

## HEATED HAND GRIP KIT

### GENERAL

#### Kit Number

N1050.1AK

#### Models

For model fitment information, please see the Accessories section of [www.buell.com](http://www.buell.com) (English only).

#### Tools and Supplies Required

**For Lightning and Ulysses Models:** Loctite® 271 (Red) Threadlocker and Sealant (H-D Part Number 99671-97) is required for proper installation of this kit.

### WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Buell dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00334a)

#### NOTE

*This instruction sheet references Service Manual information. A Service Manual for your model motorcycle is required for this installation and is available from a Buell Dealer.*

#### Electrical Overload

### CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage. See a Buell dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00249b)

### WARNING

When installing any electrical accessory, be certain not to exceed the maximum amperage rating of the fuse or circuit breaker protecting the affected circuit being modified. Exceeding the maximum amperage can lead to electrical failures, which could result in death or serious injury. (00310a)

The Heated Hand Grips require up to 3.0 amps additional current from the electrical system.

### Kit Contents

See Figure 14 and Table 1.

### PREPARATION

1. Refer to the Service Manual, and follow the instructions given to remove the seat. Unthread the fastener and remove the negative (black) battery cable from the negative (-) battery terminal.
2. **For Firebolt models:** Fairing removal is not necessary in order to install this kit.

**For Lightning models:** Using a 1/8 inch hex key, remove the four screws and washers retaining the windscreen to the vehicle. Set the screen and hardware aside for later assembly.

#### For Ulysses models:

- a. Using a 1/8 inch hex key, remove the six screws and washers retaining the flyscreen/windscreen assembly to the vehicle. Set the screen and hardware aside for later assembly.
- b. Unsnap the deflectors from the handlebar end caps, and loosen the deflector attaching screws if necessary to swivel the deflectors forward.

### HAND GRIP REMOVAL

1. **For Firebolt and Lightning models:** Begin at Step 3.  
**For Ulysses models:** Release the switch housing harnesses from the handlebar by removing the four harness retainers from the holes in the bar.

#### NOTE

*In the following step, remove only the cable straps, not the harness retainers on the switch harness.*

2. To aid in later assembly, make marks on the brake switch harness at the approximate locations of the **cable straps** that bind together the right-side handlebar switch harness and brake switch harness. Cut these cable straps off and discard them.
3. **For ALL models:** Note the routing of the right-side handlebar switch wiring, and the location of any remaining cable straps attaching the right-side handlebar switch harness to components under the fairing/flyscreen/windscreen. Remove and discard these cable straps.
4. Remove the left-side handlebar switch assembly fasteners, and **set aside** for later assembly. Remove the switch assembly from the handlebar.
5. Using a sharp blade or knife, carefully cut the left-side grip from the handlebar. Thoroughly clean the handlebar surface of all dirt and adhesive residue.

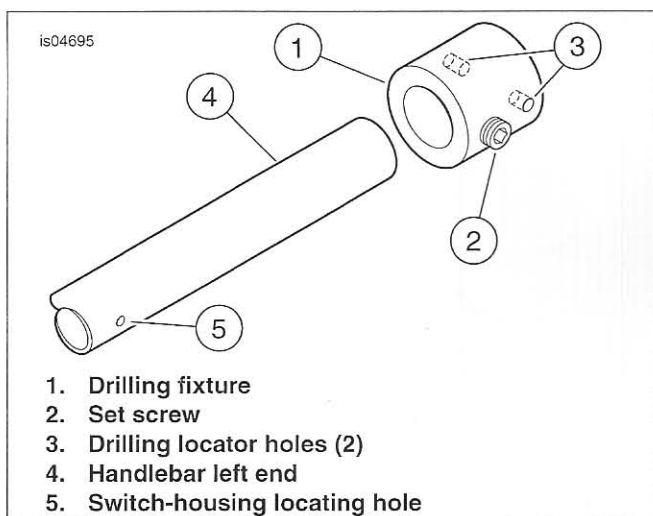
6. Refer to **HANDLEBAR SWITCHES: REMOVAL** in the Service Manual, and follow the instructions to disassemble the throttle and idle cables **at the handlebar end only**. Disconnect the switch connector from the vehicle harness, and remove and **discard** the right-side handlebar switch assembly.

7. Remove and discard the right-side hand grip (throttle grip).

## HEATED HAND GRIP INSTALLATION

1. Using an 8mm socket, loosen the clutch lever pinch screw to allow the clutch lever bracket to rotate on the handlebar.
2. See Figure 1. Obtain the drilling fixture (1) from the kit. Check that the set screw (2) does not extend into the bore of the fixture. With the set screw inboard and toward the front, slide the fixture onto the left end of the handlebar (4).

Align the set screw with the switch housing locating hole (5) in the handlebar, and tighten the set screw securely.



