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STANNAH LIFTS LTD

TECHNICAL BULLETIN

INFORMATION ONLY

For the Attention of : Service Engineers, Installers, Testers, Trade Customers, Training Dept.

Date : 09/08/10

Product : Maxilift 8 Person - Traction Passenger Lifts

Subject : Wiring of Traction Motor.

Pages :

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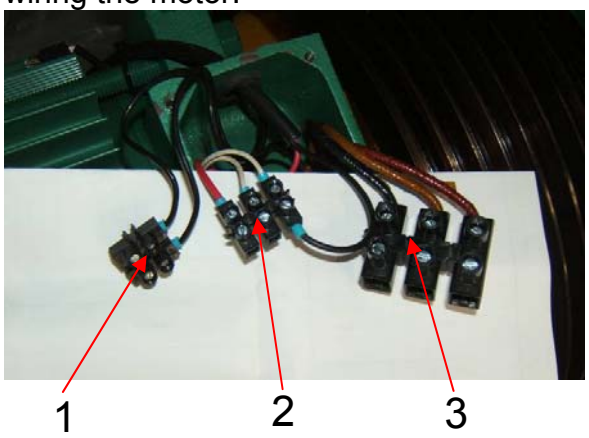
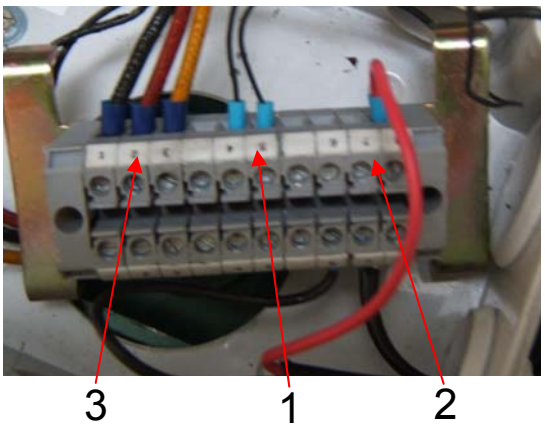
General Information

Since the introduction of the Maxilift 8P traction lift, there have been instances where the thermistors in the drive motor have been identified as being faulty. Due to the fact that the thermistors are embedded in the windings of the motor, this has resulted in the motor needing to be replaced. Damage to the thermistors can occur if the motor is incorrectly wired or the wrong voltage is applied to them.

Due to the cost and level of disruption in replacing a motor, it is strongly advised that special care is taken when making the necessary electrical connections. This is particularly the case when wiring the thermistors, fan and brake. We are working with our supplier to minimise possibility of these being incorrectly wired in the future but in the meantime the following information should help to identify the necessary terminations and to avoid damage to the motor. Reference should also be made to the manufacturers wiring diagram supplied with each motor and located in the terminal housing.

The following photos show two possible arrangements of motor terminals employed. It should be noted that the brake wiring (not shown) will also terminate in the terminal housing. Reference should be made to drawings 9335/9, 9335/44 and 9336/17 when wiring the motor.





Key to photos of terminals

1) Thermistor Terminals – Wiring can be traced entering into the main body of the motor where the thermistors are embedded in the windings.
2) Fan Terminals – Wiring can be traced out of the terminal housing where the fan and thermostat are mounted external to the main motor body
3) Motor Winding Terminals – The largest of the terminal blocks. Wire may also be identified ‘U’, ‘V’ and ‘W’

Pre-installation checks

It is also highly recommended that the following checks are carried out prior to installing the motor:

1) Motor Thermistor Check – When the motor is at room temperature the resistance of the thermistors should measure 150Ω – 300Ω. The inverter will trip at 3000 ohms
2) Fan Thermostat Check – When the machine is at room temperature the thermostat should be open circuit. The thermostat will close when the temperature of the motor casing is greater than 65°C.
3) Motor Winding Resistance – The resistance of the windings when measured across any two of the terminals i.e. U-V, V-W and W-U should measure a nominal value of 10Ω. Difficulty in obtaining a steady reading could be due to the effect of the magnets.
4) Motor Winding Insulation – With the use of a 500V Megger, the resistance between each of the motor terminals, U, V and W and Earth should be checked. The resistance should measure greater than 5MΩ.

If any of the above tests fail to show the expected readings, then it is recommended that you contact Stannah before proceeding.