



# INSTRUCTIONS

J06466

2016-12-19



## 2014-2016 TOURING POLICE SIDECAR ATTACHMENT KIT

### GENERAL

#### ⚠ WARNING

TLE and TLE-Ultra sidecars can only be installed on Touring Model family motorcycles. Use of sidecars on motorcycles other than those specified adversely affect handling and reduce braking efficiency, which could result in death or serious injury. (00103b)

### Kit Number

91800067

### Application

This kit provides necessary additional hardware to connect the TLE-Ultra sidecar to 2014-2016 FLHP and FLHTP Police vehicles.

This kit must be used in conjunction with 87166-09 TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT.

### Models

This kit is to be installed on 2014-2016 FLHP and FLHTP vehicles for police use only.

### Additional Items Required

The following items must be purchased separately:

- 87166-09 TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT
- LOCTITE 243 MEDIUM STRENGTH THREADLOCKER AND SEALANT (BLUE) (11100005)
- LOCTITE 565 THREAD SEALANT (99818-97)
- Thread cutting fluid

If equipped with an oil cooler, the oil cooler system must be removed to allow adequate clearance for the sidecar connection components. Separate purchase of an oil filter adapter (Part No. 26352-95A) is required for proper installation of this kit.

A motorcycle service manual, electrical diagnostic manual and sidecar service manual are available from your Harley-Davidson dealer. Use the service manuals in conjunction with this instruction sheet to properly install this kit.

#### 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)**

#### ⚠ 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)

#### ⚠ WARNING

The rider's safety depends upon the correct installation of this kit. Dealer installation is required for vehicles equipped with ABS brakes. Proper installation of this kit requires the use of special tools available only through a Harley-Davidson Dealer. An improperly serviced brake system can adversely affect brake performance, which could result in death or serious injury. (00578b)

### Special Tools Required

- **Vehicles equipped with oil pressure gauges:** A 1-1/16 inch open-end crowfoot wrench (Snap-On FC34A or equivalent) is required for installation of this kit.
- **ABS equipped:** Digital Technician II is required to properly bleed the brakes.

### Kit Contents

See Figure 9 and Table 7.

Also included are tools to drill and thread the necessary holes to mount the brackets.

### PREPARE

#### NOTE

*Refer to the service manual for more information on these generalized steps.*

*Save all parts removed during installation of this kit to return motorcycle to operation without the sidecar (unless otherwise noted).*

1. Remove both saddlebags.
2. Remove both side covers.
3. Remove seat and seat fairing.
4. Remove battery.
5. Remove any equipment attached to right side of engine guard.
6. Remove the right passenger footrest bracket and footrest.
7. Remove the right side exhaust pipes.
8. **FLHP:**
  - a. Remove stock clutch cable.

b. Remove headlamp nacelle.

9. **FLHTP:** Remove outer fairing.

a. Remove pursuit lamps and brackets.

b. Remove fairing skirt.

c. Remove clips securing hydraulic clutch line to the right front downtube.

10. Remove rear master cylinder/brake pedal assembly.

a. Remove rear brake pedal from master cylinder assembly.

b. Remove and save rubber pedal pad.

## INSTALL BRACKETS

### Drill and Tap Rear Mount Holes

**NOTE**

Use thread cutting fluid when drilling and threading holes.

1. See Figure 1. Attach drilling fixture (2) to the right rear mount casting.

- Install 3/8 x 1 in screw (1) into third from the top passenger footrest mounting hole.
- Tighten securely.

2. Install stop collar on "U" drill bit.

a. Adjust the collar to 1-3/8 in from drill tip.

b. Tighten set screw securely.

3. Drill two holes.

a. Drill squarely until stop collar contacts jig.

4. Remove drilling fixture.

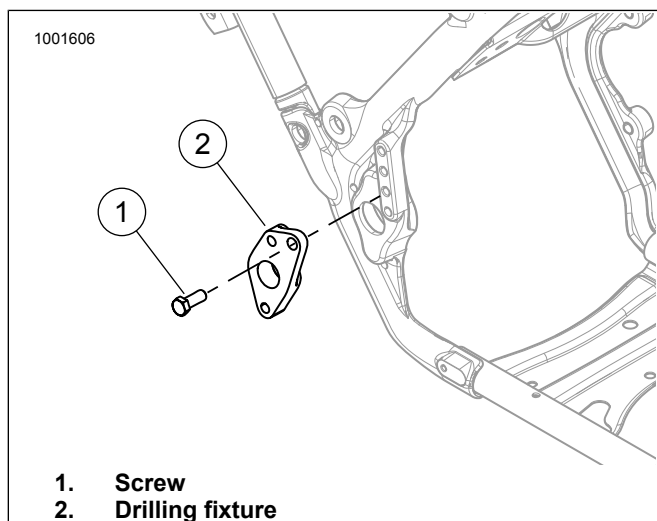


Figure 1. Install Drilling Fixture

**NOTE**

Clear chips often while threading holes.

5. Thread holes 0.650 in deep using 7/16-14 supplied tap.

6. Clear chips and cutting fluid from holes.

**NOTE**

Refer to instructions in 87166-09 TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT for fastener identification.

