For vehicles with a turbocharger intake pressure and temperature (TCIPT) sensor, the BARO value is inferred by comparing the TCIPT sensor, manifold absolute pressure (MAP) sensor, and turbocharger boost pressure (TCBP) sensor values at key on, engine off (KOEO). While driving, the BARO is updated by monitoring the TCIPT sensor when air flow volume is below 2 parts per million.

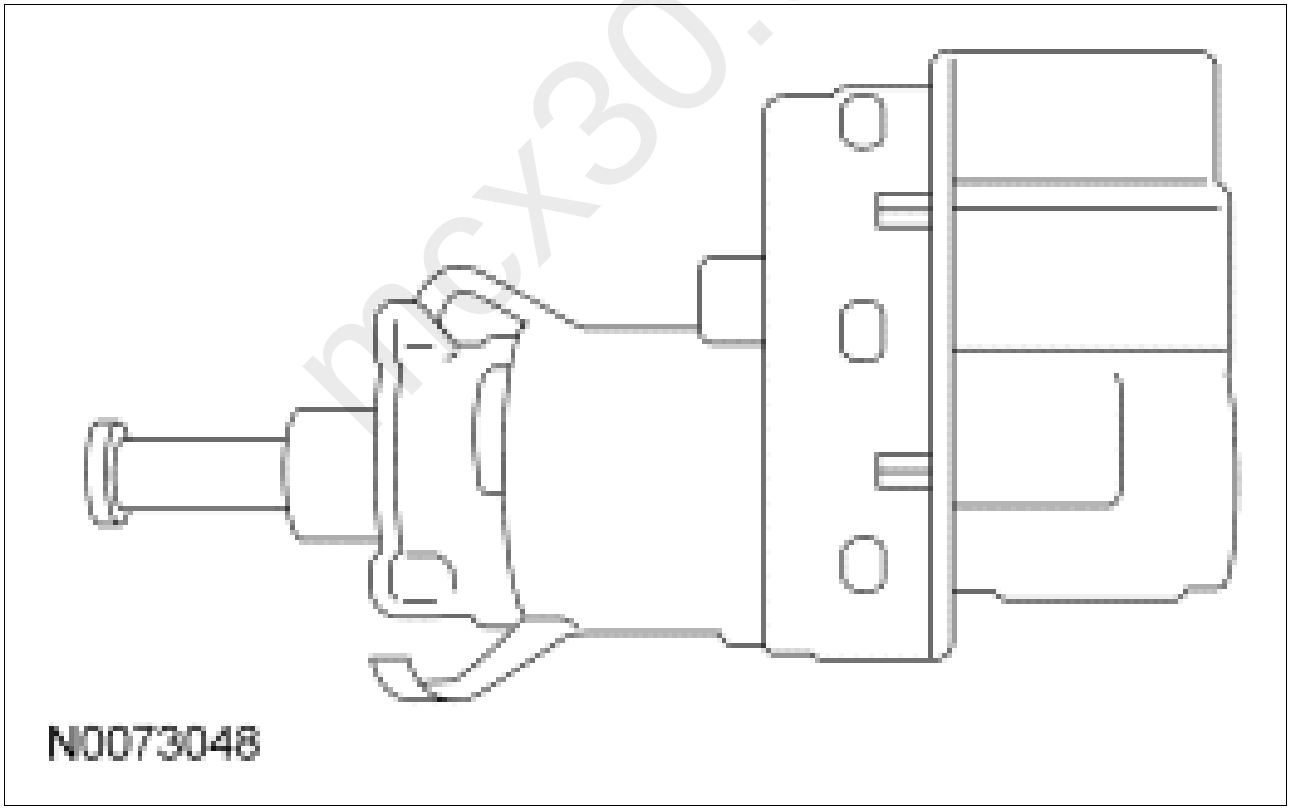
For direct injection vehicles, a BARO sensor is mounted internally to the PCM. The BARO sensor measures the barometric pressure to estimate the exhaust back pressure.

For all other vehicles without a BARO sensor, the BARO value is inferred by the PCM based on the volumetric efficiency of the engine, comparing the mass air flow (MAF) sensor and the ambient temperature values. The actual MAF value is used to calculate an inferred MAP value based on operating conditions and volumetric efficiency. At or near wide open throttle, the BARO value is calculated to be slightly higher than the inferred MAP value, with the difference calculated by the pressure drop across the throttle plate.

## ENGINE CONTROL COMPONENTS > BRAKE PEDAL POSITION (BPP) SWITCH

The BPP switch is sometimes referred to as the stoplamp switch. The BPP switch provides a signal to the PCM indicating the brakes are applied. The BPP switch is normally open and mounted on the brake pedal support. The BPP switch supplies battery positive (B+) voltage to the PCM when the brake pedal is applied.

Fig 1: Identifying BPP Switch




Courtesy of FORD MOTOR CO.