

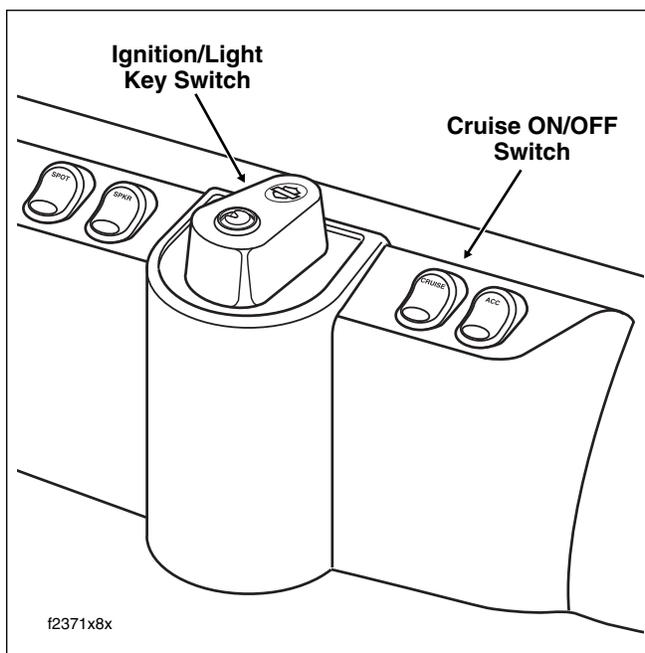
## GENERAL

The Cruise Control system provides automatic vehicle speed control. The electronics and stepper motor are contained in a control module mounted under the left side cover. The stepper motor actuates the cruise control cable through a gear train and ribbon reel.

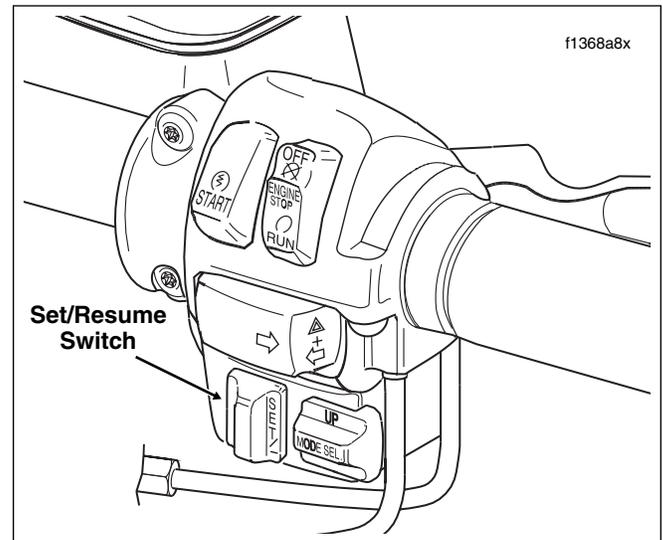
## SYSTEM OPERATION

To engage and disengage the cruise control system, proceed as follows:

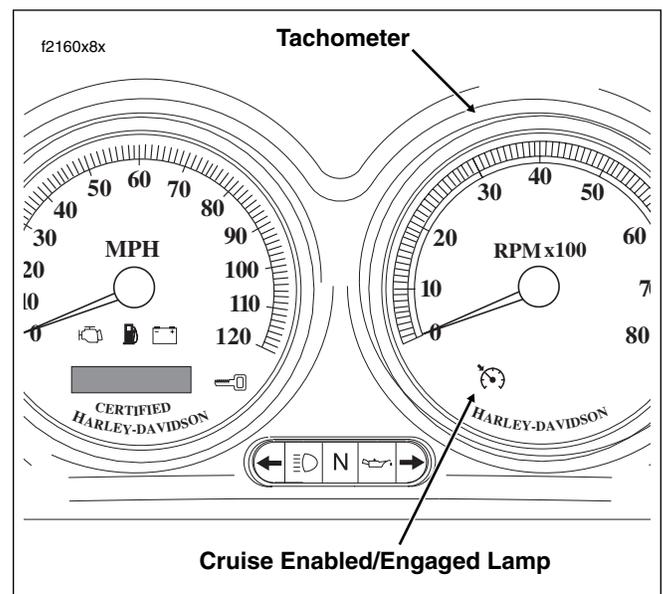
1. While riding in fourth or fifth gear, turn the Cruise ON/OFF Switch to the ON position. See [Figure 8-128](#). The switch is located on the fairing cap of FLHTCU models, the instrument nacelle of FLTR models, and the left handlebar lower switch housing on FLHRC models. The Cruise Enabled/Engaged lamp in the tachometer face (speedometer on FLHRC models) turns red to indicate that the system is activated. See [Figure 8-130](#). A red lamp in the switch on both FLHTCU and FLTR models also indicates this condition to the rider.
2. Power (12 vdc) is supplied to the cruise control module through a 15 amp fuse located in the fuse block mounted under the left side cover.



**Figure 8-128. Fairing Cap (FLHTCU)**



**Figure 8-129. Right Handlebar Switch Assembly (FLTR, FLHTCU)**



**Figure 8-130. Instrument Panel (FLHTCU)**

3. With the motorcycle traveling at the desired “cruise” speed (30 mph/48 km/h to 85 mph/137 km/h), momentarily push the Cruise SET/RESUME switch to SET. See [Figure 8-129](#).

The cruise control module reads the VSS output to establish the desired vehicle speed. The module then sends a signal to the stepper motor which drives the ribbon reel to take up slack in the cruise cable. The Cruise

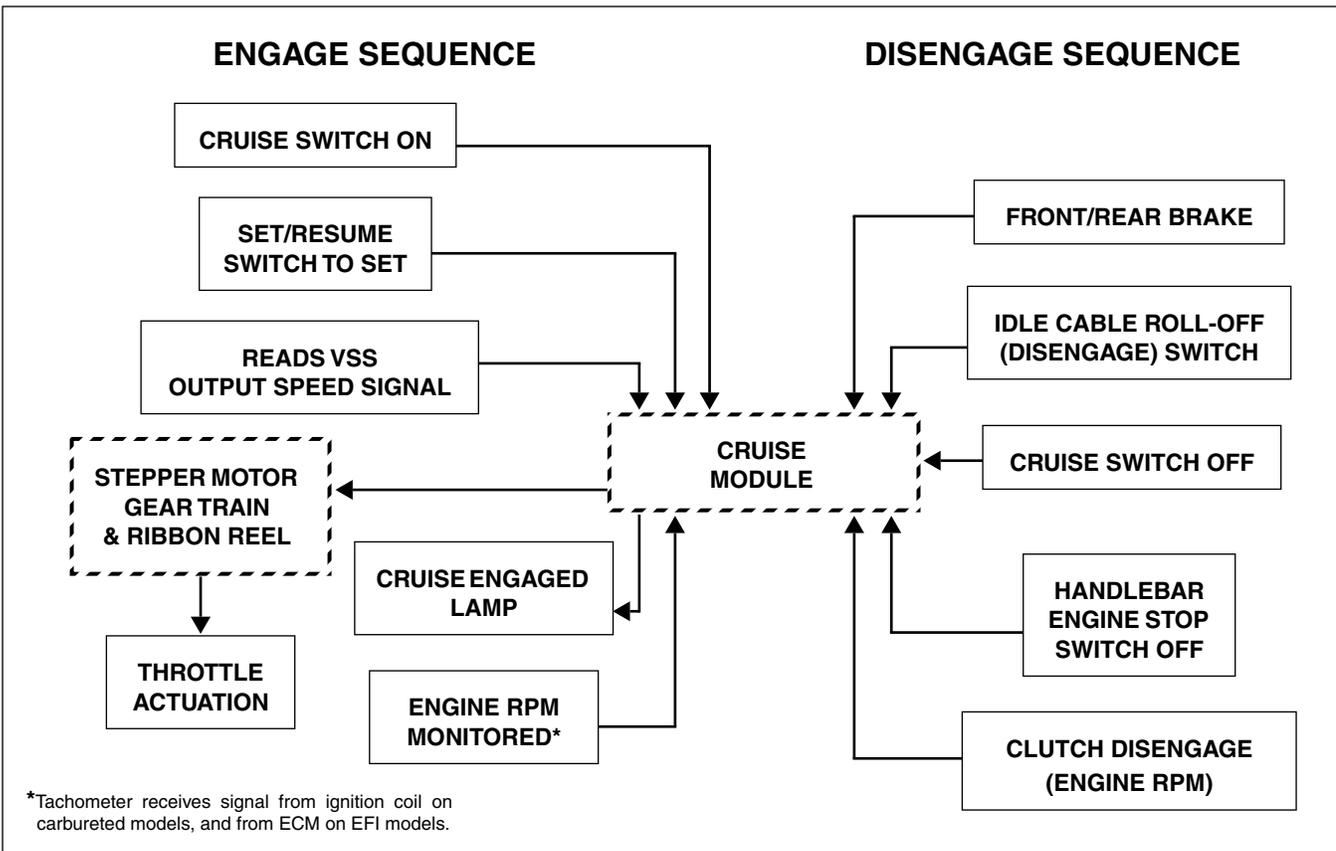


Figure 8-131. Cruise System Diagram

Enabled/Engaged lamp in the tachometer face (speedometer on FLHRC models) turns from red to green to indicate that cruising speed is locked in. See [Figure 8-130](#).

4. The cruise control module monitors both engine RPM and the VSS output speed signal. The module signals the stepper motor to open or close the throttle to keep the speedometer output speed signal constant. The engine RPM is monitored to detect engine overspeed, a condition which automatically causes cruise disengagement.
5. The cruise control automatically disengages (stepper motor drives cruise cable to the full-out position) whenever the cruise control module receives one of the following inputs:
  - a. Front or rear brake is applied.
  - b. Throttle is "rolled back" or closed, thereby actuating idle cable roll-off (disengage) switch.
  - c. Motorcycle clutch is disengaged (module senses too great an increase in RPM).
  - d. Cruise ON/OFF Switch placed in the OFF position. The switch is located on the fairing cap of FLHTCU models, the instrument nacelle of FLTR models, and the left handlebar lower switch housing on FLHRC models. The green Cruise Enabled/Engaged lamp

in the tachometer face (speedometer on FLHRC models) is extinguished to indicate that the system is deactivated. The red lamp in the fairing cap switch of FLHTCU models and the instrument nacelle switch of FLTR models is also extinguished.

- e. Handlebar mounted Engine Stop Switch placed in the OFF position. (This removes tachometer input signal which results in module disengagement.)
- f. Handlebar mounted Cruise SET/RESUME switch is pushed to SET and held in that position until vehicle speed drops below 30 mph (48 km/h).

#### NOTE

*If the vehicle speed is above 30 mph (48 km/h) when the Cruise SET/RESUME Switch is released, then the cruise system automatically re-engages.*

## CABLE ADJUSTMENT

#### NOTE

*Always adjust the cables in the sequence presented below, that is, throttle and then idle cable. The cruise cable only requires adjustment if the cruise module or cruise cable are removed or replaced, and then it must be adjusted last using the [CABLE LASH INITIALIZATION](#) routine on the next page.*

## THROTTLE CABLE

1. With the front wheel pointed straight ahead (and idle cable adjusted to full slack), gently turn the throttle grip counterclockwise to wide open throttle (WOT) and then hold in position. Now turn the cable adjuster counterclockwise until the throttle cam stop just touches the stop plate on the carburetor/induction module. Release the throttle grip, turn cable adjuster counterclockwise an additional 1/2-1 full turn, and then tighten the jam nut against the cable adjuster.
2. Twist throttle grip to full closed position. Check that idle stop screw is touching idle stop with handlebar in straight ahead position, and while turning handlebar from “lock-to-lock”.

### NOTE

*If idle stop screw is not touching idle stop, adjust (loosen) throttle cable just enough so that contact is made through full lock-to-lock handlebar movement. Also check that cruise cable has slack and is not opening throttle. Loosen cruise cable if required.*

3. Rotate throttle grip to WOT and release. Throttle must return to idle position freely. If it does not, check for incorrect cable routing, damaged cables or binding in the throttle grip.

## IDLE CABLE

1. Remove left side saddlebag. See Section [2.26 SADDLEBAG, REMOVAL](#).
2. Gently pull side cover from frame downtubes (no tools required).
3. Lift the locking latch and remove the cruise module connector [17]. With idle cable still adjusted to full slack position, connect ohmmeter to violet/yellow and orange/violet leads on connector [17A].
4. Ohmmeter must indicate infinity (switch contacts open). If ohmmeter indicates continuity, the roll-off switch may be shorted and entire cable must be replaced.
5. With handlebar in straight ahead position, adjust idle cable until approximately 0.06 inch (1.5 mm) of freeplay exists at the outside diameter (OD) of the throttle grip.
6. With light force, rotate the throttle grip toward the closed position. The ohmmeter must indicate continuity. If it does not, decrease freeplay at throttle grip by adjusting the idle cable to obtain continuity while maintaining some freeplay at the throttle grip.
7. While holding the throttle grip (with light force) in the closed position, turn handlebar from “lock-to-lock”. Ohmmeter must indicate continuity throughout handlebar movement.
8. With handlebar in straight ahead position, rotate throttle grip to WOT and release. Throttle must return to idle position freely.

9. Repeat step 8 with handlebar at full left and right positions. If throttle does not return to idle position freely, loosen idle cable slightly and repeat steps 6-9.
10. Install cruise module connector [17] and engage locking latch.
11. Align barbed studs in side cover with grommets in frame downtubes and push firmly into place (no tools required).
12. Install left side saddlebag. See Section [2.26 SADDLEBAG, INSTALLATION](#).

## CABLE LASH INITIALIZATION

With the elimination of the mechanical cruise cable adjuster, the tolerance stack-ups are intended to result in a cable that is too long. The extra cable length is then taken up upon execution of the Cable Lash Initialization routine. During the routine, the system calculates the number of “motor steps” the cable is pulled before the throttle plates are moved (a maximum of 200 motor steps equivalent to 1.2 inches or 31 mm). This information is then stored in permanent memory.

### NOTE

*Perform the initialization routine whenever the cruise module, cruise cable or throttle body are removed or replaced. For best results, be sure the engine is at normal operating temperature and throttle and idle cables are correctly adjusted and operational.*

To set the correct cable lash, proceed as follows:

- a. Push the Cruise Switch on the right handlebar to **RESUME and hold**.
- b. Turn the Cruise ON/OFF switch to ON.
- c. Turn the Ignition/Light Key Switch to IGNITION.
- d. Start the engine. The green Cruise Enabled/Engaged lamp in the tachometer face (speedometer on FLHRC models) will illuminate. Wait 3 seconds for the lamp to go off.
- e. Release the Cruise Switch from the RESUME position.
- f. Push the Cruise Switch to **RESUME and hold**. Cruise will pull in cable until change in RPM is detected. The number of motor steps required to rev the engine is stored in memory.
- g. After engine revs and Cruise Enabled/Engaged lamp is extinguished, release the Cruise Switch from the RESUME position.
- h. Turn the Ignition/Light Key Switch to OFF.

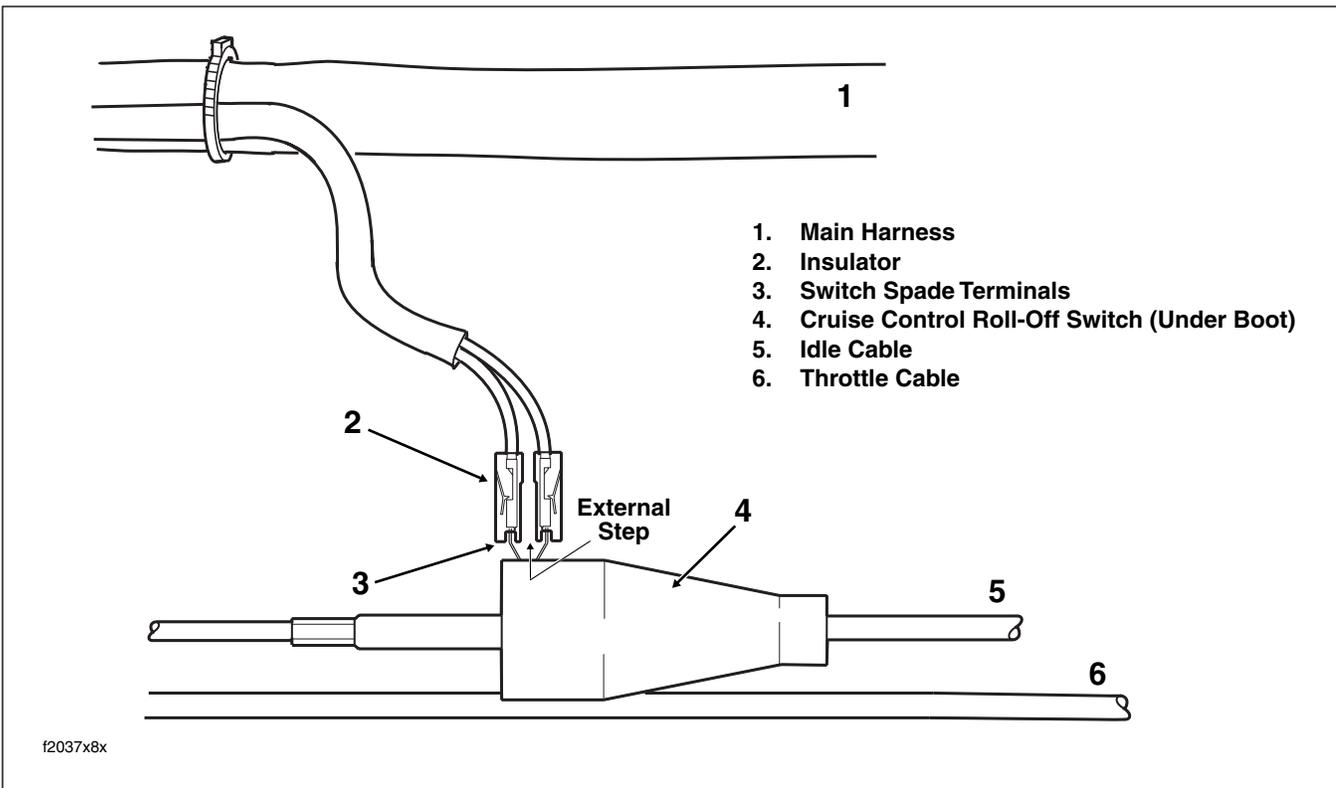


Figure 8-132. Throttle/Idle Cable Configuration (Right Side View)

## THROTTLE/IDLE CABLES

### NOTE

While the same throttle cable is used on all Touring models, the idle cable of "cruise" models is provided with a cruise roll-off (disengage) switch.

### REMOVAL

1. See Section 2.21 THROTTLE CABLES (NON-CRUISE), REMOVAL, THROTTLE SIDE.
2. Remove the air cleaner and backplate. See Section 4.5 AIR CLEANER, REMOVAL.
3. Raise fuel tank to access cables in area of frame backbone. For carbureted models, see Section 4.7 FUEL TANK (CARBURETED), PARTIAL REMOVAL, FLHX, FLHT, or FLHR/S. For fuel injected models, see Section 9.4 FUEL TANK (FUEL INJECTED), PARTIAL REMOVAL, FLHXI, FLHT/C/U/I, FLTRI, or FLHR/C/S/I.
4. Locate the cruise control roll-off switch plumbed into the idle cable on the right side of the frame backbone (just rear of the steering head). Push rubber boot on switch forward and remove insulators from switch spade terminals. See Figure 8-132.

5. **Carbureted:** Using a needle nose pliers, carefully pull idle cable barrel from upper inboard hole in throttle wheel. Pull throttle cable barrel from remaining hole. Release idle and throttle cables from guides in throttle cable bracket.

**Induction Module:** Using a needle nose pliers, carefully pull idle cable barrel from upper hole in throttle wheel. Pull throttle cable barrel from lower hole. Using slots, release idle and throttle cables from guides in throttle cable bracket.

6. Free cables from J-clamp riveted to right side of frame backbone.
7. If present, remove screw (with flat washer) to release J-clamp from wellnut in right side of steering head. Remove J-clamp from cables.

### INSTALLATION

1. See Section 2.21 THROTTLE CABLES (NON-CRUISE), INSTALLATION, THROTTLE SIDE.
2. Route the throttle and idle cables as follows:

**FLHTCU:** Route the cables downward following the brake line to the inner fairing. Pass the cables through the inner fairing grommet and then loop them toward the rear along the right side of the steering head.

**FLHRC:** Route the cables downward following the right handlebar to the handlebar clamp shroud. Pass the cables through the opening in the shroud and then loop them toward the rear along the right side of the steering head. Capture cables in J-clamp and then start screw (with flat washer) to fasten J-clamp to wellnut in right side of steering head. Tighten screw to 9-18 **in-lbs** (1.0-2.0 Nm).

3. Route the throttle and idle cables rearward along the right side of the frame backbone. After passing through J-clamp riveted to frame backbone, route cables downward to carburetor/induction module.
4. Use a pliers to straighten switch spade terminals of cruise roll-off switch if bowed or bent back. The terminals must be parallel and line up perpendicular to the idle cable.
5. Separate the cruise roll-off switch wires up to the point where they enter the wire harness conduit. Now route the leads straight down.
6. Orient the idle cable so that the switch spade terminals are at the top.
7. Slide the insulators onto the switch spade terminals (polarity is not a factor). For maximum insertion, be sure

that the external step on the insulators face each other. See [Figure 8-132](#).

8. Fit the rubber boot over the cruise control roll-off switch. An oval cut in the boot accommodates the switch spade terminal connections.
9. Position the throttle cable below the idle cable.
10. **Carbureted:** Install sleeve on throttle cable housing into shorter cable guide in throttle cable bracket. Drawing throttle cable downward, fit barrel end into lower outboard hole in throttle wheel. Install sleeve and spring on idle cable housing into longer cable guide inserting barrel end into upper inboard hole in throttle wheel.
- Induction Module:** Install sleeve on throttle cable housing into cable guide at top of throttle cable bracket. Drawing throttle cable downward, fit barrel end into lower hole in throttle wheel. Install sleeve and spring on idle cable housing into cable guide at bottom of throttle cable bracket inserting barrel end into upper hole in throttle wheel.
11. Verify that cables are fully seated in channel of throttle wheel, and using cable adjusters at handlebar, tighten cables as necessary to keep barrel ends from dislodging. Verify operation by turning throttle grip and observing cable action.

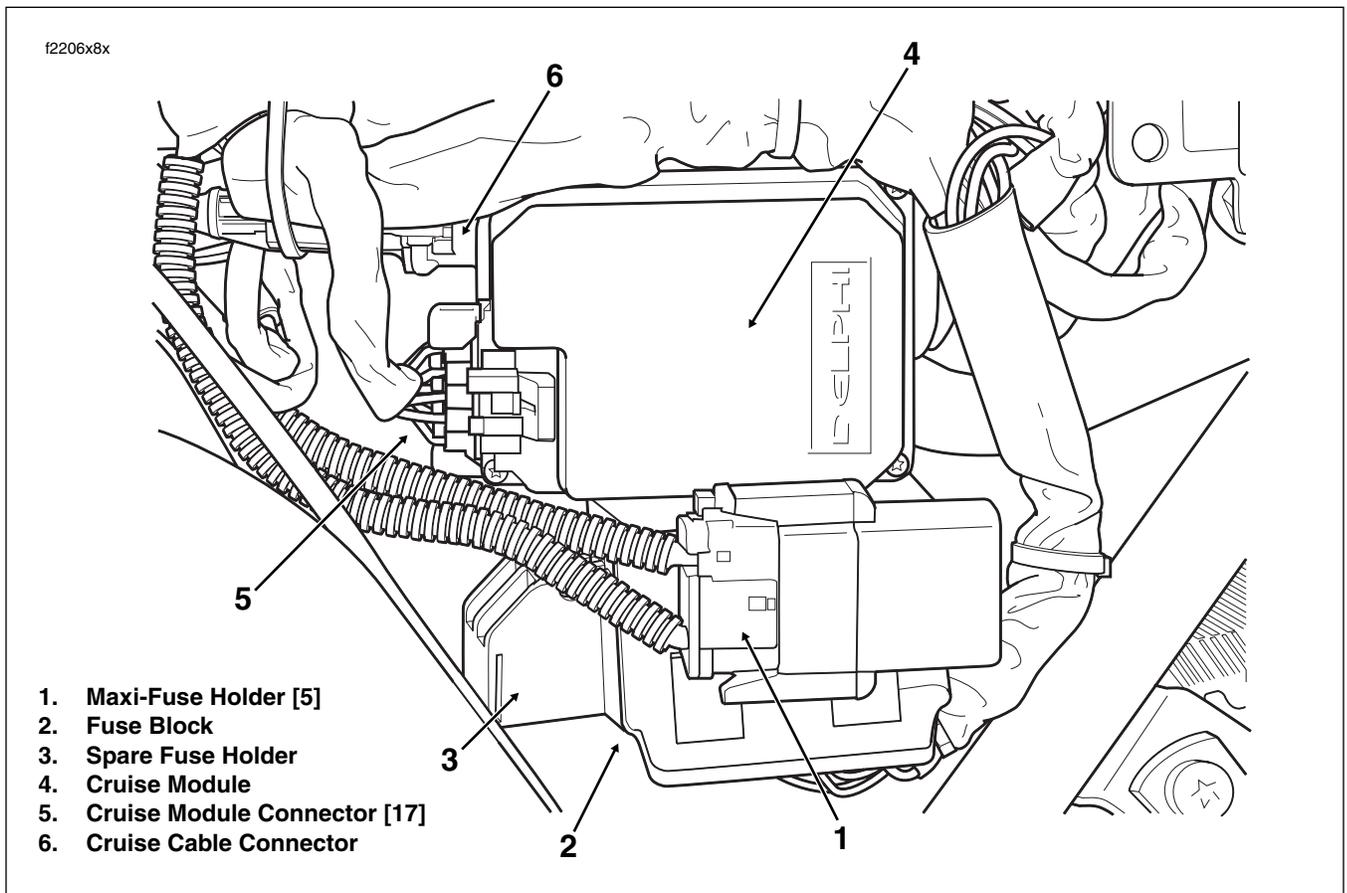
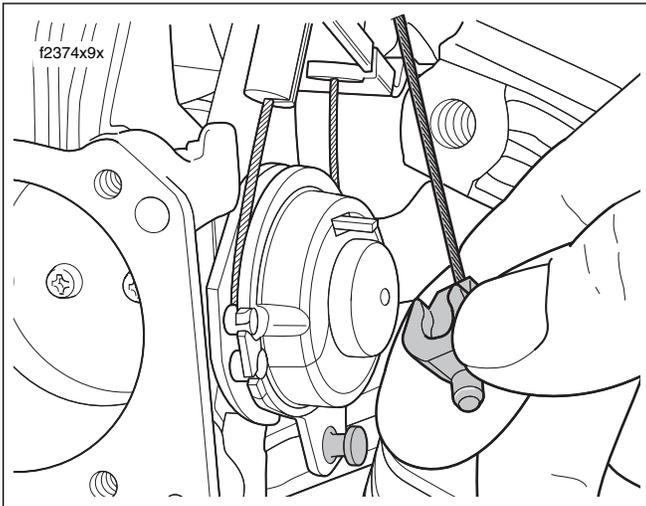


Figure 8-133. Cruise Control Module (Under Left Side Cover)



**Figure 8-134. Remove End Fitting From Wheel Pin**

12. Install fuel tank. For carbureted models, see Section 4.7 [FUEL TANK \(CARBURETED\), INSTALLATION \(AFTER PARTIAL REMOVAL\)](#), or [FLHR/S](#). For fuel injected models, see Section 9.4 [FUEL TANK \(FUEL INJECTED\), INSTALLATION \(AFTER PARTIAL REMOVAL\)](#), [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#), or [FLHR/C/S/I](#).
13. Install backplate and air cleaner assembly. See Section 4.5 [AIR CLEANER, INSTALLATION](#).
14. Adjust the throttle and idle cables. Be sure to use the cable adjustment procedure for Ultra models. See [CABLE ADJUSTMENT](#), in this section.

