



INSTRUCTIONS

J02714

2009-01-29



POLICE VEHICLE INTEGRATED RADAR SYSTEM KIT

GENERAL

Kit Number

76122-04A, 76123-04A, 76124-04A, 76125-04A, 76126-04A, 76127-04A

Models

These kits fit all FLHP, FLHTP and FXDP Police motorcycles.

▲ 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 13 and Table 3.

Additional Required Parts

Separate purchase of either one or two Radar Antenna Kits and a Speaker Kit. These items are available separately from your Harley-Davidson dealer.

Table 1. Antenna Kits

76094-04	Ka-band antenna for rear mounting
76095-04	Ka-band antenna for front mounting
76347-04	K-band antenna for rear mounting
76348-04	K-band antenna for front mounting

Two speaker kits are available:

Table 2. Speaker Kits

77616-04	For FLHP and FXDP Models: Requires Bullet Speaker/Amplifier Assembly Kit
77024-04	For FLHTP Models: Requires Speaker/Amplifier Module Kit

NOTE

The rear antenna is not compatible with Chrome License Plate/Light Kit (68230-97A).

REMOVAL

▲ WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

1. Remove the seat and disconnect the negative (-) battery cable following the instructions in the appropriate service Manual. Save all hardware for installation.

NOTE

Note the clutch lever position so it can be re-installed the same way.

2. See Figure 1. Remove and discard the two screws (1) with a T27 TORX drive head, remove flat washers securing the left handlebar clamp to the clutch lever bracket. Remove the clamp (2) and position the clutch hand lever assembly away from the handlebar. Discard the clamp.

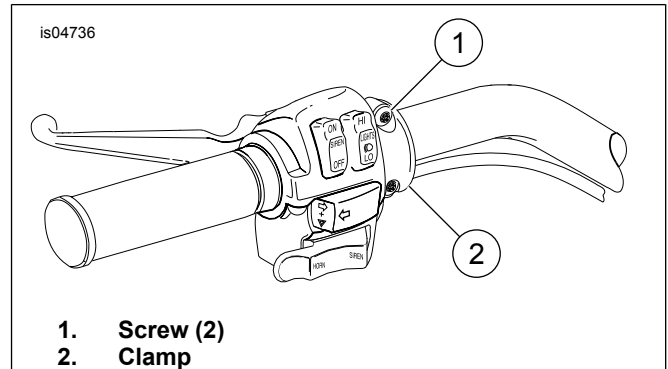


Figure 1. Left Side Controls

INSTALLATION

Installing the Switch Housings

1. See Figure 13. Obtain the left auxiliary control assembly (6) from the kit. Remove two screws with a T25 TORX drive head, securing the control assembly cover to the lower housing.
2. Separate the cover and switch assembly from the lower housing, pulling the switch harness through the hole in the back of the lower housing as needed to gain access to the two mounting holes inside.

NOTE

Install the lower housing with the drain holes on the bottom.



- See Figure 2. Install the lower housing (1), with the drain holes (3) on the bottom, with two screws (2) and flat washers from the kit. Position the lever as it was earlier. Tighten the screws to 8–9 N·m (60–80 **in-lbs**) with a 5/32 inch hex key.
- Guide the switch harness back through the lower housing. Install the cover and switch assembly with the two screws removed earlier. Tighten the screws to 4–5 N·m (35–45 **in-lbs**).
- See Figure 13. Repeat Steps 1 through 3 to install the right side auxiliary control assembly (7) to the front brake master cylinder housing.
- Proceed to INSTALLING THE DISPLAY UNIT.

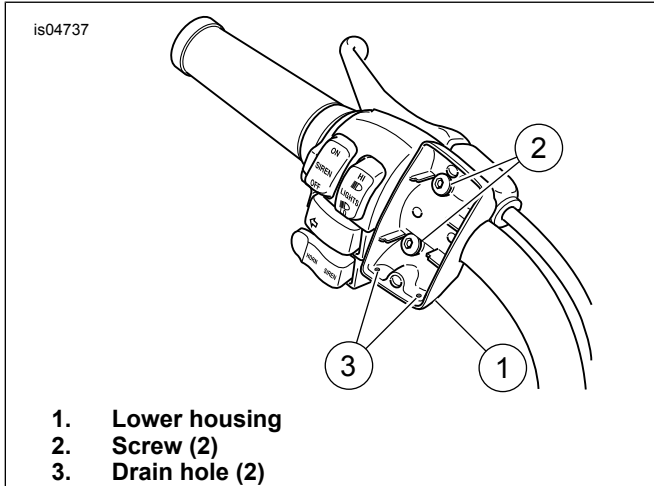


Figure 2. Install Left Switch Housing

Installing the Display Unit

- See Figure 3. Obtain the radar display unit assembly from the kit. Remove the two acorn nuts (3) and the U-bolt (5) from the ram base (4) and position the display unit (1) on the left side rise section of the handlebar (6).