7. See Figure 2. Install rear sidecar frame mount.

a. Position the rear mount (1) over the two mounting holes.

b. Install two mounting bolts and lockwashers.

c. Tighten to 46–57 N·m (34–42 ft-lbs).

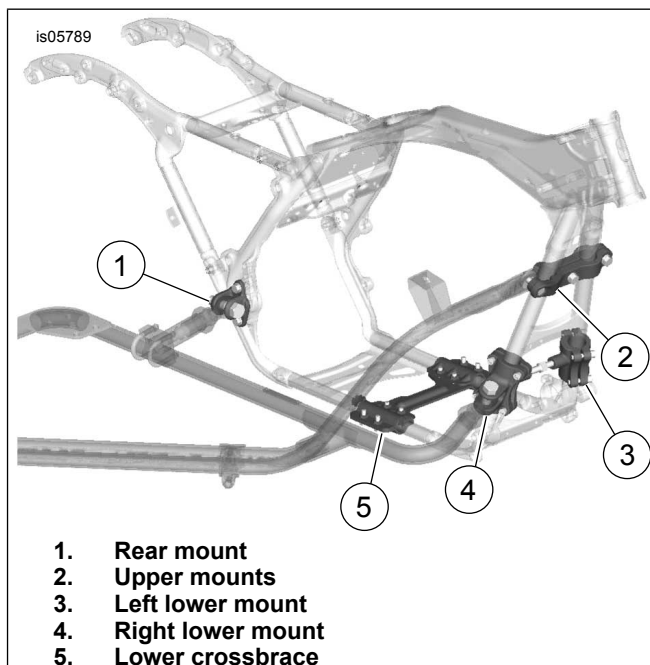


Figure 2. Crossbrace and Mounts Locations

### Install Damper Adapter Bracket to Fork Bracket

Table 1. Damper Bracket to Vehicle Hardware

Qty	Part Number	Description
1	45700038	Lower adapter bracket
2	45700039	Upper adapter brackets
Damper Bracket Mounting Hardware		
2	6703	1/4 in flat washer
2	7716	1/4-20 flange locknut
2	2718	1/4-20 x 1.75 in hex head capscrew
Brake Line Retention Hardware		
2	10006	Cable strap
1	10039	Cable strap
1	7620W	#10-32 nut
1	10106	P-clamp
1	2660	#10-32 x 3/8 in machine screw

1. Remove cable straps from brake line bracket on lower fork bracket.

2. **FLHP:** Remove cable straps securing front lighting harness.

3. Remove brake lines from brake line bracket on lower fork bracket.

4. Route wheel speed sensor, fender tip lighting (FLHTP only), and forward lighting (FLHP only) harnesses through the left pocket of the lower fork bracket near the fork.
5. See Figure 3. Install the steer damper lower adapter bracket (5) using two 1/4-20 x 1.75 in screws (2), flat washers (3) and nuts (6).
  - a. Insert the screws through upper brackets (4) with the flat washers (3) between the screw head and upper adapter brackets.
  - b. Tighten to 9–10.2 N·m (80–90 in-lbs).

**NOTE**

Verify that upper adapter brackets do not contact steering head.

6. Secure brake lines in brake line bracket. Secure with two cable straps (Part No. 10006) (1).
7. Capture wheel speed sensor, fender tip lighting (FLHTP only), and forward lighting (FLHP only) harnesses to left fork tube with one cable strap (Part No. 10039) located just above the lower fork bracket.
8. Secure the brake line to damper bracket with P-clamp (7), 10-32 x 3/8 in screw (9) and nut (8). Tighten.

Torque: 3.1–3.7 N·m (27–33 in-lbs) *Brake line P-clamp screw*

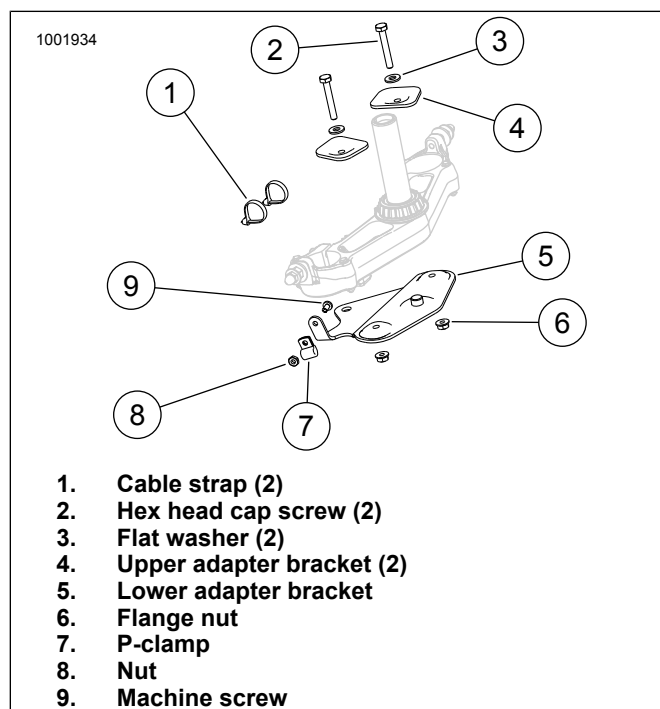


Figure 3. Install Fork Bracket Mount

## Install Steer Damper Bracket on Sidecar Frame

Table 2. Damper Bracket to Sidecar Frame Hardware

Qty	Part Number	Description
1	45700037	Bracket, steering damper, sidecar frame
Steer Damper Bracket Tooling		
1	n/a	"Q" drill bit (Included in kit)
Steer Damper Bracket Hardware		
4	3987	Hex head cap screw, 5/16-18 x 0.75 in
4	6702	Flat washer, 5/16 in
4	7531	Flange locknut, 5/16-18

