

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

Machine #: \_\_\_\_\_

Initials: \_\_\_\_\_

### CHECK AND RECORD MACHINE CONDITION

		Good	Fair	Poor
1	<b>Stud and Bushing in "C" position Swing Arm</b>			
2	<b>Stud and Bushing in "E" position Swing Arm</b>			
3	<b>Check gap between Revolving Head and Cap</b>			
4	<b>Check Head Locking and Locating arm for the following conditions:</b> Pin, Bushings, Head movement when locking, proper clearance between locating block and the lever, Roll & Pin			
5	<b>Left End Bracket, Support ring:</b> Cracks, Broken support Ribs. Slide Rail condition, loose Screws and Pins, thread condition at Stock Reel coupler			
6	<b>Work Spindle Condition:</b> Side play			
	Spindle# 1 Record			
	Spindle#2 Record			
	Spindle#3 Record			
	Spindle#4 Record			
7	<b>Feed Mechanism:</b> Bushings, Slide Rods, Play between Pin and Blocks			
8	<b>Chuck Opening Mechanism:</b> Excessive play			
9	<b>Chuck Closing Mechanism:</b> Excessive play			
10	<b>"A" &amp; "B" position Cross Slides:</b>			
11	<b>Chuck &amp; Feed Cam:</b> Roll& Pin, end play. Roll Slots			
12	<b>Lube System and Gauges:</b> pressures of 12Lbs. low and 120 high side, check for leaks			
13	<b>Hand Clutch:</b> Adjustment. Rolls & Pins, Chucking Mechanism			
14	<b>High Speed Clutch:</b> end play in shaft, Bushing condition, Long & Short Levers, Rolls & Pins			
15	<b>Feed Gear Box and components:</b> Compound Gears, Feed Gear Shaft and Bushings, Roll Clutch, door and Box condition			
16	<b>Tool Spindle:</b> Cam Shaft, Extension, Bushings, Brake Assembly, Front Cam Shaft, Spacer			
17	<b>Wire Carrier:</b> cracked or broken tubes, Inner Carrier cracks or brakes, Center shaft is tight, Rear Support rolls are turning every index, Caps are on both ends of Tubes			
18	<b>All Guards and Covers are there and in good repair</b>			
19	<b>Electrical components:</b> Be sure all components are secure, Doors and Covers are in place and work, Switches and Lights work, there are no broken or cracked wires			

## HOW TO CHECK

- 1 + 2.** Take a short pry bar and push up on the tool arm. Look at the top of the arm at the stud bushing. If the stud has any amount of movement, the bushing should be replaced. Be sure if you replace the bushing that you measure the stud to be sure it is not worn.
- 3.** Using a set of feeler gages, check the head between 3rd and 4th position and 4th and 5th position to see what size feeler gage can be inserted between the revolving head and the cap. With readings of more than .004 some caution should be taken as to the size of material and the amount of side working to be done. When you get readings of more than .006 you should consider repairing or replacing the machine.
- 4.** With the locking lever unlocked, hold the arm at the top just under the 729 block. Pull out on the lever and then push in as you watch the 624-1 pin in the bushing to see if there is any movement between the pin and bushing. If the pin moves side to side in the bushing, loosen the lock screw and tap the pin in (caution should be used not to damage the puller hole). If the pin goes in, you will need to re-adjust the roll in the locating cam. If the pin doesn't go in, the bushings will have to be replaced. Jog the machine through a couple of indexes and watch the lever as it lifts and the machine begins to index that there is no pressure on the lever. When the machine indexes, look to see if there is clearance between the 729 block and the 724-1 locating block on the revolving head. If the blocks hit you need to find out where you are losing stroke. When the locking lever begins locking down, be sure that the lever is not coming down on top of the revolving head block. It should, however, move the revolving head back at least .010. With the head locked down and the machine off, take a chucking bar and tap on the locking lever while trying to turn the 5080-36 roll. The roll should turn slightly each time the lever is struck.
- 5.** Visually check the MB-380-2 support ring for cracks, broken ribs, deep wear marks, or any other damage that may cause the ring not to function properly. On the left slide bracket, check for loose, bent or worn slide rails. Check that threads are good where wire carrier attaches to machine.
- 6.** With a small screw driver placed between the tool post stop and the outer spindle, place your thumb opposite the screw driver. Push with the screw driver and then with your thumb, alternating the pressure between the screw driver and your thumb several times and note the movement. A dial indicator placed on the spindle will give you a numeric value to record. Spindles with bronze bearings have .0014 oil clearance Spindles with needle bearings have .0005 oil clearance. Depending on your job mix, you can make a determination on how much wear you can work with. Be sure NOT to push the screw driver in so far that you stop the spindle from moving back!!
- 7.** This is strictly a visual inspection. See if you can engage the roll into the chuck and feed cam and move the inner portion of the feed lever back and forth. Look for excess play in the bushings, blocks and pin, roll and pin, and that the hardened guides are in place and are tight. Jog the machine through an index. Watch the feed slide roll as it enters the guide. It should enter without hitting. Also the feed slides should be inspected for excessive wear as well as the roll and pin being tight. There will be a slight amount of play built into the chuck and feed cam.
- 8.** This is also a visual inspection. With the roll engaged in the chuck and feed cam, move the top portion of the chuck opening mechanism. Inspect for excess play. Jog the machine through an index. Look at the 328 chuck slide as the roll begins to enter the chuck opening guide. Be sure that it enters cleanly without hitting the guide. There will be a slight amount of play that is built into the chuck and feed cam.
- 9.** Position the machine so that the chuck closing mechanism is positioned at furthest point back. You will be able to visually inspect the 5139-2 closing block for wear as well as any other type of physical damage. You can also, at this point, move the lever while inspecting for excessive play in the bushing and roll & pin. With collets installed, index the machine through at least 5 indexes and make sure the collets are all closing the proper amount specified for the type of chucking you are using.
- 10.** Inspect the tops of the "A" and "B" position cross slides for physical damage to the T-Bolt slots, the adjusting bolt area, cracks, broken corners and the key slot. Without any springs on the cam levers, move the slides in and out to be sure they move smoothly. Using a small pry bar or screw driver, with the slide positioned where it would be when cutting, see if you can move the slide from side to side. With no springs on the cam levers push the slides in. They should retract by themselves.

