

WABCOPAC[®] BRAKE ASSEMBLY

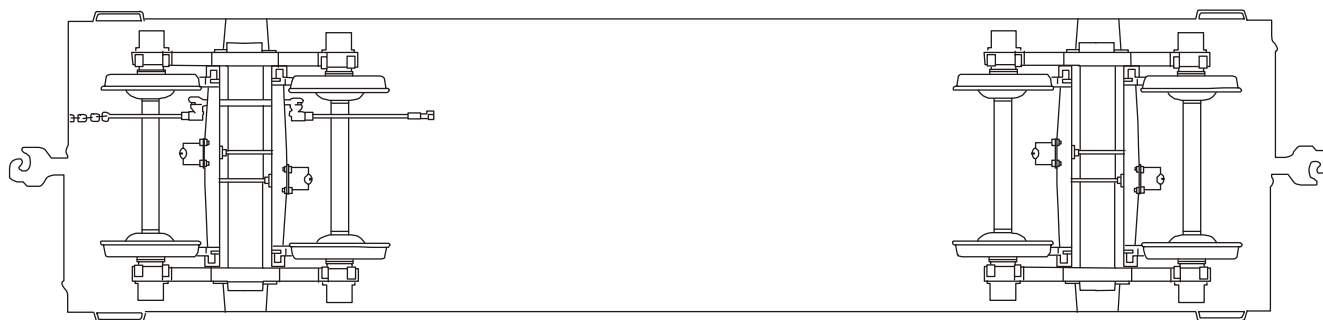
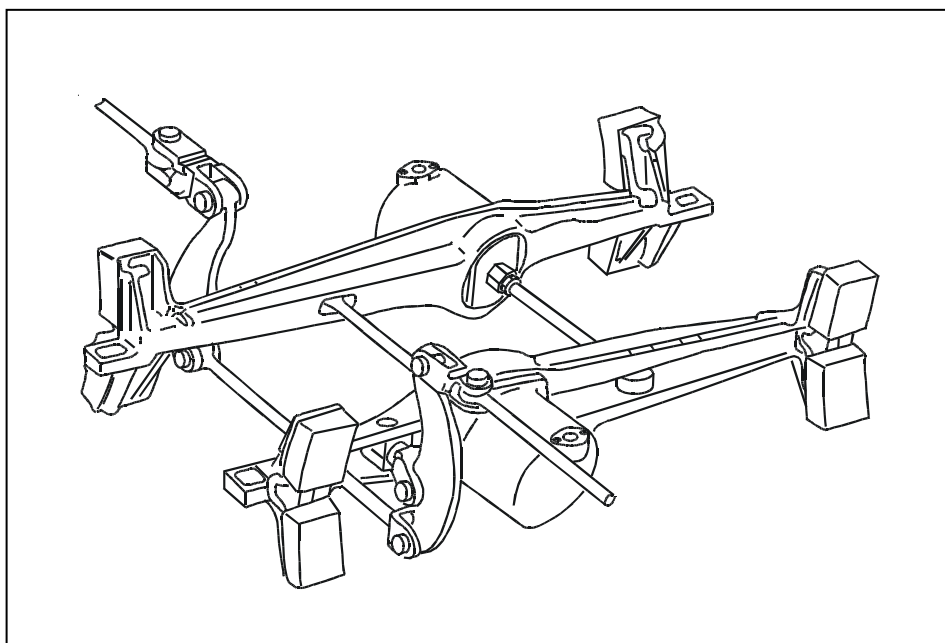
REPLACEMENT PARTS

IMPORTANT: The information provided in this publication serves to identify the individual parts of the WABCOPAC Brake Assembly with special emphasis on hand brake details.

For information or details not covered in this publication, contact your Wabtec Corporation representative.

IMPORTANT: Only Wabtec supplied parts are to be used in the repair of this device in order to obtain satisfactory operation. Commercially available non-O.E.M. parts are unacceptable.

NOTE: The part numbers and their associated descriptions are the property of Wabtec Corporation and may not be replicated in any manner or form without the prior sole written consent of an Officer of Wabtec Corporation.



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WABCOPAC BRAKE ASSEMBLY

UNIT BODY IDENTIFICATION

Designation	Style	Pattern No.	Piece No.
B	6 Bolt	TA 42051	Obsolete
B1	6 Bolt	TA 42413	Obsolete
B3	4 Bolt (Old Style)	TA 42196	Obsolete
B3-A	4 Bolt (Relieved Contour) Raised Brake Head	TA 43450	566248
B4	4 Bolt (Old Style)	TA 42546	Obsolete
B4-A	4 Bolt (Relieved Contour) Raised Brake Head	TA 43547	566349

NOTE: The B3 Unit is interchangeable with the B3-A Unit as is the B4 Unit with the B4-A Unit.

