



ABEX BRAKE SHOES - BRAND INFORMATION INTRODUCTION



Abex

Abex shoes provide unmatched strength and integrity to keep vehicles running safely day after day. These OE-quality shoes with OE-approved Abex brake linings are available in 40 of the most popular applications and are manufactured with proprietary technology, preventing concavity and convexity after welding. Abex shoes are electrocoated with a high-gloss finish for superior corrosion protection.



Abex Stop Box Kits give you complete braking solutions that eliminate the need for guesswork and parts hunting.

These all-in-one packages feature:

- Two new OEM-quality lined shoes
- OE-approved brake linings
- Complete heavy-duty hardware kit

With four available linings —

685 FF, 6008-1 FF, 6011 FF, 6098 GG —

covering numerous applications, they're everything that's required for a first-class brake replacement job.

The performance of Abex brake blocks and linings has made them the first choice of demanding, quality-conscious fleets. Engineered for superior stopping power, optimum lining life and minimal drum wear, Abex linings deliver the most efficient cost-per-mile braking in the industry. It's a reputation earned over billions of miles

GENERAL INFORMATION:

Premium Heavy Duty: Higher axle ratings and load applications for on and off highway.

Premium: Medium to high friction. Wide range of highway use.

Standard: General application highway use.

Abex

Are Edge Codes an Indication of Lining Quality?

ABSOLUTELY NOT. Edge codes (EE, FF, GG etc...) describe a range of normal and hot friction values measured when a 1" square piece of material is subjected to varying conditions of temperature, pressure, and rubbing speed on a Chase test machine.

Edge codes identify the lining manufacturer, lining material, and the coefficient of friction (amount of resistance between two surfaces.) They do not make any claims concerning lining hardness/softness or lining quality. Edge codes are strictly an identifier.

**ABEX BRAKE LINING IDENTIFICATION AND APPLICATION****ABEX LIST OF LINING OPTIONS****“EX” Abex 685FF Supreme Brake Block**

Abex 685 FF is an OEM approved asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 23,000 lbs. with an AL factor of 165.

“AX” Abex 6149FF Aftermarket 23K

Abex 6149 FF is an aftermarket quality premium brake lining with a torque output is at a level that will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 23,000 lbs. with an AL factor of 165.

“EW” Abex 6028 GG Wedge Brake Block

“EW” prefix lining is specifically designed and OEM approved for wedge brake applications.

“EN” Abex 6008-1 FF Premium Brake Block

Abex 6008-1 FF is an OEM approved asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR 20,000 lbs. with an AL factor of 165-180.

“AN” Abex 6166FF Aftermarket 20K

Abex 6166 FF is an aftermarket quality premium brake lining with a torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 20,000 lbs. with an AL factor of 165.

“EL” Abex 6011 FF Supreme II Brake Block

Abex 6011 FF is an OEM approved asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR 20,000 lbs. with an AL factor of 165.

“XL” Abex 6014 Special Brake Block

Abex 6014 FF is an asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR 19,000 lbs. with an AL factor of 180.

“ED” Abex 6028 GG Supreme III Extreme Duty Brake Block

Abex 6028 GG is an OEM approved asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR 25,000 lbs. with an AL factor of 180.

“SMC” Abex SM FF/Abex 6098 GG Semi-metallic Brake Block

“SMS” is a semi-metallic combination brake lining with a torque output level that will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 23,000 lbs with an AL factor of 165.

“SM” Abex SM FF Semi-metallic Brake Block

Abex SM FF is a semimetallic brake lining that will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 20,000 lbs with an AL factor of 165.

“SDA” Abex 6098 GG Severe Duty Brake Block

Abex 6098 GG is an asbestos free premium brake lining. The torque output is at a level which will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR of 23,000 lbs. with an AL factor of 165-180. It is recommended for refuse trucks and other severe duty applications.

“FT” Abex FT GG OEM Fire Truck Brake Block

Abex FT GG is an OEM approved premium brake lining with a torque output level that will meet the inertia dynamometer requirements of FMVSS 121 at a GAWR 26,000 lbs. with an AL factor of 195.

“EH” Extra Heavy Duty Off-Highway Brake Block

Lining in this category is OEM approved and application engineered by part number. Each formulation will provide the optimum balance between performance, safety, and long life.

“MC” Abex 685 FF/Abex 697 EE Combination Transit Brake Block

“MC” is an OEM approved asbestos free combination transit brake lining. This combination has been custom designed for use on busses. It is the preferred lining of most major transit authorities.

“MX” Abex 697 EE Transit Brake Block

Abex 697 EE is a single friction asbestos free transit lining.

NOTE:

Although this reference guide considers general performance characteristics, product performance varies not only by material grade but also by brake components used, load, terrain, and driver habits. When selecting a friction material, review performance data and consult manufacturer representatives for service recommendations.

Never purchase friction material based solely on price.



FLEETCRAFT BRAKE LINING

**NOT ALL AFTERMARKET LININGS ARE CREATED EQUAL.
NOT ALL AFTERMARKET LININGS ARE MADE IN THE USA.**



A QUALITY BRAKE LINING ON A NEW OR REMANUFACTURED BRAKE SHOE WITH NO SACRIFICE IN QUALITY. AND IT'S MADE IN THE USA!

FLEETCRAFT BRAKE LINING APPLICATION GUIDE

LINING DESCRIPTION & APPLICATION

FC20 Brake Lining

Premium, OE quality non-asbestos friction material with a glass fiber base. It provides excellent performance and wear .

APPLICATION

General Freight "over-the-road" use on trucks, truck-tractors, and trailers. Meets FMVSS 121 requirements. GAWR 20,000 lbs.

**NEW LINED SHOES - 16.5X7
Lined with Fleetcraft**

Premium Quality FC20 Lining

Application	Part No.
Rockwell "Q"	1011941-FC20
Fruehauf XEM3	1011944-FC20
Rockwell "Q+"	1011951-FC20



PREMIUM QUALITY LINED SHOES

FC23 Brake Lining

Premium heavy duty non-asbestos friction material. Recommended for multi-duty service where excessive loads and tough terrain are prevalent.

APPLICATION

Heavy highway use, gravel trains, steel haulers, concrete trucks, liquid haulers.
Meets FMVSS 121 requirements. GAWR 23,000 lbs.

NEW LINED SHOES

Lined with Fleetcraft

Premium FC23 Lining

Application	Part No.
Rockwell "Q"	1011941-FC23
Fruehauf XEM3	1011944-FC23
Rockwell "Q+"	1011951-FC23





FLEETCRAFT BRAKE LINING FC20 & FC23 PRODUCT PROFILES

FC20 Brake Lining

- 20,000 GAWR - FMVSS 121 rated with 180 AL factor.

Application: Recommended for use on S-cam brakes on trucks, truck-tractors and trailers. Hauling general freight on-highway. Long-haul freight over moderate terrain.

Typical Physical Properties:

- Gogan Hardness - 24 GC

-This is the nondestructive method of measuring a lining's compressibility. Used as a quality control check of the consistency of formulation and processing of brake lining. SAE J379a.

- Specific Gravity - 1.97

-Nondestructive test used as a quality control check of the consistency of formulation and processing of brake lining. SAE J380.

- Flexural Strength - 6200 PSI

-Method of evaluating physical strength of brake lining. Force required to break .250 x .500 inch bar of lining placed on supports 4 inches apart. ASTM D79066.

- Friction Properties

-Normal Friction .448F. -Hot Friction .420F. SAE J661a.



FC23 Brake Lining

- Low swell and growth characteristics.

- Excellent fade and recovery performance.

- Exceptional lining life and drum compatibility.

- 23,000 GAWR - FMVSS 121 rated with 180 AL factor.

Application: Recommended for use on S-cam brakes on trucks, truck-tractors and trailers. Single axle dumps and refuse trucks. Triaxle dumps and heavy loads.

Typical Physical Properties:

- Gogan Hardness - 26 GC

-This is the nondestructive method of measuring a lining's compressibility. Used as a quality control check of the consistency of formulation and processing of brake lining. SAE J379a.

- Specific Gravity - 1.75

-Nondestructive test used as a quality control check of the consistency of formulation and processing of brake lining. SAE J380.

- Flexural Strength - 5000 PSI

-Method of evaluating physical strength of brake lining. Force required to break .250 x .500 inch bar of lining placed on supports 4 inches apart. ASTM D79066.

- Friction Properties

-Normal Friction .421F. -Hot Friction .443F. SAE J661a.



LINED BRAKE SHOES FOR CAM TYPE BRAKES



New Lined Brake Shoes

We can take a brake shoe and sell it to you with the lining you want!
Our part numbers represent the kind of shoe (Q, Q+, XEM, etc..) and the type of lining (FC20 Fleetcraft, 685 Abex, etc..)

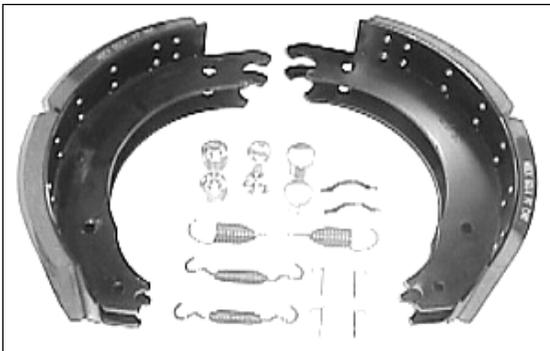
HERE ARE OUR BASE 16.5X7 PART NUMBERS FOR NEW LINED BRAKE SHOES:

1011941 = Q shoe (4515)
1011944 = XEM 3 shoe (4515)
1011951 = Q+ shoe (4707)
1011953 = 4709 ESII shoe

HERE ARE OUR BASE PART NUMBERS FOR TYPES OF BRAKE LINING:

Abex = We use their numbers, 685, 6008, 6085, 6098, etc.
Fleetcraft = We use our numbers, FC20, FC23.

If you have a lining preference, such as Abex, Meritor, etc., let us know and we will get you a quote. We have access to many kinds of lining!



COMPLETE BRAKE SHOE KITS

Each kit contains two new lined brake shoes with foundation hardware to rebuild one brake assembly. 16-1/2 X 7.

In order to make your shoes into a kit with the 2 shoes and hardware kit together as one price, we put a 'K' on the end of the part number!

RE-LINED BRAKE SHOE PROGRAMS

We have Many Programs available for Re-Lined Brake Shoes.
Ask your salesperson, and they will go over these programs to find the right fit for you!





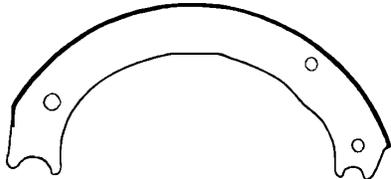
UNLINED BRAKE SHOES FOR CAM TYPE BRAKES



Also available: **UNLINED** brake shoes.
If you need some for your core bank
- these are very handy.

Many options -

We have more "cores" than these:



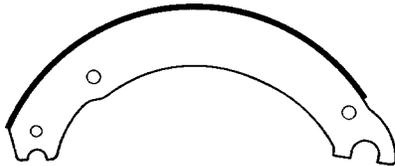
Eaton "ESII" Single Anchor Pin

16-1/2" DIAMETER BRAKES

Eaton "ESII" Single Anchor Pin, Extended Service Brake

Part No.	Size	FMSI No.	Replaces	Hardware Kit
1011933	161/2X7	4709	Eaton 819707	NL1688

Eaton Web stamping no. 819700

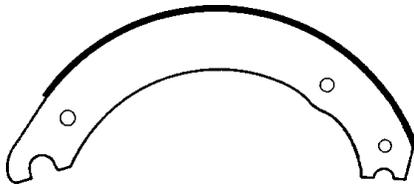


Fruehauf Current "XEM3" Design

Fruehauf Current "XEM3" Design

Part No.	Size	FMSI No.	Replace	Hardware Kit
1011924	161/2X7	4515E	Fruehauf ACF003379-001	NL1624 NL1624BX NL1624HD

Fruehauf web stamping no. ACF3381-1

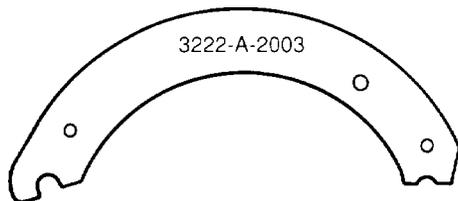


Rockwell "Q" Brake

Rockwell "Q" Brake

Part No.	Size	FMSI No.	Replaces	Hardware Kit
1011921	161/2X7	4515E	Rockwell A-3222-S-1293	NL1621 NL1621BX NL1621HD NL1621HDS

Rockwell web stamping no. 3222-O-1291



Rockwell "Q-Plus" Brake

Rockwell "Q-Plus" Brake

Part No.	Size	FMSI No.	Replaces	Hardware Kit
1011931	161/2X7	4707	Rockwell A-3222-D-2006	NL1621HD NL1621HDS

Rockwell web stamping no. 3222-A-2003

RE-LINED BRAKE SHOE PROGRAMS

We have Many Programs available for Re-Lined Brake Shoes.
Ask your salesperson, and they will go over these
programs to find the right fit for you!





