



# INSTRUCTIONS

J05180

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## COMBINATION SPEEDOMETER/TACHOMETER GAUGE KIT

### GENERAL INFORMATION

<p>is03400 U.S. Department of Transportation National Highway Traffic Safety Administration Title 49, United States Code, Subtitle VI. Motor Vehicle and Driver Programs, Part C. Information, Standards, and Requirements, Chapter 327. Odometers Section 32703. Preventing tampering A person may not — (1) advertise for sale, sell, use, install, or have installed, a device that makes an odometer of a motor vehicle register a mileage different from the mileage the vehicle was driven, as registered by the odometer within the designed tolerance of the manufacturer of the odometer; (2) disconnect, reset, alter, or have disconnected, reset, or altered, an odometer of a motor vehicle intending to change the mileage registered by the odometer; (3) with intent to defraud, operate a motor vehicle on a street, road, or highway if the person knows that the odometer of the vehicle is disconnected or not operating; or (4) conspire to violate this section or section 32704 or 32705 of this title. Section 32704. Service, repair, and replacement (a) Adjusting mileage. A person may service, repair, or replace an odometer of a motor vehicle if the mileage registered by the odometer remains the same as before the service, repair, or replacement. If the mileage cannot remain the same — (1) the person shall adjust the odometer to read zero; and (2) the owner of the vehicle or agent of the owner shall attach a written notice to the left door frame of the vehicle specifying the mileage before the service, repair, or replacement and the date of the service, repair, or replacement.</p>	<p>(b) Removing or altering notice. A person may not with intent to defraud, remove or alter a notice attached to a motor vehicle as required by this section.  Section 32705. Disclosure requirements on transfer of motor vehicles  (a) (1) Disclosure requirements. Under regulations prescribed by the Secretary of Transportation that include the way in which information is disclosed and retained under this section, a person transferring ownership of a motor vehicle shall give the transferee the following written disclosure:  (A) Disclosure of the cumulative mileage registered on the odometer. (B) Disclosure that the actual mileage is unknown if the transferor knows that the odometer reading is different from the number of miles the vehicle has actually traveled.  (2) A person transferring ownership of a motor vehicle may not violate a regulation prescribed under this section or give a false statement to the transferee in making the disclosure required by such a regulation.  (3) A person acquiring a motor vehicle for resale may not accept a written disclosure under this section unless it is complete.  (4) (A) This subsection shall apply to all transfers of motor vehicles (unless otherwise exempted by the Secretary by regulation), except in the case of transfers of new motor vehicles from a vehicle manufacturer jointly to a dealer and a person engaged in the business of renting or leasing vehicles for a period of 30 days or less. (B) For purposes of subparagraph (A), the term "new motor vehicle" means any motor vehicle driven with no more than the limited use necessary in moving, transporting, or road testing such a vehicle prior to delivery from the vehicle manufacturer to a dealer, but in no event shall the odometer reading of such vehicle exceed 300 miles.  (5) The Secretary may exempt such classes or categories of vehicles as the Secretary deems appropriate from these requirements. Until such time as the Secretary amends or modifies the regulations set forth in 49 CFR 580.6, such regulations shall have full force and effect.</p>
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Figure 1. Title 49, United States Code

### Kit Numbers

Table 1. Kit Numbers

Kit Number	Type	Description
74777-11C	Gauge, Speedo/Tach, KMH	Black
74776-11D	Gauge, Speedo/Tach, MPH	Black
74775-11C	Gauge, Speedo/Tach, KMH	Spun aluminum

Table 1. Kit Numbers

Kit Number	Type	Description
74774-11D	Gauge, Speedo/Tach, MPH	Spun aluminum
70900171C	Gauge, Speedo/Tach, MPH/KMH	Spun aluminum



## GENERAL

### Models

For model fitment information, see the Parts and Accessories (P&A) Retail Catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com).

