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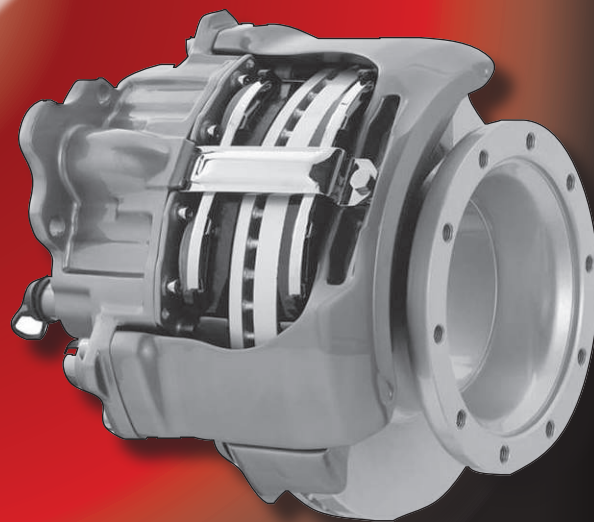
Vol. 23/1

Precision Tools &
Components for
Heavy Duty
Vehicle Brake
Systems



Your DISC AND S-CAM BRAKE Specialists

From the name you trust
in heavy duty brake
system applications,
Fraser Gauge is the
specialist providing
proven components and
training to meet your
systems maintenance
and purchasing needs



***Precision Instruments
for Heavy Vehicle
Brake Systems***



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If You're Not Using Fraser Gauge, What's Stopping You?

FRASER GAUGE DISC BRAKE CENTER



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THE USE OF IMPACT SCREWDRIVERS/IMPACT WRENCHES IN CONJUNCTION WITH FRASER SERVICE TOOLS FOR AIR DISC BRAKE IS NOT PERMITTED. THE SERVICE TOOLS ARE NOT DESIGNED FOR SUCH USE.

ATTENTION: RISK OF INJURY : FRASER ACCEPTS NO LIABILITY FOR DAMAGE OR INJURY RESULTING FROM NEGLIGENCE, AND DAMAGE TO SERVICE TOOLS FROM SUCH ACTIONS WILL VOID ALL WARRANTY



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Highly recognizable Fraser Gauge packaging assures the customer they're getting quality Fraser products

"Fraser Gauge is a manufacturer and supplier of brake components and related tools and gauges. Fraser markets their parts under the Fraser name and part number. Identification numbers/description/model numbers are used for identification only and does not indicate that the parts sold are of OEM origin."



Disc Brake Tools and Components

Knorr-Bendix Brake Systems Tools

Item	Description
.....	Bendix Knorr Complete Tool Kit

Z039062K50 KNORR/BENDIX DISC BRAKE TOOL KIT
FOR BENDIX/KNORR SN6, SN7, ADB225, SB6, SB7

APPLICATION:
TRANSIT BUS DISC BRAKE MAINTENANCE



Other Available Tool Kits

PART NO	DESCRIPTION	CONSISTING OF TOOL COMPONENTS
F-KII32202	WEDGE FORK FOR REMOVAL AND BOOT ASSEMBLY	T15
F-KZ004357	PULL IN TOOL FOR INNER BOOT	T07,T08,T10
F-KZ004354	PULL IN PULL OUT TOOL INCLUDING GROOVING TOOL FOR BRASS BUSHING	T08,T12,T13,T14
F-K046290	PRESS-IN TOOL FOR TAPPET AND BOOT ASSEMBLY	T02,T03,T04,T28.T55,T56
F-K015825	PRESS IN TOOL FOR COVER	T26
F-Z004361	PRESS IN TOOL FOR INNER SEAL	T03,T04,T09
F-K016743	PRESS IN /PULL OUT TOOL FOR RUBBER BUSH	T27
F-K005986	PULL IN/PULL OUT TOOL FOR GUIDE SLEEVE	T05,T06,T08,T14,T20,T21
F-Z004198	PULL-IN/PULL OUT TOOL FOR RUBBER BUSH	T05,T06,T18,T19,T20,T21,T22

Item	Description
F-27MMDBW	Disc Brake Torque Wrench Extension



THE DISC BRAKE CALIPER TORQUE WRENCH EXTENSION ALLOWS YOUR MECHANICS TO PROPERLY TORQUE DISC BRAKE CALIPER BOLTS TO THE TORQUE PLATE. THIS WRENCH ALLOWS ACCESS TO MOUNTING BOLTS LOCATED ON THE REAR AXLE THAT WOULD BE OTHERWISE INACCESSIBLE DUE TO THE CLOSE PROXIMITY OF THE AIR RIDE BEAM. THE WRENCH DESIGNED TO BE USED WITH ALL 3/4 INCH DRIVE TORQUE WRENCHES AND IS OXIDE FINISHED TO ENHANCE DURABILITY.



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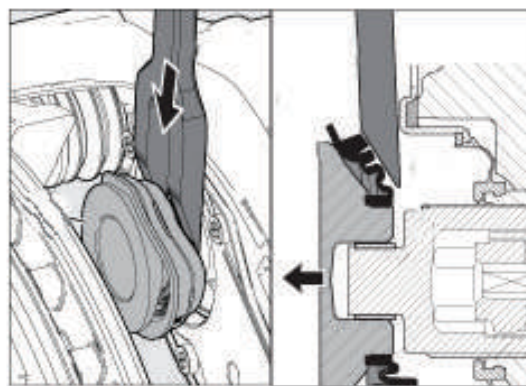
Tools

Knorr-Bendix Brake Systems Tools

Item	Description
F-II32202	Wedge - Fork, For removal of Tappet and boot assemblies - Tool T15



REMOVES



Item	Description
F-Z004515	Press In Tool for Cover, Tool T2, T25



INSTALLS



Item	Description
F-Z004917	Press In Tool for Cover, Tool T2, T17



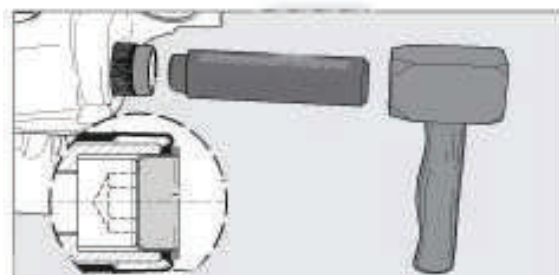
INSTALLS



Item	Description
F-Z003934	Cap Installer, Tool T11



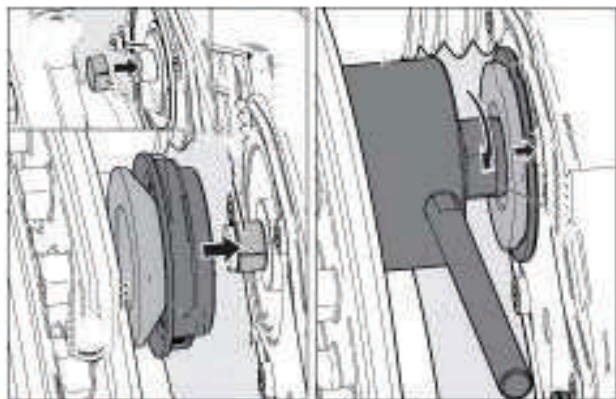
INSTALLS



Tools

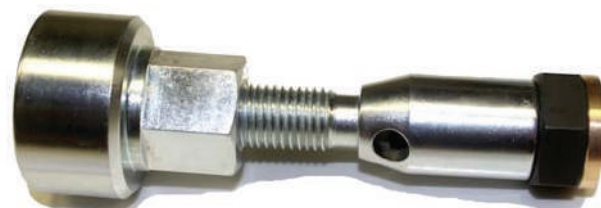
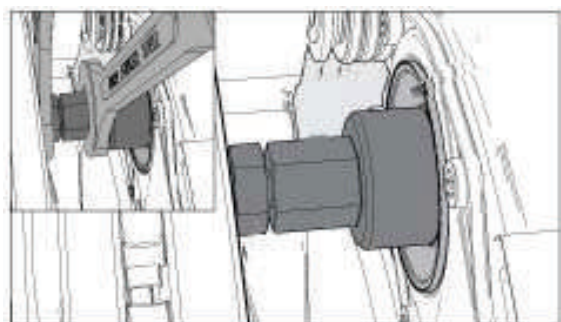
Knorr-Bendix Brake Systems Tools

Item	Description
F-K046290	Press In Tool for Tappet and Boot Assembly - Tools T1, T2, T3, T4, T24



INSTALLS

Item	Description
F-Z004361	Press In Tool for Inner Seal - Tools T3, T4, T9 (Off Vehicle Installation Only) Tools T3, T9 (On Vehicle Installation Only)



INSTALLS

Item	Description
F-K010604	Tappet, Boot, and Inner Seal Kit (74 mm) SB7and SB6
F-K010603	Tappet, Boot, and Inner Seal Kit (69mm) SN7 and SN6



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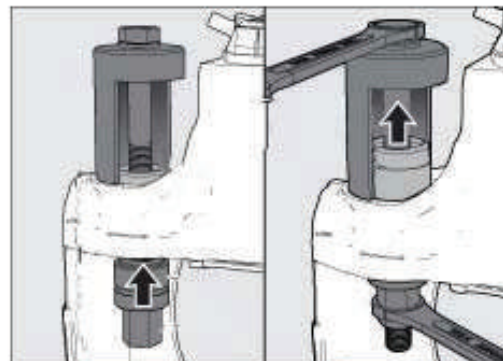
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Knorr-Bendix Brake Systems Tools

