



REPAIRS

How do diagnose RE-GEN?

Application for
All types

Visual inspection



Fig. 1 REGEN case

Inspect the part well for any damage or cracks in housing which could lead in voltage leakage which is very dangerous

Measuring the line-line resistance of the REGEN

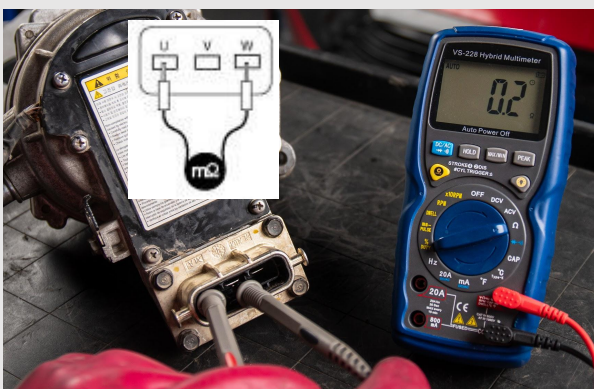


Fig. 5 Line measurement

- Using ohmmeter to measure the internal resistance of the REGEN electric coil
- 3 measurements will be performed to measure the resistance, open circuit or short circuit for each coil.

Terminal number	Measurement result	Remark
U-V	200Ω	Change depending on temperature ± 0.4°C
V-W	200Ω	
W-U	200Ω	



Measuring the insulation for REGEN



Fig. 2 Insulation ohmmeter

- Using Insulator ohmmeter which is detected for measuring the high resistance
- Install the probes in the insulation side not in the normal sockets. as shown in **see Fig. 2**

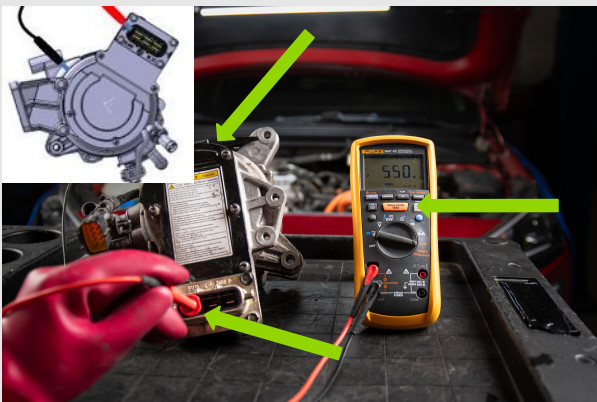


Fig. 3 Insulation procedures

- Using Insulator ohmmeter install -VE probe on the Re-GEN casing and the other +VE probe on one of the 3 HV terminals (U,V W), then change it to other HV terminals.
- After installing the the probes click on yellow button (Insulation test) to start, **see fig. 3**
- If the result is more than the standard, it is ok
- If the result is lower, the part need to be changed, **see fig. 4**



Fig. 4 Insulation result

HV Terminal-Case	Re-GEN Case	Standard result
Pin 1	550 MΩ	10 MΩ
Pin 2	550 MΩ	
Pin 3	550 MΩ	



Measuring the resolver sensor resistance

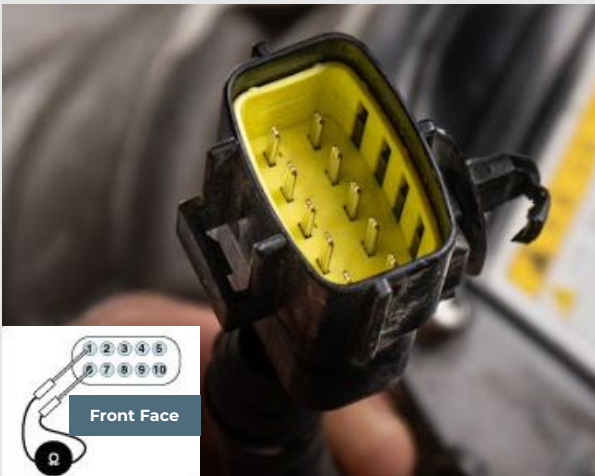


Fig. 5 Resolver connector pinout

- Using ohmmeter to measure the resolver sensor resistance which measure angle of rotation, See Fig. 5
- Multiple tests will be performed to verify the functionality of the sensor thru the connector, See Fig. 6

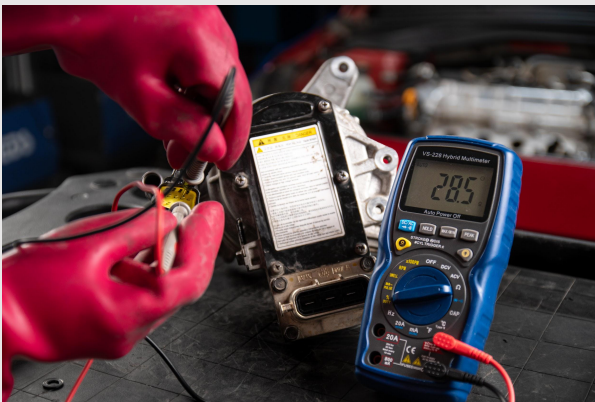


Fig. 6 Resolver sensor

Inspection area	Inspection criteria	Remarks
Pin 1-6	15.8 ± 2Ω	Ambient temperature 23°C
Pin 2-7	28.2 ± 2Ω	
Pin 3-8	28.2 ± 2Ω	

Measuring the temperature sensor resistance



Fig. 7 Measuring the temp. sensor

- Using ohmmeter to measure the temperature sensor resistance which measure the temperature of the REGEN, See Fig. 7

Inspection area	Inspection criteria	Remarks
Pin 4-9	10.92- 13.44 KΩ	Ambient temperature 20°C