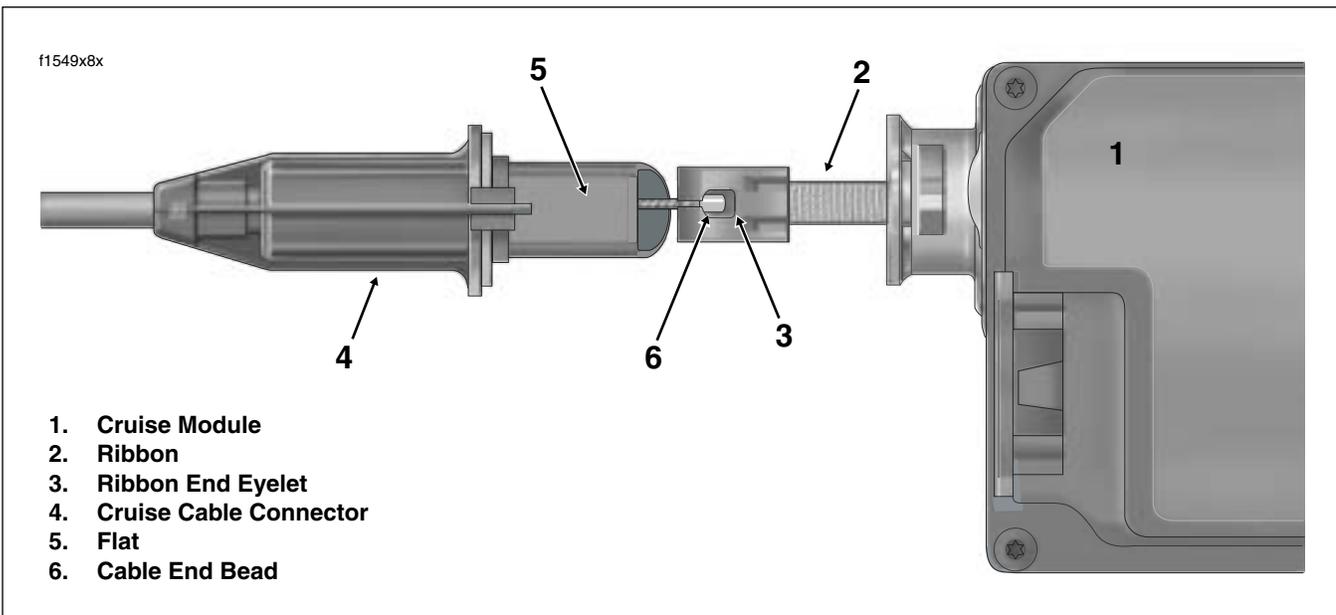
## CRUISE CABLE

### REMOVAL

1. Remove the air cleaner and backplate. See Section 4.5 [AIR CLEANER, REMOVAL](#).
2. Remove E-clip from sleeve at end of cruise cable housing. Discard E-clip. Using slot, remove cruise cable housing from cable guide in throttle cable bracket.
3. Push the plastic end fitting on the cruise cable to the outboard side to release from wheel pin. See [Figure 8-134](#).
4. Remove left side saddlebag. See Section 2.26 [SADDLEBAG, REMOVAL](#).
5. Gently pull side cover from frame downtubes (no tools required).
6. Rotate cruise cable connector in a counterclockwise direction to detach from cruise module. See [Figure 8-135](#).
7. Pull the cable out of the connector and remove the cable end bead from the ribbon end eyelet.
8. Pull anchored cable clip from hole in frame crossmember. See [Figure 8-136](#).
9. Carefully pull cruise cable from beneath fuel tank drawing it out through hole in frame crossmember.

### INSTALLATION

1. Draw the cruise cable forward along the left side of the frame backbone, and then route the cable toward the right side of the vehicle in front of the top engine stabilizer bracket.



**Figure 8-135. Remove Cable End Bead From Ribbon End Eyelet**

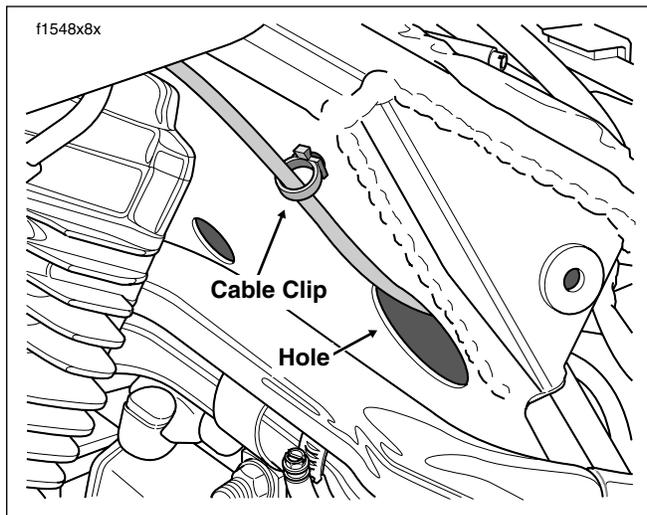


Figure 8-136. Cruise Cable Routing (Left Side)

2. Slide groove in cruise cable end fitting over cap of wheel pin. Push on end fitting until it snaps in place. See [Figure 8-134](#).
3. Using slot, slip cruise cable housing into cable guide in throttle cable bracket. At bottom of bracket, install **new** E-clip on sleeve at end of cruise cable housing.
4. Feed cruise cable and connector through hole in frame crossmember. See [Figure 8-136](#).

#### CAUTION

**Be sure that the ribbon is not twisted. A twisted ribbon may adversely affect performance or even prevent cruise operation.**

5. With the hole in the ribbon end eyelet and the flat on the cable connector housing facing outboard, fit cable end bead into ribbon end eyelet. See [Figure 8-135](#).
6. Verify that bead, eyelet and ribbon are lined up correctly. If necessary, remove plastic end fitting from wheel pin and gently pull on end fitting to remove cable slack. Reinstall end fitting, if removed.
7. Insert cruise cable connector into cruise module and rotate in a clockwise direction until tabs on connector fully engage grooves or detentes in cruise module housing.
8. Capture cruise cable in cable clip and anchor in hole of frame crossmember. See [Figure 8-136](#).
9. Adjust the throttle and idle cables. See [CABLE ADJUSTMENT](#), in this section.
10. Install backplate and air cleaner assembly. See Section [4.5 AIR CLEANER, INSTALLATION](#).
11. Align barbed studs in side cover with grommets in frame downtubes and push firmly into place (no tools required).
12. Install left side saddlebag. See Section [2.26 SADDLE-BAG, INSTALLATION](#).

13. Perform the [CABLE LASH INITIALIZATION](#) routine described in this section.

## CRUISE CONTROL MODULE

### REMOVAL

1. Remove the air cleaner and backplate. See Section [4.5 AIR CLEANER, REMOVAL](#).
2. Push the plastic end fitting on the cruise cable to the outboard side to release from wheel pin. See [Figure 8-134](#).
3. Remove seat. See Section [2.25 SEAT, REMOVAL](#).

#### WARNING

**Always disconnect the negative battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.**

4. Unthread bolt and remove battery negative cable (black) from battery negative (-) terminal.
5. Unthread bolt and remove battery positive cable (red) from battery positive (+) terminal.
6. Loosen T40 TORX screw and move lip of hold-down clamp off edge of battery. Remove battery from battery box.
7. Lift locking latch and remove cruise module connector [17], 10-place Packard. See [Figure 8-133](#).
8. Rotate cruise cable connector in a counterclockwise direction to detach from cruise module.
9. From inside battery box, remove three flange bolts. Carefully pull cruise module away from side of battery box exercising caution to avoid losing grommets.

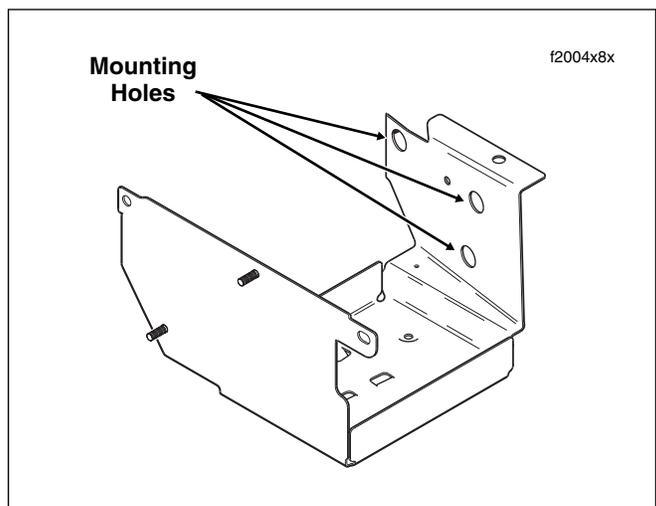


Figure 8-137. Battery Box (Right Side View)

## INSTALLATION

1. Install grommets into holes on left side of battery box with the larger OD on the outboard side. See [Figure 8-137](#).
2. Align threaded holes on inboard side of cruise module with holes in grommets and install flange bolts from inside battery box.
3. Alternately tighten flange bolts to 60-96 **in-lbs** (6.8-10.9 Nm). Install cruise module connector [17] and engage locking latch.

### CAUTION

**Be sure that the ribbon is not twisted. A twisted ribbon may adversely affect performance or even prevent cruise operation.**

4. With the hole in the ribbon end eyelet and the flat on the cable connector housing facing outboard, fit cable end bead into ribbon end eyelet. See [Figure 8-135](#).
5. Verify that bead, eyelet and ribbon are lined up correctly. If necessary, remove plastic end fitting from wheel pin and gently pull on end fitting to remove cable slack.
6. Insert cruise cable connector into cruise module and rotate in a clockwise direction until tabs on connector fully engage grooves or detentes in cruise module housing.
7. Install cruise module connector [17], 10-place Packard. See [Figure 8-133](#).
8. Place battery in battery box, terminal side forward. Rotate the hold-down clamp so that the lip (with rubber pad) rests on the edge of the battery. Tighten T40 TORX screw to 15-20 ft-lbs (20-27 Nm).

### WARNING

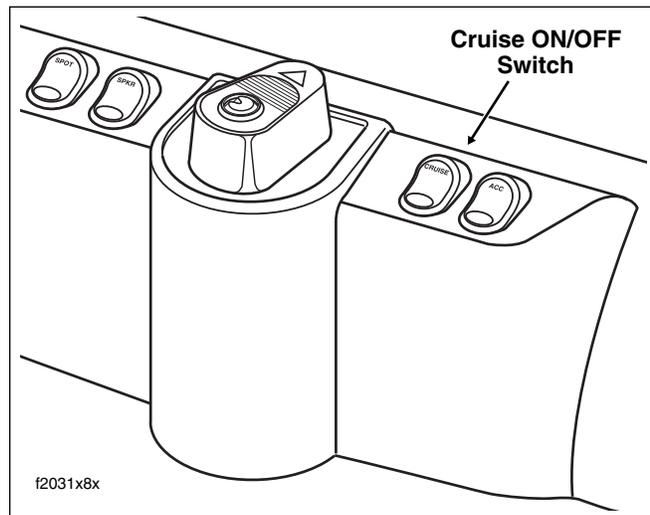
**Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.**

9. Insert bolt through battery positive cable (red) into threaded hole of battery positive (+) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
10. Insert bolt through battery negative cable (black) into threaded hole of battery negative (-) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
11. Install seat. See Section [2.25 SEAT, INSTALLATION](#).
12. Slide groove in cruise cable end fitting over cap of wheel pin. Push on end fitting until it snaps in place. See [Figure 8-134](#).
13. Install backplate and air cleaner assembly. See Section [4.5 AIR CLEANER, INSTALLATION](#).
14. Perform the [CABLE LASH INITIALIZATION](#) routine described in this section.

## CRUISE CONTROL SWITCHES

### FAIRING CAP

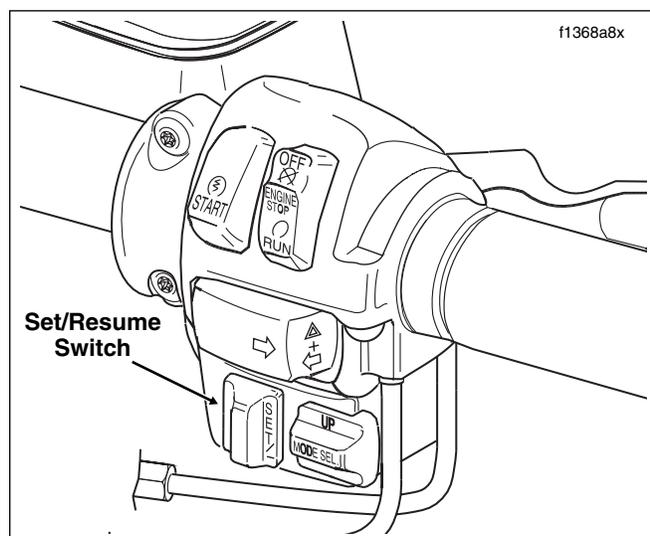
See [Figure 8-138](#). For instructions on replacement of the CRUISE ON/OFF SWITCH, see Section [8.20 FAIRING CAP SWITCHES \(FLHTC/U\)](#), Section [8.21 INSTRUMENT NACELLE SWITCHES \(FLTR\)](#), or Section [8.22 HANDLEBAR SWITCHES \(FLHRC\)](#).



**Figure 8-138. Fairing Cap (FLHTCU)**

### HANDLEBAR

See [Figure 8-139](#). For instructions on replacement of the handlebar mounted CRUISE SET/RESUME switch, see Section [8.22 HANDLEBAR SWITCHES, SWITCH REPAIR/REPLACEMENT](#).



**Figure 8-139. Right Handlebar Switch Assembly (FLTR, FLHTCU)**

## RADIO (STORAGE BOX)

## REMOVAL

1. Remove maxi-fuse. See Section 8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL.
2. Remove outer fairing. Proceed as follows:  
**FLHX, FLHT/C/U:** See Section 2.30 UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, REMOVAL.  
**FLTR:** See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), OUTER FAIRING, REMOVAL.
3. On FLHTCU models, remove the CB module. See CB MODULE, REMOVAL, steps 3-4, in this section.
4. See Figure 8-140. Disconnect the following connectors:

**FLHX, FLHTC/U, FLTR:**

- Radio connector [27], 23-place Amp.
- Radio antenna cable connector [51].

**FLHTCU Only:**

- Radio connector [28], 35-place Amp.

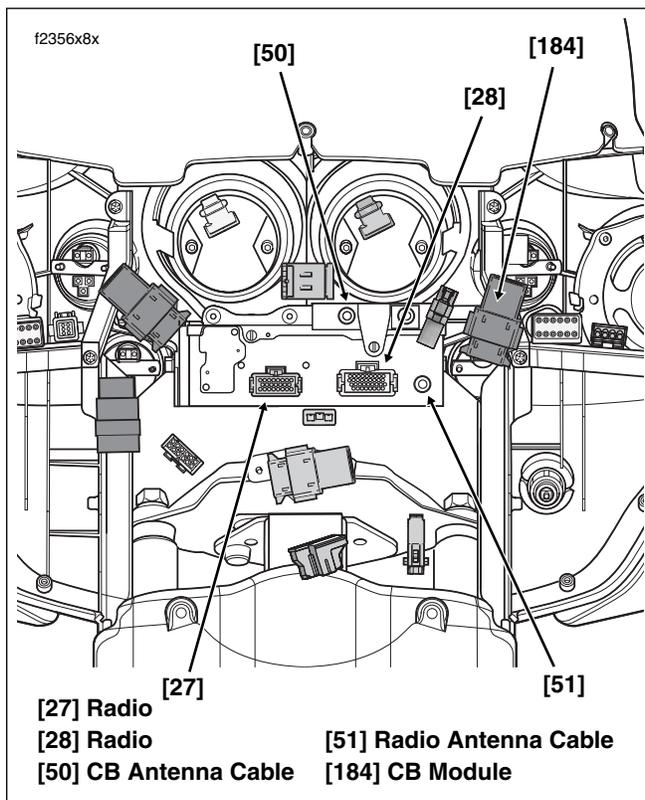


Figure 8-140. Radio Connections (FLHTC/U)

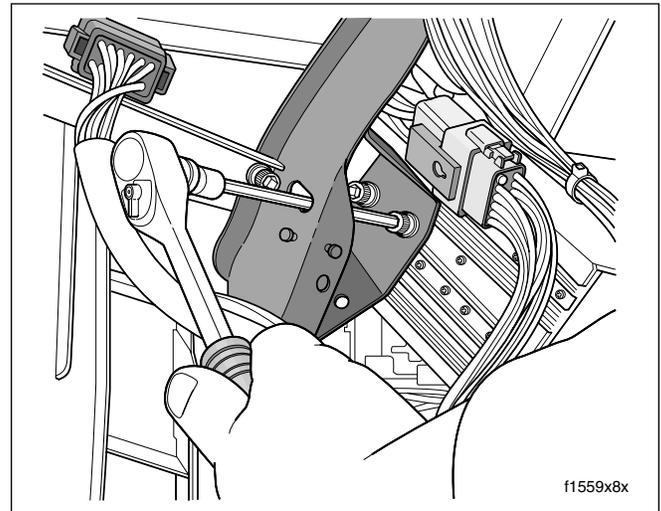


Figure 8-141. Release Radio from Fairing Brackets (FLHTC/U)

5. Using a long shank ball end socket (Snap-on® FABL6E), remove four socket head screws to release radio (storage box on FLHT) from left and right radio support brackets. Use oblong holes in fairing brackets to access screws. See Figure 8-141.
6. Pull radio (storage box on FLHT) forward to remove from opening in inner fairing.

## INSTALLATION

1. Position radio (storage box on FLHT) between radio support brackets and push into opening in inner fairing.
2. Align threaded inserts in sides of radio (storage box on FLHT) with holes in left and right radio support brackets. Starting at the rear, install four socket head screws. Alternately tighten screws to 35-45 in-lbs (4.0-5.1 Nm). Use oblong holes in fairing brackets to access screws.
3. See Figure 8-140. Connect the following connectors:

**FLHX, FLHTC/U, FLTR:**

- Radio connector [27], 23-place Amp.
- Radio antenna cable connector [51].

**FLHTCU Only:**

- Radio connector [28], 35-place Amp.

4. On FLHTCU models, install the CB module. See CB MODULE, INSTALLATION, steps 1-3, in this section.
5. Install outer fairing. Proceed as follows:

**FLHX, FLHT/C/U:** See Section 2.30 UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, INSTALLATION.

**FLTR:** See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), OUTER FAIRING, INSTALLATION.

6. Install maxi-fuse. See Section 8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION.

## FRONT FAIRING SPEAKERS

### REMOVAL

1. Remove outer fairing. Proceed as follows:  
**FLHX, FLHTC/U:** See Section 2.30 UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, REMOVAL.  
**FLTR:** See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), OUTER FAIRING, REMOVAL.
2. Carefully pull the socket terminals from the speaker spade contacts.
3. Remove three T25 TORX screws to release the speaker adapter assembly from the inner fairing.
4. Carefully pull speaker from adapter.

### INSTALLATION

1. With the speaker spade contacts at the top of the adapter, the top being the side with the widest edge, snap speaker into adapter using finger pressure.
2. If speaker grille is loose, apply 3M-847 adhesive (HD Part No. 99618-60) to outer edge of adapter ring. Install grille on adhesive.
3. With the widest edge of adapter at the top, align holes in speaker adapter assembly with those in inner fairing.
4. Install two long screws to secure top of speaker adapter assembly to inner fairing. Capturing fairing support brace, install short screw in lower outboard hole (positioning flat washer between adapter and support brace). The screw hole on the lower inboard side is not used.
5. Using a T25 TORX drive head, tighten the lower speaker screw to 22-28 **in-lbs** (2.5-3.2 Nm). Tighten the two upper speaker screws to 35-50 **in-lbs** (4.0-5.7 Nm).
6. Install the socket terminals onto the speaker spade contacts. Different size spade contacts prevent improper assembly.
7. Install outer fairing. Proceed as follows:  
**FLHX, FLHTC/U:** See Section 2.30 UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, INSTALLATION.  
**FLTR:** See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), OUTER FAIRING, INSTALLATION.

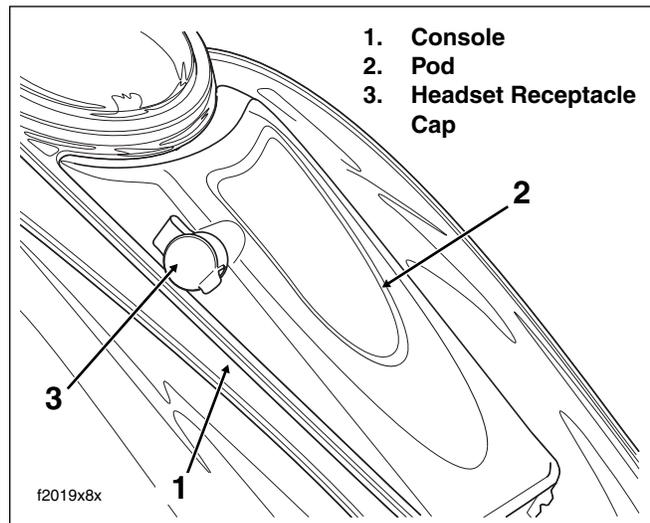


Figure 8-142. Console Pod Assembly

## CONSOLE POD ASSEMBLY

### NOTE

The following instructions may also be used for replacement of the chrome fuel tank console on which the pod is mounted.

### REMOVAL

1. Remove seat. See Section 2.25 SEAT, REMOVAL.

### WARNING

To protect against shock and accidental start-up of vehicle, disconnect the negative battery cable before proceeding. Inadequate safety precautions could result in death or serious injury.

2. Unthread bolt and remove battery negative cable (black) from battery negative (-) terminal.
3. Remove left side saddlebag. See Section 2.26 SADDLEBAG, REMOVAL.
4. Gently pull side cover from frame downtubes (no tools required).
5. Carefully cut cable strap securing console pod conduit and audio harness to left frame tube at front and rear of saddlebag rail.
6. Open fuel door on console. Remove two Allen head screws inboard of rubber bumpers. These screws secure console to clip nuts on the canopy bracket.
7. Remove Allen head screw to detach flange at rear of console from clip nut on fuel tank weldment.
8. Lay a clean shop towel on forward part of the rear fender. Remove filler cap from neck of fuel tank. Remove console and lay upside down on shop towel. Reinstall filler cap.

9. Bend back flexible clamp to release pod cable conduit from bottom of console.
10. Release console pod connector [53], 12-place Deutsch, from attachment clip anchored in hole of frame cross-member (at rear of battery box). See [Figure 8-143](#). Disconnect pin and socket halves.
11. Remove three Phillips screws to release pod from console.

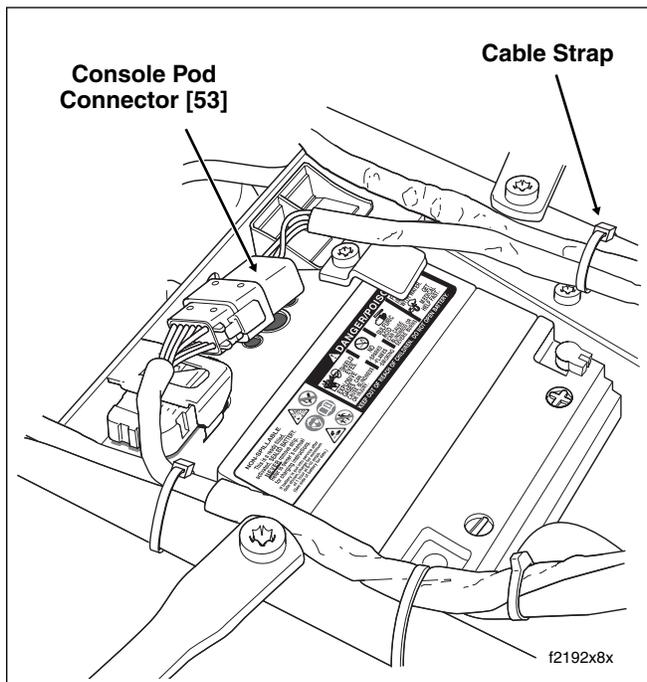
## INSTALLATION

1. Feed pin housing and conduit through top of console seating pod in recess. Install three Phillips screws to secure pod to console. Alternately tighten screws to 6-11 **in-lbs** (0.7-1.2 Nm). Capture conduit in flexible clamp at bottom of console.

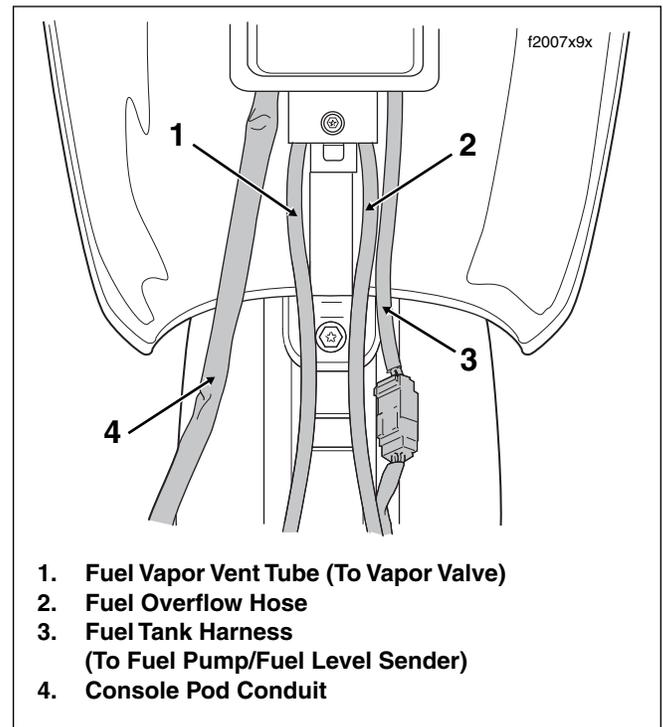
### WARNING

Exercise caution to avoid pinching or kinking the fuel overflow hose when console is installed. A blocked hose can cause excess gasoline to remain above the filler neck insert, while fuel expansion can cause an overfilled tank to overflow through the filler cap vent. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

2. Remove filler cap. Place console over filler neck onto canopy. Route cables from beneath console as shown in [Figure 8-144](#). Be sure that hoses and wires are not pinched by the console during installation. Reinstall filler cap.



**Figure 8-143. Disconnect Console Pod Connector**



**Figure 8-144. Console Pod Cable/Hose Routing (FLHTCU)**

3. Install Allen head screw to fasten rear flange of console to clip nut on fuel tank weldment. Tighten screw to 25-30 **in-lbs** (2.8-3.4 Nm).
4. Open fuel door on console. Install two Allen head screws to secure front of console to clip nuts on canopy bracket. Alternately tighten screws to 25-30 **in-lbs** (2.8-3.4 Nm).
5. Install **new** cable straps to secure console pod conduit and audio harness to left frame tube at front and rear of saddlebag rail. Cut any excess cable strap material. See [Figure 8-143](#).
6. Connect console pod connector [53], 12-place Deutsch. Install connector onto attachment clip anchored in hole of frame crossmember (at rear of battery box).
7. Insert bolt through battery negative cable (black) into threaded hole of battery negative (-) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
8. Install seat. See Section [2.25 SEAT, INSTALLATION](#).
9. Align barbed studs in side cover with grommets in frame downtubes and push firmly into place (no tools required).
10. Install left side saddlebag. See Section [2.26 SADDLE-BAG, INSTALLATION](#).

## FRONT HEADSET RECEPTACLE

### REMOVAL

1. Remove console pod. See [CONSOLE POD ASSEMBLY, REMOVAL](#), in this section.
2. Remove terminals 6 through 12 from pin housing of 12-place Deutsch connector.

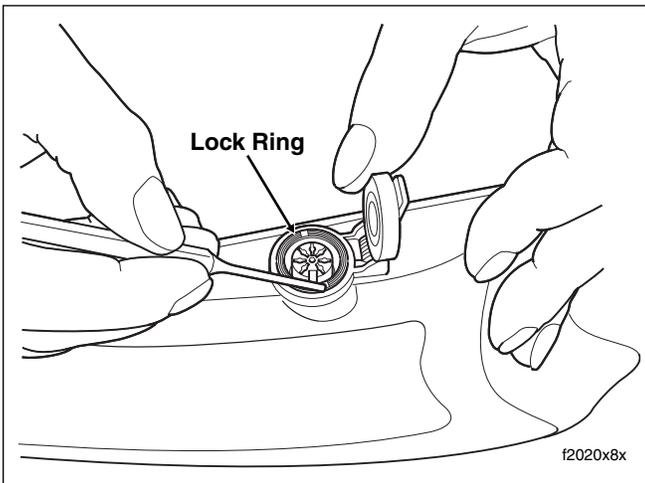
**NOTE**

For instructions on properly removing wire terminals, see [APPENDIX B.1 DEUTSCH ELECTRICAL CONNECTORS, REMOVING/INSTALLING PINS](#).

3. Raise headset receptacle cap. Place pin punch in either notch of lock ring and rotate in a counterclockwise direction until loose. See [Figure 8-145](#).
4. Remove lock ring and cap from headset receptacle.
5. Remove headset receptacle from pod.

### INSTALLATION

1. From inside pod, insert threaded end of headset receptacle through side hole.
2. Place receptacle cap over end of headset receptacle so that it seats in recess of pod.
3. Open cap, and with the notches on the outboard side, thread lock ring onto headset receptacle.
4. Place pin punch in either notch of lock ring and rotate in a clockwise direction until tight.
5. Install terminals 6 through 12 into pin housing of 12-place Deutsch connector.



**Figure 8-145. Remove Lock Ring from Receptacle Using Pin Punch**

**Table 8-18. Front Headset Receptacle**

Wire Color	Chamber Number
Blue/Yellow	6
Yellow/Black	7
Yellow/White	8
Yellow/Red	9
Black	10
Red	11
Black (Thick Insulation)	12

**NOTE**

For instructions on properly installing wire terminals, see [APPENDIX B.1 DEUTSCH ELECTRICAL CONNECTORS, REMOVING/INSTALLING PINS](#).

6. Install console pod. See [CONSOLE POD ASSEMBLY, INSTALLATION](#), in this section.
7. Test operation of headset receptacle.

