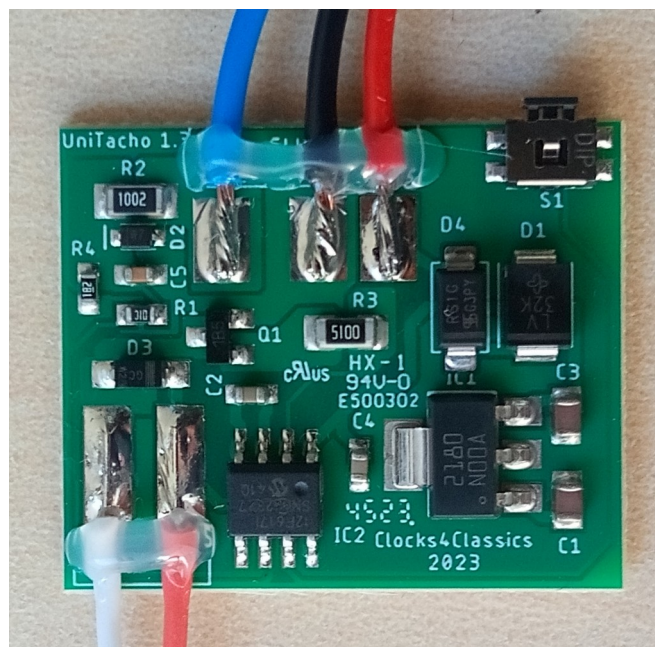


Clock4Classics UniTacho Tachometer Repair Kit Vehicle Installation Instructions



Please Note: These instructions are specific to the UniTacho repair kit product as shown in the photo above. If you have purchased one of our other tacho repair kit products please see the installation instructions for that product.

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1. Important Note – Ignition Coil Supply

On Smiths / Jaeger RVI tachos the Rpm signal is obtained by measuring the current through the ignition coil feed wire. The UniTacho uses a different method and measures Rpm by sensing ignition coil voltage, however it is important that the original ignition coil feed wire is left in tact otherwise there will be no supply to the ignition coil and the engine will not start. To avoid this problem please follow the instructions below if you have an RVI type tacho:

If you have an RVI Gen1 tacho there will be a wire loop attached to a sensing transformer on the back of the tacho. When removing the tacho from the car remove the wire loop from the back of the tacho but **do not cut the wire**. Leave the coiled wire in the wiring harness so that it maintains the feed to the ignition coil. The UniTacho circuit board does not use this coiled wire but it must be left in place in the wiring harness when the tacho is reinstalled.

If you have an RVI Gen 2 tacho there will be two bullet connectors on the back of the tacho (one male and one female). The wires plugged into these connectors carry the feed to the ignition coil and are joined together inside the tacho. When removing the tacho from the car the unplug the two wires from these bullet connectors and plug the two wires together – this will maintain the feed to the ignition coil. The UniTacho circuit board does not use this wiring and so the wires should be left plugged together on the car wiring harness when the tachometer is re-installed.

2. WARNING - Wiring To Electronic Ignition Modules

When installing your tachometer be careful not to accidentally change the wiring to your electronic ignition module. These modules often take their supply from the ignition coil feed and can be easily damaged if the polarity is reversed or if the output of the module is connected to the same terminal as the ignition coil feed. See your ignition module instructions for the correct wiring.

3. Installing the Tachometer

The wiring connections to the tachometer will depend on whether your car's electrical system is positive or negative earth and whether you have a standard ignition system (with contact breakers) or electronic ignition. There are four possible configurations which are shown in the following wiring diagrams. It is recommended that you also refer to your car's wiring diagram to identify the correct connection points. To determine whether your car is positive or negative earth check the battery terminals. One terminal will be connected to the car chassis or bodywork – if this is the positive terminal then the car is positive earth, otherwise it is negative earth.

For **NEGATIVE EARTH** cars (with contact breakers or electronic ignition)

Refer to the wiring diagram in Fig 1 and connect the three tacho wires as follows:

- Connect the RED tacho wire to a fused +12V supply which is switched by the ignition switch.
- Connect the BLACK tacho wire to a good vehicle earth (chassis).

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- Connect the BLUE tacho wire to the negative (-) coil terminal (may be labelled “CB”). To help identify the correct coil terminal note that on a car with contact breaker ignition this will be the terminal connected to the distributor. For cars with electronic ignition first identify which coil terminal is connected to the ignition switch or ballast resistor (if fitted) and then connect the blue tacho wire to the other coil terminal.

