



**PLC Ladder Diagrams  
for  
VTC-160A, B, 200B, C & 300C  
(Mazatrol Fusion 640M)  
Publication #557KATL0**

1/2000

**CAUTION**

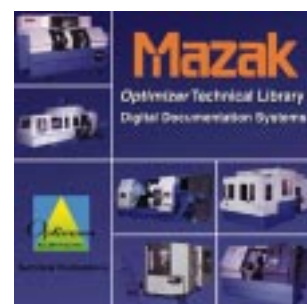
*This Manual is published to assist experienced personnel on the operation, maintenance and/or programming of Mazak machine tools.*

*All Mazak machine tools are engineered with a number of safety devices to protect personnel and equipment from injury or damage. Operators should not, however, rely solely upon these safety devices, but should operate the machine only after fully understanding what special precautions to take by reading the following documentation thoroughly.*

*Do not attempt to operate or perform maintenance / repair on the machine without a thorough understanding of the actions about to be taken. If any question exists, contact the nearest Mazak service center for assistance.*

*Certain covers, doors or safety guards may be open or removed to more clearly show machine components. These items must be in place before operating the machine. Failure to comply with this instruction may result in serious personal injury or damage to the machine tool.*

*This manual was considered complete and accurate at the time of publication, however, due to our desire to constantly improve the quality and specification of all Mazak products, it is subject to change or modification.*



Notes:

## SAFETY PRECAUTIONS

The machine is provided with a number of safety devices to protect personnel and equipment from injury and damage. Operators should not, however, rely solely upon these safety devices, but should operate the machine only after fully understanding what special precautions to take by reading the following documentation thoroughly.

### • BASIC OPERATING PRACTICES

#### DANGER:

- 1) Some control panels, transformers, motors, junction boxes and other parts have high voltage terminals. These should not be touched or a severe electric shock may be sustained.
- 2) Do not touch any switches with wet hands. This too, can produce an electric shock.

#### WARNING:

- 1) The emergency stop pushbutton switch location should be well known, so that it can be operated at any time without having to look for it.
- 2) Before replacing a fuse, turn off the main incoming power switch to the machine.
- 3) Provide sufficient working space to avoid hazardous falls.
- 4) Water or oil can make floors slippery and hazardous. All floors should be clean and dry to prevent accidents
- 5) Do not operated any switch without a thorough understanding of the actions about to be taken.
- 6) Avoid accidental operation of switches.
- 7) Work benches near the machine must be strong enough to hold materials placed on them to prevent accidents. Articles should be prevented from slipping off the bench surface.
- 8) If a job is to be done by two or more persons, coordinating signals should be given at each step of the operation. The next step should not be taken unless a signal is given and acknowledged.

#### CAUTION:

- 1) In the event of power failure, turn off the main circuit breaker immediately.
- 2) Use the recommended hydraulic oils, lubricants and grease or acceptable equivalents.
- 3) Replacement fuses should have the proper current ratings.
- 4) Protect the NC unit, operating panel, electric control panel, etc. from shocks, since this could cause a failure or malfunction.
- 5) Do not change parameters or electrical settings. If changes are unavoidable, record the values prior to the change so that they can be returned to their original settings, if necessary.

- 6) Do not deface, scratch or remove any caution plate. Should it become illegible or missing, order another caution plate from the supplier, specifying the part number shown at the lower right corner of the plate.

### • BEFORE POWERING UP

#### DANGER:

Cables, cords or electric wires whose insulation is damaged can produce current leaks and electric shocks. Before using, check their condition.

#### WARNING:

- 1) Be sure the instruction manual and the programming manual are fully understood before operating the machine. Every function and operating procedure should be completely clear.
- 2) Use approved oil resistant safety shoes, safety goggles with side covers, safe clothes, and other safety protection required.
- 3) Close all NC unit, operating panel, electric control panel doors and covers.

#### CAUTION:

- 1) The power cable from the factory feeder switch to the machine main circuit breaker should have a sufficient sectional area to handle the electric power used.
- 2) Cables which must be laid on the floor must be protected from hot chips, by using rigid or other approved conduit, so that short-circuits will not occur.
- 3) Before first time operation of the machine after unpacking it or from being idle for a long period of time (several days or more), each sliding part must be sufficiently lubricated. To do so, push and release the pump button several times until the oil seeps out on the sliding parts. The pump button has a return spring, so do not force it to return.
- 4) Oil reservoirs should be filled to indicated levels. Check and add oil, if needed.
- 5) For lubrication points, oil specification and appropriate levels, see the various instruction plates.
- 6) Switches and levers should operate smoothly. Check that they do.
- 7) When powering the machine on, turn on the switches in the following order: first the factory feeder switch, then the machine main circuit breaker, and then the control power on switch located on the operating panel.
- 8) Check the coolant level, and add coolant, if needed.

• **AFTER CONTROL POWER IS TURNED ON**

CAUTION:

When the control power "ON" switch on the operating panel is on, the "READY" lamp on the operating panel should also be on (check to see that it is).

• **ROUTINE INSPECTIONS**

WARNING:

When checking belt tensions, do not get your fingers caught between the belt and pulley.

CAUTION:

- 1) Check pressure gages for proper readings.
- 2) Check motors, gear boxes and other parts for abnormal noises.
- 3) Check the motor lubrication, and sliding parts for evidence of proper lubrication.
- 4) Check safety covers and safety devices for proper operation.
- 5) Check belt tensions. Replace any set of belts that have become stretched with a fresh matching set.

• **WARM UP**

CAUTION:

- 1) Warm up the machine, especially the spindle and feed shaft, by running the machine for 10 to 20 minutes at about one-half or one-third the maximum speed in the automatic operation mode.
- 2) The automatic operation program should cause each machine component to operate. At the same time, check their operations.
- 3) Be particularly careful to warm up the spindle which can turn above 4000 rpm.

If the machine is used for actual machining immediately after being started up following a long idle period, the sliding parts may be worn due to the lack of oil. Also, thermal expansion of the machine components can jeopardize machining accuracy. To prevent this condition, always make sure that the machine is warmed up.

• **PREPARATIONS**

WARNING:

- 1) Tooling should conform to the machine specifications, dimensions and types.
- 2) Replace all seriously worn tools with new ones to prevent injuries.
- 3) The work area should be adequately lighted to facilitate safety checks.

- 4) Tools and other items around the machine or equipment should be stored to ensure good footing and clear aisles.
- 5) Do not place tools or any other items on the headstock, turret, covers and similar places (For T/M).

CAUTION:

- 1) Tool lengths should be within specified tolerances to prevent interference.
- 2) After installing a tool, make a trial run.

• **OPERATION**

WARNING:

- 1) Do not work with long hair that can be caught by the machine. Tie it back, out of the way.
- 2) Do not operate switches with gloves on. This could cause mis-operation.
- 3) Whenever a heavy workpiece must be moved, if there is any risk involved, two or more people should work together.
- 4) Only trained, qualified workers should operate forklift trucks, cranes or similar equipment and apply slings.
- 5) Whenever operating a forklift truck, crane or similar equipment, special care should be taken to prevent collisions and damage to the surroundings.
- 6) Wire ropes or slings should be strong enough to handle the loads to be lifted and should conform to the mandatory provisions.
- 7) Grip workpieces securely.
- 8) Stop the machine before adjusting the coolant nozzle at the tip.
- 9) Never touch a turning workpiece in the spindle with bare hands, or in any other way.
- 10) To remove a workpiece from the machine other than by a pallet changer, stop the tool and provide plenty of distance between the workpiece and the tool (for M/C).
- 11) While a workpiece or tool is turning, do not wipe it off or remove chips with a cloth or by hand. Always stop the machine first and then use a brush and a sweeper.
- 12) Do not operate the machine with the chuck and front safety covers removed (For T/M).
- 13) Use a brush to remove chips from the tool tip, do not use bare hands .
- 14) Stop the machine whenever installing or removing a tool.
- 15) Whenever machining magnesium alloy parts, wear a protective mask.

**CAUTION:**

- 1) During automatic operation, never open the machine door. Machines equipped with the door interlock will set the program to single step.
- 2) When performing heavy-duty machining, carefully prevent chips from being accumulated since hot chips from certain materials can cause a fire.

• **TO INTERRUPT MACHINING**

**WARNING:**

When leaving the machine temporarily after completing a job, turn off the power switch on the operation panel, and also the main circuit breaker.

• **COMPLETING A JOB**

**CAUTION:**

- 1) Always clean the machine or equipment. Remove and dispose of chips and clean cover windows, etc.
- 2) Make sure the machine has stopped running, before cleaning.
- 3) Return each machine component to its initial condition.
- 4) Check the wipers for breakage. Replace broken wipers.
- 5) Check the coolant, hydraulic oils and lubricants for contamination. Change them if they are seriously contaminated.
- 6) Check the coolant, hydraulic oil and lubricant levels. Add if necessary.
- 7) Clean the oil pan filter.
- 8) Before leaving the machine at the end of the shift, turn off the power switch on the operating panel, machine main circuit breaker and factory feeder switch in that order.

• **SAFETY DEVICES**

- 1) Front cover, rear cover and coolant cover.
- 2) Chuck barrier, tail barrier and tool barrier (NC software).
- 3) Stored stroke limit (NC software).
- 4) Emergency stop pushbutton switch.

• **MAINTENANCE OPERATION PREPARATIONS**

- 1) Do not proceed to do any maintenance operation unless instructed to do so by the foreman.
- 2) Replacement parts, consumables (packing, oil seals, O rings, bearing, oil and grease, etc.) Should be arranged in advance.
- 3) Prepare preventive maintenance and record maintenance programs.

**CAUTION:**

- 1) Thoroughly read and understand the safety precautions in the instruction manual.
- 2) Thoroughly read the whole maintenance manual and fully understand the principles, construction and precautions involved.

• **MAINTENANCE OPERATION**

**DANGER:**

- 1) Those not engaged in the maintenance work should not operate the main circuit breaker or the control power "ON" switch on the operating panel. For this purpose, "Do not Touch the Switch, Maintenance Operation in Progress!" or similar warning should be indicated on such switches and at any other appropriate locations. Such indication should be secured by a semi-permanent means in the reading direction.
- 2) With the machine turned on, any maintenance operation can be dangerous. In principle, the main circuit breaker should be turned off throughout the maintenance operation.

**WARNING:**

- 1) The electrical maintenance should be done by a qualified person or by others competent to do the job. Keep close contact with the responsible person. Do not proceed alone.
- 2) Overtravel limit and proximity switches and interlock mechanisms including functional parts should not be removed or modified.
- 3) When working at a height, use steps or ladders which are maintained and controlled daily for safety.
- 4) Fuses, cables, etc. made by qualified manufacturers should be employed.

• **BEFORE OPERATION & MAINTENANCE BEGINS**

**WARNING:**

- 1) Arrange things in order around the section to receive the maintenance, including working environments. Wipe water and oil off parts and provide safe working environments.
- 2) All parts and waste oils should be removed by the operator and placed far enough away from the machine to be safe.

**CAUTION:**

- 1) The maintenance person should check that the machine operates safely.
- 2) Maintenance and inspection data should be recorded and kept for reference.



## WARNING

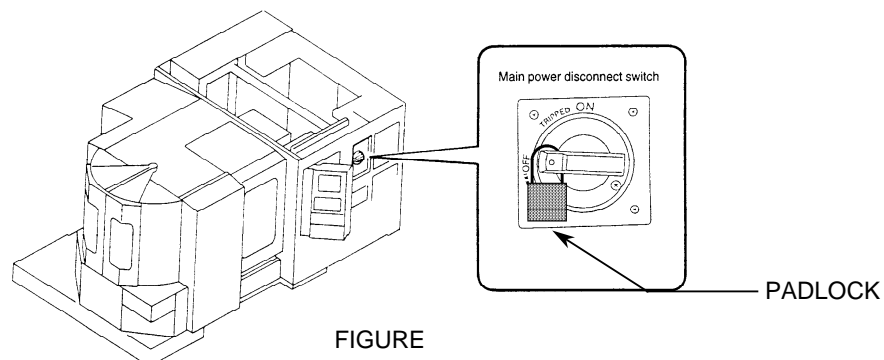
ALWAYS TURN THE MAIN CIRCUIT BREAKER TO THE “OFF” POSITION & USE AN APPROVED LOCKOUT DEVICE WHEN COMPLETING MAINTENANCE OR REPAIRS.

THE LOCKOUT PROCEDURE THAT FOLLOWS IS INTENDED TO SAFEGUARD PERSONNEL & EQUIPMENT DURING MAINTENANCE OPERATIONS, AND, REPRESENTS THE MINIMUM REQUIREMENTS. ANY ACTION SHOULD BE PRECEDED BY A “HAZARD ANALYSIS” TO DETERMINE ANY ADDITIONAL SAFETY PRECAUTIONS THAT MAY BE NECESSARY TO ENSURE THE SAFETY OF PERSONNEL AND EQUIPMENT.

**NOTE:** USE OF THE FOLLOWING LOCKOUT PROCEDURE IS MANDATORY WHEN COMPLETING MAINTENANCE OR REPAIRS.

### LOCKOUT PROCEDURE

- 1) THE LOCKOUT PROCESS MUST BE PERFORMED BY AUTHORIZED PERSONNEL ONLY.
- 2) INFORM ALL EFFECTED PERSONNEL OF YOUR INTENT TO LOCKOUT AND SERVICE THE SPECIFIED MACHINE.
- 3) SHUT OFF MACHINE POWER USING NORMAL SHUT DOWN PROCEDURES.
- 4) TURN OFF THE MACHINE AND INDIVIDUAL BUILDING CIRCUIT BREAKERS. MAKE SURE ALL STORED ELECTRICAL ENERGY IS RELIEVED. (EG: SPINDLE & AXIS SERVO CONTROLLERS)
- 5) CONNECT THE LOCKOUT DEVICE AS SHOWN IN FIGURE 1, AND ATTACH THE APPROPRIATE TAG AT THE MACHINE CIRCUIT BREAKER. THE TAG MUST IDENTIFY THE PERSON RESPONSIBLE FOR THE LOCKOUT. THIS WILL ENSURE THAT POWER CANNOT BE RESTORED BY ANYONE ELSE.
- 6) TEST THE MACHINE TO VERIFY THAT MACHINE SYSTEMS DO NOT OPERATE IN ANY WAY. ONCE TESTING IS COMPLETE, MAKE SURE ALL SWITCHES ARE IN THE “OFF” POSITION. CONFIRM THAT THE LOCKOUT DEVICES REMAIN PROPERLY INSTALLED.
- 7) COMPLETE THE REQUIRED MAINTENANCE OPERATIONS.
- 8) MAKE SURE ALL PERSONNEL ARE CLEAR OF THE MACHINE.
- 9) REMOVE THE LOCKOUT DEVICE. MAKE SURE ALL PERSONNEL ARE AT A SAFE LOCATION BEFORE RESTORING MACHINE POWER.



FIGURE

## INSTALLATION PRECAUTIONS

The following subjects outline the items that directly affect the machine installation and start-up. To ensure an efficient and timely installation, please follow these recommendations before calling to schedule a service engineer.

### • ENVIRONMENTAL REQUIREMENTS

**Avoid the following places for installing the machine:**

- 1) Avoid exposure to direct sunlight and/or near a heat source, etc. Ambient temperature during operation: 0° thru 45°C (32°F to 113°F).
- 2) Avoid areas where the humidity fluctuates greatly and/or if high humidity is present; normally 75% and below in relative humidity. A higher humidity deteriorates insulation and might accelerate the deterioration of parts.
- 3) Avoid areas that are especially dusty and/or where acid fumes, corrosive gases and salt are present.
- 4) Avoid areas of high vibration.
- 5) Avoid soft or weak ground (**minimum load bearing capacity of 1025 lbs./ft<sup>2</sup>**)

### • FOUNDATION REQUIREMENTS

For high machining accuracy, the foundation must be firm and rigid. This is typically accomplished by securely fastening the machine to the foundation with anchor bolts. In addition, the depth of concrete should be as deep as possible (minimum 6 - 8 inches). Note the following:

- 1) There can be no cracks in the foundation concrete or surrounding area.
- 2) Vibration proofing material (such as asphalt) should be put all around the concrete pad.
- 3) Form a "cone" in the foundation for J-bolt anchors, or use expansion anchors.
- 4) With the foundation anchor bolt holes open pour the primary **concrete at a minimum thickness of 6 - 8 inches**. Typically, the concrete must have a **minimum compression rating of 2500 lbs. @ 250 lbs. compression** and strengthened with reinforcing rods. When the concrete has cured, rough level the machine, and install the J-bolts, leveling blocks, etc., and pour grout into foundation bolt holes.
- 5) Mix an anti-shrinkage agent such as Denka CSA with concrete, or use Embecco grout to fill the foundation bolt holes.

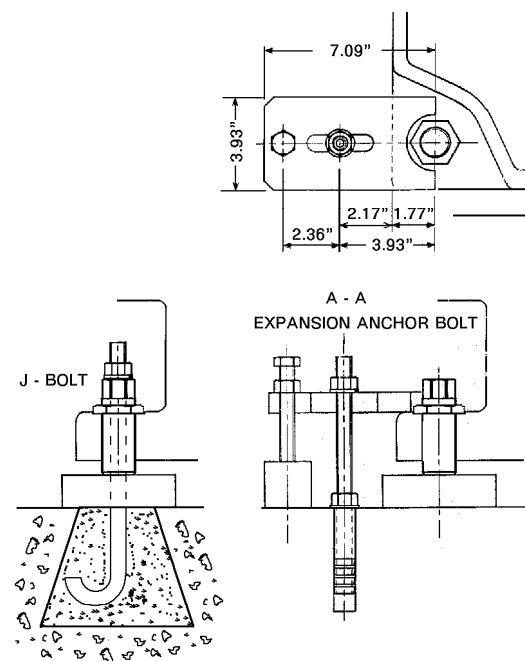
- 6) In pouring grout, fasten the leveling block base plates with the collar retaining screws to prevent the base plates from dropping. When the grout has completely hardened, level the machine properly, and tighten M24 nuts to secure the machine to the foundation.

#### Note:

The machine must be anchored to the foundation with J-bolts, expansion bolts or other suitable method.

The machine accuracy and alignment specifications quoted by Mazak can usually be obtained when the minimum foundation requirements are met. However, production of close tolerance parts requires the use of an appropriate certified foundation. Foundations that do not meet certified specifications may require more frequent machine re-leveling and re-alignment, which can not be provided under terms of warranty.

If any of these conditions cannot be met, contact the nearest Mazak service office immediately.



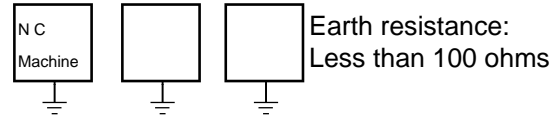
TYPICAL MACHINE HOLD DOWN OPTIONS



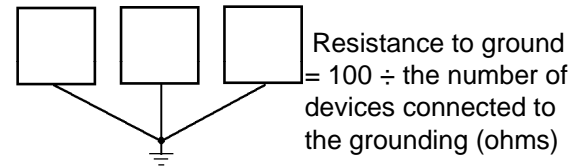
**• WIRING**

- 1) Use only electrical conductors with performance ratings equivalent or superior.
- 2) Do not connect any power cables for devices which can cause line noise to the power distribution panel, such as arc welders and high frequency machinery.
- 3) Arrange for a qualified electrician to connect the power lines.
- 4) Incoming supply voltage should not deviate more than  $\pm 10\%$  of specified supply voltage.
- 5) Source frequency should be  $\pm 2$  Hz of nominal frequency.

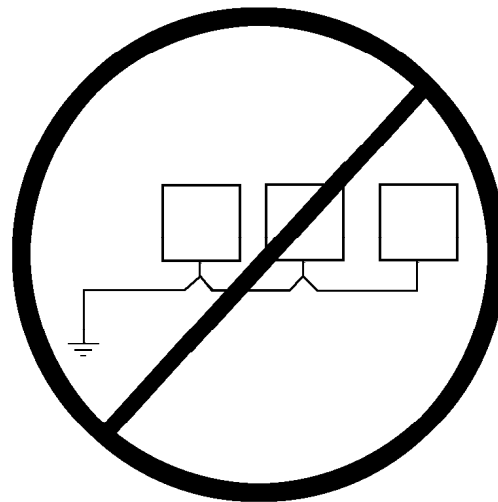
Desirable Independent Grounding:



Common Grounds:



**Note: Never ground equipment as shown below:**



**[ CAUTION ]**

**VERIFY THE ACTUAL MACHINE ELECTRICAL POWER REQUIREMENT AND THE MAIN TRANSFORMER RATING (IF APPLICABLE), AS WELL AS THE LOCAL ELECTRICAL CODE BEFORE SIZING AND INSTALLING THE INCOMING POWER WIRING. PLEASE SEE THE ADDITIONAL CAUTIONS ON THE FOLLOWING PAGE.**

**• GROUNDING**

- 1) An isolated earth ground with a resistance to ground of less than 100 ohms is required. Typically, a 5/8" copper rod, 8 feet long, and no more than 5 feet from the machine, is sufficient. Building grounds or multiple machines grounded to the same ground rod, are not acceptable.
- 2) The wire size should be greater than AWG (American Wire Gauge) No. 5 and SWG (British Legal Standard Wire Gauge) No. 6.



**CAUTION**

A step-down transformer is optional on some machine models. Be certain to verify the transformer Kva rating (where applicable), as well as local electrical code requirements before sizing and installing the incoming power wiring.

Machines not equipped with a main transformer are wired for 230 VAC, 3 phase. The end user must supply a step-down transformer where factory electrical power varies more than  $\pm 10\%$  of the 230 VAC rating.

**NOTE:**

Step-down or voltage regulating transformers are external (peripheral) to the machine tool and are considered the primary input line (source) for the machine. Local electrical code or practice may require a circuit breaker or other switching device for the isolation of electrical power when this type of transformer is used. In such cases, the machine tool end user is required to supply the necessary circuit breaker or switching device.

***FAILURE TO COMPLY CAN RESULT IN PERSONAL INJURY AND DAMAGE TO THE MACHINE. IF ANY QUESTION EXISTS, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.***

**WARNING**

MAZATROL CNC CONTROLLERS PROVIDE PARAMETER SETTINGS TO LIMIT SPINDLE RPM. THESE SETTINGS ARE BASED ON THE MAXIMUM SPEED SPECIFIED BY THE CHUCK/ACTUATOR MANUFACTURER.

MAKE SURE TO SET THESE PARAMETERS ACCORDING TO CHUCK SPECIFICATION WHEN INSTALLING A CHUCKING PACKAGE. ALSO, STAMP THE MAXIMUM SPINDLE RPM ON THE CHUCK IDENTIFICATION PLATE LOCATED ON THE MACHINE TOOL COVERS.

*REFERENCE THE CNC PARAMETER MANUAL SUPPLIED WITH THE SPECIFIC MACHINE TOOL TO IDENTIFY THE REQUIRED PARAMETERS TO CHANGE.*

**FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE MACHINE, SERIOUS INJURY OR DEATH.**

IF ANY QUESTIONS EXIST, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.

**WARNING**

MAZAK MACHINES ARE ENGINEERED WITH A NUMBER OF SAFETY DEVICES TO PROTECT PERSONNEL AND EQUIPMENT FROM INJURY AND DAMAGE.

***DO NOT REMOVE, DISCONNECT, BYPASS OR MODIFY ANY LIMIT SWITCH, INTERLOCK, COVER, OR OTHER SAFETY FEATURE IN ANY WAY, EITHER MECHANICALLY OR ELECTRICALLY.***

**FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE MACHINE, SERIOUS INJURY OR DEATH.**

IF ANY QUESTIONS EXIST, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.

**WARNING**

MAZAK MACHINES ARE ENGINEERED WITH A NUMBER OF SAFETY DEVICES TO PROTECT PERSONNEL AND EQUIPMENT FROM INJURY AND DAMAGE.

***MACHINE OPERATOR DOORS AND COVERS ARE DESIGNED TO WITHSTAND ACCIDENTAL IMPACT OF A BROKEN INSERT WHERE A MAXIMUM WEIGHT INSERT AT MAXIMUM TOOL DIAMETER IS RUNNING AT MAXIMUM SPINDLE RPM***

***NEVER USE A CUTTING TOOL OR TOOL INSERT THAT EXCEEDS MACHINE SPECIFICATIONS OR THAT OF A SPECIFIC TOOL HOLDER ITSELF, WHICHEVER IS LESS. THIS RESTRICTION APPLIES TO DIAMETER, WEIGHT, MAXIMUM SPINDLE RPM, MAXIMUM CUTTING TOOL ROTATION SPEED, ETC.***

*FOR COMPLETE SPECIFICATIONS, MAKE SURE TO REFERENCE OPERATION, MAINTENANCE AND DETAIL SPECIFICATION DOCUMENTATION SUPPLIED WITH THE MACHINE AND BY THE TOOLING MANUFACTURER.*

*NOTE: THE MAXIMUM INSERT WEIGHT FOR MAZAK MACHINES IS 20 gf. (0.04 lbs.).*

**FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE MACHINE, SERIOUS INJURY OR DEATH.**

IF ANY QUESTIONS EXIST, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.

**WARNING**

BEFORE STARTING OPERATION, CHECK THAT THE WORKPIECE IS SECURELY MOUNTED IN A VISE OR A SUITABLE FIXTURE. BE CERTAIN THAT THE MOUNTING IS SUFFICIENT TO WITHSTAND CUTTING FORCES DURING WORKPIECE MACHINING.

**FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE MACHINE, SERIOUS INJURY OR DEATH.**

IF ANY QUESTIONS EXIST, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.

**WARNING**

CONFIRM PROPER WORKPIECE FIXTURING/CLAMPING, TOOL SETUP AND THAT THE MACHINE DOOR IS SECURELY CLOSED BEFORE THE START OF MACHINING.

VERIFY ALL SAFETY PRECAUTIONS OUTLINED IN THIS MANUAL BEFORE USING THE FOLLOWING CUTTING CONDITIONS:

- CUTTING CONDITIONS THAT ARE THE RESULT OF THE MAZATROL FUSION 640 AUTOMATIC CUTTING DETERMINATION FUNCTION
- CUTTING CONDITIONS SUGGESTED BY THE MACHINING NAVIGATION FUNCTION
- CUTTING CONDITIONS FOR TOOLS THAT ARE SUGGESTED TO BE USED BY THE MACHINING NAVIGATION FUNCTION

**FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE MACHINE, SERIOUS INJURY OR DEATH.**

IF ANY QUESTIONS EXIST, CONTACT THE NEAREST MAZAK SERVICE CENTER FOR ASSISTANCE.

**DOOR INTERLOCK SAFETY SPEC.**

Determined by YMW Eng. H.Q. '99/9/1  
Revised by YMC Prod. Eng. '99.10.28

**MACHINING CENTER**

DOOR	MODE	SET UP SWITCH	
		O (OFF)	I (ON)
OPEN	MANUAL	Prohibit to move axis. Prohibit to start spindle running. Prohibit to operate manual ATC. Prohibit to operate manual Pallet Changer. Prohibit to run chip spiral conveyor.	Limit the rapid override. Max is 12%. Prohibit to run chip spiral conveyor. Can run spindle JOG. Can run spindle Orient. Can operate manual ATC.
	AUTO	Prohibit cycle start. Prohibit to run chip spiral conveyor.	Prohibit cycle start. Prohibit to run chip spiral conveyor.
CLOSE I V OPEN	MANUAL	Door is always locked. Door lock can be released by pushing "DOOR UNLOCK SW" on operator panel. But, it can not release in operating ATC/Pallet changer/Axis/Spindle.	
		Prohibit to move axis. Prohibit to start spindle running. Prohibit to operate manual ATC. Prohibit to operate manual Pallet Changer. Prohibit to run chip spiral conveyor.	Limit the rapid override. Max is 12%. Chip spiral conveyor would stop. Can run spindle JOG. Can run spindle Orient. Can operate manual ATC.
	AUTO	Door is always locked. Door lock can be released by pushing "DOOR UNLOCK SW" on operator panel. But, it can not release in auto operation running except single block stop or feed hold stop or M00 program stop or M01 optional stop <b>and spindle stop</b> . If not, Alarm displayed "Door open invalid".	
		If release the lock by note(*1), Alarm will occur then stop the all motion. Chip spiral conveyor would stop.	Prohibit cycle start. Chip spiral conveyor would stop.
CLOSE	MANUAL	No Limitation.	No Limitation.
	AUTO	No Limitation.	Can not run auto operation.

**TURNING CENTER**

DOOR	MODE	SET UP SWITCH	
		O (OFF)	I (ON)
OPEN	MANUAL	Can operate CHUCK, TAILSLEEVE , STEADY REST for Loading workpiece.  Can NOT operate Spindle, Axis, Turret, Coolant, ToolEye, Partscatcher, Chip Conveyor.	Can operate CHUCK, TAILSLEEVE , STEADY REST for Loading workpiece.  Can not operate Spindle running, but Can operate Spindle JOG and Spindle Orient. Limitation of speed for axis movement . (Override is 10% max.) 1 step index only for turret.
	AUTO	Can operate CHUCK, TAILSLEEVE , STEADY REST for Loading workpiece. Can not run Auto-operation.	Can operate CHUCK, TAILSLEEVE , STEADY REST for Loading workpiece. Can not run Auto-operation.
CLOSE -> OPEN	MANUAL & AUTO	Can not open the front door in Spindle running, Axis moving, Auto-running( Cycle start, Feed hold ) due to Mechanical locking system. (Except Single Block Stop or M00 program stop or M01 optional stop) But, if release the lock by note(*1), Alarm will occur then stop the all motion.	
CLOSE	MANUAL	No Limitation.	No Limitation.
	AUTO	No Limitation.	Can not run Auto-operation.

\*1 : Door lock mechanism can not be released in machine stop by NC power OFF.

If it is necessary to release the lock such as emergencies, the lock can be released by operating the supplementary lock release mechanism of the main body of the safety door lock switch.

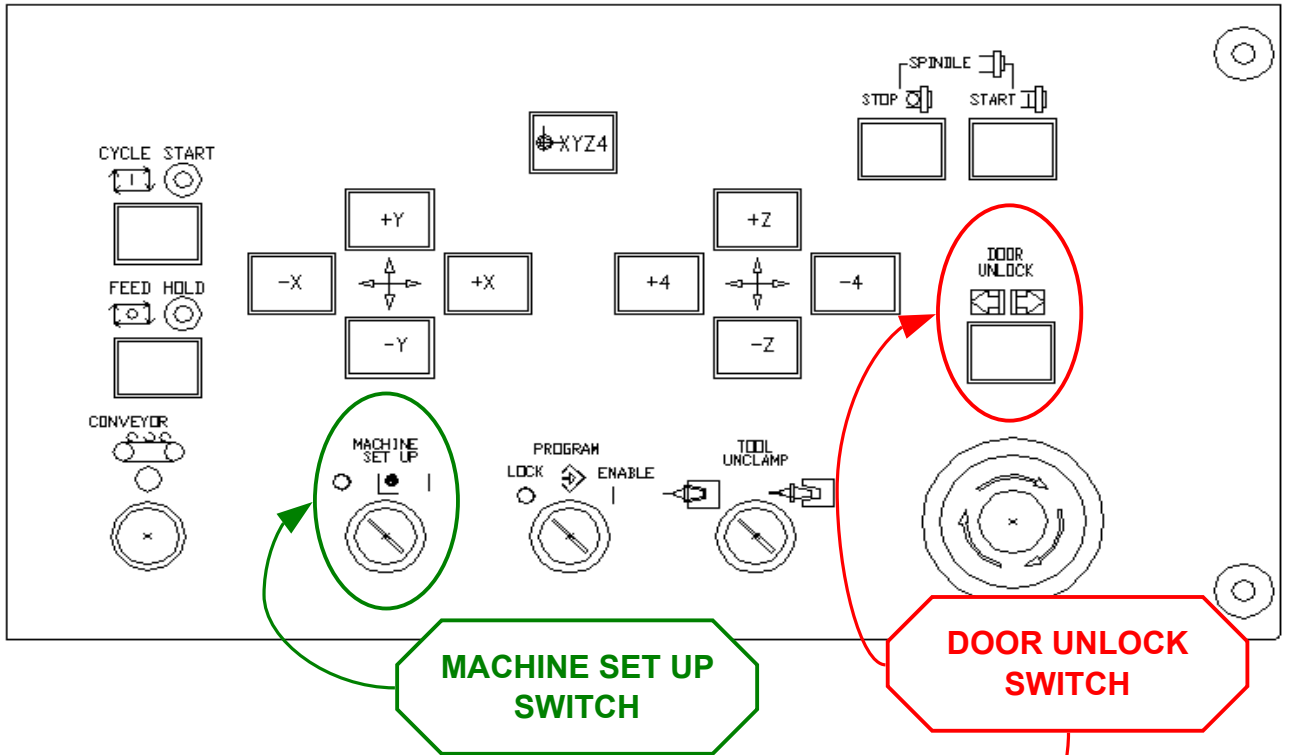
\*2 : Override Limitation of Rapid speed of AXIS

Machining Center : 12%. Turning Center : 10%.

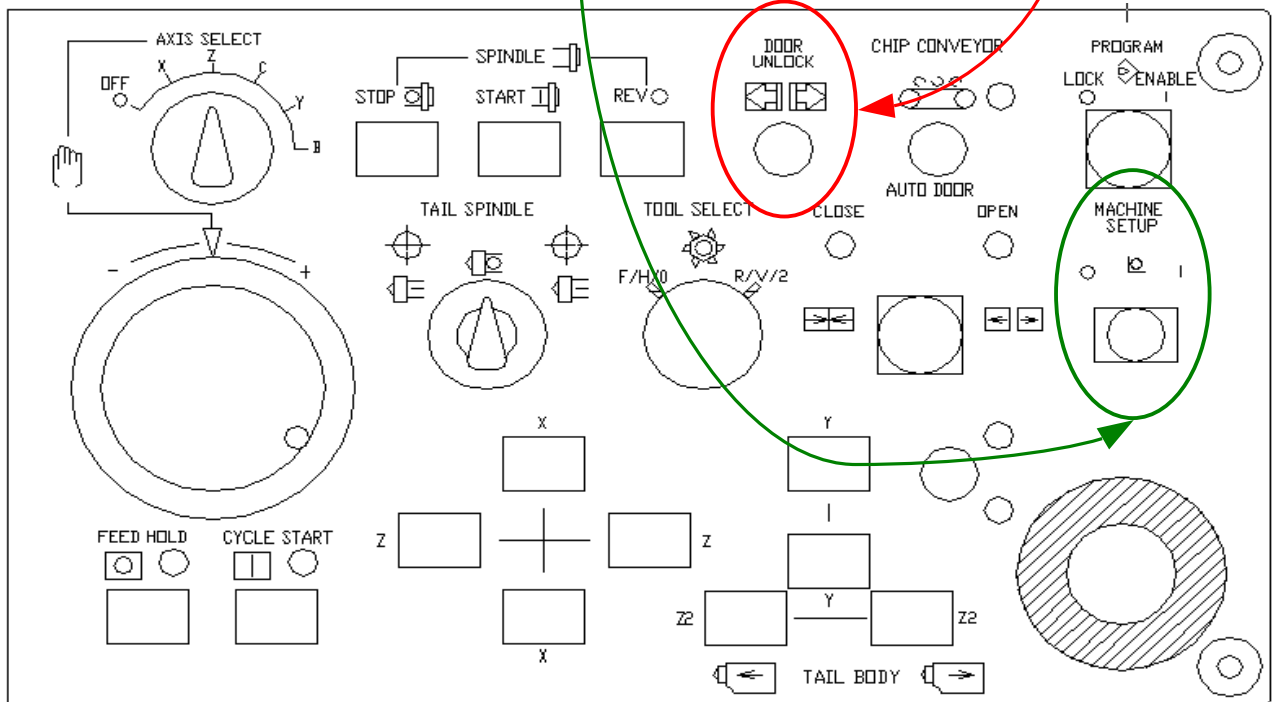
\*3 : Chip Conveyor and Coolant should stop in the door open.

**APPENDIX**

**SWITCH PANEL for M640M (Machining Center)**



**SWITCH PANEL for M640MT/T (Turning Center)**



# MACHINE DOCUMENTATION CUSTOMER EVALUATION



The Other Thoroughbred From Kentucky

Your opinion is important to enable us to issue documentation that will fit your needs.  
Thank you for taking the time to supply this information.

Date: \_\_\_\_\_

Machine Type: \_\_\_\_\_ Machine Serial#: \_\_\_\_\_ NC Type: \_\_\_\_\_

Customer: \_\_\_\_\_ Reported By: \_\_\_\_\_

Address: \_\_\_\_\_ Position: \_\_\_\_\_

Telephone#: \_\_\_\_\_

Manual Publication #: \_\_\_\_\_

	Excellent	Good	Adequate	Fair	Poor
<b><i>How well is the documentation suited to your needs?</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b><i>Were you able to find the necessary information easily?</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b><i>How well are the manuals organized?</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b><i>How easy are the manuals to understand?</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Notes:

X0000	TSR.PB	TOOL SELECT REV.PB 29 32 65	964	2310	2455	2754	2763	8381	8390
X0001	X1.PLS	X1 PULSE PENDANT 905 914 2670	9553	13172					
X0002	FHD	FEED HLD PENDANT 925 942 5458	5643	5660					
X0003	WLFLSW	WAY LUBE FLOAT SW 8548							
X0004	WLPSW	WAY LUBE PRESS. SW 8517 8523 8540	8544						
X0005	TSF.PB	TOOL SELECT FWD.PB 28 31 49	963	2309	2454	2753	2762	8380	8389
X0006	CCOVL D	CHIP CONVEYOR OVER 7960 7964							
X0007	XINT1	XAXIS INTLCK 1 6684 6704 6707							
X0008	CCALM	CHIP CONVEYOR INVT 7941 8015 8048							
X0009	XINT2	XAXIS INTLCK 2 6679 6694 6708							
X000A	CNTCV	CENTER COVER 719 724 3222 3404 3409 3415 7838 12452 12462 12580 12589 12597	3235 3423 12489	3247 6664 12499	3275 6709 12516	3295 7773 12526	3302 7789 12551	3343 7801 12559	3350 7822 12572
X000B	MDINT	MACHINE DOOR CLOSE 688 699 723	750	7856	7913	8266	8300		
X000C	X100.P	X100 PLS PENDANT 915 929							
X000E	RT4UC	ROTARY 4AXIS UNCL. 4165 4171 4380	4382						
X000F	4NG	4HT AXIS NEGLECT 4176							
X0010	TROVHT	TRANSF.OVER HEAT 8613							
X0011	HYD.PS	HYDRO.PS 7496 8494							
X0012	MFIN	M FUNC. FINISH 4313 4341 4362 7660 7677	4397	4401	4405	4422	4427	4432	7644
X0013	MGDRLS	MAGAZINE DOOR LS 710 6671 6726	6763	7306	8407	8409			
X0014	MDINT	MACHINE DOOR CLOSE 683 694 717	747	7861	7914	8260	8302		
X0015	SPARE	SPARE 8559							
X0016	MNMGIT	MG.MNL. INTERRUPT 2238 2524 2535	2539	2559	2564	8373	8385	8447	
X0017	MMSRDY	MMS SENSOR READY 5210 5228 5565							
X0018	MMSIMP	MMS INPROCESE 5211 5222							
X0019	MMSPON	MMS POWER ON 5225 5564							

X001A	MOTRIP	MOTOR THERMAL TRIP 8602							
X001B	COTRIP	CONV.THERMAL TRIP 8606							
X001C	CYCLST	CYCLE START PB. 895							
X001E		9369							
X0020	*-LX	*-LX(INBIT READ F) 4217 4232							
X0021	MGDIPF	MG.D.INT.(P.OF CF) 708 8408 8410							
X0023	ESPPOF	EMG.STOP P.CUT CNF 767 774 783							
X0025	TNOSMD	TOOL NO. SET MODE 9420 9423 9432							
X0026	PNOSMD	POCKET NO.SET MODE 9419 9422 9431							
X0028	CVCLSS	COVER COOLANT SW. 4107							
X0029	MDIPOC	M.DR.INT.P.OFF CNF 759 792							
X002C	MARERS	MEAS. ARM RETRACT 4494 4500 8641	8657	8659					
X002D	MAEXRS	MEAS. ARM EXTEND 4493 4499 8642	8644	8656					
X002E	*ESP2	EMG.STOP 2 327 2680 13364	13396						
X0030	SPARE-	SPARE 881							
X0031	ATCRET	ATC ARM RETRACT 3599							
X0033		8564							
X0036	HGLS	HIGH GEAR LS 5779							
X0037	LGLS	LOW GEAR LS 5793							
X0038	CUPPB	COUNTER UP PB.(OP) 9440 9451							
X0039	CDWNPB	COUNTER DOWN PB.OP 9443 9448							
X003A	HYD.PS	WARM UP PRG.ON/OFF 1241							
X0042	PUHKLS	PALLET UNHOOK LS 7407							
X0057	FHD	EXT FEED HOLD PB. 1154							
X005E	CST	CYCLE START PB. 938 1065							
X0064	SPX64	SPARE 13152							



X0148	MEM.B	MEMORY MODE PB 7360 7382 12245 12314
X0149	MDI.B	MDI MODE PB 7364 12251
X014A	RT.B	RAPID TR. MODE PB 7344 12257
X014B	ZRN.B	ZERO RET MODE PB 7348 12268
X014D	HS1.B	HANDLE *1 MODE PB 907
X014E	HS10.B	HANDLE *10 MODE PB 917
X0150	VFC.B	VFC PB 510
X0151	TAPE.B	TAPE MODE PB 7357 7381 12239 12310
X0154	COLMNU	COOLANT MENU PB 6890
X0155	CLSP.P	COOLANT STOP PB 4000
X0156	MF1.B	MF1 PB 318 585 761 786 799 836 971 1115 2273 2277 2909 2913 3968 5307 6883 8280 8421 10173 10178 10185 10188 10203 10206 10224 10228
X0159	HS100B	HANDLE *100 MODE P 931
X015A	MCMN.B	MACHINE MENU PB 6885
X015B	SBK.B	SINGLE BLOCK PB 9057
X015F		326 330 2435 2440 2445 4335 7938 7957 7982 8044 8064 8362 13366 13398
X0178	SKIP.M	MMS SKIP.M 5180 5190 5230 5257 5294
X017D	TLMSKP	T.MEASURE SKIP PRS 5179 5194
X0180	RDY1	SERVO READY X.N 347
X0181	RDY2	SERVO READY Y.N 346
X0182	RDY3	SERVO READY Z.N 345
X0188	AX1	X AXIS SELECT NC 8254
X0189	AX2	Y AXIS SELECT NC 8255
X018A	AX3	Z AXIS SELECT NC 8256
X018B	AX4	4 AXIS SELECT NC 4205 4207 8249
X018C	AX5	5 AXIS SELECT NC 4290 4295 8251

X0190	MV1	MOVE +X.N 7766 7782
X0191	MV2	MOVE +Y.N 7764 7780
X0192	MV3	MOVE +Z.N 7765 7781
X0193	MV4	MOVE +4.N 4208
X0194	MV4	MOVE +5.N 4296
X0198	MD1	MOVE -X.N 5815 6025 7767 7783
X0199	MD2	MOVE -Y.N 5821 6035 7768 7784
X019A	MD3	MOVE -Z.N 5827 6045 7769 7786
X019B	MD4	MOVE -4.N 4209 6055
X019C	MD5	MOVE -5.N 4297 6065
X01A4	ZP15	ZERO POSITION 51.N 303
X01E0	JOG.N	JOG MODE .N 647 5872 6093 6624 7537 7540 7559
X01E1	H.N	HANDLE MODE.N 648 3296 3303 3344 3351 4192 4279 4325 6850 6854 6863 6865 7557 7569 7577
X01E2	S.N	STEP MODE.N 649 4187 4274 5873 6094 6625 7558
X01E3	PTP.N	PTP MODE.N 1180 4743
X01E4	Z.N	ZERO RETURN MODE.N 650 5844 5874 6626 7546 7553
X01E8	M.N	MEMORY MODE.N 643 1072 1108 1114 2032 4516 4520 4609 4628 5023 7525 7531 10612 13472
X01E9	T.N	TAPE MODE.N 641 1073 1107 1113 2031 4517 4521 5024 7527 7529 9404 9412
X01EB	D.N	MDI MODE.N 642 1499 1568 5397 5437 5509 7534 10610 10618 10651
X01F0	MA.N	NC READY.N 335 435 442 743 5835 13367 13399 13407
X01F1	SA.N	SERVO READY.N 344 516 521 4979 5116 7691 7707 7731
X01F2	OP.N	AUTO MODE.N 467 511 821 861 1100 1109 1116 4668 7408 8168 8311 8342 13192 13202 13544
X01F3	STL.N	CYCLE START.N 825 1159 1209 1235 4452 4473 4747 5060 5114 5136 5157 5486 6880 8310 8350 8896 13469 13543
X01F4	SPL.N	FEED HOLD.N 1077 1227 1236 5061 5487 13470









Y0183	DTCH4N	4TH AXIS NEGLECT 4177 4195 4394	5804	6809	8719	12669	Y01C0	*-MITX	*MANUAL INT.-X NC 6706 5894 5908	7470
Y0184	DTCH5N	5TH AXIS NEGLECT 4264 4282 4360	5807	6836	8724	11389	Y01C1	*-MITY	*MANUAL INT.-Y NC 6748 5929 5941	7473
Y0188	*SVFXN	*SERVO OFF X NC 856					Y01C2	*-MITZ	*MANUAL INT.-Z NC 6785 5962 5974	7477
Y0189	*SVFYN	*SERVO OFF Y NC 857					Y01C3	*-MIT4	*MANUAL INT.-4 NC 6803 5997	
Y018A	*SVFZN	*SERVO OFF Z NC 858					Y01C4	*-MIT5	*MANUAL INT.-5 NC 6821 6020 11504	
Y018B	*SVF4N	*SERVO OFF 4 NC 6812 6794 6804					Y01C8	AMLKXN	AUTO M.LOCK X NC 7588 7595 7602	7608
Y018C	*SVF5N	*SERVO OFF 5 NC 6838 6817 6831	11507				Y01D0	MMLKXN	MANUAL M.LOCK X NC 7612 5895 7616	
Y0190	MIX.N	MIRROR IMAGE X NC 3980 9998 10002					Y01D1	MMLKYN	MANUAL M.LOCK Y NC 5930	
Y0191	MIY.N	MIRROR IMAGE Y NC 10006					Y01D2	MMLKZN	MANUAL M.LOCK Z NC 5963	
Y0193	MI4.N	MIRROR IMAGE 4 NC 10010					Y01D8	+JX.N	+JX.N 5893	
Y0198	*+EDXN	*EXT.DEC.+X NC 11510					Y01D9	+JY.N	+JY.N 5928 4957 4965	
Y01A8	*+AITX	*AUTO INT.+X NC 6681					Y01DA	+JZ.N	+JZ.N 5961	
Y01A9	*+AITY	*AUTO INT.+Y NC 6714					Y01DB	+J4.N	+J4.N 5988	
Y01AA	*+AITZ	*AUTO INT.+Z NC 6751					Y01DC	+J5.N	+J5.N 6011	
Y01AB	*+AIT4	*AUTO INT.+4 NC 6799 6786					Y01E0	-JX.N	-JX.N 5911 6024	
Y01AC	*+AIT5	*AUTO INT.+5 NC 6818 6813 11495					Y01E1	-JY.N	-JY.N 5944 6034	
Y01B0	*-AITX	*AUTO INT.-X NC 6686					Y01E2	-JZ.N	-JZ.N 5977 6044	
Y01B1	*-AITY	*AUTO INT.-Y NC 6715					Y01E3	-J4.N	-J4.N 5999 6054	
Y01B2	*-AITZ	*AUTO INT.-Z NC 6752					Y01E4	-J5.N	-J5.N 6023 6064	
Y01B3	*-AIT4	*AUTO INT.-4 NC 6800					Y01F8		12339	
Y01B4	*-AIT5	*AUTO INT.-5 NC 6819 11498					Y0200	ZRNA.N	ZERO RETURN A.N 12351 7547 7554	
Y01B8	*+MITX	*MANUAL INT.+X NC 6696 5890 7469					Y0201	ZRNB.N	ZERO RETURN B.N 7548 7555	
Y01B9	*+MITY	*MANUAL INT.+Y NC 6740 5925 7472					Y0208	JM.N	JOG MODE.N 7518	
Y01BA	*+MITZ	*MANUAL INT.+Z NC 6777 5958 7476					Y0209	HM.N	HANDLE MODE.N 7509 6097 7387 7453 7466 7511 7515 12288 12297	
Y01BB	*+MIT4	*MANUAL INT.+4 NC 6802 5986					Y020A	SM.N	STEP MODE.N 7513 7516 7523	
Y01BC	*+MIT5	*MANUAL INT.+5 NC 6820 6008 11501					Y020B	PTPM.N	PTPM.N 7501	







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M3263 M3264
138*--|/|-----|/|-----[MOV K0 D8 ]*
MAGJSA MAGJST
MAGAZINE POSITION
137 142 285 1465
2414 2419 2636 2640
2653 2658 9715 9719
12806 10834 9731

M854 T17
143*--|/|-----|/|-----<T17 K3000>*
TMCTST TMCTT
588 146
M854
149*--|/|-----|/|-----[MOV T17 D314 ]*
TMCTST TMCTT
588 146
60 MIN COUNTER
153*--|/|-----|/|-----<C4 K12 >*
TMCTT
146
P252 Y6 Y6 POWER ON
158*--|/|-----|/|-----< >*
PWON.M
160
160 98 114 158
159 175 200 218
227 276 282 294
736 593 458 436
2024 1357 1089 1085
3458 3432 3426 2781
5326 5315 5018 4064
7281 6938 6895 5352
8412 8273 8208 7409
9697 9040 8915 8608
9766 9750 9740 9706
9871 9796 9793 9771
10492 9926 9923 9894
10818 10576 10563 10535
11077 11001 10976 10846
11131 11104 11091 11082
11203 11196 11180 11176
11281 11271 11267 11247
11367 11351 11318 11288
11448 11441 11437 11418
11492 11470 11462 11458
11553 11548 11545 11511
11576 11566 11559 11557
11750 11734 11704 11591
11897 11881 11856 11812
11988 11925 11919 11903
12604 12422 12329 12044
12697 12679 12654 12649
12815 12751 12719 12704
13337 12861

Y6
*--|/|-----|/|-----[PLS M1228 ]*
PWON.M
160
POWER ON INIT.
162 167 782

M1228
167*--|/|-----|/|-----[CALL P21 ]*
PWRONI
162
M1209
170*--|/|-----|/|-----[WAND R7000 H4FFF R7000 ]*
GAPELM
4
4 2 164 166
172 174 202 204
518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779

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Y6
175*--|/|-----|/|-----[MOV H80 R7010 ]*
PWON.M
160
178
*--|/|-----|/|-----[MOV H81 R7011 ]*
181
*--|/|-----|/|-----[MOV H93 R7012 ]*
184
*--|/|-----|/|-----[MOV HD R7013 ]*
187
*--|/|-----|/|-----[MOV H6D R7014 ]*
190
*--|/|-----|/|-----[MOV K2 R7540 ]*
193

194* [< K160 R1999 ]-----[MOV K0 R1999 ]*
199
199 196 1307 1353
1459 1622 1684 1764
1814 2005 2013 2137
4986 4983 2828 2226
9742 5016 5002 4989
12790 12788 12637 12609
12820 12817 12809

Y6
200*--|/|-----|/|-----[WOR R7000 H80 R7000 ]*
PWON.M
160
4
4 2 164 166
172 174 202 204
518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120

MENU DATA
*--|/|-----|/|-----[WAND R413 HFF D21 ]*
208 217 281 6924
6940 10117 10121 10125
10129 10133 10137 10141
10153 10149 10145

MENU NUMBER
209* [= K0 R16 ]-----[MOV R410 D22 ]*
214 6928 6943 10014
10018 10022 10026 10029
10032 10035 10038 10042
10058 10054 10050 10046
10074 10070 10066 10062
10090 10086 10082 10078
10106 10102 10098 10094

MENU DATA
*--|/|-----|/|-----[MOV K0 D21 ]*
208 217 281 6924
6940 10117 10121 10125
10129 10133 10137 10141
10153 10149 10145

Y6
218*--|/|-----|/|-----[WOR R7002 H4 R7002 ]*
PWON.M
160
222
222 220 1269 1271
9752 9754 12812 12814

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-----[WOR R7001 H8000 R7001 ]* 226 224 1262 1264
1531 1533 1540 1542
226 4995 4997 5005 5007
13048 13046 12803 12801
13104 13102 13090 13088
13353 13351 13146 13144

Y6
227*--| |-----[WAND R2001 HFF D27 ]* 231 242 250 254
PWON.M 257 260 265 270
160 273
M2204

232*[D< K0 R6020 ]----->* 236 4949 4954 4964

M326 M401 M355 M326 TOUCH TOOL
237*--| |-----| |-----| |-----| |----->* 243 237 247 4023
TCHT TCM TS=0 5182 5192 5203 5235
243 2852 2014 5270 5291
* [= H12 D27 ]*

M327 M401 M355 M327 SPECIAL TOOL
244*--| |-----| |-----| |-----| |----->* 251 244 266 274
SPET TCM TS=0 2036 5470 5571 5584
251 2852 2014 5626 5629 5683
M326
TCHT
243
* [= H11 D27 ]*

231
252* [< H0 D27 ]-> HA D27 ]*-----| |----->* M833 ENABLE AUTO T.MEAS
267 1663 4445
231 SPET
* [= HF D27 ]-----| |----->* M1003 @EDMIM
231
* [= H13 D27 ]*----->*

231
268* [< H0 D27 ]-> H14 D27 ]*-----| |----->* M834 ENABLE MNL.T.MEAS.
275 4447
M327 M834
SPET
231 251

Y6 M2007 CRT OFF PB AUX
276*--| |----->* 277 278 6886 6891
PWON.M
160
M2007
278*--| |-----[MOV K0 D21 ]* MENU DATA
CRTFBX 208 217 281 6924
277 6940 10117 10121 10125
10129 10133 10137 10141
10153 10149 10145

Y6 Y230 MNL.ABSOLUTE.N
282*--| |----->* 283 11556
PWON.M
160
*-----[MOV D8 R2000 ]* 286 1466 9559 13339
MGPOSI
137
*-----[MOV K0 R1998 ]* 289 11485

M455 Y2B9 PC FEED RATE 2.N
290*--| |----->* 291 11546

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IMINIT
11519
M455 Y2B8 PC FEED RATE 1.N
292*--| |----->* 293 11547
IMINIT
11519
Y6 K1 ZP.X MEMORY
294*--| |-----[MOV R6017 M472 ]* 297 5809 5818 5877
PWON.M 5879 5889 5897 5899
160 5907 8708 11587
=< M897 ZP.5 MEMORY
298*[BIT R6017 H4 ]----->* 301 5805 6001 6003
6013 6015 8722 11580

M1250 Y134 5 ZERO POSI.L.B
302*--| |----->* 304
5ZRL
X1A4 Y119
*--| |----->* 305
ZP15

M1252 Y135 5 ZERO POSI.#2L.B
306*--| |----->* 307
5ZRL2

M1251 Y136 6 ZERO POSI.L.B
308*--| |----->* 309
6ZRL

M1253 Y137 6 ZERO POSI.#2L.B
310*--| |----->* 311
6ZRL2

M666 M2013 M2001 TPS PB AUX
312*--| |----->* 315 4666
MN4 MD10
10019 10154
M663 X156 M2004 SPINDLE JOG PB AX
319 937 5456 5642
MD8 MF1.B 5658
10146
M664 M2005 SPINDLE REV PB AX
322 5708
MD9
10150

M2015 M2013 M2003 ZERO RET 2 PB AUX
323*--| |----->* 325 7350 12272
MN300 MD10
10051 10154
X15F X2E M1088 M1375 EMG STOP SIGNAL M
326*--| |----->* 329 332 791 832
*ESP2 @YME-C 8066

