

Rekluse Motor Sports

The e-Axle

2002+ Honda

2000-2002 KTMs

2004+ Kawasaki KXs

2004+ Suzuki RMZ 250

2002+ Yamaha YZs

Installation Guide

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e-Axle Revision 1.000
RMS 2710A, 2731A, 2741A, 2770A

195-2710A

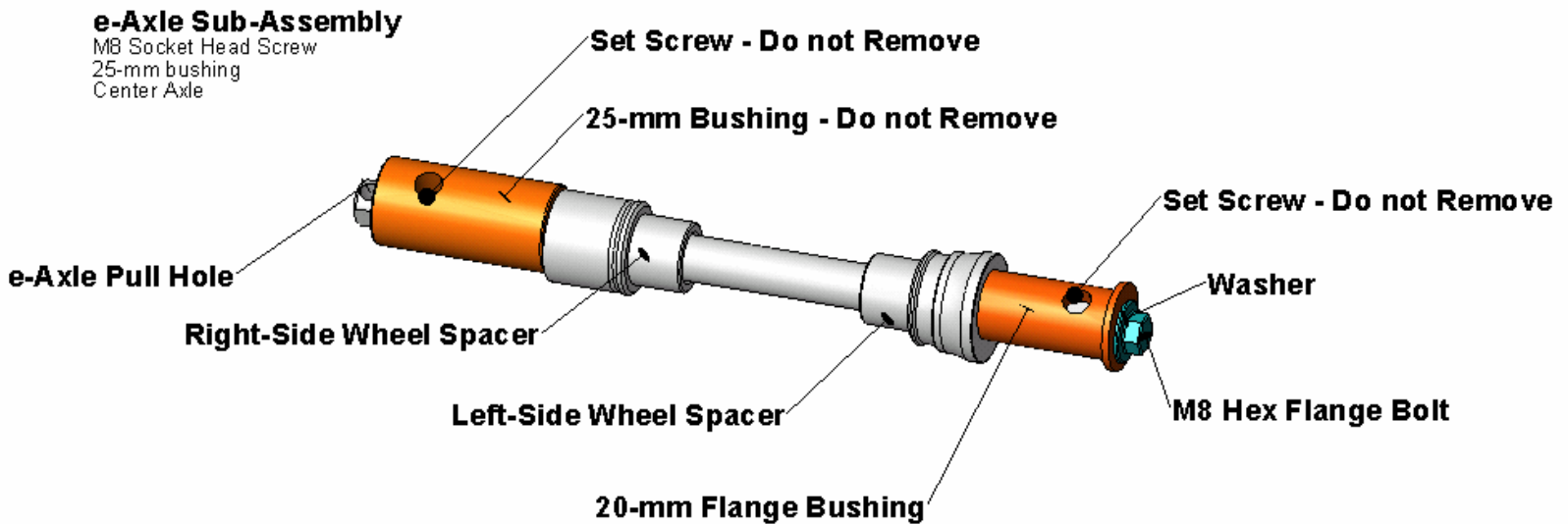
Manual Revision: 042406

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Required Tools

10mm socket	Needle Nose Pliers
Torque Wrench	Wrench to remove stock axle
Flat Blade Screw Driver	4-mm or 6-mm Allen Key

e-Axle Overview



Warning: The 2 set screws in each bushing are installed by Rekluse and should **NEVER** be removed or tightened.

Note: This manual refers to right and left as you would be sitting on the motorcycle.

Warning: The e-Axle is designed to work with the OEM rotor, pads, and caliper. If you are using a larger diameter aftermarket rotor, you will need to check for interference between the rotor and caliper through the range of adjustment the e-Axle offers.

Included Parts for the e-Axle

e-Axle Sub-Assembly	Left-Side Wheel Spacer
20 mm Bushing	M8 Hex Flange Bolt
Right-Side Wheel Spacer	Washer

Basic e-Axle Function

The e-Axle is an eccentric front axle that allows the rider to easily adjust the front wheel trail. Changing the front wheel trail affects the handling characteristics of the motorcycle.

Note: All **02-04 Yamaha owners** and **00-02 KTM owners** please see the end of this manual for added instructions to install the e-Axle.

