HEATED HAND GRIP KITS

GENERAL

Kit Numbers
56047-08A, 56049-08A, 56196-08A, 56512-08A, 56828-08A, 56926-08A

Table 1. Models

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Hand Grip Style</th>
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<tbody>
<tr>
<td>56047-08A</td>
<td>Flame</td>
</tr>
<tr>
<td>56049-08A</td>
<td>Ironside</td>
</tr>
<tr>
<td>56196-08A</td>
<td>Chrome and Rubber, Small (1.5 inch/38 mm) Diameter</td>
</tr>
<tr>
<td>56512-08A</td>
<td>Contoured Chrome and Rubber Custom</td>
</tr>
<tr>
<td>56828-08A</td>
<td>Aileron</td>
</tr>
<tr>
<td>56926-08A</td>
<td>Skull Collection</td>
</tr>
</tbody>
</table>

Models
For model fitment information, see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

NOTE
See the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only) for a collection of matching Genuine Motor Accessory items that are available. These can be easily installed at the same time as this kit.

Service Manual Required

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 Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211b)

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)

This Heated Hand Grip kit requires up to 2.8 amps additional current from the electrical system.

Kit Contents
Each kit contains one pair of heated hand grips of the style shown in Table 1, plus connecting parts. See Figure 7 and Table 2.

REMOVAL

Preparation

WARNING
To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

1. Refer to the service manual and follow the instructions given to remove the main fuse.

WARNING
When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

2. Remove the fuel tank according to the service manual instructions.
Left-Side Grip Removal

1. See Figure 1. Using a T-25 TORX drive head, remove the upper and lower switch housing screws (1).

2. Using a T-27 TORX drive head, loosen the upper screw securing the handlebar clamp (3) to the clutch lever bracket. Remove the lower clamp screw with flat washer. Loosen the clamp and position the clutch hand lever assembly away from the switch housing.

3. Separate the upper and lower switch housings.

3. **With “glueless” grip:** Remove the grip from the handlebar.

   **With glued grip:** Remove the grip by carefully cutting it away from the handlebar using a sharp blade or knife.

   ![Figure 1. Left Handlebar Switch Housing](image)

   **Figure 1. Left Handlebar Switch Housing**

4. **NOTES**

   The twist grip sensor in the right side of the handlebar has a seal cap that protects internal electrodes from dirt and moisture, and also serves as a retention device for the throttle grip.

   To remove the grip, a slight tug may be necessary to release the index pins in the grip from the receptacle in the seal cap.

   Upon removing the grip, check the location of the seal cap.

   If the seal cap is still fastened to the index pins inside the old throttle grip, it can be discarded along with the grip.

   If the seal cap is still fastened to the end of the twist grip sensor:
   - See Figure 3. Insert a small screwdriver or other flat-blade tool into the flat area on one side of the seal cap.
   - Press the leg on the underside of the cap to free it from the slot at the end of the twist grip sensor. Pry up one end of the cap.
   - Repeat on the other side of the cap.
   - Carefully remove the cap and discard it.

   ![Figure 3. Remove Seal Cap](image)

Right-Side Grip Removal

**CAUTION**

Do not remove or install the master cylinder assembly without first positioning a 5/32-inch (4 mm) thick insert between the brake lever and lever bracket. Removing or installing the master cylinder assembly without the insert in place may result in damage to the rubber boot and plunger on the front stoplight switch. (00324a)

**NOTE**

A section of corrugated cardboard or the eyelet of an ordinary cable strap can be used for this purpose. See Figure 2.

1. Place a 5/32-inch (4 mm) thick insert between the brake lever and the lever bracket.
2. Using a T-25 TORX® drive head, remove the upper and lower switch housing screws.

   ![Figure 2. Protect Stop Light Switch](image)

   **Figure 2. Protect Stop Light Switch**

1. 5/32-inch (4 mm) thick insert
2. Brake lever
3. Brake lever bracket
INSTALATION

Heated Grip Installation

NOTE
The throttle grip sensor will have two wires, covered in sheathing, coming out of the end that goes into the handlebar. These wires will either have black heat shrink tubing over them or will be terminated with a two-cavity electrical connector.

1. Refer to TWIST GRIP SENSOR: REMOVAL in the service manual, and follow the instructions for your model motorcycle to:
   a. Access the six-way twist grip sensor jumper harness connector [204] inside the vehicle, and disconnect the connector halves.
   b. Gently pull the twist grip sensor out of handlebar only as far as necessary to access the black heat shrink tubing or the heated grip connector.

