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## VEHICLE SPEED SENSOR INSTALLATION

Vehicle speed sensors are required for all California TPI and TBI installations that must be approved by a CARB referee before emission testing. They are essential for proper emission control operation and also perform the converter lock-up function according to the factory lock-up schedule.

Howell Engine Developments speed sensors are designed for use with vehicles with cable drive speedometers or any vehicle with a standard US speedometer connection on the transmission or transfer case. They install directly on the transmission and the speedometer cable attaches to the speed sensor.

There are two speed sensor designs:

1. A two pulse per rev unit for throttle body injection (1987-1992) and 1985-1989 tuned port injections.
2. A four pulse per rev unit, is for most later model TBI's and 1990 or later TPI's and LT-1's.

Early TBI & TPI speed sensors have two wires:

1. The black wire is the grounded, either to the chassis or by splicing into a harness ground wire.
2. The brown wire plugs directly into an ECM connector as noted below:

1987-1993 TBI-plug into connector row "A" (top row, short connector), position 10.

1985-1989 TPI's-plug into connector row "A" position 10.

Speed Density (1990 & later) TPI's and LT-1's- both wires plug into the ECM as noted below:

TPI with # 1227730 ECM – Plug purple wire into position B-9.

Plug yellow wire into position B-10.

Row "B" is the bottom row of the shorter, black connector.

LT-1 (1992-1993) The "D" connector is brown.

Plug purple wire into position D-1.

Plug yellow wire into position D12.

A portable scanner will now read vehicle MPH when the vehicle is moving.