

Installing a 123 Ignition Distributor in a 1955 Slough Built Traction Avant that has been converted to Negative ground. Stephen Gercovich

IMPORTANT!- These notes are for installing a negative ground 123 Ignition Distributor into a Traction that has been converted to a Negative ground. If you follow the instructions below, and you have a positive ground unit you will damage it if you follow the electrical connection notes.

If your vehicle is still positive grounded, you will need to order a 123 Ignition Distributor that is specifically made for positive grounded vehicles.

Similarly, for a negative grounded vehicle you need to order a negative ground 123 Ignition Distributor.

These notes are intended as guidance only based on my own installation experience and are far from being of an expert nature. Your own vehicle could differ, and you should always refer to the installation manual that comes with the 123 Ignition Distributor for installation and wiring instructions

1./ Determine the rotation direction of the rotor button of the distributor. This is done by removing the distributor cap and while keeping hands etc. clear of the engine turn the vehicle over and see which way the rotor button turns. On some rotor buttons the direction is stamped on it. In a 1955 Traction Avant this was clockwise.

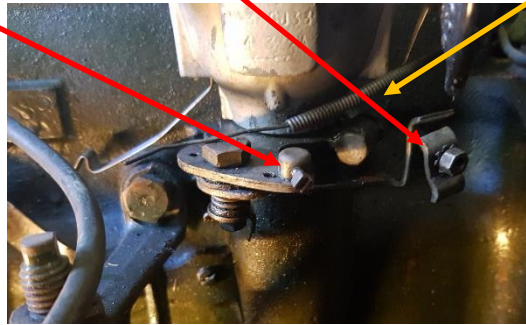


2./ Determine firing order of cylinders. This can be done by removing the old distributor cap and looking at the order of the leads going to each cylinder. The cylinder at the front of the engine (closest to radiator) is regarded as No.1 with each cylinder going back towards the fire wall numbered 2, 3 and 4 (closest to the firewall).

In a 1955 TA the order was 1-3-4-2

3./ Disconnect the advance/retard cable from the body of the distributor by undoing the internal cable holding bolt and the outer cable retaining clamp-

Cable removed



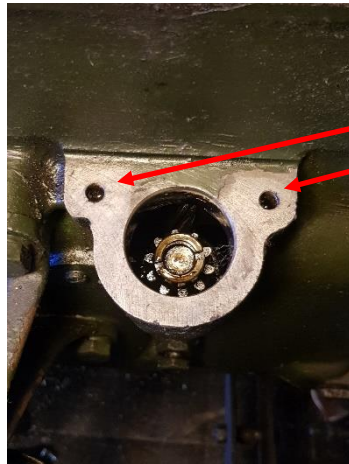
4./ Disconnect the wire from the distributor body to the coil in addition to the vacuum advance pipe (if fitted)-



5./ Remove the two bolts holding the distributor retaining bracket in place. These are located at the back of the distributor next to the engine-



6./ Remove the distributor and ensure nothing can fall into the housing opening (place a rag in the opening)-

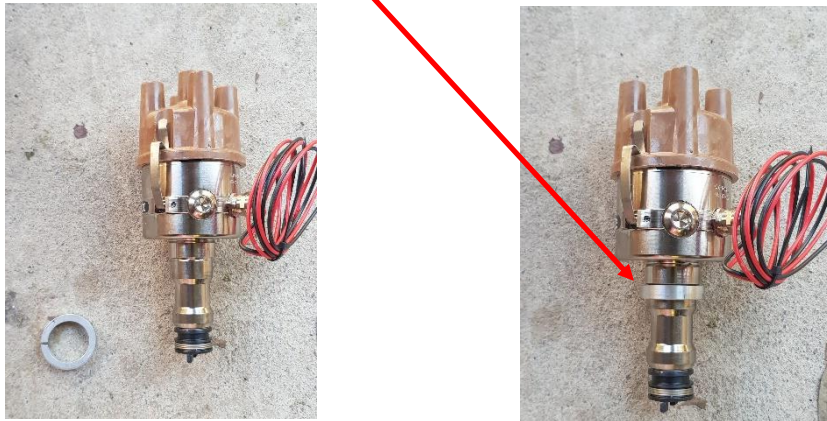


Note the location of the distributor retaining plate bolt holes as mentioned in the previous step

