

VT No. 32-0587 and 39-0453

This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

REPLACEMENT 5 in. ELECTRONIC SPEEDOMETER KITS

General

These speedometer replacement kits are for FLHR/I, Softail and FXDWG models with the following calibrations:

Kit number	Year and Calibration
67027-96C	1996-98 Softail, Domestic (Mile)
67033-95D	1994-98 FLHR, Domestic (Mile)
67178-96C	1996-98 FXWDG, Domestic (Mile)

Removing Old Speedometer

NOTE

Locate and follow procedure in this Instruction Sheet that applies to motorcycle requiring speedometer replacement.

WARNING

To protect against shock and accidental start-up of vehicle, disconnect the battery cables, negative cable first, before proceeding. Inadequate safety precautions could result in death or serious injury.

WARNING

Always disconnect the negative battery cable first. If the positive battery cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

FLHR/I (1994-1996 Models) Removing Speedometer

1. Remove the instrument console acorn nut and mounting screw (with flat washer). Lift the console from the fuel tank. Turn the console over and lay it on a shop towel placed on gas tank.
2. See Figure 1 and 2. Cut all leads connected to speedometer as close to speedometer as possible; except reset switch leads. A new switch with wires connected to speedometer connector is provided.

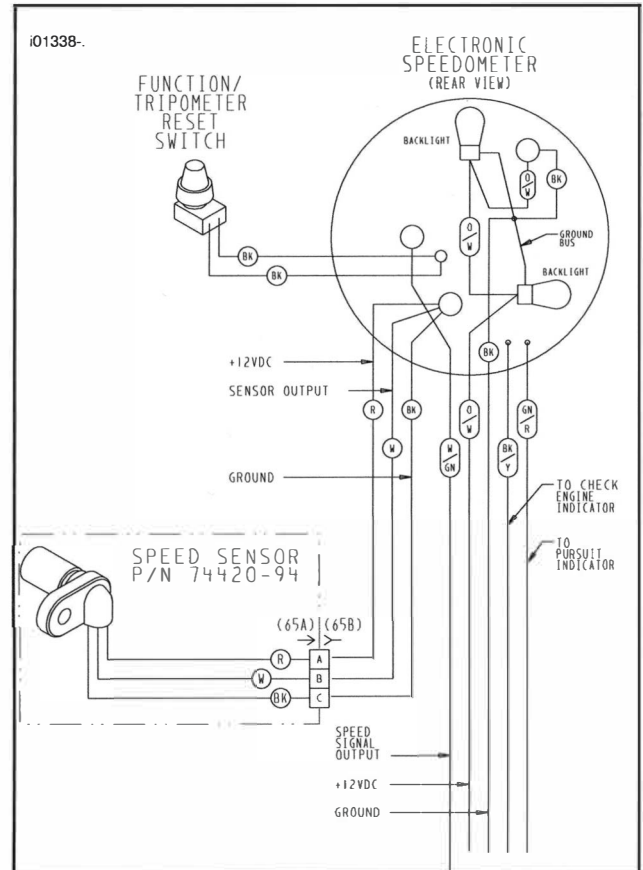


Figure 1. Cutting Wires At Old Speedometer

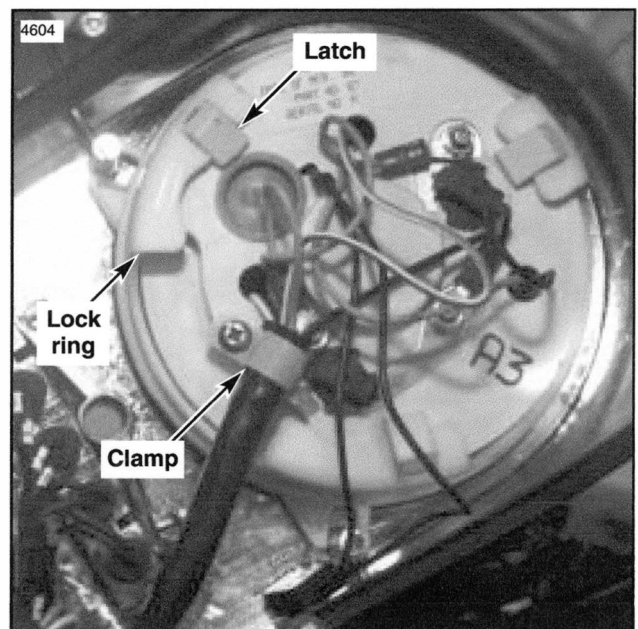


Figure 2. Old Speedometer

3. Unscrew reset knob and pull harness from clamp (remove screw if necessary).
4. Gently pry the three latches upward to release the lock ring from back of speedometer. Lift console, remove old speedometer from top side of console. Discard old speedometer and lock ring.
5. Retain rubber gasket for use with new speedo.
6. Continue at "Installing Deutsch Mini Terminals". **Connector [20] does not need to be replaced on these models.**

FLHR/I (1997 & 1998 Models) Removing Speedo

1. Perform steps 1-5 given for 1994-1996 FLHR/I on previous page.
2. See Figure 3. Remove left side cover and locate connector [20].