X15F M1088 X1F0 Y29F Y1 HYDRO.MOTOR ON
330*--| |-----| |-----| |-----| |----->* 337 39 82 89
@YME-C MA.N PCEMG 343 715 828 4013
5306 4329 4351 4376 4385
7943 7912 7303 5639
8565 8558 8495 8453
13565 8836 8676 8619

M1375 M1088 Y95
*--| |-----| |----->* 338
*EMGSM @YME-C

X1F5 M200 *RESET
*--| |----->* 340 22 40 81
RST.N 88 582 621 979
1080 1168 1490 1647
1877 1871 1846 1653
2288 2035 1927 1892
2355 2346 2303 2297
2510 2505 2392 2383
2849 2606 2598 2594
3082 3019 2957 2948
3138 3133 3110 3097
3981 3974 3149 3144

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X1F0 Y6 MA.N PULSE
435*--| |-----|-----[PLS M446 ]* 438 439 454 978
MA.N PWON.M 6935 7399 10306
160
M446
439*--| |-----|-----[CALL P21 ]*11082 169 441
MAP
438
X1F0 MA.N MEM T 1 (YME)
442*--| |-----|-----<T155 K10 >* 444 969 5311 6381
MA.N 6416 8370
MA.N MEM T 2 (YME)
442*--| |-----|-----<T156 K50 >* 448 837 1242 1249
9398
M1041
451*--| |-----|-----[CALL P46 ]*12654 453
@DNC
M446
454*--| |-----|-----[MOV K0 D49 ]* 457
MAP
438
Y6
458*--| |-----|-----[MOV R1937 D28 ]* 461 463 472 475
PWON.M 479 482 486 489
160 493 496 500 503
[SFR D28 K8 ]* 461 463 472 475
479 482 486 489
493 496 500 503
X202 X1F2 M328 M324
465*--| |-----|-----< >* 461 466 514
TAP.N OP.N ATSEL
1634
M324
VFCSTX
469
M1199 AUX 1
470*-< H1F D28 ]-> H2C D28 ]-----< >* 476 505 568 4481
4484 5051 5054 5068
461 461 8947 8987 9515 9539
9601 9587 9583 9548
10494 10481 9628 9614
10897 10886 10885 10515
10940 10932 10919 10905
11965 11025 11016 10963
12049 12048 11980 11977
12098 12089 12062 12050
12158 12133 12122 12118
12225 12188 12179 12169
12831 12826 12696 12235
13418 13362 12882 12868
M1198 AUX 2
477*-< H3F D28 ]-> H45 D28 ]-----< >* 483 506 8954 8988
9554 9557 9581 10486
461 461 10501 10522 10845 10857
10955 10954 10872 10863
11983 11978 11974 10964
12874 12846 12830 12693
13406 13400 13389 12884
M1197 AUX 3
484*-< H4F D28 ]-> H54 D28 ]-----< >* 490 507 8961 8989
10491 10508 10529 12691
461 461 12840 12863 12875 13500
13518 13507 13502
M1196 AUX 4
491*-< H5F D28 ]-> H67 D28 ]-----< >* 497 508 8968 8990
9519 9534 9543 9556
461 461 9824 9831 9832 9839
9855 9848 9847 9840
9868 9864 9863 9856

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M1195 AUX 5
498*-< H6F D28 ]-> H7B D28 ]-----< >* 504 509 8975 8991
11982 12018 12688 12855
461 461
M1200 12864 12869
M1199 X150 X1F2 Y108 M1260 M324 VFC START
505*--| |-----|-----< >* 515
AUX1 VFC.B OP.N VFC.L VFC1 VFCSTX
476 469
M1198
*--| |-*
AUX2
483
M1197
*--| |-*
AUX3
490
M1196
*--| |-*
AUX4
497
M1195
*--| |-*
AUX5
504
X1F1
516*--| |-----|-----[WOR R7000 H200 R7000 ]* 4 2 164 166
SA.N 172 174 202 204
4 518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120
X1F1
521*--| |-----|-----[WAND R7000 HFDFF R7000 ]* 4 2 164 166
SA.N 172 174 202 204
4 518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120
X230 M505 M CODE TOO LARGE
526*--| |-----|-----< >* 549 555 607 628
MF1.N 8099
X231
*--| |-----|-----[D< K999 R22 ]*
MF2.N
X232
*--| |-----|-----[D< K999 R24 ]*
MF3.N
X233
*--| |-----|-----[D< K999 R26 ]*
MF4.N
X230 M201 M505 M315 M F.MISOP.AUX
550*--| |-----|-----< >* 556 559 567
MF1.N MF AUX MTOLRG
566 549
X231
*--| |-----|-----[CALL P31 ]*11935 558
MF2.N
X232
*--| |-*
MF3.N

```

```

|X233 |
*--| |-*
|MF4.N |
|
M315
559*--| |-----[CALL P36 ]*12048 561
|MF MOPX
|556 |
|X230 | M201 M FUNCTION AUX
562*--| |-----< >* 566 554 570 572
|MF1.N | 577 626 7291 9265
|
|X231 |
*--| |-*
|MF2.N |
|
|X232 |
*--| |-*
|MF3.N |
|
|X233 |
*--| |-*
|MF4.N |
|
M315 M1199 M201 M316 M FUNCTION MISOP
567*--| |-----< >* 571 569 574 606
|MF MOPX AUX1 |MF AUX
|556 476 |566 |
|M316 |
*--| |-----*
|MF MOP
|571 |
|M201 M314
572*--| |-----[CALL P13 ]* 9894 576
|MF AUX MFOFF |
|566 578 |
|M316 |
*--| |-----*
|MF MOP
|571 |
|M201 M314
577*--| |-----< >* 578 573
|MF AUX
|566 |
|M111 M112 M200 M853 TIME COUNT MEMORY
579*--| |-----< >* 583 580 586
|M111 M112 *RST
| | 340
|M853 |
*--| |-*
|M111ME
|583 |
|M301 X156 M854 TIME COUNT START
584*--| |-----< >* 588 143 149
|MNL MF1.B |
|652 |
|M853 |
*--| |-----*
|M111ME
|583 |
|M110 |
*--| |-----*
|M110 |
|
M855
591*--| |-----[RST C4 ]* 155 592 595
|TMCNTP
|590 |
|Y6 |
593*--| |-----[D* C4 K30000 D316 ]* 598 601 602 604
|PWON.M | 60MINC
|160 | 155
|
|-----[D+ D314 D316 D316 ]* 598 601 602 604
|
| 152 598
|-----[DBCD D316 D280 ]* 605

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|M316 M505 X238 598 M312 T FUNCTION 1
606*--| |-----< >* 610 1504 1506 1513
|MF MOP MTOLRG |TF1.N | 1545 1590 1605 1619
|571 549 | 1629 1776 1788 8094
|
|X239 M313 T FUNCTION 2
*--| |-----< >* 613 1507 1518 1591
|TF2.N | 1606 8095 12615 12625
|
|M202 Y225
614*--| |-----[DMOV R8 D86 ]* 618 625 6343
|SF AUX GSFN.N
|620 6356 |
|X234 M202 S FUNCTION AUX
619*--| |-----< >* 620 614 6354 7292
|SF.N | 8818 9271 9283
|
|M200
621*--| |-----[DMOV K0 D86 ]* 618 625 6343
|*RST
|340 |
|M201 M316 M505 M FUNCTION PLS
626*--| |-----[PLS M246 ]* 630 635 656 663
|MF AUX MF MOP MTOLRG
|566 571 549 |
|X238 M203 T FUNCTION AUX
631*--| |-----< >* 633 7293 9267 9272
|TF1.N | 9284 9289
|
|X239 |
*--| |-*
|TF2.N |
|
|X230 M246 M CODE
634*--| |-----[MOV R20 D20 ]* 638 659 666 673
|MF1.N MFP | 9768 9939 9945 9950
| 630 | 9955 9959 9966 9970
| | 9990 9985 9981 9977
| | 10009 10005 10001 9995
| | 11958 11950 11944 11938
| | 11990 11973 11970 11964
| | 12042 12036 12030 12024
|
|-----[CALL P14 ]* 9937 640 661 668
| 675
|
|X1E9 M300 AUTO
641*--| |-----< >* 644 651 677 823
|T.N | 866 1169 4730 5090
| | 5115 5334 5409 5416
| | 5609 5521 5491 5488
| | 6106 6102 5736 5724
| | 6219 6201 6198 6112
| | 6399 6372 6357 6340
| | 7599 7406 6576 6404
| | 8197 8182 8151 8131
| | 8329 8301 8299 8221
| | 8450 8428 8372 8344
| | 13374 9338 8802
|
|X1EB AUTO MODE PULSE
*--| |-----[PLS M302 ]* 646 5526 6490
|D.N |
|
|X1E8
*--| |-*
|M.N

```

```

X1E0 M300 M301 MANUAL
647*--| |*--|/|*-----< >* 652 35 584 713
|JOG.N |AUTO | 824 2234 2693 2718
|644 | 2738 2769 2817 3606
| | 3939 3917 3908 3892
| | 4667 3995 3958 3945
| | 5414 5345 4927 4702
| | 5656 5651 5460 5428
| | 6092 5738 5726 5712
| | 6314 6108 6104 6100
| | 6409 6395 6363 6331
| | 6543 6506 6445 6423
| | 8246 7592 6907 6569
| | 12925 12908 8433 8345
| | 12939 12929

X1E1 *--| |*-----[PLS M303 ]* MANUAL MODE PULSE
|H.N | 654 5527 6491

X1E2 *--| |*
|S.N |

X1E4 *--| |*
|Z.N |

X231 M246 M CODE
655*--| |*--|/|*-----[MOV R22 D20 ]* 638 659 666 673
|MF2.N |MFP | 9768 9939 9945 9950
|630 | 9955 9959 9966 9970
| | 9990 9985 9981 9977
| | 10009 10005 10001 9995
| | 11958 11950 11944 11938
| | 11990 11973 11970 11964
| | 12042 12036 12030 12024

X232 M246 M CODE
662*--| |*--|/|*-----[MOV R24 D20 ]* 638 659 666 673
|MF3.N |MFP | 9768 9939 9945 9950
|630 | 9955 9959 9966 9970
| | 9990 9985 9981 9977
| | 10009 10005 10001 9995
| | 11958 11950 11944 11938
| | 11990 11973 11970 11964
| | 12042 12036 12030 12024

X233 M246 M CODE
669*--| |*--|/|*-----[MOV R26 D20 ]* 638 659 666 673
|MF4.N |MFP | 9768 9939 9945 9950
|630 | 9955 9959 9966 9970
| | 9990 9985 9981 9977
| | 10009 10005 10001 9995
| | 11958 11950 11944 11938
| | 11990 11973 11970 11964
| | 12042 12036 12030 12024

X10A M300 X109 M1324 F144 SETUPKEY ON INVD
676*--| |*--|/|*-----< >* 680

```

```

SUP.SS AUTO ST.B AXINTL
644 732
M1034 F146 DOOR INLK BYPSS ON
681*--|/|*-----< >* 682
|@MDINT

X14 XB M1088 M1320 MACHINE DOOR CLOSE
683*--| |*--|/|*-----< >* 707 714 827 869
|MDINT |MDINT |@YME-C | 2690 2715 2735 2756
| | 2766 2773 4009 4028
|M1064 |M4089 M4055 | 5419 5517 5608 5652
*--|/|*-----< >* 6315 6385 6411 7751
|200C/3 |MVRiL LT-SID | 7898 7901 7926 7940
|11113 |3215 3262 | 8111 8115 8126 8139
|M4056 M4087 | 8150 8198 8209 8245
*--| |*-----< >* 8319 13377
|RT-SID MVLiR |
|3257 3203 |

X14 XB Y9 M1088
*--| |*--|/|*-----< >*
|MDINT |MDINT |THCOLV @YME-C |
| | |8371 |

M1064 M4089 M4055
*--|/|*-----< >*
|200C/3 |MVRiL LT-SID |
|11113 |3215 3262 |
|M4087 M4056 |
*--|/|*-----< >*
|MVLiR RT-SID |
|3203 3257 |
|X21 M1088 M1328 MG DOOR INTL LS AX
708*--| |*--|/|*-----< >* 711 15 1715 8394
|MGDIFF @YME-C | 8398 8429 8434 8451

X13
*--| |*-----< >*
|MGDRLS

X10A M301 Y1 X14 XB
712*--| |*--|/|*-----< >* 1
|SUP.SS MNL |HYD.M |MDINT |MDINT |
|652 337 | | | |
M1320 M1064 XA M1089
*--|/|*-----< >* 2
|MDCL |200C/3 |CNTCV PARTIN |
|707 |11113 |
|M1088 |XA M1089 M4056 |
*--|/|*-----< >*
|@YME-C |CNTCV PARTIN RT-SID |
| |3257 |
|X10A |
*--| |*-----< >* 3
|SUP.SS |

M1034
*--|/|*-----< >* 4
|@MDINT

M1324 MDIT AXIS INTL.
1>-----< >* 732 679 735 738
| | 2253 2874 2879 2884
| | 2889 4336 6651 6672
| | 6727 6764 6793 6816
| | 8257

M4055
2>-----< >*
|LT-SID |
|3262 |

3>-----< >*
4>-----< >*

M1394 T161 M1394 SERVO OFF DELAY
733*--| |*--|/|*-----< >* 737 733 855 6811
|SVFDLY SVFDDT |
|737 740 |

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M1324
*--| |-----*
|AXINTL
|732
|Y6
*--| |-----*
|PWON.M
|160
738*--| |-----<T161 K5 >*
|M1324
|AXINTL
|732
|X1F0
|-----M2500
743*--| |----->*
|MA.N
|
|M2500
*--| |-----*
|745
|X10A X14 XB F174 M1088 M2500
746*--| |-----<T153 K100 >*
|SUP.SS|MDINT MDINT MDLSAL @YME-C
|
|
|M1064
*--| |-----*
|200C/3
|11113
|T153 X29
|-----M1373
758*--| |----->*
|POFFCT MDIPOC
|755
|X140 L13
|-----L13
*--| |----->*
|RST.B |POFFAM
|765
|X156
*--| |-----*
|MF1.B
|
|Y34 X23 M1088
766*--| |-----<T154 K20 >*
|SPTMGM ESPPPOF @YME-C
|842
|Y34 X23 M1088
773*--| |-----<T160 K100 >*
|SPTMGM ESPPPOF @YME-C
|842
|T154
|-----M1374
780*--| |----->*
|SWEST1
|770
|T160
|-----L14
*--| |----->*
|SWEST2
|777
|M1228 X23
*--| |----->*
|PWRONI ESPPPOF
|162
|X140 L14
*--| |----->*
|RST.B |SEMGAM
|790
|X156
*--| |-----*
|MF1.B
|
|M1375 X29 M1088
791*--| |-----<T157 K100 >*
|*EMGSM MDIPOC @YME-C
|329
|T157
|-----M1383
798*--| |----->*
|EMGPOT
|795
|X156 L15
|-----L15
*--| |----->*

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|MF1.B |EMGPCX
|804
|X140
*--| |-----*
|RST.B
|
|M1373 M1088
805*--| |-----< F182 >*
|POFFML @YME-C
|764
|M1374
*--| |-----*
|SEMGML
|789
|M1383
*--| |-----*
|EMGPCM
|803
|M1366
*--| |-----*
|MGDCML
|8424
|M1381
*--| |-----*
|PDCML
|
|X10A
812*--| |-----<T158 K20 >*
|SUP.SS
|
|T158 M1387
817*--| |-----< M1387 >*
|SUPOFT SUPME
|814 820
|X10A
*--| |-----*
|SUP.SS
|
|X1F2 Y114 M300 X1F3 M1387 Y1
821*--| |-----< M1325 >*
|OP.N FHD.L AUTO |STL.N SUPME |HYD.M
|1234 644 820 337
|M301
*--| |-----*
|MNL
|652
|M1320
*--| |-----*
|MDCL
|707
|M1088
*--| |-----*
|@YME-C
|
|Y29F M1375 X243 X210 X211 F182 M1088 M1368
831*--| |-----< >*
|PCEMGM *EMGSM SPAL.N NCAL1 NCAL2 |PCUTAL @YME-C
|5306 329 811
|X156
*--| |-----*
|MF1.B
|
|T156
*--| |-----*
|MA.NT2
|448
|M1368
841*--| |-----< Y34 >*
|SPTMGM
|840
|M1325 M1395 X244 Y2D6
843*--| |-----< [D] K3000 R18 ]---->1
|SSETX SPMRNM SPZS.N SOR.N
|830 5750 5641
|
|1>-----<T141 K30 >*

```

POWER CUT OFF MALF  
811 838 5303 8876

SET UP SW OFF TMR  
814 817

SET UP SW OFF DLY  
820 818 826 7897

SPINDLE SET AUX.  
830 843 5640

SOFTWARE EMG STP M  
840 841

SFT.EMG.STOP  
842 766 773

SPINDLE ESP DELAY  
852

```

|M1394 Y188 *SERVO OFF X NC
855*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|SVFDLY|
|737|
| Y189 *SERVO OFF Y NC
| 857
| Y18A *SERVO OFF Z NC
| 858
F116 M207 M1088 M300 M1034 F116 SET UP SS ON
859*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|HUMOP *ALRST|@YME-C AUTO @MDINT 868 357 859
|868 8084 644
|X1F2 X10A|
|*--| |---| |*--| |---|
|OP.N |SUP.SS
|
|M240
|*--| |---|
|CSTPBX
|1069
|M1320
869*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|MDCL ]M1088 M1139 M1398 SPEED MONITOR AUX
|707 |@YME-C SPARE- 879 875 882 5305
|M207 M1398
|*--| |---|
|*ALRST SPMNIX
|8084 879
|M1139 X30 M1088 M1047 F183 SPEED MONITOR AL
880*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|SPARE- SPARE-|@YME-C @WUP 885
|M1398
|*--| |---|
|SPMNIX
|879
|M118 M3053 HANDLE MODE SEL
886*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|HX.B 892 910 920 934
| 1224 7342 7346 7355
|X119 12243 12249 12255 12266
|*--| |---|
|HY.B 12311
|X11A
|*--| |---|
|HZ.B
|X11B
|*--| |---|
|H4.B
|X13C
|*--| |---|
|M1064
|*--| |---|
|200C/3
|11113
M1064 M1074 X1C X10A M3000 CYCLE START
893*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|200C/3 CYCLST|SUP.SS 903 939 1064
|11113
|X109 |Y103 Y102
|*--| |---| |*--| |---| |---| |---|
|ST.B |MDI.L MEM.L
| |7535 7532
| |M1034
| |*--| |---|
| |@MDINT
|M1064 X1 Y106 M3053 X1 HANDLE SELC.
904*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|

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|200C/3 X1.PLS H*1.L |HNDL
|11113 7563 |892
|X14D M1064
|*--| |---| |*--| |---|
|HS1.B 200C/3
|11113
|M1064 X1 XC Y107 M3053 X10 HANDLE SELC
913*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|200C/3 X1.PLS X100.P H*10.L |HNDL 922 7352 12293
|11113 7573 |892
|X14E M1064
|*--| |---| |*--| |---|
|HS10.B 200C/3
|11113
|M1064 M1074 X2 M3051 FEED HOLD
923*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|200C/3 FHD 927 1156 1244
|11113
|X111
|*--| |---|
|*PHD.B
|M1064 XC Y10D M3053 X100 HANDLE SELC
928*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|200C/3 X100.P H100.L |HNDL 936 7353 12285 12302
|11113 7580 |892
|X159 M1064
|*--| |---| |*--| |---|
|HS100B 200C/3
|11113
|M2004 M1369 OP.SW.ERROR MEM 1
937*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|SJBGX
|319
|XSE
|*--| |---|
|CST
|M3000
|*--| |---|
|CYCLST
|903
|X108
|*--| |---|
|M1074 X2
|*--| |---| |*--| |---|
| FHD
X115 M1066 M1370 OP.SW.ERROR MEM 2
945*--| |---| |*--| |---| |---| |---| |---| |---| |---| |---|
|+5.B |@5TH 960 967 7507
|X116
|*--| |---|
|-5.B
|X100 M4063
|*--| |---| |*--| |---|
|+X.B MID.PS|
| 3279
|X101 M4063
|*--| |---| |*--| |---|
|-X.B MID.PS|
| 3279
|X102
|*--| |---|
|+Y.B
|X103
|*--| |---|
|-Y.B
|X104
|*--| |---|
|+Z.B

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```

X105
*--| |-----*
|-Z.B
X106
*--| |-----*
|+4.B
X107
*--| |-----*
|-4.B
X10C
M1371 OP.SW.ERROR MEM 3
961*--| |-----* > 965 968
|TUC.SS
|X11C
*--| |-----*
|DULK.B
|X5
*--| |-----*
|TSF.PB
|X0
*--| |-----*
|TSR.PB
M1369 T155 M1088 F181 OP.SW.CONDITION ER
966*--| |-----* > 975 356 972 5302
|SWERR1 |MA.NT1|@YME-C
|944 |444
|M1370
*--| |-----*
|SWERR2
|960
|M1371
*--| |-----*
|SWERR3
|965
|X140 F181
*--| |-----*
|RST.B |SW.ERR
| |975
X156
*--| |-----*
|MF1.B
M160
976*--| |-----* > [MOV R2145 D198 ] * 982 988 993 997
|M160 | 1000
|9889
|M6
*--| |-----*
| [= K0 R2145 ]-----[MOV K15 D198 ] * 982 988 993 997
|M6 | 1000
|M446
*--| |-----*
|MAP
|438
|M200
*--| |-----*
|RST
|340
|M161
990*--| |-----* > [MOV R2146 D198 ] * 982 988 993 997
|M161 | 1000
M162
994*--| |-----* > [MOV R2147 D198 ] * 982 988 993 997
|M162 | 1000
M1081
998*--| |-----* > [MOV D198 D290 ] * 1001 1036 1038 1045
|@CUTSP | 1048 1051 1055 1056
| 982 | 1061
*--| |-----* > [MOV K0 D291 ] * 1004

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```

*-----[MOV R148 D240 ] * 1007 1013
6369
*-----[MOV K0 D241 ] * 1010
*-----[D* R28 D240 D294 ] * 1014 1030 1033 1037
| 1040 1043 1050 1054
M2202
*--| |-----* > [D* D100 K100 D296 ] * 1020 1026 1029 1032
|SMXRPM
|5785 |11354
M2202
*--| |-----* > [D* D102 K100 D296 ] * 1020 1026 1029 1032
|5785 |11357
* [D< D296 D294 ]-----[DMOV D296 D294 ] * 1014 1030 1033 1037
| 1040 1043 1050 1054
| 1020 1014 | 1020
*-----[D* D290 D294 D290 ] * 1001 1036 1038 1045
| 1048 1051 1055 1056
| 1001 1014 | 1061
*-----[D* D294 K10 D294 ] * 1014 1030 1033 1037
| 1040 1043 1050 1054
| 1014
*-----[D/ D290 K10 D290 ] * 1001 1036 1038 1045
| 1048 1051 1055 1056
| 1001 | 1061
*-----[D- D294 D290 D292 ] * 1052 1058
| 1014 1001
*-----[D+ D294 D290 D290 ] * 1001 1036 1038 1045
| 1048 1051 1055 1056
| 1014 1001 | 1061
* [D< D292 R18 ]-[D> D290 R18 ]----- > * M1300 SPINDLE UP TO SPD.
| 1063 1078 4048
| 1052 | 1001
M3000 F126 M240 CYCLE START PB AUX
1064*--| |-----* > * 1069 862 1075 1101
|CYCLST|DINTA |
|903 |8112 |
|X5E |
*--| |-----*
|CST |-----[PLF M549 ] * 1071 9 1167 2523
| | 4565 4581 4726 5615
| | 8113 8118
M995
*--| |-----*
|STCMD
|13542
|M1171
*--| |-----*
|DNCCST
X1E8 M224 M240 M200 M1081 Y2D6 X249 M1301 SPNDL UP TO SPD ME
1072*--| |-----* > * 1084 1076 1103
|M.N |SRUNME CSTPBX *RST @CUTSP SOR.N SPSVON
|5408 1069 |340 | 5641
X1E9
*--| |-----*
|T.N
M1301 X1F4 M1300
*--| |-----*
|SUTSME SPL.N SPUTS
|1084 | 1063

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M376 M992 |
*--| |----|/|-*
TSELMX ENMG
2506 2243
M832 Y286 M831 M389 CYCLE START LAMP X
1200*--| |----|/|-*> 1213 1219 8143 8170
TMCSTX *CX7.N TM.SB | 8219 8316 8321 12695
1182 | 1178
M1273 M1215 Y1B CYCLE START LAMP
*--| |----|/|-*> 1214 3969
TMEEXC MEAREX
4871
M696 Y286 CYCLE START LAMP.P
*--| |----|/|-* [PLS M241 ]> 1216 5430 9336 12915
TPSRET *CX7.N
4745
X1F3 M831
*--| |----|/|-*
STL.N TM.SB
1178
M698
*--| |----|/|-*
TPSCST
4678
M259 M850 Y113 CYCLE START L.B
1217*--| |----|/|-*> 1220 1221 7817 7833
CSTLX FLCKER
1199 1193
M389
*--| |----|/|-*
CSTLX
1213
Y113 M1074 YF CYCLE START LAMP
1221*--| |----|/|-*> 1226
CST.L
1220
M1074 M3053
*--| |----|/|-*
HNDL
892
X1F4 M699 M831 Y114 FEED HOLD L.B
1227*--| |----|/|-*> 1234 822 3970 4704
SPL.N TPSREM TM.SB | 8317 8322 8343 8477
4750 1178
M696 Y286
*--| |----|/|-*
TPSRET *CX7.N
4745
M832
*--| |----|/|-*
TMCSTX
1182
X1F3 X1F4 Y219 X1F9 M479 M244 EN.PLCAx.MOVSTART
1235*--| |----|/|-*> 1240 1662 4483 4632
STL.N SPL.N *SP.N TIMP.N MZP
1166 5812
X3A T156 M3051 X140 M994 M999 WARM UP-SS MEMORY
1241*--| |----|/|-*> 1247 1243 13355 13375
HYD.PS MA.NT2|FDH RST.B WUPPIN
448 927 13555
M999
*--| |----|/|-*
WUSSME
1247
M994 T156 M1047
1248*--| |----|/|-* [CALL P120 ]> 13355 1253
WUPPIN MA.NT2|@WUP
13555 448
M207
*--| |----|/|-*
*ALRST
8084
<=
1258*[BIT R7006 H7 ]-----[WAND R7001 HFF7F R7001 ]> 226 224 1262 1264
| 9761 226 | 1531 1533 1540 1542
| | 4995 4997 5005 5007
| | 13048 13046 12803 12801
| | 13104 13102 13090 13088

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13353 13351 13146 13144
<=
1265*[BIT R7007 H8 ]-----[WAND R7002 HFEFF R7002 ]> 222 220 1269 1271
| 9752 9754 12812 12814
222
<=
1272*[BIT R7007 HA ]*--| |----|/|-*> M400 TOOL CHANGE CMD.P
| TCCPM | 1277 1291 1305 1326
| 1333 | 1330 2797 2813 2820
| M2022 | 2825 2835 2842
*--| |----|/|-*> M2030 T.H.UP P ME 2
| | 1280 1292 1312 1327
| TUPPM | 1331
| 1334
M2021 M2022 M2020 PK-T FIN
*--| |----|/|-*> 1284 1336 1439 9521
| TCCPM TUPPM
| 1333 1334
<=
1285*[BIT R7007 H9 ]*--| |----|/|-*> M2024 T-PK FIN
| | 1288 1319 1623 1910
M2025 M371 TOOL SELECT PULSE
*--| |----|/|-*> 1290 93 1328 1332
| TSPM | 2461 2468 2472 2504
| 1335
M400
1291*--| |----|/|-* [MOV R2060 D162 ]> 1295 12825
| TCCMDP |
| 1277 |
| M2030 |
*--| |----|/|-* [MOV R2058 D164 ]> 1298 12835 12838 12844
| TUPM2 | 12891
| 1280 |
*--| |----|/|-* [MOV R2063 D163 ]> 1301 12829
| |
*--| |----|/|-* [MOV R2061 D165 ]> 1304 12850 12853 12859
| | 12894
M400
1305*--| |----|/|-* [MOV R1999 D208 ]> 1308 1315 2829 12902
| TCCMDP |
| 1277 | 199
*--| |----|/|-* [MOV D161 D166 ]> 1311 1318 2832 12867
| | 12872 12878 12888 12897
| M2030 | 1325
1312*--| |----|/|-* [MOV D168 D208 ]> 1308 1315 2829 12902
| TUPM2 | PKTNo
| 1280 | 1349
*--| |----|/|-* [MOV D169 D166 ]> 1311 1318 2832 12867
| | 12872 12878 12888 12897
| | 1346
M2024
1319*--| |----|/|-* [MOV R2050 D160 ]> TOOL No.
| T-PPIN | 1322 12795
| 1288 |
*--| |----|/|-* [MOV R2049 D161 ]> POCKET No.
| | 1325 1310 1774 1937
| | 2831
M400 M2026
1326*--| |----|/|-* [RST M400 ]> TOOL CHANGE CMD.P
| TCCMDP RSTME | 1277 1291 1305 1326
| 1277 9749 | 1330 2797 2813 2820
| M2030 | 2825 2835 2842
*--| |----|/|-* [RST M2030 ]> T.H.UP P ME 2
| | 1280 1292 1312 1327
| TUPM2 | 1331
| 1280 |
| M371 |
*--| |----|/|-* [RST M371 ]> TOOL SELECT PULSE
| TSELP | 1290 93 1328 1332
| 1290 | 2461 2468 2472 2504

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*=[ K0 D168 ]*
      PKTNo
      1349
M2048
1480*--| |-----[CALL P119 ]*13152 1482
|@TID-S
|11130
|X66 YA M2055 T-ID HEAD RET CONF
1483*--| |-----< >* 1486 42 2567
|TSUCLS GSHHI
|4089
|M2048
*--| |-----*
|@TID-S
|11130
|M196 M197 M200 M838 M196 MODE
1487*--| |-----< >* 1491 1488 1493 1498
|M196 M197 *RST
|M196 M197 340
|M838
*--| |-----*
|M196MD
|1491
|M1026 M359 ATC SLT/*M06 AUX
1492*--| |-----< >* 1494 1628 1630 8097
|@*M6TF
|12619 12627
|M838
*--| |-----*
|M196MD
|1491
|M1085 M149 M838 X1EB M1208 M312 M840 EIA TOOL LIFE
1495*--| |-----< >* 1505 1511 1522 1613
|M149 M196MD D.N PLCLIF TF1
|M149 1491 610
|M1258
*--| |-----*
|M1241 M149
*--| |-----|
|EIA/MZ M149
M312 T FUNCTION PULSE
1506*--| |-----[PLS M535 ]* 1509 1510 1523 1588
|TF1
|610
|M313
*--| |-----*
|TF2
|613
|M535 M840 M312
1510*--| |-----[DMOV R36 D80 ]* 1516 1552 1598 1603
|TFPLS EIATLTF TF1
|1509 1505 610 12621 1796 1886 2230
|M313 12606 12633 12647
*--| |-----[DMOV R38 D82 ]* 1521 1560 1609 12612
|TF2
|613
|M840 M535
1522*--| |-----[DMOV R36 R2026 ]* 1526
|EIATLTF TFPLS
|1505 1509
*--| |-----[DMOV R38 R2028 ]* 1529
|
*--| |-----[WOR R7001 H4000 R7001 ]* 226 224 1262 1264
| 1531 1533 1540 1542
| 4995 4997 5005 5007
| 13048 13046 12803 12801
| 13104 13102 13090 13088
| 13353 13351 13146 13144
|<=
|EIA TLM (PLC)
1534*[BIT R7006 HE ]*-----[PLS M1323 ]* 1538 1543 1547

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9761
|
|-----[WAND R7001 HBFFF R7001 ]* 226 224 1262 1264
| 1531 1533 1540 1542
| 4995 4997 5005 5007
| 13048 13046 12803 12801
| 13104 13102 13090 13088
| 13353 13351 13146 13144
M1323 M312 M841 TSRH-1
1543*--| |-----< >* 1546 1544 1611 1614
|EIATLMTF1
|1538 610
|M841
*--| |-----*
|TSRH-1
|1546
|M1323 X238
1547*--| |-----[MOV R2030 D80 ]* 1516 1552 1598 1603
|EIATLMTF1.N
|1538 1621 1796 1886 2230
| 12606 12633 12647
*--| |-----[MOV K0 D81 ]* 1555
|
|-----[MOV R2031 D82 ]* 1521 1560 1609 12612
|X239
*--| |-----*
|TF2.N
*--| |-----[MOV K0 D83 ]* 1563
|
|M1085 M149 M838 X1EB <= X238
1564*--| |-----| |-----| |-----| |-----| |-----| |-----| |-----| |-----|
| M149 M196MD D.N | [BIT R2032 H4 ]*--| |----->1
| 1491 |TF1.N
|M1258
*--| |-----* |<=
| [BIT R2032 H1 ]*
|M1241 M149
*--| |-----| |-----| |-----| |-----| |-----| |-----| |-----|
|EIA/MZ M149 | [BIT R2032 HC ]*--| |-----|
| |<=
| [BIT R2032 H9 ]*
M312 F14
*--| |-----| |-----| |-----| |-----| |-----| |-----| |-----|
|TF1 |ILLEGL
|610 |1594
|M313
*--| |-----*
|TF2
|613
|1>-----| |-----| |-----| |-----| |-----| |-----| |-----|
| M535 M1208 F14 ILLEGAL TOOL ALM.
|TFPLS PLCLIF |>-----< >* 1594 1592 2617 9276
| 1509
|2>-----*
M147 M312 M841 M506 T CODE TOO LARGE
1595*--| |-----[D< D84 D80 ]-----*--| |-----< >* 1612 1615 8466 9275
|M147 |TF1 |TSRH-1
| |610 |1546
|M147
*--| |-----[D< K160 D80 ]*
|M147 1516
|M313
*--| |-----[D< D84 D82 ]-----*
|TF2
|613 11469 1521

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M840 M506 M847 FINISH TSRH
1613*--|/|-*--|/|->* 1616 1618 1635 1743
|EIATLF|TTOLRG | 1785 1800 1825 2198
|1505 |1612 | 9260
M841 |
*--|/|-*
|TSRH-1|
|1546 |
M147 M847 M312
1617*--|/|-*--|/|->* [MOV D80 R1999] * 199 196 1307 1353
|M147 FITSRH TF1 | 1459 1622 1684 1764
|1616 610 | 1516 1814 2005 2013 2137
| | 4986 4983 2828 2226
| | 9742 5016 5002 4989
| | 12790 12788 12637 12609
| | 12820 12817 12809
M2024 M2034 M2033 T-P SRCH ATC
1623*--|/|-*--|/|->* 1626 1624 1747
|T-PFIN|ATCS2 |
|1288 |1638 |
M2033 |
*--|/|-*
|T-PATC|
|1626 |
M6 M359 M147 M149 M328 ATC SELECT
1627*--|/|-*--|/|->* 1634 468 1195 1640
|M6 SLT/M6|M147 M149 | 1679 1696 1701 1706
|1494 | 1713 1719 1729 1736
| | 1802 1790 1777 1755
| | 2182 2072 2034 1821
| | 3035 3030 3021 2185
| | 4619 4579 4506 4436
| | 4946 4940 4924 4643
| | 5504 5452 5441 5035
| | 9255 5672 5567
M312 M359 M847 ATC SELECT PULSE
*--|/|-*--|/|->* [PLS M544] * 1637 1671 1674 1681
|TF1 SLT/M6|M147 FITSRH | 1693 1703 4604 4608
|610 1494 | 1616
| | M2034
| | * 1638 1625
M838 M328 M816 T.MEASER SELECT
1639*--|/|-*--|/|->* 1643 4442 4511 4858
|M196MD ATSEL | 5676 9137 9258
|1491 1634 |
M199
*--|/|-*
M199
*--|/|-*
M198
*--|/|-*
M198
M180 M181 M200 M1327 NEGLECT NEXT T.LD
1644*--|/|-*--|/|->* 1648 1645 1836 1858
|M180 M181 *RST | 2085 2105
| | 340
M1327
*--|/|-*
M180ME
1648
M825 M35 M827 M200 M824 M35 MEMORY
1649*--|/|-*--|/|->* 1654 1651 1661
|M35X M35 TBRST *RST |
|1656 |1668 340 |
M824
*--|/|-*
M35M
1654
M35 M825 M35 AUX
1655*--|/|-*--< >* 1656 1649
|M35
M195 M835 M826 TBR START AUX
1657*--|/|-< >* 1659 1660 4441 4449

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M195 TBRFIN 4513 5679 8705
|4830 |
M826 M824 M244 M833 F52 F53 M2014 M827 TBR START
1660*--|/|-*--|/|->* 1668 1176 1652 1666
|TBRSTX M35M ENPLCM ENATPM TADMLF TASMLF|PTPFIN| 4025 4696 4723 4814
|1659 1654 1240 267 8667 8668 |4771| 4819 4824 4867 7503
| | 8490 8472
M827 TBR START PULSE
*--|/|-*--|/|->* [PLS M828] * 1670 4715 4811
|TBRST |
|1668 |
M544
1671*--|/|-*--< >* [CALL P45] *12604 1673
|ATCSLP |
|1637 |
M544 M545 EQUAL TOOL ATC
1674*--|/|-*--< >* D17 D18 M328 M545
|ATCSLP |PTPMT PTPSTL|ATSEL | 1680 1678 1694 1704
|1637 | 12607 12610 |1634 | 1744 1801 1817 1819
M545 4640 4644 4930 5030
*--|/|-*
|EQATATC |
|1680 |
M544 M1068 M1397 SPDL T.NO.SET MOP
1681*--|/|-*--< >* D16 R1999 M1068 M1397
|ATCSLP |MGMAXT |@UN/CL | 1689 1686 8467 8905
|1637 | 11440 199 |
M207 M1397
*--|/|-*
*ALRST TSETMP
8084 1689
M1241 M1015 M544 M545 M328 M2014 M554 ATC AXIS MOV.AUX
1690*--|/|-*--|/|->* 1698 1695 1699 2790
|EIA/MZ|@ATCMS ATCSLP EQATATC|ATSEL PTPFIN | 3384 3391 3402 4568
|1637 1680 |1634 4771 | 4631 4641 8703
M1012
*--|/|-*
@EAXM
M554
*--|/|-*
ATCMVX
1698
M554 M328 M1357 ATC AXIS MOV.XX
1699*--|/|-*--< >* M1357
|ATCMVX|ATSEL | 1702 1700 2801 2805
|1698 |1634 | 4546 4915 12919
M1357
*--|/|-*
ATCMXX
1702
M544 M545 M328 M550 ATC AXIS MOV.MEM.
1703*--|/|-*--< >* M550
|ATCSLP EQATATC|ATSEL | 1707 1705 3987 4016
|1637 1680 |1634 | 4661 5292
M550
*--|/|-*
ATCMVM
1707
M687 M329 M328 M552 ATC STOP(MENU)
1708*--|/|-*--< >* M552
|ATCSTP ATCST |ATSEL | 1714 1711 1738 4664
|10199 1756 |1634 |
M543 M552
*--|/|-*
THSBKO ATCSP1
1171 1714
M1328 M329 M328 M1035 M1344 MG.DOOR INT.ATC
1715*--|/|-*--< >* M1344
|MGDITB|ATCST ATSEL |@MGDIN | 1724 1721 1727 8439
|711 |1756 1634 |
T135
*--|/|-*
MGDICA
|8462 |

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M1366 |
*--| |-*
MGDCML
8424
M207 M1344
*--| |-----*
*ALRST MGDITA
8084 1724
M543 M1345 M329 M328 M1345 ATC STOP(MG.DOOR)
1725*--|/|-----| |-*--|/|-----| |-----| < >* 1730 1726 1739
THSBKO ATCSP2|ATCST ATSEL
1171 1730 |1756 1634
M1344
*--| |-----*
MGDITA
1724
M509 M329 M328 M1346 ATC STOP(M.DOOR)
1731*--| |----|/| |-*--| |-----| < >* 1737 1734 1740 8295
MDISP ATCST |ATSEL
8167 1756 |1634
M543 M1346 |
*--|/|-----| |-*
THSBKO ATCSP3
1171 1737
M552 M1347 ATC STOP
1738*--| | |-* < >* 1741 1753 2854
ATCSP1 |
1714
M1345
*--| |-*
ATCSP2 |
1730
M1346
*--| |-*
ATCSP3 |
1737
M870 M847 M545 M376 M386 M2033 M334 ATC START AUX
1742*--|/|-----| |----|/|-----| |----|/|-----| |-----| < >* 1748 1749
NTSEL FITSRH EQTATC TSELX TSLFIN T-PATC
1928 1616 1680 2506 2654 1626
M334 M339 M342 M331 M1347 M328 M329 ATC START
1749*--| |----|/|-----| |----|/|-----| |----| |-*--| |-----| < >* 1756 1709 1718 1728
ATCSTX TFCMDM TFME ATCME ATCSP |ATSEL |
1748 1847 1872 1879 1741 1634
1752 2062 2047 1984
8105 4642
M329 ATC START PULSE
*--| |-----* | *-----[PLS M330 ]* 1758 1759 1769 1880
ATCST 1939 1946 1953 1960
1756 1982 2043 2058 2066
5538 5515 5404
M330 ATC COMMAND TOOL
1759*--| | |-* < [MOV D17 D1 ]* 1762 1904 1942 1962
ATCSTP| PTPCMT
1758 | 2126 2211 13099
| 12607
*-----[MOV R1999 D2 ]* 1765 1949 1963 2117
| 199
*-----[MOV D26 D3 ]* 1768 1882 1898 1902
| PTPNXT
| 12613
M330 ATCTF1 DIA CODE
1769*--| | |-* < [MOV R2052 D201 ]* 1772 1969
ATCSTP|
1758
*-----[MOV D161 D203 ]* 1775 1972
| SMGNO
| 1325
M312 M328 M149 M147 M336 T FUNCTION SELECT
1776*--| |----|/| |-*--|/|-----| |-----| < >* 1781 1823 2183 9251

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TF1 ATSEL M149 M147
610 1634
M149 M205 MG SELECT
*--| |-----| < >* 1784 1789 2181
M149
M847 M339 M312 M205 M328 M337 T FUNCTION FINISH
1785*--| |----|/| |-*--| |----|/|-----| |-----| < >* 1791 1787 1822 9250
FITSRH TFCMDM |TF1 MGS | ATSEL
1616 1847 610 1784 1634
M337 T FUNCTION 1 PLS
*--| |-----| < [PLS M338 ]* 1793 1794 1840 1862
TFFIN 1884
1791
M338 T FUNCTION TOOL X.
1794*--| | |-----| < [MOV D80 D5 ]* 1797 1809 1815 1908
TF1PLS
1793 1516
M339 M847 M545 M328 M565 EQ.ATC FINISH
1798*--|/| |----|/| |----|/|-----| |-----| < >* 1803 1799 1818 4931
TFCMDM FITSRH EQTATC ATSEL
1847 1616 1680 1634
M565 EQ.ATC T.SEL.PLS
*--| | |-* < [PLS M566 ]* 1805 1806 1835 1857
EQATCF 1888
1803 T FUNCTION TOOL X.
M566 < [MOV D26 D5 ]* 1797 1809 1815 1908
ATCTSP | PTPNXT
1805 | 12613
* [= K0 D26 ]-----[MOV R1999 D5 ]* 1797 1809 1815 1908
PTPNXT
12613
199
M329 M545 M328 M847 M335 ATC CANCEL
1816*--|/|-----| |----|/|-----| |-----| < >* 1826 1843 1867 1874
ATCST EQTATC |ATSEL | FITSRH
1756 1680 |1634 |1616
M565 M545
*--|/|-----| |-*
EQATCF EQTATC
1803 1680
M337 M336
*--|/|-----| |-*
TFFIN TFSEL
1791 1781
M331 M566 M1327 Y21A M341 M200 M339 T F.CMD.MEMORY
1827*--| | |----|/| |-*--|/|-----| |-----| < >* 1847 1750 1786 1798
ATCME ATCTSP M180ME |SBK.N |TFST *RST
1879 1805 1648 |9070 |1865 340
1842 |
*--| | |-*
TFME @550PC
1872
M426 M338
*--| | |-----| |-*
THDNME |TF1PLS
| 1793
M428
*--| | |-*
THUPME
M363
*--| | |-*
ATCST4
2080
M376
*--| | |-*
TSELMX
2506
M386
*--| | |-*
TSLFIN
2654
M870
*--| | |-*
NTSEL
1928

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M350      |M342      |
*--|-----*--|-*
|DTL=TS   |TFME      |
|1992     |1872      |
M343      |           |M331      |M351      |TL=0
1993*--| |-- [=   |K0      |D4      |] *--| |-----< >* 2001 1997 2017
|LDTSTP   |          |LDT      |ATCME   |
|1931     |          |1899    |1879    |
|M351     |          |M342    |         |
*--|-----*--| |-----*
|TL=0     |          |TFME    |         |
|2001     |          |1872    |         |
M343      |          |M331    |M352      |TL=TS
2002*--| |-- [=   |D4      |R1999  |] *--| |-----< >* 2010 2006 2081 2101
|LDTSTP   |          |LDT      |ATCME   |
|1931     |          |1899    |1879    |
|M352     |          |M342    |         |
*--|-----*--| |-----*
|TL=TS   |          |TFME    |         |
|2010     |          |1872    |         |
M343      |          |M331    |M355      |TS=0
2011* [=   |K0      |R1999  |] *--| |-----< >* 2014 239 246 2016
|          |          |          |          |
|M350     |M351     |M343     |M331     |M353     |EQ NEXT DIA TS=0
2015*--| |-----< >* 2023 2019 2134 2138
|DTL=TS   |TL=0     |LDTSTP  |ATCME   |
|1992     |2001     |1931    |1879    |
|M355     |          |M342    |         |
*--|-----*--| |-----*
|TS=0     |          |TFME    |         |
|2014     |          |1872    |         |
M353      |          |         |         |
*--|-----*
|LTTS     |          |         |         |
|2023     |          |         |         |
Y6        |          |         |         |
2024*--| |-----< [CALL P70 ] *13012 2026
|PWON.M   |          |          |          |
|160      |          |          |          |
M332      |M870     |          |M325     |CUT ST INTERLOCK 2
2027*--| |-----< >* 2030 2028 4060
|T/CFIN  |NTSEL   |          |          |
|2048     |1928    |          |          |
M325      |          |          |          |
*--|-----*
|CUTIL2   |          |          |          |
|2030     |          |          |          |
X1E9      |M332     |M328     |M200     |M327     |UNORIENT PULSE
2031*--| |-----< [PLS M562 ] * 2038 5557
|T.N      |T/CFIN  |ATSEL   |*RST    |SPET    |
|          |2048    |1634    |340     |251     |
X1E8      |          |          |          |
*--|-----*
|M.N      |          |          |          |
M344      |M360     |M404     |M329     |M332     |T/C FINISH
2039*--| |-----< >* 2048 2027 2033 2046
|TC=0     |ATCST1  |FINCHG  |ATCST   |
|1945     |2073    |2867    |1756    |
M361      |          |          |          |
*--|-----*
|ATCST2   |          |          |          |
|2063     |          |          |          |
M330      |M347     |          |          |
*--|-----*
|ATCSTP   |TC=TSA  |          |          |
|1758     |1966    |          |          |
M332      |          |          |          |
*--|-----*
|T/CFIN   |          |          |          |
|2048     |          |          |          |
M344      |M360     |M404     |M332     |M329     |M361     |ATC STEP 2
2051*--| |-----< >* 2063 2041 2060 2070
|TC=0     |ATCST1  |FINCHG  |T/CFIN  |ATCST   |
|1945     |2073    |2867    |2048    |1756    |
M348      |M344     |M347     |M330     |          |
*--|-----< >* 3061
|          |          |          |          |
*--|-----< >*

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|DTC=TS   |TC=0     |TC=TSA   |ATCSTP  |
|1985     |1945     |1966     |1758    |
M345      |          |          |          |
*--|-----*
|TSA=0    |          |          |          |
|1952     |          |          |          |
M361      |          |          |          |
*--|-----*
|ATCST2   |          |          |          |
|2063     |          |          |          |
M348      |M330     |M347     |M345     |M361     |M332     |M328     |M360     |ATC STEP 1
2064*--| |-----< >* 2073 2040 2052 2069
|DTC=TS   |ATCSTP  |TC=TSA  |TSA=0   |ATCST2  |T/CFIN  |ATSEL   |
|1985     |1758    |1966    |1952    |2063    |2048    |1634    |
M344      |          |          |          |          |
*--|-----*
|TC=0     |          |          |          |
|1945     |          |          |          |
M360      |          |          |          |
*--|-----*
|ATCST1   |          |          |          |
|2073     |          |          |          |
M370      |M342     |          |M363     |ATC STEP 4
2074*--| |-----< >* 2080 1831 1852 1869
|ATCS4Y   |TFME    |          |          |
|2092     |1872    |          |          |
M369      |M331    |          |          |
*--|-----*
|ATCS4X   |ATCME   |          |          |
|2100     |1879    |          |          |
M363      |          |          |          |
*--|-----*
|ATCST4   |          |          |          |
|2080     |          |          |          |
M352      |M343     |M331     |M363     |M370     |ATC STEP 4Y
2081*--| |-----< >* 2092 2074 2087 2191
|TL=TS   |LDTSTP  |ATCME   |ATCST4  |
|2010     |1931    |1879    |2080    |
Y21A     |M1103   |M342    |          |
*--|-----*
|SBK.N   |@550PC  |TFME    |          |
|9070     |          |1872    |          |
M1327    |          |          |          |
*--|-----*
|M180ME   |          |          |          |
|1648     |          |          |          |
M370     |          |          |          |
*--|-----*
|ATCS4Y   |          |          |          |
|2092     |          |          |          |
M372      |M362     |M331     |M363     |M369     |ATC STEP 4X
2093*--| |-----< >* 2100 2075 2095 2190
|MG-TL   |ATCST3  |ATCME   |ATCST4  |
|2145     |2112    |1879    |2080    |
M369     |M342    |          |          |
*--|-----*
|ATCS4X   |TFME    |          |          |
|2100     |1872    |          |          |
M352     |Y21A    |M1327   |M343     |M331     |M363     |M362     |ATC STEP 3
2101*--| |-----< >* 2112 2094 2107 2143
|TL=TS   |SBK.N   |M180ME  |LDTSTP  |ATCME   |ATCST4  |
|2010     |9070    |1648    |1931    |1879    |2080    |
|          |M1103   |          |          |M342    |          |
|          |*--| |-----*
|          |@550PC  |          |          |TFME    |          |
|          |          |          |          |1872    |          |
M362     |          |          |          |          |
*--|-----*
|ATCST3   |          |          |          |
|2112     |          |          |          |
M376     |M398    |          |          |M360     |M384     |M373     |MG-SPINDLE TOOL
2113*--| |-----< >* 2121 2118 2147 2166
|TSELMX  |MGSPCF  |SPTNo   |ATCST   |ATCST1  |MGMNIT  |
|2506     |1438    |1343    |1765    |2073    |2529    |
M373     |          |          |          |          |
*--|-----*
|MG-TS   |          |          |          |
|2121     |          |          |          |

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M376 M398 M361 M384 M374 MG-COMMAND TOOL
2122*--|/|----| |--|= D167 D1 ]*--| |----|/|-----< >* 2130 2127 2149 2168
|TSELMX MGSPCF SPTNo ATCCMT|ATCST2 MGMNIT
|2506 1438 1343 1762|2063 2529
M374
*--| |-----*
|MG-TC
|2130

2131*|= D167 D4 ]---| |*--|/|----| |*--| |----|/|---< >* 2145 2093 2142 2152
|SPINo LDT LTTS |TSELMX MGSPCF|ATCST3 MGMNIT
|1343 1899 2023 |2506 1438 |2112 2529
M353
*|= D167 R1999 ]---|/|-*
|SPTNo LTTS
|1343 199 2023

M372
*--| |-----*
|MG-TL
|2145
M360 M373 M392 M384 M364 ATC TOOL UNLOAD
2146*--| |----|/|-*--|/|----|/|-----< >* 2157
|ATCST1 MG-TS |ATCTS MGMNIT
|2073 2121 2160 2529
M361 M374 M384 M392 ATC TOOL SELECT
2160 2155
*--| |----|/|-*--|/|----|/|-----< >*
|ATCST2 MG-TC |MGMNIT
|2063 2130 |2529
M362 M372 |M384 ATC TOOL SELECT.P
2164 2463
*--| |----|/|-*--|/|----|/|-----< [PLS M393 ]*
|ATCST3 MG-TL |MGMNIT
|2112 2145 2529
M360 M373 M354 M365 ATC TOOL LOAD
2172
2165*--| |----|/|-*--|/|----|/|-----< >*
|ATCST1 MG-TS |ATCTC
|2073 2121 2180
M361 M374 |M1241 X1F8 M2166 M354 ATC TOOL CHANGE
2180 2171 2178 2808
*--| |----|/|-*--|/|----|/|-----< >*
|ATCST2 MG-TC |EIA/MZ DEN.N |2966
|2063 2130
|M1241
*--|/|-----*
|EIA/MZ
|M354
*--| |-----*
|ATCTC
|2180
M205 M328 M336 M432 MAG.RUN SELECT
2184 2201 9249
2181*--| |----|/|----|/|-----< >*
|MGS L ATSEL TFSEL
|1784 1634 1781
M328 M331 M369 M370 M386 M376 M870 M339
2185*--|/|-*--|/|-*--|/|----|/|----|/|----|/|----|/|----|/|---->1
|ATSEL ATCME |ATCS4X ATCS4Y TSLFIN TSELMX NTSEL TFCMDD
|1634 1879 2100 2092 2654 2506 1928 1847
M560 M363
*--| |*--|/|-*
|ATCFIN ATCST4
|4942 2080
M342 M433 ATC OFF
2197 2199 7290 9291
|1>-----|/|-----< >*
|TFME
|1872
|13211
M847 M433 M432 M434 MAGAZINE RUN START
2202 2200 2207 2228
2198*--| |----|/|-*--|/|----|/|-----< >*
|FITSRH ATCOFF|MGRSEL
|1616 2197 2184
M434 MAGAZINE RUN PLS
2204 2462
*--| |-----*
|MGRST
|2202
M386 M434 M437 MAG.RUN FINISH
2208 2206 9248 13210
2205*--| |*--|/|----|/|-----< >*
|TSLFIN|MGRST
|2654 2202
M437
*--| |*

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MGRFIN
2208
M361 MG.SELECT TOOL X.2
2209*--| |----|/|----|/|-----< [MOV D1 D6 ]* 2212 2216 2222 2227
|ATCST2 ATCCMT
|2063 1762
M360 MG.SELECT TOOL X.2
2213*--| |----|/|----|/|-----< [MOV D2 D6 ]* 2212 2216 2222 2227
|ATCST1 ATCST
|2073 1765
M362 M353 MG.SELECT TOOL X.2
2217*--| |*--|/|----|/|-----< [MOV D4 D6 ]* 2212 2216 2222 2227
|ATCST3|LTTS
|2112 |2023
|M353 1899
*--|/|----|/|-----< [MOV R1999 D6 ]* 2212 2216 2222 2227
|LTTS
|2023
M434 199
MG.SELECT TOOL X.2
2228*--| |----|/|----|/|-----< [MOV D80 D6 ]* 2212 2216 2222 2227
|MGRST
|2202 1516
M987 M301 M1035 X16 M249 M992 ENABLE MAGAZINE
2232*--| |*--|/|----|/|----|/|----|/|----|/|----|/|----|/|----< K0 D216 ]-< >* 2243 1197 2470 2558
|PKNoSM MNL @MGDIN|MNMGIT ENMGR2
|9439 652 27
M986 M384 27
*--| |*--|/|----|/|-----*
|TNoSMD MGMNIT
|9430 2529
M673 M656 M274 M273 MNL MG FRD KEY
2244*--| |*--|/|----|/|-----< >* 2248 53 70 2251
|M305 MD1 TSRKEY
|10063 |10118 2252
|M657 M273 M274 MNL MG REV KEY
*--| |----|/|-----< >* 2252 54 69 2247
|MD2 TSPKEY
|10122 2248
M1324 M676 M656 M2105 M2104 MG.JOG FWD PB
2253*--| |----|/|----|/|----|/|----|/|----|/|----|/|----< >* 2258 2261 2328 2404
|AXINFL MN301 |MD1 MGJGRV
|732 10083 |10118 2262
|M657 M2104 M2105 MG.JOG REV PB
*--| |----|/|----|/|-----< >* 2262 2257 2329 2396
|MD2 MGJGFV
|10122 2258
M676 M658 M2100
2263*--| |----|/|----|/|-----< >* 2265
|M301 MD3
|10083 10126
M1094 M676 M659 M2101 MG.ZERO RTN PB
2266*--| |----|/|----|/|-----< >* 2270 2351
|M301 MD4
|10083 10130
M660 X156 M2102 MG.ORG PB
*--| |----|/|----|/|-----< >* 2274 2280
|M5 MF1.B
|10134
M661 X156 M3276 M2103 MG.ORG SET PB
*--| |----|/|----|/|-----< >* 2279 2292
|MD6 MF1.B MAGAZS
|10138
M2102 MG.ORIGN MODE PLS
2280*--| |----|/|----|/|-----< [PLS M2107 ]* 2282 2283 2285
|MGORGP
|2274
M2107 M2108 M200 M3284 M3360 M2108 MG.ORIGN MODE
2283*--| |----|/|----|/|----|/|----|/|----|/|----< >* 2291 2284 2286 2299
|MGORGM MGORGM]*RST MAGZSF MGJOG
|2282 2291 340 2314
|M2107 M2108
*--|/|----|/|----|/|-----*
|MGORGM MGORGM
|2282 2291
M2103 M3276 M200 M2109 MG.ORIGN SET
2292*--| |----|/|----|/|-----< >* 2298 2294 2301 7163
|MGORGS MAGAZS]*RST
|2279 340