7./ Remove the distributor retaining plate from the distributor by unbolting/loosening the clamp and sliding it and the mounting bush off the body of the distributor-



8./ prepare the 123 Ignition distributor by placing the 'packing sleeve' (if required) to secure the retaining plate onto the body of the new distributor-



9./ Place the mounting bush onto the 123 Ignition Body to make sure it fits-



10./ Remove the mounting bush and then slide onto it the retaining plate. Then slide the plate and bush onto the distributor body and clamp it around the packing sleeve. Roughly position the distributor body so the wires coming out of the body are roughly aligned to the advance/retard cable securing bolt. Tighten the retaining plate clamp enough to hold it into position as this will be adjusted later.-



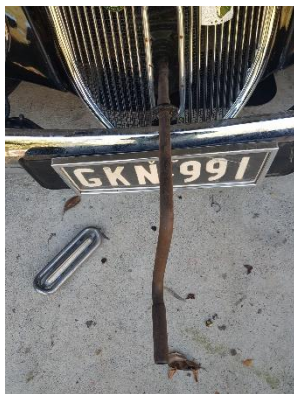
11./ Attach to the body a grounding wire that is long enough to go to a grounding point on the body or the ground on your battery terminal. The hole on the base of the 123 Ignition distributor body takes a M5 threaded bolt-



12./ Ensure that you have selected the right profile curve for your vehicle. This is done by unscrewing the Allen bolt and selecting the required setting on the switch in the body. For Traction Avant models this should be curve "0" (as per the instruction book) and while this may be the default it always pays to check-



13./ Find top dead center of the piston on cylinder No. 1. Ensure the car is in neutral and the crank handle is in position and the power disconnected from the battery-

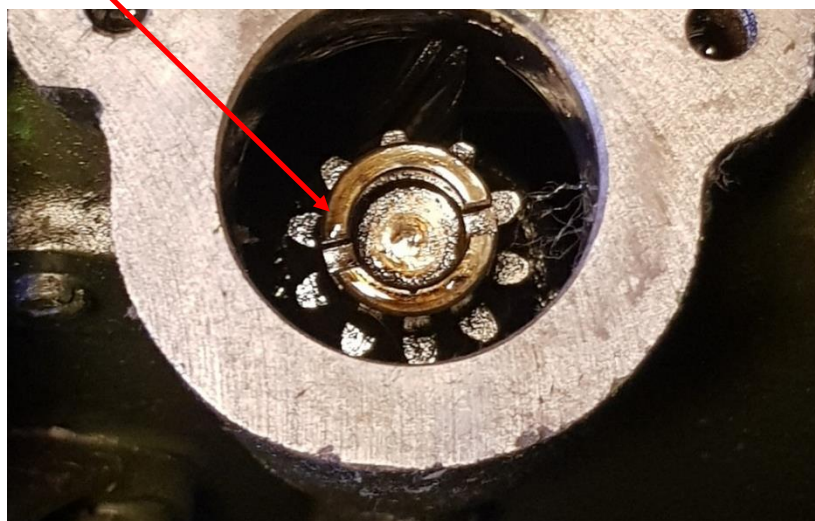


14./ Place a 6 mm diameter rod into the hole located on the side of the bell housing towards the front of the engine. This hole lines up with a notch in the flywheel that allows the pin to be inserted in it when the piston No. 1 is at top dead center. In this picture the hole is to the front offside of the vehicle and 'the rod' is a screwdriver with a 6 mm shaft that has had the end cut of it to make it square.



15./ This step can be done by one person but it's a lot easier with 2. While one person **very slowly** cranks the car in a clockwise direction the other person pushes the rod in towards the flywheel. As it is being cranked you should feel the end of the rod 'grating' against the flywheel. When the timing notch is aligned with the hole, the rod should slip into it and lock the flywheel in position of top dead center for piston No. 1.