Bike Preparation and Disassembly

1. Place the motorcycle on a suitable stand so the front tire is no longer touching the ground.
2. Refer to your Owners Manual and remove the stock front axle and front wheel. Using a clean shop rag, remove all dirt and sand from the fork fists and from inside the wheel hub. Dirt and sand will mar the surface of your e-Axle parts. Stow the wheel in a suitable place so that the brake rotor cannot be damaged.
3. Disassemble the e-Axle. Remove the M8 hex flange bolt from the end of the 20-mm flange bushing of the e-Axle. Slide the 20-mm flange bushing off of the e-Axle sub-assembly followed by the left-side and right-side wheel spacers. **See the following picture.**



Warning: The M8 set screws in each bushing are installed by Rekluse and should **NEVER** be removed or adjusted. The e-Axle Sub-Assembly consisting of the 25-mm bushing and the center axle are assembled by Rekluse and should **NEVER** be disassembled.

e-Axle Installation

4. Slide the 20-mm Flanged Bushing into the disk side fork fist to check fitment. The 20-mm Flanged Bushing should slide into the fork fist easily. On some bikes, the bushing may not slide in easily because the outer edge of the fork fist hole is not supported by the stock axle and after a few tightening cycles the fork fist hole will deform.

To solve this use some emery cloth and lightly sand the outer portion of the hole until the 20-mm Flanged Bushing slides in smoothly. **See following picture.**



5. Remove the stock wheel spacers from both sides of the wheel hub. Use a clean rag to remove all dirt and sand inside the wheel and install both of the Rekluse wheel spacers. After installing the Rekluse wheel spacers, stow the wheel in a suitable place so that the brake rotor cannot be damaged. **See following picture.**

Note: On all models except the Yamahas, the disk side wheel spacer is the longer of the two. On the 00-02 KTM, the wheel spacers are identical unless you will be installing the odometer replacement spacer.



6. Coat the center axle in a thin layer of grease to aid installing the axle.

Note: Coat the center axle in a thin layer of grease every time it is re-installed after removing the front wheel for tire maintenance.

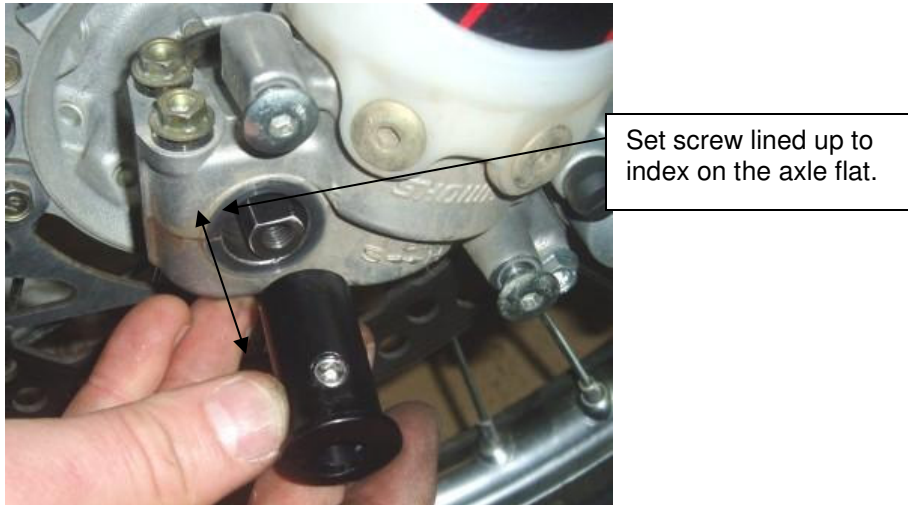
7. Position the front wheel back in between the forks so that the brake disk is in place between the brake pads, and so the wheel spacers line up with the hole in the fork fists.
8. Slide the e-Axle sub-assembly through the right-side fork fist and through the wheel spacers in the front hub. Rotate the 25-mm bushing so the set screw is facing up, this will line the "0" Offset Mark with the fork fist pinch clamp slot. Continue sliding the axle through until the 25-mm bushing is almost flush with the outer edge of the right fork fist. **See following picture.**



9. Slide the 20-mm Flange Bushing onto the left-end of the Center Axle through the left fork fist by positioning the bushing with the set screw facing up, this will allow the bushing to slide over the end of the center axle with the set screw indexing against the flat on the left-end of the axle. Slide the 20-mm bushing in until the flange is flush against the outer edge of the left fork fist. **See following picture.**

Warning: The set screw in the 20-mm Flange Bushing must index onto the axle flat to insure proper installation and function.

