

Exhaust Emission Systems

1973 MAZDA 808 & B-1600 ENGINE MODIFICATION

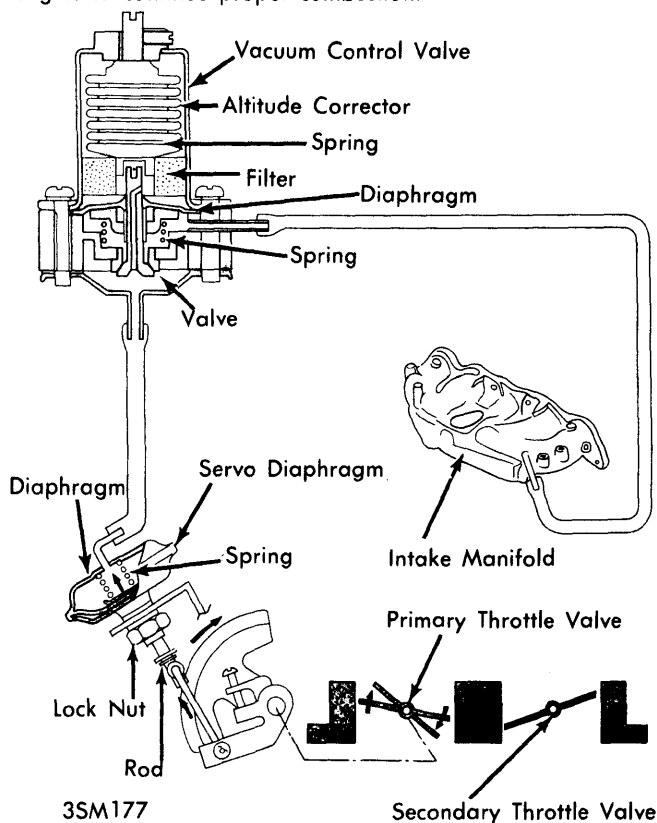
Mazda 808 (1973)
Mazda B-1600 Pickup (1973)

DESCRIPTION

A throttle opener system is used on all models. This system is composed of a servo diaphragm connected to the throttle lever, and a vacuum control valve which controls amount of intake manifold vacuum led to servo diaphragm. On 808 Station Wagon models with automatic transmission, an accelerator switch and a thermosensor are used to retard the ignition during certain conditions of engine operation. On 808 Sedan and Coupe with automatic transmission, a vacuum switch is used to allow ignition timing advance during periods of low manifold vacuum

OPERATION

Throttle Opener System – During periods of deceleration, the air/fuel mixture entering the engine is not sufficient for normal combustion. The system uses intake manifold vacuum during these periods to slightly open the primary throttle valve in these periods to slightly open the primary throttle valve in the coasting condition (to an opening of 1400 ± 100 RPM, unloaded). The optimum amount of mixture is then fed to the engine to continue proper combustion.



THROTTLE OPENER SYSTEM

Ignition Control System (808 Station Wagon With Auto. Trans.) – The accelerator switch and the thermosensor control ignition timing. The switch closes the retard circuit when accelerator pedal is depressed up to 3/4 throttle, and opens the circuit when pedal is depressed over 3/4 of the way. The thermosensor closes the retard circuit when cooling water temperature is above 122-140°F, and opens retard circuit

when temperature of cooling water is below 122-140°F. Ignition timing is retarded (from 8° to 4° BTDC), only when both the accelerator switch and the thermosensor close.

Vacuum Switch (808 With Auto. Trans.) – Switch cancels retard circuit when intake manifold vacuum is 0-3.15" of mercury, and retards timing (from 5° BTDC to TDC) when intake manifold vacuum is higher than 3.15" of mercury.

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ADJUSTMENT

Throttle Opener Adjustment – 1) Install tachometer on engine and set idle speed to 800 RPM. Stop Engine and disconnect vacuum sensing tube between servo diaphragm and vacuum control valve. Disconnect at servo diaphragm.

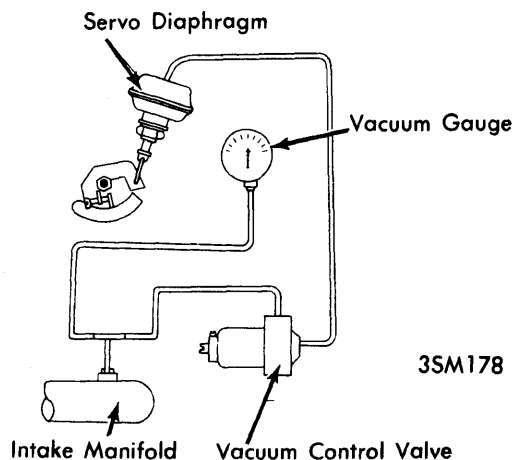
2) Remove intake manifold suction hole plug and connect intake manifold and servo diaphragm with suitable length of tubing. Start engine and read engine speed. If speed is 1400 ± 100 RPM, the servo diaphragm is normal.

3) When speed is lower than specified, turn adjusting screw clockwise; when higher, turn adjusting screw counterclockwise. Reconnect components in original orders and install a vacuum gauge to the intake manifold.

4) Start engine and raise engine speed to 3000 RPM. Release throttle to allow RPM to drop suddenly. Adjust vacuum control valve adjusting screw so that when engine speed descends from 3000 RPM to 1000 RPM, the vacuum reading will be above 22" of mercury. The needle on the gauge should remain stationary for a few seconds at this reading and then fall.

Vacuum Switch (808 Sedan & Coupe With Auto. Trans.) – Disconnect sensing tube of vacuum switch and using a "T" fitting, connect a vacuum gauge in the line. Connect one end of tube to vacuum source and run vacuum to above 6" of mercury. Allow vacuum to drop. If switch does not click at about 3.15" of mercury, replace switch.

Accelerator Switch (808 Station Wagon With Auto. Trans.) – Loosen lock nut and adjusting screw of switch. Fully depress accelerator pedal and gradually tighten adjusting screw until switch clicks. Further tighten screw 2 1/2 turns, tighten lock nut.



ATTACHING VACUUM GAUGE