



# INSTRUCTIONS

J05675

2015-10-09



## HYDRAULIC CLUTCH LINE KITS

### GENERAL

#### Kit Number

Table 1. Hydraulic Clutch Line Kits - Banjo Angle 0° - Straight

Diamond-Black Kit	Diamondback Kit	Length
37200199	37200187	67.0 in (170 cm)
37200042	37200036A	68.5 in (174 cm)
37200043	37200037A	70.5 in (179 cm)
37200044	37200038A	72.5 in (184 cm)
37200045	37200039A	74.5 in (189 cm)
37200046	37200040A	76.5 in (194 cm)
37200047	37200041A	78.5 in (199 cm)

Table 2. Hydraulic Clutch Line Kits - Banjo Angle 35°

Diamond-Black Kit	Diamondback Kit	Length
37200161	37200164	140 cm (55.0 in)
37200201	37200189	146 cm (57.5 in)
37200109	37200107	152 cm (60.0 in)
37200202	37200190	159 cm (62.5 in)
37200160	37200163	168 cm (66.0 in)
37200203	37200191	171 cm (67.5 in)
37200204	37200192	179 cm (70.5 in)
37200183	37200181	183 cm (72.0 in)
37200101	37200105	188 cm (74.0 in)

Table 3. Hydraulic Clutch Line Kits - Banjo Angle 90°

Diamond-Black Kit	Diamondback Kit	Length
37200200	37200188	151 cm (59.5 in)
37200099	37200103	184 cm (72.5 in)

### 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).

### Installation Requirements

Four or five cable straps approximately 15 in (38 cm) long (Part No. 10039) are required for the proper installation of this kit.

DOT 4 brake fluid (Part No. 99953-99A) is required for the installation of this kit.

#### ⚠ 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 refers to service manual information. A service manual for this year/model motorcycle is required for this installation. One is available from a Harley-Davidson dealer.

### Kit Contents

See Figure 10 and Table 4 for kit contents.

### PREPARATION

#### NOTE

**For vehicles equipped with security siren:**

- Verify that the hands-free Fob is present.
- With security fob present, turn ignition switch ON.

For ALL vehicles with main fuse:

#### ⚠ WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

1. See the service manual. Remove main fuse.

#### NOTE

If DOT 4 brake fluid contacts painted surfaces, IMMEDIATELY flush area with clear water.

Cover nearby motorcycle surfaces with an H-D Service Cover or polyethylene protective sheet to help protect against damage to the finish caused by spillage or splash of DOT 4 brake fluid.



### ⚠ WARNING

Contact with DOT 4 brake fluid can have serious health effects. Failure to wear proper skin and eye protection could result in death or serious injury.

- If inhaled: Keep calm, remove to fresh air, seek medical attention.
- If on skin: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, seek medical attention.
- If in eyes: Wash affected eyes for at least 15 minutes under running water with eye lids held open. If irritation develops, seek medical attention.
- If swallowed: Rinse mouth and then drink plenty of water. Do not induce vomiting. Contact Poison Control. Immediate medical attention required.
- See Safety Data Sheet (SDS) for more details available at [sds.harley-davidson.com](http://sds.harley-davidson.com)

(00240e)

### NOTICE

DOT 4 brake fluid will damage painted and body panel surfaces it comes in contact with. Always use caution and protect surfaces from spills whenever brake work is performed. Failure to comply can result in cosmetic damage. (00239c)

2. See the service manual. Drain fluid from the clutch reservoir and lines.

## REMOVAL

### ⚠ WARNING

Be sure no clutch fluid gets on tires, wheels or brakes when adding fluid. Traction can be adversely affected, which could result in loss of control and death or serious injury. (00294a)

1. **Fairing models:** See the service manual. Remove outer fairing. Remove fairing cap.
2. **ALL models:** Record the clutch fluid line routing. Record the location of all cable straps.
3. **FLRT models:** See Figure 6. Remove the cable strap that secures the clutch fluid line to the frame bowtie bracket. **Softail models:** See Figure 8. Remove the cable strap that secures the clutch fluid line to the frame tubes brackets.
4. **Fairing models:** See Figure 1. Remove cable straps that secure the clutch fluid line to the brake line and handlebar clamp.

