



# *CORPORATE INFORMATION*

## **G & B SPECIALTIES, INC.**

*A Wabtec subsidiary*

*CORPORATE OFFICE*

*FACTORY & WAREHOUSE*

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BIDA Complex  
Berwick, PA 18603

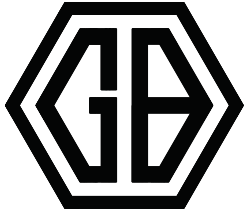
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**G & B SPECIALTIES, INC.**

# **PACKAGED SWITCH LAYOUTS**

## **SECTION A**

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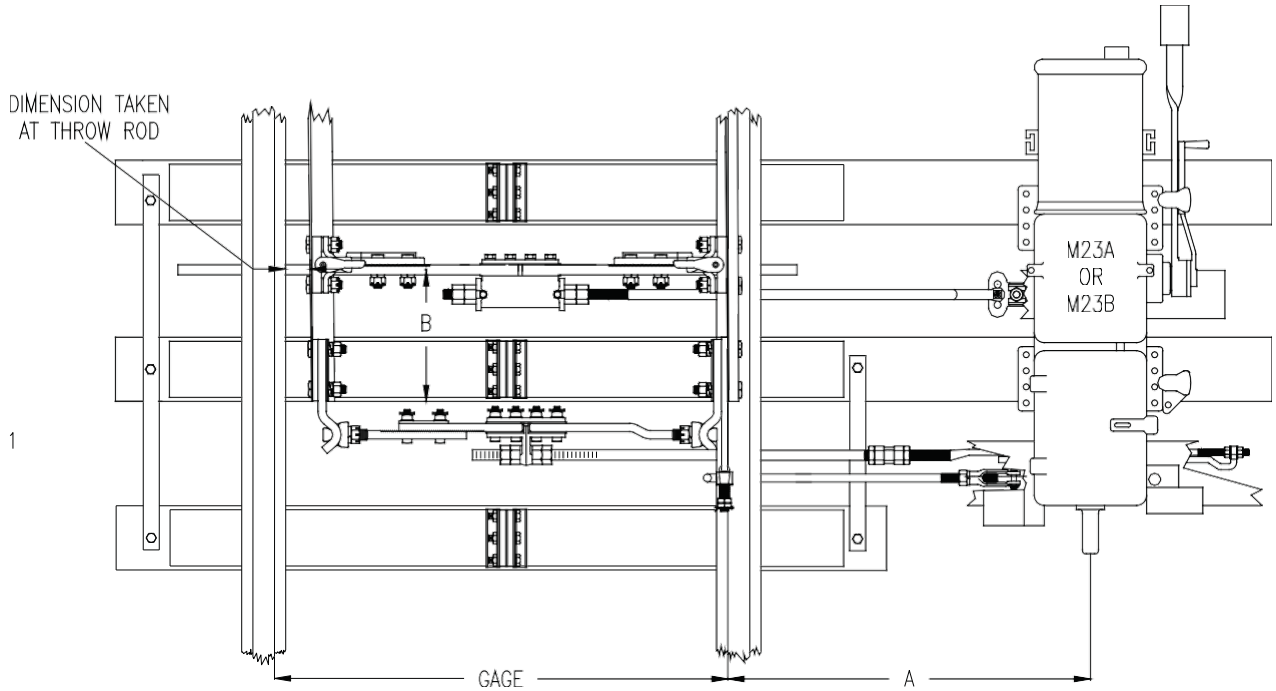


FIGURE 1

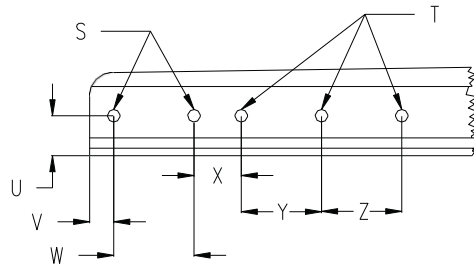


FIGURE 2

## SWITCH MACHINE LAYOUTS - HOW TO ORDER

The figures above illustrate a typical layout for a power switch machine. Refer to these diagrams as you complete the following questionnaire. These specifications will enable our experienced engineering staff to accurately design your Single Switch, Movable Point Frog, Single Slip, Double Slip, or Derail Layout. Please call our engineering staff to assist you.

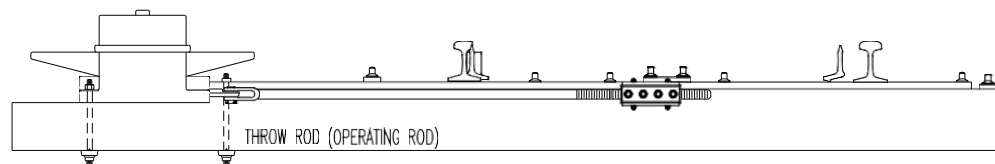
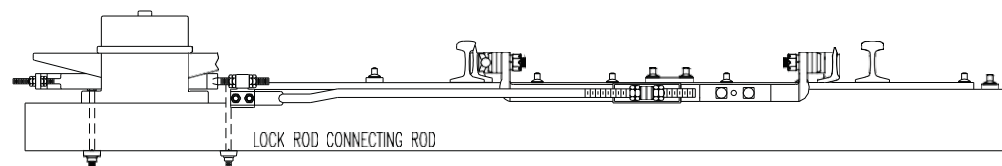
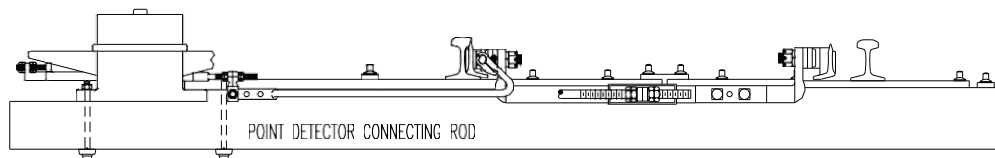
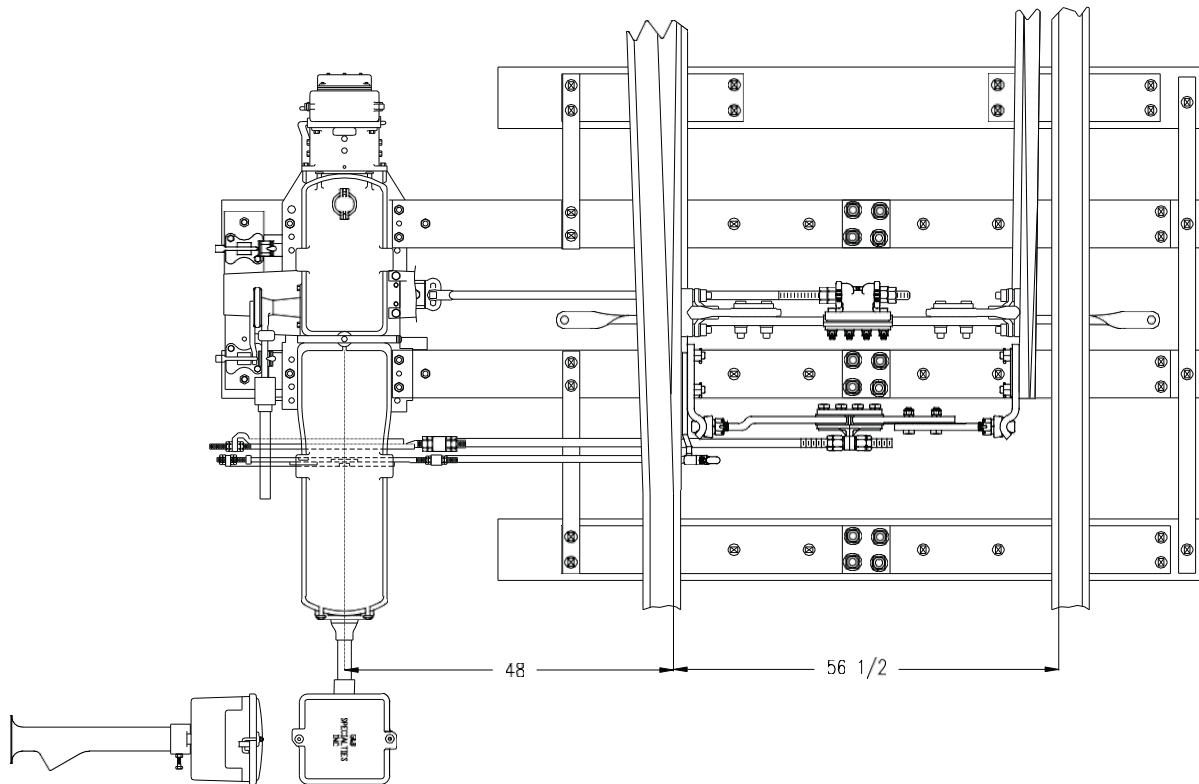
1. Specify what type of switch machine and any accessories or options. \_\_\_\_\_
2. Specify LH layout \_\_\_\_\_ or RH layout \_\_\_\_\_ or both \_\_\_\_\_
3. Furnish a point detail or specify AREA point derail 4000, 5100, or 6100. \_\_\_\_\_
4. Specify dimensions of hole sizes and location per Figure 2. \_\_\_\_\_

Hole "S" dia = \_\_\_\_\_ Hole "T" dia = \_\_\_\_\_ "U" = \_\_\_\_\_ "V" = \_\_\_\_\_

"W" = \_\_\_\_\_ "X" = \_\_\_\_\_ "Y" = \_\_\_\_\_ "Z" = \_\_\_\_\_

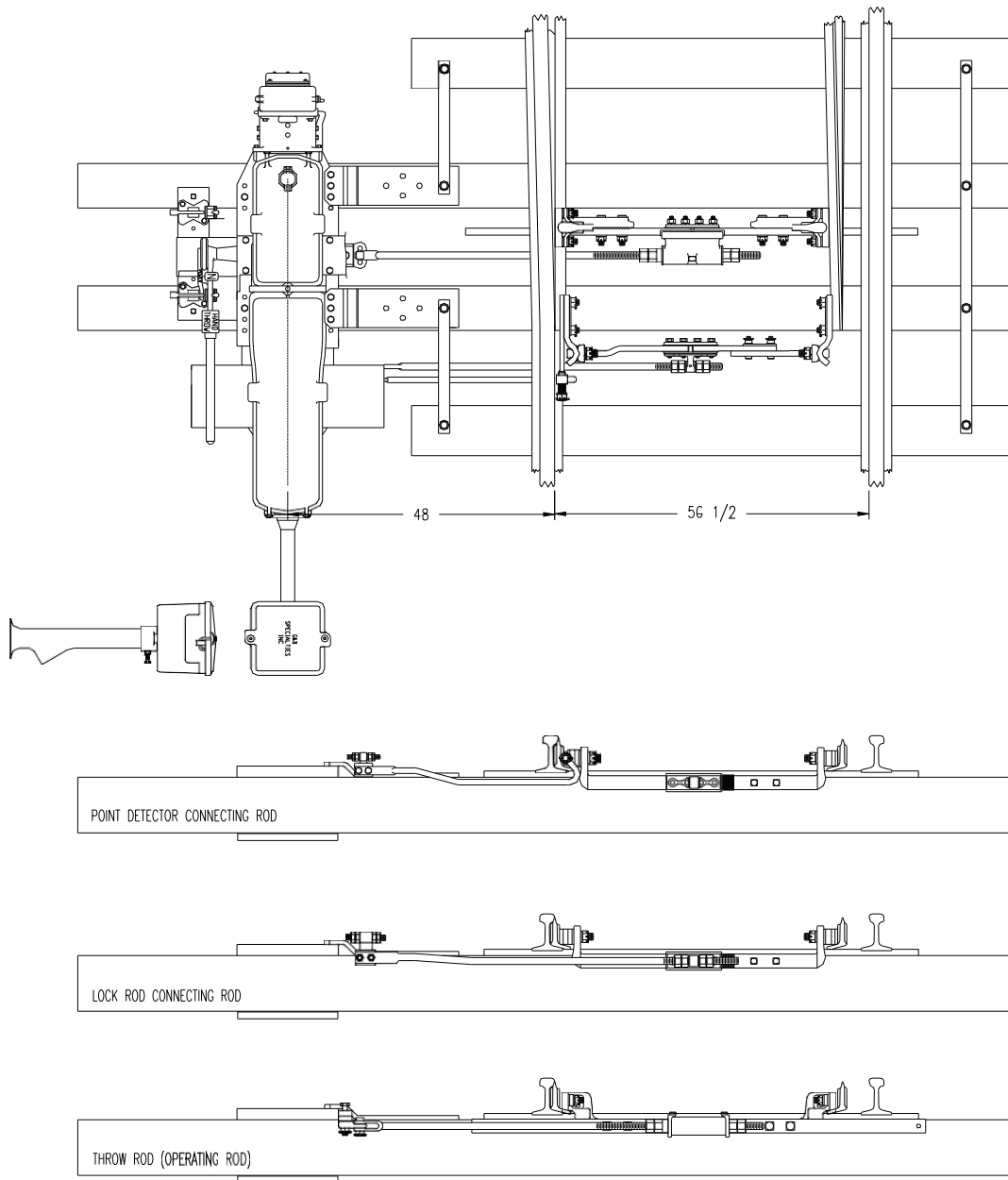
5. Specify whether the point adjacent to the switch machine is normally open or normally closed. \_\_\_\_\_
6. When ordering layouts for a double slip, give the dimensional distance between the two points located in the center of the switch. \_\_\_\_\_
7. Specify the dimension for the relation of the point rails to the edge of tie No. 1. \_\_\_\_\_
8. Specify point throw at No. 1 switch rod. \_\_\_\_\_
9. Specify weight and section of rail. \_\_\_\_\_
10. Specify rail gage -- 56 1/2" or other. \_\_\_\_\_
11. Specify length of switch. \_\_\_\_\_
12. Specify the distance between the center of the No. 1 switch rod and the end of the switch point \_\_\_\_\_
13. Specify the distance between the centerline of switch machine and the gage of rail, designation "A" per Figure 1. \_\_\_\_\_
14. Specify machine tie size (height x width x length). \_\_\_\_\_
15. Specify spacing between tie Nos. 0, 1, and 2. \_\_\_\_\_
16. Specify if machine ties are dapped. If so, specify depth and length of dapping. \_\_\_\_\_
17. Specify type of No. 1 switch rod to be used -- Vertical or Horizontal. \_\_\_\_\_
18. Specify type of rail clip that will be used with No. 1 switch rod -- Rocker clip, "M", "MJ", "SMJ", side jaw, adjustable side jaw or transit clip. \_\_\_\_\_
19. Specify the type of switch point adjuster for No. 1 switch rod. See Catalog Section D for details. \_\_\_\_\_
20. Specify the type of front rod and downset dimension:  
Swivel -- 2 1/2" downset or 4 3/8" downset  
Hinged -- 4 1/4" downset or 5 3/16" downset  
Rigid -- 4 5/16" downset or 5 3/16" downset \_\_\_\_\_
21. Specify type of plates and tie straps. See Catalog Section G for details. \_\_\_\_\_

Please furnish track plan showing design and dimensions of rail braces, switch rods, rail clips, and locations of switch rods.



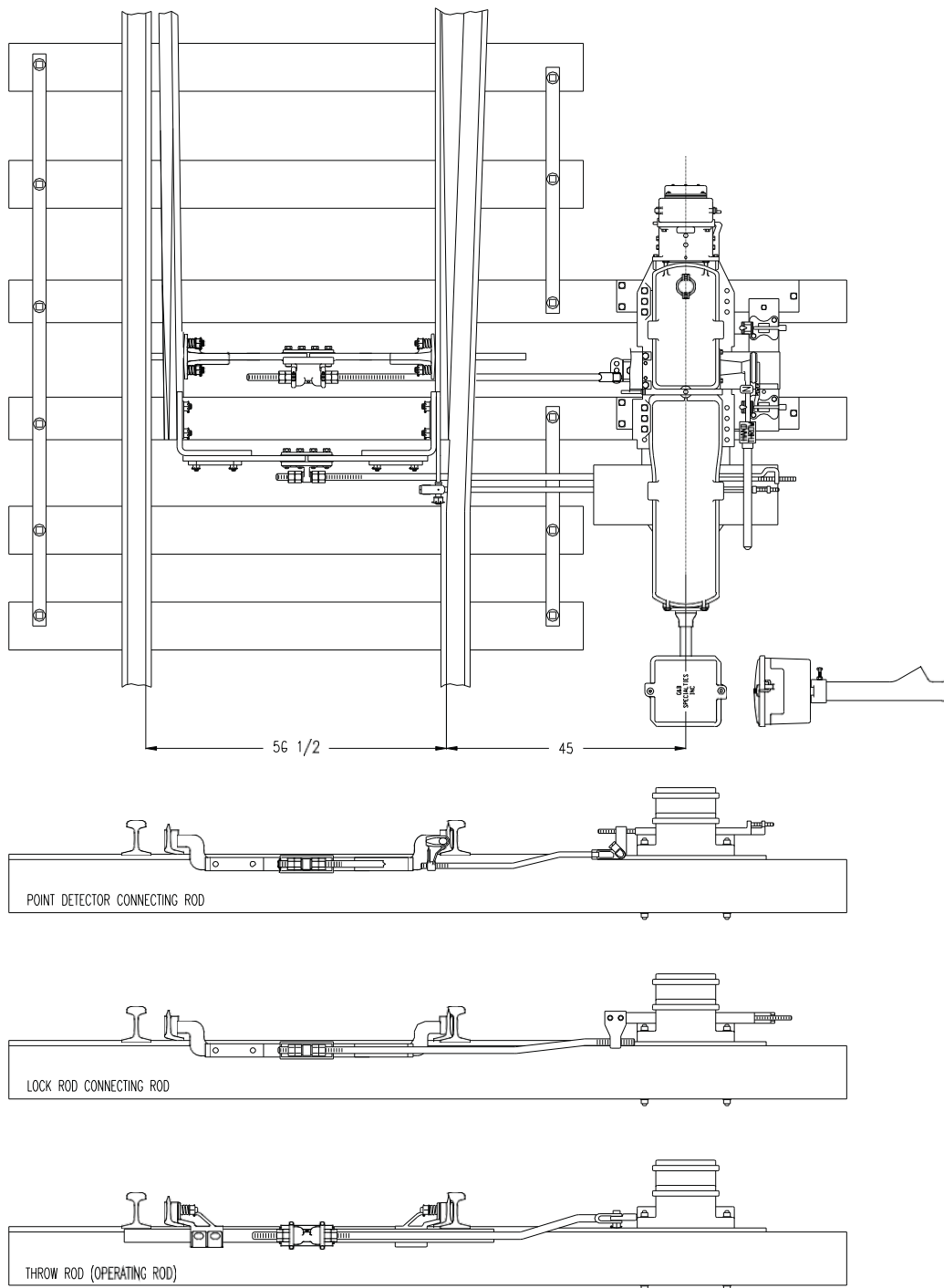
**LH MODEL 5F/5H SWITCH LAYOUT**

- \* DAPPED TIE
- \* EXTENDED GAGE PLATE
- \* ADJUSTABLE SWIVEL FRONT ROD



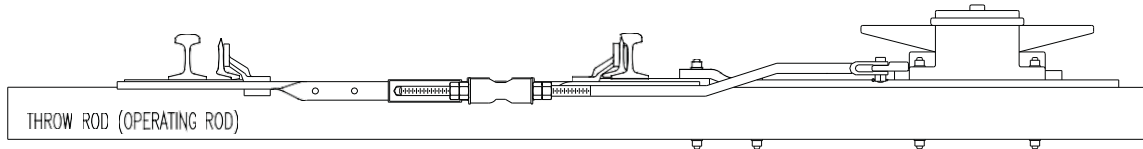
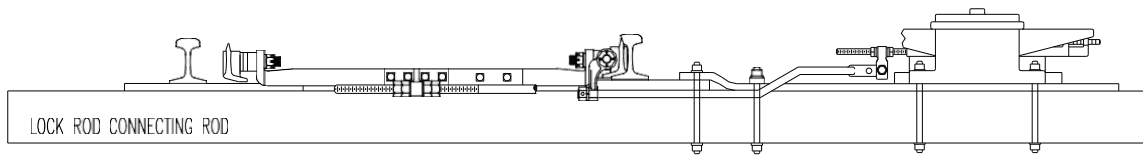
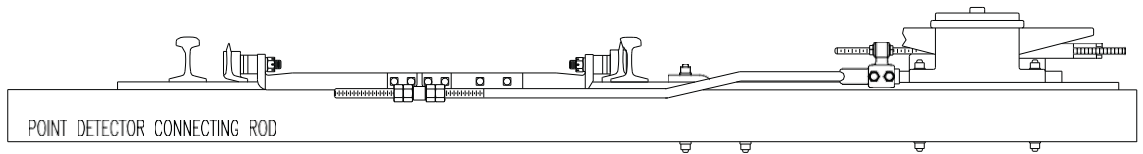
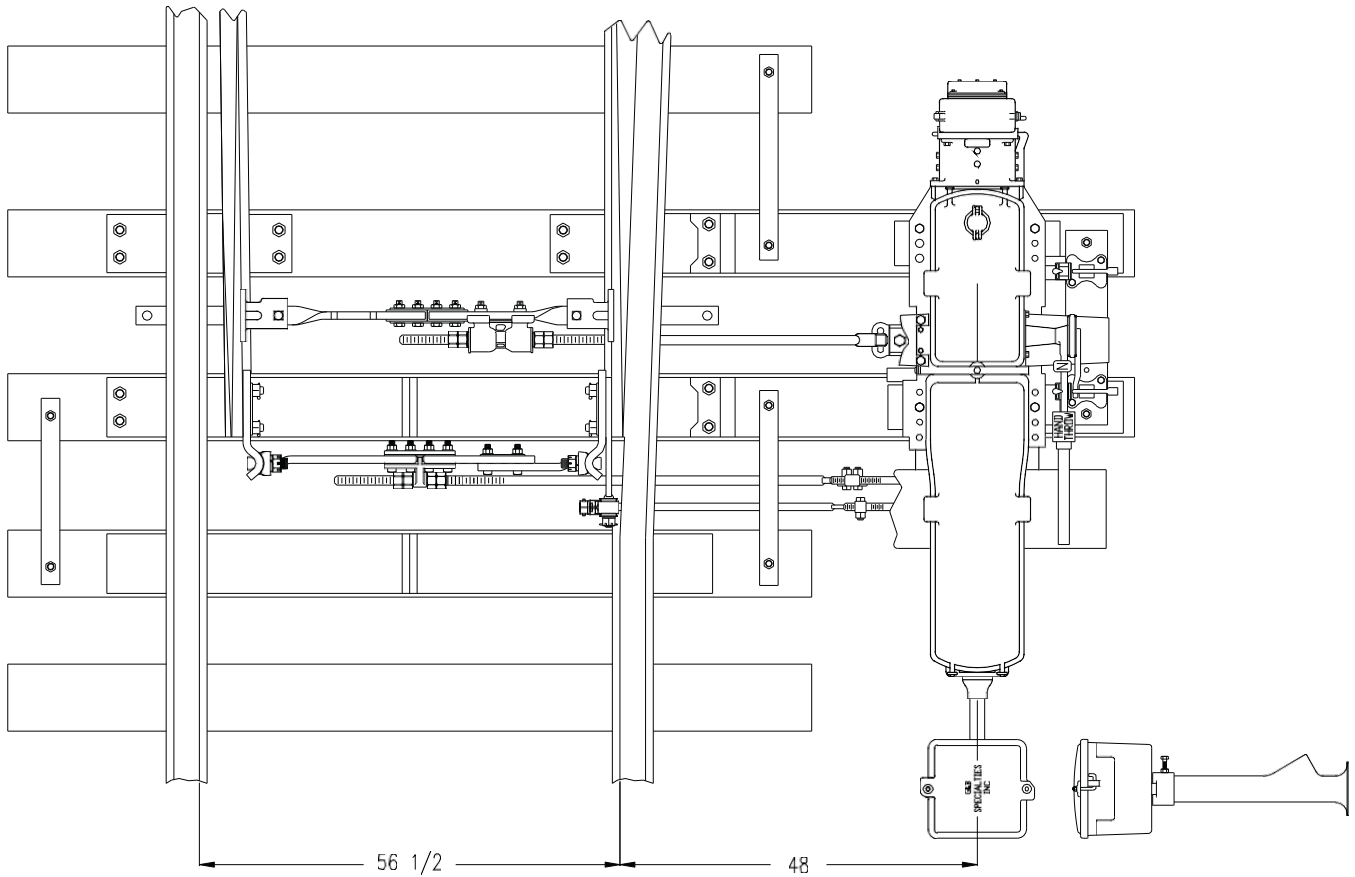
## LH MODEL 5F/5H SWITCH LAYOUT

- \* NON-DAPPED TIES
- \* INDEPENDENT EXTENSION PLATES
- \* ADJUSTABLE SWIVEL



**RH MODEL 5F/5H SWITCH LAYOUT**

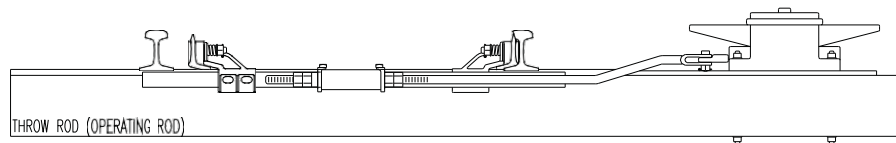
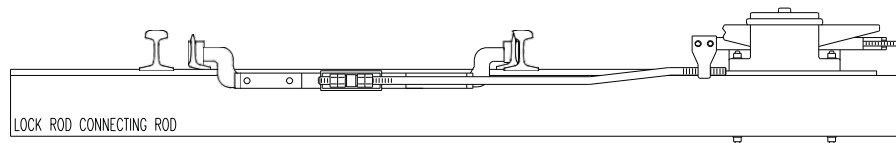
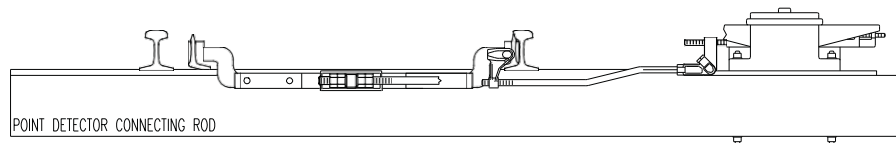
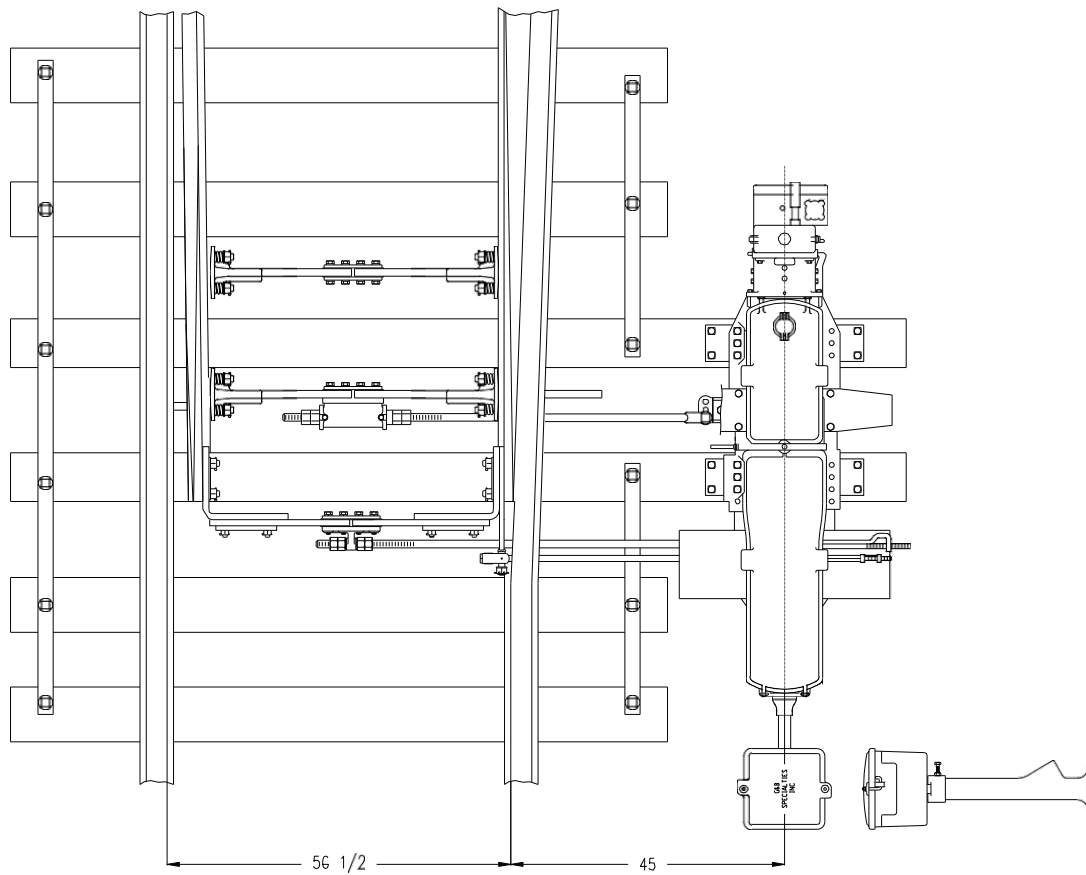
- \* NON-DAPPED TIES
- \* INDEPENDENT SADDLE PLATES
- \* ADJUSTABLE RIGID FRONT ROD



## RH MODEL 5F/5H SWITCH LAYOUT

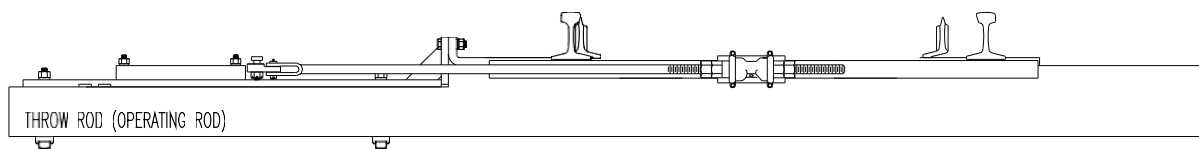
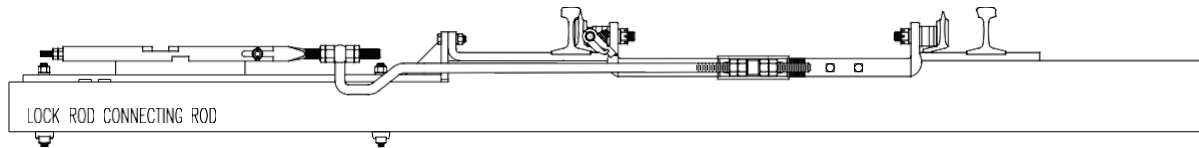
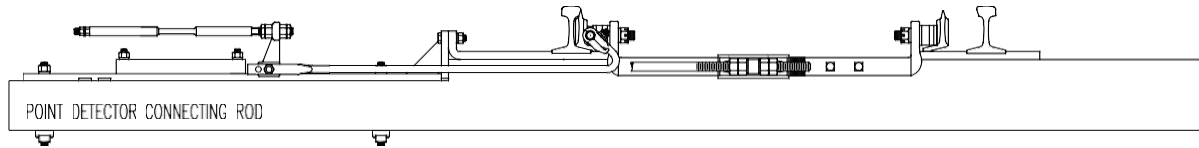
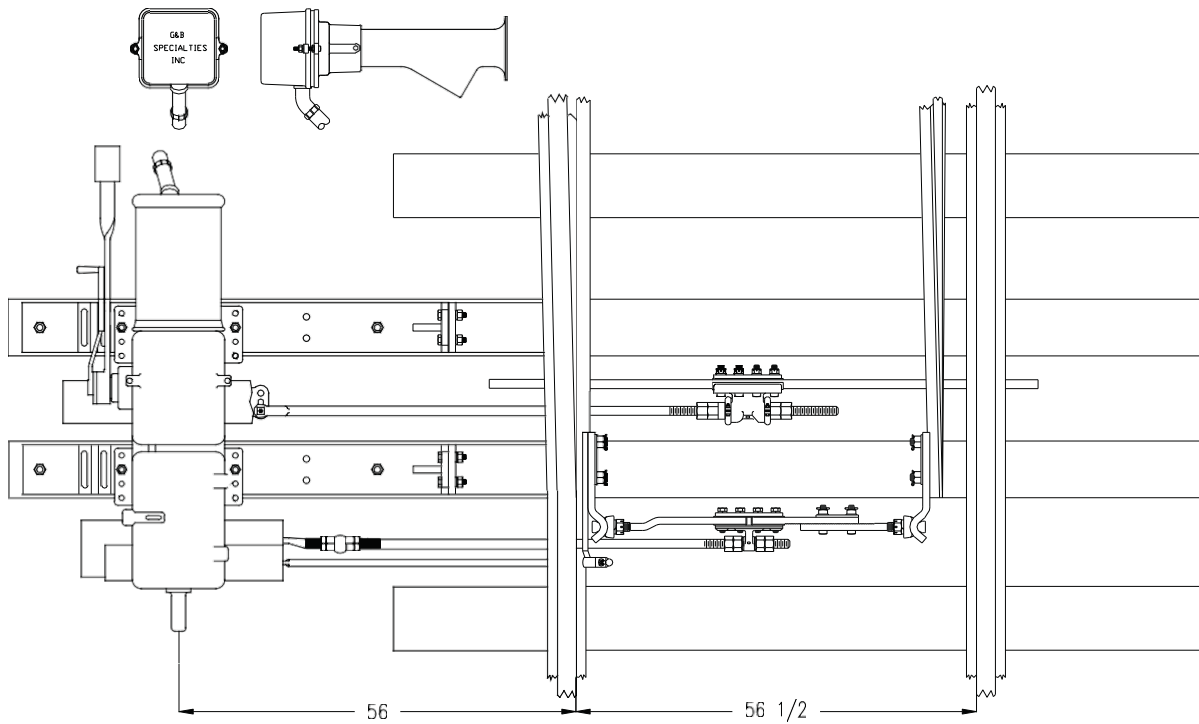
- \* NON-DAPPED TIES
- \* GAGE EXTENSION SADDLE PLATES
- \* ADJUSTABLE SWIVEL FRONT ROD





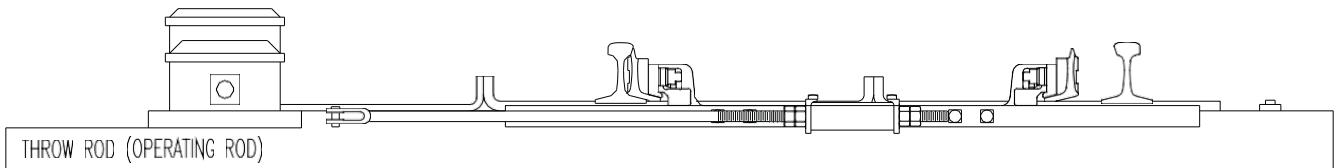
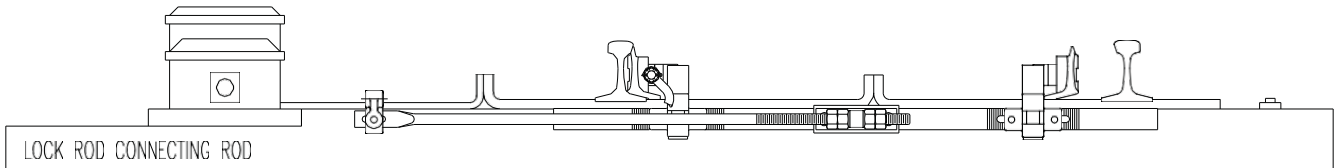
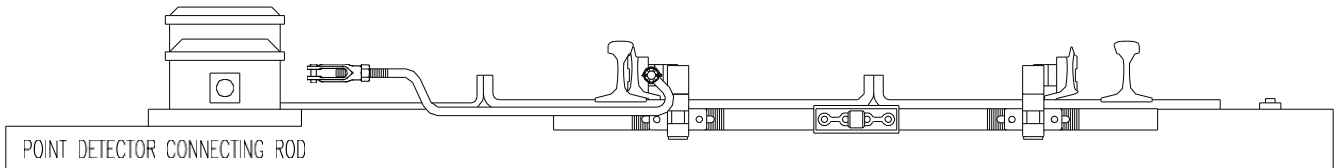
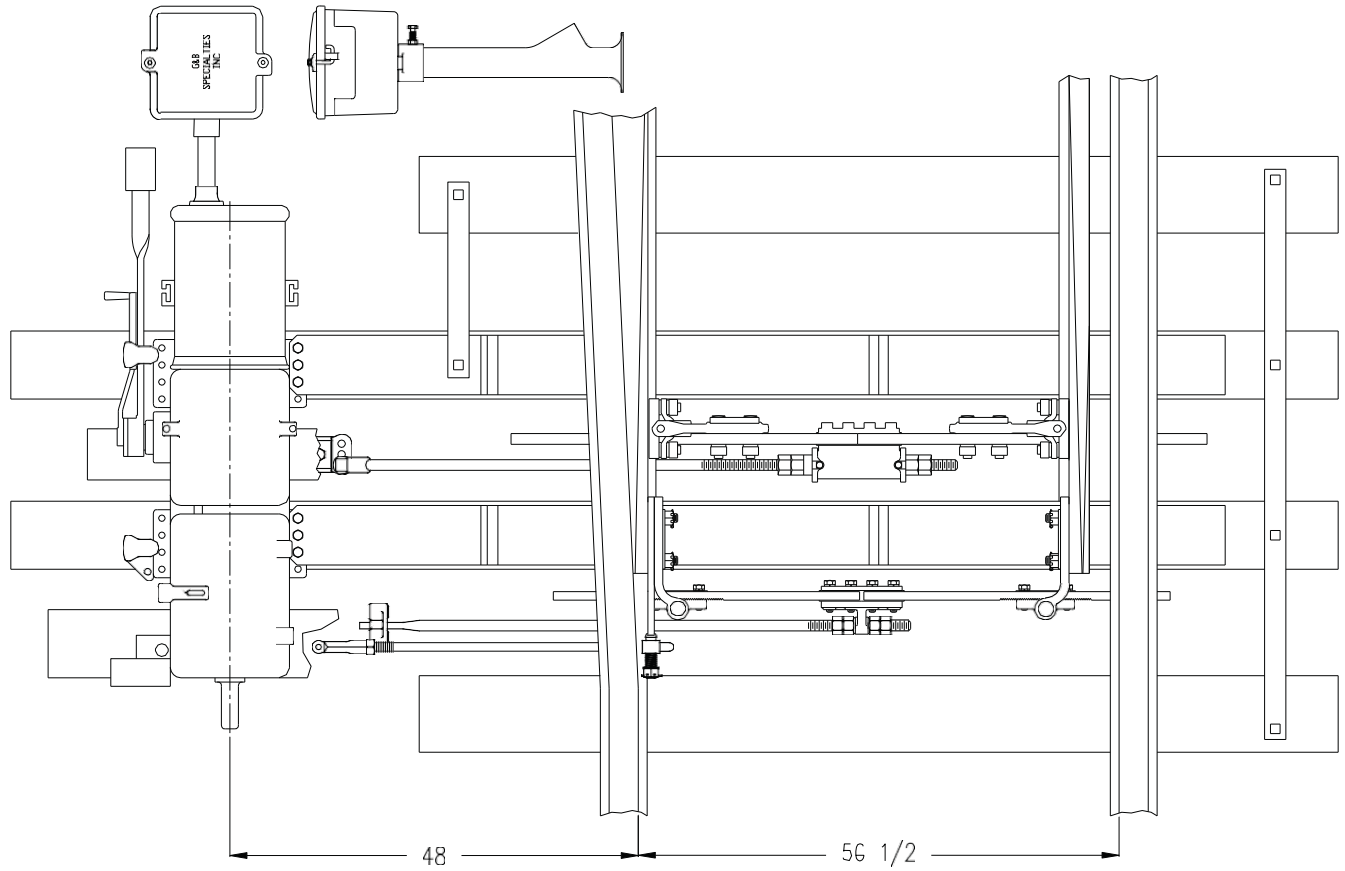
**RH MODEL 5G SWITCH LAYOUT**

- \* NON-DAPPED TIES
- \* INDEPENDENT SADDLE PLATES
- \* RIGID ADJUSTABLE FRONT ROD



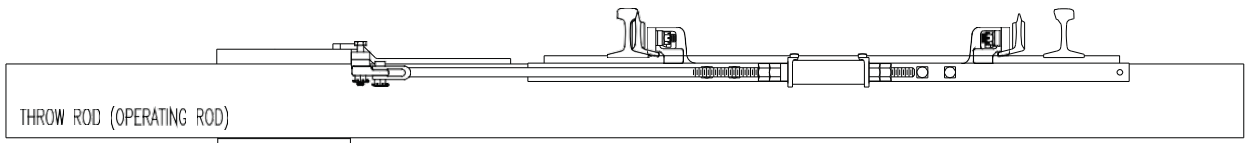
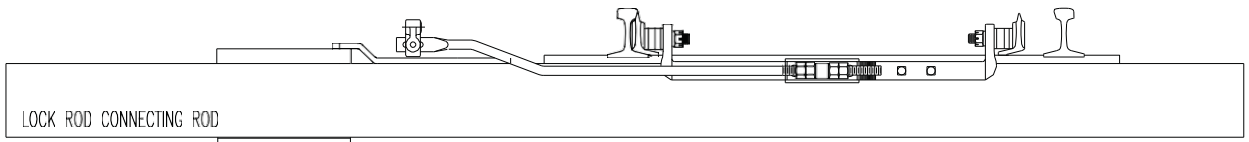
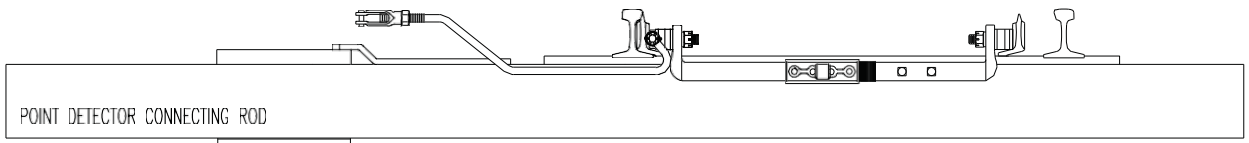
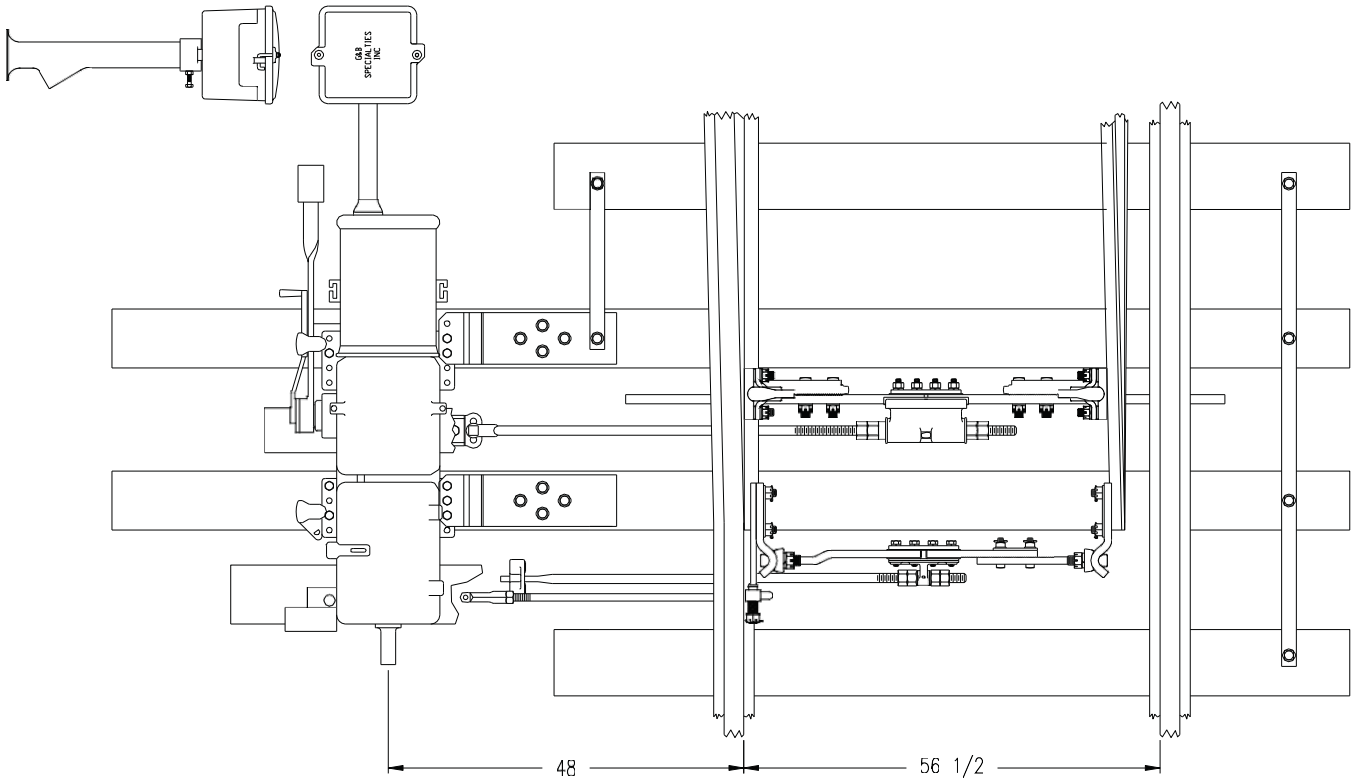
## LH MODEL M-23 SWITCH LAYOUT

- \* DAPPED TIE
- \* GAGE EXTENSION SADDLE PLATES
- \* ADJUSTABLE SWIVEL FRONT ROD



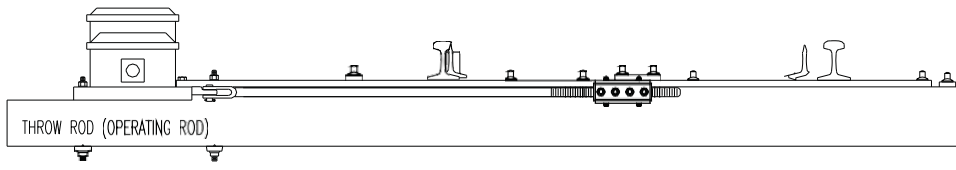
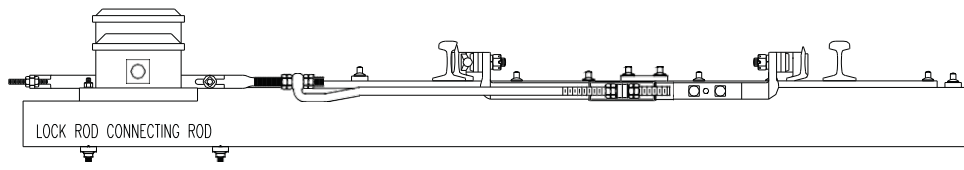
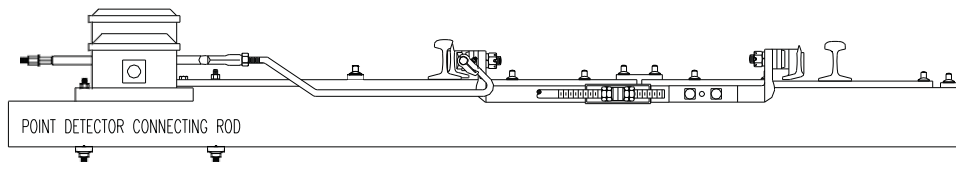
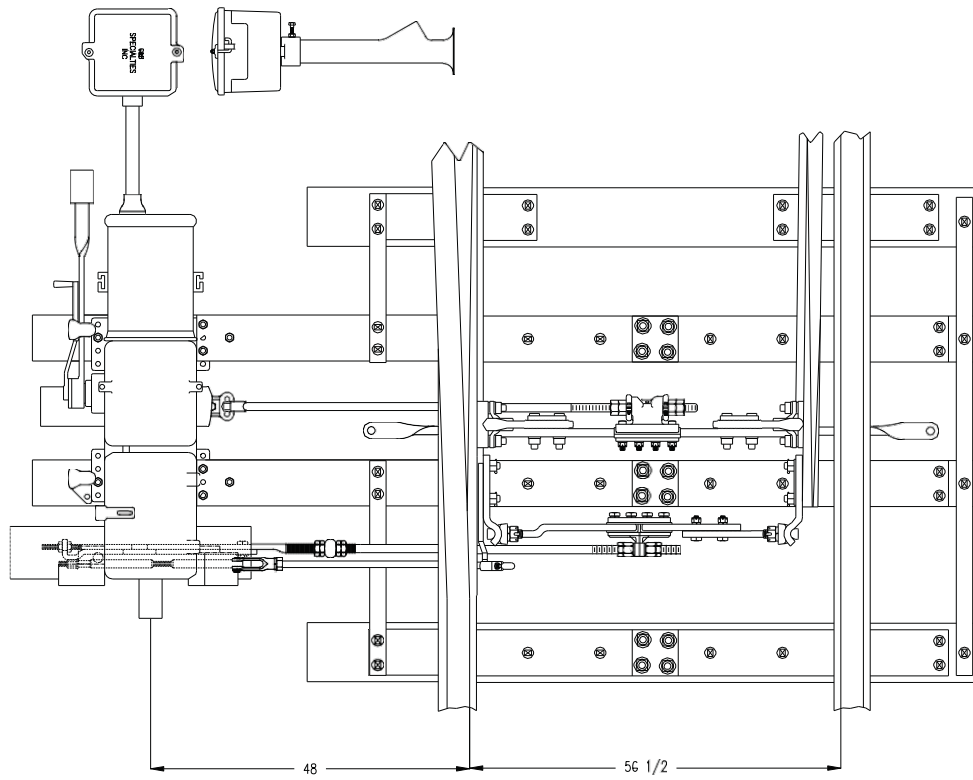
**LH MODEL M-23 SWITCH LAYOUT**

- \* DAPPED TIE
- \* GAGE PLATE EXTENSION PLATE
- \* ADJUSTABLE HINGED FRONT ROD



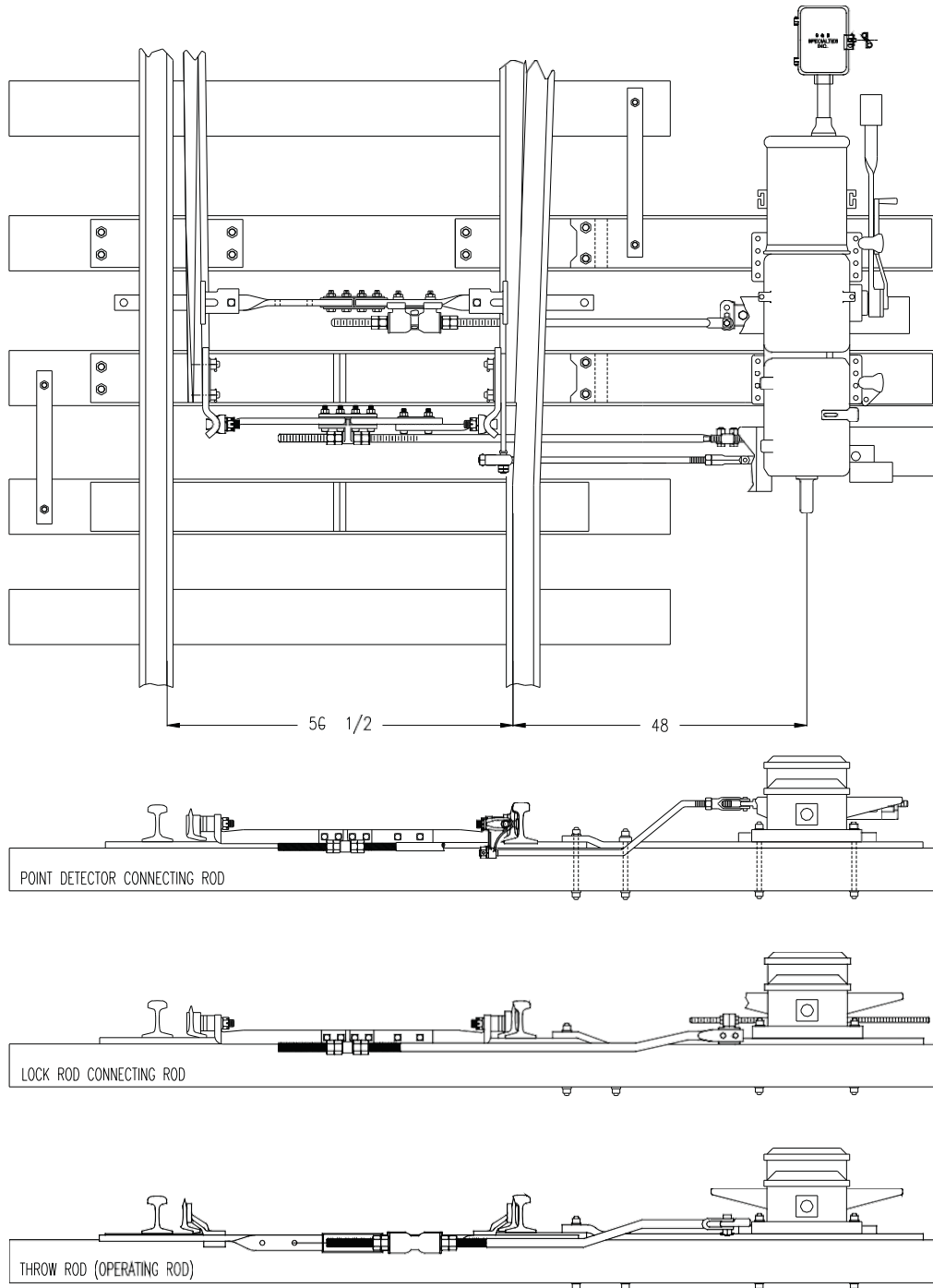
## LH MODEL M-23 SWITCH LAYOUT

- \* NON-DAPPED TIES
- \* INDEPENDENT EXTENSION PLATE
- \* ADJUSTABLE SWIVEL FRONT ROD



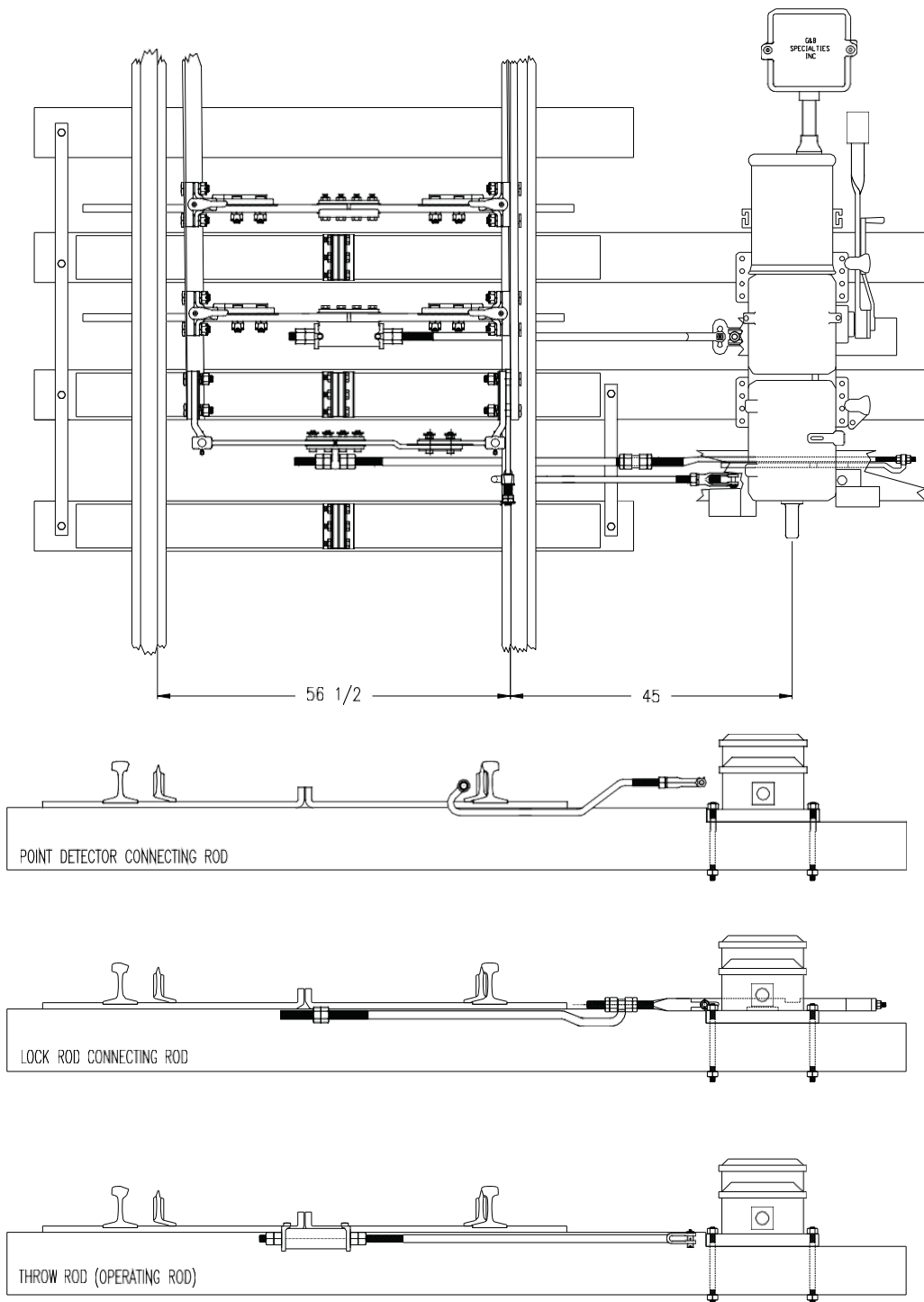
**LH MODEL M-23 SWITCH LAYOUT**

- \* DAPPED TIE
- \* EXTENDED GAGE PLATE
- \* ADJUSTABLE SWIVEL FRONT ROD



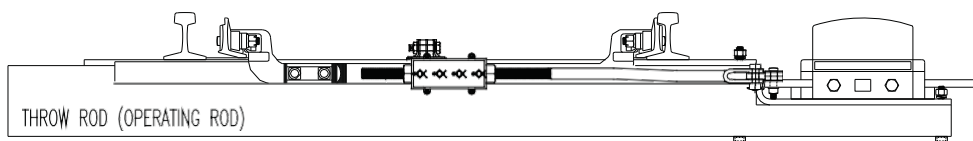
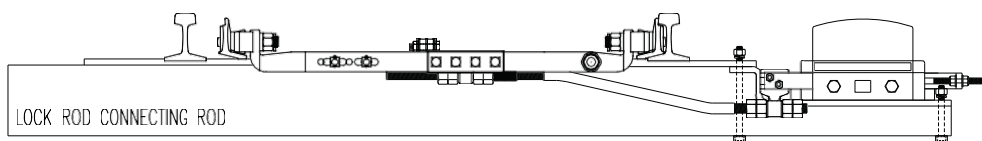
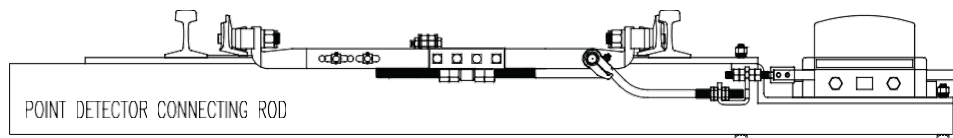
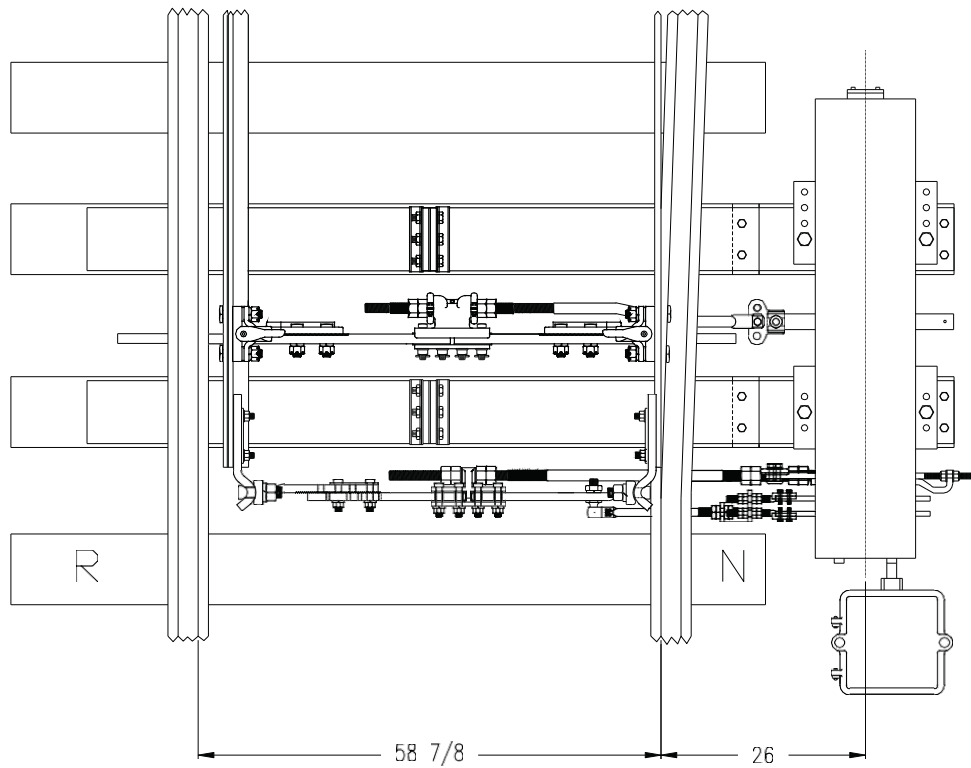
## RH MODEL M-23 SWITCH LAYOUT

- \* NON-DAPPED TIE
- \* GAGE EXTENSION SADDLE PLATE
- \* ADJUSTABLE SWIVEL FRONT ROD



**RH MODEL M-23 SWITCH LAYOUT**

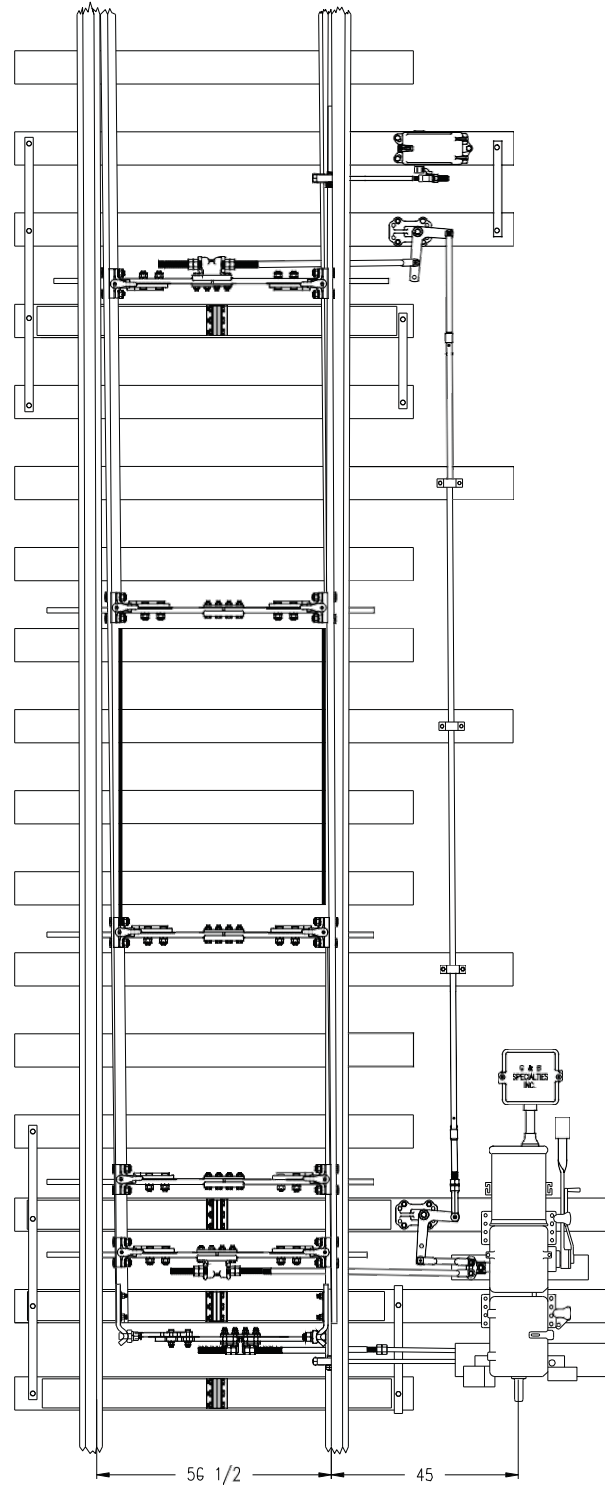
- \* DAPPED TIE
- \* STYLE MF FRONT ROD



## RH MODEL HW1122 SWITCH LAYOUT

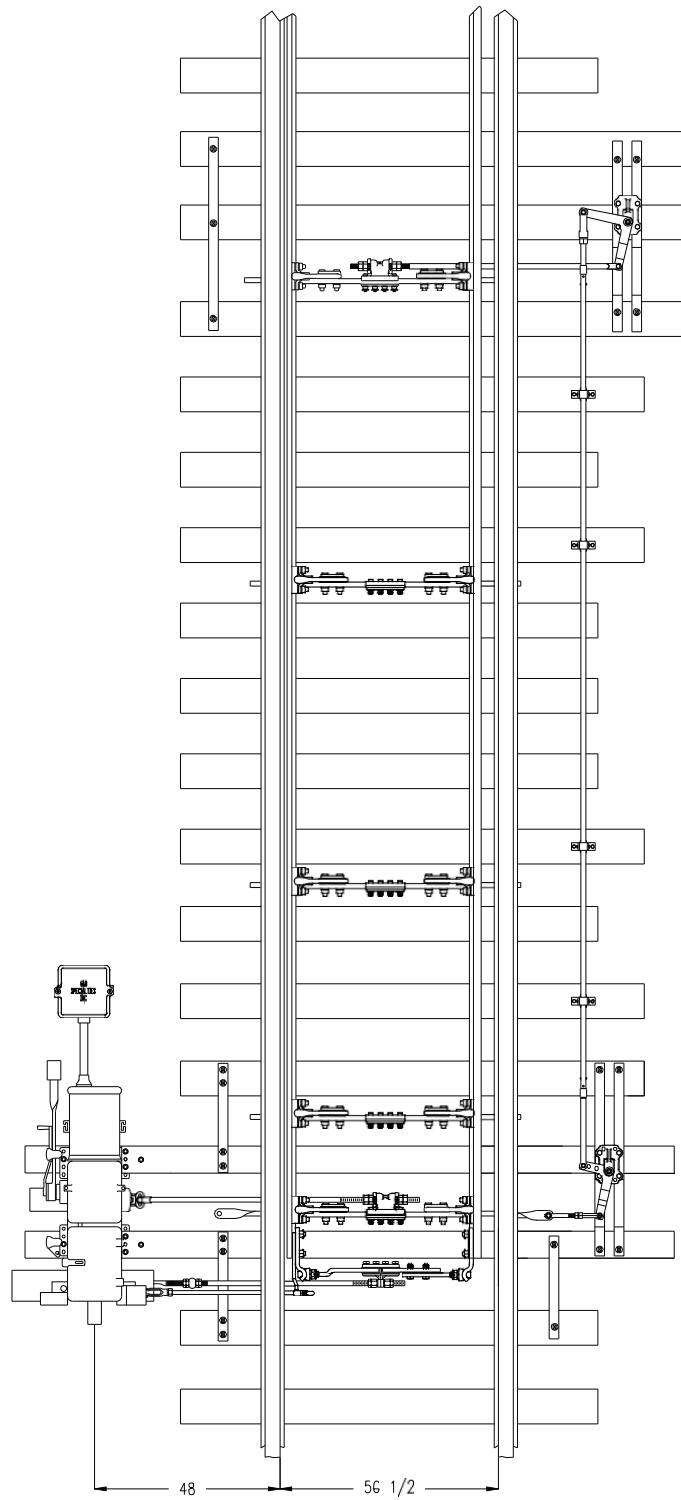
- \* DAPPED TIES
- \* GAGE EXTENSION SADDLE PLATE
- \* ADJUSTABLE SWIVEL FRONT ROD



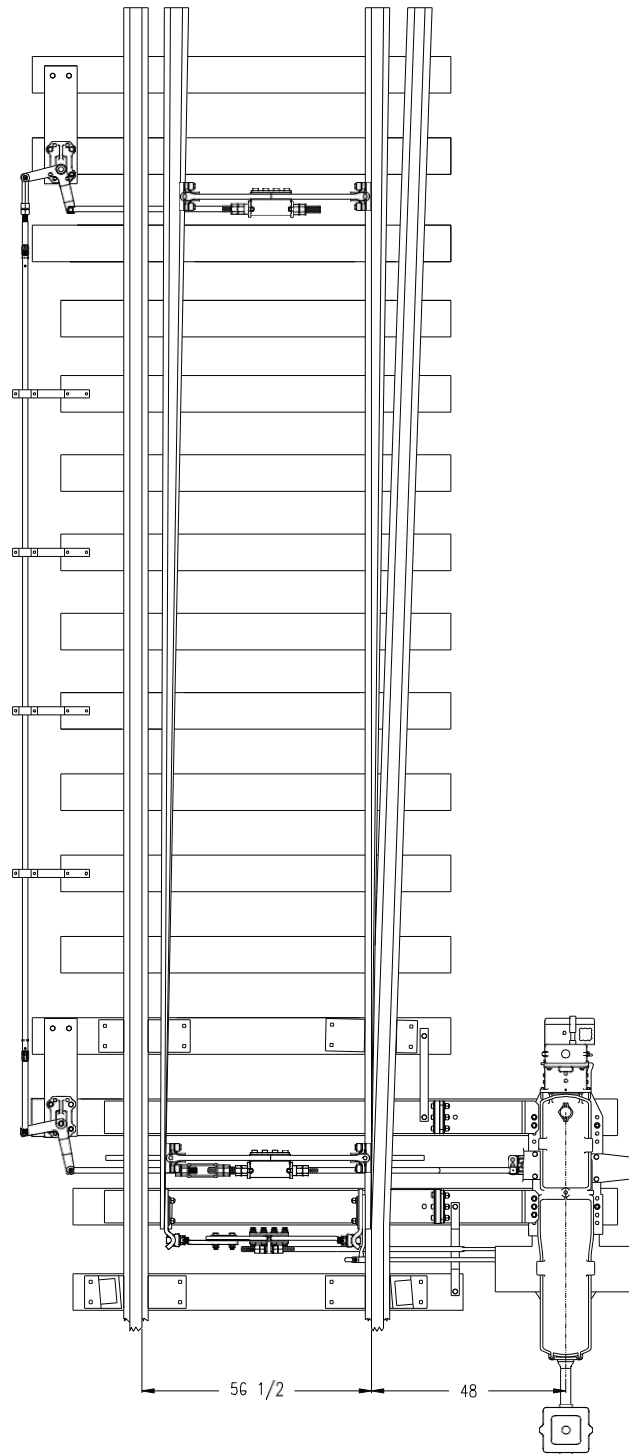


**RH SINGLE THROW HELPER ROD LAYOUT**

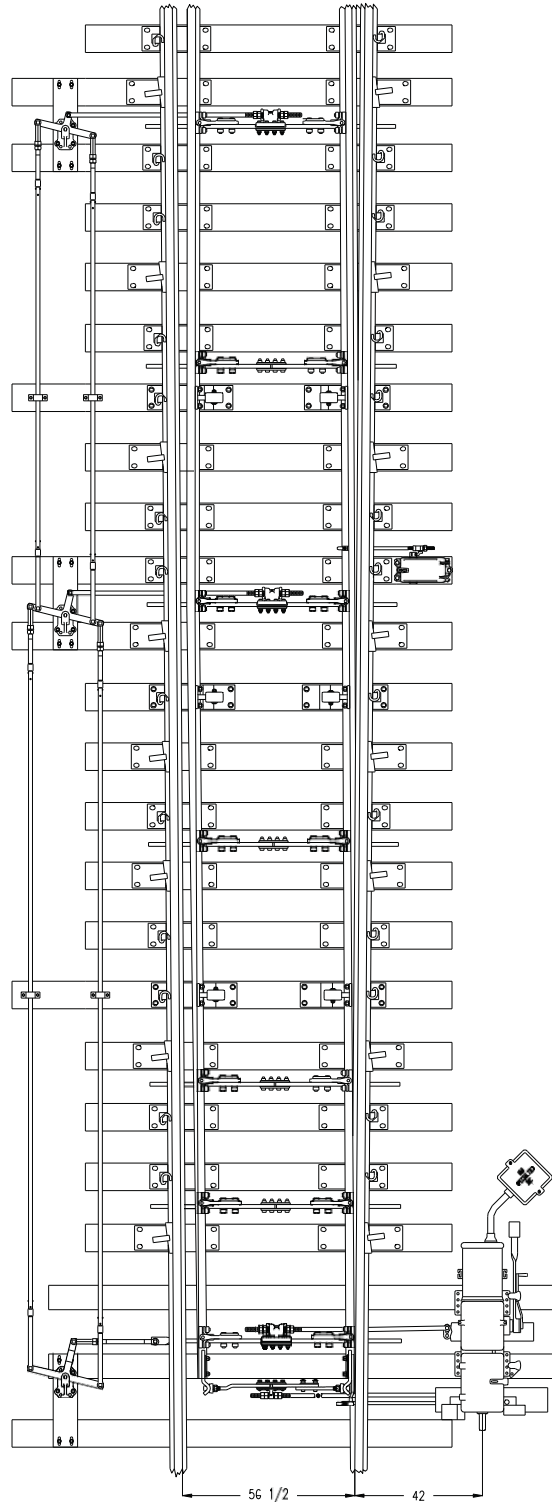
\* HELPER ROD ON SAME SIDE AS MOVEMENT



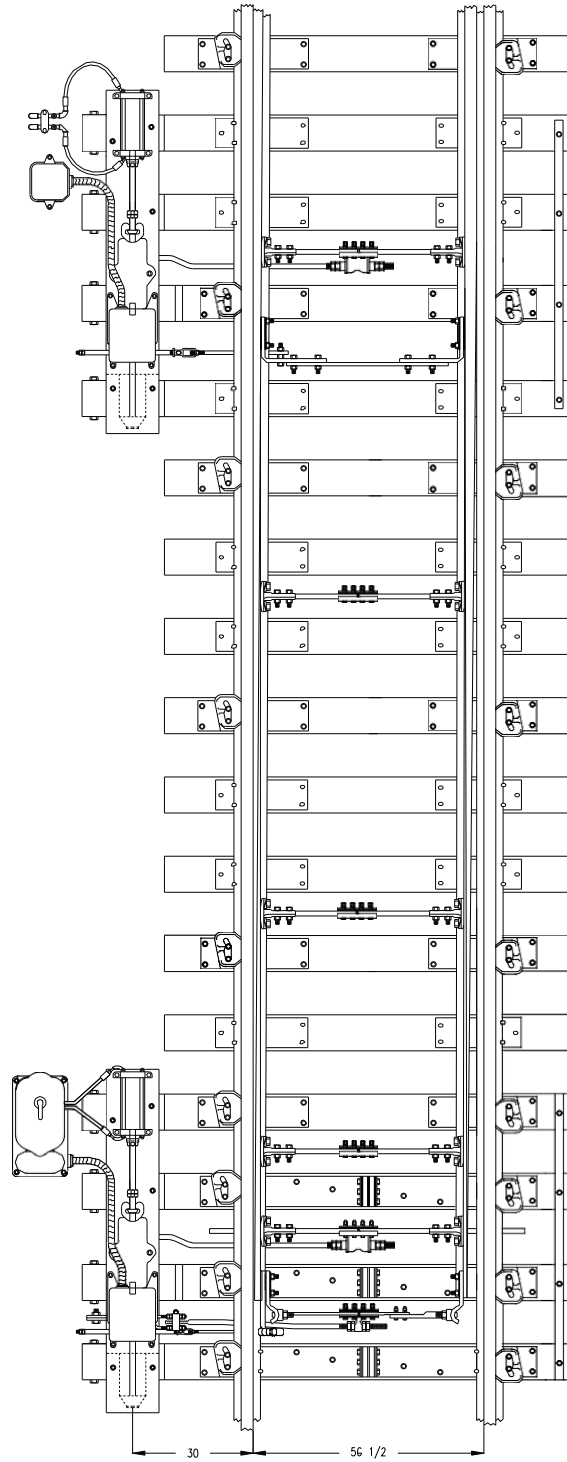
## LH SINGLE THROW HELPER ROD LAYOUT



**RH SINGLE THROW HELPER ROD LAYOUT**

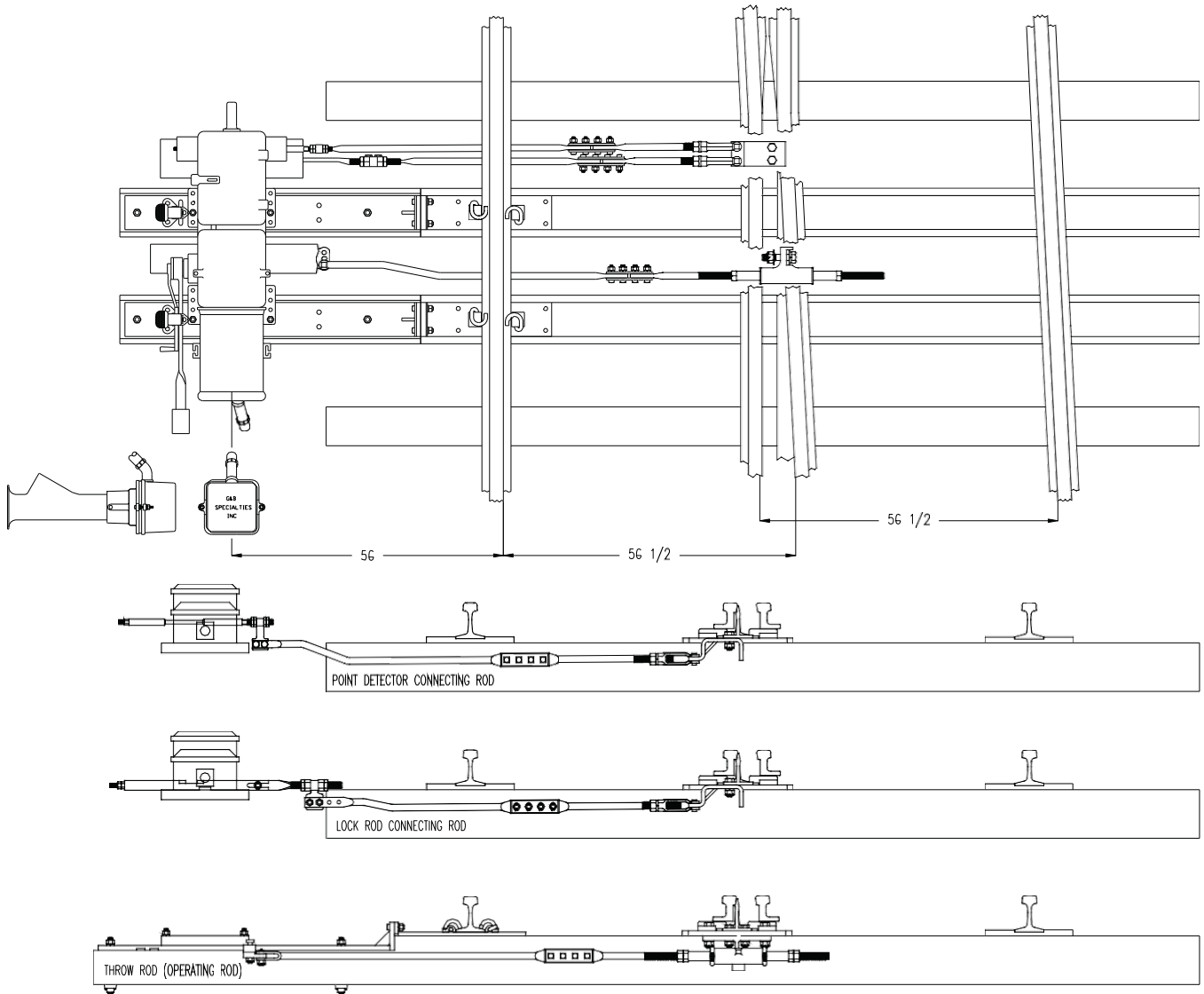


## RH DOUBLE THROW HELPER ROD LAYOUT



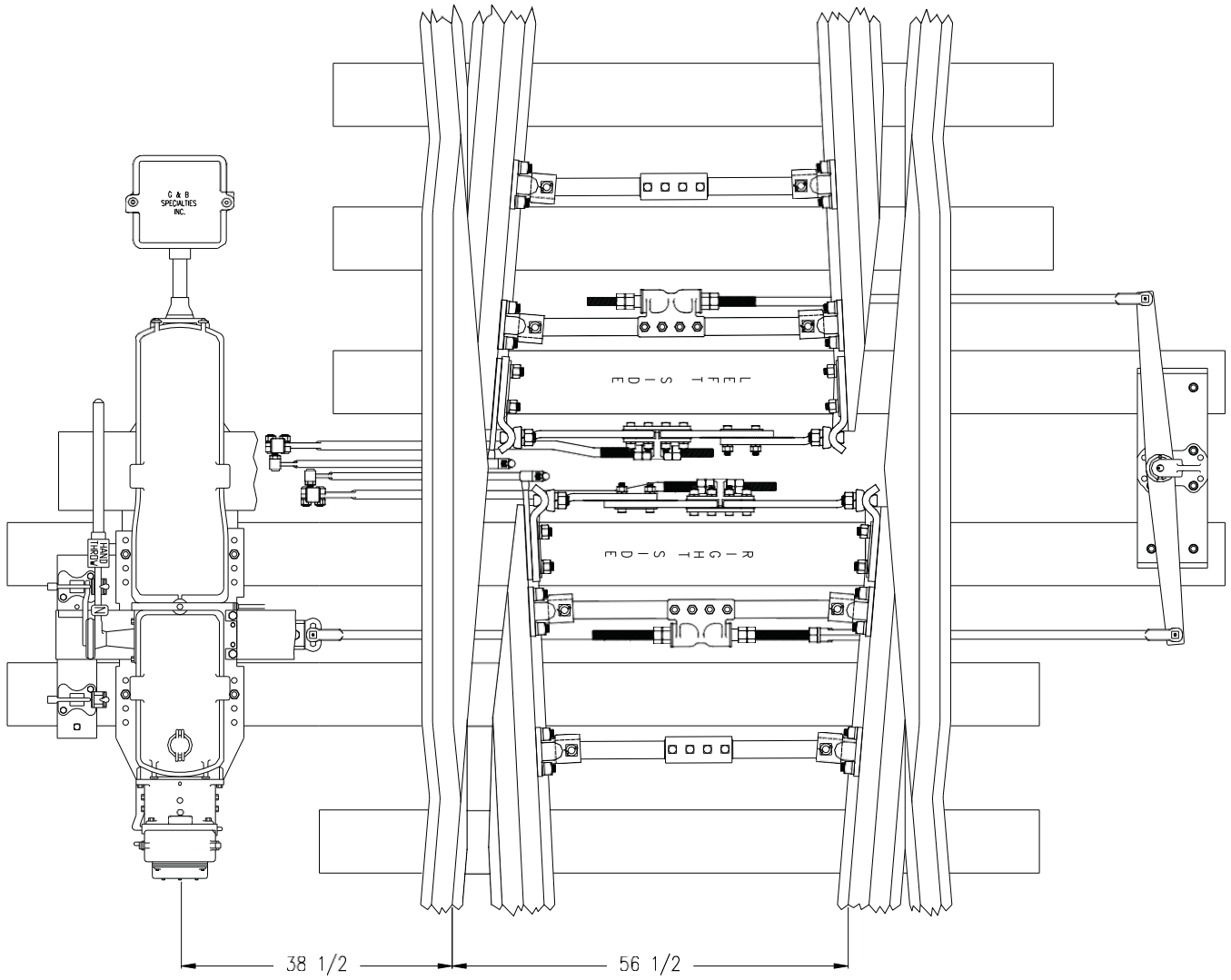
**MODEL A-5 SWITCH LAYOUT**

- \* NO. 20 TURNOUT
- \* USES TWO AIR OPERATED MACHINES



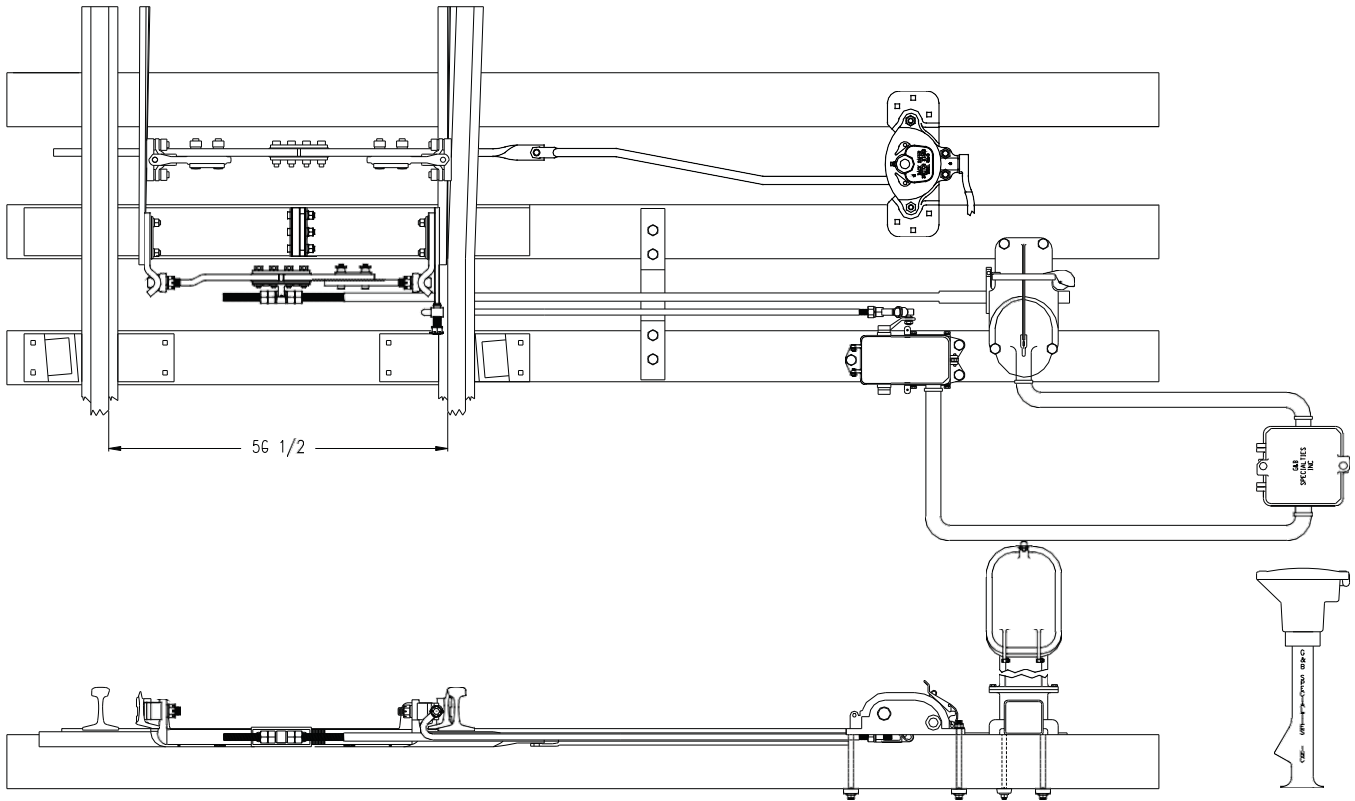
## SWING NOSE FROG LAYOUT

- \* MODEL M-23 MOVEMENT
- \* GAGE EXTENSION SADDLE PLATES



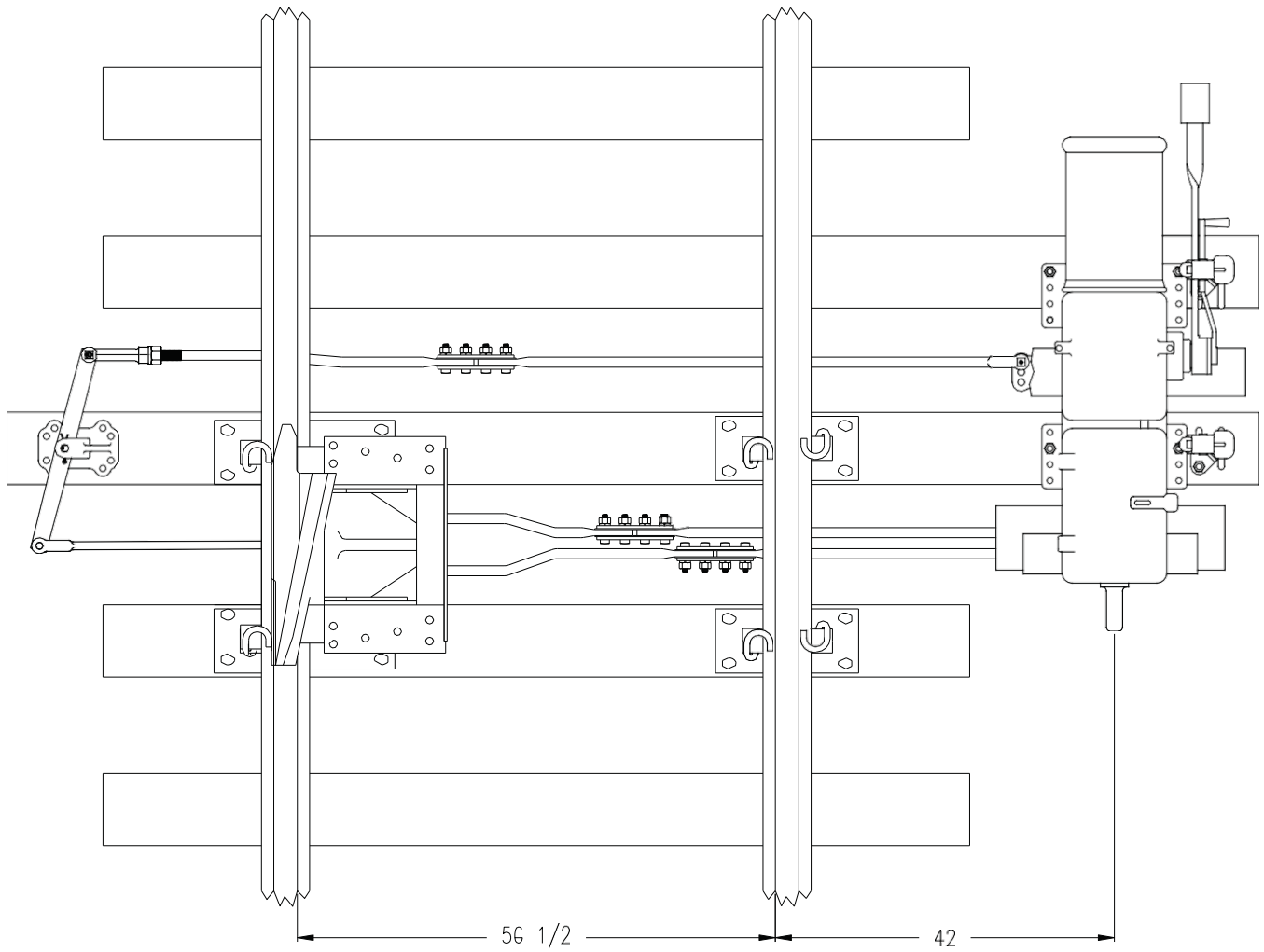
**MOVEABLE POINT FROG LAYOUT**

\* MODEL 5F MOVEMENT

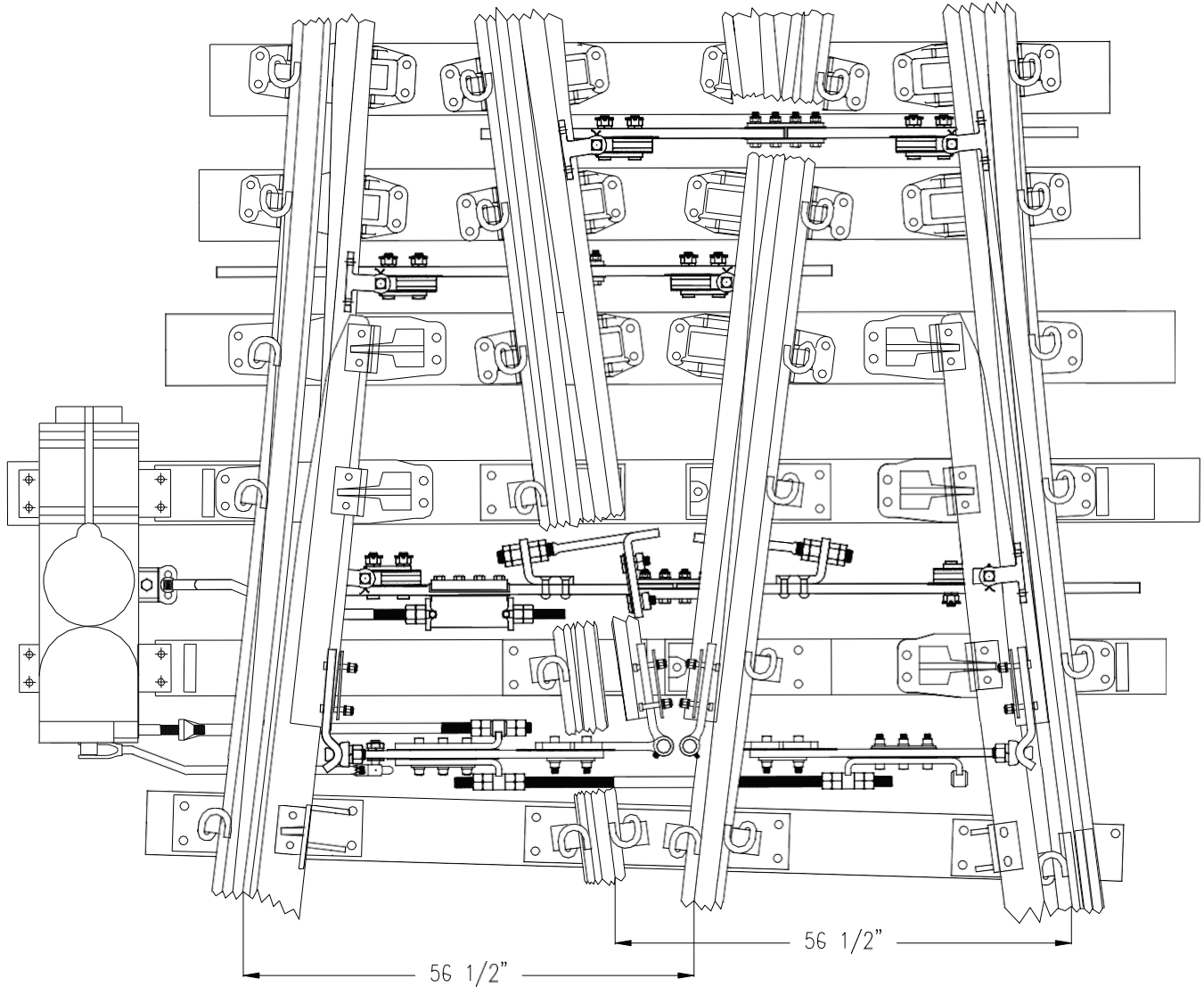


## RH ELECTRIC LOCK LAYOUT



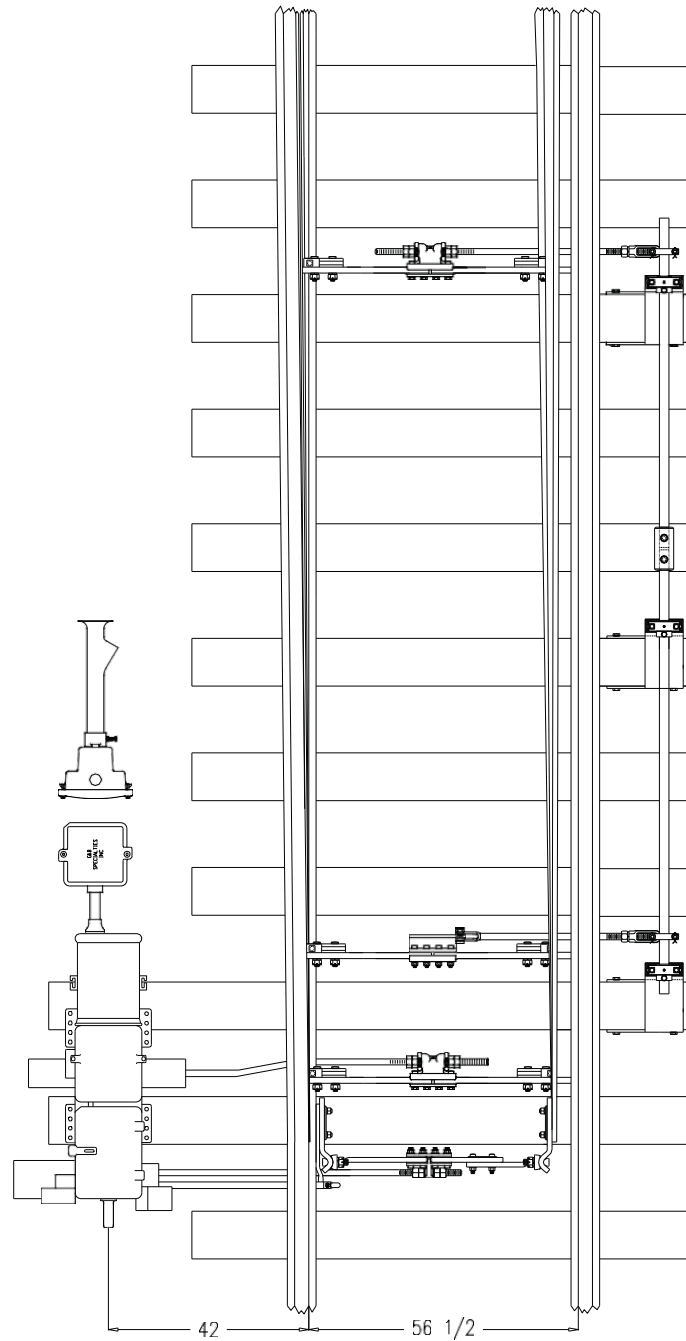


DERAIL LAYOUT



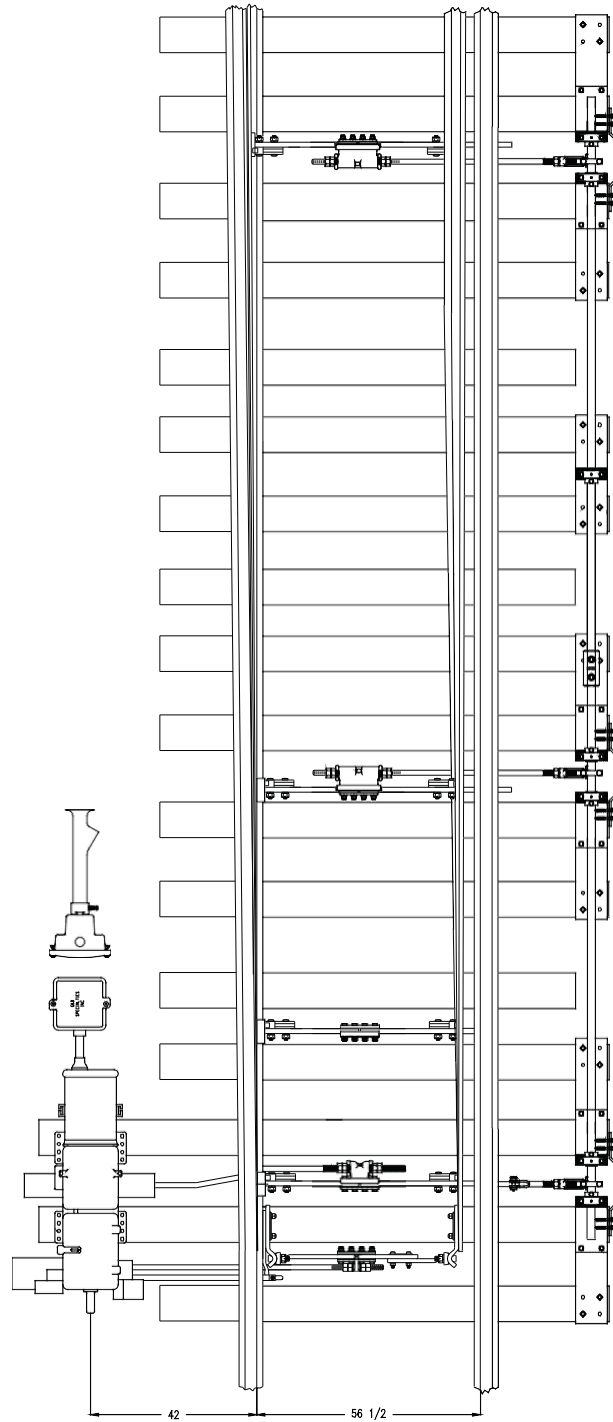
**DOUBLE SLIP LAYOUT**

\* A-10 SWITCH MOVEMENT



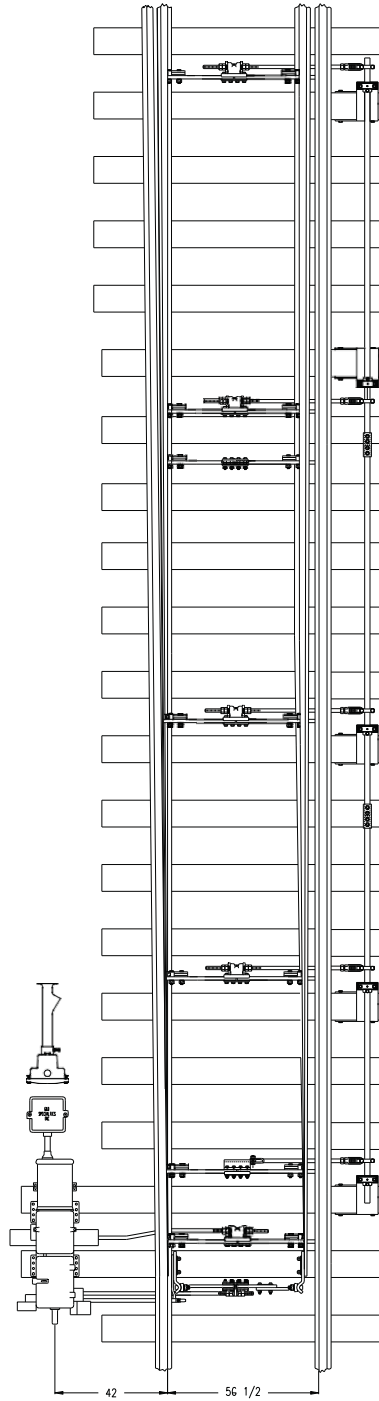
**ROTARY HELPER ROD LAYOUT**

- \* NO. 15 TURNOUT
- \* CONCRETE TIES



## ROTARY HELPER LAYOUT

- \* NO. 20 TURNOUT
- \* WOODEN TIES



**ROTARY HELPER ROD LAYOUT**

- \* NO. 20 TURNOUT
- \* CONCRETE TIES



G & B SPECIALTIES, INC.

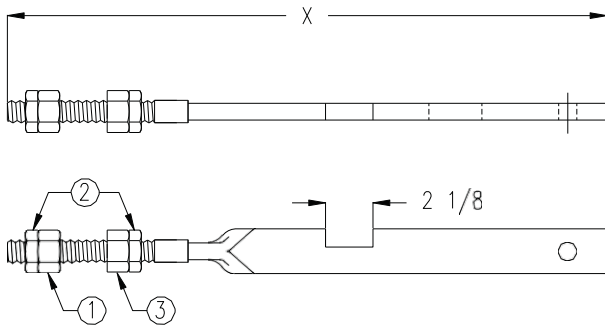
# SWITCH MACHINE COMPONENTS

## SECTION B

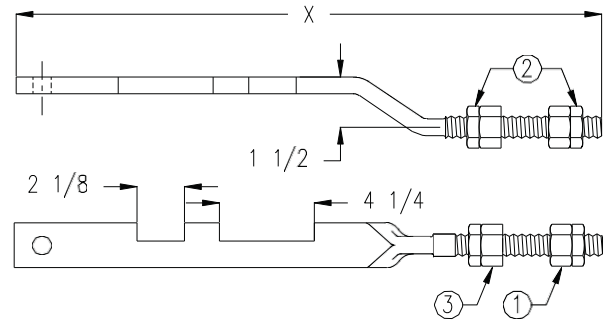
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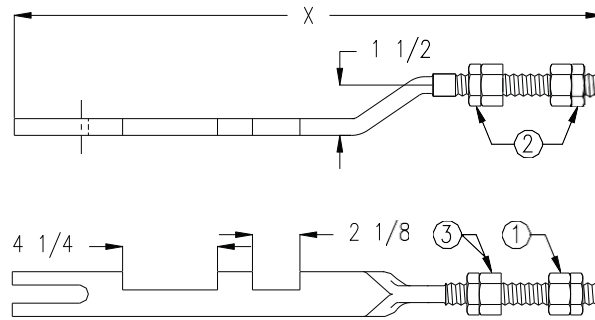
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REF A



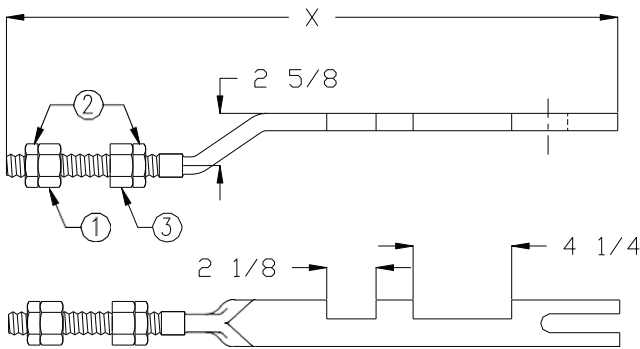
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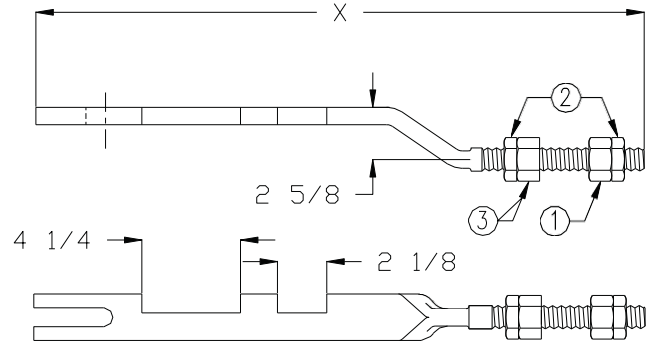
REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD, LH OR RH</b> , with hardware, for flat plunger lock single switch layout, locking switch normal only, RR Detail #3114, X = 26 3/4".....	816001-001X	N113763
A1	Similar to Ref A except without hardware.....	816001-001	M113762
A2	Similar to Ref A except locking switch reverse only.....	816001-005X	N113771
A3	Similar to Ref A2 except without hardware.....	816001-005	M113770
A4	<b>LOCK ROD, LH OR RH</b> , with hardware, for style S-1 mechanical operated facing point lock for spring switches, locking switch normal only, X = 26 3/4".....	816001-006X	N215974
A5	Similar to Ref A4 except without hardware.....	816001-006	M186714
B	<b>LOCK ROD, LH OR RH</b> , with hardware, for flat plunger lock single switch layout, locking switch normal and reverse, X = 26 3/4".....	816001-007X	N/A
B1	Similar to Ref B except without hardware.....	816001-007	M451419-3101
C	<b>LOCK ROD, LH OR RH</b> , with hardware, for flat plunger lock single switch layout, locking switch normal and reverse, X = 26 3/4".....	816001-008X	N/A
C1	Similar to Ref C except without hardware.....	816001-008	M451419-3102
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030

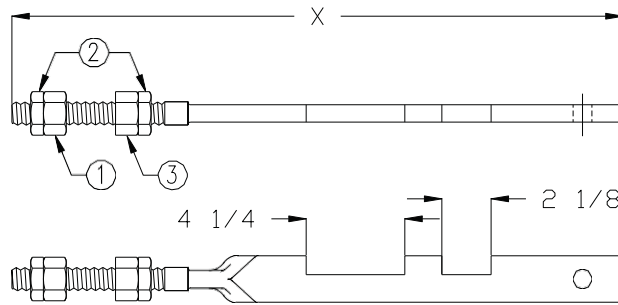
# LOCK RODS



REF A



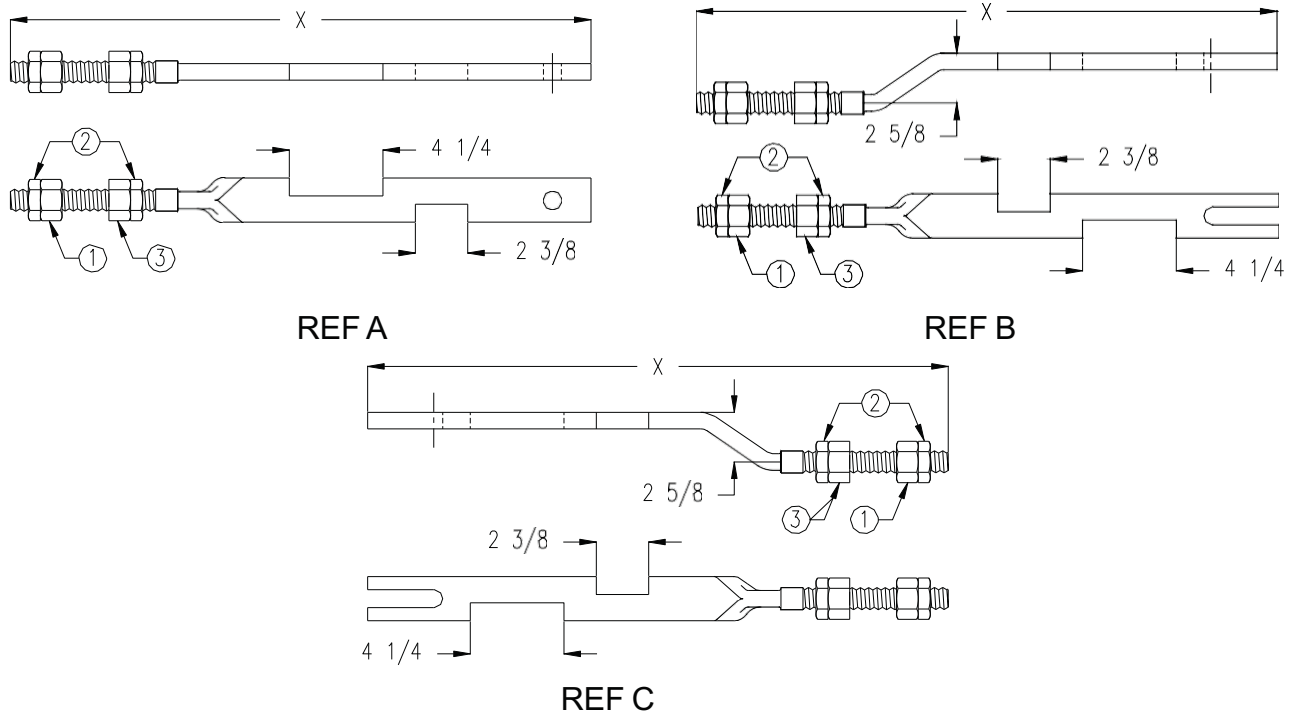
REF B



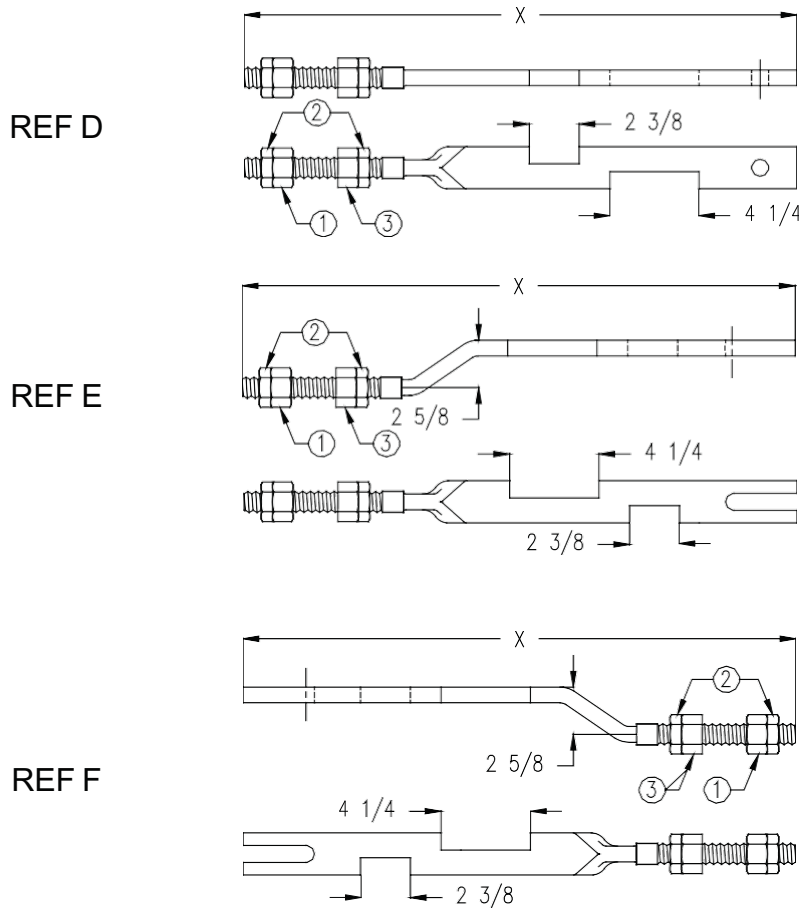
REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD, RH</b> , with hardware, for flat plunger lock single switch layout, RR Detail #3115, X = 26 3/4".....	816001-002X	N113765
A1	Similar to Ref A except without hardware.....	816001-002	M113764
B	<b>LOCK ROD, LH</b> , with hardware, for flat plunger lock single switch layout, RR Detail #3116, X = 26 3/4".....	816001-003X	N113767
B1	Similar to Ref B except without hardware.....	816001-003	M113766
C	<b>LOCK ROD, LH OR RH</b> , with hardware, for flat plunger lock single switch layout, locking switch normal and reverse, RR Detail #3117, X = 26 3/4".....	816001-004X	N113769
C1	Similar to Ref C except without hardware.....	816001-004	M113768
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030



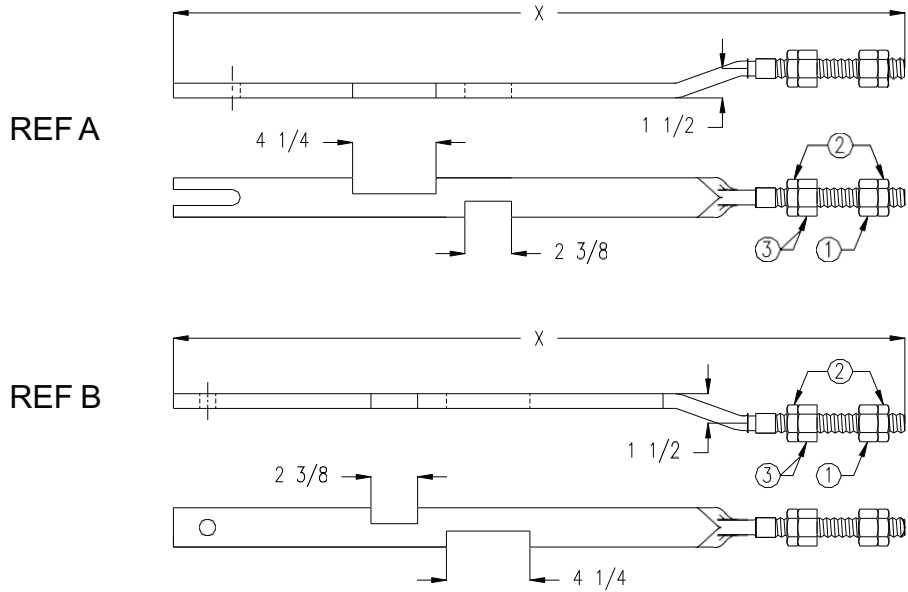


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD, LH OR RH</b> , with hardware for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #3111, X = 26 3/4" and 7 1/2" thread length	816001-009X	N113757
A1	Similar to Ref A except without hardware.....	816001-009	M113756
A2	Similar to Ref A except 3 19/32" to 5 23/32" point stroke.....	816001-015X	N/A
A3	Similar to Ref A2 except without hardware.....	816001-015	M182424
B	<b>LOCK ROD, RH</b> , with hardware, for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #3112 X = 26 3/4" and 7 1/2" thread length.....	816001-010X	N113759
B1	Similar to Ref B except without hardware.....	816001-010	M113758
B2	Similar to Ref B except 3 19/32" to 5 23/32" point stroke.....	816001-016X	N/A
B3	Similar to Ref B2 except without hardware.....	816001-016	M182425
C	<b>LOCK ROD, LH</b> , with hardware, for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #3113, X = 26 3/4" and 7 1/2" thread length.....	816001-011X	N113761
C1	Similar to Ref C except without hardware.....	816001-011	M113760
C2	Similar to Ref C except 3 19/32" to 5 23/32" point stroke.....	816001-017X	N/A
C3	Similar to Ref C2 except without hardware.....	816001-017	M182426
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030



REF	DESCRIPTION	G & B PART #	OEM PART #
D	<b>LOCK ROD, LH OR RH</b> , with hardware, for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #31120, X = 26 3/4" and 7 1/2" thread length.....	816001-012X	N119749
D1	Similar to Ref D except without hardware.....	816001-012	M118861
E	<b>LOCK ROD, RH</b> , with hardware, for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #31121, X = 26 3/4" and 7 1/2" thread length.....	816001-013X	N119750
E1	Similar to Ref E except without hardware.....	816001-013	M118862
F	<b>LOCK ROD, LH</b> , with hardware, for A-5 movements, 3 27/32" to 5 23/32" point stroke, RR Detail #31122, X = 26 3/4" and 7 1/2" thread length.....	816001-014X	N119751
F1	Similar to Ref F except without hardware.....	816001-014	M118863
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030

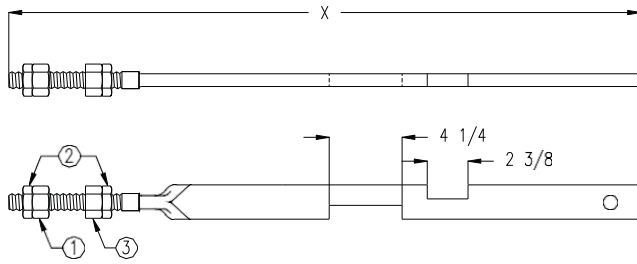
# LOCK RODS



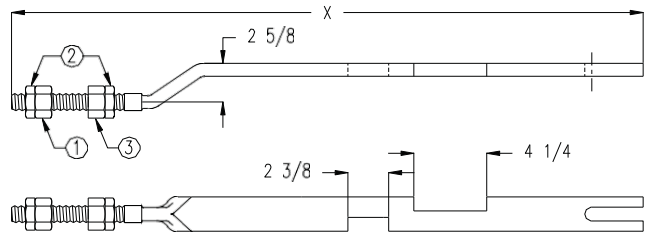
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD, LH OR RH</b> , with hardware, for M-3, M-22 & M-23 movements, 3 27/32" to 5 23/32" point stroke, X = 36 1/4".....	816001-018X	N216538
A1	Similar to Ref A except without hardware.....	816001-018	M149864
A2	Similar to Ref A except with hardened notches.....	816001-019X	N/A
A3	Similar to Ref A2 except without hardware.....	816001-019	M233782
A4	Similar to Ref A except X = 34 1/4".....	816001-020X	N/A
A5	Similar to Ref A4 except without hardware.....	816001-020	M167072
A6	<b>LOCK ROD, LH OR RH</b> , with hardware, for M-3, M-22 & M-23 movements, 4 3/8" to 6 3/4" point stroke, X = 36 3/4".....	816001-021X	N231714
A7	Similar to Ref A6 except without hardware.....	816001-021	M224932
B	<b>LOCK ROD, LH OR RH</b> , with hardware, for M-3, M-22 & M-23 movements, 3 27/32" to 5 23/32" point stroke, X = 36 1/4".....	816001-022X	N216539
B1	Similar to Ref B except without hardware.....	816001-022	M149865
B2	Similar to Ref B except with hardened notches.....	816001-023X	N/A
B3	Similar to Ref B2 except without hardware.....	816001-023	M233783
B4	Similar to Ref B except X = 34 1/4".....	816001-024X	N/A
B5	Similar to Ref B4 except without hardware.....	816001-024	M167073
B6	<b>LOCK ROD, LH OR RH</b> , with hardware, for M-3, M-22 & M-23 movements, 4 3/8" to 6 3/4" point stroke, X = 36 3/4".....	816001-025X	N231715
B7	Similar to Ref B6 except without hardware.....	816001-025	M224933
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030

# LOCK RODS

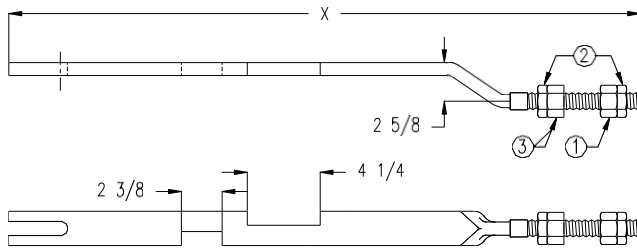
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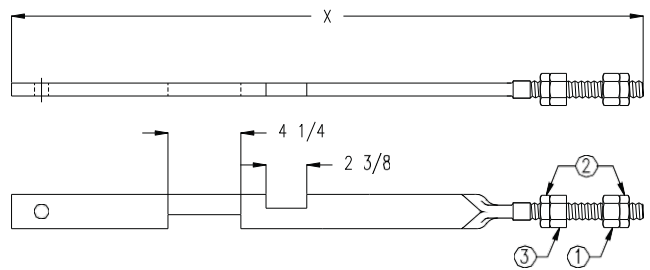
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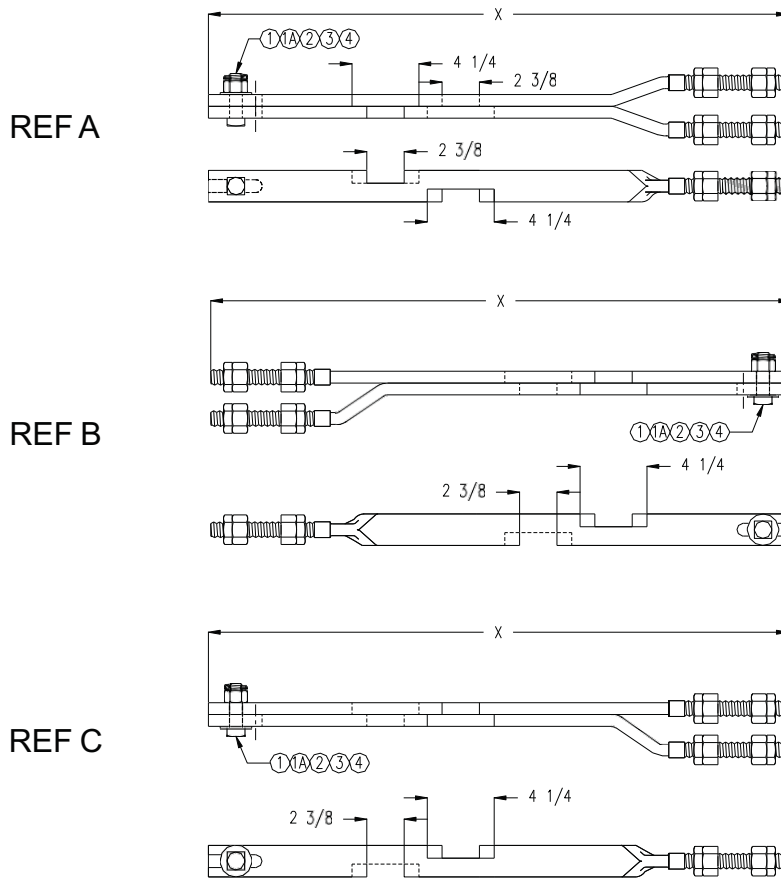


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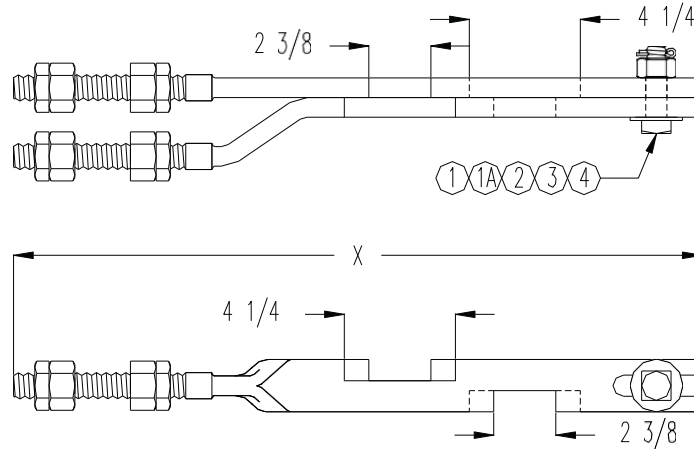


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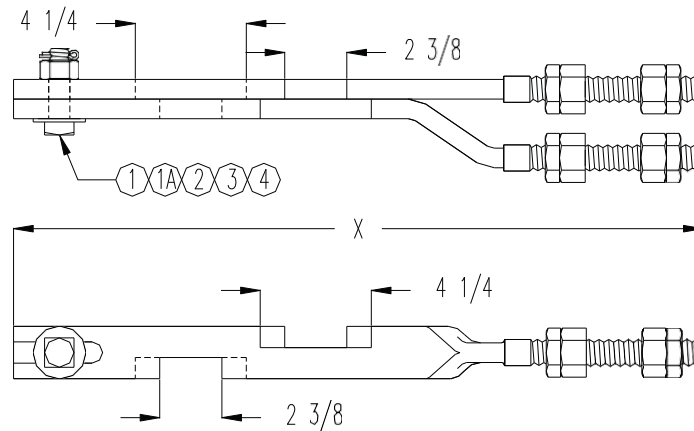
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD, RH</b> , with hardware, for M-3, M-22, & M-23 movements, RR Detail #31123, X = 37 1/4".....	816001-026X	N158981
A1	Similar to Ref A except without hardware.....	816001-026	M156826
B	<b>LOCK ROD, RH</b> , with hardware, for M-3, M-22, & M-23 movements, RR Detail #31124, X = 37 1/4".....	816001-027X	N158982
B1	Similar to Ref B except without hardware.....	816001-027	M156827
C	<b>LOCK ROD, LH</b> , with hardware, for M-3, M-22, & M-23 movements, RR Detail #31125, X = 37 1/4".....	816001-028X	N158983
C1	Similar to Ref C except without hardware.....	816001-028	M156828
D	<b>LOCK ROD, LH</b> , with hardware, for M-3, M-22, & M-23 movements, RR Detail #31126, X = 37 1/4".....	816001-029X	N158984
D1	Similar to Ref D except without hardware.....	816001-029	M156829
1	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
2	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
3	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD</b> , for M-3, M-22, M-23 movements, 3 27/32" to 5 23/32" point stroke, X = 36 1/4" and 7 1/2" thread length.....	816005-015X	N149866
A1	Similar to Ref A except with hardened notches.....	816005-016X	N233784
A2	Similar to Ref A except X = 34 1/4".....	816005-217X	N167074
A3	Similar to Ref A except 3 3/8" to 4 3/8" point stroke.....	816005-018X	N451419-1903
A4	Similar to Ref A except 4 3/8" to 6 1/4" point stroke, X = 36 3/4".....	816005-019X	N224934
B	<b>ADJUSTABLE LOCK ROD, RH</b> , for M-3, M-22, M-23 movements, 3 27/32" to 5 23/32" point stroke, X = 37 1/4" and 7 1/2" thread length.....	816005-021X	N156841
C	Similar to Ref B except <b>LH</b> .....	816005-022X	N156840
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, and cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632



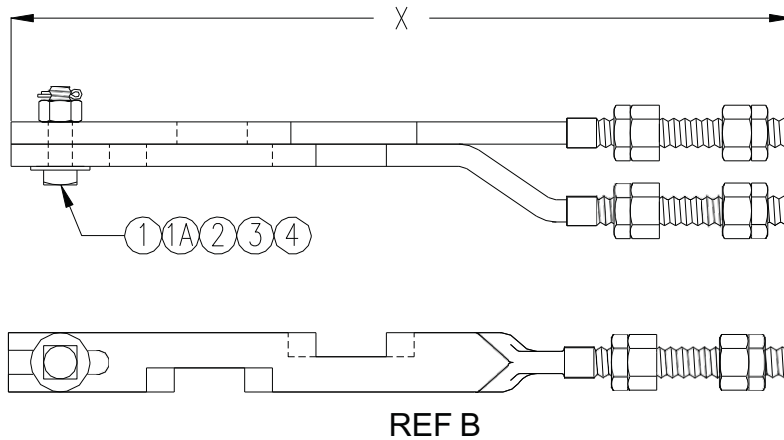
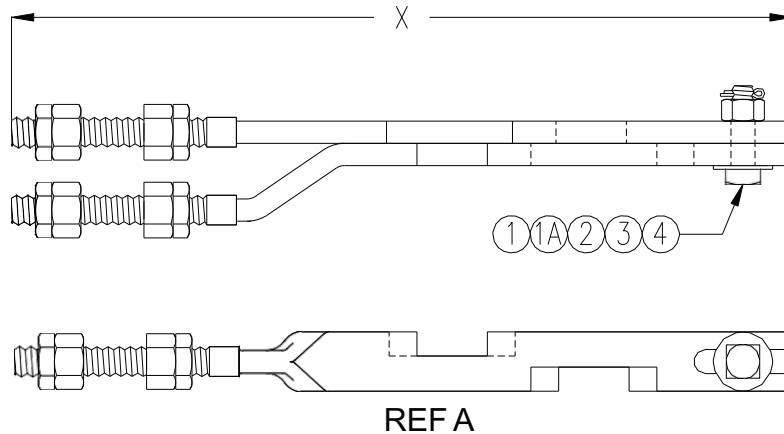
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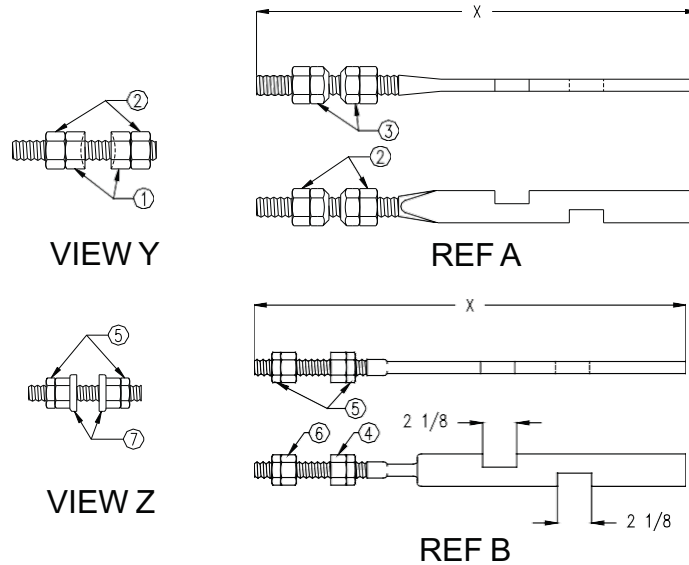
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REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD, RH</b> , for A-1, A-5 movements, 3 27/32" to 5 23/32" point stroke, X = 26 3/4" and 7 1/2" thread length.....	816005-024X	N118864
A1	Similar to Ref A except hex nuts assembled in reverse order.....	816005-025X	N147502
B	<b>ADJUSTABLE LOCK ROD, LH</b> , for A-1, A-5 movements, 3 27/32" to 5 23/32" point stroke, X = 26 3/4" and 7 1/2" thread length.....	816005-026X	N118865
B1	Similar to Ref B except hex nuts assembled in reverse order.....	816005-027X	N158945
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, and cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632

ADJUSTABLE LOCK RODS

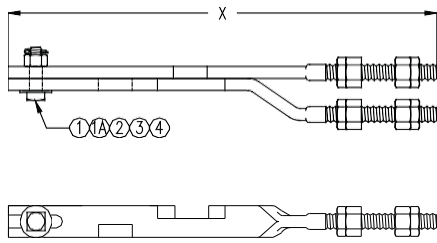


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD</b> , for A-1, A-5 movements, 3 27/32" to 5 23/32" point stroke, X = 26 3/4" and 7 1/2" thread length.....	816005-028X	N119009
A1	Similar to Ref A except hex nuts assembled in reverse order.....	816005-029X	N137462
A2	Similar to Ref A1 except 3 19/32" to 5 23/32" point stroke.....	816005-030X	N182427
B	<b>ADJUSTABLE LOCK ROD</b> , for A-1, A-5 movements, 3 27/32" to 5 23/32" point stroke, X = 26 3/4" and 7 1/2" thread length.....	816005-031X	N119010
B1	Similar to Ref B except hex nuts assembled in reverse order.....	816005-032X	N137463
B2	Similar to Ref B1 except 3 19/32" to 5 23/32" point stroke.....	816005-033X	N182428
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, and cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632

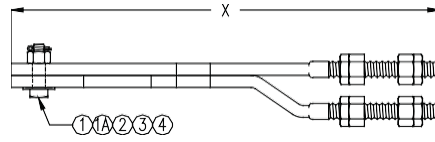


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, LH OR RH</b> , for style S-20 or S-21 mechanical operated switch movements, 1 1/4" threads, with convex nuts, 2 3/16" wide notches, X = 27 1/2".....	816005-035X	N256472
A1	Similar to Ref A except with cupped nuts, per view Y.....	816005-036X	N260122
A2	Similar to Ref A except X = 26 3/4".....	816005-054X	N277995
A3	Similar to Ref A2 except with cupped nuts, per view Y.....	816005-037X	N373876
A4	<b>LOCK ROD COMPLETE, LH OR RH</b> , for style T-20 or T-21 hand operated switch movements, 1 1/4" threads, with convex nuts, 2 1/8" wide notches, X = 27 1/2".....	816005-034X	N256474
A5	Similar to Ref A4 except with cupped nuts, per view Y.....	816005-020X	N257216
A6	Similar to Ref A4 except X = 26 3/4".....	816005-038X	N277994
A7	Similar to Ref A6 except with cupped nuts, per view Y.....	816005-039X	N/A
B	<b>LOCK ROD COMPLETE, LH OR RH</b> , for style T-20 or T-21 hand operated switch movements, with cupped nuts, 1" threads, X = 26 3/4".....	816005-040X	N108634
B1	Similar to Ref B except hardened notches.....	816005-041X	N233823
B2	Similar to Ref B except with special cupped nuts, per view Z.....	816005-042X	N218829
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176
3	<b>CONVEX HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	816004-005	M191237
4	<b>CUPPED HEAVY HEX NUT</b> , 1"-8 UNC, RR Detail 31110.....	816004-001	M117153
5	<b>HEAVY HEX JAM NUT</b> , special, 1"-8 UNC, RR Detail 3119.....	816004-002	M117152
6	<b>HEAVY HEX NUT</b> , 1"-8 UNC.....	990331-100-02	J048030
7	<b>SPECIAL CUPPED HEX NUT</b> , 1"-8 UNC.....	816004-006	M193165

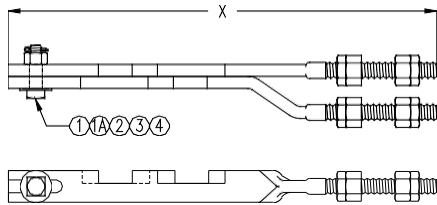




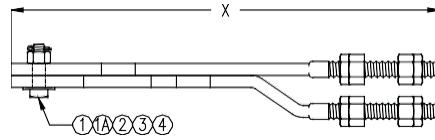
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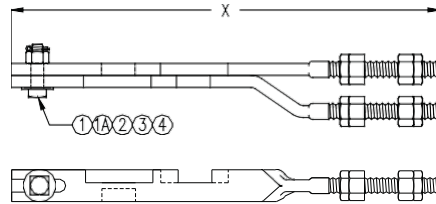
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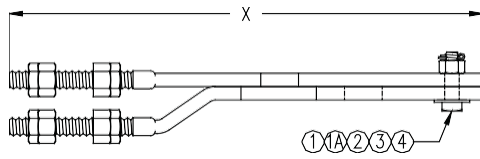


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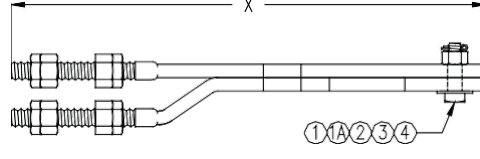


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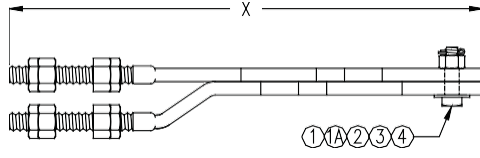
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD, LH</b> , for style S-1 mechanical operated facing point lock for spring switches with LH point locked closed, X = 26 3/4".....	816005-047X	N186715
B	<b>ADJUSTABLE LOCK ROD, LH</b> , for LH flat plunger lock with LH point locked closed, X = 26 3/4".....	816005-043X	N119028
C	Similar to Ref B except LH or RH point locked closed.....	816005-045X	N119029
D	Similar to Ref B except RH point locked closed.....	816005-044X	N119030
E	<b>ADJUSTABLE LOCK ROD, LH</b> , for hand throw single switch & lock with LH point locked closed, X = 26 3/4".....	816005-046X	N140510
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, & cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632



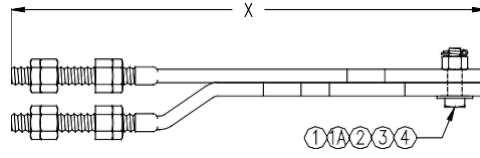
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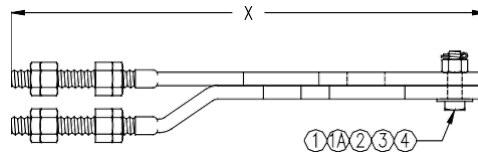
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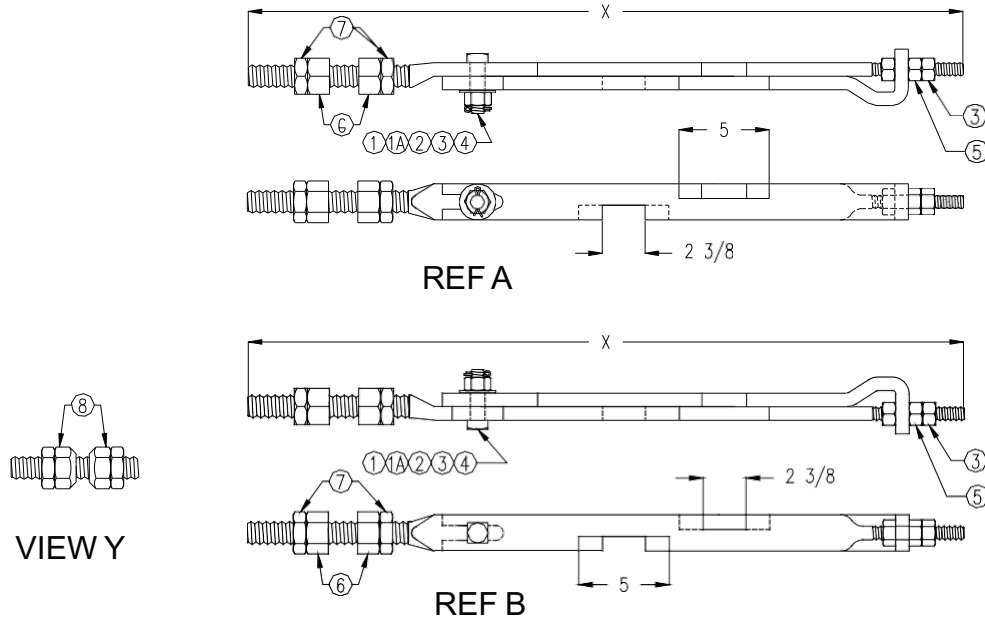


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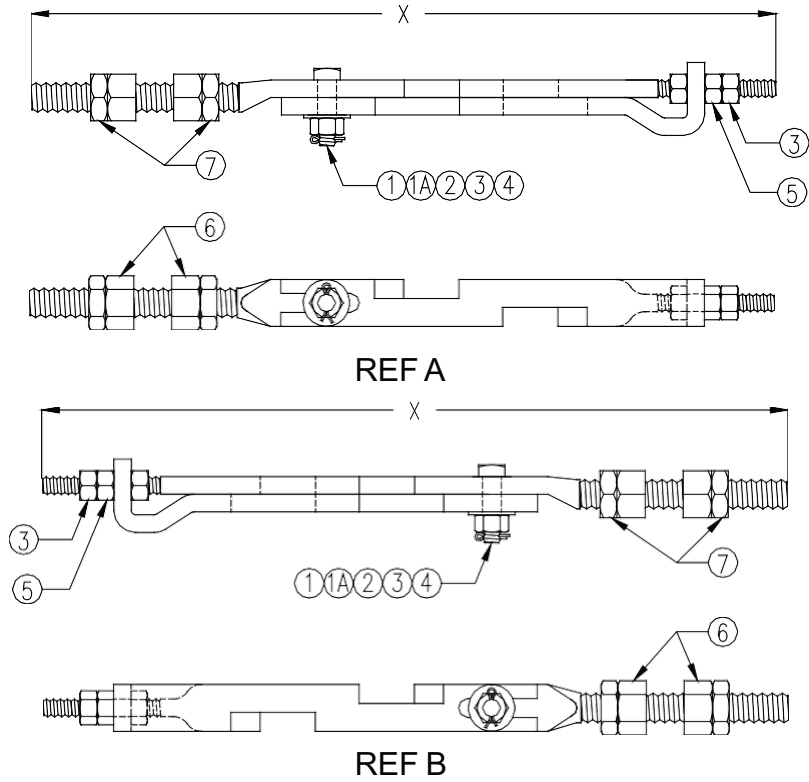


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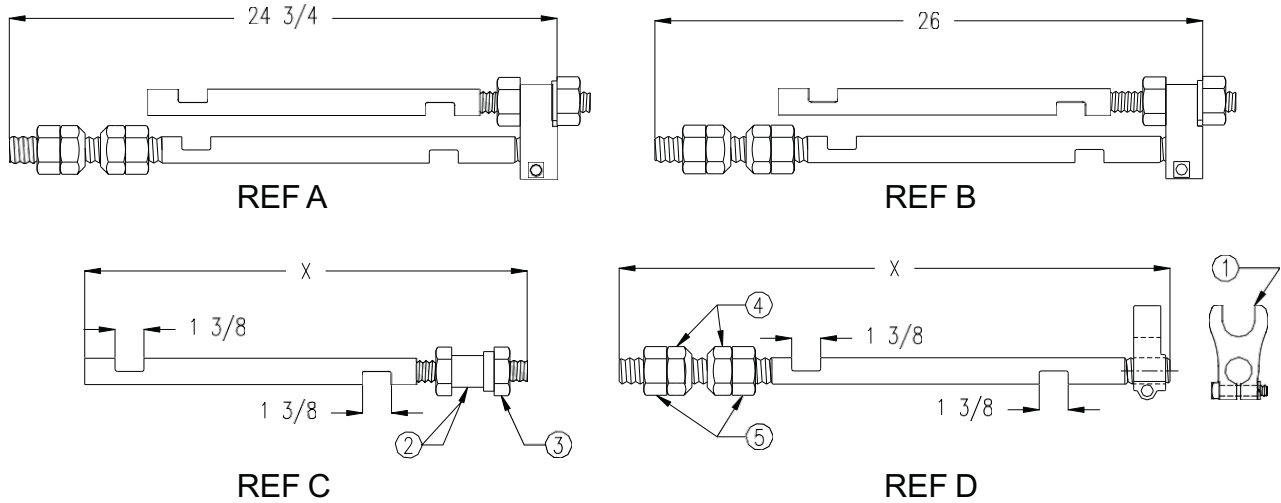
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD, RH</b> , for style S-1 mechanical operated facing point lock for spring switches with RH point locked closed, X = 26 3/4".....	816005-052X	N186716
B	<b>ADJUSTABLE LOCK ROD, RH</b> , for RH flat plunger lock with RH point locked closed, X = 26 3/4".....	816005-048X	N119025
C	Similar to Ref B except LH or RH point locked closed.....	816005-050X	N/A
D	Similar to Ref B except LH point locked closed.....	816005-049X	N/A
E	<b>ADJUSTABLE LOCK ROD, RH</b> , for hand throw single switch & lock with RH point locked closed, X = 26 3/4".....	816005-051X	N140522
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, & cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632



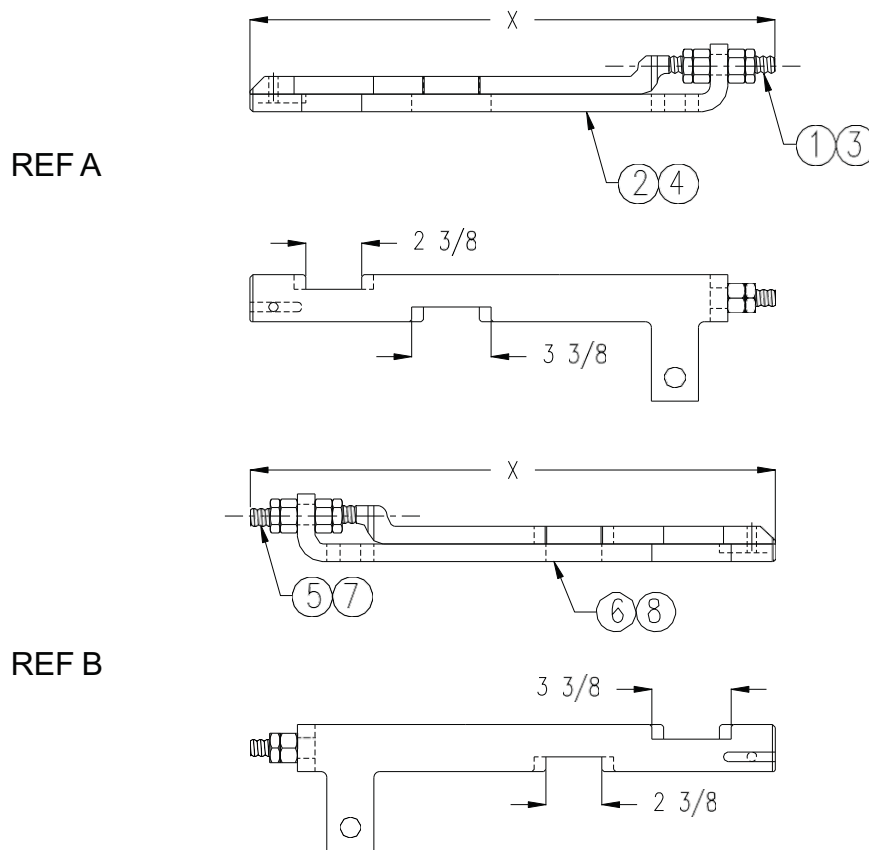
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD, LH</b> , for use in M-2, M-22, M-23 movements, 3 1/2" to 6 1/8" point stroke, X = 47 7/8" and 10 3/4" thread length.....	816010-003X	N258643
A1	Similar to Ref A except with convex nuts, per view Y.....	816010-005X	N265445
A2	Similar to Ref A except X = 44 7/8" and 7 3/4" thread length.....	816010-006X	N278018
A3	Similar to Ref A2 except with convex nuts, per view Y.....	816010-008X	N307224
A4	Similar to Ref A except X = 43 7/8" and 6 3/4" thread length.....	816010-009X	N386968
A5	Similar to Ref A4 except with convex nuts, per view Y.....	816010-010X	N/A
A6	<b>ADJUSTABLE LOCK ROD, LH</b> , for use in M-2, M-22, M-23 movements applied to a swing-nose frog layout, 1 1/2" to 4 1/8" point stroke, X = 47 7/8" and 10 3/4" thread length.....	816010-011X	N451419-1802
B	Similar to Ref A except RH.....	816010-004X	N274570
B1	Similar to Ref A2 except RH.....	816010-007X	N278711
B2	Similar to Ref A6 except RH.....	816010-012X	N451419-1801
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, and cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632
5	<b>SPECIAL NUT</b> , 3/4"-10 UNC.....	816004-004	M000284
6	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522
7	<b>HEAVY HEX JAM NUT</b> , 1 1/4"-7 UNC.....	990330-125-02	J048044
8	<b>HEAVY HEX CONVEX NUT</b> , 1 1/4"-7 UNC.....	816004-007	M215700



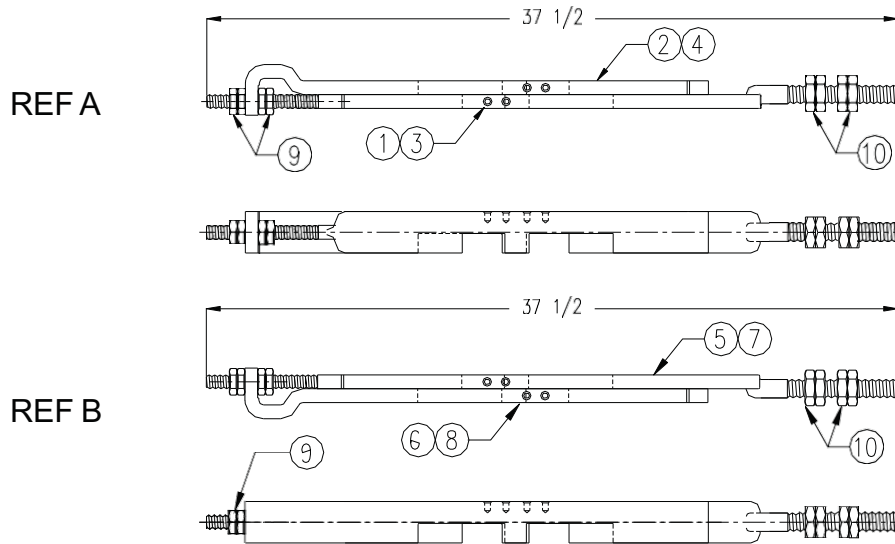
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE LOCK ROD</b> , for A-1 & A-5 movements, 4 1/4" to 5 1/2" point stroke, X = 30" and 7" thread length.....	816010-101X	N281573
A1	<b>ADJUSTABLE LOCK ROD</b> , for A-1 & A-5 movements, 3 1/2" to 5 23/32" point stroke, X = 34" and 7 1/2" thread length.....	816010-103X	N258816
A2	<b>ADJUSTABLE LOCK ROD</b> , for A-1 & A-5 movements, 3 5/32" to 5 11/32" point stroke, X = 30 1/2" and 6 3/4" thread length.....	816010-105X	N451419-0901
B	Similar to Ref A except opposite hand.....	816010-102X	N281575
B1	Similar to Ref A1 except opposite hand.....	816010-104X	N258817
B2	Similar to Ref A2 except opposite hand.....	816010-106X	N/A
1	<b>BOLT COMPLETE</b> , with plate washer, heavy hex nut, and cotter pin.....	816004-003-01	N/A
1A	<b>BOLT ONLY</b> , for Ref 1.....	816004-003	M010725
2	<b>PLATE WASHER</b> , 13/16" ID X 2" OD.....	990601-075-002	J047506
3	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
4	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632
5	<b>SPECIAL NUT</b> , 3/4"-10 UNC.....	816004-004	M000284
6	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522
7	<b>HEAVY HEX JAM NUT</b> , 1 1/4"-7 UNC.....	990330-125-02	J048044



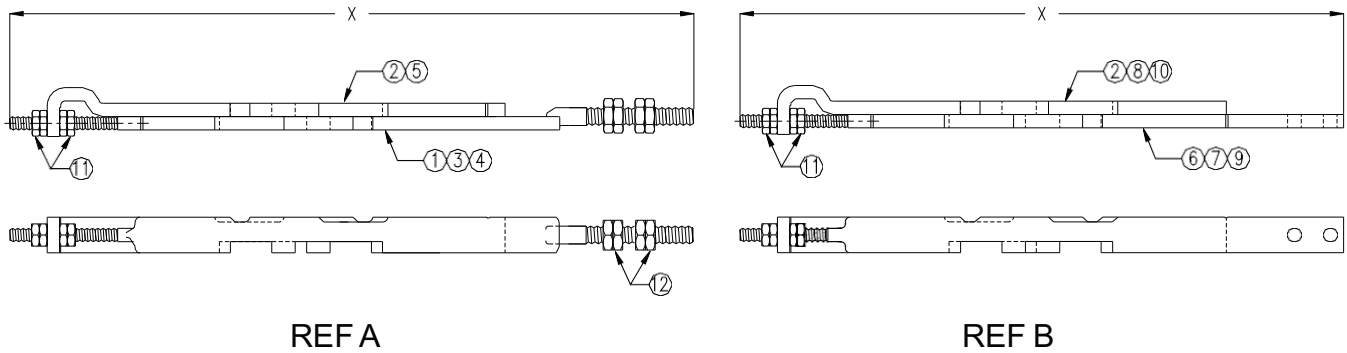
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 1/8" to 4 3/8" point stroke.....	816016-001-01	N/A
B	<b>LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 3/4" to 5 5/8" point stroke.....	816016-002-01	N/A
C	<b>TOP LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 1/8" to 4 3/8" point stroke, X = 19 3/4".....	816015-001-01	N215506
C1	<b>TOP LOCKING BAR ONLY</b> , similar to Ref A except without adjusting nuts.	816015-001	M158092
C2	<b>TOP LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 3/4" to 5 5/8" point stroke, X = 21".....	816015-002-01	N215508
C3	<b>TOP LOCKING BAR ONLY</b> , similar to Ref A2 except without adjusting nuts	816015-002	M166728
D	<b>LOWER LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 1/8" to 4 3/8" point stroke, X = 24 3/4".....	816015-003-01	N163680
D1	Similar to Ref D except with rust preventative.....	816015-003-02	N163680-001
D2	Similar to Ref D except includes chamfered and hex nuts.....	816015-003-03	N/A
D3	<b>LOWER LOCKING BAR ONLY</b> , similar to Ref D except without jaw.....	816015-003	M158093
D4	<b>LOWER LOCKING BAR COMPLETE, LH OR RH</b> , for A-10 S & L movement, adjustable for 3 3/4" to 5 5/8" point stroke, X = 26".....	816015-004-01	N166772
D5	Similar to Ref D4 except includes chamfered and hex nuts.....	816015-004-02	N294211
D6	<b>LOWER LOCKING BAR ONLY</b> , similar to Ref D4 except without jaw.....	816015-004	M166730
1	<b>LOCK ROD JAW COMPLETE</b> .....	816015-011X	N186083
2	<b>ADJUSTING NUT</b> .....	816004-010	M158089
3	<b>ADJUSTING JAM NUT</b> .....	816004-008	M158133
4	<b>CHAMFERED HEAVY HEX NUTS, 1"-8 UNC</b> .....	816004-009	M163240
5	<b>HEAVY HEX NUTS, 1"-8 UNC</b> .....	990331-100-02	J048030



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, LH</b> , for M-3, M-22 & M-23 movements, 3 1/2" to 4 1/2" point stroke, X = 20 15/16".....	816019-001X	N451419-1403
A1	Similar to Ref A except 4 1/2" to 5 1/2" point stroke & X = 22 5/16".....	816019-002X	N451419-2504
B	<b>LOCK ROD COMPLETE, RH</b> , for M-3, M-22 & M-23 movements, 3 1/2" to 4 1/2" point stroke, X = 20 15/16".....	816019-003X	N451419-1303
B1	Similar to Ref B except 4 1/2" to 5 1/2" point stroke & X = 22 5/16".....	816019-004X	N451419-2604
1	<b>PINNED LOCK ROD ONLY</b> , for Ref A.....	816018-001	R451419-1404
2	<b>LOCK ROD ONLY</b> , for Ref A.....	816018-002	M451419-1401
3	<b>PINNED LOCK ROD ONLY</b> , for Ref A1.....	816018-003	R451419-2503
4	<b>LOCK ROD ONLY</b> , for Ref A1.....	816018-004	M451419-2501
5	<b>PINNED LOCK ROD ONLY</b> , for Ref B.....	816018-005	R451419-1305
6	<b>LOCK ROD ONLY</b> , for Ref B.....	816018-006	M451419-1301
7	<b>PINNED LOCK ROD ONLY</b> , for Ref B1.....	816018-007	R451419-2603
8	<b>LOCK ROD ONLY</b> , for Ref B1.....	816018-008	M451419-2601

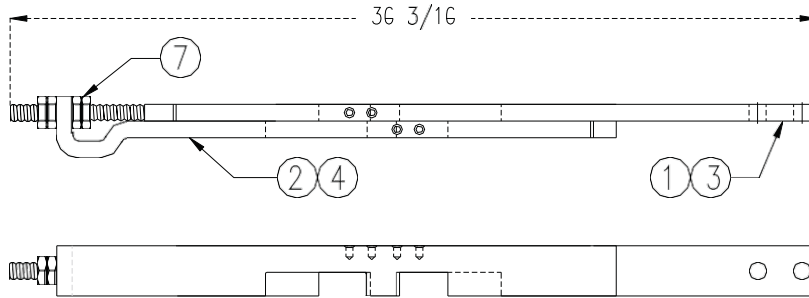


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G & 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches.....	916005-001X	45512-005-07 P85-468
A1	Similar to Ref A except with 2 1/8" wide notches.....	916005-002X	45512-005-10
B	<b>LOCK ROD COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G & 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches, opposite hand of Ref A.....	916005-003X	45512-006-06 P85-469
B1	Similar to Ref B except with 2 1/8" wide notches, opposite hand of Ref A1....	916005-004X	45512-006-08
1	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref A.....	916001-006	45519-006 P85-471
2	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref A.....	916002-004	45525-004 P85-482
3	<b>LOCK ROD ONLY</b> , 2 1/8" wide notch, for Ref A1.....	916001-171	45519-171
4	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref A1.....	916002-061	45525-061
5	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref B.....	916001-005	45519-005 P85-470
6	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref B.....	916002-005	45525-005 P85-483
7	<b>LOCK ROD ONLY</b> , 2 1/8" wide notch, for Ref B1.....	916001-170	45519-170
8	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref B1.....	916002-062	45525-062
9	<b>HEAVY HEX JAM NUT</b> , 3/4"-10 UNC.....	990330-075-02	4364 P85-250
10	<b>HEAVY HEX JAM NUT</b> , 1"-8 UNC.....	990330-100-02	0477-000-ON P91-144

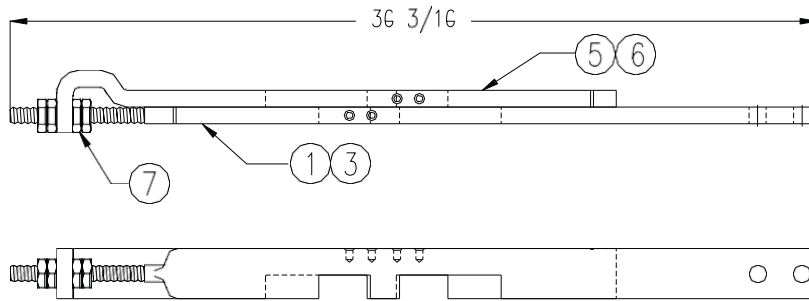


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, LH OR RH</b> , for Model 55 switch movement, double adjustable, 3 1/2" to 6 3/8" point stroke, 2 5/16" wide notches, X = 38 1/4".....	916005-005X	45512-073-01 P85-1116
A1	Similar to Ref A except X = 37 1/2".....	916005-006X	45512-073-02
A2	Similar to Ref A1 except with 2 1/8" wide notches.....	916005-007X	45512-073-03
B	<b>LOCK ROD COMPLETE, LH OR RH</b> , for Model 55 switch movement, single adjustable, 3 1/2" to 6 3/8" point stroke, 2 5/16" wide notches, X = 33 3/4".....	916005-016X	45512-071-01 P85-1101
B1	Similar to Ref B except X = 34 5/8".....	916005-017X	45512-075-01
B2	Similar to Ref B except with 2 1/8" wide notches.....	916005-018X	45512-081-01
1	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref A.....	916001-156	45519-156 P85-1125
2	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref A, A1, & B.....	916002-053	45525-053 P85-1105
3	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref A1.....	916001-164	45519-164
4	<b>LOCK ROD ONLY</b> , 2 1/8" wide notch, for Ref A2.....	916001-176	45519-176
5	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref A2.....	916002-066	45525-066
6	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref B.....	916001-155	45519-155 P85-1102
7	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref B1.....	916001-162	45519-162
8	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref B1.....	916002-059	45525-059
9	<b>LOCK ROD ONLY</b> , 2 1/8" wide notch, for Ref B2.....	916001-172	45519-172
10	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref B2.....	916002-063	45525-063
11	<b>HEAVY HEX JAM NUT</b> , 3/4"-10 UNC.....	990330-075-02	4364 P85-250
12	<b>HEAVY HEX JAM NUT</b> , 1"-8 UNC.....	990330-100-02	0477-000-ON P91-144



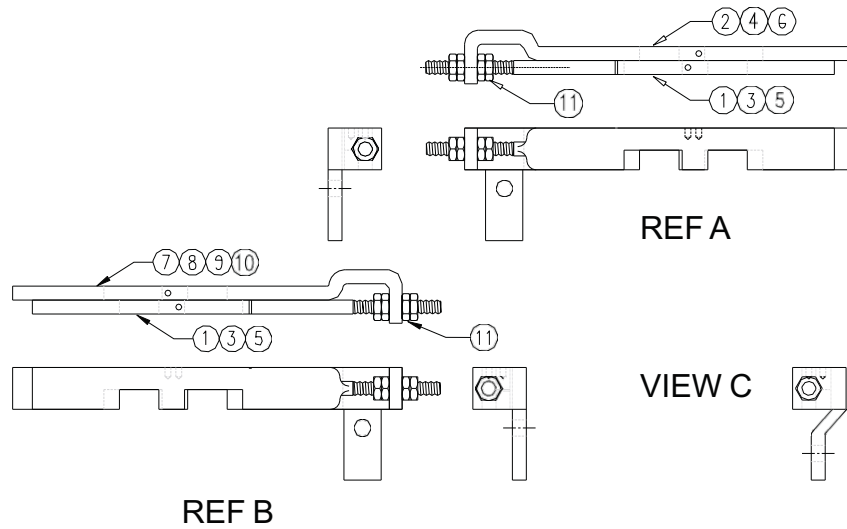


REF A



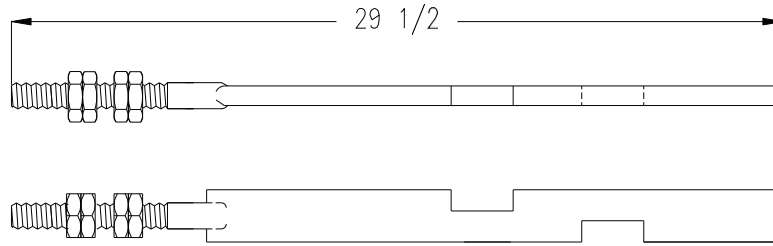
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, RH</b> , for Model 5A, 5E, 5F, 5G & 5H switch movements, single adjustable, 3 1/2" to 6" point stroke, 2 5/16" notches.....	916005-010X	45512-057-01
A1	Similar to Ref A except with 2 1/8" notches.....	916005-012X	45512-083-03
A2	Similar to Ref A1 except with 3 1/2" drop lug.....	916005-012-01X	45512-083-01
B	<b>LOCK ROD COMPLETE, LH</b> , for Model 5A, 5E, 5F, 5G & 5H switch movements, single adjustable, 3 1/2" to 6" point stroke, 2 5/16" notches.....	916005-011X	45512-057-04
B1	Similar to Ref B except with 2 1/8" notches.....	916005-023X	45512-083-04
B2	Similar to Ref B1 except with 3 1/2" drop lug.....	916005-023-01X	45512-083-02
1	<b>LOCK ROD ONLY</b> , 2 5/16" wide notch, for Ref A & B.....	916001-145	45519-145
2	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref A.....	916002-038	45525-038
3	<b>LOCK ROD ONLY</b> , 2 1/8" wide notch, for Ref A1, A2, B1 & B2.....	916001-184	45519-184
4	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref A1 & A2.....	916002-074	45525-074
5	<b>ADJUSTING PLATE ONLY</b> , 2 5/16" wide notch, for Ref B.....	916002-039	45525-039
6	<b>ADJUSTING PLATE ONLY</b> , 2 1/8" wide notch, for Ref B1 & B2.....	916002-075	45525-075
7	<b>HEAVY HEX JAM NUT</b> , 3/4"-10 UNC.....	990330-075-02	4364 P85-250

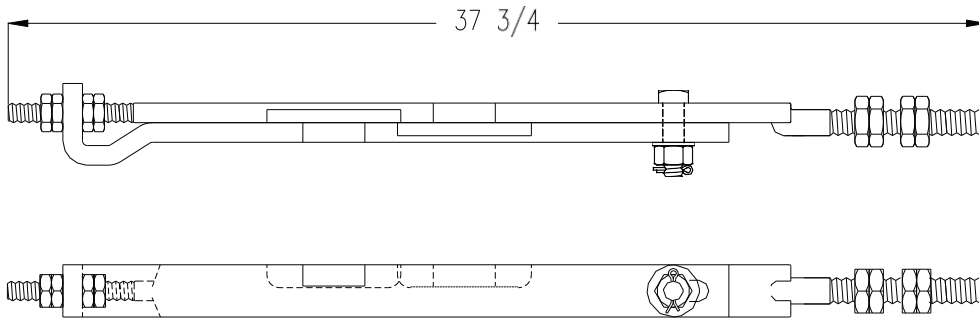


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, LH</b> , for Model 5A, 5E, 5F, 5G & 5H switch movements, single adjustable, 3 1/2" to 4 1/2" point stroke, 2 1/8" notches....	916005-013X	45512-028-01
A1	Similar to Ref A except 4 1/2" to 5 1/2" point stroke.....	916005-019X	N/A
A2	Similar to Ref A except 5 1/2" to 6 3/8" point stroke.....	916005-014X	45512-028-04
B	<b>LOCK ROD COMPLETE, RH</b> , for Model 5A, 5E, 5F, 5G & 5H switch movements, single adjustable, 3 1/2" to 4 1/2" point stroke, 2 1/8" notches....	916005-015X	45512-029-01
B1	Similar to Ref B except 4 1/2" to 5 1/2" point stroke.....	916005-020X	N/A
B2	Similar to Ref B except 5 1/2" to 6 3/8" point stroke.....	916005-021X	45512-029-04
B3	Similar to Ref B except per view "C".....	916005-022X	45512-016-01
1	<b>LOCK ROD ONLY</b> , for Ref A, B & B3.....	916001-000	45519-000
2	<b>ADJUSTING PLATE ONLY</b> , for Ref A.....	916002-023	45525-023
3	<b>LOCK ROD ONLY</b> , for Ref A1 & B1.....	916001-153	45519-153
4	<b>ADJUSTING PLATE ONLY</b> , for Ref A1.....	916002-047	45525-047
5	<b>LOCK ROD ONLY</b> , for Ref A2 & B2.....	916001-152	45519-152
6	<b>ADJUSTING PLATE ONLY</b> , for Ref A2.....	916002-046	45525-046
7	<b>ADJUSTING PLATE ONLY</b> , for Ref B.....	916002-022	45525-022
8	<b>ADJUSTING PLATE ONLY</b> , for Ref B1.....	916002-048	45525-048
9	<b>ADJUSTING PLATE ONLY</b> , for Ref B2.....	916002-056	45525-056
10	<b>ADJUSTING PLATE ONLY</b> , for Ref B3.....	916002-000	45525-000
11	<b>HEAVY HEX JAM NUT</b> , 3/4"-10 UNC.....	990330-075-02	4364 P85-250

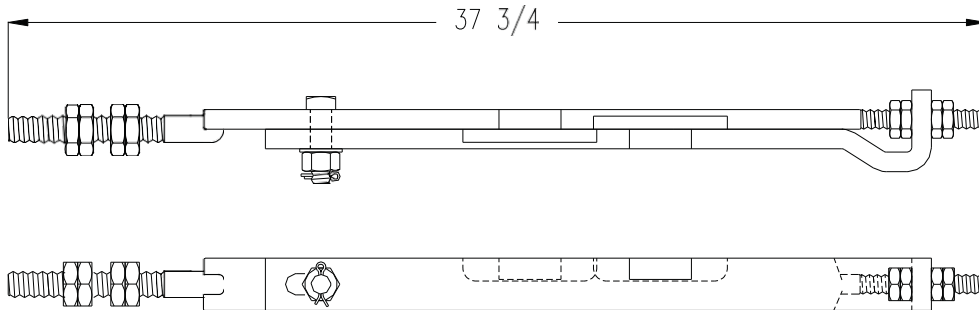
LOCK RODS



REF A

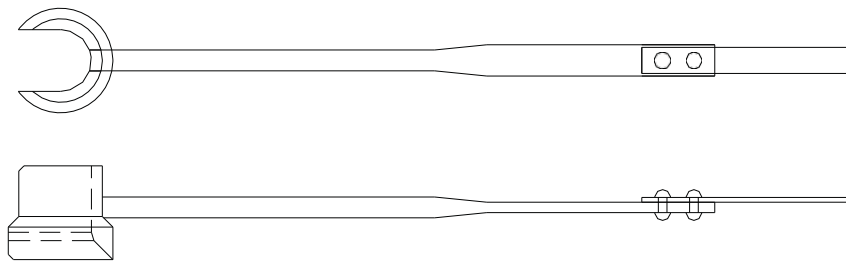


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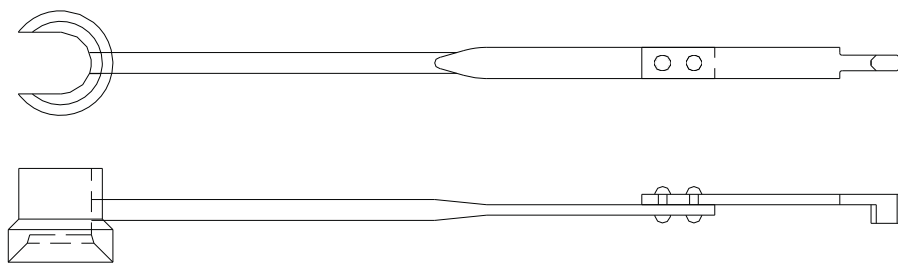


REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE, LH OR RH</b> , for single locking on a Model 9 switch movement, for normal closed or normal open point.....	916020-001X	50842-020 A87-230
B	<b>LOCK ROD COMPLETE, LH</b> , for double locking on a Model 9 switch movement, for normal closed point, 4" to 6" point stroke.....	916020-002X	50840-011-01 A87-231
C	<b>LOCK ROD COMPLETE, RH</b> , for double locking on a Model 9 switch movement, for normal closed point, 4" to 6" point stroke.....	916020-003X	50840-009-01 A87-233



