

# SERVICE BULLETIN



M-1041

Safety Recall Code 085

January 10, 1994

## FLTCU/FLHTCU THROTTLE/IDLE CONTROL CABLES

### General

Harley-Davidson has learned that an increase in operating force may be required to operate the throttle of some 1993 and 1994 FLTC and FLHTC Ultras. This condition is caused by the passage of electrical current, which in some circumstances, may generate sufficient heat to soften the liner between the cable housing and the cable core. While the throttle control functions adequately under this condition, Harley-Davidson is concerned that the increase in force required to operate the throttle may be a distraction to the rider during vehicle operation.

As a precautionary measure, Harley-Davidson has elected to initiate a voluntary recall campaign in the interest of motor vehicle safety and customer satisfaction. This voluntary recall applies to all 1993 and 1994 cruise control equipped vehicles in the Ultra family manufactured and shipped from the York, Pennsylvania Assembly plant between August, 1992 and October 28, 1993.

While Harley-Davidson is not aware of any incidents related to this condition, all potentially affected vehicles are to be recalled to have the throttle cable condition remedied.

Attached is a list which contains:

- the names of registered owners whose vehicles were delivered to your dealership and are involved in this recall campaign.
- the vehicle identification numbers (VIN) of unregistered vehicles that were delivered to your dealership and are involved in this recall campaign.

To ensure rider safety, it is your responsibility to perform the required service on all affected vehicles even if the motorcycle was not purchased from your dealership. You will be required to perform the required service on all affected vehicles in your dealership inventory prior to selling or leasing those vehicles. We are enclosing a sufficient number of blank Dealer Service Cards for those vehicles. If necessary, additional cards are available through the Harley-Davidson Service Department.

If you are not sure that a safety recall has been completed on a particular motorcycle, contact the Harley-Davidson Recall Information Line at 1-800-448-1708 for a computer check of our recall records.

### IMPORTANT NOTE

*Because only registered owners as shown on the attached list will receive notification from us, we request that you contact any owners of vehicles still listed as unregistered. (Wherever possible, this includes any owners of FLT family vehicles not originally equipped with cruise control, yet through dealer installation of OEM parts, are now so equipped.) Advise them of the safety recall and make*

*arrangements for them to come in for recall service. We also require that you provide us with their names, addresses and VIN's as soon as possible to enable us to mail them an owner's letter, as required by the National Traffic and Motor Vehicle Safety Act (as amended).*

A shipment of Recall Code 085 Kits (Part Number 93726) will contain all of your total estimated kit requirements and will begin on or around Jan. 10, 1994. All kits will be shipped no charge, transportation paid. If additional kits are needed, please contact your Telemarketing Sales Representative.

The Safety Recall Kit contains the following items.

Qty.	Description
2	Insulator
1	Convulated Tubing (12 in.)
1	Cable Strap (14 in.)
1	Well Nut
1	J-Clamp
1	Flat Washer
1	Screw
1	Rubber Washer

### NOTE

*See the table on page 2 for a model breakdown of the items that are needed.*

### Disassembly

### NOTE

*Remove fasteners to detach tub if vehicle equipped with side car. See Credit Procedures on page 6.*

1. Remove seat.

### WARNING

**To protect against shock and accidental start-up of vehicle, disconnect the battery cables before proceeding.**

### 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 producing serious personal injury and/or property damage.**

2. Disconnect battery cable, negative cable first.

### NOTE

*If fairing lowers are absent, proceed to step 7.*

- Remove two screws from fairing lower cap on right side of vehicle.
- Holding locknut at bottom of fairing lower, turn inside screw to free assembly from engine guard clamp. Discard rubber washer.
- FLTCU:** From within glove box, remove screw, flat washer and large flat washer to free top part of fairing lower from tapped hole in fairing clamp. Remove three screws to separate glove box from fairing lower. Two screws are located on the upper inboard and outboard corners while the third can be found in the recess that fits the upper rail of the engine guard.  
**FLHTCU:** Remove two locknuts to free retainer from upper rail of engine guard. From within glove box, remove U-bolt.
- Remove glove box from fairing lower. Remove fairing lower from vehicle.
- Remove two bolts with flat washers to free rear end of fuel tank from frame. Remove fuel tank front mounting bolt (with flat washers and locknut).

**CAUTION**

If tip-over valve is not released from spring clip, the rigid neoprene tubing may break or crack when fuel tank is moved rearward.

