



MGM Brakes

A Division of Indian Head Industries, Inc.

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SERVICE CHAMBERS

&

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BRAKE MONITORING SYSTEM

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& Bus Safety...
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1956

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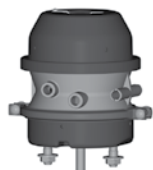
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NOTE: Product information and specifications subject to change without notice.

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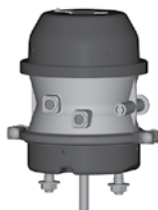
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R4A



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SAAR/R7A



SAHR/R8H

NOTE: Product information and specifications subject to change without notice.

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PART NUMBER / MODEL DESIGNATION

PART NUMBER / MODEL DESIGNATION

KEY TO MODEL "PREFIXES"	KEY TO MODEL "SUFFIXES"
C = SERVICE CHAMBER	A = 1.75 INCH STROKE (MAGNUM PERFORMANCE PLUS) No
CS = SERVICE CHAMBER / SEALED	B = 2.00 INCH STROKE
CW = SERVICE CHAMBER / WEDGE	C = 2.25 INCH STROKE
LTR = INTEGRAL RELEASE BOLT / TAMPER RESISTANT	D = 2.50 INCH STROKE
M = MAGNUM	E = 3 INCH LONG STROKE (MAGNUM PERFORMANCE PLUS)
MJS = MAGNUM PERFORMANCE PLUS / S-CAM TYPE	G = G-SERIES
MJW = MAGNUM PERFORMANCE PLUS / WEDGE	H = HYBRID
TR = TAMPER RESISTANT	HD = HEAVY DUTY
W = WEDGE	L = LONG STROKE
	L3 = 3 INCH LONG STROKE CHAMBER
	LP3 = 3 INCH LONG STROKE / LOW PROFILE
	S = SEVERE SERVICE
	T = TUBE
	W = WELDED MOUNTING BOLTS

P/N Series	Model	Stroke	Part Description	Page Number(s)	Obsolete	Replaced By
1009	CW9	1.75	Wedge Service	74-75		
1012	CW12	1.75	Wedge Service	74-75		
1016	CW16	1.75	Wedge Service	74-75		
1412	C12	1.75	CAM Service	72-73		
1416	C16	2.25	CAM Service	72-73		
1417	C16L	2.50	CAM Service	•	X	1617
1418	C16L2.5	2.50	CAM Service	76-77		
1420	C20	2.25	CAM Service	72-73		
1421	C20L	2.50	CAM Service	76-77		
1427	C24L	2.50	CAM Service	72-73		
1428	C24L3	3.00	CAM Service	76-77		
1430	C30	2.50	CAM Service	72-73		
1431	C30L3	3.00	CAM Service	76-77		
1436	C36	3.00	CAM Service	72-73		
1617	CS16LH	2.50	CAM Service	76-77		
1621	CS20L	2.50	CAM Service	76-77		
2014	WM1216	1.75	Wedge Spring/Service	•	X	MJW1216AT
2017	WM1624LG-T	1.75	Wedge Spring/Service	•	X	MJW1624BT
2212	WL1216	1.75	Wedge Spring/Service	•	X	MJW1216AT
3220	TR2030LP3	3.00	CAM Spring/Service	30-31		
3221	TR2030LP3T	3.00	CAM Spring/Service	34-35		
3224	TR2430LP3	3.00	CAM Spring/Service	30-31		
3225	TR2430LP3T	3.00	CAM Spring/Service	34-35		
3226	TR2430LP3HD	3.00	CAM Spring/Service	32-33		
3227	TR2430LP3THD	3.00	CAM Spring/Service	36-37		
3230	TR3030LP3	3.00	CAM Spring/Service	30-31		
3231	TR3030LP3T	3.00	CAM Spring/Service	34-35		
3232	TR3030LP3HD	3.00	CAM Spring/Service	32-33		

Note: For Transit / Special Applications (i.e. rod length, etc.,) refer to Section 9.

NOTE: Product information and specifications subject to change without notice.

PART NUMBER / MODEL DESIGNATION



P/N Series	Model	Stroke	Part Description	Page Number(s)	Obsolete	Replaced By
3233	TR3030LP3THD	3.00	CAM Spring/Service	36-37		
3244	TR3030LP3THDW	3.00	CAM Spring/Service	38-39		
3420	TR2024	2.25	CAM Spring/Service	14-15		
3421	TR2024T	2.25	CAM Spring/Service	18-19		
3426	TR2424LT	2.50	CAM Spring/Service	18-19		
3427	TR2424L	2.50	CAM Spring/Service	14-15		
3428	TR2430LT	2.50	CAM Spring/Service	18-19		
3429	TR2430L	2.50	CAM Spring/Service	14-15		
3430	TR3030	2.50	CAM Spring/Service	14-15		
3431	TR3030T	2.50	CAM Spring/Service	18-19		
3432	TR3036T	2.50	CAM Spring/Service	18-19		
3433	TR3036	2.50	CAM Spring/Service	14-15		
3434	TR3024	2.50	CAM Spring/Service	14-15		
3435	TR3024T	2.50	CAM Spring/Service	18-19		
3436	TR3636T	3.00	CAM Spring/Service	18-19		
3331	TR3030L3-T	3.00	CAM Spring/Service	•	X	3231
3437	TR3636	3.00	CAM Spring/Service	14-15		
3444	TR3030THDW	2.50	CAM Spring/Service	22-23		
3523	TR2430LP3TS	3.00	CAM Spring/Service	40-41		
3526	TR2430LTSHD	2.50	CAM Spring/Service	26-27		
3527	TR2430LP3TSHD	3.00	CAM Spring/Service	42-43		
3528	TR2430LTS	2.50	CAM Spring/Service	24-25		
3530	TR3030	2.50	CAM Spring/Service	14-15		
3531	TR3030TS	2.50	CAM Spring/Service	24-25		
3532	TR3036TS	2.50	CAM Spring/Service	24-25		
3533	TR3030TSHD	2.50	CAM Spring/Service	26-27		
3534	TR3030LP3TSHD	3.00	CAM Spring/Service	42-43		
3535	TR3030LP3TS	3.00	CAM Spring/Service	40-41		
3536	TR3636TS	3.00	CAM Spring/Service	24-25		
3538	TR2424LTS	2.50	CAM Spring/Service	24-25		
3624	TR2430LHD	2.50	CAM Spring/Service	16-17		
3625	TR2430LTHD	2.50	CAM Spring/Service	20-21		
3630	TR3030HD	2.50	CAM Spring/Service	16-17		
3631	TR3030THD	2.50	CAM Spring/Service	20-21		
3827	LTR2430LT	2.50	CAM Spring/Service	56-57		
3828	LTR2430L3	3.00	CAM Spring/Service	58-59		
3831	LTR3030T	2.50	CAM Spring/Service	56-57		
3832	LTR3030L3	3.00	CAM Spring/Service	58-59		
3844	LTR3030L3W	3.00	CAM Spring/Service	60-61		
4112	M1216G-T	1.75	CAM Piston/Spring/Service	•	X	MJS1216AT
4115	M1620LGT	2.50	CAM Piston/Spring/Service	•	X	MJS1724ET
4117	M1624LGT	2.50	CAM Piston/Spring/Service	•	X	MJS1724ET
4119	M2020LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2024ET
4120	M2024LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2024ET

Note: For Transit / Special Applications (i.e. rod length, etc.,) refer to Section 9.

NOTE: Product information and specifications subject to change without notice.



PART NUMBER / MODEL DESIGNATION

PART NUMBER / MODEL DESIGNATION

P/N Series	Model	Stroke	Description	Page Number(s)	Obsolete	Replaced By
4122	M2420LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2424ET
4124	M2424LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2424ET
4128	M2430LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2430ET
4131	M3027GT	2.50	CAM Piston/Spring/Service	•	X	MJS3028ET
4133	M3024GT	2.50	CAM Piston/Spring/Service	•	X	MJS3024ET
4420	M2030LGT	2.50	CAM Piston/Spring/Service	•	X	MJS2030ET
4430	M3030GT	2.50	CAM Piston/Spring/Service	•	X	MJS3028ET
4431	M3031GT	2.50	CAM Piston/Spring/Service	•	X	MJS3030ET
5004	R4A	4.50	Remote Mount Cylinder	86-87		
5005	R5A	4.40	Remote Mount Cylinder	86-87		
5005	R5AHD	4.41	Remote Mount Cylinder	86-87		
5007	R7A	2.75	Spring Applied/Air Released	88-89		
5008	R8H	2.75	Spring Applied/Hydraulic Released	88-89		
MJS1216AT	MJS1216AT	1.75	CAM Piston/Spring/Service	64-65		
MJS1724ET	MJS1724ET	3.00	CAM Piston/Spring/Service	66-67		
MJS2024ET	MJS2024ET	3.00	CAM Piston/Spring/Service	66-67		
MJS2030ET	MJS2030ET	3.00	CAM Piston/Spring/Service	66-67		
MJS2424ET	MJS2424ET	3.00	CAM Piston/Spring/Service	66-67		
MJS2430ET	MJS2430ET	3.00	CAM Piston/Spring/Service	66-67		
MJS3024ET	MJS3024ET	3.00	CAM Piston/Spring/Service	68-69		
MJS3028ET	MJS3028ET	3.00	CAM Piston/Spring/Service	68-69		
MJS3030ET	MJS3030ET	3.00	CAM Piston/Spring/Service	68-69		
MJS3628ET	MJS3628ET	3.00	CAM Piston/Spring/Service	68-69		
MJS3630ET	MJS3630ET	3.00	CAM Piston/Spring/Service	68-69		
MJW1216AT	MJW1216AT	1.75	Wedge Piston/Spring/Service	80-81		
MJW1624BT	MJW1624BT	2.00	Wedge Piston/Spring/Service	82-83		

AIR DISC BRAKES

1617	CS16LH	2.50	Air Disc Service	52		
1621	CS20L	2.50	Air Disc Service	52		
1427	C24L	2.50	Air Disc Service	52		
1429	C27H	2.50	Air Disc Service	52		
1430	C30	2.50	Air Disc Service	52		
3417	TR1724LTHDH	2.50	Air Disc/Spring/Service	48		
3419	TR1724LTH	2.50	Air Disc/Spring/Service	48		
3422	TR2024LTHD	2.50	Air Disc/Spring/Service	48		
3423	TR2024LT	2.50	Air Disc/Spring/Service	48		
3425	TR2130LTH	2.50	Air Disc/Spring/Service	48		
3426	TR2424LT	2.50	Air Disc/Spring/Service	49		
3428	TR2430LT	2.50	Air Disc/Spring/Service	49		
3431	TR3030T	2.50	Air Disc/Spring/Service	49		

Note: For Transit / Special Applications (i.e. rod length, etc.,) refer to Section 9.

NOTE: Product information and specifications subject to change without notice.

P/N Series	Model	Stroke	Description	Page Number(s)	Obsolete	Replaced By
3432	TR3036T	2.50	Air Disc/Spring/Service	48		
3450	TR2730TH	2.50	Air Disc/Spring/Service	48		
3452	TR2736TH	2.50	Air Disc/Spring/Service	49		
3623	TR2424LTHD	2.50	Air Disc/Spring/Service	49		
3625	TR2430LTHD	2.50	Air Disc/Spring/Service	49		
3627	TR2130LTHDH	2.50	Air Disc/Spring/Service	49		
3631	TR3030THD	2.50	Air Disc/Spring/Service	49		
3650	TR2730THDH	2.50	Air Disc/Spring/Service	48		
MJB1724ET	MJB1724ET	3.00	Air Disc/Spring/Service	50		
MJB2024ET	MJB2024ET	3.00	Air Disc/Spring/Service	50		
MJB2030ET	MJB2030ET	3.00	Air Disc/Spring/Service	50		
MJB2424ET	MJB2424ET	3.00	Air Disc/Spring/Service	50		
MJB2430ET	MJB2430ET	3.00	Air Disc/Spring/Service	50		
MJB2730ET	MJB2730ET	3.00	Air Disc/Spring/Service	50		
MJB3030ET	MJB3030ET	3.00	Air Disc/Spring/Service	50		

Note: For Transit / Special Applications (i.e. rod length, etc.,) refer to Section 9.

UNDERSTANDING MGM BRAKES PART NUMBERS

MGM Brakes assigns a 7-digit part number to every assembly and part we manufacture. This number code reveals information about the part.

EXPLANATION OF 7-DIGIT PART NUMBER

- 1st Two Digits - Major models, groups, detail parts, kits, etc.
- 2nd Two Digits - (a) Model size on major groups
(b) Detail parts identification all others
- 3rd Three Digits- Numerical sequence 001-999 (a) Spring brake singles – 001 through 050
Spring brake tandems – 051 through 999
(b) All others 001 through 999

EXAMPLE OF SYSTEM

10000000 – 19999999	Service Chamber
20000000 – 29999999	Wedge Spring Brake
30000000 – 39999999	Double Diaphragm Brake
40000000 – 49999999	Piston Type Brake
50000000 – 59999999	Remote Mount Cylinder
80000000 – 89999999	Parts/Assemblies/Valves
89999999 – 99999999	Kits

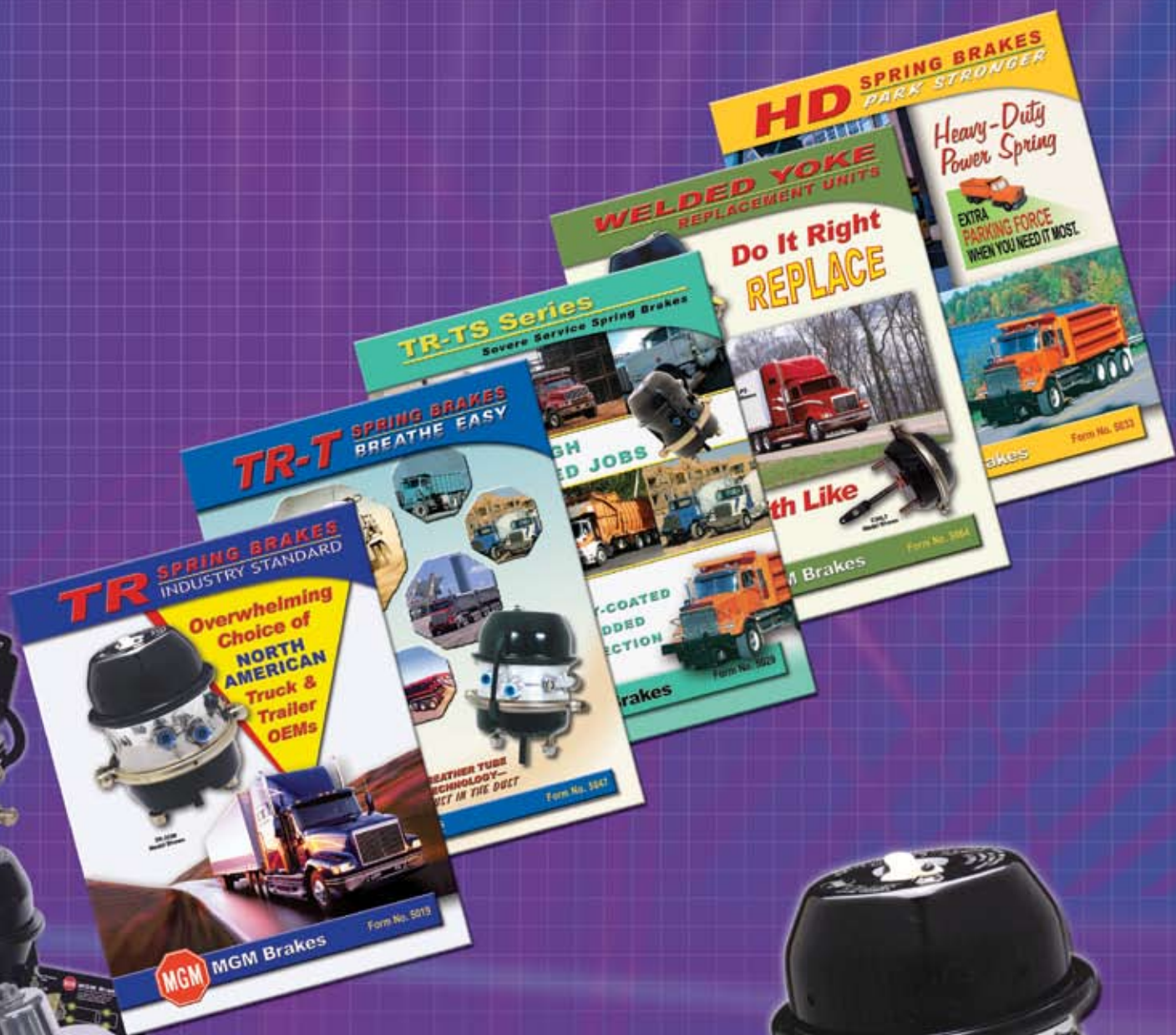
MAGNUM PERFORMANCE PLUS NUMBERING SYSTEM

The Magnum "Performance" Plus numbering system is uniquely different from how MGM Brakes identified products in the past. The Magnum Plus part number contains all the information pertaining to the brake, allowing anyone to identify not only the model, but application, stroke, features and serial number as well.

Example: MJS3030ET051

Model Series	Style	Service Side	Spring Side	Max. Stroke	Feature	Serial Number
MJ	S	30	30	E	T	051
Magnum J-Series	S-Cam	Type 30	Type 30	3.00	Breather Tube	Aftermarket Complete Assembly

NOTE: Product information and specifications subject to change without notice.



Safe, Reliable,
Tamper-Resistant

TR SERIES



Section 1: Double Diaphragm Spring Brakes..... 10-45

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Standard Stroke Models



TR	(Tamper Resistant).....	14-15
TR-HD	(Tamper Resistant, Heavy-Duty).....	16-17
TR-T	(Tamper Resistant, Tube).....	18-19
TR-THD	(Tamper Resistant, Tube, Heavy-Duty).....	20-21
TR-THDW	(Tamper Resistant, Tube, Heavy-Duty, Welded NPC).....	22-23
TR-TS	(Tamper Resistant, Tube, Severe Service).....	24-25
TR-TSHD	(Tamper Resistant, Tube, Severe Service, Heavy-Duty).....	26-27
TR-TSHDW	(Tamper Resistant, Tube, Severe Service, Heavy-Duty, Welded NPC).....	28-29

Long Stroke Models



TR-LP3	(Tamper Resistant, Long Stroke).....	30-31
TR-LP3HD	(Tamper Resistant, Long Stroke, Heavy-Duty).....	32-33
TR-LP3T	(Tamper Resistant, Long Stroke, Tube).....	34-35
TR-LP3THD	(Tamper Resistant, Long Stroke, Tube, Heavy-Duty).....	36-37
TR-LP3THDW	(Tamper Resistant, Long Stroke, Tube, Heavy-Duty, Welded NPC).....	28-39
TR-LP3TS	(Tamper Resistant, Long Stroke, Tube, Severe Service).....	40-41
TR-LP3TSHD	(Tamper Resistant, Long Stroke, Tube, Severe Service, Heavy-Duty).....	42-43
TR-LP3TSHDW	(Tamper Resistant, Long Stroke, Tube, Severe Service, Heavy-Duty, Welded NPC).....	44-45



INDUSTRY SAFETY REMINDER:

Before 1989 double diaphragm spring brake actuators were manufactured using two clamp bands; one to seal the service side and one to seal the spring parking side. At one time both sides of these units were considered "serviceable", meaning that if either side failed the clamp band could be removed, the diaphragm or other components could be replaced, and the unit continued in service as repaired.

While removing the clamp band on the service side of a double diaphragm spring brake actuator carries little or no risk, experience showed that all too often technicians did not follow the required safety procedures when removing the clamp band on the spring parking side, resulting in a potential for severe personal injury. If the powerful spring in the spring parking side is not properly "caged" before the clamp band is removed the spring can propel components of the assembly with great force, potentially causing severe personal injury.

In response to this safety problem MGM Brakes pioneered the development in 1987 of the "Tamper Resistant" double diaphragm spring brake actuator with the first "non-serviceable" spring parking side. By the early 1990's the entire domestic industry recognized the enhancement to safety offered by the "Tamper Resistant" design. Today every responsible spring brake manufacturer based in the United States offers only spring brakes utilizing a "Tamper Resistant" technology. As a result of the universal adoption of a "Tamper Resistant" design for the spring parking side of double diaphragm spring brake actuators, instances of injury to workers from improper repair procedures or accidents have steadily declined until today they are virtually nonexistent.

Unfortunately, a disturbing trend is emerging within the aftermarket portion of the heavy duty truck industry - the use of double clamp banded spring brake actuators as replacements for damaged or failed "Tamper Resistant" units. This "reintroduction" of double clamp banded spring brakes into the North American market seriously threatens worker safety in the heavy duty truck industry. Especially at risk are those workers least experienced in the industry. Well over a decade has passed since MGM Brakes' introduction of "Tamper Resistant" spring parking brakes and many in the service and maintenance end of the industry have not seen, let alone serviced, a double clamp banded spring brake. Younger workers are not likely to have been trained in the special safety procedures required to cage the spring before servicing the spring parking side of double clamp banded units.

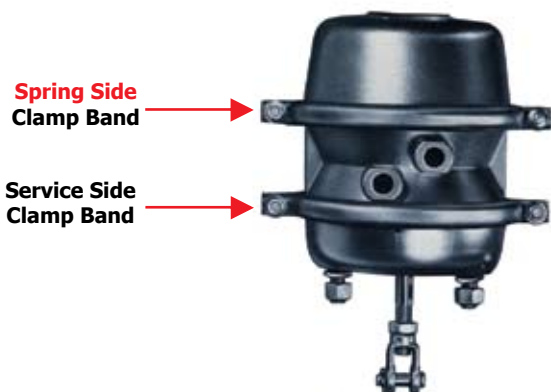
Therefore, MGM Brakes believes the industry needs to be reminded of the dangers associated with servicing double clamp banded spring brakes.

BE SURE TO PROPERLY "CAGE" THE SPRING IN THE SPRING PARKING SIDE ON ALL DOUBLE DIAPHRAGM SPRING BRAKE ACTUATORS - EVEN "TAMPER RESISTANT" MODELS - BEFORE ATTEMPTING ANY SERVICE ON THEM.

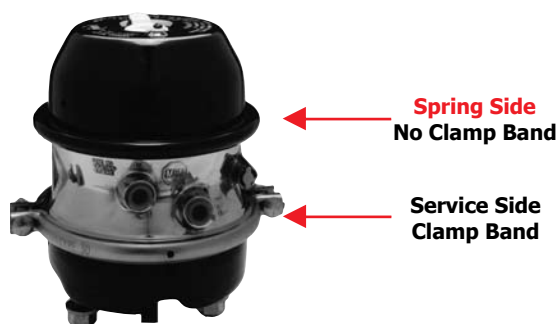
DO NOT ATTEMPT TO REMOVE OR LOOSEN THE SPRING PARKING SIDE CLAMP BAND ON A DOUBLE CLAMP BANDED SPRING BRAKE ACTUATOR UNDER ANY CIRCUMSTANCE.

IMPROPER SERVICING OF A DOUBLE CLAMP BANDED SPRING BRAKE ACTUATOR MAY RESULT IN SEVERE PERSONAL INJURY DUE TO AN UNINTENTIONAL SEPARATION OF THE HEAD FROM THE BASE OF THE UNIT.

**Double Clamp Band
Spring Brake**



**MGM "TR"
Spring Brake**



Information taken from technical bulletin EB 06-003

NOTE: Product information and specifications subject to change without notice.

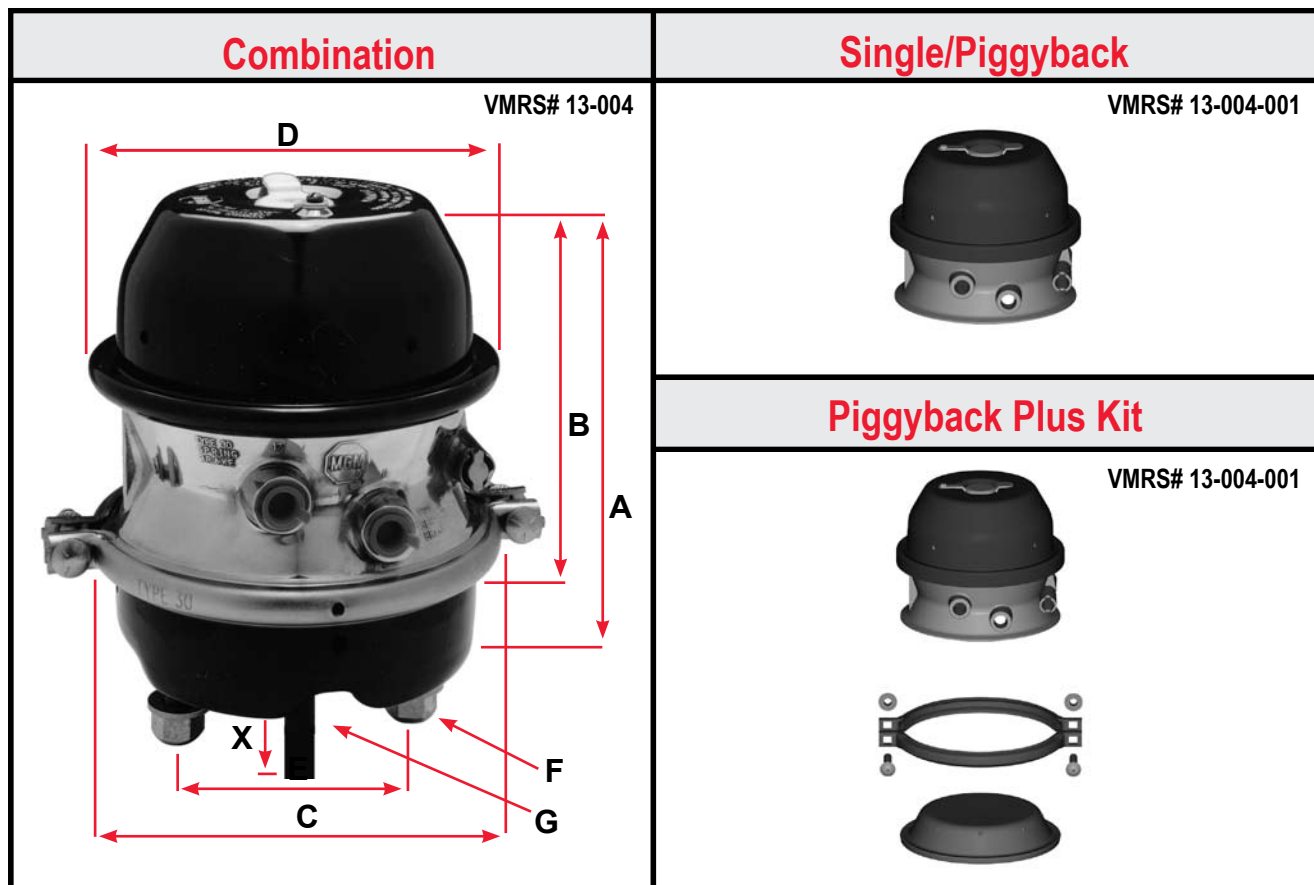
FEATURES	TR	TR-HD	TR-T	TR-THD	TR-THDW	TR-TS	TR-TSHD	TR-TSHDW	TR-LP3	TR-LP3HD	TR-LP3T	TR-LP3THD	TR-LP3THDW	TR-LP3TS	TR-LP3TSHD	TR-LP3TSHDW
Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out																
Center Hole Diaphragm																
Tamper-Resistant Mechanically Locked Spring Housing																
Molded Nitrile Rubber Push-Rod Air Seal																
Center Hole Shield																
Steel Head/Epoxy Coated																
External Breather Tube																
Externally Stored Release Bolt																
Stroke Alert																
"Long Life" Power Spring																
Heavy-Duty "Long Life" Power Spring																
Polymer Push-Rod Guides																
Heavy-Duty 8 Gauge Steel Non-Pressure Chamber																
3 Inch Long Stroke																
Weatherseal™ Plug																
360 Aluminum Center Case																
Heavy-Duty Nylon Reinforced Diaphragms																
Weld Reinforced NPC																

Indicates Feature

NOTE: Product information and specifications subject to change without notice.



Standard Stroke Model



P/N Series	3420	3427	3429	3434	3430	3433	3437
Model	TR2024	TR2424L	TR2430L	TR3024	TR3030	TR3036	TR3636
Size	2024	2424	2430	3024	3030	3036	3636
Stroke	2.25"	2.50"	2.50"	2.50"	2.50"	2.50"	3.00"
P/N Combination	3420051	3427051	3429051	3434051	3430051	3433051	3437051
P/N Single/Piggyback	3420001	N/A	N/A	3434001	3430001	N/A	N/A
P/N Piggyback Plus Kit	N/A	3427008	3429008	N/A	3430008	3433008(a)	3437008
Wt. Combination (Lbs.)	15.9	16.6	18.5	18.3	20.0	26.5	30.8
Wt. Single (Lbs.)	9.6	9.5	11.6	9.7	11.6	18.3	20.2
A	8.31	8.52	9.04	8.47	9.04	9.86	11.13
B	6.16	6.36	6.91	6.12	6.66	7.52	8.38
C	6.9	7.38	7.38	8.31	8.31	8.31	9.25
D	7.34	7.34	8.21	7.34	8.21	9.18	9.18
E	4.75"						
F	5/8" - 11UNC						
G	5/8" - 18UNF						
Inlets	3/8" - NPTF						
X - Min. (in the caged position)	8.00" (b)						

NOTE: (a) This model must be used only in combination with MGM Brakes heavy-duty weld reinforced mounting base or 8 gauge non-pressure housing.

For Transit and Hendrickson Intraax / Vantraax Suspension applications refer to Section 9.

NOTE: Product information and specifications subject to change without notice.

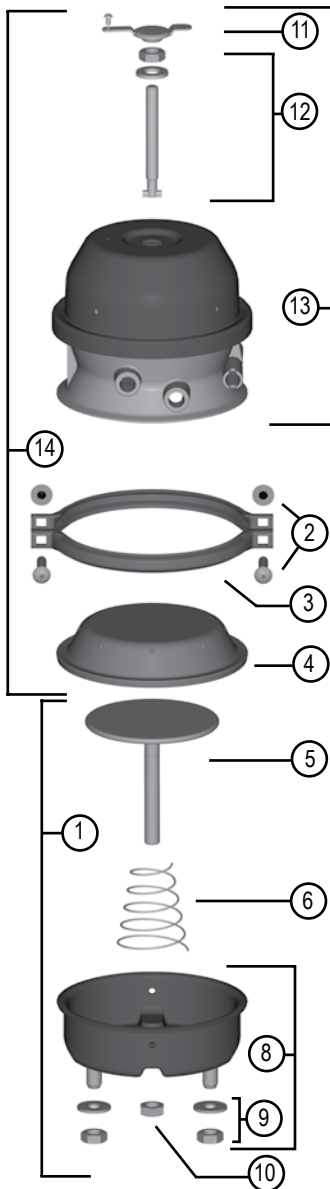
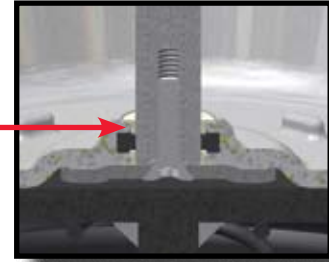
Standard Stroke Model

TR Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Stone Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- “Long Life” Power Spring
- Weatherseal™ Plug
- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models) (6-Gauge Standard on Type 36 Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (See pg.119)

Center Seal (Push-Rod Air Seal)

Multi-lipped, pressure activated seal – an MGM exclusive - molded from specially formulated low-temperature-resistant Nitrile Rubber, providing long-term protection against air leaks. Nylon guides eliminate metal to metal contact and premature failure in this critical area.



Replacement Parts

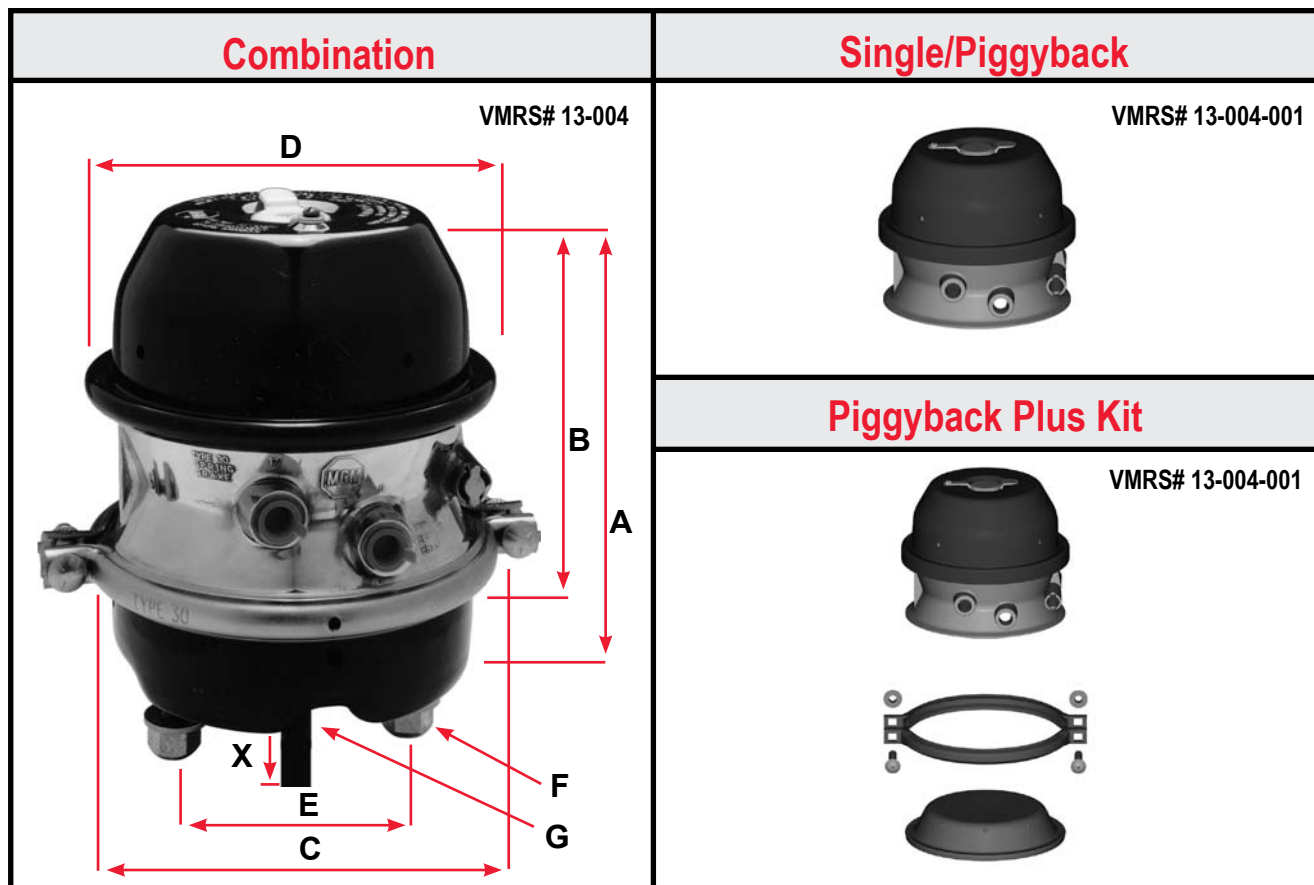
P/N Series	3420	3427	3429	3434	3430	3433	3437
Model	TR2024	TR2424L	TR2430L	TR3024	TR3030	TR3036	TR3636
1 Kit - NP Chamber (b)	9015160	9015161	9015161	9015050	9015050	9015050	9015049
2 Kit - Nuts & Bolts	9003001	9003001	9003001	9003001	9003001	9003001	9003001
3 Clamp Band Assembly	8216020	8216025	8216025	8216045	8216045	8216045	8216036
4 Diaphragm	8017120	8017141	8017141	8017730	8017730	8017730	8017836
5 Kit - Push-Rod Assembly (b)	9064001	9064002	9064002	9064003	9064003	9064003	9064004
6 Return Spring	8068011	8068011	8068011	8068011	8068011	8068011	8068012
7 Kit - Center Hole Shield	9065002	9065002	9065002	9065002	9065002	9065002	9065002
8 NP Chamber Assembly	8215169	8215105	8215105	8215501	8215501	8215501	8215036
9 Kit - Nuts & Washers	9002001	9002001	9002001	9002001	9002001	9002001	9002001
10 Hex Nut - Yoke	8130004	8130004	8130004	8130004	8130004	8130004	8130004
11 Kit - Weatherseal™ Plug	9019005	9019005	9019005	9019005	9019005	9019006	9019006
12 Kit - Release Bolt	9007003	9007003	9007003	9007003	9007003	9007009	9007009
13 Piggyback	3420001	N/A	N/A	3434001	3430001	N/A	N/A
14 Kit - Piggyback Plus	N/A	3427008	3429008	N/A	3430008	3433008(a)	3437008
OPTIONAL ITEMS							
Yoke Assembly	Refer to Replacement Parts Section 8						
Boot & Retainer	Refer to Replacement Parts Section 8						

NOTE: (a) This model must be used only in combination with MGM Brakes heavy-duty weld reinforced mounting base or 8 gauge non-pressure housing.

(b) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.

Standard Stroke Model


P/N Series	3624	3630
Model	TR2430LHD	TR3030HD
Size	2430	3030
Stroke	2.50"	2.50"
P/N Combination	3624051	3630051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	3624008	3630008
Wt. Combination (Lbs.)	18.6	19.9
Wt. Single (Lbs.)	11.7	11.5
A	9.04	9.04
B	6.91	6.66
C	7.38	8.31
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	

NOTE: Product information and specifications subject to change without notice.

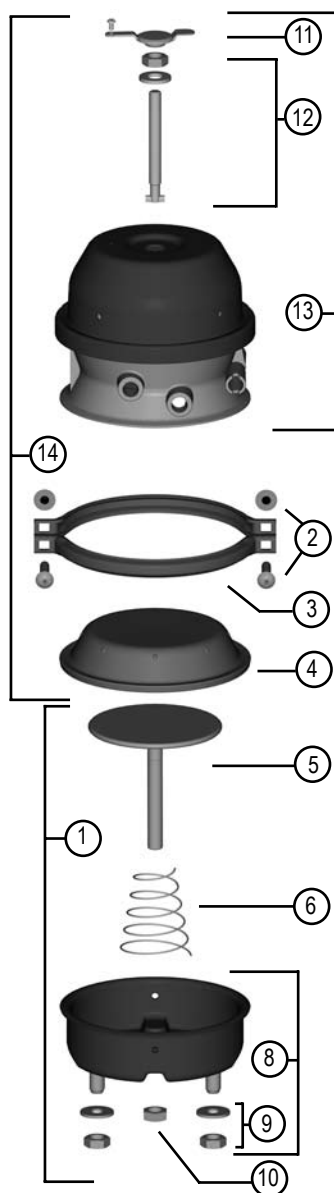
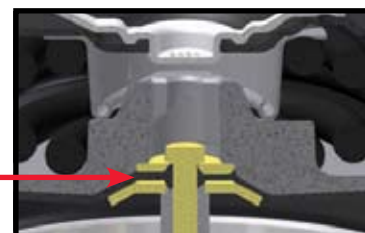
TR-HD Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- Weatherseal™ Plug

- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- **Heavy-Duty Power Spring (160 Lbs. additional parking brake force @ 1.25 inches of stroke)**
- **Center Hole Diaphragm (U.S. Patent #5,507,217)**

Center Hole Diaphragm (U.S. Patent #5,507,217)

Patented feature that aligns the piston, diaphragm, power spring and internal push-rod providing the following advantages: Maintains component alignment; reduces power spring stress; reduces coil clash; increases center-seal life and eliminates the effects of severe vibration.



