



## PREMIUM SUSPENSION KIT

J04909

2009-06-01

### GENERAL

#### Kit Number

54530-10

#### Models

For model fitment information, see the P&A Retail Catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com) (English only). Kit is not compatible with saddle bags P/N 90328-08.

#### Additional Parts Required

Separate purchase and installation of additional parts or accessories may be required for proper installation of this kit on your model motorcycle. See the P&A Retail Catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com) (English only) for a list of required parts or accessories for your model.

#### 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 and is available from a Harley-Davidson Dealer.

#### Kit Contents

See [Figure 9](#) and [Table 6](#).

### REMOVAL

#### Front Fork Assembly

1. Refer to the XR model section of the service manual and remove the front forks.

# INSTALLATION

## Front Fork Assembly

1. Install front forks from kit to motorcycle according to service manual instructions but do not tighten the fork bracket pinch screws at this time.
2. See [Figure 1](#). Measure the distance from the top of upper fork bracket to top of fork assembly. Both sides must be exactly the same and measure 0.388-0.468 inch (9.85-11.89 mm) above the top fork bracket. Align the adjustment screws inline with the handlebars (see Figure 5).

### NOTE

If **new** pinch screws are not readily available, use a wire grinder wheel to remove all remaining lock patch from original pinch screws, wash screws in clean solvent and dry thoroughly. Apply two drops of LOCTITE® 262 to the first 1/4 in. (6.35 mm) of the end threads.

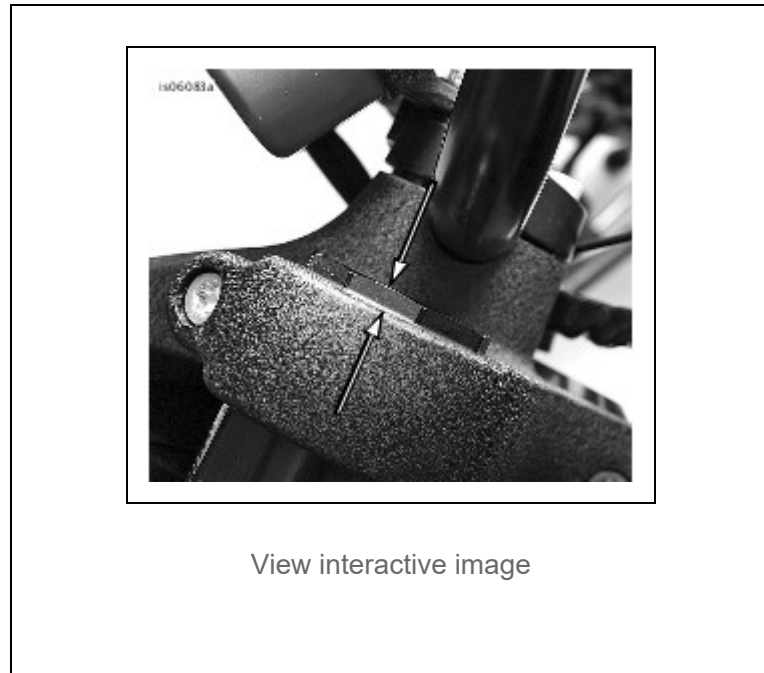


Figure 1. Fork Installation Height Measurement.

3. Install pinch screws to upper and lower fork brackets.
4. Verify fork tube installation measurement is 0.388-0.468 inch (9.85-11.89 mm).
5. Tighten pinch screws to 40.7–47.5 N·m (30–35 ft-lbs).

### NOTE

See [Figure 2](#). The top edge of reflector should be 1-1/2 inches (38.10 mm) below the lower edge of the bottom fork clamp.

