AccuSpark

Modern Ignition for Classic cars

Fitting and Information Guide For

Modules

1 Before fitting

AccuSpark electronic ignition kit. NOTE : All kits are negative earth only

Ensure your electrics are Negative earth, the – terminal of the battery should be connected to the car body. **DO NOT PROCEED IF YOUR CAR IS POSITIVE EARTH.**
Check the charging system; with the engine running the battery voltage should not exceed 14.2 Volts. If the vehicle is over-charging, a new alternator or voltage regulator will be required. Over-charging will damage the AccuSpark unit.
Before fitting your AccuSpark it should be noted what type of ignition system is fitted and that a suitable coil is correctly fitted.
Only coils of more than 1.4 Ohms of resistance are suitable. Low resistance and electronic ignition coils are NOT suitable and will invalidate any warranty.
A coil fitted to points will work either way around, this is not the case with electronic ignition. It is imperative that the coil is checked for fitting and suitability.

The coil will have 2 spade terminals one – and one +. Remove the wire/wires from the + terminal, with the ignition on, these should show 12 Volts, this is the feed. The negative side to runs to the distributor, the negative side may also have a taco fitted

Testing for a ballast resistor or wire

If there is no ballast resistor visible you may have a ballast wire inside the loom. To test for it proceed as follows:
1. Check voltage of battery with volt meter and make a note
2. Remove the wires from the negative side of the coil (negative earth cars)
3. Connect a temporary wire from the negative terminal of the coil to earth
4. Turn ignition on (nothing else switched on)
5. Now check the voltage on the coil, put red probe on + side of coil and the - probe to earth
6. If the reading is less than 80% of battery voltage there is probably a resistor in the system. If it is more than 80% you probably have a standard system
7. Remove the temporary wire and reconnect wires.

If your reading is less than 80% you should use a ballast coil

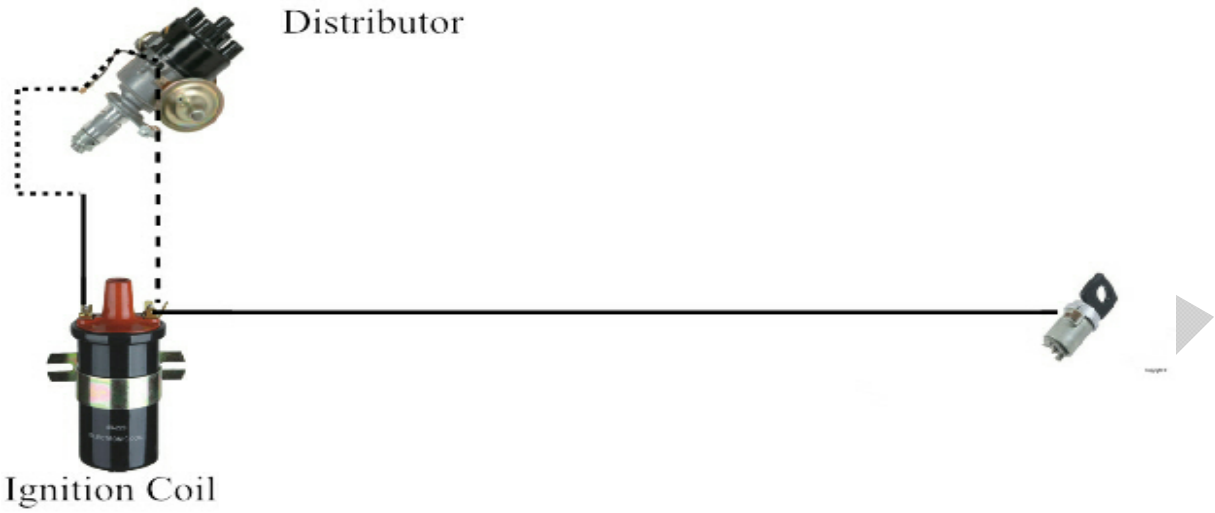
If you reading is more than 80% you should use a non-ballast coil

Testing Type of coil

Remove all wires, set your volt meter to Ohms.
A reading of around 1.5 indicates a Ballast coil.
A reading of around 3 Ohms indicates a Standard coil.

