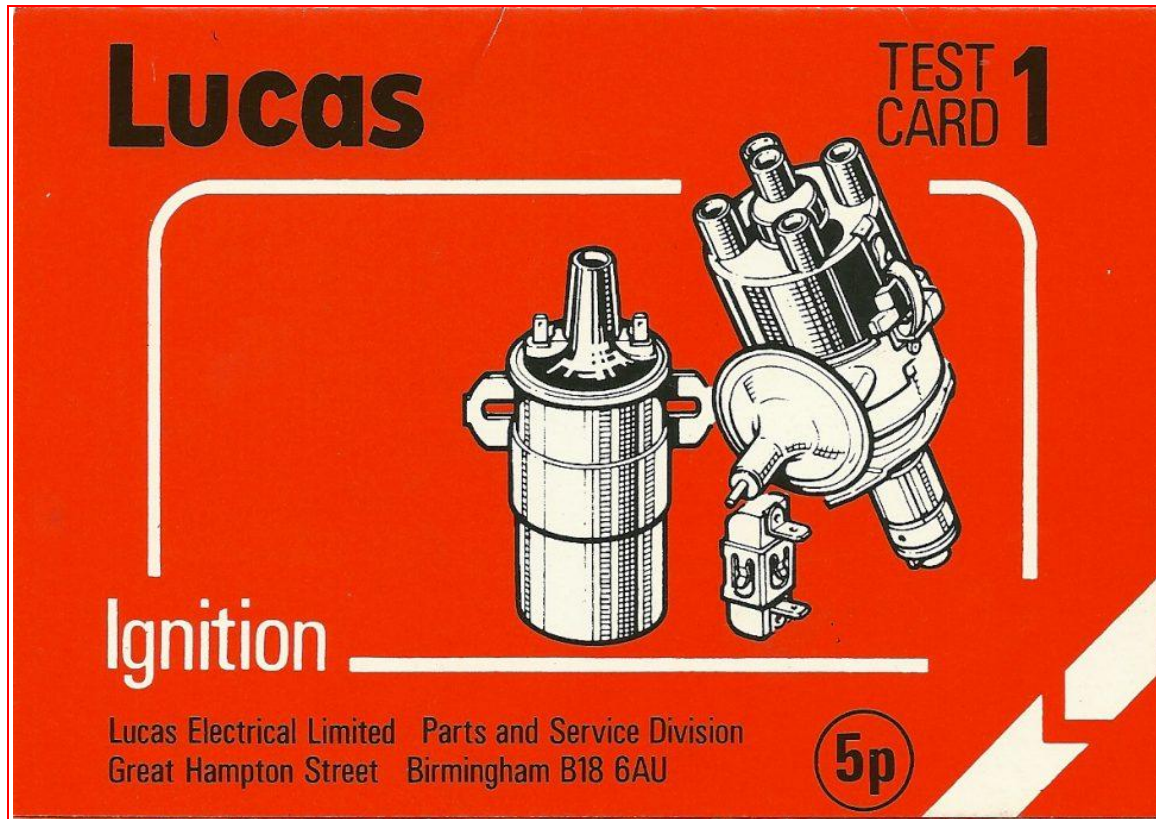


# Lucas Test Cards

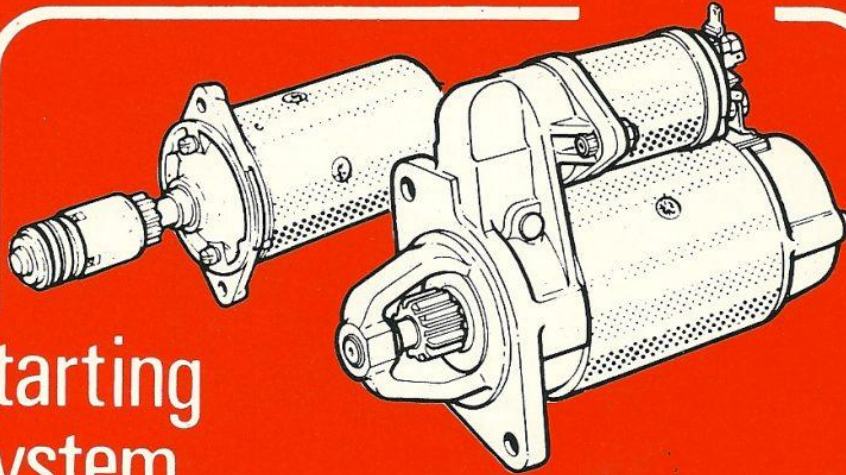
**Richard Lentinello**



Back in the 1960s, and possibly the early '70s, Lucas Electric Limited of England issued these test cards to assist owners of British-built cars and trucks with any electrical problem they may encounter. Be it Lucas electrics, or Autolite, Delco, Bosch, and Magneti Marelli, all automotive electrical systems, regardless of where they are manufactured, do fail every now and then. Having these test cards on hand helped many car owners diagnose those problems.

