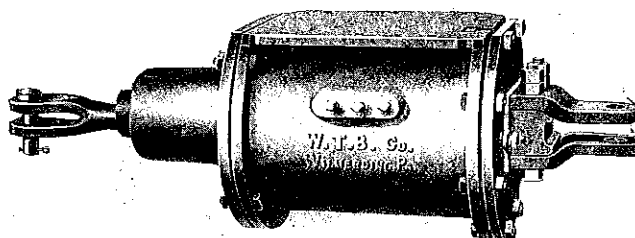


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Westinghouse Traction Brake Company



Traction Brake Cylinders Types S, H and R

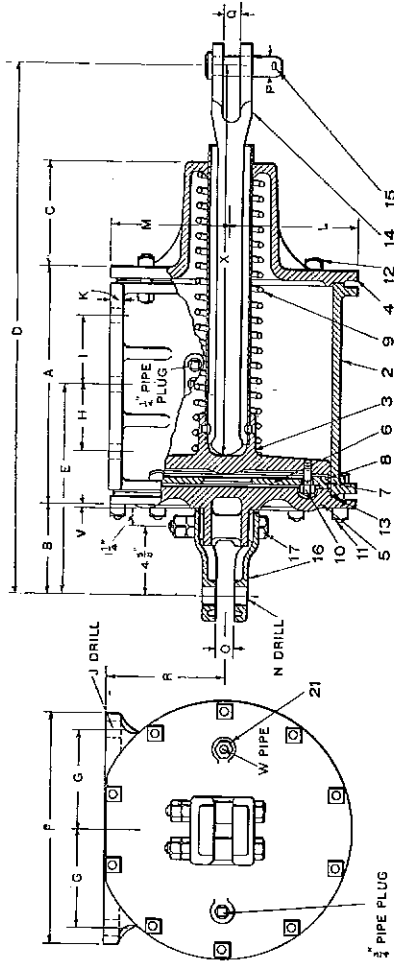
Part Catalog No. T 3514-1

March, 1918

(SUPERSEDING ISSUE OF OCTOBER, 1912.)

TYPE S TRACTION BRAKE CYLINDERS

Type S Brake Cylinders are used with Straight Air Brake Equipments, SME Brake Equipments and Automatic Brake Equipment having the Emergency Valve or Triple Valve mounted on a Bracket.



Cylinder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	X	V	W	Net Wt.
6" x 8"	11 3/8"	6 1/2"	5 1/8"	29 1/8"	12 1/8"	9 3/8"	3 3/4"	2 3/8"	2 3/8"	1 1/8"	5/8"	4 3/8"	3 3/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	3 3/8"	19 1/2"	1"	1 1/2"	95 lbs.
6" x 12"	13 1/8"	6 3/8"	5 1/8"	34 1/8"	14 1/8"	9 3/8"	3 3/4"	4 1/8"	4 1/8"	1 1/8"	5/8"	4 3/8"	3 3/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	3 3/8"	24 3/8"	1"	1 1/2"	135 "
8" x 8"	10 1/8"	6 "	6 1/8"	30 "	11 1/8"	10 1/8"	4 1/8"	2 1/8"	2 1/8"	1 1/8"	1 1/8"	5 3/8"	4 1/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	4 1/8"	21 1/2"	1/8"	1 1/2"	135 "
8" x 12"	16 3/8"	6 "	6 1/8"	34 1/2"	14 1/8"	10 7/8"	4 1/8"	4 1/2"	4 1/2"	1 1/8"	1 1/8"	5 3/8"	4 1/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	4 1/8"	26 "	1/8"	1 1/2"	150 "
10" x 8"	11 3/8"	6 "	6 1/8"	30 1/8"	11 1/8"	11 "	4 1/8"	2 3/4"	2 3/4"	1 1/8"	1 1/8"	6 3/8"	5 3/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	5 3/4"	21 1/2"	1/8"	1 1/2"	175 "
10" x 12"	15 5/8"	6 "	6 1/8"	34 5/8"	13 7/8"	11 "	4 1/8"	4 1/4"	4 1/4"	1 1/8"	1 1/8"	6 5/8"	5 1/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	5 1/8"	26 "	1/8"	1 1/2"	200 "
12" x 8"	11 1/8"	6 1/8"	7 "	30 5/8"	12 3/4"	13 1/4"	6 1/2"	2 5/8"	2 5/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	6 1/2"	21 1/4"	1/8"	1 1/2"	300 "
12" x 12"	15 1/8"	6 1/8"	7 "	35 1/8"	14 "	15 1/2"	6 1/2"	4 3/8"	4 3/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	6 1/2"	26 "	1/8"	1 1/2"	300 "
14" x 12"	15 1/8"	6 1/4"	7 1/8"	35 1/2"	14 1/4"	15 1/2"	6 5/8"	4 5/8"	4 5/8"	1 1/8"	1 1/8"	8 5/8"	7 1/8"	1 1/4"	1 1/4"	1 3/8"	1 1/8"	7 1/8"	26 "	3/8"	1 1/2"	400 "
16" x 12"	16 1/8"	6 3/4"	7 "	35 5/8"	14 3/8"	16 1/2"	8 5/8"	4 5/8"	4 5/8"	1 1/8"	7/8"	9 3/4"	9 "	1 1/4"	1 1/4"	1 3/2"	1 1/8"	9 "	26 "	3/8"	3/4"	500 "

NOTE—12-inch Stroke Cylinders have six holes in supporting flange. 8-inch Stroke Cylinders have four holes in supporting flange.

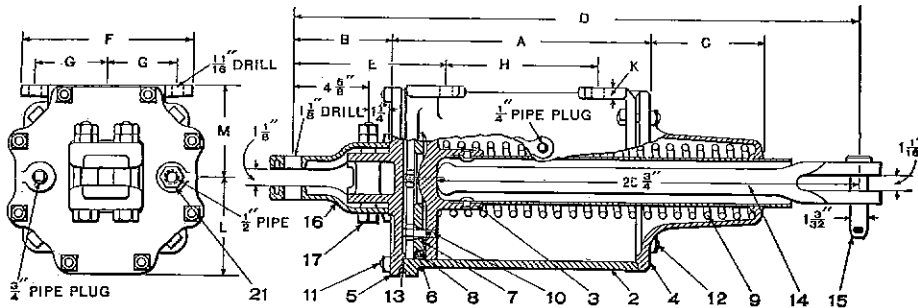
TYPE S TRACTION BRAKE CYLINDERS

Ref. No.	6" x 8"		6" x 12"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price
3	23695	\$9.00	23246	\$9.00	11500	\$9.00	9254	\$9.00	11404	\$12.00	11462	\$17.00	9262	\$17.00	10513	\$22.00	23467	\$31.00	23467	\$31.00
4	23692	7.50	23394	7.50	23240	7.50	23725	7.50	23355	10.50	23457	13.50	23429	13.50	23469	20.50	23491	29.50	23491	29.50
5	23697	9.00	24347	9.00	11501	9.00	9255	9.00	11496	12.00	11498	17.00	9263	17.00	10514	22.00	23434	31.00	23434	31.00
6	23698	7.50	23905	7.50	23241	7.50	23242	7.50	23359	10.50	23428	15.50	23430	15.50	23470	20.50	23482	29.50	23482	29.50
7	23695	3.50	11037	3.50	11509	3.50	9256	3.50	9456	4.50	11429	6.00	9264	6.00	10515	7.50	23507	12.00	23507	12.00
8	2435	1.00	9102	1.00	2363	1.00	1245	1.00	11570	1.50	11433	2.25	8631	2.25	5397	3.00	24319	4.00	24319	4.00
9	1234	1.00	1234	1.00	1217	1.00	1217	1.00	1104	1.25	1029	1.75	1029	1.75	1005	2.50	6569	3.50	6569	3.50
10	50162	1.25	56132	1.25	14079	1.50	14079	1.50	14054	1.75	14058	2.25	14058	2.25	14081	2.75	4943	4.50	4943	4.50
11	56161	1.25	56161	1.25	11502	1.50	11502	1.50	4776	1.75	4777	2.25	4777	2.25	4942	2.75	4943	4.50	4943	4.50
12	1235	.03	1238	.03	1142	.03	1142	.03	1108	.25	1033	.50	1033	.50	1010	.60	1076	.75	1076	.75
13	23709	†	23709	†	23710	†	23710	†	23711	†	23712	†	23712	†	23713	†	23714	†	23714	†
14	1241	.05	1241	.05	1145	.05	1145	.05	1112	.06	1036	.08	1036	.08	1015	.10	1079	.15	1079	.15
15	1239	.30	5377	.30	1110	.30	1110	.30	1110	.50	1090	.50	1090	.50	1077	.75	1077	1.00	1077	1.00
16	27345	.03	27345	.03	2305	.03	2305	.03	2305	.03	5154	.04	5154	.04	5184	.04	5184	.04	5184	.04
17	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03	4353	.03
18	14363	1.50	24224	1.50	23728	1.50	23728	1.50	17486	1.50	23728	1.50	17486	1.50	17270	1.50	17270	1.50	17270	1.50
19	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10
20	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30	14363	.30
21	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20
22	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01
23	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01
24	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02	2202	.02
25	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05	9332	.05
26	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05	6983	.05

NOTE A—The Brake Cylinders shown on this page are standard. For Non-Standard Cylinders, see Page 7.
 * NOTE B—For Spring Identification Table, see Page 17.
 † NOTE C—See Part Catalog T 3516-10.

Orders must give PIECE NUMBER and NAME of part wanted.