## REAR HEADSET RECEPTACLE

See Section [8.37 AUDIO HARNESS \(FLHTCU\)](#).

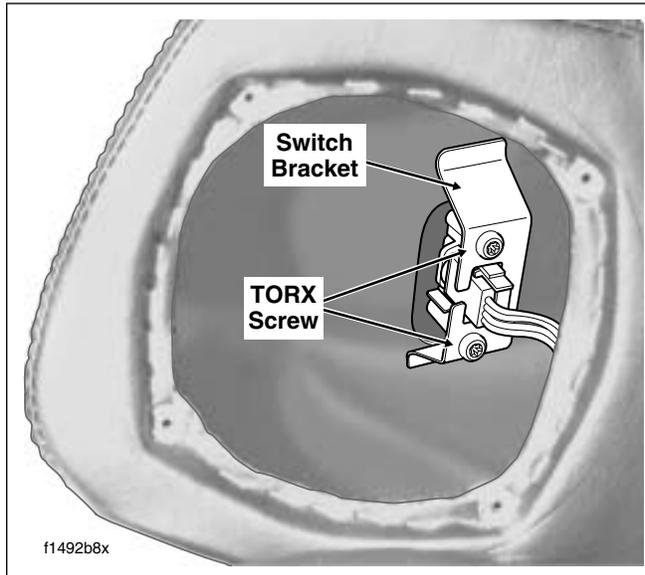
## REAR PASSENGER SWITCHES

### REMOVAL

**NOTE**

Right and left side replacement passenger switch assemblies are interchangeable.

1. Remove maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL](#).
2. Open Tour-Pak.
3. Remove four T10 TORX screws and pull speaker grille from speaker box.
4. Remove speaker from speaker box and carefully pull socket terminals from speaker spade contacts.
5. Remove trim ring and gently pull on wire harness to draw rear speaker/passenger controls connector, 6-place Deutsch, out of speaker box.
6. Disconnect pin and socket halves of Deutsch connector.
7. Draw socket half of Deutsch connector back into speaker box and pull out through speaker hole.



**Figure 8-146. Remove Passenger Switch Assembly (Right Side Speaker Box Shown)**

8. Remove two T25 TORX screws to release switch bracket from inside of speaker box. Remove bracket using slot to free switch wires. See [Figure 8-146](#).
9. Pull switch housing assembly, wire harness conduit, speaker terminals and Deutsch socket from speaker box using switch housing hole on outboard side.
10. Carefully pull keycap from switch shaft. Remove switch from switch housing.
11. Remove terminals 1 through 4 from socket housing.

**NOTE**

For instructions on properly removing wire terminals, see [APPENDIX B.1 DEUTSCH ELECTRICAL CONNECTORS, REMOVING/INSTALLING SOCKETS](#).

12. Pulling one wire at a time, remove four wires from conduit.

## INSTALLATION

1. Pushing one wire at a time, feed four wires of **new** switch through conduit.
2. Install terminals 1 through 4 into socket housing.

**Table 8-19. Rear Passenger Switches**

Wire Color	Chamber Number
Pink/White	1
Gray/White	2
Violet/Black	3
* Orange/Black	4

\* Mates to O/BK on [41A], BN/W on [42A].

**NOTE**

For instructions on properly installing wire terminals, see [APPENDIX B.1 DEUTSCH ELECTRICAL CONNECTORS, REMOVING/INSTALLING SOCKETS](#).

3. With the Pink/White wire at the bottom, place switch in cavity of switch housing. Bottom of the assembly is determined by location of rib on switch housing. See [Figure 8-147](#).
4. Note lettering for proper orientation and gently push keycap onto switch shaft. When orienting keycap, remember that bottom of assembly is determined by location of switch housing rib.
5. Feed Deutsch socket connector, speaker terminals and conduit through switch housing hole on outboard side of speaker box until switch housing backplate contacts speaker box. Pull harness out through speaker hole.

**NOTE**

To align bracket and switch housing holes, slot in bracket must face toward the front on right side assembly and toward the rear on left side. See [Figure 8-148](#). Switch also must be square in cavity of switch housing or bracket will not fit.

6. Reaching into speaker box, align holes in bracket with holes in switch housing. Install two T25 TORX screws. See [Figure 8-149](#).
7. Feed Deutsch socket through speaker hole into speaker box and pull out through harness hole on inboard side.
8. Mate pin and socket halves of Deutsch connector. Feed connector back up into speaker box pressing trim ring into hole.
9. Install socket terminals onto speaker spade contacts. On right side of vehicle, install socket terminal of the solid Green wire onto contact next to the red dot. On left side, install socket terminal of the solid Brown wire onto contact next to the red dot.
10. Align holes in speaker grille with those in speaker and slide four TORX screws through grille and speaker holes.
11. With spade contacts at bottom rear corner, position speaker/grille assembly against speaker box. Install four T10 TORX screws and alternately tighten in a crosswise pattern.
12. Close Tour-Pak.
13. Install maxi-fuse. See [Section 8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).
14. Test switch for proper operation.

## REAR SPEAKERS

### REMOVAL

1. Remove maxi-fuse. See [Section 8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL](#).

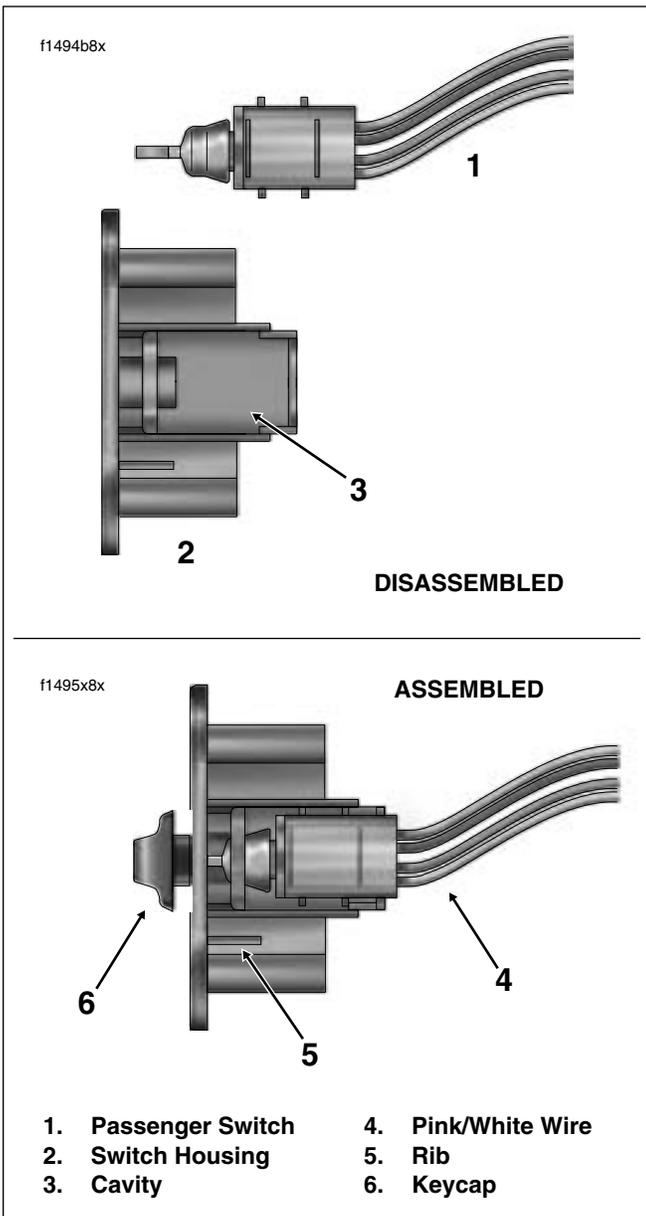


Figure 8-147. Install Switch in Housing

2. Open Tour-Pak.
3. Remove four T10 TORX screws from speaker grille. Remove speaker grille from speaker box.
4. Remove speaker from speaker box. Carefully pull two socket terminals from speaker spade contacts.

## INSTALLATION

1. Install two socket terminals onto speaker spade contacts. Different size spade contacts prevent improper assembly.

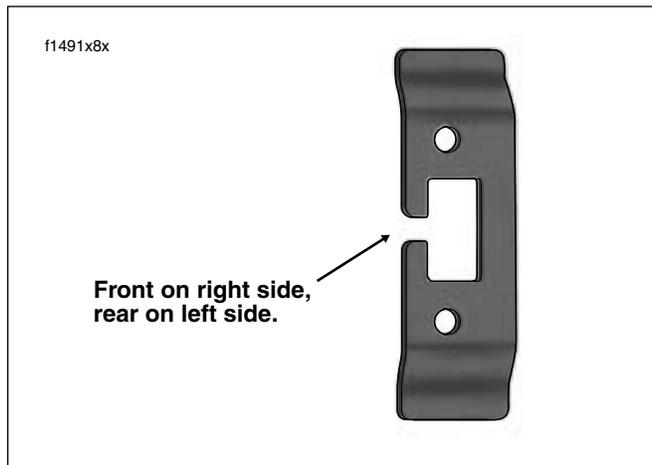


Figure 8-148. Properly Orient Slot in Switch Bracket

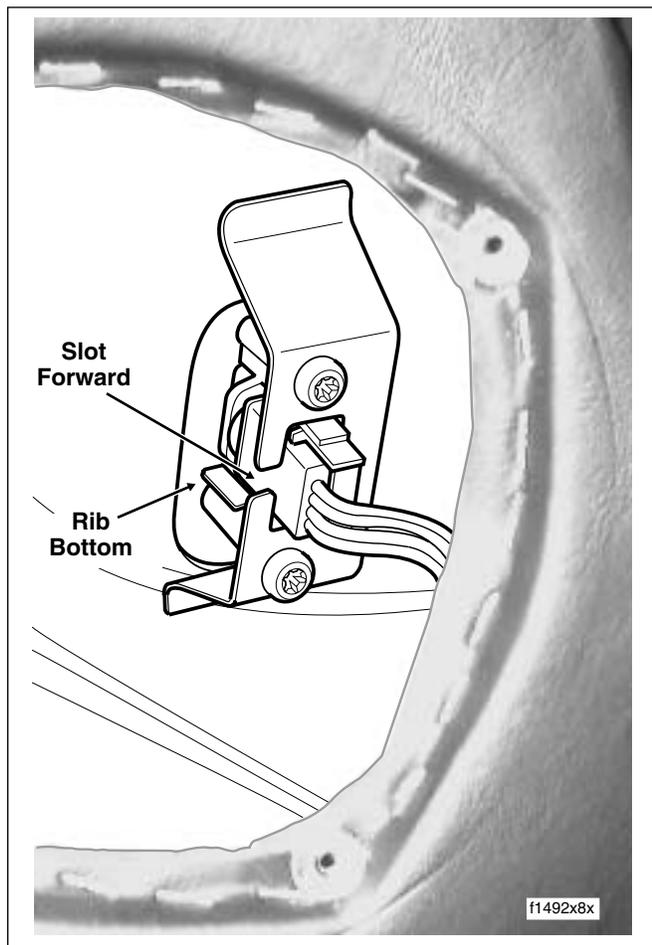


Figure 8-149. Install Passenger Switch Assembly (Right Side Speaker Box Shown)

2. With spade contacts at bottom, install speaker in speaker box.
3. Align holes in speaker with those in speaker box. Align holes in grille with those in speaker.

## [HOME](#)

4. Install four T10 TORX screws and alternately tighten in a crosswise pattern.
5. Close Tour-Pak.
6. Install maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).
7. Test speaker for proper operation.

## CB MODULE

---

### REMOVAL

1. Remove maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL](#).
2. Remove outer fairing. See Section [2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, REMOVAL](#).
3. See [Figure 8-140](#). Disconnect the following connectors:
  - CB antenna cable connector [50]. Rotate knurled nut counterclockwise until free.
  - CB module connector [184], 12-place Deutsch (black); top of radio (left side).
4. Remove screw to release flange of CB module from radio.

### INSTALLATION

1. Fit metal cones on CB module into rubber grommets at top of radio. Use the position above radio connector [28], 35-place Amp, as the other location has been reserved for certain P&A accessories.
2. Install screw to fasten flange of CB module to radio. Tighten screw to 35-45 **in-lbs** (4.0-5.1 Nm).
3. See [Figure 8-140](#). Connect the following connectors:
  - CB antenna cable connector [50]. Insert pin and rotate knurled nut clockwise until tight.
  - CB module connector [184], 12-place Deutsch (black); top of radio (left side).
4. Install outer fairing. See Section [2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, INSTALLATION](#).
5. Install maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).

## CB LOADING COIL

---

### REMOVAL

1. Remove maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL](#).

2. Open Tour-Pak. Open map pocket and remove acorn nuts. Remove map pocket and molded liner from Tour-Pak.
3. Disconnect CB antenna cable connector [50] on right side of Tour-Pak. Release cable from rear adhesive clip at bottom of Tour-Pak.
4. Remove Keps nut, ring terminal and flat washer from loading coil stud.
5. Holding hex head screw, remove flange nut at bottom of Tour-Pak to release loading coil bracket. Remove hex head screw (with external tooth lockwasher) and loading coil from motorcycle.

### INSTALLATION

1. Place **new** loading coil into position aligning hole in bracket with hole in rear right corner of Tour-Pak. Slide hex head screw (with external tooth lockwasher) through holes. At bottom of Tour-Pak, install flange nut on hex head screw.
2. Connect CB antenna cable connector [50]. Capture antenna cable in rear adhesive clip at bottom of Tour-Pak.
3. Install flat washer, ring terminal and Keps nut onto loading coil stud. Tighten Keps nut.
4. Install molded liner in Tour-Pak. Install map pocket and secure using acorn nuts. Close Tour-Pak.
5. Install maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).
6. Check SWR and adjust if necessary. Follow the SWR Adjustment procedure in Section 6 of the 2006 ELECTRICAL DIAGNOSTIC MANUAL (Part No. 99497-06). Remove SWR meter, install antenna connector and tighten antenna connector stud.

## AUDIO HARNESS

---

For removal and installation instructions, see Section [8.37 AUDIO HARNESS \(FLHTCU\)](#).

## RADIO ANTENNA CABLE

---

For removal and installation, see Section [8.36 RADIO ANTENNA CABLE](#).

## CB ANTENNA CABLE

---

For removal and installation, see Section [8.38 CB ANTENNA CABLE \(FLHTCU\)](#).

## REMOVAL

1. Remove fuel tank. For carbureted models, see Section 4.7 [FUEL TANK \(CARBURETED\)](#), COMPLETE REMOVAL, [FLHX](#), [FLHT](#) or [FLHR/S](#). For fuel injected models, see Section 9.4 [FUEL TANK \(FUEL INJECTED\)](#), COMPLETE REMOVAL, [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#) or [FLHR/C/S/I](#).
2. Unthread bolt and remove battery positive cable (red) from battery positive (+) terminal. (Battery negative cable already removed under FUEL TANK, COMPLETE REMOVAL.)
3. Loosen T40 TORX screw and move lip of hold-down clamp off edge of battery. Remove battery from battery box.
4. Starting at the front of the wire trough, and working rearward from side to side, release catches to remove cover. For most catches, carefully insert blade of flat tip screwdriver into slot only as far as necessary to release catch. See [Figure 8-150](#).
5. Using a paint pen, draw a line on the conduit and/or wire bundle on both sides of each cable strap. See [Figure 8-151](#).

### NOTE

*If multiple branches of the harness are bound by a single cable strap, such as the breakouts leading to the induction module on fuel injected models, be sure to mark all branches with the paint pen.*

6. Starting at the front of the wire trough, cut the first cable strap as close to the eyelet as possible. Be sure to cut off the tail of the cable strap and not the eyelet. The cable strap can be reused for use in step 7 if only the tail is removed, but it must be replaced with a **new** cable strap if the eyelet is cut off. See [Figure 8-152](#).
7. Remove the tail remnant from the eyelet of the cable strap, if present. Remove the cable strap from the slots in the wire trough and install it back on the harness just outside the painted lines. Be sure to capture each wire of the harness, but not the wire trough. Repeat steps 6-7 for all remaining cable straps.

### NOTE

*If multiple branches of the harness are bound by a single cable strap, such as the breakouts leading to the induction module on fuel injected models, install **new** cable strap just outside the painted lines before cutting original cable strap through wire trough. This will further ensure that stackup and breakout lengths remain the same.*



Figure 8-150. Release Catches From Cover



Figure 8-151. Mark Location of Cable Straps

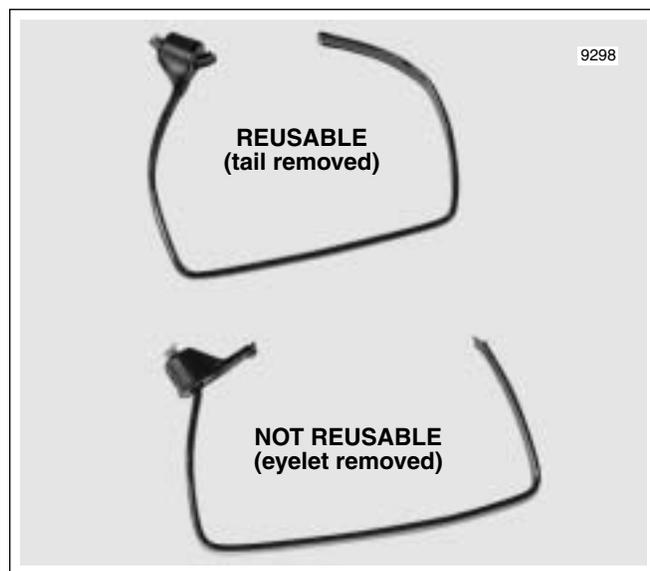


Figure 8-152. Cut Cable Straps

8. Gently pull index pins on rear legs of wire trough from holes in frame backbone. For best results, work both pins loose at the same time.
9. Slide wire trough forward to release slot at bottom from T-stud a center of frame backbone.
10. Raise wire harness and carefully remove wire trough from left side of motorcycle.

## INSTALLATION

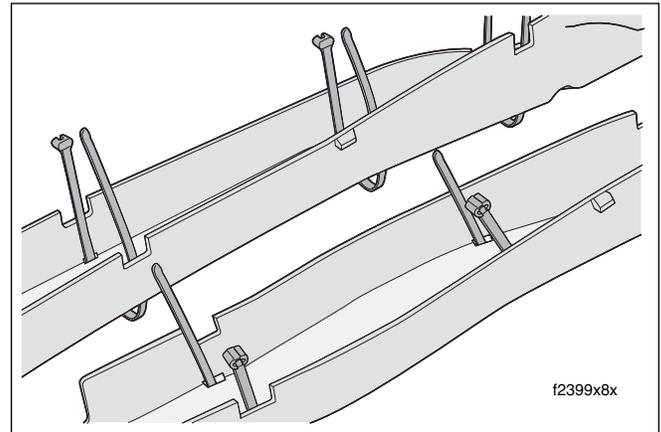
1. Thread cable straps through slots of **new** wire trough as shown in [Figure 8-153](#). Properly installed, both ends of the cable strap will be pointing upward. Install all cable straps in this fashion.

### NOTE

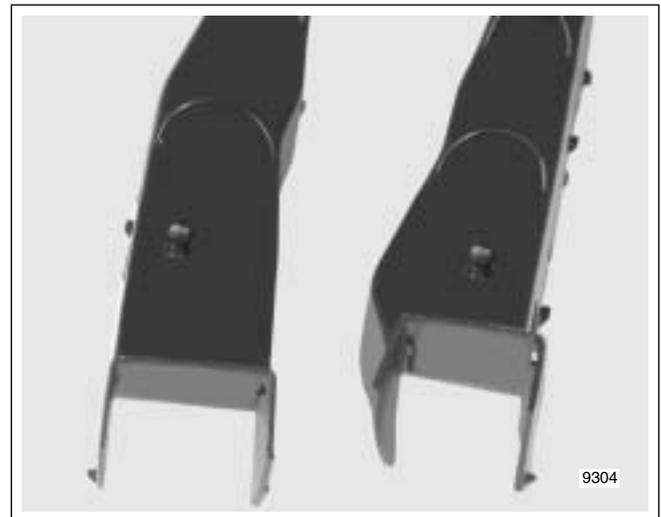
Depending upon model, there are a minimum of 17 cable straps (carbureted FLHR/S) and a maximum of 20 (fuel injected FLHTCU). See [Figure 8-155](#) in conjunction with [Table 8-20](#) below. For example, if installing the wire trough on a fuel injected FLHTCU, start cable straps in all slots except 18. If installing the wire trough on a carbureted FLHR/S, start cable straps in all slots except 2, 7, 9 and 19.

**Table 8-20. Wire Trough Cable Straps**

Cable Strap	Captures Conduit/Wire Bundle	Models
1	Main Harness	All
2	Audio Harness	FLHTCU
3	Ignition Coil	All
	Fuel Gauge	FLHR/C/S
4	Main Harness	All
	Audio Harness	FLHTCU
5	Main Harness	All
6	Main Harness	All
	Audio Harness	FLHTCU
7	Front Fuel Injector	Fuel Injected
8	TP Sensor, MAP Sensor, IAC and Rear Fuel Injector	Fuel Injected
	MAP Sensor	Carbureted
9	TP Sensor, MAP Sensor, IAC and Rear Fuel Injector	Fuel Injected
10	Horn	All
	ET Sensor	Fuel Injected
11-17	Main Harness	All
	Audio Harness	FLHTCU
18	Instrument Console	FLHR/C/S
19	Fuel Tank Harness	FLHX, FLHT/C/U, FLTR
20-21	Main Harness	All

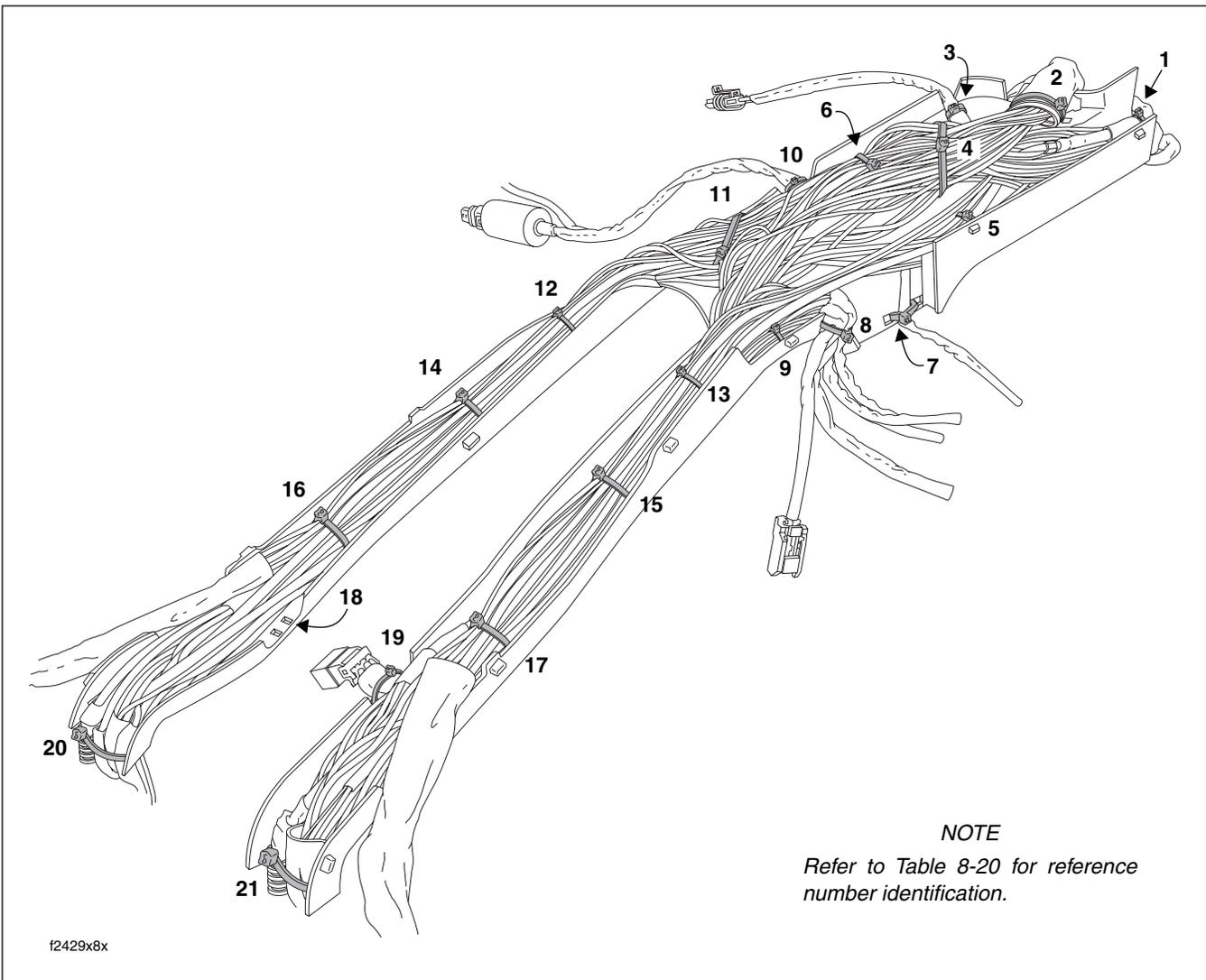


**Figure 8-153. Install New Cable Straps in Wire Trough**



**Figure 8-154. Rear Leg Index Pins**

2. Raise wire harness, and from left side of motorcycle, carefully slide wire trough into position on frame backbone.
3. Slide wire trough rearward to engage slot at bottom on T-stud at center of frame backbone.
4. Gently push index pins on rear legs of wire trough into holes in frame backbone. See [Figure 8-154](#).
5. Lay harness in wire trough so that the painted lines are adjacent to the cable straps. Start tail end of each cable strap into eyelet, but do not tighten.
6. Adjust harness as necessary, so that the painted lines are aligned with the cable straps threaded through the wire trough.
7. Tighten the cable straps and cut any excess cable strap material.
8. Carefully cut and remove all cable straps not threaded through the wire trough, that is, those installed just outside the painted lines in step 7 under [REMOVAL](#).



**Figure 8-155. Wire Trough Cable Strap Locations (FLHTCU)**

9. Place cover over wire trough. Starting at the front and working rearward from side to side, engage catches to latch cover. Verify that all latches are fully engaged.
10. Place battery in battery box, terminal side forward. Rotate the hold-down clamp so that the lip (with rubber pad) rests on the edge of the battery. Tighten T40 TORX screw to 15-20 ft-lbs (20-27 Nm).
11. Insert bolt through battery positive cable (red) into threaded hole of battery positive (+) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
12. Insert bolt through battery negative cable (black) into threaded hole of battery negative (-) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
13. Install fuel tank. For carbureted models, see Section 4.7 [FUEL TANK \(CARBURETED\)](#), INSTALLATION (AFTER COMPLETE REMOVAL), FLHX, FLHT or FLHR/S. For fuel injected models, see Section 9.4 [FUEL TANK \(FUEL INJECTED\)](#), INSTALLATION (AFTER COMPLETE REMOVAL), FLHXI, FLHT/C/U/I, FLTRI or FLHR/C/S/I.

**⚠ WARNING**

**Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.**

## REMOVAL

## REMOVAL- ALL MODELS (PART I)

1. Remove fuel tank. For carbureted models, see Section 4.7 FUEL TANK (CARBURETED), COMPLETE REMOVAL, FLHX, FLHT or FLHR/S. For fuel injected models, see Section 9.4 FUEL TANK (FUEL INJECTED), COMPLETE REMOVAL, FLHXI, FLHT/C/U/I, FLTRI or FLHR/C/S/I.
2. Unthread bolt and remove battery positive cable (red) from battery positive (+) terminal. (Battery negative cable already removed under FUEL TANK, COMPLETE REMOVAL.)
3. Loosen T40 TORX screw and move lip of hold-down clamp off edge of battery. Remove battery from battery box.
4. Remove left side saddlebag. See Section 2.26 SADDLEBAG, REMOVAL.
5. Gently pull left side cover from frame downtubes (no tools required).
6. Repeat steps 4-5 to remove right side saddlebag and side cover.

## NOTE

Depending upon model, continue procedure at [REMOVAL-FLHR/C/S \(PART II\)](#), [REMOVAL- FLTR \(PART II\)](#), or [REMOVAL- FLHX, FLHT/C/U \(PART II\)](#).

## REMOVAL- FLHR/C/S (PART II)

1. Remove the headlamp assembly. See Section 8.11 HEADLAMP (FLHR/C/S, FLHX, FLHT/C/U), HEADLAMP ASSEMBLY, REMOVAL.
2. See Figure 8-156. Reaching inside the headlamp nacelle, disconnect main harness as follows:
  - Front fender tip lamp jumper harness connector [32], 2-place Multilock (black); used on FLHR only.
  - Auxiliary lamps connector [73], 2-place Multilock (white); used on FLHR/C only.
  - Auxiliary lamps switch connector [109], 4-place Amp; used on FLHR/C only.
  - Accessory switch connector [67], 4-place Amp.
  - Right handlebar switch controls connector [22], 6-place Deutsch (black); T-stud on fork stem nut lock-plate (left side).

