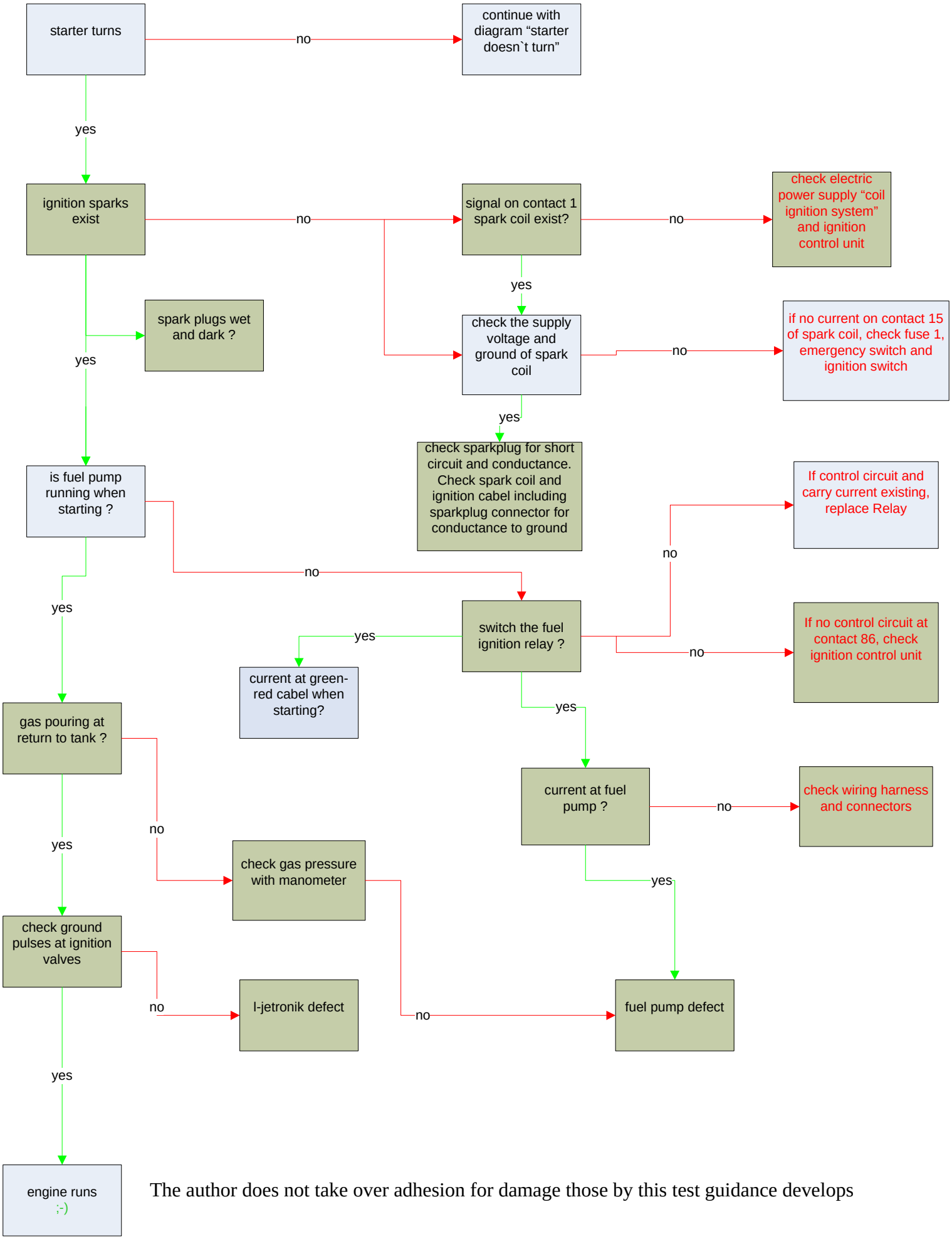
Defect-search-diagram engine doesn`t start, starter turns



The author does not take over adhesion for damage those by this test guidance develops

Spark can be tested with an insulated pair of pliers by holding a cable 3 to 5 mm from the ground while starting the engine. Best done with an old spark plug fixed to an alligator clamp which is clamped to the ground. When testing, only one cable should be pulled so that the spark need not jump more than 3 to 5 mm, since otherwise the ignition or the coil might be damaged.