Note: You may need to rock the wheel back up and down to get the 20-mm bushing to slide over the end of the center axle and through the left fork fist.



10. Moderately tighten the 2 left-side fork fist pinch clamp bolts to secure the 20-mm Flange Bushing.
11. Apply medium strength thread locker to the M8 Hex Flange bolt and install it into the left-end of the center axle and torque to 18 foot pounds (24 newton meters).



12. Tighten the 2 left-side fork fist pinch clamp bolts to the torque values recommended in the service manual.

13. With the bike on the ground, compress the forks several times by pushing down on the handlebars to allow the right side fork fist to come into proper alignment on the 25-mm bushing. Tighten the 2 right side fork fist pinch clamp bolts to the torque values recommended in the service manual.

Warning: If the fork fist pinch clamp bolts are not tightened properly they could come loose allowing the axle to rotate unexpectedly causing severe damage or injury.

Adjusting the e-Axle

1. Loosen the M8 hex flange bolt on the left-side of the e-Axle.
2. Loosen both right and left-side fork fist pinch clamp bolts.
3. Rotate the e-Axle from the right-side using a 10-mm wrench on the two machined flats in the 25-mm (non-disk side) Bushing—or use a 4mm hex Key through the hole in the M8 Socket Head screw to rotate the e-Axle to the desired offset. Always rotate the axle clockwise when adjusting the e-Axle. **See following picture.**



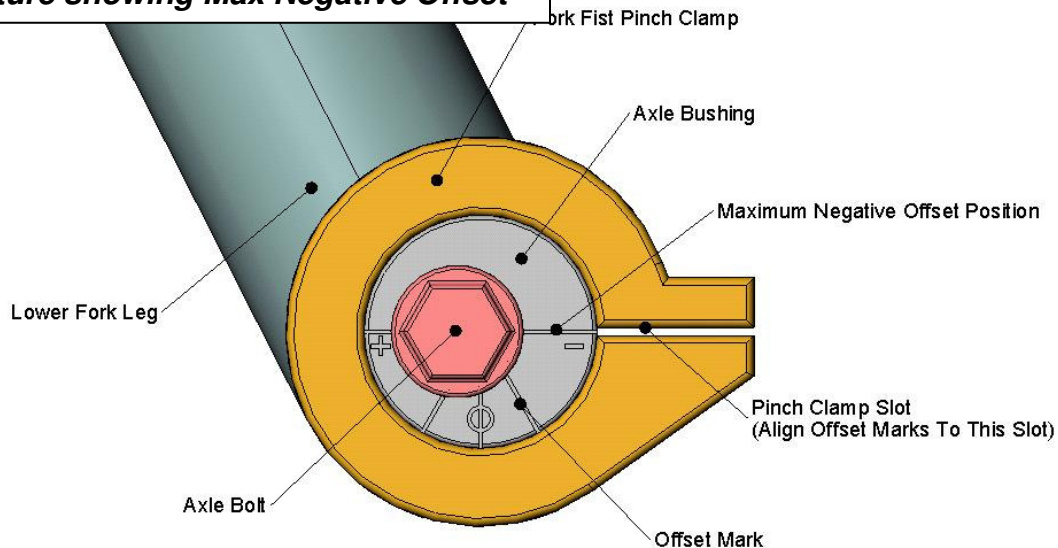
Note: See next page for information on indicating marks

In general, negative settings tend to increase steering effort, increase front wheel traction, and improve straight line stability. Positive settings tend to reduce steering effort, decrease front wheel traction, and reduce straight line stability.

