DATSUN 1970-72 240Z ENGINE MODIFICATION

Datsun 240Z (Manual & Auto. Trans 1970-72)

NOTE — Air Injection is also used with this system.

DESCRIPTION

Engine modification system consists of a vacuum control valve which detects intake manifold vacuum. Valve operates a servo diaphragm which controls the carburetor throttle valve. System is activated during periods of deceleration. An altitude compensation device is contained in system. This device compensates for variations in altitude so that valve can function properly at any altitude. Automatic transmission cars also utilize a dual point distributor which provides for both advanced and retarded spark timing under various conditions.

NOTE — Depending on altitude (atmospheric pressure), vacuum required to operate the control valve will vary. To determine proper setting of vacuum required for operation, it is necessary to know the altitude or atmospheric pressure when valve is adjusted.

TESTING

Vacuum control valve is set at factory and adjustment is not normally required. If adjustment is needed, proceed as follows:

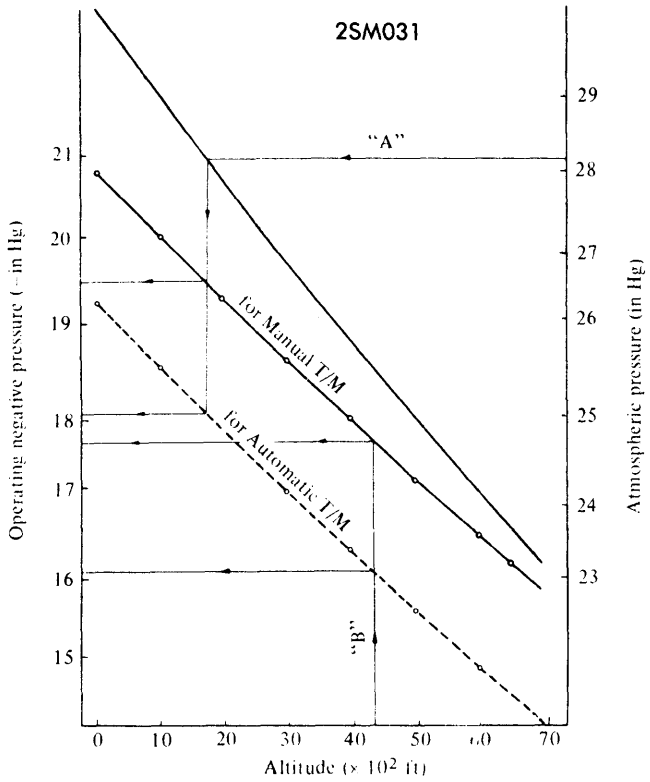
1) Connect a vacuum guage to connector for anti-backfire valve, and raise engine speed to 2,000 RPM without load. Release accelerator linkage quickly.

2) Manifold vacuum should rise causing control valve to operate and transfer vacuum to servo diaphragm. Servo diaphragm should operate once for a full stroke of .197".

3) Following this, both speed and manifold vacuum should reduce. The speed and vacuum should stabilize after one or two seconds. Manifold vacuum at this time is called "Operating Negative Pressure".

4) Loosen lock screw on control valve and adjust vacuum adjusting screw (at end of valve) so that operating negative pressure matches the value obtained from the chart that follows:

5) Make sure that time required to lower speed from 2,000 RPM to 1,000 RPM is less than 6 seconds.