TYPE S "FEATHERWEIGHT" TRACTION BRAKE CYLINDER
WITH DETACHABLE LEVER BRACKETS



CYLINDER	A	B	C	D	E	F	G	H	K	L	M	Net Weight Lbs.
8" x 12"	15 3/4"	6"	6 3/8"	34 3/8"	8 3/4"	9 1/4"	3 3/4"	10"	1 1/8"	5 3/8"	4 5/8"	125
10" x 12"	15 3/4"	6"	6 3/8"	34 3/8"	9 1/4"	10 3/8"	4 3/8"	9 1/4"	1 1/8"	6"	5 5/8"	175

This type of Brake Cylinder is a special "Featherweight" design for Straight-Air Brake Equipments and is furnished with SME "Featherweight" Equipment.

Ref. No.	CYLINDER	8" x 12"		10" x 12"	
		Pc. No.	List Price	Pc. No.	List Price
2	Brake Cylinder, complete.....	49718	\$9.00	58608	\$12.00
	Brake Cylinder, complete, less Push Rod.....			58816	10.50
	Brake Cylinder, complete, less Lever Bracket.....			58817	12.00
	Brake Cylinder, complete, less Lever Bracket and Push Rod.....			58818	10.50
	Cylinder Body (includes 1/4" Pipe Plug).....	49721	3.00	50459	4.50
3	Piston and Rod (includes 10 only).....	1246	1.00	1251	1.50
4	Non-Pressure Head.....	45540	.60	50426	1.25
5	Pressure Head, less Bracket.....	50337	1.75	50463	2.50
6	Pressure Head, with Bracket.....	41202	1.75	50460	2.50
	Follower.....	1142	.08	1108	.25
7	Packing Leather.....	28710	†	28711	†
8	Packing Expander.....	1145	.05	1112	.06
9	Release Spring.....	1110	.50	1110	.50
10	Follower Stud and Nut.....	2305	.03	2305	.03
11	Pressure Head Bolt and Nut.....	25001	.03	9701	.04
12	Non-Pressure Head Bolt and Nut.....	25000	.03	9701	.04
13	Cylinder Gasket.....	1147	†	1114	†
14	Push Rod with Pin and Cotter.....	41191	1.50	41191	1.50
15	Push Rod Pin with Cotter.....	14363	.10	14363	.10
16	Detachable Lever Bracket.....	1456	.30	1456	.30
17	Lever Bracket Bolt and Nuts.....	10819	.20	10819	.20
	1/4" Pipe Plug.....	1635	.01	1635	.01
	1/2" Pipe Plug.....	1004	.01	1004	.01
	3/4" Pipe Plug.....	2202	.02	2202	.02
21	1/4" x 1/2" Bushing.....	9332	.05	9332	.05

NOTE A—If Brake Cylinder is desired with J-M Packing Expander, order should so state and specify as follows:

Ref. No.	CYLINDER	8" x 12"		10" x 12"	
		Pc. No.	List Price	Pc. No.	List Price
8	Brake Cylinder, complete.....	50335	\$0.75	50446	\$12.89
	Brake Cylinder, complete, less Lever Brackets.....	50336	9.75	50447	12.89
	J-M Packing Expander.....	36585	.80	36586	.95

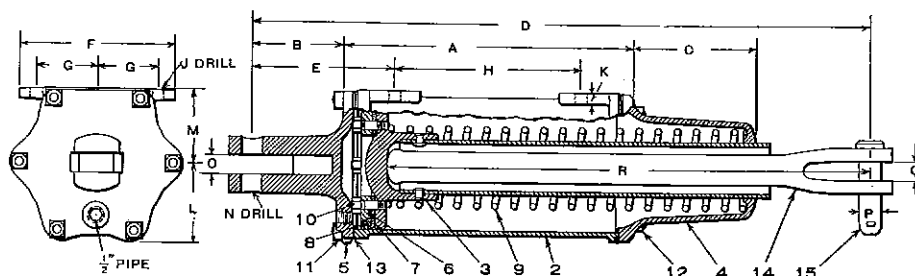
* NOTE B—For Spring Identification Table, see Page 17.

NOTE C—Brake Cylinders have four holes in supporting flange.

† NOTE D—See Part Catalog T 3516-10.

Orders must give **PIECE NUMBER** and **NAME** of part wanted.

TYPE S "FEATHERWEIGHT" TRACTION BRAKE CYLINDER
WITH FORKED PRESSURE HEAD



CYLINDER	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	Net Weight Lbs.
5" x 8"	10 ³ / ₁₆ "	3 ¹ / ₄ "	3 ³ / ₈ "	22 ³ / ₁₆ "	5 ³ / ₈ "	6 ³ / ₄ "	2 ⁵ / ₈ "	5 ⁵ / ₈ "	9 ¹ / ₂ "	1 ¹ / ₂ "	2 ⁵ / ₈ "	2 ³ / ₈ "	1 ¹ / ₂ "	1 ⁵ / ₈ "	3 ¹ / ₂ "	4 ⁵ / ₁₆ "	17 ³ / ₁₆ "	50
7" x 12"	15 ³ / ₁₆ "	5"	6 ³ / ₈ "	33 ³ / ₁₆ "	7 ³ / ₈ "	8 ¹ / ₂ "	3 ³ / ₄ "	10 ¹ / ₄ "	9 ¹ / ₂ "	1 ³ / ₂ "	4 ³ / ₄ "	4 ¹ / ₂ "	1 ¹ / ₂ "	1 ³ / ₈ "	1 ³ / ₂ "	1 ¹ / ₂ "	25 ³ / ₁₆ "	100
8" x 12"	15 ³ / ₁₆ "	5"	6 ³ / ₈ "	32 ¹ / ₈ "	7 ³ / ₈ "	8 ¹ / ₄ "	3 ³ / ₄ "	10"	9 ¹ / ₂ "	1 ¹ / ₂ "	5 ¹ / ₂ "	4 ³ / ₈ "	1 ¹ / ₂ "	1 ³ / ₈ "	1 ¹ / ₂ "	1 ¹ / ₂ "	25 ³ / ₁₆ "	125

This type of Brake Cylinder is a special "Featherweight" design for Straight-Air Brake Equipment and is furnished with SME "Featherweight" Equipment.

Ref. No.	CYLINDER	†5" x 8"		7" x 12"		8" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
2	Brake Cylinder, complete.....	58006		47179	\$8.00	45542	\$9.00
3	Brake Cylinder, complete, less Push Rod.....	58007		47180	6.50		
	Cylinder Body.....	57678		41135	2.00	45539	3.00
	Piston and Rod (includes 10 only).....	57696		41193	1.25	1246	1.00
4	Non-Pressure Head.....	57676		41157	.60	45540	.60
5	Pressure Head with Bracket.....	57994		41140	.75	45541	1.50
6	Follower.....	57679		24669	.15	1142	.08
7	Packing Leather.....	57688		43555	‡	28710	‡
8	Packing Expander.....	57681		24670	.15	1145	.05
9	Release Spring.....	42188		1110	.50	1110	.50
10	Follower Stud and Nut.....	57683		2305	.03	2305	.03
11	Pressure Head Bolt and Nut.....	25001		25001	.03	25001	.03
12	Non-Pressure Head Bolt and Nut.....	25001		25000	.03	25000	.03
13	Cylinder Gasket.....	57689		41179	‡	1147	‡
14	Push Rod with Pin and Cotter.....	58008		41191	1.50	41191	1.50
15	Push Rod Pin with Cotter.....	57997		14363	.10	14363	.10

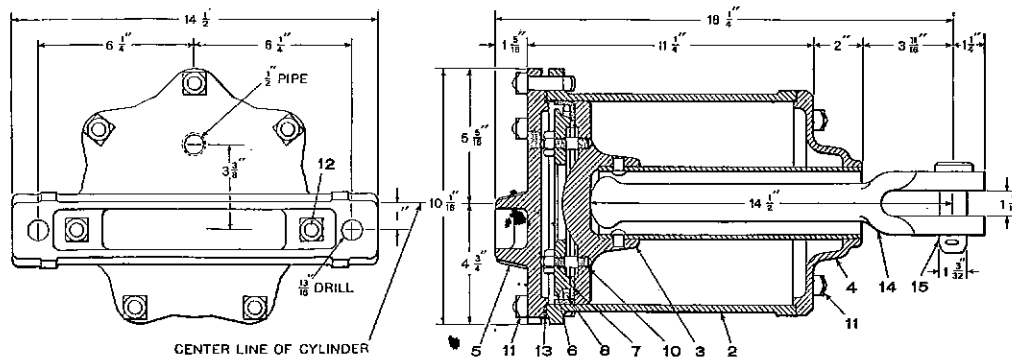
NOTE A—If Brake Cylinder is desired with J-M Packing Expander, order should so state and specify as follows:

Ref. No.	CYLINDER	7" x 12"		† 8" x 12"	
		Pc. No.	List Price	Pc. No.	List Price
8	Brake Cylinder, complete.....	41194	\$8.65		
	Brake Cylinder, complete, less Push Rod.....	41195	7.15		
	J-M Packing Expander.....	41217	.80		

* NOTE B—For Spring Identification Table, see
NOTE C—Brake Cylinders have four holes in mounting flange.
† NOTE D—Prices will be quoted upon application.
‡ NOTE E—See Part Catalog T 3516-10.

Orders must give PIECE NUMBER and NAME of part wanted.

8-INCH x 8-INCH TYPE S "FEATHERWEIGHT" TRACTION BRAKE CYLINDER
FOR VERTICAL INSTALLATION



Net Weight, 140 lbs.

This type of Brake Cylinder is a special "Featherweight" design for Straight-Air Brake Equipments and is furnished with SME "Featherweight" Equipment.