Replacement Parts

P/N Series		3624	3630
Model		TR2430LHD	TR3030HD
1	Kit - NP Chamber (a)	9015219	9015050
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017141	8017730
5	Kit - Push-Rod Assembly (a)	9064002	9064003
6	Return Spring	8068011	8068011
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	8215294	8215501
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Piggyback	N/A	N/A
14	Kit - Piggyback Plus	3624008	3630008
OPTIONAL ITEMS			
Yoke Assembly		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

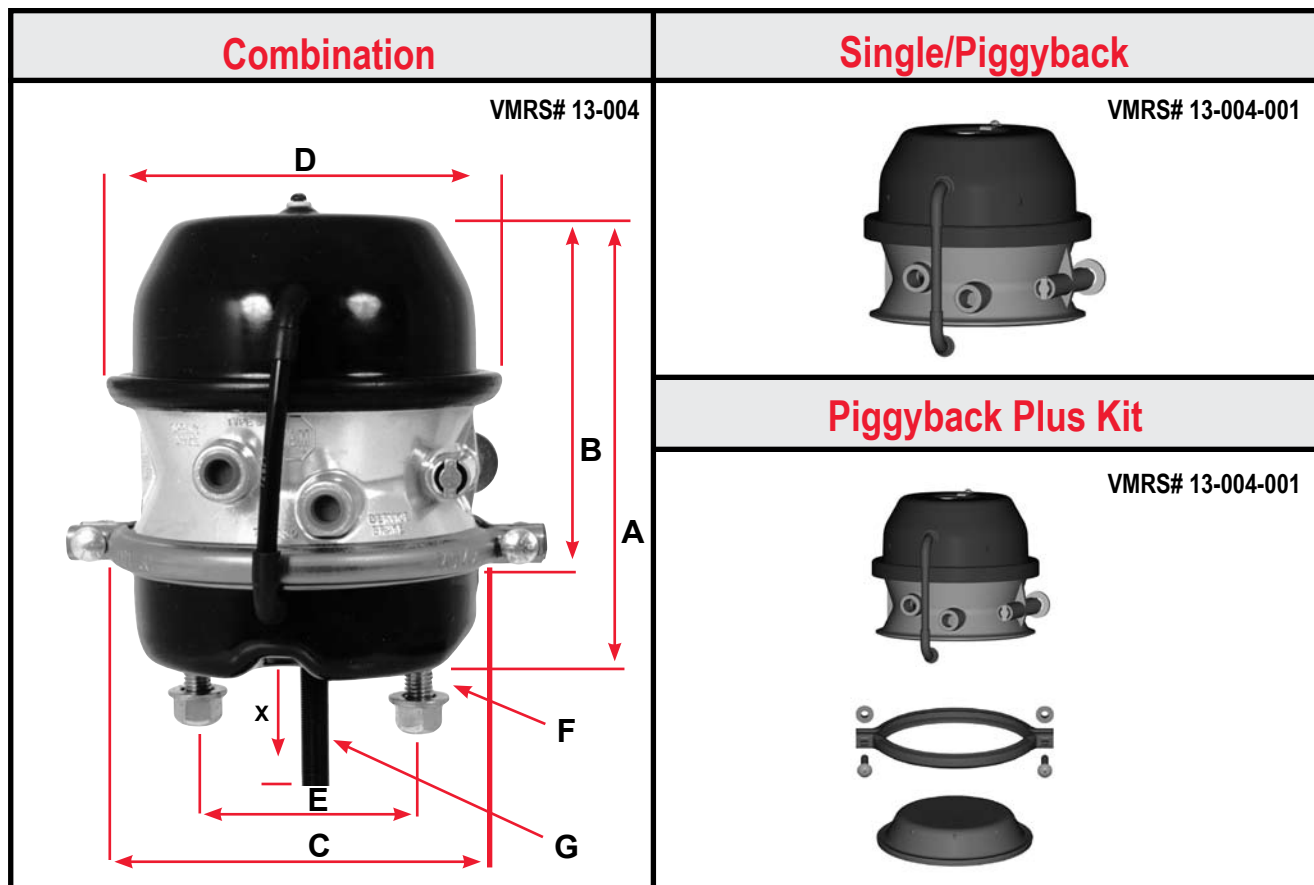
NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.



Standard Stroke Model

DOUBLE DIAPHRAGM



P/N Series	3421	3426	3428	3435	3431	3432	3436
Model	TR2024T	TR2424LT	TR2430LT	TR3024T	TR3030T	TR3036T	TR3636T
Size	2024	2424	2430	3024	3030	3036	3636
Stroke	2.25"	2.50"	2.50"	2.50"	2.50"	2.50"	3.00"
P/N Combination	3421051	3426051	3428051	3435051	3431051	3432051	3436051
P/N Single/Piggyback	3421001	N/A	N/A	3435001	3431001	3432001 (a)	3436001
P/N Piggyback Plus Kit	N/A	N/A	3428008	N/A	3431008	N/A	N/A
Wt. Combination (Lbs.)	15.9	16.6	18.5	18.3	20.0	26.5	30.8
Wt. Single (Lbs.)	9.6	N/A	11.6	9.7	11.6	18.3	20.2
A	8.31	8.52	9.04	8.47	9.04	9.86	11.13
B	6.16	6.36	6.91	6.12	6.66	7.52	8.38
C	6.9	7.38	7.38	8.31	8.31	8.31	9.25
D	7.34	7.34	8.21	7.34	8.21	9.18	9.18
E	4.75"						
F	5/8" - 11UNC						
G	5/8" - 18UNF						
Inlets	3/8" - NPTF						
X - Min. (in the caged position)	8.00" (b)						

NOTE: (a) This model must be used only in combination with MGM Brakes heavy-duty weld reinforced mounting base or 8 gauge non-pressure housing.

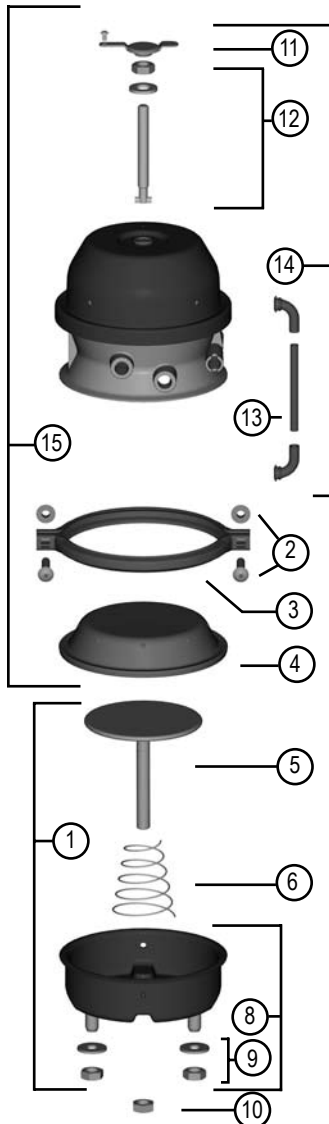
For Transit applications refer to Section 9.

NOTE: Product information and specifications subject to change without notice.

TR-T Model Features

- Tamper Resistant Design
(U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- "Long Life" Power Spring

- Weatherseal™ Plug
- Heavy-Duty Steel Non-Pressure Chamber
(8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
(6-Gauge Standard on Type 36 Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- **External Breather Tube**



External Breather-Tube

Vents air from inside the protected area of the non-pressure chamber to effectively prevent entry of liquid and solid corrosive contaminants that can cause premature failure of the spring brake chamber.

Replacement Parts

P/N Series	3421	3426	3428	3435	3431	3432	3436
Model	TR2024T	TR2424LT	TR2430LT	TR3024T	TR3030T	TR3036T	TR3636T
1 Kit - NP Chamber (b)	9015111	9015152	9015152	9015157	9015157	9015149	9015150
2 Kit - Nuts & Bolts	9003001	9003001	9003001	9003001	9003001	9003001	9003001
3 Clamp Band Assembly	8216020	8216025	8216025	8216045	8216045	8216045	8216036
4 Diaphragm	8017120	8017141	8017141	8017730	8017730	8017730	8017836
5 Kit - Push-Rod Assembly (b)	9064001	9064002	9064002	9064003	9064003	9064003	9064004
6 Return Spring	8068011	8068011	8068011	8068011	8068011	8068011	8068012
7 Kit - Center Hole Shield	9065002	9065002	9065002	9065002	9065002	9065002	9065002
8 NP Chamber Assembly	9015110	9015151	9015151	9015122	9015122	9015122	9015108
9 Kit - Nuts & Washers	9002001	9002001	9002001	9002001	9002001	9002001	9002001
10 Hex Nut - Yoke	8130004	8130004	8130004	8130004	8130004	8130004	8130004
11 Kit - Weatherseal™ Plug	9019005	9019005	9019005	9019005	9019005	9019006	9019006
12 Kit - Release Bolt	9007003	9007003	9007003	9007003	9007003	9007009	9007009
13 Kit - Breather Tube	9081001	9081001	9081001	9081001	9081001	9081001	9081001
14 Piggyback	3421001	N/A	N/A	3435001	3431001	3432001(a)	3436001
15 Kit - Piggyback Plus	N/A	N/A	3428008	N/A	3431008	N/A	N/A
OPTIONAL ITEMS							
Yoke Assembly	Refer to Replacement Parts Section 8						
Boot & Retainer	Refer to Replacement Parts Section 8						

NOTE: (a) This model must be used only in combination with MGM Brakes heavy-duty weld reinforced mounting base or 8 gauge non-pressure housing.

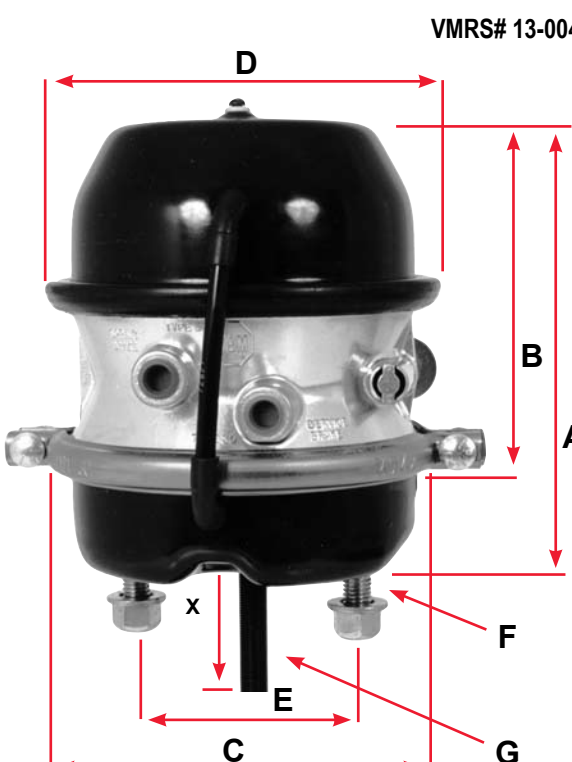
(b) The ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



Standard Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	 VMRS# 13-004-001
	Piggyback Plus Kit
	N/A

P/N Series	3625	3631
Model	TR2430LTHD	TR3030THD
Size	2430	3030
Stroke	2.50"	2.50"
P/N Combination	3625051	3631051
P/N Single/Piggyback	N/A	3631001
P/N Piggyback Plus Kit	N/A	N/A
Wt. Combination (Lbs.)	18.6	19.9
Wt. Single (Lbs.)	N/A	11.5
A	9.04	9.04
B	6.91	6.66
C	7.38	8.31
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	

NOTE: Product information and specifications subject to change without notice.

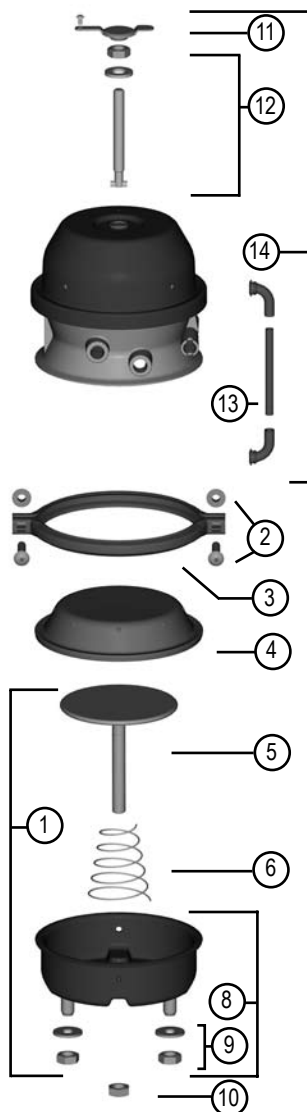
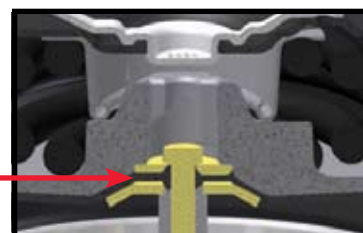
TR-THD Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- Weatherseal™ Plug

- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- **Heavy-Duty Power Spring (160 Lbs. additional parking brake force @ 1.25 inches of stroke)**
- **Center Hole Diaphragm (U.S. Patent No. 5,507,217)**

Center Hole Diaphragm (U.S. Patent No. 5,507,217)

Patented feature that aligns the piston, diaphragm, power spring and internal push-rod providing the following advantages: Maintains component alignment; reduces power spring stress; reduces coil clash; increases center-seal life and eliminates the effects of severe vibration.



Replacement Parts

P/N Series		3625	3631
Model		TR2430LTHD	TR3030THD
1	Kit - NP Chamber (a)	9015152	9015149
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017141	8017730
5	Kit - Push-Rod Assembly (a)	9064002	9064003
6	Return Spring	8068011	8068011
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	9015151	9015122
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Kit - Breather Tube	9081001	9081001
14	Piggyback	N/A	3631001
OPTIONAL ITEMS			
Yoke Assembly		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

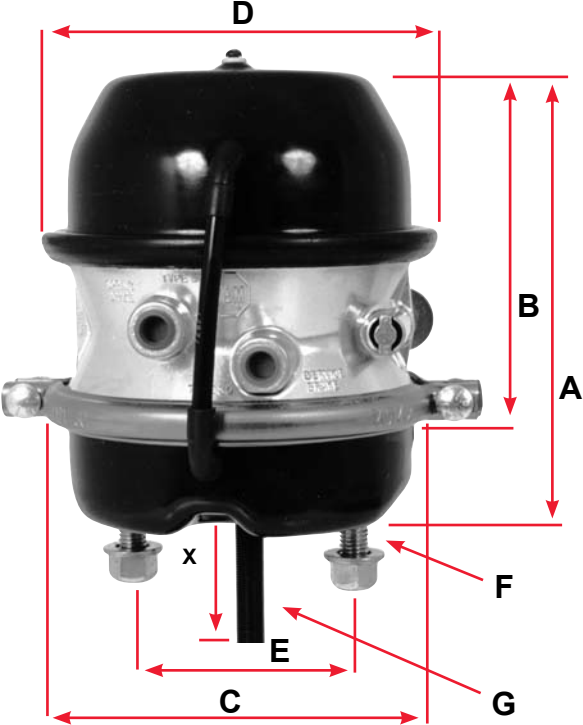
For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



Standard Stroke Model

DOUBLE DIAPHRAGM

Combination	Single/Piggyback
 VMRS# 13-004	VMRS# 13-004-001
	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3444
Model	TR3030THDW
Size	3030
Stroke	2.50"
P/N Combination	3444051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	19.9
Wt. Single (Lbs.)	N/A
A	9.04
B	6.66
C	8.31
D	8.21
E	4.75"
F	5/8" - 11UNC
G	5/8" - 18UNF
Inlets	3/8" - NPTF
X - Min. (in the caged position)	8.00"

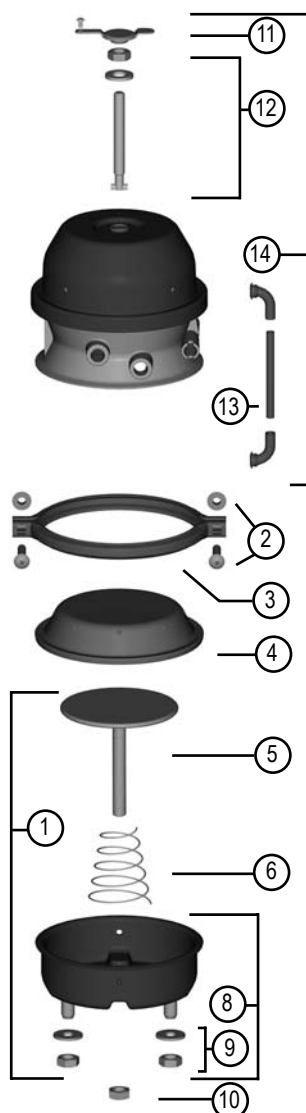
NOTE: Product information and specifications subject to change without notice.

TR-THDW Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- Weatherseal™ Plug
- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- Heavy-Duty Power Spring (160 Lbs. additional parking brake force @ 1.25 inches of stroke)
- **Weld Reinforced Non-Pressure Housing**

Weld Reinforced Non-Pressure Housing

Heavy-gauge formed steel flat-bottom design, epoxy-coated for total corrosion protection, with pressed-in and "weld-reinforced" mounting studs for added support in extreme vibration applications.



Replacement Parts

P/N Series		3444
Model		TR3030THDW
1	Kit - NP Chamber (a)	N/A
2	Kit - Nuts & Bolts	9003001
3	Clamp Band Assembly	8216045
4	Diaphragm	8017730
5	Kit - Push-Rod Assembly (a)	9064003
6	Return Spring	8068011
7	Kit - Center Hole Shield	9065002
8	NP Chamber Assembly	82151137
9	Kit - Nuts & Washers	9002001
10	Hex Nut - Yoke	8130004
11	Kit - Weatherseal™ Plug	9019005
12	Kit - Release Bolt	9007003
13	Kit - Breather Tube	9081001
14	Piggyback	3631001
OPTIONAL ITEMS		
	Yoke Assembly	Refer to Replacement Parts Section 8
	Boot & Retainer	Refer to Replacement Parts Section 8

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

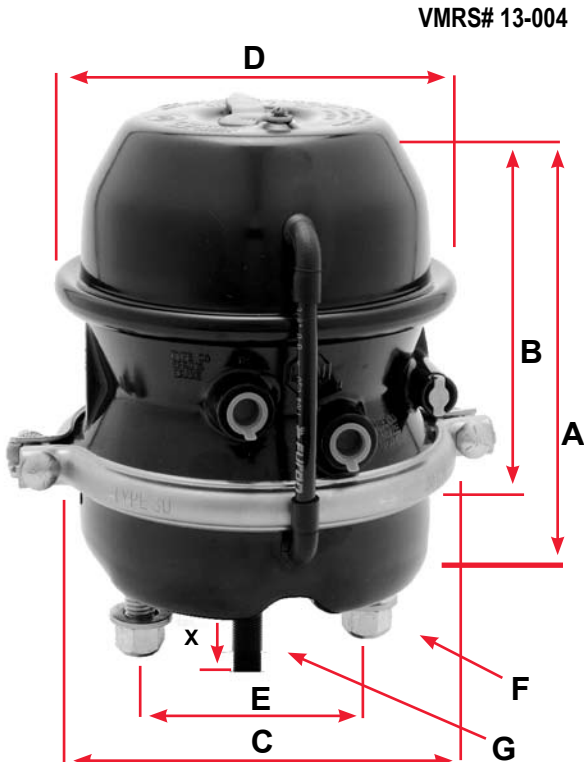
For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



Standard Stroke Model

DOUBLE DIAPHRAGM

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3538	3528	3531	3532	3536
Model	TR2424LTS	TR2430LTS	TR3030TS	TR3036TS	TR3636TS
Size	2424	2430	3030	3036	3636
Stroke	2.50"	2.50"	2.50"	2.50"	3.00"
P/N Combination	3538051	3528051	3531051	3532051	3536051
P/N Single/Piggyback	N/A	N/A	N/A	N/A	N/A
P/N Piggyback Plus Kit	N/A	N/A	N/A	N/A	N/A
Wt. Combination (Lbs.)	16.6	18.5	20.0	26.5	30.8
Wt. Single (Lbs.)	N/A	N/A	N/A	N/A	N/A
A	8.52	9.04	9.04	9.86	11.13
B	6.36	6.91	6.66	7.52	8.38
C	7.38	7.38	8.31	8.31	9.25
D	7.34	8.21	8.21	9.18	9.18
E	4.75"				
F	5/8" - 11UNC				
G	5/8" - 18UNF				
Inlets	3/8" - NPTF				
X - Min. (in the caged position)	8.00" (a)				

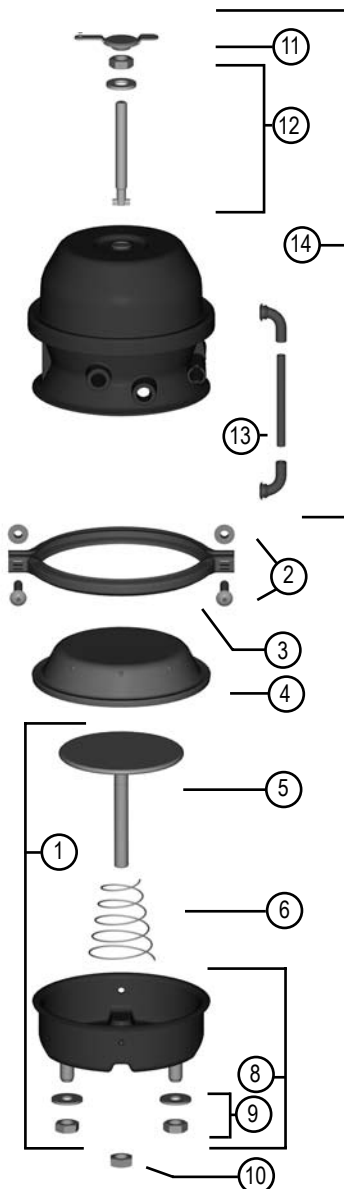
NOTE: For Transit applications refer to Section 9.

NOTE: Product information and specifications subject to change without notice.

TR-TS Model Features

- Tamper Resistant Design
(U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- "Long Life" Power Spring

- Weatherseal™ Plug
- Heavy-Duty Steel Non-Pressure Chamber
(8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
(6 Gauge Standard on Type 36 Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- **Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out**



Epoxy Coated Components

Upper piston, piston guide, flange case and return spring are epoxy coated for extra added protection in severe operating environments: such as acids, salt and concrete.



Replacement Parts

P/N Series	3538	3528	3531	3532	3536
Model	TR2424LTS	TR2430LTS	TR3030TS	TR3036TS	TR3636TS
1	Kit - NP Chamber (a)	9015152	9015152	9015149	9015150
2	Kit - Nuts & Bolts	9003001	9003001	9003001	9003001
3	Clamp Band Assembly	8216025	8216025	8216045	8216036
4	Diaphragm	8017141	8017141	8017730	8017836
5	Kit - Push-Rod Assembly (a)	9064002	9064002	9064003	9064004
6	Return Spring	8068012	8068012	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002	9065002	9065002
8	NP Chamber Assembly	9015151	9015151	9015122	9015108
9	Kit - Nuts & Washers	9002001	9002001	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005	9019005	9019006
12	Kit - Release Bolt	9007003	9007003	9007003	9007009
13	Kit - Breather Tube	9081001	9081001	9081001	9081001
14	Piggyback	N/A	N/A	N/A	N/A
OPTIONAL ITEMS					
Yoke Assembly		Refer to Replacement Parts Section 8			
Boot & Retainer		Refer to Replacement Parts Section 8			

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

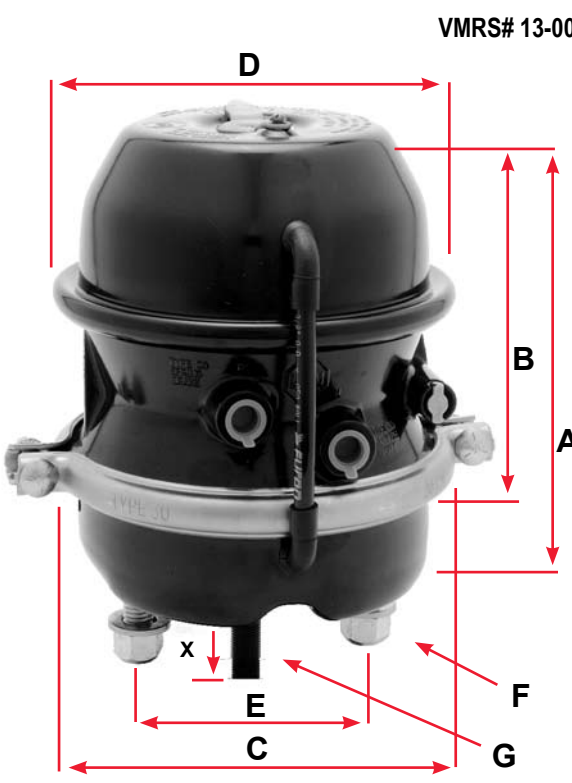
For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



Standard Stroke Model

DOUBLE DIAPHRAGM

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

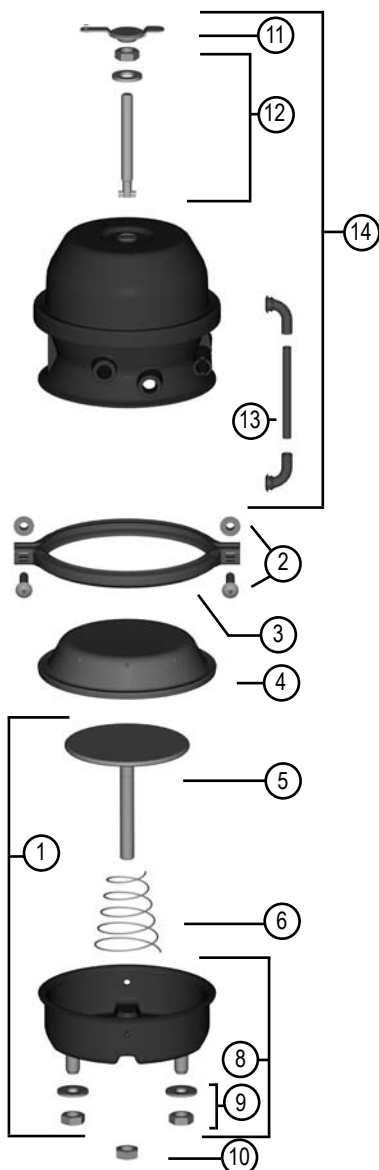
P/N Series	3526	3533
Model	TR2430LTSHD	TR3030TSHD
Size	2430	3030
Stroke	2.50"	2.50"
P/N Combination	3526051	3533051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	N/A	N/A
Wt. Combination (Lbs.)	18.6	19.9
Wt. Single (Lbs.)	N/A	N/A
A	9.04	9.04
B	6.91	6.66
C	7.38	8.31
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	

NOTE: Product information and specifications subject to change without notice.

TR-TSHD Model Features

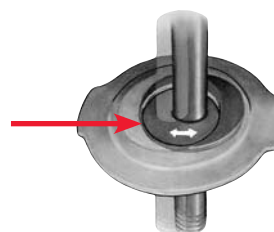
- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- Weatherseal™ Plug

- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out
- **Heavy-Duty Power Spring (160 Lbs. additional parking brake force @1.25 inches of stroke)**
- **Center Hole Diaphragm (U.S. Patent No. 5,507,217)**



Center Hole Shield

Permits visual inspection of stroke alert but prevents entry of contaminants.



Replacement Parts

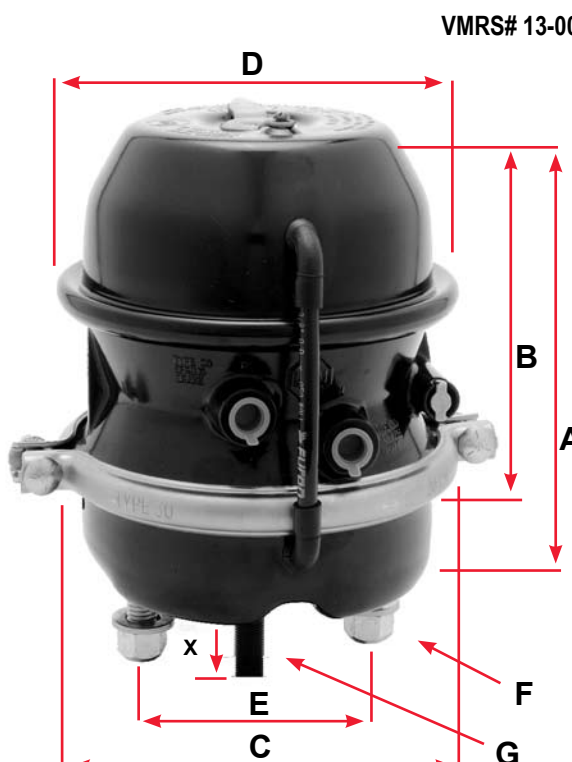
P/N Series		3526	3533
Model		TR2430LTSHD	TR3030TSHD
1	Kit - NP Chamber (a)	9015152	9015149
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017141	8017730
5	Kit - Push-Rod Assembly (a)	9064002	9064003
6	Return Spring	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	9015151	9015122
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Kit - Breather Tube	9081001	9081001
14	Piggyback	N/A	N/A
OPTIONAL ITEMS			
Yoke Assembly		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.



Standard Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

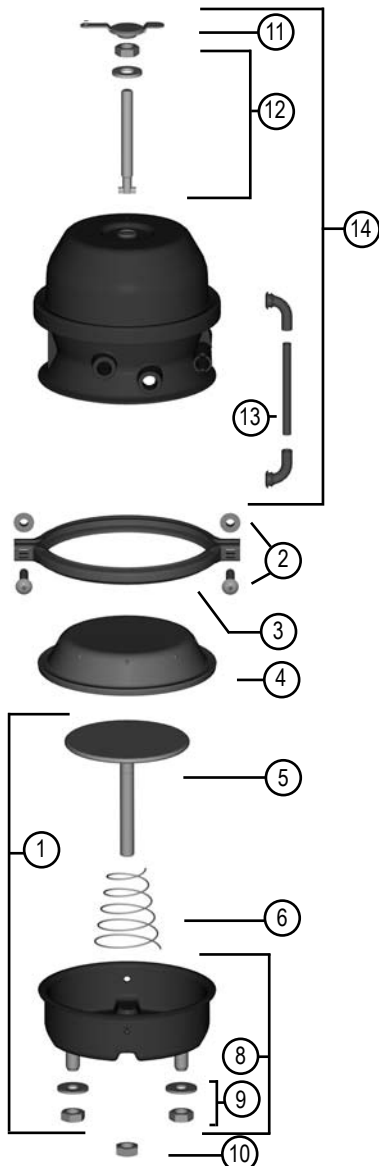
P/N Series	3544
Model	TR3030TSHDW
Size	3030
Stroke	2.50"
P/N Combination	3544051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	19.9
Wt. Single (Lbs.)	N/A
A	9.04
B	6.66
C	8.31
D	8.21
E	4.75"
F	5/8" - 11UNC
G	5/8" - 18UNF
Inlets	3/8" - NPTF
X - Min. (in the caged position)	8.00"

NOTE: Product information and specifications subject to change without notice.

TR-TSHDW Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case

- Weatherseal™ Plug
- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 & 3036 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out
- Heavy-Duty Power Spring (160 Lbs. additional parking brake force @ 1.25 inches of stroke)
- **Weld Reinforced Non-Pressure Housing**



Weld Reinforced Non-Pressure Housing
Heavy-gauge formed steel flat-bottom design, epoxy-coated for total corrosion protection, with pressed-in and "weld-reinforced" mounting studs for added support in extreme vibration applications.



Replacement Parts

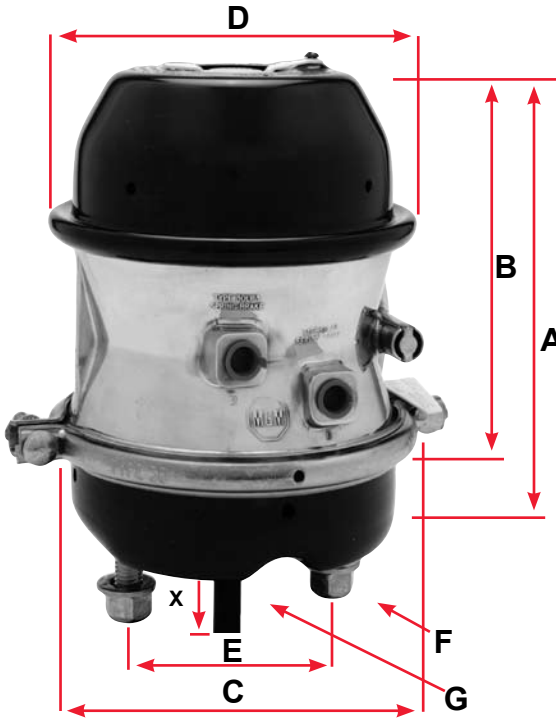
P/N Series		3544
Model		TR3030TSHDW
1	Kit - NP Chamber (a)	9015149
2	Kit - Nuts & Bolts	9003001
3	Clamp Band Assembly	8216045
4	Diaphragm	8017730
5	Kit - Push-Rod Assembly (a)	9064003
6	Return Spring	8068012
7	Kit - Center Hole Shield	9065002
8	NP Chamber Assembly	82151137
9	Kit - Nuts & Washers	9002001
10	Hex Nut - Yoke	8130004
11	Kit - Weatherseal™ Plug	9019005
12	Kit - Release Bolt	9007003
13	Kit - Breather Tube	9081001
14	Piggyback	N/A
OPTIONAL ITEMS		
Yoke Assembly		Refer to Replacement Parts Section 8
Boot & Retainer		Refer to Replacement Parts Section 8

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

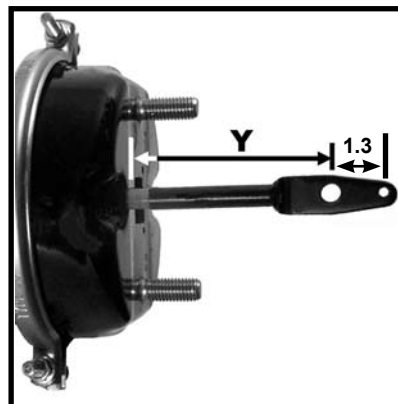
For additional replacement parts, refer to Section 8.



Long Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit VMRS# 13-004-001 

P/N Series	3220	3224	3230
Model	TR2030LP3H	TR2430LP3	TR3030LP3
Size	2030	2430	3030
Stroke	3.00"	3.00"	3.00"
P/N Combination	3220051	3224051	3230051
P/N Single/Piggyback	N/A	N/A	N/A
P/N Piggyback Plus Kit	3220008	3224008	3230008
Wt. Combination (Lbs.)	19.1	19.3	20.1
Wt. Single (Lbs.)	11.5	11.5	11.5
A	10.19	10.19	9.99
B	7.81	7.81	7.61
C	7.38	7.38	8.32
D	8.21	8.21	8.21
E	4.75"		
F	5/8" - 11UNC		
G	5/8" - 18UNF		
Inlets	3/8" - NPTF		
X - Min. (in the caged position)	8.00" (a)		



NOTE: Type 2030, 2430 and 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

3220951 (TR2030LP3H)
 3224951 (TR2430LP3)
 3230951 (TR3030LP3)

NOTE: For Hendrickson Intraax/Vantraax Suspension applications refer to Section 9.

Refer to Section 8 for replacement parts.

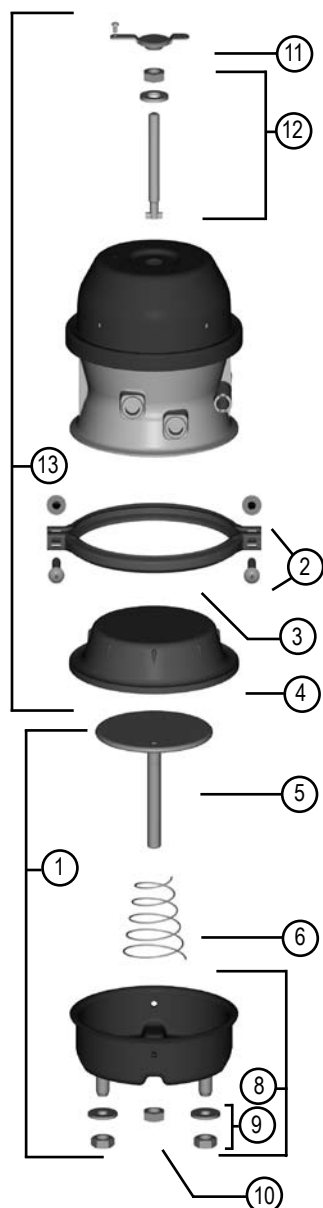
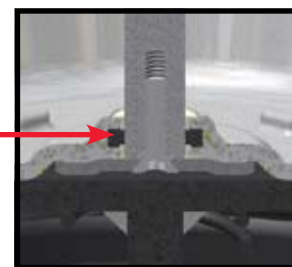
NOTE: Product information and specifications subject to change without notice.

TR-LP3 Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Long Life Power Spring
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)
- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal

Center Seal

Multi-lipped, pressure activated seal – an MGM exclusive - molded from specially formulated low-temperature-resistant Nitrile Rubber, providing long-term protection against air leaks. Nylon guides eliminate metal to metal contact and premature failure in this critical area.