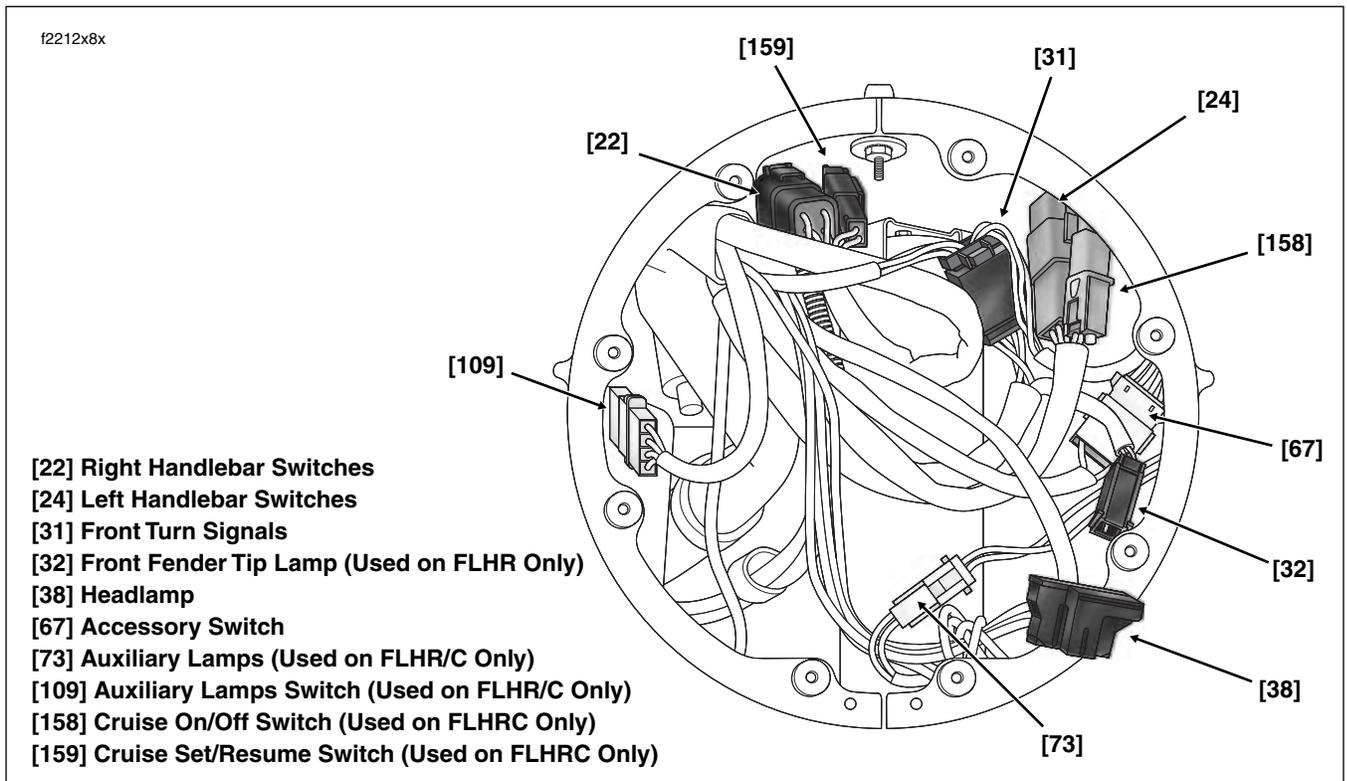
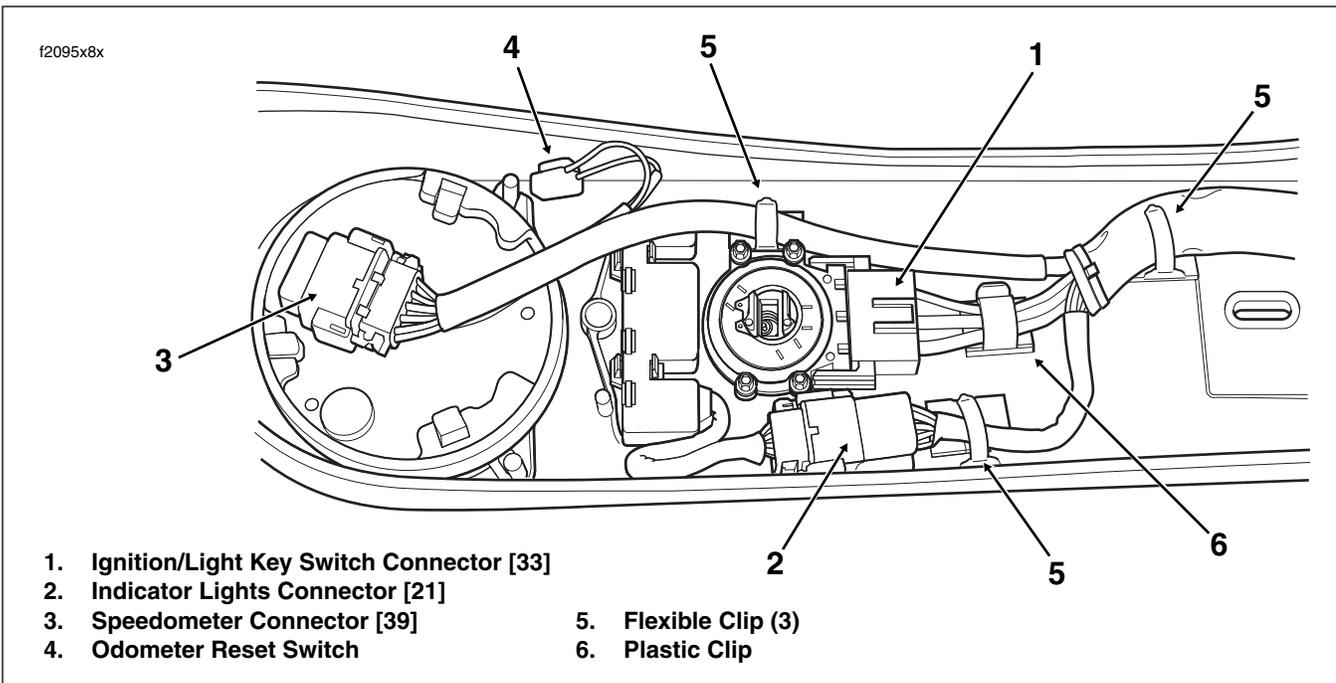


Figure 8-156. Headlamp Nacelle - Main Harness Connectors (FLHR/C/S)



**Figure 8-157. Instrument Console Assembly - Main Harness Connectors (FLHR/C)**

- Cruise set/resume switch connector [159], 2-place Deutsch (black); used on FLHRC only.
  - Front turn signal lamps connector [31], 6-place Multilock; anchored in hole of fork stem nut lock plate (left side).
  - Left handlebar switch controls connector [24], 6-place Deutsch (gray); T-stud on fork stem nut lock-plate (left side).
  - Cruise on/off switch connector [158], 2-place Deutsch (gray); used on FLHRC only.
3. Carefully pull main harness rearward under right side of headlamp nacelle allowing conduit and connectors to hang over top of engine guard.
  4. Remove screw and P-clamp to release main harness from right side of steering head.
  5. See [Figure 8-157](#). Moving to inboard side of instrument console, disconnect main harness as follows:
    - Ignition/Light Key Switch connector [33], 3-place Packard.
    - Indicator lights connector [21], 8-place Deutsch.
    - Speedometer connector [39], 12-place Packard.
  6. Unthread rubber boot from odometer reset switch and pull switch from hole in instrument console.
  7. Bend back flexible clamps on inboard side of instrument console as necessary to release main harness conduit. Set instrument console aside.

**NOTE**

Continue procedure at [REMOVAL- ALL MODELS \(PART III\)](#).

**REMOVAL- FLHX, FLHT/C/U (PART II)**

1. Remove the outer fairing and windshield. See Section [2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, REMOVAL](#).
2. Cut cable strap to release convoluted tubing of interconnect harness and conduit of main to interconnect harness connectors [1], [2], [15] and [156] from right fairing bracket.
3. See [Figure 8-158](#). Disconnect main harness from interconnect harness as follows:
  - Main to interconnect harness connector [1], 12-place Deutsch (black); T-stud on right radio support bracket.
  - Main to interconnect harness connector [2], 12-place Deutsch (gray); T-stud on right fairing support brace (middle).
  - Main to interconnect harness connector [15], 4-place Packard (black); anchored in hole at front of right fairing bracket.

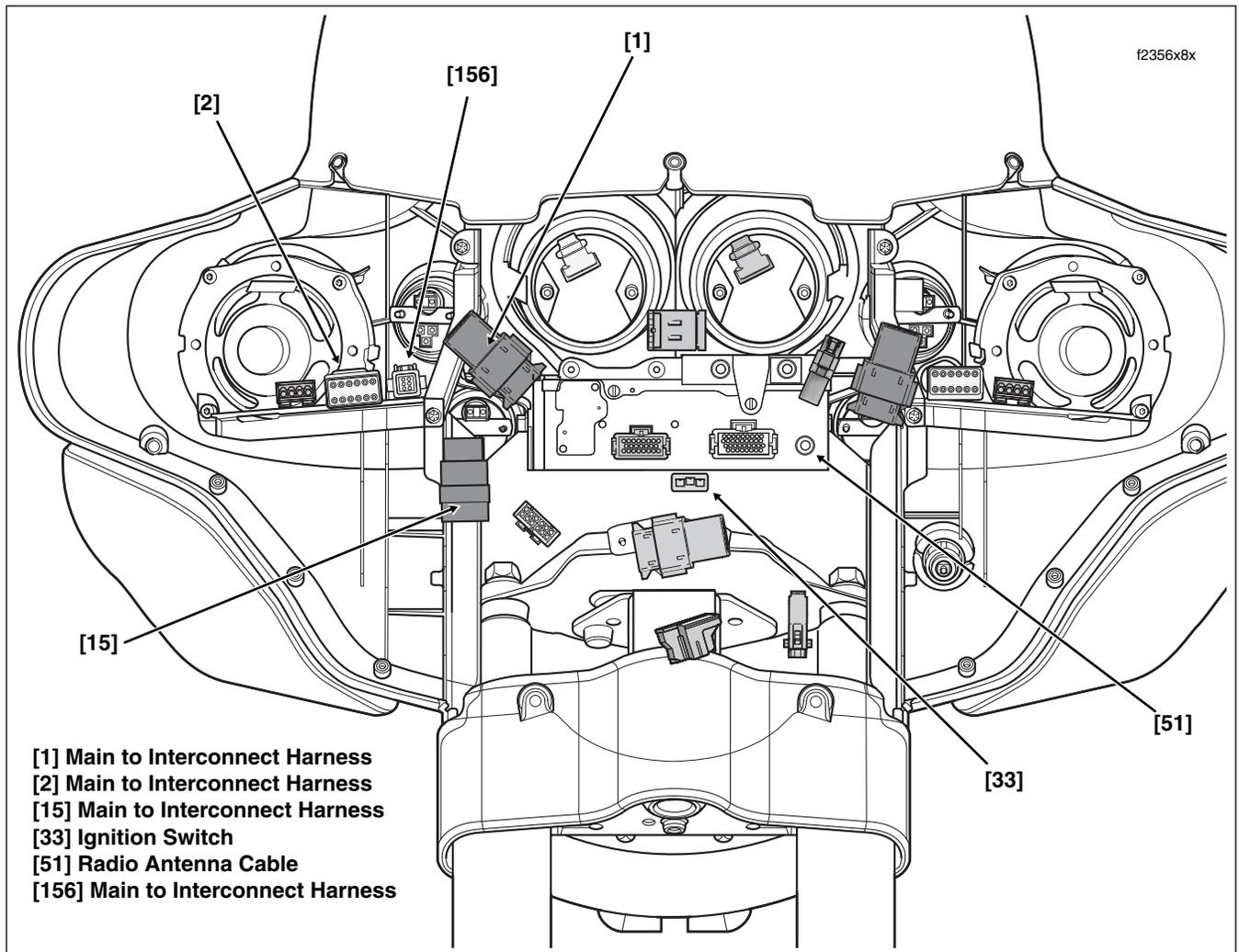


Figure 8-158. Inner Fairing - Main Harness Connectors (FLHX, FLHTC/U)

- Main to interconnect harness connector [156], 6-place Deutsch (gray); T-stud on right fairing support brace (inboard side).
4. See [Figure 8-158](#). Disconnect radio antenna cable. Proceed as follows:
    - Radio antenna cable connector [51]; back of radio (left side).
  5. See [Figure 8-158](#). Disconnect ignition/light key switch connector [33], 3-place Packard, at front of ignition switch housing. Proceed as follows:
    - a. Using a long shank ball end socket (Snap-on® FABL6E), remove four socket head screws to release radio (storage box on FLHT) from left and right radio support brackets. Use oblong holes in fairing brackets to access screws. See [Figure 8-159](#).
    - b. Carefully cut anchored cable strap to release main harness conduit from bottom right corner of radio.

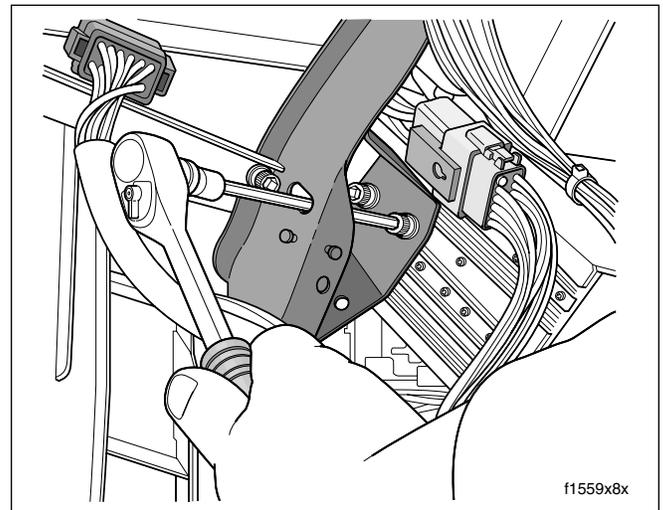


Figure 8-159. Release Radio from Fairing Brackets (FLHTC/U)

- c. Obtain the IGNITION SWITCH CONNECTOR REMOVER (HD-45961).
  - d. Lift radio slightly and gently insert end of tool into slot in ignition switch housing until it stops.
  - e. Grasping main harness conduit and tool, pull both at the same time to release socket housing from ignition switch housing.
6. Remove screw, main harness ground ring terminal and P-clamp to release main harness (and audio harness on FLHTCU models) from right side of steering head.
  7. Carefully pull main harness rearward under right side of fairing cap allowing conduit and connectors to hang over top of engine guard.
  8. For FLHTCU models only, see Section 8.37 AUDIO HARNESS (FLHTCU), REMOVAL, steps 6 and 8.

**NOTE**

Continue procedure at [REMOVAL- ALL MODELS \(PART III\)](#).

**REMOVAL- FLTR (PART II)**

1. Remove the inner fairing. See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), INNER FAIRING, REMOVAL, steps 1-20.
2. Remove screw, two main harness ground ring terminals and P-clamp to release main harness bundle from right side of steering head.

**NOTE**

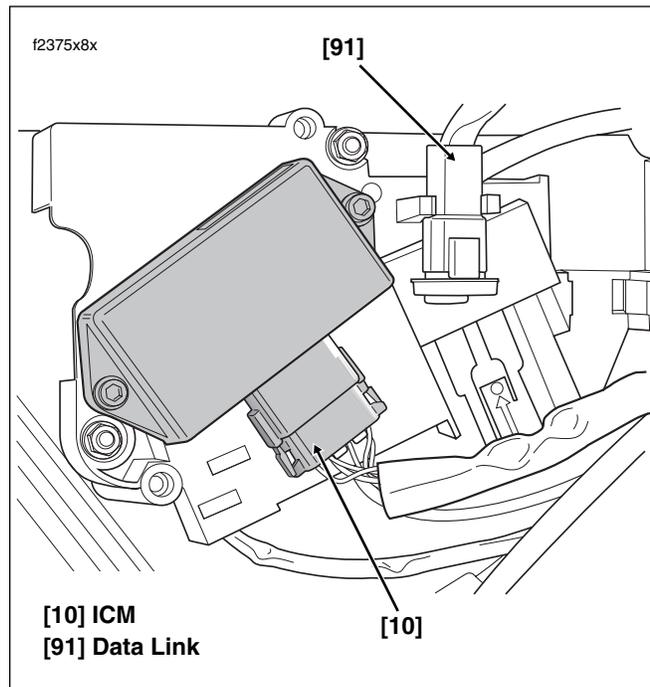
Continue procedure at [REMOVAL- ALL MODELS \(PART III\)](#).

**REMOVAL- ALL MODELS (PART III)**

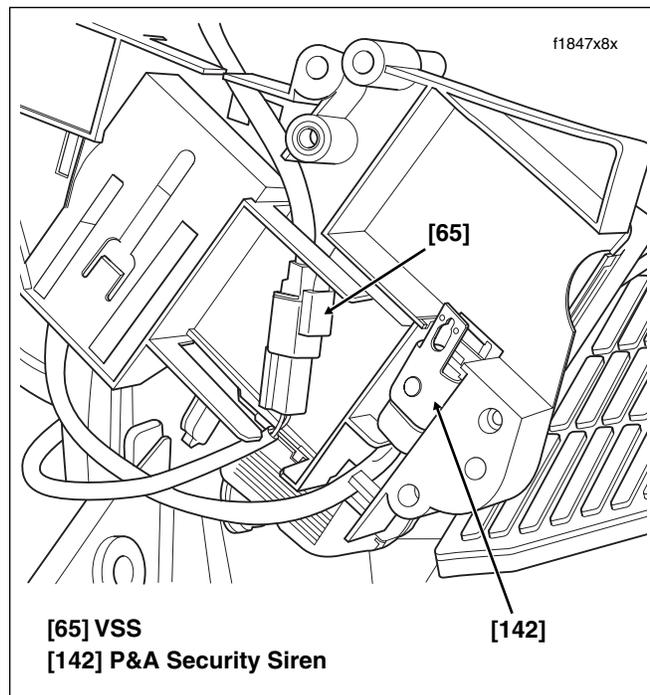
1. If cruise equipped, locate the cruise control roll-off switch plumbed into the idle cable on right side of the steering head. Push rubber boot on switch forward and remove insulators from switch spade terminals.
2. Depending upon whether the motorcycle is carbureted or fuel injected, proceed as follows:

**Carbureted:**

- a. Remove ignition coil connector [83] and MAP sensor connector [80].
- b. Remove ICM connector [10]. See [Figure 8-160](#).
- c. Gently pull on data link connector [91] to disengage from arms on electrical bracket.
- d. Remove two flange nuts to release electrical bracket from studs on side of battery box.
- e. On inboard side of electrical bracket, disconnect VSS connector [65]. See [Figure 8-161](#). Release connector and conduit from electrical bracket.
- f. Release security siren connector [142] and conduit from electrical bracket.



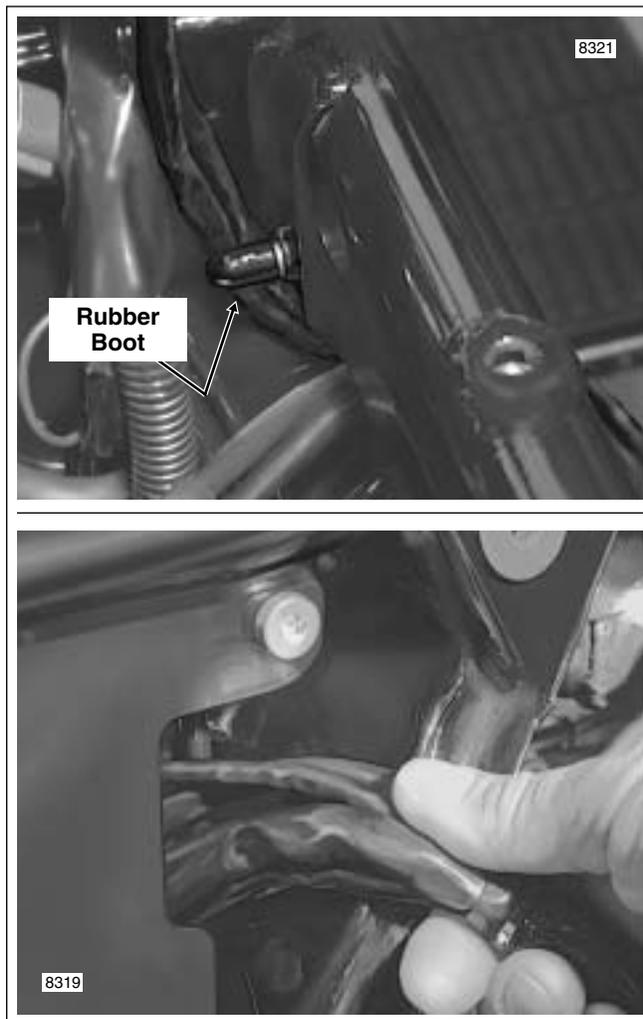
**Figure 8-160. Electrical Bracket (Under Right Side Cover)**



**Figure 8-161. Electrical Bracket (Inboard Side)**

**CAUTION**

Damage to wires can result in electrical problems. Be sure that rubber boot is present on threaded end of battery box TORX screw. Replace rubber boot if absent or damaged. See upper frame of [Figure 8-162](#).



**Figure 8-162. Remove Main Harness From Vehicle**

- g. Note that a section of the main harness conduit runs forward of the front battery box TORX screw. Pull conduit to the rear of the screw, and then feed ICM, data link, VSS, and security siren conduit and connectors through opening into battery box. See upper and lower frames of [Figure 8-162](#).

**Fuel Injected:**

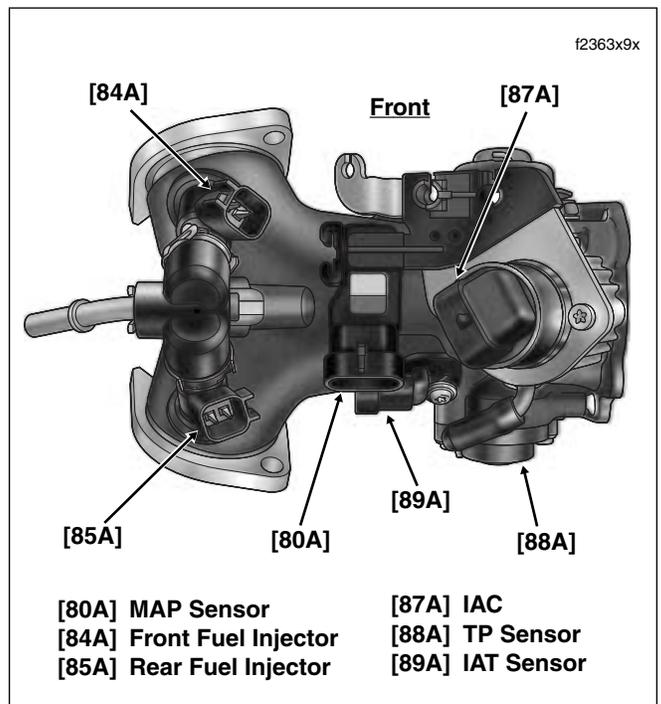
- Remove air cleaner and backplate. See Section 4.5 [AIR CLEANER, REMOVAL](#).
- Remove front fuel injector connector [84].
- Remove IAC connector [87] and MAP sensor connector [80]. See [Figure 8-163](#).
- Remove TP sensor connector [88] and IAT sensor connector [89].
- Remove rear fuel injector connector [85].
- Moving to left side of motorcycle, remove ignition coil connector [83] from left side of ignition coil.

- Pull back boot and disconnect ET sensor connector [90] at back of front cylinder. Cut cable strap to release conduit from horn bracket.
- Returning to right side of motorcycle, disconnect ECM connector [78].
- Gently pull on data link connector [91] to disengage from arms on electrical bracket.
- Locate painted white dot on inboard side of fuse block [119]. Pressing on dot, gently tug on conduit to release tabs on fuse block from slots in bracket.
- Remove two flange nuts to release electrical bracket from studs on side of battery box.
- On inboard side of electrical bracket, disconnect VSS connector [65]. See [Figure 8-161](#). Release connector and conduit from electrical bracket.
- Release security siren connector [142] and conduit from electrical bracket.

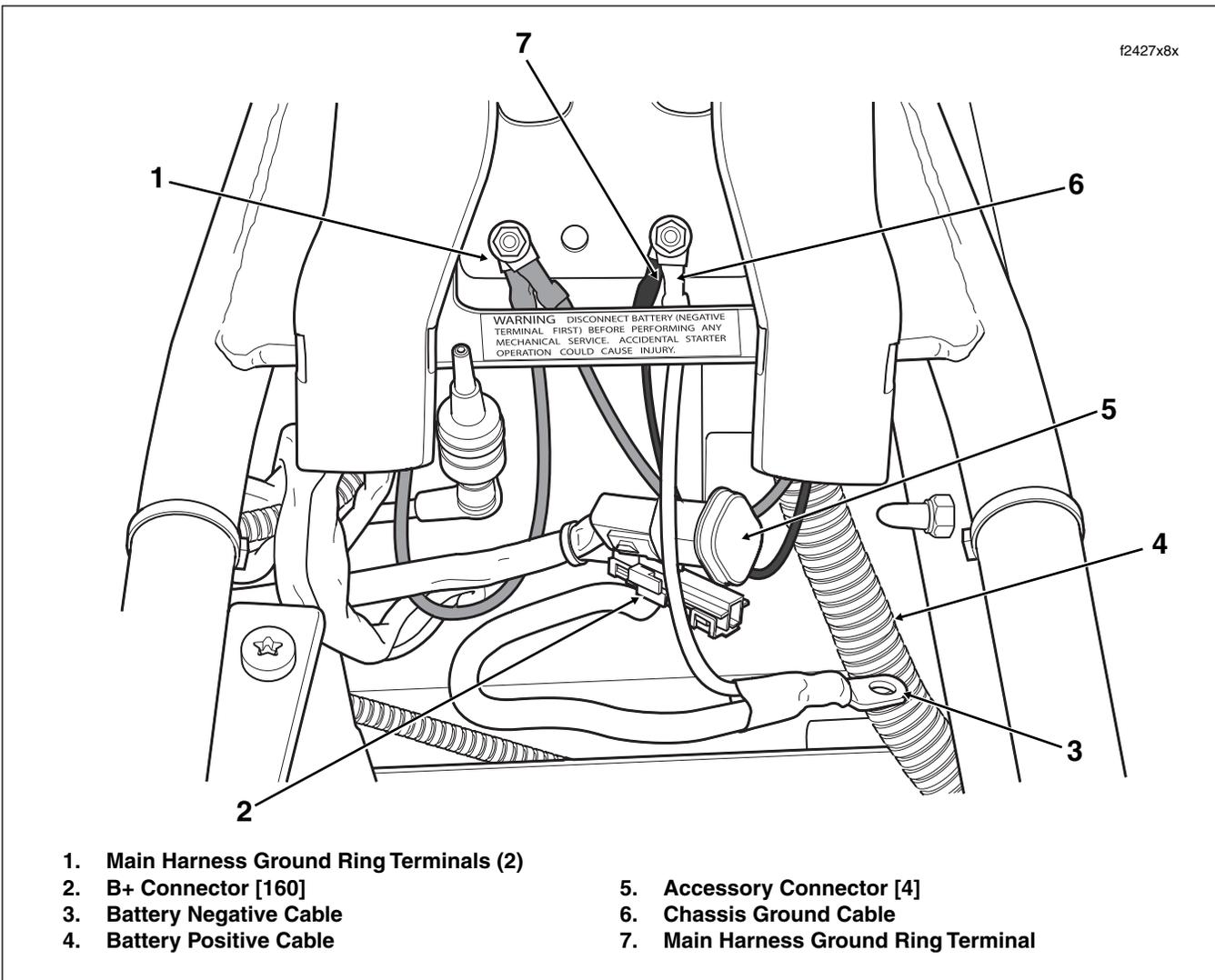
**CAUTION**

**Damage to wires can result in electrical problems. Be sure that rubber boot is present on threaded end of battery box TORX screw. Replace rubber boot if absent or damaged. See upper frame of [Figure 8-162](#).**

- n. Note that a section of the main harness conduit runs forward of the front battery box TORX screw. Pull conduit to the rear of the screw, and then feed



**Figure 8-163. Induction Module Assembly (Top View)**



**Figure 8-164. Upper Frame Cross Member (Under Seat) - Main Harness Connectors (FLHX, FLHTC/U)**

ECM, fuse block, data link, VSS, and security siren conduit and connectors through opening into battery box. See upper and lower frames of [Figure 8-162](#).

3. Moving to left side of motorcycle, remove acorn nut to release horn bracket from rubber mount stud. Pull elbow terminals from spade contacts and release conduit from J-clamp.
4. Remove flange nut (10 mm) from left side ground stud on upper frame crossmember. Remove two main harness ground ring terminals (with orange tape). Repeat step to remove main harness ground ring terminal (without orange tape) and chassis ground ring terminal from right side ground stud. See [Figure 8-164](#).
5. Depress latches on maxi-fuse holder and then slide cover rearward to disengage tongue from groove in fuse block cover.
6. Moving to right side of motorcycle, pull back boot at top of starter housing and remove flange nut and main power cable ring terminal from post. Release cable from clip anchored to T-stud at front of battery tray. Draw main power cable to left side of motorcycle.
7. Carefully cut anchored cable strap to release fuse block conduit from fuse block bracket. Pull fuse block from tabs on bracket.
8. Remove the fuse block cover. Raise lipped side slightly to disengage slots from tabs on fuse block.
9. If cruise equipped, lift the locking latch and remove cruise module connector [17]. From inside battery box, remove three flange bolts. Carefully pull cruise module away from side of battery box exercising caution to avoid losing grommets.