1. See Figure 4. Position the **new** steering damper bracket as shown.
  - a. Position the upper edge (2) flush with the top of the welded bracket (1).
  - b. Align sides flush with welded bracket.
  - c. Clamp in place.
2. Drill four holes (3) using the "Q" drill. Apply cutting fluid as necessary.
3. Secure with cap screws, flat washers and flange nuts. Tighten.

Torque: 20.3–27.1 N·m (15–20 ft-lbs) *Steering damper bracket screw*

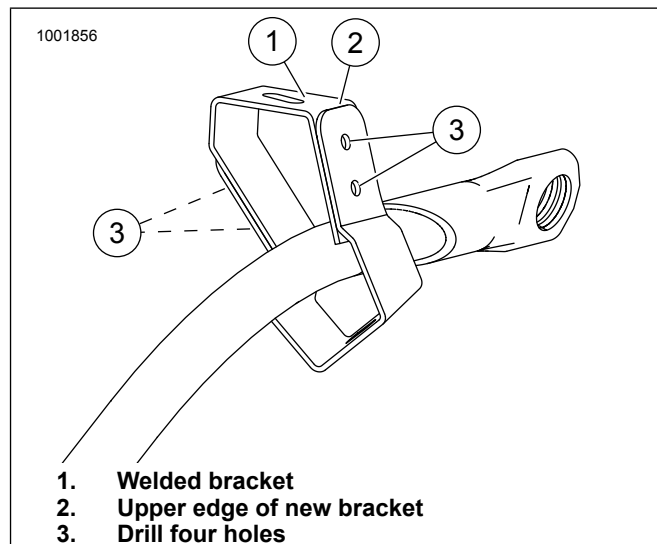


Figure 4. Locate New Bracket and Drill Holes

## Install Sidecar Brake Line and Wiring Harness

**NOTE**

The wiring harness must be installed parallel to the brake line.

Table 3. Sidecar Frame Brake and Wiring Hardware

Qty	Part Number	Description
1	41800644	Sidecar brake line
1	69201697	Wire harness, sidecar lighting

**Table 3. Sidecar Frame Brake and Wiring Hardware**

Qty	Part Number	Description
Master Cylinder Banjo Hardware		
1	11600023	10 mm double banjo
3	41751-06A	10 mm copper sealing washer
Caliper Banjo Hardware		
1	41747-82A	10 mm banjo
1	41731-01	10mm sealing gasket (bolt head side)
1	45248-97	10 mm sealing washer (caliper side)
Brake Line Retention Hardware		
4	10289A	Clip, brake line
4	12100031	Grommet, dual brake hardline
3	10031	P-clamp, 0.562 in (for brake line)
3	10053	P-clamp, 0.5 in (for wire harness)
3	12600198	Rivet, 0.1875 x 0.7 Stainless

1. **Optional:** Remove sidecar body from frame to provide better access to install brake line and wire harness. Refer to the sidecar service manual.

2. Remove existing brake line and wire harness from sidecar frame.

- a. Use #11 drill to drill the rivets securing all P-clamps.

3. See Figure 5. Route the brake line as shown.

- a. Install brake line to sidecar brake caliper with banjo bolt (10), gasket (11) and sealing washer (12). Hand-tighten.