**Replacement Parts**

P/N Series		3220	3224	3230
Model		TR2030LP3H	TR2430LP3	TR3030LP3
1	Kit - NP Chamber (a)	9015231	9015210	9015212
2	Kit - Nuts & Bolts	9003001	9003001	9003001
3	Clamp Band Assembly	8216027	8216025	8216045
4	Diaphragm	8017226	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064026	9064006	9064008
6	Return Spring	8068012	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002	9065002
8	NP Chamber Assembly	8215200	8215200	8215501
9	Kit - Nuts & Washers	9002001	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005	9019005
12	Kit - Release Bolt	9007003	9007003	9007003
13	Kit - Piggyback Plus	3220008	3224008	3230008
OPTIONAL ITEMS				
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8		
Boot & Retainer		Refer to Replacement Parts Section 8		

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

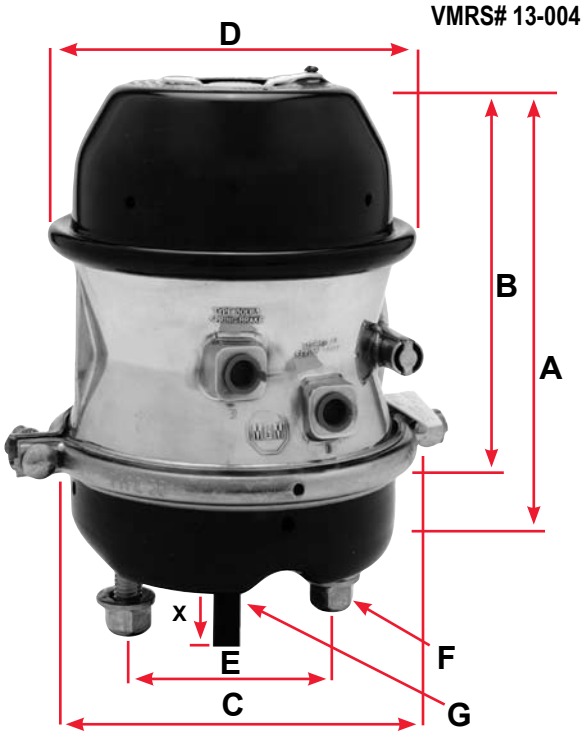
For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.

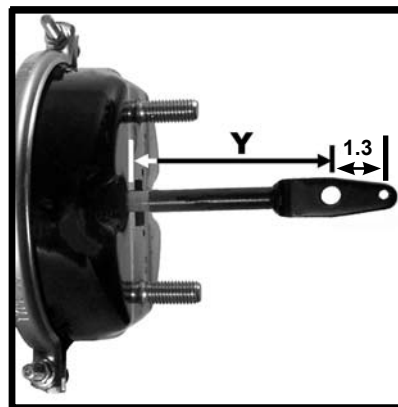


Long Stroke Model

DOUBLE DIAPHRAGM

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit VMRS# 13-004-001 

P/N Series	3226	3232
Model	TR2430LP3HD	TR3030LP3HD
Size	2430	3030
Stroke	3.00"	3.00"
P/N Combination	3226051	3232051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	3226008	3232008
Wt. Combination (Lbs.)	19.5	20.4
Wt. Single (Lbs.)	11.7	11.7
A	10.19	9.99
B	7.81	7.61
C	7.38	8.32
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

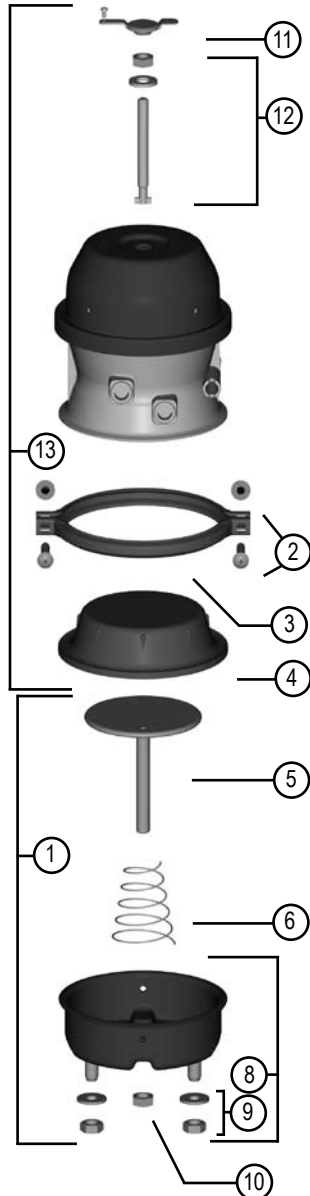
3226951 (TR2430LP3HD)
3232951 (TR3030LP3HD)

Refer to Section 8 for replacement parts.

TR-LP3HD Model Features

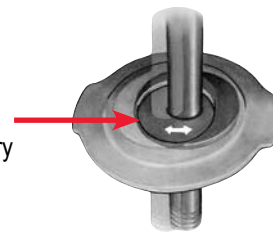
- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)

- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- **Heavy-Duty Power Spring (145 Lbs. additional parking brake force @ 1.25 inches of stroke)**



Center Hole Shield

Permits visual inspection of stroke alert but prevents entry of contaminants.



Replacement Parts

P/N Series		3226	3232
Model		TR2430LP3HD	TR3030LP3HD
1	Kit - NP Chamber (a)	9015210	9015212
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064006	9064008
6	Return Spring	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	8215200	8215501
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Kit - Piggyback Plus	3226008	3232008
OPTIONAL ITEMS			
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

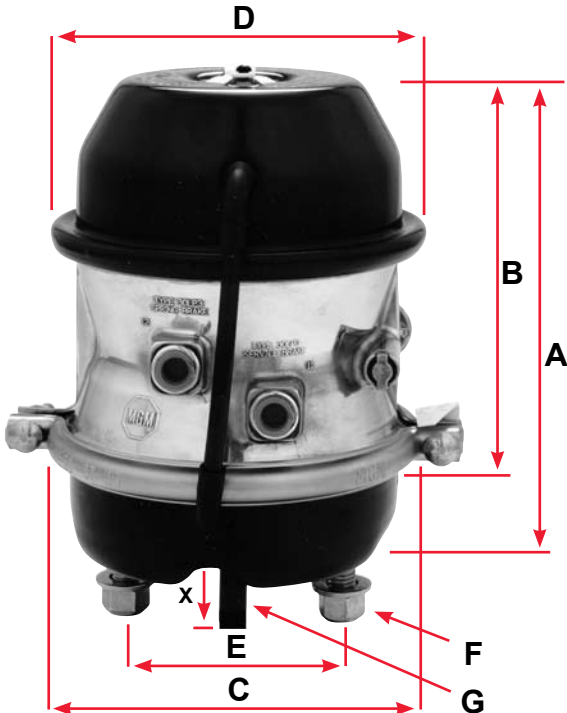
NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

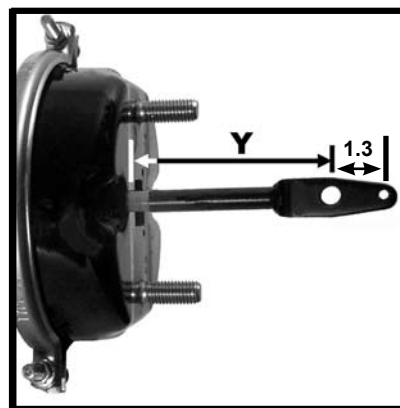
NOTE: Product information and specifications subject to change without notice.



Long Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit VMRS# 13-004-001 

P/N Series	3221	3225	3231
Model	TR2030LP3T	TR2430LP3T	TR3030LP3T
Size	2030	2430	3030
Stroke	3.00"	3.00"	3.00"
P/N Combination	3221051	3225051	3231051
P/N Single/Piggyback	N/A	N/A	N/A
P/N Piggyback Plus Kit	3221008	3225008	3231008
Wt. Combination (Lbs.)	19.1	19.3	20.1
Wt. Single (Lbs.)	11.5	11.5	11.5
A	10.19	10.19	9.99
B	7.81	7.81	7.61
C	7.38	7.38	8.32
D	8.21	8.21	8.21
E	4.75"		
F	5/8" - 11UNC		
G	5/8" - 18UNF		
Inlets	3/8" - NPTF		
X - Min. (in the caged position)	8.00"		



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y-dimension are replaced by Part Number:

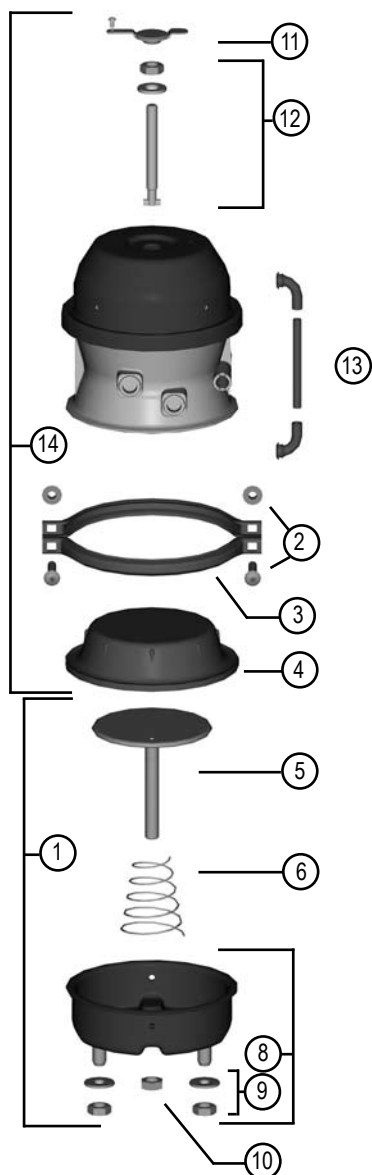
3225951 (TR2430LP3T)
3231951 (TR3030LP3T)

Refer to Section 8 for replacement parts.

TR-LP3T Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Long Life Power Spring (U.S. Patent No. 5,507,217)
- Center Hole Diaphragm
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)

- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- **External Breather Tube**



Breather Tube

Vents air from inside the protected area of the non-pressure chamber to effectively prevent entry of liquid and solid corrosive contaminants that can cause premature failure of the spring brake chamber.

Replacement Parts

P/N Series		3221	3225	3231
Model		TR2030LP3T	TR2430LP3T	TR3030LP3T
1	Kit - NP Chamber (a)	9015232	9015215	9015218
2	Kit - Nuts & Bolts	9003001	9003001	9003001
3	Clamp Band Assembly	8216027	8216025	8216045
4	Diaphragm	8017226	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064026	9064006	9064008
6	Return Spring	8068012	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002	9065002
8	NP Chamber Assembly	9015213	9015213	9015216
9	Kit - Nuts & Washers	9002001	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005	9019005
12	Kit - Release Bolt	9007003	9007003	9007003
13	Kit - Breather Tube	9081001	9081001	9081001
14	Kit - Piggyback Plus	3221008	3225008	3231008
OPTIONAL ITEMS				
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8		
Boot & Retainer		Refer to Replacement Parts Section 8		

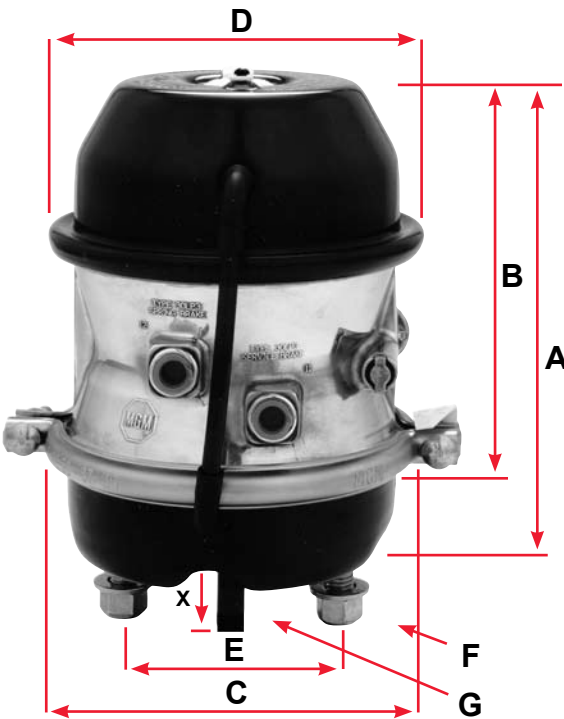
NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

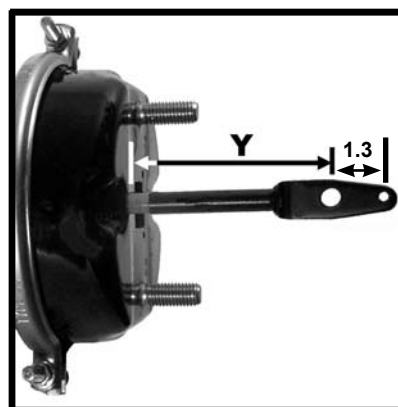
NOTE: Product information and specifications subject to change without notice.



Long Stroke Model

Combination	Single/Piggyback
VMRS# 13-004 	N/A
	Piggyback Plus Kit
	VMRS# 13-004-001 

P/N Series	3227	3233
Model	TR2430LP3THD	TR3030LP3THD
Size	2430	3030
Stroke	3.00"	3.00"
P/N Combination	3227051	3233051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	3227008	3233008
Wt. Combination (Lbs.)	19.5	20.4
Wt. Single (Lbs.)	11.7	11.7
A	10.19	9.99
B	7.81	7.61
C	7.38	8.32
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

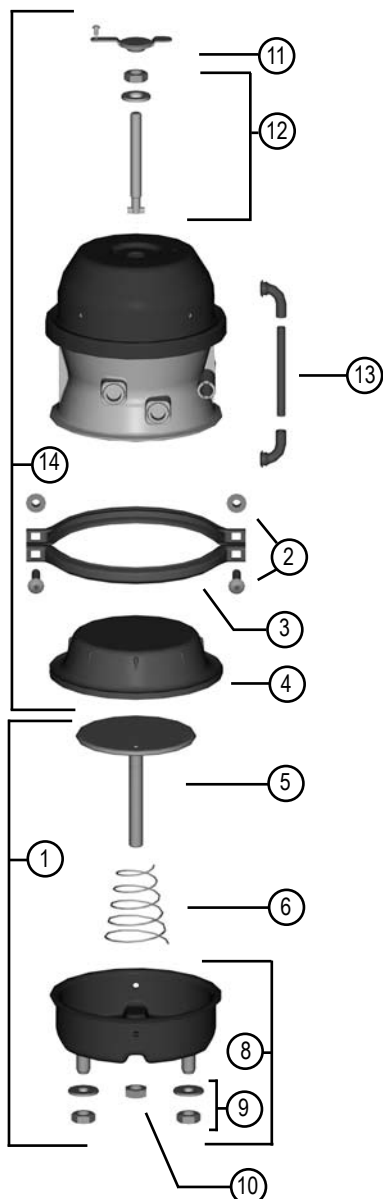
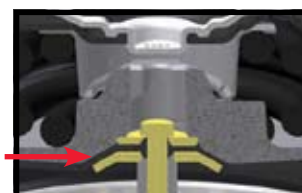
3227951 (TR2430LP3THD)
3233951 (TR3030LP3THD)

Refer to Section 8 for replacement parts.

TR-LP3THD Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)
- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- External Breather Tube
- **Heavy-Duty Power Spring (145 Lbs. of additional parking brake force @ 1.25 inches of stroke)**

Center Hole Diaphragm (U.S. Patent No. 5,507,217)
Patented feature that aligns the piston, diaphragm, power spring and internal push-rod providing the following advantages: Maintains component alignment; reduces power spring stress; reduces coil clash; increases center-seal life and eliminates the effects of severe vibration.



Replacement Parts

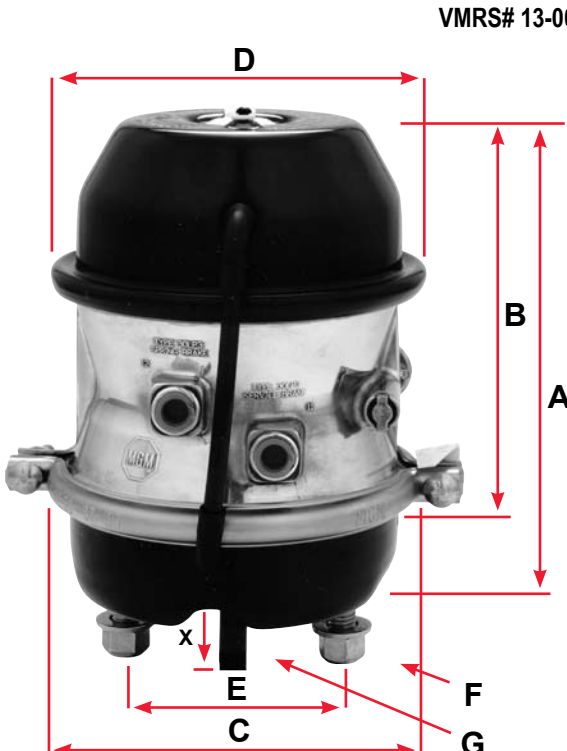
P/N Series	3227	3233
Model	TR2430LP3THD	TR3030LP3THD
1 Kit - NP Chamber (a)	9015215	9015218
2 Kit - Bolts & Nuts	9003001	9003001
3 Clamp Band Assembly	8216025	8216045
4 Diaphragm	8017424	8017830
5 Kit - Push-Rod Assembly (a)	9064006	9064008
6 Return Spring	8068012	8068012
7 Kit - Center Hole Shield	9065002	9065002
8 NP Chamber Assembly	9015213	9015216
9 Kit - Nuts & Washers	9002001	9002001
10 Hex Nut - Yoke	8130004	8130004
11 Kit - Weatherseal™ Plug	9019005	9019005
12 Kit - Release Bolt	9007003	9007003
13 Kit - Breather Tube	9081001	9081001
14 Kit - Piggyback Plus	3227008	3233008
OPTIONAL ITEMS		
Yoke & Welded Yoke Assemblies	Refer to Replacement Parts Section 8	
Boot & Retainer	Refer to Replacement Parts Section 8	

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

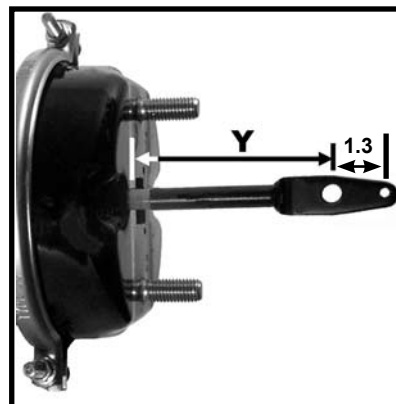
For additional replacement parts, refer to Section 8.



Long Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	VMRS# 13-004-001 N/A

P/N Series	3244
Model	TR3030LP3THDW
Size	3030
Stroke	3.00"
P/N Combination	3244051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	20.4
Wt. Single (Lbs.)	11.7
A	9.99
B	7.61
C	8.32
D	8.21
E	4.75"
F	5/8" - 11UNC
G	5/8" - 18UNF
Inlets	3/8" - NPTF
X - Min. (in the caged position)	8.00"



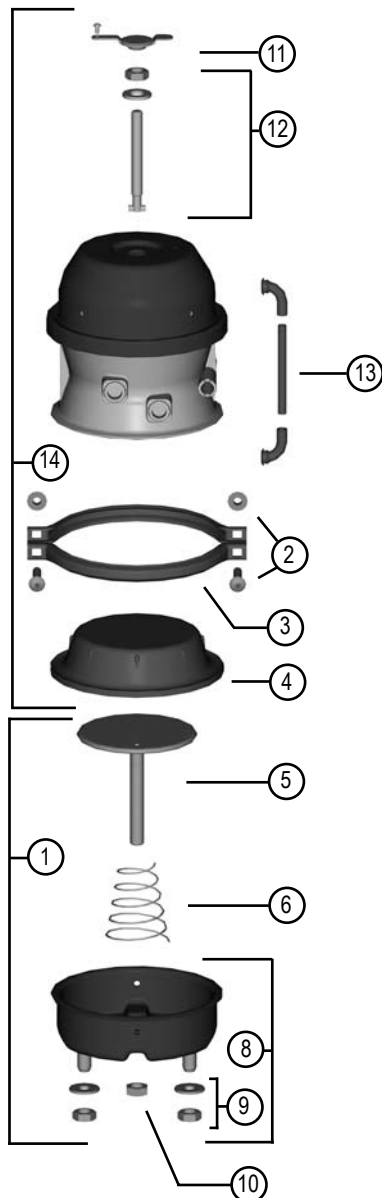
NOTE: Type 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

3244951 (TR3030LP3THDW)

Refer to Section 8 for replacement parts.

TR-LP3THDW Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)
- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- External Breather Tube
- Heavy-Duty Power Spring (145 Lbs. parking brake force @ 1.25 inches of stroke)
- **Weld Reinforced Non-Pressure Housing**



Weld Reinforced Non-Pressure Housing

Heavy-gauge formed steel flat-bottom design, epoxy-coated for total corrosion protection, with pressed-in and "weld-reinforced" mounting studs for added support in extreme vibration applications.



Replacement Parts

P/N Series		3244
Model		TR3030LP3THDW
1	Kit - NP Chamber (a)	N/A
2	Kit - Bolts & Nuts	9003001
3	Clamp Band Assembly	8216045
4	Diaphragm	8017830
5	Kit - Push-Rod Assembly (a)	9064008
6	Return Spring	8068012
7	Kit - Center Hole Shield	9065002
8	NP Chamber Assembly	82151137
9	Kit - Nuts & Washers	9002001
10	Hex Nut - Yoke	8130004
11	Kit - Weatherseal™ Plug	9019005
12	Kit - Release Bolt	9007003
13	Kit - Breather Tube	9081001
14	Kit - Piggyback Plus	N/A
OPTIONAL ITEMS		
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8
Boot & Retainer		Refer to Replacement Parts Section 8

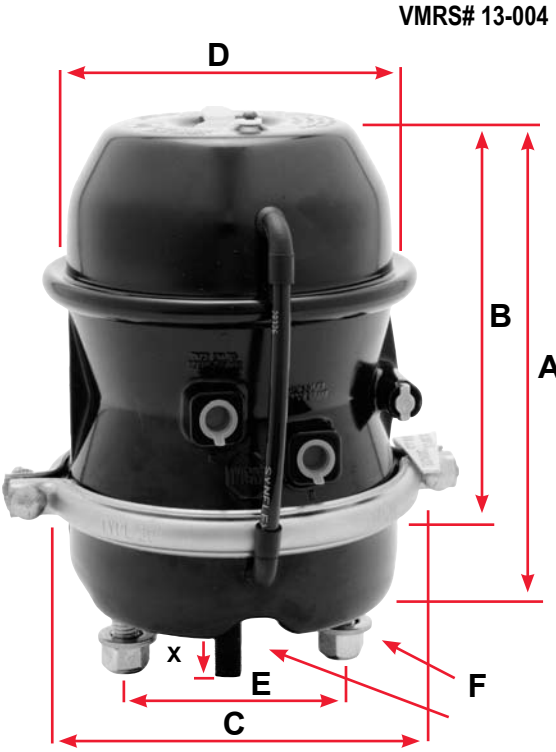
NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

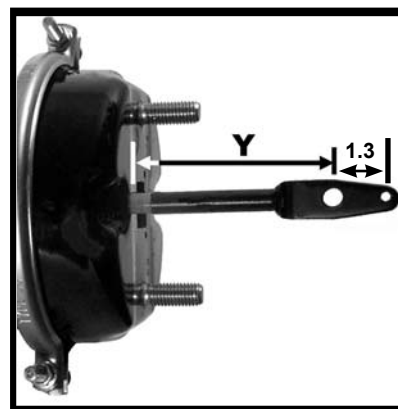


Long Stroke Model

DOUBLE DIAPHRAGM

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3523	3535
Model	TR2430LP3TS	TR3030LP3TS
Size	2430	3030
Stroke	3.00"	3.00"
P/N Combination	3523051	3535051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	N/A	N/A
Wt. Combination (Lbs.)	19.3	20.1
Wt. Single (Lbs.)	N/A	N/A
A	10.19	9.99
B	7.81	7.61
C	7.38	8.32
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

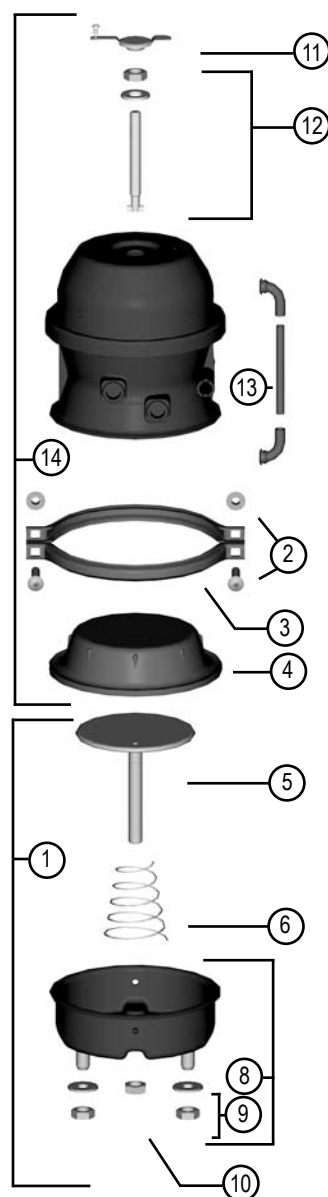
3523951 (TR2430LP3TS)
3535951 (TR3030LP3TS)

Refer to Section 8 for replacement parts.

TR-LP3TS Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Long Life Power Spring (U.S. Patent No. 5,507,217)
- Center Hole Diaphragm
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)

- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- External Breather Tube
- Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out



Epoxy Coated Components

Upper piston, piston guide, flange case and return spring are epoxy coated to for extra added protection in severe operating environments: such as acids, salt and concrete.



Replacement Parts

P/N Series		3523	3535
Model		TR2430LP3TS	TR3030LP3TS
1	Kit - NP Chamber (a)	9015215	9015218
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064006	9064008
6	Return Spring	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	9015213	9015216
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Kit - Breather Tube	9081001	9081001
14	Kit - Piggyback Plus	N/A	N/A
OPTIONAL ITEMS			
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

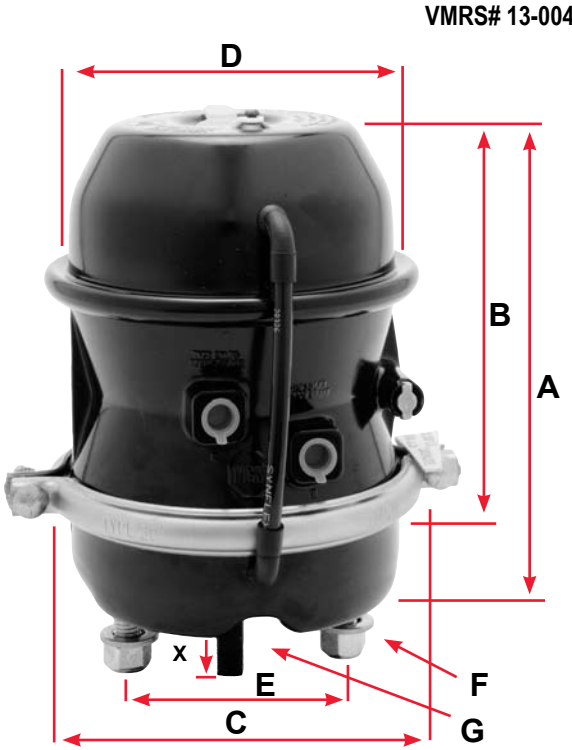
Note: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

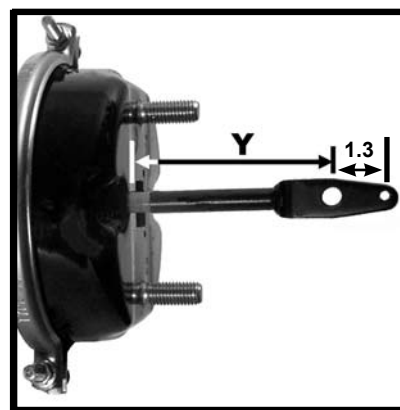
NOTE: Product information and specifications subject to change without notice.



Long Stroke Model

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3527	3534
Model	TR2430LP3TSHD	TR3030LP3TSHD
Size	2430	3030
Stroke	3.00"	3.00"
P/N Combination	3527051	3534051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	N/A	N/A
Wt. Combination (Lbs.)	19.5	20.4
Wt. Single (Lbs.)	N/A	N/A
A	10.19	9.99
B	7.81	7.61
C	7.38	8.32
D	8.21	8.21
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

3527951 (TR2430LP3TSHD)

3534951 (TR3030LP3TSHD)

Refer to Section 8 for replacement parts.

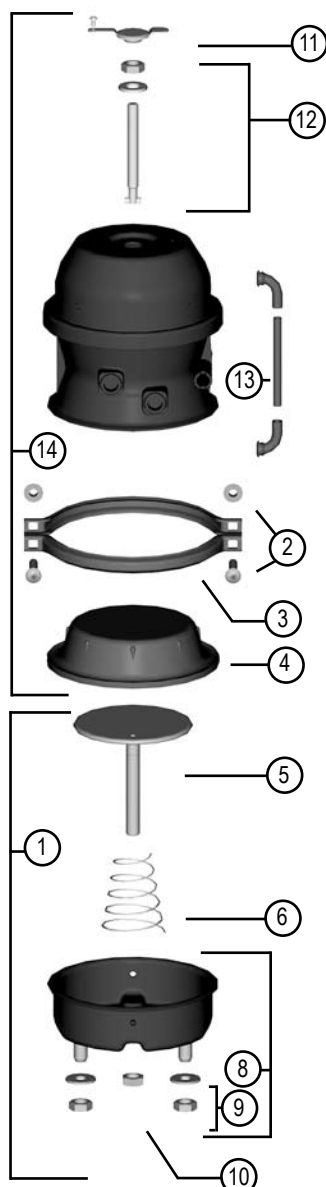
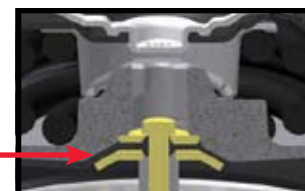
TR-LP3TSHD Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)
- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)

- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Longstroke
- Molded Nitrile Rubber Air Seal
- External Breather Tube
- Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out
- **Heavy-Duty Power Spring (145 Lbs. additional parking brake force @ 1.25 inches of stroke)**

Center Hole Diaphragm

Patented feature that aligns the piston, diaphragm, power spring and internal push-rod providing the following advantages: Maintains component alignment; reduces power spring stress; reduces coil clash; increases center-seal life and eliminates the effects of severe vibration.



Replacement Parts

P/N Series		3527	3534
Model		TR2430LP3TSHD	TR3030LP3TSHD
1	Kit - NP Chamber (a)	9015215	9015218
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064006	9064008
6	Return Spring	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	9015213	9015216
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Weatherseal™ Plug	9019005	9019005
12	Kit - Release Bolt	9007003	9007003
13	Kit - Breather Tube	9081001	9081001
14	Kit - Piggyback Plus	N/A	N/A
OPTIONAL ITEMS			
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

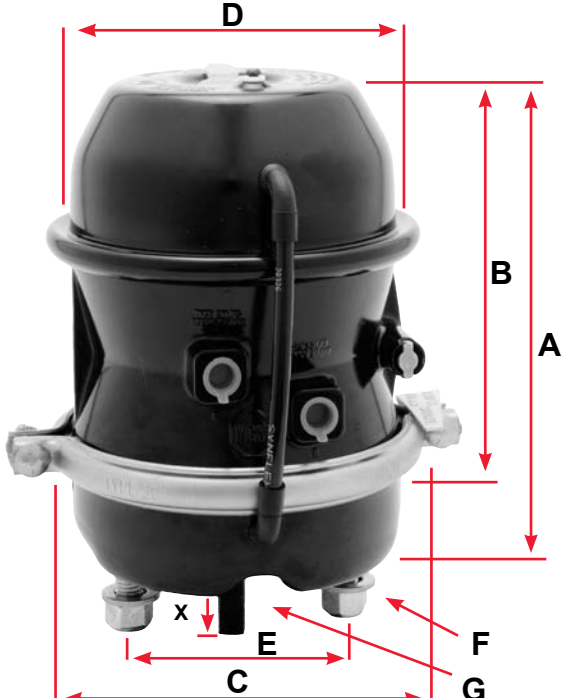
NOTE: (a) The ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

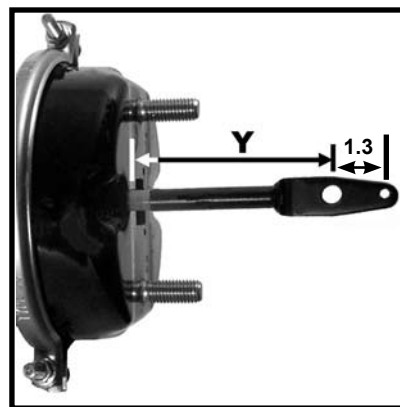
NOTE: Product information and specifications subject to change without notice.



Long Stroke Model

Combination	Single/Piggyback
	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3544
Model	TR3030LP3TSHDW
Size	3030
Stroke	3.00"
P/N Combination	3544051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	20.4
Wt. Single (Lbs.)	N/A
A	9.99
B	7.61
C	8.32
D	8.21
E	4.75"
F	5/8" - 11UNC
G	5/8" - 18UNF
Inlets	3/8" - NPTF
X - Min. (in the caged position)	8.00"



NOTE: Type 3030 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

3544951 (TR3030LP3TSHDW)

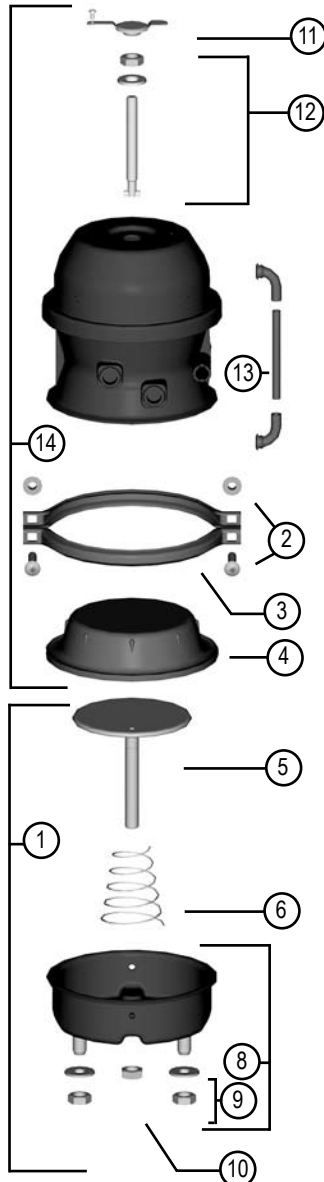
Refer to Section 8 for replacement parts.

TR-LP3TSHDW Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Center Hole Diaphragm (U.S. Patent No. 5,507,217)
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- Center Hole Shield
- Square Port Bosses (Long Stroke Identification)
- Weatherseal™ Plug
- Heavy-Duty 8-Gauge Steel Non-Pressure Chamber (Type 3030 Models) - (9 gauge on all other sizes)
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- Stroke Alert
- Externally Stored Release Bolt
- 3 Inch Long Stroke
- Molded Nitrile Rubber Air Seal
- External Breather Tube
- Epoxy-Coated Piston & Guide, Return Spring, Center Case - Inside & Out
- Heavy-Duty Power Spring (145 Lbs. additional parking brake force @ 1.25 inches of stroke)
- **Weld Reinforced Non-Pressure Housing**

Weld Reinforced Non-Pressure Housing

Heavy-gauge formed steel flat-bottom design, epoxy-coated for total corrosion protection, with pressed-in and "weld-reinforced" mounting studs for added support in extreme vibration applications.



P/N Series		3544
Model		TR3030LP3TSHDW
1	Kit - NP Chamber (a)	9015218
2	Kit - Nuts & Bolts	9003001
3	Clamp Band Assembly	8216045
4	Diaphragm	8017830
5	Kit - Push-Rod Assembly (a)	9064008
6	Return Spring	8068012
7	Kit - Center Hole Shield	9065002
8	NP Chamber Assembly	82151137
9	Kit - Nuts & Washers	9002001
10	Hex Nut - Yoke	8130004
11	Kit - Weatherseal™ Plug	9019005
12	Kit - Release Bolt	9007003
13	Kit - Breather Tube	9081001
14	Kit - Piggyback Plus	N/A
OPTIONAL ITEMS		
Yoke & Welded Yoke Assemblies		Refer to Replacement Parts Section 8
Boot & Retainer		Refer to Replacement Parts Section 8

NOTE: (a) The ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



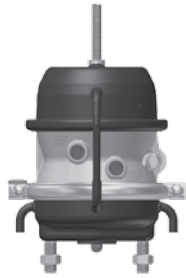
Unparalleled Variety of Models
Reliable and Longer-Life
Braking Performance

AIR DISC



Section 2: Air Disc Brakes.....

46-53



TR Series - Standard Stroke Model

TR-T (Tamper Resistant, Tube).....	48-49
TR-THD (Tamper Resistant, Tube, Heavy-Duty).....	48-49



MJB Series - Long Stroke Model

MJB (Magnum, J-Series, 3.00" Stroke, Tube).....	50-51
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Service Chambers

C (Service Chambers).....	52-53
CS (Service Chambers, Sealed).....	52-53

Air Disc Model

Combination	Single/Piggyback
	N/A
	Piggyback Plus Kit N/A

DOUBLE DIAPHRAGM AIR DISC BRAKES

P/N Series	3417	3419	3422	3423	3425	3432	3450	3650
Model	TR1724LTHDH	TR1724LTH	TR2024LTHD	TR2024LT	TR2130LTH	TR3036T	TR2730TH	TR2730THDH
Size	1724	1724	2024	2024	2130	3036	2730	2730
Stroke	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Part Number	3417751	3419751	3422751	3421751	3425751	3432751	3450751	3650751
Wt. (Lbs.)	15.41	15.81	15.51	15.95	17.88	25.87	19.10	18.64
A	8.86	8.86	8.86	8.86	9.45	10.39	9.40	9.40
B	7.34	7.34	7.34	7.34	8.21	9.18	8.21	8.21
C	6.72	6.72	6.72	6.72	7.19	8.14	8.14	8.14
D	4.75							
E**	M16 X 1.5-6g							
Inlets	3/8-18 NPTF							
XB**	15MM							

**NOTE: All chart measurements are in inches, except E,XB.

NOTE: Product information and specifications subject to change without notice.

Air Disc Model

Model Features

- Tamper Resistant Design (U.S. Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Externally Stored Release Bolt
- Epoxy-Coated Head, Non-Pressure Chamber and Lower Push-Rod Assembly
- 360 Aluminum Center Case
- Weatherseal™ Plug
- Heavy-Duty 8 Gauge Steel Non-Pressure Chamber
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube
- Heavy-Duty Power Spring (160 Lbs. additional parking brake force @ 1.25 inches of stroke) - **HD MODELS**
- Center Hole Diaphragm (U.S. Patent No. 5,507,217) - **HD MODELS**



Center-Hole Diaphragm

HD Models

MGM designed and patented feature that aligns the piston, diaphragm, power spring and internal push-rod providing the following advantages: Maintains component alignment, reduces power spring stress, reduces coil clash, increases center-seal life and eliminates the effects of severe vibration.



Center-Seal

Multi-lipped, pressure activated seal – MGM Brakes exclusive - molded from specially formulated low temperature-resistant Nitrile Rubber, providing long-term protection against air leaks. Nylon guides eliminate metal to metal contact and premature failure in this critical area.



External Breather-Tube

Vents air from inside the protected area of the non-pressure chamber to effectively prevent entry of liquid and solid corrosive contaminants that can cause premature failure of the spring brake chamber.