10. Disconnect the rear fender lights connector [7], 8-place Multilock, anchored at front of rear fender. Detach pin housing from anchor.
11. Release ignition keyswitch and starter relays by pulling anchors on rubber molding from holes in frame weldment at rear of battery box. Remove relays and molding from connectors. Push connectors down into space below frame weldment.
12. Locate the TSM/TSSM inside hole of frame weldment on opposite side. Depress tab at front of spring clip and lift to release legs from holes in weldment. Remove module and disconnect TSM/TSSM connector [30], 12-place Deutsch. Push connector down into space below frame weldment.
13. Pull rear fender lights, ignition keyswitch and starter relays, and TSM/TSSM conduit and connectors out through opening above rear of fuse block bracket and allow to hang on left side of motorcycle.
14. Depending upon model, proceed as follows:

**FLHR/C/S:** Move to step 15.

**FLTR:**

- a. On left side of motorcycle, remove bolt (with flat washer) to remove passenger seat strap and saddlebag front mounting bracket. Remove Phillips screw and chrome frame tube cover.
- b. Carefully cut cable strap to release radio antenna cable from shoulder of upper frame tube (just in front of air valve mounting bracket). Cut cable strap to release radio antenna cable from slotted hole in rear fender support.
- c. At bottom of radio antenna bracket, rotate knurled ring to separate pin and socket halves of radio antenna cable connector [51].
- d. Draw radio antenna cable forward to area of fuse block bracket and allow to hang with other main harness branches.

**FLHX:**

- a. On left side of motorcycle, remove bolt (with flat washer) to remove passenger seat strap and saddlebag front mounting bracket. Remove Phillips screw and chrome frame tube cover.
- b. Carefully cut cable strap to release radio antenna cable from shoulder of upper frame tube (just in front of air valve mounting bracket). Cut cable strap to release radio antenna cable from slotted hole in rear fender support.
- c. At bottom of radio antenna bracket, rotate knurled ring to separate pin and socket halves of radio antenna cable connector [51].
- d. Disconnect rear facia lamp connector [12], 3-place Multilock, inboard of upper frame tube.

- e. Draw radio antenna cable and rear facia lamp conduit forward to area of fuse block bracket and allow to hang with other main harness branches.

**FLHTC/U:**

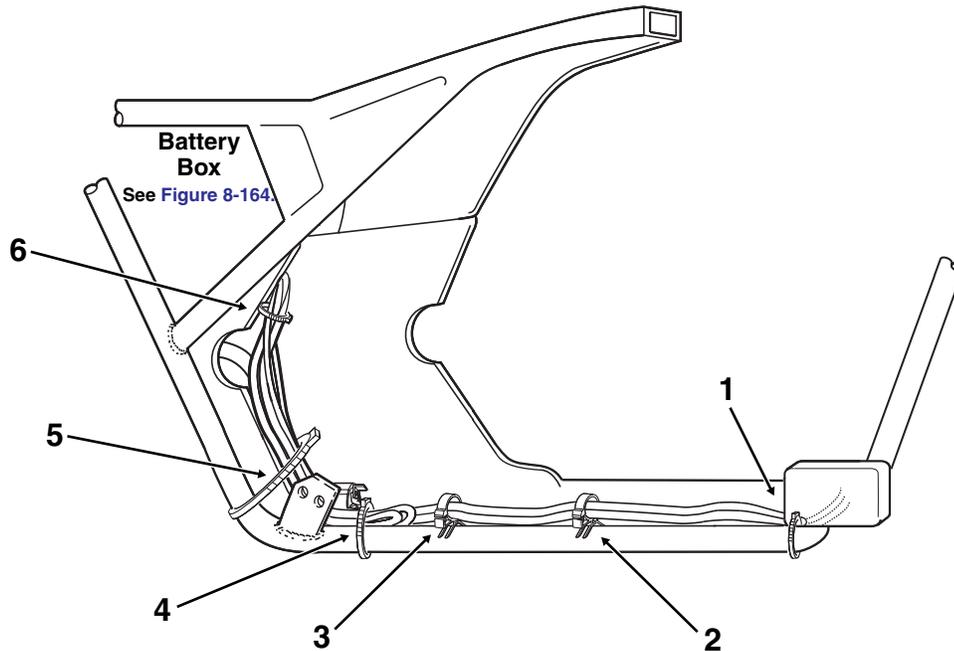
- a. Open Tour-Pak and proceed as follows:

**FLHTC:** Remove rubber mat.

**FLHTCU:** Open map pocket and remove acorn nuts with flat washers. Remove map pocket and molded liner from Tour-Pak.

- b. On Ultra models, depress external latch and remove bulb socket from left side wrap-around light.
- c. Rotate knurled ring in a counterclockwise direction to separate pin and socket halves of radio antenna cable connector [51]. Release cable from two adhesive clips at bottom of Tour-Pak.
- d. On FLHTCU models, disconnect Tour-Pak lights connector [12], 3-place Multilock.
- e. Pull grommet into Tour-Pak and remove from main harness conduit.
- f. Pull Tour-Pak lights and radio antenna cable connectors through hole at front of Tour-Pak. Cut cable strap to release conduit from luggage rack rail.
- g. Draw Tour-Pak lights and radio antenna cable connectors forward to area of fuse block bracket and allow to hang with other main harness branches.
- h. For FLHTCU models only, see Section [8.37 AUDIO HARNESS \(FLHTCU\)](#), [REMOVAL](#), steps 10-17.

15. Carefully cut two cable straps securing main harness to left upper frame tube.
16. Cut anchored cable strap to release accessory connector [4] and B+ connector [160] from left side of frame crossmember (in front of battery box). See [Figure 8-164](#).
17. Cut cable strap to release vapor valve from mounting bracket. Move vapor valve out of the way to facilitate harness removal.
18. Alternately feed branches of main harness hanging on left side of motorcycle into battery box through opening above fuse block bracket. For best results, feed one length of conduit through at a time drawing the fuse block through the opening last. Pulling branches out of battery box, allow conduit and connectors to hang on left side of frame backbone.
19. Moving to front right side of motorcycle, locate CKP sensor connector [79], 2-place Deutsch, fixed to bracket at bottom of voltage regulator. Push connector toward right side of motorcycle to disengage attachment clip from T-stud on bracket. Lift connector off T-stud. Depress button on socket terminal side and pull apart pin and socket halves.
20. Disconnect voltage regulator connector [77], 2-place Lyall, at bottom right side of voltage regulator. Proceed as follows:



1. **Cable Strap: Captures Main Harness Conduit and Lower Frame Tube**
2. **Cable Clip: Captures Main Harness Conduit and Rear Brake Line**
3. **Cable Clip: Captures Main Harness Conduit and Rear Brake Line**
4. **Cable Strap: Captures Rear Brake Light Switch Wires, Main Harness Conduit and Lower Frame Tube**
5. **Cable Strap: Captures Main Harness Conduit and Frame Downtube**
6. **Anchored Cable Strap: Captures Main Harness Conduit, Neutral Switch Conduit and VSS Cable**

**Figure 8-165. Cable Strap Locations (Right Side View)**

- a. Loosen locknuts on studs of lower frame crossmember.
  - b. Lift voltage regulator and release voltage regulator connector conduit and CKP sensor connector convoluted tubing from P-clip at front of right side leg of voltage regulator.
  - c. Pull away locking latch and remove socket of voltage regulator connector.
21. Locate oil pressure switch/sender at front right side of crankcase. On FLHR/C/S models, pull elbow from post of oil pressure switch. On FLHX, FLHT/C/U and FLTR models, remove Delphi connector from oil pressure sender.
  22. Cut cable strap to free main harness conduit (leading to oil pressure sender and CKP sensor connectors) from inboard side of rear brake pedal weldment. See [Figure 8-165](#).
  23. Open two cable clips on lower frame tube T-studs. Free main harness conduit from cable clips.
  24. Remove starter solenoid connector [128] at top of starter housing.
  25. Remove two elbow connectors from neutral switch posts.
  26. Pull two socket terminals from spade contacts on rear brake light switch. Cut cable strap to free rear brake light switch wires from lower frame tube.
  27. Cut cable strap at rear of rear brake light switch bracket to release main harness conduit from frame downtube.
  28. Cut anchored cable strap in hole of frame downtube (inboard of rear swingarm bracket) to release VSS cable, main harness and neutral switch conduit.
  29. Draw neutral switch wires out from under starter housing. For best results, reach in under right side of battery box.
  30. Carefully pull voltage regulator, CKP sensor, oil pressure switch/sender, rear brake light switch, starter solenoid, and neutral switch conduit and connectors rearward and then feed up through opening at front of battery tray into battery box. See lower frame of [Figure 8-162](#).

**NOTE**

*For best results, insert blade of small screwdriver into gap at side of clip and gently rotate end of screwdriver to pop open.*

- Slide wire trough forward/rearward to disengage slot at bottom from T-stud at center of frame backbone. Remove wire trough from motorcycle drawing conduit and connectors out of battery box.

## INSTALLATION

### INSTALLATION- ALL MODELS (PART I)

#### NOTE

*Disregard references to radio antenna cable and starter relay connectors when working on FLHR/C/S models. The connectors are not part of the main harness on these motorcycles.*

- Position wire trough on motorcycle as follows: Lay wire trough on frame backbone so that front branches hang over top of right engine guard. Move left and right rear branches so that they hang over the left and right frame tubes. Slide wire trough as necessary until slot at bottom fully engages T-stud at center of frame backbone.

#### Left Side

- Locate rear left side branches terminating in rear fender lights, ignition keyswitch and starter relays, TSM/TSSM, fuse block, cruise module (if equipped) and radio antenna cable connectors. Feed connectors and conduit into battery box pulling branches out through opening above fuse block bracket. Continue drawing harness out through opening until main harness ground ring terminal is adjacent to left side ground stud on frame crossmember. Allow connectors and conduit to hang on left side of motorcycle.

#### Right Side

- Depending upon whether the motorcycle is carbureted or fuel injected, proceed as follows:

#### Carbureted:

- Locate rear right side branches terminating in the ICM, data link, VSS, and security siren connectors.
- Feed connectors and conduit into battery box pulling branches out through opening on right side. See lower frame of [Figure 8-162](#). Allow connectors and conduit to hang on right side of motorcycle.

#### Fuel Injected:

- Locate rear right side branches terminating in the ECM, fuse block, data link, VSS, and security siren connectors.
- Carefully feed connectors and conduit into battery box and then pull out through opening on right side. See lower frame of [Figure 8-162](#). Allow connectors and conduit to hang on right side of motorcycle.
- Pull on main harness to eliminate slack and tuck conduit into space in front of the battery box TORX screw. See upper frame of [Figure 8-162](#).

#### CAUTION

**Damage to wires can result in electrical problems. Be sure that rubber boot is present on threaded end of battery box TORX screw. Replace rubber boot if absent or damaged. See upper frame of [Figure 8-162](#).**

- Locate rear right side branches terminating in voltage regulator, CKP sensor, oil pressure switch/sender, rear brake light switch, starter solenoid, and neutral switch connectors. Feed connectors and conduit into battery box pulling branches down and out through opening in front of battery tray. Draw connectors and conduit downward following front of rear frame downtube, and then continue drawing harness out of battery box until two main harness ground ring terminals are adjacent to right side ground stud on frame crossmember.
- Returning to left side of motorcycle, route horn conduit under the top engine mounting bracket to back of horn. Install elbow terminals onto horn spade contacts. Capture conduit in J-clamp. Slide horn bracket onto rubber mount stud and install acorn nut with flat washer. Tighten acorn nut to 80-100 **in-lbs** (9.0-11.3 Nm).
- Slide two main harness ground ring terminals (with orange tape) onto left side ground stud on upper frame crossmember. Install flange nut (10 mm). Install main harness ground ring terminal (without orange tape), chassis ground ring terminal and flange nut (10 mm) onto right side ground stud. Tighten flange nuts to 50-90 **in-lbs** (5.7-10.2 Nm). See [Figure 8-164](#).
- Feed rear fender lights, ignition keyswitch and starter relays, and TSM/TSSM conduit and connectors through opening above rear of fuse block bracket to area in front of rear fender.

#### NOTE

*On FLHX, FLHT/C/U and FLTR models, leave longer conduit of radio antenna cable hanging outboard of fuse block bracket.*

- Routing connector up between frame weldment and rear fender, mate pin and socket halves of rear fender lights connector [7], 8-place Multilock, and attach to anchor at front of rear fender.
- At front of rear fender, feed ignition keyswitch and starter relay connectors up through rectangular shaped hole in frame weldment. Fit relay connectors into rubber molding and install anchors on molding into holes in frame weldment. Install relays in connectors.
- Feed TSM/TSSM connector [30] up through hole on opposite side of frame weldment and connect to module. Install module into hole in frame weldment. Insert legs of spring clip into holes in weldment and push down until tab at front snaps in place.

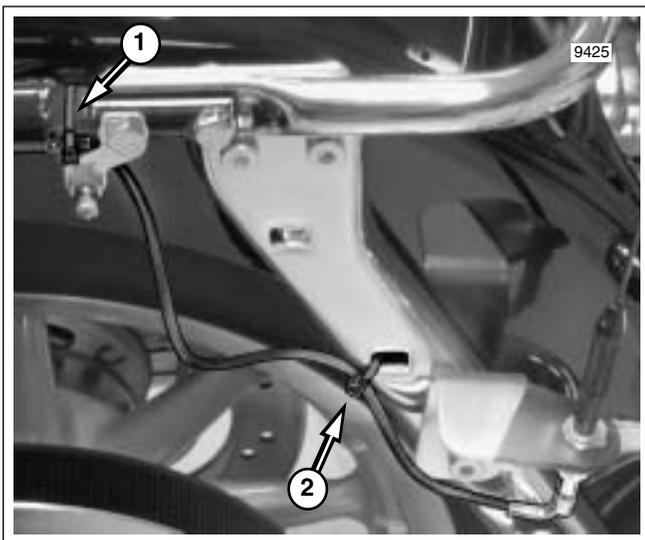


Figure 8-166. Capture Radio Antenna Cable (FLTR)



Figure 8-167. Capture Radio Antenna Cable (FLHX)

11. If cruise equipped, install grommets into holes on left side of battery box with the larger OD on the outboard side. Align threaded holes on inboard side of cruise module with holes in grommets and install flange bolts from inside battery box. Alternately tighten flange bolts to 60-96 **in-lbs** (6.8-10.9 Nm). Install cruise module connector [17] and engage locking latch.
12. Slide cover over fuse block until slots fully engage tabs on block. Slide fuse block into position on mounting bracket. Tabs on bracket fit into slots on each side of fuse block cover. Install **new anchored** cable strap in hole at rear of fuse block bracket. Tighten cable strap to capture fuse block conduit.

13. Route main power cable on maxi-fuse holder through opening above front of fuse block bracket and then forward passing under frame crossmember toward right side of motorcycle. Pull back boot at top of starter housing and install ring terminal on post. Install flange nut and tighten to 70-90 **in-lbs** (7.9-10.2 Nm). Capture cable in clip anchored to T-stud at front of battery tray.
14. Returning to left side of motorcycle, slide maxi-fuse cover forward to engage tongue in groove of fuse block cover and then insert maxi-fuse holder into cover until latches engage.
15. Install **new anchored** cable strap in lower hole on left side of frame crossmember (in front of battery box). Tighten cable strap to capture conduit of both accessory connector [4] and B+ connector [160] approximately one inch from connector housings. See [Figure 8-164](#).
16. Hold vapor valve in position on right side of mounting bracket. From left side of bracket, insert end of small cable strap through hole in arm and then around body of vapor valve. Mate ends of cable strap and pull tight engaging strap in slot of arm. Cut any excess cable strap material.

17. Depending upon model, proceed as follows:

**FLHR/C/S:** Move to step 18.

**FLHX:**

- a. Feed radio antenna cable and rear facia lamp wires rearward following inboard side of upper frame tube.
- b. Mate pin and socket housings of rear facia lamp connector [12], 3-place Multilock.
- c. Install **new** cable strap to secure rear facia lamp wires and radio antenna cable to shoulder of upper frame tube (just in front of air valve mounting bracket).
- d. Using slotted hole, install **new** cable strap to secure rear facia lamp wires and radio antenna cable to rear fender support. See [Figure 8-167](#).
- e. At bottom of radio antenna bracket, rotate knurled ring to mate pin and socket halves of radio antenna cable connector [51].
- f. Install chrome frame tube cover on frame tube. Install Phillips screw and tighten to 25-40 **in-lbs** (2.8-4.5 Nm). Install bolt (with flat washer) to fasten saddlebag front mounting bracket and passenger seat strap to chrome frame tube cover.

**FLHTC/U:**

- a. Feed Tour-Pak lights and radio antenna cable connectors and conduit through hole at front of Tour-Pak. Capture cable and conduit in grommet. Install grommet in hole with the larger OD facing inside.
- b. Connect Tour-Pak lights connector [12], 3-place Multilock.
- c. Rotate knurled ring in a clockwise direction to mate pin and socket halves of radio antenna cable connector [51]. Capture cable in two adhesive clips at bottom of Tour-Pak.

- d. On Ultra models, install bulb socket of left side wrap-around light.
  - e. Loosely install **new** cable strap to secure main harness conduit to luggage rack rail.
  - f. Proceed as follows:
    - FLHTC:** Install rubber mat in Tour-Pak. Close Tour-Pak.
    - FLHTCU:** See Section [8.37 AUDIO HARNESS \(FLHTCU\)](#), [INSTALLATION](#), steps 9-17. Install molded liner in Tour-Pak. Install map pocket and secure using acorn nuts (with flat washers). Close Tour-Pak.
- FLTR:**
- a. Feed radio antenna cable and connector rearward following inboard side of upper frame tube. With the 3-place Multilock connector (unused) positioned about as far rearward as the rear shock air valve, install **new** cable strap to secure radio antenna cable to shoulder of upper frame tube (just in front of air valve mounting bracket). Using slotted hole, install **new** cable strap to secure radio antenna cable to rear fender support. See [Figure 8-166](#).
  - b. At bottom of radio antenna bracket, rotate knurled ring to mate pin and socket halves of radio antenna cable connector [51].
  - c. Install chrome frame tube cover on frame tube. Install Phillips screw and tighten to 25-40 **in-lbs** (2.8-4.5 Nm). Install bolt (with flat washer) to fasten saddlebag front mounting bracket and passenger seat strap to chrome frame tube cover.
18. Returning to right side of motorcycle, feed voltage regulator, oil pressure switch/sender and CKP sensor connectors and conduit downward between rear swingarm and oil filler spout until free ends hang below lower frame tube.
  19. Route neutral switch wires under starter housing to transmission top cover. For best results, reach in under right side of battery box. Install two elbow connectors onto posts of neutral switch.
  20. Install starter solenoid connector [128] at top of starter housing.
  21. Install **new** anchored cable strap in hole of frame downtube (inboard of rear swingarm bracket) capturing VSS cable, main harness and neutral switch conduit. See [Figure 8-165](#).
  22. Install **new** cable strap at rear of rear brake light switch bracket capturing main harness conduit and frame downtube. Cut any excess cable strap material.
  23. Install two socket terminals onto spade contacts of rear brake light switch. Install **new** cable strap to secure rear brake light switch wires to lower frame tube.
  24. Route branch of the main harness terminating in the voltage regulator, oil pressure sender and CKP sensor connectors forward to front of motorcycle following inboard side of lower frame tube.
  25. Capture main harness conduit in two cable clips on lower frame tube T-studs. Snap cable clips closed.
- NOTE**
- In addition to the main harness conduit, cable clips also captures rear brake line.*
26. Route main harness conduit inboard of rear brake pedal weldment. Capturing main harness conduit and lower frame tube, install **new** cable strap through opening in rear brake pedal weldment. See [Figure 8-165](#). Cut any excess cable strap material.
  27. Route oil pressure switch/sender connector upward at rear of lower frame crossmember. Route voltage regulator and CKP sensor connectors upward at front of lower frame crossmember.
  28. Install voltage regulator connector [77], 2-place Lyall, at bottom right side of voltage regulator. Then proceed as follows:
    - a. Push against locking latch until socket is fully engaged.
    - b. Capture voltage regulator connector conduit and CKP sensor connector convoluted tubing in P-clip at front of right side leg of voltage regulator.
    - c. Alternately tighten locknuts on studs of lower frame crossmember to 70-100 **in-lbs** (7.9-11.3 Nm).
  29. Connect CKP sensor connector [79]. Place large end of slot on attachment clip over T-stud on bracket at bottom of voltage regulator. Push connector toward left side of motorcycle to engage small end of slot.
  30. Install oil pressure switch/sender connector at front right side of crankcase. On FLHR/C/S models, install elbow connector on post terminal. On FLHX, FLHT/C/U and FLTR models, install 4-place Delphi connector.
  31. Connect VSS connector [65]. Route VSS and security siren connectors and conduit on inboard side of electrical bracket as shown in [Figure 8-161](#).
  32. Slide electrical bracket onto studs at side of battery box. Be sure that conduit is properly routed on inboard side of electrical bracket or wires may be pinched during installation. Install flange nuts and tighten to 36-48 **in-lbs** (4.1-5.4 Nm).
  33. Depending upon whether the motorcycle is carbureted or fuel injected, proceed as follows:

**Carbureted:**

    - a. Install ICM connector [10].
    - b. Verify that protective plug is installed in data link connector [91]. With the plug side down and in contact with tab, position connector between arms on electrical bracket.

**Fuel Injected:**

    - a. Engage tabs on fuse block [119] with slots in electrical bracket. Slide fuse block up into cavity. Gently tug on conduit to verify that fuse block is locked in place.

- b. Install ECM connector [78].
  - c. Verify that protective plug is installed in data link connector [91]. With the plug side down and in contact with tab, position connector between arms on electrical bracket.
34. Depending upon whether the motorcycle is carbureted or fuel injected, proceed as follows:

**Carbureted:**

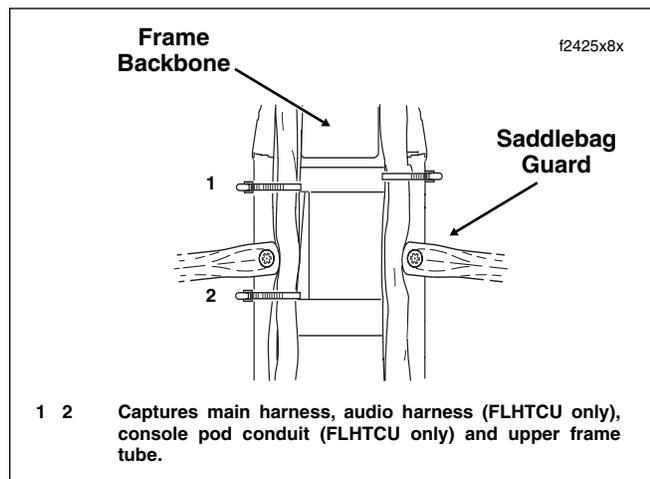
- a. Install ignition coil connector [83] onto left side of ignition coil.
- b. Install MAP sensor connector [80].

**Fuel Injected:**

- a. Install rear fuel injector connector [85]. See [Figure 8-163](#).
  - b. Install IAT sensor connector [89] and TP sensor connector [88].
  - c. Install MAP sensor connector [80] and IAC connector [87].
  - d. Install front fuel injector connector [84]. See [Figure 8-163](#).
  - e. Feed ignition coil and ET sensor connectors to left side of vehicle, routing the first in front of the top engine stabilizer link, the latter to the rear.
  - f. Install ignition coil connector [83] onto left side of ignition coil.
  - g. Install ET sensor connector [90] at back of front cylinder. Pull boot over sensor to keep out dirt and debris. Install **new** cable strap to secure connector conduit to horn bracket.
  - h. Install backplate and air cleaner. See [Section 4.5 AIR CLEANER, INSTALLATION](#).
35. If cruise equipped, install cruise roll-off switch as follows:
- a. Separate the cruise roll-off switch wires up to the point where they enter the main harness conduit.
  - b. Orient the idle cable so that the switch spade terminals are at the top.
  - c. Slide the insulators onto the switch spade terminals (polarity is not a factor). For maximum insertion, be sure that the external step on the insulators face each other.
  - d. Fit the rubber boot over the cruise control roll-off switch. An oval cut in the boot accommodates the switch spade terminal connections.
36. Install two **new** cable straps to secure main harness to left upper frame tube. Cut any excess cable strap material. See [Figure 8-168](#).

**NOTE**

Depending upon model, continue procedure at [INSTALLATION- FLHR/C/S \(PART II\)](#), [INSTALLATION- FLTR \(PART II\)](#), or [INSTALLATION- FLHX, FLHT/C/U \(PART II\)](#).



**Figure 8-168. Capture Main Harness Conduit**

**INSTALLATION- FLHR/C/S (PART II)**

1. Carefully feed main harness conduit and connectors forward under right side of instrument nacelle (keeping outboard of the front brake line).
2. Install P-clamp on main harness bundle. Install screw to fasten P-clamp to right side of steering head.
3. Moving to front of motorcycle, reach inside headlamp nacelle and install screw to fasten harness ground ring terminal and brake line P-clamp to front of upper fork bracket.
4. See [Figure 8-156](#). Connect main harness as follows:
  - Front fender tip lamp connector [32], 2-place Multilock (black); used on FLHR only.
  - Auxiliary lamps connector [73], 2-place Multilock (white); used on FLHR/C only.
  - Auxiliary lamps switch connector [109], 4-place Amp; used on FLHR/C only.
  - Accessory switch connector [67], 4-place Amp.
  - Right handlebar switch controls connector [22], 6-place Deutsch (black); T-stud on fork stem nut lock plate (left side).
  - Cruise set/resume switch connector [159], 2-place Deutsch (black); used on FLHRC only.
  - Front turn signal lamps connector [31], 6-place Multilock; anchored in hole of fork stem nut lock plate (left side).
  - Left handlebar switch controls connector [24], 6-place Deutsch (gray); T-stud on fork stem nut lock plate (left side).
  - Cruise on/off switch connector [158], 2-place Deutsch (gray); used on FLHRC only.
5. Install the headlamp assembly. See [Section 8.11 HEADLAMP \(FLHR/C/S, FLHX, FLHT/C/U\), HEADLAMP ASSEMBLY, INSTALLATION](#).

6. See [Figure 8-157](#). Moving to inboard side of instrument console, connect main harness as follows:
  - Ignition/light key switch connector [33], 3-place Packard.
  - Indicator lights connector [21], 8-place Deutsch.
  - Speedometer connector [39], 12-place Packard.
7. Slide odometer reset switch through hole in instrument console and install rubber boot.
8. Bend flexible clamps on inboard side of instrument console as necessary to capture main harness conduit.

**NOTE**

Continue procedure at [INSTALLATION- ALL MODELS \(PART III\)](#).

## INSTALLATION- FLHX, FLHT/C/U (PART II)

1. Moving to right engine guard, carefully feed main harness conduit and connectors forward under right side of fairing cap to front of inner fairing.
2. See [Figure 8-158](#). Connect ignition/light key switch connector [33], 3-place Packard, at front of ignition switch housing. Then proceed as follows:
  - a. Using oblong holes in fairing brackets and a long shank ball end socket (Snap-on® FABL6E), install four socket head screws to fasten radio (storage box on FLHT) to left and right radio support brackets. Alternately tighten screws to 35-45 **in-lbs** (4.0-5.1 Nm). See [Figure 8-159](#).
  - b. Install **new anchored** cable strap in hole at bottom right corner of radio. Tighten cable strap to capture main harness conduit to ignition/light key switch. Cut any excess cable strap material.
3. See [Figure 8-158](#). Connect radio antenna cable. Proceed as follows:
  - Radio antenna cable connector [51]; back of radio (left side).
4. See [Figure 8-158](#). Standing at front of motorcycle, mate pin and socket halves of the following connectors and fix positions using retaining devices:
  - Main to interconnect harness connector [1], 12-place Deutsch (black); T-stud on right radio support bracket.
  - Main to interconnect harness connector [2], 12-place Deutsch (gray); T-stud on right fairing support brace (middle).
  - Main to interconnect harness connector [15], 4-place Packard (black); anchored in hole at front of right fairing bracket.
  - Main to interconnect harness connector [156], 6-place Deutsch (gray); T-stud on right fairing support brace (inboard side).

5. Using oval shaped hole in right fairing bracket, install **new** cable strap capturing convoluted tubing of interconnect harness and conduit of main to interconnect harness connectors [1], [2], [15] and [156].
6. For FLHTCU models only, see [AUDIO HARNESS, INSTALLATION](#), steps 6-7.
7. Install P-clamp on main harness (and audio harness on FLHTCU models). Install main harness ground ring terminal onto screw and fasten P-clamp to right side of steering head.
8. Install the outer fairing and windshield. See [Section 2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, INSTALLATION](#).

