Preliminary Draft

MASTER TECH Essential Tools ™

Vehicular Data Recorder

Installation and Operating Instructions

1- Installation In The Vehicle

Determine whether a Custom Interconnect System, appropriate for the vehicle and for the problem being investigated, is available for use. If an appropriate Custom Interconnect System is not available, the Universal Interconnect System must be used.

When Using A Custom Interconnect System:

1- Locate the vehicle computer(s) or other electronic device(s) that the Custom Interconnect System is specified for.
2- Disconnect the vehicle wiring harness connector(s) and replace them with the corresponding connector(s) on the Custom Interconnect System.
3- Connect the vehicle wiring harness connector(s) (which were just disconnected from the vehicle electronics) to the corresponding connector(s) on the Custom Interconnect system.
4- When using the optional Fuel Pressure Sensor, connect the sensor assembly to the vehicle fuel system.

When the Custom Interconnect System is installed in the engine compartment, connect the fuel pressure Sensor assembly directly to the 4-pin connector on the Custom Interconnect System.

When the Custom Interconnect System is installed in the passenger compartment, use the optional Fuel Pressure Extension Cable to connect the Fuel Pressure Sensor assembly to the 4-pin connector on the Custom Interconnect System, routing the extension cable out through the hood cowling and through the door seal into the passenger compartment.

5- Connect the Custom Interconnect System to the Vehicular Data Recorder.

When Using the Universal Interconnect System:

1-Identify the signals within the vehicle that are to be monitored.
2- Using the vehicle wiring diagram, identify the connector pins that are to be back-probed.
3- Locate the vehicle connectors that are to be back-probed, carefully insert the appropriate probe pins on the Universal Interconnect System into the desired vehicle connector locations by sliding the probe pin along the vehicle wire and into the vehicle connector housing, so that the probe pin is touching the contact inside the vehicle connector housing.
4-When using the optional Fuel Pressure Sensor, connect the sensor assembly to the vehicle fuel system.

When the Universal Interconnect System is installed in the engine compartment, connect the Fuel Pressure Sensor assembly directly to the 4-pin connector on the Universal Interconnect System.

When the Universal Interconnect System is installed in the passenger compartment, use the optional Fuel Pressure Extension Cable to connect the fuel Pressure Sensor assembly to the 4-pin connector on the Universal Interconnect System, routing the extension cable out through the hood cowling and through the door seal into the passenger compartment.

5- Connect the Universal Interconnect System to the Vehicular Data Recorder.

6- Place the Vehicular Data Recorder in a secure location close to the installed Interconnect System.

When the installation is in the engine compartment, keep the recorder and cabling as far as possible from metal surfaces that will become extremely hot! Whenever possible, place the recorder in a location that will cause air to flow over the recorder.

When the installation is in the passenger compartment, keep the recorder and cabling away from passengers, preferably placing them up inside the hush panel.

7- Position the wire antenna on the Vehicular Data Recorder so that it forms the top of a letter "T" on an imaginary line drawn from the vehicle steering wheel, while not allowing the antenna wire to come in direct contact with any metal surface.

8- Install the Wireless Pushbutton on the vehicle steering wheel, using the attached hook-and-loop fastener strip. The Wireless Pushbutton should be positioned on an area of the steering wheel that the driver would normally grip, with the plastic case toward the inside of the steering wheel. This ensures that the pushbutton is close to the driver's hand, while not interfering with movement of the hand on the steering wheel.

2-Operation In the Vehicle

The vehicle should be operated normally, with the following exception. In the event that the Vehicular Data Recorder is being used to troubleshoot a starting problem, the ignition should be ON for approximately 30 seconds before attempting to start the vehicle, to allow time for the Vehicular Data Recorder to initialize and start the recording process.

While the vehicle is being operated with the Vehicular Data Recorder installed and functioning, the "Check Engine" light will flash briefly at 4 second intervals. In the event that the vehicle stalls or the "Check Engine" light activates, the driver does not have to press the Wireless Pushbutton on the steering wheel - the data recorder will automatically record the event. In the event that a problem occurs that does not result in a stall or in activation of the "Check Engine" light, the vehicle operator should press the Wireless Pushbutton within 20 seconds, holding it pressed for approximately 1 second, to record the event. The "Check Engine" light will rapidly (3 times per second) flash on-and-off to indicate that the event has been recorded.

When one or more events have been recorded (due to a vehicle stall and/or the operator has pressed the Wireless Pushbutton) or the "Check Engine" light is remaining on steady, the vehicle should be returned to the automotive technician as soon as possible to have the problem identified and corrected.

6- Retrieving and Viewing Recorded Event Data

Recorded event data can be retrieved from the Vehicular Data Recorder while the recorder is installed in a vehicle, or the recorder can be removed and taken to a more convenient location.

When data is to be retrieved from the recorder while the recorder is installed in a vehicle, connect a 9-pin serial null-modem cable from the 9-pin D-sub connector on the Vehicular Data Recorder to a pc-compatible computer (usually a lap-top when the recorder is installed in a vehicle) that is running the application software provided with the Vehicular Data Recorder. The vehicle ignition must be switched ON before attempting to retrieve data from the recorder, and it must remain ON until data transfer has started. When data transfer has started, the vehicle ignition can be switched OFF without affecting the data recorder.

When data is to be retrieved from the recorder while the recorder is not in a vehicle, connect a 9-pin serial null-modem cable from the 9-pin D-sub connector on the Vehicular Data Recorder to a pc-compatible computer (lap-top or desktop) that is running the application software provided with the Vehicular Data Recorder. Plug the plug-in power adapter (supplied with the recorder) into a 115V AC wall plug, and insert the 3-pin metal connector attached to the power adapter into the mating 3-pin metal connector on the event recorder.

For detailed instructions regarding the retrieval and viewing of event data, refer to the user instructions for the application software supplied with the Vehicular Data Recorder for use in the pc-compatible computer.