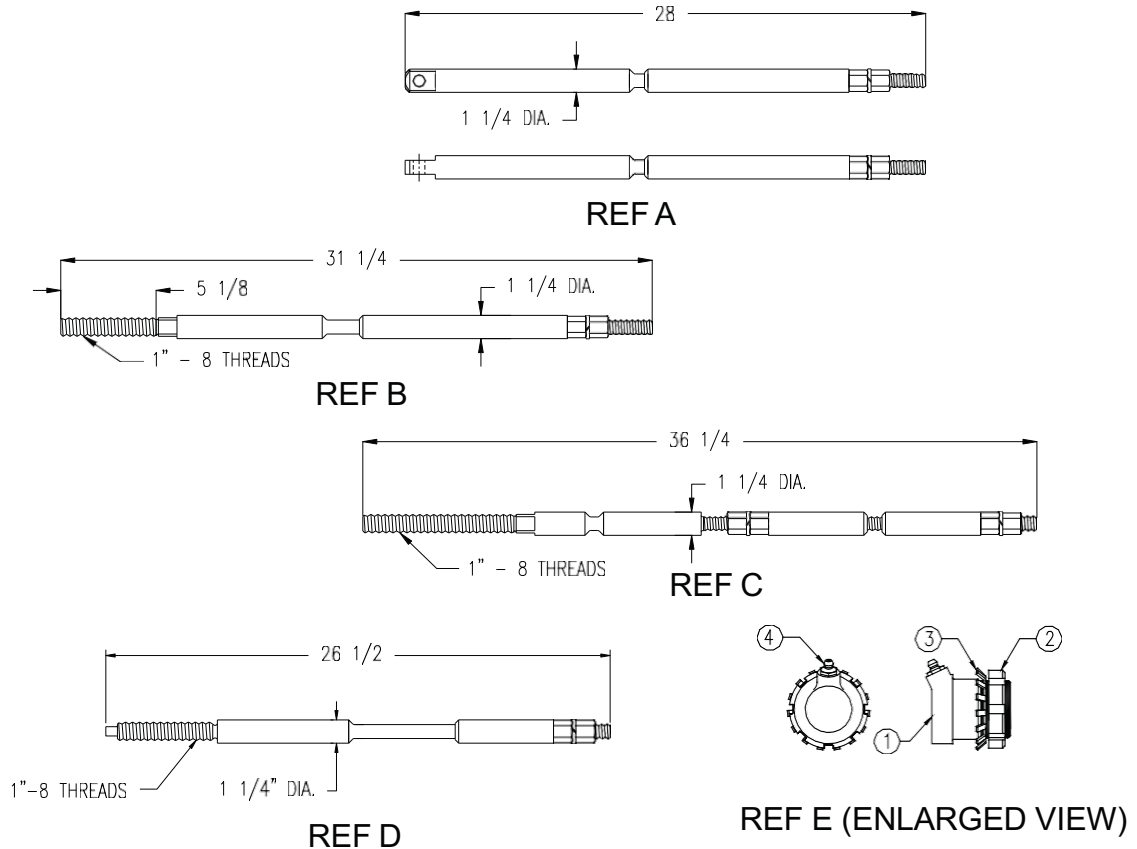
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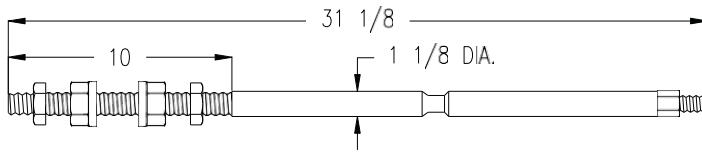
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR GAGE</b> , for use with M-3 & M-23 A/B movements.....	830100-001X	N295326
A1	Similar to Ref A except without feeler gage.....	830100-007X	N295325
A2	<b>POINT DETECTOR GAGE</b> , for use with A-1 & A-5 movements.....	830100-002X	N250287
A3	Similar to Ref A2 except without feeler gage.....	830100-008X	N258698
A4	<b>POINT DETECTOR GAGE</b> , for use with M-2 & M-22 movements.....	830100-003X	N250288
A5	Similar to Ref A4 except without feeler gage.....	830100-009X	N258699
A6	<b>POINT DETECTOR GAGE</b> , for use with T-20/T-21 movements & S-20/S-21 F.P. locks.....	830100-004X	N250289
A7	Similar to Ref A6 except without feeler gage.....	830100-010X	N258700
B	<b>POINT DETECTOR GAGE, MIDPOINT</b> , for use with A-5 switch machine for midpoint movements to indicate points closed at 1/2", points open at 5/8"....	830100-005X	N451228-0501
B1	Similar to Ref B except without feeler gage.....	830100-011X	N451228-0502
B2	<b>POINT DETECTOR GAGE, MIDPOINT</b> , for use with M-23 switch machine for midpoint movements to indicate points closed at 1/2", points open at 5/8".....	830100-006X	N451228-0601
B3	Similar to Ref B2 except without feeler gage.....	830100-012X	N451228-0602

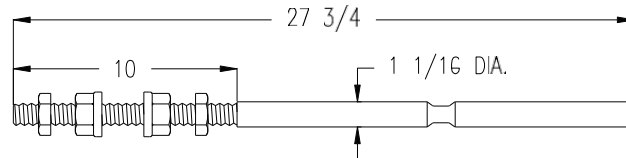
POINT DETECTOR BARS



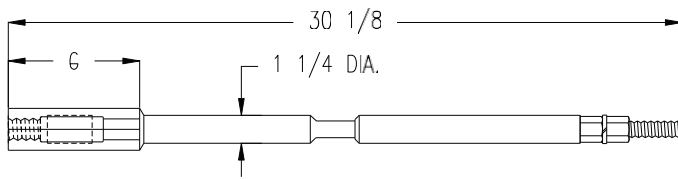
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR BAR</b> , for Model M-3/M-23 movements, 3 7/8" to 6" point stroke.....	830110-001X	N284475
A1	Similar to Ref A except 2 1/8" to 4 3/8" point stroke.....	830110-002X	N304195
A2	Similar to Ref A except for Model M, M-2, M-20, M-22, & M-10 switch movements.....	830110-003X	N141759
B	<b>POINT DETECTOR BAR</b> , for Model M-3/M-23 movements.....	830110-004X	N285907
B1	Similar to Ref B except for short throw on swing-nose frog.....	830110-005X	N451161-6703
C	<b>POINT DETECTOR BAR</b> , for Model M-3/M-23 movements.....	830110-008X	N451161-6002
D	<b>POINT DETECTOR BAR</b> , for Model M-3/M-23 movements.....	830110-006X	N387566
D1	Similar to Ref D except with no jam nuts.....	830110-007X	N387566-001
E	<b>POINT DETECTOR BAR GUIDE BUSHING ASSEMBLY</b> .....	898100X	X296127-001
1	<b>POINT DETECTOR BAR BUSHING</b> , for Model M-3/M-23 movements.....	898100	M296122
2	<b>LOCKNUT</b> , for Ref E.....	890355-100	M223351
3	<b>LOCK WASHER</b> .....	990413-156	J047810
4	<b>GREASE FITTING</b> , straight alemite.....	990900-009	J039137



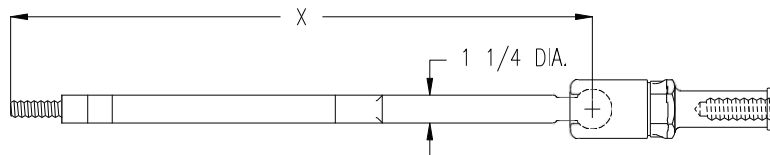
REF A



REF B

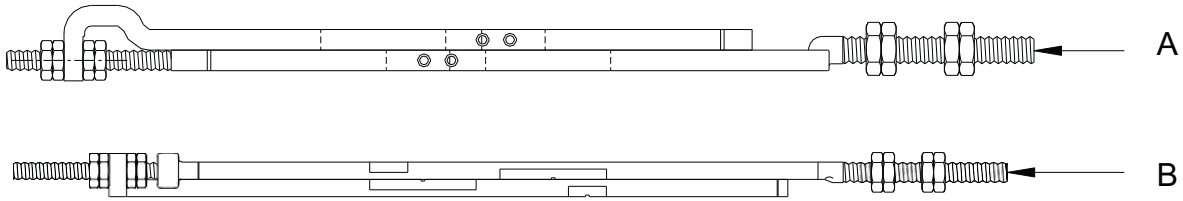


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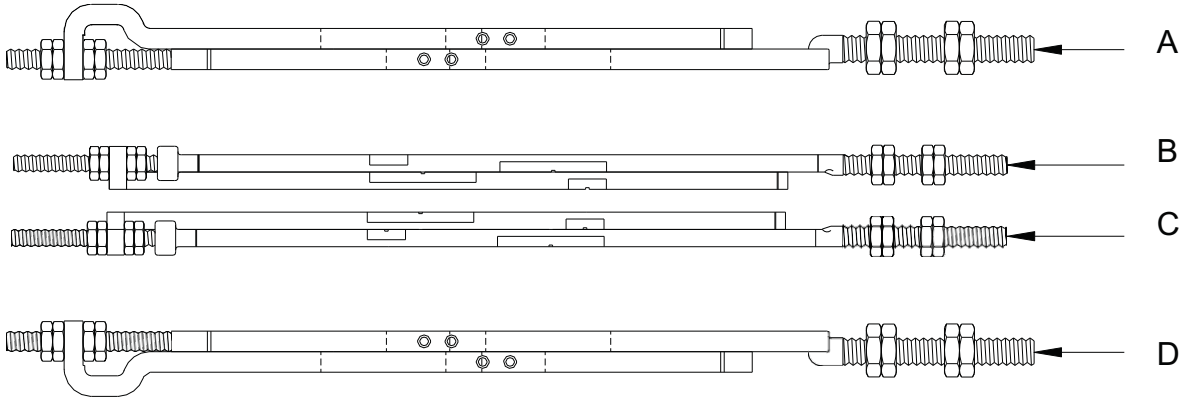


REF D

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR BAR</b> , for Model T-20/T-21 movements, with cupped nuts	830111-001X	N105110
A1	Similar to Ref A except with flat jam nuts.....	830111-002X	N266999
B	<b>POINT DETECTOR BAR</b> , for Model T-20/T-21 movements, with cupped nuts	830111-003X	N107199
B1	Similar to Ref B except with flat jam nuts.....	830111-004X	N252479
C	<b>POINT DETECTOR BAR</b> , for Model A-5 movement, 4" to 5 1/4" point stroke	830112-001X	N181732
C1	Similar to Ref C except 1" to 2 3/4" point stroke.....	830112-002X	N438435
C2	Similar to Ref C except 2 3/4" to 4 1/4" point stroke.....	830112-003X	N438435-001
D	<b>POINT DETECTOR BAR</b> , for Model A-5 movement, X = 24 7/8".....	830112-004X	N270479
D1	Similar to Ref D except X = 27".....	830112-005X	N394359
D2	Similar to Ref D except X = 26".....	830112-006X	N394359-001

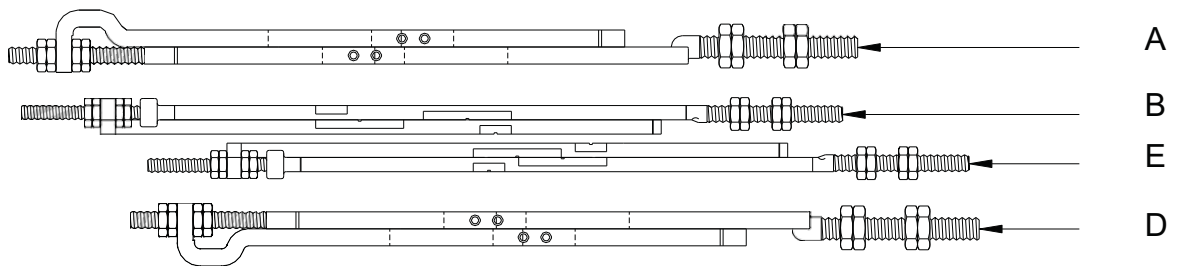


FOR SINGLE SWITCH, SINGLE SLIP SWITCH, DERAIL, OR DOUBLE SLIP SWITCH WITH MACHINE HAVING ONE LOCK AND ONE POINT DETECTOR ROD

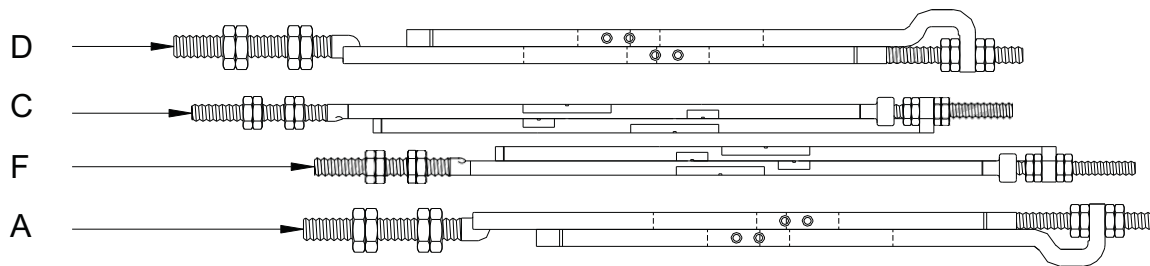


FOR DOUBLE SLIP SWITCH WITH MACHINE HAVING TWO LOCK RODS AND TWO POINT DETECTOR RODS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE</b> , adjustable, for model 5A, 5E, 5F, 5G and 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches.....	916005-001X	45512-005-07 P85-468
B	<b>POINT DETECTOR BAR COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 1/4" min throw, 6" max throw.....	930327-003X	51327-001-05 P85-764
C	<b>POINT DETECTOR BAR COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 1/4" min throw, 6" max throw.....	930327-012X	51327-002-07 P85-765
D	<b>LOCK ROD COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches, opposite hand of Ref A.....	916005-003X	45512-006-06 P85-469



FOR MOVEABLE POINT FROG - LEFT HAND

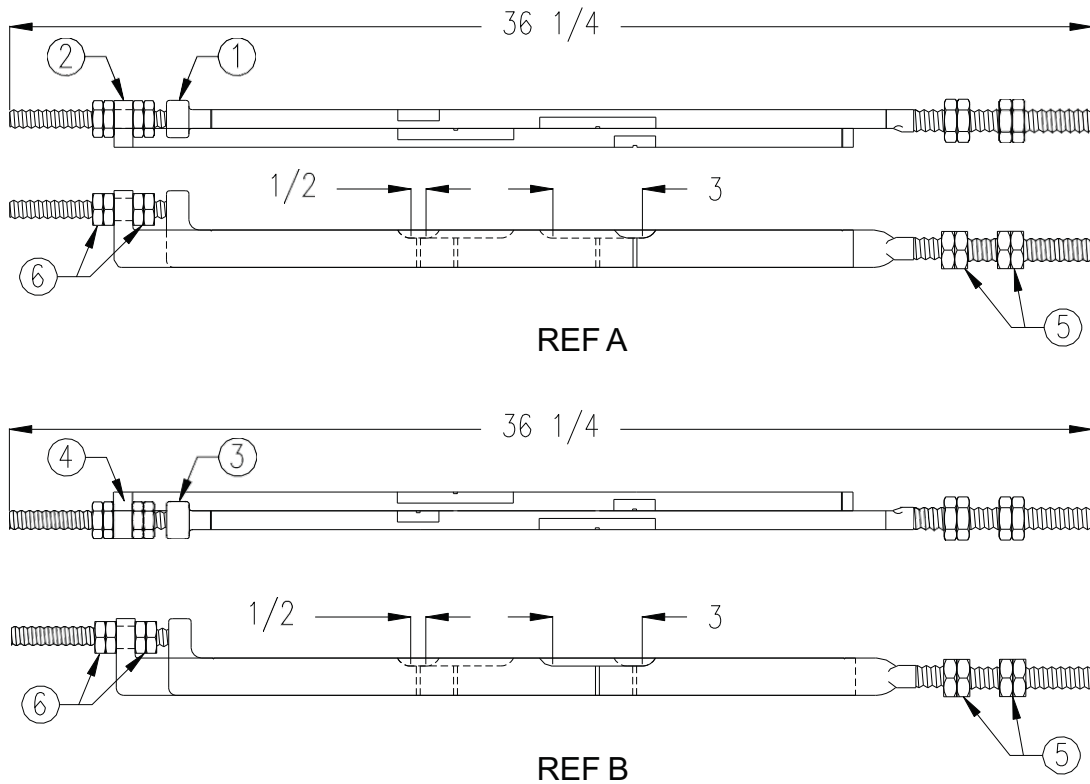


FOR MOVEABLE POINT FROG - RIGHT HAND

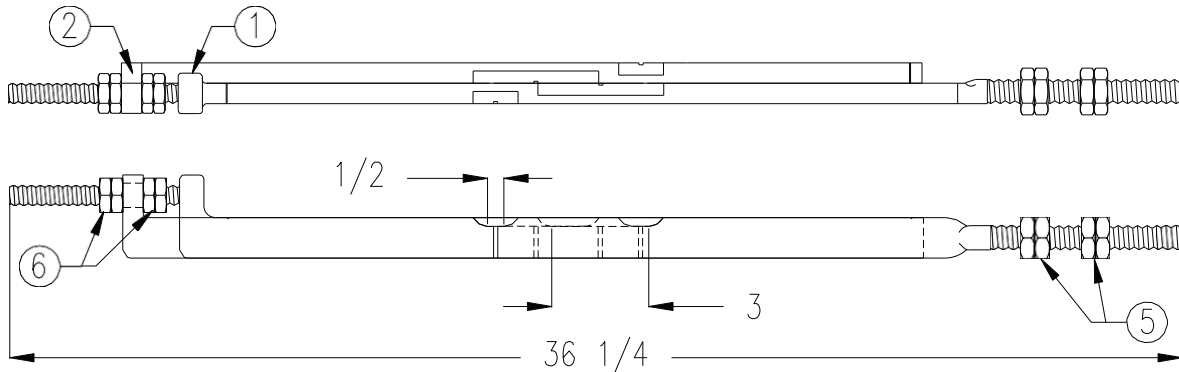
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD COMPLETE</b> , adjustable, for model 5A, 5E, 5F, 5G and 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches.....	916005-001X	45512-005-07 P85-468
B	<b>POINT DETECTOR BAR COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 1/4" min throw, 6" max throw.....	930327-003X	51327-001-05 P85-764
C	<b>POINT DETECTOR BAR COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 1/4" min throw, 6" max throw.....	930327-012X	51327-002-07 P85-765
D	<b>LOCK ROD COMPLETE</b> , adjustable, for Model 5A, 5E, 5F, 5G and 5H movements, 3 3/8" to 5 7/8" point stroke, 2 5/16" wide notches, opposite hand of Ref A.....	916005-003X	45512-006-06 P85-469
E	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5A, 5E, 5F, 5G and 5H movements, with rods moving in opposite directions, 3 1/4" min throw, 6" max throw.....	930327-002X	51327-000-07 P85-763
F	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5A, 5E, 5F, 5G and 5H movements, with rods moving in opposite directions, 3 1/4" min throw, 6" max throw.....	930327-013X	51327-011-07 P85-766



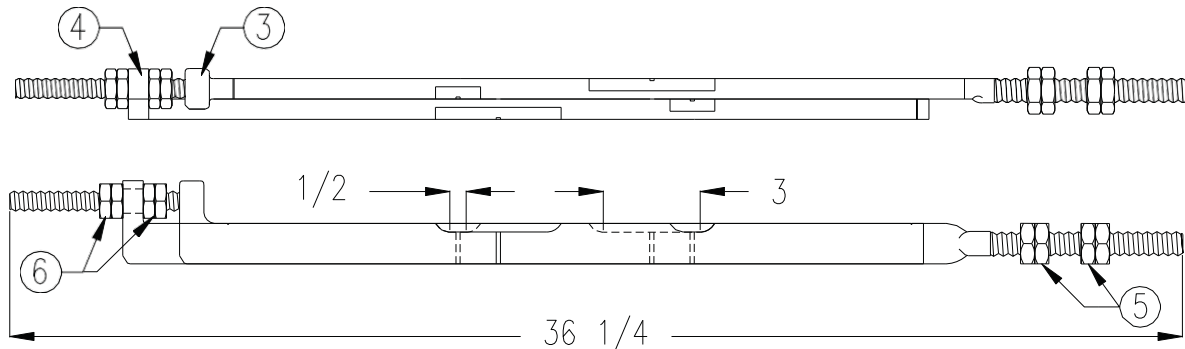
POINT DETECTOR BARS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5 movements, with rods moving in opposite or in same directions, 3 1/4" min throw, 6" max throw.....	930327-003X	51327-001-05 P85-764
B	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5 movements, with rods moving in same directions, 3 1/4" min throw, 6" max throw.....	930327-012X	51327-002-04 P85-765
1	<b>ROD</b> , with stud, for detector bar Ref A.....	930325-001X	56931-000-01 P85-881
2	<b>ROD</b> , adjusting, for detector bar Ref A.....	930326-001	51176-001 P85-729
3	<b>ROD</b> , with stud, for detector bar Ref B.....	930325-003X	56931-000-03 P85-883
4	<b>ROD</b> , adjusting, for detector bar Ref B.....	930326-005	51176-005 P85-730
5	<b>JAM NUT</b> , 3/4"-10 UNC, heavy hex.....	930330-075-00	4364 P85-250
6	<b>JAM NUT</b> , 5/8"-11 UNC, heavy hex.....	990330-062-00	1318 P85-208

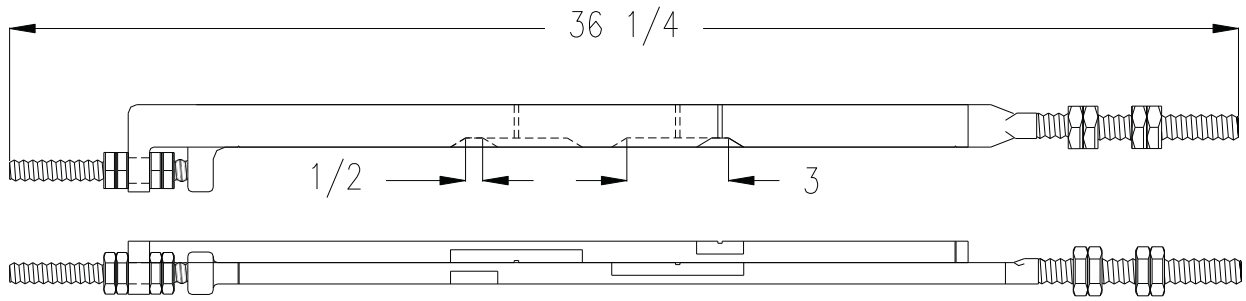


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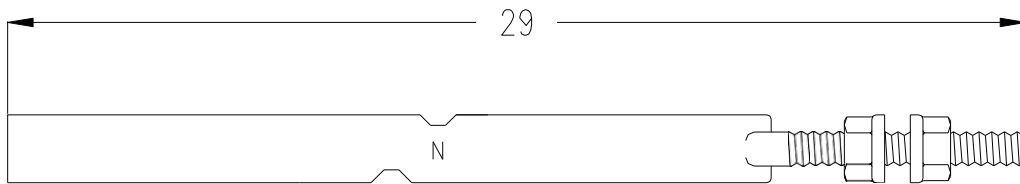


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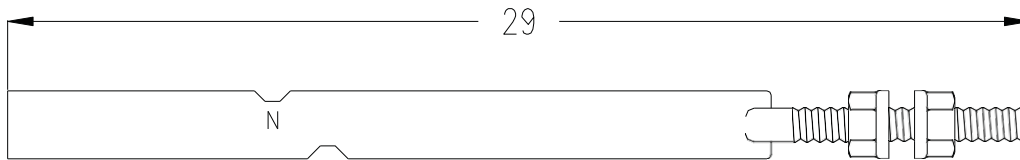
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5 movements, with rods moving in opposite directions, 3 1/4" min throw, 6" max throw.....	930327-002X	51327-000-07 P85-763
B	<b>POINT DETECTOR BAR COMPLETE</b> , for Model 5 movements, with rods moving in opposite directions, 3 1/4" min throw, 6" max throw.....	930327-013X	51327-011-07 P85-766
1	<b>ROD</b> , with stud, for detector bar Ref A.....	930325-002X	56931-000-02 P85-882
2	<b>ROD</b> , adjusting, for detector bar Ref A.....	930326-000	51176-000-00 P85-728
3	<b>ROD</b> , with stud, for detector bar Ref B.....	930325-009X	56931-000-09 P85-884
4	<b>ROD</b> , adjusting for detector bar Ref B.....	930326-024	51176-024 P85-731
5	<b>JAM NUT</b> , 3/4"-10 UNC, heavy hex.....	990330-075-00	4364 P85-250
6	<b>JAM NUT</b> , 5/8"-11 UNC, heavy hex.....	990330-062-00	1318 P85-208



**REF A**

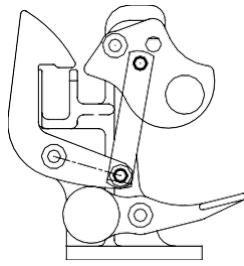


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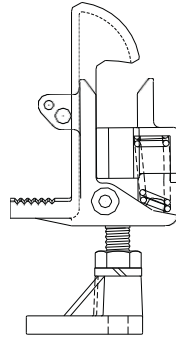


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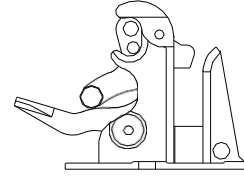
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR BAR COMPLETE, LH OR RH, for Model 55 movement</b>	930327-015X	51327-023-01 P85-1153
B	<b>POINT DETECTOR BAR COMPLETE, for Model 9 movement, normal closed point.....</b>	930465-001X	50465-003 A87-239
C	<b>POINT DETECTOR BAR COMPLETE, for Model 9 movement, normal open point.....</b>	930465-002X	50465-004 A87-241



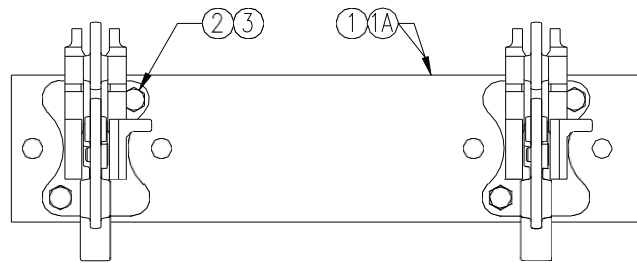
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REF B



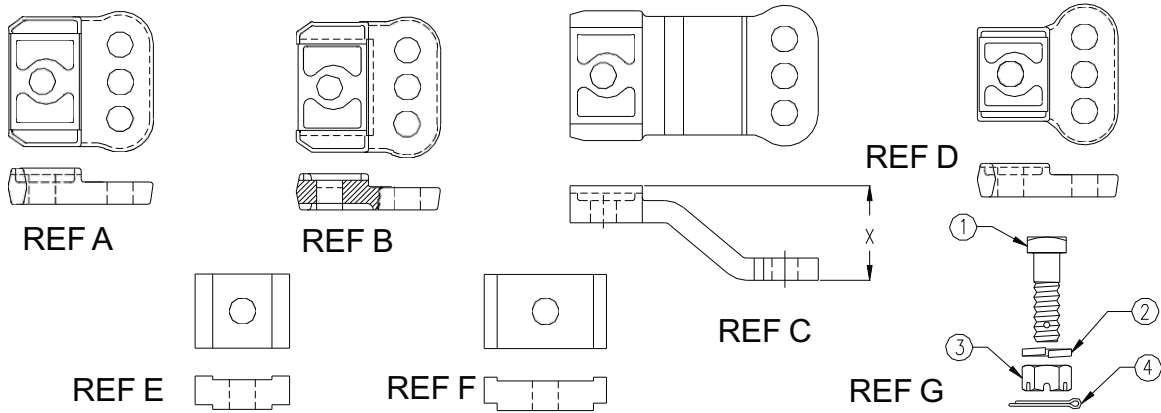
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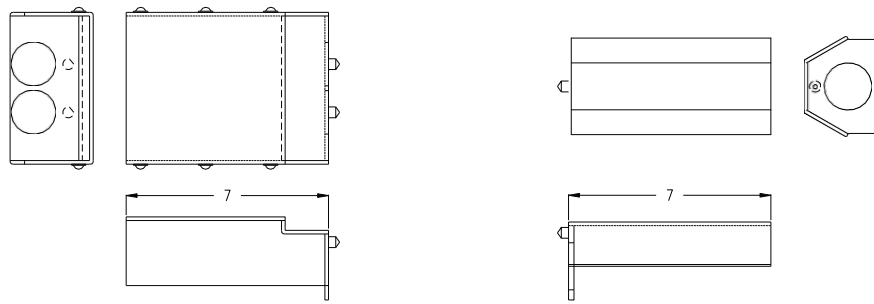
REF D

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LATCH STAND</b> , for Model 5F and 5H switch movements.....	950794X	52589-005-02 P85-794
B	<b>UNIVERSAL LATCH STAND</b> , for Model M-22A, M-22B, M-23A and M-23B..	880750X	N/A
B1	<b>LATCH STAND</b> , for Model M-23A and M-23B switch movements.....	850997X	N286609
B2	Similar to Ref B1 except for 7/8" dia mounting hardware.....	850998X	N286609-002
B3	Similar to Ref B1 except arranged for double padlocking.....	850999X	N398882
C	<b>LATCH STAND</b> , for Model 50A, 50B, 51A and 51B manual switch stand.....	898999X	591-00-00-465
D	<b>LATCH STAND PLATE ASSEMBLY</b> , for Model 5F and 5H switch movements.....	950794-000-01X	N/A
1	<b>MOUNTING PLATE</b> , with hardware, for Ref D.....	960501-001X	N/A
1A	<b>MOUNTING PLATE ONLY</b> , for Ref D.....	960501-001	51168-015 P85-719
2	<b>BOLT</b> , 1/2"-13 UNC X 1" long, hex head, for Ref D.....	950795	3343-034 P50-403
3	<b>LOCK WASHER</b> , internal tooth, 1/2".....	033715-050-02	53029-078 P85-802

THROW BAR COUPLINGS

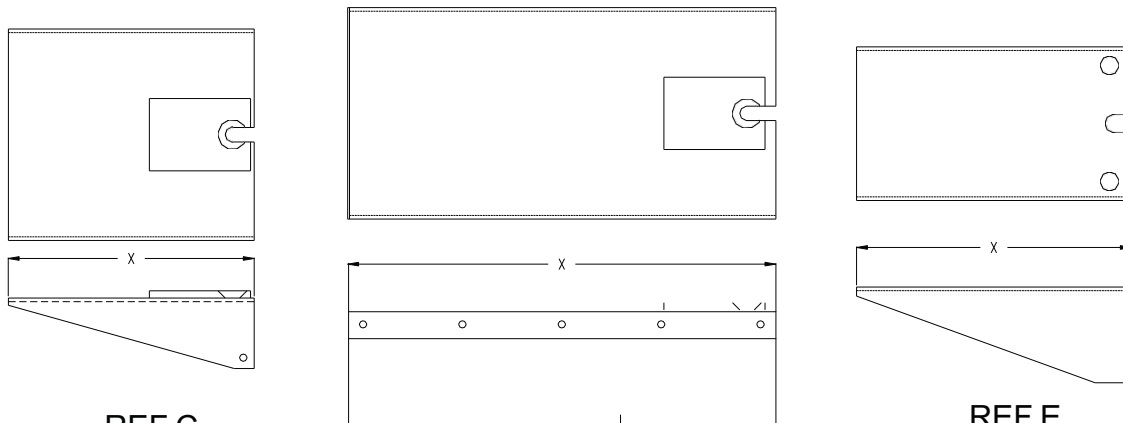


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>THROW BAR COUPLING</b> , for Model 5A, 5E, 5F, 5G, and 5H switch movements.....	941153	51153-001 P85-709
B	<b>THROW BAR COUPLING</b> , for Model 5A, 5E, 5F, 5G, and 5H switch movements.....	941159	51153-011
B1	<b>THROW BAR COUPLING</b> , 2.0" width for Model 55 switch movement.....	941158	51153-009 P85-1010
C	<b>OFFSET THROW BAR COUPLING</b> , for Model 5A, 5E, 5F, 5G, and 5H switch movements, X = 3 3/16".....	941156	51153-003 P85-925
D	<b>THROW BAR COUPLING</b> , 2.5" width for Model 6 switch movement.....	941154	51153-002 P85-933
D1	<b>THROW BAR COUPLING</b> , 2.0" width for Model 55 switch movement.....	941157	51153-007 P85-1009
D2	<b>THROW BAR COUPLING</b> , 2.0" width for M-3, M-22, and M-23 switch movements.....	841153	M146443
E	<b>COUPLING SHIM</b> , 1" drop, for Model 55 switch movement.....	941151	51896-003
F	<b>COUPLING SHIM</b> , 1" drop, for Model 5A, 5E, 5F, 5g, and 5H switch movements.....	941260-001	51896-004
G	<b>BOLT COMPLETE</b> , with lock washer, hex nut and cotter pin, for fastening coupling to throw bar on Model 5A, 5E, 5F, 5G, and 5H switch movements	990235-005X	N/A
G1	Similar to Ref G except for Model M-3, M-22, and M-23 switch movements	990235-007X	X348101
1	<b>BOLT ONLY</b> , for Ref G, 7/8"-9 X 3 1/4" long, square head.....	990235-005	38186-004 P85-424
1A	<b>BOLT ONLY</b> , for Ref G1, 7/8"-9 X 3" long, hex head.....	990237-300-021	J460113
2	<b>LOCK WASHER</b> , 7/8" regular, for Ref G.....	990401-087-02	01273-014 P85-117
2A	Similar to Ref 2 except extra duty, for Ref G1.....	990403-087-02	J047773
3	<b>HEAVY HEX SLOTTED NUT</b> , 7/8"-9 UNC, for Ref G and G1.....	990332-087-02	47191-009 P85-552 J048136
4	<b>COTTER PIN</b> , 3/16" X 2".....	990509-200-02	00046-001-ON J048636



REF A

REF B

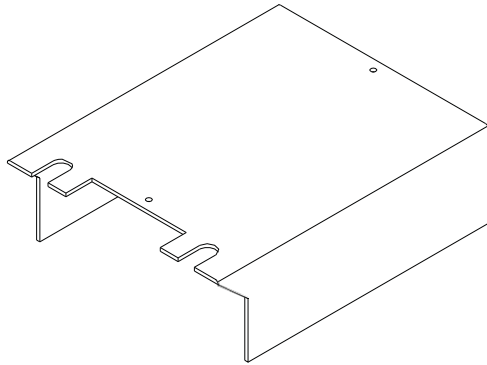


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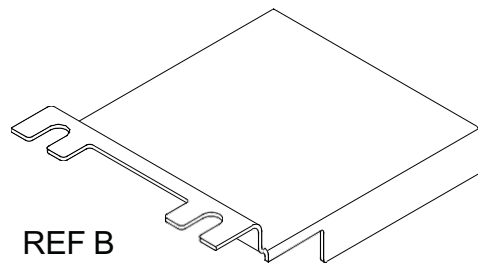
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REF E

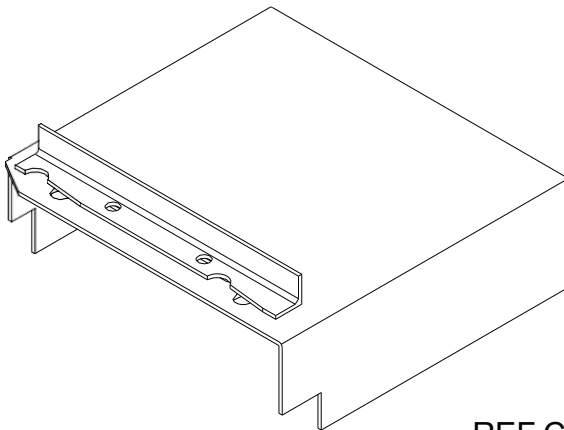
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>COVER, POINT DETECTOR BAR</b> , track side.....	850125X	N296125
A1	Similar to Ref A except includes point detector bar bushing, grease fitting, cover plate, lock washer and lock nut.....	850127X	X296127
B	<b>COVER, POINT DETECTOR BAR</b> , field side.....	850126X	N296126
B1	Similar to Ref B except includes point detector bar bushing, grease fitting, cover plate, lock washer and lock nut.....	850128X	X296128
C	<b>COVER, OPEN LOCK ROD</b> , X = 8 1/2".....	850129X	N269671
D	<b>COVER, CLOSED LOCK ROD</b> , track side, X = 10 1/4".....	850130X	N242439
D1	Similar to Ref D except field side, X = 14 3/4".....	850131X	N242441
D2	Similar to Ref D except X = 23 1/8".....	850132X	R242441-001
D3	Similar to Ref D except for low-profile switch movements, X = 4".....	850133X	N439013
E	<b>COVER, OPERATING BAR</b> , trackside, X = 9 1/2".....	850134	M148141
E1	Similar to Ref E except field side.....	850135X	R159272
E2	Similar to Ref E except X = 6 7/8".....	850136	M148141-001



REF A



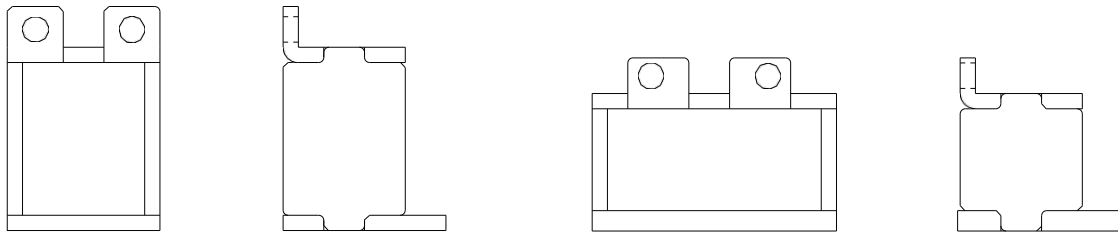
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REF C

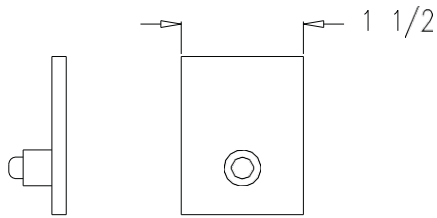
REF	DESCRIPTION	G & B PART #	OEM PART #
A	COVER, THROW BAR, track side, for Model 5A, 5E, 5F, 5G & 5H movements.....	599595-001	51114-004 P85-595
B	Similar to Ref A except for field side.....	599596-001	51114-013 P85-596
C	COVER, POINT DETECTOR BAR, LH, for Model 5A, 5E, 5F, 5G & 5H movements.....	599737-001X	51190-000-01 P85-737
C1	Similar to Ref C except RH.....	51190-000-02	51190-000-02 P85-738

# MODEL 5 SWITCH MACHINE - REPLACEMENT PARTS B-34

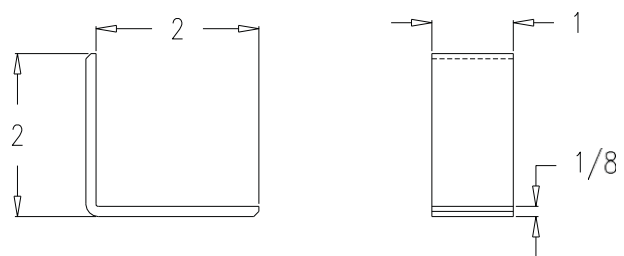


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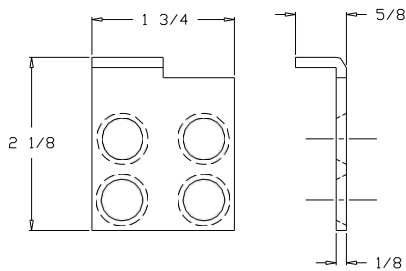
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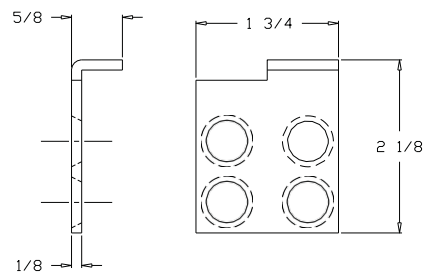
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REF D



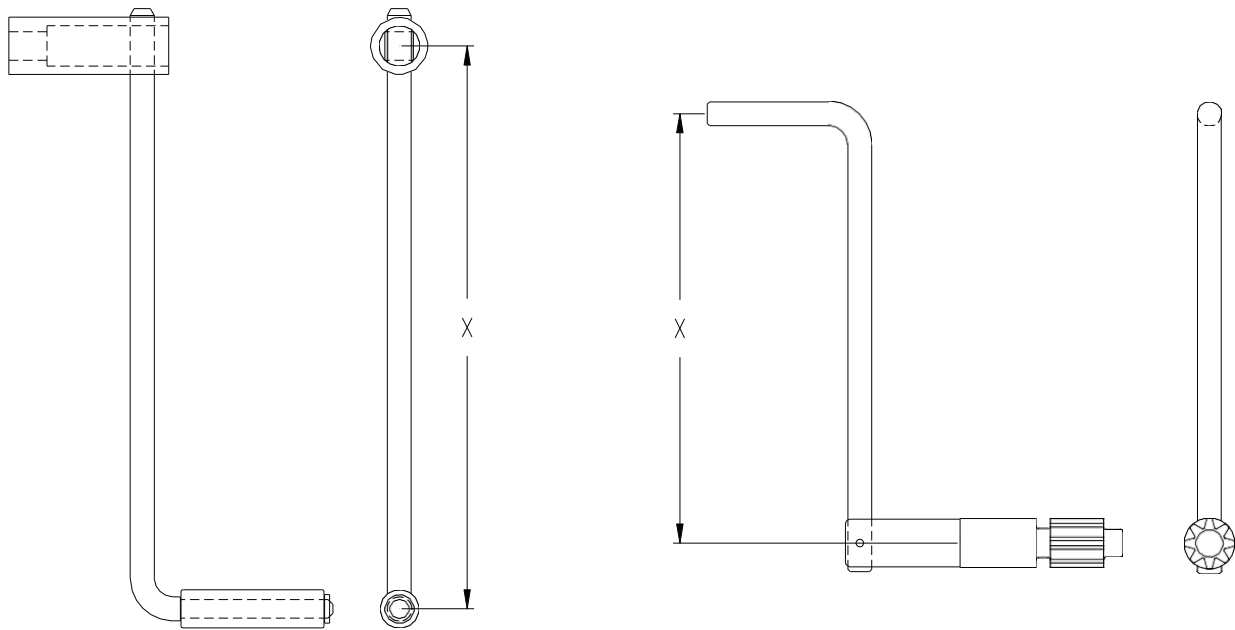
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REF F

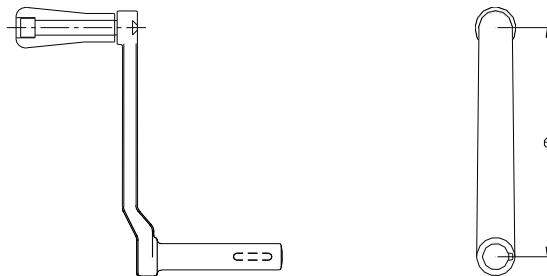
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>WEAR PLATE SET</b> , for each lock rod, one required for each side of machine.....	959001X	54920-003-02 P85-864
B	<b>WEAR PLATE SET</b> , for all detector rod combinations, one required for each side of machine.....	959002X	54920-004-01 P85-865
C	<b>WEAR PLATE</b> , for use under lock rod, X = 1 1/2".....	959003X	54920-001-01 P85-862
C1	Similar to Ref C except X = 1 1/4".....	959004X	54920-001-02 P85-863
D	<b>GIB</b> , for throw bar.....	959005X	11072-002 P85-286
E	<b>CLIP, LH</b> , for link motions.....	959006X	P85-733
F	<b>CLIP, RH</b> , for link motions.....	959007X	P85-734





REF A

REF B



REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HAND CRANK COMPLETE</b> , for M-3 switch movements, X= 14 3/4".....	977705-001X	N/A
A1	Similar to Ref A except X = 9".....	977705-002X	R451568-2305
B	<b>HAND CRANK COMPLETE</b> , for A-10 switch movements, X = 11 1/4".....	977704-001X	N165246
B1	Similar to Ref B except X = 15".....	977704-002X	N/A
C	<b>HAND CRANK COMPLETE</b> , for Model 5A, 5E, 5F, 5G & 5H switch movements.....	977700-001X	54477-002-01 P85-826



# INSULATED FRONT RODS & COMPONENTS

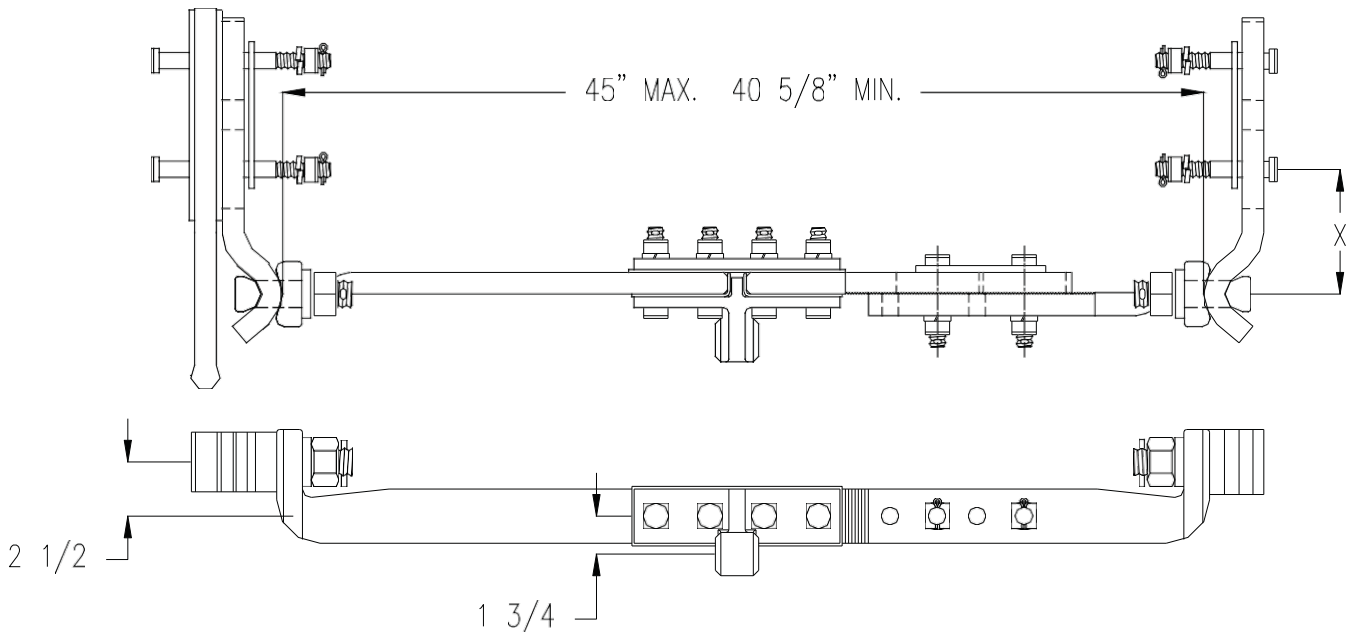
## SECTION C

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MF Front Rods.....	

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G & B Specialties' swivel front rods are designed for high strength and severe service with its forged swivel connections on either end and may be used to advantage with both hand and power-operated switches.

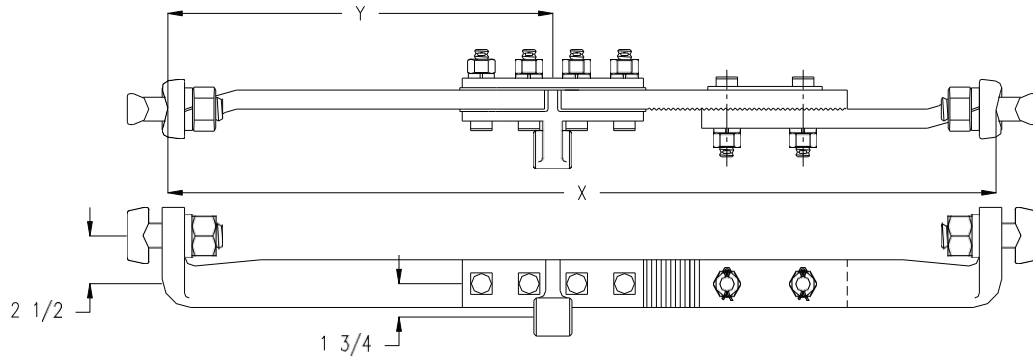
This type of front rod is more ruggedly constructed than those of the rigid type where flexibility must be provided to permit application to switch points which do not stay in alignment. The swivel front rod provides the rigidity in the vertical plane desired for support of the switch point, without the use of pins which will wear, and without the development of stresses caused by imperfect alignment of switch points with respect to each other or with respect to the switch movement.

A swivel front rod is comprised of a front bar and two swivel point lugs. The front bar is turned up at each end for attachment to the point lugs by tee bolts. The point lugs are curved to fit the tee bolt head serving as a vertical pivot pin, and the engaging faces of the front bar ends are also curved to fit the point lugs. The hole for the tee bolt in each end of the front bar is a relatively close fit, but the corresponding holes in the point lugs are slotted, thus the point lugs need not be at exactly 90 degrees with the front bar but may be swiveled in a horizontal plane.

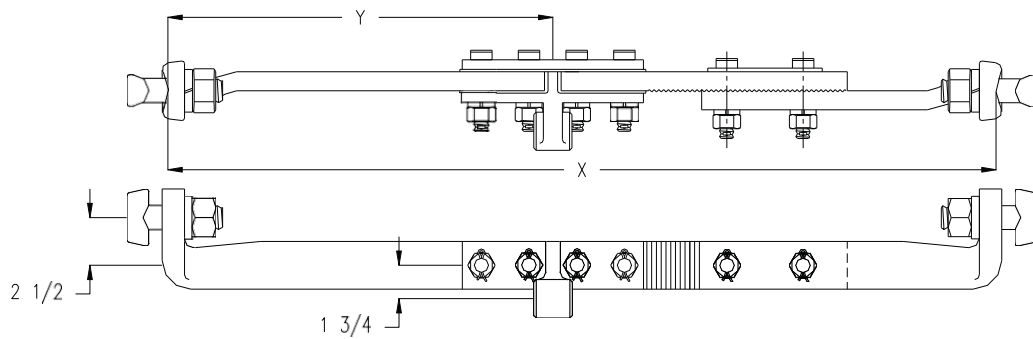
The front bar is insulated at the lock rod connection lug. The length of a swivel front rod is secured by the meshing of the serrations, thereby eliminating wear of the rod bolts and rod bolt holes. It is adjustable in 1/8" increments, providing a wide range of lengths to accommodate the various thicknesses of reinforcing bars and the various switch point openings typically encountered. Swivel front rods for other than standard track gage are available as well.

#### HOW TO ORDER:

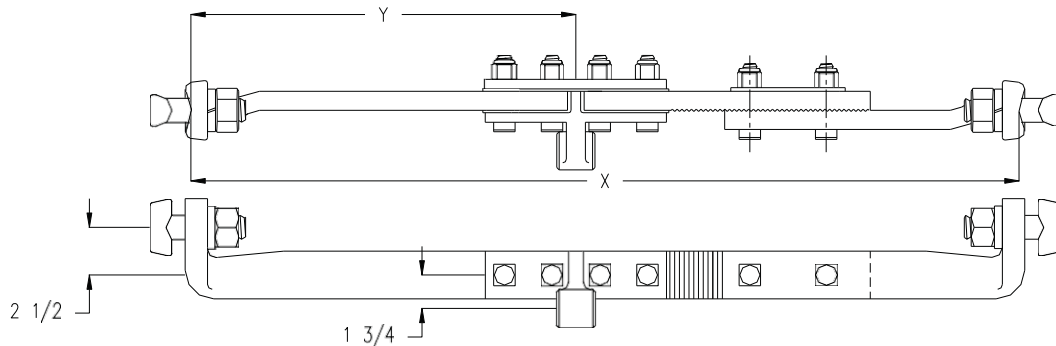
Order the required swivel front rods, swivel point lugs, and point bolts from the tabulations on the following pages. When ordering swivel front rods for a new or special application, contact G & B Specialties' Sales for assistance.



REF A



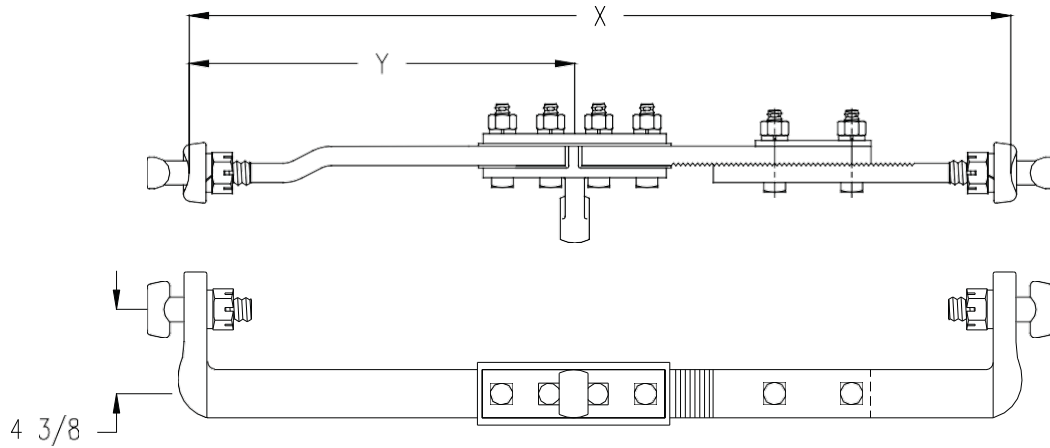
REF B



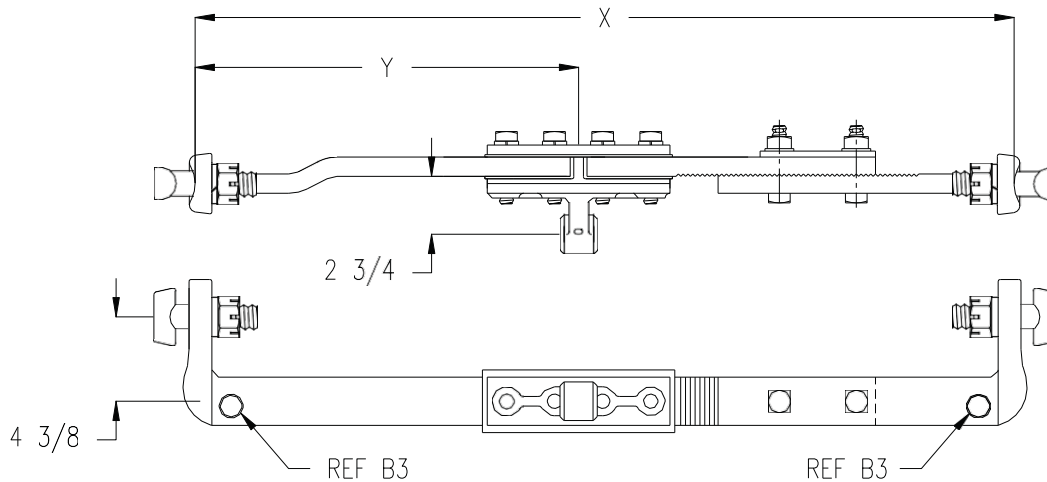
REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	801002X	N229002
A1	Similar to Ref A except X = 45" max to 40 5/8" min.....	801003X	N438502
B	<b>SWIVEL FRONT ROD COMPLETE</b> , similar to Ref A except with bolts oriented as shown.....	801004X	N293254
B1	Similar to Ref B except X = 51 1/4" max to 49 1/2" min, Y = 25", for 62 1/4" rail gage.....	801005X	N451387-2001
C	<b>SWIVEL FRONT ROD COMPLETE</b> , similar to Ref A except with elastic stop nuts and bolts oriented as shown.....	801006X	N435072

# SWIVEL FRONT RODS



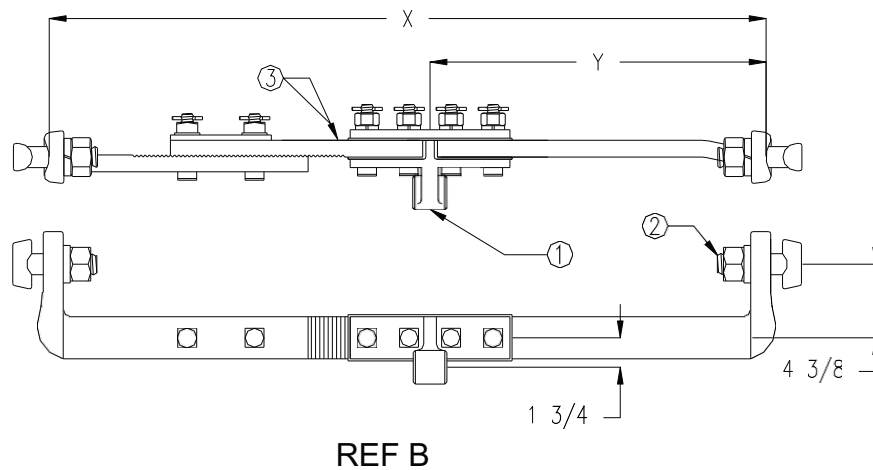
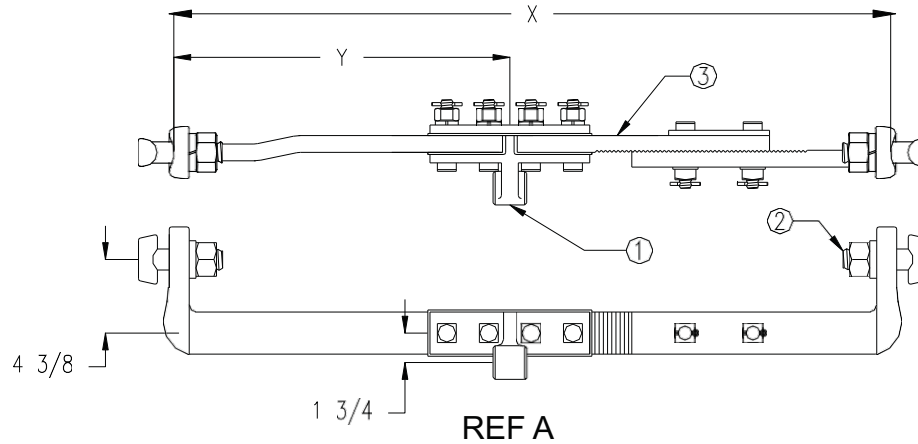
REF A



REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 43 7/8" max to 39 1/2" min, Y = 18 15/16".....	802001X	N451387-0301
A1	Similar to Ref A except X = 44 7/8" max to 40 1/2" min, Y = 19 15/16".....	802002X	N/A
A2	Similar to Ref A except X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802003X	N303520
A3	Similar to Ref A except X = 50 1/4" max to 45 7/8" min, Y = 24 1/4", for 58 7/8" rail gage .....	802004X	N394367
B	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 43 7/8" max to 39 1/2" min, Y = 18 15/16".....	802005X	N/A
B1	Similar to Ref B except X = 44 7/8" max to 40 1/2" min, Y = 19 15/16".....	802006X	N/A
B2	Similar to Ref B except X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802007X	N376167
B3	Similar to Ref B2 except with center lug, 820231-002.....	802026X	N433030

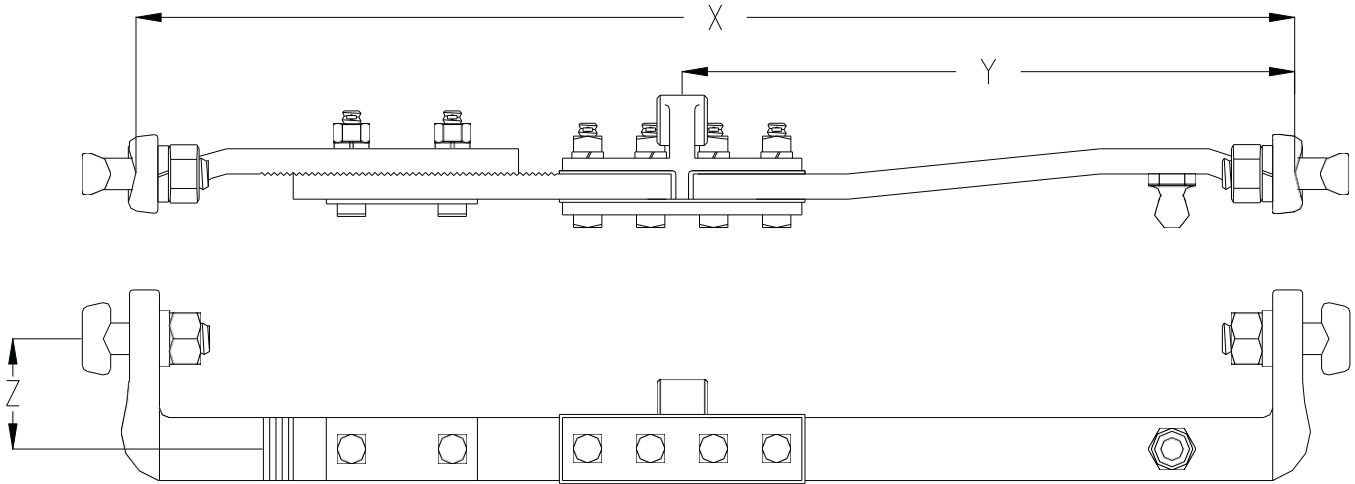
# SWIVEL FRONT RODS



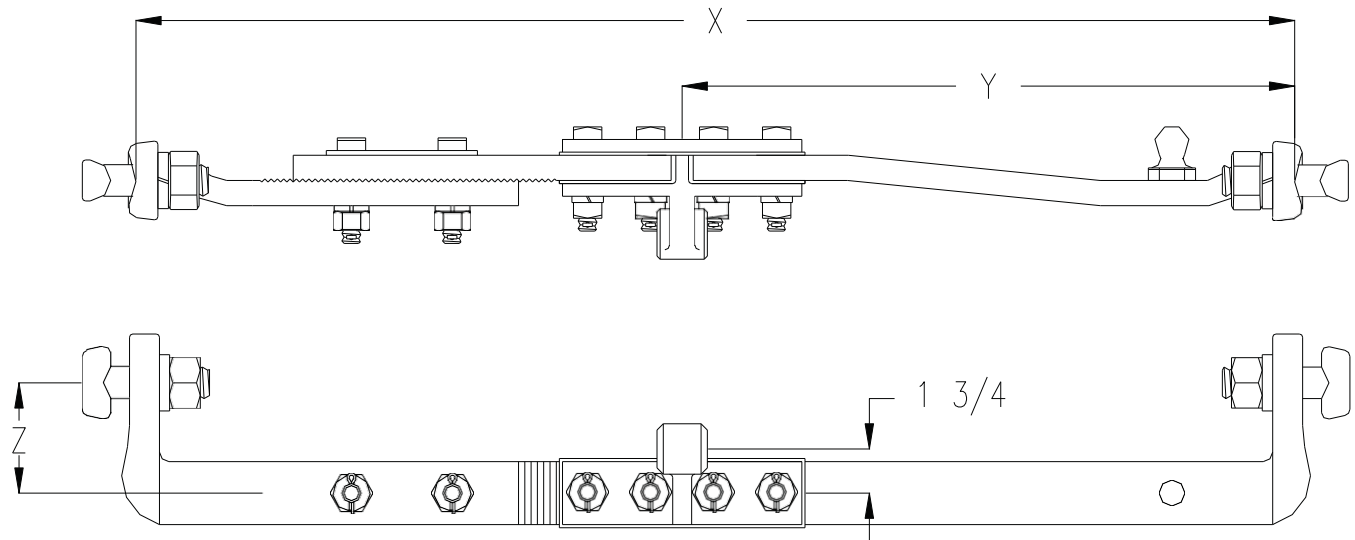
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE, LH</b> , X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802008X	N451387-1501
A1	Similar to Ref A except X = 43 3/8" max to 39" min, Y = 18 7/16".....	802009X	N451387-1502
A2	Similar to Ref A except X = 40 7/8" max to 36 1/2" min, Y = 15 15/16".....	802010X	N451387-1503
A3	Similar to Ref A except X = 50 1/4" max to 45 7/8" min, Y = 24 1/4", for 58 7/8" rail gage.....	802011X	N451387-1504
B	<b>SWIVEL FRONT ROD COMPLETE, RH</b> , X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802012X	N451387-5902
B1	Similar to Ref B except X = 43 3/8" max to 39" min, Y = 18 7/16".....	802013X	N/A
B2	Similar to Ref B except X = 40 7/8" max to 36 1/2" min, Y = 15 15/16".....	802014X	N/A
B3	Similar to Ref B except X = 50 1/4" max to 45 7/8" min, Y = 24 1/4", for 58 7/8" rail gage.....	802015X	N/A
1	<b>FRONT ROD LUG</b> .....	820230	M182516
2	<b>T-BOLT</b> , 1 1/4"-7 UNC.....	809009	M229009
3	<b>ADJUSTMENT BAR</b> , 1" X 2 1/2" X 15".....	801469	M239076
3A	<b>ADJUSTMENT BAR</b> , for Ref A3 and B3 only, 1" X 2 1/2" X 16 1/8".....	801469-001	M394469

**C-5**

**SWIVEL FRONT RODS**



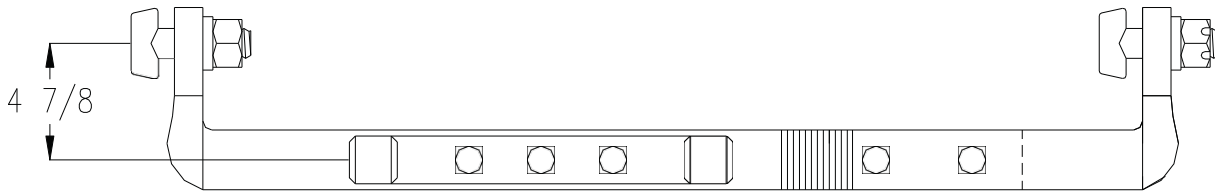
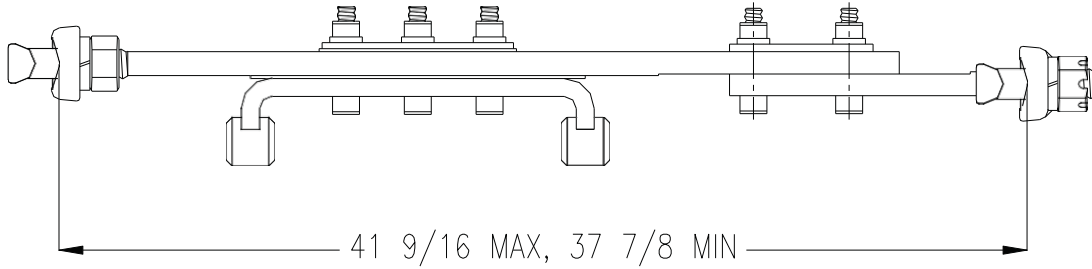
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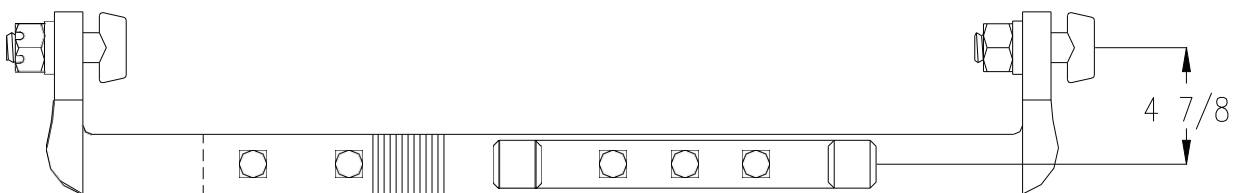
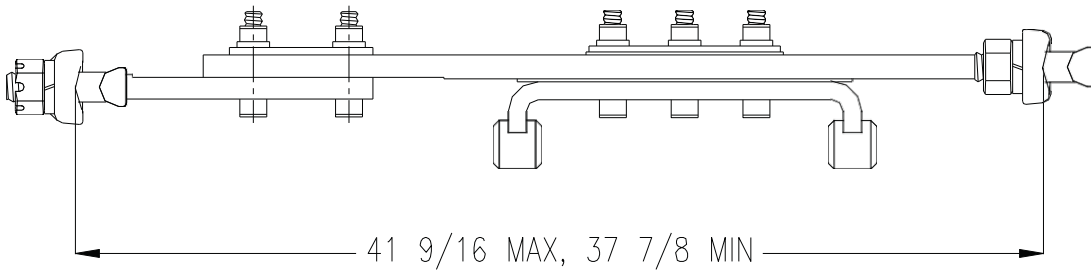
**REF B**

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , for moveable point frog layouts, X = 46 5/16" max to 44 1/8" min, Y = 24 5/16", Z = 4 3/8".....	802016X	N278048
A1	Similar to Ref A except without ball stud.....	802017X	N282070
A2	Similar to Ref A except Z = 4 5/8".....	802018X	N308639
B	<b>SWIVEL FRONT ROD COMPLETE</b> , for moveable point frog layouts, X = 46 5/16" max to 44 1/8" min, Y = 24 5/16", opposite hand of Ref A.....	802019X	N278049
B1	Similar to Ref B except without ball stud, opposite hand of Ref A1.....	802020X	N282071
B2	Similar to Ref B except Z = 4 5/8", opposite hand of Ref A2.....	802021X	N308640

# SWIVEL FRONT RODS



REF A



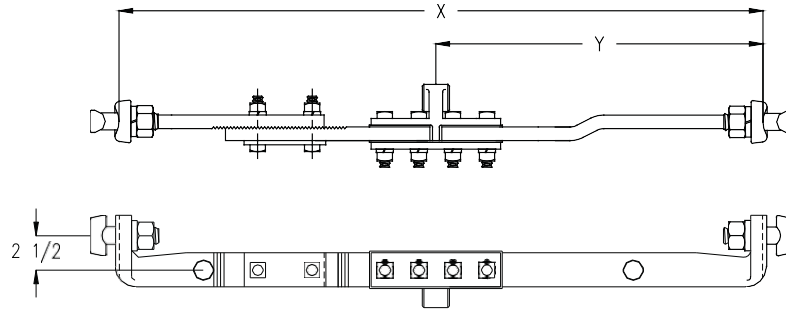
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , for double slip layouts, X = 41 9/16" max to 37 7/8" min.....	803001X	N451387-1001
A1	Similar to Ref A except includes insulated ball stud mounted on swivel bar...	803002X	N451387-1002
A2	Similar to Ref A except X = 44 1/16" max to 40 3/8" min.....	803003X	N49106601
A3	Similar to Ref A2 except includes insulated ball stud mounted on swivel bar	803004X	N49106602
B	<b>SWIVEL FRONT ROD COMPLETE</b> , for double slip layouts, X = 41 9/16" max to 37 7/8" min.....	803005X	N451387-1101
B1	Similar to Ref B except includes insulated ball stud mounted on swivel bar...	803006X	N451387-1102
B2	Similar to Ref B except X = 44 1/16" max to 40 3/8" min.....	803007X	N49106701
B3	Similar to Ref B2 except includes insulated ball stud mounted on swivel bar	803008X	N49106702

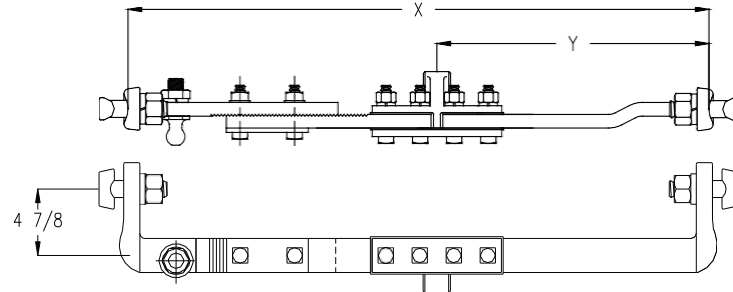


SWIVEL FRONT RODS

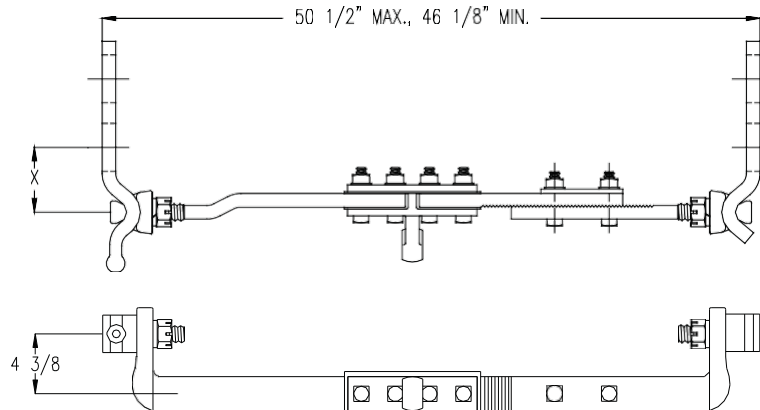
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REF B

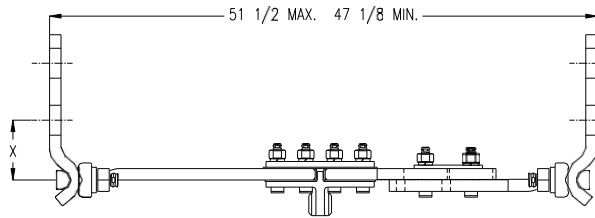


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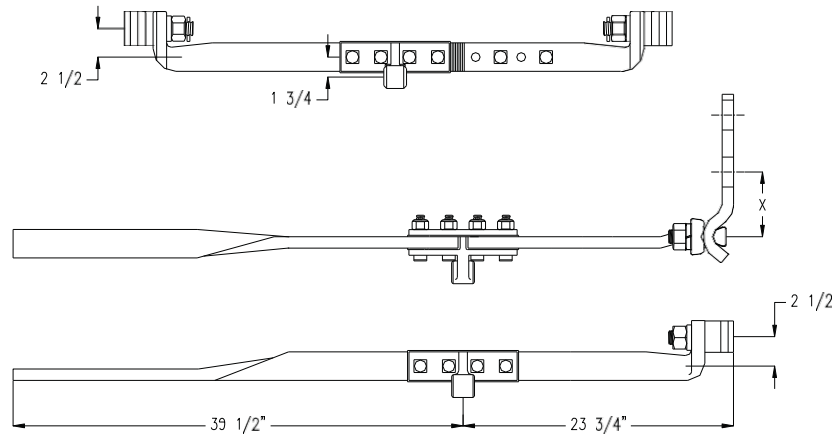


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 43 3/4" min to 45 3/4" max, Y = 20 3/4".....	801007X	N281975
A1	Similar to Ref A except X = 46 1/4" min to 48 1/4" max, Y = 24".....	801008X	N398341
A2	Similar to Ref A except X = 48 1/2" min to 50 1/2" max, Y = 25 5/8".....	801009X	N372602-001
A3	Similar to Ref A except with insulated ball stud on adjustment side, X = 44 7/8" max to 42 7/8" min, Y = 20 3/4".....	801010X	N451387-6301
A4	Similar to Ref A3 except with insulated ball stud on non-adjustable side.....	801011X	N451387-6302
B	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 42 7/8" min to 45 1/8" max, Y = 22".....	802022X	N451387-5601
C	<b>SWIVEL FRONT ROD COMPLETE</b> , with swivel point lugs for 1" dia point bolts, X = 4 1/2".....	802002-001-01	N/A
C1	Similar to Ref C except X = 5 1/2".....	802002-002-01	N451387-0801
C2	Similar to Ref C except X = 6 3/8".....	802002-003-01	N/A

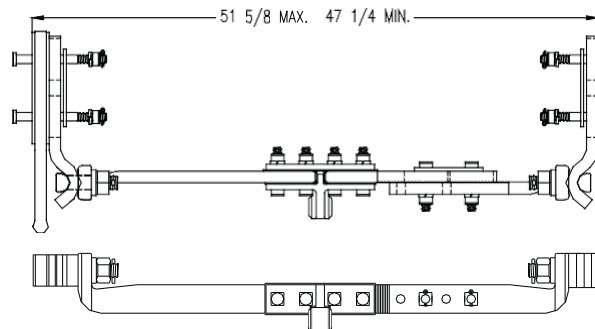
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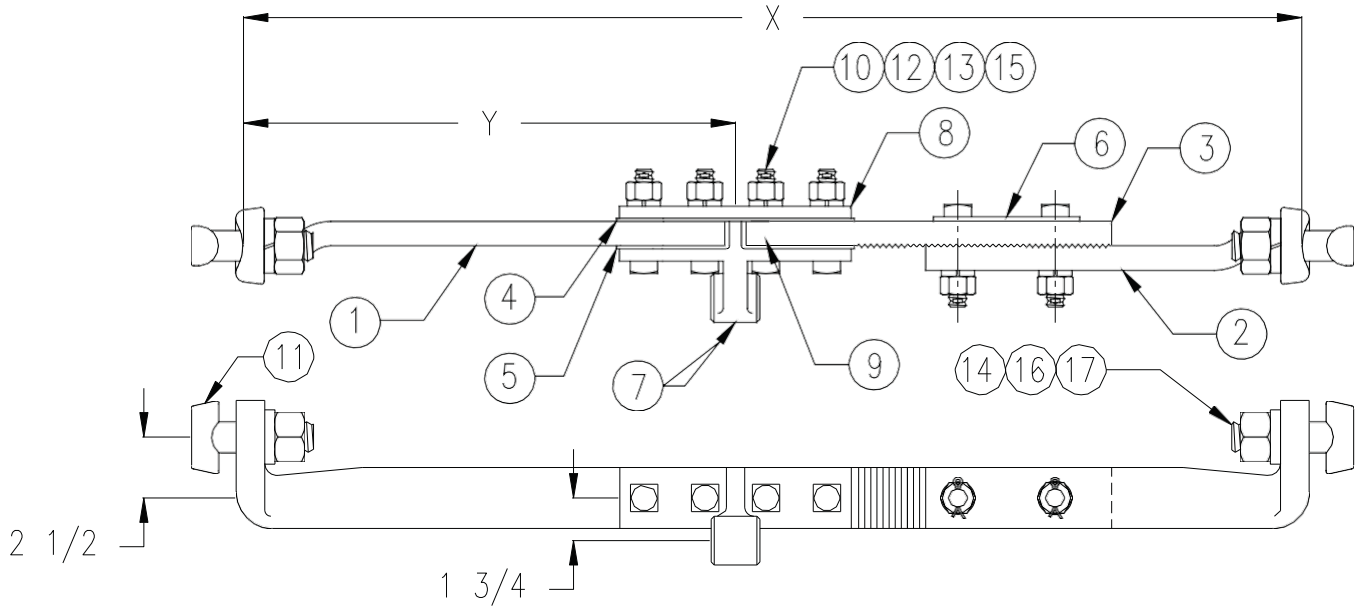
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REF C

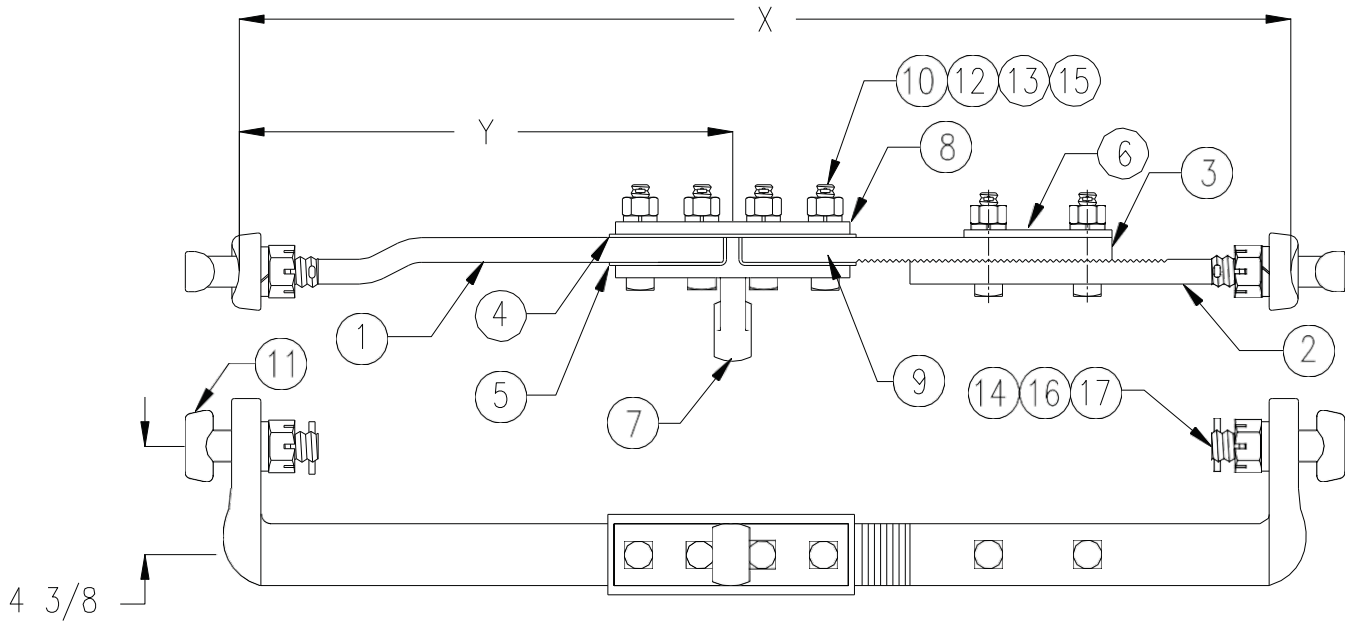


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , with swivel point lugs for 3/4" dia point bolts, X = 4 3/4".....	801002-001-01	N/A
A1	Similar to Ref A except X = 5 1/2".....	801002-002-01	N/A
A2	Similar to Ref A except X = 6 3/4".....	801002-003-01	N/A
A3	<b>SWIVEL FRONT ROD COMPLETE</b> , with swivel point lugs for 1" dia point bolts, X = 4 1/2".....	801002-004-01	N/A
A4	Similar to Ref A3 except X = 5 1/2".....	801002-005-01	N/A
A5	Similar to Ref A3 except X = 6 3/8".....	801002-006-01	N/A
A6	<b>SWIVEL FRONT ROD COMPLETE</b> , with chamfered swivel point lugs for 1" dia point bolts, X = 5 1/4", RR Detail 0441.....	801006-001-01	X435073
B	<b>SWIVEL FRONT ROD COMPLETE</b> , for derail, X = 5 1/4", RR Detail 0442	801006-002-01	X303090
C	<b>SWIVEL FRONT ROD COMPLETE</b> , with swivel point lugs, point detector lug, insulation and point bolts, X = 5 1/2".....	801003-001-01	N451387-2701
C1	Similar to Ref C except point detector lug on opposite side.....	801003-001-02	N451387-2702



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWIVEL FRONT ROD COMPLETE, X = 45 7/8" max to 41 1/2" min, Y = 20 15/16" .....	801002X	N229002
1	SWIVEL FRONT BAR.....	801467-005	M229005
2	ADJUSTABLE SWIVEL FRONT BAR.....	801468-006	M229006
3	ADJUSTMENT BAR, 1" X 2 1/2" X 15".....	801469	M239076
4	INSULATION PLATE, 1/8" X 2 3/4" X 10".....	973200-001	J780038-0002
5	INSULATION ANGLE, 1/8" X 2 3/4" X 4 5/8".....	973400-003	M377239-003
6	PLATE WASHER, 5/16" X 2 1/2" X 6".....	960099-001	M182519
7	FRONT ROD LUG, 1 3/4" downset.....	820230	M182516
8	SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
9	INSULATION BUSHING, 25/32" ID X 1" OD X 1 7/32" long.....	973101-003	J780038-001
10	BOLT, 3/4"-10 UNC X 3 3/4" long, square head.....	801470	M182518
11	T-BOLT.....	809009	M229009
12	WASHER, 3/4" lock.....	990402-075-02	J047772
13	NUT, 3/4"-10 UNC square.....	990302-075-02	J048229
14	NUT, 1 1/4"-7 UNC heavy hex.....	990331-125-02	J048176
15	COTTER PIN, 3/16" X 1 1/8".....	990509-112-02	J048632
16	WASHER, 1 1/4" lock.....	990402-125-02	J047805
17	COTTER PIN, 1/4" X 1 3/4".....	990511-175-02	J048644

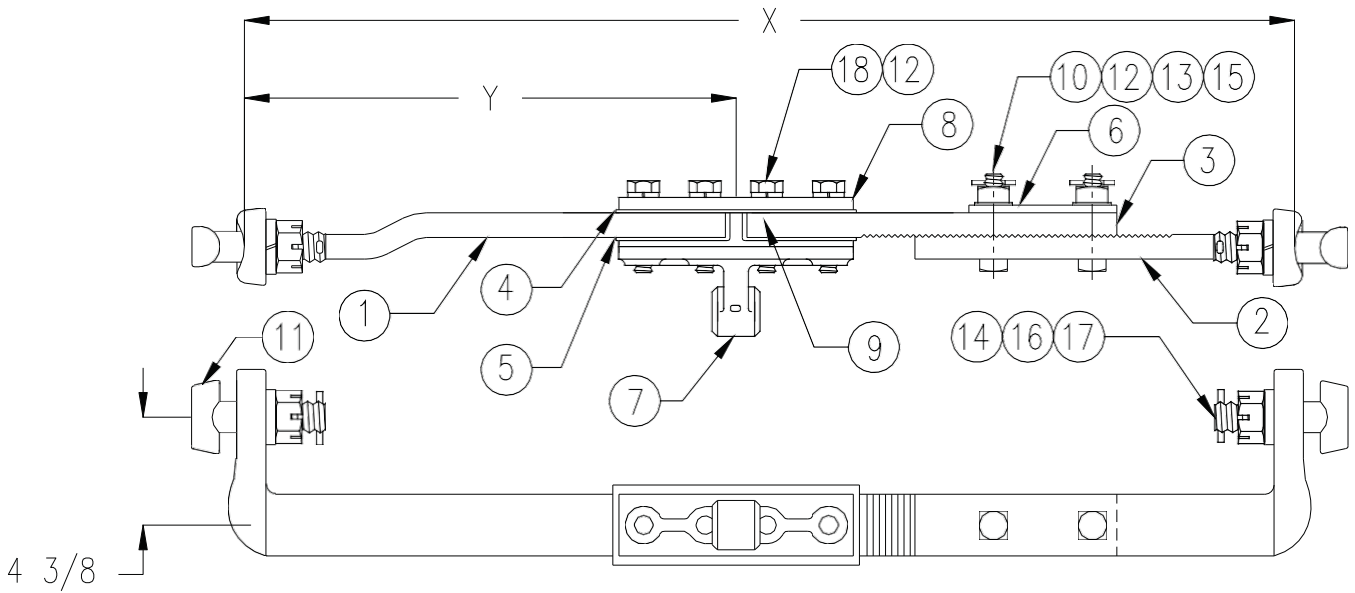


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802003X	N303520
1	<b>SWIVEL FRONT BAR</b> .....	802467-2901	M451467-2901
2	<b>ADJUSTABLE SWIVEL FRONT BAR</b> .....	802468-2802	M451467-2802
3	<b>ADJUSTMENT BAR</b> , 1" X 2 1/2" X 15".....	801469	M239076
4	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-001	J780038-0002
5	<b>INSULATION ANGLE</b> , 1/8" X 2 3/4" X 4 5/8".....	973400-003	M377239-003
6	<b>PLATE WASHER</b> , 5/16" X 2 1/2" X 6".....	960099-001	M182519
7	<b>FRONT ROD LUG</b> .....	820231	M105715
8	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
9	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 7/32" long.....	973101-003	J780038-0001
10	<b>BOLT</b> , 3/4"-10 UNC X 3 3/4" long, square head.....	801470	M182518
11	<b>T-BOLT</b> .....	809009-001	M308645
12	<b>WASHER</b> , 3/4" lock.....	990402-075-02	J047772
13	<b>NUT</b> , 3/4"-10 UNC square.....	990302-075-02	J048229
14	<b>NUT</b> , 1 1/4"-7 UNC slotted heavy hex.....	990332-125-02	J0487127
15	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632
16	<b>WASHER</b> , 1 1/4" lock.....	990402-125-02	J047805
17	<b>COTTER PIN</b> , 1/4" X 2 1/2".....	990511-250-02	J048665

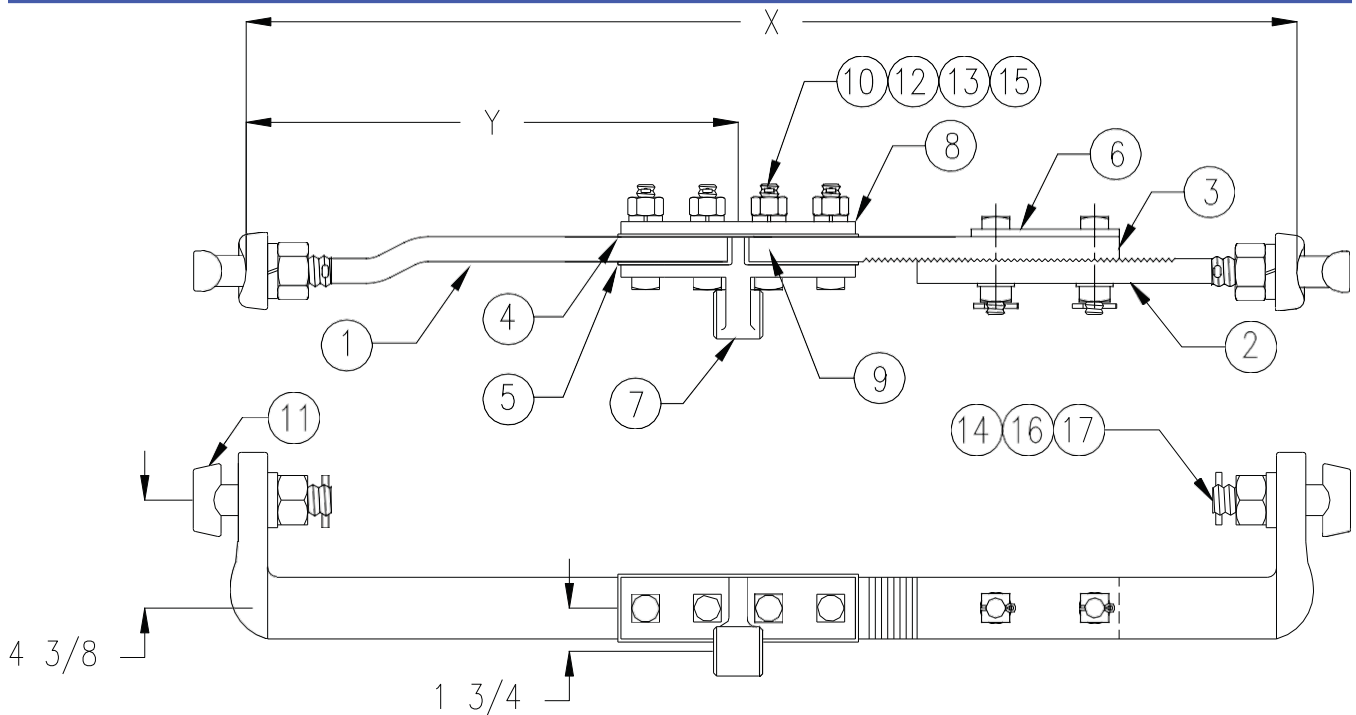
# C-11

# SWIVEL FRONT RODS - REPLACEMENT PARTS



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL FRONT ROD COMPLETE</b> , X = 43 7/8" max to 39 1/2" min, Y = 18 15/16".....	802005X	N/A
1	<b>SWIVEL FRONT BAR</b> .....	802467-2902	M451467-2902
2	<b>ADJUSTABLE SWIVEL FRONT BAR</b> .....	802468-2802	M451467-2802
3	<b>ADJUSTMENT BAR</b> , 1" X 2 1/2" X 15".....	801469	M239076
4	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-001	J780038-0002
5	<b>INSULATION ANGLE</b> , 1/8" X 2 3/4" X 4 5/8".....	973400-003	M377239-003
6	<b>PLATE WASHER</b> , 5/16" X 2 1/2" X 6".....	960099-001	M182519
7	<b>FRONT ROD LUG</b> .....	920230	30908-103 P91-290 J793107
8	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
9	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 7/32".....	973101-003	J780038-0001
10	<b>BOLT</b> , 3/4"-10 UNC X 3 3/4" long, square head.....	801470	M182518
11	<b>T-BOLT</b> .....	809009-001	M308645
12	<b>WASHER</b> , 3/4" lock.....	990402-075-02	J047772
13	<b>NUT</b> , 3/4"-10 UNC square.....	990302-075-02	J048229
14	<b>NUT</b> , 1 1/4"-7 UNC slotted heavy hex.....	990332-125-02	J048127
15	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632
16	<b>WASHER</b> , 1 1/4" lock.....	990402-125-02	J047805
17	<b>COTTER PIN</b> , 1/4" X 2 1/2".....	990511-250-02	J048665
18	<b>BOLT</b> , 3/4"-10 UNC X 3" long, hex head.....	801471	6013-002

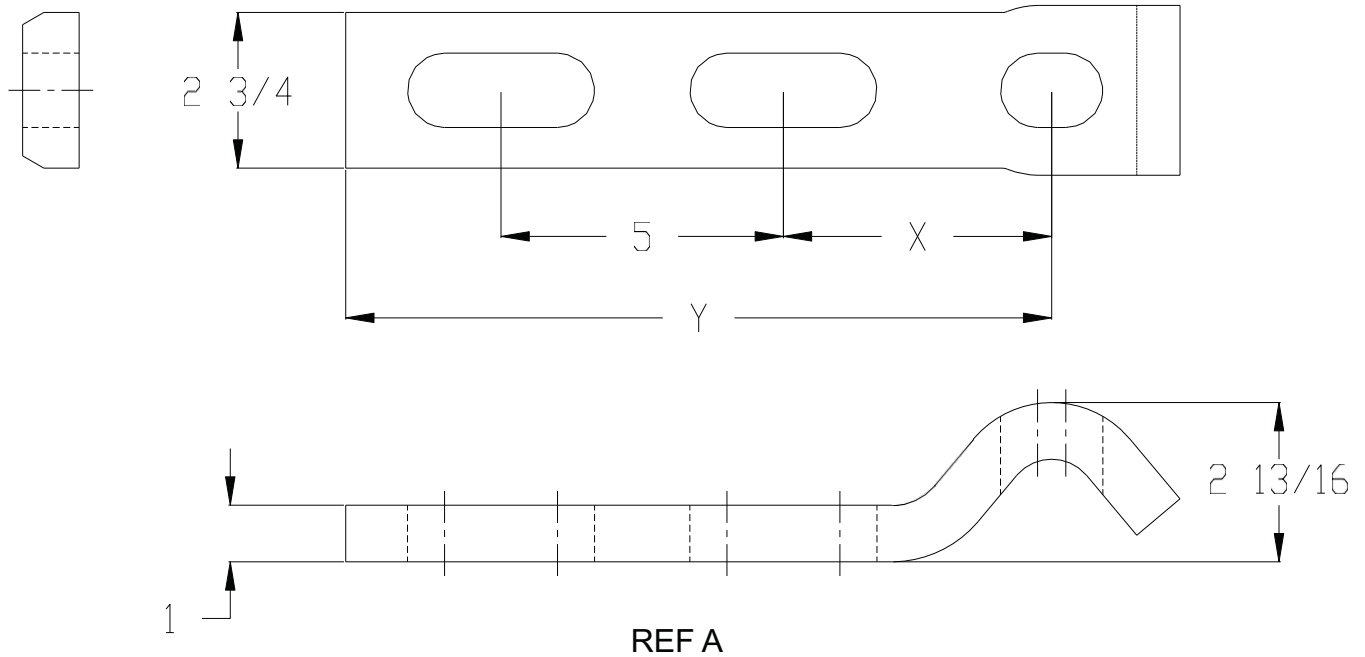


REF A

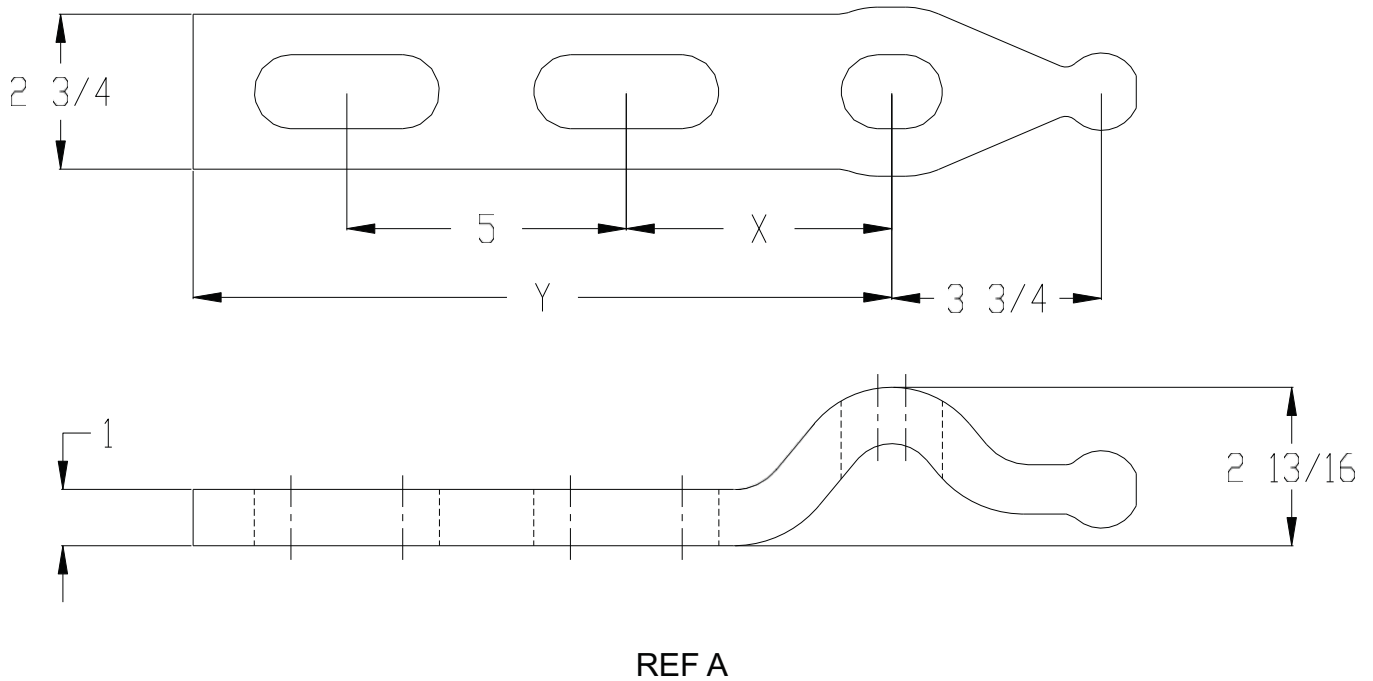
REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWIVEL FRONT ROD COMPLETE, X = 45 7/8" max to 41 1/2" min, Y = 20 15/16".....	802008X	N451387-1501
1	SWIVEL FRONT BAR.....	802467-2907	M451467-2907
2	ADJUSTABLE SWIVEL FRONT BAR.....	802468-4701	M451467-4701
3	ADJUSTMENT BAR, 1" X 2 1/2" X 15".....	801469	M239076
4	INSULATION PLATE, 1/8" X 2 3/4" X 10".....	973200-001	J780038-0002
5	INSULATION ANGLE, 1/8" X 2 3/4" X 4 5/8".....	973400-003	M377239-003
6	PLATE WASHER, 5/16" X 2 1/2" X 6".....	960099-001	M182519
7	FRONT ROD LUG, 1 3/4" downset.....	820230	M182516
8	SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
9	INSULATION BUSHING, 25/32" ID X 1" OD X 1 7/32" long.....	973101-003	J780038-0001
10	BOLT, 3/4"-10 UNC X 3 3/4" long, square head.....	801470	M182518
11	T-BOLT.....	809009	M229009
12	WASHER, 3/4" lock.....	990402-075-02	J047772
13	NUT, 3/4"-10 UNC square.....	990302-075-02	J048229
14	NUT, 1 1/4"-7 UNC heavy hex.....	990331-125-02	J048176
15	COTTER PIN, 3/16" X 1 1/8".....	990509-112-02	J048632
16	WASHER, 1 1/4" lock.....	990402-125-02	J047805
17	COTTER PIN, 1/4" X 1 3/4".....	990511-175-02	J048644

**C-13**

**SWIVEL POINT LUGS**

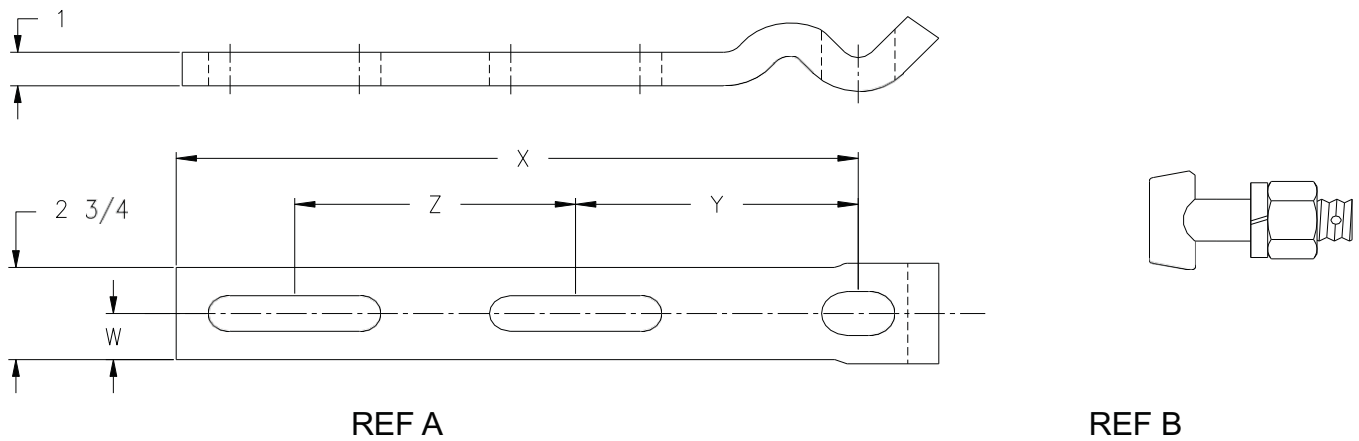


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL POINT LUG, PLAIN END</b> , for 3/4" bolts, X = 4", Y = 10 3/4".....	820570-018	M303052
A1	Similar to Ref A except X = 4 3/4", Y = 11 3/4".....	820570-002	M280484
A2	Similar to Ref A except X = 5", Y = 11 3/4".....	820570-016	M295210
A3	Similar to Ref A except X = 5 1/2", Y = 12 1/2".....	820570-001	M257125
A4	Similar to Ref A except X = 6 1/4", Y = 12 3/4".....	820570-014	M266688
A5	Similar to Ref A except X = 6 3/4", Y = 13 5/8".....	820570-003	M284293
A6	Similar to Ref A except X = 7 1/2", Y = 14 1/2".....	820570-026	N/A
A7	<b>SWIVEL POINT LUG, PLAIN END</b> , for 1" bolts, X = 3 1/2", Y = 10 1/2".....	820571-005	M438580-001
A8	Similar to Ref A7 except X = 4 1/2", Y = 11 1/2".....	820571-001	M286840
A9	Similar to Ref A7 except X = 5 1/2", Y = 12 1/2".....	820571-002	M283081
A10	Similar to Ref A9 except with chamfers per view B.....	820571-021	M435071
A11	Similar to Ref A7 except X = 6 3/8", Y = 13 3/8".....	820571-003	M284294
A12	Similar to Ref A7 except X = 7", Y = 14".....	820571-026	N/A
A13	Similar to Ref A7 except X = 7 3/4", Y = 14 3/4".....	820571-006	M438580-002
A14	Similar to Ref A7 except X = 8", Y = 15".....	820571-027	N/A
A15	Similar to Ref A7 except X = 9 1/2", Y = 15 3/4".....	820571-024	M286840-003
A16	<b>SWIVEL POINT LUG, PLAIN END</b> , for insulated 1" dia bolts, X = 4 1/2", Y = 11 1/2".....	820572-003	M286840-002
A17	Similar to Ref A16 except X = 5 1/2", Y = 12 1/2".....	820572-001	M438580-007
A18	Similar to Ref A16 except X = 6 3/8", Y = 13 3/8".....	820572-002	M438580-008

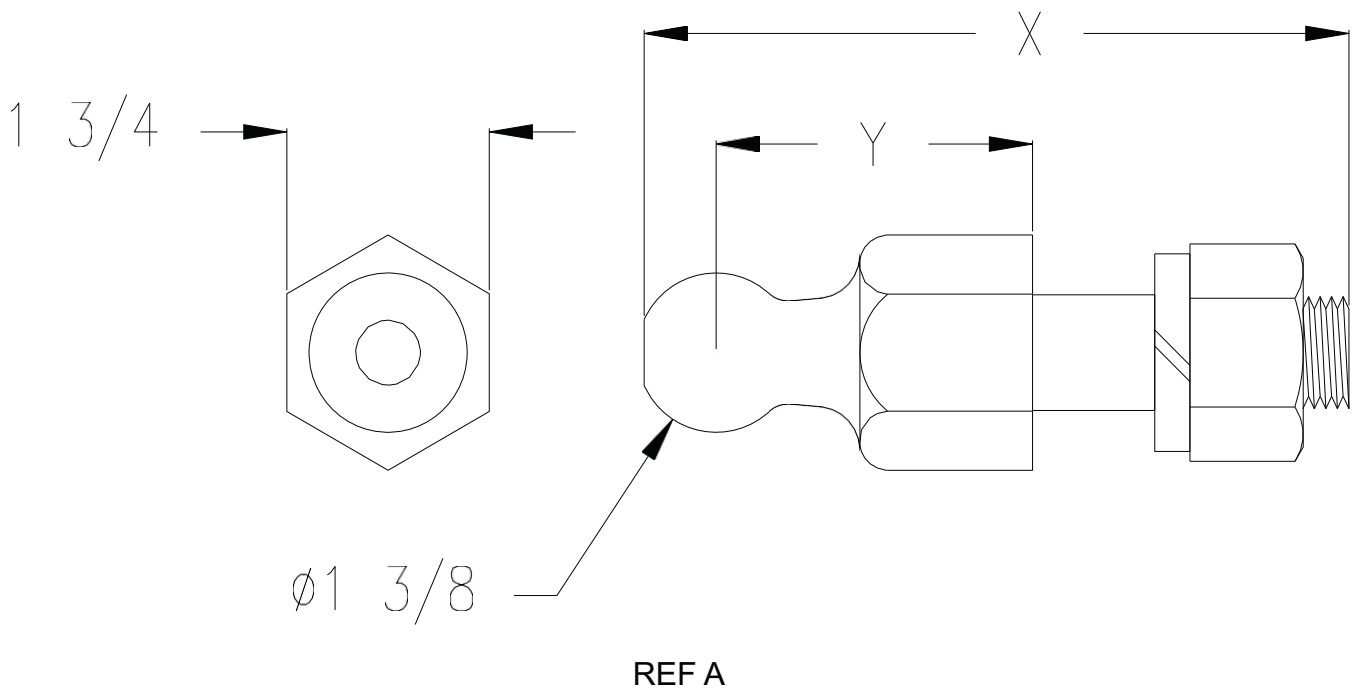


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL POINT LUG, BALL END</b> , for 3/4" bolts, X = 4 3/4", Y = 11 3/4".....	820670-001	M309848-001
A1	Similar to Ref A except X = 5 1/2", Y = 12 1/2".....	820670-002	M257124
A2	Similar to Ref A except X = 6 3/4", Y = 13 5/8".....	820670-003	M373959
A3	Similar to Ref A except X = 7 1/2", Y = 14 1/2".....	820670-015	N/A
A4	<b>SWIVEL POINT LUG, BALL END</b> , for 1" bolts, X = 4 1/2", Y = 11 1/2".....	820671-001	M286016
A5	Similar to Ref A4 except X = 5 1/2", Y = 12 1/2".....	820671-002	M297146
A6	Similar to Ref A4 except X = 6 3/8", Y = 13 3/8".....	820671-003	M293573
A7	Similar to Ref A4 except X = 7 1/2", Y = 14 1/2".....	820671-010	N/A
A8	<b>SWIVEL POINT LUG, BALL END</b> , for insulated 1" dia bolts, X = 4 1/2", Y = 11 1/2".....	820672-003	M286016-001
A9	Similar to Ref A8 except X = 5 3/8", Y = 12 3/8".....	820672-001	M435923
A10	Similar to Ref A8 except X = 5 1/2", Y = 12 1/2".....	820672-002	M297146-001
A11	Similar to Ref A8 except X = 6 3/8", Y = 13 3/8".....	820672-004	M435923-001
A12	Similar to Ref A8 except X = 7 1/2", Y = 14 1/2".....	820672-005	N/A

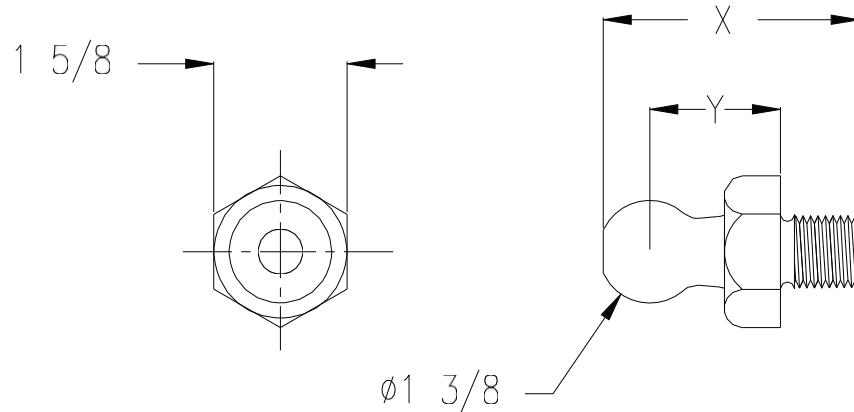




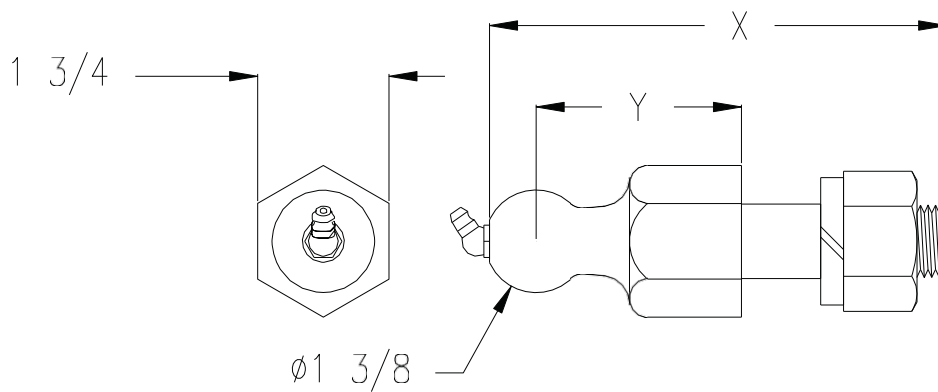
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWIVEL POINT LUG, PLAIN END</b> , for double slip switches, for 3/4" bolts, W = 1 3/8", X = 14 3/4", Y = 7 3/4", Z = 5".....	820573-014	M451398-2301
A1	<b>SWIVEL POINT LUG, PLAIN END</b> , for double slip switches, for 7/8" bolts, W = 1 3/8", X = 12 1/2", Y = 6 1/2", Z = 3 3/4".....	820573-001	M451398-4901
A2	<b>SWIVEL POINT LUG, PLAIN END</b> , for double slip switches, for 1" bolts, W = 1 1/16", X = 15", Y = 8 1/2", Z = 3 3/4".....	820573-002	M451398-4902
A3	Similar to Ref A2 except W = 1 11/16".....	820573-003	M451398-4903
A4	Similar to Ref A2 except W = 1 1/16", X = 12", Y = 5 1/2".....	820573-004	M451398-4904
A5	Similar to Ref A4 except W = 1 11/16".....	820573-005	M451398-4905
A6	Similar to Ref A2 except W = 1 3/8", X = 11 7/8", Y = 5 1/2", Z = 5".....	820573-006	M277723
A7	Similar to Ref A2 except W = 1", X = 12 3/4", Y = 6 1/4", Z = 5".....	820573-011	M435966
A8	Similar to Ref A2 except W = 1 3/8", X = 15 1/2", Y = 8 1/2", Z = 5".....	820573-012	M451398-4906
A9	Similar to Ref A2 except W = 1 3/8", X = 12 1/2", Y = 5 1/2", Z = 5".....	820573-013	M451398-4907
A10	Similar to Ref A2 except W = 1 3/8", X = 11 3/4", Y = 6 1/2", Z = 3 3/4".....	820573-017	M277723-001
B	<b>T-BOLT COMPLETE</b> , with hex nut, washer and cotter pin, X = 5 3/8".....	809009X	N436484
B1	<b>T-BOLT ONLY</b> , for Ref B.....	809009	M229009
B2	Similar to Ref B1 except with 2 cotter pin holes.....	809009-001	M308645
B3	Similar to Ref B2 except aluminum paint.....	809009-002	M308645-001
B4	<b>T-BOLT ONLY</b> , X = 5".....	809009-003	M308646
B5	Similar to Ref B4 except no cotter pin holes.....	809009-004	M277773
B6	<b>T-BOLT ONLY</b> , with no cotter pin holes, X = 4 1/2".....	809009-005	M397621



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BALL STUD COMPLETE, 1 1/8" dia stem, X = 5 3/8", Y = 2"</b> .....	809598-001-01	N193017
A1	Similar to Ref A except X = 6 1/8", Y = 2 3/4".....	809598-002-01	N199018
A2	Similar to Ref A except X = 8 5/8", Y = 5 1/4".....	809598-003-01	N210156
A3	Similar to Ref A except X = 5 1/8", Y = 1 3/4".....	809598-004-01	N211449
A4	Similar to Ref A except X = 6 5/8", Y = 3 1/4".....	809598-005-01	N211489
A5	Similar to Ref A except X = 8", Y = 4 5/8".....	809598-006-01	N212841
A6	Similar to Ref A except X = 7 5/8", Y = 4 1/4".....	809598-007-01	N216401
A7	Similar to Ref A except X = 9 1/8", Y = 5 3/4".....	809598-008-01	N338130
A8	Similar to Ref A except X = 4 3/16", Y = 1 1/2", with jam nut.....	809598-009-01	N386271
A9	Similar to Ref A except X = 4 7/8", Y = 1 1/2".....	809598-010-01	N434826
A10	Similar to Ref A except X = 5 3/8", Y = 1 1/2", with 1" dia stem.....	809598-011-01	N434826-001
A11	Similar to Ref A except X = 5 3/8", Y = 1 1/2", insulated.....	809598-012-01	N438659
A12	Similar to Ref A except X = 5 11/32", Y = 2".....	809598-013-01	N451598-2001
A13	Similar to Ref A except X = 6 23/32", Y = 3 3/8".....	809598-014-01	N451598-2003
A14	Similar to Ref A except X = 7 19/32", Y = 4 1/4".....	809598-015-01	N451598-2005
A15	Similar to Ref A except X = 5 7/8", Y = 2 1/2".....	809598-016-01	N451598-2007
A16	Similar to Ref A except X = 6 3/8", Y = 3".....	809598-017-01	N451598-2011

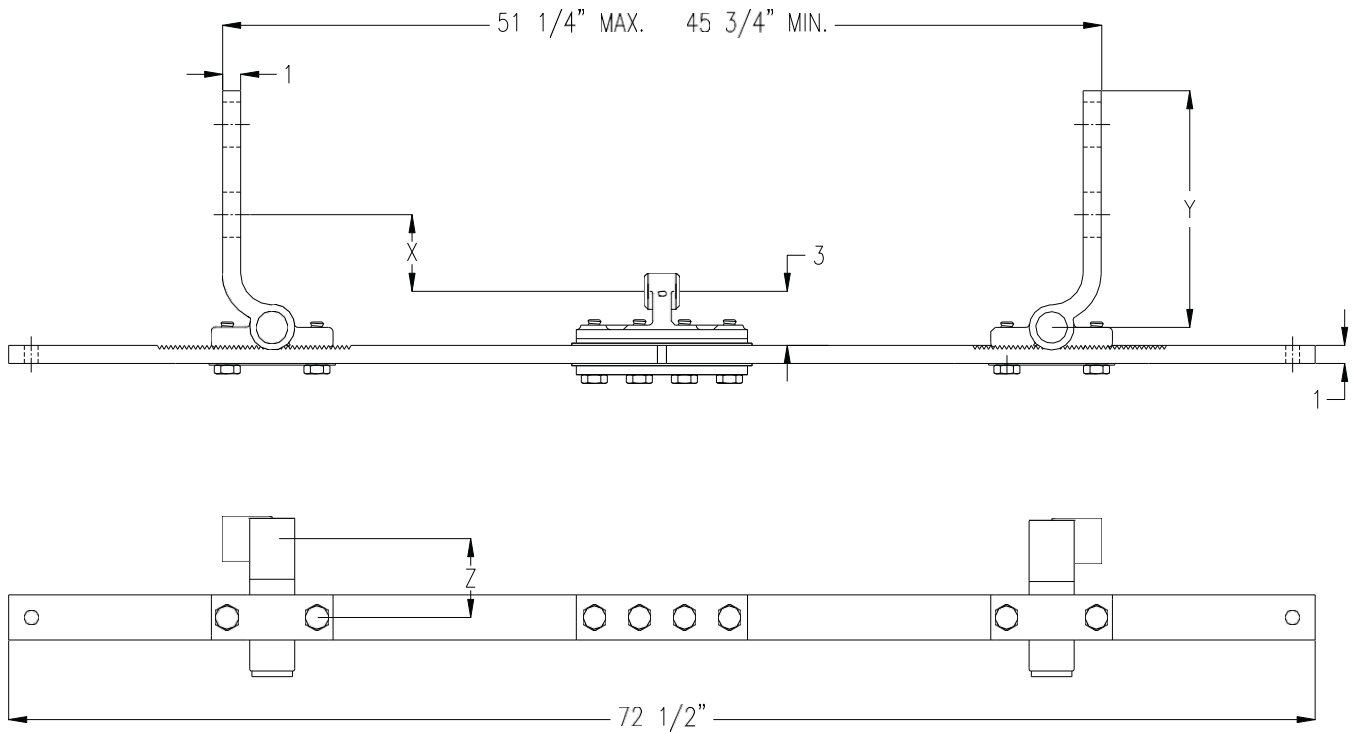


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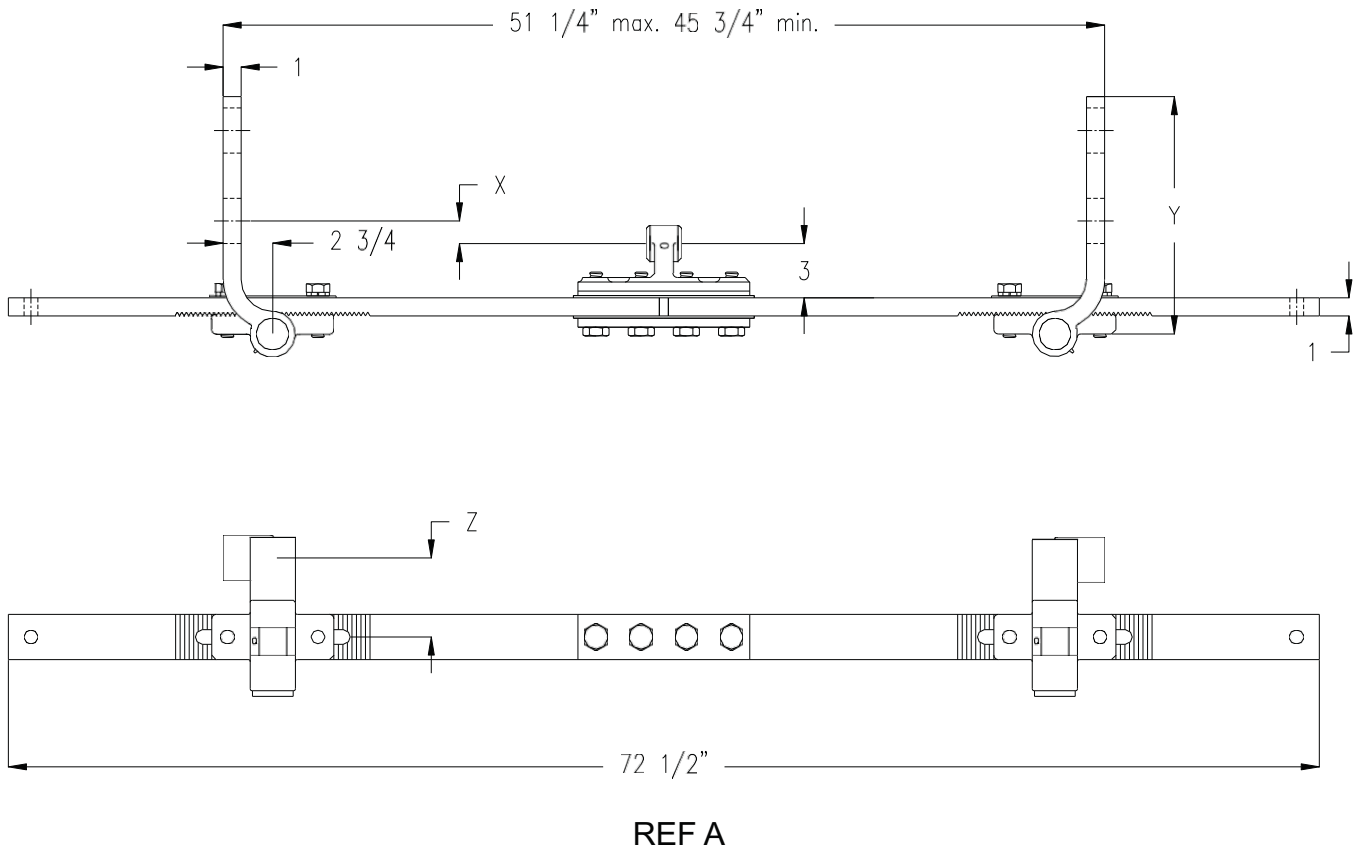
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BALL STUD</b> , 1" - 8 UNC threads, X = 3 3/16", Y = 1 1/2".....	809598-018	M277709
A1	Similar to Ref A except X = 3 7/16", Y = 1 3/4".....	809598-019	M311498
A2	Similar to Ref A except X = 5 7/8", Y = 2".....	809598-020	M331903
B	<b>BALL STUD</b> , 1 1/8" - 7 threads, with lubrication holes, X = 6 3/8", Y = 3".....	809598-021-01	N383902
B1	Similar to Ref B except without hardware.....	809598-021	M383901
B2	Similar to Ref B except X = 4 7/8", Y = 1 1/2".....	809598-022-01	N388491
B3	Similar to Ref B2 except without hardware.....	809598-022	M388490
B4	Similar to Ref B except X = 5 5/8", Y = 2 1/4".....	809598-023-01	N388493
B5	Similar to Ref B4 except without hardware.....	809598-023	N388492
B6	Similar to Ref B except X = 5 7/8", Y = 2 3/4".....	809598-024-01	N399770
B7	Similar to Ref B6 except without hardware.....	809598-024	M399769

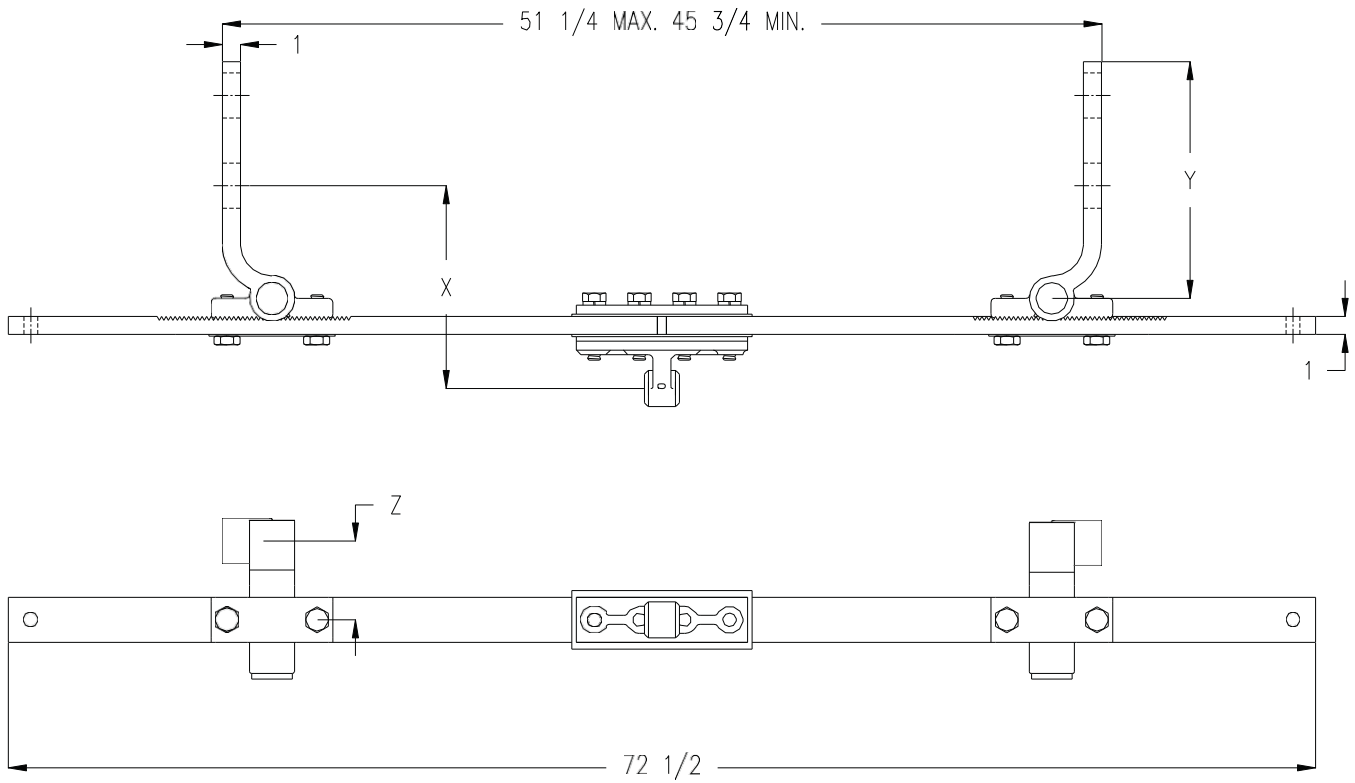


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE</b> , X = 3 1/2" to 5", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....	901330X	A91-330
A1	Similar to Ref A except 3/4" dia point bolts.....	901340X	A91-340
A2	<b>HINGED FRONT ROD COMPLETE</b> , X = 3 1/2" to 5", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....	901331X	A91-331
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	901341X	A91-341
A4	<b>HINGED FRONT ROD COMPLETE</b> , X = 5 1/2" to 7", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....	901332X	A91-332
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	901342X	A91-342
A6	<b>HINGED FRONT ROD COMPLETE</b> , X = 5 1/2" to 7", Y = 15 1/8", Z = 5 3/16", for 1" point bolts.....	901333X	36333-055-01 A91-333
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	901343X	A91-343

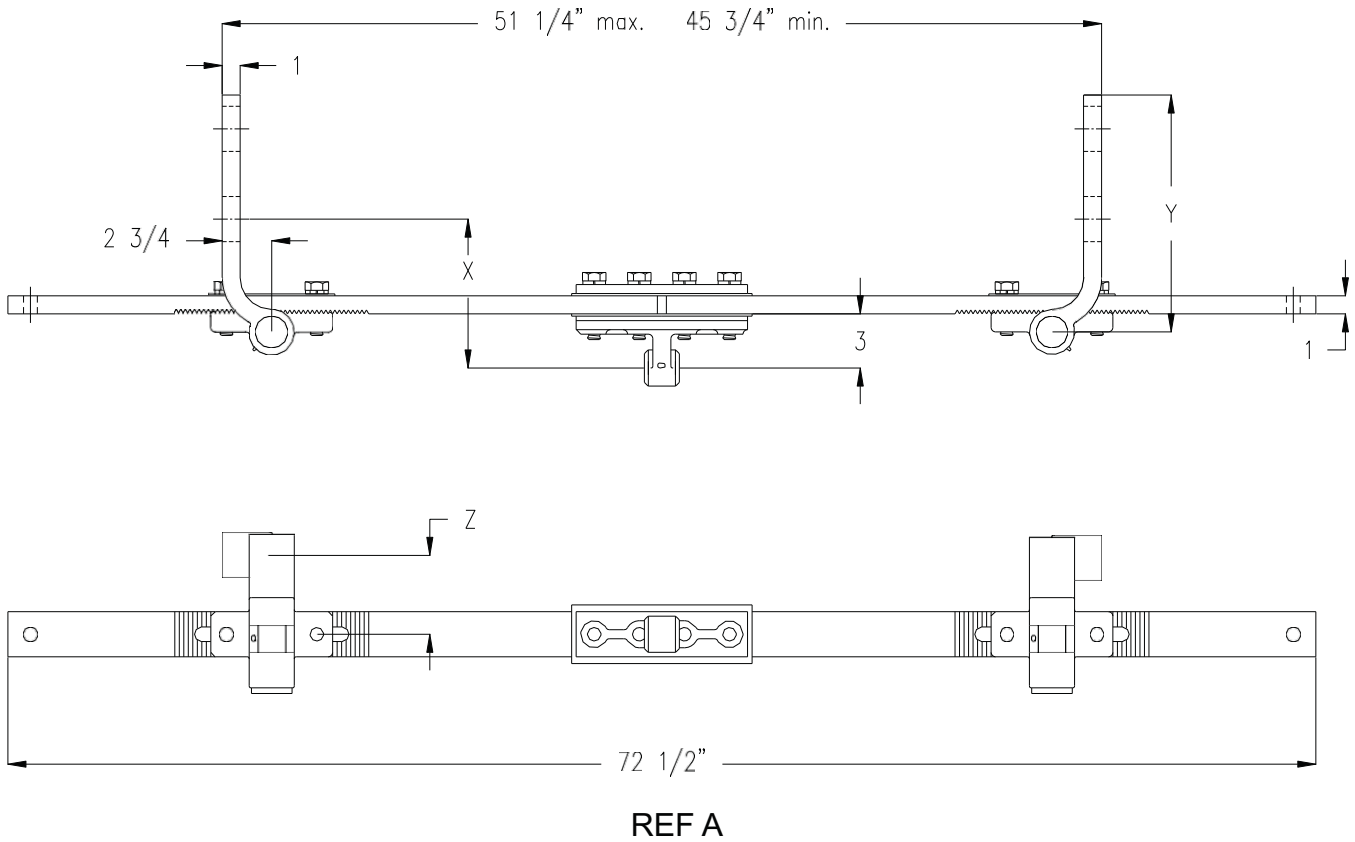


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE</b> , X = 1/2" to 2", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....	902350X	36333-056-03 A91-350
A1	Similar to Ref A except for 3/4" dia point bolts.....	902360X	A91-360
A2	<b>HINGED FRONT ROD COMPLETE</b> , X = 1/2" to 2", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....	902351X	36333-057-03 A91-351
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	902361X	A91-361
A4	<b>HINGED FRONT ROD COMPLETE</b> , X = 2 1/2" to 4", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....	902352X	36333-056-01 A91-352
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	902362X	A91-362
A6	<b>HINGED FRONT ROD COMPLETE</b> , X = 2 1/2" to 4", Y = 15 1/8", Z = 5 3/16", for 1" dia point bolts.....	902353X	36333-057-01 A91-353
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	902363X	A91-363

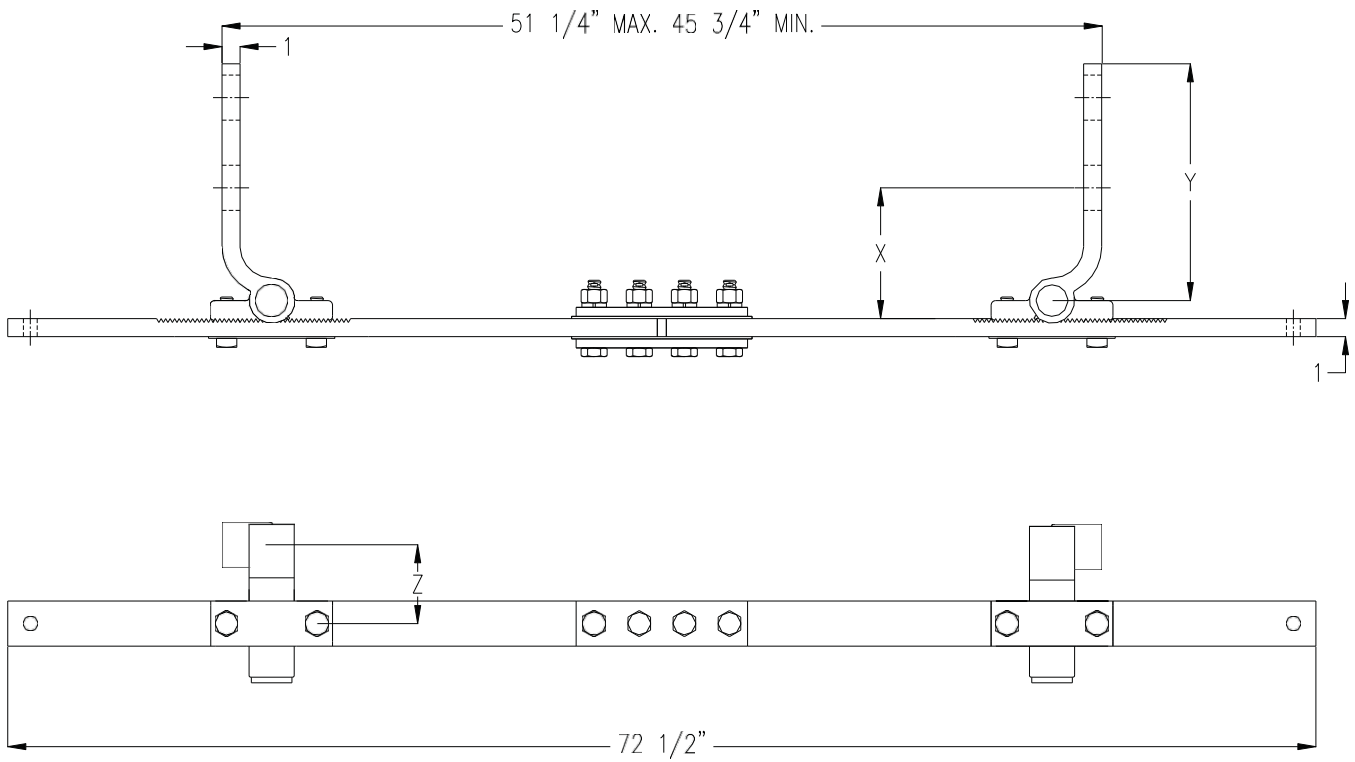


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE</b> , X = 10 1/2" to 12", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....	903370X	A91-370
A1	Similar to Ref A except for 3/4" dia point bolts.....	903380X	A91-380
A2	<b>HINGED FRONT ROD COMPLETE</b> , X = 10 1/2" to 12", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....	903371X	A91-371
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	903381X	A91-381
A4	<b>HINGED FRONT ROD COMPLETE</b> , X = 12 1/2" to 14", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....	903372X	A91-372
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	903382X	A91-382
A6	<b>HINGED FRONT ROD COMPLETE</b> , X = 12 1/2" to 14", Y = 15 1/8", Z = 5 3/16", for 1" dia point bolts.....	903373X	A91-373
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	903383X	A91-383



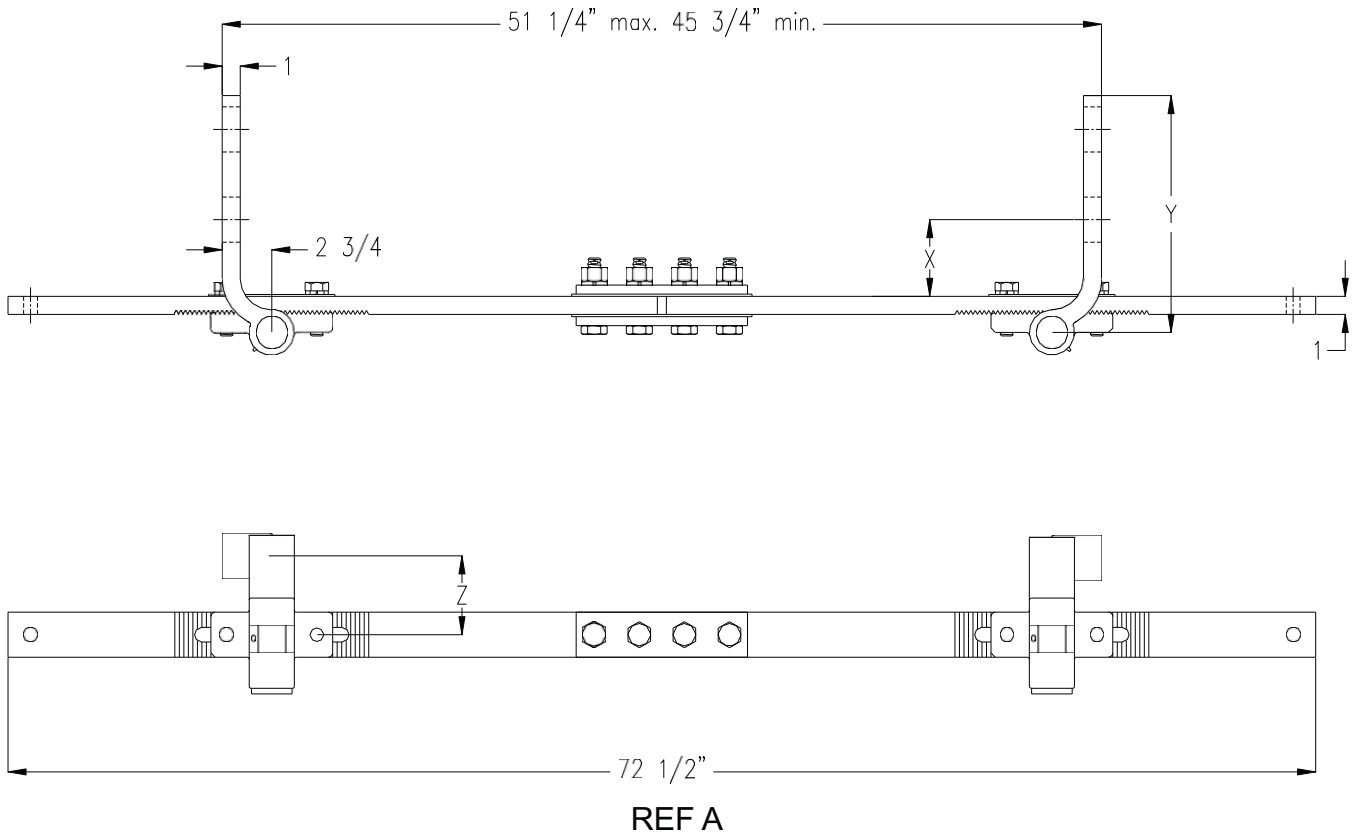
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE, X = 7 1/2" to 9", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....</b>	904390X	36333-056-02 A91-390
A1	Similar to Ref A except for 3/4" dia point bolts.....	904400X	A91-400
A2	<b>HINGED FRONT ROD COMPLETE, X = 7 1/2" to 9", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....</b>	904391X	36333-057-02 A91-391
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	904401X	A91-401
A4	<b>HINGED FRONT ROD COMPLETE, X = 9 1/2" to 11", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....</b>	904392X	36333-056-04 A91-392
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	904402X	A91-402
A6	<b>HINGED FRONT ROD COMPLETE, X = 9 1/2" to 11", Y = 15 1/8", Z = 5 3/16", for 1" dia point bolts.....</b>	904393X	36333-057-04 A91-393
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	904403X	A91-403



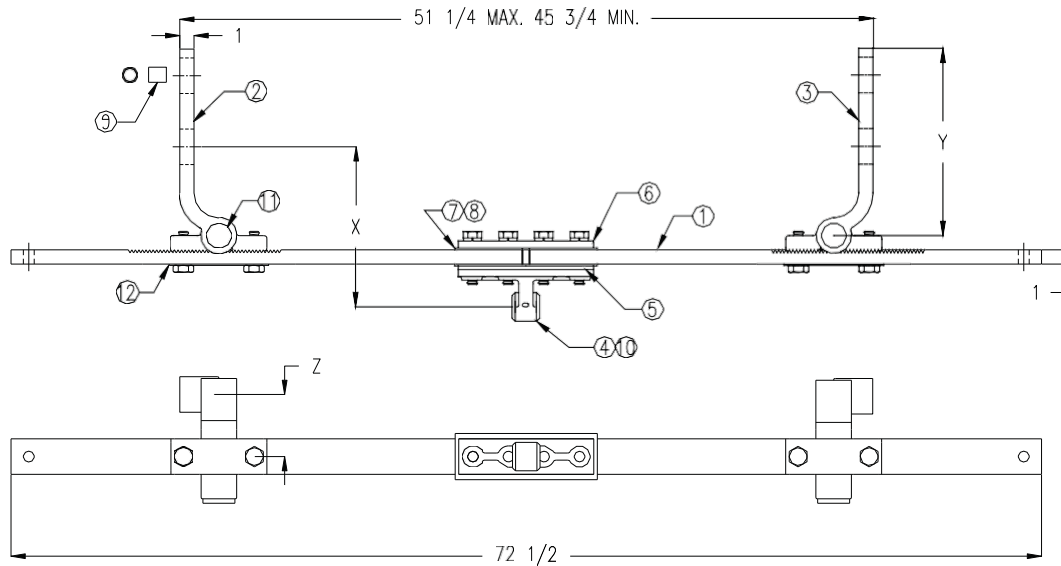
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE</b> , X = 6 1/2" to 8", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....	905410X	A91-410
A1	Similar to Ref A except for 3/4" dia point bolts.....	905420X	A91-420
A2	<b>HINGED FRONT ROD COMPLETE</b> , X = 6 1/2" to 8", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....	905411X	A91-411
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	905421X	A91-421
A4	<b>HINGED FRONT ROD COMPLETE</b> , X = 8 1/2" to 10", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....	905412X	A91-412
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	905422X	A91-422
A6	<b>HINGED FRONT ROD COMPLETE</b> , X = 8 1/2" to 10", Y = 15 1/8", Z = 5 3/16", for 1" dia point bolts.....	905413X	A91-413
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	905423X	A91-423



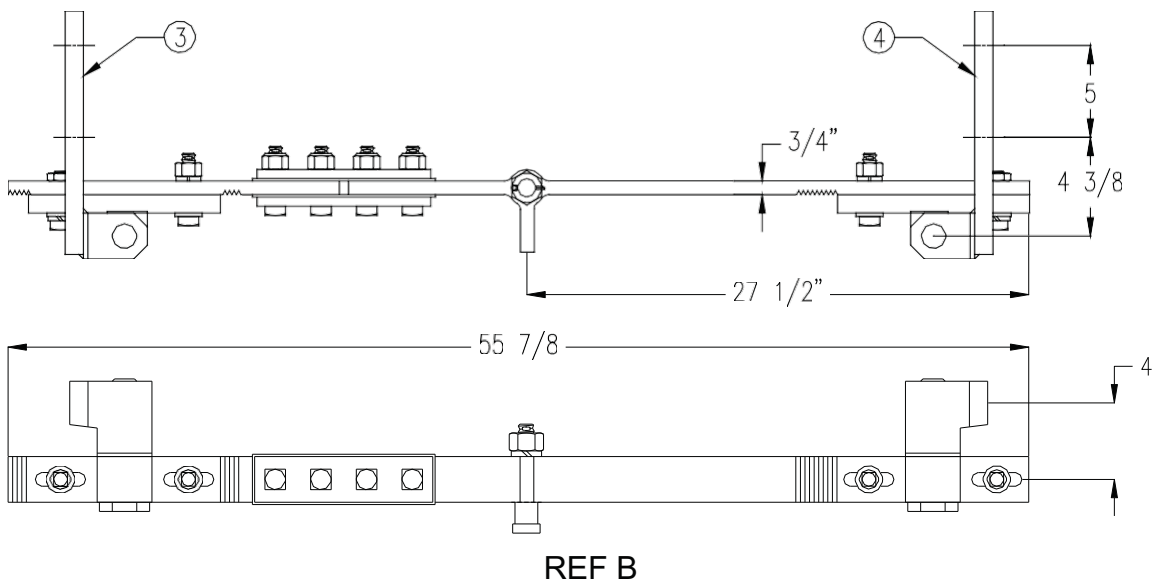
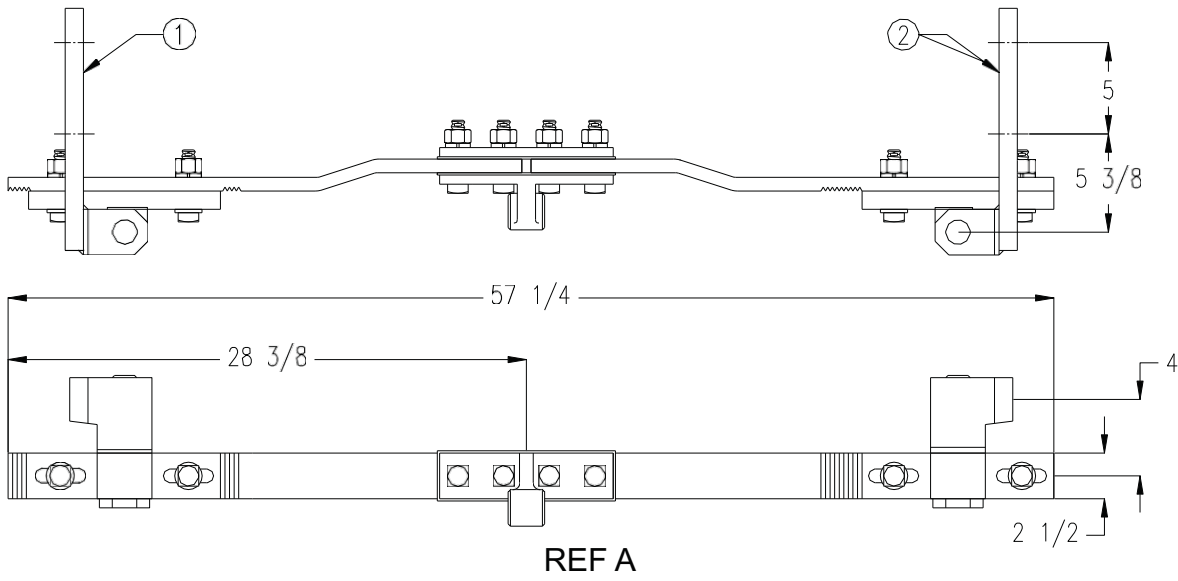


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED FRONT ROD COMPLETE</b> , X = 3 1/2" to 5", Y = 13 1/8", Z = 4 1/4", for 1" dia point bolts.....	906430X	A91-430
A1	Similar to Ref A except for 3/4" dia point bolts.....	906440X	A91-440
A2	<b>HINGED FRONT ROD COMPLETE</b> , X = 3 1/2" to 5", Y = 13 1/8", Z = 5 3/16", for 1" dia point bolts.....	906431X	A91-431
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	906441X	A91-441
A4	<b>HINGED FRONT ROD COMPLETE</b> , X = 5 1/2" to 7", Y = 15 1/8", Z = 4 1/4", for 1" dia point bolts.....	906432X	A91-432
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	906442X	A91-442
A6	<b>HINGED FRONT ROD COMPLETE</b> , X = 5 1/2" to 7", Y = 15 1/8", Z = 5 3/16", for 1" dia point bolts.....	906433X	36333-063-01 A91-433
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	906443X	A91-443

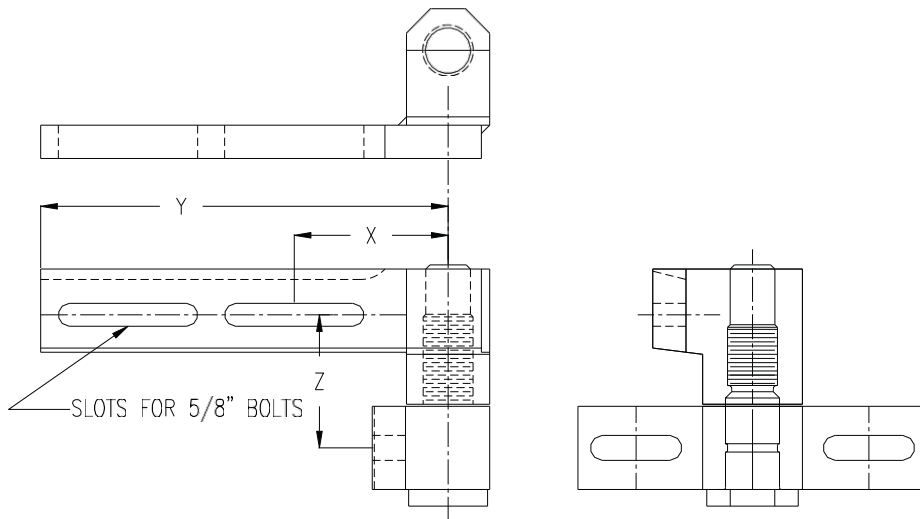


REF A

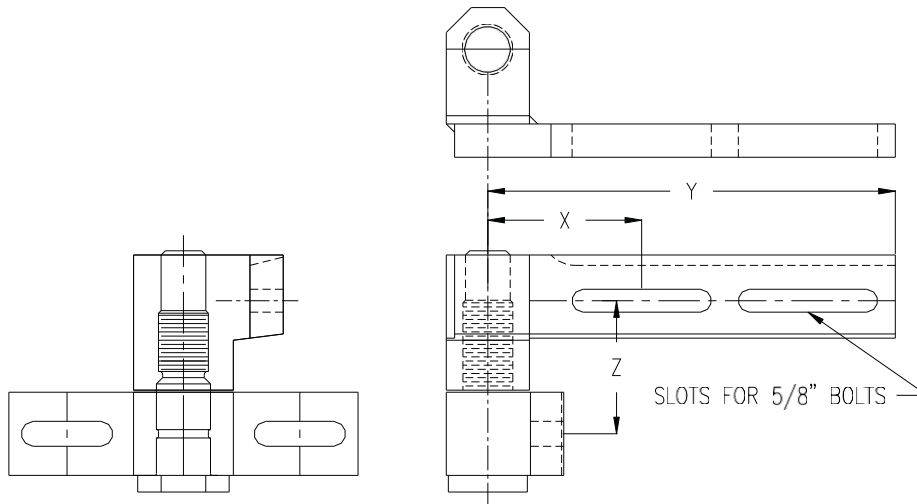
REF	DESCRIPTION	G & B PART #	OEM PART #
1	<b>SERRATED CONNECTING ROD</b> .....	911709-248	14709-248 P91-273
2	<b>HINGED LUG, LH</b> , 1" bolts, X = 6 1/4", Y = 13 1/8", Z = 4 1/4".....	911294-082X	17294-008-02 P91-278
2A	Similar to Ref 2 except Z = 5 3/16".....	911294-084X	17294-008-04 P91-280
3	<b>HINGED LUG, RH</b> , 1" bolts, X = 6 1/4", Y = 13 1/8", Z = 4 1/4".....	911294-092X	17294-009-02 P91-282
3A	Similar to Ref 3 except Z = 5 3/16".....	911294-094X	17294-009-04 P91-284
4	<b>LUG</b> , center, 2 5/8" offset.....	920230-001	30908-103 P91-290
4A	Similar to Ref 4 except 2 7/8" offset with shim Ref 5.....	920230-000-01	30908-143
5	<b>SHIM PLATE</b> , 1/4" X 2 1/2" X 9 1/2".....	960100-005	40640-012 P91-313
6	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	40640 P91-312
7	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-001	47409 P91-329
8	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 7/32" long.....	973100-005	46983 P91-328
9	<b>STEEL BUSHING</b> , for 3/4" dia point bolts.....	998000-001	8104-001 P91-270
10	<b>GREASE FITTING</b> , 1/4" drive, straight.....	990900-001	34232-021
11	<b>GREASE FITTING</b> , 1/4" drive, 65 degree.....	990900-002	34232-043
12	<b>PLATE WASHER</b> , 12 GA X 2" X 7".....	960100-068	5656-068



REF	DESCRIPTION	G & B PART #	OEM PART #
A	INSULATED HINGED FRONT ROD COMPLETE.....	807101-001-01	N451387-3501
B	INSULATED HINGED FRONT ROD COMPLETE, with lock rod bolt and hinged point lugs.....	807102-001-01	N398767
B1	Similar to Ref B except without lock rod bolt and hinged point lugs.....	807102-001-02	N397146
1	HINGED POINT LUG, LH, slotted for 5/8" dia bolts on 5" centers.....	807152X	N451398-1901
2	Similar to Ref 1 except RH.....	807153X	N451398-2001
3	HINGED POINT LUG, LH, slotted for 5/8" dia bolts on 5" centers.....	807150X	N395124
4	Similar to Ref 3 except RH.....	807151X	N395125

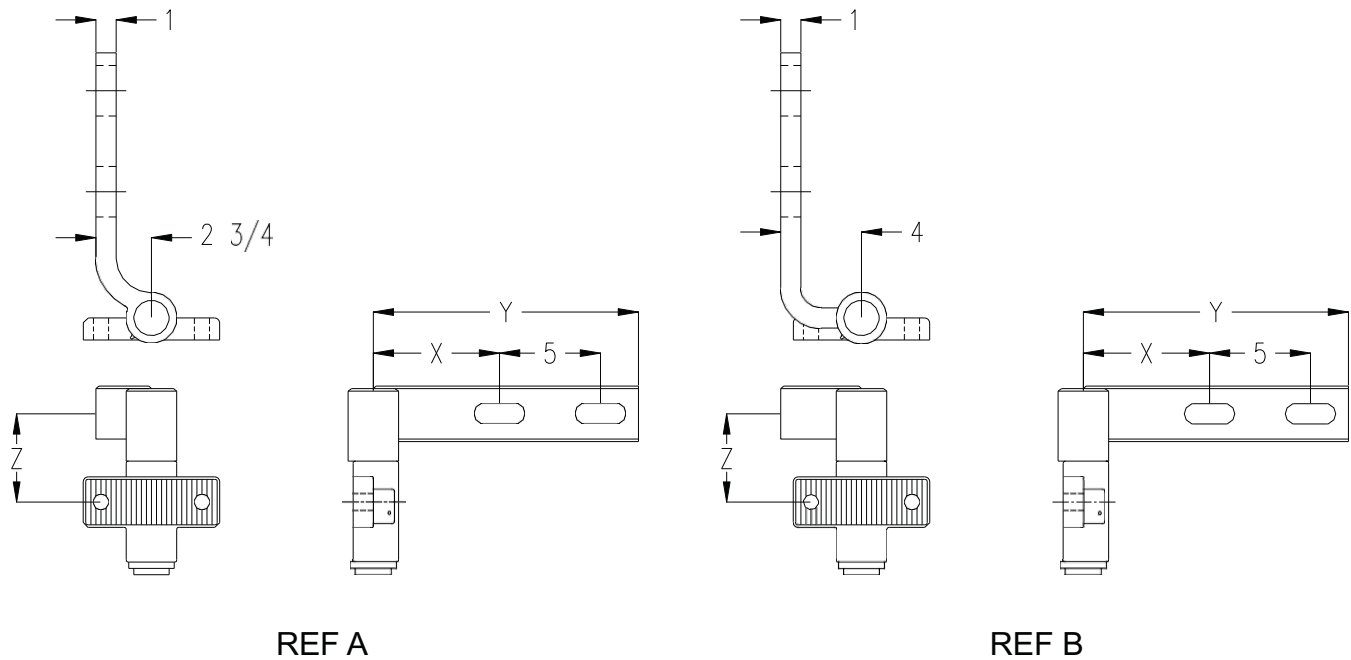


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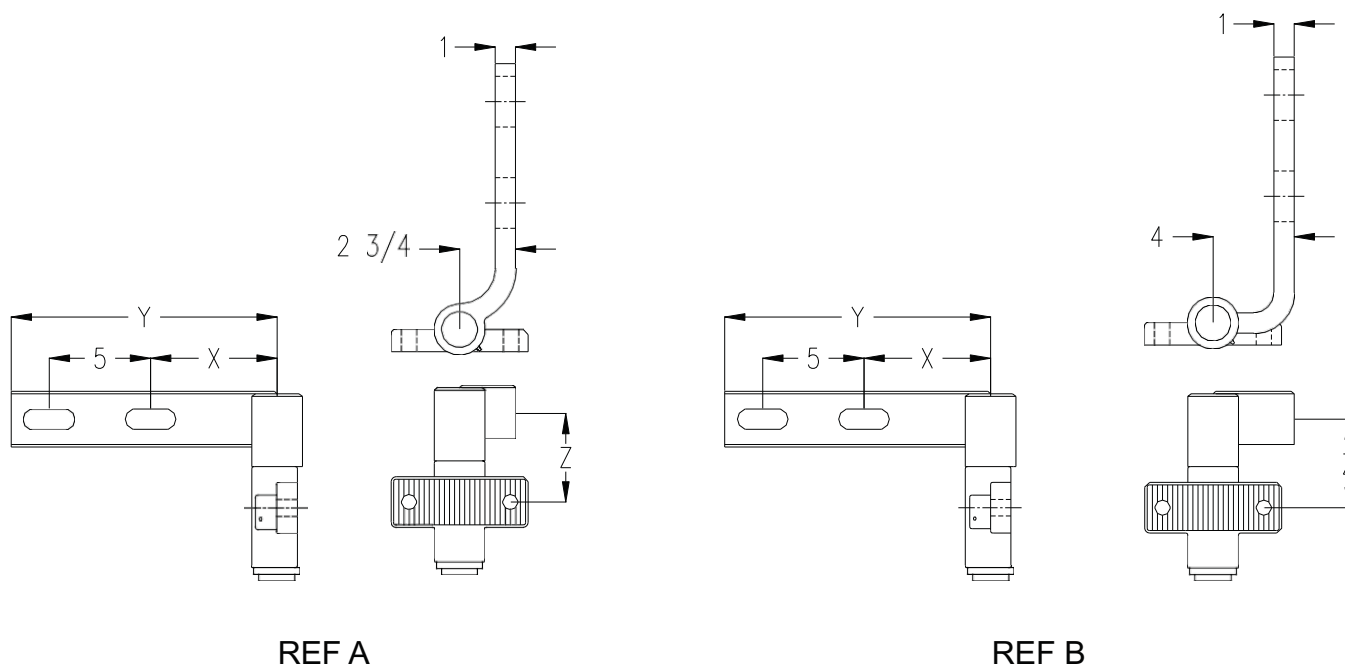


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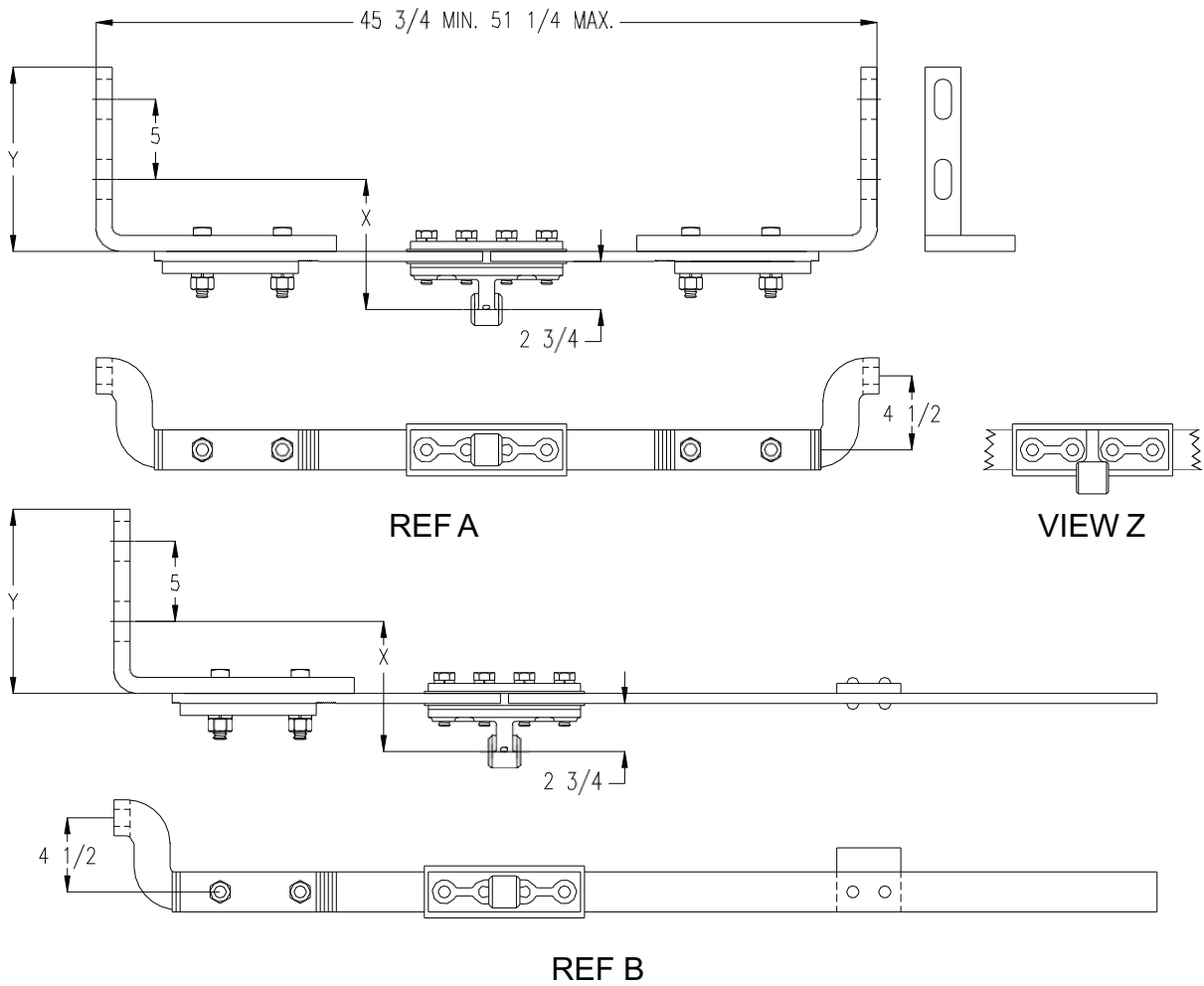
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED POINT LUG, LH</b> , slotted for 5/8" dia bolts on 5" centers, X = 4 3/4", Y = 12 1/4", Z = 4".....	807150X	N395124
A1	Similar to Ref A except X = 5 3/8", Y = 14 1/4".....	807152X	N451398-1901
A2	<b>HINGED POINT LUG, LH</b> , slotted for 5/8" dia bolts on 5" centers, X = 4 7/8", Y = 12 1/4", Z = 5 5/16".....	807154X	N451398-3501
A3	Similar to Ref A2 except X = 6 3/8", Y = 13 3/4".....	807156X	N451398-3503
B	<b>HINGED POINT LUG, RH</b> , slotted for 5/8" dia bolts on 5" centers, X = 4 3/4", Y = 12 1/4", Z = 4".....	807151X	N395125
B1	Similar to Ref B except X = 5 3/8", Y = 14 1/4".....	807153X	N451398-2001
B2	<b>HINGED POINT LUG, RH</b> , slotted for 5/8" dia bolts on 5" centers, X = 4 7/8", Y = 12 1/4", Z = 5 5/16".....	807155X	N451398-3502
B3	Similar to Ref B2 except X = 6 3/8", Y = 13 3/4".....	807157X	N451398-3504



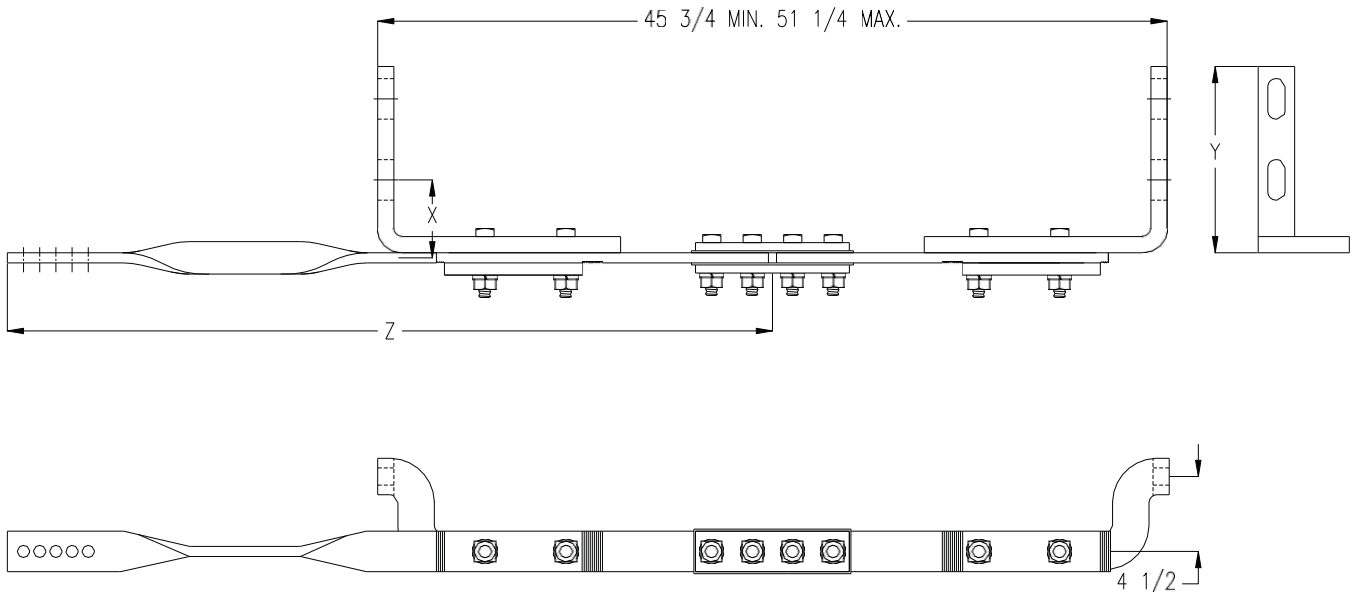
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED LUG, LH, 1" bolts, X = 8 1/4", Y = 15 1/8", Z = 4 1/4"</b> .....	911294-081X	17294-008-01
A1	<b>HINGED LUG, LH, 1" bolts, X = 6 1/4", Y = 13 1/8", Z = 4 1/4"</b> .....	911294-082X	17294-008-02 P91-278
A2	Similar to Ref A except Z = 5 3/16".....	911294-083X	17294-008-03 P91-279
A3	Similar to Ref A1 except Z = 5 3/16".....	911294-084X	17294-008-04 P91-280
A4	<b>HINGED LUG, LH, 1" bolts, X = 5 1/4", Y = 13 5/8", Z = 4 1/4", 6 1/2" slot spacing</b> .....	911294-088X	17294-008-08
A5	Similar to Ref A4 except Z = 5 3/16".....	911294-461X	17294-046-01
A6	<b>HINGED LUG, LH, 5/8" bolts, X = 6 3/8", Y = 13 1/8", Z = 4 1/4"</b> .....	911294-331X	17294-033-01
A7	Similar to Ref A6 except X = 8 3/8", Y = 15 1/8".....	911294-332X	17294-033-02
A8	<b>HINGED LUG, LH, 5/8" bolts, X = 5 3/8", Y = 12", Z = 4 1/4"</b> .....	911294-361X	17294-036-01
A9	Similar to Ref A8 except Z = 5 3/16".....	911294-362X	17294-036-02
B	<b>HINGED LUG, LH, 1" bolts, X = 4 1/2", Y = 11 3/8", Z = 4 1/4"</b> .....	911294-101X	17294-010-01
B1	Similar to Ref B except Z = 5 3/16".....	911294-102X	17294-010-02
B2	<b>HINGED LUG, LH, 1" bolts, X = 3 1/4", Y = 10 1/2", Z = 4 1/4"</b> .....	911294-103X	17294-010-03
B3	Similar to Ref B except holes for 3/4" bolts, X = 3 3/4", Y = 9 3/4".....	911294-201X	17294-020-01



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HINGED LUG, RH, 1" bolts, X = 8 1/4", Y = 15 1/8", Z = 4 1/4"</b> .....	911294-091X	17294-009-01
A1	<b>HINGED LUG, RH, 1" bolts, X = 6 1/4", Y = 13 1/8", Z = 4 1/4"</b> .....	911294-092X	17294-009-02 P91-282
A2	Similar to Ref A except Z = 5 3/16".....	911294-093X	17294-009-03 P91-283
A3	Similar to Ref A1 except Z = 5 3/16".....	911294-094X	17294-009-04 P91-284
A4	<b>HINGED LUG, RH, 1" bolts, X = 5 1/4", Y = 13 5/8", Z = 4 1/4", 6 1/2" slot...</b>	911294-098X	17294-009-08
A5	Similar to Ref A4 except Z = 5 3/16".....	911294-471X	17294-047-01
A6	<b>HINGED LUG, RH, 5/8" bolts, X = 6 3/8", Y = 13 1/8", Z = 4 1/4"</b> .....	911294-321X	17294-032-01
A7	Similar to Ref A6 except X = 8 3/8", Y = 15 1/8".....	911294-322X	17294-032-02
A8	<b>HINGED LUG, RH, 5/8" bolts, X = 5 3/8", Y = 12", Z = 4 1/4"</b> .....	911294-371X	17294-037-01
A9	Similar to Ref A8 except Z = 5 3/16".....	911294-372X	17294-037-02
B	<b>HINGED LUG, RH, 1" bolts, X = 4 1/2", Y = 11 3/8", Z = 4 1/4"</b> .....	911294-111X	17294-011-01
B1	Similar to Ref B except Z = 5 3/16".....	911294-112X	17294-011-02
B2	<b>HINGED LUG, RH, 1" bolts, X = 3 1/4", Y = 10 1/2", Z = 4 1/4"</b> .....	911294-113X	17294-011-03
B3	Similar to Ref B except holes for 3/4" bolts, X = 3 3/4", Y = 9 3/4".....	911294-211X	17294-021-01



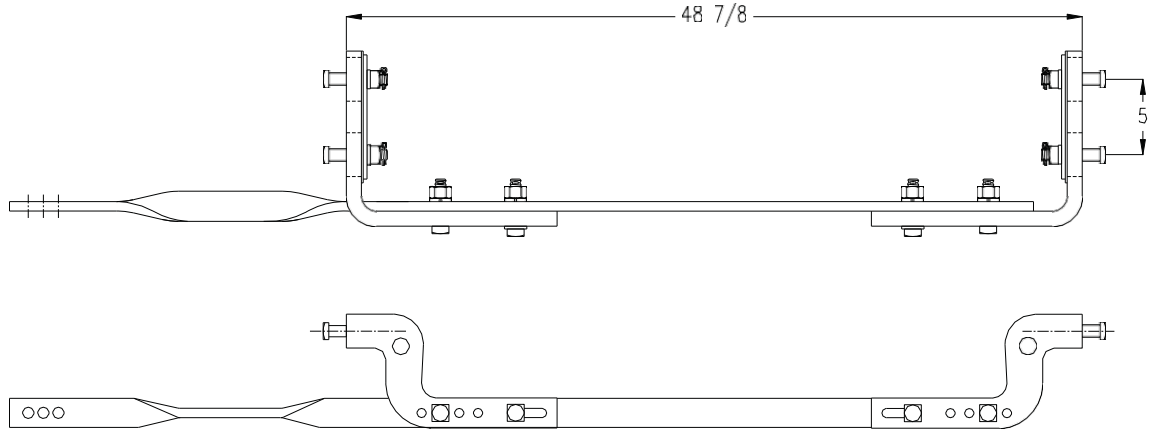
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>RIGID FRONT ROD COMPLETE</b> , with straight lug, X = 7 1/8" to 8 5/8", Y = 11 1/2", for 1" dia point bolts.....	907260X	22870-194-02 A91-260 N451387-4301
A1	Similar to Ref A except for 3/4" dia point bolts.....	907262X	A91-262
A2	<b>RIGID FRONT ROD COMPLETE</b> , with straight lug, X= 9 1/8" to 10 5/8", Y = 13 1/2", for 1" dia point bolts.....	907261X	22870-194-03 A91-261
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	907263X	A91-263
A4	<b>RIGID FRONT ROD COMPLETE</b> , with downset lug per view Z, X = 7 3/8" to 8 7/8", Y = 13 1/2", for 1" dia point bolts.....	907267X	22870-196-02 A91-267
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	907269X	A91-269
B	<b>RIGID FRONT ROD COMPLETE, LH</b> , with straight lug, X = 7 1/8" to 8 5/8", Y = 11 1/2", for 1" dia point bolts.....	907264X	N451387-4201
B1	Similar to Ref B except RH.....	907265X	N451387-4202



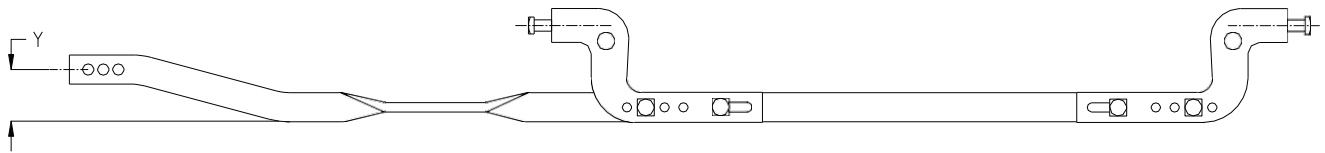
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>FRONT ROD, RIGID TYPE</b> , with continuous lock rod connection, X = 6 1/16" to 7 9/16", Y = 13 1/2", Z = 63", for 1" dia point bolts.....	907280X	A91-280
A1	Similar to Ref A except for 3/4" dia point bolts.....	907284X	A91-284
A2	<b>FRONT ROD, RIGID TYPE</b> , with continuous lock rod connection, X = 4 1/16" to 5 9/16", Y = 11 1/2", Z = 63", for 1" dia point bolts.....	907281X	A91-281
A3	Similar to Ref A2 except for 3/4" dia point bolts.....	907285X	A91-285
A4	<b>FRONT ROD, RIGID TYPE</b> , with continuous lock rod connection, X = 6 1/16" to 7 9/16", Y = 13 1/2", Z = 47", for 1" dia point bolts.....	907282X	A91-282
A5	Similar to Ref A4 except for 3/4" dia point bolts.....	907286X	A91-286
A6	<b>FRONT ROD, RIGID TYPE</b> , with continuous lock rod connection, X = 4 1/16" to 5 9/16", Y = 11 1/2", Z = 47", for 1" dia point bolts.....	907283X	A91-283
A7	Similar to Ref A6 except for 3/4" dia point bolts.....	907287X	A91-287

