



Operating Instructions and Parts Manual

Tube And Pipe Notcher

Model TN-800



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2.0 Safety Instructions

⚠ WARNING

Failure to follow these rules may result in serious personal injury

1. Only trained and qualified personnel can operate this machine.
2. Make sure guards are in place and in proper working order before operating machinery.
3. Remove any adjusting tools. Before operating the machine, make sure any adjusting tools have been removed.
4. Keep work area clean. Cluttered areas invite injuries.
5. Overloading machine. By overloading the machine you may cause injury from flying parts. DO NOT exceed the specified machine capacities.
6. Dressing material edges. Always chamfer and deburr all sharp edges.
7. Do not force tool. Your machine will do a better and safer job if used as intended. DO NOT use inappropriate attachments in an attempt to exceed the machines rated capacity.
8. Use the right tool for the job. DO NOT attempt to force a small tool or attachment to do the work of a large industrial tool. DO NOT use a tool for a purpose for which it was not intended.
9. Dress appropriate. DO NOT wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.
10. Use eye and ear protection. Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
11. Do not overreach. Maintain proper footing and balance at all times. DO NOT reach over or across a running machine.
12. Stay alert. Watch what you are doing and use common sense. DO NOT operate any tool or machine when you are tired.
13. Check for damaged parts. Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
14. Observe work area conditions. DO NOT use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. DO NOT use electrically powered tools in the presence of flammable gases or liquids.
15. Blade adjustments and maintenance. Always keep blades sharp and properly adjusted for optimum performance.
16. Keep children away. Children must never be allowed in the work area. DO NOT let them handle machines, tools, or extension cords.
17. Store idle equipment. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
18. DO NOT operate machine if under the influence of alcohol or drugs. Read warning labels on prescriptions. If there is any doubt, DO NOT operate the machine.
19. DO NOT touch live electrical components or parts.
20. Turn off power before checking, cleaning, or replacing any parts.
21. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
22. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. Bare wiring can kill!
23. DO NOT bypass or defeat any safety interlock systems.
24. Keep visitors a safe distance from the work area.

Familiarize yourself with the following safety notices used in this manual:

⚠ CAUTION

This means that if precautions are not heeded, it may result in minor injury and/or machine damage.

⚠ WARNING

This means that if precautions are not heeded, it may result in serious injury or death.

⚠ DANGER

This means that if precautions are not heeded, it will result in serious or fatal, injury.

Save the Instructions

3.0 About This Manual

This manual is provided by Baileigh Industrial, covering the safe operation and maintenance procedures for a Baileigh Model TN-800 Tube and Pipe Notcher. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

Technical Support handles questions on setup, operation, schematics, warranty issues, and individual parts needed. Our Technical Support department can be reached at 920-684-4990.

If there are questions or comments, please contact your local supplier or Baileigh Industrial. We can also be reached at our web site: www.baileigh.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

WARNING

Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

Register your product online -

<https://baileigh.com/product-registration>



4.0 Product Identification

- You have made a practical choice in purchasing a Model TN-800 Eccentric Cut Notching Machine. It has been carefully built of high quality materials and designed to give many years of efficient service. The simplicity of design and minimum effort required to operate the machine contributes towards meeting schedules and producing greater profits.
- The TN-800 is an electric powered end-mill notching machine specially designed to notch a variety of materials using only one end mill. The Patented Eccentric Cut feature, allows the user to feed an end mill cutter through an adjustable eccentric path. Creating a perfect weld joint when mating two or more pieces of tubing together.
- The TN-800 Notching Machine you have purchased is built of solid steel and high quality components, ensuring maximum rigidity and long life.



