

# IGNITION SYSTEM - 2.5L W/RENIX ELECTRONIC IGNITION

1988 Jeep Cherokee

Distributors & Ignition Systems  
JEEP RENIX ELECTRONIC IGNITION

2.5L TBI: Cherokee, Comanche, Wagoneer, Wrangler

## DESCRIPTION

The Renix electronic ignition system consists of a solid-state Ignition Control Module (ICM), a distributor, a Top Dead Center (TDC) sensor, and an Electronic Control Unit (ECU).

## OPERATION

### IGNITION CONTROL MODULE (ICM)

The ignition control module is located in engine compartment, just left of battery. The ICM consists of a solid-state ignition circuit and an integrated ignition coil that can be removed and serviced separately.

Electronic signals from the electronic control unit to the ICM determine the amount of ignition timing or retard needed to meet various engine requirements. The electronic control unit provides an input signal to the ICM. The ICM has only 2 outputs: a tach signal to the tachometer and diagnostic connector, and a high voltage signal from the coil to the distributor cap.

### TDC SENSOR

The TDC sensor senses TDC and BDC crankshaft positions as well as engine RPM. Sensor is located on left rear side of engine and is not adjustable. Sensor is secured by special shouldered bolts to flywheel/drive plate housing.

## TESTING

1) Disconnect ignition coil wire from center tower of distributor cap. Using insulated pliers, hold coil wire about 1/2" (13 mm) away from engine block. Crank engine and check for spark between wire and engine block.

2) If spark occurs, reconnect coil wire to distributor cap. Remove spark plug wire from one spark plug. Using insulated pliers, hold wire about 1/2" (13 mm) away from engine block.

3) Crank engine and check for spark between wire and engine block. If spark occurs, check fuel system for problems. If no spark occurs, check for a defective rotor, distributor cap, or spark plug wires. Replace parts as necessary.

4) If rotor, cap and wires are okay, check for loose or corroded connections at coil terminals. If necessary, clean terminals and wires. Ensure wires are properly seated on coil terminals and not wedged between coil body and terminal. If okay, go to next step.

5) Check for loose connectors at ICM or ECU. Verify that wire connectors are firmly plugged into ICM and ECU. Also check for loose ICM or ECU ground wire connections at oil dipstick bracket. Clean and tighten if necessary.

6) Load test battery to ensure battery is fully charged. Replace battery if necessary. If battery is okay, check voltage between terminals "A" and "B" of ICM connector while cranking engine. See Fig. 1.

7) Minimum voltage reading should be 9.5 volts. If voltage is okay, go to next step. If voltage is low, check continuity of ICM and ECU ground wires. Repair or replace as necessary.

8) Using an ohmmeter, check ignition coil resistance. Resistance on primary winding should be .4-.8 ohms. Secondary resistance should be 2500-4000 ohms. If correct, go to next step. If not, replace ignition coil.

9) Check ECU and ICM with Tester (MS 1700). Replace ICM or ECU if either fails MS 1700 test sequence.

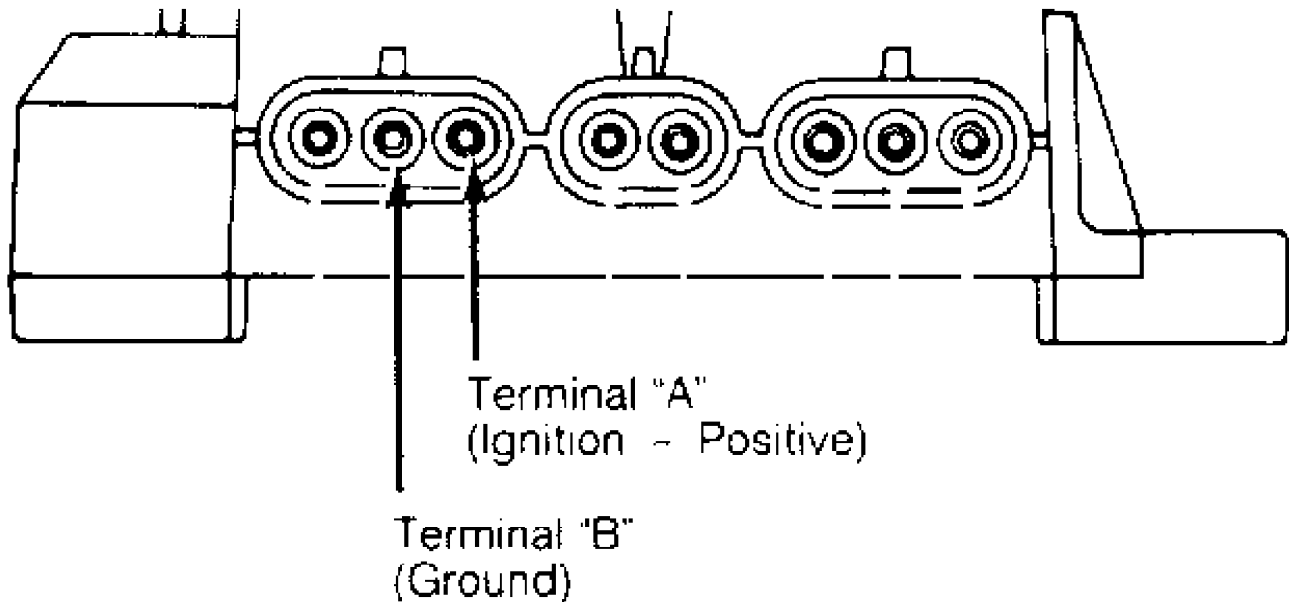


Fig. 1: 2.5L TBI ICM Connector Terminals  
Courtesy of American Motors/Jeep Corp.

## OVERHAUL

NOTE: The 2.5L TBI distributor contains no electrical components other than the rotor and distributor cap. If any other distributor part is defective, the entire distributor assembly must be replaced.