

1981 Exhaust Emission Systems

DATSUN BOOST CONTROLLED DECELERATION DEVICE

280ZX
810

TESTING & ADJUSTMENTS

DESCRIPTION

The Boost Controlled Deceleration Device (BCDD) is installed to reduce HC emissions during deceleration. The BCDD is mounted under the throttle chamber as an integral part. This device supplies additional air to the intake manifold to maintain manifold vacuum at proper operating pressure.

OPERATION

The Boost Controlled Deceleration Device (BCDD) contains two diaphragms. When vacuum in the intake manifold exceeds a pre-determined value, diaphragm I opens the vacuum control valve. This allows manifold vacuum into a vacuum chamber in the BCDD and actuates diaphragm II. When actuated, diaphragm II opens the air control valve, allowing additional air into the manifold to maintain required operating pressure.

The amount of air entering the manifold is controlled by the servo-action of the air control valve and vacuum control valve. This servo-action maintains manifold vacuum at the pre-determined operating pressure.

Intake manifold operating pressure (vacuum) changes depending on altitude at which the vehicle is being operated. To compensate for this, an altitude compensator is incorporated in the BCDD of 280ZX models. The altitude compensator automatically adjusts the operating pressure in response to altitude.

BCDD OPERATING PRESSURE

Checking BCDD Operating Pressure — 1) To check pressure, engine should be at normal operating temperature, idle speed set to specifications and transmission in neutral. Connect a tachometer to engine and a vacuum gauge to intake manifold.

2) Run the engine under no load and note vacuum reading. Increase engine speed to 3000-3500 RPM, then quickly close the throttle. Manifold vacuum should increase to 23.6 in (600 mm) Hg or more, then gradually decrease to level noted at idle.

3) If BCDD operating pressure at idle is not as specified in "BCDD Operating Pressures" table, proceed as follows:

Adjusting BCDD Operating Pressure — 1) Turn adjusting screw (810 models) or adjusting nut (280ZX) models as necessary until specified operating pressure is obtained. See Fig. 2. Turning the adjusting mechanism clockwise decreases operating pressure and counterclockwise increases pressure.

NOTE — On 280ZX models, turn adjusting nut in or out with lock spring in place. Also, always set lock spring properly to prevent changes in operating pressure.