Figure 4-1

Table 4-1

Item	Description	Function
A	Swivel Casters	Steer and control the machine when moving.
B	Large Feed Wheel	Rotates the spindle head on the oscillation plate to create the eccentric pattern used for milling.
C	Y Feed Hand Wheel	Used to move the vise bed along the length of the end mill.
D	Vise Pivot Clamp Handle	Release the handle to rotate the vise to the desired angle. Lock the handle to lock the vise at the desired angle.
E	X Feed Hand Wheel (far side not shown)	Used to move the vise bed into and away from the end mill.
F	Vise	Used to hold and secure the material to be notched. May be rotated to feed the material into the end mill at an angle from 0° - 45°
G	Lexan Guard	Safety cover to covers the mill and milling area during machining to prevent inadvertent contact.
H	End Mill	Machining tool to create the cut.
I	Spindle	Turns the end mill.
J	On/Off Switch	Starts and stops the notcher motor and herby the notcher.
K	Gear Box	Transfers power from the motor to the spindle.
L	Motor	Powers the notcher for milling.
M	Chip Box	Collets the chips from the cutting process.
N	Wheels	Used to roll the machine to various locations.

5.0 Specifications

Table 5-1

Model No.	TN-800
Motor and Electrical	
Power	110/220V, 60Hz Prewired 110V
Motor	1HP (.75kW)
General Specifications	
Mill Speed	350rpm
Maximum Notching Capacity	3" Diameter using a 1" end mill (76mm / 25mm)
Minimum Notching Capacity	.5" Diameter using a .5" end mill and .5" reducer bushing (12mm / 12mm / 12mm)
Angle Adjustment	0 – 60°
End Mill Size	1" Standard / 1/2" Optional (25mm / 12mm optional)
Weights and Dimensions	
Shipping Weight	540lbs. (245kg)
Shipping Dimensions	66" x 44" x 60" (1676 x 1118 x 1524mm)

⚠️ WARNING

Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

6.0 Setup and Assembly

6.1 Unpacking and Checking Contents

Your Baileigh machine is shipped complete in one crate. Separate all parts from the packing material and check each item carefully. Make certain all items are accounted for before discarding any packing material.

⚠️ WARNING

SUFFOCATION HAZARD! Immediately discard any plastic bags and packing materials to eliminate choking and suffocation hazards to children and animals.

⚠️ WARNING

If any parts are missing, do not plug in the power cable, or turn the power switch on until the missing parts are obtained and installed correctly.

6.2 Cleaning

Your machine may be shipped with a rustproof waxy oil coating and grease on the exposed unpainted metal surfaces. To remove this protective coating, use a degreaser or solvent cleaner. For a more thorough cleaning, some parts will occasionally have to be removed. **DO NOT USE** acetone or brake cleaner as they may damage painted surfaces.

Follow manufacturer's label instructions when using any type of cleaning product. After cleaning, wipe unpainted metal surfaces with a light coating of quality oil or grease for protection.

⚠️ WARNING

DO NOT USE gasoline or other petroleum products to clean the machine. They have low flash points and can explode or cause fire.

⚠️ CAUTION

When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.

6.3 Transporting and Lifting

NOTICE

Lifting and carrying operations should be carried out by skilled workers, such as a truck operator, crane operator, etc. If a crane is used to lift the machine, attach the lifting chain carefully, making sure the machine is well balanced.

Follow these guidelines when lifting with truck or trolley:

- The lift truck must be able to lift at least 1.5 – 2 times the machines gross weight.
- Make sure the machine is balanced. While transporting, avoid rough or jerky motion, and maintain a safe clearance zone around the transport area.

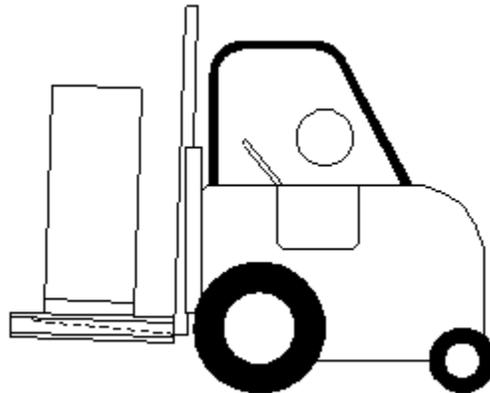


Figure 6-1

- Use a fork lift with sufficient lifting capacity and forks that are long enough to reach the complete width of the machine.
- Remove the securing bolts that attach the machine to the pallet.
- Approaching the machine from the side, lift the machine on the frame taking care that there are no cables or pipes in the area of the forks.
- Move the machine to the required position and lower gently to the floor.
- Level the machine so that all the supporting feet are taking the weight of the machine and no rocking is taking place.

