Troubleshooting the Montreal Ignition System

Prior to performing these tests do a visual check to insure that all electrical connects are clean and tight. Insure that there is a ground wire going from the fast-on tab on the ignition boxes to the car chassis.

CAUTION

Always insure that the ignition is switched OFF when connecting or disconnecting wires.

The secondary ignition circuit puts out in excess of 30,000 volts. Use extreme caution when performing these test to avoid electrocution.

Never connect condensers, radio interference suppressors, timing lights, etc. To the coil terminal.

In the test procedure when using the test light be sure to connect it to the 3 pin connector on the wiring harness, not to the connector on the ignition box. A multimeter can be used in lieu of a test light

See last page for ignition circuit diagram

STEP 1

One at a time disconnect the spark plug wire from spark plugs 1, 4, 6 and 7. While the plug wire is disconnected hold the wire close to the engine and crank the engine with the ignition switch on.

Spark from all four plug wires? YES → Ignition circuit A is good

NO → Spark from some, but not all of the plug wires?

YES → Bad spark plug wire or distributor cap

NO → Problem with ignition circuit A

STEP 2

One at a time disconnect the spark plug wire from spark plugs 2, 3, 5 and 8. While the plug wire is disconnected hold the wire close to the engine and crank the engine with the ignition switch on.

Spark from all four plug wires? YES → Ignition circuit B is good

NO → Spark from some, but not all of the plug wires?

YES → Bad spark plug wire or distributor cap

NO → Problem with ignition circuit B
STEP 3

If both of the ignition circuits are bad go to STEP 4

STEP 3a
Ignition circuit A is bad and Ignition circuit B is good

Disconnect coil wire A from the distributor cap. Hold the coil wire close to the car chassis and crank the engine with the ignition switch on.

- Spark from the coil wire? YES → Bad distributor cap or rotor
- NO

Disconnect the wire from terminal 15 on coil A (white wire). Disconnect the wire from terminal 15 on coil B (blue wire) and connect it to terminal 15 on coil A. Hold Coil wire A close to the car chassis and crank the engine with the ignition switch on.

- Spark from the coil wire? NO → Bad ignition coil A or coil wire
- YES

Disconnect the blue wire from terminal 15 on coil A and reconnect it to terminal 15 on coil B. Reconnect the white wire previously disconnected from terminal 15 of coil A.

Disconnect the three pin connector from ignition box A and connect a test light from ground to pin B of the three pin connector (pink wire) on the wire harness and turn the ignition switch on.

- Does the test light come on? NO → Bad fuse or wire harness
- YES

Connect a test light from pin C (white/black wire) to pin B (pink wire) on the three pin connector on the wire harness. Crank the engine with the ignition switch on.

- Does the light blink on and off? NO → Bad breaker points or wire harness
- YES

Disconnect the 3 pin connector from ignition box B. Connect the 3 pin connector that was disconnected from ignition box A to ignition box B. Hold Coil wire A close to the car chassis and crank the engine with the ignition switch on.

- Spark from the coil wire? YES → Bad ignition box A
- NO

Bad wire from ignition box A to coil A.
STEP 3B
Ignition circuit B is bad and Ignition circuit A is good

Disconnect coil wire B from the distributor cap. Hold the coil wire close to the car chassis and crank the engine with the ignition switch on.

Spark from the coil wire? YES → Bad distributor cap or rotor

NO

Disconnect the wire from terminal 15 on coil B (blue wire). Disconnect the wire from terminal 15 on coil A (white wire) and connect it to terminal 15 on coil B. Hold Coil wire B close to the car chassis and crank the engine with the ignition switch on.

Spark from the coil wire? NO → Bad ignition coil B or coil wire

YES

Disconnect the white wire from terminal 15 on coil B and reconnect it to terminal 15 on coil A. Reconnect the blue wire previously disconnected from terminal 15 of coil B.

Disconnect the three pin connector from ignition box B and connect a test light from ground to pin B of the three pin connector (pink/black wire) on the wire harness and turn the ignition switch on.

Does the test light come on? NO → Bad fuse or wire harness

YES

Connect a test light from pin C (blue/black wire) to pin B (pink/black wire) on the three pin connector on the wire harness. Crank the engine with the ignition switch on.

Does the light blink on and off? NO → Bad breaker points or wire harness

YES

Disconnect the 3 pin connector from ignition box A. Connect the 3 pin connector that was disconnected from ignition box B to ignition box A. Hold Coil wire B close to the car chassis and crank the engine with the ignition switch on.

Spark from the coil wire? YES → Bad ignition box B

NO

Bad wire from ignition box B to coil B.
STEP 4
Ignition circuits A and B both bad

Disconnect the three pin connector from ignition box A and connect a test light from ground to pin B of the three pin connector (pink wire) and turn the ignition switch on.

Does the test light come on?

NO → Bad fuse or wire harness

YES → Connect a test light from pin C (white/black wire) to pin B (pink wire) on the three pin connector. Crank the engine with the ignition switch on.

Does the light blink on and off?

NO → Bad breaker points or wire harness

YES → Ignition box A bad

Disconnect the three pin connector from ignition box B and connect a test light from ground to pin B of the three pin connector (pink/black wire) and turn the ignition switch on.

Does the test light come on?

NO → Bad fuse or wire harness

YES → Connect a test light from pin C (blue/black wire) to pin B (pink/black wire) on the three pin connector. Crank the engine with the ignition switch on.

Does the light blink on and off?

NO → Bad breaker points or wire harness

YES → Ignition box B bad
MONTREAL IGNITION SYSTEM