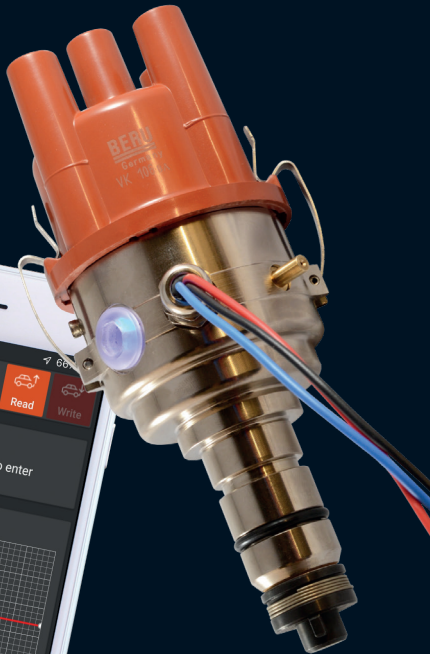
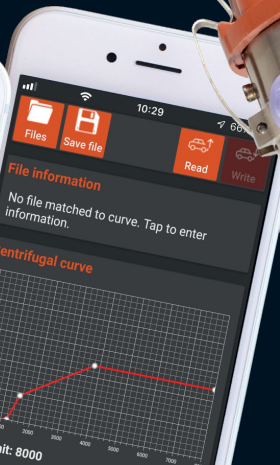


123^{ignition}

installation manual 123\TUNE+



SPECIFICATIONS

Operating voltage	: 4,0 - 15,0V
Operating current	: < 100 mA
Range	: 500 - 8000 rpm crankshaft
Direction	: Clockwise and Counterclockwise
Temperature	: -30 to 95 degrees Celsius
Coil	: stock- or High Energy- coil primary coil NOT below 1,0 ohm
Dwell	: constant current, fully automatic
Time-out	: after 1 second current is switched off
Vacuum-sensor	: 0 to 100 kPascal
Timing error	: < 0,1 degree crankshaft

WIRING THE I23\TUNE+

The I23\TUNE+-4-R-V and the I23\TUNE+-6-R-V can be used on cars with 'battery minus' connected to the body of the car (this is also called "NEG-EARTH"), **but also** on cars with 'battery plus' connected to the body of the car ("POS-EARTH").

The 8-cyl. version however (I23\TUNE+-8-R-V) can **only** be used on cars, with the 'battery minus' connected to the body of the car ("NEG-EARTH").

Check the diagrams at the last pages of this manual for proper wiring.

The I23\TUNE+-4-R-V, I23\TUNE+-6-R-V and the I23\TUNE+-8-R-V can be used on cars with 6 and 12 volt batteries.

MOUNTING THE I23\TUNE+ IN YOUR CAR

Check, before removing the old distributor from the car, in which direction the rotor arm is moving. You can do this by first removing the wire from the distributor to the coil. Then remove the cap and ask some-one to look at the rotor, while you activate the start-motor.

Now you know if the rotor arm rotates clockwise (CW) or counterclockwise (CCW) seen from the top. Put that on a little note, together with the proper ignition sequence. For most four cylinder engines the correct sequence is 1-3-4-2. To check this, follow the high tension lead from cylinder no. 1 to the distributor cap.

Now follow the next lead (dependent on the rotation direction) to the engine and write down this cylinder number. Do this with all high tension leads.

Bring the engine to the static timing point - at the end of the compression stroke - for cylinder number 1. The rotor on the old distributor should point to the cable that connects to the sparkplug of cylinder number 1.

After these steps, you can now put your I23\TUNE+ in the car and find a position where the cables and the vacuum nipple come out conveniently. Connect the wires according to the proper diagram. Do not connect the black wire yet. Turn on the ignition key.

If your rotor arm rotates CW: rotate the unit CCW until the green LED **just** lights up. Press the rotor in CCW direction, to remove any backlash in the drive.

If your rotor arm rotates CCW: rotate the unit CW until the green LED **just** lights up. Press the rotor in CW direction, to remove any backlash in the drive.

The LED shines through one of the holes in the aluminium disc below the rotor.

For all models: if you expect a bad ground connection: use the M5 threaded hole in the bottom face of the distributor housing, for a direct wire to ground.

Turn off the ignition.

Now, connect the black wire to 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 I23ignition. Please be aware that the rotor arm can point in a different direction compared to the old distributor.

Connect the high voltage wire from the coil to the center position of the cap. Attach the cap to the distributor. Keep the high tension leads as far away as possible from other cables using cable ties.