Remember that you are dealing with high tension (15-20000V) current. This force can endanger people with pace makers or cardiovascular problems. Work only with appropriate tools and consult an expert in case of doubt.

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An ohmmeter can test coils; the measurement differs between double coils of K100 and single coils of K 75. For single coils K 75:

About 10 K ohms should be measured between pin 4 and pin 1 or pin15 and between pin 1 and pin15 about 0.8 ohms.

For double coils of K 1100-1200:

Measuring both cables ends (pin 4) together, then about 10 ohm result as well. pin 15 and pin 1 should produce 1.9-2.2 ohm.

Cables and plugs are between 5-7 K ohm. K 75 is a special case: the cables connecting to the plugs have no measurable resistance.

Cables and coils can produce surges which are not measurable with the ohmmeter. In that case it is best to exchange cable and coils in a given cylinder and to check whether the fault is reproduced in the next cylinder.

Plugs should be tested for conductance between connection and middle electrode. No current should flow to the thread.

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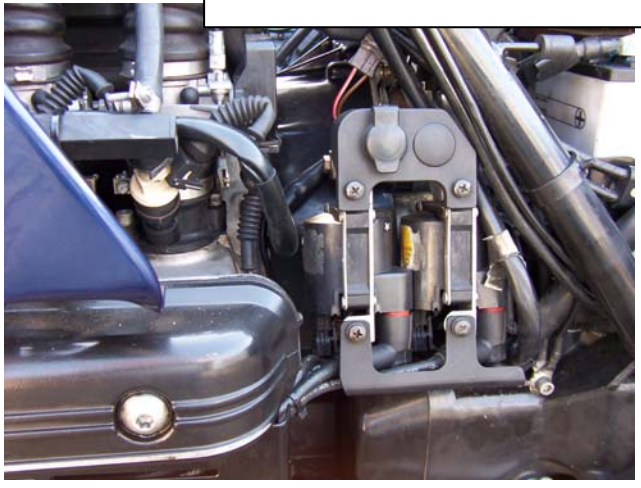
Diode lamp on the K75 ignition coil to black-red, black-blue or black-green K100 only black-blue and black green the alligator clamp of the diode lamp plug to clip 15 of the ignition coil Diode must flicker when starts.



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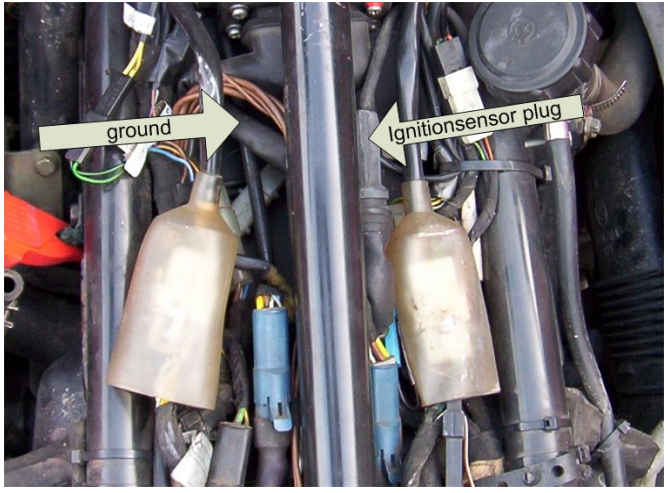
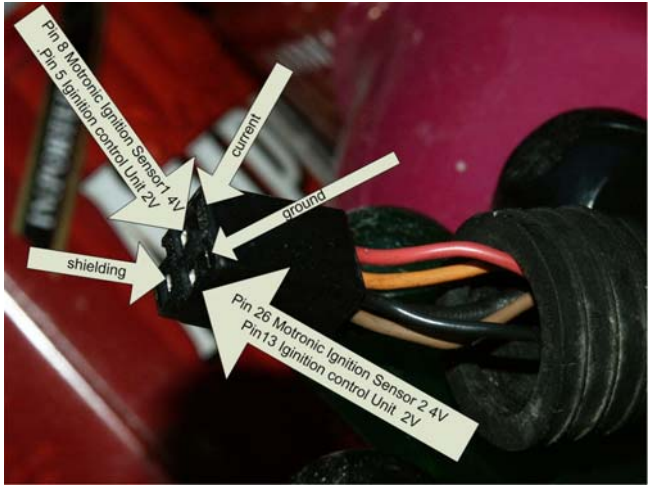
examine the ignition sensor