Item	Description
F-K05986-1	Guide Sleeve Removal Tool T14, T20, T21 For Guide Sleeve 6C



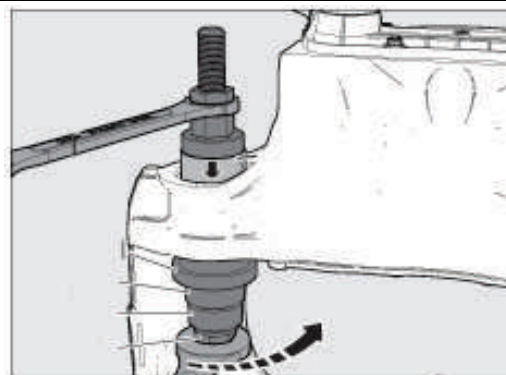
REMOVES



Item	Description
F-K05986-2	Guide Sleeve Installation Tool T5, T6, T8, T14, T20 For Guide Sleeve 6C



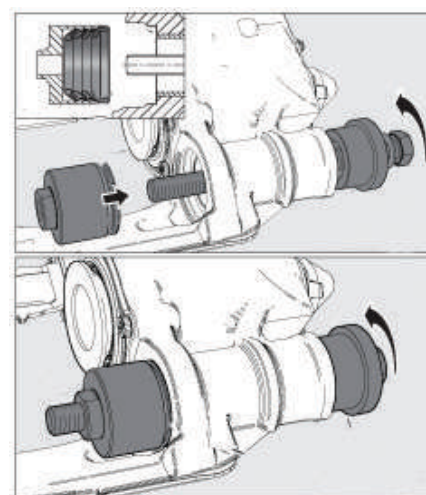
INSTALLS



Item	Description
F-K004357	Pull In Tool for Slide Pin Boot T6, T7, T8, T10

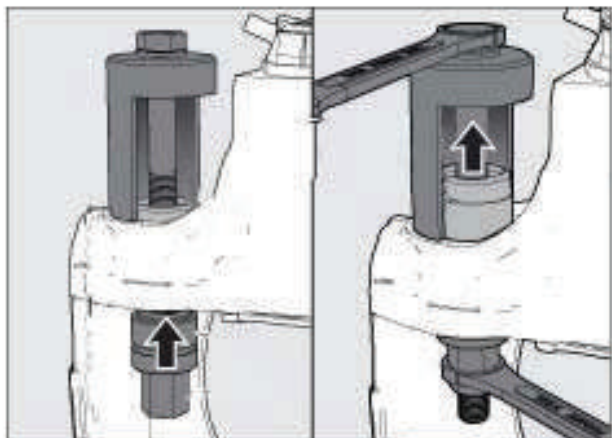


INSTALLS



Knorr-Bendix Brake Systems Tools

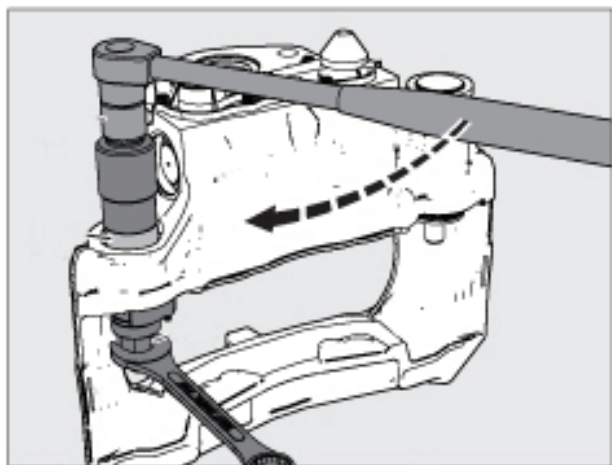
Item	Description
F-K04198-1	Guide Sleeve Removal Tool T5,T6, T20, T21, T22 For Guide Sleeve 6A and B



REMOVES



Item	Description
F-K04198-2	Guide Sleeve Removal Tool T16, T18, T20, T22 For Guide Sleeve 6A and B



INSTALLS

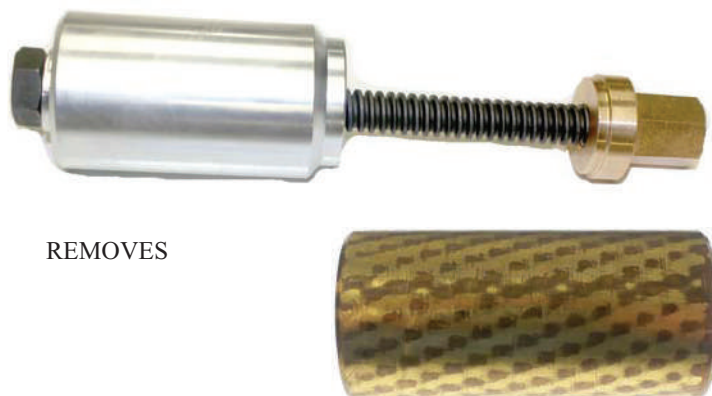


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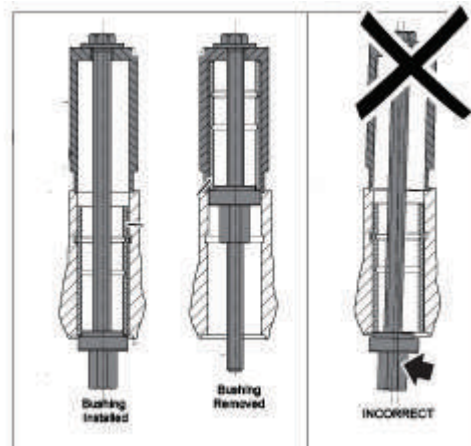
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Knorr-Bendix Brake Systems Tools

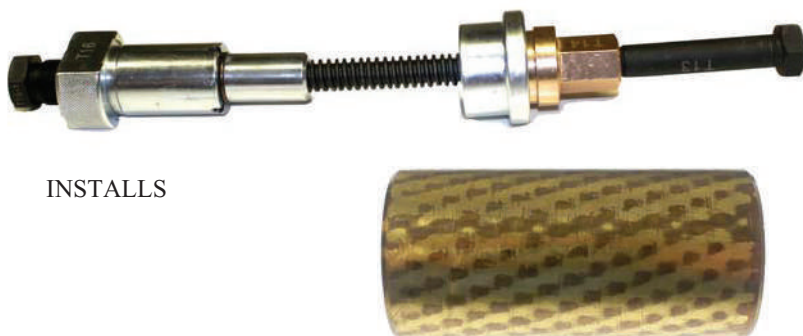
Item	Description
F-K004354-1	Brass Bushing Removal Tool - Tools T8, T12, T13, T14



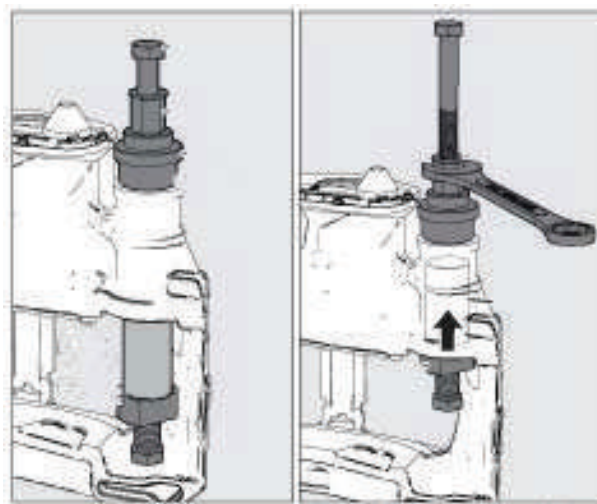
REMOVES



Item	Description
F-Z004354-2	Brass Bushing Installation Tool - Tools T8, T13, T14, T16

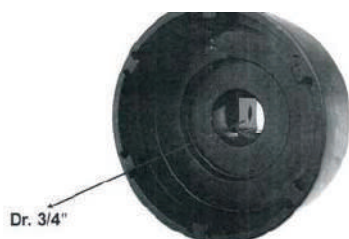


INSTALLS

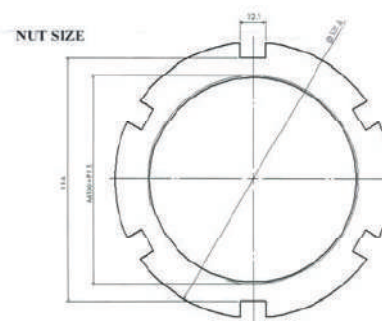
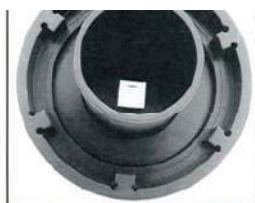


Knorr-Bendix Brake Systems Tools

Item	Description
F-A1328	Front Wheel Axle Nut Socket



Item	Description
F-A1329	Rear Wheel Axle Nut Socket



Item	Description
F-A5800	Extension Tube for Protection of axle threads while removing the Hub Assembly