6.4 Installation

IMPORTANT:

Consider the following when looking for a suitable location to place the machine:

- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.

- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.
- **LEVELING:** The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.
- **FLOOR:** This tool distributes a large amount of weight over a small area. Make certain that the floor is capable of supporting the weight of the machine, work stock, and the operator. The floor should also be a level surface. If the unit wobbles or rocks once in place, be sure to eliminate by using shims.
- **WORKING CLEARANCES:** Take into consideration the size of the material to be processed. Make sure that you allow enough space for you to operate the machine freely.
- **POWER SUPPLY PLACEMENT:** The power supply should be located close enough to the machine so that the power cord is not in an area where it would cause a tripping hazard. Be sure to observe all electrical codes if installing new circuits and/or outlets.

6.5 Assembly

WARNING

For your own safety, DO NOT connect the machine to the power source until the machine is completely assembled and you read and understand the entire instruction manual.

1. Remove the machine from the skid it was shipped on and install the casters.
2. Check the oil level and top off if necessary.
3. Read through the remainder of the manual and become familiar with the tool installation and settings as well as normal operation.
4. Position the machine as desired following the installation guidelines.
5. Follow the electrical guidelines to connect the machine to a power supply.

7.0 Electrical Connections

CAUTION

HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN! Check if the available power supply is the same as listed on the machine nameplate.

WARNING

Make sure the grounding wire (green) is properly connected to avoid electric shock. DO NOT switch the position of the green grounding wire if any electrical plug wires are switched during hookup.

7.1 Motor Specifications

Your tool is wired for 110 volt, 60Hz alternating current. Before connecting the tool to the power source, make sure the machine is cut off from power source.

7.2 Considerations

- Observe local electrical codes when connecting the machine.
- The circuit should be protected with a time delay fuse or circuit breaker with a amperage rating slightly higher than the full load current of machine.
- A separate electrical circuit should be used for your tools. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the tool.
- All line connections should make good contact. Running on low voltage will damage the motor.
- In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING

In all cases, make certain the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

- Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the

electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- Repair or replace damaged or worn cord immediately.

7.3 Extension Cord Safety

Extension cord should be in good condition and meet the minimum wire gauge requirements listed below:

Table 7-1

AMP Rating	Length		
	25ft	50ft	100ft
1-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No
Wire Gauge			

An undersized cord decreases line voltage, causing loss of power and overheating. All cords should use a ground wire and plug pin. Replace any damaged cords immediately.

7.4 Plug Connection

- Have an electrician install the correct power supply for the application.
- Once hooked up, turn on the power supply and start the machine.

8.0 Operation

⚠ CAUTION

Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.

⚠ WARNING

BEFORE THE MAIN LEXAN GUARD IS OPENED, THE POWER CORD MUST BE UNPLUGGED FROM ITS SOURCE.

8.1 Cutter Selection

1. Before any notching can take place, the proper cutter must be chosen. If the material to be notched is 1" (25.4mm) diameter up to 3" (76.2mm) diameter, the supplied 1" (25.4mm) cutter will work properly.
2. If the material is smaller than 1" (25.4mm), then an optional reducer bushing and 1/2" (12.7mm) diameter cutter must be installed. (This will

notch from 1/2" (12.7mm) up to 1" (25.4mm) diameter material.

3. To install the cutter, first unplug the power cord and open the Lexan guard.
4. Loosen the set screws (A) located on the spindle and insert the desired cutter, align the flats on the cutter with the holes on the spindle.
5. Tighten the set screws (A).