NOTE

When positioning the display unit on the handlebar, make sure existing wires are clear of sharp edges or moving parts to avoid cutting or pinching and possible short circuit.

- Lightly clamp the display unit to the handlebar with the U-bolt and acorn nuts. Loosen the ram base, adjust the double-socket arm (2) and display unit to the desired position, then tighten the side clamp to hold the unit in place. Tighten the U-bolt to the handlebar securely.

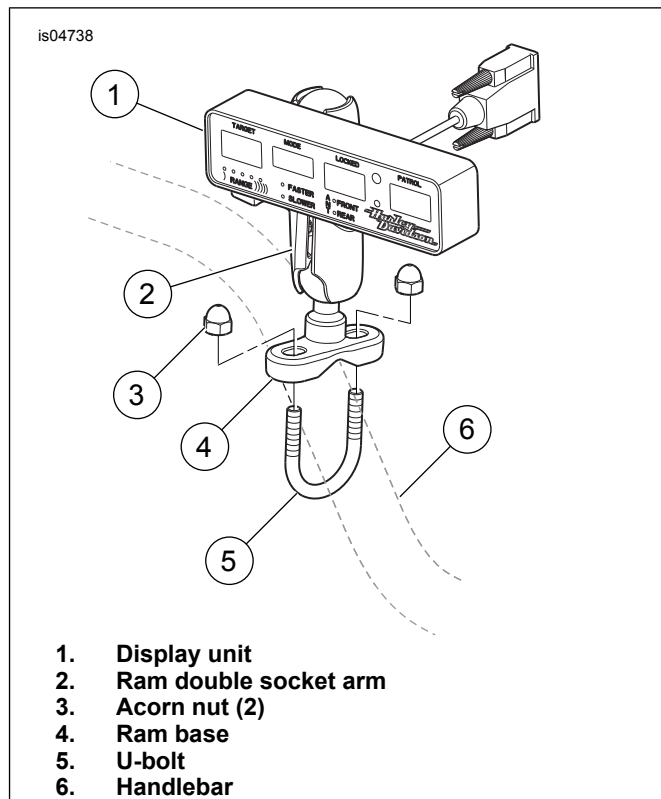


Figure 3. Radar Display Unit

Installing the Speaker - FLHP, FXDP Models

- See Figure 13. Obtain the speaker, housing and clamp assembly (20) from the speaker kit (purchased separately).
- See Figure 4. Remove the button head screws (3) that hold the 3-piece clamp (2) together. Place the clamp around the right side rise section of the handlebar (4) as shown.
- Re-install the button head screws and tighten to 1 N·m (9 **in-lbs**).
- Tighten the clamp spacer (5) securely.
- Proceed to the appropriate antenna installation procedure.

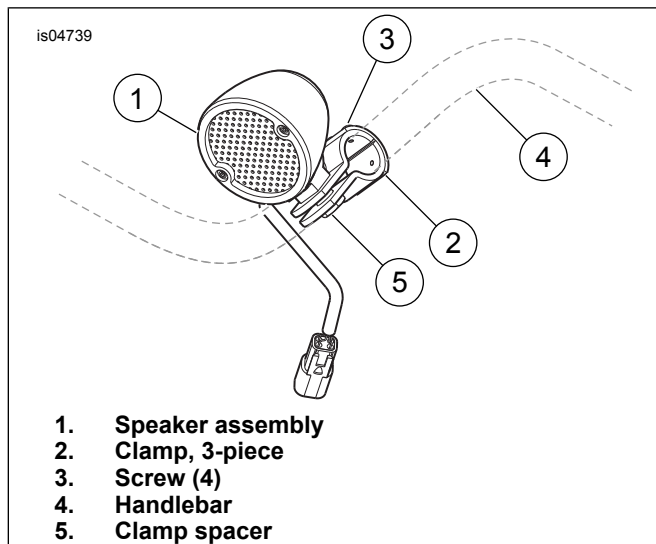


Figure 4. Speaker - FLHP and FXDP Models

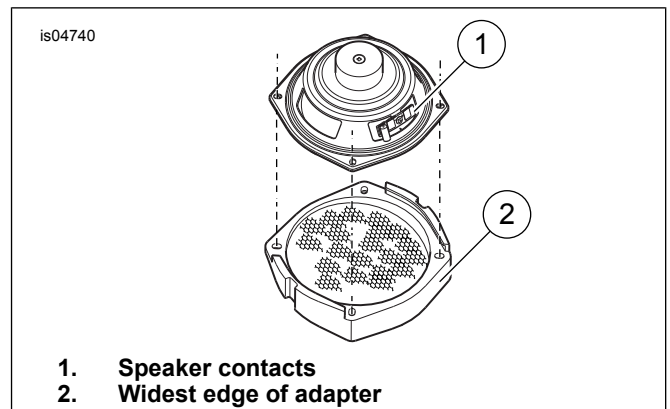
Installing the Speaker - FLHTP Models

1. Remove the outer fairing following the instructions in the appropriate service manual.
2. Remove and discard the three screws to remove the right side speaker opening cover from the inner fairing. The lower inboard screw hole is not used.
3. See Figure 13. Obtain the speaker (23), adapter (24), screws (25 and 26) and modular amplifier (27) from the speaker kit (purchased separately).
4. See Figure 5. With the grille side down, orient the speaker to the back of the adapter so the spade contacts are at the side with the widest edge. Snap the speaker into the adapter using finger-pressure only.