HAND BRAKE ASSEMBLY DETAILS

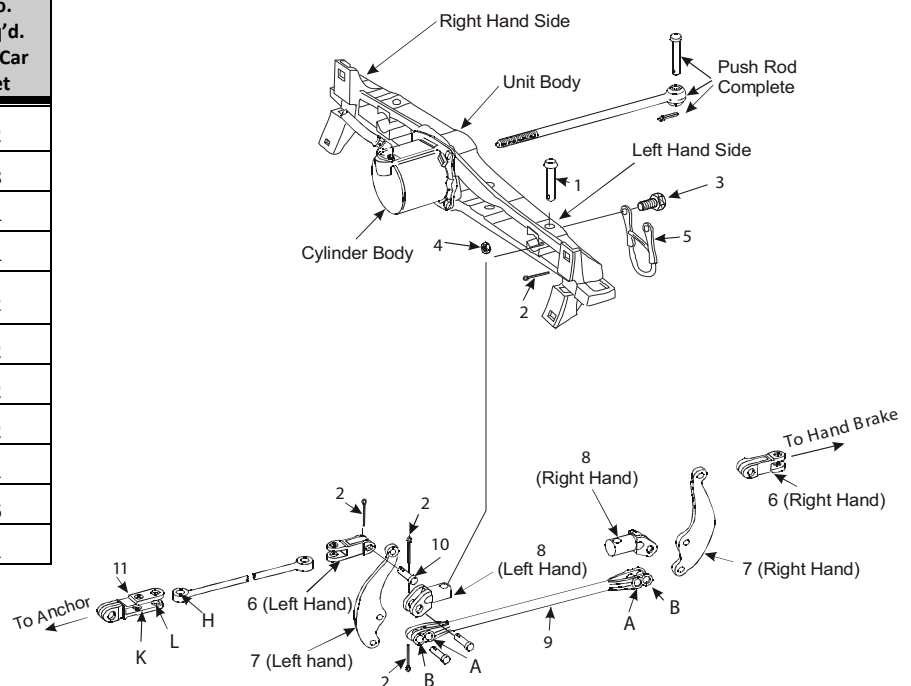
Ref. No.	Piece Number	Part Name	No. Req'd. per Car Set
1	566257	PIN, 1 ⁷ / ₆₄ " x 5 ¹ / ₁₆ "	2
2	569145	COTTER PIN, 5 ⁵ / ₁₆ " x 2 ¹ / ₂ "	8
3	3205	CAP SCREW, 1/2" x 2"	4
4	520517	LOCK NUT, 1/2"	4
5	Not common See Chart	SAFETY STRAP	2
6	See Chart	CLEVIS	2
7	See Chart	LEVER	2
8	See Chart	FULCRUM BRACKET	2
9	See Chart	CONNECTING ROD	1
10	565030	PIN, 1 ⁷ / ₆₄ " x 3 ³ / ₈ "	6
11	574815	ANCHOR CLEVIS	1

HAND BRAKE ADJUSTMENT

Connection Code	Compensation at Each Shoe	Equivalent Horizontal Chain Travel
HLAA	Normal	Normal
HKAA	7 ⁷ / ₁₆ "	3"
HLBA	3 ⁵ / ₈ "	4 ³ / ₈ "
HKBA	1 ¹ / ₆₄ "	7 ³ / ₈ "
HLBB	1 ¹ / ₄ "	8 ³ / ₄ "
HKBB	1 ¹¹ / ₆₄ "	11 ¹ / ₄ "

CYLINDER BODY IDENTIFICATION

Size	Style			
	4 Bolt		6 Bolt	
	Pattern No.	Piece No.	Patter No.	Piece No.
6 ¹ / ₂ "	TA 42963	570749		
7 ¹ / ₂ "	TA 42533	566009	TA 42052	562952
8 ¹ / ₂ "	TA 42197	566251	RA 42136	563885
9"	TA 42547	566345	TA 42464	565107
10"	TA 42548	566346	TA 42404	565240
10 ¹ / ₂ "			TA 42697	Obsolete



