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## **MEMORY UPGRADE FOR FADAL MACHINES**

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The installation of the memory expansion is a simple procedure when following the enclosed instructions.

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#### **DISCLAIMER:**

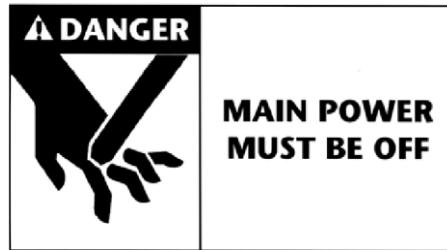
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#### **SAFETY PRECAUTION:**

**WARNING:** DISCONNECT ELECTRICAL POWER WHEN PERFORMING MAINTENANCE OR SERVICE ON EQUIPMENT! THIS INCLUDES:

- ◆ WHEN ADJUSTING OR CHANGING TOOLS
- ◆ WHEN MAKING MECHANICAL ADJUSTMENTS
- ◆ WHEN PERFORMING MAINTENANCE WORK OR PERFORMING ANY SERVICE TO THE MACHINE
- ◆ WHEN REMOVING ANY GUARD
- ◆ WHEN REMOVING ANY BELTS OR PULLEYS

**TO AVOID INJURY, ELECTRICAL POWER MUST BE OFF WHEN PERFORMING MAINTENANCE OR SERVICE ON EQUIPMENT!**



**SERIOUS PERSONAL INJURY IS ALWAYS A HAZARD IN AN INDUSTRIAL ENVIRONMENT. EXTREME CAUTION, IN ALL FACETS OF SAFETY, SHALL BE MAINTAINED. ALL COMPANY SAFETY STANDARDS, PRECAUTIONS AND REGULATIONS OF O.S.H.A. SHALL BE MAINTAINED DURING TRAINING, ASSEMBLY, AND DISASSEMBLY OF PRECISION SPINDLES.**



**GENERAL SAFEGUARDS:**

- DO NOT OPERATE THE SPINDLE ASSEMBLY AND/OR ITS COMPONENTS UNLESS YOU HAVE READ THIS DOCUMENT.
- RETAIN FOR FUTURE REFERENCE.
- FOLLOW ALL WARNINGS AND INSTRUCTIONS IN THIS DOCUMENT AND/OR THE VMC.

**1. Read and Follow Instructions**

Read all the safety and operating instructions supplied by Fadal prior to operating the spindle and/or its components

**2. Attachments and Equipment**

Remove any tool from spindle and lock out access to work zone; i.e. the spindle.

Never add any attachments and/or equipment to the spindle assembly without approval of the manufacturer as such additions may result in spindle failure, personal injury and/or voiding of the warranty.

**3. Servicing**

Do not attempt to service the machine and/or its components yourself as opening or removing covers and/or guards may expose you to dangerous hazards. Refer all servicing to qualified service personnel.

**4. Power**

Disconnect all power to the machine before adding upgrade kit.

**5. Protection**

Always wear proper eye, foot and head protection when lifting, transporting and/or servicing/operating any machinery.

6. Accessories

Any mounting of equipment and/or its components should follow the manufacturer's instructions, and should use a mounting accessory recommended by Fadal, if applicable.

# INSTALLATION PROCEEDURE

## STEP 1 – RECORD ALL PARAMETERS IN THE CNC CONTROL.

Use the form to record your current parameters settings BEFORE installing the new memory board.

At the CNC prompt ENTER NEXT COMMAND

Enter the command SETP to display the parameter tables an record each setting. After installing the memory board you will need to reenter all the CNC parameters.

LAST HOME POSITION X _____ Y _____ Z _____		
X-AXIS BACKLASH _____, _____, _____ Y-AXIS BACKLASH _____, _____, _____ Z-AXIS BACKLASH _____ A-AXIS BACKLASH _____ B-AXIS BACKLASH _____		
<b>BACKLASH settings</b>		
<b>PARAMETER settings – Page 1</b>		
FORMAT: _____	BAUD RATE: _____	SPINDLE AFTER M6: _____
AXES: _____	TRAVEL: _____	PENDANT: _____
DEFAULT: _____	A-AXIS RATIO: _____	M60/A-AXIS BRAKE: _____
DEFAULT: _____	B-AXIS RATIO: _____	M60/B-AXIS BRAKE: _____
DEFAULT: _____	TOOL CHANGER CAP: _____	IMM FIXED CYCLE: _____
RPM FACTOR: _____	SPINDLE TYPE: _____	ORIENTATION FACTOR: _____
<b>PARAMETER settings – Page 2</b>		
DEFAULT: _____	MS: _____ MT: _____	3 PHASE > 5% LOW: _____
PU FORMAT: _____	N-WORDS ORDERED: _____	TOOL TABLE: _____
CRC MODE: _____	BINARY BUFFERS: _____	HIGH TORQUE: _____
SPINDLE OFF: _____	TURRET FACTOR: _____	CMD MENU: _____
PALLET: _____	GAIN: _____	RAMP: _____
ASPECT: _____	TIMERS: _____	OVERLOAD: _____
<b>PARAMETER settings – Page 3</b>		
SCREW: _____	IPM: _____	XYZ RAMP: _____
Z TAP GAIN: _____	VECTOR: _____	AXIS DISPLAY: _____
AUTO BRAKE: _____	A-PALLET: _____	B-PALLET: _____
5-AXIS HEAD: _____	G00 DETAIL: _____	FEEDBACK: _____

