CHRYSLER CORP. IMPORTS JET AIR SYSTEM

Arrow Pickup, Challenger, Champ, Colt, Ram-50 Pickup, Sapporo

DESCRIPTION

Jet Air System uses an additional valve in top of each combustion chamber to inject a high velocity stream of air at small throttle openings. On intake stroke, air rushing out of jet valve opening scavenges gases from around spark plug and produces a strong swirl in combustion chamber. This promotes high combustion efficiency and results in lower exhaust emissions.

The jet valve is operated by an extension on the intake valve rocker arm. The valve assembly consists of a jet valve, jet body and spring. The assembly is screwed into the jet piece, which is press-fitted in the cylinder head with the jet opening toward spark plug.

OPERATION

Air flows to jet valve through 2 intake openings near carburetor throttle valve, a passage in intake manifold and a passage in cylinder head. The intake stroke pulls air into combustion chamber through intake valve port and jet valve opening. When throttle valve opening is small, a large pressure difference is produced between jet valve opening and jet intake opening as piston goes down.

This causes jet air to flow into the combustion chamber at a much higher speed than it does at large throttle openings. Because the jet valve opening points directly at spark plug, the air stream scavenges gases accumulated in that area. It also produces a swirling action in the combustion chamber, resulting in a longer burn period after ignition.

ADJUSTMENTS

JET VALVE ADJUSTMENT

1) Before adjusting, note the following:

- Misadjusted jet valve clearance will adversely affect emission levels.
- Adjust jet valve clearance before adjusting intake valve clearance.
- Before adjusting jet valve, retighten cylinder head bolts (cold) to 51-64 ft. lbs. (69-86 N.m) on 1.4L and 1.6L engines or 65-72 ft. lbs. (87-97 N.m) on 2.0L and 2.6L engines.
- Adjust jet valve clearance with intake valve adjusting screw fully loosened.

2) With engine at normal operating temperature, stop engine, remove rocker cover and position appropriate piston at TDC of compression stroke.

3) Back off intake valve side adjusting screw 2 or more turns. Loosen lock nut on jet valve adjusting screw.

4) Back off jet valve adjusting screw (counterclockwise) and place .006" (.15 mm) feeler gauge between top end of jet valve stem and bottom end of adjusting screw. *See Fig. 2.*

5) Turn down adjusting screw (clockwise) until proper clearance is obtained.

NOTE: Tensile strength of jet valve spring is weak. DO NOT force screw to turn, putting excess pressure on spring.

6) Hold adjusting screw and tighten lock nut. Recheck clearance. Adjust intake valve clearance to .006" (.15 mm). Repeat adjustment at each cylinder.

Fig. 2 Adjusting Jet Valve Clearance

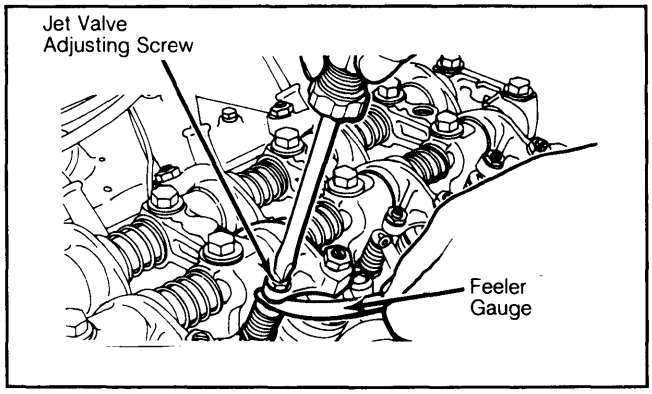

Fig. 1: Cutaway View of Chrysler Corp. Jet Air System