

T-03: Adjust Parameters

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- Electrical hazard exists when working inside electrical cabinets.

EQUIPMENT

- none

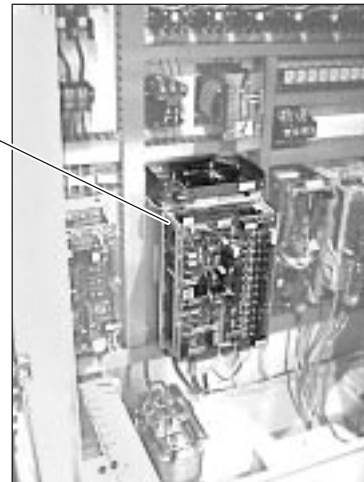
RESOURCES

- manufacturer's manual for the board with parameter settings
- maintenance manual with the parameter adjustment procedure

Adjust Parameters

Note: This procedure is documented for a Fanuc AC Spindle Drive.

Fanuc AC Spindle Drive



1. Obtain the parameter list for the drive.

- Acquire the parameter list from the manufacturer's machine manual or from the data recorded from the previous drive.

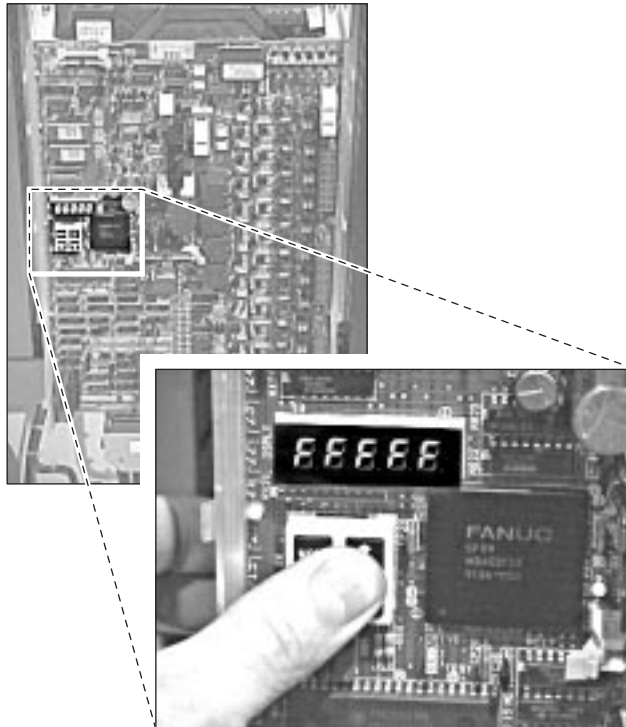
Parameter List

GE/FANUC OD SPINDLE DRIVE PARAMETERS					
F-01	0001	F-21	0050	F-41	0064
F-02	0000	F-22	0050	F-42	0010
F-03	0000	F-23	0100	F-43	0016
F-04	0000	F-24	0100	F-44	0010
F-05	0000	F-25	0030	F-45	0005
F-06	0000	F-26	0030	F-46	0030
F-07	0100	F-27	0030	F-47	0008
F-08	0005	F-28	0030	F-48	0071
F-09	0000	F-29	0128	F-49	0056
F-10	0128	F-30	0000	F-50	0073
F-11	0135	F-31	0000	F-51	0002
F-12	0140	F-32	0010	F-52	0128
F-13	0182	F-33	0010	F-53	0011
F-14	0140	F-34	0100		
F-15	0040	F-35	0075		
F-16	0015	F-36	0090		
F-17	0003	F-37	0000		
F-18	0050	F-38	0000		
F-19	0010	F-39	0000		
F-20	0040	F-40	0000		

1.0um 1.0um

2. Compare the parameters on the drive with the parameter list.

- Press the <Mode>, <Up>, <Down>, and <Data Set> buttons simultaneously for more than one second until the display shows "FFFFF."