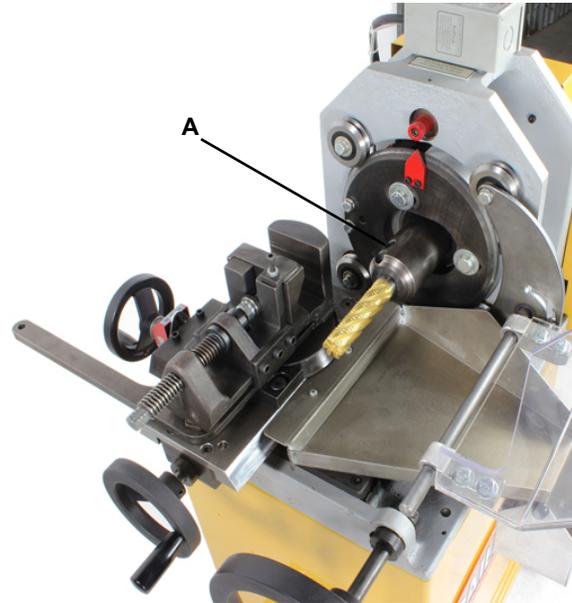


Figure 8-1

8.2 Material Insertion

1. Once the proper cutter is installed, the material to be notched can be inserted into the vise.
2. Open the vise and insert the material so that the end toward the cutter extends past the vise jaw approximately 2" (50.8mm). Material should be kept as close as possible to the vise jaws to get accurate notches.
3. Tighten the vise.
4. If an angle notch is required, loosen the cam handle (A) and rotate vise to the desired angle, not to exceed 45 deg. DO NOT rotate the vise so that the lead screw (B) is in front of the end mill.
5. Using the "X" and "Y" hand wheels, position the material up to the cutter leaving about 1/2" (12.7mm) of clearance between the cutter and material.
6. The "X" and "Y" Table gibs are set tight from the factory. This is because they are only used in positioning. The gibs may be loosened; however, this may induce chatter or vibration when notching material.
7. Position the material as far back (toward the chuck) on the cutter as possible. Visually check for possible interferences and correct by extending out more material and/or repositioning.