# Lucas

TEST  
CARD 2



## Starting System

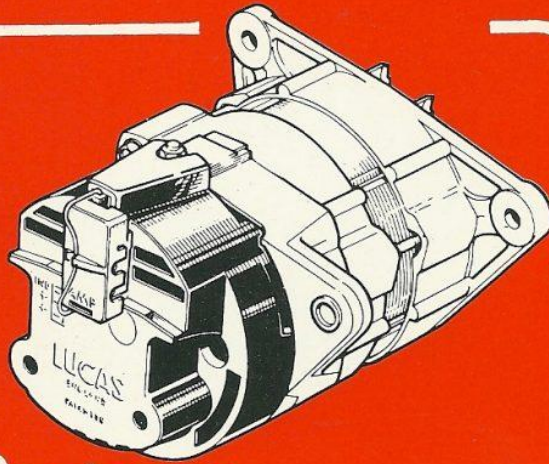
Lucas Electrical Limited Parts and Service Division  
Great Hampton Street Birmingham B18 6AU

I recently received these four Lucas Test Cards in the mail from Jeffrey Miller, the son of the previous owner of my 1967 Triumph GT6, who'd found them while cleaning out his father's garage. Each test card measures 6-inches wide by 4.25-inches, and opens to a full 16.5-inches. Printed on stock similar in thickness to a postcard, they are coated to protect against dirty fingers while in use.

# Lucas

## TEST CARD 3

### A.C. Charging Systems



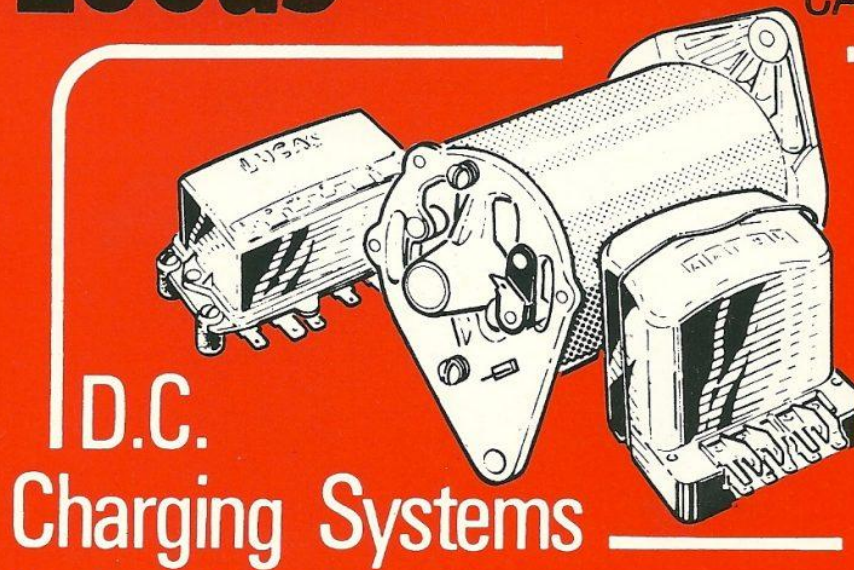
Lucas Electrical Limited Parts and Service Division  
Great Hampton Street Birmingham B18 6AU

Each test card is numbered, and clearly states which part of the electric system it's focusing on. When opened, there are a series of tests to conduct to fix that particular problem. The information is direct and to the point and easy to understand, while the insightful illustrations are equally comprehensible. The tests continue on the back side of the opened card; for the Ignition Test Card there are 13 tests in total to check.



# Lucas

TEST  
CARD 4



## D.C. Charging Systems

Lucas Electrical Limited Parts and Service Division  
Great Hampton Street Birmingham B18 6AU

While they may have been created for vehicles equipped with Lucas electric systems, these test cards are not only invaluable in accessing and fixing problems in all cars' electric systems but help owners better understand exactly how those systems work.

### RECOMMENDED TEST EQUIPMENT

D.C. Moving Coil Voltmeter Scale 0-20V

Hydrometer

H T Jumper Cable

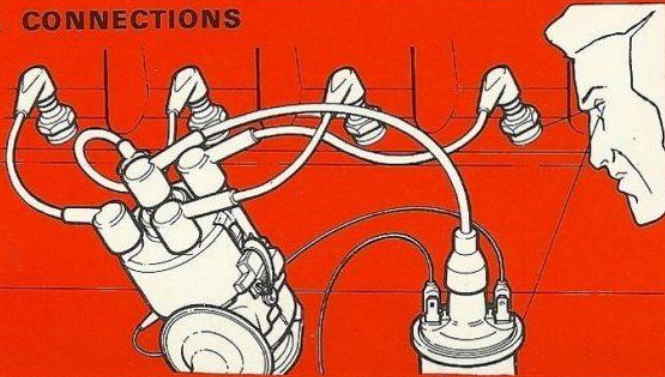
Test Capacitor (0.18-0.20  $\mu$ F)

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.