4. **NOTE**

*Be sure the harness will not contact the tire when secured.*

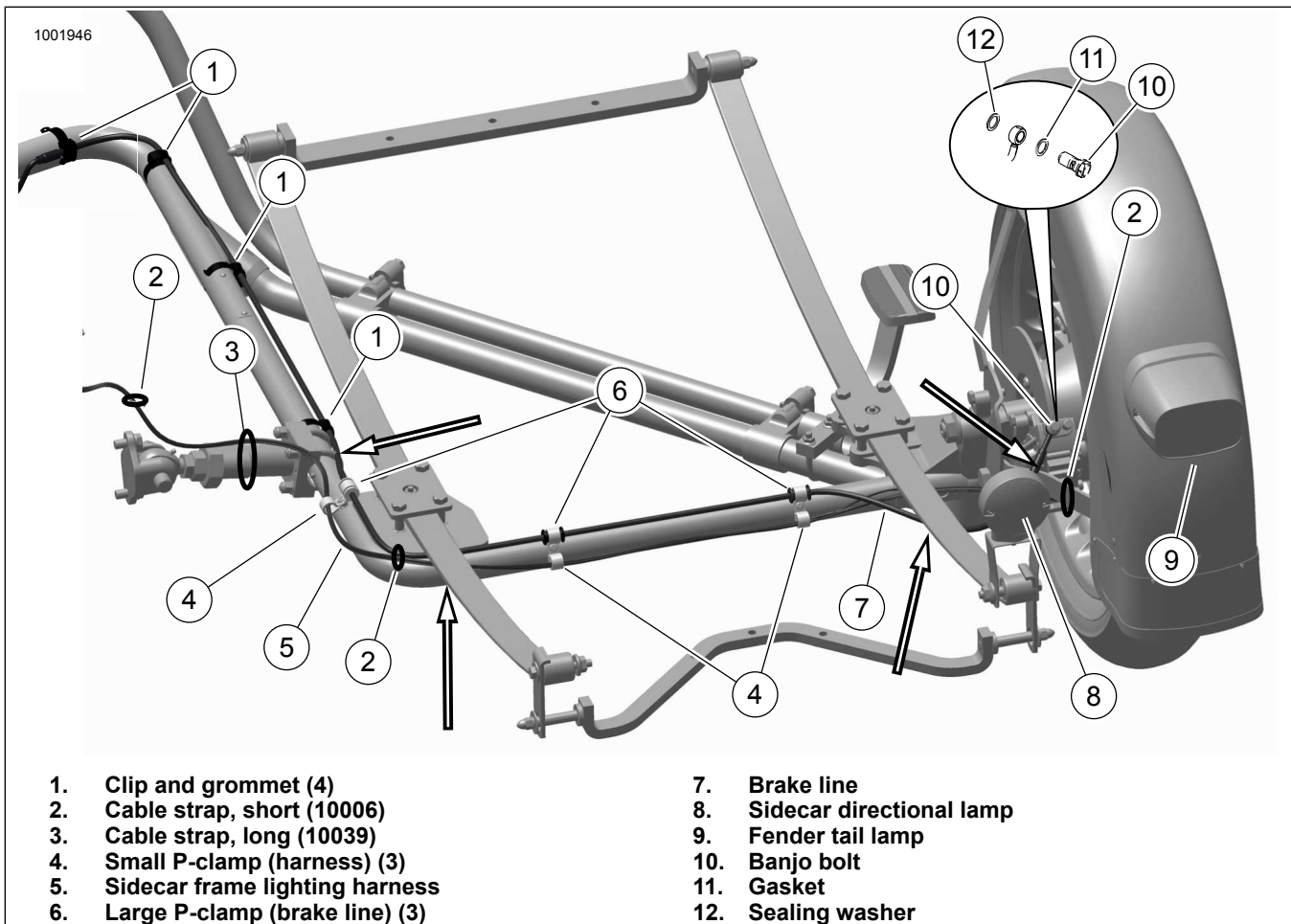
Route wiring harness as shown.

- a. Connect the wiring harness to the fender tail lamp (9). Secure the harness in the fender clips.

5. **NOTE**

*The sidecar frame harness to sidecar directional lamp (8) harness connector will be located under the outer leaf spring.*

Secure harness to lower fender bracket near fender with a cable strap (2).



**Figure 5. Brake Line and Harness Routing**

6. Secure brake line and wiring harness to sidecar frame.
  - a. Install four grommets and clips (1) in locations shown. Orient as shown.
  - b. Install three large P-clamps (6) on brake line grommets.
  - c. Install three small P-clamps (4) on wiring harness.
  - d. Verify that routing is correct. Adjust position so adequate brake line clearance exists in locations shown (arrows).
  - e. Secure P-clamps with rivets.
7. Verify clearance at area under outer leaf spring (arrow).
8. Tighten sidecar caliper banjo bolt.  
Torque: 23–29.8 N·m (17–22 ft-lbs) *Caliper banjo bolt*
9. Pull slack from harness and secure to brake line and frame members with cable straps (2, 3).
  - a. Secure to brake line at bend in sidecar frame.
  - b. Secure to top of rear connector.
  - c. Secure to motorcycle rear downtube after vehicle and sidecar are connected.

## Install Brake Pedal, Master Cylinder and Reservoir

**Table 4. Brake Pedal and Master Cylinder Hardware**

Qty	Part Number	Description
1	506000286	Brake pedal
1	41600244	Reservoir adaptor bracket
Reservoir Adaptor Bracket Hardware		
2	926	Hex socket button head screw
Brake Pedal Hardware		
1	515	Cotter pin

1. Install the remote reservoir provided in kit 87166-09 to reservoir adaptor bracket (Part No. 41600244) using the hardware provided in 87166-09. Tighten securely.
2. Install the reservoir and adaptor bracket to the frame using two button head screws (Part No. 926). Tighten.  
Torque: 8.1–9.5 N·m (72–84 in-lbs)
3. Install the sidecar master cylinder from TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT (Part No. 87166-09). Do NOT install the double banjo bolt or brake pedal hardware provided in that kit.
  - a. See Figure 9. Install rubber pedal pad removed earlier to **new** pedal assembly (48).
  - b. Install **new** pedal assembly to **new** sidecar master cylinder assembly provided in kit 87166-09.
  - c. Install **new** cotter pin (49).

- d. Install master cylinder and pedal assembly. Tighten to specifications in the service manual.

4. Connect hose from remote fluid reservoir to the master cylinder. Follow instructions supplied in TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT (Part No. 87166-09).