\* Continued on next page \*

- 11.** Jog the machine through at least one complete index while looking at the roll slots. Inspect for dents, chipped areas and the edges of the slots being rolled out. Remove the cover over the bronze gear and look at the indexing roll & pin. Make sure the roll spins and is free from physical damage. Make sure the pin is tight in the gear. Take a pry bar and try to move the chuck and feed cam back and forth on the shaft. If it moves, make sure the nut is tight. If it still moves, the bearing should be replaced.
- 12.** There are two types of dual pressure systems. Belt driven and electric. Both these pumps have a high and a low pressure side. The high side of belt system should have a pressure of 120 lbs. and the electric should be at least 100 lbs. The low pressure side of the belt driven system should be 12 to 15 lbs., and 30 lbs. on the electric. The system should be inspected to sure that it does not have broken or damaged lines or loose fittings. The machine can be run to inspect for leaks simply by removing the spindle gears. This will allow you to run your machine under power without indexing the revolving head. As of 2006 machines, new or remanufactured, are equipped with a single stage constant pressure electric pump system. An upgrade kit is available to convert a Model B to this system.
- 13.** Engage the hand clutch and move the handle back and forth. Note the amount of free play in the handle. Be sure the handle “snaps in” when it is engaged, if not check the chucking mechanism tension. This condition, if too loose, could cause the machine to slip out of gear while in production. If you can wiggle the handle check the shoes & pins in the chucking mechanism. Check the pins in the linkage and the keys in the handle as well as the linkage levers.
- 14.** Remove the pin that engages the high speed clutch. Take a chucking bar and lift the large lever to engage and then disengage the high speed clutch. If you can’t engage the high speed using a chucking bar it is too tight and should be backed off. The clutch should have a distinct “snap” action to it. Look at the high speed 5080-139-1 shaft to see if it is moving back and forth. If so, adjust the play by using the driving clutch bracket arm. With the high speed clutch engaged move the lever, by hand, up and down looking for play between the shoes & pins. Check the 1761 bushing for excessive play. Move the high speed short arm looking at the amount of movement. There should be a slight amount of play between the roll and the cam slot. Install the pin into the high speed short arm. Jog the machine into high. Check the chucking mechanism to see if it has closed the proper amount. Fulcrum style chucking should have no more than 1/32” gap between the sleeve and the fulcrum. With barrel chucking, you should see the groove on the inner sleeve.
- 15.** Open the gear box door. Disengage the compound gear from the feed gear and try to move the compound gear, looking for play in the bushing and sleeve. Take a small pry bar and see if you can move the feed gear shaft in the bushing. Engage the compound gear and the high speed pin. Run the machine while watching the roll clutch to see if it breaks free in high and doesn’t slip in low. Watch the roll clutch to see if it is moving in and out. If so the Timken bearings will need to be replaced. If a reversing clutch is used make sure the spring is strong enough to not allow the clutch to engage by itself.
- 16.** With the cam shaft outer bracket off and the tool spindle cam carrier removed see if you can move the 5080-22-10 or 5080-22-11 cam shaft up and down, if so note by how much. Do the same with the cam shaft extension. Inspect the ground surfaces on the cam carriers. If they are worn it could cause the cam bolts to break and prematurely wear the bushings. Install the cam carrier and outboard bracket. Tighten them up, run the machine and look at the outboard bracket to see if the bracket is moving. NOTE: all of the play you find will result in lost thousandths of cam rise!
- 17.** The wire carrier should be level with the machine. This can easily be checked looking at the slide rails on the left end bracket where they are engaged to the inner carrier (front bracket). If they look even front to back and have the same amount of space on the sides, they should be ok. Look at the center carriers to be sure they are not cracked or broken. Look at the caps on the ends of the tubes and the rolls on the outer carrier (rear support). Be sure these rolls turn when the machine indexes, and do not have flat spots. Inspect the tubes for cracks or breaks. Be sure that the center shaft is tight, and that the wire carrier will slide on and off easily.
- 18.** Check all guards and covers for cracks and breaks. Make sure they are all in place and fit properly, including the one for the “A” position cross slide.
- 19.** Inspect the electrical system for cracked, broken or pulled wires. Check that liquid tight conduit is secure, covers are in place, and all components are securely fastened. Check main disconnect to be sure it is operating properly.