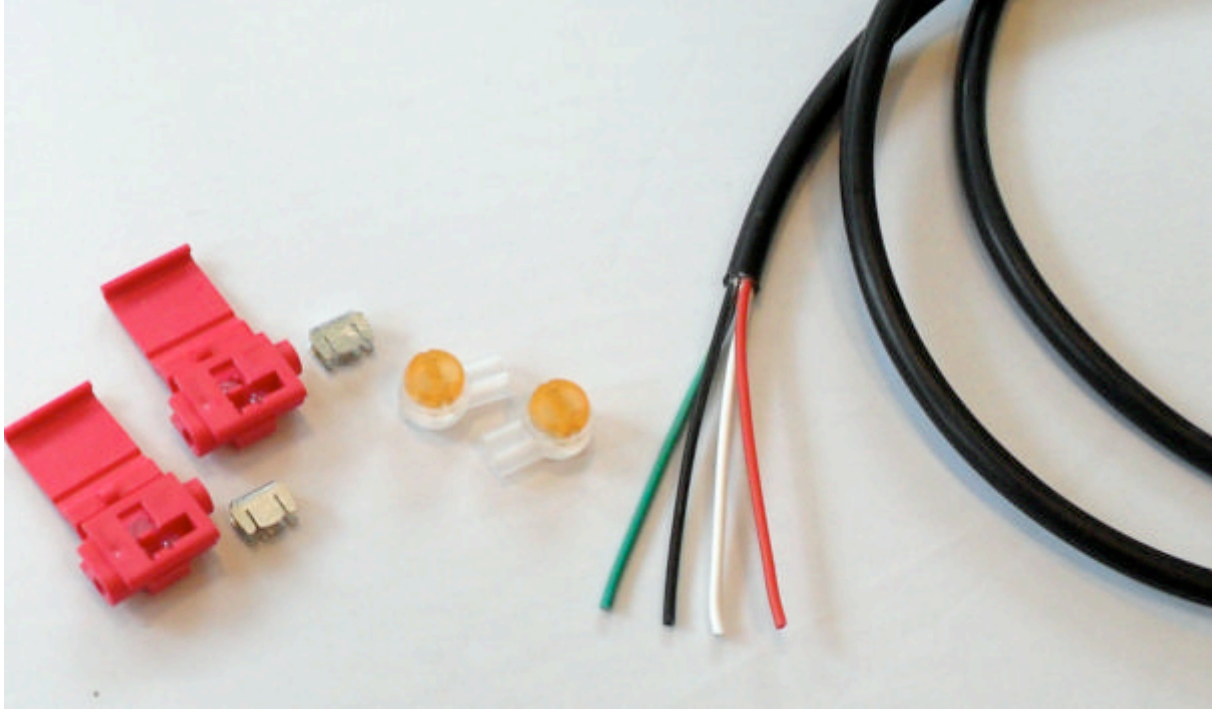


Install Guide for SHV4A-U01 Harness Kit

(All vehicles with electronic speedometer and 3-wire speed sensor)

Disclaimer: Do not attempt to install the product if you don't have basic mechanical skills. The SpeedoHealer is intended to improve speedometer accuracy. However, HealTech Electronics Ltd. and Blue Monkey Motorsports Inc., shall not be liable for any loss, damage or penalties caused by improper installation, unlawful use (see your state's relevant laws), or inaccurate speed readings.



Preparation:

- Vehicle should be parked on flat ground with parking brake on for safety.
- The ignition key should be in the OFF position. **Remove the key from the ignition** while working under a vehicle.
- Since most garages are not terribly well lit, even a cheap single bulb shop light or head-strapped light is very helpful when you're under the vehicle.
- A mechanic's creeper to lay on helps but is not required

1. Locating the Speed Sensor connector

The Speed Sensor on most vehicles is located in the vicinity of the transfer case or transmission. If in doubt, refer to your shop manual for component location.