**Figure 1. Position Drilling Fixture On Left-Side of Handlebar**

### NOTE

*Cover the front fender and intake cover with clean shop towels to prevent scratching. Damage to the finish could result.*

3. Rotate the clutch lever bracket upward to provide clearance for the drill.

Insert the 9/64 inch drill bit from the kit into one of the holes (3) in the fixture, and drill a hole completely through the handlebar wall.

Insert the drill bit into the second hole (3) in the fixture, and drill a hole through the handlebar wall, directly opposite the first hole.

Thoroughly clean the handlebar surface of all metal shavings from the drilling operation.

4. See Figure 14. Obtain the left-side heated hand grip (1) and two self-tapping screws (7) from the kit, and note the two slots on the inboard end of the grip.

With the wire facing down, slide the grip onto the left end of the handlebar, aligning the holes inside the slots with the holes drilled in the handlebar in Step 3.

Peel back the collar on the hand grip, and insert one of the screws into each slot, with the threads protruding through the hole in the grip and into the hole in the handlebar.

Using a T-20 TORX® drive, fasten the screws into the holes in the handlebar. Tighten to **14-16 in-lbs (1.6-1.8 Nm)**.

### NOTE

*Take care not to break the alignment pins on the switch housings.*

5. Refer to **HANDLEBAR SWITCHES: INSTALLATION** in the Service Manual, and follow the instructions to re-install the left-side handlebar switch assembly to the handlebar.
6. Rotate the clutch lever bracket downward into its original position. Tighten the clutch lever pinch screw to **60-84 in-lbs (6.8-9.5 Nm)**.

7. Obtain the **new** right-side handlebar switch assembly and heated throttle grip from the kit. **With the wire facing down**, slide the grip onto the right end of the handlebar.

Refer to **THROTTLE CONTROL: ASSEMBLY/INSTALLATION** in the Service Manual to install the throttle grip, throttle and idle cables and handlebar switch assembly to the vehicle. **DO NOT** fasten wires and cables to the vehicle at this time.

### NOTE

**For Ulysses models only:** If a Buell™ Quest™ Global Positioning System (GPS) Kit is installed on the vehicle, fit the heated throttle grip wire **between** the two GPS wires.

8. **For Lightning and Ulysses models:**

- a. Slightly loosen the four screws fastening the upper handlebar clamp.
- b. Shift the position of the handlebar as needed to allow threading the heated throttle grip wire and right-side handlebar switch harness under the handlebar, behind the front fork, following the path of the existing wiring into the front fairing.

Note that the rubber-mounted gauge cluster may need to be pushed upward slightly on the right side to allow the switch connector to be fed under the cluster.

- c. **One at a time**, remove the handlebar clamp screws. Refer to Service Manual Chapter 1, **GENERAL: REPAIR AND REPLACEMENT PROCEDURES: THREADLOCKING AGENTS** for instructions on proper thread cleaning and use of Red Loctite when re-using screws having a pre-applied threadlocking agent.
- d. Clean the screw and hole. Apply two drops of Loctite® 271 (Red) Threadlocker and Sealant to the screw threads, and re-install the screw, but do not fully tighten. Repeat for the remaining screws.
- e. Align the handlebar for rider comfort. Tighten both front screws to **10-12 ft-lbs (14-16 Nm)**, then tighten both rear screws to **10-12 ft-lbs (14-16 Nm)**.

**For Firebolt models:**

- a. Remove the cable straps attaching the left-side and right-side handlebar switch wiring harnesses to the upper fork clamp (triple clamp).
- b. Route the **right-side** switch wiring harness along the same path as the original switch wires, **outside** the opening between the frame and the fairing support bracket.
- c. Route **both** heated grip harnesses **through** the opening between the frame and the fairing support bracket.

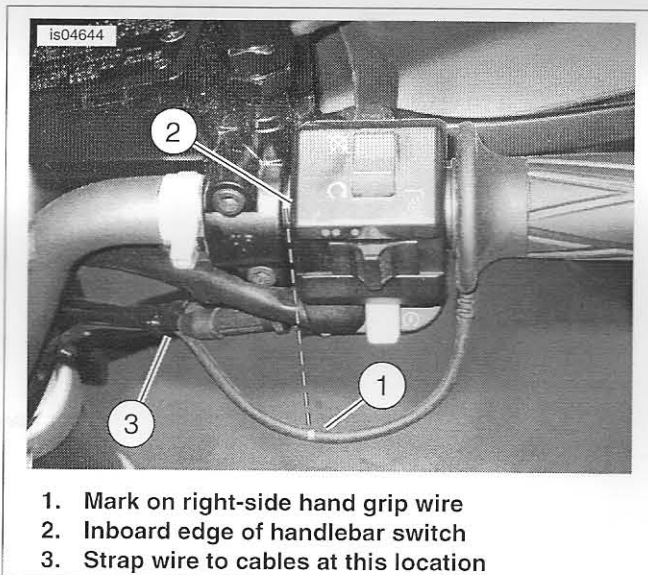
Continue routing the right-side handlebar switch wiring harness and both heated grip harnesses along the vehicle main wire harness to the connector location behind the headlight assembly.

