

Ignition

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10p

RECOMMENDED TEST EQUIPMENT

D.C. Moving Coil Voltmeter Scale 0-20V
Hydrometer
H T Jumper Cable
Test Capacitor (0.18-0.20 µF)

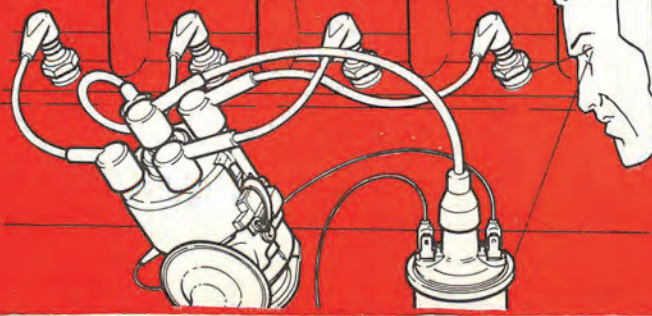
- Note:
1. All meter connections are given for negative earth systems.
 2. The ignition must be switched 'on' for all tests.
 3. Tests A, B and C are preliminary checks.

WARNING

Ignition circuits induce high voltages which are dangerous. Besides the risk from electric shock itself, there could be sudden uncontrolled bodily movement causing, for example, a hand to be damaged by the cooling fan which is rotating at high speed. Take great care when working with the ignition switch 'on'.

TEST:

A CONNECTIONS

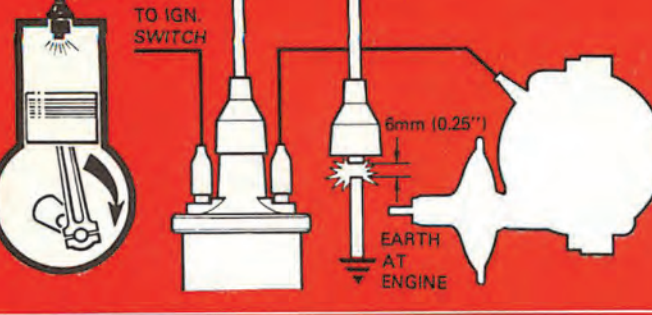


RESULT:

Should be:
Tight and clean ▶ TEST B

Loose and/or dirty
Rectify
If engine will not start ▶ TEST B

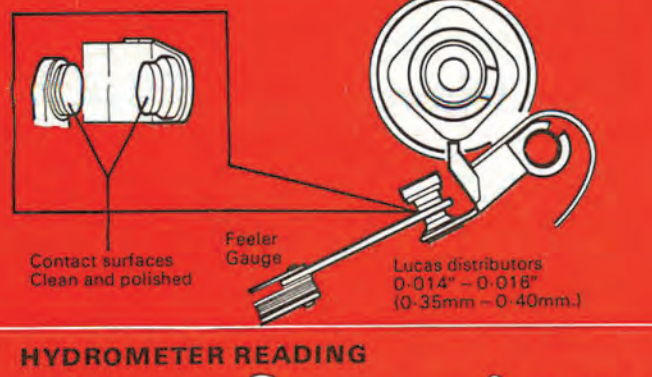
B HT SPARKING



Regular sparking — suggests fault other than coil i.e. distributor, plugs, fuelling, timing etc. ▶ TEST C

No sparking. ▶ TEST C

C CONTACT CONDITION AND GAP



Contacts pitted and piled
Remove — clean and/or replace
If engine will not start ▶ TEST 1