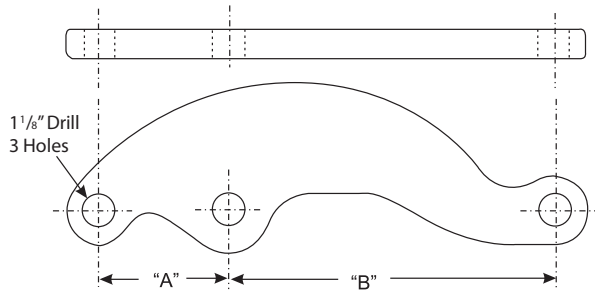
The WABCOPAC Brake Assembly Hand Brake can be adjusted to compensate for shoe and wheel wear through pin connections at the Connecting Rod and the Anchor Clevis. The Connecting Rod length can be varied by means of the two holes, 1³/₄ inches apart, at each end (Ref. A and B). The Anchor Clevis can also be adjusted in this manner. It contains two holes 3 inches apart (Ref. K and L) for maximum adjustment.

The table shows the adjustments that are obtained by connecting these holes in accordance with the letter code indicated.

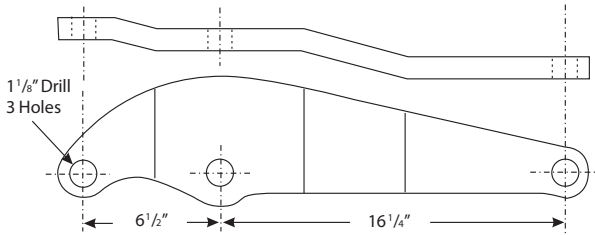
HAND BRAKE ASSEMBLY & PUSH ROD COMBINATIONS

