510 Series Piggy Back Shocks Installation Instructions
2009+ Harley-Davidson Touring Models

Introduction

Thank you for your purchase of your new DropKick Customs, 510 Series Piggyback Shocks double adjustable and height adjustable shocks!

Getting Started

The 510 series shocks come set from the factory at a neutral adjusted setting this means you will need to adjust spring preload and dampening before you ride the bike. We recommend setting the shocks at a mid-setting, so you can adjust them either stiffer or softer depending on your feel.

Installation:

1. Place a quality jack or sufficient blocks under the motorcycle to securely lift the rear wheel slightly off the ground.

2. Using the correct shop manual for your bike, remove the old shocks and note location of mounting hardware. If additional accessories are installed on your motorcycle, please refer to their mounting instructions for removal to gain access to your shocks.

3. Before installing your new 510 Series shocks you need to check the tire to fender clearance, making sure that the tire does not come in contact with the fender. If the rear fender or tire has been changed to anything other than stock. On some models with side bags or luggage, the bag or luggage mounts may need to be modified to eliminate any interference. Install the shock assemblies onto the motorcycle with the included hardware, note any special instructions in the hardware kit. Tighten bolts / nuts to their proper torque. Check the clearances of the shock to the frame, shock to chain or belt, shock to chain or belt guard and shock to brake caliper and/or linkage.

4. Reinstall any accessories removed in accord with their mounting instructions. Make sure accessories do not interfere with the shocks throughout their full travel. If any accessories bolt to the shock mounting points, a careful inspection must be made to ensure that they do not bind the shocks in any way.

5. Set your ride sag. The proper spring pre-load setting will permit the rear suspension to sag, or compress, approximately 1" from full extension. To check sag, take a measurement from the center of the rear axle, straight up to a vertical point on the rear fender or frame with the shocks fully extended. Then take a second measurement using the same points with the rider(s) on the bike. The difference between the two measurements is the ride sag. If the bike is sagging too much, increase the pre-load. These shocks are set at the factory to minimum pre-load.

6. Spring pre-load adjustments are made by using the supplied preload wrench to loosen the preload locking ring, and then turn the preload adjusting ring. Turn this adjuster clockwise (looking at the shock from the reservoir end) to increase spring preload and counterclockwise to decrease spring pre-load. Set the preload equally on both shocks, measuring the installed spring lengths making sure they are the same. Never adjust the preload to produce a spring length less than the minimum installed springs lengths. Once you've adjusted the preload, be sure to tighten the preload lock ring back down on the adjuster ring.

7. Adjust Rebound Dampening & Compression Dampening Adjust both shocks equally by counting the "clicks"

8. Test ride: If excessive bottoming occurs you need to increase your spring pre-load and/or compression setting described above.

9. Then ride and enjoy.... Safely.

• DropKick Customs products are subject to continuous improvement and development, therefore, although these instructions include the most up-to-date information available at the time of printing, minor updates may occur. To find the latest information. Please contact DropKick Customs if you have any questions regarding the contents in this document.

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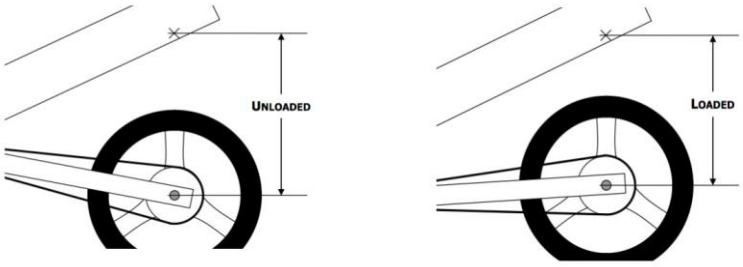

Spring Preload Adjustment

Spring preload refers to the amount a motorcycle suspension spring is compressed when installed on a fully extended shock (under no load). Changing a rear shock spring preload will change the motorcycles rear sag. Rear sag is the measure of change in rear ride height when comparing a fully extended suspension to a loaded suspension. Typically, loaded and unloaded sag are considered. The reference measurement is the fully-extended suspension (as with the motorcycle wheel off the ground). Performance of the rear suspension is typically best when the loaded sag is about 1/3 the available travel. Adjust this sag by increasing or decreasing the preload on the spring by rotating the threaded spring support on the shock Spring Preload Adjuster. Increasing or decreasing the amount of preload will not change the spring's stiffness, it will only bring the rear of the bike up or down within its travel. It is important that the rear damper can respond to dips and bumps without excessive topping or bottoming of the damper. The sag recommendation is a guideline and experimenting with settings +/- 10mm from the suggested optimum settings may be advantageous to some riders. To adjust the spring preload adjuster using the supplied wrench, be sure the wrench is fully inserted into the holes provided around the OD of the threaded spring preload adjuster. Supporting the rear of your bike on a center stand or lifting up on the rear helps reduce the spring load and the turning of the spring preload adjuster will require less force. The spring preload adjuster is fitted to the shock using normal right-hand threads and reducing the installed length of the spring INCREASES the preload.

Rebound Damping Adjustment

Rebound damping is the damping force absorbed by a shock which opposes suspension extension. Too little rebound damping force will cause a loose or disconnected feeling or, at the extreme, even instability of the motorcycle. Too much rebound will compromise traction, often causing the suspension to feel stiff due to the suspension "packing" or riding lower in the stroke.
The shock is designed with user adjustability to allow the rider to make changes to best match the conditions. A rebound adjuster sweep is located on the lower portion of the shock just above the lower mounting clevis or eyelet housing. This adjustment sweep controls an internal jet that allows "bleed" or a bypass of fluid within the damper piston. Turning the sweep in the clockwise direction will cause the shock to become firmer and cause the rebound to become slower. Turning this control in the counter-clockwise direction will cause the damper to become more compliant and the rebound to become faster. There are 20"clicks" of total active adjustment available. It is very important to count the clicks from the fully closed position (fully clockwise). When closing the adjuster, you are contacting the adjuster needle into its seat and for that reason it is very important to not exert anymore force than needed to feel the closed condition. We recommend you record all the setup changes you make to your damper assembly, so you can keep track of your changes. It is also a good idea to keep notes relative to the changes that you perceive when riding.

Compression Damping Adjustment

Compression damping is the force absorbed by a shock that opposes the compression or bump movement of the suspension. Excessive compression force causes a firm feel and keeps the suspension higher in its stroke on bumpy surfaces. Piggyback mounted reservoir that includes an aluminum separator piston and a fully configurable "head valve" that provides an important level of compression damping control and adjustability to allow for a higher degree of performance, longevity, heat dissipation and adjustability. With regard to operation, the user has an option of adjusting the compression of the shock independently of the main "rebound" adjuster at the bottom of the shock. The compression adjuster is attached to the reservoir and is located either on the top of the reservoir. To change the compression setting, simply rotate the knob (S) Soft (F) Firm. The auxiliary valve in the reservoir produces a percentage of the total compression force that the shock makes and in doing so, distributes heat outside of the main damper body as well as providing better pressure balance within the unit. The reservoir allows for additional oil and gas capacity within the shock, aiding in heat dissipation and unit longevity.