

Troubleshooting

Arbor motor fails to start Things to Check

Possible Cause

No power to the saw.

The main power disconnect may be off. Check the disconnect switch on the main Buss line to ensure that it is on.

Fuses may be pulled or blown in the disconnect box. Check to see that the fuses are in place and working (not blown). If necessary replace the blown fuses with ones of the same size.

There may be an overload in the main starter cabinet. One or more starters may be tripped out.

Each starter has a reset button that should be checked. The starter that is over loaded will display a flag, and the reset button will push in with some degree of resistance. Push in on the manual reset button.

The newer machines only have one button for reset.



Some State Codes prohibit manual resets. In this case, automatic resets were supplied and will automatically reset when the heater relays have cooled sufficiently.

Control circuit breaker (110 Volt) is tripped.

Reset the breaker located on or near the main control transformer. (See your schematic for an exact location.)

Interlock on arbor access doors are not made. (Motors will not start if the doors are ajar.)

Make sure that the access doors are properly closed and securely latched.

Check to see if the arbor access door switches are loose or the door is ajar.

Troubleshooting (Con't.)

Possible Cause	Things to Check
<i>The oil levels in the oil mist generators are low, actuating the low level cut out switch.</i>	Fill the system per instructions on the Oil Mist Lubrication notice located on the machine. Also refer to the Lubrication Section (Section 8) of the manual for oil type.
<i>Air pressure is low or nonexistent.</i>	Check that the compressed air supply line is properly connected to the machine.
<i>Feed drive frequency control interlock not working.</i>	Check the input voltages to the controller. (Main voltage must be present for the control circuit to operate.)
<i>Air pressure is low.</i>	With system air present, increase the press roll air pressure until the arbor motor starts. The minimum required is 20 PSI.
<i>Arbor overload has tripped.</i>	Reset the overload switch.
<i>Feed overload has tripped.</i>	Reset the feed overload switch.
<i>Master control relay is not energized.</i>	Check the electrical schematic for system control operations.

Troubleshooting (Con't.)



Possible Cause	Things to Check
<i>Arbor motor is not running.</i>	Start the arbor motors.
<i>Feed variable frequency drive has tripped out.</i>	Reset the feed variable frequency drive following the instructions in the Maintenance Section of this manual.
<i>The oil level in the oil mist generators is low, actuating the low level cut out switch.</i>	Fill the system per instructions on the Oil Mist Lubrication notice located on the machine. Also refer to the Lubrication Section (Section 8) of the manual for oil type.



Always disconnect the main power supply before servicing the machine.

Possible Cause	Things to Check
<i>Extended feed chain pins and bottom vees of the feed chains are dry.</i>	Check the oil mist generator, perhaps oil is not getting to the proper place on the chains.
<i>Improper positioning of the oil mist nozzles.</i>	Reposition the nozzles. One should spray on the bottom of the chain and the other should spray on the extended pins. Refer to the Lubrication Section of this manual for more information on the oil mist unit.
<i>Ends of the nozzles are blocked so no oil can reach the chains.</i>	Clean the nozzle ends and check alignment before start-up.

Troubleshooting (Con't.)

Possible Cause	Things to Check
<i>Oil mist generator is defective.</i>	Replace the oil mist generator.
<i>Saw dust has built up in the dip cam area.</i>	Remove and clean the dip cams.
<i>Saw dust compaction on the feed sprocket teeth and driving side of the chain center link.</i>	Remove several feed slats from the outfeed end of the machine in the area of the feed sprockets. Inspect and clean the hardened dust buildup from the affected area.
	Use compressed air to blow down the machine daily. A cleaning program will reduce the sawdust buildup.
<i>The dip cams are worn.</i>	The dip cams are designed so that they may be changed side for side <i>once</i> . The next time they are worn it is necessary to install new cams.
	Call the Mereen-Johnson Customer Service Department to order new dip cams.
<i>The feed chains are worn.</i>	Replace or rebuild the feed chains. The pins are worn if they measure less than .450" from the flat to the opposite side.
<i>Roller chain coupling on the feed motor is worn or out of adjustment.</i>	Replace the worn roller chain. Adjust it if necessary and lubricate using the roller chain oil.
<i>Frequency controller unstable.</i>	Consult the troubleshooting section in controller manufacturer's manual for possible causes.

Troubleshooting (Con't.)

