CAPRI 2000 & 2600 CC TRANSMISSION REGULATED SPARK

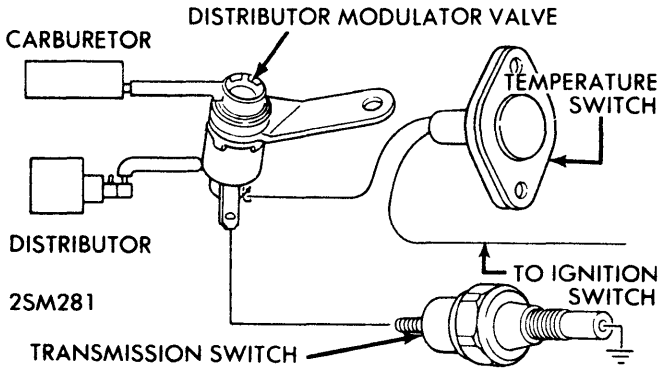
2000 cc Engine (Except California) (1972-73)
2600 cc Engine (All States) (1972-73)

DESCRIPTION

System consists of a distributor modulator valve, ambient temperature switch, transmission switch, and vacuum hose and electrical connections. System retards distributor vacuum advance when vehicle is in first and second gear. Spark is advanced when vehicle is in high gear only. Although not directly a part of the TRS system, a decel valve is also used in conjunction with the system.

OPERATION

Distributor Modulator Valve – Vacuum advance of the distributor is retarded through the use of this valve. It is located in the vacuum line between the carburetor venturi port and the outer diaphragm of the distributor vacuum advance connection. The valve is normally open and when energized electrically by the transmission switch, it closes to cut off vacuum supply to the distributor.



TRS SYSTEM

Ambient Temperature Switch – Switch is located in the right front door pillar. At temperatures of 49°F or below, the switch contacts are open, and allows normal vacuum advance in all gear ranges. At 65°F or above, the switch contacts close. This closes the circuit to the modulator valve and causes it to energize, cutting off vacuum advance to the distributor when transmission is not in high gear.

Transmission Switch – Located on left side of transmission case, the switch is actuated when shift lever is moved to high gear position. This opens the switch contacts to de-energize the modulator valve. This allows vacuum advance providing that ambient temperature is below 49°F.

SERVICE PROCEDURES

System Testing – Connect vacuum gauge to TRS system between modulator valve and distributor. Make sure that temperature switch is above 65°F, and proceed as follows:

1) Start engine in neutral or park. No vacuum should be indicated on the gauge. Increase engine speed to 1000-1500 RPM. Vacuum should remain at zero.

2) Push clutch pedal to the floor and place transmission in high gear. With engine running at 1000-1500 RPM, vacuum reading should be at least 6" Hg.

3) The foregoing tests are for detecting trouble in the vacuum circuits. Should the system fail to function according to the System Test, it is necessary to check the individual components.

Transmission Switch – Disconnect switch lead from distributor modulator valve terminal and connect it in series with a test light to the positive terminal of the battery. With engine and ignition off, move gear lever through all positions. The light should stay on until high gear is selected. If light stays on, the circuit is grounded or the switch is defective. If light does not go on at all, circuit is open or the switch is inoperative.

Temperature Switch – Disconnect temperature switch lead from terminal of distributor modulator and connect in series with a test lamp to a good ground. Turn on ignition and warm temperature switch with a warm sponge. Lamp should light when temperature of switch exceeds 65°F. Cool switch until temperature is below 49°F. Light should go out. Replace switch if defective.

Distributor Modulator Valve – With transmission switch and temperature switch known to be good, repeat the System Test. If vacuum not present when it should be, or vacuum is present when it should not be, either valve is faulty or hoses are pinched, plugged, improperly connected, or there is no vacuum from the carburetor.

1973 CAPRI DECEL VALVE

Capri (All Engines) (1973)

DESCRIPTION & OPERATION

Valve is mounted on intake manifold adjacent to carburetor. Purpose of valve is to meter an additional amount of air/fuel to engine during periods of deceleration. When decelerating, manifold vacuum forces diaphragm assembly against the spring which in turn raises (opens) decel valve. With valve open, existing manifold vacuum pulls a metered amount of air/fuel from the carburetor and travels through the valve body assembly into the intake manifold.

