



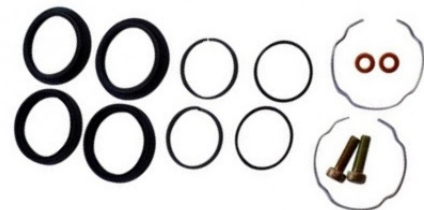
49mm Fork Tube Installation Guide

Your motorcycle and our parts both deserve top-notch installation. Use this guide in conjunction with a Harley-Davidson service manual. Work diligently—your safety depends on it.

Kit Contents

You will receive the following items in your kit.

- 2 fork legs
- 2 fork spring spacers (if extended length legs are ordered)
- 2 fork cap sealing rings
- 2 damper rod bolts
- 2 damper rod bolt crush washers
- 2 damper rod seals
- 2 fork seals
- 2 seal wipers
- 2 seal retainers



Fork Disassembly

Elevate front of motorcycle. Remove axle caps, wheel, brake caliper(s), fender, and axle. Drain fork tubes by removing the damper bolts and crush washers.

- TC Tip: If the damper bolt rotates but does not spin free, use an impact tool to release it. Most axle caps require 5mm hex bits and most damper bolts require use of a 12mm hex bit.



Loosen the fork caps. Do not remove them at this time.



- TC Tip: By following this sequence of steps, loosening the fork caps is made easier because the fork tubes remain stationary. A 35mm socket is required to remove most factory fork caps.

Remove fork tubes from triple tree. Remove fork caps completely and remove springs, spacers, and washer.

- TC Tip: The fork springs may be under compression even with the suspension unloaded. Use gloves and eye protection during fork cap removal. Exert downward pressure as you unscrew the fork caps to prevent damage or injury. This will also prevent damage to threads.

Drain fork tubes completely by moving the tubes through their stroke several times. Use a small flathead screwdriver to carefully pry up the dust boots and seal wipers.



Free the seal retaining rings from their grooves in the lower leg.



Remove damper rods and rebound springs. Remove fork seals. Separate the inner fork tube and outer leg. (Extend the fork tube rapidly and briskly several times. The captive bushings

will drive the seal from the fork lower.) Once the legs are separated, remove the damper rod bases from the lower leg.

- TC Tip: Make sure to account for both damper rod bases. Surface tension from the fork oil can trap them in the lower leg.

Remove the fork damper rod seals from the damper rods. Clean and dry the insides of the lower legs, fork springs, damper rods, rebound springs, and damper rod bases. After cleaning, inspect all items to be reused for wear.

- TC Tip: If you are “shaving” your fork legs, now is the time to do it. Be sure to clean everything again after machining is complete.

Fork Assembly

Transfer fork tube bushings to new fork tubes. Replace if worn. Use a small screwdriver to gently pry the bushing ends apart enough to free the bushing from its retaining groove. Install slider bushings and backup rings onto fork tubes. Install new fork seals onto the fork tube.

- TC Tip: Orient the seals with the garter spring facing upwards. Prior to installing seals, apply grease to seal lips. Use care to prevent compromising fork seal integrity.

Install new sealing rings on the damper rods.



Install rebound springs onto damper rods. Insert damper assemblies into fork tubes. Return damper rod bases to the lower legs. Slide each tube into its corresponding lower leg.



Install new damper rod bolts and new damper rod crush washers to factory torque specification.

- TC Tip: The damper rod bolt crush washer seals the fork from leaks. Install carefully.

Slide seals carefully down the fork tube until they contact the lower legs. Install fully with suitable seal driver tool.

- TC Tip: 2" PVC tubing may be fashioned into a fork driver. Use a section that is a few inches longer than your new fork tubes protrude. Using a hammer, drive the seal home evenly. You'll know you're getting close to fully seated when the groove for the seal retaining ring is visible.

Install seal retaining rings, new seal wipers, and dust boots. Install fork tubes into the triple trees. Be sure fork tube protrudes slightly above the top tree. Tighten to recommended torque specification. Extend the tubes fully.

The following image is for reference only. Use it to double check your assembly, as it shows all bushing and seal components in relation to one another when installed.



Measure correct fluid quantity, and pour into the fork tubes. Check for leaks at the damper rod bolt. If leaks are found, re-check torque at bolts, drain tubes, and fill again with the correct quantity of fluid.

- TC Tip: Fluid quantity is critical to fork feel and performance. Use a graduated measuring cup or syringe for accurate measuring. Fill with factory recommended fluid specification. Longer tubes do not change fluid specifications.

Your manual may list two specifications. Use the dry specification for initial installation. If leaks are present, refill to wet specification.

Install new fork cap sealing rings onto the fork caps.



Reinstall springs. Place new spring spacers (if included) on top of the springs inside the new fork tubes, or reuse your factory spacers if none are included. Note factory springs are progressive. Be sure to orient the spring correctly when installing—the end with the coils wound more tightly faces down.



Install fork caps, using factory torque specifications.

- TC Tip: Be careful when reinstalling the fork cap. Protect the motorcycle and use personal protective equipment. You will need to exert downward pressure in order to engage the threads and tighten the fork cap.

Reinstall wheel, caliper(s), mudguard, fork braces, and all other items removed. Lower your motorcycle.

Go ride!

TC Bros.
502 Jackson Street
Archbold, OH 43502
USA