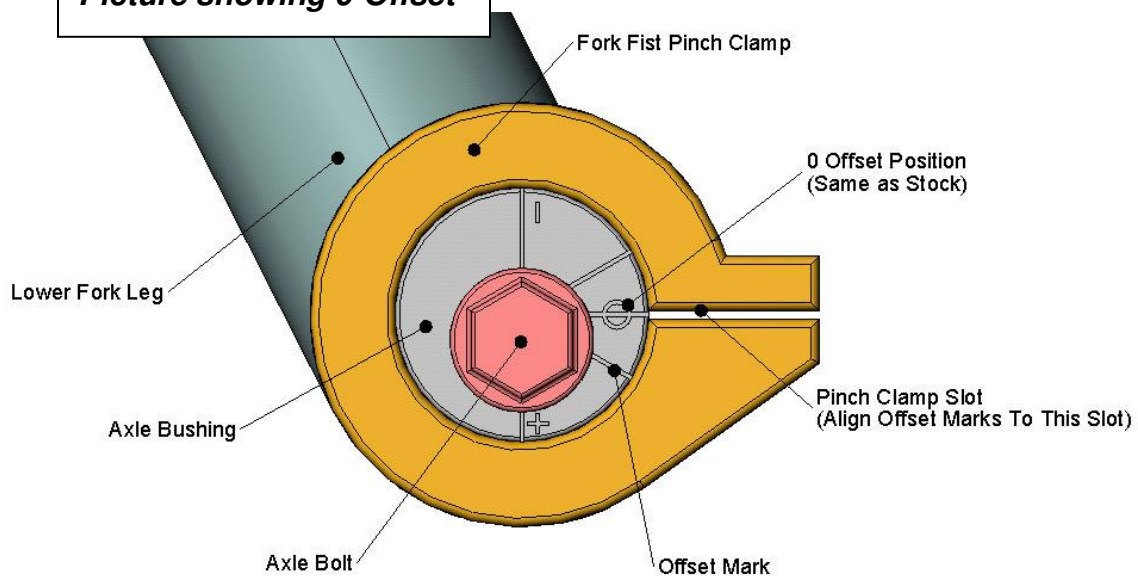
Other factors such as ground conditions, suspension settings, tire selection and rider preference will also influence the proper offset setting. Try several different offset settings for every riding condition you encounter. You will probably find there is no perfect offset for your bike but instead a preferred offset for the type of riding and the type of dirt you are riding on.

See following pictures.

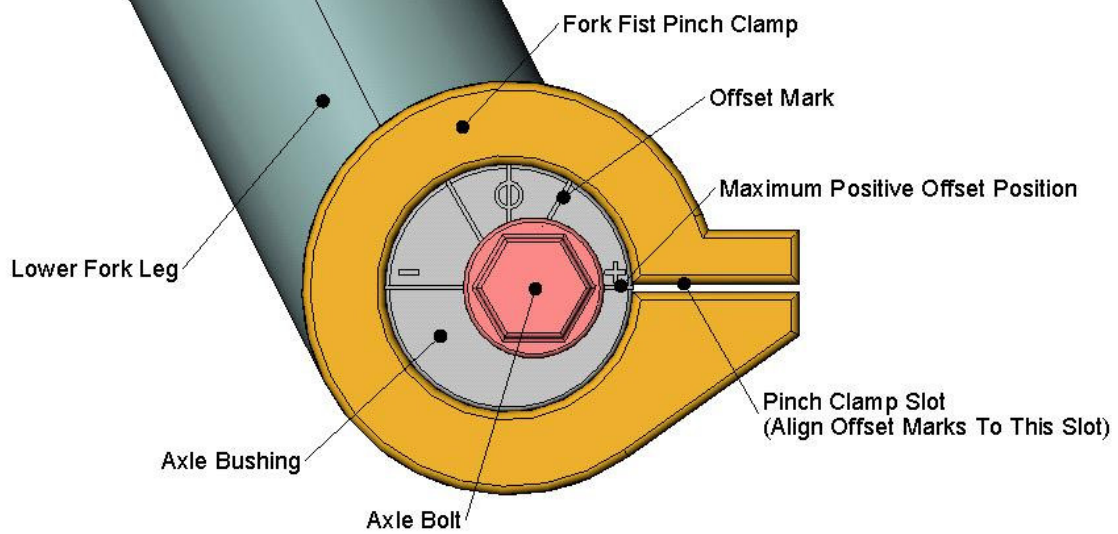
Picture showing Max Negative Offset



Picture showing 0-Offset



Picture showing Max Positive Offset



4. Re-tighten the left-side fork fist pinch clamp bolts to the proper torque specification.
5. Torque the M8 hex flange bolt on the left-side of the e-Axle to 18 foot/pounds (24 newton/meters).

6. Compress the forks several times by pushing down on the handlebars to allow the right side fork fist to come into proper alignment. Tighten the 2 right side fork fist pinch clamp bolts to the torque values recommended in the service manual.

Note: When the axle is adjusted to the max negative position it is possible to introduce slight interference between the rotor and the leaf spring in the back of the caliper.