- Release fuel tank tip-over valve from spring clip on frame bracket (in front of battery compartment, see Figure1).
- Raise the fuel tank approximately 2 inches. Unplug spark plug cables from ignition coil. Move the fuel tank crossover hose to the rear of the ignition coil, so that the tank can be raised an additional 2-3 inches (see Figure 2). Move fuel tank straight back and rest on frame backbone.
- Obtain three 1 x 2 inch wooden blocks. Raise the front of the fuel tank off the frame backbone by placing one block in the recess centered at the bottom of the tank. At the rear of the tank, place two blocks in the recess, one block on top of the other.

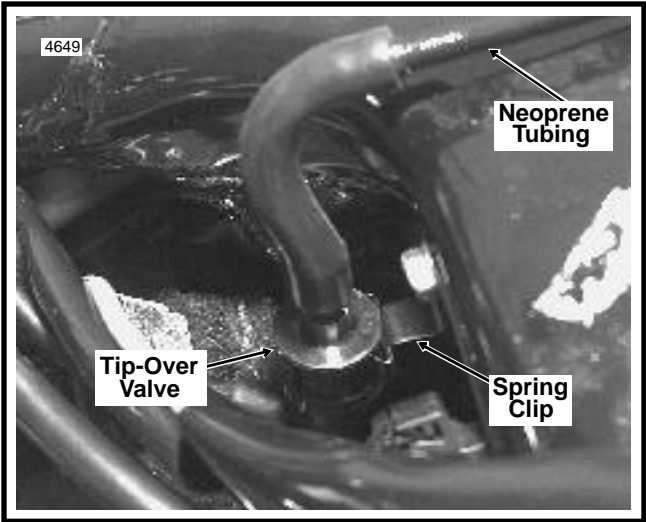


Figure 1. Release Fuel Tank Tip-Over Valve

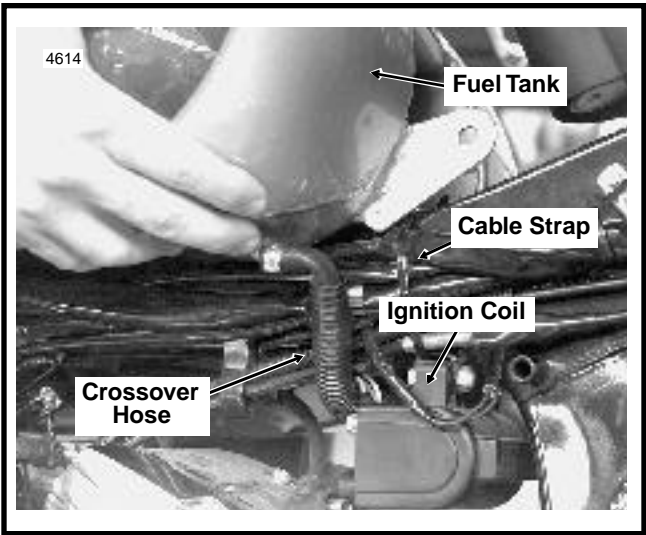


Figure 2. Move Fuel Tank Crossover Hose

- Cut and discard old 14 inch cable strap around frame backbone, wire harness and wire bundle, if present. (See cable strap callout in Figures 2 and 8.)

SAFETY RECALL KIT (HD Part No. 93726)								
Model	Parts Required							
	Insulator (2)	Convolutud Tubing	Cable Strap	Well Nut	J-Clamp	Flat Washer	Screw	Rubber Washer
-1993-								
FLTCU	●	●	●					●
FLHTCU	●	●	●					●
FLTCU/TLE	●	●	●					●
FLHTCU/TLE	●	●	●					●
-1994-								
FLTCU	●	●	●		●			●
FLHTCU	●	●	●	●	●	●	●	●
FLTCU/TLE	●	●	●		●			●
FLHTCU/TLE	●	●	●	●	●	●	●	●

## Installation/Assembly

1. Locate the cruise control roll off switch plumbed into the idle control cable on the right side of the vehicle (see Figure 3). Push rubber boot on switch forward to access spade type wire terminals.
2. Carefully examine both the idle and throttle control cables in the vicinity of the switch. If any melting of the black vinyl coating is observed, replace the affected cable following the appropriate procedures outlined in the 1993 and 1994 FLT/FXR Service Manual (see Credit Procedures for reimbursement details). After replacing the cable(s), proceed with step 3.
3. Remove both female spade type terminals from spade contacts on cruise control roll off switch.
4. On 1993 models, separate the switch wires so that the ends are free up to the point where they enter the wire harness conduit. Now route the leads straight down inboard of all wire bundles and cables running horizontally along the right side of the frame backbone. Since the wire bundles are above the wire harness on 1994 models, just verify that the switch wires are routed inboard of both the idle and throttle control cables.

