TOP DEAD CENTER SENSOR

Operation

- The top dead center sensor functions to detect the top dead center position of the No. 1 cylinder and to convert those data to pulse signals that are input to the engine control unit. The engine control unit, based upon those signals, calculates the sequence of fuel injection.
- The power for the top dead center sensor is supplied from the control relay and is grounded to the vehicle body. The top dead center sensor, by intermitting the flow (to ground) of the 5-volt signal from the engine control unit, produces pulse signals. See **Fig. 37** .

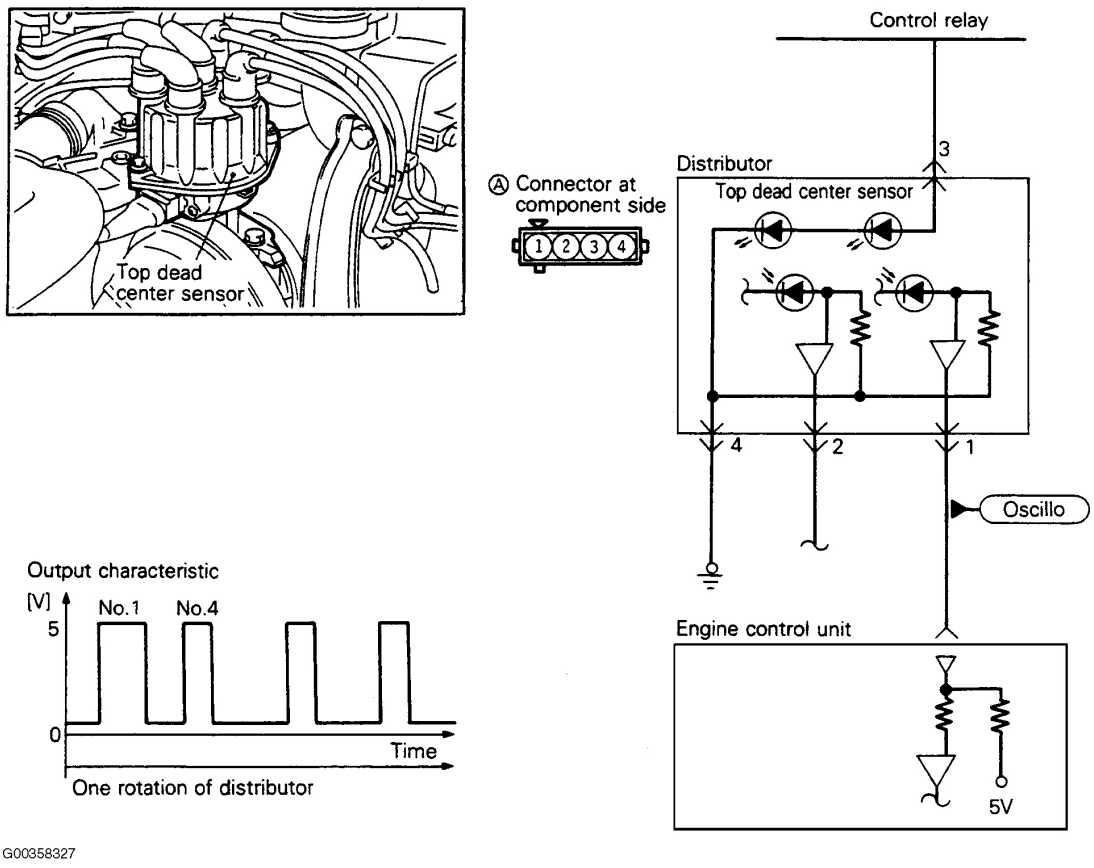

Fig. 37: Identifying Top Dead Center Sensor Circuit
Courtesy of MITSUBISHI MOTOR SALES OF AMERICA.

Trouble Shooting Hints

If there is a malfunction of the top dead center sensor, the sequential injection will not be correct, resulting in such problems as engine stalling, unstable idling and poor acceleration.

Inspection Using Oscilloscope

1. Run engine at idle speed.
2. Connect the probe to the oscilloscope pick-up point as shown in the circuit diagram. See **Fig. 37** . Waveform should be as illustrated. See **Fig. 38** .