## ATTACH SIDECAR FRAME

### Install TLE/TLE-ULTRA SIDECAR ATTACHMENT KIT (Part No. 87166-09)

- Follow the instructions to install brackets and connect the sidecar frame to the vehicle.
- See Figure 9 and Table 7. Connect the brake line to the master cylinder.
  - a. Install sealing washer (33) on banjo bolt (34).
  - b. Insert banjo bolt through banjo of sidecar brake line, second sealing washer (33), vehicle brake line banjo and third sealing washer (33).
  - c. Hand-tighten into master cylinder.
  - d. Verify brake line routing and clearance.
  - e. Tighten master cylinder double banjo bolt to 26–30 N·m (19–22 ft-lbs).

## Install Steer Damper

Install the steer damper from 87166-09 using the following components from this kit.

**Table 5. Steer Damper Hardware**

Qty	Part Number	Description
Steer damper (included in 87166-09)		
Hardware to Mount to Steer Damper Adaptor Bracket		
1	87144-83	Rod end ball joint
1	4721	Hex head capscrew, 3/8-16 x 1.5 in
1	6519	Large flat washer
1	6701	Flat washer, 3/8 in
1	7601	Flange locknut, 3/8-16
Hardware to Mount to Sidecar Frame		
1	4420	Hex head capscrew, 3/8-16 x 2.75 in
2	6701	Flat washer, 3/8 in
2	6519	Large flat washer
1	59938-72	Spacer
1	7601	Flange locknut, 3/8-16

1. See Figure 6. Attach rod end ball joint (4) to steer damper. Adjust so about 3/8 in (10 mm) of the threads protrude.
2. Position the steering damper and install hardware as shown. Hand-tighten.
3. Center sidecar frame end of the damper connection within the slot in the sidecar frame bracket. Hand tighten.
4. Verify clearance.
  - a. Rotate steering through full left-right range while looking for interference.

- b. Adjust the damper position as necessary using the rod end ball joint and the slotted hole in the sidcar mounting bracket.
5. Tighten both ends.  
Torque: 33.9–40.7 N·m (25–30 ft-lbs) *Damper screws*
6. Again, verify steering clearance.

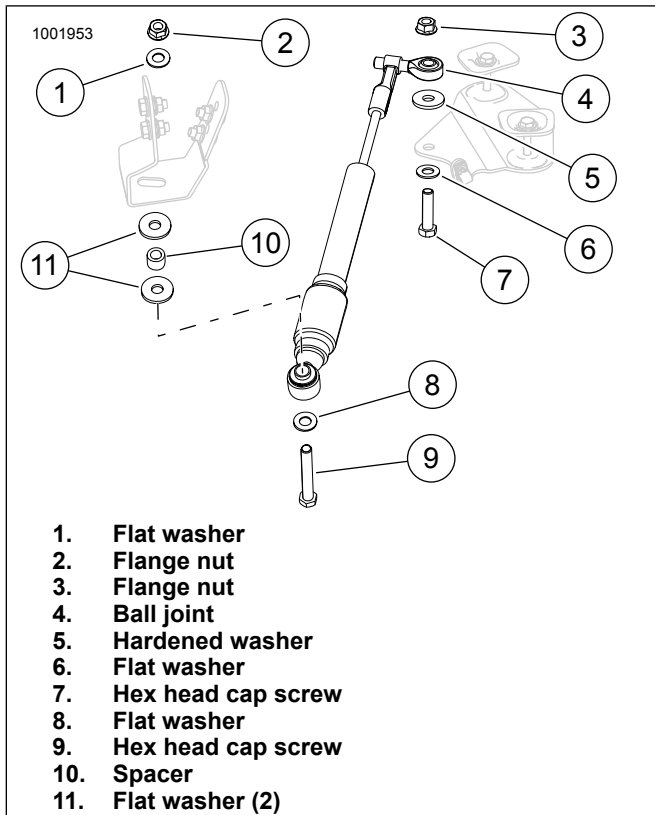


Figure 6. Install Steering Damper

## Install Bank Angle Sensor (BAS)

Table 6. BAS Hardware

Qty	Part Number	Description
1	69201698	Wire harness, bank angle sensor
1	32495-98A	Switch, bank angle
1	69201702	Bracket, bank angle sensor
Sensor Hardware		
1	4930	Hex head machine screw, #10-24 x 0.75 in
1	7069	Split lockwasher, #10
Bracket Hardware		
2	4617	Socket head cap screw (shcs), 1/4-20 x 0.625 in
2	7069	Split lockwasher

1. See Figure 9. Install the bank angle sensor bracket and sensor.
  - a. Install BAS (16) to bracket (14) with screw (18) and split lockwasher (17).
  - b. Tighten to 2.2–3.4 N·m (20–30 **in-lbs**).

- c. Remove seat spring lower screws (2).
- d. Apply LOCTITE 243 MEDIUM STRENGTH THREADLOCKER AND SEALANT (BLUE) to **new** 1/4-20 x 0.625 in shcs (15).
- e. Install BAS and bracket with **new** 1/4-20 x 0.625 in shcs (15). Tighten to 4.1–6.8 N·m (36–60 **in-lbs**).

