



INSTRUCTIONS

-J04772

REV. 2011-06-27

DIGITAL OIL PRESSURE GAUGE

GENERAL

Kit Number

75138-09, 75340-09

Models

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

Additional Parts and Supplies Required

2011 and Later Softail Models and 2012 and Later Dyna Models: Requires separate purchase of Electrical Connection Kit (Part No. 72673-11).

An UltraTorch UT-100 (Part No. HD-39969) , Robinair Heat Gun (Part No. HD-25070) with Heatshrink Attachment (Part No. HD-41183) or other suitable radiant heating device is required for the proper installation of this kit.

Loctite 565 Thread Sealant (H-D Part No. 99818-97) is required for the 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 Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

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.

Electrical Overload

NOTICE

It is possible to overload your vehicle's charging system by adding too many electrical accessories. If the combined electrical accessories operating at any one time consume more electrical current than the vehicle's charging system can produce, the electrical consumption can discharge the battery and cause damage to the vehicle's electrical system. See an authorized Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories or for necessary wiring changes. (00211c)

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 digital oil pressure gauge kit requires up to 400 mA additional current from the electrical system.

Kit Contents

See Figure 5 and Table 1.

INSTALLATION

Preparation, 2011 and earlier Dyna models

Remove the seat per service manual instructions.

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)

Refer to the service manual and follow the instructions given to disconnect and remove the battery.

Preparation, all models EXCEPT 1999-2011 Dyna

Models with main fuse:

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.

Remove the seat per service manual instructions.

Models with main circuit breaker:

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 service manual and follow the instructions given to remove the seat and disconnect the negative (black) battery cable from the negative (-) battery terminal. Retain all seat mounting hardware.

Oil Pressure Sender and Gauge Installation

1. Remove the connector from the oil pressure switch (see Figure 1). Remove and discard the switch. Clean old threadlocking agent from the threaded opening.

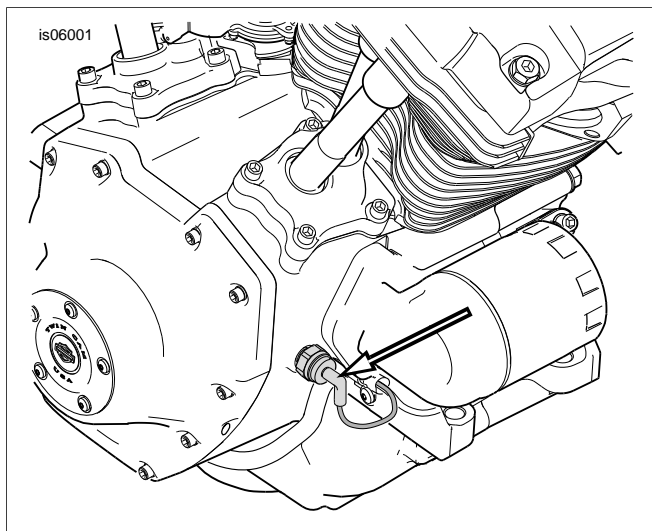


Figure 1. Oil Pressure Switch Location (Typical)

2. See Figure 5.

Dyna and Softail models only: Obtain the 90 degree elbow fitting (5) from the kit. Apply Loctite 565 Thread Sealant to the clean male threads of the fitting, and thread it into the crankcase.