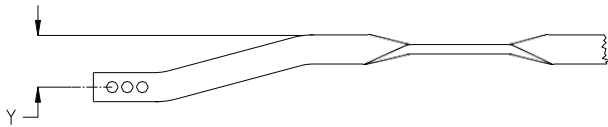




REF A

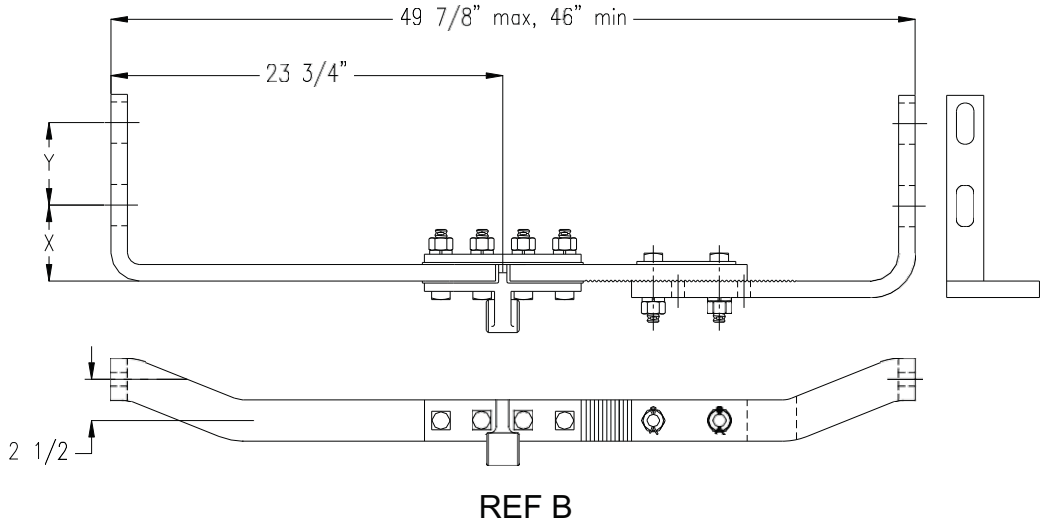
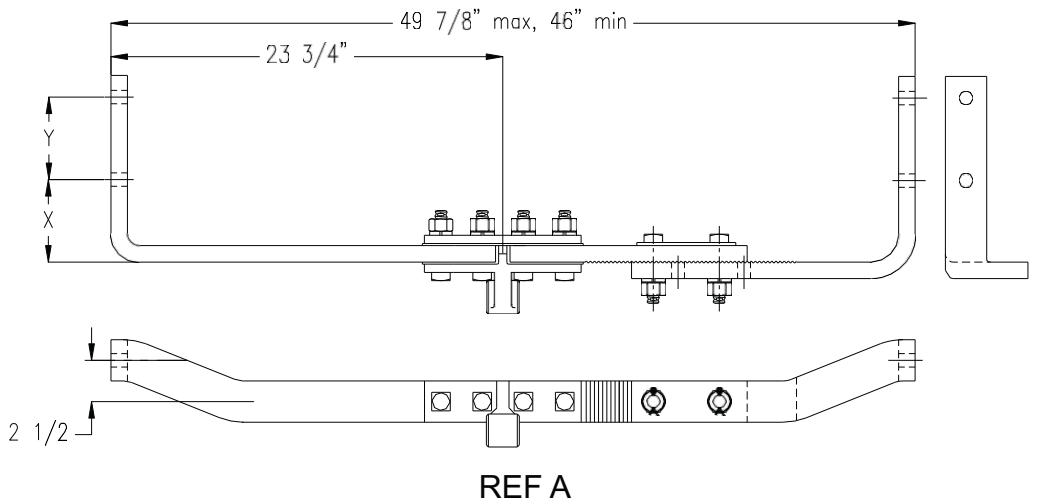


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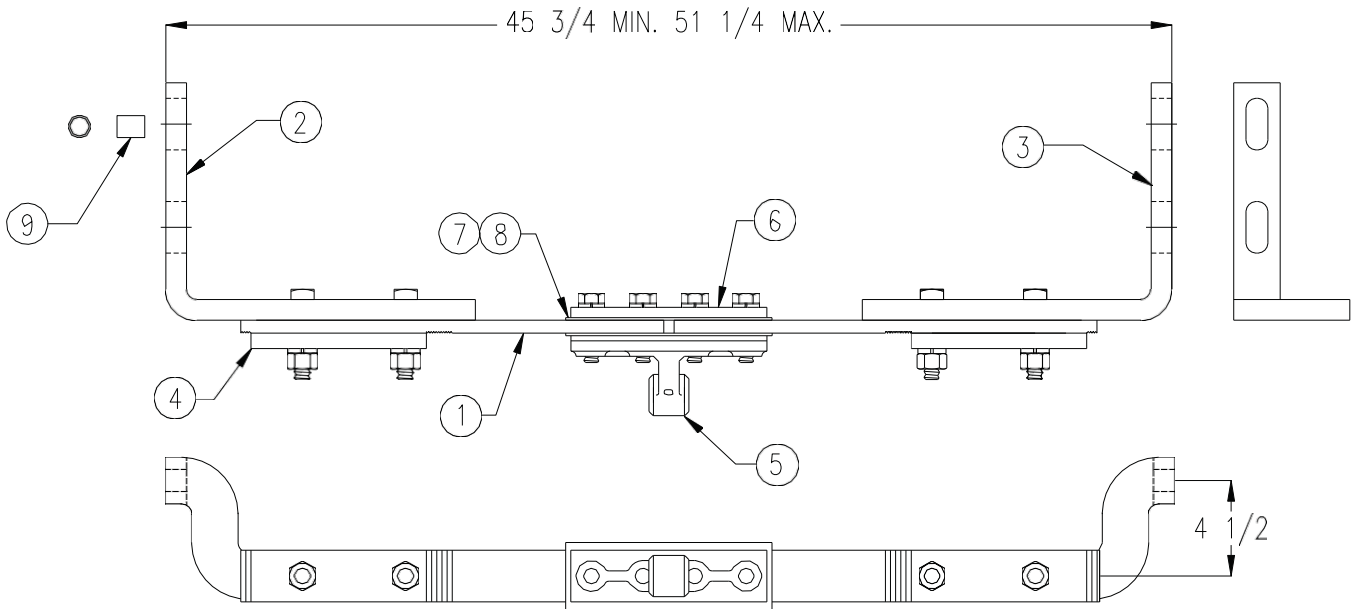


VIEW Z

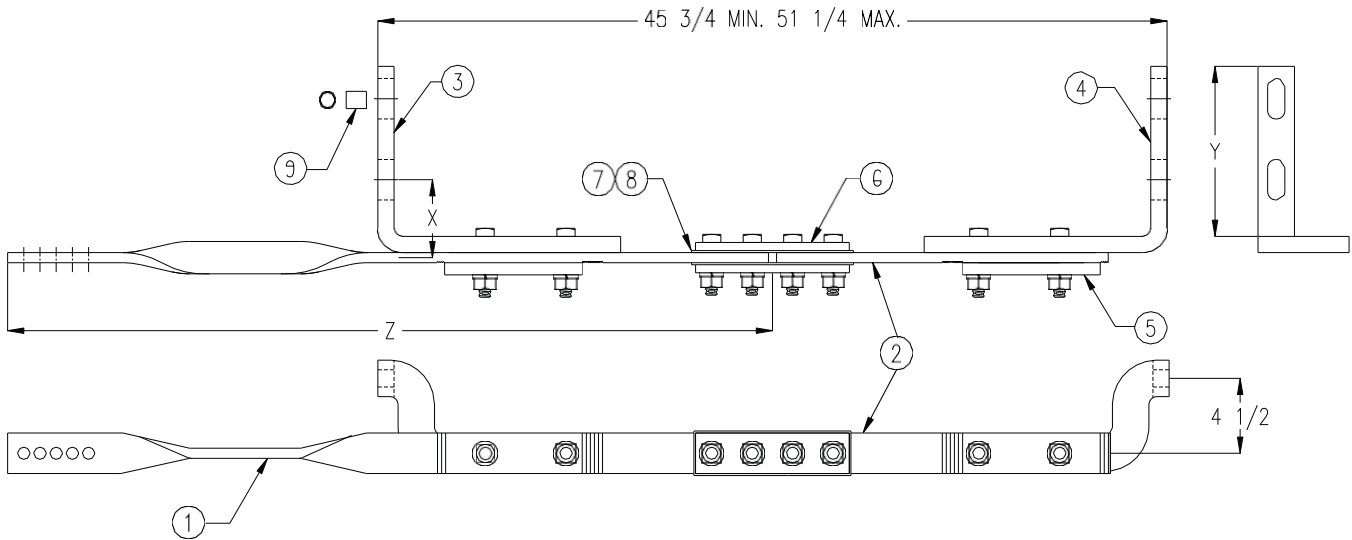
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>RIGID FRONT ROD COMPLETE, LH</b> , with lock rod drop lug, switch feet, insulation and mounting hardware.....	806002-001-01	N451387-4101
A1	Similar to Ref A except RH.....	806002-002-01	N451387-4101
B	<b>RIGID FRONT ROD COMPLETE, LH</b> , with lock rod drop lug, switch feet, insulation and mounting hardware.....	806003-001-01	N49104801
B1	Similar to Ref B except RH.....	806003-002-01	N49104802
B2	<b>RIGID FRONT ROD COMPLETE, LH</b> , with switch feet, insulation and mounting hardware per view Z, for 100 and 120# PS rail, RR Detail 30521	806004-001-01	N/A
B3	Similar to Ref B2 except RH.....	806004-002-01	N/A
B4	Similar to Ref B2 except for 131# RE and larger rail, RR Detail 30555.....	806005-001-01	N/A
B5	Similar to Ref B4 except RH.....	806005-002-01	N/A
B6	Similar to Ref B2 except for 115# RE rail, RR Detail 30568.....	806006-001-01	N/A
B7	Similar to Ref B6 except RH.....	806006-002-01	N/A



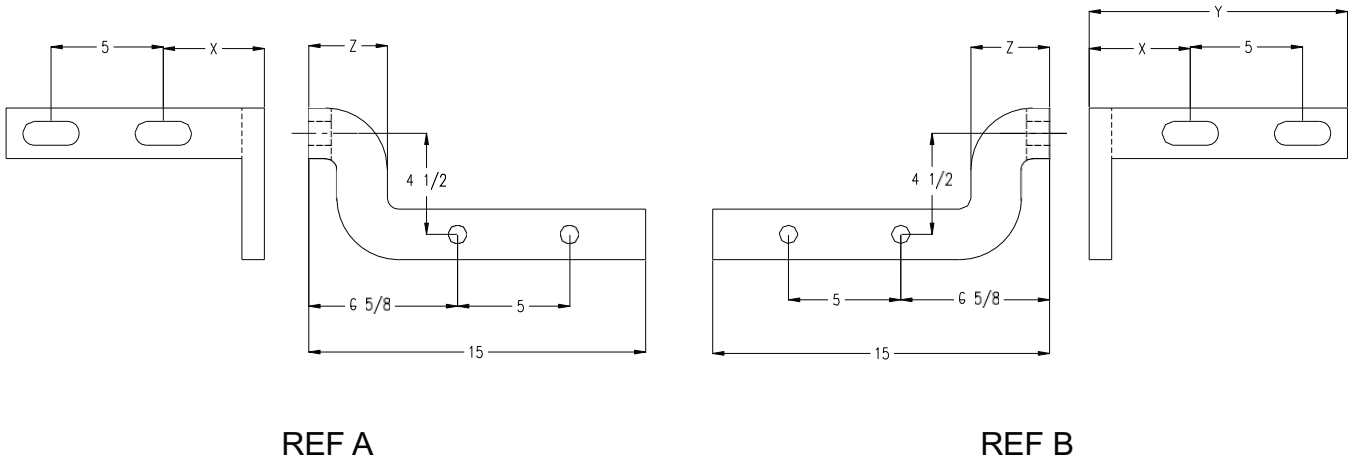
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>RIGID ADJUSTABLE FRONT ROD</b> , for 3/4" dia point bolts, X = 5", Y = 5"...	807001X	N214607
A1	Similar to Ref A except X = 6 3/8".....	807002X	N183692
A2	Similar to Ref A1 except for 1" dia point bolts.....	807003X	N183693
A3	Similar to Ref A1 except no bolt holes.....	807004X	N184631
A4	Similar to Ref A1 except X = 7 1/8".....	807005X	N215765
A5	Similar to Ref A1 except X = 6 1/8", Y = 4 1/2".....	807006X	N236978
B	<b>RIGID ADJUSTABLE FRONT ROD</b> , slotted for 3/4" dia point bolts, X = 4 1/2", Y = 5".....	807007X	N214769
B1	Similar to Ref B except for 1" dia point bolts.....	807008X	N257326
B2	Similar to Ref B1 except X = 5 1/2".....	807009X	N308195



REF	DESCRIPTION	G & B PART #	OEM PART #
1	PLATE, center serrated.....	907272	51994-027 P91-334
2	LUG, LH, 13 1/2" long.....	906501	32328-387 P91-293
2A	Similar to Ref 2 except 11 1/2" long.....	906503	32328-388 P91-294
3	LUG, RH, 13 1/2" long.....	906502	32328-389 P91-295
3A	Similar to Ref 3 except 11 1/2" long.....	906504	32328-390 P91-296
4	PLATE WASHER, 1/2" thick, serrated.....	907277	5656-103 P91-262
4A	Similar to Ref 4 except 3/4" thick with 3/4"-10 UNC threaded holes.....	907277-001	5656-117
5	LUG, center, 2 5/8" offset.....	920230-001	30908-103 P91-290
5A	Similar to Ref 5 except 2 7/8" offset by adding 1/4" thick shim.....	920230-000-01	30908-143
6	SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....	960101-001	40640 P91-312
7	INSULATION PLATE, 1/8" X 2 3/4" X 10".....	973200-001	47409 P91-329
8	INSULATION BUSHING, 25/32" ID X 1" OD X 27/32" long.....	973100-002	7350-282 P91-268
9	STEEL BUSHING, for 3/4" dia point bolts.....	998000-001	8104-001 P91-270

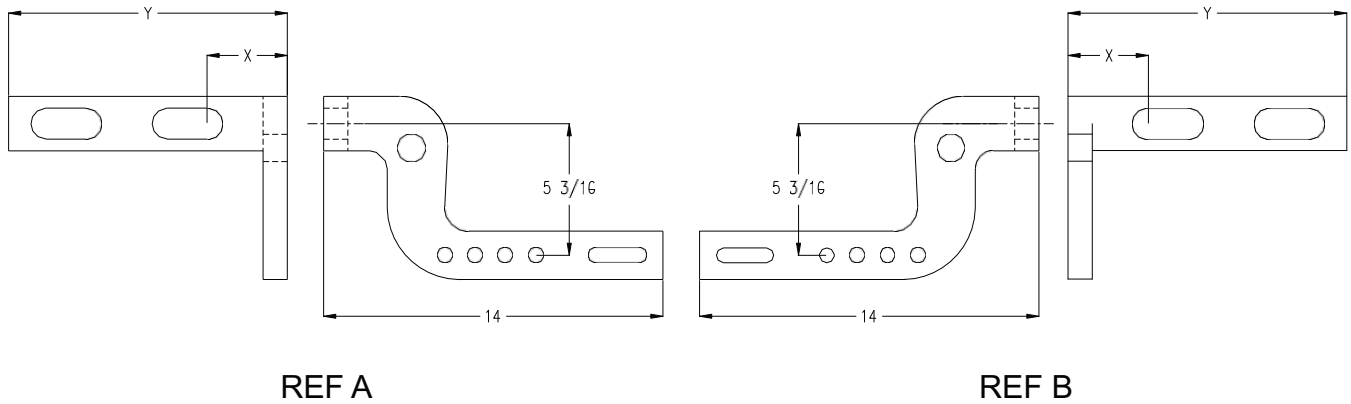


REF	DESCRIPTION	G & B PART #	OEM PART #
1	ROD, connecting, 63" long.....	907270	P91-274
1A	Similar to Ref 1 except 47" long.....	907271	P91-275
2	PLATE, center serrated.....	907272	51994-027 P91-334
3	LUG, LH, 13 1/2" long.....	906501	32328-387 P91-293
3A	Similar to Ref 3 except 11 1/2" long.....	906503	32328-388 P91-294
4	LUG, RH, 13 1/2" long.....	906502	32328-389 P91-295
4A	Similar to Ref 4 except 11 1/2" long.....	906504	32328-390 P91-296
5	PLATE WASHER, serrated.....	907277	5656-103 P91-262
6	SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....	960101-001	40640 P91-312
7	INSULATION PLATE, 1/8" X 2 3/4" X 10".....	973200-001	47409 P91-329
8	INSULATION BUSHING, 25/32" ID X 1" OD X 27/32" long.....	973100-002	7350-282 P91-268
9	STEEL BUSHING, for 3/4" dia point bolts.....	998000-001	8104-001 P91-270

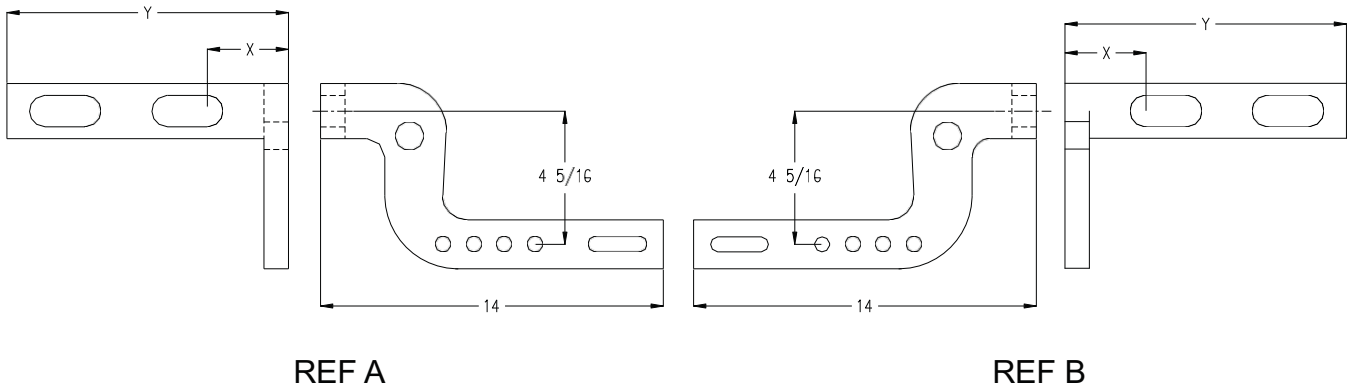


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH FOOT, LH</b> , 1 1/16" wide slots, 5" bolts centers, X = 6 1/2", Y = 13 1/2", Z = 3 1/2".....	906501	32328-387 P91-293
A1	Similar to Ref A except X = 4 1/2", Y = 11 1/2".....	906503	32328-388 P91-294
A2	Similar to Ref A1 except with chamfer.....	906505	32328-445
A3	Similar to Ref A1 except Z = 4 1/2".....	906507	32328-461
A4	Similar to Ref A except drilled for 3/4" point bolts on 3 3/4" centers, X = 5", Y = 10".....	906509	32328-433
A5	<b>SWITCH FOOT, LH</b> , 1 1/16" wide slots, 4" bolt centers, X = 4 1/2", Y = 10 1/2", Z = 3 1/2".....	906511	32328-451
A6	Similar to Ref A5 except X = 11 3/16", Y = 17 3/16".....	906513	32328-463
A7	Similar to Ref A5 except X = 6 5/8", Y = 12 5/8".....	906515	32328-465
B	<b>SWITCH FOOT, RH</b> , 1 1/16" wide slots, 5" bolt centers, X = 6 1/2", Y = 13 1/2", Z = 3 1/2".....	906502	32328-389 P91-295
B1	Similar to Ref B except X = 4 1/2", Y = 11 1/2".....	906504	32328-390 P91-296
B2	Similar to Ref B1 except with chamfer.....	906506	32328-446
B3	Similar to Ref B1 except Z = 4 1/2".....	906508	32328-462
B4	Similar to Ref B except drilled for 3/4" point bolts on 3 3/4" centers, X = 5", Y = 10".....	906510	32328-434
B5	<b>SWITCH FOOT, RH</b> , 1 1/16" wide slots, 4" bolt centers, X = 4 1/2", Y = 10 1/2", Z = 3 1/2".....	906512	32328-452
B6	Similar to Ref B5 except X = 11 3/16", Y = 17 3/16".....	906514	32328-464
B7	Similar to Ref B5 except X = 6 5/8", Y = 12 5/8".....	906516	32328-466

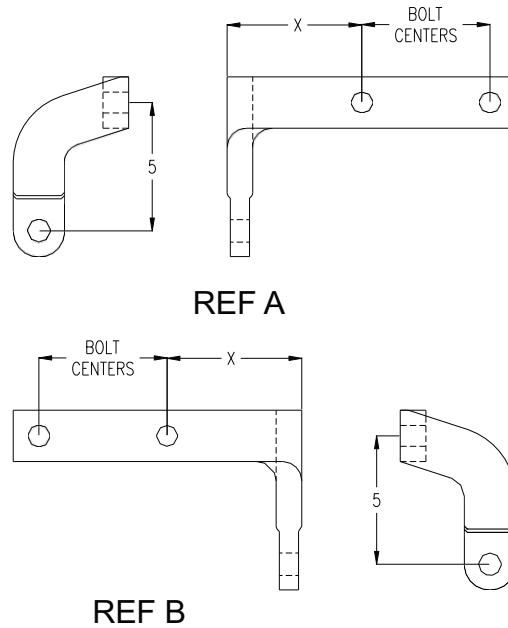
# SWITCH FEET



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH FOOT, LH</b> , 1 5/16" wide slots, 5" bolt centers, X = 4 15/16", Y = 13 1/4".....	806523	M438493
A1	Similar to Ref A except X = 3 13/16", Y = 13 1/4".....	806525	M438493-001
A2	Similar to Ref A except X = 6 3/8", Y = 13 1/4".....	806527	M306714-005
A3	Similar to Ref A except X = 3 1/2", Y = 11 3/4".....	806529	M451508-0207
A4	Similar to Ref A except X = 2 3/4", Y = 10 3/4".....	806531	M451508-0211
A5	Similar to Ref A except 3 3/4" bolt centers, X = 3 15/16", Y = 11".....	806509	M185474
A6	<b>SWITCH FOOT, LH</b> , 1 9/32" wide slots, 5" bolt centers, X = 3 15/16", Y = 11 5/8".....	806533	M397417
A7	Similar to Ref A6 except 3 3/4" bolt centers, X = 3 3/4", Y = 10 1/4".....	806535	M451508-0103
A8	<b>SWITCH FOOT, LH</b> , 1 1/16" wide slots, 5" bolt centers, X = 5 1/8", Y = 13".....	806537	M438493-002
A9	Similar to Ref A8 except X = 4 1/2", Y = 13".....	806539	M438493-004
B	<b>SWITCH FOOT, RH</b> , 1 5/16" wide slots, 5" bolt centers, X = 4 15/16", Y = 13 1/4".....	806524	M438492
B1	Similar to Ref B except X = 3 13/16", Y = 13 1/4".....	806526	M438492-001
B2	Similar to Ref B except X = 6 3/8", Y = 13 1/4".....	806528	M306715-005
B3	Similar to Ref B except X = 3 1/2", Y = 11 3/4".....	806530	M451508-0208
B4	Similar to Ref B except X = 2 3/4", Y = 10 3/4".....	806532	M451508-0212
B5	Similar to Ref B except 3 3/4" bolt centers, X = 3 15/16", Y = 11".....	806510	M185475
B6	<b>SWITCH FOOT, RH</b> , 1 9/32" wide slots, 5" bolt centers, X = 3 15/16", Y = 11 5/8".....	806534	M397418
B7	Similar to Ref B6 except 3 3/4" bolt centers, X = 3 3/4", Y = 10 1/4".....	806536	M451508-0104
B8	<b>SWITCH FOOT, RH</b> , 1 1/16" wide slots, 5" bolt centers, X = 5 1/8", Y = 13".....	806538	M438492-002
B9	Similar to Ref B8 except X = 4 1/2", Y = 13".....	806540	M438492-004



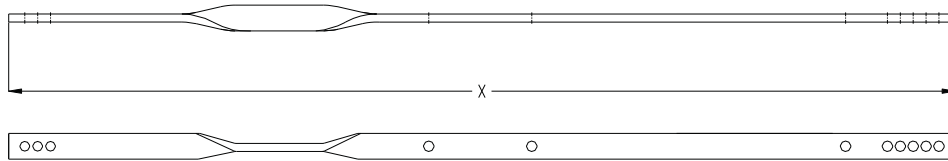
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH FOOT, LH, 25/32" wide slots, 5" bolt centers, X = 5 7/8", Y = 13 1/4"</b> .....	806541	M163220-001
A1	Similar to Ref A except X = 3 7/8", Y = 11".....	806543	M106593
A2	Similar to Ref A except X = 6 7/8", Y = 14".....	806545	M106593-001
A3	Similar to Ref A except X = 4 1/2", Y = 13".....	806547	M106593-006
A4	<b>SWITCH FOOT, LH, 1 3/64" wide slots, 5" bolt centers, X = 4 5/16", Y = 12 1/2"</b> .....	806549	M218907
A5	Similar to Ref A4 except X = 4 15/16", Y = 13 1/4".....	806551	M106593-002
A6	Similar to Ref A4 except X = 5 11/16", Y = 14".....	806553	M106593-004
A7	Similar to Ref A4 except X = 2 1/2", Y = 11".....	806555	M106593-005
A8	Similar to Ref A4 except 3 3/4" bolts centers, X = 3 3/4", Y = 10 1/4".....	806557	M106593-003
B	<b>SWITCH FOOT, RH, 25/32" wide slots, 5" bolt centers, X = 5 7/8", Y = 13 1/4"</b> .....	806542	M163221-001
B1	Similar to Ref B except X = 3 7/8", Y = 11".....	806544	M106594
B2	Similar to Ref B except X = 6 7/8", Y = 14".....	806546	M106594-001
B3	Similar to Ref B except X = 4 1/2", Y = 13".....	806548	M106594-006
B4	<b>SWITCH FOOT, RH, 1 3/64" wide slots, 5" bolt centers, X = 4 5/16", Y = 12 1/2"</b> .....	806550	M218908
B5	Similar to Ref B4 except X = 4 15/16", Y = 13 1/4".....	806552	M106594-002
B6	Similar to Ref B4 except X = 5 11/16", Y = 14".....	806554	M106594-004
B7	Similar to Ref B4 except X = 2 1/2", Y = 11".....	806556	M106594-005
B8	Similar to Ref B4 except 3 3/4" bolt centers, X = 3 3/4", Y = 10 1/4".....	806558	M106594-003



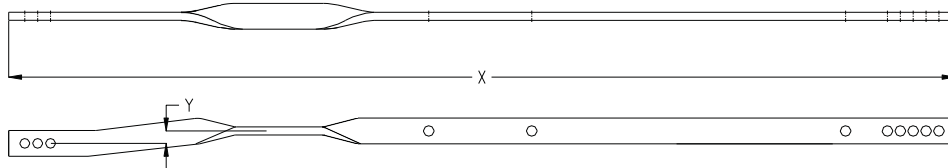
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH FOOT COMPLETE, LH</b> , with (2) 3/4" dia point bolt assemblies on 4" centers, X = 5 1/2".....	806001X	X438785
A1	Similar to Ref A except without hardware.....	806001	M233586
A2	Similar to Ref A1 except for 7/8" dia bolts.....	806559	M233586-001
A3	Similar to Ref A1 except for 3 3/4" bolt centers.....	806561	M232217
A4	Similar to Ref A1 except for 5" bolt centers, X = 4 1/4".....	806563	M235723
A5	Similar to Ref A4 except X = 5 1/4".....	806565	M230122
A6	Similar to Ref A4 except X = 6".....	806567	M279896
B	<b>SWITCH FOOT COMPLETE, RH</b> , with (2) 3/4" point bolt assemblies on 4" centers, X = 5 1/2".....	806002X	X438786
B1	Similar to Ref B except without hardware.....	806002	M233585
B2	Similar to Ref B1 except for 7/8" dia bolts.....	806560	M233585-001
B3	Similar to Ref B1 except for 3 3/4" bolt centers.....	806562	M219294
B4	Similar to Ref B1 except for 5" bolt centers, X = 4 1/4".....	806564	M235722
B5	Similar to Ref B4 except X = 5 1/4".....	806566	M250563
B6	Similar to Ref B4 except X = 6".....	806568	M279897



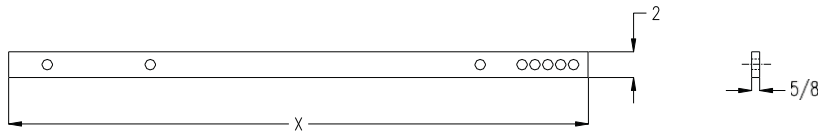
FRONT ROD BAR



REF A

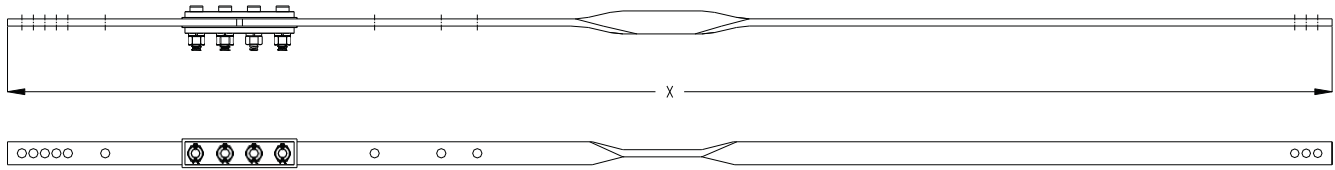


REF B

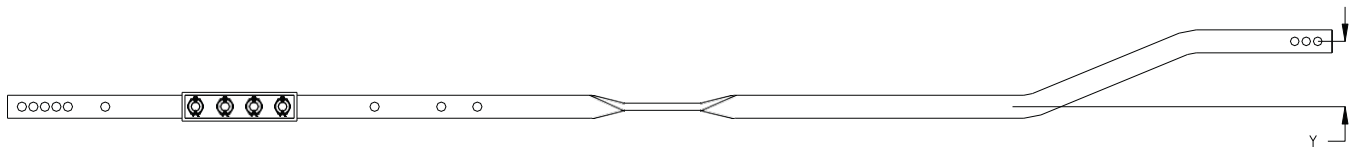


REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>FRONT ROD BAR</b> , X = 5'-8", RR Detail 32117.....	810467-002	M451846-1501
A1	Similar to Ref A except X = 7'-0 1/4".....	810467-005	M124644
A2	Similar to Ref A except X = 6'-8".....	810467-006	M139477
A3	Similar to Ref A except X = 7'-9".....	810467-007	M159711
A4	Similar to Ref A except X = 6'-9 3/4".....	810467-008	M167423
B	<b>FRONT ROD BAR</b> , X = 5'-7", Y = 7/8", RR Detail 3211.....	810467-003	M113772
B1	Similar to Ref B except Y = 1/2".....	810467-009	M113772-001
B2	Similar to Ref B except X = 7'-3", Y = 7/8".....	810467-010	M151870
B3	Similar to Ref B except X = 6'-3", Y = 2 5/16", RR Detail 32110.....	810467-004	M156850
B4	Similar to Ref B except X = 5'-6 1/4", Y = 3/4".....	810467-011	M185736
B5	Similar to Ref B except X = 6'-0 1/4", Y = 3/4".....	810467-012	M208366
B6	Similar to Ref B except X = 6'-0 7/8", Y = 7/8".....	810467-013	M238302
B7	Similar to Ref B except X = 6'-4 1/2", Y = 3/8".....	810467-014	M256145
B8	Similar to Ref B except X = 6'-1 1/2", Y = 3/8".....	810467-015	M256145-001
B9	Similar to Ref B except X = 7'-2 3/4", Y = 1 3/8".....	810467-016	M257140-001
B10	Similar to Ref B except X = 6'-0 3/4", Y = 3 1/4".....	810467-001	M451467-5301
B11	Similar to Ref B10 except Y = 1 3/4", RR Detail 832126.....	810467-019	N/A
B12	Similar to Ref B except X = 6'-6 3/4", Y = 2 1/2".....	810467-017	M49104701
C	<b>MID-POINT CONNECTING BAR</b> , X = 45", RR Detail 2221.....	810467-018	M451467-5302 M451507-0801



REF A

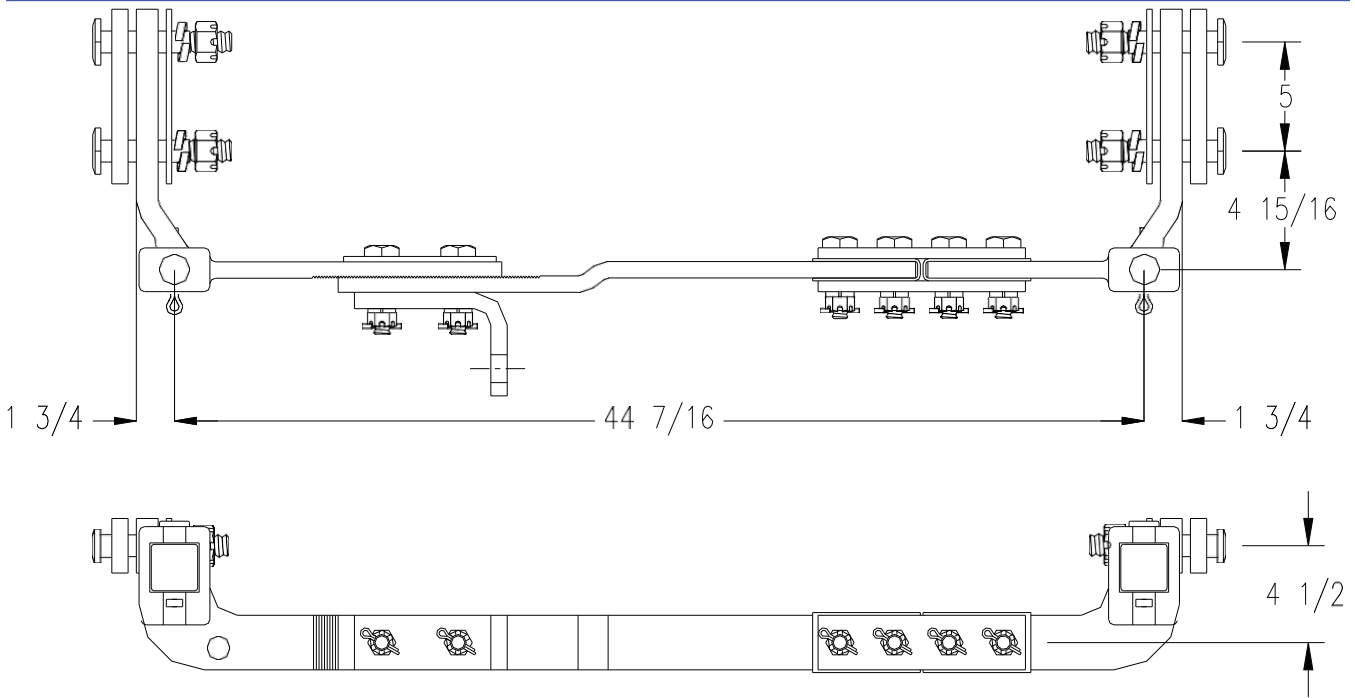


REF B

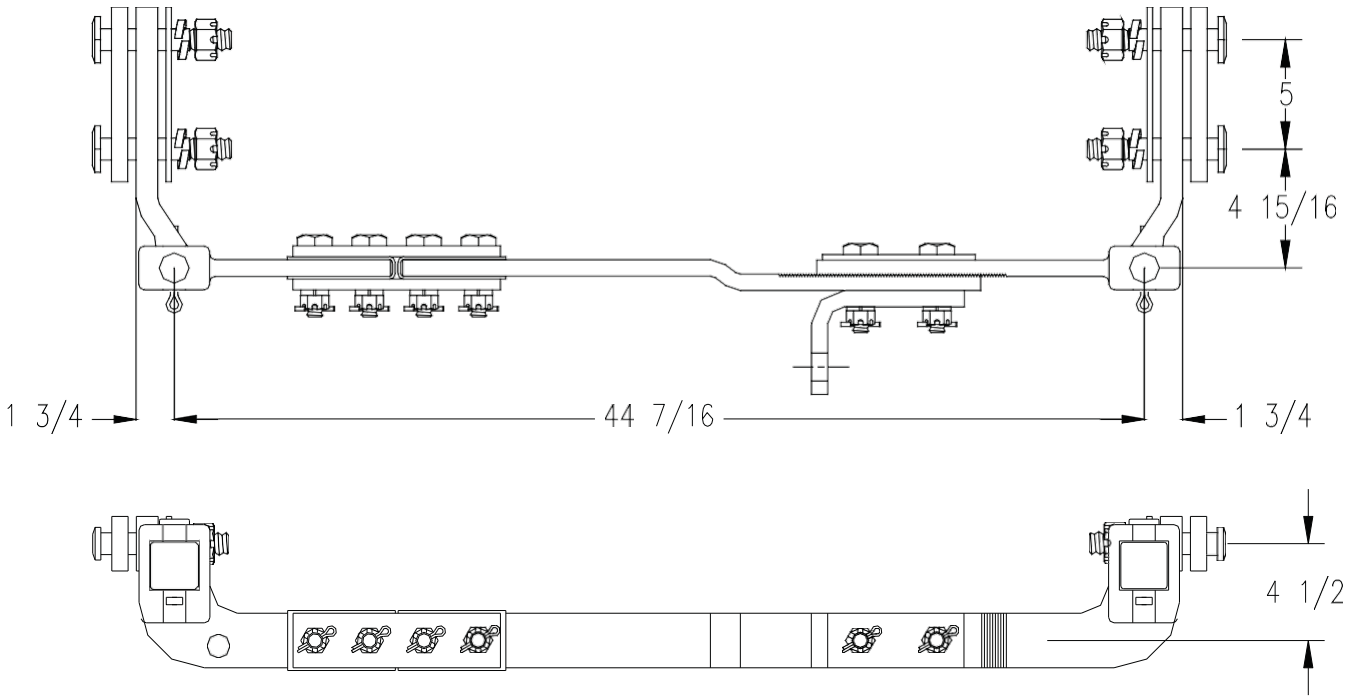
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED FRONT ROD BAR COMPLETE, X = 9'-7 1/4"</b> .....	810468-001X	N234110
A1	Similar to Ref A except X = 6'-7".....	810468-002X	N451387-5202
A2	Similar to Ref A except X = 6'-9".....	810468-003X	N451387-3408
B	<b>INSULATED FRONT ROD BAR COMPLETE, X = 7'-4 1/4", Y = 1 1/4"</b> .....	810468-004X	N451387-3402
B1	Similar to Ref B except X = 8'-1 3/8".....	810468-005X	N451387-3404
B2	Similar to Ref B except X = 6'-5 7/8", Y = 3/8".....	810468-006X	N451387-3406
B3	Similar to Ref B except X = 5'-8 1/2", Y = 1 1/8".....	810468-007X	N451387-3410
B4	Similar to Ref B except X = 9'-7 1/4", Y = 1 1/4".....	810468-008X	N451387-3412
B5	Similar to Ref B except X = 9'-4 1/4", Y = 1 1/4".....	810468-009X	N451387-3414

# C-41

# MF FRONT RODS

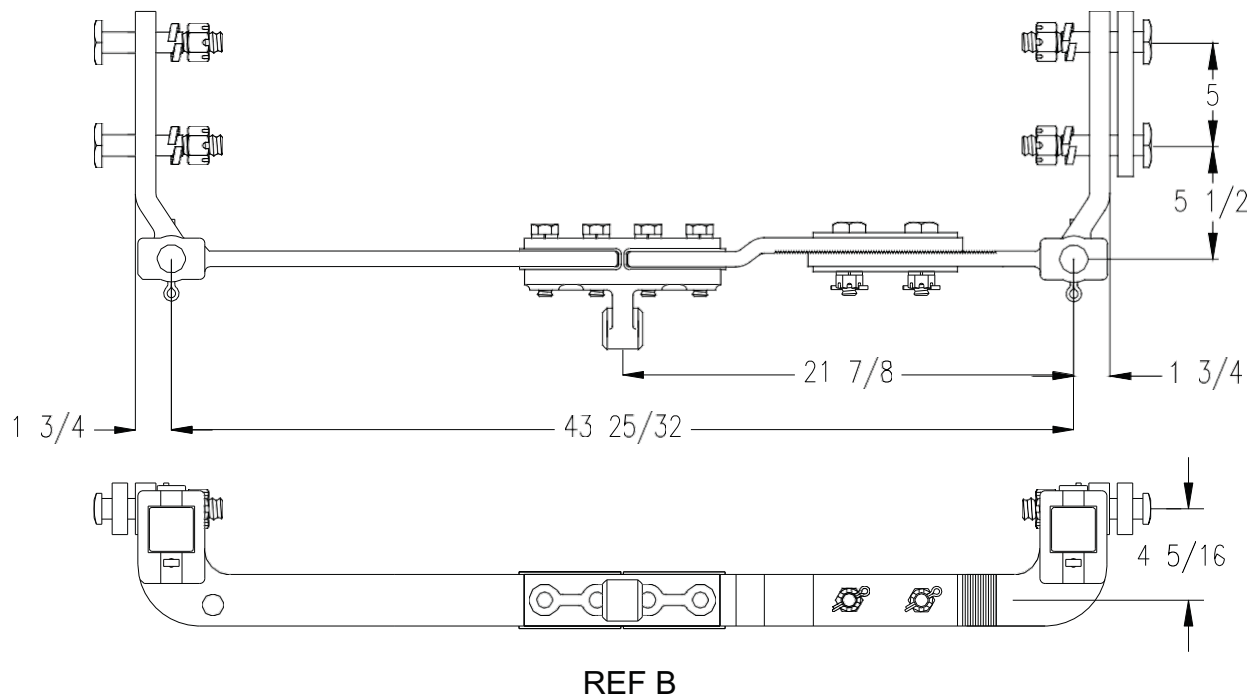
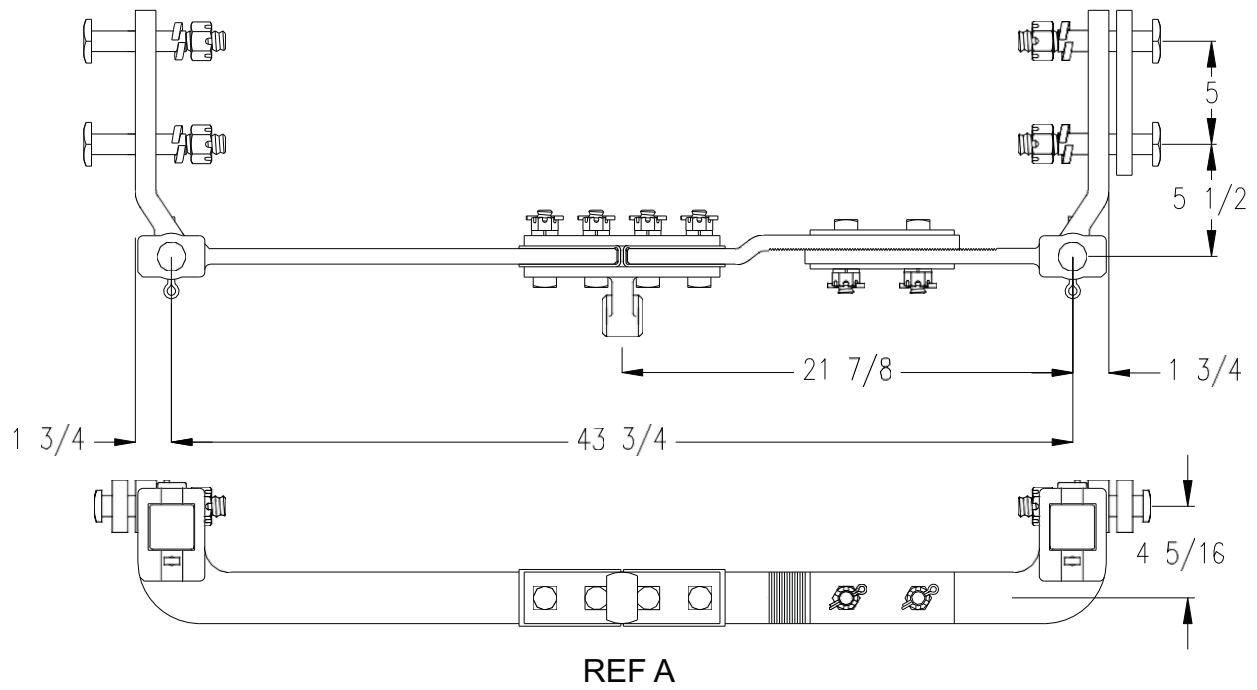


REF A

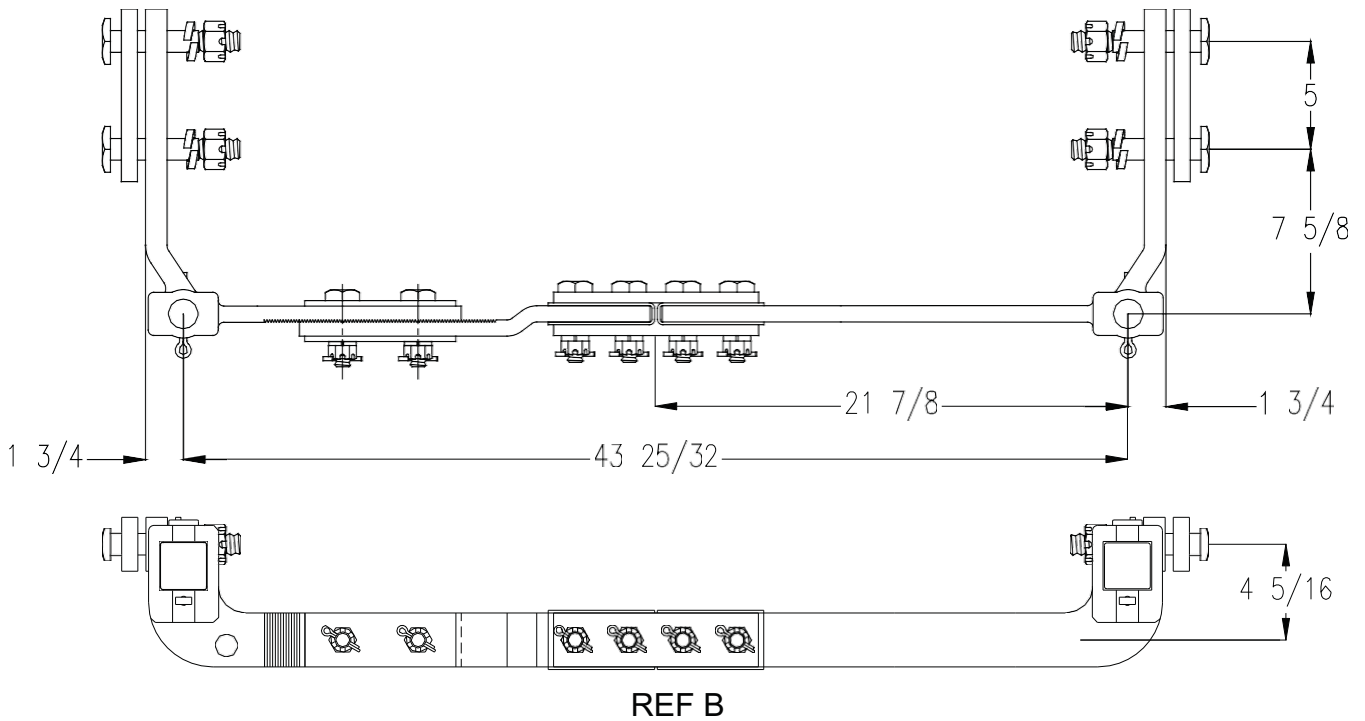
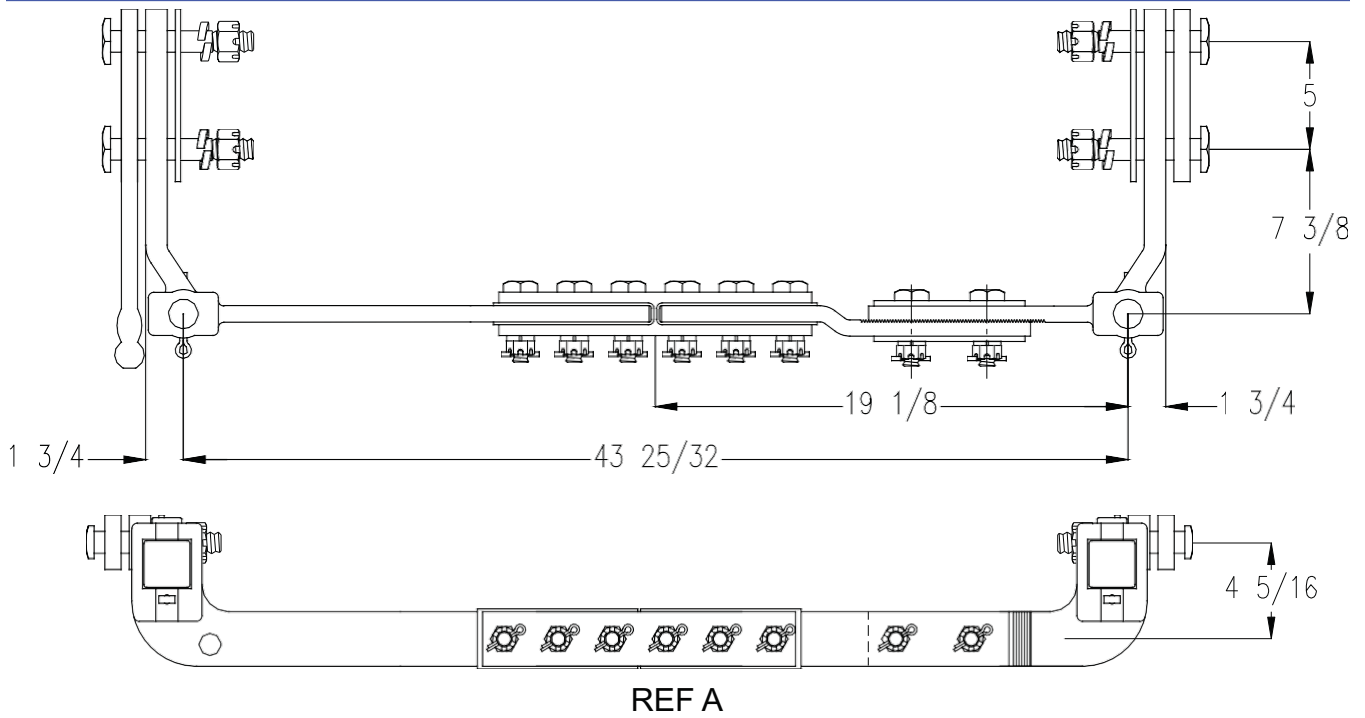


REF B

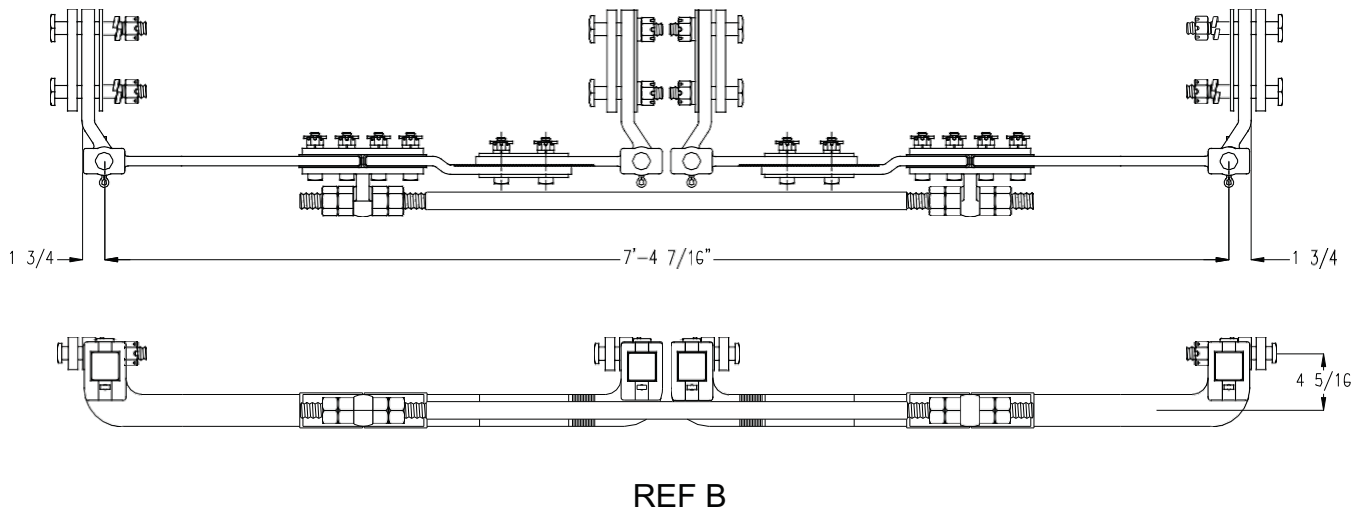
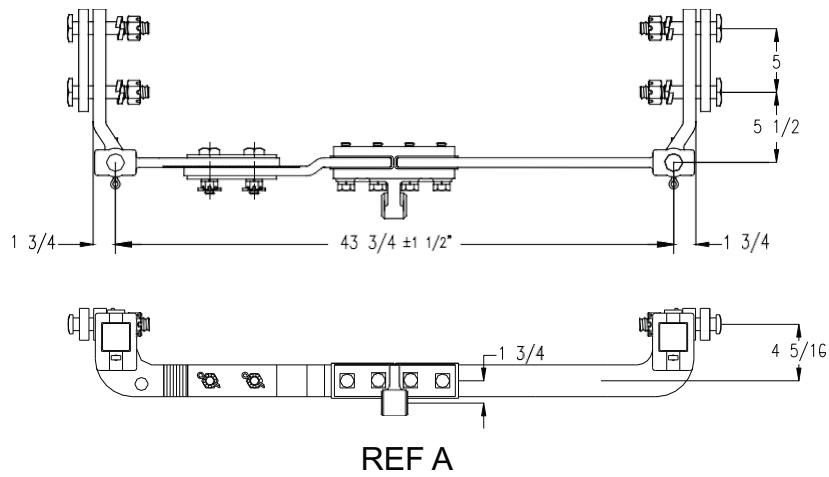
REF	DESCRIPTION	G & B PART #	OEM PART #
A	INSULATED MF FRONT ROD COMPLETE, LH, for use on power switches	900110-001-01	N/A
B	INSULATED MF FRONT ROD COMPLETE, RH, for use on power switches	900110-002-01	N/A



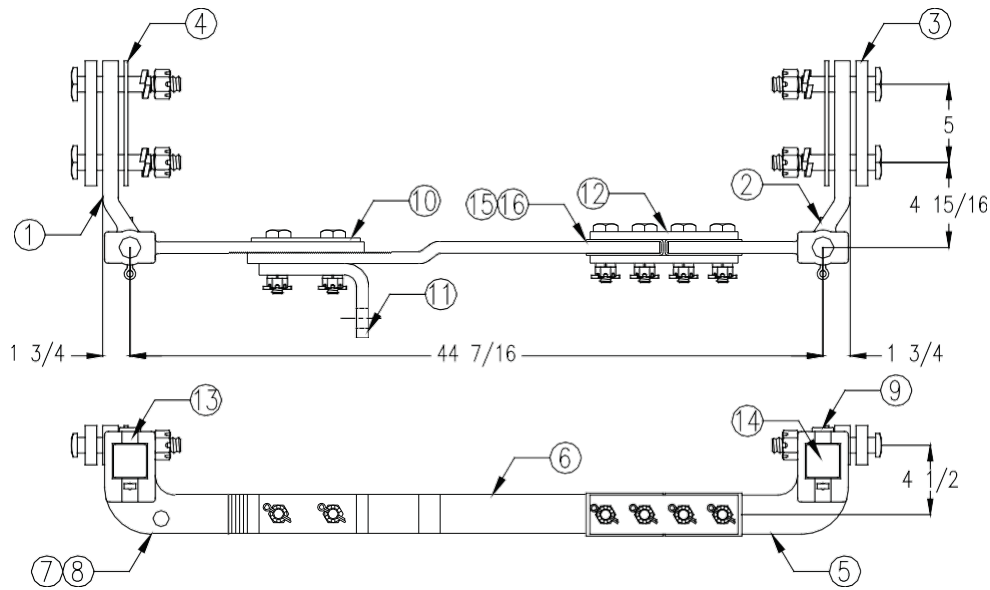
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED MF FRONT ROD COMPLETE, LH, with center lock rod bracket.....</b>	900110-003-01	N/A
A1	Similar to Ref A except RH.....	900110-004-01	N/A
B	<b>INSULATED MF FRONT ROD COMPLETE, LH, with center lock rod bracket.....</b>	900110-005-01	MF-2-L
B1	Similar to Ref B except RH.....	900110-006-01	MF-2-R



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED MF FRONT ROD COMPLETE, LH</b> , for use on power switches.	900110-007-01	N/A
A1	Similar to Ref A except RH.....	900110-008-01	N/A
B	<b>INSULATED MF FRONT ROD COMPLETE, RH</b> , for use on spring switches.	900110-010-01	MF-1-R
B1	Similar to Ref B except LH.....	900110-009-01	MF-1-L

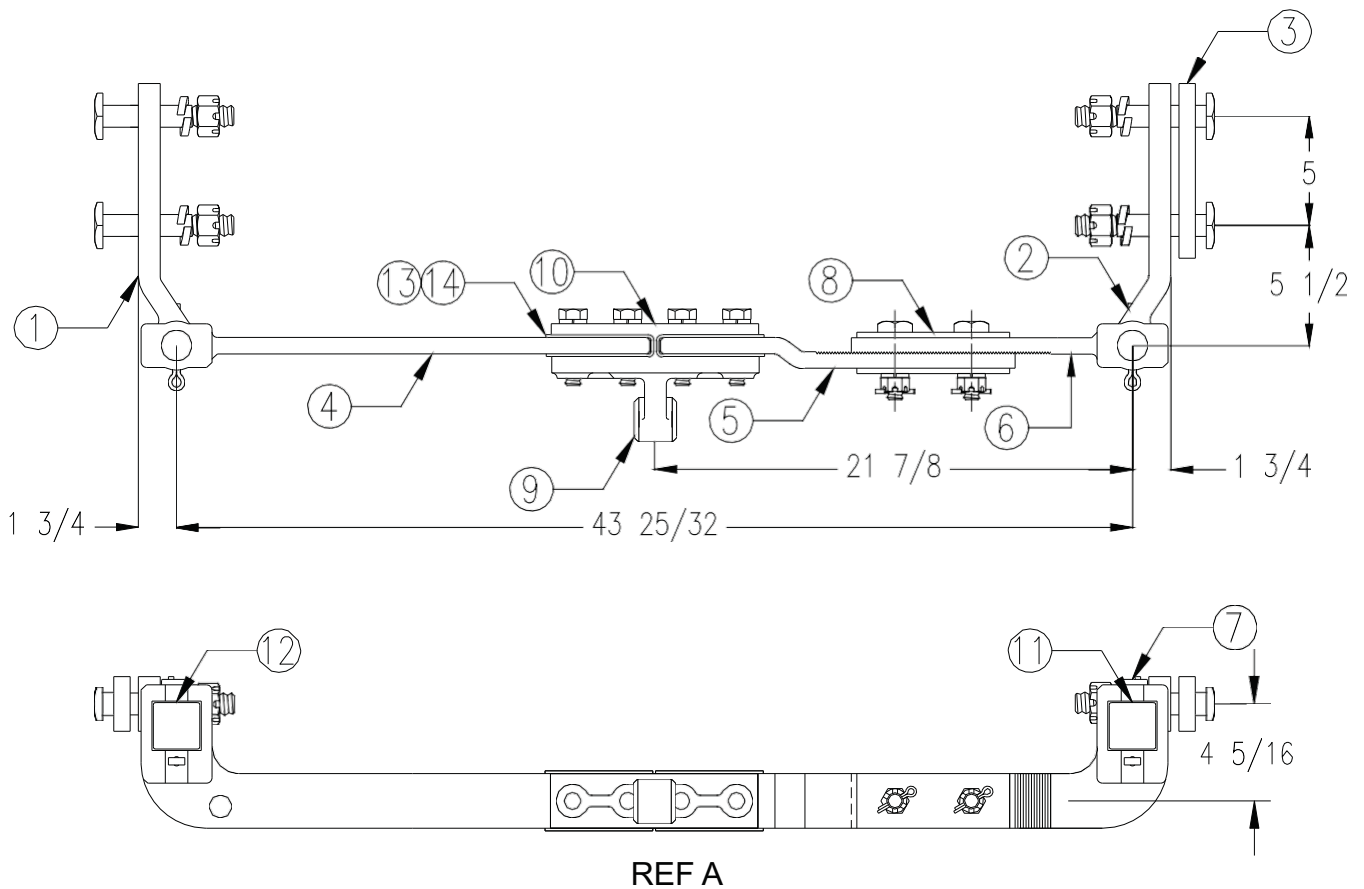


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED MF FRONT ROD COMPLETE, RH</b> , for use on electric lock layouts.....	900110-012-01	MF-3-R
A1	Similar to Ref A except LH.....	900110-011-01	MF-3-L
B	<b>INSULATED MF FRONT ROD COMPLETE</b> , for use on double slip switches	900111-001-01	N/A



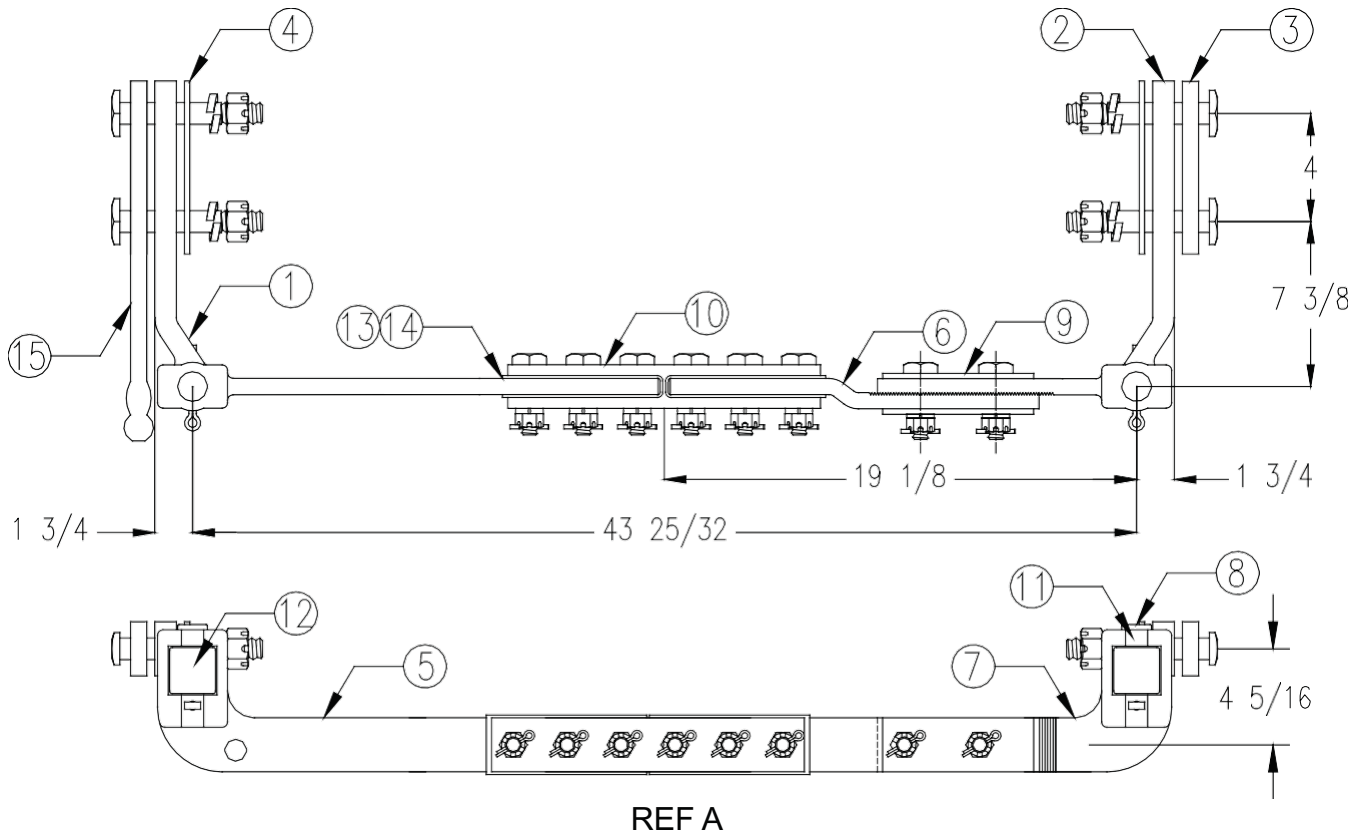
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	INSULATED MF FRONT ROD COMPLETE, LH, for use on power switches.	900110-001-01	N/A
1	POINT CLIP, LH, 11 15/16" long, slotted for 1" point bolts.....	900113-001X	3811-A-3R-CF
2	POINT CLIP, RH, 11 15/16" long, slotted for 1" point bolts.....	900112-001X	3811-A-3L-CF
3	SHIM, 3/4" X 2 1/2" X 8", for 1" point bolts.....	900114-001	3811-D-2
4	SHIM, 1/4" X 2 1/2" X 8", for 1" point bolts.....	900114-002	3811-D-2-E
5	SWIVEL ROD, PLAIN.....	900115-001X	3811-B-3-ZA
6	OFFSET ROD, SERRATED.....	900116-001	3811-E-12-F
7	SWIVEL ROD, SERRATED, LH, as shown.....	900117-001X	3811-B-4-R
8	SWIVEL ROD, SERRATED, RH, opposite hand of Ref 7.....	900117-002X	3811-B-4-S
9	PIN, HARDENED STEEL, 1.120" dia X 4" long.....	900118	3811-C-1-A
10	TWIN WASHER, 3 1/2" centers, 1/4" X 2 1/2" X 7", for 3/4" bolts.....	900119-001	3811-E-4-G
11	BRACKET, POINT DETECTOR ROD.....	900120	3811-F-9
12	SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....	960101-001	3811-E-5
13	RAILITE BUSHING, 1.126" ID X 1.501" OD X .625" long, for Ref 5, 7 & 8....	900121	3811-B-2-C
14	RAILITE BEARING, 1.126" ID X 1.501" OD X 2.218" long, for Ref 1 & 2....	900122	3811-A-2
15	INSULATION "U" PLATE, forbon, 1/8" X 2 3/4".....	974300-001	UP-1
16	INSULATION BUSHING, forbon, 25/32" ID X 1" OD X 31/32" long.....	974100-003	B-4



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED MF FRONT ROD COMPLETE, LH, with center lock rod bracket, for use on power switches.....</b>	900110-005-01	N/A
1	<b>POINT CLIP, LH, 11 3/8" long, drilled for 3/4" point bolts.....</b>	900112-002X	3811-A-3L
2	<b>POINT CLIP, RH, 11 3/8" long, drilled for 3/4" point bolts.....</b>	900113-002X	3811-A-3R
3	<b>SHIM, 3/4" X 2 1/2" X 8", for 3/4" point bolts.....</b>	900114-004	3811-D-1
4	<b>SWIVEL ROD, PLAIN.....</b>	900115-002X	3811-B-3
5	<b>OFFSET ROD, SERRATED.....</b>	900116-002	3811-E-12
6	<b>SWIVEL ROD, SERRATED, LH OR RH.....</b>	900117-003X	3811-B-4
7	<b>PIN, HARDENED STEEL, 1.120" dia X 4" long.....</b>	900118	3811-C-1-A
8	<b>TWIN WASHER, 4" centers, 1/4" X 2 1/2" X 7", for 3/4" bolts.....</b>	900119-002	3811-E-4
9	<b>BRACKET, LOCK ROD CONNECTING ROD.....</b>	920230-001	30908-103
10	<b>SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2".....</b>	960101-001	3811-E-5
11	<b>RAILITE BUSHING, 1.126" ID X 1.501" OD X .625" long, for Ref 4 &amp; 6.....</b>	900121	3811-B-2-C
12	<b>RAILITE BEARING, 1.126" ID X 1.501" OD X 2.218" long, for Ref 1 &amp; 2.....</b>	900122	3811-A-2
13	<b>INSULATION ANGLE PLATE, fiberglass, 1/8" X 2 3/4".....</b>	973400-005	N/A
14	<b>INSULATION BUSHING, fiberglass, 25/32" ID X 1" OD X 31/32" long.....</b>	973100-008	N/A





REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED MF FRONT ROD COMPLETE, LH</b> , for use on power switches with 3/4" point bolts on 4" centers.....	900110-007-01	N/A
1	<b>POINT CLIP, LH</b> , 13 5/8" long, slotted for 3/4" bolts.....	900112-007X	3811-A-3L-CC
2	<b>POINT CLIP, RH</b> , 13 5/8" long, slotted for 3/4" bolts.....	900113-007X	3811-A-3R-CC
3	<b>SHIM</b> , 3/4" X 2 1/2" X 8 1/2", for 3/4" point bolts on 4" centers.....	900114-021	3811-D-1-W
4	<b>PLATE WASHER</b> , 1/4" X 2 1/2" X 7", for 3/4" point bolts on 4" centers.....	900114-005	3811-D-1-L
5	<b>SWIVEL ROD, PLAIN</b> .....	900115-003	3811-B-3-A5
6	<b>OFFSET ROD, SERRATED</b> .....	900116-003	3811-E-12-H
7	<b>SWIVEL ROD, SERRATED, LH OR RH</b> .....	900117-003X	3811-B-4
8	<b>PIN, HARDENED STEEL</b> , 1.120" dia X 4" long.....	900118	3811-C-1-A
9	<b>TWIN WASHER</b> , 4" centers, 1/4" X 2 1/2" X 7", for 3/4" bolts.....	900119-002	3811-E-4
10	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 15".....	960101-007	3811-E-5-C
11	<b>RAILITE BUSHING</b> , 1.126" ID X 1.501" OD X .625" long, for Ref 5 & 7.....	900121	3811-B-2-C
12	<b>RAILITE BEARING</b> , 1.126" ID X 1.501" OD X 2.218" long, for Ref 1 & 2...	900122	3811-A-2
13	<b>INSULATION "U" PLATE</b> , forbon, 1/8" X 2 3/4".....	974301-001	UP-35
14	<b>INSULATION BUSHING</b> , forbon, 25/32" ID X 1" OD X 31/32" long.....	974100-003	B-4
15	<b>POINT LUG, BALL &amp; SOCKET</b> .....	820680-013	3811-G-2-M



# OPERATING RODS SWITCH POINT ADJUSTERS

## SECTION D

## CONTENTS

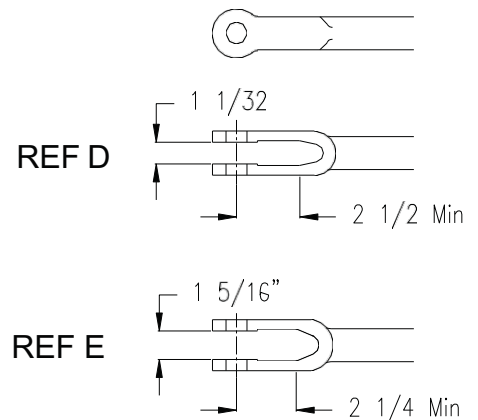
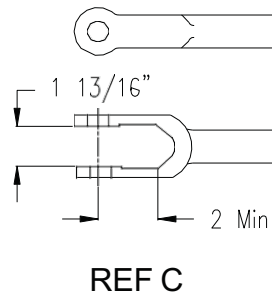
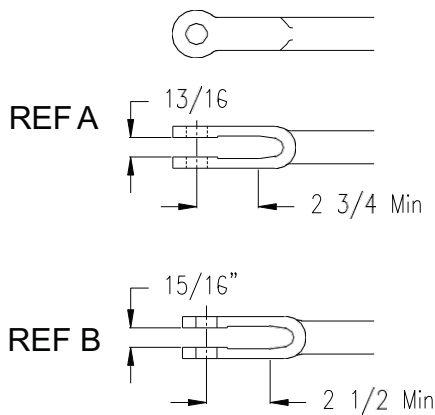
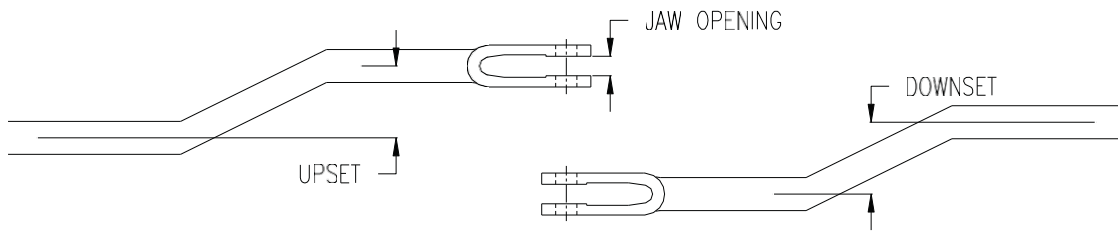
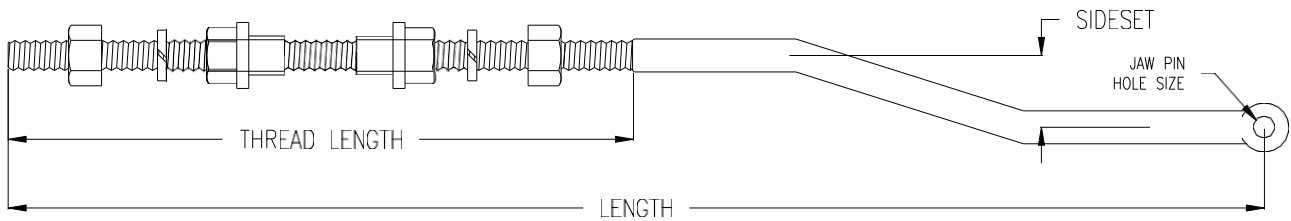
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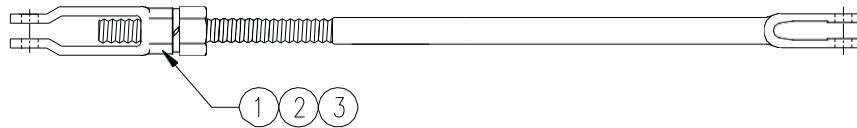
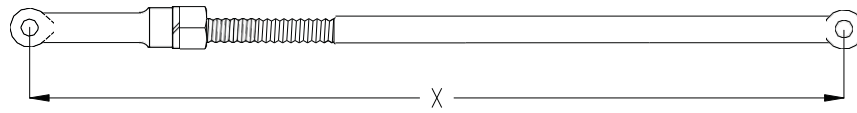
<b>Product</b>	<b>Pages</b>
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Insulated Operating Rods.....	23
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HOW TO ORDER

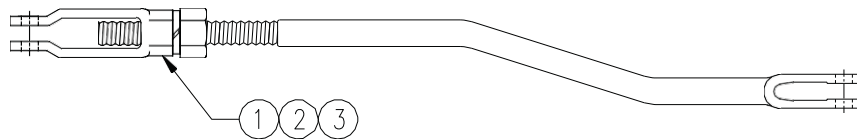
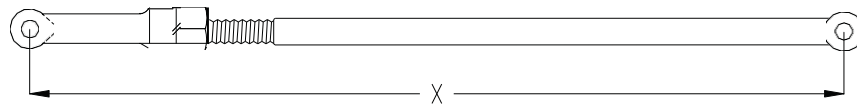
Specify the following information:

1. Length of rod from the centerline of jaw pin hole to end of rod.
2. Amount of sideset bend, if any.
3. Amount of upset or downset bend, if any.
4. Length of thread.
5. Type of thread, LH or RH.
6. Jaw opening. See references below.
7. Jaw pin hole size.
8. Hardware such as jaw pins, sleeve nuts and hex nuts. See appropriate pages of this catalog section.





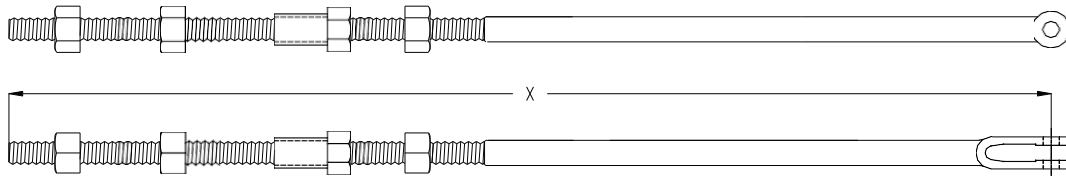
REF A



REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE, X = 15"</b> .....	840120-008-01	N153596
A1	Similar to Ref A except X = 18".....	840120-009-01	N114760
A2	Similar to Ref A1 except includes jaw pin.....	840120-009-02	X226105
A3	Similar to Ref A except X = 23".....	840120-010-01	N299473-010
A4	Similar to Ref A except X = 28".....	840120-011-01	N299473-003
A5	Similar to Ref A except X = 32".....	840120-012-01	N299473-006
A6	Similar to Ref A except X = 36".....	840120-013-01	N299473-007
A7	Similar to Ref A except X = 71".....	840120-014-01	N299473-012
B	<b>OPERATING ROD COMPLETE, X = 27", 1 1/2" downset</b> .....	840153-058X	N451379-1402
B1	Similar to Ref B except X = 53", 2 1/2" downset.....	840153-059X	N451379-1405
B2	Similar to Ref B except X = 20", 2" downset.....	840153-060X	N451379-1407
B3	Similar to Ref B except X = 29", 2 1/4" downset.....	840153-001X	N451846-3602
1	<b>HEAVY HEX NUT, 1 1/4"-7 UNC 2B</b> .....	990331-125-02	J048176 545-7
2	<b>SCREW JAW, 13/16" jaw opening</b> .....	898010-006	M022398
3	<b>LOCK WASHER, 1 1/4"</b> .....	990404-125-02	J047834

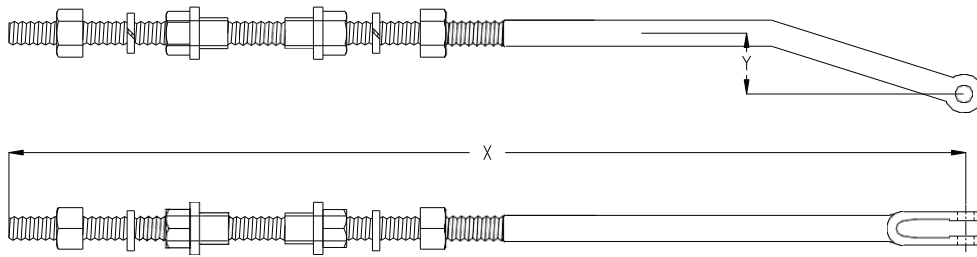
For custom rods other than those shown, specify Model 840120 or 840153 rod and dimensions.



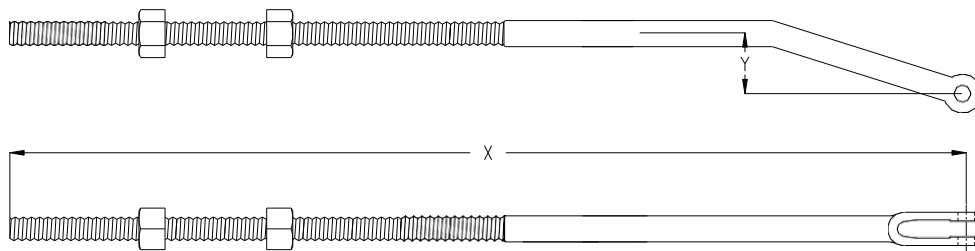
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with sleeve nut & (3) hex nuts, X = 66".....	840120-015-01	N108827
A1	Similar to Ref A except with lug.....	840120-015-02	N165698
A2	Similar to Ref A except with (2) hex nuts only.....	840120-015-03	N299473
A3	Similar to Ref A2 except with jaw pin.....	840120-015-04	N438251
A4	Similar to Ref A except with (2) sleeve nuts & hex nuts, X = 76".....	840120-016-01	N176372
A5	Similar to Ref A4 except with (2) hex nuts only.....	840120-016-02	N339415
A6	Similar to Ref A except with switch point adjuster, X = 72".....	840120-017-01	N220008
A7	Similar to Ref A6 except with (2) hex nuts only.....	840120-017-02	N221474
A8	Similar to Ref A6 except with (2) security locknuts only.....	840120-017-03	N233817-001
A9	Similar to Ref A6 except with sleeve nut & (3) hex nuts only.....	840120-017-04	N436960
A10	Similar to Ref A except with (2) hex nuts only, X = 84".....	840120-018-01	N277350
A11	Similar to Ref A10 except includes (2) lock washers.....	840120-018-02	N299473-002
A12	Similar to Ref A except with sleeve nut & hex nuts.....	840120-018-03	N392967
A13	Similar to Ref A except with (2) hex nuts only, X = 60".....	840120-019-01	N280117
A14	Similar to Ref A except with (2) elastic stop nuts only, X = 62".....	840120-020-01	N299473-001
A15	Similar to Ref A except with (2) hex nuts only, X = 74".....	840120-021-01	N299473-004
A16	Similar to Ref A except with (2) hex nuts & lock washers, X = 70".....	840120-022-01	N299473-005
A17	Similar to Ref A except with (2) hex nuts only, X = 81".....	840120-023-01	N299473-008
A18	Similar to Ref A except with (2) security locknuts only, X = 82 1/4".....	840120-024-01	N299473-009
A19	Similar to Ref A18 except X = 90".....	840120-025-01	N299473-011

For custom rods other than those shown, specify Model 840120 rod and dimensions.



REF A

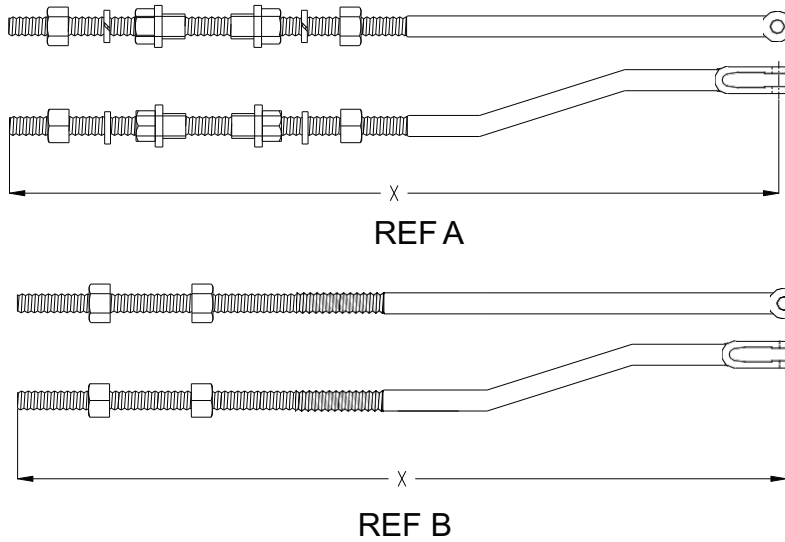


REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , X = 50 1/2", Y = 3 3/4".....	840152-001X	N209506
A1	Similar to Ref A except includes jaw pin.....	840152-002X	X348201
A2	Similar to Ref A except X = 53".....	840152-003X	N209506-002
A3	Similar to Ref A2 except includes jaw pin.....	840152-004X	X348201-001
B	<b>OPERATING ROD COMPLETE</b> ,with (2) hex nuts, X = 47", Y = 2 1/4".....	840152-005X	N283882
B1	Similar to Ref B except with sleeve nut X = 60", Y = 2".....	840152-006X	N283883
B2	Similar to Ref B except X = 55", Y = 1".....	840152-007X	N305955
B3	Similar to Ref B except X = 51", Y = 4 5/8".....	840152-008X	N209506-003
B4	Similar to Ref B3 except X = 58 1/2".....	840152-009X	N209506-004
B5	Similar to Ref B except with (2) 1 1/4"-7 UNC elastic stop nuts, X = 60", Y = 2".....	840152-010X	N348775
B6	Similar to Ref B except X = 55 1/2", Y = 2".....	840152-011X	N371920
B7	Similar to Ref B6 except includes (2) lockwashers.....	840152-012X	N435015
B8	Similar to Ref B except X = 60", Y = 2".....	840152-013X	N435590-001
B9	Similar to Ref B except X = 58", Y = 3 5/8".....	840152-014X	N438278-001

For custom rods other than those shown, specify Model 840152 rod and dimensions.

OPERATING RODS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , includes (2) hex nuts, (2) sleeve nuts and (2) lockwashers, X = 67", 4 1/2" upset .....	840153-013X	N208362
A1	Similar to Ref A except X = 66", 2" upset .....	840153-014X	N259890
A2	Similar to Ref A except X = 82 1/4", 1 7/8" upset .....	840153-015X	N438637
B	<b>OPERATING ROD COMPLETE</b> , includes (2) hex nuts, X = 86", 2 1/2" upset	840153-016X	N219485
B1	Similar to Ref B except X = 91", 4 1/2" upset.....	840153-017X	N218222
B2	Similar to Ref B1 except includes (3) hex nuts and (1) sleeve nut .....	840153-018X	N108083
B3	Similar to Ref B except X = 74", 1 1/4" upset .....	840153-008X	N432804
B4	Similar to Ref B except includes security locknuts in lieu of standard hex nuts, X = 112", 1 1/2" upset .....	840153-019X	N287331-001
B5	Similar to Ref B except X = 65 3/4", 4 3/8" upset .....	840153-020X	N331098-002
B6	Similar to Ref B except includes (3) hex nuts and (1) sleeve nut, X = 114", 4 3/4" upset.....	840153-021X	N332035-001
B7	Similar to Ref B except X = 125", 2 3/8" upset .....	840153-022X	N438637-001
B8	Similar to Ref B except X = 70", 1 3/4" upset.....	840153-023X	N438637-002
B9	Similar to Ref B except includes (3) hex nuts and (1) sleeve nut, X = 46", 3/8" upset.....	840153-024X	N438637-003
B10	Similar to Ref B except X = 79", 1" upset.....	840153-025X	N438637-004
B11	Similar to Ref B except includes shrink tubing on length of rod, X = 61", 1 9/16" upset.....	840153-026X	N438637-005
B12	Similar to Ref B except includes (3) hex nuts and (1) sleeve nut, X = 54", 2 3/8" upset.....	840153-027X	N438637-006
B13	Similar to Ref B12 except X = 61", 1 9/16" upset.....	840153-028X	N438637-007

For custom rods other than those shown, specify Model 840153 rod with length and upset dimensions.

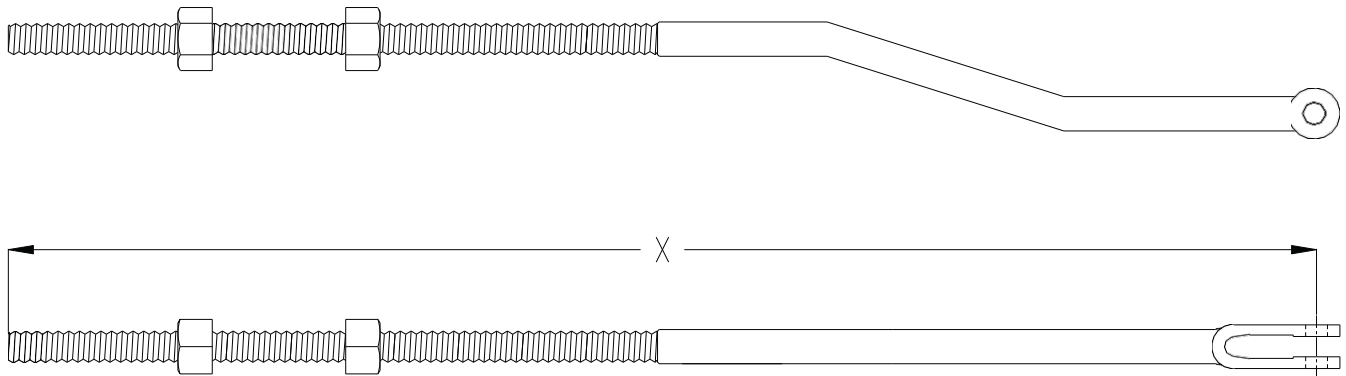
# OPERATING RODS

**D-6**

REF	DESCRIPTION	G & B PART #	OEM PART #
B14	Similar to Ref B except X = 72", 1 1/4" upset.....	840153-029X	N438637-008
B15	Similar to Ref B except X = 62", 3"upset.....	840153-030X	N438637-009
B16	Similar to Ref B except X = 55 1/4", 2 1/8" upset.....	840153-031X	N438680
B17	Similar to Ref B except X = 72", 1 5/8" upset.....	840153-032X	N438680-001
B18	Similar to Ref B except X = 45 3/4", 1 3/4" upset.....	840153-033X	N438680-002
B19	Similar to Ref B except includes lockwashers, X = 67", 4 1/2" upset.....	840153-034X	N438680-003
B20	Similar to Ref B except X = 62", 2 1/4" upset.....	840153-035X	N438680-004
B21	Similar to Ref B except X = 57", 1 3/4" upset.....	840153-036X	N438680-005
B22	Similar to Ref B except X = 58", 1 1/8" upset.....	840153-037X	N438680-006
B23	Similar to Ref B30 except X = 58", 1 1/4" upset.....	840153-038X	N438680-007
B24	Similar to Ref B except X = 63", 1" upset.....	840153-039X	N438680-008
B25	Similar to Ref B32 except X = 84", 1" upset.....	840153-040X	N438680-009
B26	Similar to Ref B except X = 86", 2 3/4" upset.....	840153-041X	N438680-010
B27	Similar to Ref B except without nuts X = 115", 4 7/8" upset.....	840153-042X	N451414-6411
B28	Similar to Ref B except includes jaw pin, X = 66", 3/8" upset.....	840153-043X	N451414-6401
B29	Similar to Ref B27 except X = 69", 2 1/2" upset.....	840153-044X	N451414-6402
B38	Similar to Ref B27 except X = 62", 1 3/8" upset.....	840153-045X	N451414-6403
B30	Similar to Ref B27 except X = 72", 1 7/8" upset.....	840153-046X	N451414-6404
B31	Similar to Ref B27 except X = 66 1/2", 1 3/4" upset.....	840153-047X	N451414-6405
B32	Similar to Ref B27 except X = 69", 2 5/8" upset.....	840153-048X	N451414-6406
B33	Similar to Ref B32 except X = 74", 2 5/8" upset.....	840153-049X	N451414-6407
B34	Similar to Ref B27 except X = 82", 2 1/2" upset.....	840153-050X	N451414-6408
B35	Similar to Ref B27 except X = 72", 3 1/2" upset.....	840153-051X	N451414-6409
B36	Similar to Ref B27 except includes (3) hex nuts and (1) sleeve nut, X = 88", 1 3/4" upset.....	840153-052X	N451414-6410
B37	Similar to Ref B27 except X = 60", 3/4" upset.....	840153-053X	N451414-6412
B38	Similar to Ref B27 except X = 96", 1 1/2" upset.....	840153-054X	N451414-6413
B39	Similar to Ref B27 except without nuts, X = 71", 1/2" upset.....	840153-055X	N451414-6414
B40	Similar to Ref B39 except X = 89", .....	840153-056X	N451414-6415
B41	Similar to Ref B39 except X = 82", 1" upset.....	840153-057X	N451414-6416

For custom rods other than those shown, specify Model 840153 rod with length and upset dimensions.

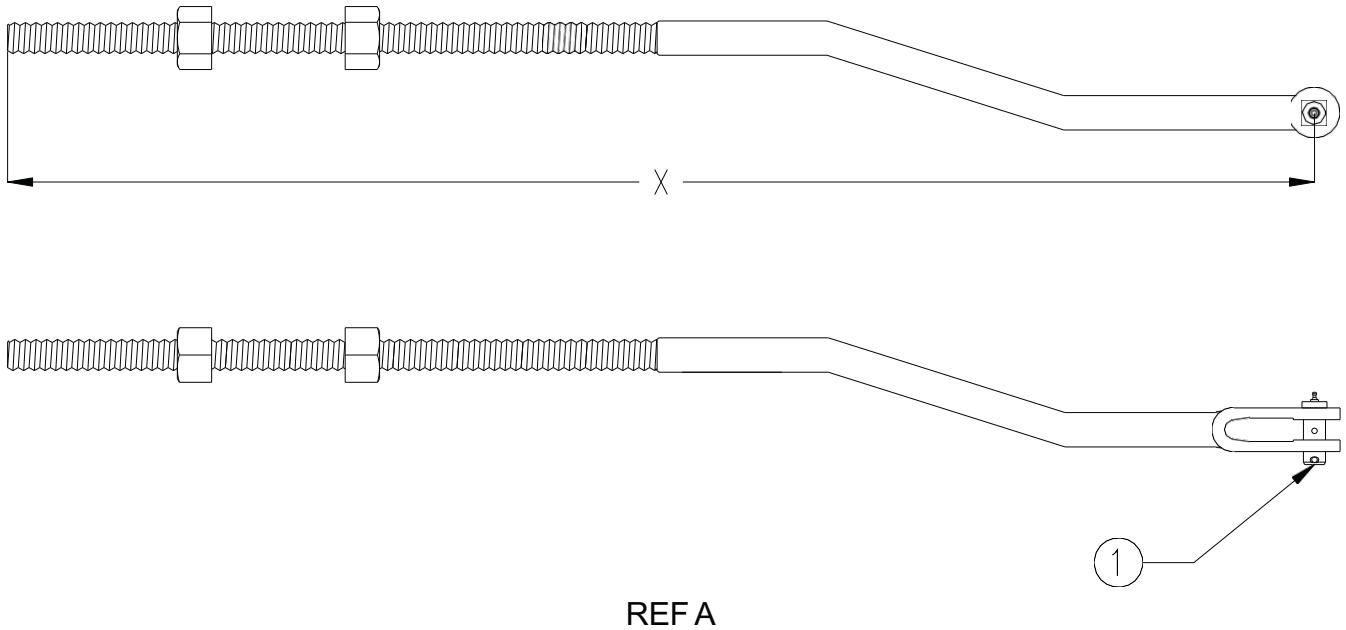




REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with (2) hex nuts, X = 69", 1 1/2" sideset....	840154-006X	N302930
A1	Similar to Ref A except X = 79 1/2".....	840154-007X	N338359
A2	Similar to Ref A except X = 58".....	840154-008X	N338359-001
A3	Similar to Ref A except X = 74 1/2", 1" sideset.....	840154-009X	N338359-005
A4	Similar to Ref A3 except X = 71 1/2".....	840154-002X	N338359-006
A5	Similar to Ref A3 except X = 67".....	840154-010X	N338359-007
A6	Similar to Ref A3 except X = 62 1/4".....	840154-011X	N338359-008
A7	Similar to Ref A3 except X = 58 1/4".....	840154-012X	N338359-009
A8	Similar to Ref A except X = 74", 2 3/4" sideset.....	840154-013X	N338359-010
A9	Similar to Ref A except X = 77", 1" sideset.....	840154-001X	N312842
A10	Similar to Ref A except X = 72", 1 3/4" sideset.....	840154-014X	N438727
A11	Similar to Ref A except includes (4) hex nuts, X = 45", 1 1/2" sideset.....	840154-015X	N438727-001
A12	Similar to Ref A except includes elastic stop nuts in lieu of hex nuts, X = 60", 1 3/4" sideset.....	840154-016X	N304748
A13	Similar to Ref A except includes (3) hex nuts and sleeve nut, X = 66", 3/4" sideset.....	840154-017X	N301638
A14	Similar to Ref A13 except, X = 68", 3 3/8" sideset.....	840154-018X	N338359-002
A15	Similar to Ref A14 except 2 7/8" sideset.....	840154-019X	N338359-003
A16	Similar to Ref A13 except 1 1/8" sideset.....	840154-020X	N338359-004
A17	Similar to Ref A13 except X = 60", 1 3/4" sideset.....	840154-021X	N394382

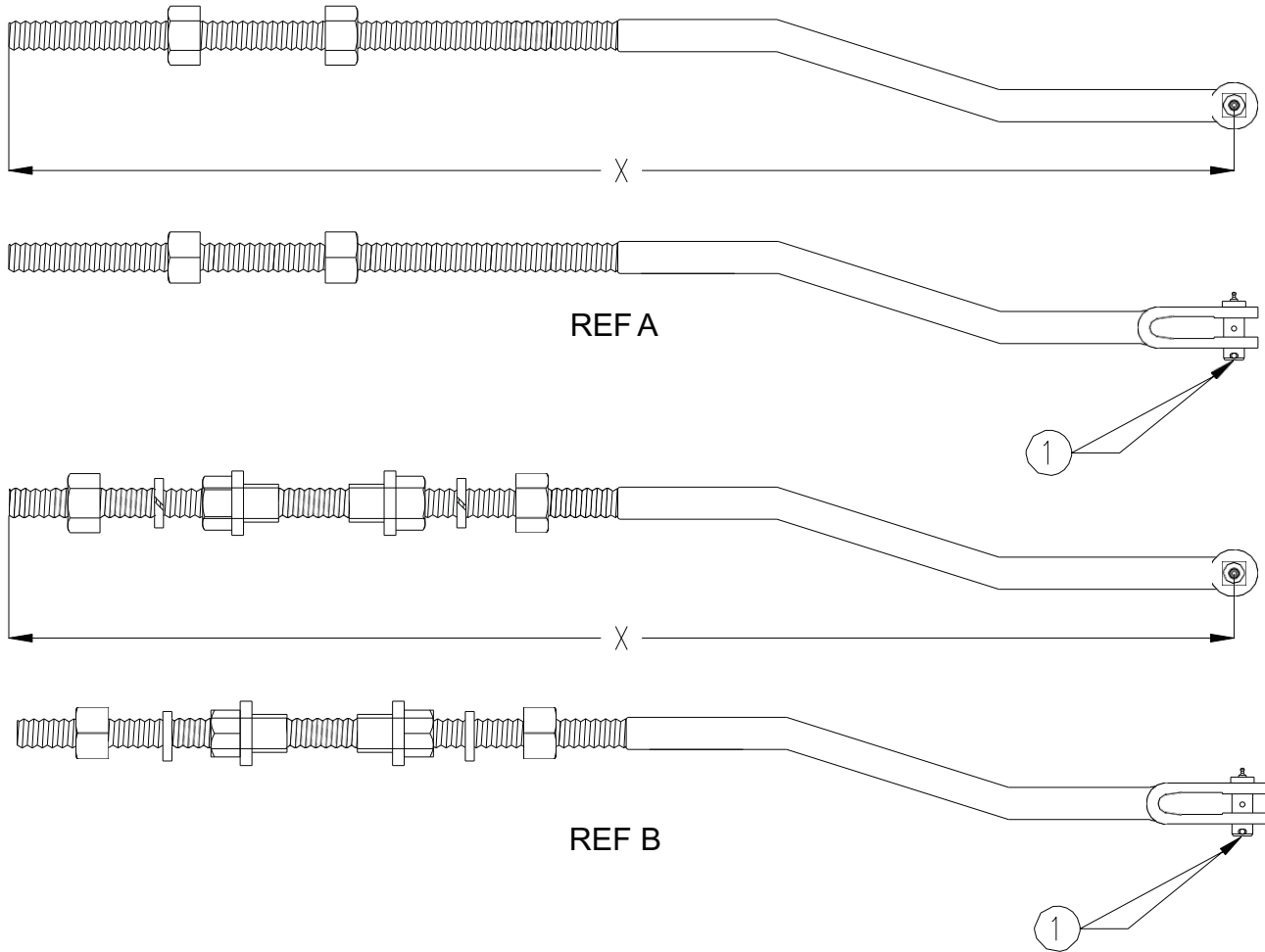
For custom rods other than those shown, specify Model 840154 rod and dimensions.



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly and (2) heavy hex nuts, X = 65", 2 3/4" sideset, 2 3/4" downset.....	840155-001X	N451846-0901
A1	Similar to Ref A except 1" downset.....	840155-002X	N451846-0902
A2	Similar to Ref A except 3" sideset, 3 3/4" downset.....	840155-003X	N451846-0903
A3	Similar to Ref A except X = 70", 2" sideset, 1/2" downset.....	840155-004X	N451846-0904
A4	Similar to Ref A except X = 80", 1" sideset, 1 3/4" downset.....	840155-005X	N451846-0905
A5	Similar to Ref A except X = 69", 2 1/2" sideset, 1 5/8" downset.....	840155-006X	N451846-0906
A6	Similar to Ref A except X = 68", 1 1/8" sideset, 1 5/16" downset.....	840155-007X	N49100201
A7	Similar to Ref A except X = 70", 1 5/8" sideset, 1 5/16" downset.....	840155-008X	N49100202
A8	Similar to Ref A except X = 64 1/2", 2 1/4" sideset, 1 3/8" downset.....	840155-009X	N49100203
A9	Similar to Ref A except X = 63", 1 1/2" sideset, 5/8" downset.....	840155-010X	N49100204
A10	Similar to Ref A except X = 83", 1/2" downset.....	840155-011X	N49100205
A11	Similar to Ref A except X = 73 1/2", 2 1/2" sideset, 2 5/8" downset.....	840155-012X	N49100206
A12	Similar to Ref A except X = 46 1/2", 3 5/8" downset.....	840155-013X	N49100207
1	<b>JAW PIN COMPLETE</b> , lubricated, 7/8" dia x 2 1/2" long with 3/16" x 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....	890590-005X	X259173

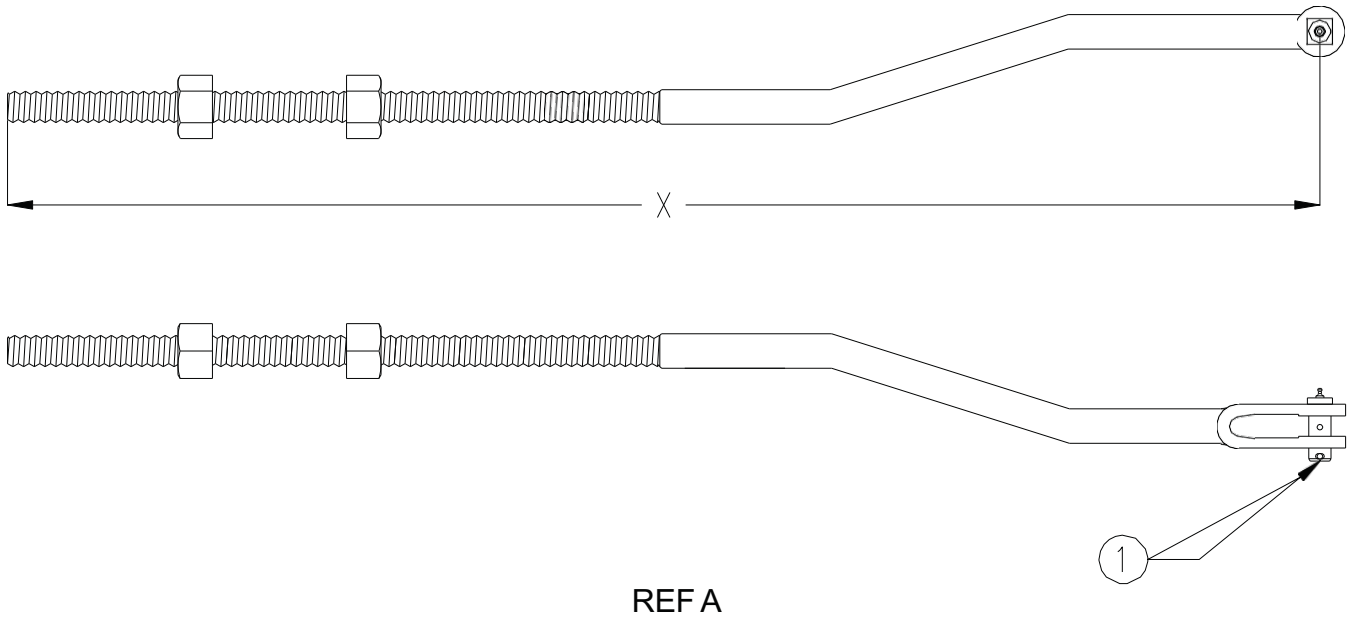
For custom rods other than those shown, specify Model 840155 rod with length, sideset and downset dimensions

# OPERATING RODS



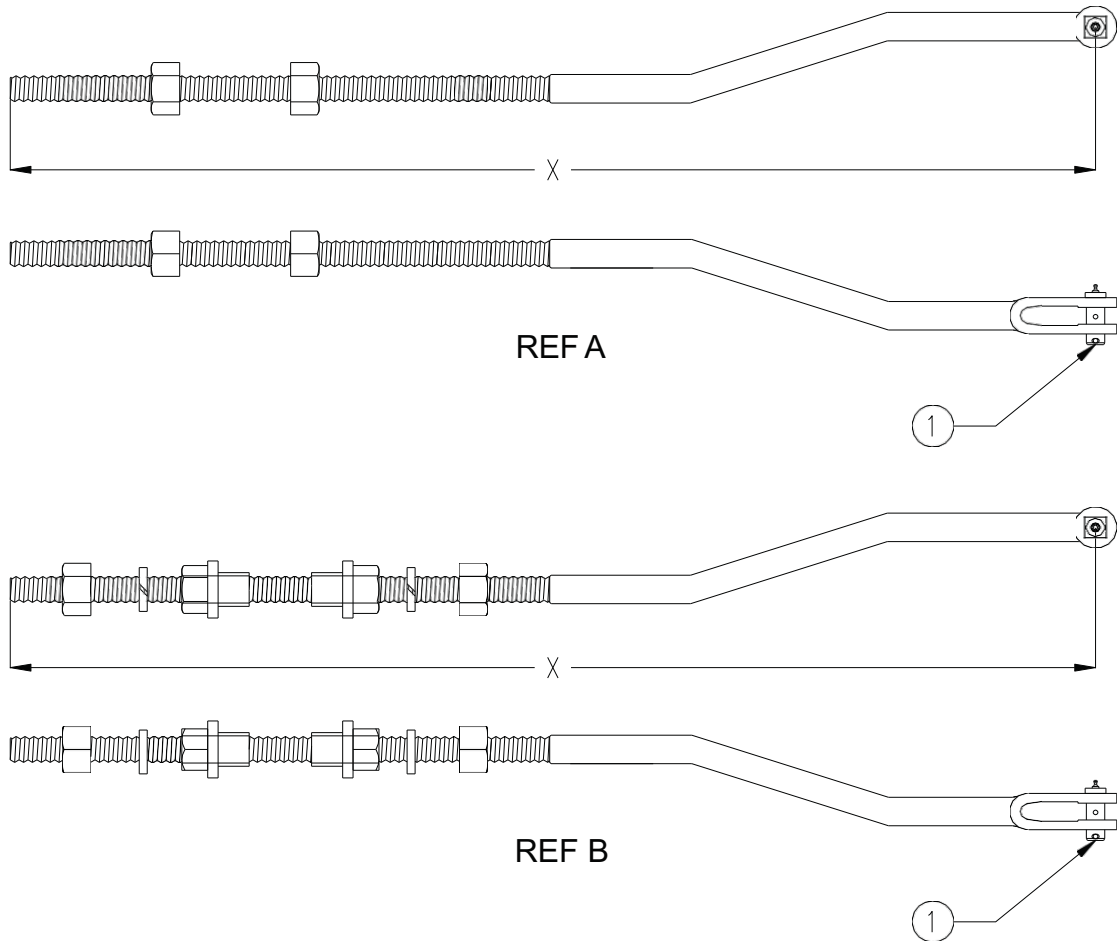
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly and (2) heavy hex nuts, X = 56", 2 5/8" sideset, 1 5/8" downset.....	840155-014X	N451414-7209
A1	Similar to Ref A except X = 87 1/2", 3 5/8" sideset, 1 7/8" downset.....	840155-015X	N451414-7210
A2	Similar to Ref A except no nuts, X = 62", 1 7/8" sideset, 1 3/8" downset.....	840155-016X	N451414-7201
A3	Similar to Ref A except no jaw pin assembly, (4) heavy hex nuts, X = 74 1/2", 3" sideset, 2 1/4" downset.....	840155-017X	N451414-7211
A4	Similar to Ref A3 except X = 76", 2 3/4" sideset, 2 3/8" downset.....	840155-018X	N451414-7202
A5	Similar to Ref A3 except X = 72", 2 1/2" sideset, 1 11/16" downset.....	840155-019X	N451414-7208
B	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly and (2) heavy hex nuts, (2) sleeve nuts and (2) lock washers, X = 60", 2 1/2" sideset, 2" downset.....	840155-020X	N451414-7203
B1	Similar to Ref B except X = 59", 2 1/4" sideset, 1 5/8" downset.....	840155-021X	N451414-7204
B2	Similar to Ref B except X = 53", 3/4" sideset, 1 3/4" downset.....	840155-022X	N451414-7207
B3	Similar to Ref B except X = 82", 1 5/8" sideset, 1 5/8" downset.....	840155-023X	N451414-7205
B4	Similar to Ref B3 except 5/8" sideset.....	840155-024X	N451414-7206
1	<b>JAW PIN COMPLETE</b> , lubricated, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....	890590-005-01	X259173

For custom rods other than those shown, specify Model 840155 rod with length, sideset and downset dimensions



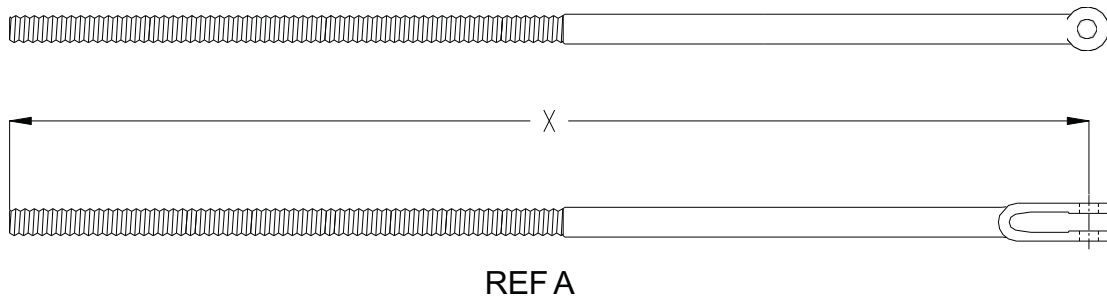
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly and hex nuts, X = 71", 1 1/8" sideset, 1 15/16" downset.....	840156-001X	N451846-0701
A1	Similar to Ref A except X = 65", 2 3/4" sideset, 2 3/4" downset.....	840156-002X	N451846-0702
A2	Similar to Ref A1 except 1" downset.....	840156-003X	N451846-0703
A3	Similar to Ref A1 except 3" sideset, 3 3/4" downset.....	840156-004X	N451846-0704
A4	Similar to Ref A except X = 70", 2" sideset, 1/2" downset.....	840156-005X	N451846-0705
A5	Similar to Ref A except X = 80", 1" sideset, 1 3/4" downset.....	840156-006X	N451846-0706
A6	Similar to Ref A except X = 69", 2 1/2" sideset, 1 5/8" downset.....	840156-007X	N451846-0707
A7	Similar to Ref A except, X = 68", 1 1/8" sideset, 1 5/16" downset.....	840156-008X	N49100401
A8	Similar to Ref A except X = 70", 1 5/8" sideset.....	840156-009X	N49100402
A9	Similar to Ref A except X = 64 1/2", 2 1/4" sideset, 1 3/8" downset.....	840156-010X	N49100403
A10	Similar to Ref A except X = 63", 1 1/2" sideset, 5/8" downset.....	840156-011X	N49100404
A11	Similar to Ref A except X = 83", 2 3/4" sideset, 1/2" downset.....	840156-012X	N49100405
A12	Similar to Ref A11 except X = 46 1/2", 3 5/8" downset.....	840156-013X	N49100407
A13	Similar to Ref A except X = 73 1/2", 2 1/2" sideset, 2 5/8" downset.....	840156-014X	N49100406
1	<b>JAW PIN COMPLETE</b> , lubricated, 7/8" dia x 2 1/2" long with 3/16" x 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....	890590-005X	X259173

For custom rods other than those shown, specify Model 840156 rod with length, sideset and downset dimensions



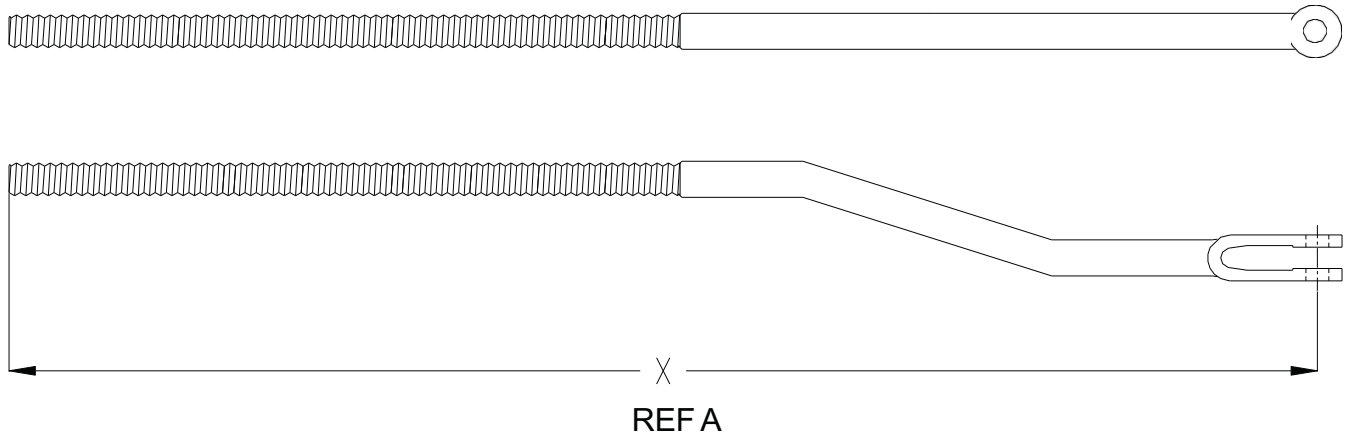
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly and heavy hex nuts, X = 56", 2 5/8" sideset, 1 5/8" downset.....	840156-015X	N451414-7409
A1	Similar to Ref A except X = 87 1/2", 3 5/8" sideset, 1 7/8" downset.....	840156-016X	N451414-7410
A2	Similar to Ref A except no nuts, X = 62", 1 7/8" sideset, 1 3/8" downset.....	840156-017X	N451414-7401
A3	Similar to Ref A except (4) heavy hex nuts, X = 74 1/2", 3" sideset, 2 1/4" downset.....	840156-018X	N451414-7411
A4	Similar to Ref A except no jaw pin assembly, X = 76", 2 3/4" sideset, 2 3/8" downset.....	840156-019X	N451414-7402
A5	Similar to Ref A4 except X = 72", 2 1/2" sideset, 1 11/16" downset.....	840156-020X	N451414-7408
B	<b>OPERATING ROD COMPLETE</b> , with jaw pin assembly, heavy hex nuts, sleeve nuts and lock washers, X = 60", 2 1/2" sideset, 2" downset.....	840156-021X	N451414-7403
B1	Similar to Ref B except X = 53", 3/4" sideset, 1 3/4" downset.....	840156-022X	N451414-7407
B2	Similar to Ref B except X = 59", 2 1/4" sideset, 1 5/8" downset.....	840156-023X	N451414-7404
B3	Similar to Ref B2 except X = 82", 5/8" sideset.....	840156-024X	N451414-7405
B4	Similar to Ref B3 except 1 5/8" sideset.....	840156-025X	N451414-7406
1	<b>JAW PIN COMPLETE</b> , lubricated, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....	890590-005X	X259173

For custom rods other than those shown, specify Model 840156 rod with length, sideset and downset dimensions



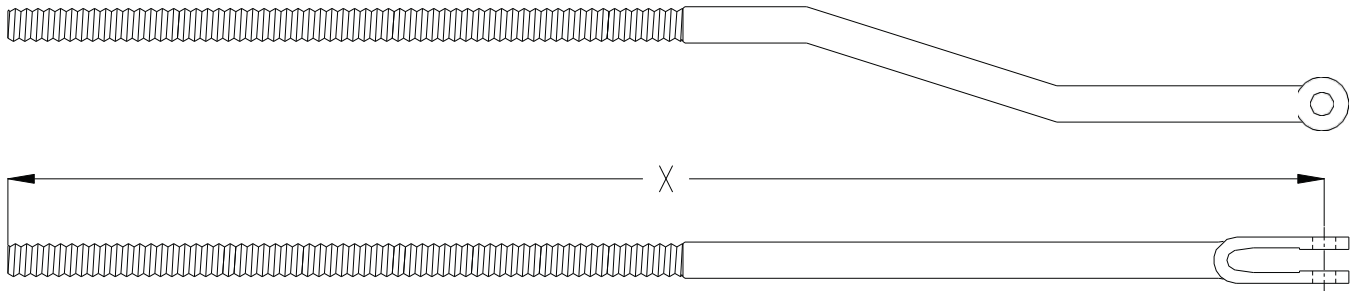
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD</b> , 1 3/8" dia, X = 42".....	940120-012	120-012
A1	Similar to Ref A except X = 45".....	940120-013	120-013
A2	Similar to Ref A except X = 48".....	940120-016	120-016
A3	Similar to Ref A except X = 50".....	940120-018	120-018
A4	Similar to Ref A except X = 64".....	940120-029	120-029
A5	Similar to Ref A except X = 41".....	940120-055	120-055
A6	Similar to Ref A except X = 69".....	940120-069	120-069
A7	Similar to Ref A except X = 75".....	940120-078	120-078
A8	Similar to Ref A except X = 76".....	940120-133	120-133
A9	Similar to Ref A except X = 80".....	940120-153	120-153
A10	Similar to Ref A except X = 67".....	940120-156	120-156
A11	Similar to Ref A except X = 30".....	940120-158	120-158
A12	Similar to Ref A except X = 68".....	940120-162	120-162
A13	Similar to Ref A except X = 73".....	940120-165	120-165
A14	Similar to Ref A except X = 72".....	940120-197	120-197
A15	Similar to Ref A except X = 80".....	940120-214	120-214
A16	Similar to Ref A except X = 23".....	940120-248	120-248
A17	Similar to Ref A except X = 44".....	940120-249	120-249
A18	Similar to Ref A except X = 70".....	940120-253	120-253
A19	Similar to Ref A except X = 78".....	940120-270	120-270
A20	Similar to Ref A except X = 94".....	940120-279	120-279
A21	Similar to Ref A except X = 41".....	940120-280	120-280
A22	Similar to Ref A except X = 44".....	940120-281	120-281
A23	Similar to Ref A except X = 46".....	940120-282	120-282

For custom rods other than those shown, specify Model 940120 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD</b> , 1 3/8" dia, X = 66", 2" downset.....	940153-011	153-011
A1	Similar to Ref A except X = 64", 1 1/2" downset.....	940153-022	153-022
A2	Similar to Ref A except X = 72", 3 9/16" downset.....	940153-087	153-087
A3	Similar to Ref A except X = 68", 1 1/2" downset.....	940153-127	153-127
A4	Similar to Ref A except X = 73", 2 9/16" downset.....	940153-184	153-184
A5	Similar to Ref A except X = 69", 2 13/16" downset.....	940153-220	153-220
A6	Similar to Ref A except X = 70", 1 3/4" downset.....	940153-233	153-233
A7	Similar to Ref A except X = 74", 2 15/16" downset.....	940153-248	153-248
A8	Similar to Ref A7 except 2 13/16" downset.....	940153-286	153-286
A9	Similar to Ref A except X = 68", 2 1/4" downset.....	940153-292	153-292
A10	Similar to Ref A9 except 15/16" downset.....	940153-299	153-299
A11	Similar to Ref A9 except 3 1/4"downset.....	940153-308	153-308
A12	Similar to Ref A except X = 78", 3 1/2" downset.....	940153-327	153-327
A13	Similar to Ref A except X = 64", 4" downset.....	940153-348	153-348
A14	Similar to Ref A except X = 144", 2 1/2" downset.....	940153-375	153-375
A15	Similar to Ref A except X = 60", 1" downset.....	940153-380	153-380
A16	Similar to Ref A except X = 56", 3 5/16" downset.....	940153-383	153-383
A17	Similar to Ref A except X = 40", 1 13/64" downset.....	940153-390	153-390
A18	Similar to Ref A except X = 107", 1 1/2" downset.....	940153-391	153-391

For custom rods other than those shown, specify Model 940153 rod and dimensions

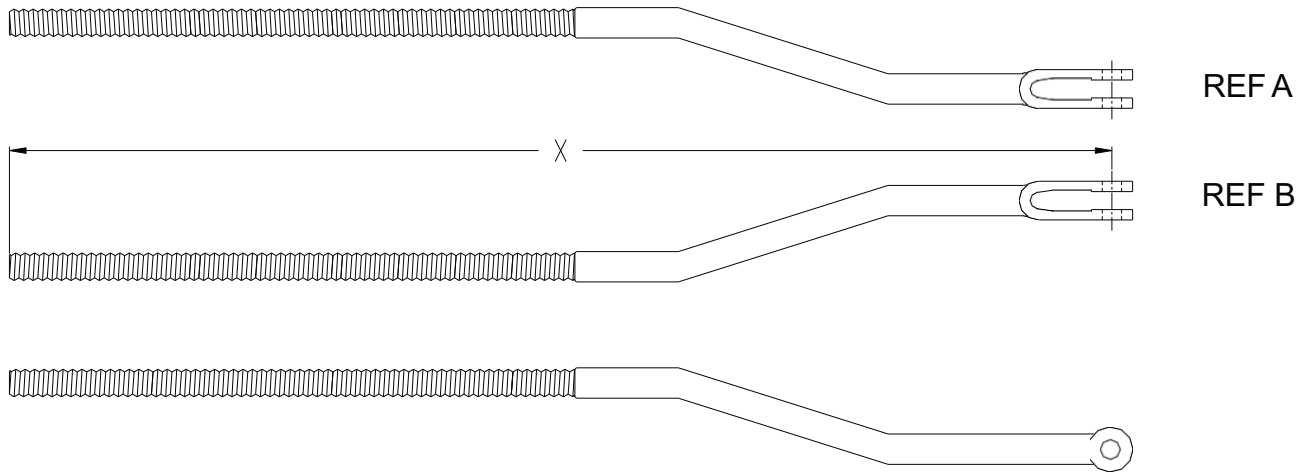


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD</b> , 1 3/8" dia, X = 48", 4 1/4" sideset.....	940154-001	154-001
A1	Similar to Ref A except X = 54 3/8", 2" sideset.....	940154-003	154-003
A2	Similar to Ref A1 except X = 78", 2 1/2" sideset.....	940154-007	154-007
A3	Similar to Ref A except X = 90", 3" sideset.....	940154-008	154-008
A4	Similar to Ref A except X = 54", 1 1/8" sideset.....	940154-011	154-011
A5	Similar to Ref A except X = 60", 1 3/4" sideset.....	940154-014	154-014
A6	Similar to Ref A except X = 49" 1 1/4" sideset.....	940154-020	154-020
A7	Similar to Ref A except X = 66", 3/4" sideset.....	940154-022	154-022
A8	Similar to Ref A except X = 52", 1" sideset.....	940154-024	154-024
A9	Similar to Ref A8 except X = 44".....	940154-036	154-036
A10	Similar to Ref A8 except X = 79".....	940154-042	154-042
A11	Similar to Ref A1 except X = 71 1/2".....	940154-062	154-062
A12	Similar to Ref A11 except X = 60".....	940154-090	154-090
A13	Similar to Ref A5 except X = 72".....	940154-142	154-142
A14	Similar to Ref A8 except X = 66".....	940154-144	154-144
A15	Similar to Ref A5 except X = 34".....	940154-150	154-150
A16	Similar to Ref A8 except X = 102 1/2".....	940154-161	154-161
A17	Similar to Ref A except X = 47", 1 5/8" sideset.....	940154-163	154-163
A18	Similar to Ref A17 except 3/4" sideset.....	940154-164	154-164
A19	Similar to Ref A except X = 52", 1 1/2" sideset.....	940154-168	154-168
A20	Similar to Ref A19 except X = 94".....	940154-169	154-169

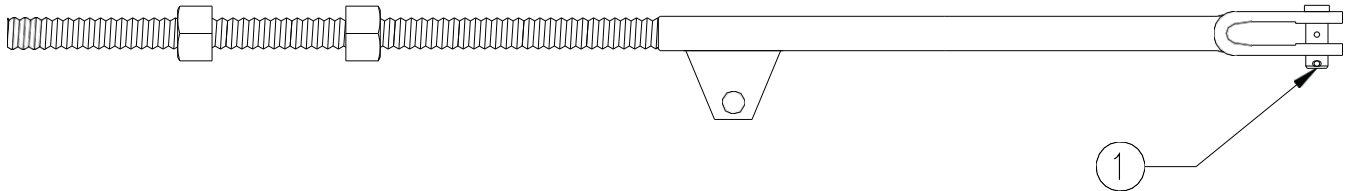
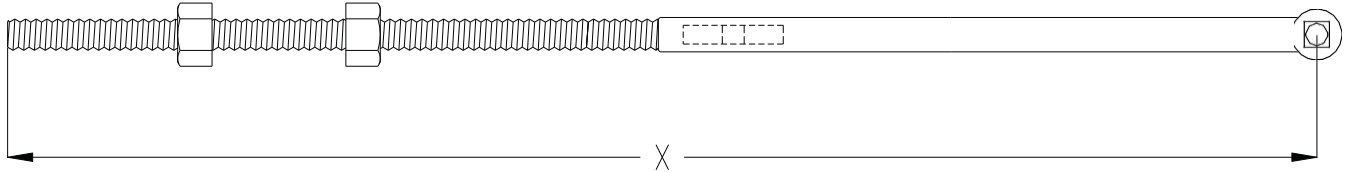
For custom rods other than those shown, specify Model 940154 rod, length and sideset dimensions



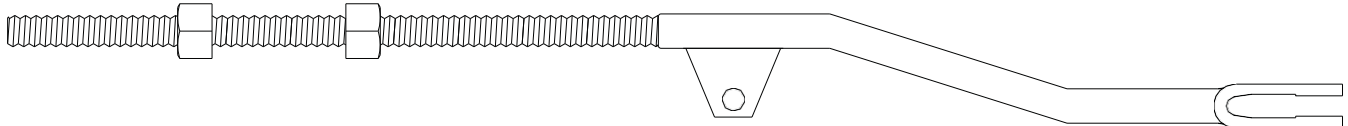
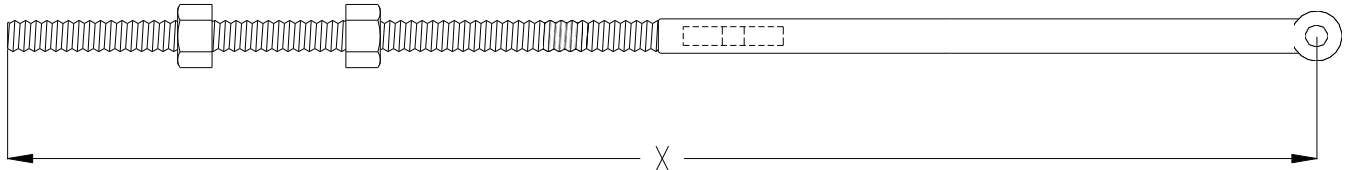


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD</b> , 1 3/8" dia, X = 66", 2" sideset, 11/16" downset.....	940155-001	155-001
A1	Similar to Ref A except X = 67", 1/2" sideset, 1 1/2" downset.....	940155-010	155-010
A2	Similar to Ref A except X = 71 1/2", 1 1/2" sideset, 3/8" downset.....	940155-031	155-031
A3	Similar to Ref A except X = 56", 2" sideset, 7/8" downset.....	940155-037	155-037
A4	Similar to Ref A except X = 69", 7/16" sideset, 2 13/16" downset.....	940155-047	155-047
A5	Similar to Ref A except 1 3/4" sideset, 2 7/8" downset.....	940155-056	155-056
A6	Similar to Ref A5 except 1 1/4" sideset.....	940155-061	155-061
A7	Similar to Ref A except X = 94", 2 1/2" sideset, 1 1/2" downset.....	940155-060	155-060
A8	Similar to Ref A except 1 7/8" sideset, 1" downset.....	940155-075	155-075
A9	Similar to Ref A except X = 44", 5/8" sideset, 2" downset.....	940155-081	155-081
B	<b>OPERATING ROD</b> , 1 1/4" dia, X = 40", 5/8" sideset, 1 5/8" upset.....	940156-001	156-001
B1	Similar to Ref B except X = 75", 2 15/16" upset.....	940156-024	156-024
B2	Similar to Ref B except X = 66", 2" sideset, 7/8" upset.....	940156-035	156-035
B3	Similar to Ref B3 except X = 56", 3/8" upset.....	940156-039	156-039
B4	Similar to Ref B except X = 137", 1 1/2" sideset, 2 3/16" upset.....	940156-048	156-048
B5	Similar to Ref B except X = 75", 1 3/16" sideset, 2 15/16" upset.....	940156-058	156-058
B6	Similar to Ref B except X = 66", 1 1/4" sideset, 2 7/8" upset.....	940156-061	156-061
B7	Similar to Ref B except X = 46", 3/4" sideset, 1/2" upset.....	940156-064	156-064
B8	Similar to Ref B except X = 44", 2 3/4" sideset, 5/8" upset.....	940156-074	156-074
B9	Similar to Ref B8 except 2" sideset.....	940156-075	156-075

For custom rods other than those shown, specify Model 940155 or 940156 rod and dimensions



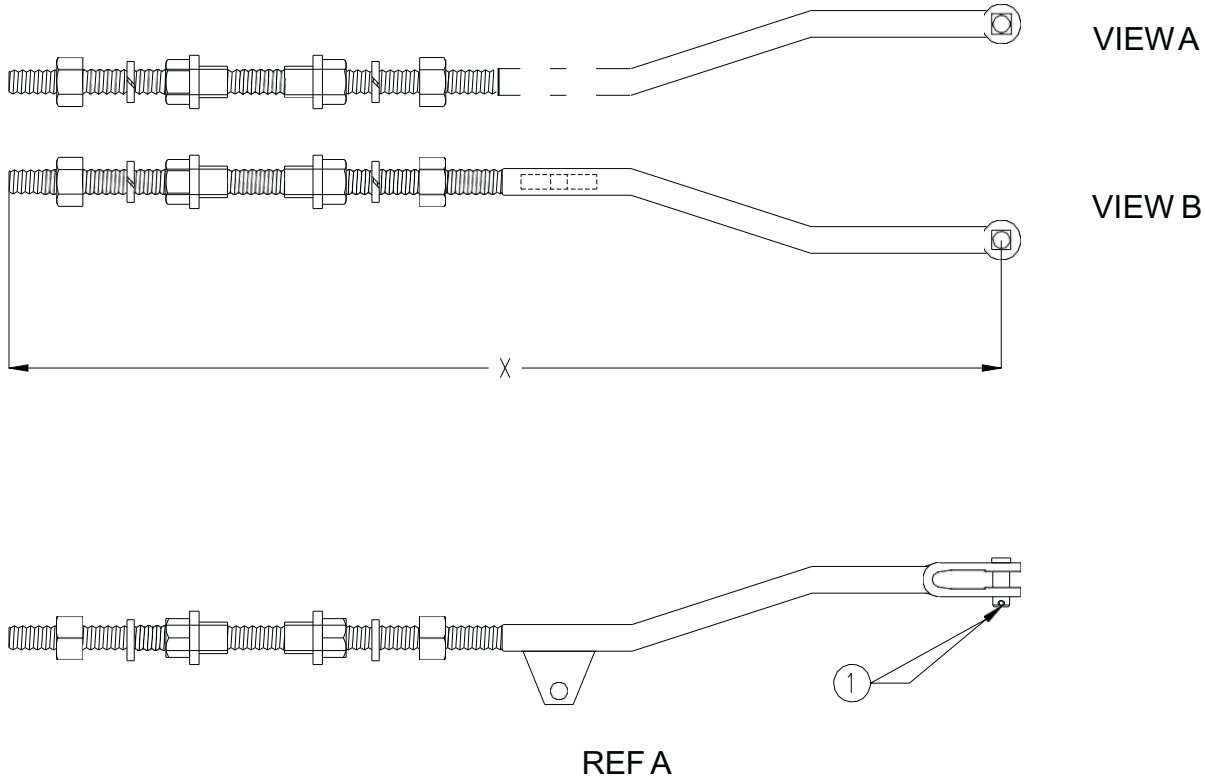
REF A



REF B

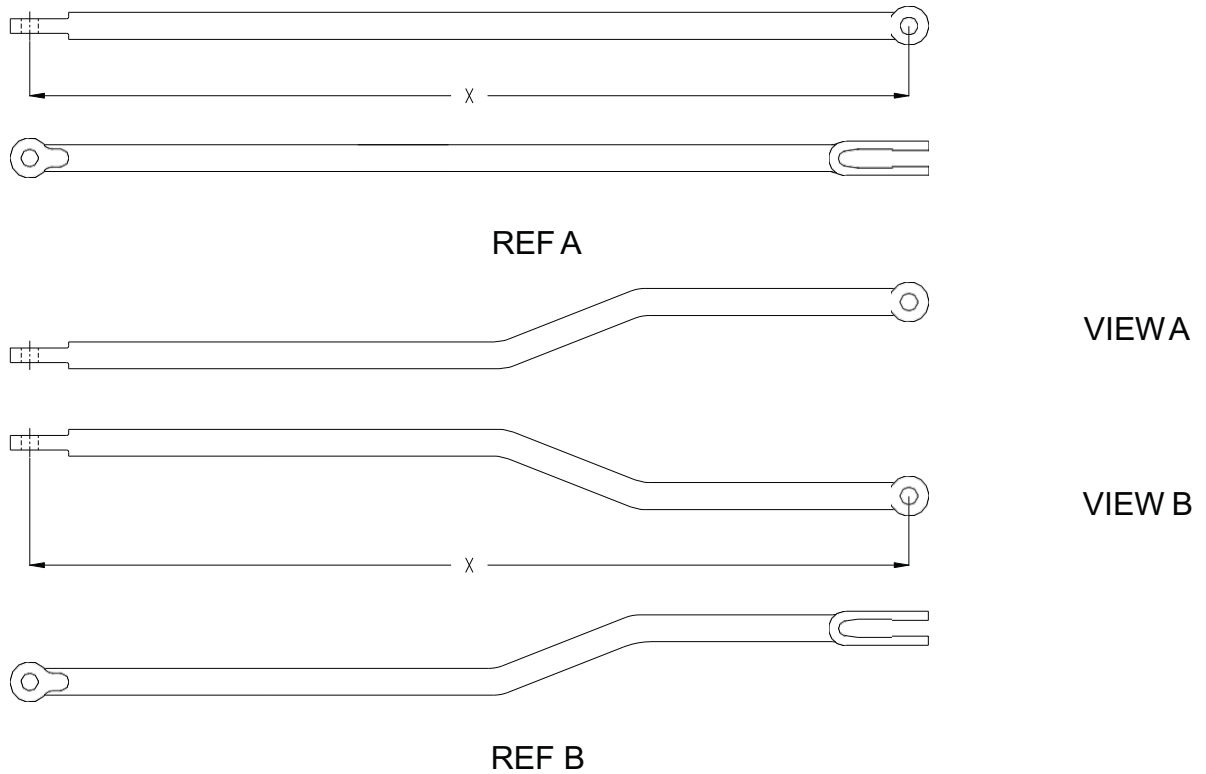
REF	DESCRIPTION	G & B PART #	OEM PART #
A	OPERATING ROD COMPLETE, with lug, jaw pin assembly and (2) heavy hex nuts, X = 63".....	840135-001X	N300809
A1	Similar to Ref A except X = 62".....	840135-002X	N333415
A2	Similar to Ref A except X = 69 3/4".....	840135-003X	N344422
B	OPERATING ROD COMPLETE, with lug and (2) heavy hex nuts, X = 58", 1" downset.....	840135-004X	N451414-2803
B1	Similar to Ref B except X = 47".....	840135-005X	N451414-2806
B2	Similar to Ref B except X = 73", 1/2" downset.....	840135-006X	N451414-2809
B3	Similar to Ref B except X = 66", 1 3/8" downset.....	840135-007X	N451414-2812
B4	Similar to Ref B except X = 82 1/2", 1 1/2" downset.....	840135-008X	N451414-6201
1	JAW PIN COMPLETE, non-lubricated.....	890597-003X	N/A

For custom rods other than those shown, specify Model 840135 rod and dimensions



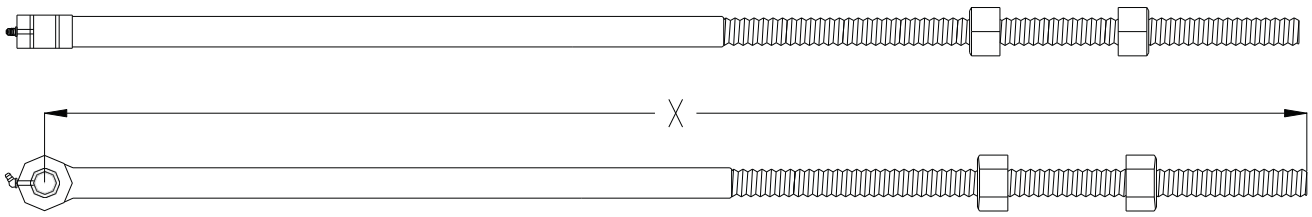
REF	DESCRIPTION	G & B PART #	OEM PART #
A	OPERATING ROD COMPLETE, per view A, with lug, jaw pin assembly, heavy hex nuts, sleeve nuts and lock washers, X = 58 1/4", 3/4" sideset, 2" upset.....	840135-009X	N451414-2102
A1	Similar to Ref A except per view B.....	840135-010X	N451414-2104
A2	Similar to Ref A except without lock washers, X = 61", 1 3/4" sideset, 1 5/8" upset.....	840135-011X	N451414-2110
A3	Similar to Ref A2 except per view B.....	840135-012X	N451414-2108
A4	Similar to Ref A2 except X = 57", .....	840135-013X	N451414-2114
A5	Similar to Ref A4 except per view B.....	840135-014X	N451414-2116
A6	Similar to Ref A except X = 54 1/2", 2 1/8" sideset, 3/4" upset.....	840135-015X	N49101101
1	JAW PIN COMPLETE, non-lubricated.....	890597-003X	N/A

For custom rods other than those shown, specify Model 840135 rod, length, and sideset dimensions

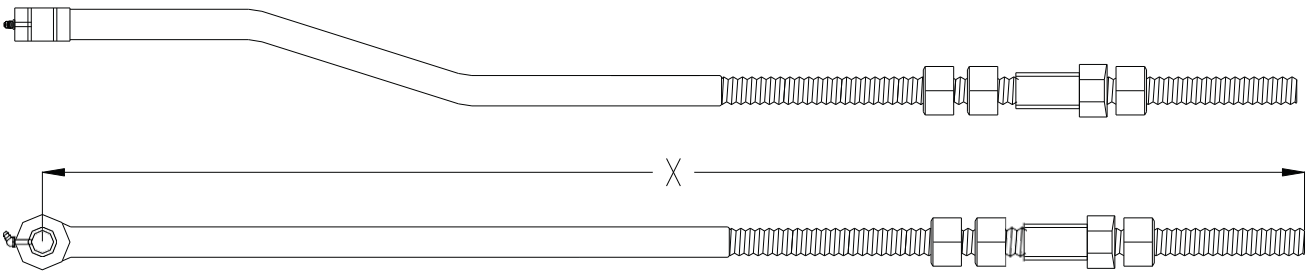


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE, X = 41"</b> .....	840136-001	M158530
A1	Similar to Ref A except X = 56".....	840136-002	M243089
A2	Similar to Ref A except X = 53".....	840136-003	M280485
A3	Similar to Ref A except X = 49".....	840136-004	M286469
A4	Similar to Ref A except X = 41 3/4".....	840136-005	M286548
A5	Similar to Ref A except X = 115 1/2".....	840136-006	M293964
A6	Similar to Ref A except X = 53 3/4".....	840136-007	M333389
A7	Similar to Ref A except X = 31 1/2".....	840136-008	M334827
A8	Similar to Ref A except X = 59 1/8".....	840136-009	M337653
A9	Similar to Ref A except X = 43".....	840136-010	M337653-001
B	<b>OPERATING ROD COMPLETE, per view B, X = 38", 1 1/2" sideset, 4 3/8" upset</b> .....	840136-011	M332332-001
B1	Similar to Ref B except per view A.....	840136-012	M335592-001
B2	Similar to Ref B except 3/4" sideset, 3 1/4" upset.....	840136-013	M332332-003
B3	Similar to Ref B except X = 38 1/2", 1 1/4" sideset, 3 1/4" upset.....	840136-014	M332332-004
B4	Similar to Ref B3 except per view A.....	840136-015	N/A

For custom rods other than those shown, specify Model 840136 rod and dimensions



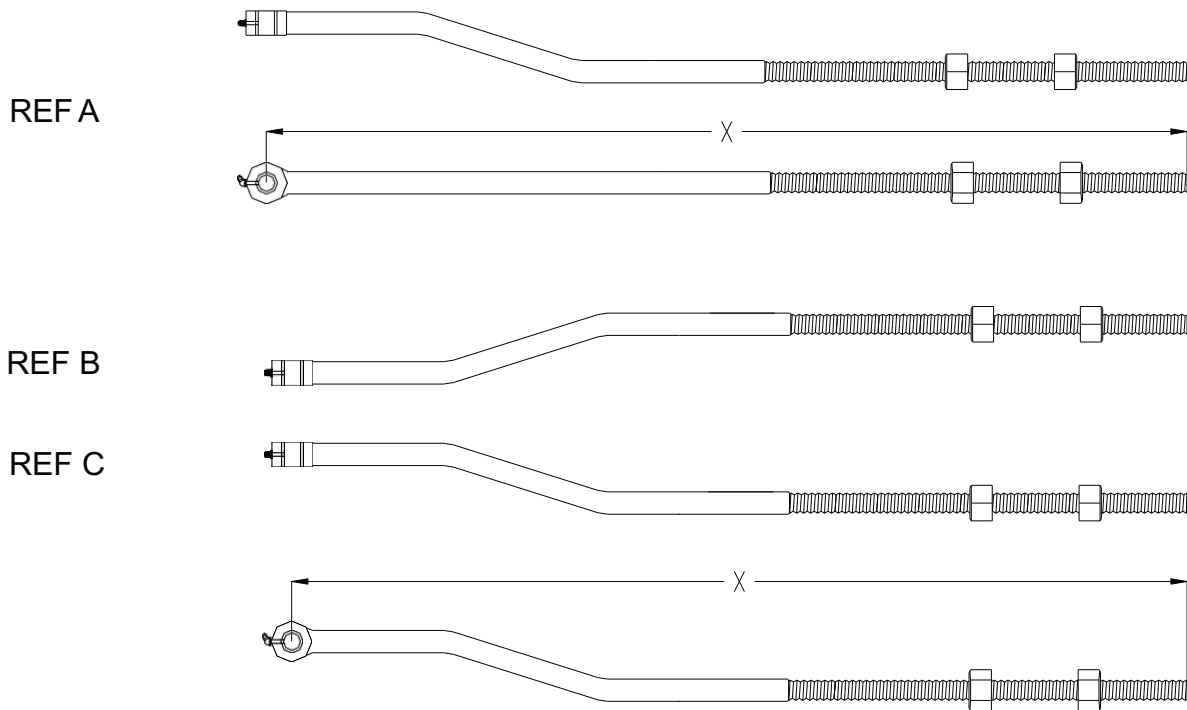
REF A



REF B

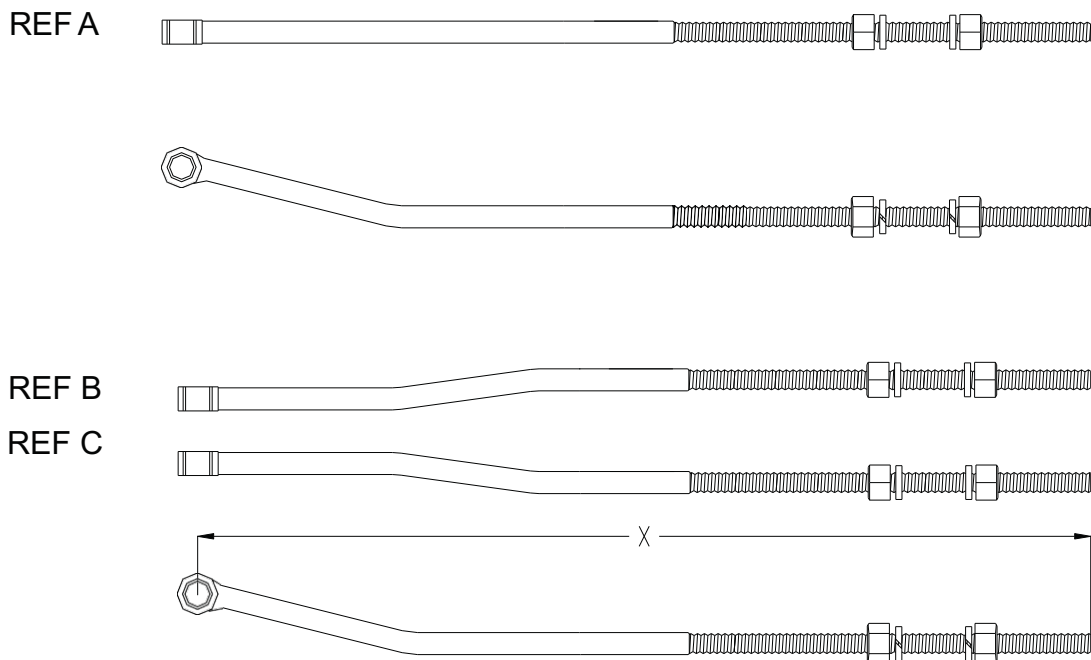
REF	DESCRIPTION	G & B PART #	OEM PART #
A	OPERATING ROD COMPLETE, with hex nuts, for use with YM-2000 Electric Switch Machine, X = 58 1/2".....	840116-001X	N451414-8002
A1	Similar to Ref A except X = 71".....	840116-002X	N451414-8004
A2	Similar to Ref A except X = 82".....	840116-003X	N451414-8802
A3	Similar to Ref A except X = 66".....	840116-004X	N451414-8804
A4	Similar to Ref A except X = 90".....	840116-005X	N451414-8806
B	OPERATING ROD COMPLETE, with sleeve nut & hex nuts, for use with YM-2000 Electric Switch Machine, X = 79", 1 7/8" sideset.....	840116-006X	N394644
B1	Similar to Ref B except with lockwashers.....	840116-007X	N394644-001
B2	Similar to Ref B1 except 1/2" sideset.....	840116-008X	N394644-002
B3	Similar to Ref B except without sleeve nut.....	840116-009X	N437794-001
B4	Similar to Ref B3 except with lockwashers.....	840116-010X	N437794

For custom rods other than those shown, specify Model 840116 rod and dimensions



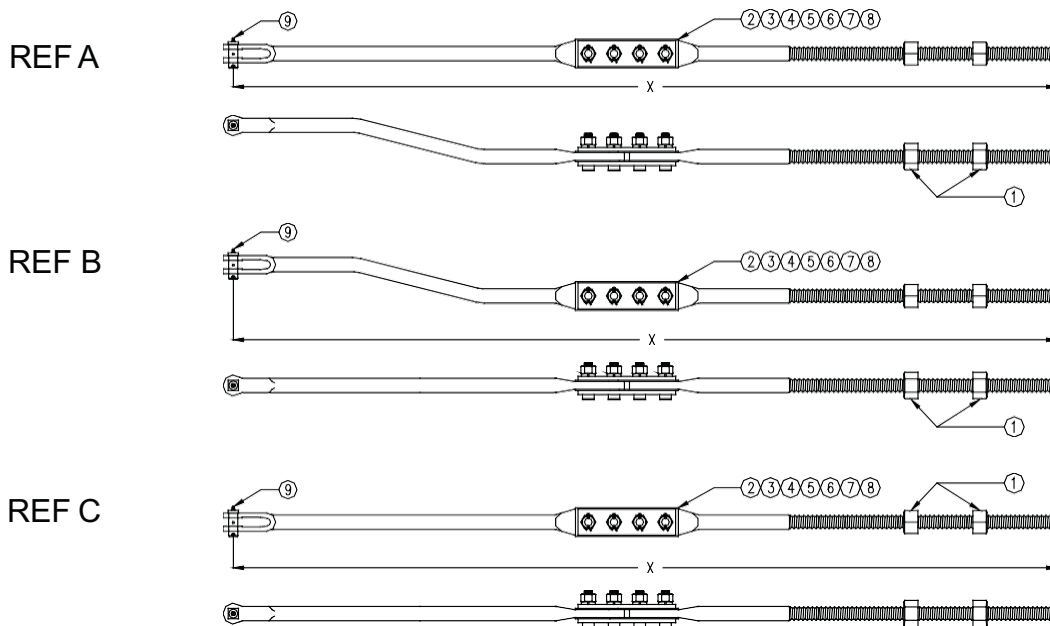
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , with (2) hex nuts and shrink tubing, for use with YM-2000 Switch Machine, X = 79", 3 1/2" sideset.....	840116-011X	N434927-001
A1	Similar to Ref A except with lockwashers.....	840116-012X	N434927
A2	Similar to Ref A except X = 93".....	840116-013X	N434927-002
A3	Similar to Ref A2 except without shrink tubing.....	840116-014X	N438284-001
A4	Similar to Ref A2 except 1 7/8" sideset.....	840116-015X	N438284-002
B	<b>OPERATING ROD COMPLETE</b> , for use with YM-2000 Switch Machine, X = 82", 2 1/8" sideset, 2 1/2" upset.....	840116-016X	N451414-8902
B1	Similar to Ref B except X = 84", 3" sideset, 1" upset.....	840116-017X	N451414-8904
B2	Similar to Ref B except X = 76", 5 1/8" sideset, 1 3/4" upset.....	840116-018X	N451414-9302
C	<b>OPERATING ROD COMPLETE</b> , for use with YM-2000 Switch Machine, X = 82", 2 1/8" sideset, 2 1/2" upset.....	840116-019X	N451414-9002
C1	Similar to Ref C except X = 84", 3" sideset, 1" upset.....	840116-020X	N451414-9004

For custom rods other than those shown, specify Model 840116 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING ROD COMPLETE</b> , for use with NA-15 Electro-Pneumatic Switch Machine, X = 77", 1" upset.....	840115-001X	N310069
A1	Similar to Ref A except X = 52 1/4", 1" upset.....	840115-002X	N312044
A2	Similar to Ref A except X = 61 1/2", 1" upset.....	840115-003X	N335594
A3	Similar to Ref A except X = 63 1/4", 1" upset, without lock washers.....	840115-004X	N341223
A4	Similar to Ref A3 except with (2) sleeve nuts, 950607 and lock washers.....	840115-005X	N311400
A5	Similar to Ref A except X = 74 1/2", 2 1/2" upset.....	840115-006X	N337655
A6	Similar to Ref A except X = 78", 1" upset.....	840115-007X	N390248
B	<b>OPERATING ROD COMPLETE</b> , for use with NA-15 Electro-Pneumatic Switch Machine, X = 61", 1 3/16" sideset, 1" upset.....	840115-008X	N301773
B1	Similar to Ref B except X = 57 1/4", 1 3/16" sideset, 2" upset.....	840115-009X	N310061
B2	Similar to Ref B except X = 48 3/4", 5/8" sideset, 1 1/2" upset.....	840115-010X	N337483
C	<b>OPERATING ROD COMPLETE</b> , for use with NA-15 Electro-Pneumatic Switch Machine, X = 61", 1 3/16" sideset, 1" upset.....	840115-011X	N301771
C1	Similar to Ref C except X = 59", 1/2" sideset, 1/4" upset.....	840115-012X	N302163
C2	Similar to Ref C except X = 61 1/2", 1/2" sideset, 1" upset.....	840115-013X	N302163-001
C3	Similar to Ref C except X = 57 1/4", 1 3/16" sideset, 2" upset.....	840115-014X	N310063

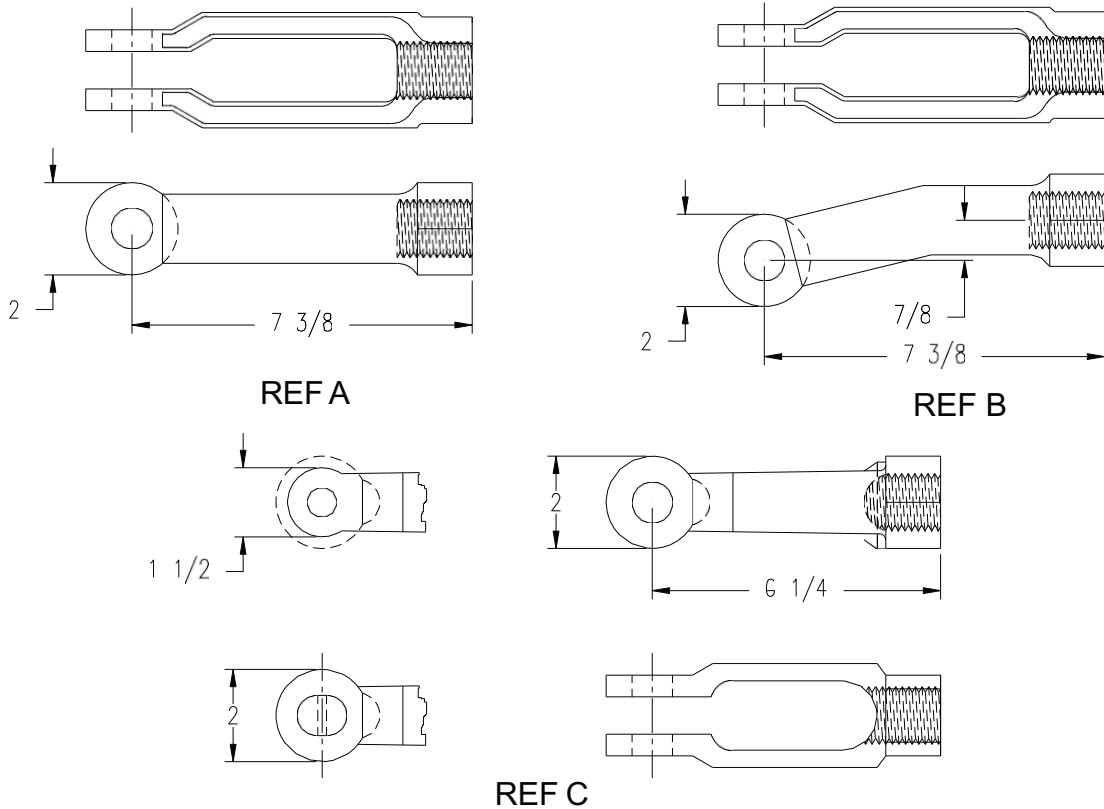
For custom rods other than those shown, specify Model 840115 rod and dimensions



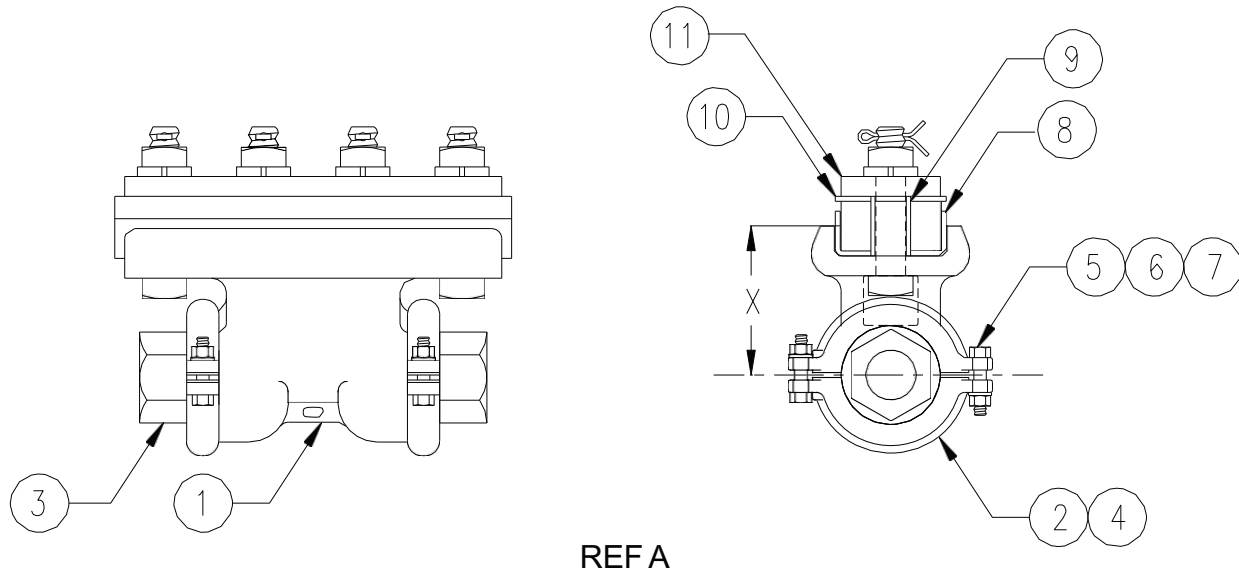
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED OPERATING ROD COMPLETE</b> , includes hex nuts and hardware, X = 117", 3" sideset.....	840380-001X	N/A
A1	Similar to Ref A except 2 1/2" sideset.....	840380-002X	N/A
B	<b>INSULATED OPERATING ROD COMPLETE</b> , includes jaw pin and hardware, X = 106", 1 7/16" upset.....	840380-003X	N/A
B1	Similar to Ref B except X = 101", 3/4" upset.....	840380-004X	N451846-5001
B2	Similar to Ref B except 2" upset.....	840380-005X	N451846-5002
B3	Similar to Ref B1 except 2 1/4" upset.....	840380-006X	N451846-5003
B4	Similar to Ref B1 except 2" upset.....	840380-007X	N451846-5004
C	<b>INSULATED OPERATING ROD</b> , includes hex nuts and hardware, X = 106"	840380-008X	N/A
1	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	930331-125-02	J048176
2	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-002	J780038-0002
3	<b>SPLICE PLATE</b> , 3/8" X 2 1/2" X 9 1/2".....	960101-009	M131442
4	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 27/32".....	973100-002	N/A
5	<b>BOLT</b> , square head, 3/4"-10 UNC X 3 1/8" long.....	990231-312-121	N/A
6	<b>LOCK WASHER</b> , 3/4".....	990403-075-02	J047772
7	<b>HEAVY HEX NUT</b> , 3/4"-10 UNC.....	990331-075-02	J048026
8	<b>COTTER PIN</b> , 3/16" X 1 1/4".....	990509-125-02	J048633
9	<b>JAW PIN COMPLETE</b> , lubricated, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....	890590-005X	X259173

For custom rods other than those shown, specify Model 840380 rod and dimensions

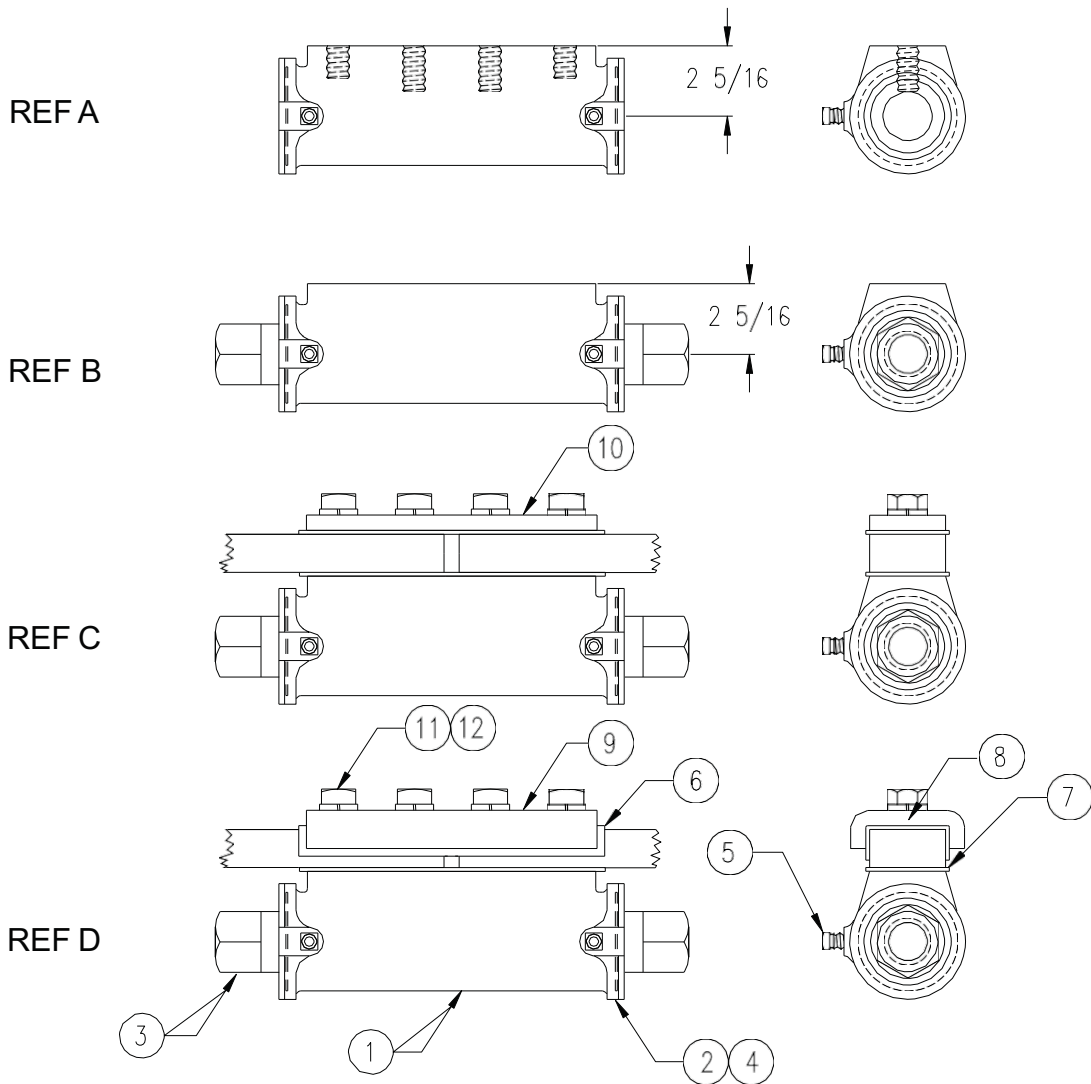




REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SCREW JAW</b> , 1 1/4" - 7 UNC threads, 13/16" jaw opening, 7/8" dia. jaw pin hole, AAR Detail 13.1.15-4.....	898010-006	M022398 959 P91-110
A1	Similar to Ref A except painted aluminum.....	898010-007	M022398-001
A2	Similar to Ref A except 1" dia. jaw pin hole.....	898010-011	M231420-001
A3	Similar to Ref A except 1 1/8" dia. jaw pin hole.....	898010-008	M022398-002
A4	Similar to Ref A except 1" - 8 UNC threads.....	898010-013	M163209 959-009
A5	Similar to Ref A except 1 3/8" - 6 UNC threads.....	898010-014	959-006
A6	Similar to Ref A except 1 5/16" jaw opening and 1" dia. jaw pin hole.....	898010-015	959-007
A7	Similar to Ref A except 1 1/16" jaw opening.....	898010-016	N/A
A8	Similar to Ref A except 1 5/16" jaw opening and 1 1/8" dia. jaw pin hole.....	898010-017	N/A
B	<b>SCREW JAW</b> , 1 1/4" - 7 UNC threads, 13/16" jaw opening, 7/8" dia. jaw pin hole.....	898010-018	959-005
C	<b>SCREW JAW</b> , 1 1/4" - 7 UNC threads, 13/16" jaw opening, 7/8" dia. jaw pin hole.....	898010-012	M000833
C1	Similar to Ref C except 5/8" dia. jaw pin hole per View A.....	898010-002	M000833-001
C2	Similar to Ref C except slotted per View B.....	898010-019	M143227

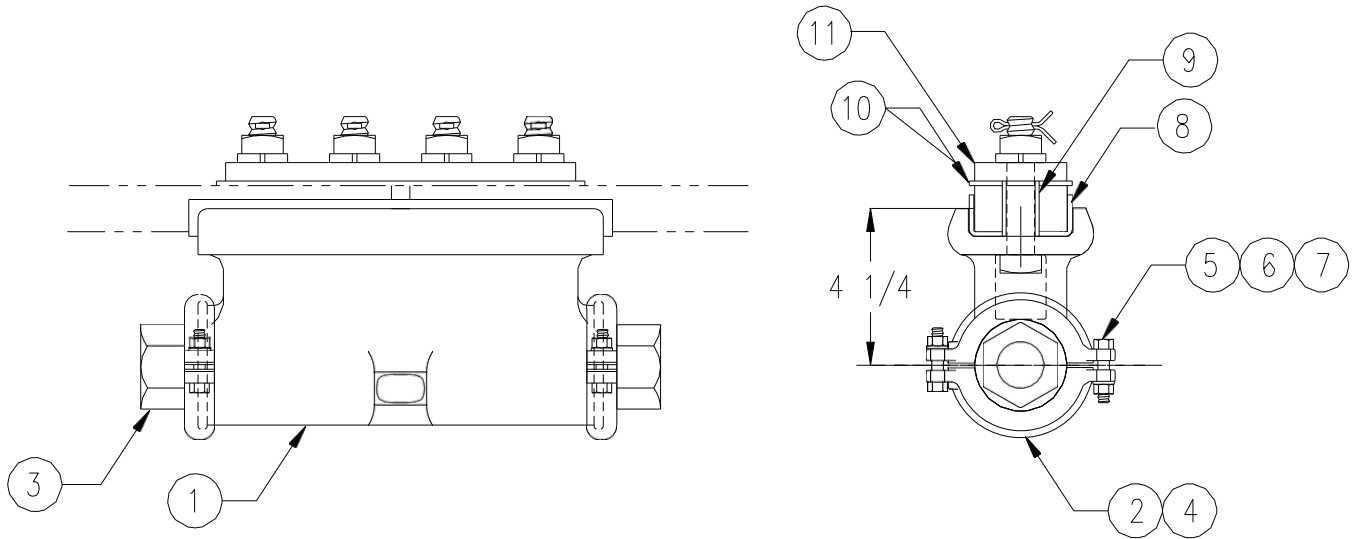


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER COMPLETE</b> , with adjusting sleeve nuts, insulation channel, insulation bushings, insulation flat plate and mounting hardware as shown, for 1 1/4" X 2 1/2" vertical switch rod, X = 3 3/4".....	950125-001-01	X242314-001
A1	Similar to Ref A except includes angled insulation in lieu of insulation flat plate, not shown.....	950125-001-02	N/A
A2	Similar to Ref A except also includes (2) 1 1/4"-7 UNC heavy hex nuts.....	950125-001-03	N/A
A3	Similar to Ref A except without insulation.....	950125-001-04	N/A
A4	Similar to Ref A except without insulation and mounting hardware.....	950125-001-05	N245230
A5	Similar to Ref A except includes elastic stop nuts in lieu of standard hex nuts.....	950125-001-06	X291842-001
A6	Similar to Ref A except includes insulation and hardware for 1" X 2 1/2" switch rod, X = 3 5/8".....	950125-001-07	X242314-002
1	<b>SWITCH POINT ADJUSTER ONLY</b> .....	950125-001	M242309
2	<b>CLAMP HALF</b> .....	950125-004	M190836
3	<b>ADJUSTING SLEEVE NUT</b> .....	950125-003	M242310
4	<b>WASHER</b> .....	950125-006	M190837
5	<b>BOLT</b> , 5/16"-18 UNC X 1 1/2" long, square head.....	990331-031-02	J046825
6	<b>LOCK WASHER</b> , 5/16".....	990403-031-02	J047767
7	<b>HEAVY HEX NUT</b> , 5/16"-18 UNC.....	990331-031-02	J048006
8	<b>INSULATION CHANNEL</b> , 1/8" X 2 3/4" X 10".....	973301-001	N/A
9	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 15/32".....	973100-003	N/A
10	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-002	J780038-0002
10A	<b>INSULATION ANGLE</b> , 1/8" X 2 3/4" X 4 5/8".....	973400-001	N/A
11	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
12	<b>INSULATION KIT</b> , for Ref A with hardware and flat insulation plate.....	977100-022-01	N/A
13	<b>INSULATION KIT</b> , for Ref A1 with hardware and angled insulation plates.....	977100-022-02	N/A



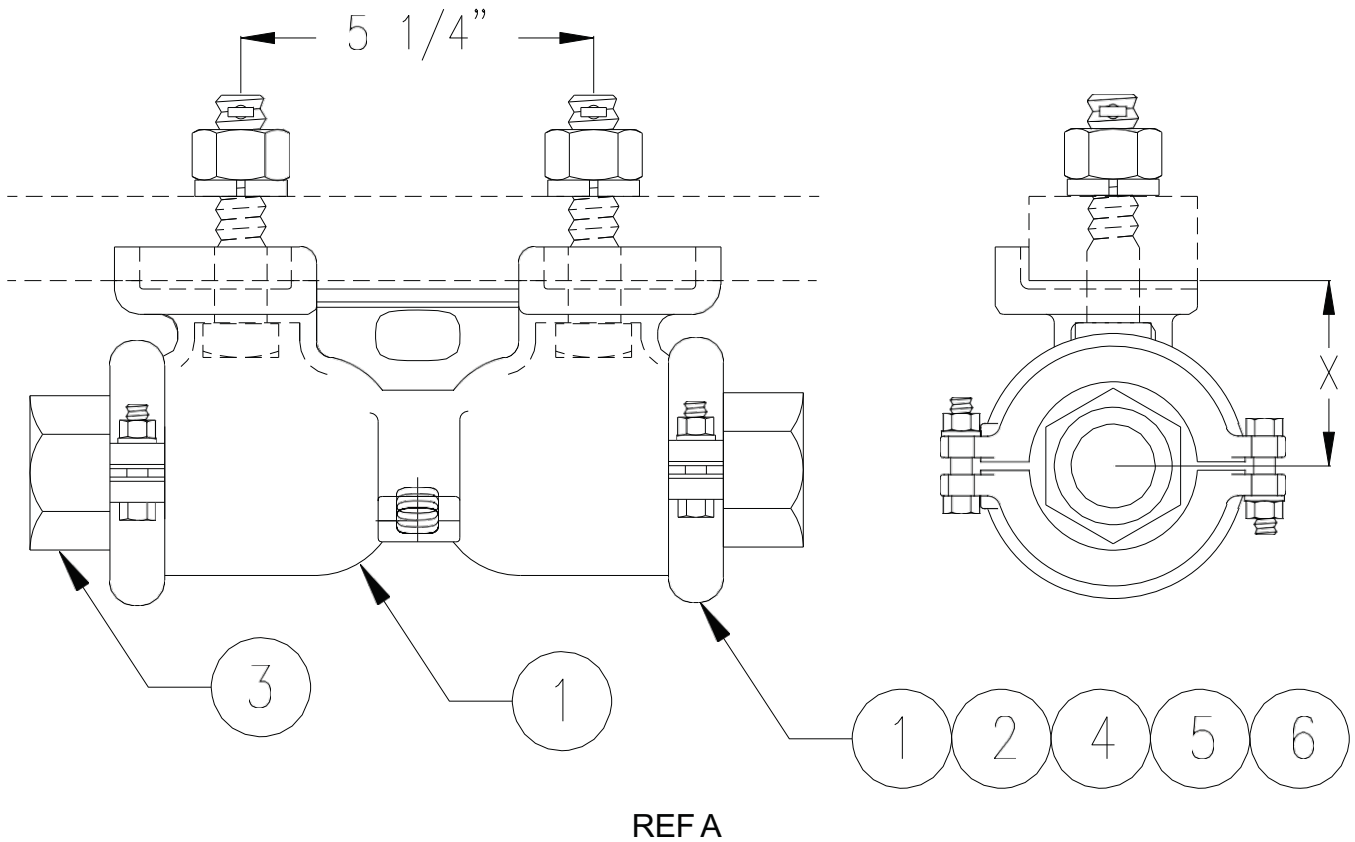
REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWITCH POINT ADJUSTER, insulated, for vertical switch rod as shown without adjusting sleeve nuts, hardware and insulation.....	950143-001-01	46948-015-01
B	SWITCH POINT ADJUSTER, insulated, for vertical switch rod as shown, includes (2) adjusting sleeve nuts, without hardware and insulation.....	950143-001-02	A91-143
C	SWITCH POINT ADJUSTER, insulated, for vertical switch rod as shown, includes (2) adjusting sleeve nuts, hardware and insulation for 3/4" thick switch rod.....	950143-001-03	N/A
C1	Similar to Ref C except for 1" thick switch rod.....	950143-001-04	N/A
C2	Similar to Ref C except for 1 1/4" thick switch rod.....	950143-001-05	N/A