Piece numbers in bold type are RECOMMENDED STANDARDS

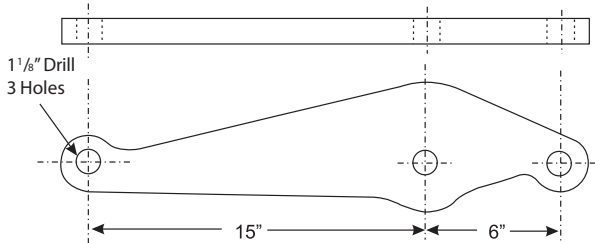
Brake Assembly Type	Car Set Complete Pc. No.	Push Rod Complete Pc. No.	Badge Plate		HAND BRAKE ASSEMBLY PARTS NOT COMMON							
					H.B. Assembly Complete Pc. No.	Safety Strap Pc. No.	CLEVIS		FULCRUM BRACKET		Lever Pc. No.	Connecting Rod Pc. No.
			Pc. No.	Pattern No.			Left Hand Pc. No.	Right Hand Pc. No.	Left Hand Pc. No.	Right Hand Pc. No.		
B3-A-6½	570690	566602	571835	TA 43232	566246	582535	562974	562975	566255	566256	573921	562977
B3-A-6½	574367	566602	574370	TA 43453	574369	582535	562979	562979	566581	566581	LH574920 RH574921	563635
B3-A-7½	566263	565399	567421	TA 42789	566268	582535	562974	562975	566255	566256	573921	563635
B3-A-7½	566267	566602	571829	TA 43226	566246	582535	562974	562975	566255	566256	573921	562977
B3-A-7½	567554	565399	567555	TA 42811	567553	582535	562979	562979	567551	567551	LH574920 RH574921	563635
B3-A-7½	568458	565399	568460	TA 42911	568459	582538	562979	562979	566581	566581	568461	564462
B3-A-7½	569053	565399	568460	TA 42911	569054	582538	562979	562979	566581	566581	567933	564462
B3-A-7½	569459	566602	571834	TA 43231	569460	582536	562974	562975	566255	566256	562976	562977
B3-A-7½	570387	565399	567419	TA 42787	570338	582536	562974	562975	566255	566256	573927	563635
B3-A-7½	571429	565399	571836	TA 43233	571427	582535	562979	562979	566581	566581	LH574920 RH574921	565127
B3-A-7½	571769	566602	571766	TA 43233	571768	582536	562979	562979	571764	571764	571765	563635
B3-A-7½	572480	565399	567421	TA 42789	572479	582535	562979	562979	572478	572478	573921	563635
B3-A-7½	574368	566602	567555	TA 42811	574369	582535	562979	562979	566581	566581	LH574920 RH574921	563635
B3-A-8½	566261	566603	563893	TA 42239	566246	582535	562974	562975	566255	566256	573921	562977
B3-A-8½	566579	566603	567423	TA 42791	566580	582537	562979	562979	566581	566581	573928	565127
B3-A-8½	567839	566603	567423	TA 42791	567840	582537	562979	562979	566581	566851	572588	565127
B3-A-8½	567936	566603	567938	TA 42874	567935	582538	562979	562979	566581	566581	567933	565127
B3-A-8½	567942	567944	567941	TA 42875	567945	582537	562979	562979	566581	566581	572588	563635
B3-A-8½	568979	566603	571833	TA 43230	566268	582535	562974	562975	566255	566256	573921	563635
B3-A-8½	569103	567944	563893	TA 42239	566246	582535	562974	562975	566255	566256	573921	562977
B3-A-8½	569212	565970	571833	TA 43230	566268	582535	562974	562975	566255	566256	573921	563635
B3-A-8½	569454	567944	569456	TA 42993	569455	582537	562979	562979	566581	566581	572588	562977
B3-A-8½	571426	566603	571428	TA 43201	571427	582535	562979	562979	566581	566581	LH574920 RH574921	565127
B3-A-8½	571671	566603	567941	TA 42875	567945	582537	562979	562979	566581	566581	572588	563635
B3-A-8½	571720	566603	571722	TA 43219	571721	582538	562979	562979	566581	566581	567933	563635
B3-A-8½	571770	566603	567423	TA 42791	571771	582537	562979	562979	566581	566581	571772	565127
B3-A-8½	573771	566603	567938	TA 42874	573772	582538	562979	562979	566581	566581	568461	565127
B3-A-8½	575398	566603	563893	TA 42239	575399	582535	562974	562975	566255	566256	573921	573922
B3-A-8½	575782	565399	575786	TA 43596	569054	582538	562979	562979	566581	566581	567933	564462
B3-A-8½	575879	566603	575877	TA 43606	575878	582538	562979	562979	566581	566581	567933	562977
B3-A-8½	577897	566603	577892	TA 43828	577898	582537	--	562979	571147	571147	572588	564462
B3-A-8½	578313	565399	571833	TA 43230	566268	582535	562974	562975	566255	566256	573921	563635
B3-A-8½	579616	566603	563893	TA 42239	579617	582535	562979	562979	572478	572478	573921	562977
B3-A-8½	579962	566603	579981	TA 44026	579963	582537	562878	562879	579964	579965	573928	571151
B3-A-9	566335	565052	571830	TA 43227	566338	582535	562974	562975	566347	566348	573921	566068
B3-A-9	569070	565052	567420	TA 42788	569069	582536	562974	562975	566347	566348	573927	573923
B3-A-9	570600	565246	571830	TA 43227	566338	582535	562974	562975	566347	566348	573921	566068
B3-A-9	571149	565246	571152	TA 43178	571150	582537	562979	562979	571147	571147	573928	571151
B3-A-9	572591	565246	572592	TA 43316	572590	582537	562979	562979	571147	571147	572588	572589
B3-A-9	576386	565246	576384	TA 43677	576385	582538	562979	562979	571147	571147	567933	571151
B3-A-10	566339	565246	571831	TA 43228	566338	582535	562974	562975	566347	566348	573921	566068
B3-A-10	568755	565399	571832	TA 43229	568757	582535	562974	562975	566347	566348	573921	573922

Levers


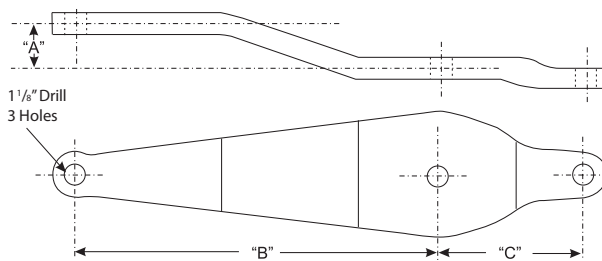
Pc. No.	Pattern No.	"A"	"B"
573927	TA 43423	4 3/4"	11 1/8"
573921	TA 43422	5 1/2"	13 3/4"
562976	TA 42058	4"	10"



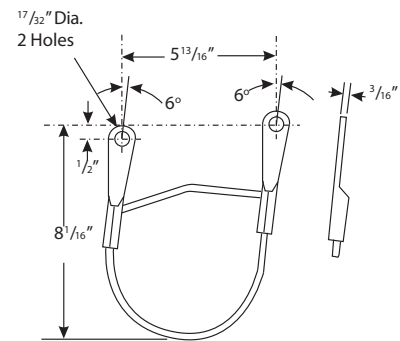
R.H. Piece Number 574921 Pattern Number TA 43492
 L.H. Piece Number 574920 Pattern Number TA 43491