3. Continue at "Installing Deutsch Mini Terminals". After terminals have been installed, replace connector [20] following instructions given in "Replacing Connector [20]".

NOTE

On FLHR/I 1997 & 1998 models, connector [20] must be replaced.

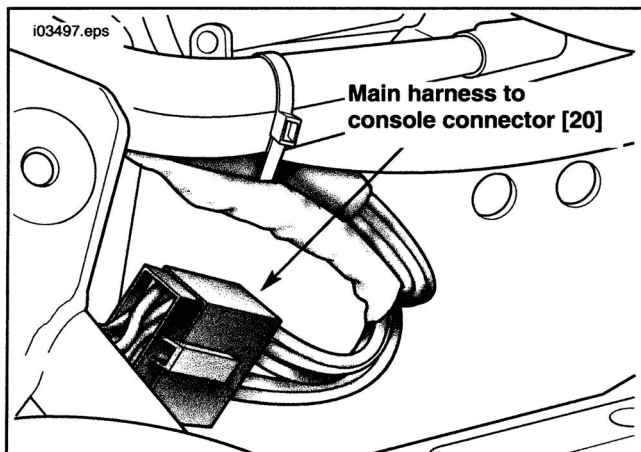


Figure 3. Replacing Connector [20] FLHR/I 1997-98

FXDWG (1995-1998 Models) Removing Speedo

1. Remove instrument console nut and lift console from tank. Disconnect 12-place (or 14 place On 1998 models) harness connector [20] under console. Remove terminals from ignition switch, making note of wire locations. Remove console from fuel tank.
2. See Figure 1 and 2. Cut all leads connected to speedometer as close to speedometer as possible; except reset switch leads. A new switch with wires connected to speedometer connector is provided.

3. Unscrew reset knob and pull harness from clamp (remove screw if necessary).
4. Gently pry the three latches upward to release the lock ring from back of speedometer. Lift console, remove old speedometer from top side of console. Discard old speedometer and lock ring.
5. Retain rubber gasket for use with new speedo.
6. Continue at "Installing Deutsch Mini Terminals". After terminals have been installed, replace connector [20] following instruction given in "Replacing Connector [20]".

SOFTAILS (1996-1998 Models) Removing Speedometer

1. Remove instrument console nut and lift console from tank. Disconnect connectors [20] and ignition switch connector [33] under console. Remove console from fuel tank.
2. See Figure 1 and 2. Cut all leads connected to speedometer as close to speedometer as possible; except reset switch leads. A new switch with wires connected to speedometer connector is provided.
3. Unscrew reset knob and pull harness from clamp (remove screw if necessary).
4. Gently pry the three latches upward to release the lock ring from back of speedometer. Lift console, remove old speedometer from top side of console. Discard old speedometer and lock ring.
5. Retain rubber gasket for use with new speedo.
6. Continue at "Installing Deutsch Mini Terminals". After terminals have been installed, replace connector [20] following instruction given in "Replacing Connector [20]".