On most models there is usually no interference, and if there is it is generally slight and will self clear. If your leaf spring rubs the rotor when the e-Axle is adjusted all the way in you can remove it and replace with the included coil spring. See the “Coil Spring Installation” section at the end of this manual.

Axle Removal

7. Place the motorcycle on a suitable stand.
8. Using a 10-mm wrench, remove the M8 hex flange bolt on the left-side of the e-Axle.
9. Loosen both right and left-side fork fist pinch clamp bolts.
10. Slide a suitable pulling tool (screw driver, 4-mm hex key, etc.) through the holes in the right-end (25-mm bushing end) axle. And pull the e-Axle out. **See following picture.**

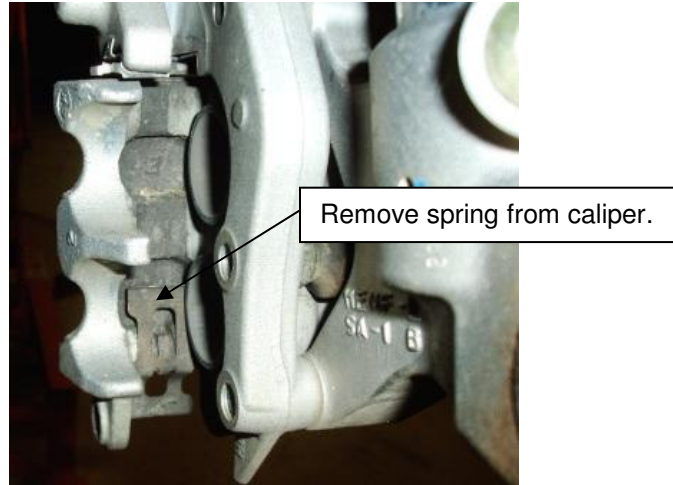


Note: Removing the left-side axle bushing (20-mm Flange Bushing) from the left-side fork fist clamp may allow the axle to slide out easier.

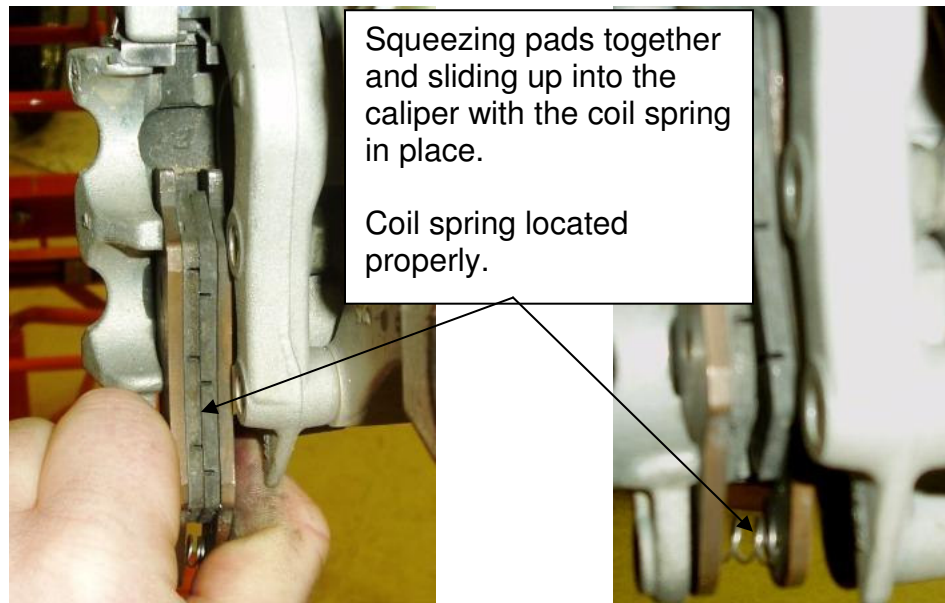
Note: Clean all parts before re-installing and coat the axle with a thin layer of grease.