Disc Brake Kits - Knorr-Bendix

PREVENTATIVE MAINTENANCE KITS

F-K000375

SB Caliper Repair Kit

Knorr #	Fraser #	Description	Qty
K000375	F-K1911	Pin, Slide Pin 36 x 114mm	1
K000375	F-K5121	Bolt, Slide Pin M16 x 1.5 x 87mm	1
K000375	F-K0211	Slide Pin Short, 32x80mm	1
K000375	F-K7121	Bolt, Slide Pin M16 x 1.5 x 80mm	1
K000375	F-K1421	Bushing, Long 36x40/80mm	1
K000375	F-K0151	Cap, Slide Pin	1
K000375	F-K7131	Boot, Slide Pin	1
K000375	F-K3291	Bushing, Rubber 39mm	1
K000375	F-K2241	Ring, Slide Pin Boot	1
K000375	F-K8051	Ring, Slide Pin Boot	1
K000375	F-K4291	O-Ring, Cap	1
K000375	F-68966091Z	Grease	1



Use Master Tool Kit— F-MTK-CRKA
Includes Tools: F-Z004515, F-Z003934,
F-K004357, F-K04198-1, F-K04198-2,
F-K004354-1, and F-K004354-2

F-K00472

SN Caliper Repair Kit

Knorr #	Fraser #	Description	Qty
K000472	F-K9111	Pin, Slide Long 36x114mm	1
K000472	F-K5121	Bolt, Slide Pin M16 x 1.5 x 87mm	1
K000472	F-K0211	Slide Pin Short, 32x80mm	1
K000472	F-K7121	Bolt, Slide Pin M16 x 1.5 x 80mm	1
K000472	F-K1421	Bushing, Long 36x40/80mm	1
K000472	F-K9051	Cap, Slide Pin 40 x 11mm	1
K000472	F-K7131	Boot, Slide Pin	1
K000472	F-K3291	Bushing, Rubber 39mm	1
K000472	F-K2241	Ring, Slide Pin Boot	1
K000472	F-K8051	Ring, Slide Pin Boot	1
K000472	F-68966091Z	Grease	1



Use Master Tool Kit— F-MTK-CRKA
Includes Tools: F-Z004515, F-Z003934,
F-K004357, F-K04198-1, F-K04198-2,
F-K004354-1, and F-K004354-2



Disc Brake Kits - Knorr-Bendix

PREVENTATIVE MAINTENANCE KITS

F-K048371K50

SB Caliper Repair Kit

Knorr #	Fraser #	Description	Qty
K048371K50	F-K9111	Pin, Slide 36/114mm	1
K048371K50	F-K5121	Bolt, Slide Pin M16 x 1.5 /87mm	1
K048371K50	F-K0211	Pin, Slide 32 /80mm	1
K048371K50	F-K7121	Bolt, Slide Pin M16 x 1.5 /80mm	1
K048371K50	F-K0151	Cap, Steel	1
K048371K50	F-K7131	Boot, Slide Pin	1
K048371K50	F-K5291	Bushing, Slide Pin 39mm	1
K048371K50	F-K2241	Ring, Boot	1
K048371K50	F-K4291	O Ring, Cap	1
K048371K50	F-68966091Z	Grease	1



Use Master Tool Kit— F-MTK-CRKA
Includes Tools: F-Z004515, F-Z003934,
F-K004357, F-K04198-1, F-K04198-2,
F-K004354-1, and F-K004354-2

F-K067417K50

SB Caliper Repair Kit

Knorr #	Fraser #	Description	Qty
K067417K50	F-K1911	Pin, Slide Pin 36 x 114mm	1
K067417K50	F-K5121	Bolt, Slide Pin M16 x 1.5 x 87mm	1
K067417K50	F-K0211	Slide Pin Short, 32x80mm	1
K067417K50	F-K7121	Bolt, Slide Pin M16 x 1.5 x 80mm	1
K067417K50	F-K1421	Bushing, Long 36x40/80mm	1
K067417K50	F-K0151	Cap, Slide Pin	1
K067417K50	F-K7131	Boot, Slide Pin	1
K067417K50	F-K3291	Bushing, Rubber 39mm	1
K067417K50	F-K2241	Ring, Slide Pin Boot	1
K067417K50	F-K8051	Ring, Slide Pin Boot	1
K067417K50	F-K4291	O-Ring, Cap	1
K067417K50	F-68966091Z	Grease	1
K067417K50	F-9051	Cap 040/11mm	1



Use Master Tool Kit— F-MTK-CRKA
Includes Tools: F-Z004515, F-Z003934,
F-K004357, F-K04198-1, F-K04198-2,
F-K004354-1, and F-K004354-2



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Disc Brake Kits - Knorr-Bendix

PREVENTATIVE MAINTENANCE KITS

F-K00195 SB Caliper Repair Kit

Knorr #	Fraser #	Description	Qty
K001915	F-K9111	Pin, Slide 36 /114	1
K001915	F-K5121	Bolt, Slide Pin M16 x 1.5 /87mm	1
K001915	F-K0211	Pin, Slide 32/80mm	1
K001915	F-K7121	Bolt, Slide Pin M16 1.5 / 80mm	1
K001915	F-K1241	Bushing, Slide Pin 36x40	1
K001915	F-K9051	Cap, Slide Pin 40 /11	1
K001915	F-K7131	Boot,Slide Pin	1
K001915	F-K5291	Bushing 39mm	1
K001915	F-K2241	Ring, Boot	1
K001915	F-K8051	Ring, Bushing	1
K001915	F-68966091Z	Grease	1



Use Master Tool Kit— F-MTK-CRKA
Includes Tools: F-Z004515, F-Z003934,
F-K004357, F-K04198-1, F-K04198-2,
F-K004354-1, and F-K004354-2

F-K010603 Tappet Repair Kit 69MM

Item	Description	Quantity
N/A	Tappet Thrust Bellow 69MM	2
N/A	Shaft Body Dust Cover—Rubber	2
N/A	Tappet Bushing 18X16X10MM	2



F-K010604 Tappet Repair Kit 74MM

Item	Description	Quantity
N/A	Tappet Thrust Bellow 74MM	2
N/A	Shaft Body Dust Cover—Rubber	2
N/A	Tappet Bushing 18X16X10MM	2

Use Master Tool Kit— F-MTK-TRK
Includes Tools: F-K042690 and F-Z004361

F-K85100Z Shear Adapter Kit

Item	Description	Quantity
N/A	Shear Adapter Kit	10



Meritor Tools

EX 225 MAINTENANCE TOOLS

Item	Description
F-30MMDBW	Disc Brake Torque Wrench Extension



THE DISC BRAKE CALIPER TORQUE WRENCH EXTENSION ALLOWS YOUR MECHANICS TO PROPERLY TORQUE MERITOR DISC BRAKE CALIPER BOLTS TO THE TORQUE PLATE. THIS WRENCH ALLOWS ACCESS TO MOUNTING BOLTS LOCATED ON THE REAR AXLE THAT WOULD BE OTHERWISE INACCESSIBLE DUE TO THE CLOSE PROXIMITY OF THE AIR RIDE BEAM. THE WRENCH DESIGNED TO BE USED WITH ALL 3/4 INCH DRIVE TORQUE WRENCHES AND IS OXIDE FINISHED TO ENHANCE DURABILITY.

Item	Description
F-MST1000	Complete Bushing and Retaining Ring Installation Kit

F-MST1000 Complete Bushing Installation Kit For Meritor EX225 Calipers



Tool Use for Retaining Ring - F-1000-4

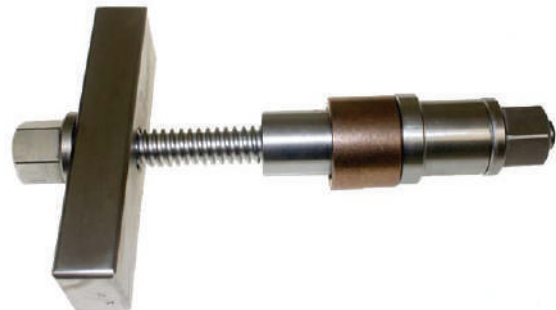
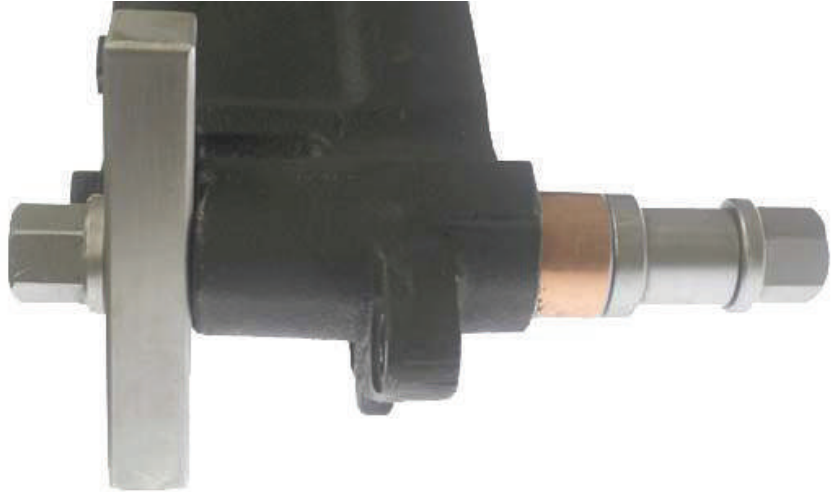