### Installation Requirements

DIGITAL TECHNICIAN II (PART NUMBER: HD-48650) is required for vehicles with RDRS and ABS installation.

#### ⚠ WARNING

**Rider and passenger safety depend 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 Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)**

#### NOTE

*This instruction sheet refers to service manual information. A service manual for this year/model motorcycle is required for this installation. One is available from a Harley-Davidson dealer.*

### REMOVE

Original Equipment (OE) Speedometer Removal

#### ⚠ WARNING

**To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative (-) cable first) before proceeding. (00307a)**

#### ⚠ WARNING

**Disconnect negative (-) battery cable first. If 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. (00049a)**

1. Apply power to vehicle.
2. Record odometer reading.
3. Disconnect negative battery cable. See service manual.
4. Retain seat mounting hardware.

#### NOTE

*Cover painted parts to protect finish.*

5. Remove instrument console acorn nut.
6. Place an H-D Service Cover or clean shop towels on fuel tank.
7. Lift console from fuel tank, turn upside down and lay it on covering.
8. Unplug 12-terminal connector [39B] from back of speedometer.

9. Press external latches.
  - a. Use rocking motion to separate pin and socket halves.
10. Remove back clamp.
  - a. Gently pry latches upward to release back clamp from back of speedometer.
11. Lift console.
  - a. Remove OE speedometer from console.
  - b. Discard OE speedometer, retain rubber gasket and back clamp for later use.

#### NOTE

*Set console securely on protected top of fuel tank. Take care that it does not fall off during the following operations.*

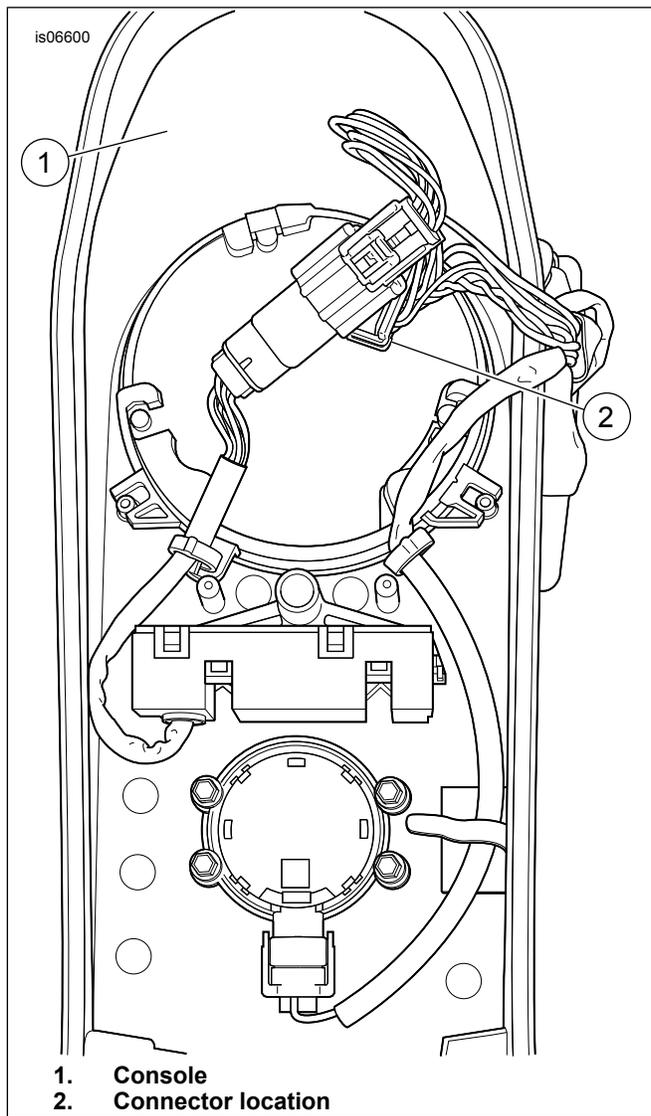
12. Set console securely on top of fuel tank.

