



MG A B Fitting Instructions

Classic Sport Ignition – Lucas 23D/25D, 43D/45D Negative Earth Only

Application: Various Models – negative earth only

Important Notes

Please read these instructions carefully. These instructions are for **Negative Earth** cars only. Incorrect installation can destroy the CSI distributor and/or damage the engine. Please take care when working with the high voltage HT leads.

Ignition Coils & HT Leads

It is important to use the correct coil with a CSI Distributor. If the coil resistance is wrong it may cause damage to the CSI distributor. 4 and 6 cylinder models require a coil with a minimum resistance of 2.5 Ohms (Ω), it is recommended that the 3 Ω Sports type coil is used. The coil should be replaced if required.

Silicone resistor HT leads are highly recommended. Copper HT leads can be used but must be fitted with resistor/suppressor spark plug caps.

Ballast Resistor Circuits

The CSI Distributor must have a 12V power supply. If the car is fitted with a ballast type ignition system the ballast resistor must be bypassed. Check the resistance of the coil and replace if required.

Engine Condition

Check that the engine is in good condition with carburettors correctly set and that the spark plugs are clean and correctly gapped. It is recommended that the engine is warmed to operating temperature before carrying out the distributor change.

Installation Video

Instruction movies are available online at: www.csi-ignition.com

Fitting Instructions

1. Check the ignition is switched off.
2. Disconnect the wires and HT lead from the coil.
3. Check the resistance of the coil using a multi-meter. To measure the resistance set the multi-meter to read resistance or ohms (scale 0-200 Ω) and place the multi-meter connectors to the (+) positive and (-) negative terminal of the coil. The reading on the display will be the resistance of the coil. Check the coil against the requirements detailed above.
4. Set the static timing. Refer to the curve selection table to find the correct static timing setting for your engine. Make sure the rotor arm is pointing to the number 1 contact on the distributor cap. Details of how to set static timing can be found in the relevant workshop manual.
5. Note the correct position of the HT leads and remove the distributor cap, also note the position of the rotor arm. Then remove the existing distributor. Loosen/remove the clamp to extract the distributor. Consult the workshop manual for the correct procedure if required.

6. Now you are ready to install the CSI distributor. Remove the distributor cap from the CSI distributor and carefully insert the distributor into the engine. Lightly press the distributor body and turn the rotor arm to locate the drive dog. You will feel the distributor 'click' into place. The rotor arm should be in the same position as the old unit prior to removal. Loosely refit the distributor clamp.

7. Determine the 12 Volt power supply wire and reconnect it to the positive (+) terminal on the coil. Also connect the red wire from the CSI distributor to the positive (+) terminal on the coil. Do not connect the black wire yet.

Ensure you do not connect the black wire to the 12V power supply. This will destroy the CSI Distributor.

8. Turn on the ignition.

9. Carefully turn the CSI distributor body anti-clockwise until the LED flashes, ensuring the spindle does not disengage from the drive dog. The number of times the LED flashes is the advance curve the unit is currently set to. Using a small Philips screwdriver select the appropriate curve for your engine, see the advance curve selection table.

10. Slowly turn the distributor body clockwise until the LED is on continuously. The CSI Distributor is now set to the static timing point. Now tighten the distributor clamp.

11. Turn off the ignition.

12. Connect the black wire from the CSI distributor to the negative (-) terminal on the coil. If your car has a tachometer, reconnect the wire to the (-) negative terminal on the coil.

13. Refit the distributor cap and HT leads, ensuring they are in the correct order. Keep the HT leads as far apart from other wires as possible to prevent interference.

