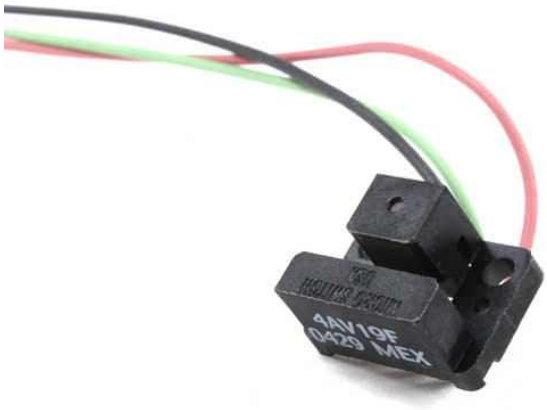
Without a working crank position sensor, the ignition system can't tell whether your SAAB's engine parts are rotating or the relative position, and won't fire the spark or run the fuel pump. You end up dead in the water with an engine that turns over but doesn't start. This specific sensor (#7484546) is used on both SAAB's 9000 and non-turbo 900 models from 1989 until Trionic 5.5 was introduced in 1994. The complete sensor assembly is not available from SAAB, but I've tracked down the OEM sensor so you can replace the sensor yourself and reuse your old wiring and housing.

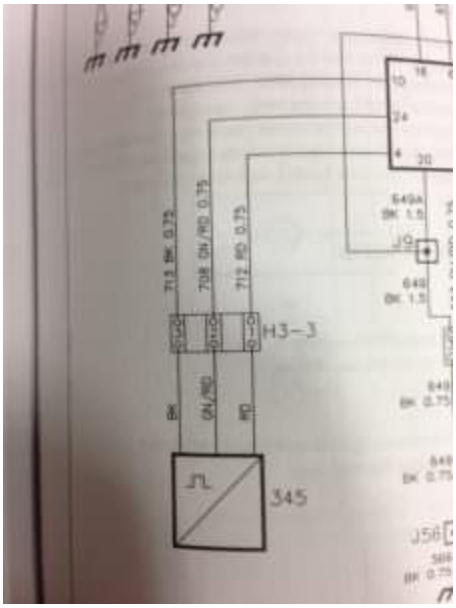


There has been some confusion about how to wire the replacement sensor as the wire colors and positions marked on the sensor have changed. There are also some best practices when splicing electrical parts and wires that we'll walk through to make sure your repair is long-lived and trouble-free.

Now I just happen to have a classic 900 oil pump housing which holds the sensor up against the crank pulley, but in your cars you'll need to remove your crank pulley to get access to these parts. Depending on if this is for a 900 or 9000, this process is a little different to get the pulley off, but once you remove it, you'll be staring at this on your engine.

To remove the sensor, unscrew the two T20 torx screws holding it to the oil pump housing. Once these are removed you can unplug the sensor and remove it from the vehicle.

Once you have the sensor on the bench you'll notice that it has a nice silicone-infused fiberglass wrap around it. This serves as a heat shield and insulator and you'll want to keep as much of it as possible. After you cleaned all the years of engine gunk off the housing and wiring take a quick look over the rest of the parts just to make sure that nothing else caused the sensor failure besides old age. If the harmonic balancer has separated , it can take out the sensor and engine oil pump housing in a short time. A leaky crankshaft (front main) seal can contaminate the sensor with dirt and build up as well so it's best to make sure all these parts in your SAAB's engine are in good condition before completing the repair.

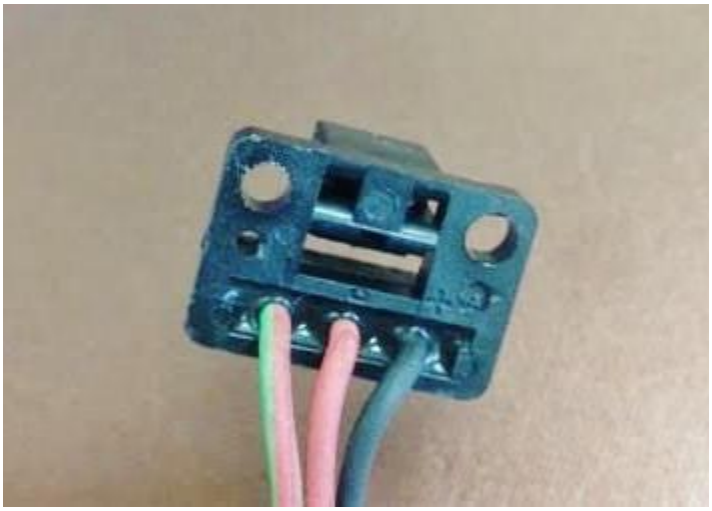


Now back to our sensor, if we flip the Saab 900 Crankshaft Position Sensor assembly over, you'll see two smaller T10 torx screws holding the sensor retaining plate. Remove these and the old sensor can be removed easily from the housing. Before we put the new one in , we'll splice the wires together and seal the harness as best as possible in order to keep heat and contaminants away from the wiring.