**NOTE**

**For ALL models:** A "hanging loop" of excess wire is important to ensure the continued function of the right-side heated hand grip as it is subjected to throttle operation.

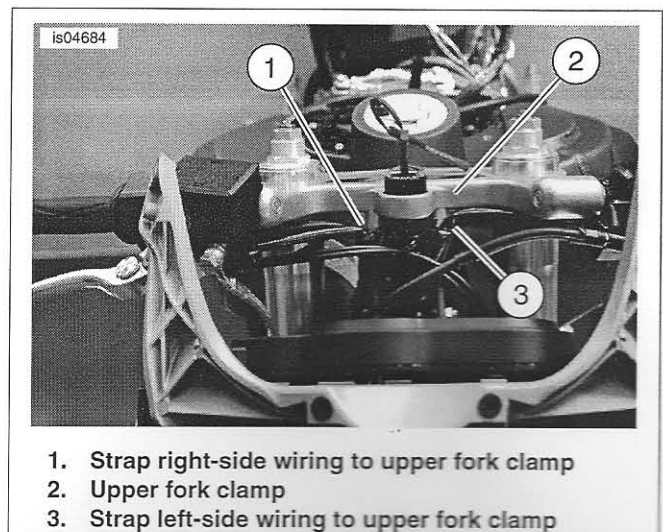
9. See Figure 2. Locate the mark (1) on the right-side hand grip wire, and align it with the inboard edge (2) of the handlebar switch. This will allow sufficient slack in the wire to prevent binding of the wire during throttle operation.

Use a cable strap (3) from the kit to bind the right-side hand grip wire to the throttle and idle cables just inboard of the throttle cable adjusters, as shown.



**Figure 2. Bind Heated Grip Wire to Throttle and Idle Cables (Ulysses Model Shown)**

10. With the first cable strap installed, rotate the right-side hand grip to make sure the wire does not touch any part of the hand control. If the wire **DOES** touch the hand control at any point, increase the size of the loop as needed to prevent contact during throttle operation.



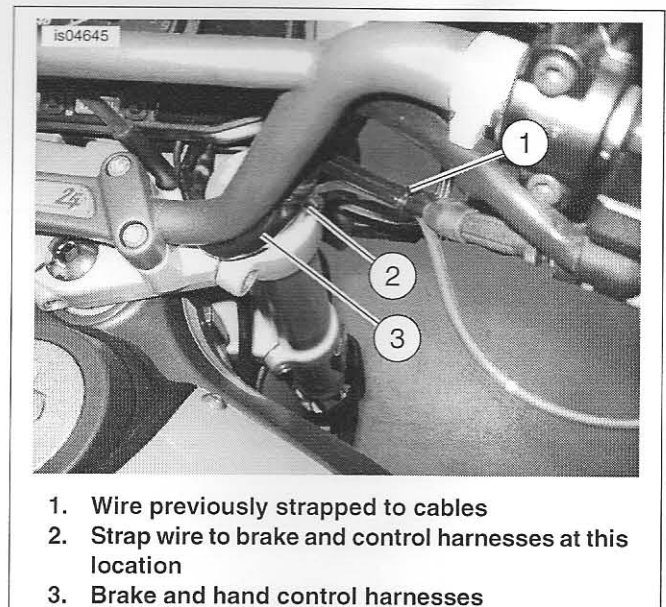
**Figure 3. Bind Wiring to Upper Fork Clamp (Firebolt Models)**

11. **For Firebolt models:** See Figure 3. Use a second cable strap (1) to bind the right-side heated hand grip wire, handlebar switch harness and brake switch harness to the upper fork clamp (2).

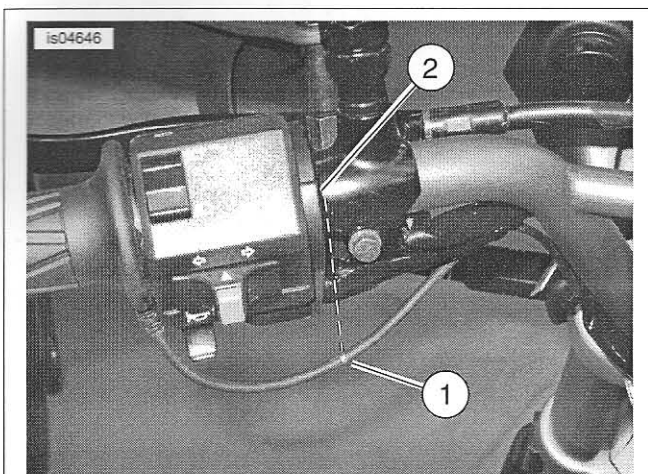
**For Lightning models:** Use a second cable strap to bind the right-side heated hand grip wire, handlebar switch harness and brake switch harness together **behind** the upper fork clamp. **DO NOT** bind the wires to the upper fork clamp.

