# Diesel Electrical System Diagnosis

## ENGINE DOES NOT START COLD

HINT:

- Battery voltage at least 12 V (or 24 V) – starter switch OFF.
- Engine cranks normally.
- Fusible link okay.
- Check the voltage marked with an asterisk (*) just as the starter switch is placed at ON because the voltage will change.

### 1. Pre-Heating System (Super Glow Type)

Disconnect the water temperature sensor.

Check if indicator light lights up with starter switch ON.
**Light on: 6 – 7 seconds**

No → Check fuse. (See page ST-2)

Fuse Blown → Check for short circuit and repair if necessary.

Fuse OK

Check indicator light bulb.

Bulb No Good → Replace bulb.

Bulb OK

Check for battery voltage to terminal 3 of pre-heating timer connector (on wire harness side).
If okay, pre-heating timer is faulty and should be replaced.

Yes

Starter switch OFF

*Check for battery voltage to terminal 1 of pre-heating timer with starter switch ON.

No Voltage → *Check that there is 1 V or less to terminal 9.
If okay, timer is faulty and should be replaced.

Voltage

*Check if voltage to terminal 1 of pre-heating timer is terminated after engine is started.

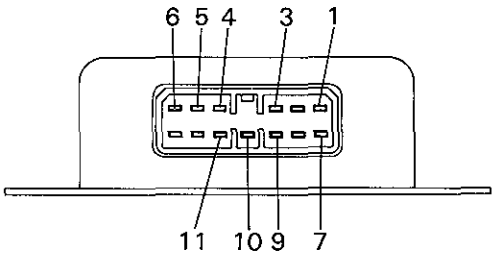
No → Start engine and check/if there is a voltage at terminal 9 of pre-heating timer.
If faulty, repair charging system as necessary.
If okay, timer is faulty and should be replaced.

Yes

Starter switch OFF.

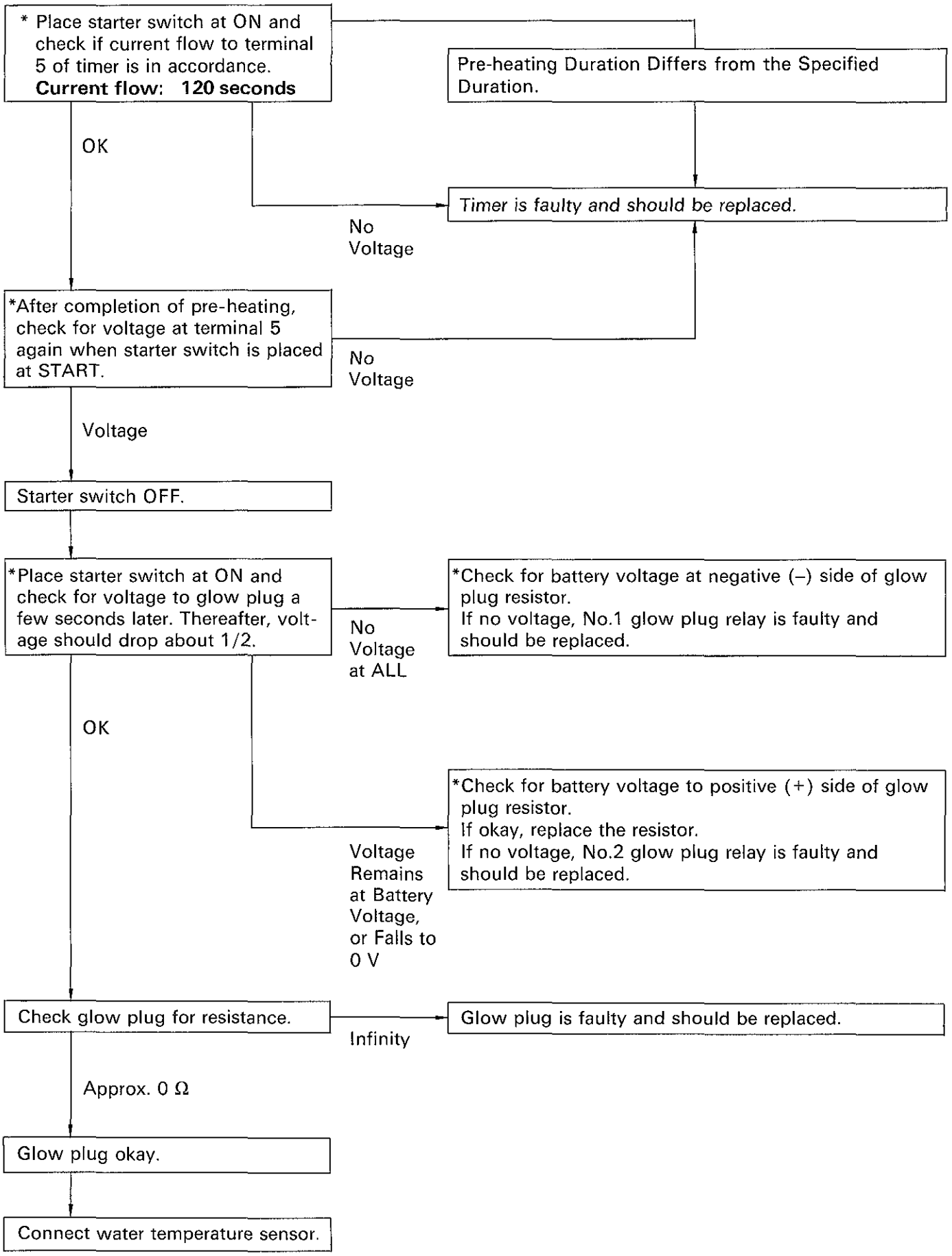
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**Pre-Heating Timer**




ST0049

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## 2. Fuel Cut Solenoid Valve