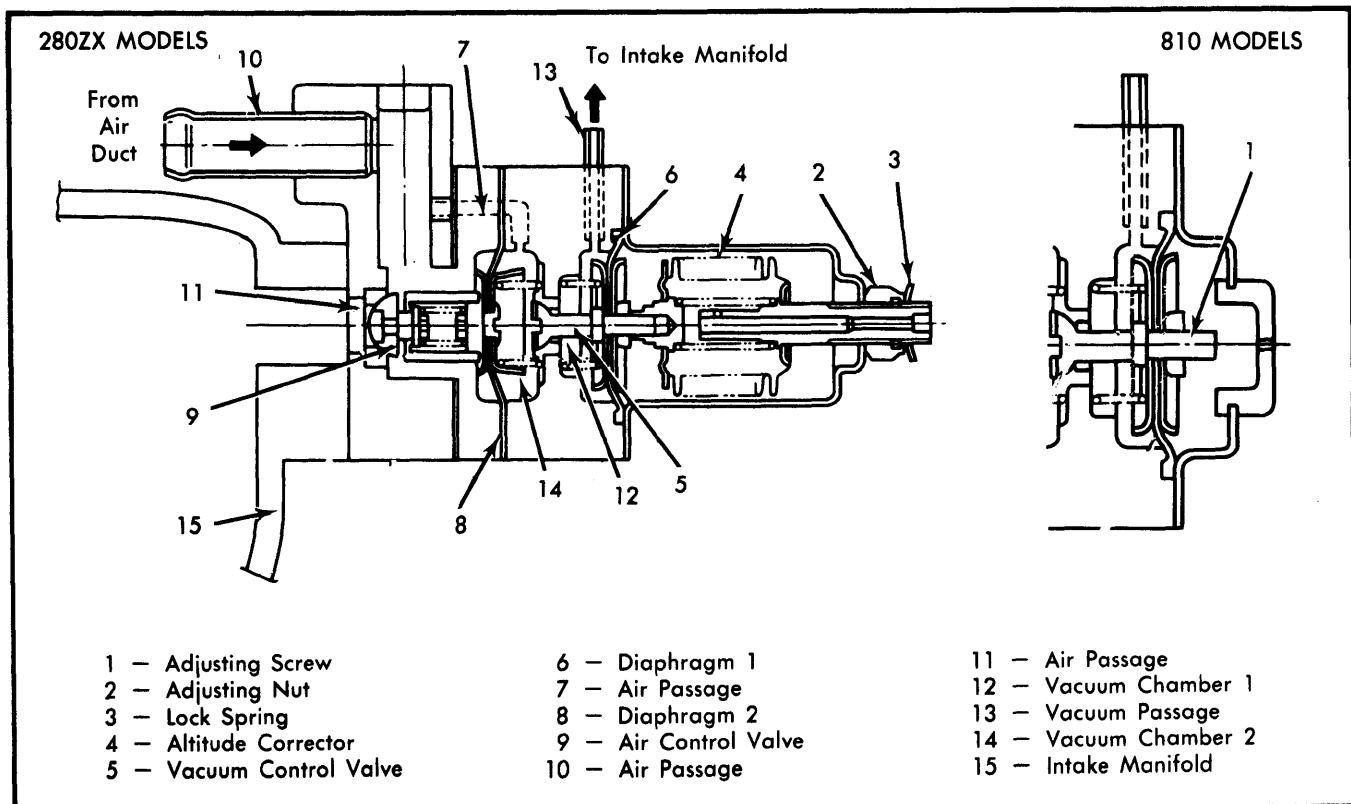


Fig. 1 Schematic of Boost Controlled Deceleration Device System

DATSUN BOOST CONTROLLED DECELERATION DEVICE (Cont.)

BCDD Operating Pressure (At Sea Level)	
Application	Pressure (In. Hg)
280ZX	21.6-23.2
810	21.6-23.2

2) After setting pressure to specified range, accelerate engine and check adjustment. If lower than specified level, turn adjuster until specification is correct. Accelerate engine again and check adjustment. If engine speed cannot be decreased to idle when checking BCDD operating pressure, proceed as follows:

3) Turn adjuster counterclockwise, so BCDD operating pressure is .79 in. (20 mm) Hg higher than specification. Then turn adjuster $\frac{1}{4}$ turn clockwise so pressure drops to specification.

4) If operating pressure cannot be observed in step 3), turn adjuster counterclockwise so BCDD operating pressure is 1.97 in. (50 mm) Hg higher than specification. Then turn adjuster $\frac{1}{2}$ turn clockwise so pressure drops to specification.

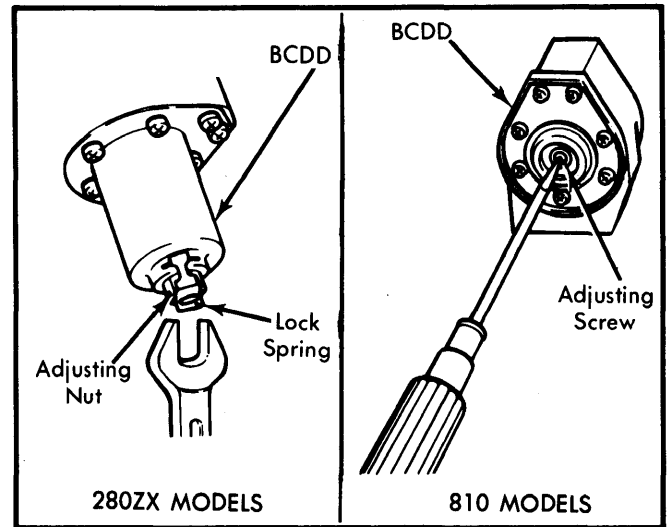


Fig. 2 Adjusting BCDD Operating Pressure

NOTE — The BCDD operating pressure must be set to specifications after previous adjustment procedure, even if engine speed cannot be decreased to idling RPM.

5) If operating pressure cannot be adjusted, unit must be replaced as an assembly.