REF	DESCRIPTION	G & B PART #	OEM PART #
D	<b>SWITCH POINT ADJUSTER</b> , insulated, for vertical switch rod, as shown with adjusting sleeve nuts, hardware and insulation for 1" thick switch rod.....	950143-001-06	N/A
D1	Similar to Ref D except for 1 1/4" thick switch rod, AAR Detail 12.1.15-2.....	950143-001-07	N/A
E	<b>INSULATION SET</b> , for Ref C, includes splice plate, insulation plates and bushings, bolts and lock washers, for 3/4" thick switch rod, not shown.....	977100-012-01	47409-000-04 A91-147
E1	Similar to Ref E except for 1" thick switch rod, not shown.....	977100-014-01	47409-000-05 A91-148
E2	Similar to Ref E except for 1 1/4" thick switch rod, not shown.....	977100-015-01	47409-000-06 A91-149
F	<b>INSULATION SET</b> , for Ref D, includes channel splice plate, insulation and hardware for 1" thick switch rod, not shown.....	977100-022-05	N/A
F1	Similar to Ref F except for 1 1/4" thick switch rod, not shown.....	977100-022-06	N/A
1	<b>BRACKET ONLY</b> .....	950143-001	44920-008 P91-316
2	<b>CAP</b> , for bracket.....	950143-002	51112 P91-333
3	<b>ADJUSTING SLEEVE NUT</b> , 1 1/4"-7 UNC.....	950143-003	44921-002 P91-124
4	<b>WASHER</b> , for Ref 2.....	950143-004	23332-001 P91-287
5	<b>SCREW</b> , for bracket.....	950143-005	6954-001 P91-266
6	<b>INSULATION CHANNEL</b> , 1/8" X 2 3/4" X 10".....	973301-001	N/A
7	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-002	47409 P91-329
8	<b>INSULATION BUSHING</b> , for 3/4" switch rod, 25/32" ID X 1" OD X 31/32" long.....	973100-008	40639 P91-311
8A	<b>INSULATION BUSHING</b> , for 1" switch rod, 25/32" ID X 1" OD X 1 7/32" long.....	973100-005	46983
8B	<b>INSULATION BUSHING</b> , for 1 1/4" switch rod, 25/32" ID X 1" OD 1 15/32" long.....	973100-003	7350-185 P91-267
9	<b>SPLICE PLATE</b> , for 3/4" bolts, 1/2" X 2 1/2" X 9 1/2".....	960101-001	40640 P91-312
10	<b>CHANNEL SPLICE PLATE</b> , for 2 1/2" wide switch rod.....	860107	N/A
11	<b>BOLT</b> , square head, 3/4"-10 UNC X 2 1/2" long, for 3/4" thick rod.....	990031-250-02	542-55
11A	<b>BOLT</b> , square head, 3/4"-10 UNC X 2 3/4" long, for 1" thick rod.....	990031-275-02	542-56
11B	<b>BOLT</b> , square head, 3/4"-10 UNC X 3" long, for 1 1/4" thick rod.....	990031-300-02	542-27
12	<b>LOCK WASHER</b> , 3/4".....	990401-075-02	01273-13

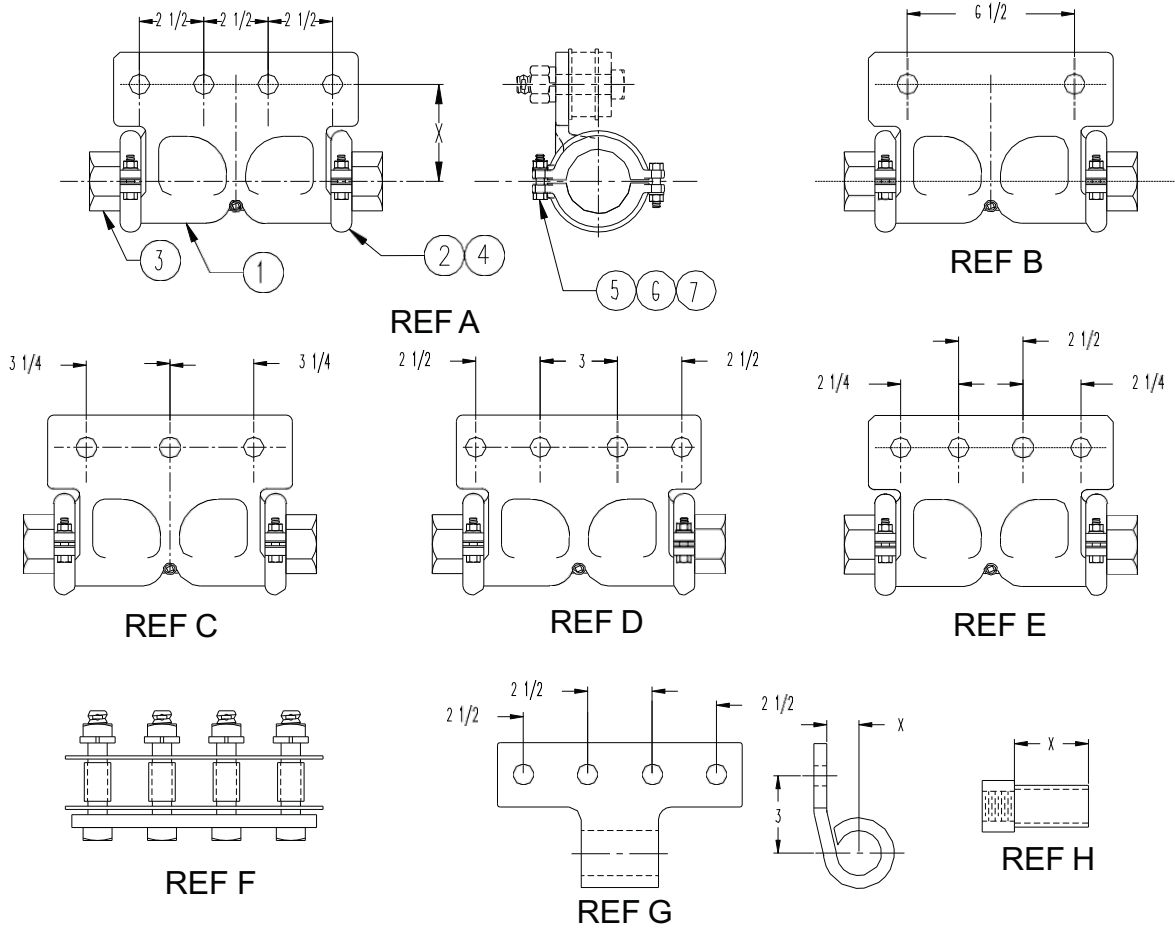


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER COMPLETE</b> , with adjusting sleeve nuts, insulation and hardware, for 1 1/4" X 2 1/2" vertical switch rod .....	950803-001-02	X451817-0802
A1	Similar to Ref A except with angled insulation, not shown.....	950803-001-03	N/A
A2	Similar to Ref A except without hardware and insulation.....	950803-001-01	N451817-0801
1	<b>SWITCH POINT ADJUSTER ONLY</b> .....	950803-001	M451817-0602
2	<b>CLAMP HALF</b> .....	950125-004	M190836
3	<b>ADJUSTING SLEEVE NUT</b> .....	950603	M451817-0702
4	<b>WASHER</b> .....	950803-002	M451161-7108
5	<b>BOLT</b> , 5/16"-18 UNC X 1 1/2" long, square head.....	990331-031-02	J046825
6	<b>LOCK WASHER</b> , 5/16".....	990403-031-02	J047767
7	<b>HEAVY HEX NUT</b> , 5/16"-18 UNC.....	990331-031-02	J048006
8	<b>INSULATION CHANNEL</b> , 1/8" X 2 3/4" X 11 1/2".....	973301-003	N/A
9	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 15/32".....	973100-003	N/A
10	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-001	J780038-0002
10A	<b>INSULATION ANGLE</b> , 1/8" X 2 3/4" X 4 5/8".....	973400-001	N/A
11	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	M051340
12	<b>INSULATION KIT</b> , for Ref A with hardware and flat insulation plate.....	977100-022-03	N/A
13	<b>INSULATION KIT</b> , for Ref A1 with hardware and angled insulation plates.....	977100-022-04	N/A



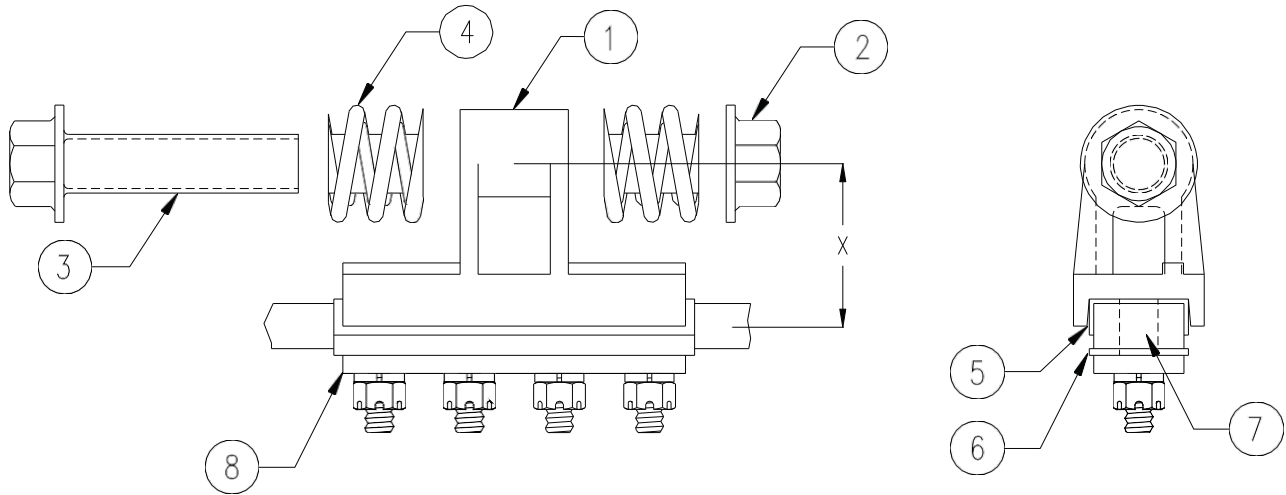
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER</b> , uninsulated for 1" X 2 1/2" vertical switch rod as shown with hardware, 3/4" bolts, X = 2 3/4".....	950283-001-01	N193283
A1	Similar to Ref A except for 1 1/4" X 2 1/2" vertical switch rod.....	950283-001-02	N239911
A2	Similar to Ref A except includes elastic stop nuts in lieu of standard hex nuts.....	950283-001-03	N292435
1	<b>SWITCH POINT ADJUSTER, ONLY</b> .....	950283	M193282
2	<b>CLAMP HALF</b> .....	950125-004	M190836
3	<b>ADJUSTING SLEEVE NUT</b> .....	950600	M190829
4	<b>WASHER</b> .....	950125-006	M190837
5	<b>BOLT</b> , 5/16"-18 UNC X 1 1/2" long, square head.....	990023-150-02	J046825
6	<b>LOCK WASHER</b> , 5/16".....	990403-031-02	J047767
7	<b>HEAVY HEX NUT</b> , 5/16"-18 UNC.....	990331-031-02	J048006



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER</b> , insulated for horizontal 2 1/2" wide switch rod as shown without hardware & insulation, 3/4" bolts, X = 3 5/8".....	950835-001-01	N190835
A1	Similar to Ref A except with hardware & insulation for 1 1/4" X 2 1/2" switch rod.....	950835-001-02	X190913
A2	Similar to Ref A except with hardware & insulation for 1" X 2 1/2" switch rod.....	950835-001-03	N315225
A3	Similar to Ref A except with hardware & insulation for 7/8" X 2 1/2" switch rod.....	950835-001-04	N310732-001
A4	Similar to Ref A except with hardware & insulation for 3/4" X 2 1/2" switch rod.....	950835-001-05	N/A
A5	Similar to Ref A except for horizontal 3" wide switch rod, X = 3 3/4".....	950835-001-06	N438276
A6	Similar to Ref A except for 5/8" dia bolts.....	950835-001-07	N337643
B	<b>SWITCH POINT ADJUSTER</b> , for horizontal 2 1/2" wide switch rod, as shown without hardware & insulation, 3/4" bolts, X = 3 5/8".....	950836-001-01	N193692
B1	Similar to Ref B except with hardware & insulation for 1 1/4" X 2 1/2" switch rod.....	950836-001-02	X193692-001

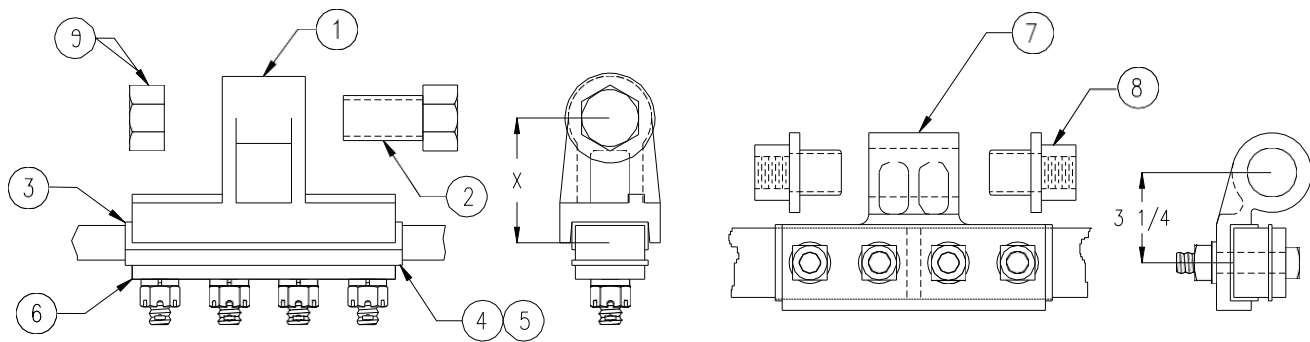
REF	DESCRIPTION	G & B PART #	OEM PART #
C	SWITCH POINT ADJUSTER, for horizontal 2 1/2" wide switch rod as shown without hardware & insulation, 3/4" bolts, X = 3 5/8".....	950837-001-01	N194786
C1	Similar to Ref C except with hardware & insulation for 1 1/4" X 2 1/2" switch rod.....	950837-001-02	O372308
D	SWITCH POINT ADJUSTER, for horizontal 2 1/2" wide switch rod as shown without hardware & insulation, 3/4" bolts, X = 3 5/8".....	950838-001-01	N197366
D1	Similar to Ref D except with hardware & insulation for 1 1/4" X 2 1/2" switch rod.....	950838-001-02	O259102
D2	Similar to Ref D except for 5/8" dia bolt.....	950838-001-03	N211292
E	SWITCH POINT ADJUSTER, insulated, for horizontal 2 1/2" wide switch rod as shown without hardware & insulation, 3/4" bolts, X = 3 5/8".....	950839-001-01	N209079
E1	Similar to Ref E except with hardware & insulation for 1 1/4" X 2 1/2" switch rod.....	950839-001-02	N/A
F	INSULATION SET, for Ref A includes splice plate, insulation plates and bushings, bolts, nuts and lock washers for 3/4" X 2 1/2" switch rod.....	977100-012-02	47409-000-01 A91-144
F1	Similar to Ref F except for 7/8" thick switch rod.....	977100-013-02	N/A
F2	Similar to Ref F except for 1" thick switch rod.....	977100-014-02	47409-000-02 A91-145
F3	Similar to Ref F except for 1 1/4" thick switch rod.....	977100-015-02	47409-000-03 A91-146
G	SWITCH ROD ADJUSTMENT BRACKET, 3/4" dia. bolts, X = 1 1/4", painted black.....	820232-001	M451398-0601 40578-010
G1	Similar to Ref G except painted brown.....	820232-002	40578-001
G2	Similar to Ref G1 except for 5/8" dia. bolts.....	820232-003	40578-004
G3	Similar to Ref G except X = 7/8".....	820232-004	M135867
H	SLEEVE NUT, 1 1/4" - 7 UNC threads, X = 2 7/8".....	950605	M021117
H1	Similar to Ref H except zinc plated.....	950605-001	M021117-001
H2	Similar to Ref H except X = 1 1/8".....	950606	M314820
1	SWITCH POINT ADJUSTER ONLY.....	950835-001	M190815
2	CLAMP HALF.....	950125-004	M190836
3	ADJUSTING SLEEVE NUT.....	950600	M190829
4	WASHER.....	950125-006	M190837
5	BOLT, 5/16"-18 UNC X 1 1/2" long, square head.....	990023-150-02	J046825
6	LOCK WASHER, 5/16".....	990403-031-02	J047767
7	HEAVY HEX NUT, 5/16"-18 UNC.....	990331-031-02	J048006





REF A

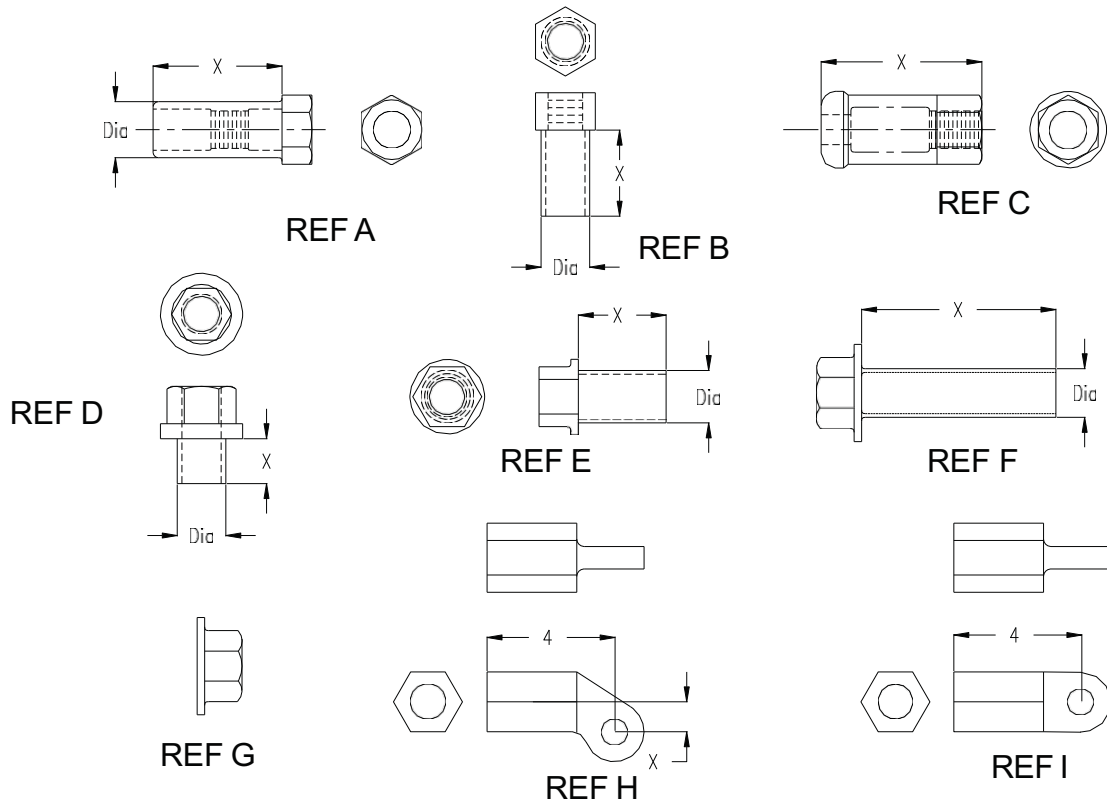
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER COMPLETE</b> , with sleeve nuts, springs, insulation and mounting hardware for 1 1/4" X 2 1/2" switch rod, X = 4 1/4"	950175-001-01	SRI-53
A1	Similar to Ref A except X = 4".....	950176-001-01	N/A
A2	Similar to Ref A except X = 3 1/2".....	950177-001-01	SRI-54
A3	Similar to Ref A except BNSF standard with 2000 LB spring set.....	950175-001-03	610050005
1	<b>SWITCH POINT ADJUSTER ONLY</b> , X = 4 1/4".....	950175-001	E-3552 9960-000-0020
1A	Similar to Ref 1 except X = 4".....	950176-001	E-2455 M-764 44920-016 9960-000-0014
1B	Similar to Ref 1 except X = 3 1/2".....	996-0000-0021	E-2686
2	<b>FLANGE NUT</b> , 1 1/4"-7 UNC.....	950175-004	E-3482
3	<b>SLEEVE NUT</b> , 1 1/4"-7 UNC.....	950175-003	E-3483
3A	<b>SHORT SLEEVE NUT</b> , 1 1/4"-7 x 1 7/16".....	950175-005	N/A
4	<b>DOUBLE COIL SPRING ASSEMBLY 1500 LB</b> .....	950175-002-01	81
4A	<b>DOUBLE COIL SPRING ASSEMBLY 2000 LB</b> .....	950175-002-02	N/A
5	<b>INSULATION CHANNEL</b> , 1/8" X 2 3/4" X 10".....	973301-002	C-5
6	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-002	RP-19
7	<b>INSULATION BUSHING</b> , 25/32" ID x 1" OD X 1 15/32" long.....	973100-003	B-86
8	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	ST-684



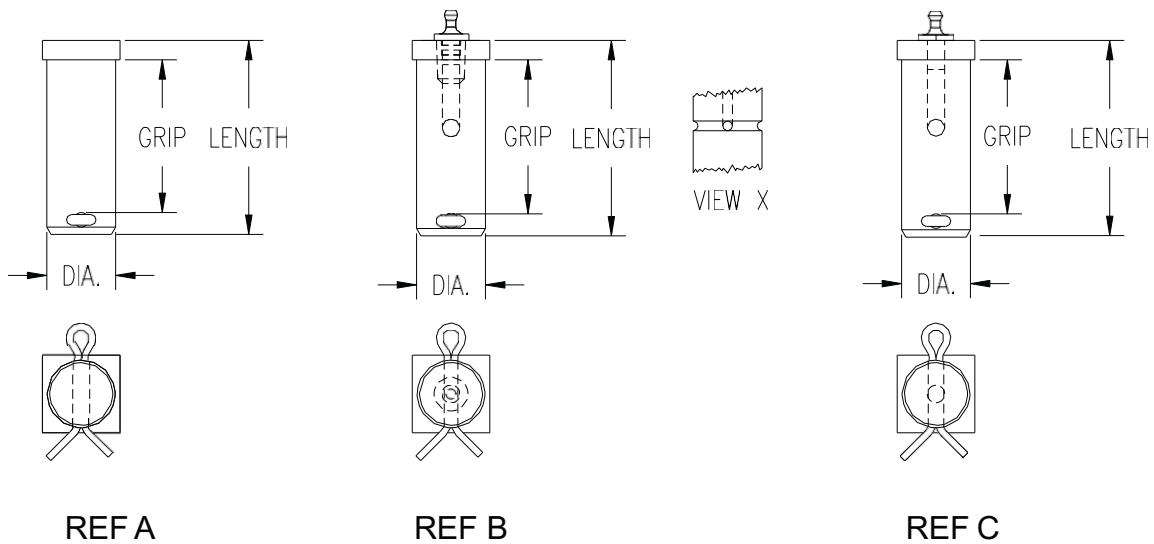
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REF B

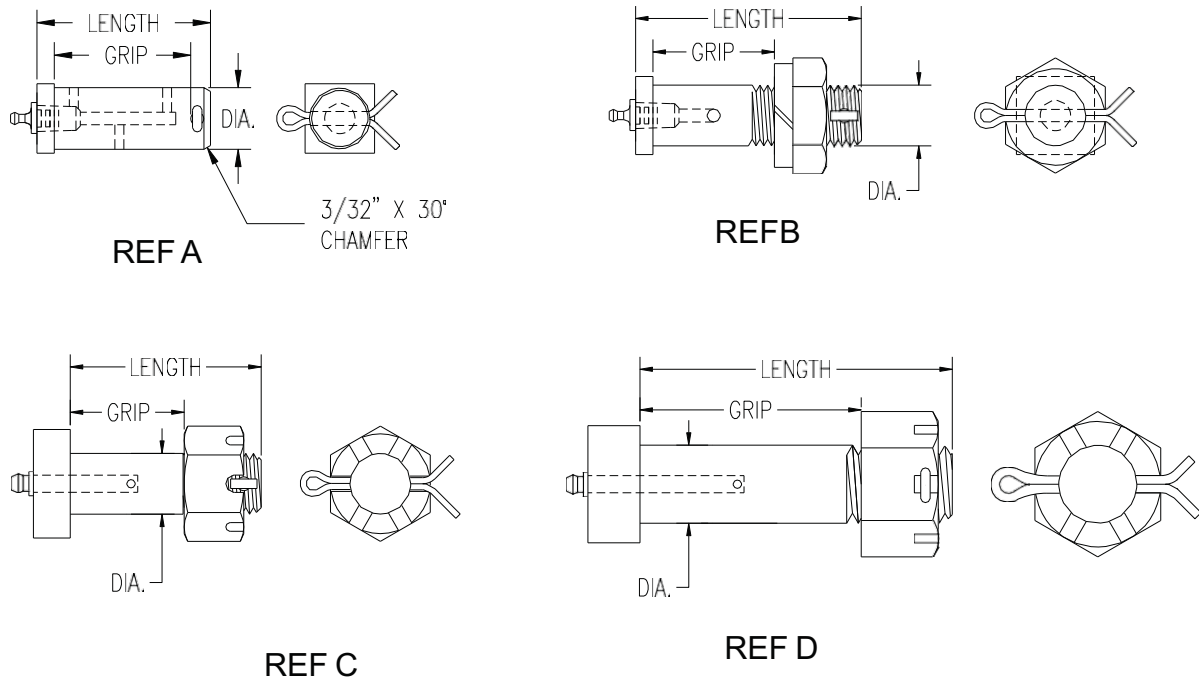
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ADJUSTER COMPLETE</b> , with sleeve nut and hardware, for 1 1/4" X 2 1/2" switch rod, X = 4 1/4".....	950175-001-02	N/A
A1	Similar to Ref A except X = 4".....	950176-001-02	N/A
A2	Similar to Ref A except X = 3 1/2".....	950177-001-02	SRI-63
A3	Similar to Ref A except X = 3 1/4".....	950178-001-02	N/A
B	<b>SWITCH POINT ADJUSTER COMPLETE</b> , with sleeve nuts and hardware, for 1 1/4" X 2 1/2" switch rod.....	950840-001-01	N/A
1	<b>SWITCH POINT ADJUSTER ONLY</b> , X = 4 1/4".....	950175-001	E-3552 9960-000-0020
1A	Similar to Ref 1 except X = 4".....	950176-001	E-2455 M-764 44920-016 9960-000-0014
1B	Similar to Ref 1 except X = 3 1/2".....	950177-001	E2686
1C	Similar to Ref 1 except X = 3 1/4".....	950178-001	9960-000-0021
2	<b>SLEEVE NUT</b> .....	950605	M021117 E-2853
3	<b>INSULATION CHANNEL</b> , 1/8" X 2 3/4" X 10".....	973301-001	C-5
4	<b>INSULATION PLATE</b> , 1/8" X 2 3/4" X 10".....	973200-002	RP-19
5	<b>INSULATION BUSHING</b> , 25/32" ID X 1" OD X 1 15/32" long, for Ref A.....	973100-003	B-86
6	<b>SPLICE PLATE</b> , 1/2" X 2 1/2" X 9 1/2".....	960101-001	ST-684
7	<b>SWITCH POINT ADJUSTER ONLY</b> .....	950840-001	N/A
8	<b>SLEEVE NUT</b> .....	950607	M116151
9	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	930331-125-02	J048176



REF	DESCRIPTION	G & B PART #	OEM PART #
A	SLEEVE NUT, 1 1/4"-7 UNC, 2 1/8" dia, X = 4 1/8".....	950600	M190829
A1	Similar to Ref A except X = 2 11/16".....	950125-003	M242310
A2	Similar to Ref A except 1 7/8" dia, X = 4 5/16".....	950602	M451161-7301
A3	Similar to Ref A2 except X = 5 11/16".....	950603	M451817-0702
A4	Similar to Ref A2 except X = 10".....	950604	M451817-0703
B	SLEEVE NUT, 1 1/4"-7 UNC, 1 5/8" dia, X = 2 7/8".....	950605	M021117 E-2853
B1	Similar to Ref B except X = 1 1/8".....	950606	M314820
C	SLEEVE NUT, 1 1/4"-7 UNC, X = 5 7/8", AAR Detail 12.1.19-1.....	950143-003	44921-002 P91-124
D	SLEEVE NUT, 1 1/4"-7 UNC, 1 5/8" dia, X = 1 1/2".....	880151	M116151
E	SLEEVE NUT, 1 1/4"-7 UNC, 1 3/4" dia, X = 2 15/16".....	950608	585-074 Y-1745
F	SLEEVE NUT, 1 1/4"-7 UNC, 1 5/8" dia, X = 6 1/2".....	950175-003	E-3483 802-0730-0003
G	FLANGE NUT, 1 1/4"-7 UNC.....	950175-004	E-3482 802-0730-0002
H	THREADED SCREW EYE, 1 1/4"-7 UNC, X = 1".....	840002-001	N/A
H1	Similar to Ref H except X = 3/4".....	840002-002	M106207
I	THREADED SCREW EYE, 1 1/4"-7 UNC.....	840002-003	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>JAW PIN COMPLETE, NON-LUBRICATED, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip.....</b>	890597-003X	N/A
A1	Similar to Ref A except without cotter pin.....	890597-003	M022589
A2	Similar to Ref A1 except case hardened.....	890597-004	M022589-001
A3	<b>JAW PIN COMPLETE, NON-LUBRICATED, 7/8" dia X 3 1/2" long with 3/16" X 1 1/2" cotter pin, 2 61/64" grip.....</b>	890597-005X	N/A
A4	Similar to Ref A 3 except without cotter pin.....	890597-005	M022590
B	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....</b>	89590-005X	X259173
B1	Similar to Ref B except without hardware.....	890590-005	M188149
B2	Similar to Ref B1 except with groove per view X.....	890590-010	N/A
B3	Similar to Ref B1 except 3" long with 2 29/64" grip.....	890590-012	M188149-002
B4	Similar to Ref B1 except 3 1/2" long with 2 61/64" grip.....	890590-013	M260947
B5	Similar to Ref B except 1 1/8" dia.....	890590-014	N49105402
B6	Similar to Ref B4 except without hardware.....	890590-015	M49105401
C	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 3/16" drive grease fitting.....</b>	890591-001-01	730-41-01 P91-100
C1	Similar to Ref C except without hardware, AAR Detail 10105.....	890591-001	M146822 730-41 P91-101
C2	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 3 1/2" long with 3/16" X 1 1/2" cotter pin, 2 61/64" grip, 3/16" drive grease fitting.....</b>	890591-002-01	X348152
C3	Similar to Ref C2 except without hardware, AAR Detail 10106.....	890591-002	M152587



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 2 1/2" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....</b>	890590-002-01	X438755
A1	Similar to Ref A except without cotter pin.....	890590-002-02	N223195
A2	Similar to Ref A1 except without grease fitting.....	890590-002	M223194
B	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 3 1/4" long with 3/16" X 1 1/2" cotter pin, 1 61/64" grip, 1/8" PT grease fitting.....</b>	890590-016-01	N451299-2102
B1	Similar to Ref B except without hardware.....	890590-016	M451299-2101
C	<b>JAW PIN COMPLETE, LUBRICATED, 7/8" dia X 2 3/4" long with 3/16" X 2" cotter pin, 1 61/64" grip, 1/4" straight drive grease fitting, RR Detail 8007-1.....</b>	990235-004-01	38186-017-01 P91-120
C1	Similar to Ref C except jaw pin only, with hex nut.....	990235-004-02	38186-017-02 P91-121
C2	Similar to Ref C except pin only.....	990235-004	38186-017
D	<b>JAW PIN COMPLETE, LUBRICATED, 1 1/8" dia X 4 1/2" long with 1/4" X 1 3/4" cotter pin, 3 1/4" grip, 1/4" straight drive grease fitting, RR Detail 8007-2.....</b>	990248-011-01	N/A
D1	Similar to Ref D except pin only.....	990248-011	N/A



# LOCK ROD CONNECTION RODS

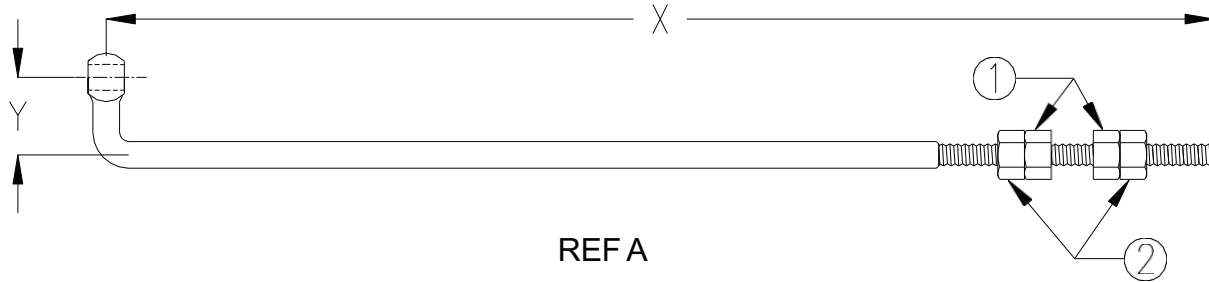
## SECTION E

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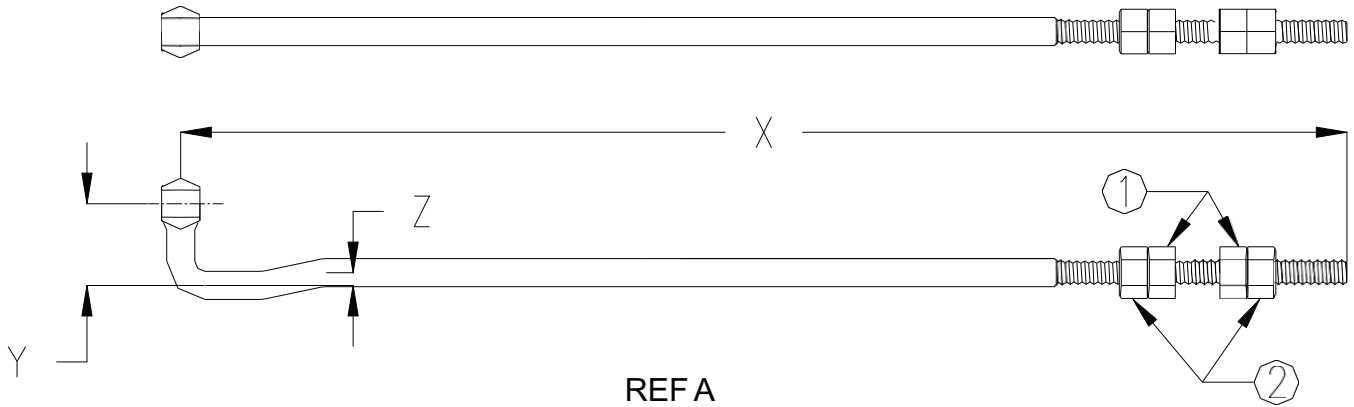
<b>Product</b>	<b>Pages</b>
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**LOCK ROD CONNECTING RODS**



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements with 1 1/4" dia lock rod, X = 83 1/2", Y = 3 3/4".....	810884-001X	N260121
A1	Similar to Ref A except X = 60", Y = 4 3/4".....	810884-002X	N432806
A2	Similar to Ref A except X = 48", Y = 3 3/8".....	810884-003X	N263383
A3	Similar to Ref A except X = 63 1/2", Y = 4".....	810884-004X	N397193-001
A4	Similar to Ref A except X = 83 1/2", Y = 3".....	810884-005X	N290372
A5	Similar to Ref A except X = 71 1/2", Y = 3 3/16".....	810884-006X	N293348
A6	Similar to Ref A except X = 71", Y = 4 1/2".....	810884-007X	N308145
A7	Similar to Ref A except X = 55 1/4", 3 3/4".....	810884-008X	N312699
A8	Similar to Ref A except X = 69", Y = 3 1/2".....	810884-009X	N313028
A9	Similar to Ref A except X = 55 1/4", Y = 4 1/2".....	810884-010X	N395632
A10	Similar to Ref A except X = 51", Y = 3 1/2".....	810884-011X	N397193-002
A11	Similar to Ref A except X = 103", Y = 3".....	810884-012X	N451379-0502
A12	Similar to Ref A except X = 54 1/4", Y = 3".....	810884-013X	N451379-0510
A13	Similar to Ref A except X = 82", Y = 3 1/2".....	810884-014X	N451379-0512
A14	Similar to Ref A except X = 60", Y = 4 1/4".....	810884-015X	N451379-0514
A15	Similar to Ref A except X = 58", Y = 3 1/4".....	810884-016X	N451379-0516
A16	Similar to Ref A except X = 56", Y = 4".....	810884-017X	N451379-0518
A17	Similar to Ref A except X = 82", Y = 4 1/2".....	810884-018X	N451379-0520
A18	Similar to Ref A except X = 56", Y = 4 5/16".....	810884-019X	N451379-0522
A19	Similar to Ref A except X = 61", Y = 3 3/16".....	810884-020X	N451379-0524
A20	Similar to Ref A except X = 71 1/2", Y = 5 7/16".....	810884-021X	N451379-0526
A21	Similar to Ref A except X = 103", Y = 3 3/4".....	810884-022X	N451379-0528
A22	Similar to Ref A except X = 60", Y = 4".....	810884-023X	N451379-0530
A23	Similar to Ref A except X = 61", Y = 3".....	810884-024X	N451379-0532
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 810884 rod and dimensions

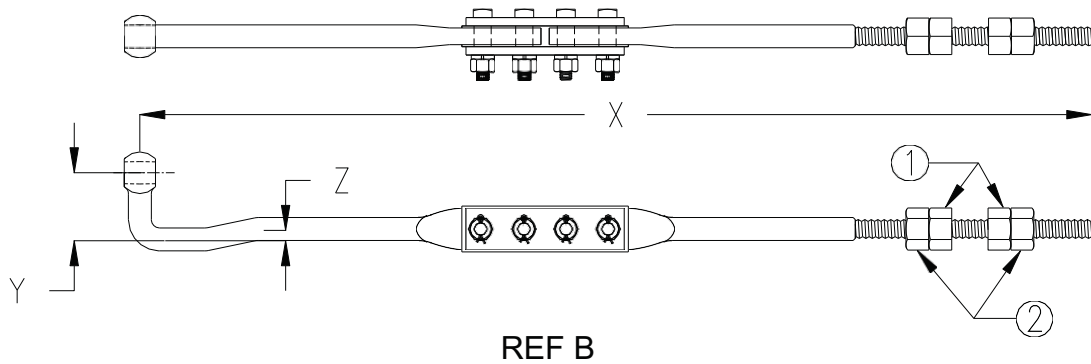
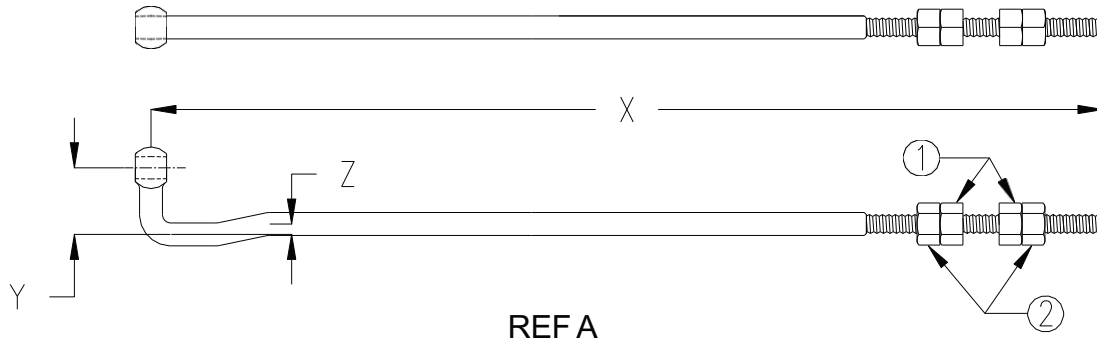


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements with 1 1/4" dia lock rod, X = 65 1/2", Y = 3", Z = 1 1/8".....	810884-025X	N258417
A1	Similar to Ref A except X = 58 1/4", Y = 3", Z = 1 1/8".....	810884-026X	N258686
A2	Similar to Ref A except X = 30 1/4", Y = 3", Z = 3/4".....	810884-027X	N282195
A3	Similar to Ref A except X = 40 1/2", Y = 3", Z = 3/8".....	810884-028X	N374847
A4	Similar to Ref A except X = 52 1/4", Y = 3", Z = 1 1/8".....	810884-029X	N434106
A5	Similar to Ref A except X = 63", Y = 3", Z = 1 3/4".....	810884-030X	N438573
A6	Similar to Ref A except X = 60", Y = 3", Z = 1 1/2".....	810884-031X	N438573-002
A7	Similar to Ref A except X = 60", Y = 3", Z = 3/4".....	810884-032X	N438573-004
A8	Similar to Ref A except X = 55 1/4", Y = 3", Z = 1 3/8".....	810884-033X	N438573-006
A9	Similar to Ref A except X = 54", Y = 3", Z = 11/16".....	810884-034X	N438573-008
A10	Similar to Ref A except X = 55", Y = 3", Z = 1 3/4".....	810884-035X	N438573-010
A11	Similar to Ref A except X = 51", Y = 3", Z = 1 1/4".....	810884-036X	N438573-012
A12	Similar to Ref A except X = 64", Y = 3", Z = 2 1/2".....	810884-037X	N438573-014
A13	Similar to Ref A except X = 46 1/4", Y = 3", Z = 1 1/8".....	810884-038X	N438573-016
A14	Similar to Ref A except X = 63 1/2", Y = 5", Z = 3".....	810884-039X	N438573-018
A15	Similar to Ref A except X = 61", Y = 3", Z = 1 5/8".....	810884-040X	N438573-020
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 810884 rod and dimensions



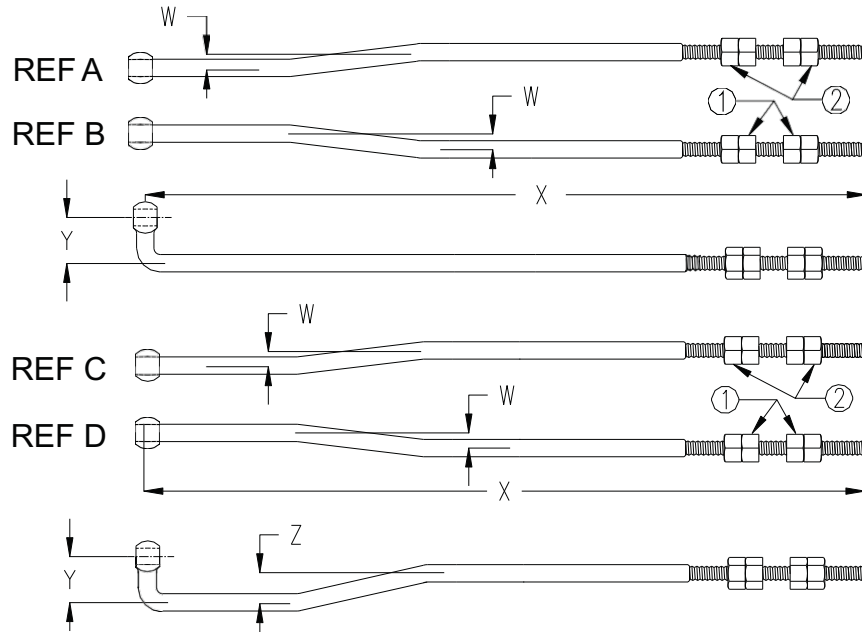
# LOCK ROD CONNECTING RODS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements with 1 1/4" dia lock rod, X = 58", Y = 3", Z = 1 5/8".....	810884-041X	N438573-022
A1	Similar to Ref A except X = 53 1/2", Y = 3", Z = 1 5/8".....	810884-042X	N438573-024
A2	Similar to Ref A except X = 48 3/4", Y = 3", Z = 1 5/8".....	810884-043X	N438573-026
A3	Similar to Ref A except X = 44 3/4", Y = 3", Z = 1 5/8".....	810884-044X	N438573-028
A4	Similar to Ref A except X = 64 3/4", Y = 4", Z = 2 1/2".....	810884-045X	N438573-030
A5	Similar to Ref A except X = 68 1/4", Y = 4", Z = 1 5/8".....	810884-046X	N451846-3002
A6	Similar to Ref A except X = 54 1/4", Y = 3", Z = 3/8".....	810884-047X	N438432
A7	Similar to Ref A except X = 48", Y = 3", Z = 3 3/8".....	810884-048X	N438432-001
A8	Similar to Ref A except X = 44", Y = 3", Z = 3 5/16".....	810884-049X	N438432-002
A9	Similar to Ref A except X = 77", Y = 3", Z = 1 3/4".....	810884-050X	N451379-6602
B	<b>INSULATED LOCK ROD CONNECTING ROD</b> , X = 71 1/2", Y = 4", Z = 1 7/16".....	810885-005X	N451846-2001
B1	Similar to Ref B except X = 63 1/4", Y = 4", Z = 1 23/32".....	810885-006X	N451846-3701
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 810884 rod and dimensions

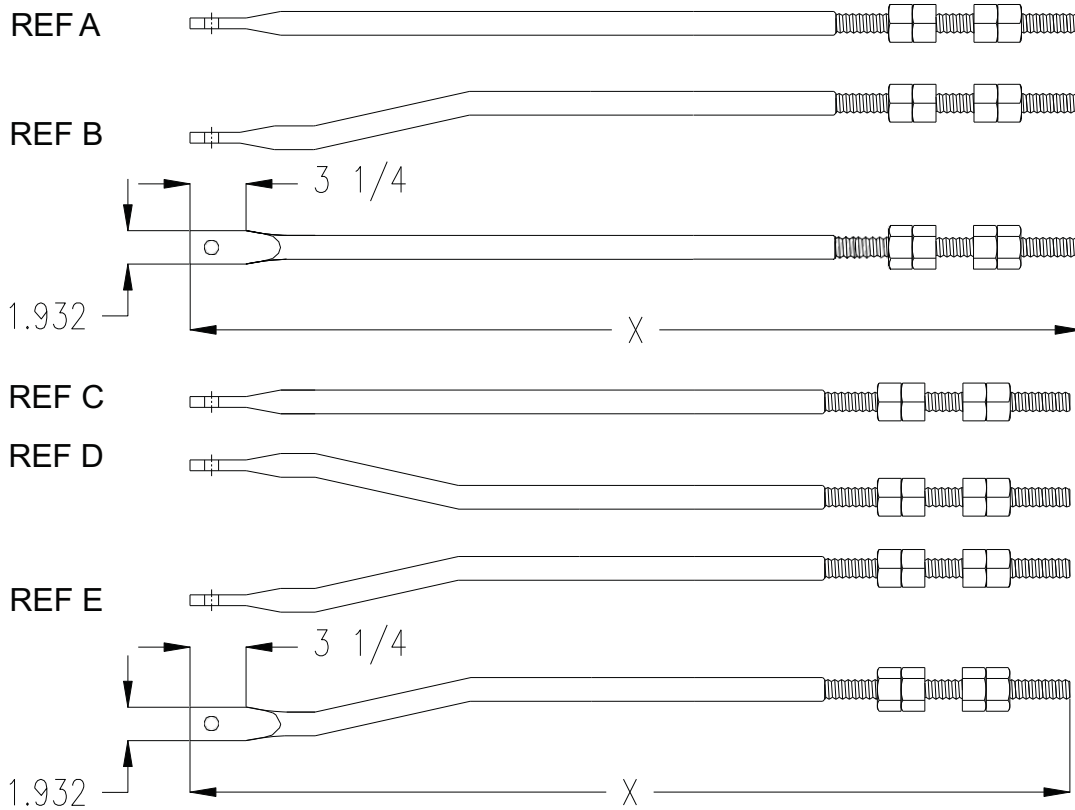
# LOCK ROD CONNECTING RODS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, RH, W = 3 1/4", X = 105 1/2", Y = 3 7/8"</b>	810884-051X	N273791
A1	Similar to Ref A except W = 3 1/4", X = 63 1/2", Y = 3 5/8".....	810884-052X	N273793
A2	Similar to Ref A except W = 3 1/4", X = 63 1/2", Y = 3".....	810884-053X	N273793-001
A3	Similar to Ref A except W = 4 1/8", X = 63 1/2", Y = 3 3/4".....	810884-054X	N273793-002
A4	Similar to Ref A except W = 2 1/8", X = 63 1/2", Y = 3".....	810884-055X	N273793-003
B	<b>LOCK ROD CONNECTING ROD, LH, SWIVEL TYPE, for A-5, M-3, M-22 &amp; M-23 movements, with 1 1/4" dia lock rod, W = 3 1/4", X = 105 1/2", Y = 3 7/8".....</b>	810884-056X	N273790
B1	Similar to Ref B except Y = 3 5/8".....	810884-057X	N273790-001
B2	Similar to Ref B except W = 3 1/4", X = 63 1/2", Y = 3 5/8".....	810884-058X	N273792
B3	Similar to Ref B except W = 4 1/8", X = 63 1/2", Y = 3 3/4".....	810884-059X	N273792-001
B4	Similar to Ref B except W = 2 1/8", X = 63 1/2", Y = 3".....	810884-060X	N273793-004
C	<b>LOCK ROD CONNECTING ROD, RH, RR Detail 3125, W = 3 1/4", X = 51 1/2", Y = 3 3/4", Z = 1".....</b>	810884-061X	N451379-1903
C1	Similar to Ref C except W = 1 1/8", X = 6'-3", Y = 4", Z = 1 3/16".....	810884-062X	N451379-1907
C2	Similar to Ref C except W = 2 1/4", X = 67 13/16", Y = 5", Z = 2 1/4".....	810884-063X	N451379-1911
D	<b>LOCK ROD CONNECTING ROD, LH, RR Detail 3124, W = 3 1/4", X = 51 1/2", Y = 3 3/4", Z = 1".....</b>	810884-064X	N451379-1901
D1	Similar to Ref D except W = 1 1/8", X = 6'-3", Y = 4", Z = 1 3/16".....	810884-065X	N451379-1905
D2	Similar to Ref D except W = 1 1/2", X = 57", Y = 3 3/4", Z = 2 7/8".....	810884-066X	N451379-1909
D3	Similar to Ref D except W = 2 1/4", X = 67 13/16", Y = 5", Z = 2 1/4".....	810884-067X	N451379-1913

For custom rods other than those shown, specify Model 810884 rod and dimensions

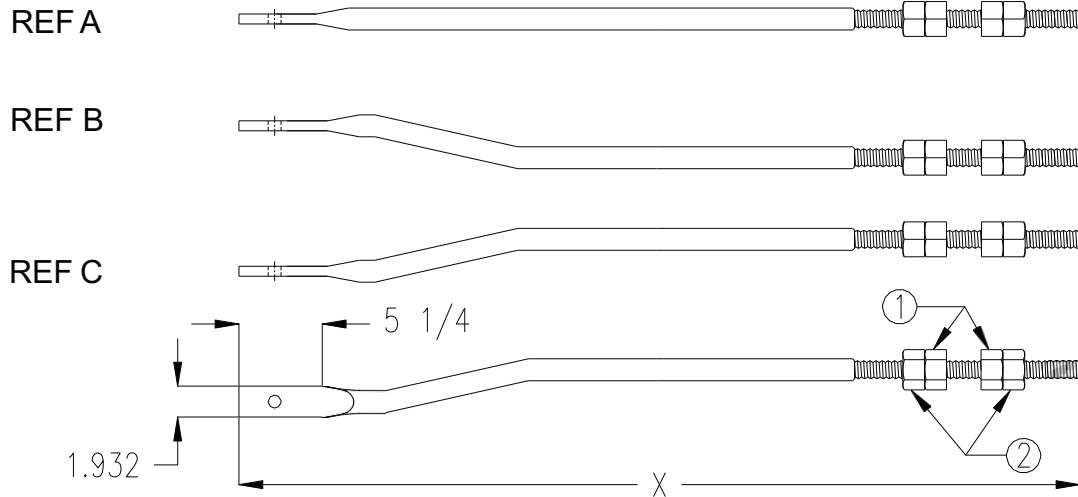
**LOCK ROD CONNECTING RODS**



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, X = 51 3/4".....	810377-001X	N253205
A1	Similar to Ref A except X = 61".....	810377-002X	N282061
B	<b>LOCK ROD CONNECTING ROD</b> , 1" sideset, X = 61".....	810377-003X	N394867
B1	Similar to Ref B except 1 1/2" sideset, X = 52 3/4".....	810377-004X	N335678
B2	Similar to Ref B1 except 3" sideset.....	810377-005X	N336221
C	<b>LOCK ROD CONNECTING ROD</b> , 13/16" downset, X = 61 5/8".....	810377-006X	N259281
C1	Similar to Ref C except 1/2" downset, X = 52 3/4".....	810377-007X	N299641
C2	Similar to Ref C except 2 3/8" downset, X = 65".....	810377-008X	N305204
D	<b>LOCK ROD CONNECTING ROD, LH</b> , 7/16" downset, 13/16" sideset, X = 61 5/8".....	810377-012X	N298081
D1	Similar to Ref D except 2 3/4" downset, X = 67".....	810377-013X	N326008
D2	Similar to Ref D except 15/16" downset, X = 62".....	810377-014X	N326008-001
D3	Similar to Ref D except 1 5/8" downset, X = 62".....	810377-015X	N326008-002
E	<b>LOCK ROD CONNECTING ROD, RH</b> , 7/16" downset, 13/16" sideset, X = 61 5/8".....	810377-009X	N297885
E1	Similar to Ref E except 2 3/4" downset, X = 67".....	810377-010X	N381514
E2	Similar to Ref E except 1" downset, X = 62".....	810377-011X	N381514-001

For custom rods other than those shown, specify Model 810377 rod and dimensions

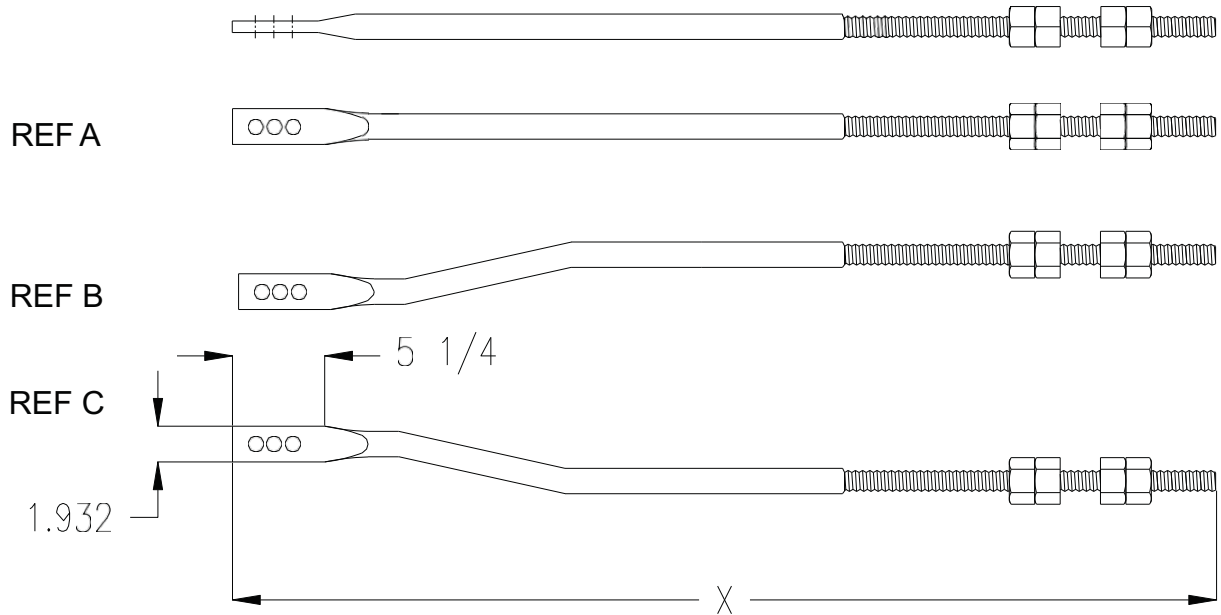
# LOCK ROD CONNECTING ROD



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, RR Detail 3123, 2 3/4" downset, X = 59 3/4".....	810378-001X	N451379-1502
A1	Similar to Ref A except 2" downset.....	810378-002X	N451379-1504
A2	Similar to Ref A except RR Detail 3373 and 7/8" downset.....	810378-003X	N451379-1506
A3	Similar to Ref A except 1 11/16" downset, X = 73 1/2".....	810378-004X	N278051
A4	Similar to Ref A except 1 5/8" downset, X = 74 1/4".....	810378-005X	N303846
A5	Similar to Ref A except 1 11/16" downset, X = 57".....	810378-006X	N329480
A6	Similar to Ref A except 1 11/16" downset, X= 70 1/2".....	810378-007X	N434978
A7	Similar to Ref A except 1 3/4" downset, X= 54 1/2".....	810378-008X	N451378-3502
A8	Similar to Ref A except 1 1/4" downset, X = 46 1/2".....	810378-009X	N394385
A9	Similar to Ref A except 2" downset, X = 46 1/2".....	810378-010X	N435482-002
A10	Similar to Ref A except 2 1/2" downset, X = 46 1/2".....	810378-011X	N433771
A11	Similar to Ref A except 1 1/4" downset, X = 54 1/2".....	810378-012X	N394385-001
A12	Similar to Ref A except 2" downset, X = 54 1/2".....	810378-013X	N435482-001
A13	Similar to Ref A except 2 1/2" downset, X = 54 1/2".....	810378-014X	N435482
B	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 3/8" downset, 1 1/2" sideset, X = 56 3/4".....	810378-015X	N345195
B1	Similar to Ref B except 1" downset, X = 53 3/4".....	810378-016X	N345195-001
C	<b>LOCK ROD CONNECTING ROD, RH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 3/8" downset, 1 1/2" sideset, X = 56 3/4".....	810378-017X	N345197
C1	Similar to Ref C except 1" downset, X = 53 3/4".....	810378-018X	N345197-001
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

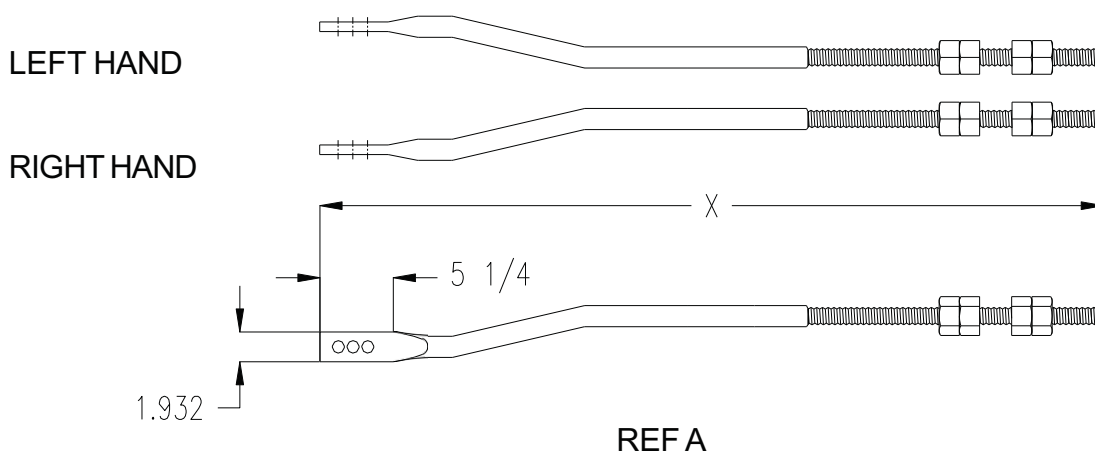
For custom rods other than those shown, specify Model 810378 rod and dimensions

# LOCK ROD CONNECTING RODS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, X = 56 3/4".....	810379-007X	N259334
A1	Similar to Ref A except X = 54".....	810379-008X	N451379-7218
B	<b>LOCK ROD CONNECTING ROD</b> , 3/8" offset, X = 65 3/4".....	810379-009X	N280998
B1	Similar to Ref B except 3/4" offset, X = 62 1/4".....	810379-010X	N298721
B2	Similar to Ref B except 5/16" offset, X = 62 1/2".....	810379-011X	N302655
B3	Similar to Ref B except 1" offset, X = 62 1/2".....	810379-012X	N332195
B4	Similar to Ref B except 1" offset, X = 75".....	810379-013X	N349444
B5	Similar to Ref B except 2 1/2" offset, X = 59 1/2".....	810379-014X	N382648
B6	Similar to Ref B except 7/8" offset, X = 59 1/2".....	810379-015X	N332195-001
B7	Similar to Ref B except 1" offset, X = 69 3/8".....	810379-016X	N332195-002
B8	Similar to Ref B except 1 1/16" offset, X = 60 1/2".....	810379-017X	N451419-2302
B9	Similar to Ref B except 1 1/16" offset, X = 58".....	801379-018X	N451419-2304
C	<b>LOCK ROD CONNECTING ROD</b> , 3" offset, X = 65".....	810379-019X	N451379-7202
C1	Similar to Ref C except 1 7/16" offset, X = 68".....	810379-020X	N451379-7204
C2	Similar to Ref C except 7/16" offset, X= 68".....	810379-021X	N451379-7206
C3	Similar to Ref C except 11/16" offset, X = 59".....	810379-022X	N451379-7208
C4	Similar to Ref C except 3 1/2" offset, X = 77".....	810379-023X	N451379-7210
C5	Similar to Ref C except 1" offset, X = 38 1/2".....	810379-024X	N451379-7212
C6	Similar to Ref C except 1" offset, X = 56".....	810379-025X	N451379-7214
C7	Similar to Ref C except 1" offset, X = 62".....	810379-026X	N451379-7216

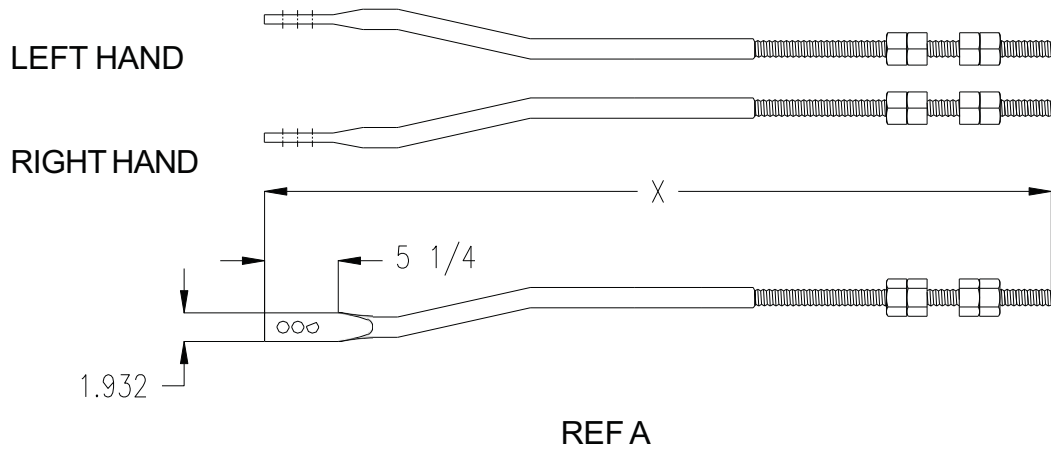
For custom rods other than those shown, specify Model 810379rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1/4" downset, 1 1/4" sideset, X = 62 1/2".....	810379-027X	N451379-0904
A1	Similar to Ref A except RH.....	810379-028X	N451379-0902
A2	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 9/16" downset, 1 3/16" sideset, X = 46 3/4".....	810379-029X	N451379-0908
A3	Similar to Ref A2 except RH.....	810379-030X	N451379-0906
A4	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 3 1/16" downset, 1 3/16" sideset, X = 46 3/4".....	810379-031X	N451379-0912
A5	Similar to Ref A4 except RH.....	810379-032X	N451379-0910
A6	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 5/16" downset, 4 3/16" sideset, X = 44 3/4".....	810379-033X	N451379-0916
A7	Similar to Ref A6 except RH.....	810379-034X	N451379-0914
A8	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 3/16" downset, 1" sideset, X = 60".....	810379-035X	N451379-0920
A9	Similar to Ref A8 except RH.....	810379-036X	N451379-0918
A10	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 11/16" downset, 1" sideset, X = 51".....	810379-037X	N451379-0924
A11	Similar to Ref A10 except RH.....	810379-038X	N451379-0922
A12	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 1/16" downset, 1" sideset, X = 47 3/4".....	810379-039X	N451379-3904
A13	Similar to Ref A12 except RH.....	810379-040X	N451379-3902
A14	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 7/16" downset, 1 3/16" sideset, X = 47 3/4".....	810379-041X	N451379-3906
A15	Similar to Ref A14 except RH.....	810379-042X	N451379-3908
A16	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1" downset, 1 3/16" sideset, X = 60".....	810379-043X	N451379-3912
A17	Similar to Ref A16 except RH.....	810379-044X	N451379-3910

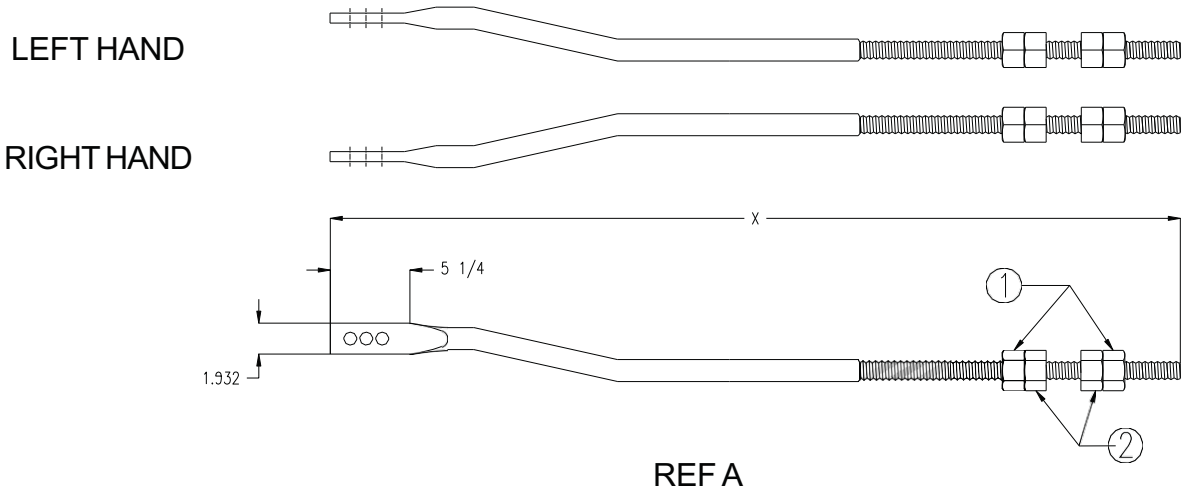
For custom rods other than those shown, specify Model 810379rod and dimensions

# LOCK ROD CONNECTING RODS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1/2" downset, 2 3/4" sideset, X = 57 3/4".....	810379-045X	N451379-3914
A1	Similar to Ref A except RH.....	810379-046X	N451379-3916
A2	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 11/16" downset, 1 1/16" sideset, X = 63".....	810379-047X	N451379-3918
A3	Similar to Ref A2 except RH.....	810379-048X	N451379-3920
A4	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 1/16" downset, 1 1/16" sideset, X = 63".....	810379-049X	N451379-3924
A5	Similar to Ref A4 except RH.....	810379-050X	N451379-3922
A6	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 11/16" downset, 1 1/16" sideset, X = 63".....	810379-051X	N451379-3928
A7	Similar to Ref A6 except RH.....	810379-052X	N451379-3926
A8	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 3/16" downset, no sideset, X = 59 1/2".....	810379-053X	N451379-3930
A9	Similar to Ref A8 except RH.....	810379-054X	N451379-3932
A10	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 3/8" downset, 3/4" sideset, X = 53".....	810379-055X	N451379-3934
A11	Similar to Ref A10 except RH.....	810379-056X	N451379-3936
A12	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 2 3/4" downset, 1 5/8" sideset, X = 49".....	810379-057X	N451379-3938
A13	Similar to Ref A12 except RH.....	810379-058X	N451379-3940
A14	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 3/4" downset, 4 3/4" sideset, X = 57 1/2".....	810379-059X	N451379-3942
A15	Similar to Ref A14 except RH.....	810379-060X	N451379-3944
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 810379rod and dimensions

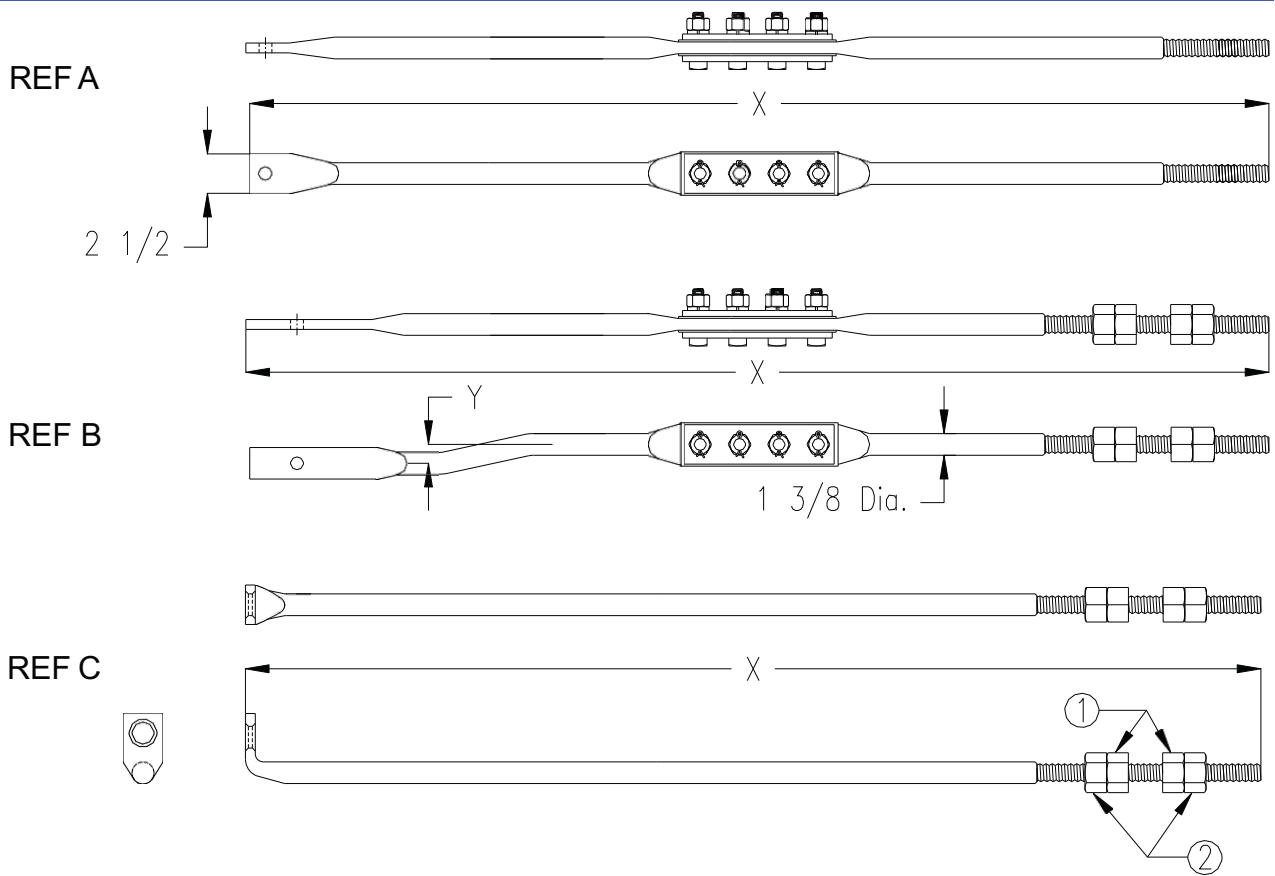


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 5/16" downset, 1 3/16" sideset, X = 70 1/2".....	810379-061X	N451379-2904
A1	Similar to Ref A except RH.....	810379-062X	N451379-2902
A2	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 7/16" downset, 3 7/16" sideset, X = 33".....	810379-063X	N451379-2908
A3	Similar to Ref A2 except RH.....	810379-064X	N451379-2906
A4	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 3/16" downset, 7/8" sideset, X = 65".....	810379-065X	N451379-2910
A5	Similar to Ref A4 except RH.....	810379-066X	N451379-2912
A6	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 9/16" downset, 7/8" sideset, X = 65".....	810379-067X	N451379-2914
A7	Similar to Ref A6 except RH.....	810379-068X	N451379-2916
A8	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1 11/16" downset, 7/8" sideset, X = 62".....	810379-069X	N451379-2918
A9	Similar to Ref A8 except RH.....	810379-070X	N451379-2920
A10	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1" downset, 1 7/16" sideset, X = 55".....	810379-071X	N451379-2922
A11	Similar to Ref A10 except RH.....	810379-072X	N451379-2924
A12	<b>LOCK ROD CONNECTING ROD, LH, NON-SWIVEL TYPE</b> , for A-5, M-3, M-22 & M-23 movements, 1" downset, 1 7/16" sideset, X = 51".....	810379-073X	N451379-2926
A13	Similar to Ref A12 except RH.....	810379-074X	N451379-2928
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 810379rod and dimensions

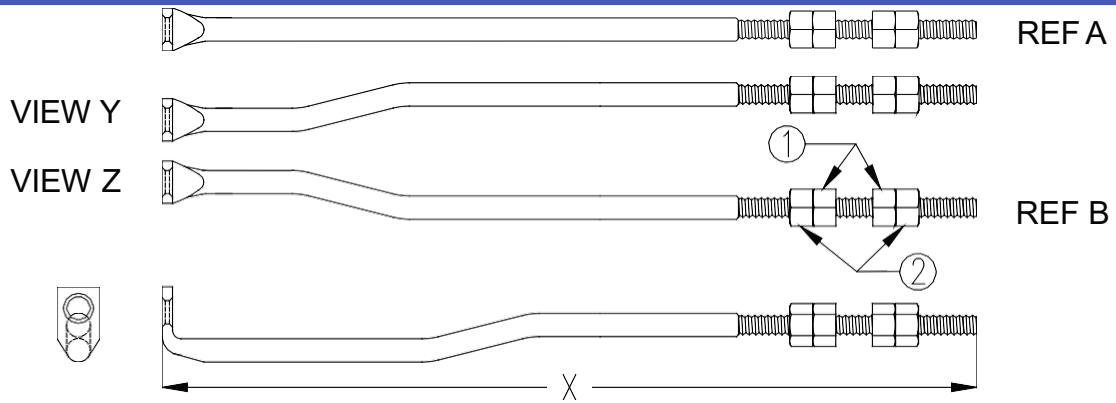


**LOCK ROD CONNECTING RODS**



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED LOCK ROD CONNECTING ROD COMPLETE</b> , for Model 5 movement on # 20 turnout, X = 74 1/16".....	810380-001X	N451846-2301
A1	Similar to Ref A except X = 73 11/16".....	810380-002X	N451846-2601
B	<b>INSULATED LOCK ROD CONNECTING ROD COMPLETE</b> , for M-3 movement on a swing nose frog, X = 85".....	810380-003X	N451846-4501
C	<b>LOCK ROD CONNECTING ROD</b> , for A-10 movements, X = 46 3/4".....	810410-001X	N282170
C1	Similar to Ref C except X = 47".....	810410-002X	N297143
C2	Similar to Ref C except X = 52".....	810410-003X	N372657
C3	Similar to Ref C except X = 54".....	810410-004X	N372657-001
C4	Similar to Ref C except X = 58 1/2".....	810410-005X	N282171
C5	Similar to Ref C except X = 103 1/2".....	810410-006X	N377843
C6	Similar to Ref C except X = 58".....	810410-007X	N377845
C7	Similar to Ref C except X = 51".....	810410-008X	N387046
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

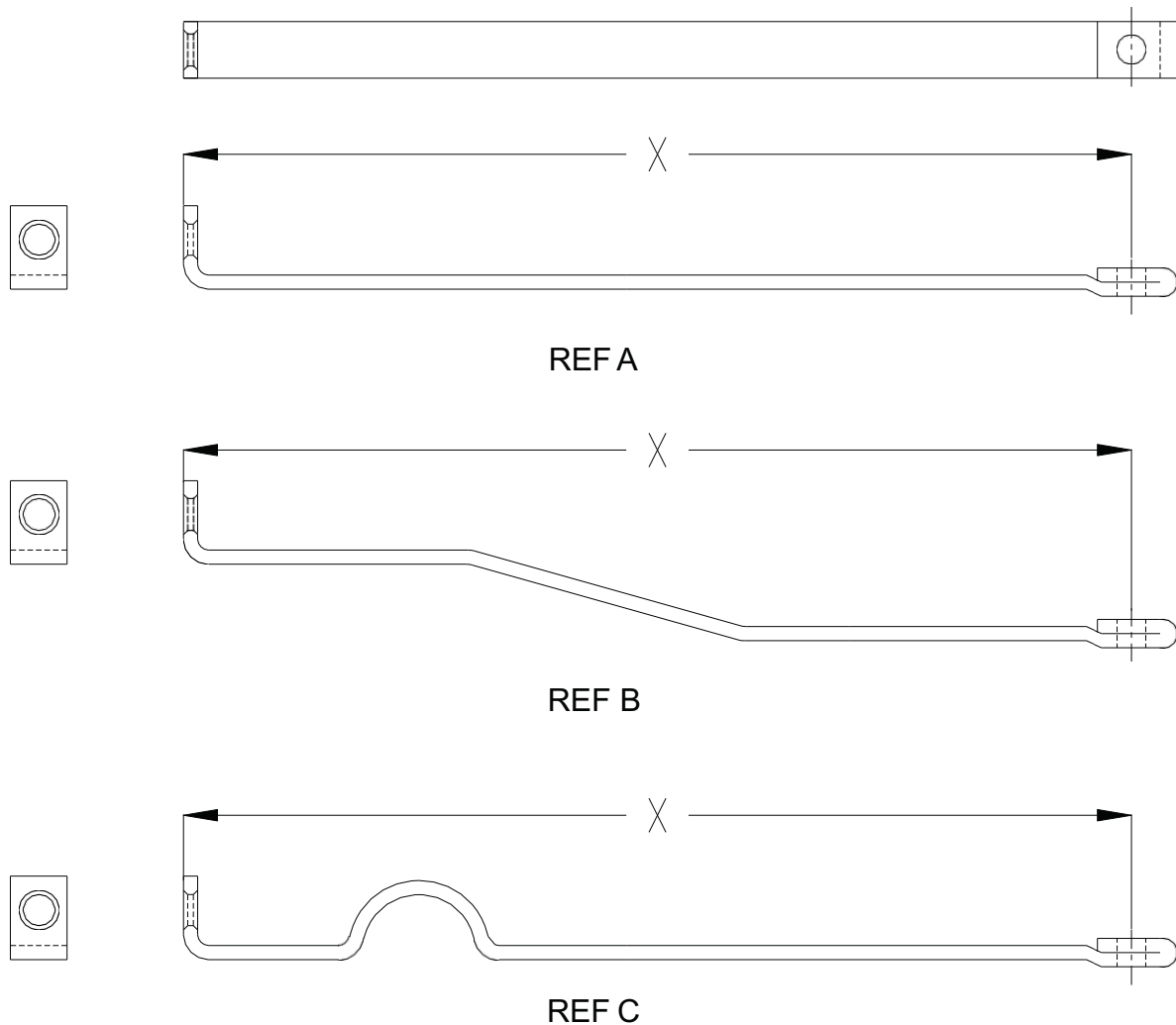
For custom rods other than those shown, specify Model 810380 or 810410 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD</b> , for A-10 movements, X = 46 3/4".....	810410-009X	N282170
A1	Similar to Ref A except X = 47".....	810410-010X	N297143
A2	Similar to Ref A except X = 52".....	810410-011X	N372657
A3	Similar to Ref A except X = 54".....	810410-012X	N372657-001
A4	Similar to Ref A except X = 58 1/2".....	810410-013X	N282171
A5	Similar to Ref A except X = 103 1/2".....	810410-014X	N377843
A6	Similar to Ref A except X = 58".....	810410-015X	N377845
A7	Similar to Ref A except X = 51".....	810410-016X	N387046
B	<b>LOCK ROD CONNECTING ROD, RH</b> , per view Z, for A-10 movements, with 1/2" upward set of threaded end, X = 59".....	810410-017X	N398363
B1	Similar to Ref B except LH per view Y.....	810410-018X	N398365
B2	<b>LOCK ROD CONNECTING ROD, RH</b> , per view Y, for A-10 movements, with 1 1/8" upward set of threaded end, X = 52".....	810410-019X	N398363-001
B3	Similar to Ref B2 except LH per view Z.....	810410-020X	N398365-001
B4	<b>LOCK ROD CONNECTING ROD, RH</b> , per view Y, for A-10 movements, with 1 1/8" upward set of threaded end, X = 54 3/4".....	810410-021X	N398363-002
B5	Similar to Ref B4 except LH per view Z.....	810410-022X	N398365-002
B6	<b>LOCK ROD CONNECTING ROD, RH</b> , per view Y, for A-10 movements, with 1 3/4" upward set of threaded end, X = 52".....	810410-023X	N398363-003
B7	Similar to Ref B6 except LH per view Z.....	810410-024X	N398365-003
B8	<b>LOCK ROD CONNECTING ROD, RH</b> , per view Y, for A-10 movements, with 1 1/8" downward set of threaded end, X = 52".....	810410-025X	N398363-004
B9	Similar to Ref B8 except LH per view Y.....	810410-026X	N398365-004
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

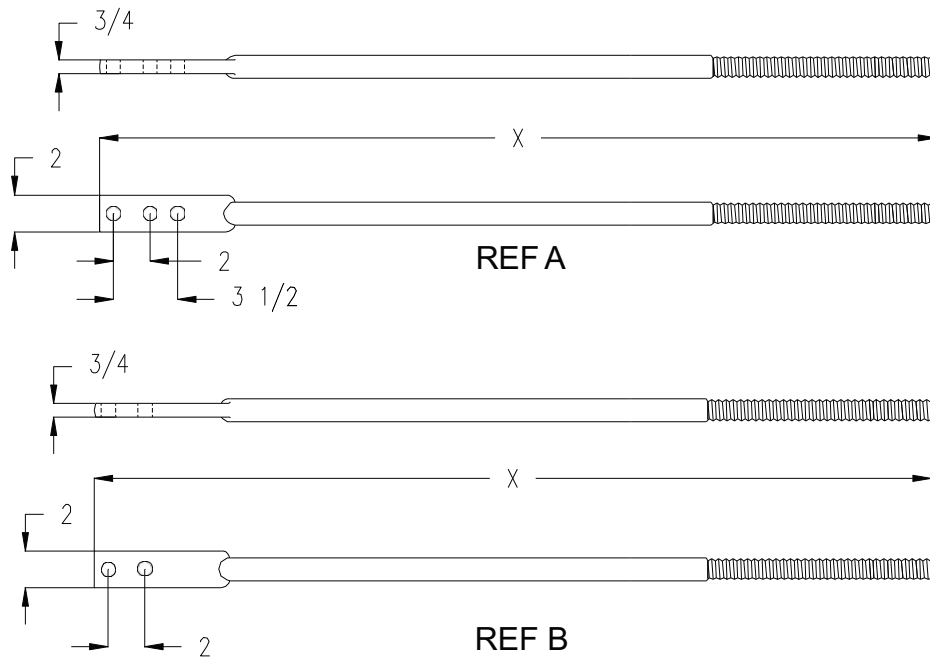
For custom rods other than those shown, specify Model 810410 rod and dimensions

**LOCK ROD CONNECTING RODS**



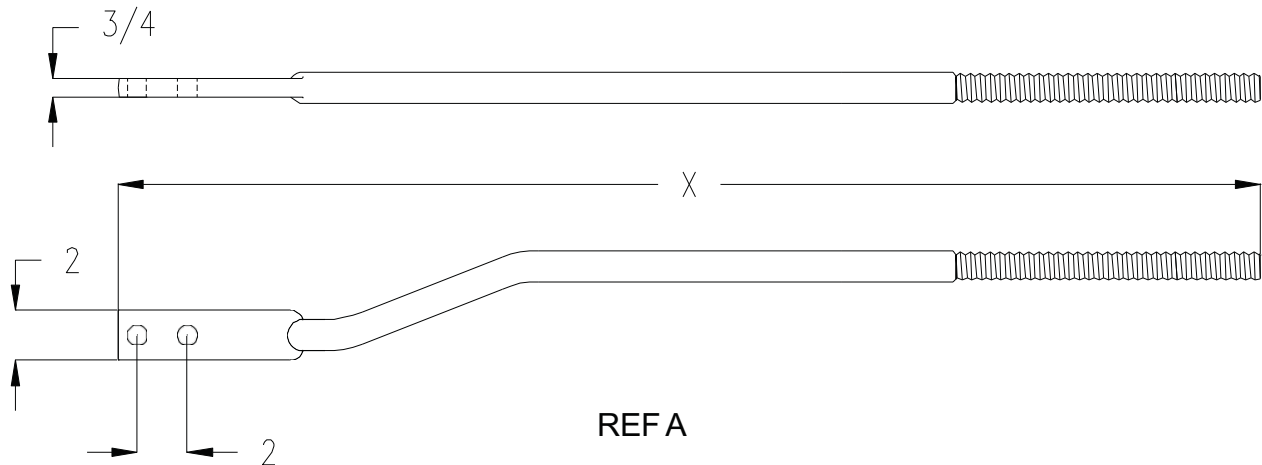
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD</b> , for A-10 movements, X = 40".....	810411-001	M163218
A1	Similar to Ref A except X = 65 1/2".....	810411-002	M163219
A2	Similar to Ref A except X = 43".....	810411-003	M304563
A3	Similar to Ref A except X = 36".....	810411-004	M391744
A4	Similar to Ref A except X = 76 3/4".....	810411-005	M394918
A5	Similar to Ref A except X = 74 1/4".....	810411-006	M394919
A6	Similar to Ref A except X = 32".....	810411-007	M391744-001
A7	Similar to Ref A except X = 30 3/4".....	810411-008	M391744-002
A8	Similar to Ref A except X = 34".....	810411-009	M451419-2401
B	<b>LOCK ROD CONNECTING ROD</b> , for A-10 movements, X = 53 1/4".....	810411-010	M166852
C	<b>LOCK ROD CONNECTING ROD</b> , for A-10 movements, X = 40".....	810411-011	M451419-0201
C1	Similar to Ref C except X = 65 3/4".....	810411-012	M451419-0202

For custom rods other than those shown, specify Model 810411 rod and dimensions



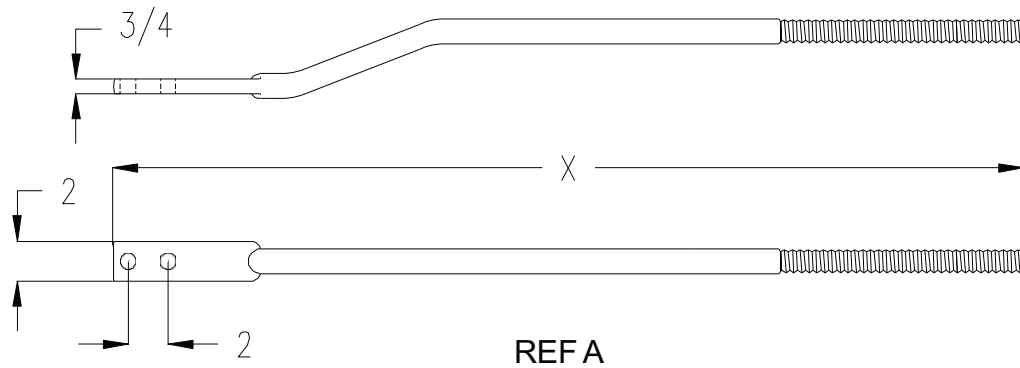
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, X = 66".....	910109-128	23109-052
A1	Similar to Ref A except X = 70 1/2".....	910109-139	23109-070
A2	Similar to Ref A except X = 72".....	910109-130	23109-097
A3	Similar to Ref A except X = 61".....	910109-131	23109-121
A4	Similar to Ref A except X = 64 1/2".....	910109-133	23109-163
A5	Similar to Ref A except X = 82".....	910109-140	23109-204
A6	Similar to Ref A except X = 106".....	910109-135	23109-205
A7	Similar to Ref A except X = 38".....	910109-141	23109-227
A8	Similar to Ref A except X = 108".....	910109-142	23109-232
A9	Similar to Ref A except X = 47".....	910109-143	23109-233
A10	Similar to Ref A except X = 63".....	910109-136	23109-237
A11	Similar to Ref A except X = 59".....	910109-144	23109-242
A12	Similar to Ref A except X = 55".....	910109-137	23109-245
A13	Similar to Ref A except X = 50".....	910109-138	23109-265
B	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, X = 75".....	910109-001	23109-174
B1	Similar to Ref B except X = 71".....	910109-002	23109-151
B2	Similar to Ref B except X = 68".....	910109-003	23109-249
B3	Similar to Ref B except X = 56".....	910109-004	23109-261

For custom rods other than those shown, specify Model 910109 rod and dimensions



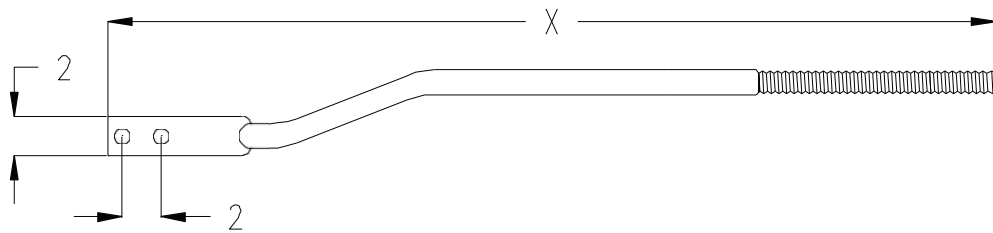
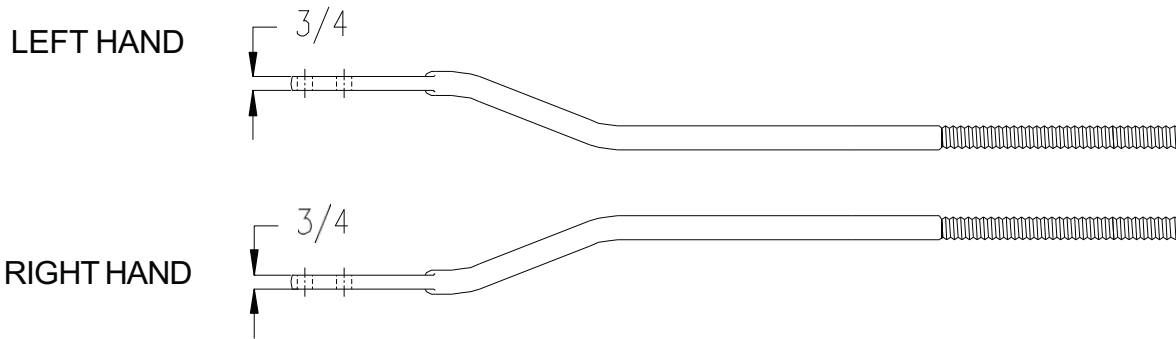
REF	DESCRIPTION	G & B PART #	OEM PART #
A	LOCK ROD CONNECTING ROD, for Model 5 movements, X = 62", 1 3/8" offset.....	910109-043	23109-041
A1	Similar to Ref A except X = 68", 1 3/8" offset.....	910109-044	23109-047
A2	Similar to Ref A except X = 62", 1 7/16" offset.....	910109-045	23109-064
A3	Similar to Ref A except X = 68", 13/16" offset.....	910109-046	23109-106
A4	Similar to Ref A except X = 52", 11/16" offset.....	910109-047	23109-118
A5	Similar to Ref A except X = 62", 7/16" offset.....	910109-026	23109-123
A6	Similar to Ref A except X = 68", 7/16" offset.....	910109-048	23109-131
A7	Similar to Ref A except X = 63", 1 7/16" offset.....	910109-027	23109-134
A8	Similar to Ref A except X = 64 3/4", 1 7/16" offset.....	910109-038	23109-146
A9	Similar to Ref A except X = 68", 1 3/16" offset.....	910109-049	23109-155
A10	Similar to Ref A except X = 70", 1 7/8" offset.....	910109-028	23109-190
A11	Similar to Ref A except X = 29", 1 3/4" offset.....	910109-078	23109-195
A12	Similar to Ref A except X = 70", 1 5/16" offset.....	910109-029	23109-197
A13	Similar to Ref A except X = 65", 2 3/4" offset.....	910109-030	23109-202
A14	Similar to Ref A except X = 72", 1 7/16" offset.....	910109-033	23109-244
A15	Similar to Ref A except X = 56", 1 3/16" offset.....	910109-079	23109-251
A16	Similar to Ref A except X = 63", 1 9/16" offset.....	910109-034	23109-254
A17	Similar to Ref A except X = 69 1/4", 2" offset.....	910109-035	23109-270
A18	Similar to Ref A except X = 65", 1 5/16" offset.....	910109-036	23109-275
A19	Similar to Ref A except X = 76", 2" offset.....	910109-037	23109-281
A20	Similar to Ref A except X = 66", 1" offset.....	910109-080	23109-289

For custom rods other than those shown, specify Model 910109 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	LOCK ROD CONNECTING ROD, for Model 5 movements, X = 51 1/2", 1 3/8" sideset.....	910109-065	23109-060
A1	Similar to Ref A except X = 56 5/8", 2 1/8" sideset.....	910109-066	23109-126
A2	Similar to Ref A except X = 59 7/8", 2 1/8" sideset.....	910109-067	23109-143
A3	Similar to Ref A except X = 59 3/8", 2 1/8" sideset.....	910109-068	23109-148
A4	Similar to Ref A except X = 46 3/4", 1 1/4" sideset.....	910109-051	23109-154
A5	Similar to Ref A except X = 80 1/2", 2" sideset.....	910109-052	23109-158
A6	Similar to Ref A except X = 67 1/2", 2" sideset.....	910109-053	23109-170
A7	Similar to Ref A except X = 39 3/4", 1 1/4" sideset.....	910109-054	23109-171
A8	Similar to Ref A except X = 57 3/4", 4 1/16" sideset.....	910109-069	23109-176
A9	Similar to Ref A except X = 82", 2 1/2" sideset.....	910109-055	23109-189
A10	Similar to Ref A except X = 62", 1 1/8" sideset.....	910109-056	23109-196
A11	Similar to Ref A except X = 60", 2" sideset.....	910109-057	23109-210
A12	Similar to Ref A except X = 86", 2 3/4" sideset.....	910109-070	23109-221
A13	Similar to Ref A except X = 69", 3/4" sideset.....	910109-058	23109-222
A14	Similar to Ref A except X = 60", 1 1/2" sideset.....	910109-059	23109-228
A15	Similar to Ref A except X = 68", 1" sideset.....	910109-060	23109-230
A16	Similar to Ref A except X = 47", 2" sideset.....	910109-061	23109-234
A17	Similar to Ref A except X = 32 3/4", 1 1/4" sideset.....	910109-062	23109-259
A18	Similar to Ref A except X = 38 1/4", 1 1/4" sideset.....	910109-071	23109-260
A19	Similar to Ref A except X = 68", 1 3/8" sideset.....	910109-063	23109-262
A20	Similar to Ref A except X = 68", 1 1/2" sideset.....	910109-072	23109-263
A21	Similar to Ref A except X = 69", 3 7/16" sideset.....	910109-073	23109-267
A22	Similar to Ref A except X = 52", 1" sideset.....	910109-076	23109-239
A23	Similar to Ref A except X = 94", 3 1/2" sideset.....	910109-077	23109-240

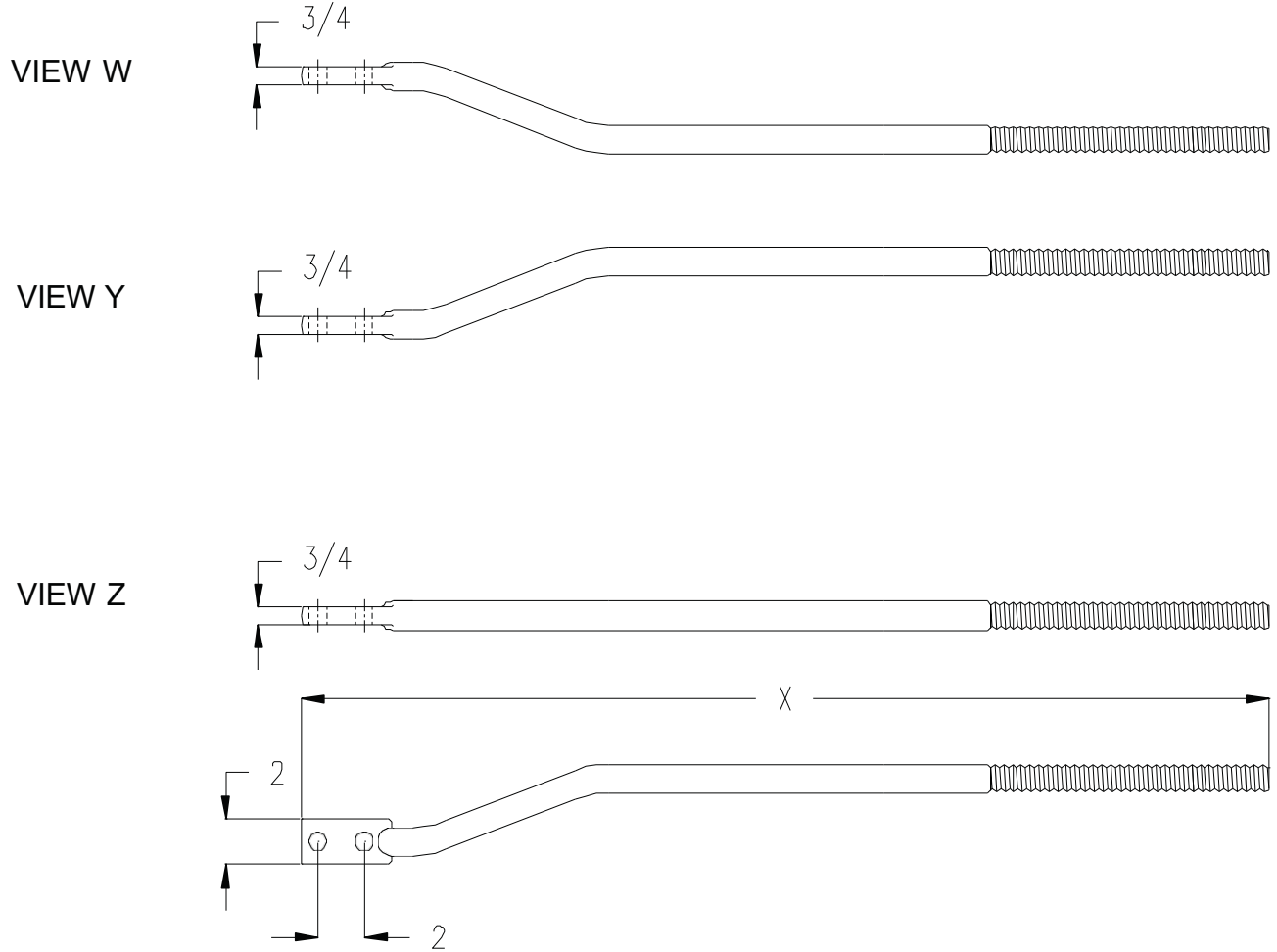
For custom rods other than those shown, specify Model 910109 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD, RH</b> , for Model 5 movements, X = 52", 1 9/16" sideset, 1 3/16" downset.....	910109-103	23109-252
A1	Similar to Ref A except LH, 1 1/2" sideset, 1" downset.....	910109-104	23109-253
A2	Similar to Ref A except X = 67".....	910109-105	23109-255
A3	Similar to Ref A2 except LH.....	910109-106	23109-256
A4	Similar to Ref A except X = 49", 3 1/2" sideset, 1 3/4" downset.....	910109-107	23109-286
A5	Similar to Ref A4 except LH, 1 1/2" sideset, 1" downset.....	910109-108	23109-287
A6	Similar to Ref A except X = 68", 3/4" sideset, 11/16" downset.....	910109-109	23109-124
A7	Similar to Ref A except X = 26 1/2", 2" sideset, 1 3/4" downset.....	910109-110	23109-128
A8	Similar to Ref A except X = 52", 3/4" sideset, 11/16" downset.....	910109-111	23109-132
A9	Similar to Ref A except X = 64", 2 1/4" sideset, 13/16" downset.....	910109-112	23109-182
A10	Similar to Ref A except X = 68", 2" sideset, 2 9/16" downset.....	910109-113	23109-215
A11	Similar to Ref A except X = 64", 2 1/2" sideset, 1 1/2" downset.....	910109-114	23109-217

For custom rods other than those shown, specify Model 910109 rod and dimensions



REF A

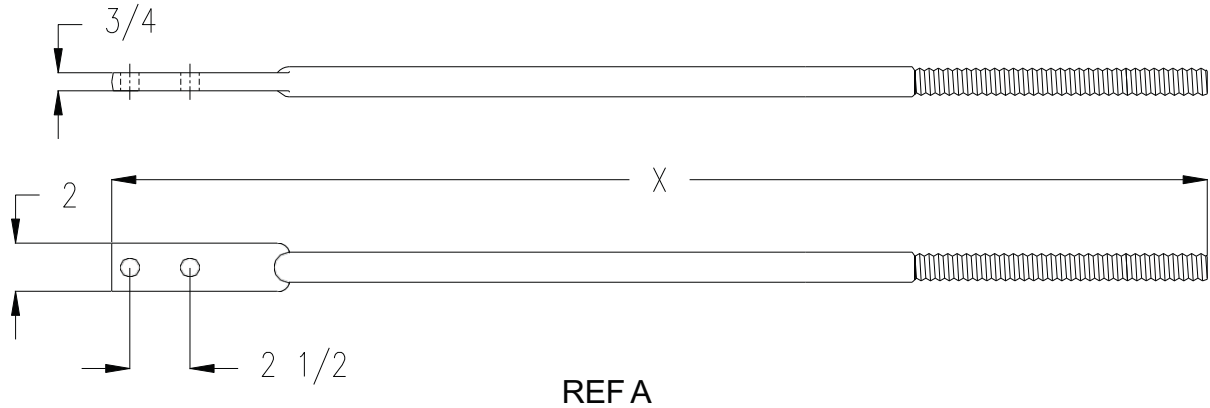
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, per view Z, X = 37", 2" downset.....	910109-151	23109-271
A1	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, per view Y, X = 69", 3 7/16" sideset, 1 13/16" downset.....	910109-201	23109-273
A2	Similar to Ref A1 except X = 38", 1" sideset, 2" downset.....	910109-202	23109-276
A3	Similar to Ref A1 except X = 84", 3 7/16" sideset, 2" downset.....	910109-203	23109-279
A4	Similar to Ref A1 except X = 40", 3 7/16" sideset, 1" downset.....	910109-204	23109-280
A5	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, per view W, X = 69", 3 7/16" sideset, 1 13/16" downset.....	910109-176	23109-274
A6	Similar to Ref A5 except X = 84".....	910109-177	23109-278

For custom rods other than those shown, specify Model 910109 rod and dimensions



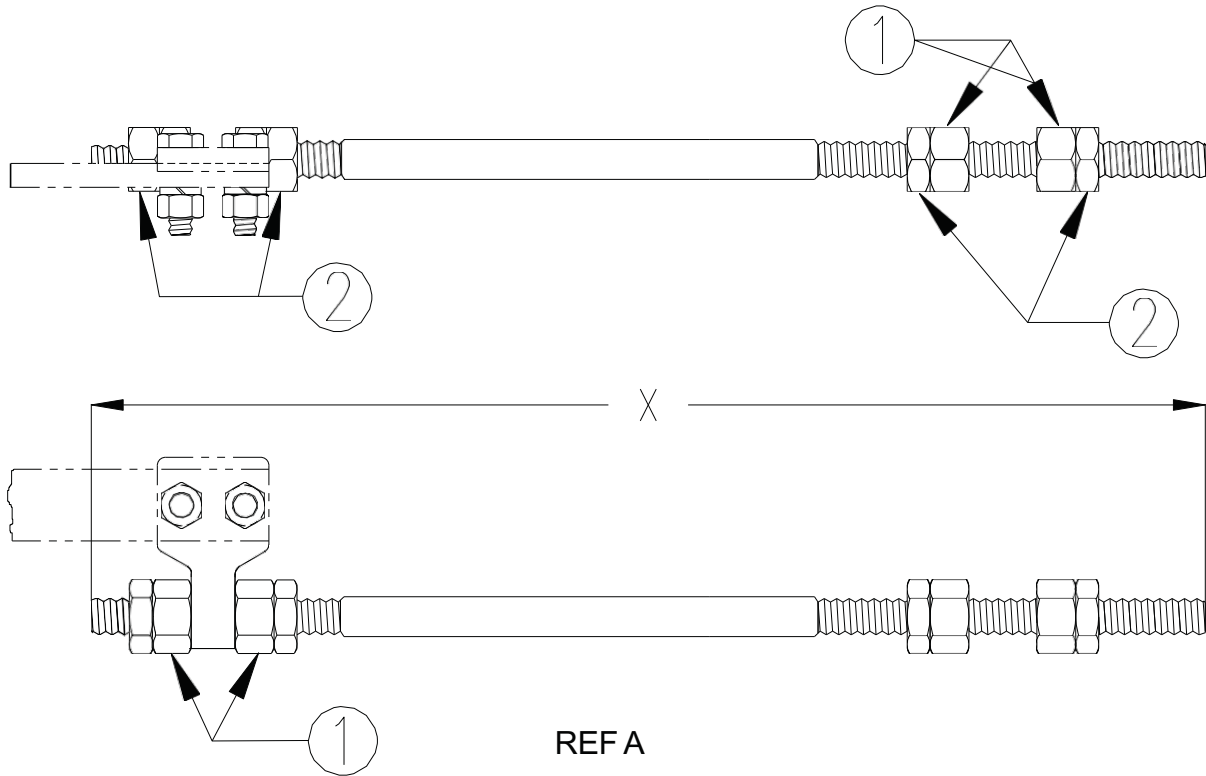
**E-19**

**LOCK ROD CONNECTING RODS**



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD</b> , for Model 5 movements, X = 37 3/8".....	910110-001	38764-004
A1	Similar to Ref A except X = 78".....	910110-002	38764-005
A2	Similar to Ref A except X = 74 3/4".....	910110-003	38764-007
A3	Similar to Ref A except X = 36".....	910110-004	38764--009
A4	Similar to Ref A except X = 18".....	910110-005	38764-012
A5	Similar to Ref A except X = 44 1/8".....	910110-006	38764-015
A6	Similar to Ref A except X = 56 1/8".....	910110-007	38764-016
A7	Similar to Ref A except X = 59 1/8".....	910110-008	38764-017
A8	Similar to Ref A except X = 14 1/2".....	910110-009	38764-021
A9	Similar to Ref A except X = 32 1/8".....	910110-010	38764-026
A10	Similar to Ref A except X = 46".....	910110-011	38764-028
A11	Similar to Ref A except X = 26 3/4".....	910110-012	38764-029
A12	Similar to Ref A except X = 52".....	910110-013	38764-036
A13	Similar to Ref A except X = 24".....	910110-014	38764-039
A14	Similar to Ref A except X = 76 1/4".....	910110-015	38764-049
A15	Similar to Ref A except X = 39 5/8".....	910110-016	38764-062
A16	Similar to Ref A except X = 46 1/4".....	910110-017	38764-101
A17	Similar to Ref A except X = 53".....	910110-018	38764-104
A18	Similar to Ref A except X = 50 1/4".....	910110-019	38764-108
A19	Similar to Ref A except X = 61 1/2".....	910110-020	38764-109
A20	Similar to Ref A except X = 55".....	910110-021	38764-118
A21	Similar to Ref A except X = 18 1/2".....	910110-022	38764-119
A22	Similar to Ref A except X = 49".....	910110-023	38764-135

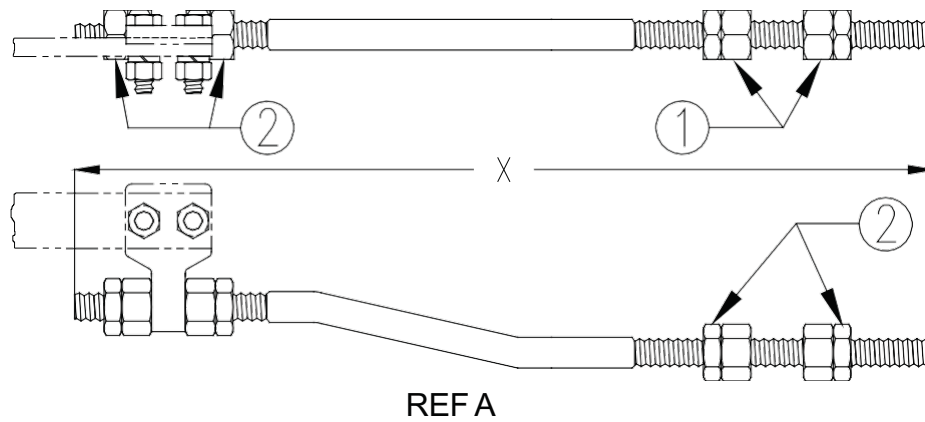
For custom rods other than those shown, specify Model 910110 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD COMPLETE</b> , with hardware, for Model 5 movements, 1 1/4" dia, X = 73".....	910172-036X	4172-036-01 A91-139
A1	Similar to Ref A except without hardware.....	910172-036	4172-036
A2	Similar to Ref A1 except X = 64".....	910172-058	4172-058
A3	Similar to Ref A1 except X = 75".....	910172-060	4172-060
A4	Similar to Ref A1 except X = 87".....	910172-061	4172-061
A5	Similar to Ref A1 except X = 156".....	910172-075	4172-075
A6	Similar to Ref A1 except X = 56".....	910172-076	4172-076
A7	Similar to Ref A1 except X = 70".....	910172-080	4172-080
A8	Similar to Ref A1 except X = 75".....	910172-086	4172-086
A9	Similar to Ref A1 except X = 93 3/4".....	910172-087	4172-087
A10	Similar to Ref A1 except X = 85 5/8".....	910172-091	4172-091
A11	Similar to Ref A1 except X = 15".....	910172-094	4172-094
A12	Similar to Ref A1 except X = 88".....	910172-104	4172-104
A13	Similar to Ref A1 except X = 72".....	910172-106	4172-106
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX JAM NUT</b> , 1 1/4"-7 UNC.....	990330-125-02	J048044 2813-003

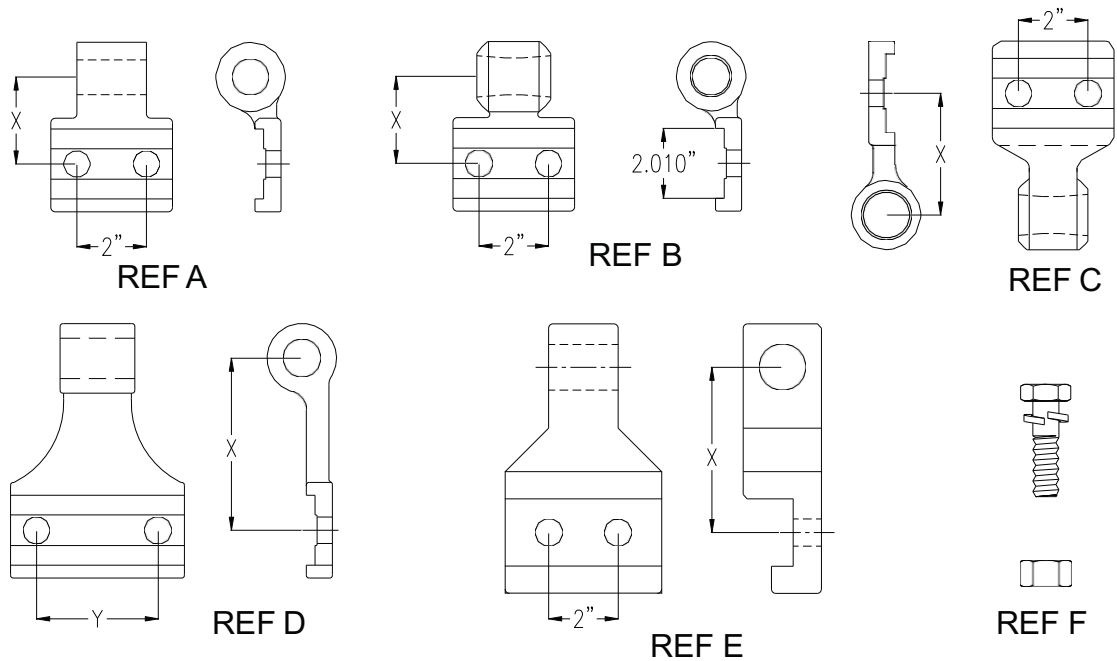
For custom rods other than those shown, specify Model 910172 rod and dimensions

**LOCK ROD CONNECTING RODS**



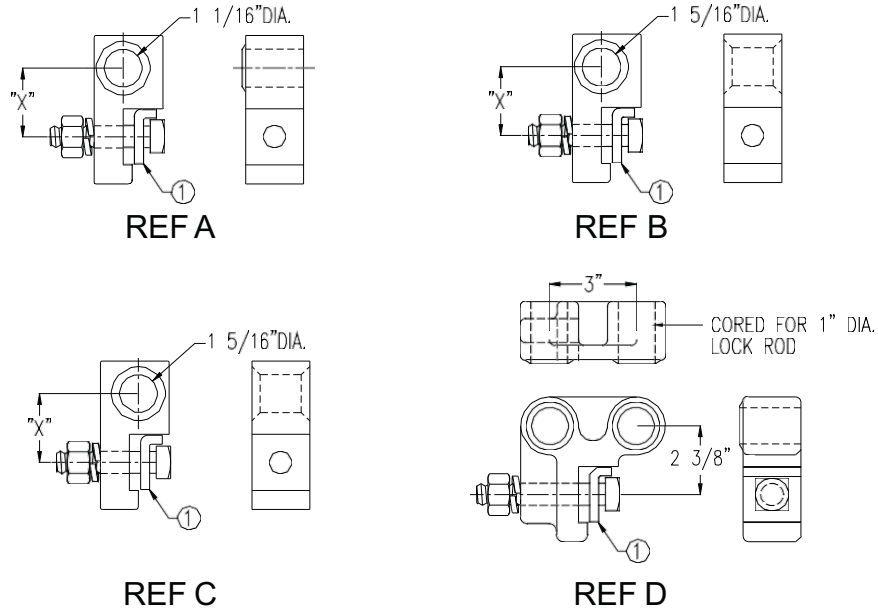
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD CONNECTING ROD COMPLETE</b> , with hardware, for Model 5 movements, 1 1/4" dia, 1 1/2" offset, X = 67".....	910172-038X	4172-038-01 A91-140
A1	Similar to Ref A except without hardware.....	910172-038	4172-038
A2	Similar to Ref A1 except 2 3/4" offset, X = 118".....	910172-035	4172-035
A3	Similar to Ref A1 except 1 7/8" offset, X = 70".....	910172-041	4172-041
A4	Similar to Ref A1 except 1 1/2" offset, X = 72".....	910172-042	4172-042
A5	Similar to Ref A1 except 1 15/16" offset, X = 38".....	910172-050	4172-050
A6	Similar to Ref A1 except 2 1/2" offset, X = 58".....	910172-056	4172-056
A7	Similar to Ref A1 except 2 3/4" offset, X = 87".....	910172-059	4172-059
A8	Similar to Ref A1 except 1 7/16" offset, X = 58".....	910172-070	4172-070
A9	Similar to Ref A1 except 3/4" offset, X = 73".....	910172-077	4172-077
A10	Similar to Ref A1 except 2 1/4" offset, X = 90".....	910172-081	4172-081
A11	Similar to Ref A1 except 1 3/4" offset, X = 96 1/4".....	910172-085	4172-085
A12	Similar to Ref A1 except 1" offset, X = 64".....	910172-088	4172-088
A13	Similar to Ref A1 except 4 3/16" offset, X = 85 5/8".....	910172-090	4172-090
A14	Similar to Ref A1 except 1 3/4" offset, X = 86".....	910172-092	4172-092
A15	Similar to Ref A1 except 1 3/8" offset, X = 88".....	910172-095	4172-095
A16	Similar to Ref A1 except 1 7/8" offset, X = 88".....	910172-096	4172-096
A17	Similar to Ref A1 except 1" offset, X = 74".....	910172-102	4172-102
A18	Similar to Ref A1 except 4" offset, X = 74".....	910172-103	4172-103
A19	Similar to Ref A1 except 1 1/4" offset, X = 88".....	910172-105	4172-105
A20	Similar to Ref A1 except 1 5/16" offset, X = 69".....	910172-107	4172-107
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX JAM NUT</b> , 1 1/4"-7 UNC.....	990330-125-02	J048044 2813-003

For custom rods other than those shown, specify Model 910172 rod and dimensions

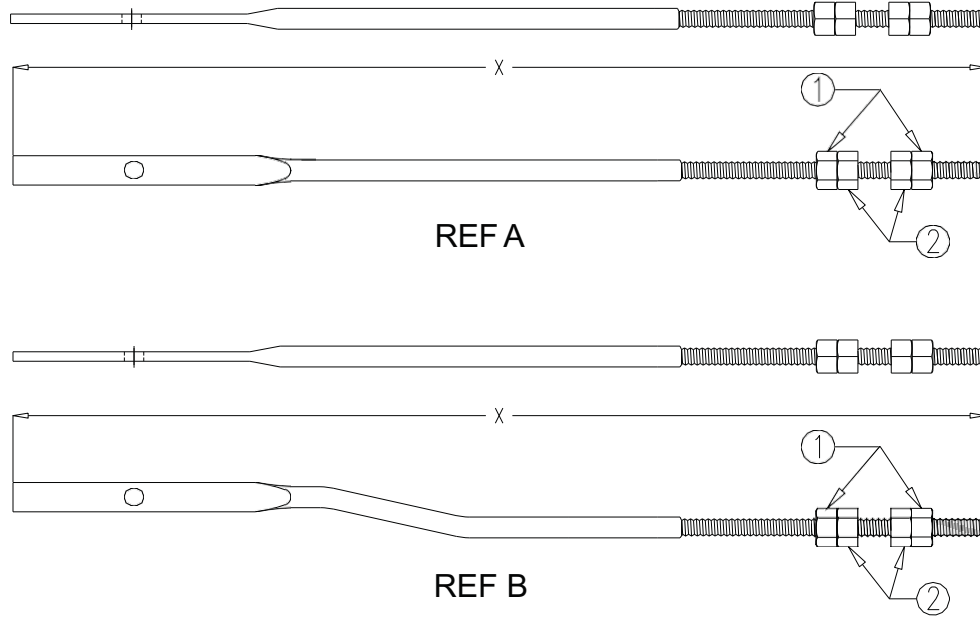


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD DROP LUG</b> , slip joint, for 1" dia lock rod and 2" wide lock rod connecting rod, X = 2 1/2".....	920530-001	30908-014 A85-561
A1	Similar to Ref A except X = 3 1/2".....	920530-002	30908-005 A85-560
B	<b>LOCK ROD DROP LUG</b> , lubricated swivel joint, for 1" dia lock rod and 2" wide lock rod connecting rod, X = 3 1/2".....	920535-001X	30908-099
B1	Similar to Ref B except includes cup nuts.....	920535-001-01	30908-099-01 A85-562
B2	Similar to Ref B except X = 2 1/2".....	920535-002X	30908-141
C	<b>LOCK ROD DROP LUG</b> , lubricated swivel joint, for 2" wide lock rod and 1 1/4" dia lock rod connecting rod, X = 3 1/2".....	920535-003X	30908-117
C1	Similar to Ref C except for 2 1/4" wide lock rod.....	920535-004X	30908-102
C2	<b>LOCK ROD DROP LUG</b> , lubricated swivel joint, for 2" wide lock rod and 1 1/4" dia lock rod connecting rod, X = 4 15/16".....	920535-005X	N/A
C3	Similar to Ref C2 except for 2 1/4" wide lock rod.....	920535-009X	30908-109
D	<b>LOCK ROD DROP LUG</b> , slip joint for 1" dia lock rod and 2" wide lock rod connecting rod, X = 4 15/16", Y = 3 1/2".....	920530-003	30908-098
D1	Similar to Ref D except Y = 2".....	920530-004	30908-163
E	<b>LOCK ROD DROP LUG</b> , slip joint, for 1" dia lock rod and 2" wide lock rod connecting rod, X = 4 3/4".....	920530-005X	N/A
F	<b>BOLT COMPLETE</b> , 3/4"-10 unc X 2 1/2" long hex head, with lock washer and hex nut, for fastening lugs to lock rod connecting rod.....	910108X	6013-029-01 P85-1211

# LOCK ROD DROP LUG

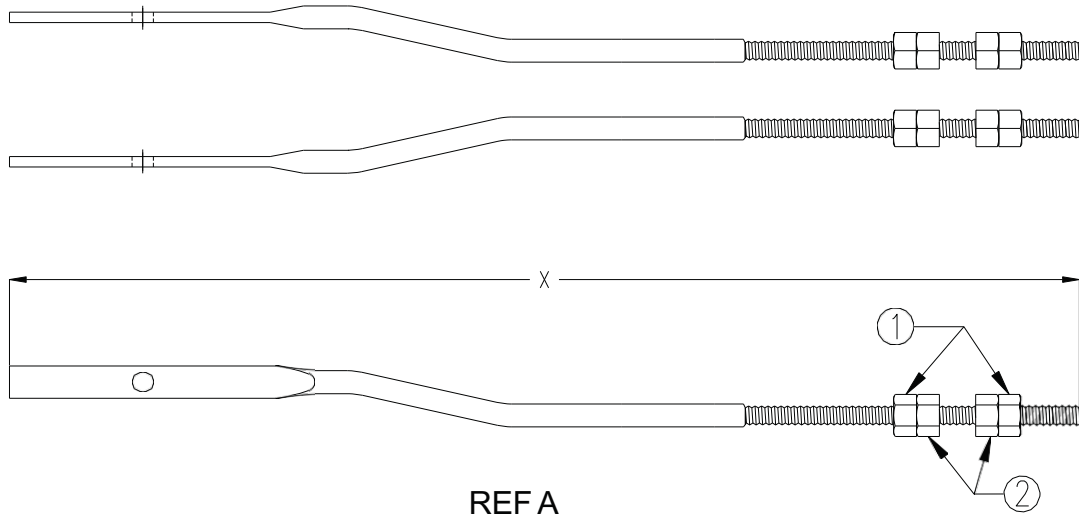


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD DROP LUG</b> , for 5/8" thick lock rod connecting rod, X = 2 3/8"....	820540-001X	N107246
A1	Similar to Ref A except X = 3".....	820540-002X	N/A
A2	Similar to Ref A except X = 3 1/2".....	820540-003X	N/A
A3	Similar to Ref A except for 1" thick lock rod connecting rod.....	820540-004X	N223725
A4	Similar to Ref A3 except X = 3".....	820540-005X	N/A
A5	Similar to Ref A3 except X = 3 1/2".....	820540-006X	N/A
B	<b>LOCK ROD DROP LUG</b> , for 5/8" thick lock rod connecting rod, X = 2 3/8"....	820540-007X	N257403
B1	Similar to Ref B except X = 3".....	820540-008X	N/A
B2	Similar to Ref B except X = 3 1/2".....	820540-009X	N/A
B3	Similar to Ref B except for 1" thick lock rod connecting rod.....	820540-010X	N273920
B4	Similar to Ref B3 except X = 3".....	820540-011X	N/A
B5	Similar to Ref B3 except X = 3 1/2".....	820540-012X	N257403-001
C	<b>LOCK ROD DROP LUG</b> , for 5/8" thick lock rod connecting rod, X = 2 3/8"....	820540-013X	N451598-2502
D	<b>LOCK ROD DROP LUG</b> , for 5/8" thick lock rod connecting rod.....	820541-001X	N123471
D1	Similar to Ref D except with elastic stop nut and no lock washer, RR Detail 04110.....	820541-002X	N/A
D2	Similar to Ref D except for 1" thick lock rod connecting rod.....	820541-003X	N123471-001
D3	Similar to Ref D except bolt assembly is secured with cotter pin.....	820541-004X	N291521
1	<b>WASHER</b> , for Ref A, B, C & D.....	820542	M117198



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD</b> , for use with SL-6A electric switch lock, X = 89".....	816437-001X	N314378
A1	Similar to Ref A except X = 70".....	816437-002X	N394567
A2	Similar to Ref A except X = 94".....	816437-003X	N249063
A3	Similar to Ref A except X = 86 3/4".....	816437-004X	N249230
A4	Similar to Ref A except X = 42".....	816437-005X	N263203
A5	Similar to Ref A except X = 172 1/2".....	816437-006X	N280187
A6	Similar to Ref A except X = 137".....	816437-007X	N451419-0501
A7	Similar to Ref A except X = 119 5/8".....	816437-008X	N451419-0504
B	<b>LOCK ROD</b> , for use with SL-6 electric switch lock, X = 147", 2 3/8" downset	816438-001X	N329331
B1	Similar to Ref B except X = 141 1/4", 2 3/8" downset.....	816438-002X	N337798
B2	Similar to Ref B except X = 141", 2 3/8" downset.....	816438-003X	N395025
B3	Similar to Ref B2 except hole located differently, 2 3/8" downset.....	816438-004X	N395032
B4	Similar to Ref B except X = 249", 2 3/8" downset.....	816438-005X	N398687
B5	Similar to Ref B except X = 154", 3" downset.....	816438-006X	N434458
B6	Similar to Ref B except X = 142", 3" downset.....	816438-007X	N438667-001
B7	Similar to Ref B except X = 139", 3" downset.....	816438-008X	N439002-009
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

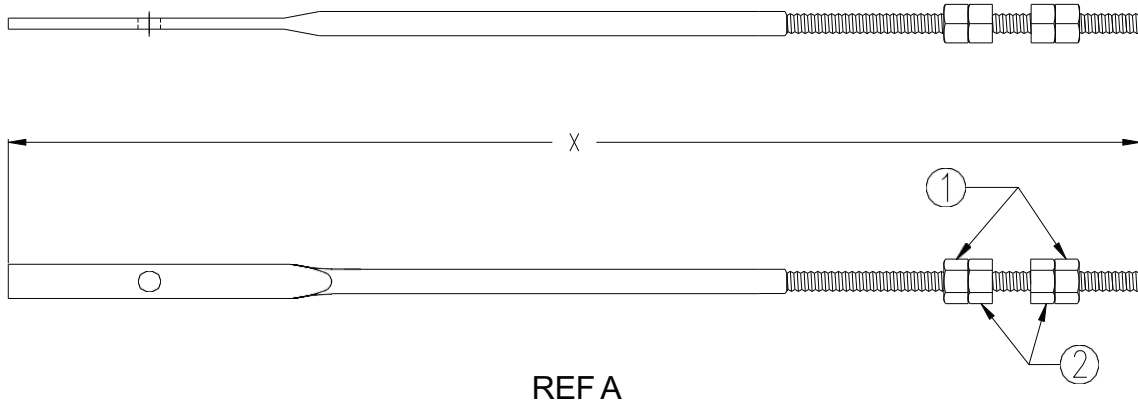
For custom rods other than those shown, specify Model 816437 or 816438 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	LOCK ROD, for use with SL-6A electric switch lock, per view Y, X = 152", 1 1/4 sideset, 3" downset .....	816439-001X	N260677
A1	Similar to Ref A except per view Z.....	816439-002X	N260679
A2	Similar to Ref A except X = 98", 1 3/8" sideset .....	816439-003X	N439002-003
A3	Similar to Ref A2 except per view Z.....	816439-004X	N439002-001
A4	Similar to Ref A except X = 139", 1 3/8" sideset .....	816439-005X	N439002-007
A5	Similar to Ref A4 except per view Z.....	816439-006X	N439002-005
A6	Similar to Ref A except X = 170", 1 1/8" sideset .....	816439-007X	N439002-013
A7	Similar to Ref A6 except per view Z.....	816439-008X	N439002-011
A8	Similar to Ref A except X = 124", 1 1/8" sideset .....	816439-009X	N439002-017
A9	Similar to Ref A8 except per view Z.....	816439-010X	N439002-019
A10	Similar to Ref A except X = 94 1/2", 1" sideset .....	816439-011X	N439002-023
A11	Similar to Ref A10 except per view Z.....	816439-012X	N439002-021
A12	Similar to Ref A except X = 154 3/4", 1 1/8" sideset .....	816439-013X	N439002-015
A13	Similar to Ref A except X = 148", 1" sideset .....	816439-014X	N238813
A14	Similar to Ref A13 except per view Z.....	816439-015X	N238811
A15	Similar to Ref A except X = 169 7/8", 1 1/8" sideset, 2 1/8" downset.....	816439-016X	N451419-2702
1	CUPPED HEAVY HEX NUT, 1 1/4"-7 UNC.....	810522	M182522 545-16
2	HEAVY HEX NUT, 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

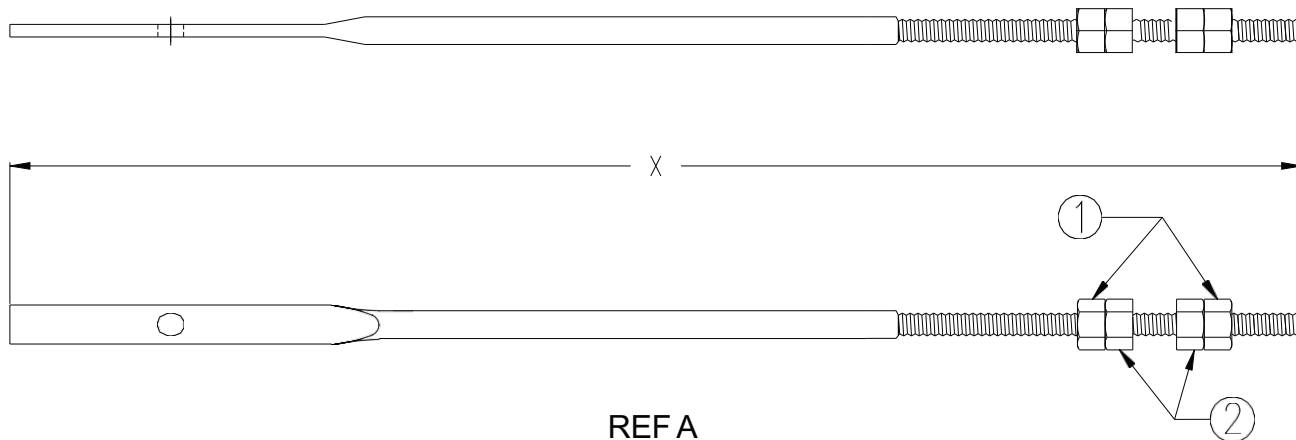
For custom rods other than those shown, specify Model 816439 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD</b> , for Model 9B/10 electric lock, X = 152", thread length = 16".....	916010-001X	14095-009-01 A50-206
A1	Similar to Ref A except no hardware.....	916010-001	14094-043
A2	<b>LOCK ROD</b> , for Model 9B/10 electric lock, X = 94", thread length = 16".....	916010-002X	14095-009-02 A50-205
A3	Similar to Ref A2 except no hardware.....	916010-002	14094-044
A4	<b>LOCK ROD</b> , for Model 9B/10 electric lock, X = 75", thread length = 8".....	916010-068X	14095-010-01
A5	Similar to Ref A4 except no hardware.....	916010-068	14094-068
A6	Similar to Ref A4 except X = 142", thread length = 12".....	916010-025	14094-025
A7	Similar to Ref A4 except X = 80", thread length = 12".....	916010-026	14094-026
A8	Similar to Ref A4 except X = 160", thread length = 12".....	916010-027	14094-027
A9	Similar to Ref A4 except X = 77", thread length = 12".....	916010-028	14094-028
A10	Similar to Ref A4 except X = 89", thread length = 12".....	916010-029	14094-029
A11	Similar to Ref A4 except X = 152", thread length = 12".....	916010-035	14094-035
A12	Similar to Ref A4 except X = 94", thread length = 12".....	916010-042	14094-042
A13	Similar to Ref A4 except X = 125", thread length = 12".....	916010-045	14094-045
A14	Similar to Ref A4 except X = 145", thread length = 12".....	916010-046	14094-046
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 916010 rod and dimensions





REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOCK ROD</b> , for Model 9B/10 electric lock, without hardware, X = 92", thread length = 12".....	916010-048	14094-048
A1	Similar to Ref A except X = 99 3/4", thread length = 16".....	916010-050	14094-050
A2	Similar to Ref A except X = 125", thread length = 16".....	916010-051	14094-051
A3	Similar to Ref A except X = 74", thread length = 6".....	916010-053	14094-053
A4	Similar to Ref A except X = 99 3/4", thread length = 22".....	916010-059	14094-059
A5	Similar to Ref A except X = 162", thread length = 16".....	916010-062	14094-062
A6	Similar to Ref A except X = 164", thread length = 16".....	916010-063	14094-063
A7	Similar to Ref A except X = 123", thread length = 16".....	916010-064	14094-064
A8	Similar to Ref A except X = 141", thread length = 16".....	916010-066	14094-066
A9	Similar to Ref A except X = 84", thread length = 16".....	916010-067	14094-067
A10	Similar to Ref A except X = 108", thread length = 16".....	916010-069	14094-069
A11	Similar to Ref A except X = 160", thread length = 16".....	916010-070	14094-070
A12	Similar to Ref A except X = 102", thread length = 16".....	916010-072	14094-072
A13	Similar to Ref A except X = 92", thread length = 16".....	916010-080	14094-080
1	<b>CUPPED HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	810522	M182522 545-16
2	<b>HEAVY HEX NUT</b> , 1 1/4"-7 UNC.....	990331-125-02	J048176 545-7

For custom rods other than those shown, specify Model 916010 rod and dimensions



# POINT DETECTOR CONNECTING RODS & LUGS

## SECTION F

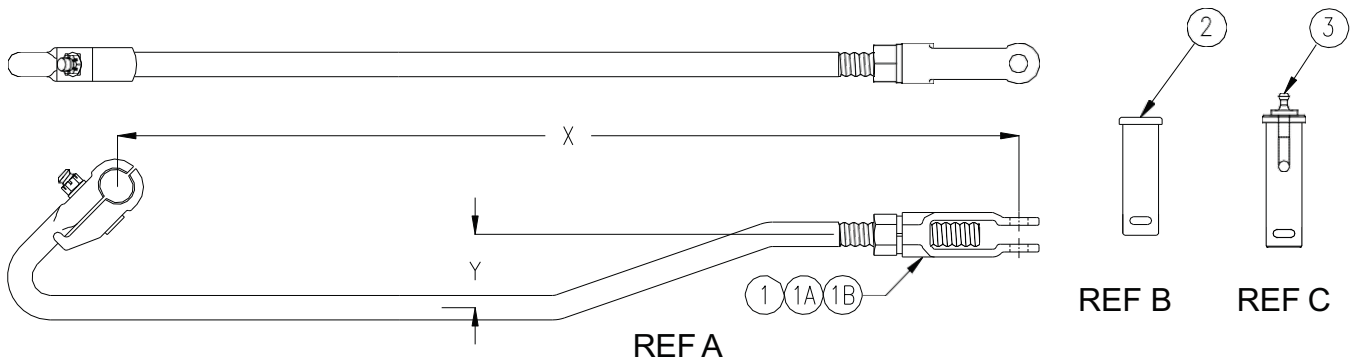
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# F-1

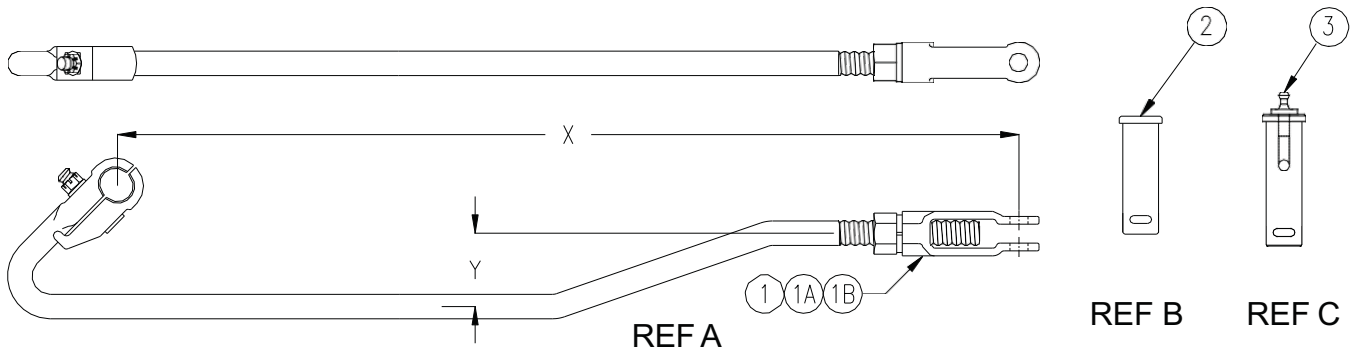
# POINT DETECTOR CONNECTING RODS



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , X = 37", Y = 3 1/2".....	830208-030CX	N193019
A1	Similar to Ref A except with non-lubricated jaw pin.....	830208-030-02	X348154
A2	Similar to Ref A except X = 48", Y = 5 1/4".....	830208-034CX	N258253
A3	Similar to Ref A except X = 43 1/2", Y = 5 1/4".....	830208-035CX	N258253-001
A4	Similar to Ref A except X = 38 1/2", Y = 5 1/8".....	830208-029CX	N263563
A5	Similar to Ref A except X = 42", Y = 5 3/4".....	830208-036CX	N296410
A6	Similar to Ref A except X = 37 1/2", Y = 5 3/8".....	830208-037CX	N298719
A7	Similar to Ref A except X = 37 1/4", Y = 6 7/8".....	830208-038CX	N310691
A8	Similar to Ref A except X = 41 1/2", Y = 5".....	830208-031CX	N346778-004
A9	Similar to Ref A except X = 35", Y = 3 3/4".....	830208-039CX	N346778-006
A10	Similar to Ref A except X = 50 1/4", Y = 4 7/8".....	830208-040CX	N349446
A11	Similar to Ref A except X = 39 1/2", Y = 5".....	830208-041CX	N382956
B	<b>JAW PIN COMPLETE</b> , non-lubricated, 5/8" dia X 2 3/16" with cotter pin.....	890590-008X	N/A
C	<b>JAW PIN COMPLETE</b> , lubricated, 5/8" dia X 2 3/16" with cotter pin and grease fitting.....	890590-006X	N/A
1	<b>SCREW JAW COMPLETE</b> , with Ref B jaw pin complete.....	833755-000-01	X438801
1A	Similar to Ref 1 except with Ref C jaw pin complete.....	833755-000-02	N/A
1B	<b>SCREW JAW ONLY</b> .....	833755	M003755
2	<b>JAW PIN ONLY</b> , non-lubricated.....	890590-008	M000328
3	<b>JAW PIN ONLY</b> , lubricated.....	890590-006	M195190

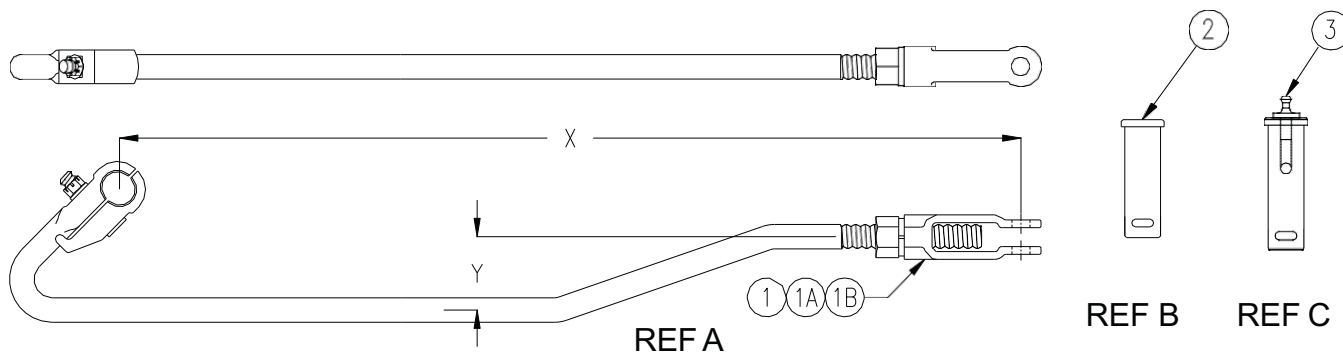
For custom rods other than those shown, specify Model 830208 rod and dimensions



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , X = 34 1/4", Y = 5".....	830208-042CX	N433406
A1	Similar to Ref A except X = 32 1/2", Y = 5 3/8".....	830208-043CX	N433406-001
A2	Similar to Ref A except X = 42", Y = 5".....	830208-044CX	N434529-001
A3	Similar to Ref A except X = 37 3/4", Y = 5 1/2".....	830208-045CX	N439031
A4	Similar to Ref A except X = 35 3/4", Y = 5 1/2".....	830208-046CX	N439031-001
A5	Similar to Ref A except X = 89 1/2", Y = 5".....	830208-047CX	N438575
A6	Similar to Ref A except X = 33", Y = 3 3/4".....	830208-048CX	N438575-001
A7	Similar to Ref A except X = 37 1/2", Y = 7 3/8".....	830208-049CX	N438575-002
A8	Similar to Ref A except X = 36 1/2", Y = 8".....	830208-050CX	N438575-003
A9	Same as Ref A except X = 25", Y = 1".....	830208-051CX	N438575-004
A10	Similar to Ref A except X = 24", Y = 3 1/2".....	830208-052CX	N438575-005
A11	Similar to Ref A except X = 31 1/2", Y = 5".....	830208-053CX	N438575-006
B	<b>JAW PIN COMPLETE</b> , non-lubricated, 5/8" dia X 2 3/16"with cotter pin.....	890590-008X	N/A
C	<b>JAW PIN COMPLETE</b> , lubricated, 5/8" dia X 2 3/16"with cotter pin and grease fitting.....	890590-006X	N/A
1	<b>SCREW JAW COMPLETE</b> , with Ref B jaw pin complete.....	833755-000-01	X438801
1A	Similar to Ref 1 except with Ref C jaw pin complete.....	833755-000-02	N/A
1B	<b>SCREW JAW ONLY</b> .....	833755	M003755
2	<b>JAW PIN ONLY</b> , non-lubricated.....	890590-008	M000328
3	<b>JAW PIN ONLY</b> , lubricated.....	890590-006	M195190

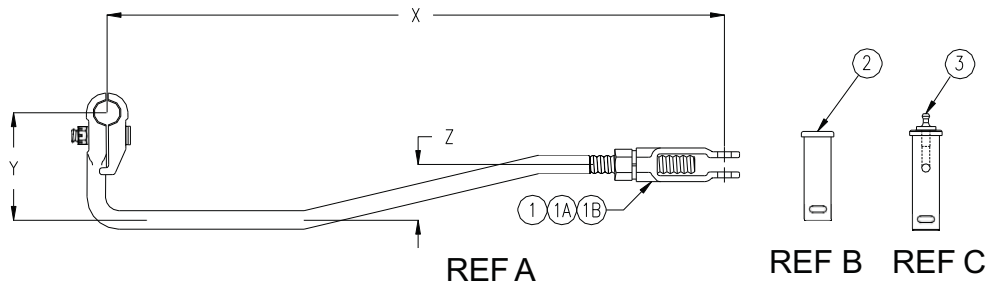
For custom rods other than those shown, specify Model 830208 rod and dimensions



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , X = 34 1/2", Y = 3 3/4".....	830208-027CX	N438575-007
A1	Similar to Ref A except X = 33 1/2", Y = 4 1/8".....	830208-054CX	N438575-008
A2	Similar to Ref A except X = 33 3/8", Y = 3 1/8".....	830208-055CX	N451378-5601
A3	Similar to Ref A except X = 33 3/8", Y = 3 3/4".....	830208-056CX	N451378-5602
A4	Similar to Ref A except X = 33 3/8", Y = 4 1/8".....	830208-057CX	N451378-5603
A5	Similar to Ref A except X = 23 1/2", Y = 6 1/4".....	830208-058CX	N451378-5604
A6	Similar to Ref A except 1 1/4" dia rod, X = 41 13/16", Y = 4 5/16".....	830208-059CX	N451846-3101
A7	Similar to Ref A except X = 33", Y = 5 1/2".....	830208-060CX	N451378-5101
A8	Similar to Ref A except X = 32", Y = 5 7/8".....	830208-061CX	N451378-5102
A9	Similar to Ref A except X = 34 3/4", Y = 5 7/8".....	830208-062CX	N451378-5103
A10	Similar to Ref A except X = 31", Y = 4 3/8".....	830208-028CX	N451378-5104
A11	Similar to Ref A except X = 40", Y = 5 1/8".....	830208-063CX	N451378-5105
B	<b>JAW PIN COMPLETE</b> , non-lubricated, 5/8" dia X 2 3/16"with cotter pin.....	890590-008X	N/A
C	<b>JAW PIN COMPLETE</b> , lubricated, 5/8" dia X 2 3/16" with cotter pin and grease fitting.....	890590-006X	N/A
1	<b>SCREW JAW COMPLETE</b> , with Ref B jaw pin complete.....	833755-000-01	X438801
1A	Similar to Ref 1 except with Ref C jaw pin complete.....	833755-000-02	N/A
1B	<b>SCREW JAW ONLY</b> .....	833755	M003755
2	<b>JAW PIN ONLY</b> , non-lubricated.....	890590-008	M000328
3	<b>JAW PIN ONLY</b> , lubricated.....	890590-006	M195190

For custom rods other than those shown, specify Model 830208 rod and dimensions

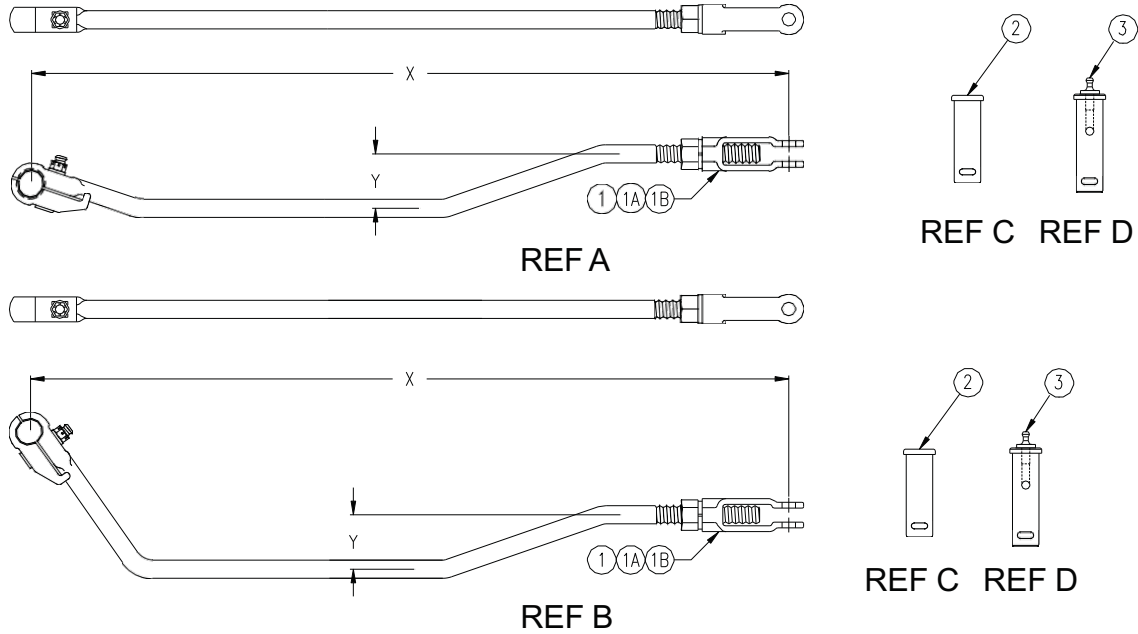


\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , for use with ball & socket connection, X = 40 3/4", Y = 4 1/4", Z = 5 3/4".....	830214-001CX	N246921
A1	Similar to Ref A except X = 41 3/4", Y = 4 1/4", Z = 5 5/8".....	830214-002CX	N265991
A2	Similar to Ref A except X = 39 1/2", Y = 4 1/4", Z = 5 1/4".....	830214-003CX	N268962
A3	Similar to Ref A except X = 35 3/4", Y = 4 1/4", Z = 2 3/4".....	830214-004CX	N274583
A4	Similar to Ref A except X = 52 3/4", Y = 4 1/4", Z = 5 7/8".....	830214-005CX	N277312
A5	Similar to Ref A except X = 51", Y = 4 1/4", Z = 5 5/16".....	830214-006CX	N277313
A6	Similar to Ref A except X = 38 1/4", Y = 4 1/4", Z = 7 1/4".....	830214-007CX	N288577
A7	Similar to Ref A except X = 40", Y = 4 1/4", Z = 5".....	830214-008CX	N299599
A8	Similar to Ref A except X = 33 3/4", Y = 4 1/4", Z = 5 1/2".....	830214-009CX	N299751
A9	Similar to Ref A except X = 53 1/4", Y = 4 1/4", Z = 5 1/2".....	830214-010CX	N301158
A10	Similar to Ref A except X = 85 1/2", Y = 5 3/4", Z = 6 3/4".....	830214-011CX	N308199
A11	Similar to Ref A except X = 55 1/2", Y = 4 1/4", Z = 5 5/16".....	830214-012CX	N333373
A12	Similar to Ref A except X = 41 1/2", Y = 4 1/4", Z = 5 5/16".....	830214-013CX	N333461
A13	Similar to Ref A except X = 95", Y = 4 1/4", Z = 4 3/4".....	830214-014CX	N337673
A14	Similar to Ref A except X = 40", Y = 4 1/4", Z = 5 1/2".....	830214-015CX	N/A
A15	Similar to Ref A except X = 37", Y = 4 1/4", Z = 5 3/8".....	830214-016CX	N/A
B	<b>JAW PIN COMPLETE</b> , non-lubricated, 5/8" dia X 2 3/16" with cotter pin.....	890590-008X	N/A
C	<b>JAW PIN COMPLETE</b> , lubricated, 5/8" dia X 2 3/16 "with cotter pin and grease fitting.....	890590-006X	N/A
1	<b>SCREW JAW COMPLETE</b> , with Ref B jaw pin complete.....	833755-000-01	X438801
1A	Similar to Ref 1 except with Ref C jaw pin complete.....	833755-000-02	N/A
1B	<b>SCREW JAW ONLY</b> .....	833755	M003755
2	<b>JAW PIN ONLY</b> , non-lubricated.....	890590-008	M000328
3	<b>JAW PIN ONLY</b> , lubricated.....	890590-006	M195190

For custom rods other than those shown, specify Model 830214 rod and dimensions

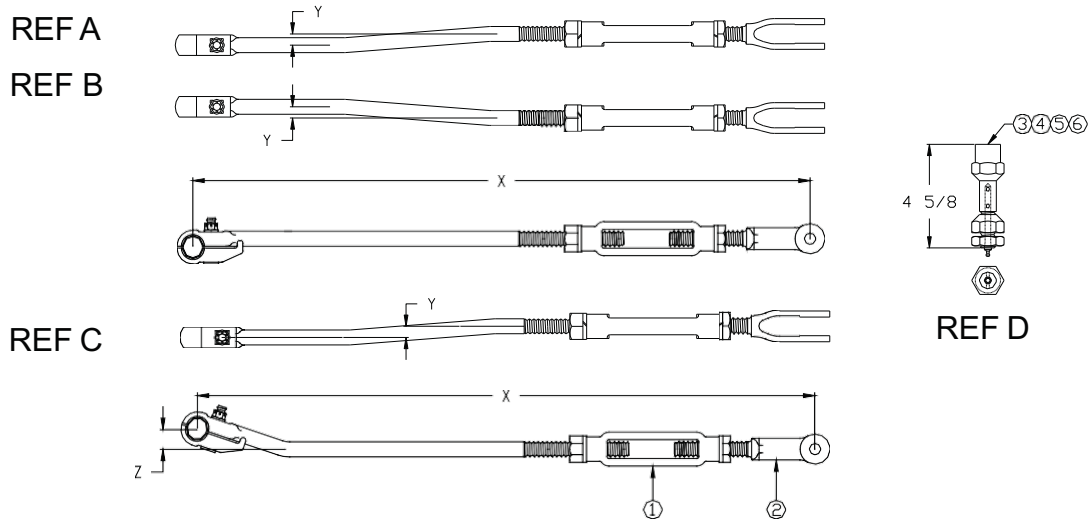
POINT DETECTOR CONNECTING RODS



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT DETECTOR CONNECTING ROD, for moveable point frog layouts, X = 54", Y = 5 3/16".....	830210-004CX	N285395
A1	Similar to Ref A except X = 55 1/8", Y = 6".....	830210-005CX	N307244
A2	Similar to Ref A except X = 43 1/2", Y = 5 1/2".....	830210-006CX	N316716
A3	Similar to Ref A except X = 43 1/4", Y = 5 9/16".....	830210-007CX	N322009
A4	Similar to Ref A except X = 46", Y = 5 1/4".....	830210-008CX	N337698
A5	Similar to Ref A except X = 40 1/2", Y = 6 5/8".....	830210-009CX	N337698-001
A6	Similar to Ref A except X = 27 1/2", Y = 5".....	830210-010CX	N337698-002
A7	Similar to Ref A except X = 47 1/2", Y = 5".....	830210-011CX	N337698-003
B	POINT DETECTOR CONNECTING ROD, X = 81 1/2", Y = 5 7/8".....	830210-012CX	N451378-5501
B1	Similar to Ref B except X = 82 1/4", Y = 5 1/4".....	830210-013CX	N451378-5701
B2	Similar to Ref B except X = 82 1/4", Y = 6 1/8".....	830210-014CX	N451378-5702
B3	Similar to Ref B except X = 76 1/2", Y = 6 1/2".....	830210-015CX	N451378-5703
C	JAW PIN COMPLETE, non-lubricated, 5/8" dia X 2 3/16" long with flat washer and cotter pin.....	890590-008X	N/A
D	JAW PIN COMPLETE, lubricated, 5/8" dia X 2 3/16" long with flat washer, cotter pin and grease fitting.....	890590-006X	N/A
1	SCREW JAW COMPLETE, with Ref C jaw pin complete.....	833755-000-01	X438801
1A	Similar to Ref 1 except with Ref D jaw pin complete.....	833755-000-02	N/A
1B	SCREW JAW ONLY.....	833755	M003755
2	JAW PIN ONLY, non-lubricated.....	890590-008	M000328
3	JAW PIN ONLY, lubricated.....	890590-006	M195190

For custom rods other than those shown, specify Model 830210 rod and dimensions

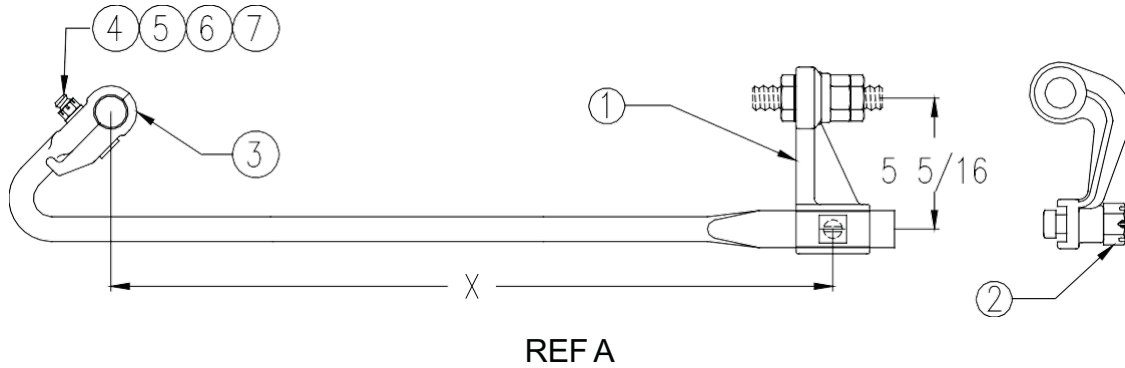


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , For Model A-10 movements, X = 36", Y = 5/8".....	830217-001X	N282122
A1	Similar to Ref A except X = 34 1/4", Y = 5/8".....	830217-002X	N297793
A2	Similar to Ref A except X = 42", Y = 3/4".....	830217-003X	N372659
A3	Similar to Ref A except X = 40 1/2", Y = 3/4".....	830217-004X	N434835
A4	Similar to Ref A except X = 40 1/2", Y = 1 3/4".....	830217-005X	N434835-001
A5	Similar to Ref A except X = 38", Y = 2".....	830217-006X	N434835-002
A6	Similar to Ref A except X = 41", Y = 5/8".....	830217-007X	N434835-003
B	<b>POINT DETECTOR CONNECTING ROD</b> , For Model A-10 movements, X = 40 1/2", Y = 1 3/4".....	830217-008X	N451378-0401
B1	Similar to Ref B except X = 38", Y = 2".....	830217-009X	N451378-0402
C	<b>POINT DETECTOR CONNECTING ROD</b> , for Model A-10 movements, X = 47", Y = 1 1/4", Z = 5/8".....	830217-010X	N282123
C1	Similar to Ref C except X = 42", Y = 1 3/4", Z = 7/16".....	830217-011X	N387355
C2	Similar to Ref C except X = 46 1/4", Y = 1 3/4", Z = 5/8".....	830217-012X	N398355
D	<b>ROCKER ARM SWIVEL BOLT ASSEMBLY</b> , for Model A-10 movements..	830296X	N/A
1	<b>TURNBUCKLE</b> , 1"-8 UNC.....	830294	M266656
2	<b>SCREW JAW</b> .....	830295	M162413
3	<b>BOLT</b> , for rocker arm swivel.....	830296	M162414
4	<b>NUT</b> , for Ref 8.....	830297	M162415
5	<b>JAM NUT</b> , 3/4"-10 hex.....	990330-075-02	J048023
6	<b>LUBRICATION FITTING</b> , 1/8" PT, 67 1/2 degree.....	890900-007	J039142

For custom rods other than those shown, specify Model 830217 rod and dimensions



**POINT DETECTOR CONNECTING RODS**

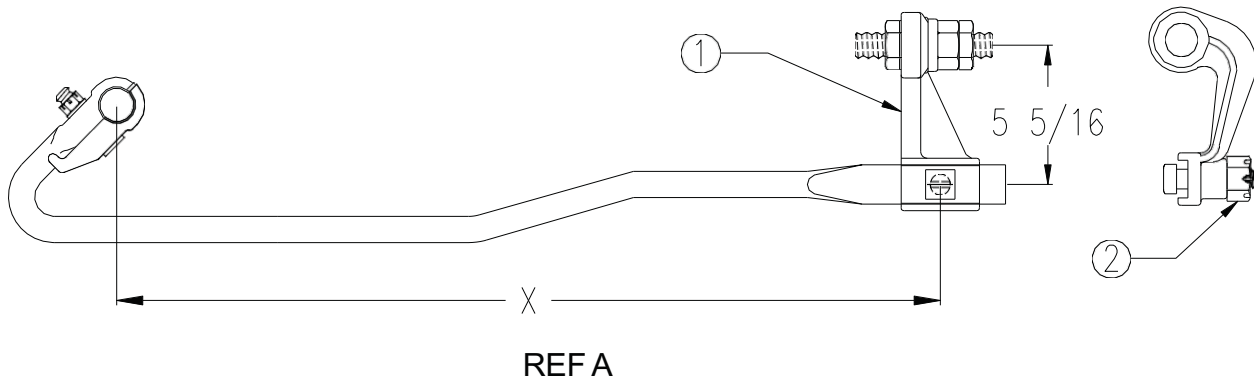


REF A

\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , X = 33 1/8".....	830209-015LX	N257849
A1	Similar to Ref A except X = 36 1/4".....	830209-016LX	N296653
A2	Similar to Ref A except X = 39 1/2".....	830209-017LX	N297383
A3	Similar to Ref A except X = 38".....	830209-018LX	N297383-001
A4	Similar to Ref A except X = 32 3/4".....	830209-019LX	N297383-002
A5	Similar to Ref A except X = 48".....	830209-013LX	N297383-003
A6	Similar to Ref A except X = 38".....	830209-021LX	N297383-004
A7	Similar to Ref A except X = 35".....	830209-022LX	N297383-005
A8	Similar to Ref A except X = 30 1/2".....	830209-023LX	N297383-006
A9	Similar to Ref A except X = 25 3/4".....	830209-024LX	N297383-007
A10	Similar to Ref A except X = 21 3/4".....	830209-025LX	N297383-008
1	<b>POINT DETECTOR DROP LUG COMPLETE</b> .....	920531X	X243851
2	<b>BOLT COMPLETE</b> .....	920534X	X348252
3	<b>CLAMP ONLY</b> , for 1" dia ball & socket style point detector connecting rods..	830200	M187470
3A	Similar to Ref 3 except for 1 1/4" dia rod.....	830201	M187470-001
4	<b>PLOW BOLT COMPLETE</b> , 5/8"-11 UNC X 3 1/4" long, square head, with lock washer, nut & cotter pin.....	830202X	X372261
4A	Similar to Ref 4 except plow bolt only.....	991409-325-107	M272145
4B	Similar to Ref 4A except 3" long.....	991409-300-101	M187491
4C	Similar to Ref 4B except drilled at 2 3/4".....	991409-300-102	M187491-001
5	<b>LOCK WASHER</b> , 13/16" hi-power.....	990404-081-02	J047546
6	<b>SLOTTED HEX NUT</b> , 5/8"-11 UNC.....	990312-062-02C	J048180
7	<b>COTTER PIN</b> , 1/8" X 1 1/2" SSTL.....	990506-150-30	J486001

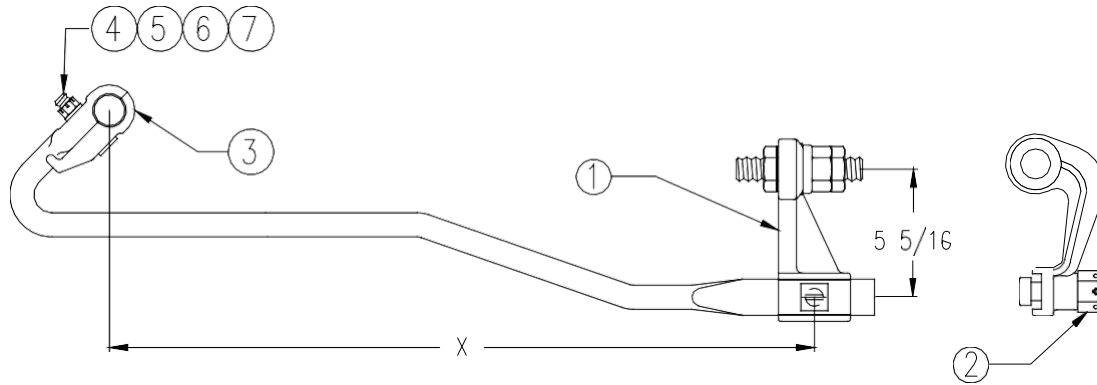
For custom rods other than those shown, specify Model 830209 rod and dimensions



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT DETECTOR CONNECTING ROD, X = 39 3/8", 2 3/16" offset.....	830209-026LX	N323684
A1	Similar to Ref A except X = 37 1/4", 3 1/8" offset.....	830209-027LX	N326006
A2	Similar to Ref A except X = 38 5/8", 3" offset.....	830209-028LX	N326006-001
A3	Similar to Ref A except X = 40 1/2", 3" offset.....	830209-029LX	N326006-003
A4	Similar to Ref A except X = 48", 2 1/4" offset.....	830209-030LX	N326006-004
A5	Similar to Ref A except X = 41 1/2", 1 1/4" offset.....	830209-031LX	N326006-005
A6	Similar to Ref A except X = 40 15/16", 1 1/8" offset.....	830209-032LX	N326006-006
A7	Similar to Ref A except X = 38 1/2", 1 1/16" offset.....	830209-033LX	N339839
A8	Similar to Ref A except X = 38 1/4", 3 1/8" offset.....	830209-034LX	N381515
A9	Similar to Ref A except X = 36 1/4", 3/4" offset.....	830209-035LX	N382194
A10	Similar to Ref A except X = 42", 3 3/16" offset.....	830209-036LX	N432808
A11	Similar to Ref A except X = 39 1/8", 1 13/16" offset.....	830209-037LX	N451378-5301
A12	Similar to Ref A except X = 39 1/8", 2 3/16" offset.....	830209-038LX	N451378-5302
A13	Similar to Ref A except X = 36 1/8", 2 9/16" offset.....	830209-039LX	N451378-5303
1	POINT DETECTOR DROP LUG COMPLETE.....	920531X	X243851
2	BOLT COMPLETE.....	820534X	X348252

For custom rods other than those shown, specify Model 830209 rod and dimensions

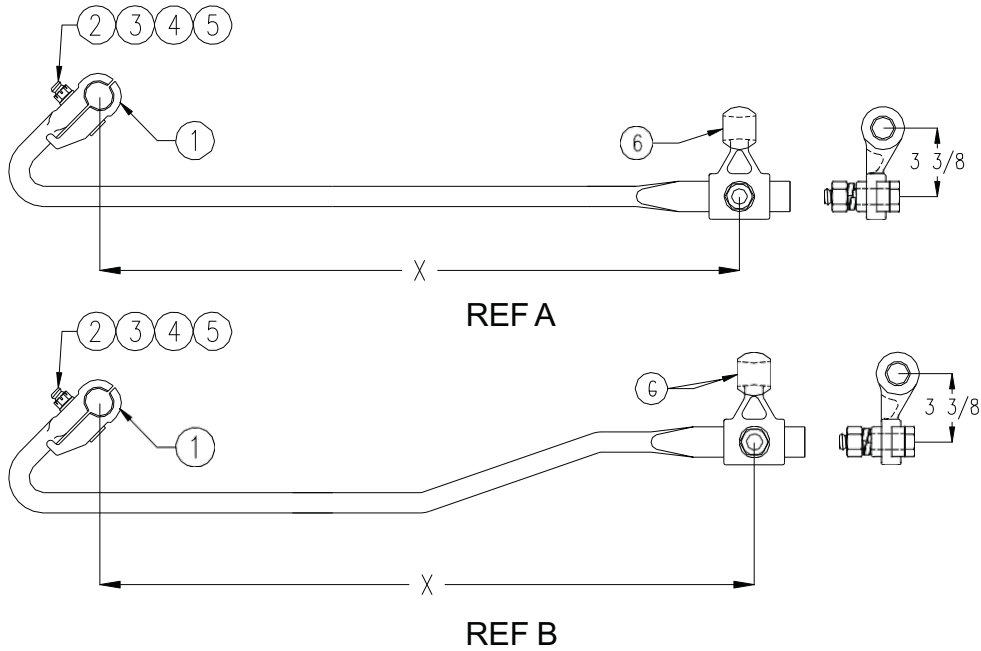


REF A

\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , X = 33", 1 1/4" offset.....	830209-040LX	N451378-0301
A1	Similar to Ref A except X = 22 3/4", 1 11/16" offset.....	830209-041LX	N451378-0302
A2	Similar to Ref A except X = 24 7/16", 1 3/16" offset.....	830209-042LX	N451378-0303
A3	Similar to Ref A except X = 22 3/4", 2 3/16" offset.....	830209-043LX	N451378-0304
A4	Similar to Ref A except X = 22 1/8", 1 3/16" offset.....	830209-044LX	N451378-0305
A5	Similar to Ref A except X = 23 1/8", 1 9/16" offset.....	830209-045LX	N451378-0306
A6	Similar to Ref A except X = 27", 1 1/4" offset.....	830209-046LX	N451378-0307
A7	Similar to Ref A except X = 21 1/8", 1 9/16" offset.....	830209-047LX	N451378-0308
1	<b>POINT DETECTOR DROP LUG COMPLETE</b> .....	920531X	X243851
2	<b>BOLT COMPLETE</b> .....	820534X	X348252
3	<b>CLAMP ONLY</b> , for 1" dia ball & socket style point detector connecting rods..	830200	M187470
3A	Similar to Ref 3 except for 1 1/4" dia rod.....	830201	M187470-001
4	<b>PLOW BOLT COMPLETE</b> , 5/8"-11 UNC X 3 1/4" long, square head, with lock washer, nut & cotter pin.....	830202X	X372261
4A	Similar to Ref 4 except plow bolt only.....	991409-325-107	M272145
4B	Similar to Ref 4A except 3" long.....	991409-300-101	M187491
4C	Similar to Ref 4B except drilled at 2 3/4".....	991409-300-102	M187491-001
5	<b>LOCK WASHER</b> , 13/16" hi-power.....	990404-081-02	J047546
6	<b>SLOTTED HEX NUT</b> , 5/8"-11 UNC.....	990312-062-02C	J048180
7	<b>COTTER PIN</b> , 1/8" X 1 1/2" SSTL.....	990506-150-30	J486001

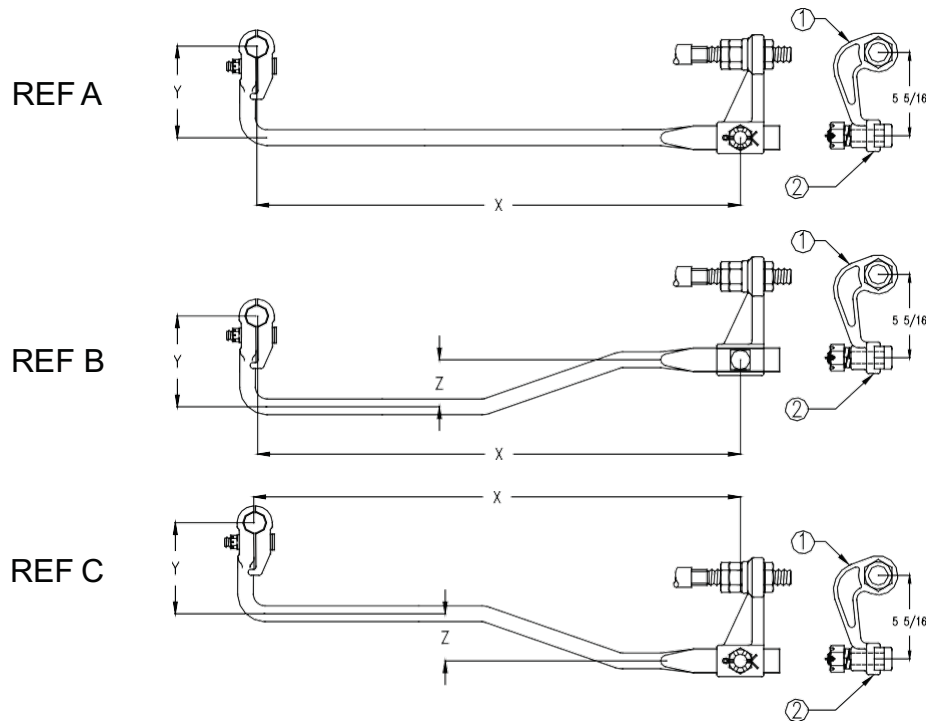
For custom rods other than those shown, specify Model 830209 rod and dimensions



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , for Model T-20/T-21 movements, X = 39 1/2".....	830209-048LX	N378420
A1	Similar to Ref A except X = 51 1/2".....	830209-487LX	N378421
A2	Similar to Ref A except X = 21.....	830209-050LX	N383717
A3	Similar to Ref A except X = 76 1/2".....	830209-051LX	N392523-001
A4	Similar to Ref A except X = 33 5/8".....	830209-052LX	N392523-001
A5	Similar to Ref A except X = 30 3/4.....	830209-053LX	N392523-003
A6	Similar to Ref A except X = 45 1/2".....	830209-054LX	N438806
B	<b>POINT DETECTOR CONNECTING ROD</b> , 33 3/4", 1 3/8" offset.....	830209-55LX	N392523-002
B1	Similar to Ref A except X = 40 1/4", 2 1/8" offset.....	830209-056LX	N390449
1	<b>CLAMP</b> , for 1" dia rod.....	830200	M187470
1A	<b>CLAMP</b> , for 1 1/4" dia rod.....	830201	M187470-001
2	<b>BOLT</b> ,.....	991409-325-107	M272145
3	<b>LOCK WASHER</b> , 13/16" hi-power.....	990404-081-02	J047546
4	<b>SLOTTED HEX NUT</b> , 5/8"-11 UNC.....	990312-062-02C	J048180
5	<b>COTTER PIN</b> , 1/8" X 1 1/2" SSTL.....	990506-150-30	J486001
6	<b>POINT DETECTOR DROP LUG</b> , swivel joint, for 1" dia point dector bar.....	820435-001	M376808

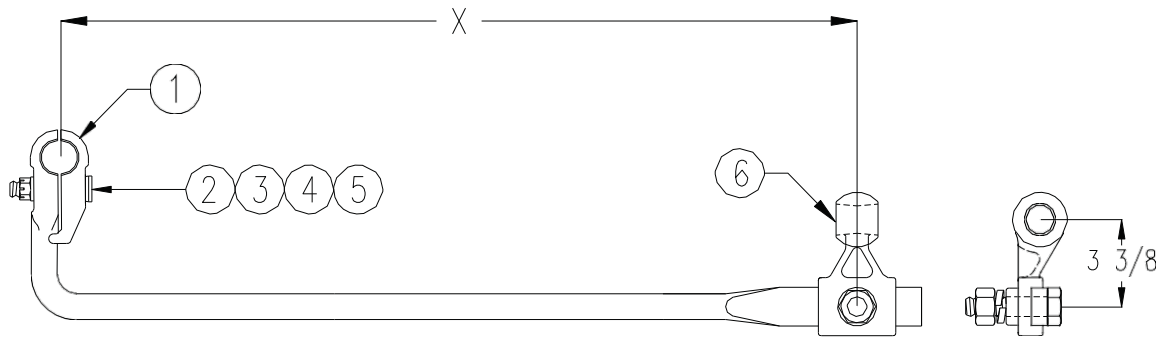
For custom rods other than those shown, specify Model 830209 rod and dimensions



