



INSTRUCTIONS

-J02800

REV. 2-18-03

Kit Number 77196-04

CRUISE CONTROL KIT FOR 2004 FLHT/C/CI

General

This cruise control kit is designed for installation on 2004 and later FLHT, FLHTC and FLHTCI model motorcycles. **This kit is not compatible with some Screamin' Eagle Carburetors.**

See Service Parts for kit contents.

WARNING

The rider's safety depends on the correct installation of this kit. If the following installation procedures are not within your capabilities, or if you do not have the correct tools, have your Harley-Davidson dealer perform this installation. Failure to do the installation correctly could result in death or serious injury.

Service Manual Required

This Instruction Sheet refers the installer to the appropriate FLT Service Manual for many procedures. Therefore, Harley-Davidson recommends that you do not attempt to install this kit without having a copy of the FLT Service Manual applicable to your vehicle.

NOTE

A Service Manual for your vehicle is available from your Harley-Davidson dealer.

Installation

1. Remove seat, left saddlebag, left side cover, and air cleaner assembly following instructions in applicable Service Manual.
2. Review the "CRUISE CONTROL-Ultra MODELS" section in the applicable FLT Service Manual before attempting to install this kit.

Install Cruise Control Module

WARNING

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

WARNING

Disconnect the negative (-) battery cable first. If positive (+) cable should contact ground with the negative (-) cable connected, the resulting sparks can cause a battery explosion which could result in death or serious injury.(00049a)

3. Remove battery.
4. See Figure 1. In battery box, identify the location of the three mounting holes (on left side of panel) for mounting the cruise control module.

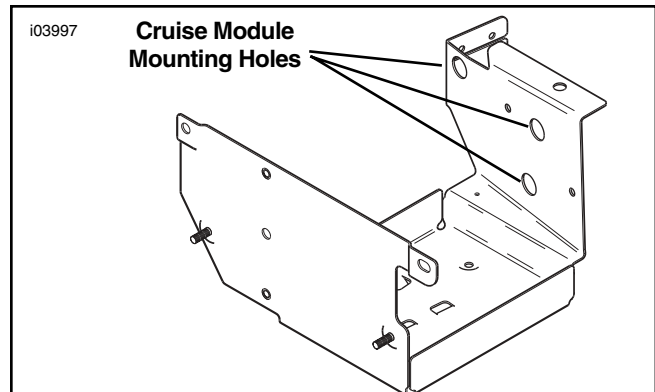


Figure 1. Cruise Module Mounting Holes

5. See Service Parts Illustration. Obtain the Cruise Control Module (1) with cruise cable attached and three Grommets (4) from kit. Install the grommets on studs of cruise control module. with small diameters outward.
6. See Figure 2. While holding cruise control module in place near its mounting location, feed the cruise control cable through the hole in frame crossmember plate and route under rear spark plug wire staying on inner side of fuel line components. Carefully curve cable toward the right and continue routing up under the fuel tank and over the top of the engine stabilizer bracket, then down between cylinder heads. Leave in place temporarily. See Service Parts Illustration and obtain the harness retainer (3) from kit and secure the cruise cable to crossmember plate with barb as shown. On California models, remove the EVAP hose from cable clip and secure hose with one of the cable ties (6).