### NOTICE

Do not allow dirt or debris to enter the master cylinder reservoir. Dirt or debris in the reservoir can cause improper operation and equipment damage. (00205c)

5. **ALL models:** See the service manual and Figure 3. Remove transmission side cover (7).
6. See the service manual. Drain clutch fluid line (4). Disconnect clutch fluid line from secondary clutch actuator (6).
7. Disconnect clutch fluid line from clutch master cylinder reservoir (2). Save banjo bolt (10). Discard sealing washers (11).
8. **Fairing models:** Pull the reservoir end of the clutch fluid line out through the inner fairing.
9. **ALL models:** Remove any clamps securing the clutch fluid line to the motorcycle. Save clamps and hardware.
10. See Figure 2. Note locations of cable straps. Remove cable straps securing the clutch fluid line to the rear brake line. Remove cable straps from frame tubes.
11. Remove the clutch fluid line.

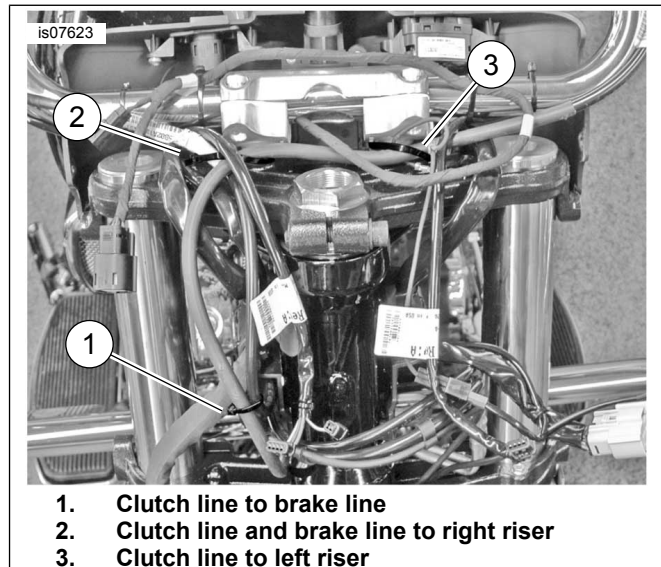


Figure 1. Clutch and Brake Fluid Lines, Fairing Models (Fairing Removed for Clarity)

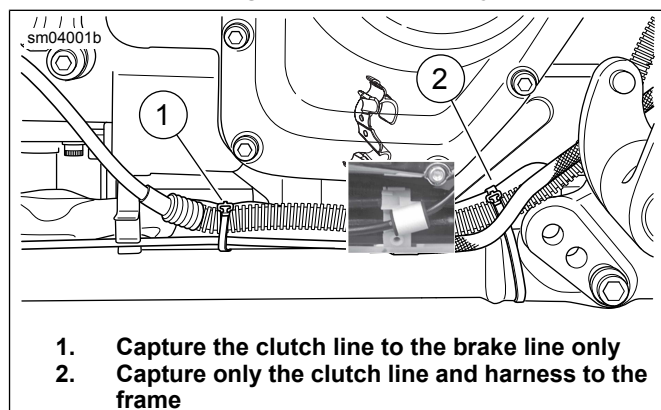
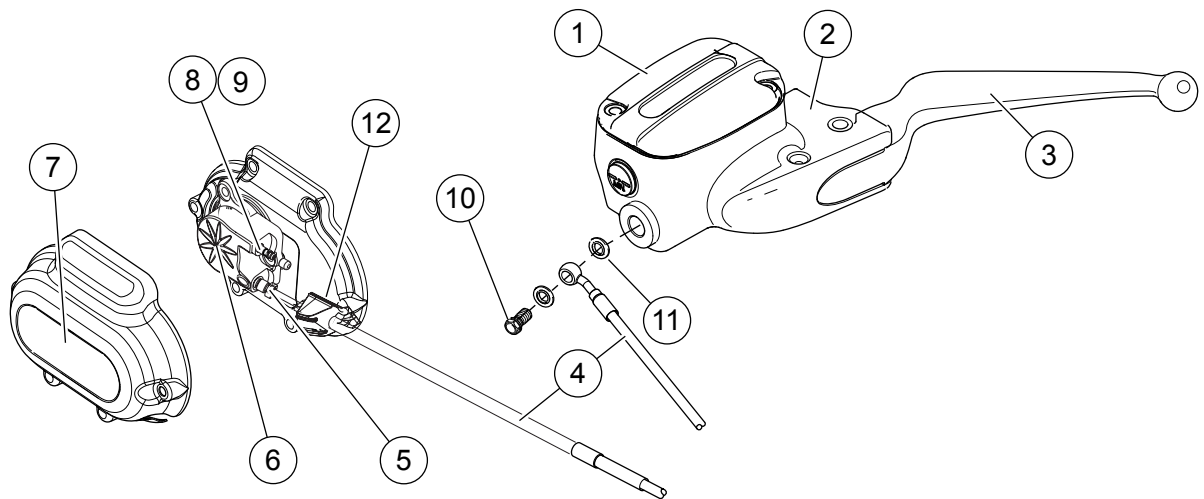


