INSTRUCTIONS

-J02461 REV. 03-16-2004

Kit Number 74633-02A

ELECTRONIC COMPASS SENSOR SERVICE KIT

General

This kit is designed to service the compass sensor that comes with Electronic Compass Kit 74441-02, which fits 1996 and later FLHT (Electra Glide®) and 1998 and later FLTR (Road Glide®) model motorcycles.

Installation of the service sensor does not require disassembly of the fairing or fuel tank removal. The service sensor harness will plug into the existing compass harness in the area under the seat. The existing harness will be cut, and a new Deutsch connector (included in the kit) must be installed.

See the Service Parts illustration for a list of items contained in this kit.

⚠WARNING

A Service Manual is necessary for installation of this kit. The rider's safety depends upon the correct installation of this kit. If the procedure is not within your capabilities or you do not have the correct tools, have your Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury.

NOTE

A Service Manual for your model motorcycle is available from any Harley-Davidson dealer.

Installation

Removing the Existing Sensor

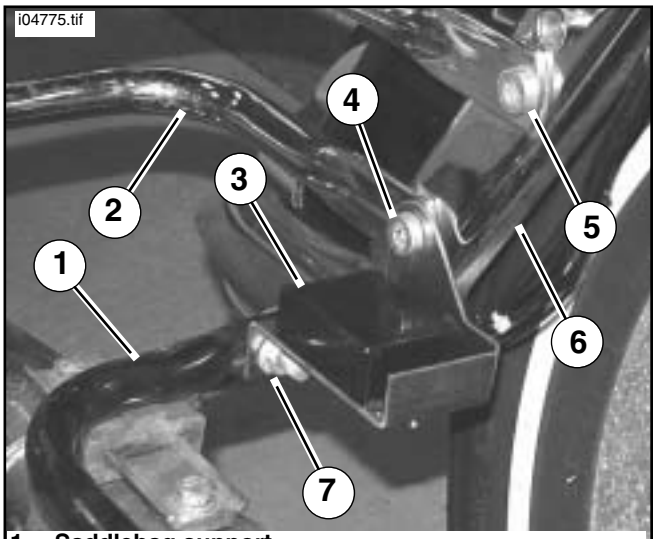
⚠WARNING

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

1. Refer to the Owner's Manual and follow the instructions given to remove the seat and disconnect the negative battery cable. Retain all seat mounting hardware.
2. Remove the right-side saddlebag. Refer to SADDLEBAG REMOVAL in the appropriate Service Manual.
3. Cut the wires on the old sensor, a few inches away from the sensor.

CAUTION

Do not use magnetic tools such as Torx® drivers when installing the compass sensor. If the compass bracket becomes magnetized, it will affect calibration and accuracy.



1. **Saddlebag support**
2. **Lower saddlebag guard**
3. **Compass sensor**
4. **Lower saddlebag guard screw**
5. **Upper saddlebag guard screw**
6. **Support bracket**
7. **Support bracket screw and locknut**

Figure 1. Compass Sensor Mounting (Model with Saddlebag Guards Shown)

4. See Figure 1. Remove the outboard screw and locknut (7) attaching the existing sensor (3) and saddlebag support (1) to the support bracket (6).
5. Remove the screw (4) and flat washer holding the upper part of the sensor bracket (and the lower saddlebag guard [2], if so equipped) to the support bracket.

Installing the New Compass Sensor Unit

6. **Models WITHOUT Saddlebag Guards:** Attach the **new** compass sensor (3) to the support bracket (6) through the upper hole with the flat washer and screw (4) removed in Step 5.

   Models WITH Saddlebag Guards: Attach the **new** compass sensor (3) to the lower saddlebag guard (2) and the support bracket (6) through the upper hole with the flat washer and screw (4) removed in Step 5.

7. **All models:** Attach the compass sensor to the support bracket (6) and the saddlebag support (1) through the lower hole with the nut and screw (7) removed in Step 4.

Routing the Compass Sensor Cable

1. See Figure 1. Remove the screw (5) fastening the compass sensor cable clamp to the support bracket, and pull the old cable from the clamp. Insert the cable from the new compass sensor into the clamp, and re-fasten the clamp to the support bracket.

2 Remove the old cable from the motorcycle as you lead the **new** cable up the right side saddlebag support bracket (6), and forward along the fender support bracket and frame strut. Secure the new cable with cable ties from the kit at the same points as the old cable.

3. Route the cable through the opening in the frame gusset, under the turn signal/security module (if so equipped) and behind the battery to the left side of the motorcycle.

4. Run the cable along the left side of the battery. Unplug the existing cable from the switched accessory connector, located in front of the battery. Plug the four-position Deutsch connector from the new compass sensor into the accessory connector.

