

# SERVICE & PARTS TECHNICAL INFORMATION

NO.



# Triumph

April, 1978

SUBJECT:

MODELS:

ELECTRONIC IGNITION SYSTEMS

All

Diagnosis of engine misfire, rough running and stalling will be simplified if a routine method of checking is adopted. It is important to remember that engine performance can be affected by a number of conditions such as vacuum leaks, induction leaks, carburetion as well as ignition system malfunction.

The electronic ignition systems on British Leyland vehicles have proved to be remarkably reliable. The no fault condition of many ignition amplifiers returned as unserviceable, prove that the amplifier and module were suspected of being the cause of a particular problem when in fact this was not the case.

The following revised checking procedure must be used when diagnosing suspected ignition system faults.

## INBUILT OPUS ELECTRONIC IGNITION TEST PROCEDURE

### 1. CHECK BATTERY

Specific gravity reading should be between 1.260 and 1.268

### 2. CHECK H-T SPARK

1. Remove main H-T lead and insert known, good test H-T lead into coil chimney. With insulated pliers, hold the free end approximately ¼" away from the engine block.

2. With the ignition on, crank engine. Regular sparking should occur. If sparking occurs, check the distributor cover for signs of tracking, etc. Check H-T leads, rotor arm insulation, spark plugs, coil chimney, fuel supply.

### 3. NO SPARKING - AMPLIFIER CHECK

1. With test H-T lead in coil chimney and with free end approximately ¼" from engine block, switch on ignition and remove white-blue lead from drive resistor. A spark should occur each time white-blue lead is removed. Replace white-blue lead after test.

3. NO SPARKING - AMPLIFIER CHECK (cont'd)

2. If sparking occurs, check pick-up air gap which should be 0.014 inches to 0.016 inches, and check that distributor shaft rotates. If correct, replace module.

3. If no sparking occurs, check for battery voltage on ignition switch side of the drive resistor. If voltage correct, proceed as follows.

4. VOLTAGE SUPPLY

Remove distributor cover and insure that no ferrite rod is in the vicinity of the pick-up module. With ignition on, connect volt meter leads, negative to a ground point, and positive lead to input of ballast resistor. The reading in each case should be at least 11 volts. If less than 11 volts, check wiring for excessive resistance between battery and checking point. Voltage at positive terminal coil ballasted should be 4 to 8 volts. A low voltage reading indicates excessive resistance between the checking point and battery and a high reading indicates the ballast resistor has been by-passed or the coil or amplifier is faulty. Proceed with test.

5. VOLTAGE AT COIL NEGATIVE

Disconnect coil negative lead. Connect volt meter negative lead to ground, positive lead to coil negative terminal. Volt meter should read battery voltage. A zero reading indicates faulty coil. Reconnect coil negative lead to coil with volt meter still connected as in previous check. Reading should fall less than 2.5 volts. If reading is higher than 2.5 volts, check resistance value of drive resistor. It should be 9 to 11 ohms. If drive resistor value is correct, replace electronic module.

6. SWITCH CHECK

Leave volt meter connected as in previous check and crank engine. Volt meter reading should fluctuate between 2 to 4 volts, approximately, dependant on cranking speed. If volt meter reading remains steady, no fluctuation, replace electronic module. If results from Check No. 2 is no sparking, replace coil.