Possible Cause	Things to Check
<i>Drive fault.</i>	See Drive Manual provided by the manufacturer.
<i>Movable saw is on a collision switch.</i>	Depress an emergency stop. Move the saw off of the collision switch.
<i>Saws are not getting the data string from the Optimizing System.</i>	Check the Optimizing System. Check for the commanded value sent from the optimizing system.
<i>Allen-Bradley drive has no power.</i>	Check the drive fault. Check the Drive Manual for details. The transformer fuse may be blown. Check and replace if necessary.
<i>No feedback from the drive.</i>	Check for faulty cabling, disconnected, cut, etc.
<i>Cut pockets don't match laser solution. Drive motor coupling is not secured properly.</i>	Remove the servomotor coupling access cover and check the tightness of the coupling clamp collar locking screw. If screws have been tightened, and problem persists, then check for galling on the shaft. The contact of the allen screw on the shaft must be tight. Use blue lock-tight. (See “Information for Removing Servo Motor” in the Maintenance Section.)

Troubleshooting (Con't.)

Positioning saws oscillate

Possible Cause	Things to Check
<i>Saw hub packing is dirty.</i>	Check and clean.
<i>Saw hub is sticking.</i>	Remove the hubs, clean and reinstall.
<i>Faulty encoder.</i>	Replace the defective encoder.

Troubleshooting - Electrical

Emergency light is on

Possible Cause	Things to Check
<i>Any one (1) Emergency Stop pushbutton is pushed in and the red Emergency Stop light is on.</i>	An overload has been tripped on any of the starters. Reset the tripped overload.
	The arbor access door is ajar or open. Make sure the door is closed securely and locked.
	The Control Relay Master (CRM) is not working correctly.
	Check system integration for other inhibiting devices or controls.

Main power turned off

<i>Main power has been turned on, all the Emergency Stops pushbuttons are pulled OUT and the lights are OFF.</i>	Incoming power is not actually on. Use an AC voltmeter to check power supply.
	A fuse, located near the control transformer, may be blown. Replace the fuse. Replace it with a new fuse of the proper size.

Arbor motor does not start

<i>Arbor does not start when the arbor pushbutton is pressed.</i>	Low Air Main Switch is triggered. Check the air supply and lines.
	Low Lube Switch is triggered. Fill the oil reservoirs. Refer to the Lubrication Section (Section 8) of the manual for oil type.
	Emergency Stop pushbutton is in.
	Check for a fault on the feed drive.

Troubleshooting - Electrical (Con't.)

Select arbor saw does not move

Possible Cause	Things to Check
<i>Select arbor saw does not move when commanded to move.</i>	<p>Drive fault, reset drive from the operator screen. If unsuccessful see Appendix I.</p> <p>Motor is at limit, push in the E-Stop and manually move the motor off of the limit.</p> <p>Infeed or outfeed press roll sensor is tripped preventing the arbor from moving.</p> <p>Current relay for the arbor is activated, adjust the set point.</p> <p>Emergency Stop is in.</p>

E-Stop light comes on

<i>Machine stops for no apparent reason and E-Stop light comes on.</i>	<p>Check the air pressure as well as the oil level and air pressure of the oil mist generator.</p> <p>Check for over loads that have tripped on any of the starters.</p> <p>Check the feed drive for faults.</p>
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Incorrect width cut

<i>Machine is not cutting correct width.</i>	<p>Check the calibration.</p> <p>Check the saw hub and bed plate for free movement.</p> <p>Check the servo gear box output shaft and coupling gear for mechanical looseness.</p> <p>Drive fault (see Appendix I).</p>
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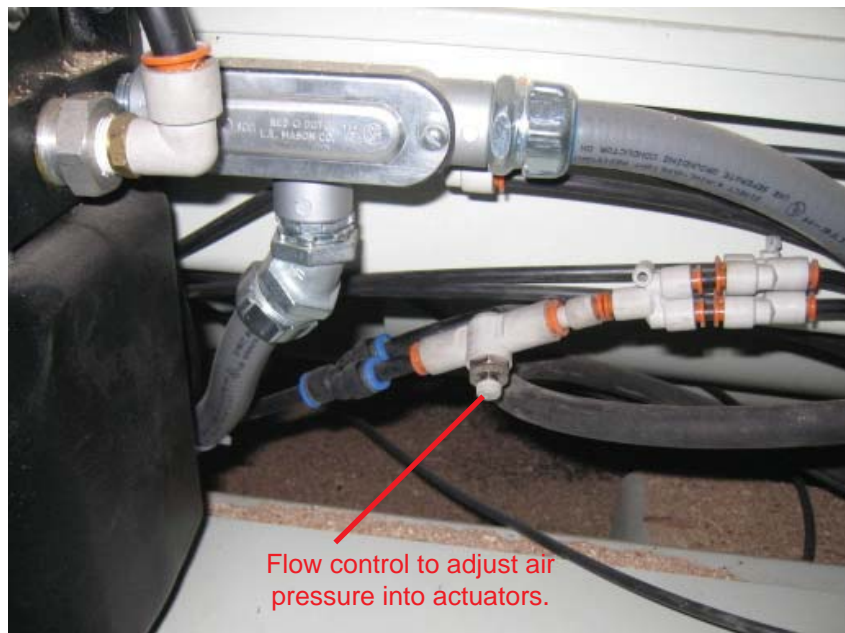
Troubleshooting - Electrical (Con't.)