NOTE

If the speaker grille is loose, apply 3M-847 adhesive (99618-60) to the outer edge of the adapter ring. Install the grille onto the adhesive.

5. Position the speaker and adapter assembly into the inner fairing location, with the widest edge of the adapter and the contacts at the top.
6. See Figure 13. Install the two long screws (25) to secure the top of the speaker and adapter assembly to the right side inner fairing. Capturing the fairing support brace, install the short screw (26) in the lower outboard hole. The lower inboard screw hole is not used.
7. Tighten the lower speaker screw to 2.5–3.2 N·m (22–28 **in-lbs**). Tighten the two upper speaker screws to 4–5.7 N·m (35–50 **in-lbs**).
8. Secure the amplifier module (27) within the inner fairing with cable ties (14) from the kit. Connect the amplifier socket terminals to the speaker spade terminals. Different sized contacts will prevent proper assembly.
9. Proceed to the appropriate antenna installation procedure.



1. Speaker contacts
2. Widest edge of adapter

Figure 5. Speaker and Adapter - FLHTP Models

Installing the Front Antenna - Turn Signal Mount

NOTE

The front antenna will not mount to the turn signal when engine guard strobe lamps are installed. When used with strobe lamps, mount the front antenna to the engine guard. See INSTALLING THE FRONT ANTENNA - ENGINE GUARD MOUNT.

1. See Figure 13. Obtain the front antenna (16), antenna bracket (17), chrome locknut (19) and chrome washer (18) from the antenna kit.
2. See Figure 6. Using a long shank ball end socket (Snap-on[®] FABL5 or equivalent), remove the two screws (5) fastening the left side turn signal lamp to the mounting bracket. Use the hole in the passing lamp bracket to access the inboard screw.
3. Slide the antenna bracket (2) in between the turn signal lamp and mounting bracket as shown. Start the two screws to secure the turn signal lamp to the mounting bracket. Verify that the conduit fits in the slot at the back of the bracket and is not pinched as the screws are tightened. Tighten the screws securely.
4. Mount the antenna unit to the antenna bracket with the chrome flat washer (3) and locknut (4) and tighten securely.
5. Proceed to INSTALLING THE CABLES.

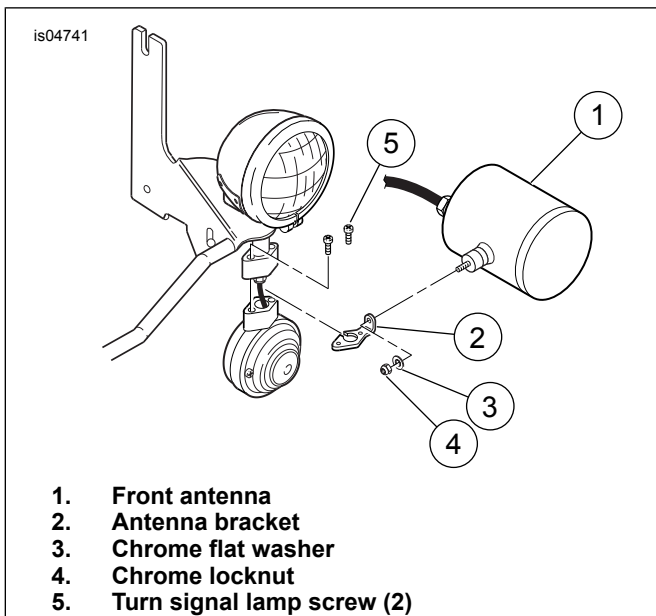


Figure 6. Front Antenna - Turn Signal Mount - FLHP, FLHTP Shown

Installing the Front Antenna - Engine Guard Mount

1. See Figure 7. Remove the four button head screws that hold the 3-piece clamp (2) together. Install the clamp around the left-side engine guard (4) as shown, positioning the clamp on the straight, upright section of the guard.
2. Install the button head screws and tighten to 1 N-m (9 in-lbs).
3. Install the chrome antenna clamp nut (3) onto the threads of the antenna stud, and tighten securely.
4. Proceed to INSTALLING THE CABLES.