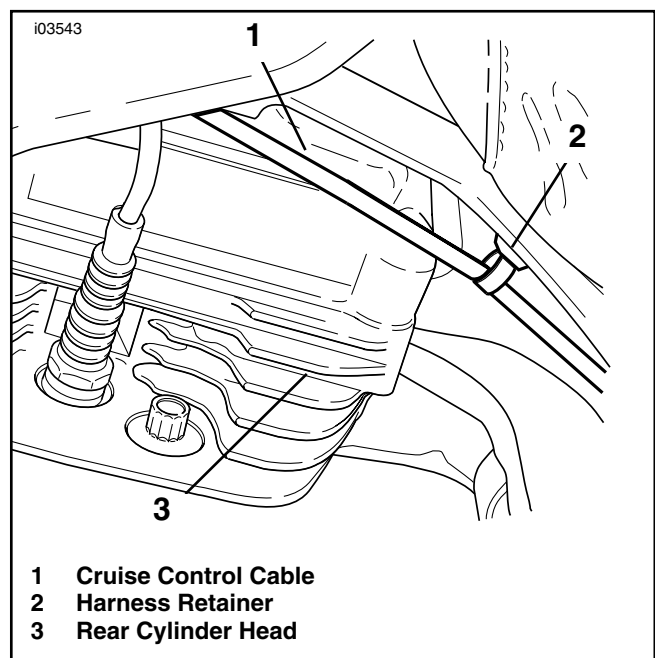


Figure 2. Attaching Cruise Cable (Left Side View)

NOTE

Prior to performing the next step, it may be necessary to cut the wire ties securing the main harness to the frame tube (above mounting area) and temporarily move harness aside to allow adequate room for cruise module installation. It may also be necessary to move the charcoal canister hose to the side and secure to frame tube with cable tie (6).

7. See Figure 3. Remove the fuse block cover panel by pulling straight out from mounts and temporarily position the cover away from the mounting area. Align the cruise module studs (and grommets) with mounting holes in battery box and push module firmly into position. Make sure grommets enter mounting holes in battery box.
8. See Service Parts Illustration. Obtain the three flange locknuts (5) and install to cruise control module studs (inside battery box). Tighten nuts 9-11 ft-lbs (12.2-15 Nm). Locate the 10-place connector harness (normally wire tied to frame tube next to battery box) and cut the tie. Route connector downward and install the at 10-place receptacle in cruise module.

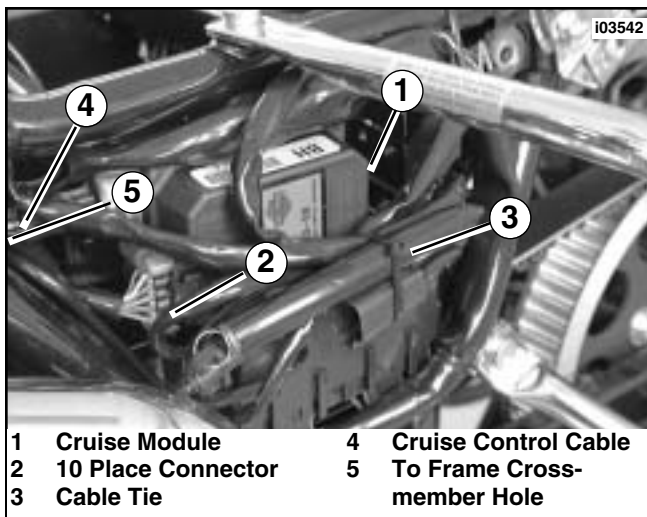


Figure 3. Mount Cruise Control Module

9. Reinstall the fuse block cover panel by sliding (side channels) back onto mounts. See Service Parts Illustration. Obtain cable tie/s (6) from kit. Bundle wire harnesses (moved to install cruise module) along side of cruise module to allow the side cover to be reinstalled.
10. Return to cruise cable end near carburetor or induction module. Follow instructions in applicable Service Manual to connect cruise cable to carburetor or induction module. **NOTE:** See Service Parts Illustration. Use new retaining ring (8) from kit when installing cable end to carburetor/Induction module.

Install New Right Handlebar Control with Harness

CAUTION

Do not remove the switch housing assembly without first placing the 5/32 inch cardboard insert between the brake lever and lever bracket. Removal without the insert may result in damage to the rubber boot and plunger of the Front Stoplight Switch.

NOTE

Use the eyelet of an ordinary cable strap if the cardboard insert is not available.



