



Installation Instructions 444 Series Rear Shocks for Harley Davidson Tri-Glide

ATTENTION

Statements in these instructions that are preceded by the following words are of special significance:

Warning

This means there is the possibility of injury to yourself or others.

Caution

This means there is the possibility of damage to the motorcycle.

Note

Information of particular importance has been placed in italics.

Warranty

Progressive Suspension warrants to the original purchaser of this Part to be free of manufacturing defects in materials and workmanship with a lifetime limited warranty. In the event warranty service is required, you must call Progressive Suspension immediately with a description of the problem.

If it is deemed necessary for Progressive Suspension to make an evaluation to determine whether the part is defective, a return authorization number will be given by Progressive Suspension. The parts must be packaged properly so as to not cause further damage and returned prepaid to Progressive Suspension with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem. If after the evaluation by Progressive Suspension the part was found to be defective it will be repaired or replaced at no cost to you. If we replace it, we may replace it with a reconditioned one of the same design.

Progressive Suspension shall not be held liable for any consequential or incidental damages resulting from the failure of a Progressive Suspension part. Progressive Suspension shall have no obligation if a part becomes defective as a result of improper installation or abuse.

Warning

The motorcycle must be securely blocked to prevent it from dropping when the shocks are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension shocks are designed to work on the OEM (Original Equipment) frame, swingarm, and mounting points. Use of these shocks on a chassis configuration other than OEM may produce an unsatisfactory ride and void the warranty.

Make sure that proper bushings/sleeves are installed in the shocks. Improper bushings/sleeves can cause unsatisfactory and/or unsafe operation (see the instructions packaged with the mounting hardware).

IMPORTANT NOTICE

Note: Please read the following instructions completely before starting installation!

These shocks can be mounted with the adjuster at the top or bottom. However, **we recommend the shocks be mounted with the adjuster at the bottom** for easier spring adjustment.

Follow instructions in an authorized shop manual or take the motorcycle to a competent dealer.

The use of lowering or lifting blocks on Progressive Suspension shocks is not recommended. Use of a lowering or lifting kit may void the warranty or damage the shock/motorcycle.

Be sure to refer to instruction supplements provided in any included mounting hardware

Installation

1. Place a quality jack or sufficient blocks under the motorcycle to securely lift the rear wheels slightly off the ground.
2. Using the correct shop manual for your bike, remove the old shocks and note location of mounting hardware. This will entail removing the rear wheels, and you will need to support the bike with either jack-stands or separate jack while you support the swingarm/axle assembly with another jack. If additional accessories are installed on your motorcycle, please refer to their mounting instructions for removal to gain access to your shocks.

Caution

Before installing your new Progressive shocks you should check your exhaust system clearances.

The reason for this is Progressive shocks are slightly longer than stock to give you better ground clearance and optimum ride quality, and due to factory assembly tolerances some Trikes may need the exhaust system adjusted to allow for this extra suspension travel. Though most Trikes will not require any adjustment, if while extending your swingarm to install the longer shocks you notice contact - or hear contact - at or around the front of the swingarm or rear pulley housing refer to the "Extended Clearance & Adjustment" section of this instruction for guidance.

3. Install the proper mounting sleeves into each shock eye per the illustration (**Figure 1**). The shouldered portion of the sleeve needs to be sandwiched between the shock eye and the mounting surface - this means the upper sleeve shoulder needs to facing inward towards the frame (**Figure 2**) and the lower one facing outward towards the wheel mount (**Figure 3**).

4. After installing the supplied sleeves in the proper orientation, re-using the stock mounting hardware, apply a thread-locking agent to the threads of the bolts, mount the shocks on the Trike - with the preload adjuster at the bottom - and torque the bolts to the factory recommended 55-60 ft-lbs.

5. Reinstall the rear wheels and any other components removed during the installation. Before lowering the Trike and putting the jack away, refer to the "Ride SAG" section to properly set your sag.

Ride SAG

Maximum ride quality is achieved with your new 444 Series shocks when the preload is set to allow approximately .80"-1.20" of Ride Sag.

To check your Ride Sag, place the Trike on a jack to fully extend the rear suspension. Take a measurement from the edge of the rim to a vertical point on the fender. Record that measurement. Now take the Trike off the jack and load the bike with rider(s) and any luggage and re-measure between the same points. This second measurement should be approximately .80" - 1.20" shorter than the first measurement when the air pressure is set correctly. Add or reduce preload accordingly to achieve .80" - 1.20" sag (**Figure 4**)

Spring pre-load adjustments are made by turning the bottom (Long) Cover. Looking at the shock from the bottom, turn this adjuster clockwise to increase spring pre-load and counterclockwise to decrease spring pre-load. Above the adjuster, there are 5 grooves, these are pre-load reference marks:

Minimum pre-load = No visible grooves

Maximum pre-load = 5 visible grooves.

Set the pre-load equally on both shocks using these reference marks as your guide (**Figure 5**).

NOTE: The adjuster is a threaded device, so if you rotate the Adjuster (lower cover) fully to the minimum or the maximum setting, you will feel a sudden increase in rotational resistance as you reach the end of the range of adjustment. This sudden increase in resistance is the adjuster tightening against its stop. When you feel this, we recommend that you turn the adjuster back from the stop by approx ¼ turn. This will facilitate easy adjustments in the future. If the adjuster is tightened firmly against the stop, either at minimum pre-load or maximum, you may have difficulty re-adjusting the pre-load by hand. Should this occur the use of a strap wrench or similar tool will give you the needed leverage to rotate the adjuster away from its stop and return it to normal operation

Test ride: If excessive bottoming occurs you need to increase your spring pre-load setting as described above.