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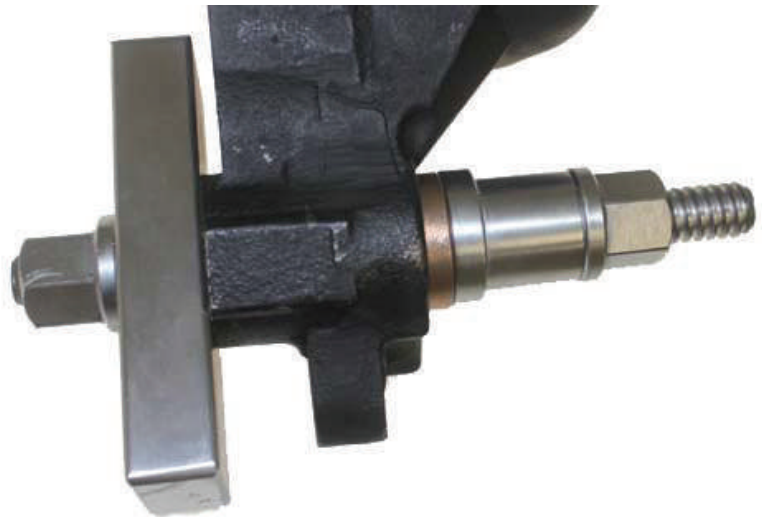
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Tool Use for Slotted Bushing - F-1023



Tool Use for Oval Bushing - F-1025



Disc Brake Kits - Meritor

EX225 PM KIT - T-DBK-EX225 PM

F-DBK-225PM

Meritor EX225 Preventative Maintenance Kit

Qty	Description	Fraser	Meritor
1	Bolt - Pad Retainer	F-M8521	68130034
1	Bolt - Slide Pin [Long]	F-M3121	68130151
1	Bolt - Slide Pin [Short]	F-M8021	68130152
1	Dust Cover- Caliper Adjuster	F-M5402	68322655
1	Spring, Wear Indicator	F-M2171	68323722
2	Boot- Slide Pin	F-M4412	68323751
1	Bushing Slide Pin Bronze	F-M2141	68323784
2	Bushing, Slide Pin	F-M7041	68324208
1	Caliper Dust Cover Chamber	F-M3902	68324746
2	Cap, Pin End	F-M3051	68324890
1	Slide Pin [Short]	F-M2111	68325093
1	Slide Pin [Long]	F-M3111	68325094
1	Wear Indicator	F-M2491	68325336
2	Grease	F-MZ190	68966091Z
1	Pad Retainer Bar	F-M0681	68323719
4	Bridge Bolts	F-M4021	68130144
2	Tappet Boots	F-M8031	68324854

Torque Specifications

Description	Fastener Size	Wrench Size	lb-ft
Pad Retainer Bolt	M10	17 mm	25-30
Carrier Bolt	M20	30 mm	350-450
Bridge Bolt	M14	E18	174-202
Bridge Bolt	M16	14 mm	221-253
Slide Pin Bolts	T80	T80	310-332
Hub-to-Rotor Bolt	5/8-inch	15/16-inch	155-195
Hub-to-Rotor Bolt	M16	24 mm	165-190
Chamber Release Tool	1/2-inch	3/4-inch	5-11



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Meritor EX225 Components

MERITOR EX225 COMPONENTS



Item	Description
F-68322655	Caliper Adjustment Boot Cap



Item	Description
F-68324854	Tappet Seal



Item	Description
F-KIT225210	Bar - Pad Retaining With Bolt



Item	Description
F-KIT225207X1	Visual Wear Indicator with Spring



Item	Description
F-68323784	Bushing - Slide Pin (Round)



Item	Description
F-68324208	Bushing - Slide Pin (Oval)



Item	Description
F-68323746	Caliper Dust Cover—Front and Rear Axle (H3)



Item	Description
F-68322297	Caliper Dust Cover—Center Axle (H6)



Meritor EX225 Components

MERITOR EX225 COMPONENTS



Item	Description
F-68325094	Slide Pin - Long



Item	Description
F-68325093	Slide Pin - Short



Item	Description
F-68324899	Retainer - Seal



Item	Description
F-68130151	Bolt - Slide Pin 120mm



Item	Description
F-68130152	Bolt - Slide Pin 80mm



Item	Description
F-68130183 Replaces F-68130144	Bolt - M16X1.5 40mm 12.9Hardness



Item	Description
F-68323751	Boot - Slide Pin



Item	Description
F-MS2160065M2	Mounting Bolt—Hub to Rotor M16X2 65mm 10.9 Hardness



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Meritor Caliper Repair Kits

PREVENTATIVE MAINTENANCE KITS

Kit F-KIT225206 Mounting Kit—Rear Axle

Item	Description	Quantity
F-41X1662V	Carrier Bolts M20X1.50 75mm	6
F-MWA520P	Washers M20	6

Kit F-KIT225205 Mounting Kit—Front Axle

Item	Description	Quantity
F-41X1621V	Carrier Bolts M20X1.50 50mm	6
F-MWA520P	Washers M20	6

Kit F-KIT225200 Slide Pin Kit

Item	Description	Quantity
F-68130152	Slide Pin Bolt—Short	1
F-68325093	Slide Pin—Short	1
F-68130183 Replaces F-68130144	Bridge Bolts	4
F-68323751	Boot—Slide Pin	2
F-68130151	Slide Pin Bolt—Long	1
F-68325094	Slide Pin—Long	1
F-68324854	Boot—Piston	2
F-68966091Z	Grease	1

Kit F-KIT225210 Disc Pad Retaining Kit

Item	Description	Quantity
F-68323719	Retainer—Bar	1
F-68130034	Retainer Screw	1

Kit F-KIT225201 Boot Kit

Item	Description	Quantity
F-68130183 Replaces F-68130144	Bridge Bolts	4
F-68323751	Boot—Slide Pin	2
F-68322655	Adjuster Cover	1
F-68324854	Boot—Piston	2
F-68966091Z	Grease	1



Meritor Caliper Repair Kits

PREVENTATIVE MAINTENANCE KITS

Kit F-KIT225221

Slide Pin Bushing Kit

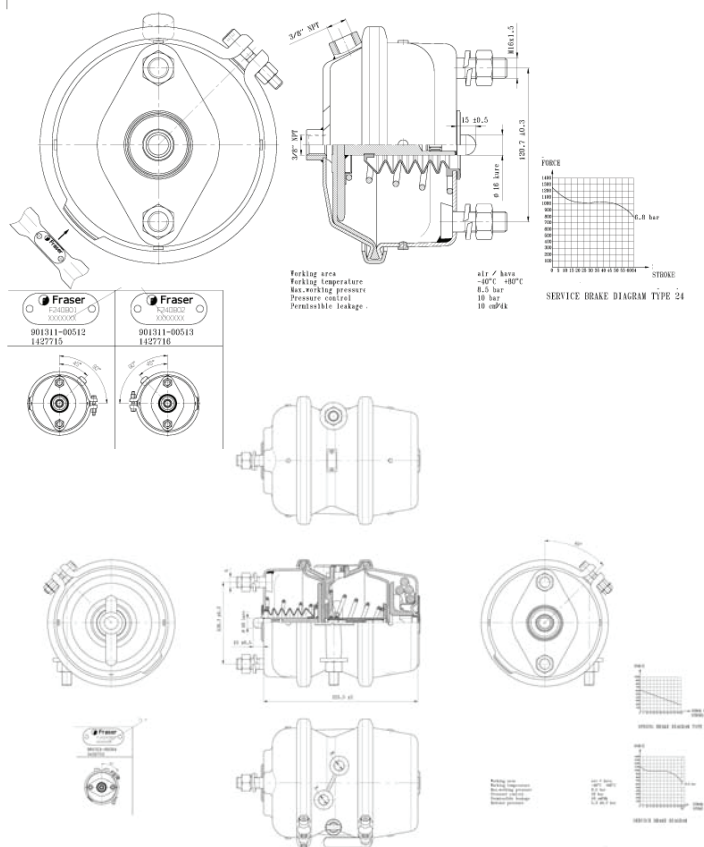
Item	Description	Quantity
F-68324899	Retainer Guide Sleeve	2
F-68323784	Bushing	2
F-68324208	Bushing, Guide Oval	1

Kit F-KIT225207

Pad Wear Kit

Item	Description	Quantity
F-68323722	Spring	4
F-68325336	Indicator	4

MERITOR DISC BRAKE CHAMBERS



Front Chambers

Item	Replaces	Description
F-24DB01	A-93-3276-X-24	Disc Brake Chamber - Left Hand
F-24DB02	A-94-3276-X-24	Disc Brake Chamber - Right Hand

Center Axle Chamber

Item	Replaces	Description
F-2424DB01		Disc Brake Chamber

Rear Axle Chamber

Item	Replaces	Description
F-2430DBP01		Disc Brake Chamber



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Air Chambers - Knorr/Bendix

FRONT/REAR AXLE DISC BRAKE CHAMBERS



Front Chambers

Type	Fraser No	Knorr No	MGM	Stroke
18	F-18DBK	K028022	CSB18D051	2.50" (63mm)
20	F-20DBK	K028225	CSB20D051	2.50" (63mm)
22	F-22DBK	K028238	CSB22D051	2.50" (63mm)
24	F-24DBK	K028252	CSB240051	2.50" (63mm)
24	F-24DBK-702		1627702	2.50" (63mm)
24	F-24DBK-703		1627703	2.50" (63mm)



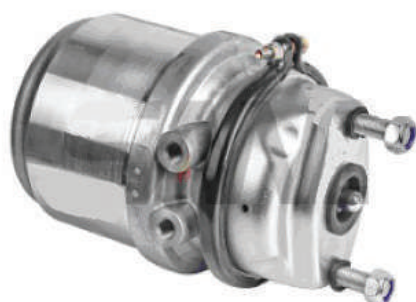
Double Diaphragm Style Center and Rear Axle Chamber