2. See Figure 7. Obtain the left-side heated grip (1), long wire harness (15) and short wire harness extension (8) from the kit.
   Determine if the extension is required for this installation:
   a. Temporarily connect the socket housing on the wire harness to the white pin housing on the end of the left-side heated hand grip.
   b. Hold the grip and the attached wire harness in position along the outside of the handlebar as if the assembly were installed on the handlebar.
   c. The black pin housing at the end of the wire harness must extend past the right end of the handlebar.
   
   Does the black pin housing extend past the opposite end of the handlebar?
   If YES: the extension will not be needed, and can be discarded. Disconnect the wire harness from the left-side grip.
   If NO: disconnect the wire harness from the left-side grip. Connect the pin housing on the extension to the white socket housing on the wire harness.
   Set the left-side grip, and the wire harness or harness assembly aside.

   NOTE
   DO NOT cut any wires leading to the green connector on the twist grip sensor. Cut off the black heat shrink tubing ONLY.

3. Cut the heat shrink or electrical connector from the black harness coming from the center of the twist grip sensor, as close to the connector as possible. Cut away a 1.0 inch (25.4 mm) length of sheathing from the harness, and strip approximately 5/32 inch (4 mm) of insulation from the two sensor wires.

4. Obtain the 2-way socket housing (16) and two socket terminals (17) from the kit. Refer to MULTILOCK ELECTRICAL CONNECTORS in the service manual, and follow the instructions to crimp the terminals onto the sensor wires.

Obtain the wire harness set aside in Step 2. Note the wire colors and terminal cavity location in the black pin housing at the end of the wire harness.
   a. Match the white sensor wire location to the white striped black wire location in the black pin housing.
   b. Match the black sensor wire location to the solid black wire location in the black pin housing.
   c. Insert the correct color wire terminals into the correct cavity of the 2-way socket housing.

5. Connect the socket housing on the sensor wires to the black pin housing at the end of the wire harness.

   NOTE
   Air pressure or an electrician’s fish tape can be used to thread the wire harness completely through the handlebar.

6. Thread the white socket housing and twist grip sensor wire harnesses into the right side of the handlebar.
   a. While feeding the wiring into the handlebar, gently pull the connector at the end of the twist grip sensor jumper harness to draw the twist grip sensor into the handlebar.
   b. Thread the left-side heated grip wire harness all the way through and out the left side of the handlebar.
   c. Fit the index tabs on the twist grip sensor into the slots in the handlebar. One index tab and slot are smaller than the others to prevent improper assembly.

   NOTE
   Make sure that the handlebar surface is smooth, dry and thoroughly cleaned of all dirt or adhesive residue.

   Remove the protective ring (marked "REMOVE PRIOR TO ASSEMBLY") from the end of the new left-side grip.

7. Fasten the white socket housing to the new left-side heated hand grip (1).

8. See Figure 1. Position the left-side heated grip (4) so the larger diameter portion of the flange (5) is at the bottom. Push the grip fully onto the handlebar.

9. Position the lower switch housing beneath the grip so that the grooves (2) on the outboard side of the switch housing fit over the flange on the end of the grip.

10. Position the upper switch housing over the handlebar and lower switch housing.

11. Start the upper and lower switch housing screws, but do not tighten. Verify that the wire harness conduit runs in the depression at the bottom of the handlebar.

12. Position the clutch hand-lever assembly inboard of the switch housing assembly, engaging the tab on the lower switch housing in the groove at the bottom of the clutch lever bracket.

13. Align the hole in the handlebar clamp with the hole in the clutch lever bracket, and start the lower screw with flat washer. Adjust the switch housing and clutch hand control position for rider comfort.

14. Using a T-27 TORX drive head, tighten first the upper, then the lower handlebar clamp screws to 60-80 in-lbs (6.8-9 Nm).
15. Using a T-25 TORX drive head, tighten first the lower, then the upper switch housing screws to 35-45 in-lbs (4-5.4 Nm).

**CAUTION**

Do not route the handgrip main harness inside the switch housing. Wires routed inside the switch housing could result in short circuits and equipment damage. (00369a)

16. Route the heated handgrip main wire harness between the handgrip and left switch housing, then under the switch housing.

17. See Figure 7. If equipped with holes on the left underside of the handlebar, install wire retainer clips (12) from the kit in the holes and then fasten the wire harness to the clips. Otherwise, use cable straps (9) to fasten the wire harness to the handlebar.

18. Obtain the new right-side heated throttle grip (2) from the kit. Insert a screwdriver or other flat-blade tool between the body of the throttle grip and the end cap, and carefully pry the end cap off the grip.