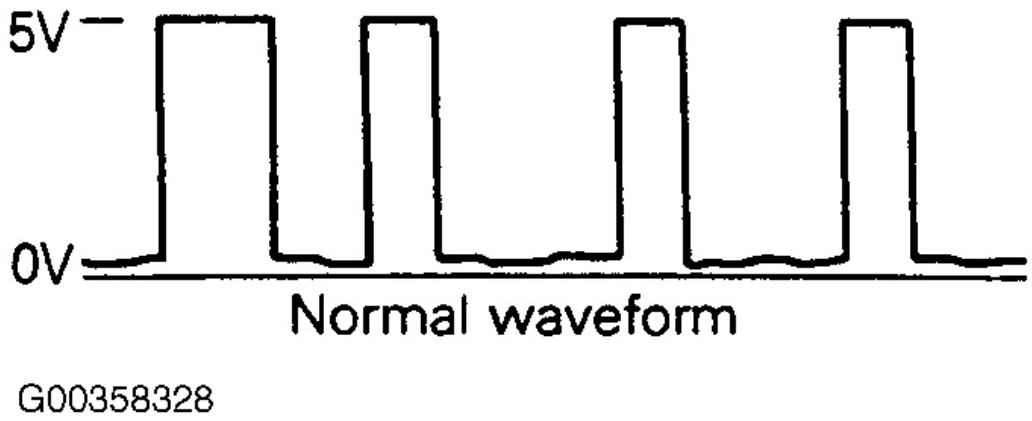

Fig. 38: Top Dead Center Sensor Waveform
Courtesy of MITSUBISHI MOTOR SALES OF AMERICA.

Harness Inspection

For harness inspection, see **Fig. 39** . For component locations and connector terminal identification, see **Fig. 37** .

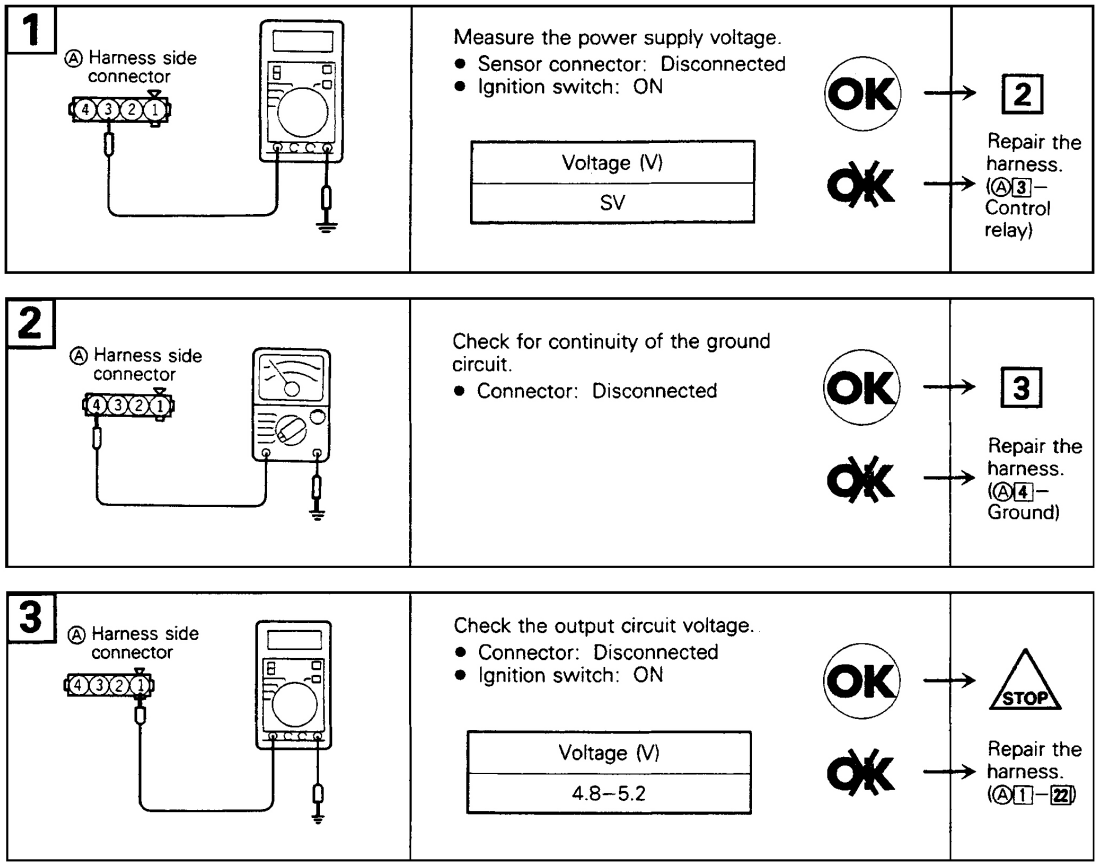

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Fig. 39: Top Dead Center Sensor Harness Inspection
Courtesy of MITSUBISHI MOTOR SALES OF AMERICA.