Figure 4. Install Cardboard Insert

11. See Figure 4. Place a 5/32 inch cardboard insert between the brake lever and lever bracket.
12. Using a T27 TORX® drive head, remove two screws with flat washers securing the handlebar clamp to the master cylinder housing. Remove brake lever/master cylinder assembly and clamp from the handlebar. Use a tie strap or other means to keep the assembly out of the way.
13. Using T25 TORX® drive head, remove the upper and lower switch housing screws.
14. Remove the friction shoe from the end of the tension adjuster screw.

NOTE

The friction shoe is a loose fit and may fall out or become dislodged if the lower switch housing is turned upside down or shaken.

15. See Figure 5. Remove the brass ferrules from the notches on the inboard side of the throttle control grip, then remove ferrules from the cable end fittings. Save ferrules for re-installation.

NOTE

It is not necessary to remove the throttle control grip.

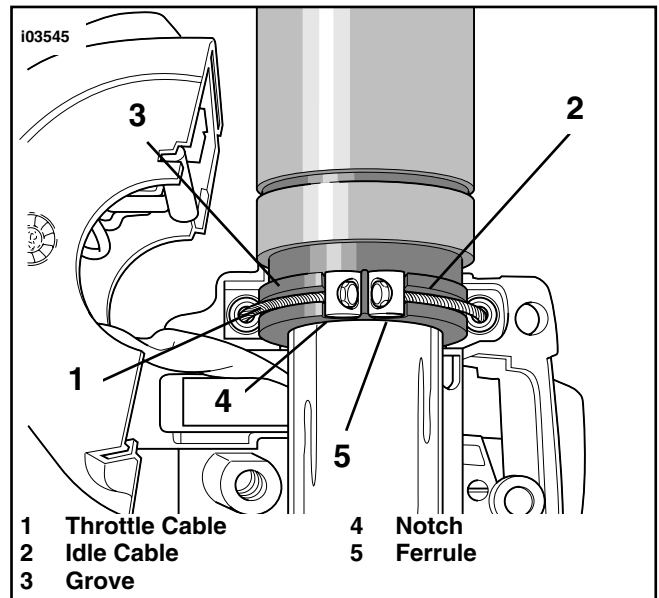


Figure 5. Remove Throttle and Idle Control Cables

16. See Figure 6. Pull the crimped inserts at the end of the throttle and idle control cable housings from the lower switch housing. For best results, use a rocking motion while pulling. Place a drop of light oil on the retaining rings, if necessary. Save inserts for re-installation.

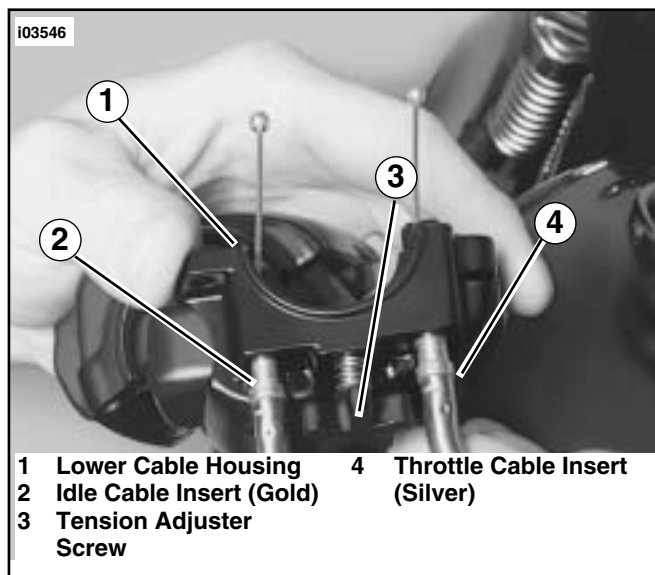


Figure 6. Upper Right Handlebar Switch Housing

17. Remove the cables from the switch housing, then separate the upper and lower switch halves.
18. Follow instructions in Service Manual and remove outer fairing.
19. Trace right handlebar wiring harness to 10-place connector and disconnect connector. Note harness routing and cut tie straps securing harness to handlebars. Discard right hand control with harness.
20. Obtain new Right-Hand Control with Harness (1) from kit. Route harness along same path as old harness (along right handlebar). Connect 10-place connector to same connector removed in Step 19.
21. Hold lower switch housing with concave side facing upward. Install the friction shoe so that the pin hole is over the point of the adjuster screw.