Q VERSUS Q+: CAMSHAFTS AND BRAKE SHOES

Never use a standard Q brake camshaft with Q Plus brake shoes.

Always use Q Plus camshafts with Q Plus brake shoes.

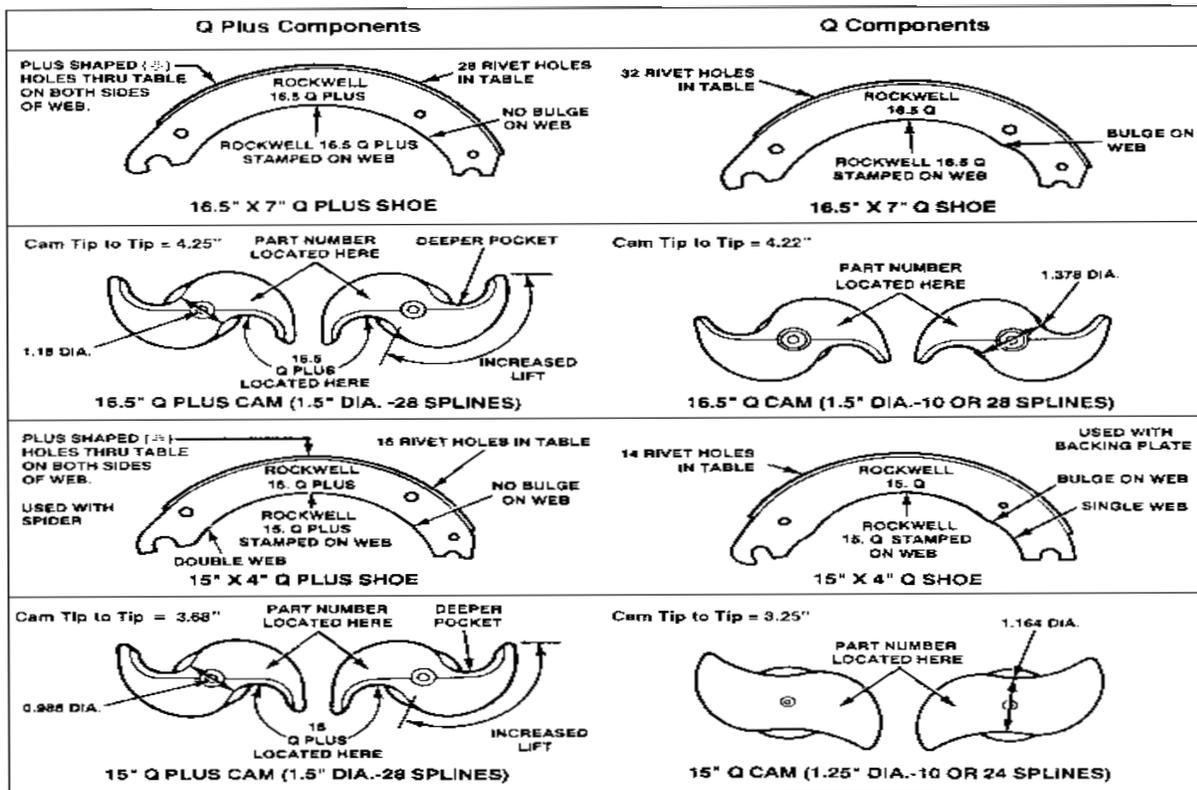
All Q Plus shoes and camshafts are marked with "Q Plus" for easy identification.

If Q Plus shoes are used with standard Q camshafts, there is a possibility that the camshaft will "roll over" during brake application under certain operating conditions.

This results in a nonworking brake which will increase stopping distances.

Also, a new brake drum may not fit over the Q Plus brake shoes if the shoes are used with a standard brake camshaft.

Identifying Q-Plus Brake Shoes And Cams



Commonly Asked Questions About Meritor (Rockwell) "Q-Plus" Brakes

Q: Will I have a balance problem with mixing "Q Plus" brakes on my tractor or trailer?

A: No, the "Q Plus" brake was specifically designed for complete compatibility with the current Q brake. The brake performance and balance is essentially maintained through offering the same variety of linings for both brake designs.

Q: Can I use "Q" shoes on "Q Plus" camshafts?

A: Yes, both "Q" and "Q Plus" shoes can be used with "Q Plus" camshafts. In fact you may find it advantageous to standardize on "Q Plus" cams.

Q: Can I use "Q Plus" shoes on standard "Q" camshafts?

A: No, the current "Q" cam may not allow the "Q Plus" shoes (with .12" thicker lining) to collapse far enough to assemble the brake drum. A turned or worn drum could be assembled over the shoes, however this may not allow for

adequate initial lining clearance which would increase the risk of a dragged brake.

Q: Do I need a special drum to accommodate the increased thickness of the "Q Plus" shoe?

A: No drum changes are required for 16.5" "Q Plus" brakes. 15 x 4 "Q Plus" front brakes may require slightly different drums and hubs on certain applications.

Q: What parts are common to "Q Plus" and "Q"?

A: All standard components are common between the "Q" and "Q Plus" brakes except for the brake shoes and camshafts. The "Q Plus" cam can be used with the "Q" or "Q Plus" brake shoes.

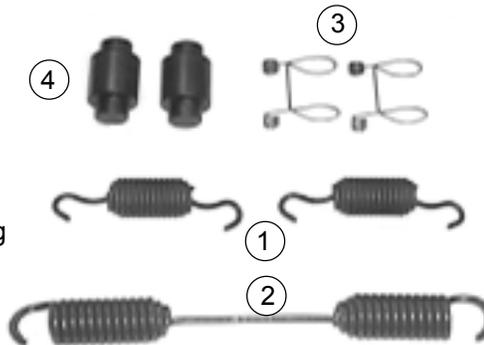
Q: What makes the "Q Plus" better than the "Q"?

A: The "Q Plus" reduces the overall maintenance costs by increasing the intervals between relines.

**EATON - BRAKE SHOE REPAIR KITS****EATON 16-1/2" ES
"EXTENDED SERVICE" BRAKE****Part No. NL1686**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1085	Retainer Spring
2	1	NL1720	Return Spring
3	2	NL1722	Roller Retainer
4	2	NL1721	Roller



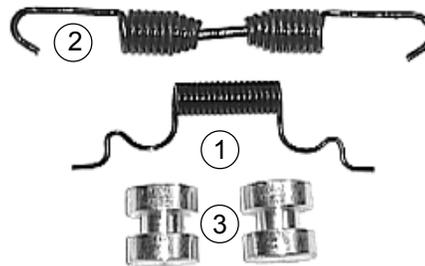
Replaces

Eaton 5-808330
E5481A
R507057
HK63XLS

**EATON 15" SINGLE ANCHOR PIN
FRONT (STEERING) BRAKE****Part No. NL1683**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	1	NL1713	Retainer Spring
2	1	NL1714	Return Spring
3	2	NL1712	Roller



Replaces

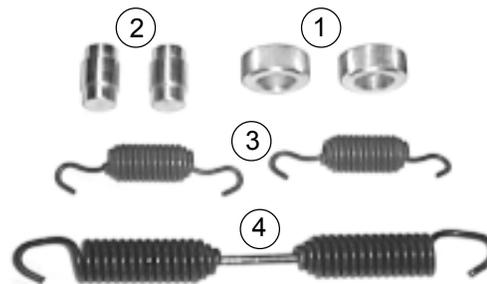
Eaton 1008306

E5139

**EATON 16-1/2" SINGLE ANCHOR PIN BRAKE****Part No. NL1616**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1027	Knurled Roller
2	2	NL1041	Roller Pin
3	2	NL1085	Retainer Spring
4	1	NL1089	Heavy Duty Return Spring



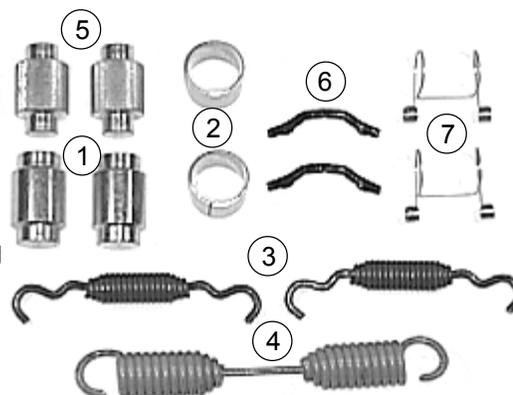
Replaces

Eaton 1001238
MK10
E1887ASHD
08-1042

**EATON "Top Spec" 16-1/2" ES
"EXTENDED SERVICE" BRAKE
RETROFIT FOR ROCKWELL****Part No. NL1687**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1005	Anchor Pin
2	2	NL1724	Stainless Bushing
3	2	NL1086	Retainer Spring
4	1	NL1723	Return Spring
5	2	NL1052	Knurled Roller
6	2	NL1212	Spring retainer
7	2	NL1722	Roller Retainer



Replaces

5-3319

E8925

(Major Kit)





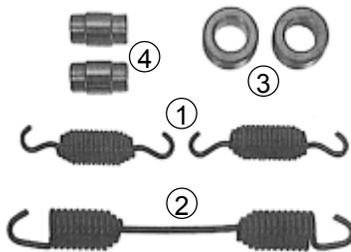
EATON - BRAKE SHOE REPAIR KITS

**Eaton 16-1/2" Single Anchor Pin Brake
Ford Special Application, high mount shoe**

Part No. NL1695

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL7767	Retainer Spring
2	1	NL7768	Return Spring
3	2	NL7769	Knurled Roller
4	2	NL7766	Roller Pin



Replaces

E3801

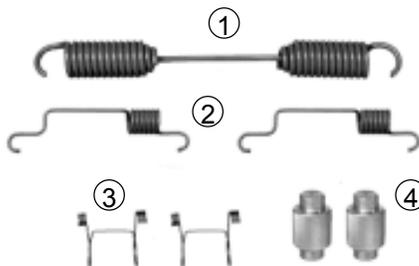


Eaton ESII 16-1/2" Brake Hardware Kit

Part No. NL1688

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	1	NL7743	Return Spring
2	2	NL7755	Retainer Spring
3	2	NL7744	Roller Retainer
4	2	NL7756	Brake Shoe Roller



Replaces

E-10244

HK61

314147

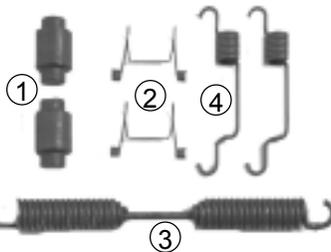


**Eaton ESII 16-1/2" Brake Hardware Kit
(Minor Kit)**

Part No. HK61

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	32-1490	Roller
2	2	34-1570	Roller Retainer
3	1	19-915	Return Spring
4	2	19-940	Retainer Spring



Replaces

314147

E 10244

NL1688

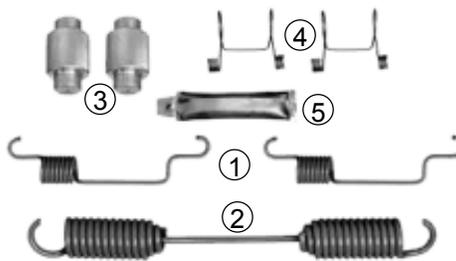


Eaton ESII 16-1/2" Brake Hardware Kit

Part No. E-10244

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-10198	Retainer Spring
2	1	E-10197	Return Spring
3	2	E-5477	Brake Shoe Roller
4	2	E-5478	Roller Retainer
5	1	E-3887	Anti-seize compound