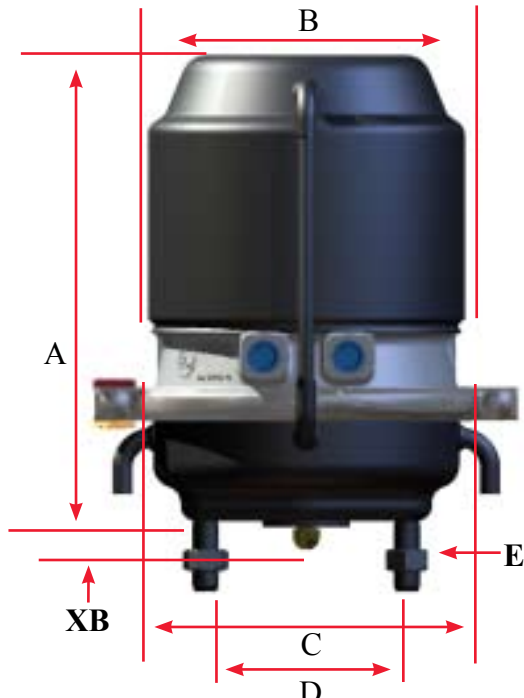
DOUBLE DIAPHRAGM AIR DISC BRAKES

P/N Series	3452	3431	3631	3627	3426	3623	3428	3625
Model	TR2736TH	TR3030T	TR3030THD	TR2130LTHDH	TR2424LT	TR2424LTHD	TR2430LT	TR2430LTHD
Size	2736	3030	3030	2130	2424	2424	2430	2430
Stroke	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Part Number	3452751	3431751	3631751	3627751	3426751	3623751	3428751	3625751
Wt. (Lbs.)	25.39	19.68	18.94	17.30	16.20	16.20	18.70	17.68
A	10.39	9.40	9.40	9.45	9.02	9.02	9.45	9.45
B	9.18	8.21	8.21	8.21	7.34	7.34	8.21	8.21
C	8.14	8.14	8.14	7.19	7.19	7.19	7.19	7.19
D	4.75							
E**	M16 X 1.5-6g							
Inlets	3/8-18 NPTF							
XB**	15MM							

**NOTE: All chart measurements are in inches, except E,XB.

NOTE: Product information and specifications subject to change without notice.

Air Disc Model

Combination	Single/Piggyback
	N/A
	Piggyback Plus Kit
	N/A

PISTON DIAPHRAGM AIR DISC BRAKES

P/N Series	MJB1724ET	MJB2024ET	MJB2030ET	MJB2424ET	MJB2430ET	MJB2730ET	MJB3030ET
Model	MJB1724ET	MJB2024ET	MJB2030ET	MJB2424ET	MJB2430ET	MJB2730ET	MJB3030ET
Size	1724	2024	2030	2424	2430	2730	3030
Stroke	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Part Number	MJB1724ET751	MJB2024ET751	MJB2030ET751	MJB2424ET751	MJB2430ET751	MJB2730ET751	MJB3030ET751
Wt. (Lbs.)	19.5	20.1	22.71	20.4	23.7	24.56	24.56
A	10.61	10.61	11.21	10.59	11.2	11.39	11.39
B	6.76	6.76	7.50	6.76	7.50	7.50	7.50
C	6.90	6.90	6.90	7.38	7.38	8.32	8.32
D	4.75						
E**	M16 X 1.5-6g						
Inlets	3/8-18 NPTF						
XB**	15MM						

**NOTE: All chart measurements are in inches, except E,XB.

NOTE: Product information and specifications subject to change without notice.

Magnum Performance Plus Model Features

- Tamper Resistant Design
- Lighter Weight
- 3 Inch Long Stroke
- Compact Size
- New Patented Integral Release Bolt Mechanism - Minimal Bolt Protrusion (Approx. 1.25 inch protrusion on "Long Stroke" models when manually released)

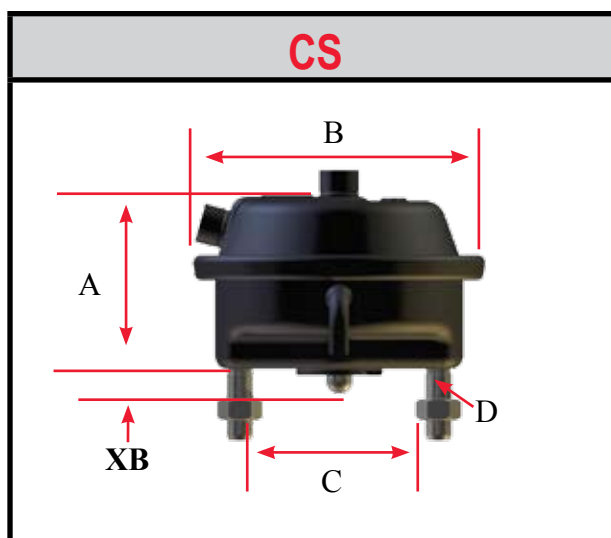
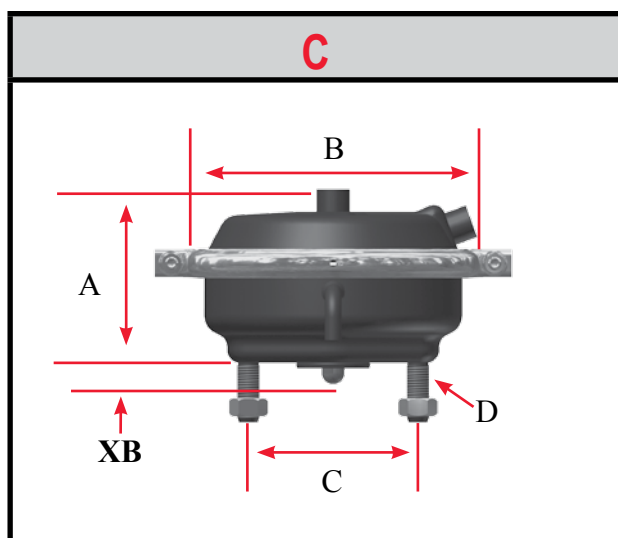
- Non-Coil Clash Power Spring
- Increased Corrosion Resistance - Steel Head Double-Coated with Plating and Epoxy
- Available with 1,922-2,600 Lbs. of Push-Rod Braking Force @ 1.25 inch Stroke/Service Brake Sizes 16-20
- Heavy Duty 8-Guage NPC Standard



**Dual-Thread Release Bolt
MJB Models**

"Dual-Thread" manual release bolt: an MGM Brakes patented design feature; provides minimal bolt protrusion at maximum release, allowing for installation in tight areas.

Air Disc Model



AIR DISC SERVICE CHAMBERS

P/N Series	1617	1621	1427	1429	1430
Model	CS16LH	CS20L	C24L	C27H	C30
Size	16	20	24	27	30
Stroke	2.50	2.50	2.50	2.50	2.50
Inlet Angle (0°)	1617701	1621701	1427701	1429701	1430701
Inlet Angle (90°)	1617702	1621704	1427702	-	-
Wt. (Lbs.)	6.20	6.70	8.66	9.57	9.88
A	4.76	4.76	4.84	4.85	4.85
B	6.99	6.99	7.33	8.27	8.27
C	4.75				
D	M16 X 1.5-6g				
Inlets	3/8-18 NPTF				
XB**	15MM				

**NOTE: All chart measurements are in inches, except XB.

NOTE: Product information and specifications subject to change without notice.

C & CS Model Features

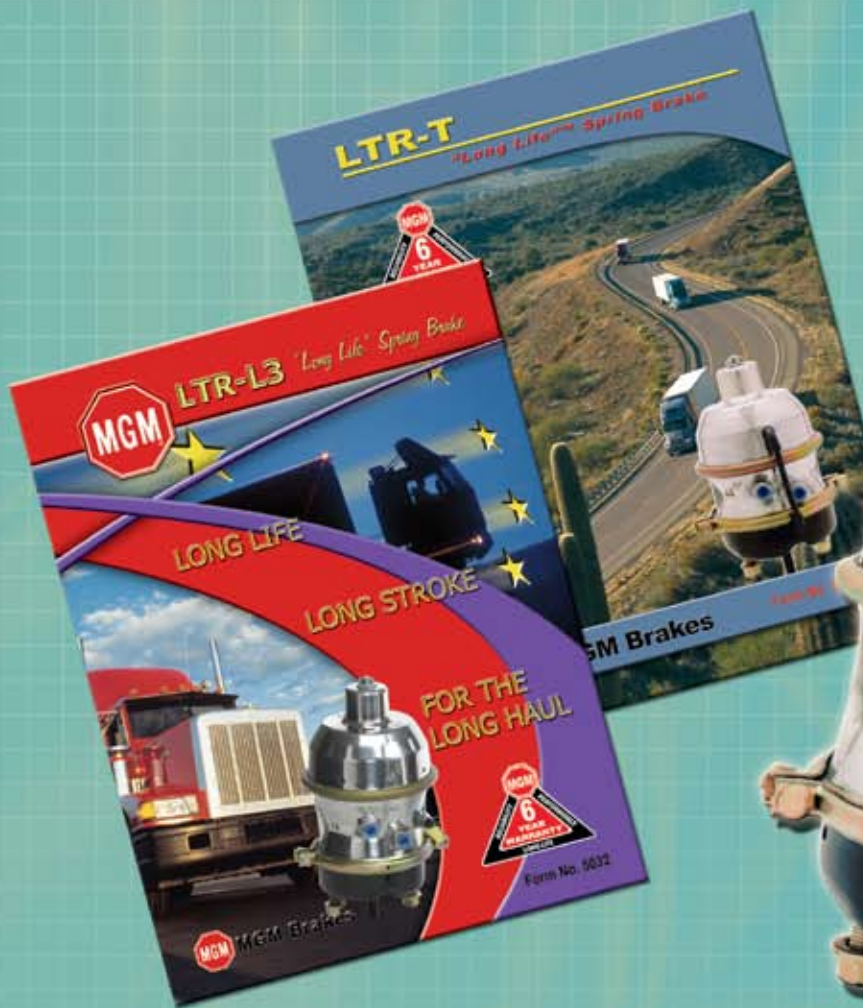
- Formed Steel Pressure Cap - Epoxy-Coated
(CS20 Models have Zinc Iron Chromate Coating)
- Formed Steel Non-Pressure Chamber - Epoxy-Coated

Air Disc Model

- Heavy-Duty Nylon Reinforced Diaphragms
- Top and Side Air Ports - 3/8" NPTF

REPLACEMENT PARTS

Model		24/30
1	Kit – Weatherseal™ Plug	9019005
2	Kit – Release Bolt	9007003
3	Kit – Breather Tube	9081001
4	Nut – Hex M16X1.5	8130036



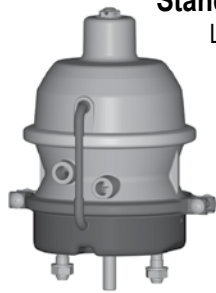
Innovative Design,
Quality Craftsmanship—
The Long-Life Benchmark

LTR SERIES



Section 3: Long Life Double Diaphragm Spring Brakes...

54-61

**Standard Stroke Model**

LTR-T

(Integral Release Bolt, Tamper Resistant, Tube).....

56-57

**Long Stroke Model**

LTR-L3

(Integral Release Bolt, Tamper Resistant, Long Stroke).....

58-59

LTR-L3W

(Integral Release Bolt, Tamper Resistant, Long Stroke, Welded NPC).....

60-61

FEATURES	LTR-T	LTR-L3	LTR-L3W
Tamper-Resistant Mechanically Locked Spring Housing			
Molded Nitrile Rubber Push-Rod Air Seal			
Center Hole Shield			
360 Aluminum Alloy			
External Breather Tube			
Integral Release Bolt			
Stroke Alert			
Heavy-Duty "Long Life" Power Spring			
Polymer Push-Rod Guides			
3 Inch Long Stroke			
6 Year Limited Warranty			
Low Friction Piston & Guide			
Heavy-Duty Steel Non-Pressure Chamber			
Heavy-Duty Nylon Reinforced Diaphragms			
Weld Re-Inforced Non Pressure Chamber			

■ Indicates Feature

NOTE: Product information and specifications subject to change without notice.

Standard Stroke Model

Combination	Single/Piggyback
VMRS# 13-004	VMRS# 13-004-001
	Piggyback Plus Kit VMRS# 13-004-001

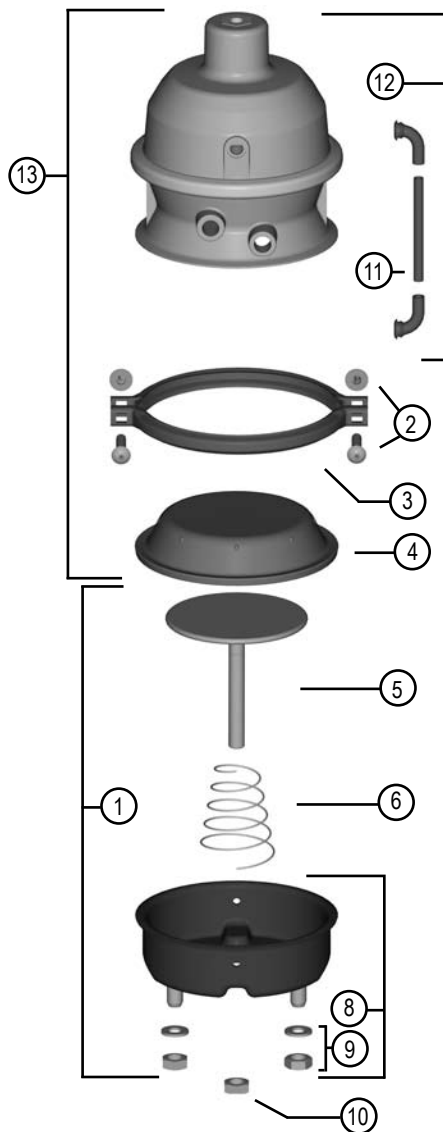
P/N Series	3827	3831
Model	LTR2430LT	LTR3030T
Size	2430	3030
Stroke	2.50"	2.50"
P/N Combination	3827051	3831051
P/N Single/Piggyback	N/A	3831001
P/N Piggyback Plus Kit	3827008	3831008
Wt. Combination (Lbs.)	18.5	19.9
Wt. Single (Lbs.)	11.4	11.7
A	11.8	11.86
B	9.68	9.46
C	7.38	8.27
D	8.18	8.18
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00"	

NOTE: Product information and specifications subject to change without notice.

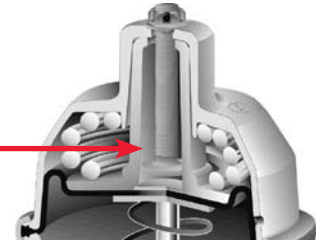
LTR-T Model Features

- Tamper Resistant Design (U.S Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Six (6) Year Limited Warranty
- Integral Release Bolt
- 360 Aluminum Alloy
- Low Friction Piston & Guide

- Heavy-Duty "Long Life" Power Spring (100 Lbs. additional parking brake force @ 1.25 inches of stroke)
- Heavy-Duty Steel Non-Pressure Chamber (8 Gauge Standard on Type 3030 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- External Breather Tube

**Built-In Manual Release Bolt**

Permanently installed, can't get lost. Permits safe, easy release to reline brakes or move vehicle in absence of air pressure.

**Replacement Parts**

P/N Series		3827	3831
Model		LTR2430LT	LTR3030T
1	Kit - NP Chamber (a)	9015152	9015157
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017141	8017730
5	Kit - Push-Rod Assembly (a)	9064002	9064003
6	Return Spring	8068011	8068011
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	9015151	9015122
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Breather Tube	9081001	9081001
12	Piggyback	N/A	3831001
13	Piggyback Plus Kit	3827008	3831008
OPTIONAL ITEMS			
Yoke Assembly		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

NOTE: (a) To ensure correct stroke alert indicator positioning, these kits must be used only in the designated MGM Brakes units.

For additional replacement parts, refer to Section 8.

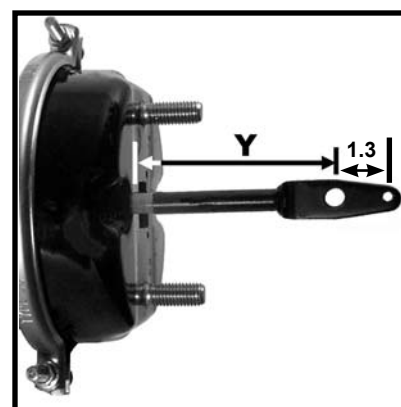
Long Stroke Model

LONG LIFE DOUBLE DIAPHRAGM

Combination	Single/Piggyback
VMRS# 13-004	N/A
	Piggyback Plus Kit VMRS# 13-004-001

P/N Series	3828	3832
Model	LTR2430L3	LTR3030L3
Size	2430	3030
Stroke	3.00"	3.00"
P/N Combination	3828051	3832051
P/N Single/Piggyback	N/A	N/A
P/N Piggyback Plus Kit	3828008	3832008
Wt. Combination (Lbs.)	19.3	20.5
Wt. Single (Lbs.)	12.3	12.6
A	13.0	13.0
B	10.63	10.63
C	7.38	8.27
D	8.18	8.18
E	4.75"	
F	5/8" - 11UNC	
G	5/8" - 18UNF	
Inlets	3/8" - NPTF	
X - Min. (in the caged position)	8.00" (a)	

Note: (a) For Hendrickson Intraax/Vantraax Suspension applications refer to 98.



NOTE: Type 2430 and 3030 units equipped with welded-yoke and 2.25" Y-dimension are replaced by Part Number:

3828951 (LTR2430L3)
3832951 (LTR3030L3)

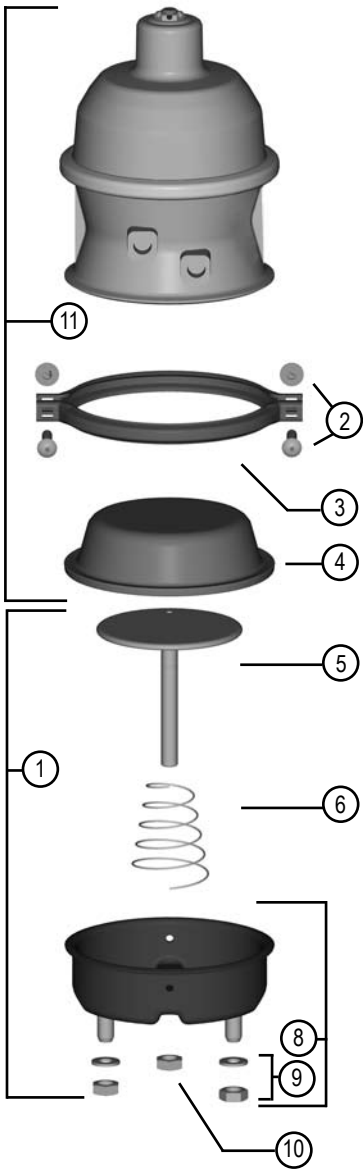
Refer to Section 8 for replacement parts.

NOTE: Product information and specifications subject to change without notice.

LTR-L3 Model Features

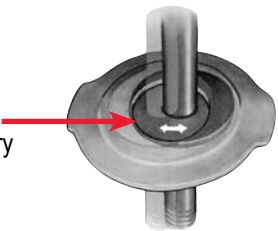
- Tamper Resistant Design (U.S Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Six (6) Year Limited Warranty
- Integral Release Bolt
- 360 Aluminum Alloy
- Low Friction Piston & Guide
- Square Port Bosses (Long Stroke Identification)

- Heavy-Duty “Long Life” Power Spring (100 Lbs. additional parking brake force @ 1.25 inches of stroke)
- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)



Center Hole Shield

Permits visual inspection of stroke alert and prevents entry of contaminants.



Replacement Parts

P/N Series		3828	3832
Model		LTR2430L3	LTR3030L3
1	Kit - NP Chamber (a)	9015210	9015212
2	Kit - Nuts & Bolts	9003001	9003001
3	Clamp Band Assembly	8216025	8216045
4	Diaphragm	8017424	8017830
5	Kit - Push-Rod Assembly (a)	9064006	9064003
6	Return Spring	8068012	8068012
7	Kit - Center Hole Shield	9065002	9065002
8	NP Chamber Assembly	8215200	8215501
9	Kit - Nuts & Washers	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004
11	Kit - Piggyback Plus	3828008	3832008
OPTIONAL ITEMS			
Yoke Assembly		Refer to Replacement Parts Section 8	
Boot & Retainer		Refer to Replacement Parts Section 8	

NOTE: (a) To ensure correct stroke alert indicator positioning, these kits must be used only in the designated MGM Brakes units.
For additional replacement parts, refer to Section 8.

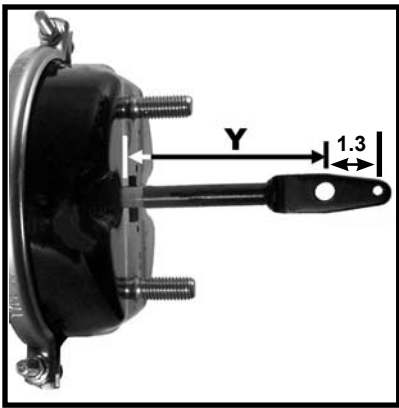
Long Stroke Model

LONG LIFE DOUBLE DIAPHRAGM

Combination	Single/Piggyback
VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	3844
Model	LTR3030L3W
Size	3030
Stroke	3.00"
P/N Combination	3844051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	20.5
Wt. Single (Lbs.)	12.6
A	13.0
B	10.63
C	8.27
D	8.18
E	4.75"
F	5/8" - 11UNC
G	5/8" - 18UNF
Inlets	3/8" - NPTF
X - Min. (in the caged position)	8.00" (a)

Note: (a) For Hendrickson Intraax/Vantraax Suspension applications refer to 98.



NOTE: Type 3030 units equipped with welded-yoke and 2.25" Y-dimension are replaced by Part Number:

3844951 (LTR3030L3W)

Refer to Section 8 for replacement parts.

LTR-L3W Model Features

- Tamper Resistant Design (U.S Patent No. 5,067,391)
- Molded Nitrile Rubber Push-Rod Air Seal
- Center Hole Shield
- Six (6) Year Limited Warranty
- Integral Release Bolt
- 360 Aluminum Alloy
- Low Friction Piston & Guide
- Square Port Bosses (Long Stroke Identification)
- Heavy-Duty "Long Life" Power Spring (100 Lbs. additional parking brake force @ 1.25 inches of stroke)
- Heavy-Duty Steel Non-Pressure Chamber (8-Gauge Standard on Type 3030 Aftermarket Models)
- Stroke Alert
- Polymer Push-Rod Guides
- Heavy-Duty Nylon Reinforced Diaphragms
- Heavy-Duty Nylon Reinforced Neoprene Diaphragms (Optional)
- **Weld Re-Inforced Non-Pressure Housing**

Weld Reinforced Non-Pressure Housing

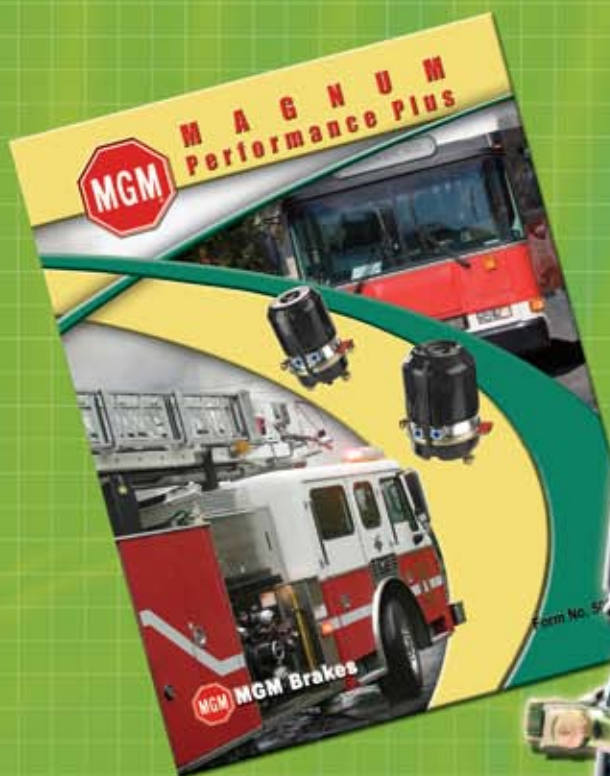
Heavy-gauge formed steel flat-bottom design, epoxy-coated for total corrosion protection, with pressed-in and "weld-reinforced" mounting studs for added support in extreme vibration applications.

**Replacement Parts**

P/N Series		3844
Model		LTR3030L3W
1	Kit - NP Chamber (a)	N/A
2	Kit - Nuts & Bolts	9003001
3	Clamp Band Assembly	8216045
4	Diaphragm	8017830
5	Kit - Push-Rod Assembly (a)	9064003
6	Return Spring	8068012
7	Kit - Center Hole Shield	9065002
8	NP Chamber Assembly	82151136
9	Kit - Nuts & Washers	9002001
10	Hex Nut - Yoke	8130004
11	Kit - Piggyback Plus	N/A
OPTIONAL ITEMS		
Yoke Assembly		Refer to Replacement Parts Section 8
Boot & Retainer		Refer to Replacement Parts Section 8

NOTE: (a) To ensure correct stroke alert indicator positioning, these kits must be used only in the designated MGM Brakes units.

For additional replacement parts, refer to Section 8.



Piston Performance For
Demanding Applications—
When Only The Best Will Do

MAGNUM

**“Performance Plus”
SERIES**



Section 4: Piston Spring Brakes..... 62-69

Standard Stroke Model



MJS (Magnum, J-Series, 1.75" Stroke, Tube)..... 64-65

Long Stroke Model

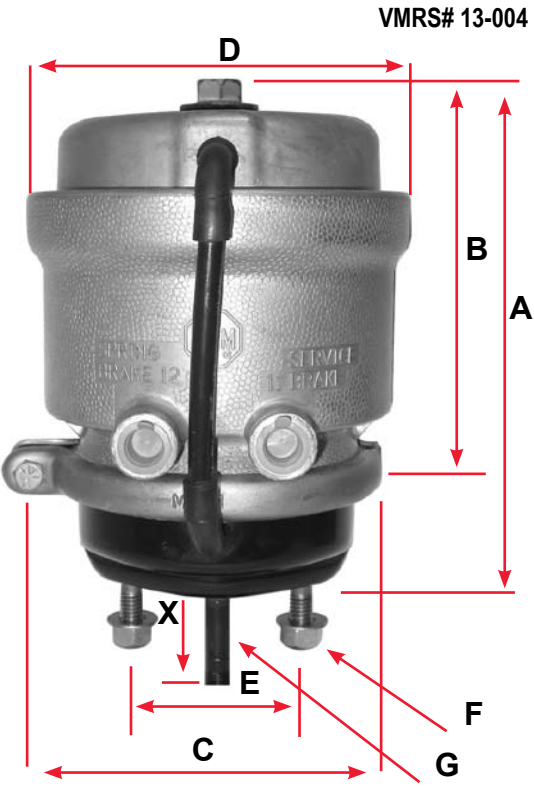


MJS (Magnum, J-Series, 3.00" Stroke, Tube)..... 66-69

FEATURES	MJS - 1.75	MJS - 3.00
Tamper-Resistant Mechanically Locked Spring Housing		
Molded Nitrile Rubber Push-Rod Air Seal		
Center Hole Shield		
Steel Head/Clear Zinc Iron Chromate & Epoxy Coated		
External Breather Tube		
Integral Release Bolt		
Stroke Alert		
Heavy-Duty Steel Non-Pressure Chamber		
Polymer Push-Rod Guides		
3 Inch Long Stroke		
Piston Brake Highest Force & Lowest Hold-Off Pressure		
Compact / Lighter Weight		

■ Indicates Feature

NOTE: Product information and specifications subject to change without notice.

Combination	Single/Piggyback
 VMRS# 13-004	N/A
	Piggyback Plus Kit  VMRS# 13-004-001

P/N Series	MJS1216AT
Model	MJS1216AT
Size	1216
Stroke	1.75"
P/N Combination	MJS1216AT051
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	MJS1216AT008
Wt. Combination (Lbs.)	12.18
Wt. Single (Lbs.)	8.70
A	8.62
B	5.84
C	5.70
D	6.44
E	3.00"
F	7/16" - 14 UNC
G	1/2" - 20 UNF
Inlets	3/8" - NPTF
X -Min (in the caged position)	8.00"

NOTE: Product information and specifications subject to change without notice.

Performance Plus

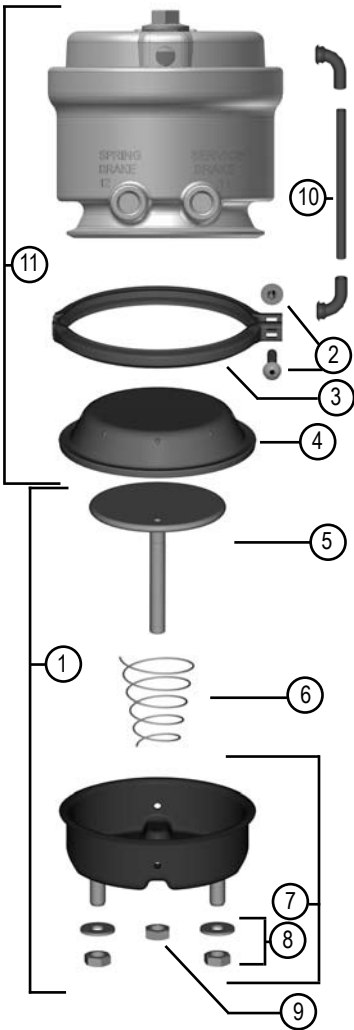
1.75" Stroke Model

MJS Model Features

- Lightweight, Rugged Aluminum Housing and Head
 - Epoxy-Coated Power Spring
 - External Breather Tube
 - Integral Release Bolt
- Polymer Push-Rod Guides
 - Molded Nitrile Rubber Push-Rod Air Seal
 - Low Friction Piston and Guide
 - Heavy-Duty Nylon Reinforced Diaphragms

Release Bolt

Patented “Dual Thread Release Bolt” design, an MGM Brakes exclusive, provides minimal bolt protrusion at maximum release. (Approx. 1.00 inch protrusion when manually released)



Replacement Parts

P/N Series		MJS1216AT
Model		MJS1216AT
1	Kit - NP Chamber (a)	9015242
2	Kit - Nuts & Bolts	9003002
3	Clamp Band Assembly	8216012
4	Diaphragm	8017312
5	Kit - Push-Rod Assembly (a)	9064010
6	Return Spring	8068007
7	NP Chamber Assembly	8215198
8	Kit - Nuts & Washers	9002003
9	Hex Nut - Yoke	8130011
10	Kit - Breather Tube	9006003
11	Kit - Piggyback Plus	MJS1216AT008
OPTIONAL ITEMS		
Yoke Assembly		Refer to Replacement Parts Section 8

NOTE: (a) To ensure correct stroke alert indicator positioning, these kits must be used only in the designated MGM Brakes units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.

Combination	Single/Piggyback
VMRS# 13-004	N/A
	Piggyback Plus Kit VMRS# 13-004-001

Additional sizes on page 68.

P/N Series	MJS1724ET	MJS2024ET	MJS2030ET	MJS2424ET	MJS2430ET
Model	MJS1724ET	MJS2024ET	MJS2030ET	MJS2424ET	MJS2430ET
Size	1724	2024	2030	2424	2430
Stroke	3.00	3.00	3.00	3.00"	3.00"
P/N Combination	MJS1724ET051	MJS2024ET051	MJS2030ET051	MJS2424ET051	MJS2430ET051
P/N Single/Piggyback	N/A	N/A	N/A	N/A	N/A
P/N Piggyback Plus Kit	MJS1724ET008	MJS2024ET008	MJS2030ET008	MJS2424ET008	MJS2430ET008
Wt. Combination (Lbs.)	20.32	20.32	22.70	20.4	23.70
Wt. Single (Lbs.)	14.6	14.6	14.9	13.5	14.92
A	10.61	10.61	11.21	10.31	10.93
B	7.94	7.94	8.56	7.94	8.56
C	6.85	6.85	6.85	7.38	7.38
D	6.76	6.76	7.50	6.76	7.5
E	4.75"			4.75"	
F	M16X1.5-6G			5/8" - 11 UNC	
G	5/8" - 18 UNF			5/8" - 18 UNF	
Inlets	3/8" - NPTF			3/8" - NPTF	
X - Min. (in the caged position)	8.00"			8.00"	

Additional sizes on page 68.

NOTE: Product information and specifications subject to change without notice.

Performance Plus

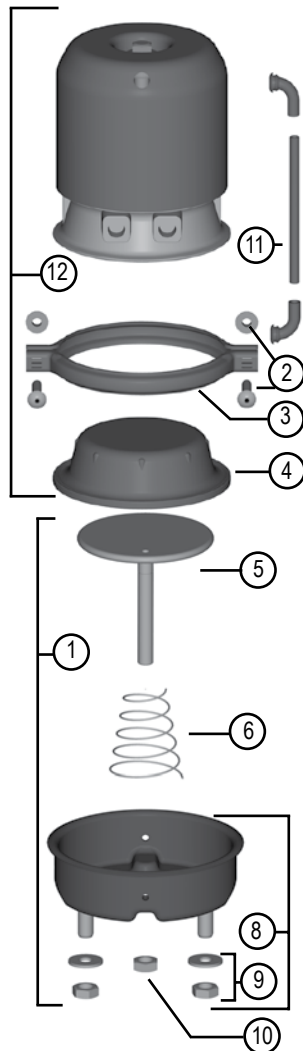
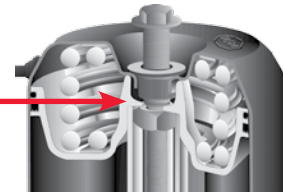
3.00" Long Stroke Model

Magnum Performance Plus Model Features

- Tamper Resistant Design
- Lighter Weight
- 3 Inch Long Stroke
- Compact Size
- Patented Integral Release Bolt Mechanism - Minimal Bolt Protrusion (Approx. 1.25 inch protrusion on "Long Stroke" models when manually released)
- Lower Hold-Off Pressure (Less Air Consumption)
- Non-Coil Clash Power Spring
- Increased Corrosion Resistance - Steel Head Double-Coated with Clear Zinc Iron Chromate and Epoxy
- Available with 1,922-2,600 Lbs. of Push-Rod Braking Force @ 1.25 inch Stroke / Service Brake Sizes 24-36

Release Bolt

Patented "Dual Thread Release Bolt" design, an MGM Brakes exclusive, provides minimal bolt protrusion at maximum release.



Replacement Parts

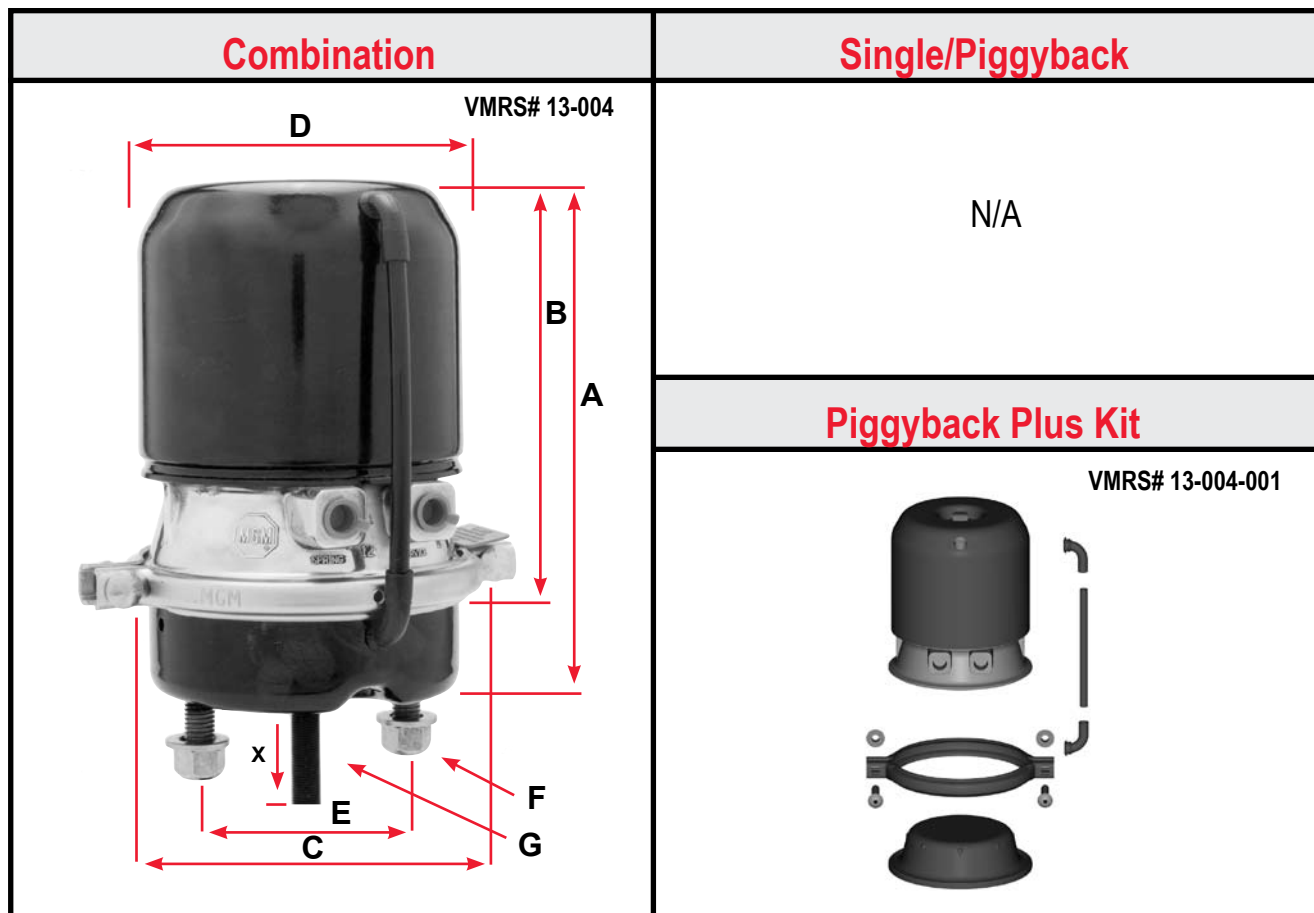
P/N Series		MJS1724ET	MJS2024ET	MJS2030ET	MJS2424ET	MJS2430ET
Model		MJS1724ET	MJS2024ET	MJS2030ET	MJS2424ET	MJS2430ET
1	Kit - NP Chamber (a)	9015240	9015258	9015239	9015215	9015215
2	Kit - Nuts & Bolts	9003001	9003001	9003001	9003001	9003001
3	Clamp Band Assembly	8216020	8216020	8216020	8216025	8216025
4	Diaphragm	8017215	8017820	8017820	8017424	8017424
5	Kit - Push-Rod Assembly (a)	8264532	8264039	8264039	9064006	9064006
6	Return Spring	8068021	8068021	8068021	8068022	8068022
7	Kit - Center Hole Shield	9065002	9065002	9065002	9065002	9065002
8	NP Chamber Assembly	8215928	8215928	8215928	9015213	9015213
9	Kit - Nuts & Washers	8130036	8130036	8130036	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004	8130004	8130004	8130004
11	Kit - Breather Tube	9081001	9081001	9081001	9081001	9081001
12	Kit - Piggyback Plus	MJS1724ET008	MJS2024ET008	MJS2030ET008	MJS2424ET008	MJS2430ET008
OPTIONAL ITEMS						
Yoke Assembly		Refer to Replacement Parts Section 8				
Boot & Retainer		Refer to Replacement Parts Section 8				

Additional sizes on page 69.