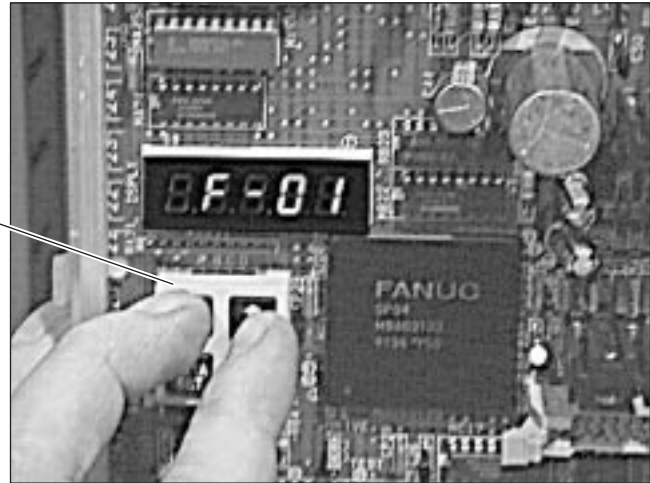
- Check any discrepancies due to tuning the drive, update the parameter list if necessary.

Note: If no buttons are pressed for 10 seconds, the display will default to the rpm display.

- Press and hold the <Mode> button while comparing parameter data.
- Press the <Up> or <Down> button to increment to the desired parameter address.

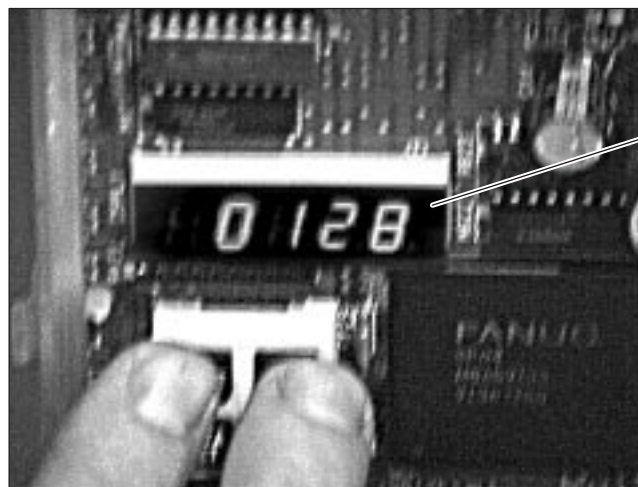


Press Up and Down
Arrows to Scroll
Parameters



Note: If the <Up> or <Down> button is held depressed the display will start to scroll.

- Release the <Up> or <Down> button and view the data displayed for the selected parameter address.



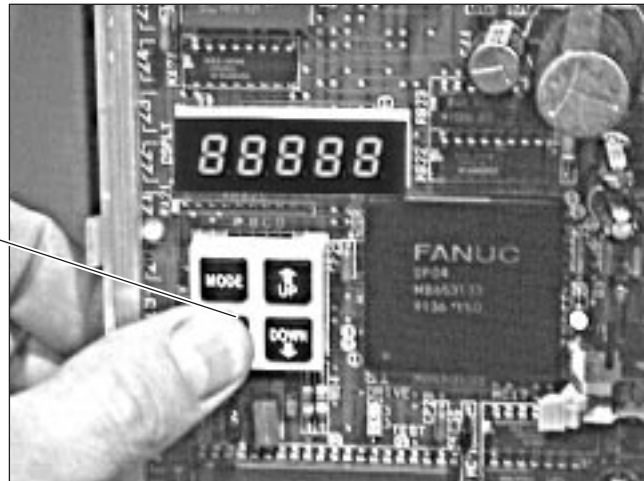
Example of
Parameter's Data

- Compare the data displayed with the expected data for that parameter.
- Continue comparing parameter data on the drive with the parameter list, noting any discrepancies.
- Check any discrepancies and update the list, if necessary.

3. Adjust the parameters as needed.

Note: Some drive boards have a write protect switch or jumper, which must be set to allow parameter adjustment.

- Select the parameter address with the discrepant parameter data observed in step 2.
- Release the <Mode> button and the data will display after a 1/2 second.
- Press the <Up> or <Down> button to change the parameter data.
- To save the data, press the <Data Set> button until the “88888” displays.



Press Data Set

- Press and hold the <Mode> button and move the parameter display back to the new parameter setting to verify the data entry.
- Continue changing any other discrepant parameter values until all parameter values match the parameter list.

Note: Remove the write enable switch or jumper, if applicable.

4. Verify all parameter data against the parameter list.

- Check any discrepancies and update the list, if necessary.

5. Close the drive cabinet door.

6. Ask the Operator to cycle the machine to verify proper operation.