Fraser Gauge

Precision Instruments for Heavy Vehicle Brake Systems

www.frasergauge.com
(313) 882-9192 • Fax (313) 924-0374
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.

F311 Checks MAN front and rear cast iron shoes.
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

618 For MAN Front and Rear Cast Iron Shoes (Not Pictured)

**NOTE:** 617 Eaton Exception: The Eaton Validator must test the cam and anchor ends separately. (See Illustration)
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 ¼” increments.

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.

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.

A Precision gauge used to verify and recalibrate the 202D and 202E Drum Gauge

The 202C

A Precision gauge used to verify and recalibrate the 205E Drum Gauge

205C

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 Drum Kit. The 910 Drum Kit Contains:
- 202E Drum Gauge
- 202C Calibration Tool for 202E
- Durable Plastic Case to hold the tools.

A Precision gauge to measure brake drums while drum is mounted on vehicle. For 14 1/2” and 15 1/8” Brake Drums

203N

A Precision gauge to measure brake drums while drum is mounted on vehicle. For 15” and 16 1/2” Brake Drums

910 Kit
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”

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”

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

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

The brake shoe web gauge is a unique Go/NoGo Gauge that checks the webbing of 4515, 4514, 4625 and 4551 brake shoes.

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.

Rivet Hole Gauge Checks Shoes for Stretched Rivet Holes on Steel and Cast Shoes
- 419 Gauge - For 1/4” standard rivet holes
- 420 Gauge - For metric rivet holes

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.

930 Kit comes with the 501 and all accessories as well as the carrying/storage case along with plastic adapter for smaller axle tubes.

Adapter for the 1” bar to check cam bushing alignment (1 1/2” and 1 5/8” bushings - not pictured)
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 ¼” 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

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.

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

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.

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 ¾ inch drive torque wrenches and is oxide finished to enhance durability.

F-30MMDBW
The wheel bearing race removal tool can 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**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>F-3205</td>
<td>Pinion Bearing Cup Driver</td>
</tr>
<tr>
<td>F-552AI</td>
<td>Outer Race Installer</td>
</tr>
<tr>
<td>F-552AR</td>
<td>Outer Race Remover</td>
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<tr>
<td>F-6320I</td>
<td>Race Installer</td>
</tr>
<tr>
<td>F-6320R</td>
<td>Race Remover</td>
</tr>
<tr>
<td>F-6405</td>
<td>Hub Bearing Cup Driver</td>
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<tr>
<td>F-6420I</td>
<td>Race Installer</td>
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<tr>
<td>F-6420R</td>
<td>Race Remover</td>
</tr>
<tr>
<td>F-653I</td>
<td>Race Installer</td>
</tr>
<tr>
<td>F-653R</td>
<td>Race Remover</td>
</tr>
<tr>
<td>F-9003</td>
<td>Hub Seal Driver</td>
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<tr>
<td>F-6535I</td>
<td>Race Installer</td>
</tr>
<tr>
<td>F-6535R</td>
<td>Race Remover</td>
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</tbody>
</table>

The UH-1 Universal Handle for Bearing/Race Installer-Remover is developed to be interchangeable will all Fraser Gauge Tools above.

**Locate Your Seal Number Below for the Correct Tool**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>SI-417507</td>
<td>Seal Installer</td>
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<tr>
<td>SI-455091</td>
<td>Seal Installer</td>
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<tr>
<td>SI-370001</td>
<td>Seal Installer</td>
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<tr>
<td>SI-370003</td>
<td>Seal Installer</td>
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<td>SI-370048</td>
<td>Seal Installer</td>
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<td>SI-370066</td>
<td>Seal Installer</td>
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<tr>
<td>SI-370195</td>
<td>Seal Installer</td>
</tr>
<tr>
<td>SI-9003</td>
<td>Seal Installer</td>
</tr>
</tbody>
</table>
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-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.
**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.

**Planetary Axle Hub Nut Wrench.** This tool is used to install and adjust rear axle hub wheel bearing adjusting nut.

**Snap Ring Installer for Anchor Pins requiring Locking Rings.**
- SR-102—Long Tool Piece
- SR-107—Long Slide Piece
- SR-103—Short Tool Piece
- SR-108—Short Slide Piece

**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 safety related road calls. The Fraser EPG can be mounted either female stud mount or using the magnetic plates provided in the kit.

**Tool Display Cabinets**
- **F-9010** Rolling Tool Cart - High Floor Tools
- **F-9011** Rolling Tool Cart - Low Floor Tools
- **F-9012** Rolling Tool Cart - Planetary Axle Tools

**Note:** Display Cabinets Do Not Come With Tools. Tools may be purchased separately.
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 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

930 Kit
The 930 Spider Kit. The 930 Spider Kit contains
501 and Adapter

940 Kit
The 940 Validator Kit. The 940 Validator Kit contains:
612, 615, 616

950 Kit
The 950 Floater Kit. The 950 Floater Kit contains:
F301, F302B, F303E, F304XEM, F304Q, F308, F310

960 Kit
The 960 Attache’ Case Only

970 Kit
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.
Rear Axle Wiper Installation Tool
Easily install rear oil seal wipers on your axle. Fits over the axle spindle.

**F-HDWI**

Cummins / Parker Fuel Filter Socket
Place on top of the fuel filter and easily remove the cover to replace the paper filter.

**FFW113**

For Knorr sub kits and individual tools, please refer to the Fraser Gauge disc brake catalog.

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**Complete Knorr Service Tool Kit**

<table>
<thead>
<tr>
<th>OE</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z004354</td>
<td>Complete Knorr Service Tool Kit</td>
<td>1</td>
</tr>
</tbody>
</table>
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.

Introducing the 30-Second Solution

The Floater, Validator, and Combination Shoe Check Gauges for New and Rlined 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

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Quickly Pinpoint Brake Problems and Avoid Costly Mistakes

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