## STEP 2 – INSTALL MEMORY EXPANSION BOARD.

Power OFF the machine, remove the 1400 CPU board and attach the expanded memory board.

### **STEP 3 – CLEAR AND FORMAT THE MEMORY.**

Power ON the machine.

Enter CNC Diagnostics – Enter the command DI then type G0 3000 Note: use zero not the letter O

Select ZERO MEMORY

Select Y (to lose all programs) Power

Off CNC, wait 10 seconds.

Power ON

Reinitialize the memory for the CNC format:

At ENTER NEXT COMMAND

Enter command RI

Y

Y

Y

(control restarts)

AT ENTER NEXT COMMAND

Enter SETTO command to set the current tool in the tool turret as number 1

Enter BL command and set original backlash values

Enter SETP and set all parameter values to the recorded values from the work sheet in step 1.

Press MANUAL to exit parameter menu

Power OFF the CNC and restore power after 10 seconds.

### **STEP 4 – TESTING THE MEMORY.**

AT ENTER NEXT COMMAND

Enter DT command - All values should be zero

Enter the ME command to verify the new memory capacity.

**IMPORTANT NOTE:** The machine is ready to run. Caution needs to be taken since the CNC parameters have been changed and the possibility of incorrectly setting a parameter could affect the machines operation. It is recommend that you “Dry-Run” the machine and verify correct operation of the machine before machining parts.

**If you have any questions, call us at 800-342-3475 or email [parts@itscnc.com](mailto:parts@itscnc.com)**

### **LIMITED WARRANTY:**

Any component, sold by Independent Technology Service Inc., which, under normal operating conditions in the plant of the original purchaser thereof, proves defective in material or workmanship within specified time (one year) from the date of shipment by us, as determined by an inspection by us, will be repaired or replaced, at our discretion, free of charge for repair. Customer is responsible for the shipping costs.

Provided that you promptly send to us notice of the defect and establish that the component has been properly installed, maintained, and operated within the limits of rated and normal usage, and that no factory adjustments have been tampered with or damage has occurred from contamination; i.e. water, coolant, any foreign material such as chips or dust.

Independent Technology Service Inc. or agents liability is limited to repair or replacement of defective parts. as examined and determined by us. Repaired items will carry a 90-day warranty or until fulfillment of original warranty time; which ever is greater.

All expressed and implied warranties, including the implied warranties of merchantability and fitness for a particular purpose are limited in duration to the warranty period, and no warranties, whether expressed or implied, will apply after this period.

Under no circumstances shall Independent Technology Service Inc. or any of our affiliates have any liability whatsoever for claims or damages arising out of the loss of use of any product or part sold to you. Nor shall we have any liability to yourself or anyone for any indirect or consequential damages such as injuries to person and property caused directly or indirectly by the product or part sold to you, and you agree in accepting our product or part to save us harmless from any and all such claims or damages that may be initiated against us by third parties.

**POLICY INFORMATION:**

**CORE RETURNS:**

A CORE is defined as a used or broken part, capable of being repaired at a reasonable cost as determined by Independent Technology Service Inc. A credit is given to parts specific and defined by us. Upon reception of the CORE and if it is determined by us to be repairable, we will issue a "Core Credit" for the amount determined at the initial sale of the component less the cost of unusable parts of the assembly. Core returns not considered repairable by us will either be returned or destroyed according to the customer's instructions.

**RESTOCKING:**

We cannot receive a return part that has been damaged or in a condition that makes it unable to resale as originally sold. Parts being returned must be returned in the same packaging and in the same condition (as determined by us) as it was originally received. Components returned to us that are not under a warranty repair will be subject to a 15% restock fee. We will contact the customer to discuss returns considered unusable or damaged for possible solutions.

**SHIPPING:**

Customer is responsible for all shipping unless determined by us to be our fault; i.e. the wrong part was shipped.