16./ The 123 Distributer is now ready to be bolted back into position. Before doing this take special note of the slot in the top of the distributor drive shaft in the engine. You will note that this 'notch' is off center-

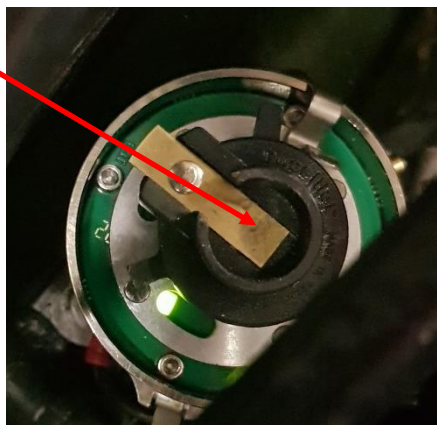


If you look at the bottom of the 123 Ignition Distributor you will notice that the drive head also has an off-center 'key' to it.

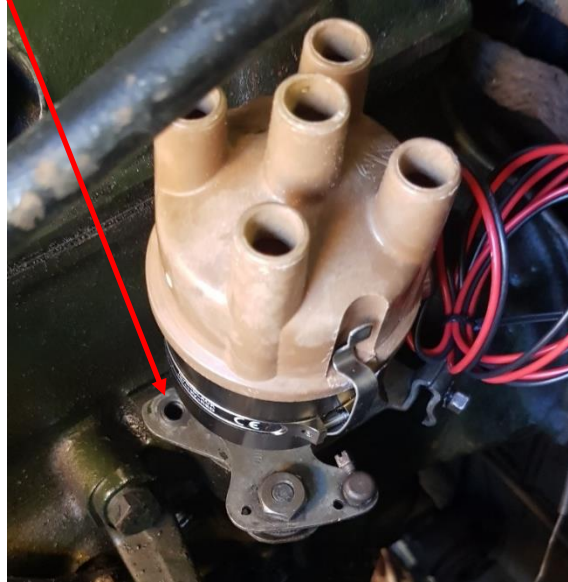


You need to ensure that the position of the 'key' and 'notched' head are both aligned the same way so that the key fits/aligns into the notched head.

With the distributor cap off, place the body of the distributor into the mounting hole and turn the rotor button so the key and notch both align.



17./ Bolt the distributor retaining plate back into place (2 bolts) on the engine side of the distributor-

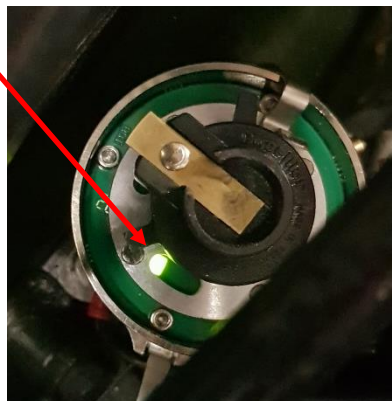


18./ Depending on how your car is grounded connect the live feed wire to the coil. In this vehicle it had been converted to negative ground so the positive (red) wire was connected to the + terminal on the coil. Leave the negative wire disconnected for now.

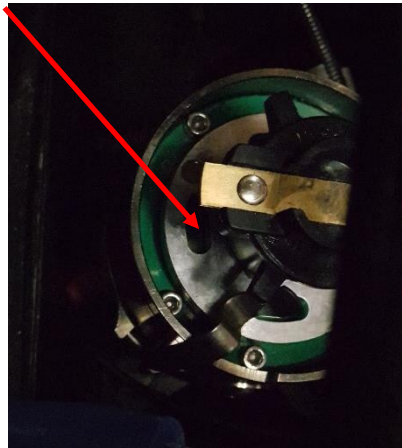
IMPORTANT!- If your vehicle is positive grounded and your unit is a positive ground unit you will have to refer to the wiring instructions that came with your 123 Ignition Distributor as connecting it per this instruction will damage the electronics in the unit.

Remove the distributor cap and loosen the clamp on the distributor retaining plate that is holding the distributor in position. Connect the power to the car and with the ignition on look down onto the top of the distributor.