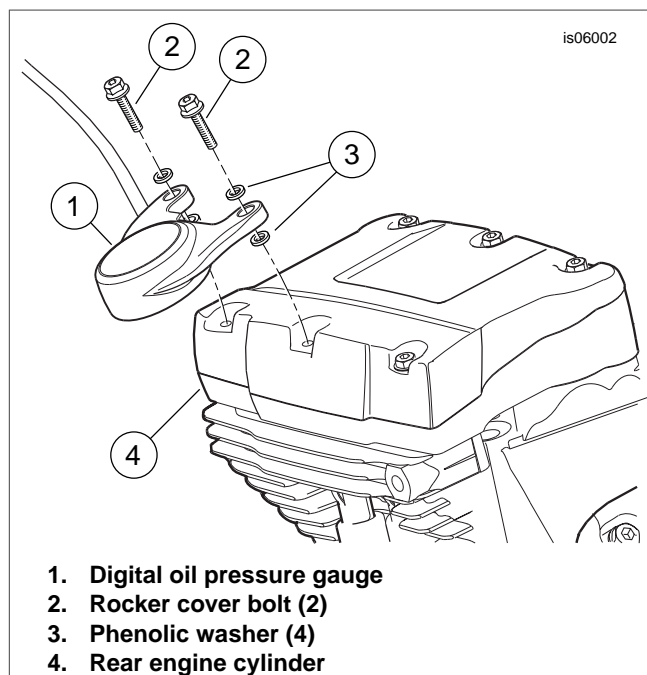
Tighten the fitting to 90-120 **in-lbs** (10.2-13.6 Nm), orienting the fitting so the sender will face **down**.

3. **ALL models:** Obtain the oil pressure sender (4) from the kit, and thread it into the crankcase or elbow fitting. Tighten the sender to 90-120 **in-lbs** (10.2-13.6 Nm).

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)

4. Loosen the fuel tank per the instructions in the service manual to gain access to the rear rocker cover.
5. See Figure 2. On the rear engine cylinder (4), remove and discard the two rearmost right side rocker cover bolts (2). Clean old threadlocking agent from the threaded holes.
6. Obtain the digital oil pressure gauge (1), two hex flanged screws and four phenolic washers (3) from the kit.
Place a phenolic washer onto the threads of each screw. Insert the screws through the gauge mounting holes as shown. Place a second phenolic washer onto the threads of each screw.



1. Digital oil pressure gauge
2. Rocker cover bolt (2)
3. Phenolic washer (4)
4. Rear engine cylinder

Figure 2. Digital Oil Pressure Gauge Installation

NOTE

Make sure the gauge wire and conduit are not pinched between the gauge and rocker cover.

7. Guide the gauge wire and conduit rearward past the rocker cover. Lightly fasten the gauge to the rocker cover with both screws, then tighten first the forward screw, then the rear screw to 15-18 ft-lbs (20.3-24.4 Nm).

Wire Harness Routing

1. Route the digital oil pressure gauge conduit toward the rear of the vehicle.

Route the unterminated orange/white wire and black wire:

Dyna models: under the top frame tube, then through the battery area (forward of the battery location) to the area behind the fuse block on the left side of the vehicle.

Softail models: along the inside of the top frame tube past the battery, then over to the fuse block.

Touring models except 2007: over the top right frame tube, crossing **beneath** the harnesses already in the area under the seat, under the top left frame tube to the area behind the left side cover.

2007 Touring models: along the inside of the top frame tube, then down to the area behind the right side cover.

2. Route the long branch of the harness to the oil pressure sender installed earlier.

On Dyna models:

- a. Back along the top frame tube,
- b. down the vertical tube behind the battery box,
- c. forward along the bottom frame tube,
- d. up the front vertical tube. Plug the connector into the oil pressure sender.

Softail models:

- Back along the top frame tube,
- following the vehicle main harness down behind the oil tank, then forward with the main harness along the bottom frame tube.
- Plug the connector into the oil pressure sender.

Touring models:

- Down the vertical tube behind the right side cover,
- forward along the bottom frame tube and vehicle harness,
- up the front vertical tube. Plug the connector into the oil pressure sender.

HARNESS CONNECTION

For ALL models

Splicing of wire leads is necessary in the installation of the digital oil pressure gauge to the motorcycle. Refer to the service manual for proper wire splicing procedures.