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M2109 M3284 |
*--| |----|/|-*
MGORGS MAGZSF
2298
M2108 M3363 MG AZS
2299*--| |-----< >* 2300 2343 2362
MGORM
2291
M2109 M200 M3364 MG ZST
2301*--| |*--| |-----< >* 2304 2302
MGORGS *RST
2298 340
M3364
*--| |-*
MGZST
2304
YD M3350 MG SERVO ON
2305*--| |-----< >* 2306 122
SA.M
348
M273 M377
2307*--| |-*--|/|-*-----[RST M3358 ]* 2312 2318 2323 2330
TSFKEY TSELM
2248 2621
M274
*--| |-*
*-----[SET M3359 ]* 2313 2319 2324 2331
TSRKEY
2252
X5
*--| |-*
*-----[RST M3360 ]* 2314 2290 2320 2325
TSF.PB
2332
X0
*--| |-*
*-----[RST M3361 ]* 2315 2321 2326 2333
TSR.PB
7096
M2110 M377
2316*--| |*--|/|-*-----[RST M3358 ]* 2312 2318 2323 2330
MGHMRT TSELM
2356 2621
*-----[RST M3359 ]* 2313 2319 2324 2331
MG JOG
*-----[RST M3360 ]* 2314 2290 2320 2325
2332
MG ZERO RETERN
*-----[SET M3361 ]* 2315 2321 2326 2333
7096
M377
2322*--| |*--|/|-*-----[SET M3358 ]* 2312 2318 2323 2330
TSELM
2621
*-----[RST M3359 ]* 2313 2319 2324 2331
MG JOG
*-----[RST M3360 ]* 2314 2290 2320 2325
2332
MG ZERO RETERN
*-----[RST M3361 ]* 2315 2321 2326 2333
7096
M2104
2328*--| |*--|/|-*-----[RST M3358 ]* 2312 2318 2323 2330
MGJGFW
2258
M2105
*--| |-*
*-----[RST M3359 ]* 2313 2319 2324 2331
MGJGRV
2262
*-----[SET M3360 ]* 2314 2290 2320 2325

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2332
MG ZERO RETERN
*-----[RST M3361 ]* 2315 2321 2326 2333
7096
M3376
*-----< >* MG PARAMETER1
2334
M207 F12
2335*--| |*--| |-----< >* 2342 2336
*ALRST
8084 2342
M3285
*--| |-----*
MAGZSE
M3283
*--| |-----*
MAGZSN
M3281
*--| |-----*
MAGBAL
M3278
*--| |-----*
MAGAL1
M3279
*--| |-----*
MAGAL2
M3363 M3370 M3352 MG PAR PROTECT
2343*--| |*--|/|-*-----< >* 2345
MGAZS MGST
2300 2365
M200 M3353 MG RESET
2346*--|/|-----< >* 2347
*RST
340
M249 M3354 MG *INT+
2348*--| |*--|/|-*-----< >* 2349
ENMGR2
27
M3355 MG *INT-
2350
M2101 M3258 M200 M2110 MG.HOME RTN
2351*--| |*--|/|----| |-----< >* 2356 2316 2353 2360
MGZRPB MAGZP *RST
2270 340
M179
*--| |-*
M179
M2110
*--| |-*
MGHMRT
2356
M253 M3363 T25 M3370 MG START
2357*--| |*--|/|*--| |-----< >* 2365 125 2344 2430
TSFRDP MGAZS
62 2300 2368 6964 7008 7097 8374
9552
M254
*--| |-*
*-----<T25 D350 >* 2368 2364
TSREVP
78
M377
*--| |-*
TSELM
2621
M2110
*--| |-*
MGHMRT
2356

```



```

|M2111 |
*--| |-*
|2407 |
M3264 M3253
2371*--| |-----|/|-----[PLS M5238 ]* 2374
|MAGJST MAGAX
|M3253
2375*--| |-----|/|-----<T214 K3 >* 2377 2382 2391
|MAGAX
|M253 T214 M200
2380*--| |-----|/|-----< >* 2384 2381 2386 2423
|TSFRDP | *RST
|62 | 2377 340
|M5270 |
*--| |-*
|MG.MNF |
|2384 |
M253 M3371
2385*--| |-----|/|-----< >* 2388 2397
|TSFRDP |MGREV
|62 | 2398
|M5270 |
*--| |-*
|MG.MNF |
|2384 |
M254 T214 M200
2389*--| |-----|/|-----< >* 2393 2390 2395 2424
|TSREVP | *RST
|78 | 2377 340
|M5271 |
*--| |-*
|MG.MNR |
|2393 |
M254 M5272
2394*--| |-----|/|-----< >* 2398 2387 2403 2405
|TSREVP |
|78 | 2388
|M5271 |
*--| |-*
|MG.MNR |
|2393 |
M2105
*--| |-*
|MGJGRV |
|2262 |
M3253 M3264
2399*--| |-----|/|-----< >* 2401
|MAGAX MAGJST
|M2105 M3371
2402*--| |-----|/|-----< >* 2407 2361
|MGJGRV MGREV |
|2262 2398 |
|M2104 M3371 |
*--| |-----|/|-----< >*
|MGJGFW MGREV |
|2258 2398 |
M3264 M3265
2408*--| |-----|/|-----[WAND R7722 H1FF D8 ]*
|MAGJST MAGNAR |
|2653 2658 9715 9719 |
M3263
*--| |-----|/|-----< >*
|MAGJSA
|M3263 M3264
2415*--| |-----|/|-----[MOV K0 D8 ]*
|MAGJSA MAGJST
|2653 2658 9715 9719 |
|12806 10834 9731 |
M253 M5224
2420*--| |-----|/|-----< >* 2429 2442 2451

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|TSFRDP |MG.BKC
|62 | 2453
|M254 |
*--| |-*
|TSREVP |
|78 |
M377
2430*--| |-----|/|-----< >* 2433 2431 2434
|TSELM |
|2621 |
|M5270 |
*--| |-*
|MG.MNF |
|2384 |
|M5271 |
*--| |-*
|MG.MNR |
|2393 |
M3262
2440*--| |-----|/|-----[PLS M2113 ]* 2444 2432
|MAGSA
|M3264
*--| |-----|/|-----< >*
|MAGJST
|M3253
*--| |-*
|MAGAX
|M3370 M2113
2430*--| |-----|/|-----< >* 2433 2431 2434
|MGST |MGBRKP
|2365 2444
M2112
*--| |-*
|MGBRXX
|2433
2434*--| |-----|/|-----<T182 K10 >* 2437 2441
|M2112 X15F
|MGBRXX
|2433
X15F T182
2440*--| |-----|/|-----[PLS M2113 ]* 2444 2432
|2437 |
|M5223
*--| |-----|/|-----< >*
|MG.BKR
|2429
X15F
2445*--| |-----|/|-----< >* 2446
|M253 M254 M377 M3253 M5223 M3264
2447*--| |-----|/|-----|/|-----|/|-----|/|-----|/|-----< >* 2453 2428
|TSFRDP |TSREVP |TSELM |MAGAX |MG.BKR |MAGJST
|62 | 78 | 2621 | 2429
X5
2454*--| |-----|/|-----[PLS M993 ]* 2459 12 2469
|TSF.PB
|X0
*--| |-*
|TSR.PB
|M273
*--| |-*
|TSFKEY |
|2248 |
|M274 |
*--| |-*
|TSRKEY |
|2252 |
M2025 M371
2460*--| |-----|/|-----< >* 1335 1289 2460 2464
|TSPM |TSELP |
|1335 1290 |

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M438
*--| |-----*
|MGRPLS
|2204
|M393
*--| |-----*
|ATCTSP
|2164
2468 *--| |-----*
|M371 M993 M992 M805 MNL.TOOL SEL PLS
|-----< >* 2471 2478 2509
|TSELP MGPBP ENMG
|1290 2459 2243
|M371
2472 *--| |-----*
|-----[MOV R2044 D7 ]*
|TSELP 2475 95 2580 2583
|1290 2635 2652 10822 10838
|M805
2478 *--| |-----*
|-----[+ D216 D16 D190 ]*
|MTSELP 2482 2484 2486 2488
|2471 9511 11440
|-----[- D190 R2170 D190 ]*
|----- 2482 2484 2486 2488
|-----[ / D190 D16 D191 ]*
|----- 2482 2484 2486 2488
|-----[MGMAXT
|----- 2482 11440
|-----[MOV D16 D192 ]*
|-----[MGMAXT
|----- 2497 2494 2500 9569
|----- 2497 9572 9575
|-----[MOV D192 D193 ]*
|----- 2501 2587 2590 2639
|----- 2497 2657 10827 10842
|M376 M386 M200 M376 TOOL SELECT MEM.X
2502 *--| |-----*
|-----< >*
|TSELMX TSLFIN *RST
|2506 2654 340
|M371
*--| |-----*
|TSELP
|1290
2507 *--| |-----*
|M806 M803 M200 M806 MNL.TOOL SEL MEM.X
|-----< >*
|MTSLMX M.TSLF *RST
|2511 2659 340
|M805
*--| |-----*
|MTSELP
|2471
2512 *--| |-----*
|M331 M339 M342 M376 M377 M1501 M390 MAG.MNL.READY
|-----< >*
|ATCME TFCMDM TFME TSELMX TSELM MENUON
|1879 1847 1872 2506 2621 2532
|M503
*--| |-----*
|MGIALX
|2613
2520 *--| |-----*
|M376 M549 M390 M1035 M384 MAG.MNL.INTERRUPT
|-----< >*
|TSELMX STOPP MGMNRD @MGDIN
|2506 1071 2519
|M342 2554 2573 2605 2614
*--| |-----*
|TFME MGMNIT
|1872 2529
|M329
*--| |-----*
|ATCST
|1756
|X16
*--| |-----*
|MNMGIT
|M676 M1501 ATC & F0 MENU ON
2530 *--| |-----*
|-----< >* 2532 38 48 52

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|M301
|10083
|M673
*--| |-----*
|M305
|10063
|M1501 X16 M1500 ENABLE MAGAZINE OP
2533 *--| |-----*
|-----< >*
|MENUON MNMGIT
|2532
|M1500
*--| |-----*
|ENMGSW
|2536
|M1501 X16 M1502 ENABLE MAGAZINE ME
2537 *--| |-----*
|-----< >*
|MENUON MNMGIT
|2532
|M1502
*--| |-----*
|ENMGMN
|2540
|M384 M390 T111
2541 *--| |-----*
|-----<T111 K5 >*
|MGMNIT MGMNRD MMILT
|2529 2519 2545
|T111 Y3 M384 M1035 Y3
2548 *--| |-----*
|-----< >*
|MMILT MINT.L MGMNIT @MGDIN
|2545 2566 2529
|T111 Y3
*--| |-----*
|MMILT MINT.L
|2545 2566
|M390
*--| |-----*
|MGMNRD
|2519
|M850 X16 M1035
*--| |-----*
|FLCKER MNMGIT @MGDIN
|1193
|M252
*--| |-----*
|ENMMGR
|46
|M992
*--| |-----*
|ENMG
|2243
|T78 M1501 X16
*--| |-----*
|.2SPLS MENUON MNMGIT
|1185 2532
2567 *--| |-----*
|M2055 F195 M883 M248 ENABLE MAGAZINE RUN
|-----< >*
|IDHRTL ATCOL
|1486 13312 1366
|M2048
*--| |-----*
|@TID-S
|11130
|M376 M384 M377 M822 M501 T.SELECT MISOP AUX
2572 *--| |-----*
|-----< >*
|TSELMX MGMNIT TSELM TSELM
|2506 2529 2621 2630
|M806
*--| |-----*
|MTSLMX
|2511
2578 *--| |-----*
|-----< >*
|[ = K0 D7 ] *--| |-----*
|MGSELT TSELMX TSLMOP
|2475 2506 2577
*--| |-----*
|[ < D16 D7 ] *
|MGMNIT MGSELT
|11440 2475

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* [= K0 D193 ] *--| |-*
      M806 |
      |MTSLMX
      2501 |2511
* [< D16 D193 ] *
      MGMAXT
      11440 2501
M200 M512
*--| |-----| |-----| |-----|
|RST TSLMOP
340 2597
M200 M502
2598*--| |-----| |-----| |-----| |-----|
> M502 ATC SELECT MISOP X
      2603 2599 2616 2626
      8469
*RST ATSMPX
340 2603
M248 M501
*--| |-----| |-----| |-----| |-----|
|ENMGR TSLMOP
2571 2577
M207 M200 M503
2604*--| |-----| |-----| |-----| |-----|
> M503 MG.INPOSI.ALARM X
      2613 2516 2607 2618
      2627 8791
*ALRST *RST MGIALX
8084 340 2613
M384
*--| |-----| |-----| |-----| |-----|
|MGMNIT
2529
M3263 M3264 M3265 M501
*--| |-----| |-----| |-----| |-----|
|MAGJSA MAGJST MAGNAR TSLMOP
      2577
M384 M512 M502 F14 M503 M376
2614*--| |-----| |-----| |-----| |-----| |-----|
> M377 TOOL SELECT MEMORY
      2621 8 2311 2317
      2322 2359 2422 2449
      2517 2575 2619 2633
      2774 2663 2660 2644
      8766 8457 8400 8121
      8782 8779
M377
*--| |-----| |-----| |-----| |-----|
|TSELM
2621
M992 M512 M502 M503 M806
2624*--| |-----| |-----| |-----| |-----| |-----|
> M822 MNL.TOOL SEL MEMO
      2630 2576 2628 2637
      2645 2661 2664 9478
      9484
      2632 10825 10840
M822
*--| |-----| |-----| |-----| |-----|
|TSELM
2630
M377
2633*--| |-----| |-----| |-----| |-----|
> M385 TOOL EQUAL
      2647 2643 2649 2662
TSELM MGSELT MGPOSI |MGSPCF TSELM
2621 2475 137 1438 2621
M822 M822
*--| |-----| |-----| |-----| |-----|
* [= D193 D8 ] *
MTSELM MGPOSI MTSELM
2630 2501 137 2630
M385
*--| |-----| |-----| |-----| |-----|
|TEQAU
2647
M398 M385
2648*--| |-----| |-----| |-----| |-----|
> M386 TOOL SELECT FINISH
      2654 1746 1833 1854
      2192 2205 2503
      2659 2508
      2659 2508
      2659 2508
      2659 2508
M803
* [= D193 D8 ] *
      MGPOSI
      2501 137
M377 M385 M255 M256
2660*--| |-----| |-----| |-----| |-----|
> M387 MAGAZINE STOP
      2668 2669
TSELM TEQAU MNMGMF MNMGRM
2621 2647 85 92
M822
*--| |-----| |-----| |-----| |-----|

```

```

MTSELM
2630
M377 M822
*--| |-----| |-----| |-----| |-----|
TSELM MTSELM
2621 2630
M387 X1
2669*--| |-----| |-----| |-----| |-----|
> T69 K3 * MAGAZINE DELAY TMR
      2672
MGSTOP X1.PLS
2668
T99
2675*--| |-----| |-----| |-----| |-----|
> T59 K100 * AL-MAG.RUN TIMER
      2677
TSEMT
8770
X2E M1088 X10A M1320 M301 M1035 M1034 M1112 M1376
2680*--| |-----| |-----| |-----| |-----| |-----|
> * M.DOOR INT MNL1 X1
      2701 2684 2691 2722
*ESP2 @YME-C SUP.SS MDCL MNL @MGDIN @MDINT @MDIT2
      707 652 11119
M253 M1088 M1376 M384 M1035
*--| |-----| |-----| |-----| |-----|
|TSFRDP @YME-C DIM1X1 MGNMNT @MGDIN
62 2701 2529
M254
*--| |-----| |-----| |-----| |-----|
|TSREVP
78
M1376 M207
*--| |-----| |-----| |-----| |-----|
|DIM1X1 *ALRST
2701 8084
M658 M673 X10A M1320 M301 M1034 M1112 M1377
2702*--| |-----| |-----| |-----| |-----| |-----|
> * M.DOOR INT MNL1 X2
      2721 2709 2716 2723
MD3 MN305 SUP.SS MDCL MNL @MDINT @MDIT2
10126 10063 707 652 11119
M659 M1088 M1377
*--| |-----| |-----| |-----| |-----|
|MD4 @YME-C DIM1X2
10130 2721
M660
*--| |-----| |-----| |-----| |-----|
|MD5
10134
M661
*--| |-----| |-----| |-----| |-----|
|MD6
10138
M662
*--| |-----| |-----| |-----| |-----|
|MD7
10142
M663
*--| |-----| |-----| |-----| |-----|
|MD8
10146
M1377 M207
*--| |-----| |-----| |-----| |-----|
|DIM1X2 *ALRST
2721 8084
M1376
2722*--| |-----| |-----| |-----| |-----|
> M1310 M.DOOR INTL MNL 1
      2724 2744 2757 2850
      3089 4124 4129 8287
      12930 12940 12957 12983
|DIM1X1
2701
M1377
*--| |-----| |-----| |-----| |-----|
|DIM1X2
2721
M658 M673 M1320 M301 X10A M1034 M1112 M1088 M1311
2725*--| |-----| |-----| |-----| |-----| |-----|
> * M.DOOR INTL MNL 2
      2743 2732 2736 2851
      3090 4125 4130 8288
      12931 12941 12958 12984
|MD3 MN305 MDCL MNL SUP.SS @MDINT @MDIT2 @YME-C
10126 10063 707 652 11119
M659 M1311
*--| |-----| |-----| |-----| |-----|
|MD4 MDITM2
10130 2743
M660
*--| |-----| |-----| |-----| |-----|
|MD5
10134

```



```

M401
*--| |-----*
TCM
2852
M865
*--| |-----*
SABP
2861
M2156
2866*--| |-----M404 FINISH ARM CHANGE
AMST2P
3145
M404
2868*--| |-----[WOR R2916 H1 R2916 ]* 2873 2871
FINCHG
2867
M1510
*--| |-----
SAM.P
351
M1324 M1396 M656 M2131 M2130 ARM MTR CW
2874*--| |-----M2130 ARM MTR CW
AXINTL MN302 MD1 AMTCCW
732 10087 10118 2883
M1324 M1396 M657 M2130 M2131 ARM MTR CCW
2879*--| |-----M2131 ARM MTR CCW
AXINTL MN302 MD2 AMTRCW
732 10087 10122 2878
M1324 M1396 M658 M2133 M2132 ARM 0 FO
2884*--| |-----M2132 ARM 0 FO
AXINTL MN302 MD3 AM52F0
732 10087 10126 2893
M1324 M1396 M659 M2132 M2133 ARM 52 FO
2889*--| |-----M2133 ARM 52 FO
AXINTL MN302 MD4 AM0F0
732 10087 10130 2888
M1396 M660 M2169 M2168 ARM 180 CW FO
2894*--| |-----M2168 ARM 180 CW FO
MN302 MD5 A180CC
10087 10134 2901
M1396 M661 M2168 M2169 ARM 180 CCW FO
2898*--| |-----M2169 ARM 180 CCW FO
MN302 MD6 A180CW
10087 10138 2897
M1094 M1396 M2013 M2135 ARM ZERO RTN PB
2902*--| |-----M2135 ARM ZERO RTN PB
MN302 MD10
10087 10154
M662 X156 M2136 ARM ORIGIN MODE PB
*--| |-----M2136 ARM ORIGIN MODE PB
MD7 MF1.B
10142
M663 X156 M3226 M2137 ARM ORIGIN MODE SE
*--| |-----M2137 ARM ORIGIN MODE SE
MD8 MF1.B ARMAZS
10146
M673 M661 M2150 M2149 M2148 M2147 ARM 180 CCW ATC ME
2916*--| |-----M2147 ARM 180 CCW ATC ME
MN305 MD6 AMO AM60 180CWA
10063 10138 2939 2933 2927
M673 M660 M2150 M2149 M2147 M2148 ARM 180 CW ATC MEN
2922*--| |-----M2148 ARM 180 CW ATC MEN
MN305 MD5 AMO AM60 180CCA
10063 10134 2939 2933 2921
M673 M659 M2150 M2148 M2147 M2149 ARM 60deg ATC MNL
2928*--| |-----M2149 ARM 60deg ATC MNL
MN305 MD4 AMO 180CWA 180CCA
10063 10130 2939 2927 2921
M673 M658 M2149 M2148 M2147 M2150 ARM 0deg ATC MNL
2934*--| |-----M2150 ARM 0deg ATC MNL
MN305 MD3 AM60 180CWA 180CCA
10063 10126 2933 2927 2921
M2136
2940*--| |-----[PLS M2138 ]* ARM ORIGIN MODE PL
AMORPB
2910
M2138 M2139 M200 M3234 M3310 M2139 ARM ORIGIN MODE
2943*--| |-----M2139 ARM ORIGIN MODE

```

```

SMORMP AMORMD *RST ARMZSF AMJOG
2942 2951 340 3033
M2138 M2139
*--| |-----| |-----
SMORMP AMORMD
2942 2951
M2137 M3226 M200 M2140 ARM ORIGIN SET
2952*--| |-----M2140 ARM ORIGIN SET
AMORMS ARMAZS *RST
2915 340
M2140 M3234
*--| |-----| |-----
AMORS ARMZSF
2958
M2139 M3313 ARM AZS
2959*--| |-----M3313 ARM AZS
AMORMD
2951
Y14D Y14E M323 M398 M5121 M2166
2961*--| |-----M2166
YZP2LB ZP2LB SORARI MGSPCF ACOPL
1434 1438 1402
M2149 M3243 M885 M2167 ARM TO 277 CCW
2967*--| |-----M2167 ARM TO 277 CCW
AM60 ARMP54 ARMPKD
2933 1371
M2133
*--| |-----
AM52F0
2893
M3242 M2132 M397 M2165 ARM TO 0 CW
2972*--| |-----M2165 ARM TO 0 CW
ARMP53 AMOFO TCLCF
2888 1398
M3243 M2150
*--| |-----
ARMP54 AMO
2939
M2160
*--| |-----
AM277
1381
M3242 M2147 M2166 M396 M2164 ARM TO 75 180CW
2980*--| |-----M2164 ARM TO 75 180CW
ARMP53 180CCA TUCLCF
2921 2966 1390
M2160 M2169
*--| |-----
AM277 A180CC
1381 2901
M3242 M2148 M2166 M396 M2163 ARM TO 277 180CW
2988*--| |-----M2163 ARM TO 277 180CW
ARMP53 180CWA TUCLCF
2927 2966 1390
M2159 M2168
*--| |-----
AM75 A180CW
1376 2897
M3241 M2150 M397 M2162 ARM TO 0 CCW
2996*--| |-----M2162 ARM TO 0 CCW
ARMP52 AMO TCLCF
2939 1398
M2159 M2132
*--| |-----
AM75 AMOFO
1376 2888
M3241 M2149 M2166 M2161 ARM TO 75 CW
3003*--| |-----M2161 ARM TO 75 CW
ARMP52 AM60
2933 2966
M885 M2133
*--| |-----
ARMPKD AM52F0
1371 2893
M2167 M2152 ARM CCW
3010*--| |-----M2152 ARM CCW
277CCW
2971

```

```

|M2164 |
*--| |-*
|2>1CCW|
|2987 |
|M2162 |
*--| |-*
|A0CCW |
|3002 |
|M2131 |
*--| |-*
|AMTCCW|
|2883 |
|M2152 |
3015*--| |-----M3321 | ARM CCW DIR
|-----< >* 3016 6970 7011
|AMCCW |
|3014 |
|M2140 | M200 |-----M3314 | ARM ZST
3017*--| |-*|-----< >* 3020 3018
|AMORS | *RST |
|2958 | 340 |
|M3314 |
*--| |-*
|AMZST |
|3020 |
|M328 | YD |-----M3300 | ARM SERVO OFF
3021*--| |-*|-----< >* 3028 116
|ATSEL | SA.M |
|1634 | 348 |
|M673 |
*--| |-*
|M305 |
|10063 |
|M1396 |
*--| |-*
|M302 |
|10087 |
|M2154 |
*--| |-*
|AMEND |
|3134 |
|M2155 |
*--| |-*
|AMST2 |
|3139 |
|M2156 |
*--| |-*
|AMST2P|
|3145 |
|M2142 | M328 |-----[RST M3308 ] * ARM AUTO
3029*--| |-----|-----< >* 3031 3044 3050
|AMHRTN ATSEL|
|3098 | 1634 |
|-----[RST M3309 ] * ARM MANUAL
|-----< >* 3032 3045 3051
|-----[RST M3310 ] * ARM JOG
|-----< >* 3033 2950 3046 3052
|-----[SET M3311 ] * ARM ZERO RETERN
|-----< >* 3034 3047 3053 7266
|
|M328 |-----[SET M3308 ] * ARM AUTO
3035*--| |-----|-----< >* 3031 3044 3050
|ATSEL |
|1634 |
|M2147 |-----[RST M3309 ] * ARM MANUAL
|-----< >* 3032 3045 3051
|180CCA|
|2921 |-----[RST M3310 ] * ARM JOG
|-----< >* 3033 2950 3046 3052
|2148 |
*--| |-*
|180CWA|
|2927 |-----[RST M3311 ] * ARM ZERO RETERN
|M2149 |-----< >* 3034 3047 3053 7266
*--| |-*

```

```

|AM60 |
|2933 |
|M2150 |
*--| |-*
|AM0 |
|2939 |
|M2132 |
*--| |-*
|AM0F0 |
|2888 |
|M2133 |
*--| |-*
|AM52F0|
|2893 |
|M2161 |
*--| |-*
|A75CW |
|3009 |
|M2162 |
*--| |-*
|A0CCW |
|3002 |
|M2130 |
3048*--| |-----[RST M3308 ] * ARM AUTO
|-----< >* 3031 3044 3050
|AMTRCW|
|2878 |-----[RST M3309 ] * ARM MANUAL
|M2131 |-----< >* 3032 3045 3051
*--| |-*
|AMTCCW|
|2883 |-----[SET M3310 ] * ARM JOG
|-----< >* 3033 2950 3046 3052
|-----[RST M3311 ] * ARM ZERO RETERN
|-----< >* 3034 3047 3053 7266
|
|M140 | M139 |-----L124
3054*--| |-----|-----< >* 3057 3055 3065 9117
|-----< >* 9120
|L124 |
*--| |-*
|3057 |
|L30 | M348 | M361 | M1396 |-----M3326
3058*--| |-----|-----< >* 3068
|DTC=TS|ATCST2|MN302|
|13065 | 1985 | 2063 | 10087 |
|L31 |
*--| |-----*
|13121 |
|L30 | M360 |-----*
*--| |-----|-----*
|13065 | ATCST1 |
|L124 | 2073 |
*--| |-----*
|3057 |
|M673 |
*--| |-----*
|M305 |
|10063 |
|M1396 |-----M3327
3069*--| |-----|-----< >* 3070
|MN302 |
|10087 |-----[RST M3302 ] * ARM PAR PROTECT
3071*--| |-----|-----< >* 3073
|M3313 | M3320 |
|AMAZS | AMSTRT |
|2960 | 3114 |
|M207 | F102 |-----F102
3074*--| |-----|-----< >* ATC ARM DRIVER MAL
|*ALRST |ADRVAL|
|8084 | 3081 |

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```

M3235
*--| |-----*
|ARMZSE
M3233
*--| |-----*
|ARMZSN
M3231
*--| |-----*
|ARMBAL
M3228
*--| |-----*
|ARMAL1
M3229
*--| |-----*
|ARMAL2
M200
M3303 ARM RESET
3082*--| |-----< >* 3083
|RST
340
M2154 M1310 M1311 M518 M3304 ARM *INT +
3084*--| |-----< >* 3092 8747
|AMEND |MDITM1 |MDITM2 |ATCFHD|
3134 |2724 |2743 |8117 |
M2155 M3305 ARM *INT -
*--| |-----< >* 3093
|AMST2
3139
M2157
*--| |-----*
|AMST1
3150
M673
*--| |-----*
|MN305
10063
M1396
*--| |-----*
|MN302
10087
M2135 M3208 M200 M2142 ARM HOME RETURN
3094*--| |-----< >* 3098 3029 3095 3107
|AMZRTF |ARMZP |*RST
2906 | |340
M2142
*--| |-----*
|AMHRTN
3098
M2130 M200 M3313 T26 M3320 ARM START
3099*--| |-----< >* 3114 119 3072 6971
|AMTRCW |*RST |AMAZS | |
2878 |340 |2960 |3117 |
M2131 | | |
*--| |-----<T26 K3 >* 3117 3113
|AMTCCW|
2883
M2161
*--| |-----*
|A75CW|
3009
M2162
*--| |-----*
|AOCCW|
3002
M2163
*--| |-----*
|1>2CW|
2995
M2164
*--| |-----*
|2>1CCW|
2987
M2165
*--| |-----*

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|A0CW
2979
M2167
*--| |-----*
|277CCW|
2971
M2142
*--| |-----*
|AMHRTN|
3098
M2157
*--| |-----*
|AMST1
3150
M2155
*--| |-----*
|AMST2
3139
M3203
3120*--| |-----<T181 K3 >* 3122
|ARMAX
M3203 M3214 M2146 ARM STOP
3125*--| |-----< >* 3127
|ARMAX |ARMJST
M354
3128*--| |-----[PLS M2153 ]* 3130 3146 3151
|ATCTC
2180
M2155 M885 M200 M2154 ARM END
3131*--| |-----< >* 3134 3024 3084 3137
|AMST2 |ARMPKD |*RST
3139 |1371 |340
M2156 M2154 M200 M2155 ARM SETP2
3135*--| |-----< >* 3139 3025 3085 3109
|AMST2P |AMEND |*RST
3145 |3134 |340
M2155
*--| |-----*
|AMST2
3139
M2157 M2158 M2155 M200 M2156 ARM STEP2 PLS
3140*--| |-----< >* 3145 2784 2866 3026
|AMST1 |AM359 |AMST2 |*RST
3150 |1386 |3139 |340
M2156
*--| |-----*
|AMST2P
3145
M2153 M2156 M200 M2157 ARM STEP1
3146*--| |-----< >* 3150 3086 3108 3140
| |AMST2P |*RST
3130 |3145 |340
M2157
*--| |-----*
|AMST1
3150
M2153
3151*--| |-----[MOV K359 R7578 ]* 3154 3160 3165 3170
|3130
M2155
3155*--| |-----[MOV K1 R7578 ]* 3154 3160 3165 3170
|AMST2
3139
M2165
*--| |-----*
|A0CW
2979
M2162
*--| |-----*
|AOCCW
3002
M2164
3161*--| |-----[MOV K75 R7578 ]* 3154 3160 3165 3170
|2>1CCW|
2987

```

```

|M2161 |
*--| |-*
|A75CW |
|3009  |
|M2163  |
3166*--| |-*-----[MOV K275 R7578 ]* 3154 3160 3165 3170
|1>2CW |
|2995  |
|M2167  |
*--| |-*
|277CCW|
|2971  |
|M3214  M3215
3171*--| |----| |-*-----[WAND R7770 H1FFF D355 ]* 3177 1361 1364 1370
|ARMJST ARMNAR|
|M3213  |
*--| |-----*
|ARMJSA |
|M664  M2015  M1089  M479
3178*--| |----| |----| |----| |-----[PLS M4086 ]* 3183 3185 3187
|MD9   MN300  PARTIN MZP
|10150 10051 5812
|M4085  M4086  M1089  M4083
3184*--|/|----| |-*--| |----|/|-----< >* 3191 3184 3186 3192
|MN.XFR MN.SFK|PARTIN BK.FIN
|3191 3183 3595
|M4085  M4086 |
*--| |----|/|-*
|MN.XFR MN.SFK
|3191 3183
3192*--| |----| |-*--| |----|/|----|/|----| |-----< >* 3203 686 696 3197
|MN.XFR |LT-SID|PARTIN MVRiL MDINT MZP
|3191 |3262| 3215 8306 5812
|M1827 M71 |M4087|
*--| |----| |-*--| |----|
|M72.OK M71 MVLiR
|3236 3203
|M4085 M4056 M1089 M4087 F32 M479 M4089
3204*--| |----| |-*--| |----|/|----|/|----| |-----< >* 3215 689 700 3200
|MN.XFR |RT-SID|PARTIN MVLiR MDINT MZP
|3191 |3257| 3203 8306 5812
|M1828 M72 |M4089|
*--| |----| |-*--| |----|
|M71.OK M72 MVRiL
|3248 3215
|X113
3216*--| |-----[PLS M1825 ]* 3218 3225 3227
|RT.SW
|X114
3219*--| |-----[PLS M1826 ]* 3221 3237 3239
|LT.SW
|XA
3222*--|/|-----[PLS M1872 ]* 3224 3230 3242
|CNTCV
|M1825 M1825 M1872 M4056 M1827 M72 VALID
3225*--| |-*--|/|-*--|/|-*--|/|-----< >* 3236 3193 3226 3228
|RT.PLS|RT.PLS|CNTCV|RT-SID|
|3218 3218 3224 3257 |
|M1827 M1827 |M4087|
*--| |-*--|/|-* *--| |-*
|M72.OK M72.OK MVLiR
|3236 3236 3203 |
|M1089
*--|/|-----*
|PARTIN
|XA
*--| |-----*
|CNTCV
|M1826 M1826 M1872 M4055 M1828 M71 VALID
3237*--| |-*--|/|-*--|/|-*--|/|-----< >* 3248 3205 3238 3240

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|LT.PLS|LT.PLS|CNTCV|LT-SID|
|3221 3221 3224 3262 |
|M1828 M1828 |M4089|
*--| |-*--|/|-* *--| |-*
|M71.OK M71.OK MVRiL
|3248 3248 3215 |
|M1089
*--|/|-----*
|PARTIN
|XA
*--| |-----*
|CNTCV
|M1827 Y11E RIGHT SIDE LED
3249*--| |-----< >* 3250 13596
|M72.OK
|3236
|M1828 Y11F LEFT SIDE LED
3251*--| |-----< >* 3252 13599
|M71.OK
|3248
M4056 MACHINE RIGHT
3253*[D> R6018 R2190 ]---| |-----< >* 3257 685 697 721
|M1089
|PARTIN
M4055 MACHINE LFT
3258*[D< R6018 R2192 ]---| |-----< >* 3262 690 701 726
|M1089
|PARTIN
M4089 M4089
3263*[D< R6018 R2190 ]-[D> R6018 R2192 ]*--| |----|/|----|>1
|PARTIN MVRiL
|3215
|XA M4057 M4063 MACHINE MID
*--|/|-*--| |-*< >* 3279 949 952 3277
|CNTCV |MID.PS|
|3273 |
|M4063 |
*--| |-*
|MID.PS
|3279
M4057 MACHINE MID
1>---|/|-----< >* 3273 3276
|M4087
|MVLiR
|3203
M455
3280*--| |-*-----[D* D118 K100 D402 ]* 3285 3287
|IMINIT |
|11519 |
*-----[D/ D402 K254 D404 ]* 3290 3313
|3285
|M1089 M4056 M4058 XA X1E1
3291*--| |----| |-*--|/|----|/|----| |-----[DMOV R2190 R6512 ]* 3299 3309 3314 11401
|PARTIN RT-SID|MVLiFR CNTCV H.N
|3257 |3413
|M4058 M455
*--| |-*--|/|-----[DMOV D118 R6512 ]* 3299 3309 3314 11401
|MVLiFR|IMINIT |
|3413 11519 11379
|XA M455
*--| |-*--| |-----[DMOV D404 R6512 ]* 3299 3309 3314 11401
|CNTCV |IMINIT |
|11519 3290
|X1E1
*--| |-*
|H.N

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M4087
*--| |-*-----[DMOV D124 R6502 ] * 3321 3363 3389 11887
|MVLiR | ZP2Y+ |11909
|3203 | 11423
|M4089
*--| |-*
|MVRiL
|3215
*-----[DMOV R6308 R6514 ] * 3325 3367 11404
*-----[DMOV R6310 R6516 ] * 3328 3370 11407
*-----[DMOV R6312 R6518 ] * 3331 3373 11410
*-----[DMOV R6314 R6520 ] * 3334 3376 11413
*-----[WOR R6901 H4 R6901 ] * 3338 3336 3378 3380
|3395 3397 11415 11417
|11899 11901 11921 11923
M1089 M4055 M4087 XA X1E1
3339*--| |----| |-*--|/|----|/|----|/|-----[DMOV R2192 R6500 ] * 3347 3356 11884 11906
|PARTIN LT-SID |MVLiR CNTCV H.N
|3262 |3203
|M4087
*--| |-*-----[DMOV H0 R6500 ] * 3347 3356 11884 11906
|MVLiR
|3203
|XA
*--| |-*
|CNTCV
|X1E1
*--| |-*
|H.N
|M4087
*--| |-*-----[DMOV D124 R6502 ] * 3321 3363 3389 11887
|MVLiR | ZP2Y+ |11909
|3203 | 11423
|M4089
*--| |-*
|MVRiL
|3215
*-----[DMOV R6308 R6514 ] * 3325 3367 11404
*-----[DMOV R6310 R6516 ] * 3328 3370 11407
*-----[DMOV R6312 R6518 ] * 3331 3373 11410
*-----[DMOV R6314 R6520 ] * 3334 3376 11413
*-----[WOR R6901 H2 R6901 ] * 3338 3336 3378 3380
|3395 3397 11415 11417
|11899 11901 11921 11923
M4089 M554 M2010 M1089
3381*--|/|----| |-*--|/|----| |-----[DMOV D114 R6502 ] * 3321 3363 3389 11887
|MVRiL |ATCMVX ZR2LX PARTIN |+OTY
|3215 |1698 7556 |11373
|M4087 |M554 M2010 M1089
*--|/|----| |-*--|/|----| |-----[WOR R6901 H2 R6901 ] * 3338 3336 3378 3380

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|MVLiR ATCMVX ZR2LX PARTIN |3395 3397 11415 11417
|3203 1698 7556 |3338 |11899 11901 11921 11923
M4087
3398*--| |-*-----[CALL P28 ] *11881 3401 4970
|MVLiR
|3203
|M4089
*--| |-*
|MVRiL
|3215
|M554 M2010 XA M1089
3402*--|/|----|/|----| |----| |-----[CALL P29 ] *11903 3407 4978
|ATCMVX ZR2LX CNTCV PARTIN
|1698 7556
|M4089 XA M1089
3408*--| |----|/|----| |-*-----[PLS M4061 ] * 3412 4716
|MVRiL CNTCV PARTIN
|3215
M4058 MOV LT IF RT
*-----[ ] * 3413 3294 3301 4698
|4710 4734 4759 4776
|4804
M4059 MOV RT IF LT
3414*--| |----|/|----| |-*-----[ ] * 3417 4693 4709 4737
|MVLiR CNTCV PARTIN
|3203
M4059 MOV RT IF LT
*-----[ ] * 3419 4717
M4062
M4089 M1089 XA
3420*--| |----| |----|/|----| |-----[CALL P17 ] *10477 3425 4607
|MVRiL PARTIN CNTCV
|3215
|M4087
*--| |-*
|MVLiR
|3203
|Y6
3426*--| |-----[D- R6262 K1 D300 ] * 3431 3466
|PWON.M
|160
|Y6
3432*--| |-----[DMOV R6260 D302 ] * 3435 3470
|PWON.M
|160
M4056 M1089 M4089
3436*--| |----| |----| |-----[DMOV R2194 D304 ] * 3441 3449 3460
|RT-SID PARTIN MVRiL
|3257 3215
|M4055 M1089 M4087
3444*--| |----| |----| |-----[DMOV R2196 D304 ] * 3441 3449 3460
|LT-SID PARTIN MVLiR
|3262 3203
|Y6
3458*--| |-----[D* D304 K2 D306 ] * 3463
|PWON.M
|160
|X.POS
|3441
M4066 2ND ZERO Z
3464* [D= R6022 D300 ]-----[ ] * 3467
|Z2NDZ
|3431
M4067 2ND ZERO Y
3468* [D= R6020 D302 ]-----[ ] * 3471 6662
|Z2NDY
|3435
M4055 M4087 M4083 M4082
3472*--|/|----| |-* [D= R6020 D400 ] *-----[ ] * 3482 9089
|LT-SID MVLiR |BK.FIN
|3262 3203 |3595
|M4056 M4089 |M4084
*--|/|----| |-* *-----[ ] * 3484
|RT-SID MVRiL
|3257 3215
|M4089 M4056 M1089
3485*--| |----| |----| |-----[PLS M4090 ] * 3492 3502
|MVRiL RT-SID PARTIN
|3215 3257

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M412
*--| |-----|
|TUCLM
|3953
M412 M923 M709 M323 F84 T.UNCL.MOP(SORI)
3919*--|/|---| |---|/|*--|/|*-----|< >* 3929 3613 3927 3948
|TUCLM TUCSSX TUCSOK SORARI
|3953 3622 3910 1434
|M11 M408
*--| |-----|
|M11 ATUCL
|3620
|M207 F84
*--| |-----|
*ALRST TUCMPO
|8084 3929
|T62 X10C M412 F83 T.UNCL.MOP(SSP)
3930*--|/|---| |---|/|*--|/|*-----|< >* 3937 3935 3947
|SSTOPT TUC.SS TUCLM
|1420 3953
|M235
*--| |*
|SMRX
|5690
|M207 F83
*--| |-----|
*ALRST TUCMPS
|8084 3937
|X10C M301 F85 T.UNCL.MOP(MNL)
3938*--|/|---| |---|/|*-----|< >* 3943 3941 3949
|TUC.SS MNL
|652
|M207 F85
*--| |-----|
*ALRST TUCMPM
|8084 3943
|M413 M301 M409 F83 F84 F85 M411 M230 M412
3944*--|/|---| |---|/|---|/|---|/|---|/|---|/|---|< >* 3953 3916 3919 3933
|EMNTUC MNL MNTUCP TUCMPS TUCMPO TUCMPM MNTCLC SMR
|3918 652 3673 3937 3929 3943 3894 5686
|M412
*--| |-----|
|TUCLM
|3953
|M401 M408 M1068 M301 F86 AUTO MOP(TUC)
3954*--|/|---| |---|/|*-----|< >* 3962 3960 8904
|TCM ATUCL @UN/CL MNL
|2852 3620 652
|M412
*--| |-----|
|TUCLM
|3953
|M207 F86
*--| |-----|
*ALRST ATMOPT
|8084 3962
|M408 Y90 TOOL UNCLAMP
3963*--|/|---| |---|/|*-----|< >* 3965 1389 1397 3891
|ATUCL
|3620
|M412
|8671 8674 8683 8685
|8694 8696 13594 13597
*--| |*
|TUCLM
|3953
|M396 Y2D3 TORQUE LIMIT 2.N
3966*--|/|---| |---|/|*-----|< >* 3967
|TUCLCF
|1390
|X156 Y1B Y114 M235 Y21 OVER TRAVEL RELEAS
3968*--|/|---| |---|/|---|/|---|/|---|< >* 3972 5845 5884 5920
|MF1.B CST.PT FHD.L SMRX
|1214 1234 5690
*--| |*
|M2008 OT REL. PB AUX
|3973
*--| |*
|M200 K2 M07 MEMORY
3974*--|/|---| |---|/|*-----|< >* 3977 4075 9942 9952

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*RST
|340
*--| |-----|
|K2 MIRROR IMAGE X NC
|Y190 ]* 3980 9998 10002
*--| |*
|M200 M132 MEMORY
3981*--|/|---| |---|/|*-----|< >* 3982 4146 9946 9992
*ALRST
|340
*--| |-----|
|M267 Y94 M550 M9 M1049 M864
3984*--|/|---| |---|/|---|/|---|/|---|< >* 3983 4037 4054 4065
|M51M THCOV ATCMVM M9 @THROG
|3997 4099 1707
|M716
*--| |*
|THRCON
|3999
|T116 M864
*--|/|---| |---|/|*-----|
|SCLNIG M51MEX
|2863 3993
|M51 Y90 M51 MEMORY
3994*--|/|---| |---|/|*-----|< >* 3997 2856 3984 4090
|M51 TUCL.M
|3965
*--| |*
|M301
|MNL
|652
|Y90 THROUGH COOLANT ON
3998*--|/|---| |---|/|*-----|< >* 3999 3985 4092 7002
|TUCL.M
|3965
|X155 COOLANT STOP P.B P
4000*--|/|---| |---|/|*-----|< >* 4002 4003 4005
|CLSP.P
*--| |*
|M1392 Y10B Y10B COOLANT STOP L.B
4003*--|/|---| |---|/|*-----|< >* 4008 4004 4006 4026
|CLSTPB CLSP.L
|4002 4008
|M1392 Y10B
*--|/|---| |---|/|*-----|
|CLSTPB CLSP.L
|4002 4008
|M1320 M1088 M5131 Y1 Y143 M401 M550 M294 M295 EN.WORK AIR BLAST
4009*--|/|---| |---|/|---|/|---|/|---|< >* 4018 4034 4119
|MDCL @YME-C ACCLX HYD.M PROSLB TCM ATCMVM PENDME
|707 4022 337 7638 2852 1707 9319
|M1088
*--|/|---| |---|/|*-----|
|@YME-C
*--| |*
|M5122 M5130 M5131 ATC COVER CLS AUX
4019*--|/|---| |---|/|*-----|< >* 4022 4012 4020
|ACCLL ACOP
|1406 12975
|M5131
*--| |*
|ACCLX
|4022
|M326 M817 M827 Y10B M1401 EN.COOLANT AUX
4023*--|/|---| |---|/|---|/|---|/|---|< >* 4027 4069 4078 4096
|TCHT T.MSTX TBRST CLSP.L
|243 4444 1668 4008
|M1320 M281 M295 M263 ENABLE COOLANT
4028*--|/|---| |---|/|*-----|< >* 4035 4036 4053 4071
|MDCL MARTLI ENWABL
|707 4503 4018
|X10A M1023
*--| |*
|SUP.SS @TMEAS

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|M1034 |
*--|/|-*
|@MDINT
|-----|
M263 M275
4036 *--|/|-*-----<T122 D158 >* 4039 4052 CUTTING ST-ITL TMR
|ENCLT CCDON
|4035 3983
|Y2D0 X24B X234 M1300 T122 M263 M2071 M325 11140
|-----|-----< > *CUT START INT.N
4042 *--|/|-*-----< > * 4063 11555
|SRN.N SPFW D |SF.N SPUTS |CUTILT ENCLT |MMSST |CUTILL|
|5746 | | |1063 |4039 4035 |5205 |2030
|Y2D1 X24C | | | | |Y18 |M1111 |
|-----|-----|-----|-----|
*--|/|-*-----|-----|-----|-----|
|SRI.N SPREV | |CCDON | |MMSSKE @TULCH
|5743 | |3983 | |5283
|x202 | |M1061 |
|-----|-----|-----|-----|
*--|/|-*-----|-----|-----|-----|
|TAP.N | |@CUTCL
|-----|-----|-----|-----|
|M1395
*--|/|-*-----|-----|-----|-----|
|SPMRNM
|5750
|M1081
*--|/|-*-----|-----|-----|-----|
|@CUTSP
|-----|-----|-----|-----|
|Y6
4064 *--|/|-*-----[RST M275 ]* 3983 4037 4054 4065 COOLANT COMMAND ON
|PWON.M
|160
|M265 M720 M1401 M263 Y93 4074 4083 4101 4115
|-----|-----|-----|-----|
4066 *--|/|-*-----< > * 4072 4103 FLOOD COOLANT VAL
|M08M FDCAOT |ENCLTX |ENCLT
|9956 10312 |4027 |4035
|M712
*--|/|-*-----|-----|-----|-----|
|FDCON
|10400
4075 *--|/|-*-----|-----|-----|-----|
M264 M722 M1401 M263 M2056 MIST COOLANT AUX.
|-----|-----|-----|-----|
|M07M MISCAT |ENCLTX |ENCLT
|3977 10343 |4027 |4035
|M714
*--|/|-*-----|-----|-----|-----|
|MISCON
|10418
|M2056 M2048 YA GEAR SHIFT HIGH
|-----|-----|-----|-----|
4084 *--|/|-*-----< > * 4089 1484
|MISTX @TID-S
|4081 11130 |
|M2051 M2048
*--|/|-*-----|-----|-----|-----|
|IDHEXT @TID-S
|13299 11130
M267 M724 Y1F M1401 M263 Y94 THROGH COOLANT VAL
|-----|-----|-----|-----|
4090 *--|/|-*-----< > * 4099 3986 4102
|M51M THRCAT |M43T.M |ENCLTX |ENCLT
|3997 10363 |4339 4027 |4035
|M716 |M1071 |
*--|/|-*-----|-----|-----|-----|
|THRCON
|3999
|Y94 Y0 FLOOD COOLANT M.
4102 *--|/|-*-----< > * 4104
|THCOV
|4099
|Y93
*--|/|-*-----|-----|-----|-----|
|FCOV
|4072
M269 M726 M1401 M1087 M263 Y30 COVER COOLANT MTR
|-----|-----|-----|-----|
4105 *--|/|-*-----< > * 4113
|M53M COVCAT |ENCLTX |@COVCL |ENCLT
|9978 10383 |4027 |4035
|x28
*--|/|-*-----|-----|-----|-----|
|COOLANT COMMAND ON
*--|/|-*-----[SET M275 ]* 3983 4037 4054 4065

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|CVCLSS
|-----|-----|-----|-----|
|M718
*--|/|-*-----|-----|-----|-----|
|COVVON
|10458
M266 M723 M295 Y10B Y92 WORK AIR BLAST
4116 *--|/|-*-----< > * 4121
|M50M AIRBAT |ENWABL |CLSP.L
|9961 10352 |4018 4008
|M715
*--|/|-*-----|-----|-----|-----|
|AIRBON
|10427
M5129 Y80 M1310 M1311 Y81 ATC COVER CLOSE
4122 *--|/|-*-----< > * 4126 1401 4128 7193
|ACCL ACOP.M MDITM1 MDITM2
|12968 4131 2724 2743
|M5130 Y81 M1310 M1311 Y80 ATC COVER OPEN
4127 *--|/|-*-----< > * 4131 1405 4123 7222
|ACOP ACCL.M MDITM1 MDITM2
|12975 4126 2724 2743
|M271 M721 M1401 M263 Y29 AUTO P.OFF FROM NC
4132 *--|/|-*-----< > * 4138
|M130M NGRCAT |ENCLTX |ENCLT
|9987 10334 |4027 |4035
|M713
*--|/|-*-----|-----|-----|-----|
|[SET M275 ]* 3983 4037 4054 4065 COOLANT COMMAND ON
|NGRCON
|10409
|M408
4141 *--|/|-*-----<T68 D147 >* 4143 4157
|ATUCL
|3620
|M272 M727 M263 X244 M230 M1401 Y91 SPINDLE AIR BLAST
4146 *--|/|-*-----< > * 4163
|M132M THRAAT |ENCLT |SPZS.N |SMR |ENCLTX
|3982 10392 |4035 |5686 |4027
|M719
*--|/|-*-----|-----|-----|-----|
|THRAIO
|10467
|M865
*--|/|-*-----|-----|-----|-----|
|SABP
|2861
* [= K0 D147 ] *--|/|-*-----|-----|-----|
|ATUCL
|11291 |3620
|-----|-----|-----|-----|
|T68
*--|/|-*-----|-----|-----|-----|
|ATSABT
|4143
|M1145 M2056
*--|/|-*-----|-----|-----|-----|
|@THMS2 MISTX
|4081
|YB XE
4164 *--|/|-*-----<T113 K5 >* 4167 6788 9199
|GSHLOW RT4UC
|4378
|YB XE
4170 *--|/|-*-----<T114 K5 >* 4173 6805 9202
|GSHLOW RT4UC
|4378
|XF Y183 4TH AXIS NEGLECT
4176 *--|/|-*-----< > * 4177 4195 4394 5804
|4NG 6809 8719 12669
|M298 Y105 Y14B Y183 M527 MNL TABLE UNCLAMP
4178 *--|/|-*-----< > * 4196 4204 4210
|ZRXY4 |ZRN.L |4ZPSLB |DTCH4N
|5849 |7550 |4177
|x106
*--|/|-*
|+4.B

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|X12 M43 M530 M1002 M200 M1066 Y1F | M43T (OP)
4313*--|/|*--| |----|/|----|/|*--| |----|/|*--| >* 4339 4093 4251 4257
|MFIN |M43 M43FNM @NI/EL *RST @5TH | 4314 4319 4332 4340
| 4344 | 340 | 4345 4347 6814 6833
|Y1F | | 9168 9176
*--| |*
|M43T.M
|4339
|M43 M44 M1002
*--| |*--|/|----| |----| |----| |----|
|M43 |M44 @NI/EL
|Y1F |
*--| |*
|M43T.M
|4339
|X1E1 X117 Y1 M1066
*--| |*--|/|----| |----| |----| |----|
|H.N H5.B |HYD.M @5TH
| 337 |
|M898
*--| |*
|T5UCME
|4289
|M899
*--| |*
|T5UCCD
|4294
|Y1F M1071 M44 X15F M1324 X83
*--| |*--|/|----| |----| |----| |----|
|M43T.M M44 AXINTL ATC.CL
|4339 | 732 |
|Y1F X12 M43 M530 M43 FINISH MEMORY
4340*--| |*--|/|----| |----| |----| |----| >* 4344 4316 4342 9174
|M43T.M MFIN |M43
|4339 |
|M530
*--| |*
|M43FNM
|4344
4345*--| |*--|/|----| |----| |----| |----| <T66 K100 >* 5 TBL CL/UCL ALM T
|M43T.M T5UCLS|@5TH HYD.M 4353 4358
|4339 | 337 |
|Y1F X66
*--|/|----| |*
|M43T.M T5UCLS
|4339
|M207 F171 M1066 Y184 F171 5 AX TBL UCL LS AL
4356*--| |*--|/|----| |----| |----| |----| >* 4361 4357
|*ALRST T5AL |@5TH DTCH5N
|8084 4361 | 4264 |
|T66
*--| |*
|T5ALT
|4353
4362*--|/|*--| |----|/|----|/|*--| |----| |----| |----| >* 4373 4363 4368 4396
|MFIN |M44 M44FNM @NI/EL *RST | 9164
| 4400 | 340 |
|Y17 |
*--| |*
|M44T.M
|4373
|M44 M43 M1002
*--| |*--|/|----| |----| |----| |----|
|M44 |M43 @NI/EL
|Y17 |
*--| |*
|M44T.M
|4373
|M529 Y1 M1000 YB GEAR SHIFT LOW
4374*--| |*--|/|----| |----| |----| |----| >* 4378 4164 4170 4379
|NTUCCM|HYD.M @IN/NC 4381 6787 6806
|4206 | 337 | 11107 |
|M528 |
*--| |*

