



INSTRUCTIONS

-J06426

2016-08-22

SCREAMIN EAGLE ADJUSTABLE REAR SHOCKS

GENERAL

Kit Number

54000125

Models

For model fitment information, see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

Installation Requirements

This kit requires LOCTITE[®] 243 (blue) for proper installation.

Belt Tension Gauge (Part No. HD-35381-A) is required when the shock installation is finished.

▲ WARNING

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)

NOTE

This instruction sheet references service manual information. A service manual for your model motorcycle is required for this installation. One is available from a Harley-Davidson Dealer.

Kit Contents

See Figure 3 and Table 1.

REMOVAL

NOTE

When removing shocks, remove and replace one shock at a time. This method does not require raising and blocking the rear wheel. To remove both shocks at the same time, place the motorcycle on a center stand with the rear wheel raised off the ground.

1. See the service manual. Remove rear shock absorbers.
2. See Figure 2. Retain washers (10 & 11) for new shock installation.

INSTALLATION

1. See Figure 2. Loosely install upper shock mounting bolt (1) to **Both Sides**: Position the bushing (9) facing the inboard side. Install upper shock eye to frame:

2. Install lower shock eye to **Right Side** (except Japan models):
 - a. Verify bushing (9) is toward vehicle.
 - b. Slide lower mounting bolt (5) through washer (10) and bottom shock eye.
 - c. Slide lower mounting bolt through rear fork.
 - d. Slide lower mounting bolt through one special washer (6) (2015 and earlier models only).
 - e. Slide lower mounting bolt through the belt guard.
 - f. Slide lower mounting bolt through one special washer (6) (2015 and earlier models only).
 - g. Apply Loctite 243 (blue) to lower shock bolt. Install nut (7).

NOTE

The lower right side mounting bolt on Japan models must be inserted from inside the rear fork (Opposite of what is shown in Figure 2). Removal and installation of rear wheel is needed for this step.

- h. Tighten shock mounting bolt and nut. Torque to 61–68 N·m (45–50 ft-lbs).
3. Install lower shock eye to **Right Side** (Japan only models):
 - a. See the service manual. Remove rear wheel.
 - b. Verify bushing (9) is toward vehicle.
 - c. Slide lower mounting bolt (5) through one special washer (6) (2015 and earlier models).
 - d. Slide lower mounting bolt through the belt guard.
 - e. Slide lower mounting bolt through one special washer (6) (2015 and earlier models).
 - f. Slide lower mounting bolt through rear fork.
 - g. Slide lower mounting bolt through bottom shock eye and washer (10).
 - h. Apply Loctite 243 (blue) to lower shock bolt. Install nut (7).
 - i. Tighten shock mounting bolt and nut. Torque to 61–68 N·m (45–50 ft-lbs).
 - j. See the service manual. Install rear wheel.

4. Remove upper shock bolt. Apply Loctite 243 (blue) to upper shock bolt.
5. Slide upper mounting bolt (1) through washer (11) and upper shock eye.
6. Slide upper mounting bolt into frame boss.
7. Tighten shock mounting bolt. Torque to 61–68 N·m (45–50 ft-lbs).
8. Install lower shock mount to **Left Side**:
 - a. Verify bushing (9) is toward vehicle.
 - b. Slide lower mounting bolt (8) through washer (10) and bottom shock eye.
 - c. Slide lower mounting bolt through rear fork.
 - d. Apply Loctite 243 (blue) to lower shock bolt. Install nut (7).
 - e. Tighten shock mounting bolt and nut. Torque to 61–68 N·m (45–50 ft-lbs).
9. Remove upper shock bolt. Apply Loctite 243 (blue) to upper shock bolt.
10. Slide upper mounting bolt (1) through washer (11) and upper shock eye.
11. Slide upper mounting bolt into frame boss.

NOTE

In order for the new reflector to adhere to the reflector bracket, make sure to clean the surrounding area. Wash with soap and water and dry with a clean oil free towel.