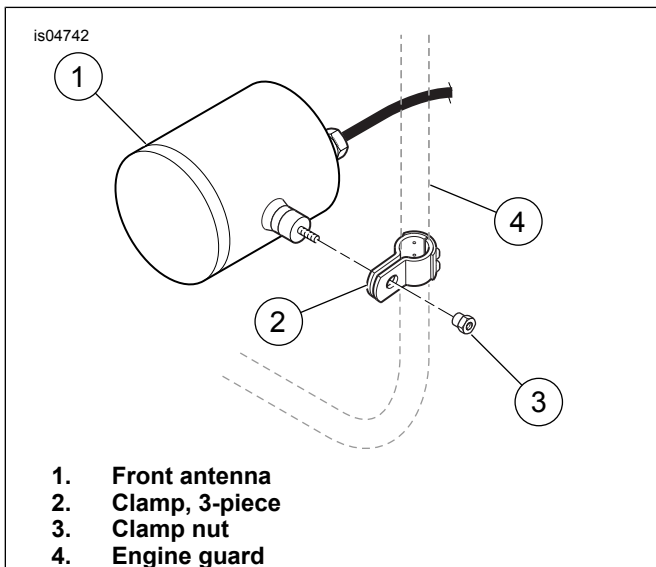


Figure 7. Front Antenna - Engine Guard Mount

Installing the Rear Antenna - FLHP, FLHTP

NOTE

The rear antenna is not compatible with Chrome License Plate/Light Kit (68230-97A).

1. See Figure 13. Obtain the rear antenna unit (16), antenna bracket (17), chrome locknut (19) and chrome washer (18) from the antenna kit.

NOTE

If the Police Pole Lamp is installed, mount the rear antenna to the right side turn signal. If the Pole Lamp is not installed, mount to the left side turn signal.

2. See Figure 8. Remove the two screws (7) to release the turn signal lamp assembly (5) from the turn signal bracket (6).

NOTE

For best results, remove the turn signal and bracket assembly from the vehicle. Insert a long shank ball end socket (Snap-on[®] FABL5 or equivalent) through the round hole at the tail lamp notch.

3. Slide the antenna bracket in between the turn signal lamp and mounting bracket as shown. Start the two screws to secure the turn signal lamp to the mounting bracket. Verify that the conduit fits in the slot at the back of the bracket and is not pinched as the screws are tightened. Tighten the screws securely.
4. Proceed to INSTALLING THE CABLES.

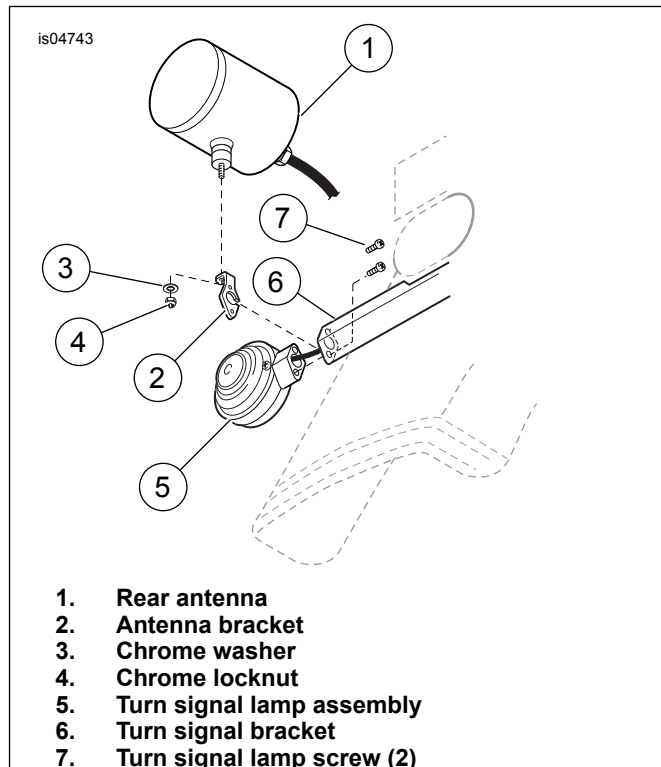


Figure 8. Rear Antenna Bracket - FLHP, FLHTP

Installing the Rear Antenna - FXDP

1. See Figure 13. Obtain the rear antenna unit (16), chrome locknut (19) and washer (18) from the antenna kit, and the L-bracket (10) from the radar system kit.

2. See Figure 9. Remove the nut (5), washers (3), spacer (4) and bolt (2) attaching the rear of the left saddlebag (1) to the saddlebag guard (6). Discard the spacer.
3. Slide the L-bracket (8) into place between the saddlebag and the tab on the guard. Replace the nut, washers and bolt, but do not fully tighten at this time.
4. Mount the antenna unit (7) to the L-bracket with the chrome flat washer (9) and locknut (10). Position the L-bracket as desired, then tighten the nut and bolt securely. Aim the antenna unit and tighten the chrome locknut securely.
5. Proceed to INSTALLING THE CABLES.