Fig1a

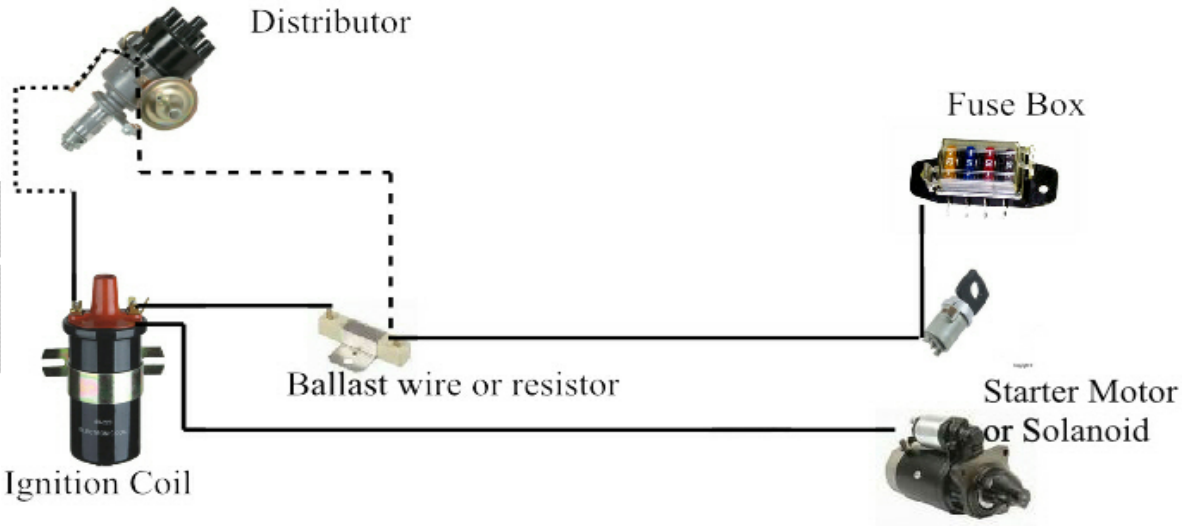
AccuSpark fitted to a Standard Ignition



- - - - - - - New Red Wire
——— Existing wiring
..... New Black Wire

Fig1b

AccuSpark fitted to a Ballast Ignition



- - - - - - - New Red Wire. Can also be run to ignition key or fuse box
——— Existing wiring
..... New Black Wire

2. Fitting AccuSpark module to existing Distributor

See special notes relating to specific kits before proceeding.

1. If access is poor and removal is necessary first remove distributor as in next section (fitting new Distributor)
2. Disconnect low tension lead from side of distributor (this will be connected to the module later)
3. Remove distributor cap
4. Remove Rotor
5. Remove Points and condenser, these will no longer be needed, keep screws
6. Establish correct position of module, on many kits this is not the same as the points and often the condenser fixing point is used.
7. Open the sachet of white silicone heat sink and spread the whole of the contents on the base of the module, this helps dissipate the heat from the module and the whole sachet must be used.
8. Fix Module to baseplate and fix using the screws removed from the points
9. Use the supplied cable tie to secure the wires away from the centre of the distributor.
10. Push the supplied trigger ring down onto the centre cam , this should be a snug fit , if loose some kits are supplied with a packing piece place this on first then push the trigger on .If nothing supplied wrap a small piece of tape around centre cam and the push trigger wheel on .
11. The gap between the trigger and Module is not critical but the two should not touch
12. Refit rotor
13. Refit cap
14 Proceed to connecting your AccuSpark Section 3