### NOTE

On some 1993 models, preinsulated terminals may have been installed instead of the shrink tubing. On these vehicles, leave the preinsulated terminals in place and proceed to step 10.

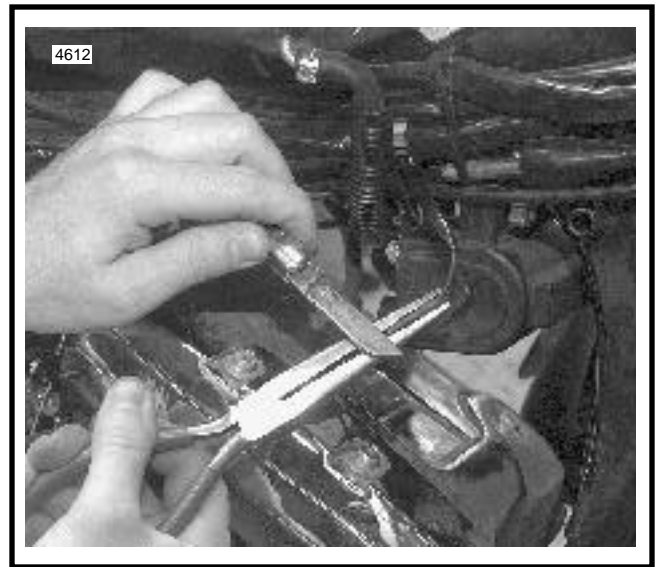


Figure 4. Cut Shrink Tubing from Female Spades

5. With a needle nose pliers, grasp the female spade type wire terminal the long way (see Figure 4). Using a sharp knife, make a cut the full length of the shrink tubing. Exercise caution to avoid cutting the wire beneath the shrink tubing material. Peel off the shrink tubing material and discard. Repeat the procedure to remove the tubing material from the other terminal.