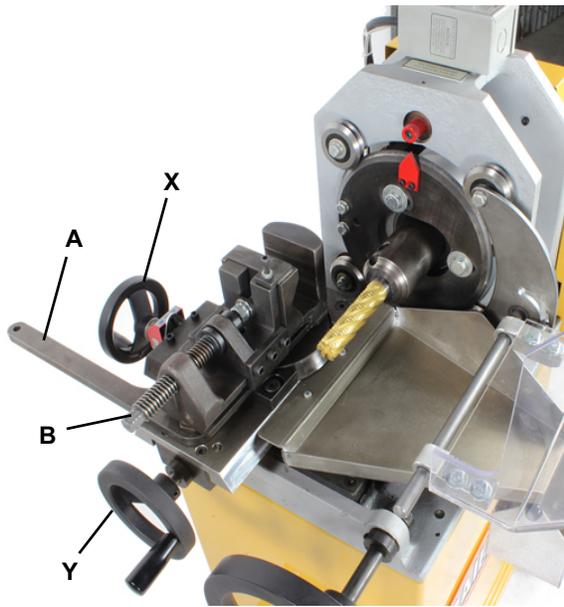


Figure 8-2

8.3 Setting Offset

1. Once the cutter and material are installed, the cutter offset can be set.

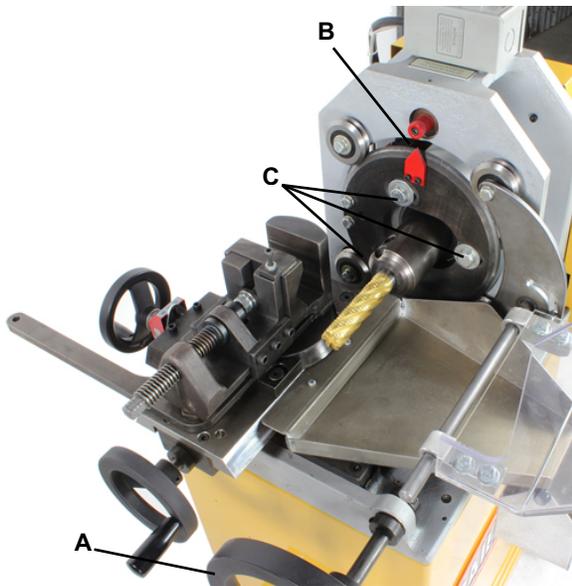


Figure 8-3

2. If using the 1" (25.4mm) cutter on 1" (25.4mm) material or the 1/2" (12.7mm) cutter on 1/2" (12.7mm) material, set the machine to the "12 o'clock" position (fine tune as needed) and move on to setting any desired angle and notching the material.

IMPORTANT: Machine must be in the home or "12 o'clock" position.

3. Do this by rotating the large feed hand wheel (A) in the counterclockwise direction until the red pointer lines (B) up with the red indicator at the 12 o'clock position.

4. At this point all offset adjustments and table positioning will be made, this is also the start and end point of every notch.
5. On the face of the "V" groove guide plate, there will be (3) 3/4" main bolts (C) which need to be loosened before the offset screw can be activated.

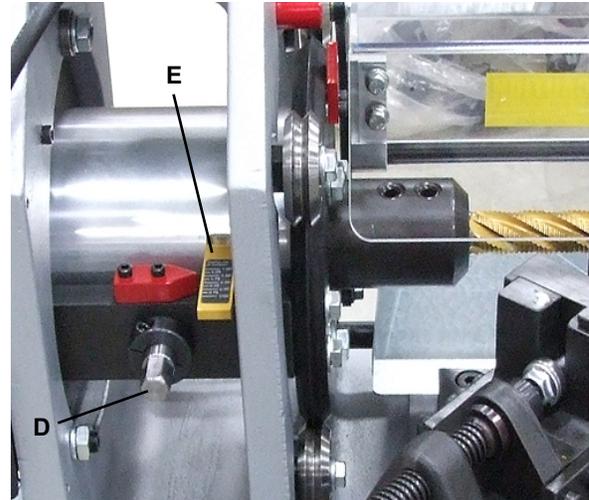


Figure 8-4

6. Once the (3) bolts are loose, use the 5/8" wrench included to adjust the offset screw (D) until the desired notch diameter is displayed on the scale (E).

Note: The scale readings are based on using 1" diameter cutter.

7. After the offset is reached, tighten the (3) main bolts. **VERY IMPORTANT!**
8. Be sure nothing is in contact with the cutter and reconnect the power cord.

8.4 Notching

1. Activate the start switch making sure the cutter is rotating the correct way. With the cutter rotating, the notch can be created.
2. Using the large feed hand wheel, slowly rotate in the counterclockwise direction. As the cutter makes contact with the material, continue to rotate feeding slow enough not to damage the cutter. The cutter control shaft is equipped with a 1-way clutch which prevents the cutter from being turned in the counterclockwise direction.
3. Once the cutter passes completely through the material, continue to rotate the hand wheel until the red pointer lines up with the red indicator pin at the 12 o'clock position.
4. If the material needs to be notched deeper, advance the "X" hand wheel, moving the material closer toward the cutter, repeat these steps until the desired notch depth is achieved.
5. Alternate depth notch, if you know how deep you need to notch, mark that depth on the material. Rotate the red indicator to the 6" o'clock position, then feed with the "X"

handwheel until the cutter reaches the mark, Then make one complete revolution to complete the notch.