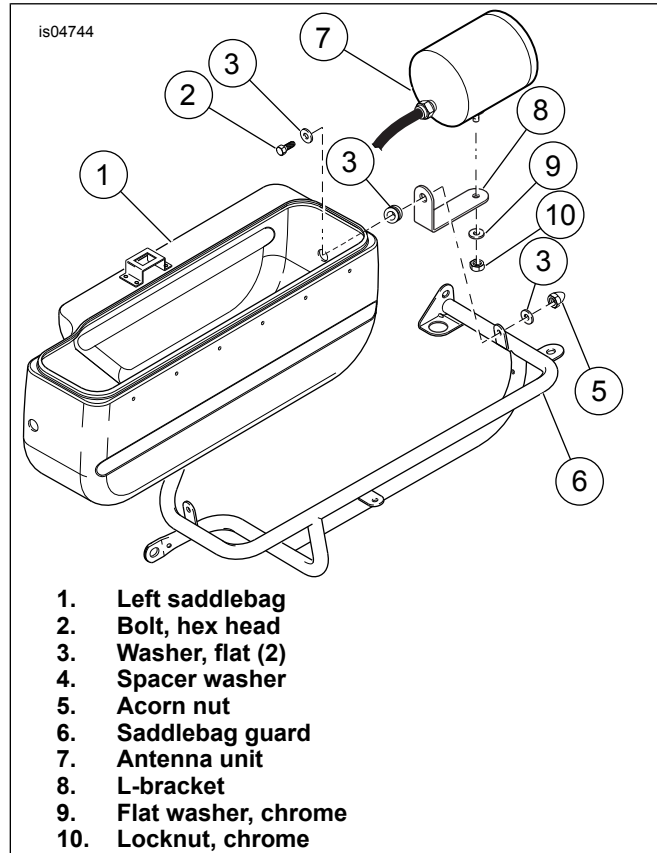


Figure 9. Rear Antenna Mount - FXDP

Installing the Cables

1. See Figure 13. Obtain the logic module (5) from the radar system kit.

⚠ WARNING

Stop the engine when refueling or servicing the fuel system. Do not smoke or allow open flame or sparks near gasoline. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00002a)

2. Loosen the fuel tank. Refer to the service manual.
3. **FLHP Models:** Disassemble the front nacelle following the instructions in the service manual.

4. Route the harnesses coming from the handlebar-mounted radar switch control housings to the handlebar clamp and down the fork tube, then back along the frame tubes to the area under the tank.
5. Attach the harnesses to the handlebar as needed with cable ties (14) from the kit.
6. See Figure 12. Connect the 8-place Deutsch connectors from the handlebar radar switch-control housings to the logic module (12) connectors.
7. Match the gray module connector to the gray left side switch control connector (10), and the black module connector to the black right side switch control connector (9).
8. Connect the 3-place Deutsch connector coming from the hand remote cable (5) to the remaining logic module connector.
9. Connect the 4-place Deutsch connector from the hand remote cable to the speaker (6 or 7).
10. Obtain the power harness (4) from the radar system kit, and plug it into the police accessory connector [4A] under the seat.
11. Proceed to the appropriate radar control unit installation procedure.

Installing the Radar Control Unit - FLHP, FLHTP Models

1. **For 2008-Earlier Models:** See Figure 10. Remove the two flange nuts (3) and flat washers retaining the rear of the seat trim panel (2) to the stud plate (1) on the underside of the fender. **For 2009-Later Models:** See Figure 11. Remove the two flange nuts (3) and install the brackets (1).

NOTE

Orient the radar control unit as shown to avoid interference with seat travel.

2. **For 2008-Earlier Models:** Mount the radar control unit (4) onto the studs. Install the flat washers and flange nuts on the studs. Tighten the nuts to 20–27 N·m (8–12 ft-lbs). **For 2009-Later Models:** See Figure 11. Install the acorn nut and flat washer (2). Tighten the nuts to 20–27 N·m (8–12 ft-lbs).
3. Proceed to FINAL ASSEMBLY.