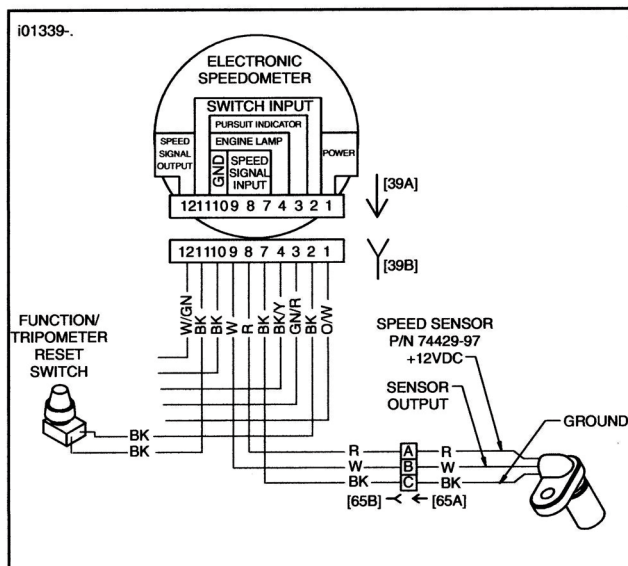


Figure 4. Wires At New Speedo.

Installing Deutsch Mini Terminals.

1. See FLT Service Manual "Deutsch Solid Barrel Contact Crimping Instructions" and follow instructions to terminate the wires cut when speedo was removed.

CAUTION

In the following step, make certain ground wire from speed sensor is inserted in cavity (7) of connector [39B]. Do not mix with speedo ground connected at cavity (10).

2. See Figure 4. Insert terminals into connector half [39B] as shown.

NOTE

On FLHR/I 1994 - 1996 models, go to "Installation and Final Check". On all other models, continue at "Replacing Connector [20]."

Replacing Connector [20]

NOTE

Connector [20] is located as follows:

FLHR/I - behind left side cover

FXDWG and Softails - under console

1. Cut wires from main harness (pin connector half [20A]) as close to connector housing as possible.

NOTE

The 1998 FLHR/I and FXDWG models have a 14 place connector [20]. Cavities (13 & 14) are not used on FXDWG models. On FLHR/I models switch the check engine light lead, BK/Y, from cavity (14) in old connector [20] to cavity (7) in new connector [20] as shown in Figure 5.

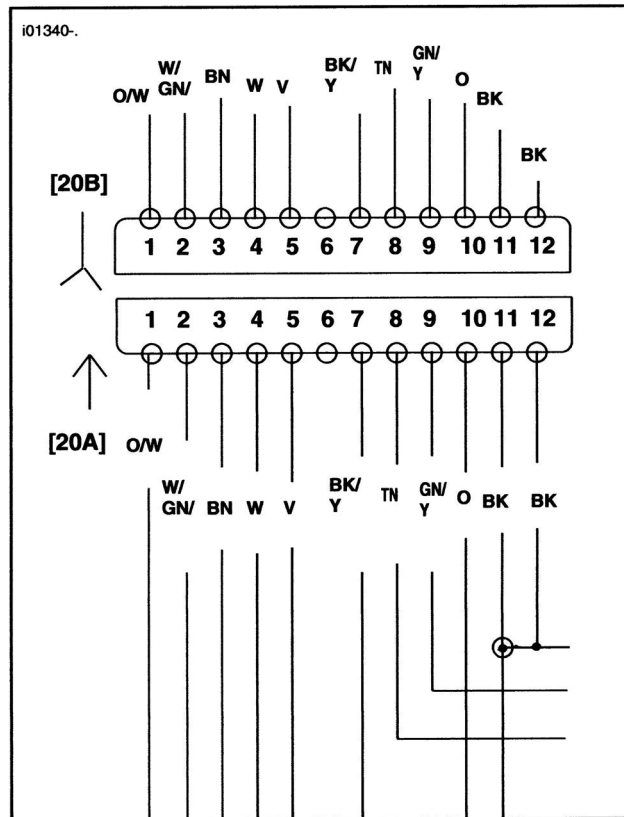


Figure 5. Wiring Connector [20].