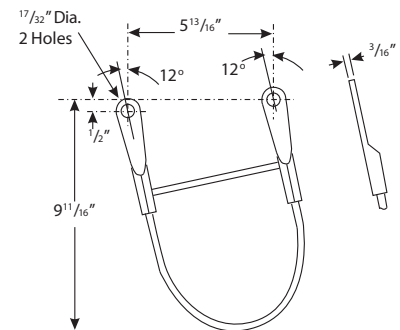
Piece Number 571765 Pattern Number TA 43222



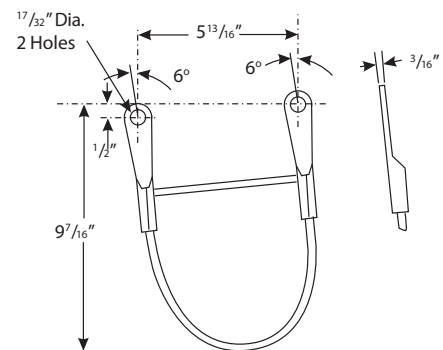
Pc. No.	Pattern No.	"A"	"B"	"C"
567933	TA 42873	1 1/4"	18 11/16"	7 1/2"
568461	TA 42910	2 1/4"	18 11/16"	7 1/2"
571772	TA 43224	3/4"	19 11/16"	7 7/8"
572588	TA 43315	2 1/4"	19 11/16"	7 7/8"
573928	TA 43424	1 1/4"	19 11/16"	7 7/8"

Safety Straps


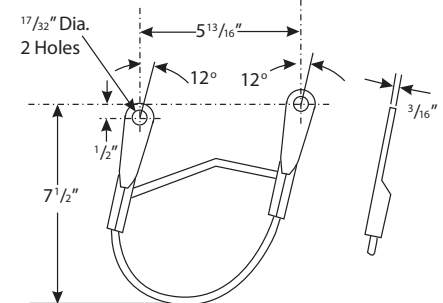
Piece Number 582535



Piece Number 582537

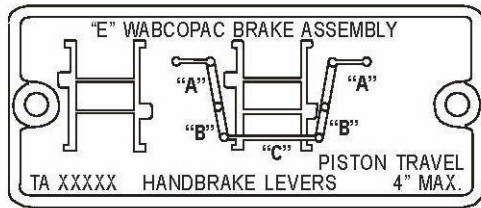


Piece Number 582538



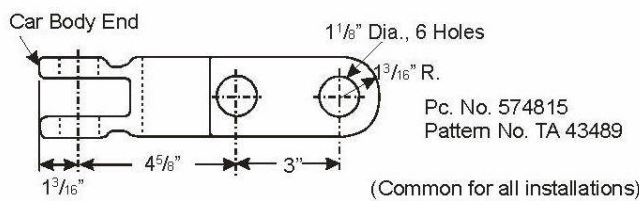
Piece Number 582536

Badge Plate

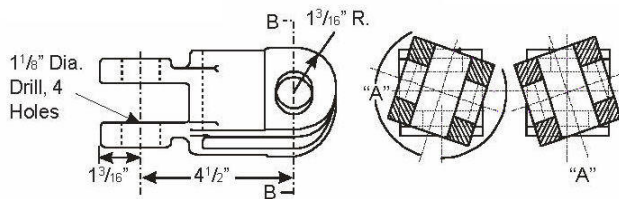


The car badge plate serves to identify the size of the cylinder ("E"), the connecting rod length ("C"), and fulcrum lengths for the levers ("A" and "B").

Anchor Clevis



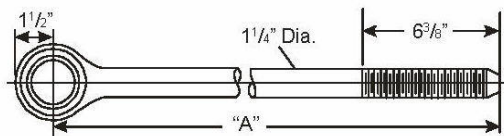
Clevis



Type	Pc. No.	Pattern No.	Angle "A"
L.H.	562974	TA 42060	342°
R.H.	562975	TA 42063	18°
L.H. or R.H.	562979	TA 42064	0°
L.H.	562878	TA 42146	348°
R.H.	562879	TA 42147	12°

NOTE: The portion marked "Lever End", "L" or "R" mates with Left or Right Hand lever on corresponding side of unit body (see exploded view). Opposite end mates with connecting rod.