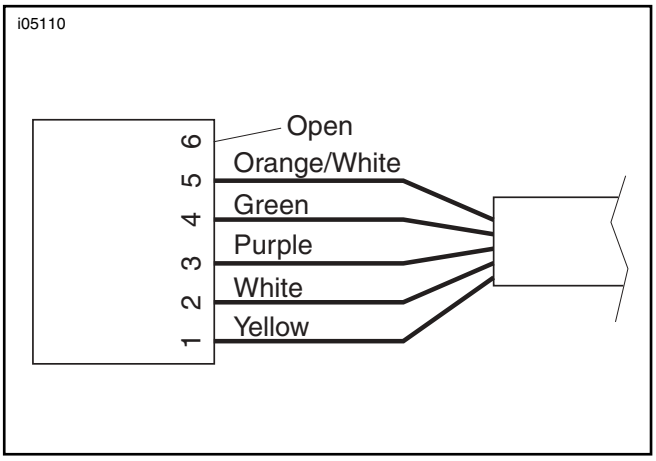


Figure 2. Connection Diagram

Final Assembly

In order to connect the new compass sensor to the compass display in the motorcycle fairing, the old compass sensor harness must be cut in the area under the seat. A six-position Deutsch connector (included in the kit) will then be assembled to the front portion of the existing harness, and plugged into the new sensor harness.

NOTE

When cutting the existing harness, make sure the wires from the front of the bike are long enough to reach the service harness connector without stretching, pinching or rubbing.

1. Cut the wires of the original compass sensor harness in the area under the seat so that the wires coming from the fairing will reach the service harness connector.

2. Obtain the Deutsch socket, terminals and related parts from the kit. See a 1998 or later FLT Service Manual for Deutsch Solid Barrel Contact Crimping Instructions. Follow instructions to terminate the wires from the old compass sensor harness.

3. See Figure 2. Insert the terminals into the connector half as shown.

4. Insert the seal pin in the unused cavity.

5. Connect the old compass harness to the new sensor harness.

6. Install the right-side saddlebag. Refer to SADDLEBAG INSTALLATION in the appropriate Service Manual.

7. Refer to the Owner's Manual and follow the instructions to re-attach the negative battery cable and install the 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)

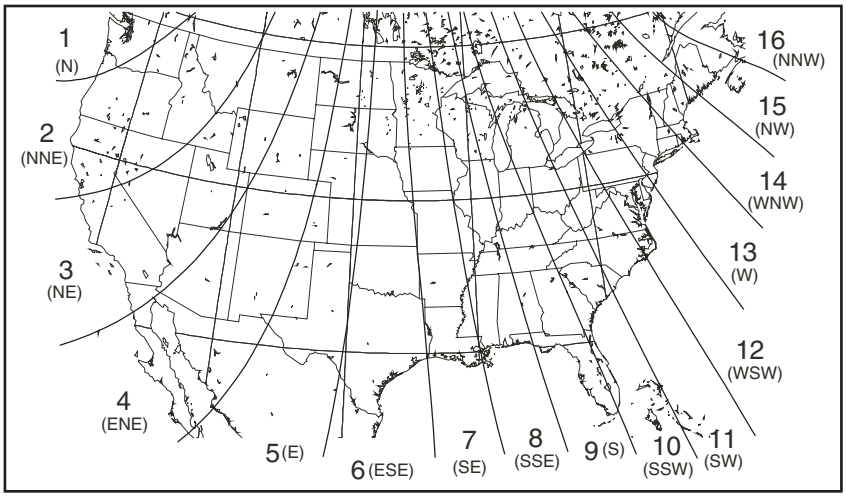


Figure 3a. Zone Chart for the "Lower 48" States (With Compass Gauge Equivalents)

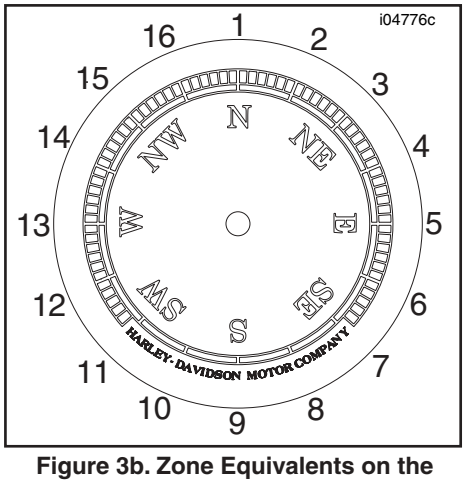


Figure 3b. Zone Equivalents on the Compass Gauge

Figure 3

Setting the Zone and Re-calibrating the Compass

CAUTION

Upon initial power up of the compass after installation of the new sensor, the gauge will continually spin until zone selection and calibration procedures have been successfully completed.