2. See FLT Service Manual "Deutsch Solid Barrel Contact Crimping Instructions" and follow instructions to terminate the wires cut in step 1.
3. See Figure 5. Insert terminals into connector half [20A] as shown.

CAUTION

To avoid miswiring the indicator lamp wires in the socket half of the connector in the following step, cut each wire separately, strip wire, install new socket terminal and insert terminal in same position that it was in old socket half. On FLHR/I models switch the check engine light lead, BK/Y, from cavity (14) in old connector [20] to cavity (7) in new connector [20] as shown in Figure 5.

4. See Figure 5. Insert socket terminals into connector half [20B] as shown.

Installation and Final Check

All Models

Apply window cleaning fluid to speedo gasket to aid assembly.

FLHR/I (1994-1996 Models)

1. Place the gasket into position around the console speedometer bore.
2. Fit the speedometer into the bore so that it fits snugly against the rubber gasket.
3. Turn the console over. Place the lock ring over the back of the speedometer aligning the two slots with the console bosses. Press the latches down until they lock into position.
4. Insert the function/reset switch through the hole in the left side of the console and screw on the rubber button.
5. See Figure 4. Check that new connector [39B] is wired as shown in Figure 4. Plug connector [39B] into speedometer.
6. Turn the console over and center the assembly on the fuel tank. Install the acorn nut and console mounting screw (with flat washer).

WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

7. Connect battery cables, positive cable first.
8. Check speedometer for proper operation and clear diagnostic codes following instructions at end of this Instruction Sheet.

FLHR/I (1997 & 1998 Models)

1. Perform steps 1 through 6 from previous "FLHR/I - 1994 - 1996" procedure.
2. See Figure 5. Check that new connector [20] is wired as shown in Figure 5. Insert seal pins in any cavities not being used.
3. Plug connector [20] halves together and install left side cover.

WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

4. Connect battery cables, positive cable first.
5. Check speedometer and indicators for proper operation and clear diagnostic codes following instructions at end of this Instruction Sheet.

FXDWG (1995 1998 Models) SOFTAILS (1996 1998 Models)

1. Place the gasket into position around the console speedometer bore.
2. Fit the speedometer into the bore so that it fits snugly against the rubber gasket.

3. Turn the console over. Place the lock ring over the back of the speedometer aligning the two slots with the console bosses. Press the latches down until they lock into position.
4. Insert the function/reset switch through the hole in the left side of the console and screw on the rubber button.
5. See Figure 4. Check that new connector [39B] is wired as shown in Figure 4. Plug connector [39B] into speedo.
6. See Figure 5. Check that new connector [20] is wired as shown in Figure 5. Insert seal pins in any cavities not being used.
7. Plug connector [20] halves together. On FXDWG, install ignition switch terminals in original locations. On Softail models, install connector [33] to ignition switch.
8. Turn the console over and center the assembly on the fuel tank. Install the acorn nut.

WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

9. Connect battery cables, positive cable first.
10. Check speedometer and indicators for proper operation and clear diagnostic codes following instructions at end of this Instruction Sheet.

Clearing Diagnostic Codes

The diagnostic mode is entered by turning the ignition from OFF to ON while holding the reset switch in. The normal power-up sequence will occur before entering the diagnostic mode. Diagnostic codes set during this power-up sequence will be stored as well.

When in the diagnostic mode the odometer will display the first diagnostic code. When the trip switch is pressed again the next code will be shown. If the trip switch is pressed for more than 5 seconds at any time while in the diagnostic mode, the diagnostic code displayed will be cleared.

1. Turn the ignition from OFF to ON while holding the reset switch in.
2. The code "d01Clr" will be displayed.
3. Press button again and do not release button "d02SET" will be displayed. Hold button in until "d02CLR" is displayed. This indicates code has been cleared.

The diagnostic mode is exited either by turning ignition from ON to OFF to ON again without depressing the reset switch or if a speed signal greater than 5 MPH is detected.

For diagnostic procedures, refer to the applicable Service Manual.