**For Ulysses models:** See Figure 4. Use a second cable strap (2) to bind the right-side heated hand grip wire to the handlebar switch harness and brake switch harness (3) at the (lower) mark made on the handlebar switch harness in Step 5.

**For ALL models:** Re-test the throttle operation to ensure that there is **NO** contact between the hand grip wire and any part of the vehicle.



**Figure 4. Bind Heated Grip Wire to Brake and Handlebar Switch Harnesses (Ulysses Models)**



1. Mark on left-side hand grip wire
2. Inboard edge of handlebar switch

**Figure 5. Align Mark with Edge of Switch (Ulysses Model Shown)**

**NOTE**

A "hanging loop" of excess wire on the left-side grip is used to prevent kinking of the wire and provide a "balanced" appearance to the right side.

12. See Figure 5. Locate the mark (1) on the left-side hand grip wire, and align it with the inboard edge (2) of the handlebar switch.

**For Firebolt models:** Use a cable strap from the kit to bind the left-side hand grip wire, handlebar switch harness and clutch interlock switch harness together.

See Figure 3. Use a second cable strap (3) to bind the heated hand grip wire, handlebar switch harness and interlock switch harness to the upper fork clamp (2).

**For Lightning models:** Use a cable strap from the kit to bind the left-side hand grip wire, handlebar switch harness and clutch interlock switch harness to the handlebar, close to the switch assembly.

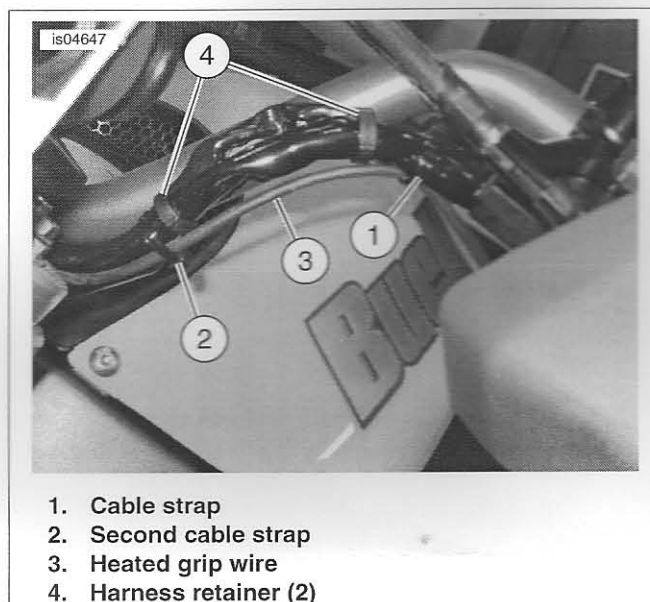
Use a second cable strap to bind the heated hand grip wire, handlebar switch harness and interlock switch har-

ness to the handlebar, close to the upper fork clamp. DO NOT bind the wires to the upper fork clamp.

**For Ulysses models:**

- a. See Figure 6. Use two cable straps (1 and 2) from the kit to bind the left-side hand grip wire (3) to the handlebar switch harness and clutch interlock switch harness on either side of the harness retainers (4).
- b. If the prongs on any of the harness retainers were broken during disassembly, replace them with the **new** harness retainers from the kit.

Press the harness retainers into the holes in the left and right sides of the handlebar.



1. Cable strap
2. Second cable strap
3. Heated grip wire
4. Harness retainer (2)

**Figure 6. Bind Heated Grip Wire to Handlebar Switch Harness (Ulysses Models)**

13. **For Firebolt models:** Proceed to Step 14.  
**For Lightning models:** Proceed to Step 18.  
**For Ulysses models:** Proceed to Step 23.