**NOTE**

Continue procedure at [INSTALLATION- ALL MODELS \(PART III\)](#).

## INSTALLATION- FLTR (PART II)

1. Install P-clamp on main harness bundle. Install two main harness ground ring terminals onto screw and fasten P-clamp to right side of steering head.
2. Install the inner fairing. See [Section 2.31 UPPER FAIRING/WINDSHIELD \(FLTR\), INNER FAIRING, INSTALLATION](#), steps 3-22.

**NOTE**

Continue procedure at [INSTALLATION- ALL MODELS \(PART III\)](#).

## INSTALLATION- ALL MODELS (PART III)

1. Place battery in battery box, terminal side forward. Rotate the hold-down clamp so that the lip (with rubber pad) rests on the edge of the battery. Tighten T40 TORX screw to 15-20 **ft-lbs** (20-27 Nm).

**⚠ WARNING**

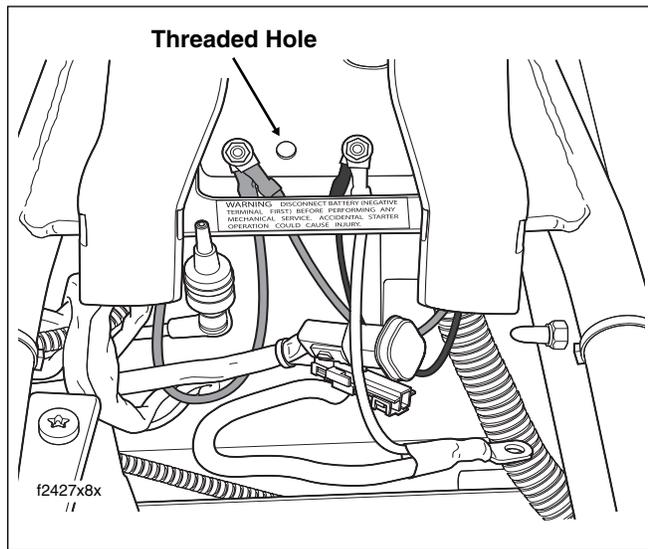
**Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.**

2. Insert bolt through battery positive cable (red) into threaded hole of battery positive (+) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
3. Insert bolt through battery negative cable (black) into threaded hole of battery negative (-) terminal. Tighten bolt to 60-96 **in-lbs** (6.8-10.9 Nm).
4. Align barbed studs in left side cover with grommets in frame downtubes and push firmly into place (no tools required).

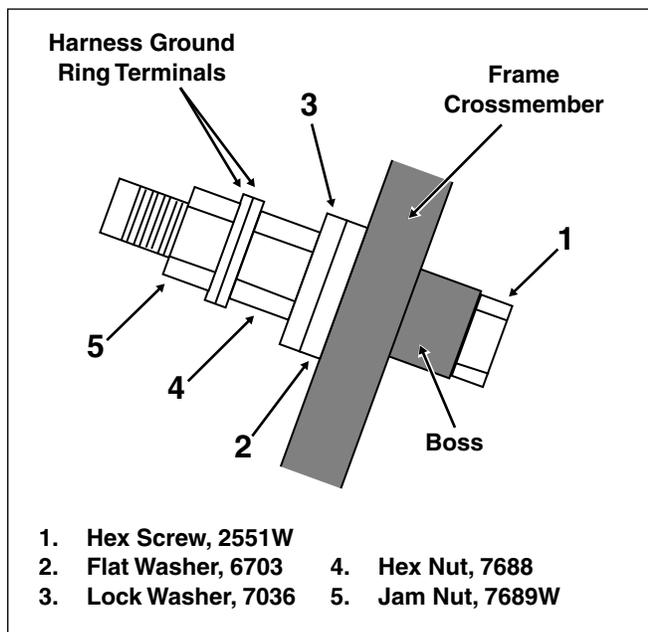
5. Install left side saddlebag. See Section [2.26 SADDLE-BAG, INSTALLATION](#).
6. Repeat steps 4-5 to install right side saddlebag and side cover.
7. Install fuel tank. For carbureted models, see Section [4.7 FUEL TANK \(CARBURETED\), INSTALLATION \(AFTER COMPLETE REMOVAL\)](#), [FLHX](#), [FLHT](#) or [FLHR/S](#). For fuel injected models, see Section [9.4 FUEL TANK \(FUEL INJECTED\), INSTALLATION \(AFTER COMPLETE REMOVAL\)](#), [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#) or [FLHR/C/S/I](#).

## FRAME GROUND STUD REPLACEMENT

1. Remove seat. See Section [2.25 SEAT, REMOVAL](#).
2. Locate threaded hole between ground studs. See [Figure 8-169](#). Thoroughly scrape away all paint from around threaded hole.
3. Moving to front of frame crossmember, thoroughly scrape away all paint on face of threaded boss.
4. Obtain five parts shown in [Figure 8-170](#).
5. Start hex screw into threaded boss and tighten to 90-120 **in-lbs** (10.2-13.6 Nm).
6. At rear of frame crossmember, install flat washer and lockwasher onto threaded end of hex screw. Install hex nut and tighten to 90-120 **in-lbs** (10.2-13.6 Nm).
7. If replacing left side ground stud, slide two main harness ground ring terminals (with orange tape) onto hex screw. If replacing right side ground stud, install main harness ground ring terminal (without orange tape) and chassis ground ring terminal.
8. Install jam nut onto hex screw and tighten to 50-90 **in-lbs** (5.7-10.2 Nm).
9. Install seat. See Section [2.25 SEAT, INSTALLATION](#).



**Figure 8-169. Remove Seat**



**Figure 8-170. Install New Frame Ground Stud**

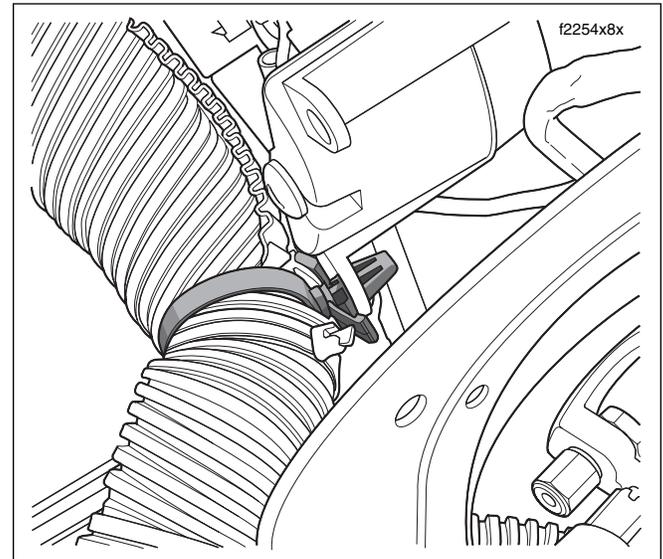
## FLHX, FLHT/C/U

## REMOVAL

## NOTE

When referencing inner fairing locations, the term “fairing bracket” refers to either the left or right vertical support, while the term “support brace” refers to either the left or right horizontal support. References to left and right always refers to left and right side of motorcycle.

1. Remove maxi-fuse. See Section 8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL.
2. Remove the outer fairing and windshield. See Section 2.30 UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, REMOVAL.
3. Release anchors on convoluted tubing of interconnect harness from lower outboard ears of speedometer and tachometer brackets. See Figure 8-171. For best results, squeeze anchor with needle nose pliers before pulling from hole in ear.
4. Remove anchor on convoluted tubing of headlamp connector from hole in left fairing bracket. See Figure 8-174.
5. On opposite side of inner fairing, remove anchor on conduit of fairing cap switch connector from hole in lower wing of right side radio support bracket. See Figure 8-175.
6. Cut cable strap to release convoluted tubing of interconnect harness and conduit of main to interconnect harness connectors [1], [2], [15] and [156] from right fairing bracket. See Figure 8-176.
7. Remove connectors from their retaining devices, if present, and disconnect pin and socket halves. See Figure 8-172.
  - a. Main to interconnect harness connector [2], 12-place Deutsch (gray); T-stud on right fairing support brace (middle).
  - b. Main to interconnect harness connector [156], 6-place Deutsch (gray); T-stud on right fairing support brace (inboard side).
  - c. Radio connector [27], 23-place Amp (black); back of radio (right side).
  - d. Indicator lamps connector [21]; 10-place Multilock (black); above radio (between speedometer and tachometer gauges).



**Figure 8-171. Anchor Interconnect Harness in Lower Ears of Speedometer/Tachometer Brackets**

- e. Speedometer connector [39]; 12-place Packard (black); back of speedometer. Unthread rubber boot from odometer reset switch and pull switch from hole in inner fairing.
- f. Tachometer connector [108]; 12-place Packard (gray); back of tachometer.
- g. Ambient temperature sensor connector [107], if present; 3-place Multilock (black); anchored in hole on outboard side of left fairing bracket.
- h. Left handlebar switch controls connector [24], 12-place Deutsch (gray); T-stud on left fairing support brace (inboard side).
- i. Left front turn signal/auxiliary lamp connector [31L], 4-place Multilock (black); T-stud on left fairing support brace (outboard side).
- j. Right front turn signal/auxiliary lamp connector [31R], 4-place Multilocks (black); T-stud on right fairing support brace (outboard side).
- k. Main to interconnect harness connector [1], 12-place Deutsch (black); T-stud on right radio support bracket.
- l. Main to interconnect harness connector [15], 4-place Packard (black); anchored in hole at front of right fairing bracket.
- m. Fairing cap switch connector [105], 12-place Multilock (black); top of upper fork bracket (right side).

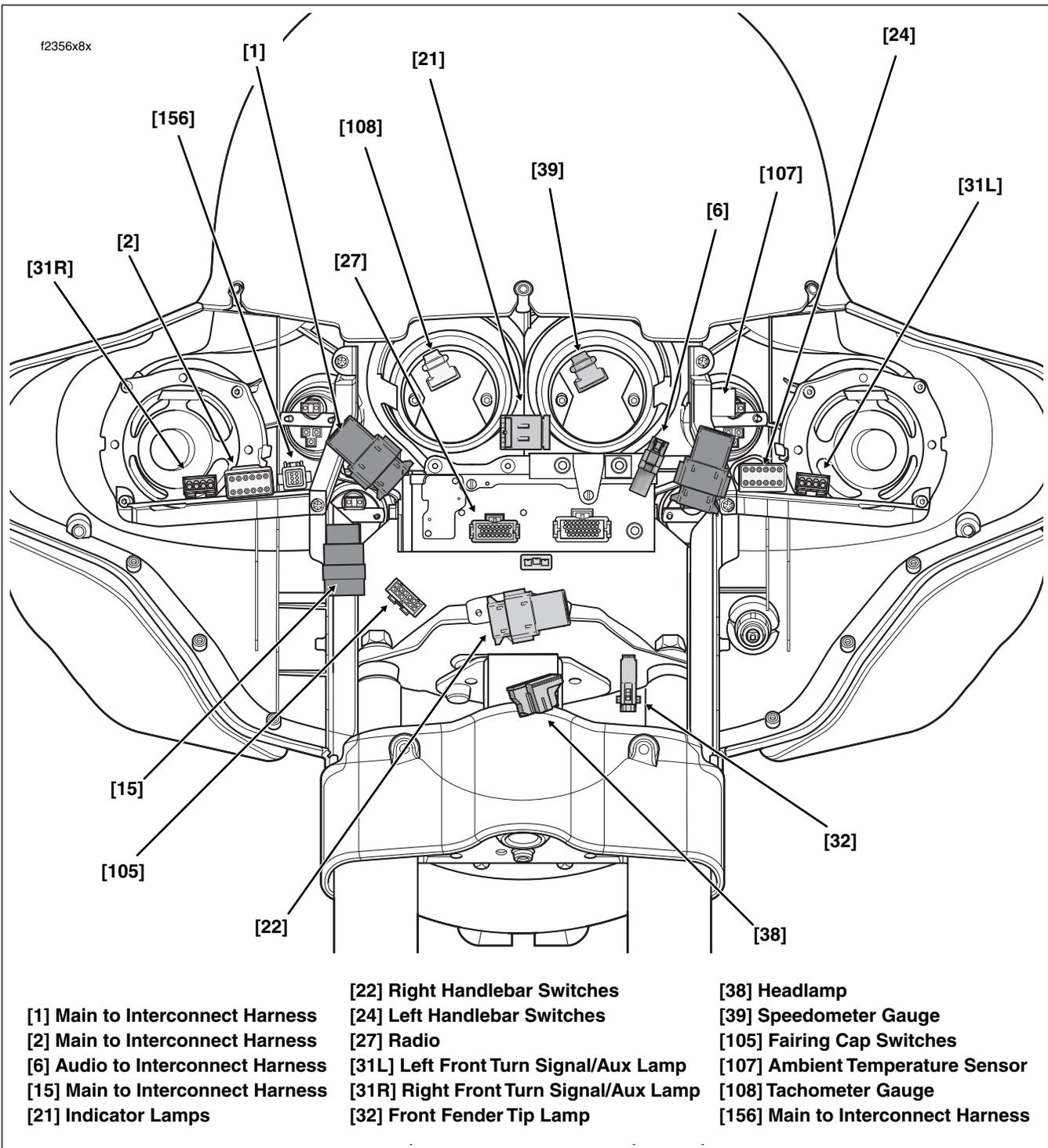


Figure 8-172. Inner Fairing - Interconnect Harness Connectors (FLHX, FLHT/C/U)

- n. Right handlebar switch controls connector [22], 12-place Deutsch (black); T-stud on fork stem nut lock-plate (left side).
- o. Audio to interconnect harness connector [6], if present; 6-place Deutsch (black); top of radio (left side).
- p. Front fender tip lamp jumper harness connector [32], 2-place Multilock (black); below upper fork bracket (left side).
8. See [Figure 8-173](#). Remove connectors from spade contacts as follows:

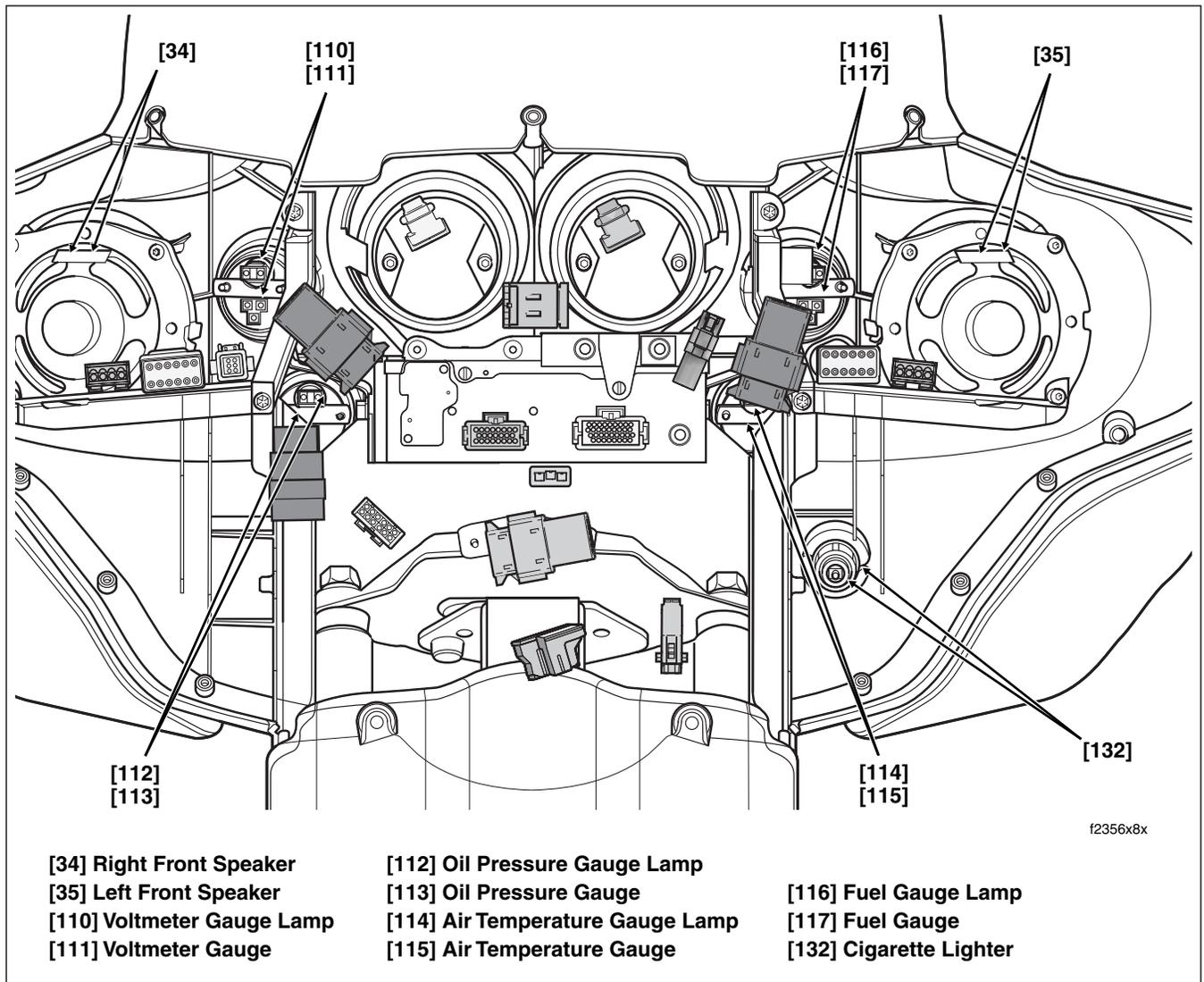


Figure 8-173. Inner Fairing - Interconnect Harness Connectors (FLHX, FLHTC/U)

Left side:

- Left front speaker [35]
  - Fuel gauge [117] and lamp [116]
  - Cigarette lighter [132]
9. Feed conduit (with orange tape) terminating in left side speaker, fuel gauge, cigarette lighter and front turn signal connectors to mid section of inner fairing (area between left and right fairing brackets). Also feed conduit terminating in left handlebar switch controls connector [24] to mid section.
  10. Pull harness ground socket terminal from spade contact fastened to top of upper fork bracket (left side).
  11. See [Figure 8-173](#). Remove connectors from spade contacts as follows:

Right side:

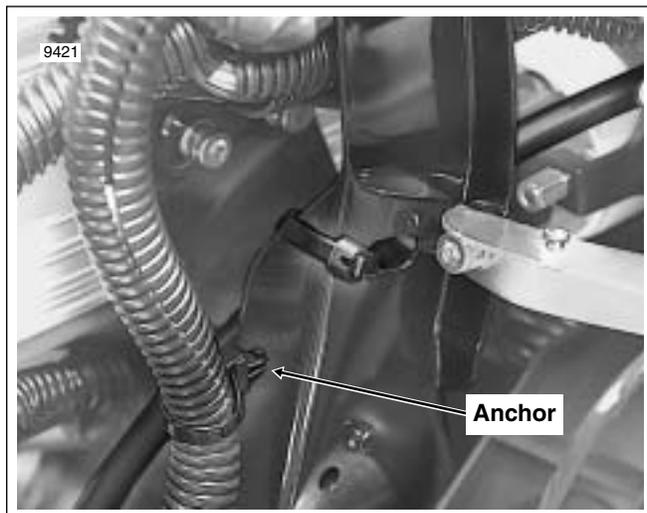
- Right front speaker [34]
  - Voltmeter gauge [111] and lamp [110]
12. Feed conduit (with orange tape) terminating in right side speaker and voltmeter gauge connectors to mid section of inner fairing (area between left and right fairing brackets). Also feed conduit terminating in main to interconnect harness connectors [2] and [156] to mid section.
  13. If present, remove connectors from spade contacts as follows:
    - Oil pressure gauge [113] and lamp [112]
    - Air temperature gauge [115] and lamp [114]
  14. Remove interconnect harness from motorcycle.

## INSTALLATION

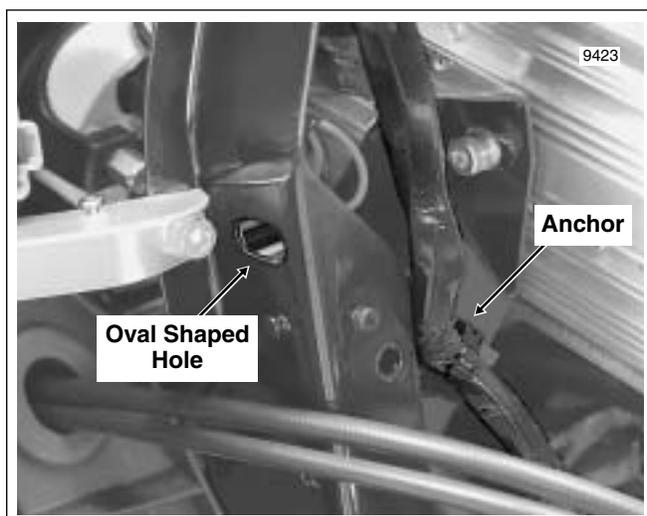
### NOTE

When referencing inner fairing locations, the term “fairing bracket” refers to either the left or right vertical support, while the term “support brace” refers to either the left or right horizontal support. References to left and right always refers to left and right side of motorcycle.

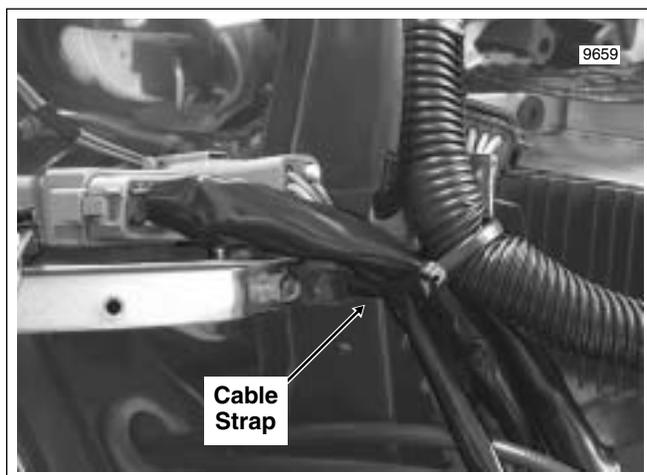
1. Center interconnect harness on top of radio. To verify proper orientation, be sure that convoluted tubing (with anchor) of headlamp connector is on left side of motorcycle, while conduit (with anchor) of fairing cap switch connector is on the right.
2. Install anchors on convoluted tubing of interconnect harness into lower outboard ears of speedometer and tachometer brackets. See [Figure 8-171](#).
3. If present, install connectors onto spade contacts as follows:
  - Oil pressure gauge [113] and lamp [112]
  - Air temperature gauge [115] and lamp [114]
4. From mid section of inner fairing (area between left and right fairing brackets), feed conduit (with orange tape) terminating in left side speaker, fuel gauge, cigarette lighter and front turn signal connectors behind left fairing bracket to area of left support brace.
5. Install connectors onto spade contacts as follows:  
Left side:
  - Left front speaker [35]
  - Fuel gauge [117] and lamp [116]
  - Cigarette lighter [132]; connect the orange/white wire socket terminal to the socket spade contact, the black wire socket terminal to the shell contact.
6. From mid section of inner fairing (area between left and right fairing brackets), also feed conduit terminating in left handlebar switch controls connector [24] behind left fairing bracket to area of left support brace.
7. Push harness ground socket terminal onto spade contact fastened to top of upper fork bracket (left side).
8. From mid section of inner fairing, feed conduit (with orange tape) terminating in right side speaker and voltmeter gauge connectors behind right fairing bracket to area of right support brace.
9. Install connectors onto spade contacts as follows:  
Right side:
  - Right front speaker [34]
  - Voltmeter gauge [111] and lamp [110]
10. From mid section of inner fairing, also feed conduit terminating in main to interconnect harness connectors [2] and [156] behind right fairing bracket to area of right support brace.
11. Mate pin and socket halves of the following connectors and fix positions using retaining devices, if present:
  - a. Main to interconnect harness connector [2], 12-place Deutsch (gray); T-stud on right fairing support brace (middle).
  - b. Main to interconnect harness connector [156], 6-place Deutsch (gray); T-stud on right fairing support brace (inboard side).
  - c. Radio connector [27], 23-place Amp (black); back of radio (right side).
  - d. Indicator lamps connector [21]; 10-place Multilock (black); above radio (between speedometer and tachometer gauges).
  - e. Speedometer connector [39]; 12-place Packard (black); back of speedometer. Slide odometer reset switch through hole in inner fairing and install rubber boot.
  - f. Tachometer connector [108]; 12-place Packard (gray); back of tachometer.
  - g. Ambient temperature sensor connector [107], if present; 3-place Multilock (black); anchored in hole on outboard side of left fairing bracket.
  - h. Left handlebar switch controls connector [24], 12-place Deutsch (gray); T-stud on left fairing support brace (inboard side).
  - i. Left front turn signal/auxiliary lamp connector [31L], 4-place Multilock (black); T-stud on left fairing support brace (outboard side).
  - j. Right front turn signal/auxiliary lamp connector [31R], 4-place Multilocks (black); T-stud on right fairing support brace (outboard side).
  - k. Main to interconnect harness connector [1], 12-place Deutsch (black); T-stud on right radio support bracket.
  - l. Main to interconnect harness connector [15], 4-place Packard (black); anchored in hole at front of right fairing bracket.
  - m. Fairing cap switch connector [105], 12-place Multilock (black); top of upper fork bracket (right side).
  - n. Right handlebar switch controls connector [22], 12-place Deutsch (black); T-stud on fork stem nut lock-plate (left side).
  - o. Audio to interconnect harness connector [6], if present; 6-place Deutsch (black); top of radio (left side).
  - p. Front fender tip lamp jumper harness connector [32], 2-place Multilock (black); below upper fork bracket (left side).
12. Install anchor on convoluted tubing of headlamp connector into hole in left fairing bracket. See [Figure 8-174](#).
13. On opposite side of inner fairing, install anchor on conduit of fairing cap switch connector into hole in lower wing of right side radio support bracket. See [Figure 8-175](#).



**Figure 8-174. Anchor Convoluted Tubing of Headlamp Connector**



**Figure 8-175. Anchor Conduit of Fairing Cap Switch Connector**



**Figure 8-176. Cable Strap Convoluted Tubing and Conduit to Fairing Bracket**

14. Using oval shaped hole in right fairing bracket, install **new** cable strap capturing convoluted tubing of interconnect harness and conduit of main to interconnect harness connectors [1], [2], [15] and [156]. See Figure 8-175 and [Figure 8-176](#).
15. Install the windshield and outer fairing. See Section [2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, INSTALLATION](#).
16. Install maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).

## FLTR

### REMOVAL

1. Remove maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, REMOVAL](#).
2. Place protective material on top of front fender to protect paint from scratches or other damage.
3. Remove the outer fairing and windshield. See Section [2.31 UPPER FAIRING/WINDSHIELD \(FLTR\), OUTER FAIRING, REMOVAL](#).
4. Carefully cut two cable straps to free wire bundles and conduit from convoluted tubing of interconnect harness and allow to hang naturally. See [Figure 8-179](#).
5. See [Figure 8-177](#). Disconnect main harness from interconnect harness as follows:
  - Main to interconnect harness connector [1], 12-place Deutsch (black); below radio (right side).
  - Main to interconnect harness connector [2], 12-place Deutsch (gray); below radio (right side).
  - Main to interconnect harness connector [15], 4-place Packard (black); below radio (right side).
  - Main to interconnect harness connector [156], 6-place Deutsch (gray); below radio (right side).
6. See [Figure 8-177](#). Disconnect handlebar switch controls from interconnect harness. Disconnect radio and radio ground. Proceed as follows:
  - Left handlebar switch controls connector [24], 12-place Deutsch (gray); T-stud on left side of radio bracket.
  - Right handlebar switch controls connector [22], 12-place Deutsch (black); T-stud on left side of radio bracket.