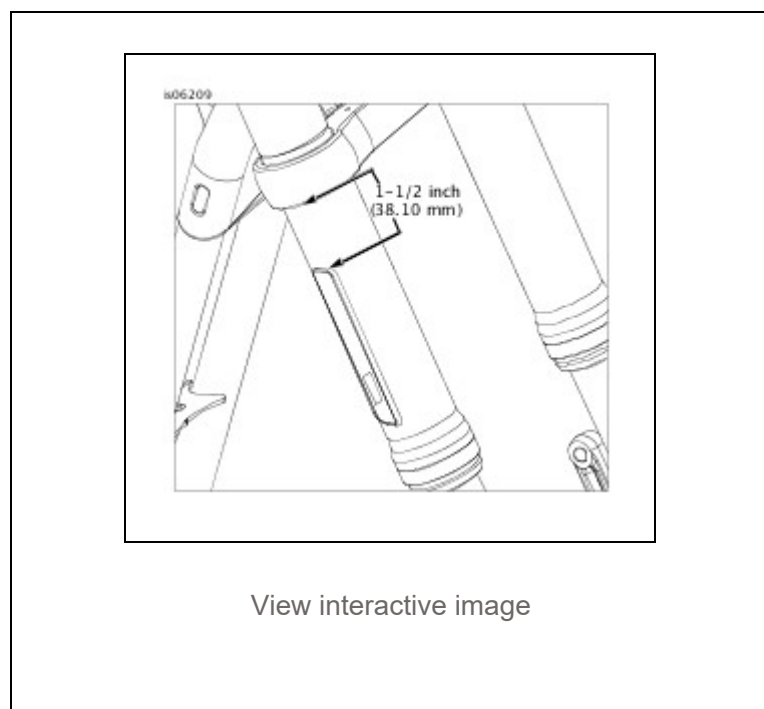


Figure 2. Attaching Reflectors to Fork Sliders

6. Remove the adhesive backing. Place reflector in position and press reflector firmly into place to activate the adhesive.  
Repeat for reflector on opposite fork.

## REMOVAL

### OEM Rear Shock Absorbers

1. Refer to the XR model section of the service manual and remove the rear shock absorbers.

## INSTALLATION

### Rear Shock Absorbers

1. See [Figure 3](#). Install the rear shock absorbers according to service manual instructions. The shocks are installed with the external gas reservoir to the rear of the shock absorbers and the thick side of the grommet installed to the frame rail mounts.



Figure 3. Install Thick Side Of Grommet To Frame Rail

## SUSPENSION ADJUSTMENTS

### Front Fork Suspension Adjustment

#### **⚠ WARNING**

Whenever a wheel is installed and before moving the motorcycle, pump brakes to build brake system pressure. Insufficient pressure can adversely affect brake performance, which could result in death or serious injury. (00284a)

#### **⚠ WARNING**

Adjust both forks equally. Improper fork adjustment can lead to loss of control, which could result in death or serious injury. (00124c)

## NOTICE

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

## NOTE

Damping is set at the factory for the average solo rider under normal riding conditions. The rider may make adjustments to compensate for individual riding styles and varying road conditions. Evaluating and changing the rebound and compression damping is a very subjective process with many variables and should be approached carefully.

The front and rear preload setting will need 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.). If the preload adjustment is correct, and you have the rebound and compression damping set at the factory recommended points, the motorcycle should handle and ride properly.

Changes in the load carried requires changes in the preload setting(s). 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.

The following tools are needed to make suspension adjustments.

- 5 mm hex key (front fork preload adjustment tool).
- Spanner wrench with extension handle (shock absorber preload adjustment).
- Screw driver (front fork damping adjustment).

### 1. Front fork preload adjustment:

- a. See [Figure 4](#) and [Table 1](#). Using the 5 mm hex key, turn the preload adjuster counterclockwise until it stops. This is the minimum preload setting.
- b. Turn the preload adjuster clockwise the recommended amount specified for the rider weight.