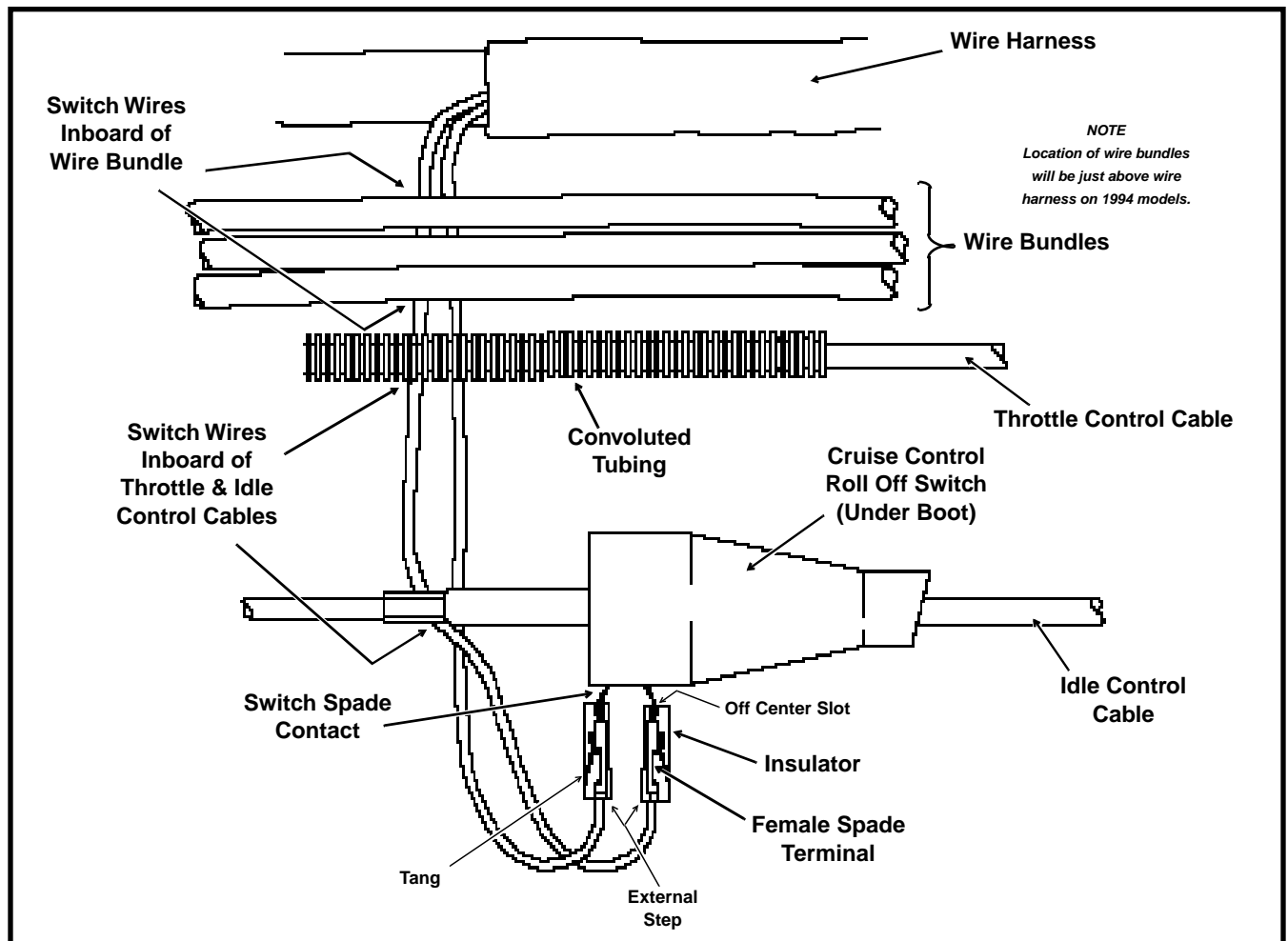


Figure 3. Throttle/Idle Control Cable Configuration (Right Side View) - 1993 Models

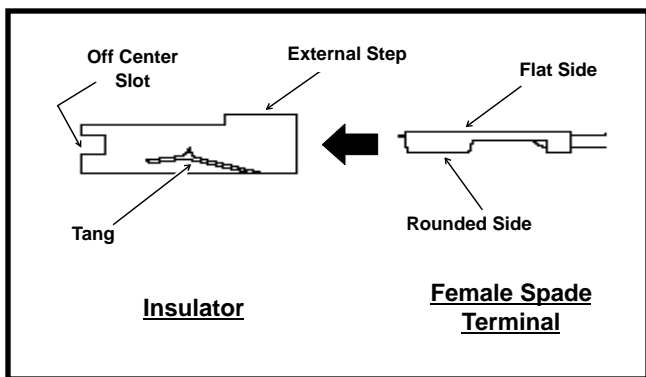


Figure 5. Install Insulators on Female Spade Terminals

#### CAUTION

If the insulators are installed backwards (where the tang engages the flat side of the female spade terminal), the insulator will only be partially installed and removal may not be possible without damage to the wire and/or crimped connections.

6. Insert the female spade type terminal into the insulator. Be sure the flat side of the spade faces the external step on the insulator (see Figure 5). The insulator will snap or click into place when fully installed.
7. Use a pliers to straighten the switch spade contacts if bowed or bent back. The contacts must be parallel and line up perpendicular to the idle control cable.
8. Slide the insulators onto the switch spade contacts (polarity is not a factor). For maximum insertion, be sure that the external step on the insulators face each other (see Figure 3).
9. Fit the rubber boot over the cruise control roll off switch. An oval cut in the boot accommodates the switch spade terminal connections.
10. Orient the idle control cable so that the insulators are at the bottom.
11. Install convoluted tubing on throttle control cable from front to rear. Open the split that runs the length of the tubing, and from the vicinity of the switch, feed the tubing back through the rearward frame mounted clamp until the end contacts the carburetor cable guide.
12. Position the throttle control cable between the idle control cable (bottom) and the wire bundle (top).
13. From right side of vehicle, insert tapered end of new 14 inch cable strap between ignition coil and coil bracket welded to underside of frame backbone. When cable strap exits left side, raise both ends so that eye is centered above the frame backbone.