**NOTE**

In the next step, Do NOT pull the plug from the throttle grip by grasping the wires or terminal pins. Only grasp the rubber tab on the plug.

19. Tucked inside the outboard end of the throttle grip is a round rubber plug, with an orange and a green wire on one side, and two pin terminals on the other. Using a needle-nose pliers or similar tool, carefully grasp the rubber tab on the wire side of the plug, and pull the plug out from the grip through the outboard opening.

**NOTE**

Make sure that the handlebar surface and the inside of the new throttle grip are smooth, dry and thoroughly cleaned of all dirt.

20. Slide the new heated throttle grip over the end of the handlebar. Rotate the grip to verify that the internal splines are engaged with those on the twist grip sensor.

**NOTE**

If the handlebar grips are patterned, align the pattern on the right grip with the pattern on the left grip while the throttle is in the fully closed position.

21. Refer to Figure 1, which shows the similar left-side switch mounting. Position the lower switch housing beneath the grip so that the grooves (2) on the outboard side of the switch housing fit over the flange on the end of the grip.

22. Position the upper switch housing over the handlebar and lower switch housing.

23. Start the upper and lower switch housing screws, but do not tighten. Verify that the wire harness conduit runs in the depression at the bottom of the handlebar.

24. Position the brake master cylinder housing inboard of the switch housing assembly, engaging the tab on the lower switch housing in the groove at the bottom of the master cylinder housing.

25. Align the hole in the handlebar clamp with the hole in the master cylinder housing, and start the lower screw with flat washer. Adjust the switch housing and brake hand control position for rider comfort.

26. Using a T-27 TORX drive head, tighten first the upper, then the lower handlebar clamp screws to 60-80 in-lbs (6.8-9 Nm).

**NOTE**

Do not pull the switch housing so far inboard as to cause the throttle grip to bind or drag on the handlebar. Actuate the throttle grip to verify that it freely returns to the idle position.

27. Using a T-25 TORX drive head, tighten first the lower, then the upper switch housing screws to 35-45 in-lbs (4-5.4 Nm).

**WARNING**

Before starting engine, be sure throttle control will snap back to idle position when released. A throttle control that prevents engine from automatically returning to idle can lead to loss of control, which could result in death or serious injury. (00390a)

28. Verify that the right grip/throttle sleeve rotates and returns freely and does not bind on the handlebar or switch housing.

**NOTE**

The terminal sockets on the twist grip sensor are offset to one side, and the pins can only be inserted one way.

29. Using a needle-nose pliers or similar tool, carefully grasp the tab on the wire side of the round rubber plug at the outboard end of the throttle grip.

a. Insert the plug back through the opening in the grip, and insert the terminal pins into the sockets at the end of the twist grip sensor.

b. Press the rubber plug firmly to verify that the pins are fully seated in the sockets.

30. Install the chrome end cap onto the end of the throttle grip.

**Connection to Vehicle Wiring**

1. Follow the existing wiring to route the heated handgrip main wire harness from the left-side grip:
   a. through, across or around the triple tree,
   b. along the motorcycle frame,
   c. to a general location under the seat

2. See Figure 7. Use cable straps (9) from the kit to fasten the hand grip wiring to the wire harnesses along the vehicle frame.

3. See Figure 4. Locate the B+ (battery positive) connector (1) on the main electrical harness under the seat (a red wire with an unused gray connector). Remove the cover (2) from the connector.

4. See Figure 7. Plug the adapter harness (11) from the kit into the B+ connector.

5. Cut the heated hand grip harness red wire to within easy reach of the end of the adapter harness red wire. Use a sealed splice connector (4) from the kit to splice the two wires, following the instructions in the service manual.
For 2004 and Later FL Touring Models

1. Obtain the orange/white fuse block adapter wire (10) from the kit.

   **For 2008 and later models:** Note the terminal on each end (see Figure 5, upper view). Only the terminal **WITHOUT the spring tabs** will fit into the fuse cavity. Carefully cut the terminal **WITH** spring tabs from the wire and discard it.

   **For 2007 models:** Note the terminal on each end (see Figure 5, lower view). Only the terminal **WITH the spring tabs** will fit into the fuse cavity. Carefully cut the terminal **WITHOUT** spring tabs from the wire and discard it.

   **For 2004 through 2006 models:** Note the terminal on each end (see Figure 5, upper view). Only the terminal **WITHOUT the spring tabs** will fit into the fuse cavity. Carefully cut the terminal **WITH** spring tabs from the wire and discard it.