2. Install BCM harness (13) terminal into BCM connector.

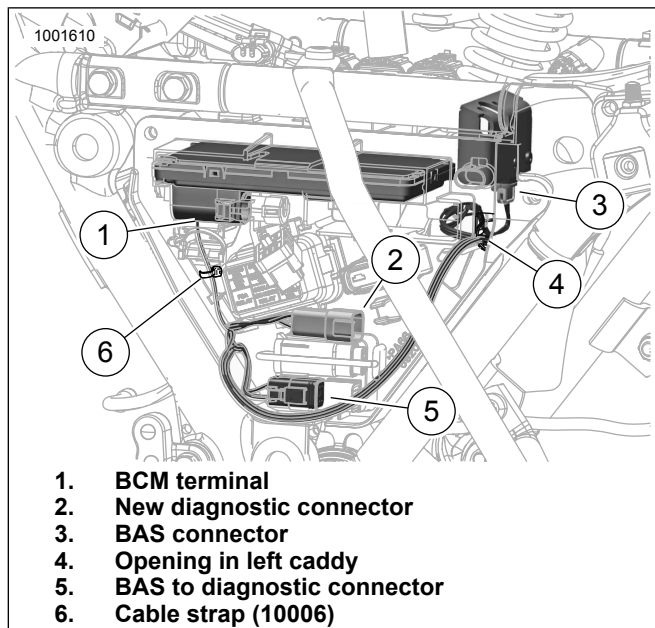
- a. See Figure 7. Remove BCM from caddy.
- b. Separate the connector from the BCM.
- c. Insert the bank angle sensor cable terminal (1) of the **new** harness into cavity B4 of the connector. See the electrical diagnostic manual for procedures to disassemble and assemble the BCM connector.
- d. Mate the connector.
- e. Install the BCM.
- f. Secure the new wire to the existing BCM bundle with cable strap (6).

### 3. **NOTE**

The harness connects to the existing diagnostic connector (5) and creates a new one (2).

Route the **new** harness as shown.

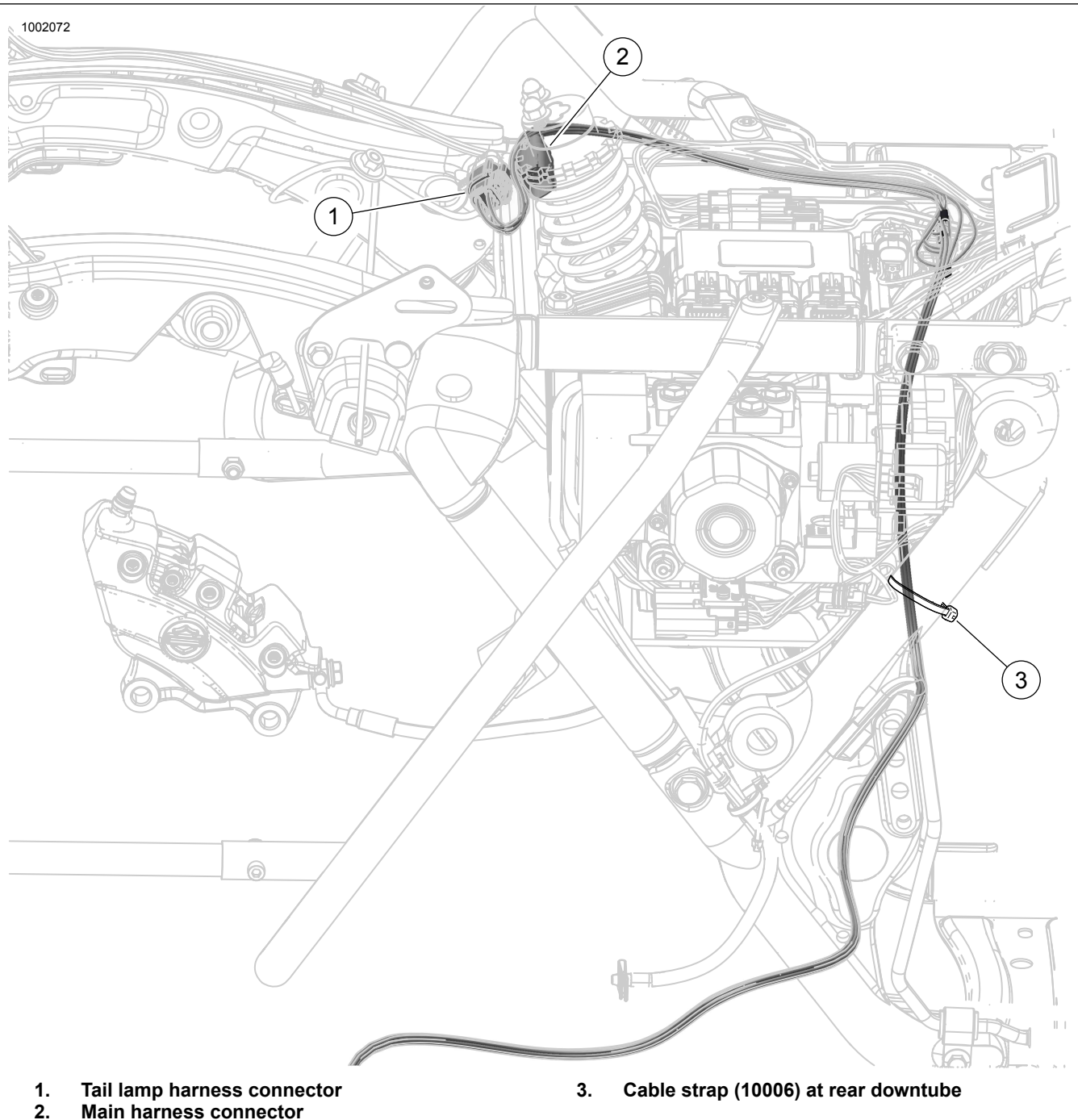
- a. Mate connector (4) to the diagnostic connector at the left caddy.
  - b. Install sealing plug into **new** diagnostics connector (2). Position connector as shown.
4. Connect harness to BAS.
    - a. Route harness through opening (4) next to main harness.
    - b. Mate connector (3) to BAS.