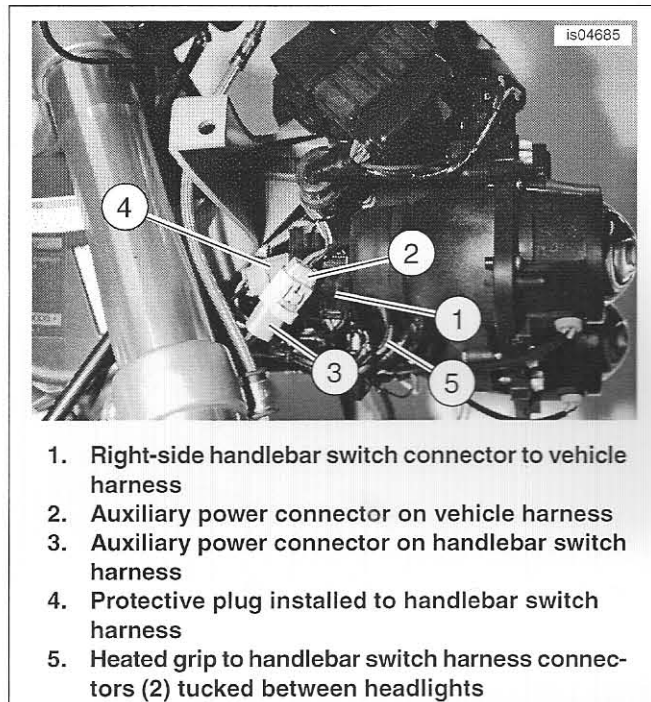


## HEATED HAND GRIP WIRE CONNECTION, FIREBOLT MODELS

14. Proceed to the area under the fairing.

See Figure 7. Refer to HANDLEBAR SWITCHES: INSTALLATION in the Service Manual, and follow the instructions to re-connect the black four-way socket housing on the right-side handlebar switch assembly to vehicle harness pin housing [22A] (1).

If previously disconnected, re-connect the black eight-way socket housing on the left-side handlebar switch assembly to vehicle harness pin housing [24A].



**Figure 7. Connect Heated Grip and Handlebar Switch Wiring (Firebolt Models)**

15. Locate the gray auxiliary power connector [160] (2) on the main vehicle harness.  
Remove the protective plug, and connect the gray pin housing (3) at the end of the right-side handlebar switch harness to socket housing [160B].  
Install the protective plug to the gray socket housing (4) at the end of the right-side handlebar switch harness.
16. Connect the two three-way heated hand grip wire pin housings to the two socket housings at the end of the right-side handlebar switch harness.  
Tuck the two heated grip wire connectors (5) up between the headlights.
17. Obtain two cable straps from the kit, and secure the bundle of wires and connectors beneath the dash.  
Proceed to the RETURN TO SERVICE section.

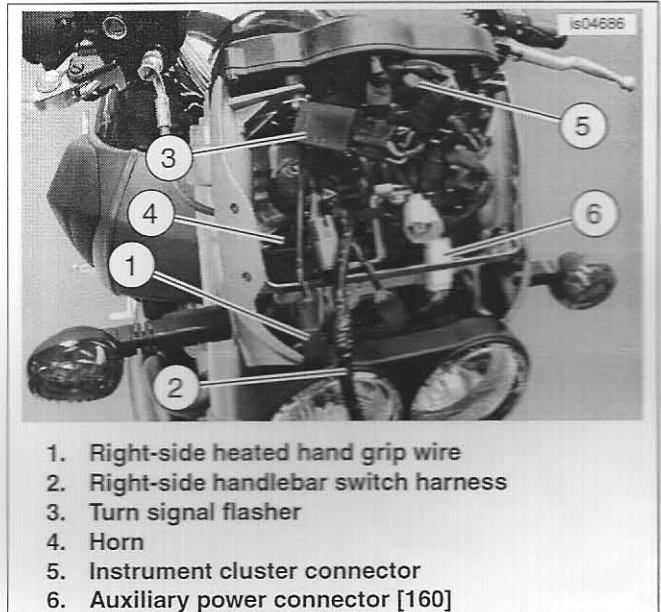
## HEATED HAND GRIP WIRE CONNECTION, LIGHTNING MODELS

18. Proceed to the area behind the windscreen.

See Figure 8. Route the right-side heated grip wire (1) and right-side handlebar switch harness (2) behind the turn signal flasher (3) and out over the horn (4).

Refer to HANDLEBAR SWITCHES: INSTALLATION in the Service Manual for instructions to re-connect the black four-way socket housing on the right-side handlebar switch assembly to vehicle harness pin housing [22A].

If previously disconnected, re-connect the black eight-way socket housing on the left-side handlebar switch assembly to vehicle harness pin housing [24A].



**Figure 8. Connect Heated Grip and Handlebar Switch Wiring (Lightning Models)**

19. Route the **left-side** heated grip wire and one heated hand grip wire from the right-side switch wire harness (2) behind the instrument cluster connector (5) under the center dash casting. Connect the grip wire three-way pin housing to the socket housing at the end of the switch harness.  
Connect the right-side heated hand grip wire pin housing to the remaining three-way socket housing at the end of the right-side handlebar switch harness.
20. Locate the gray auxiliary power connector [160] (6) on the main vehicle harness.  
Remove the protective plug, and connect the gray pin housing at the end of the right-side handlebar switch harness to socket housing [160B].  
Install the protective plug to the gray socket housing at the end of the right-side handlebar switch harness.
21. Tuck the two heated hand grip wire connectors behind the turn signal flasher (3).

