ISOLATING ROAD TROUBLES IN 10 MINUTES

Why spend an hour or more guessing at what caused a break down while on tour. Following a logical sequence of checks can isolate most problems in as short of time as 10 minutes.

The Internal Combustion Engine requires just three components to run.

1. FUEL - Ideally you need 14 parts air to 1 part fuel (14:1 ratio). Most Model A's get about 12:1 ratio from the carburetor.
2. COMPRESSION - The fuel needs to be compressed to at least 55 psi to enable today's fuel to ignite.
3. IGNITION - 20,000 volts are needed at the spark plug to ignite the fuel. This combustion at the Power Stroke causes the engine to run. As little as 12,000 volts will ignite the fuel but a loss of power will occur when the voltage from the coil is less than 20,000 volts.

If we look at the failure rate of each of the above components, the ignition circuit is the cause of 95% of all failures.

Failure Analysis

FUEL failures caused by:

Dirty gas tank, plugged gas shutoff valve, plugged sediment bowl, plugged fuel line, dirty carburetor, leaking manifold gasket.
(4% of all failures)

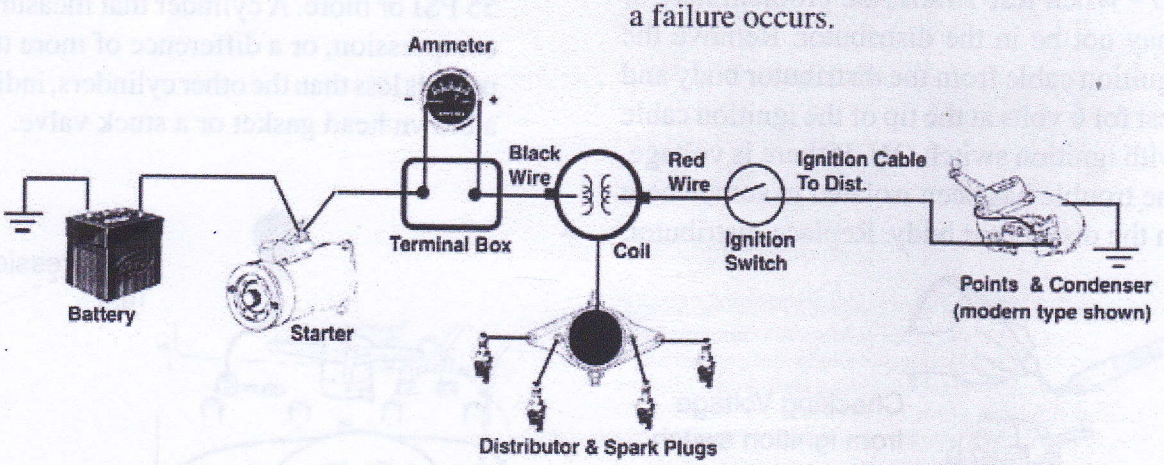
COMPRESSION failures caused by:

Head gasket leaking, stuck valve.
(1% of all failures)

IGNITION failures caused by:

Points burned or closed, condenser shorted or open, coil failure, high tension coil wire open, lower distributor wire broken, lower distributor plate shorted, ignition cable shorted or open, ignition switch faulty, ammeter nuts loose or open circuit, distributor cap carbon button worn or missing, distributor body cracked (shorted), rotor cracked, timing gear teeth broken.
(95% of all failures)

Based on the overwhelming percent of failures in the ignition circuit, it stands to reason that the ignition components should be the first test when a failure occurs.



Ignition Circuit Schematic