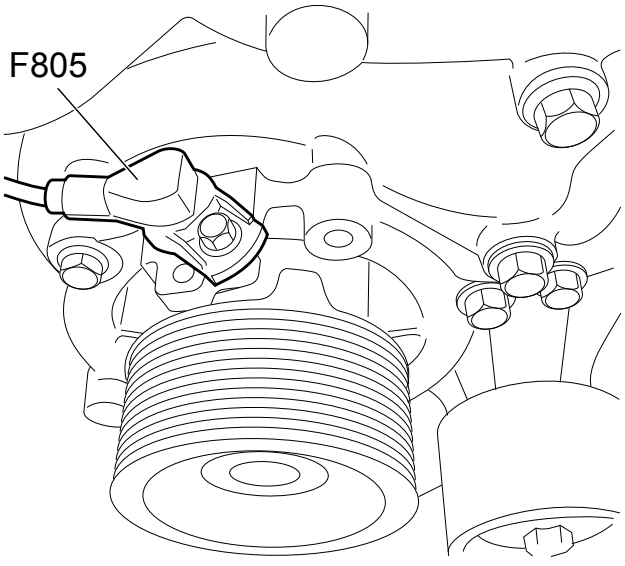
Sensor, coolant pump speed (F805)

The coolant pump speed sensor measures the speed of the coolant pump. The electronic unit PMCI-2 can detect whether the poly-V belt is broken because a coolant pump speed signal is no longer available.

The sensor is a Hall sensor. This means that the sensor emits a direct-voltage, square-wave signal when the sensor detects a change in the sensor ring tooth and hole. The sensor is a part of the coolant pump pulley.

The coolant pump speed sensor uses the Hall effect. The sensor accommodates a Hall element and permanent magnet. The magnetic field in the sensor changes when a sensor ring tooth is positioned in front of the sensor. As a result, Hall voltage is generated. If there is a tooth in front of the sensor, the voltage will be high until a hole is in front of the sensor; in the latter case, the voltage will be low. This Hall voltage is enhanced by an electric circuit in the sensor. The electronic unit uses this direct-voltage, square-wave signal to perform calculations.



Effect of temperature signal on the system:

- Detection of poly-V belt breakdown

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