12. Tighten shock mounting bolt. Torque to 61–68 N·m (45–50 ft-lbs).
13. See Figure 1. If stock reflector (2) is located below the strut cover, install new reflector (1) above the strut cover.
14. See service manual. Using the belt tension gauge, check and adjust drive belt deflection.
15. See shock absorber adjustment section to set preload and damping for your riding style and road conditions.

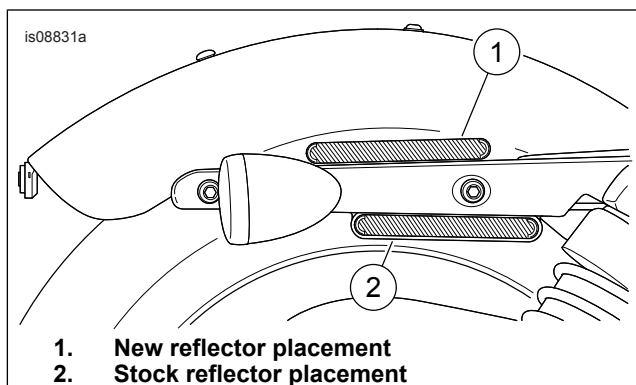


Figure 1. Sportster Reflector Mandate

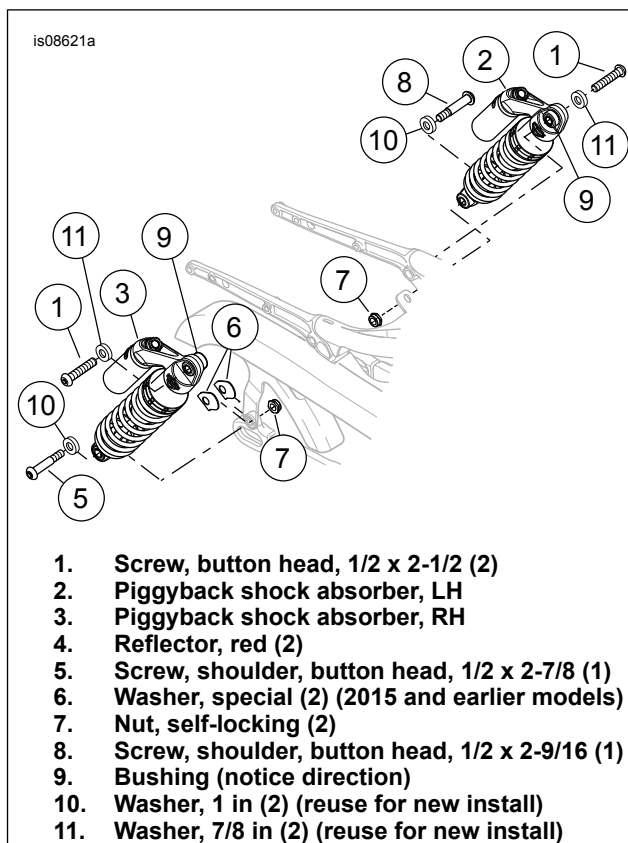


Figure 2. Rear Shock Absorber Installation

SERVICE PARTS

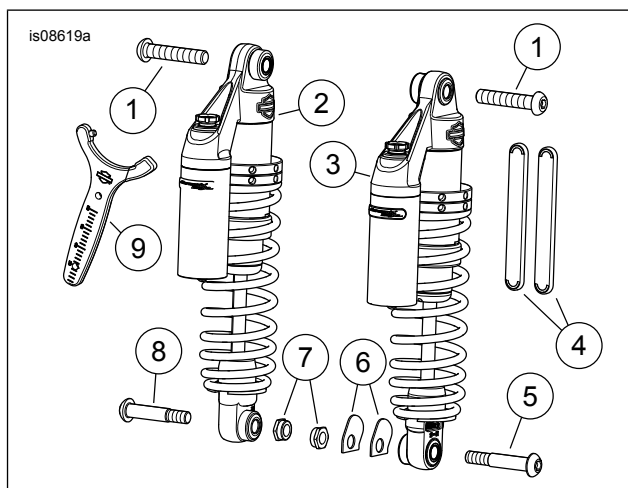


Figure 3. Service Parts: XL Rear Shock Kit

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Screw, button head Torx T50, 1/2 x 2-1/2 (2)	10200392
2	Piggyback shock absorber, LH	54000127
3	Piggyback shock absorber, RH	54000126
4	Reflector, red (2)	69490-07
5	Screw, shoulder, button head Torx T50, 1/2 x 2-7/8 (1)	10200445
6	Washer, special (2)	10600039
7	Nut, self-locking (2)	7824
8	Screw, shoulder, button head Torx T50, 1/2 x 2-9/16 (1)	4354
9	Spanner wrench	14900080

SHOCK ABSORBER ADJUSTMENT

Shock Preload Adjustment

The shock absorber preload setting needs to be adjusted for the rider's weight and cargo. This adjustment should be made before the motorcycle is ridden any distance and after changing the overall vehicle weight (adding saddlebags, etc.). Changes in the load carried requires changes in the preload settings. Carrying less weight than was used for setting up the suspension requires decreasing the amount of preload. Increasing the load carried requires adding more preload.