For POSITIVE EARTH cars with STANDARD IGNITION (contact breakers)

Refer to the wiring diagram in Fig 2 and connect the three tacho wires as follows:

- Connect the RED tacho wire to a good vehicle earth (chassis).
- Connect the BLACK tacho wire to a -12V fused supply which is switched by the ignition switch.
- Connect the BLUE tacho wire to the positive (+) or “CB” coil terminal. This will be the terminal connected to the distributor.

For POSITIVE EARTH cars with ELECTRONIC IGNITION

Refer to the wiring diagram in Fig 3 and connect the three tacho wires as follows:

- Connect the RED tacho wire to a good vehicle earth (chassis).
- Connect the BLACK tacho wire to a -12V fused supply which is switched by the ignition switch.
- Connect the BLUE tacho wire to the negative (-) coil terminal (may also be labelled “SW”). To help identify the correct coil terminal note that one terminal is permanently connected to vehicle earth – you should connect the blue tacho wire to the other terminal.

For Vehicles with a DIGITAL TACHO SIGNAL (Negative Earth Only – Not Available for Positive Earth)

Refer to the wiring diagram in Fig 4 and connect the three tacho wires as follows:

- Connect the RED tacho wire to a fused +12V supply which is switched by the ignition switch.
- Connect the BLACK tacho wire to a good vehicle earth (chassis)..
- Connect the BLUE tacho wire to the ECU output which provides the digital tacho signal.

4. Protecting the wiring against chaffing

On some tachometers the wiring will exit close to the tachometer mounting bracket and there is a possibility that the wiring could rub against the bracket and damage the wire insulation. In this case you should protect the wiring with some suitable sleeving and / or secure it so that it cannot rub against the bracket.