- Piece No. 46105. 8" x 8" Type S Traction Brake Cylinder, complete List Price, \$8.00
 Piece No. 47882. 8" x 8" Type S Traction Brake Cylinder, complete, less Push Rod List Price, \$6.50

Pe. No.	Ref. No.	CYLINDER	List Price
46318	2	Cylinder Body	\$2.50
46380	3	Piston and Rod (includes 10 only)	1.10
46128	4	Non-Pressure Head . . . . .	.60
46264	5	Pressure Head	1.25
1142	6	Follower . . . . .	.08
28710	7	Packing Leather	*
1145	8	Packing Expander . . . . .	.05
2305	10	Follower Stud and Nut . . . . .	.03
25001	11	Pressure Head Bolt and Nut . . . . .	.03
7506	12	Non-Pressure Head Bolt and Nut . . . . .	.03
1147	13	Cylinder Gasket	*
44617	14	Push Rod with Pin and Cotter	1.50
14461	15	Push Rod Pin with Cotter . . . . .	.10

NOTE A—If Brake Cylinder is desired with J-M Packing Expander, order should so state and specify as follows:

- Piece No. 47214. 8" x 8" Type S Traction Brake Cylinder, complete List Price, \$8.75
 Piece No. 36585. J-M Packing Expander List Price, \$0.80

* NOTE B—See Part Catalog T 3516-10.

Orders must give PIECE NUMBER and NAME of part wanted.

TYPE S TRACTION BRAKE CYLINDERS

The Brake Cylinders covered in this table are non-standard and are furnished only when specially ordered for use with Straight-Air Brake Equipments, SME Brake Equipment and Automatic Brake Equipment having the Emergency Valve or Triple Valve mounted on a Bracket.

Ref. No.	CYLINDER	6" x 8"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
8	Brake Cylinder, complete, with J-M Packing Expander	47374	\$9.75	47386	\$9.75	47388	\$9.75	47402	\$12.89	43721	\$12.89	47418	\$18.02	47420	\$18.02	47434	\$23.10	47440	\$32.20
	Brake Cylinder, complete, with J-M Packing Expander, less Lever Brackets	47375	9.75	47387	9.75	47389	9.75	47403	12.89	47404	12.89	47419	18.02	47421	18.02	47435	23.10	47441	32.20
	J-M Packing Expander	36584	.80	36585	.80	36586	.80	36586	.95	36586	1.10	36587	1.10	36587	1.10	36588	1.20	36589	1.35
	Brake Cylinder, complete, with I-M Packing Expander, less Leakage Grooves	58479	9.75	58477	9.75	43781	9.75	56500	12.89	47003	12.89	47003	12.89	55860	18.02	53262	23.10	49203	32.20
2	Brake Cylinder, complete, with I-M Packing Expander, less Leakage Grooves and Lever Brackets					43782	9.75	33223	9.00	39332	12.89	39340	17.00	39344	17.00	39350	22.00	41568	31.00
	Brake Cylinder, complete, with WAB Packing Expander, less Leakage Grooves			33224	9.00	33225	9.00	33225	9.00	33225	9.00	39341	17.00	39345	17.00	39351	22.00	41569	31.00
	Brake Cylinder, complete, with WAB Packing Expander, less Leakage Grooves and Lever Brackets	42920	9.00	33225	9.00	33225	9.00	33225	9.00	33225	9.00	39341	17.00	39345	17.00	39351	22.00	41569	31.00
	Cylinder Body	42921	3.50	33223	3.50	33223	3.50	33223	3.50	33223	3.50	39340	6.00	39343	6.00	39340	7.50	41567	12.00
	Brake Cylinder, complete, with I-M Packing Expander, and with Wearing Parts Case					57700	10.25			58321	13.39			58005	18.52	63607	23.60		
	Brake Cylinder, complete, with I-M Packing Expander, and with Wearing Parts Case					57225	10.25			58040	13.39			57205	18.52	54572	23.60		
	Brake Cylinder, complete, with WAB Packing Expander, and with Wearing Parts Case					59184	9.50												
	Hardened																		

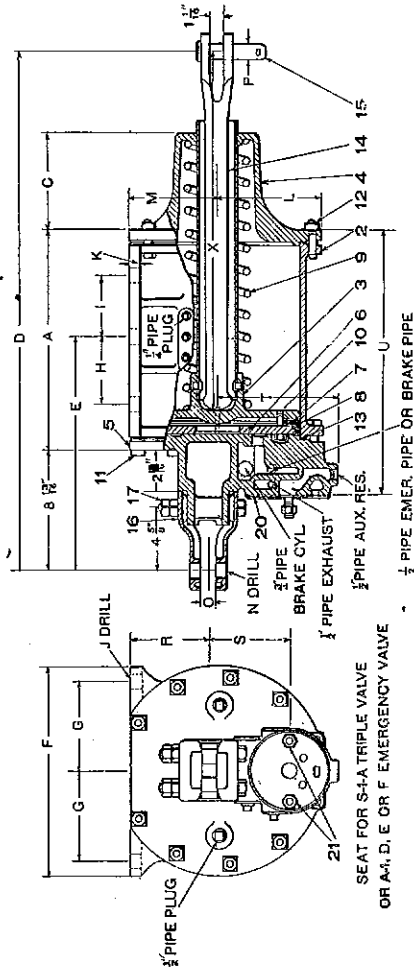
NOTE—The special details only are listed. For Piece Numbers of details common to both Standard and Non-Standard Brake Cylinders, see Page 3.

Orders must give PIECE NUMBER and NAME of part wanted.

TYPE H-1 TRACTION BRAKE CYLINDERS

With seat for $\frac{1}{2}$ " A-1 or $\frac{1}{2}$ " Emergency Valve

Type H-1 Brake Cylinders, formerly standard with SME Brake Equipments with the A-1 Emergency Valve, have been superseded by the Type H-2 Brake Cylinder and are listed only for convenience in ordering repair parts.



Cylinder	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	X	Net Wt.
6" x 8"	11 1/8"	5 1/2"	3 1/8"	1 5/8"	9 3/8"	3 3/4"	2 3/8"	2 3/8"	1 1/8"	5/8"	4 3/8"	3 3/8"	1 3/8"	1 1/8"	1 3/8"	3 1/8"	5 3/4"	8 7/8"	14 1/8"	19 1/2"	90 lbs.
6" x 12"	15 1/8"	5 7/8"	3 1/8"	1 5/8"	9 3/8"	3 3/4"	2 3/8"	2 3/8"	1 1/8"	5/8"	4 3/8"	3 1/8"	1 3/8"	1 1/8"	1 3/8"	3 1/8"	5 3/4"	8 7/8"	19 1/8"	24 3/4"	160 "
8" x 8"	10 1/8"	6 1/8"	3 1/8"	1 5/8"	10 1/8"	4 1/8"	2 3/8"	2 3/8"	1 1/8"	5/8"	5 3/8"	4 1/8"	1 3/8"	1 1/8"	1 3/8"	4 1/8"	5 1/8"	8 5/8"	14 3/8"	21 1/2"	150 "
8" x 12"	16 1/8"	6 1/8"	3 1/8"	1 5/8"	10 1/8"	4 1/8"	2 3/8"	2 3/8"	1 1/8"	5/8"	5 3/8"	4 1/8"	1 3/8"	1 1/8"	1 3/8"	4 1/8"	5 1/8"	8 5/8"	19 1/8"	26 "	165 "
10" x 8"	11 7/8"	6 1/8"	3 1/8"	1 5/8"	11 "	4 5/8"	2 3/8"	2 3/8"	1 1/8"	5/8"	6 5/8"	5 1/8"	1 3/8"	1 1/8"	1 3/8"	5 1/4"	5 1/8"	8 1/8"	14 7/8"	21 1/2"	175 "
10" x 12"	15 5/8"	6 1/8"	3 1/8"	1 5/8"	11 "	4 1/8"	2 3/8"	2 3/8"	1 1/8"	5/8"	6 5/8"	5 1/8"	1 3/8"	1 1/8"	1 3/8"	5 1/4"	5 1/8"	8 1/8"	18 7/8"	26 "	200 "
12" x 8"	11 1/8"	7 "	3 3/8"	1 5/8"	15 1/4"	6 1/2"	2 3/8"	2 3/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 3/8"	1 1/8"	1 3/8"	5 3/4"	5 3/4"	8 5/8"	15 1/8"	21 1/2"	300 "
12" x 12"	15 1/8"	7 "	3 3/8"	1 5/8"	15 1/4"	6 1/2"	2 3/8"	2 3/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 3/8"	1 1/8"	1 3/8"	5 3/4"	5 3/4"	8 5/8"	19 1/8"	26 "	350 "
14" x 12"	15 1/8"	7 1/8"	3 3/8"	1 5/8"	15 1/2"	6 5/8"	2 3/8"	2 3/8"	1 1/8"	1 "	8 5/8"	7 1/8"	1 3/4"	1 1/4"	1 3/4"	7 1/8"	6 "	9 1/8"	19 1/8"	26 "	400 "

NOTE—12-inch Stroke Cylinders have six holes in supporting flange. 8-inch Stroke Cylinders have four holes in supporting flange.