#### TEST:

##### A CONNECTIONS



#### RESULT:

Should be:

Tight and clean

TEST B

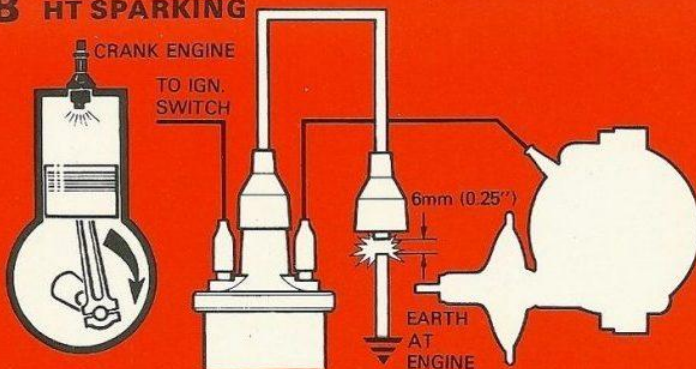
Loose and/or dirty

Rectify

If engine will not start

TEST B

##### B HT SPARKING

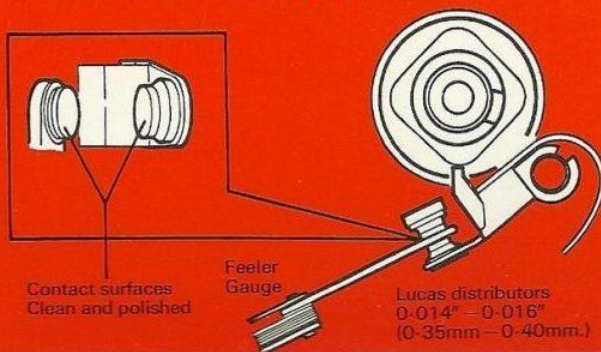


Regular sparking — suggests  
fault other than coil i.e. distributor,  
plugs, fuelling,  
timing etc.

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

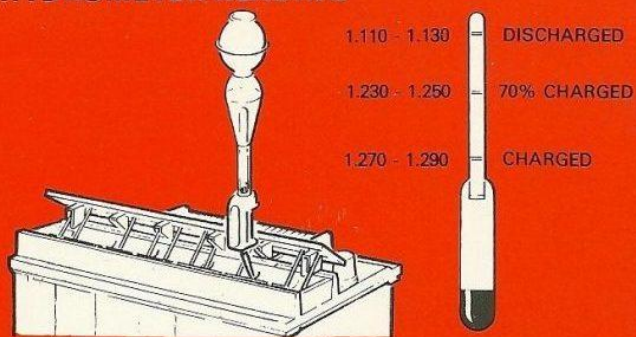
Rectify

If engine will not start

TEST 1



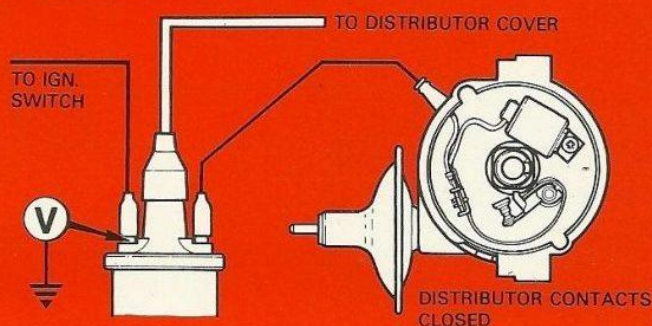
# 1 HYDROMETER READING



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

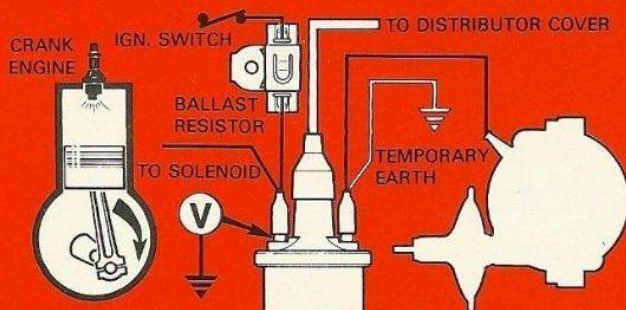
OR  
TEST 3 (Ballasted Ignition)

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)

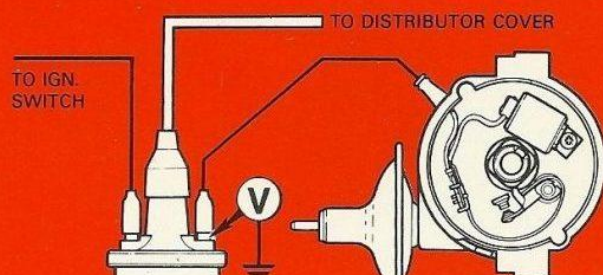
# 3 'START' VOLTAGE AT COIL '+ve' TERMINAL (BALLASTED IGNITION ONLY)



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