Replaces

HK61

NL1688

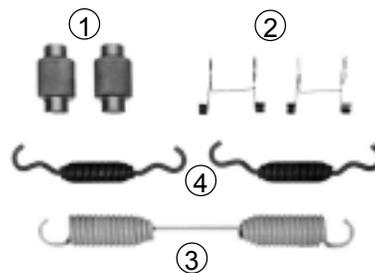


**Eaton 15 x 8-5/8" Brake Hardware Kit
"ES" Reduced Envelope, drive axle brake**

Part No. E-9039

Kit services one brake and consists of:

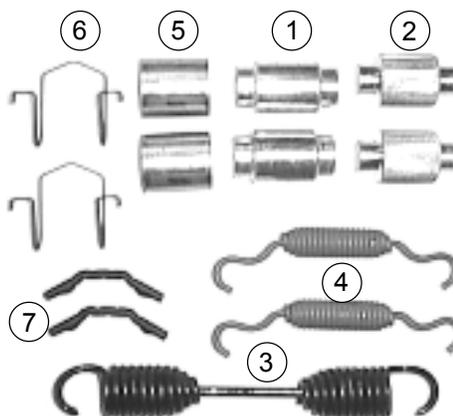
Item	Qty.	Part No.	Description
1	2	E-5477	Brake Shoe Roller
2	2	E-5478	Roller Retainer
3	1	E-9038	Return Spring
4	2	E-2767	Retainer Spring



**Q / Q+ - BRAKE SHOE REPAIR KITS****16-1/2" "Q", "Q PLUS" and SPICER "FAST CHANGE" BRAKES****Part No. NL1621BG**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1005	Anchor Pin
2	2	NL1052	Knurled Roller
3	1	NL1578	Return Spring
4	2	NL1086	Retainer Spring
5	2	NL1110	Anchor Pin Bushing
6	2	NL1200	Roller Retainer
7	2	NL1212	Spring Retainer

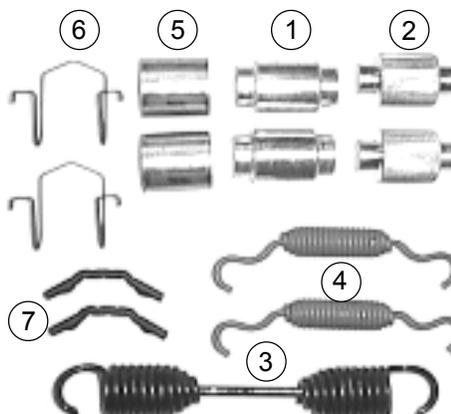


Replaces

MK39
E2769S
08-1088BG = Bagged.
This is a bagged kit.
Ten bags packed bulk is box quantity**16-1/2" "Q", "Q PLUS" and SPICER "FAST CHANGE" BRAKES****Part No. NL1621HD**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1005	Anchor Pin
2	2	NL1052	Knurled Roller
3	1	NL1084	HD Return Spring
4	2	NL1086	Retainer Spring
5	2	NL1110	Anchor Pin Bushing
6	2	NL1200	Roller Retainer
7	2	NL1212	Spring Retainer



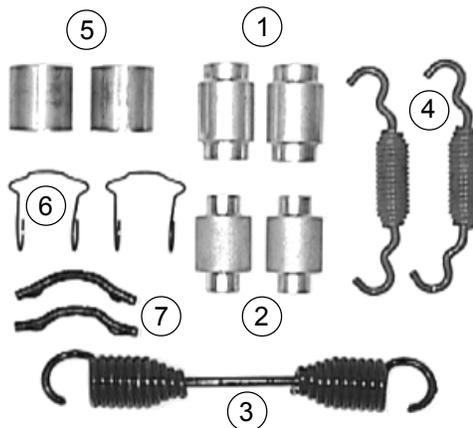
Replaces

E2769SHD

**16-1/2" "Q", "Q PLUS" and SPICER "FAST CHANGE" BRAKES****Part No. NL1621HDS**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1005	Anchor Pin
2	2	NL1052	Knurled Roller
3	1	NL1084	HD Return Spring
4	2	NL1086	Retainer Spring
5	2	NL1145	Stainless Anchor Pin Bushing
6	2	NL1199	Roller Retainer
7	2	NL1212	Spring Retainer

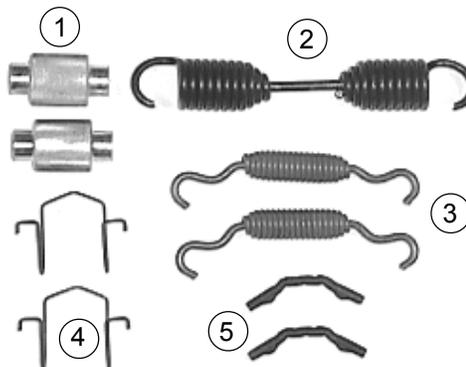
Replaces
E2769HDKit contains the same as NL1621HD except:
2 NL1145 stainless steel anchor pin bushings replace 2 NL1110 carbon steel anchor pin bushings.
2 NL1199 roller retainers replace 2 NL1200 roller retainers.**16-1/2" "Q", "Q PLUS", SPICER "FAST CHANGE" BRAKES**

Anchor pins and bushings not included in this kit.

Part No. NL1680BG

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1052	Knurled Roller
2	1	NL1084	H.D.Return Spring
3	2	NL1086	Retainer Spring
4	2	NL1200	Roller Retainer
5	2	NL1212	Spring Retainer



Less Pins and Bushings.

BG = Bagged.
This is a bagged kit.
Ten bags packed bulk is box quantity



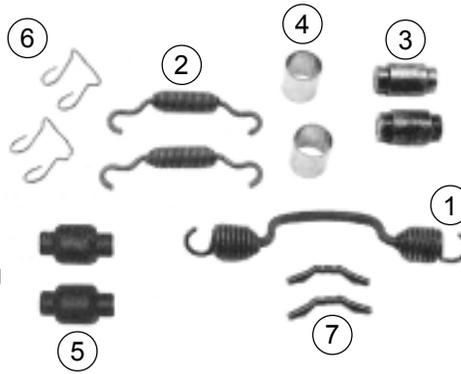
Q / Q+ - BRAKE SHOE REPAIR KITS BY ARVIN MERITOR

16-1/2" Q High Mount Brake Repair Kit

Part No. KIT8081

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	1	2258-Y-1273	Return Spring
2	2	2258-Q-615	Retainer Spring
3	2	1259-N-274	Anchor Pin
4	2	1225-B-496	Anchor Pin Bushing
5	2	2297-T-7222	Brake Shoe Roller
6	2	3105-B-210	Roller Retainer
7	2	1218-G-85	Return Spring Pin



Replaces

NL1690
E9644

w/Reloc
return spring.

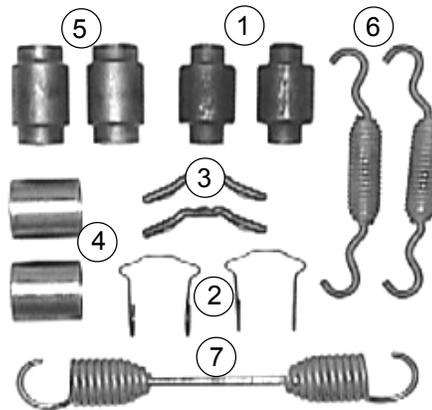
ArvinMeritor.

**15" FRONT (STEERING)
"Q PLUS" BRAKE**

Part No. KIT8824HD

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	1779-R-18	Brake Shoe Roller
2	2	3015-B-210	Roller Retainer
3	2	1218-G-85	Return Spring Pin
4	2	1225-B-496	Bushing, Anchor Pin
5	2	1259-N-274	Anchor Pin
6	2	2258-Q-615	Retaining Spring
7	1	2258-L-1234	Return Spring



Replaces

E9064
NL1650
R508824

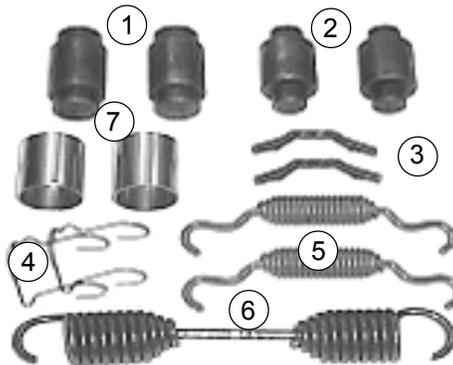
ArvinMeritor.

16-1/2" "Q", "Q PLUS" BRAKES

Part No. KIT8000HD

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	1259-N-274	Anchor Pin
2	2	1779-R-18	Roller
3	2	1218-G-85	Return Spring Pin
4	2	3105-B-210	Roller Retainer
5	2	2258-Q-615	Retainer Spring
6	1	2258-W-803	Return Spring
7	2	1225-B-496	Anchor Pin Bushing



Replaces

E2769HD
NL1621HD

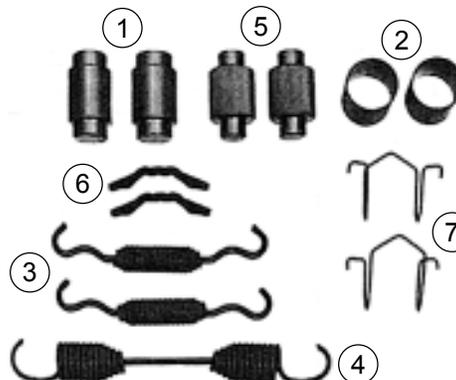
ArvinMeritor.

**16-1/2" "Q", "Q Plus",
Spicer (Dana) "Fast Change", "XLII" &
Hendrickson Intraxx Brake**

Part No. E-2769SHD

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-2766	Anchor Pin
2	2	E-1893S	Anchor Pin Bushing
3	2	E-2767	Retainer Spring
4	1	E-3490S	HD Return Spring
5	2	E-2177	Knurled Roller
6	2	E-747	Spring Retainer
7	2	E539	Roller Retainer



Replaces

KIT8000HD
MK39
NL1621HD



Also AVAILABLE
E-2769HD,
different anchor pin
bushing and return
spring.

**Q / Q+ - BRAKE SHOE REPAIR KITS****ROCKWELL 15" FRONT (STEERING)
"Q" BRAKE****Part No. NL1684**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1715	Anchor Pin
2	1	NL1716	Wear Plate
3	1	NL1718	Retainer Spring
4	2	NL1712	Roller
5	2	NL5413	Lock Nut
6	2	NL1719	Washer
7	1	NL1717	Return Spring



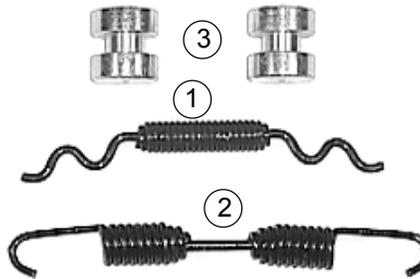
Replaces

KIT8029
K282
E3869
8-1111

**15" FRONT (STEERING)
"Q" BRAKE
Springs and rollers only.****Part No. NL1685**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	1	NL1718	Retainer Spring
2	1	NL1717	Return Spring
3	2	NL1712	Roller



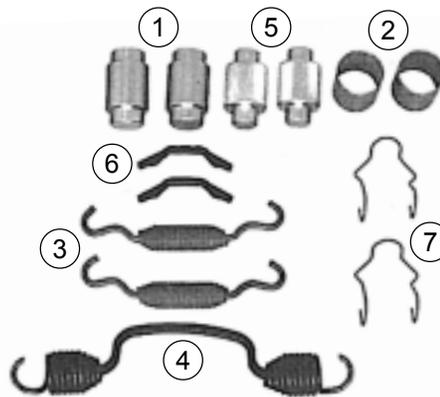
Replaces

E7899

**16-1/2" "Q" High Mount Steer Axle Brake****Part No. NL1690**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-2766	Anchor Pin
2	2	E-1893	Stainless Steel Anchor Pin Bushing
3	2	E-2767	Retainer Spring
4	1	E-9069	Return Spring
5	2	E-2177	Knurled Roller
6	2	E-747	Spring Retainer Pin
7	2	E-3007A	Roller Retainer