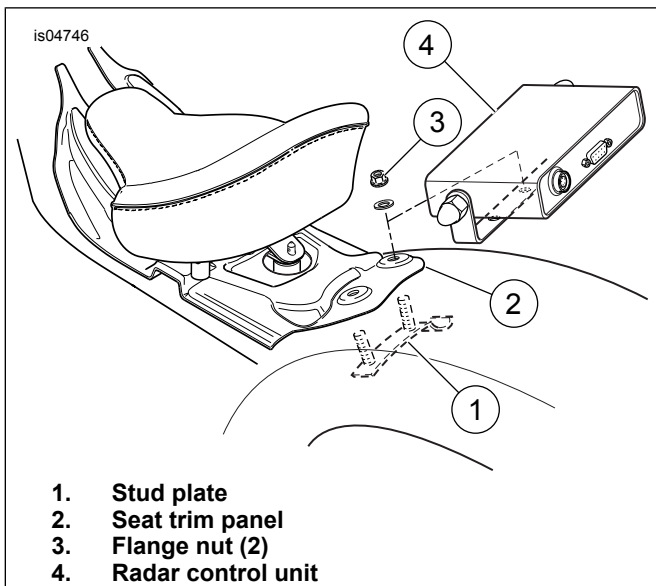


Figure 10. Radar Control Unit - 2008-Earlier FLHP, FLHTP

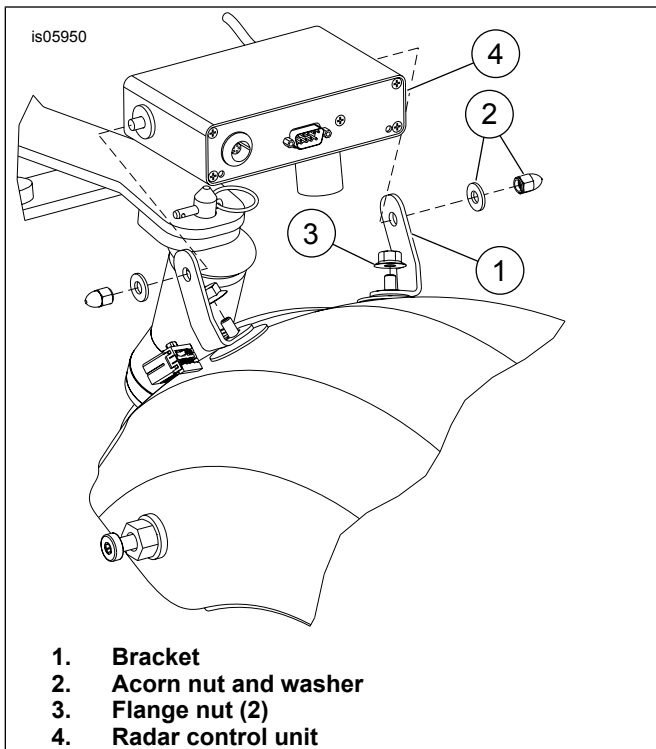


Figure 11. Radar Control Unit - 2009-Later FLHP, FLHTP

Installing the Radar Control Unit - FXDP Models

1. Remove the Tour-Pak from its mounting bracket, if equipped.
2. See Figure 13. Obtain the radar control unit (1) from the kit. The control unit will mount to the underside of the radio or Tour-Pak mounting bracket on the rear fender.
3. Position the radar control unit to the underside of the bracket, in a location that will provide officer access and sufficient clearance to make the necessary electrical connections.
4. Using the control unit mounting bracket as a template, mark the locations of the mounting holes on the upper surface of the bracket.
5. Drill two 9/32-inch holes in the marked locations. Attach the radar control unit to the underside of the bracket with two 1/4-20 x 1/2 inch screws and nuts (not included).
6. Proceed to FINAL ASSEMBLY.

Final Assembly

▲ 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)

1. Refer to the service manual and follow the instructions given to connect the negative battery cable and install the seat.

Troubleshooting

The radar control unit performs a self-test on power-up.

