

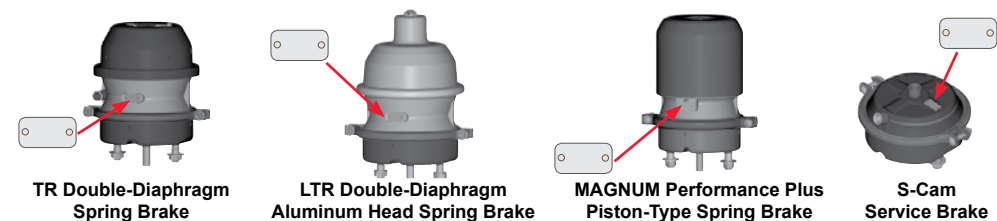
**UNDERSTANDING MGM BRAKES**

KEY TO MODEL "PREFIXES"	KEY TO MODEL "SUFFIXES"
C = SERVICE CHAMBER	A = 1.75 INCH STROKE (MAGNUM PERFORMANCE PLUS)
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

**MGM BRAKES PRODUCT IDENTIFICATION**

**MGM 3430051** — MGM Brakes Part Number  
**M102799** — Date Code  
**XXXXXXXXXX** — Customer Part Number (optional)

**EXAMPLE (above):** Part No. identifies Type 3030 spring brake, Date Code reveals unit was manufactured at Murphy, NC facility (M = Murphy, NC; C = Cloverdale, CA) on October 27, 1999 (1st two digits = month, 2nd two digits = day, last two digits = year).



**Mixing Standard & Long Stroke Chambers**

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

**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 and 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.

**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, due to the difference in operational characteristics of the chambers, an imbalance may exist in the stopping capability of the vehicle when the "standard stroke" chamber exceeds its recommended (2-inch) readjustment limit. 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.

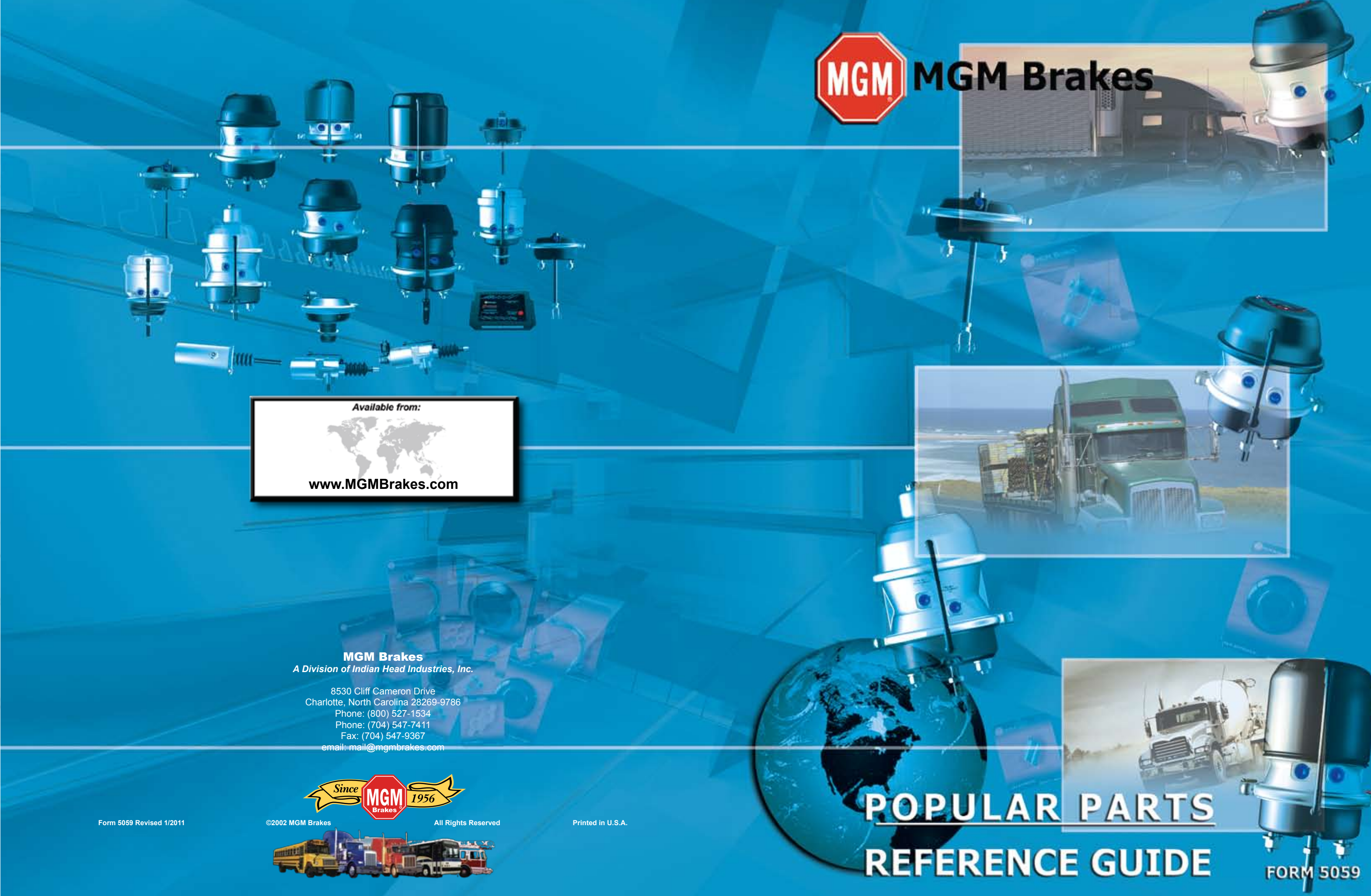
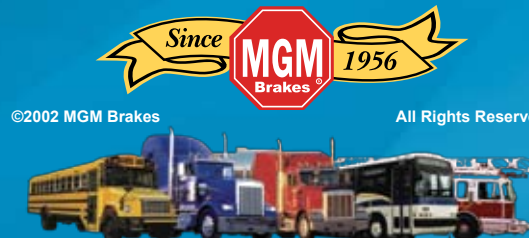
**IMPORTANT NOTE:** All dimensions & other specifications shown in this brochure are subject to design changes.