Figure 2. Clutch Fluid Line Cable Strap Location



- |                              |                                  |
|------------------------------|----------------------------------|
| 1. Cover                     | 7. Outer transmission side cover |
| 2. Clutch master cylinder    | 8. Bleeder valve                 |
| 3. Clutch hand lever         | 9. Bleeder cap                   |
| 4. Clutch fluid line         | 10. Banjo bolt                   |
| 5. Clutch line flare fitting | 11. Sealing washer (2)           |
| 6. Secondary clutch actuator | 12. Clutch line grommet          |

**Figure 3. Clutch Fluid Line Connections**

## INSTALLATION

1. If installing new handlebar, install to the point of mounting the clutch master cylinder.
2. **Fairing models:** See Figure 1. Route clutch fluid line through inner fairing to master cylinder retracing original path. Loosely secure line to each handlebar riser and the brake line with three new cable straps (purchased separately).
3. **ALL models:** Loosely secure line to clutch master cylinder using banjo bolt and new sealing washers.
4. See Figure 4 through Figure 8. Route clutch fluid line:
  - a. from underside of lower triple clamp,
  - b. down right side or in front of frame tubes,
  - c. behind rear brake master cylinder,
  - d. under front engine mount,
  - e. along right side lower frame member,
  - f. to secondary clutch actuator.
5. See Figure 3. Loosely install flare fitting (5) to secondary clutch actuator (6).
6. See Figure 2. Secure clutch fluid line using new cable straps. Verify that there is no contact with the exhaust system or any other items that can cause damage.
7. **Fairing models:** Secure line into the bottom slot of the brake line and clutch clip on right side of steering head.
8. **Fairing models:** See Figure 4. Secure line to downtube with two clamps removed earlier. **FLRT models:** See Figure 5. Install P-clamps removed earlier at both nacelle and frame locations. Tighten P-clamp screws to 4.5–5.4 N·m (40–48 in-lbs). **Softail models:** See Figure 7. Install P-clamps removed earlier at both nacelle and frame locations. Tighten P-clamp screws to 4.5–5.4 N·m (40–48 in-lbs).
9. **Fairing models:** See Figure 1. Secure clutch fluid line to the handlebar clamp and brake line using the three new cable straps. **FLRT models:** See Figure 6. Install cable strap around frame tube and clutch line through the small slot in the bowtie bracket. **Softail models:** See Figure 8. Adjust routing in front of ABS (if necessary) and down to the right side frame tube. Secure as noted during removal.
10. **ALL models:** With handlebars and hand controls in their final positions, align the clutch fluid line so the banjo fitting does not rest against the handlebar and provides the cleanest routing of the clutch fluid line. Tighten banjo bolt to 16.9–19.7 N·m (12.5–14.5 ft-lbs).
11. See Figure 3. Install transmission side cover grommet (12) onto the clutch fluid line. Position roughly as shown. Position the flare-nut end of the clutch fluid line (5) and the grommet to fit in the transmission side cover notch. Tighten flare nut to 10.9–16.3 N·m (8–12 ft-lbs).
12. See service manual. Fill and bleed clutch fluid system. If a seal is no achieved, skip to "Alternate Seal Methods".
13. Perform final positioning of the hydraulic clutch fluid line. Tighten all cable straps and routing to avoid contact with exhaust and engine surfaces and avoid pinch points or other potential damaging positions.
14. **Fairing models:** See service manual. Install fairing cap.
15. See service manual. Install outer fairing.
16. **ALL models:** Install outer transmission side cover. Tighten to 11.2–13.6 N·m (8.3–10 ft-lbs).