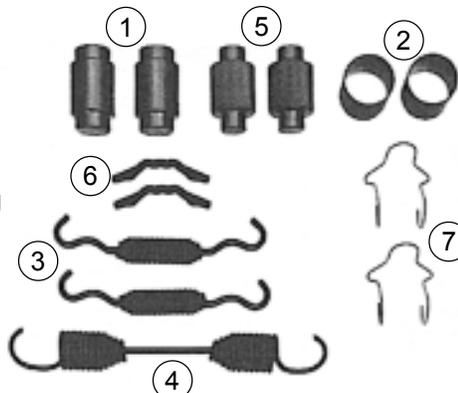
Replaces

KIT8081
E9644

**Rockwell 15" "Q", "Q Plus", Front Brake****Part No. NL1650**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-2766	Anchor Pin
2	2	E-1893	Anchor Pin Bushing
3	2	E-2767	Retainer Spring
4	1	E-9063	HD Return Spring
5	2	E-2177	Knurled Roller
6	2	E-747	Spring Retainer
7	2	E-3007A	Roller Retainer



Replaces

R508824
KIT8824HD
E9064



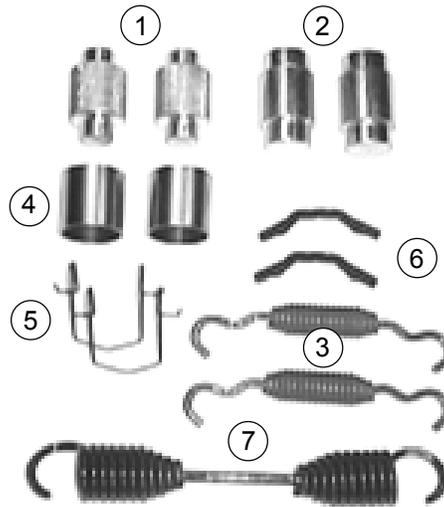


"XEM" - BRAKE SHOE REPAIR KITS

Part No. NL1624HD
Late "XEM" Brake

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	NL1052	Knurled Roller
2	2	NL1030	Anchor Pin
3	2	NL1086	Retainer Spring
4	2	NL1110	Bushing, Anchor Pin
5	2	NL1200	Roller Retainer
6	2	NL1212	Spring Retainer
7	1	NL1084	Return Spring



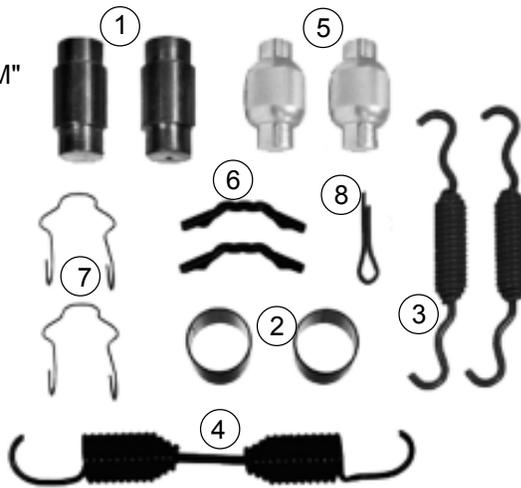
Replaces
MK-42
E3710SHD



Part No. E-3710SHD

Fruehauf "Propar" 16-1/2" late model "XEM"
Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-3711S	Anchor Pin
2	2	E-1893S	Anchor pin bushing
3	2	E-2767	Retainer Spring
4	1	E-3490S	Return Spring
5	2	E-11741	Roller
6	2	E-747	Spring Retainer
7	2	E-3007A	Retainer, Roller
8	1	E-1559	Cotter Pin

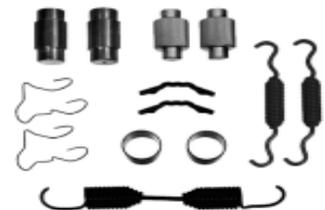


Replaces
E-4515XHD is the stopmate version. Components in the stopmate not available separately.



Part No. E-4515XHD

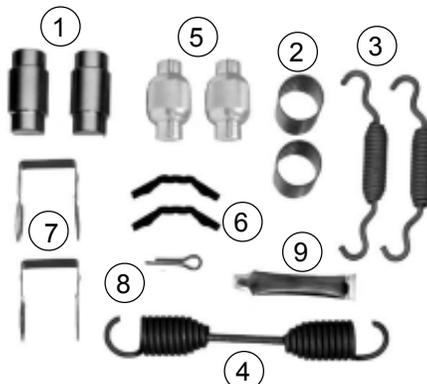
Fruehauf "Propar" 16-1/2" late model "XEM"
Stopmate version.
Components in the stopmate not available separately.



Part No. E-3710HD

Fruehauf "Propar" 16-1/2" late model "XEM"
Kit services one brake and consists of:

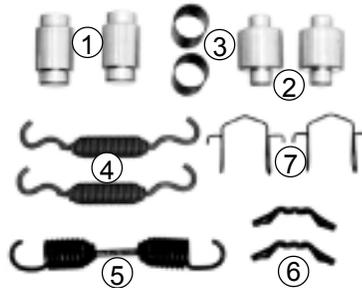
Item	Qty.	Part No.	Description
1	2	E-3711	Anchor Pin
2	2	E-8938	Anchor pin bushing
3	2	E-2767	Retainer Spring
4	1	E-3490B	Return Spring
5	2	E-11741	Roller
6	2	E-747	Spring Retainer
7	2	E-3227	Retainer, Roller
8	1	E-1559	Cotter Pin
9	1	E-3887	Anti-Seize Compound



**12.25" AND 15" BRAKE SHOE REPAIR KITS****12-1/4" "Q" BRAKE for 4692FC****Part No. E-10756**

Kit services one brake and consists of:

Item	Qty.	Part No.	Description
1	2	E-2766S	Anchor Pin
2	2	E-586	Roller
3	2	E-1893S	Anchor Pin Bushing
4	2	E-2767	Retainer Spring
5	1	E-2398	Return Spring
6	2	E-747	Spring Retainer
7	2	E-539	Roller Retainer



Replaces

47-1A
HK49-150**12-1/4" "Q" BRAKE for 4692FC****Part No. HK49-150**

Kit services one brake and consists of:

Bendix No.	Description	Qty.
15-537	Anchor Pin	2
15-542	Anchor Pin	2
16-565	Anchor Pin Bushing	2
19-862	Return Spring-HD	1
19-941	Retainer Spring - 12 1/4	2
20-881	Return Spring Pin	2
32-1427	Cam Roller - Smooth	2
34-1527	Camshaft Lockring	4
34-1529	Cam Roller Retainer	2
35-1581	Anchor Pin Washer	4



Replaces

47-1A
E10756**Part No.
HK95XLS****Description**

Brake Hardware Kit with 15 x 4 & 16-1/2 x 5, 6, 7 w/ 14° wedge.

Replaces

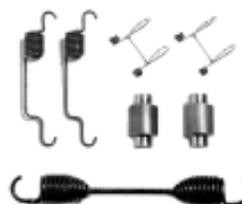
95A

Bendix No.	Description	Qty.
19-853	Return Spring - Heavy Duty	1
19-860	Spring Retainer	2
19-934	Return Spring	1
20-881	Return Spring Pin	2
20-887	Return Spring Pin	2
20-888	Return Spring Pin	2
32-1427	Cam Roller - Smooth	2
34-1529	Cam Roller Retainer	2

**Part No.
HK97XLS****Description**

Brake Hardware Kit with 15 x 4 w/ 4729 shoe.

Bendix No.	Description	Qty.
19-940	Retainer Spring - 16-1/2 & 15	2
19-956	Return Spring	1
32-1471	Cam Roller - Knurled	2
34-1570	Cam Roller Retainer	2

**ALSO AVAILABLE:**

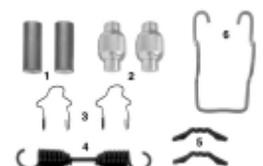
Part No.	Description
E-10875	Dexter "PQ" shoes
E-2402HD	Standard Forge 12-1/4 brake with fabricated shoes
HK62	ES11 Steer axle kit, used w/817009 collar
E-3782	4692 Quick Change, U brake 12-1/4".



E-10875



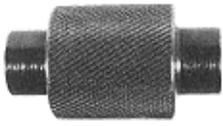
E-2402HD



E-3782



BRAKE HARDWARE KIT COMPONENTS

	Part No. E-2177 Knurled Roller	OD 1-1/4"	OA Length 2-1/4"	Application General purpose roller	Replaces RS 1779R18 P & Q brakes M2204 01-234
	Part No. E-781 Roller	OD 1-3/8"	OA Length 2-1/4"	Application 1/8 oversize version of NL1050	Replaces Fruehauf 330733X RS 1779C81 T/M 46-1-031M596A, 1-20, E-781, L294
	Part No. 3105B210 Roller Retainer	Length 1-41/64"	Width 1-7/8"	Application 16-1/2" Q & Q Plus Brake shoes	Replaces M1433, 1-313, E-3007A, L1537
	Part No. E-539 Roller Retainer	Length 2-5/32"	Width 2-9/32"	Application All sizes of "P" type Brake shoes	Replaces Rockwell 1718-Y-103 M644, 1-300, L151
	Part No. R-3227 Roller Retainer			Application "P" type Brake shoes	Replaces ACF-1328-001 M1428, 1-311, E-3227, L894
	E-2766S Anchor Pin	2-7/32"	Center 1-1/4" Ends 1"	Rockwell Q & Dana/Spicer "Fast Change"	Replaces 16WJ105 M1422, 01-434, L1416
	Part No. NL1205 Snap Ring	I.D. 1-1/8"	Thick 1/16"	Application For 1-1/4" anchor pins	Replaces M1523, E801, 01-482, L397
	NL1210 Lock Ring	1-1/2"	1/16"	For Propar 1-5/8" diameter camshaft	M1046, E1569, 04-315
	NL1250 Washer	1-7/8" OD	1-17/64" ID	For 1-1/4" anchor pins	Rockwell 1229-B-1848 M748, E1113, 04-309, L889
	NL1578 Return Spring	8-3/8"	1-1/8"	Rockwell "Q" brakes standard duty	2258-U-619 M1424, E2768, L1418, 01-369
	NL1084 Return Spring	8-3/8"	1-1/4"	Rockwell "Q" & "Q Plus" brakes, Fruehauf XEM, heavy duty.	2258-W-803 M2732, E-3490B, 1-369, L2098
	NL1086 Retainer Spring	5-1/2"	3/4"	Rockwell 12-1/4" & 16-1/2" diameter "Q" & "Q Plus", Fruehauf and Spicer brakes.	Rockwell 2258-Q-615 Fruehauf ACF-003079-001 M1423, E-2767, 1-370, L1417
 	Part No. E-747 Retainer	Length 2-3/4"	Application For most fab shoes.		Replaces Spicer M16WJ102 Eaton 809512 M1500, 1-320, L324



BRAKE CAMSHAFTS

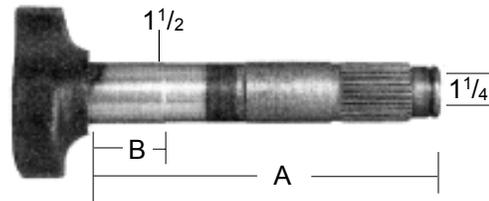
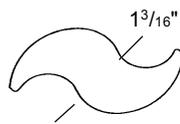
Cams are identified for reference as shown; however some applications require special chamber and cam positions, which may change cam rotation. When replacing, check carefully!



LH Cam RH Cam
Typical Cam Identification

Identify cams by viewing from head end.
 LH cams rotate left, or counter clockwise,
 RH cams rotate right, or clockwise.