⚠ WARNING

Adjust both shock absorbers equally. Improper adjustment can adversely affect stability and handling, which could result in death or serious injury. (00036b)

NOTE

See Figure 4, item 6. The minimum distance is 30 mm (1.18 in) and maximum distance is 54 mm (2.12 in).

The locknut may not be tight on new shock. The adjustment must be completed and the adjuster nut locked before vehicle operation.

1. Clean the adjuster threads (9).
2. See Figure 4. Loosen adjuster nut and locknut:
 - a. Place spanner wrench nipple (3) in hole of adjuster nut (8).
 - b. Rotate in direction (11) to separate the two nuts.
3. See Table 3. Determine desired locknut location for the total weight of rider, passenger cargo and accessories.
4. Adjusting shock preload:
 - a. Measure location by placing the bottom of the spanner wrench (5) on top of the locknut (1).
 - b. Read the measurement on the spanner wrench (6) from the top of the locknut to the shoulder (2).
 - c. Note measured distance.
 - d. Rotate lock (7) nut to desired location (6). If necessary, rotate adjuster nut (8) down to make room for locknut.
5. Repeat previous steps on opposite side. Verify that the measured distance is the same for both shocks.
6. Locking adjuster nut (8) and locknut (7) in position:
 - a. Rotate adjuster nut to touch locknut.
 - b. Place spanner wrench nipple into adjuster nut.
 - c. Rotate in direction (10) to locknuts together.
 - d. Repeat steps A through C on opposite side.