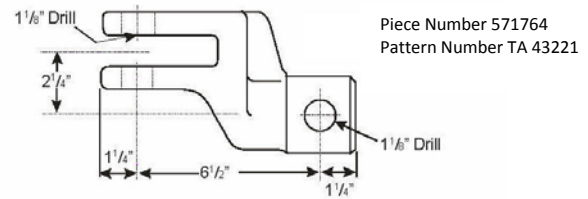
Push Rods



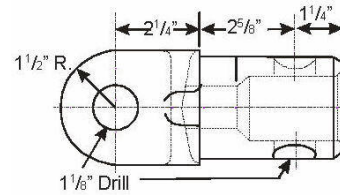
Push Rod Complete* Pc. No.	Push Rod (Bushed) Pc. No.	"A"
566602	562971	31 1/2"
565399	562945	33 1/2"
566603	563926	32 1/2"
567944	564396	30 1/2"
565970	566013	35"
565052	565087	37 1/4"
565246	565245	36"

*Push Rod complete includes Push Rod (Bushed), Pin, Pc. No. 565090 and Cotter Pin, Pc. No. 569145.

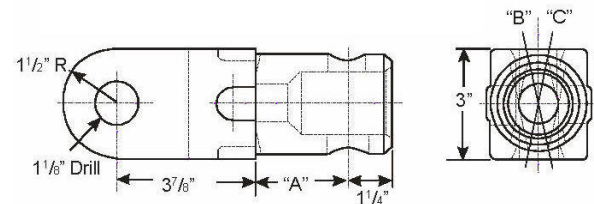
Fulcrum Brackets



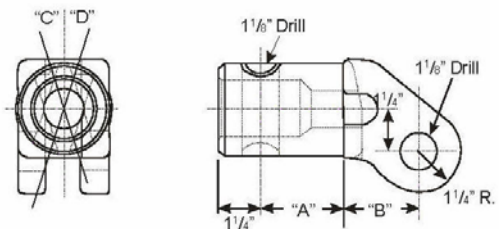
Piece Number 571764
Pattern Number TA 43221



Piece Number 567551
Pattern Number TA 42626



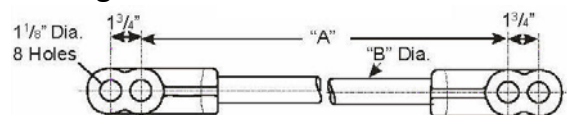
Type	Pc. No.	Pattern No.	"A"	"B"	"C"
L.H. or R.H.	566581	TA 42704	2 1/2"	0°	0°
L.H. or R.H.	571147	TA 43177	3 3/8"	0°	0°
L.H.	579964	TA 43177	3 3/8"	12°	-
R.H.	579965	TA 43177	3 3/8"	-	12°



Type	Pc. No.	Pattern No.	"A"	"B"	"C"	"D"
L.H.	566255	-	-	-	18°	-
R.H.	566256	TA 42523	2 9/16"	2 1/4"	-	18°
L.H.	566347	-	-	-	18°	-
R.H.	566348	TA 42648	3 3/4"	2 9/16"	-	18°
L.H. or R.H.	572478	TA 42523	2 9/16"	2 1/4"	0°	0°

NOTE: Markers "Top Side" & arrow indicate which face is up to install.