**1-1/2" DIAMETER,
 28 SPLINE CAMS FOR
 DRIVE AXLES
 16-1/2" "Q-PLUS" BRAKES**

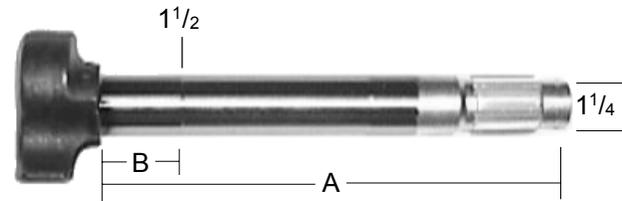
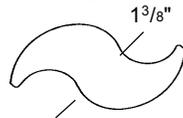


Cam Bushing Kit No: E-3993B

Part No.		A	B	C	Interchange Information
2210W7537	LH	11 ⁹ / ₁₆ "	1 ¹³ / ₁₆ "	-	E9661, E3351
2210V7536	RH				E9662, E3352
2210A7645	LH	14 ¹⁹ / ₃₂ "	1 ¹³ / ₁₆ "	-	E9677
2210Z7644	RH				E9678

**1-1/2" DIA. 28 SPLINE CAMS
 FOR DRIVE AXLES**

**FORMERITOR
 16 1/2" "Q-PLUS"
 BRAKES**

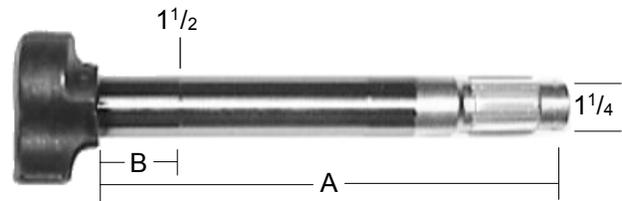
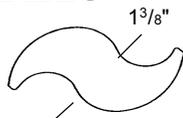


Cam Bushing Kit No: E-3993B

Part No.		A	B	Interchange Information
2210Q7427	LH	8 ⁹ / ₁₆ "	1 ¹³ / ₁₆ "	E4896, E9649
2210P7426	RH			E4897, E9650
2210C7595	LH	13 ⁷ / ₃₂ "	1 ¹³ / ₁₆ "	E4731, NL1946, E9671
2210B7594	RH			E4730, NL1947, E9672

**1-1/2" DIA. 28 SPLINE CAMS
 FOR DRIVE AXLES**

**FORMERITOR
 16 1/2" "Q" BRAKES**



Cam Bushing Kit No: E-3993B

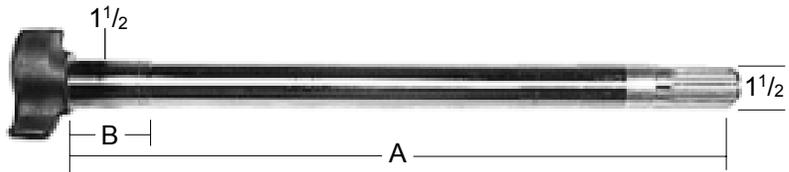
Part No.		A	B	Interchange Information
2210J7524	LH	10 ⁷ / ₃₂ "	1 ¹³ / ₁₆ "	E3349, E9659
2210H7522	RH			E3350, E9660
2210W7537	LH	11 ⁹ / ₁₆ "	1 ¹³ / ₁₆ "	E3351, M2614L, E9661 (NL1304)
2210V7536	RH			E3352, M2614R, E9662 (NL1305)



BRAKE CAMSHAFTS

1-1/2" DIAMETER, 10 SPLINE CAMS FOR TRAILER AXLES

**SINGLE GROOVE
FOR 16 1/2" BRAKES
Various Applications**

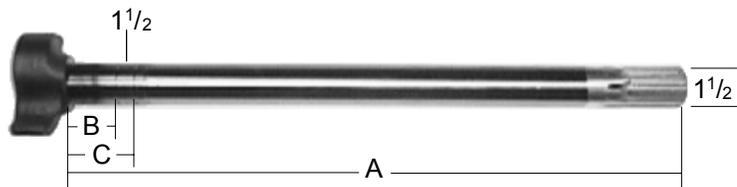


Cam Bushing Kit No: NL1238

Part No.		A	B	Interchange Information
2210A6319	LH	21 ³ / ₃₂ "	2 ⁷ / ₃₂ "	E685 M16WK103-19 M567L
2210Z6318	RH			E684 M16WK102-19 M567R
R607056	LH	22 ⁷ / ₈ "	2 ⁷ / ₃₂ "	E4884
R607055	RH			E4885
R607042	LH	24"	2 ⁷ / ₃₂ "	E4717 M746L
R607041	RH			E4716 M746R

1-1/2" DIAMETER, 10 SPLINE CAMS FOR TRAILER AXLES

**DOUBLE GROOVE
FOR 16 1/2" BRAKES
Various Applications**



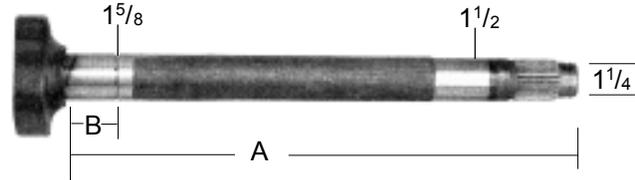
Cam Bushing Kit No: NL1238

Part No.		A	B	C	Interchange Information
NL1318 R607082	LH	20 ³ / ₈ "	2 ⁷ / ₃₂ "	1 ⁵ / ₈ "	2210-N-2484, 2210-G-3595, 2210-F-5414 M16WK103-17 E1425, 04-243 M562L, L915
NL1319 R607081	RH				2210-M-2483 2210-F-3594, 2210-E-5413 M16WK102-17 E1424, 4-242 M562R, L914
NL1326	LH	23 ⁷ / ₁₆ "	2 ⁵ / ₁₆ "	2 ⁷ / ₃₂ "	E1095, 4-104, L580, R607002 M16WK103-25, M744L
NL1327	RH				E1094, 4-105, L581, R607001 M16WK102-25, M744R



BRAKE CAMSHAFTS

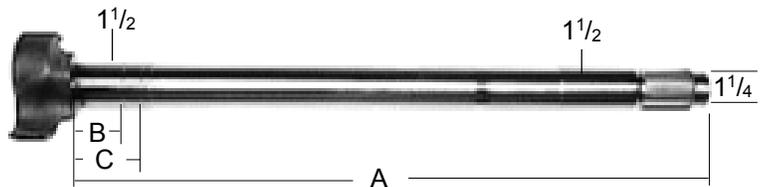
**1-5/8" DIAMETER,
28 SPLINE CAMS FOR
DANA SPICER XL
TRAILER AXLE
16-1/2" BRAKES w/ 1-5/8
BEARING JOURNAL**



Cam Bushing Kit No: E-9790A

Part No.		A	B	C	Interchange Information
17-931	LH	24 ¹ / ₈ "	2 ¹ / ₄ "	-	M16WKL25-241, M16WKL25-242, E-10909, NL1966, R607277
17-930	RH				M16WKR25-241, M16WKR25-242, E-10910, NL1967, R607278
17-923	LH	21 ⁵ / ₈ "	2 ¹ / ₄ "	-	M16WKL25-205
17-922	RH				M16WKR25-205
NL1956	LH	23 ⁹ / ₁₆ "	2 ⁷ / ₃₂ "	-	M16WKL25-236, R607232, E9736
NL1957	RH				M16WKR25-236, R607231, E9735

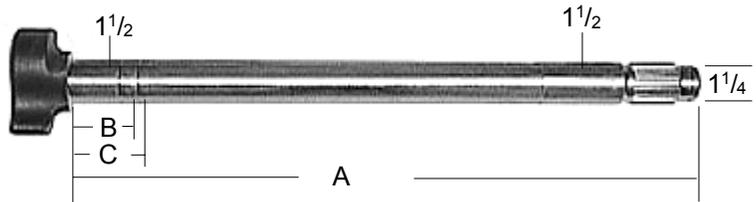
**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
SPICER TRAILER AXLES
16-1/2" "XTRALIFE" BRAKES
w/ DOUBLE GROOVE JOURNAL**



Cam Bushing Kit No: NL1238

Part No.		A	B	C	Interchange Information
NL1378	LH	20 ⁷ / ₁₆ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	Spicer M16WKL20-205, E5524, R607181
NL1379	RH				Spicer M16WKR20-205, E5525, R607182
NL1380	LH	23 ⁹ / ₁₆ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	Spicer M16WKL20-236, E5526, R607183
NL1381	RH				Spicer M16WKR20-236, E5527, R607184
NL1920	LH	24 ¹ / ₁₆ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	Spicer M16WKL20-242, E9100, R607199
NL1921	RH				Spicer M16WKR20-242, E9101, R607200

**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
SPICER TRAILER AXLES
16-1/2" BRAKES
w/ DOUBLE GROOVE JOURNAL**



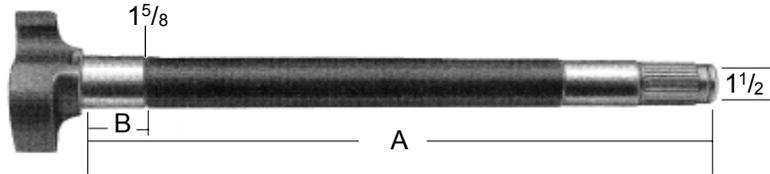
Cam Bushing Kit No: NL1238

Part No.		A	B	C	Interchange Information
17-481	LH	20 ³ / ₈ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	M16WK105-17, E3854, R607169
17-480	RH				M16WK104-17, E3855, R607170
NL1916	LH	23 ⁷ / ₁₆ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	R607171, M16WK104-25, E3856, M16WKL20-234, 17-483
NL1917	RH				R607172, M16WK105-25, E3857, M16WKR20-234, 17-482
R607189	LH	22 ⁷ / ₈ "	1 ⁵ / ₈ "	2 ⁷ / ₃₂ "	M16WK104-23, E6884, M16WKL20-227
R607190	RH				M16WK105-23, E6885, M16WKR20-227



BRAKE CAMSHAFTS

**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
EATON TRAILER AXLES
16-1/2" ES BRAKES**



Cam Bushing Kit No: NL1277

Part No.		A	B	C	Interchange Information
R607113	LH	23 3/4"	2 5/32"	-	E9059
R607114	RH				E9060

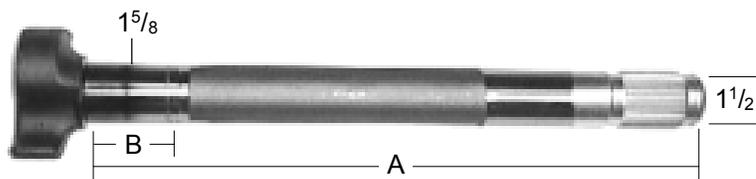
**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
HENDRICKSON INTRAAX**



Cam Bushing Kit No: S23974 (or S21181 if before 11/24/97)

Part No.		A	B	C	Interchange Information
S24636-1L	LH	11 "	2 7/16"	-	Hendrickson Intraax
S24636-1R	RH				Hendrickson Intraax
NL1970	LH	11 "	2 7/16"	-	Hendrickson Intraax
NL1971	RH				Hendrickson Intraax

**1-5/8" DIAMETER,
37 SPLINE CAMS FOR
FRUEHAUF TRAILER AXLES
16 1/2" BRAKES**



Cam Bushing Kit No: NL1228

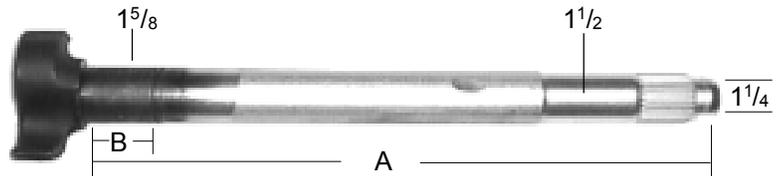
Part No.		A	B	Interchange Information
NL1334	LH	16 1/8"	2 5/32"	AXA-0420-1, M563L, E1563, R607011
NL1335	RH			AXA-0420-2, M563R, E1564, R607012
NL1337	LH	21 1/8"	2 5/32"	AXA-0420-3, M566L, E2099, R607020
NL1336	RH			AXA-0420-4, M566R, E2100, R607019
R607162	LH	23 7/8"	2 7/32"	AXA-0420-6, E3861
R607161	RH			AXA-0420-5, E3862