### INSTALL

#### NOTE

*Apply window cleaning fluid or mild soapy water to speedometer gasket to aid installation.*

1. Turn console over, facing upward.
2. Place speedometer gasket into position around console speedometer bore.
3. Fix **new** gauge into bore so it fits snugly against rubber gasket.
4. Rotate gauge into approximate visual alignment.
  - a. Back clamp completes alignment.
5. Turn console over, face down.
6. Install back clamp.
  - a. Place back clamp over back of gauge, aligning the two slots with console bosses.
  - b. Press latches down until they lock into position.
7. Carefully insert connector into back of speedometer.



**Figure 2. Speedometer/Tachometer Harness Routing**

8. Turn console over, center it on fuel tank, and install acorn nut. Tighten.  
Torque: 9–11.3 N·m (80–100 in-lbs)
9. Apply a light coat of petroleum jelly or corrosion retardant material to battery terminals.

#### ▲ WARNING

**Connect positive (+) battery cable first. If 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)**

10. Install battery cables. See service manual.
11. Install seat. After installing seat, pull up on the seat to verify that it is secure. See service manual.

#### ▲ WARNING

**Be sure headlamp, tail and stop lamp and turn signals are operating properly before riding. Poor visibility of rider to other motorists can result in death or serious injury. (00478b)**

12. Turn ignition switch to IGN, do not start vehicle.
13. Check operation of all lamps.
14. Check speedometer and tachometer for proper operation.

#### NOTE

- Both ECM and speedometer retain odometer value. If speedometer is replaced, it displays odometer value stored in ECM. Replacement speedometer will become locked to ECM after 31.1 miles (50 km) have been accumulated. Trip B odometer displays countdown mileage. Once countdown reaches zero, speedometer is locked to ECM. If installed on another vehicle, odometer displays "VIN ERR". If speedometer is removed from vehicle before countdown reaches zero, it has not been locked to ECM. This mileage countdown allows for a road test to verify that speedometer replacement was the proper repair.
- During 50 km (31.1 mi) countdown period (before speedometer is locked to ECM), security light flashes for up to 15 seconds when battery power is restored to electrical system, while new gauge synchronizes to ECM.
- Gear Indication display is a calculated gear position based on wheel and engine speed. Gear position displayed may be momentarily inaccurate depending on rider clutch use characteristics and clutch wear. This momentary false reading, although unlikely, can occur if clutch is allowed to slip either due to excessive wear, poorly adjusted clutch or if operator rides the clutch.
- If gauge is installed on a vehicle with ABS, TC, VHC, and/or TPMS, verify that ABS, TC, VHC, and/or TPMS warning lamp is working properly. See owner's manual for ABS, TC, VHC, and/or TPMS warning lamp operation.
- When ignition switch is turned from OFF or ACC to IGN, needles will sweep full range from zero to maximum and back. Background and needle colors will sweep through full color range. All telltale indicators will illuminate momentarily.

### Backlight Color Modification

Backlight color can be modified for entire gauge or dial, speedometer pointer, tachometer pointer, and display separately (see Table 2 ). Gear indication and fuel level display can also be disabled.

1. Turn ignition switch to ACC.



**Figure 3. Fuel Level Display Setup**

2. See Figure 3. Press and hold both turn signals until fuel level bars are displayed with "ON/OFF" flashing. "SETUP" also appears.
  - a. If "ON" is flashing, fuel level display is enabled.
3. To disable fuel level press and hold both turn signals until "OFF" is flashing.
4. Toggle over to gear indication by pressing right turn signal where six gears are displayed with "ON/OFF" flashing.
  - a. If "ON" is flashing the gear indication display is enabled.
5. To disable gear indication press and hold both turn signals until "OFF" is flashing.
6. Toggle over to brightness menu by pressing right turn signal where all of the bars and "BRIGHT" are displayed.
7. To dim backlight press and hold both turn signals until "dim" and half of the bars are displayed.
8. Toggle over to color menu by pressing right turn signal where "ALL" and "COLOR" are displayed.