Type	Fraser No	Knorr No	MGM No	Stroke
16/24	F-1624DBDDK	K042457	TRB2624DT051	2.50" (63mm)
18/24	F-1824DBDDK	K132352	TRB1824DT051	2.50" (63mm)
20/24	F-2024DBDDK	K041960	TRB2024DT051	2.50" (63mm)
22/24	F-K2224DBDDK	K043145	TRB2224DT051	2.50" (63mm)
2424	F-2424DBDD	K04327	TRB2424DT051	2.50" (63mm)



Air Chambers - Knorr Bendix

REAR AXLE DISC BRAKE CHAMBERS



Piston Style Center and Rear Axle Chamber

Type	Fraser No	Knorr No	MGM No	Stroke
18/24	F-1824DBPK	K025670	MJB1824ET051	2.50" (63mm)
20/24	F-2024DBPK	K025669	MJB2024ET051	2.50" (63mm)
22/24	F-2224DBPK	K026737	MJB2224ET751	2.50" (63mm)
2424	F-DBPBK2424	K026734	MJB2424ET751	2.50" (63mm)
2424	F-2424DBP-762		MJB2424ET762	2.50" (63mm)
2424	F-2424DBP-AL	BS9520/1134388	N/A	2.50" (63mm)



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Disc Brake Remanufacture

REMANUFACTURED DISC BRAKES



Knorr SN7 – SB6



Meritor EX225

Radial and Axial Mount

WHY CONSIDER IT FOR YOUR FLEET?

Remanufactured calipers are typically 30-50% of the cost of a new caliper due to cost savings from the recovery of the materials and energy content of the product.

The remanufacturing program is based on a system where customers' calipers are remanufactured and returned. Reman options are one way we support our customers and help lower owning and operating costs.

Fraser remanufactured calipers offer the quality and precision of new product at a lower cost. Fraser parts are remanufactured to strict quality standards, offer like-new performance, have a long, reliable service life.

Fraser **GREEN** – Good for the Environment

Fraser is a leader in brakes and brake remanufacturing with over 35 years experience. Because Fraser's **GREEN** program is in the business of returning end-of life components to same-as-new condition, we reduce waste and minimize the need for raw material to produce new parts. Through remanufacturing, we make a contribution to sustainable development – keeping nonrenewable resources in circulation for multiple lifetimes.

- **Domestic jobs** – remanufacturing activities take place at our plant in Detroit, Michigan, so while a product may have originally been manufactured overseas, remanufacturing provides the opportunity for creating U.S. jobs.
- **Skilled jobs** - remanufacturing is a great breeding ground for problem solving skills, more rewarding than production line jobs. Our technicians have an average of 25 years experience on brakes and in retaining traditional industrial skill bases.



Disc Brake Remanufacture

REMANUFACTURED DISC BRAKES

The benefits of remanufacturing for the environment may include:

- **Reduced raw material consumption**- as remanufacturing preserves much of the material in the original product, less raw material is used that for manufacturing new calipers.
- **Reduced energy consumption** – by limiting the amount of raw material extracted/recycled and the manufacturing of new components, remanufacturing uses less energy than manufacturing a new product.
- Reduction in CO₂ emissions – a reduction in energy consumption is usually accompanied by a reduction in CO₂ emissions.

Six steps in the caliper remanufacturing process:

1. Dismantling
2. Disposal of all components which will be replaced with new
3. Complete cleaning of all remaining components
4. Component inspection and sorting
5. Replacement of components
6. Assembly and test.



BEFORE REMANUFACTURING



AFTER REMANUFACTURING

Quality Assurance and Testing

100 % of all Calipers are bench tested for proper function



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Electronic Braking Decelerometer

netBRAKE ELECTRONIC DECELEROMETER

netBrake Decelerometer Features

- Uses Modern "Tablet" Platform
- ANDROID running engine
- Easy to use
- Three axis accelerometer
- The software has a special code that senses valid and invalid tests
- Measures dynamic vehicle tests
- Prints results directly to optional Bluetooth printer, emails results via Wi-Fi
- Can send results to our netBrake web server for further analysis and storage
- Self calibrating with level indicators

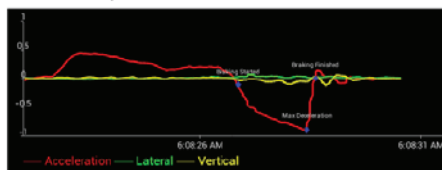


- Measures Average Deceleration Front/Rear
- Measures Peak Acceleration Left/Right - Vehicle Pulls Left/Right indication and value
- Calculates Stopping Distance (Feet or Meters)
- Calculates Test Speed (Kph or Mph)
- Can be used for Hand Brake Test
- Can record test location by using internal GPS
- No other external or internal sensors are needed
- Operates for more than 8 hours. Approximately 800 tests on full charge
- Instructions built into software, just press a button and all information is available

Net-Brake Test Report

Serial Number:	C2A150FC-EA6D-44AD-B8AD-B1FC6FEACB06
Application Version:	1.34
Last Calibrated:	Thursday, 10 July, 2014 5:48:17 AM
Test Started:	Thursday, 10 July, 2014 6:09:07 AM
Road Surface Type:	Asphalt
Road Condition:	Dry
Vehicle Registration:	UNIT 2 TEST 3 ON FLOOR (left-hand drive)
Test Number:	000023

Deceleration Graph:



Maximum Deceleration:	0.91g
Average Deceleration:	0.51g
Maximum Pull:	0.05g (left)
Average Pull:	0.03g (left)
Estimated Speed:	23 MPH (37 km/h)
Stopping Time:	2.28 seconds
Stopping Distance:	34.87 feet (10.63 meters)
Stopping Distance at 20 MPH (32 km/h) for max decel:	14.75 feet (4.49 meters)
Stopping Distance at 20 MPH (32 km/h) for avg decel:	26.02 feet (7.93 meters)
Location of Test:	Latitude 42.37279920 N, Longitude -83.02444580

Examiner: Geoff

Examiner Signature: _____

Technical Notes

The technical operation of the netBrake brake-testing system, in particular those relating to the accuracy of the results produced. It uses as its principle the high-frequency (50Hz) 3-axes accelerometer present in the tablet device to record measurements of the forces on the device in 3 directions (X, Y, Z) during a brake test and incorporates software filtering on these signals to remove noise and calculate results.

Device Calibration

Each installation of the netBrake application is assigned a unique serial number and provides a password-protected calibration function. After that, sensor readings are recording for all axes over a fixed period of time, averaged, and the offset from 0 for X and Y and 9.81 for Z is stored as the calibrated offset that represents the error component that will be subtracted from any subsequent sensor readings. A calibration certificate is provided that can be printed or emailed. Certifications will then be provided at the time of each recalibration.

Calculation of Results

When you have constant acceleration (or deceleration) and want to find distance, you can use this equation of motion: $v^2 = u^2 + 2a * d$

Where: v = current velocity u = initial velocity a = acceleration d = distance
We set $v = 0$ because we're slowing to a stop, solving for d , we get: $d = -u^2 / 2a$

netBrake uses this internationally accepted formula to calculate the stopping distance for both average and maximum deceleration.



S-Cam Brake Tools & Gauges

THE FLOATER - FOR NEW AND USED BRAKE SHOES



THE FLOATER CHECKS THE STRETCH OF THE BRAKE SHOE, ALLOWING FOR AN ACCEPTABLE TOLERANCE, ELIMINATING ANY GUESSING.

EACH FLOATER IS IMPRINTED WITH THE TYPE OF SHOE IT IS DESIGNED TO CHECK.

F301 CHECKS 16 1/2" DRUM DIAMETER S-CAM SHOES WITH 1.250" ANCHOR PINS.

F302B CHECKS 14 1/2" DRUM DIAMETER S-CAM COACH SHOES, WITH OR WITHOUT BUSHINGS.

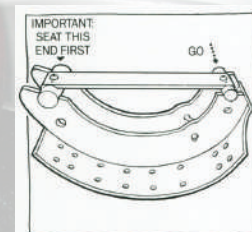
F303E CHECKS EATON OPEN-ENDED SHOES.

F304XEM CHECKS FRUEHAUF, 2ND AND 3RD XEM SHOES WITH 16 1/2" DRUM DIAMETER.

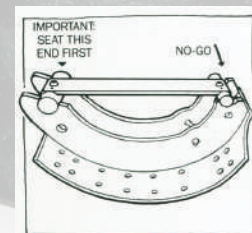
F305Q CHECKS ARVINMERITOR 16 1/2" DRUM DIAMETER "Q" BRAKE SHOES.

F308 CHECKS 15" DRUM DIAMETER ARVIN MERITOR STEERING AXLE "Q" OR "T" BRAKE SHOES.

F310 CHECKS 12 1/4" DRUM DIAMETER ARVINMERITOR BRAKE SHOES.



GOOD SHOE



STRETCHED SHOE



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The Validator

CHECK THE RADIUS OF THE SHOE TABLE

NOW THERE IS A GAUGE TO CHECK THE RADIUS OF THE SHOE TABLE. PLACE THE **VALIDATOR** ON THE THREE LOCATIONS ON THE SHOE TABLE (BOTH SIDES AND CENTER). IF THERE IS AN OPENING LARGE ENOUGH FOR THE ATTACHED FEELER GAUGE TO BE INSERTED BETWEEN THE GAUGE AND THE SHOE TABLE, REPLACE OR CORRECT THE SHOE.