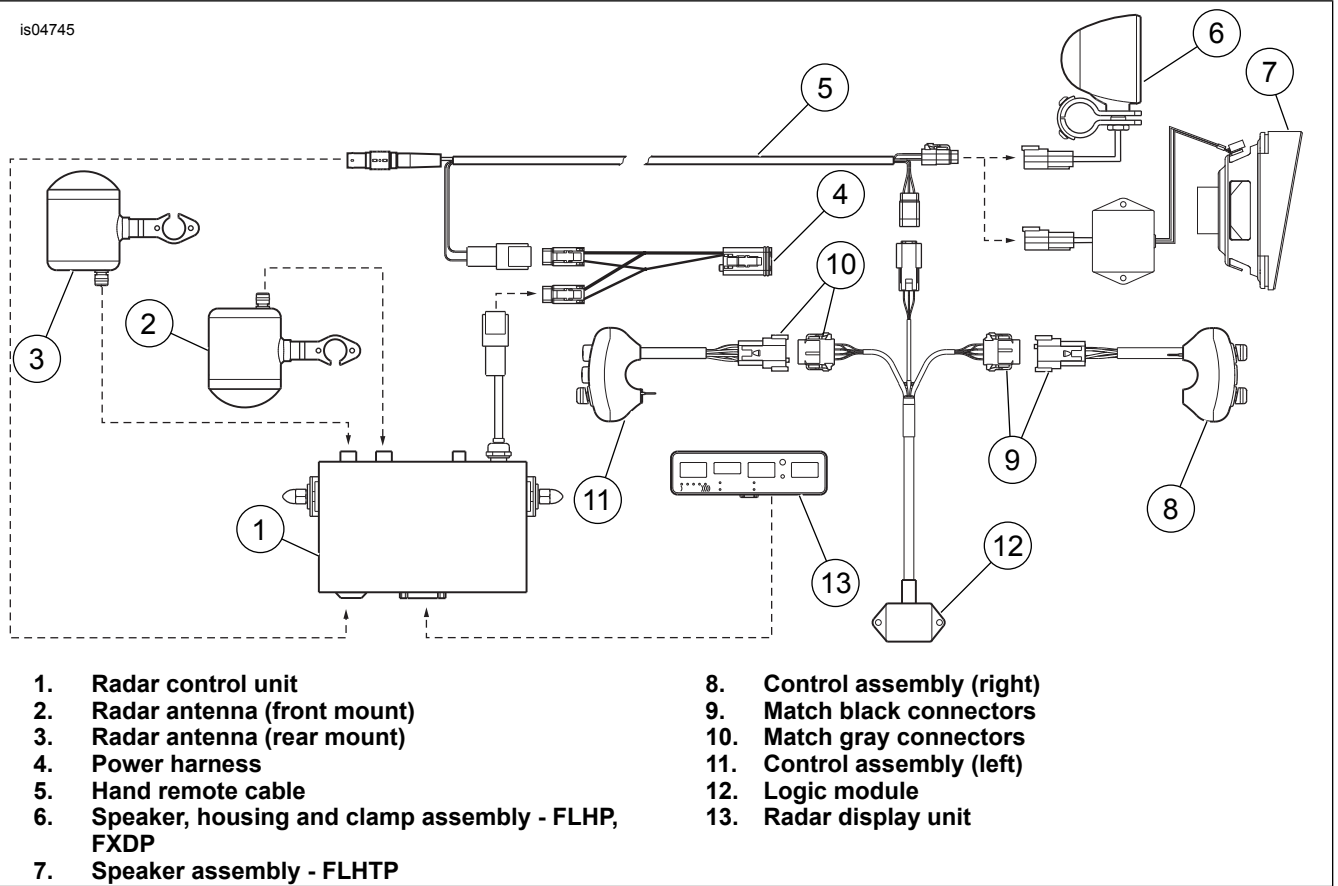


Figure 12. Integrated Radar System Diagram

SERVICE PARTS

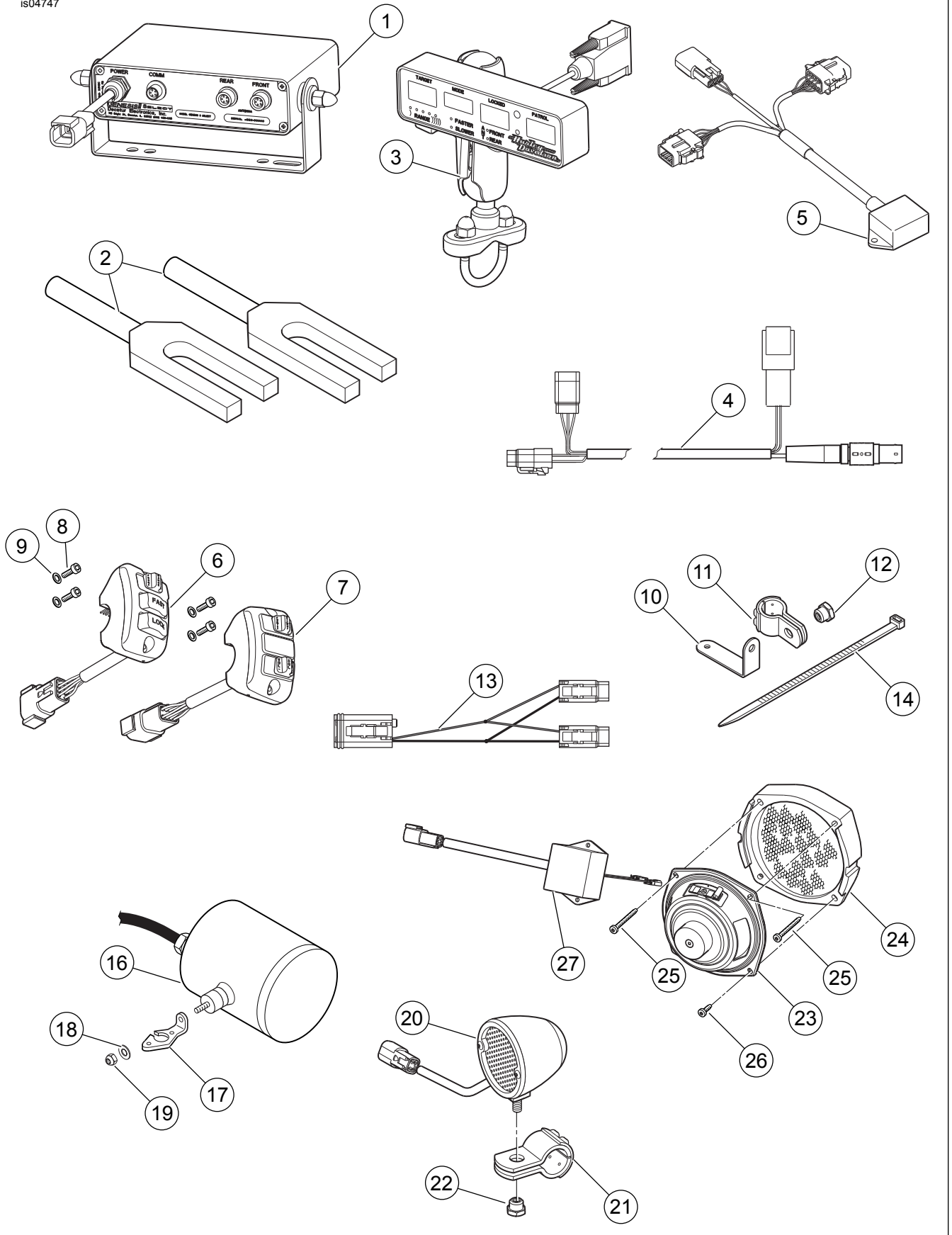


Figure 13. Service Parts: Vehicle Integrated Radar System, Radar Antenna and Speaker Kits

Table 3. Service Parts Table

Item	Description (Quantity)	Part Number
Kit Number 76122-04A - Ka Band, MPH		
1	Radar control unit, MPH	91645-04
2	Test fork kit, 35.2/50.6 MPH, Ka band	76111-04
Kit Number 76123-04A - Ka Band, MPH		
1	Radar control unit, MPH	91645-04
2	Test fork kit, 35.2/65.6 MPH, Ka band	76112-04
Kit Number 76124-04A - Ka Band, KPH		
1	Radar control unit, KPH	91693-04
2	Test fork kit, 60.2/90.6 KPH, Ka band	76128-04
Kit Number 76125-04A - Ka Band, KPH		
1	Radar control unit, KPH	91693-04
2	Test fork kit, 55.2/105.6 KPH, Ka band	76121-04
Kit Number 76126-04A - Ka Band, MPH, Florida		
1	Radar control unit, Florida	91694-04
2	Test fork kit, 35.2/50.6 MPH, Ka band	76111-04
Kit Number 76127-04A - Ka Band, MPH, Florida		
1	Radar control unit, Florida	91694-04
2	Test fork kit, 35.2/65.6 MPH, Ka band	76112-04
Parts Common to All Radar System Kits		
3	Radar display unit assembly	91644-04
4	Cable, hand remote	76098-04
5	Logic module	91695-04
6	Control assembly, left	91646-04A
7	Control assembly, right	91647-04A
8	Screw (4)	4015
9	Washer (4)	6101