Form 5059 Revised 1/2011

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**POPULAR PARTS REFERENCE GUIDE**

FORM 5059

**WARNING**

**INDUSTRY SAFETY REMINDER: The Danger of Double Clamp Banded Spring Brakes**

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.

**IMPORTANT SAFETY INFORMATION**

**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.**



Information taken from MGM Brakes Technical Bulletin EB 06-003

DESIGNED WITH QUALITY

MADE WITH PRIDE

SPRING BRAKES - STANDARD STROKE

Table with 8 columns: Model / Size, TR2424L, TR2430L, TR3030, TR3030T\*, TR3036, TR3636, LTR3030T\*\*. Rows include P/N Combination, Stroke, Wt. (lbs.), and dimensions A through G.

NOTE: (a) See Special Transit Length Push-Rod Assemblies & Combinations for Transit & Hendrickson Intraax / Vantraax Suspension applications in our Master Catalog Form 6000SS.

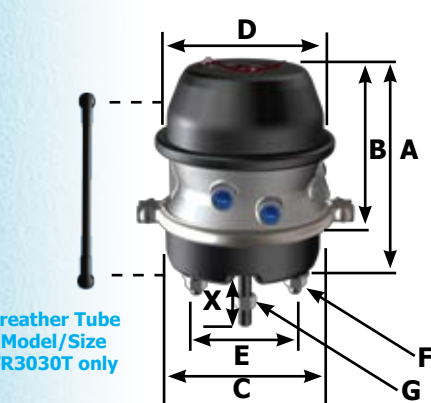


Table: PIGGYBACK PLUS KITS - STANDARD STROKE. Columns: Model / Size, TR2424L, TR2430L, TR3030, TR3030T\*, TR3036\*\*, TR3636, LTR3030T\*\*\*. Rows: P/N Piggyback Plus Kit.

NOTE: \*\*Breather Tube design. \*\*\*This model must be used in combination with MGM Brakes heavy-duty weld-reinforced mounting base or 8-gauge non-pressure housing ONLY.

SPRING BRAKES - LONG STROKE

Table with 6 columns: Model / Size, TR2430LP3, TR3030LP3, LTR3030L3\*, MJS3024ET\*\*, MJS3030ET\*\*. Rows include P/N Combination, Stroke, Wt. (lbs.), and dimensions A through G.

NOTE: (a) See Special Transit Length Push-Rod Assemblies & Combinations for Transit & Hendrickson Intraax / Vantraax Suspension applications in our Master Catalog Form 6000SS.