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.
- Cut the original equipment (OE) oil pressure switch connector (circuit [120] or [139], depending on model and year) from the green/yellow wire on the vehicle harness.
 - See Figure 5. Slide the shrink tube (13) onto the wire. Using the **red** sealed splice connector (8), splice the green/yellow wire from the **new** oil pressure sender connector to the green/yellow wire on the vehicle harness.
 - Slide the shrink tube over the splice connector and both wires. Use a heat gun or suitable radiant-heating device to shrink the tubing to the wires and connector.
 - Bind the long branch of the harness to the vehicle frame and harnesses as needed with cable straps from the kit.
 - Return to the unterminated wires of the harness at the fuse block.

NOTE

*For 2011 and later Softail models, skip the next two steps and see **For 2011 and Later Softail Models and 2012 and Later Dyna Models**.*

- Locate the main harness chassis ground connection on the frame. See the service manual for this model and year vehicle for specific location.
Remove the ground screw or nut.

- Select the correct-size ring terminal (9 or 10) from the kit to fit the ground screw or stud.

Cut the black ground wire on the **digital oil pressure gauge harness** to within easy reach of the vehicle ground. Crimp the ring terminal onto the black ground wire and install onto the ground screw or stud.

Connect the orange/white wire to a power source on the vehicle. See the wiring diagram and instructions in the service manual, and proceed to the section that follows for your specific year and model motorcycle.

For 2004 through 2011 Dyna models

- Remove the electrical caddy from the vehicle per the service manual instructions.
- Obtain the orange/white fuse block adapter wire (6) from the kit. Note the terminal on each end (see Figure 3). 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.

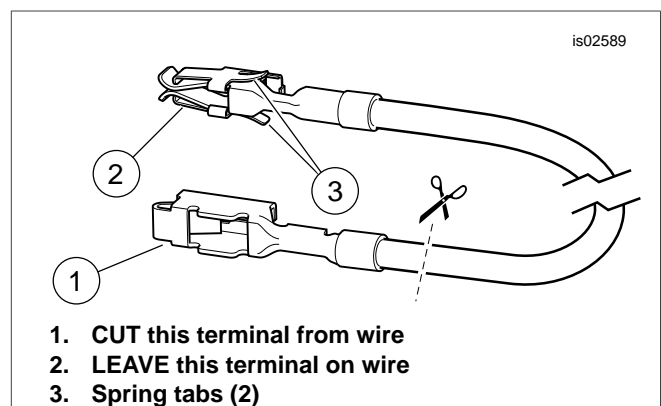


Figure 3. Fuse Block Adapter Wire (Dyna and Softail)

- Locate the fuse cavity indicated as "OPEN" on the electrical caddy. There should be a wire feeding one side of this circuit, but no mating wire or fuse will be present. 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.
- Cut the excess length from the orange/white wire on the **digital oil pressure gauge harness** to within easy reach of the orange/white adapter wire installed in Step 3. Refer to the warning before **Wire Harness Routing, Step 3**, and the service manual. Using the **blue** sealed splice connector (7) from the kit, splice the orange/white wire from the digital oil pressure gauge harness to the orange/white adapter wire.
- See Figure 5. Install the 2A fuse (11) from the kit into the OPEN fuse cavity to complete the circuit.
- Install the electrical caddy and cover onto the vehicle per the instructions in the service manual.
- Check along the entire length of the wiring for rubbing, chafing or pinch points, then proceed to **Final Assembly**.

For 2004 Through 2010 Softail Models

- Remove the fuse block cover. Remove the two hex head screws fastening the fuse block bracket, and pull the bracket and fuse block assembly away from the motorcycle frame.

