Programming the Drum Vacuum Drive (DVD) inverter, P7 model

Applies to

Thermoflex Wide I and II

Background

WARNING! - This procedure is intended for qualified Creo personnel only. High voltages are present in the service area. Extreme caution must be used!

The drum vacuum drive inverter must be programmed to enable operation of the drum vacuum system. This procedure applies to

- integration of the P7 model drum vacuum drive
- field replacement of a drum vacuum drive inverter

Tools and parts

- M2.5 Allen Key
- Crescent Wrench

Steps

1. If programming in production, refer to document 708-00193A to set up the drum vacuum drive and prepare for programming. Otherwise see steps 2 through 4.
2. Ensure that drum vacuum system is fully setup and ready to have power applied. Refer to document 77-0094A-A-PR01.doc.
3. Remove drum vacuum drive cover. Refer to document 77-0093A-A-PR01.doc steps 1 thru 3.
4. Enable DVD power using a crescent wrench to turn the main disconnect switch handle to the ON position (clockwise).
5. If programming in production, a safety drive cover is used. Use the switch on the drive cover to apply power to the DVD.
6. Manually set the parameters listed in Table 1 below, using the following steps:
7. When the DVD system is turned on, the root menu is displayed on the Liquid Crystal Display (LCD). Press the MENU key repeatedly until "Programming" appears on the LCD.
8. Press the DATA/ENTER key to enter Programming mode.
9. The LCD will show the first parameter, "A1-00", and the "A1" will be flashing.
10. Press the RIGHT arrow/RESET button to move the cursor to the "00". It will now begin flashing.
11. Press the UP arrow button until the "00" reads "03" ("Initialize Parameters"), then press the DATA/ENTER key.
12. Now the parameter setting will flash (number to the right of the "=" sign). Press the UP arrow button to change this number to 2220. (This selection

will initialize the programming parameters to the factory default. This step should be done before programming to ensure that all parameters are reset to a known state.) Press the DATA/ENTER key. The LCD will display "Entry Accepted".

13. Press the ESC key, and continue to program the rest of the parameters following steps 9 through 12. Note that there are two different pumps, each requiring different programming parameters.
14. When all the parameters have been programmed, press the MENU key until the LCD displays "Operation".
15. Press the DATA/ENTER key to get back to the root menu.

Notes

	PARAMETER		SETTING (old pump) 15-1323 DVP : 50-1806A	SETTING (new pump) 378-00010 DVP : 500-02732A
1	A1-03	Initialize Parameters	2220 : 2 Wire Factory Initialize	2220 : 2 Wire Factory Initialize
	B1-04	Reverse Operation Selection	3: Exchange phase, reverse disabled	3: Exchange phase, reverse disabled
	C1-01	Acceleration Time 1	4.0 seconds	4.0 seconds
	C1-02	Decceleration Time 1	4.0 seconds	4.0 seconds
	D1-01	Frequency Reference 1	60 Hz	60 Hz
	E1-04	Maximum Output Frequency	100 Hz	100 Hz
	E1-05	Maximum Output Voltage	**380V**	**360V**
	E1-06	Base Frequency	**60 Hz**	**100 Hz**
	E1-07	Mid Output Frequency A	**30 Hz**	**50 Hz**
	E1-08	Mid Output Voltage A	**115 VAC**	**180 VAC**
	E1-09	Minimum Output Frequency	10 Hz	10 Hz
	E1-10	Minimum Output Voltage	16.8 VAC	16.8 VAC
	E2-01	Motor Rated Current	**15 A**	**14.2 A**
	H1-01	Terminal S3 Function Selection	25: Ext fault, NC, always detected, coast to stop	25: Ext fault, NC, always detected, coast to stop
	L4-05	Frequency Reference Loss Detection Selection	0: Disable (Stop)	0: Disable (Stop)
	L6-01	Torque Detection Selection 1	3: OL@SpdAgree – Flt	3: OL@SpdAgree – Flt
1	L6-02	Torque Detection Level 1	160%	160%
	L6-03	Torque Detection Time 1 (Operator M.O.P.)	0.1 seconds	0.1 seconds

O2-03	User Parameter Default value	1: Set Defaults	1: Set Defaults

Table 1. Do not change any of the default values – change only those listed above.

Note 1: After Initialization, parameter returns to a value of 0.

Final Steps

16. After programming the parameters listed above. Save the programming parameters as the User settings. Save these settings by using the ESC, RIGHT arrow/RESET and the UP arrow buttons to select programming parameter "O2-03". Select "1: Set Defaults" and press the DATA/ENTER button.
17. After the programming parameters are saved as the User settings, a new option will appear in the Initialize Parameters menu item ("A01-03"). The operator may select the option "1110 : User Initialize" to reload the correct settings for the Drive Inverter (in this application). When this option is selected the saved User parameters are reloaded as the working parameters. Note that all, non-default user parameters except "D1-01 (Frequency Reference 1)" are reloaded. "D1-01" must be adjusted manually.
18. The operator must be cautioned to use the User settings only when their state is known to the operator. Drive Inverters received in the field may not have the correct User parameters set (as they may have come directly from the factory or have been used in a different application previously).

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Date submitted : 24 Mar 2005

Date modified : 9 Sept 2005