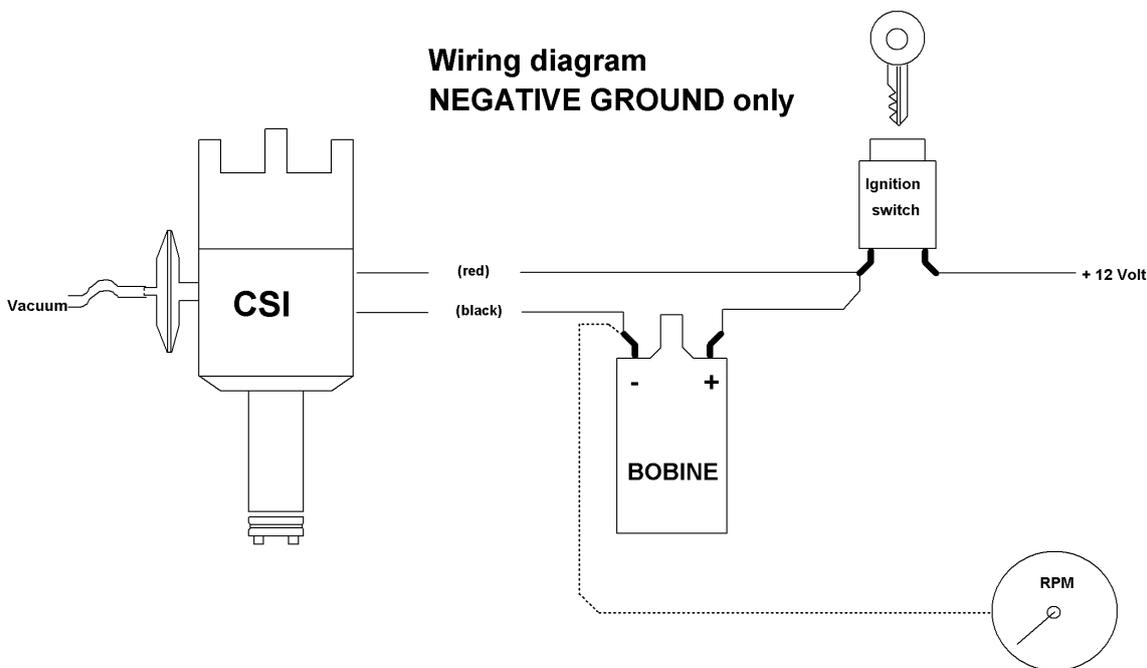
14. Connect the vacuum hose, if fitted.

15. Check the car is in neutral and start the engine.

16. Using a stroboscope timing lamp check that the timing is set to the correct timing setting, with the engine at idle (500-1000rpm). You may need to adjust the distributor to achieve the correct static setting. Loosen the clamp and turn the distributor body as required. Once the correct static setting is found re-tighten the distributor clamp.

17. Test drive the car.

18. To select an advance curve switch on the ignition but do not start the engine. Remove the distributor cap, you should see the LED flashing. If the LED is not flashing crank the engine briefly until it does flash. Select a different curve, see the curve selection guidelines.



For the latest updates and information please visit: www.csi-ignition.com

Classic Sport Ignition – MG A / B Curves:

To select the correct version of the CSI-Ignition distributor for your car:

First: Select the right distributor type

For the MGA we offer the following distributor types:

25D Positive earth

25D Negative earth

For the MGB we offer the following distributor types:

25D Positive earth until November 1967

25D Negative earth until 1974

45D 1974 on

43D 1974 on

Second: Select the right CSI-ignition distributor type

Choose the right CSI-Ignition distributor type to suit your requirements:

Optimized: Standard and light tuned cars with vacuum typically using SU carburettors

Tuned: Tuned engines non vacuum typically using Weber carburettors

Third: Select the right curve

Each distributor is programmed with 16 different curves. These curves are based on the most common curves for the different engines. Curves are also adjusted to suit the commonly available fuels and tuning techniques.

How to Choose the Correct CSI-Ignition Distributor Curve

General Points

Ensure your engine is in good running order and check that your carburettor mixture is set correctly.

The optimum settings of the carburettors and ignition are when:

A The engine has a smooth and quiet idle (500-1000RPM)

B The acceleration is good

C The maximum power will be achieved

These conditions should be achieved without pinking

The curve diagrams show the ignition advance rate at different engine speeds (RPMs). Typically less advance means less power. Whilst more advance will give you more power. But beware too much advance will reduce power and increase the likelihood of engine damage from knocking. If knock is detected, step back one curve and test drive again. It is important to use a curve that will give you the best power with the least advance.

Take care during your test drives. Do not overload or strain the engine. If detonation is detected then drive gently until the curve is changed. Engines run under sustained knock conditions can be damaged.

If you have any doubt about tuning, please contact an expert for advice.

For MGA-B models there are two ways to choose your curve:

1. Setting Up the CSI-Ignition Distributor with an Optimised Curve

If you know your engine number you can choose the right curve directly from the table with the engine numbers & distributor numbers listed in the table below. Ensure the distributor is installed in accordance with the fitting instructions, and test drive the car.

1.1 Find the correct curve to suit your engine/distributor number and the static setting from the table below. Set the static timing then select the appropriate curve, refer to the fitting instructions for details of how to set a curve. You should now be able to test drive the car.

If the engine runs well you can continue to use the car normally with this curve. If you would like to try a different curve, to see if you can gain more power, follow the instructions below.

2. Setting Up the CSI-Ignition Distributor from Curve 1

If you don't know your engine number, it is not listed in the table, or you are setting up a tuned engine follow the below steps.

2.1 Set the static timing at 10 degrees BTDC, using original timing marks on the flywheel or crankshaft pulley, make sure the rotor arm is pointing to the number 1 contact on the distributor cap. Details of how to set static timing can be found in the relevant workshop manual.