Coil Spring Installation

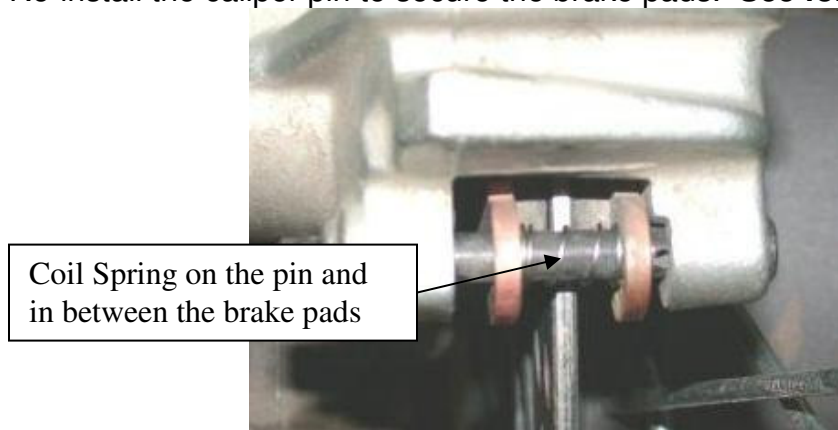
11. If the leaf spring in the back of the caliper is interfering with your rotor, follow the following steps to remove it and replace it with the Rekluse coil spring.
12. Remove the brake pads from the caliper by removing the pin.
13. Remove the leaf spring from the caliper. **See following picture.**



14. Re-install the brake pads with the included coil spring positioned between them and centered on the holes that the pin slides through securing them.



15. Re-install the caliper pin to secure the brake pads. **See following picture.**



e-Axle Instructions for 00-02 KTM motorcycles:

This manual supplement is to be used along with the e-Axle Install Manual 195-2710 to install the e-Axle on your 00-02 KTM motorcycle.

1. **00-02 KTM:** On models that have KTM analog Odometers (typically EXC models) you will need to remove the odometer and install the included Rekluse Odometer Replacement Wheel Spacer into the right side of the wheel hub in place of the odometer housing. The smaller Rekluse wheel spacer will not be used on the right side of the hub.

For KTM motorcycles without the Odometer, use the 2 regular Rekluse Wheel Spacers. **See following pictures.**

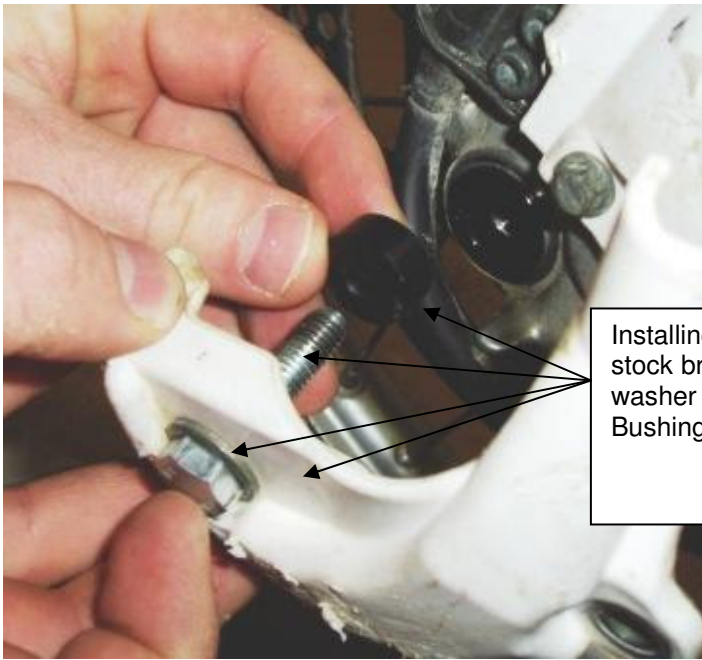


e-Axle Instructions for 02-04 Yamaha motorcycles:

This manual supplement is to be used along with the e-Axle Install Manual 195-2710 to install the e-Axle on your 02-04 Yamaha motorcycle.

1. **02-04 Yamaha owners only:** To accommodate the brake line shield that attaches to the lower fork leg you will need to install the included e-Axle Spacer and longer M8 x 35mm hex head bolt into the 20-mm Flange Bushing end (left end) of the axle.

Be sure to torque the M8 axle end bolt to 18 ft-lbs as specified in Step 11 of the e-Axle Installation Guide 195-2710. **See following pictures.**



Installing Spacer, Longer M8 bolt, stock brake line cover, and stock washer into the 20-mm Flange Bushing end of the axle.

2. To adjust the e-Axle simply loosen the M8 x 35mm bolt and the fork fist pinch clamp bolts. Then, rotate the e-Axle from the right side using the indicator marks on the 25-mm Bushing to set the e-Axle at the desired offset.