8.5 Angle Notching

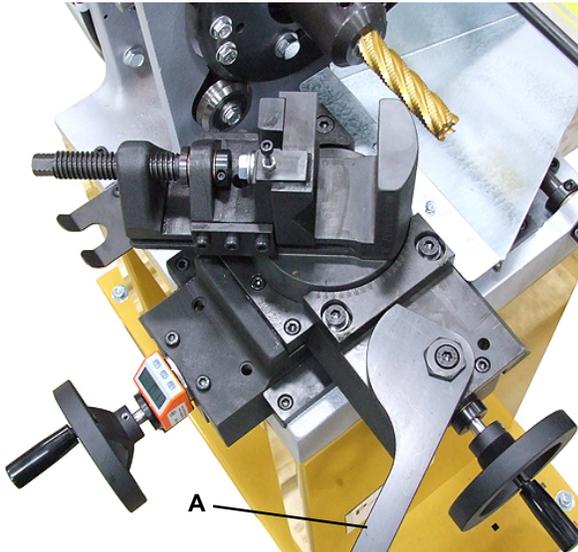


Figure 8-5

To notch at an angle, the vise needs to be rotated left or right. For small angles, rotating to the right is ok, but for large angle, rotating the vise to the left is preferred.

IMPORTANT: Never rotate the vise to the right so that the lead screw is in front of the end mill. The vise could be inadvertently moved into the end mill damaging the vise, end mill and possibly the spindle.

1. Precut the material to the desired angle prior to notching. This will create an edge that is parallel to the end mill.
2. Loosen the vise pivot lock handle and rotate the vise to the desired angle and lock the pivot handle.
3. Load the material into the vise similar to a square end cut and proceed with the milling.

8.6 Repeat Notching

1. For repeat notching perform the above steps and document the number on the counter. This number can also be used to make precise notches to the depth desired.

The calibration of the counter is:

Table 8-1

Counter display	Actual distance in inches
0000.0	0.000
0001.0	0.100
0002.0	0.200



Figure 8-6

8.7 Material Removal

1. After the desired notch depth is reached, activate the stop switch.
2. Make sure the spindle has stopped completely before removing completed part and installing new material.

8.8 Off-Center Notching

For off-center notching use the vise jaw adjustment screw to adjust the height of the vise jaw to the offset needed.

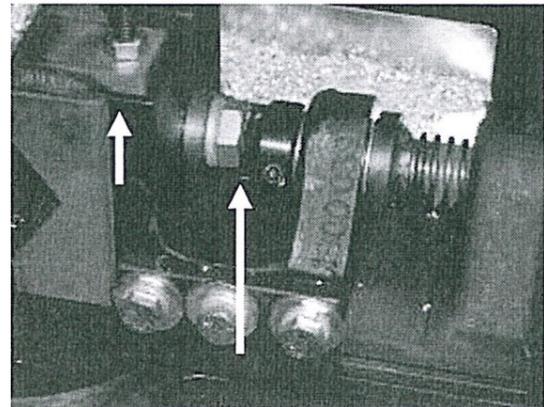


Figure 8-7

9.0 Material Selection

⚠ CAUTION

It must be determined by the customer that materials being processed through the machine are NOT potentially hazardous to operator or personnel working nearby.

When selecting materials keep these instructions in mind:

- Material must be clean and dry. (without oil)
- Material should have a smooth surface so it processes easily.
- Dimensional properties of material must be consistent and not exceed the machine capacity values.
- Chemical structure of material must be consistent.
- Buy certificated steel from the same vendor when possible.

10.0 Standard Pipe Sizes and Schedules Table

Table 10-1

Pipe Sizes	O.D.	Pipe Schedules and Wall Thickness					
		5	10	40	80	160	XX STRONG
1/8	0.405	0.400	0.050	0.068	0.095		
1/4	0.540	0.500	0.070	0.088	0.119		
3/8	0.675	0.500	0.070	0.091	0.126		
1/2	0.840	0.700	0.080	0.109	0.147	0.188	0.294
3/4	1.050	0.700	0.080	0.113	0.154	0.219	0.308
1	1.315	0.700	0.110	0.133	0.179	0.250	0.358
1-1/4	1.660	0.700	0.110	0.140	0.191	0.250	0.382
1-1/2	1.900	0.700	0.110	0.145	0.200	0.281	0.400
2	2.375	0.700	0.110	0.154	0.218	0.344	0.436
2-1/2	2.875	0.800	0.120	0.203	0.276	0.375	0.552

All sizes are in inches

11.0 Maintenance

WARNING

Make sure the electrical disconnect is OFF before working on the machine.

