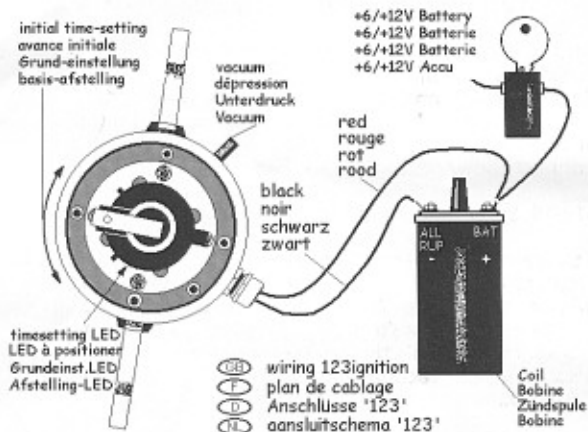


## Mounting instructions for the '123ignition'

type : 123\MG-4-R-V  
for : MG-A & MG-B  
( 6 or 12 Volt ; negative earth only )



### IMPORTANT

Please read the entire instructions before you begin installation. If after reading you are unsure of the procedure to be followed, please ask someone knowledgeable in engine tuning. Remember to work safely.

### STEP 1: Find the static timing point

On the old distributor, note the position of the ignition wire to the number one cylinder. Remove the distributor cap and turn the engine in its normal direction so that the rotor almost points to the number one cylinder position.

Now carefully turn the engine further until the static timing point ( check the 'technical data' ) is indicated on the pulley.

The engine is now at the static timing point, near the end of the compression stroke for the number one cylinder.

### STEP 2: Out with the old, in with the new

You may wish to verify that the correct advance curve has been selected in your '123' : using a 5mm Allen wrench remove the hexagonal plug in the bottom face of the housing. Inside the hole you'll find a 16 position rotary switch. ( '0' to 'F' )



curve selector '0' to 'F'  
sel. de courbe d'avance '0' à 'F'  
Kurve-schalter '0' bis 'F'  
Curve-schakelaar '0' tot 'F'

Check the technical data for the proper setting. Select the curve of your choice ; re-insert the plug and tighten securely.

Now remove the spark plug wires and coil wire from the old distributor-cap and remove the old cap. Disconnect the points wire from the coil. Unscrew the hold down nut at the base of the distributor and pull the old unit out.

Remove the distributor-cap from the '123' and carefully insert the unit in the hole, turning the rotor until the drive gears mate and the unit falls into place. Rotate the housing of the '123' so that the cables come out conveniently. If necessary, the drive gear can be repositioned on the shaft to accommodate a different rotational position. To do this, remove the '123' and carefully remove the retaining spring from the drive gear, then use a small punch to tap out the pin and re-assemble at an angle more suitable to your needs.

### **STEP 3: Static timing the '123'**

Connect the red wire to the BAT-terminal of the coil, according to the schematic. For now, do NOT connect the black wire. Turn on the ignition. Slowly turn the housing of the '123' in a clockwise direction, until the green LED just lights up. The LED shines through one of the four holes in the aluminium disc below the rotor. While turning, also press the rotor in a clockwise direction, to remove any free play in the drive gear. Finally, tighten the '123' securely, as it is also the electrical ground of the '123'. Turn off the ignition.

### **STEP 4: Finish the wiring**

Connect the black wire to the RUP-terminal of the coil, according to the schematic. Connect the spark plug leads in the proper sequence to the cap, starting with the wire for the number one cylinder at the position pointed to by the rotor of the '123'.

Also connect the high voltage wire from the coil to the center position of the cap. Attach the cap to the distributor. Keep the red and black wire well away from the high voltage leads and away from moving parts, using tie-wraps or other suitable means. Connect the vacuum-tube to the ignition.

### **STEP 5: Start and test drive**

You can now start your engine. If you have worked accurately, your ignition should be adjusted well enough to take a test drive. To achieve ultimate accuracy a fine adjustment using a stroboscope should be performed. ( check the dynamic timing data in 'technical data' ) Disconnect the vacuum-tube whilst fine-tuning. Enjoy your 123ignition!

## TIPS

- Do NOT disconnect ANY electric wire, when the engine is running. This is bad practice when using high-tech electronic systems, such as the 123ignition.
- Sparks are much stronger with a 123ignition : use good quality sparkplug leads, and a good coil. The primary resistance should not be lower then 1 ohm.
- Resistor-core silicone ignition-leads are the better choice!
- Mistrust old coils : they all look alike, but you can't see if they have been overheated many times! Buy a new one, now you know that this will not be overheated anymore...
- Fresh sparkplugs to go with the new coil and wires will ensure optimum ignition performance.
- Replace the cap and rotor every 30.000 km. Here is ordering info :

Bosch cap ref. nrs. : 1.235.522.050 / 1.235.522.058 /  
1.235.522.059 / 1.235.522.145

Bosch rotor ref. nr. : 1.234.332.024

## TECHNICAL DATA

Operating voltage range 4,0 to 15,0 Volts  
temperature 600 to 7000 rpm  
coil -30 to 85 degrees Celsius  
stock coil, or "High Energy"-coil,  
primary resistance not below 1 ohm.  
engines all standard MG-A & MG-B engines,  
advance-curves selectable by a switch  
through the bottom of the housing.

curve	replaces	for engine	static*	dyn.(max)*
0	Lucas DM2 / 40510	MG-A until engine nr. 4003 after nr. 4003 High Compr.(HC) after nr. 4003 Low Compr.(LC)	-10 -5 -10	38 @ 2200 33 @ 2200 38 @ 2200
1	Lucas 40916	18G,18GA,18GB,18GD 18GG (LC)	TDC	30 @ 4200
2	Lucas 40897/41155	18G,18GA,18GB,18GD,18GG(HC) 18GF,18GH,18GJ	TDC	28 @ 2200
3	Lucas 41339	18GK	TDC	30 @ 4600
4	Lucas 41370	18G584Z,18G585Z	TDC	41 @ 4800
5	Lucas 41491	18V672Z,18V673Z	TDC	39 @ 4300
6	Lucas 41288	18V581F,18V582F,18V583F 18V581Y,18V582Y,18V583Y (HC)	TDC	27 @ 2200
7	Lucas 41290	18V581F,18V582F,18V583F 18V581Y,18V582Y,18V583Y (LC)	TDC	31 @ 4200
8	Lucas 41032	18V ( HC)	TDC	29 @ 2200
9	Lucas 41234/41391	18V779F, 18V780F 18V892AE,18V893AE	TDC	38 @ 6000
A	Lucas 41610	18V846F, 18V847F	TDC	34 @ 5800
B	Lucas 41599	18V797AE,18V798AE	TDC	36 @ 5000
C	-	intended for 'stage 2' engines	TDC	32 @ 4400
D	Lucas 41600/41643	18V801AE[CC],18V802AE[CC]	TDC	35 @ 4500
E	Lucas 41693	18V883AE[CC],18V884AE[CC]	TDC	35 @ 4500
F	Lucas 41695	18V890AE[CC],18V891AE[CC]	TDC	35 @ 4500

\* degrees advance and enginespeed both relate to the crankshaft

vacuum-advance as specified for the original Lucas distributor  
dwll microprocessor controlled, depending on coil current  
current-timeout after +/- 1 second. If the engine is not running, the current is switched off to prevent overheating of the coil  
spark balance software controlled, better then half a degree crankshaft  
wiring red = +6 resp. +12 Volt  
black = '-' of the coil