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|NTUCME
|4201
|YB XE M1000 Y1 NC TBL CL/UCL AL T
4379*--| |*--|/|----| |----| |----| |----| <T136 K100 >* 4387 4392
|GSHLOW RT4UC |@IN/NC HYD.M
|4378 | 11107 337 |
|YB XE
*--|/|----| |*
|GSHLOW RT4UC
|4378
|M207 F170 M1000 Y183 F170 NC TBL UCL LS ALM
4390*--| |*--|/|----| |----| |----| |----| >* 4395 4391
|*ALRST RTAL |@IN/NC DTCH4N
|8084 4395 | 11107 4177 |
|T136
*--| |*
|RTALT
|4387
|Y17 X12 M44 M531 M44 FINISH MEMORY
4396*--| |*--|/|----| |----| |----| |----| >* 4400 4365 4398 9162
|M44T.M MFIN |M44
|4373
|M531
*--| |*
|M44FNM
|4400
4401*--|/|*--|/|----|/|*--|/|----| |----| |----| >* M45T (OP)
|MFIN |M45FM1 @NI/EL M45 4420 4402 4406 4416
| 4425 | 4421 4426 4431
|YC
*--| |*
|M45T.M
|4420
|X12 M534 M1002
*--| |*--|/|----| |----| |----| |----|
|MFIN |45FM2X @NI/EL
| 4430 |
|YC
*--| |*
|M45T.M
|4420
|X11F M45 M1073
*--| |*--|/|----| |----| |----| |----|
|M45
|YC M44 M1071
*--| |*--|/|----| |----| |----| |----|
|M45T.M M44
|4420
|YC X12 M45 M532 M45 FINISH MEMORY1
4421*--| |*--|/|----| |----| |----| |----| >* 4425 4403 4423 9186
|M45T.M MFIN |M45
|4420
|M532
*--| |*
|M45FM1
|4425
4426*--| |*--|/|----| |----| |----| |----| >* M534 M45 FINISH MEM.2X
|YC X12 M45 M533 M45 FINISH MEMORY2
4431*--|/|*--| |----| |----| |----| |----| >* 4435 4433 9188
|M45T.M MFIN |45FM2X
|4420 | 4430 |
|M533
*--| |*
|M45FM2
|4435
|M328 M585 M826 M816 M820 M817 T.MEASER START AUX
4436*--|/|*--|/|----|/|*--|/|----| |----| |----| >* 4444 4024 4448 4469
|ATSEL |PCSEL |TBRSTX T.MSEL T.MFIN
|1634 | | 1659 1643 4859 |

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M401
*--|-----*
TCM
2852
M280 M285 M284 M285 MEAS.ARM EX HOLD
4552*--|-*--|-*--|/|-----< >* 4557 4554 4558 8647
MAEXLI MAEXH MARTM
4497 4557 4545
M200
*--|-----*
*RST
340
M282
*--|-----*
MAEXM
4534
M285 M809 Y25 MEAS.ARM EXTEND
4558*--|-----< >* 4560 4492 4498 8630
MAEXH MARTC2
4557 4551 8632 8640 8643 8655
M685 Y14E X1F8 M554 M547 F120 CAN'T ATC (ML.ZNG)
4561*--|-----< >* 4570 4566 4633
ZNGON ZZP2LB DEN.N ATCMVX ATCMV
10191 1698 4637
M681
*--|-----*
MALKON
10181
M549 F120
*--|/|-----*
STOPP ATCMOP
1071 4570
Y14A Y14E M681 M328 X1F8 M589 M555 M547 F118 CAN'T P.CHANGE
4571*--|/|-----< >* 4587 4582 4634 4648
ZZPSLB ZZP2LB MALKON ATSEL DEN.N PCMVX PCMV ATCMV
10181 1634 4651 4637
Y148 M681 M685
*--|/|-----< >*
XZPSLB MALKON ZNGON
10181 10191
M549 F118
*--|/|-----< >*
STOPP C'NTPC
1071 4587
M1359 R2202 = 0
4588*[D= K0 R2202 ]*-----< >* 4593 4595 10664 10670
M1099
*--|/|-----< >*
@ATC3
M541 M1359 M547 M589 M537 P/C AXIS MOV FIN.
4594*--|-----< >* 4603 4601 4647
BLK2-0 R2202X ATCMV PCMVX
4903 4593 4637
M2014
*--|-----< >*
PTPFIN
4771
M2014 M555
*--|-----< >*
PTPFIN PCMV
4771 4651
M537
*--|-----< >*
PCAXFN
4603
M544
4604*--|-----[CALL P17 ]*10477 3425 4607
ATCSLP
1637
M588
*--|-----< >*
PCSTP
M544 X1E8 M1241
4608*--|-----[WOR R7000 H40 R7000 ]* 4 2 164 166

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ATCSLP M.N EIA/MZ
1637 4
172 174 202 204
518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120
M328 M2031 T.ITF SRH FIN
4615*[BIT R7005 H6 ]*--|-----< >* 4620 4618 4630
9757
M2031
*--|-----< >*
TIFFIN
4620
4621*[BIT R7005 H6 ]-----[WAND R7000 HFFBF R7000 ]* 4 2 164 166
9757 4
172 174 202 204
518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120
X1E8 M554 M244 F120 F118 M2014 M547 ATC AXIS MOV.
4628*--|/|-----< >* 4637 2853 4569 4586
M.N ATCMVX ENPLCM ATCMOP C'NTPC PTPFIN
1698 1240 4570 4587 4771
4597 4635 4697 4707
4720 4757 4774 4802
4948 4943 4917 4910
8487 8476 7583 5204
9253
M1241
*--|-----< >*
EIA/MZ
*-----[PLS M546 ]* 4639 4654 4712 4967
7609 10593 10619 10621
10650 10661
M2031
*--|-----< >*
TIFFIN
4620
M547
*--|-----< >*
ATCMV
4637
M545 M554 M329 M244 M589 M537 F118 M2014 M555 APC AXIS MOV.
4640*--|/|-----< >* 4651 4585 4599 4649
EQATC ATCMVX ATCST ENPLCM PCMVX PCAXFN C'NTPC PTPFIN
1680 1698 1756 1240 4603 4587 4771
4694 4708 4721 4760
4775 4803 4920 8488
M328
*--|/|-----< >*
ATSEL
1634
M545
*--|-----< >*
EQATC
1680
M555
*--|-----< >*
PCMV
4651
1>-----[PLS M556 ]* 4653 4655 4713 10784
M546
4654*--|-----[CALL P62 ]*10576 4657
ATCMVP
4639
M556
*--|-----< >*
PCMVP
4653

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4658	M548 Y14D Y14E M550	M551	ATC POSITION	4662 4663	
	ATCPOS YZP2LB ZZP2LB ATCMVM				
	4929 1707				
4663	M551 M552	F38	ATC STOP	4665	
	ATCPOS ATCSP1				
	4662 1714				
4666	M2001 M301 X1F2 M1212 M2006	[PLS M1210 ]	TPS INPUT PLCCMN	4672 4879	
	TPSBX MNL OP.N TPSOPM TPSEB				
	315 652 4699 4876				
	M2016 M697 T2 M200	M698	TPS.CYCLE START	4678 1098 1212 4675	
4673	TPSFNX TPSMOD TPSCST *RST				
	4898 4690 4680 340				
	M698				
	TPSCST				
	4678				
	M200 M697	M1211	TPS RESET	4685 4689 4881	
4683	*RST TPSMOD				
	340 4690				
	M2018 M2016 M1211	M697	TPS.MODE	4690 1104 4674 4684	
4686	TPSAGX TPSFNX TPSRST			4687 4719 4742 4753	
	4896 4898 4685			4882	
	M697				
	TPSMOD				
	4690				
4691	Y211 M4059 M555 M818 M827 M547 M4058	M1212	TPS OUTPUT MODE	4699 4669 4741 4880	
	TM.N MVRIFL PCMV T.MST TBRST ATCMV MVLIFR				
	12337 3417 4651 4487 1668 4637 3413				
	Y210				
	MM.N				
	12344				
	Y219	M1202	PTP FEED HOLD	4705	
4700	*SP.N				
	1166				
	M4085 M301				
	MN.XFR MNL				
	3191 652				
	Y114				
	FHD.L				
	1234				
4706	Y21A M547 M555 M4059 M4058	M1203	PTP SINGLE BLOCK	4711 1174 8478	
	SBK.N ATCMV PCMV MVRIFL MVLIFR				
	9070 4637 4651 3417 3413				
	M546				
4712	ATCMVP	[SET M1213 ]	PTP INIT.	4718 4732 8481	
	4639				
	M556				
	PCMVP				
	4653				
	M819				
	T.MSTP				
	4489				
	M828				
	TBRSTP				
	1670				
	M4061				
	MVLIFR				
	3412				
	M4062				

	MVRIFL				
	3419				
4719	M697 M557 M549 M300 Y219	[SET M1201 ]	PTP START	4740 4751 4761	
	TPSMOD BLK2 STOFB AUTO *SP.N				
	4690 4911 1071 644 1166				
	M547 M332				
	ATCMV T/CFIN				
	4637 2048				
	M555 M557 M333				
	PCMV BLK2 T/CFIP				
	4651 4911 2050				
	M818 M1213				
	T.MST PTPINI				
	4487 4718				
	M827				
	TBRST				
	1668				
	M4058 M1089				
	MVLIFR PARTIN				
	3413				
	M4059 M1089				
	MVRIFL PARTIN				
	3417				
4741	M1212 M697 X1E3 X1F6	M696	TPS.RETURN	4745 1206 1230 4748	
	TPSOPM TPSMOD PTP.N CXN.N				
	4699 4690				
	M699 X1F3 M200	M699	TPS.RETURN MEMORY	4750 1228 4746	
4746	TPSREM STL.N *RST				
	4750 340				
	M696				
	TPSRET				
	4745				
	M1201 M697	M700	TPS.CODE BACK	4754 4752	
4751	PTPST TPSMOD				
	4740 4690				
	M700				
	TPSCB				
	4754				
	M2014				
4755	PTPPFIN	[RST M1235 ]	PTP.FINISH	4756 3594 4768 4770	
	4771			4825 4856 4921 4944	
	6492				
	M547 M4059 M4058 M555 M2017				
4757	ATCMV MVRIFL MVLIFR PCMV PTPMX	[RST M1234 ]	PTP.M.COMMAND	4763 4772 4904 8480	
	4637 3417 3413 4651 4773				
	M1201				
	PTPST				
	4740				
	M2016				
4764	TPSFNX	[RST M1233 ]	TPS FINISH	4765 4769 4897	
	4898				
	M200	M1204	PTP CANSER	4767 8479	
4766	*RST				
	340				
	PTP.FINISH	[RST M1235 ]	PTP.FINISH	4756 3594 4768 4770	
	4825 4856 4921 4944				
	6492				
	TPS FINISH	[RST M1233 ]	TPS FINISH	4765 4769 4897	

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M1235 M2014 PTP FINISH
4770*--| |-----< >* 4771 1667 1697 4486
|PTPFIN | 4596 4598 4636 4650
|4756 | 4755
M1234 M2017 PTP M CMD AUX
4772*--| |-----< >* 4773 4762
|PTPMCD |
|4763 |
|M547 |
4774*--| |-----[WOR R7000 H2 R7000 ]* 4 2 164 166
|ATCMV | 172 174 202 204
|4637 | 518 520 523 525
|M555 | 4612 4614 4625 4627
*--| |-* 4779 4781 4807 4809
|PCMV | 4816 4818 4821 4823
|4651 | 4847 4849 4852 4854
|M4058 | 4887 4889 4892 4894
*--| |-* 5120 5122 5125 5127
|MVLIFR|
|3413 |
|M4059 |
*--| |-*
|MVRIFL|
|3417 |
M547 M555 M4058 M4059
4802*--| |-----[WAND R7000 HFFFD R7000 ]* 4 2 164 166
|ATCMV | 172 174 202 204
|4637 | 518 520 523 525
|4651 | 4627 4625 4614 4612
|3413 | 4809 4807 4781 4779
|3417 | 4823 4821 4818 4816
| 4854 4852 4849 4847
| 4894 4892 4889 4887
| 5127 5125 5122 5120

M819
4810*--| |-----[CALL P42 ]*12422 4813
|T.MSTP|
|4489 |
|M828 |
*--| |-*
|TBRSTP|
|1670 |
M827
4814*--| |-----[WOR R7000 H8 R7000 ]* 4 2 164 166
|TBRST | 172 174 202 204
|1668 | 518 520 523 525
| 4627 4625 4614 4612
| 4809 4807 4781 4779
| 4823 4821 4818 4816
| 4854 4852 4849 4847
| 4894 4892 4889 4887
| 5127 5125 5122 5120

M827
4819*--| |-----[WAND R7000 HFFFD R7000 ]* 4 2 164 166
|TBRST | 172 174 202 204
|1668 | 518 520 523 525
| 4627 4625 4614 4612
| 4809 4807 4781 4779
| 4823 4821 4818 4816
| 4854 4852 4849 4847
| 4894 4892 4889 4887
| 5127 5125 5122 5120

M827 M1235 M829 TBR END
4824*--| |-----< >* 4826 4827
|TBRST |PTPFIN|
|1668 |4756|
|M829 |M195|
M829 M195 M835 TBR FINISH
4827*--| |-----< >* 4830 1658 4530 4541
|TBREND|M195| 4828 4835 9139
|4826 |
|M835 |
*--| |-*

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|TBRFIN |
|4830 |
|<> |
M835 M813 TBR FINISH AUX
4831*[BII R497 K3 ]*--| |-----< >* 4836 4834 9140
|TBRFIN|
|4830 |
|13506 |
M813
*--| |-----* *-----[PLS M812 ]* 4838 5049
|TBRPNX|
|4836 |
M818
4845*--| |-----[WOR R7000 H4 R7000 ]* 4 2 164 166
|T.MST | 172 174 202 204
|4487 | 518 520 523 525
| 4627 4625 4614 4612
| 4809 4807 4781 4779
| 4823 4821 4818 4816
| 4854 4852 4849 4847
| 4894 4892 4889 4887
| 5127 5125 5122 5120

M818
4850*--| |-----[WAND R7000 HFFFD R7000 ]* 4 2 164 166
|T.MST | 172 174 202 204
|4487 | 518 520 523 525
| 4627 4625 4614 4612
| 4809 4807 4781 4779
| 4823 4821 4818 4816
| 4854 4852 4849 4847
| 4894 4892 4889 4887
| 5127 5125 5122 5120

M818 M1235 M816 M820 T.MEASER FINISH
4855*--| |-----< >* 4859 4443 4512 4857
|T.MST |PTPFIN|T.MSEL|
|4487 |4756 |1643|
|M820 |
*--| |-----*
|T.MFIN |
|4859 |
M1273 M818 M821 T.MEAS.EXT.CMD.MEM
4864*--| |-----< >* 4869 4529 4865
|TMEXC |T.MST |
|4877 |4487 |
|M821 |M827 |M280 |M1215 |MEAS.ARM EXTEND
*--| |-----< >* 4871 1203
|TMEXCM |TBRST |MAEXLI|
|4869 |1668 |4497|
|M2018 |X1FA |M200 |M2006 |TPS PB AUX
4872*--| |-----< >* 4876 4670 4873 7262
|TPSASX|TSMZ.N |*RST|
|4896 | 340 |
|M2006 |
*--| |-----*
|TPSBX |
|4876 |
M2018
4877*--| |-----[RST M1232 ]* 4878 4895
|TPSASX|
|4896 |
M1210 M1212 M479 M2019 TPS AUX
4879*--| |-----< >* 4884 4885 4890
|TPSIPL |TPSOPM|MZP|
|4672 |4699 |5812|
|M1211 |
*--| |-----*
|TPSRST |
|4685 |
|M697 |
*--| |-----*
|TPSMOD |
|4690 |
M2019
4885*--| |-----[WOR R7000 H20 R7000 ]* 4 2 164 166
|TPSX | 172 174 202 204
|4884 | 518 520 523 525
| 4

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4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120

M2019
4890*--|/|-----[WAND R7000 HFFDF R7000]*
TPSX
4884
4
172 174 202 204
518 520 523 525
4627 4625 4614 4612
4809 4807 4781 4779
4823 4821 4818 4816
4854 4852 4849 4847
4894 4892 4889 4887
5127 5125 5122 5120

M1232 M2018 TPS ANSWER AUX
4895*--|/|-----< >* 4896 4686 4872 4877
TPSANS
4878
M1233 M2016 TPS FINISH AUX
4897*--|/|-----< >* 4898 4673 4688 4764
TPSFIN
4765
M541 BLOCK 2-0
4899*[D> K3 D1022 ]-----< >* 4903 4594 4918
3506
M1234 M547 M557 BLOCK 2
4904*--|/|-[D= K2 D1022 ]-----< >* 4911 4724 4727 4905
PTPMCD
4763 3506 4637
M557
*--|/|-*
BLK2
4911
M1099 X1F8 M1357 M589 M328 M548 ATC AXIS MOV.MEM.
4912*--|/|-*--|/|-----< >* 4929 2787 2803 4658
@ATC3 DEN.N ATCMXX PCMVX ATSEL
1702 1634 1634
Y14C
*--|/|-*
XZP2LB
M547 M541
*--|/|----->
ATCMV BLK2-0
4637 4903
M555 M1235
*--|/|----->
PCMV PTPFFIN
4651 4756
M548
*--|/|----->
ATCPOS
4929
Y14C M301
*--|/|----->
XZP2LB MNL
652
M1099
*--|/|-*
@ATC3
M545 M565 M328 M885 M560 ATC FINISH
4930*--|/|-----< >* 4942 2186 4437 4507
EQATC EQATCF ATSEL ARMPKD
1680 1803 1634 1371
5029 5036 5442 5453
5505 5568 5673 9096
9254
M332 M421 M333
*--|/|----->
T/CFIN *THYIT T/CFIP
2048 2050
M559 M421
*--|/|-*

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PLUPOS *THYIT
M561
*--|/|-*
LUPOSP
M547 M1235 M328 M366 ATC AXS.MOV.FIN.ME
4943*--|/|-----< >* 4947 4945
ATCMV PTPFFIN ATSEL
4637 4756 1634
M366
*--|/|----->
ATCMFM
4947
M547 M2204 M2206 M2205
4948*--|/|-----< >* 4952 4950 4953
ATCMV
4637 236 4955
M2205
*--|/|----->
4952
M2205 M2204 M2206
4953*--|/|-----< >* 4955 4951 4975
4952 236
M2010 Y1D9 M2209 M2207
4956*--|/|-----< >* 4960 4958 4963
ZR2LX +JY.N
7556 5928 4966
M2207
*--|/|-----> [PLS M2208 ]* 4962 4968
4960
M2207 M2204 Y1D9 M2209
4963*--|/|-----< >* 4966 4959 4976
4960 236 +JY.N
5928
M546
4967*--|/|-----[CALL P28 ]*11881 3401 4970
ATCMVP
4639
M2208
*--|/|-*
4962
M2206
4975*--|/|-----[CALL P29 ]*11903 3407 4978
4955
M2209
*--|/|-*
4966
X1F1 M1207 TOOL LIFE REQ.
4979*--|/|-----< >* 4980
SA.N
M260 TOOL EXCH.
4981*[< D78 R1999 ]*-----< >* 4987 4999 5100
4990 199
* [> D78 R1999 ]*-----[MOV R1999 D78 ]* 4990 4982 4985
4990 199 199
<=
4991*[BIT R7006 H8 ]*-----[WAND R7001 HFEFF R7001 ]* 226 224 1262 1264
9761 226 1531 1533 1540 1542
4995 4997 5005 5007
13048 13046 12803 12801
13104 13102 13090 13088
13353 13351 13146 13144
M2069
4998 5072 5085 5087

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M2032
5118*--| |-----[WOR R7000 H100 R7000 ]* 4 2 164 166
|AFC | 172 174 202 204
|5117 | 518 520 523 525
| | 4627 4625 4614 4612
| | 4809 4807 4781 4779
| | 4823 4821 4818 4816
| | 4854 4852 4849 4847
| | 4894 4892 4889 4887
| | 5127 5125 5122 5120

M2032
5123*--| |-----[WAND R7000 HFEFF R7000 ]* 4 2 164 166
|AFC | 172 174 202 204
|5117 | 518 520 523 525
| | 4627 4625 4614 4612
| | 4809 4807 4781 4779
| | 4823 4821 4818 4816
| | 4854 4852 4849 4847
| | 4894 4892 4889 4887
| | 5127 5125 5122 5120

M801 ATC NOT MAX
5128* [< R133 R2866 ]-----< >* 5131 5140
| 5104

M802 ATC NOT MIN
5132* [> R133 R2865 ]-----< >* 5135 5147 5166

X1F3 5104 M1237 M801
5136*--| |-*--| |----| |-----[+ R133 R2867 R133 ]* 5104 5107 5129 5133
|STL.N |AFCURE AFCDRE ATCNMX | 5142 5144 5149 5151
| | 5131 | 5104
|M1237 M802
|*--| |----| |-----[- R133 R2867 R133 ]* 5104 5107 5129 5133
|AFCDRE ATCNMN | 5142 5144 5149 5151
| 5135 | 5104

M804 AFC DOWN MEMORY
5152* [> K13 D79 ]----| |-*--| |-----< >* 5158 5155
| | 5164 5158 |
| | AFCDWM |STL.N |
|M1237 | <=
|*--| |-----* | [BIT R6017 H8 ]---->1
|AFCDRE |
| | M802
| | *--| |-----<T79 D56 >* 5168 5177
| | ATCNMN
| | 5135 | 11563
| | 1 >-----[INC D79 ]* 5164 5154 5174

M1237
5171*--| |-----[MOV K0 D79 ]* 5164 5154 5174
|AFCDRE |

M207 F22 F22 AFC ALARM
5175*--| |----| |-*--< >* 5178 5176 8882
|*ALRST AFCAL |
|8084 5178 |
|T79 |
|*--| |-----*
|AFCALM |
|5168 |
|X17D |
5179*--| |-----*-----<T151 K3 >* 5185 5189
|TLMSKP |
| |
|X178 X206 M326 |
|*--| |----| |----| |-*
|SKIP.M SKIP.N TCHT |
| 243 |
|M2070 T151 M2070 SKIP BZR MEM
5188*--| |----| |-----*-----< >* 5195 5188 5200

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|SKPME SKPOFT |
|5195 5185 |
|X178 X206 M326 |
|*--| |----| |----| |-*-----<T8 K7 >* 5197 5201
|SKIP.M SKIP.N TCHT |
| 243 |
|X17D |
|*--| |-----*
|TLMSKP |

M2070 T8 Y117 SKIP ON BUZZER
5200*--| |----| |----| |-----< >* 5202
|SKPME SKPBZT |
|5195 5197 |
|M326 M547 M2071
5203*--| |----| |----| |-*-----< >* 5205 4057 5214 5224
|TCHT ATCMV | 5227 5231 5241 5262
|243 4637 |
| |
| | *-----[PLS M2072 ]* 5207 5213
| |
| | *-----[PLF M2073 ]* 5209

X17 M240 M2071
5210*--| |-*--| |-*--| |-*-----<T16 K50 >* 5217 5220
|MMSRDY |CSTPBX |MMSST |
| | 1069 5205 |
|X18 | |T16 Y19 MMS START COMMAND
|*--| |-* |*--| |-----< >* 5221 5215
|MMSIMP | |MMSSTT
| | 5217
|M2072
|*--| |-----*
|MMSSTP
|5207
|Y19
|*--| |-----*
|MMSCOM
|5221
|X18 Y138 MMS POWER ON L.B
5222*--| |-----< >* 5223 5239 5261 5268
|MMSIMP |

M2071 X19 Y139 MMS READY L.B
5224*--| |----| |-----< >* 5226 5233 5259
|MMSST MMSPON
|5205
|M2071 X17 Y13A MMS IMPROCESS L.B
5227*--| |----| |-----< >* 5229 5240 5260 5267
|MMSST MMSRDY
|5205
|X178 M2071 Y13B MMS TOUCH L.B
5230*--| |----| |-----< >* 5232
|SKIP.M MMSST
| 5205
|Y139 M326 M200 M460 MMS ON AUX
5233*--| |-*--| |----| |-----< >* 5237 5234 5238 5258
|MSRDY |TCHT *RST
|5226 243 340
|M460 |
|*--| |-*
|MMSONX
|5237
|M460 Y138 Y13A M2071 M461 MMS READY AUX
5238*--| |----| |----| |----| |-*-----< >* 5242 5247 5252
|MMSONX MSPOLB MSIMLB MMSST
|5237 5223 5229 5205
| |
| | *-----<T171 K5 >*
|M461
5247*--| |-----[WOR R72 H1 R72 ]* 5251 5249 5254 5256
|MMSRDYX
|5242 5251

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|M461
5252*--|/|-----[WAND R72 HFFFE R72 ]* 5251 5249 5254 5256
|MSRDYX
|5242 5251
|X178 Y139 M2071 MMS ALARM TIMER
5257*--|/|*--|/|*--|/|-----<T70 K10 >* 5264 5279
|SKIP.M|MSRDLB|MMSST
|5226 5205
|M460
*--|/|*
|MMSONX
|5237
|Y13A
*--|/|-----*
|MSIMLB
|5229
|Y138
*--|/|-----*
|MSPOLB
|5223
|Y13A X206 M326 M2074 MMS ALARM 2
5267*--|/|*--|/|*--|/|-----< >* 5274 5272 5280
|MSIMLB|SKIP.N TCHT
|5229 243
|Y138
*--|/|*
|MSPOLB
|5223
|M200 M2074
*--|/|-----*
|RST MMSAL2
|340 5274
|M240 M207 X206 F30 F30 MMS MALF.
5275*--|/|*--|/|*--|/|-----< >* 5281 5278 8875
|CSTPEX *ALRST SKIP.N MMSMLF|
|1069 8084 5281
|T70
*--|/|-----*
|MMSAL
|5264
|M2074
*--|/|-----*
|MMSAL2
|5274
|T171 Y18 MMS SKIP ENABLE
5282*--|/|-----< >* 5283 4058
|MMSSTT
|5244
|X200 X206 X1F9 RAPID MODE DELAY T
5284*--|/|*--|/|*--|/|-----<T10 K50 >* 5288 5295
|RPD.N SKIP.N TIMP.N
|M326 M550 M401 X178 T10 M1113 F113 MMS SKIP SIGNAL AL
5291*--|/|*--|/|*--|/|*--|/|-----< >* 5300 5297 5301
|TCHT ATCMVM TCM SKIP.M RTDLYT @MMEMG
|243 1707 2852 5288
|X140 F113
*--|/|-----*
|RST.B MMSKPA
|5300
|F113
5301*--|/|*--|/|*--|/|-----[SET Y29F ]* 5306 336 831 5310
|MMSKPA
|5300
|F181
*--|/|*
|SW.ERR
|975
|F182
*--|/|*
|PCUTAL
|811
|M1380
*--|/|*
|DLKMLT
|8284
|M1398
*--|/|*

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|SPMNIX
|879
|X156 X140 M1348 PLC EMERGENCY STOP
5307*--|/|*--|/|*--|/|-----[RST Y29F ]* 5306 336 831 5310
|MP1.B RST.B THUXX
|5314
|T155 Y29F M1348 POWER ON ESP MEM.
5311*--|/|*--|/|*--|/|-----< >* 5314 5309 5312
|MA.NT1 PCEMG
|444 5306
|M1348
*--|/|*
|THUXX
|5314
|Y6 Y2D7
5315*--|/|*--|/|*--|/|-----[MOV K1 R1996 ]* 5320 5325
|PWON.M|SLCI.N
|160 5393
|Y2D7
*--|/|*--|/|-----[MOV K2 R1996 ]* 5320 5325
|SLCI.N
|5393
|Y6
5326*--|/|*--|/|*--|/|-----[MOV R148 D232 ]* 5329 5337 5338 5340
|PWON.M
|160 6369
*--|/|*--|/|-----[MOV K0 D233 ]* 5332 5351
|M300
*--|/|*--|/|-----[D* R28 D232 D232 ]* 5329 5337 5338 5340
|AUTO
|644 5329
*--|/|*--|/|-----[D/ D232 K100 D232 ]* 5329 5337 5338 5340
|5329
|M301
*--|/|*--|/|-----[MOV D30 D232 ]* 5329 5337 5338 5340
|MNL SRPM
|652 6306
*--|/|*--|/|-----[MOV K0 D233 ]* 5332 5351
|Y6
5352*--|/|*--|/|*--|/|-----[+ R2140 R2141 D236 ]* 5356 5369
|PWON.M
|160
*--|/|*--|/|-----[MOV K0 D237 ]* 5359
*--|/|*--|/|-----[MOV R2140 D238 ]* 5362 5374
*--|/|*--|/|-----[MOV K0 D239 ]* 5365
|M230 M1192 AUX 8
5366*--|/|*--|/|*--|/|-----< >* 5371 2837 5378 5390
|SMR
|5686 5356 5329
|12703 12706 12792 12793
|12899 12880 12862 12804
|12903
|M1193 AUX 7
*--|/|*--|/|*--|/|-----< >* 5376 5380 5388 8986
|8993 12684
|Y290 Y290 X234
5377*--|/|*--|/|*--|/|-----<T150 K3 >* 5384
|GI1.N GI1.N SF.N
|5394 5394

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M320 M323 M200 M320 SP.ORIENT MEMORY
5535*--| |-----|*--| |-----|> 5550 5535 5574 5578
|SORME |SORARI |*RST | 5582 5586 5590 5604
|5550 1434 |340 | 5622 7294 8819
|M544 M545
*--| |*--| |-----|*
|ATCSLP|EQTATC
|1637 |1680
|M330
*--| |*
|ATCSSTP
|1758
|M401
*--| |-----|*
|TCM
|2852
|M19 M291
*--| |-----|*
|M19 GSFME
M883 M706 M673
*--| |-----|*
|ATCOL MNL5OR MN305
|1366 5534 10063
|M291 M883 X19 M328 M200 M327 F75 M322 UNORIENT MEMORY
5551*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 5573 5554 5628 8820
|GSFME |ATCOL |MMSPO|ATSEL |*RST |SPET |STMOPS
|1366 1366 |1634 |340 |251 |5475
|M323 M322 M19 |X17 |M560
*--| |-----|*--| |-----|*--| |-----|*
|SORARI |UORARI |M19 |MMSRDY |ATCFIN
|1434 5573 | |4942
|M225
*--| |-----|*
|SST
|5447
|M229
*--| |-----|*
|SJVAX
|5664
|M562
*--| |-----|*
|UORP
|2038
|X249
*--| |-----|*
|SPSVON
M1402 M664
*--| |-----|*
|M221 MD9
|10095 10150
M320 M397 M323 F80 ORI.MOP (TCL)
5574*--| |-----|*--| |-----|> 5581 5579
|SORME |TCLCF |SORARI
|5550 1398 1434
|M207 F80
*--| |*--| |-----|*
|*ALRST|ORMOPT
|8084 |5581
|M320
*--| |*
|SORME
|5550
M320 M323 M327 F81 ORI.MOP (SPEC.TOOL)
5582*--| |-----|*--| |-----|> 5589 5587 5623
|SORME |SORARI |SPET
|5550 1434 251
|M207 F81
*--| |*--| |-----|*
|*ALRST|ORMOPS
|8084 |5589
|M320
*--| |*
|SORME
|5550
M320 M323 M883 F82 ORI.MOP (ATC)
5590*--| |-----|*--| |-----|> 5596 5594 5625

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|SORME |SORARI |ATCOL |
|5550 1434 1366
|M207 F82
*--| |-----|*
|*ALRST |ORMOPA
|8084 5596
|M397 Y2D6
5597*--| |-----|*--| |-----|<T67 K5 > 5600 5621
|TCLCF |SOR.N
|1398 5641
M323 M320 M1320 M300 M1086 M1034 M1112 M1312 M.D.INT S.ORIENT 1
5603*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 5613 5605 5616 5637
|SORARI |SORME |MDCL |AUTO |@YMC/E |@MDINT |@MDIT2
|1434 5550 |707 644 11119
|M1312 M207
*--| |-----|*
|DIOR11 |*ALRST
|5613 8084
M1314 M549 M1309 M1034 M1112 M1314 M.D.INT S.ORIENT 2
5614*--| |-----|*--| |-----|*--| |-----|> 5620 5614 5638 8138
|DIOR12 |STOFP |SORCDX |@MDINT |@MDIT2
|5620 1071 |5635 11119
|M1312
*--| |-----|*
|DIOR11
|5613
M67 T67 M320 F81 F98 F82 M327 M322 F42
5621*--| |-----|*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 1
|ORNEGT |SORME |ORMOPS |SORMPG |ORMOPA |SPET |UORARI |ORAL
|5600 5550 5589 5596 251 |5573 |8860
|Y2D6 |M327 |M200
*--| |-----|*--| |-----|*--| |-----|*
|SOR.N |SPET |*RST
|5641 251 340
F44 M1309 SPNDL ORIENT CD AX
1>-----| |-----|< > 5635 5617 5636
|ORSZS
|8868
M1309 M1312 M1314 Y1 M1325 Y2D6 SP.ORIENT CMD.N
5636*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 5641 846 1082 1424
|SORCDX |DIOR11 |DIOR12 |HYD.M |SSETX
|5635 5613 5620 337 830
5598 5627 5682 7272
8843 8837 8346 8335
13582 8863 8855
M2004 M228 X10A M301 M1320 M1034 M1112 M1313 M.D.INT S.JOG PB
5642*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 5655 5647 5663 8290
|SJVGBX |SSTHLD|SJGBX |DISJOG
|319 |5531 |652 707 |11119
X2 M1074
*--| |-----|*
|FHD
M1313 M207
*--| |-----|*
|DISJOG |*ALRST
|5655 8084
M301 M228 M2004 M1313 M229 SPINDLE JOG AUX
5656*--| |-----|*--| |-----|*--| |-----|> 5664 5528 5556 5665
|MNL |SSTHLD|SJGBX |DISJOG
|652 5531 |319 |5655
|M1074 X2
*--| |-----|*
|FHD
M229 M397 M883 M19 M328 M816 M826 M227
5665*--| |*--| |-----|*--| |-----|*--| |-----|*--| |-----|> 1
|SJVGBX |TCLCF |ATCOL |M19 |ATSEL |T.MSEL |TBRSTX |ENSRUN
|5664 1398 1366 |1634 1643 1659 5503
|M228 M230 |M560 |M820
*--| |*--| |-----|*
|SSTHLD |SMR |ATCFIN |T.MFIN
|5531 5686 |4942 |4859
|M545
*--| |*
|EQTATC
|1680

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      Y90   Y2D6   M327   M294   M1312           M230  | SPINDLE MOTOR RUN
1>-----|/-----|/-----|/-----|/-----|-----< > * 5686 1411 3952 4151
      TUCL.M SOR.N SPET  PENDME DIOR11
      3965 5641 251  9319 5613
      5366 5669 5689 5752
      6324 6332 6341 6345
      8799 8230 8186 8145

M235   T5           M235  | SMR DELAY OFF
5687*--| |-----|/-----|-----< > * 5690 3913 3931 3971
      SMRX  MPMD  |
      5690 5692  |
      M230  |
      SMR  |
      5686  |
      X24B  X24E  X249           Y115  | SPINDLE RUN L.B
5695*--| |-----|/-----|-----< > * 5702 5749 8144
      SPFWD |SPIPOS SPSVON|
      X24C  |
      SPREV |
      M235  X249           *
      SMRX  SPSVON
      5690  |
      T62  |
      Y129  | SPINDLE STOP L.B
5703*--| |-----|/-----|-----< > * 5704 8309
      SSTOP  |
      1420  |
      M229  M235           M2011  | SPINDLE JOG L AUX
5705*--| |-----|/-----|-----< > * 5707 7233
      SJGAX  SMRX
      5664 5690
      M2005  |
      SRVBX  |
      322  |
      M231  M301           M232  | SPINDLE REV.PLS
5711*--| |-----|/-----|-----< > * 5713 5714 5716
      SREVPX MNL
      5710 652
      M232  M233           M233  | MANUAL SP.REVERSE
5714*--| |-----|/-----|-----< > * 5719 5715 5717 5727
      SREVP  MNSR  |
      5713 5719  |
      M232  M233  |
      *--|/-----|/-----|-----< > *
      SREVP  MNSR  |
      5713 5719  |
      M4  M3           M234  | AUTO SP.REVERSE
5720*--| |-----|/-----|-----< > * 5723 5721 5725 5733
      M4  M3
      M234  |
      ASR  |
      5723  |
      M300  M234           M221  | SPINDLE REVERSE X
5724*--| |-----|/-----|-----< > * 5729 5741 5744 9147
      AUTO  ASR  |
      644 5723  |
      M301  M233  |
      *--|/-----|/-----|-----< > *
      MNL  MNSR  |
      652 5719  |
      X24C  X24E  X249  M300           Y12B  | SPINDLE REV. L.B
5730*--| |-----|/-----|-----< > * 5740 7254
      SPREV |SPIPOS SPSVON|AUTO
      644  |
      M234  X249           *
      ASR  SPSVON
      5723  |
      M233  M301  |
      *--|/-----|/-----|-----< > *

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MNSR  MNL
5719 652
M221  M235           Y2D1  | SP.FD.N(M.REV)
5741*--| |-----|/-----|-----< > * 5743 4044 5748
      SREVPX SMRX
      5729 5690
      M221  M235           Y2D0  | SP.REV.N(M.FD)
5744*--| |-----|/-----|-----< > * 5746 4042 5747
      SREVPX SMRX
      5729 5690
      Y2D0  |
      M1395  | SPINDLE SMR RUN M
5747*--| |-----|/-----|-----< > * 5750 844 4050 7698
      SRN.N  |
      5746  |
      Y2D1  |
      *--|/-----|/-----|-----< > *
      SRI.N  |
      5743  |
      Y115  |
      *--|/-----|/-----|-----< > *
      SST.L  |
      5702  |
      X244  M230  Y295  X249  M291  M323           SP.ZERO SPEED TMR
5751*--| |-----|/-----|/-----|/-----|/-----<T6 K30 > * 5758 5777 5781 5791
      SPZS.N SMR  GSFT.N SPSVON GSFME  SORARI
      5686 6353 1434
      M291  T129           REGEAR SHIFT TMR1
5761*--| |-----|/-----|/-----|/-----<T128 K80 > * 5764 5767 5772 5774
      GSFME  REGST2
      5769
      T128           REGEAR SHIFT TMR2
5767*--| |-----|/-----|/-----|/-----<T129 K10 > * 5769 5762
      REGST1
      5764
      T128  M289  T6  M2203  T233           M2202
5772*--| |-----|/-----|/-----|/-----|/-----< > * 5785 1016 1022 5780
      REGST1 HSR  |SZSPDT|  GSALT
      5764 5758 5799
      T128  M290           *
      *--|/-----|/-----|/-----|/-----< > *
      REGST1 LSR
      5764
      M206  X36  T6           *
      *--|/-----|/-----|/-----|/-----< > *
      HYDONP HGLS |SZSPDT|
      342 5758
      M2202
      *--|/-----|/-----|/-----|/-----< > *
      5785
      T128  M290  T6  M2202  T233           M2203
5786*--| |-----|/-----|/-----|/-----|/-----< > * 5799 5783 5794 6984
      REGST1 LSR  |SZSPDT|  GSALT
      5764 5758 5785
      T128  M289           *
      *--|/-----|/-----|/-----|/-----< > *
      REGST1 HSR
      5764
      M206  X37  T6           *
      *--|/-----|/-----|/-----|/-----< > *
      HYDONP LGLS |SZSPDT|
      342 5758
      M2203
      *--|/-----|/-----|/-----|/-----< > *
      5799
      M479           M478  | MACHINE ZP.X
5800*--| |-----|/-----|/-----|/-----|/-----< > * 5801
      MZP
      5812
      M475  M897  M472  M473  M474           M479  | MACHINE ZERO POSI.
5802*--| |-----|/-----|/-----|/-----|/-----|/-----< > * 5812 1239 3181 3202
      ZP4ME |ZP5ME |ZPXME ZPYME ZPZME
      301 297
      M1000 M1066           |
      *--|/-----|/-----|/-----|/-----|/-----< > *
      @IN/NC|@5TH  |
      11107 |

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|Y183 |Y184 |
*--| |*-| |*-|
|DTCH4N DTCH5N
4177 4264
M4063 X101 X198 M469 X AXIS MOVE
5813*--|/|---| |---| |*-----< >* 5819 5816 5832 5883
|MID.PS -X.B MD1
|3279
|M469
*--| |-----|*
|XMOV
5819
|M491
*--| |-----|*
|XZRME
|12764
|M472
*--| |-----|*
|ZPXME
297
X102 X199 M470 Y AXIS MOVE
5820*--| |---| |*------< >* 5825 5822 5833 5919
|+Y.B MD2
|M470
*--| |-----|*
|YMOV
5825
|M492
*--| |-----|*
|YZRME
|12774
|M473
*--| |-----|*
|ZPYME
X105 X19A M471 Z AXIS MOVE
5826*--| |---| |*------< >* 5831 5828 5834 5952
|-Z.B MD3
|M471
*--| |-----|*
|ZMOV
5831
|M493
*--| |-----|*
|ZZRME
|12784
|M474
*--| |-----|*
|ZPZME
M469 X1F0
5832*--|/|---| |*------[CALL P49 ]*12751 5837
|XMOV MA.N
5819
|M470
*--|/|---|
|YMOV
5825
|M471
*--|/|---|
|ZMOV
5831
X112 M479 M200 Y105 X1E4 Y21 M297 ZERO RETURN Z
5838*--| |---| |*-| |---| |---| |---|/|*------< >* 5846 5856 5950 5969
|ALLZ.B MZP *RST ZRN.L Z.N OTR.M
|5812 340 7550 3972
|M997 |Y14A M298 ZERO RETURN XY4
*--| |-----|* >* 5849 4178 4265 5881
|ZERTCD |ZZPSLB 5901 5917 5936 5983
13457 5994 6005 6017
M1185 ALL ZERO RETURN P.
*--| |-----|* >* 5852 5853
|DNCZRT
|12666
|M980
5853*--| |-----[CALL P47 ]*12719 5855

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|AZRPLS
5852
M297 M981 M981 X + POSITION
5856*--| |*-| |-----< >* 5859 5858 5876 5898
|ZRZ |+XPOS
5846 |5859
|M982 M982 Y + POSITION
*--| |-----< >* 5862 5861 5914 5933
|+YPOS
5862
|M983 M983 Z + POSITION
*--| |-----< >* 5865 5864 5947 5966
|+ZPOS
5865
|M984 M984 4TH + POSITION
*--| |-----< >* 5868 5867 5980 5991
|+4POS
5868
|M979 M979 P.CHANGE START P.
*--| |-----< >* 5871 5870 6002 6014
|PCSTP
5871
X1E0 M2035 STEP OR JOG MODE
5872*--| |*------< >* 5875 5892 5910 5927
|JOG.N
5943 5960 5976 5987
5998 6009 6021
X1E2
*--| |*-
|S.N
X1E4
*--| |*-
|Z.N
M981 M472 M298 Y148 Y105 M2035 Y1D8 +JX.N
5876*--|/|---| |*-| |---|/|*-| |---| |---| |---| |---| |---| |---| |---| |---| |---| < >* 5893
|+XPOS ZPXME |ZRXY4 XZPSLB |ZRN.L |S/J
5859 297 5849 |7550 |5875
|T11 M472 |M472
*--| |---| |---| |---| |---| |---|
|ZRETXT ZPXME |ZPXME
6031 297 |297
M469 X100 M4063 |Y1B8
*--| |*-| |---| |---| |---| |---| |---|
|XMOV |+X.B MID.PS *+MITX
5819 |3279 |6696
|Y21
*--| |*-
|OTR.M
3972
Y1C0 Y1D0 T11 M472 M298 Y148 Y105 M2035 Y1E0 -JX.N
5894*--| |---|/|---|/|---|/|*-| |---|/|*-| |---| |---| |---| |---| |---| |---| |---| < >* 5911 6024
|*-MITX MMLKXN ZRETXT ZPXME |ZRXY4 XZPSLB |ZRN.L |S/J
6706 7612 6031 297 |5849 |7550 |5875
|M981 M472 |M472
*--| |---| |---| |---| |---| |---|
|+XPOS ZPXME |ZPXME
5859 297 |297
X101 M4063 |Y1C0
*--| |---| |---| |---| |---| |---|
|-X.B MID.PS *+MITX
3279 |6706
|T12 M473 M298 Y149 Y105 M2035 Y1D9 +JY.N
5912*--| |---|/|*-| |---|/|*-| |---| |---| |---| |---| |---| |---| |---| |---| < >* 5928 4957 4965
|ZREYTX ZPYME |ZRXY4 YZPSLB |ZRN.L |S/J
6041 |5849 |7550 |5875
|M982 M473 |M473
*--|/|---| |---| |---| |---|
|+YPOS ZPYME |ZPYME
5862
|M470 X103 |Y1B9
*--| |*-| |---| |---| |---|
|YMOV |-Y.B *+MITY
5825 |6740
|Y21
*--| |*-
|OTR.M
3972

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M301 M299 M212 Y209 M301 M299 RAPID MODE AUX
6092*--| |*--| |----|/|----|/|*--| |-----< >* 6101 6095
|MNL |RAPMX |JGMDCC |HM.N |MNL |
|652 |6101 |7509 |652 |
|X1E0 |Y22E |
*--| |*--| |-----< >*
|JOG.N |RPDM.N
|7524 |
|X1E2 |
*--| |*--| |-----< >*
|S.N |
M300 M1388 SP. % MONITOR M.
6102*--| |-----< >* 6103 6239 6256 6267
|AUTO |
|644 |
|M301 M1389 SP. RPM MONITOR M.
6104*--| |-----< >* 6105 6278 6285 6297
|MNL |
|652 |
|M300 Y21D Y13E JOG FEED/MIN L.B
6106*--| |*--| |-----< >* 6109 6167 6176 6186
|AUTO |DRN.N |
|644 |10232 |
|M301 M455 Y153 JOG FEED/INCH L.B
*--| |*--| |-----< >* 6111
|MNL |IMINIT
|652 |11519 |
|M300 Y21D Y13D JOG FEED % L.B
6112*--| |*--| |-----< >* 6114 6118 6145 6156
|AUTO |DRN.N |
|644 |10232 |
M2060 M2061 JOG FEED UP 2
6115*[> R2153 R132 ]*[= K1 R4104 ]*--| |*--| |-----< >* 6125 6146 6160 6181
|Y13D |M2060 | | | | |
|*--| |*--| |-----< >* |M2061 |
|JF%L.B | |
|6114 |6214 |M2060 |
|M660 | |MN275 |
*--| |*--| |-----< >* |10113 |
|MD5 |
|10134 |
|X141 |
*--| |*--| |-----< >*
|JUP.PB |
M2060 M2062 JOG FEED DOWN 2
6126*[= K1 R4105 ]*--| |*--| |-----< >* 6132 6149 6157 6172
|M661 |M2060 |
*--| |*--| |-----< >* |MN275 |
|M661 | |10113 |
*--| |*--| |-----< >*
|M661 |
|10138 |
|X142 |
*--| |*--| |-----< >*
|JDW.PB |
T0 JOG.UP/DOWN TIMER
6133*--| |*--| |-----< >T0 K8 >* 6135 6133 6168 6177
|JUP/DW |
|6135 |
|T1 |
6138*--| |*--| |-----< >T1 K15 >* 6140 6138 6166 6175
|OVRU/D |
|6140 |
|Y298 X202 M2061 |
6143*--| |*--| |*--| |*--| |-----< >[PLS M448 ]* 6148 6171
|OVC.N TAP.N JFUP2 |
|6091 |6125 |
|Y13D |M2062 |
*--| |*--| |*--| |*--| |-----< >T72 K5 >* 6151 6170
|JF%L.B |JFDW2 |
|6114 |6132 |
|Y298 X202 M2062 |
6154*--| |*--| |*--| |*--| |-----< >[PLS M449 ]* 6159 6180

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|OVC.N TAP.N JFDW2 |
|6091 |6132 |
|Y13D |M2061 |
*--| |*--| |*--| |*--| |-----< >T73 K5 >* 6162 6179
|JF%L.B |JFUP2 |
|6114 |6125 |
|Y13D T1 T72 M2062 M450 JOG FEED UP
6165*--| |*--| |*--| |*--| |-----< >* 6173 6183 6189 6195
|JF%L.B OVRU/D OVRU/DW JFDW2 |
|6114 6140 6151 6132 |
|Y13E T0 |
*--| |*--| |*--| |*--| |-----< >*
|JF/MLB JUP/DW |
|6109 6135 |
|M448 |
*--| |*--| |*--| |*--| |-----< >*
|JFUPBP |
|6148 |
|Y13D T1 T73 M2061 M451 JOG FEED DOWN
6174*--| |*--| |*--| |*--| |-----< >* 6182 6184 6190 6196
|JF%L.B OVRU/D JFDWB JFUP2 |
|6114 6140 6162 6125 |
|Y13E T0 |
*--| |*--| |*--| |*--| |-----< >*
|JF/MLB JUP/DW |
|6109 6135 |
|M449 |
*--| |*--| |*--| |*--| |-----< >*
|JFDWBP |
|6159 |
|M450 M455 Y13E
6183*--| |*--| |*--| |*--| |-----< >[CALL P19 ]*10882 6188
|JFUP |IMINIT JF/MLB |
|6173 |11519 6109 |
|M451 |
*--| |*--| |*--| |*--| |-----< >*
|JFDWN |
|6182 |
|M450 M455 Y13E
6189*--| |*--| |*--| |*--| |-----< >[CALL P20 ]*11013 6194
|JFUP |IMINIT JF/MLB |
|6173 |11519 6109 |
|M451 |
*--| |*--| |*--| |*--| |-----< >*
|JFDWN |
|6182 |
|M450 Y13D M300
6195*--| |*--| |*--| |*--| |-----< >[CALL P38 ]*12353 6200
|JFUP |JF%L.B AUTO |
|6173 |6114 644 |
|M451 |
*--| |*--| |*--| |*--| |-----< >*
|JFDWN |
|6182 |
|M300 Y21D X202 Y298 M442 OVER.CANCEL SEL.X
6201*--| |*--| |*--| |*--| |*--| |-----< >* 6205 6210 6215
|AUTO |DRN.N TAP.N OVC.N |
|644 |10232 |6091 |
*--| |*--| |*--| |*--| |*--| |-----< >[PLS M454 ]*
|JFDWN |
|6182 |
|M450 M442
6208*--| |*--| |*--| |*--| |*--| |-----< >[MOV D34 R132 ]* 6214 6117 6217 6226
|JFUP |OVCSLX |
|6173 |6205 |
|M451 |6218 |
*--| |*--| |*--| |*--| |*--| |-----< >*
|JFDWN |
|6182 |
|M454 |
*--| |*--| |*--| |*--| |*--| |-----< >*
|JF%PLS |
|6207 |
|M442 |
6215*--| |*--| |*--| |*--| |*--| |-----< >[MOV R132 D34 ]* 6218 6213 11569 12356
|OVCSLX |
|6205 |
|6214 |
|12358 12360 12364 12366
|12368

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6219*--|/|----|/|-*-----[MOV K100 R132 ]* 6214 6117 6217 6226
      |M300 M1261
      |AUTO VFC2
      |644
      |Y21D
      *--| |-----*
      |DRN.N
      |10232
      |Y298
      *--| |-----*
      |OVC.N
      |6091
      |X202
      *--| |-----*
      |TAP.N
      |M1402 M664 <>
6227*--| |----| |-*[BII R2911 HF ]-----[DMOV D43 R136 ]* 6235 6607 6612
      |MN221 MD9
      |10095 10150 11006
      |Y13E
      *--| |-----*
      |JF/MLB
      |6109
6236*[> R2152 R148 ]* [= K1 R4102 ]*--| |-*-----< M2060 M2063 SPINDLE UP 2
      |M1388 6369 |MN275 |
      | | |10113 |
      *--|/|-----*
      |SP%M.M
      |6103
      |M658
      *--| |-----*
      |MD3
      |10126
      |X143
      *--| |-----*
      |SPUP.B
6247*[ = K1 R4103 ]*--| |-*-----< M2060 M2064 SPINDLE DOWN 2
      |M659 |MN275 |
      | | |10113 |
      *--|/|-----*
      |MD4
      |10130
      |X144
      *--| |-----*
      |SPDW.B
6254*--|/|----|/|-*-----[PLS M440 ]* SP.UP PB PULSE
      |OVC.N TAP.N SPUP2 |
      |6091 6246 |M2064 |
      |M1388 |M2064 | SPINDLE UP PB.TMR
      *--|/|-----* *--|/|-----<T74 K5 >* 6262 6279 12389
      |SP%M.M SPDW2 |
      |6103 6253 |
6265*--|/|----|/|-*-----[PLS M441 ]* SP.DOWN PB PULSE
      |Y298 X202 M2064
      |OVC.N TAP.N SPDW2 |
      |6091 6253 |M2063 |
      |M1388 |M2063 | SPINDLE DWN.PB.TMR
      *--|/|-----* *--|/|-----<T75 K5 >* 6273 6286 12396
      |SP%M.M SPUP2 |
      |6103 6246 |M2064 |
6276*--| |----| |-*-----< M452 SPINDLE OVER.UP
      |M1388 T1 T74
      |SP%M.M OVRU/D|SUPPBT|SPDW2
      |6103 6140 |6262 |6253
      |M1389
      *--| |-----*
      |SPRPMM
      |6105
      |M440
      *--| |-----*

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|SUPPBP
|6259
|M1388 T1 T75 M2063 M453 SPINDLE OVER.DOWN
6283*--| |----| |-*--| |-*--|/|-----< >* 6289 6291 6371 12378
      |SP%M.M OVRU/D|SDWBT |SPUP2
      |6103 6140 |6273 |6246
      |M1389
      *--| |-----*
      |SPRPMM
      |6105
      |M441
      *--| |-----*
      |SDWPBP
      |6270
      |M452 M1388
6290*--| |-*--| |-----[CALL P39 ]*12370 6295
      |SOVUP |SP%M.M
      |6282 |6103
      |M453 |M1389
      *--| |-*--| |-----[CALL P40 ]*12387 6299
      |SOVDWN SPRPMM
      |6289 6105
      |M2202
6300*--|/|---< D100 D30 ]-----[MOV D100 D30 ]* 6306 5347 6303 6310
      |5785 |SMXRPM SRPM |SMXRPM |
      | |11354 6306 |11354 | 6313 6319 6322 6335
      | | | | |6589 12391 12393 12398
      | | | | |12411 12407 12404 12400
      | | | | |12420 12417 12414
      |M2202 SPINDLE RPM
6307*--| |---< D102 D30 ]-----[MOV D102 D30 ]* 6306 5347 6303 6310
      |5785 |11357 6306 |11357 | 6313 6319 6322 6335
      | | | | |6589 12391 12393 12398
      | | | | |12411 12407 12404 12400
      | | | | |12420 12417 12414
      |M301 M1320 M1088 SPINDLE RPM
6314*--| |----|/|----| |---< D330 D30 ]-[MOV D330 D30 ]* 6306 5347 6303 6310
      |MNL MDCL @YME-C |SRPM |
      |652 707 |11212 6306 |11212 | 6313 6319 6322 6335
      | | | | |6589 12391 12393 12398
      | | | | |12411 12407 12404 12400
      | | | | |12420 12417 12414
      |M229 M230
6323*--| |----| |-*-----[MOV R2113 R108 ]* 6327 6336 6344 6350
      |SJGAX SMR
      |5664 5686
      *--| |-----*
      |M301 M230 M229 SPINDLE RPM
6331*--| |----| |---<| |---<| |---<| |---< [MOV D30 R108 ]* 6327 6336 6344 6350
      |MNL SMR SJGAX |SRPM |
      |652 5686 5664 |6306 |
      *--| |-----* *--| |-----*
      |M300 M230
6340*--| |----| |-----[DMOV D86 R108 ]* 6327 6336 6344 6350
      |AUTO SMR
      |644 5686 |618 |
      |M230
6345*--|/|---< [DMOV K0 R108 ]* 6327 6336 6344 6350
      |SMR
      |5686
      |M291 Y294 SPINDLE STOP.N
      *--| |-*-----< >* 6351
      |GSFME
      |M291 Y295 GEAR SHIFT
6352*--| |-----< >* 6353 5753 6355 8800
      |GSFME