2.2 Set the CSI-Ignition distributor on curve 1, the led light will flash once. Refer to the fitting instructions for details of how to set a curve. You can now start your engine.

If the engine runs well you can continue to use the car normally with this curve. If you would like to try a different curve, to see if you can gain more power, follow the instructions below.

Classic Sport Ignition		MG A-B			nominal values	
curve nr	Motor type	Year		LUCAS distributor	static degrees	stroboscopic check
		from	to			degrees @ rpm (idle)
					BTDC	
1	18GD/GG LC	1962	1971	40916	16	16 @ 500-1000
2	optimized				10	10 @ 500-1000
3	18GD/GG HC	1962	1971	40897	17	17 @ 500-1000
3	18GF,GH,GJ	1967	1970	40897/41155	17	17 @ 500-1000
4	18V EUROPA	1972		41032	15	15 @ 500-1000
5	18V846F/847F	1974	1980	41610	10	10 @ 500-1000
6	18V581Y/582Y/583Y LC	1971	1973	41290	17	17 @ 500-1000
7	18GK	1971	1971	41339	17	17 @ 500-1000
8	MGA			40510	13	13 @ 500-1000
9	18V779/780	1973	1974	41234/41391	10	10 @ 500-1000
10	optimized				10	10 @ 500-1000
11	18V836/837 LC	1974	1975	41599	12	12 @ 500-1000
11	18V883/884 LC	1976	1980	41600	12	12 @ 500-1000
11	18V801/802	1975	1976	41693	12	12 @ 500-1000
12	optimized				10	10 @ 500-1000
13	18V672Z/673Z	1972	1974	41491	11	11 @ 500-1000
14	18V584Z/585Z LC	1971	1972	41370	16	16 @ 500-1000
15	optimized				10	10 @ 500-1000
16	optimized				10	10 @ 500-1000

Selecting a Different Advance Curve

Once you have the CSI-Ignition distributor installed and the engine is running on the basic curve you can start to find more performance by selecting different curves.

1. If necessary retune the engine by adjusting the idle setting of the carburettors and the distributor timing slightly so the engine idles smoothly. Your ignition should be adjusted well enough to take a test drive.

2 Take a test drive and then work your way up through the curves. Every time you chose a higher curve, take another test drive; listen carefully for evidence of knock. If knock is detected, return to the previous curve. Engines run under sustained knock conditions can be damaged.

3 The ignition advance starts at 1000 RPM and the created curve will go to maximum advance at a pre-programmed maximum RPM.

4 The graphs show the 16 different settings in groups of 4. You can tune by choosing one of the 16 different curves. If you think that you didn't find the maximum advance, or you want a lower maximum advance, you can also adjust the static setting from 10 degrees to a higher or lower setting. The maximum advance will also change by the same degree as the static timing is adjusted. So if the curve has a maximum advance from 30 degrees at a static setting of 10 degrees and you change the static setting to 12 degrees, the maximum advance will also go up with 2 degrees to 32 degrees.

Always check the settings with a stroboscopic timing light.

Please be aware that knocking at high RPMs is very difficult to detect. If you are not sure, seek expert advice and consider rolling road tuning. When you find the curve that suits your car the CSI-Ignition distributor is ready for use.

CSI-Ignition is not responsible for any kind of engine damage!!! If you are not sure, please seek the advice from an expert!!!

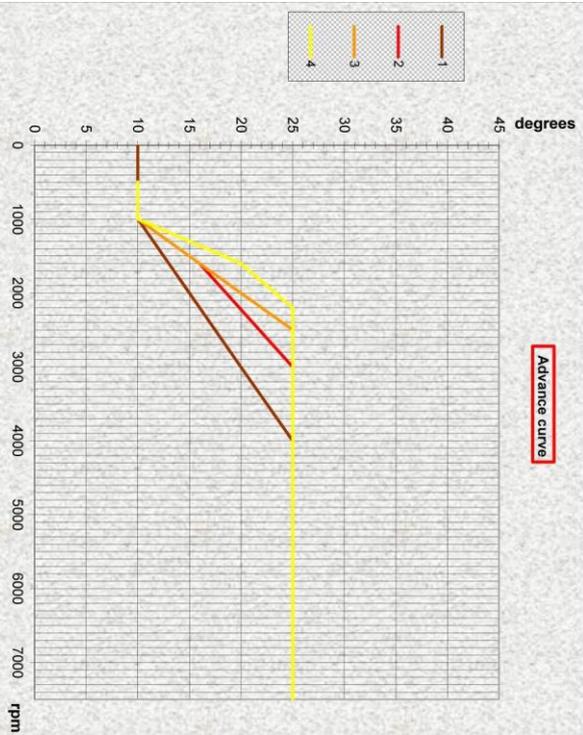
See for the latest updates and additions: www.csi-ignition.com