### NOTE

*Do not allow the wiring to rest on the horn. Horn volume and tone quality will be affected.*

22. Obtain a cable strap from the kit, and loop it around the turn signal flasher mount to capture the bundle of wires and connectors beneath, and secure them to the mount, holding them away from the horn.

Proceed to the FINAL ASSEMBLY section.

## HEATED HAND GRIP WIRE CONNECTION, ULYSSES MODELS

23. Proceed to the area under the flyscreen.

**On the right (throttle control) side:** See Figure 9. Obtain a cable strap (1) from the kit, and attach the **new** right-side handlebar switch harness (2) and heated hand grip wire (3) in the same manner as the strap removed in HAND GRIP REMOVAL, Step 3.

**On the left (clutch control) side:** See Figure 10. Obtain a cable strap from the kit, and attach the heated hand grip wire to the left-side handlebar switch harness in the location shown.

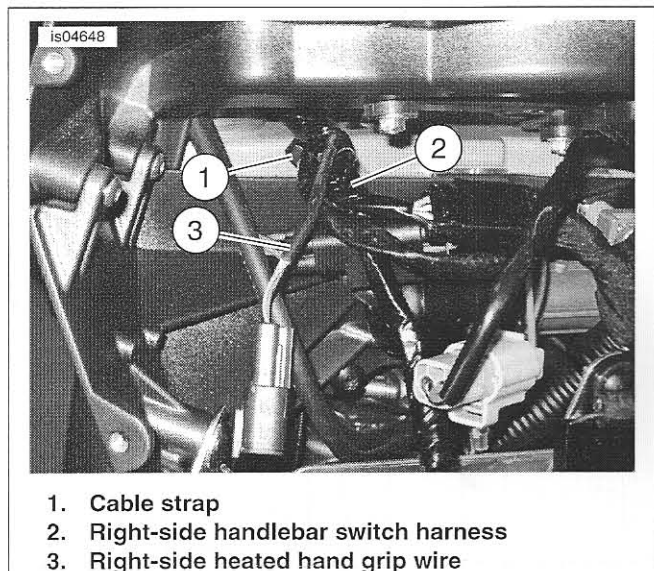


Figure 9. Bind Right-Side Harness and Wire (Ulysses Models)

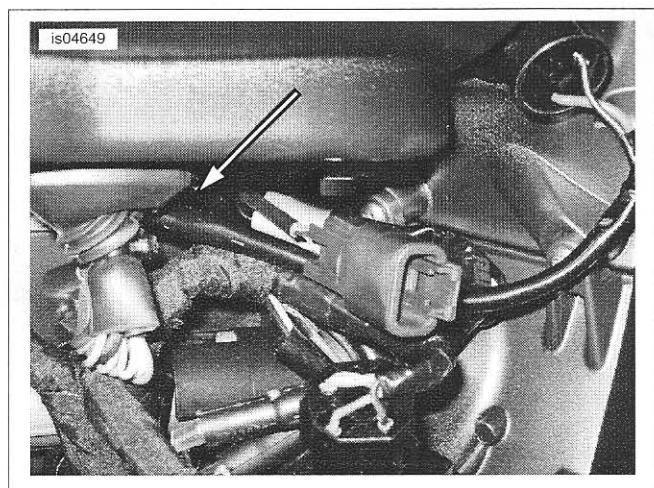


Figure 10. Bind Left-Side Harness and Wire (Ulysses Models)

24. Refer to HANDLEBAR SWITCHES: INSTALLATION in the Service Manual for instructions to re-connect the black four-way socket housing on the right-side handlebar switch assembly to vehicle harness pin housing [22A].

If previously disconnected, re-connect the black eight-way socket housing on the left-side handlebar switch assembly to vehicle harness pin housing [24A].

25. See Figure 11. Route the **left-side** heated grip wire and one heated hand grip wire from the **right-side** switch wire harness (1) behind the instrument cluster connector (5) attached to the center dash casting. Connect the three-way pin housing on the grip wire (3) to the socket housing at the end of the switch harness.

Connect the right-side heated hand grip wire pin housing (3) to the remaining three-way socket housing at the end of the right-side handlebar switch harness.