TYPE H-1 TRACTION BRAKE CYLINDERS
With Seat for A-1 or D Emergency Valve

Ref. No.	CYLINDER	6" x 8"		6" x 12"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
24344	Brake Cylinder, complete, less Lever Brackets and Push Rod.....	11646	\$14.00	12736	\$14.00	21665	\$14.00	21667	\$16.00	21671	\$16.00	11430	\$22.00	11440	\$22.00	24355	\$27.00	24365	\$27.00
24401	Brake Cylinder, complete, less Lever Bracket.....	26403	12.50	23248	12.50	28300	12.50	28302	14.50	28307	14.50	28308	20.50	28438	20.50	28476	25.50	28478	25.50
24345	Brake Cylinder, complete, less Push Rod.....	11647	14.00	12737	14.00	21666	14.00	21668	16.00	21672	16.00	11431	22.00	11441	22.00	24356	27.00	24366	27.00
26400	Brake Cylinder, complete, less Push Rod.....	26402	12.50	23247	12.50	28301	12.50	28303	14.50	28306	14.50	28309	20.50	28439	20.50	28475	25.50	28477	25.50
23668	Cylinder Body (includes 1/4" Pipe Plug).....	11687	3.50	9256	3.50	11509	3.50	8486	4.50	9280	4.50	11429	6.00	9264	6.00	10515	7.50	10516	7.50
2	Piston and Rod (includes 10 only).....	11688	1.00	1246	1.00	11570	1.00	11571	1.50	11572	1.50	11432	2.25	11433	2.25	10517	3.00	10518	3.00
3	Non-Pressure Head.....	1234	6.00	1217	6.00	1104	6.00	1105	7.50	1106	7.50	1039	7.00	1039	7.00	1005	8.00	1006	8.00
4	Pressure Head, less Bracket.....	14078	5.50	14082	5.50	14085	6.00	14085	6.00	14085	6.00	14087	7.00	14087	7.00	20569	8.00	20570	8.00
5	Pressure Head with Bracket.....	11648	5.50	8901	5.50	8487	6.00	8487	6.00	8487	6.00	11434	7.00	11434	7.00	20568	8.00	20569	8.00
6	Follower.....	1233	.08	1142	.08	1108	.25	1108	.25	1108	.25	1033	.50	1033	.50	1010	.60	1010	.60
7	Packing Leather.....	28709	.05	28710	.05	4883	.03	4883	.03	4883	.03	28712	.08	28712	.08	28713	.10	28713	.10
8	Packing Expander.....	1241	.05	1145	.05	1112	.05	1112	.05	1112	.05	1093	.08	1093	.08	1015	.10	1015	.10
9	Release Spring.....	1230	.30	5877	.30	27345	.30	27345	.30	27345	.30	5184	.04	5184	.04	5184	.04	5184	.04
10	Follower Stud and Nut.....	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03
11	Pressure Head Bolt and Nut.....	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03
12	Non Pressure Head Bolt and Nut.....	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03
13	Cylinder Gasket.....	1243	.10	1243	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10
14	Push Rod with Pin and Cotter.....	24392	1.50	23728	1.50	17486	1.50	17486	1.50	17486	1.50	14363	.10	14363	.10	14363	.10	14363	.10
15	Push Rod Pin with Cotter.....	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10
16	Detachable Lever Bracket.....	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30
17	Lever Bracket Bolt and Nuts.....	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20
20	Triple Valve Gasket.....	12094	.05	12094	.05	4887	.05	4887	.05	4887	.05	4887	.05	4887	.05	4887	.05	4887	.05
21	Triple Valve Stud and Nut.....	1685	.01	1685	.01	1685	.01	1685	.01	1685	.01	1685	.01	1685	.01	1685	.01	1685	.01
22	1/2" Pipe Plug.....	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01
23	3/8" Pipe Plug.....	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01

NOTE A—If Brake Cylinders are desired with J-M Expanders, order should so state and specify as follows:

Ref. No.	CYLINDER	6" x 8"		6" x 12"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
47382	Cylinder, complete.....	47384	\$14.75	47384	\$14.75	47384	\$14.75	47384	\$16.89	47412	\$16.89	47436	\$23.02	47438	\$23.02	47439	\$28.10	47439	\$28.10
47383	Cylinder, complete, less Lever Brackets.....	47385	14.75	47385	14.75	47385	14.75	47411	16.89	47413	16.89	47427	23.02	47429	23.02	47433	28.10	47433	28.10
36684	J-M Expander.....	36684	.80	36684	.80	36684	.80	36586	.95	36586	.95	36587	1.10	36587	1.10	36588	1.20	36588	1.20

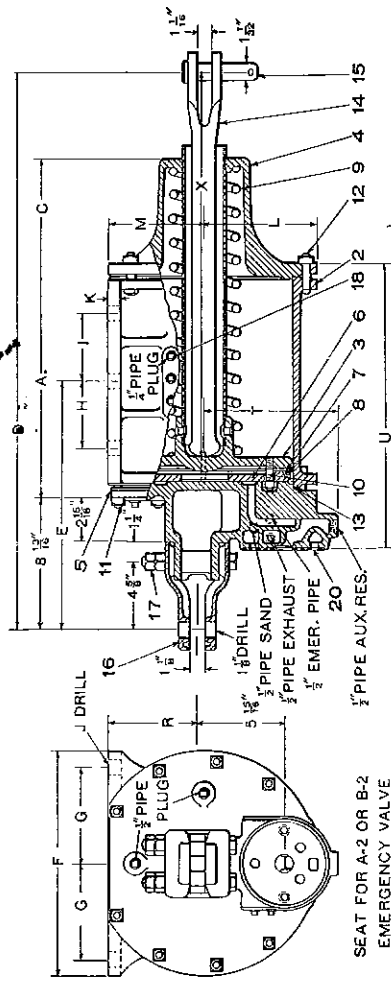
* NOTE B—For Spring Identification Table, see Page 17.
 † NOTE C—Listed for convenience only. Not included in J-M Expander Brake Cylinder.
 ‡ NOTE D—See Part Catalog T 3516-10.

Orders must give PRICE, NUMBER and NAME of part wanted.

TYPE H-2 TRACTION BRAKE CYLINDERS

With seat for A-1, A-2, B-2 or D-1 Emergency Valve

Type H-2 Brake Cylinders are Fundamental with SME Brake Equipments using A-1 or D-1 Emergency Valves.



SEAT FOR A-2 OR B-2
EMERGENCY VALVE

Cylinder	A	C	D	E	F	G	H	I	J	K	L	M	R	T	U	X	Net Wt.
8" x 8"	10 1/8"	6 1/8"	32 1/8"	14 1/8"	10 1/4"	4 1/8"	2 1/8"	1 1/8"	5/8"	5/8"	5 3/8"	4 1/8"	4 1/8"	8 3/8"	14 1/8"	21 1/2"	150 lbs.
8" x 12"	16 1/8"	6 1/8"	37 1/8"	16 1/8"	10 1/8"	4 1/8"	4 1/8"	1 1/8"	5/8"	5/8"	5 3/8"	4 1/8"	4 1/8"	8 3/8"	19 1/8"	26 "	165 "
10" x 8"	11 1/8"	6 1/8"	32 1/8"	14 1/8"	11 "	4 1/8"	2 1/8"	1 1/8"	1 1/8"	1 1/8"	6 5/8"	5 1/8"	5 1/4"	8 3/8"	14 7/8"	21 1/2"	175 "
10" x 12"	15 5/8"	6 1/8"	37 1/8"	16 1/8"	11 "	4 1/8"	4 1/4"	1 1/8"	1 1/8"	1 1/8"	6 5/8"	5 1/8"	5 1/4"	8 3/8"	18 7/8"	26 "	200 "
12" x 8"	11 1/8"	7 "	33 1/8"	14 3/8"	15 1/4"	6 1/8"	2 5/8"	1 1/8"	1 1/8"	1 1/8"	7 5/8"	6 1/8"	6 "	9 1/8"	15 1/8"	21 1/2"	300 "
12" x 12"	15 1/8"	7 "	37 5/8"	16 1/2"	15 1/4"	6 1/2"	4 3/8"	1 1/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	6 "	9 1/8"	19 1/8"	26 "	350 "

NOTE—12-inch Stroke Cylinders have six holes in supporting flange. 8-inch Stroke Cylinders have four holes in supporting flange.

TYPE H-2 TRACTION BRAKE CYLINDERS
 With seat for A-1, A-2, B-2 or D-1 Emergency Valve

Ref. No.	CYLINDER	8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"	
		Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price
1	Brake Cylinder, complete, less Lever Brackets and Push Rod	21669	\$14.00	12875	\$11.00	15888	\$16.00	19275	\$16.00	21675	\$22.00	13846	\$23.00
2	Brake Cylinder, complete, less Lever Bracket	28924	12.50	28946	12.50	28939	14.50	28971	14.50	28926	20.50	28440	20.50
3	Brake Cylinder, complete, less Push Rod	11509	3.50	28945	3.50	28948	3.50	28970	3.50	28925	20.50	28439	20.50
4	Brake Cylinder, complete, less 3/4" Pipe Plug	11509	3.50	28956	3.50	28956	4.50	28960	4.50	11430	6.00	9264	6.00
5	Piston and Rod (includes 10 only)	2563	1.00	1948	1.00	11570	1.50	1251	1.50	11433	2.25	3631	2.25
6	Non-Pressure Head	1917	6.00	1217	2.00	1104	1.25	1104	1.25	1029	1.75	1029	1.75
7	Pressure Head, Less Bracket	63151	5.50	63151	2.50	14083	6.00	14083	6.00	14090	7.00	14090	7.00
8	Pressure Head with Bracket	12377	6.50	12377	3.50	13281	6.00	13281	6.00	12849	7.00	12849	7.00
9	Follower	1142	.08	1142	.08	1108	.25	1108	.25	1033	.50	1033	.50
10	Packing Leather	28710	\$.05	28710	\$.05	28711	\$.05	28711	\$.05	28712	\$.05	28712	\$.05
11	*Release Spring	1145	.50	1145	.50	1112	.06	1112	.06	1036	.08	1036	.08
12	Follower Stud and Nut	2305	.03	2305	.03	1110	.50	1110	.50	1090	1.00	1090	1.00
13	Pressure Head Bolt and Nut	4883	.03	4883	.03	2805	.03	2805	.03	5184	.04	5184	.04
14	Non-Pressure Head Bolt and Nut	4883	.03	4883	.03	4883	.03	4883	.03	8733	.04	8733	.04
15	Cylinder Gasket	1147	1.50	1147	1.50	1114	1.50	1114	1.50	1038	1.50	1038	1.50
16	Push Rod with Pin and Cotter	23728	1.00	14363	1.00	23728	1.50	17486	1.50	23728	1.50	17486	1.50
17	Detachable Lever Bracket	14363	.30	14363	.30	14363	.10	14363	.10	14363	.10	14363	.10
18	Lever Bracket Bolt and Nuts	10819	.20	10819	.20	1456	.30	1456	.30	1456	.30	1456	.30
19	Triple Valve Gasket	12094	\$.05	12094	\$.05	10819	.20	10819	.20	10819	.20	10819	.20
20	3/4" Pipe Plug	1635	.01	1635	.01	12094	\$.05	12094	\$.05	12094	\$.05	12094	\$.05
21	1/2" Pipe Plug	1004	.01	1004	.01	1635	.01	1635	.01	1635	.01	1635	.01
22	3/8" Pipe Plug	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01

