EGR FUNCTION TESTING

1988 Jeep Cherokee

1983-88 Exhaust Emission Systems
JEEP EXHAUST GAS RECIRCULATION

TESTING

EGR VALVE

Valve Opening Test

1) With engine at normal operating temperature and at idle, rapidly open and close throttle. Open throttle sufficiently to obtain at least 1500 RPM. Movement should be noticed in EGR diaphragm.

2) If diaphragm does not move, probable causes are: faulty vacuum signal to EGR, defective EGR diaphragm or defective backpressure sensor diaphragm (if equipped), or leaks in vacuum lines or connections.

Valve Closing Test

1) With engine at normal operating temperature and at idle, manually depress EGR valve diaphragm. RPM should immediately drop, indicating that EGR valve is not leaking and had been properly cutting off exhaust gas flow at idle.

2) If there is no change in RPM and engine is idling properly, exhaust gases are not reaching combustion chamber. Check for plugged passage between EGR valve and intake manifold.

3) If engine idles poorly and RPM is not greatly affected by manually moving diaphragm up, EGR valve is not closing off exhaust gas flow. Check for carbon between pintle, leaking EGR valve gasket or bad EGR valve.

COOLANT TEMPERATURE OVERRIDE (CTO) SWITCH

NOTE: Engine coolant temperature must be below 100°F (38°C) to perform this test.

1) Check vacuum lines for leaks and correct routing. Disconnect vacuum line at backpressure sensor (if equipped) or at EGR valve, and attach this line to vacuum gauge.

2) Operate engine at 1500 RPM. No vacuum should be indicated on gauge. If vacuum is shown, replace CTO switch.

3) Idle engine until coolant temperature exceeds 100°F (38°C) on 4-cylinder engines, or 115°F (46°C) on 6-cylinder and V8 engines.

4) Raise engine speed to 1500 RPM. Ported vacuum should be shown on gauge. If not, replace CTO switch.

DUMP VALVE

1) With engine at normal operating temperature, remove dump valve vacuum hose from manifold and plug manifold connection.

2) Raise engine speed to 2000 RPM. Vacuum should be present at exhaust ports on bottom of valve. If not, replace valve.

3) Reconnect vacuum hose to manifold and raise engine speed to 2000 RPM. No vacuum should be felt at exhaust ports on bottom of valve. If vacuum is present, replace valve.

THERMAL VACUUM SWITCH (TVS)

1) With the air cleaner temperature below 40°F (-4°C), disconnect vacuum hoses from TVS and connect vacuum source to large

outlet.

2) Apply vacuum to TVS. TVS should hold vacuum. If not, replace TVS.

3) Start engine and warm air cleaner to 55°F (13°C), or greater. TVS should not hold vacuum. If it does, replace TVS.