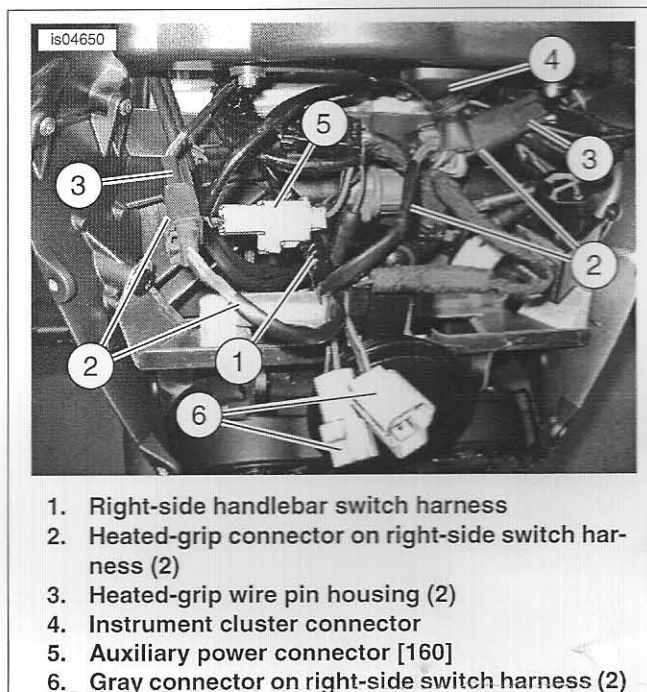


Figure 11. Heated Grip and Auxiliary Power Connections (Ulysses Models)

26. Separate the two halves of the gray connector [160] (5) that provides power to the auxiliary power outlet on the instrument panel.

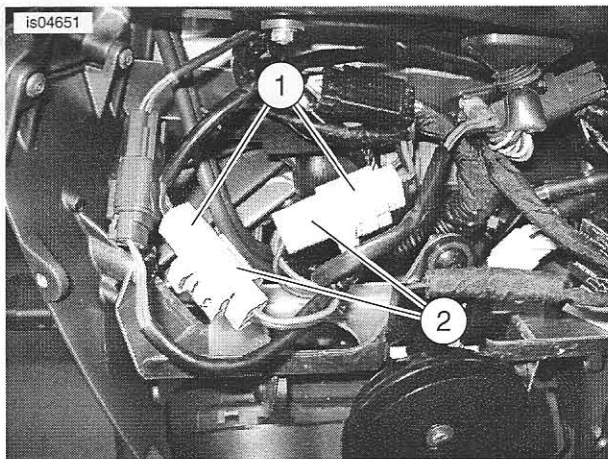
**If connector [160] appears as shown:** Plug the two gray connectors (6) at the end of the right-side handlebar switch harness into the mating halves of connector [160].

**If a Buell™ Quest™ Global Positioning System (GPS) Kit is installed on the vehicle,** it is already plugged in to socket housing [160B]. Proceed as follows:

- Disconnect the GPS wire from the vehicle main harness socket housing [160B].
- Plug the right-side handlebar switch harness pin housing into the vehicle main harness socket housing [160B].
- Plug the right-side handlebar switch harness socket housing into the GPS wire pin housing.

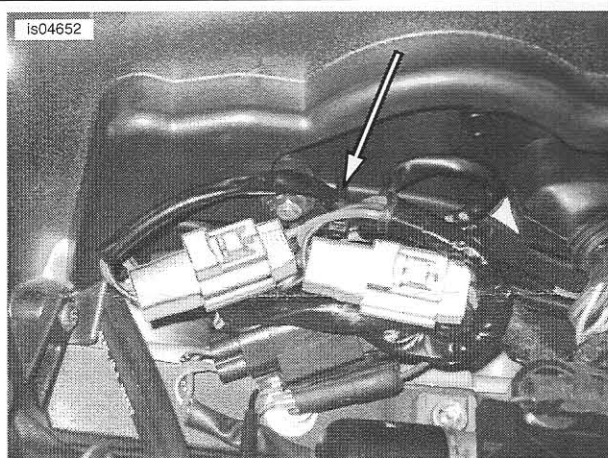
The final connection (without GPS Kit installed) should look like Figure 12.

27. Obtain a cable strap from the kit, and loop it around the upper dash casting to capture the bundle of wires and connectors beneath, and secure them to the dash (see Figure 13). Proceed to the FINAL ASSEMBLY section.



1. Auxiliary power connectors
2. Heated grip connectors on right-side switch harness

**Figure 12. Heated Grip Connections to Auxiliary Power (Ulysses Models)**



**Figure 13. Secure Wiring to Dash (Ulysses Models)**

## FINAL ASSEMBLY

1. **For Lightning models:** Position the windscreen onto the left and right front modules. Using a 1/8 inch hex key, install the four screws and washers removed earlier, and tighten to 10-12 in-lbs (1.1-1.4 Nm).

### For Ulysses models:

- a. Position the flyscreen/windscreen assembly onto the left and right front modules. Using a 1/8 inch hex key, install the six screws and washers removed earlier, and tighten to 10-12 in-lbs (1.1-1.4 Nm).
- b. Snap the deflectors onto the handlebar end caps. If loosened, tighten the deflector attaching screws to 24-36 in-lbs (2.7-4.1 Nm).

