

# **ELEC 3**

## **IGNITOR ELECTRONIC IGNITION KIT FITTING INSTRUCTIONS**

### **Suitable for:**

All models fitted with a Lucas 20D8 twin point distributor:

All Silver Cloud III and Bentley S3 models

Silver Shadow & Bentley T (SY) models prior to VIN 08742 (approximately)

### **General Information**

Originally the earlier models were fitted with a 3 ohm coil and no ballast resistor.

Later models (SY from VIN 01942) were fitted with a 1.5 ohm coil and a ballast resistor.

We highly recommend that this kit is fitted in conjunction with a new Flamethrower 1.5 ohm coil for both ballasted and non-ballasted systems.

We offer COIL1 (silver finish) or COIL2 (black finish).

Do not use a High Energy coil (HEI) as this will damage the new module.

It is not designed to be used with copper HT leads and is only suitable for 12V negative earth ignition systems.

Due to the Ignitor unit producing very high voltage output compared to standard points, it is essential that you have an exceptionally good earth connection. This may otherwise give the impression that the ignitor unit is faulty.

The ballast resistor is to be retained where fitted (applicable only on SY models from VIN 01942).

### **Pre-Installation Checks**

Check the battery charging rate, timing marks and vacuum advance (if fitted). Refer to Workshop manuals as necessary.

Turn the engine to Top Dead Centre on A1 cylinder and confirm alignment of rotor arm to distributor electrode A1.

We offer tool UE5179TOOL to check that the distributor drive gear is correctly positioned – see instructions at the end of this sheet.

Check engine over for loose or poor connections in ignition circuit including checking battery terminals for corrosion or loose connections.

Check the voltage with the ignition OFF - it should be between 12V & 14V.

SY models from VIN 01942 were originally fitted with a ballast resistor UE34105. If this is missing or has been by-passed it should be replaced or re-connected.

### **Installation Instructions**

1. Disconnect the battery or ensure ignition switch is off and set engine to TDC on A1 cylinder.
2. Remove distributor cap and rotor arm and leave HT leads attached.

3. Examine distributor cap, HT leads and rotor arm - replace any components that show excessive wear.
4. Remove the points and condenser. Disconnect the CB wire and remove the base plate and plastic sealing plug.
5. Clean the inside of the distributor housing and shaft.
6. Set the new ignitor base plate with module into the distributor housing as you would for a set of contact points.
7. Using the original hardware attach the loose end of the earth wire to the nearest hold-down screw. Tighten the plate in place with the remaining hardware.
8. Push the wire grommet into the hole in the distributor housing. Pull the excess wire out of the distributor housing. Gently pull the ignitor wires through the grommet, leave enough wire inside the distributor so the magnetic sleeve and/ or any other moving parts do not make contact with the wires. Tighten the tie-wrap / cable tie around the module wires just inside the distributor housing.
9. Place the magnetic sleeve on to the point cam, line up the sleeve with the cam profile and press down firmly to ensure the sleeve drops down completely.
10. Replace rotor arm and distributor cap. Check distributor cap is seated correctly, making sure the cap does not rock from side-to-side. If this is a problem you will need to file approx. 1mm from the bottom of the rotor arm. Ensure all plug cables are seated securely.

**11. Connect black Ignitor module wire to the negative (-) side of the coil.**

**12. Cars without a ballast resistor:**

**Connect red Ignitor module wire to the positive (+) side of the coil.**

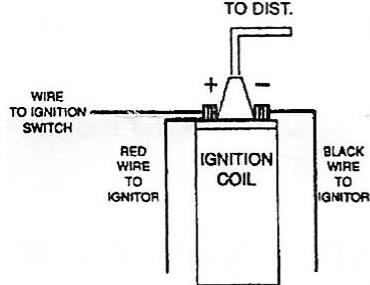
**13. Cars with a ballast resistor:**

**Connect red Ignitor module wire to the ignition switch side of the ballast resistor.**

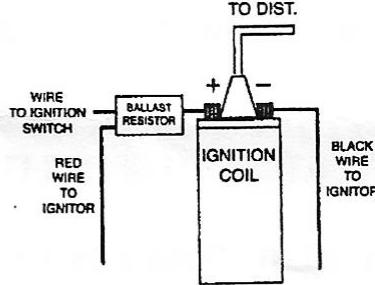
14. Reconnect battery and check wiring.
15. Start the engine and let it warm up and come to normal idle and set the ignition timing with a stroboscopic lamp in the conventional manner.

***Please do not leave the ignition switch on for longer than 20 seconds as this could cause the coil to overheat or damage the new ignition module.***

WIRING DIAGRAM  
IGNITOR SYSTEM  
WITHOUT BALLAST RESISTOR



WIRING DIAGRAM  
IGNITOR SYSTEM  
WITH BALLAST RESISTOR



### Troubleshooting

Q. What is the first thing I should check if the engine will not start?

A. Make certain all wires are connected securely to the proper terminals.

Q. The engine still will not start or runs rough. Are there any tests I can do?

A. Yes, remove the red ignitor wire from the coil. Connect a jumper wire from the positive side of the battery to the red ignitor wire just removed from the coil. If the engine starts you have a low voltage problem. (This is a very common problem). Remember this is just a test. Not intended for permanent installation.