Connect the vacuum tube (if there is one) from the carburetor to the nipple on the I23ignition.

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 to the I23ignition or remove the hard line to the carburetor and replace it completely with thick-walled rubber vacuum hose.

If you loaded the proper advance curve before, you can now start your engine!

INSTALLING THE APP

Please download the I23\TUNE+ app. If you have an Apple device you can find the app in the app store. For Android devices go to the Google play store. Search for I23TUNE.

The I23\TUNE+ needs a Bluetooth 4.0 device or higher. All devices of the last few years have Bluetooth 4.0. The I23\TUNE+ needs to be powered (6 volt or 12 volt) if you like to connect with the I23\TUNE+ app.

For most up to date instructions, go to the following website: www.I23ignition.nl/tuneplusapp
You will find video tutorials there.

HOW TO CONNECT

1. Start the app.
2. A welcome message will be shown the first time.
3. Go to the settings tap in the right bottom corner.
4. The available devices will be shown in the device list. Tap on the I23\TUNE+ device (don't forget to power the unit).
5. For accessing the I23ignition, a PIN code is required (standard PIN code: I234). The connection will be made after the right PIN code has been entered. The PIN code will be stored in the app, so it only has to be entered the first time. On the dashboard a message and a green point will be shown as a sign of a successful

connection.

6. Tap on “Dashboard” to go to the dashboard information.

7. You can now start your engine and see actual engine information in the app.

SETTINGS

If you like to change some settings, go back to the settings tab by tapping on the dashboard somewhere and then tapping on the “Settings” button in the right bottom corner.

It is possible to change the PIN code with the “Set PIN” button.

On top you can activate the immobilizer by tapping the red lock symbol and unlock by tapping the green unlock symbol.

The rest of the settings will explain themselves.

CHANGING THE ADVANCE CURVE

Please be aware the engine cannot run when advance curves will be changed.

Push the “Curves” button on the bottom of the screen.

Read the curve from the 123\TUNE+ by tapping the Read button.

The curve will now be read from the ignition.

CHANGING THE CENTRIFUGAL CURVE

1. To change the centrifugal curve, push the “Edit centrifugal curve” button.

Now it is possible to change the RPM advance curve.

2. The Max RPM value is used by the Rev limiter to limit the engine RPM. This is a soft limiter, only 60% of the

sparks will be random cut off.

3. Tap the value you want to change and enter the desired value.
4. You can tap the “Add point” button to add an extra point.
5. To remove a point, tap the delete icon next to the point.
6. The 500 RPM and 8000 RPM points are fixed and cannot be removed. For most curves, the 8000 RPM advance needs to be changed to the same advance as the highest added advance point. This is done to keep the curve flat between the highest entered point and 8000 RPM.
7. When you're finished press the done button.

CHANGING THE MAP CURVE

1. Push the “Edit MAP curve” button to modify the vacuum advance curve.
2. Entering a “Start @ RPM” value results in a ported vacuum function (vacuum curve is not active below the entered RPM)
3. Changing the vacuum curve works the same way as the RPM curve.
4. When you're finished press the done button.

Push the “write button on the right upper corner to write the modified curve in the ignition.

Go back to the dashboard by pushing the Dashboard button on the left bottom corner.

Start the engine!

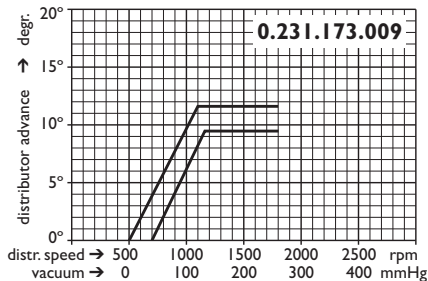
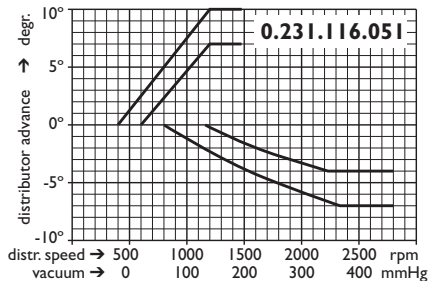
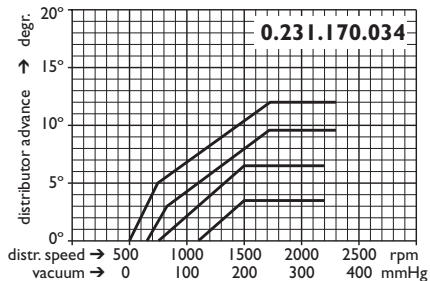
TUNING WITH THE I23\TUNE+

When the engine is running, you could press the ‘TUNE’ button to enable real-time ‘TUNING’ mode.

