

3. Couple stroboscopic timing lamp and tachometer to engine following the manufacturers instructions.
4. Disconnect the vacuum pipes from the distributor.
5. Start engine, with no load and not exceeding 3,000 rpm, run engine until normal operating temperature is reached. (Thermostat open). Check that the normal idling speed falls within the tolerance specified in the data section.
6. Idle speed for timing purposes must not exceed 750 rpm, and this speed should be achieved by removing a breather hose **NOT BY ADJUSTING IDLE SETTING SCREWS.**
7. With the distributor clamping bolt slackened turn distributor until the timing flash coincides with the timing pointer and the correct timing mark on the rim of the torsional vibration damper as shown in the engine tuning section.
8. Retighten the distributor clamping bolt securely. Recheck timing in the event that retightening has disturbed the distributor position.
9. Refit vacuum pipes.
10. Disconnect stroboscopic timing lamp and tachometer from engine.

### LUCAS CONSTANT ENERGY IGNITION SYSTEM 35DM8 PRELIMINARY CHECKS

Inspect battery cables and connections to ensure they are clean and tight. Check battery state of charge if in doubt as to its condition.

Inspect all LT connections to ensure that they are clean and tight. Check the HT leads are correctly positioned and not shorting to earth against any engine components. The wiring harness and individual cables should be firmly fastened to prevent chafing.

### PICK-UP MODULE AIR GAP SETTINGS

Air gap settings vary according to vehicle application.

**NOTE: The gap is set initially at the factory and will only require adjusting if tampered with or when the pick-up module is replaced.**

#### Test Notes

- (i) The ignition must be switched on for all checks.
- (ii) Key to symbols used in the charts for Tests 2.



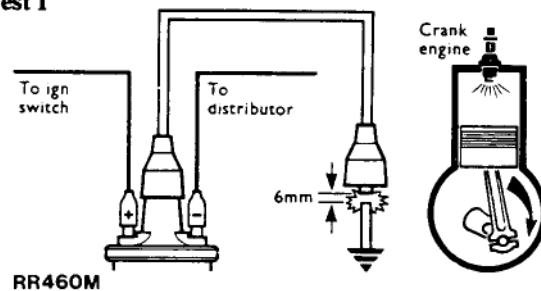
- (iii) Use feeler gauges manufactured from a non-magnetic material when setting air gaps.

#### TEST 1:

#### Check HT Sparking

Remove coil/distributor HT lead from distributor cover and hold approximately 6 mm (0.25 in) from the engine block. Switch the ignition 'on' and operate the starter. **If regular sparking occurs, proceed to Test 6. If no sparking proceed to Test 2.**

#### Test 1



#### TEST 2:

#### Amplifier Static Checks

Switch the ignition 'on'

- (a) Connect voltmeter to points in the circuit indicated by the arrow heads and make a note of the voltage readings.

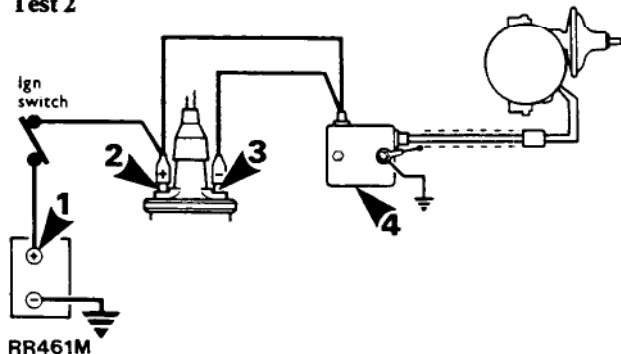
**NOTE: Only move the voltmeter POSITIVE lead during tests 2, 3 and 4.**

- (b) Compare voltages obtained with the specified values listed below:

#### EXPECTED READINGS

1. More than 11.5 volts
2. 1 volt max below volts at point 1 in test circuit
3. 1 volt max below volts at point 1 in test circuit
4. 0 volt—0.1 volt

#### Test 2



*Continued*

- (c) If all readings are correct proceed to Test 3.
- (d) Check incorrect reading(s) with chart to identify area of possible faults, i.e. faults listed under heading 'Suspect'.

