

IDLE AIR CONTROL VALVE PACKAGE INSTALLATION PROCEDURES

IDLE AIR CONTROL VALVE (IACV)

The Idle Air Control Valve is located at the throttle body (Figures 1, 2 and 3) and is controlled by the Electronic Control Module (ECM) which has the desired idle speed programmed in its memory. The ECM compares the actual idle speed from the engine RPM sensor (distributor EST reference signal) to the desired RPM reference in memory. When the two do not match, the IACV pintle is retracted or extended, allowing more or less air, respectively, to pass directly to the intake manifold. This procedure automatically holds an idle RPM independent of the engine loads.

REMOVAL

1. Remove air cleaner.
2. With ignition "OFF," disconnect electrical connection to the Idle Air Control Valve (IACV).
3. Using an 1-1/4" wrench (32MM), remove IACV from the throttle body. Remove old gasket(s) from IACV unit and DISCARD (new gasket already installed on service IACV).

INSTALLATION

Prior to installation of the replacement IACV unit in the throttle body, measure distance from gasket mounting surface on valve to tip of pintle (Dimension "A." Figures 1, 2 and 3).

NOTICE: Pintle position in the IACV must be checked before installing in throttle body. If pintle is extended too far, internal damage to the IACV unit may occur.

If measured distance (Dimension "A") is greater than 1-1/8" (28MM), distance must be reduced, as follows:

Compress pintle retaining spring from the pintle (toward body of IACV), while turning pintle "in" with a clockwise motion. Return spring to original position, with straight portion of spring end aligned with flat surface under pintle head.

1. Clean gasket mounting surface on throttle body to ensure a good seat.
2. With pintle properly positioned in IACV unit (see above), install IACV in the throttle body using a 1-1/4" (32MM) wrench and torque to 18 N.M. (13 ft/s).

NOTICE: DO NOT attempt to tighten IACV using the plastic wire connector portion of the unit. Damage to the unit may result.

3. Reconnect electrical connection for IACV unit.
4. Install air cleaner.

IACV ADJUSTMENT

NOTICE: There are no physical adjustments to be made to the IACV unit after installation. However, a reset process (below) may have to be performed if the idle RPM is abnormally high (1800-2000RPM), and will not regulate back to specifications in a few moments (Engine at operating temp).

RESET PROCESS

1. TBI System (Figure 1) and Pontiac PFI System (Figure 2) —The IACV resetting process is accomplished by operating the vehicle at normal engine temperature at a road speed of 40 MPH (64 KPH). At 40 MPH, the ECM will command the IACV pintle to fully extend to the mating seat in the throttle body. This process allows the ECM to establish an accurate reference with respect to the pintle position. Proper idle regulation should now result.
2. Buick (Figure 3) — Turn the ignition on and let the engine run for approximately one minute, then turn off. When the ignition is turned off, the ECM stays alive and resets the pintle.