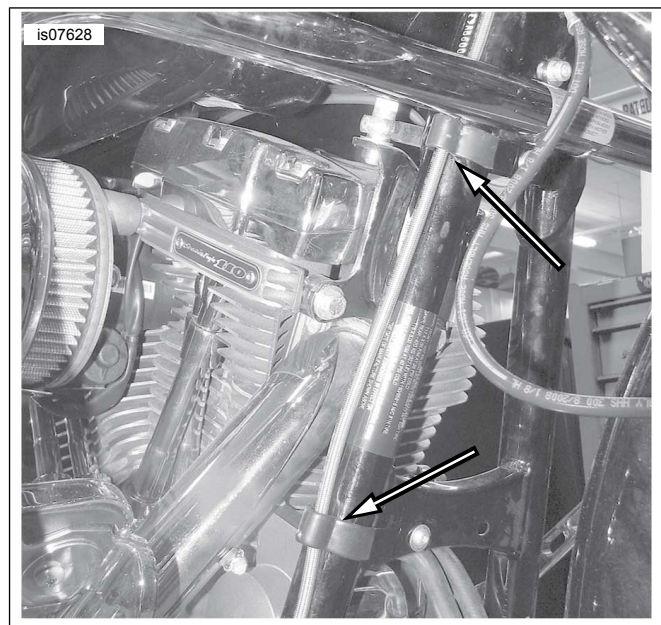


Figure 4. Clamp Locations on Frame Downtube, Fairing Models



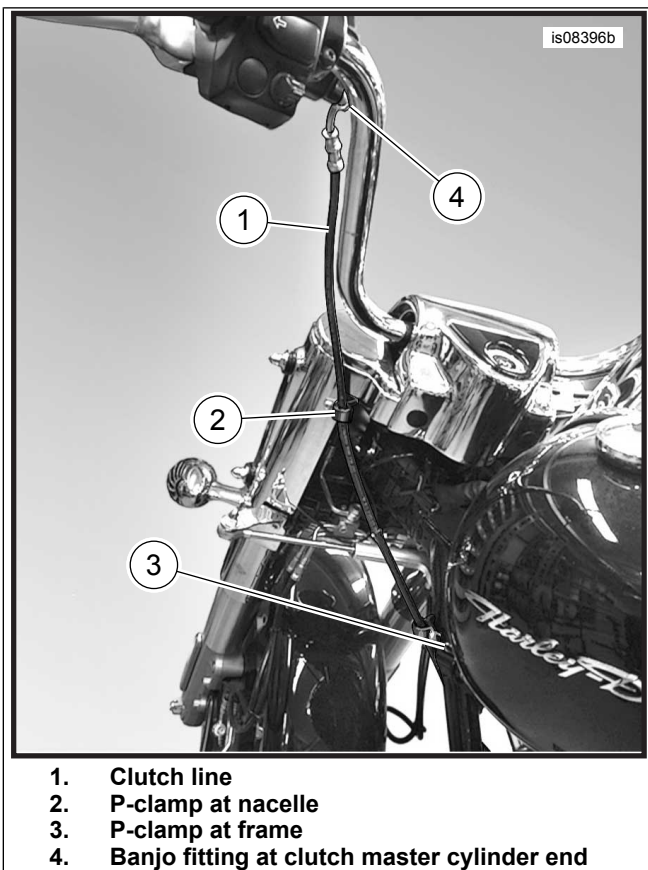


Figure 5. Clutch Fluid Line Upper Routing (FLRT Models)

