NTG Motor Services Limited

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Directors: M.Green P.Banyard *Company Reg.No. 1262476* *V.A.T.Reg. No. 289 5422 17*

L012EX + L013EX (123'GB-4/6-R-V-CCW-NEG.)

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.

STEP1: Find the static timing

- 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 Top Dead Center (TDC) is indicated on the timing mark. The engine is now at the static timing point, at the end of the compression stroke for the number one cylinder.

If you do know the engine firing order, this is an ideal time to trace the ignition wires and make some notes.

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

- You should verify that the correct advance curve for your engine has been selected in your '123': remove the hexagonal or plastic plug in the bottom face of the housing. Inside the hole you will find a 16 position rotary switch (marked '0'to 'F') Check the technical date for the proper setting.
- Select the curve of your choice, then 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.
- Loosen the clamp at the base of the distributor and pull the old unit out.
- Now remove the distributor cap from the '123'and carefully insert it in the block, turning the rotor until the drive dog mates and the unit slips into place.
- Rotate the housing of the '123' so that the cables come out conveniently.

STEP 3: Static timing the '123'

- Connect the red wire to the BAT (positive) terminal of the ignition coil. When there is a blue wire connect the blue wire to earth. 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 trough one of the four/six 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.
- Finally, tighten the '123' securely, <u>as it is also the electrical ground of the '123'.</u> Turn off the engine.

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STEP 4: Finish the wiring

- Connect the black wire to the negative terminal of the ignition coil.
- 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 centre position of the cap.
- Attach the cap to the distributor.
- Route 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 from the carburettor to the vacuum port on the '123. Older engines may have a screw-connection for the vacuum-advance diaphragm. In this case you can use a short length of rubber hose to connect the '123', or remove the hard line to the carburettor and replace it completely with rubber vacuum-hose.

STEP 5: Start and test drive

- You can now start your engine. If you have worked accurately, your engine 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 date in 'technical date'.
- Disconnect the vacuum-tube whilst fine-tuning.
- Enjoy your '123'ignition

TECHNICAL DATA:

RPM range : TDC until 500 rpm, 500 – 4500 as defined
fixed until 7000 rpm

Temperature : -30 to 85 degrees Celcius

Coil : stock coil or "high Energy" coil primary resistance **not below 1 ohm**
Lucas Sports coil or Blue Bosch coil.

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CURVE L012EX + L013EX (GB4/6)

Curve (switch setting)	degr. advance @500-1000rpm*	degr. advance @2000rpm*	max. degrees advance@rpm*
0	10,0	15,0	27,0@4200
1	10,0	16,5	27,0@3600
2	10,0	19,0	27,0@3000
3	10,0	21,0	27,0@2400
4	10,0	16,0	30,0@4500
5	10,0	18,0	30,0@4500
6	10,0	20,0	30,0@4500
7	10,0	22,0	30,0@4500
8	10,0	17,0	33.0@4500
9	10,0	19,0	33,0@4500
A	10,0	21,0	33,0@4500
B	10,0	23,0	33,0@4500
C	10,0	17,5	36,0@4500
D	10,0	20,0	36,0@4500
E	10,0	22,0	36,0@4500
F	10,0	24,0	36,0@4500

- degrees advance and engine speed both relate to the crankshaft.

