

Trac. motor & PWR test

1 . Winding phase to phase resistance & inductance of the traction motors

- Set RLC meter - frequency 100 Hz , measurement type - L button - H (Henry)
- Set mili ohmmeter to the max test power .

R - resistance

L 1,2,3 - phase U, W, V

$$(RL_max - RL_min) / ((RL1+RL2+RL3) \times 3) \times 100$$


Accepted parameters:

R < 5% (mili-ohmmeter)

L < 1% (RLC meter)

2 . Dielectric Absorption Ratio

- Set measuring intervals to 15 - 60 sec

DAR > 1.15 

DAR = 1 (wet insulation)

DAR >= 1.7 (dry insulation)

3 . Shorted IGBT (PWR) check

+ - / - + between the transistors

+ - / - + to earth

> 4-5 kOhm

4 . Traction motors insulation test

- Set voltage to 2000-4000 V

R > 2 mOhm 

R > 1 mOhm (still acceptable)