



INSTRUCTIONS

J05412

2014-03-03



COMBINATION SPEEDOMETER/TACHOMETER GAUGE KIT

GENERAL

<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,</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.</p>
<p>Chapter 327. Odometers Section 32703. Preventing tampering</p>	<p>Section 32705. Disclosure requirements on transfer of motor vehicles</p>
<p>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.</p>	<p>(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:</p>
<p>Section 32704. Service, repair, and replacement</p>	<p>(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.</p>
<p>(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>(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.</p>
	<p>(3) A person acquiring a motor vehicle for resale may not accept a written disclosure under this section unless it is complete.</p>
	<p>(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.</p>
	<p>(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>

Figure 1. Title 49, United States Code

GENERAL (Continued)

Kit Number

70900100C, 70900475

Models

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

Service Manual Required

▲ 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 and is available from a Harley-Davidson dealer.

Preparation

NOTE

For vehicles equipped with security siren: Verify that the hands-free Fob is present.

1. Turn the ignition key switch to IGNITION and record the odometer reading.

▲ WARNING

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

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

Removing the Old Speedometer

Models with Speedometer Mounted Flush to Console

1. Follow service manual instructions to remove the old speedometer.

Models with Speedometer Mounted Upright on Console

1. Follow service manual instructions to remove the seat and instrument console.
2. Follow instructions in the service manual to remove the old speedometer.

Models with Speedometer Mounted at the Handlebar

1. Follow service manual instructions to remove the speedometer housing from the upper fork bracket, and remove the old speedometer from the housing.

Installation and Final Check

NOTE

- To aid installation, apply window cleaning fluid or mild soapy water to the speedometer gasket as needed.
- Rotate the gauge into approximate visual alignment before fastening in place.

1. Follow instructions in the service manual to install the **new** speedometer.

NOTE

Verify that the ignition key switch is in the OFF position **before** installing the main fuse.

2. Refer to the service manual and follow the instructions to install the main fuse.

▲ 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)

3. Turn the ignition key switch to IGN, but do not start the motorcycle. Test for proper turn signal, brake light and tail light operation.
4. Check the speedometer and tachometer for proper operation.

NOTE

- Both the ECM and speedometer retain the odometer value. If the speedometer is replaced, it displays the odometer value stored in the ECM. The replacement speedometer will become locked to the ECM after 50 km (31.1 mi) have been accumulated. The trip B odometer displays the countdown mileage. Once the countdown reaches zero, the speedometer is locked to the ECM. If installed on another vehicle the odometer displays "VIN ERR". If the speedometer is removed from the vehicle before the countdown reaches zero, it has not been locked to the ECM. This mileage countdown allows for a road test to verify that speedometer replacement was the proper repair.
- During the 50 km (31.1 mi) countdown period (before the speedometer is locked to the ECM), the security light flashes for up to 15 seconds when battery power is restored to the electrical system, while the new gauge synchronizes to the ECM.
- Gear Indication display is a calculated gear position based on wheel and engine speed. The 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 the clutch is allowed to slip either due to excessive wear, poorly adjusted clutch or if the operator rides the clutch.
- If gauge is installed on a motorcycle with ABS, be sure the ABS warning lamp is working properly. See the owner's manual for ABS warning lamp operation.

Backlight Color Modification

NOTE

This speedometer has a black back lighted LCD with color selectable back lighting. In daytime lighting conditions with direct or indirect sunlight, the contrast of the LCD display varies depending on the backlight color selected. The display contrast affects the visibility of the display.

In direct sunlight, color #600 maximizes display contrast and visibility.

The backlight color can be modified for the entire gauge or the dial, speedometer pointer, tachometer pointer, and display separately (see Table 1 and Figure 2). The gear indication and fuel level display can also be disabled.

Fuel Level Display (All Models Except Sportster.)

1. Turn ignition key switch to the accessory (ACC) position.

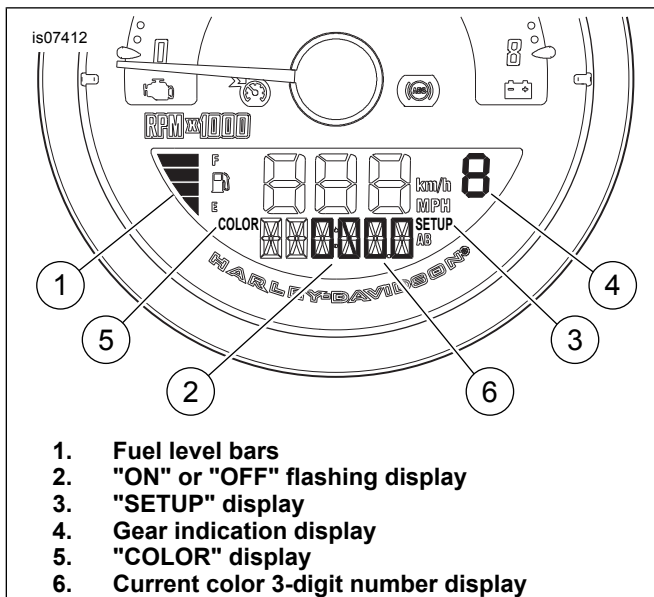


Figure 2. Display Setup

2. Press and hold both turn signals until fuel level bars are displayed (1) with "ON" or "OFF" flashing (2). "SETUP" (3) will also appear. If "ON" is flashing, the fuel level display is enabled.
3. To disable fuel level display, press and hold both turn signals until "OFF" is flashing.