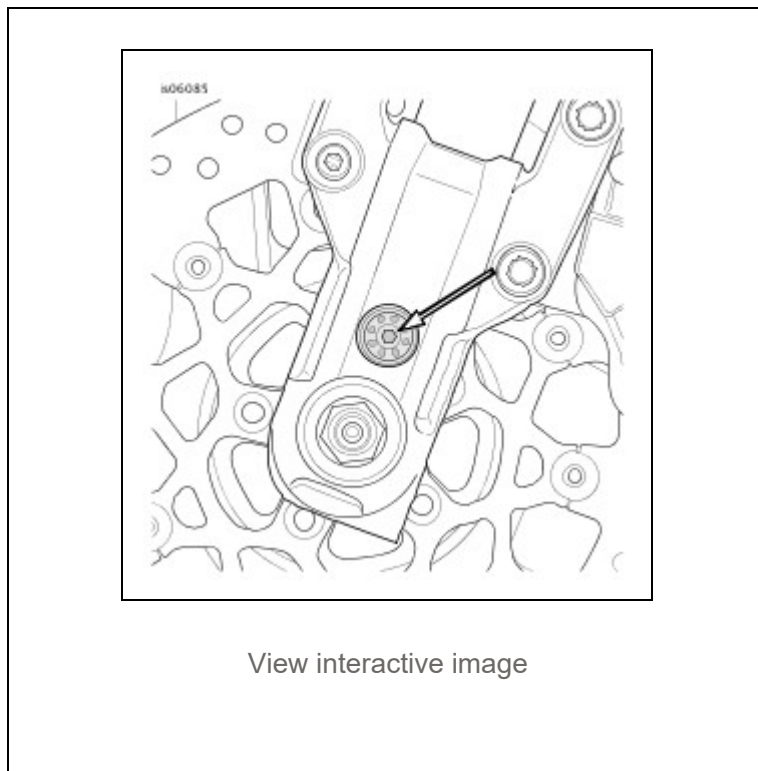


Figure 4. Fork Preload Adjuster

### 2. Front rebound damping adjustment:

- a. See [Figure 5](#) and [Table 2](#). Turn the rebound damping adjuster clockwise until it stops. This is the maximum rebound damping setting.
- b. Turn the adjuster counterclockwise within the range of turns specified to the desired setting.

### 3. Front fork compression damping adjustment:

- a. See [Figure 5](#) and [Table 2](#). Turn the compression damping adjuster clockwise until it stops. This is the maximum compression damping setting.
- b. Turn the adjuster counterclockwise within the range of turns specified to the desired setting.

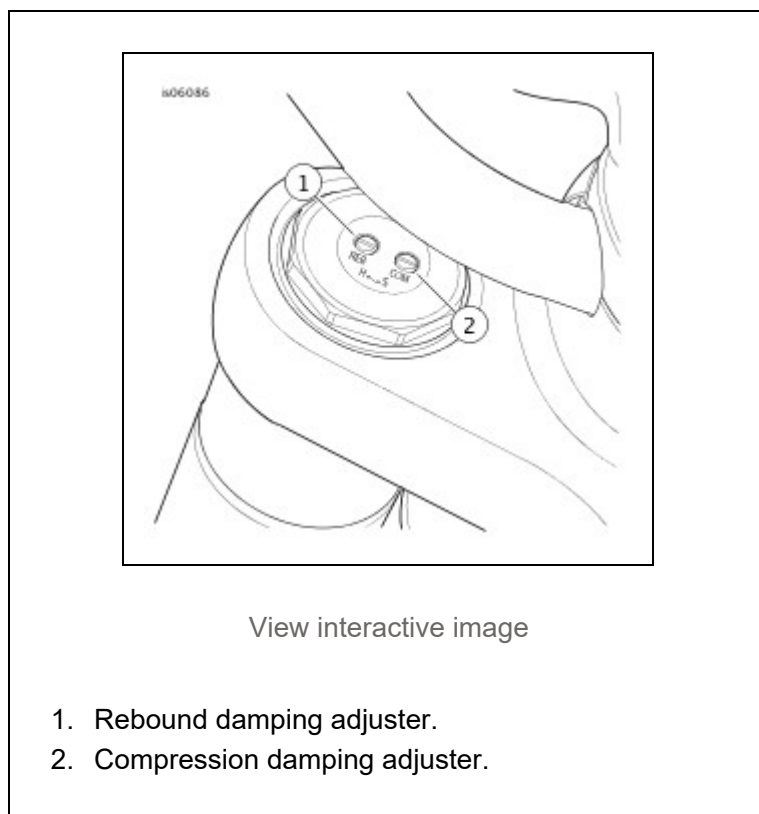


Figure 5. Fork Rebound and Compression Damping Adjusters

Table 1. Recommended Fork Preload Adjustment

RIDER WEIGHT	PRELOAD*
Less than 75 kg (165 lb)	0-4 turns in
75-89 kg (165-195 lb)	4-6 turns in
89-102 kg (195-225 lb)	6-8 turns in
102-116 kg (225-255 lb)	8-10 turns in
Greater than 116 kg (255 lb)	More than 10 turns

\*Values shown are clockwise turns in from minimum. Rotate adjuster clockwise to increase preload or counterclockwise to decrease preload.

Table 2. Recommended Fork Rebound and Compression Damping Adjustment: XR 1200X

DAMPING*	NOMINAL (FROM MAXIMUM)
Rebound (REB)	3 turns
Compression (COM)	5 turns

\*Values shown are counterclockwise turns out from maximum. Rotate adjuster clockwise to increase damping or counterclockwise to decrease damping.

# Shock Absorber Suspension 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

Do not force adjusters beyond the mechanical stops.