#### NOTE

*Push on each handlebar connector to disengage small end of slot on attachment clip from T-stud on radio bracket. Lift connector off T-stud.*

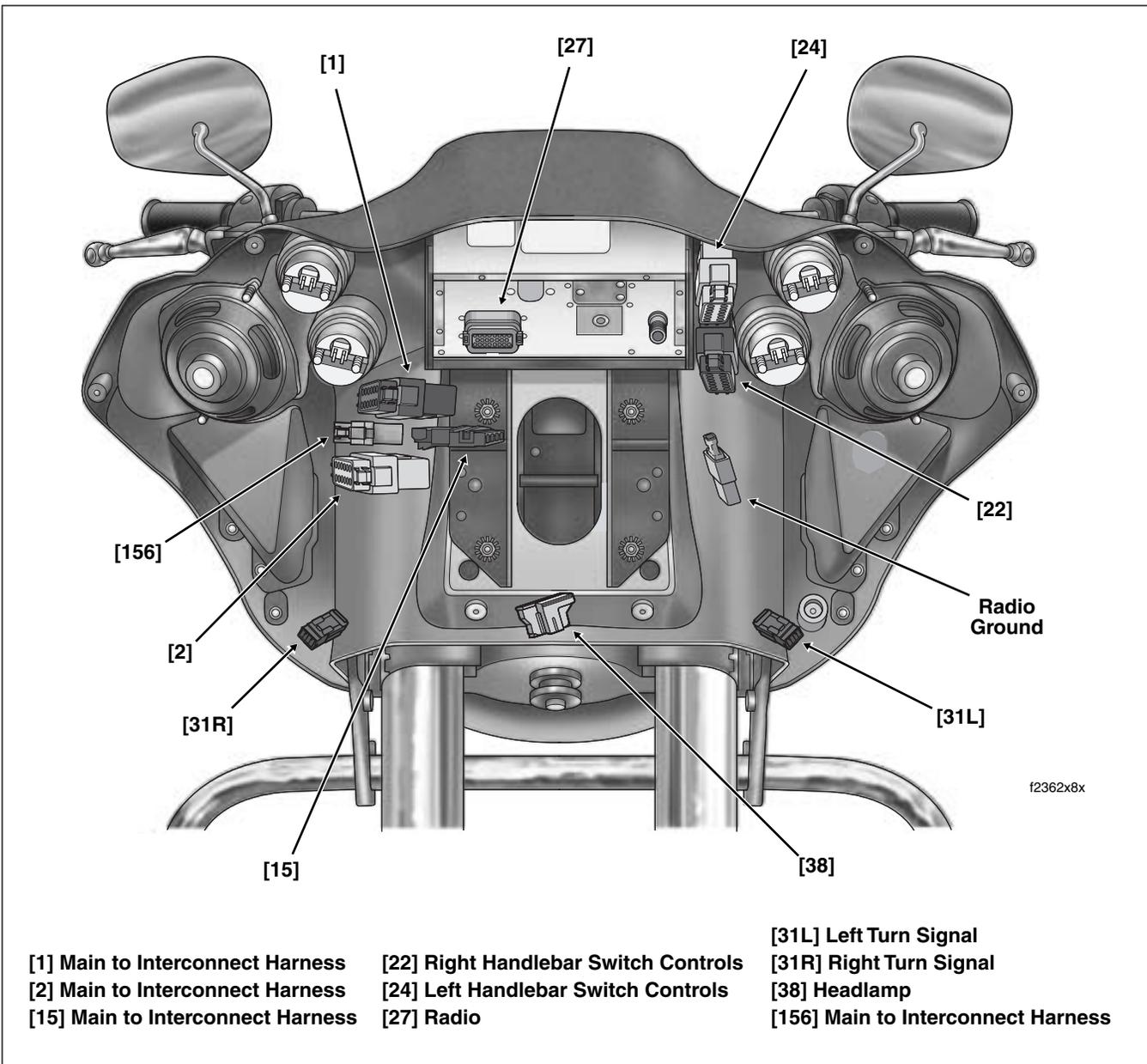
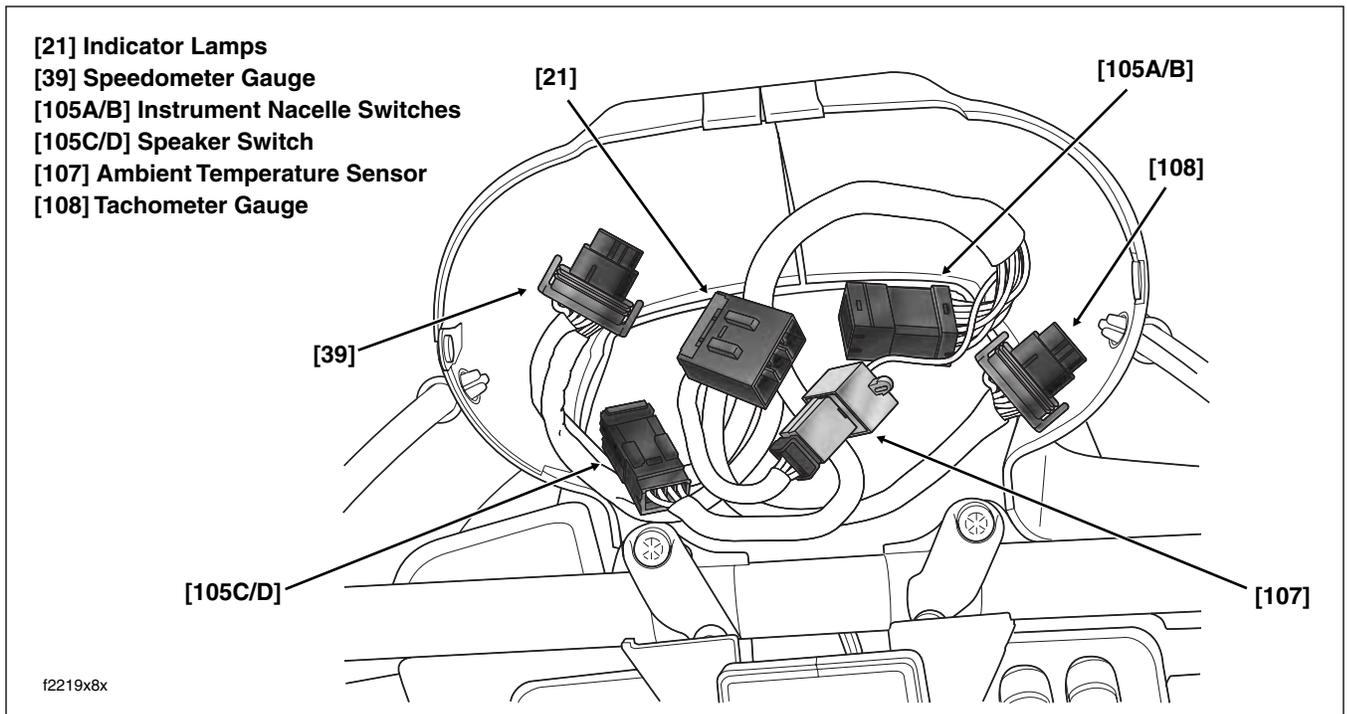


Figure 8-177. Inner Fairing - Interconnect Harness Connectors (FLTR)

- Radio connector [27], 23-place Amp (black); back of radio (right side).
  - Radio ground; single spade and socket terminal; below radio (left side).
7. Remove left side of instrument nacelle. See Section 2.31 [UPPER FAIRING/WINDSHIELD \(FLTR\), INSTRUMENT NACELLE, REMOVAL](#), steps 1-6.
  8. See [Figure 8-178](#). Disconnect instrument nacelle switches and ambient temperature sensor from interconnect harness as follows:
    - Instrument nacelle switch connector [105], 12-place Multilock.
    - Ambient temperature sensor connector [107], 3-place Multilock.
  9. See [Figure 8-178](#). Draw branches of interconnect harness (terminating in odometer reset switch and speedometer, tachometer, indicator lamps, instrument nacelle switch and ambient temperature sensor connectors) from instrument nacelle through tunnel of fairing bracket to front of inner fairing. Allow the interconnect harness to hang along the left side of the front fender.
  10. Remove connectors from spade contacts as follows:



**Figure 8-178. Instrument Nacelle (Bezel Removed)**

Left side:

- Left speaker
- Fuel gauge and lamp (with orange tape)
- Air temperature gauge and lamp
- Cigarette lighter

Right side:

- Right speaker
- Voltmeter gauge and lamp (with orange tape)
- Oil pressure gauge and lamp

11. Free conduit of front turn signal lamp connectors [31L] and [31R], 3-place Multilocks, from flexible clips on sides of inner fairing.
12. Remove interconnect harness from motorcycle. Remove radio antenna cable connector [51] at back of radio (left side) to facilitate removal.

## INSTALLATION

### CAUTION

**To avoid chafing wires of interconnect harness, verify that trim strips are installed on hooks of radio bracket.**

1. Center convoluted tubing of interconnect harness above and inboard of hooks on radio bracket. See [Figure 8-179](#). To verify proper orientation, be sure that long length of conduit terminating in socket terminals of cigarette lighter is on left side of motorcycle. Install radio antenna

cable connector [51] at back of radio (left side), if removed.

2. Install connectors onto spade contacts as follows:

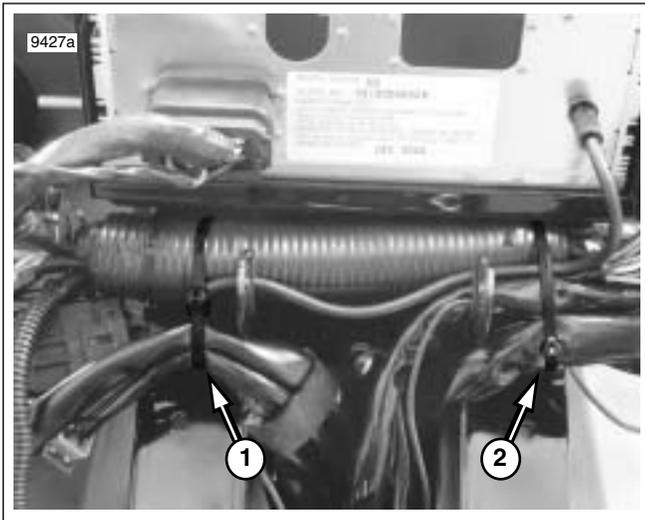
Left side:

- Left speaker
- Fuel gauge and lamp (with orange tape)
- Air temperature gauge and lamp
- Cigarette lighter; connect the orange/white wire socket terminal to the socket spade contact, the black wire socket terminal to the shell contact.

Right side:

- Right speaker
- Voltmeter gauge and lamp (with orange tape)
- Oil pressure gauge and lamp

3. Find branch of interconnect harness terminating in odometer reset switch and speedometer, tachometer, indicator lamps, instrument nacelle switch and ambient temperature sensor connectors. Feed connectors and conduit from front of inner fairing through tunnel of fairing bracket and then out through opening at top of fairing bracket to instrument nacelle.
4. See [Figure 8-178](#). Connect instrument nacelle switches and ambient temperature sensor to interconnect harness as follows:



**Figure 8-179. Cable Strap Convoluted Tubing and Conduit**

- Instrument nacelle switch connector [105], 12-place Multilock.
  - Ambient temperature sensor connector [107], 3-place Multilock.
5. See [Figure 8-177](#). Connect handlebar switch controls to interconnect harness. Connect radio and radio ground. Proceed as follows:
- Left handlebar switch controls connector [24], 12-place Deutsch (gray); T-stud on left side of radio bracket.
  - Right handlebar switch controls connector [22], 12-place Deutsch (black); T-stud on left side of radio bracket.

**NOTE**

*Place large end of slot on attachment clip over T-stud on radio bracket and push on each handlebar connector to engage small end of slot.*

- Radio connector [27], 23-place Amp (black); back of radio (right side).
  - Radio ground; single spade and socket terminal; below radio (left side).
6. See [Figure 8-177](#). Connect main harness to interconnect harness as follows:
- Main to interconnect harness connector [1], 12-place Deutsch (black); below radio (right side).
  - Main to interconnect harness connector [2], 12-place Deutsch (gray); below radio (right side).
  - Main to interconnect harness connector [15], 4-place Packard (black); below radio (right side).
  - Main to interconnect harness connector [156], 6-place Deutsch (gray); below radio (right side).

7. Orient connectors as shown in [Figure 8-177](#). Install two **new** cable straps outboard of radio bracket hooks to secure wire bundles and conduit to convoluted tubing of interconnect harness. Cut any excess cable strap material. See [Figure 8-179](#).
8. Capture conduit of front turn signal lamp connectors [31L] and [31R], 3-place Multilocks, in flexible clips on sides of inner fairing.
9. Install the outer fairing and windshield. See Section [2.31 UPPER FAIRING/WINDSHIELD \(FLTR\)](#), [OUTER FAIRING, INSTALLATION](#).
10. Install left side of instrument nacelle. See Section [2.31 UPPER FAIRING/WINDSHIELD \(FLTR\)](#), [INSTRUMENT NACELLE, INSTALLATION](#), steps 3-7 and 9-10.
11. Install bezel. See [BEZEL, INSTALLATION](#), in this section.
12. Install maxi-fuse. See Section [8.3 SYSTEM FUSES, MAXI-FUSE, INSTALLATION](#).

## FLHTC/U

## REMOVAL

1. Remove fuel tank. For carbureted models, see Section 4.7 **FUEL TANK (CARBURETED)**, COMPLETE REMOVAL, [FLHX](#), [FLHT](#). For fuel injected models, see Section 9.4 **FUEL TANK (FUEL INJECTED)**, COMPLETE REMOVAL, [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#).
2. Remove left side saddlebag. See Section 2.26 **SADDLEBAG**, [REMOVAL](#).
3. Gently pull side cover from frame downtubes (no tools required).
4. Remove the outer fairing and windshield. See Section 2.30 **UPPER FAIRING/WINDSHIELD** ([FLHX](#), [FLHT/C/U](#)), [OUTER FAIRING/WINDSHIELD](#), [REMOVAL](#).
5. Remove radio antenna cable connector [51] at back of radio (left side). See [Figure 8-180](#). Carefully cut cable where it exits main harness conduit.
6. Remove screw, ground wire ring terminal and P-clamp to release main harness (and audio harness on FLHTCU) from right side of steering head.

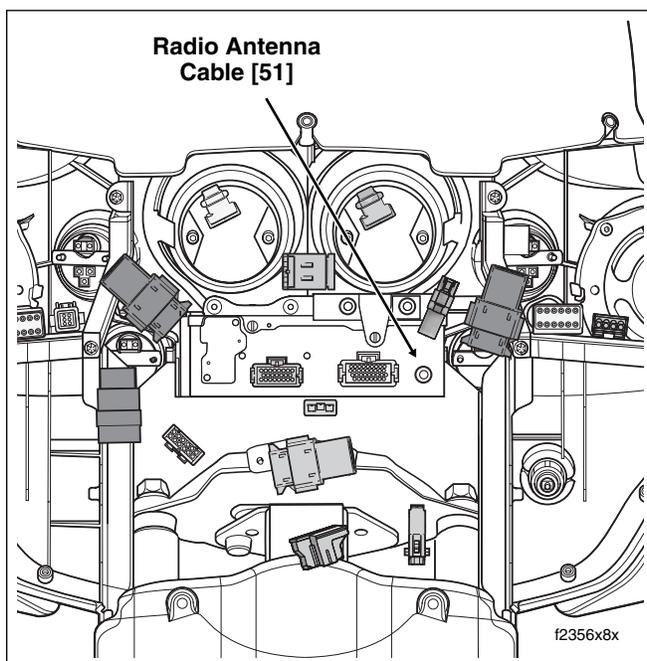


Figure 8-180. Remove Outer Fairing ([FLHX](#), [FLHTC/U](#))

7. Starting at the front of the wire trough, and working rearward from side to side, release catches to remove cover. For most catches, carefully insert blade of flat tip screwdriver into slot only as far as necessary to release catch.
8. Carefully cut three cable straps securing main harness (and audio harness on FLHTCU) to left upper frame tube and luggage rack rail.
9. Open Tour-Pak and proceed as follows:

**FLHTC:** Remove rubber mat.

**FLHTCU:** Open map pocket and remove acorn nuts (with flat washers). Remove map pocket and molded liner from Tour-Pak.

10. On Ultra models, depress external latch and remove bulb socket from left side wrap-around light.
11. Rotate knurled ring in a counterclockwise direction to separate pin and socket halves of radio antenna cable connector [51]. Release cable from two adhesive clips at bottom of Tour-Pak.
12. Disconnect Tour-Pak lights connector [12], 3-place Multilock. See [Figure 8-181](#).
13. Pull grommet into Tour-Pak and remove from main harness conduit.
14. Pull Tour-Pak lights and radio antenna cable connectors through hole at front of Tour-Pak. See [Figure 8-182](#).
15. Carefully cut radio antenna cable where it exits main harness conduit.

## INSTALLATION

## NOTE

Place **new** radio antenna cable on motorcycle following original path. Note that the cable follows the main harness routed to the rear left side of the motorcycle.

1. At front of inner fairing, connect radio antenna cable connector [51] at back of radio (left side). See [Figure 8-180](#).
2. Route free end of radio antenna cable rearward under the fairing cap to right side of the steering head.
3. Capture radio antenna cable, main harness (and audio harness on FLHTCU) in P-clamp. Install ground wire ring terminal on screw and fasten P-clamp to right side of steering head.
4. Route radio antenna cable rearward through opening at front of wire trough. Exiting wire trough through opening

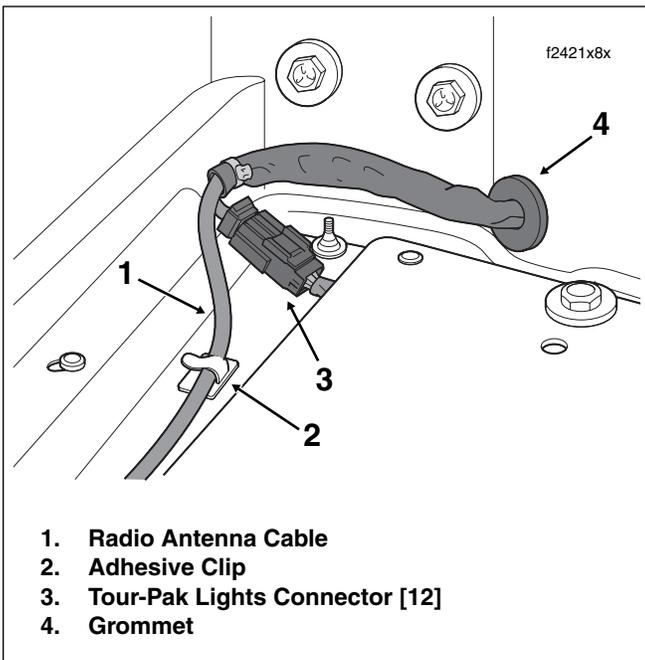


Figure 8-181. Disconnect Tour-Pak Lights Connector

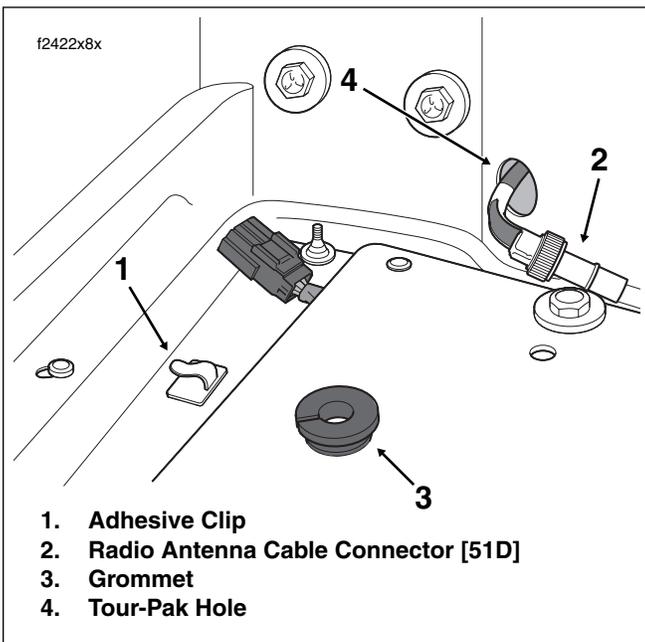


Figure 8-182. Feed Main Harness Thru Tour-Pak Hole

at end of left leg, route cable rearward along bottom of upper frame tube to rear of battery box, up through opening between rear of frame weldment and front of rear fender, along inboard side of upper frame tube (and chrome frame tube cover) and then up the luggage rack rail to front of Tour-Pak.

- Loosely install two **new** cable straps to secure radio antenna cable to left upper frame tube. See [Figure 8-183](#). Loosely install **new** cable strap to secure radio antenna cable to luggage rack rail.

- Feed Tour-Pak lights and radio antenna cable connectors and conduit through hole at front of Tour-Pak. Capture cable and conduit in grommet. Install grommet in hole with the larger OD facing inside.
- Connect Tour-Pak lights connector [12], 3-place Multilock. See [Figure 8-181](#).
- Rotate knurled ring in a clockwise direction to mate pin and socket halves of radio antenna cable connector [51]. Capture cable in two adhesive clips at bottom of Tour-Pak.
- On Ultra models, install bulb socket of left side wrap-around light.
- Tighten three cable straps securing radio antenna cable to left upper frame tube and luggage rack rail. Cut any excess cable strap material.
- Proceed as follows:
  - FLHTC:** Install rubber mat in Tour-Pak. Close Tour-Pak.
  - FLHTCU:** Install molded liner in Tour-Pak. Install map pocket and secure using acorn nuts (with flat washers). Close Tour-Pak.
- Place cover over wire trough. Starting at the front and working rearward from side to side, engage catches to latch cover. Verify that all latches are fully engaged.
- Install fuel tank. For carbureted models, see [Section 4.7 FUEL TANK \(CARBURETED\), INSTALLATION \(AFTER COMPLETE REMOVAL\)](#), [FLHX](#), [FLHT](#). For fuel injected models, see [Section 9.4 FUEL TANK \(FUEL INJECTED\), INSTALLATION \(AFTER COMPLETE REMOVAL\)](#), [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#).
- Install the outer fairing and windshield. See [Section 2.31 UPPER FAIRING/WINDSHIELD \(FLTR\), OUTER FAIRING, INSTALLATION](#).
- Align barbed studs in left side cover with grommets in frame downtubes and push firmly into place (no tools required).
- Install left side saddlebag. See [Section 2.26 SADDLEBAG, INSTALLATION](#).

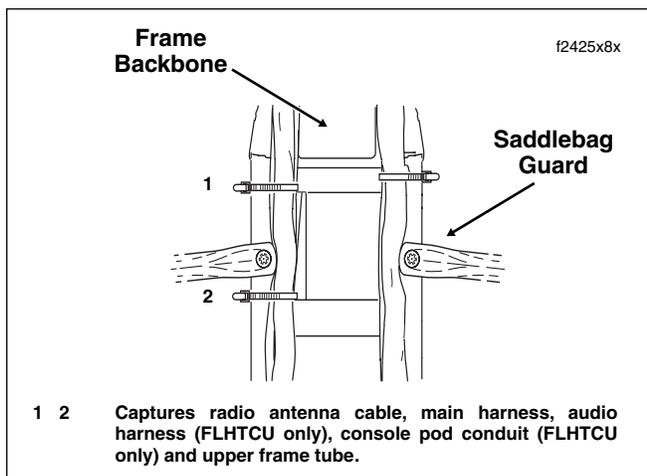


Figure 8-183. Capture Radio Antenna Cable

## FLHX, FLTR

### REMOVAL

1. Remove fuel tank. See Section 9.4 FUEL TANK (FUEL INJECTED), COMPLETE REMOVAL, FLHXI, FLHT/C/U/I, FLTRI.
2. Remove left side saddlebag. See Section 2.26 SADDLEBAG, REMOVAL.
3. Gently pull side cover from frame downtubes (no tools required).
4. Remove the outer fairing and windshield. See Section 2.31 UPPER FAIRING/WINDSHIELD (FLTR), OUTER FAIRING, REMOVAL.
5. Remove radio antenna cable connector [51] at back of radio (left side). See Figure 8-184. Carefully cut cable where it exits main harness conduit.
6. Remove screw, ground wire ring terminal and P-clamp to release main harness from right side of steering head.
7. Starting at the front of the wire trough, and working rearward from side to side, release catches to remove cover.
8. Carefully cut two cable straps securing main harness conduit to left upper frame tube.
9. On left side of motorcycle, remove bolt (with flat washer) to remove passenger seat strap and saddlebag front mounting bracket from chrome frame tube cover.
10. Remove Phillips screw and chrome frame tube cover.
11. Carefully cut cable strap to release radio antenna cable from shoulder of upper frame tube (just in front of air valve mounting bracket). Cut cable strap to release radio antenna cable from slotted hole in rear fender support. See Figure 8-185.
12. At bottom of radio antenna bracket, rotate knurled ring to separate pin and socket halves of radio antenna cable connector [51].
13. Draw radio antenna cable forward to area of fuse block bracket. Carefully cut cable where it exits main harness conduit.

### INSTALLATION

#### NOTE

Place **new** radio antenna cable on motorcycle following original path. Note that the cable follows the main harness routed to the rear left side of the motorcycle.

1. At front of inner fairing, connect radio antenna cable connector [51] at back of radio (left side). See Figure 8-184.

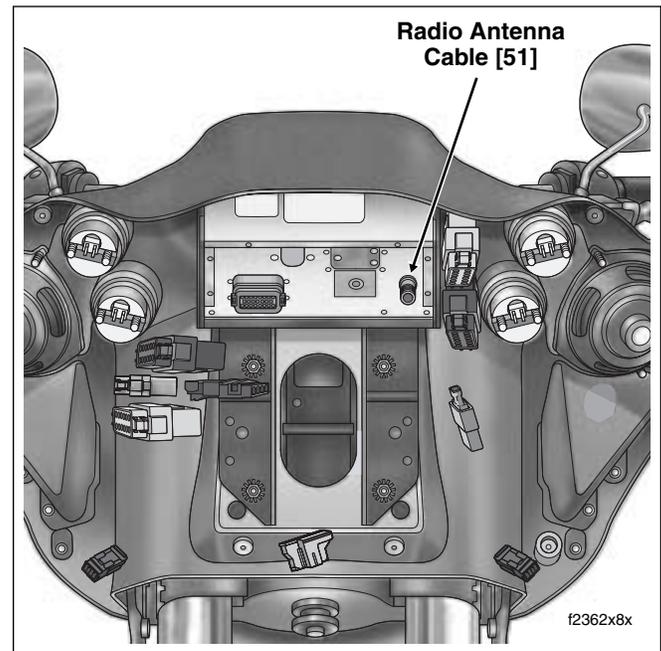
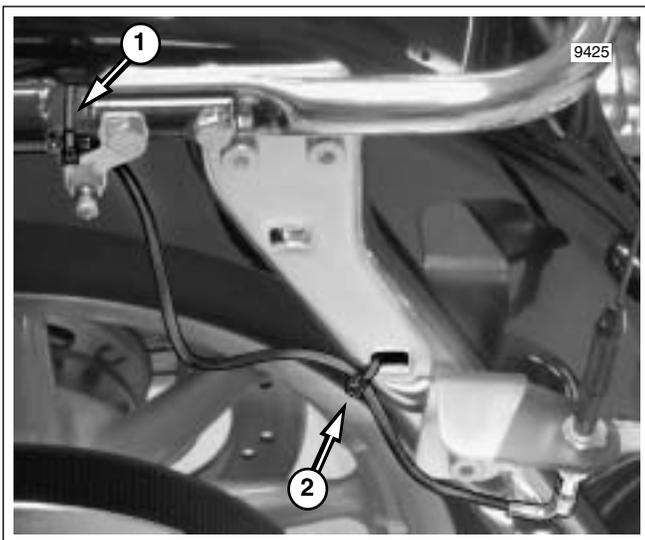


Figure 8-184. Remove Outer Fairing (FLTR)

2. Proceed as follows:
  - FLHX:** Route free end of radio antenna cable rearward under the fairing cap to right side of the steering head.
  - FLTR:** Route free end of radio antenna cable rearward through opening on the right side of the fairing bracket to right side of the steering head.
3. Capture radio antenna cable and main harness in P-clamp. Install ground wire ring terminal on screw and fasten P-clamp to right side of steering head.
4. Route radio antenna cable rearward through opening at front of wire trough. Exiting wire trough at end of left leg, route cable rearward along bottom of upper frame tube to rear of battery box, and then up through opening between rear of frame weldment and front of rear fender, continuing along inboard side of upper frame tube (and chrome frame tube cover).
5. Loosely install two **new** cable straps to secure radio antenna cable to left upper frame tube. See Figure 8-183.
6. Install **new** cable strap to secure radio antenna cable (and rear facia lamp wires on FLHX) to shoulder of upper frame tube (just in front of rear shock air valve mounting bracket). Using slotted hole, install **new** cable strap to secure radio antenna cable (and rear facia lamp wires on FLHX) to rear fender support. See Figure 8-185 or Figure 8-186.
7. At bottom of radio antenna bracket, rotate knurled ring to mate pin and socket halves of radio antenna cable connector [51].



**Figure 8-185. Capture Radio Antenna Cable (FLTR)**



**Figure 8-186. Capture Radio Antenna Cable (FLHX)**

8. Tighten four cable straps securing radio antenna cable to left upper frame tube and rear fender support. Cut any excess cable strap material.
9. Install chrome frame tube cover on frame tube. Install Phillips screw and tighten to 25-40 **in-lbs** (2.8-4.5 Nm).
10. Insert bolt (with flat washer) through passenger seat strap and slotted hole of saddlebag front mounting bracket. Insert bolt into forward hole in chrome frame tube cover. Snug saddlebag front mounting bracket bolt, but do not tighten.

11. Place cover over wire trough. Starting at the front and working rearward from side to side, engage catches to latch cover. Verify that all latches are fully engaged.
12. Install fuel tank. See Section [9.4 FUEL TANK \(FUEL INJECTED\), INSTALLATION \(AFTER COMPLETE REMOVAL\), FLHXI, FLHT/C/U/I, FLTRI](#).
13. Install the outer fairing and windshield. See Section [2.31 UPPER FAIRING/WINDSHIELD \(FLTR\), OUTER FAIRING, INSTALLATION](#).
14. Align barbed studs in left side cover with grommets in frame downtubes and push firmly into place (no tools required).
15. Install left side saddlebag. See Section [2.26 SADDLEBAG, INSTALLATION](#).
16. Using an open end/box wrench, tighten saddlebag front mounting bracket bolt to 60-96 **in-lbs** (6.8-10.8 Nm).

