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Stannah

TB-MP016

TECHNICAL BULLETIN

INFORMATION ONLY

For the Attention of :	Graham Mears, Larry Power, Peter Amura, Contract Managers, Service Branch Managers, Testers, Margaret Pitman
From:	Pete Canning – Product Support Manager (Passenger Lifts)
Date :	29February 2016
Product :	MP
Subject :	**VVVF Transformer Failure Version 2**
Pages :	3

Background

This v2 Technical Bulletin is an update with the information that SLL have received from MP about the Drive Unit failures. This is to follow on from the first Technical Bulletin sent out on 30 June 2015.

MP have said "*Poor performance transformers started to be seen in the inverters in manufactured products during mid 2015". .*

The root cause of this was the discovery of a possible issue with higher (>425 volts) & unstable power supply voltages causing a number of failures in the transformers of the drives on MP lifts.

Complaint transformers are now being supplied with MP product.

- Any claims for faulty Drives must be registered in the normal way using MPs B2B to make claims
- SLL, Andover hold a 'safety stock' Drives if your need is urgent
- Remember to clarify the controller – 10hp Drive = Microbasic controller and 15hp Drive = VS controller
- MP will provide Stannah with a 5 year guarantee for Drives (the standard guarantee was 2 years).

If you are unsure and or have any questions concerning this topic then please do not hesitate to contact me.

The next pages show how to identify a faulty Drive and the procedure for setting up the new Drive unit.

I hope you find this Bulletin to be of help and should you have any questions about this topic or would like to know a little more then please contact me on **Ext 8646 or DDI 01264 34 36 46**

How to identify a faulty drive (Caused by Transformer failure.)

XC12 Plug will have 415 volts on it but the display will be blank.

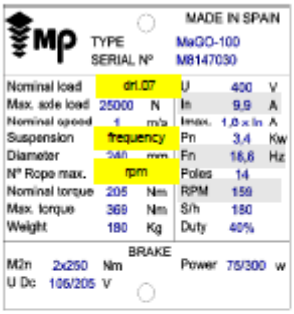
XC12 Plug

No Display shown here (The picture shows the normal display.)

Procedure for Installing the new Drive unit.

B INITIAL PARAMETER CHECKING

- **ENC.00** : This paremeter holds the number of pulses per revolution of the encoder installed in the gearless machine. You have to be careful since if you enter an invalid value, you can get overspeed and/or erratic behaviour of the lift.
- **ENC.01** : 21
- **TR1.00** : The machine plate shows the rated electrical frequency(Fn), which should be the value of this parameter, or lower.
- **TR1.01** : It must be set around the 10% of TR1.00, ranging from 5% to 15% of such parameter value.



- **TR0.00** : The value of this parameter should be set around the 30% of the rated speed.
- **TR2.00 TR2.01** : Just in case you'd have to use the second speed set. Their values are to be set in the same way we did with TR1.00 y TR101 respectively.
- **DRI.03** : Check that the value of this parameter is equal to the value calculated using the following formula :

$$\frac{120 \times \text{Frequency}}{\text{RPM}}$$

If not you should run the autotuning procedure or try to set the autotuning parameters by hand. Anyway, contact MP for support.

- **VEL.10** : 11000
- **DRI.07** : The value of this parameter has to be taken from the machine plate (In).
- **INT.03, INT.05, INT.04, INT.06** : Depending on the brand/ model of the machine, set these parameters with the values that are shown in the "MACHINE TABLE", in the other side of this document.

AUTOTUNING

There is just one condition to perform the autotuning procedure : **the machine must not carry any load at all**. This condition is absolutely necessary. If you don't do this way, the data that are taken from it will not be reliable.

In case you are forced to perform autotuning in situ, i.e., in the installation, you would be forced to lift up the cabin and counterweigth, take off the cables from pulley and make sure the brake opens (see section A.3 on the other side of this sheet). Doing it in this way, the no-load condition will be satisfied.

To perform the autotuning procedure you must follow 6 steps :

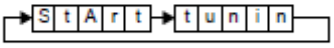
1) Set control board in inspection or MES (Electrical Emergency Operation) mode.

2) In the converter, check that parameter dri07 is set to the rated current of the macine (see section B on the other side of this sheet).

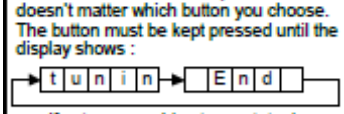
3) Set TUN.00 = 09999

4) Exit SETUP mode in converter.

5) The converter display will show blinking.

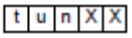


6) Press the up - or down - button of the MES control unit or inspection box. It doesn't matter which button you choose. The button must be kept pressed until the display shows :



If not, you would get an autotuning error. These errors are listed in the left table

The whole process will last 30 seconds, aproximately. At the beginning, the pulley will move and it will stand still for a moment. After this, it will rotate clockwise and counterclockwise, making three movements in total. The converter display will show :



where XX is the progress percentage of the autotuning procedure.

AUTOTUNING ERRORS	
A0	Autotunning aborted
A1	Error while reading absolute position
A2	Initial and final absolute position are equal.
A3	Error setting parameters of absolute encoder adjusting.
A4	Sinusoidal encoder error
A5	Error setting parameters of sinusoidal encoder adjusting.
A6	Invalid number of poles.
A7	Error setting parameters of direction adjusting.
A8	Invalid resistance
AA	Time-out error
B2	Autotuning procedure incompatible with rescue operation.