Table 1. 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.

NOTE

On Sportster vehicles without the fuel level sender (61200008), by default the fuel display is enabled but will not function. It can be disabled in set up mode. See Figure 2. If not disabled it will show empty (1).

Fuel Level Display (Sportster with fuel level sender 61200008.)

1. Switch to IGNITION for at least 10 seconds to allow for gauge to detect fuel level sender.
2. Switch to ACC, then press and hold both turn signals until fuel level bars are flashing (1).

3. Press and hold both turn signals again until "OFF" or previously selected tank size is flashing (2). Use left or right turn signal to choose proper tank size (2.1 gal, 3.3 gal or 4.5 gal for domestic or 7.9L, 12.5L, 17.0L). See Figure 3. See owner's manual for correct tank size.
4. Once the proper tank size has been selected, press and turn signals to save. "Saved" will appear on display.



Figure 3. Select Fuel Tank Size (Sportster Models Only)

Gear Indicator Display

1. Toggle over to gear indication by pressing the right turn signal; "8" will be displayed at the top right (4), with "ON" or "OFF" flashing (2). If "ON" is flashing, the gear indication display is enabled (gears "1" through "6" will display as appropriate when the vehicle is in motion).

NOTE

Number "8" is a setup indicator only. Transmission has 6 speeds.

2. To disable gear indication (only "6" will display to show vehicle is in 6th gear), press and hold both turn signals until "OFF" is flashing.

NOTE

This speedometer has a photocell sensor that will sense daytime and nighttime modes. When traveling under bridges or in tunnels the photocell sensor will sense nighttime mode and enable the backlight. It is normal for this to take a few seconds.

3. Toggle over to the brightness menu by pressing the right turn signal where all of the bars and "BRIGHT" will be displayed.
4. To dim the backlight press and hold both turn signals until "DIM" and half of the bars are displayed.

NOTE

Color display adjustment is best done while not in direct sunlight.

5. Toggle over to the color menu by pressing the right turn signal where "ALL" and "COLOR" (5) will be displayed.



Figure 4. Select Display Color

6. See Figure 4. To change color press and hold both turn signals where the current color number will be displayed.
7. For coarse adjustment, press left turn signal to count down and right turn signal to count up incrementally.
8. For fine adjustment, press and hold left turn signal to count down and right turn signal to count up.
9. Once desired color is selected press and hold both turn signals until "SAVED" is displayed.
10. To change the color for the other three components (dial, tachometer pointer, and display), Toggle over to the color menu by pressing the right turn signal and follow steps 7 through 10.
11. Once desired setup and colors are finalized, turn ignition switch to the ignition (IGN) position and verify settings (gear indication will NOT appear until vehicle is in motion).

Clock Adjustment

1. To adjust clock on gauge toggle to the clock in the display.
2. Press and hold trip and choose between 12-hour or 24-hour clock by pressing and holding trip
3. The hours will then flash. Press trip switch quickly to current hour then press and hold trip switch.
4. The minutes will then flash. Press trip switch quickly to current minute then press and hold trip switch.
5. The AM or PM will then flash. Choose correct one, then press and hold.

Battery Reconnection and Initialization

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

During consumption of the first full tank of fuel, the gauge software will begin the process of learning your riding patterns, eventually tailoring the fuel range calculations to your unique riding characteristics.

The fuel level display and tank-mounted fuel gauge may not match at all times when starting with a full tank of fuel. The tank fuel gauge utilizes a continuous sweep needle to indicate fuel level, while the speedo/tach fuel level utilizes a segmented display. Each segment represents one fourth of a tank.

For example; if a given segment just came on or is about to go off, it would show no change, while the needle on the tank-mounted gauge would likely show a change in position.

Fuel Fill-up and Top-off

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

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

Troubleshooting

Table 2. 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.
Fuel Level	Fuel level display does not flash during setup for Sportsters with fuel level.	Fuel level sender #61200008 not installed properly or not properly detected.	Rerun step 1 of Sportster Fuel Level Display setup.
Color Changing	Color will not save.	Color was not saved properly.	Use instruction sheet for proper saving procedure.
Range functionality	Range for XL states "r----".	Tank size not set up.	Go into set up mode and select tank size.

Note: Please contact Technical Service with any installation or troubleshooting questions before filing a warranty claim.