10	L-bracket, rear antenna - for FXDP models	76166-04
11	Clamp, 3-piece 1-1/4 inch	50903-85T
12	Spacer, antenna clamp 1/4-20	50919-04
13	Power harness	70301-04
14	Cable tie (10)	10006
15	Operating instruction manual	76096-04

Table 4. Service Parts Table

Item	Description (Quantity)	Part Number
Antenna Kit Number 76094-04		
16	Ka-band antenna with a 3-foot (0.9 M) cable for rear mounting	Not Sold Separately
Antenna Kit Number 76095-04		
16	Ka-band antenna with a 7-foot (2.1 M) cable for front mounting	Not Sold Separately
Antenna Kit Number 76347-04		
16	K-band antenna with a 3-foot (0.9 M) cable for rear mounting	Not Sold Separately
Antenna Kit Number 76348-04		
16	K-band antenna with a 7-foot (2.1 M) cable for front mounting	Not Sold Separately
Parts Common to All Antenna Kits		
17	Bracket, antenna mounting	76099-04
18	Washer, 1/4 inch chrome (2)	94065-90T
19	Locknut, 1/4-20 chrome (2)	94026-92T
Speaker Kit Number 77016-04 - FLPH, FXDP Models		
20	Speaker, housing and clamp assembly	Not Sold Separately
21	Clamp, 3-piece 1.0 inch	50904-85T
22	Spacer, antenna clamp, 5/16-24	50934-04
Speaker Kit Number 77024-04 - FLPHTP Models		
23	Speaker	77029-01
24	Adapter, speaker	77047-98
25	Screw, #10-16 x 2.0 inch (2)	2965
26	Screw, #10-12 x 1-1/8 inch (2)	3639
27	Amplifier module	76097-04