2. Press the tab retaining the left-hand fuse block, and slide the block out of the mounting slots.
3. Obtain the orange/white fuse block adapter wire (6) from the kit. Note the terminal on each end (see Figure 3). 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.
4. Locate the fuse cavity indicated as "P&A IGN" on the fuse block cover. There should be a wire feeding one side of this circuit, but no mating wire or fuse will be present. 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.
5. Cut the excess length from the orange/white wire on the **digital oil pressure gauge harness** to within easy reach of the orange/white adapter wire installed in Step 4.
Refer to the warning before **Wire Harness Routing, Step 3**, and the service manual. Using the **blue** sealed splice connector (7) from the kit, splice the orange/white wire from the digital oil pressure gauge harness to the orange/white adapter wire.
6. See Figure 5. Install the 2A fuse (11) from the kit into the P&A IGN fuse cavity to complete the circuit.
7. Slide the fuse block into the mounting slots in the fuse block bracket until it clicks firmly into place. Place the bracket and fuse block assembly into position, and fasten with the two hex head screws removed earlier. Tighten securely. Install the fuse block cover.
8. Check along the entire length of the wiring for rubbing, chafing or pinch points, then proceed to **Final Assembly**.

For 2011 and Later Softail Models and 2012 and Later Dyna Models

NOTES

Requires separate purchase of Electrical Connection Kit (Part No. 72673-11).

1. Install Electrical Connection Harness (Part No. 72673-11) to Oil Pressure Gauge according to instructions in harness kit.
 - a. Splice the O/W wire of the digital oil pressure gauge harness to the R/Y wire of the electrical connection kit harness. See the instruction for that kit and the service manual.
 - b. Splice the black wire of the digital oil pressure gauge harness to the black wire of the electrical connection kit harness. See the instruction for that kit and the service manual.
2. Connect the socket housing of the electrical connection kit harness to the vehicle harness. See the instruction for that kit and the service manual.
3. Check along the entire length of the wiring for rubbing, chafing or pinch points, then proceed to **Final Assembly**.

For 2004 and Later FL Touring Models

1. **For 2008 and later models:** Remove the left side cover per the service manual instructions.
For 2007 models: If not already done, remove the right side cover per the service manual instructions.

For 2004 through 2006 models: Remove the left side cover per the service manual instructions.

2. **ALL models:** Remove the main fuse holder, fuse block and dust cover from the vehicle per the service manual instructions.
3. Obtain the orange/white fuse block adapter wire (6) from the kit.

For 2008 and later models: Note the terminal on each end (see Figure 4, **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 4, **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 4, **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.

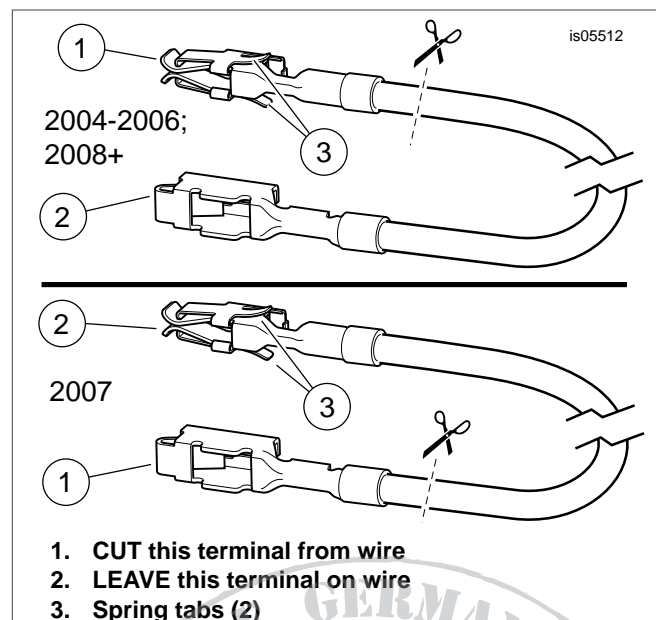


Figure 4. Fuse Block Adapter Wire (FL Touring)

4. **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.
5. 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.
6. Cut the excess length from the orange/white wire on the **digital oil pressure gauge harness** to within easy reach of the orange/white adapter wire installed in Step 5.
Refer to the warning before **Wire Harness Routing, Step 3**, and the service manual. Using the **blue** sealed splice connector (7) from the kit, splice the orange/white wire

from the digital oil pressure gauge harness to the orange/white adapter wire.