Incorrect gap
Rectify
If engine will not start ▶ TEST 1

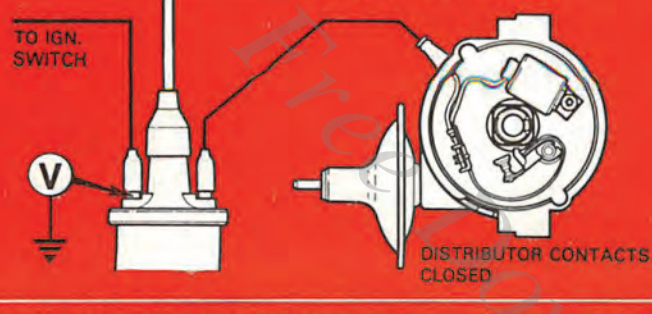
1 HYDROMETER READING



Below 1.230
Recharge and then test ▶ TEST 2

1.230-1.290 ▶ TEST 2

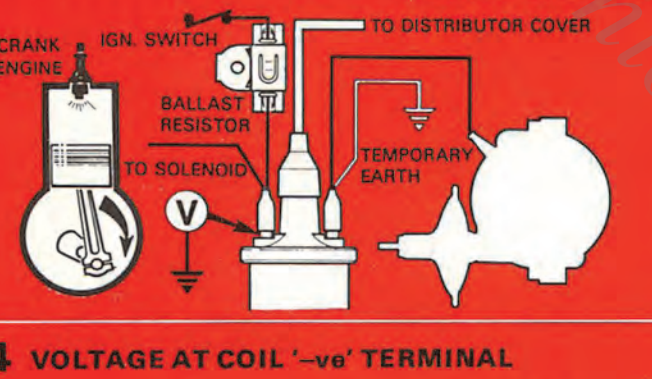
2 VOLTAGE AT COIL '+ve' TERMINAL



Should be:
Battery voltage (or approx. 6V for Ballasted Ignition System) ▶ TEST 4 OR TEST 3 (Ballasted Ignition)

Zero voltage — check feed to and from ignition switch, ballast resistor (if fitted) and connections. Rectify
If engine will not start ▶ TEST 4 OR TEST 3 (Ballasted Ignition)

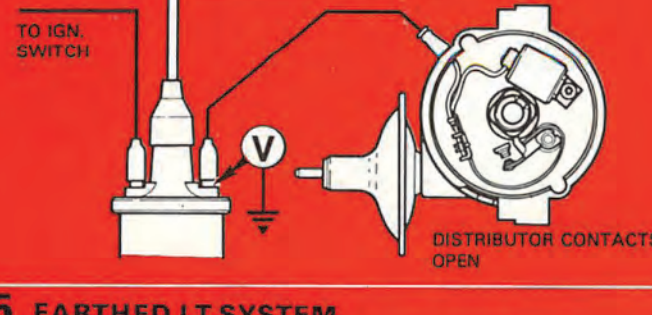
3 'START' VOLTAGE AT COIL '+ve' TERMINAL (BALLASTED IGNITION ONLY)



Voltage should increase while cranking ▶ TEST 4

If no increase check supply at ignition terminal starter solenoid while cranking
Rectify
If engine will not start ▶ TEST 4

4 VOLTAGE AT COIL '-ve' TERMINAL

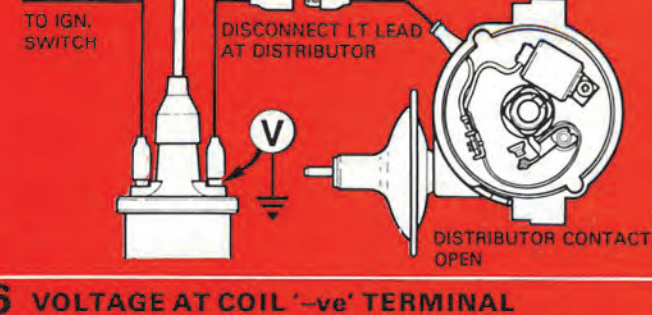


Should be:
Battery voltage ▶ TEST 6

Zero voltage: Disconnect LT lead to distributor at coil
Voltmeter should now show battery voltage ▶ TEST 5

If zero voltage is still shown, replace coil.
If engine will not start ▶ TEST 5

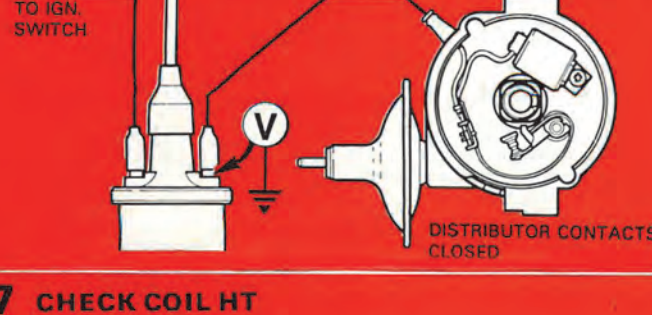
5 EARTHED LT SYSTEM



Should be:
Battery voltage indicating an earth in the distributor
Rectify
If engine will not start ▶ TEST 6