NOTE

The friction shoe is a loose fit and may fall out or become dislodged if the switch housing is turned upside down or shaken.

22. Refer to Figure 6. Push the throttle and idle control cables into the lower switch housing until they snap into place. Perform the following:
 - a. Obtain the crimped inserts removed in Step 16. Note the different diameter inserts crimped into the end of the throttle and idle control cable housings.
 - b. Push the larger diameter insert (silver) on the throttle cable housing into the larger hole in front of the tension adjuster screw.
 - c. Push the smaller diameter insert (gold) on the idle cable housing into the smaller hole at the rear of the tension adjuster screw.

NOTE

To aid assembly, place a drop of light oil on the retaining rings of the crimped inserts. Always replace the retaining rings if damaged or distorted.

23. Slide the throttle control grip towards motorcycle until it bottoms against the closed end of the handlebar. Rotate the grip so that the ferrule notches are at the top. To prevent binding, pull the grip back about 1/8 inch (3.2 mm).
24. Refer to Figure 5. Position the lower switch housing beneath the throttle control grip. Install the brass ferrules onto the cables so that the end fittings seat in the ferrule recess. Seat the ferrules in their respective notches on the throttle control grip. Verify that the cables are captured in the grooves molded into the grip.
25. Position the upper switch housing over the handlebar and lower switch housing.
26. Verify that wire harness conduit runs in the depression at the bottom of the handlebar. Be sure that the upper switch housing harness will not be pinched under the handlebar when the switch housing screws are tightened.
27. Start the upper and lower switch housing screws, but do not tighten.

CAUTION

See Figure 4. Do not remove the 5/32 inch cardboard insert wedged between the brake lever and lever bracket. Removal will result in damage to the rubber boot and plunger of the Front Stoplight Switch during installation of the master cylinder assembly.

28. See Figure 7. Position the brake lever/master cylinder assembly inboard of the switch housing assembly engaging the tab on the lower switch housing in the groove at the top of the brake lever bracket.

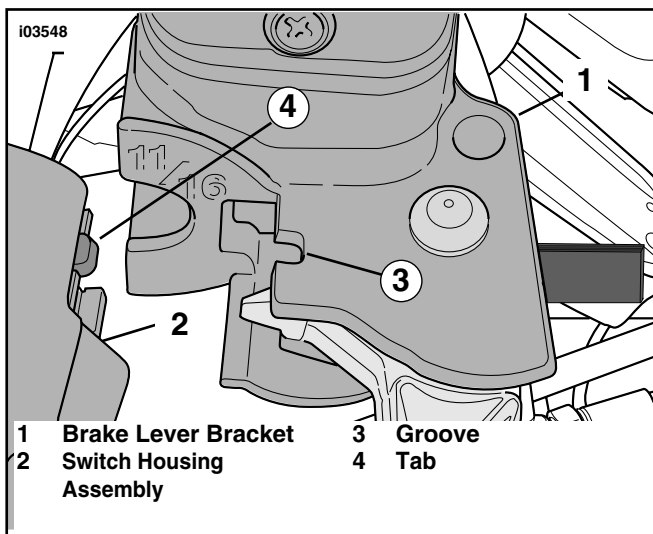


Figure 7. Installing Brake Lever/Master Cylinder Assembly to Right Switch Housing Assemblies

29. Align the holes in the handlebar clamp with those in the master cylinder housing and start the two screws (with flat washers). Position for rider comfort. Beginning with the top screw, tighten the screws to 60-80 **in-lbs** (6-9 Nm) using a T27 TORX® drive head.