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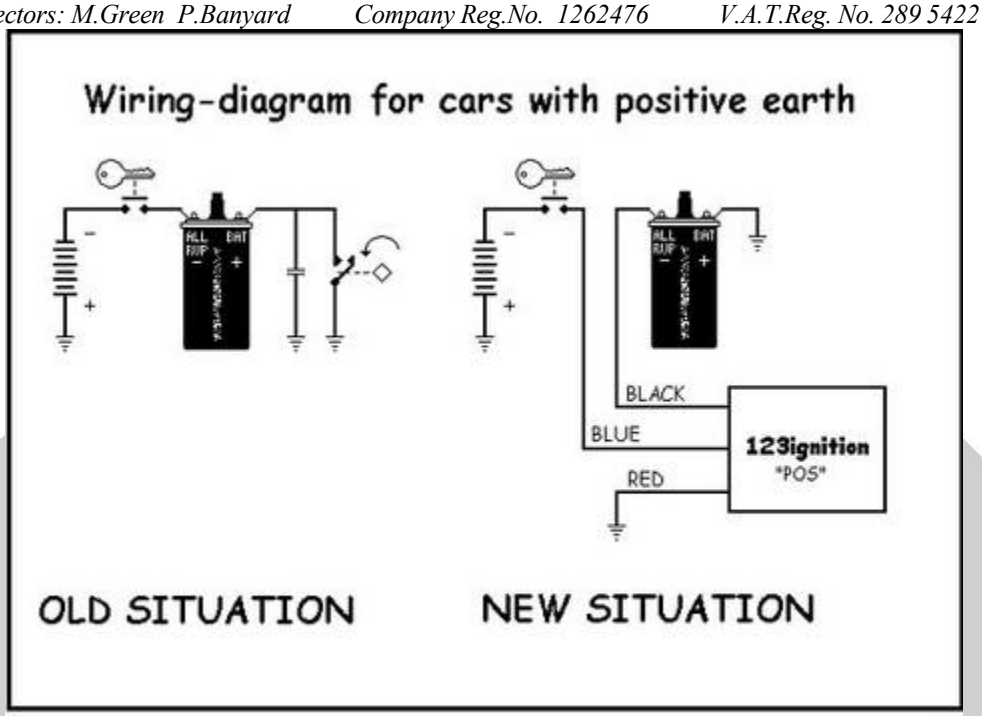

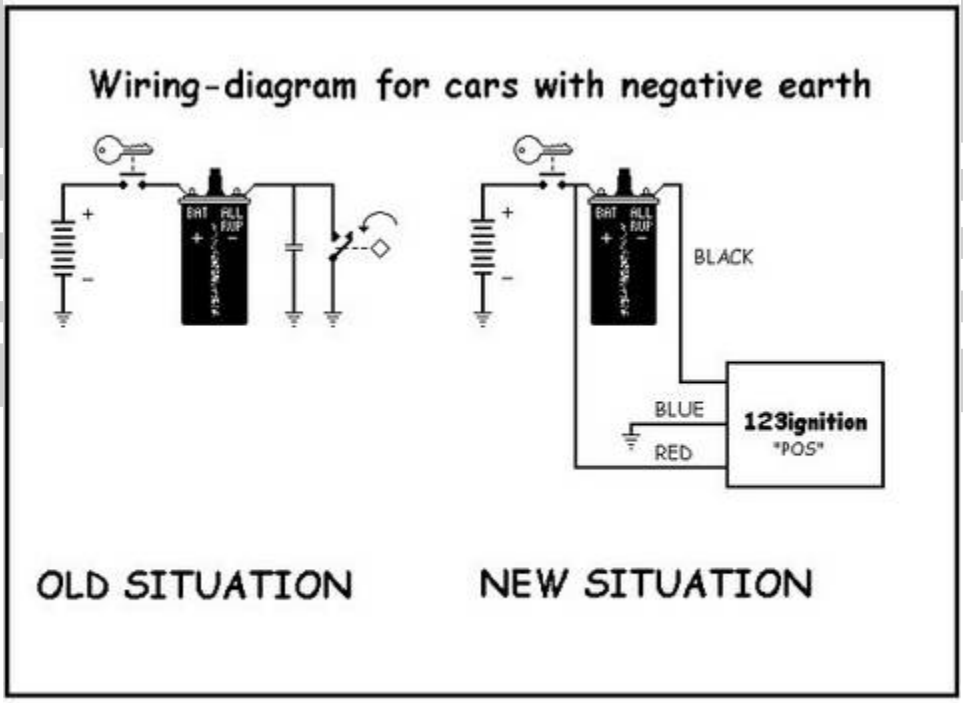

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