Q. How can I fix a low voltage problem?

Connect the red ignitor wire to the ignition wire prior to the ballast resistor.

Q. How do I check my coil for resistance?

A. Remove all the wires from the coil. Attach an ohmeter to both the positive and negative terminals. The reading must be 1.5 ohms or greater.

Q. May I modify the length of the ignitor wires?

A. Yes, you can cut the wires to any length your application requires. You can also add lengths of wire if needed (20-gauge wire). Please make sure all wire splices are clean and connections are secure.

## **INSTRUCTIONS TO FIT UE5179TOOL**

*It is quite common, especially after an engine rebuild, to find that your distributor drive gear is misaligned. This simple tool allows you to check and, if necessary, re-align the drive gear to ensure that your distributor is firing correctly.*

*Remove the distributor assembly and fit the tool UE5179TOOL onto the top of the distributor driving shaft. With the engine at TDC on A1 cylinder the tool will be parallel to the camshaft and the cylinder head when the drive gear is correctly positioned.*

*If the drive gear is misaligned, remove it and follow the instructions from the relevant workshop manual.*

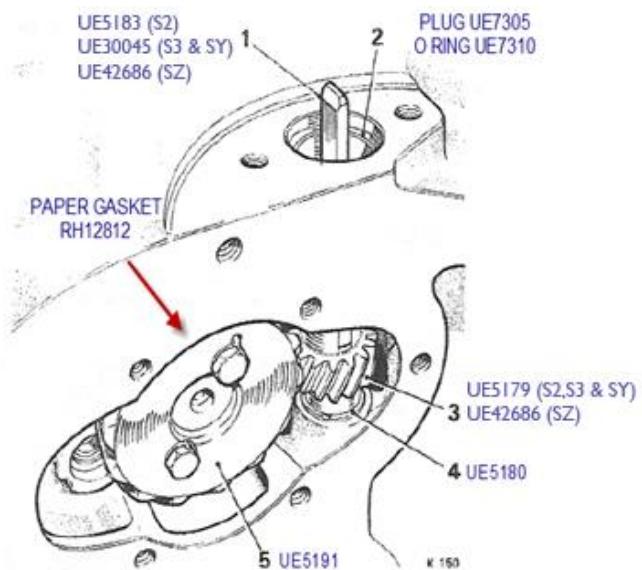
*Instructions from the Silver Shadow Workshop Manual TSD2476 Chapter E7 are below:*

### **Distributor driving gear - To fit**

1. Fit the camshaft distributor driving gear.
2. Rotate the crankshaft until the timing marks on the camshaft and crankshaft gears are in line.
3. Fit the thrust washer to the distributor driving gear spindle then fit the gear into the recess in the crankcase. It will help in fitting this gear if the washer is held to the gear with a light smear of grease.
4. When the gear is fitted, the slot in the top of the gear spindle should be in line with the camshaft (see Fig. E44).

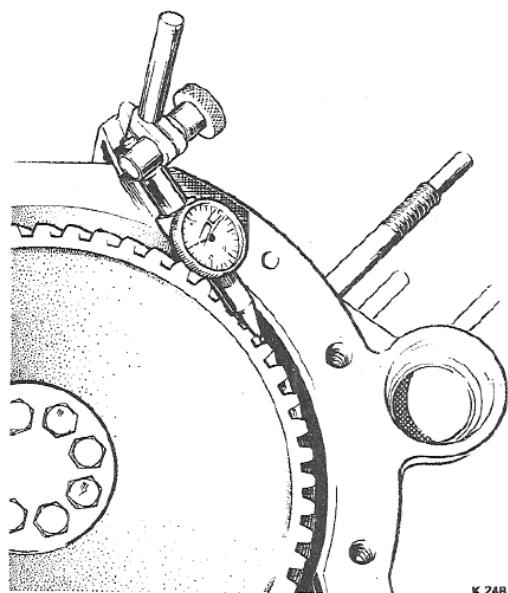
On no account should the setting of crankshaft and camshaft be disturbed whilst fitting this gear.

5. Fit the distributor driving shaft to the driving spindle then fit the locating plug.
6. If necessary, renew the rubber 'O' ring on the locating plug.
7. Using a dial test indicator in a similar manner to that shown in Figure E47, check the backlash of the distributor driving gear. This should be between 0,05 mm. and 0,10 mm. (0.002 in. and 0.004 in.).
8. Fit the camshaft rear cover using a new paper joint.



**FIG. E44 VIEW OF DISTRIBUTOR DRIVING GEARS**

- |                                     |                 |
|-------------------------------------|-----------------|
| 1 Distributor driving shaft         | 4 Thrust washer |
| 2 Locating plug                     | 5 Skew gear     |
| 3 Driving spindle and integral gear |                 |



**FIG. E47 CHECKING TIMING GEAR BACKLASH**

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