**Figure 4. Select Display Color**

9. See Figure 4. To change color press and hold both turn signals where the current color number displayed.
10. For coarse adjustment, press left turn signal to count down and right turn signal to count up incrementally.
11. For fine adjustment, press and hold left turn signal to count down and right turn signal to count up.
12. Once desired color is selected press and hold both turn signals until "SAVED" is displayed.
13. To change color for the following components (dial, speedometer pointer, tachometer pointer and display), toggle over to color menu by pressing right turn signal and follow steps 7 through 10.
14. Once desired setup and colors are finalized, turn ignition switch to ignition (IGN) position.
15. Verify settings (gear indication appears until vehicle is running).

**Table 2. Color Guide**

Number	Range Color
000-015	Red
016-030	Amber (Orange)
031-060	Yellow
061-100	Yellow/Green
101-180	Green
181-250	Green/Blue
251-350	Blue
351-380	Blue/Violet
381-440	Violet
441-490	Pink
491-525	Red
526-600	White/Light Colors

Note: Color descriptions and color ranges are approximate.

## Clock Adjustment

1. Adjust clock on gauge toggle to clock in the display.
2. Press and hold trip.

3. Choose 12-hour or 24-hour clock by pressing and holding trip.
4. Hours will flash.
5. Press trip switch quickly to current hour then press and hold trip switch.
6. Minutes will flash.
7. Press trip switch quickly to current minute then press and hold trip switch.
8. AM or PM will flash.
9. Choose one, then press and hold.

tailoring fuel range calculations to your unique riding characteristics.

Fuel level display and tank-mounted fuel gauge may not always match when starting with a full tank of fuel. Tank fuel gauge utilizes a continuous sweep needle to indicate fuel level. While speedo/tach fuel level utilizes a segmented display. Each segment represents 1/8 of a tank. For example; if a given segment just came on or is about to go off, it would show no change. While needle on tank-mounted gauge would likely show a change in position.

### Fuel Fill-up and Top-off

When adding fuel to vehicle, it is recommended you add at least 7.6 L (2 USgal) of fuel to update the fuel and range displays. If fuel display does not update immediately after vehicle is put in motion, the fuel and range displays slowly updates over the next 48.3 km (30 mi).

Press and hold "Trip" reset switch to toggle between "mile" and "kilo" displays.

### Battery Reconnection and Initialization

After battery is reconnected or a new gauge is installed, gauge requires about a half tank of fuel to properly initialize fuel range (miles to empty) functionality.

During consumption of first full tank of fuel, gauge software begins the process of learning your riding patterns. Eventually

### COMPLETE

1. Software flash is required for vehicles with RDRS and ABS installed. See Harley-Davidson dealer.  
Special Tool: DIGITAL TECHNICIAN II (HD-48650)

### Troubleshooting

Table 3. Troubleshooting

Operation	Problem	Possible Cause	Possible Solution
Installation into vehicle harness	LCD states "vin err".	Gauge was already "married" (accumulated 31.1 miles (50 km)) to another vehicle.	Reinstall on previous vehicle to confirm no "vin err".
Entering set up mode	Will not go to set up mode.	Loose connection with gauge connector or trip reset button.	Check for bent accessory pin #6 in gauge connector or check trip reset button operation.
Gear Indication	Gear Indication does not operate.	Not turned on.	Use instruction sheet to turn on gear indication in set up mode.
Fuel Level	Fuel Level does not operate.	Not turned on in set up mode.	Use instruction sheet to turn on fuel level in set up mode.
Color Changing	Color will not save.	Color was not saved properly.	Use instruction sheet for proper saving procedure.
Note: Please contact Technical Service with any installation or troubleshooting questions before filing a warranty claim.			