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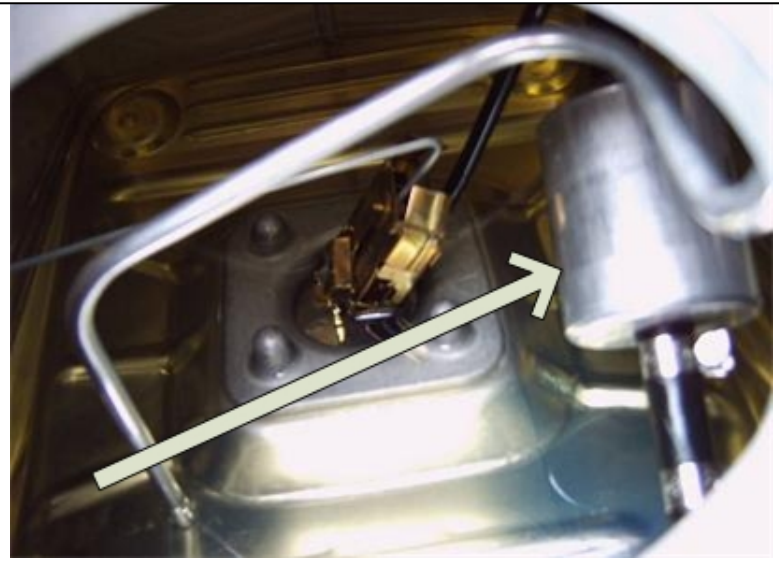
When no pressure exists, the cause can also be a burst fuel filter or fuel line in the Tank. Or it may be a pressure regulator attached below on the injection Fuel Pump.

Here you see the fuel filter after the filling pipe on the tank has been removed.



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on the right site you see a relaisbox from a K100 **without** ABS

left from a K75 **with** ABS1

On pin 86 of the injection relay (the relays usually have their clip numbers on the lower side) current enters upon ignition and at pin 85 when starting. Pin 30 has permanent voltage.

Measurements can also be made at the injection jets and the throttle valve switch.

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When starting the engine with the tank half full and the lid open you can see or hear the recycle flow. Alternatively disconnect the fuel line at the tank, hold it over an appropriate container and start the engine.

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This is the fuel pump in the tank. When starting, current should be flowing. To access the pump, the tank filler must be removed.

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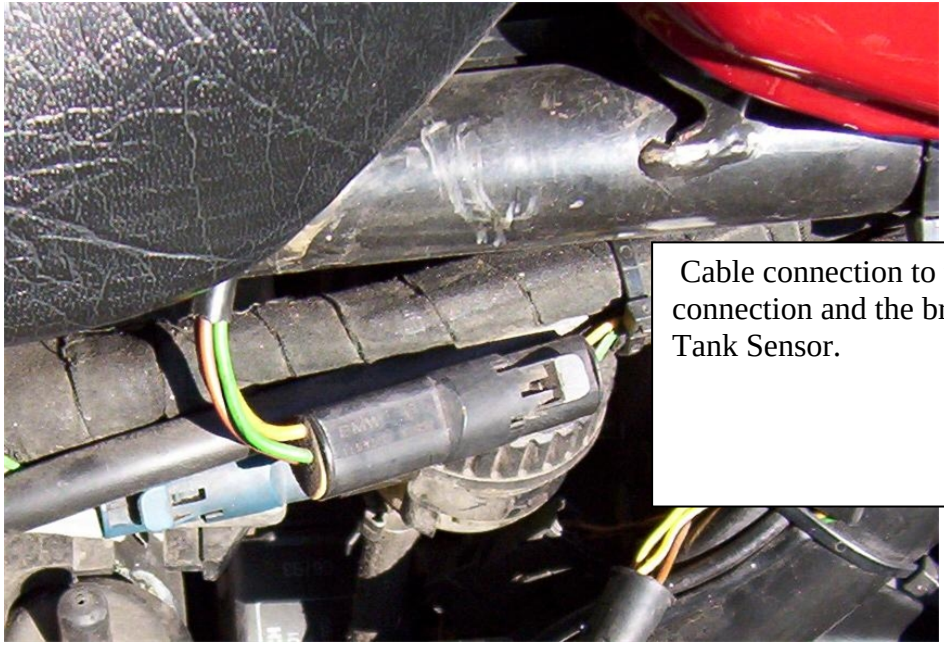