Saw will not move

Possible Cause	Things to Check
<i>Saw move in Manual Mode, but not in optimizing mode.</i>	<p>Check the connection to the optimizing system.</p> <p>Make sure that the feed is on.</p> <p>Check the press roll sensors in case one has been triggered.</p> <p>Arbor current relay sensor is tripped.</p>

Troubleshooting (Con't.)

Possible Cause	Selectable saw carriage binds up Things to Check
<i>The arbor chamber is full of dust.</i>	Clean out area.
<i>Actuator full of dust.</i>	Carefully blow the dust out of the THK actuator with an air nozzle. Do not stretch or damage the metal band cover. Turn up the positive air pressure flow using the flow control on the lower back of the machine.



Do not turn up air pressure up so high that the bands on the THK actuators are blowing out a lot.

Troubleshooting (Con't.)

Possible Cause	Cam Lock Collar Moves Things to Check
<i>Cam Locks are mounted on the arbor in the wrong orientation.</i>	The cam should be on the arbor motor side with the lobe toward the outfeed when it is on the top side of the arbor.
<i>Cam Lock shoulder bolt bent.</i>	Replace shoulder bolt.
<i>Infeed system is "steering" the material.</i>	Make certain that the infeed feeding system is aligned properly. Be certain that the infeed feeding system is jumped up off of the part before the part enters the saw blade.
<i>Faulty encoder.</i>	The area of the arbor where the Cam Locks are mounted should be clean and oil free in order for the Cam Locks to operate properly.
<i>The moving saw stop is not set properly and the moving saw hits the Cam Lock causing it to move.</i>	Set the moving saw stop.
<i>The outfeed table or take-away system is at the wrong height (influencing the board while it is being cut).</i>	Adjust the outfeed table or system (level, etc.).

Troubleshooting (Con't.)

Possible Cause	Things to Check
<i>Moving shoe pucks are worn causing the moving shoe to fling into the camlock fixed shoe when going to minimum.</i>	Replace the moving shoe pucks.
<i>Pressure head height setting is too low.</i>	Reset the pressure head as shown in the Operations Manual.
<i>Tooling is worn and there is no side clearance.</i>	Replace tooling.

Bow cuts

<i>The slat inserts are worn unevenly.</i>	Replace the slat inserts. Check the press roll for proper adjustment, to prevent slippage of the material in the bed.
<i>The aluminum feed slats are bent.</i>	Install new Mereen-Johnson feed slats. Call the Customer Service Department for pricing and to order
<i>The press rolls are out of adjustment.</i>	On air loaded models check the air regulator functions and settings.
<i>Infeed or outfeed conveyors are influencing the feeding or tailing.</i>	Realign and relevel the conveyors as necessary. The infeed conveyor speed must match the rip saw feed speed exactly.

Troubleshooting (Con't.)

Possible Cause	Things to Check
<i>The material to be ripped is bowed.</i>	Turn the material so that the concave side is turned toward the guide, and the material will be forced to the left by the guide. This will also create an opening between the material and the guide as it feeds through. When using a long infeed guide, or fence, the same is true, turn the concave side to the fence.
<i>Excessive hold down pressure or feeding thicker material than the machine is setup to handle has caused the feed slats to bend.</i>	Ensure that the material being ripped is of uniform thickness.

Tapered cuts

<i>Material is unevenly surfaced, side-to-side. The high areas of the material hold the press rolls up and off the thinner areas, causing the thinner ripped pieces to float sideways.</i>	Make sure that the material to be cut is evenly surfaced.
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These types of materials may cause serious personal injury.



Danger

Troubleshooting (Con't.)

Possible Cause	Poor quality of cut Things to Check
<i>Saw kerf cuts in the bed plate are becoming too wide</i>	Install sharp tooling. Check with Merreen-Johnson's Customer Service Department about new tooling. Install new bed plate.
<i>Press roll to bed plate relationship is not correct.</i>	Refer to the Press Roll and Bed Plate sections of this manual for additional information.
<i>Arbor motor bearings are failing</i>	Install new motor bearings following the procedure outlined in the Arbor Motor Section of this manual.
<i>Slip-off bearing fails.</i>	Install new slip-off bearing.
<i>The infeed pinch roll feeder is set wrong (non-MJ feeder).</i>	Adjust the infeed pinch roll to jump up before the material hits the saw blade.