My process is to clip the factory the length of the new pig tail and then trim the sheathing out two inches so that you have room to make your splice. This time around I chose to use solder and heat shrink around each individual wire and then around the sheathing to make a weather tight patch. High-quality , properly sized butt connectors with the heat-shrink glue can also be used with great results. It just depends on what tools you have and what you are comfortable with.

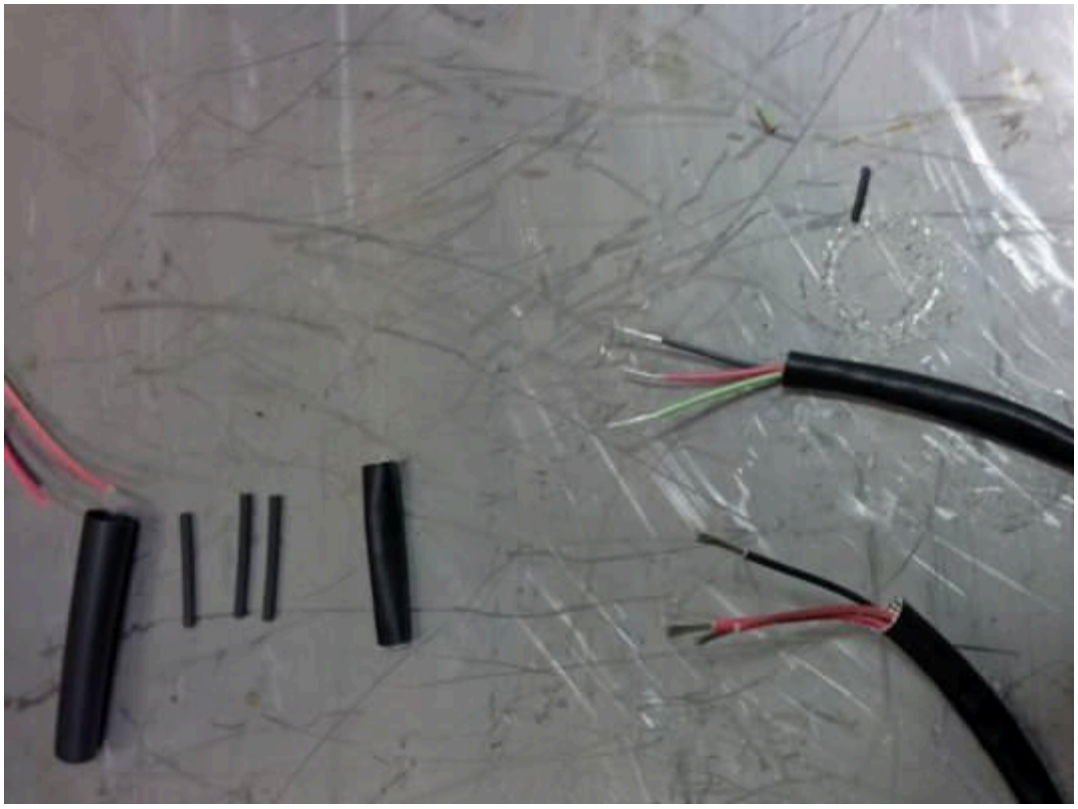
Even though there are only three wires, which wires to actually connect together is actually kind of confusing. The wire colors are slightly different, however what is more confusing is that the labels + o – markings cast into the original sensor don't coincide with what the wiring diagrams explain their function should be. The black wire is in the "+" position, the red wire is in the "o" position and the red/green wire is in the "-" position. Standard automotive practice is generally red equals positive, black is ground and the

third wire would be the signal output going back to the ignition controller part. **This is how the new CPS is set up**.



Pay no attention to the markings on the old sensor

However, if you were diligent enough to read these positions *on the old one* and matched the wiring to that, you'd end up with a very frustrating afternoon of not actually fixing your car and possibly having to buy a new sensor, since you just fried it. It seems that somewhere along the way the manufacturer corrected the symbols to go with the corresponding wire colors. **So with the new sensor as long as you match color to color** (*red to red, black to black and red/green to green if that wasn't obvious*), then all will be right with the world and the little markings on your new one actually make sense.



So after the wires have been spliced together, heat shrunk and the sheathing patched you can insert the sensor back into the housing, reinsert the retaining clip and screws and you should be ready to put your Saab 900 Crankshaft Position Sensor back in the car for that satisfying crank, crank, vroom-vroom noise you so desperately want to hear.