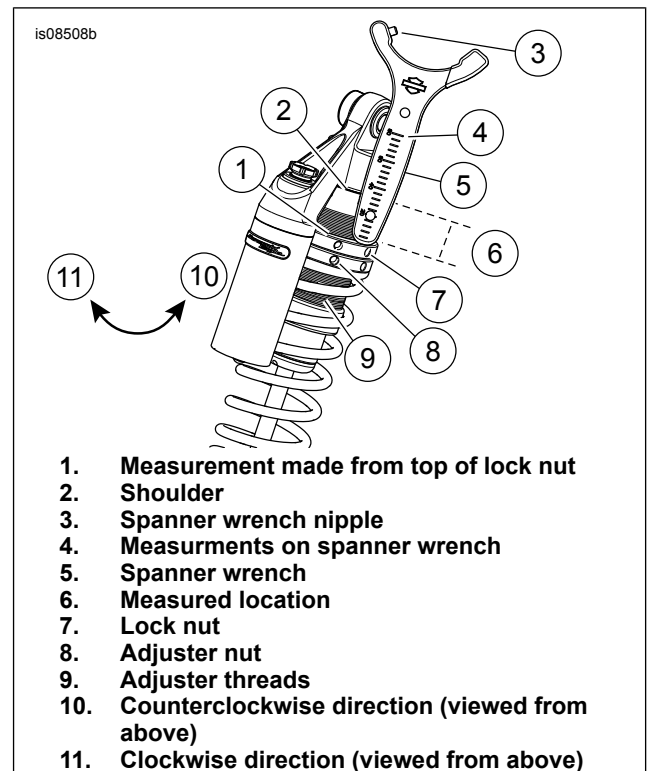


Figure 4. Preload Adjustment

Shock Damping Adjustment

⚠ WARNING

Adjust both shock absorbers equally. Improper adjustment can adversely affect stability and handling, which could result in death or serious injury. (00036b)

NOTICE

Compression and rebound adjusting valves may be damaged if too much force is used at either end of the adjustment range. (00237a)

NOTE

See Table 2 for rebound (TEN) and compression (COMP) damping adjustment.

Shock Absorber Compression Damping Adjustment

1. See Figure 5. Turn the compression adjuster clockwise (toward H) until it stops. This is the maximum compression damping setting.
2. Turn the compression adjuster counterclockwise (H to S) the recommended number of clicks.

Shock Absorber Rebound Damping Adjustment

1. See Figure 6. Turn the rebound adjuster in the direction of the embossed H (hard) until it stops. This is the maximum rebound damping setting.
2. Turn the rebound adjuster toward the embossed S (soft) the recommended number of clicks.

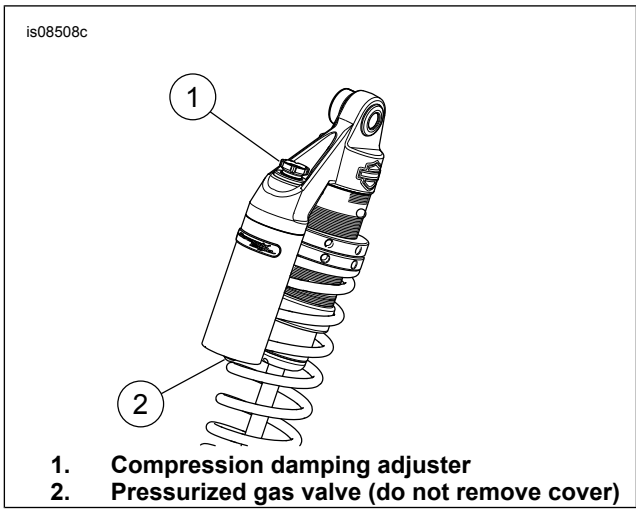


Figure 5. Shock Absorber Compression Damping Adjusters

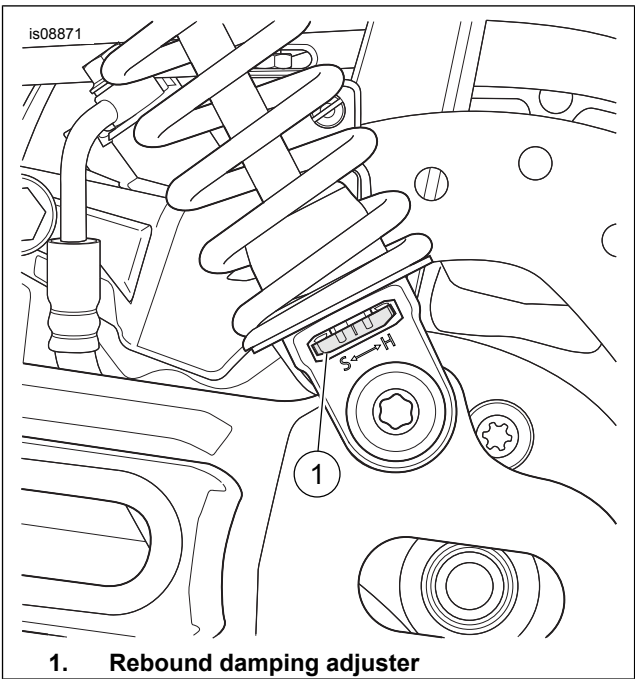


Figure 6. Shock Absorber Rebound Damping Adjusters

Table 2. Recommended Shock Rebound and Compression Damping Adjustment

DAMPING	NOMINAL (From Maximum)
Compression (COMP)	7 clicks
Rebound (TEN)	7 clicks
Values shown are counterclockwise turns from maximum. Rotate adjuster clockwise to increase damping or counterclockwise to decrease damping.	