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M202 Y295 Y225 GEAR SHIFT.N
6354*--| |---|/|-----< * 6356 615
|SF AUX GSFT.N
|620 6353
M300 X202 Y298 M443 OVERRIDE ON AUX
6357*--| |---|/|---|/|---< * 6360 6377
|AUTO TAP.N OVC.N
|644 6091
|*-----[PLS M456]*
|
M301 M1261
6363*--| |---|/|---< [MOV K100 R148 ]* 6369 1006 5328 6238
|MNL VFC2
|652
|X202
|*-----*
|TAP.N
|
|Y298
|*-----*
|OVC.N
|6091
M452 M300
6370*--| |---|/|---< [MOV D31 R148 ]* 6369 1006 5328 6238
|SOVUP |AUTO
|6282 |644
|M453
|*-----*
|SOVDWN
|6289
|M456
|*-----*
|OVONXP
|6362
|M443
6377*--| |---|/|---< [MOV R148 D31 ]* 6380 6375 11572 12373
|OVONX
|6360 6369 12375 12377 12381 12383
|T155 12385
6381*--| |---|/|---< [PLS M1385]* 6383 6384 6495
|MA.NT1
|444
M1385 M1320 M1034 M1112
6384*--| |---|/|---< [MOV K3 D36]* 6390 6394 6397 6572
|MANT1P MDCL @MDINT @MDIT2
|6383 707 11119
|M1088
|*-----[MOV K4 D36]* 6390 6394 6397 6572
| @YME-C
|
M301
6395*--| |---|/|---< [MOV D36 D32]* 6398 6402 6421 6426
|MNL RAPMNL
|652 6390
|
M300
6399*--| |---|/|---< [MOV D37 D32]* 6398 6402 6421 6426
|AUTO RAPAUT
|644 6579
|
M1088 M300 X10A M1320 M1112 M1034 T155 M1304 MDIT RT OVR DWN
6403*--| |---|/|---< * 6417 6428 6434 6499
|@YME-C AUTO SUP.SS MDCL @MDIT2 @MDINT MA.NT1
|644 707 11119 444
|M1088 X10A M301 M2076
|*-----*
|@YME-C SUP.SS MNL
|652 8436
|M1088
|*-----*

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|@YME-C
M1088 M1304 MDIT RT OVR DWN P.
6418*--| |---|/|---< K3 D32 ]-----*--| |-----[PLS M1305]* 6430 6438 6444 6494
|@YME-C RAPOST DIRTDW
|6398 6417
M1088 M301
*--| |---|/|---< K4 D32 ]*
|@YME-C MNL RAPOST
|652 6398
M997 M479 M1304
6431*--| |---|/|---< [MOV K2 D32]* 6398 6402 6421 6426
|ZERTCD MZP DIRTDW
|13457 5812 6417
|M1185
|*-----*
|DNCZRT
|12666
M1305 M1088
6438*--| |---|/|---< [MOV K3 D32]* 6398 6402 6421 6426
|DIRTDP @YME-C
|6430
|
M1088 M1305 M301
6443*--| |---|/|---< [MOV K4 D32]* 6430 652
|@YME-C DIRTDP MNL
|6430 652
|
M997
6449*--| |---|/|---< [PLF M457]* 6452 6493
|ZERTCD
|13457
|M1185
|*-----*
|DNCZRT
|12666
|
6453* [= K0 D32 ]*-----< Y12C RT 100% L.B
| RAPOST 6456 6554
| 6398
|
|*-----[MOV K100 D33]* 6459 6466 6473 6480
| 6487 6497
|
6460* [= K1 D32 ]*-----< Y12D RT 50% L.B
| RAPOST 6463 6544
| 6398
|
|*-----[MOV K50 D33]* 6459 6466 6473 6480
| 6487 6497
|
6467* [= K2 D32 ]*-----< Y126 R2 L.B
| RAPOST 6470
| 6398
|
|*-----[MOV R2112 D33]* 6459 6466 6473 6480
| 6487 6497
|
6474* [= K3 D32 ]*-----< Y125 R1 L.B
| RAPOST 6477 6546
| 6398
|
|*-----[MOV R2111 D33]* 6459 6466 6473 6480
| 6487 6497
|
6481* [= K4 D32 ]*-----< Y124 R0 L.B
| RAPOST 6484 6562
| 6398
|

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*-----[MOV R2110 D33 ]* RAPID OVERRIDE
6459 6466 6473 6480
6487 6497

M459
6488*--| |*-----[MOV D33 R134 ]* 6498 6502 6505 6509
|RTRDWB|
|6563|
|M462|
*--| |*
|RTRUPB|
|6555|
|M302|
*--| |*
|AMPLS|
|646|
|M303|
*--| |*
|MNPLS|
|654|
|M1235|
*--| |*
|PTPPIN|
|4756|
|M457|
*--| |*
|RTDEPF|
|6452|
|M1305|
*--| |*
|DIRTDP|
|6430|
|M1385|
*--| |*
|MANT1P|
|6383|
|M1304|
6499*--| |*--[< R2111 R134 ]-----[MOV R2111 R134 ]* 6498 6502 6505 6509
|DIRTDW|
|6417|
|M301|
6506*--| |*--[< K50 R134 ]-----[MOV K50 R134 ]* 6498 6502 6505 6509
|MNL|
|652|
6513*=[ K1 R4100 ]*--| |*-----[MOV M2065 ]*
|M2060|
|MN275|
|10113|
M656
*--| |*
|MD1|
|10118|
|X145|
*--| |*
|RTUP.B|
6520*=[ K1 R4101 ]*--| |*-----[MOV M2066 ]*
|M2060|
|MN275|
|10113|
M657
*--| |*
|MD2|
|10122|
|X146|
*--| |*
|RTDW.B|
6527*--| |*-----[PLS M444 ]* RAPID UP PB PLS
6529 6551
|RTUP2|
|6519|
M2066
*--| |*-----[<T76 K5 ]* RT.OV.UP PB.TMR.
6532 6549
|M2066|
|6526|
6535*--| |*-----[PLS M445 ]* RAPID DOWN PB PLS
6537 6560

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|RTDW2|
|6526|
M2065
*--| |*-----[<T77 K5 ]* RT.OV.DOWN TMR.
6540 6558
|RTUP2|
|6519|
M301 M1034 T76 T1 M2066 Y12C M462
6543*--| |*-----[< ]*
|MNL| @MDINT| RTOVUP| OVRU/D| RTDW2| 100%LB|
|652| 6532 6140 6526 6456|
|Y12D| Y125| M444|
*--| |*-----[DEC D32 ]* RAP.TR.OVERRI.STEP
6398 6402 6421 6426
|50%L.B| R1.L| RPUPBP|
|6463| 6477| 6529|
6437 6442 6448 6455
|M1304|
*--| |*
|DIRTDW|
|6417|
T77 T1 M2065 Y124 M459
6558*--| |*-----[< ]* RAPID DOWN PB
6563 6488
|RTOVDW| OVRU/D| RTUP2| R0.L|
|6540| 6140| 6519| 6484|
|M445|
*--| |*-----[INC D32 ]* RAP.TR.OVERRI.STEP
6398 6402 6421 6426
|RPDPBP|
|6537|
6437 6442 6448 6455
6462 6469 6476 6483
6578 6571 6565 6557

M997 M1185 M301
6566*--| |*-----[MOV D32 D36 ]* RAP.TR.STEP MANUAL
6390 6394 6397 6572
|ZERTCD| DNCZRT| MNL|
|13457| 12666| 652|
|M479|
*--| |*
|MZP|
|5812|
M997 M1185 M300
6573*--| |*-----[MOV D32 D37 ]* RAP.TR.STEP AUTO
6579 6401
|ZERTCD| DNCZRT| AUTO|
|13457| 12666| 644|
|M479|
*--| |*
|MZP|
|5812|
M1388
6580*--| |*-----[MOV R148 R125 ]* 6583 6587
|SP%M.M|
|6103|
|M1389|
6369
6584*--| |*-----[MOV D70 R125 ]* 6583 6587
|SRPMM|
|6105|
6591
*-----[ / D30 K10 D70 ]* SPINDLE RPM WORK 1
6591 6586
|Y13D|
6592*--| |*-----[MOV R132 R124 ]* 6595 6601 6608 6623
|JF%L.B|
|6114|
|Y13E| M1274|
6596*--| |*-----[MOV D38 R124 ]* 6595 6601 6608 6623
|JF/MLB| M3DME|
|6109|
|M1274| M455|
*--| |*-----[MOV R136 R124 ]* 6595 6601 6608 6623
|M3DME| IMINIT|
|11519|
|M455|
6235
*--| |*-----[D* R136 K100 D260 ]* 6615 6617 11218 11220
|IMINIT|
|11519|
6235
11232 11234 11258 11260
*-----[D/ D260 K254 D264 ]* 6620 6622 11223 11225
11237 11239 11263 11265
6615

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-----[MOV D264 R124 ]* 6595 6601 6608 6623
6624 X1E0 X1E2 X1E4
|---|/|---|/|---|/|-----[MOV K0 Y100 ]* 6629
|JOG.N S.N Z.N
6630 X100 M1324 X140 M1034 M4009 INVALID COND.
|---|/|---|/|---|/|---|>* 6654 6650 8296
|+X.B |AXINTL RST.B @MDINT
|732
X101
|---|
|-X.B
X102
|---|
|+Y.B
X103
|---|
|-Y.B
X104
|---|
|+Z.B
X105
|---|
|-Z.B
X106
|---|
|+4.B
X107
|---|
|-4.B
M676 M656
|---| |*---| |---|
|MN301 MD1
|10083 |10118
| |M657
| |*---| |---|
| |MD2
| |10122
M1396 M656
|---| |*---| |---|
|MN302 MD1
|10087 |10118
| |M657
| |*---| |---|
| |MD2
| |10122
| |M658
| |*---| |---|
| |MD3
| |10126
| |M659
| |*---| |---|
| |MD4
| |10130
M4009
|---|
|INVL D
|6654
Y11B M4067 M1854 AXIS INTLCK PARTIT
6655*---| |---| |---|>* 6665 6678 6683 6693
|13587 |2ZRO.Y|
|M4089 |3471|
|---|
|MVRiL
|3215
|M4087
|---|

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MVLiR
|3203
|M307
*---| |-----|
|H/ST
|7560
X140 M307
*---| |---| |---|
|RST.B H/ST
|7560
M1089
*---|/|-----|
|PARTIN
XA
*---| |-----|
|CNTCV
X68 M579 T124 X13 M1324 M479 M1854 Y1A8 *AUTO INT.+X NC
6666*---| |*---|/|---|/|---|/|---| |---| |---| |---|>* 6681
|SPX68 |PCINT |1CNGTA|MGDRLS AXINTL|MZP |INTLCK|
| |732 |5812 |6665 |
M1022 |M1038 X9
*---|/|---| *---| |---| |---|
|@ADDIS |@MZPCB XINT2
M1125 M1854 Y1B0 *AUTO INT.-X NC
*---| |---| |---|>* 6686
|@INTNG |INTLCK| | |
| |6665 |
| |X7 |
| |*---| |---|
| |XINT1
|
|<=
|[BIT R2064 H8 ]*--->1
|
|M1275
*---|/|-----|*--->2
|MAXITL
|
|<=
|[BIT R2064 H0 ]*--->3
|
|M1275
*---|/|-----|*--->4
|MAXITL
M1854 Y1B8 *MANUAL INT.+X NC
1>---| |---| |---|>* 6696 5890 7469
|INTLCK|
|6665 |
|X9 |
2>---| |---| |---|
|XINT2
M1854 Y1C0 *MANUAL INT.-X NC
3>---| |---| |---|>* 6706 5894 5908 7470
|INTLCK|
|6665 |
|X7 |
4>---| |---| |---|
|XINT1
X7 X9 M1848
6707*---| |---| |---|>* 6711 6725 6762
|XINT1 XINT2
XA
*---| |-----|
|CNTCV
M1089
*---|/|-----|
|PARTIN

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```

|X11A      M1039 X1E1      Y248 | H.1AXIS SELECT 1.N
6844*--| |-----|*--|/|*--| |-----|< >* 6851
|HZ.B      |@3HSEL|H.N
|X117      M1066
*--| |-----| |*
|H5.B      @5TH
|X118
*--| |-----|*
|HX.B
|X119      X1E1      M1039      Y249 | H.1AXIS SELECT 2.N
6852*--| |-----|*--| |-----|< >* 6856
|HY.B      |H.N      |@3HSEL
|X11A
*--| |-----|*
|HZ.B
|X11B      M1000 M1039 X1E1      Y24A | H.1AXIS SELECT 4.N
6857*--| |-----|*--|/|*--| |-----|< >* 6864
|H4.B      @IN/NC|@3HSEL H.N
|11107
|X117      M1066
*--| |-----| |*
|H5.B      @5TH
|X1E1      M1039 X119      Y251 | H.2AXIS SELECT 2.N
6865*--| |-----|*--| |-----|< >* 6869
|H.N      |@3HSEL|HY.B
|X11A      Y258 | H.3AXIS SELECT 1.N
*--| |-----|< >* 6872
|HZ.B
|X11B      M1000      Y259 | H.3AXIS SELECT 2.N
*--| |-----|< >* 6873
|H4.B      @IN/NC
|11107
|X11B      M1000      Y25A | H.3AXIS SELECT 4.N
*--| |-----|< >* 6877
|H4.B      @IN/NC
|11107
|X201      Y234 | CUT TIME NC
6878*--| |-----|< >* 6879
|CUT.N
|X1F3      Y111      Y235 | TRACE TIME
6880*--| |-----|< >* 6882
|STL.N      ALM.L
|8075
|X156      Y10C | MF1 L.B
6883*--| |-----|< >* 6884
|MF1.B
|X15A      M2007 M2010      Y10E | M.MENU P.B PULSE
6885*--| |-----|*--|/|*--|/|-----|< >[PLS M690 ]* 6889 6900 6902
|MCMN.B CRTFBX ZR2LX
|277 7556
|X154      M2007 M2010      Y10A | COOLMT.MENU PB PLS
6890*--| |-----|*--|/|*--|/|-----|< >[PLS M692 ]* 6894 6905 6912 6914
|COLMNU CRTFBX ZR2LX
|277 7556
|Y6
|PWON.M      Y231 | 6899 6910 6921
6895*--| |-----|< >[WAND R2552 HFF
|160
|M690 Y10E M692 M262 M301
6900*--| |-----|*--|/|*--|/|-----|< >[K0 D331 ]< >* 6911 6901 6903 6917
|M.MNPP MMNU.L|COMPBP HDLC MNL
|6889 6911 |6894 7385 652
|M690 Y10E |*
*--| |-----| |*
|M.MNPP MMNU.L
|6889 6911
|M692 Y10A Y10E M262      Y10A | COOLANT MENU L.B
6912*--| |-----|*--|/|*--|/|-----|< >[K0 D331 ]< >* 6922 6913 6915

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|COMPBP CMNU.L|MMNU.L HDLC
6894 6922 6911 7385
|M692 Y10A
*--| |-----| |*
|COMPBP CMNU.L
6894 6922
|D21 D23 ]-----|< >* M310 EQUAL MENU DATA
6923*=[ D21 D23 ]-----|< >* 6926 4467 6934
|MENUDA BMENU
|208 6941
|D22 D24 ]-----|< >* M311 EQUAL MENU NUMBER
6927*=[ D22 D24 ]-----|< >* 6930 6931
|MENUNM BMENUN
|214 6944
|M311
6931*--|/|-----|< >[CALL P16 ]*10012 6933
|EQMENN
|6930
|M310
6934*--|/|*-----|< >[CALL P15 ]*10115 6937
|EQMEND
|6926
|M446
*--| |-----| |*
|MAP
|438
|Y6
6938*--| |-----|< >[MOV D21 D23 ]* BEFOR MENU DATA
|PWON.M
|160
|MENUDA
|208
*--| |-----| |*
|D22 D24 ]< >[MOV D22 D24 ]* BEFOR MENU NUMBER
6945*--| |-----|< >[M640 LAMP 1
|M677 M1355 M1351 M1356
|M307 SPARE- SPARE- SPARE-
|10091
|M678 M686
*--| |-----| |*
|MN5 XPLKON
|10103 10209
|M669 Y23F
*--| |-----| |*
|MN11 BDT1.N
|10043 10240
|M720 M671
*--| |-----| |*
|FDCCOAT MN310
|10312 10055
|M724 M672
*--| |-----| |*
|THRCAT MN311
|10363 10059
|M673 M3371 M3370
*--| |-----| |*
|M305 MGREV MGST
|10063 2398 2365
|M676
*--| |-----| |*
|M301
|10083
|L11 M675
*--| |-----| |*
|PDCAME MN304
|10475 10079
|M1396 M3321 M3320
*--| |-----| |*
|M302 AMCCW AMSTRT
|10087 3016 3114
|M670 M3001
*--| |-----| |*
|M308 CCFWD
|10047
|M670 M640
|8037
*--| |-----| |*
|M308 LAMP1
|10047 6983

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|M679 M1089 M4085 |
*--| |-----| |-----| |-----|
PARTIN MN.XFR
|10099 3191 |
M2203 M293 M666 M641 LAMP 2
6984*--| |-----| |-----| |-----| < * 7017
|LGX MN4 |
|5799 10019 |
M677 M1354 M1350 M1356 |
*--| |-----| |-----| |-----| |-----| |-----|
|MN307 SPARE- SPARE- SPARE- |
|10091 |
M678 M687 |
*--| |-----| |-----| |-----|
|MN5 ATCSTP |
|10103 10199 |
|M2000 |
*--| |-----| |-----| |-----|
LAMP3X
|7028 |
M669 Y240 |
*--| |-----| |-----| |-----|
|MN11 BDT2.N |
|10043 10248 |
M712 M671 |
*--| |-----| |-----| |-----|
|FDCON MN310 |
|10400 10055 |
M716 M672 |
*--| |-----| |-----| |-----|
|THRCON MN311 |
|3999 10059 |
M673 M3371 M3370 |
*--| |-----| |-----| |-----|
|MN305 MGREV MGST |
|10063 2398 2365 |
M676 |
*--| |-----| |-----| |-----|
|MN301 |
|10083 |
M1396 M3321 M3320 |
*--| |-----| |-----| |-----|
|MN302 AMCCW AMSTRT |
|10087 3016 3114 |
M670 M3002 |
*--| |-----| |-----| |-----|
|MN308 CCREV |
|10047 8041 |
Y23F M665 M2000 LAMP 3 AUX
7018*--| |-----| |-----| |-----| < * 7028 6995
|BDT1.N MN3 |
|10240 10015 |
Y240 |
*--| |-----| |-----| |-----|
|BDT2.N |
|10248 |
Y241 |
*--| |-----| |-----| |-----|
|BDT3.N |
|10256 |
Y242 |
*--| |-----| |-----| |-----|
|BDT4.N |
|10264 |
Y243 |
*--| |-----| |-----| |-----|
|BDT5.N |
|10272 |
Y244 |
*--| |-----| |-----| |-----|
|BDT6.N |
|10280 |
Y245 |
*--| |-----| |-----| |-----|
|BDT7.N |
|10288 |
Y246 |
*--| |-----| |-----| |-----|

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|BDT8.N |
|10296 |
Y247 |
*--| |-----| |-----| |-----|
|BDT9.N |
|10304 |
M669 Y241 M642 LAMP 3
7029*--| |-----| |-----| |-----| < * 7052
|MN11 BDT3.N |
|10043 10256 |
M678 M685 |
*--| |-----| |-----| |-----|
|MN5 ZNGON |
|10103 10191 |
M721 M671 |
*--| |-----| |-----| |-----|
|NGRCAT MN310 |
|10334 10055 |
M725 M672 |
*--| |-----| |-----| |-----|
|TAPCAT MN311 |
|10372 10059 |
M2106 M676 |
*--| |-----| |-----| |-----|
|MN301 |
|10083 |
M2165 M3320 M850 M673 |
*--| |-----| |-----| |-----| |-----|
|AOCW AMSTRT FLCKER MN305 |
|2979 3114 1193 10063 |
M2162 M1396 |
*--| |-----| |-----| |-----|
|AOCW MN302 |
|3002 10087 |
M883 |
*--| |-----| |-----| |-----|
|ATCOL |
|1366 |
M669 Y242 M643 LAMP 4
7083*--| |-----| |-----| |-----| < * 7115
|MN11 BDT4.N |
|10043 10264 |
M665 M683 |
*--| |-----| |-----| |-----|
|MN3 OPSTON |
|10015 10219 |
M678 |
*--| |-----| |-----| |-----|
|MN5 |
|10103 |
M713 M671 |
*--| |-----| |-----| |-----|
|NGRCON MN310 |
|10409 10055 |
M717 M672 |
*--| |-----| |-----| |-----|
|TAPCON MN311 |
|10447 10059 |
M850 M3361 M3370 M676 |
*--| |-----| |-----| |-----| |-----|
|FLCKER MGZRN MGST MN301 |
|1193 2315 2365 10083 |
M3258 |
*--| |-----| |-----| |-----|
|MAGZP |
M2161 M3320 M850 M1396 |
*--| |-----| |-----| |-----| |-----|
|A75CW AMSTRT FLCKER MN302 |
|3009 3114 1193 10087 |
M2167 M673 |
*--| |-----| |-----| |-----|
|277CCW MN305 |
|2971 10063 |
M2159 |
*--| |-----| |-----| |-----|
|AM75 |
|1376 |

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```

|M2160
*--|-----*
|AM277
|1381
|M1116 M670 Y12
*--|-----*
|R2108. MN308 CCRUN
|10047 7944
|M2202 M292 M666
7116*--|-----* M644 LAMP 5
|HGX MN4 >* 7149 7145
|5785 10019
|M669 Y243
*--|-----*
|MN11 BDT5.N
|10043 10272
|M665 M684
*--|-----*
|M3 MN3 DRYRON
|10015 10231
|M678
*--|-----*
|M35
|10103
|M722 M671
*--|-----*
|MISCAT MN310
|10343 10055
|M726 M672
*--|-----*
|COVCAT MN311
|10383 10059
|M2108 M676
*--|-----*
|MGORGM MN301
|2291 10083
|M2163 M3320 M850 M673
*--|-----*
|1>2CW AMSTRT FLCKER MN305
|2995 3114 1193 10063
|M2160 M1396
*--|-----*
|AM277 MN302
|1381 10087
|M670 Y11
*--|-----*
|M308 CCHISP
|10047 8063
|M670 M644
*--|-----*
|M308 LAMP5
|10047 7149
|M669 Y244
7150*--|-----* M645 LAMP 6
|MN11 BDT6.N >* 7181 7176
|10043 10280
|M665 M681
*--|-----*
|M3 MALKON
|10015 10181
|M666
*--|-----*
|M4
|10019
|M678
*--|-----*
|M5
|10103
|M714 M671
*--|-----*
|MISCON MN310
|10418 10055
|M718 M672
*--|-----*
|COVVON MN311
|10458 10059
|M2109 M676
*--|-----*

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|MGORGS MN301
|2298 10083
|M2164 M3320 M850 M673
*--|-----*
|2>1CCW AMSTRT FLCKER MN305
|2987 3114 1193 10063
|M2159 M1396
*--|-----*
|AM75 MN302
|1376 10087
|M670 M3004 Y11
*--|-----*
|M308 CCHISP
|10047 8058 8063
|M670 M645
*--|-----*
|M308 LAMP6
|10047 7181
|M669 Y245
7182*--|-----* M646 LAMP 7
|MN11 BDT7.N >* 7208
|10043 10288
|M723 M671
*--|-----*
|AIRBAT MN310
|10352 10055
|M727 M672
*--|-----*
|THRAAT MN311
|10392 10059
|M2015 M4501
*--|-----*
|M300
|10051 9359
|Y81 M850 M676
*--|-----*
|ACCL.M FLCKER MN301
|4126 1193 10083
|M5122 M673
*--|-----*
|ACCLL MN305
|1406 10063
|M2139 M1396
*--|-----*
|AMORMD MN302
|2951 10087
|M665 M680
*--|-----*
|M3 WKLON
|10015 10166
|M666
*--|-----*
|M4
|10019
|M678
*--|-----*
|M5
|10103
|M669 Y246
7209*--|-----* M647 LAMP 8
|MN11 BDT8.N >* 7235
|10043 10296
|M715 M671
*--|-----*
|AIRBON MN310
|10427 10055
|M719 M672
*--|-----*
|THRAIO MN311
|10467 10059
|M1023 M281 M667
*--|-----*
|@TMEAS MARTLI MN6
|4503 10023
|M280
*--|-----*
|MAEXLI
|4497

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```

|Y80      M850  M676  |
*--|-----|-*--|-*
|ACOP.M  FLCKER|MN301
|4131   1193  |10083
|M5121  |M673  |
*--|-----|-*--|-*
|ACOPL   MN305  |
|1402   10063  |
|M2140  M1396  |
*--|-----|-*--|-*
|AMORS  MN302  |
|2958   10087  |
|M666   M2011  |
*--|-----|-*--|-*
|MN4     SJGLX  |
|10019  5707   |
|M669   Y247   |
7237*--|-----|-*--|-*
|MN11   BDT9.N |
|10043  10304  |
|M671   M664   |
*--|-----|-*--|-*
|MN310  MD9    |
|10055  10150  |
|M672   |
*--|-----|-*--|-*
|MN311  |
|10059  |
|M673   M709   |
*--|-----|-*--|-*
|MN305  TUCSOK|
|10063  3910   |
|M1396  |
*--|-----|-*--|-*
|MN302  |
|10087  |
|M667   M280   |
*--|-----|-*--|-*
|MN6    MAEXLI |
|10023  4497   |
|Y8     M677   |
*--|-----|-*--|-*
|WLPMON MN307  |
|7693   10091  |
|M666   Y12B   |
*--|-----|-*--|-*
|MN4    SRVL.B |
|10019  5740   |
|M2015  M4085  |
*--|-----|-*--|-*
|MN300  MN.XFR |
|10051  3191   |
|M2010  M2015  |
7260*--|-----|-*--|-*
|ZR2LX  MN300  |
|7556   10051  |
|M2006  M666   |
*--|-----|-*--|-*
|TPSEX  MN4    |
|4876   10019  |
|M850   M3311  M3320 M1396
*--|-----|-*--|-*
|FLCKER AMZRN  AMSTRT|MN302
|1193   3034  3114  |10087
|M3208  |
*--|-----|-*--|-*
|ARMZP  |
|M850   Y2D6  M673  |
*--|-----|-*--|-*
|FLCKER SOR.N  |MN305
|1193   5641  |10063
|M323   |
*--|-----|-*--|-*
|SORARI  |
|1434   |
|Y5     M672  M1064 |
*--|-----|-*--|-*

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|BSCCLNT MN311 200C/3
|8363 10059 11113
|Y6
7281*--|-----|-*--|-*
|PWON.M |K3
|160 |LAMP1
| |6983
| |
| |-----|WOR D340 H8000 R408 |* 7289
| |
| |-----|7285
|M433 M201 M202 M203 M320 X202 M304 ENABLE MODE CHANGE
7290*--|-----|-*--|-*
|ATCOFF MF AUX SF AUX TF AUX SORME TAP.N < >* 7296 7302 7372 7383
|2197 566 620 633 5550
|X118 M304 Y1 M1104 M296 "HANDLE ON(X,Y,Z,4
7297*--|-----|-*--|-*
|HX.B |ENMCHG HYD.M SPARE-
|7296 337
|X119
|*--|-----|-*--|-*
|HY.B
|
|X11A
|*--|-----|-*--|-*
|HZ.B
|
|X11B
|*--|-----|-*--|-*
|H4.B
|
|X117
|*--|-----|-*--|-*
|H5.B
|
|X13
|F165 MAG. DOOR OPEN
7306*--|-----|-*--|-*
|MGDRLS < >* 7307
|
|X118 M1064 X140 F166 PNDNT BOX IN USE
7308*--|-----|-*--|-*
|HX.B |200C/3 RST.B < >* 7315
|11113
|X119
|*--|-----|-*--|-*
|HY.B
|
|X11A
|*--|-----|-*--|-*
|HZ.B
|
|X11B
|*--|-----|-*--|-*
|H4.B
|
|X13C
|*--|-----|-*--|-*
|
|M296 X11E X11D HS*10
7316*--|-----|-*--|-*
|H.XYZ4 |-----|PLS M465 |* 7321 7332
|7305
|X11E
|*--|-----|-*--|-*
|-----|PLS M464 |* 7325 7331
|
|X11D X11E HS*100
|*--|-----|-*--|-*
|-----|PLS M466 |* 7330 7333
|
|M464 M465 M466
7331*--|-----|-*--|-*
|H*1P H*10P H*100P <T139 K2 >* 7335 7338
|7325 7321 7330
|T139 M296
7338*--|-----|-*--|-*
|SPARE- H.XYZ4
|7335 7305
|

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M3053 X14A M308 MODE CHANGE PLS X
7342*--|/|-*--| |-*--| |-*--| |
|HNDL| RT.B
|892|
|M1064|
*--|/|-*
|200C/3|
|11113|
|M2002|
*--| |-----|
|JPGBX|

M3053 X14B
*--|/|-*--| |-*
|HNDL| ZRN.B
|892|
|M1064|
*--|/|-*
|200C/3|
|11113|
|M2003|
*--| |-----|
|ZRN2BX|
|325|
|M3052|
*--| |-----|
|X1.HND|
|912|
|M3050|
*--| |-----|
|X10.HN|
|922|
|M3054|
*--| |-----|
|X100.H|
|936|

M3053 X151 M1275 M296 M304
7355*--|/|-*--| |-----| |-----| |-----| [PLS M305 ] * 7374 7398
|HNDL| TAPE.B MAXITL H.XYZ4 ENMCHG
|892| |7305| |7296|
|M1064| |M1274|
*--|/|-* *--|/|-*
|200C/3| |M3DME|
|11113|
|M3053 X148
*--|/|-*--| |-*
|HNDL| MEM.B
|892|
|M1064|
*--|/|-*
|200C/3|
|11113|
|M3053 X149
*--|/|-*--| |-*
|HNDL| MDI.B
|892|
|M1064|
*--|/|-*
|200C/3|
|11113|
|M308|
*--| |-----|
|MCHGPX|
|7354|
|M654|
*--| |-----|
|HCHGAX|
|7341|
*--| |-----|
|<= M3053 X151 X148 M304 HDLC MODE CMD AUX.
7375*[BIT R2919 H0 ]*--|/|-*--| |-----| |-----| |-----| |-----| [PLS M262 ] * 7385 6906 6918 7400
|HNDL| TAPE.B MEM.B ENMCHG
|892| |7296|
|M1064|
*--|/|-*
|200C/3|
|11113|
|Y209 M217 X11B M1000
7387*--| |-----| |-----| |-----| |-----| [CALL P37 ] *12237 7402 13465

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|HM.N HS100C H4.B @IN/NC|
|7509 | | |11107|
| | |X117 M1066|
| | |*--| |-----| |-*
| | |H5.B @5TH|

M1185 M304
*--| |-----| |-----|
|DNCZRT ENMCHG
|12666 7296
|M305
*--| |-----|
|MCHGP
|7374
|M446
*--| |-----|
|MAP
|438
|M262
*--| |-----|
|HDLC
|7385
|Y210 M300 X42 X1F2 Y6 Y5F HDL INTERRUPT LAMP
7403*--| |-----| |-----| |-----| |-----| |-----| |-----| |-----| |-----| * 7410 7429 7450 7500
|MM.N AUTO PUHKLS OP.N PWON.M
|12344 644
|Y211
|160
*--| |-----|
|TM.N
|12337
|Y213
*--| |-----|
|DM.N
|12346

M296 M1121 Y5F M688 MP1.N AUX
7411*=[ K1 R2116 ]*--|/|-*--| |-----| |-----| |-----| |-----| * 7431 7461
|H.XYZ4 @HABMA HINT.L
|7305 |7410|
|M1104 M1121
*--|/|-*
|SPARE- @HABMA|

X11E X11D M296 M1121
*--|/|-*--| |-----| |-----| |-----| |-----|
|H.XYZ4 @HABMA
|7305 |
|M1104 M1121
*--| |-----| |-----|
|SPARE- @HABMA|

M216
*--| |-----|
|HS100C

M296 M1121 Y5F M689 MP2.N AUX
7432*=[ K2 R2116 ]*--|/|-*--| |-----| |-----| |-----| |-----| * 7452 7460 7467
|H.XYZ4 @HABMA HINT.L
|7305 |7410|
|M1104 M1121
*--|/|-*
|SPARE- @HABMA|

X11E X11D M296 M1121
*--|/|-*--| |-----| |-----| |-----| |-----|
|H.XYZ4 @HABMA
|7305 |
|M1104 M1121
*--| |-----| |-----|
|SPARE- @HABMA|

M217
*--| |-----|
|HS100C

Y209 X11B M1000 M689 Y2C0 MULTIPLY 1.N
7453*--| |-----| |-----| |-----| |-----| |-----| * 7462
|HM.N H4.B @IN/NC MP2NX |
|7509 | |11107| |7452| |

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      |X117  M1066 |
      *--| |-----| |-*
      H5.B  @5TH

M688
*--| |-----| |-*
|MP1NX
|7431
|M1066  X11B  M689
7463 *--| | |-----| |-* > Y2C1 MULTIPLY 2.N
      |@5TH  |H4.B  |MP2NX  |
      |7452
      |X117
      *--| | |-----| |-*
      |H5.B
      |Y209
      *--| | |-----| |-*
      |HM.N
      |7509
      |Y1B8  X118
7469 *--| | |-----| |-* > Y24F H.1 SELECT.N
      |*+MITX |HX.B
      |6696
      |Y1C0
      *--| | |-----| |-* > Y257 H.2 SELECT.N
      |*+MITX |@3HSEL
      |6706
      |Y1B9  X119
      *--| | |-----| |-* > Y25F H.3 SELECT.N
      |*+MITY |HY.B
      |6740
      |Y1C1
      *--| | |-----| |-*
      |*+MITY
      |6748
      |Y1BA  X11A
      *--| | |-----| |-*
      |*+MITZ |HZ.B
      |6777
      |Y1C2
      *--| | |-----| |-*
      |*+MITZ
      |6785
      |X11B  M1000
      *--| | |-----| |-*
      |H4.B  @IN/NC
      |11107
      |X117  M1066
      *--| | |-----| |-*
      |H5.B  @5TH

M215
7490 *--| | |-----| |-* > M306 STEP MODE
      |HSX1CD
      |M216
      *--| | |-----| |-*
      |HS10CD
      |M217
      *--| | |-----| |-*
      |HS100C

M296  M1121  Y5F  Y20B  M818  M827
7494 *--| | |-----| |-* > Y209 HANDLE MODE.N
      |H.XYZ4 |@HABMA |HINT.L |PTPM.N |T.MST |TBRST
      |7305   |7410   |4487   |1668
      |X11  M1121
      *--| | |-----| |-*
      |HYD.PS |@HABMA
      |M1104
      *--| | |-----| |-*
      |SPARE-
      |Y24F  M306  M1370
      *--| | |-----| |-*

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|HS1S.N |STEPMD |SWERR2
|7486   |7493   |960
|M296
*--| | |-----| |-*
|H.XYZ4
|7305
|M306   |Y209   |Y24F
7510 *--| | |-----| |-* < > Y20A STEP MODE.N
      |STEPMD |HM.N   |HS1S.N
      |7493   |7509   |7486
      |M306   |Y209   |Y20A
7514 *--| | |-----| |-* < > Y208 JOG MODE.N
      |STEPMD |HM.N   |SM.N
      |7493   |7509   |7513
      |M211
      *--| | |-----| |-*
      |RPMDCCD
      |M211  M479
7519 *--| | |-----| |-* < > Y22E RAPID TRAVERSE.N
      |RPMDCCD |M2P
      |5812
      |M214
      *--| | |-----| |-*
      |ZRN2CD
      |M213
      *--| | |-----| |-*
      |ZRN1CD
      |Y20A
      *--| | |-----| |-*
      |SM.N
      |7513
      |X1E8  M218
7525 *--| | |-----| |-* < > Y109 TAPE L.B
      |M.N   |HDLCCD
      |X1E9
      *--| | |-----| |-*
      |T.N
      |X1E9  M218
7529 *--| | |-----| |-* < > Y102 MEMORY L.B
      |T.N   |HDLCCD
      |X1E8
      *--| | |-----| |-*
      |M.N
      |X1EB
7534 *--| | |-----| |-* < > Y103 MDI L.B
      |D.N
      |Y22E  X1E0  M211
7536 *--| | |-----| |-* < > Y104 RAPID L.B
      |RPDM.N |JOG.N  |RPMDCCD
      |7524
      |X1E0  Y22E  M212
7540 *--| | |-----| |-* < > M2009 JOG L AUX
      |JOG.N  |RPDM.N |JGMDCCD
      |7524
      |X1FA  X1E4  Y200  Y201  M213
7544 *--| | |-----| |-* < > Y105 ZERO RET L.B
      |TSMZ.N |Z.N   |ZRNA.N |ZRN.B.N |ZRN1CD
      |12351
      |Y105
      *--| | |-----| |-*
      |ZRN.L
      |7550
      |X1FA  X1E4  Y200  Y201
7551 *--| | |-----| |-* < > M2010 ZERO RET 2 L AUX
      |TSMZ.N |Z.N   |ZRNA.N |ZRN.B.N
      |12351
      |M2010
      *--| | |-----| |-*
      |ZR2LX
      |7556

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```

|X1E1 M307 | HANDLE OR STEP
7557*--| |-*< >* 7560 6658 6660 7561
|H.N | |
|X1E2 |
*--| |-*
|S.N |
|X1E0 |
*--| |-*
|JOG.N |
M307 M215 | Y106 | HANDLE *1 L.B
7561*--| |----< >* 7563 906
|H/ST | HSX1CD |
|7560 | |
|X11B M1000 X1E1 M217 M307 | Y107 | HANDLE *10 L.B
7564*--| |----< >* 7573 916
|H4.B | @IN/NC|H.N | HS100C|H/ST |
| | 1107 | | | 7560 |
|X117 M1066 | |
*--| |---->
|H5.B | @5TH |
|M216 |
*--| |---->
|HS10CD |
M1066 X11B M307 M217 | Y10D | HANDLE *100 L.B
7574*--|/|----< >* 7580 930
|@5TH | H4.B | H/ST | HS100C |
| | 7560 | |
|X117 | |
*--|/|---->
|H5.B | |
|X1E1 |
*--|/|---->
|H.N | |
M686 | Y29A | AUX.FUNCTION LCK.N
7581*--| |----< >* 7582
|XPLKON |
|10209 |
M547 M681 | K4 | AUTO M.LOCK X NC
7583*--|/|----< >* 7588 7595 7602 7608
|ATCMV | MALKON | Y1C8 |
|4637 | 10181 | |
|M681 M685 M301 | K4 | AUTO M.LOCK X NC
*--|/|----< >* 7588 7595 7602 7608
|MALKON ZNGON MNL | [MOV H4 Y1C8 ] *
|10181 10191 652 |
|M681 M685 M300 | K4 | AUTO M.LOCK X NC
*--|/|----< >* 7588 7595 7602 7608
|MALKON ZNGON AUTO | [MOV H404 Y1C8 ] *
|10181 10191 644 |
|M681 M685 | K4 | AUTO M.LOCK X NC
*--|/|----< >* 7588 7595 7602 7608
|MALKON ZNGON | [MOV H0 Y1C8 ] *
|10181 10191 |
M546 | K2 | MANUAL M.LOCK X NC
7609*--| |----< >* 7612 5895 7616
|ATCMVP | [MOV H0 Y1D0 ] *
|4639 |
|M685 | K2 | MANUAL M.LOCK X NC
*--| |----< >* 7612 5895 7616
|ZNGON | [MOV H4 Y1D0 ] *
|10191 |
M396 | Y145 | TOOL UNCLAMP L.B
7617*--| |----< >* 7618
|TUCLCF |
|1390 |
X246 X249 | Y146 | SPINDLE LOCK L.B
7619*--| |----< >* 7621
|SPOR.N SPSVON |
|M240 M242 M243 M200 | M243 | SINGLE BLOCK MEMO.
7622*--|/|----< >* 7630 5485 7624 7633

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```

|CSTPEX FHDPEX SBKME |*RST
|1069 1158 7630 |340
|M1 M683
*--| |---->
|M1 | OPSTON
| | 10219
|M0
*--| |---->
|M0
|9874
|X1F8 M226 M243 M200 | Y143 | PROGRAM STOP L.B
7631*--| |----< >* 7638 4014 7634 8153
|DEN.N SBKMX SBKME |*RST
| | 5489 7630 |340
|Y143 M240
*--| |---->
|PROSLB CSTPEX
|7638 1069
M520 | EXT.MF AUX
7639*-< K0 D60 |----< >* 7642 7643 7661 7680
| | MFCNT
| | 7667
M520 X12 | EXT MF BCD
7643*--| |----< >* 7647 7649 7653
|EXTMPX MFIN |
|7642 | EXTMP1
| | 7670
| | | D65 H100 D66 | EXT MF BCD HUNDRED
| | | EXTMPB | * 7651 7656
| | | 7647 |
| | | [MOV D65 Y50 | * M11.M
| | | EXTMPB | * 7654
| | | 7647 |
| | | [MOV D66 Y58 | * M31.M
| | | MFBCDH | * 7657
| | | 7651 |
Y5C X12 M520 | M521 | EXT.FINISH AUX
7658*--| |----< >* 7662 7659 7679
|MF.M | MFIN | EXTMPX |
|7688 | 7642 |
|M521 |
*--| |---->
| | [PLS M522 ] * 7664 7665
|EXTFNX
|7662
|M522
7665*--| |----< >* 7667 7641 8092 9219
|EXTFNP | [DEC D60 ] *
|7664 |
| | | D62 D61 | EXT MF 1
| | | EXTMP2 | * 7670 7646 12025
| | | 7673 |
| | | [MOV D63 D62 | EXT MF 2
| | | EXTMP3 | * 7673 7669 12031
| | | 7676 |
| | | [MOV D64 D63 | EXT MF 3
| | | EXTMP4 | * 7676 7672 12037
| | | 12043 |
X12 M521 M520 M1018 | M523 | M FUNCTION M.AUX
7677*--|/|----< >* 7682 7678
|MFIN | EXTFNX EXTMPX @EXFNU |
| | 7662 7642 |
|M523 |
*--| |---->
|MFMX | *<T4 K10 >* 7684 7687
|7682 |
T4 | Y5C | M FUNCTION STROBE
7687*--| |----< >* 7688 7658
|MPDLYT |
|7684 |
F8 X1F1 T118 | Y8 | WAY LUBE PUMP MTR
7689*--|/|----< >* 7693 7250 8516 8539
|WLFPSAL | SA.N | WLONT
|8557 | 7709

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|F9|
*--|/|-*
|WLP|SAL
|8537|
|M677| M664
7694*-| |---| |-----[PLS M860 ]* MNL WAY LUBE ON
|MN307| MD9 | 7697 7706
|10091| 10150
|M1395|
7698*-| |---| |-----[PLS M866 ]* SPINDLE ON PULSE
|SPMRNM| | 7700 7726
|5750|
|F9| M1363 | AL.WAY L.PUMP OFF2
7701*-|/| |-----[PLS M1363 ]* 7703 7705
|WLP|SAL
|8537|
|F8|
*--|/|-*
|WLF|SAL
|8557|
|T119| M860 | X1F1 |
7704*-|/|---|/|---| |-----[T118 D140 ]* WAY LUBE ON TIMER
|WLO|FPT |M|LON |SA.N | 7709 7692 7712 8515
|7714| 7697 | 11134 | 8538
|M1363|
*--|/|-*
|AWLO|F2
|7703|
|T118|
7712*-| |---| |-----[T119 D146 ]* WAY LUBE OFF TIMER
|WLO|NT
|7709| 8590 | 7714 7704 8522 8543
|M1395|
7717*-|/| |-----[T89 D159 ]* SPINDLE STOP TMR
|SPMR|NM
|5750| 11189 | 7719
*--| |---| |-----[T142 K50 ]* SPINDLE STOP TMR 2
|M866| T142 | M1386 | AIR CURTAIN ON MEM
7726*-| |---| |-----[T142 K50 ]* 7729 7727
|SP.ONP|SSPT2
|7700| 7723 |
|M1386|
*--| |---| |-----[T142 K50 ]*
|SAC|DT
|7729| M4003 | 7733 8504
7730*-|/|---|/|---| |-----[T142 K50 ]*
|WLP|SAL |SA.N |M121ME |
|8537| 7738 |
|M278| M9 | M207 |
7734*-| |---|/|---| |-----[M278 ]* HEAD AIR REMOVE
|M121ME| M9 | *ALRST |
|7738| 8084 |
|M121|
*--| |---| |-----[M278 ]*
|X10F|
7739*-| |---| |-----[PLS M895 ]* CHIP CONV. ON PLS.
|CCV.|B | 7741 7742 7903 7905
7742*-| |---| |-----[PLS M417 ]* ARM 1 COMMAND
|M895| M3001 | 7746 8054
|CCV|ONP|CCFWD
|7741| 8037 |
|M3001|
*--|/| |-----[PLS M416 ]* ATC ARM EXCHANGE
|CCFWD|
|8037|
|M1320|
7751*-|/| |-----[PLS M1365 ]* M.DOOR OPEN PLS
|MDCL| | 7753 7929 8238
|707|
*--| |---| |-----[T159 K10 ]* M.DOOR OPEN TMR

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|X100| M4010
7758*-| |---| |-----[M4010 ]* 7759
|+X.B|
|M3254| M3255 |M3204 |M3205 |X191 |X192 |X190 |X198
7760*-|/|---|/|---|/|---|/|---|/|---|/|---|/|---|/|---| >1
|MAGM|VP |MAGM|VM |ARMM|VP |ARMM|VM |MV2 |MV3 |MV1 |MD1
|M4055| M1089 | XA
*--| |---| |-----[M4055 ]* >2
|LT-SID| PARTIN | CNTCV
|3262|
|X199| X19A | X245 | M4007 | INVALID COND.
7775*-|/|---|/|---|/|---|/|---|/|---|/|---|/|---| >
|MD2| MD3 | SSDT.N | 7775 7794 7805 7836
|7879|
|2>|-----| |-----[M4007 ]*
|M3254| M3255 |M3204 |M3205 |X191 |X192 |X190 |X198
7776*-|/|---|/|---|/|---|/|---|/|---|/|---|/|---|/|---| >1
|MAGM|VP |MAGM|VM |ARMM|VP |ARMM|VM |MV2 |MV3 |MV1 |MD1
|M4056| M1089 | XA
*--| |---| |-----[M4056 ]* >2
|RT-SID| PARTIN | CNTCV
|3257|
|X199| X245 | X19A | M4008 | INVALID COND.
7791*-|/|---|/|---|/|---|/|---|/|---|/|---|/|---| >
|MD2| SSDT.N | MD3 | 7791 7793 7803 7820
|7883|
|2>|-----| |-----[M4008 ]*
|X11C| M4008 | M1034
7792*-| |---| |---| |---| |-----[PLS M4004 ]* 7798 7812 7815 7828
|DULK.B| INVLD |@MDINT | 7781
|7791|
|M4007|
*--| |---| |---| |---| |---| |---| |---|
|INVLD|
|7775|
|X11C| M1089 | XA | M4055 | M4008 | F145 | DOOR OPN INVLD CND.
7799*-| |---| |---| |---| |---| |---| |---| |---| >
|DULK.B| PARTIN | CNTCV | LT-SID | INVLD | 7811
|M1034|
*--|/| |---| |---| |---| |---| |---| |---|
|@MDINT|
|M4007| M4056
*--|/| |---| |---| |---| |---| |---| |---|
|INVLD| RT-SID
|7775| 3257
|M1089|
*--|/| |---| |---| |---| |---| |---| |---|
|PARTIN|
|M4004| M4000 |Y113 | X140 | M4006 | M4000 | DOOR UNLOCK
7812*-| |---| |---| |---| |---| |---| |---| |---| >
|DRULCK| CST.L | RST.B | LCKPLS | 7827 7813 7814 7867
|7798| 7827 | 1220 | 7877
|M4000| M4004 | X10A
*--| |---| |---| |---| |---| |---| |---| |---|
|DRULCK| 7798 | SUP.SS
|7827| 7798
|M1089| M4008 | M4056 | XA
*--| |---| |---| |---| |---| |---| |---| |---|
|PARTIN| INVLD | RT-SID | CNTCV
|7791| 3257
|M4004| M4001 |Y113 | X140 | M4006 | M4001 | DOOR UNLOCK
7828*-| |---| |---| |---| |---| |---| |---| |---| >
|DRULCK| CST.L | RST.B | LCKPLS | 7843 7829 7830 7869
|7798| 7843 | 1220 | 7877

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F198 X140
*--| |-----| |-----| |-----| |-----|
|CCALM RST.B
|8021
M1116 T101
8023*--| |-----| |-----| |-----| |-----| |-----| |-----|
|R2108. CCFW T101 COUNTER FOR OVLD S
|8008 8008 7999 8013 8025 8028
|
|X140 Y14 CHIP CONVEYOR RESE
8026*--| |-----| |-----| |-----| |-----| |-----| |-----|
|RST.B < >* 8027 7970 8002 8017
|
|-----| |-----| |-----| |-----| |-----| |-----| |-----|
|-----| |-----| |-----| |-----| |-----| |-----| |-----|
[RST C2 ]* 7999 8013 8025 8028
8046
M670 M656 M3003 M3002 F198 M3001 CHIP CNVY FWD
8029*--| |-----| |-----| |-----| |-----| |-----| |-----|
|MN308 MD1 |CCSTP CCREV CCALM < >* 8037 6977 7744 7748
|10047 10118 |8055 8041 8021 7889 7935 7950 8031
|M3001
*--| |-----|
|CCFWD
|8037
|M126
*--| |-----|
|M126
|M416
*--| |-----|
|ACHG
|7750
M670 M657 F198 M3002 CHIP CNVY REV
8038*--| |-----| |-----| |-----| |-----| |-----| |-----|
|MN308 MD2 |CCALM < >* 8041 7015 7891 7936
|10047 10122 8021 7977 8035
|M670 M659 M3003 CHIP CNVY STOP
8042*--| |-----| |-----| |-----| |-----| |-----| |-----|
|M3008 MD4 < >* 8055 7939 7949 7958
|10047 10130 7983 8034 8051
|X15F
*--| |-----|
* [= C2 R2133 ]*
|CC#OVL
|7999
|X8
*--| |-----|
|CCALM
|M1116 M3005 M3003
*--| |-----| |-----| |-----| |-----| |-----| |-----|
|R2108. CCOVLD CCSTP
|7965 8055
|M127
*--| |-----|
|M127
|M417
*--| |-----|
|AM1CMD
|7746
M670 M660 M3004 CHIP CNVY STOP
8056*--| |-----| |-----| |-----| |-----| |-----| |-----|
|M3008 MD5 < >* 8058 7178 8062
|10047 10134
|M670 M661 M3004 Y11 CHIP CONVEYOR HIGH
8059*--| |-----| |-----| |-----| |-----| |-----| |-----|
|MN308 MD6 |CCSTP < >* 8063 7147 7179 8061
|10047 10138 |8058
|Y11
*--| |-----|
|CCHISP
|8063
|X15F M1088 Y111 ALARM LAMP.B
8064*--| |-----| |-----| |-----| |-----| |-----| |-----|
| 8075 6881 9014 9022

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@YME-C
|M1375 M1088
*--| |-----| |-----| |-----| |-----| |-----| |-----|
|*EMGSM @YME-C
|329
|X210
*--| |-----|
|NCAL1
|X211
*--| |-----|
|NCAL2
|X212
*--| |-----|
|NCAL3
|X213
*--| |-----|
|NCAL4
|Y29F
*--| |-----|
|PCEMG
|5306
|Y144
*--| |-----|
|UN
|9013
8076* [= H5 R16 ]-----| |-----| |-----| |-----| |-----| |-----|
|M1390 CLEAR P.B
| 8079 8081
M1390 X140 M1175 M207 *ALARM RESET
8081*--| |-----| |-----| |-----| |-----| |-----| |-----|
|CLEARB RST.B DNCRST < >* 8084 860 874 1142
|8079 1150 1250 1685 1720
| 2335 2604 2685 2710
| 2821 2775 2760 2733
| 3934 3926 3074 2838
| 4390 4356 3959 3940
| 5038 5031 4472 4451
| 5276 5175 5077 5053
| 5577 5481 5471 5465
| 5648 5606 5593 5585
| 8199 8171 8152 7736
| 8386 8375 8233 8223
| 8511 8500 8427 8401
| 8575 8566 8554 8534
| 8624 8615 8604 8600
| 8699 8688 8662 8651
| 8793 8787 8753 8726
| 8865 8857 8850 8809
| 13164 13005 12995 12954
| 13392 13310
M316 F27 DISABLE MF CMDS
8085*--| |-----| |-----| |-----| |-----| |-----| |-----|
|MFMOP < >* 8089
|571
|M126 M127
*--| |-----| |-----| |-----| |-----| |-----| |-----|
|M126 M127
M1018 F28 IMPROPER MF
8090* [< K0 D60 ]-----| |-----| |-----| |-----| |-----| |-----|
|MFCNT @EXFNU < >* 8100 9277
|7667
|M312 M6 M359
*--| |-----| |-----| |-----| |-----| |-----| |-----|
|TF1 M6 SLT/M6
|610 1494
|M313
*--| |-----|
|TF2
|613

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M505
*--|-----*
|MTOLRG
|549
M519 M329 M1034 M1112 M514 M.DOOR INT.AT.ATC
8101*--|-----* < >* 8110 8104 8116 8161
|MDALM |ATCST |@MDINT @MDIT2 |
|8157 |1756 | |11119 |
|M1306 |M870 | |M1320 | F126 DOOR INT.LOCK(ATC)
*--|-----* < >* 8112 1068 8133 8162
|DISST |NTSEL | MDCL
|8207 |1928 | 707
|M1308 |
*--|-----*
|DICST
|8229
|M514
*--|-----*
|MDIATC
|8110
M549 M518 M514 M518 ATC FEED HOLD
8113*--|-----* < >* 8117 3091 8114 8132
|STOFP |ATCFHD |MDIATC
|1071 |8117 |8110
|M1320
*--|-----*
|MDCL
|707
M549 M515 M377 M515 TOOL SELECT HOLD
8118*--|-----* < >* 8122 8119 8135
|STOFP |TSELHD |TSELM
|1071 |8122 |2621
|F87
*--|-----*
|ATMOEM
|8379
M636 M564 M1321 P/C MOV AUX.
8123*--|-----* < >* 8125 8128 8164
|PDINX |LUMVLP |
| |M1320 | M1322 P/C MOV INTL AUX.
*--|-----* < >* 8127 8129 8165
| |MDCL
| |707
M1321 M1322 F34 M300 F127 "MSG"CYCLE START"
8128*--|-----* < >* 8141
|PMOVX |PDITX |PDINT |AUTO |644 |
|8125 |8127 | | |
|M518 |F126 |
*--|-----*
|ATCFHD |DINTA
|8117 |8112
|M515 |F87
*--|-----*
|TSELHD |ATMOPM
|8122 |8379
|M1314 |M1320
*--|-----*
|DIOR2 |MDCL
|5620 |707
M240 X10A M1088 M1320 M300 M1034 M519 MACHINE DOOR ALARM
8142*--|-----* < >* 8157 8101 8154 8158
|CSTPBX|SUP.SS @YME-C|MDCL |AUTO |@MDINT
|1069 | |707 |644 |
|M389 |M1088 |
*--|-----*
|CSTLX |@YME-C
|1213
|Y115
*--|-----*
|SST.L
|5702
|M230
*--|-----*
|SMR
|5686
|M207 |Y143 |M519
*--|-----*