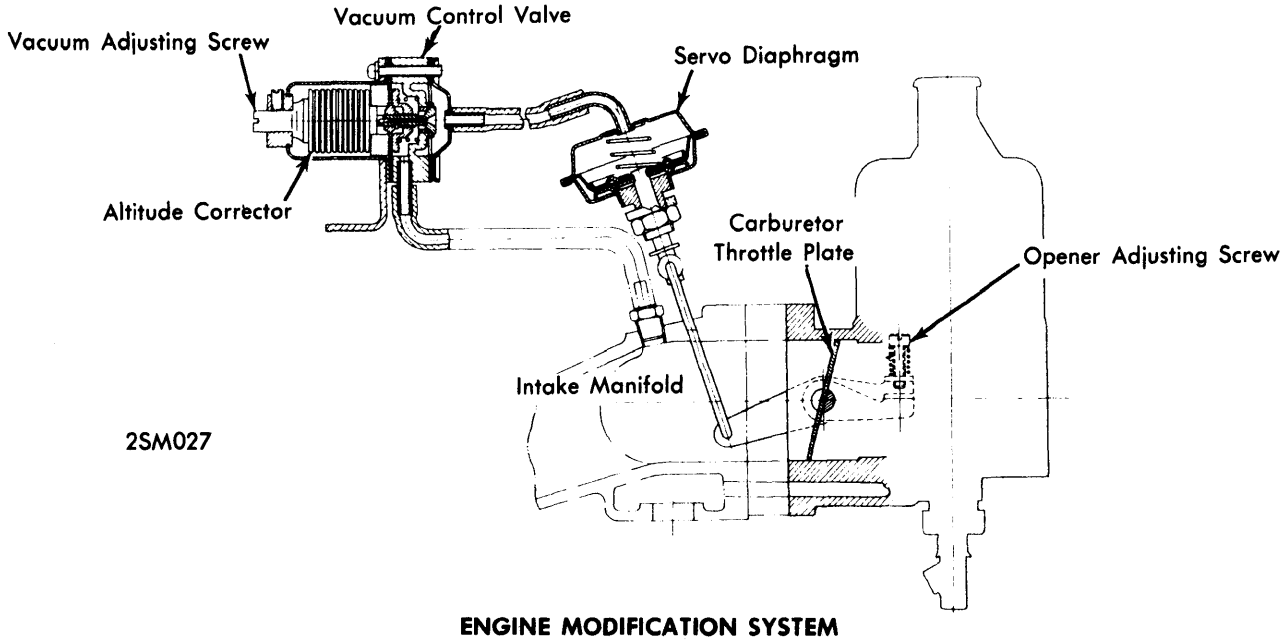


CONTROL VALVE OPERATING NEGATIVE PRESSURE (OPERATING VACUUM)

SERVICE PROCEDURE

Remove air cleaner, check oil in carburetor damper. Make sure piston moves freely in chamber. Engine should be at normal operating temperature and all lights and accessories off.

1) Connect tachometer and timing light. Using a suitable carburetor synchronizer, balance air intake on both carburetors while maintaining an engine speed of 750 RPM



ENGINE MODIFICATION SYSTEM

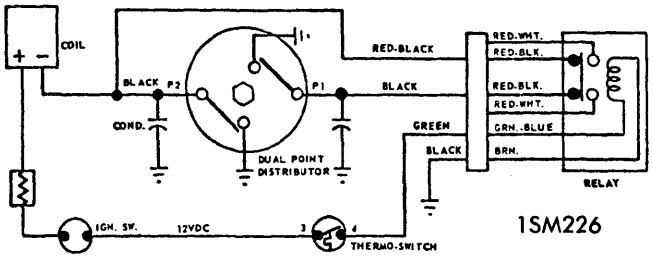
DATSUN 1970-72 240Z ENGINE MODIFICATION (Cont.)

(manual transmission in Neutral) or 600 RPM (automatic transmission in Drive). Set ignition timing to 5° BTDC (TDC with automatic transmission).

► *IGNITION TIMING NOTE (240 Z AUTOMATIC ONLY) — On models equipped with dual point distributor, the ambient temperature must be above 40° (1971 models) and 52° (1972 models) to set timing. Dual point distributor is temperature controlled, an advanced reading will result if temperature is not to specification.*

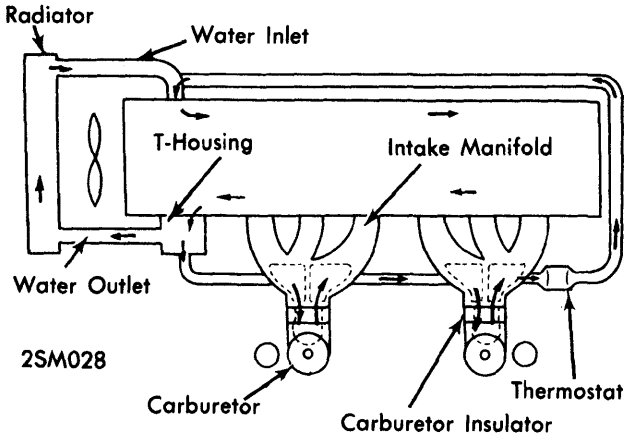
2) Disconnect control valve vacuum tube from control valve connector, connect servo diaphragm vacuum tube to control valve connector. Apply manifold booster to servo diaphragm. Turn rear carburetor balance adjusting screw (located on connecting shaft) to obtain an engine speed of 1200 RPM. Using carburetor synchronizer and maintaining 1200 RPM, turn front carburetor balance adjusting screw until air intake of both carburetors is balanced.