\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD COMPLETE, 1" dia, X = 38", Y = 4 3/4"</b> .....	830215-015LX	N/A
A1	Similar to Ref A except X = 40".....	830215-016LX	N/A
B	<b>POINT DETECTOR CONNECTING ROD COMPLETE, 1" dia, X= 75", Y = 4 3/4", Z = 3"</b> .....	830215-017LX	N347983
B1	Similar to Ref B except X = 40 3/4", Y = 4 1/4", Z = 3".....	830215-018LX	N336007
B2	Similar to Ref B except X = 35 3/4", Y = 4 3/4", Z = 13/16".....	830215-019LX	N336007-001
B3	Similar to Ref B except X = 37 3/4", Y = 4 3/4", Z = 13/16".....	830215-020LX	N336007-002
B4	Similar to Ref B except X = 36", Y = 4 9/16", Z = 1 3/16".....	830215-021LX	N336007-003
B5	Similar to Ref B except X = 41", Y = 4 3/4", Z = 2 15/16".....	830215-022LX	N49110501
C	<b>POINT DETECTOR CONNECTING ROD COMPLETE, 1" dia, X = 24 1/2", Y = 4 3/4", Z = 9/16"</b> .....	830215-023LX	N451378-2301
1	<b>POINT DETECTOR DROP LUG COMPLETE</b> .....	920531X	X243851
2	<b>BOLT COMPLETE</b> .....	820534X	X348252

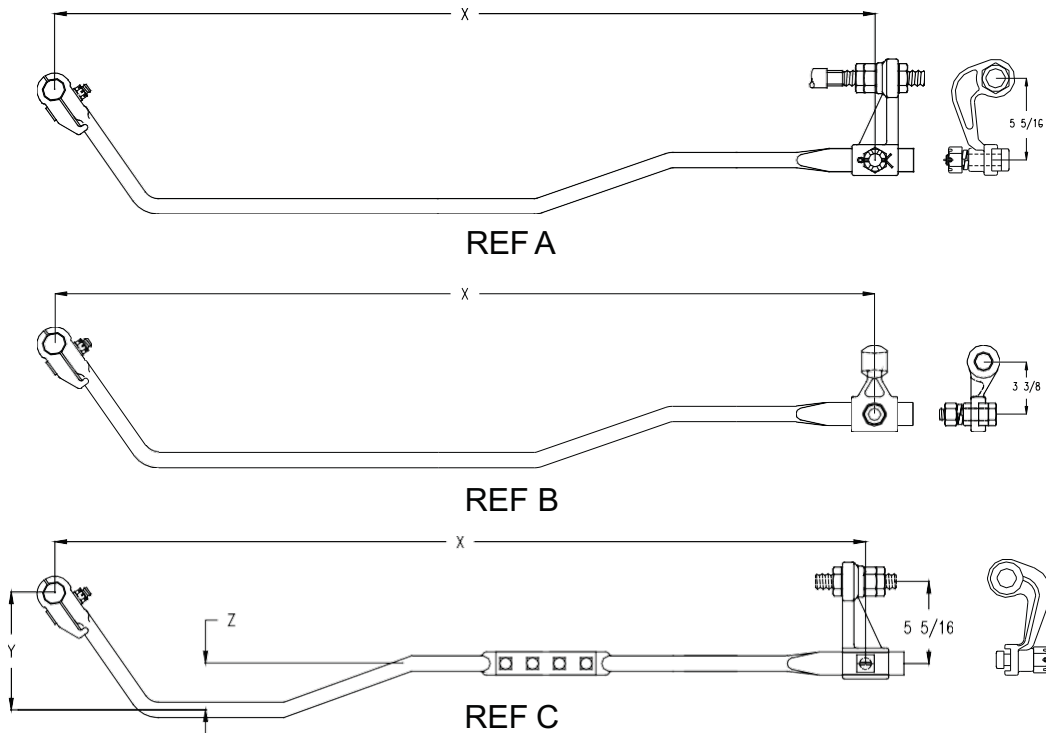
For custom rods other than those shown, specify Model 830215 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , for Model T-20/T-21 movements, X = 24 1/2".....	830215-001LX	N378436
A1	Similar to Ref A except X = 43".....	830215-002LX	N378437
A2	Similar to Ref A except X = 55 1/2".....	830215-003LX	N378438
A3	Similar to Ref A except X = 80".....	830215-004LX	N378439
A4	Similar to Ref A except X = 45 3/4".....	830215-005LX	N381925
A5	Similar to Ref A except X = 44 1/2".....	830215-006LX	N382357
A6	Similar to Ref A except X = 69".....	830215-007LX	N382944
A7	Similar to Ref A except X = 53".....	830215-008LX	N383324
A8	Similar to Ref A except X = 29 1/2".....	830215-009LX	N389015
A9	Similar to Ref A except X = 66".....	830215-010LX	N393341
A10	Similar to Ref A except X = 88".....	830215-011LX	N396283
A11	Similar to Ref A except X = 60 1/4".....	830215-012LX	N398283
A12	Similar to Ref A except X = 21 3/4".....	830215-013LX	N434945
A13	Similar to Ref A except X = 31 1/4".....	830215-014LX	N435848
1	<b>CLAMP</b> , for 1" dia rod.....	830200	M187470
1A	<b>CLAMP</b> , for 1 1/4" dia rod.....	830201	M187470-001
2	<b>BOLT</b> .....	991409-325-107	M272145
3	<b>LOCK WASHER</b> , 13/16" hi power.....	990404-081-02	J047546
4	<b>HEX SLOTTED NUT</b> , 5/8"-11 UNC.....	990312-062-02C	J048180
5	<b>COTTER PIN</b> , 1/8" X 1/8" X 1 1/2" SSSL.....	990506-150-30	J486001
6	<b>POINT DETECTOR DROP LUG</b> , swivel joint, for 1" dia point detector bar....	820435-001	M376808

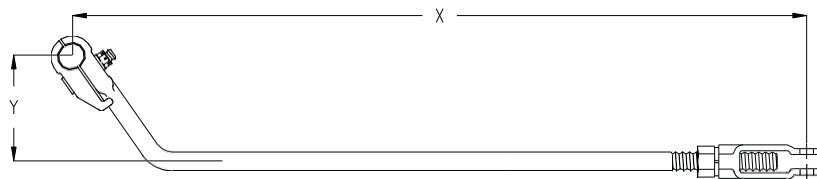
For custom rods other than those shown, specify Model 830215 rod and dimensions



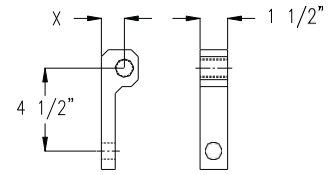
\* AVAILABLE IN 1" OR 1 1/4" DIAMETER  
 \* BALL & SOCKET CONNECTION

REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT DETECTOR CONNECTING ROD, X = 79 1/2", 1 7/8" offset.....	830211-001LX	N451378-4801
A1	Similar to Ref A except X = 85", 3 1/16" offset.....	830211-002LX	N451378-4806
B	POINT DETECTOR CONNECTING ROD, X = 34", 3 1/4" offset.....	830211-003LX	N451378-4802
B1	Similar to Ref B except X = 72 1/2", 3 1/4" offset.....	830211-004LX	N451378-4803
B2	Similar to Ref B except X = 37 5/8", 1 11/16" offset.....	830211-005LX	N451378-4804
B3	Similar to Ref B except X = 37 5/8", 11/16" offset.....	830211-006LX	N451378-4805
B4	Similar to Ref B except X = 32 1/2", 3" offset.....	830211-007LX	N451378-4807
B5	Similar to Ref B except X = 57 1/2", 3 5/16" offset.....	830211-008LX	N451378-4808
B6	Similar to Ref B except X = 50 1/2", 2 13/16" offset.....	830211-009LX	N451378-4809
B7	Similar to Ref B except X = 32 1/2", 2 9/16" offset.....	830211-010LX	N451378-4810
C	INSULATED POINT DETECTOR CONNECTING ROD, 1 1/4" dia, X = 69", Y = 4 5/8", Z = 0" .....	830213-001LX	N49104101
C1	Similar to Ref C except X = 80", Y = 4 5/8", Z = 2".....	830213-002LX	N49104301

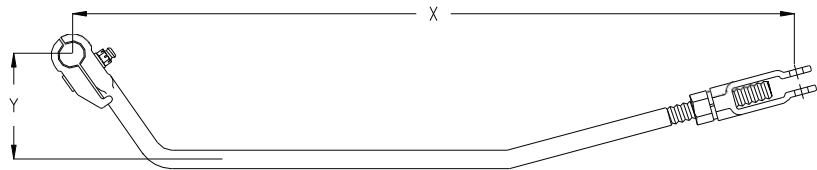
For custom rods other than those shown, specify Model 830211 or 830213 rod and dimensions



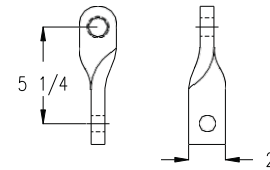
REF A



REF C



REF B

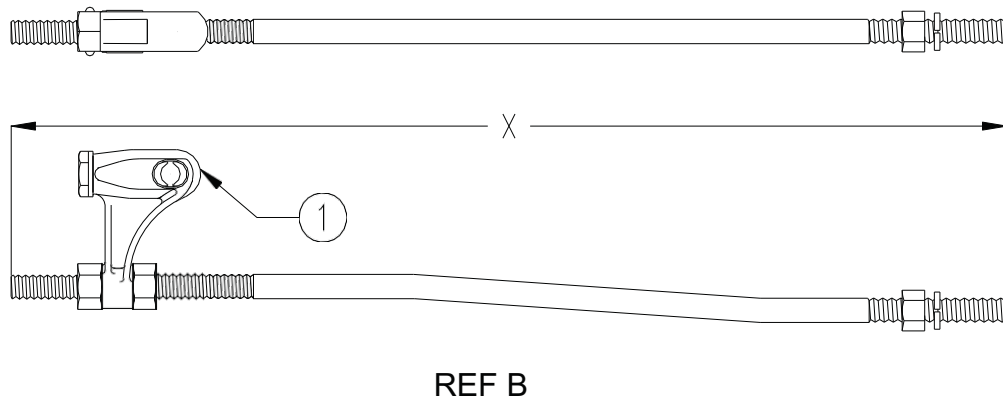
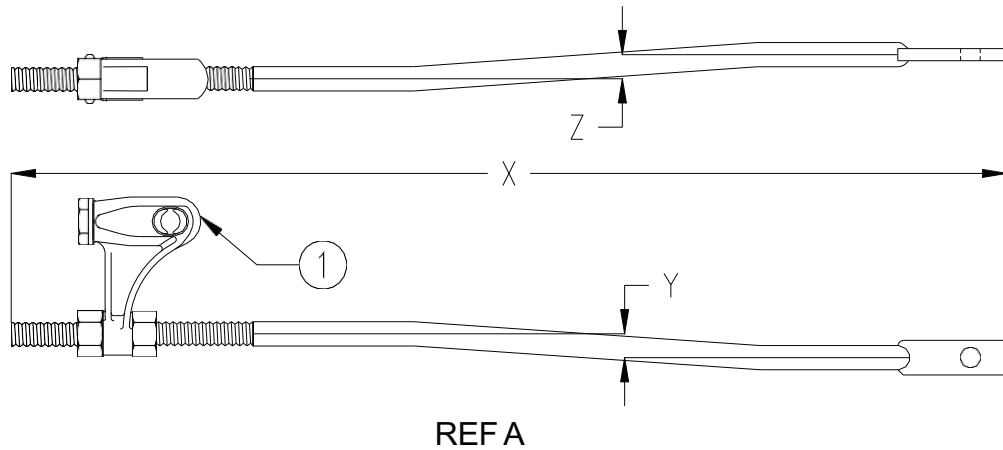


REF D

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , with drop lug, Ref D, X = 33 5/16", Y = 2 5/8".....	830216-001-01	N451378-5201
A1	Similar to Ref A except X = 31 1/2", Y = 1 7/8".....	830216-002-01	N451378-5202
A2	Similar to Ref A except X = 34", Y = 1 3/8".....	830216-003-01	N451378-5203
A3	Similar to Ref A except X = 77", Y = 2 5/8".....	830216-004-01	N451378-5204
B	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , with drop lug, Ref C, X = 24 1/4", Y = 2 5/8".....	830216-005-01	N399780
B1	Similar to Ref B except X = 61".....	830216-006-01	N378728
B2	Similar to Ref B except X = 50".....	830216-007-01	N434424
B3	Similar to Ref B except X = 67 1/4".....	830216-008-01	N434720
B4	Similar to Ref B except with drop lug, Ref D, X = 23 1/4".....	830216-009-01	N399780-001
C	<b>POINT DETECTOR DROP LUG</b> , X = 1".....	820434-001	R399795
C1	Similar to Ref C except X = 1 1/4".....	820434-002	R433037
C2	Similar to Ref C except X = 1 5/8".....	820434-003	R434641
D	<b>POINT DETECTOR DROP LUG</b> .....	820434-004	M451398-2101

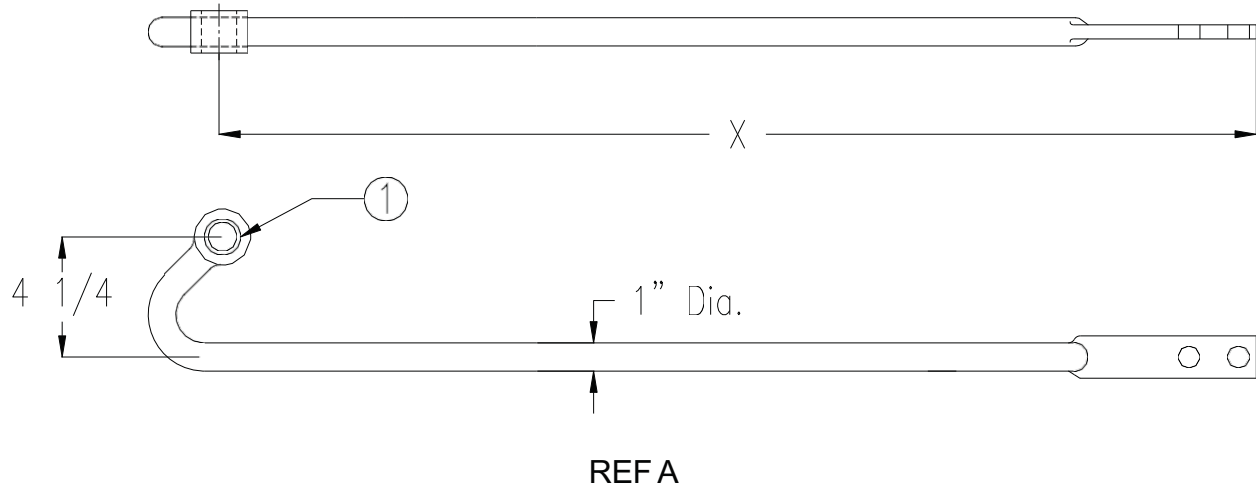
For custom rods other than those shown, specify Model 830216 rod and dimensions





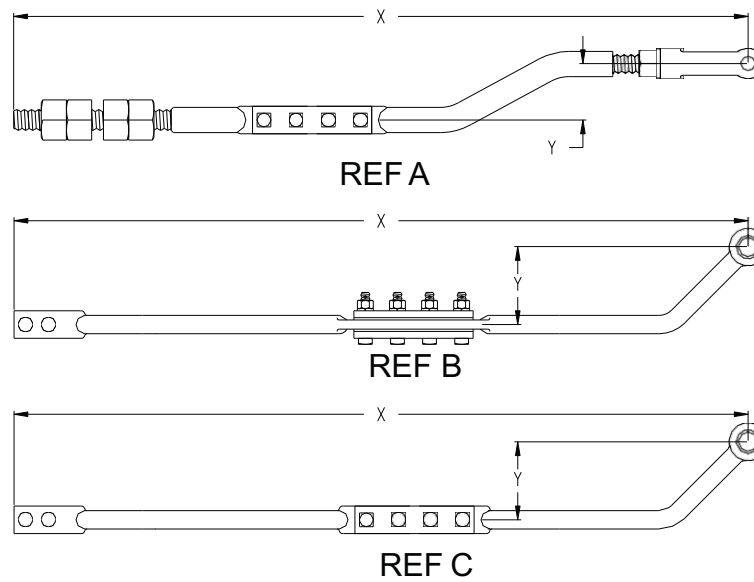
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , for M-23 or Model 5 movements, X = 38", Y = 0", Z = 0".....	930643-001X	N/A
A1	Similar to Ref A except for far point normally closed, X = 90", Y = 0", Z = 0"	930643-002X	N/A
A2	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , for T-21 or Model 9 movements, X = 47", Y = 0", Z = 7/16".....	930643-003X	N/A
A3	Similar to Ref A2 except for far point normally closed, X = 99", Y = 0", Z = 7/16".....	930643-004X	N/A
A4	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , for S-21 movement, X = 81", Y = 3/4", Z = 7/16".....	930643-005X	N/A
B	<b>POINT DETECTOR CONNECTING ROD COMPLETE</b> , with hardware, for A-5 electro-pneumatic movement, X = 26", 1/2" downset.....	930643-006X	N/A
1	<b>POINT SOCKET ASSEMBLY</b> , near or far rail, 1"-8 UNC threaded rod.....	920300X	N/A

For custom rods other than those shown, specify Model 930643 rod and dimensions

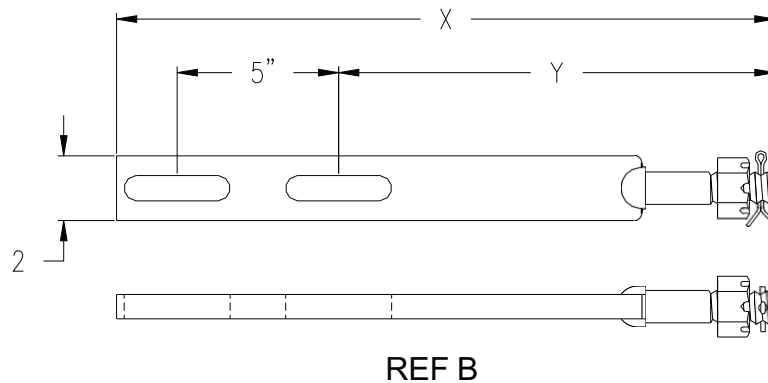
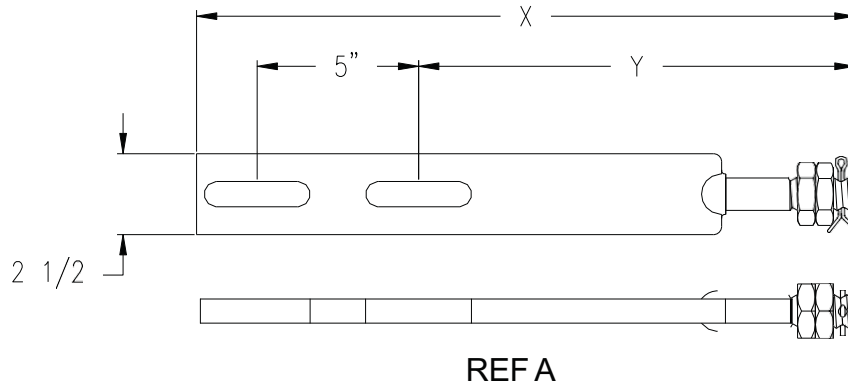


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR CONNECTING ROD</b> , for use with tapered shank point lugs, X = 47".....	931116-001X	43050-116-01 A91-162
A1	Similar to Ref A except X = 60".....	931116-002X	43050-116-02
A2	Similar to Ref A except X = 30".....	931116-003X	43050-116-03
A3	Similar to Ref A except X = 37".....	931116-004X	43050-116-04
A4	Similar to Ref A except X = 44".....	931116-005X	43050-116-05 A91-161
A5	Similar to Ref A except X = 33".....	931116-006X	43050-116-06
A6	Similar to Ref A except X = 79".....	931116-007X	43050-116-07 A91-164
A7	Similar to Ref A except X = 36".....	931116-008X	43050-116-08 A91-160
A8	Similar to Ref A except X = 38".....	931116-009X	43050-116-09
A9	Similar to Ref A except X = 31".....	931116-010X	43050-116-10
A10	Similar to Ref A except X = 26".....	931116-011X	43050-116-11
A11	Similar to Ref A except X = 21".....	931116-012X	43050-116-12
A12	Similar to Ref A except X = 73".....	931116-013X	43050-116-13
A13	Similar to Ref A except X = 54".....	931116-014X	43050-116-14
A14	Similar to Ref A except X = 64".....	931116-015X	43050-116-15
A15	Similar to Ref A except X = 25".....	931116-016X	43050-116-16
A16	Similar to Ref A except X = 34".....	931116-017X	43050-116-17
A17	Similar to Ref A except X = 123 3/4".....	931116-018X	43050-116-18
A18	Similar to Ref A except X = 40".....	931116-019X	43050-116-19
1	<b>TAPERED BUSHING</b> , AAR Detail 125510.....	998000-003	M138226 6714-367 P91-263

For custom rods other than those shown, specify Model 931116 rod and dimensions



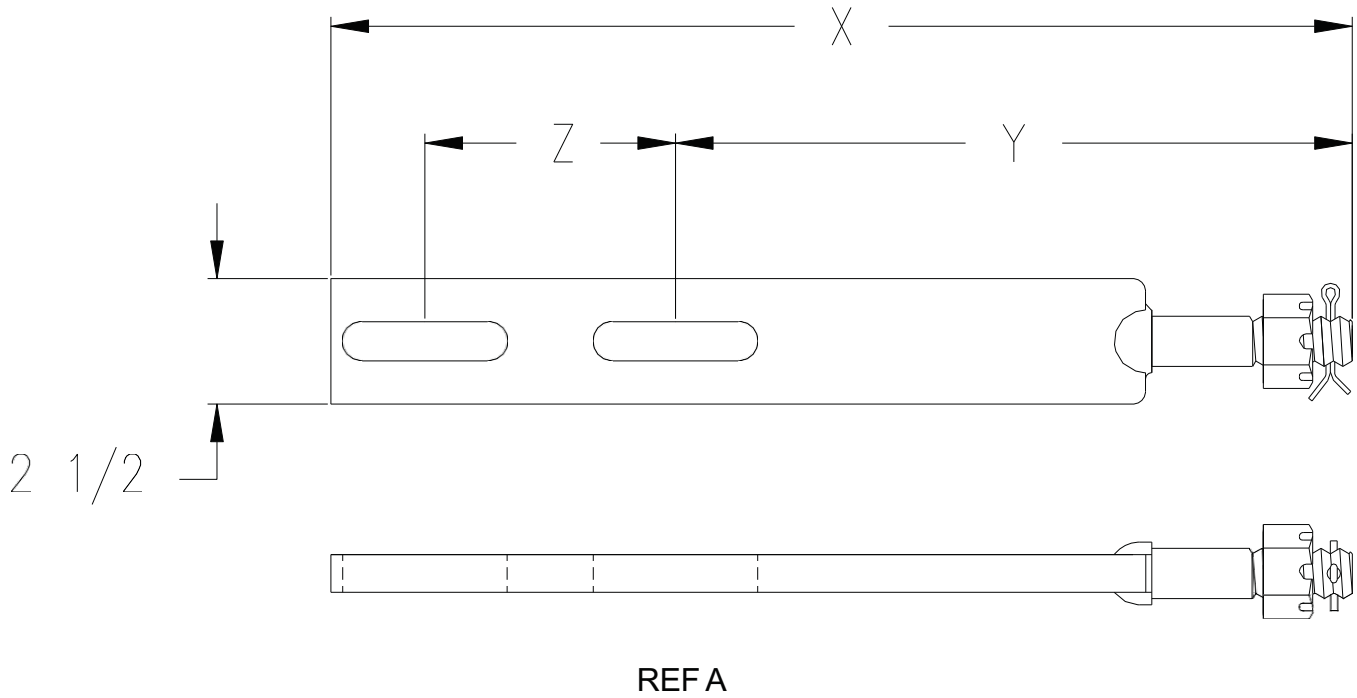
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATED POINT DETECTOR CONNECTING ROD</b> , for use on swing nose frogs, X = 74 7/8", Y = 5 5/8".....	830380-003X	N451846-3901
A1	Similar to Ref A except X = 93", Y = 5".....	830380-004X	N451846-4401
C	<b>INSULATED POINT DETECTOR CONNECTING ROD</b> , for use with tapered shank point lug on far point, X = 86", Y = 4 1/4".....	931054-001-01	46930-054-01
B	<b>INSULATED POINT DETECTOR CONNECTING ROD</b> , for use with tapered shank point lug on far point, X = 76", Y = 4 1/4".....	931130-001-01	A91-170
B1	Similar to Ref C except X = 80 1/2".....	931130-002-01	46930-130-03 A91-171
B2	Similar to Ref C except X = 84".....	931130-003-01	46930-130-07 A91-172
B3	Similar to Ref C except X = 86 1/2".....	931130-004-01	46930-130-04 A91-173
B4	Similar to Ref C except X = 92 1/2".....	931130-005-01	A91-174
B5	Similar to Ref C except X = 94".....	931130-006-01	A91-175
B6	Similar to Ref C except X = 105".....	931130-007-01	A91-176
B7	Similar to Ref C except X = 83".....	931130-008-01	46930-130-08
D	<b>INSULATION SET</b> , includes insulating and splice plates, insulation bushings, 1/2" dia X 2 1/4" long bolts, nuts and lockwashers.....	977100-023-01	46886-000-01 A91-220
1	<b>SPLICE PLATE</b> , 3/8" X 1 1/2" X 6 1/2".....	960101-008	46936 P91-320
2	<b>INSULATION BUSHING</b> , 17/32" ID X 3/4" OD X 23/32" long.....	973098-001	16779 P91-276
3	<b>INSULATION PLATE</b> , 1/8" X 1 3/4" X 6 3/4".....	973200-007	46886 P91-319



\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, STRAIGHT SHANK COMPLETE, 2 1/2" width, 4" shank length, 3/4" bolts, X = 20 1/4", Y = 13 5/8", with two heavy hex jam nuts and cotter pin</b> .....	920555-001X	110333-105X
A1	Similar to Ref A except for 1" bolts.....	920555-002X	110333-106X
A2	<b>POINT LUG, STRAIGHT SHANK, 2 1/2" width, 4" shank length, 3/4" bolts, X = 18 3/4", Y = 12 1/8"</b> .....	920555-003X	110333-107X
A3	Similar to Ref A2 except for 1" bolts.....	920555-004X	110333-108X
A4	<b>POINT LUG, STRAIGHT SHANK, 2 1/2" width, 4" shank length, 3/4" bolts, X = 16 5/8", Y = 10"</b> .....	920555-005X	110333-109X
A5	Similar to Ref A4 except for 1" bolts.....	920555-006X	110333-110X
A6	<b>POINT LUG, STRAIGHT SHANK, 2 1/2" width, 4" shank length, 3/4" bolts, X = 14 3/4", Y = 8 1/8"</b> .....	920555-007X	110333-111X
A7	Similar to Ref A6 except for 1" bolts.....	920555-008X	110333-112X
B	<b>POINT LUG, STRAIGHT SHANK COMPLETE, 2" width, 4 1/4" shank length, 3/4" bolts, X = 15 1/8", Y = 8 1/4", with heavy hex slotted nut and cotter pin</b> .....	920555-009X	43053-295-01
B1	Similar to Ref B except X = 20 5/8", Y = 13 3/4".....	920555-010X	43053-297-01
B2	Similar to Ref B except X = 16 1/2", Y = 9 5/8".....	920555-011X	43053-324-01
B3	Similar to Ref B except X = 22 1/8", Y = 15 1/4".....	920555-012X	43053-326-01

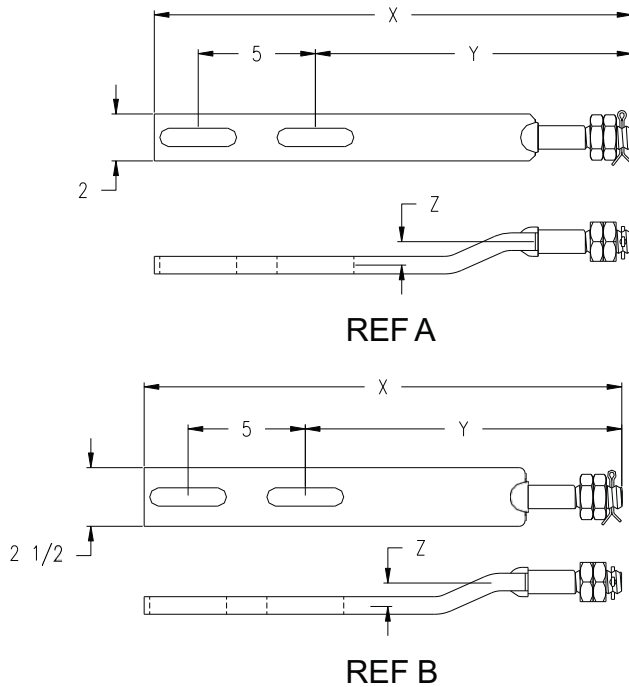
For custom lugs other than those shown, specify Model 920555 lug and dimensions



\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, STRAIGHT SHANK COMPLETE, 2 1/2" width, 1" bolts, 4 1/4" shank length, X = 15 1/8", Y = 8 1/4", Z = 5", with heavy hex slotted nut and cotter pin</b> .....	920555-015X	43053-303-01
A1	Similar to Ref A except X = 17 7/8", Y = 11", Z = 5".....	920555-016X	43053-304-01
A2	Similar to Ref A except X = 20 5/8", Y = 13 3/4", Z = 5".....	920555-017X	43053-305-01
A3	Similar to Ref A except X = 20", Y = 13 1/8", Z = 5".....	920555-018X	43053-313-01
A4	Similar to Ref A except X = 19 1/4", Y = 12 3/8", Z = 5".....	920555-019X	43053-319-01
A5	Similar to Ref A except X = 19 3/8", Y = 13 3/4", Z = 3 3/4".....	920555-020X	43053-349-01
A6	Similar to Ref A except X = 20 5/8", Y = 15", Z = 3 3/4".....	920555-021X	43053-363-01
A7	<b>POINT LUG, STRAIGHT SHANK COMPLETE, 3/4" thickness, 2 1/2" width, 1" bolts, 3 1/4" shank length, X = 19 1/4", Y = 12 5/8", Z = 5", with heavy hex slotted nut and cotter pin</b> .....	920555-013X	43053-359-01
A8	Similar to Ref A7 except X = 13 7/8", Y = 7 1/4", Z = 5".....	920555-014X	43053-360-01
A9	Similar to Ref A7 except 1" thickness, RR Detail 04329.....	920555-027X	N/A

For custom lugs other than those shown, specify Model 920555 lug and dimensions

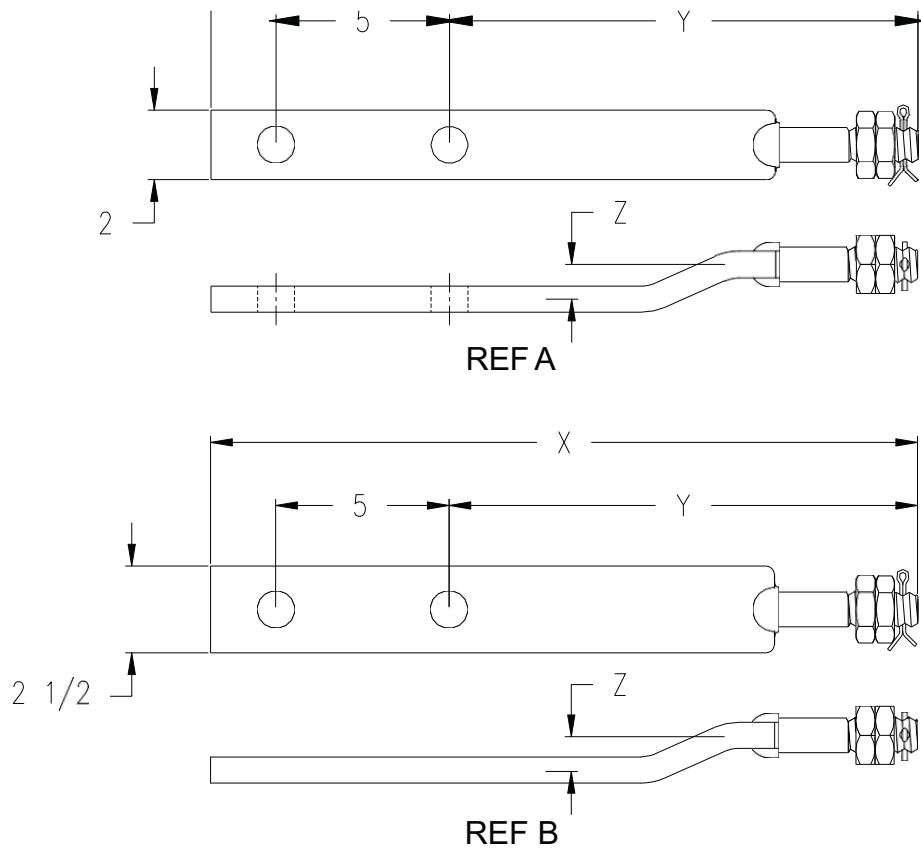


\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 3/4" thickness, 2" width, 4" shank length, 3/4" bolts, X = 17 3/8", Y = 10 3/4", Z = 1/2".....	920555-051X	110333-51X
A1	Similar to Ref A except X = 17 1/8", Y = 9".....	920555-057X	110333-149X
A2	Similar to Ref A except for 1" bolts, X = 17 1/8", Y = 8 1/2".....	920555-058X	110333-150X
A3	Similar to Ref A except for 1" bolts, X = 15 1/2", Y = 8 1/8".....	920555-059X	110333-151X
A4	Similar to Ref A except X = 15 7/8", Y = 9 1/4".....	920555-060X	110333-181X
B	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 3/4" thickness, 2 1/2" width, 4" shank length, 3/4" bolts, X = 18 3/8", Y = 11 3/4", Z = 1/2".....	920555-053X	110333-78SX
B1	Similar to Ref B except X = 20 3/8", Y = 13 7/8".....	920555-054X	N/A
B2	<b>POINT LUG, STRAIGHT SHANK</b> , 3/4" thickness, 2 1/2" width, 4" shank length, 1" bolts, X = 20 3/8", Y = 13 7/8", Z = 1/2".....	920555-052X	110333-065SX
B3	Similar to Ref B2 except X = 18", Y = 11 1/4".....	920555-055X	110333-101X
B4	Similar to Ref B2 except X = 21", Y = 14 1/4".....	920555-056X	110333-102X
B5	Similar to Ref B2 except X = 15 7/8", Y = 9 1/4".....	920555-061X	110333-182X

For custom lugs other than those shown, specify Model 920555 lug and dimensions

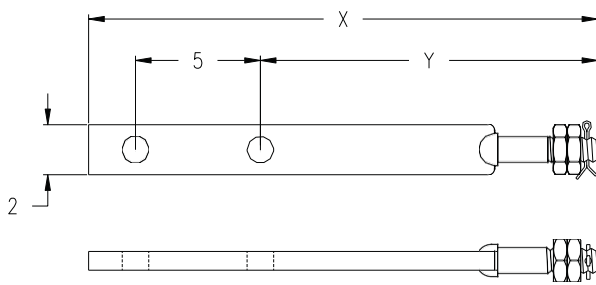
STRAIGHT SHANK POINT LUGS



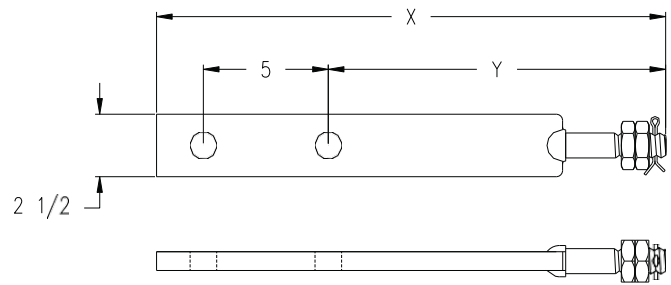
\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 2" width, 3/4" bolts, 4" shank length, X = 17 1/8", Y = 10 3/4", Z = 1/2"	920555-101X	110333-54X
A1	Similar to Ref A except X = 16 1/2", Y = 10 1/8".....	920555-113X	N/A
A2	Similar to Ref A except X = 16", Y = 9 5/8".....	920555-114X	N/A
A3	Similar to Ref A except X = 15 1/2", Y = 8 1/8".....	920555-115X	N/A
B	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 2 1/2" width, 3/4" bolts, 4" shank length, X = 18 3/8", Y = 12", Z = 1/2"	920555-107X	110333-78X
B1	Similar to Ref B except X = 16 7/8", Y = 10 1/2".....	920555-111X	N/A
B2	Similar to Ref B except X = 15 7/8", Y = 9".....	920555-112X	N/A
B3	<b>POINT LUG, STRAIGHT SHANK, 2 1/2" width, 1" bolts, 4" shank length, X = 14 3/8", Y = 8", Z = 1/2".....</b>	920555-102X	110333-55X
B4	Similar to Ref B3 except X = 17 1/8", Y = 10 3/4".....	920555-103X	110333-56X
B5	Similar to Ref B3 except X = 18 3/8", Y = 12".....	920555-104X	110333-61X
B6	Similar to Ref B3 except X = 20 3/8", Y = 14 1/8".....	920555-105X	110333-65X
B7	Similar to Ref B3 except X = 19 1/2", Y = 13 1/4".....	920555-106X	110333-71X

For custom lugs other than those shown, specify Model 920555 lug and dimensions



REF A



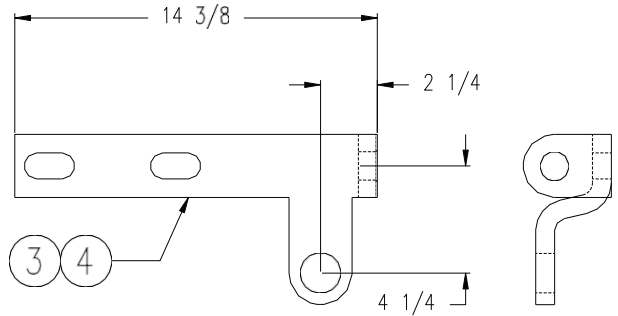
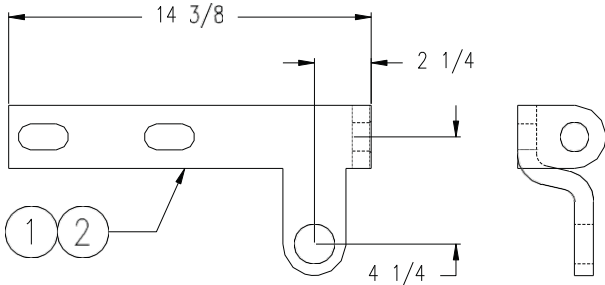
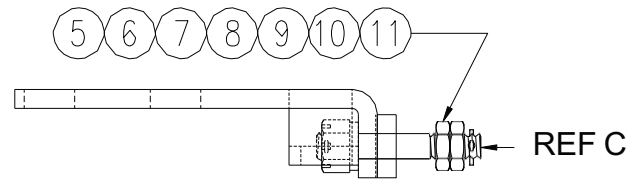
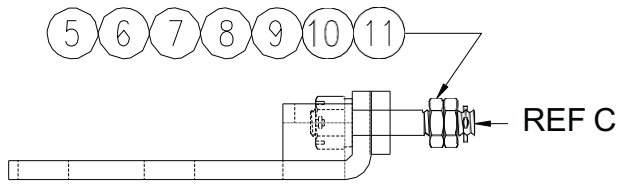
REF B

\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 2" width, 3/4" bolts, X = 14 1/2", Y = 7 5/8".....	920555-161X	N/A
A1	Similar to Ref A except X = 15 1/8", Y = 8 1/4".....	920555-162X	N/A
A2	Similar to Ref A except X = 16", Y = 9 1/8".....	920555-163X	N/A
A3	Similar to Ref A except X = 16 1/2", Y = 9 5/8".....	920555-164X	N/A
A4	Similar to Ref A except X = 18", Y = 11 1/8".....	920555-165X	N/A
A5	Similar to Ref A except X = 19 1/2", Y = 12 5/8".....	920555-166X	N/A
A6	Similar to Ref A except X = 20 5/8", Y = 13 3/4".....	920555-167X	N/A
A7	Similar to Ref A except X = 22 1/8", Y = 15 1/4".....	920555-168X	N/A
B	<b>POINT LUG, STRAIGHT SHANK, COMPLETE</b> , with jam nuts and cotter pin, 2 5/16" shank length, 2 1/2" width, 3/4" bolts, X = 13", Y = 5/8".....	920555-152X	43053-240-01
B1	Similar to Ref B except 4" shank length, X = 15 5/8", Y = 8".....	920555-153X	N/A
B2	Similar to Ref B except X = 16 5/8", Y = 9".....	920555-154X	N/A
B3	Similar to Ref B except X = 17 5/8", Y = 10".....	920555-155X	N/A
B4	Similar to Ref B except X = 18 5/8", Y = 12".....	920555-156X	N/A
B5	<b>PONT LUG, STRAIGHT SHANK</b> , 2 5/16" shank length, 2 1/2" width 1" bolts, X = 13", Y = 6 5/8".....	920555-151X	43053-216-01
B6	Similar to Ref B5 except 4" shank length, X = 14 5/8", Y = 8".....	920555-157X	N/A
B7	Similar to Ref B5 except X = 16 5/8", Y = 10".....	920555-158X	N/A
B8	Similar to Ref B5 except X = 18 5/8", Y = 12".....	920555-159X	N/A
B9	Similar to Ref B5 except X = 19 5/8", Y = 13".....	920555-160X	N/A

For custom lugs other than those shown, specify Model 920555 lug and dimensions



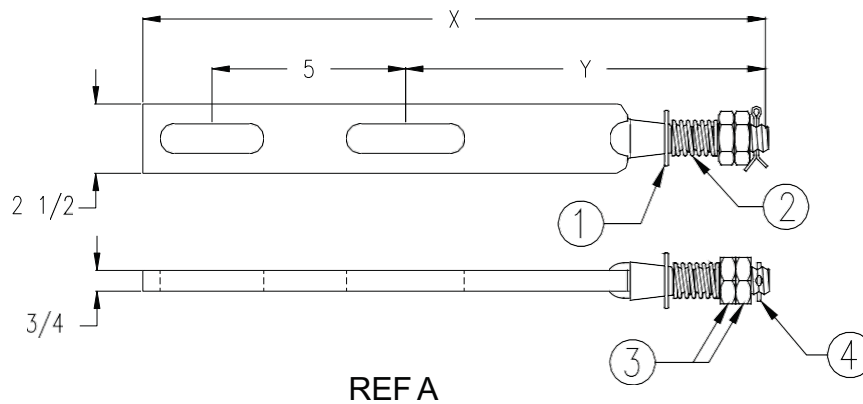


REF A

REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, LH</b> , for 3/4" bolts on 5" centers, 2" width, RR dwg # SX403.....	820700-001X	N345373
A1	Similar to Ref A except for 1" bolts on 5" centers, 2 1/2" width.....	820700-002X	N345375
B	<b>POINT LUG, RH</b> , for 3/4" bolts on 5" centers, 2" width, RR dwg # SX403	820700-003X	N345377
B1	Similar to Ref B except for 1" bolts on 5" centers, 2 1/2" width.....	820700-004X	N345379
C	<b>STUD ASSEMBLY</b> , for LH or RH lugs.....	820701X	N437926
1	<b>POINT LUG ONLY</b> , for Ref A.....	820700-001	M345372
2	<b>POINT LUG ONLY</b> , for Ref A1.....	820700-002	M345374
3	<b>POINT LUG ONLY</b> , for Ref B.....	820700-003	M345376
4	<b>POINT LUG ONLY</b> , for Ref B1.....	820700-004	M345378
5	<b>STUD ONLY</b> , for Ref C.....	820701	M345371
6	<b>LOCK WASHER</b> , 1 1/8".....	990401-112-02	J047551
7	<b>HEAVY HEX SLOTTED NUT</b> , 1 1/8"-7 UNC.....	990332-112-02	J480158
8	<b>COTTER PIN</b> , 1/4" X 2 1/4".....	990511-225-02	J048646
9	<b>LOCK WASHER</b> , 1".....	990401-100-02	J047823
10	<b>HEAVY HEX JAM NUT</b> , 1"-8 UNC.....	990330-100-02	J048033
11	<b>COTTER PIN</b> , 1/4" X 1 13/4".....	990511-175-02	J048644

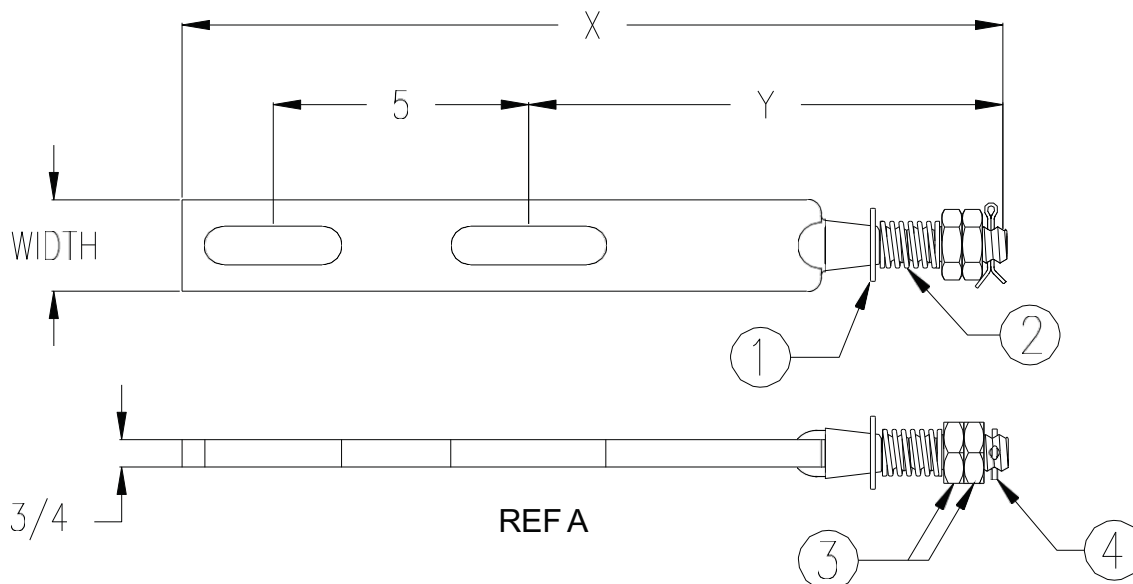
For custom lugs other than those shown, specify Model 820700 lug and dimensions



\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, TAPERED SHANK, 2 1/2" width, 3/4" bolts, X = 18 1/2", Y = 11 5/8"</b> .....	920560-011X	110333-237X
A1	<b>POINT LUG, TAPERED SHANK, 2 1/2" width, 1" bolts, X = 19 3/4", Y = 12"</b> .....	920560-015X	N451398-5002
A2	Similar to Ref A1 except X = 15 3/4", Y = 8 7/8".....	920560-001X	43053-287-01 A91-200
A3	Similar to Ref A1 except X = 18 1/2", Y = 11 5/8".....	920560-002X	43053-288-01 A91-201
A4	Similar to Ref A1 except X = 21 1/4", Y = 14 3/8".....	920560-003X	43053-289-01 A91-202
A5	Similar to Ref A1 except X = 24 1/4", Y = 17 3/8".....	920560-004X	43053-290-01 A91-203
A6	Similar to Ref A1 except X = 17 1/8", Y = 10 1/4".....	920560-005X	43053-315-01 A91-450
A7	Similar to Ref A1 except X = 19 7/8", Y = 13".....	920560-006X	43053-316-01 A91-451
A8	Similar to Ref A1 except X = 22 3/4", Y = 15 7/8".....	920560-007X	43053-317-01 A91-452
A9	Similar to Ref A1 except X = 20 1/2", Y = 13 5/8".....	920560-008X	43053-338-01 A91-453
1	<b>PLATE WASHER, 1" dia</b> .....	990601-100-002	J047509 626-59 P91-142
2	<b>SPRING</b> .....	920561	J068838 586-102 P91-143
3	<b>JAM NUT, hex, 1"-8 UNC</b> .....	990330-100-02	J048033 0477-2 P91-144
4	<b>COTTER PIN, 1/4" X 1 3/4"</b> .....	990511-175-02	J048644 00048-000-ON

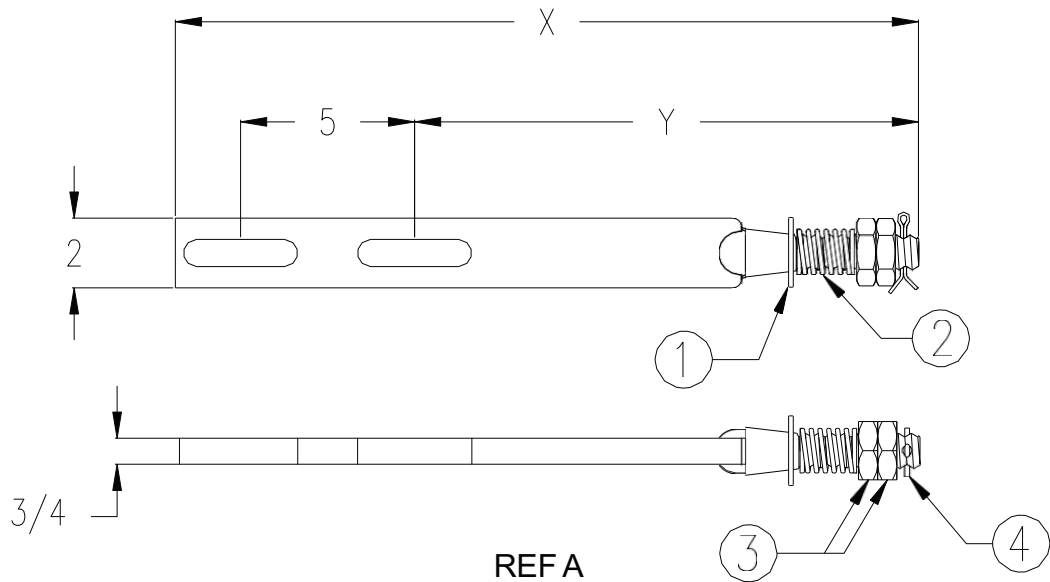
For custom lugs other than those shown, specify Model 920560 lug and dimensions



\*AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, TAPERED SHANK</b> , 2 1/2" width, 1" bolts, X = 22 3/4", Y = 15 7/8".....	920560-013X	43053-379-01
A1	Similar to Ref A except X = 15 3/4", Y = 8 7/8".....	920560-014X	43053-380-01
A2	Similar to Ref A except X = 15 1/4", Y = 8 7/8".....	920560-009X	110333-234
A3	Similar to Ref A except X = 18", Y = 11 5/8".....	920560-010X	110333-236
A4	Similar to Ref A except slotted for insulated 1" bolts, X = 21 3/8", Y = 14 3/8".....	920560-016X	N451398-5004
A5	<b>POINT LUG, TAPERED SHANK</b> , 2" width, 3/4" bolts, X = 15 3/4", Y = 8 7/8".....	920560-026X	43053-279-01 A91-207
A6	Similar to Ref A5 except X = 18 1/2", Y = 11 5/8".....	920560-027X	43053-280-01 A91-208
A7	Similar to Ref A5 except X = 21 1/4", Y = 14 3/8".....	920560-028X	43053-281-01 A91-209
A8	Similar to Ref A5 except X = 24 1/4", Y = 17 3/8".....	920560-029X	43053-282-01 A91-210
1	<b>PLATE WASHER</b> , 1" dia.....	990601-100-002	J047509 626-59 P91-142
2	<b>SPRING</b> .....	920561	J0468838 586-102 P91-143
3	<b>JAM NUT</b> , hex, 1"-8 unc.....	990330-100-02	J048033 0477-2 P91-144
4	<b>COTTER PIN</b> , 1/4" X 1 3/4".....	990511-175-02	J048644 00048-000-ON

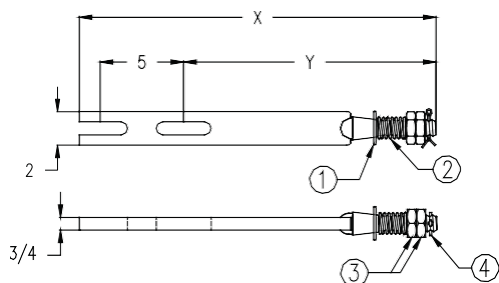
For custom lugs other than those shown, specify Model 920560 lug and dimensions



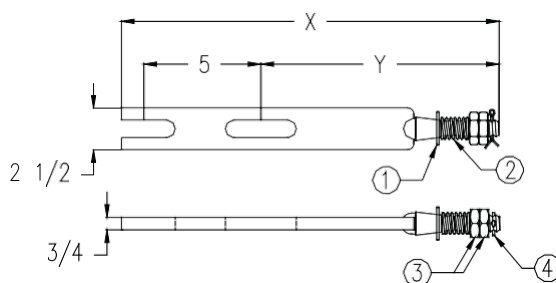
\* AVAILABLE IN 3/4" OR 1" THICKNESS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, TAPERED SHANK, 2" width, 3/4" bolts, X = 17 1/8", Y = 10 1/4"</b> .....	920560-030X	43053-321-01
A1	Similar to Ref A except X = 19 7/8", Y = 13".....	920560-031X	43053-322-01
A2	Similar to Ref A except X = 22 3/4", Y = 15 7/8".....	920560-032X	43053-323-01 A91-462
A3	Similar to Ref A except X = 20 1/2", Y = 13 5/8".....	920560-033X	43053-337-01 A91-463
A4	Similar to Ref A except X = 14", Y = 7 1/8".....	920560-040X	43053-378-01
A5	Similar to Ref A except X = 18", Y = 11 5/8".....	920560-034X	110333-233X
A6	Similar to Ref A except X = 15 1/4", Y = 8 7/8".....	920560-035X	110333-235X
A7	Similar to Ref A except slots are offset 1/4", X = 20 5/8", Y = 13 3/4".....	920560-036X	43053-355-01
A8	Similar to Ref A7 except X = 23 5/8", Y = 16 3/4".....	920560-037X	43053-356-01
1	<b>PLATE WASHER, 1" dia</b> .....	990601-100-002	J047509 626-59 P91-142
2	<b>SPRING</b> .....	920561	J0468838 586-102 P91-143
3	<b>JAM NUT, hex, 1"-8 unc</b> .....	990330-100-02	J048033 0477-2 P91-144
4	<b>COTTER PIN, 1/4" X 1 3/4"</b> .....	990511-175-02	J048644 00048-000-ON

For custom lugs other than those shown, specify Model 920560 lug and dimensions



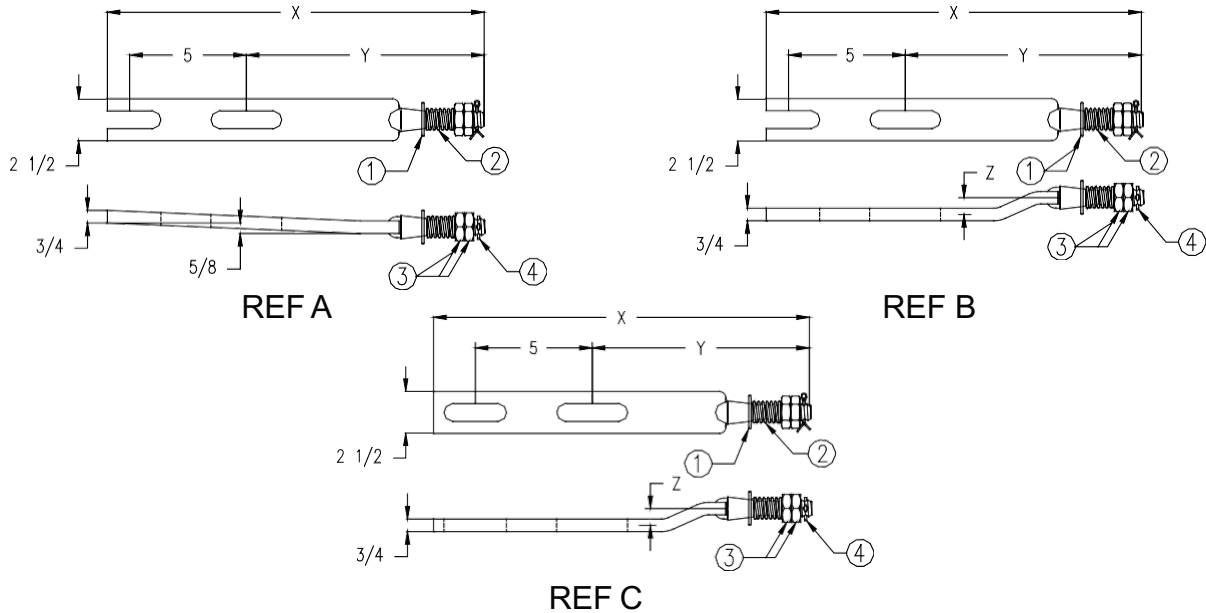
REF A



REF B

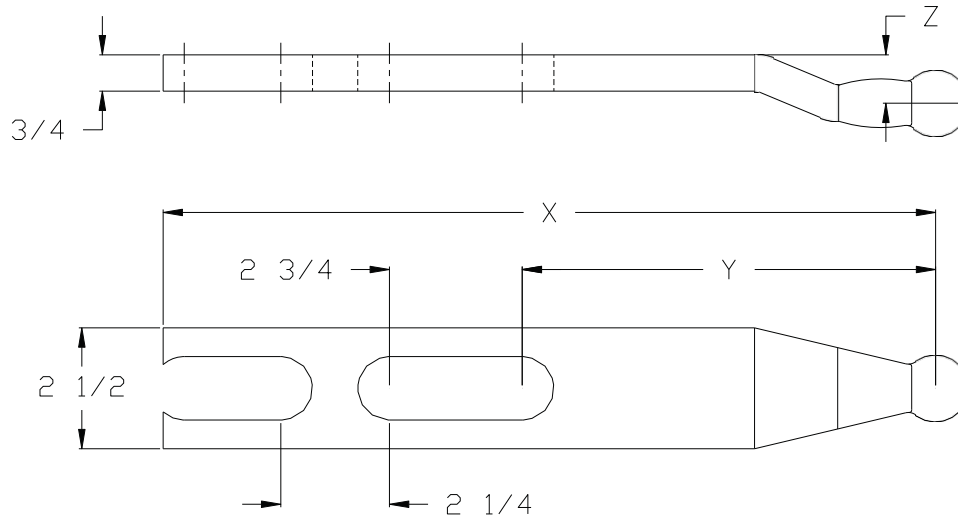
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, TAPERED SHANK, 2" width, 3/4" bolts, X = 20 1/8", Y = 14 1/8"</b> .....	920560-300X	N372818
A1	Similar to Ref A except X = 15 1/2", Y = 9 1/2".....	920560-301X	N393957
A2	Similar to Ref A except X = 21 1/2", Y = 15 1/8".....	920560-302X	N395034
A3	Similar to Ref A except X = 17 5/8", Y = 11 5/8".....	920560-303X	110333-257X
A4	Similar to Ref A except X = 14 7/8", Y = 8 7/8".....	920560-304X	110333-258X
A5	<b>POINT LUG, TAPERED SHANK, 2" width, 1" bolts, X = 21 1/4", Y = 14 1/4"</b> .....	920560-305X	N372818-001
A6	Similar to Ref A5 except X = 17 1/2", Y = 10 1/2".....	920560-306X	N372818-002
A7	Similar to Ref A5 except X = 19 1/2", Y = 12 1/2".....	920560-307X	N372818-003
A8	Similar to Ref A5 except X = 20 1/4", Y = 13 1/4".....	920560-308X	N372818-004
A9	Similar to Ref A5 except X = 18 7/8", Y = 12 3/4".....	920560-309X	N194400-001
B	<b>POINT LUG, TAPERED SHANK, 2 1/2" width, 3/4" bolts, X = 20 1/8", Y = 14 1/8"</b> .....	920560-310X	110333-252X
B1	Similar to Ref B except X = 21 1/8", Y = 15 1/8".....	920560-311X	110333-253X
B2	Similar to Ref B except X = 17 5/8", Y = 11 5/8".....	920560-312X	110333-254X
B3	Similar to Ref B except X = 15 1/2", Y = 9 1/2".....	920560-313X	110333-255X
B4	<b>POINT LUG, TAPERED SHANK, 2 1/2" width, 1" bolts, X = 21 5/8", Y = 15 3/4"</b> .....	920560-314X	43053-369-01
B5	Similar to Ref B4 except X = 15 1/2", Y = 9 1/2".....	920560-315X	N438620-003
1	<b>PLATE WASHER, 1" dia</b> .....	990601-100-002	J047509 626-59 P91-142
2	<b>SPRING</b> .....	920561	J068838 586-102 P91-143
3	<b>JAM NUT, hex, 1"-8 UNC</b> .....	990330-100-02	J048033 0477-2 P91-144
4	<b>COTTER PIN, 1/4" X 1 3/4"</b> .....	990511-175-02	J048644 00048-000-ON

For custom lugs other than those shown, specify Model 920560 lug and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG, TAPERED SHANK</b> , for use on single and double slip switches, 2 1/2" width, 3/4" bolts, X = 18 7/8", Y = 12 7/8".....	920560-316X	110333-251X
B	<b>POINT LUG, TAPERED SHANK</b> , 2 1/2" width, 3/4" bolts, X = 19 1/2", Y = 12 5/8", Z = 1/2".....	920560-317X	N273485
B1	Similar to Ref B except X = 21 1/4", Y = 14 3/8", Z = 1/2".....	920560-318X	N274172
B2	Similar to Ref B except X = 18", Y = 11 1/8", Z = 1/2".....	920560-319X	N282703
B3	Similar to Ref B except X = 20", Y = 13 1/8", Z = 1/2".....	920560-320X	N293057
B4	Similar to Ref B except X = 19", Y = 13", Z = 1 1/2".....	920560-321X	N438620-001 110333-256X
B5	<b>POINT LUG, TAPERED SHANK</b> , 2 1/2" width, 1" bolts, X = 20", Y = 13 1/8", Z = 1/2".....	920560-322X	N277719
B6	Similar to B5 except X = 17 1/4", Y = 10 3/8", Z = 1/2".....	920560-323X	N277719-001
C	<b>POINT LUG, TAPERED SHANK</b> , 2 1/2" width, 1" bolts, X = 18", Y = 11 1/8", Z = 1/2".....	920560-076X	43053-353-01
C1	Similar to Ref C except X = 21 1/4", Y = 14 3/8", Z = 7/8".....	920560-077X	43053-357-01
C2	Similar to Ref C except X = 19 1/2", Y = 12 5/8", Z = 7/8".....	920560-078X	43053-365-01
1	<b>PLATE WASHER</b> , 1" dia.....	990601-100-002	J047509 626-59 P91-142
2	<b>SPRING</b> .....	920561	J068838 586-102 P91-143
3	<b>JAM NUT</b> , hex, 1"-8 UNC.....	990330-100-02	J048033 0477-2 P91-144
4	<b>COTTER PIN</b> , 1/4" X 1 3/4".....	990511-175-02	J048644 00048-000-ON

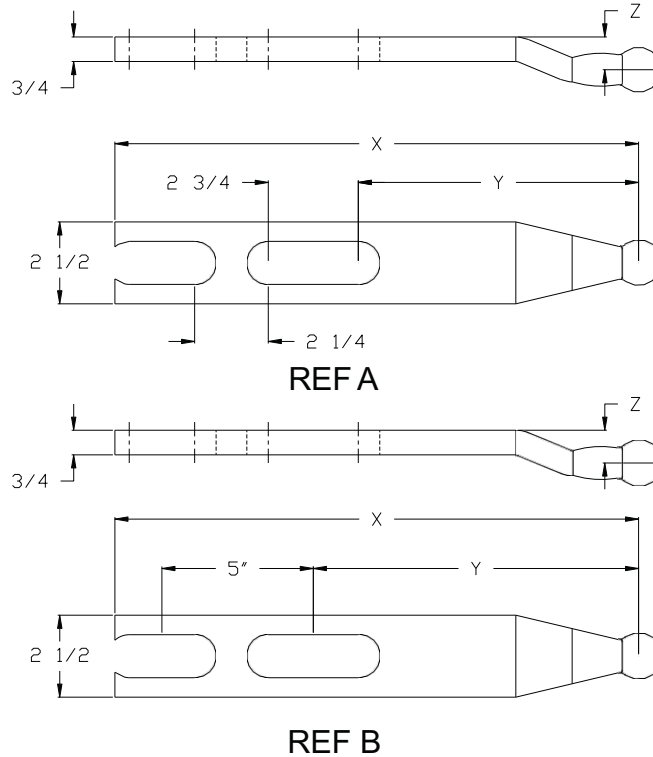
For custom lugs other than those shown, specify Model 920560 lug and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT LUG, for 3/4" bolts, X = 12", Y = 5", Z = 1".....	820680-001	M346588
A1	Similar to Ref A except Z = 1 1/8".....	820680-007	M261927
A2	Similar to Ref A except Z = 1 3/8".....	820680-008	M224299
A3	Similar to Ref A except Z = 1 5/8".....	820680-009	M328714
A4	Similar to Ref A except for 1" bolts.....	820681-001	M346591
A5	Similar to Ref A except for insulated 1" bolts.....	820682-003	M435578-001
A6	Similar to Ref A except for 2 1/4" width.....	820680-006	M451398-3001
A7	POINT LUG, for 3/4" bolts, X = 14", Y = 7", Z = 1".....	820680-002	M346589
A8	Similar to Ref A7 except Z = 1 3/8".....	820680-010	M224457
A9	Similar to Ref A7 except Z = 1 5/8".....	820680-011	M336658
A10	Similar to Ref A7 except for 7/8" bolts.....	820683-003	M311398
A11	Similar to Ref A7 except for 1" bolts.....	820681-003	M346592
A12	Similar to Ref A11 except Z = 1 1/4".....	820681-014	M220026
A13	Similar to Ref A7 except for insulated 1" bolts.....	820682-001	M346593-003

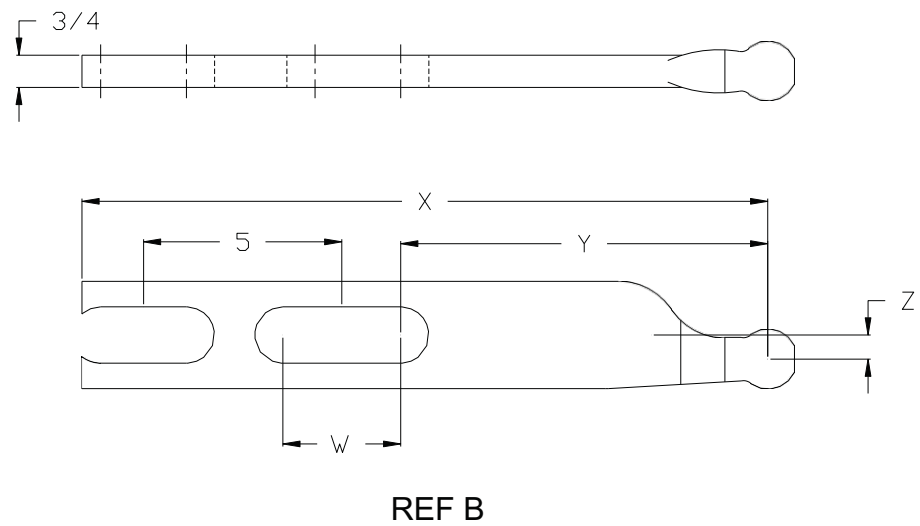
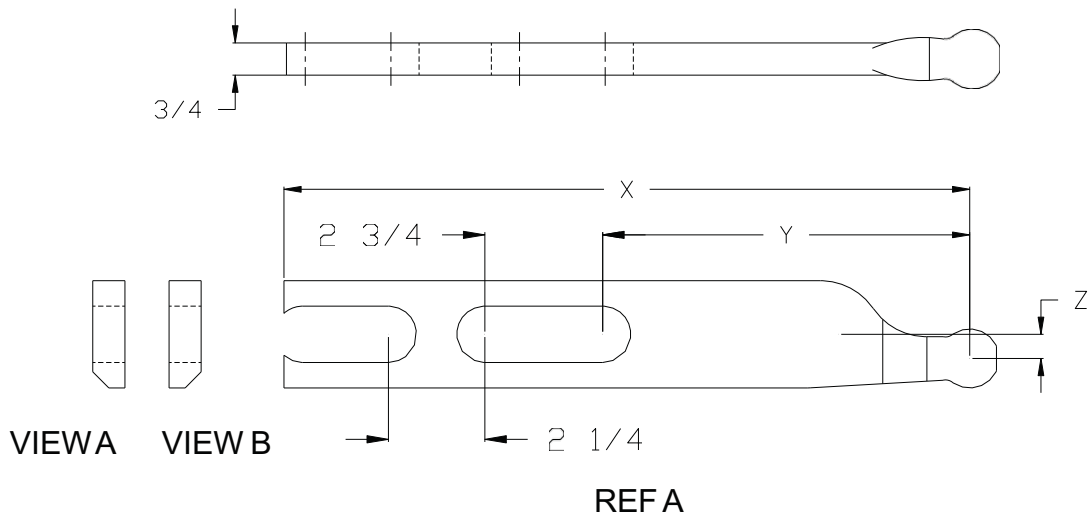
For custom lugs other than those shown, specify Model 820680, 820681, or 820682 lug and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT LUG, for 3/4" bolts, X = 16", Y = 9", Z = 1".....	820680-003	M346590
A1	Similar to Ref A except 2 1/4" width.....	820680-004	M346590-001
A2	Similar to Ref A except for 7/8" bolts.....	820683-004	M434574
A3	Similar to Ref A except 1" bolts.....	820681-004	M346593
A4	Similar to Ref A3 except lubricated ball.....	820681-015	M435526
A5	Similar to Ref A3 except 2" width.....	820681-016	M382997
A6	Similar to Ref A3 except 2 1/4" width.....	820681-005	M346593-001
A7	Similar to Ref A3 except for insulated 1" bolts.....	820681-019	M434574-001
A8	POINT LUG, for 3/4" bolts, X = 18", Y = 11", Z = 1".....	820680-005	M346590-002
A9	POINT LUG, for 1" bolts, X = 17 3/8", Y = 10 3/8", Z = 1".....	820681-017	M451398-4001
A10	Similar to Ref A9 except X = 13", Y = 6".....	820681-002	M346591-001
A11	Similar to Ref A9 except X = 15 5/8", Y = 8 5/8".....	820681-006	M346593-004
A12	Similar to Ref A9 except X = 14 1/2", Y = 7 1/2", 2 1/4" width.....	820681-007	M451398-3003
B	POINT LUG, for 3/4" bolts, X = 12", Y = 5".....	820680-012	M451398-4501
B1	POINT LUG, for 1" bolts, X = 17 3/4", Y = 10 3/4".....	820681-008	M451398-5202
B2	Similar to Ref B1 except for insulated 1" bolts.....	820682-002	M451398-5201
B3	POINT LUG, for insulated 1" bolts, X = 14 1/2", Y = 8 1/4", 3 3/4" bolt centers.....	820682-004	M451398-4502

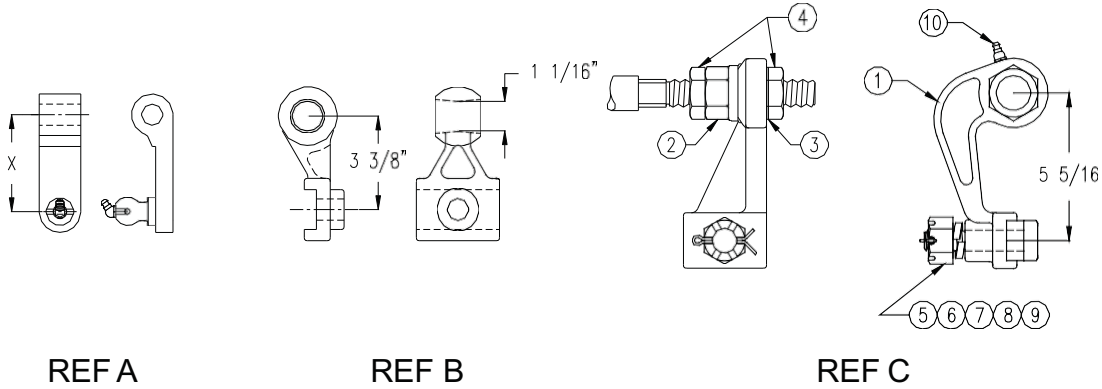
For custom lugs other than those shown, specify Model 820680, 820681, or 820682 lug and dimensions



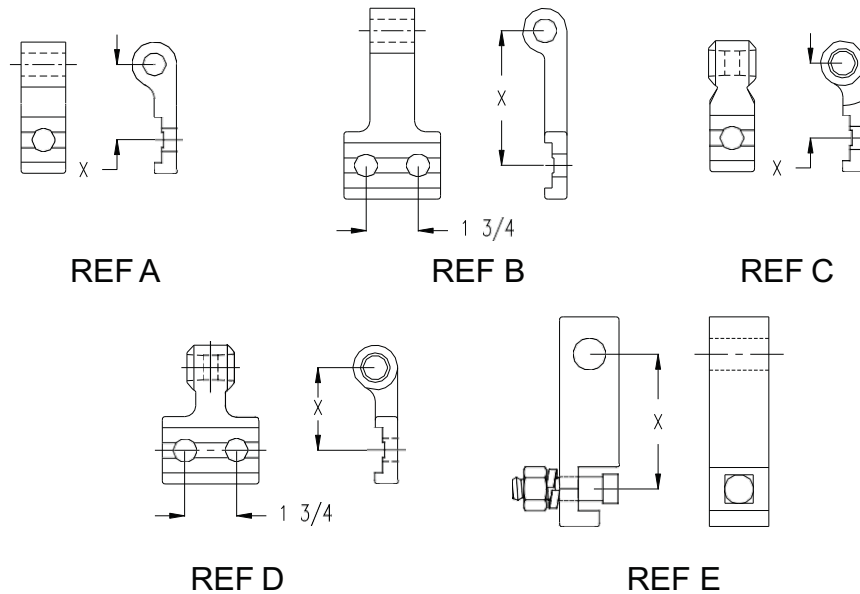


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG</b> , for insulated 1" bolts, X = 16 5/8", Y = 8 1/2", Z = 1/2", RR Detail #3223.....	820692-001	M451398-1501
A1	Similar to Ref A except for 3/4" bolts, Z = 11/16", per view A.....	820692-004	M451398-1502
A2	Similar to Ref A1 except per view B.....	820692-005	M451398-1503
B	<b>POINT LUG</b> , for insulated 1" bolts, W = 1 1/8", X = 15 11/16", Y = 9 5/8", Z = 3/8".....	820692-002	M451398-5101
B1	Similar to Ref B except W = 2", X = 18", Y = 10 1/8", Z = 3/8".....	820692-003	M451398-5102

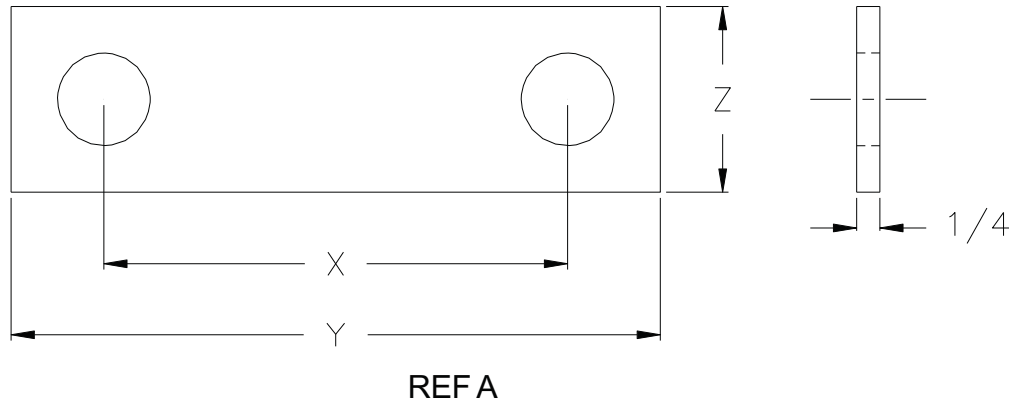
For custom lugs other than those shown, specify Model 820692 lug and dimensions



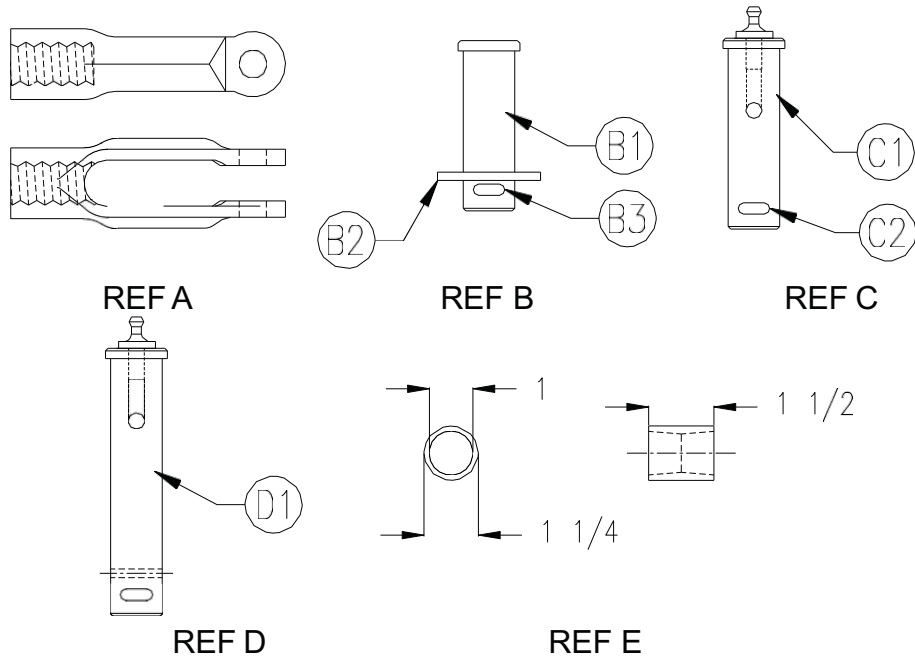
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR DROP LUG</b> , slip joint, non insulated, for 3/4" dia point detector bar and 1" dia ball stud connection, X = 3 1/2".....	920400-001X	59534-002-01 A85-566
A1	Similar to Ref A except, X = 2 1/2".....	920400-002X	59534-000-01 A85-565
A2	Similar to Ref A1 except insulated, and for 1" dia point detector bar.....	920400-003X	59534-002-02 A85-567
A3	Similar to Ref A except X = 3 1/2".....	920400-004X	N/A
A4	Similar to Ref A except for 1" dia point detector bar.....	920400-005X	N/A
B	<b>POINT DETECTOR DROP LUG</b> , swivel joint, for 1" dia point detector bar and 1 7/16" wide point detector connecting rod, used on T-20, T-21, S-20, & S-21 movements.....	820435-001	M376808
C	<b>POINT DETECTOR DROP LUG COMPLETE</b> , swivel joint, for 1" dia point detector bar and 1 7/16" wide point detector connecting rod, used on M-3, M-22 & M-23 movements.....	920531X	X243851
C1	Similar to Ref C except includes mounting bolt assembly as shown.....	920531-001X	N/A
C2	Similar to Ref C1 except includes mounting bolt assembly with elastic stop nut, not shown.....	920531-002X	N/A
1	<b>POINT DETECTOR DROP LUG ONLY</b> .....	920531	M208579
2	<b>CAST CUPPED NUT</b> , 1"-8 unc.....	920532	M208570
3	<b>SPECIAL CONVEX NUT</b> , 1"-8 unc.....	920533	M208597
4	<b>HEAVY HEX JAM NUT</b> , 1"-8 unc.....	990330-100-02	J048033
5	<b>BOLT COMPLETE</b> , to fasten Ref 1 to rod.....	920534X	X348252
6	<b>BOLT ONLY</b> , square head, 3/4"-10 UNC X 3 1/4" long.....	920534	M104547
7	<b>LOCK WASHER</b> , 3/4" .....	990403-075-02	J047772
8	<b>HEAVY HEX SLOTTED NUT</b> , 3/4"-10 UNC.....	990332-075-02	J048091
9	<b>COTTER PIN</b> , 3/16" X 1 1/2".....	990509-150-02	J048634
10	<b>GREASE FITTING</b> .....	890900-003	J039137



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT DETECTOR DROP LUG</b> , slip joint, for Model 9 movement, 1" dia point detector bar and 1 1/2" wide point detector connecting rod, single bolted joint, X = 2 1/2".....	920430-001	30908-078
A1	Similar to Ref A except for 3/4" dia point detector bar, Model 5 switch movement.....	920430-002	30908-004 A85-563
A2	Similar to Ref A1 except X = 3 1/2".....	920430-008	N/A
A3	Similar to Ref A1 except X = 4 1/2".....	920430-004	30908-147
B	<b>POINT DETECTOR DROP LUG</b> , slip joint, for 3/4" dia point detector bar and 1 1/2" wide point detector connecting rod, double bolted joint, X = 4 1/2".....	920430-006	N/A
B1	Similar to Ref B except X = 3 1/2".....	920430-011	N/A
B2	Similar to Ref B except X = 2 1/2".....	920430-005	N/A
C	<b>POINT DETECTOR DROP LUG</b> , swivel joint, for 3/4" dia point detector bar and 1 1/2" wide point detector connecting rod, single bolted joint, X = 2 1/2".....	920435-001	30908-100
C1	Similar to Ref C except with grease fitting.....	920435-001X	30908-104
D	<b>POINT DETECTOR DROP LUG</b> , swivel joint, for 3/4" dia point detector bar and 1 1/2" wide point detector connecting rod, double bolted joint, X = 2 1/2".....	920435-002	N/A
D1	Similar to Ref D except with grease fitting.....	920435-002X	N/A
E	<b>POINT DETECTOR DROP LUG COMPLETE</b> , with bolt, lockwasher and nut, slip joint, for 1" dia point detector bar.....	920430-009X	N49109202



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PLATE WASHER</b> , AAR Detail 125511, for 1" bolts, X = 5", Y = 7", Z = 2"..	960100-001	5656-32 P91-145
A1	Similar to Ref A except AAR Detail 125512, for 3/4" bolts.....	960100-033	M336032 5656-33 P91-146
A2	Similar to Ref A except for 7/8" bolts.....	860100-010	M285833
A3	<b>PLATE WASHER</b> , for 3/4" bolts, X = 5", Y = 7 1/2", Z = 2".....	860100-011	M170562
A4	Similar to Ref A3 except for 7/8" bolts.....	860100-012	M260530-001
A5	Similar to Ref A3 except for 1" bolts.....	860100-001	M260530
A6	<b>PLATE WASHER</b> , for 5/8" bolts, X = 5", Y = 6 1/2", Z = 2".....	860100-013	M393274
A7	Similar to Ref A6 except for 3/4" bolts.....	860100-014	M393274-001
A8	<b>PLATE WASHER</b> , for 3/4" bolts, X = 5", Y = 6 3/4", Z = 2".....	860100-015	M198650
A9	Similar to Ref A8 except for 1" bolts.....	860100-002	M286994
A10	<b>PLATE WASHER</b> , for 3/4" bolts, X = 5", Y = 8", Z = 2".....	860100-016	M329590
A11	<b>PLATE WASHER</b> , for 5/8" bolts, X = 5", Y = 8 1/4", Z = 2".....	860100-017	M146865
A12	Similar to Ref A11 except for 3/4" bolts.....	860100-018	M133066
A13	Similar to Ref A11 except for 1" bolts.....	860100-019	M305089
A14	<b>PLATE WASHER</b> , for 3/4" bolts, X = 5", Y = 9", Z = 2".....	860100-020	M167354
A15	Similar to Ref A14 except for 1" bolts.....	860100-021	M299072
A16	<b>PLATE WASHER</b> , for 1" bolts, X = 5", Y = 7 3/4", Z = 2 1/4".....	860100-003	M396224
A17	<b>PLATE WASHER</b> , for 3/4" bolts, X = 5", Y = 8", Z = 2 1/4".....	860100-022	M206740
A18	Similar to Ref A17 except for 7/8" bolts.....	860100-023	M107355
A19	Similar to Ref A17 except for 1" bolts.....	860100-024	N/A
A20	<b>PLATE WASHER</b> , for 1" bolts, X = 5", Y = 6 5/16", Z = 2 1/4".....	860100-025	M451598-1901
A21	Similar to Ref A20 except Y = 8 1/4".....	860100-006	M223001



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SCREW JAW COMPLETE</b> , for 1"-8 UNC threaded rod, 13/16" jaw opening, with non-lubricated 5/8" jaw pin, washer & cotter pin.....	833755X	X438801
A1	Similar to Ref A except screw jaw only.....	833755	M003755
A2	Similar to Ref A1 except with hole for 7/8" dia jaw pin.....	833755-001	M398406
A3	Similar to Ref A2 except with 15/16" jaw opening.....	833755-002	M398406-001
A4	Similar to Ref A2 except with 1 1/16" jaw opening.....	833755-003	M398406-002
B	<b>JAW PIN COMPLETE, NON-LUBRICATED</b> , 5/8" dia X 2 3/16" long with washer & 3/16" X 1 1/8" cotter pin, 1 23/32" grip.....	890597-006X	N/A
B1	<b>PIN ONLY</b> , for Ref B.....	890597-006	M000328
B2	<b>WASHER</b> , 5/8" flat.....	990600-062-002	J047505
B3	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-125-02	J048632
C	<b>JAW PIN COMPLETE, LUBRICATED</b> , 5/8" dia X 2 3/16" long with washer, 3/16" straight drive grease fitting & 3/16" X 1 1/8" cotter pin, 1 23/32" grip.....	890590-006-01	N/A
C1	<b>PIN ONLY</b> , for Ref C.....	890590-006	M195190
C2	<b>COTTER PIN</b> , 3/16" X 1 1/8".....	990509-112-02	J048632
D	<b>JAW PIN COMPLETE, LUBRICATED</b> , 5/8" dia X 3 1/4" long, with 1/8" PT grease fitting & 3/16" X 1 1/8" cotter pin, 2 13/32" or 2 29/32" grip.....	890590-017X	N451598-3602
D1	<b>PIN ONLY</b> , for Ref D.....	890590-017	M451598-3601
E	<b>TAPERED BUSHING</b> , AAR Detail 125510.....	931150	M138226 6714-367 P91-263



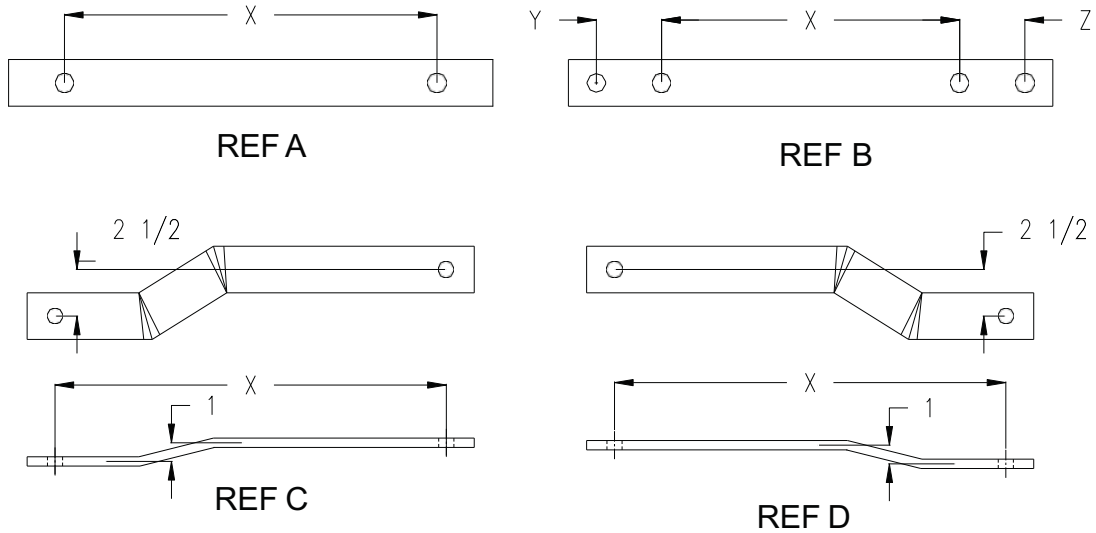
# GAGE EXTENSION/SADDLE PLATES & TIE STRAPS

## SECTION G

## CONTENTS

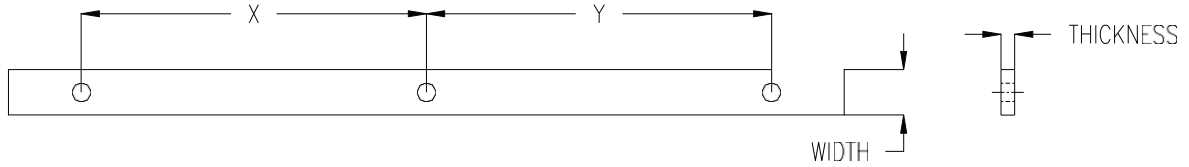
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M-3 Saddle Plates.....	7
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Gage Plate Extension Plates.....	10
Crank Stand Base Plates.....	11

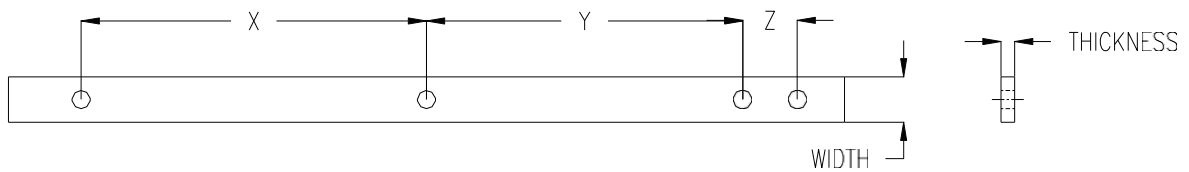


REF	DESCRIPTION	G & B PART #	OEM PART #
A	TIE STRAP, 3/4" thick x 2 1/2" wide, 2 tie, X = 16 1/2".....	860002-001	M433054-001
A1	Similar to Ref A except X = 18".....	860002-002	N/A
A2	Similar to Ref A except X = 20".....	860002-003	M127876
A3	Similar to Ref A except X = 21".....	860002-004	N/A
A4	Similar to Ref A except X = 22".....	860002-005	M081541
A5	Similar to Ref A except X = 23".....	860002-006	M433054-002
A6	Similar to Ref A except X = 25".....	860002-007	N/A
A7	Similar to Ref A except X = 27".....	860002-008	M433054-003
A8	TIE STRAP, 1/2" thick x 2 1/2" wide, 2 tie, X = 22".....	960002-001	49865-077
A9	Similar to Ref A8 except X = 20".....	960002-002	49865-086
A10	Similar to Ref A8 except X = 18".....	960002-003	49865-109
A11	Similar to Ref A8 except X = 21".....	960002-004	49865-126
A12	Similar to Ref A8 except X = 16".....	960002-005	49865-130
A13	Similar to Ref A8 except X = 18 1/2".....	960002-006	49865-142
A14	Similar to Ref A8 except X = 25 3/4".....	960002-007	49865-220
B	TIE STRAP, 3/4" thick x 2 1/2" wide, 2 tie, X = 17 1/2", Y = 4 1/2", Z = 4 1/2".....	860002-025	M267428
B1	Similar to Ref B except X = 18 1/8", Y = 3 7/8", Z = 3 7/8".....	860002-026	M433054
C	TIE STRAP, 1/2" thick, x 2 1/2" wide, X = 21".....	860002-027	N/A
D	TIE STRAP, 1/2" thick x 2 1/2" wide, X = 21".....	860002-028	N/A

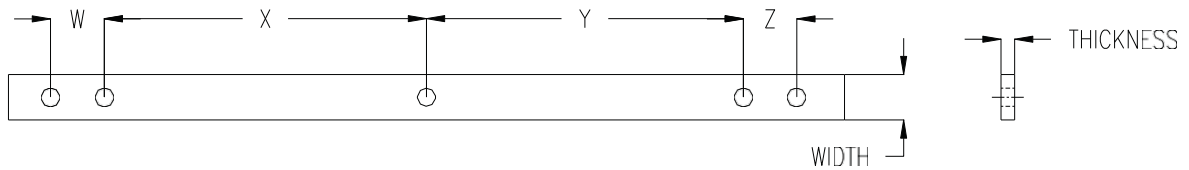
For custom tie straps other than those shown, specify Model 860002 or 960002 tie strap and dimensions



REF A



REF B

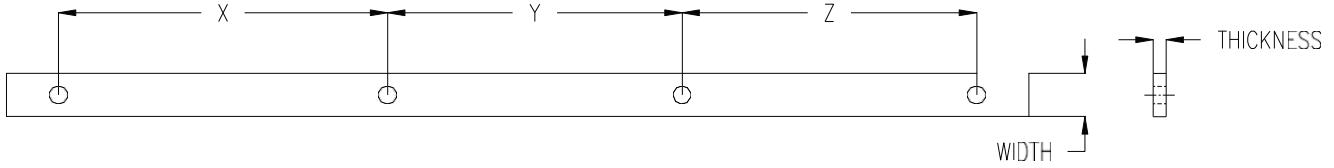


REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, 3 tie, 13/16" holes X = 20", Y = 21".....	860003-001	M299035-003
A1	Similar to Ref A except 1" holes.....	860003-002	M299035
A2	Similar to Ref A except Y = 22".....	860003-003	M127875
A3	Similar to Ref A except X = 19", Y = 24".....	860003-004	M299035-001
A4	Similar to Ref A except 1" holes, X = 19", Y = 19".....	860003-005	M299035-004
A5	Similar to Ref A except X = 22", Y = 26", 1" holes.....	860003-006	M299035-005
B	<b>TIE STRAP</b> , 3/4" thick x 2" wide, 3 tie, 13/16" holes, X = 19 1/2", Y = 17", Z = 5".....	860003-007	M299035-002
C	<b>TIE STRAP</b> , 3/4" thick x 2" wide, 3 tie, 13/16" holes, W = 4", X = 21 1/2", Y = 21 1/2", Z = 4".....	860003-008	M207279

For custom tie straps other than those shown, specify Model 860003 tie strap and dimensions

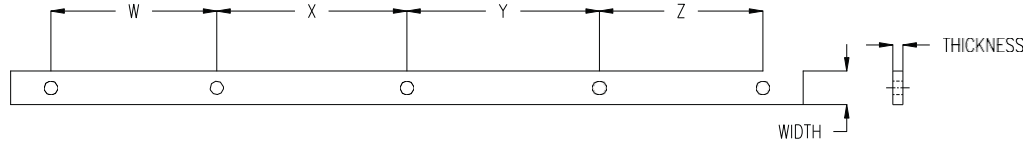




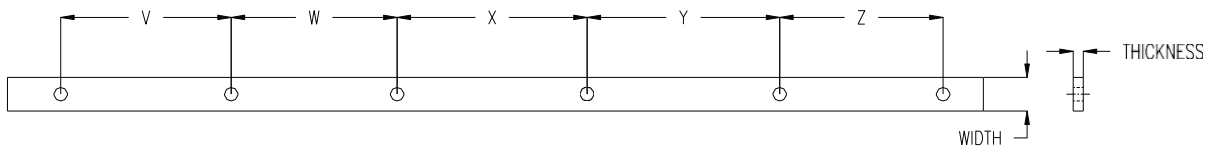
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, 4 tie, X = 23", Y = 23", Z = 23".....	860004-001	M080122
A1	Similar to Ref A except X = 25", Y = 20", Z = 20".....	860004-002	M167045-001
A2	Similar to Ref A except X = 18 1/4", Y = 22", Z = 17 1/4".....	860004-003	M226290
A3	Similar to Ref A except X = 21", Y = 21", Z = 20".....	860004-004	M256405
A4	Similar to Ref A except X = 19", Y = 17", Z = 17".....	860004-005	M281723-001
A5	Similar to Ref A except X = 19", Y = 17", Z = 19".....	860004-006	M281723-002
A6	Similar to Ref A except X = 20", Y = 22", Z = 21".....	860004-007	M281723-003
A7	Similar to Ref A except X = 23", Y = 22", Z = 21".....	860004-008	M281723-004
A8	Similar to Ref A except X = 22", Y = 25", Z = 15 1/2".....	860004-009	M281723-005
A9	Similar to Ref A except X = 26 1/2", Y = 20 1/2", Z = 22".....	860004-010	M281723-006
A10	Similar to Ref A except X = 19", Y = 22", Z = 14".....	860004-011	M281723-007
A11	<b>TIE STRAP</b> , 1/2" thick x 2" wide, 4 tie, X = 20", Y = 20", Z = 20".....	960004-001	49865-014
A12	Similar to Ref A11 except X = 20 1/2", Y = 22 1/2", Z = 20 1/2".....	960004-002	49865-015
A13	Similar to Ref A11 except X = 20", Y = 22", Z = 22".....	960004-003	49865-016
A14	Similar to Ref A11 except X = 21", Y = 22", Z = 20".....	960004-004	49865-031
A15	Similar to Ref A11 except X = 23", Y = 23", Z = 23".....	960004-005	49865-221
A16	<b>TIE STRAP</b> , 1/2" thick x 2 1/2" wide, 4 tie", X = 20", Y = 20", Z = 20".....	960004-025	49865-076
A17	Similar to Ref A16 except X = 20 1/2", Y = 22", Z = 21 1/2".....	960004-026	49865-138
A18	Similar to Ref A17 except X = 20 1/2", Y = 22", Z = 26".....	960004-027	49865-139
A19	Similar to Ref A18 except X = 18", Y = 22", Z = 21".....	960004-028	49865-172
A20	Similar to Ref A19 except X = 20", Y = 22", Z = 24".....	960004-029	49865-192
A21	Similar to Ref A20 except X = 16", Y = 25", Z = 20".....	960004-030	49865-211

For custom tie straps other than those shown, specify Model 860004 or 960004 tie strap and dimensions



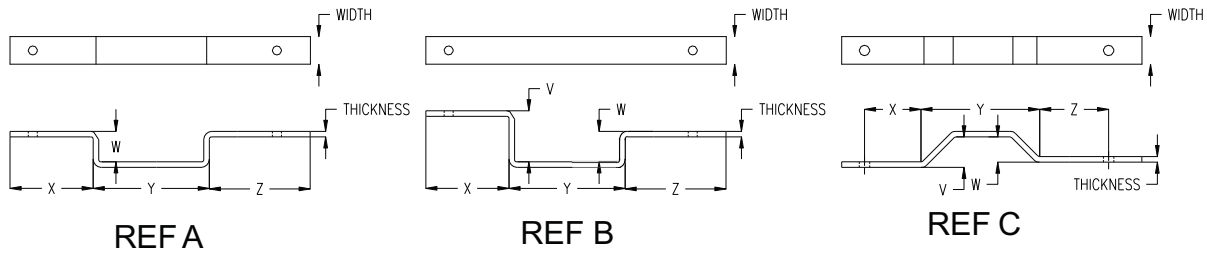
REF A



REF B

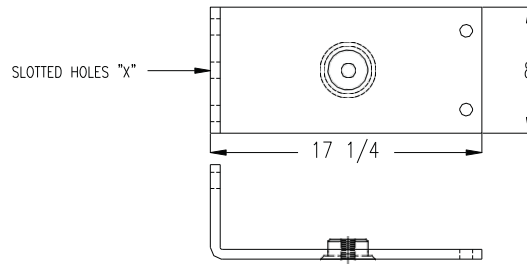
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, 5 tie, 13/16" holes, W = 20", X = 20", Y = 19", Z = 5".....	860005-001	M281723
A1	Similar to Ref A except W = 22", X = 24", Y = 22", Z = 22".....	860005-002	M177187
A2	Similar to Ref A except W =22", X = 22", Y = 20", Z = 19".....	860005-003	M177187-003
A3	Similar to Ref A except W = 22", X = 20", Y = 20", Z = 20".....	860005-004	M177187-004
A4	Similar to Ref A except 1/2" X 2", W = 19", X = 16", Y = 16", Z = 19".....	860005-025	M177187-001
A5	Similar to Ref A except 1/2" X 2", W = 20", X = 20", Y = 18", Z = 20".....	860005-026	M177187-002
A6	<b>TIE STRAP</b> , 3/4" thick x 2" wide, 5 tie, 13/16" holes, W = 20", X=23", Y= 20", Z = 20".....	960005-001	49865-037
A7	Similar to Ref A6 except W = 20", X = 20", Y = 23", Z = 22".....	960005-002	49865-043
A8	Similar to Ref A6 except W = 20", X = 24", Y = 20", Z = 20".....	960005-003	49865-115
A9	Similar to Ref A6 except W = 24", X = 22", Y = 20", Z = 20".....	960005-004	49865-129
B	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, 6 tie, 13/16" holes, V = 21", W = 21", X = 22", Y = 21", Z = 19".....	860006-001	M187415
B1	Similar to Ref B except V = 21", W = 19", X = 19", Y = 19 1/2", Z = 20".....	860006-002	M239320
B2	Similar to Ref B except 1" holes, V= 20", W = 21", X = 22", Y = 17", Z = 21".....	860006-003	M299034
B3	Similar to Ref B except 5/8" thick X 2" wide, V = 20", W = 20", X = 22", Y = 21", Z = 20 1/2".....	860006-025	99034-001

For custom tie straps other than those shown, specify Model 860005, 860006, or 960005 tie strap and dimensions

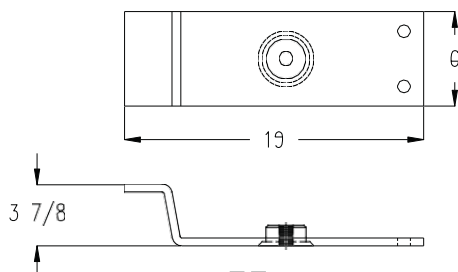


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, W = 2 1/4", X = 8 1/2", Y = 11 1/2", Z = 28".....	860010-001	M451457-0610
A1	Similar to Ref A except W = 2 3/4", X = 7 1/2", Y = 12", Z = 27".....	860010-002	M451457-0604
A2	Similar to Ref A except W = 4", X = 8 1/2", Y = 10", Z = 28".....	860010-003	M451457-0605
A3	Similar to Ref A except W = 4", X = 7 1/2", Y = 12", Z = 7 1/2".....	860010-004	M451457-0608
A4	Similar to Ref A except W = 5", X = 8 3/8", Y = 10 3/4", Z = 26 3/8".....	860010-005	M451457-0611
A5	Similar to Ref A except W = 5", X = 7 3/8", Y = 15", Z = 28 5/8".....	860010-006	M451457-0612
A6	Similar to Ref A except W = 5 1/2", X = 8", Y = 10", Z = 8".....	860010-007	M451457-0615
A7	Similar to Ref A except W = 5 3/4", X = 9 1/2", Y = 11", Z = 9 1/2".....	860010-008	M451457-0606
A8	Similar to Ref A except W = 6 1/4", X = 8 1/2", Y = 10", Z = 28 1/2".....	860010-009	M451457-0609
A9	Similar to Ref A except 5/8" thick x 2" wide, W = 6 3/8", X = 8 1/2", Y = 10 1/2", Z = 25 1/2".....	860010-010	M451457-0607
A10	Similar to Ref A except W = 6 3/4", X = 8 1/2", Y = 11", Z = 8 1/2".....	860010-011	M451457-0616
A11	Similar to Ref A except 1/2" thick x 2 1/2" wide, W = 3 1/2", X = 8 1/2", Y = 10", Z = 8 1/2".....	860010-012	49865-191
A12	Similar to Ref A11 except W = 4 3/4".....	860010-013	49865-212
A13	Similar to Ref A11 except W = 3 3/8", X = 8", Y = 10", Z = 8".....	860010-014	49865-153
B	<b>TIE STRAP</b> , 3/4" thick x 2 1/2" wide, V = 5", W = 4 1/4", X = 7 1/2", Y = 12", Z = 27".....	860010-015	M451457-0602
B1	Similar to Ref B except V = 5 1/4", W = 4 1/2", X = 8 1/2", Y = 13", Z = 8 1/2".....	860010-016	M451457-0613
B2	Similar to Ref B except V = 5 1/4", W = 4 1/2", X = 8 1/2", Y = 10", Z = 8 1/2".....	860010-017	M451457-0614
B3	Similar to Ref B2 except V = 6", W = 5".....	860010-018	M451457-0601
B4	Similar to Ref B2 except V = 7", W = 6".....	860010-019	M451457-0603
B5	Similar to Ref B except 1/2" thick x 2" wide, V = 4 1/2", W = 2 1/2", X = 7", Y = 12", Z = 8".....	860010-020	49865-158
C	<b>TIE STRAP</b> , 3/4" thick x 2" wide, V = 3", W = 2", X = 7 1/2", Y = 12", Z = 7 1/2".....	860010-021	49865-024
C1	Similar to Ref C except Y = 16".....	860010-022	49865-128

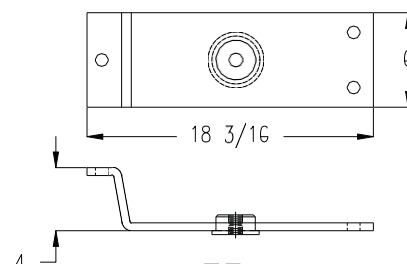
For custom tie straps other than those shown, specify Model 860010 tie strap and dimensions



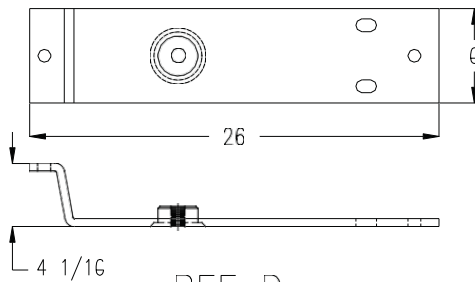
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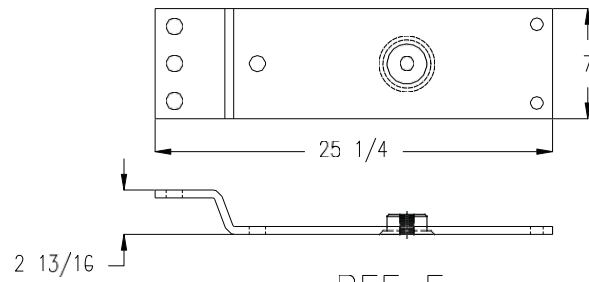
REF B



REF C

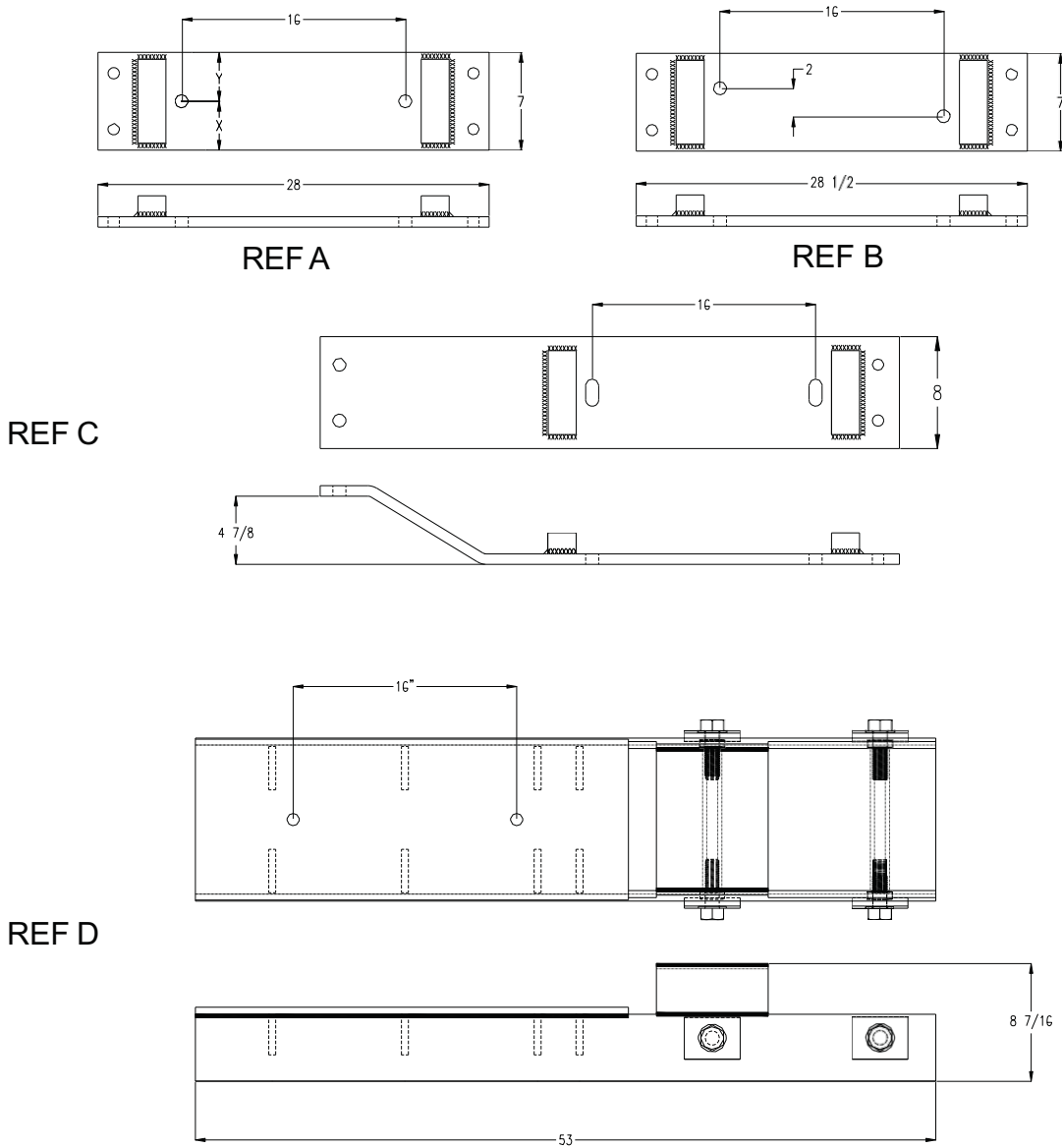


REF D



REF E

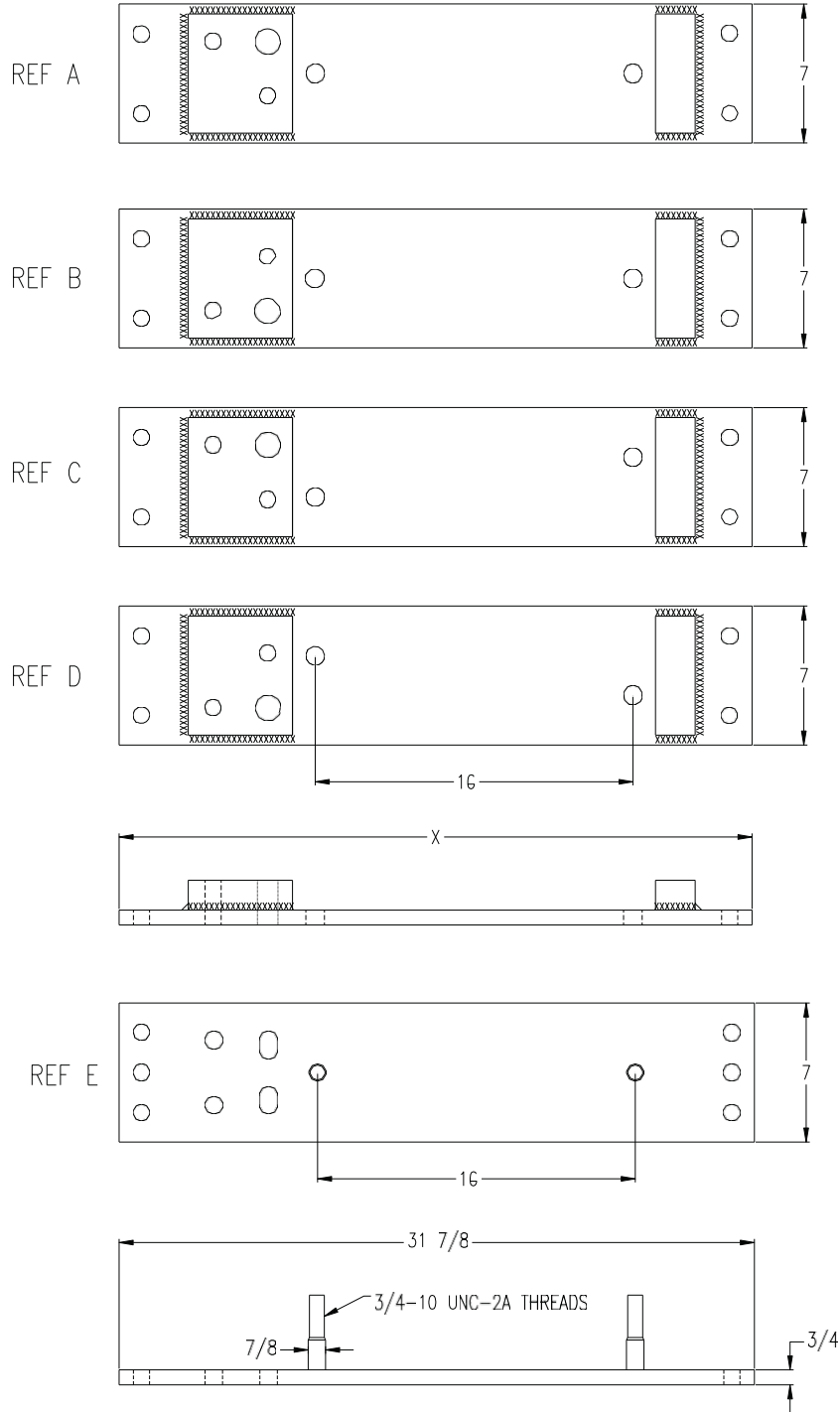
REF	DESCRIPTION	G & B PART #	OEM PART #
A	MOUNTING PLATE, A-10 SWITCH MACHINE.....	860104-001X	N451534-3402
A1	Similar to Ref A except holes "X" are slotted.....	860104-002X	N451534-3404
B	MOUNTING PLATE, A-10 SWITCH MACHINE.....	860104-003X	R297973
C	MOUNTING PLATE, A-10 SWITCH MACHINE.....	860104-004X	N163277
D	MOUNTING PLATE, A-10 SWITCH MACHINE.....	860104-005X	N165535
E	MOUNTING PLATE, A-10 SWITCH MACHINE.....	860104-006X	R451598-1602



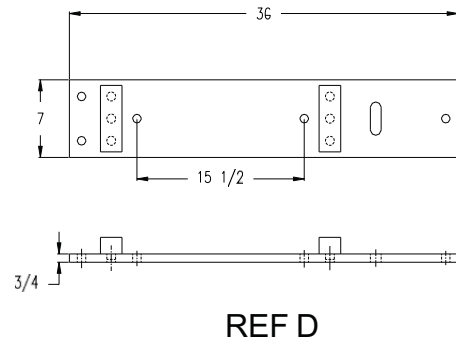
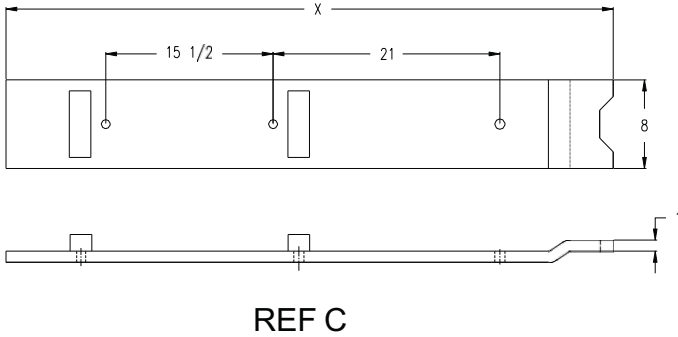
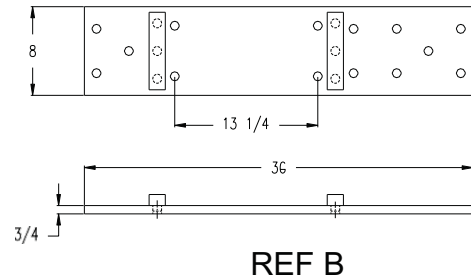
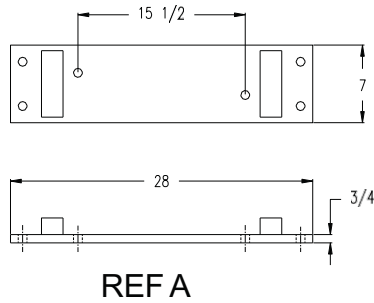
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SADDLE PLATE</b> , for M-3 switch movement, X = 3 1/2", Y = 3 1/2".....	860102-001X	R451517-0101
A1	Similar to Ref A except X = 4 7/8", Y = 2 1/8".....	860102-002X	R451517-1102
A2	Similar to Ref A except X = 2 3/4", Y = 4 1/4".....	860102-003X	R451517-0103
B	<b>SADDLE PLATE</b> , for M-3 switch movement.....	860102-004X	R395634
C	<b>SADDLE PLATE</b> , for M-3 switch movement, X = 26 3/32".....	860102-005X	R49102102
C1	Similar to Ref C except X = 31 3/32".....	860102-006X	R49102202
D	<b>SWITCH MACHINE MOUNTING BRACKET</b> , for M-3 switch movement on concrete ties.....	860102-007X	N/A
D1	Similar to Ref D except for MPF crossing.....	860102-008X	N/A

# M-23 SADDLE PLATES

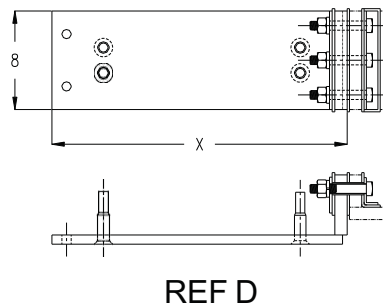
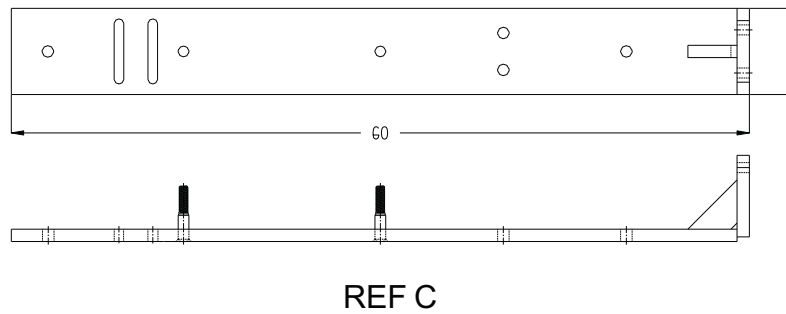
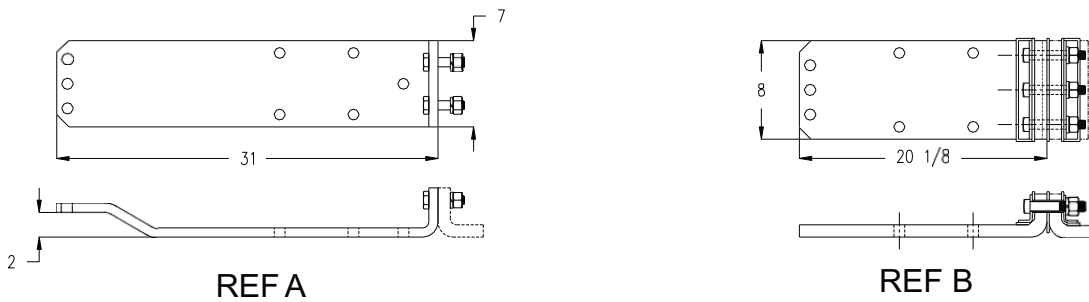
G-8



REF	DESCRIPTION	G & B PART #	OEM PART #
A	SADDLE PLATE, LH, M-23 switch movement, X = 31 7/8".....	860103-010X	R451517-1003
B	Similar to Ref A except RH.....	860103-002X	R451517-1004
C	SADDLE PLATE, LH, M-23 switch movement, X = 31 7/8".....	860103-003X	R396396
D	Similar to Ref C except RH.....	860103-004X	N/A
E	SADDLE PLATE, UNIVERSAL, M-23 switch movement, X = 31 7/8".....	860103-009-01	R47400101



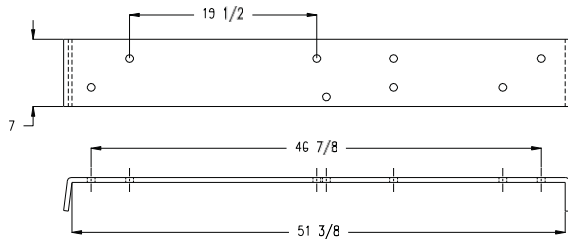
REF	DESCRIPTION	G & B PART #	OEM PART #
A	SADDLE PLATE COMPLETE, for Model 5A, C, E, G, & 6 switch movements, RR Detail 8004-1.....	961493-001X	42493-018-01
B	SADDLE PLATE COMPLETE, for Model 9 switch movement, with latch stands and without electric lock, located on tie #1.....	961493-002X	42493-048-01
B1	Similar to Ref B except for tie #2.....	961493-003X	42493-048-02
C	EXTENSION TIE PLATE COMPLETE, for Model 5F & 5H switch movements, X = 4'-8 1/4".....	961493-004X	42493-070-01
C1	Similar to Ref C except X = 4'-9".....	961493-005X	42493-070-02
C2	Similar to Ref C except X = 5'-1".....	961493-006X	42493-070-03
C3	Similar to Ref C except X = 5'-1 3/4".....	961493-007X	42493-070-04
C4	Similar to Ref C except X = 4'-2 1/4".....	961493-008X	42493-070-05
C5	Similar to Ref C except X = 4'-3".....	961493-009X	42493-070-06
D	SADDLE PLATE COMPLETE, for Model 5F & 5H switch movements, without slot "X".....	961493-010X	42493-078-01
D1	Similar to Ref D except with slot "X", RR Detail 8004-17.....	961493-011X	42493-078-02



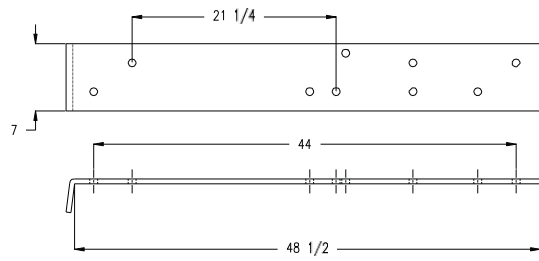
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>GAGE PLATE EXTENSION PLATE COMPLETE</b> , non-insulated.....	860103-001X	X451534-6501
B	<b>INSULATED GAGE PLATE EXTENSION PLATE</b> .....	860105-001X	X451534-7701
C	<b>GAGE PLATE EXTENSION PLATE COMPLETE</b> , non-insulated, for M-23 movement on dapped ties.....	860106-001X	R451534-7901
C1	Similar to Ref C except for Model 5 movement.....	960106-001X	42493-083-01
D	<b>INSULATED GAGE PLATE EXTENSION PLATE COMPLETE</b> , for M-23 movement on dapped ties, X = 24".....	860107-001X	X451534-6001
D1	Similar to Ref D except opposite hand.....	860107-002X	X451534-6201
D2	<b>INSULATED GAGE PLATE EXTENSION PLATE COMPLETE</b> , for M-23 movement on dapped ties, X = 25".....	860107-003X	X451534-7301
D3	Similar to Ref D2 except opposite hand.....	860107-004X	X451534-7501



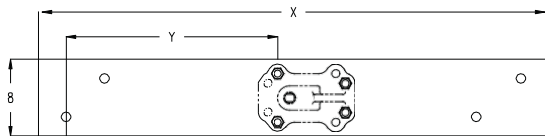
CRANK STAND BASE PLATES



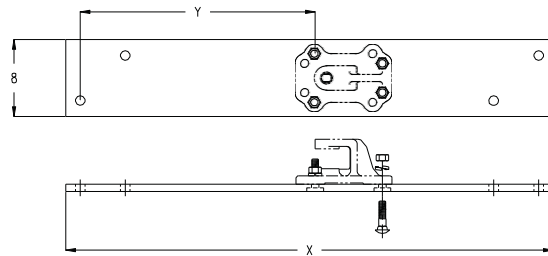
REF A



REF B



REF C



REF D

REF	DESCRIPTION	G & B PART #	OEM PART #
A	FRONT CRANK STAND BASE PLATE, applied to wooden ties.....	860101-001	M451195-8101
B	REAR CRANK STAND BASE PLATE, applied to wooden ties.....	860101-002	M451195-8102
C	CRANK STAND BASE PLATE, X = 51 23/32", Y = 22 1/32".....	980011-013	N/A
C1	Similar to Ref C except X = 52 3/8", Y = 20 5/8".....	980011-014	N/A
D	CRANK STAND BASE PLATE, applied to concrete ties, X = 50 3/4", Y = 24 15/32".....	980011-011	N/A
D1	Similar to Ref D except X = 47 3/4", Y = 25 7/8".....	980011-012	N/A



# JUNCTION / TERMINAL BOXES

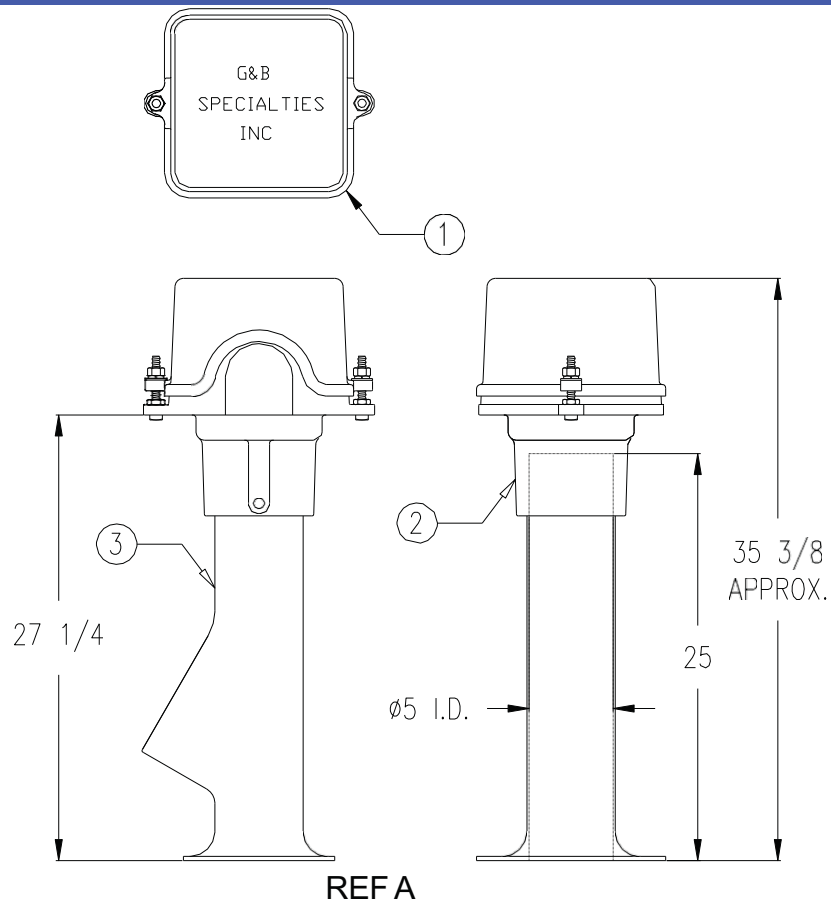
## SECTION H

## CONTENTS

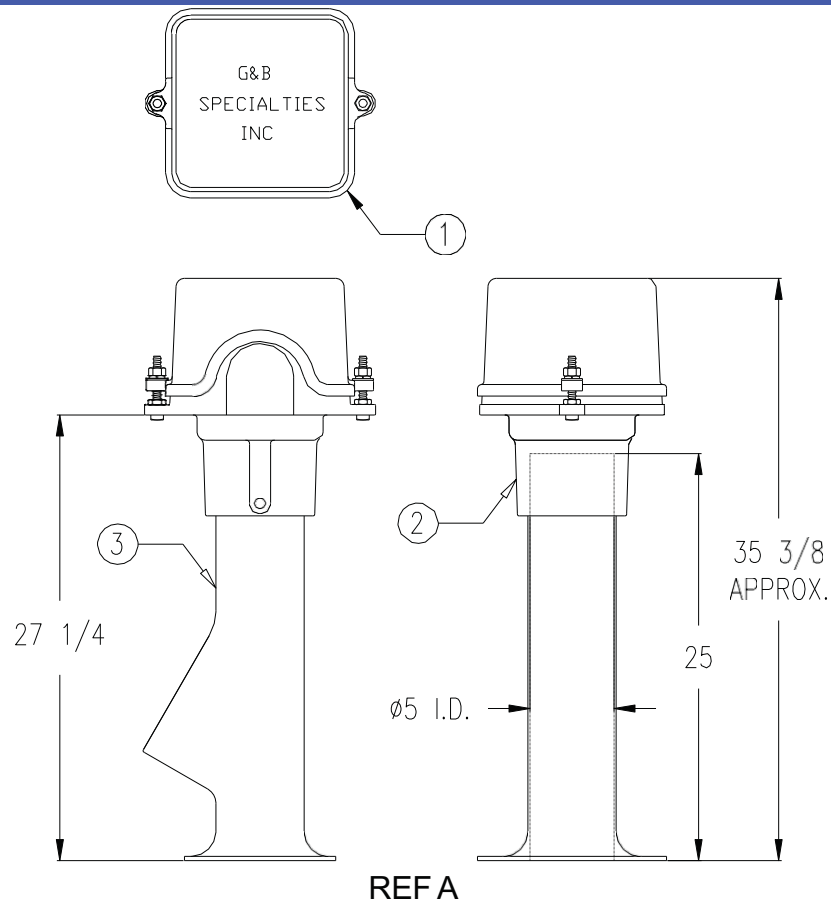
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<b>Product</b>	<b>Pages</b>
Pedestal Mount Junction Boxes.....	1-5
Terminal Blocks and Hardware.....	6
Conduit and Fittings.....	7

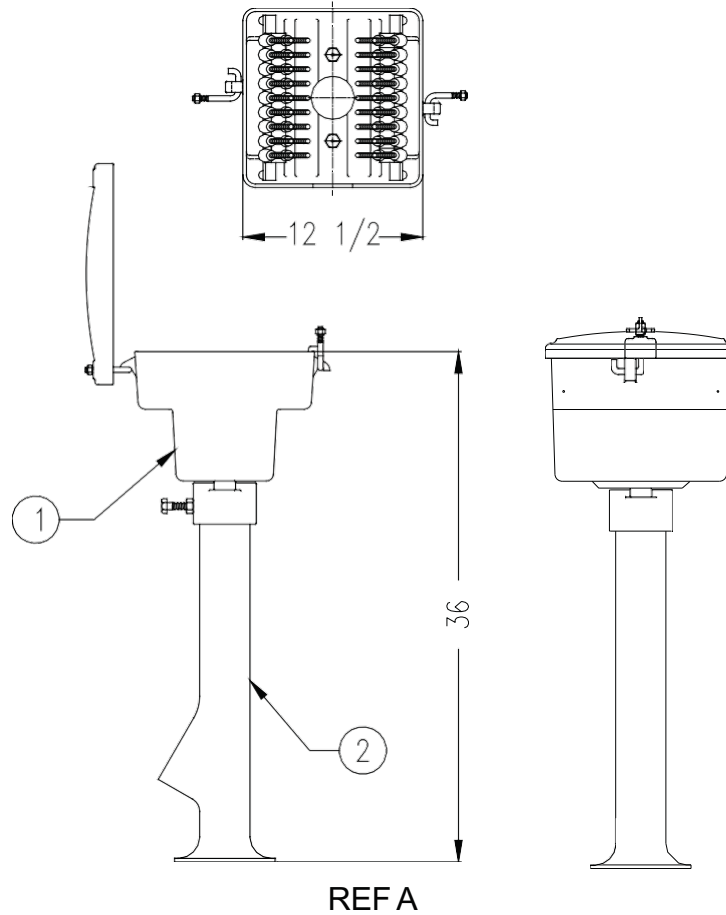
**JUNCTION BOXES**



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>JUNCTION BOX COMPLETE</b> , aluminum, with cast iron pedestal, 36 terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-001-01	N/A
A1	<b>JUNCTION BOX ONLY</b> , aluminum, 36 terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-001-02	N/A
A2	<b>JUNCTION BOX COMPLETE</b> , aluminum, with cast iron pedestal, 36 terminals, variable resistor, with two knockouts for 2 1/2" conduit fittings.....	898655-001-03	N/A
A3	<b>JUNCTION BOX ONLY</b> , aluminum, 36 terminals, variable resistor, with two knockouts for 2 1/2" conduit fittings.....	898655-001-04	N/A
A4	<b>JUNCTION BOX COMPLETE</b> , aluminum, with cast iron pedestal, 48 terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-002-01	N/A
A5	Similar to Ref A4 except with 1 1/2" conduit connection.....	898655-002-02	N/A
A6	<b>JUNCTION BOX ONLY</b> ,aluminum, 48 terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-002-03	N/A
A7	<b>JUNCTION BOX COMPLETE</b> , aluminum with cast iron pedestal, no terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-000-01	N/A
A8	<b>JUNCTION BOX ONLY</b> , aluminum, no terminals, with two knockouts for 2 1/2" conduit fittings.....	898655-000-02	N/A
1	<b>COVER, JUNCTION BOX ONLY</b> , aluminum.....	898657-001	N/A
2	<b>JUNCTION BOX ONLY</b> , aluminum.....	898658-001	N/A
3	<b>PEDESTAL ONLY</b> , cast iron.....	898659	M347484

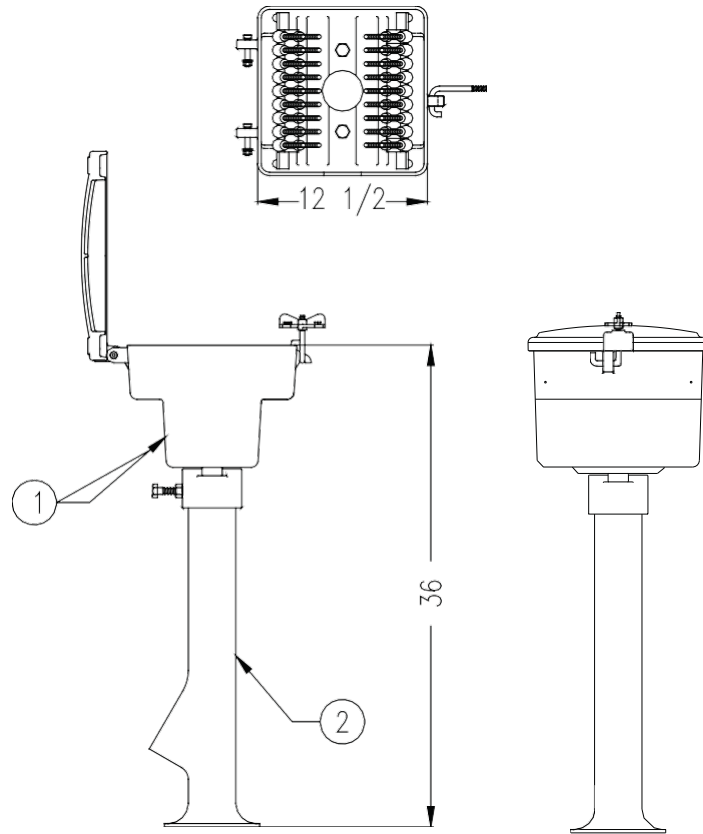


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>JUNCTION BOX COMPLETE</b> , cast iron, with cast iron pedestal, 36 terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-001-01	N349656-003
A1	<b>JUNCTION BOX ONLY</b> , cast iron, 36 terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-001-02	N349656-002
A2	<b>JUNCTION BOX COMPLETE</b> , cast iron, with cast iron pedestal, 36 terminals, variable resistor, with two knockouts for 2 1/2" conduit fittings.....	898656-001-03	N347725-004
A3	<b>JUNCTION BOX ONLY</b> , cast iron, 36 terminals, variable resistor, with two knockouts for 2 1/2" conduit fittings.....	898656-001-04	N347725-003
A4	<b>JUNCTION BOX COMPLETE</b> , cast iron, with cast iron pedestal, 48 terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-002-01	N349656
A5	Similar to Ref A4 except with 1 1/2" conduit connection.....	898656-002-02	N349656-001
A6	<b>JUNCTION BOX ONLY</b> , cast iron, 48 terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-002-03	N347725
A7	<b>JUNCTION BOX COMPLETE</b> , cast iron, with cast iron pedestal, no terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-000-01	N347725-002
A8	<b>JUNCTION BOX ONLY</b> , cast iron, no terminals, with two knockouts for 2 1/2" conduit fittings.....	898656-000-02	N347725-001
1	<b>COVER, JUNCTION BOX ONLY</b> , cast iron.....	898657	M347723
2	<b>JUNCTION BOX ONLY</b> , cast iron.....	898658	M347722
3	<b>PEDESTAL ONLY</b> , cast iron.....	898659	M347484



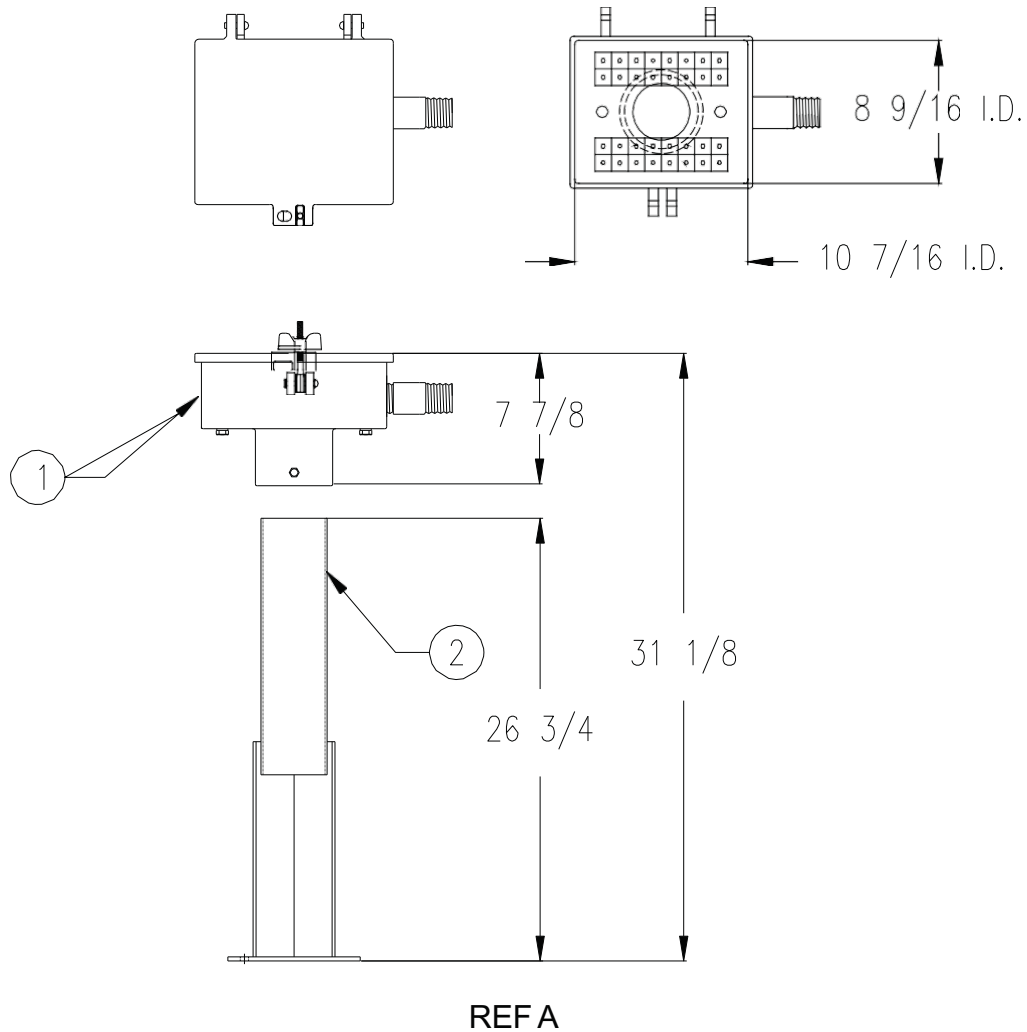
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PEDESTAL MOUNT JUNCTION BOX COMPLETE</b> , with aluminum junction box and cast iron pedestal, 36 terminals, 2" conduit connection.....	998918-001-01	N/A
A1	Similar to Ref A except for 1 1/2" conduit connection.....	998918-001-07	N/A
A2	Similar to Ref A except cast iron junction box.....	998918-002-01	N/A
A3	Similar to Ref A2 except for 1 1/2" conduit connection.....	998918-002-07	N/A
A4	<b>PEDESTAL MOUNT JUNCTION BOX COMPLETE</b> , with aluminum junction box and cast iron pedestal, 28 terminals, 2" conduit connection.....	998918-001-02	N/A
A5	Similar to Ref A4 except for 1 1/2" conduit connection.....	998918-001-08	N/A
A6	Similar to Ref A4 except cast iron junction box.....	998918-002-02	N/A
A7	Similar to Ref A6 except for 1 1/2" conduit connection.....	998918-002-08	N/A
1	<b>ALUMINUM JUNCTION BOX ONLY</b> , 28 terminals.....	998918-001-28	N/A
1A	Similar to Ref 1 except 36 terminals.....	998918-001-36	N/A
1B	<b>CAST IRON JUNCTION BOX ONLY</b> , 28 terminals.....	998918-002-28	N/A
1C	Similar to Ref 1B except 36 terminals.....	998918-002-36	52918-009-01 A91-230
2	<b>CAST IRON PEDESTAL</b> .....	998914	N/A

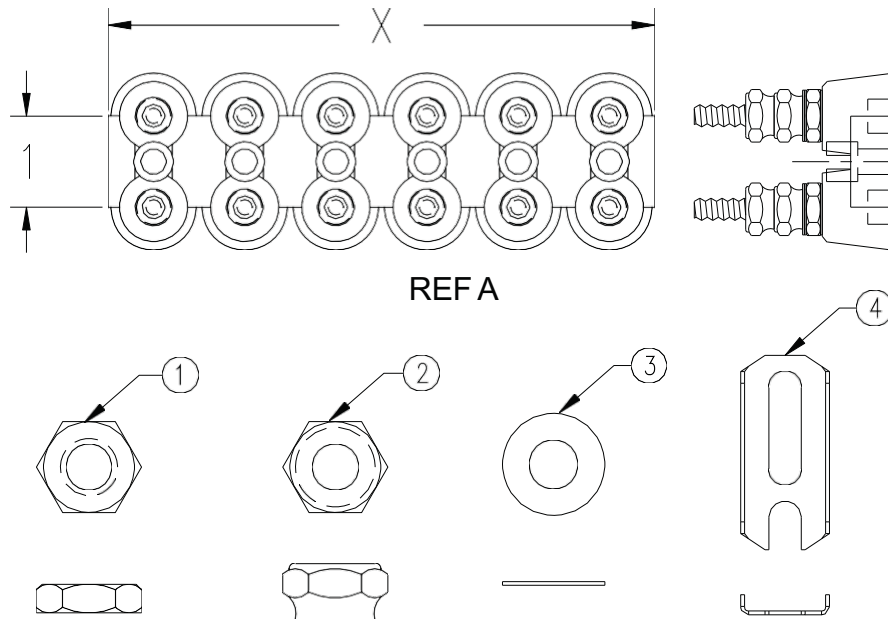


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PEDESTAL MOUNT JUNCTION BOX COMPLETE</b> , with hinged lid, aluminum junction box and cast iron pedestal, 36 terminals, 2" conduit connection.....	998918-003-01	N/A
A1	Similar to Ref A except for 1 1/2" conduit connection.....	998918-003-07	N/A
A2	Similar to Ref A except cast iron junction box.....	998918-004-01	N/A
A3	Similar to Ref A2 except for 1 1/2" conduit connection.....	998918-004-07	N/A
A4	<b>PEDESTAL MOUNT JUNCTION BOX COMPLETE</b> , hinged lid, with aluminum junction box and cast iron pedestal, 28 terminals, 2" conduit connection.....	998918-003-02	N/A
A5	Similar to Ref A4 except for 1 1/2" conduit connection.....	998918-003-08	N/A
A6	Similar to Ref A4 except cast iron junction box.....	998918-004-02	N/A
A7	Similar to Ref A6 except for 1 1/2" conduit connection.....	998918-004-08	N/A
1	<b>ALUMINUM JUNCTION BOX ONLY</b> , with hinged lid, 28 terminals.....	998918-003-28	N/A
1A	Similar to Ref 1 except 36 terminals.....	998918-003-36	N/A
1B	<b>CAST IRON JUNCTION BOX ONLY</b> , with hinged lid, 28 terminals.....	998918-004-28	N/A
1C	Similar to Ref 1B except 36 terminals.....	998918-004-36	N/A
2	<b>CAST IRON PEDESTAL</b> .....	998914	N/A

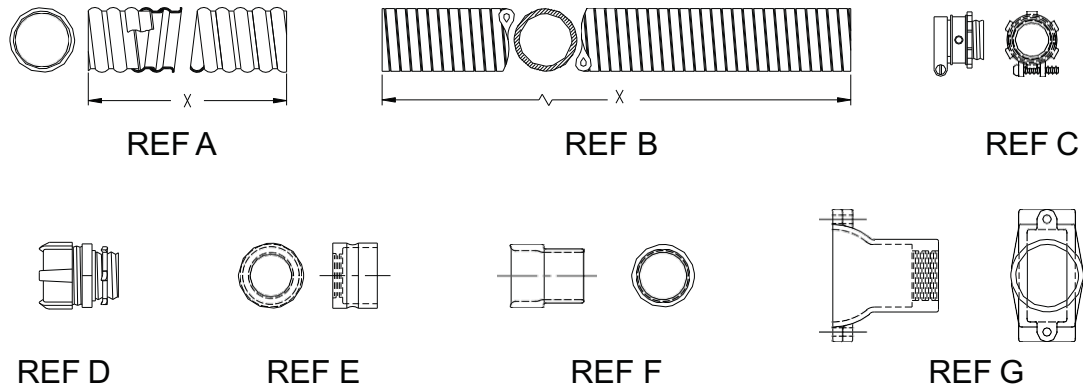


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PEDESTAL MOUNT JUNCTION BOX COMPLETE</b> , with aluminum junction box and galvanized steel pedestal, 16 way, 1 1/2" NPT conduit connection...	998919-001-01	N/A
A1	Similar to Ref A except 18 way.....	998919-001-02	N/A
A2	Similar to Ref A except 12 way.....	998919-001-03	N/A
1	<b>JUNCTION BOX COMPLETE</b> , less pedestal, for Ref A.....	998919-004X	N/A
1A	<b>JUNCTION BOX COMPLETE</b> , less pedestal, for Ref A1.....	998919-005X	N/A
1B	<b>JUNCTION BOX COMPLETE</b> , less pedestal, for Ref A2.....	998919-006X	N/A
2	<b>GALVANIZED STEEL PEDESTAL</b> .....	998919X	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TERMINAL BLOCK COMPLETE, 6 WAY</b> , with hardware as shown, X = 6"	5971-006-01	N/A
A1	Similar to Ref A except without hardware.....	5971-006	J077873
A2	<b>TERMINAL BLOCK COMPLETE, 5 WAY</b> , with hardware as shown, X = 4 7/8".....	5971-005-01	N221633
A3	Similar to Ref A2 except without hardware.....	5971-005	M181819
A4	<b>TERMINAL BLOCK COMPLETE, 4 WAY</b> , with hardware as shown, X = 3 7/8".....	5971-004-01	N221634
A5	Similar to Ref A4 except without hardware.....	5971-004	M181829
A6	<b>TERMINAL BLOCK COMPLETE, 3 WAY</b> , with hardware as shown, X = 2 7/8".....	5971-003-01	N221635
A7	Similar to Ref A6 except without hardware.....	5971-003	M181830
A8	<b>TERMINAL BLOCK COMPLETE, 2 WAY</b> , with hardware as shown, X = 1 7/8".....	5971-002-01	N221636
A9	Similar to Ref A8 except without hardware.....	5971-002	M181831
A10	<b>TERMINAL BLOCK COMPLETE, 1 WAY</b> , with hardware as shown, X = 7/8".....	5971-001-01	N221637
A11	Similar to Ref A10 except without hardware.....	5971-001	M181832
1	<b>BINDING NUT</b> , #14-24 threads, AAR Detail 14.1.11-7.....	990101-006-55	M029101
2	<b>CLAMP NUT</b> , #14-24 threads, AAR Detail 14.1.11-6.....	990101-007-55	M029103
3	<b>WASHER</b> , for terminal post, AAR Detail 14.1.11-8.....	990101-008-55	J047818
4	<b>TERMINAL CONNECTOR</b> , for terminal post, AAR Detail 14.1.15-1.....	990101-001-55	





REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>FLEXIBLE GALVANIZED STEEL CONDUIT, 2", X = 24"</b> .....	998234-001	M320859-010 43355-032
A1	Similar to Ref A except X = 36".....	998234-002	M320859-024
A2	Similar to Ref A except X = 60".....	998234-003	M320859-025
A3	<b>FLEXIBLE GALVANIZED STEEL CONDUIT, 1 1/2", X = 30"</b> .....	998233-001	M320858-008
A4	Similar to Ref A3 except X = 36".....	998233-002	M320858-013
A5	Similar to Ref A3 except X = 48".....	998233-003	M320858-018
B	<b>LIQUIDTIGHT JACKETED METALLIC FLEXIBLE CONDUIT, 2", X = 36"</b> ..	998229-001	N/A
B1	Similar to Ref B except X = 48".....	998229-002	N/A
B2	Similar to Ref B except X = 60".....	998229-003	N/A
B3	<b>LIQUIDTIGHT JACKETED METALLIC FLEXIBLE CONDUIT, 1 1/2", X = 96"</b> .....	998231-001	N/A
B4	Similar to Ref B3 except X = 120".....	998231-002	N/A
B5	Similar to Ref B3 except X = 144".....	998231-003	N/A
C	<b>STRAIGHT CONDUIT CONNECTOR, 2"</b> , for flexible steel conduit.....	998685-035	N/A
C1	Similar to Ref C except for 1 1/2" flexible steel conduit.....	998685-034	N/A
D	<b>STRAIGHT CONDUIT CONNECTOR, 2"</b> , for flexible sealtite conduit.....	998687-035	N/A
D1	Similar to Ref D except for 1 1/2" seal tight conduit.....	998687-034	N/A
E	<b>CONDUIT FITTING, 1 1/2"</b> , for M-3 and M-23 movements.....	998451-453	M451453-010
F	<b>CONDUIT FITTING, 2"</b> , for M-3 and M-23 movements.....	898192	M256314
G	<b>COUPLING, 1 1/2"</b> , for Model 5 movements.....	998912	45689-192
G1	Similar to Ref G except with 2" conduit connection.....	998912-001	N/A



# HELPER ROD LAYOUT COMPONENTS

## SECTION I

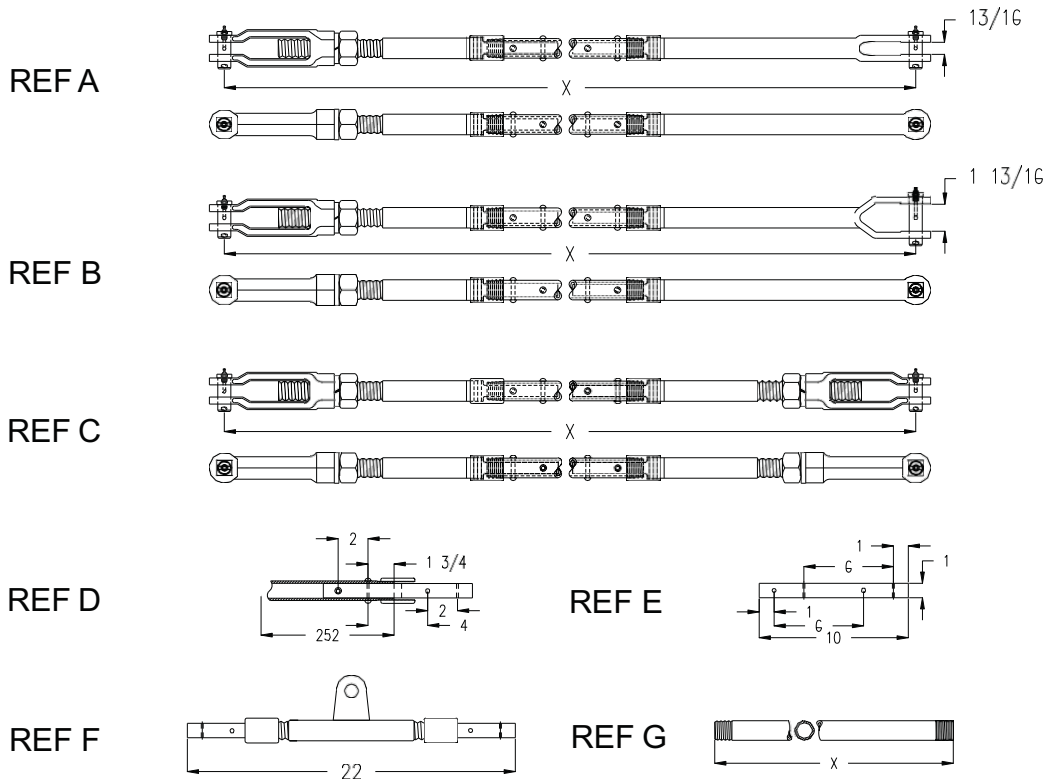
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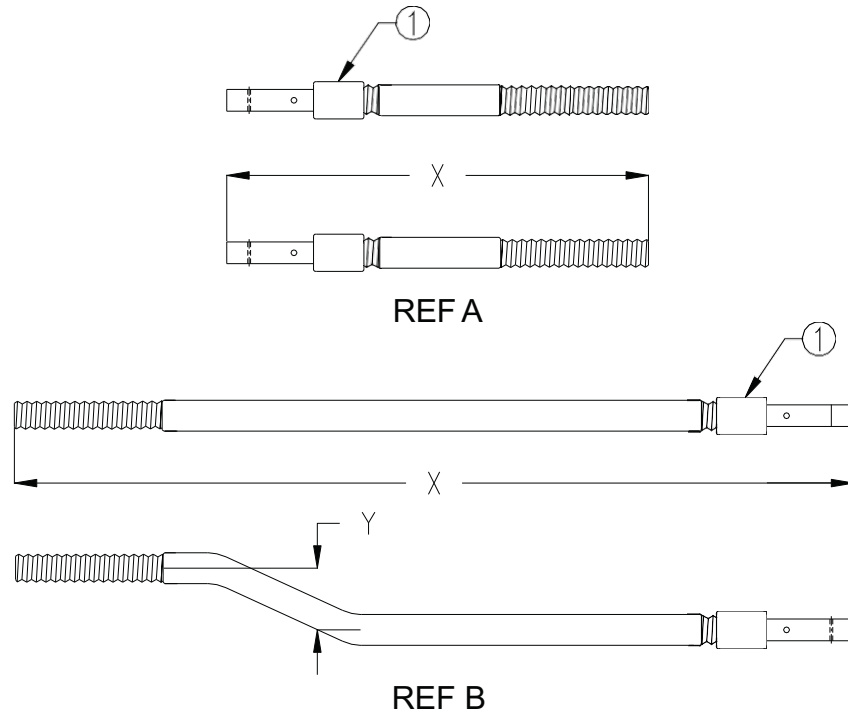
<b>Pages</b>	<b>Pages</b>
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# HELPER ROD ASSEMBLIES

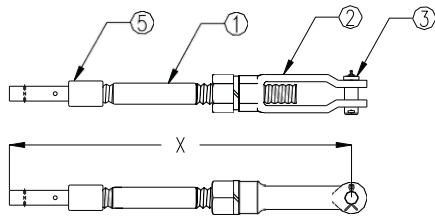


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HELPER ROD ASSEMBLY</b> , X = 18'-5/8".....	880032-001-01	N/A
A1	Similar to Ref A except X = 11'-5 5/8".....	880032-002-01	N/A
B	<b>HELPER ROD ASSEMBLY</b> , with wide jaw opening, X = 15'-3/4".....	880033-001-01	9000868
B1	Similar to Ref B except X = 16'-10 9/16".....	880033-002-01	9000867
B2	Similar to Ref B except X = 17'-6 11/16".....	880033-003-01	9001034
C	<b>HELPER ROD ASSEMBLY</b> , X = 25'-6 3/16".....	880034-001-01	9000894-1
C1	Similar to Ref C except X = 15'-9 29/32".....	880034-002-01	9000894-2
C2	Similar to Ref C except X = 15'-1".....	880034-003-01	900869
C3	Similar to Ref C except X = 17'-6 11/16".....	880034-004-01	9001037
D	<b>SIGNAL PIPE COMPLETE</b> , with 1" galvanized pipe, coupling, plug, and rivets, AAR Detail 10155.....	880035-001-01	N085726 33526-000-01 A91-122
E	<b>PLUG</b> , 31/32" dia x 10" long, AAR Detail 10151.....	880036	M018827
F	<b>TANGED LUG COMPLETE</b> , for 1" galvanized pipe, AAR Detail 10171.....	880037-001-01	N086139
G	<b>SIGNAL PIPE</b> , 1" galvanized, X = 21' 0".....	880031-210	M085727
G1	Similar to Ref G except X = 15'-0".....	880031-004	M397973
G2	Similar to Ref G except X = 15'-1 1/2".....	880031-005	M397973-001
G3	Similar to Ref G except X = 17'-2".....	880031-006	M397973-002

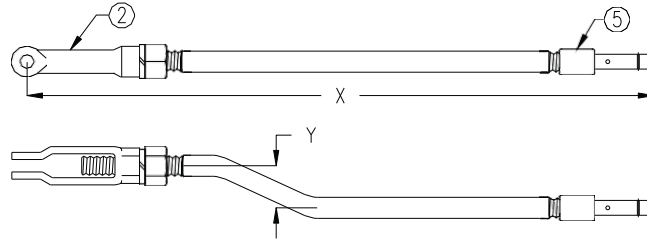


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TANGED SCREW JAW ROD COMPLETE</b> , with coupling, X = 18 3/4", 1 1/4"-7 UNC RH threads, AAR Detail 10194.....	980020-004-04	N073588 30585-000-01
A1	Similar to Ref A except with LH threads, AAR Detail 10195.....	980020-100-01	N068575
A2	Similar to Ref A except X = 25 3/4".....	980020-101-01	30585-002-01
A3	Similar to Ref A except X = 47".....	980020-102-01	N166923 30585-018-01
A4	Similar to Ref A except X = 23".....	980020-103-01	N080101
A5	Similar to Ref A except X = 29".....	980020-104-01	N075329
A6	Similar to Ref A except X = 36".....	980020-105-01	N147818
A7	Similar to Ref A except X = 48".....	980020-106-01	N091376
A8	Similar to Ref A except X = 60".....	980020-107-01	N120924
B	<b>TANGED SCREW JAW ROD COMPLETE</b> , with coupling, 1 1/4"-7 UNC RH threads, X = 25 1/4", Y = 2 3/4".....	980020-108-01	39465-001
B1	Similar to Ref B except Y = 1 1/4".....	980020-109-01	39465-003
B2	Similar to Ref B except X = 18 3/4", Y = 2 3/4".....	980020-110-01	39465-016
B3	Similar to Ref B2 except Y = 1/2".....	980020-111-01	39465-032
B4	Similar to Ref B except X = 57", Y = 1 7/8".....	980020-112-01	N345496
B5	Similar to Ref B except X = 58", Y = 3 1/2".....	980020-113-01	N382849
1	<b>COUPLING ONLY</b> , for 1" Schedule 40 pipe, AAR Detail 10152.....	980025	J032183 640

# TANGED SCREW JAW RODS

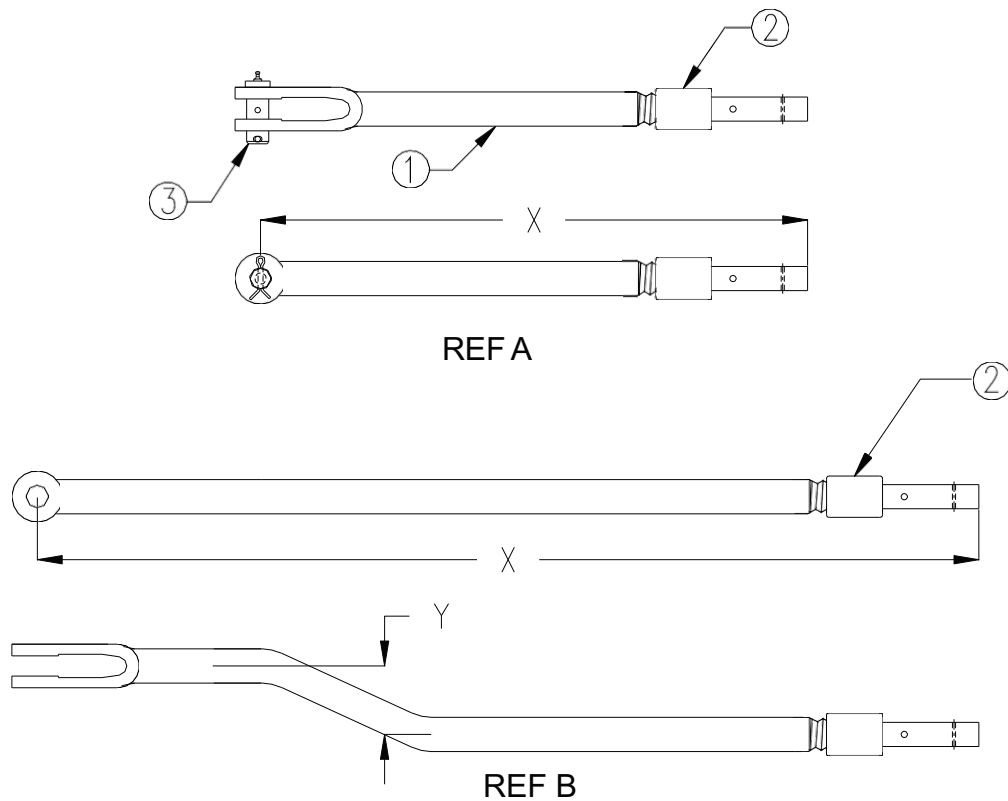


REF A



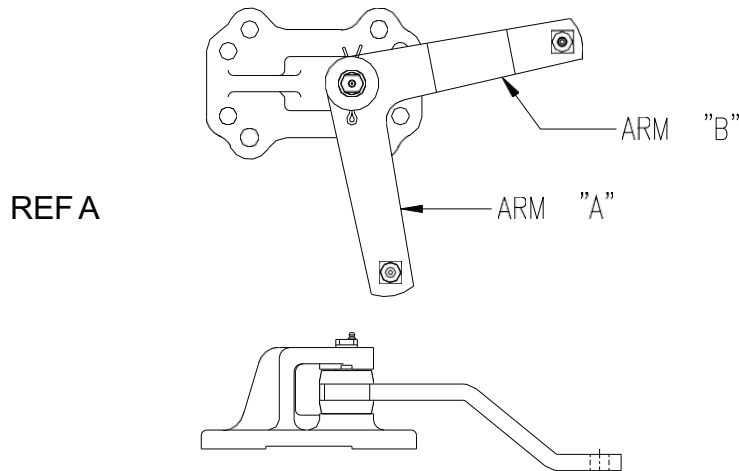
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TANGED SCREW JAW ROD COMPLETE</b> , with coupling and jaw pin assembly, tanged for 1" Schedule 40 pipe, X= 21 3/4".....	980020-004-02	X349426
A1	Similar to Ref A except without jaw pin assembly, AAR Detail 10199.....	980020-004-01	N078626 30584-000-01 A91-126
A2	Similar to Ref A except X = 22 7/8".....	980020-114-03	N49105302
A3	Similar to Ref A2 except without jaw pin assembly.....	980020-114-02	N/A
A4	Similar to Ref A1 except with 1 1/4"-7 UNC elastic stop nut.....	980020-004-03	N095995
A5	Similar to Ref A1 except X = 25".....	980020-115-02	N451379-6902
A6	Similar to Ref A1 except X = 26".....	980020-103-02	N212437
A7	Similar to Ref A1 except X = 29".....	980020-116-02	N089057
A8	Similar to Ref A1 except X = 30", AAR Detail 13605.....	980020-117-02	N087791
A9	Similar to Ref A1 except X = 33".....	980020-118-02	N330305
B	<b>TANGED SCREW JAW ROD COMPLETE</b> , with coupling, tanged for 1" Schedule 40 pipe, X = 41", Y = 2 3/4".....	980020-119-02	N451379-1702
B1	Similar to Ref B except X = 25", Y = 1 1/8".....	980020-120-01	N451379-1704
B2	Similar to Ref B1 except with 1 1/4"-7 UNC elastic stop nut.....	980020-120-02	N451379-1705
1	<b>ROD ONLY</b> , for Ref A.....	980020-004	M022830 30585 P91-288
2	<b>SCREW JAW ONLY</b> .....	898010-006	M022398 959 P91-110
3	<b>JAW PIN COMPLETE</b> , 7/8" dia X 2 1/2" long, for Ref A and A2.....	890590-005-01	X259173
4	<b>RIVET</b> , 1/4" X 1 11/16" rd. hd. iron.....	890600-001	J049464 39554 P91-112
5	<b>COUPLING ONLY</b> , for 1" Schedule 40 pipe, AAR Detail 10152.....	980025	J032183 640



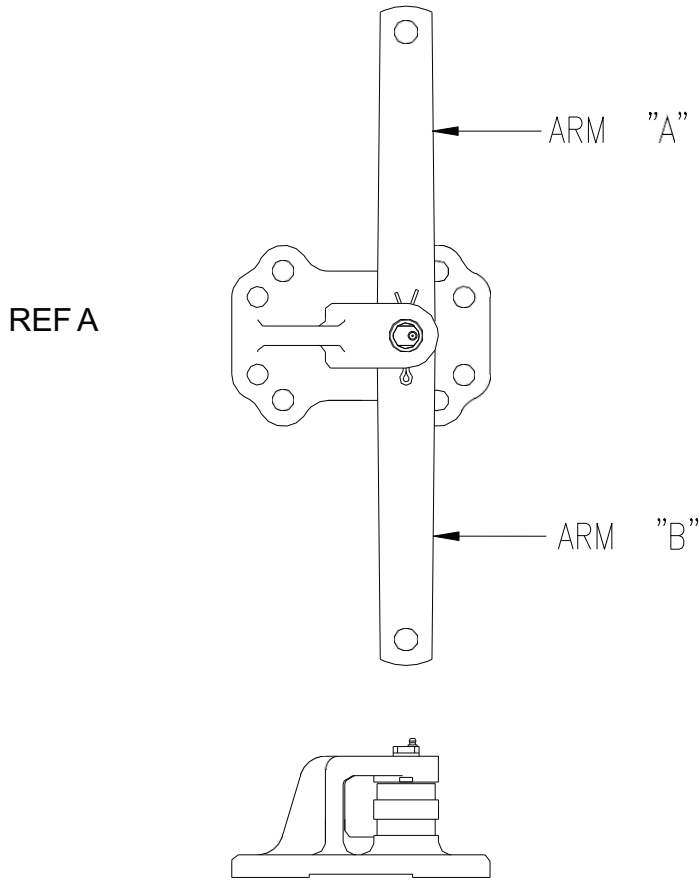
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TANGED SOLID JAW ROD COMPLETE</b> , with coupling and jaw pin assembly, tanged for 1" Schedule 40 pipe, X = 23".....	980020-002-02	X349428
A1	Similar to Ref A except without jaw pin assembly, AAR Detail 10181.....	980020-002-01	N069076 109-005 A91-125
A2	Similar to Ref A1 except with 1 13/16" jaw opening, AAR Detail 10183.....	980020-001-01	N068930
A3	Similar to Ref A1 except tanged for 1" Schedule 80 pipe.....	980020-003-01	N082214
A4	Similar to Ref A1 except X = 25".....	980020-005-01	N451379-6802
B	<b>TANGED SOLID JAW ROD COMPLETE</b> , with coupling, tanged for 1" Schedule 40 pipe, X = 41", Y = 2 3/4".....	980020-007-01	N451379-1602
B1	Similar to Ref B except X = 25", Y = 1 1/8".....	980020-008-01	N451379-1604
B2	Similar to Ref B except X = 22 1/8", Y = 22 3/4", AAR Detail 10182.....	980020-009-01	N073276
1	<b>ROD ONLY</b> , for Ref A.....	980020-002	M022846
2	<b>COUPLING ONLY</b> , for 1" Schedule 40 pipe, AAR Detail 10152.....	980025	J032183 640
3	<b>JAW PIN COMPLETE</b> , 7/8" dia X 2 1/4" long, for Ref A.....	890590-005-01	X259173
4	<b>RIVET</b> , 1/4" X 1 11/16" rd hd iron, not shown.....	890600-001	J049464 39554 P91-112

# RIGHT ANGLE CRANK STANDS



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>RIGHT ANGLE CRANK STAND COMPLETE</b> , with stand, pin, and 4 1/2" x 7" crank.....	980500-030X	N186686
A1	Similar to Ref A except with 4 7/8" x 9" crank with 1" upset in arm "A".....	980500-031X	N396201
A2	Similar to Ref A except with 4 7/8" x 9" crank with 1" downset in arm "A".....	980500-032X	N396202
A3	Similar to Ref A except with 7" x 7" crank.....	980500-034X	N091440 AAR10114
A4	Similar to Ref A except with 7" x 9" crank.....	980500-035X	N236309
A5	Similar to Ref A except with 8" x 10 1/2" crank.....	980500-036X	N293491
A6	Similar to Ref A except with 9" x 9" crank.....	980500-037X	N070157 AAR10115
A7	Similar to Ref A except with 9" x 9" crank with 7/16" downset in arm "B".....	980500-039X	N438387-002
A8	Similar to Ref A except with 9" x 9" crank with 7/16" downset in arm "A".....	980500-040X	N438387-003
A9	Similar to Ref A except with 9" x 11 3/4" crank.....	980500-041X	N099847
A10	Similar to Ref A except with 9" x 13 1/2" crank.....	980500-043X	N178836
A11	Similar to Ref A except with 9" x 14 1/2" crank.....	980500-044X	N227985
A12	Similar to Ref A except with 10" x 13" crank.....	980500-045X	N332099
A13	Similar to Ref A except with 11 3/4" x 11 3/4" crank.....	980500-046X	N073391 AAR10116
A14	Similar to Ref A except with 11 3/4" x 11 3/4" crank with 4" downset in arm "A".....	980500-047X	N080711
A15	Similar to Ref A except with 11 3/4" x 11 3/4" crank with 4" downset in arm "B".....	980500-048X	N081737
A16	Similar to Ref A except with 12" x 12" crank.....	980500-050X	N178835
A17	Similar to Ref A except with 14 1/2" x 14 1/2" crank.....	980500-051X	N085522 AAR10117

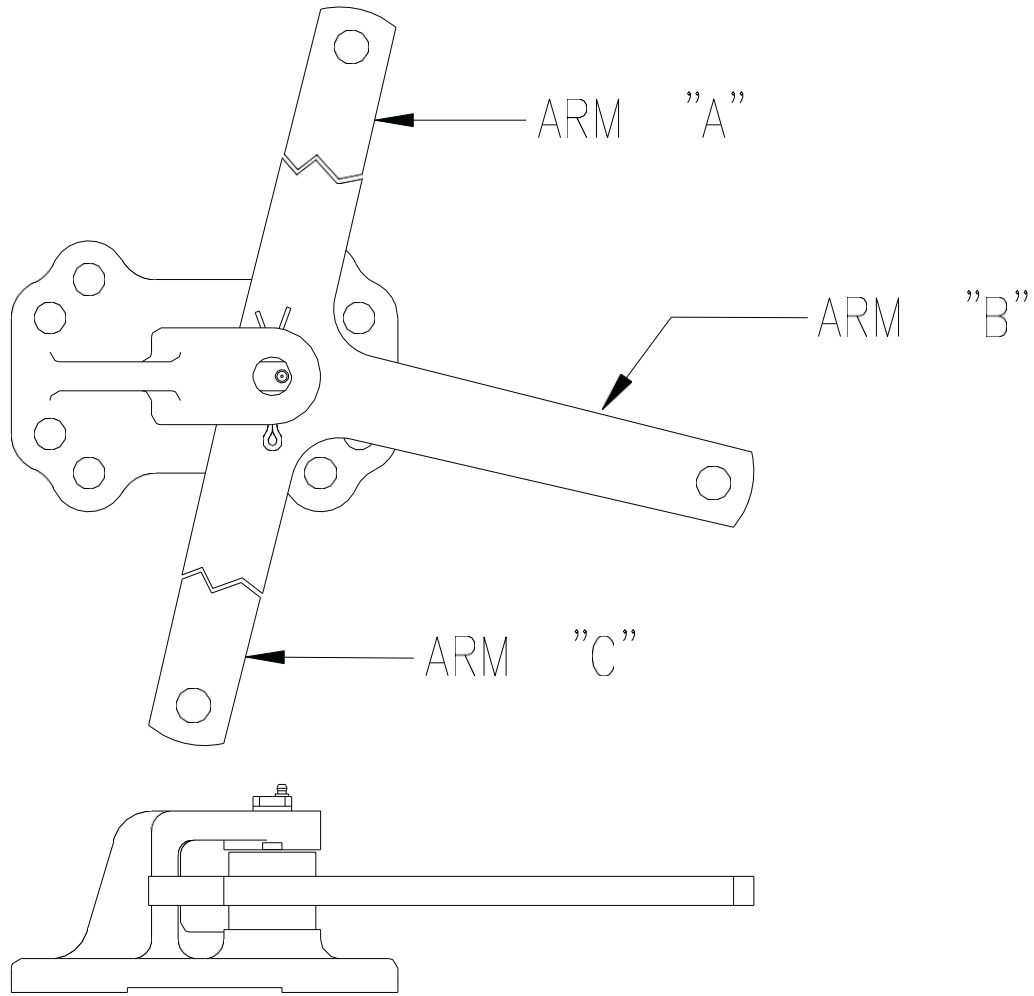
For custom orders, specify style 980500 right angle crank stands, the lengths of arms "A" and "B" and any corresponding upsets or downsets in each arm. Contact G&B's Customer Service Department for assistance.