BRAKE CAMSHAFTS

**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
ROCKWELL TRAILER AXLES
WITH "Q+" BRAKES**

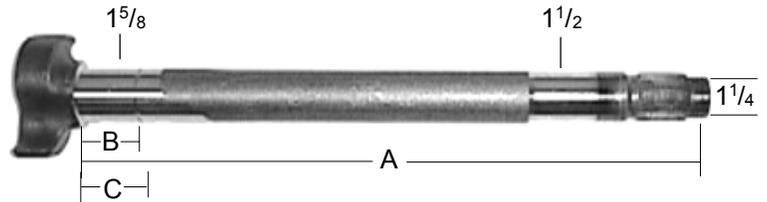
**16 1/2" DIAMETER
FABRICATED SPIDER**



Cam Bushing Kit No: NL1417

Part No.		A	B	Interchange Information
2210S8157	LH	20 ¹³ / ₃₂ "	1 ⁴⁵ / ₆₄ "	2210R4334, M991L, E-2443A, NL1961, R607273
2210T8158	RH			2210Q4333, M991R, E2444A, NL1960, R607274
2210G6871	LH	20 ¹³ / ₃₂ "	2"	2210P6594, E9093, E5508, NL1964
2210F6870	RH			2210N6592, E9094, E5509, NL1965
NL1940	LH	24 ¹ / ₁₆ "	1 ³¹ / ₃₂ "	2210X6576, E6081, E5510, E2445A
NL1941	RH			2210W6575, E6082, E5511, E2446A
2210E6869	LH	24 ¹ / ₁₆ "	1 ³¹ / ₃₂ "	2210-X-6576, E6081, E5510
2210D6868	RH			2210-W-6575, E6082, E5511

**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
ROCKWELL TRAILER AXLES
4000-6000 SERIES - Q+
Double Groove
16 1/2" BRAKES**



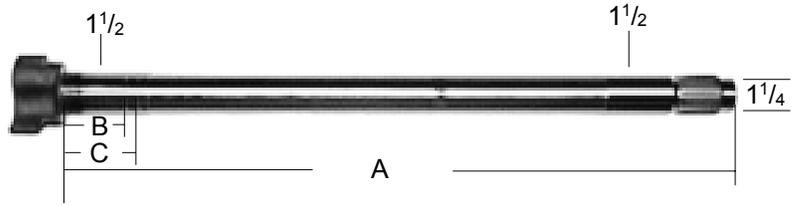
Cam Bushing Kit No: NL1280

Part No.		A	B	C	Interchange Information
NL1958	LH	17 ⁵ / ₁₆ "	1 ²⁵ / ₃₂ "	1 ³¹ / ₃₂ "	2210M4329, M990L, E2441A, 2210R8156
NL1959	RH				2210L4328, M990R, E2442A, 2210Q8155



SPICER TRAILER AXLE BRAKE CAMSHAFTS

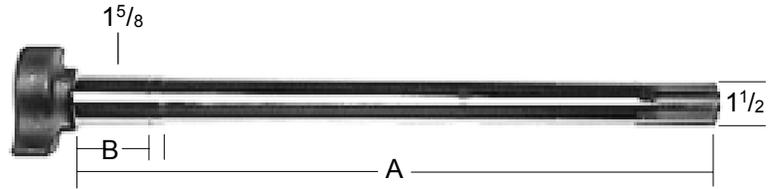
**1-1/2" DIAMETER,
28 SPLINE CAMS FOR
SPICER TRAILER AXLES
12-1/4" BRAKES
Double Groove**



Cam Bushing Kit No: NL1240

Part No.		A	B	C	Interchange Information
R607253	LH	23 ³ / ₁₆ "	2 ⁷ / ₃₂ "	2 ²¹ / ₃₂ "	M12WKL20-233, E9759, NL1952
R607254	RH				M12WKR20-233, E9760, NL1953

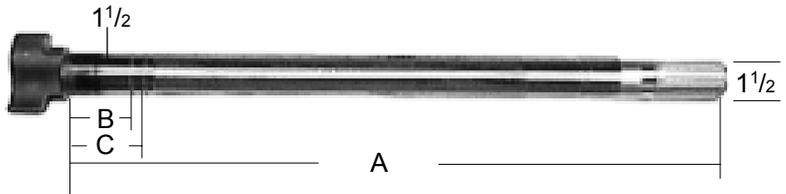
**1-1/2" DIAMETER, 28 SPLINE
CAMS FOR SPICER
TRAILER AXLES
12-1/4" Q BRAKES
w/ 1-5/8" Bearing Journal
Double Groove**



Cam Bushing Kit No: E-9790A / 43-7118

Part No.		A	B	Interchange Information
17-417	LH	23 ¹ / ₈ "	2 ¹ / ₄ "	M12WKL25-233, E10905, R607273
17-416	RH			M12WKR25-233, E10906, R607274

**1-1/2" DIAMETER,
10 SPLINE CAMS FOR
SPICER TRAILER AXLES
12-1/4" BRAKES**

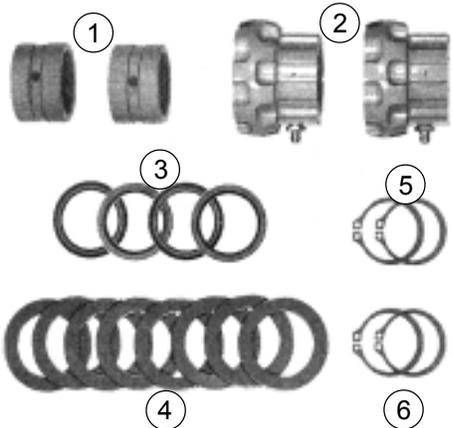


Cam Bushing Kit No: NL1417

Part No.		A	B	C	Interchange Information
R607006	LH	21 ¹ / ₈ "	2 ⁷ / ₃₂ "	2 ²¹ / ₃₂ "	E1411 M477L
R607005	RH				E1410 M477R
R607010	LH	23 ¹ / ₄ "	2 ⁷ / ₃₂ "	2 ²¹ / ₃₂ "	E1423 M478L
R607009	RH				E1422 M478R



EUCLID CAMSHAFT REPAIR KITS



Late Model Eaton Trailer Axle Brake Kit With "501" Series Brakes, & "ES" Brakes with "Long Life" Cam Support Bushings

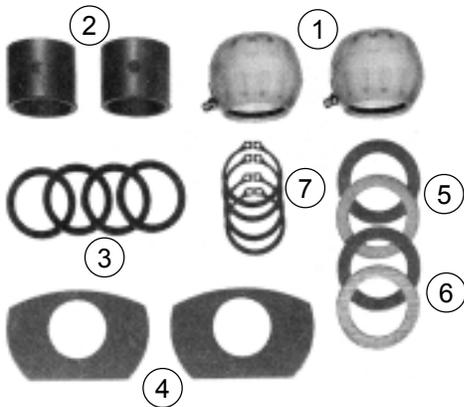
Interchange Info

MK18

Part No. E-2123

FLEETCRAFT
NL1226

Item	Qty.	Part No.	Description
1	2	E-536	Bushing
2	2	E-1385	Bushing
3	4	E-1416	Seal
4	8	E-580	Washer
5	2	E-1569	Lock Ring
6	2	E-526	Lock Ring

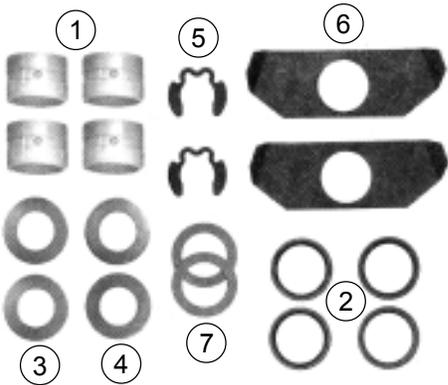


Dana Spicer 12-1/4" "U" Brake Cam Bushing Kit

R615014

Part No. E-5307

Item	Qty.	Part No.	Description
1	2	E-2102	Bushing
2	2	E-807	Bushing
3	4	E-1416A	Seal
4	2	E-2409	Washer
5	2	E-580	Washer
6	2	E-2404	Washer
7	4	E-526	Lock Ring

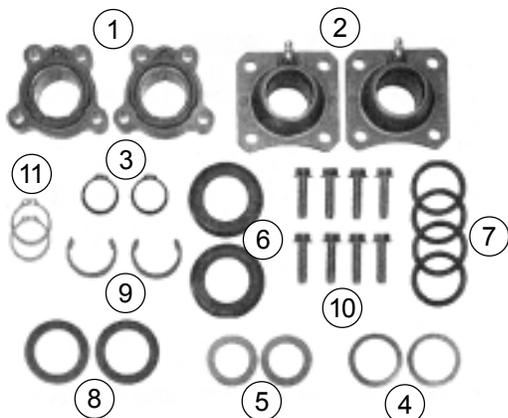


Eaton 15" & 16.5" ES Cam Bushing Kit

Eaton 127808
CQ65501
R615015

Part No. E-5501

Item	Qty.	Part No.	Description
1	4	E-536	Bushing
2	4	E-1416	Seal
3	2	E-1781	Washer
4	2	E-1782	Washer
5	2	E-3234	Lock Ring
6	2	E-5482	Washer
7	2	E-580	Washer



Rockwell "Q" & "Q PLUS" Trailer Axle Brakes with Fabricated Spider

FLEETCRAFT
NL1417
KIT8078A

Part No. E-9079HD

Item	Qty.	Part No.	Description
1	2	E-6076	Bushing
2	2	E-1318AHD	Support Assem.
3	2	E-5093	Lock Ring
4	2	E-1113	Washer
5	2	E-564	Washer
6	2	E-6077	Outer Washer
7	4	E-2405	Seal
8	2	E-9072	Inner Washer
9	2	E-9077	Lock Ring
10	8	Attaching Screws	
11	2	E-801	Lock Ring