NOTE A--If Brake Cylinders are desired with J-M Packing Expanders, order should so state and specify as follows:

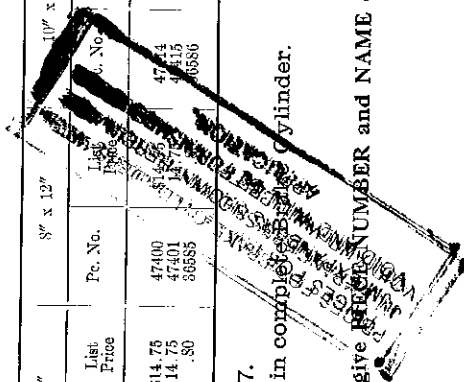
Ref. No.	CYLINDER	8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"	
		Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price
8	Cylinder complete, less Lever Brackets	47398	\$14.75	47400	\$16.80	47416	\$16.80	47430	\$23.02	47432	\$23.02	47432	\$23.02
	J-M Expander	47399	14.75	47401	16.80	47417	16.80	47431	23.02	47433	23.02	47433	23.02
		36585	.80	36585	.95	36586	.95	36587	1.10	36587	1.10	36587	1.10

* NOTE B--For Spring Identification Table, see Page 17.

† NOTE C--Listed for convenience only. Not included in complete set of parts.

‡ NOTE D--See Part Catalog T 3516-10

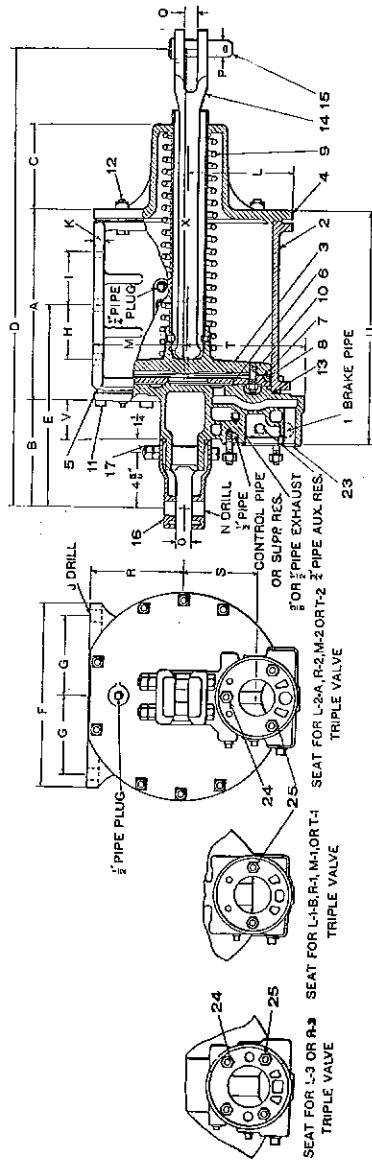
Orders must give NUMBER and NAME of part wanted.



TYPE R TRACTION BRAKE CYLINDERS

With seat for Type M, R or L Triple Valve

Type R Brake Cylinders are used with AMM, AMR and AML Automatic Brake Equipments, when Triple Valve is mounted on the Cylinder Head.



Triple Valves used with Type R Brake Cylinders.

CYLINDER DIAMETER	TRIPLE VALVES
8" and 10"	M-1, R-1, L-1-B
12" only	M-2-A
12" and 14"	R-2, L-2-A
14" and 16"	M-2-B
16" only	R-3, L-3

Cylinder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Net Wt.
6" x 8"	11 1/8"	9 1/8"	5 1/8"	3 1/8"	15 1/4"	9 3/8"	3 3/4"	2 1/8"	2 3/8"	1 1/8"	5/8"	4 3/8"	3 3/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	3 3/8"	6 1/8"	9 1/8"	15 3/8"	3 3/8"	19 1/8"	110 lbs.
6" x 12"	15 1/8"	9 1/8"	5 1/8"	3 1/8"	17 3/8"	9 3/8"	3 3/8"	4 1/8"	4 1/8"	1 1/8"	5/8"	4 3/8"	3 3/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	3 3/8"	6 1/8"	9 1/8"	19 3/8"	3 3/8"	24 3/8"	150 "
8" x 8"	10 1/8"	9 1/8"	6 1/8"	3 3/8"	14 1/8"	10 1/4"	4 1/8"	2 1/8"	2 1/8"	1 1/8"	5/8"	5 3/8"	4 3/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	4 1/8"	6 1/8"	8 1/8"	14 1/2"	3 1/8"	21 1/2"	140 "
8" x 12"	16 1/8"	9 3/8"	6 1/8"	3 3/8"	17 3/8"	10 1/4"	4 1/8"	4 1/8"	4 1/8"	1 1/8"	5/8"	5 3/8"	4 3/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	4 1/8"	6 1/8"	8 1/8"	19 3/8"	3 1/8"	26 "	165 "
10" x 8"	11 3/8"	7 3/8"	6 1/8"	3 1/4"	13 1/2"	11 "	4 5/8"	2 3/4"	2 3/4"	1 1/8"	1 1/8"	6 5/8"	5 3/4"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	5 1/4"	6 1/8"	8 1/8"	13 5/8"	1 1/4"	21 1/2"	170 "
10" x 12"	15 3/8"	7 3/8"	6 1/8"	3 1/4"	15 1/2"	11 "	4 3/4"	4 1/4"	4 1/4"	1 1/8"	1 1/8"	6 5/8"	5 1/4"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	5 1/4"	6 1/8"	8 1/8"	17 5/8"	1 3/4"	26 "	200 "
12" x 8"	11 1/8"	9 1/8"	7 "	3 3/8"	15 1/4"	15 1/4"	6 1/2"	2 5/8"	2 5/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	6 "	8 1/2"	11 1/8"	15 5/8"	3 1/8"	21 1/2"	300 "
12" x 12"	15 1/8"	9 1/8"	7 "	3 3/8"	15 1/4"	15 1/4"	6 1/2"	4 3/8"	4 3/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	6 "	8 1/2"	11 1/8"	19 3/8"	3 1/8"	26 "	300 "
14" x 12"	15 1/8"	9 1/8"	7 1/8"	3 3/8"	17 1/4"	15 1/4"	6 5/8"	4 5/8"	4 5/8"	1 1/8"	1 1/8"	8 5/8"	7 1/8"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	7 1/8"	6 1/4"	10 "	19 3/8"	3 3/8"	26 "	400 "
16" x 12"	16 1/8"	9 1/8"	7 1/8"	3 3/8"	19 1/2"	19 1/2"	8 3/8"	4 5/8"	4 5/8"	1 1/8"	1 1/8"	9 3/4"	9 "	1 1/4"	1 1/4"	1 1/4"	1 1/4"	9 "	7 3/8"	11 "	19 3/8"	3 3/8"	26 "	500 "

NOTE—12-inch Stroke Cylinders have six holes in supporting flange. 8-inch Stroke Cylinders have four holes in supporting flange.

TYPE R TRACTION BRAKE CYLINDERS
With seat for Type M, R or L Triple Valve

Ref. No.	CYLINDER	6" x 8"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
24340	Brake Cylinder, complete, less Push Rod.....	24342	\$14.00	21671	\$14.00	11173	\$14.00	21673	\$16.00	13869	\$16.00	13510	\$22.00	13184	\$22.00	12817	\$27.00	23734	\$27.00
26396	Brake Cylinder, complete, less Lever Bracket.....	26398	12.50	29944	13.50	29243	12.50	23862	14.50	28384	14.50	23431	20.50	28433	20.50	28473	25.50	30399	26.00
24341	Brake Cylinder, complete, less Lever Bracket.....	24343	14.00	21672	14.00	11174	14.00	21674	16.00	18371	16.00	13511	22.00	13185	22.00	12818	27.00	23735	27.50
26397	Brake Cylinder, complete, less Lever Bracket and Push Rod.....	26399	12.50	29245	12.50	29244	12.50	23863	14.50	28385	14.50	23432	20.50	28434	20.50	28474	25.50	30400	26.00
23698	Cylinder Body (includes 1/2" Pipe Plug).....	23699	3.50	11509	3.50	9256	3.50	8456	4.50	9260	4.50	11429	6.00	9264	6.00	10578	7.50	30401	12.00
2435	Piston and Rod (includes 10 only).....	8102	1.00	2563	1.00	1246	1.00	11570	1.50	1251	1.50	11433	2.25	3631	2.25	5397	3.00	24819	4.00
4	Non-Pressure Head.....	1284	.60	1217	.60	1104	1.25	1104	1.25	1029	1.75	1029	1.75	1005	2.50	1005	2.50	6369	3.50
5	Pressure Head, less Bracket.....	24338	5.50	13083	5.50	13085	6.00	14089	7.00	14089	7.00	14089	7.00	14089	7.00	14089	8.00	23730	9.50
6	Pressure Head, with Bracket.....	24339	5.50	11175	5.50	10097	6.00	10097	6.00	14043	7.00	14043	7.00	14043	7.00	14043	8.00	23729	9.50
1238	Followler.....	1238	.08	1142	.08	1142	.08	1108	.25	1108	.25	1033	.50	1033	.50	1010	.50	1076	.75
28709	Packing Leather.....	28709	**	28710	**	28711	**	28711	**	28712	**	28712	**	28713	**	28713	**	28714	**
1241	Packing Expander.....	1241	.05	1145	.05	1112	.06	1112	.06	1036	.08	1036	.08	1015	.10	1015	.10	1079	.15
1259	Release Spring.....	5877	.50	5877	.50	1110	.50	1110	.50	1090	1.00	1090	1.00	1077	1.00	1077	1.00	1077	1.00
27345	Follower Stud and Nut.....	27345	.03	2305	.03	2305	.03	2305	.03	5184	.04	5184	.04	5184	.04	5184	.04	5184	.04
4883	Pressure Head Bolt and Nut.....	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03
4883	Non-Pressure Head Bolt and Nut.....	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03	4883	.03
1243	Cylinder Gasket.....	1243	**	1147	**	1114	**	1114	**	1038	**	1038	**	1023	**	1023	**	1083	**
24523	Push Rod with Pin and Cotter.....	24523	1.50	23728	1.50	17486	1.50	17486	1.50	17486	1.50	17486	1.50	17486	1.50	17270	1.50	17270	1.50
14363	Push Rod Pin with Cotter.....	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10	14363	.10
1456	Detachable Lever Bracket.....	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	4010	.30
10819	Lever Bracket Bolt and Nuts.....	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20
8960	Triple Valve Gasket.....	8960	**	8969	**	8969	**	8969	**	8969	**	8969	**	8969	**	8969	**	8969	**
16437	Triple Valve Stud and Nut.....	16437	.05	16437	.05	13142	.06	13142	.06	13142	.06	13142	.06	13142	.06	13142	.06	13142	.06
1635	1/2" Pipe Plug.....	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01	1635	.01
1734	3/8" Pipe Plug.....	1734	.01	1734	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01	1004	.01
2002	1/2" Pipe Plug.....	2002	.02	2002	.02	2002	.02	2002	.02	2002	.02	2002	.02	2002	.02	2002	.02	2002	.02
1636	1/4" Pipe Plug.....	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02