NOTE: EATON EXCEPTION BELOW

616 FOR 16 1/2" DRUM DIAMETER FOR ARVINMERITOR AND FRUEHAUF SHOES.

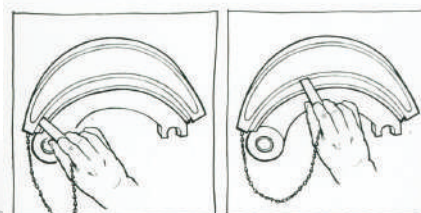
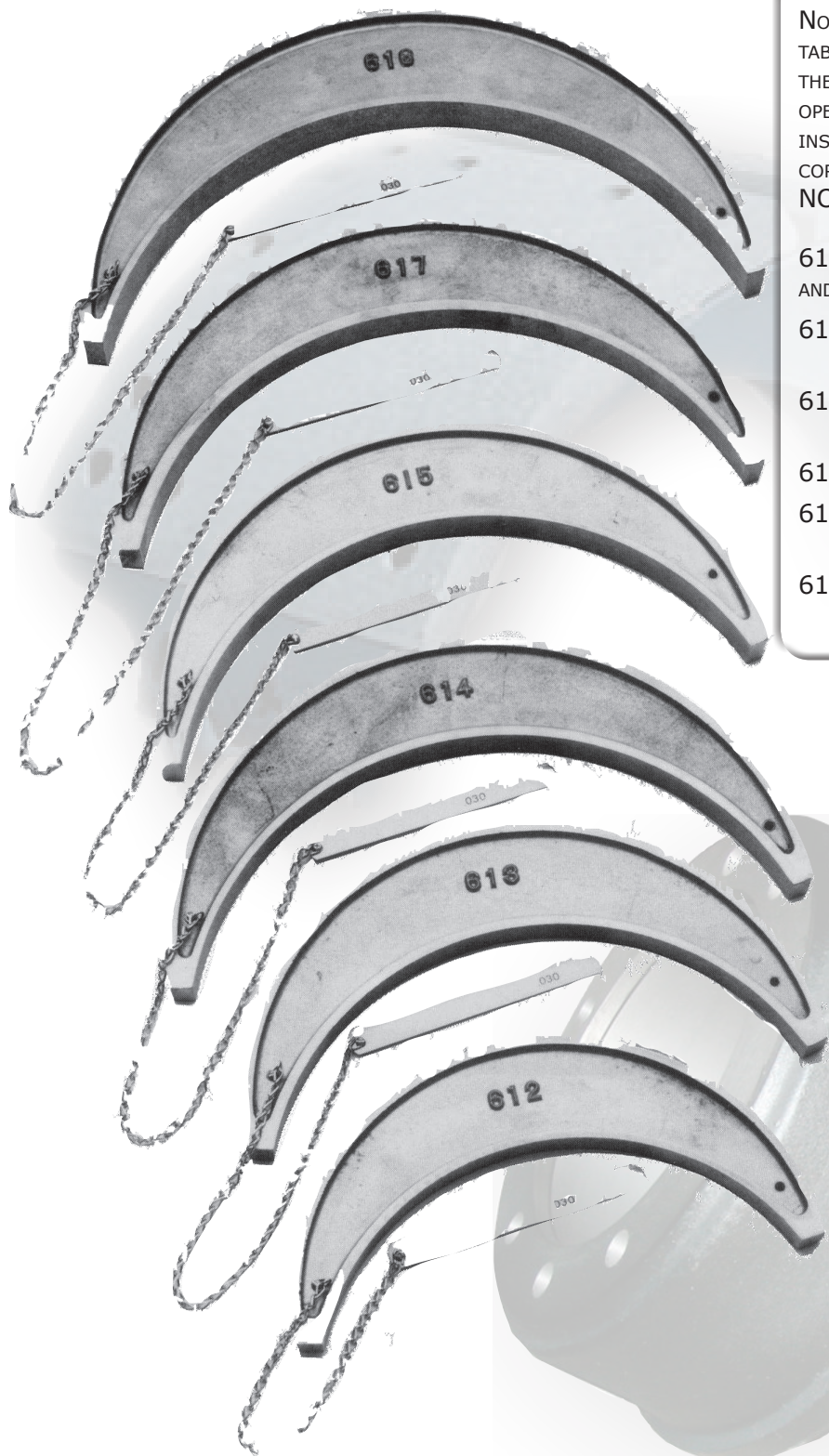
617 FOR 16 1/2" DRUM DIAMETER FOR EATON SHOES (SEE BELOW)

615 FOR 15" DRUM DIAMETER. ARVINMERITOR FRONT STEERING AXLE BRAKE SHOE.

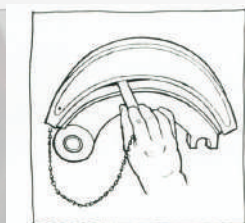
614 FOR 15 1/8" DRUM DIAMETER WEDGE BRAKE SHOE

613 FOR 14 1/2" DRUM DIAMETER S-CAM BUS AND COACH BRAKE SHOE.

612 FOR 12 1/4" DRUM DIAMETER FOR LOWBOY SHOES

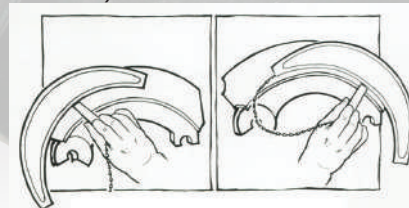


CHECKS END RADIUS CHECKS CENTER RADIUS



Go/NoGo

NOTE: 617 EATON EXCEPTION: THE EATON VALIDATOR MUST TEST THE CAM AND ANCHOR ENDS SEPARATELY. (SEE ILLUSTRATION)



ANCHOR END

CAM END



Brake Drum Gauges

THE CORRECT TOOL FOR EVERY JOB



202D

THE 202D DRUM GAUGE. THE INDUSTRY STANDARD FOR THE ACCURATE MEASUREMENT OF SCORED, WORN, OR HEAT-CHECKED BRAKE DRUMS. EASY READING 4" DIAL CALIBRATED IN TEN THOUSANDTHS FROM MINUS .040 TO PLUS .120. MEASURES ANY BRAKE DRUM FROM 12" TO 18" DIAMETER IN 1/4" INCREMENTS.



202E

THE 202E DRUM GAUGE. THE INDUSTRY STANDARD FOR THE ACCURATE MEASUREMENT OF SCORED, WORN, OR HEAT-CHECKED BRAKE DRUMS. EASY READING 4" DIAL CALIBRATED TO THE 0.0005. MEASURES ANY BRAKE DRUM FROM 12" TO 18" DIAMETER IN 0.0005" INCREMENTS.



202EC

THE 202EC DRUM GAUGE. THE INDUSTRY STANDARD FOR THE ACCURATE MEASUREMENT OF SCORED, WORN, OR HEAT-CHECKED BRAKE DRUMS. ELECTRONIC TYPE DRUM GAUGE FOR ALL DRUMS 12" TO 18" IN DIAMETER. INSTANTLY DISPLAYS DRUM WEAR IN THOUSANDTHS OF AN INCH OR MM. THIS KIT CONTAINS BOTH THE 202E AND 202C.



202C

A PRECISION GAUGE USED TO VERIFY AND RECALIBRATE THE 202D AND 202E DRUM GAUGE



205C

A PRECISION GAUGE USED TO VERIFY AND RECALIBRATE THE 205E DRUM GAUGE



910 Kit

THE 910 DRUM KIT. THE 910 DRUM KIT CONTAINS:
202D DRUM GAUGE
202C CALIBRATION TOOL FOR 202D
DURABLE PLASTIC CASE TO HOLD THE TOOLS.

910E Kit

THE 910E DRUM KIT. THE 910 DRUM KIT CONTAINS:
202E DRUM GAUGE
202C CALIBRATION TOOL FOR 202E
DURABLE PLASTIC CASE TO HOLD THE TOOLS.



203N

A PRECISION GAUGE TO MEASURE BRAKE DRUMS WHILE DRUM IS MOUNTED ON VEHICLE. FOR 14 1/2" AND 15 1/8" BRAKE DRUMS



205

A PRECISION GAUGE TO MEASURE BRAKE DRUMS WHILE DRUM IS MOUNTED ON VEHICLE. FOR 15" AND 16 1/2" BRAKE DRUMS



Fraser Gauge

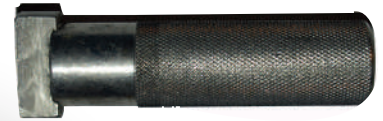
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Brake Spider & Anchor Pin Hole Guages

THE CORRECT TOOL FOR EVERY JOB

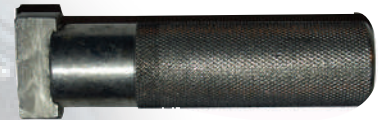
THE ANCHOR PIN HOLE GAUGE IS USED TO CHECK THE ANCHOR END OF BRAKE SHOES WHICH UTILIZE AT 1.250 ANCHOR PIN. BUSHING WEAR CAN AFFECT THE OVERALL PERFORMANCE OF THE BRAKE, CONTRIBUTE TO IRREGULAR LINING WEAR AND BRAKE NOISE. MEASURES 1.275"

401



THE ANCHOR PIN HOLE GAUGE IS USED TO CHECK THE ANCHOR END OF BRAKE SHOES WHICH UTILIZE AT 1.250 ANCHOR PIN. BUSHING WEAR CAN AFFECT THE OVERALL PERFORMANCE OF THE BRAKE, CONTRIBUTE TO IRREGULAR LINING WEAR AND BRAKE NOISE. MEASURES 1.280"

401+30



THE NEW 404C COMBINATION Go/NoGo GAUGE CHECKS:
1.025" FOR SHOES USING 1.00" ANCHOR PINS
1.275" FOR SHOES USING 1.250" ANCHOR PINS
1.513" WEB SPACING FOR 4514 - 4515 BRAKES SHOES

404C



THE NEW 405 COMBINATION Go/NoGo GAUGE CHECKS:
1.030" FOR SHOES USING 1.00" ANCHOR PINS
1.280" FOR SHOES USING 1.250" ANCHOR PINS
1.513" WEB SPACING FOR 4514 - 4515 BRAKES SHOES

405



THE BRAKE SHOE WEB GAUGE IS A UNIQUE Go/NoGo GAUGE THAT CHECKS THE WEBBING OF 4515, 4514, 4625 AND 4551 BRAKE SHOES.