2. **ALL models:** Locate the fuse cavity indicated as "P&A IGN" "2A MAX". There is a bus bar feeding one side of this circuit, but no mating wire or fuse will be present. Remove the three existing fuses in this row, noting their location.

3. Gently remove the orange plastic secondary lock from the fuse block. Insert the terminal on the orange/white adapter wire until it stops. Refer to a nearby factory-installed terminal for comparison to verify proper orientation and depth. Install the secondary lock.

4. Cut the excess length from the orange/white wire on the heated hand grip to within easy reach of the orange/white adapter wire installed in Step 3.

5. Using the **blue** sealed splice connector (4) from the kit, splice the orange/white wire from the heated hand grip power harness to the orange/white adapter wire following the instructions in the service manual.

6. See Figure 7. Install a 2A fuse (13) from the kit into the P&A IGN fuse cavity to complete the circuit. Install the three fuses removed in Step 2 into the proper cavities.

7. Install the dust cover onto the fuse block, and install the fuse block and main fuse holder following the instructions in the service manual.

8. Open the cover of the fuse holder on the heated hand grip power harness. Plug the remaining 5A fuse (14) from the kit into the fuse holder, and close the cover.

9. Check along the entire length of the wiring for rubbing, chafing or pinch points.

10. Fasten black wire with ring terminal to any ground stud on the frame.

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**WARNING**

Be sure to follow manufacturer’s instructions when using the UltraTorch UT-100 or any other radiant heating device. Failure to follow manufacturer’s instructions can cause a fire, which could result in death or serious injury. (00335a)

- Avoid directing heat toward any fuel system component. Extreme heat can cause fuel ignition/explosion resulting in death or serious injury.
- Avoid directing heat toward any electrical system component other than the connectors on which heat shrink work is being performed.
- Always keep hands away from tool tip area and heat shrink attachment.

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**Figure 4. B+ Connector**

**Figure 5. Fuse Block Adapter Wire (FL Touring)**
Return to Service

NOTE
DO NOT perform the following steps until the heated hand grips and all related wiring have been installed according to the procedures outlined in this instruction sheet.

1. Verify that the right grip/throttle sleeve rotates and returns freely and does not bind on the handlebar or switch housing. DO NOT operate the vehicle unless the throttle functions properly.

2. Verify that the ignition/light key switch is turned to the OFF position.
   Refer to the service manual and follow the instructions given to install the main fuse.

3. Install the fuel tank according to the service manual instructions.
   Install any other motorcycle components removed earlier per the instructions in the service manual.

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. Install the seat according to the instructions in the service manual.

   NOTE
To prevent battery drain, these heated hand grips are designed to function only with the engine running. The hand grips produce peak heat with the engine running at cruising speed.

   The heat settings on the heated hand grip control dial range from 1 (minimum) to 6 (peak).

5. Before starting the vehicle, check that the hand grips are not producing heat.

6. Start the engine and check the hand grips at all settings for proper heating.

TROUBLESHOOTING
See Figure 6 for the heated hand grip schematic diagram.

Hand Grips Do Not Produce Heat

1. See Figure 1. Check for proper wire routing. The hand grip main harness must be routed outside of the switch housing. If the wires were routed internally, disassemble the left hand switch housing and inspect for pinched wires. If wires are pinched, replace the left hand grip and repeat the installation process with the correct wire routing.

2. Check the wire connections of the orange/white, red and black hand grip main wire harness wires.
   • If a connection is damaged, loose or weak, repair the connection and test the hand grips.
   • If all connections are good, continue with the next step.

3. Before starting the vehicle, check that the hand grips are not producing heat.

4. Start the engine and check the hand grips at all settings for proper heating.

Hand Grips Produce Heat with Ignition (Key) Switch Off

If the hand grips produce heat with the ignition switch off, then either the hand grips are incorrectly wired to the vehicle, or the left side grip and wire harness are faulty.

Carefully check all heated hand grip wire connections on the vehicle. If the connections are correct, replace the heated hand grip main wire harness, then test the hand grips.

Figure 6. Heated Hand Grip Schematic
Figure 7. Service Parts, Heated Hand Grip Kits
<table>
<thead>
<tr>
<th>Kit</th>
<th>Item</th>
<th>Description (Quantity)</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kit 56047-08A</td>
<td>1</td>
<td>Left-side heated grip</td>
<td>56100-04B</td>
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<td>Flame Heated Grips</td>
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<td>Right-side heated throttle grip (includes Item 3)</td>
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<td></td>
<td>3</td>
<td>• End cap, right-side grip</td>
<td>55940-08</td>
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<td>1</td>
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<td>57055-07A</td>
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<td>Items common to ALL Kits</td>
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