7. See Figure 5. Install the 2A fuse (11) from the kit into the P&A IGN fuse cavity to complete the circuit.
Install the three fuses removed in Step 4 into the proper cavities.
8. Install the dust cover onto the fuse block, and install the fuse block and main fuse holder per the instructions in the service manual.
9. Check along the entire length of the wiring for rubbing, chafing or pinch points, then proceed to **Final Assembly**.

For ALL 2003 or Earlier Models

1. Locate the orange/white wire on the vehicle harness that leads to the rear lighting connector [7] under the seat.
2. Cut the **vehicle harness** orange/white wire in a location that will allow easy stripping and splicing to the orange/white wire on the **digital oil pressure gauge harness**.
3. Cut the excess length from the orange/white wire on the **digital oil pressure gauge harness** to within easy reach of the orange/white vehicle harness wires cut in Step 2.
4. See Figure 5, the warning under **Harness Connection**, and the service manual. Using the **blue** sealed splice connector (7) from the kit, splice the orange/white wire together with the orange/white wires cut in Step 2.
5. Check along the entire length of the wiring for rubbing, chafing or pinch points.

FINAL ASSEMBLY

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)

1. Install the fuel tank. Refer to the service manual.

NOTE

*Verify that the ignition key switch is in the OFF position **before** installing the main fuse or attaching the battery cable or cables.*

2. Verify that the ignition key switch is turned to the OFF position.

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)

NOTICE

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)

3. **For 1999-2011 Dyna models:** Install the battery per the instructions in the service manual.

For Softail and FL Touring models with main circuit breaker: Refer to the service manual and follow the instructions given to attach the negative battery cable.

Apply a light coat of Harley-Davidson electrical contact lubricant (H-D Part No. 99861-02), petroleum jelly or corrosion retardant material to the negative battery terminal.

For all models with main fuse: Refer to the service manual and follow the instructions given to install the main fuse.

4. Test the digital oil pressure gauge for proper operation.

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)

5. Install the seat following the instructions in the service manual.

GAUGE FUNCTION

The oil pressure gauge will illuminate when the vehicle ignition is switched on. The minimum value that can be displayed is 5 psi (0.3 bar), and this will appear even when the engine is not running. Should the oil pressure drop to a point where the oil indicator lamp illuminates, **STOP THE ENGINE AT ONCE!** Refer to INDICATOR LAMPS in the owner's manual, and do not ride further until the trouble is located and necessary repairs are made.

CHANGING THE DISPLAY MODE

1. The display can be changed to read in psi or bar as follows:
 - a. With the vehicle in a well lit area, turn the ignition key switch to IGNITION, but do not start the motorcycle.
 - b. **As soon as** the pressure value shown on the gauge face stabilizes (at or above 5 PSI or 0.3 BAR), cover the right half of the face (at least the area just below the PSI/BAR icon) with your hand or other opaque object.
 - c. As soon as the display starts flashing (approximately five seconds), uncover the gauge face. Flashing should stop, and the alternate mode should display.
 - d. If flashing continues, cycle the ignition and repeat the process.

