Fadal Maintenance Manual

CHART 2 **AUTOMATIC TOOL CHANGER** TOOL CHANGER 10-18-95 PROPER AIR PRESSURE AND ADEQUATE AIR VOLUME IS CRITICAL FOR TOOL CHANGES. AIR PRESSURE REGULATOR ON MACHINE MUST BE SET AS LABELED (80-90 PSI AND 120 PSI FOR TOOL OUT REGULATOR). AIR SUPPLY TO MACHINE SHOULD BE 120 PSI. AIR HOSE TO MACHINE MUST BE 3/8° AND AS SHORT AS POSSIBLE. AIR DISTRIBUTION PIPE IN BUILDING SHOULD BE A MINIMUM OF 3/4". THE PRESSURE DROP AT THE MACHINE DURING A TOOL CHANGE SHOULD BE A USE TOOL IN/OUT TO INSERT/REMOVE TOOL FROM SPINDLE MAXIMUM OF 3-5 PSI CHECK AIR PRESSURE (80PSI AND 120PSI) (MAX 3-5 PSI DROP DURING TOOL CHANGE) DOES DRAWBAR WORK WHEN MANUALLY MANUALLY ACTIVATE DRAWBAR SOLENOID AT MAC AIR VALVE ASSY. CHECK AIR DELIVERY TO DRAWBAR CYLINDER. DOES TOOL IN/OUT WORK? CHECK NO NO F20 AND K24 ON 1100-2. QPERATED? 2.2 2.2.1 2.2.2 (IF A TOOL IS IN THE SPINDLE, HAVE HELPER HOLD ONTO IT.) 2.2.4 YES CHECK 1040 AND WIRING YES 2.2.3 2.2.6 CHECK DRAWBAR CYLINDER FOR BAD SEALS OR BROKEN PISTON (SEE DRAWING 1002 AND KEYBOARD TROUBLESHOOTING PRESS TURRET CW AND TURRET CCW EUROPEAN CE NORM MACHINES MUST HAVE DOORS CLOSED FOR ATC TO WORK PROPERLY DIAGRAM) 2.2.7 2.3 CHECK FUSES F5 & F6 & CB2 AND RELAYS K5, K33, K11, & K12 ON 1100-2. K12 MUST BE LOW TURRET FACTOR IN SETP MUST BE 1 EMERGENCY STOP MUST BE RELEASED SERVO GENEVA DID TURRET MOVE FOR SERVO TURRET OR SERVO AND LEAKAGE (GREEN). CHECK F4 AND SERVO TURRET FUSES ORRECTLY C2 ON 1100-2 MUST AMPLIFIERS RESET BE BYPASSED YES 243 CHECK SERVO TURRET MECHANISM FOR BINDING OR EXCESSIVE PLAY. GO TO CS POSITION. (IF NOT COLD STARTED CHECK TURRET FACTOR IN SETP. CHECK FUSES F5 & F6 & CB2 AND RELAYS K5, K33, K11, & K12 ON 1100-2. K12 MUST BE RATED FOR 3 AMP OUTPUT (BLACK). DO A COLD START.) CHECK GENEVA CHECK TURRET MOTOR WIRING MECHANISM CHECK TURRET MOTOR WIRING IN MDI ENTER M19 CHECK TURRET MOTOR ENCODER AND WIRING. 2.5 IF TURRET AMPLIFIER FUSE IS BLOWN OR OVER-CURRENT LED IS ON, CHECK MOTOR WIRES FOR SHORT TO CHASSIS. GO TO DID SPINDLE ORIENT? NO CHART SPINDLE TURN? NO. 3 SPINDLE DRIVER (WIRES TO MOTOR ARE SHIELDED; SHIELD MUST BE STRIPPED BACK FROM CONDUCTOR). YES 2.6.1 2.6 2.6.1a YES GO TO CHART DID ORIENTATION ARM SWING IN? ADJUST ORIENTATION FACTOR IN SETP YES NO. 3 SPINDLE IF TURRET MOVES CORRECTLY EXCEPT FOR DIRECTION, DRIVER CHANGE DIRECTION 2.6.2a NO CONTROL FROM TB1-7 TO TB1-5 ON 1100-2 CHECK F19 & K23 ON 1100-2 (OR VICE VERSA) 2.6.3 IF TURRET RUNS AWAY: 1.REVERSE MOTOR LEADS, 2.CHECK ENCODER WIRING, 3.REPLACE ENCODER, 4.REPLACE TURRET CONTROL MODULE. REMOVE TOOL FROM SPINDLE AND MANUALLY ACTIVATE ORIENTATION AIR SOLENOID AT MAC AIR VALVE ASSY. IF VERY HEAVY TOOLS ARE UNEVENLY DISTRIBUTED, DID CHECK WIRING YES REDISTRIBUTE TOOLS ARM SWING TRY KNOWN ON TURRET IN? GOOD 1040 2.4.9 DIP SWITCH SETTINGS NO DIP SWITCH SETTINGS SPEED SW1 SW2 FAST OPEN OPEN MEDFAST CLOSED OPEN MEDSLOW OPEN CLOSED SLOW CLOSED CLOSED MOTOR TYPE: SW3 & SW4 OPEN CONSULT FACTORY ABOUT OTHER MOTOR SETTINGS. CONSULT FACTORY SERVICE DEPT. ABOUT DIP SWITCH SETTINGS FOR GO TO PAGE 2 OF CHART 2 CHECK AIR PRESSURE CHECK AND REPAIR