30. Using a T25 TORX drive head, tighten the lower and upper switch housing screws to 35-45 **in-lbs** (4-5 Nm).

NOTE

Tighten the lower switch housing screw first so that any gap between the upper and lower housings is at the front of the switch.

31. Remove the cardboard insert between the brake lever and lever bracket.

32. See Service Parts Illustration. Obtain two cable straps (6) from kit. Secure wiring harness conduit to handlebar. Position one cable strap approximately 4-5 inches from handlebar clamp. Cut any excess cable strap material.

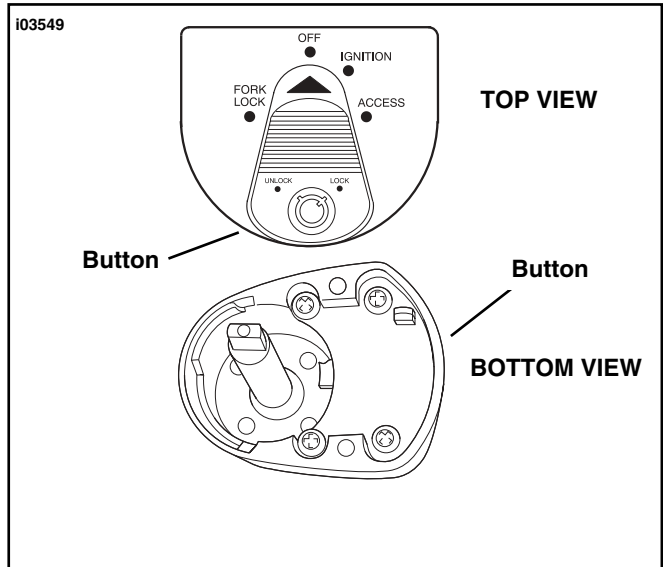


Figure 8. Ignition Switch Knob Release Button

Install Cruise Control Switch/Lamp

33. The Ignition Switch assembly must be removed to permit removal of the fairing cap. Perform the following:

34. See Figure 8. To remove the ignition switch knob, first turn the Ignition Switch key to UNLOCK and then turn the knob to ACCESS. Depress the release button at bottom (left side) with a small screwdriver, and while pushing key down, turn 60 degrees in a counterclockwise direction. Lift and remove knob.

35. Using 7/8 inch wrench on the flats, loosen switch nut and remove from threaded post of ignition switch housing. Remove collar and spacer.

36. Using a T27 TORX® drive head, remove the two screws (with flat washers) that secure the fairing cap to the left and right sides of inner fairing.

37. Gently remove the decal plate by pulling tabs from slots in fairing cap. If necessary, raise the fairing cap slightly to facilitate removal.

38. With the forks turned slightly to the left, disconnect the Fairing Switch connector [105] (12-place MULTILOCK®), from behind right side of fairing cap. Depress the button on the socket terminal side of the connector (plug) to pull apart the pin and socket halves. Remove fairing cap.

39. See Figure 9. Bend back the flexible clamp to release switch wires from the inboard side of the fairing cap.

40. Locate cruise switch location (in other half of bracket next to accessory switch) Figure 9 illustrates location with switch installed.