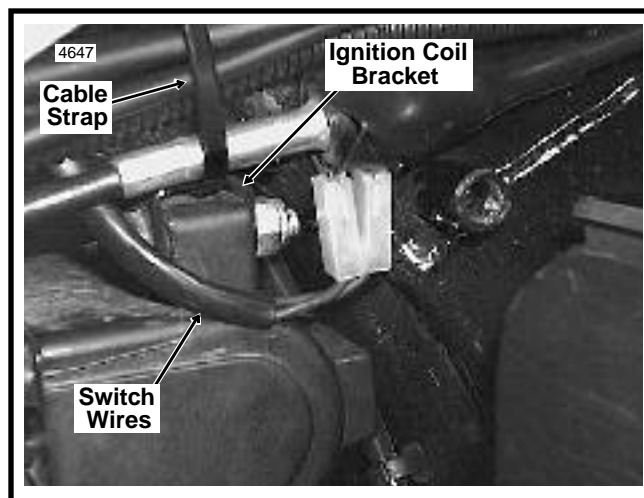


Figure 6. Leave Switch Wires Out of Cable Strap (Right Side View) - 1993 Models

#### WARNING

Switch wires may become kinked if captured in cable strap, or contact with threaded end of coil bracket bolt may fray switch wire insulation, resulting in a short to ground. Shorted switch wires will cancel operation of cruise control and brake light functions, the latter condition posing a significant hazard to the rider.

14. On 1993 models, verify that the cruise control roll off switch wires are **not** captured within the cable strap. The switch wires must be routed outboard and to the rear of the ignition coil bracket (see Figure 6). The ignition module wires (left side of vehicle above ignition coil) must also be left outside the cable strap (see Figure 7).

#### NOTE

On 1994 models, the ignition module wires are not present at this location and the switch wires run forward of the ignition coil bracket, so the checks in step 14 are not necessary.

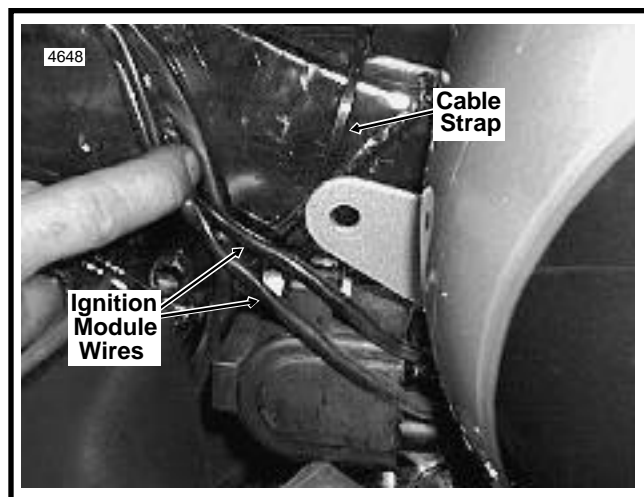
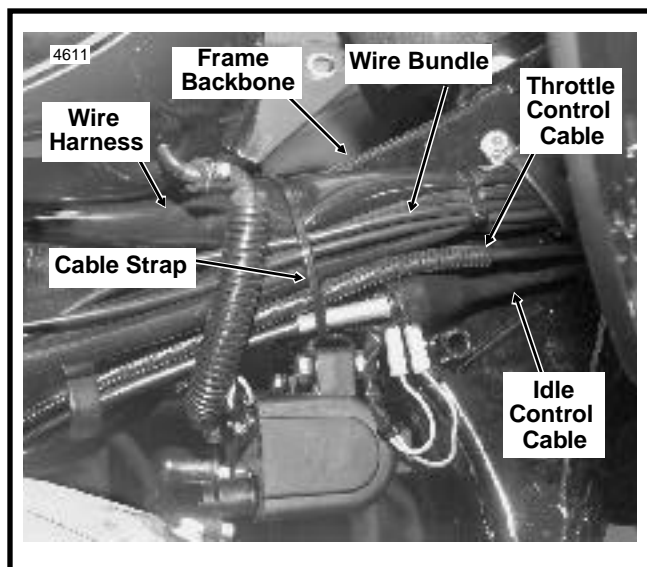
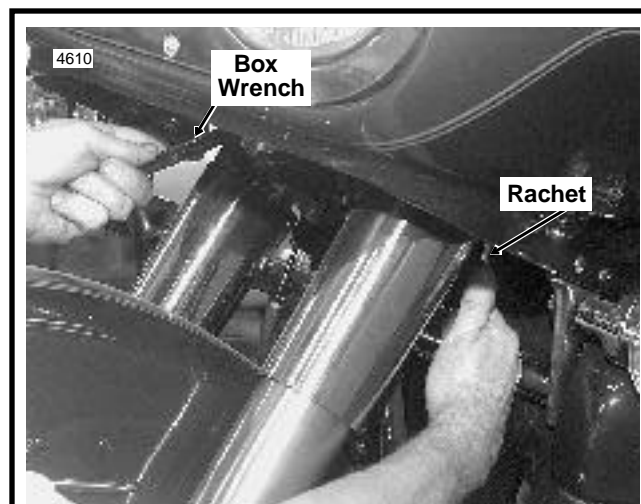