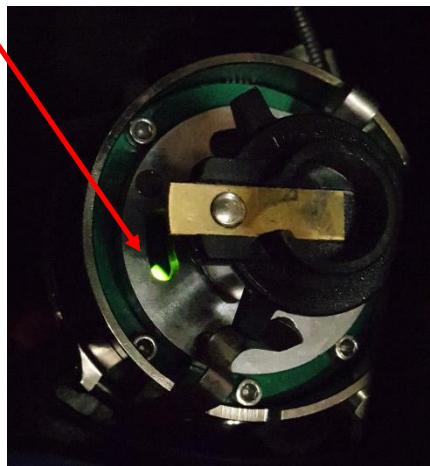
Looking through the holes of the aluminum plate in the distributor there should be a LED light that is on. If you can't see one just try slowly rotating the distributor body in a clockwise (the direction of the original distributor rotation) direction where it should come on.-



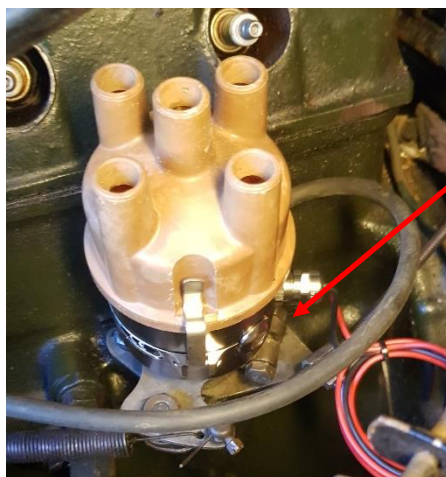
Continue to rotate the body in a clockwise direction until the light just turns off-



At this point, and while pushing both the rotor button and the distributor body, turn both in a counter clockwise direction until the LED light just comes on-



Without trying to move the distributor body tighten the clamp of the retaining plate to hold the distributor in the correct timing position



Retaining Plate
Clamp

19./ Remove the retaining rod from the flywheel and ensure the crank is disengaged from the front of the gearbox.

20./ Based on the position of the rotor being at No. 1 cylinder, install high resistance spark plug leads in the firing order identified earlier. While you can use the old copper wire leads the insulation on these aren't the best and you may get electrical arcing across them.

21./ Connect the lead from the distributor to the coil

22./ Connect the negative wire to the negative terminal on the coil.

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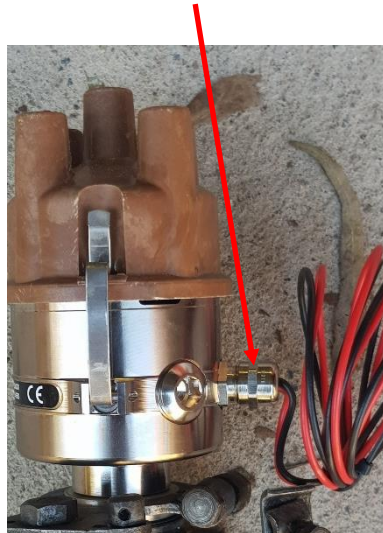
23./ Connect the grounding wire (from the body of the 123 Ignition) to a ground point on the vehicle.

24./ Try starting the vehicle. If it runs OK- well done!

If you get nothing happening it may be that you have got the order of the spark plug leads wrong or installed the distributor body at 180° off what it should be (i.e. the notch and key weren't properly aligned and 180° out) and you may have to start over.

25./ Assuming the car is running stop the engine and reconnect the advance/retard cable (mainly for aesthetics) and reconnect the vacuum advance tubing if installed.

26./ Tighten up the gland bolt where the wires enter the distributor to ensure water doesn't get in. I also taped the gland and wires with insulation tape all the way back to the coil.



27./ Take car for a test drive and hopefully you notice no misfiring, smoother running and a bit of 'spring' back into the engine

Comment from Michael Hose.

Noticed that Stephen Gs procedure for 123 Ignition fit leaves the crank timing at 8 deg, not the required 12 deg which is the hard part. However, Peter Stringer was into a procedure off the rear of the flywheel which would resolve the matter if added to Stephen's details. <https://citroenclassic.org.au/wordpress/wp-content/uploads/2014/08/Peter-Stringer-Traction-engine-Timing.pdf> (I have an equivalent off the crank handle but it's in redevelopment to allow advance testing, not just static setting, and intended to encompass vacuum but will only do a D configuration statically because the crank handle engagement isn't fixed.