**Figure 7. BAS Harness Routing**

## **Install Sidecar Lighting Harness in Motorcycle**

1. See Figure 8. Route the sidecar lighting harness as shown.
  - a. Route along sidecar rear frame, along and inside the motorcycle right rear downtube (3) and up into the area under the seat.
2. Separate the vehicle rear lighting connectors (1, 2).
3. Mate the connectors of the sidecar harness to the separated rear lighting connectors.
4. Secure the harness to the sidecar frame and rear downtube with the longer cable straps (Part No. 10039).
5. Secure harness under the seat area with shorter cable straps (Part No. 10006).



**Figure 8. Sidecar Lighting Harness Routing**



## Complete

### NOTE

See the service manual for specific procedures.

1. **FLHTP:** Install clips to secure hydraulic clutch line to right front downtube. Position lower clip so clutch line is away from the exhaust pipe.
2. Install battery.
3. Install seat fairing and seat.
4. Install exhaust components.
5. Install rear passenger footrest and bracket.
6. Fill reservoir with **DOT 4 brake fluid** and bleed sidecar and rear motorcycle brakes. Refer to service manual.
7. Install reservoir gasket, cover and screws.
  - a. Tighten to 0.7–0.9 N·m (6–8 in-lbs).
8. **FLHP:** Install headlamp nacelle.
9. **FLHTP:** Install fairing skirt and outer fairing.
- 10.

### NOTE

*The BCM must be reconfigured as Trike. This is only done when adding a sidecar to a 2014-2016 Police vehicle. When the sidecar is removed from the vehicle, the BCM needs to be reconfigured back to a two-wheeled model.*

Reconfigure BCM.

- a. Use Digital Technician to access the BCM customization options tab from the Vehicle Set-up screen.
- b. Under the "External Bank Angle Sensor" section, select "FLHTCUTG".
- c. Select "Update Vehicle".

11. Install side covers and saddlebags.
12. Install sidecar body if removed.
13. Install items removed from right engine guard.

## Return to Service

See instructions in 87166-09 TLE/TLEULTRA SIDECAR ATTACHMENT KIT.

### ⚠ WARNING

**Be sure that sidecar brake is functioning properly. An improperly functioning sidecar brake can adversely affect vehicle handling, which could result in death or serious injury. (00109a)**

### ⚠ WARNING

**Harley-Davidson recommends the use of its specified tires. Harley-Davidson vehicles are not designed for operation with non-specified tires, including snow, moped and other special-use tires. Use of non-specified tires can adversely affect stability, handling or braking and lead to loss of vehicle control, which could result in death or serious injury. (00024d)**