Figure 7. Leave Ignition Module Wires Out of Cable Strap (Left Side View) - 1993 Models

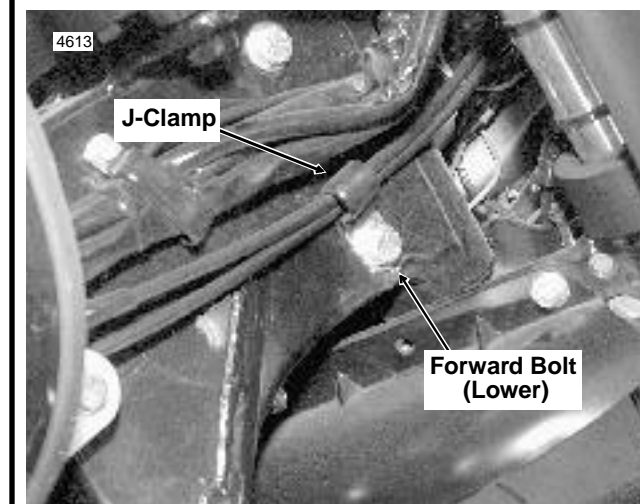


**Figure 8. Install Cable Strap**

15. On right side of vehicle, verify that the idle and throttle control cables, wire bundles, wire harness and frame backbone are captured before mating strap ends (see Figure 8). Tighten cable strap, but leave loose enough so that one finger can be inserted between strap and frame backbone. **Do not overtighten.** Cut any excess cable strap material.
16. Remove wooden blocks and move fuel tank toward its installed position. Half way down, move fuel tank crossover hose in front of ignition coil and connect spark plug cables. To facilitate cable routing and prevent possible chafing, install the spark plug cable to the front cylinder onto the left side coil connection. Work fuel tank into position aligning front flange holes with those in frame.
17. Attach fuel tank tip-over valve to spring clip on frame bracket (see Figure 1).
18. From the right side of the vehicle, install fuel tank front mounting bolt (with flat washer). On left side of vehicle, install second flat washer. Start locknut on bolt but do not tighten.
19. Install two bolts with flat washers to secure rear end of fuel tank to frame. Tighten bolts to 6 ft-lbs (8 Nm) torque.
20. Tighten fuel tank front mounting bolt.
21. On 1993 FLTCU and FLHTCU models, where the forward J-clamp is present, proceed to step 24. Since the forward J-clamp is absent on 1994 models, proceed to step 22 for additional instructions.
22. **FLTCU:** With handlebars turned to the right fork stop, remove locknut and flat washer from lower bolt in forward area of frame. Remove bolt (with second flat washer). Install J-clamp on bolt. Reinstall bolt from right side of frame. Install flat washer and locknut on threaded end of bolt (left side). Orient the J-clamp so that the loop is positioned at the top. To prevent slippage, hold a box wrench on the bolt head (right side) and use a ratchet to tighten locknut to 19 ft-lbs (26 Nm) torque (see Figure 9).



**(Left Side View)**



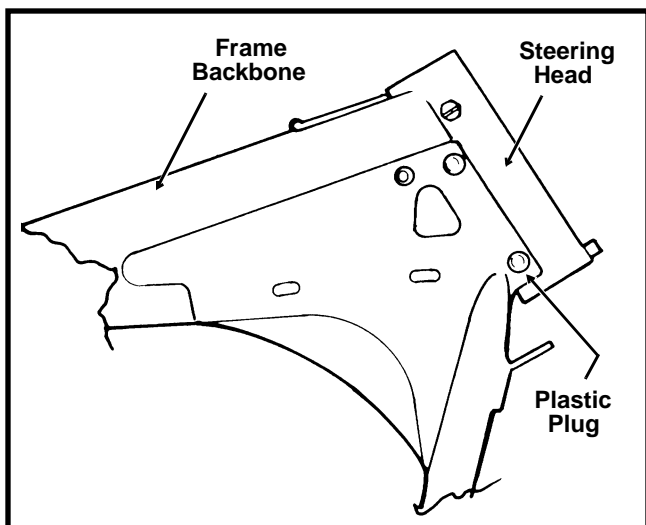
**(Right Side View)**

**Figure 9. Install J-Clamp on Forward Frame Bolt**

**FLHTCU:** Using the sharp edge of a knife, carefully pull out the plastic plug in forward area of frame (see Figure 10). Install wellnut from recall kit in hole. Install flat washer and J-clamp on screw. Start screw into wellnut. With the loop of the clamp orientated at the top, tighten the clamp screw until snug.

