Encoder alignment guide for the Magnetek HPV1000 connected to a gearless machine.

Installation State:

1. Lift on inspection controls with no faults and inspection buttons operating correctly.
2. Drive settings:

I. You will now need to verify the parameters entered in the drive match that of the motor data plate, these are in the A5 menu.

II. Verify the following parameters:
   - CONTRACT CAR SPD (A1) *parameter should be the lift contract speed in m/s. This can be verified with a hand tachometer if required and adjusted if required.*
   - CONTRACT MTR SPD (A1) *parameter should be set to the RPM that is required to make the lift travel at contract car speed.*

NOTE: The above two parameters are utilized by the drive for many purposes regarding speed control of the lift, therefore its important these are set correctly prior to continuing any further.

III. Verify the Line Voltage in INPUT VOLTAGE (A4) this parameter should be set to the measured incoming phase to phase voltage.

3. The drive is now ready for an alignment to be carried out using the steps below.

   ### Alignment – Non-Rotating

   If the motor is already roped, we recommend the 'PolePos-norotate' (Static) alignment method.

   Navigate to the U9 menu and set:
   - 'PolePos-norotate' (TUNING MODE SEL U9)

   Once the above information has been entered press down to get to the bottom of the menu, the screen will display: 'Auto-tuning. Waiting for command – Tune Ready? Give Run/Hit Enter'.
   At this point **DO NOT** press any keypad buttons.
   Using your inspection controls, **PRESS AND HOLD** the buttons to run the lift in the **UP DIRECTION** (the lift will not move, however the tune will begin) If the drive has control of the motor contactors they will now pull in and the tune will begin. During this process, the drive will display motor speed and motor current for reference. This Alignment test can take up to 120 seconds to complete.
   Once complete the drive will display "END Tune Successful". The test run UP button can now be released.
   The drive will then automatically populate the Enc Z-Pulse Offs (A5)

4. The lift should now be able to move on INSPECTION CONTROL,
   Run the drive in low speed inspection mode and…
   - Start with a value of 0.5s for INERTIA (A1)
   - Ensure Motor Contactors are closing, Brake is lifting, and the car can move freely in the shaft.
   - Verify encoder polarity. The motor phasing should match the encoder phasing. If you experience Speed Dev Flt/HIT TRQ LIM alarm the phasing may be incorrect – the most likely cause is incorrect motor phasing. Swap two motor phases, perform alignment and run again.
   - Verify correct lift car direction. If this is running with correct speed and control, but in the incorrect direction, swap both Encoder Connect (C1) and Motor Rotation (C1) and repeat alignment procedure.

   If needed please contact technical@lestercontrols.co.uk where someone will be able to assist.