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



P/N Series	MJS3024ET	MJS3028ET	MJS3030ET	MJS3628ET	MJS3630ET
Model	MJS3024ET	MJS3028ET	MJS3030ET	MJS3628ET	MJS3630ET
Size	3024	3028	3030	3628	3630
Stroke	3.00"	3.00"	3.00"	3.00"	3.00"
P/N Combination	MJS3024ET051	MJS3028ET051	MJS3030ET051	MJS3628ET051	MJS3630ET051
P/N Single/Piggyback	N/A	N/A	N/A	N/A	N/A
P/N Piggyback Plus Kit	MJS3024ET008	MJS3028ET008	MJS3030ET008	MJS3628ET008	MJS3630ET008
Wt. Combination (Lbs.)	22.4	23.1	23.1	24.9	25.2
Wt. Single (Lbs.)	14.6	14.92	14.92	14.5	14.5
A	10.33	10.93	10.93	11.28	11.28
B	7.94	8.56	8.56	8.56	8.56
C	8.32	8.32	8.32	9.4	9.4
D	6.76	7.5	7.5	7.5	7.5
E	4.75"				
F	5/8" - 11UNC				
G	5/8" - 18UNF				
Inlets	3/8" - NPTF				
X - Min. (in the caged position)	8.00"				

NOTE: Product information and specifications subject to change without notice.

Performance Plus

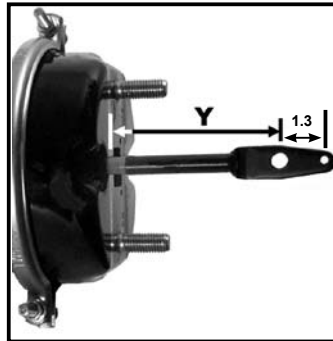
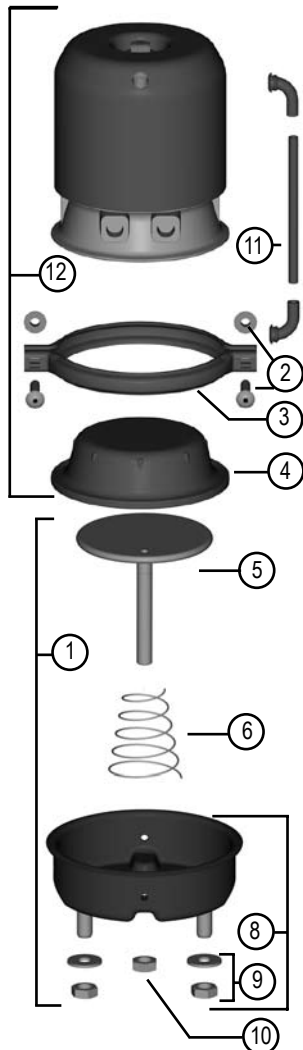
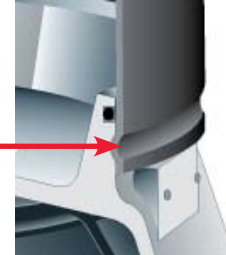
3.00" Long Stroke Model

Magnum Performance Plus Model Features

- Tamper Resistant Design
- Lighter Weight
- 3 Inch Long Stroke
- Compact Size
- New Patented Integral Release Bolt Mechanism - Minimal Bolt Protrusion (Approx. 1.25 inch protrusion on "Long Stroke" models when manually released)
- Lower Hold-Off Pressure (Less Air Consumption)
- Non-Coil Clash Power Spring
- Increased Corrosion Resistance - Steel Head Double-Coated with Clear Zinc Iron Chromate and Epoxy
- Available with 1,922-2,600 Lbs. of Push-Rod Braking Force @ 1.25 inch Stroke / Service Brake Sizes 24-36

"Roll-In" Tamper Resistant Design

Patented design permanently locks heavy-gauge steel head to the rugged, non-corrosive alloy 360 aluminum center case preventing inadvertent disassembly of the power spring housing.



NOTE: Type 3024 units equipped with welded-yoke and 2.25" Y- dimension are replaced by Part Number:

MJS3024ET951

Refer to Section 8 for replacement parts.

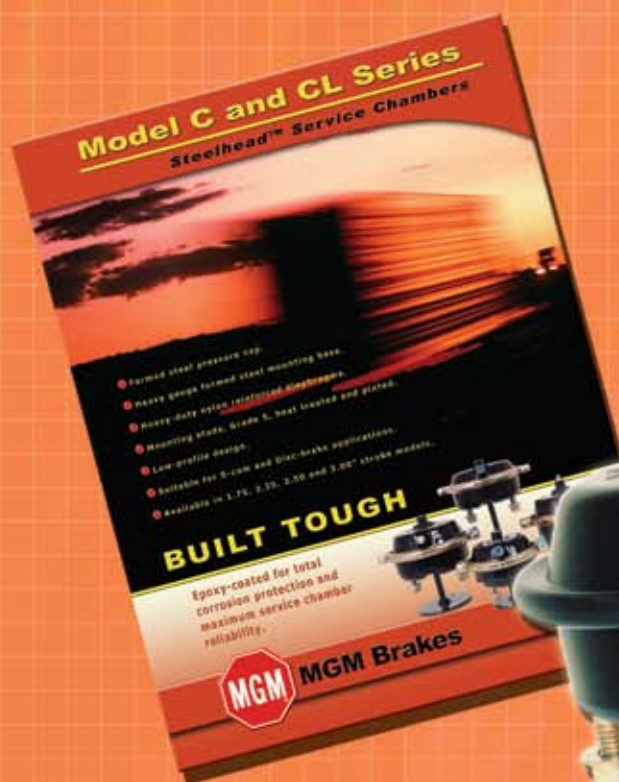
Replacement Parts

P/N Series	MJS3024ET	MJS3028ET	MJS3030ET	MJS3628ET	MJS3630ET
Model	MJS3024ET	MJS3028ET	MJS3030ET	MJS3628ET	MJS3630ET
1 Kit - NP Chamber (a)	9015218	9015218	9015218	9015109	9015109
2 Kit - Nuts & Bolts	9003001	9003001	9003001	9003001	9003001
3 Clamp Band Assembly	8216045	8216045	8216045	8216036	8216036
4 Diaphragm	8017830	8017838	8017838	8017836	8017836
5 Kit - Push-Rod Assembly (a)	9064008	9064008	9064008	9064008	9064008
6 Return Spring	8068022	8068022	8068022	8068022	8068022
7 Kit - Center Hole Shield	9065002	9065002	9065002	9065002	9065002
8 NP Chamber Assembly	9015216	9015216	9015216	9015108	9015108
9 Kit - Nuts & Washers	9002001	9002001	9002001	9002001	9002001
10 Hex Nut - Yoke	8130004	8130004	8130004	8130004	8130004
11 Kit - Breather Tube	9081001	9081001	9081001	9081001	9081001
12 Kit - Piggyback Plus	MJS3024ET008	MJS3028ET008	MJS3030ET008	MJS3628ET008	MJS3630ET008
OPTIONAL ITEMS					
Yoke Assembly	Refer to Replacement Parts Section 8				
Boot & Retainer	Refer to Replacement Parts Section 8				

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



**Tough, Cost-Effective:
A Stopping Force
Within The Industry**

“C” SERIES SERVICE CHAMBERS



Section 4: Service Chambers..... 70-77

Standard Stroke Models



C (Service Chambers)..... 72-73

CW (Service Chambers, Wedge)..... 74-75



Long Stroke Models



CL (Service Chambers, Long Stroke)..... 76-77

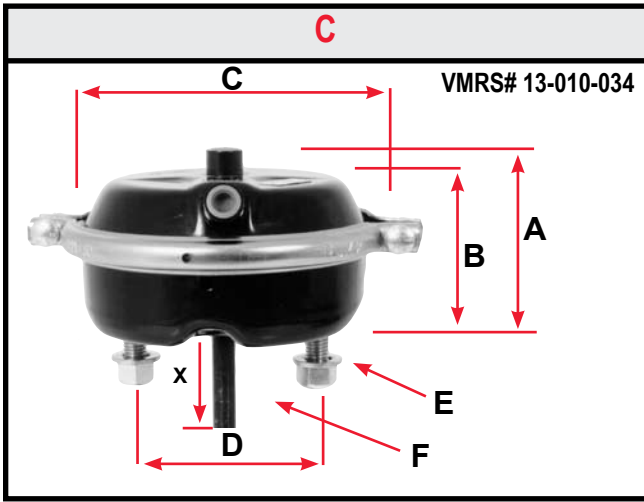
CS (Service Chambers, Long Stroke, Sealed)..... 76-77

FEATURES	C	CW	CL, CS
Formed Steel Pressure Cap/Epoxy Coated	■	■	■
Heavy-Duty Nylon-Reinforced Diaphragms	■	■	■
Heavy-Duty Steel	■	■	■
Non-Pressure Chamber	■	■	■
Stroke Alert	■	■	■
Suited for S-Cam and Disc-Brake Applications	■	■	■
Top / Side Air Ports	■	■	■

■ Indicates Feature

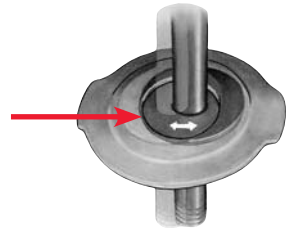
NOTE: Product information and specifications subject to change without notice.

Standard Stroke Model



Center Hole Shield

Permits visual inspection of stroke alert but prevents entry of contaminants.



P/N Series	1412	1416	1420	1427	1430	1436
Model	C12	C16	C20	C24L	C30	C36
Size	12	16	20	24	30	36
Stroke	1.75"	2.25"	2.25"	2.50"	2.50"	3.00"
Part Number	1412001	1416001	1420001	1427001	1430001	1436001
Wt.(Lbs.)	3.8	5.9	7.55	8.4	10.12	15.88
A	3.84	4.43	4.16	4.42	4.43	5.12
B	3.13	3.64	3.41	3.67	3.69	4.52
C	5.69	6.59	6.92	7.34	8.19	9.25
D	3.00	3.00	4.75	4.75	4.75	4.75
E	7/16" - 14UNC	7/16" - 14UNC	5/8" - 11UNC	5/8" - 11UNC	5/8" - 11UNC	5/8" - 11UNC
F	1/2" - 20UNF	1/2" - 20UNF	5/8" - 18UNF	5/8" - 18UNF	5/8" - 18UNF	5/8" - 18UNF
Inlets	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF
X - Min.	4.00"	4.00"	8.00"	8.00"	8.00"	8.00"

NOTE: Product information and specifications subject to change without notice.

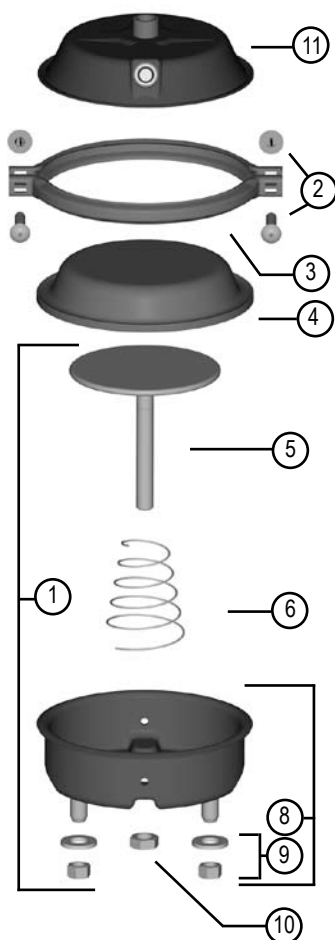
C Model Features

- Formed Steel Pressure Cap - Epoxy-Coated
- Formed Steel Non-Pressure Chamber - Epoxy-Coated
- Heavy-Duty Nylon Reinforced Diaphragms

Standard Stroke Model

- Top and Side Air Ports - 3/8" NPTF
- Center Hole Shield (Type 30 only)

Replacement Parts



P/N Series	1412	1416	1420
Model	C12	C16	C20
1 Kit - NP Chamber (b)	9015207	9015136	9015046
2 Kit - Nuts & Bolts	9003002	9003001	9003001
3 Clamp Band Assembly	8216012	8216018	8216020
4 Diaphragm	8017112	8017116	8017120
5 Kit - Push-Rod Assembly (b)	9064018	9064019	9064001
6 Return Spring	8068007	8068008	8068011
7 Kit - Center Hole Shield	N/A	N/A	N/A
8 NP Chamber Assembly	8215142	8215023	8215169
9 Kit - Nuts & Washers	9002003	9002003	9002001
10 Hex Nut - Yoke	8130011	8130011	8130004
11 Pressure Cap (2-inlets/steel)	8010066(a)	8210013	8210010
OPTIONAL ITEMS			
Yoke Assembly	Refer to Replacement Parts Section 8		
Boot & Retainer	Refer to Replacement Parts Section 8		

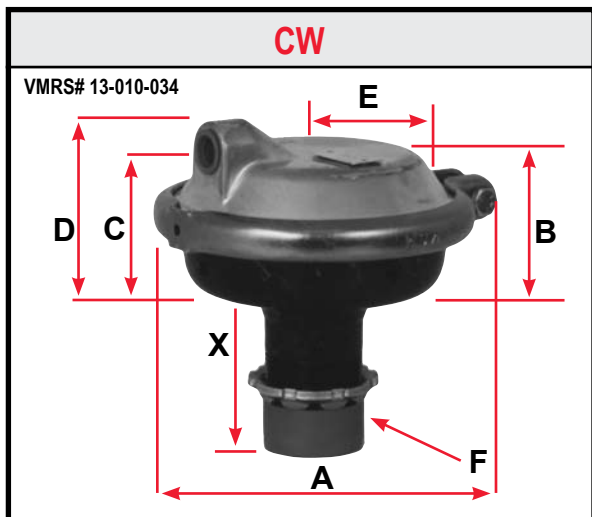
P/N Series	1427	1430	1436
Model	C24L	C30	C36
1 Kit - NP Chamber (b)	9015117	9015050	9015049
2 Kit - Nuts & Bolts	9003001	9003001	9003001
3 Clamp Band Assembly	8216025	8216045	8216036
4 Diaphragm	8017141	8017730	8017836
5 Kit - Push-Rod Assembly (b)	9064002	9064003	9064004
6 Return Spring	8068011	8068011	8068012
7 Kit - Center Hole Shield	N/A	9065002	N/A
8 NP Chamber Assembly	8215105	8215501	8215036
9 Kit - Nuts & Washers	9002001	9002001	9002001
10 Hex Nut - Yoke	8130004	8130004	8130004
11 Pressure Cap (2-inlets/steel)	8210002	8210003	8010009
OPTIONAL ITEMS			
Yoke Assembly	Refer to Replacement Parts Section 8		
Boot & Retainer	Refer to Replacement Parts Section 8		

NOTE: (a) Type 12 pressure cap is cast aluminum.

(b) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

For additional replacement parts, refer to Section 8.

Standard Stroke Model



NOTE: X - Dimension of mounting tube is measured from bottom flat on non-pressure chamber to tube end.

CW Model Features

- Formed Steel Non-Pressure Chamber - Epoxy-Coated
- Heavy-Duty Nylon Reinforced Diaphragms
- Top and Side Air Ports - 3/8" NPTF

Wedge Piston Assembly ArvinMeritor Bendix



Ordering: Determine if foundation brake is ArvinMeritor or Bendix type by comparison to piston assembly photos above.

P/N Series	1009	1012	1016
Model	CW9	CW12	CW16
Size	9	12	16
Stroke	1.75"	1.75"	1.75"
Wt.(Lbs.)	3.53	3.81	5.80
A	6.23	6.67	7.42
B	2.42	2.39	2.48
C	2.42	2.60	2.28
D	2.97	3.10	2.79
E	2.63	2.85	3.22
F	1 3/4" 12UNC	1 3/4" 12 UNC	1 3/4" 12 UNC
Inlets	3/8" NPTF	3/8" NPTF	3/8" NPTF

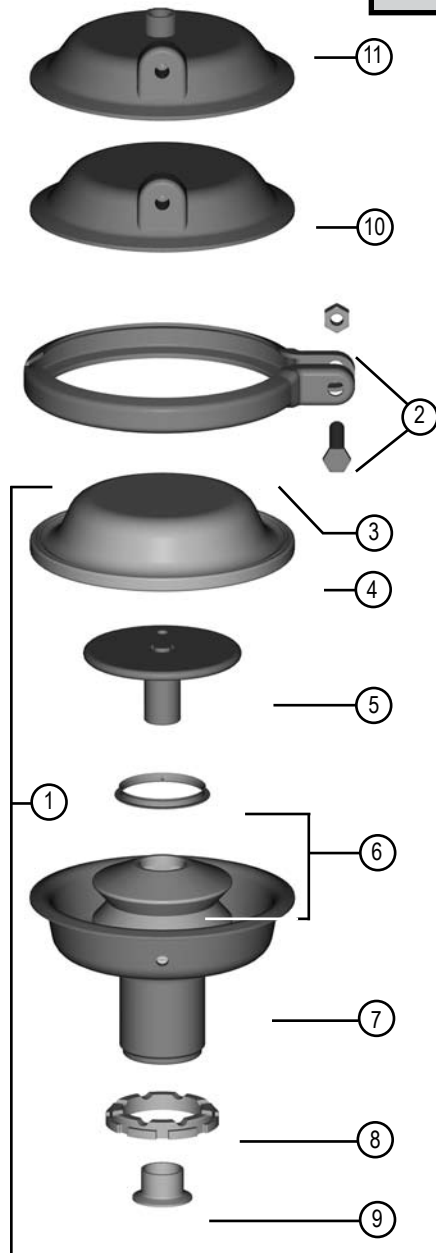
CW Service Brake Chamber						
Size	Type 9		Type 12		Type 16	
Stroke	1.75		1.75		1.75	
"X" DIM	ArvinMeritor	Bendix	ArvinMeritor	Bendix	ArvinMeritor	Bendix
2.25	1009018	1009012	1012008	1012009	1016004	1016001
2.85	1009023	1009020	1012001	1012004	1016003	1016005
3.75	*	*	*	1012097	*	1016019
4.10	1009032	1009021	1012002	1012048	1016006	*
4.56	*	*	1012066	*	*	*
6.10	1009053	1009022	1012057	1012049	1016017	*
7.56	*	*	1012058	*	*	*
8.75	1009049	*	1012007	*	*	*
10.19	*	*	1012003	1012006	1016020	*
12.00	*	*	1012096	*	1016011	*
14.00	*	*	1012056	1012052	*	*

NOTE: (*) This chamber version is not available

NOTE: Product information and specifications subject to change without notice.

Standard Stroke Model

CW Chamber Service Kits						
Size	Type 9		Type 12		Type 16	
Stroke	1.75		1.75		1.75	
"X" DIM	ArvinMeritor	Bendix	ArvinMeritor	Bendix	ArvinMeritor	Bendix
2.25	*	*	9015003	9015002	*	*
2.85	9015005	*	9015007	9015006	*	9015043
3.75	*	*	*	*	*	9015095
4.10	*	*	9015011	*	9015059	*
6.10	*	*	9015019	9015018	*	*
7.56	*	*	*	*	*	*
8.75	*	*	9015022	*	*	*
10.19	*	*	9015026	*	*	*
12.00	*	*	9015102	*	*	*
14.00	*	*	9015031	*	*	*



Replacement Parts

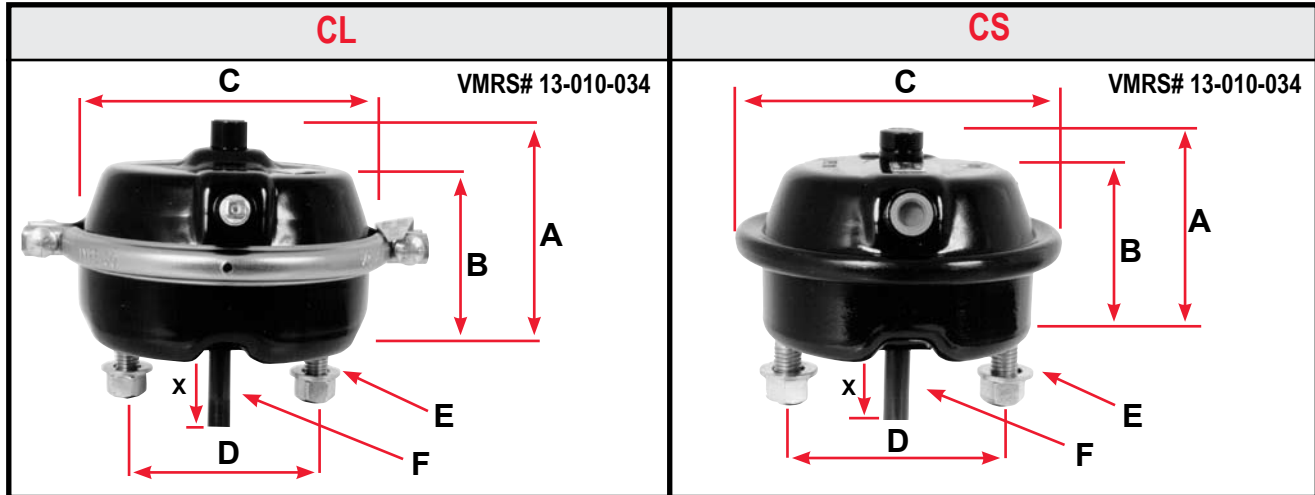
P/N Series	1009	1012	1016
Model	CW9	CW12	CW16
1 Kit - NP Chamber	Refer to wedge chamber service kits above		
2 Kit - Nuts & Bolts	9003002	9003002	9003002
3 Clamp Band Assembly	8216009	8216012	8216018
4 Diaphragm	(a)	(a)	(a)
5 Kit - Push-Rod Assembly	(a)	(a)	(a)
6 Kit- Wedge Boot	9004005	9004005	9004005
7 NP Chamber Assembly	(a)	(a)	(a)
8 Spanner Nut	8034001	8034001	8034001
9 Wedge Guide - ArvinMeritor	8024006	8024006	8024006
10 Pressure Cap (1 Inlet)	N/A	8010040	8210001
11 Pressure Cap (2 Inlets)	8010028	8010066	8210013

NOTE: (a) Diaphragm is glued to push-rod plate, therefore diaphragm and push-rod assembly are available only as part of item 1 kit.

For additional replacement parts, refer to Section 8.

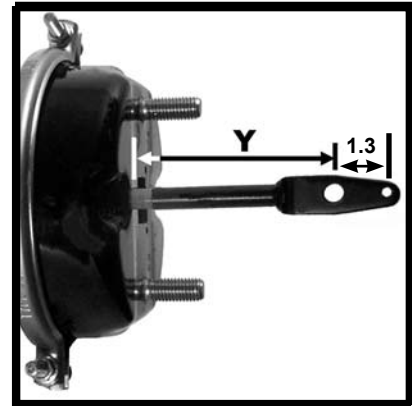
NOTE: Product information and specifications subject to change without notice.

Long Stroke Models



P/N Series	1428	1431	1418
Model	C24L3	C30L3	C16L
Size	24	30	16
Stroke	3.00"	3.00"	2.50"
Part Number	1428001	1431001	1418001
Wt.(Lbs.)	9.28	10.55	5.9
A	5.30	5.31	4.53
B	4.28	4.30	3.78
C	7.37	8.24	6.59
D	4.75	4.75	3.00
E	5/8" - 11UNC	5/8" - 11UNC	7/16" - 14UNC
F	5/8" - 18UNF	5/8" - 18UNF	1/2" - 20UNF
Inlets	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF
X - Min.	8.00"	8.00"	4.00"

P/N Series	1617	1421	1621
Model	CS16LH	C20L	CS20L
Size	16	20	20
Stroke	2.50"	2.50"	2.50"
Part Number	1617001	1421001	1621001
Wt.(Lbs.)	6.62	7.65	6.80
A	4.37	4.40	4.37
B	3.74	3.67	3.74
C	7.00	6.85	7.00
D	4.75	4.75	4.75
E	5/8" - 11UNC	5/8" - 11UNC	5/8" - 11UNC
F	5/8" - 18UNF	5/8" - 18UNF	5/8" - 18UNF
Inlets	3/8" - NPTF	3/8" - NPTF	3/8" - NPTF
X - Min.	8.00"	8.00"	8.00"



NOTE: Type 16, 24 and 30 units equipped with welded-yoke and 2.25" Y dimension are replaced by Part Number:

1428901 (C24L3)
1431901 (C30L3)
1617901 (CS16LH)*
1621901 (CS20L)*

*** All CS models are sealed assemblies, non-serviceable, therefore replacement kits are not available.**

For additional replacement parts, refer to Section 8.

Long Stroke Models

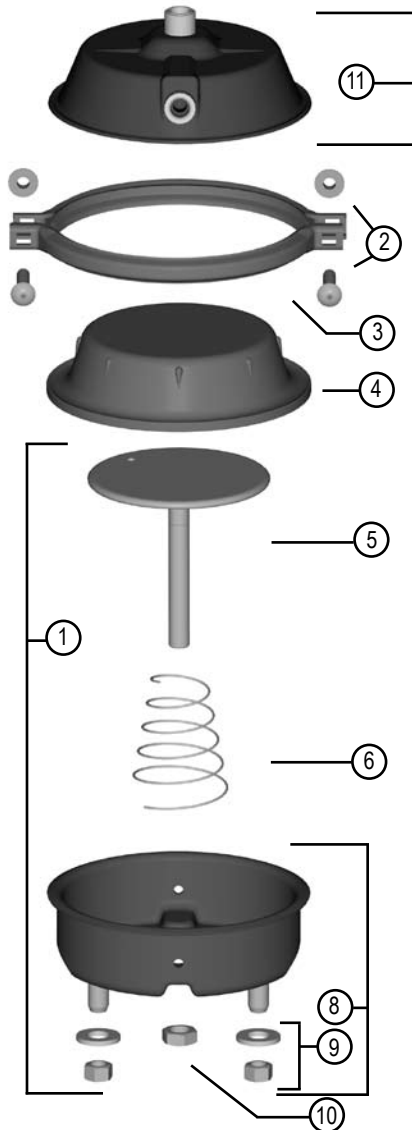
CL Model Features

- Formed Steel Pressure Cap - Epoxy-Coated
(CS20 Models have Zinc Iron Chromate Coating)
- Formed Steel Non-Pressure Chamber - Epoxy-Coated

- Heavy-Duty Nylon Reinforced Diaphragms
- Top and Side Air Ports - 3/8" NPTF
- Center Hole Shield

Replacement Parts

P/N Series		1428	1431	1418
Model		C24L3	C30L3	C16L
1	Kit - NP Chamber (a)	9015200	9015201	9015205
2	Kit - Nuts & Bolts	9003001	9003001	9003001
3	Clamp Band Assembly	8216025	8216045	8216018
4	Diaphragm	8017924	8017830	8017216
5	Kit - Push-Rod Assembly (a)	9064006	9064008	9064022
6	Return Spring	8068012	8068012	8068008
7	Kit - Center Hole Shield	N/A	9065002	N/A
8	NP Chamber Assembly	8215200	8215501	8215251
9	Kit - Nuts & Washers	9002001	9002001	9002003
10	Hex Nut - Yoke	8130004	8130004	8130011
11	Pressure Cap (2-inlet/steel)	8210026	8210024	8210020
OPTIONAL ITEMS				
Yoke Assembly		Refer to Replacement Parts Section 8		
Boot & Retainer		Refer to Replacement Parts Section 8		



P/N Series		1617	1421	1621
Model		CS16LH	C20L	CS20L
1	Kit - NP Chamber (a)	N/A	9015233	N/A
2	Kit - Nuts & Bolts	N/A	9003001	N/A
3	Clamp Band Assembly	N/A	8216020	N/A
4	Diaphragm	N/A	8017220	N/A
5	Kit - Push-Rod Assembly (a)	N/A	9064020	N/A
6	Return Spring	N/A	8068011	N/A
7	Kit - Center Hole Shield	N/A	N/A	N/A
8	NP Chamber Assembly	N/A	8215169	N/A
9	Kit - Nuts & Washers	9002001	9002001	9002001
10	Hex Nut - Yoke	8130004	8130004	8130004
11	Pressure Cap (2-inlet/steel)	N/A	8210022	N/A
OPTIONAL ITEMS				
Yoke Assembly		Refer to Replacement Parts Section 8		
Boot & Retainer		Refer to Replacement Parts Section 8		

NOTE: (a) To ensure correct stroke alert positioning, these kits must be used only on the designated MGM Brake units.

All CS models are sealed assemblies, non-serviceable, therefore kits are not available.

For additional replacement parts, refer to Section 8.

NOTE: Product information and specifications subject to change without notice.



New Design,
Better Performance,
Same Reliability and Quality

WEDGE BRAKES



Section 6: Wedge Spring Brakes..... 78-83

Standard Stroke Models



MJW1216 (Magnum Performance Plus, Wedge)..... 80-81



MJW1624 (Magnum Performance Plus, Wedge)..... 82-83
(Replacement for MG1624T, P/N 2017156)



CW (Service Wedge) Refer to Section 5 - SERVICE CHAMBERS

FEATURES	MJW
Various Tube Lengths Available	
Light Weight, Rugged Aluminum Housing	
Epoxy-Coated Power Spring	
External Breather Tube	
Integral Release Bolt	
Polymer Push-Rod Guides	
Molded Nitrile Rubber Push-Rod Air Seal	
Low Friction Piston and Guide	
Heavy-Duty Nylon Reinforced Diaphragms	

Indicates Feature

NOTE: Product information and specifications subject to change without notice.

1.75" Stroke Model

MJW1216AT 1.75" Stroke Model

WEDGE

Combination	Single/Piggyback
VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	MJW1216AT
Model	MJW1216AT
Size	1216
Stroke	1.75"
Push-Rod	ArvinMeritor / Bendix
P/N Combination	(a)
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	13.18
Wt. Single (Lbs.)	N/A
A	7.90
B	5.84
C	5.70
D	6.44
E	1 3/4" - 12 UNC
F Inlets	3/8" - NPTF
X (a)	SEE CHART

Standard Assembly Part Numbers

Model	MJW1216AT	
Size	MJW1216	
X Dimension	ArvinMeritor	Bendix
2.25	MJW1216AT052	MJW1216AT059
2.85	MJW1216AT053	MJW1216AT060
4.10	MJW1216AT054	MJW1216AT061
6.10	MJW1216AT055	MJW1216AT062

NOTE: (a) Refer to "Standard Assembly Part Numbers Chart" for mounting tube length variations.

NOTE: Product information and specifications subject to change without notice.

MJW1216AT Model

1.75" Stroke Model

MJW Model Features

- Wide Choice Tube Lengths
- Lightweight, Rugged Aluminum Housing
- Epoxy-Coated Power Spring
- External Breather Tube

- Integral Release Bolt
- Polymer Push-Rod Guides
- Molded Nitrile Rubber Push-Rod Air Seal
- Low Friction Piston and Guide
- Heavy-Duty Nylon Reinforced Diaphragms

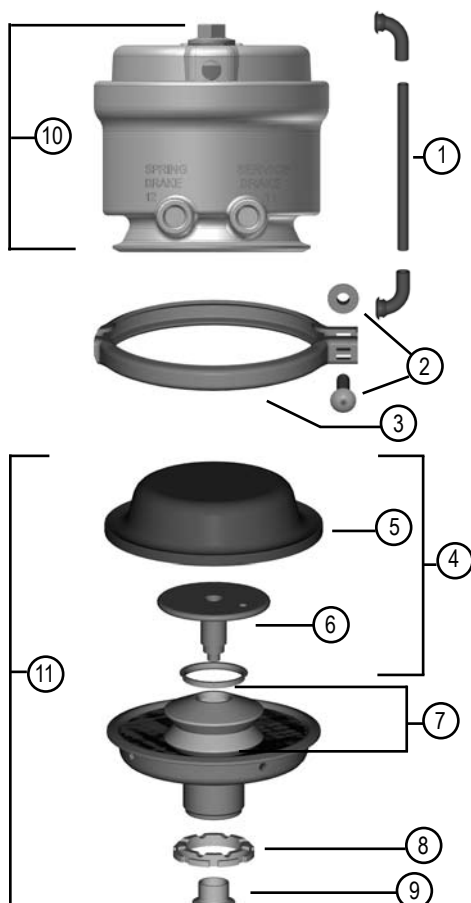
Wedge Piston Assembly ArvinMeritor Bendix



Ordering: Determine if foundation brake is ArvinMeritor or Bendix type by comparison to piston assembly photos above.

Standard Service Kits

Type MJW1216AT		
Stroke 1.75"		
X Dimension	ArvinMeritor	Bendix
2.25	9015247	9015254
2.85	9015248	9015255
4.10	9015249	9015256
6.10	9015250	9015257



Replacement Parts

P/N Series		MJW1216AT
Model		MJW1216AT
Part Description		MGM P/N
1	Kit - Breather Tube	9081001
2	Kit - Nuts & Bolts	9003002
3	Clamp Band Assembly	8216012
4	Kit - Diaphragm/Push Rod	(a)
5	Diaphragm	(a)
6	Push Rod	(a)
7	Kit - Wedge Boot	9004005 (a)
8	Spanner Nut	8034001
9	Wedge Guide (ArvinMeritor)	8024006
10	Piggyback	N/A
11	Kit - NP Chamber	Refer to Wedge Chamber service kits above

NOTE: (a) Diaphragm is glued to push-rod plate, therefore diaphragm and push-rod assembly are available only as part of item 11 kit.

For additional replacement parts, refer to Replacement Parts Section 8.

NOTE: Product information and specifications subject to change without notice.

2.00" Stroke Model

MJW1624BT 2.00" Stroke Model

WEDGE

Combination	Single/Piggyback
VMRS# 13-004	N/A
	Piggyback Plus Kit
	N/A

P/N Series	MJW1624BT
Model	MJW1624BT
Size	1624
Stroke	2.00"
P/N Combination	MJW1624BT156
P/N Single/Piggyback	N/A
P/N Piggyback Plus Kit	N/A
Wt. Combination (Lbs.)	17.06
Wt. Single (Lbs.)	N/A
A	8.30
B	7.16
C	6.53
D	6.76
E	1 3/4" - 12 UNC
Inlets	3/8" - NPTF
X	4.50"

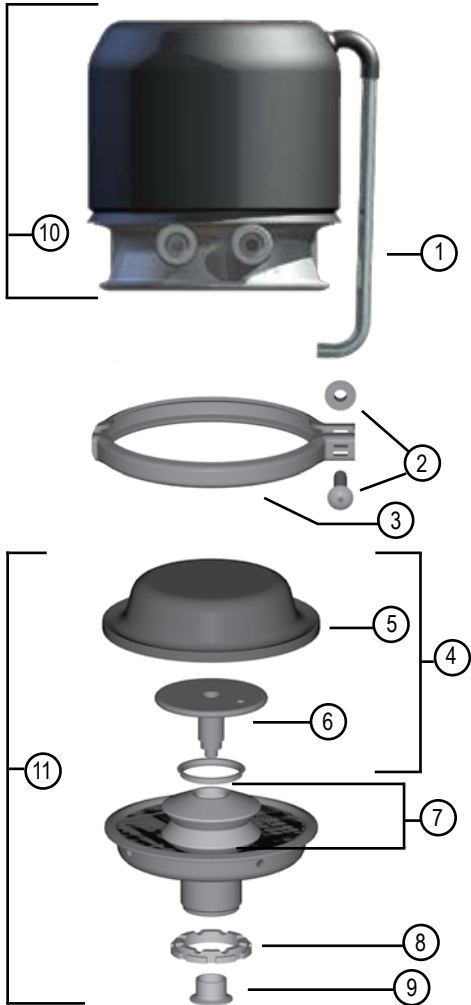
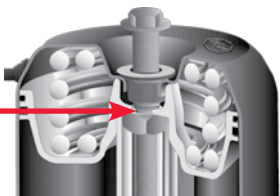
NOTE: Product information and specifications subject to change without notice.

MJW1624BT Model

2.00" Stroke Model

- Tamper Resistant Design
 - Lighter Weight
 - Compact Size
 - External Breather Tube
 - Lower Hold-Off Pressure (Less Air Consumption)
- Patented Integral Release Bolt Mechanism for Minimal Bolt Protrusion when manually released.
 - Non-Coil Clash Power Spring
 - Increased Corrosion Resistance - Steel Head Double-Coated with Clear Zinc Iron Chromate and Epoxy

Release Bolt
Patented “Dual Thread Release Bolt” design, an MGM Brakes exclusive, provides minimal bolt protrusion at maximum release.



Replacement Parts

P/N Series		MJW1624BT
Model		MJW1624BT
Part Description		MGM P/N
1	Kit - Breather Tube	9081002
2	Kit - Nuts & Bolts	9003001
3	Clamp Band Assembly	8216018
4	Kit - Diaphragm/Push Rod	(a)
5	Diaphragm	(a)
6	Push Rod	(a)
7	Kit - Wedge Boot	9004005 (a)
8	Collet Nut	8034005
9	Wedge Guide	8024006
10	Piggyback	N/A
11	Kit - NP Chamber	9015196

NOTE: (a) Diaphragm is glued to push-rod plate, therefore diaphragm and push-rod assembly are available only as part of item 11 kit.

For additional replacement parts, refer to Replacement Parts Section 8.



Perfect For
Remote Operation
Of Trailer Tailgates

REMOTE MOUNT CYLINDERS



Section 7: Remote Mount Cylinders.....

84-89

Standard Stroke Models

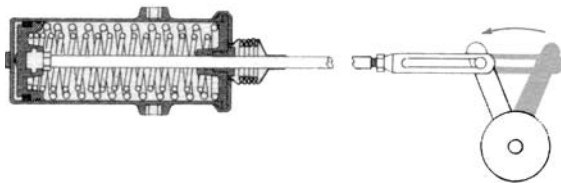
	R4A	(Remote Cylinder).....	86-87
	R5A	(Remote Cylinder).....	86-87
	R5AHD	(Remote Cylinder, Heavy-Duty).....	86-87
	R7A	(Remote Cylinder, Air Applied, Spring Released).....	88-89
	R8H	(Remote Cylinder, Spring Applied, Hydraulic Release).....	88-89

MGM Brakes R4A & R5A Remote Mount Cylinders...are the original spring brake invented in the rugged logging country of Northern California. These cylinders were introduced by MGM Brakes in 1956 as the world's first spring-actuated parking and emergency brake actuators for commercial vehicles. These "pull-to-actuate" cylinders were designed for axle-mount using various weld-on and bolt-on mounting brackets and linkage arms.