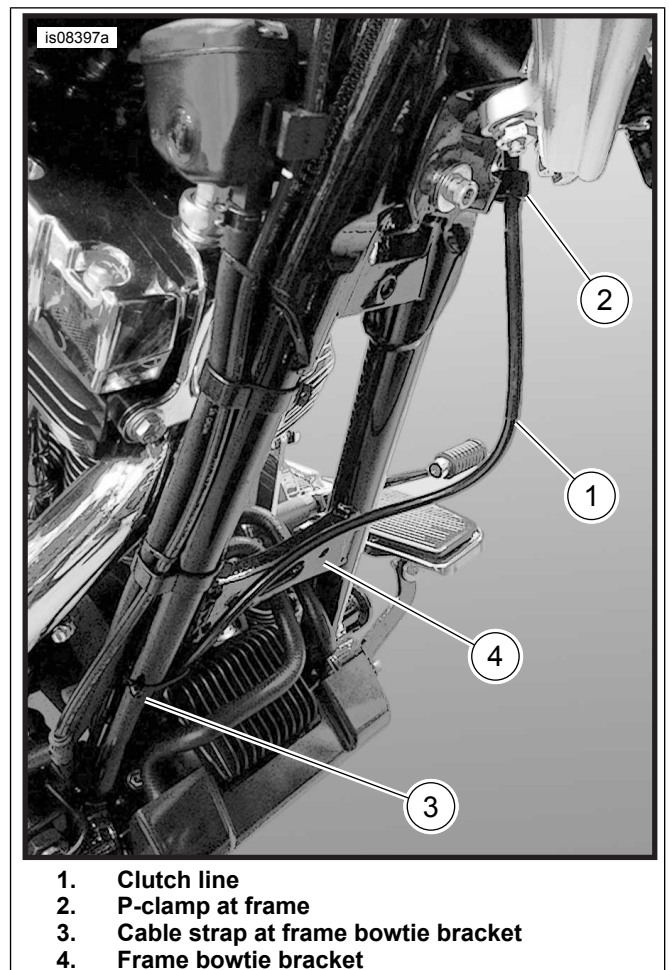
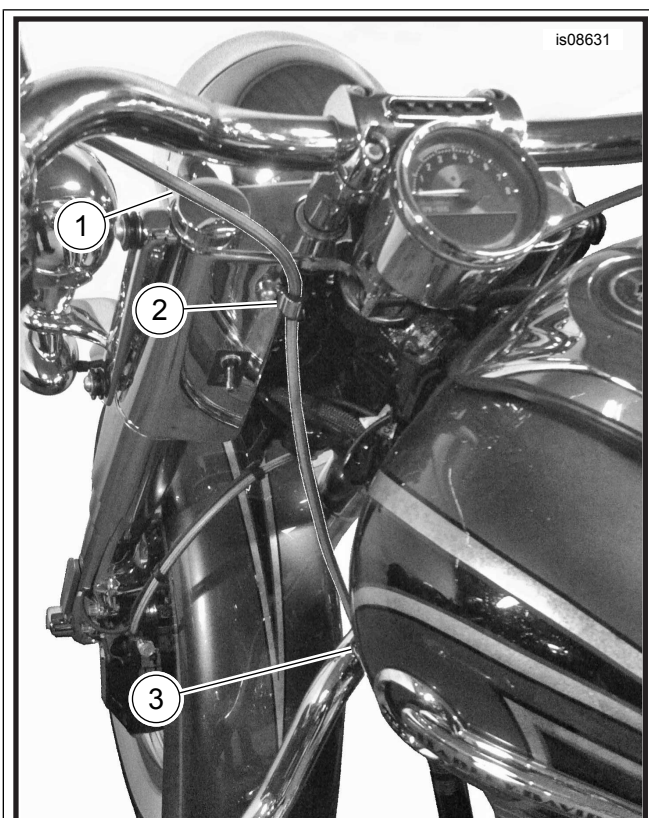
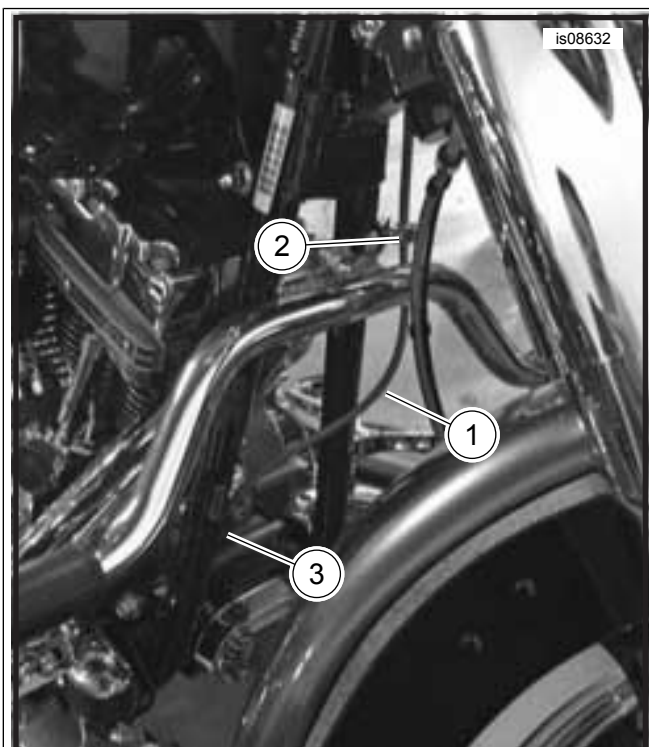