Figure 16-4 Automatic Tool Changer

AND AIR LINES

2.6.5a

SPEED AND PID



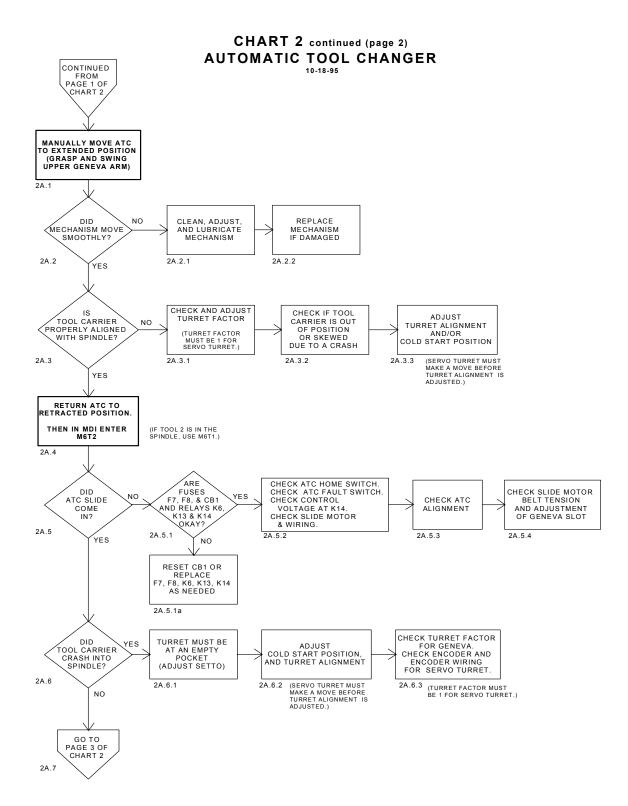


Figure 16-5 Automatic Tool Changer (Continued)



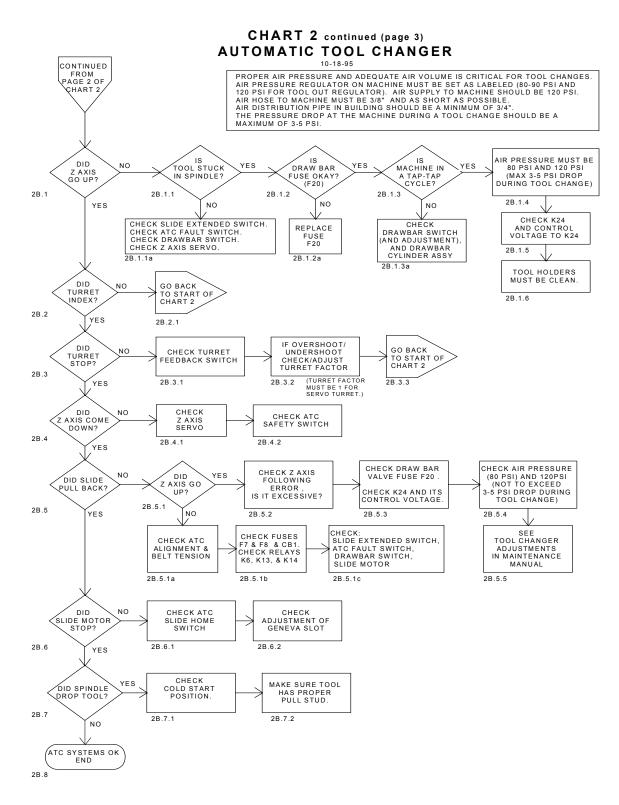


Figure 16-6 Automatic Tool Changer (Continued)