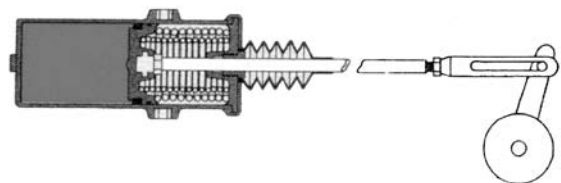
SAAR and SAHR drive-line brakes are developed as replacements for manually operated lever applied "drive-line" brakes. Mounted to the frame rail, the actuator utilizes a cable to apply parking force to a drum mounted on the drive-line. An optional electronic "travel" sensor provides the operator with information pertaining to the position of the push rod - "applied" or "released".

Today, these high-quality air-actuated cylinders have been adapted to such diverse non-automotive usage as dump truck end-gate actuators, emergency brake actuators on massive logging and commercial fishing winches and numerous other special applications.

How Remote Mount Cylinders Operate



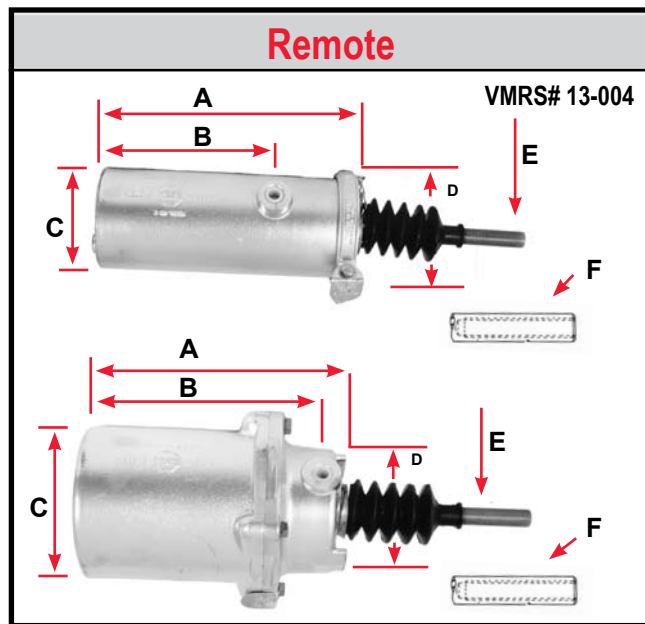
When the end-gate is closed, spring pressure within the cylinders moves the latches into the latched position, reducing the risk the end-gate may inadvertently swing open.



To unlatch the end-gate, the operator applies air to the cylinder through a valve located in the cab of the vehicle. As air pressure builds within the cylinder it forces the piston to move, compressing the spring(s) and extending the push-rod which moves the end-gate latches into the open position.

NOTE: Product information and specifications subject to change without notice.

Standard Stroke Model



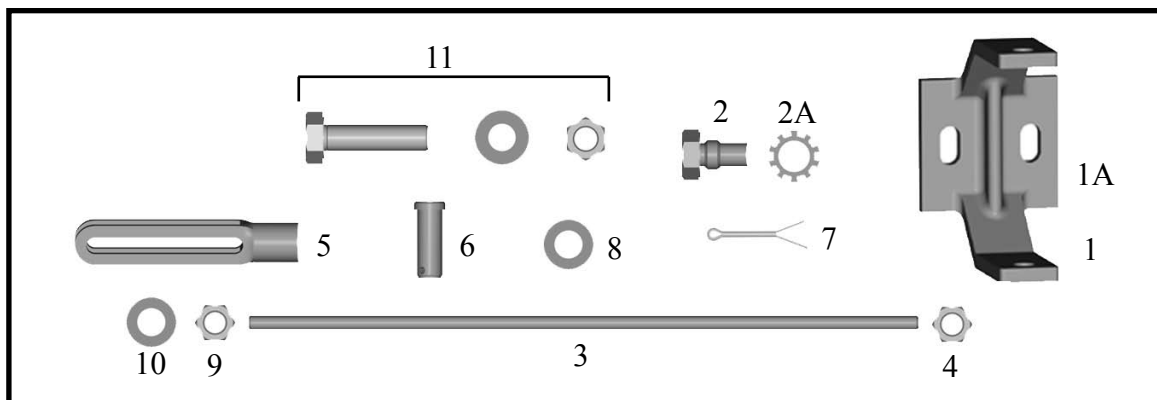
P/N Series	5004	5005	5005
Model	R4A	R5A	R5AHD
Size	4	5	5
Stroke	4.60"	4.40"	4.37"
P/N Ext. 20" Rod	5004010	N/A	N/A
P/N Ext. 15" Rod	5004013	5005011	5005012
P/N Ext. 7" Rod	5004014	5005013	5005014
Wt. Combination (Lbs.)	13.5	17.8	19.6
A	11.12	10.5	10.5
B	7.50	9.38	9.38
C	4.38	6.12	6.12
D	5.69	5.12	5.12
E	3/4" - 16UNF x 10.75" LONG		
F	1/2" - 20UNF x 3.00" DEEP		
Inlets	3/8" - NPTF		

Standard Assembly Part Numbers & Service Parts

Model R4A P/N	Model R5A P/N	Model R5AHD P/N	Description Of Parts
5004010			Remote Mount Cylinder - R4A (a) (External Thread on 20.00" X - Dimension Rod)
5004013			Remote Mount Cylinder - R4A (a) (External Thread on 15.00" X - Dimension Rod)
5004014			Remote Mount Cylinder - R4A (a) (Internal Thread on 7.00" X - Dimension Rod)
	5005011		Remote Mount Cylinder - R5A (a) (External Thread on 15.00" X - Dimension Rod)
	5005013		Remote Mount Cylinder - R5A (a) (Internal Thread on 7.00" X - Dimension Rod)
		5005012	Remote Mount Cylinder - R5AHD (a) (External Thread on 15.00" X - Dimension Rod)
		5005014	Remote Mount Cylinder - R5AHD (a) (Internal Thread on 7.00" X - Dimension Rod)
9004003			Kit - Boot & Clamp - Remote
9008001			Kit - Side Bushings R4A/R5A (for Trunnion Bolt Mount)

NOTE: (a) X-dimension (7.00", 15.00" etc.) is measured from lockpin hole in piston rod outward to rod end. Note that the lockpin hole appears from within the cylinder only after the cylinder is charged with minimum 85 psi air pressure.

Standard Stroke Models

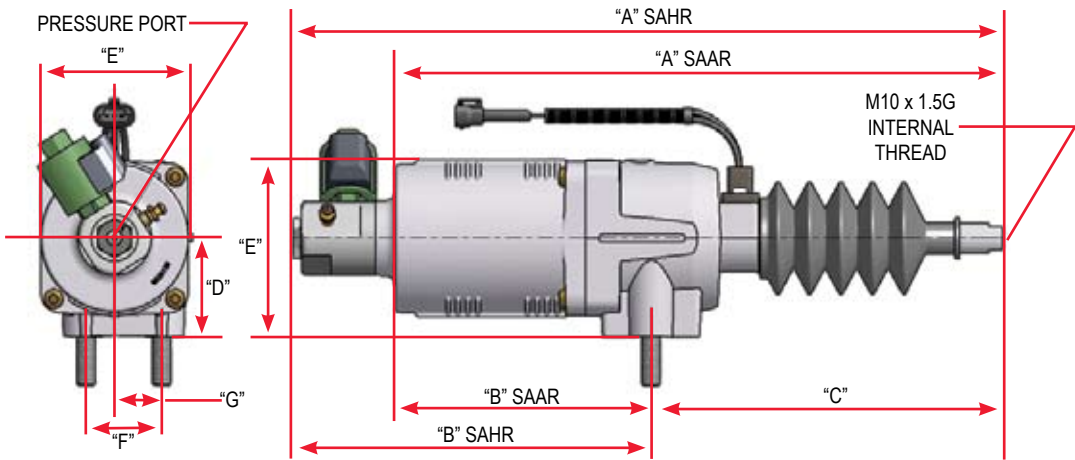


Assemblies			Kit P/N and Quantities				
Model	P/N	Rod Specifications	9050019	9050027	9050028	9050029	9050035
R4A	5004010	External Thread 20.00"	2				
R4A	5004013	External Thread 15.00"		1			
R4A	5004014	Internal Thread 7.00"					1
R5A	5005011	External Thread 15.00"				1	
R5AHD	5005012	External Thread 15.00"			1		
R5A	5005013	Internal Thread 7.00"					
R5AHD	5005014	Internal Thread 7.00"					
Key	P/N	Part Description					
1	8005001	Gimbal Bracket - R4A	2	1			1
1	8005003	Gimbal Bracket - R5A / R5AHD			1	1	
1A	8062001	Shock Pad - R4A	2	1			1
1A	8062002	Shock Pad - R5A / R5AHD				1	
2	8003003	Trunnion Bolt	4	2	2	2	2
2A	8141002	Star Lock Washer	4	2	2	2	2
3	8055017	Extension Rod 1/2" UNF x 24					
4	8130011	Hex Nut 1/2" 20 UNF					
5	8092006	Sliding Clevis 1/2" UNF					
6	8038001	Yoke Pin 1/2"					
7	8151001	Cotter Pin					
8	8140007	Flat Washer 1/2" (inside diameter)					
9	8130002	Hex Nut 3/4" 16 UNC	4				
10	8140002	Lockpin Washer 3/4" (inside diameter)	2				
11	8203001	Bolt Assembly (Frame Bracket)					

NOTE: Product information and specifications subject to change without notice.

Pull-Type Actuators

SAAR and SAHR Drive-line Brakes were developed as replacements for manually operated lever applied “drive-line” brakes on class 6 and 7 vehicles. Mounted to the frame rail, the actuator utilizes a cable to apply parking force to a drum mounted on the drive-line. An optional electronic “travel” sensor provides the operator with information pertaining to the position of the push rod – “applied” or “released”.



Model	SAAR	SAHR
Series	R7A	R8H
Part Number	5007001	5008001
Stroke of Unit	2.75 min (69.8 mm)	2.75 min (9.8 mm)
Normal Stroke	2.85 ± .10 in. (73.4 ± 2.5 mm)	2.85 ± .10 in. (73.4 ± 2.5 mm)
Operating Pressure	130 PSI (9.0 Bar)	2320 PSI (160 Bar)
Temperature Range	-40°F/+190° F (-40° C/+ 87.8° C)	-40° F/+190° F (-40° C/+ 88° C)
Weight – estimated	6.91 lbs. (≈3.13 KG)	10 lbs. (≈ 4.53 KG)
A	15.46 in. (392.7 mm)	18.08 in. (459.2 mm)
B	6.51 in (165.4 mm)	9.10 in. (227.3 mm)
C	8.94 in. (227.0 mm)	
D	2.50 in. (63.5 mm)	
E	4.50 in. (114.3 mm)	
F	1.93 in. (49.0 mm)	
G	1.20 in. (30.5 mm)	

NOTE: Product information and specifications subject to change without notice.

SAAR, SAHR Model Features

- Compact Design
- Light Weight Aluminum
- Electronic Stroke Sensor

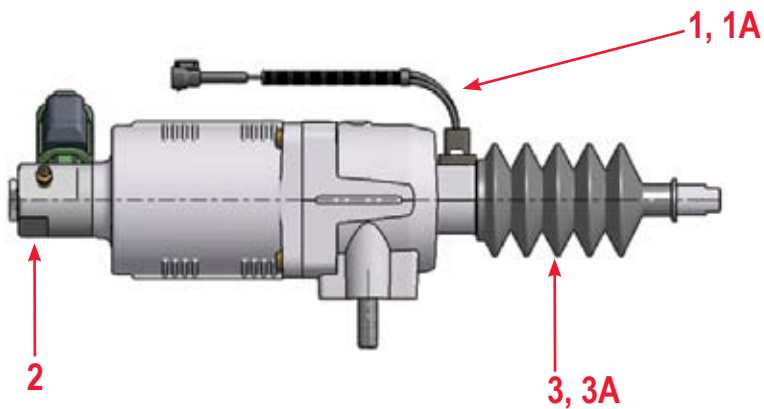


SAAR MODEL
SPRING APPLIED
AIR RELEASE

SAHR MODEL
SPRING APPLIED
HYDRAULIC RELEASE

Service Kits & Replacement Parts

1	9051001	Sensor Kit - SAAR & SAHR
1A	9051004	Sensor Kit - Blue Diamond
2	9041004	Cartridge - SAHR Hydraulic Unit
3	8004002	Boot - SAAR
3A	8004010	Boot - SAHR



NOTE: Product information and specifications subject to change without notice.

**Original-Equipment Quality—
Satisfaction Guaranteed**



Contact your MGM Brakes
sales representative to find out
more about our packaged parts
program and how to get a
display rack in your store.



**REPLACEMENT
PARTS**



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NOTE: All parts except push-rod assemblies and non-pressure housings are packaged (on a card) or bulk packed in a box. Packaged parts are designated with a "P" suffix and bulk parts are designated with an "X" suffix. See price list for details.

Diaphragms



Type	Stroke	P/N	Material	Outside Diameter
9	1.75	8017109	R	5.00" (130 mm)
12	1.75	8017112	R	5.50" (140 mm)
12	1.75	8017312*	R	5.50" (140mm)
16	2.25	8017116	R	6.00" (150 mm)
16LH	2.50	8017215	R	6.50" (165mm)
16L	2.50	8017216	R	6.00" (150 mm)
20	2.25	8017120	R	6.50" (165 mm)
20	2.25	8017145	N	6.50" (165 mm)
20L	2.50	8017220	R	6.50" (165 mm)
24	2.25	8017241	R	7.00" (180 mm)
24L	2.50	8017141	R	7.00" (180 mm)
24L	2.50	8017224	N	7.00" (180 mm)
24L3	3.00	8017424	R	7.00" (180 mm)
24L3	3.00	8017425	N	7.00" (180 mm)
30	2.50	8017730	R	8.00" (200 mm)
30	2.50	8017731	N	8.00" (200 mm)
30L3	3.00	8017830	R	8.00" (200 mm)
30L3	3.00	8017831	N	8.00" (200 mm)
36	3.00	8017836	R	9.00" (230 mm)
36	3.00	8017036	N	9.00" (230 mm)

NOTE: (1) Material "R" is natural rubber blend with nylon fabric reinforcement.
Use only "R" type diaphragms in extreme cold weather climates. Good to -65° F.
(2) Material "N" is neoprene blend with nylon fabric reinforcement.
(*) For use in MJ1216AT or MJS1216AT models only. See technical bulletin 04-001.

Clamp Bands



Type	P/N (1 Piece)	P/N (2 Piece)
9	8216009	
12	8216012	
16	8216016	8216018
20	8216022	8216020
24	9016024	8216025
30	9016030	8216045
36		8216036

NOTE: All clamps furnished with nuts and bolts.

Push-Rod Assembly & Nut Kits



Type	P/N
12	9064018
16	9064019
20	9064001
24L	9064002
24L3	9064006*
30	9064003
30L3	9064008*
36	9064004

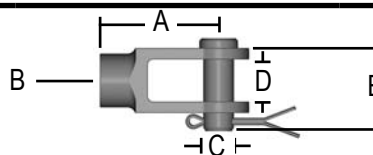
NOTE: Type 12 and 16 push-rods will provide an approx. 4.00" X- dimension when installed with 4.00" of 1/2" - 20 UNF threads.

NOTE: Type 20 through 36 push-rods will provide an approx. 8.00" X-dimension when installed with 8.00" of 5/8" - 18 UNF threads.

NOTE: These assemblies have MGM Brakes "Stroke Alert" markings and must be used only on the designated MGM Brakes units.

NOTE: (*) These assemblies to be used in conjunction with MGM 3-inch long stroke units only.

Yoke Assemblies



P/N	A	B	C	D	E
8292001	2.00"	5/8" - 18 UNF	1/2"	9/16"	1 11/16"
8292002	2.00"	5/8" - 18 UNF	5/8"	9/16"	1 11/16"
8292003	2.00"	1/2" - 20 UNF	1/2"	9/16"	1 11/16"
8292007	2.31"	3/4" - 16 UNF	1/2"	11/16"	1 13/16"
8292008	2.31"	3/4" - 16 UNF	5/8"	11/16"	1 13/16"
8292009*	2.00"	5/8" - 18 UNF	1/2"	9/16"	1 11/16"
8292010	1.88"	1/2" - 20 UNF	5/8"	9/16"	1 11/16"
8292011*	2.00"	5/8" - 18 UNF	5/8"	9/16"	1 11/16"
8292012	1.88"	M16 x 1.5-6H	14 mm	14 mm	1 11/16"
8292016	1.88"	M16 x 1.5-6H	1/2"	9/16"	1 11/16"

NOTE: (*) Stainless steel pin: 1/2" dim. 8038007, 5/8" dim. 8038008, see other stainless steel pins, page 94.

Breather Cap, End Caps & Weatherseal™ Plug Kits



Key	P/N	Description	Used on MGM Models/Sizes
1	9006001	Breather Cap Assembly	All WM, WL and MB
2	9019005	Kit - Weatherseal™ Plug	TR, TR-T, sizes 2024, 2424L, 2430L, 3024, 3030, TR-TS, sizes 2424L, 2430L, 3030
2	9019006	Kit - Weatherseal™ Plug	TR, TR-T, TR-TS sizes, 3036, 3636
3	8206008	End Cap & Retainer	All L-T, MB-T and MG-T

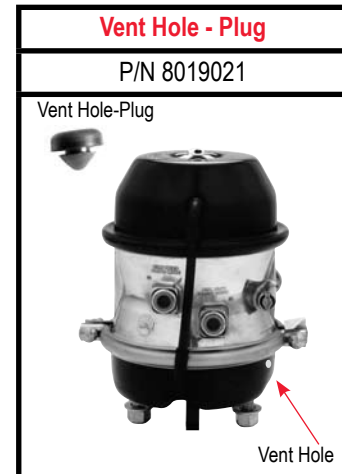
NOTE: Product information and specifications subject to change without notice.

S-Cam Protective Boot & Center Hole Shield Kits						
Key	P/N	Description				
1	9004001	Boot & Retainer S-Cam		1	2	3
2	9004002	Boot & Retainer S-Cam				
3	9065002	Kit - Center Hole Shield				
4	8004009	Boot - 1.625 Center-Hole				

NOTE:

- (1) MGM P/N 9004001 Kit can only be used with non-pressure chambers (mounting housings) having an embossed bottom essentially shaped like the retaining plate for the boot.
- (2) MGM P/N 9004002 Kit can only be used with MGM Brakes Type 20, 24 & 30 non-pressure chambers (mounting housings) with flat bottoms having 3 equally spaced installation holes for the plastic boot retainer.
- (3) MGM P/N 9065002 Kit is suitable only for MGM Brakes Type 20, 24, 30 & 36 non-pressure chambers. Field installation requires complete disassembly of the service brake chamber.
- (4) MGM P/N 8004009 is suitable for MGM Brakes type 20, 24, 30 & 36 non-pressure chambers with 1.625 center hole and 5/8" rod only.

Breather Tube & Elbow Kits			
Key	P/N	Service MGM Brakes Model	
1	9081001	All MGM Brakes model sizes fitted with breather tube except those listed below	
2	9081002	M3030B-T	M3036B-T
2	9081003	M3636B-T	



NOTE: Do not plug more than 3 holes in the service chamber (NPC) and never plug any hole facing the road surface or positioned at the lowest point.

Non-Pressure Chamber (With Breather Elbow)	
Type	P/N
16	9015163
20*	9015110
24*	9015151
30	9015122
36	9015108

NOTE:
 (*) These chamber sizes are heavy-duty weld-reinforced.
 (**) 8-Gauge NPC with welded bolts.

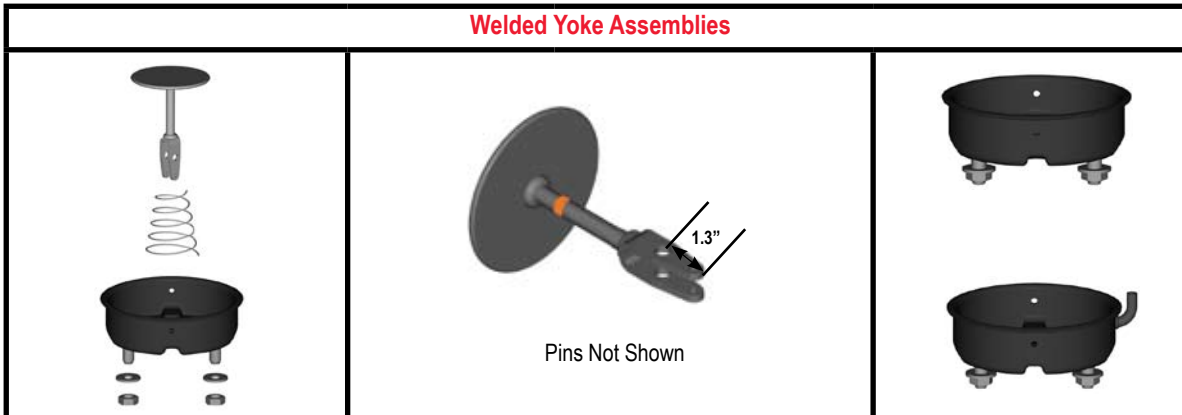
Non-Pressure Chamber (Without Breather Elbow)	
Type	P/N
12	8215142
16	8215023
20*	8215169
24*	8215105
30	8215501
30**	82151136
36	8215036

Kit - Wedge Chamber Boot	
	P/N 9004005

Kit - Nuts & Washers (NPC Mounting)	
P/N 9002001	Type 20, 24, 30 & 36
P/N 9002003	Type 12 and 16

NOTE: Product information and specifications subject to change without notice.

Welded Yoke Assemblies



Type 2430 - 3.00" Long Stroke - "Y" Dim. = 2.25"

P/N	Kit - NP Chamber	Kit - Push-Rod / Welded Yoke	Kit - Chamber Assembly
3224951	9015903	9075002	8215250
3226951	9015903	9075002	8215250
3225951	9015901	9075002	9015213
3527951	9015901	9075002	9015213
3227951	9015901	9075002	9015213
3523951	9015901	9075002	9015213
3828951	9015903	9075002	8215250
1428901	9015903	9075002	8215250

Type 3030 - 3.00" Long Stroke - "Y" Dim. = 2.25"

P/N	Kit - NP Chamber	Kit - Push-Rod / Welded Yoke	Kit - Chamber Assembly
3230951	9015904	9075001	8215501
3232951	9015904	9075001	8215501
3231951	9015902	9075001	9015216
3233951	9015902	9075001	9015216
3535951	9015902	9075001	9015216
3534951	9015902	9075001	9015216
3832951	9015904	9075001	8215501
1431901	9015904	9075001	8215501

Kit - Release Bolt

Key	P/N	Services MGM Brakes Model Sizes
① & ④	9007003	TR2024, TR2424L, TR2430L, TR3024 and TR3030
② & ③	9007005	M20B-T, M24B-T, M30B-T and M1216G-T
	9007007	M36B-T and all MG-T models except M1216G-T
	9007009	TR3036, TR3636

Yoke Pins (Stainless Steel)

Diameter	P/N
1/2"	8038007 (Forged Yoke)
5/8"	8038008 (Forged Yoke)
1/2"	8038012 (Welded Yoke)
1/4"	8038016 (Welded Yoke)

NOTE: Product information and specifications subject to change without notice.

NOTE: Product information and specifications subject to change without notice.

Satisfying Special
Application Requirements . . .



Especially in the
Transit Industry

TRANSIT/SPECIAL APPLICATION BRAKES



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Special Transit Length Push-Rods

VMRS # 13-004

Available aftermarket options & part numbers for assemblies requiring "X" dimensions longer than standard 8.00" fully threaded push-rod.						
All Models	Type 24		Type 30		Type 36	
"X" Dimension	12.00"	18.00"	12.00"	18.00"	12.00"	18.00"
Push-Rod Diameter	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"
Threaded Length	5.00"	7.00"	5.00"	7.00"	3.00"	9.00"
Part Number Designator	xxxx551	xxxx651	xxxx551	xxxx651	xxxx551	xxxx651
Kit - Push-Rod Assembly	9064553	9064653	9064551	9064651	9064552	9064652



TR-T Model



TR-LP3T Model



LTR-L3 Model



MJS Model

NOTE: For yoke pin and mounting hardware replacement parts refer to Section 8.
For custom replacement assemblies, contact MGM Brakes Sales.

NOTE: Product information and specifications subject to change without notice.



NOTE: Product information and specifications subject to change without notice.



**Monitor Brake Stroke—
Increase Safety, Reduce Costs**

e-STROKE
BRAKE MONITORING SYSTEM



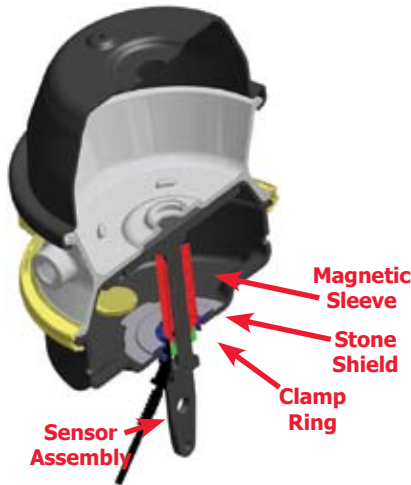
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FEATURES	
	Promotes SAFETY
	Check Brake Stroke Status & Pinpoint Brake Problems
	Wheel- & Problem-Specific Monitoring in Real Time
	Diagnostic Tool
	Chassis Communications Module (CCM) with Easy-to-Read Green/Red/Orange LEDs and a Concise Blink Code Listing on Unit
	System Status Indicator
	CCM is Environmentally Sealed—Completely 'Potted' & Sealed to Keep Out Dust, Water & Contaminants
	Stroke sensing magnetic components are factory installed and pre-calibrated as an integral part of the MGM Brakes service and spring brake chambers.
	Sensors are field replaceable.
	Durable Cables Made from Heavy-Gauge Wire & Water-Proof Connectors Ensure Reliable Operation
	Highly Accurate, *Patented Design
	Operating Temperature: -40°F to +176°F (-40°C to +80°C)

*U.S. Patent Nos. 5,450,930, 5,825,287 and 6,255,941, and other U.S. and Foreign Patents Pending.

NOTE: Product information and specifications subject to change without notice.

e•STROKE® – Brake Monitoring System



The MGM Brakes e•STROKE® system provides a quick, accurate brake stroke status reading for any air-braked vehicle with exposed push-rod brake chambers. The easy-to-read, conveniently placed Chassis Communications Module (CCM) produces specific LED blink codes that pinpoint existing brake problems, including an overstroke condition, dragging brakes and/or non-functioning actuators.

E•stroke sensing magnetic components are factory pre-installed and pre-calibrated as an integral part of MGM Brakes service chambers and spring brakes, helping to keep them from the elements and out of harm's way. This unique, patented design eliminates the accuracy, reliability and durability issues inherent with an externally-mounted sensor system.

Good preventive maintenance can significantly lower parts and labor costs. The e•STROKE® system is an excellent diagnostic tool to find and remedy brake problems before they become serious and costly.

Keeping a vehicle's braking system in optimal condition and adjustment also reduces the risk of receiving expensive out-of service citations during official inspections, further reducing costs.

The e•STROKE® system's ease-of-use promotes operational safety—always a serious concern. Conduct a brake stroke status check during a pre-trip 'walk-around' inspection and discover problems before getting on the road, without having to crawl underneath the vehicle.

'Real time' monitoring is also possible with the CCM mounted inside the vehicle—the LEDs display constant feedback as the vehicle is driven and the brakes are applied. With e•STROKE®, knowing the state of a vehicle's braking system is very easy.

e•STROKE® warnings can lead to the discovery of:

- Soft or broken return spring in foundation brake or actuator
- Worn bushings (cam tube or spider brake)
- Poor automatic slack maintenance
- Improper parking brake release by operator
- Brake drum expanded by overheating
- Drum warpage or out-of-round condition
- Excessive mechanism deflection
- Defective or worn spring brake
- Broken parking brake power spring
- Brake adjustment done incorrectly
- Low voltage system

SPECIFICATIONS:

Chassis Communications Module (CCM)—

Dimensions: 7" W x 3.75" H x 2" D

Weight: 2 ± 0.5 lbs.

Power: 9.5 to 30 VDC

Cable Connectors: Metri-Pack Sealed 150 & 280 Series, IP66 rated

Sensor/Cable Assembly—

Power: 5 VDC supplied by CCM

Sensor Cable Lengths: 8' to 60'

SAE J1128 and J2202 requirements

Cable Connectors: Metri-Pack Sealed 150 Series, IP66 rated

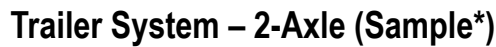
Operating Temperature: -40°F to +176°F

Specifications subject to change.

To find out how e•STROKE® can help reduce your fleet operating costs, whether truck, trailer or bus, contact MGM Brakes Customer Service at: (800) 527-1534

NOTE: Product information and specifications subject to change without notice.

e•STROKE® – ELECTRONIC STROKE ALERT



CCM – Truck / Tractor / Bus

Part Number	Description
8290110	CCM 2 Axle Truck / Bus
8290112	CCM 2 Axle Tractor
8290113	CCM 3 Axle Tractor



CCM – Truck / Tractor / Bus

Power Cables - Truck / Tractor / Bus

Part Number	Length (ft.)	Description
8290051	2'	CCM Power Connect Lead
8290175	5'	CCM Power Cable
8290176	10'	CCM Power Cable
8290098	15'	CCM Power Cable
8290099	30'	CCM Power Cable
8290189	12'	SAE J1708 Harness



CCM Power Connect Lead
Truck / Tractor / Bus



Power Cables
Truck / Tractor / Bus

Pressure Transducer Harness - Truck / Tractor / Bus

Part Number	Length (ft.)	Description
8290170	5'	Pressure Transducer Harness
8290171	10'	Pressure Transducer Harness
8290172	15'	Pressure Transducer Harness
8290173	20'	Pressure Transducer Harness



Pressure Transducer Harness
Truck / Tractor / Bus

Actuator Sensor Harness - Truck / Tractor / Bus /Trailer

Part Number	Length (ft.)	Description
8290076	8'	Sensor Harness
8290077	10'	Sensor Harness
8290079	15'	Sensor Harness
8290081	20'	Sensor Harness
8290083	25'	Sensor Harness
8290085	30'	Sensor Harness
8290087	35'	Sensor Harness
8290089	40'	Sensor Harness
8290091	45'	Sensor Harness
8290093	50'	Sensor Harness
8290095	55'	Sensor Harness
8290097	60'	Sensor Harness



Actuator Sensor Harness
Truck / Tractor / Bus /Trailer

NOTE: Product information and specifications subject to change without notice.

Actuator Sensor - Truck / Tractor / Bus /Trailer		
Part Number	Length (in.)	Description
8290116	30"	Actuator Sensor
8290120	60"	Actuator Sensor

Pressure Transducer - Truck / Tractor / Bus	
Part Number	Description
8090075	Pressure Transducer

Miscellaneous Parts (not shown)		
Part Number	Length (ft.)	Description
8090040	N/A	Tie Wraps
8090058	N/A	Labels
9090106	12'	Warning Light Harness

CCM - Trailer	
Part Number	Description
8290034	CCM 1 Axle Trailer
8290035	CCM 2 Axle Trailer
8290036	CCM 3 Axle Trailer
8090021	Bracket - Mounting (Optional)

ABS "T" Power Breakout Adapter - Trailer		
Part Number	Length (ft.)	Description
8290178	1'	Power Breakout Adapter

Power Cables - Trailer		
Part Number	Length (ft.)	Description
8290123	5'	Trailer ABS Power Cable
8290124	10'	Trailer ABS Power Cable
8290125	15'	Trailer ABS Power Cable
8290122	20'	Trailer ABS Power Cable
8290121	25'	Trailer ABS Power Cable
8290126	30'	Trailer ABS Power Cable
8290127	35'	Trailer ABS Power Cable



Actuator Sensor
Truck / Tractor / Bus /Trailer



Pressure Transducer
Truck / Tractor / Bus



CCM - Trailer



CCM Mounting Bracket



ABS "T" Power Breakout Adapter - Trailer



Power Cables - Trailer

ANYTIME.

ANYWHERE.

ANY WEATHER.

NOTE: Product information and specifications subject to change without notice.



**Important Procedures
& Detailed Tech Information**

**TECHNICAL
INFORMATION**



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MGM Brakes manufactures a wide variety of spring brakes, many designed specifically for niche applications. While all MGM models are engineered for the longest life and most reliable service, choosing the right spring brake for a particular application is crucial to ensuring maximum value.

APPLICATION																			
MGM Brakes Spring Brake Application Matrix: This matrix is intended for use as a general information guide only. If you have any questions concerning the application of any particular MGM Brakes model, contact your local MGM Brakes representative for assistance.	TR	TR-HD	TR-T	TR-THD	TR-THDW	TR-TS	TR-TSHD	TR-TSHDW	TR-LP3	TR-LP3HD	TR-LP3T	TR-LP3THD	TR-LP3THDW	TR-LP3TS	TR-LP3TSHD	TR-LP3TSHDW	LTR-T	LTR-L3	MJ-ET
ACIDS / LIQUID CORROSIVES						X	X	X						X		X			
DRY BULK CHEMICALS						X	X	X						X		X			X
DUMP TRUCK			X	X	X						X	X	X						
FERTILIZER						X	X	X						X	X	X			X
FIRE & EMERGENCY				X													X	X	X
LINE HAUL	X								X								X	X	X
LIVESTOCK / POULTRY						X	X	X						X	X	X			
LOGGING				X	X							X	X						X
PETROLEUM PRODUCTS						X	X	X						X	X	X			
READY-MIX CONCRETE			X	X	X						X	X	X						X
REFUSE					X	X							X	X	X				
SALT TRUCK						X	X	X						X	X	X			X
SCHOOL BUS		X								X									
TOXIC WASTE						X	X	X						X	X	X	X	X	X
TRANSIT						X	X	X						X	X	X	X	X	X

NOTE: Product information and specifications subject to change without notice.

1.0 PURPOSE:

To notify customers of coating conversion from current Yellow Zinc Dichromate (hexavalent chromium) to clear trivalent chromate.

2.0 BACKGROUND:

Hexavalent chromium is used in surface coatings for corrosion protection in many vehicle components. On February 28, 2006, the U.S. Department of Labor, Occupational Health and Safety Administration (OSHA) issued final rule concerning Hexavalent chromium. The OSHA directive stated that Hexavalent chromium was a carcinogen and set new limits for exposure to this hazardous material. The European Union's directive 2000/53/EC [1] known as the End of Life Vehicle Directive (ELVD) governs permissible use, reuse, recycling, and recovery of end-of-life vehicles and their components. The objective of the ELVD is to encourage vehicle manufacturers to limit the use of hazardous materials in their products. Hexavalent chromium is one of the materials controlled by the ELVD, which calls for a total phasing out of hexavalent chromium coatings by July 2007.

3.0 SCOPE:

Hexavalent chromium is a key component of the yellow zinc dichromate plating used for corrosion protection on clamp bands, clamp band bolts, continuous rings, and other hardware. MGM Brakes will be replacing the yellow zinc dichromate coating on all components with a trivalent zinc chromate.

4.0 TIMELINE:

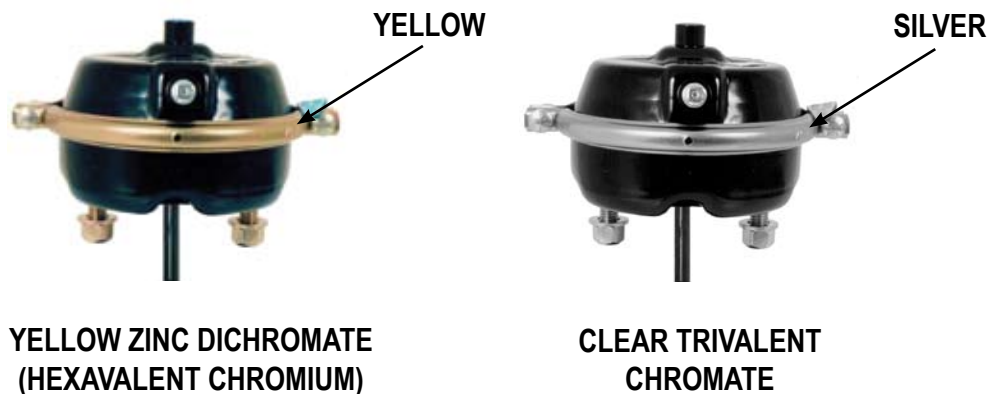
The new trivalent zinc chromate coating will be phased into production beginning in early 2007.

5.0 APPEARANCE:

The new coating will be clear or clear with a blue tint.

6.0 CORROSION PROTECTION:

The new coating will offer equal or greater salt spray protection when compared to yellow zinc dichromate.



NOTE: Product information and specifications subject to change without notice.



PRODUCT IDENTIFICATION PLATE

All MGM brake actuators made after October - 1987 have an aluminum identification plate attached to the actuator which contains the MGM Brakes part number, date code, and often a customer part number.

On all TR, LTR and MJ (Magnum Performance Plus) models the I.D. plate is attached to the center section aluminum casting. On all C, CS and CW models the I.D. plate is attached to the pressure cap or to the clamp band. See the illustrations below for I.D. plate locations.