SERVICE PARTS

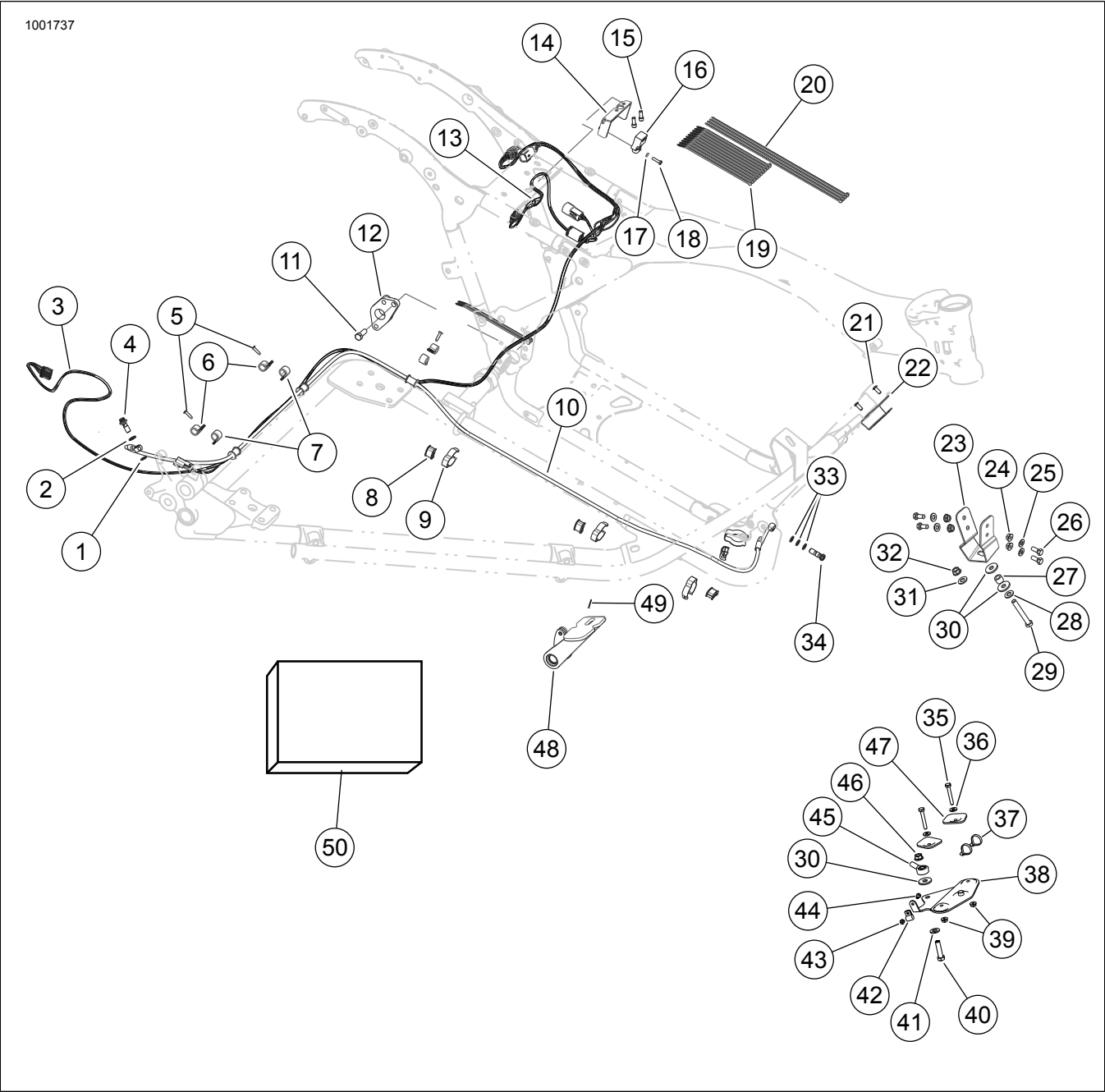


Figure 9. Service Parts: Sidecar Connection Kit

SERVICE PARTS TABLE

Table 7.

ITEM	DESCRIPTION (QTY)	PART NUMBER	ITEM	DESCRIPTION (QTY)	PART NUMBER
1	Crush washer, small	45248-97	26	Hex head capscrew, 5/16-18 x 0.75 in (4)	3987
2	Gasket	41731-01	27	Spacer	59938-72
3	Lighting harness	69201697	28	Flat washer, 3/8 in	6701
4	Banjo bolt	4147-82A	29	Hex head capscrew, 3/8-16 x 2.75 in	4420
5	Rivet, 3/16 (3)	12600198	30	Fender washer, 3/8 in (3)	6519
6	Clamp, small (3)	10053	31	Flat washer, 3/8 in	6701
7	Clamp, large (3)	10031	32	Flange locknut, 3/8-16	7601
8	Grommet, dual brake line (4)	12100031	33	Sealing washer (3)	41751-06A
9	Clip, clutch cable (4)	10289A	34	Double banjo bolt	11600023

Table 7.

ITEM	DESCRIPTION (QTY)	PART NUMBER	ITEM	DESCRIPTION (QTY)	PART NUMBER
10	Brake line	41800644	35	Hex head capscrew, 1/4-20 x 1.75 in grade 5 (2)	2718
11	Hex capscrew, 3/8-16 x 1 in grade 5	2879W	36	Plain washer, 1/4 in (2)	6703
12	Drilling fixture	69201698	37	Cable strap (12)	10006
13	Jumper harness, BAS	N/A	38	Lower damper bracket	45700038
14	Bracket, BAS	69201702	39	Flange locknut, 1/4-20 (2)	7716
15	SHCS (socket head cap screw), 1/4-20 x 5/8 in (2)	4617	40	Hex head capscrew, 3/8-16 x 1.5 in grade 5	4721
16	BAS	32495-98A	41	Plain washer, 3/8 in (3)	6701
17	Lockwasher	7069-01	42	P-clamp, small	71795-63A
18	Hex head machine screw, #10-24 x 0.75 in	4930	43	Hex nut, #10	7620W
19	Cable strap, short (12)	10006	44	Pan head machine screw, #10	2660
20	Cable strap, long (4)	10039	45	Ball joint	87144-83
21	Hex socket button head screw (2)	926	46	Flange locknut, 3/8-16 in (3)	7601
22	Bracket, fluid reservoir	41600244	47	Upper damper bracket (2)	45700039
23	Bracket, steering damper	45700037	48	Brake pedal	50600286
24	Flange locknut, 5/16-18 (4)	7531	49	Cotter pin	515
25	Flat washer, 5/16 (4)	6702	50	Tap and drill kit	N/A