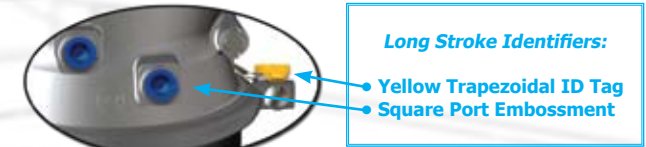
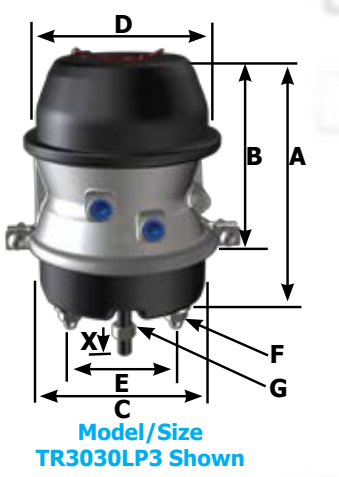


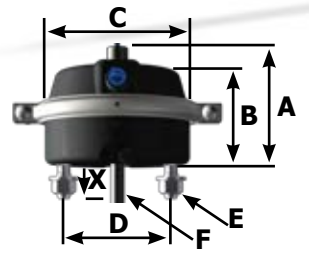
Table: PIGGYBACK PLUS KITS - LONG STROKE. Columns: Model / Size, TR2430LP3, TR3030LP3, LTR3030L3\*, MJS3024ET\*\*, MJS3030ET\*\*. Rows: P/N Piggyback Plus Kit.

NOTE: \*LTR-L3 Model with aluminum head and 6-yr. warranty. •Piggyback Plus Kits include piggyback, clamband & service diaphragm.

SERVICE CHAMBERS - STANDARD AND LONG STROKE

Table with 11 columns: Model / Size, C12, C16, C20, CS20L\*, C24L\*\*, C24L\*\*\*, C30, C30L3\*\*\*, C36. Rows include P/N Service Chamber, Stroke, Wt. (Lbs.), and dimensions A through F.

NOTE: (a) Equipped with welded-yoke and 2.25" Y dimension. \*S = Sealed assembly; L = Long Stroke model. \*\*L = 2 1/2" Long Stroke models. \*\*\*L3 = 3" Long Stroke models. • Dimensions in inches.



REPLACEMENT PARTS

DIAPHRAGMS

Table of Diaphragms with columns: Type, Stroke, P/N, Material, Outside Diameter. Lists various types from 9 to 36 with their respective materials and diameters.

NOTE: (1) Material 'R' is natural rubber blend with nylon fabric reinforcement. Use only 'R' type diaphragms in extreme cold weather climates. Good to -40°F (40°C). (2) Material 'N' is neoprene blend with nylon fabric reinforcement. (\*) For use in MJ1216AT or MJS1216AT models only. See technical bulletin 04-001. (\*\*) 'Easy Fit' • For Neoprene Diaphragms - refer to MGM Form 5063.

CLAMP BANDS

Table of Clamp Bands with columns: Type, P/N (1 Piece), P/N (2 Piece). Lists types 9, 12, 16, 20, 24, 30, 36 with their P/N numbers.

NOTE: • Clamband Assemblies include clamband, nut(s) and bolt(s).

BREATHER TUBE & ELBOW KITS

Table of Breather Tube & Elbow Kits with columns: Key, P/N, Service MGM Brakes Model. Lists keys 1 and 2 with their respective P/N numbers and service models.



REPLACEMENT PARTS

YOKE ASSEMBLIES

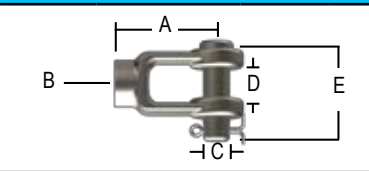


Table of Yoke Assemblies with columns: P/N, A, B, C, D, E. Lists various P/N numbers and their dimensions.

NOTE: • Yoke pin is Stainless Steel (1/2" diameter P/N - 8038007; 5/8" P/N 8038008). • Yoke assemblies include yoke, yoke pin and cotter pin.

2-PIN YOKE



Table of Yoke Pins (Stainless Steel) with columns: Diameter, P/N. Lists diameters 1/2", 5/8", 1/2", and 1/4" with their corresponding P/N numbers.

KIT - NUTS & WASHERS (NPC MOUNTING)

Table of Kit - Nuts & Washers with columns: P/N, Type. Lists P/N numbers 9002001 and 9002003 with their types.

KIT - RELEASE BOLT

Table of Kit - Release Bolt with columns: P/N, Services MGM Brakes Model Sizes. Lists P/N numbers 9007003 and 9007009 with their service models.

S-CAM PROTECTIVE BOOT & CENTER HOLE SHIELD KITS

Table of S-Cam Protective Boot & Center Hole Shield Kits with columns: Key, P/N, Description. Lists keys 1, 2, 3, 4 with their P/N numbers and descriptions.

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.

BREATHER CAP, END CAPS & WEATHERSEAL™ PLUG KITS

Table of Breather Cap, End Caps & Weatherseal™ Plug Kits with columns: Key, P/N, Description, Used on MGM Models/Sizes. Lists keys 1, 2, 3 with their P/N numbers, descriptions, and applicable models.

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