**Fig 1: Tachometer Wiring For Negative Earth Vehicles
With Contact Breakers or Electronic Ignition**

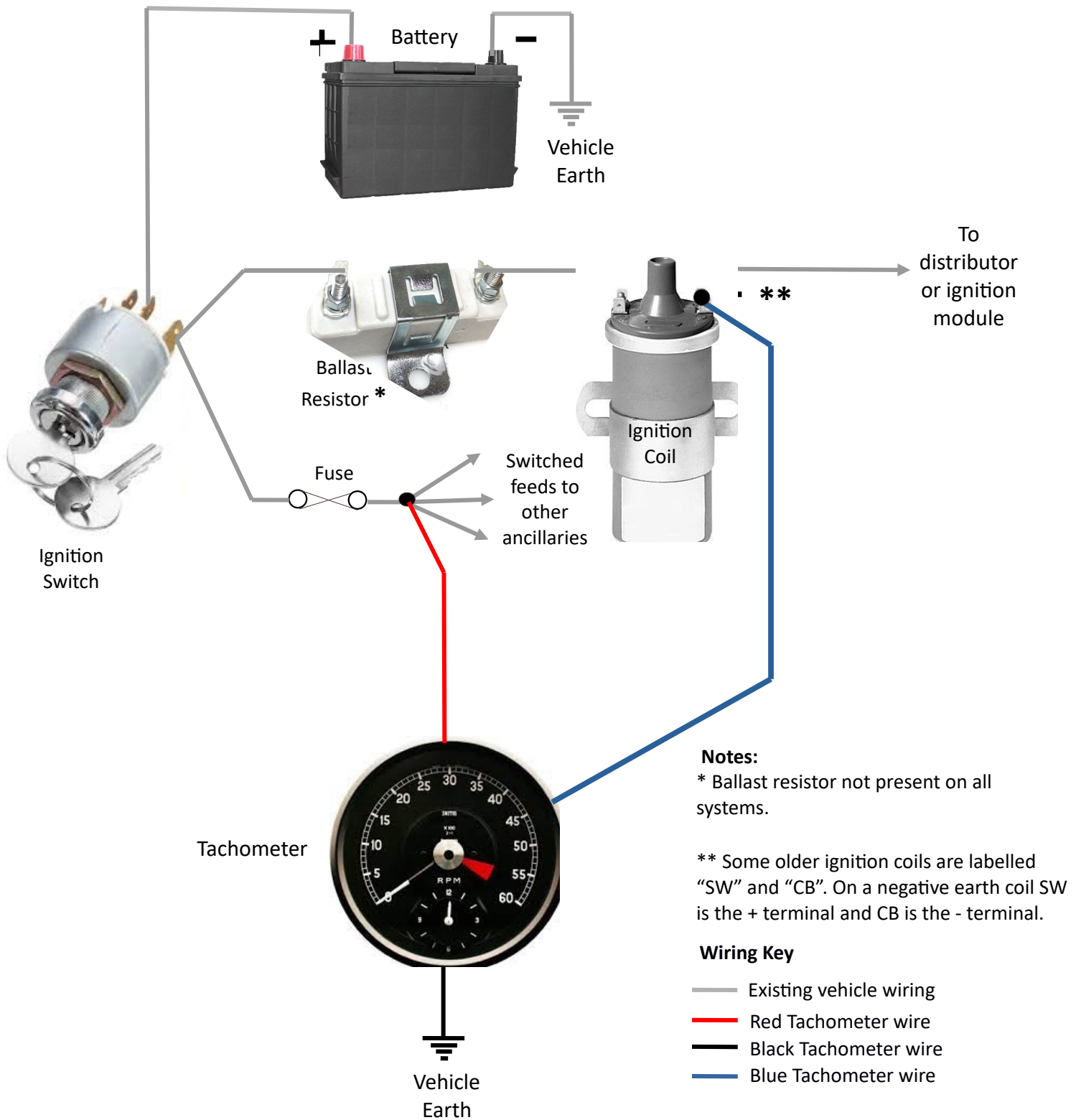


Fig 2: Tachometer Wiring For Positive Earth Vehicles with Contact Breakers