SERVICE PARTS

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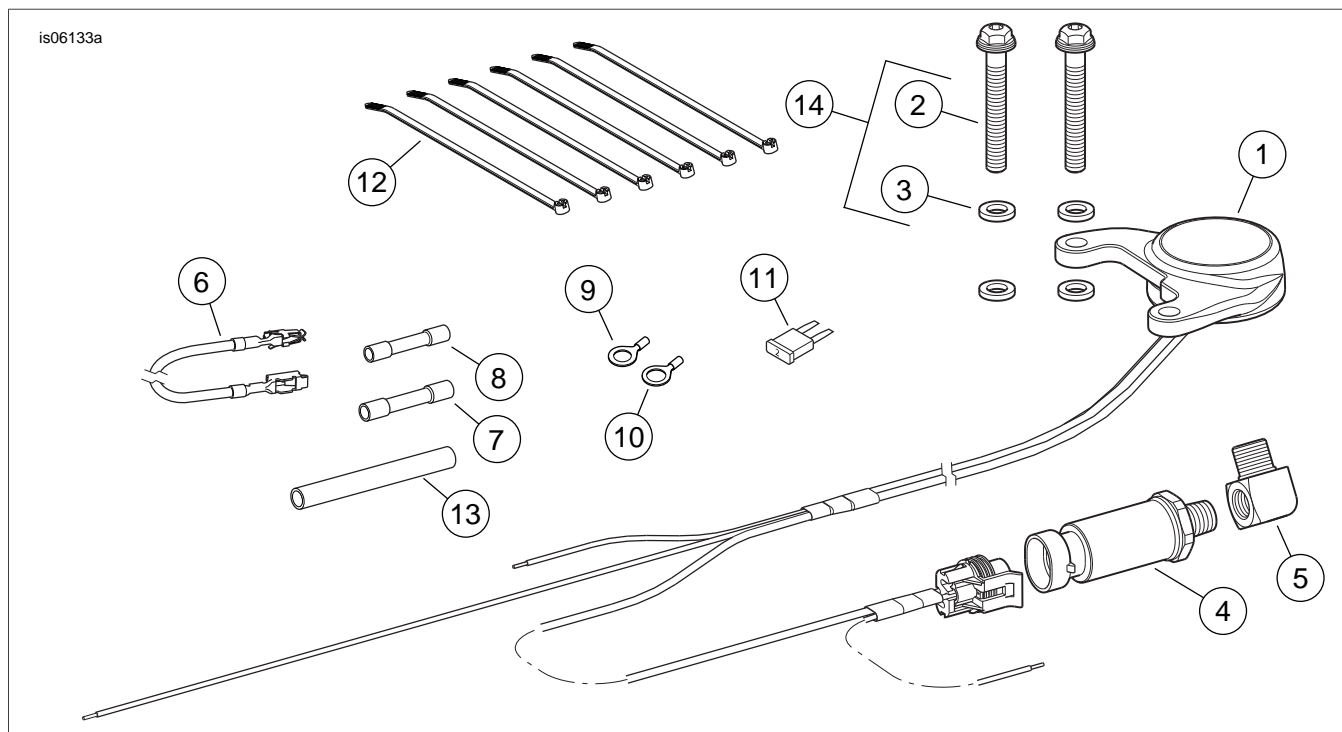


Figure 5. Service Parts, Digital Oil Pressure Gauge

Table 1. Service Parts

Kit	Item	Description (Quantity)	Part Number
Kit 75138-09 Digital Oil Pressure Gauge, Chrome	1	Gauge, digital oil pressure (chrome)	Not sold separately
Kit 75340-09 Digital Oil Pressure Gauge, Black	1	Gauge, digital oil pressure (black)	Not sold separately
	2	Screw, hex flange head (2)	Not sold separately
	3	Washer, phenolic (4)	Not sold separately
	4	Oil pressure sender	74438-99
	5	Fitting, street elbow, 90 degree, brass	75221-09
	6	Fuse block adapter wire (orange/white)	70329-04
	7	Sealed splice connector, #14-16 AWG (blue)	70586-93
	8	Sealed splice connector, #18-20 AWG (red)	70585-93
	9	Ring terminal, #18-22 AWG (1/4 inch stud)	9858
	10	Ring terminal, #18-22 AWG (5/16 inch stud)	9859
	11	Fuse, blade type, 2A	54305-98
	12	Cable strap	10065
	13	Shrink tube, black, 0.032 inch (0.8 mm) x 2.0 inches (51 mm) long	72411-97
	14	Service kit, oil pressure gauge hardware (includes items 2 and 3)	12600004