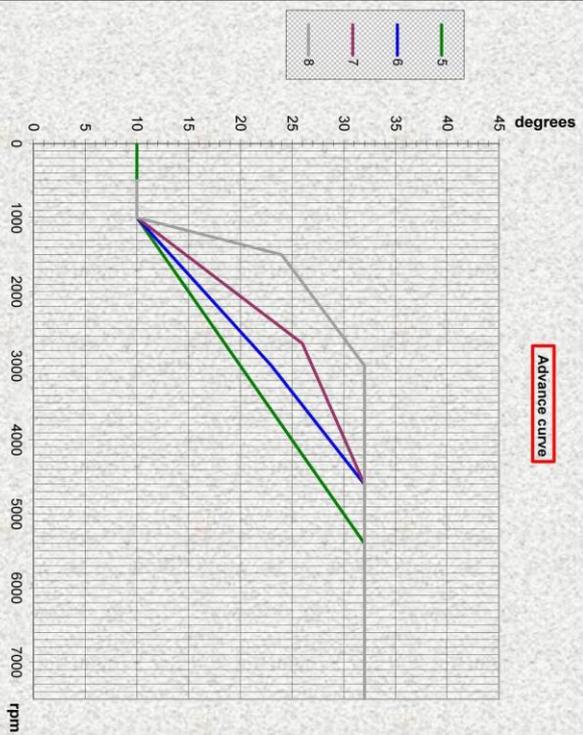
Change the curves with a small philips screw driver.

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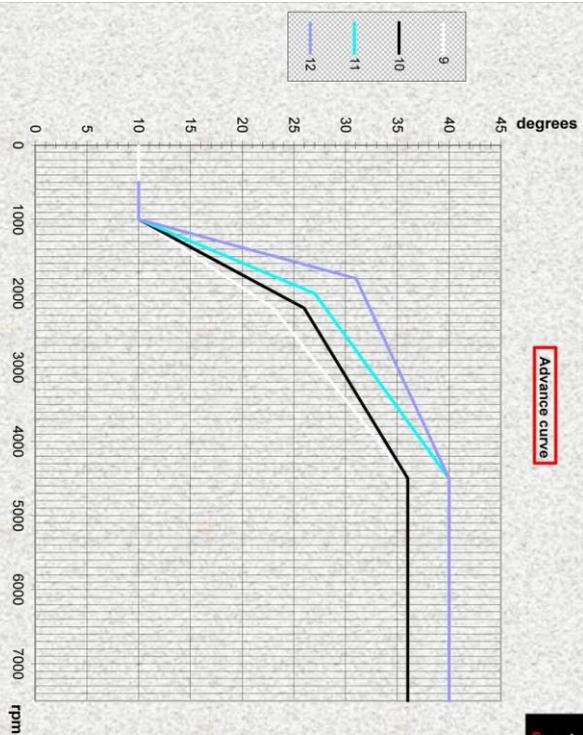
CSI-IGNITION OPTIMIZED CURVES MG A - B



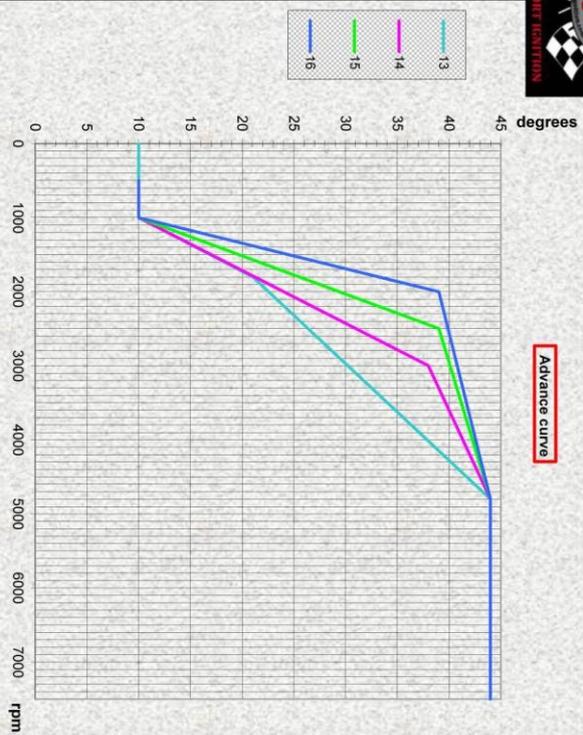
Advance curve



Advance curve



Advance curve



Advance curve

