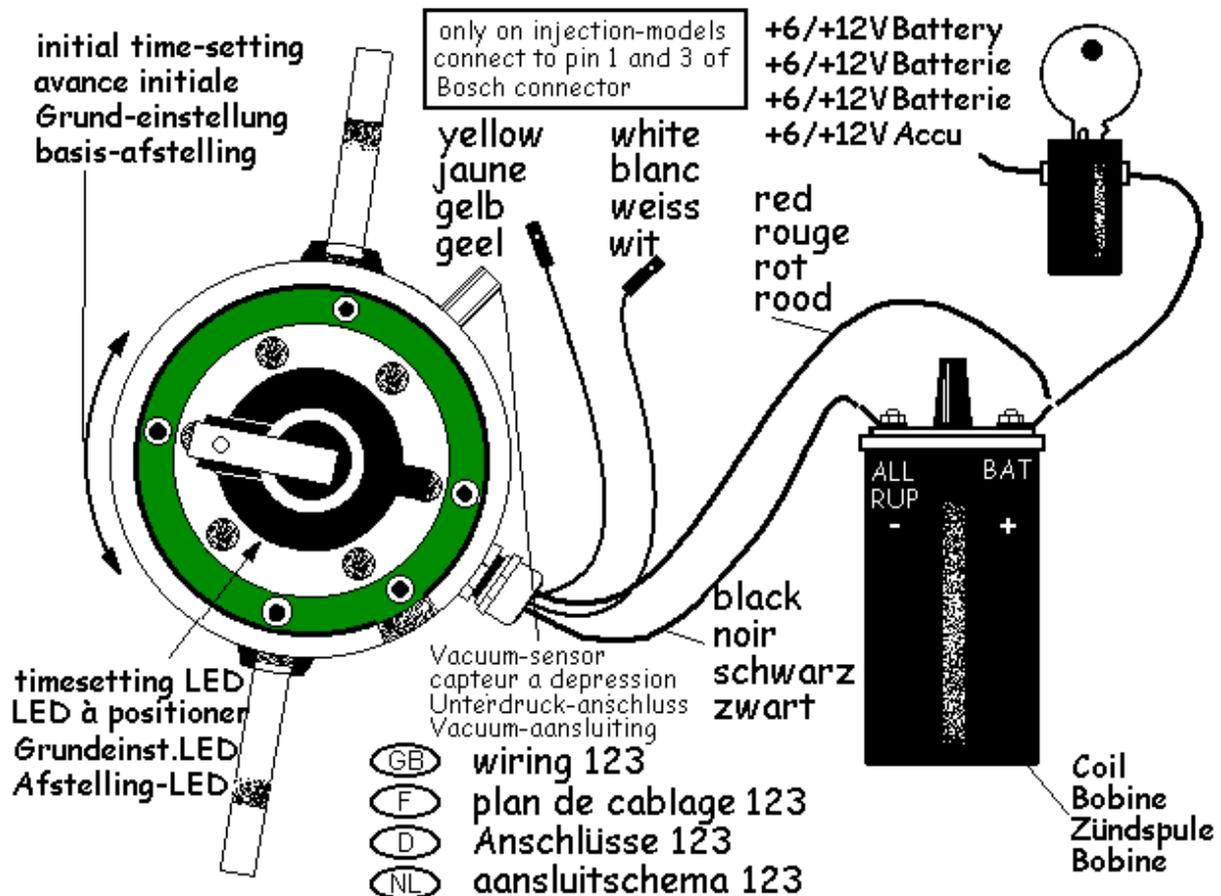


Mounting instructions for the '123ignition'

type : 123\MERCEDES-6-R-V & 123\MERCEDES-6-R-V-IE
 for : W108, W109, W110, W111, W112, W113, W114 & W123
 (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 who knows. 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.

Now remove the distributor-cap from the '123' and carefully insert the '123' 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 counter-clockwise direction, until the green LED just lights up.

The LED shines through one of the six holes in the aluminium disc below the rotor. While turning, also press the rotor in a counter-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. 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 than 1 ohm. (If your car was fitted with a coil resistor, you could remove it to get a stronger spark, as long as the primary resistance is not lower than 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 spark plugs to go with the new coil and wires will ensure optimum ignition performance.
- Replace the cap and rotor every 30.000 km. Here is the ordering info :
Bosch cap ref. nrs. : 1.235.522.051 / 1.235.522.060 / 1.235.522.103 /
1.235.522.109 /1.235.522.147
Bosch rotor ref. nr.: 1.234.332.024

Technical data

Operating voltage	4,0 to 15,0 Volts
range	600 to 7000 rpm
temperature	-30 to 85 degrees Celsius
coil	stock coil, or "High Energy"-coil, primary resistance not below 1 ohm.
Engines	all <u>standard</u> W108, W109, W110, W111, W112, W113, W114&W123
vacuum-advance	as specified for the original distributor
dwell	microprocessor controlled, depending on coil current
current-timeout	after +/- 1 second. If the engine is not running, the

spark balance
wiring

current is switched off to prevent overheating of the coil
software controlled, better than half a degree crankshaft
red = +6 resp. +12 Volt black = '-' of the coil

Curve	replaces Boschnr	for engine(s)	max.* degr.@rpm
0	0231.116.048 0231.187.001/002 0231.116.052 0231.185.006 0231.185.006 0231.142.003/004	W114 230/250/250 2.8 W108 280S 1 : 9,0	37@4600
1	as curve 0	as curve 0 ; for engines with low compression	40@4600
2	0231.116.048 0231.116.038	W110 230, W111 230S W108 250 1 : 9,0	35@4600
3	VJUR 6 BR 49T VJUR 6 BR 45T	W111 220 SEb 1st & 2nd Version 1 : 8,7	29@2500
4	VJUR 6 BR 47T 0231.116.038	W111 220b 220 Sb 1: 8,7	33@4600
5	JFUR 6 [R} 0231.116.049 0231.116.042 0231.185.008	W111 220 Seb 3d Version	26@2000
6	IFUR 6 0231.116.046 0231.116.050 0231.185.007	W113 230SL 2nd Version 1 : 9,5	30@2300
7	ZV/PBUR 6R1T 0231.141.001 0231 141 002	W112 300SE/300Seb W108 300SE W109 300SEL until 1967	25@1600
8	0231.116.051 0231.185.009	W108 250/280SE W109 300SEL after dec. 1967 , W111 280SE W113 230SL 250SL 280SL	22@2400
9	as curve 8	as curve 8, optimised for LPG / E85	22@2400
A	0231.187.004	W123 250 before 1980	24@3000
B	as curve A	as curve A optim.for LPG / E85	24@2800
C	0231.130.1004 0231.301.015 PFURX6	W114 250CE	22@3000
D	0231.116.051 0231.116.047	W108/W111 250SE W113 250SL	22@2400
E	0231.116.061 0231.116 062 0231.116.066	W108 280SE ; W109 300SEL W113 280SL M130.980 USA 1979-1971	20@2300
F	0231.116.068	W108 280SE USA 1972	30@3400

0231.185.011

* degrees advance and enginespeed both relate to the crankshaft