23. Position the throttle control and idle control cables within the forward J-clamp. Pinch or press ends of clamp closed to contain cables.
24. Place fairing lower into position on right side of vehicle. Place glove box into fairing lower.
25. Holding screw inside fairing lower, install **new** rubber washer, clamp and locknut to attach fairing bottom to engine guard. Do not tighten locknut.
26. **FLTCU:** Install three screws to secure glove box to fairing lower. From within glove box, install screw (with flat washer and large flat washer) to secure top of fairing lower to tapped hole in fairing clamp. Tighten screw to 6 ft-lbs (8 Nm) torque.

**FLHTCU:** From within glove box, install U-bolt so that it



**Figure 10. Remove Plug From Frame (Right Side View)**

encircles the upper rail of the engine guard. Loosely install retainer and locknuts. Position fairing lower so that left side is 1/4 inch from frame downtube. Tighten locknuts to 6 ft-lbs (8 Nm) torque.

27. Holding locknut at bottom of fairing lower, turn inside screw to fasten assembly to engine guard clamp.
28. Install two screws to secure fairing lower cap to fairing lower.

#### **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 producing serious personal injury and/or property damage.**

29. Connect battery cable, positive cable first.
30. Install seat.
31. Test the operation of the cruise control roll off switch. Begin the diagnostic mode with the vehicle ignition switch OFF and the cruise main switch turned to ON.
  - A. While holding the SET switch ON, turn the vehicle ignition switch to the ON position.

**CORRECT FUNCTION** - The green cruise lamp will light and remain on only as long as the operator holds down the SET switch. Continue at Step B if function is correct.

- B. Press the RES switch upward.

**CORRECT FUNCTION** - The green cruise lamp will light and remain on as long as the operator holds the RES switch upward. Continue at Step C if function is correct.

- C. Turn the throttle grip tightly closed to check the throttle grip switch.

**CORRECT FUNCTION** - The green cruise lamp should come on when the switch is closed and should go off when the throttle grip returns to its free position.

#### **NOTE**

*If any of the above functions are incorrect, refer to the 1993 and 1994 FLT/FXR Service Manual for troubleshooting procedures.*

## **Credit Procedures**

For each vehicle repaired, completely fill out a Dealer Service Card. Place a "C" in the letter box. If using the new bar coded card supplied to the customer with the notification, affix your bar coded dealer label in the appropriate box. If using the old style Dealer Service Card, be sure you supply all necessary information, including VIN, your dealer number and dealership name and address.

#### **Sidecar Credit Procedure**

If the vehicle serviced is equipped with a sidecar, a properly completed Warranty Claim Form for sidecar tub removal must accompany your Dealer Service Card. List the motorcycle VIN in the VIN section of the claim form **and** the sidecar VIN in the 'REMARKS' section of the claim form. In the 'REMARKS' section, also reference Service Bulletin M-1041. List labor code 6958 for 0.3 hour in the labor code portion of the claim form.

#### **Throttle/Idle Cable Credit Procedure**

If the vehicle serviced required throttle and/or idle cable replacement, a properly completed Warranty Claim Form must accompany your Dealer Service Card **along with the old cable(s)**. Use special labor code 6667. You will be credited for parts and an additional 0.4 hour labor. (If vehicle serviced is sidecar equipped, sidecar tub labor described in the preceding paragraph may be added to the same claim.)

When Harley-Davidson receives your properly completed Dealer Service Card, you will be credited for 1.0 hour of labor for performing the procedures outlined in this bulletin, which includes 0.1 hour for dealer administration time.

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	LEAD TECHNICIAN	TECHNICIAN NO. 1	TECHNICIAN NO. 2	TECHNICIAN NO. 3	TECHNICIAN NO. 4	RETURN THIS TO:
INITIAL HERE									

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