407



BRAKE SHOE TABLES THAT ARE WORN WILL ALLOW THE TABLE TO DEFLECT AND THUS NOT ALLOW THE PROPER CONTACT OF THE LINING TO THE DRUM. IF THE SHOE TABLE FITS INTO THE DESIGNATED SLOT ON THIS Go/NoGo GAUGE REPLACE THE SHOE. THE OPENING HAS ALLOWED FOR THE MAXIMUM WEAR FOR THE BRAKE SHOES.

409



RIVET HOLE GAUGE CHECKS SHOES FOR STRETCHED RIVET HOLES ON STEEL AND CAST SHOES

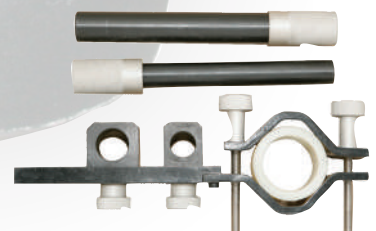
419 GAUGE - FOR 1/4" STANDARD RIVET HOLES

419



THE NEWLY DESIGNED SPIDER GAUGE ACCURATELY MEASURES THE ALIGNMENT OF THE S-CAM SPIDER TO THE CENTERLINE OF THE AXLE. FOR 14" TO 18" BRAKES, WITH 1" AND 1 1/4" ROLLERS. NO MORE WORRYING ABOUT BENT/MISALIGNED S-CAM SPIDERS.

**501
And
930 Kit**

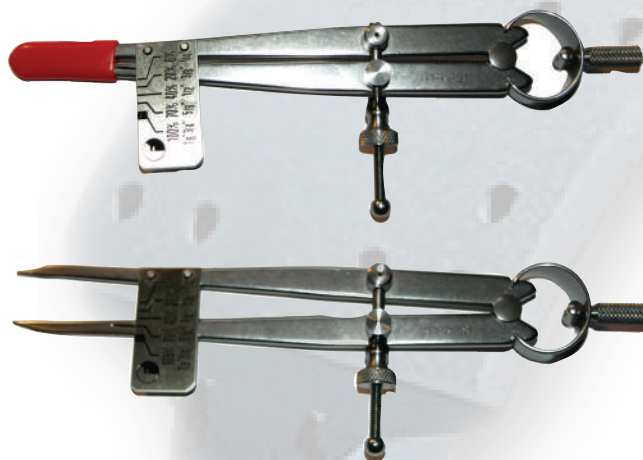


930 KIT COMES WITH THE 501 AND ALL ACCESSORIES AS WELL AS THE CARRYING/STORAGE CASE ALONG WITH PLASTIC ADAPTER FOR SMALLER AXLE TUBES.

Miscellaneous Tools

THE CORRECT TOOL FOR EVERY JOB

705



THE BRAKE LINING THICKNESS GAUGE SIMPLIFIES CHECKING STANDARD AND OVERSIZE BRAKE LININGS. THE CONVENIENT PERCENTAGE SCALE ILLUSTRATES THE LIFE LEFT ON THE LINING WITHOUT MEASURING THE SHOE TABLE.

RUGGED AND DURABLE. CAN BE USED WITHOUT REMOVING THE DUST SHIELDS OR BACKING PLATES.

- EASY TO DETERMINE REMAINING LIFE LEFT ON LINING
- READINGS CAN BE RECORDED IN EITHER PERCENTAGES OR LINEAR MEASURE. ZEROING OUT AT $\frac{1}{4}$ " ALLOWS TIME TO REPLACE LINING BEFORE CAUSING SEVERE DRUM WEAR
- ALLOWS THE USER ACCESS TO THE BRAKE LINING THROUGH THE SLOT IN THE DUST SHIELD
- VERY EFFECTIVE IN GAUGING WHEN SERVICE IS DUE AND IN TRACKING PERFORMANCE

FOR FLEETS – STANDARDIZES READINGS OF REMAINING LINING LIFE.
NO MORE CONFLICTING REPORTS



713

THE CAMSHAFT BUSHING Go - No/Go GAUGE IS USED TO CHECK THE CAMSHAFT BUSHING. BUSHING WEAR CAN AFFECT THE OVERALL PERFORMANCE OF THE BRAKE, CONTRIBUTE TO IRREGULAR LINING WEAR AND BRAKE NOISE.



717

THE CAMSHAFT Go/NoGo GAUGE IS AN EFFECTIVE TOOL IN DETERMINING PROPER CAMSHAFT REPLACEMENT INTERVALS.

THIS GAUGE WILL PROVIDE ACCURATE MEASUREMENT OF THE CAMSHAFT TO DETERMINE OUT OF SERVICE LIFE CRITERIA.

THIS GAUGE WILL:

- CHECK THE JOURNAL AREA OF THE CAMSHAFT FOR EXCESSIVE WEAR.
- PROVIDE CRITERIA WITH WHICH TO DETERMINE CAMSHAFT REPLACEMENT



719

THE CAM BUSHING INSTALLATION WILL ASSIST IN THE INSTALLATION OF CAM BUSHINGS. THIS SIMPLE TO USE TOOL WILL MAKE THE TASK OF INSTALLING CAM BUSHINGS MUCH LESS PROBLEMATIC.



F-30MMDBW

THE DISC BRAKE CALIPER TORQUE WRENCH EXTENSION ALLOWS YOUR MECHANICS TO PROPERLY TORQUE MERITOR DISC BRAKE CALIPER BOLTS TO THE TORQUE PLATE. THIS WRENCH ALLOWS ACCESS TO MOUNTING BOLTS LOCATED ON THE REAR AXLE THAT WOULD BE OTHERWISE INACCESSIBLE DUE TO THE CLOSE PROXIMITY OF THE AIR RIDE BEAM. THE WRENCH DESIGNED TO BE USED WITH ALL $\frac{3}{4}$ INCH DRIVE TORQUE WRENCHES AND IS OXIDE FINISHED TO ENHANCE DURABILITY.



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Bearing/Race/Seal Installers and Removers

THE CORRECT TOOL FOR EVERY JOB

THE WHEEL BEARING RACE REMOVAL TOOL CAN TO BE USED ON ANY TRUCK, BUS OR TRAILER THAT USES A WHEEL- BEARING RACE THAT THE TOOL FITS. ANY OF THE BEARING/RACE REMOVERS CAN BE USED WITH A UT-1 UNIVERSAL HANDLE OR A PRESS. THE TOOL WILL WORK WITH THE HUB MOUNTED ON THE DRUM OR REMOVED FROM THE DRUM. IT HAS BEEN DESIGNED SO THAT WHEN THE BEARING RACE IS REMOVED, THE TOOL CANNOT DAMAGE THE HUB

THE REMOVAL TOOL HAS BEEN DESIGNED TO CONTACT THE BEARING RACE ON THE LIP THAT IS EXPOSED WHEN THE RACE IS INSTALLED.

LOCATE YOUR BEARING/RACE NUMBER BELOW FOR THE CORRECT TOOL

F-3205	PINION BEARING CUP DRIVER
F-552AI	OUTER RACE INSTALLER
F-552AR	OUTER RACE REMOVER
F-6320I	RACE INSTALLER
F-6320R	RACE REMOVER
F-6405	HUB BEARING CUP DRIVER
F-6420I	RACE INSTALLER
F-6420R	RACE REMOVER
F-653I	RACE INSTALLER
F-653R	RACE REMOVER
F-9003	HUB SEAL DRIVER
F-6535I	RACE INSTALLER
F-6535R	RACE REMOVER



INSTALLER



REMOVER

THE UH-1 UNIVERSAL HANDLE FOR BEARING/RACE INSTALLER-REMOVER IS DEVELOPED TO BE INTERCHANGEABLE WILL ALL FRASER GAUGE TOOLS ABOVE.

UH 1



LOCATE YOUR SEAL NUMBER BELOW FOR THE CORRECT TOOL

SI-417507	SEAL INSTALLER	SI-370048	SEAL INSTALLER
SI-455091	SEAL INSTALLER	SI-370066	SEAL INSTALLER
SI-370001	SEAL INSTALLER	SI-370195	SEAL INSTALLER
SI-370003	SEAL INSTALLER	SI-9003	SEAL INSTALLER



Brake and Axle Tools

THE CORRECT TOOL FOR EVERY JOB

Bushing, Cam-Seal, and Return Spring Installers



F-8091

THE OUTER S-CAM BUSHING AND SEAL INSTALLER F-8091 CAN BE USED ON ALL OUTER S-CAM BUSHINGS ON THE FRONT AND REAR OF TRACTOR, BUS AND TRAILER AXLES. IT IS A VERSATILE TOOL THAT CAN ALSO BE USED TO INSTALL THE INNER BUSHINGS IF THERE IS ADEQUATE CLEARANCE.