NOTE A—If Brake Cylinders are desired with J-M Packing Expanders, order should so state and specify as follows:

Ref. No.	CYLINDER	6" x 8"		8" x 8"		8" x 12"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
		Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price	Pc. No.	List Price
47378	Cylinder, complete.....	47380	\$14.75	47380	\$14.75	47382	\$14.75	47407	\$16.50	47422	\$23.02	47424	\$23.02	47436	\$23.02	47437	\$23.02	47442	\$23.02
36584	J-M Expander.....	36584	.80	36585	.80	36585	.80	36586	.95	36586	.95	36587	1.10	36587	1.10	36588	1.20	36589	1.35

* NOTE B—For Spring Identification Table, see Page 17.

† NOTE C—Listed for convenience only. Not included in complete Brake Cylinder.

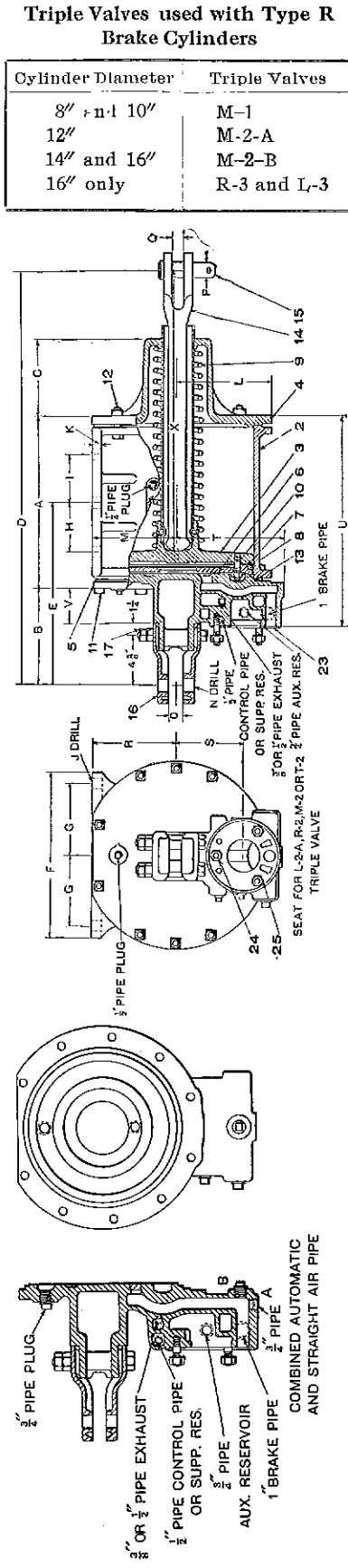
‡ NOTE D—The 16" x 12" Brake Cylinder shown in above schedule is not suitable for use with M-2-B Triple Valve. For 16" x 12" Type R Brake Cylinder with Pressure Head having seat for M-2-B Triple Valve, see Page 16.

** NOTE E—See Part Catalog T 3516-10.

Orders must give PIECE NO., PART NUMBER and NAME of part wanted.

TYPE R TRACTION BRAKE CYLINDERS
 Arranged for Combined Automatic and Straight-Air
 With seat for Type M, R or L Triple Valve

Type R Brake Cylinders are used with AMM Combined Automatic and Straight-Air Brake Equipments, when Triple Valve is mounted on the Cylinder Head.



Triple Valves used with Type R Brake Cylinders

Cylinder Diameter	Triple Valves
8" to 10"	M-1
12"	M-2-A
14" and 16"	M-2-B
16" only	R-3 and L-3

Cylinder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Net Wt.
8" x 8"	10 1/8"	9 3/8"	6 1/8"	33 1/4"	14 1/8"	10 1/4"	4 3/8"	2 1/8"	2 1/8"	1 1/8"	5/8"	5 3/8"	4 3/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	4 1/8"	6 1/8"	8 7/8"	14 1/2"	3 5/8"	21 1/2"	140 lbs.
8" x 12"	16 1/8"	9 1/8"	6 1/8"	37 1/8"	17 1/8"	10 3/8"	4 1/8"	4 1/8"	4 1/2"	1 1/8"	5/8"	5 3/8"	4 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	4 1/8"	6 1/8"	8 7/8"	19 3/4"	3 1/8"	26 "	165 "
10" x 8"	11 3/8"	7 5/8"	6 1/8"	31 3/4"	13 1/2"	11 "	4 5/8"	2 3/4"	2 3/4"	1 1/8"	1 1/8"	6 3/8"	5 3/4"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	5 1/4"	6 1/8"	8 7/8"	13 5/8"	1 3/4"	21 1/2"	170 "
10" x 12"	15 3/8"	7 5/8"	6 1/8"	36 1/4"	15 1/2"	11 "	4 1/8"	4 1/4"	4 1/4"	1 1/8"	1 1/8"	6 3/8"	5 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	5 3/8"	6 1/8"	8 7/8"	17 5/8"	1 3/4"	26 "	200 "
12" x 8"	11 1/8"	9 1/8"	7 "	33 5/8"	15 1/4"	15 1/4"	6 1/8"	2 5/8"	2 5/8"	1 1/8"	1 1/8"	7 5/8"	6 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	6 "	8 1/2"	11 1/8"	15 5/8"	3 1/8"	21 1/2"	300 "
12" x 12"	15 1/8"	9 1/8"	7 "	38 3/8"	17 "	15 3/4"	6 1/2"	4 7/8"	4 7/8"	1 1/8"	1 1/8"	7 5/8"	6 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	6 "	8 1/2"	11 1/8"	19 3/8"	3 1/8"	26 "	300 "
14" x 12"	15 1/8"	9 1/8"	7 1/8"	38 1/2"	17 1/4"	15 1/2"	6 5/8"	4 5/8"	4 5/8"	1 1/8"	1 1/8"	8 3/8"	7 1/8"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	7 1/8"	6 5/8"	10 "	19 3/8"	3 1/8"	26 "	400 "
16" x 12"	16 1/8"	9 1/8"	7 1/8"	38 1/8"	17 1/8"	19 1/2"	8 3/8"	4 5/8"	4 5/8"	1 1/8"	1 1/8"	9 3/4"	9 "	1 1/4"	1 1/4"	1 1/4"	1 1/4"	9 "	7 3/8"	11 "	19 5/8"	3 1/8"	26 "	500 "

NOTE—12-inch Stroke Cylinders have six holes in supporting flange. 8-inch Stroke Cylinders have four holes in supporting flange.