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>COMPENSATING LEVER STAND COMPLETE</b> with stand, pin and 9" x 9" lever.....	980502-001X	N072755
A1	Similar to Ref A except with hardened pin.....	980502-002X	N156800
A2	Similar to Ref A except with 9" x 9" lever with 1 1/2" downset in each arm....	980502-003X	N298245
A3	Similar to Ref A except with 10 7/8" x 10 7/8" lever.....	980502-004X	N216628
A4	Similar to Ref A except with 11 3/4" x 11 3/4" lever.....	980502-005X	N072755
A5	Similar to Ref A except with 14 1/2" x 14 1/2" lever.....	980502-006X	N110371
A6	Similar to Ref A except with 16" x 16" lever.....	980502-007X	N232311
A7	Similar to Ref A except with 18" x 18" lever.....	980502-008X	N136490
A8	Similar to Ref A except with 20" x 20" lever.....	980502-009X	N085083
A9	Similar to Ref A except with 21" x 21" lever.....	980502-010X	N099056
A10	Similar to Ref A except with 21 1/2" x 21 1/2" lever.....	980502-011X	N082342
A11	Similar to Ref A except with 22 1/2" x 22 1/2" lever.....	980502-012X	N394678
A12	Similar to Ref A except with 24" x 24" lever.....	980502-013X	N097584
A13	Similar to Ref A except with 25" x 25" lever.....	980502-014X	N310391

For custom orders, specify compensating lever stands, the lengths of arms "A" and "B" and any corresponding upsets or downsets in each arm. Contact G&B's Customer Service Department for assistance.

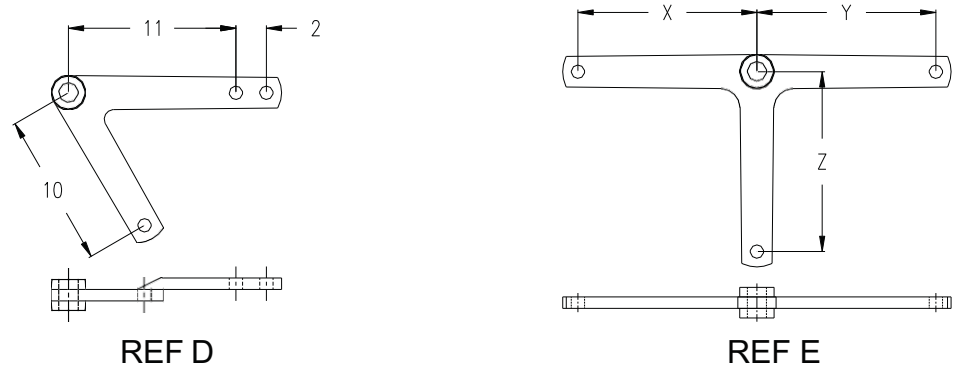
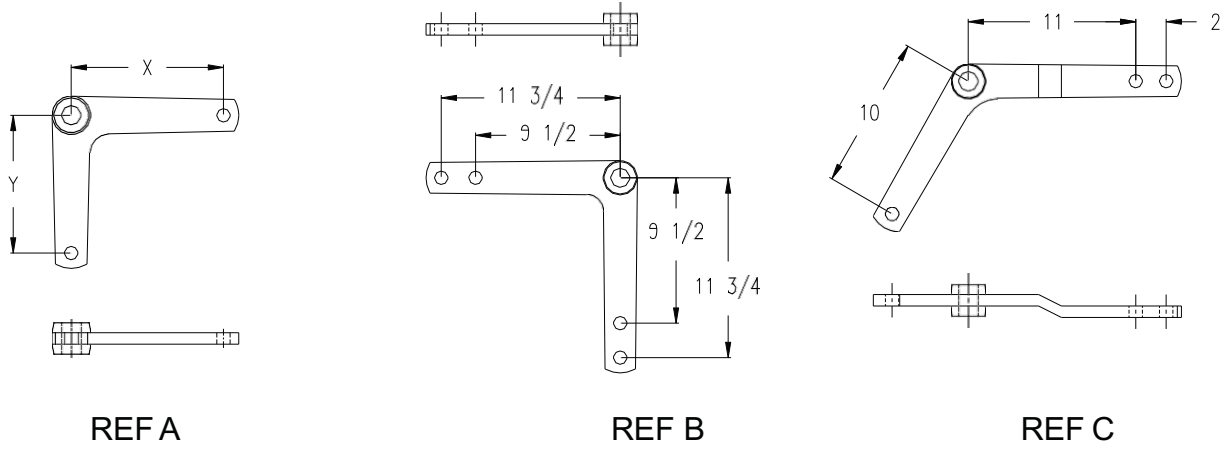




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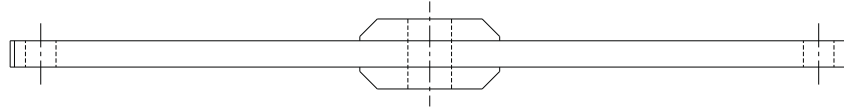
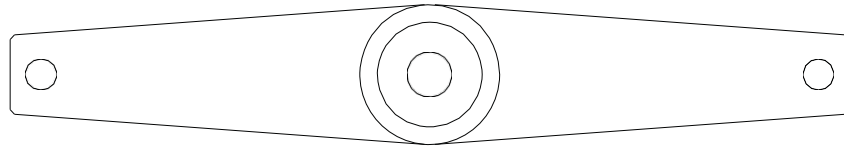
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>T-CRANK STAND COMPLETE</b> , with stand, pin and 9" x 9" x 9" T-crank	980501-001X	N079455
A1	Similar to Ref A except with 11 3/4" x 11 3/4" x 11 3/4" T-crank.....	980501-002X	N072754
A2	Similar to Ref A1 except with hardened pin.....	980501-003X	N131655
A3	Similar to Ref A1 except with 4" downset in arm "B".....	980501-004X	N099090
A4	Similar to Ref A except with 13" x 13" x 13" T-crank.....	980501-005X	N/A
A5	Similar to Ref A except with 14 1/2" x 14 1/2" x 14 1/2" T-crank.....	980501-006X	N094198

For custom orders, specify style 980501 T-crank stands, the lengths of arms "A", "B", and "C" and any corresponding upsets or downsets in each arm. Contact G&B's Customer Service Department for assistance.

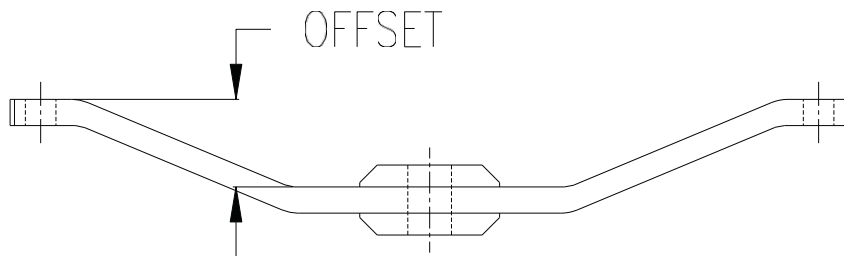
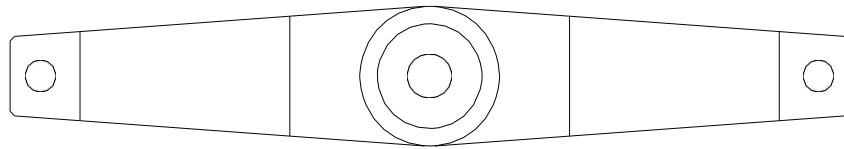


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CRANK, RIGHT ANGLE, 7" x 7"</b> , AAR Detail 10074.....	980010-006	110257-170
A1	Similar to Ref A except 9" x 9", AAR Detail 10075.....	980010-005	28717 A91-104 110257- 19
A2	Similar to Ref A except 11 3/4" x 11 3/4", AAR Detail 10076.....	980010-003	110257-7
A3	Similar to Ref A except 14 1/2" x 14 1/2", AAR Detail 10077.....	980010-004	110257-11
B	<b>CRANK, RIGHT ANGLE, 11 3/4" x 11 3/4"</b> .....	980010-039	637-131 A91-105
C	<b>CRANK, OBTUSE ANGLE, 10" x 11" - 13"</b> , AAR Detail 10135.....	980010-002	8573-004 A91-102
D	<b>CRANK, ACUTE ANGLE, 10" x 11" - 13"</b> , AAR Detail 10132.....	980010-001	8577-004 A91-103
E	<b>CRANK, THREE ARM, 11 3/4" x 11 3/4" x 11 3/4"</b> , AAR Detail 10071.....	980010-007	110257-15

# COMPENNSATOR CRANKS

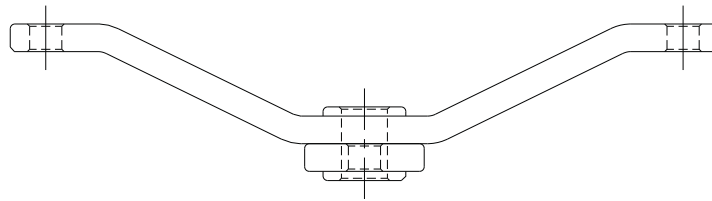
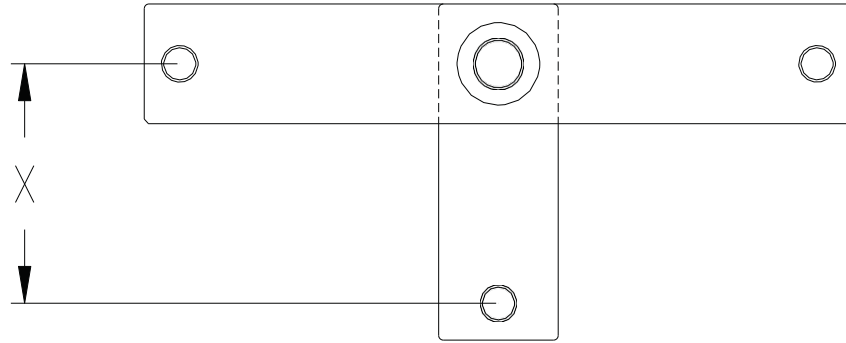


REF A



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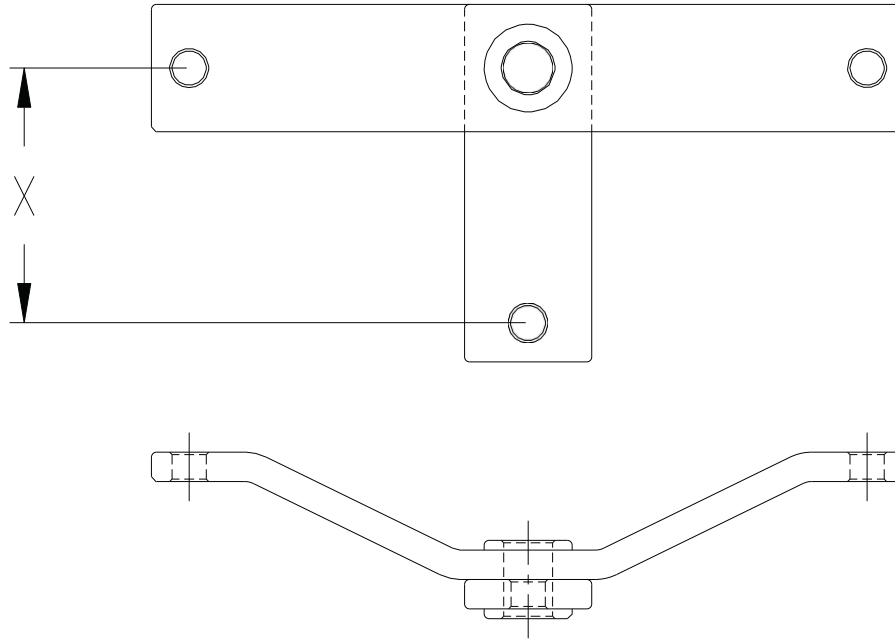
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>COMPENSATOR CRANK</b> , straight arm, 11 3/4" X 11 3/4".....	980005-001	27621 A91-106
A1	Similar to Ref A except 12" X 12".....	980005-002	N/A
A2	Similar to Ref A except 13" X 13".....	980005-003	743-100
A3	Similar to Ref A except 13 3/4" X 13 3/4".....	980005-004	743-91
A4	Similar to Ref A except 18" X 18".....	980005-005	N/A
A5	Similar to Ref A except 22 1/2" X 22 1/2".....	980005-006	743-95
A6	Similar to Ref A except 22 5/8" X 22 5/8".....	980005-007	743-97
A7	Similar to Ref A except 24" X 24".....	980005-008	743-28
A8	Similar to Ref A except 31" X 31".....	980005-009	743-90
B	<b>COMPENSATOR CRANK</b> , straight arm, 2 1/2" offset, 11 1/2" X 12".....	980005-010	743-103
B1	Similar to Ref B except 3 3/8" offset, 12 1/8" X 12 3/4".....	980005-011	743-079



REF A

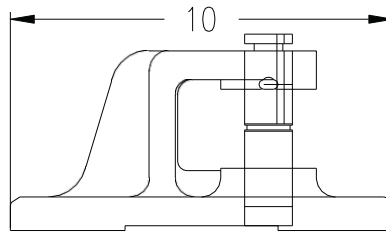
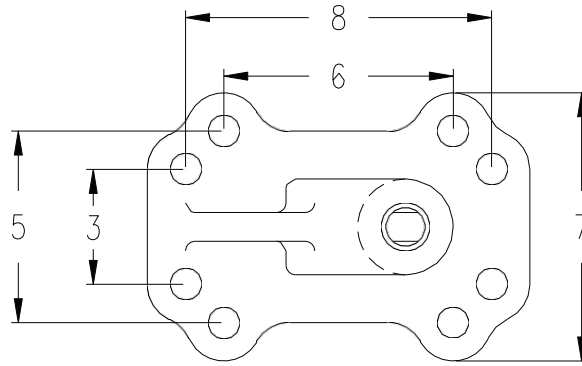
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>THREE ARM CRANK</b> , for use with double throw helper rod mechanisms on high speed turnouts, X = 12".....	980014-001	9000838-1
A1	Similar to Ref A except X = 11 3/4".....	980014-002	9000838-2
A2	Similar to Ref A except X = 11 1/2".....	980014-003	9000838-3
A3	Similar to Ref A except X = 11 1/4".....	980014-004	9000838-4
A4	Similar to Ref A except X = 11".....	980014-005	9000838-5
A5	Similar to Ref A except X = 10 3/4".....	980014-006	9000838-6
A6	Similar to Ref A except X = 10 1/2".....	980014-007	9000838-7
A7	Similar to Ref A except X = 10 1/4".....	980014-008	9000838-8
A8	Similar to Ref A except X = 10".....	980014-009	9000838-9
A9	Similar to Ref A except X = 9 3/4".....	980014-010	9000838-10
A10	Similar to Ref A except X = 9 1/2".....	980014-011	9000838-11
A11	Similar to Ref A except X = 9 1/4".....	980014-012	9000838-12
A12	Similar to Ref A except X = 9".....	980014-013	9000838-13
A13	Similar to Ref A except X = 8 3/4".....	980014-014	9000838-14
A14	Similar to Ref A except X = 8 1/2".....	980014-015	9000838-15
A15	Similar to Ref A except X = 8 1/4".....	980014-016	9000838-16
A16	Similar to Ref A except X = 8".....	980014-017	9000838-17
A17	Similar to Ref A except X = 7 3/4".....	980014-018	9000838-18
A18	Similar to Ref A except X = 7 1/2".....	980014-019	9000838-19

# THREE ARM CRANK

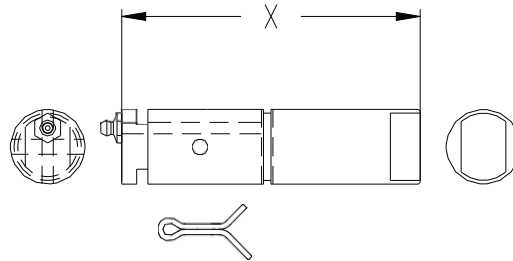


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>THREE ARM CRANK</b> , for use with double throw helper rod mechanisms on high speed turnouts, X = 7 1/4".....	980014-020	9000838-20
A1	Similar to Ref A except X = 7".....	980014-021	9000838-21
A2	Similar to Ref A except X = 6 3/4".....	980014-022	9000838-22
A3	Similar to Ref A except X = 6 1/2".....	980014-023	9000838-23
A4	Similar to Ref A except X = 6 1/4".....	980014-024	9000838-24
A5	Similar to Ref A except X = 6".....	980014-025	9000838-25
A6	Similar to Ref A except X = 5 3/4".....	980014-026	9000838-26
A7	Similar to Ref A except X = 5 1/2".....	980014-027	9000838-27
A8	Similar to Ref A except X = 5 1/4".....	980014-028	9000838-28
A9	Similar to Ref A except X = 5".....	980014-029	9000838-29
A10	Similar to Ref A except X = 4 3/4".....	980014-030	9000838-30
A11	Similar to Ref A except X = 4 1/2".....	980014-031	9000838-31
A12	Similar to Ref A except X = 4 1/4".....	980014-032	9000838-32
A13	Similar to Ref A except X = 4".....	980014-033	9000838-33
A14	Similar to Ref A except X = 3 3/4".....	980014-034	9000838-34
A15	Similar to Ref A except X = 3 1/2".....	980014-035	9000838-35
A16	Similar to Ref A except X = 3 1/4".....	980014-036	9000838-36
A17	Similar to Ref A except X = 3".....	980014-037	9000838-37

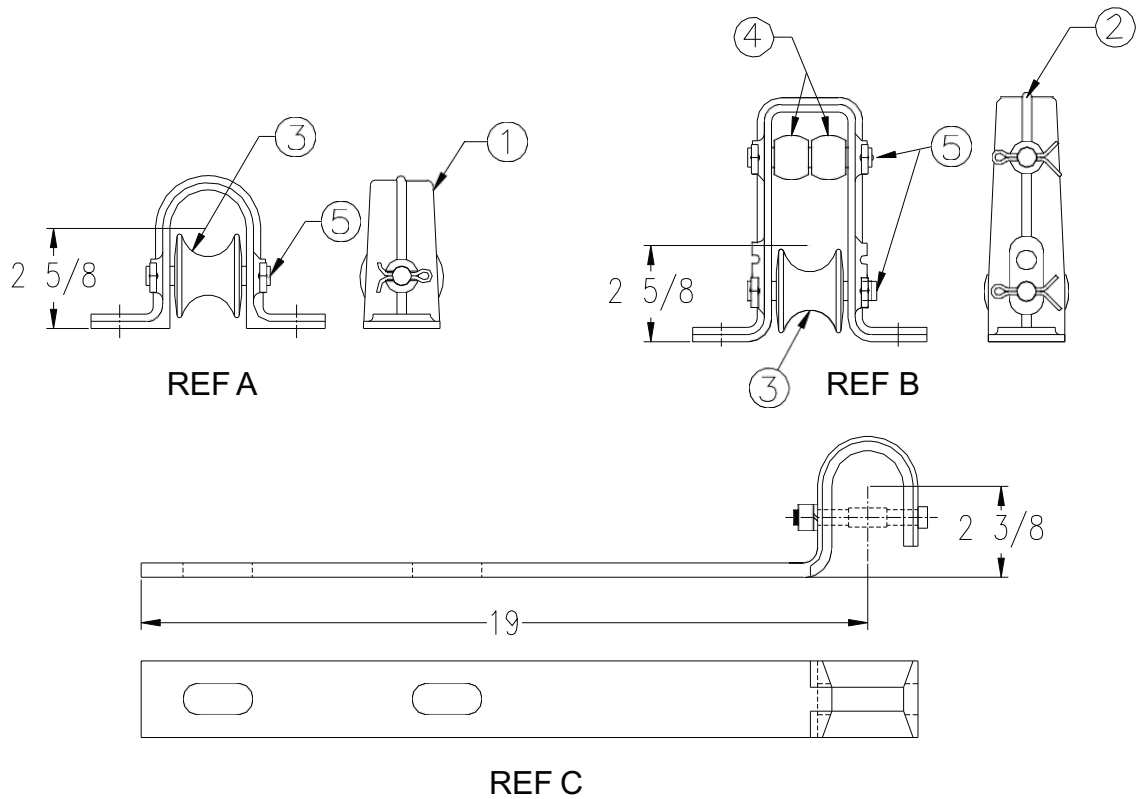


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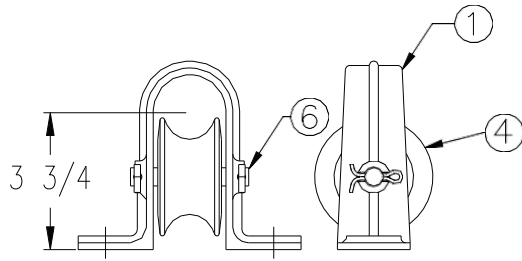


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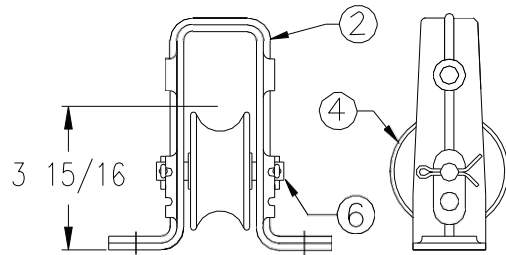
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CRANK STAND COMPLETE</b> , with stand, 1 1/4" x 5" pin, 3/16" drive lube fitting & cotter pin, AAR 10082.....	980015X	N149479 8206-001-05 A91-101
A1	Similar to Ref A except with 1/8" pipe tap lube fitting.....	980015-001X	N251439
A2	<b>CRANK STAND ONLY</b> .....	980015	M148951
B	<b>PIN COMPLETE</b> , 1 1/4" dia. x 5" lg., with 3/16" drive lube fitting & cotter pin	980016X	30291-011-01 P91-102
B1	<b>PIN COMPLETE</b> , 1 1/4" dia. x 5" lg., with 1/8" pipe tap lube fitting & cotter pin.....	980017X	N/A
B2	<b>PIN ONLY</b> , for Ref B, AAR 10101.....	980016	M149336 30291-011 P91-103
B3	<b>PIN ONLY</b> , for Ref B1.....	980017	M192798
B4	<b>PIN ONLY</b> , similar to Ref B2 except case hardened.....	980016-001	M146823
B5	<b>PIN ONLY</b> , similar to Ref B3 except case hardened.....	980017-001	M219008



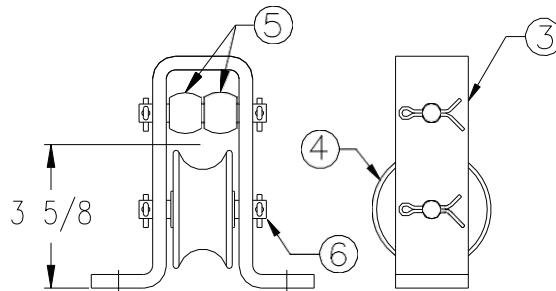
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LOW PIPE CARRIER COMPLETE</b> , one way, single roller type, including stand, roller, pin, & cotter pins, AAR 13.1.57-6/10746.....	980100-002X	N074028 2694-003-01 A91-130
A1	Similar to Ref A except includes (2) 1/2" x 2 1/2" lag screws.....	980100-003X	X348109
B	<b>LOW PIPE CARRIER COMPLETE</b> , one way, double roller type, including stand, rollers, pins, & cotter pins, AAR 13.1.57-9.....	980200-003X	2694-002-01 A91-121
B1	Similar to Ref B except includes (2) 1/2" x 2 1/2" lag screws.....	980200-004X	N/A
C	<b>PIPE SUPPORT ASSEMBLY</b> .....	980100-008X	N451598-3502
1	<b>STAND ONLY</b> , for Ref A, AAR 13.1.57-2.....	980100-002	M025053 2694-003 P91-253
2	<b>STAND ONLY</b> , for Ref B, AAR 13.1.57-1.....	980200-003	2694-002 P91-252
3	<b>ROLLER</b> , lower, for Ref A & B, AAR 13.1.57-3.....	880801-001	M088017 2695-007 P91-255
4	<b>ROLLER</b> , upper, two required, for Ref B, AAR 13.1.57-7.....	880801-002	2928-001 P91-258
5	<b>PIN</b> , for rollers Ref 3 & 4, AAR 13.1.57-4.....	890597-001	M024570 2696-002 P91-256



REF A



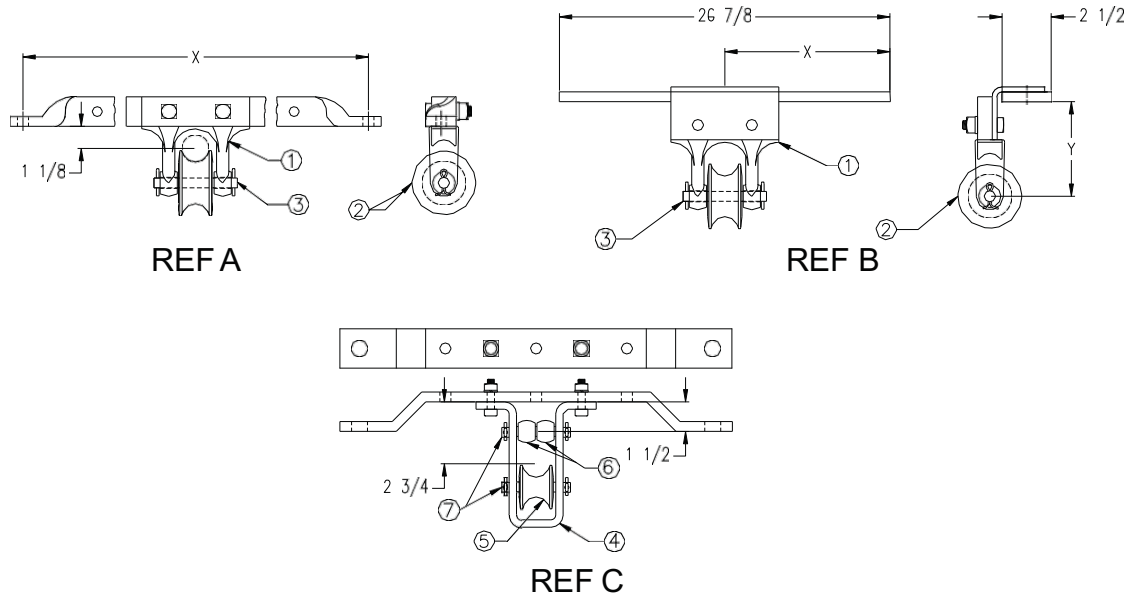
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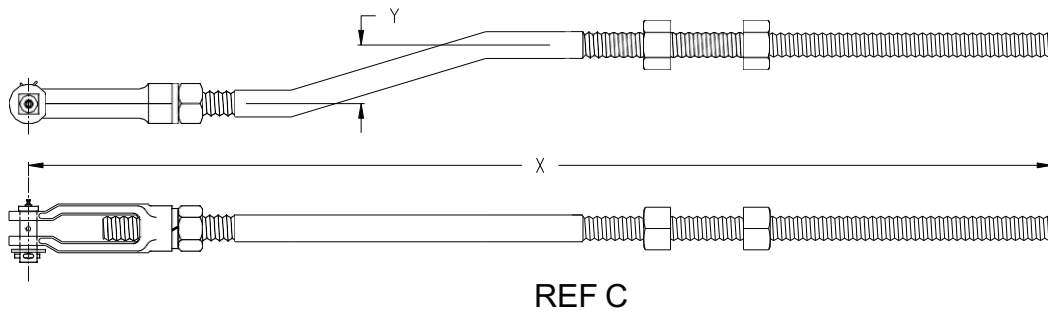
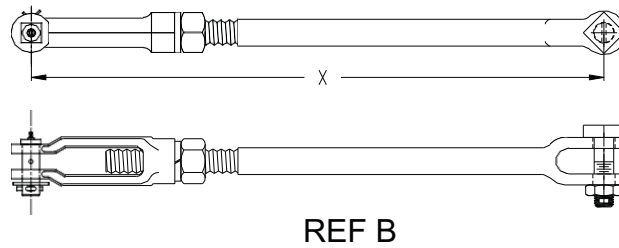
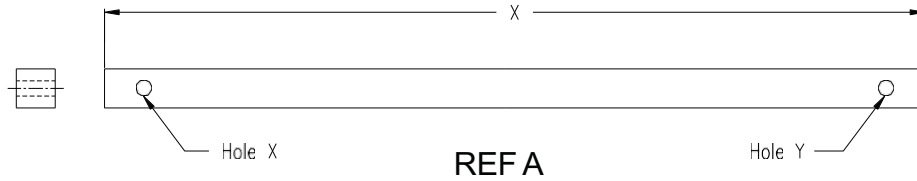
REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HIGH PIPE CARRIER COMPLETE</b> , one way, single roller type, including stand, roller, pin, & cotter pins.....	980100-004X	N110696
A1	Similar to Ref A except includes (2) 1/2" x 2 1/2" lag screws.....	980100-005X	X380627
B	<b>HIGH PIPE CARRIER COMPLETE</b> , one way, single roller type, including stand, roller, pin, & cotter pins, AAR 13.157-8.....	980100-006X	N/A
B1	Similar to Ref B except includes (2) 1/2" x 2 1/2" lag screws.....	980100-007X	N/A
C	<b>HIGH PIPE CARRIER COMPLETE</b> , one way, double roller type, including stand, rollers, pins, & cotter pins.....	980200-006X	N/A
C1	Similar to Ref C except includes (2) 1/2" x 2 1/2" lag screws.....	980200-007X	N/A
1	<b>STAND ONLY</b> , for Ref A.....	980100-004	M025052
2	<b>STAND ONLY</b> , for Ref B, AAR 13.157-1.....	980200-003	N/A
3	<b>STAND ONLY</b> , for Ref C.....	980200-006	N/A
4	<b>ROLLER</b> , for Ref A, B, & C .....	880801-003	M136268
5	<b>ROLLER</b> , upper, for Ref C.....	880801-002	2928-001 P91-258
6	<b>PIN</b> , for Ref A, B, & C.....	890597-001	M024570 2696-002 P91-256

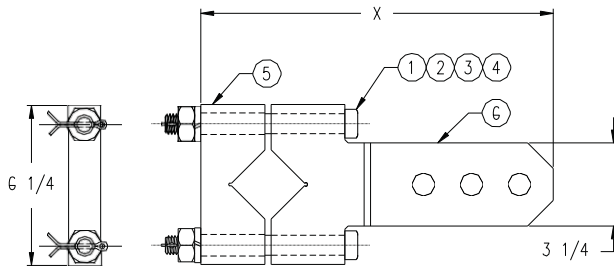




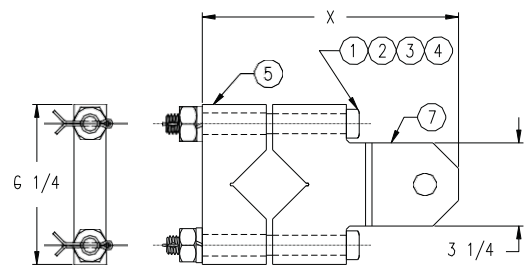
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TRANSVERSE PIPE CARRIER COMPLETE</b> , one way, including support, hanger, roller, pin, cotter pins & bolts, AAR 10721, X = 18".....	980300-001X	X077384-001
A1	Similar to Ref A except X = 20 3/4".....	980300-002X	X080399-001
B	<b>TRANSVERSE PIPE CARRIER COMPLETE</b> , one way, including support, hanger, roller, pin, cotterpins & bolts, X = 11 1/4", Y = 4 1/8".....	980300-003X	N395381
B1	Similar to Ref B except X = 14 1/8".....	980300-004X	N395381-001
B2	Similar to Ref B except X = 11 1/8, Y = 4 13/16".....	980300-005X	N397661
C	<b>PIPE CARRIER COMPLETE</b> , one way, double roller type, including stand, rollers, pins, and cotter pins, for transverse applications.....	980200-006X	N/A
C1	<b>TRANSVERSE STRAP PIPE CARRIER</b> , similar to Ref C except includes strap & bolts, AAR 10753.....	980201-007X	N/A
1	<b>HANGER ONLY</b> .....	980301	M069137
2	<b>ROLLER</b> .....	880801-003	M136268
3	<b>PIN</b> .....	890597-002	M000440
4	<b>STAND ONLY</b> , for Ref C, AAR 13.1.57-1.....	980200-003	N/A
5	<b>ROLLER</b> , lower, for Ref C, AAR 13.1.57-3.....	880801-001	M088017 2695-007 P91-255
6	<b>ROLLER</b> , upper, two required, for Ref C, AAR 13.1.57-7.....	880801-002	2928-001 P91-258
7	<b>PIN</b> , for rollers Ref 5 & 6, AAR 13.1.57-4.....	890597-001	M024570 2696-002 P91-256



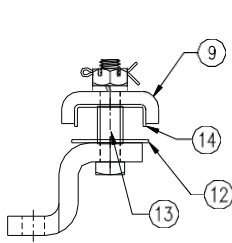
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>DRIVE BAR</b> , 2" square x 144" long with hole X and hole Y.....	999037-008	N/A
A1	Similar to Ref A except without hole Y.....	999037-007	N/A
A2	Similar to Ref A1 except made from 1018 steel.....	999037-045	N/A
A3	Similar to Ref A1 except 93" long.....	999037-015	N/A
A4	Similar to Ref A1 except 69" long.....	999037-025	N/A
B	<b>DRIVE ROD ASSEMBLY</b> , with 1 5/16" jaw opening, X = 20 1/2".....	999037-039X	N/A
B1	Similar to Ref B except with 15/16" jaw, 2" offset, X = 38 1/8".....	999037-013X	N/A
C	<b>DRIVE ROD ASSEMBLY</b> , X = 53 1/2", Y = 2".....	999037-014X	N/A
C1	Similar to Ref C except no offset, X = 20 1/2".....	999037-035X	N/A
C2	Similar to Ref C except Y = 3", X = 69".....	999037-036X	N/A
C3	Similar to Ref C except X = 60".....	999037-040X	N/A
C4	Similar to Ref C except no offset, threads are left handed, X = 34".....	999037-041X	N/A



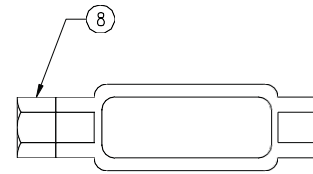
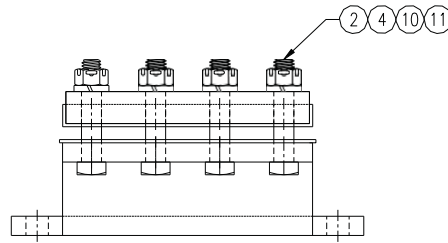
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REF B

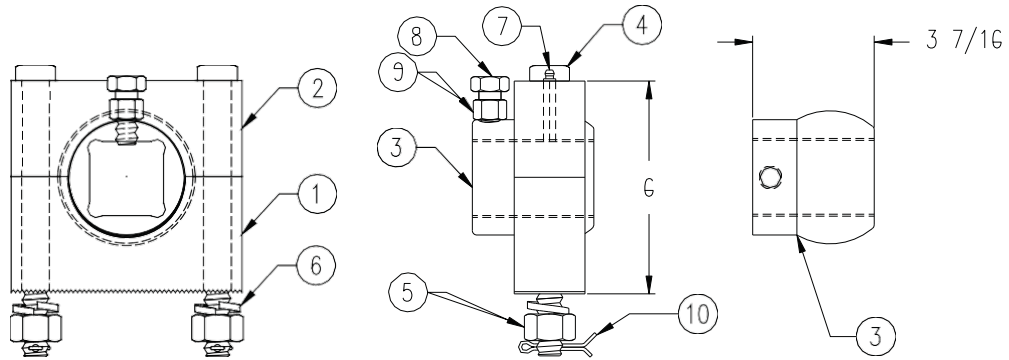


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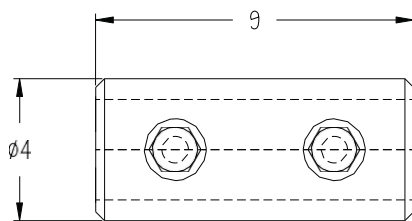


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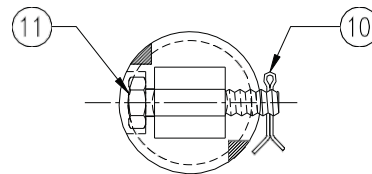
REF	DESCRIPTION	G & B PART #	OEM PART #
A	DRIVE ARM ASSEMBLY, X = 13 3/4".....	999037-001X	N/A
B	DRIVE ARM ASSEMBLY, X = 10".....	999037-028X	N/A
C	CONNECTING BRACKET ASSEMBLY, for universal application.....	999037-090X	N/A
D	TURNBUCKLE, for 1 1/4" rod.....	898011-006	G30924-000
1	BOLT, 3/4"-10 x 7".....	990231-700-121	N/A
2	WASHER, 3/4" lock.....	990403-075-02	J047772
3	NUT, 3/4"-10 heavy square.....	990302-075-02	J048229
4	COTTER PIN, 3/16" x 1 1/2".....	990509-150-02	J048634
5	DRIVE ARM CAP.....	999037-002	N/A
6	DRIVE ARM, standard.....	999037-001	N/A
7	DRIVE ARM, short.....	999037-028	N/A
8	NUT, 1 1/4"-7 left handed threads.....	990331-125-02L	J048042
9	CHANNEL, steel splice.....	960107	10176B
10	BOLT, 3/4"-10 x 4" square head.....	990233-400-121	N/A
11	NUT, 3/4"-10 hex slotted.....	990332-075-02	J048091
12	INSULATION, flat, fiberglass.....	973200-001	N/A
13	INSULATION, bushing, fiberglass.....	973100-003	10107B
14	INSULATION, channel, fiberglass.....	973301-001	N/A



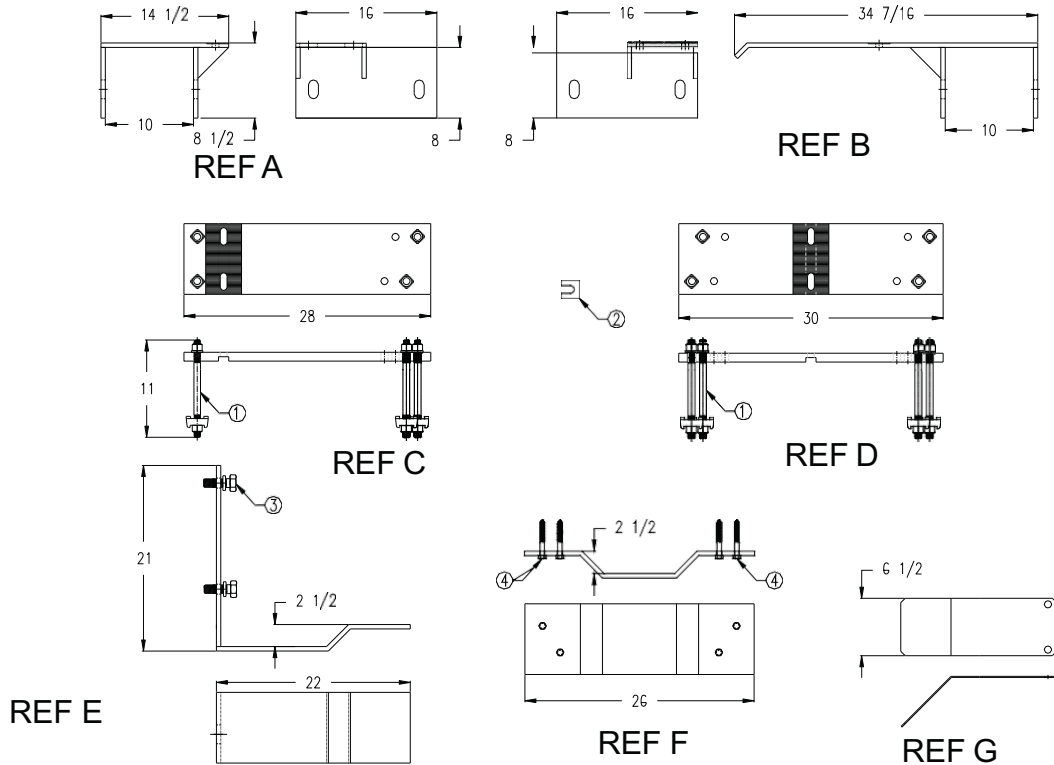
REF A



REF B



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PILLOW BLOCK ASSEMBLY, X = 5 1/2"</b> .....	999037-003X	N/A
A1	Similar to Ref A except items 1A and 4A are used, X = 6".....	999037-033X	N/A
A2	Similar to Ref A except items 1B and 4B are used, X = 8 3/4".....	999037-034X	N/A
B	<b>DRIVE BAR COUPLING</b> .....	999037-018X	N/A
1	<b>PILLOW BLOCK BASE, standard</b> .....	999037-003	N/A
1A	<b>PILLOW BLOCK BASE, intermediate</b> .....	999037-019	N/A
1B	<b>PILLOW BLOCK BASE, tall</b> .....	999037-006	N/A
2	<b>PILLOW BLOCK CAP</b> .....	999037-004	N/A
3	<b>PILLOW BLOCK BEARING</b> .....	999037-005	N/A
4	<b>BOLT, 3/4"-10 x 7 1/2"</b> .....	990231-750-121	N/A
4A	<b>BOLT, 3/4"-10 x 8"</b> .....	990231-800-121	N/A
5	<b>NUT, 3/4"-10 heavy hex</b> .....	990330-002	N/A
6	<b>LOCK WASHER, 3/4" heavy duty</b> .....	990402-075-02	N/A
7	<b>GREASE FITTING, 1/8"</b> .....	990900-009	N/A
8	<b>BOLT, 5/8"-11 x 1 1/2"</b> .....	990729-150-02	N/A
9	<b>NUT, 5/8"-11 hex</b> .....	990329-062-02	N/A
10	<b>COTTER PIN, 3/16" x 1 1/2"</b> .....	990509-150-02	J048634
11	<b>BOLT, 3/4"-10 x 3 3/4" hex</b> .....	990280-375-121	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PILLOW BLOCK MOUNTING PLATE ASSEMBLY</b> , for concrete ties, right hand.....	999037-011X	N/A
A1	Similar to Ref A except left hand.....	999037-022X	N/A
B	<b>PILLOW BLOCK MOUNTING PLATE ASSEMBLY</b> , for concrete ties, left hand.....	999037-026X	N/A
B1	Similar to Ref B except right hand.....	999037-046X	N/A
C	<b>PILLOW BLOCK MOUNTING/TIE PLATE ASSEMBLY</b> , for wood ties.....	999037-065-01	N/A
D	<b>PILLOW BLOCK MOUNTING/TIE PLATE ASSEMBLY</b> , for wood ties.....	999037-067-01	N/A
E	<b>BALLAST KEEPER ASSEMBLY</b> , for concrete ties.....	999037-031X	N/A
F	<b>BALLAST KEEPER ASSEMBLY</b> , for wood ties.....	999037-027X	N/A
G	<b>DRIVE BAR HOOD</b> .....	999037-038	N/A
1	<b>STUD ASSEMBLY</b> , 3/4"-10 x 11".....	910922-036X	N/A
2	<b>SHIM</b> .....	860300-001	N/A
3	<b>BOLT ASSEMBLY</b> , 1"-8 x 3" bolt, lockwasher.....	990821-300-X12	N/A
4	<b>LAG SCREW</b> , 1/2" x 5".....	990120-500-02	N/A



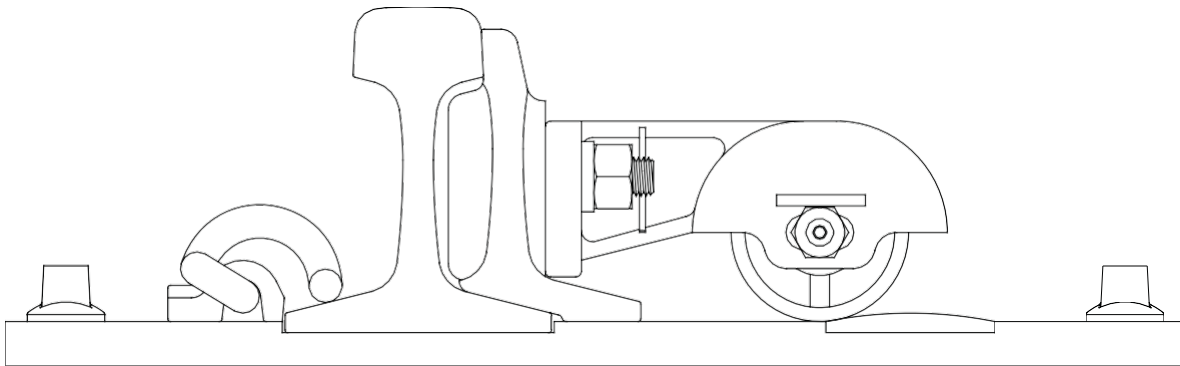
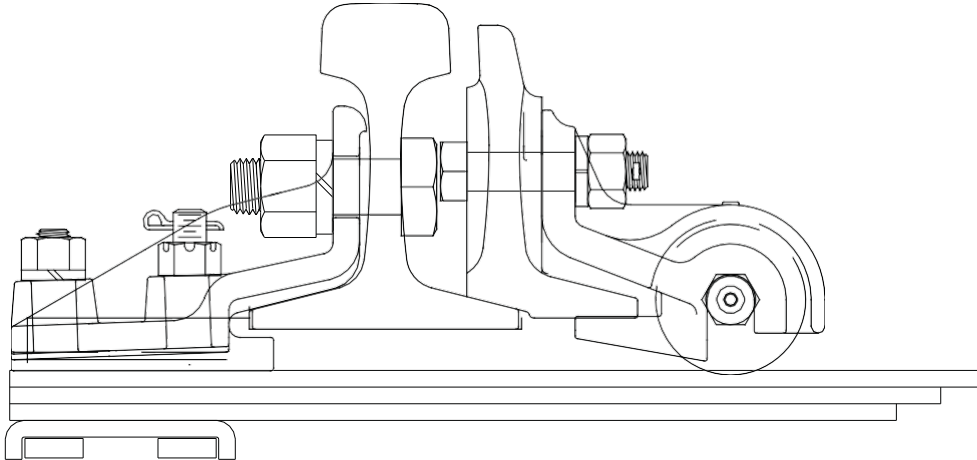
# SWITCH POINT ROLLERS

## SECTION J

## CONTENTS

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Introduction.....	1
. Model 880700 Switch Point Roller.....	2
Model 880850 Switch Point Roller.....	3
Model 880900 Switch Point Roller.....	4-6
Model 880800 Switch Point Roller.....	7

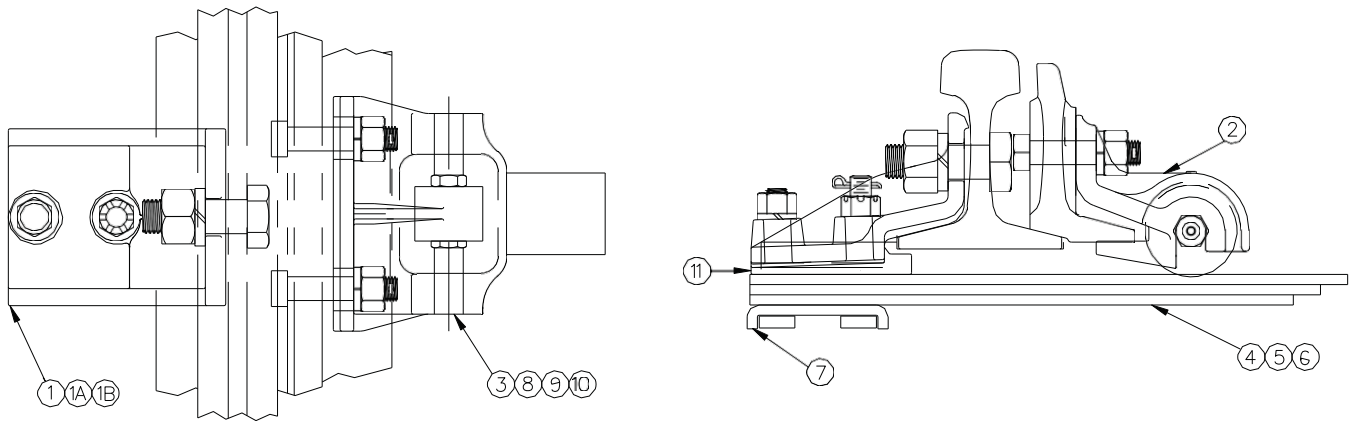


- \* **REDUCES/ ELIMINATES SWITCH PLATE LUBRICATION REQUIREMENTS**
- \* **REDUCES SWITCH MACHINE FAILURES**
- \* **REDUCES POWER REQUIREMENTS**
- \* **IMPROVES SWITCH POINT CLOSURE**

Due to the development of longer high-speed switches and the continued use of heavy rail sections, G&B Specialties offers a variety of switch point rollers to significantly reduce the effort required in switch point movement. By lifting the point off the gage plates as the switch is thrown, these rollers reduce the friction between the switch point and gage plates, consequently, reducing the force needed to throw the switch. Both “top of tie” and “in the crib” designs are available. These devices are easily installed on 115lb RE and heavier rail on existing or new switches and are especially advantageous when used on manual operated switches, spring switches and power operated switches.

### HOW TO ORDER

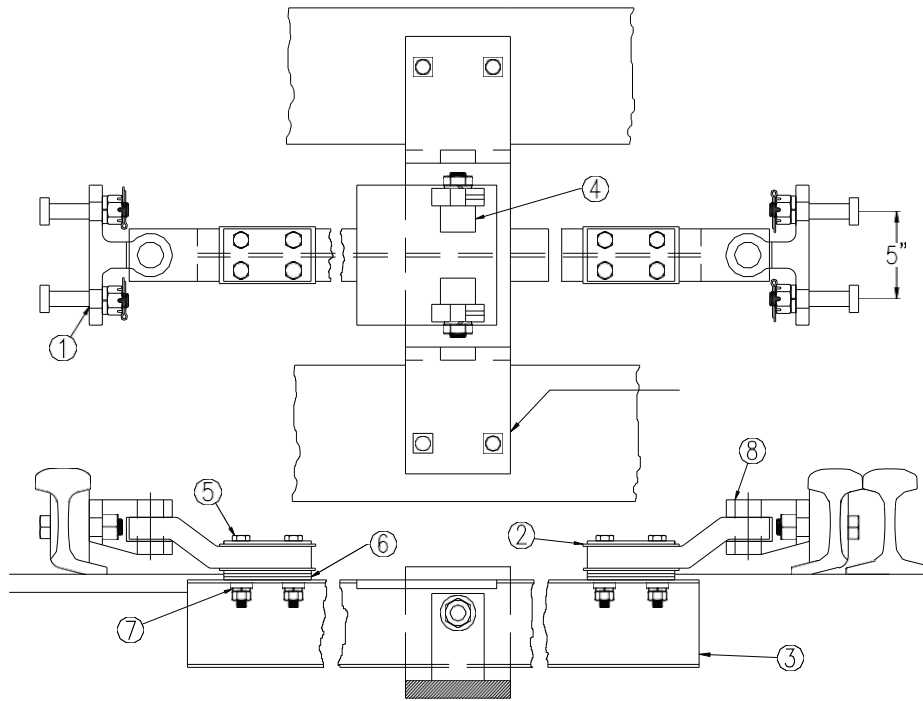
Refer to the following pages and specify the part number, weight of rail, turnout length and location of rollers. For custom switch point roller applications, please call G&B’s Customer Service Department for assistance.



REF A

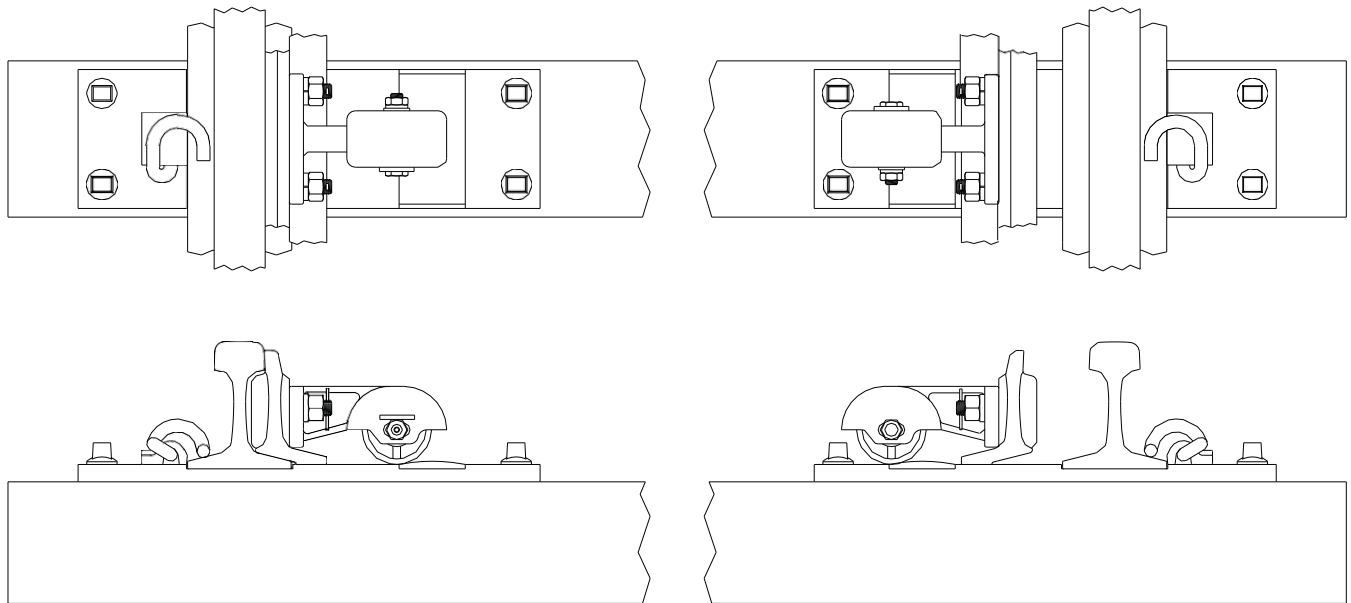
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ROLLER COMPLETE</b> , one assembly for 1/2" to 1 1/4" reinforcing bar on gage side.....	880700-001X	X231923-001
A1	<b>SWITCH POINT ROLLER COMPLETE</b> , two assemblies for 1/2" to 1 1/4" reinforcing bar on gage side <b>using Cal-Rod switch heaters</b> .....	880700-002X	X231923-002
A2	Similar to Ref A except furnished with 1" dia mounting bolt for spring bracket assembly.....	880700-003X	X231923-003
A3	Similar to Ref A except includes two assemblies for 1/2" to 1 1/4" reinforcing bar on gage side.....	880700-004X	N/A
1	<b>SPRING BRACKET COMPLETE</b> , with springs, fulcrum plate, bolt lock and bolts.....	880701X	N198173
1A	Similar to Ref 1 except allows clearance for Cal-Rod switch heaters.....	880701-001X	N198173-001
1B	<b>SPRING BRACKET ONLY</b> .....	880701	M198176
2	<b>TRUNNION BRACKET ONLY</b> .....	880702	M198177
3	<b>ROLLER BEARING &amp; SHAFT</b> with nuts and lubrication fitting.....	880703X	N198174
4	<b>SPRING</b> .....	880704	M198178
5	<b>SPRING</b> .....	880705	M198179
6	<b>SPRING</b> .....	880706	M198180
7	<b>BOLT LOCK</b> .....	880707	M198181
8	<b>SHAFT ONLY</b> .....	880708	M198182
9	<b>SLOTTED HEX NUT</b> .....	880709	M198185
10	<b>HEX NUT</b> .....	880710	M198251
11	<b>FULCRUM PLATE</b> .....	880711	M254903





REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWITCH POINT ROLLER COMPLETE, fits any size rail.....	880850-001X	57513-005-01 A91-320
B	ROLLER BASE COMPLETE.....	880851X	57514-001-01 P91-336
1	BUSHING, used with 3/4" dia bolts.....	880860	6714-276 P91-264
2	INSULATION PLATE.....	880861	1403-014 P91-250
3	BEAM COMPLETE.....	880862X	22154-001-02 P91-286
4	BEARING.....	880863	12267-006 P91-272
5	BOLT, for fastening lugs to beam.....	880864	49527-007 P91-331
5A	INSULATION BUSHING, for above.....	880865	7350-290 P91-269
6	SHIM, STEEL.....	880866	53879-027 P91-335
7	BEVEL WASHER.....	880867	36797-15 P91-298
8	LUG COMPLETE, for 3/4" to 1" bolts.....	880868X	5375-000-01 P91-260

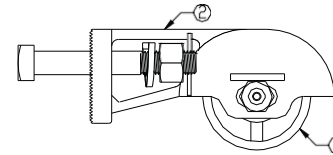
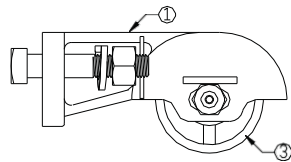
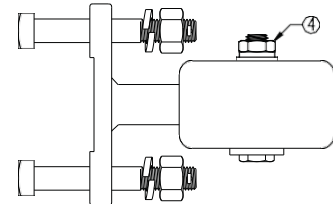
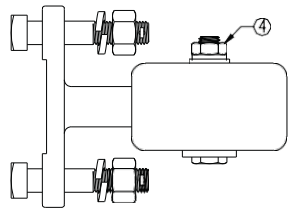
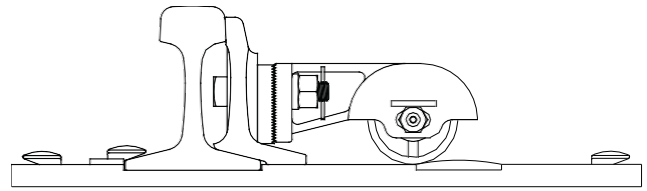
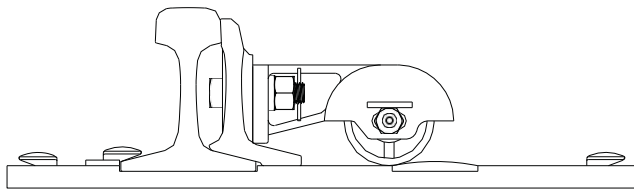


REF A

- \* REDUCES POWER REQUIREMENTS & MAINTENANCE
- \* "TOP OF TIE" DESIGN
- \* RAIL CREEPAGE DOES NOT INHIBIT PERFORMANCE
- \* HEAVY DUTY CONSTRUCTION
- \* SEALED ROLLER BEARINGS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWITCH POINT ROLLER KIT, Model 880900, 136 lb rail with pandrol fasteners for 30'-0" switch, includes four roller assemblies and riser plates	880904-003X	N/A
A1	Similar to Ref A except for 39'-0" switch, includes six roller assemblies and riser plates.....	880904-004X	N/A
B	SWITCH POINT ROLLER KIT, Model 880901, serrated adjustment, 136 lb rail with pandrol fasteners for No. 9, 16'-6" switch, includes two roller assemblies and riser plates not shown.....	880903-003X	N/A
B1	Similar to Ref B except for No. 11, 19'-6" switch.....	880903-004X	N/A
B2	Similar to Ref B except for No. 15 and 20, 30'-0" switch, includes six roller assemblies and roller plates.....	880903-005X	N/A
B3	Similar to Ref B except for No. 24, 39'-0" switch, includes eight roller assemblies and riser plates.....	880903-006X	N/A

For custom designed applications, please provide G&B's Customer Service Department with the size of turnout, rail weight, type of fasteners, point throw and tie locations of rollers.

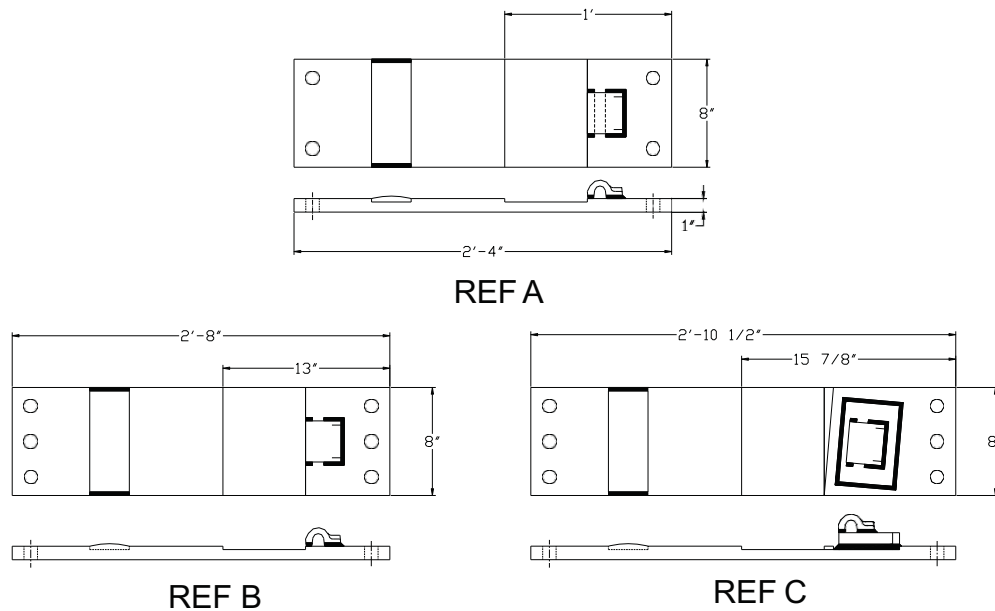


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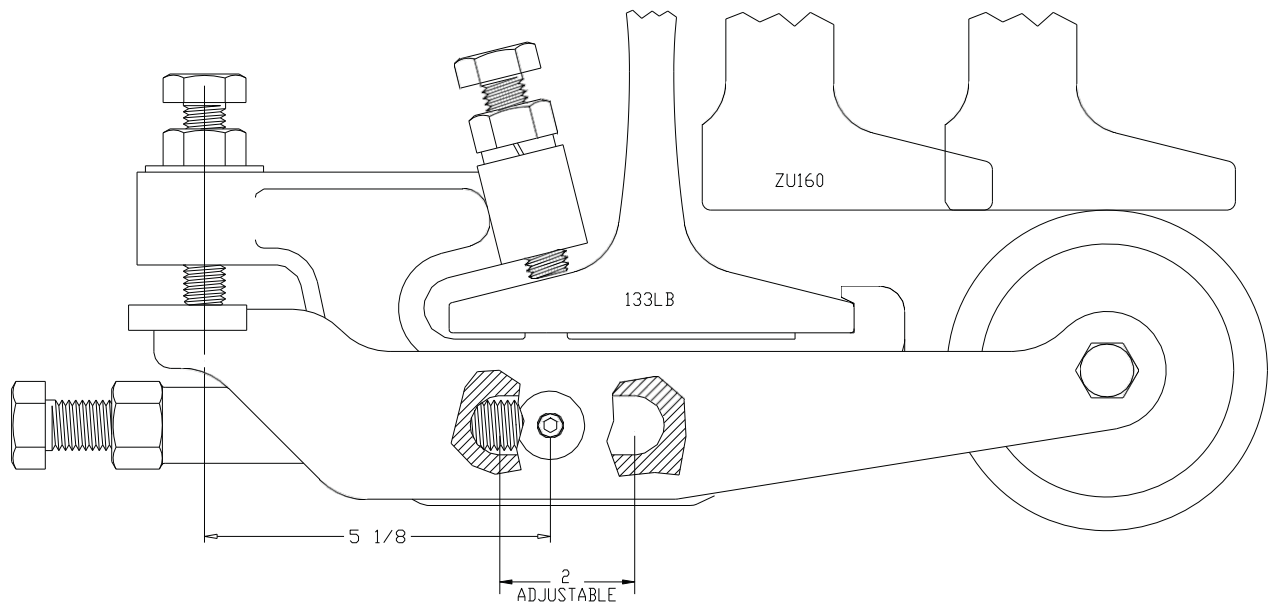
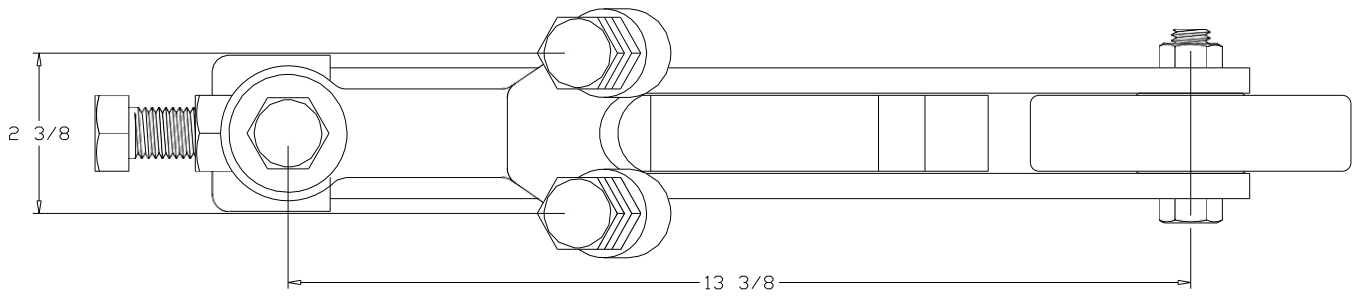
REF C

REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH POINT ROLLER ONLY</b> , without bolt assemblies.....	880900X	N/A
A1	Similar to Ref A except with two 7/8" dia X 4 1/2" long mounting bolt assemblies.....	880900-000-01X	N/A
A2	Similar to Ref A except with two 7/8" dia X 5 1/4" long mounting bolt assemblies.....	880900-000-02X	N/A
A3	Similar to Ref A except supplied as one pair of rollers.....	880900-000-03X	N/A
B	<b>SWITCH POINT ROLLER ONLY</b> , serrated adjustment without serrated mounting plate and bolt assemblies.....	880901X	N/A
B1	Similar to Ref B except with two 7/8" dia X 6" long mounting bolt assemblies	880901-000-01X	N/A
B2	Similar to Ref B except supplied as one pair of rollers.....	880901-000-03X	N/A
C	<b>SERRATED MOUNTING PLATE</b> , for Model 880901 switch point rollers, designed for 1 1/4" reinforcing bar.....	880903-001	N/A
C1	Similar to Ref C except designed for 1/2" reinforcing bar.....	880903-002	N/A
1	<b>SWITCH POINT ROLLER HOUSING</b> , non-serrated.....	880900	N/A
2	<b>SWITCH POINT ROLLER HOUSING</b> , serrated.....	880901	N/A
3	<b>ROLLER</b> .....	880908X	N/A
4	<b>ZERKED AXLE ASSEMBLY</b> .....	880909X	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>MILLED ROLLER RISER PLATE</b> , for Model 880900 switch point roller, used on 136# rail with pandrol fastener on tie #4 of a 30'-0" switch.....	880905-005X	N/A
A1	Similar to Ref A except used on tie #8 of a 30'-0" switch.....	880905-006X	N/A
A2	Similar to Ref A except used on tie #4 of a 39'-0" switch.....	880905-007X	N/A
A3	Similar to Ref A except used on tie #12 of a 39'-0" switch.....	880905-008X	N/A
A4	Similar to Ref A except used on tie #7 of a 39'-0" switch.....	880905-009X	N/A
B	<b>MILLED ROLLER RISER PLATE</b> , for Model 880901 switch point roller, used on 115# rail with pandrol fastener on tie #4 of a 16'-6" switch.....	880905-012X	N/A
B1	Similar to Ref B except used on a 136# rail.....	880905-013X	N/A
B2	Similar to Ref B except used on a 136# rail on tie #4 of a 30'-0" switch.....	880905-014X	N/A
B3	Similar to Ref B2 except used on tie #8.....	880905-015X	N/A
B4	Similar to Ref B2 except used on tie #12.....	880905-016X	N/A
C	<b>MILLED ROLLER RISER PLATE</b> , for Model 880901 switch point roller, used on 115# rail with pandrol fastener on tie #5 of a 19'-6" switch.....	880905-017X	N/A
C1	Similar to Ref C except used on 136# rail.....	880905-018X	N/A
C2	Similar to Ref C except used on a 136# rail on tie #4 of a 39'-0" switch.....	880905-019X	N/A
C3	Similar to Ref C2 except used on tie #10.....	880905-020X	N/A
C4	Similar to Ref C2 except used on tie #14.....	880905-021X	N/A
C5	Similar to Ref C2 except used on tie #18.....	880905-022X	N/A



REFA

- \* ADJUSTABLE DESIGN
- \* IMPROVES SWITCH POINT CLOSURE
- \* REDUCES POWER REQUIREMENTS
- \* SEALED ROLLER BEARINGS

REF	DESCRIPTION	G & B PART #	OEM PART #
A	ADJUSTABLE SWITCH POINT ROLLER, use with ZU160 asymmetrical switch point section.....	880800X	N/A



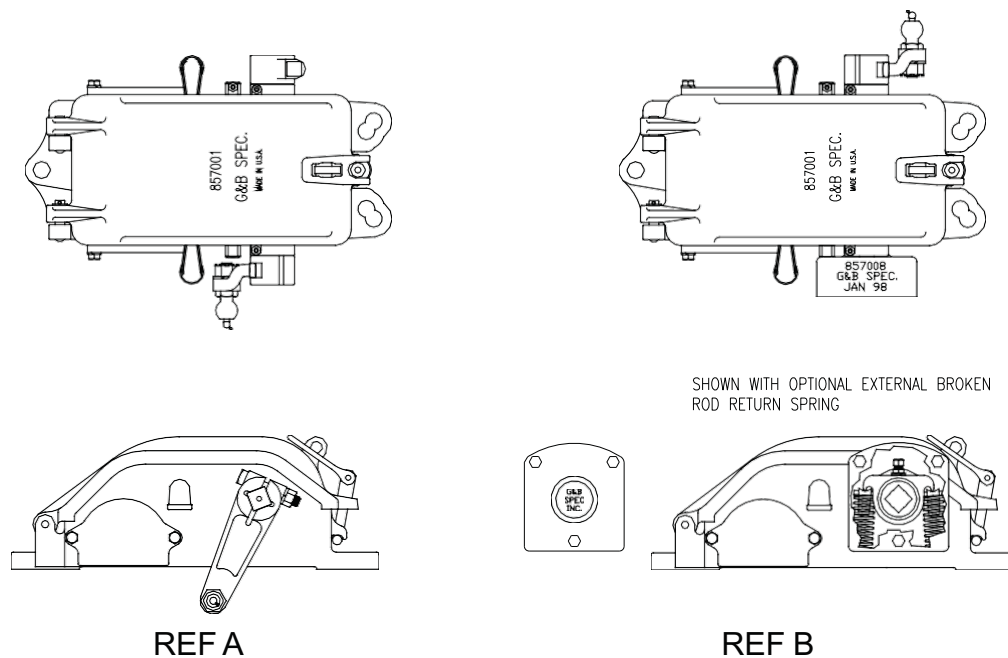
# SWITCH CIRCUIT CONTROLLERS, RODS, AND LUGS

## SECTION K

## CONTENTS

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<b>Product</b>	<b>Pages</b>
Model 856 Switch Circuit Controller.....	1-2
Switch Circuit Controller Rods.....	3-20
Point Socket and Controller Socket Assemblies.....	21-25
Point Lugs.....	26-27



- \* RUGGED WEATHERPROOF CONSTRUCTION
- \* FOUR INDIVIDUALLY ADJUSTABLE CAMS
- \* TWO AND THREE POSITION CAMS

- \* CONTACTS POSITIVELY DRIVEN BOTH DIRECTIONS
- \* THREE RETURN SPRING CONFIGURATIONS
- \* CAST IRON OR ALUMINUM COVER AVAILABLE

G&B Specialties' Model 856 switch circuit controller provides reliable positive electrical detection of the position of rail switch points. Model 856 controllers can also detect the position of derails, bridge locks and slide detectors. Additionally, they are capable of controlling relay circuits or shunting track circuits.

The Model 856 switch circuit controller is available in a four-way configuration for two-position, three-position and polarized applications.

A two-position controller may be used without change of parts for polarized application by proper cam and circuit adjustments. A two-position controller may also be used as a three-position controller for two circuits by using two cam spaces for each three-position circuit and the proper cam adjustments.

A three-position controller for four circuits is obtained by substituting combined three-position cams, in place of a two-position cam and the substitution of the cam shaft.

The terminals, contacts, operating cams and other components are installed in a rugged cast iron weather-proof housing. A hinged cast iron cover (aluminum also available) provides easy access to the interior for inspection, adjustment and maintenance of parts.

### ORDERING INFORMATION

When placing an order, please specify the following:

- Part Number and Description
- Cam Arrangement
- Contact Arrangement
- Crank Offset
- Return Spring Design
- Wire Guide Style
- Insulated or Non-Insulated Ball Stud

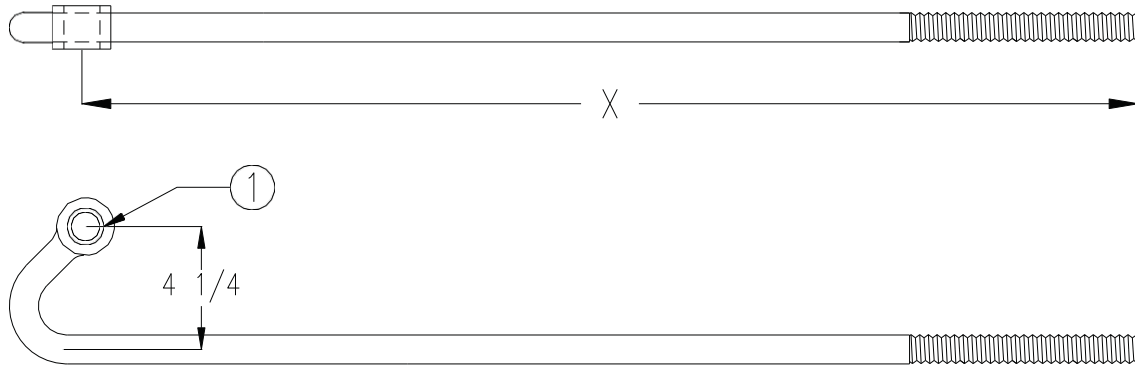
# SWITCH CIRCUIT CONTROLLER

K-2

G & B PART #	OEM PART #	CAM POSITION	RETURN SPRING	CRANK OFFSET			
				3/4" BALL STUD		2 13/32" BALL STUD	
				INS	NON-INS	INS	NON-INS
856400-001-01	N184136	4-2		X			
856400-002-01	N253925	4-2			X		
856400-003-01	N190700	4-2				X	
856400-004-01	N244167	4-2					X
856400-005-01	N218085	4-2	X	X			
856400-006-01	N199187	4-2	X		X		
856400-007-01	N229482	4-2	X			X	
856400-008-01	N257184	4-2	X				X
856400-009-01	N209313	2-2 2-3		X			
856400-010-01	N207228	2-2 2-3			X		
856400-011-01	N253786	2-2 2-3				X	
856400-012-01	N298960	2-2 2-3					X
856400-013-01	N262424	2-2 2-3	X	X			
856400-014-01	N236956	2-2 2-3	X		X		
856400-015-01	N191911	2-2 2-3	X			X	
856400-016-01	N194433	2-2 2-3	X				X
856400-017-01	N184035	4-3		X			
856400-018-01	N207497	4-3			X		
856400-019-01	N190702	4-3				X	
856400-020-01	N196648	4-3					X
856400-021-01	N323769	4-3	X	X			
856400-022-01	N186829	4-3	X		X		
856400-023-01	N191898	4-3	X			X	
856400-024-01	N223613	4-3	X				X



SWITCH CIRCUIT CONTROLLER RODS



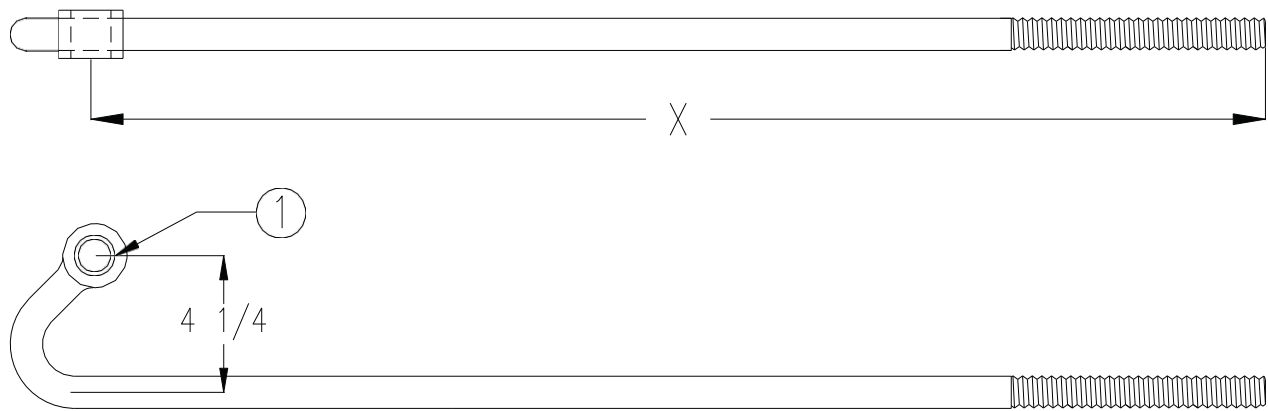
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for use with tapered shank point lugs, X = 40".....	931149-001X	43050-149-01
A1	Similar to Ref A except X = 50".....	931149-002X	43050-149-02
A2	Similar to Ref A except X = 34".....	931149-003X	43050-149-03
A3	Similar to Ref A except X = 46".....	931149-004X	43050-149-04
A4	Similar to Ref A except X = 100".....	931149-005X	43050-149-05
A5	Similar to Ref A except X = 64".....	931149-006X	43050-149-06
A6	Similar to Ref A except X = 18".....	931149-007X	43050-149-07
A7	Similar to Ref A except X = 20".....	931149-008X	43050-149-08
A8	Similar to Ref A except X = 22".....	931149-009X	43050-149-09
A9	Similar to Ref A except X = 24".....	931149-010X	43050-149-10
A10	Similar to Ref A except X = 26".....	931149-011-02	43050-149-11
A11	Similar to Ref A except X = 28".....	931149-012X	43050-149-12
A12	Similar to Ref A except X = 30".....	931149-013X	43050-149-13
A13	Similar to Ref A except X = 32".....	931149-014X	43050-149-14
A14	Similar to Ref A except X = 36".....	931149-015X	43050-149-15
A15	Similar to Ref A except X = 38".....	931149-016X	43050-149-16
A16	Similar to Ref A except X = 42".....	931149-017X	43050-149-17
A17	Similar to Ref A except X = 44".....	931149-018X	43050-149-18
A18	Similar to Ref A except X = 48".....	931149-019X	43050-149-19
A19	Similar to Ref A except X = 52".....	931149-020X	43050-149-20
A20	Similar to Ref A except X = 54".....	931149-021X	43050-149-21
1	<b>TAPERED BUSHING</b> , AAR Detail 125510.....	931150	M138226 6714-367 110205

For custom rods other than those shown, specify Model 931149 rod and dimensions

# SWITCH CIRCUIT CONTROLLER RODS

K-4

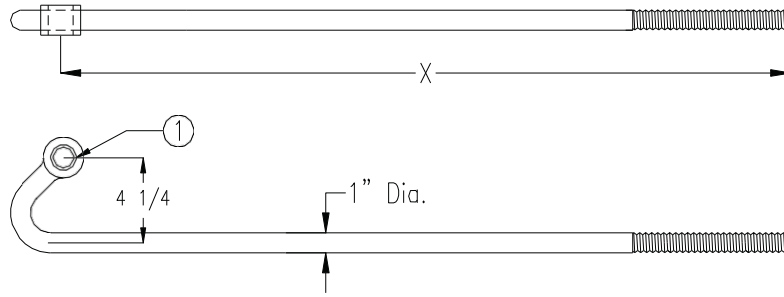


REF A

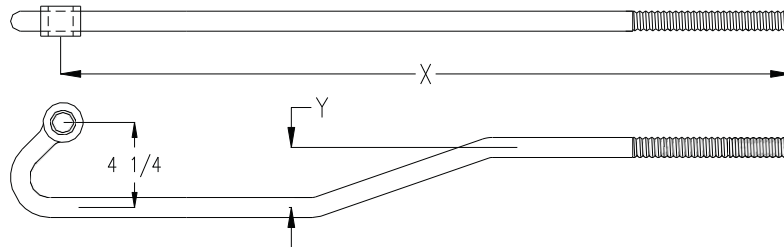
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for use with tapered shank point lugs, X = 56".....	931149-022X	43050-149-22
A1	Similar to Ref A except X = 58".....	931149-023X	43050-149-23
A2	Similar to Ref A except X = 60".....	931149-024X	43050-149-24
A3	Similar to Ref A except X = 62".....	931149-025X	43050-149-25
A4	Similar to Ref A except X = 66".....	931149-026X	43050-149-26
A5	Similar to Ref A except X = 68".....	931149-027X	43050-149-27
A6	Similar to Ref A except X = 70".....	931149-028X	43050-149-28
A7	Similar to Ref A except X = 72".....	931149-029X	43050-149-29
A8	Similar to Ref A except X = 74".....	931149-030X	43050-149-30
A9	Similar to Ref A except X = 76".....	931149-031X	43050-149-31
A10	Similar to Ref A except X = 78".....	931149-032X	43050-149-32
A11	Similar to Ref A except X = 80".....	931149-033X	43050-149-33
A12	Similar to Ref A except X = 82".....	931149-034X	43050-149-34
A13	Similar to Ref A except X = 84".....	931149-035X	43050-149-35
A14	Similar to Ref A except X = 86".....	931149-036X	43050-149-36
A15	Similar to Ref A except X = 88".....	931149-037X	43050-149-37
A16	Similar to Ref A except X = 90".....	931149-038X	43050-149-38
A17	Similar to Ref A except X = 92".....	931149-039X	43050-149-39
A18	Similar to Ref A except X = 94".....	931149-040X	43050-149-40
A19	Similar to Ref A except X = 96".....	931149-041X	43050-149-41
1	<b>TAPERED BUSHING</b> , AAR Detail 125510.....	931150	M138226 6714-367 110205

For custom rods other than those shown, specify Model 931149 rod and dimensions

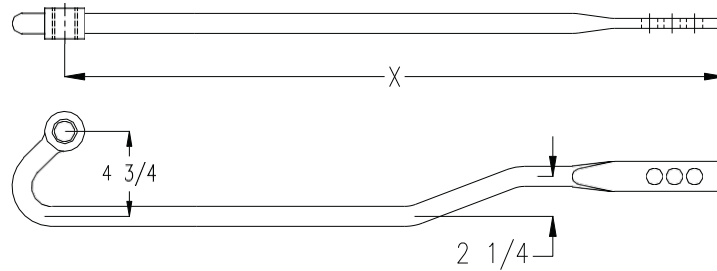
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REF B



REF C

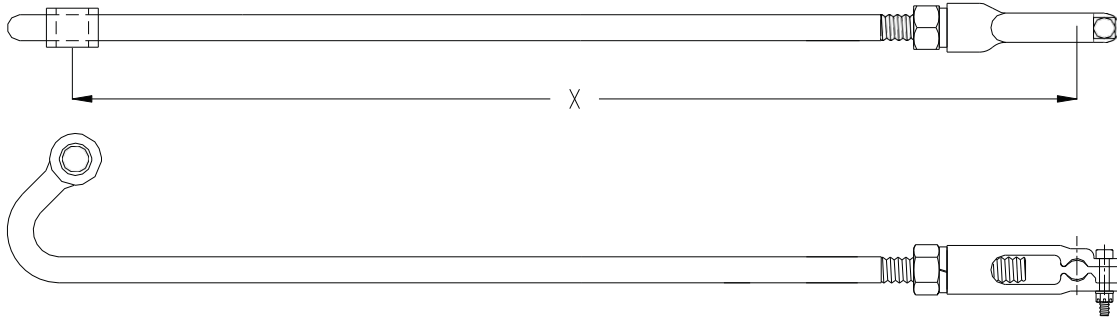


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , used with tapered shank point lug, X = 29".....	931149-042X	N393959
A1	Similar to Ref A except X = 43".....	931149-043X	N393995
A2	Similar to Ref A except X = 68".....	931149-044X	N395027
A3	Similar to Ref A except X = 25".....	931149-045X	N451377-1002
B	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , used with tapered shank point lug, X = 49 1/4", Y = 7 1/2".....	931149-046X	N208141
B1	Similar to Ref B except X = 37 1/4", Y = 5 1/4".....	931149-047X	N270015
B2	Similar to Ref B except X = 48 1/2", Y = 6 3/4".....	931149-048X	N397891
C	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , used with tapered shank point lug, X = 48 3/4", Y = 2 1/4".....	931116-020X	N451377-0201
1	<b>TAPERED BUSHING</b> .....	931150	M138226 6714-367 110205

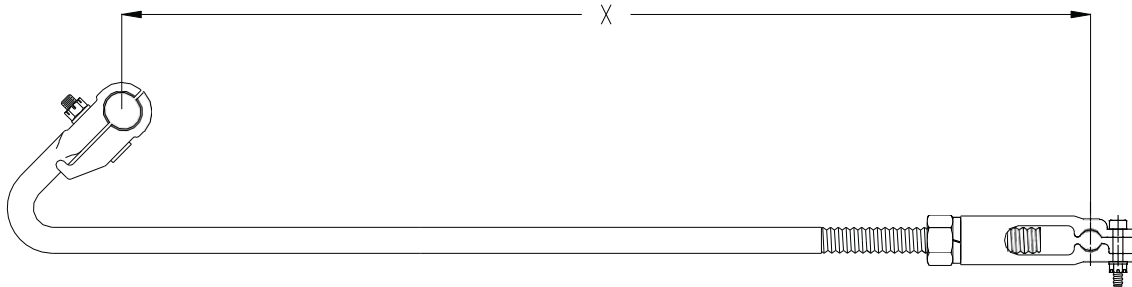
For custom rods other than those shown, specify Model 931116 or 931149 rod and dimensions

# SWITCH CIRCUIT CONTROLLER RODS

K-6



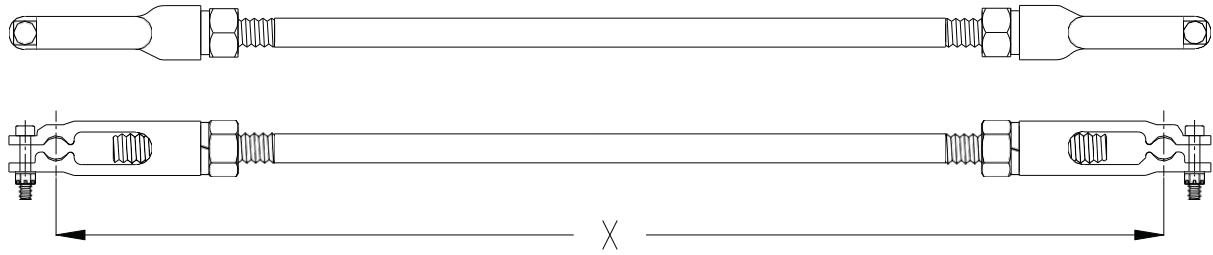
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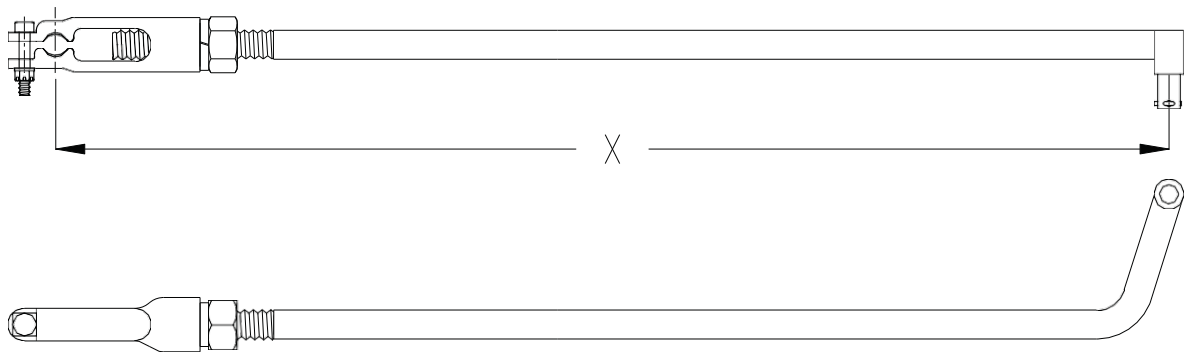
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CIRCUIT CONTROLLER ROD, X = 54"</b> .....	830570-001-01X	N436138-001
A1	Similar to Ref A except X = 78".....	830570-002-01X	N436138-002
A2	Similar to Ref A except X = 45".....	830570-003-01X	N436138-003
A3	Similar to Ref A except X = 75".....	830570-004-01X	N436138-004
B	<b>CIRCUIT CONTROLLER ROD, X = 29 1/4"</b> .....	830574-001-01X	N209508
B1	Similar to Ref B except X = 55 1/2".....	830574-002-01X	N233513
B2	Similar to Ref B except X = 69 1/2".....	830574-003-01X	N240679
B3	Similar to Ref B except X = 38 1/4".....	830574-004-01X	N259481
B4	Similar to Ref B except X = 61 1/2".....	830574-005-01X	N285293
B5	Similar to Ref B except X = 42 1/2".....	830574-006-01X	N297183
B6	Similar to Ref B except X = 44 1/4".....	830574-007-01X	N297587
B7	Similar to Ref B except X = 58 1/2".....	830574-008-01X	N310074
B8	Similar to Ref B except X = 48 1/2".....	830574-009-01X	N321504
B9	Similar to Ref B except X = 35 1/2".....	830574-010-01X	N334405
B10	Similar to Ref B except X = 32".....	830574-011-01X	N435017

For custom rods other than those shown, specify Model 830570 or 830574 rod and dimensions



REF A



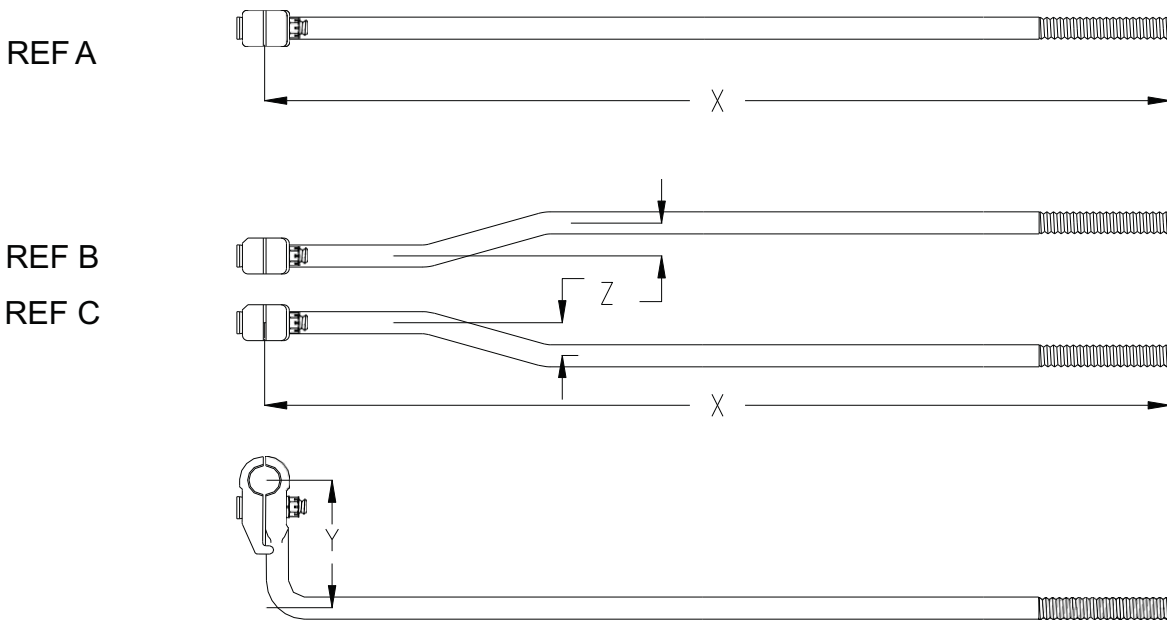
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, X = 26 1/8".....</b>	830583-001-01	X303421
A1	Similar to Ref A except X = 21".....	830583-002-01	X303421-001
B	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, with screw jaw, X = 42 1/2", RR Detail SX404.....</b>	830584-001-01	X438800
B1	Similar to Ref B except without screw jaw.....	830584-001-02	N174443
B2	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, with screw jaw, X = 44".....</b>	830584-002-01	N/A
B3	Similar to Ref B2 except without screw jaw.....	830584-002-02	N132751
B4	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, with screw jaw, X = 89".....</b>	830584-003-01	N/A
B5	Similar to Ref B4 except without screw jaw.....	830584-003-02	N132575

For custom rods other than those shown, specify Model 830583 or 830584 rod and dimensions

# SWITCH CIRCUIT CONTROLLER RODS

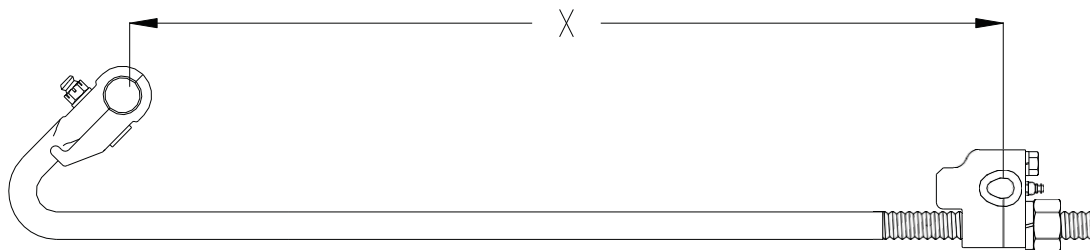
K-8



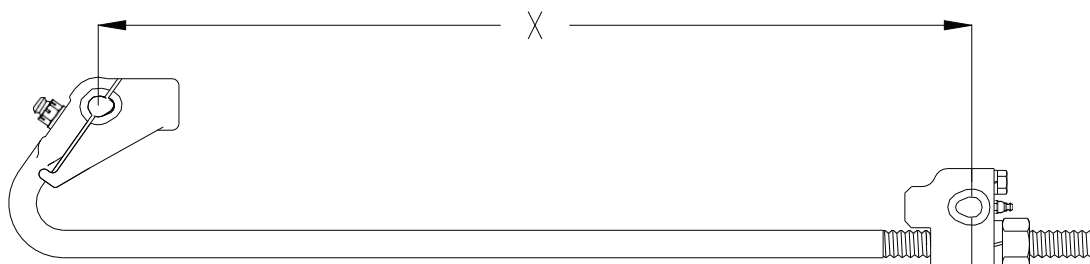
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, X = 25", Y = 4 1/4"</b>	830575-001X	N274593
A1	Similar to Ref A except X = 22 1/4".....	830575-002X	N283085
A2	Similar to Ref A except X= 22 3/4", Y = 4 3/4".....	830575-003X	N399858
A3	Similar to Ref A except X = 26".....	830575-004X	N283085-001
B	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, X = 38 3/4", Y = 4 5/8", Z = 3/4"</b> .....	830575-005X	N193733
B1	Similar to Ref B except X = 41 1/2", Y = 4 1/2".....	830575-007X	N216975
B2	Similar to Ref B except X = 46 1/8", Y = 4 7/8", Z = 1/2".....	830575-009X	N225705
B3	Similar to Ref B except X = 107", Y = 4 1/4".....	830575-011X	N277699
B4	Similar to Ref B except X = 37 1/2", Y = 4 1/4", Z = 7/8".....	830575-013X	N285655
B5	Similar to Ref B except X = 38 1/2", Y = 4 3/8", Z = 5/8".....	830575-015X	N288925
B6	Similar to Ref B except X = 42 1/4", Y = 4 1/4".....	830575-017X	N288925-001
C	<b>SWITCH CIRCUIT CONTROLLER ROD COMPLETE, X = 38 3/4", Y = 4 5/8", Z = 3/4"</b> .....	830575-006X	N193732
C1	Similar to Ref C except X = 41 1/2", Y = 4 1/2".....	830575-008X	N216974
C2	Similar to Ref C except X = 46 1/8", Y = 4 7/8", Z = 1/2".....	830575-010X	N225704
C3	Similar to Ref C except X = 107", Y = 4 1/4".....	830575-012X	N277698
C4	Similar to Ref C except X = 37 1/2", Y = 4 1/4", Z = 7/8".....	830575-014X	N285654
C5	Similar to Ref C except X = 38 1/2", Y = 4 3/8", Z = 5/8".....	830575-016X	N288924
C6	Similar to Ref C except X = 42 1/4", Y = 4 1/4".....	830575-018X	N288924-001

For custom rods other than those shown, specify Model 830575 rod and dimensions

# SWITCH CIRCUIT CONTROLLER RODS



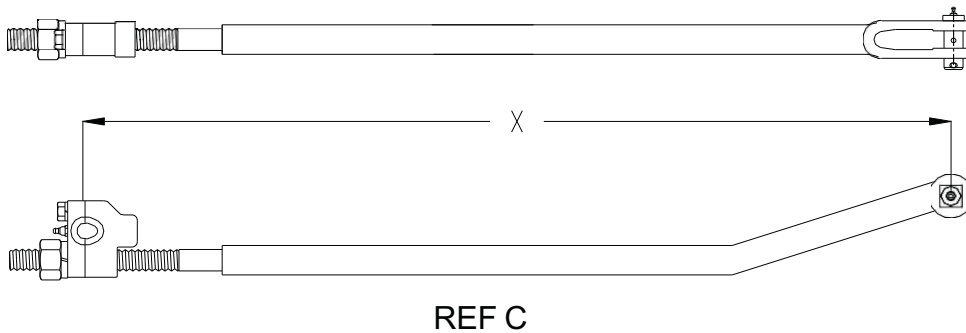
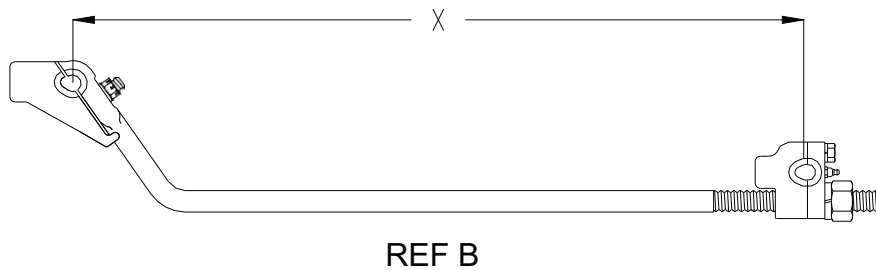
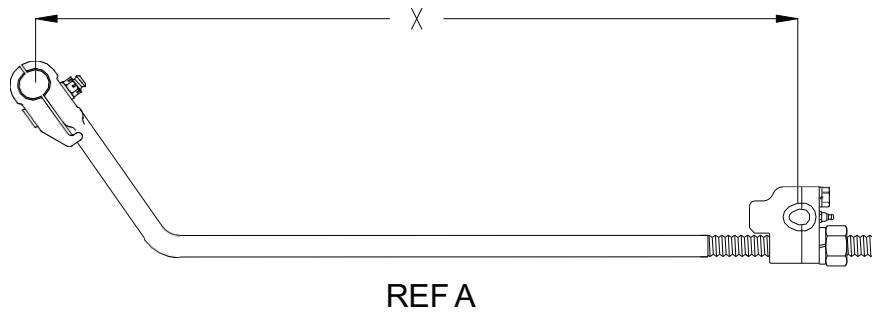
REF A



REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CIRCUIT CONTROLLER ROD</b> , near rail X = 30".....	830576-001-01X	N221255
A1	Similar to Ref A except X = 43".....	830576-002-01X	N224218
A2	Similar to Ref A except X = 23 3/4".....	830576-003-01X	N237118
A3	Similar to Ref A except X = 45 1/2".....	830576-004-01X	N249883
A4	Similar to Ref A except X = 32 3/4".....	830576-005-01X	N341534
A5	Similar to Ref A except X = 78 1/2".....	830576-006-01X	N438595-001
A6	Similar to Ref A except X = 50 1/2".....	830576-007-01X	N438595-002
A7	Similar to Ref A except 4 1/4" offset.....	830576-008-01X	N438595-003
A8	Similar to Ref A except X = 37 1/2".....	830576-009-01X	N438601-001
A9	Similar to Ref A except X = 57".....	830576-010-01X	N451378-5901
A10	Similar to Ref A except X = 46".....	830576-011-01X	N451378-5902
A11	Similar to Ref A except X = 51".....	830576-012-01X	N451378-5903
B	<b>CIRCUIT CONTROLLER ROD</b> , near rail X = 43".....	830577-001-01X	N224456
B1	Similar to Ref B except X = 86".....	830577-002-01X	N225055
B2	Similar to Ref B except X = 32 3/4".....	830577-003-01X	N228167
B3	Similar to Ref B except X = 90 1/4".....	830577-004-01X	N383163
B4	Similar to Ref B except X = 47 1/2".....	830577-005-01X	N438595

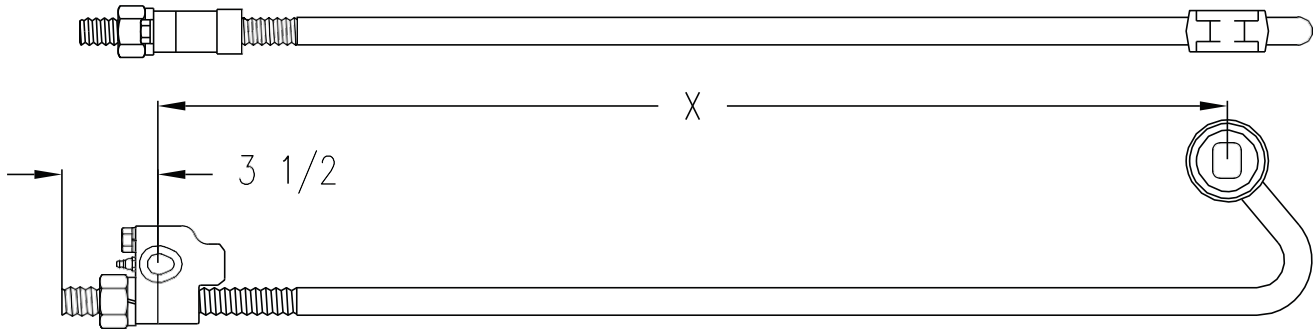
For custom rods other than those shown, specify Model 830576 or 830577 rod and dimensions



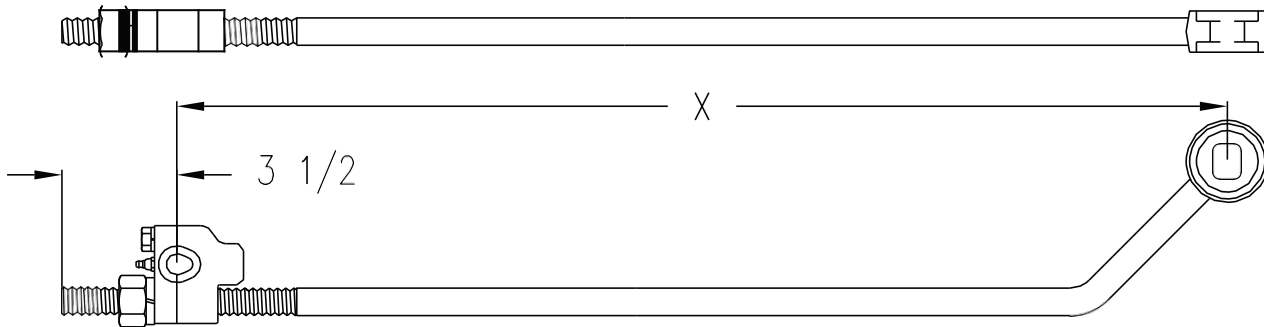
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CIRCUIT CONTROLLER ROD</b> , far rail X = 92".....	830578-001-01X	N225193
A1	Similar to Ref A except X = 90".....	830578-002-01X	N/A
A2	Similar to Ref A except X = 94".....	830578-003-01X	N/A
B	<b>CIRCUIT CONTROLLER ROD</b> , far rail X = 92".....	830579-001-01X	N/A
B1	Similar to Ref B except X = 90".....	830579-002-01X	N/A
B2	Similar to Ref B except X = 94".....	830579-003-01X	N/A
C	<b>CIRCUIT CONTROLLER ROD</b> , X = 41".....	830582-001X	N451414-7801
C1	Similar to Ref C except X = 57".....	830582-002X	N451414-7802
C2	Similar to Ref C except X = 44".....	830582-003X	N451414-7803

For custom rods other than those shown, specify Model 830578, 830579 or 830582 rod and dimensions





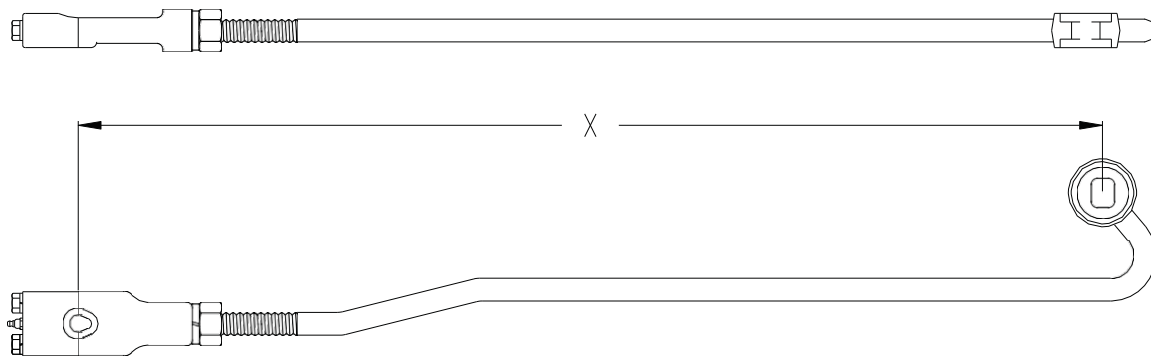
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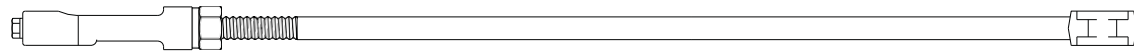
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	CIRCUIT CONTROLLER ROD, near rail, X = 39".....	830580-002X	N318321
A1	Similar to Ref A except X = 42".....	830580-003X	N321508
A2	Similar to Ref A except X = 30 1/2".....	830580-004X	N435244
A3	Similar to Ref A except X = 26 1/2".....	830580-005X	N438075
B	CIRCUIT CONTROLLER ROD, far rail, X = 91".....	830581-002X	N376403

For custom rods other than those shown, specify Model 830580 or 830581 rod and dimensions



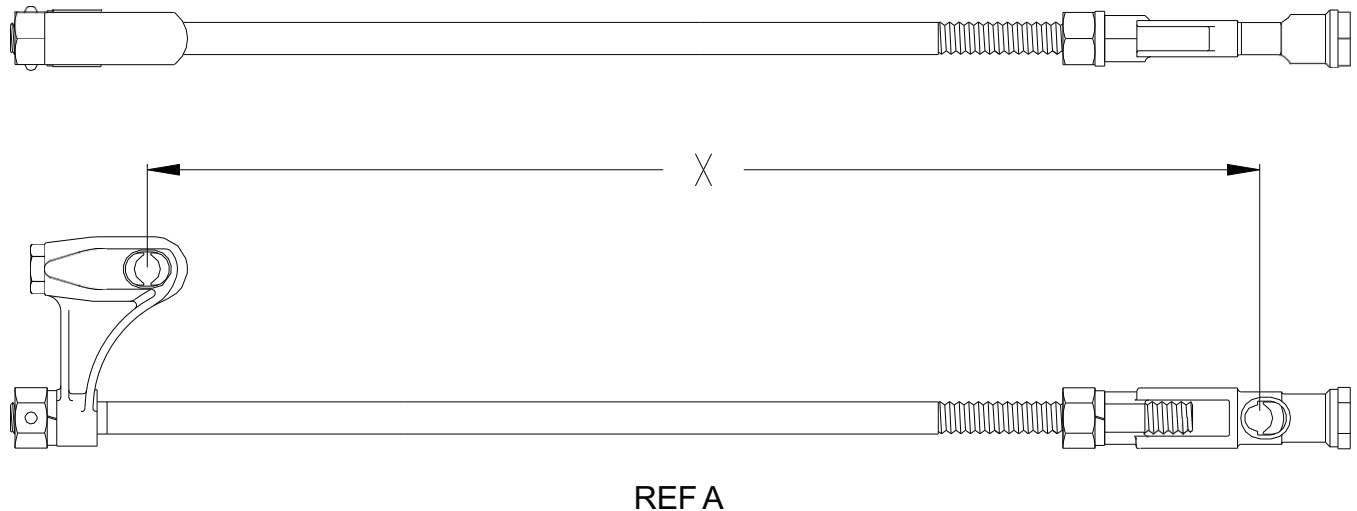
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REF D

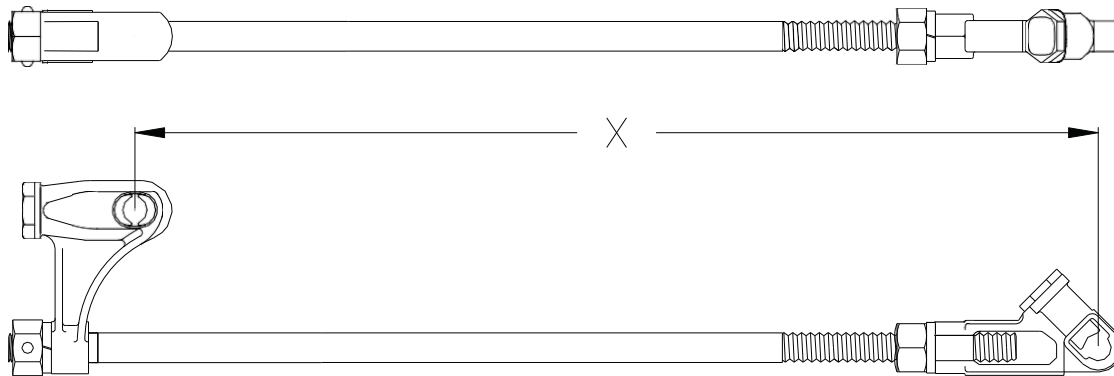
REF	DESCRIPTION	G & B PART #	OEM PART #
C	<b>CIRCUIT CONTROLLER ROD</b> , near rail, X = 45".....	830580-001X	N432892
C1	Similar to Ref C except includes point lug.....	830580-001-01X	X432893
C2	Similar to Ref C except includes point lug.....	830580-001-02X	X432893-001
D	<b>CIRCUIT CONTROLLER ROD</b> , far rail, X = 94 1/2".....	830581-001X	N433495
D1	Similar to Ref D except includes point lug.....	830581-001-01X	X433496
D2	Similar to Ref D except includes point lug.....	830581-001-02X	X433496-001

For custom rods other than those shown, specify Model 830580 or 830581 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and near rail application, with straight controller socket, X = 42 1/4".....	930633-001X	110633-1401X
A1	Similar to Ref A except X = 30".....	930633-002X	110633-1407X
A2	Similar to Ref A except X = 35".....	930633-003X	110633-1409X
A3	Similar to Ref A except X = 46".....	930633-004X	110633-1411X
A4	Similar to Ref A except X = 96 1/4".....	930663-005X	110633-1432X
A5	Similar to Ref A except X = 84".....	930633-034X	N/A
A6	Similar to Ref A except X = 62".....	930633-035X	N/A
A7	Similar to Ref A except X = 61".....	930633-036X	N/A
A8	Similar to Ref A except X = 57".....	930633-037X	N/A
A9	Similar to Ref A except X = 54".....	930633-038X	N/A
A10	Similar to Ref A except X = 51".....	930633-039X	N/A
A11	Similar to Ref A except X = 36".....	930633-040X	N/A
A12	Similar to Ref A except X = 34".....	930633-041X	N/A
A13	Similar to Ref A except X = 32".....	930633-042X	N/A
A14	Similar to Ref A except X = 48".....	930633-043X	N/A
A15	Similar to Ref A except X = 72".....	930633-044X	N/A

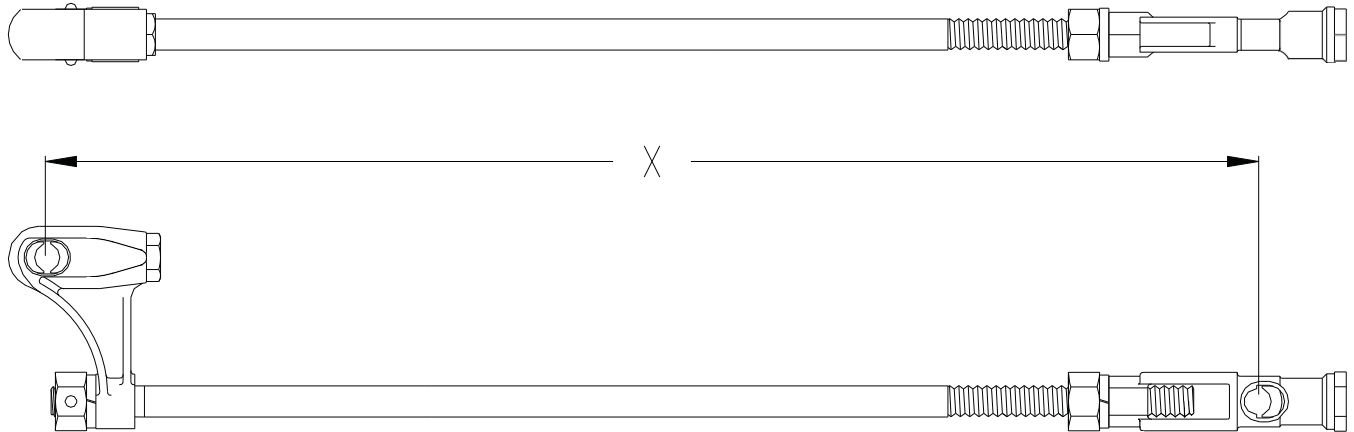
For custom rods other than those shown, specify Model 930663 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and near rail application, with offset controller socket, X = 33 7/8".....	930633-018X	110633-3400X
A1	Similar to Ref A except X = 46 3/8".....	930633-008X	110633-3401X
A2	Similar to Ref A except X = 57".....	930633-009X	110633-3402X
A3	Similar to Ref A except X = 42 1/4".....	930633-010X	110633-3410X
A4	Similar to Ref A except X = 32 1/4".....	930633-011X	110633-3411X
A5	Similar to Ref A except X = 84".....	930633-012X	110633-3413X
A6	Similar to Ref A except X = 36".....	930633-013X	110633-3429X
A7	Similar to Ref A except X = 61".....	930633-014X	110633-3438X
A8	Similar to Ref A except X = 62".....	930633-015X	110633-3439X
A9	Similar to Ref A except X = 30".....	930633-045X	N/A
A10	Similar to Ref A except X = 48".....	930633-046X	N/A
A11	Similar to Ref A except X = 51".....	930633-047X	N/A
A12	Similar to Ref A except X = 54".....	930633-048X	N/A
A13	Similar to Ref A except X = 57".....	930633-049X	N/A
A14	Similar to Ref A except X = 67".....	930633-050X	N/A
A15	Similar to Ref A except X = 72".....	930633-051X	N/A
A16	Similar to Ref A except X = 34 7/8".....	930633-007X	8005-13

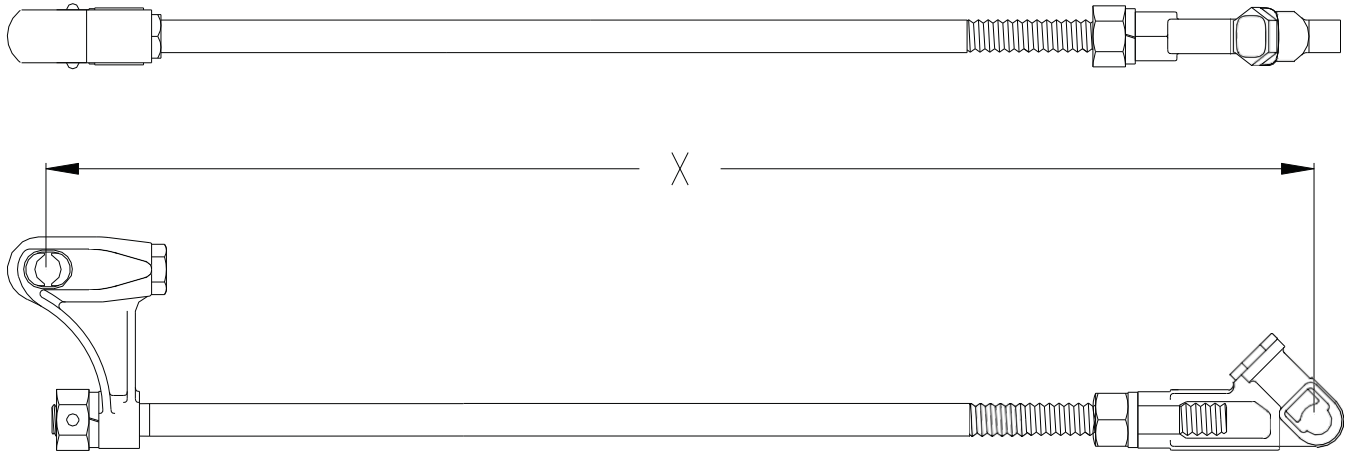
For custom rods other than those shown, specify Model 930663 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and far rail application, with straight controller socket, X = 92 1/4".....	930633-006X	110633-2400X
A1	Similar to Ref A except X = 87 1/2".....	930633-052X	110633-2404X
A2	Similar to Ref A except X = 90".....	930633-053X	N/A
A3	Similar to Ref A except X = 96".....	930633-054X	N/A
A4	Similar to Ref A except X = 98".....	930633-055X	N/A
A5	Similar to Ref A except X = 110".....	930633-056X	N/A
A6	Similar to Ref A except X = 120".....	930633-057X	N/A
A7	Similar to Ref A except X = 130".....	930633-058X	N/A
A8	Similar to Ref A except X = 140".....	930633-059X	N/A

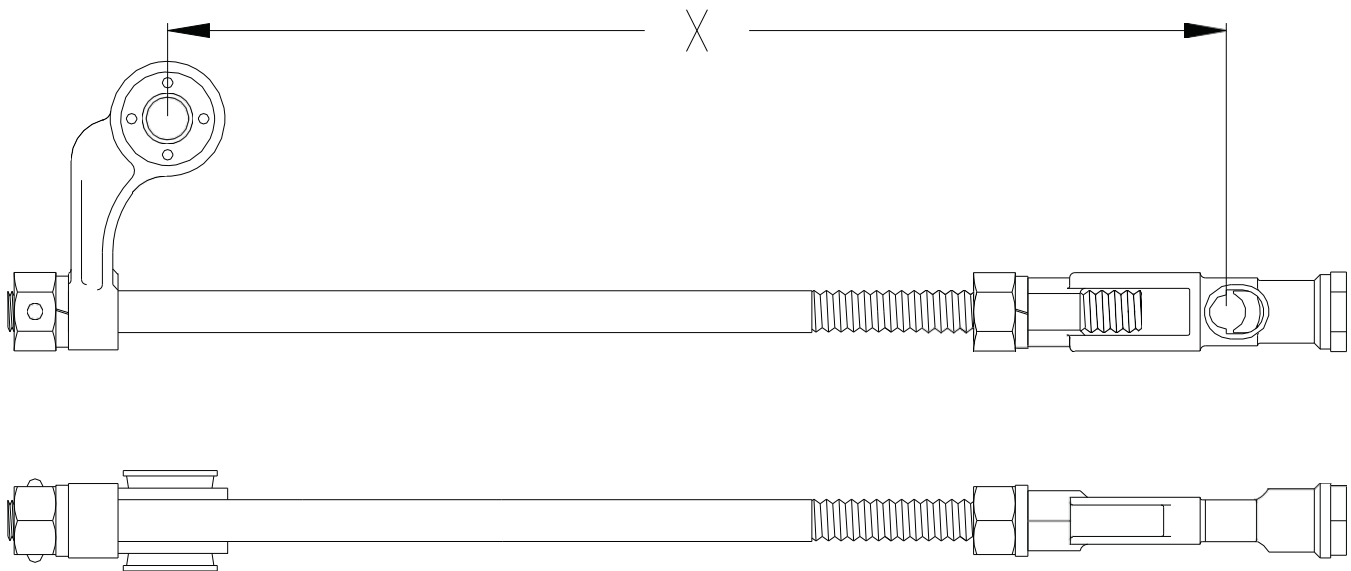
For custom rods other than those shown, specify Model 930663 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and far rail application with offset controller socket, X = 92 1/4"	930633-016X	110633-4401
A1	Similar to Ref A except X = 90".....	930633-060X	N/A
A2	Similar to Ref A except X = 96".....	930633-061X	N/A
A3	Similar to Ref A except X = 98".....	930633-062X	N/A
A4	Similar to Ref A except X = 110".....	930633-063X	N/A
A5	Similar to Ref A except X = 120".....	930633-064X	N/A
A6	Similar to Ref A except X = 130".....	930633-065X	N/A
A7	Similar to Ref A except X = 140".....	930633-066X	N/A

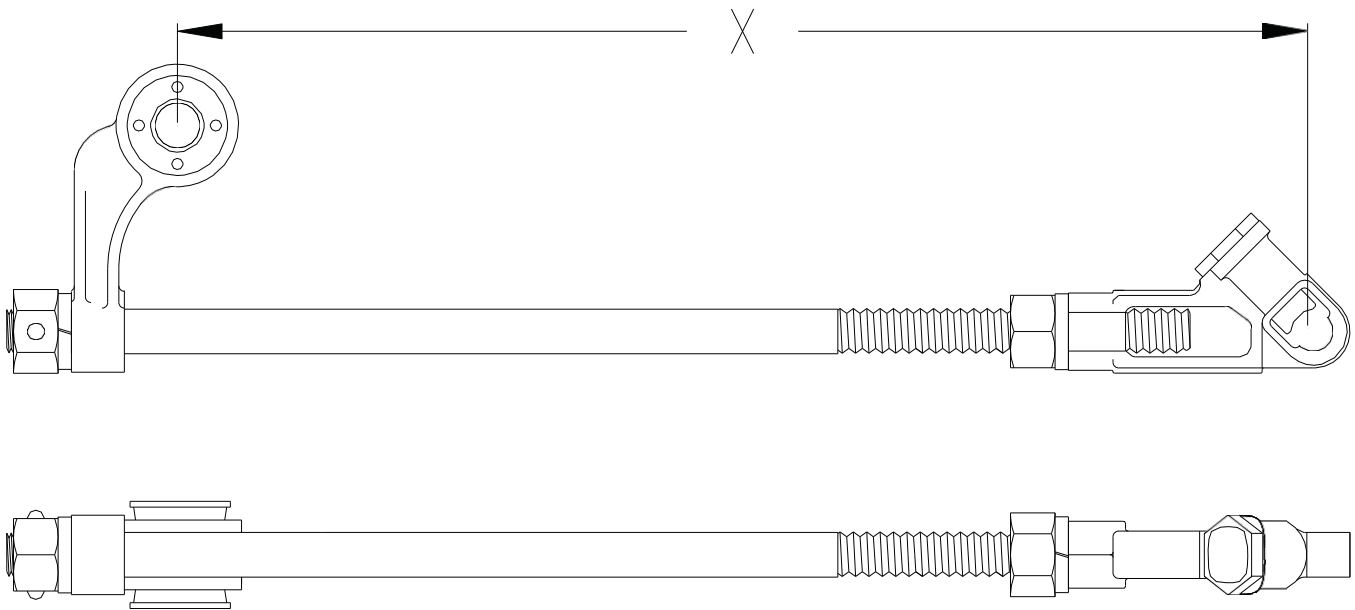
For custom rods other than those shown, specify Model 930663 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and near rail application with straight controller socket, X = 94 1/4".....	930663-004X	110663-1423X
A1	Similar to Ref A except X = 42 1/4".....	930663-005X	110663-1400X
A2	Similar to Ref A except X = 30".....	930663-008X	N/A
A3	Similar to Ref A except X = 32".....	930663-009X	N/A
A4	Similar to Ref A except X = 34".....	930663-010X	N/A
A5	Similar to Ref A except X = 36".....	930663-011X	N/A
A6	Similar to Ref A except X = 40".....	930663-012X	N/A
A7	Similar to Ref A except X = 48".....	930663-013X	N/A
A8	Similar to Ref A except X = 51".....	930663-014X	N/A
A9	Similar to Ref A except X = 54".....	930663-015X	N/A
A10	Similar to Ref A except X = 57".....	930663-016X	N/A
A11	Similar to Ref A except X = 62".....	930663-017X	N/A
A12	Similar to Ref A except X = 72".....	930663-018X	N/A
A13	Similar to Ref A except X = 84".....	930663-019X	N/A

For custom rods other than those shown, specify Model 930663 rod and dimensions

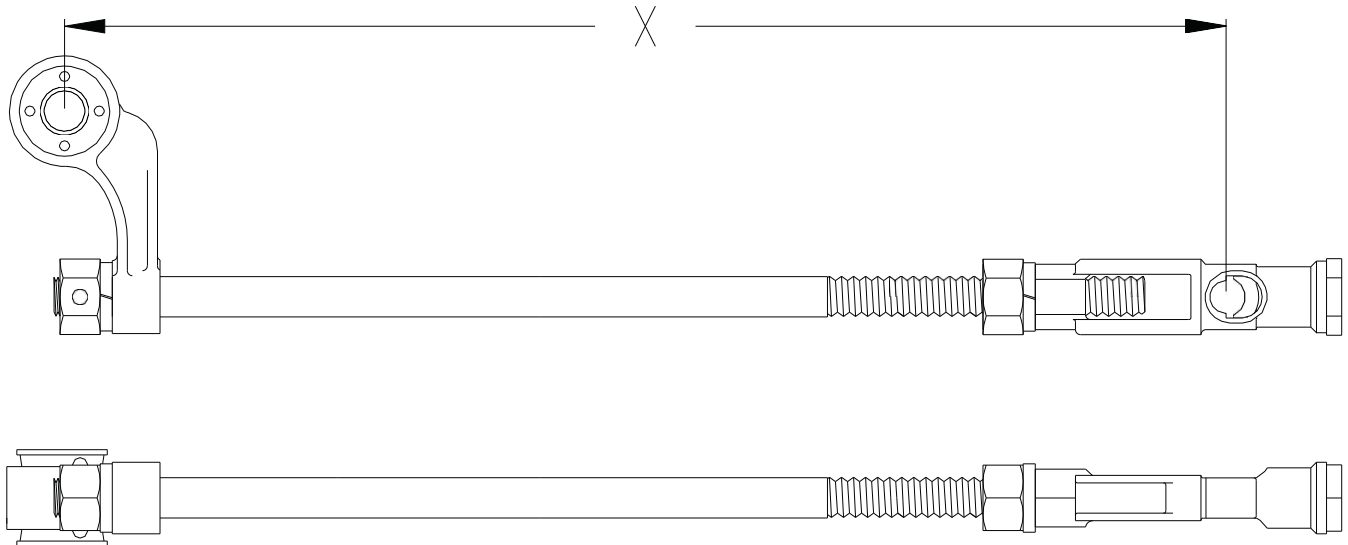


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and near rail application with offset controller socket, X = 42 1/4"	930663-003X	110663-3402X
A1	Similar to Ref A except X = 96".....	930663-020X	110663-3404X
A2	Similar to Ref A except X = 38 1/2".....	930663-021X	110663-3406X
A3	Similar to Ref A except X = 25 3/4".....	930663-022X	110663-3409X
A4	Similar to Ref A except X = 62".....	930663-023X	110663-3419X
A5	Similar to Ref A except X = 61".....	930663-024X	110663-3420X
A6	Similar to Ref A except X = 30".....	930663-025X	N/A
A7	Similar to Ref A except X = 36".....	930663-026X	N/A
A8	Similar to Ref A except X = 40".....	930663-027X	N/A
A9	Similar to Ref A except X = 48".....	930663-028X	N/A
A10	Similar to Ref A except X = 54".....	930663-029X	N/A
A11	Similar to Ref A except X = 57".....	930663-030X	N/A
A12	Similar to Ref A except X = 72".....	930663-031X	N/A
A13	Similar to Ref A except X = 84".....	930663-032X	N/A

For custom rods other than those shown, specify Model 930663 rod and dimensions

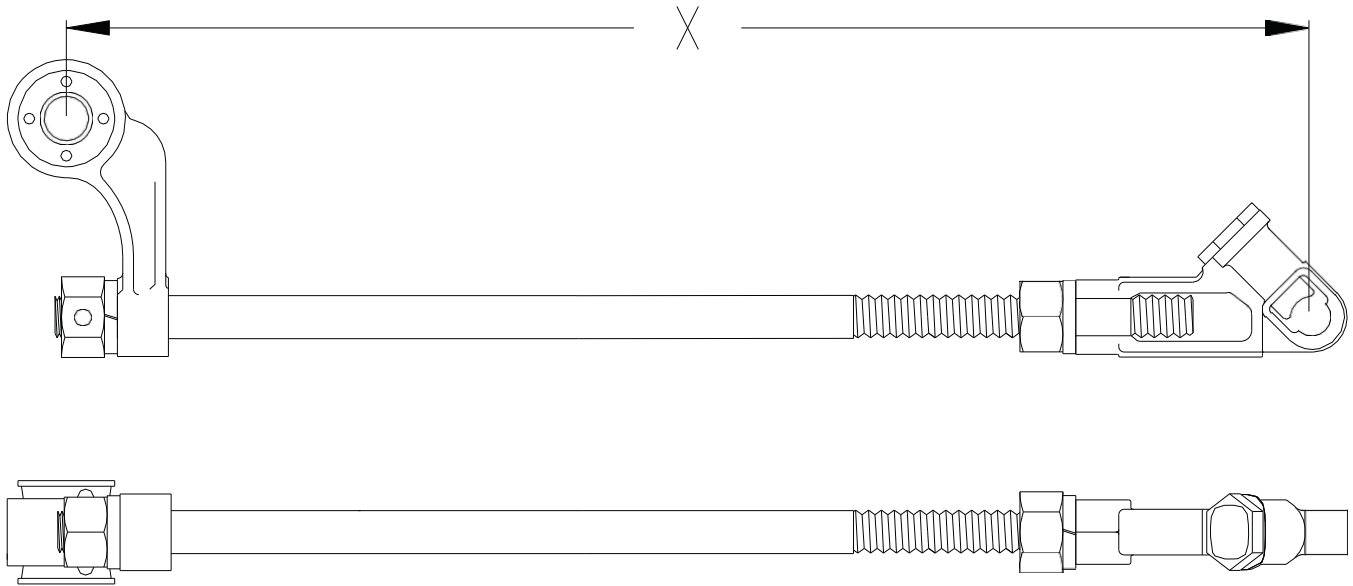




REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and far rail application, with straight controller socket X = 92 1/4".....	930663-006X	110663-2400X
A1	Similar to Ref A except X = 90".....	930663-033X	N/A
A2	Similar to Ref A except X = 96".....	930663-034X	N/A
A3	Similar to Ref A except X = 98".....	930663-035X	N/A
A4	Similar to Ref A except X = 110".....	930663-036X	N/A
A5	Similar to Ref A except X = 120".....	930663-037X	N/A
A6	Similar to Ref A except X = 130".....	930663-038X	N/A
A7	Similar to Ref A except X = 140".....	930663-039X	N/A

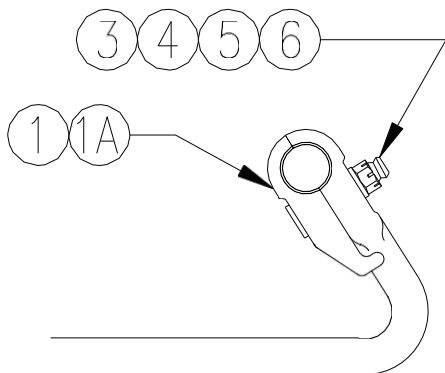
For custom rods other than those shown, specify Model 930663 rod and dimensions



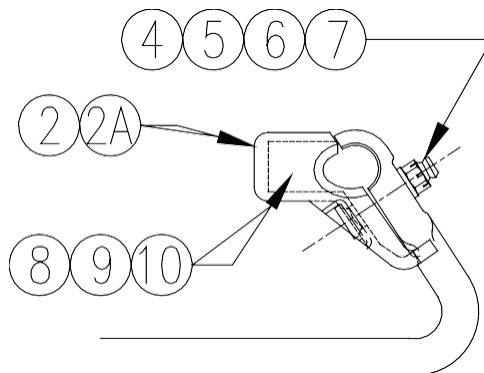
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH CIRCUIT CONTROLLER ROD</b> , for straight shank point lug connection and far rail application, with offset controller socket, X = 143"	930663-040X	110663-4400X
A1	Similar to Ref A except X = 92 1/4".....	930663-041X	110663-4401X
A2	Similar to Ref A except X = 111".....	930663-042X	110663-4403X
A3	Similar to Ref A except X = 110".....	930663-043X	110663-4404X
A4	Similar to Ref A except X = 87".....	930663-044X	N/A
A5	Similar to Ref A except X = 90".....	930663-045X	N/A
A6	Similar to Ref A except X = 98".....	930663-046X	N/A
A7	Similar to Ref A except X = 120".....	930663-047X	N/A
A8	Similar to Ref A except X = 130".....	930663-048X	N/A

For custom rods other than those shown, specify Model 930663 rod and dimensions

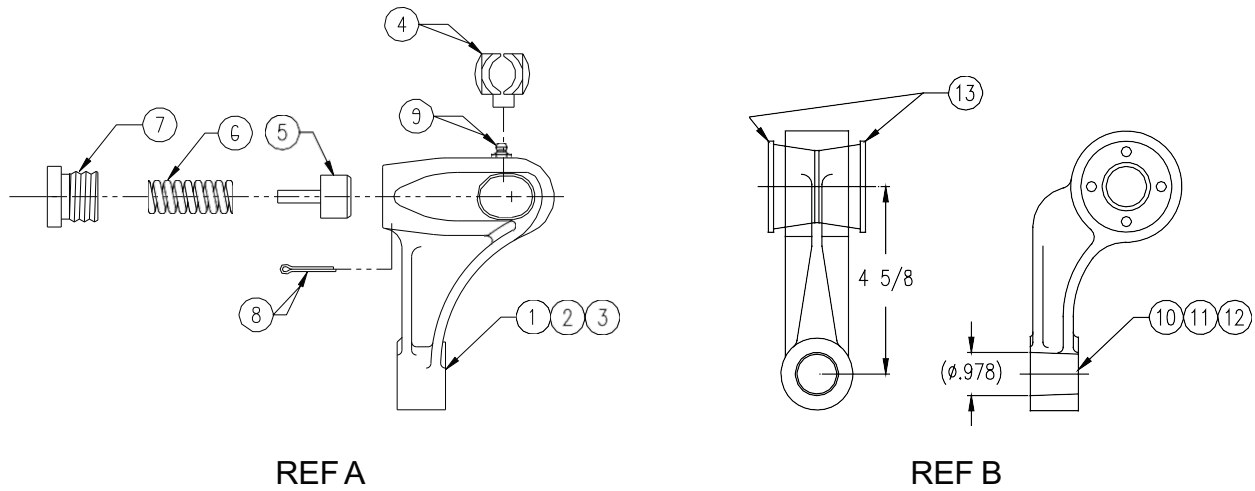


REF A

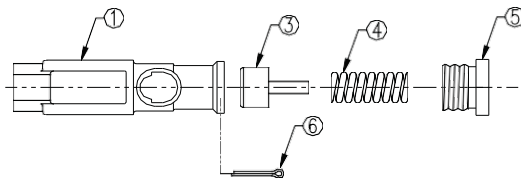


REF B

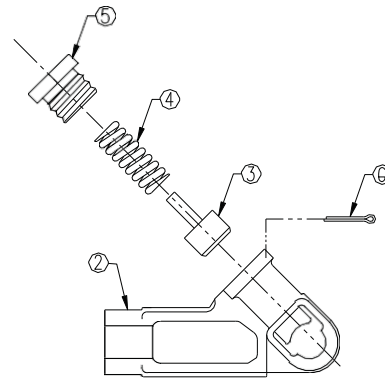
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT SOCKET ASSEMBLY</b> , includes clamp, bolt, lock washer, slotted nut and cotter pin for 1" dia. circuit controller rods.....	830200-000-01	N/A
A1	Similar to Ref A except for 1 1/4" dia. circuit controller rods.....	830201-000-01	N/A
B	<b>POINT SOCKET ASSEMBLY</b> , includes clamp, springs, spring socket, bolt, lock washer, slotted nut and cotter pin for 1" dia. circuit controller rods.....	830204-000-01	N/A
B1	Similar to Ref B except for 1 1/4" dia. circuit controller rods.....	830204-001-01	N/A
1	<b>CLAMP</b> , for 1" dia. rods.....	830200	M187470
1A	<b>CLAMP</b> , for 1 1/4" dia. rods.....	830201	M187470-001
2	<b>CLAMP</b> , for 1" dia. rods.....	830204	M212574
2A	<b>CLAMP</b> , for 1 1/4" dia. rods.....	830204-001	N/A
3	<b>BOLT, PLOW</b> .....	991409-325-107	M272145
4	<b>LOCK WASHER</b> , 13/16" hi power.....	990404-081-02	J047546
5	<b>HEX SLOTTED NUT</b> , 5/8"-11 UNC.....	990332-062-02	J048180
6	<b>COTTER PIN</b> , 1/8" x 1 1/2" SSTL.....	990506-150-10	J486001
7	<b>BOLT, PLOW</b> .....	991409-300-102	M187491-001
8	<b>SPRING</b> .....	830205	M212598
9	<b>SPRING</b> .....	830205-001	M212599
10	<b>SPRING SOCKET</b> .....	830205-002	M106340



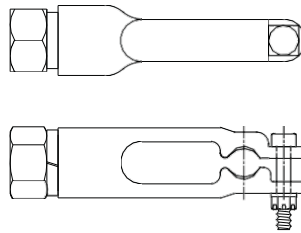
REF	DESCRIPTION	G & B PART #	OEM PART #
A	POINT SOCKET ASSEMBLY, near or far rail, threaded rod.....	920300X	110633-189X
A1	POINT SOCKET ASSEMBLY, near rail, tapered rod.....	920301X	110633-4X
A2	POINT SOCKET ASSEMBLY, far rail, tapered rod.....	920302X	110633-5X
B	POINT SOCKET ASSEMBLY, near rail, tapered rod.....	920310-001X	110663-4X
B1	POINT SOCKET ASSEMBLY, far rail, tapered rod.....	920311-001X	110663-5X
B2	POINT SOCKET ASSEMBLY, near or far rail, threaded rod.....	920312X	N/A
1	POINT SOCKET ONLY, near rail, threaded.....	920300	N/A
2	POINT SOCKET ONLY, near rail, tapered.....	920301	110633-1
3	POINT SOCKET ONLY, far rail, tapered.....	920302	110633-2
4	SOCKET BEARING.....	920320	110633-181
5	SOCKET PLUNGER.....	920321	110633-179
6	SOCKET SPRING.....	920322	110633-175
7	SOCKET PLUG.....	920323	110633-177
8	COTTER PIN, 1/8" x 1 1/4".....	990506-125-02	1017-SC
9	ALEMITE FITTING.....	990900-006	110333-8A
10	POINT SOCKET ONLY, near rail, tapered.....	920310-001	110663-208
11	POINT SOCKET ONLY, far rail, tapered.....	920310-002	110663-207
12	POINT SOCKET ONLY, near or far rail, threaded.....	920312	N/A
13	BEARING.....	920310-003	110663-33A



REF A

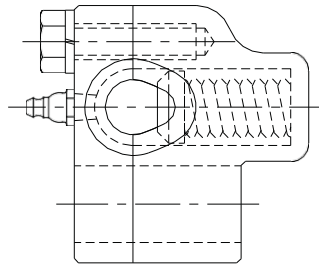


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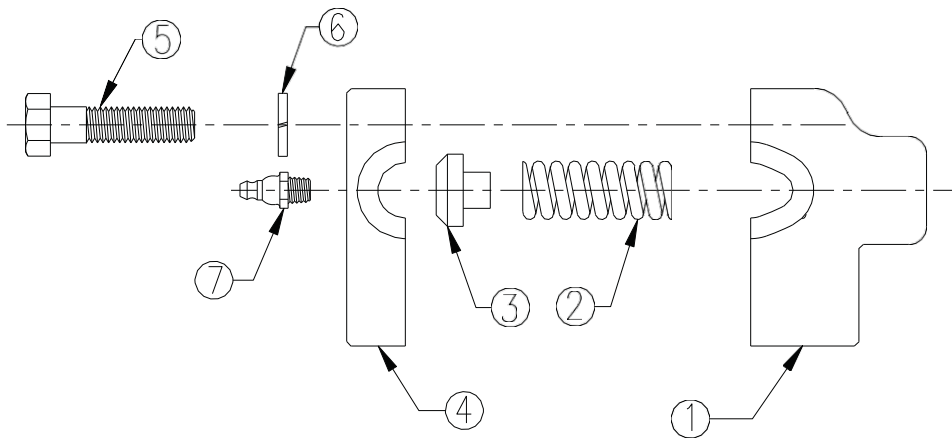


REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	STRAIGHT CONTROLLER SOCKET ASSEMBLY.....	920305X	110633-192X
B	OFFSET CONTROLLER SOCKET ASSEMBLY.....	920315X	110633-190X
C	BALL SOCKET SCREW JAW ASSEMBLY.....	830420X	N/A
1	STRAIGHT CONTROLLER SOCKET ONLY.....	920305	110633-192
2	OFFSET CONTROLLER SOCKET ONLY.....	920315	110633-190
3	SOCKET PLUNGER.....	920309	110633-188
4	SOCKET SPRING.....	920322	110633-175
5	SOCKET PLUG.....	920323	110633-177
6	COTTER PIN, 1/8" x 1 1/4".....	990506-125-02	1017-SC

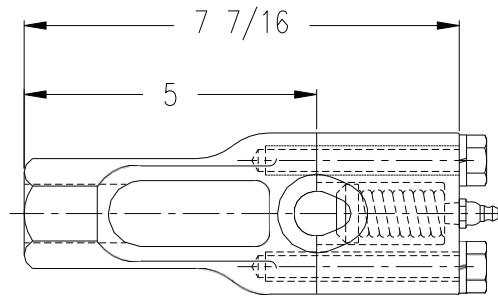


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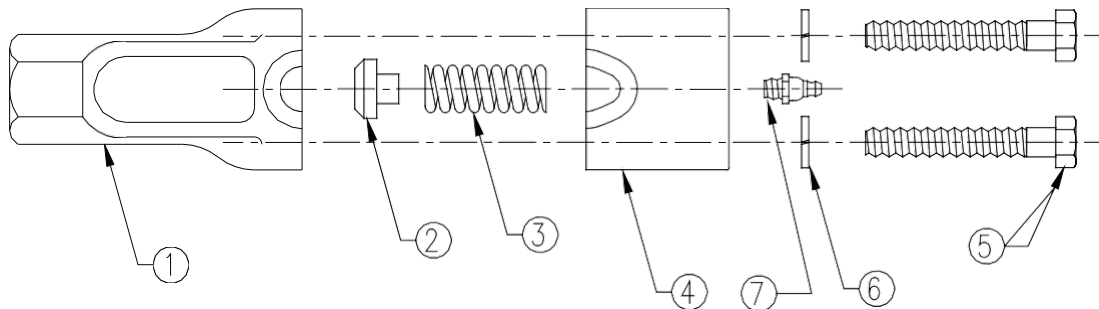


REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BALL &amp; SOCKET CONNECTION COMPLETE</b> .....	830410X	N212703
A1	Similar to Ref A except painted aluminum.....	830410-001X	N212703-001
1	<b>BALL &amp; SOCKET CONNECTOR ONLY</b> .....	830411	M212660
2	<b>SPRING</b> .....	830404	M199843
3	<b>SPRING SOCKET</b> .....	830403	M100539
4	<b>CAP</b> .....	830412	M212659
5	<b>BOLT</b> .....	990727-175-12	J050095
6	<b>WASHER, 1/2" plain lock</b> .....	990401-050-02	J047769
7	<b>FITTING, 1/8" P.T. lubrication</b> .....	990900-009	J039137

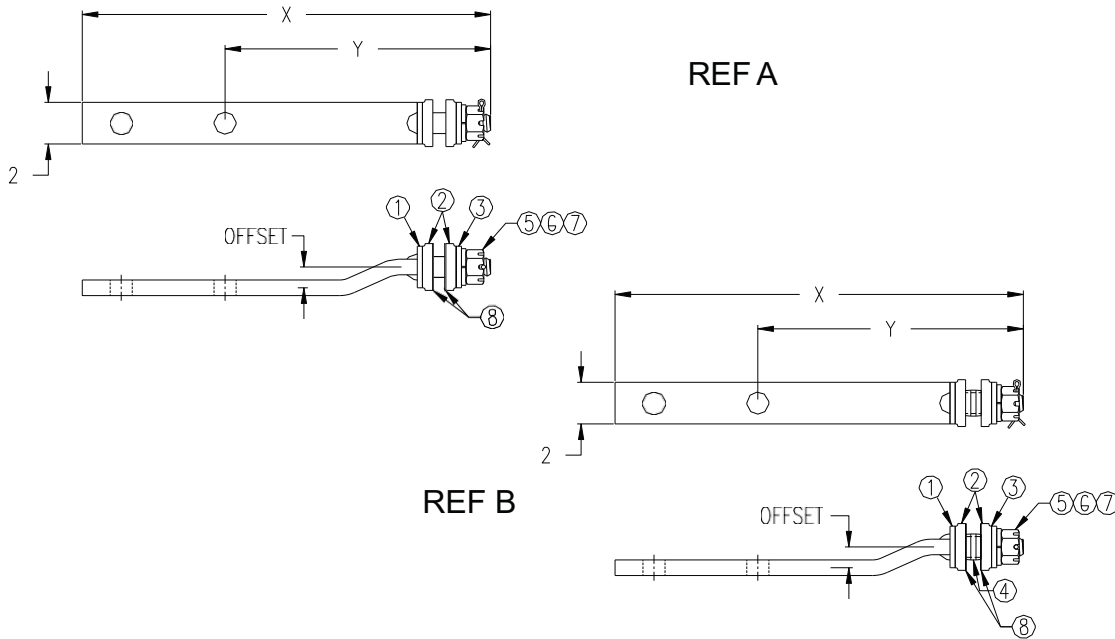


REF A



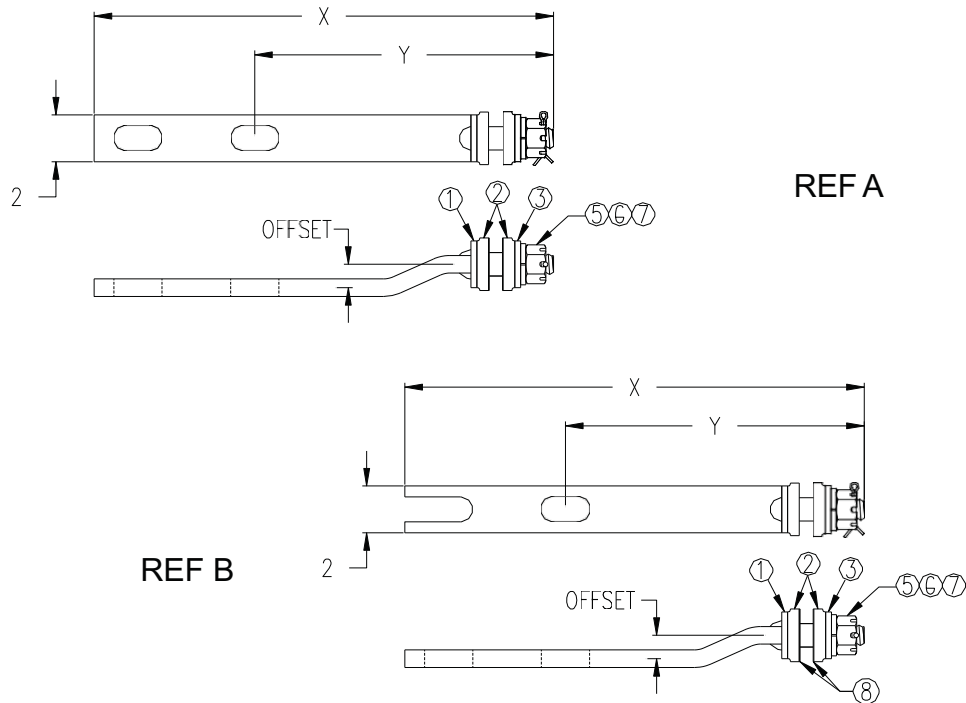
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BALL &amp; SOCKET CONNECTION COMPLETE</b> .....	830400X	N221812
A1	Similar to Ref A except with hardware.....	830400-001X	X372628
1	<b>BALL &amp; SOCKET CONNECTOR ONLY</b> .....	830401	M222453
2	<b>SPRING SOCKET</b> .....	830403	M100539
3	<b>SPRING</b> .....	830404	M199843
4	<b>CAP</b> .....	830402	M222454
5	<b>BOLT</b> .....	830405	M222455
6	<b>WASHER, 1/2" plain lock</b> .....	990401-050-02	J047769
7	<b>FITTING, 1/8" P.T. lubrication</b> .....	990900-009	J039137



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG</b> , for rubber mounted circuit controller rods, 3/4" bolts, 4" bolt centers, 1/2" offset, X = 16 1/32", Y = 11 1/32".....	820555-001-02	N297460
A1	Similar to Ref A except X = 13 17/32", Y = 8 17/32".....	820555-002-02	N302470
B	<b>POINT LUG</b> , for rubber mounted circuit controller rods, 3/4" bolts, 5" bolt centers, 1/2" offset, X = 16 1/2", Y = 10 13/32".....	820555-003-01	N318293
B1	Similar to Ref B except 1 1/4" offset, and with bronze washers.....	820555-004-01	N381396
B2	Similar to Ref B except 2 1/2" offset, and with bronze washers.....	820555-005-01	N391315
B3	Similar to Ref B except X = 14 5/16", Y = 8 1/16".....	820555-006-01	N433940
B4	<b>POINT LUG</b> , for rubber mounted circuit controller rods, with bronze washer, 3/4" bolts, 5" bolt centers, 1 1/4" offset, X = 17 1/8", Y = 11 1/32".....	820555-007-01	N391103
B5	<b>POINT LUG</b> , for rubber mounted circuit controller rods, with bronze washer, 1" bolts, 5" bolt centers, 1" offset, X = 16 1/2", Y = 10 13/32".....	820555-008-01	N297460-001
B6	Similar to Ref B5 except 1 1/4" offset.....	820555-009-01	N/A
B7	Similar to Ref B5 except 2 1/2" offset, and without bronze washers.....	820555-010-01	N393960
1	<b>WASHER</b> , steel.....	990697-001	M296971
2	<b>WASHER</b> , rubber.....	990699	J047927
3	<b>WASHER</b> , steel.....	990697-002	M296977
4	<b>BEARING BLOCK</b> , brass.....	990698	M332526
5	<b>LOCK WASHER</b> , regular duty.....	990401-087-02	J047742
6	<b>HEAVY HEX SLOTTED NUT</b> .....	990332-087-02	J048136
7	<b>COTTER PIN</b> , 5/32" x 1 3/4".....	990508-175-02	J486000
8	<b>BRONZE WASHER</b> , 1 1/4" x 2 3/4".....	990700	M332525





REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>POINT LUG</b> , for rubber mounted circuit controller rods, bronze washers, 3/4" bolts, 5" bolt centers, 1/2" offset, X = 19 1/2", Y = 13 9/32.....	820555-011-01	N432689-001
A1	<b>POINT LUG</b> , for rubber mounted circuit controller rods, 1" bolts, 5" bolt centers, 1/2" offset, X = 18 1/4", Y = 12 13/32.....	820555-012-01	N434454-001
A2	Similar to Ref A1 except X = 14 27/32", Y = 8 17/32.....	820555-013-01	N345779
B	<b>POINT LUG</b> , for rubber mounted circuit controller rods, bronze washers, 1" bolts, 5" bolt centers, 1" offset, X = 16 7/8", Y = 10 13/32.....	820555-014-01	N434215
B1	Similar to Ref B except 3/4" bolts & 1 1/4" offset.....	820555-015-01	N434217
B2	Similar to Ref B except X = 15 3/4", Y = 9 9/32.....	820555-016-01	N435246
1	<b>WASHER</b> , steel.....	990697-001	M296971
2	<b>WASHER</b> , rubber.....	990699	J047927
3	<b>WASHER</b> , steel.....	990697-002	M296977
4	<b>BEARING BLOCK</b> , brass.....	990698	M332526
5	<b>LOCK WASHER</b> , regular duty.....	990401-087-02	J047742
6	<b>HEAVY HEX SLOTTED NUT</b> .....	990332-087-02	J048136
7	<b>COTTER PIN</b> , 5/32" x 1 3/4".....	990508-175-02	J486000
8	<b>BRONZE WASHER</b> , 1 1/4" x 2 3/4".....	990700	M332525



G & B SPECIALTIES, INC.

# TRAIN STOP COMPONENTS & LAYOUTS

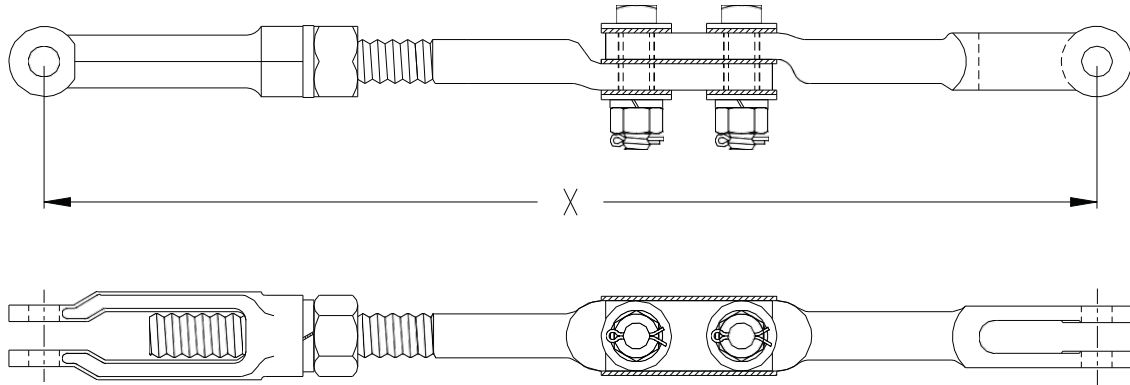
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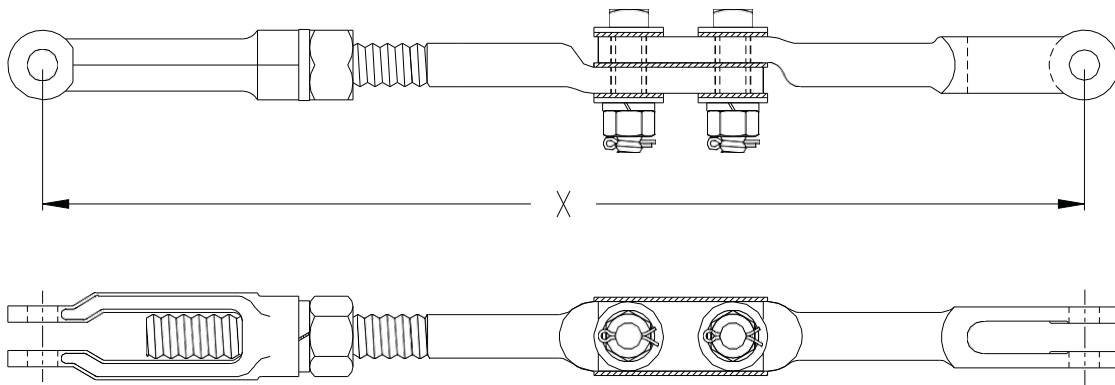
# TRAIN STOP OPERATING RODS



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	TRAIN STOP OPERATING ROD, insulated, X = 28".....	940910-028X	N/A
A1	Similar to Ref A except X = 29".....	940910-029X	N/A
A2	Similar to Ref A except X = 30".....	940910-030X	N/A
A3	Similar to Ref A except X = 32".....	940910-032X	N/A
A4	Similar to Ref A except X = 34".....	940910-034X	N/A
A5	Similar to Ref A except X = 35".....	940910-035X	N/A
A6	Similar to Ref A except X = 36".....	940910-036X	N/A
A7	Similar to Ref A except X = 37".....	940910-037X	N/A
A8	Similar to Ref A except X = 38".....	940910-038X	N/A
A9	Similar to Ref A except X = 39".....	940910-039X	N/A
A10	Similar to Ref A except X = 40".....	940910-040X	N/A
A11	Similar to Ref A except X = 41".....	940910-041X	N/A
A12	Similar to Ref A except X = 42".....	940910-042X	N/A
A13	Similar to Ref A except X = 43".....	940910-043X	N/A
A14	Similar to Ref A except X = 44".....	940910-044X	N/A
A15	Similar to Ref A except X = 45".....	940910-045X	N/A
A16	Similar to Ref A except X = 46".....	940910-046X	N/A
A17	Similar to Ref A except X = 47".....	940910-047X	N/A
A18	Similar to Ref A except X = 48".....	940910-048X	N/A
A19	Similar to Ref A except X = 49".....	940910-049X	N/A

# TRAIN STOP OPERATING RODS



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	TRAIN STOP OPERATING ROD, insulated, X = 50".....	940910-050X	N/A
A1	Similar to Ref A except X = 51".....	940910-051X	N/A
A2	Similar to Ref A except X = 52".....	940910-052X	N/A
A3	Similar to Ref A except X = 53".....	940910-053X	N/A
A4	Similar to Ref A except X = 54".....	940910-054X	N/A
A5	Similar to Ref A except X = 55".....	940910-055X	N/A
A6	Similar to Ref A except X = 56".....	940910-056X	N/A
A7	Similar to Ref A except X = 57".....	940910-057X	N/A
A8	Similar to Ref A except X = 58".....	940910-058X	N/A
A9	Similar to Ref A except X = 59".....	940910-059X	N/A
A10	Similar to Ref A except X = 60".....	940910-060X	N/A
A11	Similar to Ref A except X = 61".....	940910-061X	N/A
A12	Similar to Ref A except X = 62".....	940910-062X	N/A
A13	Similar to Ref A except X = 63".....	940910-063X	N/A
A14	Similar to Ref A except X = 64".....	940910-064X	N/A
A15	Similar to Ref A except X = 65".....	940910-065X	N/A
A16	Similar to Ref A except X = 66".....	940910-066X	N/A
A17	Similar to Ref A except X = 67".....	940910-067X	N/A
A18	Similar to Ref A except X = 68".....	940910-068X	N/A
A19	Similar to Ref A except X = 75".....	940910-075X	N/A
A20	Similar to Ref A except X = 96".....	940910-096X	N/A



# TRACKWORK PRODUCTS

## SECTION M

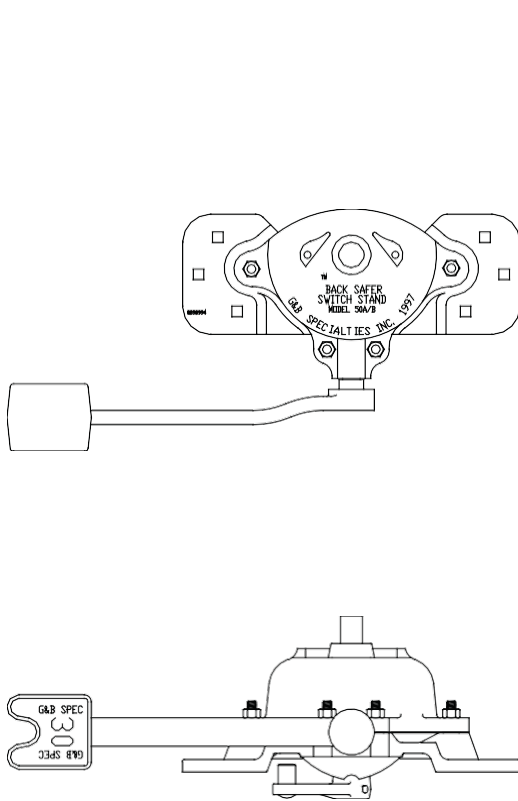
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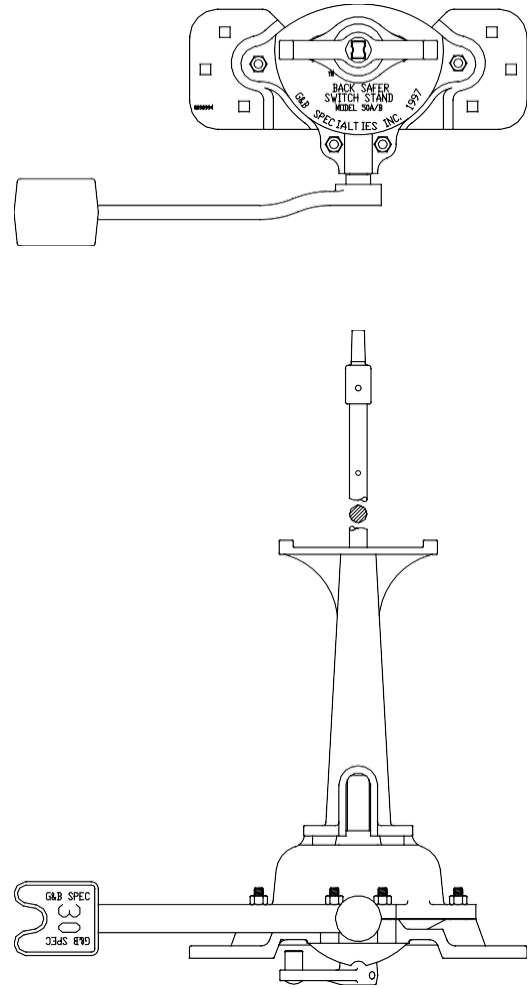
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Revised 4-04  
Switch Point Lock Clamps.....