F-8093

THE S-CAM BUSHING INSTALLER F-8093 CAN BE USED ON ALL INNER S-CAM BUSHINGS ON THE FRONT AND REAR OF ALL TRUCKS, BUSES AND TRAILERS WHERE THE THREADED ROD IS LONG ENOUGH. 31 1/2"



F-8095

THE OUTER S-CAM BUSHING REMOVER F-8095 CAN BE USED ON ALL OUTER S-CAM BUSHINGS ON THE FRONT AND REAR OF TRACTOR, BUS AND TRAILER AXLES. IT IS A VERSATILE TOOL THAT CAN ALSO BE USED TO REMOVE THE INNER BUSHINGS IF THERE IS ADEQUATE CLEARANCE.



F-8097

THE RETURN SPRING INSTALLER FOR ALL DUAL HOOK RETURN SPRINGS. THIS TOOL IS VERSATILE IN INSTALLING RETURN SPRINGS ON MOST CAM BRAKE SHOES.



F-8098

THE S-CAM BUSHING INSTALLER F-8098 CAN BE USED ON ALL INNER S-CAM BUSHINGS ON THE FRONT AND REAR OF ALL TRUCKS, BUSES AND TRAILERS WHERE THE THREADED ROD IS LONG ENOUGH. 18"

Axle Nut Installers and Removers



F-8078

THE F-8078 AXLE NUT REMOVER AND INSTALLER WRENCH CAN BE USED ON ANY TRUCK, BUS AND TRAILER THAT HAVE A 4" NUT. THE WRENCH HAS A TUBE THAT IS INSERTED INTO THE AXLE HOUSING THAT HOLDS THE SOCKET IN ALIGNMENT SO THAT ONE PERSON CAN REMOVE AND INSTALL THE AXLE NUT FOR PROPER WHEEL BEARING END PLAY.



F-8088

THE F-8088 IS USED TO SET FRONT OUTER WHEEL BEARING END PLAY. THE ADJUSTING NUT SOCKET IS REQUIRED DUE TO THE ROUND SHAPE OF THE ADJUSTMENT NUT.



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Miscellaneous Tools

THE CORRECT TOOL FOR EVERY JOB

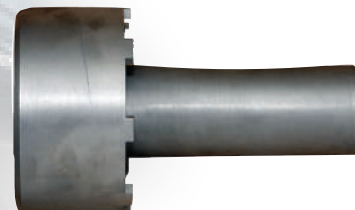
PLANETARY AXLE THRUST SCREW LOCK NUT TOOL. THIS TOOL IS USED TO HOLD THE PLANETARY AXLE THRUST SCREW LOCK NUT WHILE ADJUSTING ENDPLAY. THE TOOL IS ALSO USED TO LOOSEN THRUST SCREW DURING HUB REMOVAL

F-8094



PLANETARY AXLE HUB NUT WRENCH. THIS TOOL IS USED TO INSTALL AND ADJUST REAR ALE HUB WHEEL BEARING ADJUSTING NUT.

F-9004



SNAP RING INSTALLER FOR ANCHOR PINS REQUIRING LOCKING RINGS.
SR-102—LONG TOOL PIECE SR-107—LONG SLIDE PIECE

SR-102

SR-107



THE FRASER GAUGE END PLAY GAUGE IS THE MOST VERSATILE END PLAY GAUGE ON THE MARKET TODAY. PROPER VERIFICATION OF WHEEL AND CAM END PLAY ARE CRITICAL TO PROVIDING MAXIMUM MILEAGE BETWEEN RELINES AND REDUCES FREQUENCY OF SAFTY RELATED ROAD CALLS.

THE FRASER EPG CAN BE MOUNTED EITHER FEMALE STUD MOUNT OR USING THE MAGNETIC PLATES PROVIDED IN THE KIT.

F-EPG



Full Kits

THE CORRECT TOOL FOR EVERY JOB



910 Kit

THE 910 DRUM KIT. THE 910 DRUM KIT CONTAINS:
202D DRUM GAUGE
202C CALIBRATION TOOL FOR 202D
DURABLE PLASTIC CASE TO HOLD THE TOOLS.

THE 910E ELECTRONIC DRUM KIT. THE 910E DRUM KIT CONTAINS:
202E ELECTRONIC DRUM GAUGE
202C CALIBRATION TOOL FOR 202E
DURABLE PLASTIC CASE TO HOLD THE TOOLS.



920 Kit

THE 920 COACH KIT. THE 920 COACH KIT CONTAINS:
F302B, 401, 613, AND 614

THE 930 SPIDER KIT. THE 930 SPIDER KIT CONTAINS
501 AND ADAPTER



930 Kit

THE 940 VALIDATOR KIT. THE 940 VALIDATOR KIT CONTAINS:
612, 615, 616

THE 950 FLOATER KIT. THE 950 FLOATER KIT CONTAINS:
F301, F302B, F303E, F304XEM, F304Q, F308, F310

THE 960 ATTACHE' CASE ONLY

THE 970 HEAVY DUTY TRUCKING BASE KIT. THE 970 KIT CONTAINS:
F305Q, F304XEM, F303E, 405, 409, 616, 705

CUSTOM KITS ARE AVAILABLE. PLEASE CALL YOUR LOCAL REPRESENTATIVE OR FRASER GAUGE DIRECTLY TO ASSEMBLE A KIT THAT IS SPECIFIC TO YOUR NEEDS.



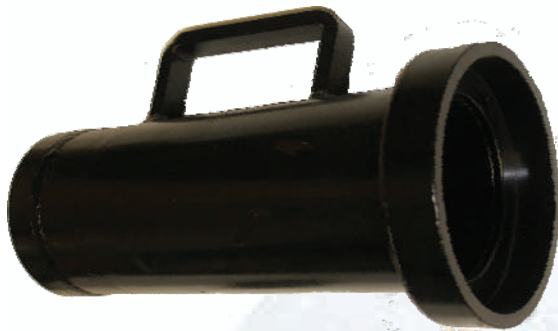
Fraser Gauge

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Specialized Tools

Special Tools

TAKE THE GUESS WORK OUT OF THE EQUATION.



F-HDWI

REAR AXLE WIPER INSTALLATION TOOL
EASILY INSTALL REAR OIL SEAL
WIPERS ON YOUR AXLE. FITS
OVER THE AXLE SPINDLE.



FFW113

CUMMINS / PARKER FUEL FILTER SOCKET
PLACE ON TOP OF THE FUEL FIL
TER AND EASILY REMOVE THE
COVER TO REPLACE THE PAPER
FILTER.



netBrake Decelerometer Features



- Uses Modern "Tablet" Platform
- ANDROID running engine
- Easy to use
- Three axis accelerometer
- The software has a special code that senses valid and invalid tests
- Measures dynamic vehicle tests
- Prints results directly to optional Bluetooth printer, emails results via Wi-Fi
- Can send results to our netBrake web server for further analysis and storage
- Self calibrating with level indicators

- Measures Average Deceleration Front/Rear
- Measures Peak Acceleration Left/Right - Vehicle Pulls Left/Right indication and value
- Calculates Stopping Distance (Feet or Meters)
- Calculates Test Speed (Kph or Mph)
- Can be used for Hand Brake Test
- Can record test location by using internal GPS
- No other external or internal sensors are needed
- Operates for more than 8 hours. Approximately 800 tests on full charge
- Instructions built into software, just press a button and all information is available



Warranty

FRASER GAUGE WARRANTY

All merchandise ordered shall be sold subject to seller's standard warranty. The seller warrants that any product found to be defective either in workmanship or material, whereby it is not suitable upon proper usage and service for the purpose for which it was designed will be, at the sellers' option repaired or replaced free of charge, including transportation charges, but not the cost of installation. All other warranties expressed or implied including any warranty of merchantability are hereby disclaimed. The foregoing expresses all of the items furnished by it shall under no circumstances be liable for consequential damages.

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**the
brake
specialist
people**

Quickly Pinpoint Brake Problems and Avoid Costly Mistakes

AS BRAKING STANDARDS BECOME MORE RIGID, REQUIRING MORE BRAKING POWER FOR FASTER STOPS, THE JOB OF BRAKE MAINTENANCE WILL BE TOUGHER THAN EVER BEFORE. GAUGES AND TOOLS SHOULD BE USED TO PROVIDE A COST-EFFECTIVE RELINE FOR A CONSISTENTLY HIGHER DEGREE OF BRAKE PERFORMANCE, SHORTER STOPPING DISTANCE, AND LOWER MAINTENANCE COSTS.



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**INTRODUCING THE
30-SECOND SOLUTION**

THE FLOATER, VALIDATOR, AND COMBINATION SHOE
CHECK GAUGES FOR NEW AND RELINED BRAKE SHOES
CHECK THE STRETCH OF THE SHOE, THE RADIUS OF THE SHOE TABLE,
THE ANCHOR PIN HOLE AND THE DISTANCE BETWEEN THE WEBBING IN
LESS THAN 30 SECONDS

***Precision Instruments & Components for
Heavy Vehicle Brake Systems***

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