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*ALRST PROSLB MDALM
|8084 |7638 |8157
M519 M514 M1321 M509 M.D.INT.AL.S.SP.FH
8158*--|-----* < >* 8167 1731 8285 8873
|MDALM |MDIATC |PMOVX |
|8157 |8110 |8125 |
|M1306 |F126 |M1322 |
*--|-----* < >*
|DISST |DINTA |PDITX
|8207 |8112 |8127
|M1308 |
*--|-----*
|DICST
|8229
X10A M1034 M1308 M519 M1306 M1112 M1088 M524 M.DOOR INT.AT.TES.
8168*--|-----* < >* 8180 8172 8181 8184
|OP.N |SUP.SS|@MDINT |DICST |MDALM |DISST |@MDIT2 |@YME-C
| | |8229 |8157 |8207 |11119 |
|M389 |M524 |
*--|-----*
|CSTLX |MDITES
|1213 |8180
|M207 |
*--|-----*
*ALRST
|8084
M524 M300 F125 DOORINT.LOCK(SBK)
8181*--|-----* < >* 8183
|MDITES |AUTO
|8180 |644
|M524 M510 M.D.INT.AL.SBK
8184*--|-----* < >* 8185 8911
|MDITES
|8180
M230 M228 M1088 X10A M300 M1320 M1086 M1034
8186*--|-----* < >* 1
|SMR |SSTHLD|@YME-C |SUP.SS|AUTO |MDCL |@YMC/E|@MDINT
|5686 |5531 | |644 |707 |
|M1303 |M1302 |M1088 | M1088 |
*--|-----* < >*
|SSTX |DISSP |@YME-C | @YME-C
|5449 |5423 |
M3
*--|-----*
|M3
M4
*--|-----*
|M4
M207 M1306
*--|-----*
*ALRST DISST
|8084 |8207
M1112 M1306 MDIT SPINDL START
1>-----|-----* < >* 8207 8102 8159 8177
| @MDIT2
|11119 |
Y6 M1320 M1034 M1086 M1112 [PLS M1307 ] *
8208*--|-----* < >* 8214 8222
|PWON.M |MDCL |@MDINT |@YMC/E |@MDIT2
|160 |707 |11119 |
X10A M1088 M240 M300 M1307 M1034 M1086 M1112 M1308 MDIT CYCLE START
8215*--|-----* < >* 8229 8103 8160 8175
|SUP.SS @YME-C|CSTPBX|AUTO |DICSTX|@MDINT |@YMC/E|@MDIT2
|1069 |644 |8214 |11119 |
|M1088 |M389 |
*--|-----* < >*
|@YME-C |CSTLX
| |1213
M207 M1308
*--|-----*
*ALRST DICST
|8084 |8229
M230 M228 M1088 X10A M1320 M301 M1034 M511 M.D.INTAL.MNL.SP.S
8230*--|-----* < >* 8248 5424 8234 8286
|SMR |SSTHLD|@YME-C |SUP.SS|MDCL |MNL |@MDINT
|5686 |5531 | |707 |652 |

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|X108      |X10A M1088 |M1112 |
*--| |-----|*--|/|---|*--| |---|/|---|*
|          |SUP.SS |@YME-C @MDIT2
|          |11119
M207 M511 |M1365 |
*--| |-----|*--| |---|
|*ALRST MDIMSS MDOPPL
8084 8248 7753
X18B M1000 M1324 M1335 AXIS SELECT MEM.
8249 *--| |-----|*--|/|---|*--|/|---|* 8258 8294
|AX4  @IN/NC|AXINTL
|          |11107 |732
X18C M1066
*--| |-----|*--| |---|
|AX5  @5TH
|
|X188
*--| |-----|*
|AX1
|
|X189
*--| |-----|*
|AX2
|
|X18A
*--| |-----|*
|AX3
|
|Y9      X14      XB      M1034 M1088 Y6
8259 *--| |-----|*--| |---| |---| |---| |---| |---| |---|>1
|THCOLV MDINT MDINT @MDINT @YME-C PWON.M
|8371
|          |M1064      |M4087 M4055 |
|          |*--|/|---|*--|/|---| |---|
|          |200C/3      |MVLiR LT-SID
|          |11113      |3203 3262
|          |M4056 M4089
|          |*--| |---|/|---|*
|          |RT-SID MVRiL
|          |3257 3215
|
|1>-----|<T152 K30 > *
|
|T152      M1088      M1380 M.DOR LOCK MAL T1
8278 *--| |-----|*--| |---| |---| |---| |---| |---| |---| 8275 8278
|MDLKT1    @YME-C
|8275
|X140 M1380
*--|/|---|*--| |---|
|RST.B DLKMLT
|8284
|X156
*--|/|---|*
|MF1.B
|
|M509      F32 MACHINE DOOR INT.
8285 *--| |-----|*--| |---| |---| |---| |---| |---| |---| 8306 359 3201 3213
|MDISPF
|8167
|M511
*--| |-----|*
|MDIMSS
|8248
|M1310
*--| |-----|*
|MDITM1
|2724
|M1311
*--| |-----|*
|MDITM2
|2743
|M1312
*--| |-----|*
|DIOR11
|5613
|M1313
*--| |-----|*

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|DISJOG
|5655
|M1331
*--| |-----|*
|DITMGB
|2772
|M1332
*--| |-----|*
|DITMGA
|2780
|M1334
*--| |-----|*
|MDI2PC
|
|M1335
*--| |-----|*
|AXISSM
|8258
|M1346
*--| |-----|*
|ATCSP3
|1737
|M4009
*--| |-----|*
|INVLD
|6654
|M4089 M300 XB
*--| |---| |---| |---|/|---|*
|MVRiL AUTO MDINT
|3215 644
|M4087 M300 X14
*--| |---| |---| |---|/|---|*
|MVLiR AUTO MDINT
|3203 644
|M1380
|
|F174 M.D.INTL LS MALF.
8307 *--| |-----|*--| |---| |---| |---| |---| |---| |---| 8308 751 1105 8878
|DLKMLT
|8284
|Y129 X1F3 X1F2 M1318 S.STOP OP.N AUX
8309 *--| |---| |---| |---| |---| |---| |---| |---| |---| |---| 8312 8326
|SSP.L STL.N OP.N
|5704
|M240 M519 X10A M1320 M300 M1034 M1317 M.D.INTL PIN EXT.
8313 *--| |---| |---| |---| |---| |---| |---| |---| |---| |---| 8331 8325 8364
|CSTPBX MDALM SUP.SS MDCL AUTO @MDINT
|1069 8157 707 644
|M259
*--| |-----|*
|CSTLX
|M199
|M389
*--| |-----|*
|CSTLX
|1213
|Y114
*--| |-----|*
|FHD.L
|1234
|M259 M200 M1317 M1318 Y143
*--| |---| |---| |---| |---| |---|/|---| |---|/|---|*
|CSTLX *RST MDPINK SSPLX PROSLB
|1199 340 8331 8312 7638
|M389
*--| |---|
|CSTLX
|1213
|Y114
*--| |---|
|FHD.L
|1234
|X10A
*--|/|---|*
|SUP.SS
|
|Y2D6 M401 M398 T62 X1FA M863 DOOR UNLOCK AX2
8335 *--| |---| |---| |---| |---| |---| |---| |---| |---| |---| 8341 8351
|SOR.N TCM MGSPCF SSTOP TSMZ.N
|5641 2852 1438 1420

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|X246 |
*--| |-*
|SPOR.N
|
|X1F2 Y114 M300 Y2D6 X1FA X1F3 M863 M1326 DOOR UNLOCK
8342*--|/|----|/|----| |-*|/|-*| |----|/|----| |-----| >* 8352 8368
|OP.N FHD.L AUTO |SOR.N |TSMZ.N STL.N DULKX2
| 1234 644 |5641 |
|M301 |X10A |
*--| |-----|*--| |-*
|MNL SUP.SS
|652
|M2013 M672
8353*--| |----| |-----| [PLS M4005 ] * 8356 8357 8359
|M10 MN311
|10154 10059
|M4005 Y5 X15F Y5 BASE COOLANT
8357*--| |----|/|----| |-----| >* 8363 7276 8358 8360
|BASE.C BSCLNT|
|8356 8363 |
|M4005 Y5 |
*--|/|----| |-*
|BASE.C BSCLNT
|8356 8363 |
|M1317 M1088 T155 Y9 SPINDLE THROUGH CO
8364*--|/|----|/|----| |-----| >* 8371 704 8259
|MDPINK @YME-C |MA.NT1
|8331 |444
|M1088 X11C M1326
*--| |----| |----| |-*
|@YME-C DULK.B DULK
| 8352
|M300 X16 M3370 M1035 F87 AUTO MOP(MGMI)
8372*--| |----| |----|/|----| |-----| >* 8379 23 8120 8136
|AUTO MNMGIT MGST @MGDIN
|644 2365
|M207 F87
*--| |----| |----| |-*
|*ALRST ATMOPM
|8084 8379
8380*--| |*--| |----| |----| |*--| |*--| |*--| |-----| >* 8397 8387 8393 8437
|TSF.PB |MGMNIT |MNMGIT |TSF.PB |MGDIM |@MGDIN
| 2529 | 8397 |
|X0 |X0 |
*--| |-* *--| |-*
|TSR.PB |TSR.PB |
|M273 |M273 |
*--| |-* *--| |-*
|TSFKY |TSFKY |
|2248 |2248 |
|M274 |M274 |
*--| |-* *--| |-*
|TSRKEY |TSRKEY |
|2252 |2252 |
|M207 M525 M1328
*--| |----| |-----| |-----| >*
|*ALRST MGDIM MGDITB
|8084 8397 711
|M1328 M377 M1035 M526 MG.DOOR INT. (AUT)
8398*--|/|----| |*--| |-----| >* 8405 8402 8438
|MGDITB |TSELM |@MGDIN
|711 2621 |
|T135 |
*--| |-*
|MGDICA
|8462
|M207 M526
*--| |----| |----| |-*
|*ALRST MGDIA
|8084 8405
|M13 X21 Y6 M1088 M1035 MG.DOR CIRCT MAL.T
8407*--| |----| |----| |----| |----| |-----| <T110 K20 >* 8416 8419
|MGDRLS MGDIPP |PWON.M @YME-C @MGDIN
| 160
|X13 X21
*--|/|----|/|----| |-*

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|MGDRLS MGDIPP
|T110 M1366 MG.DOR CIRCUIT MAL
8419*--| |-----|*-----| >* 8424 19 808 1717
|MGDCMT
|8416
|X140 L3 L3 MG.DOR.CUICT ML X
*--|/|----| |----| |-----| >* 8425 8422
|RST.B MGDMLX
|8425
|X156
*--|/|----| |----| |-*
|MF1.B
|M2075 M207 M1035 M2075 MG DOOR INT FHD &
8426*--| |----| |----| |----| |-----| >* 8432 8426 8441 8906
|MGINFH *ALRST @MGDIN
|8432 8084
|M300 M1328
*--| |----|/|----| |----| |-----| >*
|AUTO MGDITB
|644 711
|M301 M1328 M1035 M2076
8433*--| |----|/|----| |-----| >* 8436 6414
|MNL MGDITB @MGDIN
|652 711
|M525 F33 MAGAZINE DOOR INT.
8437*--| |----| |----| |-----| >* 8442 16 407 8452
|MGDIM
|8397
|M526
*--| |-*
|MGDIA
|8405
|M1344
*--| |-*
|MGDITA
|1724
|M1366
*--| |----| |----| |-----| >*
|MGDCML
|8424
|M2075
*--| |----| |----| |-----| >*
|MGINFH
|8432
|M390 M384 F35 MG.MNL. INTERRUPT
8443*--|/|----| |----| |-----| >* 8449
|MGMNRD |MGMNIT |
|2519 2529
|M1035
*--|/|----| |----| |-----| >*
|@MGDIN
|M1501 X16
*--| |----| |----| |-----| >*
|MENUCN MNMGIT
|2532
|M300 M1328 F33 Y1 M1035 F37 MG.DOOR OPEN
8450*--| |----|/|----|/|----| |-----| >* 8455 408 8459
|AUTO MGDITB MGDINT HYD.M @MGDIN
|644 711 8442 337
|M378 M377 F33 F37 M1035 MG.DOOR INT.CAN.T.
8456*--| |----| |----|/|----| |-----| <T135 K300 >* 8462 1716 8399
|TSEINT TSELM MGDINT MGDOP @MGDIN
|24 2621 8442 8455
|M512 F94 T.SELECT MOP (NO)
8465*--| |----| |----| |-----| >* 8468
|TSLMOP
|2597
|M506
*--| |----| |----| |-----| >*
|TTOLRG
|1612
|M1397
*--| |----| |----| |-----| >*
|TSETMP
|1689

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M502 F95 T.SELECT MOP(ARMP)
8469*-|----->* 8470
|ATSMFX
|2603
|M818 M280 F52 F53 Y114 M1203 M1204 M1234
8471*-|----->1
|T.MST MAEXLI TADMLF TASMLF FHD.L PTPSBK PTPCAN PTPMCD
|4487 4497 8667 8668 1234 4711 4767 4763
|M827
*--|-----*
|TBRST
|1668
|M547
*--|-----*
|ATCMV
|4637
| M1213 Y113
|1>-----<T235 K6000 >* 8484 8491 8492
| PTPINI CST.L
|4718 1220
|M547 M555 M818 M827
8487*-|----->[RST T235 ]* 8484 8491 8492
|ATCMV PCMV T.MST TBRST
|4637 4651 4487 1668
|T235 F114 PTP(AXIS) ERROR
8492*-|----->* 8493
|AXIMVE
|8484
|X11 Y1
8494*-|-----<T82 K20 >* 8497 8502
|HYD.PS HYD.M
|337
|M207 F0 F0 HYDRO.PRESS.ALARM
8500*-|----->* 8503 8501 8869 8917
|*ALRST HYDPAL
|8084 8503
|T82
*--|-----*
|HYDROT
|8497
|M4003 X92
8504*-|-----<T83 K300 >* 8507 8512
|PD4OLS
|7733
|F2 M207 M1124 F2 AIR PRESS.ALARM
8510*-|----->* 8514 373 8510 8879
|AIRPAL *ALRST
|8514 8084
|T83
*--|-----*
|8507
|T118 Y8 X4
8515*-|-----<C0 K3 >* 8519 8530 8542 8584
|WLONT WLPMON WLPSW
|7709 7693
|T119 X4
8522*-|-----<C1 K2 >* 8525 8533 8546
|WLOFFT WLPSW
|7714
F9 WAY LUBE PSW ALM
8528*|< K2 C0 ]*----->* 8537 429 7690 7701
| WLPAC1
| 8519
*|< K1 C1 ]*
| WLPAC2
| 8525
|M207 F9
*--|-----*
|*ALRST WLPAL
|8084 8537
|T118 Y8 X4
8538*-|----->[RST C0 ]* 8519 8530 8542 8584
|WLONT WLPMON WLPSW
|7709 7693
|M200
*--|-----*

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|RST
|340
|T119 X4
8543*-|----->[RST C1 ]* 8525 8533 8546
|WLOFFT WLPSW
|7714
|M200
*--|-----*
|RST
|340
|YD X3
8547*-|-----<T149 K10 >* 8550 8556
|SA.M WLFLSW
|348
|M207 F8 F8 WAY LUBE FLT SW AL
8554*-|----->* 8557 426 7689 7702
|*ALRST WLFSAL
|8084 8557
|T149
*--|-----*
|WLFSAT
|8550
|Y1 X15
8558*-|-----<T57 K50 >* 8561 8573
|HYD.M SPARE
|337
|X33 Y1
8564*-|-----<T84 K600 >* 8570 8567 8579
|HYD.M
|337
|M207 T84
*--|-----*
|*ALRST CHLALM
|8084 8570
|T57 M1064 F3 HEAD LUBE PS ALM
8573*-|----->* 8578 8574 8880
|HLALMT 200C/3
|8561 11113
|F3 M207
*--|-----*
|HSHOAL *ALRST
|8578 8084
|T84 M1148 F6 CHILLER ALARM
8579*-|----->* 8581 385 8892 8913
|CHLALM SPARE-
|8570
8582*|= K1 C0 ]*----->[MOV K300 D146 ]* 8590 7716 8599 11179
| WLPAC1
| 8519
*|= K2 C0 ]*
| WLPAC1
| 8519
8591*|= K0 C0 ]*----->[MOV D141 D146 ]* 8590 7716 8599 11179
| WLPAC1
| 8519
*|< K2 C0 ]*
| WLPAC1
| 8519
|M207 F17 F17 THRML TRIP ALARM
8600*-|----->* 8603 8601 8870
|*ALRST THRTRP
|8084 8603
|X1A
*--|-----*
|MOTRIP
|M207 F18 F18 CONVEYOR THR.TRIP
8604*-|----->* 8607 8605
|*ALRST COVTRP
|8084 8607
|X1B
*--|-----*
|COVTRIP

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8608*--| |-----<T85 K100 >* 8610 8614 13368
|Y6 |-----<T85 K100 >* 8610 8614 13368
|PWON.M
|160
|X10 T85 F19
8613*--|/|----| |*-----< >*
|TROVHT PWODLT
| 8610
|M207 F19
*--| |----| |*
*ALRST TROVAL
8084 8618
|Y1
8619*--| |-----<T86 K20 >* 8621 8627
|HYD.M
|337
|M207 F11 F11
8624*--| |----| |*-----< >*
*ALRST SCNTAL
8084 8629
X243 T86
*--| |----| |*
|SPAL.N HYDRON
| 8621
|Y25 M280 M1023
8630*--| |----|/|----| |*-----<T134 K100 >*
|M.AEXT MAEXLI @TMEAS
4560 4497
|Y25 M281
*--|/|----|/|----| |*
|M.AEXT MARTLI
4560 4503
|Y25 X2C X2D T134 F50
8640*--|/|----| |----| |*-----< >*
|M.AEXT MARERS MAEXRS |TMEALM|
4560 | 8637
|Y25 X2D
*--| |----|/|----| |*
|M.AEXT MAEXRS
4560
|M285 M280 M1023
*--| |----|/|----|/|----| |*
|MAEXH MAEXLI @TMEAS
4557 4497
|M207 F50
*--| |----| |----| |*
*ALRST TAEMLF
8084 8654
|Y25 X2D X2C T134 F51
8655*--| |----| |----| |*-----< >*
|M.AEXT MAEXRS MARERS |TMEALM|
4560 | 8637
|Y25 X2C
*--|/|----| |----| |*
|M.AEXT MARERS
4560
|M207 F51
*--| |----| |----| |*
*ALRST TARMLF
8084 8665
|X140
8666*--| |*-----[RST F52 >] * 8667 1664 4479 8474
|RST.B
|
*-----[RST F53 >] * 8668 1665 4480 8475
|
|
|X91 Y90 Y1
8669*--| |*-----<T87 K50 >* 8678 8687 8698
|TCLLS |TUCL.M|HYD.M
| 3965 |337
|X90
*--|/|----| |*
|TUCLLS
|X91 Y90
*--|/|----|/|----| |*

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|TCLLS |TUCL.M
| 3965
|X90
*--| |*
|TUCLLS
|X91 X90 Y90 T87 F56
8681*--| |----| |----| |*-----< >* 8691 369 8689 8758
|TCLLS |TUCLLS |TUCL.M|TCLALT|
| 3965 | 8678
|X91 Y90
*--|/|----|/|----| |*
|TCLLS |TUCL.M
| 3965
|M207 F56
*--| |----| |----| |*
*ALRST TCLMLF
8084 8691
|X90 X91 Y90 T87 F57
8692*--| |----| |----| |*-----< >* 8702 371 8700 8757
|TUCLLS |TCLLS |TUCL.M|TCLALT|
| 3965 | 8678
|X90 Y90
*--|/|----| |----| |*
|TUCLLS |TUCL.M
| 3965
|M207 F57
*--| |----| |----| |*
*ALRST TUCMLF
8084 8702
|M554 M472 F70
8703*--| |*-----< >* 8709 403
|ATCMVX |ZPXME
1698 297
|M589 M473 F71
*--| |*-----< >* 8712 411
|PCM VX |ZPYME
|M826 |M474 F72
*--| |*-----< >* 8715 387
|TBRSTX |ZPZME
1659
|M817 |M475 |M1000 |Y183 F73
*--| |*-----< >* 8720
|T.MSTX |ZP4ME @IN/NC DTCH4N
4444 | 1107 4177
|M897 |M1066 |Y184 F173
*--|/|----| |----| |*-----< >* 8725
|ZP5ME @5TH DTCH5N
301 4264
|M207 |M479 |F117 F117
8726*--| |----|/|----| |*-----< >* 8739 8728
*ALRST MZP C'NTPM
8084 5812 8739
|M4063 X100 M469
*--|/|----| |----|/|----| |*
|MID.PS +X.B XMOV
3279 5819
|X103 M470
*--| |----|/|----| |*
|-Y.B YMOV
| 5825
|X104 M471
*--| |----|/|----| |*
|+Z.B ZMOV
| 5831
|M2165 M885 M3320 M3304 M1396
8740*--| |*-----<T131 K100 >* 8750 8755
|A0CW |ARMPRD |AMSTRT |AMINT+ |MN302
|2979 |1371 |3114 |3092 |10087
|M2155
*--| |*
|AMST2
|3139
|M2157 M2158
*--| |----|/|----| |*
|AMST1 AM359
|3150 1386

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M207 F103 F103 ATC ARM O&LS MALF
8753 *--| |----| |-*-----<----->* 8756 8754 8761
|*ALRST AOMLF
|8084 8756
|T131
|--| |-----*
|A0ALT
|8750
|F57 M401 M516 TOOL CHG.MEM.ALARM
8757 *--| |----| |-*-----<----->* 8765 8763
|TUCMLF|TCM
|8702 2852
|F56
|--| |----*
|TCLMLF|
|8691
|F100
|--| |----*
|A#1MLF|
|
|F101
|--| |----*
|A#2MLF|
|
|F103
|--| |----*
|AOMLF|
|8756
|F104
|--| |----*
|A60MLF|
|
|M516
|--| |----*
|TCMAL
|8765
|M377 M378 M399 TOOL SEL.MEMO.TMR.
8766 *--| |----| |----| |----| |----<T99 K1200>* 8770 2675 8773 8790
|TSELM TSEINT REMAGR
|2621 24 8777
|T99
|--| |----> K2 D154 ]-----<----->* M399 RE.MAG RUN SEL
8773 *--| |----| |----| |----| |----<----->* 8777 8768 8778
|TSEMT
|8770 8781
|M399 M377
8778 *--| |----| |----| |----| |----[INC D154]* 8781 8776 8786
|REMAGR TSELM
|8777 2621
|M377 F68
8782 *--| |----| |----| |----| |----[MOV K0 D154]* 8781 8776 8786
|TSELM MGIMLF
|2621 8792
|M207 F68 F68 MG.INPOSI.LS MALF.
8787 *--| |----| |----| |----| |----<----->* 8792 8783 8788
|*ALRST MGIMLF|
|8084 8792
|T97
|--| |-----*
|MGIPAL
|
|T99
|--| |-----*
|TSEMT
|8770
|M503
|--| |-----*
|MGIALX
|2613
|M207 F69 F69 MG.STOP PIN LS MLF
8793 *--| |----| |----| |----| |----<----->* 8796 8794
|*ALRST MGFMLF|
|8084 8796
|T98
|--| |-----*
|MGSPPA
|
|X244 M239 M230 Y295 X249 M300 M237 ALARM SP.RUN AUX
8797 *--| |----| |----| |----| |----| |----<----->* 8803 8804

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|SPZS.N SZSPX SMR GSFT.N SPSVON AUTO
|8829 5686 6353 644
M237 AL.SP.RUN AUX TMR
8804 *--| |----| |----| |----| |----<T93 K10>* 8806 8811
|ALSRX
|8803
|M207 F41 F41 SPINDLE RPM MALF
8809 *--| |----| |----| |----| |----<----->* 8812 393 8810 8872
|*ALRST SRPFMF|
|8084 8812
|T93
|--| |-----*
|ALSRAX
|8806
|M226 X24E M225 M202 M320 M322 X249 X202
8813 *--| |----| |----| |----| |----| |----| |----<----->1
|SBKMX |SPIPOS|SST SF AUX SORME UORARI SPSVON TAP.N
|5489 | |5447 620 5550 5573
|
|M220
|*--| |----*
|ON
|7
|L12 Y295 M238 SPINDLE ZERO SPEED
1>-----| |----| |----| |----<----->* 8825 8828 8831
|TAPLES GSFT.N
|5089 6353
T94 M239 M239 SP.ZERO SPED X
8826 *--| |----| |----| |----| |----<----->* 8829 8798 8827 8830
|ZSPEDX SZSPX
|8833 8829
|M238
|--| |-----*
|SZSP
|8825
|M239 M238
8830 *--| |----| |----| |----| |----<T94 K30>* 8833 8826
|SZSPX SZSP
|8829 8825
|Y1 Y2D6 X249
8836 *--| |----| |----| |----| |----<T95 K10>* 8840 8849
|HYD.M SOR.N SPSVON
|337 5641
|Y2D6
8843 *--| |----| |----| |----| |----<T96 K100>* 8845 8854
|SOR.N
|5641
|M323 T95 F43 ORIENT RELEAS AL.
8848 *--| |----| |----| |----| |----<----->* 8853 8851
|SORARI ORTMR1
|1434 8840
|M207 F43
|--| |----| |----*
|*ALRST ORREAL
|8084 8853
|T96 Y2D6 M323 F42 ORIENT ALARM
8854 *--| |----| |----| |----| |----<----->* 8860 5631 8858
|ORTMR2 SOR.N SORARI
|8845 5641 1434
|M207 F42
|--| |----| |----*
|*ALRST ORAL
|8084 8860
|X244 M323 Y2D6 X249 F44 ORIENT SZS AL.
8861 *--| |----| |----| |----| |----<----->* 8868 5501 5634 8866
|SPZS.N SORARI SOR.N SPSVON
|1434 5641
|M207 F44
|--| |----| |----*
|*ALRST ORSZS
|8084 8868
|FO M496 ALARM SPINDLE STOP
8869 *--| |----| |----| |----| |----<----->* 8886 8887 8899
|HYDPAL
|8503
|F17
|--| |----*
|THRTRP
|8603

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|F11 |
*--| |-*
|SCNTAL|
|8629 |
|F41 |
*--| |-*
|SRPMMF|
|8812 |
|M509 |
*--| |-*
|MDISPF|
|8167 |
|M511 |
*--| |-*
|MDIMSS|
|8248 |
|F30 |
*--| |-*
|MMSMLF|
|5281 |
|F182 |
*--| |-*
|PCUTAL|
|811 |
|F192 |
*--| |-*
|THMOAL|
|F174 |
*--| |-*
|MDLSAL|
|8308 |
|F2 |
*--| |-*
|AIRPAL|
|8514 |
|F3 |
*--| |-*
|HSHOAL|
|8578 |
|F191 |
*--| |-*
|THRAL2|
|F22 |
*--| |-*
|AFCAL |
|5178 |
|F8 |
*--| |-*
|WLFSAL|
|8557 |
|F9 |
*--| |-*
|WLPSAL|
|8537 |
|F4 |
*--| |-*
|HWFSAL|
|M496
8887*--| |-*-----<T81 K3 >* ALARM SPINDLE STOP
|ALSSSTP| 8889 8895
|8886 |
|F6 | Y21A | X1F3 | M497 ALARM SP.STOP 2
8892*--| |-*-----< >* 8897 5492 8898
|CHALM |SBK.N |STL.N
|8581 |9070 |
|F19 |
*--| |-*
|TROVAL|
|8618 |
|T81 |
*--| |-*
|ALSSSTP|
|8889 |
|M497 M498 ALARM FEED STOP
8898*--| |-*-----< >* 8907 1163 13372

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|ALSSP2|
|8897 |
|M496 |
*--| |-*
|ALSSSTP|
|8886 |
|F44 |
*--| |-*
|ORSZS |
|8868 |
|F29 |
*--| |-*
|C'TCST|
|1145 |
|F40 |
*--| |-*
|C'TCST|
|1153 |
|M463 |
*--| |-*
|ALSSPX|
|F86 |
*--| |-*
|ATMOPT|
|3962 |
|M1397 |
*--| |-*
|TSETMP|
|1689 |
|M2075 |
*--| |-*
|MGINFH|
|8432 |
|F19 |
8908*--| |-*-----< M499 >* ALARM SINGLE BLOCK
|TROVAL| 8914 9068 13373
|8618 |
|F26 |
*--| |-*
|TBREAK|
|5081 |
|M507 |
*--| |-*
|TLSEBK|
|5042 |
|M510 |
*--| |-*
|MDISEBK|
|8185 |
|F163 |
*--| |-*
|PDOFAL|
|F6 |
*--| |-*
|CHALM |
|8581 |
|Y6 |
8915*--| |-*-----< [DMOV K8 ALARM SEARCH
|PWON.M| F0 D640 ]* 8918 8943 11816 11858
|160 | HYDPAL
| | 8503
| | K8
*-----< [DMOV F32 D642 ]* 8921 8950 11820 11826
| | 8306
| | K8
*-----< [DMOV F64 D644 ]* 8924 8957 11831 11864
| | LGMLF
| | K8
*-----< [DMOV F96 D646 ]* 8927 8964 11836 11867
| | TCMOPA
| | 2824
| | K8
*-----< [DMOV F128 D648 ]* 8930 8971 11841 11870

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      K8
      F160 D650 ]* 8933 8978 11846 11873
      NZZL +
      K2
      F192 D652 ]* 8936 8985 11849
      THMOAL
      D651 D105 D651 ]* 8940 8938 8981
      8940
      M1199 AUX 1
8941* [= K0 D640 ]- [= K0 D641 ]-----< >* 476 505 568 4481
      8918 | 4484 5051 5054 5068
      | 8947 8987 9515 9539
      | 9601 9587 9583 9548
      | 10494 10481 9628 9614
      | 10897 10886 10885 10515
      | 10940 10932 10919 10905
      | 11965 11025 11016 10963
      | 12049 12048 11980 11977
      | 12098 12089 12062 12050
      | 12158 12133 12122 12118
      | 12225 12188 12179 12169
      | 12831 12826 12696 12235
      | 13418 13362 12882 12868
      M1198 AUX 2
8948* [= K0 D642 ]- [= K0 D643 ]-----< >* 483 506 8954 8988
      8921 | 9554 9557 9581 10486
      | 10501 10522 10845 10857
      | 10955 10954 10872 10863
      | 11983 11978 11974 10964
      | 12874 12846 12830 12693
      | 13406 13400 13389 12884
      M1197 AUX 3
8955* [= K0 D644 ]- [= K0 D645 ]-----< >* 490 507 8961 8989
      8924 | 10491 10508 10529 12691
      | 12840 12863 12875 13500
      | 13518 13507 13502
      M1196 AUX 4
8962* [= K0 D646 ]- [= K0 D647 ]-----< >* 497 508 8968 8990
      8927 | 9519 9534 9543 9556
      | 9824 9831 9832 9839
      | 9855 9848 9847 9840
      | 9868 9864 9863 9856
      | 12881 12845 11979 9869
      M1195 AUX 5
8969* [= K0 D648 ]- [= K0 D649 ]-----< >* 504 509 8975 8991
      8930 | 11982 12018 12688 12855
      | 12864 12869
      M1194 AUX 6
8976* [= K0 D650 ]- [= K0 D651 ]-----< >* 8982 8992 12686 12860
      8933 | 12883
      8940
      M1193 AUX 7
8983* [= K0 D652 ]-----< >* 5376 5380 5388 8986
      8993 12684
      8936
      M1199 M1198 M1197 M1196 M1195 M1194 M1193 M495 *ALARM
8987* ---|---|---|---|---|---|---|---< >* 8994 8995 9008 9012
      AUX1 AUX2 AUX3 AUX4 AUX5 AUX6 AUX7
      476 483 490 497 504 8982 5376
      M495
8995* ---|---|---|---|---|---|---|---< >* R158 ]* 8999
      *ALARM
      8994
      ---|---|---|---|---|---|---|---< >* R160 ]* 9003
      ---|---|---|---|---|---|---|---< >* ALARM DATA 1
      ---|---|---|---|---|---|---|---< >* D50 ]* 9007

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      M495
8008* ---|---|---|---|---|---|---|---< > [CALL P23 ]*11812 9010
      *ALARM
      8994
      M1192 M495 Y144
8011* ---|---|---|---|---|---|---|---< >* 9013 8074 9015 9023
      AUX8 *ALARM
      5371 8994
      Y111
8014* ---|---|---|---|---|---|---|---< > T71 K10 >* ALARM TIMER
      ALM.L | 9017 9020
      8075
      Y144
      *---|---|---|---|---|---|---|---< >*
      UN
      9013
      T71 Y1D ALARM PATO LAMP
8020* ---|---|---|---|---|---|---|---< >* 9021
      ALARM
      9017
      Y111 M5140
8022* ---|---|---|---|---|---|---|---< > T147 D230 >* ALARM POWER OFF T1
      ALM.L ALPOFS | 9027 9024 9030 9397
      8075 | 9415
      Y144 11183
      *---|---|---|---|---|---|---|---< >*
      UN
      9013
      T147
      ALOFT1
      9027
8030* ---|---|---|---|---|---|---|---< > T148 K50 >* ALARM POWER OFF T2
      9032 9379
      ALOFT1
      9027
8035* ---|---|---|---|---|---|---|---< > T56 K50 >* 5 SEC PULSE TIMER
      T56 | 9037 9035 9046
      5SPLS
      9037
      Y6
8040* ---|---|---|---|---|---|---|---< > [INC D93 ]* SCAN COUNTER
      PWON.M | 9042 9049 9056
      160
      *---|---|---|---|---|---|---|---< > [MOV K5000 D94 ]* TIME SET
      9045 9048
      T56
8046* ---|---|---|---|---|---|---|---< > [ / D94 D93 D91 ]* 1 SCAN TIMER (HEX)
      5SPLS | 9050 9052
      9037 TSET SCNCNT
      9045 9042
      *---|---|---|---|---|---|---|---< > [BCD D91 D90 ]* 1 SCAN TIMER (BCD)
      9053
      1SCNTH
      9050
      *---|---|---|---|---|---|---|---< > [MOV K0 D93 ]* SCAN COUNTER
      9042 9049 9056
      X15B
8057* ---|---|---|---|---|---|---|---< > [PLS M1391 ]* SINGLE BLOCK P.B
      SBK.B | 9059 9060 9062
      M1391 Y10F Y10F
8060* ---|---|---|---|---|---|---|---< >* SNLKB SBK.L | SINGLE BLOCK L.B
      9059 9065 | 9065 9061 9063 9067
      M1391 Y10F
      *---|---|---|---|---|---|---|---< >*
      SNLKB SBK.L
      9059 9065
      M243 Y21A
8066* ---|---|---|---|---|---|---|---< >* SINGLE BLOCK.N
      SBKME | 9070 1099 1837 1859
      7630 | 2082 2102 4706 8894

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|Y10F |
*--| |-*
|SBK.L |
|9065 |
|M499 |
*--| |-*
|ALSBK |
|8914 |
|M1173 |
*--| |-*
|DNCSBK |
|
M245 M200 M245 M02 MEMORY
9071*--| |-*--| |-----> 9075 9071 9280 9318
|M02ME |*RST
|9075 |340
|M2 |
*--| |-*
|M2 |
|
M30 |
*--| |-*
|M30 |
|
M126 M1116 M126 M127 M126 M127
9076*--| |-*--| |-----<T19 K10 > 9080 9085
|M126 |R2108.
|M127 |
*--| |-*
|M127 |
|
M126 M127 M1180 MFIN M126/M127
9083*--| |-----> 9086 9243
|M126 |M127
|
T19 |
*--| |-----*
|MFINT |
|9080 |
M72 M71 M4060 MCODE FIN.
9087*--| |-----> 9090 9245
|M72 |M71
|
M4082 |
*--| |-----*
|XFR.FI |
|3482 |
X220 X221 M560 M865 M323 M10 M11 M5122
9091*--| |-*--| |-*--| |-*--| |-*--| |-*--| |----->1
|DM0.N|DM01.N|ATCFIN|SABP |SORARI|M10 |M11 |ACCLL | |
| | |4942 |2861 |1434 | | | |1406 |
|M0 |M1 |M6 |M9 |M19 |M397 |M396 |M15 |
*--| |----->2
|M0 |M1 |M6 |M9 |M19 |TCLCF |TUCLCF |M15 |
|9874 | | | |1398 |1390 |
|
M5121 L124 L124 M481 FIN 1
1>*--| |-----> 9123 9144
|ACOPL |
|1402 |3057 |3057 |
|M16 |M139 |M140 |
2>*--| |----->
|M16 |M139 |M140 |
|
M1351 M1350 M280 M281 M820 M835 M813 M281
9124*--| |-*--| |-*--| |-*--| |----->1
|SPARE-|SPARE-|MAEXLI|MARTLI|T.MFIN|TBRFIN|TBRFNX|MARTLI|
| | |4497 |4503 |4859 |4830 |4836 |4503 |
|M64 |M65 |M33 |M34 |M816 |M195 |
*--| |----->
|M64 |M65 |M33 |M34 |T.MSEL|M195 |
|9880 | | | |1643 |
|M1356 |
*--| |-----*
|SPARE- |
|
M481 M482 FIN 2
1>-----> 9145 9160

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|
| FIN1
| 9123
|M235 M221 M235 M221 T62 M482 M483 FIN 3
9146*--| |-----> 9161 9184
|SMRX SREVM |SMRX SREVM |SSTOPT|FIN2
|5690 5729 |5690 5729 |1420 |9145
|M3 |M4 |M5
*--| |-----*
|M3 |M4 |M5
|
X222 X1F8
*--| |-----*
|DM02.N|DEN.N
|
X223 |
*--| |-----*
|DM30.N
|
M531 M1002 M1000 M530 M1002 M1066 M483 M484 FIN 4
9162*--| |-----> 9185 9215
|M44FNM @NI/EL|@IN/NC|M43FNM @NI/EL|@5TH |FIN3
|4400 |11107 |4344 |9161
|Y17 M1002 |Y1F M1002 |
*--| |-----| |-*
|M44T.M @NI/EL |M43T.M @NI/EL|
|4373 |4339
|Y1F M1002 M1000 |M43 |
*--| |-----| |-*
|M43T.M @NI/EL |@IN/NC|M43 |
|4339 |11107 |
|M44 |M1071 |
*--| |-----*
|M44 |
|
M1071 |
*--| |-----*
|
M1066
*--| |-----*
|@5TH
|
M532 M1002 T92 T80 T113 T114 Y7 M2127
9186*--| |----->1
|M45FM1 @NI/EL|T5UCT |T5CLT |NCTUCC|NCTCLC|FCOLV | |
|4425 |4254 |4260 |4167 |4173 |4229 |4244 |
|M533 M1002 |M43 |M44 |M46 |M47 |M2048 |
*--| |----->2
|M45FM2 @NI/EL|M43 |M44 |M46 |M47 |@TID-S
|4435 | | | |11130 |
|M45 |M1066 |
*--| |-----*
|M45 |@5TH
|
T88 T88 M484 M485 FIN 5
1>*--| |-----> 9216 9220
|SPARE-|SPARE-|FIN4
|4310 |4310 |9185
|M43 |M44 |
2>*--| |----->
|M43 |M44 |
|
M485 M486 FIN 6
9217* [= K0 D60 ]-----> 9221 9246 9263 9285
|MFCNT FIN5
|7667 |9216
M571 M570 M573 M572 M593 M2043 F188 F194
9222*--| |-*--| |-*--| |-*--| |----->1
|PDCL |PDOP |PCLL |PUCL |PCSTP3|M125FN
| | | | |13208 |13264 |13171 |
|M64 |M65 |M68 |M69 |M585 |M125 |
*--| |----->2
|M64 |M65 |M68 |M69 |PCSEL |M125 |
|9880 |
|M597 |
*--| |-----*
|PDCA

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M1116 M4060 M486 M488 FIN 8
1>---|/|---|/|---|/|-----|< >* 9247 9264
|R2108.|MFIN FIN6
| 9090 9221
|M1180 |
2>---|/|---|/|---|/|-----|< >*
MFIN
9086
M437 M337 M547 M560 M820 M847 M487 FIN 7
9248*---|/|---|/|---|/|---|/|-----|< >* 9261 9266 9288
|MGRFIN|TFFIN |ATCMV |ATCFIN|T.MFIN|FITSRH
|2208 |1791 |4637 |4942 |4859 |1616
|M432 |M336 |M328 |M816 |
*---|/|---|/|---|/|-----|< >*
|MGRSEL TFSEL ATSEL T.MSEL
|2184 |1781 |1634 |1643
|M1016 M486 M487 M201 M316 M506 F14 F28 M480 FIN 0
9262*---|/|---|/|---|/|---|/|-----|< >* 9278 9269 9279 9316
|@P/C-1 FIN6 |FIN7 |MF AUX|MFMOP |TTOLRG |ILLEGL |IMPMLF
| 9221 | 9261 |566 |571 |1612 |1594 |8100
|M488 |M203 |M202 |
*---|/|---|/|---|/|-----|< >*
|FIN8 |TF AUX|SF AUX|
|9247 |633 |620 |
|M201 |M203 |
*---|/|---|/|---|/|-----|< >*
|MF AUX |TF AUX
|566 |633
|M480 |
*---|/|---|/|---|/|-----|< >*
|FIN0
|9278
|M480 M245 Y226 AUX.FUNC.FIN.1.N
9279*---|/|---|/|---|/|-----|< >* 9281
|FIN0 M02ME
|9278 9075
|M201 M486 M487 M433 M621 M622 X1F8 F36
9282*---|/|---|/|---|/|---|/|-----|< >* 1
|MF AUX|FIN6 |FIN7 |ATCOFF|PDOCDCX|PDCDCX|DEN.N PCHLD |
|566 |9221 |9261 |2197 |M570 |M571 |
*---|/|---|/|---|/|---|/|-----|< >*
|SF AUX|MF AUX TF AUX PDOP PDCL
|620 |566 633
|M203 |
*---|/|---|/|---|/|-----|< >*
|TF AUX
|633
M1118 PALLET CHNG HOLD T
1>---|/|---|/|---|/|-----|<T234 K600 >* 9303 9312 9341 9361
|@PHOFF
M1109 M279 PALLET PATO LIGHT
2>---|/|---|/|---|/|-----|< >* 9308 9343 9363
|@2PCPT
F36 PALLET CHNG HOLD T
9311*---|/|---|/|---|/|-----|<RST T234 >* 9303 9312 9341 9361
|PCHLD
X222 X1F8 M480 M245 M294 PRG.END MEMORY
9313*---|/|---|/|---|/|---|/|-----|< >* 9319 4017 5684 9317
|DM02.N|DEN.N FIN0 M02ME
| 9278 9075
|X223 |
*---|/|---|/|---|/|-----|< >*
|DM30.N
|M294
*---|/|---|/|---|/|-----|< >*
|PENDME
|9319
|X222 X1F8 M433 M480 M621 M622 M242 M240
9320*---|/|---|/|---|/|---|/|-----|< >* 1
|DM02.N|DEN.N ATCOFF FIN0 PDCDCX PDCDCX|FHDPCX|CSTPCX
| 2197 9278 |1158 |1069
|X223 |
*---|/|---|/|---|/|-----|< >*

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|DM30.N
|M247
*---|/|---|/|---|/|-----|< >*
|CFIN
|9339
|Y143 M433 M621 M622 M1046
*---|/|---|/|---|/|---|/|-----|< >*
|PROSLB ATCOFF PDCDCX PDCDCX @M00PT
|7638
|M241 X140 M300 M247 CYCLE FINISH
1>---|/|---|/|---|/|---|/|-----|< >* 9339 9327 9340 9360
|CSTLP RST.B AUTO |12689
|1216 644
|M247 X1F7 Y1C CYCLE FINISH LAMP
9340*---|/|---|/|---|/|---|/|-----|< >* 9349 12676
|CFIN |RWD.N
|9339
|T234
*---|/|---|/|---|/|-----|< >*
|PCHLDT
|9303
|M279 M1109
*---|/|---|/|---|/|-----|< >*
|PCPT @2PCPT
|9308
|M1181
*---|/|---|/|---|/|-----|< >*
|DNCPT
|M1178
*---|/|---|/|---|/|-----|< >*
|DNCNCF
|M1179
*---|/|---|/|---|/|-----|< >*
|DNCOFF
|M2015 M662
9350*---|/|---|/|---|/|---|/|-----|<[PLS M4500 >* 9353 9354 9357
|MN300 MD7
|10051 10142
|M4500 M4501 M4501
9354*---|/|---|/|---|/|---|/|-----|< >* 9359 7191 9355 9356
|9353 9359
|M4501 M4500
*---|/|---|/|---|/|-----|< >*
|9359 9353
|M247 X1F7 X1E P.CHANGE OFF TIMER
9360*---|/|---|/|---|/|---|/|-----|<T109 D256 >* 9375 9378
|CFIN |RWD.N
|9339
|T234 M1095 M4501 11270
*---|/|---|/|---|/|---|/|-----|< >*
|PCHLDT
|9303 9359
|M279 M1109
*---|/|---|/|---|/|-----|< >*
|PCPT @2PCPT
|9308
|M1181
*---|/|---|/|---|/|-----|< >*
|DNCPT
|M1178
*---|/|---|/|---|/|-----|< >*
|DNCNCF
|M1179
*---|/|---|/|---|/|-----|< >*
|DNCOFF
|T109 Y48D
9378*---|/|---|/|---|/|---|/|-----|< >* 9381 9380
|PCOFFT
|9375

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          M1196      AUX 4
9516* [= K2 D224 ]-----< >* 497 508 8968 8990
          9699                    9519 9534 9543 9556
                                9824 9831 9832 9839
                                9855 9848 9847 9840
                                9868 9864 9863 9856
                                12881 12845 11979 9869

M2027 M2020
9520*--|/|-----|*-----[MOV R2047 D360 ]* 9524 9541 9585
MGTIC P-TFIN
9712 1284

*-----[MOV R2063 D361 ]* 9527 9533 9550

* [= K0 R2062 ]-----[MOV K0 D361 ]* 9527 9533 9550

          9546

M1196
9534*--| |-----[MOV D215 R2048 ]* 9537
AUX4
497          9507
M986 M1199

9538*--| |-----[MOV D360 D216 ]* 9511 2242 2480 9436
TNoSMD AUX1
9430 476          9524          9542 9545 9576 9578
M1196

9543*--| |-----[MOV D216 R2062 ]* 9546 9530 9579 9733
AUX4
497          9511
M987 M1199

9547*--| |-----[MOV D361 D215 ]* 9507 9427 9536 9551
PKNoSM AUX1
9439 476          9527          9586 9589 9597
M3370

9552*--|/|-----< >* M1198      AUX 2
          483 506 8954 8988
          9554 9557 9581 10486
          10501 10522 10845 10857
          10863 10872 10954 10955
          10964 11974 11978 11983
          12693 12830 12846 12874
          12884 13389 13400 13406

M985 M1196 M1198
9555*--| |-----|*-----[+ R2000 R2170 D190 ]* 2482 2484 2486 2488
TEJPM D AUX4 AUX2
9421 497 483          286          9561 9563

*-----[/ D190 D16 D191 ]* 2490 9565
          MGMEMXT
          2482 11440

* [= K0 D192 ]-[MOV D16 D192 ]* 2497 2494 2500 9569
          MGMEMXT
          2497 11440

*-----[MOV D192 D216 ]* 9511 2242 2480 9436
          9542 9545 9576 9578
          2497          9616 9624

*-----[MOV D216 R2062 ]* 9546 9530 9579 9733
          9736 9739
          9511

M985 M1198 M1199
9580*--| |-----|*-----[MOV D360 D215 ]* 9507 9427 9536 9551
TEJPM D AUX2 AUX1
9421 483 476          9524          9586 9589 9597
M987

*-----*

PKNoSM
9439
M1199

9587*--| |-----[BCD D215 D218 ]* 9590 9592 9603
AUX1
476          9507

*-----[WAND D218 HF D219 ]* 9594 9600 9659

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```

          9590

9595* [= K0 D215 ]-----[MOV HF D219 ]* 9594 9600 9659
          9507

M1199
9601*--| |-----|*-----[MOV D218 D220 ]* 9604 9606 9610 9613
AUX1
476          9590

*-----[SFR D220 K4 ]* 9604 9606 9610 9613
          9645

9608* [= K0 D220 ]-----[MOV HF D220 ]* 9604 9606 9610 9613
          9604
          9645

M1199
9614*--| |-----|*-----[BCD D216 D221 ]* 9617 9619 9630
AUX1
476          9511

*-----[WAND D221 HF D222 ]* 9621 9627 9687
          9617

9622* [= K0 D216 ]-----[MOV HF D222 ]* 9621 9627 9687
          9511

M1199
9628*--| |-----|*-----[MOV D221 D223 ]* 9631 9633 9637 9640
AUX1
476          9617

*-----[SFR D223 H4 ]* 9631 9633 9637 9640
          9673

9635* [= K0 D223 ]-----[MOV HF D223 ]* 9631 9633 9637 9640
          9631

9641* [= K1 D224 ]-----[MOV D220 D225 ]* 9646 9660 9674 9688
          9699          9604
          9708

9647* [= K2 D224 ]-----[RST Y38 ]* 9650 9654
          9699

TOOL NO. DATA 2-1
9651* [= K3 D224 ]-----[SET Y38 ]* 9650 9654
          9699

TOOL NO. DATA 2-1

9655* [= K4 D224 ]-----[MOV D219 D225 ]* 9646 9660 9674 9688
          9699          9594
          9708

TOOL NO. DATA 2-0
9661* [= K5 D224 ]-----[RST Y39 ]* 9664 9668
          9699

TOOL NO. DATA 2-0

9665* [= K6 D224 ]-----[SET Y39 ]* 9664 9668
          9699

9669* [= K7 D224 ]-----[MOV D223 D225 ]* 9646 9660 9674 9688
          9699          9631
          9708

POCKET NO. DATA2-1
9675* [= K8 D224 ]-----[RST Y3A ]* 9678 9682

POCKET NO. DATA2-1
9679* [= K9 D224 ]-----[SET Y3A ]* 9678 9682
          9699

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9683* [= K10 D224 ]-----[MOV D222 D225 ]* 9646 9660 9674 9688
      9699                      9621
      POCKET NO. DATA2-0
9689* [= K11 D224 ]-----[RST Y3B ]* 9692 9696
      9699
      POCKET NO. DATA2-0
9693* [= K12 D224 ]-----[SET Y3B ]* 9692 9696
      9699
Y6
9697* --| |-----[INC D224 ]* 9699 9514 9518 9643
PWON.M | |
160 | |
      9649 9653 9657 9663
      9667 9671 9677 9681
      9702 9695 9691 9685
      9705

9700* [< K12 D224 ]-----[MOV K1 D224 ]* 9699 9514 9518 9643
      9699
      9649 9653 9657 9663
      9667 9671 9677 9681
      9702 9695 9691 9685
      9705

Y6
9706* --| |-----[MOV D225 K1 Y3C ]* 9709
PWON.M | |
160 | |
M2021 | |
M2027 | |
      9646 M2027 MG TOOL ITF CHK
9710* --| |-----< >* 9712 9520 9713 9717
TCPM | |
1333 | |
M2022 | |
*--| |-----*
TUPPM | |
1334 | |
M2027 | |
9713* --| |-----[MOV D8 R2059 ]* 9716 1340 1446 9721
MGTIC | |
9712 | |
M2027 | |
      MGPOSI 137
9717* --| |-----[+ D8 K1 R2059 ]* 9716 1340 1446 9721
MGTIC | |
9712 | |
      MGPOSI 137
      * [< D16 R2059 ]-----[MOV K1 R2059 ]* 9716 1340 1446 9721
      MGMTX 11440 9716
      *-----[- D8 K1 R2062 ]* 9546 9530 9579 9733
      MGPOSI 137
      * [ > K1 R2062 ]-----[MOV D16 R2062 ]* 9546 9530 9579 9733
      MGMTX 11440
      9546

Y6
9740* --| |-----[MOV R1999 R2051 ]* 9743
PWON.M | |
160 | |
      199 M2026 RESET MEM
9744* --| |-----< >* 9749 1329 9745
M200 M2027
M2026 M2025
*--| |-----*
RSTME TSPM
9749 1335
Y6
9750* --| |-----[WOR R7002 H600 R7002 ]* 222 220 1269 1271
PWON.M | |
160 | |
      222
      *-----[MOV K0 R7005 ]* 9757 4616 4622

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*-----[DMOV K0 R7006 ]* 9761 1259 1535 4992
13023 13053 13079 13092
13094 13109 13135 13148
13150

M1119
9762* --| |-----[CALL P131 ]*13578 9764
@TIMER

9765*-----[FEND]*

P11 Y6
9766* --| |-----[DECO D20 D600 K8 ]* 9769 9773 9799 9820
PWON.M | |
160 | |
      MCODE 638
Y6
9771* --| |-----[DOR D600 D620 ]* 9774 9873 9898
PWON.M | |
160 | |
      9769
      *-----[DOR D602 D622 ]* 9777 9876 9902
      9802
      *-----[DOR D604 D624 ]* 9780 9879 9906
      9805
      *-----[DOR D606 D626 ]* 9783 9882 9910
      9808
      *-----[DOR D608 D628 ]* 9786 9885 9914
      9811
      *-----[DOR D610 D630 ]* 9789 9888 9918
      9814
      *-----[DOR D612 D632 ]* 9792 9891 9922
      9817

Y6
9793* --| |-----[CALL P12 ]* 9871 9795 9925
PWON.M | |
160 | |
Y6
9796* --| |-----[DAND D660 D600 ]* 9769 9773 9799 9820
PWON.M | |
160 | |
      11595
      *-----[DAND D662 D602 ]* 9802 9776 9827
      11599
      *-----[DAND D664 D604 ]* 9805 9779 9835
      11603
      *-----[DAND D666 D606 ]* 9808 9782 9843
      11607
      *-----[DAND D668 D608 ]* 9811 9785 9851
      11611
      *-----[DAND D670 D610 ]* 9814 9788 9859
      11615

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```

-----[DAND D672 D612 ]* 9817 9791 9867
          11619
          M1196
9818* [= K0 D600 ]- [= K0 D601 ]-----< >* 497 508 8968 8990
          9769
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9825* [= K0 D602 ]- [= K0 D603 ]---| |-----< >* 497 508 8968 8990
          9802
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9833* [= K0 D604 ]- [= K0 D605 ]---| |-----< >* 497 508 8968 8990
          9805
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9841* [= K0 D606 ]- [= K0 D607 ]---| |-----< >* 497 508 8968 8990
          9808
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9849* [= K0 D608 ]- [= K0 D609 ]---| |-----< >* 497 508 8968 8990
          9811
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9857* [= K0 D610 ]- [= K0 D611 ]---| |-----< >* 497 508 8968 8990
          9814
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
          M1196 M1196 AUX 4
9865* [= K0 D612 ]---| |-----< >* 497 508 8968 8990
          9817
          AUX4
          497
          9519 9534 9543 9556
          9824 9831 9832 9839
          9855 9848 9847 9840
          9868 9864 9863 9856
          12881 12845 11979 9869
9870*-----[RET ]*
P12 Y6
9871*---| |-*-----[DMOV D620 K8 M0 ]* 9874 7628 9092
          PWON.M
          160
          9774
          K8 M32
          [DMOV D622 M32 ]* 9877
          9777
          K8 M64
          [DMOV D624 M64 ]* 9880 9125 9223 12119
          12140 12197 12216
          9780
          K8 M96
          [DMOV D626 M96 ]* 9883