### 1. Shock absorber preload adjustment:

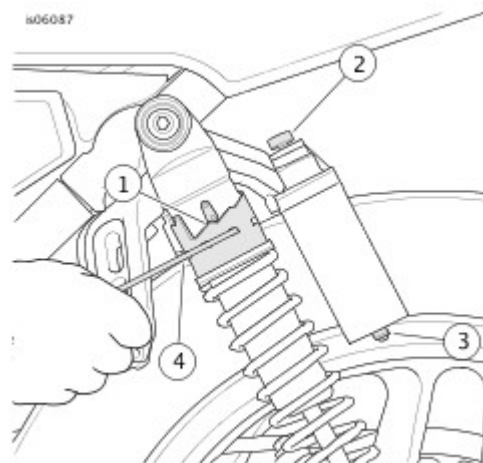
- a. See [Figure 6](#) and [Table 3](#). Using the spanner wrench turn the adjusting cam (1) to the recommended position as specified in Table 3.

### 2. Shock absorber compression damping adjustment:

- a. See [Figure 6](#). Using fingers, turn the compression adjuster (2) clockwise (toward the "H") until it stops. This is the maximum compression damping setting.
- b. See [Table 4](#). Turn the compression adjuster counterclockwise (toward the "S") the recommended amount.

### 3. Shock absorber rebound damping:

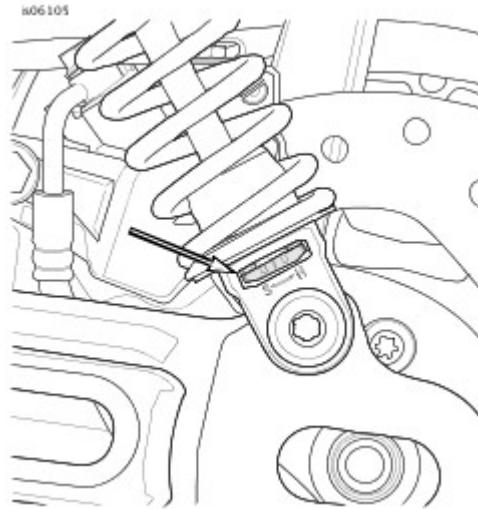
- a. See [Figure 7](#). Turn the rebound adjuster counterclockwise (toward the "H") until it stops. This is the maximum rebound damping setting.
- b. See [Table 4](#). Turn the rebound adjuster clockwise (toward the "S") the recommended amount.



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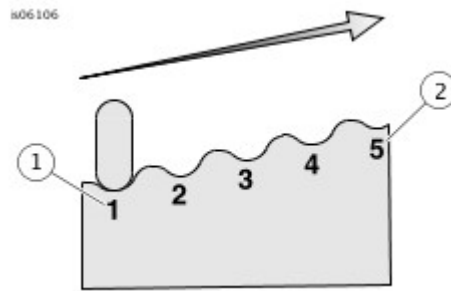
1. Preload adjusting cam.
2. Compression damping adjuster.
3. Pressurized gas valve (do not remove cover).
4. Spanner wrench.

Figure 6. Rear Shock Preload and Compression Damping Adjusters



View interactive image

Figure 7. Rear Shock Rebound Damping Adjuster



View interactive image

1. Minimum preload adjustment.
2. Maximum preload adjustment.

Figure 8. Shock Absorber Preload Adjustment

Table 3. Recommended Rear Shock Preload Adjustment

RIDER WEIGHT	PRELOAD
Less than 75 kg (165 lb)	Position 1
75–89 kg (165–195 lb)	Position 2
89–102 kg (195–225 lb)	Position 3
102–116 kg (225–255 lb)	Position 4
Greater than 116 kg (255 lb)	Position 5

Table 4. Recommended Rear Shock Rebound and Compression Damping Adjustment: XR 1200X

<b>DAMPING</b>	<b>NOMINAL (FROM MAXIMUM)</b>
Compression (COM)	7 clicks
Rebound (REB)	5 clicks

## SUSPENSION TUNING

### NOTE

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 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 a variety of 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 5](#). 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 5. Suspension Damping Adjustment Guidelines: XR 1200X

<b>MOTORCYCLE BEHAVIOR</b>	<b>SUGGESTED REMEDY</b>
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



# MAINTENANCE

**Shock Absorbers:** These shock absorbers contain pressurized gas. Visually inspect the shock absorbers while observing the following precautions.

**⚠ WARNING**

Shock absorber cannot be serviced. Attempting service can cause an explosion, which could result in death or serious injury. (00602d)

- Do not refill, disassemble, puncture or expose shock to flames.
- Replacement and disposal should only be done by an authorized Harley-Davidson dealer.

**Front Forks:** The service procedure for these forks are different than other forks. Refer to the service manual for XR1200X forks for inspection, maintenance, and service procedures.