MGM 3430051

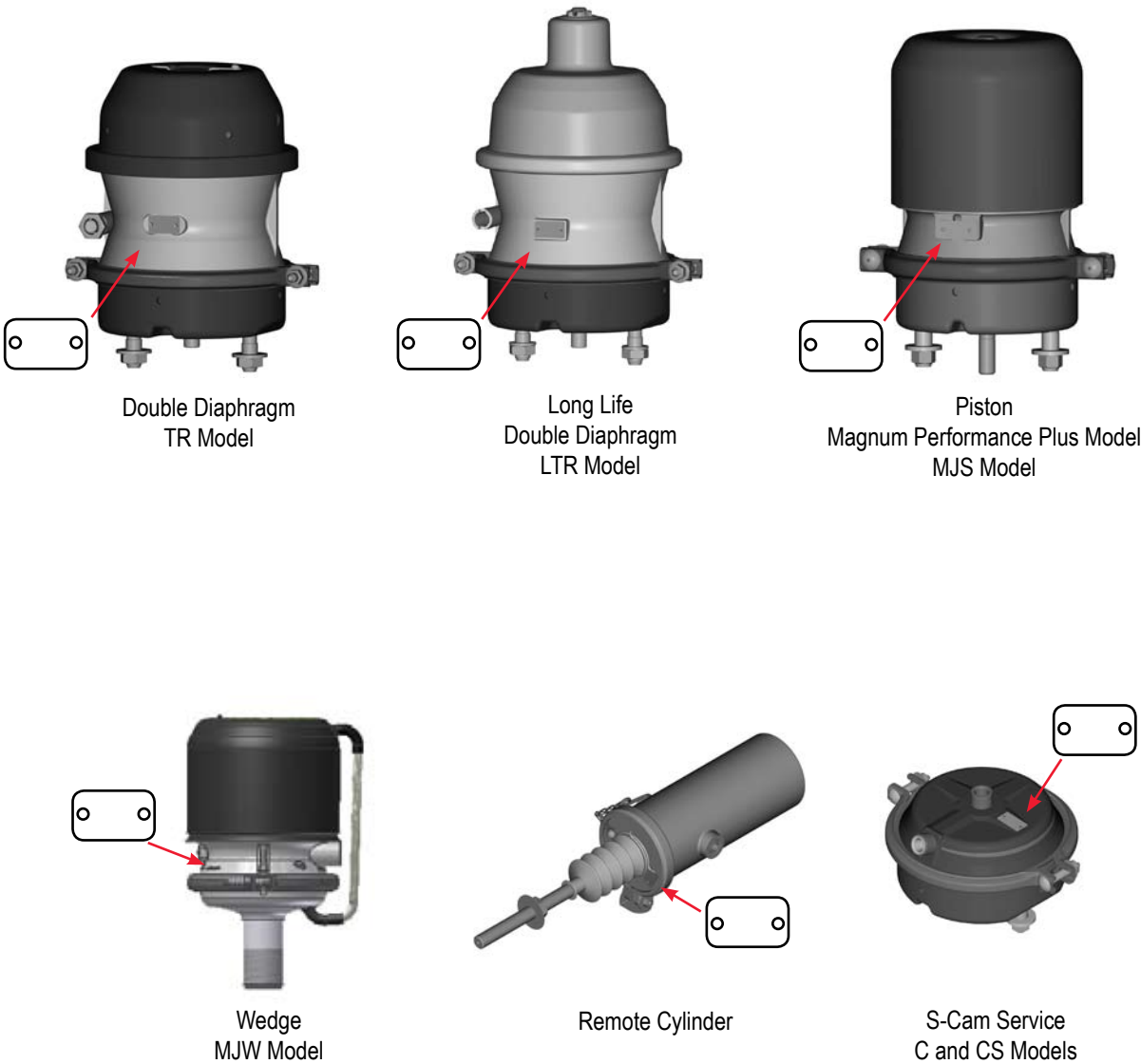
○ M102799

XXXXXXXXXXXX

MGM Brakes Part Number

Date Code

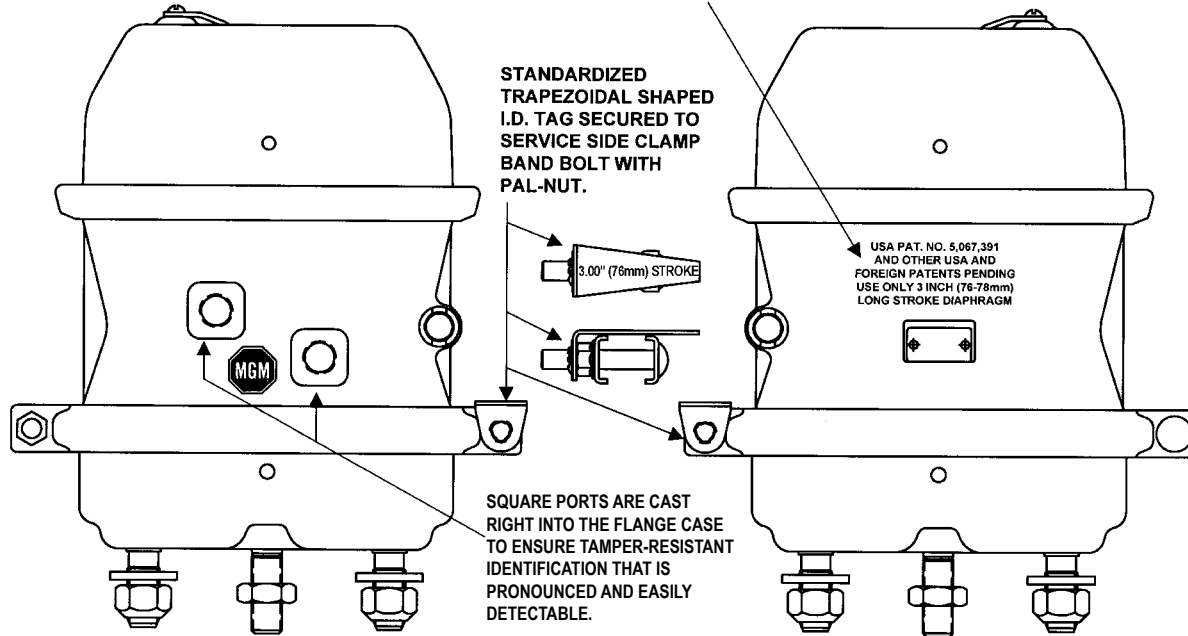
Customer Part Number (optional)



NOTE: Product information and specifications subject to change without notice.

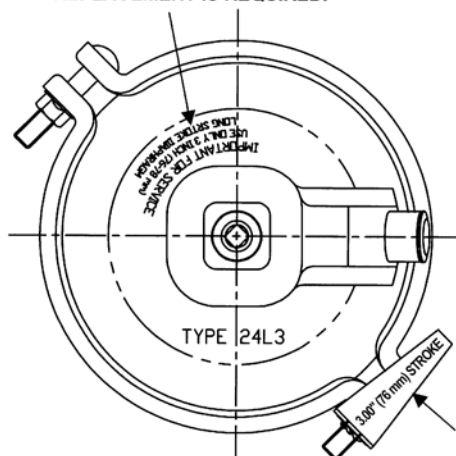
“LONG STROKE” SPRING BRAKE IDENTIFICATION

SERVICING INSTRUCTIONS ARE
EMBOSSSED INTO THE FLANGE
CASE FOR WHEN DIAPHRAGM
REPLACEMENT IS REQUIRED.

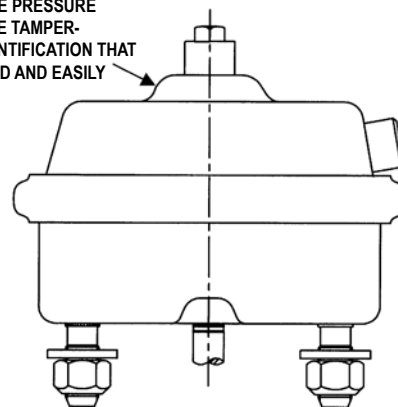


“LONG STROKE” SERVICE CHAMBER IDENTIFICATION

SERVICING INSTRUCTIONS ARE
STAMPED INTO THE PRESSURE
CAP FOR WHEN DIAPHRAGM
REPLACEMENT IS REQUIRED.



SQUARE EMBOSSMENT IS
RAISED A FULL HALF-INCH FROM
THE TOP OF THE PRESSURE
CAP TO ENSURE TAMPER-
RESISTANT IDENTIFICATION THAT
IS PRONOUNCED AND EASILY
DETECTABLE



STANDARDIZED,
TRAPEZOIDAL SHAPED
I.D. TAG SECURED TO SERVICE
CHAMBER CLAMP BAND BOLTS.

NOTE: Product information and specifications subject to change without notice.

1.0 PURPOSE:

The purpose of this technical bulletin is to recommend a MJ-ET piston type air brake actuator replacement for various MG-T's and double diaphragm models.

CAUTION:

The recommended MJ-ET replacement may have more parking force than the model it is replacing. An anti compounding valve may be required to prevent excess braking torque. Note: The J-Series (Magnum Performance Plus) models listed on the chart below are 3.00 inch stroke actuators. Ensure that installations have proper clearance for 3.00 inches of stroke.

MGM Brakes recommends replacing both brakes on an axle if force and/or stroke is different than unit being replaced.

2.0 CROSS REFERENCE CHART:

The following chart provides an easy cross reference for selecting a MJ-ET piston type air brake actuator to replace a MG-T or double diaphragm air brake actuator.

3.0 MODEL NUMBER DEFINITIONS:

Model numbers for double diaphragm air brake actuators describe the diaphragm size. A model TR2430 describes a type 24 service chamber diaphragm and a type 30 spring chamber diaphragm. Model numbers for piston type air brake actuators describe the service chamber diaphragm size and a level of parking chamber force. A model M2420LG-T describes a type 24 service chamber diaphragm and a parking chamber having 1410 lbs. $\pm$ 10% force output at 1.25 inch stroke (see chart below).

(A) Hold-Off Pressure (psig) is measured as decreasing air pressure at .200 inch of full "OFF" stroke position (zero stroke).

(B) Parking Force (lbs. $\pm$ 10%) is measured at 1.25 inches of stroke.

				MJS1724	MJS2024	MJS2424	MJS3024	MJS2028	MJS2428	MJS3028	MJS3628	MJS2030	MJS2430	MJS3030	MJS3630
Model Size	Stroke (Inches)	Parking Force (B)	→	1922 lbs.			2320 lbs.			2450lbs.					
		↓	Hold-Off Pressure (A)	71 psig			73 psig			75 psig					
TR2430HD	2.50	1580 lbs.	68 psig												
TR3030HD	2.50	1580 lbs.	68 psig												
TR2430	3.00	1435 lbs.	63 psig												
TR2430HD	3.00	1580 lbs.	68 psig												
TR3030	3.00	1435 lbs.	63 psig												
TR3030HD	3.00	1580 lbs.	68 psig												
TR3036	2.50	1960 lbs.	66 psig												
TR3636	3.00	1960 lbs.	68 psig												
LTR2430	3.00	1525 lbs.	71 psig												
LTR3030	3.00	1525 lbs.	71 psig												
M1620LG-T	2.50	1410 lbs.	50 psig												
M1624LG-T	2.50	1625 lbs.	56.8 psig												
M2020LG-T	2.50	1410 lbs.	50 psig												
M2024LG-T	2.50	1625 lbs.	59.6 psig												
M2030LG-T	2.50	2360 lbs.	58.2 psig												
M2420LG-T	2.50	1410 lbs.	50 psig												
M2424LG-T	2.50	1625 lbs.	59.3 psig												
M2430LG-T	2.50	2360 lbs.	68.2 psig												
M3024GT	2.50	1625 lbs.	60 psig												
M3027GT	2.50	2040 lbs.	67 psig												
M3031GT	2.50	2325 lbs.	69 psig												

Note: Contact MGM Brakes Sales for model's not specified above.

NOTE: Product information and specifications subject to change without notice.

PROCEDURE: TO CUT THE SERVICE PUSH-ROD TO PROPER LENGTH



Warning: Do not attempt to service or disassemble the spring chamber or any spring brake actuator. A large spring in the spring chamber having extreme force could cause serious bodily injury if it were suddenly released due to inadvertent removal of this clamp or tamper-resistant head.

IMPORTANT: Place blocks under wheels to prevent vehicle runaway before removing air brake actuators.

- REMOVE WORN OR NON-FUNCTIONAL UNIT FROM VEHICLE. Determine manufacturer and model of unit to be replaced. Refer to that manufacturer's service manual for caging and removal instructions.
- Make sure the spring chamber of the removed actuator is fully released (power spring caged) and the service brake push-rod is fully retracted to zero stroke position (i.e. brake fully released).
- Measure and record the "X" and "Y" dimensions (Figure 1).

"X" Dimension - The dimension from bottom of actuator to end of push-rod.

"Y" Dimension - The dimension from bottom of actuator to centerline of yoke pin.

Figure 1

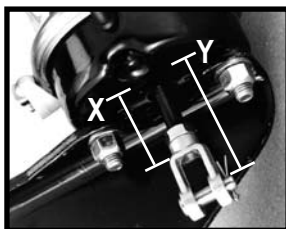
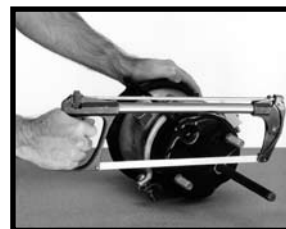


Figure 2



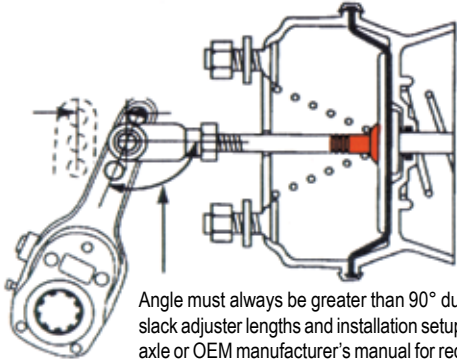
NOTE: If for some reason the spring chamber power spring cannot be caged and fully released, then the "X" and "Y" dimensions will need to be measured from another actuator of the exact type from the same vehicle provided it is retracted to its zero stroke position (brake fully released) and was operating correctly.

- Before marking push-rod to be cut on a new unit, be sure the spring chamber and push-rod are fully retracted to the zero position. (This may be done with the manual caging bolt or by applying 90-100 psi air pressure to the spring chamber air inlet port.)
- Take measured "X" dimension from the removed unit and mark push-rod of new unit from the bottom of the actuator.
- Thread yoke jam nut past mark on push-rod. Align bottom edge of nut with mark.
- Use a sharp hack-saw and cut push-rod on the mark (Figure 2).
- After cutting rod, thread jam nut off to clean up the thread.
- Thread yoke onto the push-rod. Yoke from removed unit may be reused provided yoke pin hole is not worn. Adjust yoke to the same "Y" dimension as measured from the removed unit.
- Hold yoke to prevent it from turning and tighten jam nut against yoke 25-35 Lbs.-Ft. torque.

TO INSTALL NEW UNIT ON VEHICLE: Refer to MGM Brakes Service Manual for the model that is being installed.

NOTE: The last half of an air chamber stroke is less efficient than the first half. Therefore, the following adjustments are recommended for maximum efficiency when using manually adjusted slack adjusters.

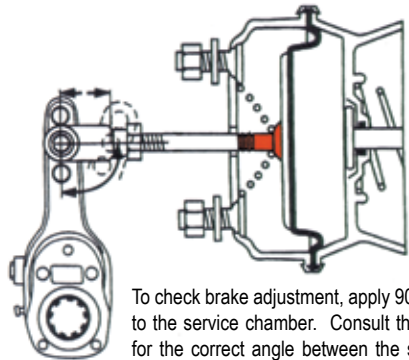
BRAKES "OFF" - NOT APPLIED



Angle must always be greater than 90° due to various slack adjuster lengths and installation setups. (Refer to axle or OEM manufacturer's manual for recommended angle).

Stroke should be as short as possible with no lining to drum contact.

PROPERLY - ADJUSTED BRAKES "ON" - APPLIED

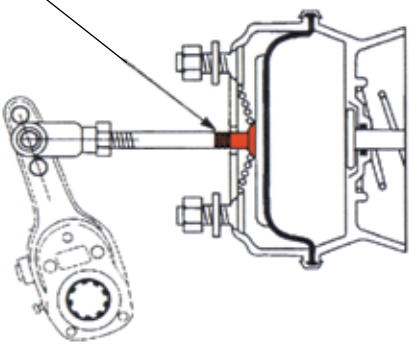


To check brake adjustment, apply 90 to 100 psi air pressure to the service chamber. Consult the vehicle manufacturer for the correct angle between the slack adjuster arm and push-rod and/or the push-rod length. This is necessary since different dimensions are required for automatic or manual slacks, various slack lengths and different slack adjuster manufacturers.

IMPROPERLY ADJUSTED BRAKES "ON" - APPLIED

Maximum recommended readjustment stroke has been exceeded)

MGM Brake "Stroke Alert" (Excessive Stroke Warning)



See chart for recommended readjustment stroke

Type	Effective Area (SQ. IN.)	Approx. Diaphragm O.D.		Rated Stroke of Chamber		Maximum Stroke with Brakes Adjusted	"B" MV/MA Recommended Readjustment Stroke	
		Inches	MM	Inches	MM		Inches	MM
9	9	5.00	125	1.75	45	SHOULD BE AS SHORT AS POSSIBLE WITHOUT LINING TO DRUM CONTACT	1.35	35
12	12	5.50	140	1.75	45		1.35	35
16	16	6.00	150	2.25	57		1.75	45
16L	16	6.00	150	2.50	64		2.00	51
20	20	6.50	165	2.25	57		1.75	45
20L	20	6.50	165	2.50	64		2.00	51
24	24	7.00	175	2.25	57		1.75	45
24L	24	7.00	175	2.50	64		2.00	51
24L3	24	7.00	175	3.00	76		2.50	64
30	30	8.00	200	2.50	64		2.00	51
30L3	30	8.00	200	3.00	76		2.50	64
36	36	9.00	230	3.00	76		2.25	57

SOURCE: MVMA (Motor Vehicle Manufacturers Association)

Note: The push-rod must remain perpendicular to the bottom surface of the non-pressure chamber (NPC) within ±3° zero to full stroke.

• IMPORTANT •

RECOMMENDED SPRING BRAKE ACTUATOR DISARMING PROCEDURE



Warning: This procedure must be strictly adhered to. Never attempt to remove the spring chamber clamp ring from a double diaphragm actuator or the spring chamber retaining ring from a piston actuator. Both actuators employ a high energy power spring that could cause serious bodily injury if the spring were suddenly released due to improper disassembly.

All retired spring brake actuators must be safely disarmed before they are disposed of to prevent serious personal injury from accidental sudden release of the high energy spring (as much as 2700 Lbs. of force) in the parking chamber. To disarm the unit, remove it from the vehicle following the instructions in the MGM Brakes Service Manual. Be sure to release the brake per Section (2) of the MGM Brakes Service Manual. Never attempt to remove the head which contains the power spring. Observe all safety precautions. Place the unit in a steel *container and use an acetylene torch to cut a hole through the head housing the power spring. Cut completely through at least two spring coils. The steel container must have openings to expose the head where it is to be cut with the acetylene torch and it must be strong enough to prevent parts from hurtling out should the unit suddenly separate before it is safely disarmed. It is the users responsibility to ensure the steel container is safe.

*Information concerning a suitable container is available through your MGM Brakes Representative.

NOTE: Product information and specifications subject to change without notice.

BOLT TORQUES			
Component	Bolt Size	Foot/Pounds of Torque	Newtons/Meters of Torque
RELEASE BOLTS			
<u>CAGING</u>			
TR Models	1/2 - 13 UNC	40-50	54-68
TR Models	5/8 - 11 UNC	40-50	54-68
L Models	5/8 - 11 UNC	40-50	54-68
J Models	5/8 18 UNF / 1/2 - 13 UNC	74 Max.	100 Max.
M Models	3/8 - 24 UNF	15-32	20-44
M Models	1/2 - 20 UNF	15-32	20-44
STORAGE			
TR Models	1/2 - 13 UNC	10	14
TR Models	5/8 - 11 UNC	10	14
L Models		45-50	61-68
J Models		50-60	68-81
M Models (MG-T)		34-45	46-61
CLAMP BAND NUTS AND BOLTS			
	5/16 - 24 UNF	18-23	24-31
	3/8 - 16 UNC	30-35	41-47
YOKE NUTS			
	1/2 - 20 UNF	20 - 30	27 - 41
	5/8 - 18 UNF	25 - 50	34 - 68
	3/4 - 16 UNF	75 - 100	102 - 136
	M16 X 1.5 - 6G	25 - 50	34 - 68
MOUNTING NUTS & BOLTS			
	7/16 - 14 UNC	35-40	47-54
	5/8 - 11 UNC	133-155	180-210
	5/8 18 UNF	133-155	180-210
	M16 X 1.5 - 6G	133-155	180-210
AIR INLET FITTINGS			
	3/8 NPTF	25 - 30	34 - 40
	3/8 - 24 UNF	17 - 19	23 - 26
	M16 X 1.5- 6H	13 - 15	18 - 20



WARNING: DO NOT USE IMPACT WRENCH.

NOTE: Product information and specifications subject to change without notice.

1.0 PURPOSE:

To provide a procedure to add a tube section to lengthen a breather tube in the field when the single/piggyback is rotated to reposition the ports relative to the non-pressure chamber housing.

2.0 SCOPE:

All MGM Brakes models with an external breather tube.

3.0 MATERIAL REQUIRED:

8081128 Rubber extension tube
8400025 Adhesive (Loctite #414 Superbond) or equivalent

4.0 PROCEDURE:

- 4.1 Cut breather tube approximately half way between the rubber elbows.
- 4.2 Using the recommended procedure in the MGM Brakes Service Manual, loosen the service chamber clamp and rotate the piggyback to the desired position. Tighten service chamber clamp.
- 4.3 If necessary, cut 8081128 rubber extension to a length that will insure a minimum of ½ inch engagement over both ends of the cut breather tube.
- 4.4 Apply an adhesive to both ends of the cut breather tube.
- 4.5 Slip the rubber extension over both ends of the cut breather tube a minimum of ½ inch.
- 5.0 Using the recommended procedure in the MGM Brakes Service Manual, check the service chamber clamp for leaks.



WARNING: Do not remove the spring chamber clamp ring (clamp closest to the release bolt) as serious injury may result from sudden release of the power spring.

1.0 **SCOPE:**

Installing and replacing brake chambers with different rated strokes – specifically long stroke versus standard stroke.

2.0 **RECOMMENDATION:**

MGM Brakes recommends replacing chambers with the same stroke rating across an axle. When servicing a truck/trailer equipped with either standard stroke or long stroke chambers, it is crucial that replacement of the chambers be like for like. For example: if a 3-inch stroke chamber is to replace a 2.5-inch stroke chamber, both chambers on that axle must be upgraded to 3-inch chambers.

CAUTION:

When upgrading from standard stroke to long stroke chambers, be sure there is:

- 1) adequate clearance for the increased stroke of the pushrod, yoke, and slack adjuster at full stroke
- 2) adequate clearance of the longer chamber at the worst case suspension and steering articulation.

Approval from the original vehicle manufacturer for proper clearance is recommended.

3.0 **BACKGROUND:**

The heat generated by the contact of the lining against the drum, especially during hard or continuous braking situations, causes the drum to “grow”, or expand. The ability of a 2.5-inch “standard” stroke chamber to provide adequate pressure of the lining against the ever-expanding drum is limited by the stroke and performance characteristics of the brake. As the 2.5-inch stroke chamber exceeds 2-inches of travel, the operator will begin to sense the “brake fade” phenomenon, which will become more prevalent as the chamber moves closer to its maximum travel position, at which point the brake will cease to provide any braking capability.

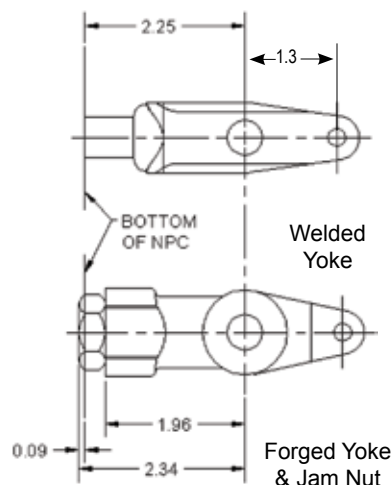
However, the performance and operational characteristics of the MGM 3-inch “long stroke” chamber provides braking force beyond the point where the 2.5-inch “standard” stroke chamber ceases to provide braking. The 3-inch “long stroke” chamber provides the same force-output at 2.5-inches of stroke as provided by the “standard” chamber at 2-inches of stroke.

Therefore, because of the differences in the operational characteristics of the standard and long stroke chambers, when they are mixed across an axle, an imbalance may exist in the stopping capability of the vehicle at strokes beyond the recommended readjustment limit of the standard stroke chamber. This may result in the vehicle being “pulled” toward the side of the “long stroke” chamber, which is doing the majority of the braking. This may go unnoticed by the driver during “normal” brake applications, but could cause vehicle instability during “emergency” braking.

Every day, more and more vehicles are being manufactured with 3-Inch "long stroke" spring brakes and service chambers with the yoke "welded" to the service push rod.

Because the "welded" yoke is permanently attached to the push-rod, it is virtually impossible to remove and re-use it. Therefore, unless the non-pressure housing (mounting base), push-rod, and/or yoke have been damaged, or are severely worn, MGM Brakes recommends replacement of the single/piggyback unit only.

However, if replacement of the combination/tandem unit is required, it is recommended that a unit equipped with a "welded" yoke be used.



Units manufactured with a "welded" yoke have a preset "Y" dimension, measured from the bottom of the NPC to the centerline of the yoke pin, of 2.25-inches. Because the "Y" dimension is relatively short, the corresponding "X" dimension, measured from the bottom of the NPC to the end of the rod, will also be short, at approximately $\frac{3}{4}$ of an inch.

Consequently, if a replacement unit with a "universal" all-threaded cut-to-fit push rod is used, the "stack-up" of the yoke and jam nut will exceed the "X" dimension by approximately $\frac{1}{8}$ th of an inch.

In some cases, this will prevent the unit from achieving zero-stroke, or, if the push rod opening in the NPC is large enough, the jam nut will protrude into the NPC and may damage the protective stone shield.

Spring brakes and service chambers must fully retract to zero-stroke in order to completely release the foundation brakes so the lining no longer contacts the drum, and to allow the automatic slack adjusters to properly operate and adjust the stroke.

Therefore, do not use a replacement unit with a universal all-threaded cut-to-fit push rod to replace a unit with a "welded" yoke.

NOTE: Be sure to always replace like for like. Do not mix 2.5-inch "standard stroke" chambers with 3-inch "long stroke" chambers across an axle. Reference MGM Technical Bulletin on page 117.

MGM Brakes manufactures a limited line of service chambers and spring brakes with “Neoprene” diaphragms for severe service applications where petroleum saturated contaminants may enter the air system and come into contact with the diaphragms.

While “Natural Rubber” diaphragms may resist the negative effects of oil and oil saturated contaminants for a period of time, “Neoprene” diaphragms have proven to be more durable. Manufactured from a combination of materials that insure superior strength, flexibility and resistance to degradation due to contact with oil and other chemicals, “Neoprene” diaphragms are a great option when the air system is prone to contamination from oil.

The following is a list of MGM “Neoprene” diaphragm equipped service chambers and spring brakes:

PART #	MODEL	DESCRIPTION
1420801	C20	Service Chamber
1427801	C24L	Service Chamber
1436801	C36	Service Chamber
3230851	TR3030LP3	Combination
3430808	TR3030	Piggyback Plus Kit
3430808X	TR3030	Piggyback Plus Kit – Bulk Pack 20 Pcs/Box
3430851	TR3030	Combination
3430851X	TR3030	Combination – Bulk Pack 20 Pcs/Box
3431808	TR3030T	Piggyback Plus Kit
3431851	TR3030T	Combination
3436851	TR3636T	Combination
3530851	TR3030S	Combination
3531801	TR3030TS	Piggyback
3531851	TR3030TS	Combination
3533851	TR3030TSHD	Combination
3535851	TR3030LP3TS	Combination
MJS3024ET851	MJS3024ET	Combination
MJS3628ET851	MJS3628ET	Combination

NOTE: If other sizes are required, contact your local sales representative for availability.

PERFORMANCE CHART - SPRING BRAKE CHAMBERS

MGM

MODELS	Service Chamber Size	Spring Chamber Size	Rated Service Stroke (in)	Max. Service Stroke (in)	Vol. Displ. @ 100 psi (in) (a)	Hold-Off Pressure Required (psi) (b)	Spring Brake Force-Output (Pounds-Force) at Inches of Stroke (c) (d)									(in) Pounds of Torque Applied at 1.25" Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in) (**)			
					Spring		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	5.00	5.50	6.00	6.50
TR2024	20 S-Cam	24	2.25	2.33	76.2	78.0	1280	1210	1150	1080	1000	840	-	-	-	6050	6655	7260	7865
TR2030LP3	"	30	3.00	3.08	115.4	63.0	1519	1435	1352	1270	1187	1098	1009	919	837	7175	7893	8610	9328
TR2424L	24 S-Cam	24	2.50	2.53	76.2	78.0	1280	1210	1150	1080	1000	840	620	-	-	6050	6655	7260	7865
TR2430L	"	30	2.50	2.53	104.8	70.0	1510	1420	1350	1280	1190	1060	895	-	-	7100	7810	8520	9230
TR2430LHD	24 S-Cam		2.50	2.53	103.2	68	1681	1580	1488	1396	1303	1211	1119	-	-	7900	8690	9480	10270
TR2430LP3	"	30	3.00	3.08	115.4	63	1519	1435	1352	1270	1187	1098	1009	919	837	7175	7893	8610	9328
TR2430LP3HD	"		3.00	3.08	115.4	68	1681	1580	1488	1396	1303	1211	1119	1026	934	7900	8690	9480	10270
TR3024	30 S-Cam	24	2.50	2.58	76.2	78.0	1280	1210	1150	1080	1000	840	620	-	-	6050	6655	7260	7865
TR3030	"	30	2.50	2.58	104.8	70.0	1510	1420	1350	1280	1190	1060	895	-	-	7100	7810	8520	9230
TR3030HD	"		2.50	2.58	103.2	68	1681	1580	1488	1396	1303	1211	1119	-	-	7900	8690	9480	10270
TR3030LP3	"	30	3.00	3.08	114.7	63	1519	1435	1352	1270	1187	1098	1009	919	837	7175	7893	8610	9328
TR3030LP3HD	"		3.00	3.08	114.7	68	1681	1580	1488	1396	1303	1211	1119	1026	934	7900	8690	9480	10270
TR3036	"	36	2.50	2.58	121.9	66.0	2050	1960	1867	1774	1679	1584	1487	-	-	9800	10780	11760	12740
TR3636	36 S-Cam	36	3.00	3.02	138.7	68.0	2050	1960	1867	1774	1679	1584	1487	1390	1280	9800	10780	11760	12740
LTR2430T	24 S-Cam	30	2.50	2.54	104.8	70	1560	1420	1350	1280	1210	1145	1070	-	-	7100	7810	8520	9230
LTR2430L3	"	30	3.00	3.10	108	71	1615	1525	1435	1350	1260	1160	1050	935	-	7625	8388	9150	9913
LTR3030T	30 S-Cam	30	2.50	2.54	104.8	70	1560	1420	1350	1280	1210	1145	1070	-	-	7100	7810	8520	9230
LTR3030L3	"	30	3.00	3.10	108	71	1615	1525	1435	1350	1260	1160	1050	935	-	7625	8388	9150	9913

- NOTE:
- (*) Indicates "piston-type" design in the spring chamber.
 - (**) Brake chambers with 2.00" or less rated stroke calculated at 1.00" stroke.
 - (a) Spring chamber measured at full "OFF" (zero) stroke and service chamber measured at maximum "ON" stroke. Reference SAE J1469.
 - (b) Measured as decreasing air pressure required to activate spring chamber to within 0.20 inch (5 mm) of full "OFF" (deactivated) stroke.
 - (c) Measured at end of service chamber push-rod using power springs which have been held compressed to assembly shut height for 24 hours to remove initial false load. Forces shown are nominal performance (+/- 10%) for all spring chamber model sizes.
 - (d) Refer to the following pages for performance characteristics of all MGM service brake chamber sizes (pgs. 122-126)
Performance levels shown hold true for all design versions of the same model size. For example...read the same performance for Models TR3030T and TR 3030TS as shown above for Model TR 3030.

NOTE: Product information and specifications subject to change without notice.

Model	Service Chamber Size	Spring Chamber Size	Rated Service Stroke (in)	Max. Service Stroke (in)	Vol. Displ. @100 psi	Hold-Off Pressure Required (psi) (b)	Spring Brake Force-Output (Pounds-Force) at Inches of Stroke (c) (d)										(in) Pounds of Torque Applied at 1.25" Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in) (**)			
							Spring	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	5.00	5.50	6.00	6.50
MJS1216AT*	S-Cam	16	1.75	1.84	44.4	82		1404	1310	1211	1098	-	-	-	-	-	7020	7722	8424	9126
MJS2424ET*	24 S-Cam	24	3.00	3.02	98.5	71		2000	1922	1842	1771	1696	1607	1528	1449	1370	9610	10571	11532	12493
MJS3024ET*	"	24	3.00	3.02	98.5	71		2000	1922	1842	1771	1696	1607	1528	1449	1370	9610	10571	11532	12493
MJS3028ET*	"	28	3.00	3.02	128.4	73		2423	2320	2207	2070	1982	1870	1756	1670	1521	11600	12760	13920	15080
MJS3030ET*	"	30	3.00	3.02	128.4	75		2556	2450	2350	2256	2183	2086	1987	1858	1657	12250	13475	14700	15925
MJS3628ET*	36 S-Cam	28	3.00	3.02	128.4	73		2423	2320	2207	2070	1982	1870	1756	1670	1521	11600	12760	13920	15080
MJS3630ET*	"	30	3.00	3.02	128.4	75		2556	2450	2350	2256	2183	2086	1987	1858	1657	12250	13475	14700	15925
MJW1216AT	"	16	1.75	1.84	44.4	78		1404	1310	1211	1098	-	-	-	-	-	7020	7722	8424	9126

REMOTE MOUNT CYLINDERS

Model	-	-	Rated Stroke (in)	-	-	Hold-Off Pressure	Spring Brake Force-Output (Lbs.-Force) at Inches of Stroke													
							1.00	1.50	2.00	2.50	3.00	3.50	4.00							
R4A	-	-	4.50	-	-	80	800	745	690	640	585	535	480	-	-	-	-	-	-	-
R5A	-	-	4.40	-	-	56	1150	1065	980	895	810	725	640	-	-	-	-	-	-	-
R5AHD	-	-	4.37	-	-	80	1720	1580	1440	1300	1160	1020	875	-	-	-	-	-	-	-
R7A	-	-	2.50	-	-	60	461	429	400	368	-	-	-	-	-	-	-	-	-	-
R8H	-	-	2.50	-	-	1500	461	429	400	368	-	-	-	-	-	-	-	-	-	-

NOTE: Product information and specifications subject to change without notice.

PERFORMANCE CHART - SERVICE BRAKE CHAMBERS

MGM

TECHNICAL

		Rated Stroke & Air Volume																
Model	Type	Rated Service Stroke (in)	Vol. Displ. @ 100 psi Rated Service Stroke (cubic in)	Application Pressure of (PSI)	Service Brake Force-Output (Pounds-Force) at Inches of Stroke										(in) Pounds of Torque Applied At Mid-Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in)			
					1.00	1.25	1.50	1.75	2.00	2.25	2.50	275	3.00	5.00	5.50	6.00	6.50	
TR2024	S-Cam	2.25	53.40	20	325	325	320	310	250	160	-	-	-	1625	1788	1950	2113	
				40	710	710	690	630	540	390	-	-	-	3550	3905	4260	4615	
				60	1080	1085	1080	1040	900	620	-	-	-	5400	5940	6480	7020	
				80	1410	1480	1470	1375	1200	840	-	-	-	7050	7755	8460	9165	
				100	1800	1855	1845	1790	1500	1125	-	-	-	9000	9900	10800	11700	
TR24xxL	S-Cam	2.50	69.80	20	362	372	379	377	365	336	278	-	-	1860	2046	2232	2418	
				40	808	824	840	842	820	773	676	-	-	4120	4532	4944	5356	
				60	1245	1270	1296	1302	1279	1223	1106	-	-	6350	6985	7620	8255	
				80	1682	1717	1757	1764	1739	1674	1534	-	-	8585	9444	10302	11161	
				100	2115	2158	2211	2224	2201	2133	1980	-	-	10790	11869	12948	14027	
TR24xxLP3	S-Cam	3.00	83.20	20	355	358	368	376	378	369	351	326	246	1840	2024	2208	2392	
				40	783	790	814	835	839	827	795	750	616	4070	4477	4884	5291	
				60	1204	1218	1255	1288	1296	1282	1247	1184	1008	6275	6903	7530	8158	
				80	1623	1642	1694	1738	1752	1734	1696	1620	1399	8470	9317	10164	11011	
				100	2034	2061	2129	2185	2204	2188	2147	2067	1800	10645	11710	12774	13839	
TR30xx	S-Cam	2.50	87.00	20	526	528	528	515	489	427	290	-	-	2640	2904	3168	3432	
				40	1120	1130	1135	1115	1064	950	718	-	-	5650	6215	6780	7345	
				60	1717	1737	1748	1724	1658	1510	1208	-	-	8685	9554	10422	11291	
				80	2307	2337	2358	2331	2254	2083	1731	-	-	11685	12854	14022	15191	
				100	2894	2937	2967	2940	2856	2667	2277	-	-	14685	16154	17622	19091	
TR30xxLP3	S-Cam	3.00	107.50	20	493	508	524	524	512	498	479	446	363	2620	2882	3144	3406	
				40	1062	1091	1109	1113	1103	1090	1063	1009	892	5545	6100	6654	7209	
				60	1628	1658	1695	1698	1694	1683	1649	1576	1442	8475	9323	10170	11018	
				80	2183	2229	2277	2283	2283	2274	2241	2149	1997	11385	12524	13662	14801	
				100	2735	2788	2855	2867	2870	2868	2835	2745	2581	14275	15703	17130	18558	
TR36xx	S-Cam	3.00	122.12	20	624	624	626	619	607	584	539	446	284	3130	3443	3756	4069	
				40	1338	1334	1328	1324	1311	1298	1218	1087	846	6640	7304	7968	8632	
				60	2042	2030	2029	2028	2014	1976	1898	1731	1436	10145	11160	12174	13189	
				80	2733	2720	2727	2733	2718	2681	2591	2405	2071	13635	14999	16362	17726	
				100	3412	3402	3423	3444	3439	3411	3336	3169	2858	17115	18827	20538	22250	
LTR24xxT	S-Cam	2.50	69.80	20	362	372	379	377	365	336	278	-	-	1860	2046	2232	2418	
				40	808	824	840	842	820	773	676	-	-	4120	4532	4944	5356	
				60	1245	1270	1296	1302	1279	1223	1106	-	-	6350	6985	7620	8255	
				80	1682	1717	1757	1764	1739	1674	1534	-	-	8585	9444	10302	11161	
				100	2115	2158	2211	2224	2201	2133	1980	-	-	10790	11869	12948	14027	
LTR24xxL3	S-Cam	3.00	83.20	20	355	358	368	376	378	369	351	326	246	1840	2024	2208	2392	
				40	783	790	814	835	839	827	795	750	616	4070	4477	4884	5291	
				60	1204	1218	1255	1288	1296	1282	1247	1184	1008	6275	6903	7530	8158	
				80	1623	1642	1694	1738	1752	1734	1696	1620	1399	8470	9317	10164	11011	
				100	2034	2061	2129	2185	2204	2188	2147	2067	1800	10645	11710	12774	13839	

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PERFORMANCE CHART - SERVICE BRAKE CHAMBERS



		Rated Stroke & Air Volume																
Model	Type	Rated Service Stroke (in)	Vol. Displ. @ 100 psi Rated Service Stroke (cubic in)	Application Pressure of (PSI)	Service Brake Force-Output (Pounds-Force) at Inches of Stroke										(in) Pounds of Torque Applied At Mid-Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in)			
					1.00	1.25	1.50	1.75	2.00	2.25	2.50	275	3.00	5.00	5.50	6.00	6.50	
LTR30xxT	S-Cam	2.50	87.00	20	526	528	528	515	489	427	290	-	-	2640	2904	3168	3432	
				40	1120	1130	1135	1115	1064	950	718	-	-	5650	6215	6780	7345	
				60	1717	1737	1748	1724	1658	1510	1208	-	-	8685	9554	10422	11291	
				80	2307	2337	2358	2331	2254	2083	1731	-	-	11685	12854	14022	15191	
				100	2894	2937	2967	2940	2856	2667	2277	-	-	14685	16154	17622	19091	
LTR30xxL3	S-Cam	3.00	107.50	20	493	508	524	524	512	498	479	446	363	2620	2882	3144	3406	
				40	1062	1091	1109	1113	1103	1090	1063	1009	892	5545	6100	6654	7209	
				60	1628	1658	1695	1698	1694	1683	1649	1576	1442	8475	9323	10170	11018	
				80	2183	2229	2277	2283	2283	2274	2241	2149	1997	11385	12524	13662	14801	
				100	2735	2788	2855	2867	2870	2868	2835	2745	2581	14275	15703	17130	18558	