3) Disconnect servo diaphragm vacuum tube from connector and then reconnect and make sure engine speed is 1200 RPM. If not, repeat above procedure. Reconnect control valve vacuum tube to original position. Adjust each idle adjusting nut until best idle is obtained, or until a CO reading of 6% (5% with automatic transmission) is obtained with air injection pump disconnected.



DATSUN 240Z ENGINE MODIFICATION DUAL POINT DISTRIBUTOR

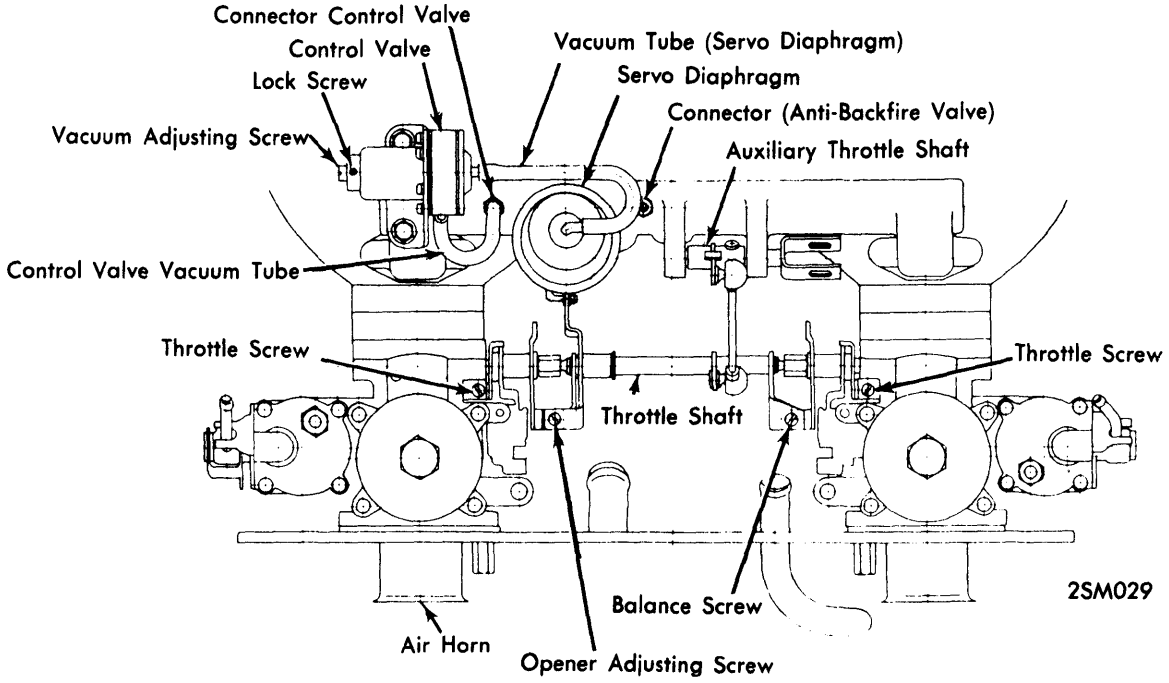
NOTE — Do not disassemble carburetor unless absolutely necessary. If for any reason carburetors are disassembled, always adjust the jet-to-jet bridge distance to .984". (This value will result when idle adjusting nut is backed out 2 1/2 turns from its fully in position).



TEMPERATURE CONTROLLED CARBURETION

S.U. Carburetor (Temperatured-Control by Engine Coolant) – On this type of carburetor, the flow rate of fuel varies with change in temperature of gasoline, which is effected by viscosity variations. The carburetor is heated by engine coolant to keep a nearly constant flow rate regardless of ambient temperature variations and contributes to improved atomization in the air intake system. A small thermostat is employed to control the flow of coolant to prevent deterioration under hot weather.

CAUTION – To prevent coolant from entering cylinders, drain ½ gal. of coolant from radiator before removing carburetor, insulator, or intake manifold.



ENGINE MODIFICATION AND CARBURETOR LINKAGE