## RETURN TO SERVICE

### CAUTION

Do not over-tighten bolts on battery terminals. Use recommended torque values. Over-tightening battery terminal bolts could result in damage to battery terminals. (00216a)

1. **For ALL Models:** Be sure wires, clutch cable, throttle/idle cables and brake lines do not pull tight when handlebars are turned fully to left or right fork stops
2. Verify that the Ignition/Headlamp Key Switch is turned to the OFF position.  
Apply a light coat of petroleum jelly or corrosion retardant material to the battery terminal.  
Thread the fastener through the negative battery cable (black) into the threaded hole of the negative (-) battery terminal. Tighten the fastener to 72-96 in-lbs (8-11 Nm).
3. Refer to the Service Manual, and follow the instructions given to re-install the seat.

### WARNING

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

4. Turn the Ignition/Headlamp Key Switch to ON, but do not start the motorcycle. Test each handlebar switch for proper operation.  
Test for proper headlamp, turn signal, tail lamp and stop lamp operation.  
Turn the handlebar to the left and right steering stops, testing the handlebar control functions at each stop.

### NOTE

*The Heated Hand Grips will take a few minutes before they begin to feel warm.*

5. Turn the throttle and idle cable adjusters in the direction that will shorten the cable housings. See THROTTLE CABLE AND IDLE SPEED ADJUSTMENT in the Service Manual, and follow the instructions to adjust the throttle and idle cables.

SERVICE PARTS

Table 1. Service Parts Table

Item	Description (Quantity)	Part Number
1	Hand grip, heated (left side)	N0050.5AA
2	Hand grip (throttle grip), heated (right side)	N0051.5AA
3	Handlebar control assembly, right side	N0158.5AA
4	Drilling fixture kit (includes cone-point set screw)	C2031.1AK
5	Retainer, wire harness (4)	70345-84
6	Cable strap (7)	Y0303.2B
7	Screw, self-tapping (2)	CA0044.3AK
8	Drill bit, high-speed, 9/64 inch (not shown)	Not sold separately

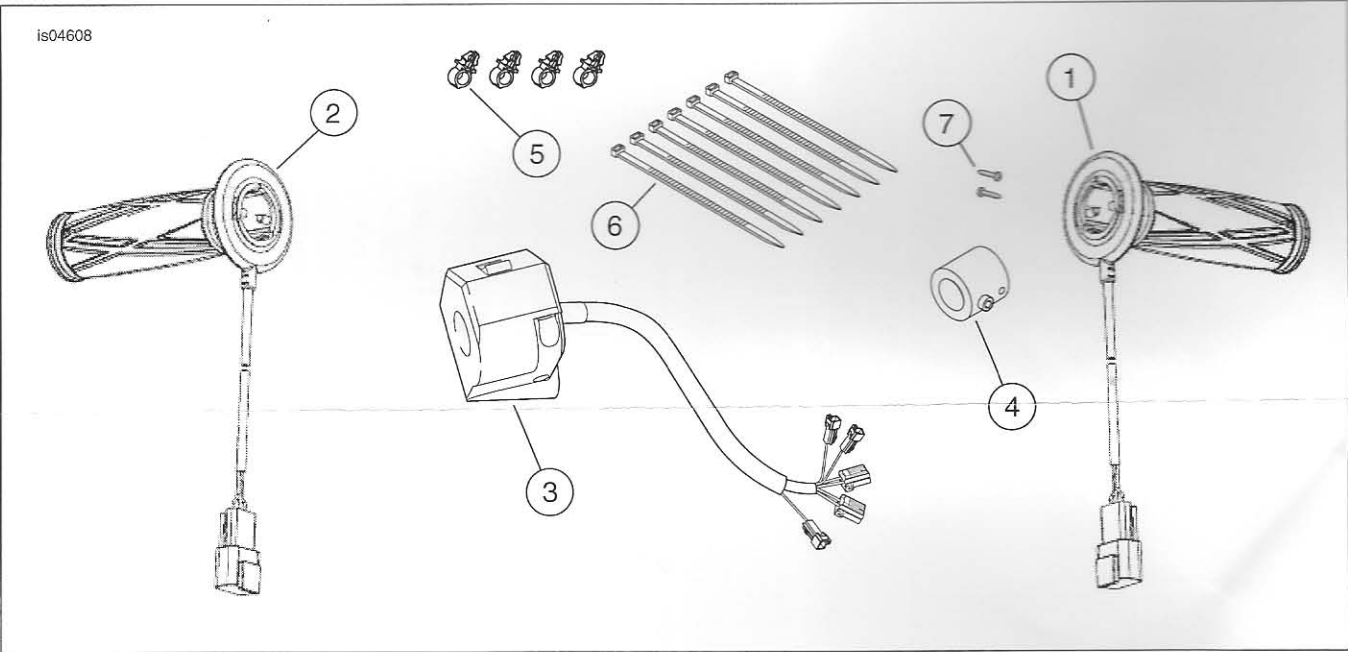


Figure 14. Service Parts, Heated Hand Grip Kit