Figure 6. Clutch Fluid Line Lower Routing (FLRT Models)



1. Clutch line
2. P-clamp at nacelle
3. P-clamp at frame

Figure 7. Clutch Fluid Line Upper Routing (Softail Models)



1. Clutch line
2. P-clamp at frame
3. Lower secure location right-front frame

Figure 8. Clutch Fluid Line Lower Routing (Softail Models)

## ALTERNATE SEAL METHODS

If a leak is found at the secondary clutch actuator during the clutch line initial installation, perform the following steps.

1. See Figure 3. Verify that the clutch line flare nut (5) is tightened to 10.9–16.3 N·m (96–144 **in-lbs**).
2. If leak is still present, increase flare nut tightness to 16.3–22.6 N·m (144–200 **in-lbs**).
3. If the leak persists, remove the secondary clutch actuator (6) to inspect the secondary clutch actuator cavity. See the service manual.
4. Drain fluid from clutch system. Remove clutch line.
5. Hold actuator with cavity facing upward. Check to see if copper washer has been previously installed or is being added for the first time. If leak is still present at the increased tightness and a copper washer is already installed, discard and replace the secondary clutch actuator (Part No. 37200023).

### NOTE

*Only one copper washer can be installed in the secondary clutch actuator. Washer is difficult to remove from cavity after it has been in service. A clutch line can be installed multiple times on an actuator with a copper washer, as long as a proper seal can be achieved.*

### ⚠ WARNING

**Insufficient clutch-release plate movement can lead to difficulty or inability to shift, causing loss of control, which could result in death or serious injury. (00345a)**

6. See Figure 9. Hold secondary clutch actuator upright. Install copper washer (Part No. 12300027) in the actuator cavity. Allow copper washer to self-center.
7. Align the clutch line flared tube and tighten the clutch line flare nut to 10.9–16.3 N·m (96–144 **in-lbs**).

### NOTE

*Do not activate a bled secondary clutch actuator while not mounted to the transmission. The fluid pressure can press the actuator piston fully out of the assembly.*

8. Install secondary clutch actuator to the transmission and bleed the clutch fluid system. See service manual.
9. If a leak is still present, remove and replace the secondary clutch actuator (Part No. 37200023).
10. If a seal has been achieved, verify proper clutch operation and return to **INSTALLATION**, Step 13.