TYPE R TRACTION BRAKE CYLINDERS
 Arranged for Combined Automatic and Straight-Air
 With seat for Type M, R or L Triple Valve

Ref. No.	CYLINDER	8" x 8"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
		Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price
2	Brake Cylinder, complete, less Lever Bracket.....	47450	\$14.00	47446	\$16.00	33311	\$16.00	40009	\$22.00	30077	\$22.00	30980	\$27.00	51419	\$37.50
	Brake Cylinder, complete, less Lever Bracket.....	47451	14.00	47447	16.00	34631	16.00	41000	22.00	30978	22.00	30970	27.00	51420	37.50
	Cylinder Body (includes 3/4" Pipe Plug).....	11569	3.50	8486	4.50	32300	4.50	11428	6.00	9264	6.00	10578	7.50	33307	12.00
3	Piston and Rod (includes 10 only).....	2503	1.00	11570	1.50	1251	1.50	11433	2.25	3631	2.25	5307	3.00	24319	4.00
4	Non-Pressure Head.....	1147	1.00	1104	1.25	1204	1.25	1030	1.75	1020	1.75	1405	2.50	6369	3.50
5	Pressure Head, less Bracket.....	37315	5.50	33340	6.00	33350	6.00	36981	7.00	36851	7.00	35581	8.00	51424	9.50
6	Pressure Head, with Bracket.....	37317	5.50	33343	6.00	33349	6.00	36982	7.00	36852	7.00	36074	8.00	51423	9.50
	Follower.....	1142	.08	1142	.08	1108	.25	1033	.50	1033	.50	1010	.60	1070	.75
7	Packing Leather.....	28710	**	28711	**	28711	**	28712	**	28712	**	28713	**	28714	**
8	Packing Expander.....	1145	.05	1112	.06	1112	.06	1036	.08	1013	.08	1013	.10	1070	.15
9	*Release Spring.....	1110	.50	1110	.50	1119	.50	1060	1.00	1077	1.00	1077	1.00	1077	1.00
10	Follow Rod and Nut.....	2305	.03	2305	.03	2305	.03	5184	.04	5184	.04	5184	.04	5184	.04
11	Pressure Head Bolt and Nut.....	4853	.03	4853	.03	4853	.03	8733	.04	8733	.04	8733	.04	8733	.04
12	Non-Pressure Head Bolt and Nut.....	4853	.03	4853	.03	4853	.03	8701	.04	8701	.04	8702	.04	8703	.04
13	Cylinder Gasket.....	1147	1.50	1114	1.50	1114	1.50	1038	1.50	1038	1.50	1032	1.50	1032	1.50
14	Push Rod with Pin and Center.....	23728	1.50	23728	1.50	23728	1.50	23728	1.50	23728	1.50	17260	1.50	17260	1.50
15	Push Rod Pin with Center.....	14563	.10	14563	.10	14563	.10	14363	.30	14363	.30	14363	.30	14363	.30
16	Detachable Lever Bracket.....	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30	1456	.30
17	Lever Bracket Bolt and Nuts.....	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20	10819	.20
23	*Triple Valve Gasket.....	3869	**	3869	**	3869	**	4887	.05	4887	.05	4887	.05	4887	.05
24	Triple Valve Stud and Nut.....	19224	.06	19224	.06	19224	.06	19224	.06	19224	.06	19224	.06	19224	.06
25	Triple Valve Bolt and Nut.....	1655	.01	1655	.01	1655	.01	1655	.01	1655	.01	1655	.01	1655	.01
	3/4" Pipe Plug.....														
	1/2" Pipe Plug.....	2302	.02	2302	.02	2302	.02	1004	.01	1004	.01	1004	.01	1004	.01
	1" Pipe Plug.....	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02	1636	.02

NOTE A - If Brake Cylinders are desired with J-M Packing Expanders, order should so state and specify as follows:

Ref. No.	CYLINDER	8" x 8"		10" x 8"		10" x 12"		12" x 8"		12" x 12"		14" x 12"		16" x 12"	
		Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price	Pe. No.	List Price
8	Cylinder, complete.....	47452	\$14.75	47445	\$16.80	46507	\$16.80	47454	\$23.02	43437	\$23.02	47456	\$28.10	47457	\$28.10
	Cylinder, complete, less Lever Brackets.....	47453	14.75	47446	16.80	47400	16.80	47455	23.02	43438	23.02	47457	28.10	47457	28.10
	J-M Expander.....	36585	.80	36585	.95	36586	.95	36587	1.10	36587	1.10	36588	1.20	36588	1.20

* NOTE B - For Spring Identification Table, see Page 17.
 † NOTE C - Listed for convenience only. Not included in complete Brake Cylinder.
 ‡ NOTE D - The 16" x 12" Brake Cylinder shown in above selection is not suitable for use with M-2-B Triple Valve. For 16" x 12" Type R Brake Cylinder with Pressure Head having seat for M-2-B Triple Valve, see Page 16.
 ** NOTE E - See Part Catalog T 3516-10.
 Orders must give **PIECE NUMBER** and **NAME of part wanted**.

16-INCH x 12-INCH TYPE R TRACTION BRAKE CYLINDER

With seat for Type M-2-B Triple Valve

Type R Brake Cylinders are used with AMM, AMR and AML Automatic Brake Equipments when Triple Valve is mounted on the Cylinder Head.

Piece No. 53891. 16" x 12" Type R Traction Brake Cylinder, complete, List Price, \$37.50
 Piece No. 53892. 16" x 12" Type R Traction Brake Cylinder, complete, less
 Lever Brackets. List Price, \$37.50

Pc. No.	Ref.No.		List Price
23507	2	Cylinder Body	\$12.00
24819	3	Piston and Rod (includes 10 only)	4.00
6369	4	Non-Pressure Head	3.50
53894	5	Pressure Head, less Lever Brackets	9.50
53893	5	Pressure Head, with Lever Brackets	9.50
1076	6	Follower . . . . .	.75
28714	7	Packing Leather	†
1079	8	Packing Expander . . . . .	.15
*1077	9	Release Spring	1.00
5184	10	Follower Stud and Nut . . . . .	.04
8733	11	Pressure Head Bolt and Nut . . . . .	.04
8733	12	Non-Pressure Head Bolt and Nut . . . . .	.04
1083	13	Cylinder Gasket	†
17270	14	Push Rod with Pin and Cotter	1.50
17269	15	Push Rod Pin with Cotter . . . . .	.15
4010	16	Detachable Lever Bracket . . . . .	.30
10819	17	Lever Bracket Bolt and Nut . . . . .	.20
†12794	23	Triple Valve Gasket	†
12274	24	Triple Valve Stud and Nut . . . . .	.08
12925	25	Triple Valve Bolt and Nut . . . . .	.08
1635	1/4"	Pipe Plug . . . . .	.01
1734	3/8"	Pipe Plug . . . . .	.01
1004	1/2"	Pipe Plug . . . . .	.01
2202	3/4"	Pipe Plug . . . . .	.02
1636	1"	Pipe Plug . . . . .	.02

NOTE A—If 16" x 12" Type R Traction Brake Cylinder arranged for Combined Automatic and Straight Air and with seat for M-2-B Triple Valve is desired, order should so state and specify as follows:

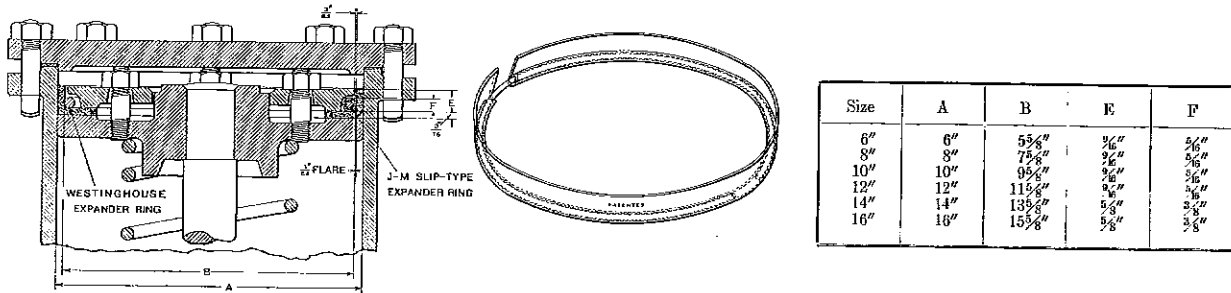
Piece No. 64852. 16" x 12" Type R Traction Brake Cylinder, complete List Price, \$37.50
 Piece No. 64858. 16" x 12" Type R Traction Brake Cylinder, complete, less Lever
 Brackets. List Price, \$37.50

Pc. No.	Ref. No.		List Price
64840	5	Pressure Head, complete, less Lever Brackets	\$ 9.50
64839	5	Pressure Head, complete	9.50

* NOTE B—For Spring Identification Table, see Page 17.
 † NOTE C—Listed for convenience only. Not included in complete Brake Cylinder.
 ‡ NOTE D—See Part Catalog T 3518-10.

Orders must give PIECE NUMBER and NAME of part wanted.

J-M BRAKE CYLINDER EXPANDER RING.



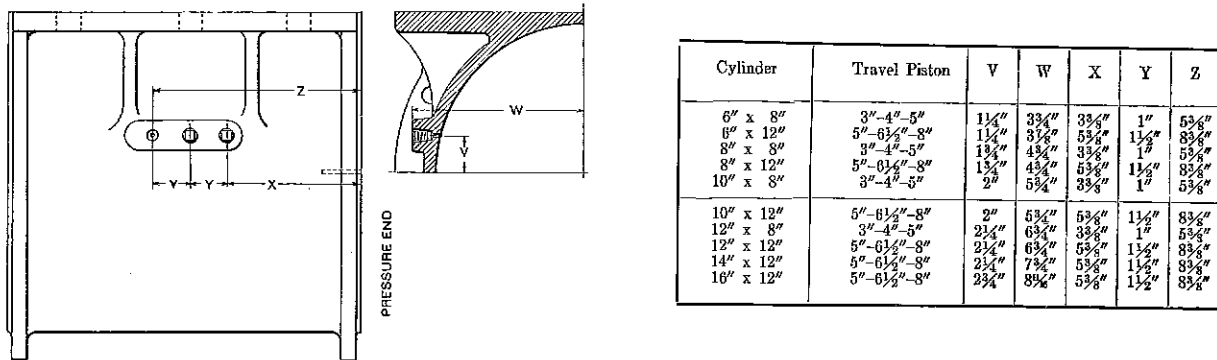
Showing both the Westinghouse and J-M Expander Rings.

The improved form of brake cylinder expander ring, recently introduced and illustrated herewith embodies certain mechanical features of merit in the matter of applying and maintaining brake cylinder packing leathers and has proven very satisfactory in actual service. For the convenience of our customers who may desire to apply this ring, therefore, we have arranged to carry all sizes in stock at our works, Wilmerding, Pa., and will furnish this special expander ring for our standard ring when specified at the following net prices subject to change without notice.

Diameter of Brake Cylinder	J-M EXPANDER RING	
	Pc. No.	Net Price
6"	36584	\$.60
7"	41217	.60
8"	36585	.60
10"	36586	.72
12"	36587	.83
14"	36588	.60
16"	36589	1.02

On orders for brake cylinders, J-M expanders will be substituted at the additional net price shown above.