Special Notes

1. **Lucas 23D** :On the Lucas 23D kit it will be necessary to remove two small lugs from the base plate in order to allow the baseplate to fit flush
2. **Lucas 45D** kits are supplied with a trigger and a combined trigger and rotor , use the one with the best fit .Do not use both
3. **Lucas 48D4 and 59D4**. The small locating post for the blue self-cleaning points should be removed, or the baseplate replaced if one has been provided.
4. **Motorcraft/Fomoc.**. Some distributors may require the cutting of a small slot in the base plate to allow the wires to exit

3. Connecting AccuSpark

Existing distributor with AccuSpark Module

It is recommended that any radio suppressors are removed before fitting**.**
Your Distributor will now have a Red wire and a Black or Blue wire, it may be necessary to lengthen the red wire on some models.

1. Connect the black or blue wire to the existing low tension wire running to the negative side of the coil.
2 Connect the red wire to a 12 volt source as below

a. Standard ignitions: Connect to positive terminal on coil. See fig 1a
b. Ballast ignitions: Connect to the 12 Volt side of the resistor or wire (DO NOT CONNECT TO COIL). See fig 1b
   if the position of the resistor or wire is unknown connect to ignition key or the live side of the fuse box (not through a fuse). see fig 1b

   NOTE : If unsure of your ignition type connect as b.

4. Starting the car

Attempt to start car, in most cases the car will start .In some cases the distributor will have to be turned a few degrees in each direction until car starts and best idle can be achieved. Then the engine can be timed with a strobe.
PLEASE NOTE: It is not possible to accurately set timing statically, a strobe lamp should be used.

5. Ignition Timing Guide

As a general rule of thumb, the more advance on an engine without causing detonation (engine knock) the more power it will produce.

Average timing settings are around 6 – 14 degrees BTDC at 800 revs .
The Distributor should be advanced until the best fastest idle can be achieved within this range.
Then the total advance should be checked at around 4000-5000 revs this should be typically be around 30-40 BTDC.
If when test driven there are any rattling sounds (pinking or detonation) from the engine the ignition should be retarded until this stops.
If engine runs on ignition timing should also be retarded.

6. Trouble shooting and test Guide

Note: If at any point the module has been incorrectly fitted and the polarity reversed, the module will no longer function.

Engine will not Start

Ensure the rotor has been refitted and the centre brush in the cap is OK
Ensure the coil has 1.4 Ohms of resistance and is correctly fitted
Ensure that the baseplate earth wire is in good condition
It is recommended that a radio suppressor is not fitted to coil.

1. Crank engine to start car. If the car makes attempt to start i.e. misfires or appears to jam, then the ignition timing will need adjustment
   If the car make no attempt to start proceed to step 2

2. With the ignition on, place a test bulb between the – side of coil and earth. The bulb should illuminate.

3. If the bulb fails to illuminate there is no power supply to coil. Check wiring .
   If the bulb illuminates, then crank the engine with the starter, as the engine turns the bulb should flicker. If This occurs the module is functioning, check leads cap and rotor

4. If bulb fails to flicker and all checks have been made, please fill the return form on the back of this leaflet

Car was running and now won't start

1. Car is overcharging (more than 14.5 Volts) causing the module to fail.
2. Heat sink paste has not been applied, meaning the module has overheated.
3. Incorrect coil with too low a resistance or electronic coil has been fitted .Coils with a resistance of less 1.4 ohms should not be fitted.

AccuSpark Returns Note

This page **MUST** be completed in full and enclosed with returned items, we **cannot** process returns without this information.

Name:……

Address……

……

Post Code……

Email Address……..

Daytime Phone Number……

Returns Goods Authorisation Number (RGA)……

Date of original purchase……..

Was the item purchased through

a) Over the phone
b) Via our website
c) Show
d) Shop sale

Invoice Number item number……

Description of item returned ……

Reason for return……

Description of fault (if faulty)……

……

……

Date:……

Copy of invoice sales invoice to be enclosed

Return to:

MGOC Spares Ltd
Octagon House
Swavesey, CB24 4QZ

01954 231318