V-Twin Mfg.
OEM REPLACEMENT IGNITION MODULE
FITS 1980-1984 FX,FL,1980-1982 XL
VT No. 32-9015

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.

General
The ignition module in this kit is designed for replacement of the original equipment ignition module on the following Harley-Davidson motorcycle models with electronic ignition:

1980 - 1982 XLH,XLS
1983 - 1984 XR 1000
1980 - 1983 FLT
1982 - 1983 FXR, FXRS, FXRT
1980 - 1984 FLH, FXE, FXSB, FXWG, FXB, FXEF, FXS, FXDG

Warning: Do not install this kit's ignition module on any model other than those specified above. Doing so may result in adverse engine operation and/or damage to vehicle electrical and engine components.

This kit consists of the following components:
1 Conduit, 10 inch long vinyl
1 Conduit, 33-inch long high-temp vinyl
1 Conduit, 34·inch long vinyl
1 Conduit, 48·inch long high-temp vinyl
1 Connector, 3-pin/socket
1 Harness, ignition module adapter wiring
1 Module, ignition
2 Rivet, timer cover
1 Rotor, ignition
7 Strap, cable
2 Terminal, pin type
2 Terminal, ring type (for #l0 stud size)
1 Terminal. socket type
1 Terminal, spade type- female

NOTE: Additional components are provided in this kit to accommodate a variety of model applications. Certain kit components may not be required for your particular installation.

Original equipment ignition modules, on the models listed above, have six color-coded wire leads grouped into three separate wiring harness branches of different lengths. Each of the six wire leads terminates in either a pin type, a socket type, a ring type, or a spade type terminal.

The replacement ignition module in this kit has seven color coded wire leads grouped into a single six-inch long "pigtail" wiring harness, which terminates in a seven- socket connector.

A new adapter wiring harness, assembled from components in this kit, connects to the vehicle's ignition system components harnesses in the same locations as the original module wires, and allows simple plug in connection of the adapter harness's seven-pin connector to the new style replacement module's seven-socket connector.

NOTE: Only six of the seven adapter harness wires will be connected to the ignition system components/harnesses; the seventh wire (violet/white color code) is not used and will be cut off at the harness seven-pin connector.

When installing this kit on vehicles in which a new style ignition module and adapter wiring harness have been previously installed the seven-socket connector of the kit's ignition module will simply plug into the seven-pin connector of the motorcycle's existing adapter wiring harness.

NOTE: Faulty ignition module operation may result from wiring harness problems, in which case the connection of this kit's module to an existing adapter wiring harness may not correct the ignition system malfunction. You will also need to replace the previously-installed harness (with the new adapter wiring harness in this kit) if it is determined to be faulty.

WARNING: To avoid accidental start-up of vehicle and possible personal injury, disconnect battery cables from battery (negative cable first) before performing any of the following procedures.

NOTE: The new style ignition rotor is an original equipment component on 1984 models. Therefore, on these models, replacement with the rotor from this kit is not required.

1. On all models (except 1984 models and vehicles in which a new style ignition rotor has previously been installed), refer to applicable Service Manual to replace original ignition rotor with new rotor from kit. Check camshaft oil seal; replace it defective.

NOTE: Do not reinstall timer cover at this time; the inspection and adjustment of ignition timing (Step 17) must be performed prior to the installation of timer cover.

2. Locate and gain access to existing ignition module using applicable Service Manual. On vehicles in which an adapter wiring harness has been previously installed, proceed to Step 3. On all other vehicles, proceed to Step 4.

3. Disconnect seven-socket connector of existing module from seven-pin connector of wiring harness. Remove and save ignition module mounting fasteners; remove existing ignition module. Proceed to Step 15.

4. Using the table below, compare wire color codes of adapter harness from kit (and new module pigtail) with those of original module on motorcycle.

NOTE: Original module color code for both the ground wire and one of the ignition sensor wires is black. To distinguish between the two, note that the black ground wire is not grouped with any other wire lead, and that the black ignition sensor plate wire is grouped (encased by conduit) with the two other sensor plate wires (green and red).

5. Take note of the routing of original ignition module wire leads. Disconnect these module wire leads at the terminals. Remove and save ignition module mounting fasteners; remove original ignition module.

NOTE: Ignition modules being replaced under warranty must be submitted with all wires and wire terminals intact (warranty claims will be rejected for modules submitted with wires cut and/or terminals removed). Regardless of warranty considerations, do not splice the wires of the new ignition module, or the wires of the adapter wiring harness, to the wires of the original module's wiring harness.

