

TROUBLESHOOTING PHASED-MAKER CONTACT CD IGNITION SYSTEM

The Phased-Maker Contact CD Ignition System -- as used on 1972 Merc 40-75-110-200 models and 1971 models so equipped -- consists, basically, of a low speed and high speed generating coil. The maker contacts and generating coils are phased (rotate together for ignition timing change) which, consequently, results in a very efficient ignition power source. The voltage, which is generated by the coils, is rectified and used to charge a capacitor. The capacitor is allowed to discharge into the primary of the ignition coil when the contacts make.

The following troubleshooting procedure is recommended if the ignition system is suspected as the source of a problem. A VOA Electrical Meter (C-91-52751) and a Magneto Analyzer (C-91-25213) will be used for making the measurements. Disconnect the four generating coil leads, the capacitor lead and the heavy green leads from the electrical module.

MEASUREMENT	VOA RANGE	READING
A. SYMPTOM - Hard Starting or Poor Low Speed Performance		
1. Resistance of low speed coil; between red and yellow coil leads.	R x 100	38-46
2. Forward resistance of rectifier; red VOA lead to electrical module terminal (where red coil lead was connected) and black VOA lead to terminal (where capacitor was connected).	R x 1000	10-15
3. Reverse resistance of rectifier. Reverse the VOA leads from position used in previous measurement.	R x 1000	No reading
B. SYMPTOM - Poor High Speed Performance		
1. Resistance of high speed coils between blue and yellow coil leads.	R x 100	1.6 - 2.0
2. Forward resistance of rectifier; red VOA lead to electrical module terminal (where blue coil lead was connected) and black VOA lead to terminal (where capacitor was connected).	R x 1000	4 - 5
3. Reverse resistance of rectifier. Reverse the VOA leads from position used in previous measurement.	R x 1000	No reading
MEASUREMENT	MAGNETO ANALYZER POSITION	READING
C. SYMPTOM - No Ignition Output		
1. Capacitance; one Magneto Analyzer lead connected to capacitor lead and the other connected to ground,	4	.45 .55
2. Condenser leakage and short; Magneto Analyzer leads connected as in previous measurement.	5	Pointer should return to left of scale.