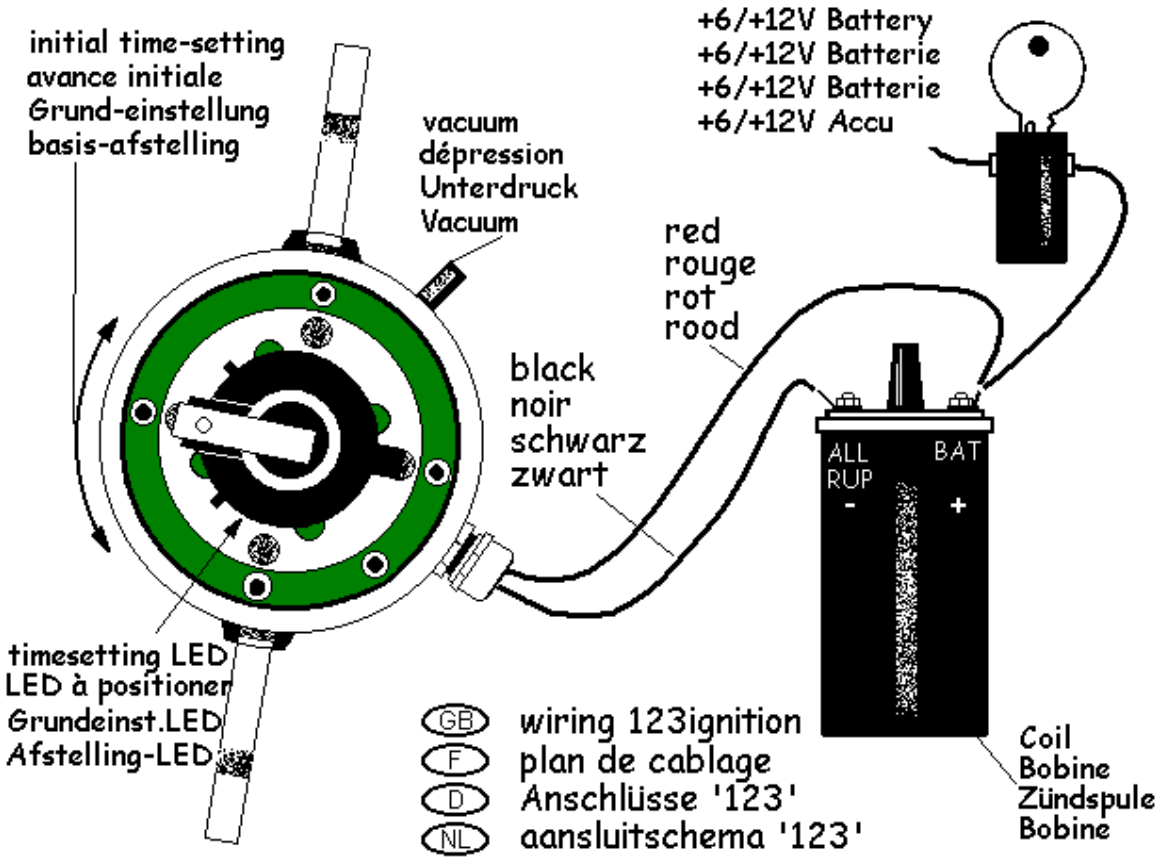
Mounting instructions for the '123ignition'

type : **123\RENAULT-4-R-V**
for : Renault 4, Renault 5, DAF 55, Renault Savanne / Estafette
(**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 is reached. (check the workshop-manual if you are not sure)
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, marked '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 below 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 and vacuum-tube 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 the ignition on.
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 four 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.

STEP 5: Start and test drive

You can now start your engine. If you have worked accurately, your ignition should be adjusted well enough for a test drive. To achieve ultimate accuracy a fine adjustment using a stroboscope should be performed. (check the dynamic timing data in the workshop manual) 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...
- Replace the cap and rotor every 30.000 km. Here is ordering info :
  Ducellier cap & rotor : Valeo item nr. “D104”

Tuning, LPG (liquid petroleum gas) and E85 (bioethanol)

A tuned engine often runs better with different ignition timing as original. High octane fuels like LPG and E85 can benefit of more ignition advance in medium and low revs. Here are the ignition curves from a tuner's perspective in three groups in order of centrifugal advance.

Curve	medium adv/rpm	max adv/rpm	remark
#4	12°/2000	18°/4800	
#1	16°/2600	24°/5400	
#9	5°/1200	24°/5000	
#E	-	22°/4000	suitable for LPG/E85
#A	14°/1500	28°/4200	
#8	-	30°/4950	straight
#C	14°/1600	30°/3250	suitable for LPG/E85
#2	-	34°/5000	straight
#0	22°/2400	34°/4900	
#3	20°/2600	34°/4400	
#5	20°/2600	34°/4400	
#6	14°/1600	36°/4300	
#B	14°/1600	36°/4300	more vac adv as #6
#7	14°/1600	36°/4300	more vac adv as #B
#D	-	36°/3250	suitable for LPG/E85

Technical data

Operating voltage	4,0 to 15,0 Volts, negative earth only.
range	500 to 7000 rpm
temperature	-30 to 85 degrees Celsius
coil	stock coil, or "High Energy"-coil, primary resistance **not** below 1 ohm.
engines	standard engines, advance-curves selectable by a switch through the bottom of the housing.

CURVE-#	Replaces	For model / engine
0 :	R-222 C33	Renault-4-Fourgon / 688
1 :	R-280 C52	Renault 4 GTL / 688
2 :	R-244 D61	Renault 4 GTL / 688
3 :	R-268 C52	Renault 4 Savanne / 708
4 :	R-275/R287 C34	Renault 5 engine / 800-10
5 :	R-268 C34	Renault 5 engine / 689-10
6 :	R-248 C34	Renault 5 engine / 810-25
7 :	R-248 C33	Renault 5 engine / 810-26
8 :	R-294 D61	Renault 5 engine / 810-29
9 :	R-308 C33	Renault 5 / 1400cc engine
A :	R-230 C34	Renault 5 Alpine
B :	BB/BR110	DAF 55
C :	B130	DAF 55
D :	R-249 C33	for Renault Estafette R-2136/7 engine 810-01 1289 cc
E :	ZS & ZT	Savanne, Estafette / 671
F :	-	

dwell	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