1	2	3	4	SUSPECT
L	✓	✓	✓	DISCHARGED BATTERY
✓	L	L	✓	IGN. SWITCH AND/OR WIRING
✓	✓	L	✓	COIL OR AMPLIFIER
✓	✓	✓	H	AMPLIFIER EARTH

**TEST 3:**

**Check Amplifier Switching**

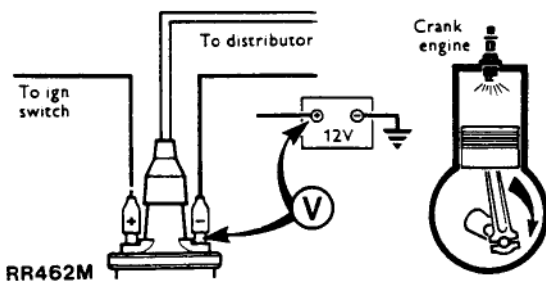
Disconnect the high tension lead between the coil and distributor.

Connect the voltmeter between battery positive (+ve) terminal and H.T. coil negative (-ve) terminal, the voltmeter should register zero volts.

Switch the ignition 'on' then crank the engine. The voltmeter reading should increase just above zero, in which case proceed with Test 5.

If there is no increase in voltage during cranking proceed to Test 4.

**Test 3**



Remove the coil/distributor H.T. lead and fit test H.T. lead to coil chimney. Hold free end about 6 mm (0.25 in) from the engine block and crank the engine.

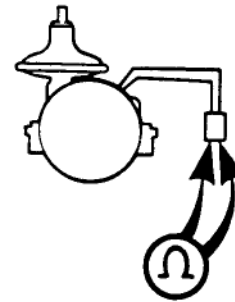
If H.T. sparking good, repeat test with original H.T. lead, if then no sparking, change H.T. lead. If sparking is good but engine will not start, proceed to Test 6.

If no sparking, replace coil. If engine will not start carry out Test 6.

If engine will not start carry out Test 6.

If engine will not start carry out Test 6.

**Test 4**



**TEST 5:**

**Check H.T. Sparking**

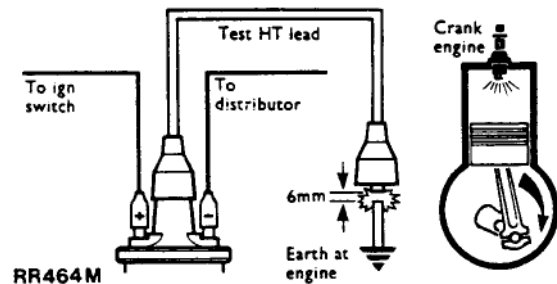
Remove existing coil/distributor H.T. lead and fit test H.T. lead to coil chimney. Hold free end about 6 mm (0.25 in) from the engine block and crank the engine.

H.T. sparking good, repeat test with original H.T. lead, if then no sparking, change H.T. lead. If sparking is good but engine will not start, proceed to Test 6.

If no sparking, replace coil.

If engine will not start carry out Test 6.

**Test 5**



*Continued*

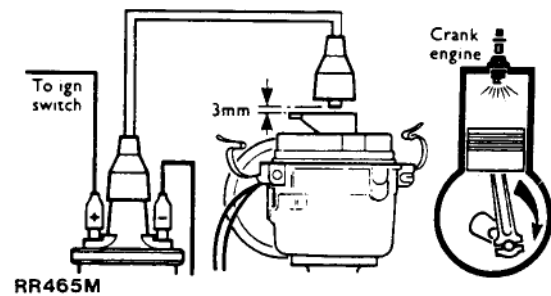
TEST 4:  
Pick-Up Coil Resistance Applications with  
Disconnect the pick-up coil from the distributor plug.  
The ohmmeter should register between 2k and 5k ohms if correct. Change the amplifier if ohmmeter reading is correct. If the engine still does not start carry out Test 5.

**TEST 6:****Test 6****Check Rotor Arm**

Remove distributor cover. Disconnect coil H.T. lead from cover and hold about 3 mm (0.13 in) above rotor arm electrode and crank the engine. There should be no H.T. sparking between rotor and H.T. lead. If satisfactory carry out Test 7.

H.T. sparking, replace rotor arm.

If engine will not start carry out Test 7.



RR465M

**TEST 7:****Visual and H.T. Cable Checks****Examine:**

1. Distributor Cover.
2. Coil Top.
3. H.T. Cable Insulation.
4. H.T. Cable Continuity.
5. Sparking Plugs.

**NOTE:**

1. Reluctor.
2. Rotor and Flash Shield.

**Should be:**

- Clean, dry, no tracking marks.
- Clean, dry, no tracking marks.
- Must not be cracked, chafed or perished.
- Must not be open circuit.
- Clean, dry, and set to correct gap.

Must not foul pick-up or leads.

Must not be cracked or show signs of tracking marks.