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PERFORMANCE CHART - SERVICE BRAKE CHAMBERS

TECHNICAL

		Rated Stroke & Air Volume																
Model	Type	Rated Service Stroke (in)	Vol. Displ. @ 100 psi Rated Service Stroke (cubic in)	Application Pressure of (PSI)	Service Brake Force-Output (Pounds-Force) at Inches of Stroke										(in) Pounds of Torque Applied At Mid-Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in)			
					1.00	1.25	1.50	1.75	2.00	2.25	2.50	275	3.00	5.00	5.50	6.00	6.50	
MJS12xxAT	S-Cam	1.75	28.00	20	190	190	150	90	-	-	-	-	-	950	1045	1140	1235	
				40	410	400	350	200	-	-	-	-	-	2000	2200	2400	2600	
				60	650	620	545	360	-	-	-	-	-	3100	3410	3720	4030	
				80	900	875	760	490	-	-	-	-	-	4375	4813	5250	5688	
				100	1120	1080	930	650	-	-	-	-	-	5400	5940	6480	7020	
MJS24xxET	S-Cam	3.00	83.20	20	355	358	368	376	378	369	351	326	246	1840	2024	2208	2392	
				40	783	790	814	835	839	827	795	750	616	4070	4477	4884	5291	
				60	1204	1218	1255	1288	1296	1282	1247	1184	1008	6275	6903	7530	8158	
				80	1623	1642	1694	1738	1752	1734	1696	1620	1399	8470	9317	10164	11011	
				100	2034	2061	2129	2185	2204	2188	2147	2067	1800	10645	11710	12774	13839	
MJS30xxET	S-Cam	3.00	107.50	20	493	508	524	524	512	498	479	446	363	2620	2882	3144	3406	
				40	1062	1091	1109	1113	1103	1090	1063	1009	892	5545	6100	6654	7209	
				60	1628	1658	1695	1698	1694	1683	1649	1576	1442	8475	9323	10170	11018	
				80	2183	2229	2277	2283	2283	2274	2241	2149	1997	11385	12524	13662	14801	
				100	2735	2788	2855	2867	2870	2868	2835	2745	2581	14275	15703	17130	18558	
MJS36xxET	S-Cam	3.00	122.77	20	622	623	623	620	612	598	574	534	438	3115	3427	3738	4050	
				40	1313	1310	1319	1322	1313	1295	1259	1188	1027	6595	7255	7914	8574	
				60	1989	1989	2008	2017	2011	1992	1950	1860	1659	10040	11044	12048	13052	
				80	2658	2667	2698	2714	2712	2694	2647	2543	2318	13490	14839	16188	17537	
				100	3324	3342	3385	3410	3414	3398	3348	3235	2994	16925	18618	20310	22003	
C12	S-Cam	1.75	26.00	20	190	190	150	90	-	-	-	-	-	950	1045	1140	1235	
				40	410	400	350	200	-	-	-	-	-	2000	2200	2400	2600	
				60	650	620	545	360	-	-	-	-	-	3100	3410	3720	4030	
				80	900	875	760	490	-	-	-	-	-	4375	4813	5250	5688	
				100	1120	1080	930	650	-	-	-	-	-	5400	5940	6480	7020	
C16	S-Cam	2.25	45.10	20	250	250	250	250	215	135	-	-	-	1250	1375	1500	1625	
				40	580	600	600	580	490	335	-	-	-	3000	3300	3600	3900	
				60	900	915	920	890	780	510	-	-	-	4575	5033	5490	5948	
				80	1220	1250	1250	1200	1050	755	-	-	-	6250	6875	7500	8125	
				100	1525	1585	1585	1510	1360	1035	-	-	-	7925	8718	9510	10303	
C20	S-Cam	2.25	50.80	20	325	325	320	310	250	160	-	-	-	1625	1788	1950	2113	
				40	710	710	690	630	540	390	-	-	-	3550	3905	4260	4615	
				60	1080	1085	1080	1040	900	620	-	-	-	5400	5940	6480	7020	
				80	1410	1480	1470	1375	1200	840	-	-	-	7050	7755	8460	9165	
				100	1800	1855	1845	1790	1500	1125	-	-	-	9000	9900	10800	11700	
C30	S-Cam	2.50	90.10	20	526	528	528	515	489	427	290	-	-	2640	2904	3168	3432	
				40	1120	1130	1135	1115	1064	950	718	-	-	5650	6215	6780	7345	
				60	1717	1737	1748	1724	1658	1510	1208	-	-	8685	9554	10422	11291	
				80	2307	2337	2358	2331	2254	2083	1731	-	-	11685	12854	14022	15191	
				100	2894	2937	2967	2940	2856	2667	2277	-	-	14685	16154	17622	19091	

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PERFORMANCE CHART - SERVICE BRAKE CHAMBERS



TECHNICAL

		Rated Stroke & Air Volume															
Model	Type	Rated Service Stroke (in)	Vol. Displ. @ 100 psi Rated Service Stroke (cubic in)	Application Pressure of (PSI)	Service Brake Force-Output (Pounds-Force) at Inches of Stroke									(in) Pounds of Torque Applied At Mid-Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in)			
					1.00	1.25	1.50	1.75	2.00	2.25	2.50	275	3.00	5.00	5.50	6.00	6.50
C36	S-Cam	3.00	124.29	20	624	624	626	619	607	584	539	446	284	3130	3443	3756	4069
				40	1338	1334	1328	1324	1311	1298	1218	1087	846	6640	7304	7968	8632
				60	2042	2030	2029	2028	2014	1976	1898	1731	1436	10145	11160	12174	13189
				80	2733	2720	2727	2733	2718	2681	2591	2405	2071	13635	14999	16362	17726
				100	3412	3402	3423	3444	3439	3411	3336	3169	2858	17115	18227	20538	22250
C16L	S-Cam	2.50	53.71	20	260	260	260	250	250	240	-	-	-	1300	1430	1560	1690
				40	605	605	605	600	595	550	475	-	-	3025	3328	3630	3933
				60	930	930	930	930	910	860	750	-	-	4650	5115	5580	6045
				80	1260	1260	1270	1280	1260	1200	1090	-	-	6300	6930	7560	8190
				100	1590	1595	1610	1640	1600	1550	1400	-	-	7975	8773	9570	10368
C16LH	S-Cam	2.50	59.72	20	265	260	250	240	225	200	165	-	-	1300	1430	1560	1690
				40	598	575	565	550	530	500	435	-	-	2875	3163	3450	3738
				60	920	900	890	875	850	800	730	-	-	4500	4950	5400	5850
				80	1240	1220	1210	1200	1170	1110	1020	-	-	6100	6710	7320	7930
				100	1560	1550	1540	1525	1495	1440	1315	-	-	7750	8525	9300	10075
C20L	S-Cam	2.50	59.90	20	295	298	300	300	300	280	245	-	-	1490	1639	1788	1937
				40	655	665	680	690	680	645	570	-	-	3325	3658	3990	4323
				60	1010	1030	1060	1075	1060	1015	900	-	-	5150	5665	6180	6695
				80	1380	1400	1450	1465	1450	1390	1250	-	-	7000	7700	8400	9100
				100	1750	1780	1840	1850	1840	1760	1610	-	-	8900	9790	10680	11570
CS20L	S-Cam	2.50	58.71	20	295	298	300	300	300	280	245	-	-	1490	1639	1788	1937
				40	655	665	680	690	680	645	570	-	-	3325	3658	3990	4323
				60	1010	1030	1060	1075	1060	1015	900	-	-	5150	5665	6180	6695
				80	1380	1400	1450	1465	1450	1390	1250	-	-	7000	7700	8400	9100
				100	1750	1780	1840	1850	1840	1760	1610	-	-	8900	9790	10680	11570
CS20L3H	S-Cam	3.00	68.29	20	293	298	308	312	312	305	295	277	230	1540	1694	1848	2002
				40	654	662	679	695	699	693	679	647	568	3395	3735	4074	4414
				60	1006	1018	1048	1074	1084	1081	1067	1026	925	5240	5764	6288	6812
				80	1353	1371	1415	1451	1468	1470	1457	1409	1294	7075	7783	8490	9198
				100	1693	1718	1777	1826	1850	1858	1848	1796	1675	8885	9774	10662	11551
C24L	S-Cam	2.50	69.60	20	362	372	379	377	365	336	278	-	-	1860	2046	2232	2418
				40	808	824	840	842	820	773	676	-	-	4120	4532	4944	5356
				60	1245	1270	1296	1302	1279	1223	1106	-	-	6350	6985	7620	8255
				80	1682	1717	1757	1764	1739	1674	1534	-	-	8585	9444	10302	11161
				100	2115	2158	2211	2224	2201	2133	1980	-	-	10790	11869	12948	1402
C24L3	S-Cam	3.00	83.20	20	355	358	368	376	378	369	351	326	246	1840	2024	2208	2392
				40	783	790	814	835	839	827	795	750	616	4070	4477	4884	5291
				60	1204	1218	1255	1288	1296	1282	1247	1184	1008	6275	6903	7530	8158
				80	1623	1642	1694	1738	1752	1734	1696	1620	1399	8470	9317	10164	11011
				100	2034	2061	2129	2185	2204	2188	2147	2067	1800	10645	11710	12774	13839

NOTE: Product information and specifications subject to change without notice.

PERFORMANCE CHART - SERVICE BRAKE CHAMBERS

MGM

		Rated Stroke & Air Volume																
MODEL	Type	Rated Service Stroke (in)	Vol. Displ. @ 100 psi Rated Service Stroke (cubic in)	Application Pressure of (PSI)	Service Brake Force-Output (Pounds-Force) at Inches of Stroke										(in) Pounds of Torque Applied At Mid-Stroke by S-Cam Camshaft w/Slack Adjuster Length of (in)			
					1.00	1.25	1.50	1.75	2.00	2.25	2.50	275	3.00	5.00	5.50	6.00	6.50	
C30L3	S-Cam	3.00	111.76	20	493	508	524	524	512	498	479	446	363	2620	2882	3144	3406	
				40	1062	1091	1109	1113	1103	1090	1063	1009	892	5545	6100	6654	7209	
				60	1628	1658	1695	1698	1694	1683	1649	1576	1442	8475	9323	10170	11018	
				80	2183	2229	2277	2283	2283	2274	2241	2149	1997	11385	12524	13662	14801	
				100	2735	2788	2855	2867	2870	2868	2835	2745	2581	14275	15703	17130	18558	
CW9	Wedge	1.75	21.25	20	175	170	150	55	-	-	-	-	-	-	-	-	-	
				40	355	340	300	174	-	-	-	-	-	-	-	-	-	
				60	530	510	415	260	-	-	-	-	-	-	-	-	-	
				80	720	690	615	375	-	-	-	-	-	-	-	-	-	
				100	895	860	775	515	-	-	-	-	-	-	-	-	-	
CW12	Wedge	1.75	28.80	20	225	225	180	70	-	-	-	-	-	-	-	-	-	
				40	455	455	385	200	-	-	-	-	-	-	-	-	-	
				60	685	680	570	350	-	-	-	-	-	-	-	-	-	
				80	915	910	820	560	-	-	-	-	-	-	-	-	-	
				100	1145	1130	1080	800	-	-	-	-	-	-	-	-	-	
CW16	Wedge	1.75	38.90	20	312	310	300	145	-	-	-	-	-	-	-	-	-	
				40	630	660	610	385	-	-	-	-	-	-	-	-	-	
				60	960	950	920	630	-	-	-	-	-	-	-	-	-	
				80	1290	1275	1235	780	-	-	-	-	-	-	-	-	-	
				100	1605	1595	1590	980	-	-	-	-	-	-	-	-	-	

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Self-Study Courses Feature
MGM Brakes Products and
Servicing Procedures

BRAKETECH PROGRAMS



BrakeTECH Self-Study Training Programs

MGM Brakes created the **BrakeTECH Self-Study Training Programs (Form No. 5038 and 5043)** for counter and outside sales personnel and service technicians involved in providing replacement parts and maintenance to the heavy-duty trucking industry. The goal of these programs is to assist participants in becoming more knowledgeable about the MGM Brakes products they sell and service each and every day.

Participants can study the course booklet at their own pace, regardless of schedule, to become better acquainted with MGM Brakes products and service procedures. A final review quiz made up of true & false and multiple choice questions completes the course.

MGM Brakes issues a "Certificate of Completion" to any participant successfully scoring a minimum of 85% on the quiz. In addition, Parts Personnel who successfully complete the course (form 5038) will receive a *BrakeTECH* pin and hat, while Service Technicians who successfully complete the course (form 5043) will be sent a patch and decal as tokens of MGM Brakes' appreciation for a job well done. These will go one step further toward singling participants out in the eyes of their colleagues and customers alike as true experts on MGM Brakes products.

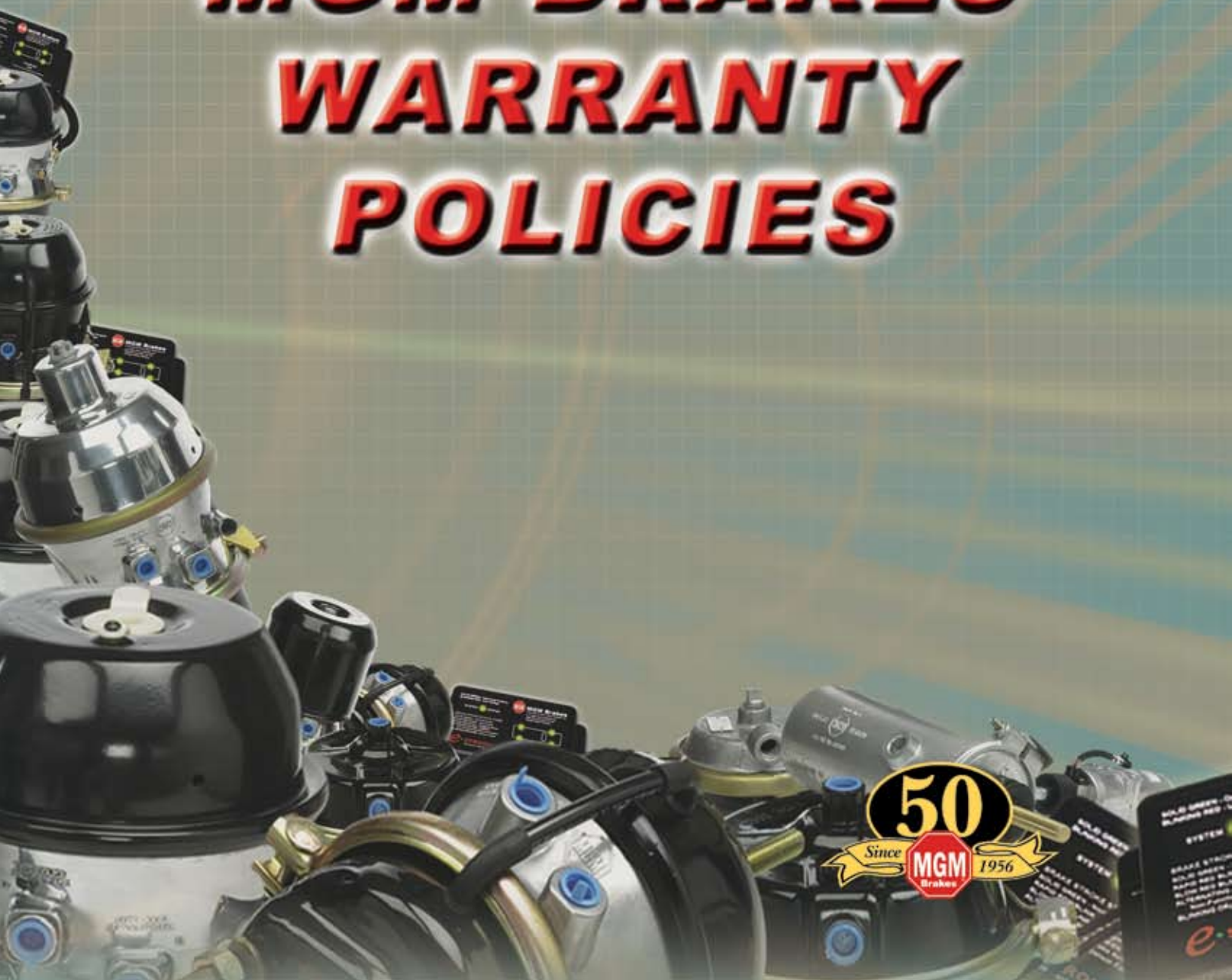
The *BrakeTECH Self-Study Training Programs* are offered free of charge. Please visit our website (<http://www.mgmbrakes.com>) to conveniently download the course booklet or if you prefer a hardcopy or CD-Rom you may place an order online, just fill out a Literature Request Form.

These books are also available in Spanish - 5038S and 5043S.

Have more questions? Go to www.MGMBrakes.com for information on a sales representative in your area.



MGM BRAKES WARRANTY POLICIES





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MGM BRAKES • WARRANTY POLICY

MGM Brakes, Charlotte, NC, U.S.A. warrants that all spring brake and service chamber models manufactured by MGM Brakes in the U.S.A., when properly installed and placed under normal service and use, are free from defects in materials and workmanship for a varied period of time computed from the date of manufacture stamped on the product. The warranty period is determined by specific model and applies irrespective of mileage. All spring brake models are warranted for a three year period except models "MJW" and "WM" which are warranted for two years, and LTR models which are warranted for six years (Form #VII.6a.2).

LIMITATIONS OF WARRANTY

1. This warranty applies exclusively to MGM Brakes' spring brake models sold for use on the North American continent.
2. This warranty does not apply to parts and assemblies which have been subjected to misuse, improper installation, abnormal service, accident, fire, improper repair, tampering or abuse. Without limiting the foregoing, this warranty does not apply to a spring brake which has been used while its end cap or breather cap has been removed or while the external breather tube with connecting fittings has not been kept in place and in good repair when so equipped upon purchase. Deviation from this provision requires written permission from MGM Brakes.

LIMITATION OF REMEDY

1. THE RESPONSIBILITY OF MGM BRAKES UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT (AT MGM BRAKES' OPTION) OF THE DEFECTIVE PART OR ASSEMBLY.
2. IN NO EVENT AND UNDER NO CIRCUMSTANCES SHALL MGM BRAKES BE RESPONSIBLE UNDER THIS LIMITED WARRANTY FOR ANY OTHER CHARGE WHATSOEVER, INCLUDING BUT NOT LIMITED TO CHARGES OR CLAIMS FOR LABOR, LOST BUSINESS, LOST TIME, LOST PROFITS, LOSS OF USE, OR ANY KIND OF CONSEQUENTIAL DAMAGES, HOWEVER DENOMINATED OR DESCRIBED. THE REMEDY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT.

DISCLAIMER OF OTHER WARRANTIES

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED. ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

PROCEDURE FOR WARRANTY CLAIMS

1. OEM Dealers - Without superseding OE coverage and direction, contact your MGM Brakes Regional Sales Manager.
Distributors - Contact your MGM Brakes Regional Sales Manager.
Fleets - Contact your distributor/dealer or your MGM Brakes Regional Sales Manager.
For a listing of MGM Brakes Regional Sales Managers, call the MGM Brakes Corporate Sales Department: 1-800-527-1534, or visit the MGM Brakes website at <http://www.mgmbreaks.com>.
2. In the event that MGM Brakes wants to examine product prior to disposition, MGM Brakes shall specify a destination to which the claimed defective part or assembly should be shipped freight prepaid.
3. Upon receipt, freight prepaid, of the claimed defective part or assembly, MGM Brakes shall examine the part and assembly and, if MGM Brakes concurs that said part or assembly was defective in materials or workmanship within the warranty period, will repair or replace same and return said repaired or replaced item freight prepaid.
4. If the part or assembly received by MGM Brakes does not meet the requirements of the Warranty Program set forth above, the part or assembly will either be returned or repaired at the customer's cost and returned freight collect.

Form No. VII.6a

NOTE: Product information and specifications subject to change without notice.

MGM BRAKES • WARRANTY POLICY

LTR-L3 and LTR-T “LONG LIFE” SERIES SPRING BRAKES

MGM Brakes, Charlotte, NC, USA warrants all LTR-L3 and LTR-T “Long Life” single/piggyback spring brake models manufactured by MGM Brakes in the U.S.A. to be free from defects in materials and workmanship for a period of **Six (6) Years** from date of manufacture stamped on the product.

LIMITATIONS OF WARRANTY

1. This warranty applies exclusively to MGM Brakes LTR-L3 and LTR-T “Long Life” single piggyback spring brake models manufactured after April 1, 1996, when properly installed and placed in normal use upon **on-highway, over-the-road** trucks and trailers, irrespective of mileage, and sold for use on the North American continent.
2. LTR-L3 and LTR-T Complete Spring Brakes installed in **Severe Service Applications** such as dry bulk hauling, refuse collection, ready-mix concrete hauling, transit coach, etc., will be warranted for a period of **Three (3) Years** from date of manufacture stamped on the product, irrespective of mileage.
3. This warranty does not apply to parts and assemblies which have been subjected to misuse, improper installation, abnormal service, accident, fire, improper repair, tampering or abuse. Without limiting the foregoing, this warranty does not apply to a spring brake which has been used while the external breather tube with connecting fittings has not been kept in place and in good repair when so equipped upon purchase. Deviation from this provision requires written permission from MGM Brakes.

LIMITATION OF REMEDY

1. THE RESPONSIBILITY OF MGM BRAKES UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT (AT MGM BRAKES' OPTION) OF THE DEFECTIVE PART OR ASSEMBLY.
2. IN NO EVENT AND UNDER NO CIRCUMSTANCES SHALL MGM BRAKES BE RESPONSIBLE UNDER THIS LIMITED WARRANTY FOR ANY OTHER CHARGE WHATSOEVER, INCLUDING BUT NOT LIMITED TO CHARGES OR CLAIMS FOR LABOR, LOST BUSINESS, LOST TIME, LOST PROFITS, LOSS OF USE, OR ANY KIND OF CONSEQUENTIAL DAMAGES, HOWEVER DENOMINATED OR DESCRIBED. THE REMEDY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT.

DISCLAIMER OF OTHER WARRANTIES

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED. ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

PROCEDURE FOR WARRANTY CLAIMS

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3. Upon receipt, freight prepaid, of the claimed defective part or assembly, MGM Brakes shall examine the part and assembly and, if MGM Brakes concurs that said part or assembly was defective in materials or workmanship within the warranty period, will repair or replace same and return said repaired or replaced item freight prepaid.
4. If the part or assembly received by MGM Brakes does not meet the requirements of the Warranty Program set forth above, the part or assembly will either be returned or repaired at the customer's cost and returned freight collect.

Form No. VII.6a.2

NOTE: Product information and specifications subject to change without notice.

MGM BRAKES • WARRANTY POLICY



SPRING BRAKES & COMPONENTS

MGM Brakes, Charlotte, NC, USA warrants that all e•STROKE® system components supplied by MGM Brakes in the U.S.A., when properly installed and placed under normal service and use, are free from defects in materials and workmanship for a varied period of **time**. The warranty period is determined by specific component and applies irrespective of mileage.

All e•STROKE® spring brake and service chamber models—including their internal e•STROKE® components—are warranted for a **three year** period computed from the date of manufacture stamped on the product, except *LTR* models which are warranted for six years (see Form #VII.6a.2). All other external e•STROKE® system components are warranted for a **one year** period computed from the date put into service. These one-year components include: Chassis Communications Modules (CCM), Power Cables, Sensor Assemblies, Sensor Harnesses, and all other associated external components.

LIMITATIONS OF WARRANTY

1. This warranty applies exclusively to MGM Brakes e•STROKE® systems sold for use within the North American continent.
2. This warranty does not apply to parts and assemblies which have been subjected to misuse, improper installation, abnormal service, accident, fire, improper repair, tampering or abuse. Without limiting the foregoing, this warranty does not apply to a spring brake which has been used while its dust plug (end cap) has been removed, or while the external breather tube with connecting fittings has not been kept in place and in good repair when so equipped upon purchase. Deviation from this provision requires written permission from MGM Brakes.

LIMITATION OF REMEDY

1. THE RESPONSIBILITY OF MGM BRAKES UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT (AT MGM BRAKES' OPTION) OF THE DEFECTIVE PART OR ASSEMBLY.
2. IN NO EVENT AND UNDER NO CIRCUMSTANCES SHALL MGM BRAKES BE RESPONSIBLE UNDER THIS LIMITED WARRANTY FOR ANY OTHER CHARGE WHATSOEVER, INCLUDING BUT NOT LIMITED TO CHARGES OR CLAIMS FOR LABOR, LOST BUSINESS, LOST TIME, LOST PROFITS, LOSS OF USE, OR ANY OTHER KIND OF CONSEQUENTIAL DAMAGES, HOWEVER DENOMINATED OR DESCRIBED. THE REMEDY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT.

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3. Upon receipt, freight prepaid, of the claimed defective part or assembly, MGM Brakes shall examine the part and assembly and, if MGM Brakes concurs that said part or assembly was defective in materials or workmanship within the warranty period, will repair or replace same and return said repaired or replaced item freight prepaid.
4. If the part or assembly received by MGM Brakes does not meet the requirements of the Warranty Program set forth above, the part or assembly will either be returned or repaired at the customer's cost and returned freight collect.

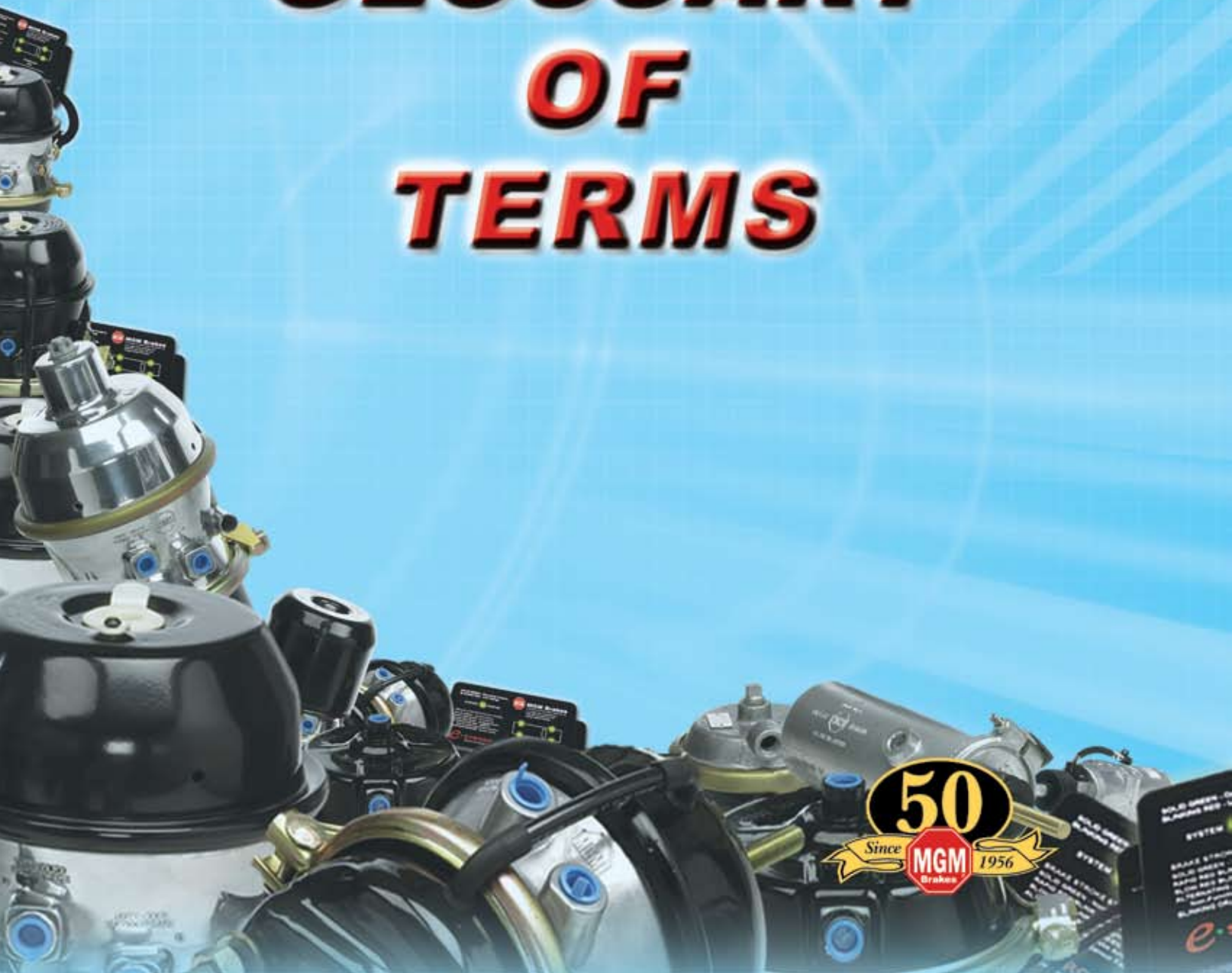
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NOTE: Product information and specifications subject to change without notice.

GLOSSARY OF TERMS



ABS	Anti-Lok Braking System. Prevents wheel lock-up by regulating brake actuation through modulation of system air pressure.
Actuator	Brake chamber. Usually refers to combination units and service chambers.
Actuator Sensor	Electromagnetic device that outputs actuator stroke codes to the Chassis Communications Module (CCM).
Air Governor	Maintains system air pressure between predetermined minimum and maximum levels.
Air Tank	Reservoir for compressed air.
AL Factor	Mathematical representation of the brake adjuster and brake chamber combination. "A" equals the effective area of the brake chamber in square inches (type 30 chamber has effective area of 30 square inches). "L" equals the effective length of the slack adjuster, in inches (slack length = 5"). Example, 30 X 5 = AL Factor of 150
Anti-Compounding	System that prevents service brakes from adding to the force being exerted by the parking brake.
Axle	Components to which wheels, brakes and suspension are attached.
Bogie	Assembly of two or more drive axles, usually a pair in tandem.
Boot	Flexible rubber cover. Installs over service push rod to keep solid and liquid contaminants out of service chamber.
Brake Drag	Brake fails to completely release, causing lining or pads to maintain contact with the brake drum or rotor. May result in excessive lining and drum wear, or possibly a wheel fire if the component parts become excessively hot.
Brake Fade	Usually the result of heat-induced expansion of the brake drum caused by the friction of the lining rubbing against the drum.
Brake Pot	Brake Chamber. Usually refers to "complete" or "combination" unit, meaning service and spring parking brake chambers combined.
Bulk Pack	See "X-Pack"
Cage	Refers to "releasing" the spring brakes.
Caging Bolt	Release tool. Used to "cage" the spring brake. Also referred to as a "Release Bolt".
Can	Refers to service chamber or combination brake.
Cap	See "End Cap"
CCM	Chassis Communication Module. Receives and displays brake stroke condition codes from sensors on brake chambers.
Center Section	See "Flange Case".

NOTE: Product information and specifications subject to change without notice.

Clevis	Connects service chamber push rod to slack adjuster. Also referred to as a "Yoke".
Combination	Service and spring parking brake chambers combined.
Combo	See "Combination".
Common Carrier	Trucking company that hauls for hire.
Complete	See "Combination".
Converter-Dolly	Auxiliary axle assembly equipped with fifth wheel for towing pup or semi-trailer.
Crack Pressure	Minimum air pressure, expressed in pounds per square inch (psi), required to open an air valve.
CVSA	Abbreviation for Commercial Vehicle Safety Alliance.
DD-3	Bendix brake actuator that uses a mechanical roller locking mechanism for parking. Used primarily on transit coaches and intercity buses.
Dead Axle	Un-powered axle that can be lifted off the ground to save wear and tear on the tires when the truck or trailer is empty. Usually mounted forward of "drive" axles.
Diaphragm	Flexible rubber, or neoprene rubber, disc that separates pressurized areas of the chamber from non-pressurized areas.
Disc Brake	Brake design in which a disc (rotor) is sandwiched between the brake pads.
Dolly	See "Converter-Dolly".
Drive Axles	Axles that drive the truck or tractor. Usually refers to rear axle or axles.
Dust Boot	Flexible rubber cover installed over service push rod to keep solid and liquid contaminants out of service chamber.
e-STROKE	Electronic brake stroke monitoring system.
E Model	MGM double clamp band spring brake. Obsolete. Replaced by the TR Model.
Emergency Brake	Independently actuated secondary brake system used for parking or braking when the service brake is inoperative.
End Cap	Plastic piece used to close "release bolt" hole in top of spring brake. Also referred to as a "plug".
Fault Code	Blinking light on CCM that indicates problem with brake stroke status.
Flange Case	Usually made of aluminum and contains pocket for release tool and air inlet ports. Also referred to as "Center Section".
FMVSS	Abbreviation for Federal Motor Vehicle Safety Standard.

NOTE: Product information and specifications subject to change without notice.

Front Axle	Axle at the front of the vehicle. Also known as the "steer" axle.
Glad Hand	Air brake line connector between truck and trailer.
HD	Heavy Duty
Head	Top of chamber . Also referred to as the spring cap.
Jake Brake	Device that manipulates the engine's fuel system, intake and exhaust valves to eliminate the power stroke and create drag.
Jam Nut	Nut on service push rod. Used to "lock" yoke onto rod.
L Model	Original MGM "double diaphragm" spring brake. Replaced by LTR-T Model.
Lift Axle	Un-powered axle that can be lifted off the ground to save wear and tear on the tires when the truck or trailer is empty.
Long Stroke Brake	Any actuator, of equal size, with maximum stroke exceeding that of the standard model.
LTR-L3	Integral Release Bolt, Tamper Resistant, 3-Inch Stroke.
LTR-T	Integral Release Bolt, Tamper Resistant, with External Breather Tube.
Magnum	Brand name for MGM Models MB-T and MG-T piston/diaphragm brakes.
Maxi-Brake	Brand name for Haldex-Midland piston brake. Also used as generic reference for spring parking brake.
Mounting Base	See "Non-Pressure Chamber".
Multiplexing	Means of sending discreet electrical signals to multiple devices through a common set of wires.
NHTSA	Abbreviation for National Highway Transportation Safety Administration.
Non-Pressure Chamber	Component part of service or combination brake used to attach chamber to vehicle or trailer foundation brake.
Non-Pressure Housing	See "Non-Pressure Chamber".
NPC	See "Non-Pressure Chamber".
Pancake	Diaphragm.
Piggyback	Spring Brake or Parking Brake Chamber.
Piggyback Plus Kit	Piggyback, clamp band and diaphragm packaged as a "kit".
Pintle Hook	Coupling device used in double, triple and truck-trailer combinations.
Plug	Plastic piece used to close "release bolt" hole in top of spring brake. Also referred to as "cap".

NOTE: Product information and specifications subject to change without notice.

Pocket	Storage pocket for release bolt. Usually located on side of flange case.
Ports	Threaded openings cast into "flange case" where air lines connect to chamber.
Pot	Brake Chamber or Actuator.
Pressure Cap	Steel or aluminum top for service chambers with one or two air inlet ports.
Pressure Transducer	Signals brake pedal application to Chassis Communications Module (CCM).
PSI	Pounds Per Square Inch. Unit of measurement for air and spring pressure.
Pull	Vehicle moves, or pulls, to one side when braking.
Pup	Short, 25 to 35 foot trailer or semi-trailer.
Push Rod	Rod protruding from a brake chamber that connects to a slack adjuster via a clevis.
Pusher Axle	An additional axle, added to support heavy loads, may be able to be lifted off the ground to save wear and tear on the tires when the truck or trailer is empty. Usually mounted ahead of the drive axle.
Release Bolt	Used to "capture" or "cage" the spring brake portion of the brake chamber, allowing the push rod to return to zero (0) stroke. Also referred to as a "Caging Bolt".
Return Spring	Conical shaped coiled spring used to return internal parts of service chamber or spring brake to fully retracted position.
Rotochamber	Refers to actuator with a rolling diaphragm.
SAE	Abbreviation for Society of Automotive Engineers.
Semi-Trailer	A trailer designed to be towed with a fifth wheel on a converter dolly or tractor.
Service Brake	Mechanism for slowing or stopping the vehicle.
Shipping Bolt	Short "release bolt", usually associated with brakes manufactured for production installations.
Short Stop	Brand name for early MGM WM and WL Model Wedge Brakes.
Short Stroke	Chamber fails to travel to maximum allowable stroke.
Single	Spring Brake or Parking Brake Chamber. Also referred to as the piggyback.
Single Axle	One axle on the rear of a truck, tractor or trailer.
Spanner Nut	Castellated nut on wedge tube. Used to "lock" tube into wedge housing.
Standard Stroke	Refers to actuators with 2.50 inch maximum stroke, or length of stroke when actuator originally designed.

NOTE: Product information and specifications subject to change without notice.

Stinger	Non-powered axle, mounted at rear of vehicle, behind "drive" axles. Can be lifted off the ground to save wear and tear on the tires when the truck or trailer is empty.
Stop Guard	Brand name for early MGM L and E Model Spring Brakes. Replaced by LTR-T and TR Models.
Stroke	Maximum distance traveled by a brake chamber push rod, or slack adjuster arm, during application.
Stroke Alert	Orange stripe or mark on service push rod that indicates when service chamber is approaching 80% of its rated stroke.
Super Single	Extremely wide tire. Replaces "dual" tires with "single" tire.
Tag Axle	Non-powered axle that can be lifted off the ground to save wear and tear on the tires when the truck or trailer is empty. Usually mounted forward of "drive" axles. See "Lift Axle".
Tandem	See "Combination".
Tandem Axle	Two axles on the rear of a truck, tractor or trailer.
Tractor	Vehicle designed primarily to pull trailers by means of a fifth wheel connection.
Tractor Trailer	Tractor and trailer in combination. Also know as a "Rig". Tractor pulling a semi-trailer.
Truck	Vehicle designed to "carry" cargo within a body or on a bed mounted on its chassis.
Type	Refers to chamber size; i.e. 16, 20, 24, 30, 36, etc.
Un-Cage	Removal of "release bolt" or "caging" bolt.
VIN Number	Vehicle Identification Number or Serial Number.
Warning Light	Indicator light mounted on vehicle dash that illuminates to indicate status of the e-STROKE System.
Wedge Brake	Brake shoes are applied by a single or double wedge-type mechanism as opposed to brake applied by rotation of an "S-cam".
Welded Yoke	Yoke permanently attached to service push rod.
X - Dimension	Measurement taken from bottom of NPC to end of push rod thread.
X-Pack	Large quantity of chambers packaged in one container. Also know as a "Bulk Pack".

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Y - Dimension	Measurement taken from bottom of NPC to center-line of yoke pin.
Yoke	Connects service chamber push rod to slack adjuster. Also referred to as a "Clevis".
Zero Stroke	When service push rod is completely retracted into the service chamber.

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