With the new sensor installed, the compass must be adjusted to operate in the zone in which it will be used. Therefore, the correct zone must again be programmed into the compass. See Figure 3a for locations within the “lower 48” United States. See Figure 4 for Canada and Alaska. Hawaii is in zone seven. Travel across several zones should not significantly affect compass accuracy.

See Figure 3b. The compass gauge display is used to indicate the zone currently selected or stored in memory. “N” indicates zone one is selected, “NNE” indicates zone two, and so on.

The compass must also be re-calibrated after sensor replacement. This allows the new sensor to compensate for the influence of the motorcycle structure in its determination of the correct heading.

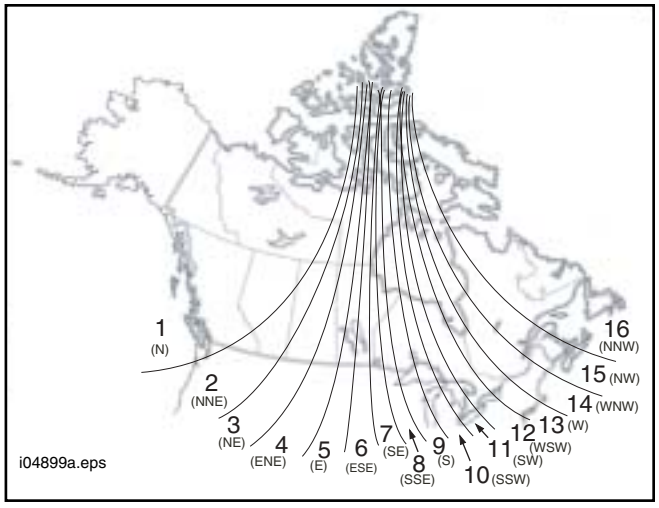


Figure 4. Zone Chart for Alaska and Canada (With Compass Gauge Equivalents)

NOTE: For Hawaii calibrate to Zone 7 (SE)