2. Identifying the Speed Sensor wires

You have to determine which wire is the **Power, Signal** and **Ground**.

Identify the wires by using a basic analog or digital multimeter (\$20-40 at most auto parts stores):

1. Locate the **Power** wire.
With the speed sensor connected, switch the instrument to DC 20V position. Connect the black meter probe to a known good chassis ground (i.e. frame, engine block, etc). Turn the ignition ON. With the red meter probe, test each of the 3 wires (touching either through the back of the plug, or by probing through the insulation). When you locate the wire with constant +5V to +12V DC voltage, this is the **POWER** wire that will connect to the **RED** SpeedoHealer wire.
2. Locate the **Ground** wire.

Switch the multimeter to read Ohms. Connect the red meter probe of the instrument to a known good ground. Connect the black test lead to one of the remaining two wires (touching either through the back of the plug, or by probing through the insulation). The **Ground** wire should test at 0 Ohms, and will connect to the **BLACK** SpeedoHealer wire.

3. The third wire is your **SIGNAL** wire. This will connect to the **White** SpeedoHealer wire to feed signal, and to the **Green** SpeedoHealer wire to receive the corrected signal.
4. Take note of the wire colors and their functions.
5. Turn ignition OFF and disconnect the Speed Sensor connector to begin installation.

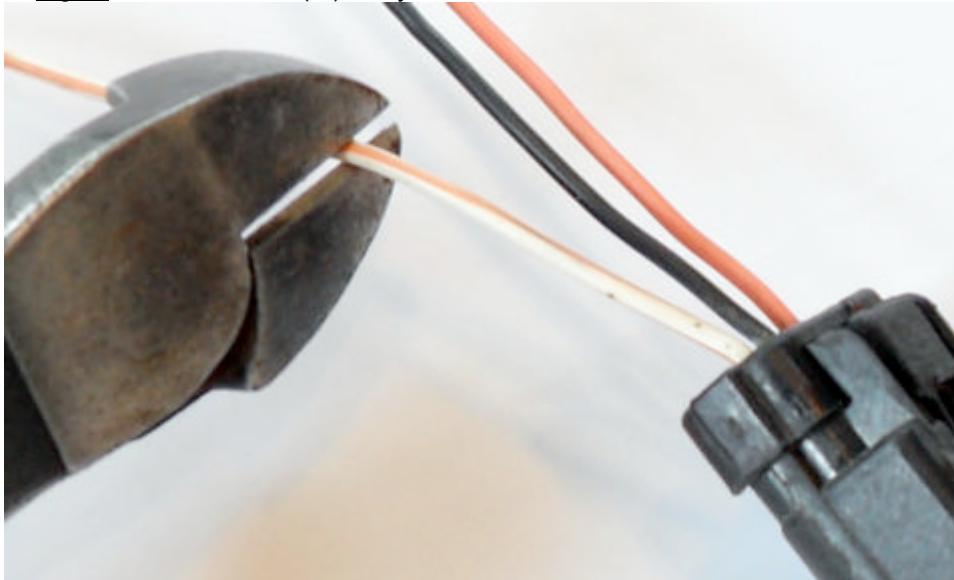
→ We recommend soldering all connections when possible. However, we include quality sealed wire splices as an alternative. See section #4 for instructions on using sealed wire splices.

3. Soldering Installation

1. Strip the Signal wire about 5 cm (2") away from the sensor connector.
2. Splice the **White** SpeedoHealer harness wire to this point. **White** wire is "Signal FROM speed sensor TO SpeedoHealer". Insulate your connection using electrical tape or heat shrink tubing.
3. In the same way, splice the **Green** SpeedoHealer wire to the other wire end of the Signal cable. **Green** wire is "Signal FROM SpeedoHealer TO speedometer". Insulate your connection.
4. Splice the **Black** SpeedoHealer wire to the Ground wire of the Speed Sensor, or to any other known good ground wire. Insulate your connection.
5. Splice the **Red** SpeedoHealer wire to the Power wire of Speed Sensor, or to any other fused power lead. Insulate your connection.
6. Make sure that all connections and insulations are good. Wrap with electrical tape for additional security.