Zero voltage: Indicating LT earth in coil to distributor LT lead
Rectify
If engine will not start ▶ TEST 6

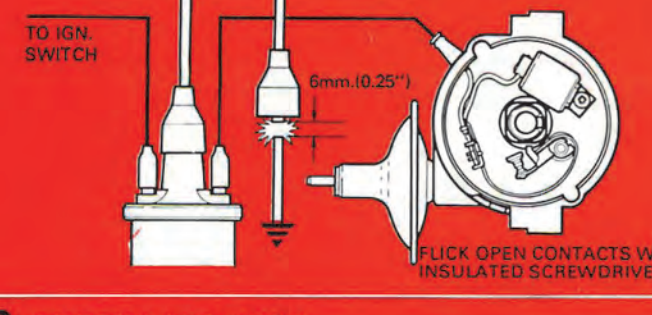
6 VOLTAGE AT COIL '-ve' TERMINAL



Should be:
Zero voltage ▶ TEST 7

Above zero voltage. Check contacts, earth links, coil to distributor lead
Rectify
If engine will not start ▶ TEST 7

7 CHECK COIL HT

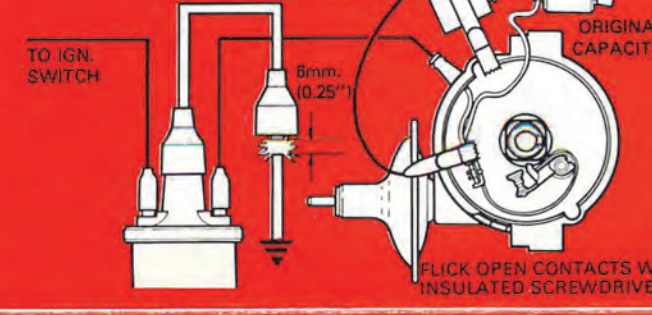


Should be:
Good HT sparking
Repeat with original HT lead ▶ TEST 9

Weak HT sparking ▶ TEST 8

No sparking ▶ TEST 8

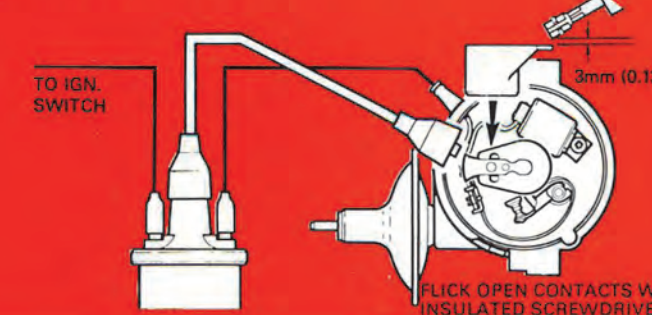
8 CHECK CAPACITOR



Should be:
Improved sparking
Fit new capacitor
If engine will not start ▶ TEST 9

Weak or no sparking
Reconnect original capacitor
Replace coil
If engine will not start ▶ TEST 9

9 CHECK ROTOR ARM



Should be:
No sparking ▶ TEST 10

Good HT sparking
Replace rotor arm
If engine will not start ▶ TEST 10

10 VISUAL AND HT CABLE CHECKS

- EXAMINE
1. DISTRIBUTOR COVER
 2. COIL TOP
 3. CHECK HT CABLE INSULATION
 4. CHECK HT CABLE CONTINUITY
 5. CORRECT CB POINT GAP

Should be:

1. Clean, dry no tracking marks
2. Clean, dry no tracking marks
3. Must not be cracked, chafed or perished
4. Must not be open circuit
5. Reset if incorrect
Replace if unserviceable