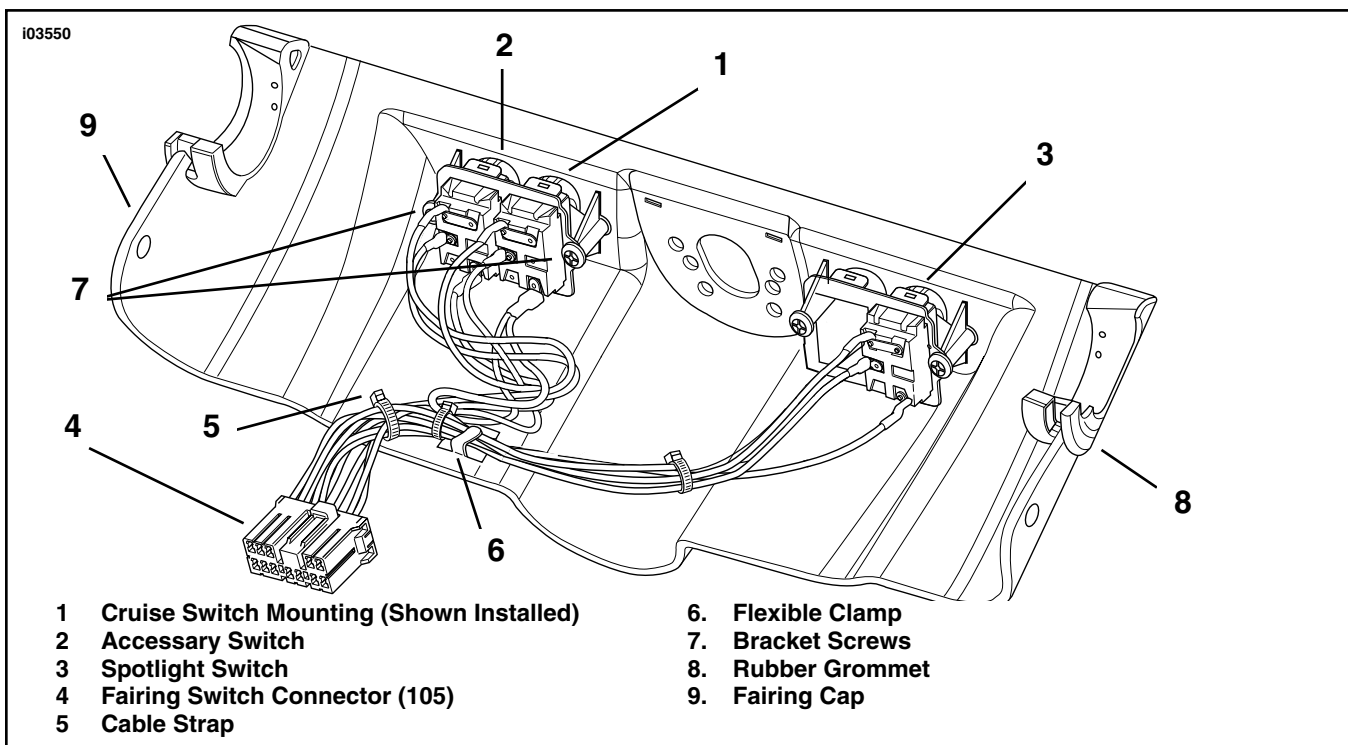


Figure 9. Fairing Cap (Inboard Side) Illustrating Cruise Switch Installed

41. Using a T25 TORX® drive head, remove the two screws to release the switch bracket.
42. Gently pry the latches on bracket outward to release tabs on cruise switch hole cover. Discard cover.