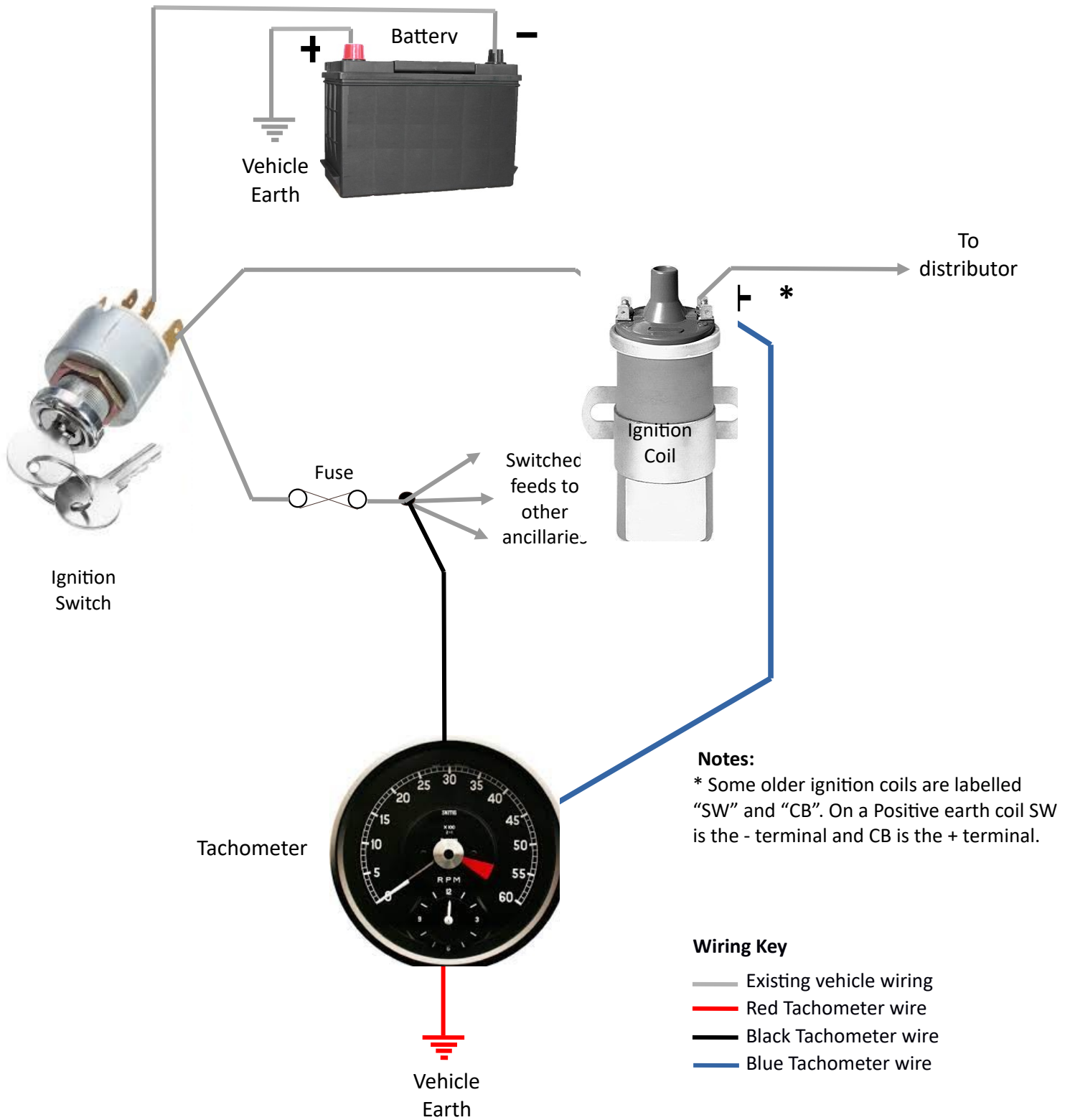
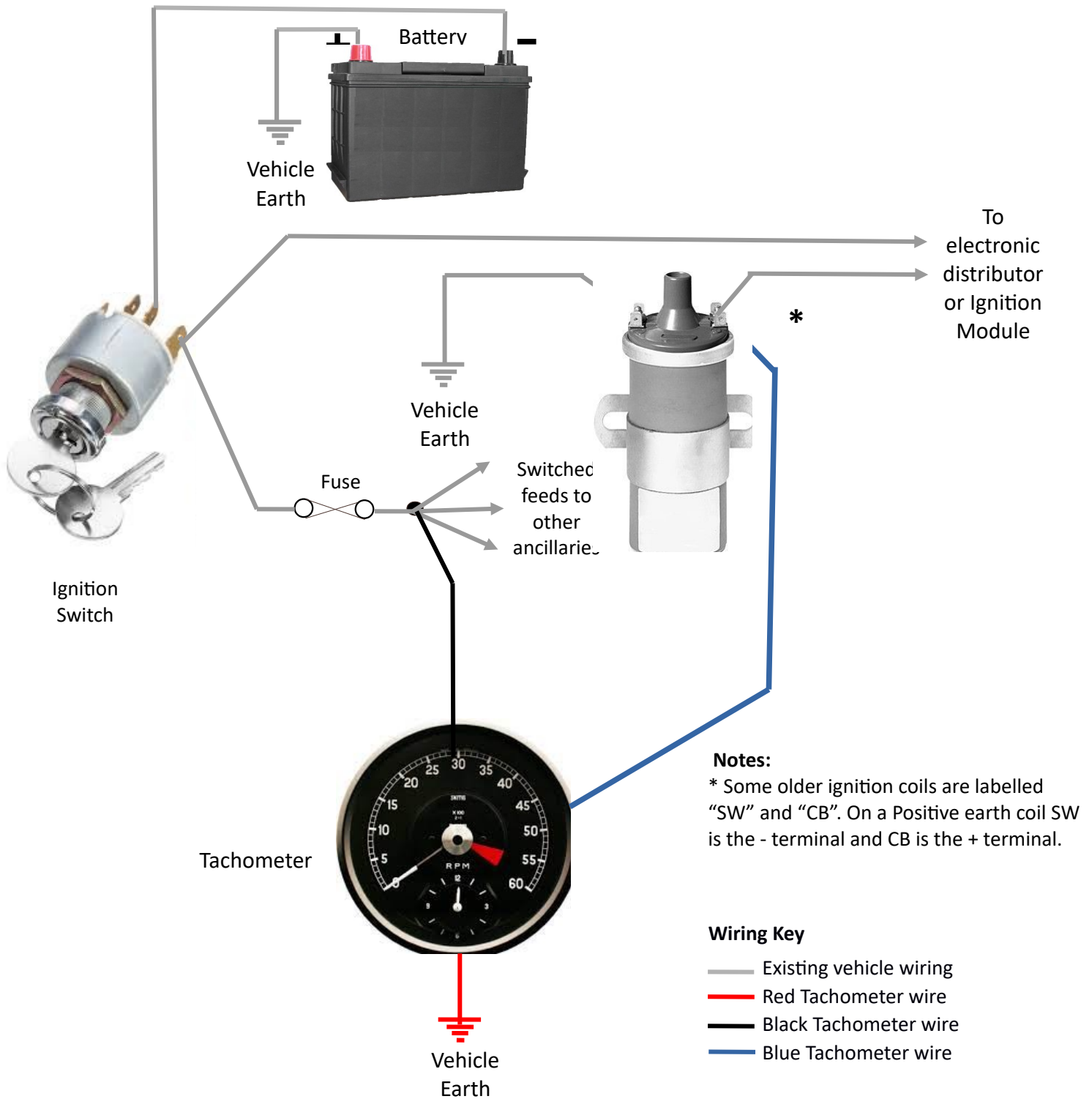


Fig 3: Tachometer Wiring For Positive Earth Vehicles with Electronic Ignition



**Fig 4: Tachometer Wiring For Digital Tacho Input
(Negative Earth Only)**