## REMOVAL

1. Remove fuel tank. For carbureted models, see Section 4.7 **FUEL TANK (CARBURETED), COMPLETE REMOVAL, FLHX, FLHT**. For fuel injected models, see Section 9.4 **FUEL TANK (FUEL INJECTED), COMPLETE REMOVAL, FLHXI, FLHT/C/U/I, FLTRI**.
2. Remove right side saddlebag. See Section 2.26 **SADDLEBAG, REMOVAL**.
3. Gently pull side cover from frame downtubes (no tools required).
4. Repeat steps 2 and 3 on left side of motorcycle.
5. Remove the outer fairing and windshield. See Section 2.30 **UPPER FAIRING/WINDSHIELD (FLHX, FLHT/C/U), OUTER FAIRING/WINDSHIELD, REMOVAL**.
6. See Figure 8-187. Disconnect the following connectors:
  - a. CB antenna cable connector [50], back of CB module (right side).

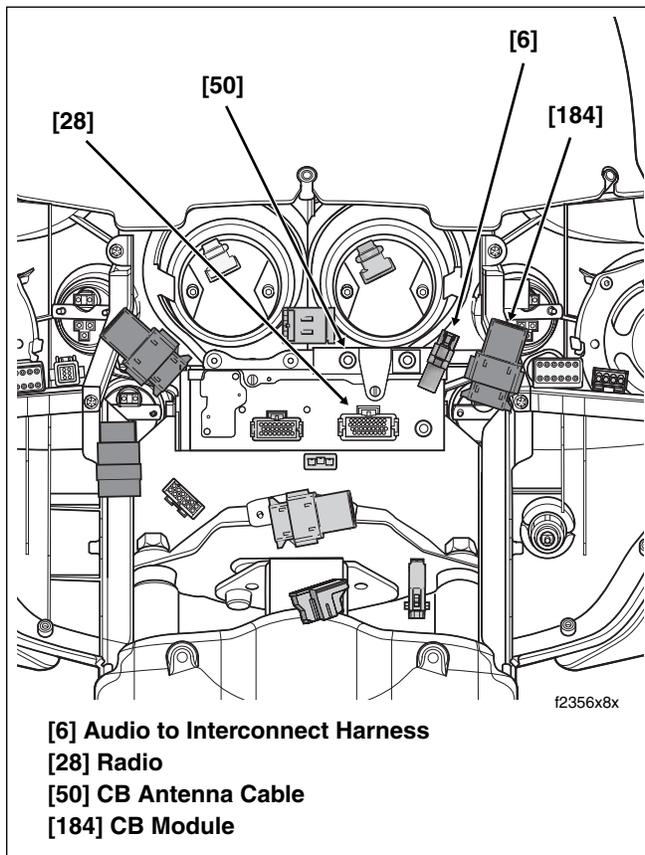


Figure 8-187. Remove Outer Fairing (FLHTCU)

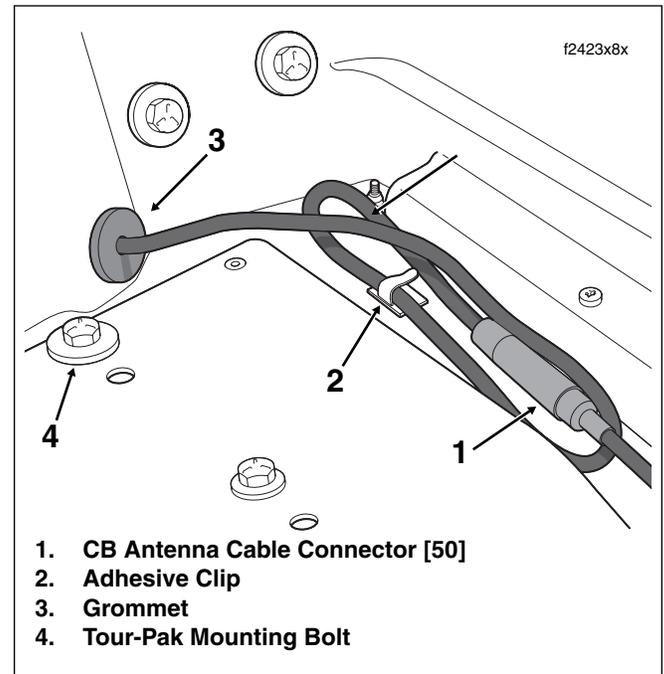
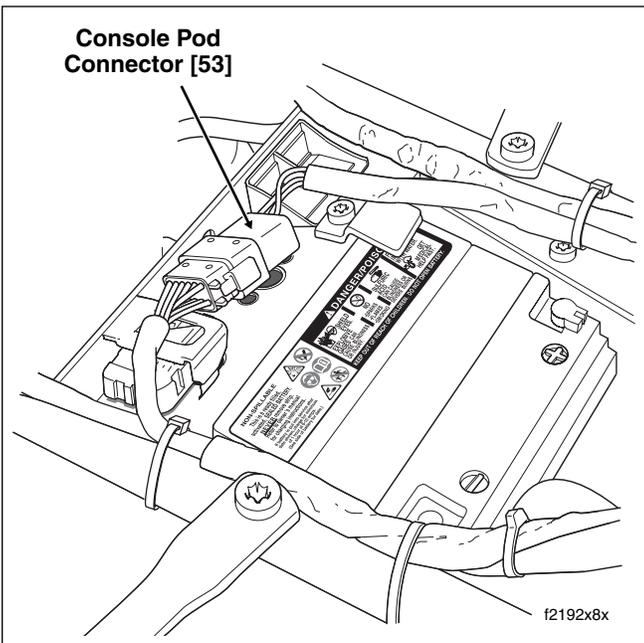


Figure 8-188. Disconnect CB Antenna Cable Connector

- b. Audio to interconnect harness connector [6], 6-place Deutsch (black); top of radio (left side).
  - c. Radio connector [28], 35-place Amp (black); back of radio (left side).
  - d. CB module connector [184], 12-place Deutsch (black); top of radio (left side).
7. Remove screw, ground wire ring terminal and P-clamp to release main harness and audio harness from right side of steering head.
  8. Carefully pull front section of audio harness rearward under right side of fairing cap and allow conduit and connectors to hang over top of engine guard.
  9. Open Tour-Pak. Open map pocket and remove acorn nuts. Remove map pocket and molded liner from Tour-Pak.
  10. Disconnect CB antenna cable connector [50]. Release cable from front adhesive clip inside Tour-Pak. See Figure 8-188.
  11. Pull right side grommet into Tour-Pak and remove from CB antenna cable. Feed CB antenna cable through hole at front of Tour-Pak.
  12. Remove trim ring and gently pull on wire harness to draw rear speaker/passenger controls connector [41], 6-place Deutsch, out of right side speaker box. Depress external latch and use a rocking motion to separate pin and socket halves.



**Figure 8-189. Remove Seat**

13. Carefully draw rear right section of audio harness forward allowing conduit and connectors to hang beside the right side passenger footboard.
14. Moving to opposite side of motorcycle, remove trim ring and gently pull on wire harness to draw rear speaker/passenger controls connector [42], 6-place Deutsch, out of left side speaker box. Depress external latch and use a rocking motion to separate pin and socket halves.
15. Release rear headset receptacle from bracket at bottom of left side speaker box. Release spring from hole in receptacle wire jacket.
16. Carefully draw rear left section of audio harness forward to front of rear fender and then pull out from beneath upper frame tube allowing conduit and connectors to hang beside the left side passenger footboard.
17. Release console pod connector [53], 12-place Deutsch, from attachment clip anchored in hole of frame weldment at rear of battery box. See [Figure 8-189](#). Depress external latches and use a rocking motion to separate pin and socket halves.
18. Carefully cut three cable straps securing audio harness to left and right upper frame tubes. See [Figure 8-191](#). Cut two cable straps securing audio harness to luggage rack rails.
19. Starting at the front of the wire trough, and working rearward from side to side, release catches to remove cover. For most catches, carefully insert blade of flat tip screwdriver into slot only as far as necessary to release catch.
20. Using a paint pen, draw a line where the audio harness conduit enters the wire trough at the front and also where it exits the outboard sides of both the left and right legs at the rear.

21. Draw a line on the conduit and/or wire bundle on both sides of cable straps 1, 2, 4, 6 and 11-17

**NOTE**

*Do not tamper with the cable straps that fix the position of the breakouts. The breakouts are those branches of the main harness that exit the wire trough on the left and right sides (cable straps 3 and 7-10 in [Figure 8-190](#)). As exact placement of the breakouts is necessary for optimal fit and routing, they should be left intact whenever possible.*

22. Carefully cut and remove cables straps marked with the paint pen.
23. Gently pull on audio harness to separate from the main harness. If a few strands of the audio harness are interwoven or intermingled with wires of the main harness and cannot be separated, then proceed based on whether the audio harness is to be discarded or retained.

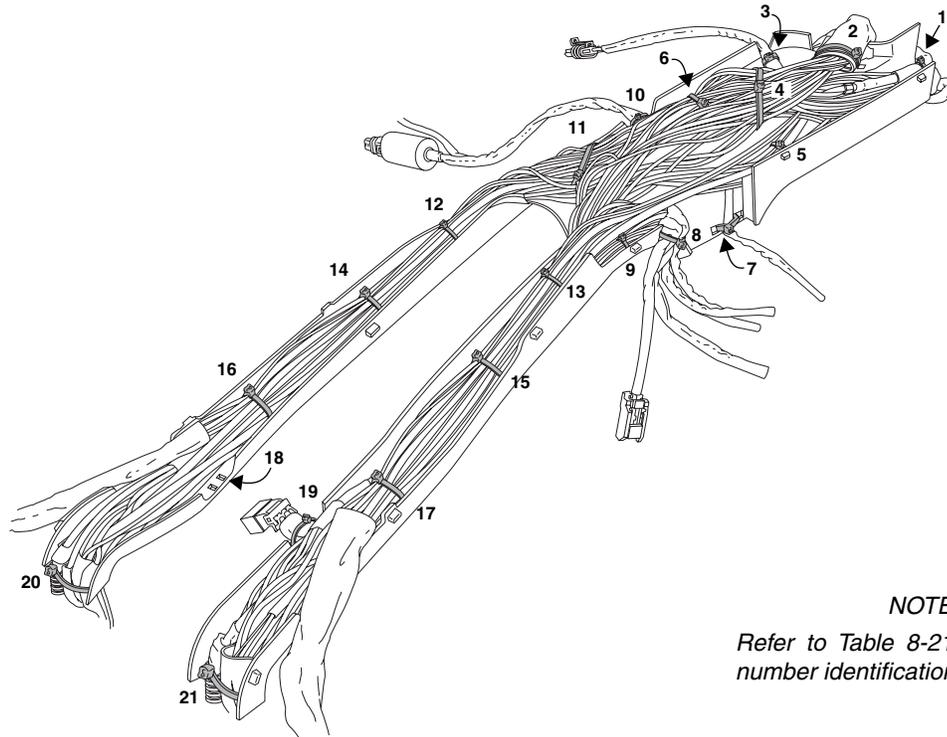
**Discarded**

- a. Cut audio harness wires well away from those of the main harness to avoid cutting or nicking the main harness wires.

**Table 8-21. Wire Trough Cable Straps**

Cable Strap	Captures Conduit/Wire Bundle	Models
1	Main Harness	All
2	Audio Harness	FLHTCU
3	Ignition Coil	All
	Fuel Gauge	FLHR/C/S
4	Main Harness	All
	Audio Harness	FLHTCU
5	Main Harness	All
6	Main Harness	All
	Audio Harness	FLHTCU
7	Front Fuel Injector	Fuel Injected
8	TP Sensor, MAP Sensor, IAC and Rear Fuel Injector	Fuel Injected
	MAP Sensor	Carbureted
9	TP Sensor, MAP Sensor, IAC and Rear Fuel Injector	Fuel Injected
10	Horn	All
	ET Sensor	Fuel Injected
11-17	Main Harness	All
	Audio Harness	FLHTCU
18	Instrument Console	FLHR/C/S
19	Fuel Tank Harness	FLHX, FLHT/C/U, FLTR
20-21	Main Harness	All

f2429x8x

**NOTE**

Refer to Table 8-21 for reference number identification.

**Figure 8-190. Wire Trough Cable Strap Locations (FLHTCU)**

- b. Remove and discard audio harness

**Retained**

- a. Take careful note of which breakouts on the main harness interfere with removal of the audio harness.
- b. Using a paint pen, draw a line on the wire bundle on the inboard side of the breakout conduit.
- c. Cut cable strap to release breakout from wire trough.
- d. Pull on audio harness as necessary to separate from the main harness.
- e. install **new** cable strap in slots of wire trough loosely capturing breakout.
- f. Move conduit on breakout so that inboard side is aligned with painted line.
- g. Adjust cable strap so that it occupies the depression or indentation left by the original cable strap and then tighten. Cut any excess cable strap material.
- h. Repeat steps as necessary until audio harness can be removed.

2. Thread **new** cable straps through slots of wire trough where removed (cable straps 1, 2, 4, 6 and 11-17). See [Figure 8-190](#). Properly installed, both ends of the cable strap will be pointing upward.

**NOTE**

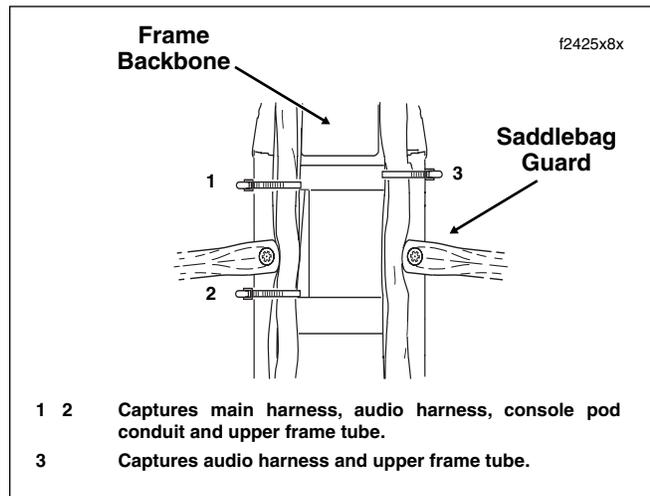
*If additional clearance is needed for installation of the cable straps, gently pull index pins on rear legs of wire trough from holes in frame backbone. Slide wire trough forward to release slot at bottom from T-stud on frame backbone. Reinstall wire trough after installation of the cable straps.*

3. Adjust main harness as necessary, so that the painted lines are aligned with the cable straps installed in the wire trough.
4. Place audio harness on top of main harness aligning the entrance and exit markings with the openings in the wire trough. Verify that the branch containing the rear headset receptacle runs down the left leg of the wire trough, while the branch containing the CB antenna cable connector runs down the right leg.
5. Start tail end of each cable strap into eyelet, but do not tighten.
6. Route front section of audio harness forward along right side of the steering head and then under the right side of fairing cap to front of inner fairing.

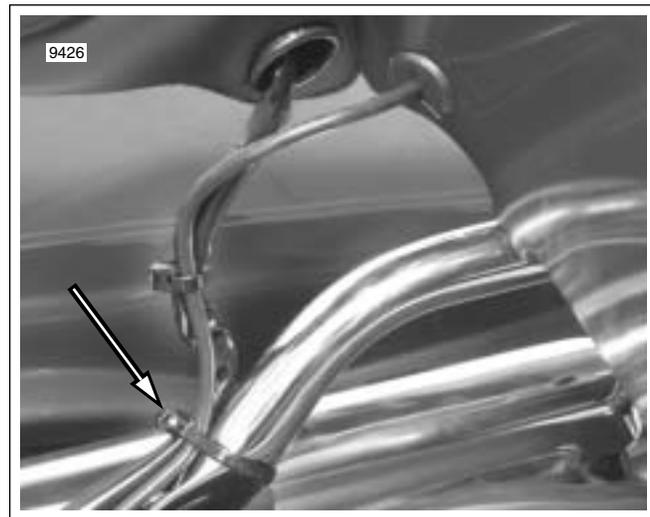
## INSTALLATION

1. Lay **new** and used audio harnesses side by side. Transfer entrance and exit markings drawn on the conduit of the used harness to their approximate locations on the new harness.

7. See [Figure 8-187](#). Standing at front of motorcycle, connect the following connectors:
  - a. CB antenna cable connector [50], back of CB module (right side).
  - b. Audio to interconnect harness connector [6], 6-place Deutsch (black); top of radio (left side).
  - c. Radio connector [28], 35-place Amp (black); back of radio (left side).
  - d. CB module connector [184], 12-place Deutsch (black); top of radio (left side).
8. On right side of motorcycle, capture audio harness and main harness in P-clamp. Install ground wire ring terminal on screw and fasten P-clamp to right side of steering head.
9. From where the audio harness exits the wire trough on outboard side of right leg, route harness rearward along inboard side of upper frame tube (and chrome frame tube cover), and then up the luggage rack rail to front of Tour-Pak.
10. Pass CB antenna cable connector through hole at front of Tour-Pak. Capture cable in grommet. Install grommet in hole with the larger OD facing inside. See [Figure 8-188](#).
11. Connect CB antenna cable connector [50]. Capture antenna cable in front adhesive clip inside Tour-Pak.
12. Connect rear speaker/passenger controls connector [41], 6-place Deutsch. Feed connector back up into right side speaker box pressing trim ring into hole.
13. Move to opposite side of motorcycle. Connect console pod connector [53], 12-place Deutsch. Install connector onto attachment clip anchored in hole at rear of battery box. See [Figure 8-189](#).
14. From where the audio harness exits the wire trough on outboard side of left leg, route harness rearward along bottom of upper frame tube to rear of battery box, and then up through opening between rear of frame weldment and front of rear fender, continuing along inboard side of upper frame tube (and chrome frame tube cover) to luggage rack rail.
15. Connect rear speaker/passenger controls connector [42], 6-place Deutsch. Feed connector back up into left side speaker box pressing trim ring into hole.
16. Attach spring to rear headset receptacle using hole in wire jacket. Capture headset receptacle in bracket at bottom of left side speaker box.
17. Install three **new** cable straps to secure audio harness to left and right upper frame tubes. See [Figure 8-191](#). Install two **new** cable straps to secure audio harness to luggage rack rails. See [Figure 8-192](#). Cut any excess cable strap material.
18. Tighten all cable straps in wire trough and cut any excess cable strap material.



**Figure 8-191. Capture Audio Harness (FLHTCU)**

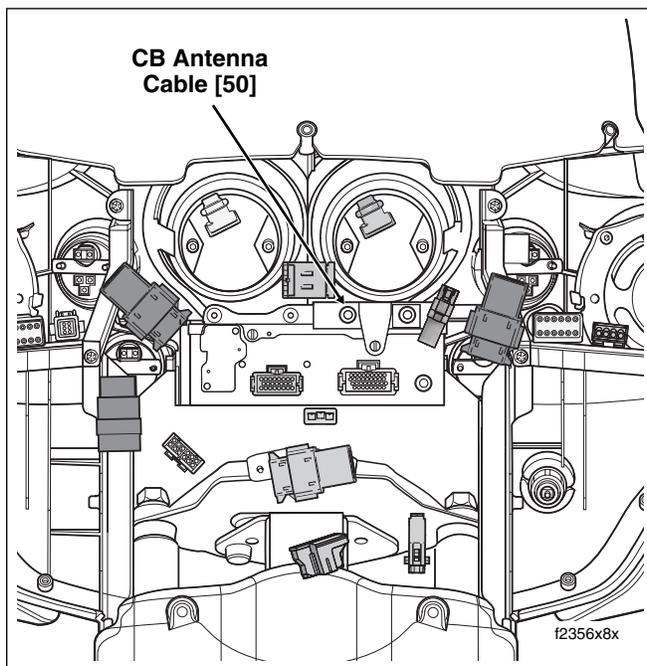


**Figure 8-192. Capture Audio Harness (FLHTCU)**

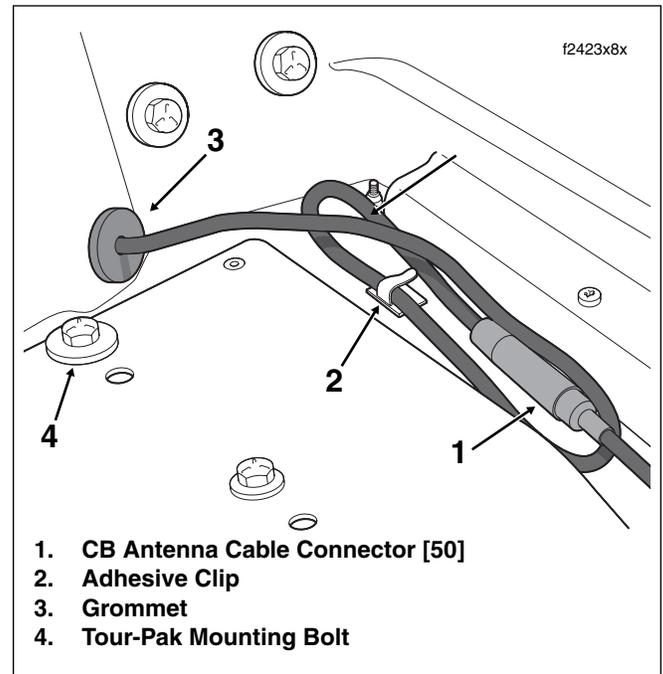
19. Place cover over wire trough. Starting at the front and working rearward from side to side, engage catches to latch cover. Verify that all latches are fully engaged.
20. Install fuel tank. For carbureted models, see Section 4.7 [FUEL TANK \(CARBURETED\), INSTALLATION \(AFTER COMPLETE REMOVAL\), FLHX, FLHT](#). For fuel injected models, see Section 9.4 [FUEL TANK \(FUEL INJECTED\), INSTALLATION \(AFTER COMPLETE REMOVAL\), FLHXI, FLHT/C/U/I, FLTRI](#).
21. Align barbed studs in right side cover with grommets in frame downtubes and push firmly into place (no tools required).
22. Install right side saddlebag. See Section 2.26 [SADDLEBAG, INSTALLATION](#).
23. Repeat steps 21 and 22 on left side of motorcycle.
24. Install the outer fairing and windshield. See Section 2.30 [UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, INSTALLATION](#).

## REMOVAL

1. Remove fuel tank. For carbureted models, see Section 4.7 [FUEL TANK \(CARBURETED\), COMPLETE REMOVAL, FLHX, FLHT](#). For fuel injected models, see Section 9.4 [FUEL TANK \(FUEL INJECTED\), COMPLETE REMOVAL, FLHXI, FLHT/C/U/I, FLTRI](#).
2. Remove right side saddlebag. See Section 2.26 [SADDLEBAG, REMOVAL](#).
3. Gently pull side cover from frame downtubes (no tools required).
4. Remove the outer fairing and windshield. See Section 2.30 [UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, REMOVAL](#).
5. Locate CB antenna cable connector [50] at back of CB module (right side). Rotate knurled ring in a counter-clockwise direction to disconnect. See [Figure 8-193](#). Carefully cut cable where it exits audio harness conduit.
6. Remove screw, ground wire ring terminal and P-clamp to release main harness and audio harness from right side of steering head.
7. Starting at the front of the wire trough, and working rearward from side to side, release catches to remove cover.



**Figure 8-193. Remove Outer Fairing (FLHTCU)**



**Figure 8-194. Disconnect CB Antenna Cable Connector**

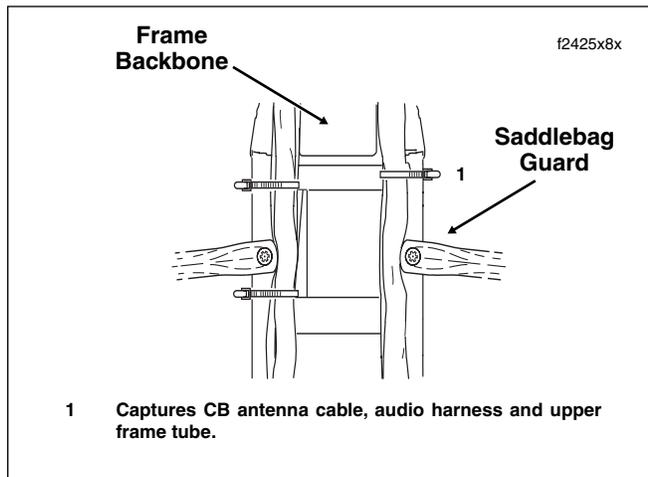
8. Carefully cut cable strap securing audio harness to right upper frame tube. See [Figure 8-195](#). Cut two cable straps securing audio harness to luggage rack rail and speaker/passenger controls conduit. See [Figure 8-196](#).
9. Open Tour-Pak. Open map pocket and remove acorn nuts (with flat washers). Remove map pocket and molded liner from Tour-Pak.
10. Disconnect CB antenna cable connector [50]. Release cable from front adhesive clip inside Tour-Pak. See [Figure 8-194](#).
11. Pull right side grommet into Tour-Pak and remove from CB antenna cable. Feed CB antenna cable through hole at front of Tour-Pak.
12. Carefully cut CB antenna cable where it exits audio harness conduit.

## INSTALLATION

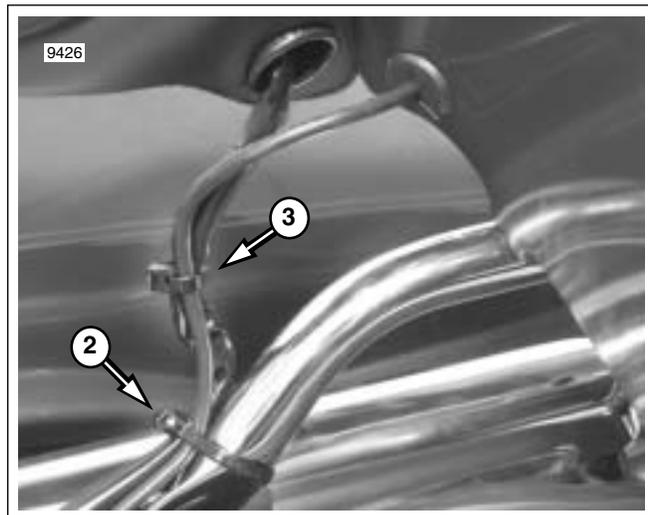
### NOTE

Place **new** CB antenna cable on motorcycle following original path. Note that the cable follows the audio harness routed to the rear right side of the motorcycle.

1. At front of inner fairing, rotate knurled ring to connect CB antenna cable connector [50] at back of CB module (right side). See [Figure 8-193](#).
2. Route free end of CB antenna cable rearward under the fairing cap to right side of the steering head.
3. Capture CB antenna cable, audio harness and main harness in P-clamp. Install ground wire ring terminal on screw and fasten P-clamp to right side of steering head.
4. Route CB antenna cable rearward through opening at front of wire trough. Exiting wire trough through opening on outboard side of right leg, route cable rearward along inboard side of upper frame tube (and chrome frame tube cover), and then up the luggage rack rail to front of Tour-Pak.
5. Loosely install **new** cable strap to secure CB antenna cable to right upper frame tube. See [Figure 8-195](#). Loosely install two **new** cable straps to secure CB antenna cable to luggage rack rail and speaker/passenger controls conduit. See [Figure 8-196](#).
6. Feed CB antenna cable connector through hole at front of Tour-Pak. Capture cable in grommet. Install grommet in hole with the larger OD facing inside. See [Figure 8-194](#).
7. Connect CB antenna cable connector [50]. Capture cable in front adhesive clip inside Tour-Pak.
8. Tighten three cable straps securing CB antenna cable to upper frame tube, luggage rack rail and speaker/passenger controls conduit. Cut any excess cable strap material.
9. Install molded liner in Tour-Pak. Install map pocket and secure using acorn nuts (with flat washers). Close Tour-Pak.
10. Place cover over wire trough. Starting at the front and working rearward from side to side, engage catches to latch cover. Verify that all latches are fully engaged.
11. Install fuel tank. For carbureted models, see Section [4.7 FUEL TANK \(CARBURETED\)](#), INSTALLATION (AFTER COMPLETE REMOVAL), [FLHX](#), [FLHT](#). For fuel injected models, see Section [9.4 FUEL TANK \(FUEL INJECTED\)](#), INSTALLATION (AFTER COMPLETE REMOVAL), [FLHXI](#), [FLHT/C/U/I](#), [FLTRI](#).



**Figure 8-195. Capture CB Antenna Cable (FLHTCU)**



**Figure 8-196. Capture CB Antenna Cable (FLHTCU)**

12. Install the outer fairing and windshield. See Section [2.30 UPPER FAIRING/WINDSHIELD \(FLHX, FLHT/C/U\), OUTER FAIRING/WINDSHIELD, INSTALLATION](#).
13. Align barbed studs in right side cover with grommets in frame downtubes and push firmly into place (no tools required).
14. Install right side saddlebag. See Section [2.26 SADDLEBAG, INSTALLATION](#).