TECHNICAL NEWSLETTER

Speed Sensor (VSS)

ISO 9001

1 YEAR WARRANTY TOTAL DS

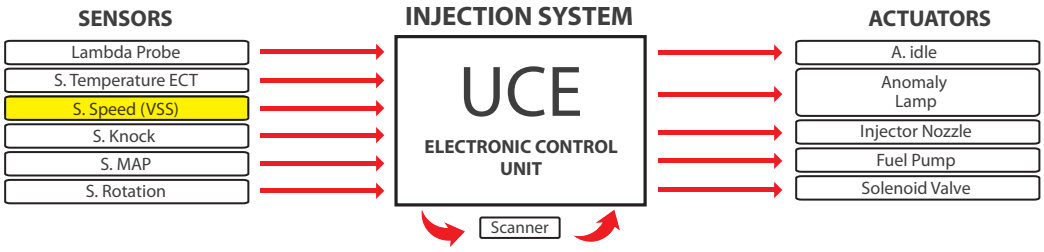
PRODUCTS TESTED ONE BY ONE

DS®

AUTOMOTIVE TECHNOLOGY

CONCEPT:

Speed Sensor is a pulse generator either magnetic or hall effect that provides a proportional signal to the speed of the vehicle. Malfunction on this sensor may cause high fuel consumption and interruptions when decelerating.



PRINCIPLE:

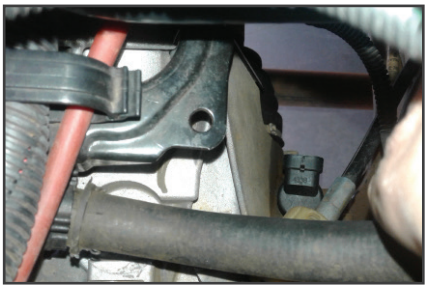
Its pulsed signal (digital) is used to calculate movement speed of vehicle. With this information (stationary vehicle or in movement) UCE performs the adjusted tracking;

- Air/fuel mixture enrichment or not during acceleration;
- Fuel cut-off;
- Engine rotation (idle speed) to prepare system for more deceleration;
- Allows for electric fan of radiator to disengage when in high speed (in some cases)
- Calculates distance and consumption in vehicles equipped with single board computer;

In vehicles with automatic transmission (Self Shifting), this information also controls blocking of the torque converter.

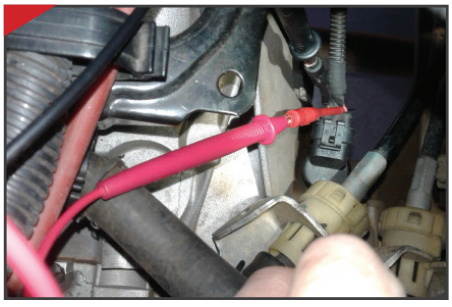
LOCATION:

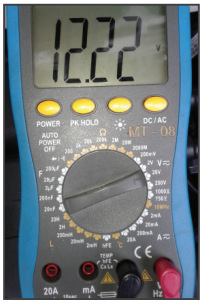
Generally it is located at the exit axis of transmission (gear level) or on the speedometer axis.



HOW TO TEST THE SPEED SENSOR (VSS): FIORINO 1.4 (DS 2504)

1

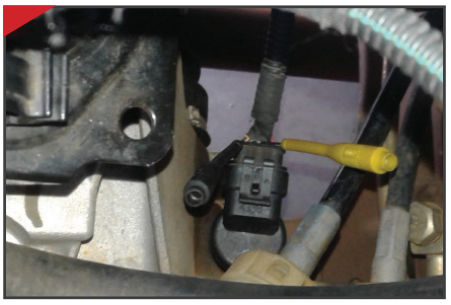




1st Check Sensor Power

With the ignition engaged, check terminals A and C of sensor. (Electric wiring harness connected to part); this sensor is fed by 12V.

2



2nd Analyze Signal of Sensor

To analyze the signal, you can use an oscilloscope or a Hertz frequency scale (Hz) automotive multimeter conferring the signal generated on pins B and C.

Lift the two front wheels. Start engine and engage 3rd level shift (when not using an elevator, leave a person inside the car for safety)

The frequency on this specific car will be between 0,076 and 0,086 KHz and speed nearly 20km/h

Check if there is no oscillation on speedometer

CAUTION:

There are factors that may lead speed sensor to have incorrect readings:

- Incorrect positioning
- Vibrations on vehicle
- Warped pulley or gearing
- Incorrect Sensor
- Cables of sensor with weld
- Dirty or worn sensor
- Oxidization, grouding and/or disruption on electric wiring harness connections.