By pressing ‘+’ (advance) you can increase the total amount of advance with a maximum of 10 degrees crankshaft, in steps of 1 degree.

By pressing '-' (retard) you can decrease the total amount of advance with a maximum of 10 degrees crankshaft, in steps of 1 degree.

This feature will come in handy, if you have your car on a rolling road, and want to optimize the engine-power. The advance or retard found is not stored in any way, so you will have to remind your findings, and adapt the active advance-curve accordingly.



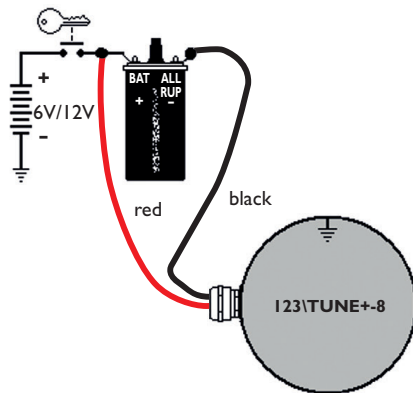
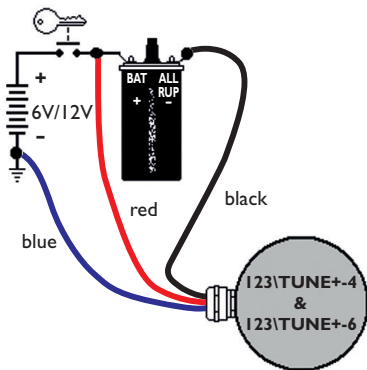
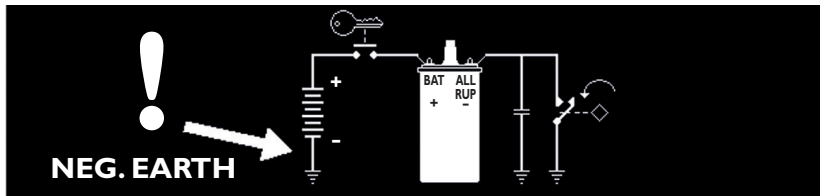


Diagram for cars with NEG. EARTH

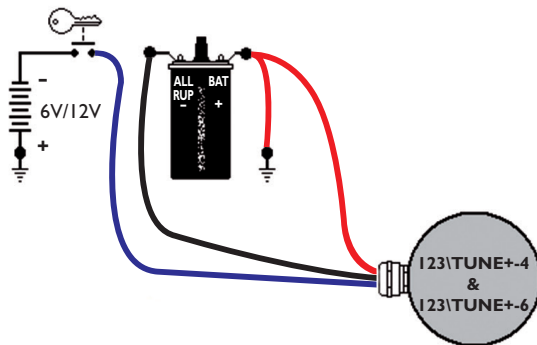
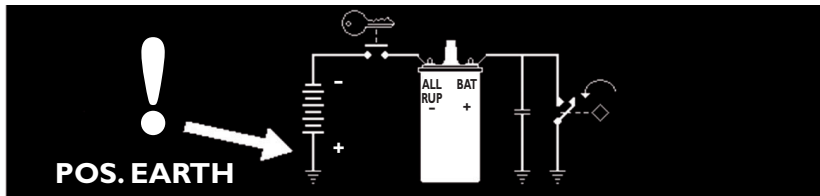
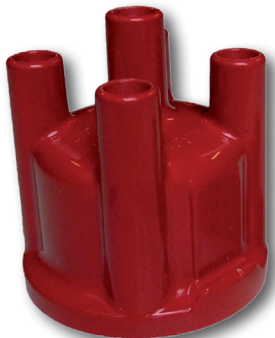


Diagram for cars with POS. EARTH



BOSCH : 1 235 522 056
BERU : VK 106
BREMI : 8045



BOSCH : 1 235 522 332
BERU : VK 334
BREMI : 8070



BOSCH : 1 234 332 024
KW : D 5026



BOSCH : 1 235 522 060
BERU : VK 102



BOSCH : 1 234 332 024
KW : D 5026



DUCELLIER : 582171



DUCELLIER : 661920



DUCELLIER : 664895



PREMIUM AUTO : RTC3197
BERU : VK465



PREMIUM AUTO : STC1857
BERU : NVL 177

Produced by:

albertronic

Moordrecht, The Netherlands