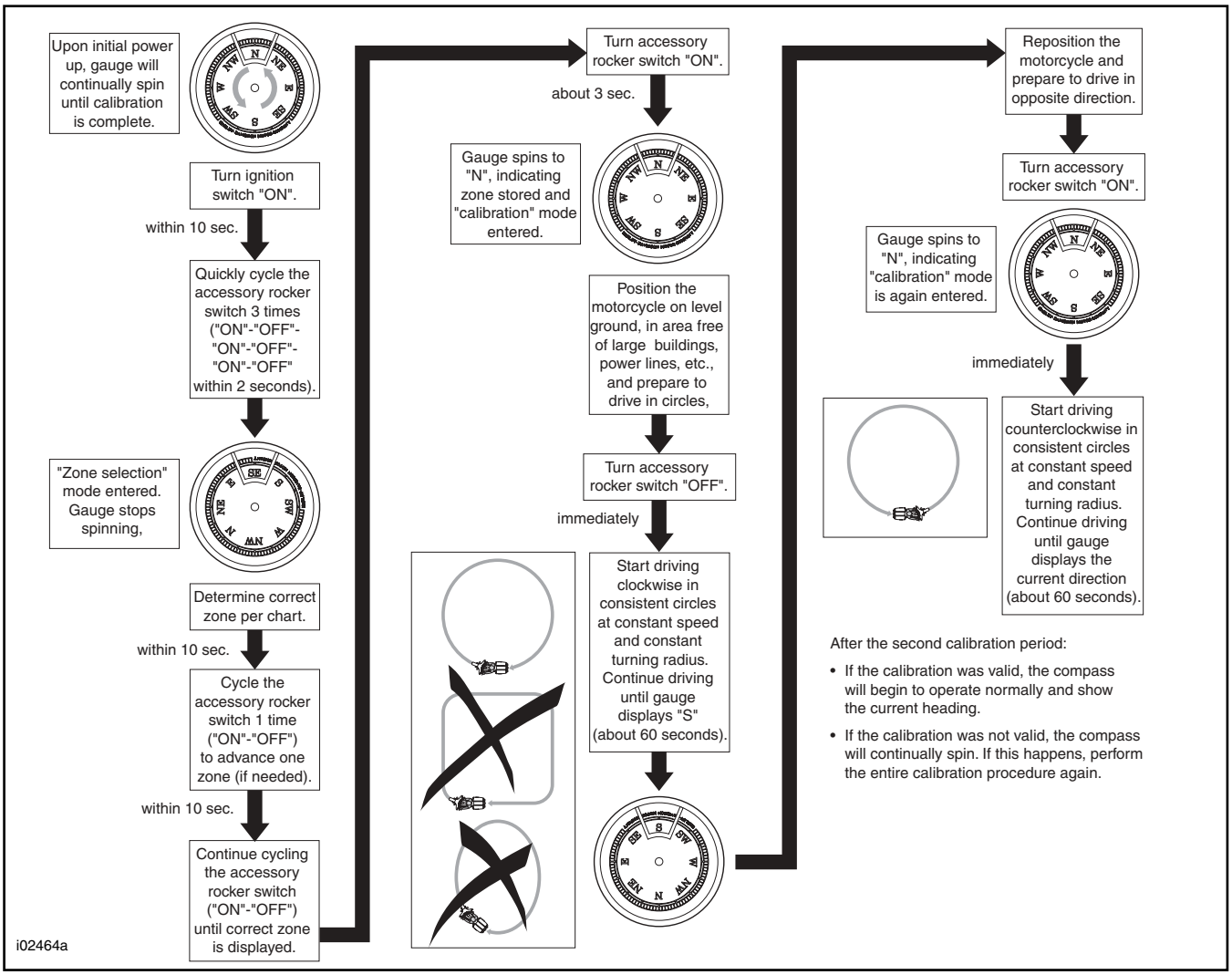


Figure 5. Zone Selection and Re-calibration Procedure

The zone-setting and re-calibration of the compass can be accomplished by following the flow chart in Figure 5.

- The re-calibration procedure involves driving the motorcycle in large diameter circles (30-40 ft) (9-12 M) on level ground free of large buildings, power lines, etc.
- An on/off sequence of the accessory rocker switch (located on the inner fairing dash panel) will set the zone and initiate re-calibration.
- The quality of the calibration is directly dependent on the consistency of the circles driven during calibration.
- Two sets of equal -size circles, driven in opposite directions, are required.

Please read through and understand the entire flow chart before starting the re-calibration procedure.

Calibration information is stored in non-volatile memory, and re-calibration will not be needed if power to the unit is disconnected. However, when travel to another zone introduces noticeable inaccuracy the new zone should be stored in memory in order to maintain compass accuracy.

Service Parts

Part No. 74633-02A | Date 03/04

Electronic Compass Sensor Service Kit

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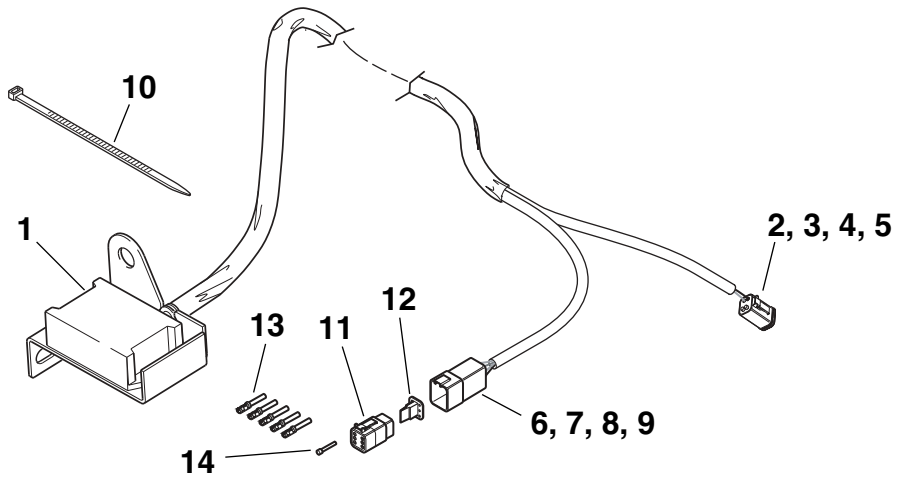

Item	Description (Quantity)	Part No.
1	Sensor, electronic compass (includes items 2 through 9)	Not sold separately
2	Socket housing, 4-cavity	72114-94BK
3	Secondary lock, 4-cavity	72154-94
4	Terminal, socket (2)	72191-94
5	Plug, seal pin (2)	72195-94
6	Pin housing, 6-cavity	74106-98BK
7	Secondary lock, 6-cavity	74146-98
8	Terminal, pin (5)	74190-98
9	Plug, seal pin	74195-98
10	Cable strap, (6) 0.19 x 7.5 in (5 x 190 mm)	10006
11	Socket housing, 6-cavity	74116-98BK
12	Secondary lock, 6-cavity	74156-98
13	Terminal, socket (5)	74191-98
14	Plug, seal pin	74195-98