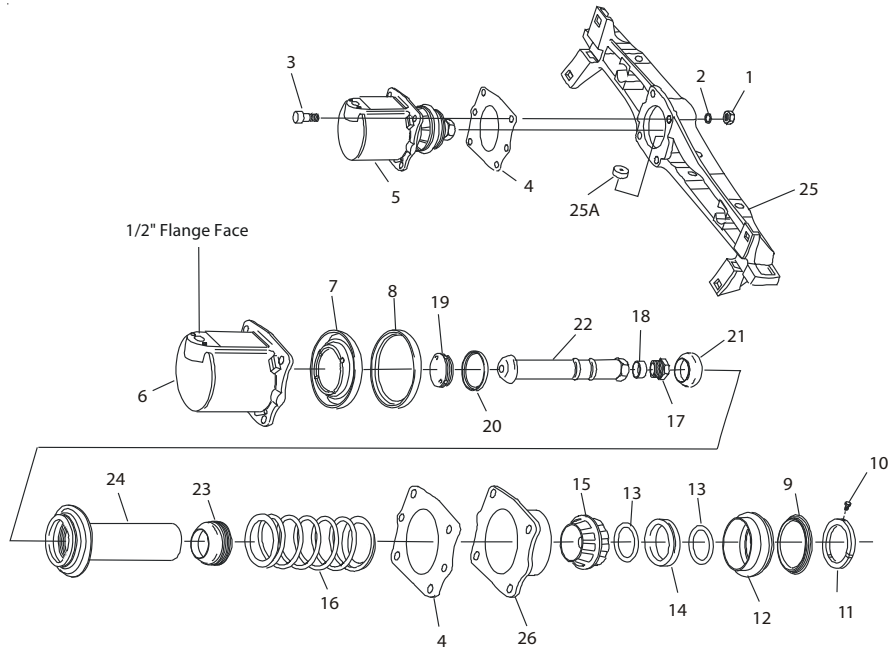
Connecting Rods



Pc. No.	"A"	"B"	Pc. No.	"A"	"B"
562977	35 1/2"	1 1/2"	571151	41 1/2"	1 1/2"
SE1201-12-1374*	37 1/2"	1 1/2"	572589	39 3/4"	1 1/2"
564462	39 3/4"	1 1/2"	573922	35 1/2"	1 1/2"
565127	38 3/4"	1 1/2"	573923	38 3/4"	1 1/2"
566068	37 1/2"	1 1/4"			

*Schaeffer piece number replaces 563635

WABCOPAC BRAKE ASSEMBLY



Ref. No.	Piece Number Cylinder Size				Parts Name	No. Req'd.
	7½"	8½"	9"	10"		
	566260	566247	566337	566341	WABCOPAC BRAKE ASSEMBLY	
1	555414	555414	555414	555414	.NUT, ¾" Hex	4
2	15985	15985	15985	15985	.WASHER, ¾" Lock	4
3	565423	565423	565423	565423	.BOLT, ¾-10x2¾", T-Head	4
4	566011	566011	566344	566344	.GASKET, Cylinder	2
5	566265	566250	566353	566354	.CYLINDER, Piston & Push Rod Assembly	1
6	566009	566251	566345	566346	..BODY, Cylinder	1
	572387	572391	572389	572390	..PISTON and PUSH ROD ASSEMBLY	1
7	571141	571105	506957	94800	...CUP, Packing	1
8	567633	567634	567659	565432	...RING, Piston Head Guide	1
9	567268	567268	567268	567268	...GASKET, Hollow Rod Guide	1
10	571207	571207	571207	571207	...SCREW, 5/16" Set	2
11	562967	562967	562967	562967	...COLLAR, Hollow Rod	1
12	566254	566254	566254	566254	...GUIDE, Hollow Rod	1
13	536589	536589	536589	536589	...O-RING, 4¾" O.D.	2
14	562965	562965	562965	562965	...SEAL, Hollow Rod Packing	1
15	566253	566253	566253	566253	...SEAT, Spring	1
16	562963	562963	565116	565116	...SPRING, Release	1
17	562969	562969	562969	562969	...NUT, Push Rod End Locking	1
18	563210	563210	563210	563210	...SEAL, Push Rod	1
	567461	567462	567463	567464	...PISTON, Assembly	1
19	567398	567398	567398	567398PLUG, Locking	1
20	567396	567396	567396	567396RING, Locking	1
21	562478	562478	562478	56248RING, Anti-Rattler	1
22	562960	562960	565114	565114END, Push Rod	1
23	571853	571853	571853	571853SEAL, Push Rod End	1
24	567401	567402	567403	567404BODY, Piston & Rod	1
25	566248	566248	566349	566349	.BODY, Unit	1
25A	94814	94814	94814	94814	..STRAINER	1
26	575932	575932	575926	575926	.STOP, Spring Seat (Part of Cylinder, Ref. 5)	1

Guidelines for Parts Renewal & Piston Maintenance

I. Parts Requiring Renewal

Ref. No.	Piece Number Cylinder Size				Parts Name	No. Req'd.
	7½"	8½"	9"	10"		
4	566011	566011	566344	566344	.GASKET, Cylinder	2
7	571141	571105	506957	94800	...CUP, Packing (For "AB" Type Valve COT & S this part requires replacement only if damaged or worn per I.L. 2391, Sup. 1)	1
9	567268	567268	567268	567268	...GASKET, Hollow Rod Guide	1
13	536589	536589	536589	536589	...O-RING, 4¾" O.D.	2
14	562965	562965	562965	562965	...SEAL, Hollow Rod Packing	1
18	563210	563210	563210	563210	...SEAL, Push Rod	1
21	562478	562478	562478	562478	...RING, Anti-Rattler	1
23	571853	571853	571853	571853	...SEAL, Push Rod End	1
25A	94814	94814	94814	94814	..STRAINER	1
26	575932	575932	575926	575926	..STOP, Spring Seat (Part of Cylinder Ref. 5.) (Add only if not included in Cylinder Assembly. Cars built after mid-1969 will most likely include this part.)	1

