1968-69 DATSUN PICKUP ENGINE MODIFICATION

Datsun Pickup (1968-69)

DESCRIPTION

The system for the Datsun Pick-up consists of a series of engine modifications and the addition of a fuel cut-off valve on the carburetor. Changes were also made in the ignition timing and idle setting. This system is designed to reduce emission of hydrocarbon and carbon monoxide emissions from exhaust system.

OPERATION

This system consists of four switches, the vacuum switch, transmission neutral switch, clutch switch, and the throttle valve switch. These four switches are connected in parallel in the circuit and control the position of the cut-off valve which is located in the idle circuit of the carburetor. Therefore, no current flows and the needle of the solenoid valve cuts off the fuel supply only when all four switches are off (which is on deceleration).

Control Fuel Cut-Off Device - The cut-off valve is attached to the carburetor and designed to cut the fuel supply by cutting off the slow fuel port during deceleration. When current does not flow, the needle is pushed forward by a spring, cutting off the slow fuel port. But as soon as the current is turned on, the needle is magnetically attracted backward and the fuel is allowed to flow.

Throttle Valve Switch - The throttle valve switch attached to the carburetor is on when the throttle valve is opened and off when the throttle valve is closed.

Vacuum Switch - The vacuum switch is connected by a vacuum hose to the intake manifold. When manifold vacuum rises to more than 22.8" Hg. during deceleration, the switch is off, and below 22.8" Hg. the switch is on.

Transmission Neutral Switch - The neutral switch attached to the transmission rear extension is on when the shift lever is in neutral position, and off when the shift lever is in gear.

Clutch Switch - The clutch switch attached to the clutch pedal stopper bracket is on when the clutch pedal is pressed down, and off when the clutch pedal is released.

TROUBLE SHOOTING

The following diagnosis is for Nissan Engine Modification System (N.E.M.S.) only and is in addition to normal diagnosis of engine performance.

Excessive Backfire - Improper carburetor fuel mixture adjustment.

Rough Engine Idle - Improper carburetor adjustment. Improper initial ignition timing.

Engine Surges At All Speeds - Improper carburetor adjustment.

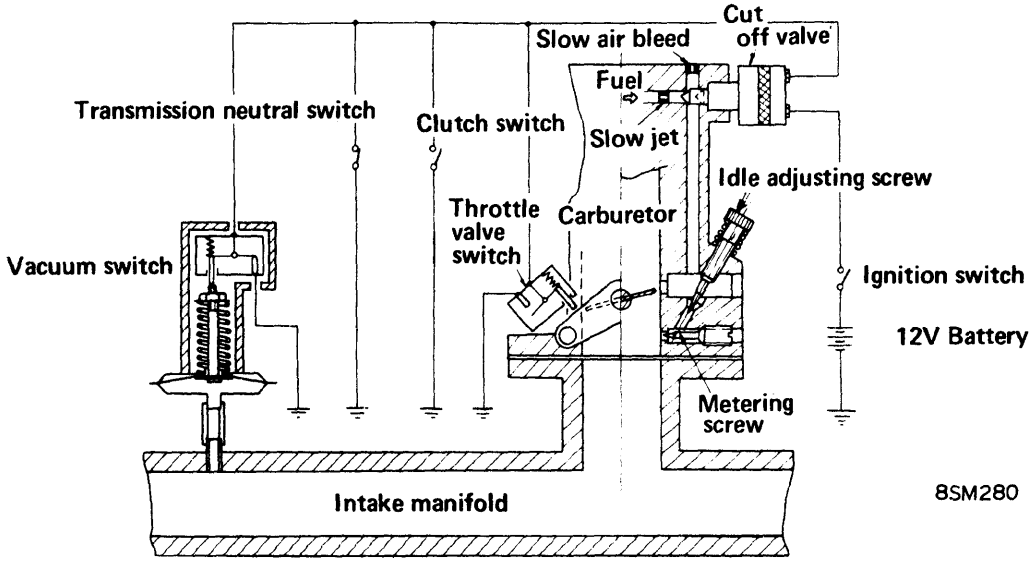
Engine Stops - Defective cut-off valve. Trouble in the electric circuit; transmission neutral switch, throttle valve switch, clutch switch, vacuum switch.

TESTING

Disconnect the wire from the cut-off valve which leads to the four switches. Connect one wire of a test light to this terminal of the cut-off valve and the other wire from the test light to the switch you are testing. Follow procedure below for each switch:

Transmission Neutral Switch - Disconnect the lead wire from the cut-off valve and connect one lead of the test light to this terminal. Disconnect the main wire from the transmission switch and connect the other wire from the test light to the transmission switch. Disconnect the lead wires of the clutch switch, throttle valve switch, and vacuum switch. Set the ignition key in the ON position and check that the test light is turned on with the transmission in neutral position and that it is off with the transmission engaged.

Throttle Valve Switch - Disconnect the test light wire from the transmission switch and connect it to the main terminal of the throttle valve switch. With the ignition key ON press down the accelerator pedal, and check to be sure that the test light is turned on, then release the accelerator pedal, and check to be sure that the lamp is not turned on.



EXHAUST EMISSION SYSTEM