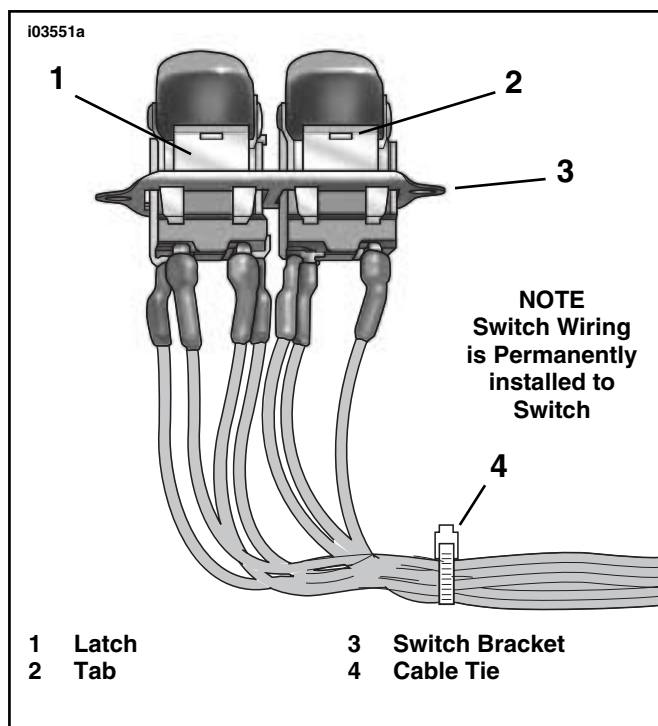


Figure 10. Cruise Switch Components

43. See Figure 10 and Service Parts Illustration. Obtain cruise switch (7) from kit. Route switch wiring through bracket. Place switch into position. Engage tabs on switch in slots of latches, then gently bend tabs upward to lock position of switch in bracket.
44. Follow instructions in APPENDIX A AMP MULTILOCK® CONNECTORS and install switch wiring terminal pins to Fairing Switch Connector as follows:
 - Orange/Violet Wire-Install Pin Terminal into Chamber 4 of the Fairing Switch Connector [105].**
 - Red/green Wire-Install Pin Terminal into Chamber 5 of the Fairing Switch Connector [105]**
 - Black/Green Wire-Install the wire with Pin Terminal into Chamber 12 of the Fairing Switch Connector [105]. NOTE: See Figure 9. Tape the end and tie off the other black/green wire. If the bike has a speaker switch, it needs to be hooked to the ground wire on that switch.**
45. Refer to Figure 9 and 10. Using a T25 TORX® drive head, install two screws to secure switch bracket to fairing cap.
46. Obtain new cable strap from kit and secure cruise wiring to wiring bundle. Secure wire bundle to fairing cap using flexible clamp.
47. Connect the fairing switch connector [105] (12-place Multilock) on the right side of the fairing cap.
48. Verify that rubber grommets on each side of fairing cap are in place. Barbs on fairing cap fit into grommet holes.

49. With forks turned fully to the left, install fairing cap over ignition switch housing. Install decal plate fitting tabs in slots of fairing cap. Plate snaps in place when properly installed. Exercise caution to avoid breaking tabs.
50. Using T27 TORX® drive head, start two fairing cap screws (with flat washers). Verify that grommets in fairing cap fully capture handlebar along with throttle and clutch cables.
51. Slide spacer over threaded post of ignition switch housing until it contacts decal plate. Slide collar over post with the tab side down (and forward). Install nut, and using a 7/8 inch wrench on flats, tighten until snug.
52. With red arrow pointing to ACCESS position, install the ignition switch knob. Turn key clockwise to UNLOCK position, then turn knob to OFF.
53. Using a T27 TORX® drive head, tighten two fairing cap screws to 45-55 in-lbs (5.1-6.2 Nm).
54. Follow instructions in Service Manual and re-install fairing cap.
55. Follow instructions in Service Manual and install outer fairing.
56. Follow instructions in Service Manual and install left saddlebag, left side cover, and air cleaner assembly.

⚠ WARNING

Connect the positive (+) battery cable first. If the positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

57. Reconnect battery, positive (+) cable first.
58. Install seat.

⚠ WARNING

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

CRUISE CABLE ADJUSTMENT AND FINAL TEST

59. If necessary, perform cruise cable adjustment. See "Cable Lash Initialization" in applicable Service Manual.
60. Refer to cruise control section in Owner's Manual for cruise control operating instructions.
61. Test ride motorcycle and verify cruise control is operating properly.