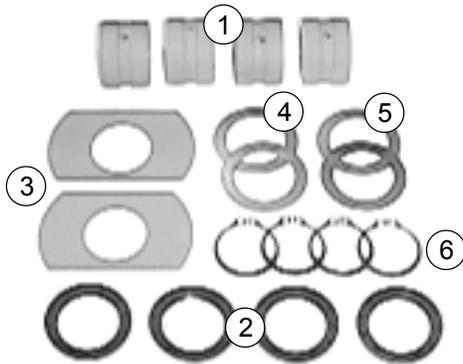


EUCLID / ARVIN MERITOR CAMSHAFT REPAIR KITS

	<p>Late Model Rockwell 4000-6000 Series Trailer Axles</p> <p>Part No. E-3520AHD</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Qty.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td><td>E-564</td><td>Washer</td></tr> <tr><td>2</td><td>2</td><td>E-1318AHD</td><td>Support Assem.</td></tr> <tr><td>3</td><td>2</td><td>E-801</td><td>Lock Ring</td></tr> <tr><td>4</td><td>2</td><td>E-2405</td><td>Seal</td></tr> <tr><td>5</td><td>2</td><td>E-2406</td><td>Seal</td></tr> <tr><td>6</td><td>2</td><td>E-2407</td><td>Outer Bushing</td></tr> <tr><td>7</td><td>2</td><td>E-2408</td><td>Inner Bushing</td></tr> <tr><td>8</td><td>2</td><td>E-1569</td><td>Lock Ring</td></tr> <tr><td>9</td><td>2</td><td>E-1113</td><td>Washer</td></tr> <tr><td>10</td><td>4</td><td>E-2411A</td><td>Washer</td></tr> <tr><td>11</td><td>2</td><td>E-5093</td><td>Lock Ring</td></tr> </tbody> </table>	Item	Qty.	Part No.	Description	1	2	E-564	Washer	2	2	E-1318AHD	Support Assem.	3	2	E-801	Lock Ring	4	2	E-2405	Seal	5	2	E-2406	Seal	6	2	E-2407	Outer Bushing	7	2	E-2408	Inner Bushing	8	2	E-1569	Lock Ring	9	2	E-1113	Washer	10	4	E-2411A	Washer	11	2	E-5093	Lock Ring	<p>Interchange Info</p> <p>KIT8048</p> <p>-For 2 Brakes!</p>
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10	4	E-2411A	Washer																																															
11	2	E-5093	Lock Ring																																															
	<p>Dana Spicer 16-1/2" Brake With 1-5/8" Cam Journal</p> <p>Part No. E-9790A</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Qty.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>2</td><td>E-9789</td><td>Bronze Bushing</td></tr> <tr><td>2</td><td>2</td><td>E-9792</td><td>Bushing</td></tr> <tr><td>3</td><td>4</td><td>E-2405</td><td>Seal</td></tr> <tr><td>4</td><td>2</td><td>E-526</td><td>Lock Ring</td></tr> <tr><td>5</td><td>2</td><td>E-801</td><td>Lock Ring</td></tr> <tr><td>6</td><td>2</td><td>E-719</td><td>Washer</td></tr> <tr><td>7</td><td>2</td><td>E-580</td><td>Washer</td></tr> <tr><td>8</td><td>4</td><td>E-1113</td><td>Washer</td></tr> <tr><td>9</td><td>2</td><td>E-2409</td><td>Washer</td></tr> </tbody> </table>	Item	Qty.	Part No.	Description	1	2	E-9789	Bronze Bushing	2	2	E-9792	Bushing	3	4	E-2405	Seal	4	2	E-526	Lock Ring	5	2	E-801	Lock Ring	6	2	E-719	Washer	7	2	E-580	Washer	8	4	E-1113	Washer	9	2	E-2409	Washer	<p>08-132800 R615019</p>								
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9	2	E-2409	Washer																																															
	<p>Meritor 16-1/2" "Q" Brake for bolt on bushing</p> <p>Part No. KIT8289</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Qty.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>A-3105-L-1078</td><td>Retainer Bushing</td></tr> <tr><td>2</td><td>2</td><td>1205-Q-2123</td><td>Seal</td></tr> <tr><td>3</td><td>1</td><td>1229-R-4100</td><td>Outer Washer</td></tr> <tr><td>4</td><td>1</td><td>1229-S-4101</td><td>Inner Washer</td></tr> <tr><td>5</td><td>1</td><td>1229-T-4102</td><td>Snap Ring</td></tr> <tr><td>6</td><td>4</td><td>10-X-1421</td><td>Screw</td></tr> </tbody> </table>	Item	Qty.	Part No.	Description	1	1	A-3105-L-1078	Retainer Bushing	2	2	1205-Q-2123	Seal	3	1	1229-R-4100	Outer Washer	4	1	1229-S-4101	Inner Washer	5	1	1229-T-4102	Snap Ring	6	4	10-X-1421	Screw	<p>E6078</p> <p>MK90</p>																				
Item	Qty.	Part No.	Description																																															
1	1	A-3105-L-1078	Retainer Bushing																																															
2	2	1205-Q-2123	Seal																																															
3	1	1229-R-4100	Outer Washer																																															
4	1	1229-S-4101	Inner Washer																																															
5	1	1229-T-4102	Snap Ring																																															
6	4	10-X-1421	Screw																																															
	<p>Meritor 16-1/2" "P" & "Q" Brakes</p> <p>Part No. KIT8058</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Qty.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>4</td><td>1229-X-3118</td><td>Washer</td></tr> <tr><td>2</td><td>2</td><td>1229-A-4135</td><td>Washer</td></tr> <tr><td>3</td><td>4</td><td>1205-Q-2123</td><td>Seal</td></tr> <tr><td>4</td><td>2</td><td>1225-N-1158</td><td>Camshaft Bushing</td></tr> <tr><td>5</td><td>2</td><td>1229-C-4137</td><td>Spacer Washer</td></tr> <tr><td>6</td><td>2</td><td>1229-B-4136</td><td>Flat Washer</td></tr> <tr><td>7</td><td>2</td><td>1229-D-3124</td><td>Snap Ring</td></tr> <tr><td>8</td><td>2</td><td>1229-T-4102</td><td>Snap Ring</td></tr> <tr><td>9</td><td>2</td><td>A-3105-V-282</td><td>Retainer Washer</td></tr> <tr><td>10</td><td>4</td><td>1229-B-1848</td><td>Washer</td></tr> <tr><td>11</td><td>2</td><td>1229-X-1116</td><td>Snap Ring</td></tr> </tbody> </table>	Item	Qty.	Part No.	Description	1	4	1229-X-3118	Washer	2	2	1229-A-4135	Washer	3	4	1205-Q-2123	Seal	4	2	1225-N-1158	Camshaft Bushing	5	2	1229-C-4137	Spacer Washer	6	2	1229-B-4136	Flat Washer	7	2	1229-D-3124	Snap Ring	8	2	1229-T-4102	Snap Ring	9	2	A-3105-V-282	Retainer Washer	10	4	1229-B-1848	Washer	11	2	1229-X-1116	Snap Ring	<p>E3989 E9078HD</p> <p>-For 2 Brakes! -Metal Bushings.</p>
Item	Qty.	Part No.	Description																																															
1	4	1229-X-3118	Washer																																															
2	2	1229-A-4135	Washer																																															
3	4	1205-Q-2123	Seal																																															
4	2	1225-N-1158	Camshaft Bushing																																															
5	2	1229-C-4137	Spacer Washer																																															
6	2	1229-B-4136	Flat Washer																																															
7	2	1229-D-3124	Snap Ring																																															
8	2	1229-T-4102	Snap Ring																																															
9	2	A-3105-V-282	Retainer Washer																																															
10	4	1229-B-1848	Washer																																															
11	2	1229-X-1116	Snap Ring																																															



FLEETCRAFT CAMSHAFT REPAIR KITS



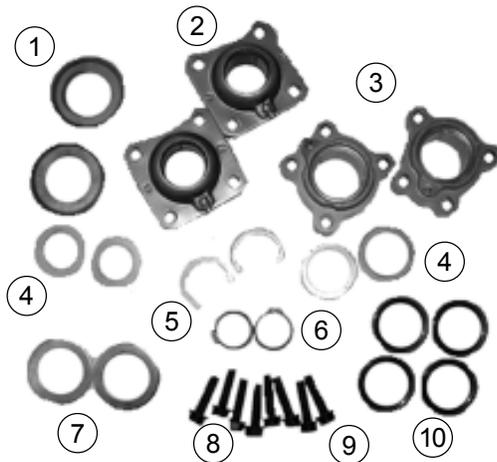
**Rockwell Early "P" Series
16-1/2" Diameter Brakes**

Fleetcraft No. NL1225

Item	Qty	Part No.	Description
1	4	NL1134	Bushing
2	4	NL1234	Seal
3	2	NL1252	"D" Washer
4	2	NL1257	Spacer Washer
5	2	NL1258	Spacer Washer
6	2	NL1217	Lock Ring

Interchange Info

MK17
E2086B
08-1302

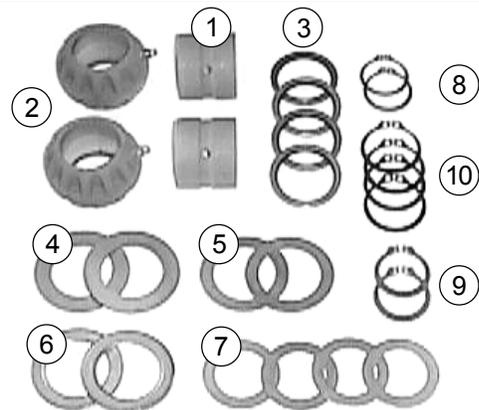


Rockwell Late Trailer with Fabricated Spider

Part No. NL1417

Item	Qty.	Part No.	Description
1	2	1229-R-4100	Outer Washer
2	2	A-3105-V-282	Retainer Bushing
3	2	A-3105-L-1078	Retainer Bushing
4	4	1229-B-1848	Washer
5	2	1229-T-4102	Snap Ring
6	2	1229-X-1116	Snap Ring
7	2	1229-S-4101	Inner Bushing
8	4	10-X-1348	Self Tapping Screw
9	4	10-X-1421	Screw
10	4	1205-Q-2123	Seal

MK88
E9079HD
KIT8078A

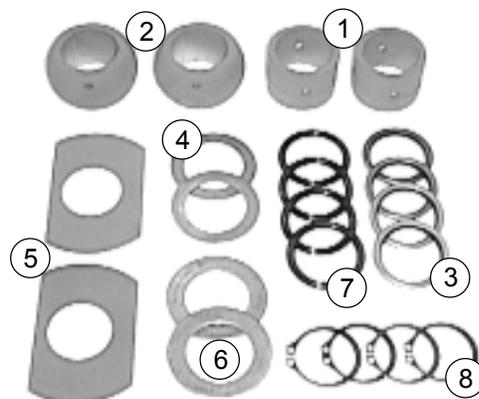


16-1/2" Diameter Brakes, Weld-On Spider

Fleetcraft No. NL1238

Item	Qty.	Part No.	Description
1	2	NL1135	Spider Bushing
2	2	NL1138	Support Bushing
3	4	NL1235	Seal
4	2	NL1255	Spacer Washer
5	2	NL1258	Spacer Washer
6	2	NL1259	Spacer Washer
7	4	NL1250	Washer
8	2	NL1205	Lock Ring
9	2	NL1266	Lock Ring
10	4	NL1217	Lock Ring

MK24
E2287
08-1321
R615008



**Spicer Model With Spherical Cam Bushing
16-1/2" Diameter Brakes**

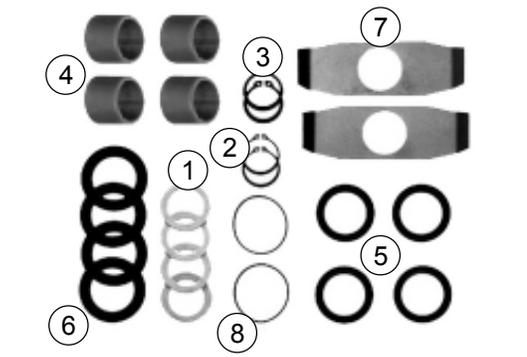
Fleetcraft No. NL1281

Item	Qty.	Part No.	Description
1	2	NL1135	Spider Bushing
2	2	NL1167	Support Bushing
3	4	NL1235	Seal
4	2	NL1258	Spacer Washer
5	2	NL1252	"D" Washer
6	2	NL1255	Spacer Washer
7	4	NL1109	"O" Ring
8	4	NL1217	Lock Ring

MK64
E2680
08-1325



CAMSHAFT REPAIR KITS



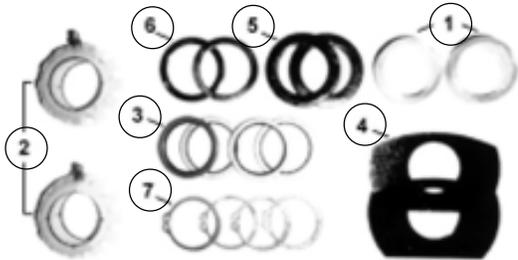
For Meritor 15" and 16-1/2" Drive Axle "Q" and "Q+" brakes

Part No. E-3993B

Item	Qty.	Part No.	Description
1	4	E-1113	Washer
2	2	E-801	Lock Ring
3	2	E-5093	Lock Ring
4	4	E-5512	Bushing
5	4	E-654	Seal
6	4	E-3479	Spacer Washer
7	2	E-3478	Wear Washer
8	2	E-3859	Seal

Interchange / Info

Contains E-3859 rubber camshaft support gasket. Also, new style E-5512 spider bushing, and lock rings for camshafts with narrow or wide grooves.



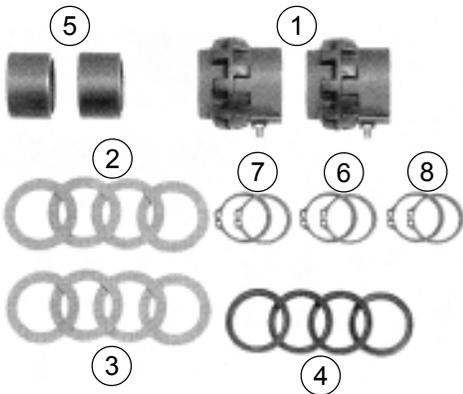
Dana Spicer "XL" "XTRALIFE" 16-1/2" Diameter Brakes

Part No. 43-7033

Item	Qty.	Part No.	Description
1	2	28-1232	Spider Bushing (NL1127)
2	2	27-1195	Bracket Bushing (NL1138)
3	4	29-1269	Spider Seal (NL1235)
4	2	29-1319	Washer (E2404)
5	2	29-1326	Washer (NL1768)
6	2	29-1309	Washer
7	4	29-1301	Lock Ring (NL1217)

M16KY202
E2469
R615010

If retrofitting to "XL" brakes, all cams should be the same to achieve balanced braking.

