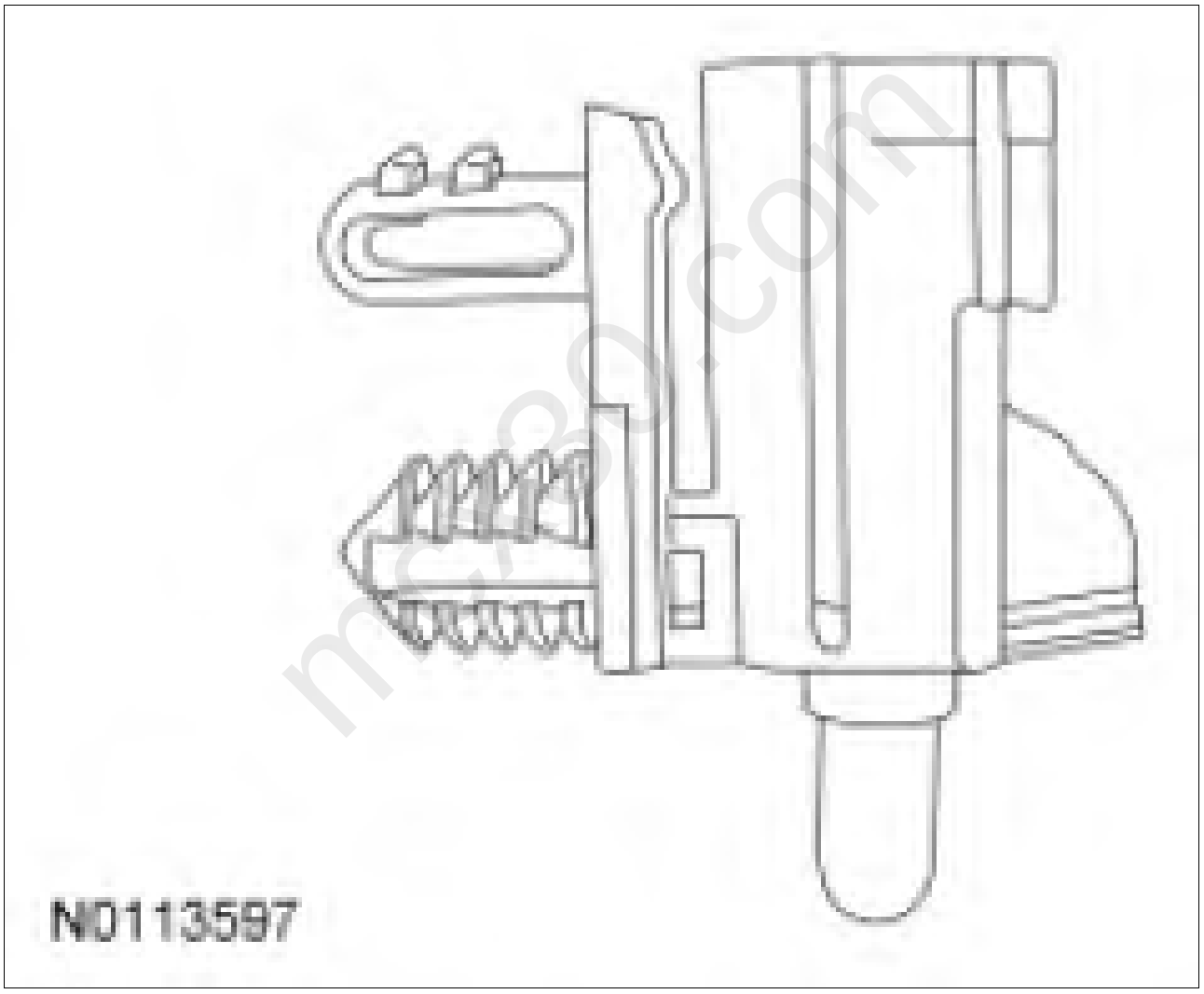
a thermistor decreases as the temperature increases, and the resistance increases as the temperature decreases. The varying resistance affects the voltage drop across the sensor terminals and provides electrical signals to the PCM corresponding to temperature.

Thermistor-type sensors are considered passive sensors. A passive sensor is connected to a voltage divider network so that varying the resistance of the passive sensor causes a variation in total current flow. Voltage that is dropped across a fixed resistor in series with the sensor resistor determines the voltage signal at the PCM. This voltage signal is equal to the reference voltage minus the voltage drop across the fixed resistor.

The AAT sensor provides ambient air temperature information to the PCM for the temperature sensor correlation tests. The PCM also communicates the AAT sensor information to all other modules on the controller area network (CAN).

Fig 1: Identifying AAT Sensor



Courtesy of FORD MOTOR CO.

ENGINE CONTROL COMPONENTS > BAROMETRIC PRESSURE (BARO) SENSOR

The BARO sensor measures barometric pressure to estimate the exhaust back pressure.