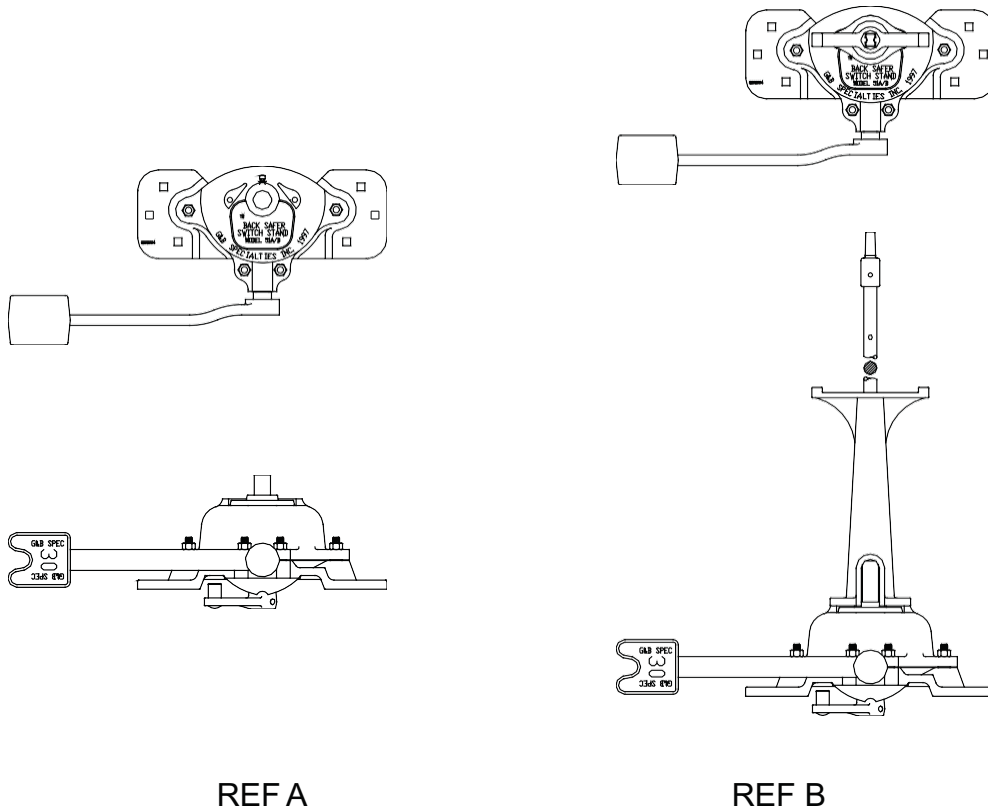
REF A



REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH STAND COMPLETE</b> , Low Model 50A, with 898751X counterweighted throw handle and 571-6706 single crank.....	898950A-002-01	N/A
A1	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365X 11TN connecting rod, 573-0120 mast and 595-6100X target assembly.....	898950A-002-03	N/A
A2	Similar to Ref A except includes 582-8365X 11TN connecting rod, 573-0125 mast, 595-6100X target assembly and 575-0127 lamp tip.....	898950A-002-04	N/A
A3	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365X 11TN connecting rod, 573-0125 mast and 595-6800X target assembly.....	898950A-002-05	N/A
A4	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365X 11TN connecting rod, 573-0125 mast, 595-5007X target assembly and 575-2958 lamp tip.....	898950A-002-06	N/A
A5	Similar to Ref A except without single crank.....	898950A-002-07	N/A
B	<b>SWITCH STAND COMPLETE</b> , Intermediate Model 50B, with 898751X counterweighted throw handle and 571-6706 single crank.....	898950B-002-01	N/A

For custom switch stands other than those shown, specify Model 898950A or 898950B switch stand and specifications

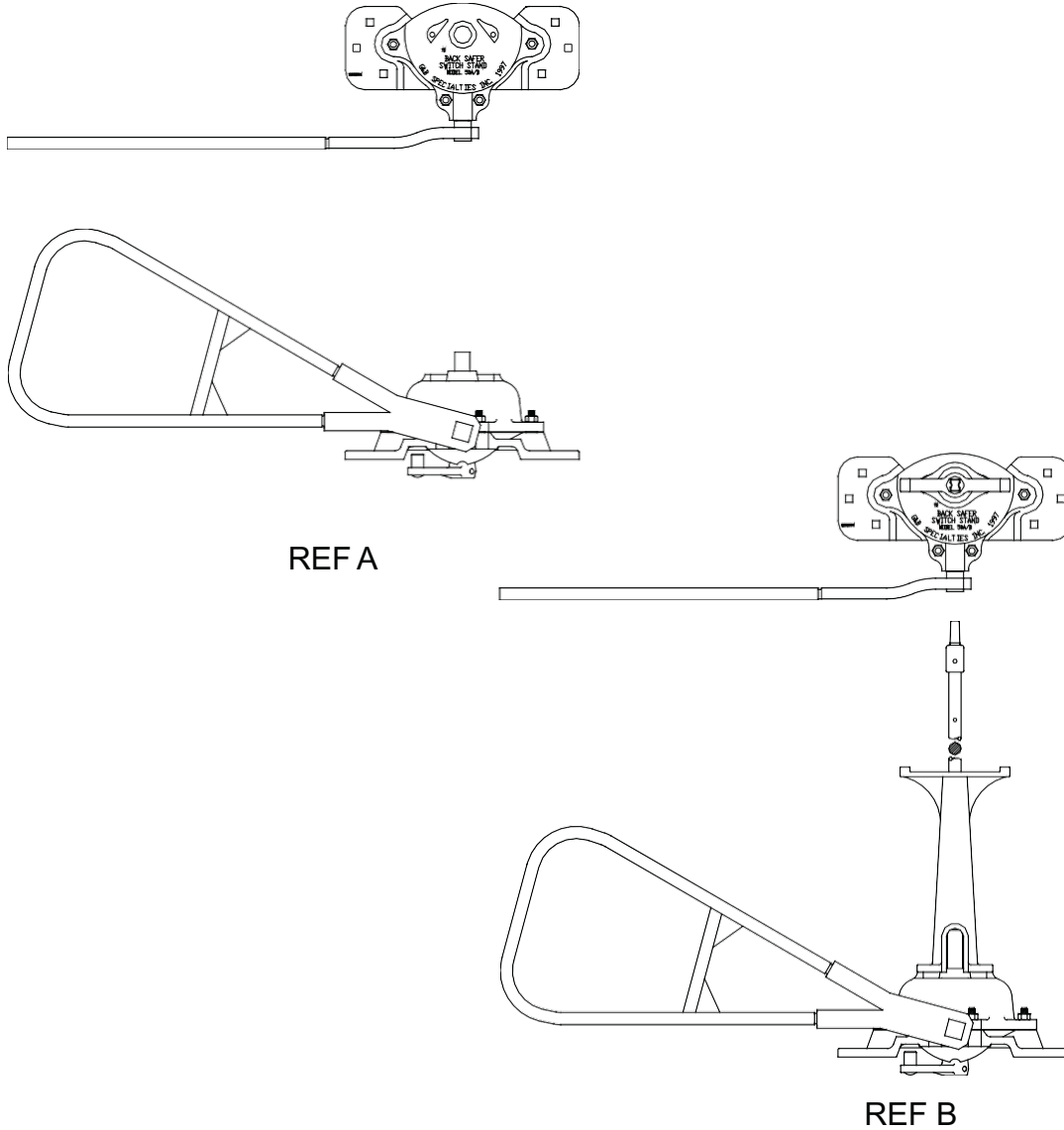


REF A

REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SWITCH STAND COMPLETE</b> , Low Model 51A, with 898751X counterweighted throw handle and 571-6706 single crank.....	898951A-002-01	N/A
A1	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365 11TN connecting rod, 573-0125 mast and 595-6100X target assembly.....	898951A-002-02	N/A
A2	Similar to Ref A except includes 582-8365 11TN connecting rod, 573-0125 mast, 595-6100X target assembly and 575-0127 lamp tip.....	898951A-002-03	N/A
A3	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365X 11TN connecting rod, 573-0125 mast and 595-6800X target assembly.....	898951A-002-04	N/A
A4	Similar to Ref A except includes a pair of 898999X latch stands, 582-1609 connecting rod, 573-0125 mast, 595-5007X target assembly and 575-2958 lamp tip.....	898951A-002-05	N/A
A5	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365 11TN connecting rod, 573-0125 mast, 595-5007X target assembly and 575-2958 lamp tip.....	898951A-002-06	N/A
A6	Similar to Ref A except without single crank and includes 573-0125 mast and 595-6100X target assembly.....	898951A-002-07	N/A
A7	Similar to Ref A except includes a pair of 898999X latch stands, 582-7605X 11TN connecting rod, 573-0125 mast and 595-6100X target assembly.....	898951A-002-08	N/A
A8	Similar to Ref A except without single crank.....	898951A-002-10	N/A
B	<b>SWITCH STAND COMPLETE</b> , Intermediate Model 51B, with 898751X counterweighted throw handle and 571-6706 single crank.....	898951B-002-01	N/A

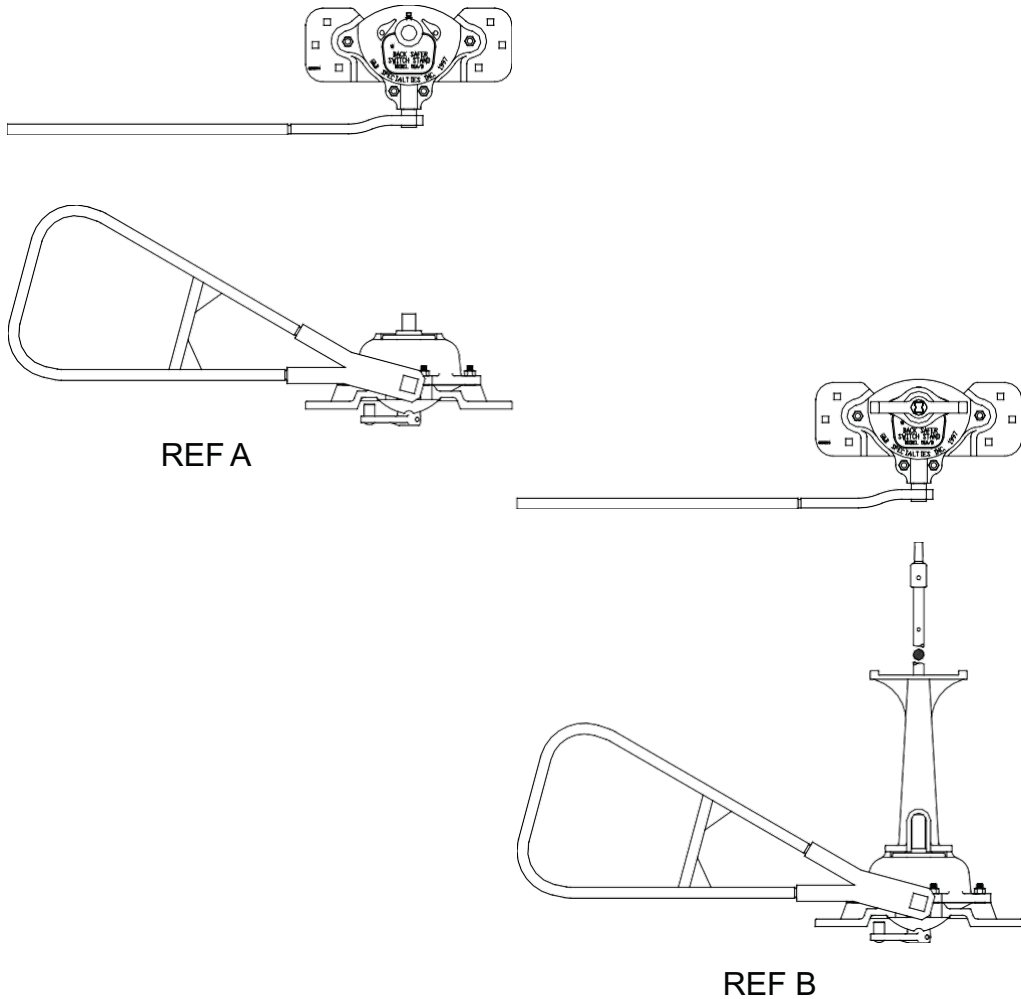
For custom switch stands other than those shown, specify Model 898951A or 898951B switch stand and specifications



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Low Model 50A with 898749X bow handle and 571-6709 single crank.....	898950A-001-01	N/A
A1	Similar to Ref A except includes a pair of 898999X latch stands, 582-7605X connecting rod, 573-0125 mast, and 595-6100X target.....	898950A-001-02	N/A
A2	Similar to Ref A1 except includes a 582-8365X connecting rod.....	898950A-001-03	N/A
A3	Similar to Ref A except without 571-6709 single crank.....	898950A-001-04	N/A
B	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Intermediate Model 50B, with 898749X bow handle and 571-6709 single crank.....	898950B-001-01	N/A
B1	Similar to Ref B except includes a pair of 898999X latch stands, 573-0129 mast and 575-0127 tip.....	898950B-001-02	N/A
B2	Similar to Ref B except without 571-6709 single crank.....	898950B-001-03	N/A

For custom switch stands other than those shown, specify Model 898950A or 898950B switch stand and specifications

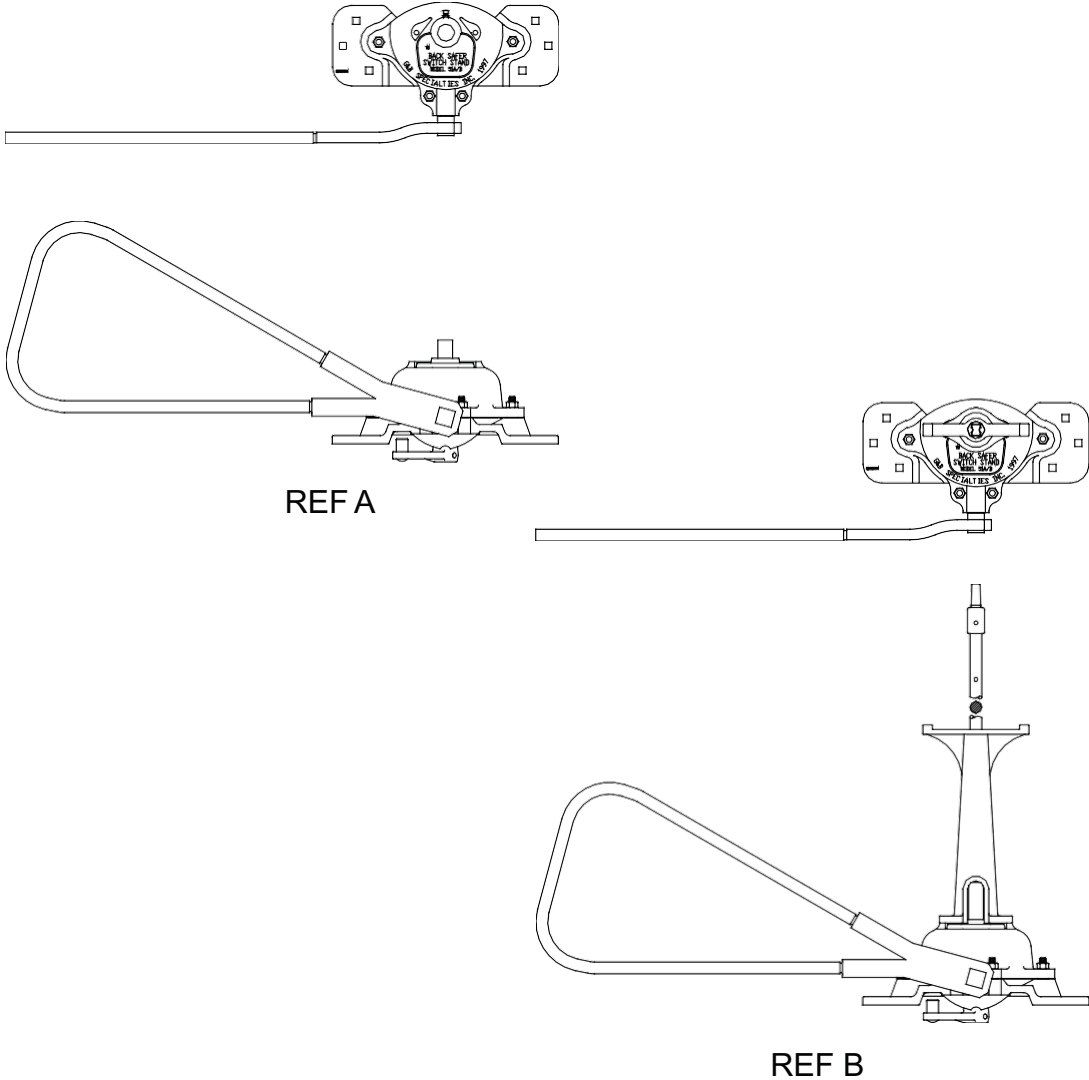




REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Low Model 51A with 898749X bow handle and 571-6709 single crank.....	898951A-001-01	N/A
A1	Similar to Ref A except includes a pair of 898999X latch stands, 582-7605X connecting rod, 573-0125 mast, and 595-6100X target.....	898951A-001-02	N/A
A2	Similar to Ref A1 except includes a 582-8365X connecting rod.....	898951A-001-03	N/A
A3	Similar to Ref A except without 571-6709 single crank.....	898951A-001-04	N/A
B	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Intermediate Model 51B, with 898749X bow handle and 571-6709 single crank.....	898951B-001-01	N/A
B1	Similar to Ref B except includes a pair of 898999X latch stands, 573-0129 mast and 575-0127 tip.....	898951B-001-02	N/A
B2	Similar to Ref B except without 571-6709 single crank.....	898951B-001-03	N/A

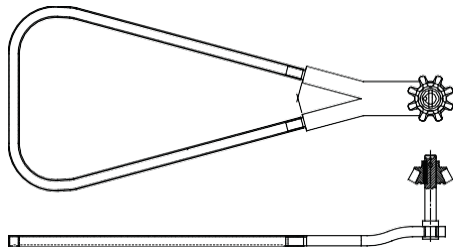
For custom switch stands other than those shown, specify Model 898951A or 898951B switch stand and specifications

**BACKSAFER SWITCH STANDS**

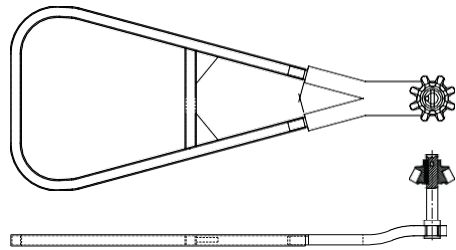


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Low Model 51A with 898748X bow handle and 571-6709 single crank.....	898951A-003-01	N/A
A1	Similar to Ref A except includes a pair of 898999X latch stands, 582-8365X 11TN connecting rod, 573-0125 mast and 595-6100X target...	898951A-003-02	N/A
A2	Similar to Ref A1 except without single crank.....	898951A-003-03	N/A
A3	Similar to Ref A except without single crank and with 582-8365X 11TN connecting rod, 573-0125 mast, 595-6100X target assembly and 575-0127 lamp tip.....	898951A-003-04	N/A
A4	Similar to Ref A except with 571-6803 double crank, one pair of 898999X latch stands, 573-0125 mast, 595-6100X target assembly and 575-0127 lamp tip.....	898951A-003-05	N/A
A5	Similar to Ref A except with 898748-001X bow handle, 571-6704 single crank and one pair of 898999X latch stands.....	898951A-005-01	N/A
B	<b>BACKSAFER SWITCH STAND COMPLETE</b> , Intermediate Model 51B, with 898748X bow handle and 571-6709 single crank	898951B-003-05	N/A

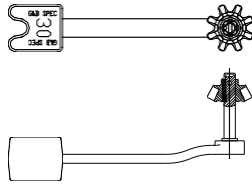
For custom switch stands other than those shown, specify Model 898951A or 898951B switch stand and specifications



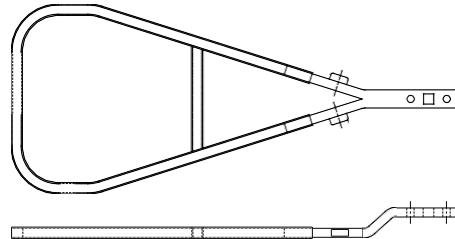
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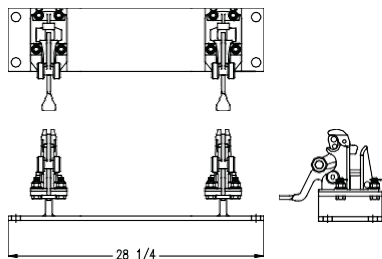
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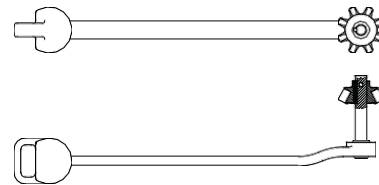
REF C



REF D

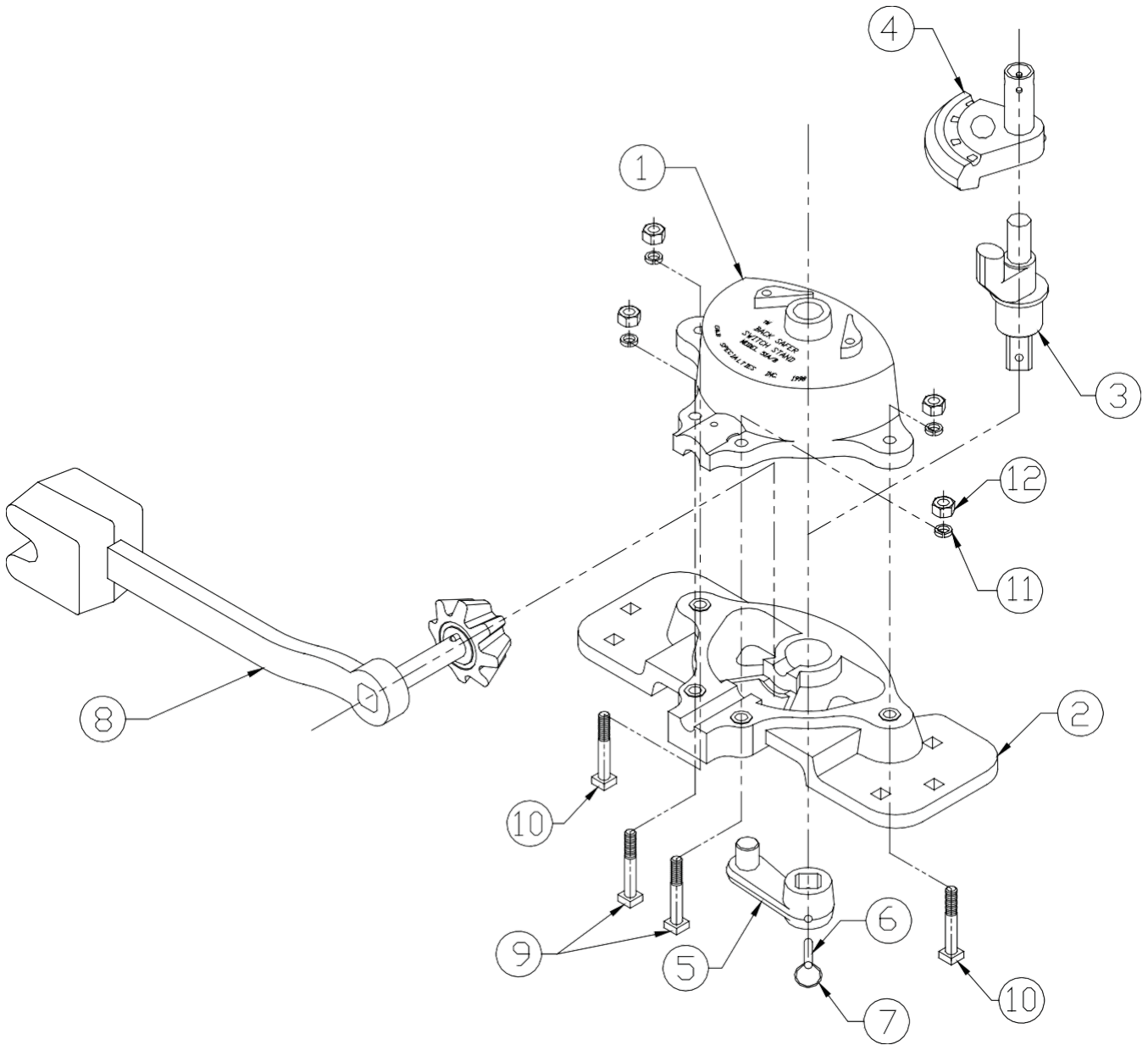


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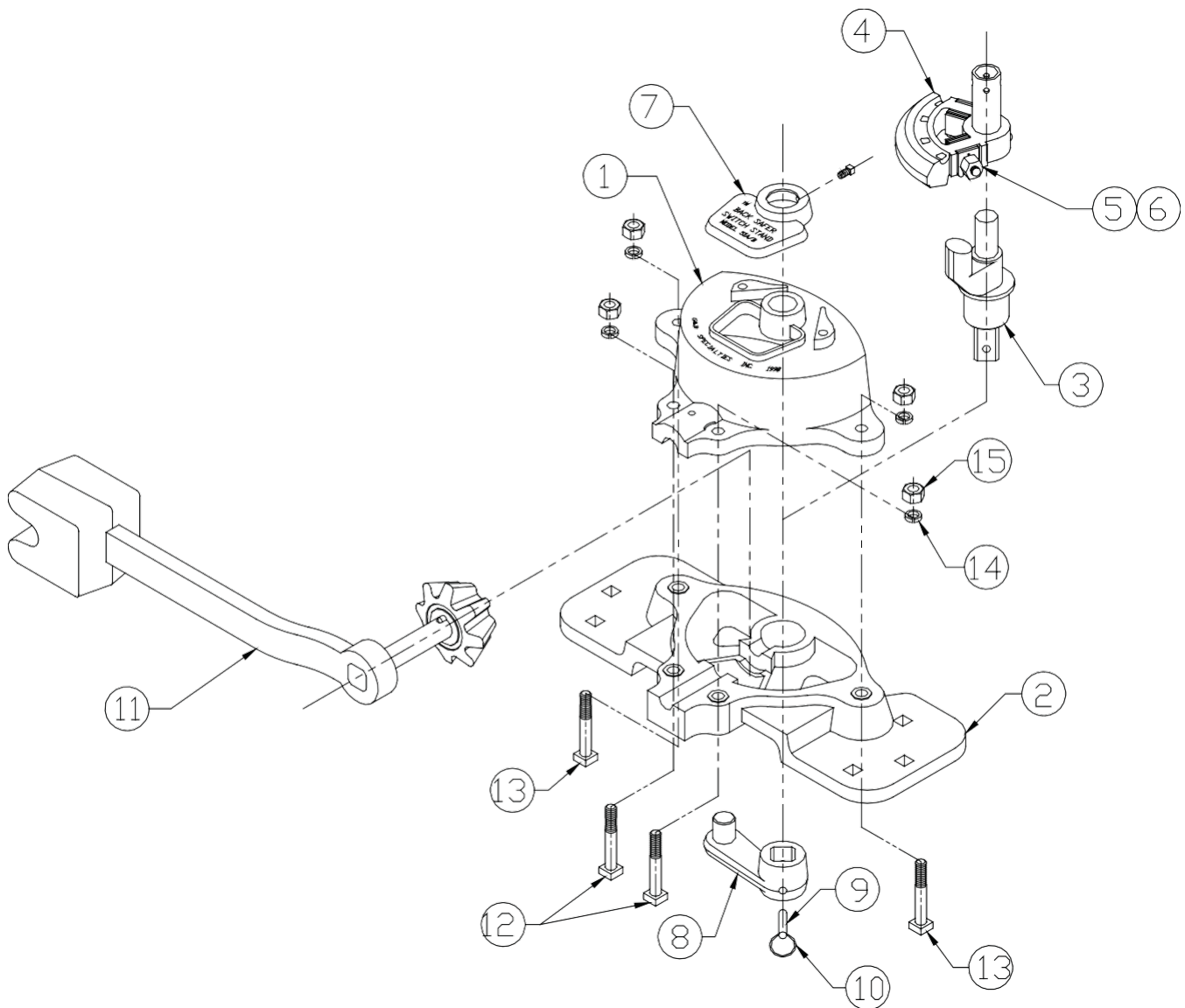


REF F

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>BACKSAFER BOW HANDLE</b> , used with Model 50/51 switch stands, without cross member, powder coated yellow.....	898748X	N/A
A1	Similar to Ref A except powder coated black.....	898748-001X	N/A
B	<b>BACKSAFER BOW HANDLE</b> , used with Model 50/51 switch stands, with cross member, powder coated yellow.....	898749X	N/A
B1	Similar to Ref B except powder coated black.....	898749-001X	N/A
C	<b>COUNTERWEIGHTED THROW HANDLE</b> , used with Model 50/51 switch stands, 30 lb counterweight, powder coated black, X = 30".....	898751X	N/A
C1	Similar to Ref C except X = 36".....	898753X	N/A
D	<b>BACKSAFER BOW HANDLE</b> , used with Model 22/22P and 12RT switch stands, powder coated yellow.....	898850X	N/A
D1	Similar to Ref D except powder coated black.....	898850-001X	N/A
D2	Similar to Ref D except with keeper assembly.....	898850-000-01	N/A
D3	Similar to Ref D1 except with keeper assembly.....	898850-001-01	N/A
E	<b>LATCH STAND COMPLETE</b> , for Ref D.....	898500-001-01	N/A
F	<b>COUNTERWEIGHTED THROW HANDLE</b> , used with Model 50/51 switch stands, 30 lb counterweight, powder coated black, X = 36".....	898752X	N/A

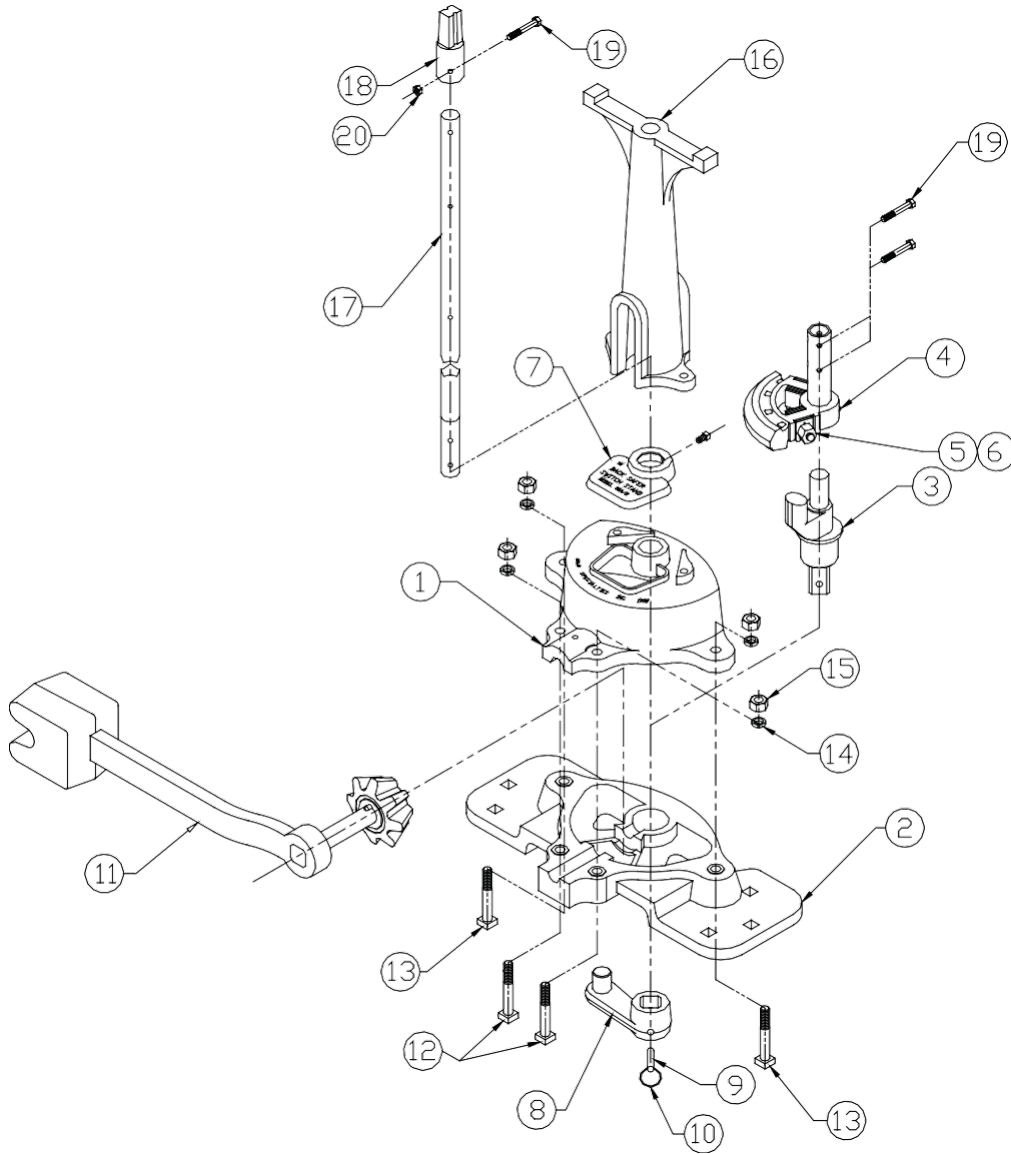


REF	DESCRIPTION	G & B PART #	REF	DESCRIPTION	G & B PART #
1	TOP.....	898985X	7	RING.....	898887
2	BOTTOM.....	898994	8	LEVER.....	898751X
3	SPINDLE.....	551-0063	9	BOLT.....	990029-350-12
4	SEGMENT GEAR.....	898990X	10	BOLT.....	990029-400-12
5	SINGLE CRANK.....	571-6706	11	LOCKWASHER.....	990401-062-02
6	CROSS PIN.....	898886	12	NUT.....	990331-062-02

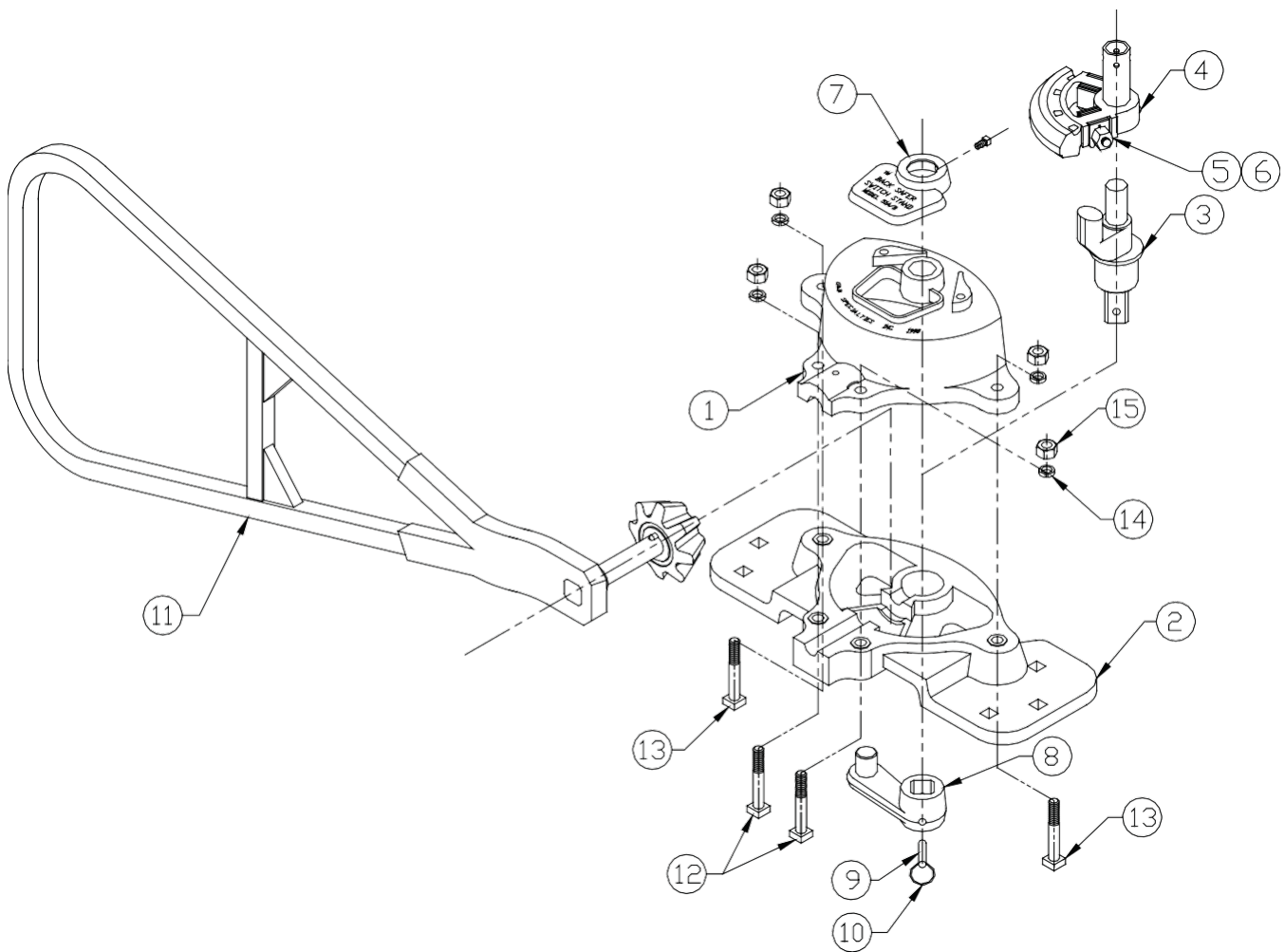


REF	DESCRIPTION	G & B PART #	REF	DESCRIPTION	G & B PART #
1	TOP.....	898995X	9	CROSS PIN.....	898886
2	BOTTOM.....	898994	10	RING.....	898887
3	SPINDLE.....	551-0063	11	LEVER.....	898751X
4	SEGMENT GEAR.....	898992X	12	BOLT.....	990029-350-12
5	SHIM SET.....	898888X	13	BOLT.....	990029-400-12
6	ADJUSTMENT BOLT.....	898889X	14	LOCKWASHER.....	990401-062-02
7	COVER.....	898996X	15	NUT.....	990331-062-02
8	SINGLE CRANK.....	571-6706			

MODEL 51 INTERMEDIATE SWITCH STAND



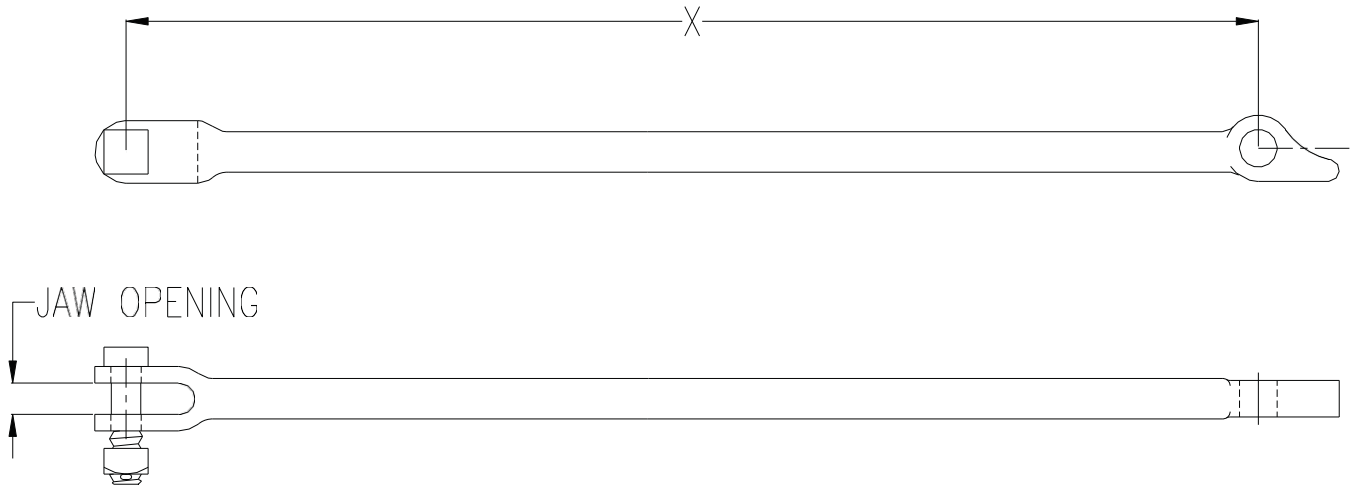
REF	DESCRIPTION	G & B PART #	REF	DESCRIPTION	G & B PART #
1	TOP.....	898995	11	LEVER.....	898751X
2	BOTTOM.....	898994	12	BOLT.....	990029-350-12
3	SPINDLE.....	551-0063	13	BOLT.....	990029-400-12
4	SEGMENT GEAR.....	898993X	14	LOCKWASHER.....	990401-062-02
5	SHIM SET.....	898888X	15	NUT.....	990331-062-02
6	ADJUSTMENT BOLT.....	898889X	16	TOP EXTENSION.....	898984
7	COVER.....	898996X	17	MAST.....	573-0179
8	SINGLE CRANK.....	571-6706	18	LAMP TIP.....	575-0127
9	CROSS PIN.....	898886	19	BOLT WITH NUT.....	990725-225-X12
10	RING.....	898887			



REF	DESCRIPTION	G & B PART #	REF	DESCRIPTION	G & B PART #
1	TOP.....	898995X	9	CROSS PIN.....	898886
2	BOTTOM.....	898994	10	RING.....	898887
3	SPINDLE.....	551-0063	11	BOW HANDLE.....	898749X
4	SEGMENT GEAR.....	898992X	12	BOLT.....	990029-350-12
5	SHIM SET.....	898888X	13	BOLT.....	990029-400-12
6	ADJUSTMENT BOLT.....	898889X	14	LOCKWASHER.....	990401-062-02
7	COVER.....	898996X	15	NUT.....	990331-062-02
8	SINGLE CRANK.....	571-6709			

M-11

MODEL 11AN CONNECTING RODS

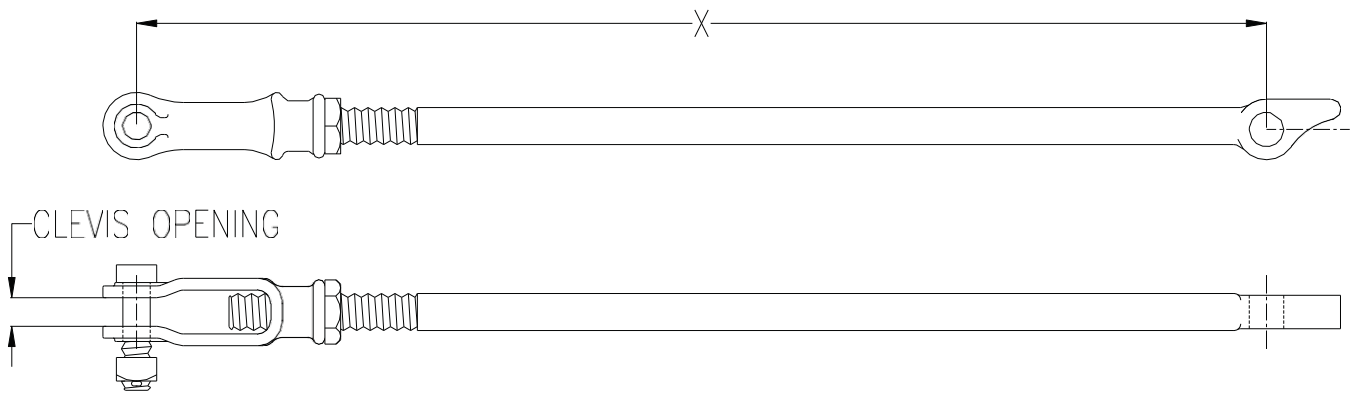


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, NON-ADJUSTABLE</b> , Model 11AN, complete with 1" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 1/16" jaw opening, X = 3'-1 1/2".....	581-0311X	N/A
A1	Similar to Ref A except X = 3' -3".....	581-0331X	N/A
A2	Similar to Ref A except X = 3'-6".....	581-0361X	N/A
A3	Similar to Ref A except X = 4'-0".....	581-0401X	N/A
A4	Similar to Ref A except X = 4'-3".....	581-0431X	N/A
A5	Similar to Ref A except X = 5'-0".....	581-0501X	N/A
A6	Similar to Ref A except X = 6'-0".....	581-0601X	N/A
A7	Similar to Ref A except X = 6'-1 1/2".....	581-0611X	N/A
A8	Similar to Ref A except X = 6'-6".....	581-0661X	N/A
A9	<b>CONNECTING ROD, NON-ADJUSTABLE</b> , Model 11AN, complete with 1 1/8" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 5/16" jaw opening, X = 3'-1 1/2".....	581-0315X	N/A
A10	Similar to Ref A9 except X = 3'-3".....	581-0335X	N/A
A11	Similar to Ref A9 except X = 3'-6".....	581-0365X	N/A
A12	Similar to Ref A9 except X = 4'-0".....	581-0405X	N/A
A13	Similar to Ref A9 except X = 4'-3".....	581-0435X	N/A
A14	Similar to Ref A9 except X = 5'-0".....	581-0505X	N/A
A15	Similar to Ref A9 except X = 6'-0".....	581-0605X	N/A
A16	Similar to Ref A9 except X = 6'-1 1/2".....	581-0615X	N/A
A17	Similar to Ref A9 except X = 6'-6".....	581-0665X	N/A

For custom rods other than those shown, specify Model 581 rod and dimensions

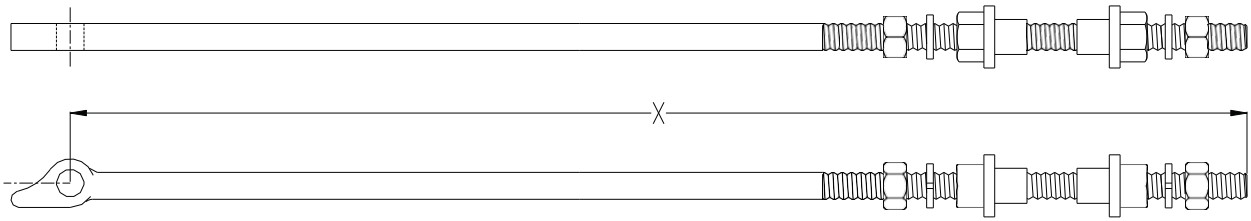




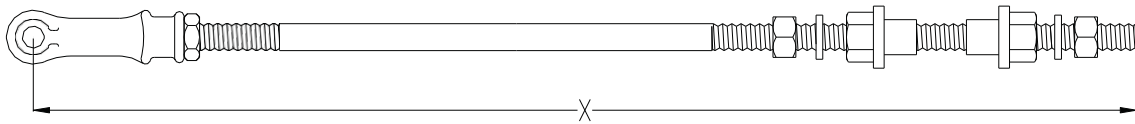
REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TN, complete with 1" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 1/16" jaw opening, X = 3'-1 1/2".....	582-7311X	N/A
A1	Similar to Ref A except X = 3' -3".....	582-7331X	N/A
A2	Similar to Ref A except X = 3'-6".....	582-7361X	N/A
A3	Similar to Ref A except X = 4'-0".....	582-7401X	N/A
A4	Similar to Ref A except X = 4'-3".....	582-7431X	N/A
A5	Similar to Ref A except X = 5'-0".....	582-7501X	N/A
A6	Similar to Ref A except X = 6'-0".....	582-7601X	N/A
A7	Similar to Ref A except X = 6'-1 1/2".....	582-7611X	N/A
A8	Similar to Ref A except X = 6'-6".....	582-7661X	N/A
A9	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TN, complete with 1 1/8" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 5/16" clevis opening, X = 3'-1 1/2".....	582-8315X	N/A
A10	Similar to Ref A9 except X = 3'-3".....	582-8335X	N/A
A11	Similar to Ref A9 except X = 3'-6".....	582-8365X	N/A
A12	Similar to Ref A9 except X = 4'-0".....	582-8405X	N/A
A13	Similar to Ref A9 except X = 4'-3".....	582-8435X	N/A
A14	Similar to Ref A9 except X = 5'-0".....	582-8505X	N/A
A15	Similar to Ref A9 except X = 6'-0".....	582-8605X	N/A
A16	Similar to Ref A9 except X = 6'-1 1/2".....	582-8615X	N/A
A17	Similar to Ref A9 except X = 6'-6".....	582-8665X	N/A

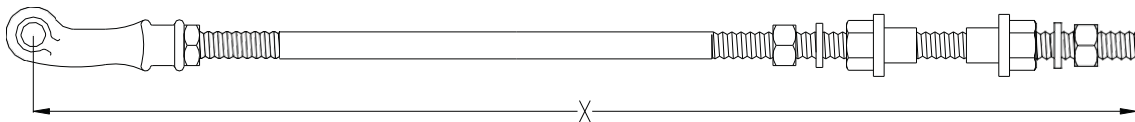
For custom rods other than those shown, specify Model 582 rod and dimensions



REF A



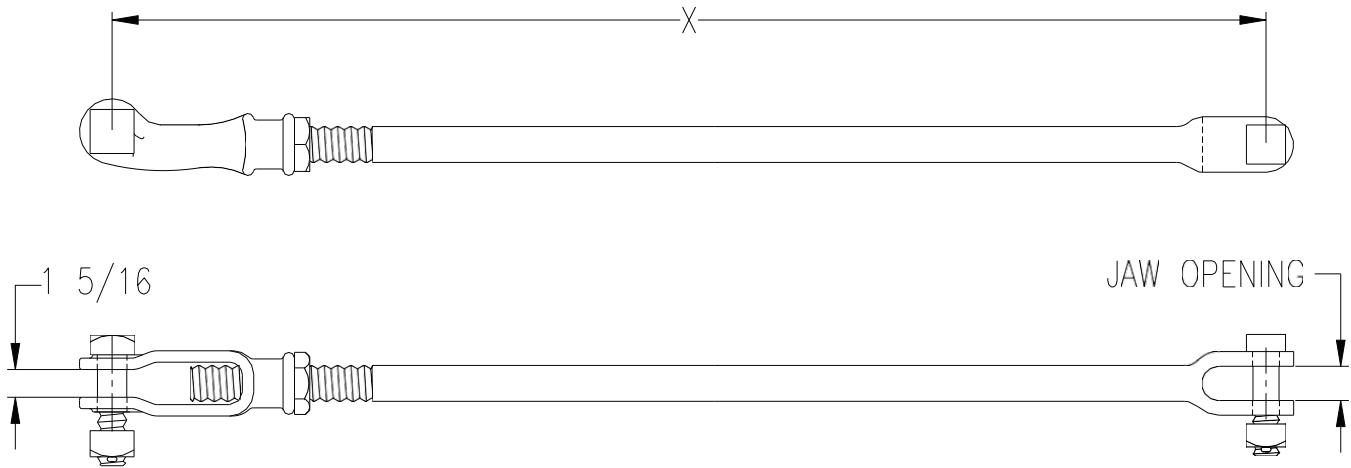
REF B



REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LORENZ OPERATING ROD, ADJUSTABLE</b> , Model 11NY, complete with hardware, used with Model 50 & 51 switch stands and basket throw switch rods, X = 7'-0".....	586-1609X	N/A
A1	Similar to Ref A except X = 8'-0".....	586-2588X	N/A
A2	Similar to Ref A except X = 9'-0".....	586-1611X	N/A
A3	Similar to Ref A except X = 10'-0".....	586-1610X	N/A
B	<b>LORENZ OPERATING ROD, ADJUSTABLE</b> , Model TY, complete with hardware, used with switch stands with 1" thick crank eye and basket throw switch rods, X = 7'-0".....	587-0700X	N/A
B1	Similar to Ref B except X = 8'-0".....	587-0800X	N/A
B2	Similar to Ref B except X = 9'-0".....	587-0900X	N/A
B3	Similar to Ref B except X = 10'-0".....	587-1000X	N/A
C	<b>LORENZ OPERATING ROD, ADJUSTABLE</b> , Model UY, complete with hardware, used with switch stands with 1" thick crank eye and basket throw switch rods, X = 7'-0".....	588-0700X	N/A
C1	Similar to Ref C except X = 8'-0".....	588-0800X	N/A
C2	Similar to Ref C except X = 9'-0".....	588-0900X	N/A
C3	Similar to Ref C except X = 10'-0".....	588-1000X	N/A

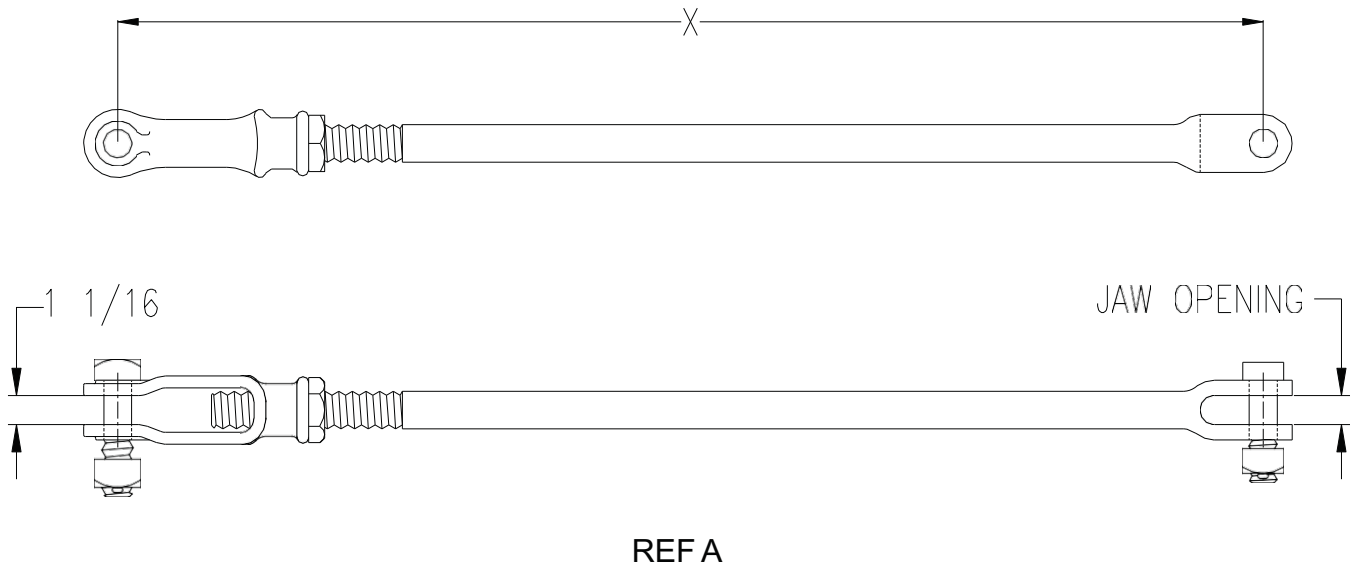
For custom rods other than those shown, specify Model 586, 587, or 588 rod and dimensions



REF A

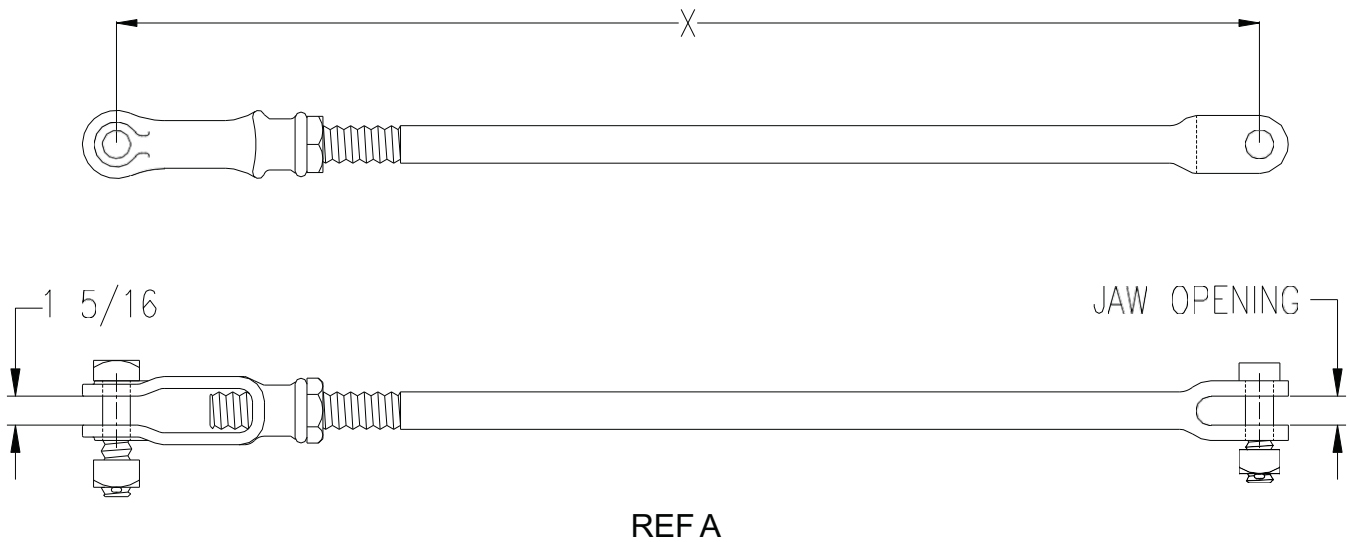
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11AU, complete with two bolt assemblies, used with switch stands with crank eye, 1 1/16" jaw opening, X = 3'-3".....	580-1335X	N/A
A1	Similar to Ref A except X = 3'-6".....	580-1365X	N/A
A2	Similar to Ref A except X = 4'-0".....	580-1405X	N/A
A3	Similar to Ref A except X = 4'-3".....	580-1435X	N/A
A4	Similar to Ref A except X = 5'-0".....	580-1505X	N/A
A5	Similar to Ref A except X = 5'-6".....	580-1565X	N/A
A6	Similar to Ref A except X = 6'-0".....	580-1605X	N/A
A7	Similar to Ref A except X = 6'-6".....	580-1665X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11AU, complete with two bolt assemblies, used with switch stands with crank eye, 1 5/16" jaw opening, X = 3'-3".....	580-5335X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	580-5365X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	580-5405X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	580-5435X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	580-5505X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	580-5565X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	580-5605X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	580-5665X	N/A

For custom rods other than those shown, specify Model 580 rod and dimensions



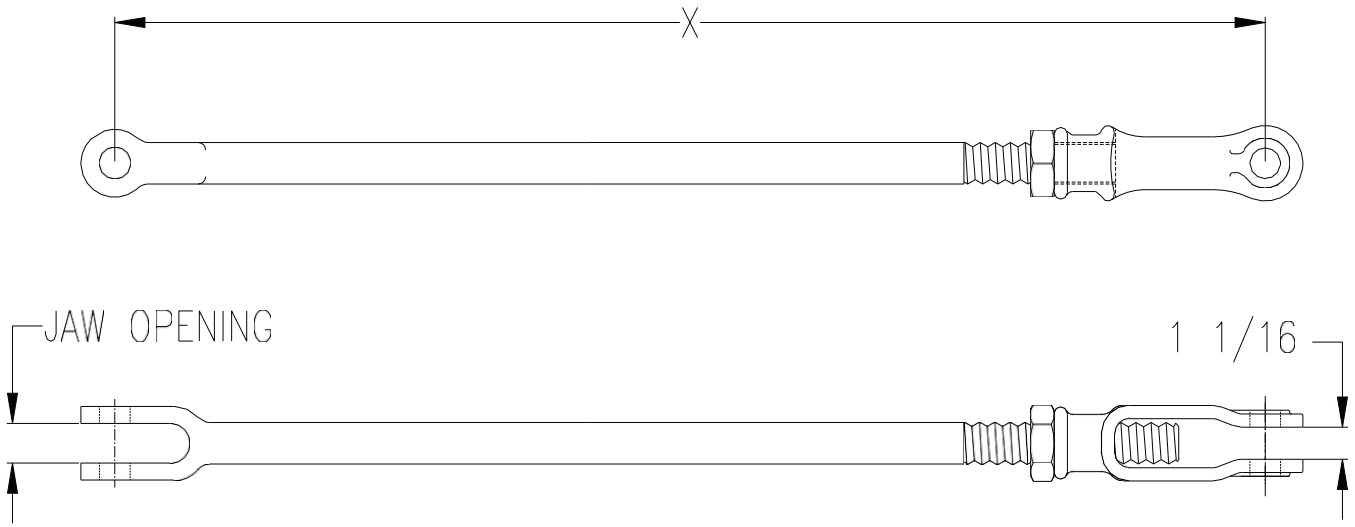
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TA, complete with two bolt assemblies, used with switch stands with crank eye, 1 1/16" jaw opening, X = 3'-3".....	579-1331X	N/A
A1	Similar to Ref A except X = 3'-6".....	579-1361X	N/A
A2	Similar to Ref A except X = 4'-0".....	579-1401X	N/A
A3	Similar to Ref A except X = 4'-3".....	579-1431X	N/A
A4	Similar to Ref A except X = 5'-0".....	579-1501X	N/A
A5	Similar to Ref A except X = 5'-6".....	579-1561X	N/A
A6	Similar to Ref A except X = 6'-0".....	579-1601X	N/A
A7	Similar to Ref A except X = 6'-6".....	579-1661X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TA, complete with two bolt assemblies, used with switch stands with crank eye, 1 5/16" jaw opening, X = 3'-3".....	579-5331X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	579-5361X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	579-5401X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	579-5431X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	579-5501X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	579-5561X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	579-5601X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	579-5661X	N/A

For custom rods other than those shown, specify Model 579 rod and dimensions



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TA, complete with two bolt assemblies, used with switch stands with crank eye, 1 1/16" jaw opening, X = 3'-3".....	579-1335X	N/A
A1	Similar to Ref A except X = 3'-6".....	579-1365X	N/A
A2	Similar to Ref A except X = 4'-0".....	579-1405X	N/A
A3	Similar to Ref A except X = 4'-3".....	579-1435X	N/A
A4	Similar to Ref A except X = 5'-0".....	579-1505X	N/A
A5	Similar to Ref A except X = 5'-6".....	579-1565X	N/A
A6	Similar to Ref A except X = 6'-0".....	579-1605X	N/A
A7	Similar to Ref A except X = 6'-6".....	579-1665X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , Model 11TA, complete with two bolt assemblies, used with switch stands with crank eye, 1 5/16" jaw opening, X = 3'-3".....	579-5335X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	579-5365X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	579-5405X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	579-5435X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	579-5505X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	579-5565X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	579-5605X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	579-5665X	N/A

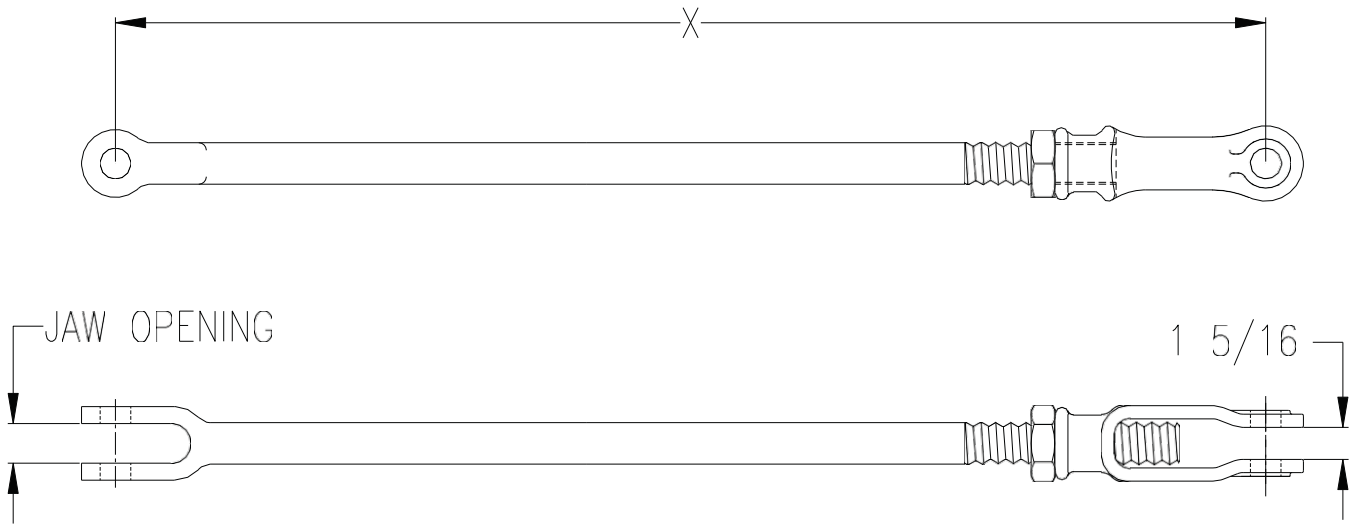
For custom rods other than those shown, specify Model 579 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 1/16" jaw opening, X = 3'-3".....	583-1331X	N/A
A1	Similar to Ref A except X = 3'-6".....	583-1361X	N/A
A2	Similar to Ref A except X = 4'-0".....	583-1401X	N/A
A3	Similar to Ref A except X = 4'-3".....	583-1431X	N/A
A4	Similar to Ref A except X = 5'-0".....	583-1501X	N/A
A5	Similar to Ref A except X = 5'-6".....	583-1561X	N/A
A6	Similar to Ref A except X = 6'-0".....	583-1601X	N/A
A7	Similar to Ref A except X = 6'-6".....	583-1661X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1 1/8" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 5/16" jaw opening, X = 3'-3".....	583-5331X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	583-5361X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	583-5401X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	583-5431X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	583-5501X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	583-5561X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	583-5601X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	583-5661X	N/A

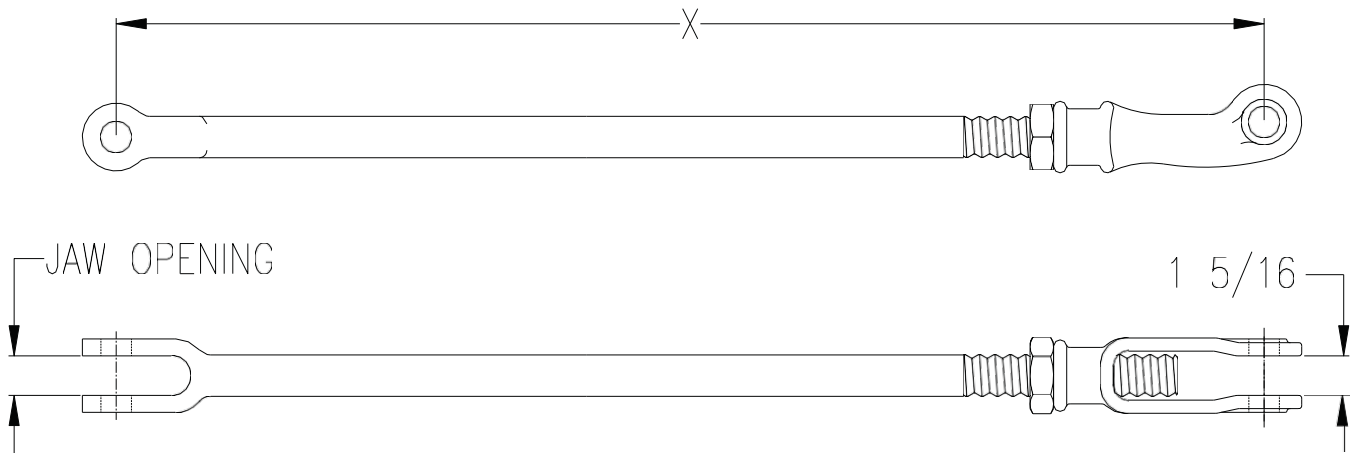
For custom rods other than those shown, specify Model 583 rod and dimensions



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 1/16" jaw opening, X = 3'-3".....	583-1335X	N/A
A1	Similar to Ref A except X = 3'-6".....	583-1365X	N/A
A2	Similar to Ref A except X = 4'-0".....	583-1405X	N/A
A3	Similar to Ref A except X = 4'-3".....	583-1435X	N/A
A4	Similar to Ref A except X = 5'-0".....	583-1505X	N/A
A5	Similar to Ref A except X = 5'-6".....	583-1565X	N/A
A6	Similar to Ref A except X = 6'-0".....	583-1605X	N/A
A7	Similar to Ref A except X = 6'-6".....	583-1665X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1 1/8" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 5/16" jaw opening, X = 3'-3".....	583-5335X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	583-5365X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	583-5405X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	583-5435X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	583-5505X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	583-5565X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	583-5605X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	583-5665X	N/A

For custom rods other than those shown, specify Model 583 rod and dimensions



REF A

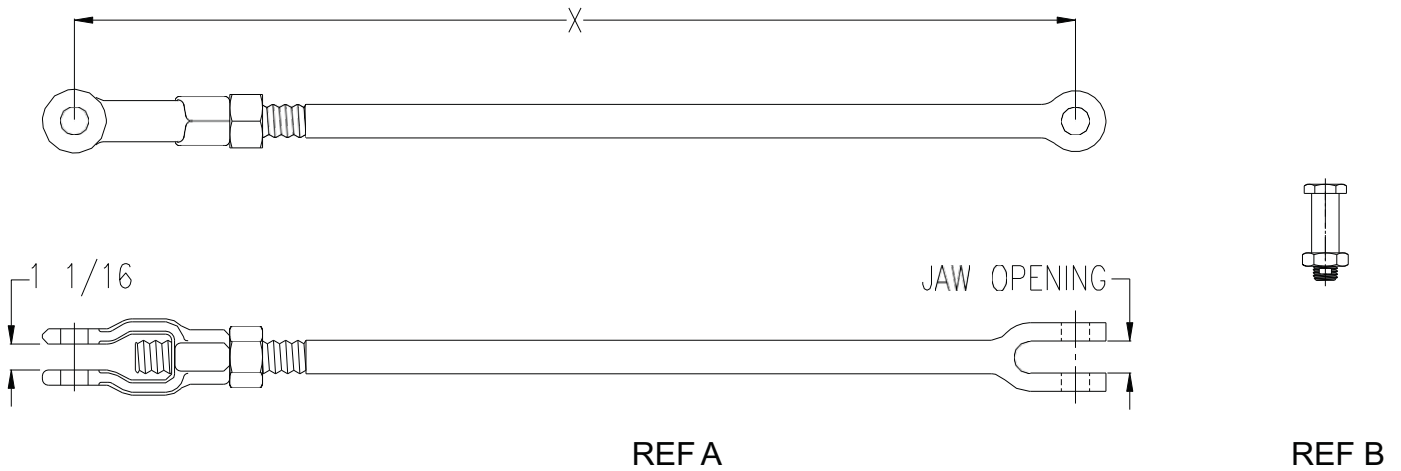
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 1/16" jaw opening, X = 3'-3".....	584-1335X	N/A
A1	Similar to Ref A except X = 3'-6".....	584-1365X	N/A
A2	Similar to Ref A except X = 4'-0".....	584-1405X	N/A
A3	Similar to Ref A except X = 4'-3".....	584-1435X	N/A
A4	Similar to Ref A except X = 5'-0".....	584-1505X	N/A
A5	Similar to Ref A except X = 5'-6".....	584-1565X	N/A
A6	Similar to Ref A except X = 6'-0".....	584-1605X	N/A
A7	Similar to Ref A except X = 6'-6".....	584-1665X	N/A
A8	<b>CONNECTING ROD, ADJUSTABLE</b> , complete with 1 1/8" dia bolt and hardware, used with Model 50 & 51 switch stands, 1 5/16" jaw opening, X = 3'-3".....	584-5335X	N/A
A9	Similar to Ref A8 except X = 3'-6".....	584-5365X	N/A
A10	Similar to Ref A8 except X = 4'-0".....	584-5405X	N/A
A11	Similar to Ref A8 except X = 4'-3".....	584-5435X	N/A
A12	Similar to Ref A8 except X = 5'-0".....	584-5505X	N/A
A13	Similar to Ref A8 except X = 5'-6".....	584-5565X	N/A
A14	Similar to Ref A8 except X = 6'-0".....	584-56505X	N/A
A15	Similar to Ref A8 except X = 6'-6".....	584-5665X	N/A

For custom rods other than those shown, specify Model 584 rod and dimensions



# CONNECTING RODS

M-20



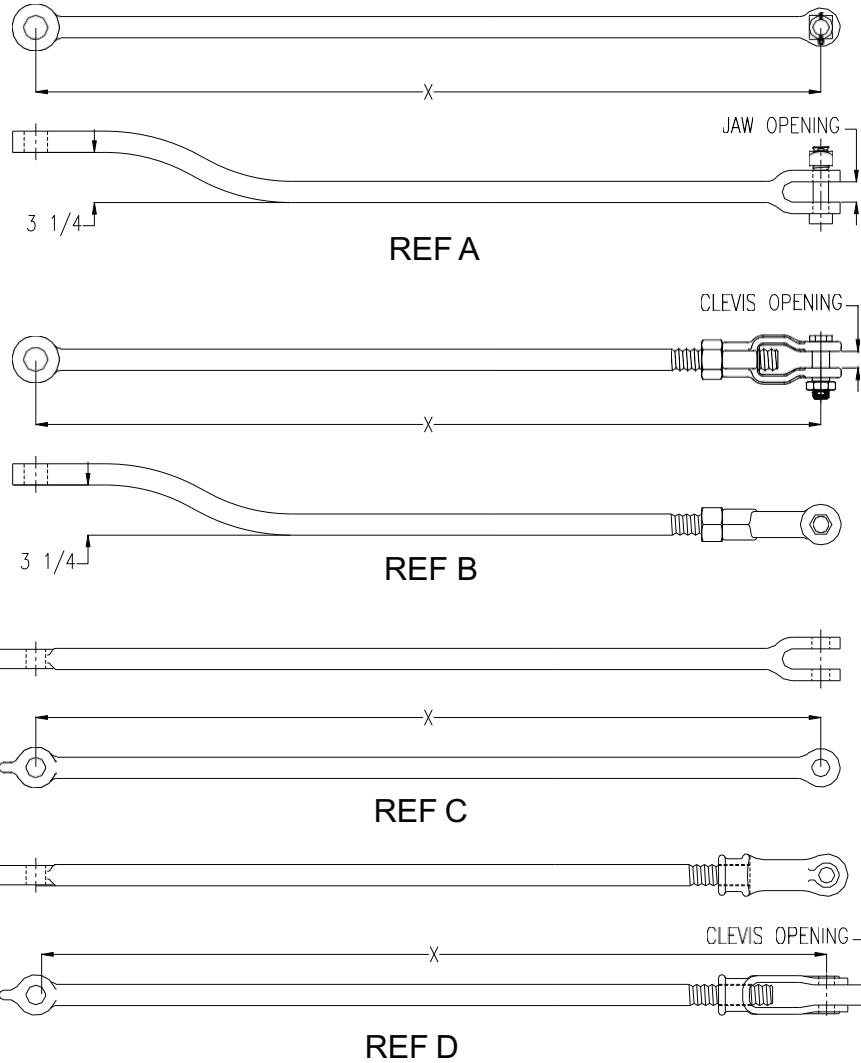
REF A

REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, ADJUSTABLE</b> , used with switch stands with crank eye, 1 1/16" jaw opening, X = 3'-4".....	585-1341X	N/A
A1	Similar to Ref A except X = 3'-6".....	585-1361X	N/A
A2	Similar to Ref A except X = 5'-0".....	585-1501X	N/A
A3	Similar to Ref A except X = 5'-1 1/2".....	585-1521X	N/A
A4	Similar to Ref A except X = 6'-0".....	585-1601X	N/A
A5	Similar to Ref A except X = 6'-0 3/4".....	585-1611X	N/A
A6	Similar to Ref A except X = 6'-1 1/2".....	585-1621X	N/A
A7	Similar to Ref A except X = 6'-10 1/2".....	585-16111X	N/A
A8	Similar to Ref A except X = 7'-0".....	585-1701X	N/A
A9	Similar to Ref A except X = 12'-0".....	585-11201X	N/A
A10	<b>CONNECTING ROD, ADJUSTABLE</b> , used with switch stands with crank eye, 1 5/16" jaw opening, X= 3'-4".....	585-5341X	N/A
A11	Similar to Ref A10 except X = 3'-6".....	585-5361X	N/A
A12	Similar to Ref A10 except X = 5'-0".....	585-5501X	N/A
A13	Similar to Ref A10 except X = 5'-1 1/2".....	585-5521X	N/A
A14	Similar to Ref A10 except X = 6'-0".....	585-5601X	N/A
A15	Similar to Ref A10 except X = 6'-0 3/4".....	585-5611X	N/A
A16	Similar to Ref A10 except X = 6'-1 1/2".....	585-5621X	N/A
A17	Similar to Ref A10 except X = 6'-10 1/2".....	585-56111X	N/A
A18	Similar to Ref A10 except X = 7'-0".....	585-5701X	N/A
A19	Similar to Ref A10 except X = 12'-0".....	585-51201X	N/A
B	<b>SWITCH STAND SHOULDER BOLT</b> .....	3605-001X	N/A

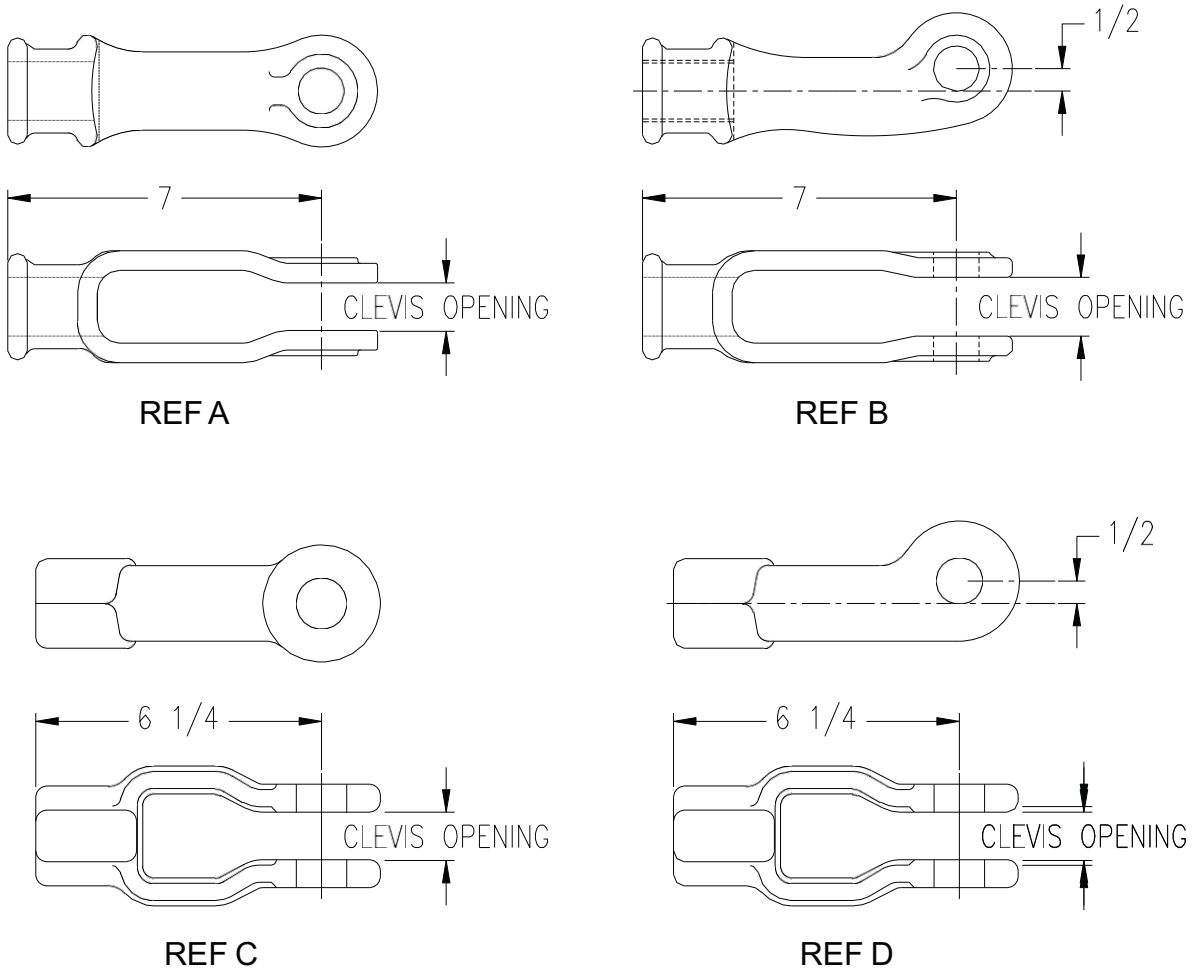
For custom rods other than those shown, specify Model 585 rod and dimensions

CONNECTING RODS

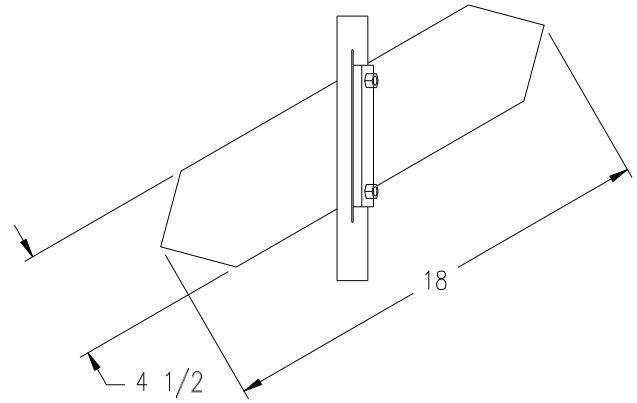
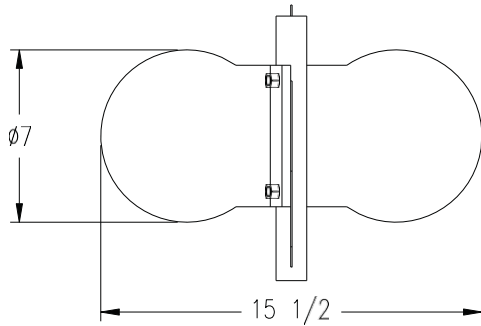


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CONNECTING ROD, NON-ADJUSTABLE</b> , used with No. 6 High and No. 1 Low "Star" switch stands, with 1 5/16" jaw opening, x= 6'-0 3/4".....	589-0615	N/A
A1	Similar to Ref A except 1 1/16" jaw opening.....	589-0611	N/A
A2	Similar to Ref A except 7/8" jaw opening and X = 8'-6 1/4".....	589-0867	N/A
B	<b>CONNECTING ROD, ADJUSTABLE</b> , used with No. 6 High and No. 1 Low "Star" switch stands, with 1 5/16" jaw opening, X = 6'-0 3/4".....	590-0615X	N/A
B1	Similar to Ref B except 1 1/16" jaw opening.....	590-0611X	N/A
C	<b>CONNECTING ROD, NON-ADJUSTABLE</b> , used with "Hub" switch stands, with 1 1/16" jaw opening, X = 3'-9 1/4".....	591-0391	N/A
C1	Similar to Ref C except 1 5/16" jaw opening and X = 5'-9 1/4".....	591-0595	N/A
D	<b>CONNECTING ROD, ADJUSTABLE</b> , used with "HUB" switch stands, with 1 1/16" clevis opening, X = 6'-0".....	592-0601	N/A

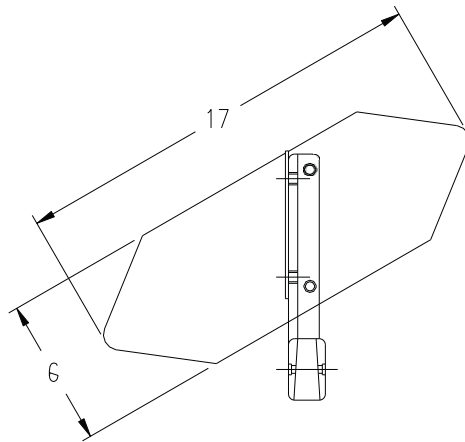
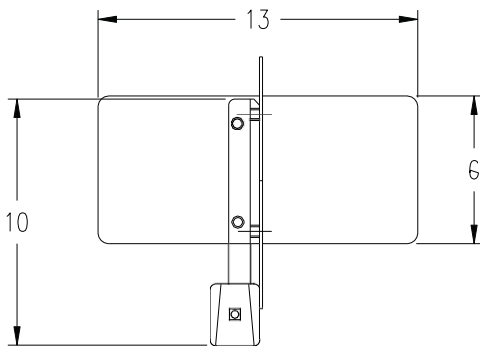
For custom rods other than those shown, specify Model 589, 590, 591, or 592 connecting rod, jaw opening and bolt size



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CLEVIS</b> , adjustable, for connecting rods 1 3/8"-6 threads, 1 1/16" clevis opening, for 1" dia. bolt.....	898113-001	610-1540
A1	Similar to Ref A except 1 5/16" clevis opening, for 1 1/8" dia bolt.....	898113-002	610-2222
A2	Similar to Ref A except for 1 1/8" dia bolt.....	898113-004	N/A
B	<b>CLEVIS, ADJUSTABLE</b> , for connecting rods, 1 3/8"-6 threads, 1 1/16" clevis opening, for 1" dia bolt.....	898113-005	N/A
B1	Similar to Ref B except for 1 1/8" dia bolt.....	898113-003	N/A
B2	Similar to Ref B except 1 5/16" clevis opening, for 1 1/8" dia. bolt.....	898113-006	610-1013
C	<b>CLEVIS, ADJUSTABLE</b> , for connecting rods, 1 3/8"-6 threads, 1 1/16" clevis opening, for 1 1/8" dia bolt.....	898010-020	N/A
D	<b>CLEVIS, ADJUSTABLE</b> , for connecting rods, 1 3/8"-6 threads, 1 5/16" clevis opening, for 1" dia bolt.....	898010-025	N/A

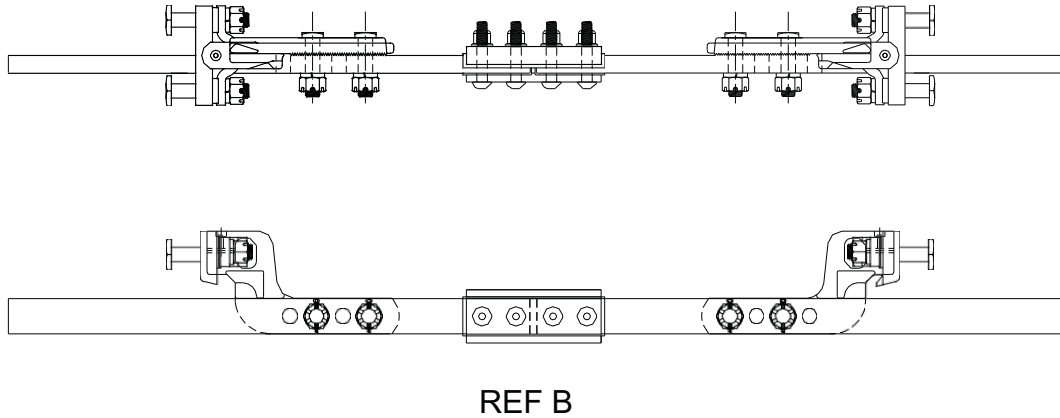
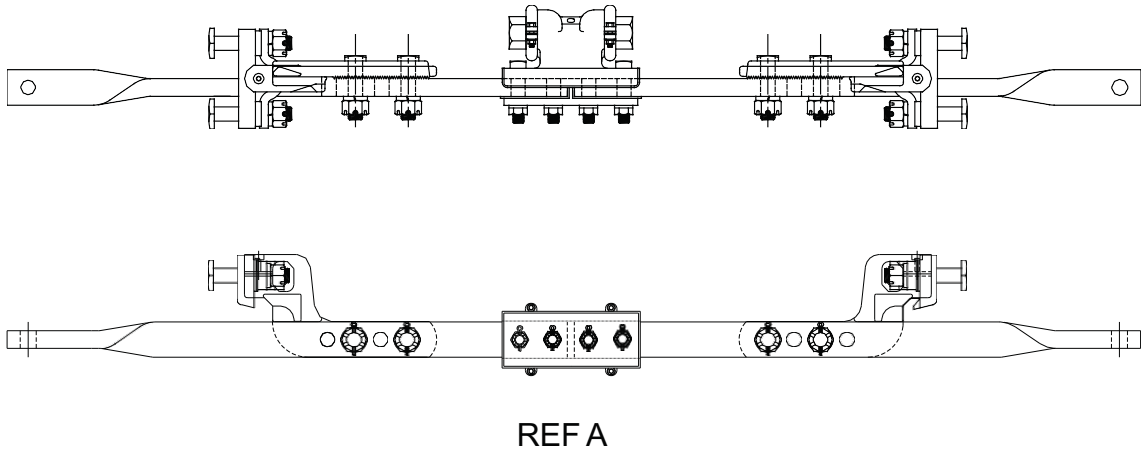


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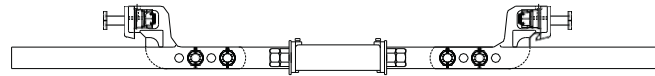
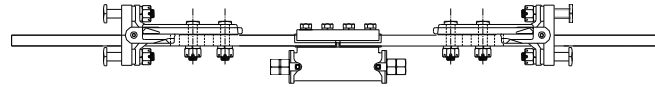


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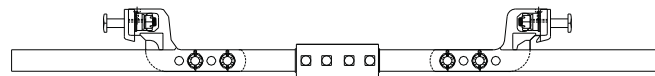
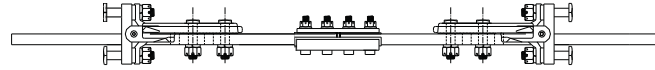
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>TARGET, "F" PATTERN</b> , for low model 50/51 switch stands, white normal indication, red reverse indication, includes mounting hardware.....	595-4000X	N/A
A1	Similar to Ref A except with white normal indication and green reverse indication.....	595-4001X	N/A
A2	Similar to Ref A except with white normal indication and yellow reverse indication.....	595-4002X	N/A
A3	Similar to Ref A except with white normal indication and purple reverse indication.....	595-4003X	N/A
A4	Similar to Ref A except with green normal indication and red reverse indication.....	595-4004X	N/A
A5	Similar to Ref A except with green normal indication and yellow reverse indication.....	595-4005X	N/A
B	<b>TARGET, "S" PATTERN</b> , for low model 50/51 switch stands, yellow normal indication, red reverse indication, includes mast and mounting hardware.....	595-5007X	N/A
B1	Similar to Ref B except with green normal indication and red reverse indication.....	595-5007-01	N/A
B2	Similar to Ref B except with green normal indication and yellow reverse indication.....	595-5007-10	N/A



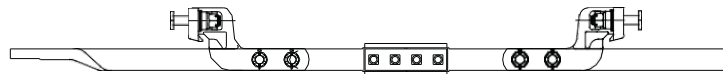
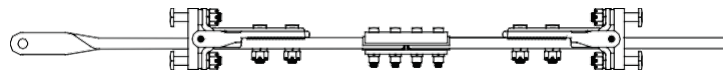
REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 1 or 5 position, for 133 lb RE rail, adjustable to fit 16'-6", 24'-0" and 39'-0" switch lengths.....	945575-000X	557-5580
A1	Similar to Ref A except without switch point adjuster.....	945575-001X	N/A
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 2, 3, or 4 position, for 133 lb RE rail, adjustable to fit 16'-6", 24'-0" and 39'-0" switch lengths.....	945575-002X	557-5583



REF A

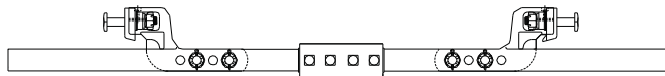
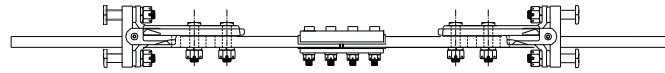


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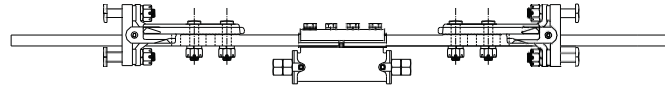


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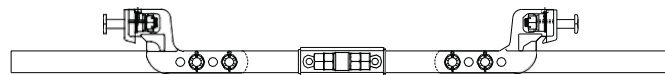
REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 1 position, for 115 lb RE rail, adjustable to fit 11'-0", 16'-6" and 22'-0" power switches.....	945575-005X	1562-15
A1	Similar to Ref A except fits 39'-0" power switch.....	945575-006X	1551-15
A2	Similar to Ref A except for No. 5 position on a 39'-0" power switch.....	945575-007X	1552-15
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 2 or 3 position for 115 lb RE rail, adjustable to fit on a 39'-0" power switch.....	945575-008X	1551
B1	Similar to Ref B except for No. 4 position on a 39'-0" power switch.....	945575-009X	1552
B2	Similar to Ref B except for No. 2 position on a 11'-0", 16'-6" and 22'-0" power or hand throw switch.....	945575-010X	1562
B3	Similar to Ref B except for No. 3 position on a 22'-0" power or hand throw switch.....	945575-011X	1563
C	<b>INSULATED VERTICAL SWITCH ROD</b> , LH Model MJ, No. 1 position, for 115 lb RE rail, adjustable to fit on a 11'-0", 16'-6" and 22'-0" hand throw switch.....	945575-012LX	1562/12L
C1	Similar to Ref C except RH.....	945575-012RX	1562/12R



REF A

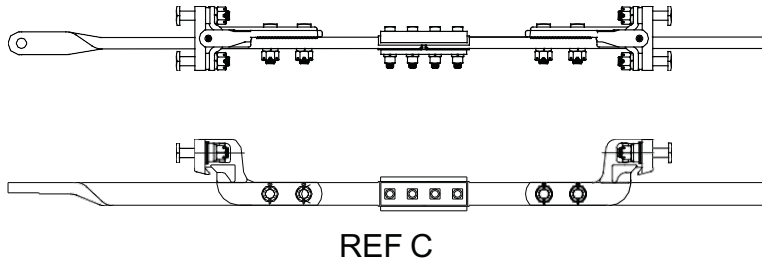
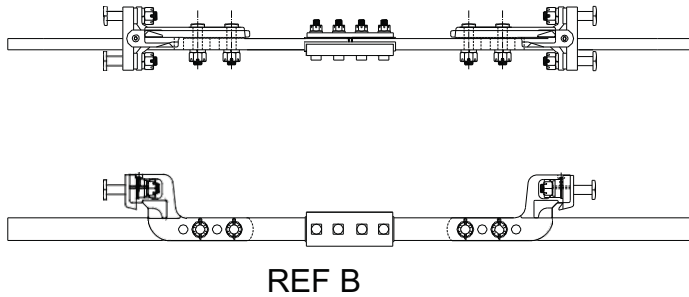
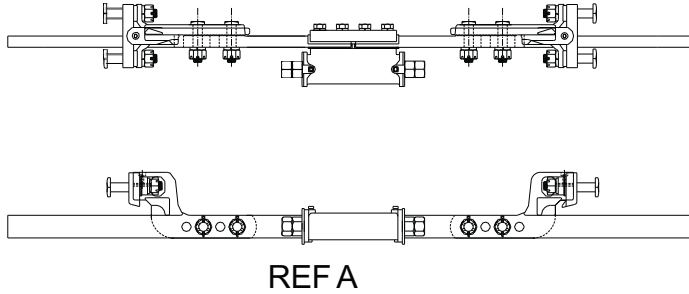


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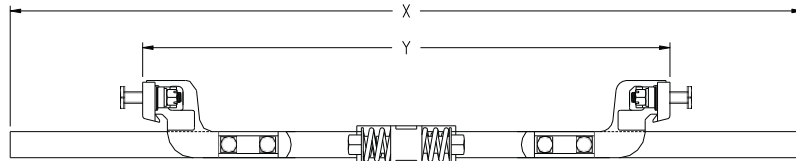
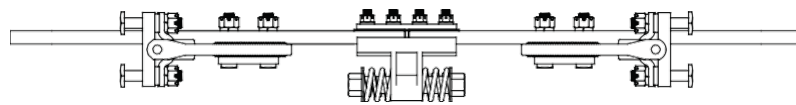
REF C

REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 1 position, for 130 lb RE-HF rail, adjustable to fit 16'-6" and 22'-0" power switches.....	945575-013X	1312-15
A1	Similar to Ref A except fits 39'-0" power switch.....	945575-014X	1321-15
A2	Similar to Ref A except for No. 5 position on a 39'-0" power switch.....	945575-015X	1322-15
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 2 position, for 130 lb RE-HF rail, adjustable to fit 16'-6" and 22'-0" power switches.....	945575-016X	1312
B1	Similar to Ref B except for No. 3 position on a 22'-0" power switch.....	945575-017X	1313
B2	Similar to Ref B except for No. 2 or 3 position on a 39'-0" power switch or No. 2 position on a 22'-0" spring switch.....	945575-018X	1321
B3	Similar to Ref B except for No. 4 position on a 39'-0" power switch.....	945575-019X	1322
B4	Similar to Ref B except for No. 1 position on a 22'-0" spring switch.....	945575-020X	1321-4
C	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 3 position, for 130 lb RE-HF rail, adjustable to fit 22'-0" spring switch.....	945575-021X	1322-103

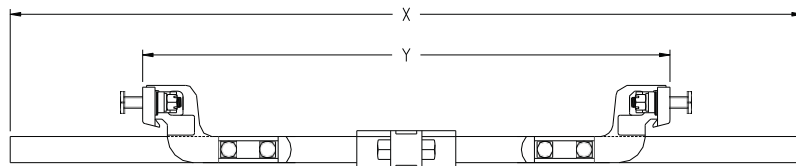
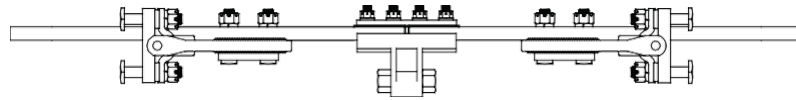


REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 1 position, for 132 lb RE rail, adjustable to fit 11'-0", 16'-6" and 22'-0" power switches.....	945575-022X	3272-15
A1	Similar to Ref A except fits 39'-0" power switch.....	945575-023X	3281-15
A2	Similar to Ref A except for No. 5 position on a 39'-0" power switch.....	945575-024X	3282-15
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model MJ, No. 2 or 3 position for 132 lb RE rail, adjustable to fit on a 39'-0" power switch.....	945575-025X	3281
B1	Similar to Ref B except for No. 4 position on a 39'-0" power switch.....	945575-026X	3282
B2	Similar to Ref B except for No. 2 position on a 11'-0", 16'-6" and 22'-0" power or hand throw switch.....	945575-027X	3272
B3	Similar to Ref B except for No. 3 position on a 22'-0" power or hand throw switch.....	945575-028X	3273
C	<b>INSULATED VERTICAL SWITCH ROD</b> , LH Model MJ, No. 1 position, for 132 lb RE rail, adjustable to fit on a 11'-0", 16'-6" and 22'-0" hand throw switch.....	945575-029LX	3272/12L
C1	Similar to Ref C except RH.....	945575-029RX	3272/12R

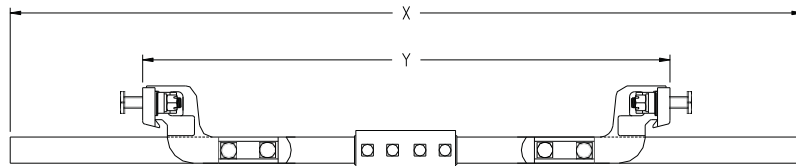




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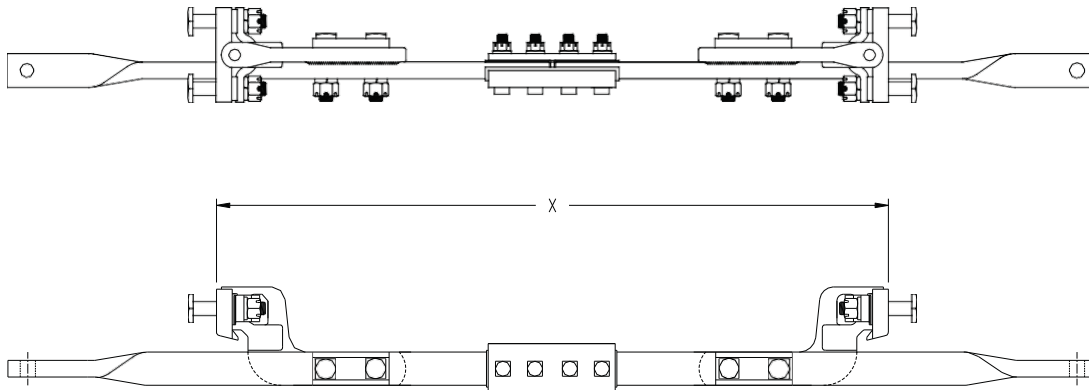


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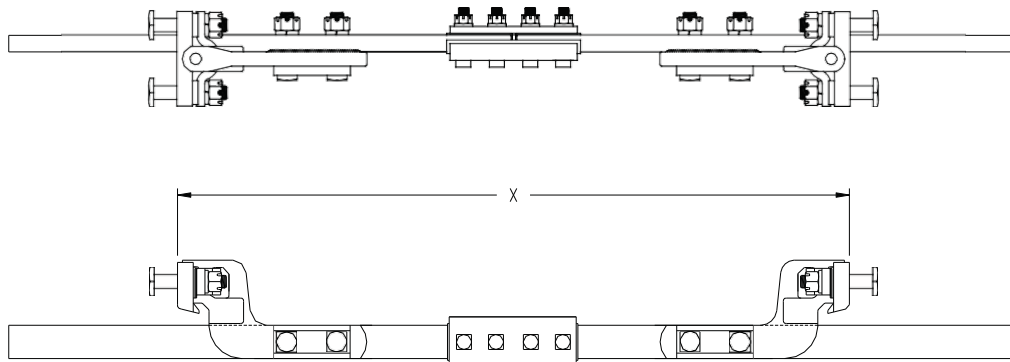


REF C

REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 1 position, for 115 lb RE and heavier rail, 1500LB spring basket, adjustable to fit 16'-6", 30'-0", and 39'-0" switch lengths, X = 6'-9", Y = 4'-2 1/8".....	945166-001VCX	010-6550100
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 2 position, for 115 lb RE and heavier rail, adjustable to fit 39'-0" switch length, X = 5'-8" Y = 4'-2 3/8".....	945166-002VCX	010-6550122
B1	Similar to Ref B except for No. 5 position, Y = 4'-4 5/8".....	945166-003VCX	010-6550105
B2	Similar to Ref B except without basket, for 16'-6" and 30'-0" switch lengths...	945166-004VCX	010-6550102
C	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 3 position, for 115 lb RE and heavier rail, adjustable to fit 30'-0" switch length, X = 4'-0", Y = 4'-3 1/16".....	945166-005VCX	010-6550120
C1	Similar to Ref C except No. 4 position, Y = 4'-4".....	945166-006VCX	010-6550130
C2	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 3 position, for 115 lb RE and heavier rail, adjustable to fit 39'-0" switch length, X = 4'-0", Y = 4'-2 1/2".....	945166-007VCX	010-6550103
C3	Similar to Ref C2 except No. 4 position, Y = 4'-3 3/8".....	945166-008VCX	010-6550104

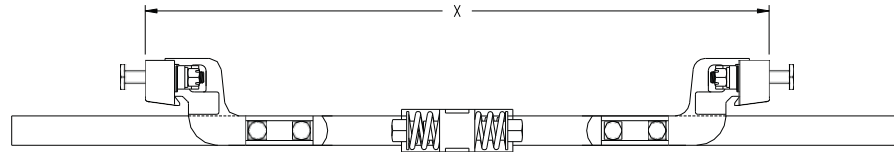
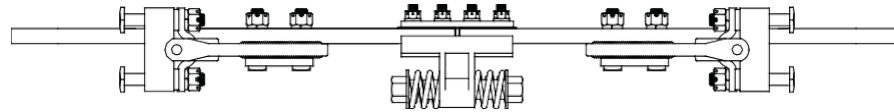


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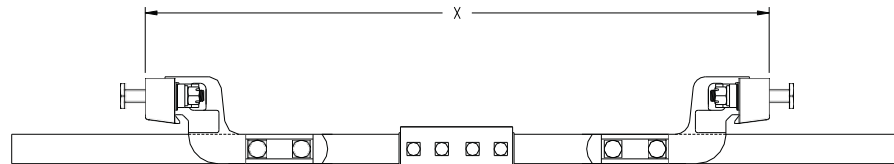
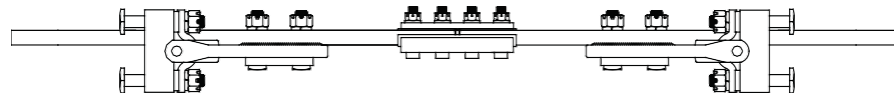


REF B

REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 1 position, for 115 lb RE and heavier rail, adjustable to fit 16'-6", 19'-6", 30'-0" and 39'-0" switch lengths, X = 3'-11 15/16".....	945166-009X	516620169N
A1	Similar to Ref A except for No. 5 position, X = 4'-2 9/16".....	945166-010X	516620170N
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, for 115 lb RE and heavier rail, adjustable to fit No. 2 position on 19'-6", 30'-0" and 39'-0" switch lengths and No. 3 position on a 39'-0" switch length, X = 4'-0 7/16".....	945166-011X	516620173N
B1	Similar to Ref B except to fit No. 2 position on 16'-6" switch length and No. 3 position on a 30'-0" switch length, X = 4'-1 13/16".....	945166-012X	516620171N
B2	Similar to Ref B except to fit No. 3 position on a 19'-6" switch length, No. 4 position on 30'-0" and 39'-0" switch lengths, No. 5 position on a 30'-0" switch length and No. 6 position on a 39'-0" switch length, X = 4'-2 1/4".....	945166-013X	516620172N

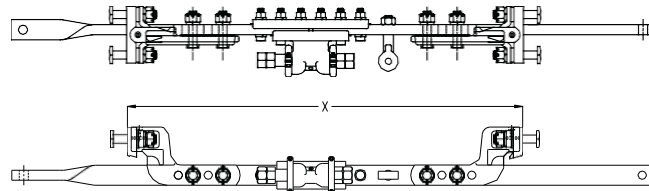


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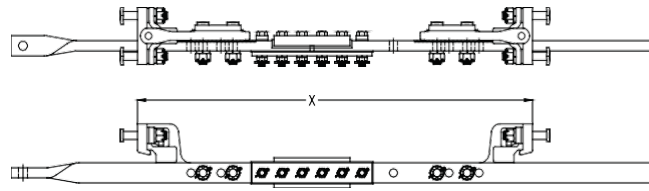


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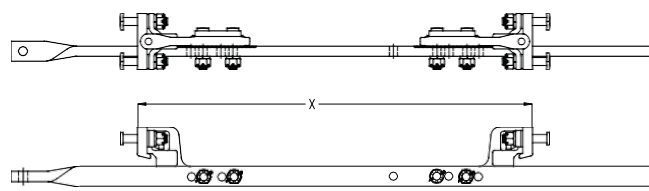
REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 1 position, for 100 RB rail, adjustable to fit 13'-0" switch length, X = 4'-3 3/4".....	945166-014X	N/A
A1	Similar to Ref A except to fit 18'-0" switch length, X = 4'-3 7/16".....	945166-015X	N/A
A2	Similar to Ref A except to fit 19'-6" switch length, X = 4'-3 5/16".....	945166-016X	N/A
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 2 position, for 100 RB rail, adjustable to fit 13'-0" switch length, X = 4'-4 1/4".....	945166-017X	N/A
B1	Similar to Ref B except to fit 18'-0" switch length, X = 4'-3 27/32".....	945166-018X	N/A
B2	Similar to Ref B except to fit 19'-6" switch length, X = 4'-3 11/16".....	945166-019X	N/A
B3	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 3 position, for 100 RB rail, adjustable to fit 13'-0" switch length, X = 4'-4 7/16".....	945166-020X	N/A
B4	Similar to Ref B3 except to fit 18'-0" switch length, X = 4'-4 3/16".....	945166-021X	N/A
B5	Similar to Ref B3 except to fit 19'-6" switch length, X = 4'-4 1/32".....	945166-022X	N/A
B6	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 4 position, for 100 RB rail, adjustable to fit 18'-0" switch length, X = 4'-3 21/32".....	945166-023X	N/A
B7	Similar to Ref B6 except to fit 19'-6" switch length, X = 4'-4 15/16".....	945166-024X	N/A



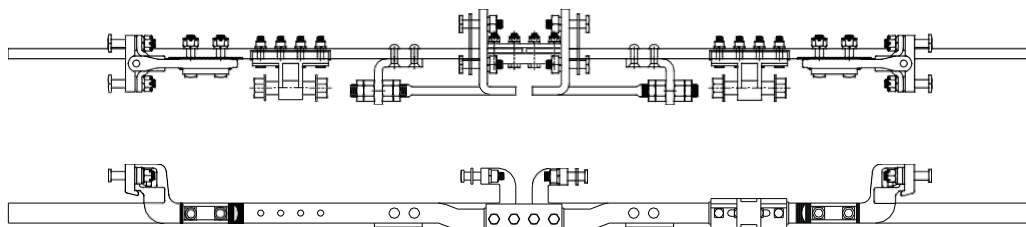
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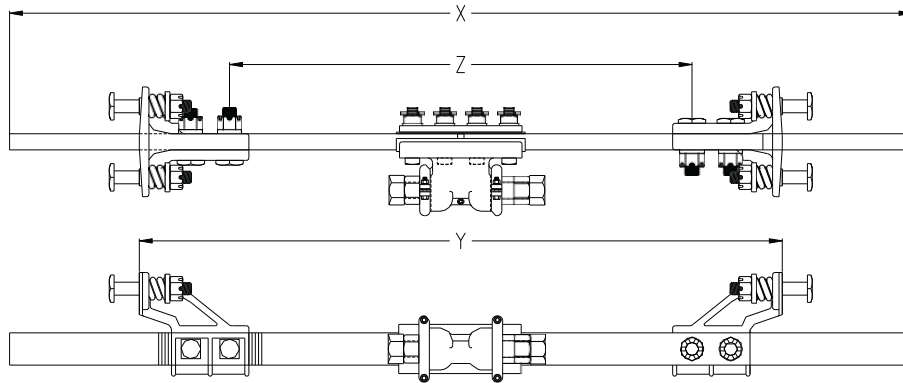


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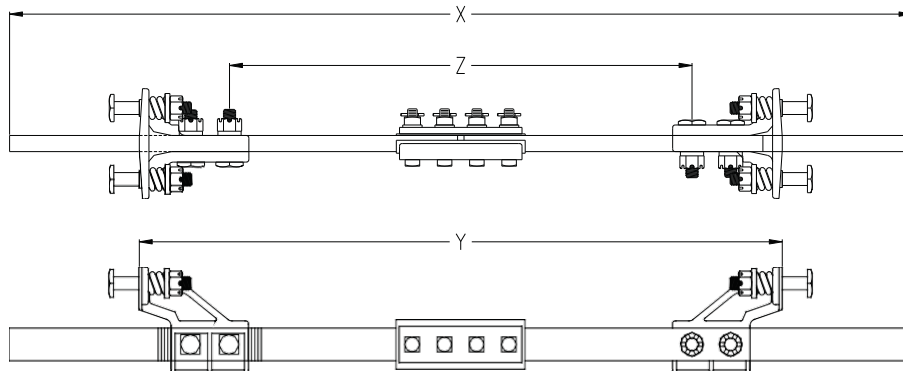


REF D

REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 1 position, for 119 to 136 lb RE rail, X = 4'-1 1/2".....	945856-001X	N/A
B	<b>INSULATED VERTICAL SWITCH ROD</b> , Model SMJ, No. 1 position, for 119 to 136 lb RE rail, X = 4'-1 1/2".....	945856-190IX	N/A
C	<b>VERTICAL SWITCH ROD</b> , uninsulated, Model SMJ, No. 1 position, for 119 to 136 lb RE rail, X = 4'-1 1/2".....	945856-190NX	N/A
D	<b>INSULATED VERTICAL END ROD</b> , Model MJS, for 132 lb RE and 140 lb RE rail, adjustable to fit No. 8, No. 9, No. 10 and No. 15 double slip switches	945230-007X	N/A

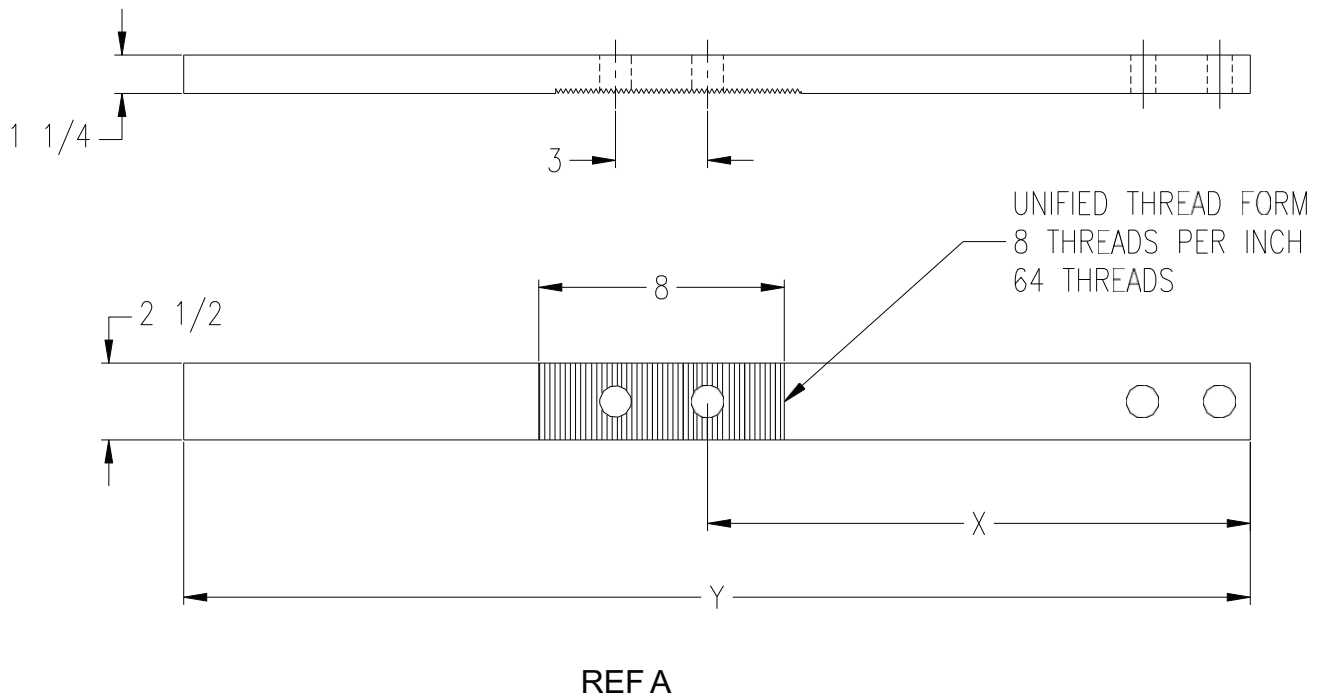


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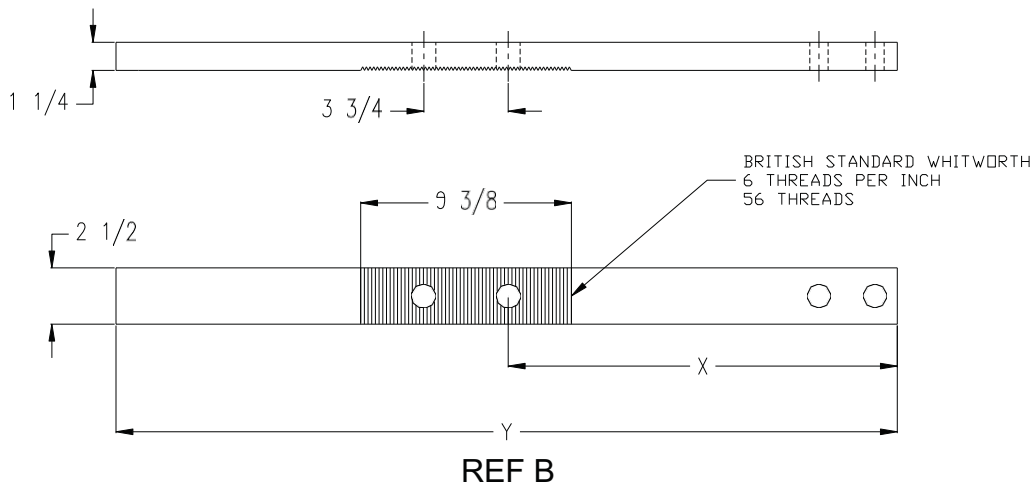
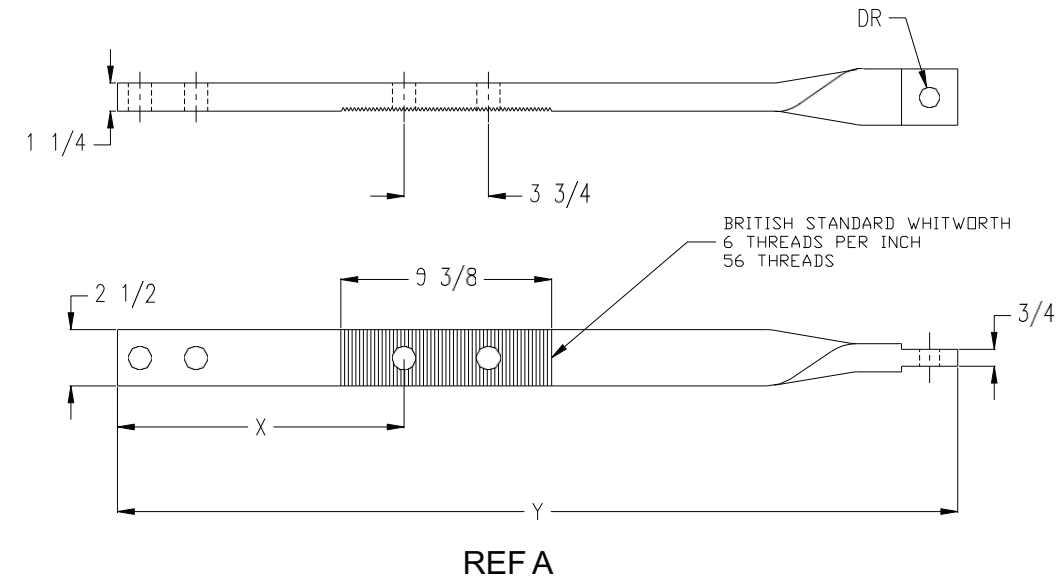


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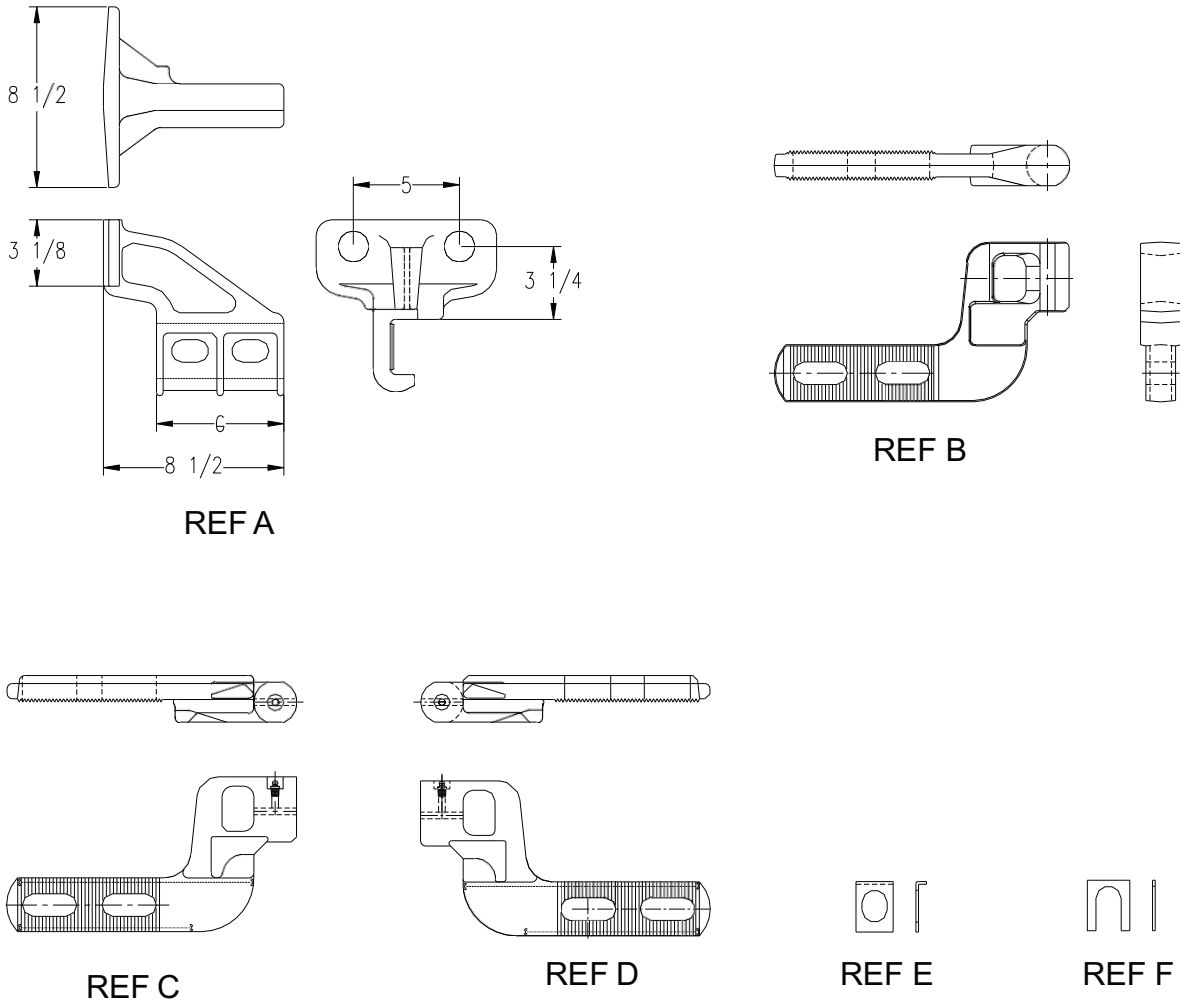
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 1 position on 16'-6", 26' and 39' switches, X = 5'-10", Y = 4'-1 5/8", Z = 2'-11 7/8"	945714-001-01	N/A
A1	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 5 position on 39' switches, X = 5'-10", Y = 4'-4 3/16", Z = 3'-2 7/16".....	945714-002-01	N/A
B	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 2 position on 16'-6" and 26' switches, X = 4'-4", Y = 4'-2 3/32", Z = 3'-0 11/32"	945714-003-01	N/A
B1	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 3 position on 16'-6" and 26' switches, X = 4'-4", Y = 4'-2 7/8", Z = 3'-1 1/8".....	945714-004-01	N/A
B2	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 4 position on 26' switch, X = 5'-10", Y = 4'-4 3/16", Z = 3'-2 7/16".....	945714-005-01	N/A
B3	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 5 position on 26' welded switch, X = 5'-10", Y = 4'-4 3/16", Z = 3'-2 7/16".....	945714-006-01	N/A
B4	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 2 position on 39' switch, X = 5'-10", Y = 4'-1 5/8", Z = 2'-11 7/8".....	945714-007-01	N/A
B5	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 3 position on 39' switch, X = 4'-4", Y = 4'-2 3/32", Z = 3'-0 11/32".....	945714-008-01	N/A
B6	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 4 position on 39' switch, X = 5'-10", Y = 4'-3 3/16", Z = 3'-1 7/16".....	945714-009-01	N/A
B7	<b>VERTICAL SWITCH ROD COMPLETE, ROCKER STYLE</b> , used in No. 6 position on 39' welded switch, X = 5'-10", Y = 4'-4 3/16", Z = 3'-2 7/16"	945714-010-01	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>VERTICAL SWITCH ROD HALF</b> , for rocker-style No. 1 rod on 16'-6", 26'-0" and 39'-0" switch lengths, 136 lb. rail, X = 17 11/16", Y = 34 3/4".....	945572-001	AM1-136
A1	Similar to Ref A except for No. 2 rod on 16'-6" and 26'-0" switch lengths, X = 17 59/64", Y = 25 3/4".....	945572-002	AM2-16/26-136
A2	Similar to Ref A1 except for No. 3 rod, X = 18 5/16, Y = 25 3/4".....	945572-003	AM3-16/26-136
A3	Similar to Ref A except for No. 4 rod on 26'-0" switch length, X = 18 31/32".....	945572-004	AM4-26-136
A4	Similar to Ref A3 except for No. 5 rod.....	945572-005	AM5-26-136
A5	Similar to Ref A except for No. 2 rod on 39'-0" switch length, X = 17 11/16".....	945573-002	AM2-39-136
A6	Similar to Ref A5 except for No. 3 rod, X = 20 1/64", Y = 25 3/4".....	945573-003	AM3-39-136
A7	Similar to Ref A5 except for No. 4 rod, X = 18 1/2".....	945573-004	AM4-39-136
A8	Similar to Ref A5 except for No. 5 rod, X = 19".....	945573-005	AM5-39-136
A9	Similar to Ref A5 except for No. 6 rod, X = 19".....	945573-006	AM6-39-136

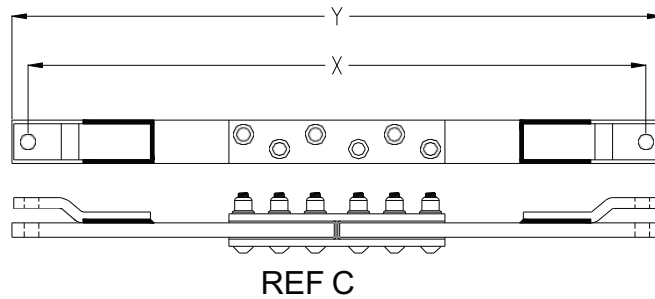
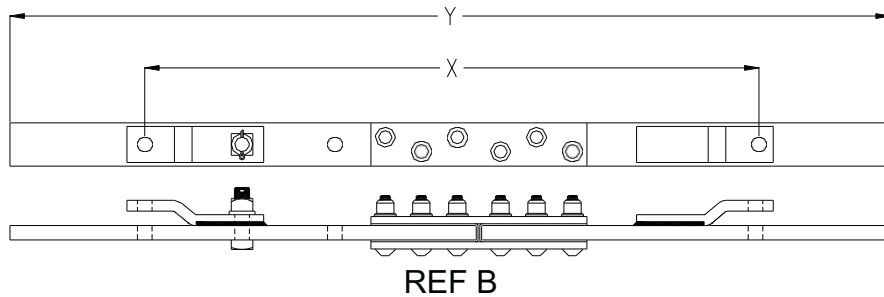
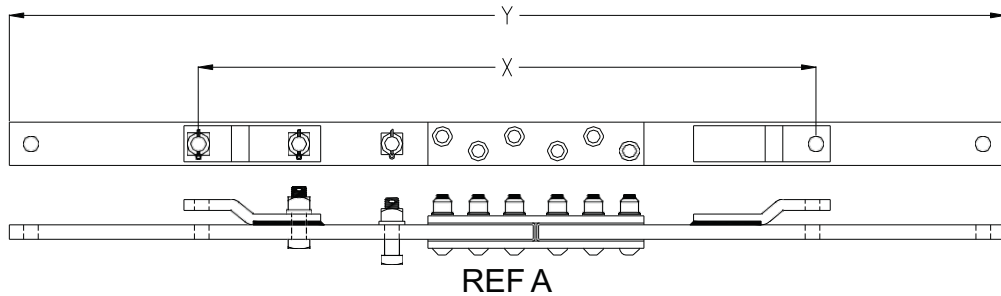


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>VERTICAL SWITCH ROD HALF</b> , for SMJ type No. 1 rod on 39'-0" switch length, 136 lb. rail, X = 12 3/4", Y = 3'-5".....	945001-010	N/A
A1	Similar to Ref A except for No. 6 rod, X = 14 1/8", Y = 3'-7 1/2".....	945001-011	N/A
B	<b>VERTICAL SWITCH ROD HALF</b> , for SMJ type No. 2 rod on 39'-0" switch length, 136 lb. rail, X = 12 3/4", Y = 3'-4".....	945000-001	N/A
B1	Similar to Ref B except for No. 3 rod, X = 12 29/32".....	945000-002	N/A
B2	Similar to Ref B except for No. 3 rod, X = 13 1/16".....	945000-003	N/A
B3	Similar to Ref B except for No. 3 rod, X = 13 1/2".....	945000-004	N/A
B4	Similar to Ref B except for No. 3 rod, X = 14 1/8".....	945000-005	N/A

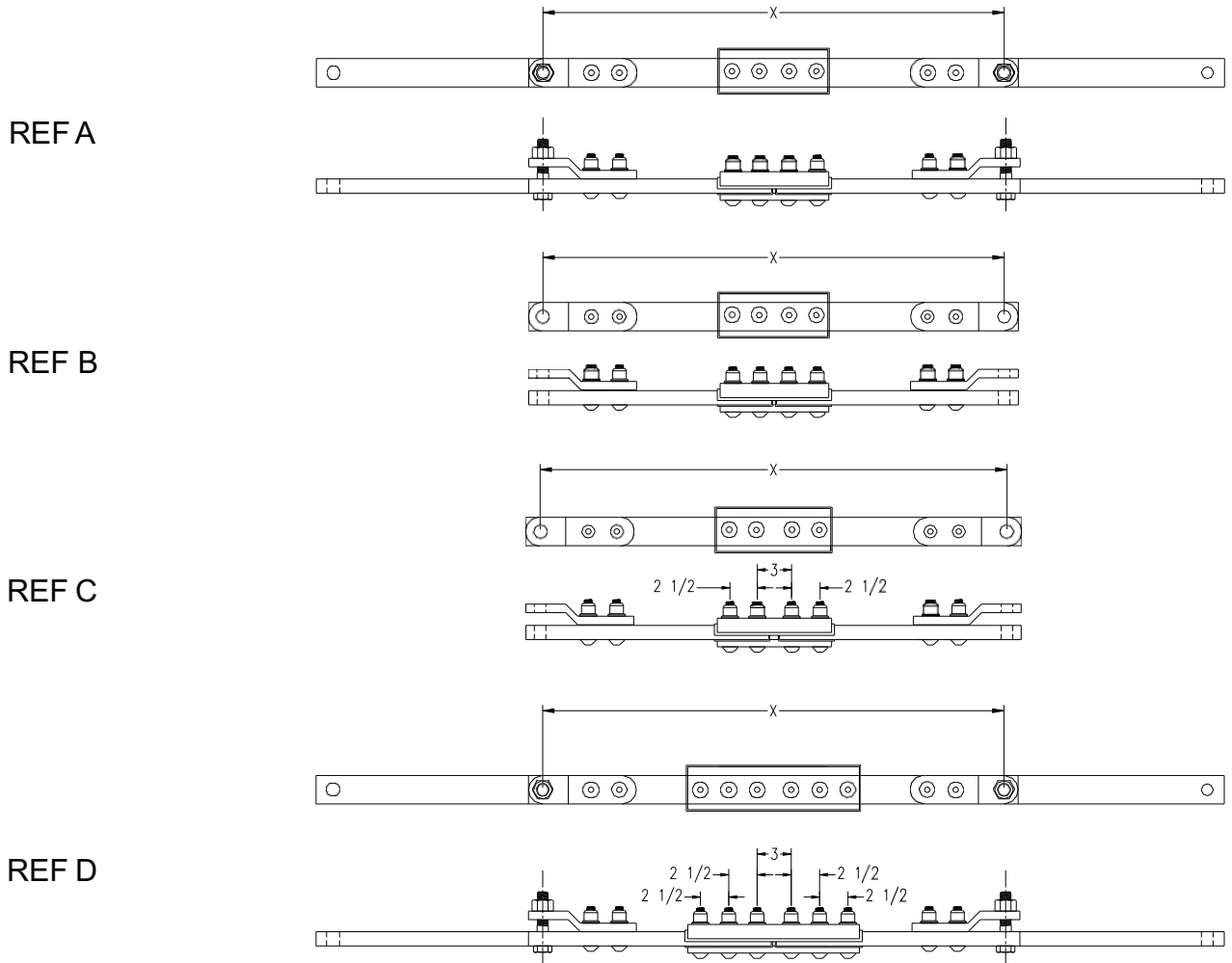


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ADJUSTABLE ROCKER CLIP</b> , LH or RH, for vertical switch rods on 115 lb. or larger rail.....	945016	N/A
B	<b>ADJUSTABLE BEARING CLIP</b> , Model SMJ, LH or RH, non-lubricated, for vertical switch rods on 115 lb. or larger rail.....	945002	N/A
B1	Similar to Ref B except lubricated.....	945002-001X	N/A
C	<b>ADJUSTABLE BEARING CLIP</b> , Model MJ, LH, lubricated, for vertical switch rods on 115 lb. or larger rail.....	945010X	N/A
D	<b>ADJUSTABLE BEARING CLIP</b> , Model MJ, RH, lubricated, for vertical switch rods on 115 lb. or larger rail.....	945015X	N/A
E	<b>SHIM RETAINER</b> , used with Model MJ and SMJ adjustable bearing clips.....	945002-004	N/A
F	<b>ADJUSTMENT SHIM</b> , used with Model MJ and SMJ adjustable bearing clips.....	945002-002	N/A



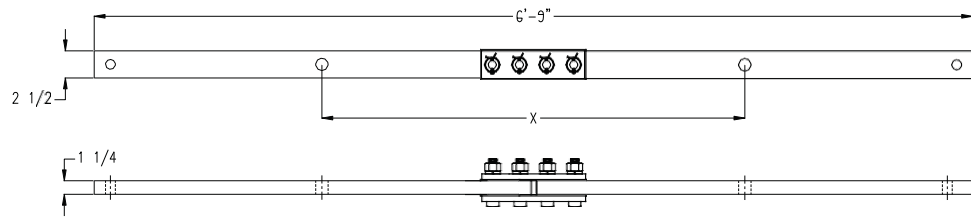


REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED HORIZONTAL SWITCH ROD, No. 1 position, for 136 lb RE rail on 16'-6" and 22'-0" power switch lengths, use with transit clips, X = 40 3/8", Y = 6'-8 1/8".....</b>	946820-001X	136-1M
A1	Similar to Ref A except for 30'-0" power switch length, X = 40 1/4", Y = 6'-8".....	946820-004X	136-30-1M
B	<b>INSULATED HORIZONTAL SWITCH ROD, No. 2 position, for 136 lb RE rail on 16'-6" switch length, use with transit clips, X = 41 1/4", Y = 5'-9 1/4".....</b>	946820-002X	136-16-2
B1	Similar to Ref B except for No. 3 position, 22'-0" switch length, X= 41 5/8", Y = 5'-9 5/8".....	946820-003X	136-22-3
B2	Similar to Ref B except for No. 3 position, 30'-0" switch length, X = 41 1/4", Y = 5'-9 1/4".....	946820-005X	136-30-3
C	<b>INSULATED HORIZONTAL SWITCH ROD, No. 2 position, for 136 lb RE rail on 22'-0" switch length, use with transit clips, X= 41 3/8", Y = 43 7/8".....</b>	946820-006X	136-22-2
C1	Similar to Ref C except for No. 4 position, X = 41 7/8", Y = 44 3/8".....	946820-007X	136-22-4
C2	Similar to Ref C except for No. 2 position on 30'-0" switch length, X = 40 3/4", Y = 43 1/4".....	946820-008X	136-30-2
C3	Similar to Ref C2 except for No. 4 position, X = 41 3/4", Y = 44 1/4".....	946820-009X	136-30-4

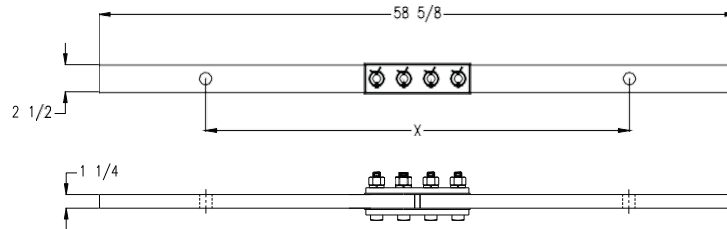


REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 1 position, for 133 lb RE rail on a 16'-6" switch length, X = 3'-3 7/16".....	946821-001X	N/A
B	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 2 position, for 133 lb RE rail on a 16'-6" switch length, X = 3'-4 5/8".....	946821-002X	N/A
C	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 2 position, for 119 lb RE and 136 lb RE rail on a 39'-0" switch length, X = 3'-2 11/16".....	946821-003X	N/A
C1	Similar to Ref C except for 30'-0" switch length, X = 3'-4 1/8".....	946821-004X	N/A
C2	Similar to Ref C except for 24'-0" switch length, X = 3'-4 1/2".....	946821-005X	N/A
C3	Similar to Ref C except for 16'-6" switch length, X = 3'-4 15/16".....	946821-006X	N/A
C4	Similar to Ref C except for No. 5 position, X = 3'-4 3/16".....	946821-007X	N/A
C5	Similar to Ref C4 except for 30'-0" switch length, X = 3'-5 11/16".....	946821-008X	N/A
D	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 3 position for 119 lb RE and 136 lb RE rail on a 39'-0" switch length, X = 3'-3 5/16".....	946821-009X	N/A
D1	Similar to Ref D except for 30'-0" switch length, X = 3'-4 11/16".....	946821-010X	N/A
D2	Similar to Ref D except for 24'-0" switch length, X = 3'-5 1/8".....	946821-011X	N/A

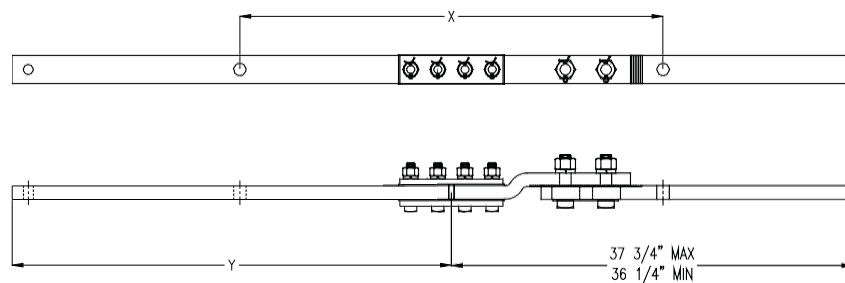
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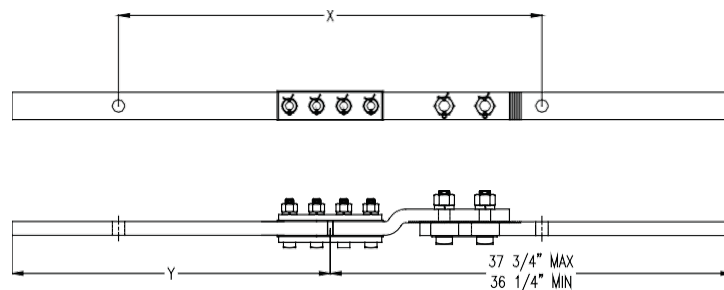
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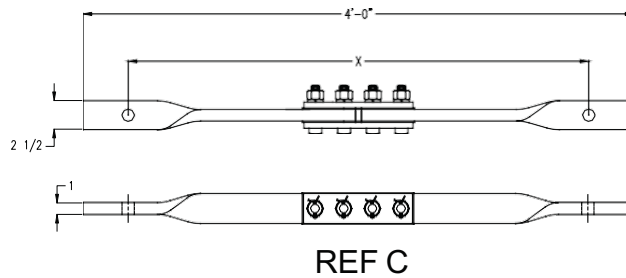
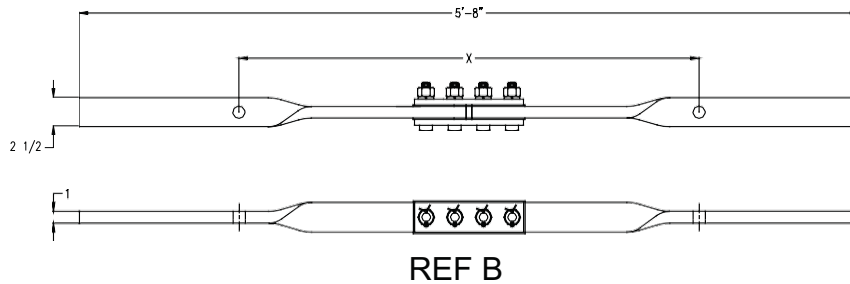
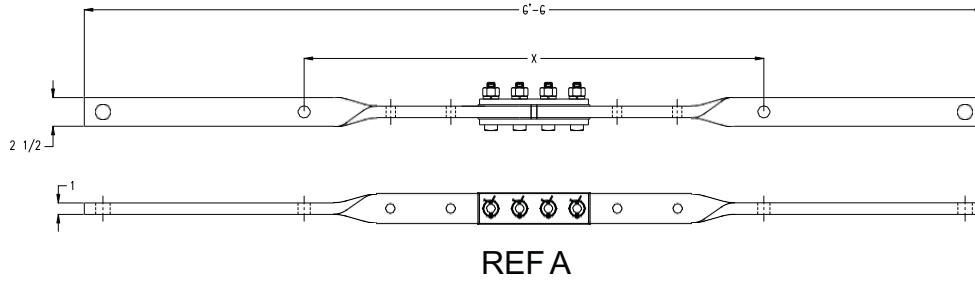
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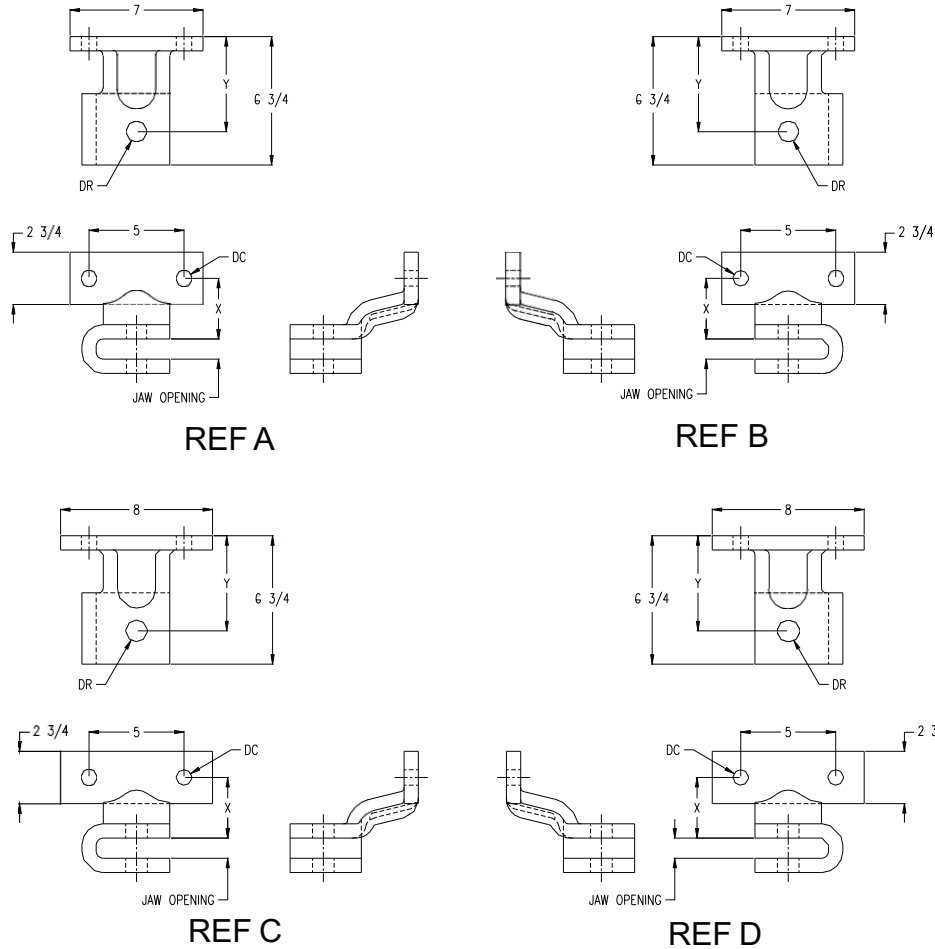
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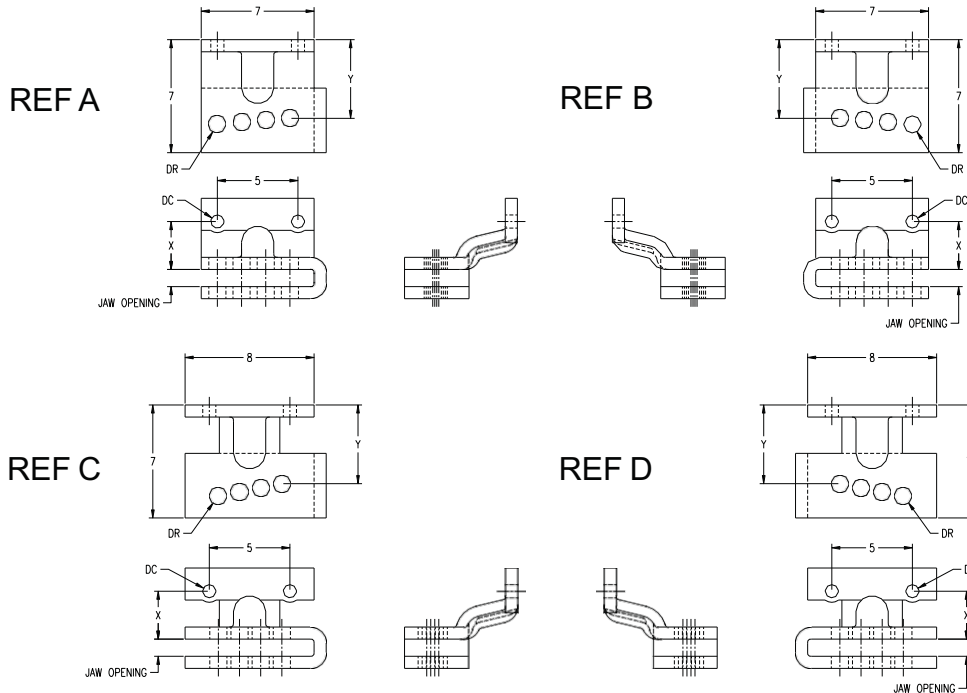
REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 1 position for 115 lb RE and heavier rail on a 16'-6" switch length, use with side jaw clips, X = 3'-4 1/8"....	947100-003X	010-6550005
B	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 2 position, for 115 lb RE and heavier rail on a 16'-6" switch length, use with side jaw clips, X = 3'-4 3/8".....	947100-004X	010-6550010
C	<b>INSULATED HORIZONTAL SWITCH ROD</b> , adjustable, No. 1 position, for 115 lb RE and heavier rail, use with side jaw clips, X = 39 1/4" to 40 3/4", Y = 44 1/4".....	947101-001X	341A
D	<b>INSULATED HORIZONTAL SWITCH ROD</b> , adjustable, No. 2 position, for 115 lb RE and heavier rail, use with side jaw clips, X = 37 3/4" to 39 1/4", Y = 34 1/4".....	947101-002X	341B
D1	Similar to Ref D except for No. 3 position, X = 39 1/4" to 40 3/4", Y = 35 3/4".....	947101-003X	341C
D2	Similar to Ref D except for No. 4 position, X = 40 3/4" to 42 1/4", Y = 37 1/4".....	947101-004X	341D



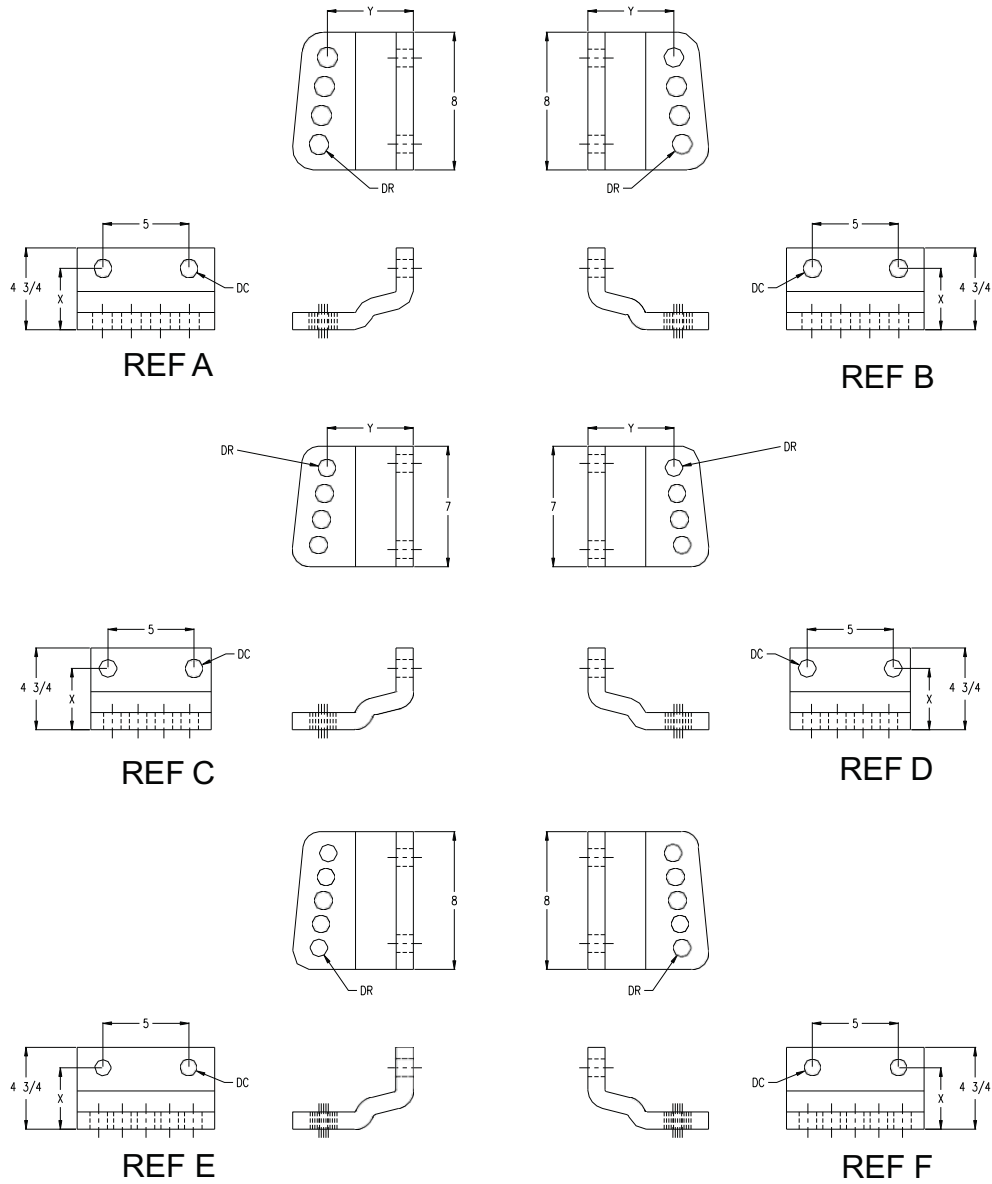
REF	DESCRIPTION	G & B PART #	RR #
A	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 1 position, for 132 lb RE and 136 lb RE rail on 16'-6", 22'-0" and 30'-0" switch lengths, X = 3'-4 1/8"...	946310-001X	N/A
B	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 3 position, for 132 lb RE and 136 lb RE rail on 22'-0" switch length, X = 3'-5 9/16".....	946310-002X	N/A
B1	Similar to Ref B except for 30'-0" switch length, X = 3'-5 1/8".....	946310-003X	N/A
B2	Similar to Ref B except for No. 5 position on a 30'-0" switch length, X = 3'-6"	946310-004X	N/A
C	<b>INSULATED HORIZONTAL SWITCH ROD</b> , No. 2 position, for 132 lb RE and 136 lb RE rail on 16'-6" and 30'-0" switch lengths, X = 3'-4 9/16".....	946310-005X	N/A
C1	Similar to Ref C except for 22'-0" switch length, X = 3'-4 3/4".....	946310-006X	N/A
C2	Similar to Ref C except for No. 4 position on a 22'-0" switch length, X = 3'-5 7/8".....	946310-007X	N/A
C3	Similar to Ref C2 except for 30'-0" switch length, X = 3'-5 11/16".....	946310-008X	N/A



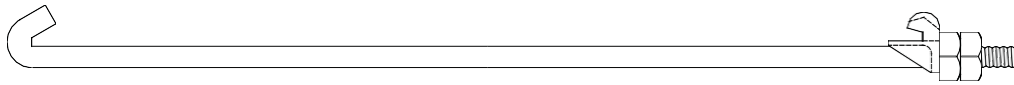
REF	DESCRIPTION	G & B PART #	RR #
A	<b>EUREKA NON-ADJUSTABLE SIDE JAW CLIP, RH</b> , 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 1/64" dia, X = 3 3/16" Y = 5".....	922301-001	N/A
A1	Similar to Ref A except DC = 1 1/16" dia, DR = 1 9/64" dia, X = 2 27/32", Y = 5 1/4".....	922301-003	N/A
B	<b>EUREKA NON-ADJUSTABLE SIDE JAW CLIP, LH</b> , 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 1/64" dia, X = 3 3/16", Y = 5".....	922301-002	N/A
B1	Similar to Ref B except DC = 1 1/16" dia, DR = 1 9/64" dia, X = 2 27/32", Y = 5 1/4".....	922301-004	N/A
C	<b>EUREKA NON-ADJUSTABLE SIDE JAW CLIP, RH</b> , for 100 lb rail, 1 5/16" jaw opening, DC = 13/16" dia, DR = 1 9/64" dia, X = 2 19/32", Y = 5".....	922301-005	338A-1
C1	Similar to Ref C except for 115 lb rail, DC = 1 1/16" dia, X = 2 13/16".....	922301-007	338A-2
C2	Similar to Ref C except for 132 lb and 136 lb rail, DC = 1 1/16" dia, X = 3 1/8".....	922301-009	338A-3
D	<b>EUREKA NON-ADJUSTABLE SIDE JAW CLIP, LH</b> , for 100 lb rail, 1 5/16" jaw opening, DC = 13/16" dia, DR = 1 9/64" dia, X = 2 19/32", Y = 5".....	922301-006	338B-1
D1	Similar to Ref D except for 115 lb rail, DC = 1 1/16" dia, X = 2 13/16".....	922301-008	338B-2
D2	Similar to Ref D except for 132 lb and 136 lb rail, DC = 1 1/16" dia, X = 3 1/8".....	922301-010	338B-3



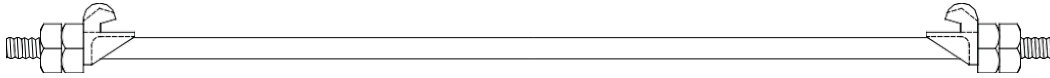
REF	DESCRIPTION	G & B PART #	RR #
A	<b>EUREKA ADJUSTABLE SIDE JAW CLIP, RH, 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 1/64" dia, X = 3 3/8", Y = 4 1/2"</b> .....	922300-001	N/A
A1	Similar to Ref A except X = 2 13/16", Y = 4 7/8".....	922300-003	N/A
A2	Similar to Ref A except X = 3 1/8", Y = 4 7/8".....	922300-005	N/A
A3	Similar to Ref A except X = 2 31/32", Y = 4 7/8".....	922300-007	N/A
A4	Similar to Ref A except 1 5/16" jaw opening, DC = 1 1/16" dia, DR = 1 9/64" dia, X = 3 1/8", Y = 4 7/8".....	922300-009	N/A
B	<b>EUREKA ADJUSTABLE SIDE JAW CLIP, LH, 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 1/64" dia, X = 3 3/8", Y = 4 1/2"</b> .....	922300-002	N/A
B1	Similar to Ref B except X = 2 13/16", Y = 4 7/8".....	922300-004	N/A
B2	Similar to Ref B except X = 3 1/8", Y = 4 7/8".....	922300-006	N/A
B3	Similar to Ref B except X = 2 31/32", Y = 4 7/8".....	922300-008	N/A
B4	Similar to Ref B except 1 5/16" jaw opening, DC = 1 1/16" dia, DR = 1 9/64", X = 3 1/8", Y = 4 7/8".....	922300-010	N/A
C	<b>EUREKA ADJUSTABLE SIDE JAW CLIP, RH, for 100 lb rail, 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 9/64" dia, X = 2 19/32", Y = 4 3/4"</b> .....	922300-011	N/A
C1	Similar to Ref C except for 115 lb rail, DC = 1 1/16" dia, X = 2 13/16".....	922300-013	N/A
C2	Similar to Ref C except for 132 lb and 136 lb rail, DC = 1 1/16" dia, X = 3 1/8".....	922300-015	N/A
D	<b>EUREKA ADJUSTABLE SIDE JAW CLIP, LH, for 100 lb rail, 1 1/16" jaw opening, DC = 13/16" dia, DR = 1 9/64" dia, X = 2 19/32", Y = 4 3/4"</b> .....	922300-012	N/A
D1	Similar to Ref D except for 115 lb rail, DC = 1 1/16" dia, X = 2 13/16".....	922300-014	N/A
D2	Similar to Ref D except for 132 lb and 136 lb rail, DC = 1 1/16" dia, X = 3 1/8".....	922300-016	N/A



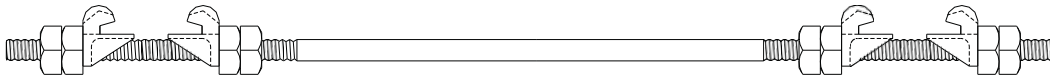
REF	DESCRIPTION	G & B PART #	RR #
A	<b>TRANSIT CLIP, RH</b> , for horizontal switch rods, 136 lb rail, DC = 1 1/32" dia, DR = 1 3/64" dia, X = 3 5/16", Y = 5".....	922302-001	N/A
B	Similar to Ref A except LH.....	922302-002	N/A
C	<b>TRANSIT CLIP, RH</b> , for horizontal switch rods, 132/136 lb rail, DC = 1 1/32" dia, DR = 1 1/64" dia, X = 3 1/4", Y = 5".....	922302-003	N/A
D	Similar to Ref C except LH.....	922302-004	N/A
E	<b>TRANSIT CLIP, RH</b> , for horizontal switch rods, 133 lb rail, DC = 15/16" dia, DR = 1 1/64" dia, X = 3 5/16", Y = 5".....	922302-005	N/A
F	Similar to Ref E except LH.....	922302-006	N/A



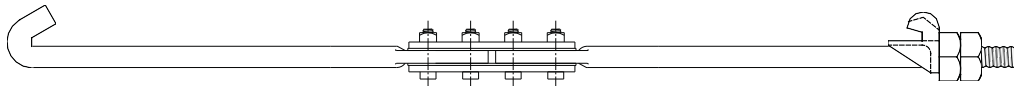
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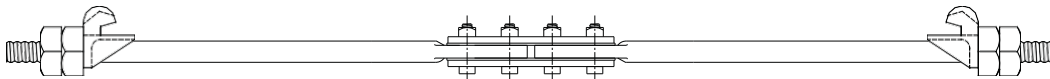
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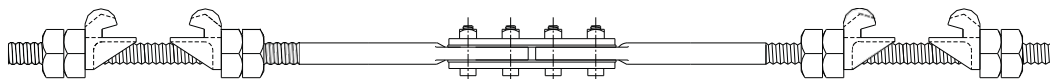
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REF D



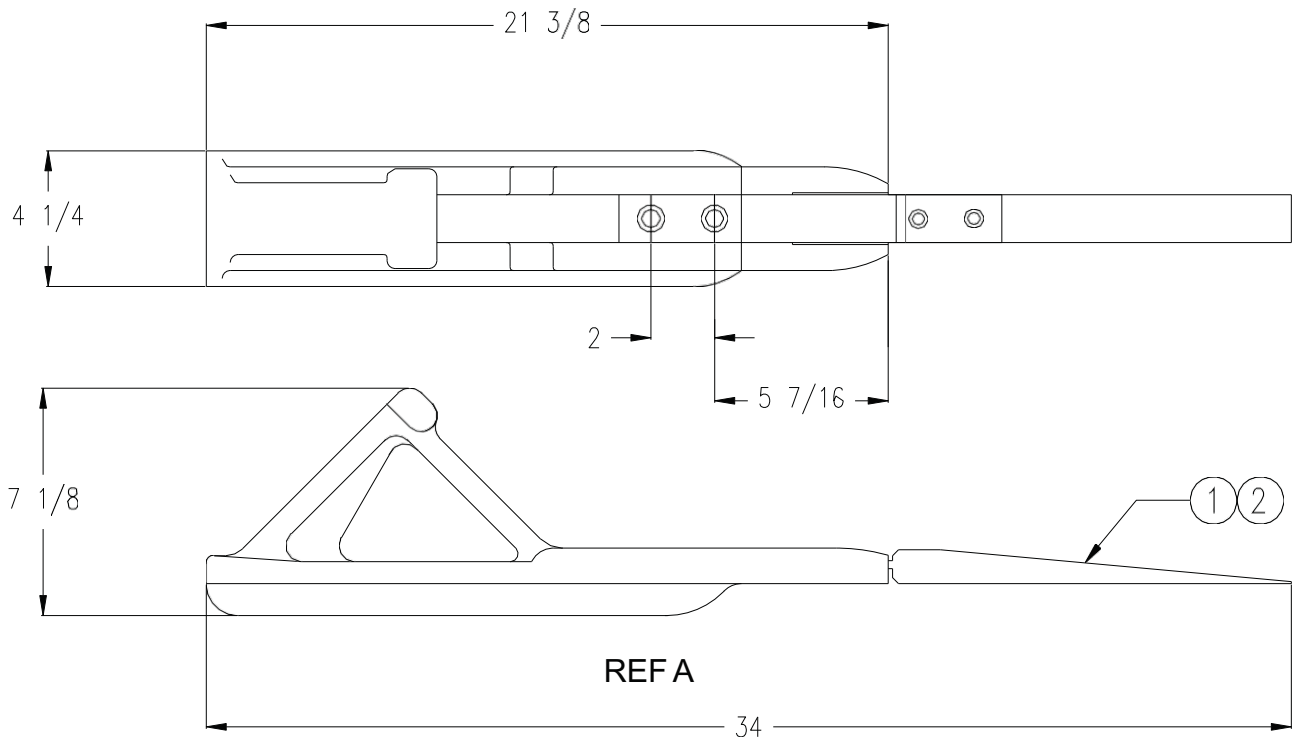
REF E



REF F

REF	DESCRIPTION	G & B PART #	OEM PART #
A	GAGE ROD, non-insulated, single end.....	940911-001-01	N/A
B	GAGE ROD, non-insulated, double end, two jaw.....	940913-001-01	N/A
C	GAGE ROD, non-insulated, double end, four jaw.....	940915-001-01	N/A
D	GAGE ROD, insulated, single end.....	940912-001-01	N/A
E	GAGE ROD, insulated, double end, two jaw.....	940914-001-01	N/A
F	GAGE ROD, insulated double end, four jaw.....	940916-001-01	N/A

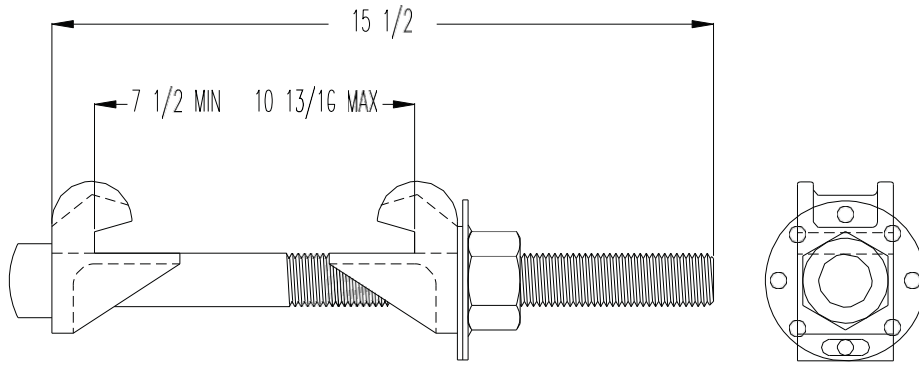




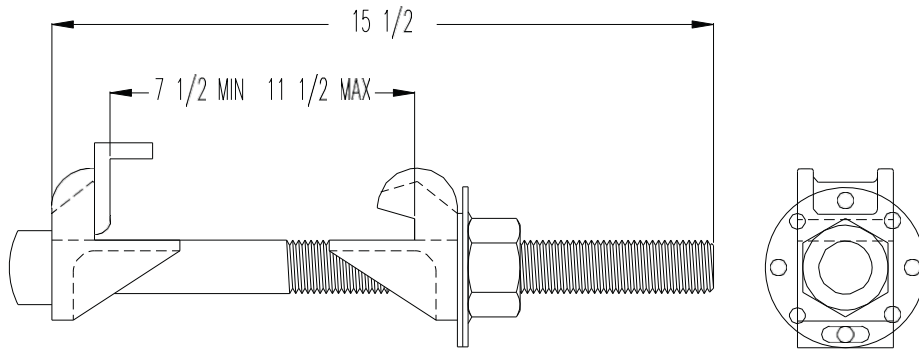
G&B Specialties' hand skate is a heavy duty device used to stop railcars moving at normal switching speeds. This skate is made for severe service, especially in classification yards, where long and very heavy trains are being formed. The skate is placed in front of the moving railcar. The sharp, tapered tail of the skate lets the wheel mount and slide with the skate. A hardened high back prevents the wheel from jumping over. The ensuing friction brings the railcar to a gradual stop. Standard color is aluminum; however, fluorescent orange is available for increased night visibility.

- \* FOR USE ON 115# OR HEAVIER RAIL
- \* EXTEREMLY RUGGED--WEIGHT 52 LBS
- \* PROVIDED WITH A REPLACEABLE TAIL

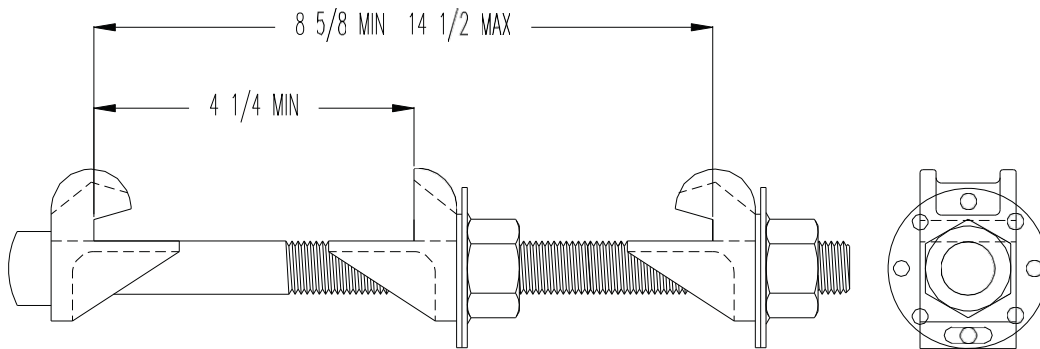
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HAND SKATE COMPLETE</b> , painted aluminum.....	898540X	N301489
A1	Similar to REF A except painted fluorescent orange.....	898540-001-01	N/A
1	<b>REPLACEMNT SKATE TAIL COMPLETE</b> , with rivets.....	898543X	X301543
2	<b>REPLACEMENT SKATE TAIL ONLY</b> .....	898542X	N301542



REF A



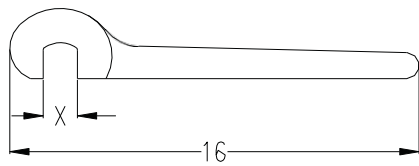
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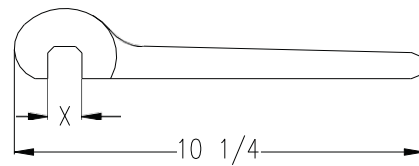
REF C

G&B's switch point lock clamps are an effective means to temporarily or permanently lock a switch in a desired position. Standard color is postal blue. However, safety yellow is also available. Please contact G&B's Customer Service Department for special applications or colors.

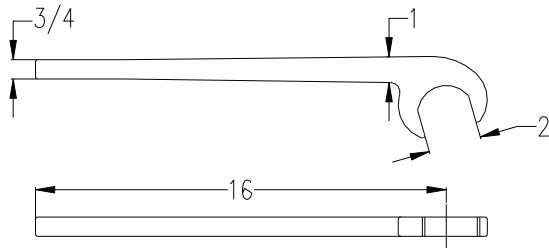
REF	DESCRIPTION	G & B PART #	OEM PART #
A	SWITCH POINT LOCK CLAMP, for standard switches.....	949060-001X	N/A
B	SWITCH POINT LOCK CLAMP, for moveable point frog.....	949060-002X	N/A
C	SWITCH POINT LOCK CLAMP, for swing nose frog, dual lock.....	949060-003X	N/A



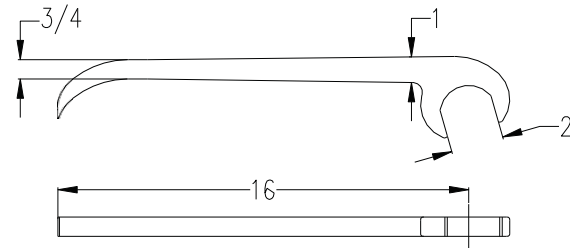
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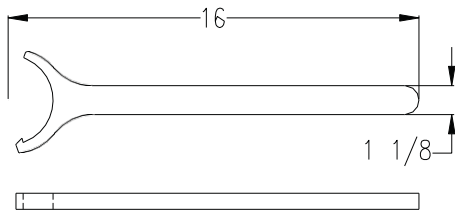
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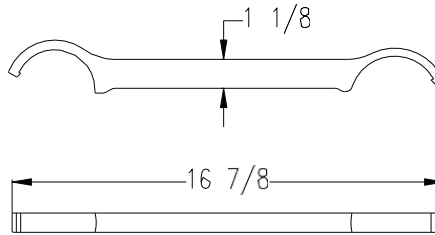
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REF D

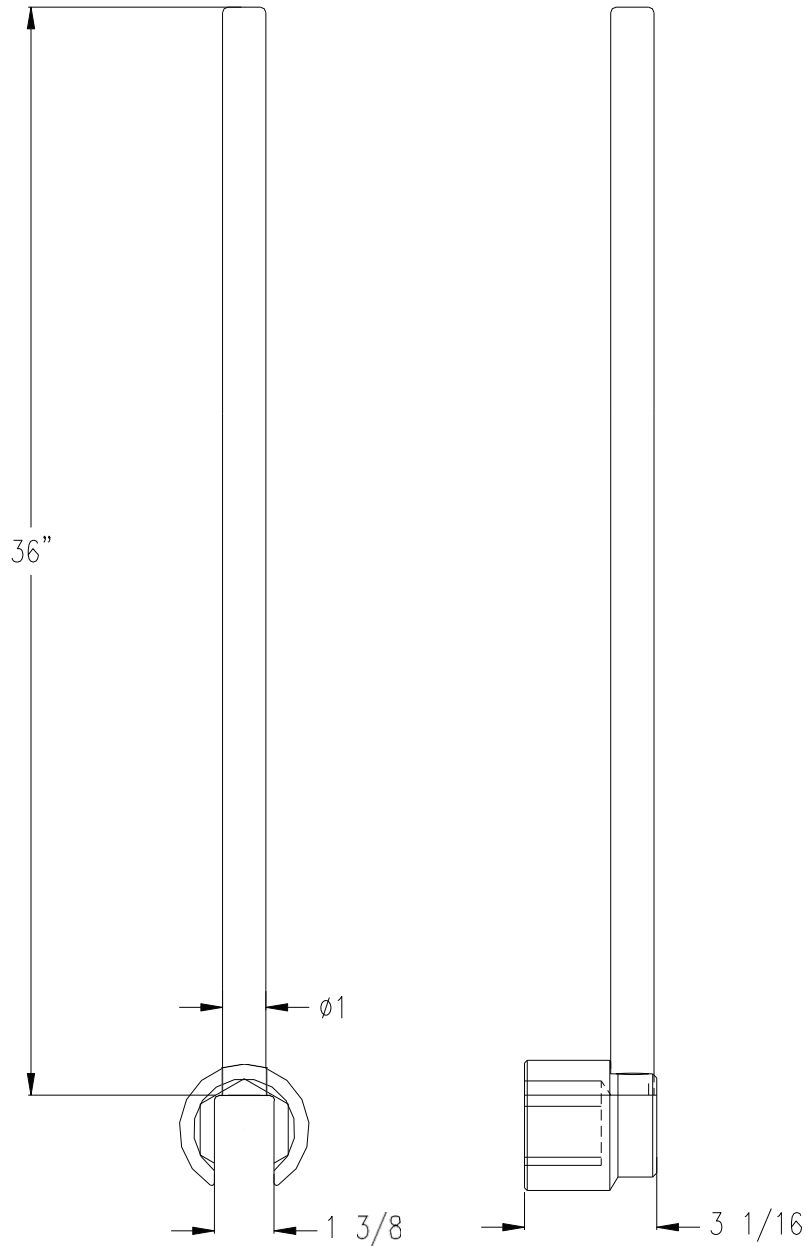


REF E



REF F

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>WRENCH</b> , switch adjusting, for 1 1/4"-7 UNC threaded operating rods, X = 2".....	998243-001	36593-005 P85-405
A1	Similar to Ref A except X = 1 5/8", for 1"-8 UNC threaded rods.....	998243-002	36593-006 P85-406
B	<b>WRENCH</b> , switch adjusting, for 3/4"-10 UNC threaded lock and detector rods, X = 1 1/4".....	998244-001	36593-007 P85-407
B1	Similar to Ref B except X = 1 1/16" for 5/8"-11 UNC threaded rods.....	998244-002	36593-008 P85-408
C	<b>WRENCH</b> , switch adjusting, for 1 1/4"-7 UNC threaded rods.....	998247-001	M322680
D	<b>WRENCH</b> , switch adjusting, for 1 1/4"-7 UNC threaded rods.....	998247-002	M092292
E	<b>WRENCH</b> , spanner.....	998246-001	M187697
F	<b>WRENCH</b> , spanner.....	998246-002	M011024



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>WRENCH</b> , forged 6 point slotted socket end, switch adjusting, for 1 1/4"-7 UNC threaded rods, with 36" handle.....	977706-002X	N/A
A1	Similar to Ref A except with 48" handle.....	977706-003X	N/A



# G&B MANUAL SWITCH STANDS & COMPONENT PARTS



**G** G&B SPECIALTIES. INC.

# BACKSAFER MANUAL SWITCH STANDS FROM G&B SPECIALTIES

## A FASTER, SAFER AND MORE SCIENTIFIC WAY TO RUN A RAILROAD

G & B Specialties, Inc. now produces for the railroad industry a manual switch stand (non run through) that incorporates a conceptually new back AVIRI throw handle.

Additionally, a retrofit kit which is comprised of the throw handle, shaft, and bevel gear assembled can be purchased at less than half the cost of the complete stand

TM calculated disc compression between the L5, L6 vertebra was reduced using the old style counterweight throw levers. Disc compression stress using the new throw handles are well below the action limit for disc compression as specified by NIOSHA. Consequently back injuries and fatigue related to switch throw activities are greatly reduced when using these handles.

The studies of this new throw device were performed in accordance with the procedures developed in the AAA 1990 report on an ergonomic investigation of hand switch operations. For copies of these studies, please contact your G & B Sales representative or call G & B Specialties at 570-752-5901.

The G & B Specialties non-run through switch stands are designed for service with high speed heavy main line traffic as well as classification yard use. They can be used with spring switches and electric locks and are ideal for use in dark areas. The G & B switch stand top portion is designed so that it can be used for a high or low target. Consequently only one type of top need be carried in a customer's replacement inventory.



The unique design significantly reduces back stress and increases efficiency.



EXCEEDING  
OSHA  
STANDARDS

All Back Safer Switch Stands are provided in black powder coating with the Back Safer Bow Handle in safety yellow powder coating. Other colors available upon request.

# BACK SAFER HANDLE

# BOW

## SIMPLE STANDARD INSTALLATION PROCEDURES FURNISHED WITH PURCHASE.

# REIRDFIT Im

The in-service models 50 & 51 A & B type, non-run through stands, can be retrofitted with the user-friendly handle. The kit consists of the **Back Safer** bow handle, shaft and bevel gear as a single unit. It may, in a few instances, be necessary to also include a new crank with a longer throw to assure switch point closure.

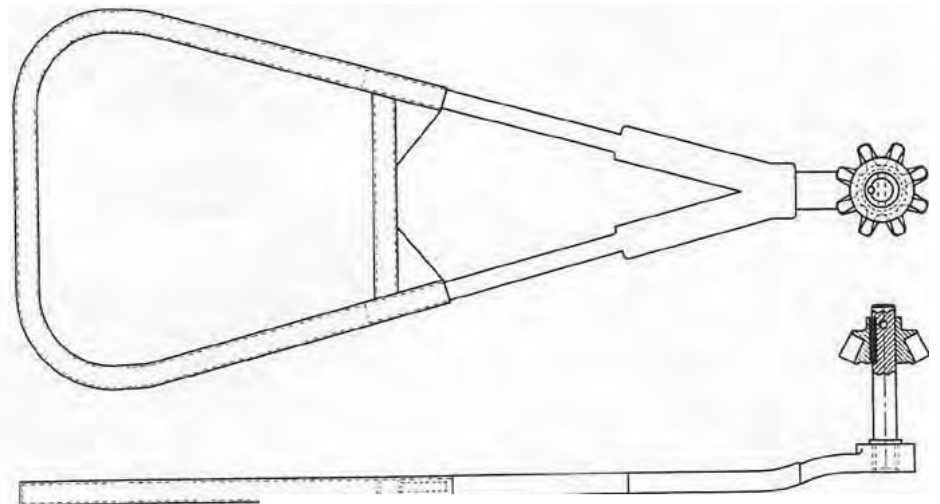
The design of the handle provides a mechanical advantage of approximately 20 to 1, which means that if a switch requires 400 lbs. of force to make the throw, only a 20 lb. hand force applied to the handle is required. The bow handle shifts almost all of the effort from the back muscle groups to the arm and shoulder groups when making a switch throw. It should also be noted that the cross member and supporting gussets are an essential part of the design. Without the stiffening effect of the cross member, failures were encountered during cycle

testing under laboratory and actual field conditions. The existing design with the stiffeners has withstood well over 100,000 throw cycles under extreme laboratory conditions without failure or dimensional changes.

Obviously, retrofitting existing non-run through stands with the handle would be cost effective in that the existing connecting rod and all other parts of the switch stand need not be replaced. The configuration of the handle is such that the likelihood of trailing materials becoming caught between the stands and the handle are minimal. An additional but unintentional advantage of the G & B bow handles are that they are visible above moderate to heavy ground coverings of snow, thereby eliminating the need to hand dig a hole to locate the throwing device.



Back Safer  
Intermediate  
Switch Stand  
Model 51-B  
898951B-001-01



Retrofit bow handles for run through switch stands are also available. Ask your G&B Sales Representative for specifics or contact G&B Specialties direct.

# Stand Components

## Top 898995

For use on Model 50-B, 51-A & 51-B.  
Made of cast iron.



## Top 89 9 5

For use on Model 50-A (Low Type)  
Made of cast iron. (Not shown).

## Adjustable Shim Set 898888X

For use on models 51-A and 51-B.



## Cover 898996X

For use on models 51-A and 51-B. Made of malleable iron.

## Spindle 551-0063

For use on Switch Stands.  
Made of forged steel.

## Ring 898887

This ring serves as a lock for cross pin number 898886.

## Cross Pin 898886

Special Shear-resistant steel.

## Adjustment Bolt 898889X

For use on Models 51-A and 51-8.

## Gear Segment 898990X

For use on Model 50-A.  
Made of malleable iron.

## Gear Segment 898991X

For use on Model 50-B. Non adjustable full motion. (Not Shown).

## Adjustable Gear Segment 898992X

For use on Model 51-A.  
Made of malleable iron.

## Adjustable Gear Segment 898993X

For use on Model 51-8. Made of malleable iron. (Not Shown).

## Bottom 898994

For use on all Switch Stands.  
Wide, heavy base of cast iron

## Back Safer Bow Handle 898750X

For use on all Switch Stands.  
Optional colors available

898750X



## Latch Stand 898999X

For use on all switch stands.



## Forged Steel Single Cranks

For use on all Switch Stands. Made of forged steel for main line use.

Item No.	Throw
571-6702	.4 1/2"
571-6703	.4 3/4"
571-6704	.4 3/4"
571-6705	.4 1/4"
571-6706	.5"
571-6707	.5 1/4"
571-6708	.5 1/4"
571-6709	.5 1/2"

## Malleable Iron Breakable

### Double Cranks

For use on all Switch Stands. Made of malleable iron. Breakable, for yard use.

Item No:	Throw
571-6801	.4 1/2"
571-6802	.4 3/4"
571-6803	.4 3/4"
571-6804	.4 1/4"
571-6901	.5"
571-6902	.5 1/2"
571-6903	.5 1/4"
571-6904	.5 3/4"
571-6905	.5 1/2"

## Top Extension 898984

For mast support on Back Safer switch stand models 50-B and 51-B.

## Throwing Lever 898751X

A rolled steel lever, assembled with pinion gear for Models 50 and 51. 30 pound cast iron weighted handle.

## Throwing Lever 898752X

A rolled steel lever, assembled with pinion gear for Models 50 and 51. 35 pound cast iron weighted handle or specify handle weight desired. (Not shown).

## Plug Lamp Tip 575-0129

For use with low stands. The plug lamp tip fits directly into the segment tube on top of the stand and takes the place of the usual target mast. The target used is correspondingly low.

## Socket Lamp Tip 575-0127

For use over the mast on low or intermediate stands. The socket end fits over the top of the mast.

## Dummy Plug 575-0133

A dummy plug to fill the socket of Models 50-A and 51-A, when target or signal is not used.

575-0129

575-0127

575-0133





# BACK SAFER BOW HANDLE MODEL 22P SWITCH STAND

' L L L Z Z L L L Z Z 17.7



reduces disc compression on key vertebra well below the NIOSH action limit.



Single or dual latch stands available.

## A FASTER, SAFER AND MORE SCIENTIFIC WAY TO RUN A RAILROAD

### Back Safer Bow Handle

G & B Specialties, Inc. is the manufacturer of a, retrofittable Back Safer Bow Handle suitable for the Model 22P Manual Switch Stand. This user friendly handle incorporates the following features and advantages:

- over 30% lighter than standard counterweights
- Reduced risk of back Injury
- Can be economically installed onto existing Model 22P switch stands
- Can be installed with minimal adjustments
- Highly visible above moderate to heavy ground covering of snow
- Currently available in the following color options: safety yellow, orange or black

### Single or Dual Latch Stands

G & B Specialties, Inc. recently introduced a "Positive Locking" latch stand for use with the Manual 22P Switch Stand and our Back Safer Bow Handle. This latch stand includes the following features:

- A "Positive Lock" on the bow handle when in the proper closed position
- Available in single or dual assembly options
- Equipped with a locking hole where an external security lock can be applied
- Can be economically installed with minimal labor and adjustments
- Can be retrofitted to existing Model 22P switch stands



Fits easily onto Model 22P switch stands already in use.