Now go ride and enjoy.....Safely.

Compliment your new shocks with a Progressive Suspension Monotube Cartridge kit for your Trike forks.



Figure 1

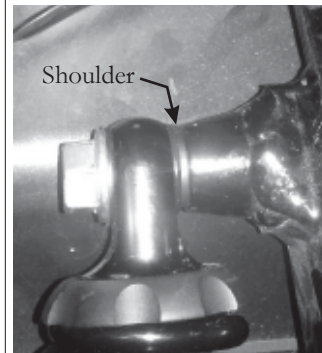


Figure 2

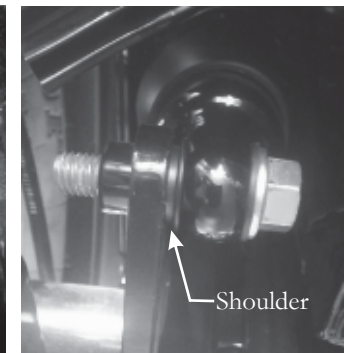


Figure 3

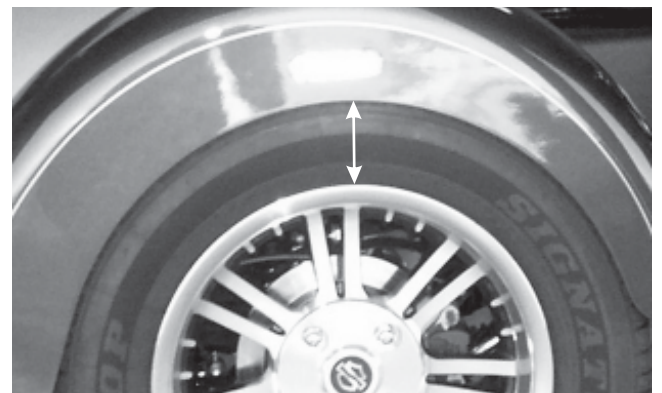


Figure 4 The difference in measurements between the top of the rim and the fender with the suspension fully extended and then with rider(s) on the bike is your Ride Sag. This difference should be .80" - 1.2" for maximum ride comfort.

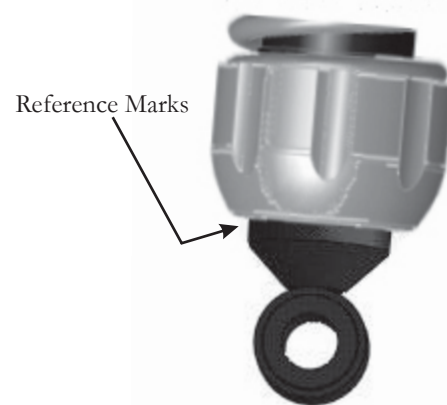


Figure 5

Extended Clearance & Adjustment

The Progressive Suspension 444 Series shocks for your Trike are 0.50" longer than stock. This is by design, as it's been determined that the vehicle benefits from the extra travel – in both ride quality and ground clearance. In most cases there is no issue with installing these longer shocks, however there are two points where, due to factory assembly tolerances, your Trike may make contact between the rear suspension assembly and the exhaust system. This portion of the instructions explains how to identify and rectify this issue should you encounter it.

As you lower the rear axle, extending the shock mounting points to accommodate the longer 444 Series Shocks, one of the places that may make early contact on some Trikes is the "Z" bend portion of the exhaust in front of where the mufflers attach to the head pipes (see figure 6). If contact is going to be made at this point, it will typically be on the right side towards the front of the swingarm. The other point of possible contact is the rear pulley guard making contact with the left muffler (see figure 7).

In either case the solution involves simply loosening and adjusting the exhaust system to gain the needed clearance. This is best done with the Trike lifted and securely supported, the rear wheels removed, and a jack under the rear axle swingarm assembly. Depending on which year/model Trike you have the points at which you can loosen and adjust the exhaust system vary (see examples at right). Look at the point of contact and discern which direction the exhaust needs to move to gain clearance. Then look at the exhaust system mounting points and slip-fit connections – each one has a certain amount of "play" or adjustability when loosened.

The most likely point of contact will be between the pulley housing and the front of the left muffler. To remedy this, loosen the cross-over pipe section – both the muffler clamp that attaches to the right side of the exhaust system and the center mount (may help to remove center mount bolt while adjusting) behind the transmission – and slide the cross-over section slightly to the left until clearance at the pulley housing is achieved. Tighten the clamp and mount back up while maintaining that clearance. The other possible contact point, typically only seen on 2014-later models, is the "Z" bend to the front right of the swingarm which can be remedied by loosening the muffler clamps on the "Z" bend and sliding it slightly forward to gain clearance. Again, once clearance is achieved tighten the clamps back up. Now, with the new longer 444 Series shocks installed, double check your exhaust system clearance again. If any contact is still seen, re-adjust the exhaust system until proper clearance is gained. Once clearance is achieved start the trike and check for possible exhaust leaks, repair as necessary.

Using this method, you should be able to remedy any possible contact issues that may occur.