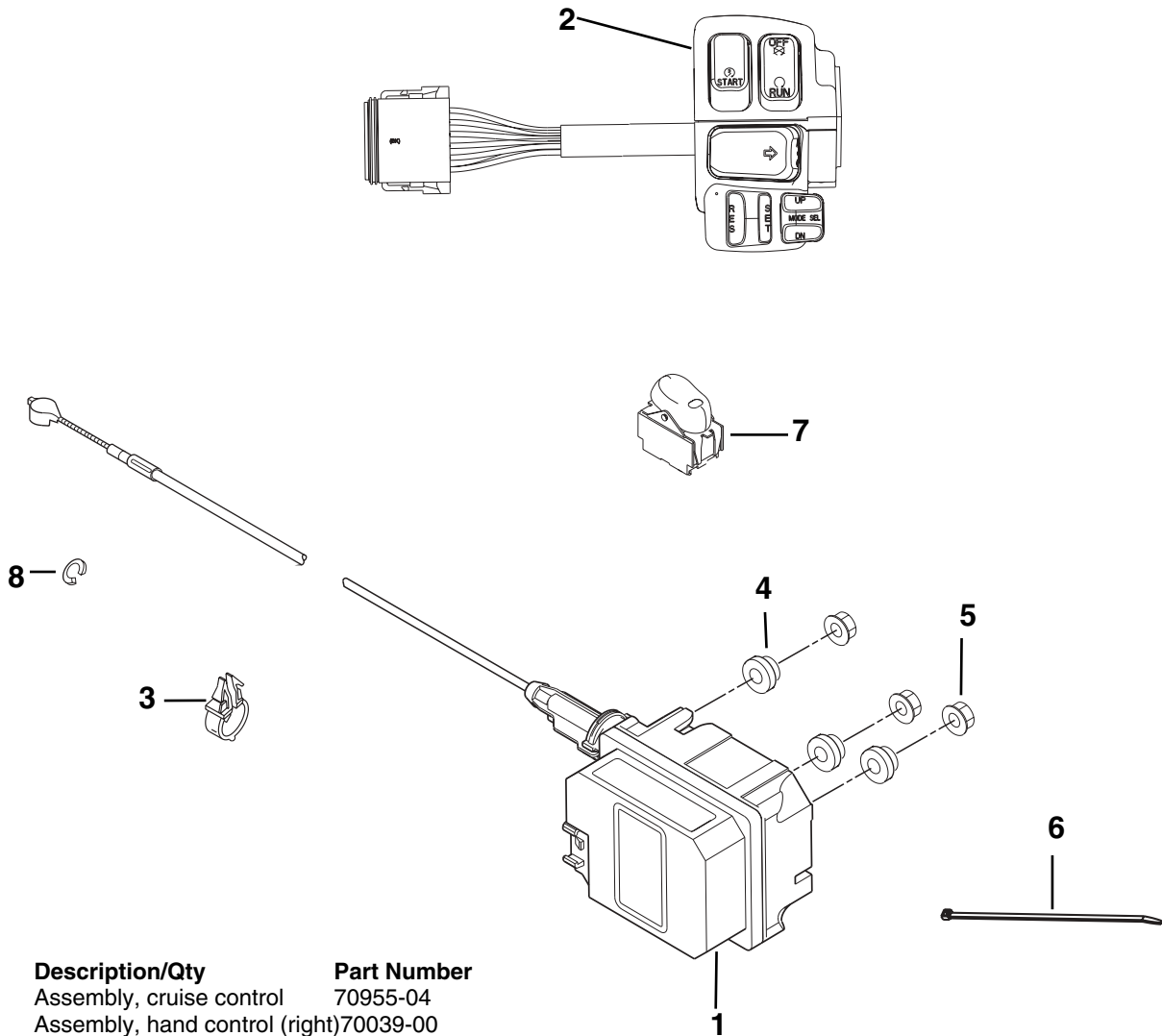
Service Parts

Part No. 77196-04

Date 2/03

FLHT/C/CI Cruise Control Kit

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Item	Description/Qty	Part Number
1	Assembly, cruise control	70955-04
2	Assembly, hand control (right)	70039-00
3	Retainer, wire harness	70345-84
4	Grommets (3)	11497
5	Flange nuts (3)	7499
6	Cable tie (6)	10065
7	Switch, cruise w/wiring	71513-98
8	Ring, retaining	11193