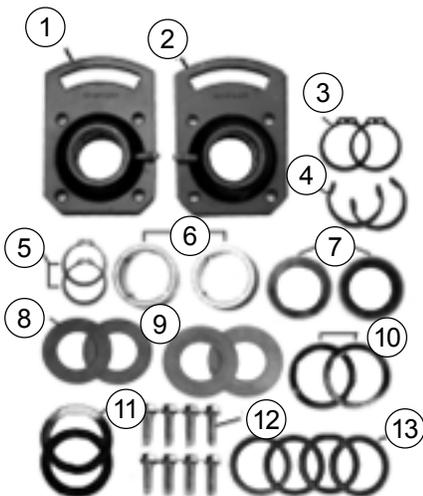


Late Model Eaton Trailer Axles

Part No. E-2696A

Item	Qty.	Part No.	Description
1	2	E-2695	Bushing
2	4	E-1565	Washer
3	4	E-580	Washer
4	4	E-2405	Seal
5	2	E-2690A	Bushing
6	2	E-1569	Lock Ring
7	2	E-526	Lock Ring
8	2	E-801	Lock Ring

Eaton
1008347



Spicer Bronze Bushing Cam Kit

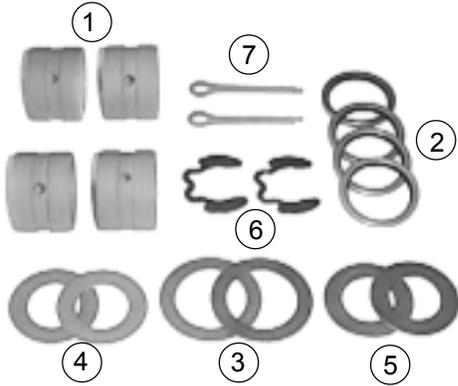
Part No. 43-7118

Item No.	Spicer No.	Description	Qty.
1	30-1341L	Cam Bracket Assembly-L	1
2	30-1341R	Cam Bracket Assembly-R	1
3	29-1301	Camshaft Lockring	2
4	29-1324	Camshaft Lockring	2
5	34-1525	Camshaft Lockring	2
6	28-1242	Camshaft Spider Bushing	2
7	29-1361	Camshaft Washer	2
8	29-1362	Camshaft Washer	2
9	29-1363	Camshaft Washer	2
10	29-1364	Camshaft Washer	2
11	34-1600	Camshaft Washer	2
12	34-1567	Self Tapping Screw	8
13	29-1271	Spider Seal	4

E-9790A



FLEETCRAFT CAM REPAIR KITS



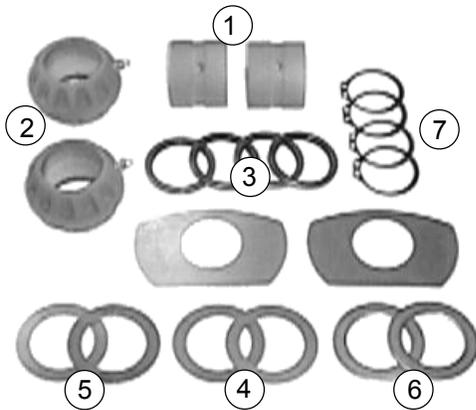
**Eaton Self-Contained Drive Axle
16-1/2" Diameter Brakes**

Fleetcraft No. NL1227

Item	Qty.	Part No.	Description
1	4	NL1134	Spider Bushing
2	4	NL1235	Seal
3	2	NL1258	Washer
4	2	NL1262	Washer
5	2	NL1261	Washer
6	2	NL1744	Lock Ring
7	2	NL1464	Cotter Pin

Interchange Info

Eaton 6-2259
MK19
E2125
08-1351
R615002

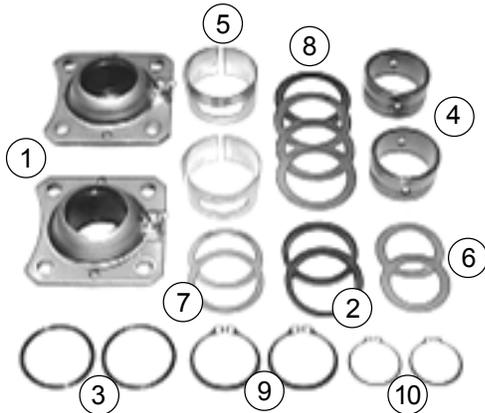


**Standard Forge, Late Models
12-1/4" Diameter Brakes, Fabricated Shoes**

Fleetcraft No. NL1240

Item	Qty	Part No.	Description
1	2	NL1135	Spider Bushing
2	2	NL1138	Support Bushing
3	4	NL1235	Seal
4	4	NL1258	Spacer Washer
5	2	NL1253	Spacer Washer
6	2	NL1259	Spacer Washer
7	4	NL1217	Lock Ring

MK26
E2469
08-1323
R615010



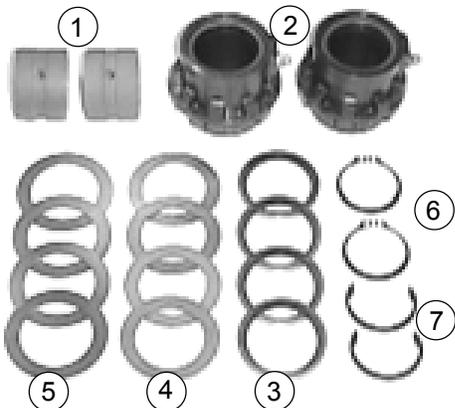
**Rockwell 4000-6000 Trailer Axles
12-1/4" and 16-1/2" Diameter Brakes**

Fleetcraft No. NL1280

Item	Qty.	Part No.	Description
1	2	NL1179	Support Bracket
2	2	NL1153	Seal
3	2	NL1156	"O" Ring Seal
4	2	NL1154	Inner Bushing
5	2	NL1155	Outer Bushing
6	2	NL1260	Spacer Washer
7	2	NL1250	Spacer Washer
8	4	NL1263	Spacer Washer
9	2	NL1210	Lock Ring
10	2	NL1205	Lock Ring

KIT 8048
MK61
E3520
E3520A

Same as
NL1224 except
2 NL1179
support ass'ys
replace
2 NL1108
bushings



**Eaton Axle With "501" Series
16-1/2" Diameter Brakes**

Fleetcraft No. NL1277

Item	Qty	Part No.	Description
1	2	NL1125	Spider Bushing
2	2	NL1126	Support Bushing
3	4	NL1169	Seal
4	4	NL1258	Spacer Washer
5	4	NL1256	Spacer Washer
6	2	NL1217	Lock Ring
7	2	NL1213	Lock Ring

MK63
E2696A
08-1364
R615004



FLEETCRAFT CAM REPAIR KITS



**Rockwell 16-1/2" Diameter Brakes
Late "P" Series Trailer Axles**

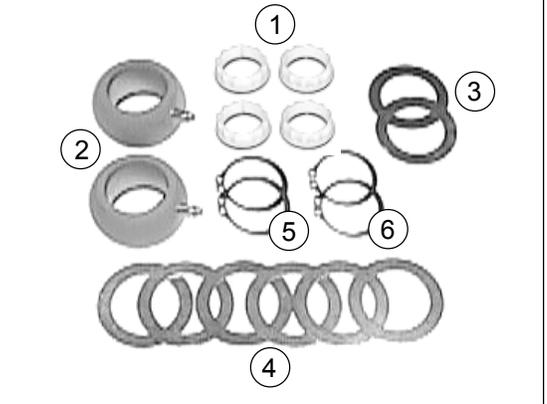
Fleetcraft No. NL1222

Item	Qty.	Part No.	Description
1	2	NL1179	Support Assembly
2	2	NL1235	Spider Seal
3	2	NL1149	Cam Seal
4	2	NL1151	Inner Bushing
5	2	NL1150	Outer Bushing
6	6	NL1260	Spacer Washer
7	4	NL1217	Lock Ring

Interchange Info

MK14
E2088
08-1301

Support assembly
NL1179 replaces
NL1108 bushings

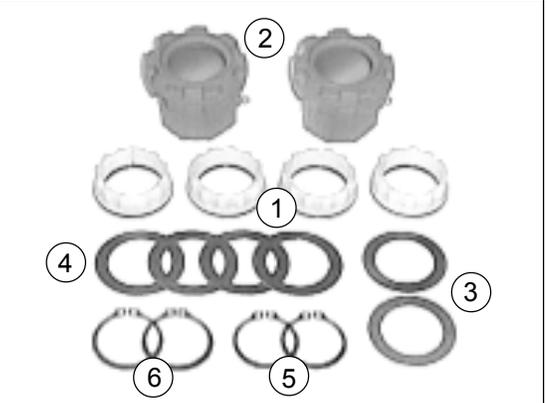


**Fruehauf Late Pro-Par Axles
Late Pro-Par Axles - 12-1/4" and 16-1/2" Dia.**

Fleetcraft No. NL1228

Item	Qty.	Part No.	Description
1	4	NL1141	Spider Bushing
2	2	NL1137	Support Bushing
3	2	NL1258	Spacer Washer
4	6	NL1256	Spacer Washer
5	2	NL1217	Lock Ring
6	2	NL1210	Lock Ring

MK20
E2090
08-1331
R615005

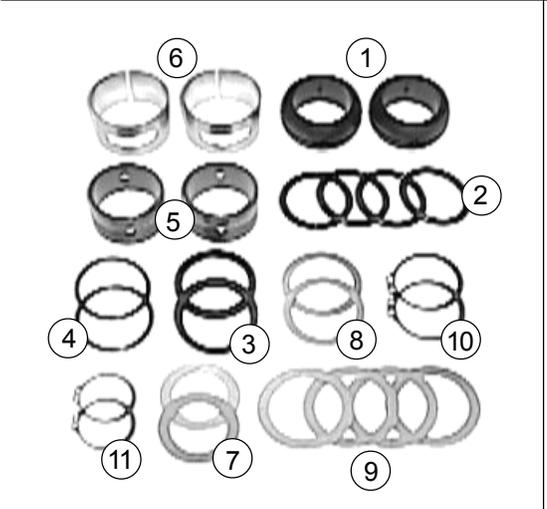


**Fruehauf Early Pro-Par Axles
12-1/4" and 16-1/2" Diameter**

Fleetcraft No. NL1236

Item	Qty.	Part No.	Description
1	4	NL1141	Spider Bushing
2	2	NL1144	Support Bushing
3	2	NL1258	Spacer Washer
4	4	NL1256	Spacer Washer
5	2	NL1217	Lock Ring
6	2	NL1210	Lock Ring

MK21
E2122
08-1330
R615006



**Rockwell 4000-6000 Trailer Axles
12-1/4" and 16-1/2" Diameter Brakes**

Fleetcraft No. NL1224

Item	Qty.	Part No.	Description
1	2	NL1108	Bushing
2	4	NL1109	"O" Ring
3	2	NL1153	Seal
4	2	NL1156	"O" Ring Seal
5	2	NL1154	Inner Bushing
6	2	NL1155	Outer Bushing
7	2	NL1260	Spacer Washer
8	2	NL1250	Spacer Washer
9	4	NL1263	Spacer Washer
10	2	NL1210	Lock Ring
11	2	NL1205	Lock Ring

MK16
E2382
08-1306



HENDRICKSON CAMSHAFT REPAIR KITS



S Cam Major Kit Intraxx, 1-1/2"
1 kit per axle before 11/24/97
Part No. S21181

Qty.	Description
2	Spide retaining ring
2	Spline Retaining Ring
4	S Cam journal washer
2	Spider camshaft bushing
2	Outer s-cam washer
2	S-cam support bushing assembly
4	Spider seal
6	Spindle Inner washer
2	Roller Retainer

Interchange Info

E9791HD
R615022



S Cam Major Kit Intraax, 1-5/8"
1 kit per axle for S24636-1 camshaft
Part No. S23974

Qty.	Description
2	Spide retaining ring
2	Spline Retaining Ring
4	S Cam journal washer
2	Spider camshaft bushing
2	Outer s-cam washer
2	S-cam support bushing assembly
4	Spider seal
6	Spindle Inner washer
2	Roller Retainer

E11450HD
R615024



Service kit. Cam Tube. 16.5" brake
Part No. S28890

AAT—23K, 25K, 30K, AAEDT 30K AND AANT 23K PARTS LIST