**G & B SPECIALTIES, INC.**

P.O. BOX 305 • BERWICK, PA 16603  
PHONE: 570-752-5901 • FAX: 570-752-6397

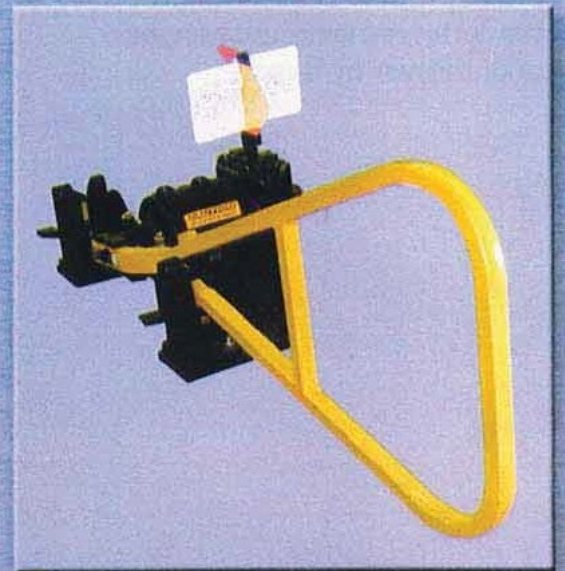
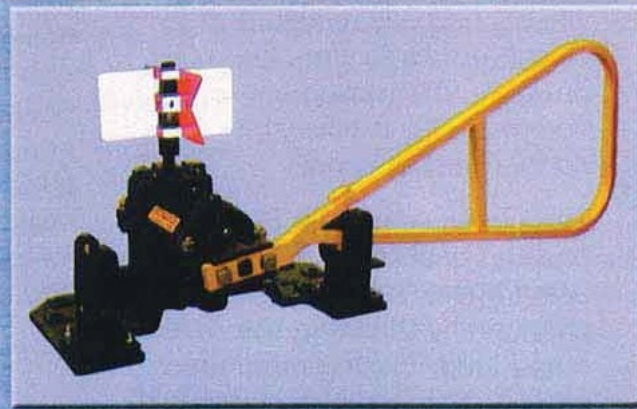
Visit us on the web at [www.gandbspecialties.com](http://www.gandbspecialties.com)

**BACK SAFER®**

**TRAILABLE SWITCH**

**STANDS, 12 RT 12 RTH**

*On track for a faster, safer and  
more scientific way to run a  
railroad*



**Aj&\_ G & B SPECIALTIES, INC.**

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Visit us on the WEB at  
[www.gand.com](http://www.gand.com)

# BACK SAFER® 12RT MANUAL SWITCH STANDS FROM G&B SPECIALTIES

A faster, safer and more scientific way to run a railroad

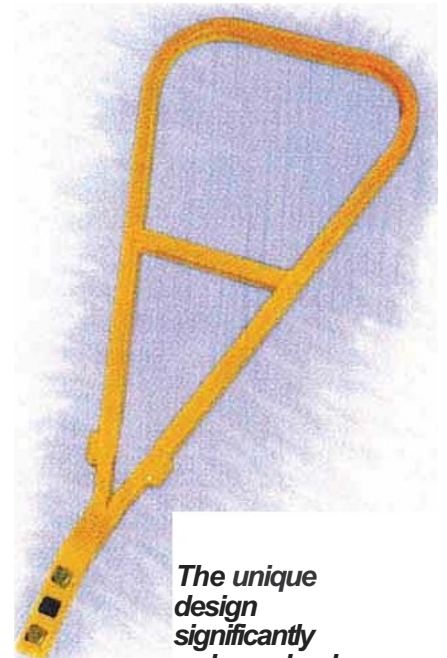
## SAFE DEPENDABLE OPERATION

The BACK SAFER® 12RT and 12RTH switch stands are engineered to withstand thousands of trailing movements. In a "run-through" movement, the first set of wheels partially moves the switch points to the new position. The movement is completed by a powerful spring mechanism.

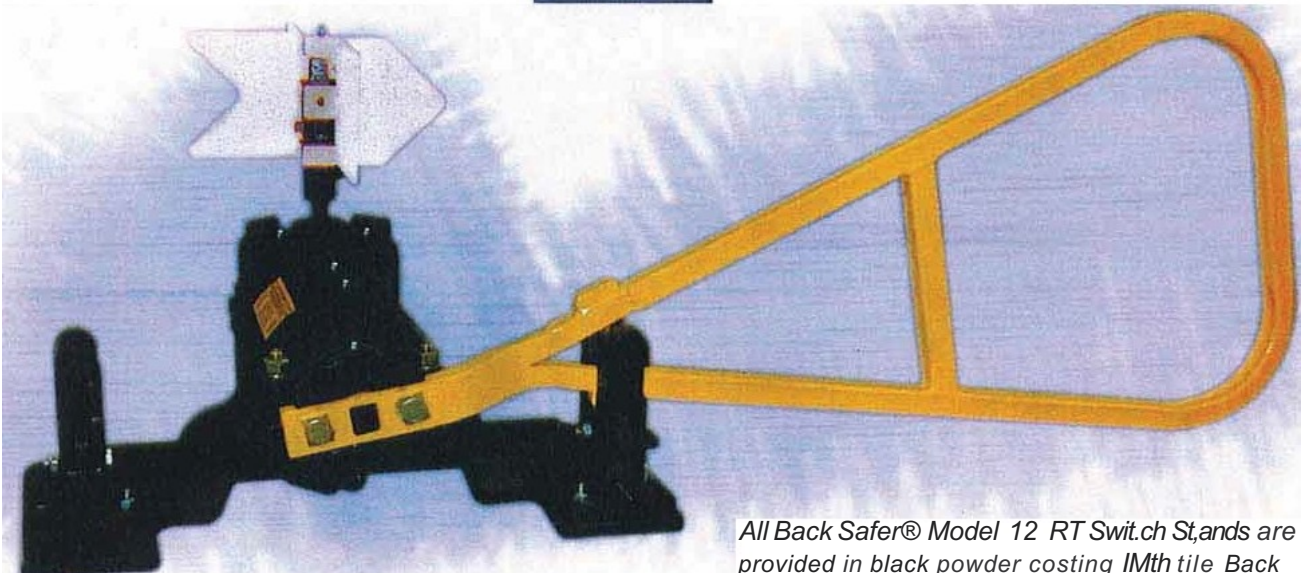
The points remain in the new position until reset by the switch being again "run-through", or changed by throwing the switch stand lever. During automatic trailing, the target changes with the points so that the switch point position is indicated, but the lever remains unchanged until thrown by hand.

## BACK SAFER® ERGONOMIC THROWING LEVER

The BACK SAFER® bow handle is available from G & B Specialties. This unique ergonomic throwing lever significantly reduces back stresses while increasing leverage efficiency. BACK SAFER® bow handles are power coated and available upon request. The BACK SAFER® 12RT and 12RTH switch stands can also be furnished with the conventional counter weighted throwing lever.



*The unique design significantly reduces back stresses while increasing leverage efficiency.*



*All Back Safer® Model 12 RT Switch Stands are provided in black powder coating IMth tile Back Safer® Bow Handle in safety yellow powder coating. Other colors available upon request.*

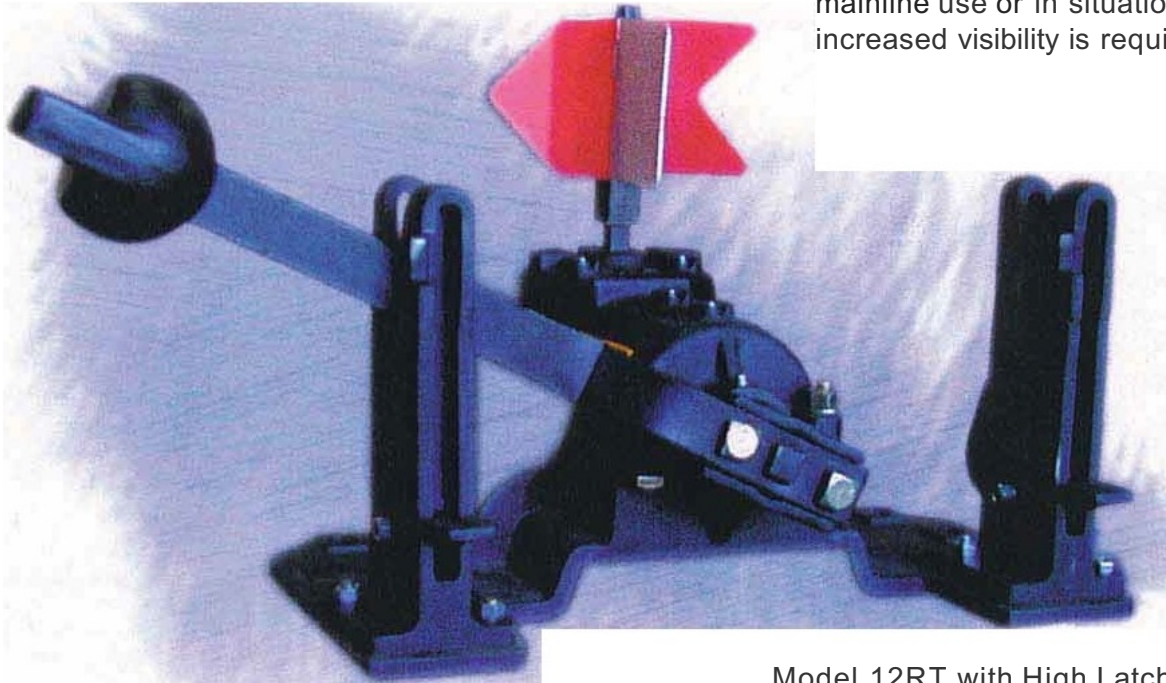
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# BACK SAFER® 12RT VARIATIONS



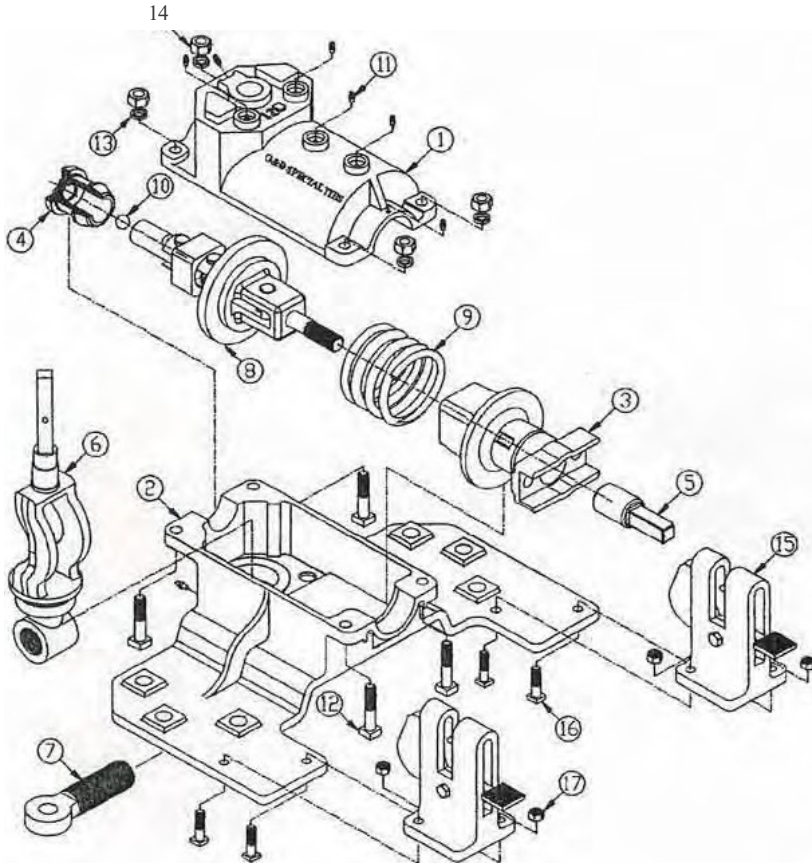
## TRAILABLE SWITCH STANDS WITH BACK SAFER® BOW HANDLE AVAILABLE FROM G&B SPECIALTIES

The BACK SAFER® 12RT and 12RTH are heavy-duty trailable switch stands that incorporate a Back Safer bow handle throwing device and are sturdily built to stand up under the heavy abuse of continuous "run-through" operations. The low stand 12RT is recommended for use with heavy rails, BOLbs and over for all yards, siding and ladder tracks where frequent movements of trains require spring action, or for any switch location where there is a likelihood that the switch will be "run through". The high stand 12RTH, not shown, is identical to the low stand but features a high mast and target for mainline use or in situations where increased visibility is required.



Model 12RT with High Latches

# CoMpoNENT PARTS foR BAck SAFER® Model 12RT Switch Stand



## STRONG, STURDY CONSTRUCTION

The BACK SAFER® 12RT and 12RTH switch stands have been designed with high quality components, including heavy duty housings.

The number of working parts has been kept to a minimum. Vital parts such as the swivel link, link and pins, and screw eye crank are heat treated for extra strength and durability.

A minimum amount of maintenance is required, consisting merely of occasional lubrication of six easily reached points on the top of the housing. The mechanism can be inspected quickly by removing the housing cover that is fastened by four bolts.

The BACK SAFER® 12 RT and 12RTH switch stands feature an adjustable screw-eye crank and connecting rod for precise and accurate setting of the points.

ITEM #	PART #	DESCRIPTION
1	897501	Machine Top
2	897502	Machine Bottom
3	897504	Spring Retainer
4	897505	Thrust Bushing
5	897506	Spring Adjuster Nut
6	897507	Spindle
7	897508	Crank Eye
8	897510X	Spring Retainer Assembly
9	897511	Spring, 61/200 x a / ,s Wire x 6 5/ e
10	897512	Ball Bearing
11	990900-001	Fitting, 1/ · Drive
12	990220-300-02	Bolt 5/ ex 3 Square Head
13	990403-062-02	Washer. 5/ a X-Duty Lock
14	990331-062-02	Nut, e e Heavy Hex
15	887513X	Latch Stand Assembly
16	890222-301-02	Bolt. 1/ 2 x 2 Square Thin Head
17	990338-050-02	Nut, 1/ 2 Heavy Hex Steel Lock
18	XLG-2000	Grease. Lubco Long Life
19	897514A	Sticker. Foot Lever Caution
20	8975148	Sticker, Grease Instructions

**G & B SPECIALTIES**

# Back Safer

## Model 36 & 36H Manual Switch Stands

The Back Safer Model 36 and 36H are ergonomically engineered components. They switch stands for unrestricted use. Both models have identical housing and operating parts. The 36 is most often used for yard operations, while the 36H, with high maintenance and target, is suitable for mainline use.

### Ergonomic Design for Operator Safety

The Back Safer Switch Stand is 30% lighter than standard counterweights. Its ergonomic design significantly reduces the risk of back injuries. The switch can be thrown with minimal operator motion.

### Easy Installation and Adjustment

Adjustment features on the Back Safer 36 and 36H allow for easy installation in varied configurations. An adjustable connecting rod, screw eye and replaceable latch slunds permit accurate setting of the point of impact on the stand. The Rack Slifer Row Handle and yoke are also available for retrofit to existing model 36 switch stands.

### Strong, Sturdy Construction

The Back Safer Model 36 and 36H have been designed with high quality components, including heavy duty housings. The number of working parts has been kept to a minimum. The extremely large surfaces of the few wearing parts assure long life and minimize lost motion. Vital parts such as the spindle, crank, and screw eye are heat treated for extra strength and durability. Maintenance merely consists of greasing four easily reached points on the switch stand. Periodic inspection is recommended to insure internal components are working properly.



896500-300 Series



896500-J00 Series

- G&B Specialties, Inc.



G & B SPECIALTIES, INC.

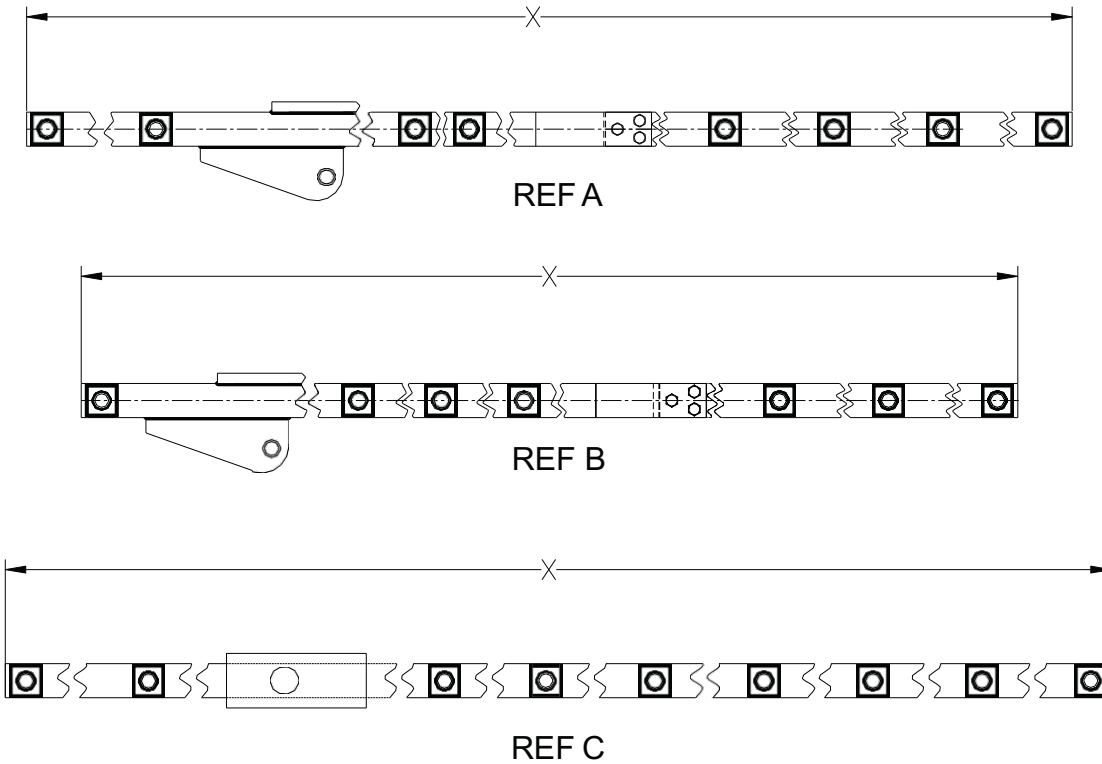
# CAR RETARDER PRODUCTS

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REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>OPERATING BAR, 8 lever, X = 467 3/4"</b> .....	900508-001-01	N/A
A1	Similar to Ref A except 7 lever, X = 401 3/4".....	900508-002-01	N/A
A2	Similar to Ref A except 6 lever, X = 335 3/4".....	900508-003-01	N/A
B	<b>OPERATING BAR, 7 lever, X = 401 3/4"</b> .....	900508-004-01	N/A
B1	Similar to Ref B except 6 lever, X = 335 3/4".....	900508-005-01	N/A
C	<b>OPERATING BAR, 9 lever, X = 534"</b> .....	900509-001-01	53450-004-06
C1	Similar to Ref C except 8 lever, X = 468".....	900509-002-01	53450-004-04
C2	Similar to Ref C except 7 lever, X = 402".....	900509-003-01	53450-004-01
C3	Similar to Ref C2 except plate between 1st and 2nd lever.....	900509-003-02	53450-004-07
C4	Similar to Ref C except 6 lever, X = 336".....	900509-004-01	53450-004-02
C5	Similar to Ref C except 5 lever, X = 270".....	900509-005-01	53450-004-08
C6	Similar to Ref C5 except plate between 1st and 2nd lever.....	900509-005-02	53450-004-05
C7	Similar to Ref C except 4 lever, plate between 1st and 2nd lever, X = 206"....	900509-006-01	53450-004-03





# HARDWARE AND INSULATION

## SECTION O

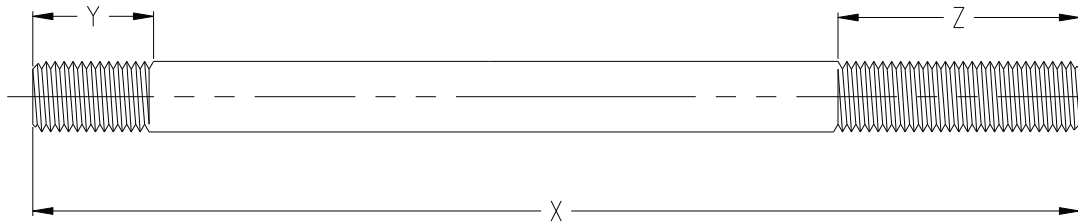
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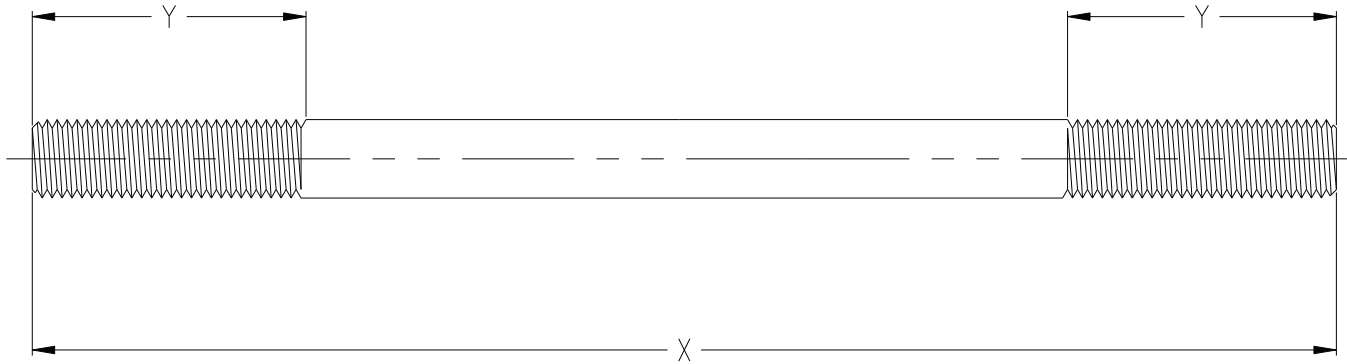
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# ANCHOR RODS

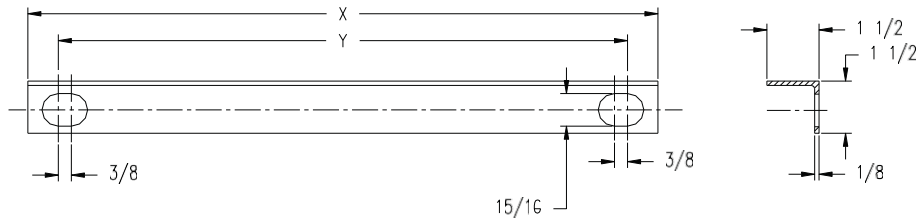


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ANCHOR ROD</b> , no finish, X = 8 3/4", Y = 1 1/4", Z = 2 3/4" .....	810922-001	M386871
A1	Similar to Ref A except zinc plated.....	810922-015	M386871-001
A2	Similar to Ref A except X = 9 3/4".....	810922-016	M386872
A3	Similar to Ref A2 except zinc plated.....	810922-017	N/A
A4	Similar to Ref A except X = 10 3/4".....	810922-018	M386873
A5	Similar to Ref A4 except zinc plated.....	810922-019	M386873-001
A6	Similar to Ref A4 except galvanized.....	810922-020	M386873-002
A7	Similar to Ref A except X = 11 3/4".....	810922-021	M386874
A8	Similar to Ref A7 except zinc plated.....	810922-022	M386874-001
A9	Similar to Ref A7 except galvanized.....	810922-023	M386874-002
A10	Similar to Ref A except X = 12 3/4".....	810922-024	M386875
A11	Similar to Ref A10 except zinc plated.....	810922-025	M386875-001
A12	Similar to Ref A10 except galvanized.....	810922-026	M386875-002
A13	Similar to Ref A except X = 13 3/4".....	810922-027	M386876
A14	Similar to Ref A13 except zinc plated.....	810922-028	M386876-001
A15	Similar to Ref A13 except galvanized.....	810922-029	N/A
A16	Similar to Ref A except X = 14 3/4".....	810922-002	M386877
A17	Similar to Ref A16 except zinc plated.....	810922-030	M386877-001
A18	Similar to Ref A16 except galvanized.....	810922-031	N/A
A19	Similar to Ref A except X = 15 3/4".....	810922-032	N/A
A20	Similar to Ref A19 except zinc plated.....	810922-033	N/A
A21	Similar to Ref A19 except galvanized.....	810922-034	N/A
A22	Similar to Ref A except X = 16 3/4".....	810922-035	N/A
A23	Similar to Ref A22 except zinc plated.....	810922-036	N/A
A24	Similar to Ref A22 except galvanized.....	810922-037	N/A

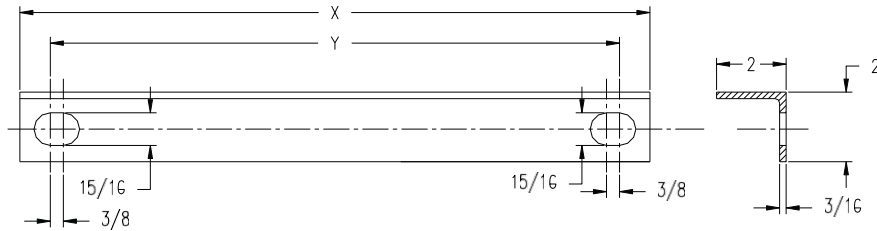


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ANCHOR ROD</b> , no finish, X = 9 3/4", Y = 2 3/4".....	810875-001	M388097
A1	Similar to Ref A except X = 10 3/4".....	810875-002	M388098
A2	Similar to Ref A1 except galvanized.....	810875-003	M388098-001
A3	Similar to Ref A except X = 11 3/4".....	810875-004	M388099
A4	Similar to Ref A3 except galvanized.....	810875-005	M388099-001
A5	Similar to Ref A except X = 12 3/4".....	810875-006	M388100
A6	Similar to Ref A5 except zinc plated.....	810875-007	M388100-001
A7	Similar to Ref A5 except galvanized.....	810875-008	N/A
A8	Similar to Ref A except X = 13 3/4".....	810875-009	M388101
A9	Similar to Ref A8 except galvanized.....	810875-010	N/A
A10	Similar to Ref A except X = 14 3/4".....	810875-011	M388102
A11	Similar to Ref A10 except galvanized.....	810875-012	N/A
A12	Similar to Ref A10 except Y = 4 3/8".....	810875-013	M438453
A13	Similar to Ref A except X = 15 3/4".....	810875-014	M388103
A14	Similar to Ref A13 except galvanized.....	810875-015	N/A
A15	Similar to Ref A except X = 16 3/4".....	810875-016	M388103-003
A16	Similar to Ref A15 except galvanized.....	810875-017	N/A

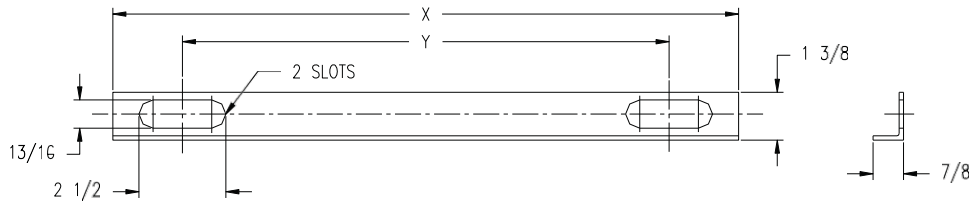
# ANGLE WASHERS



REF A

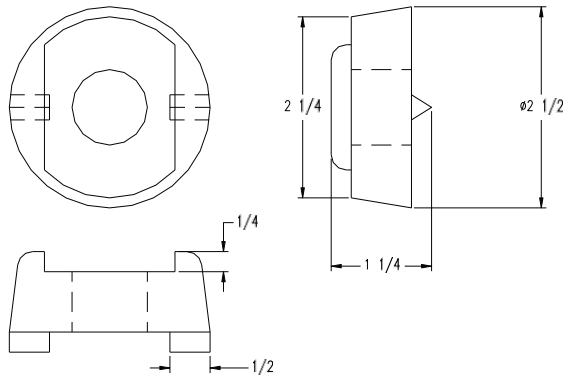


REF B

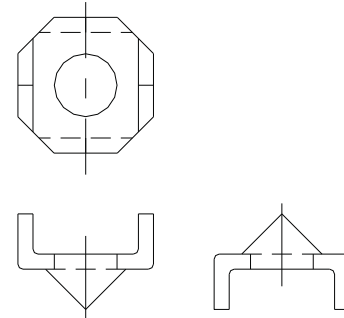


REF C

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>ANGLE WASHER</b> , for 7/8" dia studs, X = 18 1/8", Y = 16 3/8".....	860100-008	M151546
A1	Similar to Ref A except X = 22 1/8", Y = 20 3/8".....	860100-009	M376270
B	<b>ANGLE WASHER</b> , for 7/8" dia studs, X = 18 1/8", Y = 16 3/8".....	860100-007	M151546-001
C	<b>ANGLE WASHER</b> , for 3/4" dia studs, X = 18", Y = 14".....	960100-020	5656-038 5656-124 P3-110
C1	Similar to Ref C except X = 8 3/4", Y = 4 3/4".....	960100-021	5656-067 P3-112
C2	Similar to Ref C except X = 22", Y = 18".....	960100-022	5656-100
C3	Similar to Ref C except X = 13 1/4", Y = 9 1/4".....	960100-023	5656-104
C4	Similar to Ref C except X = 25", Y = 21".....	960100-024	5656-111
C5	Similar to Ref C except X = 28", Y = 24".....	960100-025	5656-114
C6	Similar to Ref C except X = 10", Y = 6".....	960100-026	5656-123
C7	Similar to Ref C except X = 12", Y = 8".....	960100-027	5656-127

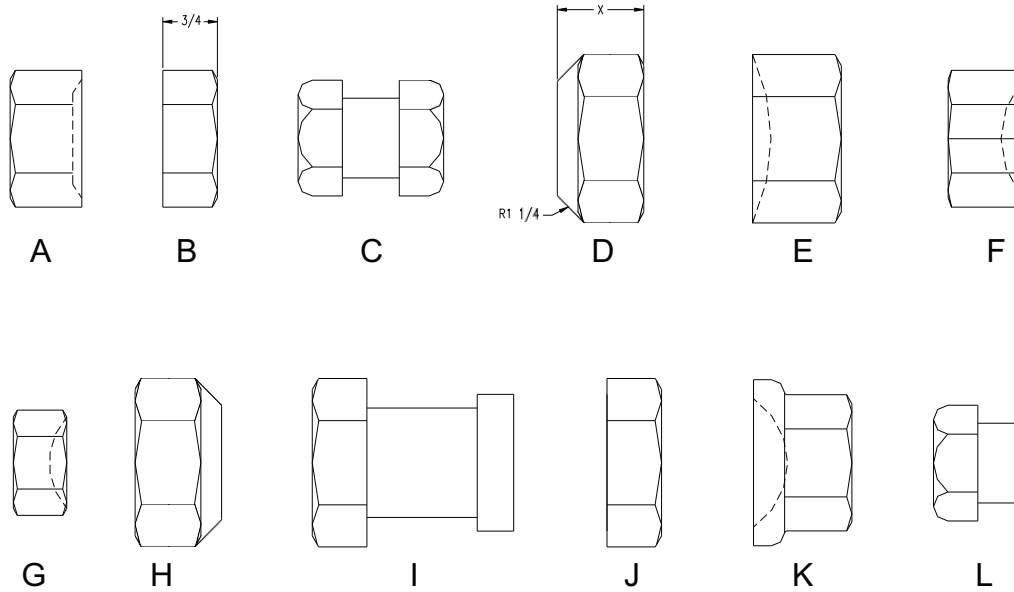


REF A



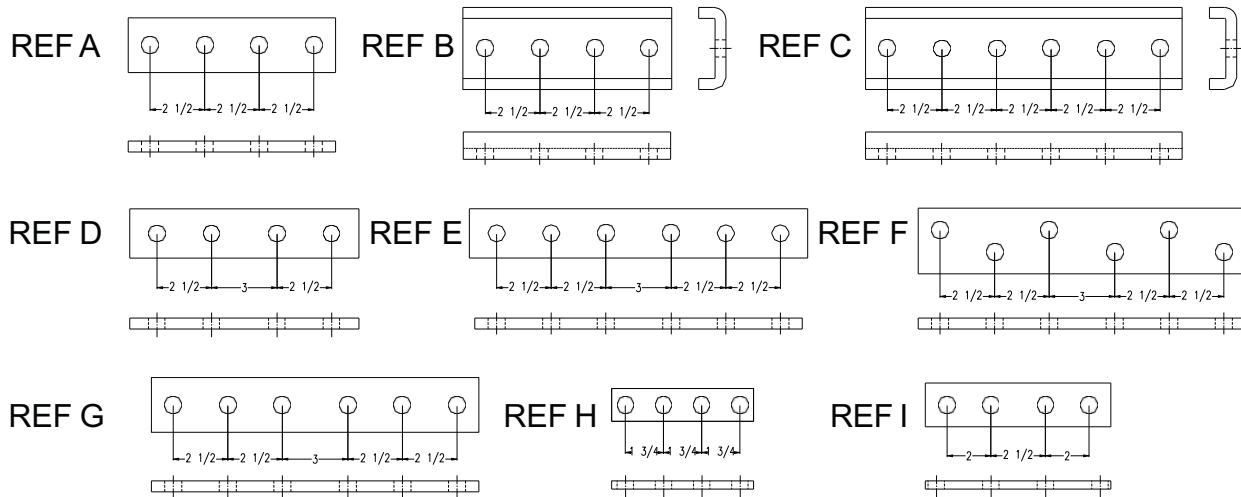
REF B

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>GRIP WASHER</b> , for 3/4" dia stud, powder coated black.....	894403	M199406
A1	Similar to Ref A except hot dip galvanized.....	894403-001	M209789
A2	<b>GRIP WASHER</b> , for 7/8" dia stud, powder coated black.....	894404	M157266
A3	Similar to Ref A2 except hot dip galvanized.....	894404-001	N/A
A4	<b>GRIP WASHER</b> , for 1" dia stud, powder coated black.....	894405	N/A
A5	Similar to Ref A4 except hot dip galvanized.....	894405-001	N/A
A6	<b>GRIP WASHER</b> , with 3/4"-10 UNC thread,s powder coated black.....	894406	N/A
A7	Similar to Ref A6 except hot dip galvanized.....	894406-001	N/A
A8	<b>GRIP WASHER</b> , with 7/8"-9 UNC threads, powder coated black.....	894407	M326148
A9	Similar to Ref A8 except hot dip galvanized.....	894407-001	N/A
A10	<b>GRIP WASHER</b> , with 1"-8 UNC threads, powder coated black.....	894408	N/A
A11	Similar to Ref A10 except hot dip galvanized.....	894408-001	N/A
B	<b>GRIP WASHER</b> , for 3/4" dia stud, powder coated black.....	894410	N/A
B1	Similar to Ref B except hot dip galvanized.....	894410-002	N/A
B2	<b>GRIP WASHER</b> , for 7/8" dia stud, powder coated black.....	894411	N/A
B3	Similar to Ref B2 except hot dip galvanized.....	894411-002	N/A
B4	<b>GRIP WASHER</b> , for 1" dia stud, powder coated black.....	894412	N/A
B5	Similar to Ref B4 except hot dip galvanized.....	894412-002	N/A



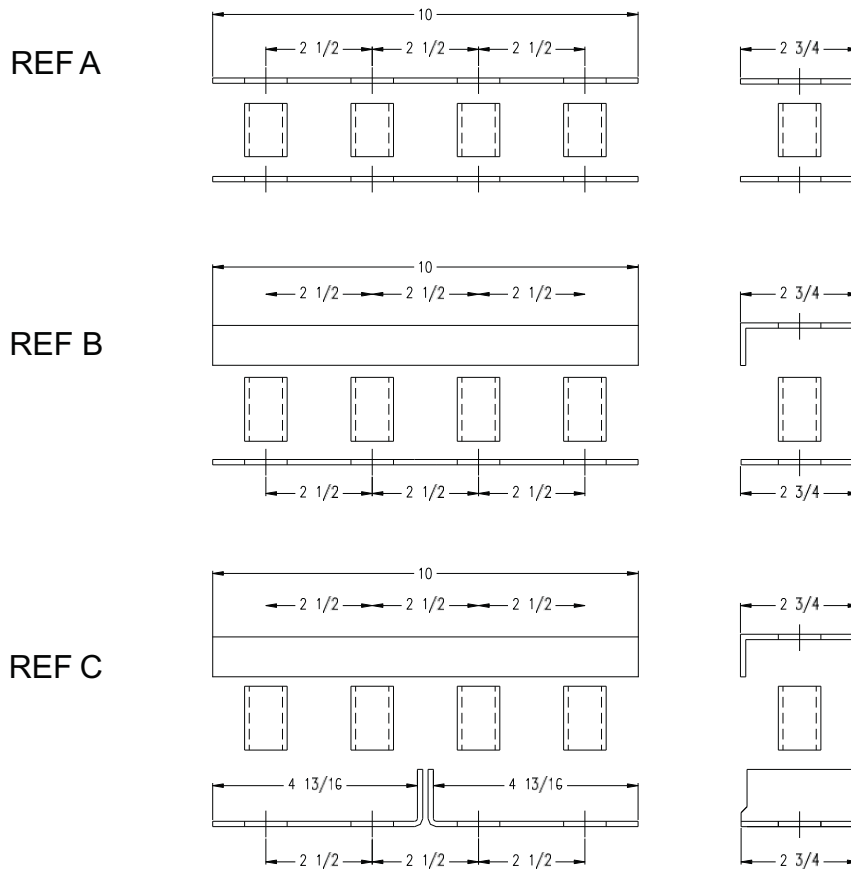
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>HEAVY HEX NUT</b> , 1/8" x 3/16" inside chamfer, used with 1"-8 UNC threaded lock rods, RR Detail 31110.....	816004-001	M117153
B	<b>HEAVY HEX JAM NUT</b> , special, used with 1"-8 UNC threaded lock rods, RR Detail 3119.....	816004-002	M117152
C	<b>SPECIAL HEX NUT</b> , used with 3/4"-10 UNC threaded lock rods.....	816004-011	N/A
D	<b>CONVEX HEAVY HEX</b> , used with 1 1/4"-7 UNC threaded lock rods, 1/4" radius, X = 1 1/4".....	816004-005	M191237
D1	Similar to Ref D except X = 1".....	816004-007	M215700
E	<b>CUPPED HEAVY HEX NUT</b> , used with 1 1/4"-7 UNC threaded lock rods and lock rod connecting rods, 1 1/4" radius.....	810522	M182522 545-016
F	<b>CUPPED HEAVY HEX NUT</b> , used with 1"-8 UNC threaded lock rods, 1 1/4" radius.....	810523	1047-017
F1	Similar to Ref F except 1" radius.....	810523-001	M387576
G	<b>CUPPED HEAVY HEX NUT</b> , used with 3/4"-10 UNC threaded point detector bars, 15/16" radius.....	810524	646-014
H	<b>HEAVY HEX NUT</b> , outside chamfer, used with 1 1/4"-7 UNC A-10 lock rods	816004-009	M163240
I	<b>ADJUSTING NUT</b> , used with 1"-8 UNC threaded A-10 lock rods.....	816004-010	M158089
J	<b>ADJUSTING JAM NUT</b> , used with 1"-8 UNC threaded A-10 lock rods.....	816004-008	M158133
K	<b>SPECIAL CUPPED HEX NUT</b> , 1"-8 UNC threads, 1 1/16" radius.....	816004-006	M193165
L	<b>SPECIAL HEX NUT</b> , used with 3/4"-10 UNC threaded lock rods.....	816004-004	M000284

# SPLICE PLATES



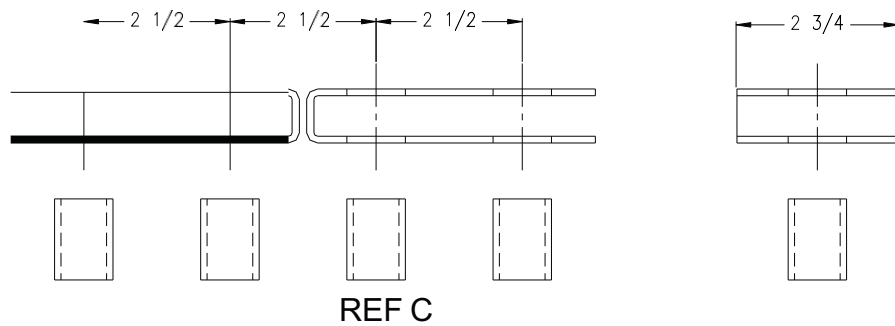
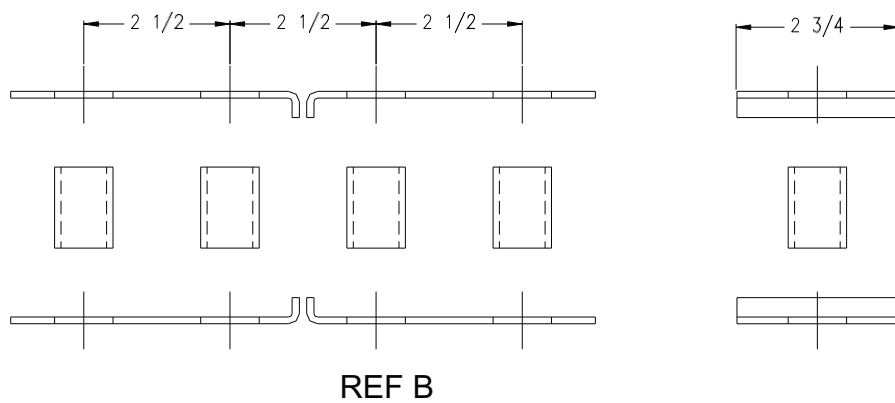
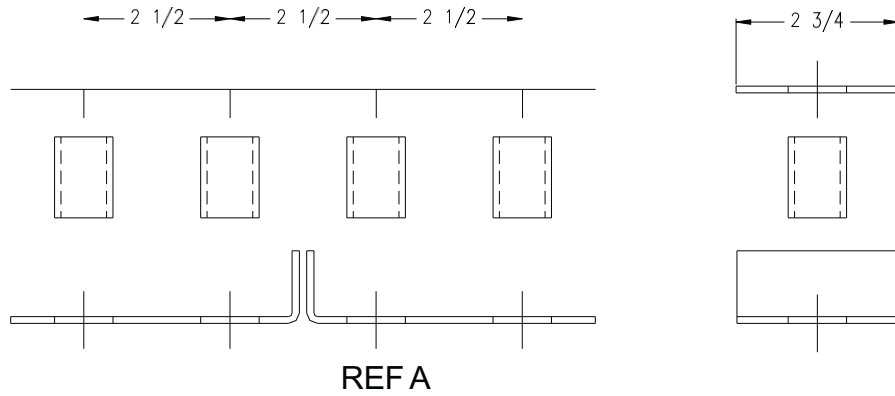
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>SPLICE PLATE, 1/2" X 2 1/2" X 9 1/2"</b> , for 3/4" diameter bolts, used with 2 1/2" wide front rods and switch rods.....	960101-001	M051340 40640 P91-312
A1	Similar to Ref A except without paint.....	960101-002	N/A
A2	Similar to Ref A except with bolt head lock.....	960101-013	N/A
A3	Similar to Ref A2 except without paint.....	960101-014	N/A
A4	Similar to Ref A except 3/8" thick.....	960101-009	M131442
A5	Similar to Ref A except 1/2" X 3" X 9 1/2", for 3/4" diameter bolts, used with 3" wide horizontal switch rods.....	960101-011	M183630
A6	Similar to Ref A5 except without paint.....	960101-012	N/A
B	<b>CHANNEL SPLICE PLATE, 1/2 X 3 7/8" X 9 1/2"</b> , used with 2 1/2" wide switch rods.....	806107	N/A
B1	Similar to Ref B except without paint.....	806107-001	N/A
B2	Similar to Ref B except with bolt head lock.....	960107X	N/A
B3	Similar to Ref B2 except without paint.....	960107-001X	N/A
C	<b>CHANNEL SPLICE PLATE, 1/2" X 3 7/8" X 14 1/2"</b> , used with 2 1/2" wide vertical switch rods.....	960107-004	N/A
C1	Similar to Ref C except without paint.....	960107-005	N/A
D	<b>SPLICE PLATE, 1/2" X 2 1/4" X 10 1/2"</b> , for 3/4" diameter bolts.....	960101-016	N/A
E	<b>SPLICE PLATE, 1/2" X 2 1/4" X 15 1/2"</b> , for 3/4" diameter bolts.....	960101-017	N/A
F	<b>SPLICE PLATE, 1/2" X 3" X 15"</b> , for 3/4" diameter bolts.....	960101-018	N/A
G	<b>SPLICE PLATE, 1/2" X 2 1/4" X 15"</b> , used with Model 900 MF front rods.....	960101-007	N/A
G1	Similar to Ref G except without paint.....	960101-012	N/A
H	<b>SPLICE PLATE, 3/8" X 1 1/2" X 6 1/2"</b> , used with insulated point detector connecting rods.....	960101-008	46936 P91-320
I	<b>SPLICE PLATE, 3/8" X 2" X 8 1/2"</b> , for 5/8" diameter bolts.....	960101-010	M439015

INSULATION KITS

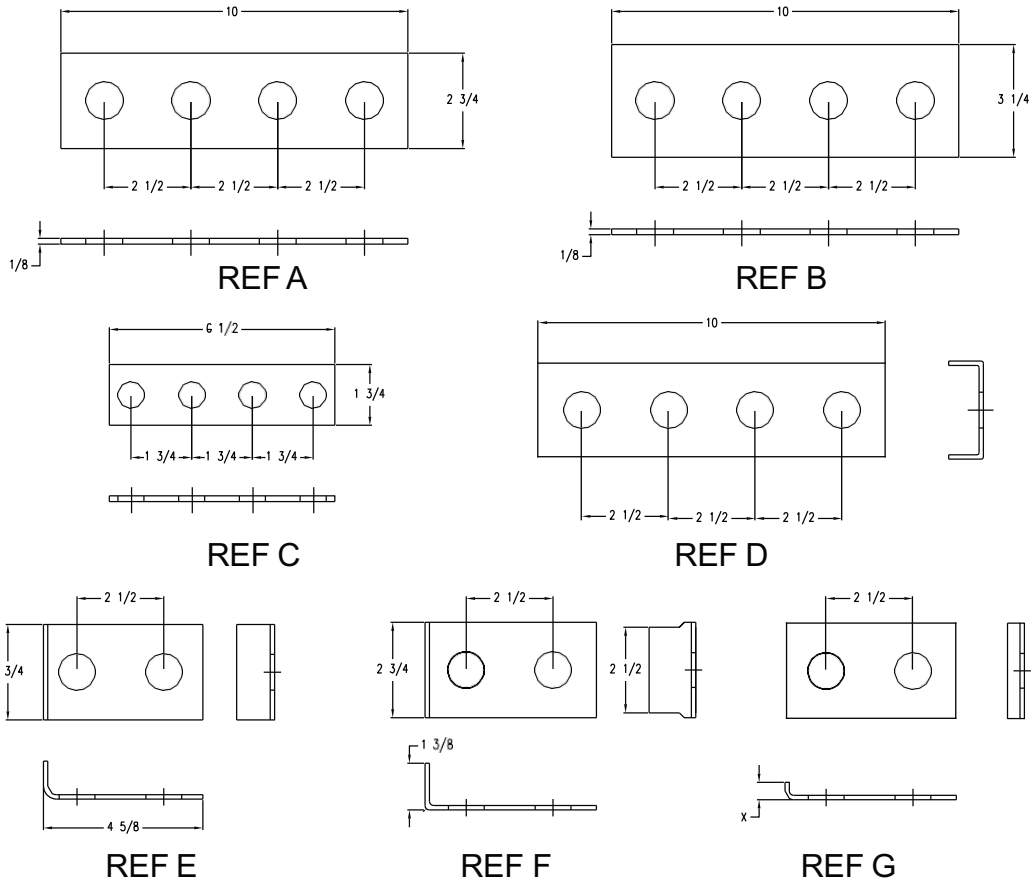


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION KIT</b> , includes two fiberglass insulation plates and four fiberglass insulation bushings for 5/8" thick X 2 1/2" wide Model 907 rigid front rods.....	977100-016X	N/A
A1	Similar to Ref A except for 3/4" thick X 2 1/2" wide horizontal switch rods....	977100-017X	N/A
A2	Similar to Ref A except for 1" thick X 2 1/2" wide switch rods and Model 901 through 906 hinged front rods.....	977100-018X	N/A
A3	Similar to Ref A except for 1 1/4" thick X 2 1/2" wide vertical switch rods.....	977100-019X	N/A
A4	Similar to Ref A except for 1" thick X 3" wide horizontal switch rods.....	977100-031X	N/A
A5	Similar to Ref A except for 1/2" thick X 1 1/2" wide insulated point detector connecting rod.....	977100-023X	N/A
B	<b>INSULATION KIT</b> , includes one fiberglass insulation channel, one fiberglass insulation plate and four fiberglass insulation bushings for 1 1/4" thick X 2 1/2" wide vertical switch rods.....	977100-028X	N/A
B1	Similar to Ref D except for 1" thick X 2 1/2" wide vertical switch rods.....	977100-029X	N/A
C	<b>INSULATION KIT</b> , includes one fiberglass insulation channel, two fiberglass insulation angle plates and four fiberglass insulation bushings for 1 1/4" thick X 2 1/2" wide vertical switch rods.....	977100-030X	N/A



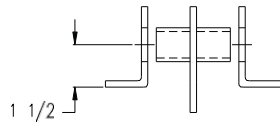
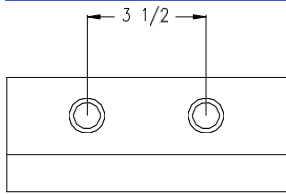


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION KIT</b> , includes one fiberglass insulation plate, two fiberglass insulation angle plates and four fiberglass insulation bushings for 1" thick X 2 1/2" wide swivel front rods.....	977100-024X	N/A
B	<b>INSULATION KIT</b> , includes four fiberglass insulation angle plates and four fiberglass insulation bushings for 3/4" thick X 2 1/2" wide Model 900 MF front rods.....	977100-020X	N/
B1	Similar to Ref B except for 1" thick X 2 1/2" wide switch rods.....	977100-021X	A
C	<b>INSULATION KIT</b> , includes two forbon insulation U-shaped plates and four forbon insulation bushings for 3/4" thick X 2 1/2" wide Model 900 MF front rods.....	978101-001X	N/ A
C1	Similar to Ref C except for 1" thick X 2 1/2" wide switch rods.....	978101-002X	N/ A

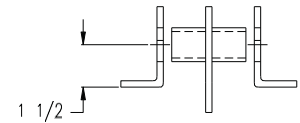
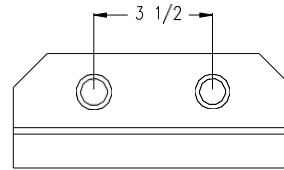


REF	DESCRIPTION	G & B PART #	OEM PART #
A	INSULATION PLATE, fiberglass, with 1 1/32" dia holes for 2 1/2" wide switch rods and front rods.....	973200-002	J780038-0002 47409 P91-329
A1	Similar to Ref A except with 1 1/16" dia holes.....	973200-001	N/A
B	INSULATION PLATE, fiberglass, for 3" wide horizontal switch rods.....	973200-004	47409-018
C	INSULATION PLATE, fiberglass, for 1 1/2" wide point detector connecting rod.....	973200-007	46886 P91-319
D	INSULATION CHANNEL, fiberglass, for 2 1/2" wide switch rods.....	973301-001	N/A
E	INSULATION ANGLE PLATE, fiberglass with 1 1/32" dia holes for 2 1/2" swivel front rods.....	973400-007	J780038-0003
E1	Similar to Ref E except with 1 1/16" dia holes.....	973400-003	N/A
F	INSULATION ANGLE PLATE, fiberglass, notched for 2 1/2" wide switch rods.....	973400-001	N/A
G	INSULATION ANGLE PLATE, fiberglass, X = 39/64" for 3/4" thick MF front rods.....	973400-005	N/A
G1	Similar to Ref G except X = 31/64" for 1" thick switch rods.....	973400-004	N/A

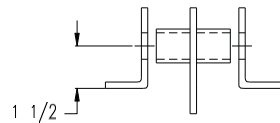
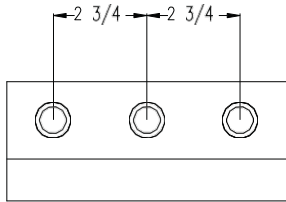
# GAGE PLATE INSULATION KITS



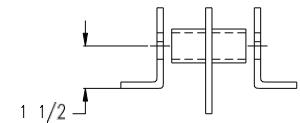
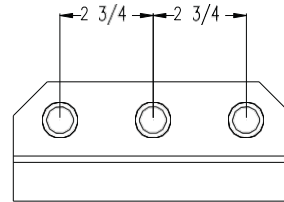
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REF B

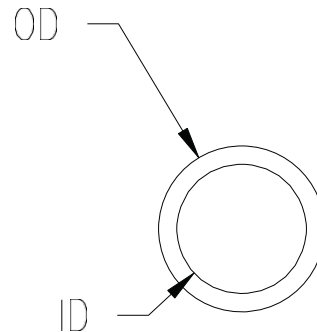
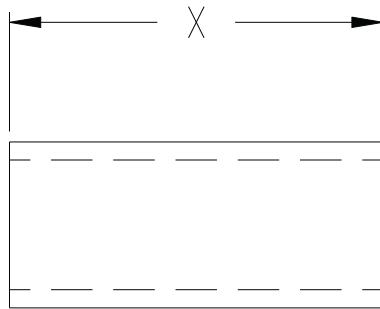


REF C



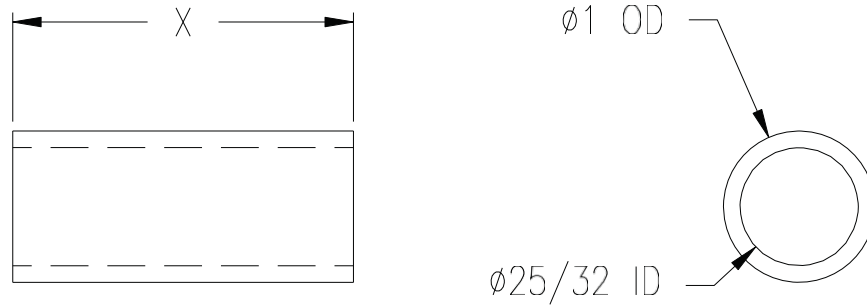
REF D

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>GAGE PLATE INSULATION KIT</b> , includes two fiberglass insulation angle plates, one fiberglass insulation end post and two fiberglass insulation bushings for 3/4" thick X 7" wide gage plates per AREA Detail 3103.....	977101-002X	N/A
A1	Similar to Ref A except for 1" thick X 7" wide gage plates.....	977103-002X	N/A
A2	Similar to Ref A except for 1 1/8" thick X 7" wide gage plates.....	977105-002X	N/A
B	<b>GAGE PLATE INSULATION KIT</b> , includes two fiberglass insulation angle plates, one fiberglass insulation end post and two fiberglass insulation bushings for 3/4" thick X 7" wide gage plates.....	977111-002X	N/A
B1	Similar to Ref B except for 1" thick X 7" wide gage plates.....	977113-002X	N/A
B2	Similar to Ref B except for 1 1/8" thick X 7" wide gage plates.....	977115-002X	N/A
C	<b>GAGE PLATE INSULATION KIT</b> , includes two fiberglass insulation angle plates, one fiberglass insulation end post and three fiberglass insulation bushings for 3/4" thick X 8" wide gage plates per AREA Detail 4103.....	977121-001X	N/A
C1	Similar to Ref C except for 1" thick X 8" wide gage plates.....	977122-001X	N/A
C2	Similar to Ref C except for 1 1/8" thick X 8" wide gage plates.....	977123-001X	N/A
D	<b>GAGE PLATE INSULATION KIT</b> , includes two fiberglass insulation angle plates, one fiberglass insulation end post and three fiberglass insulation bushings for 3/4" thick X 8" wide gage plates.....	977131-001X	N/A
D1	Similar to Ref D except for 1" thick X 8" wide gage plates.....	977132-001X	N/A
D2	Similar to Ref D except for 1 1/8" thick X 8" wide gage plates.....	977133-001X	N/A



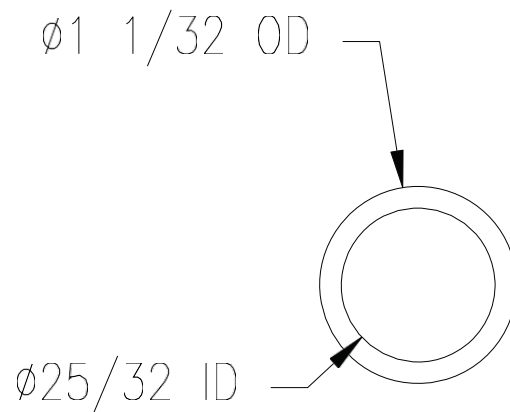
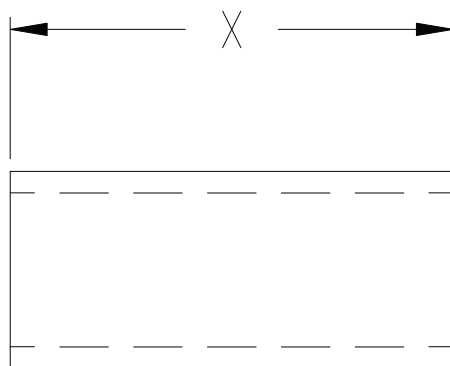
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION BUSHING</b> , fiberglass, 17/32" ID X 3/4" OD, X = 19/32".....	973098-002	N/A
A1	Similar to Ref A except X = 21/32".....	973098-003	N/A
A2	Similar to Ref A except X = 23/32".....	973098-001	16779 P91-276
A3	Similar to Ref A except X = 25/32".....	973098-004	N/A
A4	Similar to Ref A except X = 27/32".....	973098-005	N/A
A5	Similar to Ref A except X = 31/32".....	973098-006	N/A
B	<b>INSULATION BUSHING</b> , fiberglass, 5/8" ID X 13/16" OD, X = 21/32".....	973099-002	N/A
B1	Similar to Ref B except X = 23/32".....	973099-004	N/A
B2	Similar to Ref B except X = 25/32".....	973099-001	N/A
B3	Similar to Ref B except X = 13/16".....	973099-005	N/A
B4	Similar to Ref B except X = 27/32".....	973099-006	N/A
B5	Similar to Ref B except X = 31/32".....	973099-003	N/A
C	<b>INSULATION BUSHING</b> , fiberglass, 21/32" ID X 7/8" OD, X = 25/32".....	973097-001	N/A
C1	Similar to Ref C except X = 13/16".....	973097-002	N/A
C2	Similar to Ref C except X = 27/32".....	973097-003	N/A
C3	Similar to Ref C except X = 31/32".....	973097-004	N/A
C4	Similar to Ref C except X = 1 3/16".....	973097-005	N/A
C5	Similar to Ref C except X = 1 9/32".....	973097-006	N/A

For custom bushings other than those shown, specify Model 973097, 973098, or 973099 bushing and length



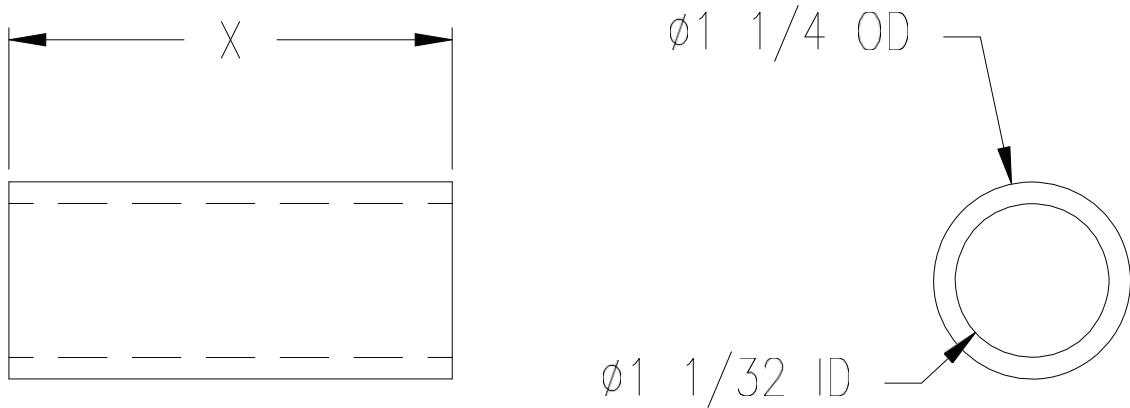
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION BUSHING</b> , for fiberglass, X = 27/32".....	973100-002	N/A
A1	Similar to Ref A except X = 31/32".....	973100-008	N/A
A2	Similar to Ref A except X = 1 3/16".....	973100-013	N/A
A3	Similar to Ref A except X = 1 7/32".....	973100-005	J780038-0001
A4	Similar to Ref A except X = 1 1/4".....	973100-004	N/A
A5	Similar to Ref A except X = 1 11/32".....	973100-014	N/A
A6	Similar to Ref A except X = 1 15/32".....	973100-003	N/A
A7	Similar to Ref A except X = 1 19/32".....	973100-015	N/A
A8	Similar to Ref A except X = 1 21/32".....	973100-016	N/A
A9	Similar to Ref A except X = 1 23/32".....	973100-017	N/A
A10	Similar to Ref A except X = 2".....	973100-018	N/A
A11	Similar to Ref A except X = 2 1/32".....	973100-012	N/A
A12	Similar to Ref A except X = 2 3/32".....	973100-009	N/A
A13	Similar to Ref A except X = 2 7/32".....	973100-019	N/A
A14	Similar to Ref A except X = 2 1/4".....	973100-020	N/A
A15	Similar to Ref A except X = 2 11/32".....	973100-021	N/A
A16	Similar to Ref A except X = 2 3/8".....	973100-007	N/A
A17	Similar to Ref A except X = 2 13/32".....	973100-010	N/A
A18	Similar to Ref A except X = 2 1/2".....	973100-022	N/A
A19	Similar to Ref A except X = 2 17/32".....	973100-011	N/A
A20	Similar to Ref A except X = 2 9/16".....	973100-023	N/A
A21	Similar to Ref A except X = 2 11/16".....	973100-006	N/A
A22	Similar to Ref A except X = 2 3/4".....	973100-001	N/A
A23	Similar to Ref A except X = 2 25/32".....	973100-024	N/A

For custom bushings other than those shown, specify Model 973100 bushing and length



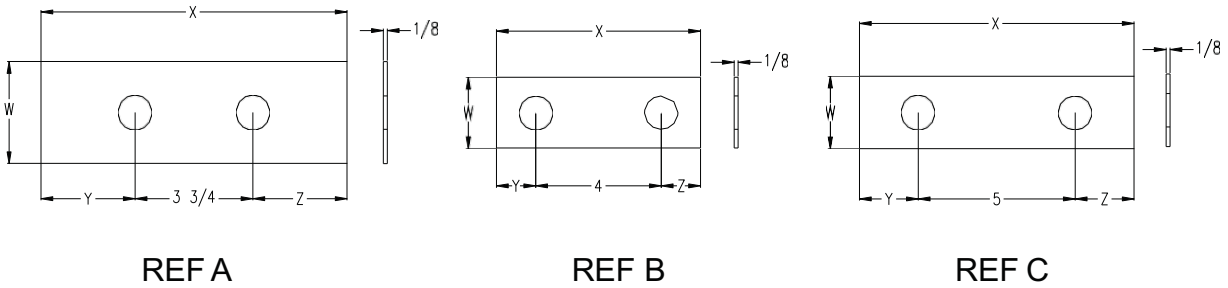
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION BUSHING</b> , fiberglass, 25/32" ID X 1 1/32" OD, X = 25/32".....	973101-005	N/A
A1	Similar to Ref A except X = 31/32".....	973101-006	N/A
A2	Similar to Ref A except X = 1 3/32".....	973101-007	N/A
A3	Similar to Ref A except X = 1 1/8".....	973101-008	N/A
A4	Similar to Ref A except X = 1 5/32".....	973101-009	N/A
A5	Similar to Ref A except X = 1 3/16".....	973101-010	N/A
A6	Similar to Ref A except X = 1 7/32".....	973101-003	N/A
A7	Similar to Ref A except X = 1 1/4".....	973101-001	N/A
A8	Similar to Ref A except X = 1 9/32".....	973101-011	N/A
A9	Similar to Ref A except X = 1 11/32".....	973101-012	N/A
A10	Similar to Ref A except X = 1 13/32".....	973101-013	N/A
A11	Similar to Ref A except X = 1 15/32".....	973101-014	N/A
A12	Similar to Ref A except X = 1 1/2".....	973101-002	N/A
A13	Similar to Ref A except X = 1 17/32".....	973101-015	N/A
A14	Similar to Ref A except X = 1 19/32".....	973101-016	N/A
A15	Similar to Ref A except X = 1 21/32".....	973101-004	N/A
A16	Similar to Ref A except X = 1 23/32".....	973101-017	N/A
A17	Similar to Ref A except X = 1 13/16".....	973101-018	N/A
A18	Similar to Ref A except X = 2 3/32".....	973101-019	N/A

For custom bushings other than those shown, specify Model 973101 bushing and length



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION BUSHING</b> , fiberglass, 1 1/32" ID X 1 1/4" OD, X = 25/32".....	973102-005	N/A
A1	Similar to Ref A except X = 31/32".....	973102-001	N/A
A2	Similar to Ref A except X = 1 3/32".....	973102-006	N/A
A3	Similar to Ref A except X = 1 1/8".....	973102-007	N/A
A4	Similar to Ref A except X = 1 5/32".....	973102-008	N/A
A5	Similar to Ref A except X = 1 3/16".....	973102-009	N/A
A6	Similar to Ref A except X = 1 7/32".....	973102-010	N/A
A7	Similar to Ref A except X = 1 1/4".....	973102-011	N/A
A8	Similar to Ref A except X = 1 9/32".....	973102-012	N/A
A9	Similar to Ref A except X = 1 11/32".....	973102-002	N/A
A10	Similar to Ref A except X = 1 13/32".....	973102-013	N/A
A11	Similar to Ref A except X = 1 15/32".....	973102-014	N/A
A12	Similar to Ref A except X = 1 1/2".....	973102-015	N/A
A13	Similar to Ref A except X = 1 17/32".....	973102-016	N/A
A14	Similar to Ref A except X = 1 19/32".....	973102-017	N/A
A15	Similar to Ref A except X = 1 21/32".....	973102-018	N/A
A16	Similar to Ref A except X = 1 23/32".....	973102-019	N/A
A17	Similar to Ref A except X = 1 13/16".....	973102-020	N/A
A18	Similar to Ref A except X = 1 31/32".....	973102-004	N/A
A19	Similar to Ref A except X = 2 3/32".....	973102-003	N/A
A20	Similar to Ref A except X = 2 1/8".....	973102-021	N/A

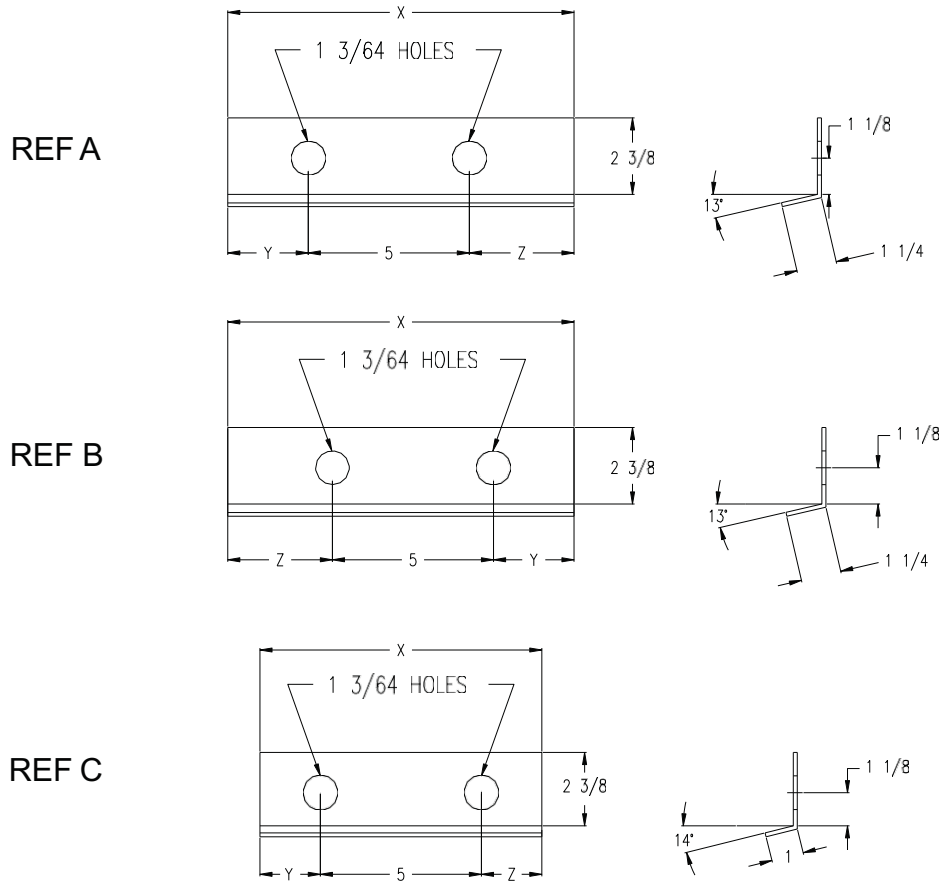
For custom bushings other than those shown, specify Model 973102 bushing and length



REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION PLATE</b> , grey fibre, W = 2 1/2", X = 9 3/4", Y = 3", Z = 3", 1 3/64" dia holes.....	974200-020	M303154
A1	Similar to Ref A except W = 2 1/4", X = 6", Y = 1 1/8", Z = 1 1/8", 1 9/32" dia holes.....	974200-021	M435347-006
A2	Similar to Ref A except W = 2 3/4", X = 9 1/4", Y = 2 3/4", Z = 2 3/4", 1 9/32" dia holes.....	974200-022	M435347-007
B	<b>INSULATION PLATE</b> , grey fibre, W = 2 1/4", X = 6 1/2", Y = 1 1/4", Z = 1 1/4", 1 1/8" dia holes.....	974200-023	M334137
B1	Similar to Ref B except W = 2 1/4", X = 9 1/8", Y = 4", Z = 1 1/8", 1 3/64" dia holes.....	974200-024	M335993
B2	Similar to Ref B except W = 2 1/4", X = 6 1/4", Y = 1 1/8", Z = 1 1/8", 1 3/64" dia holes.....	974200-025	M335994
B3	Similar to Ref B except W = 2 3/4", X = 8", Y = 1 1/4", Z = 2 3/4", 1 9/32" dia holes.....	974200-026	M335993-001
B4	Similar to Ref B except W = 2", X = 8 1/2", Y = 2 1/4", Z = 2 1/4", 1 3/64" dia holes.....	974200-027	M435347-003
C	<b>INSULATION PLATE</b> , grey fibre, W = 2 3/4", X = 8 3/4", Y = 1 7/8", Z = 1 7/8", 1 9/32" dia holes .....	974200-028	M284126
C1	Similar to Ref C except W = 2 3/4", X = 11 3/8", Y = 4 1/2".....	974200-032	M284127
C2	Similar to Ref C except X = 10 7/8", Y = 4", RR Detail 3226.....	974200-029	M284281
C3	Similar to Ref C except X = 8 1/2", Y = 1 3/4", Z = 1 3/4".....	974200-030	M305087
C4	Similar to Ref C except W = 2 1/4", X = 8 1/2", Y = 1 3/4", Z = 1 3/4".....	974200-031	M305088
C5	Similar to Ref C except W = 3 1/4", X = 9 1/4", Y = 1 3/4", Z = 2 1/2".....	974200-033	M435347
C6	Similar to Ref C except W = 2 1/2", X = 10 3/8", Y = 3 1/2", Z = 1 7/8", 1 3/64" dia holes.....	974200-034	M435347-001
C7	Similar to Ref C except W = 2 1/2", X = 8 1/4", Y = 1 5/8", Z = 1 5/8", 13/16" dia holes.....	974200-035	M435347-002

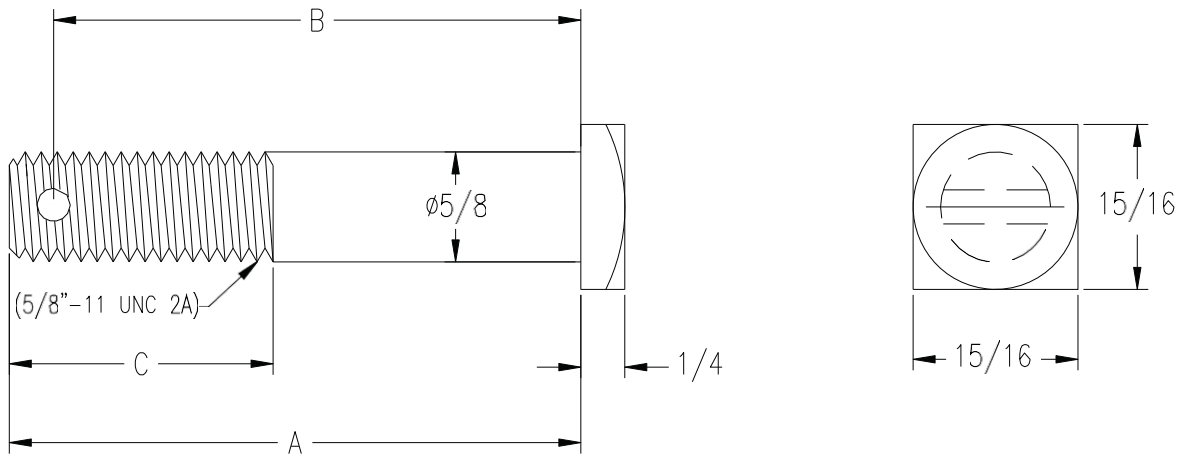
For custom insulation plates other than those shown, specify Model 974200 insulation plate and dimensions





REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>INSULATION ANGLE PLATE</b> , grey fibre, X = 10 3/4", Y = 2 1/2", Z = 3 1/4"	974401-001	M228256
A1	Similar to Ref A except X = 10 1/4", Y = 2 3/8", Z = 2 7/8".....	974401-002	M228324
A2	Similar to Ref A except X = 7 7/8", Y = 1 3/4", Z = 1 1/8".....	974401-003	M228962
A3	Similar to Ref A except X = 11 1/4", Y = 2 3/4", Z = 3 1/2".....	974401-004	M237752
A4	Similar to Ref A except X = 8 1/4", Y = 1 3/4", Z = 1 1/2".....	974401-005	M252898
B	<b>INSULATION ANGLE PLATE</b> , grey fibre, X = 10 3/4", Y = 2 1/2", Z = 3 1/4".....	974401-006	M228257
B1	Similar to Ref B except X = 10 1/4", Y = 2 3/8", Z = 2 7/8".....	974401-007	M228325
B2	Similar to Ref B except X = 7 7/8", Y = 1 3/4", Z = 1 1/8".....	974401-008	M228963
B3	Similar to Ref B except X = 11 1/4", Y = 2 3/4", Z = 3 1/2".....	974401-009	M237753
B4	Similar to Ref B except X = 8 1/4", Y = 1 3/4", Z = 1 1/2".....	974401-010	M252899
C	<b>INSULATION ANGLE PLATE</b> , grey fibre, X = 8 3/4", Y = 1 7/8", Z = 1 7/8"	974401-011	M224904
C1	Similar to Ref C except X = 11", Y = 3", Z = 3".....	974401-012	M256173
C2	Similar to Ref C except X = 10 1/4", Y = 2 1/4", Z = 3".....	974401-013	M260310
C3	Similar to Ref C except X = 10 1/4", Y = 3", Z = 2 1/4".....	974401-014	M260311
C4	Similar to Ref C except X = 9 1/2", Y = 2 1/4", Z = 2 1/4".....	974401-015	M298628

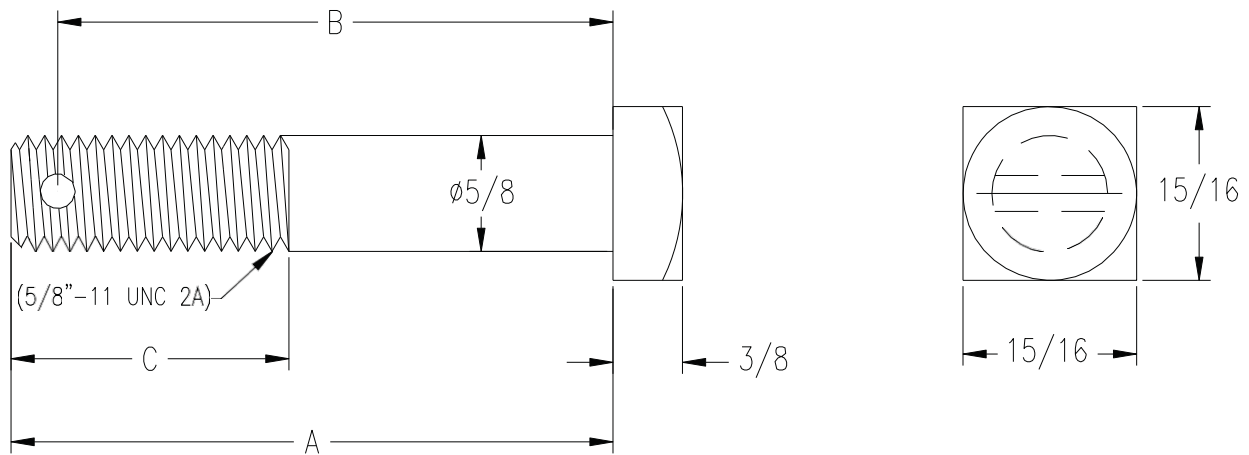
For custom insulation angle plates other than those shown, specify Model 974401 insulation angle plate and dimensions



G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990228-350-101	N/A	3 1/2"	3 1/8"	1 1/2"	3/16"	unplated
990228-375-101	N/A	3 3/4"	3 3/8"	1 1/2"	3/16"	unplated
990228-400-101	N/A	4"	3 5/8"	1 1/2"	3/16"	unplated
990228-400-121	N/A	4"	3 5/8"	1 1/2"	3/16"	zinc yellow
990228-425-101	N/A	4 1/4"	3 7/8"	1 1/2"	3/16"	unplated
990228-450-102	N/A	4 1/2"	4 1/8"	1 1/2"	3/16"	unplated
990228-450-122	N/A	4 1/2"	4 1/8"	1 1/2"	3/16"	zinc yellow
990228-475-102	N/A	4 3/4"	4 3/8"	1 1/2"	3/16"	unplated
990228-475-122	N/A	4 3/4"	4 3/8"	1 1/2"	3/16"	zinc yellow
990228-500-102	N/A	5"	4 5/8"	1 1/2"	3/16"	unplated
990228-500-122	N/A	5"	4 5/8"	1 1/2"	3/16"	zinc yellow
990228-525-102	N/A	5 1/4"	4 7/8"	1 1/2"	3/16"	unplated
990228-525-122	N/A	5 1/4"	4 7/8"	1 1/2"	3/16"	zinc yellow
990228-550-102	N/A	5 1/2"	5 1/8"	1 1/2"	3/16"	unplated
990228-550-122	N/A	5 1/2"	5 1/8"	1 1/2"	3/16"	zinc yellow
990228-575-102	N/A	5 3/4"	5 3/8"	1 1/2"	3/16"	unplated
990228-575-122	N/A	5 3/4"	5 3/8"	1 1/2"	3/16"	zinc yellow
990228-600-102	N/A	6"	5 5/8"	1 1/2"	3/16"	unplated
990228-600-122	N/A	6"	5 5/8"	1 1/2"	3/16"	zinc yellow
990228-625-102	N/A	6 1/4"	5 7/8"	1 3/4"	3/16"	unplated
990228-625-122	N/A	6 1/4"	5 7/8"	1 3/4"	3/16"	zinc yellow
990228-650-102	N/A	6 1/2"	6 1/8"	1 3/4"	3/16"	unplated
990228-650-122	N/A	6 1/2"	6 1/8"	1 3/4"	3/16"	zinc yellow

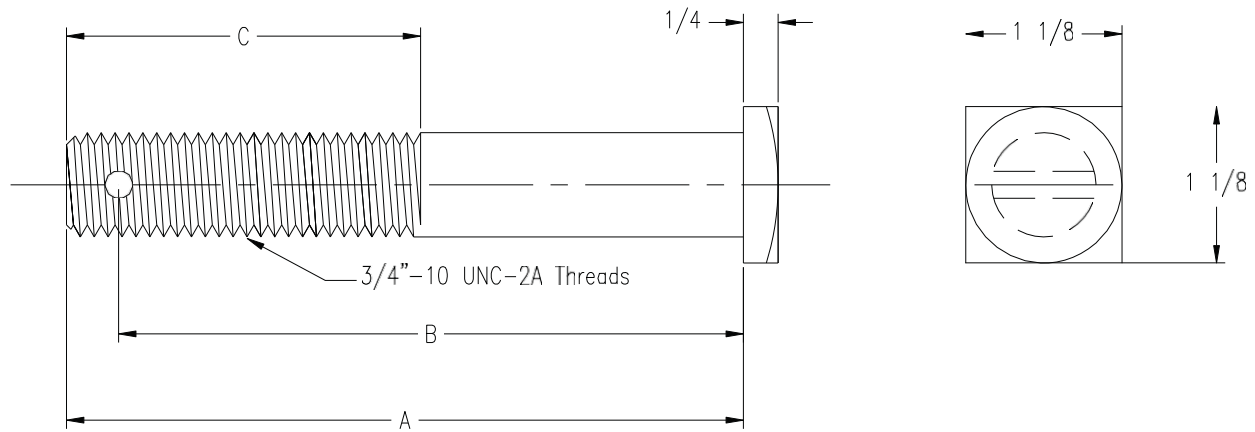
# 5/8" DIAMETER POINT BOLTS

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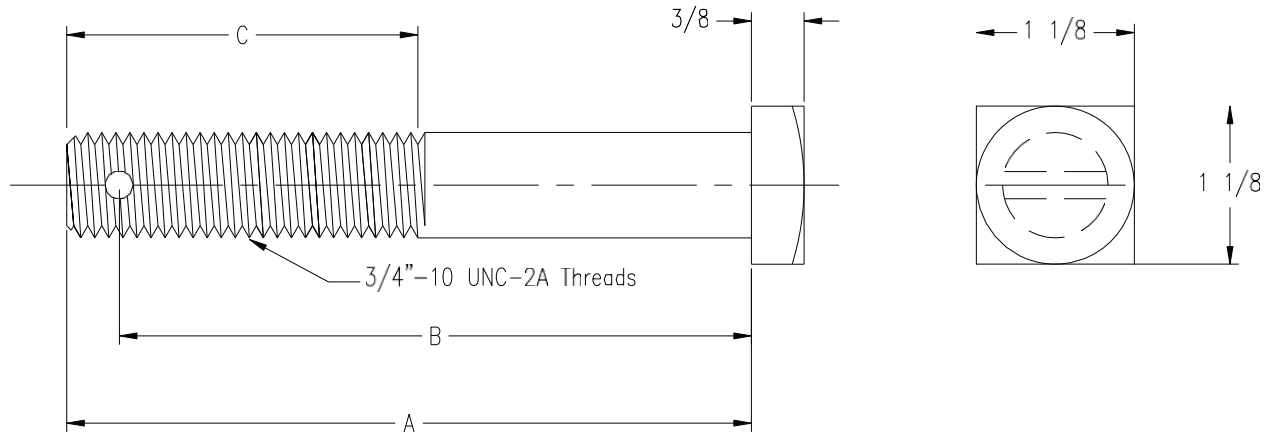
G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990229-350-101	N/A	3 1/2"	3 1/8"	1 1/2"	3/16"	unplated
990229-375-101	N/A	3 3/4"	3 3/8"	1 1/2"	3/16"	unplated
990229-400-102	N/A	4"	3 5/8"	1 1/2"	3/16"	unplated
990229-400-122	N/A	4"	3 5/8"	1 1/2"	3/16"	zinc yellow
990229-425-101	N/A	4 1/4"	3 7/8"	1 1/2"	3/16"	unplated
990229-450-102	N/A	4 1/2"	4 1/8"	1 1/2"	3/16"	unplated
990229-450-122	N/A	4 1/2"	4 1/8"	1 1/2"	3/16"	zinc yellow
990229-475-102	N/A	4 3/4"	4 3/8"	1 1/2"	3/16"	unplated
990229-475-122	N/A	4 3/4"	4 3/8"	1 1/2"	3/16"	zinc yellow
990229-500-102	N/A	5"	4 5/8"	1 1/2"	3/16"	unplated
990229-500-122	N/A	5"	4 5/8"	1 1/2"	3/16"	zinc yellow
990229-525-102	N/A	5 1/4"	4 7/8"	1 1/2"	3/16"	unplated
990229-525-122	N/A	5 1/4"	4 7/8"	1 1/2"	3/16"	zinc yellow
990229-550-102	N/A	5 1/2"	5 1/8"	1 1/2"	3/16"	unplated
990229-550-122	N/A	5 1/2"	5 1/8"	1 1/2"	3/16"	zinc yellow
990229-575-102	N/A	5 3/4"	5 3/8"	1 1/2"	3/16"	unplated
990229-575-122	N/A	5 3/4"	5 3/8"	1 1/2"	3/16"	zinc yellow
990229-600-102	N/A	6"	5 5/8"	1 1/2"	3/16"	unplated
990229-600-122	N/A	6"	5 5/8"	1 1/2"	3/16"	zinc yellow
990229-625-102	N/A	6 1/4"	5 7/8"	1 3/4"	3/16"	unplated
990229-625-102	N/A	6 1/4"	5 7/8"	1 3/4"	3/16"	zinc yellow
990229-650-102	N/A	6 1/2"	6 1/8"	1 3/4"	3/16"	unplated
990229-650-122	N/A	6 1/2"	6 1/8"	1 3/4"	3/16"	zinc yellow

3/4" DIAMETER POINT BOLTS

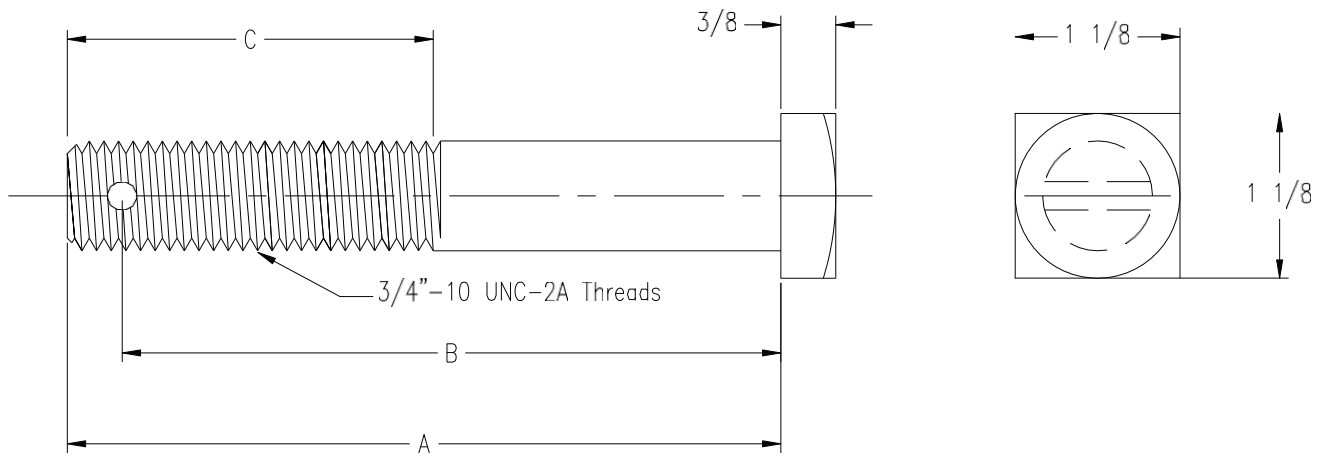


G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990233-350-121	N/A	3 1/2	3 1/8	1 3/4	3/16	zinc yellow
990233-375-121	N/A	3 3/4	3 3/8	1 3/4	3/16	zinc yellow
990233-400-122	N/A	4	3 5/8	1 3/4	3/16	zinc yellow
990233-400-121	N/A	4	3 3/4	1 3/4	3/16	zinc yellow
990233-400-123	N/A	4	3 3/4	2	3/16	zinc yellow
990233-425-121	N/A	4 1/4	3 7/8	1 3/4	3/16	zinc yellow
990233-450-122	N/A	4 1/2	4 1/4	1 3/4	3/16	zinc yellow
990233-450-121	N/A	4 1/2	4 1/8	1 3/4	3/16	zinc yellow
990233-475-121	N/A	4 3/4	4 3/8	1 3/4	3/16	zinc yellow
990233-500-121	N/A	5	4 3/4	1 3/4	3/16	zinc yellow
990233-500-102	N/A	5	4 5/8	1 3/4	3/16	unplated
990233-500-122	N/A	5	4 5/8	1 3/4	3/16	zinc yellow
990233-525-121	N/A	5 1/4	4 7/8	1 3/4	3/16	zinc yellow
990233-550-101	N/A	5 1/2	5 1/8	1 3/4	3/16	unplated
990233-550-121	N/A	5 1/2	5 1/8	1 3/4	3/16	zinc yellow
990233-575-121	N/A	5 3/4	5 3/8	1 3/4	3/16	zinc yellow
990233-600-102	N/A	6	5 5/8	1 3/4	3/16	unplated
990233-600-121	N/A	6	5 5/8	1 3/4	3/16	zinc yellow
990233-625-101	N/A	6 1/4	5 7/8	2	3/16	unplated
990233-625-121	N/A	6 1/4	5 7/8	2	3/16	zinc yellow
990233-650-101	N/A	6 1/2	6 1/8	2	3/16	unplated
990233-650-121	N/A	6 1/2	6 1/8	2	3/16	zinc yellow

# 3/4" DIAMETER POINT BOLTS

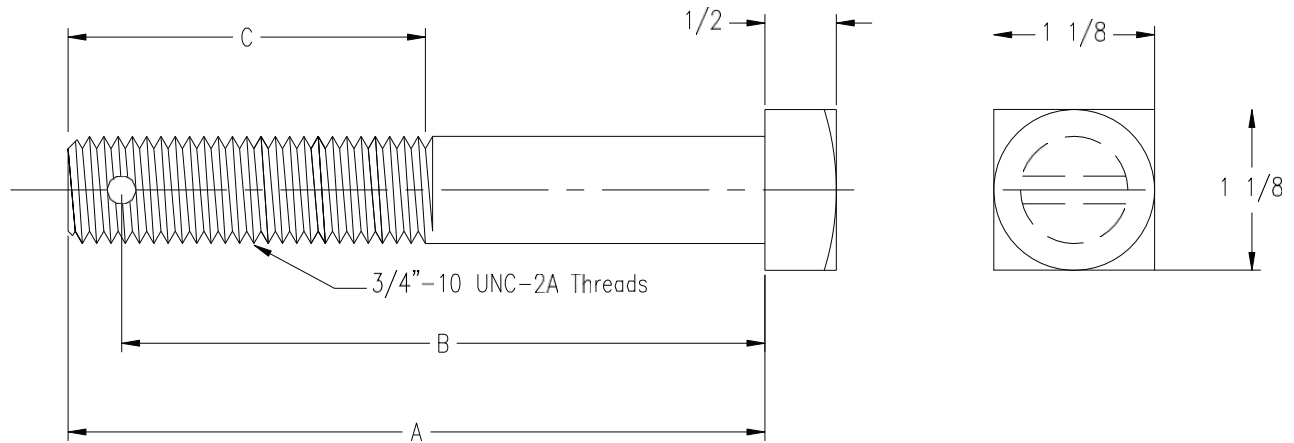


G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990232-350-121	43254-046	3 1/2	3 1/4	1 3/4	3/16	unplated
990232-350-12	M144103	3 1/2	N/A	2	3/16	zinc yellow
990232-375-121	M259494	3 3/4	3 3/8	2	3/16	zinc yellow
990232-400-12	M144103-001	4	N/A	3	3/16	zinc yellow
990232-387-101	43254-004	3 7/8	3 9/16	1 3/4	3/16	unplated
990232-400-102	N/A	4	3 17/32	1 3/4	3/16	unplated
990232-400-101	43254-024	4	3 3/4	1 3/4	3/16	unplated
990232-400-103	43254-024	4	3 5/8	1 3/4	3/16	unplated
990232-400-122	N/A	4	3 5/8	1 3/4	3/16	zinc yellow
990232-425-102	43254-030	4 1/4	3 7/8	1 3/4	3/16	unplated
990232-425-101	N/A	4 1/4	3 13/16	1 3/4	3/16	unplated
990232-437-101	43254-007	4 3/8	4 1/16	1 3/4	3/16	unplated
990232-450-103	M145853	4 1/2	4 1/4	2 1/2	3/16	zinc yellow
990232-450-101	43254-044	4 1/2	4 1/4	1 3/4	3/16	unplated
990232-450-121	N/A	4 1/2	4 1/4	1 3/4	3/16	zinc yellow
990232-450-102	43254-020	4 1/2	4 1/8	1 3/4	3/16	unplated
990232-450-122	N/A	4 1/2	4 1/8	1 3/4	3/16	zinc yellow
990232-475-122	N/A	4 3/4	3	1 3/4	3/16	zinc yellow
990232-475-101	N/A	4 3/4	4 3/8	1 3/4	3/16	unplated
990232-475-121	N/A	4 3/4	4 3/8	1 3/4	3/16	zinc yellow
990232-487-102	M197440	4 7/8	4 1/8	2 1/2	3/16	unplated
990232-487-103	43254-010	4 7/8	4 5/8	1 3/4	3/16	unplated

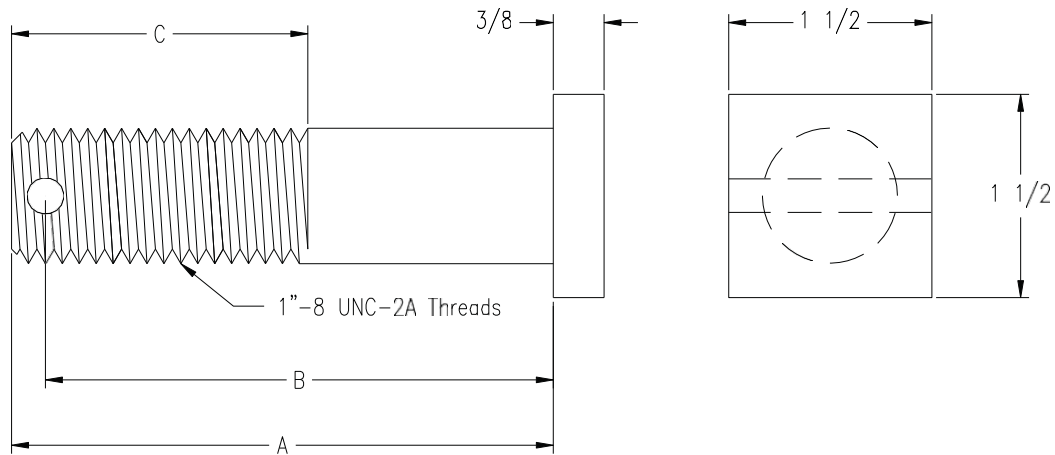


G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990232-500-102	43254-032	5	4 5/8	1 3/4	3/16	unplated
990232-500-122	N/A	5	4 5/8	1 3/4	3/16	zinc yellow
990232-500-101	43254-045	5	4 3/4	1 3/4	3/16	unplated
990232-500-121	N/A	5	4 3/4	1 3/4	3/16	zinc yellow
990232-525-121	M278920	5 1/4	5	3 1/2	3/16	zinc yellow
990232-550-102	43254-047	5 1/2	5 1/4	1 3/4	3/16	unplated
990232-550-122	N/A	5 1/2	5 1/4	1 3/4	3/16	zinc yellow
990232-575-101	N/A	5 1/2	5 3/16	1 3/4	3/16	zinc yellow
990232-575-121	N/A	5 3/4	5 3/8	1 3/4	3/16	unplated
990232-600-101	N/A	5 3/4	5 3/8	1 3/4	3/16	zinc yellow
990232-600-121	N/A	6	5 5/8	1 3/4	3/16	unplated
990232-600-122	N/A	6	5 5/8	1 3/4	3/16	zinc yellow
990232-625-122	M236004-001	6	5 3/4	2 1/2	3/16	zinc yellow
990232-625-101	N/A	6 1/4	5 7/8	2	3/16	unplated
990232-625-121	N/A	6 1/4	5 7/8	2	3/16	zinc yellow
990232-650-101	N/A	6 1/2	6 1/8	2	3/16	unplated
990232-650-121	N/A	6 1/2	6 1/8	2	3/16	zinc yellow

# 3/4" DIAMETER POINT BOLTS



G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990231-300-121	N/A	3	2 1/2	1 1/2	3/16	zinc yellow
990231-300-123	N/A	3	2 5/8	1 3/4	3/16	zinc yellow
990231-325-125	N/A	3 1/4	2 13/16	1 3/4	3/16	zinc yellow
990231-325-126	N/A	3 1/4	2 7/8	1 3/4	3/16	zinc yellow
990231-350-121	N/A	3 1/2	3 1/8	1 3/4	3/16	zinc yellow
990231-375-122	N/A	3 3/4	3 3/8	1 3/4	3/16	zinc yellow
990231-375-123	N/A	3 3/4	3 7/16	1 3/4	3/16	zinc yellow
990231-400-123	N/A	4	3 5/8	1 3/4	3/16	zinc yellow
990231-425-122	N/A	4 1/4	3 7/8	1 3/4	3/16	zinc yellow
990231-450-121	N/A	4 1/2	4 1/8	1 3/4	3/16	zinc yellow
990231-475-121	N/A	4 3/4	4 3/8	1 3/4	3/16	zinc yellow
990231-500-121	N/A	5	4 5/8	1 3/4	3/16	zinc yellow
990231-525-121	N/A	5 1/4	4 7/8	1 3/4	3/16	zinc yellow
990231-550-121	N/A	5 1/2	5 1/8	1 3/4	3/16	zinc yellow
990231-575-121	N/A	5 3/4	5 3/8	1 3/4	3/16	zinc yellow
990231-600-121	N/A	6	5 5/8	1 3/4	3/16	zinc yellow
990231-625-121	N/A	6 1/4	5 7/8	2	3/16	zinc yellow
990231-650-12	N/A	6 1/2	N/A	2	3/16	zinc yellow
990231-650-121	N/A	6 1/2	6 1/8	2	3/16	zinc yellow

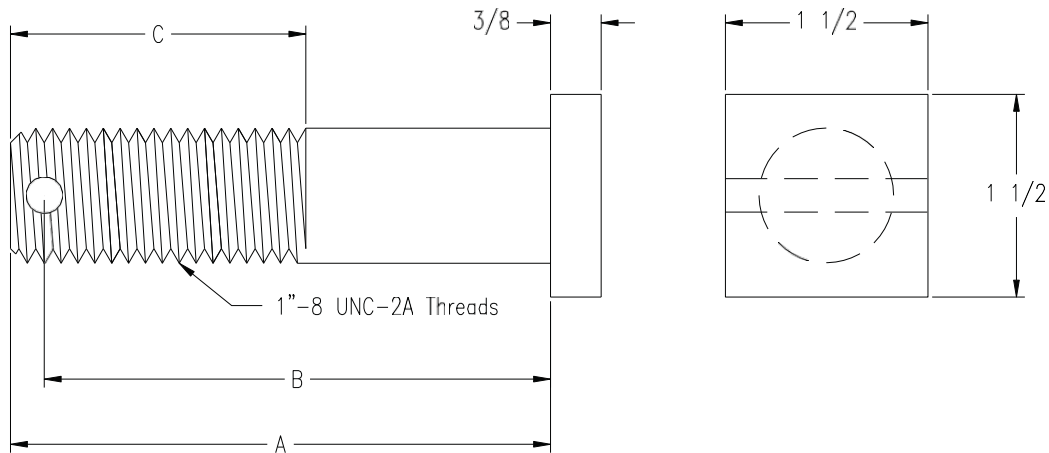


G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990243-350-101	N/A	3 1/2"	3 1/8"	2 1/4"	3/16"	unplated
990243-375-101	N/A	3 3/4"	3 3/8"	2 1/4"	3/16"	unplated
990243-400-102	N/A	4"	3 3/4"	2 1/4"	3/16"	unplated
990243-425-121	M263570	4 1/4"	3 15/16"	2 3/4"	3/16"	powder coat black
990243-425-102	N/A	4 1/4"	3 7/8"	2 1/4"	3/16"	unplated
990243-450-101	N/A	4 1/2"	4 1/4"	2 1/4"	3/16"	unplated
990243-462-102	M244552	4 5/8"	4 1/4"	2 3/4"	3/16"	powder coat black
990243-475-101	N/A	4 3/4"	4 11/32"	2 1/4"	1/4"	unplated
990243-475-10	M301559	4 3/4"	N/A	2"	N/A	unplated
990243-475-104	M312567	4 3/4"	4 3/8"	2 1/2"	3/16"	powder coat black
990243-475-122	N/A	4 3/4"	4 3/8"	2 1/4"	3/16"	zinc yellow
990243-500-122	M212755	5"	4 5/8"	2 1/4"	3/16"	powder coat black
990243-500-103	N/A	5"	4 5/8"	2 1/4"	3/16"	unplated
990243-500-121	N/A	5"	4 5/8"	2 1/4"	3/16"	zinc yellow
990243-500-102	N/A	5"	4 3/4"	2 1/4"	3/16"	unplated
990243-525-122	M259585	5 1/4"	4 7/8"	2 1/4"	3/16"	powder coat black
990243-525-123	M438390	5 1/4"	4 3/8"	2 1/4"	3/16"	powder coat black
990243-525-102	N/A	5 1/4"	4 7/8"	2 1/2"	3/16"	unplated
990243-525-104	N/A	5 1/2"	5 1/8"	2 1/4"	3/16"	unplated



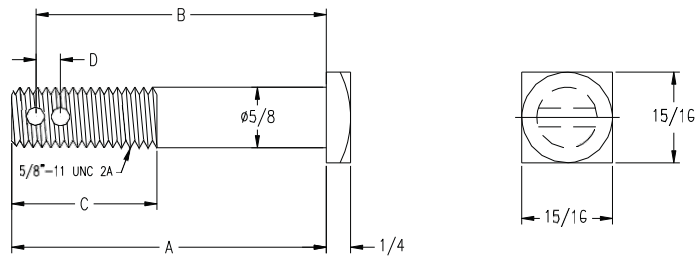
# 1" DIAMETER POINT BOLTS

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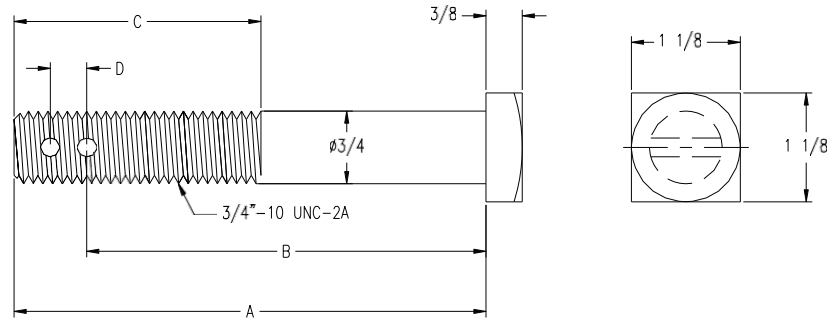


G & B PART #	OEM PART #	A	B	C	COTTER PIN SIZE	FINISH
990243-550-123	N/A	5 1/2"	5 1/8"	2 1/4"	3/16"	zinc yellow
990243-550-101	N/A	5 1/2"	5 3/16"	2 1/4"	3/16"	unplated
990243-550-102	N/A	5 1/2"	5 1/4"	2 1/4"	3/16"	unplated
990243-562-121	M323665	5 5/8"	5 1/4"	3 3/4"	3/16"	powder coat black
990243-575-102	N/A	5 3/4"	5 1/8"	2 1/4"	3/16"	unplated
990243-575-122	N/A	5 3/4"	5 1/8"	2 1/4"	3/16"	zinc yellow
990243-575-101	N/A	5 3/4"	5 1/2"	2 1/4"	3/16"	unplated
990243-575-121	M438504	5 3/4"	5 1/2"	2 1/2"	3/16"	powder coat black
990243-600-102	N/A	6"	5 5/8"	2 1/4"	3/16"	unplated
990243-600-123	N/A	6"	5 5/8"	2 1/4"	3/16"	zinc yellow
990243-600-121	M296172	6"	5 5/8"	2 1/4"	3/16"	powder coat black
990243-600-101	N/A	6"	5 3/4"	2 1/4"	3/16"	unplated
990243-625-101	N/A	6 1/4"	5 7/8"	2 1/2"	3/16"	unplated
990243-625-122	N/A	6 1/4"	5 7/8"	2 1/2"	3/16"	zinc yellow
990243-650-103	N/A	6 1/2"	6 1/8"	2 1/2"	3/16"	unplated
990243-650-122	N/A	6 1/2"	6 1/8"	2 1/2"	3/16"	zinc yellow
990243-650-121	M438503	6 1/2"	6 1/4"	2 1/2"	3/16"	powder coat black
990243-700-101	N/A	7"	6 5/8"	2 1/2"	3/16"	unplated
990243-750-101	N/A	7 1/2"	7 1/8"	2 1/2"	3/16"	unplated

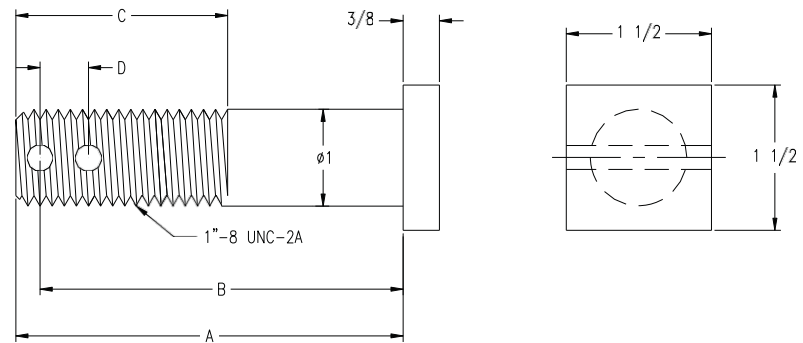
VIEW A



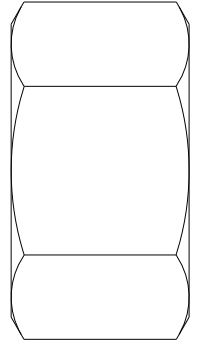
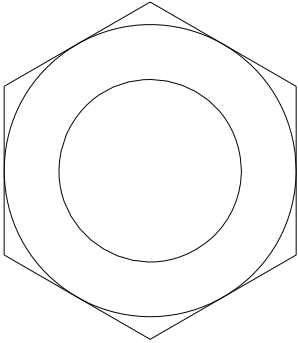
VIEW B



VIEW C

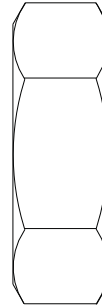
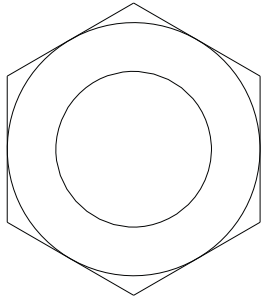


G & B PART #	OEM PART #	A	B	C	D	COTTER PIN SIZE	VIEW	FINISH
990228-550-102	N/A	5 1/2"	4 1/8"	1 1/2"	3/4"	3/16"	A	unplated
990228-550-127	N/A	5 1/2"	4 1/8"	1 1/2"	3/4"	3/16"	A	zinc yellow
990232-427-127	M304193	4 1/4"	3 5/8"	2 1/2"	5/16"	3/16"	B	zinc yellow
990232-462-127	M211915	4 5/8"	3 7/8"	2 1/2"	3/8"	3/16"	B	zinc yellow
990232-525-127	M304192	5 1/4"	4 5/8"	2 1/4"	5/16"	3/16"	B	zinc yellow
990243-525-107	M438390	5 1/4"	4 3/8"	2 1/2"	1/2"	3/16"	C	powder coat black
990243-550-107	M393550	5 1/2"	4 3/8"	3"	3/4"	1/4"	C	unplated
990243-625-107	M393551	6 1/4"	5 1/8"	3"	3/4"	1/4"	C	unplated
990243-650-107	M393551-001	6 1/2"	5 3/8"	3"	3/4"	3/16"	C	unplated



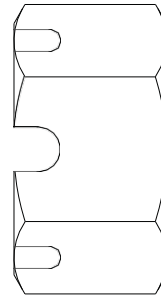
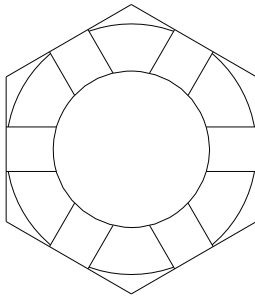
SIZE UNC-2B THREADS	REGULAR		HEAVY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"-20	990311-025-02	424-11	990331-025-02	J048002
5/16"-18	990311-031-02	1155-11	990331-031-02	J048006
3/8"-16	990311-037-02	N/A	990331-037-02	J048009
7/16"-14	990311-043-02	539-2	990331-043-02	N/A
1/2"-13	990311-050-02	1048-5	990331-050-02	J048013
9/16"-12	990311-056-02	N/A	990331-056-02	N/A
5/8"-11	990311-062-02	645-6	990331-062-02	J048020
3/4"-10	990311-075-02	0272-12	990331-075-02	J048026
7/8"-9	990311-087-02	523-11	990331-087-02	J048029
1"-8	990311-100-02	1047-14	990331-100-02	J048030
1 1/8"-7	990311-112-02	N/A	990331-112-02	J040839
1 1/4"-7	990311-125-02	545-12	990331-125-02	J048176
1 3/8"-6	990311-137-02	N/A	990331-137-02	J048049
1 1/2"-6	990311-150-02	N/A	990331-150-02	J048052

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard Sixth Edition 1988



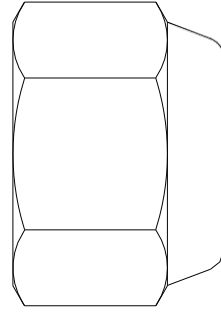
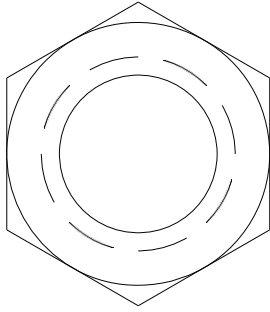
SIZE UNC-2B THREADS	REGULAR		HEAVY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"-20	990310-025-02	424-5	990330-025-02	J048003
5/16"-18	990310-031-02	01272-019-ON	990330-031-02	J048007
3/8"-16	990310-037-02	N/A	990330-037-02	J048010
7/16"-14	990310-043-02	N/A	990330-043-02	N/A
1/2"-13	990310-050-02	N/A	990330-050-02	J048016
9/16"-12	990310-056-02	N/A	990330-056-02	N/A
5/8"-11	990310-062-02	N/A	990330-062-02	J048074
3/4"-10	990310-075-02	4364-005-00	990330-075-02	J048023/4364
7/8"-9	990310-087-02	N/A	990330-087-02	J048069
1"-8	990310-100-02	N/A	990330-100-02	J048033/0477-2
1 1/8"-7	990310-112-02	N/A	990330-112-02	J048114
1 1/4"-7	990310-125-02	N/A	990330-125-02	J048044/2813-003
1 3/8"-6	990310-137-02	N/A	990330-137-02	N/A
1 1/2"-6	990310-150-02	N/A	990330-150-02	N/A

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



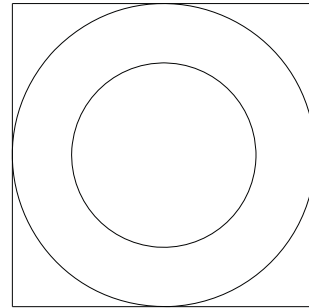
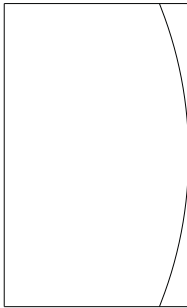
SIZE UNC-2B THREADS	REGULAR		HEAVY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"-20	990312-025-02	N/A	990332-025-02	N/A
5/16"-18	990312-031-02	N/A	990332-031-02	N/A
3/8"-16	990312-037-02	N/A	990332-037-02	J048122
7/16"-14	990312-043-02	N/A	990332-043-02	N/A
1/2"-13	990312-050-02	N/A	990332-050-02	J048090
9/16"-12	990312-056-02	N/A	990332-056-02	N/A
5/8"-11	990312-062-02	N/A	990332-062-02	J048074
3/4"-10	990312-075-02	N/A	990332-075-02	J048091
7/8"-9	990312-087-02	N/A	990332-087-02	J048136/47191-009
1"-8	990312-100-02	N/A	990332-100-02	J048117
1 1/8"-7	990312-112-02	N/A	990332-112-02	J480158
1 1/4"-7	990312-125-02	N/A	990332-125-02	J048127
1 3/8"-6	990312-137-02	N/A	990332-137-02	N/A
1 1/2"-6	990312-150-02	N/A	990332-150-02	N/A

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



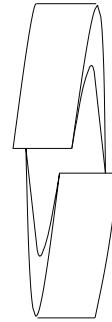
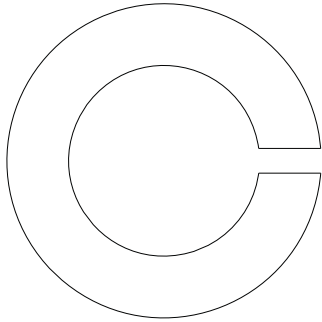
SIZE UNC-2B THREADS	REGULAR		HEAVY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"-20	990316-025-02	N/A	990335-025-02	J048140
5/16"-18	990316-031-02	N/A	990335-031-02	N/A
3/8"-16	990316-037-02	N/A	990335-037-02	J480011
7/16"-14	990316-043-02	N/A	990335-043-02	N/A
1/2"-13	990316-050-02	N/A	990335-050-02	J048133
9/16"-12	990316-056-02	N/A	990335-056-02	N/A
5/8"-11	990316-062-02	N/A	990335-062-02	N/A
3/4"-10	990316-075-02	N/A	990335-075-02	J480215
7/8"-9	990316-087-02	N/A	990335-087-02	N/A
1"-8	990316-100-02	N/A	990335-100-02	N/A
1 1/8"-7	990316-112-02	N/A	990335-112-02	N/A
1 1/4"-7	990316-125-02	N/A	990335-125-02	J048132
1 3/8"-6	990316-137-02	N/A	990335-137-02	N/A
1 1/2"-6	990316-150-02	N/A	990335-150-02	N/A

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



SIZE UNC-2B THREADS	REGULAR		HEAVY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"-20	990301-025-02	N/A	990302-025-12	J048225
5/16"-18	990301-031-02	N/A	990302-031-12	J048226
3/8"-16	990301-037-02	N/A	990302-037-12	J048227
7/16"-14	990301-043-02	N/A	990302-043-12	N/A
1/2"-13	990301-050-02	N/A	990302-050-12	J048240
9/16"-12	990301-056-02	N/A	990302-056-12	N/A
5/8"-11	990301-062-02	N/A	990302-062-12	J048228
3/4"-10	990301-075-02	N/A	990302-075-12	J048229
7/8"-9	990301-087-02	N/A	990302-087-12	J048230
1"-8	990301-100-02	N/A	990302-100-12	J048232
1 1/8"-7	990301-112-02	N/A	990302-112-12	N/A
1 1/4"-7	990301-125-02	N/A	990302-125-12	J048235
1 3/8"-6	990301-137-02	N/A	990302-137-12	N/A
1 1/2"-6	990301-150-02	N/A	990302-150-12	N/A

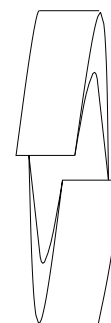
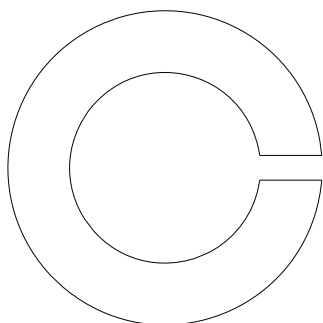
Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



SIZE	LIGHT		REGULAR	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"	990400-025-02	N/A	990401-025-02	01273-6
5/16"	990400-031-02	N/A	990401-031-02	J047526/01273-7
3/8"	990400-037-02	N/A	990401-037-02	01273-8
7/16"	990400-043-02	N/A	990401-043-02	01273-9
1/2"	990400-050-02	N/A	990401-050-02	J047783/01273-10
9/16"	990400-056-02	N/A	990401-056-02	N/A
5/8"	990400-062-02	N/A	990401-062-02	J047822/01273-11
11/16"	990400-068-02	N/A	990401-068-02	01273-12
3/4"	990400-075-02	N/A	990401-075-02	J047627/01273-13
13/16"	990400-081-02	N/A	990401-081-02	N/A
7/8"	990400-087-02	N/A	990401-087-02	J047742/01273-14
15/16"	990400-093-02	N/A	990401-093-02	N/A
1"	990400-100-02	N/A	990401-100-02	J047823/01273-15
1 1/16"	990400-106-02	N/A	990401-106-02	N/A
1 1/8"	990400-112-02	N/A	990401-112-02	J047551/01273-16
1 3/16"	990400-118-02	N/A	990401-118-02	N/A
1 1/4"	990400-125-02	N/A	990401-125-02	J047552/01273-17
1 5/16"	990400-131-02	N/A	990401-131-02	N/A
1 3/8"	990400-137-02	N/A	990401-137-02	01273-18
1 7/16"	990400-143-02	N/A	990401-143-02	N/A
1 1/2"	990400-150-02	N/A	990401-150-02	01273-19

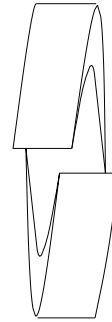
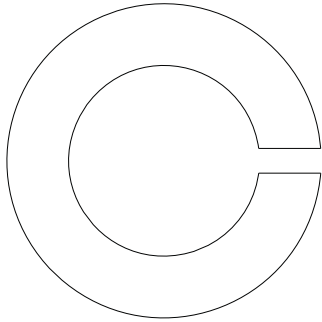
Ref: for dimensions, please refer to Industrial Fasteners Institute Standard





SIZE	HEAVY		EXTRA DUTY	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"	990402-025-02	N/A	990403-025-02	N/A
5/16"	990402-036-02	N/A	990403-031-02	J047767
3/8"	990402-037-02	N/A	990403-037-02	J047768
7/16"	990402-043-02	N/A	990403-043-02	N/A
1/2"	990402-050-02	N/A	990403-050-02	J047769
9/16"	990402-056-02	N/A	990403-056-02	N/A
5/8"	990402-062-02	N/A	990403-062-02	J047771
11/16"	990402-068-02	N/A	990403-068-02	N/A
3/4"	990402-075-02	N/A	990403-075-02	J047772
13/16"	990402-081-02	N/A	990403-081-02	N/A
7/8"	990402-087-02	N/A	990403-087-02	J047773
15/16"	990402-093-02	N/A	990403-093-02	N/A
1"	990402-100-02	N/A	990403-100-02	J047774
1 1/16"	990402-106-02	N/A	990403-106-02	N/A
1 1/8"	990402-112-02	N/A	990403-112-02	N/A
1 3/16"	990402-118-02	N/A	990403-118-02	N/A
1 1/4"	990402-125-02	N/A	990403-125-02	J047805
1 5/16"	990402-131-02	N/A	990403-131-02	N/A
1 3/8"	990402-137-02	N/A	990403-137-02	N/A
1 7/16"	990402-143-02	N/A	990403-143-02	N/A
1 1/2"	990402-150-02	N/A	990403-150-02	N/A

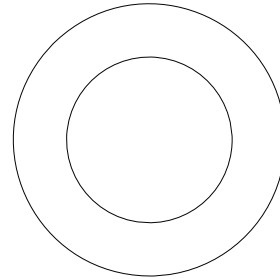
Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



SIZE	HI POWER		HI COLLAR	
	G & B PART #	OEM PART #	G & B PART #	OEM PART #
1/4"	990404-025-02	N/A	990405-025-02	N/A
5/16"	990404-031-02	N/A	990405-031-02	N/A
3/8"	990404-037-02	N/A	990405-037-02	N/A
7/16"	990404-043-02	N/A	990405-043-02	N/A
1/2"	990404-050-02	N/A	990405-050-02	N/A
9/16"	990404-056-02	N/A	990405-056-02	N/A
5/8"	990404-062-02	N/A	990405-062-02	N/A
11/16"	990404-068-02	N/A	990405-068-02	N/A
3/4"	990404-075-02	N/A	990405-075-02	N/A
13/16"	990404-081-02	J047546	990405-081-02	N/A
7/8"	990404-087-02	J047547	990405-087-02	N/A
15/16"	990404-093-02	N/A	990405-093-02	N/A
1"	990404-100-02	J047637	990405-100-02	N/A
1/16"	990404-106-02	N/A	990405-106-02	N/A
1 1/8"	990404-112-02	N/A	990405-112-02	N/A
1 3/16"	990404-118-02	N/A	990405-118-02	N/A
1 1/4"	990404-125-02	J047834	990405-125-02	N/A
1 5/16"	990404-131-02	N/A	990405-131-02	N/A
1 3/8"	990404-137-02	N/A	990405-137-02	N/A
1 7/16"	990404-143-02	N/A	990405-143-02	N/A
1 1/2"	990404-050-02	N/A	990405-150-02	N/A

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard

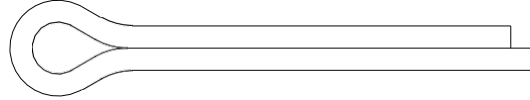
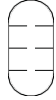
# PLAIN WASHERS



SIZE	NARROW		WIDE	
	G & B PART #	OUTSIDE DIAMETER	G & B PART #	OUTSIDE DIAMETER
3/16"	990600-187-002	.562	N/A	N/A
1/4"	990600-250-002	.625	990601-250-002	.734
5/16"	990600-312-002	.688	990601-312-002	.875
3/8"	990600-375-002	.812	990601-375-002	1.000
7/16"	990600-437-002	.922	990601-437-002	1.250
1/2"	990600-500-002	1.062	990601-500-002	1.375
9/16"	990600-562-002	1.156	990601-562-002	1.469
5/8"	990600-625-002	1.312	990601-625-002	1.750
3/4"	990600-750-002	1.469	990601-750-002	2.000
7/8"	990600-875-002	1.750	990601-875-002	2.250
1"	990600-100-002	2.000	990601-100-002	2.500
1 1/8"	990600-112-002	2.250	990601-112-002	2.750
1 1/4"	990600-125-002	2.500	990601-125-002	3.000
1 3/8"	990600-137-002	2.750	990601-137-002	3.250
1 1/2"	990600-150-002	3.000	990601-150-002	3.500
1 5/8"	990600-162-002	3.750	N/A	N/A
1 3/4"	990600-175-002	4.000	N/A	N/A
1 7/8"	990600-187-002	4.250	N/A	N/A
2"	990600-200-002	4.500	N/A	N/A
2 1/4"	990600-225-002	4.750	N/A	N/A
2 1/2"	990600-250-002	5.000	N/A	N/A
2 3/4"	990600-275-002	5.250	N/A	N/A
3"	990600-300-002	5.500	N/A	N/A

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard

# O-35 COTTER PIN - EXTENDED PRONG, SQUARE CUT



SIZE	G & B PART #	OEM PART #	SIZE	G & B PART #	OEM PART #
1/16" X 3/8"	990502-037-02	J048600/00652-001ON	3/16" X 1 3/4"	990509-175-02	00045-001-ON
1/16" X 1/2"	990502-050-02	00563-002-ON	3/16" X 2"	990509-200-02	J048636/00046-001-ON
1/16" X 3/4"	990502-075-02	00213-004-ON	1/4" X 1"	990511-100-02	N/A
1/16" X 7/8"	990502-087-02	30039-001-ON	1/4" X 1 1/4"	990511-125-02	N/A
3/32" X 1/2"	990504-050-02	00034-001-ON	1/4" X 1 1/2"	990511-150-02	J048643/00047-000-ON
3/32" X 5/8"	990504-062-02	00035-001-ON	1/4" X 1 3/4"	990511-175-02	J048644/00048-000-ON
3/32" X 3/4"	990504-075-02	00036-000-ON	1/4" X 2"	990511-200-02	J048645/00046-001-ON
3/32" X 7/8"	990504-087-02	N/A	1/4" X 2 1/4"	990511-225-02	J048646
3/32" X 1"	990504-100-02	00037-000-ON	1/4" X 2 1/2"	990511-250-02	J048665/00213-002-ON
3/32" X 1 1/4"	990504-125-02	00156-001-ON	1/4" X 2 3/4"	990511-275-02	N/A
3/32" X 1 1/2"	990504-150-02	00037-002-ON	1/4" X 3"	990511-300-02	J048647/00277-000-ON
1/8" X 1/2"	990506-050-02	N/A	1/4" x 3 1/2"	990511-350-02	N/A
1/8" X 3/4"	990506-075-02	J048618/00039-001-ON	5/16" X 1 1/2"	990512-150-02	N/A
1/8" X 7/8"	990506-087-02	00663-001-ON	5/16" X 2"	990512-200-02	N/A
1/8" X 1"	990506-100-02	00040-003-ON	3/8" X 1 1/4"	990513-125-02	N/A
1/8" X 1 1/4"	990506-125-02	J048622/00041-000-ON	3/8" X 1 1/2"	990513-150-02	N/A
1/8" X 1 1/2"	990506-150-02	J048623/00169-000-ON	3/8" X 2"	990513-200-02	N/A
3/16" X 3/4"	990509-075-02	N/A	1/2" X 1 1/2"	990515-150-02	N/A
3/16" X 1"	990509-100-02	00042-000-ON	1/2" X 2"	990515-200-02	N/A
3/16" X 1 1/8"	990509-112-02	J048632	5/8" X 3"	990516-300-02	N/A
3/16" X 1 1/4"	990509-125-02	J048633/00043-000-ON	5/8" X 3 1/2"	990516-350-02	N/A
3/16" X 1 1/2"	990509-150-02	J048634/00044-000-ON			

Ref: for dimensions, please refer to Industrial Fasteners Institute Standard



# MISCELLANEOUS

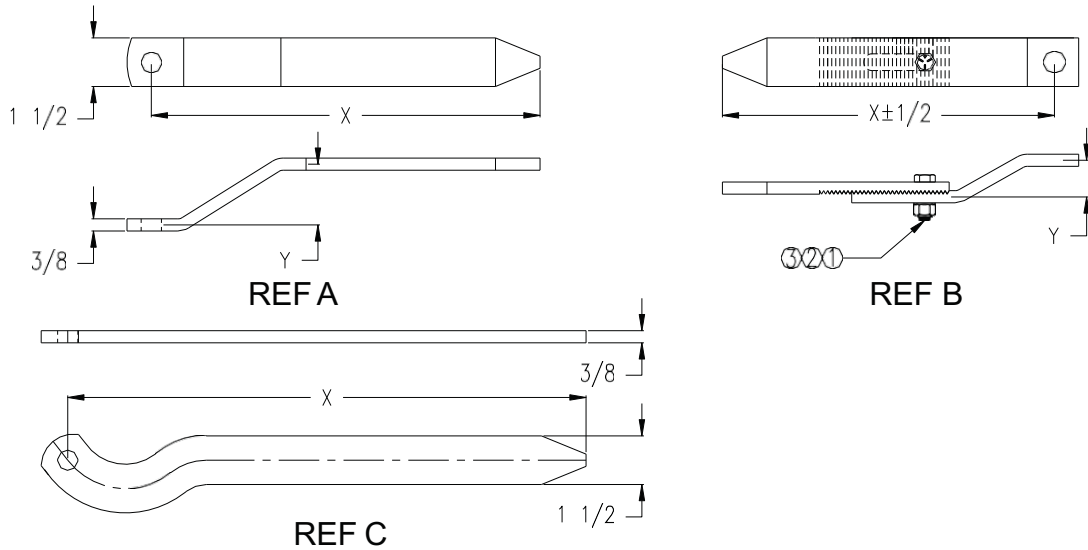
## SECTION P

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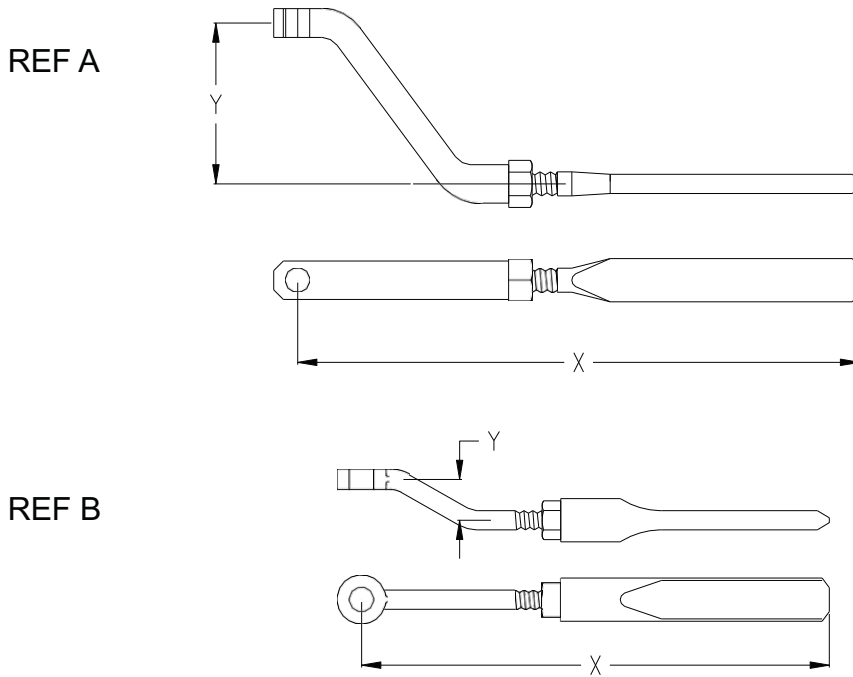
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Bridge Knife Contacts.....	
Non Shunting Barricade.....	

# LATCH ROD

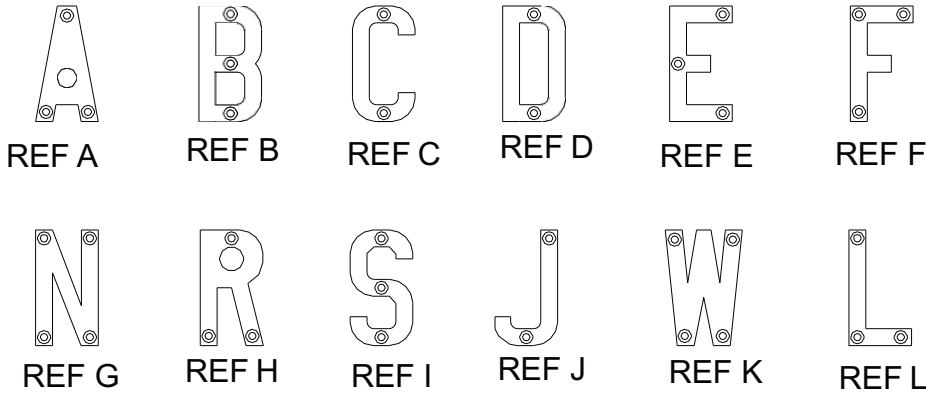


REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LATCH ROD</b> , offset, X = 14", Y = 1 7/8".....	946987-001	46987-053
A1	Similar to Ref A except X = 21", Y = 15/16".....	946987-002	46987-054
A2	Similar to Ref A except X = 12", Y = 1 7/8".....	946987-003	46987-055
A3	Similar to Ref A except X = 16", Y = 1 7/8".....	946987-004	46987-056
A4	Similar to Ref A except X = 11", Y = 1 7/8".....	946987-005	46987-063
A5	Similar to Ref A, for GRS model 9 switch machine, except X = 13, Y = 1 7/8".....	946987-006	46987-064 P50-486
A6	Similar to Ref A except X = 15, Y = 1 7/8".....	946987-007	46987-065
A7	Similar to Ref A, for Model 51A switch stand except X = 14", Y = 3/4"....	946987-008	46987-066 P50-487
A8	Similar to Ref A except X = 12", Y = 7/8".....	946987-009	46987-067
A9	Similar to Ref A, for Rapro and Ramapo 109 or 110 switch stand, except X = 13 1/2", Y = 7/8".....	946987-010	46987-068 P50-488
A10	Similar to Ref A except X = 13", Y = 1 3/8".....	946987-011	46987-069
A11	Similar to Ref A except X = 13", Y = 1 3/4".....	946987-012	46987-070
A12	Similar to Ref A except X = 17", Y = 3 3/8".....	946987-013	46987-072
A13	Similar to Ref A except X = 17", Y = 3 3/4".....	946987-014	43987-073
A14	Similar to Ref A except X = 17 3/4", Y = 1 7/8".....	946987-015	46987-075
A15	Similar to Ref A except X = 14 1/2", Y = 1 1/8".....	946987-016	46987-076
A16	Similar to Ref A except X = 16", Y = 2 3/8".....	946987-017	46987-077
B	<b>ADJUSTABLE LATCH ROD ASSEMBLY</b> , for Model 51 switch stand X = 10 1/4" Y = 1 1/8".....	957102-003-01	N/A
C	<b>LATCH ROD</b> , straight, for Ramapo Ajax 36D and 36H switch stands, X = 16".....	946987-018	46987-032 P50-479
C1	Similar to Ref B except X = 16 3/4".....	946987-019	46987-072
1	<b>HEX SCREW</b> , 1/2" X 1 3/8".....	990727-137-12	N/A
2	<b>FLAT WASHER</b> , 1/2".....	990600-050-02	N/A
3	<b>HEAVEY HEX LOCK NUT</b> .....	990338-050-02	N/A



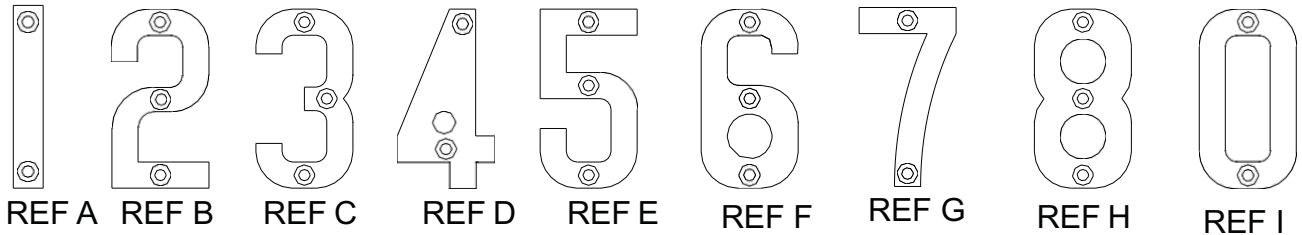
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>LEVER LOCK ROD</b> , X = 9 9/16", Y = 1 7/8".....	809000-001X	N277576
A1	Similar to Ref A except X = 23 7/8", Y = 2 11/16".....	809000-002X	N309211
A2	Similar to Ref A except X = 13 7/8", Y = 4 3/16".....	809000-003X	N295291
A3	Similar to Ref A except X = 23 7/8", Y = 4 3/16".....	809000-004X	N295293
A4	Similar to Ref A except X = 16 3/4", Y = 4 3/16".....	809000-005X	N306800
A5	Similar to Ref A except X = 9", Y = 2 11/16".....	809000-006X	N322024
A6	Similar to Ref A except X = 12 3/4", Y = 2 5/8".....	809000-007X	N304734
B	<b>LEVER LOCK ROD</b> X = 11 7/16", Y = 1 1/16", Z = 7".....	809001-001X	N313979
B1	Similar to Ref B except X = 11 11/16", Y = 1 5/8", Z = 7".....	809001-002X	N313979-001
B2	Similar to Ref B except X = 10 5/16", Y = 1 5/8", Z = 7".....	809001-003X	N313979-002
B3	Similar to Ref B except X = 18 7/16", Y = 1 1/16", Z = 14 1/8".....	809001-004X	N313797-003
B4	Similar to Ref B except X = 11 11/16", Y = 3 1/8", Z = 7".....	809001-005X	N313797-004
B5	Similar to Ref B except X = 11 11/16", Y = 3/4", Z = 7".....	809001-006X	N313797-005
B6	Similar to Ref B except X = 11 11/16", Y = 1 3/16", Z = 7".....	809001-007X	N329878
B7	Similar to Ref B except X = 11 11/16", Y = 2 1/8", Z = 7".....	809001-008X	N329977
B8	Similar to Ref B except X = 10 5/16", Y = 1 1/16", Z = 7".....	809001-009X	N399322

REF A: For SL-21A switch locks on standard hand throw switch stands  
 REF B: For SL-21A, SL-25/26 switch locks on T-20/T-21 switch machines



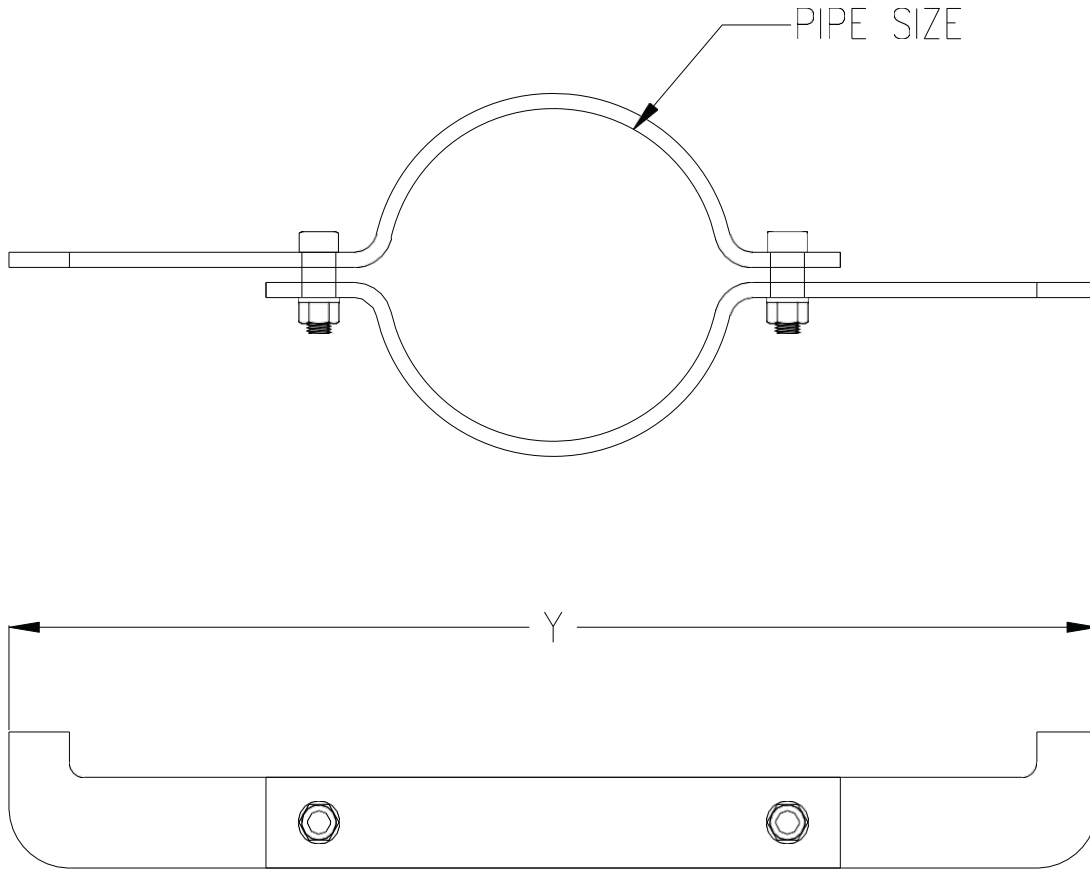
REF	DESCRIPTION	G & B PART #	OEM PART #
A	LETTER "A", painted gray.....	998760-005	M043002
A1	Similar to Ref A except painted white.....	998760-006	M043002-001
B	LETTER "B", painted gray.....	998760-007	M043003
B1	Similar to Ref B except painted white.....	998760-008	M043003-001
C	LETTER "C", painted gray.....	998760-009	M043004
C1	Similar to Ref C except painted white.....	998760-010	M043004-001
D	LETTER "D", painted gray.....	998760-011	M043005
D1	Similar to Ref D except painted white.....	998760-012	M043005-001
E	LETTER "E", painted gray.....	998760-013	M043006
E1	Similar to Ref E except painted white.....	998760-014	M043006-001
F	LETTER "F", painted gray.....	998760-015	M043007
F1	Similar to Ref F except painted white.....	998760-016	M043007-001
G	LETTER "N", painted gray.....	998760-001	M032593
G1	Similar to Ref G except painted white.....	998760-002	M032593-001
H	LETTER "R", painted gray.....	998760-003	M032594
H1	Similar to Ref H except painted white.....	998760-004	M032594-001
I	LETTER "S", painted gray.....	998760-017	M147299
I1	Similar to Ref I except painted white.....	998760-018	M147299-001
J	LETTER "J", painted gray.....	998760-019	M147298
J1	Similar to Ref J except painted white.....	998760-020	M147298-001
K	LETTER "W", painted gray.....	998760-021	M162709
K1	Similar to Ref K except painted white.....	998760-022	M162709-001
L	LETTER "L", painted gray.....	998760-023	M032592
L1	Similar to Ref L except painted white.....	998760-024	M032592-001





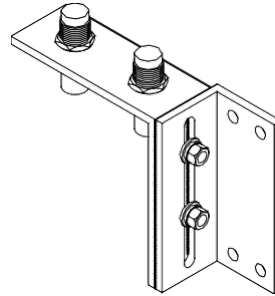
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>NUMBER "1"</b> , painted gray.....	998761-001	M032582
A1	Similar to Ref A except painted white.....	998761-002	M032582-001
B	<b>NUMBER "2"</b> , painted gray.....	998761-003	M032583
B1	Similar to Ref B except painted white.....	998761-004	M032583-001
C	<b>NUMBER "3"</b> , painted gray.....	998761-005	M032584
C1	Similar to Ref C except painted white.....	998761-006	M032584-001
D	<b>NUMBER "4"</b> , painted gray.....	998761-007	M032585
D1	Similar to Ref D except painted white.....	998761-008	M032585-001
E	<b>NUMBER "5"</b> , painted gray.....	998761-009	M032586
E1	Similar to Ref E except painted white.....	998761-010	M032586-001
F	<b>NUMBER "6"</b> , painted gray.....	998761-011	M032587
F1	Similar to Ref F except painted white.....	998761-012	M032587-001
G	<b>NUMBER "7"</b> , painted gray.....	998761-013	M032588
G1	Similar to Ref G except painted white.....	998761-014	M032588-001
H	<b>NUMBER "8"</b> , painted gray.....	998761-015	M032589
H1	Similar to Ref H except painted white.....	998761-016	M032589-001
I	<b>NUMBER "0"</b> , painted gray.....	998761-017	M032591
I1	Similar to Ref I except painted white.....	998761-018	M032591-001

# CLIMBING STEPS

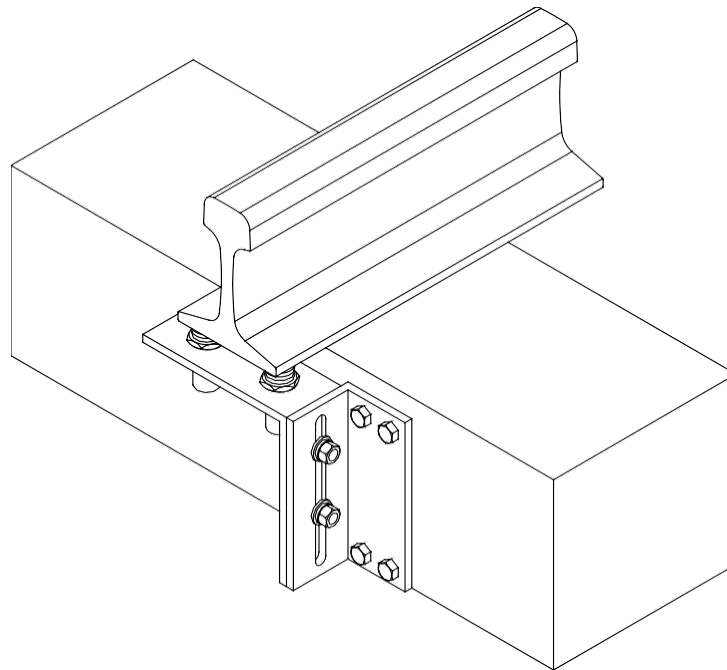


REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>CLIMBING STEP COMPLETE</b> , for 2" pipe, X = 2 3/8", Y = 15", galvanized..	989001-001-01	N283151
A1	Similar to Ref A except for 3" pipe, X = 3 1/2", Y = 16".....	989001-002-01	20416-008-01 N179510
A2	Similar to Ref A except for 4" pipe, X = 4 1/2", Y = 17", AAR Detail 14165....	989001-003-01	20416-008-02 A30-240 N199590
A3	Similar to Ref A except for 5" pipe, X = 5 1/2", Y = 18", AAR Detail 14166....	989001-004-01	20416-008-03 A30-239
A4	Similar to Ref A except for 6" pipe, X = 6 5/8", Y = 19 1/8", AAR Detail 14167.....	989001-005-01	20416-008-04
A5	Similar to Ref A except for 8" pipe, X = 8 5/8", Y = 21 1/8", AAR Detail 14168.....	989001-006-01	20416-008-05



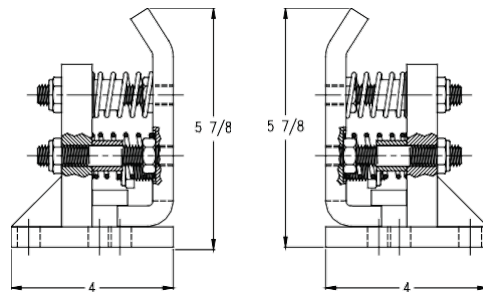
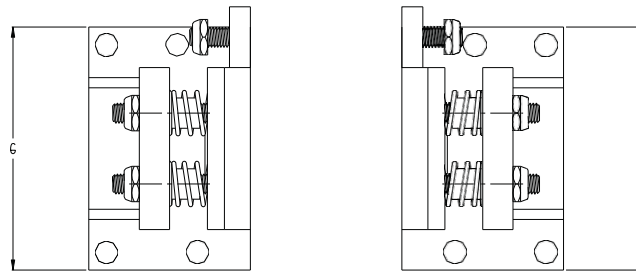
REF A



VIEW OF MOUNTING BRACKET IN USE

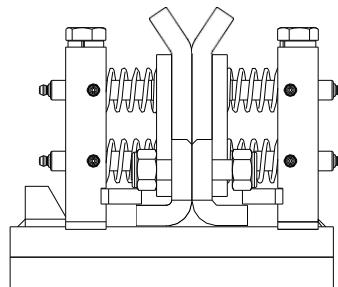
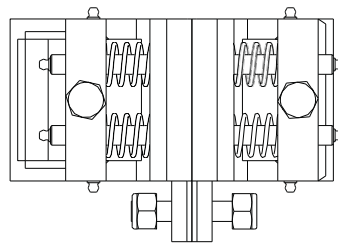
REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>PROXIMITY SWITCH MOUNTING BRACKET ASSEMBLY</b> , for right hand mounting.....	998950-501X	N/A
A1	Similar to Ref A except for left hand mounting.....	998950-502X	N/A

# BRIDGE KNIFE CONTACTS



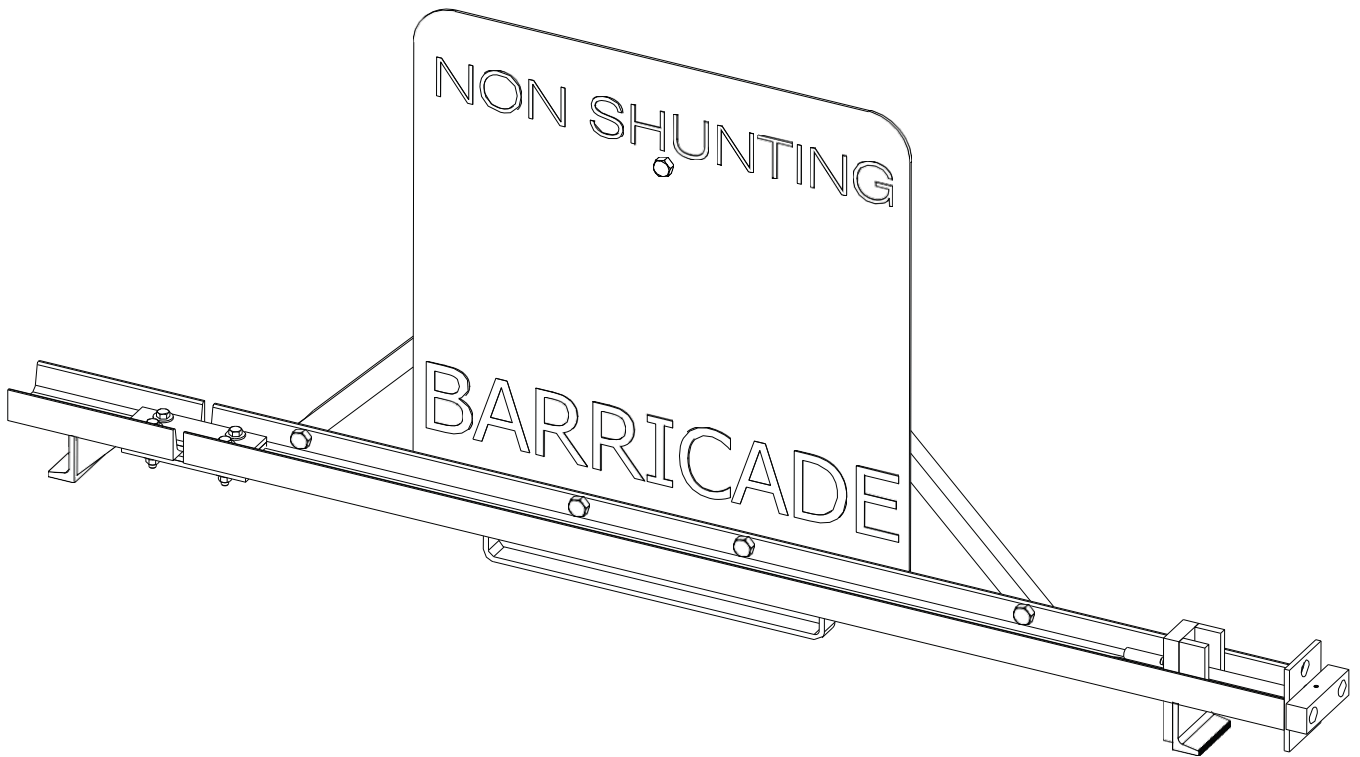
RIGHT HAND ASSEMBLY

LEFT HAND ASSEMBLY



REF A

REF	DESCRIPTION	G & B PART #	OEM PART #
A	<b>KNIFE CONTACT ASSEMBLY</b> , for drawbridge installation, one complete assembly includes all right hand and left hand assembly components shown above.....	998950X	N/A
B	<b>KNIFE CONTACT ASSEMBLY</b> , for drawbridge installation, one complete assembly includes all right hand and left hand assembly components shown above.....	998955-001-01	N/A



REF	DESCRIPTION	G & B PART #	OEM PART #
A	BARRICADE ASSY, NON SHUNTING.....	500300-001-01	N/A



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## R-150 CUSHION-RIDE *RAILGEAR*

### Light Pickup Trucks & Utility Vehicles

- ◆ Model R-150, for installation on vehicles up to 6,500 lbs GVWR
- ◆ 8" steel wheels
- ◆ Front and rear suspension Railgear units
- ◆ Mini electric/hydraulic 12 VDC powerpac with push-button controls
- ◆ Emergency hydraulic hand pump
- ◆ Road and rail automatic locking mechanism
- ◆ Combined front and rear Railgear weight of 600 lbs
- ◆ Optional in-cab controls



# R-150 CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-150 is applicable to vehicles up to 6,500 lbs GVWR. Both rotating and vertical front railgear are available. Railgear locks automatically in both road and rail position. Proven "Cushion-Ride" suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads. Rail wheel assemblies are bolted to the axles for simple wheel alignment.

All four rail wheels provide full track circuit isolation. Included 12VDC electric / hydraulic pump and reservoir with sealed push button controls provides safe and easy access to the rail. Optional in-cab railgear controls are available. Few moving parts result in low maintenance and lubrication costs. Fully installed weight is approximately 300 lbs front and 300 lbs rear. Uses light weight 8" diameter cast steel wheels with heavy duty tapered roller bearings. Rotating rear railgear is standard.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-150 Railgear* is the railgear for **YOU!!!**

## STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in rail and road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (one cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ 12VDC pump and reservoir.
- ◆ Built-in derail skirts.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels).
- ◆ Grease fittings at all points.
- ◆ Corrosion resistant, long life wear fasteners.
- ◆ Protective bellows over all inner guide tubes.
- ◆ Mechanical steering wheel lock, (hook and loop).
- ◆ Standard railgear controls.
- ◆ Rotating rear railgear is standard.

## OPTIONAL FEATURES

- ◆ In-cab railgear controls.
- ◆ Both rotating and vertical front railgear are available.

## VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ *6,500 lbs GVWR*      *GAWR (Front) 3,100 lbs*      *GAWR (Rear) 3,400 lbs*

## INSTALLED WEIGHTS

Total: 600 lbs

Front: 300 lbs

Rear: 300 lbs

## WHEELS

Material: Cast steel

Tread: 8" diameter

Flange: 10.25" diameter

Bearings: Heavy-duty tapered roller bearings

Grease cap with vent



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## R-290 CUSHION-RIDE *RAILGEAR*

### 3/4 Ton & 1 Ton Pick-Up Trucks

- ◆ Model R-290, for installation on vehicles up to 12,500 lbs GVWR
- ◆ 10" steel wheels /rubber tread wheel
- ◆ Front and rear suspension Railgear units
- ◆ Mini electric/hydraulic 12 VDC powerpac with push-button controls
- ◆ Emergency hydraulic hand pump
- ◆ Road and rail automatic locking mechanism
- ◆ Identical front and rear units
- ◆ Combined front and rear Railgear weight of 950 lbs
- ◆ Optional in-cab controls





# R-290 CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-290 is applicable to vehicles up to 12,500 lbs GVWR. Identical, ultra-compact rotating front and rear railgear units are standard. Railgear locks automatically in both road and rail position. Proven "Cushion-Ride" suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads. Rail wheel assemblies are bolted to the axles for simple wheel alignment.

All four rail wheels provide full track circuit isolation. Included 12VDC electric / hydraulic pump and reservoir with sealed push button controls and emergency hand pump provides safe and easy access to the rail. Optional in-cab railgear controls are available. Includes vehicle wheel modification kit to center vehicles front and rear tires on rail. Few moving parts result in low maintenance and lubrication costs. Fully installed weight is approximately 450 lbs front and 500 lbs rear.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-290 Railgear* is the railgear for **YOU !!!**

## STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in rail and road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (one cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ 12VDC pump and reservoir.
- ◆ Built-in derail skids.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels).
- ◆ Tubular oscillating axles, offset for increased ground clearance.
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Protective bellows over all inner guide tubes.
- ◆ Mechanical steering wheel lock, (hook and loop).
- ◆ Standard railgear controls.

## WEIGHT BREAKDOWN

RAILGEAR	190#
STL RAIL WHEEL	67#
STL RAIL WHEEL	67#
WHEEL ADAPTER	25#
WHEEL ADAPTER	25#
MNTG BRKTS	33#
MNTG BRKTS	33#
FASTENERS	10#
TOTAL	450#

Trade off between new tires and rims as to OEM tires and rims not taken into consideration. Added to the rear is 50# for Hyd. Pump/Mtr and hoses and fittings. Rubber rail wheel weigh 68# each

## OPTIONAL FEATURES

- ◆ In-cab railgear controls.
- ◆ Full in-cab railgear controls.

## VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ 12,500 lbs GVWR      GAWR (Front) 5,600 lbs      GAWR (Rear) 7,500 lbs

## INSTALLED WEIGHTS

Total: 950 lbs

Front: 450 lbs

Rear: 500 lbs

## WHEELS

Material: Cast steel or Rubber Wheel  
Tread: 10" diameter  
Flange: 12.25" diameter

Bearings: Heavy-duty tapered roller bearings  
Grease cap with vent



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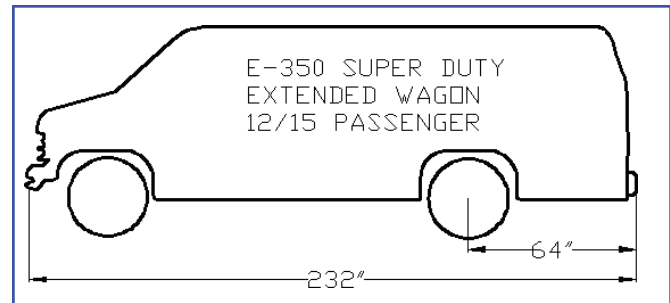


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## R-290 *RAILGEAR* ON E-350 *VAN*

### E-350 SUPER DUTY EXTENDED WAGON, 2002 thru 2007

- ◆ Model R-290, for installation on vans with 9100 lbs to 9300 lbs GVWR
- ◆ 10" steel wheels
- ◆ Front and rear suspension Railgear units
- ◆ Mini electric/hydraulic 12 VDC powerpac with push-button controls
- ◆ Emergency hydraulic hand pump
- ◆ Road and rail automatic locking mechanism
- ◆ Identical front and rear units
- ◆ Combined front and rear Railgear weight of 950 lbs
- ◆ In-cab controls or Standard controls





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## **R-450 CUSHION-RIDE *RAILGEAR***



- ◆ Proven “Cushion-Ride” suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and positive wheel-rail contact
- ◆ No adjustment required for varying loads
- ◆ Rail wheel assemblies bolted to the axle provide simple rail wheel alignment and easy maintenance
- ◆ Few moving parts results in very low maintenance and lubrication costs
- ◆ Hydraulically operated for safe and easy access to the rail
- ◆ Self-lubricated bearings at all pivot points



## R-450 CUSHION-RIDE *RAILGEAR*

This 100% duty cycle railgear was designed to meet the task at hand. Equip a light truck that has a maximum GVWR rating of 19,000 lbs with a *Rafna R-450 Railgear* and see for yourself.

Proven “*Cushion-Ride*” suspension provides ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads.

With *Rafna-Cushion-Ride Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *Rafna R-450 Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle’s front wheels are raised a minimum of 3” above the rail head and the vehicle axle is hydraulically locked in place.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-450 Railgear* is the railgear for **YOU !!!**

### STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in rail and road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skids.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels).
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Protective bellows over all inner guide tubes.
- ◆ Mechanical steering wheel lock, (hook and loop).
- ◆ Hydraulic vehicle suspension axle locking system.

### OPTIONAL FEATURES

- ◆ Electric/hydraulic package with exterior composite brake shoes. Available for 2 or 4 wheels.
- ◆ 12VDC pump and reservoir.

### VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ *19,000 lbs GVWR*      *GAWR (Front) 7,600 lbs*      *GAWR (Rear) 11,400 lbs*

### INSTALLED WEIGHTS

Total: 1,225 lbs

Front: 625 lbs

Rear: 600 lbs

### WHEELS

Material: Cast steel

Tread: 10” diameter

Flange: 12.25” diameter

Bearings: Heavy-duty tapered roller bearings

Grease cap with vent



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## R-650 CUSHION-RIDE *RAILGEAR*



- ◆ Proven “Cushion-Ride” suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and constant wheel to rail contact
- ◆ No railgear adjustments are required for varying loads
- ◆ Few moving parts results in very low maintenance and lubrication costs
- ◆ Hydraulically operated for safe and easy access to the rail
- ◆ Railgear locks automatically in both road and rail positions



# R-650 CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-650 railgear is designed for vehicles up to 39,000 lbs GVWR. Both rotating and vertical front railgear units are available. Rotating rear railgear is standard. The R-650 uses 12" diameter cast or forged steel wheels with heavy duty tapered roller bearings. Proven "Cushion-Ride" suspension provides ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads.

With *G & B Cushion-Ride Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *G & B Specialties R-650 Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle's front wheels are raised a minimum of 3" above the rail head and the vehicle axle is hydraulically or manually locked in place, and all four rail wheels provide full track circuit isolation.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-650 Railgear* is the railgear for **YOU !!!**

## STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in rail and road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skids.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels)
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Protective bellows over all inner guide tubes.
- ◆ Mechanical steering wheel lock, (hook and loop).
- ◆ Rotating rear railgear unit is standard.

## OPTIONAL FEATURES

- ◆ Optional electric/hydraulic or air brake package with exterior composite brake shoes are available
- ◆ Both rotating and vertical front railgear units are available.
- ◆ Hydraulically or manually operated vehicle front axle lock, to support front tires above the rail.

## VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ 39,000 lbs GVWR      GAWR (Front) 15,600 lbs      GAWR (Rear) 23,400 lbs

## INSTALLED WEIGHTS

Total: 2,600 lbs

Front: 1,300 lbs

Rear: 1,300 lbs

## WHEELS

Material: Cast steel, or Forged steel  
Tread: 12" diameter  
Flange: 14.25" diameter

Bearings: Heavy-duty tapered roller bearings  
Grease cap with vent



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## R-850 CUSHION-RIDE *RAILGEAR*



- ◆ Proven “Cushion-Ride” suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and constant wheel to rail contact
- ◆ Railgear locks automatically in both road and rail position
- ◆ No railgear adjustments are required for varying loads
- ◆ Few moving parts results in very low maintenance and lubrication costs
- ◆ Hydraulically operated for safe and easy access to the rail



# R-850 CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-850 railgear is designed for vehicles up to 66,000 lbs GVWR. Rotating front, vertical front and vertical behind cab front railgear units are available. Both rotating and vertical rear railgear units are available. The R-850 uses 14" diameter forged steel wheels with heavy duty tapered roller bearings. Proven "Cushion-Ride" suspension provides ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads.

With *G & B Cushion-Ride Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *G & B Specialties R-850 Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle's front wheels are raised a minimum of 3" above the rail head and the vehicle axle is hydraulically or manually locked in place, and all four rail wheels provide full track circuit isolation.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-850 Railgear* is the railgear for **YOU !!!**

## STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skids.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels)
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Mechanical steering wheel lock, (hook and loop).

## OPTIONAL FEATURES

- ◆ Air brake package with exterior quick change composite brake shoes. Available for 2 or 4 wheels.
- ◆ Rotating front, vertical front, and vertical behind cab front railgear units are available.
- ◆ Both rotating and vertical rear railgear units are available.
- ◆ Hydraulically or manually operated vehicle front axle lock, to support front tires above the rail.

## VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ *66,000 lbs GVWR*      *GAWR (Front) 20,000 lbs*      *GAWR (Rear) 46,000 lbs*

## INSTALLED WEIGHTS

Total: 3,000 lbs

Front: 1,500 lbs

Rear: 1,500 lbs

## WHEELS

Material: Forged steel  
Tread: 14" diameter  
Flange: 16" diameter

Bearings: Heavy-duty tapered roller bearings  
Grease cap with vent





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## **R-850HD CUSHION-RIDE *RAILGEAR***



- ◆ Proven “Cushion-Ride” suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress, and constant wheel to rail contact
- ◆ Railgear locks automatically in both road and rail position
- ◆ No railgear adjustments are required for varying loads
- ◆ Few moving parts results in very low maintenance and lubrication costs
- ◆ Hydraulically operated for safe and easy access to the rail

## R-850HD CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-850HD railgear is designed for vehicles up to 80,000 lbs GVWR. Rotating front, vertical front and vertical behind cab front railgear units are available. Both rotating and vertical rear railgear units are available. The R-850HD uses 14" diameter forged steel wheels with heavy duty tapered roller bearings. Proven "Cushion-Ride" suspension provides ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads.

With *G & B Cushion-Ride Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *G & B Specialties R-850HD Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle's front wheels are raised a minimum of 3" above the rail head and the vehicle axle is hydraulically or manually locked in place, and all four rail wheels provide full track circuit isolation.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-850HD Railgear* is the railgear for **YOU !!!**

### STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skirts.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels)
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Mechanical steering wheel lock, (hook and loop).

### OPTIONAL FEATURES

- ◆ Air brake package with exterior quick change composite brake shoes. Available for 2 or 4 wheels.
- ◆ Rotating front, vertical front, and vertical behind cab front railgear units are available.
- ◆ Both rotating and vertical rear railgear units are available.
- ◆ Hydraulically or manually operated vehicle front axle lock, to support front tires above the rail.

### VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ *80,000 lbs GVWR*

### INSTALLED WEIGHTS

Total: 3,000 lbs

Front: 1,500 lbs

Rear: 1,500 lbs

### WHEELS

Material: Forged steel  
Tread: 14" diameter  
Flange: 16" diameter

Bearings: Heavy-duty tapered roller bearings  
Grease cap with vent



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## R-890 CUSHION-RIDE *RAILGEAR*



- ◆ Proven “Cushion-Ride” suspension provides superior ride quality, reduced vibration through the vehicle frame, less component stress and constant wheel to rail contact
- ◆ Optional “True-Slew” rear railgear axle is available with 5-1/2” slew capability
- ◆ No railgear adjustments are required for varying loads
- ◆ Few moving parts results in very low maintenance and lubrication costs
- ◆ Hydraulically operated for safe and easy access to the rail



## R-890 CUSHION-RIDE *RAILGEAR*

G & B Specialties Model R-890 railgear is designed for vehicles up to 66,000 lbs GVWR. Vertical front and vertical behind cab front railgear units are available. Vertical rear railgear is standard. Optional "True-Slew" rear axle is available with 5-1/2" slew capability. The R-890 uses 14" diameter forged steel wheels with heavy duty tapered roller bearings. Proven "Cushion-Ride" suspension provides ride quality, reduced vibration through the vehicle frame, less component stress, and constant rail wheel to rail contact. No railgear adjustments are required for varying loads.

With *G & B Cushion-Ride Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *G & B Specialties R-890 Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle's front wheels are raised a minimum of 3" above the rail head and the vehicle axle is hydraulically or manually locked in place, and all four rail wheels provide full track circuit isolation.

If your railgear requirements include QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY, *G & B Specialties R-890 Railgear* is the railgear for **YOU !!!**

### STANDARD FEATURES

- ◆ *Cushion-Ride* rubber spring suspension.
- ◆ Automatic mechanical locking system in road positions.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Hydraulic operating valves on the front and rear units.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skirts.
- ◆ Rail sweeps front and rear.
- ◆ Full track circuit insulation (all four wheels)
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Mechanical steering wheel lock, (hook and loop).
- ◆ Vertical rear railgear unit is standard.

### OPTIONAL FEATURES

- ◆ Air brake package with exterior quick change composite brake shoes. Available for 2 or 4 wheels.
- ◆ Vertical front or vertical behind cab front railgear based on wheelbase of vehicle.
- ◆ "True-Slew" rear railgear axle with 5-1/2" slew capability.
- ◆ Hydraulically or manually operated vehicle front axle lock, to support front tires above the rail.

### VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

- ◆ 66,000 lbs GVWR      GAWR (Front) 20,000 lbs      GAWR (Rear) 46,000 lbs

### INSTALLED WEIGHTS

Total: 2,800 lbs

Front: 1,400 lbs

Rear: 1,400 lbs

### WHEELS

Material: Forged steel  
Tread: 14" diameter  
Flange: 16" diameter

Bearings: Heavy-duty tapered roller bearings  
Grease cap with vent



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## R-1100 *RAILGEAR*



- ◆ **Front Railgear utilizes vehicle's front suspension and frame to lift front wheels off track**
- ◆ **The dual scissor rear railgear mounts to truck's frame, and allows for X and Y plane adjustment**
- ◆ **Few moving parts results in very low maintenance and lubrication costs**
- ◆ **Hydraulically operated for safe and easy access to the rail**



# R-1100 *RAILGEAR*

G & B Specialties Model R-1100 railgear is designed for vehicles with GVWR's 33,000lbs and larger. The R-1100 front railgear utilizes the vehicle's front suspension and the vehicle's frame to lift the front wheels off the track. Attaching to the vehicle's front suspension and frame makes this design more advantageous for the proper support of the vehicle. The dual scissor rear railgear attaches to the truck's frame behind the spring hangers. The scissor action of the rear railgear makes it possible for the rear railgear to be moved along both the X and Y plane. This design makes for a more speedy operation of getting the vehicle on track and off track.

With *G & B New R-1100 Railgear*, there are no limits imposed. If the vehicle can support the load, so can the railgear. *G & B Specialties R-1100 Railgear* has two hydraulic cylinders on both the front and rear units, providing power to spare under full vehicle capacity.

On rail, the vehicle's front wheels are raised approximately 2" above the rail head.

Structural members are of carbon steel. Hardened steel castings are used in the making of the 16" wheels.

If your railgear requirements include **QUALITY, SAFETY, RELIABILITY, and SERVICEABILITY**, *G & B Specialties R-1100 Railgear* is the railgear for **YOU !!!**

## STANDARD FEATURES

- ◆ Patented quick locking adjustable "Cam" for rear railgear to compensate for rear tire wear.
- ◆ Precision-Machine cast steel rail wheels.
- ◆ Heavy-duty double acting hydraulic cylinders (two cylinder front and rear).
- ◆ Heavy-Duty tapered roller bearings.
- ◆ PTO pump application is standard.
- ◆ Built-in derail skirts.
- ◆ Rail sweeps front and rear.
- ◆ Grease fittings at all wear points.
- ◆ Corrosion resistant, long life fasteners.
- ◆ Mechanical steering wheel lock, (hook and loop).



## OPTIONAL FEATURES

- ◆ Cobra shoe air brake package. Available for 2 or 4 wheels.
- ◆ Insulated cast steel wheels
- ◆ Mechanical cable locking system

## VEHICLE CLASSIFICATION—MAXIMUM CAPACITY

◆ *GVWR 33,000 lbs and above*

*GAWR (Front) 12,000 lbs min.*

*GAWR (Rear) 40,000 lbs with tandem rear axle*

## INSTALLED WEIGHTS

Total: 2,570 lbs

Front: 1,385 lbs

Rear: 1,185 lbs

## WHEELS

Material: Cast steel  
Tread: 16" diameter  
Flange: 18" diameter

Bearings: Heavy-duty tapered roller bearings



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N491 00201	D-8	P85-470	B-17	P91-270	C-24	SRI-53	D-31		
N491 00202	D-8	P85-471	B-17	P9 1-272	J-3	SRI-54	D-31		
N491 00203	D-8	P85-483	B-17	P91-273	C-24	SRI-63	D-32		
N491 00204	D-8	P85-552	B-31	P91-274	C-34	ST-684	D-31		
N491 00205	D-8	P85-595	B-33	P91-275	C-34	UP-1	C-45		
N49 100206	D-8	P85-596	B-33	P91-276	F-17	X077384-001	I-15		
N491 00207	D-8	P85-709	B-31	P91-278	C-24	X080399-001	I-15		
N49 100401	D-10	P85-728	B-28	P91-279	C-27	X190913	D-29		
N491 00402	D-10	P85-729	B-27	P91-280	C-24	X1 93692-001	D-29		
N491 00403	D-10	P85-730	B-27	P91-282	C-24	X226105	D-2		
N491 00404	D-10	P85-731	B-28	P91-283	C-28	X231 923-001	J-2		
N491 00405	D-10	P85-733	B-34	P91-284	C-24	X23 1923-002	J-2		
N491 00406	D-10	P85-734	B-34	P91-286	J-3	X231 923-003	J-2		
N49 100407	D-10	P85-737	B-33	P9 1-287	D-26	X24231 4-001	D-24		
N49101101	D-17	P85-738	B-33	P91-288	I-3	X24231 4-002	D-24		
N49104101	F-13	P85-763	B-26	P91-290	C-11	X243851	F-7		
N491 04301	F-13	P85-764	B-26	P91-293	C-33	X259173	D-8		
N491 04801	C31	P85-765	B-26	P91-294	C-33	X291 842-001	D-24		
N49 104802	C31	P85-766	B-26	P91-295	C-33	X296127	B-32		
N491 05302	I-3	P85-794	B-30	P91-296	C-33	X296127-001	B-23		
N491 06601	C-6	P85-802	B-30	P91-298	J-3	X296128	B-32		
N491 06602	C-6	P85-826	B-35	P91-311	D-26	X301543	M-44		
N49 106701	C-6	P85-862	B-34	P91-312	C-24	X303090	C-8		
N491 06702	C-6	P85-863	B-34	P91-313	C-24	X303421	K-7		
N49 109202	F-33	P85-864	B-34	P91-316	D-26	X303421-001	K-7		