SERVICE PROCEDURES

Connect a tachometer and install a vacuum gauge between carburetor and decel valve. Length of tube connecting vacuum gauge should not exceed 60". With engine at normal operating temperature, ignition timing and idle RPM set to specifications, proceed as follows:

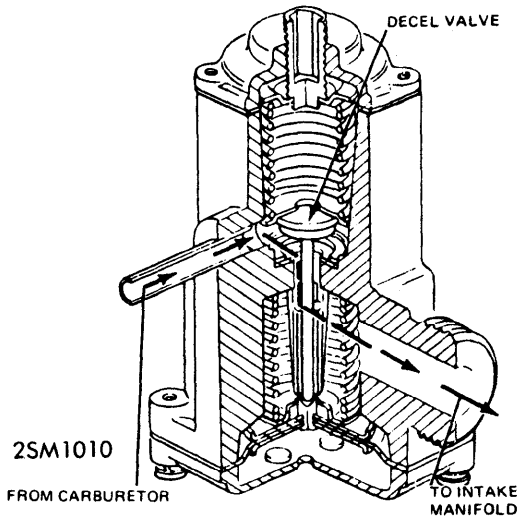
1) Bring engine to 3000 RPM and maintain for about 2 seconds. Release throttle and note time interval between throttle release and a zero reading on the vacuum gauge. Time interval should be as follows:

1973 CAPRI DECEL VALVE (Cont.)

Engine	Seconds
2000 cc (Man. Trans.)	2.5-3.5
2000 cc (Auto. Trans.)	1.5-3.5
2600 cc (All)	1.5-3.5

2) If adjustment required, remove and discard colored cap (if equipped) for access to nylon adjuster. Using a suitable tool, back adjuster outward to increase time or turn adjuster inward to increase time. One turn of adjuster, in either direction, will increase or decrease time approximately 1/2 second.

3) When nylon adjuster is flush with top of threaded collar, the maximum permissable adjustment is 1 full turn inward or 9 turns outward. When adjustments are completed, snap in new service replacement colored cap in top of valve.



CAPRI DECEL VALVE

CAPRI TUNE-UP

2000 cc Engine (1972-73)
2600 cc Engine (1972-73)

Correct ignition timing and carburetor idle adjustment is important to maintain correct emission levels and for proper running of vehicle. See *Tune-Up Decal in engine compartment for ignition and carburetor adjustment specifications.*

IGNITION TIMING

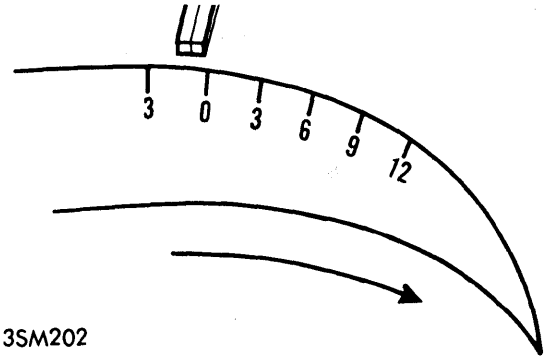
With engine at normal operating temperature and dwell angle set correctly, disconnect and plug vacuum lines. Connect timing light and tachometer to engine. Start engine and reduce idle speed to 600 RPM to be sure that centrifugal advance is not operating. Adjust ignition timing to specifications by rotating distributor. Accelerate engine to 2000 RPM and make sure that timing advances. Unplug and reconnect vacuum advance line and again accelerate engine to 2000 RPM. Advance should begin sooner and advance further than when accelerated with vacuum line disconnected. Connect distributor vacuum retard unit to intake manifold vacuum and make sure that timing is retarded.

IDLE SPEED & MIXTURE

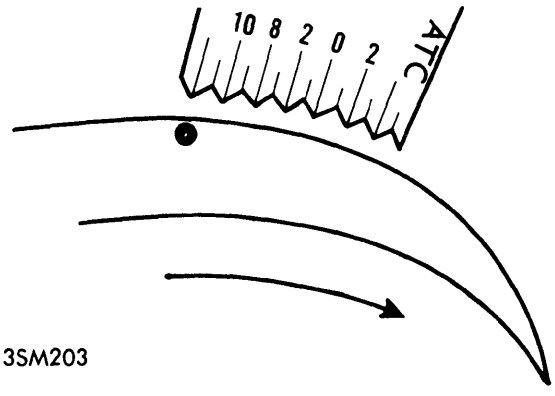
Engine and underhood temperatures must be stabilized before idle adjustments are made. Run engine a minimum of 20 minutes at 1500 RPM to achieve this condition. With ignition timing set to specifications, disconnect carburetor to decel valve hose and plug decel valve fitting. With man. trans. in "N" or auto. trans. in "D" set idle speed to specifications by adjusting curb idle screw with air cleaner installed. Turn idle mixture adjusting screw inward to obtain smoothest idle possible within range of idle limiter caps. *NOTE — If satisfactory idle cannot be obtained, proceed to supplemental fuel mixture procedure below.*

SUPPLEMENTAL FUEL MIXTURE PROCEDURE

If satisfactory idle cannot be obtained with normal idle setting procedures, check that following items are correct before continuing: No vacuum leaks, ignition system wiring continuity, spark plugs, point dwell, point condition, initial ignition timing, fuel level, crankcase ventilation system, valve clearance and engine compression. If all of above points are correct and idle is still not satisfactory, check air/fuel ratio by means of exhaust gas analyzer and adjust to specifications.



2000 cc TIMING MARKS



2600 cc TIMING MARKS