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          9783
          K8 M128
          [DMOV D628 M128 ]* 9886
          9786
          K8 M160
          [DMOV D630 M160 ]* 9889 976 12233
          9789
          K2 M192
          [DMOV D632 M192 ]* 9892
          9792
9893*-----[RET ]*
P13 Y6
9894*---| |-*-----[DMOV K0 D620 ]* 9774 9873 9898
          PWON.M
          160
          [DMOV K0 D622 ]* 9777 9876 9902
          [DMOV K0 D624 ]* 9780 9879 9906
          [DMOV K0 D626 ]* 9783 9882 9910
          [DMOV K0 D628 ]* 9786 9885 9914
          [DMOV K0 D630 ]* 9789 9888 9918
          [DMOV K0 D632 ]* 9792 9891 9922
          Y6
9923*---| |-*-----[CALL P12 ]* 9871 9795 9925
          PWON.M
          160
          Y6
9926*---| |-*-----[MOV K0 D636 ]* 9929 11999 12000 12006
          PWON.M
          160
          [MOV K0 D637 ]* 9932
          [MOV K0 D60 ]* 7667 7641 8092 9219
          9935 12022 12028 12034
          12040 12046
9936*-----[RET ]*
P14
9937* [= K9 D20 ]-----[MOV K0 K2 M264 ]* 3977 4075 9942 9952
          MCODE
          638
          M132 MEMORY
9943* [= K9 D20 ]*-----[RST M272 ]* 3982 4146 9946 9992
          MCODE
          638
          [RST M275 ]* 3983 4037 4054 4065
          4074 4083 4101 4115
          4140 9947

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9948* [= K7 D20 ] M1048 M07 MEMORY
MCODE @MISTC -----[SET M264 ] * 3977 4075 9942 9952
638

9953* [= K8 D20 ] M08 MEMORY
MCODE -----[SET M265 ] * 9956 4066
638

9957* [= K50 D20 ] M1056 M50 MEMORY
MCODE @WABLS -----[SET M266 ] * 9961 4116
638

9962* [= K51 D20 ] M1049 M51 MEMORY
@THROG MCODE -----[SET M267 ] * 3997 2856 3984 4090
| M1050
*-- | |-*
| @OILH

9968* [= K52 D20 ] M1051 M52 MEMORY
MCODE @TAPC -----[SET M268 ] * 9972
638

9973* [= K53 D20 ] M1052 M53 MEMORY
@M53SL MCODE -----[SET M269 ] * 9978 4105
638

9979* [= K54 D20 ] M54 MEMORY
MCODE -----[SET M270 ] * 9982
638

9983* [= K130 D20 ] M1054 M130 MEMORY
MCODE @NIAGC -----[SET M271 ] * 9987 4132
638

9988* [= K132 D20 ] M1055 M132 MEMORY
MCODE @THAIR -----[SET M272 ] * 3982 4146 9946 9992
638

9993* [= K90 D20 ] K2 MIRROR IMAGE X NC
MCODE Y190 -----[MOV K0 ] * 3980 9998 10002
638

9999* [= K91 D20 ] MIRROR IMAGE X NC
MCODE Y190 -----[SET ] * 3980 9998 10002
638

10003* [= K92 D20 ] MIRROR IMAGE Y NC
MCODE Y191 -----[SET ] * 10006
638

10007* [= K93 D20 ] MIRROR IMAGE 4 NC
MCODE Y193 -----[SET ] * 10010
638

10011* -----[RET ] *

P16 M665 MENU NUMBER 3
10012* [= K3 D22 ] >*10015 7027 7085 7122
MENUNM 7152 7203 10155 10160
214 10168 10174 10210 10214
10225 10220

10016* [= K4 D22 ] M666 MENU NUMBER 4
MENUNM >*10019 312 6986 7118
214 7153 7204 7232 7253
7263 10156 10161 10169
10175

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10020* [= K6 D22 ] M667 MENU NUMBER 6
MENUNM >*10023 4464 7220 7247
214

10024* [= K93 D22 ] M1393 MN6 AUX (EIA:T.L.M)
MENUNM >*10039 4460
214

* [= K94 D22 ] *
MENUNM 214

* [= K95 D22 ] *
MENUNM 214

* [= K171 D22 ] *
MENUNM 214

* [= K236 D22 ] *
MENUNM 214

10040* [= K11 D22 ] M669 MENU NUMBER 11
MENUNM >*10043 6952 6996 7029
214 7083 7119 7150 7182
7209 7237 10233 10236
10252 10249 10244 10241
10268 10265 10260 10257
10284 10281 10276 10273
10300 10297 10292 10289

10044* [= K308 D22 ] M670 MENU NUMBER 308
MENUNM >*10047 6973 6974 7014
214 7112 7143 7144 7174
7175 8029 8038 8042
8059 8056

10048* [= K300 D22 ] M2015 MENU NUMBER 300
MENUNM >*10051 323 3179 7190
214 7256 7261 9350

10052* [= K310 D22 ] M671 MENU NUMBER 310
MENUNM >*10055 6956 7000 7035
214 7090 7127 7158 7185
7212 7239 10308 10319
10336 10329 10327 10321
10394 10347 10345 10338
10411 10405 10402 10397
10423 10420 10414

10056* [= K311 D22 ] M672 MENU NUMBER 311
MENUNM >*10059 6959 7003 7038
214 7093 7130 7161 7188
7215 7240 7277 8354
10365 10357 10354 10314
10385 10377 10374 10368
10440 10432 10429 10388
10460 10452 10449 10443
10463

10060* [= K305 D22 ] M673 MENU NUMBER 305
MENUNM >*10063 2244 2531 2708
214 2731 2916 2922 2928
2934 3022 3066 3087
5547 5532 3906 3896
7108 7048 7005 6961
7226 7197 7170 7139
12927 12906 7274 7243
12937

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10064* [= K302 D22 ]-----< M1410 |
      MENUUM |
      214     | >*10067
10068* [= K306 D22 ]-----< M1411 |
      MENUUM |
      214     | >*10071
10072* [= K303 D22 ]-----< M674 | MENU NUMBER 303
      MENUUM |
      214     | >*10075
10076* [= K304 D22 ]-----< M675 | MENU NUMBER 304
      MENUUM |
      214     | >*10079 6967 10468 10471
10080* [= K301 D22 ]-----< M676 | MENU NUMBER 301
      MENUUM |
      214     | >*10083 2254 2263 2267
      |      2530 2845 5529 6638
      |      6962 7006 7041 7099
      |      7225 7196 7164 7133
      |      12936 12926 12907
10084* [= K302 D22 ]-----< M1396 | MENU NUMBER 302
      MENUUM |
      214     | >*10087 2875 2880 2885
      |      2890 2894 2898 2903
      |      3023 3067 3069 3088
      |      6643 5530 3905 3895
      |      7107 7049 7010 6969
      |      7230 7201 7171 7140
      |      8748 7269 7244
10088* [= K307 D22 ]-----< M677 | MENU NUMBER 307
      MENUUM |
      214     | >*10091 6945 6987 7251
      |      7694
10092* [= K221 D22 ]-----< M1402 | MENU NUMBER 221
      MENUUM |
      214     | >*10095 5559 6227
10096* [= K309 D22 ]-----< M679 |
      MENUUM |
      214     | >*10099 6979
10100* [= K5 D22 ]-----< M678 | MENU NUMBER 5
      MENUUM |
      214     | >*10103 6949 6992 7031
      |      7086 7123 7154 7205
      |      10157 10162 10170 10176
      |      10195 10192 10186 10182
      |      10215 10211 10204 10200
      |      10226 10221
10104* [= K275 D22 ]- [< K0 R2152 ]-----> 1
      MENUUM |
      214     |
1>--- [< K0 R2153 ]-----< M2060 | MENU NO. 275
      |      >*10113 6123 6130 6244
      |      6251 6517 6524
10114*----- [RET ]*
P15
10115* [= H10 D21 ]-----< M656 | MENU DATA 1
      MENUDA |
      208     | >*10118 2246 2256 2876
      |      6516 6639 6644 8030
      |      10201 10205 10234 10237
      |      10356 10353 10322 10318
      |      10472 10469
10119* [= H11 D21 ]-----< M657 | MENU DATA 2
      MENUDA |
      208     | >*10122 2250 2260 2881
      |      6523 6640 6645 8039
      |      10193 10196 10242 10245
      |      10431 10428 10396 10393

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10123* [= H12 D21 ]-----< M658 | MENU DATA 3
      MENUDA |
      208     | >*10126 2264 2702 2725
      |      2886 2935 6243 6646
      |      10183 10187 10250 10253
      |      10367 10364 10330 10326
10127* [= H13 D21 ]-----< M659 | MENU DATA 4
      MENUDA |
      208     | >*10130 2269 2703 2726
      |      2891 2929 6250 6647
      |      8043 10212 10216 10258
      |      10439 10404 10401 10261
      |      10442
10131* [= H14 D21 ]-----< M660 | MENU DATA 5
      MENUDA |
      208     | >*10134 2272 2704 2727
      |      2895 2923 6122 8057
      |      10222 10227 10266 10269
      |      10376 10373 10339 10335
10135* [= H15 D21 ]-----< M661 | MENU DATA 6
      MENUDA |
      208     | >*10138 2276 2705 2728
      |      2899 2917 6129 8060
      |      10171 10177 10274 10277
      |      10451 10448 10413 10410
10139* [= H16 D21 ]-----< M662 | MENU DATA 7
      MENUDA |
      208     | >*10142 2706 2729 2908
      |      4466 9351 10158 10163
      |      10282 10285 10344 10348
      |      12928 12905 10387 10384
10143* [= H17 D21 ]-----< M663 | MENU DATA 8
      MENUDA |
      208     | >*10146 317 2707 2730
      |      2912 10290 10293 10419
      |      10422 10459 10462 12938
10147* [= H18 D21 ]-----< M664 | MENU DATA 9
      MENUDA |
      208     | >*10150 321 3178 3897
      |      5560 6228 7241 7695
      |      10298 10301 10307 10313
10151* [= H1B D21 ]-----< M2013 | MENU DATA 10
      MENUDA |
      208     | >*10154 314 324 2905
      |      5533 8353
10155*--| |*--| |---|/|-----* M665 M662 M680 M680 | WORK LIGHT ON
      |MN3 |MD7 |WKLON | | >*10166 7206 10159 10164
      |10015 |10142 10166 | | | |
      |M666 | | | |
      |*--| |* | | |
      |MN4 | | | |
      |10019 | | | |
      |M678 | | | |
      |*--| |* | | |
      |MN5 | | | |
      |10103 | | | |
      |M665 M666 M678 M680 |
      |*--|/|---|/|---|/|---|*--| |*
      |MN3 MN4 MN5 |WKLON | | |
      |10015 10019 10103 |10166 |
      |M662 | | | |
      |*--|/|---|*
      |MD7 | | | |
      |10142 | | | |
      |M665 M661 M681 X156 | M681 | MACHINE LOCK ON
10168*--| |*--| |---|/|---| |*--| |* >*10181 4563 4574 4576
      |MN3 |MD6 |MALKON MF1.B | |
      |10015 |10138 10181 | |

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|M660 |
*--|/|-*
|MD5
|10134
M669 M661 Y244 Y244 BLOCK DELETE 6 NC
10273*--| |----| |----|/|-*-----< >*10280 7023 7151 10275
|M669 M661 Y244 |
|MN11 MD6 BDT6.N |
|10043 10138 10280 |
|M669 Y244 |
*--|/|-*--| |----| |----|/|-*-----<
|M661 |
*--|/|-*
|MD6
|10138
M669 M662 Y245 Y245 BLOCK DELETE 7 NC
10281*--| |----| |----|/|-*-----< >*10288 7024 7183 10283
|M669 M662 Y245 |
|MN11 MD7 BDT7.N |
|10043 10142 10288 |
|M669 Y245 |
*--|/|-*--| |----| |----|/|-*-----<
|M662 |
*--|/|-*
|MD7
|10142
M669 M663 Y246 Y246 BLOCK DELETE 8 NC
10289*--| |----| |----|/|-*-----< >*10296 7025 7210 10291
|M669 M663 Y246 |
|MN11 MD8 BDT8.N |
|10043 10146 10296 |
|M669 Y246 |
*--|/|-*--| |----| |----|/|-*-----<
|M663 |
*--|/|-*
|MD8
|10146
M669 M664 Y247 Y247 BLOCK DELETE 9 NC
10297*--| |----| |----|/|-*-----< >*10304 7026 7238 10299
|M669 M664 Y247 |
|MN11 MD9 BDT9.N |
|10043 10150 10304 |
|M669 Y247 |
*--|/|-*--| |----| |----|/|-*-----<
|M664 |
*--|/|-*
|MD9
|10150
M1020 M446 K2 FLOOD COOLANT AUTO
10305*--| |----| |----|/|-*-----< [MOV HFF M720 ]*10312 4067 6955 10317
|@COATO MAP |
|438 |
|M664 M671 |
*--| |----| |----|/|-*-----<
|MD9 MN310
|10150 10055 K2 FLOOD COOLANT AUTO
10313*--| |----| |----|/|-*-----< [MOV H0 M720 ]*10312 4067 6955 10317
|M664 M672 |
|MD9 MN311 |
|10150 10059 |
|M656 M671 M720 M720 FLOOD COOLANT AUTO
10318*--| |----| |----|/|-*-----< >*10312 4067 6955 10317
|MD1 MN310 FDCCOAT |
|10118 10055 10312 |
|M671 M720 |
*--|/|-*--| |----| |----|/|-*-----<
|M656 |
*--|/|-*
|MN310 FDCCOAT
|10055 10312
|M656 |
*--|/|-*
|MD1
|10118
M658 M671 M721 M1054 M721 NIAGARA COOL.AUTO
10326*--| |----| |----|/|-*--| |----|/|-*-----< >*10334 4133 7034 10328

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|MD3 MN310 NGRCAT @NIAGC |10331
|10126 10055 10334 |
|M671 M721 |
*--|/|-*--| |----| |----|/|-*-----<
|M658 |
*--|/|-*
|MD3
|10126
M660 M671 M722 M1048 M722 MIST COOLANT AUTO
10335*--| |----| |----|/|-*--| |----|/|-*-----< >*10343 4076 7126 10337
|M660 M671 M722 M1048 |
|MD5 MN310 MISCAT @MISTC |
|10134 10055 10343 |
|M671 M722 |
*--|/|-*--| |----| |----|/|-*-----<
|M660 M671 M722 M1048 |
|MD5 MISCAT |
|10055 10343 |
|M660 |
*--|/|-*
|MD5
|10134
M662 M671 M723 M1056 M723 AIR BLAST AUTO
10344*--| |----| |----|/|-*--| |----|/|-*-----< >*10352 4117 7184 10346
|M662 M671 M723 M1056 |
|MD7 MN310 AIRBAT @WABLS |
|10142 10055 10352 |
|M671 M723 |
*--|/|-*--| |----| |----|/|-*-----<
|M660 M671 M723 M1056 |
|MD7 MN310 AIRBAT |
|10055 10352 |
|M662 |
*--|/|-*
|MD7
|10142
M656 M672 M724 M1049 M724 THROUGH COOL.AUTO
10353*--| |----| |----|/|-*--| |----|/|-*-----< >*10363 4091 6958 10355
|M656 M672 M724 M1049 |
|MD1 MN311 THRCAT @THROG |
|10118 10059 10363 |
|M656 M724 M1050 |
*--|/|-*--| |----| |----|/|-*-----<
|MD1 THRCAT @OILH |
|10118 10363 |
|M672 |
*--|/|-*
|MN311
|10059
M658 M672 M725 M1051 M725 TAP COOLANT AUTO
10364*--| |----| |----|/|-*--| |----|/|-*-----< >*10372 7037 10366 10369
|M658 M672 M725 M1051 |
|MD3 MN311 TAPCAT @TAPC |
|10126 10059 10372 |
|M658 M725 |
*--|/|-*--| |----| |----|/|-*-----<
|MD3 TAPCAT |
|10126 10372 |
|M672 |
*--|/|-*
|MN311
|10059
M660 M672 M726 M1052 M726 COVER COOLANT AUTO
10373*--| |----| |----|/|-*--| |----|/|-*-----< >*10383 4106 7129 10375
|M660 M672 M726 M1052 |
|MD5 MN311 COVCAT @M53SL |
|10134 10059 10383 |
|M660 M726 M1087 |
*--|/|-*--| |----| |----|/|-*-----<
|MD5 COVCAT @COVCL |
|10134 10383 |
|M672 |
*--|/|-*
|MN311
|10059
M662 M672 M727 M1055 M727 THROUGH AIR AUTO
10384*--| |----| |----|/|-*--| |----|/|-*-----< >*10392 4147 7187 10386
|M662 M672 M727 M1055 |
|MD7 MN311 THRAAT @THAIR |
|10142 10059 10392 |
|M662 M727 |
*--|/|-*--| |----| |----|/|-*-----<
|MD7 THRAAT |
|10142 10392 |

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M672 |
*--|/|-*
MN311 |
10059 |
M657 M671 M712 M712 FLOOD COOLANT ON
10393*--| |----| |----|/|-*-----< >*10400 4068 6999 10395
|MD2 MN310 FDCON |
|10122 10055 10400 |
|M657 M712 |
*--|/|-*--| |----|
|MD2 FDCON |
|10122 10400 |
|M671 |
*--|/|-*
MN310 |
10055 |
M659 M671 M713 M1054 M713 NIAGARA COOLANT ON
10401*--| |----| |----|/|-*--| |----|-----< >*10409 4134 7089 10403
|MD4 MN310 NGRCON@NIAGC |
|10130 10055 10409 |
|M659 M713 |
*--|/|-*--| |----|
|MD4 NGRCON |
|10130 10409 |
|M671 |
*--|/|-*
MN310 |
10055 |
M661 M671 M714 M1048 M714 MIST COOLANT ON
10410*--| |----| |----|/|-*--| |----|-----< >*10418 4077 7157 10412
|MD6 MN310 MISCON@MISTC |
|10138 10055 10418 |
|M661 M714 |
*--|/|-*--| |----|
|MD6 MISCON |
|10138 10418 |
|M671 |
*--|/|-*
MN310 |
10055 |
M663 M671 M715 M1056 M715 AIR BLAST ON
10419*--| |----| |----|/|-*--| |----|-----< >*10427 4118 7211 10421
|MD8 MN310 AIRBON@WABLS |
|10146 10055 10427 |
|M663 M715 |
*--|/|-*--| |----|
|MD8 AIRBON |
|10146 10427 |
|M671 |
*--|/|-*
MN310 |
10055 |
M657 M672 M716 M1049 M716 THROUGH COOLANT ON
10428*--| |----| |----|/|-*--| |----|-----< >* 3999 3985 4092 7002
|MD2 MN311 THRCON@THROG |
|10122 10059 3999 |
|M657 M716 M1050 |
*--|/|-*--| |----| |----|
|MD2 THRCON @OILH |
|10122 3999 |
|M672 |
*--|/|-*
MN311 |
10059 |
M659 M672 M717 M1051 M717 TAP COOLANT ON
10439*--| |----| |----|/|-*--| |----|-----< >*10447 7092 10441 10444
|MD4 MN311 TAPCON@TAPC |
|10130 10059 10447 |
|M659 M717 |
*--|/|-*--| |----|
|MD4 TAPCON |
|10130 10447 |
|M672 |
*--|/|-*
MN311 |
10059 |
M661 M672 M718 M1052 M718 COVER COOLANT ON
10448*--| |----| |----|/|-*--| |----|-----< >*10458 4108 7160 10450

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MD6 MN311 COVVON@M53SL | 10453
|10138 10059 10458 |
|M661 M718 M1087 |
*--|/|-*--| |----| |----|
|MD6 COVVON @COVCL |
|10138 10458 |
|M672 |
*--|/|-*
MN311 |
10059 |
M663 M672 M719 M1055 M719 THROUGH AIR ON
10459*--| |----| |----|/|-*--| |----|-----< >*10467 4148 7214 10461
|MD8 MN311 THRAIO@THAIR |
|10146 10059 10467 |
|M663 M719 |
*--|/|-*--| |----|
|MD8 THRAIO |
|10146 10467 |
|M672 |
*--|/|-*
MN311 |
10059 |
M675 M656 L11 L11 P.DOOR CANCEL MEM.
10468*--| |----| |----|/|-*--| |----|-----< >*10475 6966 10470 10473
|MN304 MD1 PDCAME |
|10079 10118 10475 |
|M675 L11 |
*--|/|-*--| |----|
|MN304 PDCAME |
|10079 10475 |
|M656 |
*--|/|-*
MD1 |
10118 |
10476*-----[RET ]*
P17
10477*[D< K0 R6258 ]-----< M1199 AUX 1
>* 476 505 568 4481
| 4484 5051 5054 5068
| 8947 8987 9515 9539
| 9601 9587 9583 9548
| 10494 10481 9628 9614
| 10897 10886 10885 10515
| 10940 10932 10919 10905
| 11965 11025 11016 10963
| 12049 12048 11980 11977
| 12098 12089 12062 12050
| 12158 12133 12122 12118
| 12225 12188 12179 12169
| 12831 12826 12696 12235
| 13418 13362 12882 12868
M1198 AUX 2
10482*[D< K0 R6260 ]-----< >* 483 506 8954 8988
| 9554 9557 9581 10486
| 10501 10522 10845 10857
| 10955 10954 10872 10863
| 11983 11978 11974 10964
| 12874 12846 12830 12693
| 13406 13400 13389 12884
M1197 AUX 3
10487*[D< K0 R6262 ]-----< >* 490 507 8961 8989
| 10491 10508 10529 12691
| 12840 12863 12875 13500
| 13518 13507 13502
Y6 M1199 ZP2 X(MM/INCH)
10492*--| |----| |----|/|-*--| |----|-----[D+ R6258 K1 D130 ]*10499 10520 10537 10543
|PWON.M|AUX1 |
|160 476 |
| |M1198 |
*--|/|-*--| |----|-----[D+ R6260 K1 D132 ]*10506 3538 8010 10527
|AUX2 |
|483 |

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-----[DMOV H200] D1012 ] * 3553 10660 10674 10792
M546 M589 M1359
10661 *--| |---| |*--| |-----[DOR H1] D1004 ] * 3532 10634 10645 10668
|ATCMVP |PCMVX |R2202X
|4639 |4593 |M1359
| | |*--|/|*-----[DMOV H200] D1012 ] * 3553 10660 10674 10792
| | |R2202X|
| | |4593 |
| | |*-----[DMOV H1] D1020 ] * 3581 10656 10678 10788
| | |*-----[DMOV D130 D1018 ] * 3585 10681 10795
| | |ZP2X/
| | |10499
M556
10784 *--| |*-----[DMOV HD1] D1020 ] * 3581 10656 10678 10788
|PCMVX |
|4653 |
| | |*-----[DMOV HC0] D1012 ] * 3553 10660 10674 10792
| | |*-----[DMOV D130 D1018 ] * 3585 10681 10795
| | |ZP2X/
| | |10499
| | |*-----[DMOV D132 D1016 ] * 3589 10798
| | |ZP2Y/
| | |10506
| | |*-----[DMOV D134 D1014 ] * 3593 10801
| | |ZP2Z/
| | |10513
| | |*-----[DMOV D134 D1006 ] * 3572 10591 10804
| | |ZP2Z/
| | |10513
|M1031
| | |*--|/|-----[DMOV K1] D1022 ] * 3506 4902 4909 10630
| | |@PCMSL |
|M1031
| | |*--| |-----[DMOV K2] D1022 ] * 3506 4902 4909 10630
| | |@PCMSL |
10817 *-----[RET ] *
P18 Y6 M383
10818 *--| |*--| |-----[MOV D7 D13 ] *10823 10828 10865 10868
|PWON.M |TSESTP |MGSELT
|160 |2623 |2475
| |M823 |
| | |*--| |-----[MOV D193 D13 ] *10823 10828 10865 10868
| | |MTSSTP |
| | |2632 | 2501
| | |*-----[MOV K0 D11 ] *10832 10848 10860
| | |*-----[MOV D8 D12 ] *10835 10839 10843 10850
| | |MGPOSI
| | |137
P55 M383 M1198 AUX 2
10836 *--| |--[= D7 D12 ] *-----> *
|TSESTP |MGSELT D8-D7 |
|2623 |2475 |10835 |
|M823 |
| | |*--| |--[= D193 D12 ] *
| | |10964 11974 11978 11983

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|MTSSTP D8-D7
|2632 2501 10835
|Y6
10846 *--| |*-----[INC D11 ] *10832 10848 10860
|PWON.M |
|160 |
| | |*-----[INC D12 ] *10835 10839 10843 10850
| | |D8-D7
| | |10853 10856
10851 * [< D16 D12 ]-----[MOV K1 D12 ] *10835 10839 10843 10850
|MGMAXT D8-D7
|11440 10835
|M1198
10857 *--|/|> D14 D11 ]-----[CJ P55 ] *10836 10862
|AUX2 TMAX/2 D7-D8
|483 11466 10832
|M1198
10863 *--| |*-----[DEC D13 ] *10823 10828 10865 10868
|AUX2 |
|483 |
| | |*-----[MOV D16 D13 ] *10823 10828 10865 10868
| | |K1 D13 ]-----[MGMAXT
| | |MGDECP 10823 11440
| | |MG.DEC. POSITION
10872 *--|/|*-----[INC D13 ] *10823 10828 10865 10868
|M1198
|AUX2 |
|483 |
| | |*-----[MOV K1 D13 ] *10823 10828 10865 10868
| | |D16 D13 ]-----[MGMAXT
| | |MGDECP 10823 11440
| | |MG.DEC. POSITION
10881 *-----[RET ] *
P19 M1199
10882 * [= K0 D40 ]-----< *
|JS2INC
|10896 |
| | |AUX 1
| | |476 505 568 4481
| | |4484 5051 5054 5068
| | |8947 8987 9515 9539
| | |9601 9587 9583 9548
| | |10494 10481 9628 9614
| | |10897 10886 10885 10515
| | |10940 10932 10919 10905
| | |11965 11025 11016 10963
| | |12049 12048 11980 11977
| | |12098 12089 12062 12050
| | |12158 12133 12122 12118
| | |12225 12188 12179 12169
| | |12831 12826 12696 12235
| | |13418 13362 12882 12868
|M1199 M450
10886 *--| |----| |--[= K4 D47 ] *-----[MOV K1 D47 ] *10893 10890 10901 10904
|AUX1 JFUP JSINCH |
|476 6173 10893 |
| | |JOG STEP INCH
| | |10909 10912 10918 10922
| | |10926 10931 10936 10939
| | |10959 10953 10947 10944
| | |10978 10973 10970 10967
| | |10998 10991 10984
| | |JOG STEP 2 INCH
| | |*-----[MOV K1 D40 ] *10896 10884 10915 10928
| | |10950 10962 10975 10982
| | |10989 10996
| | |JOG STEP INCH
10897 *--| |----| |--[= K2 D47 ] *-----[MOV K4 D47 ] *10893 10890 10901 10904
|AUX1 JFUP JSINCH |
|476 6173 10893 |
| | |10909 10912 10918 10922
| | |10926 10931 10936 10939
| | |10959 10953 10947 10944
| | |10978 10973 10970 10967
| | |10998 10991 10984
|M1199 M450
10905 *--| |----| |--[= K0 D47 ] *-----[MOV K2 D47 ] *10893 10890 10901 10904
|AUX1 JFUP JSINCH |
|476 6173 10893 |
| | |10909 10912 10918 10922
| | |10926 10931 10936 10939

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10959 10953 10947 10944
10978 10973 10970 10967
10998 10991 10984
M1199 M450
JOG STEP INCH
10913* > K3 D40 ]*---|/|---| |-----[INC D47 ]*10893 10890 10901 10904
      JS2INC|AUX1 JFUP
      10896 476 6173
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10944 10947 10953 10959
      |10967 10970 10973 10978
      |10984 10991 10998
      JOG STEP 2 INCH
10923*--| |--[= K10 D47 ]*-----[INC D40 ]*10896 10884 10915 10928
      JFUP|JSINCH|
      6173|10893|
      |-----[MOV K1 D47 ]*10893 10890 10901 10904
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
      JOG STEP INCH
10932*--| |----| |--[= K2 D47 ]-----[MOV K0 D47 ]*10893 10890 10901 10904
      AUX1 JFDWN|JSINCH
      476 6182|10893
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
      JOG STEP INCH
10940*--| |----| |--[= K4 D47 ]-----[MOV K2 D47 ]*10893 10890 10901 10904
      AUX1 JFDWN|JSINCH
      476 6182|10893
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
M1198 AUX 2
10948* [= K1 D40 ]-[= K1 D47 ]-----< >* 483 506 8954 8988
      JS2INC|JSINCH
      10896|10893
      |9554 9557 9581 10486
      |10501 10522 10845 10857
      |10955 10954 10872 10863
      |11983 11978 11974 10964
      |12874 12846 12830 12693
      |13406 13400 13389 12884
      JOG STEP INCH
10955*--| |----| |---*-----[MOV K4 D47 ]*10893 10890 10901 10904
      AUX2 JFDWN|
      483 6182|
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
      JOG STEP 2 INCH
10963*--|/|----|/|----| |---*-----[DEC D47 ]*10893 10890 10901 10904
      AUX1 AUX2 JFDWN|
      476 483 6182|
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
      JOG STEP INCH
* [= K0 D47 ]*[MOV K9 D47 ]*10893 10890 10901 10904
      JSINCH|
      10893|
      |10909 10912 10918 10922
      |10926 10931 10936 10939
      |10959 10953 10947 10944
      |10978 10973 10970 10967
      |10998 10991 10984
      JOG STEP 2 INCH
*-----[DEC D40 ]*10896 10884 10915 10928

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10950 10962 10975 10982
10989 10996
      JOG 1/MIN DISP
10976*--| |-----[MOV D47 D38 ]*10979 6600 10986 10993
      PWON.M|JSINCH
      160|10893
      |11000 11003 11055 11062
      |11069 11076 11079
      |JOG 1/MIN DISP
10980* [= K1 D40 ]-----[* D47 K10 D38 ]*10979 6600 10986 10993
      JS2INC|JSINCH
      10896|10893
      |11000 11003 11055 11062
      |11069 11076 11079
      |JOG 1/MIN DISP
10987* [= K2 D40 ]-----[* D47 K100 D38 ]*10979 6600 10986 10993
      JS2INC|JSINCH
      10896|10893
      |11000 11003 11055 11062
      |11069 11076 11079
      |JOG 1/MIN DISP
10994* [= K3 D40 ]-----[* D47 K1000 D38 ]*10979 6600 10986 10993
      JS2INC|JSINCH
      10896|10893
      |11000 11003 11055 11062
      |11069 11076 11079
Y6
11001*--| |---*-----[D* D38 K254 D43 ]*11006 6234 11008 11011
      PWON.M|
      160|J1/MDI
      |10979
      |-----[D/ D43 K100 D43 ]*11006 6234 11008 11011
      |11006
11012*-----[RET ]*
P20 M1199 AUX 1
11013* > K1 D42 ]-----< >* 476 505 568 4481
      JS2MM|
      11030|
      |4484 5051 5054 5068
      |8947 8987 9515 9539
      |9601 9587 9583 9548
      |10494 10481 9628 9614
      |10897 10886 10885 10515
      |10940 10932 10919 10905
      |11965 11025 11016 10963
      |12049 12048 11980 11977
      |12098 12089 12062 12050
      |12158 12133 12122 12118
      |12225 12188 12179 12169
      |12831 12826 12696 12235
      |13418 13362 12882 12868
M451
11017*--| |---< K1 D41 ]*-----[- D41 K2 D41 ]*11024 11020 11022 11028
      JFDWN|JS1MM|
      6182|11024|JS1MM
      |11024|11024
      |M1199
      |---|/|---> K1 D41 ]--->1
      AUX1 JS1MM
      476 11024
      |JOG STEP 1MM
1>---*-----[DEC D42 ]*11030 11015 11037 11049
      |11052 11058 11065 11072
      |JOG STEP 2MM
*-----[MOV K18 D41 ]*11024 11020 11022 11028
      |11033 11039 11041 11044
      |11047 11054 11060 11067
      |11074
M450
11034*--| |---> K3 D42 ]*-----[+ D41 K2 D41 ]*11024 11020 11022 11028
      JFUP|JS2MM|
      6173|11030|JS1MM
      |11024|11024
      |* < K18 D41 ]----->1
      JS1MM
      11024
      |JOG STEP 1MM
1>---*-----[MOV K2 D41 ]*11024 11020 11022 11028
      |11033 11039 11041 11044
      |11047 11054 11060 11067

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|11074
|
|      JOG STEP 2MM
|-----[INC D42 ]*11030 11015 11037 11049
|11052 11058 11065 11072
|
|      JOG 1/MIN DISP
11050* [= K0 D42 ]-----[MOV D41 D38 ]*10979 6600 10986 10993
|      JS2MM JS1MM |11000 11003 11055 11062
|      11030 11024 |11069 11076 11079
|      JOG 1/MIN DISP
11056* [= K1 D42 ]-----[* D41 K10 D38 ]*10979 6600 10986 10993
|      JS2MM JS1MM |11000 11003 11055 11062
|      11030 11024 |11069 11076 11079
|      JOG 1/MIN DISP
11063* [= K2 D42 ]-----[* D41 K100 D38 ]*10979 6600 10986 10993
|      JS2MM JS1MM |11000 11003 11055 11062
|      11030 11024 |11069 11076 11079
|      JOG 1/MIN DISP
11070* [= K3 D42 ]-----[* D41 K1000 D38 ]*10979 6600 10986 10993
|      JS2MM JS1MM |11000 11003 11055 11062
|      11030 11024 |11069 11076 11079
|
|Y6
11077*--| |-----[DMOV D38 D43 ]*11006 6234 11008 11011
|PWON.M | J1/MDI |11080
|160 | 10979 |
|
11081*-----[RET ]*
|
P21 |Y6
11082*--| |-----[DMOV H3535374B R198 ]*11086
|PWON.M |
|160 |
|
|-----[DMOV H41544C30 R196 ]*11090
|
|Y6
11091*--| |-----[WAND R2130 HFF R2130 ]*11095 11093 11102
|PWON.M | 11095
|160 |
|
|-----[WAND R2926 HFF00 R2926 ]*11099 11097 11101 11103
|
| 11099
|-----[WOR R2926 R2130 R2926 ]*11099 11097 11101 11103
|
| 11099 11095
11104*--| |-----[DMOV R2100 K8 SQ.P.*INDEX/NCTABL
|PWON.M | M1000 ]*11107 4377 4384 4393
|160 | 5803 6789 6807 6810
|
| 6858 6876 7390 7455
| 8718 8250 7565 7481
| 12102 11583 9170 9167
| 12668 12287 12105
|
| K8 SQ.P.MMS USED
|-----[DMOV R2102 M1032 ]*11110
|
| K8 VTC-200C/300C PARM
|-----[DMOV R2104 M1064 ]*11113 684 695 718
| 748 891 893 904
| 908 913 918 923
| 7313 7278 932 928
| 7359 7356 7347 7343
| 7882 7862 7379 7363
| 11758 8577 8261 7915
| 12256 12250 12244 12238
| 12312 12267
|
| K4 SQ.P.TL.AT.ATC
|-----[MOV R2109 M1096 ]*11116

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|
|-----[MOV R2108 K4 SQ.P.DOOR INTLK 2
| M1112 ]*11119 2700 2720 2741
| 2751 2771 2779 5422
| 5612 5619 5654 6387
| 8206 8178 8109 6412
| 8243 8228 8212
|
|-----[DMOV R2106 K8 M1128 ]*11122
|
|-----[BMOV R2345 R2845 K55 ]*11125
|
|<= M2048 TOOL ID SERIAL PAR
11127* [BIT R2300 HE ]-----< >*11130 1480 1485 2569
| 4085 4087 4225 4227
| 4240 4242 9207 13160
| 13323 13197 13187 13176
| 13349
|
|Y6
11131*--| |-----[DMOV R2186 D140 ]*11134 7711
|PWON.M |
|160 |
|
|-----[DMOV R2188 D142 ]*11137 2865 11168 11171
|
|-----[MOV R2182 D158 ]*11140 4041
|
|-----[MOV H3F3F R156 ]*11143 11148 11153 11157
|
|M1114
|*--| |-----[MOV H3737 R156 ]*11143 11148 11153 11157
|@5500T
|M1066
|*--| |-----[MOV H282F R156 ]*11143 11148 11153 11157
|@5TH
|M1114
|*--| |-----[MOV H2027 R156 ]*11143 11148 11153 11157
|@5500T
|
| [> K2 D143 ]-----[MOV K3 D143 ]*11164 11161
|
| 11164
|
| [> K1 D142 ]-----[MOV K60 D142 ]*11137 2865 11168 11171
|
| 11137
|
|-----[MOV R2180 D170 ]*11175 13429
|
|Y6
11176*--| |-----[MOV D141 D146 ]* 8590 7716 8599 11179
|PWON.M |
|160 |
|Y6
11180*--| |-----[MOV R2183 D230 ]*11183 9029
|PWON.M |
|160 |
|
|-----[MOV R2184 D231 ]*11186
|

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*-----[MOV R2185 D159 ]*11189 7721
*-----[MOV R2181 D157 ]*11192
*-----[MOV R2134 D243 ]*11195 7874
DOOR LCK DLY
*-----[MOV R2176 D258 ]*11199
Y6
11196*--| |-*-----[DMOV R2178 D252 ]*11202
PWON.M
160
*-----[DMOV R2222 D246 ]*11206 11240
Y6
11203*--| |-*-----[DMOV R2224 D244 ]*11209 11226
PWON.M
160
*-----[MOV R2127 D330 ]*11212 6318 6321
M1271
11213*--| |-*-----[D* R2224 K100 D260 ]* 6615 6617 11218 11220
INCH
|11232 11234 11258 11260
*-----[D/ D260 K254 D264 ]* 6620 6622 11223 11225
|11237 11239 11263 11265
6615
*-----[DMOV D264 D244 ]*11209 11226
6620
M1271
11227*--| |-*-----[D* R2222 K100 D260 ]* 6615 6617 11218 11220
INCH
|11232 11234 11258 11260
*-----[D/ D260 K254 D264 ]* 6620 6622 11223 11225
|11237 11239 11263 11265
6615
*-----[DMOV D264 D246 ]*11206 11240
6620
Y6
11247*--| |-*-----[D+ R2224 K5000 D254 ]*11252 11255 11266
PWON.M
160
M1271
11253*--| |-*-----[D* D254 K100 D260 ]* 6615 6617 11218 11220
INCH
|11232 11234 11258 11260
11252
*-----[D/ D260 K254 D264 ]* 6620 6622 11223 11225
|11237 11239 11263 11265
6615
*-----[DMOV D264 D254 ]*11252 11255 11266
6620
Y6
11267*--| |-*-----[DMOV R2174 D256 ]*11270 9377
PWON.M
160
Y6
11271*--| |-*-----[MOV R2173 D144 ]*11274 6757

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PWON.M
160
*-----[MOV R2165 D145 ]*11277
*-----[MOV R2161 D310 ]*11280
Y6
11281*--| |-*-----[MOV R2171 D350 ]*11284 2370
PWON.M
160
P.HK/UHK CONF.TMR
*-----[MOV R2172 D351 ]*11287 6720
P.L.PIN I/O CF.TMR
Y6
11288*--| |-*-----[MOV R2164 D147 ]*11291 4145 4156
PWON.M
160
*-----[DMOV R2166 D270 ]*11294
*-----[DMOV R2168 D272 ]*11297
*-----[DMOV R2162 D312 ]*11300
*-----[DMOV R2158 D278 ]*11303 11310
* [= K0 R2158 ]-----[MOV K10 D278 ]*11303 11310
* [= K0 R2159 ]-----[MOV K10 D279 ]*11317
Y6
11318*--| |-*-----[MOV R2154 R4628 ]*11321 11337
PWON.M
160
*-----[MOV R2155 R4626 ]*11324 11340
*-----[MOV R2156 R4629 ]*11327 11347
*-----[MOV R2157 R4627 ]*11330 11350
11331*[D= K0 R2154 ]*-----[MOV K30 R4628 ]*11321 11337
*-----[MOV K80 R4626 ]*11324 11340
11341*[D= K0 R2156 ]*-----[MOV K40 R4629 ]*11327 11347
*-----[MOV K50 R4627 ]*11330 11350

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11351*Y6 |-----[DMOV R6152 D100 ]*11354 1018 6302 6305
      |PWON.M|
      |160 |
      |-----[DMOV R6154 D102 ]*11357 1024 6309 6312
      |-----[DMOV R6258 D106 ]*11360
      |-----[DMOV R6260 D108 ]*11363 11420
      |-----[DMOV R6262 D110 ]*11366 11425 11430
      |-----[DMOV R6222 D112 ]*11370 11883 11905
      |PWON.M|
      |160 |
      |-----[DMOV R6224 D114 ]*11373 3388 11908
      |-----[DMOV R6226 D116 ]*11376 11889 11911
      |-----[DMOV R6234 D118 ]*11379 3282 3308
      |-----[DMOV R6236 D120 ]*11382
      |-----[DMOV R6238 D122 ]*11385
      |-----[DMOV R6228 D138 ]*11388
      |-----[DMOV R6308 R6514 ]* 3325 3367 11404
      |-----[DMOV R6310 R6516 ]* 3328 3370 11407
      |-----[DMOV R6312 R6518 ]* 3331 3373 11410
      |-----[DMOV R6314 R6520 ]* 3334 3376 11413
      |-----[WOR R6901 H4 R6901 ]* 3338 3336 3378 3380
      |-----[WOR R6901 H4 R6901 ]* 3395 3397 11415 11417
      |-----[WOR R6901 H4 R6901 ]* 11899 11901 11921 11923
      |-----[D+ D108 K2000 D124 ]*11423 3320 3362 11886

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      |PWON.M|
      |160 |
      |-----[D+ D110 K2000 D126 ]*11428
      |-----[D- D110 K2000 D128 ]*11433
      |M1008 M1009 M1010 Y6
      |-----[MOV K30 D16 ]*11440 1683 2481 2489
      |@MGMT1 @MGMT2 @MGMT3 PWON.M
      |160 |
      |-----[MOV K24 D16 ]*11440 1683 2481 2489
      |PWON.M @MGMT1 @MGMT2 @MGMT3
      |160 |
      |-----[MOV K48 D16 ]*11440 1683 2481 2489
      |PWON.M @MGMT1 @MGMT2 @MGMT3
      |160 |
      |-----[MOV K60 D16 ]*11440 1683 2481 2489
      |@MGMT1 @MGMT2 @MGMT3 PWON.M
      |160 |
      |-----[D16 K2 D14 ]*11466 10859
      |PWON.M|
      |160 |
      |-----[MOV D16 D84 ]*11469 1597 1608 13343
      |MGMAXT
      |11440 |
      |-----[DMOV H31 R2928 ]*11474
      |PWON.M|
      |160 |
      |-----[DMOV H41 R2930 ]*11478
      |-----[DMOV H10301 R2924 ]*11482
      |-----[MOV K0 R1998 ]* 289 11485
      |-----[MOV K4 R116 ]*11488
      |-----[MOV K4 R117 ]*11491
      |Y6
      |-----[MOV H3 K1 ]*
      |PWON.M|
      |160 |
      |-----[MOV H3 K1 ]*
      |YIAC |
      |-----[*AUTO INT.+5 NC
      |-----[* 6818 6813 11495

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K1 | *AUTO INT.-5 NC
Y1B4 ] * 6819 11498

K1 | *MANUAL INT.+5 NC
Y1BC ] * 6820 6008 11501

K1 | *MANUAL INT.-5 NC
Y1C4 ] * 6821 6020 11504

K1 | *SERVO OFF 5 NC
Y18C ] * 6838 6817 6831 11507

K4 | *EXT.DEC.+X NC
H3F3F Y198 ] *11510

Y6
11511*--| |-*-----[DMOV D100 R2858 ] *11514
PWON.M SMXRPM
160 11354
*-----[DMOV D102 R2856 ] *11517
11357

M1271 11357 M455 INCH MODE INITIAL
11518*--| |-*-----[M455 >*11519 290 292 3280
INCH 3306 3311 6110 6185
6191 6605 6610 11520
12543 12438

M455 M1029
11520*--| |-*-----[D* R2376 K100 D74 ] *10540 10542 10548 10550
IMINIT @INCH 10556 10558 11526 11528
11519 11536 11538 11541 11543
12469 12460 12445 12443
12497 12482 12480 12472
12533 12524 12509 12506
12541 12539 12536

*-----[D/ D74 K254 R2876 ] *11531
10540

*-----[D* R2378 K100 D74 ] *10540 10542 10548 10550
10556 10558 11526 11528
11536 11538 11541 11543
12469 12460 12445 12443
12497 12482 12480 12472
12533 12524 12509 12506
12541 12539 12536

*-----[D/ D74 K254 D74 ] *10540 10542 10548 10550
10556 10558 11526 11528
11536 11538 11541 11543
12469 12460 12445 12443
12497 12482 12480 12472
12533 12524 12509 12506
12541 12539 12536

*-----[DMOV D74 R2878 ] *11544
10540

Y6
11545*--| |-*-----[SET Y2B9 ] * PC FEED RATE 2.N
PWON.M 291 11546
160

*-----[RST Y2B8 ] * PC FEED RATE 1.N
293 11547

Y6
11548*--| |-*-----[SET Y2A7 ] * FEED RATE SELECT.N
11549

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PWON.M
160

*-----[SET Y2AF ] * RAPID OVERRIDE S.N
11550

*-----[SET Y2B7 ] * JOG OVERRIDE SLE.N
11551

*-----[SET Y28F ] * SPINDLE OVER% NC
11552

Y6
11553*--| |-*-----[SET Y21B ] * BLOCK START INT.N
PWON.M 11554
160

*-----[SET Y21C ] * CUT START INT.N
Y6 4063 11555
PWON.M

11557*--| |-*-----[RST Y296 ] * SPINDLE ORIENT
PWON.M 11558
160

Y6
11559*--| |-*-----[* R2864 K10 D56 ] *11563 5170
PWON.M

*-----[RST M1269 ] * Z AXIS LOAD A/*D
160 11564

*-----[RST M1268 ] * SPINDLE LOAD A/*D
11565

Y6
11566*--| |-*-----[MOV K100 D34 ] * JOG FEED %
PWON.M 12358 12360 12364 12366
160 12368

*-----[MOV K100 D31 ] * SPINDLE %
12375 12377 12381 12383
12385

*-----[MOV K1 D36 ] * RAP.TR.STEP MANUAL
11575 6390 6394 6397 6572

Y6
11576*--| |-*-----[MOV K32 D0 ] * MODE
PWON.M 11579 11590 12242 12248
160 12254 12261 12265 12271
12277 12283 12296 12306
12331 12328 12323 12317
13463

M897 M475 M474 M473 M472
11580*--| |-*-----[MOV K2 D0 ] * MODE
ZP5ME ZP4ME ZPZME ZPYME ZPXME 11579 11590 12242 12248
301 297 12254 12261 12265 12271
M1066 M1000 12277 12283 12296 12306
*--| |-*----- 12317 12323 12328 12331
@5TH @IN/NC 13463
11107

Y6
11591*--| |-*-----[DMOV H418F837F D660 ] *11595 9798 11640 11642
PWON.M 11677 11679
160

*-----[DMOV H403FECE D662 ] *11599 9801 11622 11624

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-----[DMOV H3C0001F3 D664 ]*11603 9804 11628 11630
-----[DMOV HC201C000 D666 ]*11607 9807
-----[DMOV H7E201800 D668 ]*11611 9810 11667 11669
|11672 11674 11701 11703
-----[DMOV H607 D670 ]*11615 9813
-----[DMOV HF8 D672 ]*11619 9816

M1023
11620*--| |-----[WOR D662 H6 D662 ]*11599 9801 11622 11624
|@TMEAS
|11599
M1016
11625*--| |-----[WOR D664 H1F3 D664 ]*11603 9804 11628 11630
|@P/C-1
|11603
M1017
*--| |-----[MOV H7 D676 ]*11633 12013
|@P/C-2
|-----[WOR D663 H6000 D663 ]*11637 11635 11645 11647
|11651 11653 11656 11658
|11637
M1048
11638*--| |-----[WOR D660 H80 D660 ]*11595 9798 11640 11642
|@MISTC
|11595
M1056
11643*--| |-----[WOR D663 H4 D663 ]*11637 11635 11645 11647
|@WABLS
|11637
M1049
11648*--| |-----[WOR D663 H8 D663 ]*11637 11635 11645 11647
|@THROG
|11651 11653 11656 11658
|11637
M1050
*--| |-----
|@OILH
M1051
11654*--| |-----[WOR D663 H10 D663 ]*11637 11635 11645 11647
|@TAPC
|11637
M1052
11659*--| |-----[WOR D663 H20 D663 ]*11637 11635 11645 11647
|@M53SL
|11637
M1087
*--| |-----
|@COVCL
M1054
11665*--| |-----[WOR D668 H4 D668 ]*11611 9810 11667 11669
|@NIAGC
|11611
M1055
11670*--| |-----[WOR D668 H10 D668 ]*11611 9810 11667 11669
|@THAIR
|11611
M1068
11675*--| |-----[WOR D660 HC00 D660 ]*11595 9798 11640 11642
|@UN/CL
|11595
|-----[WOR D669 H8 D669 ]*11683 11681

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11683
11684* [BIT R2300 H1 ]*-----[WOR D667 H2000 D667 ]*11693 11691
<=
* [BIT R2300 HE ]*
11693
11694* [BIT R2300 H7 ]*-----[WOR D668 H7A0 D668 ]*11611 9810 11667 11669
|11672 11674 11701 11703
<=
* [BIT R2300 H8 ]*
11611
Y6
11704*--| |-----[MOV H20D R416 ]*11707 11710 11712 11715
|PWON.M
|160
|11717 11720 11722 11725
M1095
11708*--| |-----[WOR R416 H40 R416 ]*11707 11710 11712 11715
|11717 11720 11722 11725
|11727
M1116
11713*--| |-----[WOR R416 H10 R416 ]*11707 11710 11712 11715
|R2108.
|11707
|11717 11720 11722 11725
M1089
11718*--| |-----[WOR R416 H100 R416 ]*11707 11710 11712 11715
|PARTIN
|11707
|11717 11720 11722 11725
M1016
11723*--| |-----[WOR R416 H2 R416 ]*11707 11710 11712 11715
|@P/C-1
|11707
|11717 11720 11722 11725
*-----[MOV H1FF R419 ]*11730
*-----[MOV H1 R420 ]*11733
Y6
11734*--| |-----[MOV H2C3 R417 ]*11737 11743 11745
|PWON.M
|160
*-----[MOV H13F R418 ]*11740 11747 11749
M1094
11741*--| |-----[WOR R417 H38 R417 ]*11737 11743 11745
|11737
*-----[WOR R418 H2C0 R418 ]*11740 11747 11749
|11740
Y6
11750*--| |-----[MOV H103 R426 ]*11753 11772 11774 11777
|PWON.M
|160
|11779 11782 11784
*-----[MOV H100 R427 ]*11756 11760 11762 11788
|11790 11793 11795 11799
|11801 11804 11806
M1064
*--| |-----[WOR R427 H200 R427 ]*11756 11760 11762 11788
|200C/3
|11113
|11756
|11790 11793 11795 11799
|11801 11804 11806
*-----[MOV H3FF R421 ]*11766

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-----[MOV H100 R423 ]*11769
M1054
11770*--| |-----[WOR R426 HC R426 ]*11753 11772 11774 11777
@NIAGC |11779 11782 11784
11753
M1048
11775*--| |-----[WOR R426 H30 R426 ]*11753 11772 11774 11777
@MISTC |11779 11782 11784
11753
M1056
11780*--| |-----[WOR R426 HCO R426 ]*11753 11772 11774 11777
@WABLS |11779 11782 11784
11753
M1049
11785*--| |-----[WOR R427 H3 R427 ]*11756 11760 11762 11788
@THROG |11790 11793 11795 11799
11756 |11801 11804 11806
*--| |-----
@OILH
M1051
11791*--| |-----[WOR R427 HC R427 ]*11756 11760 11762 11788
@TAPC |11790 11793 11795 11799
11756 |11801 11804 11806
M1052
11796*--| |-----[WOR R427 H30 R427 ]*11756 11760 11762 11788
@M53SL |11790 11793 11795 11799
11756 |11801 11804 11806
M1087
*--| |-----
@COVCL
M1055
11802*--| |-----[WOR R427 HCO R427 ]*11756 11760 11762 11788
@THAIR |11790 11793 11795 11799
11756 |11801 11804 11806
11807*-----[RET ]*
P23 Y6
11812*--| |-----[DAND HFFFFFFF D640 ]* 8918 8943 11816 11858
PWON.M |
160 |
*-----[DAND HFFFFFFF D642 ]* 8921 8950 11820 11826
|11861 |
M1109
*--| |-----[DAND HFFFFFFF D642 ]* 8921 8950 11820 11826
@2PCPT |11861 |
*-----[DAND HFFFFFFF D644 ]* 8924 8957 11831 11864
*-----[DAND HFFFFFFF D646 ]* 8927 8964 11836 11867
*-----[DAND HFFFFFFF D648 ]* 8930 8971 11841 11870
*-----[DAND HFFFFFFF D650 ]* 8933 8978 11846 11873
*-----[WAND D652 HFF D176 ]*11851 11859 11862 11865
|11868 11871 11874 11878
8936
*-----[MOV K0 D177 ]*11855

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Y6
11856*--| |-----[DOR D640 D176 ]*11851 11859 11862 11865
PWON.M |11868 11871 11874 11878
160 |8918 |
*-----[DOR D642 D176 ]*11851 11859 11862 11865
|8921 |11868 11871 11874 11878
*-----[DOR D644 D176 ]*11851 11859 11862 11865
|8924 |11868 11871 11874 11878
*-----[DOR D646 D176 ]*11851 11859 11862 11865
|8927 |11868 11871 11874 11878
*-----[DOR D648 D176 ]*11851 11859 11862 11865
|8930 |11868 11871 11874 11878
*-----[DOR D650 D176 ]*11851 11859 11862 11865
|8933 |11868 11871 11874 11878
11875*[D= K0 D176 ]-----< >* M1192 AUX 8
|5371 2837 5378 5390
|9011 11879 12682 12699
|12703 12706 12792 12793
|12899 12880 12862 12804
|12903
11880*-----[RET ]*
P28 Y6
11881*--| |-----[MOV D112 R6500 ]* 3347 3356 11884 11906
PWON.M | +OTX
160 | 11370 |
*-----[DMOV D124 R6502 ]* 3321 3363 3389 11887
| ZP2Y+
| 11423 |11909 |
*-----[DMOV D116 R6504 ]*11890 11912
| +OTZ
| 11376 |
*-----[DMOV D111 R6506 ]*11893 11915
*-----[MOV R6230 R6508 ]*11896 11918
Y6
11897*--| |-----[WOR R6901 H2 R6901 ]* 3338 3336 3378 3380
PWON.M |3395 3397 11415 11417
160 |3338 |11899 11901 11921 11923
11902*-----[RET ]*
P29 Y6
11903*--| |-----[DMOV D112 R6500 ]* 3347 3356 11884 11906
PWON.M | +OTX
160 | 11370 |
*-----[DMOV D114 R6502 ]* 3321 3363 3389 11887
| +OTY
| 11373 |11909 |
*-----[DMOV D116 R6504 ]*11890 11912
| +OTZ
| 11376 |

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-----[DMOV D111 R6506 ]*11893 11915
-----[MOV R6230 R6508 ]*11896 11918
Y6
11919*--| |-----[WOR R6901 H2 R6901 ]* 3338 3336 3378 3380
PWON.M
160 3338 3395 3397 11415 11417
11899 11901 11921 11923
11924*-----[RET ]*
P30 Y6
11925*--| |-----[DMOV K0 R6450 ]*11929
PWON.M
160
-----[WOR R6900 H20 R6900 ]*11933 11931
11933
11934*-----[RET ]*
P31 X230 M CODE
11935*--| |-----[MOV R20 D20 ]* 638 659 666 673
MF1.N
9768 9939 9945 9950
9955 9959 9966 9970
9990 9985 9981 9977
10009 10005 10001 9995
11958 11950 11944 11938
11990 11973 11970 11964
12042 12036 12030 12024
-----[CALL P32 ]*11962 11940 11946 11952
11960
X231 M CODE
11941*--| |-----[MOV R22 D20 ]* 638 659 666 673
MF2.N
9768 9939 9945 9950
9955 9959 9966 9970
9990 9985 9981 9977
10009 10005 10001 9995
11958 11950 11944 11938
11990 11973 11970 11964
12042 12036 12030 12024
-----[CALL P32 ]*11962 11940 11946 11952
11960
X232 M CODE
11947*--| |-----[MOV R24 D20 ]* 638 659 666 673
MF3.N
9768 9939 9945 9950
9955 9959 9966 9970
9990 9985 9981 9977
10009 10005 10001 9995
11958 11950 11944 11938
11990 11973 11970 11964
12042 12036 12030 12024
-----[CALL P32 ]*11962 11940 11946 11952
11960
X233 M CODE
11955*--| |-----[MOV R26 D20 ]* 638 659 666 673