PRELOAD TABLE

The Screamin Eagle adjustable rear shocks come fully charged. Adjust shock preload for rider weight and weight of passenger, cargo and accessories.

Table 3. Manual Suspension Preload Table

RIDER WEIGHT		ADDITIONAL WEIGHT OF PASSENGER, CARGO, AND ADDED ACCESSORIES																	
LB		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	
	KG	0	4.5	9.0	13.6	18.1	22.6	27.2	31.7	36.2	40.8	45.3	49.9	54.4	58.9	63.5	68.0	72.5	
		Measurement Reading From Shock Shoulder To Top Of Lock Nut (mm)																	
100	45	30	30	30	30	30	30	30	32	34	36	39	41	43	46	48	50	53	Max
110	50	30	30	30	30	30	30	31	33	36	38	40	43	45	47	50	52	54	Max
120	54	30	30	30	30	30	30	33	35	37	40	42	44	47	49	51	54	Max	
130	59	30	30	30	30	32	34	37	39	41	44	46	48	51	53	Max			
140	64	30	30	30	31	34	36	38	41	43	45	48	50	52	Max				
150	68	30	30	31	33	35	38	40	42	45	47	49	52	54	Max				
160	73	30	30	32	35	37	39	42	44	46	49	51	53	Max					
170	77	30	32	34	36	39	41	43	46	48	50	53	Max						
180	82	31	33	36	38	40	43	45	47	50	52	54	Max						
190	86	33	35	37	40	42	44	47	49	51	54	Max							
200	91	34	37	39	41	44	46	48	51	53	Max								
210	95	36	38	41	43	45	48	50	52	Max									
220	100	38	40	42	45	47	49	52	54	Max									

Suspension Tuning

After the preload and damping have been set to the recommended settings, additional adjustments can be made to enhance the comfort, control and handling characteristics of the motorcycle. These adjustments may be based on personal riding style, desired ride quality and varying road conditions.

1. Set the front forks (if adjustable) and shock absorbers to the recommended settings. Properly inflate the tires.

2. Determine the ride quality of the motorcycle. Ride the motorcycle on a familiar road with various bumps and turns. Ride over different surfaces at varying speeds. If the suspension is set properly, the vehicle suspension will feel controlled and comfortable.
3. See Table 4. Adjust the rebound and compression damping according to the motorcycle behavior experienced during the ride.
4. After adjusting the suspension, ride the motorcycle again to check for comfort and response.

NOTE
When tuning the suspension, make all adjustments in small

increments. Radical setting changes may overshoot the best adjustment setting.

Table 4. Suspension Damping Adjustment Guidelines

MOTORCYCLE BEHAVIOR	SUGGESTED REMEDY
Soft or unsettled feeling around corners or after bumps	Increase rebound damping
Leaping feeling or topping after large bumps	Increase rebound damping
Harsh/sharp feedback over bumps	Decrease rebound damping
Feels like motorcycle drops down over chatter bumps	Decrease rebound damping
Excessive bottoming through potholes	Increase compression damping
Excessive dive when applying front brake	Increase compression damping (forks)
Hard feeling or inadequate absorption over bumps	Decrease compression damping
Feels excessively stiff or busy around corners	Decrease compression damping
NOTE: Behavior felt through the handlebars should be remedied with front fork damping changes. Behavior felt through the seat should be remedied with rear shock damping changes.	