# SERVICE PARTS

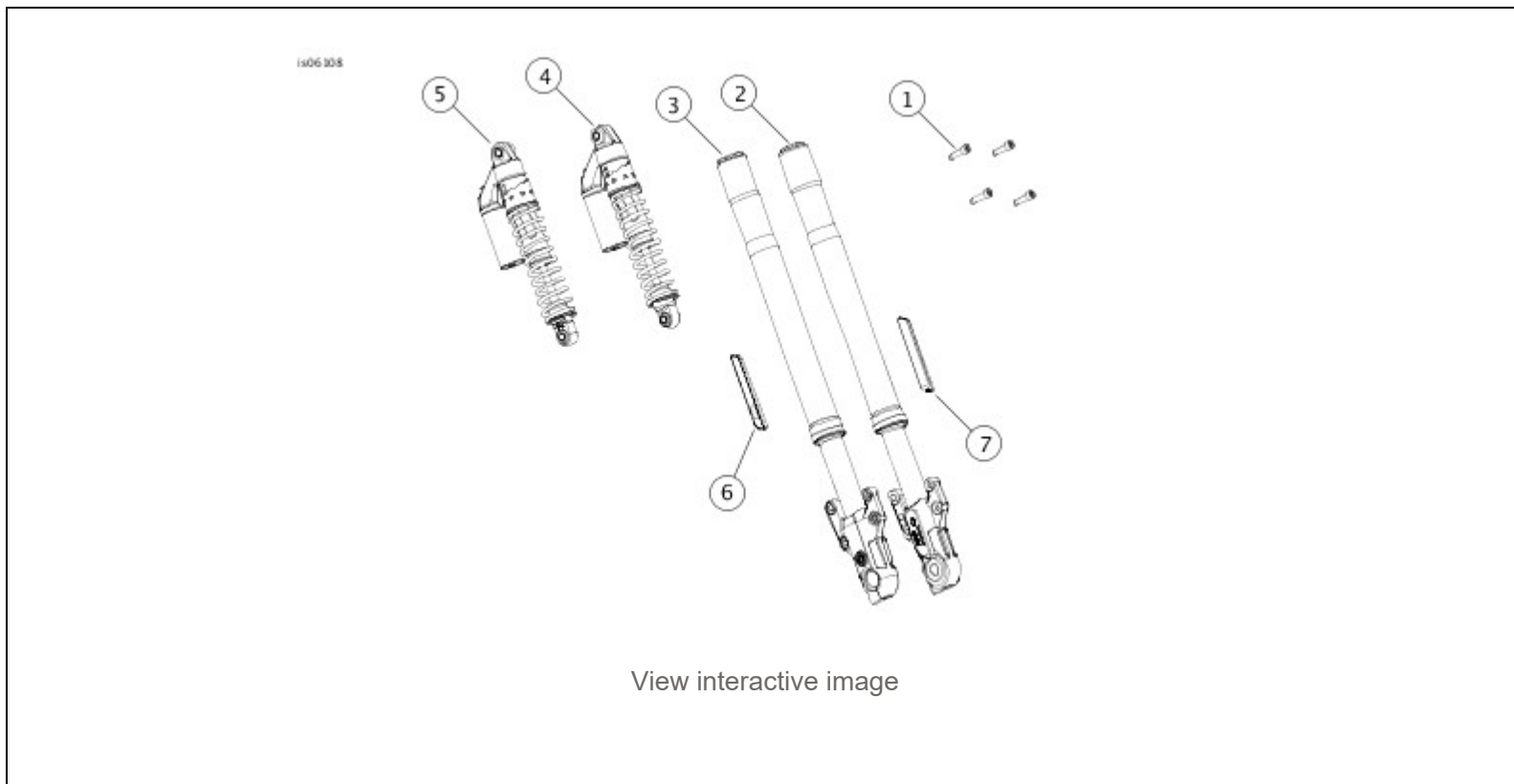


Figure 9. Service Parts: Premium Suspension Kit

Table 6. Service Parts Table

ITEM	DESCRIPTION (QUANTITY)	PART NUMBER
1	TORX® screw, self tapping, 3/8-16 x 1.5 in. (4)	4352
2	Front fork assembly, left	48771-10
3	Front fork assembly, right	48778-10
4	Shock absorber, left	54671-10

ITEM	DESCRIPTION (QUANTITY)	PART NUMBER
5	Shock absorber, right	54700-10
6	Amber reflector, right	69861-07
7	Amber reflector, left	69862-07