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MF4.N
9768 9939 9945 9950
9955 9959 9966 9970
9990 9985 9981 9977
10009 10005 10001 9995
11958 11950 11944 11938
11990 11973 11970 11964
12042 12036 12030 12024
-----[CALL P32 ]*11962 11940 11946 11952
11960
11961*-----[RET ]*
P32 M1199 AUX 1
11962*[> K200 D20 ]*-----< >* 476 505 568 4481
MCODE 638 4484 5051 5054 5068
8947 8987 9515 9539
9601 9587 9583 9548
10494 10481 9628 9614
10897 10886 10885 10515
10940 10932 10919 10905
11965 11025 11016 10963
12049 12048 11980 11977
12098 12089 12062 12050
12158 12133 12122 12118
12225 12188 12179 12169
12831 12826 12696 12235
13418 13362 12882 12868
-----[CALL P11 ]* 9766 11967
M1198 AUX 2
11968*[< K909 D20 ]-[> K915 D20 ]*-----< >* 483 506 8954 8988
MCODE 638 MCODE 638
9554 9557 9581 10486
10501 10522 10845 10857
10955 10954 10872 10863
11983 11978 11974 10964
12874 12846 12830 12693
13406 13400 13389 12884
-----[CALL P33 ]*11988 11976
M1199 M1198
11977*--| |----| |*-----[CALL P35 ]*12020 11986
AUX1 AUX2
476 483
M1196 M1199
*--| |----| |*
AUX4 AUX1
497 476
M1195 M1198
*--| |----| |*
AUX5 AUX2
504 483
11987*-----[RET ]*
P33 Y6
11988*--| |-----[- D20 K910 D618 ]*11992 11994
PWON.M
160 MCODE
638
-----[DECO D618 D616 K3 ]*11995 11998 12012 12014
12017
11992
-----[WOR D616 D636 D636 ]* 9929 11999 12000 12006
11995 9929

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-----[MOV M70 D638 ]*12003 12005 12007 12009
      K2
      M70
      12010
-----[WOR D638 D636 D638 ]*12003 12005 12007 12009
      12003 9929
-----[MOV D638 K2 M70 ]*12010 12002 12152 12168
      M70
      12003
-----[WAND D616 D676 D616 ]*11995 11998 12012 12014
      12017
      11995 11633
12015*=[ K0 D616 ]-----[RET ]*
      M1195
      AUX 5
      < * 504 509 8975 8991
      11982 12018 12688 12855
      11995 12864 12869
12019*-----[RET ]*
P35
12020*=[ K0 D60 ]-----[MOV D20 D61 ]*
      MFCNT MCODE
      7667 638
      EXT MF 1
      * 7670 7646 12025
12026*=[ K1 D60 ]-----[MOV D20 D62 ]*
      MFCNT MCODE
      7667 638
      EXT MF 2
      * 7673 7669 12031
12032*=[ K2 D60 ]-----[MOV D20 D63 ]*
      MFCNT MCODE
      7667 638
      EXT MF 3
      * 7676 7672 12037
12038*=[ K3 D60 ]-----[MOV D20 D64 ]*
      MFCNT MCODE
      7667 638
      EXT MF 4
      *12043 7675
12044*=[ Y6 ]-----[INC D60 ]*
      PWON.M
      160
      EXT.MF COUNT
      * 7667 7641 8092 9219
      9935 12022 12028 12034
      12040 12046
12047*-----[RET ]*
P36
12048*=[ M1199 ]-----[RST M1199 ]*
      AUX1
      476
      M1199
      *--|/|-*
      AUX1
      476
      AUX 1
      * 476 505 568 4481
      4844 5051 5054 5068
      8947 8987 9515 9539
      9548 9583 9587 9601
      9614 9628 10481 10494
      10515 10885 10886 10897
      10905 10919 10932 10940
      11965 11025 11016 10963
      12049 12048 11980 11977
      12098 12089 12062 12050
      12158 12133 12122 12118
      12225 12188 12179 12169
      12831 12826 12696 12235
      13418 13362 12882 12868
12051*=[ M3 M19 ]-----[SET M1199 ]*
      M3 M19
      *--|-*--|-*
      M4
      *--|-*
      M4
      *--|-*
      M5
      *--|-*
      M5
      *--|-*
      M3 M5
      *--|-*--|-*
      AUX 1
      * 476 505 568 4481
      4484 5051 5054 5068
      8947 8987 9515 9539
      9548 9583 9587 9601
      9614 9628 10481 10494
      10515 10885 10886 10897
      10905 10919 10932 10940
      10963 11016 11025 11965
      11977 11980 12048 12049
      12050 12062 12089 12098
      12118 12122 12133 12158
      12169 12179 12188 12225
      12235 12696 12826 12831

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M3 M5
M4
*--|-*
M4
M3 M4
*--|----|-*
M3 M4
M38 M39
12063*--|----|-*-----[SET M1199 ]*
M38 M39
M169 M170
*--|----|-*
M169 M170
M180 M181
*--|----|-*
M180 M181
M10 M11
*--|----|-*
M10 M11
M10 M6
*--|-*--|-*
M10 M6
M11
*--|-*
M11
M6 M147
*--|-*--|-*
M6 M147
M149
*--|-*
M149
M15 M16
*--|----|-*
M15 M16
M15 M6
*--|-*--|-*
M15 M6
M16
*--|-*
M16
M23 M24
12090*--|----|-*-----[SET M1199 ]*
M23 M24
M33 M34
*--|----|-*
M33 M34
M48 M49
*--|----|-*
M48 M49
M43 M44 M1002 M1000
12099*--|----|----|/|-*-----[SET M1199 ]*
M43 M44 @NI/EL @IN/NC
M46 M47 M1000
*--|----|----|*
M46 M47 @IN/NC
      AUX 1
      * 476 505 568 4481
      4484 5051 5054 5068
      8947 8987 9515 9539
      9548 9583 9587 9601
      9614 9628 10481 10494
      10515 10885 10886 10897
      10905 10919 10932 10940
      11107
      11107
      AUX 1
      * 476 505 568 4481
      4484 5051 5054 5068
      8947 8987 9515 9539
      9548 9583 9587 9601
      9614 9628 10481 10494
      10515 10885 10886 10897
      10905 10919 10932 10940

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557KATL0

01/07/00

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M43      M44      M1066
*--| |---| |---| |---|
M43      M44      @5TH
M6        M149
*--| |---| |---|
M6        M149
X239
*--| |---|
TF2.N
M198     M199
*--| |---| |---|
M198     M199

M64      M65      M1356
*--| |---| |---| |---| |---|
M64      M65      SPARE-
9880

X231     M195
*--| |---| |---|
MF2.N   M195
X232     M196
*--| |---| |---|
MF3.N   M196
X233     M197
*--| |---| |---|
MF4.N   M197
X238     M198
*--| |---| |---|
TF1.N   M198
X239
*--| |---|
TF2.N

M83      M1016 M1017 M74      M1016 M1017
*--| |---| |---| |---| |---| |---| |---|
M83      @P/C-1 @P/C-2 M74      @P/C-1 @P/C-2
M84
*--| |---| *--| |---|
M84
M61
*--| |---| |---|
M61      M72      M1016
M62
*--| |---| |---|
M62      M71      M1017
M62
*--| |---| |---|
M64      M70
*--| |---| |---|
M64      M70
9880     12010
M65
*--| |---|
M65
M68
*--| |---|

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```

10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9601 9587 9583 9548
10494 10481 9628 9614
10897 10886 10885 10515
10940 10932 10919 10905
11965 11025 11016 10963
12049 12048 11980 11977
12098 12089 12062 12050
12158 12133 12122 12118
12225 12188 12179 12169
12831 12826 12696 12235
13418 13362 12882 12868

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

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```

M68
M69
*--| |---|
M69
M81
*--| |---|
M81
M82
*--| |---|
M82
M74      M1016 M1017 M1016 M70
12159 *--| |---| |---| |---| |---| |---| |---| [SET M1199 ] *
M74      @P/C-1 @P/C-2 @P/C-1 M70
M73      M1017 12010
*--| |---|
M73      @P/C-2
M72
*--| |---|
M72
M71
*--| |---|
M71
M74      M1016 M1017 M71
12170 *--| |---| |---| |---| |---| |---| [SET M1199 ] *
M74      @P/C-1 @P/C-2 M71
M73
*--| |---|
M73
M1016 M72
*--| |---| |---|
M74      @P/C-1 M72
M1017
*--| |---|
M74      @P/C-2
M73      M72      M1017 M1016
12180 *--| |---| |---| |---| |---| |---| |---| [SET M1199 ] *
M73      M72      @P/C-2 @P/C-1
M74
*--| |---|
M74
M74      M73
*--| |---| |---|
M74      M73
M84      M1016 M1017 M61      M1016
12189 *--| |---| |---| |---| |---| |---| |---| [SET M1199 ] *
M84      @P/C-1 @P/C-2 M61      @P/C-1
M83
*--| |---| *--| |---|
M83      M62      M1017
M82
*--| |---| *--| |---|
M82      M64      @P/C-2
M81
*--| |---| *--| |---|
M81      M64      9880
M81      M65
*--| |---| *--| |---|
M81      M65

```

```

AUX 1
476   505   568   4481
4484 5051 5054 5068
8947 8987 9515 9539
9548 9583 9587 9601
9614 9628 10481 10494
10515 10885 10886 10897
10905 10919 10932 10940
10963 11016 11025 11965
11977 11980 12048 12049
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12169 12179 12188 12225
12235 12696 12826 12831
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12050 12062 12089 12098
12118 12122 12133 12158
12169 12179 12188 12225
12235 12696 12826 12831
12868 12882 13362 13418

```



```

M1187
*--| |-----[MOV K2 D0 ] * MODE
AZERRT
12673
11579 11590 12242 12248
12254 12261 12265 12271
12277 12283 12296 12306
12331 12328 12323 12317
13463
Y6
12329*--| |-----[MOV D0 K3 TAPE MODE CD
PWON.M M208 ] * 12332 12333
160 MODE
M208 11579
Y211 TAPE MODE.N
12333*--| |----->*12337 4691 7404
TPMDCP
12332
M218 M1090
*--| |-----|-*
HDLCCD @HDL C2
M218 Y1F8
12338*--| |----->*12339
HDLCCD
M209 Y210 MEMORY MODE.N
12340*--| |----->*12344 4692 7403
MEMDCD
M218 M1090
*--| |-----|-*
HDLCCD @HDL C2
M210 Y213 MDI MODE.N
12345*--| |----->*12346 7405
MDIMDC
M213 Y20C ZERO RETURN MODE.N
12347*--| |----->*12349
ZRN1CD
M214
*--| |-----|-*
ZRN2CD
M214 Y200 ZERO RETURN A.N
12350*--| |----->*12351 7547 7554
ZRN2CD
12352*-----[RET ]*
P38 M450 JOG FEED %
12353*--| |-----[> K200 D34 ]-----[+ D34 K10 D34 ] * 6218 6213 11569 12356
JFUP JF% JF%
6173 6218 6218
12358 12360 12364 12366
M451 12368
JOG FEED %
12361*--| |-----[< K0 D34 ]-----[- D34 K10 D34 ] * 6218 6213 11569 12356
JPDWN JF% JF%
6182 6218 6218
12358 12360 12364 12366
12368*-----[RET ]*
P39 M452 SPINDLE %
12370*--| |-----[> K150 D31 ]-----[+ D31 K10 D31 ] * 6380 6375 11572 12373
SOVUP S% S%
6282 6380 6380
12375 12377 12381 12383
M453 12385
SPINDLE %
12378*--| |-----[< K0 D31 ]-----[- D31 K10 D31 ] * 6380 6375 11572 12373
SOVDWN S% S%
6289 6380 6380
12375 12377 12381 12383
12385
12386*-----[RET ]*
P40 M440 M2064 SPINDLE RPM
12387*--| |-----[+ D30 K10 D30 ] * 6306 5347 6303 6310

```

```

SRPM 6313 6319 6322 6335
6259 6253 6589 12391 12393 12398
T74 12400 12404 12407 12411
*--| |-----*
12414 12417 12420
6262
M441 M2063
12394*--| |-----|-*-----[- D30 K10 D30 ] * SPINDLE RPM
SDWBPB SPUP2 6306 5347 6303 6310
6270 6246 SRPM 6313 6319 6322 6335
T75 6589 12391 12393 12398
*--| |-----* 12400 12404 12407 12411
SDWBT 12414 12417 12420
6273
M2202
12401*--| |-----[< D100 D30 ]-----[MOV D100 D30 ] * SPINDLE RPM
SMXRPM SRPM 6306 5347 6303 6310
5785 11354 6306 SMXRPM 6313 6319 6322 6335
11354 6589 12391 12393 12398
12411 12407 12404 12400
12420 12417 12414
M2202
12408*--| |-----[< D102 D30 ]-----[MOV D102 D30 ] * SPINDLE RPM
SRPM 6306 5347 6303 6310
5785 11357 6306 11357 6589 12391 12393 12398
12411 12407 12404 12400
12420 12417 12414
12415* [ > K0 D30 ]-----[MOV K0 D30 ] * SPINDLE RPM
SRPM 6306 5347 6303 6310
6313 6319 6322 6335
6589 12391 12393 12398
12411 12407 12404 12400
12420 12417 12414
12421*-----[RET ]*
P42 Y6
12422*--| |-----[DMOV R2380 R2880 ] *12425
PWON.M
160
*-----[DMOV R2382 R2882 ] *12428
*-----[DMOV R2384 R2884 ] *12431
*-----[DMOV R2386 R2886 ] *12434
*-----[DMOV R2388 R2888 ] *12437
M455
12438*--| |-----[D* R2390 K100 D74 ] *10540 10542 10548 10550
IMINIT 10556 10558 11526 11528
11519 11536 11538 11541 11543
12469 12460 12445 12443
12497 12482 12480 12472
12533 12524 12509 12506
12541 12539 12536
*-----[D/ D74 K254 R2890 ] *12448 12547
10540
M4056
*--| |-----[D* R2392 K100 D74 ] *10540 10542 10548 10550
RT-SID 10556 10558 11526 11528
3257 11536 11538 11541 11543

```

```

M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[D* R2380 K100 D74 ] *10540 10542 10548 10550
|CNTCV PARTIN LT-SID |
| 3262 |
|
|-----[D/ D74 K254 R2892 ] *12475 12557 12564
|
|-----[D* R2394 K100 D74 ] *10540 10542 10548 10550
|10556 10558 11526 11528
|11536 11538 11541 11543
|12469 12460 12445 12443
|12497 12482 12480 12472
|12533 12524 12509 12506
|12541 12539 12536
|
|-----[D/ D74 K254 R2894 ] *12485 12568
|
|-----[D* R2396 K100 D74 ] *10540 10542 10548 10550
M4056
*--| |----| |---[D* R2396 K100 D74 ] *10540 10542 10548 10550
|RT-SID |
|3257 |
|M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[D* R2382 K100 D74 ] *10540 10542 10548 10550
|CNTCV PARTIN LT-SID |
| 3262 |
|
|-----[D/ D74 K254 R2896 ] *12512 12578 12585
|
|-----[D* R2398 K100 D74 ] *10540 10542 10548 10550
M4056
*--| |----| |---[D* R2398 K100 D74 ] *10540 10542 10548 10550
|RT-SID |
|3257 |
|M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[D* R2384 K100 D74 ] *10540 10542 10548 10550
|CNTCV PARTIN LT-SID |
| 3262 |
|
|-----[D/ D74 K254 D74 ] *10540 10542 10548 10550

```

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|-----[D* R2390 R2890 ] *12448 12547
M455
|IMINIT|
|11519 |
M1029 M4056
*--| |----| |---[DMOV R2392 R2892 ] *12475 12557 12564
|@INCH |RT-SID |
| 3257 |
|M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[DMOV R2380 R2892 ] *12475 12557 12564
|CNTCV PARTIN LT-SID |
| 3262 |
|
|-----[DMOV R2394 R2894 ] *12485 12568
M4056
*--| |----| |---[DMOV R2396 R2896 ] *12512 12578 12585
|RT-SID |
|3257 |
|M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[DMOV R2382 R2896 ] *12512 12578 12585
|CNTCV PARTIN LT-SID |
| 3262 |
M4056
*--| |----| |---[DMOV R2398 R2898 ] *12542 12595 12602
|RT-SID |
|3257 |
|M1089 XA |
*--| |----| |-*
|PARTIN CNTCV |
M1089
*--| |----| |-*
|PARTIN
XA M1089 M4055
*--| |----| |----| |---[DMOV R2384 R2898 ] *12542 12595 12602
|CNTCV PARTIN LT-SID |
| 3262 |
12603 *-----[RET ] *
P45 Y6
12604 *--| |----| |---[MOV D80 D17 ] *12607 1676 1761 12623
|PWON.M |
| 160 |
|
|-----[MOV R1999 D18 ] *12610 1677 12634 12636
|
|-----[RET ] *

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```

    PTP NEXT TOOL
    *12613 1767 1808 1812
    1890 12642 12648
    1521
    M312 M1013 M359 M6
    12614 *--|/|---|/|---|/|---|/|---|/|---| [MOV D19 D17 ] *12607 1676 1761 12623
    |TF1 |@M06T1|SLT/M6 M6
    |610 |1494 |LDTL
    |M313 |M1014 |1883
    *--|/|---|/|---|/|---|/|---|/|---|
    |TF2 |@M06T2|
    |613
    M312 M313 M6 M359 M358 M06 AUX
    12624 *--|/|---|/|---|/|---|/|---|/|---|> *12628 12629 12643
    |TF1 |TF2 M6 SLT/M6
    |610 |613 |1494
    |M358 M1014 M1013
    12629 *--|/|---|/|---|/|---|/|---| [MOV D80 D18 ] *12610 1677 12634 12636
    |M06X |@M06T2 |@M06T1|
    |12628 |1516
    *--|/|---|/|---|/|---|/|---| [MOV D18 R1999 ] *
    |PTPSTL |1459 1622 1684 1764
    |12610 |1814 2005 2013 2137
    |4986 4983 2828 2226
    |9742 5016 5002 4989
    |12790 12788 12637 12609
    |12820 12817 12809
    M312 PTP NEXT TOOL
    12638 *--|/|---|/|---|/|---|/|---| [MOV K0 D26 ] *12613 1767 1808 1812
    |TF1 |
    |610 |
    |M313 |
    *--|/|---|/|---|/|---|/|---|
    |TF2 |
    |613 |
    |M358 M1014 M1013
    12643 *--|/|---|/|---|/|---|/|---| [MOV D80 D26 ] *12613 1767 1808 1812
    |M06X |@M06T2 |@M06T1|
    |12628 |1516
    |Y6
    12649 *--|/|---|/|---|/|---|/|---| [MOV D17 R2054 ] *12652
    |PWON.M
    |160 |PTPCMT
    | |12607
    12653 *--|/|---|/|---|/|---|/|---| [RET ] *
    Y6 K2 ZERO RET. DNC
    P46 12654 *--|/|---|/|---|/|---|/|---| [MOV R1986 M1170 ] *12657 12664
    |PWON.M
    |160
    M1182 ALARM CLEAR DNC
    12658 * [BIT R1987 K0 ]< > *12661
    M1185 M1187 M200 M1185 DNC ZERO RET.MEMO.
    12662 *--|/|---|/|---|/|---|/|---|< > *12666 5841 6028 6038
    |DNCZRT AZERRT *RST
    |12666 12673 |340
    | |6048 6058 6068 6432
    |M1170 |12318 12662
    *--|/|---|/|---|/|---|/|---|
    |DNCZRC
    |12657
    Y14B Y14A Y149 Y148 M1187 ALL AXIS ZERO RET.
    12667 *--|/|---|/|---|/|---|/|---|< > *12673 12320 12325 12663
    |4ZPSLB |ZZPSLB |YZPSLB |XZPSLB
    M1000
    *--|/|---|/|---|/|---|/|---|
    |@IN/NC|
    |11107|
    |Y183 |
    *--|/|---|/|---|/|---|/|---|
    |DTCH4N
    |4177
    M59 Y1C M200 M1186 M59 MEMORY
    12674 *--|/|---|/|---|/|---|/|---|< > *12678 12675 12692

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```

    M59 FIN.PT *RST
    9349 340
    M1186
    *--|/|---|/|---|/|---|/|---|
    |M59ME
    |12678
    Y6 K2 AUX 8
    12679 *--|/|---|/|---|/|---|/|---| [MOV K0 M1192 ] *5371 2837 5378 5390
    |PWON.M
    |160
    |9011 11879 12682 12699
    |12703 12706 12792 12793
    |12899 12880 12862 12804
    |12903
    X10B M1193 AUX 7
    12683 *--|/|---|/|---|/|---|/|---|< > *5376 5380 5388 8986
    |PROG.B
    |8993 12684
    M479 M1194 AUX 6
    12685 *--|/|---|/|---|/|---|/|---|< > *8982 8992 12686 12860
    |MZP
    |5812
    |Y110 M1195 AUX 5
    12687 *--|/|---|/|---|/|---|/|---|< > *504 509 8975 8991
    |RDY.L
    |349
    |12864 12869
    M247 X1F7 M1197 AUX 3
    12689 *--|/|---|/|---|/|---|/|---|< > *490 507 8961 8989
    |CFIN RWD.N
    |9339
    |10491 10508 10529 12691
    |12840 12863 12875 13500
    |13518 13507 13502
    M1186 M1198 AUX 2
    12692 *--|/|---|/|---|/|---|/|---|< > *483 506 8954 8988
    |M59ME
    |12678
    |9554 9557 9581 10486
    |10501 10522 10845 10857
    |10955 10954 10872 10863
    |11983 11978 11974 10964
    |12874 12846 12830 12693
    |13406 13400 13389 12884
    M259 M1199 AUX 1
    12694 *--|/|---|/|---|/|---|/|---|< > *476 505 568 4481
    |CSTLX
    |1199
    |8947 8987 9515 9539
    |M389
    |9548 9583 9587 9601
    *--|/|---|/|---|/|---|/|---|
    |CSTLX
    |1213
    |9614 9628 10481 10494
    |10515 10885 10886 10897
    |10905 10919 10932 10940
    |11965 11025 11016 10963
    |12049 12048 11980 11977
    |12098 12089 12062 12050
    |12158 12133 12122 12118
    |12225 12188 12179 12169
    |12831 12826 12696 12235
    |13418 13362 12882 12868
    Y6 K2
    12697 *--|/|---|/|---|/|---|/|---| [MOV M1192 D171 ] *12700 12712
    |PWON.M
    |160
    |AUX8
    |5371
    K2 AUX 8
    *--|/|---|/|---|/|---|/|---| [MOV K0 M1192 ] *5371 2837 5378 5390
    |9011 11879 12682 12699
    |12703 12706 12792 12793
    |12899 12880 12862 12804
    |12903
    Y6 K2
    12704 *--|/|---|/|---|/|---|/|---| [MOV M1192 D172 ] *12707 12709 12713
    |PWON.M
    |160
    |AUX8
    |5371
    *--|/|---|/|---|/|---|/|---| [SFL D172 K8 ] *12707 12709 12713

```

```

-----[WOR D171 D172 R1988 ]*12714
                12700 12707
-----[MOV K0 R1989 ]*12717

12718*-----[RET ]*

P47 Y6 M981 X + POSITION
12719*--| |-*[D< K0 R6018 ]-----< >* 5859 5858 5876 5898
      PWON.M | |
      160 | |
          M982 Y + POSITION
          * [D< K0 R6020 ]-----< >* 5862 5861 5914 5933
          | |
          M983 Z + POSITION
          * [D< K0 R6022 ]-----< >* 5865 5864 5947 5966
          | |
          M984 4TH + POSITION
          * [D< K0 R6024 ]-----< >* 5868 5867 5980 5991
          | |
          M979 P.CHANGE START P.
          * [D< K0 R6026 ]-----< >* 5871 5870 6002 6014
          | |
          12749

12750*-----[RET ]*

P49 Y6
12751*--| |-*-----[WAND R6017 H3F D152 ]*12755 12757 12767 12777
      PWON.M | |
      160 | |
          *-----[WAND D152 K1 D153 ]*12759 12763 12769 12773
          | |
          12755 M491 X ZERO RETN MEMORY
          * [= K1 D153 ]-----< >*12764 5817
          | |
          12759
          *-----[WAND D152 K2 D153 ]*12759 12763 12769 12773
          | |
          12755 M492 Y ZERO RETN MEMORY
          * [= K2 D153 ]-----< >*12774 5823
          | |
          12759
          *-----[WAND D152 K4 D153 ]*12759 12763 12769 12773
          | |
          12755 M493 Z ZERO RETN MEMORY
          * [= K4 D153 ]-----< >*12784 5829
          | |
          12759

12785*-----[RET ]*

P53 M1192 AUX 8
12786* [= K0 R1999 ]*-----< >* 5371 2837 5378 5390
      | |
      199 | |
          * [= R1999 D167 ]*
          | |
          199 SPTNo
          1343
      M1192
12793*--| |-*-----[MOV D160 R2038 ]*12796

```

```

AUX8 STNO
5371 1322
-----[MOV D167 R2039 ]*12799
      SPTNo
      1343
-----[WOR R7001 H80 R7001 ]* 226 224 1262 1264
      226
      1531 1533 1540 1542
      4995 4997 5005 5007
      13048 13046 12803 12801
      13104 13102 13090 13088
      13353 13351 13146 13144

M1192
12804*--| |-*-----[MOV D8 R2041 ]*12807
      AUX8 | |
      5371 | |
          MGPOSI
          137
          *-----[MOV R1999 R2042 ]*12810
          | |
          199
          *-----[WOR R7002 H100 R7002 ]* 222 220 1269 1271
          | |
          222
          9752 9754 12812 12814

Y6 SPINDLE TOOL No.
12815*--| |-*-----[MOV R1999 D167 ]* 1343 1348 1352 1442
      PWON.M | |
      160 | |
          199
          1449 1452 1458 2116
          2125 2132 2136 12791
          12818 12798

          POCKET TOOL No.
          *-----[XCH R1999 D168 ]* 1349 1314 1356 1453
          | |
          199
          1462 1468 1478 12821

12822*-----[RET ]*

P54 M1199 AUX 1
12823* [= K0 D162 ]-----< >* 476 505 568 4481
      SDIA
      1295
      4484 5051 5054 5068
      8947 8987 9515 9539
      9601 9587 9583 9548
      10494 10481 9628 9614
      10897 10886 10885 10515
      10940 10932 10919 10905
      11965 11025 11016 10963
      12049 12048 11980 11977
      12098 12089 12062 12050
      12158 12133 12122 12118
      12225 12188 12179 12169
      12831 12826 12696 12235
      13418 13362 12882 12868

M1198 AUX 2
12827* [= K0 D163 ]-----< >* 483 506 8954 8988
      9554 9557 9581 10486
      10501 10522 10845 10857
      10955 10954 10872 10863
      11983 11978 11974 10964
      12874 12846 12830 12693
      13406 13400 13389 12884

M1199 M1197 AUX 3
12831*--| |-* [= K2 D164 ]*-----< >* 490 507 8961 8989
      AUX1 | |
      476 | |
          10491 10508 10529 12691
          12840 12863 12875 13500
          13502 13507 13518

          * [= K3 D164 ]*
          | |
          1298

          M1196 AUX 4
          * [= K4 D164 ]-----< >* 497 508 8968 8990
          | |
          1298
          9519 9534 9543 9556
          9824 9831 9832 9839

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```

      9855 9848 9847 9840
      9868 9864 9863 9856
      12881 12845 11979 9869

M1198 M1195 AUX 5
12846 *--|/|-* [= K1 D165 ] *-----< >* 504 509 8975 8991
      AUX2 | | | | |
      483 | | | | |
      * [= K3 D165 ] *
      | | | | |
      1304 | | | | |
      * [= K4 D165 ] -----< >* 8982 8992 12686 12860
      | | | | |
      1304 | | | | |

Y6 AUX 8
12861 *--|/|-* [RST M1192 ] * 5371 2837 5378 5390
      PWON.M | | | | |
      160 | | | | |
      | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12899 12880 12862 12804
      12903

M1197 AUX 8
12863 *--|/|-* [= K0 D166 ] *-----[SET M1192 ] * 5371 2837 5378 5390
      AUX3 | | | | |
      490 | | | | |
      M1195 | | | | |
      *--|/|-* | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12804 12862 12880 12899
      12903
      AUX5 | | | | |
      504 | | | | |
      M1199 | | | | |
      *--|/|-* [= K1 D166 ] *
      AUX1 | | | | |
      476 | | | | |
      M1195 | | | | |
      *--|/|-* | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12804 12862 12880 12899
      12903
      AUX5 | | | | |
      504 | | | | |
      M1198 | | | | |
      *--|/|-* [= K2 D166 ] *
      AUX2 | | | | |
      483 | | | | |
      M1197 | | | | |
      *--|/|-* | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12804 12862 12880 12899
      12903

M1196 M1199 AUX 8
12881 *--|/|-* [= K3 D166 ] *-----[SET M1192 ] * 5371 2837 5378 5390
      AUX4 AUX1 | | | | |
      497 476 | | | | |
      M1194 M1198 | | | | |
      *--|/|-* | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12804 12862 12880 12899
      12903
      * [= K2 D164 ] * [= K4 D166 ] *
      | | | | |
      1298 | | | | |
      | | | | |
      1311 | | | | |
      * [= K1 D165 ] *
      | | | | |
      1304 | | | | |

12900 [= K0 D208 ] -----[RST M1192 ] * 5371 2837 5378 5390
      TINTFX | | | | |
      1308 | | | | |
      | | | | |
      9011 11879 12682 12699
      12703 12706 12792 12793
      12899 12880 12862 12804
      12903

12904 *-----[RET ] *

P56 M662 M16 M15 M200 M5123 ATC COVER OPEN MEM
12905 *--|/|-*--|/|-*--|/|-*--|/|-*-----< >*12914 12910 12917

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      MD7 | M16 | M15 *RST
      10142 | | | 340
      M673 | M5123 |
      *--|/|-*--|/|-*
      MN305 | ACOPME |
      10063 | 12914 |
      M676 | |
      *--|/|-*
      MN301 |
      10083 |
      M301 |
      *--|/|-*
      MNL |
      652 |
      M241 | M5123 M5122 M1357 M427 M200 M5125 TOOL HOLDER UP ME2
      12915 *--|/|-*--|/|-*--|/|-*--|/|-*-----< >*12922 12916
      CSTLP | ACOPME ACCLL ATCMXX THDNC1 *RST |
      1216 | 12914 1406 1702 340 |
      M5125 | |
      *--|/|-* *-----< >*12923 12933
      THUPM2 |
      12922 |
      M332 M301 M5127 ATC COVER CLOSE CD
      12924 *--|/|-*--|/|-*-----< >*12935 12953 12960 12972
      T/CFIN MNL |
      2048 652 |
      M676 M662 M301 M1310 M1311 |
      *--|/|-*--|/|-*--|/|-*--|/|-*
      MN301 MD7 MNL MDITM1 MDITM2 |
      10083 10142 652 2724 2743 |
      M673 |
      *--|/|-*
      MN305 |
      10063 |
      M5126 |
      *--|/|-*
      ACCCDX |
      12923 |
      M15 |
      *--|/|-*
      M15 |
      M676 M663 M301 M1310 M1311 M5128 ATC COVER OPEN CD
      12936 *--|/|-*--|/|-*--|/|-*-----< >*12947 12965 12971
      MN301 MD8 MNL MDITM1 MDITM2 |
      10083 10146 652 2724 2743 |
      M673 |
      *--|/|-*
      MN305 |
      10063 |
      M544 M545 |
      *--|/|-*
      ATCSLP EQTATC |
      1637 1680 |
      M5120 |
      *--|/|-*
      ACOM2 |
      M16 |
      *--|/|-*
      M16 |
      M2154 M2155 M2156 M883 M5122 M5127 M1310 M1311 F110 CAN'T ATC COVER CL
      12948 *--|/|-*--|/|-*--|/|-*--|/|-*-----< >*12959 12955 12961
      AMEND AMST2 AMST2P ATCOL ACCLL ACCCD MDITM1 MDITM2 |
      3134 3139 3145 1366 1406 12935 2724 2743 |
      M207 F110 |
      *--|/|-*
      *ALRST C'NTCC |
      8084 12959 |
      M5127 F110 M5128 M200 M5130 M5129 ATC COVER CLOSE
      12960 *--|/|-*--|/|-*--|/|-*-----< >*12968 4122 12962 12974
      ACCCD C'NTCC ACOCOD *RST ACOP |
      12935 12959 12947 340 12975 |
      M5129 M5122 |
      *--|/|-*
      ACCL ACCLL |
      12968 1406 |

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M5130 M5121 M5127 M200 M5129 M5130 ATC COVER OPEN
12969*--| |----|/|---|*--|/|---| |----|/|---|< >*12975 4021 4127 12967
|ACOP ACOPL ACCCD *RST ACCL |12969 12978 12990 13002
|12975 1402 |12935 340 |12968
|M5128
*--| |----|*
|ACOCD
|12947
|X82 M5130 M1310 M1311 ATC COV.OP/CL AL.T
12976*--|/|---|*--|/|---| |----|<T165 K100 >*12986 12994 13004
|ATC.OP|ACOP |MDITM1 MDITM2
|12975 |2724 2743
|X83
*--| |---|*
|ATC.CL
|X82 M5129
*--| |---| |---|*
|ATC.OP|ACCL
|12968
|X83
*--|/|---|*
|ATC.CL
|X82 M5130 T165 F58 ATC COV.OPEN RS ML
12989*--|/|---| |---| |---| |---|< >*12998 389 12996
|ATC.OP ACOP |ACALT
|12975 |12986
|X82 M5129
*--| |---| |---|*
|ATC.OP ACCL
|12968
|M207 F58
*--| |---| |---|*
*ALRST COFMLF
8084 12998
|X83 M5129 T165 F59 ATC COV.CLOSE RSMML
12999*--|/|---| |---| |---| |---|< >*13008 391 13006
|ATC.CL ACCL |ACALT
|12968 |12986
|X83 M5130
*--| |---| |---|*
|ATC.CL ACOP
|12975
|M207 F59
*--| |---| |---|*
*ALRST CCLMLF
8084 13008
13009*-----[RET ]*
P60
13010*-----[RET ]*
P61
13011*-----[RET ]*
P70
M331 M2173 M2172
13012*--| |---| |---| |---| |---| |---| |---|< >*13020 13018 13035
|ATCME
|1879 |13027 |13033
| |M2172
*--| |---|
|13020
|<> M2173
* [BII R7006 H8 ]*-----< >*13027 13014 13025 13034
| |9761
|M2173
*--| |---| |---| |---| |---| |---| |---|< >*13029 13030
|13027
M2170
13030*--| |---| |---| |---| |---| |---| |---| |---|< >[MOV K1 D180 ]*13033 13017 13038 13041

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13051 13057 13060 13074
13077 13083 13086 13097
13130 13116 13113 13107
13142 13139 13133
M2173
13034*--|/|---|*-----[MOV K0 D180 ]*13033 13017 13038 13041
|13027
|M2172
*--| |---|
13020
13039* [= K1 D180 ]*-----[MOV D2 R2015 ]* 5003 13044 13100
| ATCST
| 1765
|13033
*-----[WOR R7001 H100 R7001 ]* 226 224 1262 1264
| 1531 1533 1540 1542
| 4995 4997 5005 5007
|13048 13046 12803 12801
|13104 13102 13090 13088
|13353 13351 13146 13144
13049* [= K1 D180 ]<=
|-[BIT R7006 H8 ]-[MOV K2 D180 ]*13033 13017 13038 13041
|13033 9761
|13077 13083 13086 13097
|13130 13116 13113 13107
|13142 13139 13133
13058* [= K2 D180 ]*<=
|-[BIT R2016 HC ]-----[SET L30 ]*13065 3058 3062 13070
|13033
|<>
* [BII R2016 HC ]-----[RST L30 ]*13065 3058 3062 13070
|-----[MOV K3 D180 ]*13033 13017 13038 13041
|13051 13057 13060 13074
|13077 13083 13086 13097
|13130 13116 13113 13107
|13142 13139 13133
13075* [= K3 D180 ]<>
|-[BII R7006 H8 ]-[MOV K4 D180 ]*13033 13017 13038 13041
|13033 9761
|13077 13083 13086 13097
|13130 13116 13113 13107
|13142 13139 13133
13084* [= K3 D180 ]*-----[WAND R7001 HFEPFF R7001 ]* 226 224 1262 1264
|13033 226
| 4995 4997 5005 5007
|13048 13046 12803 12801
|13104 13102 13090 13088
|13353 13351 13146 13144
|-----[WAND R7006 HFEPFF R7006 ]* 9761 1259 1535 4992
|13023 13053 13079 13092
|13094 13109 13135 13148
|13150
13095* [= K4 D180 ]*-----[MOV D1 R2015 ]* 5003 13044 13100
| ATCCMT
| 1762
|13033

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*-----[WOR R7001 H100 R7001 ]* 226 224 1262 1264
      1531 1533 1540 1542
      226 4995 4997 5005 5007
      13048 13046 12803 12801
      13104 13102 13090 13088
      13353 13351 13146 13144

13105* [= K4 D180 ]- [BIT R7006 H8 ]- [MOV K5 D180 ]* 13033 13017 13038 13041
      13051 13057 13060 13074
      13077 13083 13086 13097
      13130 13116 13113 13107
      13142 13139 13133

13114* [= K5 D180 ]* [BIT R2016 HC ]----- [SET L31 ]* 13121 3060 13126
      13033
      <>
      * [BII R2016 HC ]----- [RST L31 ]* 13121 3060 13126
      *----- [MOV K6 D180 ]* 13033 13017 13038 13041
      13051 13057 13060 13074
      13077 13083 13086 13097
      13130 13116 13113 13107
      13142 13139 13133

13131* [= K6 D180 ]- [BII R7006 H8 ]- [MOV K7 D180 ]* 13033 13017 13038 13041
      13051 13057 13060 13074
      13077 13083 13086 13097
      13130 13116 13113 13107
      13142 13139 13133

13140* [= K6 D180 ]*----- [WAND R7001 HFEFF R7001 ]* 226 224 1262 1264
      1531 1533 1540 1542
      13033 226 4995 4997 5005 5007
      13048 13046 12803 12801
      13104 13102 13090 13088
      13353 13351 13146 13144
      *----- [WAND R7006 HFEFF R7006 ]* 9761 1259 1535 4992
      13023 13053 13079 13092
      9761 13094 13109 13135 13148
      13150

13151*----- [RET ]*

P119 X64 M2052 TOOL ID READ PB
13152*--| |-----< >*13153 13158 13178 13186
      |SPX64
      X65 M2053 TOOL ID WRITE PB
13154*--| |-----< >*13155 13159 13181 13196
      |SPX65
      X66 M2054 T-ID HEAD RETRACT
13156*--| |-----< >*13157 13301 13303
      |TSUCLS
      M2052 M2048 T-ID READ MOP MAG.
13158*--| |----- [RST M2040 ]* 13165 13179 13183 13191
      |IDR.B |@TID-S |
      |13153 |11130 | 13195 |
      |M2053 |
      *--| |-* *----- [RST M2041 ]* 13166 13182 13184 13201

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|IDW.B |
|13155 |
|M207 |
*--|/|----- [RST F186 ]* 13167 7981 13241 13317
*ALRST
8084
----- [RST F187 ]* 13168 13246 13316
----- [RST F189 ]* 13169 13251 13329
----- [RST F193 ]* 13170 13256 13328
----- [RST F194 ]* 13171 9239 13272 13314
13326
X1 M2048 M2052 T-ID READ MOP MAG.
13172*--|/|----- [SET M2040 ]* 13165 13179 13183 13191
      |X1.PLS | @TID-S |IDR.B |
      | | 13195 11130 |13153 |
      | | |M2053 |
      | | |IDW.B |
      | | |13155 |
      |M2040 | F185 ATC COVER OPEN AL.
13183*--| |-* >*13185
      |TIRMM |
      |13165 |
      |M2041 |
      *--| |-*
      |TIWMM |
      |13166 |
      M2052 M2048 M2040 X1F2
13186*--| |----- [MOV K1 R2078 ]* 13195 13163 13175 13190
      |IDR.B |@TID-S | K0 R2078 ]---|/|-----|/|----->1
      |13153 11130 | 13195 13165 |
      |1>----- [MOV K1 R2078 ]* 13195 13163 13175 13190
      |13200 13205 13218 13221
      |13227 13234 13276 13282
      |13334 13322 13292 13285

M2053 M2048 M2041 X1F2
13196*--| |----- [MOV K2 R2078 ]* 13195 13163 13175 13190
      |IDW.B |@TID-S | K0 R2078 ]---|/|-----|/|----->1
      |13155 11130 | 13195 13166 |
      |1>----- [MOV K2 R2078 ]* 13195 13163 13175 13190
      |13200 13205 13218 13221
      |13227 13234 13276 13282
      |13334 13322 13292 13285

M125 M125 MEMORY
13206*--|/|-*----- [RST M2042 ]* 13207 13222 13224
      |M125 |
      |M125 |
      *----- [RST M2043 ]* 13208 9237 13215 13231
      |13335 |
      M149 M433 M125 M2044 M125 COMMAND
13209*--|/|-*--| |-----< >*13213 13214 13223
      |M149 |@TCOFF M125 |
      |M149 |2197 |
      |M437 |
      *--| |-*
      |MGRFIN |
      |2208 |

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M2044 M2043
13214*--| |----|/|--[= K0 R2078 ]*-----[MOV K8 R2078 ]*13195 13163 13175 13190
M125CD M125FN |13200 13205 13218 13221
13213 13208 |13227 13234 13276 13282
|13334 13322 13292 13285
|
| M125 MEMORY
|-----[SET M2042 ]*13207 13222 13224
|
M2044 M2042
13223*--| |----|/|--[= K16 R2078 ]-> H1 R2080 ]--->1
M125CD M125ME |13208 9237 13215 13231
13213 13207 |13335
|
| M125 FINISH
|-----[SET M2043 ]*13208 9237 13215 13231
|13335
|
| M2045 T-ID R/W FINISH
|-----[SET M2045 ]*13235 13236
|
|13195
|
M2045 TC COVER CLOSE AL.
13236*--| |----|/|--[= H101 R2080 ]-----[SET F186 ]*13167 7981 13241 13317
R/WFIN |13235
|
| CAN'T CLS ATC COVR
|-----[SET F187 ]*13168 13246 13316
|
|-----[SET F189 ]*13169 13251 13329
|
|-----[SET F193 ]*13170 13256 13328
|
|-----[SET F188 ]*13264 9238 13278 13318
|
|-----[SET F194 ]*13171 9239 13272 13314
|13326
|
|-----[MOV K0 R2078 ]*13195 13163 13175 13190
|13200 13205 13218 13221
|13227 13234 13276 13282
|13334 13322 13292 13285
|
M200
13277*--|/|---[RST F188 ]*13264 9238 13278 13318
*RST |
340 |
|
|-----[RST F190 ]*13279 13330
|
M2046 T-ID READ MEM.
13280*=[ K1 R2078 ]*-----[< ]*13289 13286 13294 13313
|13195
|
|-----[K8 R2078 ]*
|13195
|
M2046 M2047
*--| |----|/|-----[
IDRME IDRME
13289 13296
|
M2047 T-ID WRITE MEM.
13290*=[ K2 R2078 ]*-----[< ]*13296 13287 13293 13325

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|13195
M2047 M2046
*--| |----|/|-----[
IDWME IDRME
13296 13289
M1224 Y2
13297*--| |----|/|-----[< ]*13299 4086 13300 13302
IDHEXT CCC.ST
7919
M2051 M2054
13300*--| |----|/|-----[<T164 K100 ]*13306 13311
IDHEXT IDR.RS
13299 13157
M2051 M2054
*--|/|-----[
IDHEXT IDR.RS
13299 13157
F195 M207 F195
13309*--| |----|/|-----[< ]*13312 2568 13309
*ALRST
13312 8084
T164
*--| |----|/|-----[
|13306
M2046 F194 M850 M2048 M2049 TOOL ID READ LAMP
13313*--| |----|/|-----[< ]*13324 4226
IDRME |FLCKER|@TID-S
13289 13171 1193 11130
M2040
*--| |----|/|-----[
TIRMM
13165
F187
*--| |----|/|-----[
ACCLMO
13168
F186
*--| |----|/|-----[
ACCLSA
13167
F188
*--| |----|/|-----[
|13264
*=[ K0 R2078 ]*
|13195
M2047 F194 M850 M2043 M2050 TOOL ID WRITE LAMP
13325*--| |----|/|-----[< ]*13336 4241
IDWME |FLCKER|M125FN
13296 13171 1193 13208
M2041
*--| |----|/|-----[
TIWMM
13166
F193
*--| |----|/|-----[
|13170
F189
*--| |----|/|-----[
|13169
F190
*--| |----|/|-----[
|13279
*=[ K2 R2078 ]*
|13195
Y6
13337*--| |----|/|-----[+ R2000 R2123 R2079 ]*13341 13344 13346 13348
PWON.M
160
286

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13342* < D84 R2079 ]-----[- R2079 D84 R2079 ]*13341 13344 13346 13348
      11469 13341          13341 11469
M2048
13349* -| |-----[WOR R7001 H1000 R7001 ]* 226 224 1262 1264
@TID-S
11130          226
      1531 1533 1540 1542
      4995 4997 5005 5007
      13048 13046 12803 12801
      13104 13102 13090 13088
      13353 13351 13146 13144

13354*-----[RET ]*

P120 M999          M1199          AUX 1
13355* -| |--=[ H0 R2117 ]*-----< >*
WUSSME
1247          476 505 568 4481
      4484 5051 5054 5068
      8947 8987 9515 9539
      9601 9587 9583 9548
      10494 10481 9628 9614
      10897 10886 10885 10515
      10940 10932 10919 10905
      11965 11025 11016 10963
      12049 12048 11980 11977
      12098 12089 12062 12050
      12158 12133 12122 12118
      12225 12188 12179 12169
      12831 12826 12696 12235
      13418 13362 12882 12868

          F177
* < K9999 R2117 ]*-----< >*13363

X2E M1088 X1F0 T85
13364* -|/|----| -*-| |----| |-----[MOV HF2 D104 ]*13371 13382 13385 13388
*ESP2 @YME-C |MA.N |PWODLT
      8610
X15F
* -|/|-----*
      13395 13404 13412 13415
      13421 13425 13434 13439
      13443 13446 13449 13453
      13456 13460 13468 13475
      13478 13490 13496 13499
      13522 13528 13531 13540
      13560 13553 13550 13547
      13574 13563

M498 M300
13372* -| | -*-| |-----* [> H9 D104 ]----->1
ALFSTP|AUTO
8907 |644
M499
* -| | -*-
ALSBK
8914
M999 Y110 M1320 M1034
* -| |----| |----|/|----| |-*
WUSSME RDY.L MDCL @MDINT
1247 349 707

1 >-----[MOV HF3 D104 ]*13371 13382 13385 13388
      13395 13404 13412 13415
      13421 13425 13434 13439
      13453 13449 13446 13443
      13475 13468 13460 13456
      13499 13496 13490 13478
      13540 13531 13528 13522
      13560 13553 13550 13547
      13574 13563

          M1198          AUX 2
13386* [= H0 D104 ]-----< >*
      483 506 8954 8988
      9554 9557 9581 10486
      10501 10522 10845 10857
      10955 10954 10872 10863
      11983 11978 11974 10964

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      12874 12846 12830 12693
      13406 13400 13389 12884

Y110 M999 M207
13390* -| |----|/|----| |-----[MOV HF0 D104 ]*13371 13382 13385 13388
RDY.L WUSSME *ALRST
349 1247 8084
      13395 13404 13412 13415
      13421 13425 13434 13439
      13453 13449 13446 13443
      13475 13468 13460 13456
      13499 13496 13490 13478
      13540 13531 13528 13522
      13560 13553 13550 13547
      13574 13563

X2E X15F X1F0 M1198 Y110
13396* -| | -*-| |----| |----|/|----| |-----[MOV HF1 D104 ]*13371 13382 13385 13388
*ESP2 |MA.N |AUX2 |RDY.L
      483 349
M1088
* -|/|-*
@YME-C
      13395 13404 13412 13415
      13421 13425 13434 13439
      13443 13446 13449 13453
      13456 13460 13468 13475
      13478 13490 13496 13499
      13522 13528 13531 13540
      13560 13553 13550 13547
      13574 13563

X140 M1198
13405* -| |----|/|----| |-----[MOV H9 D104 ]*13371 13382 13385 13388
RST.B |AUX2 |
      483
X1F0 M999
* -| |----|/|----| |-----
MA.N WUSSME
1247
      13395 13404 13412 13415
      13421 13425 13434 13439
      13443 13446 13449 13453
      13456 13460 13468 13475
      13478 13490 13496 13499
      13522 13528 13531 13540
      13560 13553 13550 13547
      13574 13563

          Y110 M999 M1199
13413* [= H0 D104 ]----| |----| |----|/|----| |-* [MOV H1 D104 ]*13371 13382 13385 13388
      RDY.L WUSSME AUX1
      13371 349 1247 476
      13395 13404 13412 13415
      13421 13425 13434 13439
      13453 13449 13446 13443
      13475 13468 13460 13456
      13499 13496 13490 13478
      13540 13531 13528 13522
      13560 13553 13550 13547
      13574 13563

          WARM-UP WARNING T.
*-----[RST T238 ]*13422 13427 13431

          WARM-UP WARNING T.
13423* [= H1 D104 ]*-----<T238 D170 >*13422 13427 13431
      13371 |
      |DNC
      |11175
      |T238
* -| |----| |-----[MOV H2 D104 ]*13371 13382 13385 13388
WUPWT
13422
      13395 13404 13412 13415
      13421 13425 13434 13439
      13453 13449 13446 13443
      13475 13468 13460 13456
      13499 13496 13490 13478
      13540 13531 13528 13522
      13560 13553 13550 13547
      13574 13563

          M998          WARM UP WARNING
*-----< >*13436

M479
13437* [= H2 D104 ]----|/|----| |-----[MOV H3 D104 ]*13371 13382 13385 13388
MZP
13371 5812
      13395 13404 13412 13415
      13421 13425 13434 13439

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|13453 13449 13446 13443
|13475 13468 13460 13456
|13499 13496 13490 13478
|13540 13531 13528 13522
|13560 13553 13550 13547
|13574 13563

13444* [= H3 D104 ] *M479
| *---| |-----[MOV H4 D104 ] *13371 13382 13385 13388
| MZP | | | |
| 13371 | 5812 | | |
| * [= H2 D104 ] *
| | | | |
| 13371 | | | |
| | | |
| M997 ZERO RET. COMMAND
13454* [= H3 D104 ] -----< > *13457 5840 6027 6037
| | | |
| 13371 | 6047 6057 6067 6431
| | 6449 6566 6573
| MODE
13458* [= H4 D104 ] *-----[MOV K2 D0 ] *11579 11590 12242 12248
| | | |
| 13371 | 12254 12261 12265 12271
| | 12277 12283 12296 12306
| | 12331 12328 12323 12317
| | 13463
| *-----[CALL P37 ] *12237 7402 13465

13466* [= H4 D104 ] ---|/|---|/|---| |---| |----->1
| STL.N SPL.N DEN.N M.N
| 13371
| 1>-----[MOV H5 D104 ] *13371 13382 13385 13388
| | | |
| | 13395 13404 13412 13415
| | 13421 13425 13434 13439
| | 13453 13449 13446 13443
| | 13475 13468 13460 13456
| | 13499 13496 13490 13478
| | 13540 13531 13528 13522
| | 13560 13553 13550 13547
| | 13574 13563

13476* [= H5 D104 ] *-----[MOV H0 R487 ] *13481 13493 13514 13517
| | | | |
| 13371 | | | |
| | | |
| *-----[MOV R2117 R488 ] *13484
| | | |
| *-----[MOV K0 R489 ] *13487

13488* [= H5 D104 ] -[= H0 R487 ]-[MOV H6 D104 ] *13371 13382 13385 13388
| | | | |
| 13371 | | 13481 | |
| | | |
| M1197 AUX 3
13497* [= H6 D104 ] *-----< > * 490 507 8961 8989

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|10491 10508 10529 12691
|12840 12863 12875 13500
|13518 13507 13502

CYCLE START TIMER
*13501 13533 13537

13502* ---| |-----[WOR R497 H10 R497 ] *13506 4832 13504 13509
| M1197 | | |
| AUX3 | | |
| 490 | 13506 |
| M1197 | | |
13507* ---|/|-----[WAND R497 HFPEF R497 ] *13506 4832 13504 13509
| AUX3 | | |
| 490 | 13506 |
| M1197 F176
13512* [= H2 R487 ] *---| |-----< > *13519
| AUX3 | | |
| 13481 | 490 |
| * [= H3 R487 ] *
| | |
| 13481 |
13520* [= H6 D104 ] -[= H1 R487 ]-[MOV H7 D104 ] *13371 13382 13385 13388
| | | |
| 13371 | | 13481 |
| | | |
| *-----[CALL P37 ] *12237 7402 13465

CYCLE START TIMER
13529* [= H7 D104 ] *-----<T239 K10 > *13501 13533 13537
| | |
| 13371 |
| T239 |
| *---| |-----[MOV H8 D104 ] *13371 13382 13385 13388
| SPARE- | | |
| 13501 | | |
| | | |
| | 13395 13404 13412 13415
| | 13421 13425 13434 13439
| | 13453 13449 13446 13443
| | 13475 13468 13460 13456
| | 13499 13496 13490 13478
| | 13540 13531 13528 13522
| | 13560 13553 13550 13547
| | 13574 13563

M995 CYCLE START CMD.
*13542 1066

13543* ---| |---|/|---| |---| |-----[MOV H9 D104 ] *13371 13382 13385 13388
| X1F3 | | | |
| STL.N | | |
| | | |
| X1F2 | | |
| *---| |---| |
| OP.N | | |
| | | |
| | 13395 13404 13412 13415
| | 13421 13425 13434 13439
| | 13443 13446 13449 13453
| | 13456 13460 13468 13475
| | 13478 13490 13496 13499
| | 13522 13528 13531 13540
| | 13560 13553 13550 13547
| | 13574 13563

M994 WARM UP FINISH
13551* [= H9 D104 ] *-----< > *13555 1246 1248 13554
| | |
| 13371 |
| M994 |
| *---| |-----|
| WUPPIN |
| 13555 |

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M994 F178
13556*--|/|-----< >*13557
|WUPFIN
|13555
M994 Y1 WARM-UP ALRAM TMR
13558* [> H9 D104 ]*--|/|----| |-----<T120 K1800 >*13567 13570 13575
|WUPFIN HYD.M
|13371 |13555 337
* [< HEF D104 ]*
|13371
T120
13570*--|/|-----[RST F184 ]*13571 13576
|WUPALT
|13567
13572* [= HF3 D104 ]*-----[SET F184 ]*13571 13576
|13371
T120
*--| |-----*
|WUPALT
|13567
13577*-----[RET ]*
P131 Y113 Y118
13578*--| |-----< >*13579
|CST.L
|1220
|X1F8 M119 M119
13580*--| |-----< >*13581
|DEN.N
Y2D6 X246 Y11A
13582*--| |----|/|-----< >*13584
|SOR.N SPOR.N
|5641
Y14E Y14D Y11B
13585*--| |----| |-----< >*13587 6655
|ZZP2LB YZP2LB
Y80 X82 Y11C
13588*--| |----|/|-----< >*13590
|ACOP.M ATC.OP
|4131
Y81 X83 Y11D
13591*--| |----|/|-----< >*13593
|ACCL.M ATC.CL
|4126
Y90 X90 Y11E RIGHT SIDE LED
13594*--| |----|/|-----< >* 3250 13596
|TUCL.M TUCLLS
|3965
Y90 X91 Y11F LEFT SIDE LED
13597*--|/|----|/|-----< >* 3252 13599
|TUCL.M TCLLS
|3965
13600*-----[RET ]*
13619*-----[END ]*

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