4. Sealed Wire Splice (non-soldering) Installation

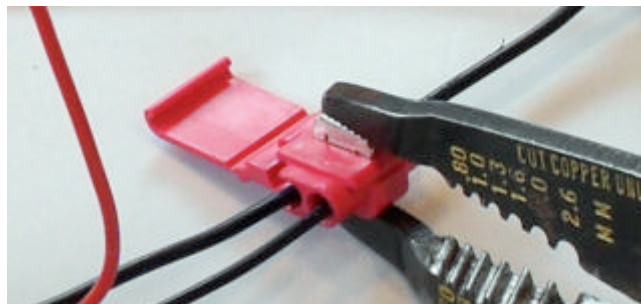
1. Cut the Signal wire about 5cm (2") away from the sensor connector.



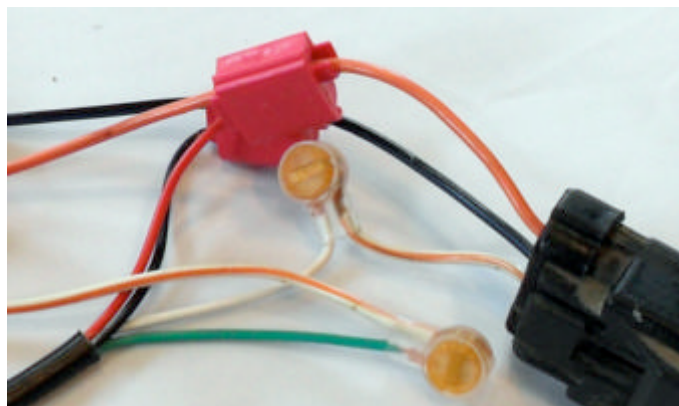
2. Splice the **White** SpeedoHealer harness wire to the signal wire coming from the speed sensor and secure with sealed gel-filled connectors. **NOTE:** The supplied gel-filled wire taps DO NOT require the wire ends to be stripped first!



3. In the same way, splice the **Green** SpeedoHealer wire to the signal wire going to the vehicle's wiring harness.
4. Use the supplied red taps and silver tap tabs to join the **Black** SpeedoHealer wire to the Ground wire of the Speed Sensor. Be sure to fully close the tabs for best contact.
5. In the same way, tap the **Red** SpeedoHealer wire into to the Power wire of Speed Sensor as shown below. Note that the continuous power wire is NOT CUT. It lays into one channel of the tap. The SpeedoHealer power wire goes into the single wire side. The silver metal tab will pierce the insulation to make a connection for power once you press it in with pliers. The silver tab **MUST BE FLUSH** with the red plastic piece if done correctly.



6. Make sure that all connections and insulations are good as shown below.



Now route cable toward engine compartment following factory wiring harness, using zip ties to secure away from moving parts and heat sources. (Fig. 4 below)

NOTE: End destination of SpeedoHealer cable is passenger side firewall.



In engine bay, route SpeedoHealer cable along factory wiring harness to passenger side firewall. Mount SpeedoHealer control box to factory harness with zip ties and plug in SpeedoHealer cable. (Fig 5 below)

Important: Do not bend the SH harness more than a couple degrees right at the SpeedoHealer control box, or the pins in the connector are weakened and could break over time.



Do not mount control box near distributor, distributor wires, or other electronic devices.

ALTERNATE MOUNTING LOCATION: Since this unit can mount anywhere its kept away from heat sources and major electrical components, it really can be mounted in any one of a dozen places. IF you wish to drill your firewall, this unit can even be installed inside your glove compartment inside the vehicle. We're simply showing you the MOST LIKELY and simplest mounting location.

Turn ignition to run position and verify control box LED is illuminated by pushing both red buttons simultaneously. Release buttons. You are now ready to program.