II. Parts Requiring Inspection*

Ref. No.	Piece Number Cylinder Size				Parts Name	No. Req'd.
	7½"	8½"	9"	10"		
6	566009	566251	566345	566346	..BODY, Cylinder	1
8	567633	567634	567659	565432	...GUIDE, Ring, Piston Head	1
12	566254	566254	566254	566254	...GUIDE, Hollow Rod	1
15	566253	566253	566253	566253	...SEAT, Spring	1
24	567401	567402	567403	567404BODY, Piston (Renew if hollow rod is worn beyond limits specified by I.L. 2391, Sup. 1. For other conditions for renewal, refer to Item III, below.)	1

*NOTE: Not necessary to renew unless worn beyond limits specified by A.A.R. Instruction Leaflet 2391, Sup. 1.

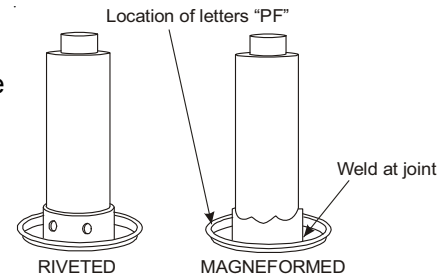
III. Piston Assembly Maintenance Procedure

A. If piston body is of the WABCO riveted design, as shown below, replace with magneformed piston and parts referenced 19 & 20 (Lock Plug Pc. 567398 and Lock Ring Pc. 567396).

B. If piston body is of the magneformed design, proceed as follows:

1. If the piston body has the letters "PF" shown cast or stamped on the non-pressure side of the flat surface near the O.D., the piston is of current design and does not require upgrading.

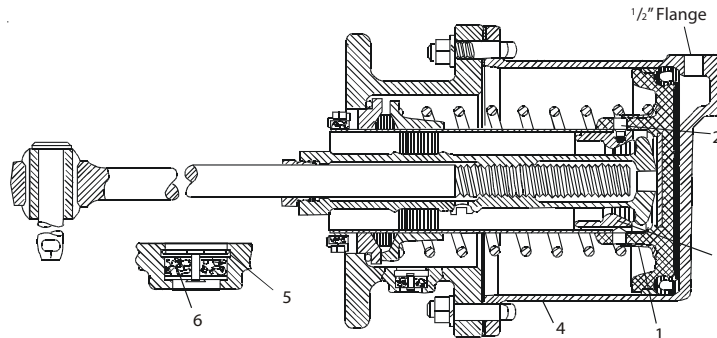
2. If the piston body does not show the letters "PF", it should be replaced or, as an alternative, a bead of weld may be applied around the circumference at the hollow rod-piston joint. (See illustration.)



a. The anodizing on the surface of the piston should be removed. This can be done by machining a groove around the circumference at the hollow rod-piston joint. The groove should not be cut as deep as the wall thickness of the hollow rod. If machining of the groove is not possible, the anodizing can be removed by grinding a few thousandths of an inch of metal at the joint.

b. a 3/32 inch diameter weld rod, alloy No. 4043, should be used in the welding operation.

C. After cleaning and prior to reassembly of the piston, apply sealant to Lock Plug threads. WABCO recommends Mobil Jointite Pipe Joint Compound or equivalent.

Available Repair Parts Unique to Obsolete WABCOPAC Brake Assemblies


Ref. No.	Piece Number Cylinder Size			Parts Name	No. Req'd.
	7½"	8½"	9"		
1	562962	562962	562962	Ring Retainer	1
2	563034	563034	563034	Pin Keeper	3
3	562958	562958	562958	Keeper, Push Rod	1
4	*562952	*563885	*565107	Body, Cylinder	1
5	99821	99821	572392	Retainer, Strainer	1
6	• 99820	• 99820	94814	Strainer	1

NOTES:

*This piece number coverage is for the obsolete six bolt cylinder bodies. Spring seat stops cannot be installed to six bolt cylinder assemblies.

- The 7½", x 8½" sizes of WABCOPAC manufactured prior to 1964 utilized strainer Pc. No. 99820. This strainer is 1½" in diameter. Care should be taken to properly identify this strainer.


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