6. Position seven-pin connector of adapter harness over location on motorcycle in which original ignition module was mounted. You may wish to tape the connector in place so that it does not shift position during the wire routing procedures which follow.

NOTE: To ease installation of conduit over adapter harness wires, immerse wire insulation and conduit in soapy water beforehand. It may also help to temporarily attach a relatively rigid "leader" wire to the end of the harness wirer(s); whereupon, the leader wire should be inserted through the conduit, and then used to puff the harness wirer(s) through the conduit.

In the wire routing procedures which follow, cable straps from this kit will be used to secure the different wire branches of the adapter harness to the vehicle. In most cases, the cable straps should be installed at the same time that the wires are being routed. In some situations, if a cable strap needs to be installed close to the wire end(s) being terminated, it may be easier to install the strap only after the terminal(s) has actually been installed to the wirer(s).

7. Install the 48·inch long high-temp vinyl conduit from kit over pink and white wires of adapter harness. Install this 2-wire/conduit assembly on the motorcycle using the same routing (to the ignition coil) as the original module blue and white wires; install cable strap(s) as required to properly secure wires.

8. When routing of 2-wire/conduit assembly reaches ignition coil, cut off excess length of wires and conduit (note that one wire will be longer than the other, as was the case with original module wires). If one of the original module wires to ignition coil had a short length of small diameter conduit encasing it near the terminal, add a similar length of conduit to corresponding wire of adapter harness (use. the kit's to-men long piece of conduit cut to proper length).

9. Trim off about 1/4 inch of insulation at the loose end of each of the two wires. Install female spade type terminal from kit to pink wire; connect terminal to ignition coil primary negative (~). Install one of the ring type terminals (#10 stud size) from kit to white wire; connect terminal to ignition coil primary positive (+).

10. Install the 33·inch long high-temp Vinyl conduit from kit over black/white. green, and red wires of adapter harness. Install this 3 wire/conduit assembly on motorcycle using same routing (to ignition sensor plate connector) as original module black, green, and red wires; install cable strap(s) as required to properly secure wires.

11. When routing of 3·wire/conduit assembly reaches ignition sensor plate connector, cut off excess length of wires and conduit. Trim off about 1/4 inch of insulation at the loose end of each of the three wires. Install pin type terminals from kit to black/white and green wires; install socket type terminal from kit to red wire (AMP #90184-1 is a recommended crimping tool for this procedure).

12. Insert the three wire terminals into positions, in back of 3·pin/socket connector from kit, which will allow adapter harness

wires to connect with their matching color wires of the existing ignition sensor plate connector, respectively (i.e .. black/white to black, green to green, and red to red). Push each pin/socket terminal far enough into connector so as to lock terminal into place (use of a special installation tool, such as ITT Cannon #CIT·SS·14, is recommended). Connect adapter harness 3-pin/socket connector to ignition sensor plate connector.

13. Route solid black ground wire of adapter harness in same manner as black ground wire of original module; install cable strap, if required, to secure wire. Trim off about 1/4 inch of insulation at the loose end of the wire. Install the remaining ring type terminal from this kit (#10 stud size) to the wire. Secure terminal to original ground location with original fastener.

CAUTION: Do not remove violet/white wire pin (from harness connector) or socket (from module connector) since this will destroy the weather-protective property of the connector. Electrical terminal corrosion can otherwise occur, resulting in adverse engine operation and/or damage to vehicle electrical and engine components.

14. Cut off the remaining violet/white wire of the adapter harness near the seven-pin connector. Apply electrical tape or a small amount of RTV silicone sealant to the cut end of wire at connector, thereby insulating it from any other electrical system component or ground.

15. Install new ignition module with original mounting fasteners. Connect seven-socket connector of new module to seven-pin connector of wiring harness.

16. Install any components or covers which may have been removed to gain access to ignition module and wire terminal connections. Connect battery cables to battery (positive cable first).

17. Check and adjust ignition timing on those vehicles in which ignition rotor was replaced (Step 1); refer to applicable Service Manual for detailed procedures. Install timer cover using two rivets from kit.

Seven Pin/Socket connector Position Number	Adapter Wiring Harness & New Module Wire Color	Original Module Wire Color	Wire Terminal Location
1	Pink	Blue	Ignition Coil Negative
2	White	White	Ignition coil positive
3	Black/White	Black	Ignition sensor plate connector
4	Black	Black	Ground to battery and/or frame
5	Violet/White	Not applicable	None; harness wire to be cut off
6	Green	Green	Ignition sensor plate connector
7	Red	Red	Ignition sensor plate connector