Cable connection to the Tank. The green-white cable is the positive connection and the brown cable the ground. The other two are for the Tank Sensor.

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When current reaches the fuel pump you can try to let the pump run backwards by exchanging the connectors. In this way sticking rollers in the pump can be loosened.

It is essential to remove the pump from the Tank since sparks caused by the cable briefly touching the Pump and the Tank can explode

Is may be possible to repair the pump. For Bosch fuel pumps consult the main page under 'Wie geht das; There is also a VDO pump as shown in the illustration.

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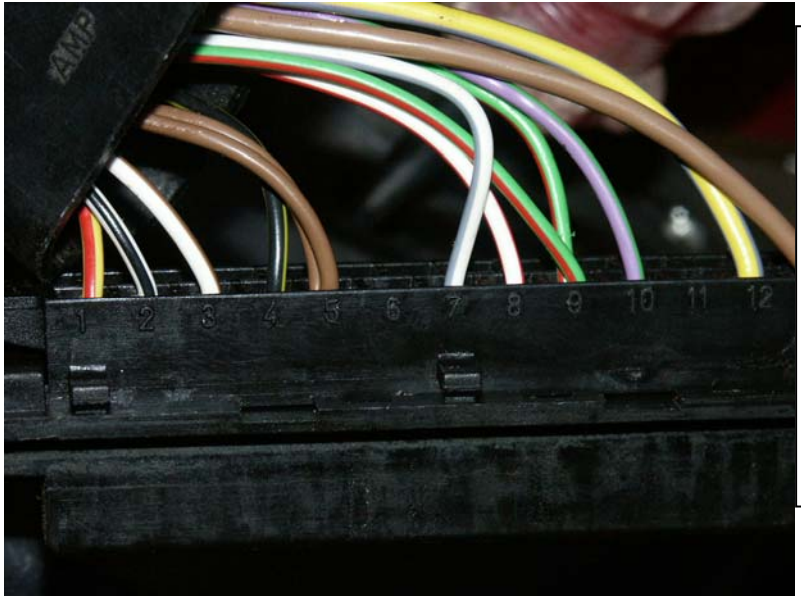

Measure with the diode test lamp on the plugged-in Jetronic plug on pin 9 and 12 the diode should blink when starting. If there is no signal, measure the yellow-red cable between pin 8 ignition regulator and pin 1 L-Jetronic for current flow. The plugs of the regulators should be disconnected. No more than 10 ohm should exist. If more is measured, then check and clean the connectors in front of the left frame triangle.

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If pin 86 on the injector relay is not switched on at the ignition regulator, then measure the yellow-brown cable between the relay and the control unit and check the connectors for corrosion. If no problems are found, then the fault involves the controller (cold solder joint, T 3 corroded, etc.) and this needs to be repaired by an experienced electronic specialist.

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When the sparkplugs are damp and black, this is a sign that the mixture is too rich or that the mix is not ignited (see: lack of spark). Assuming a spark, damp plugs are caused by a faulty temperature sensor in the cooling water or by one or more defective injectors (short circuit) or excessive fuel pressure due to a stuck pressure regulator (corrosion)

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Electric testing of injector jets

Remove the plugs of the injectors, measure resistance with an ohmmeter. About 16 ohm should exist. Much less than these points to a defective jet Mechanical testing of the jet can be done following DetlevMK instructions.

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