CYLINDER TAPPING FOR SLACK ADJUSTERS.

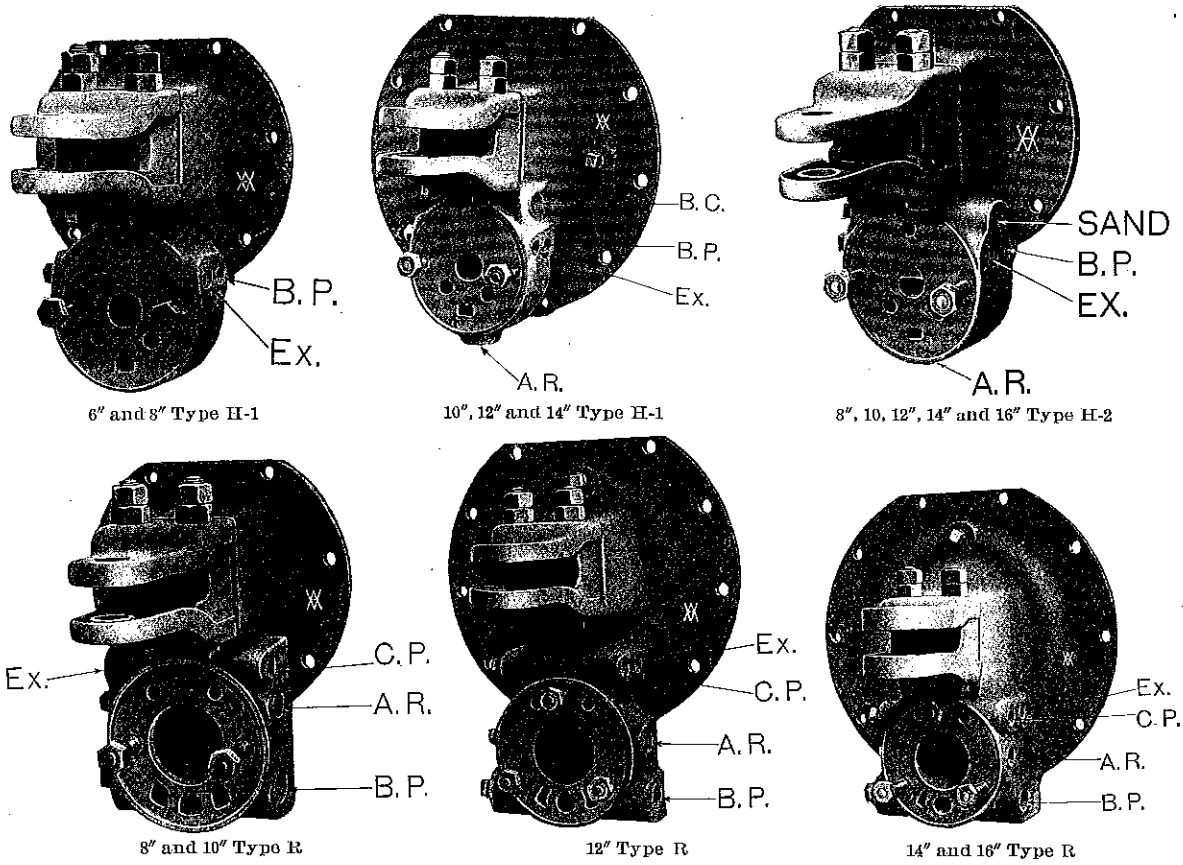


SPRING IDENTIFICATION.

The following table is shown to enable railway storekeepers and air brake men to identify the springs used in the Brake Cylinders cataloged herein. This table does not represent a specification for the springs in question and should not be used as such.

SPRING IDENTIFICATION.							
Pc. No.	Out. Dia. "A"	Dia. Wire "B"	Free Height "C"	No. Coils	Material	Name of Spring	Where Used
1077	4 1/8"	1/8"	2 3/8"	15	Steel	Release Spring	Types S, H-1 and R Cylinders
1090	4 7/8"	3/8"	2 1/2"	16 1/2	Steel	Release Spring	Types S, H-1, H-2 and R Cylinders
1110	4 1/2"	1/8"	2 3/8"	21	Steel	Release Spring	Types S, H-1, H-2 and R Cylinders
1239	4 1/2"	3/8"	2 2/8"	14 1/2	Steel	Release Spring	Types S, H-1, H-2 and R Cylinders
5877	4 1/2"	5/8"	2 6/8"	16	Steel	Release Spring	Types S, H-1 and R Cylinders
42188	3 1/8"	.263"	1 3/8"	13 1/2	Steel	Release Spring	Types S, H-1 and R Cylinders

BRAKE CYLINDER PRESSURE HEADS.



SLACK ADJUSTER EXTENSION PIECES.

Fig. 1.

Dimensions.

Pc. No.	Fig.	A	B	C
17487	1	14"	11 3/4"	
14007	1	24"	21 3/4"	
17512	2	34"	17"	14 3/4"

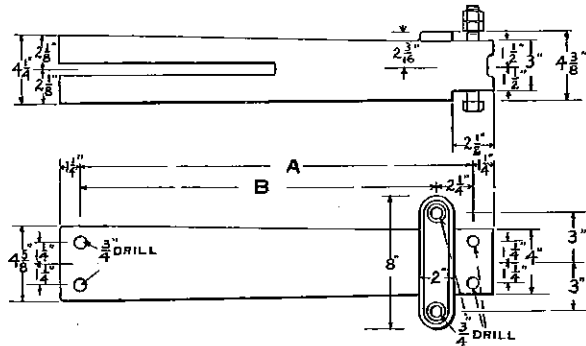
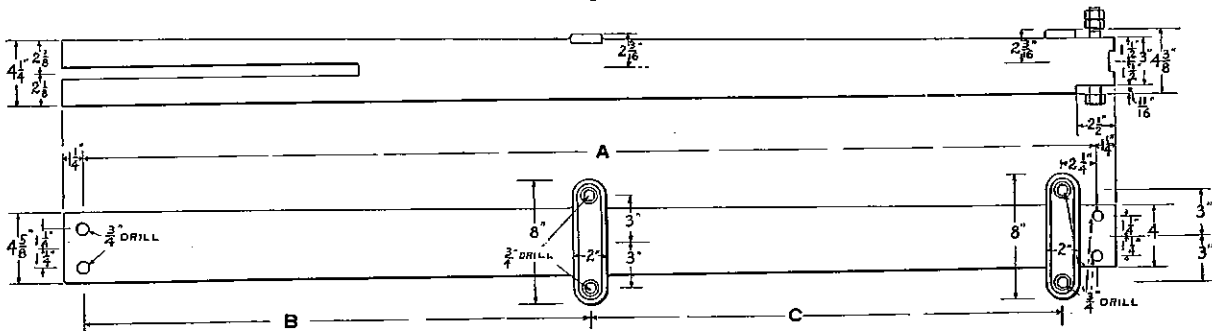


Fig. 2.



Pc. No.	Description	List Price
17487	14" Slack Adjuster Extension Piece, complete	\$ 3.00
14007	24" Slack Adjuster Extension Piece, complete	4.50
17512	34" Slack Adjuster Extension Piece, complete	6.00

Orders must give PIECE NUMBER and NAME of part wanted.

Westinghouse Traction Brake Company,

Pittsburgh, Pa., U. S. A.

WORKS AT WILMERDING, PA.

OFFICES:

ATLANTA	-	-	-	-	-	-	-	-	-	Candler Building
BOSTON	-	-	-	-	-	-	-	-	-	Exchange Building
CHICAGO	-	-	-	-	-	-	-	-	-	Railway Exchange Building
COLUMBUS	-	-	-	-	-	-	-	-	-	Columbus Savings and Trust Building
DENVER	-	-	-	-	-	-	-	-	-	Tramway Building
HOUSTON, TEX.	-	-	-	-	-	-	-	-	-	4802 Main Street
LOS ANGELES	-	-	-	-	-	-	-	-	-	Pacific Electric Building
MEXICO CITY, MEXICO	-	-	-	-	-	-	-	-	-	4a Puente de Alvarado, No. 100
NEW YORK	-	-	-	-	-	-	-	-	-	City Investing Building
PITTSBURGH	-	-	-	-	-	-	-	-	-	Westinghouse Building
ST. LOUIS	-	-	-	-	-	-	-	-	-	Boatmen's Bank Building
ST. PAUL	-	-	-	-	-	-	-	-	-	Endicott Building
SALT LAKE CITY	-	-	-	-	-	-	-	-	-	McIntyre Building
SAN FRANCISCO	-	-	-	-	-	-	-	-	-	Southern Pacific Building
SEATTLE	-	-	-	-	-	-	-	-	-	Securities Building
TOPEKA	-	-	-	-	-	-	-	-	-	New England Building



ASSOCIATED COMPANIES:

WESTINGHOUSE AIR BRAKE COMPANY, Pittsburgh, Pa.	CANADIAN WESTINGHOUSE COMPANY, LTD., Hamilton, Ontario, Canada.
THE AMERICAN BRAKE COMPANY, St. Louis, Mo.	SOCIETE ANONYME WESTINGHOUSE, Petrograd, Russia.
THE WESTINGHOUSE BRAKE COMPANY, LTD., London, England.	COMPAGNIE DES FREINS WESTINGHOUSE, Sevran, France.
WESTINGHOUSE PACIFIC COAST BRAKE COMPANY, Emeryville, Calif.	COMPAGNIA ITALIANA WESTINGHOUSE DEI FRENI, Turin, Italy.
WESTINGHOUSE BRAKE COMPANY OF AUSTRALASIA, LTD., Concord West, New South Wales, Australia.	WESTINGHOUSE EISENBAHN BREMSSEN GESELLSCHAFT, Hanover, Germany.