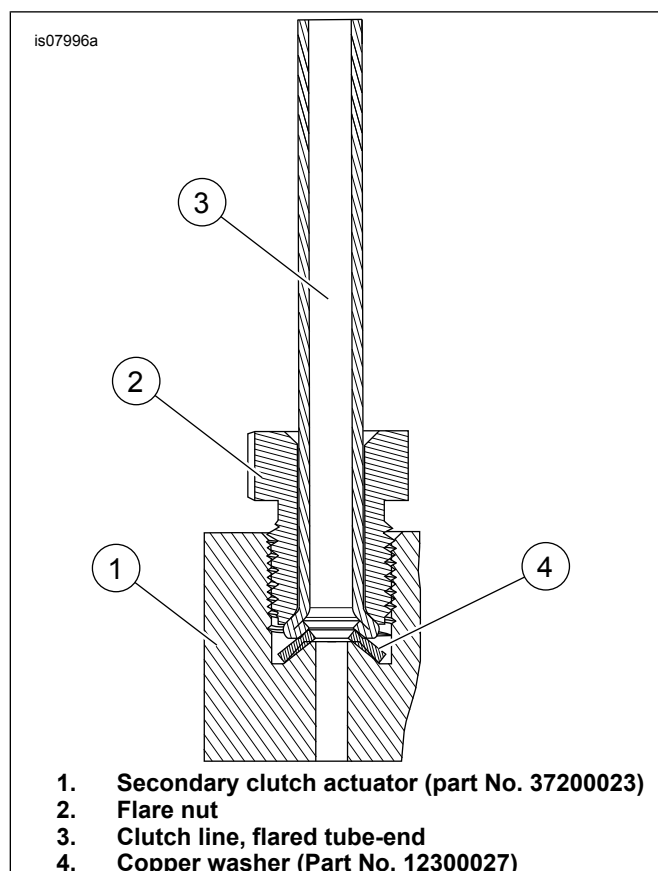


Figure 9. Copper Washer Orientation

## COMPLETION

### NOTE

Verify that the ignition switch is in the OFF position **before** installing the main fuse.

1. Verify that the ignition switch is turned to OFF.
2. See the service manual. Install main fuse.

### ⚠ WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

3. See the service manual. Install seat.
4. Test ride motorcycle at low speed. Verify that the clutch operates properly.

## SERVICE PARTS

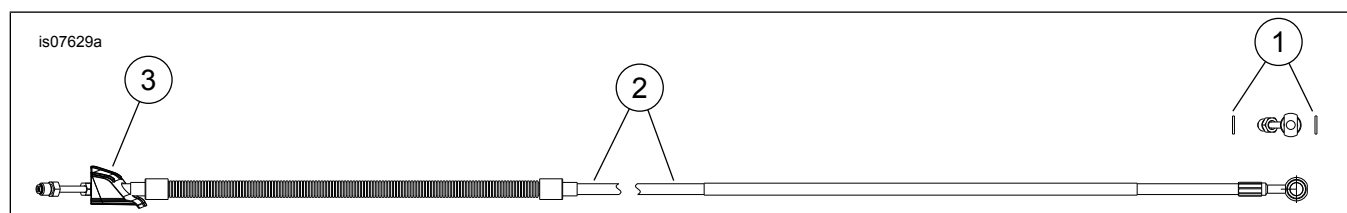


Figure 10. Service Parts: Hydraulic Clutch Line Kits

Table 4. Service Parts

Item	Description (Quantity)	Part Number
1	Sealing washer (2)	41751-06A
2	Hydraulic clutch fluid line	Not sold separately
3	Grommet, transmission side cover	12100028
<b>Items mentioned in text, but not included in kit:</b>		
A	Copper gasket service kit	12300027
B	Secondary clutch actuator	32700023
C	Cable strap, approximately 15 in (38 cm) long, (5)	10039