WARNING

Maintenance should be performed on a regular basis by qualified personnel.

WARNING

Always follow proper safety precautions when working on or around any machinery.

- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.
- The gearbox oil should be changed every three years, with 80 W90 gear lube. (1.5 – 2 years if used more than 12hrs/day).
- Periodically lubricate the "V" rollers and rear cam rollers with light machine oil.
- Be sure to keep the slide ways clean and the gib screws properly adjusted.

- Be sure always to use sharp cutters, dull or worn tools will decrease the performance of the machine and may be unsafe.
- Periodically check the power cord for cuts or bare wire and replace if damaged.

11.1 Oil Disposal

Used oil products must be disposed of in a proper manner following your local regulations.

11.2 Storing Machine for Extended Period of Time

If the Vertical Milling Machine is to be inactive for a long period of time, prepare the machine as follows:

- Disconnect the electrical supply from the power panel.
- Empty and clean the coolant reservoir.
- Clean and grease the machine.
- Cover the machine.

Note: Proper maintenance can increase the life expectancy of your machine.

12.0 Troubleshooting

WARNING

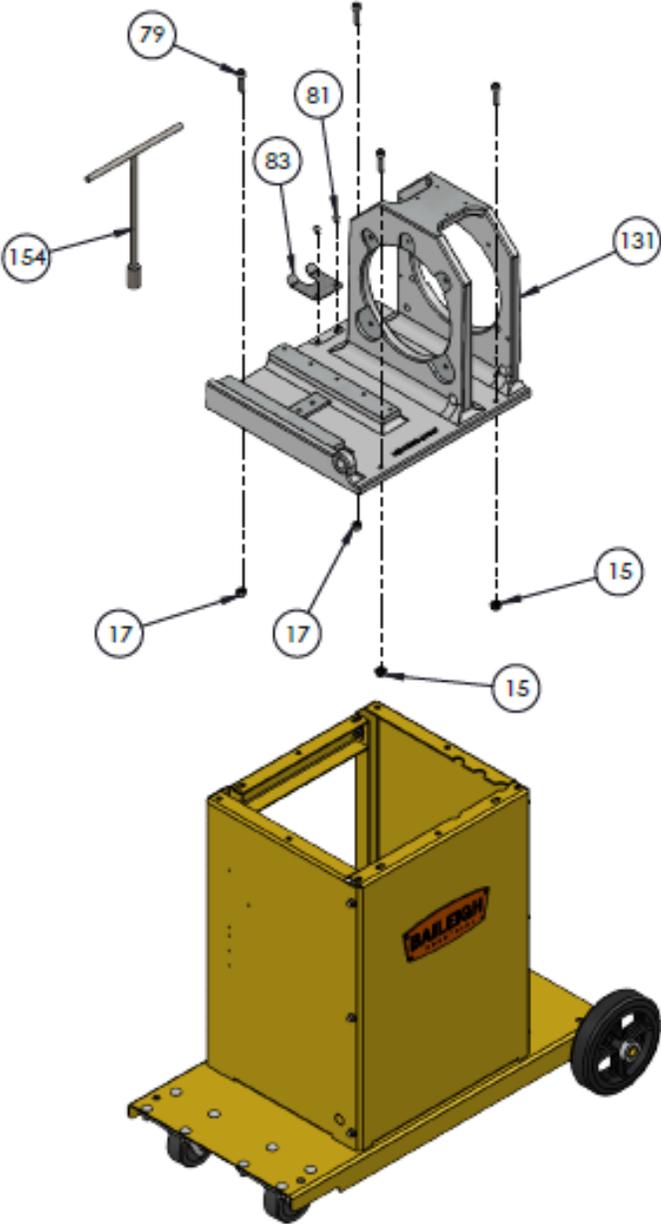
Make sure the electrical disconnect is OFF before working on the machine.

Table 12-1

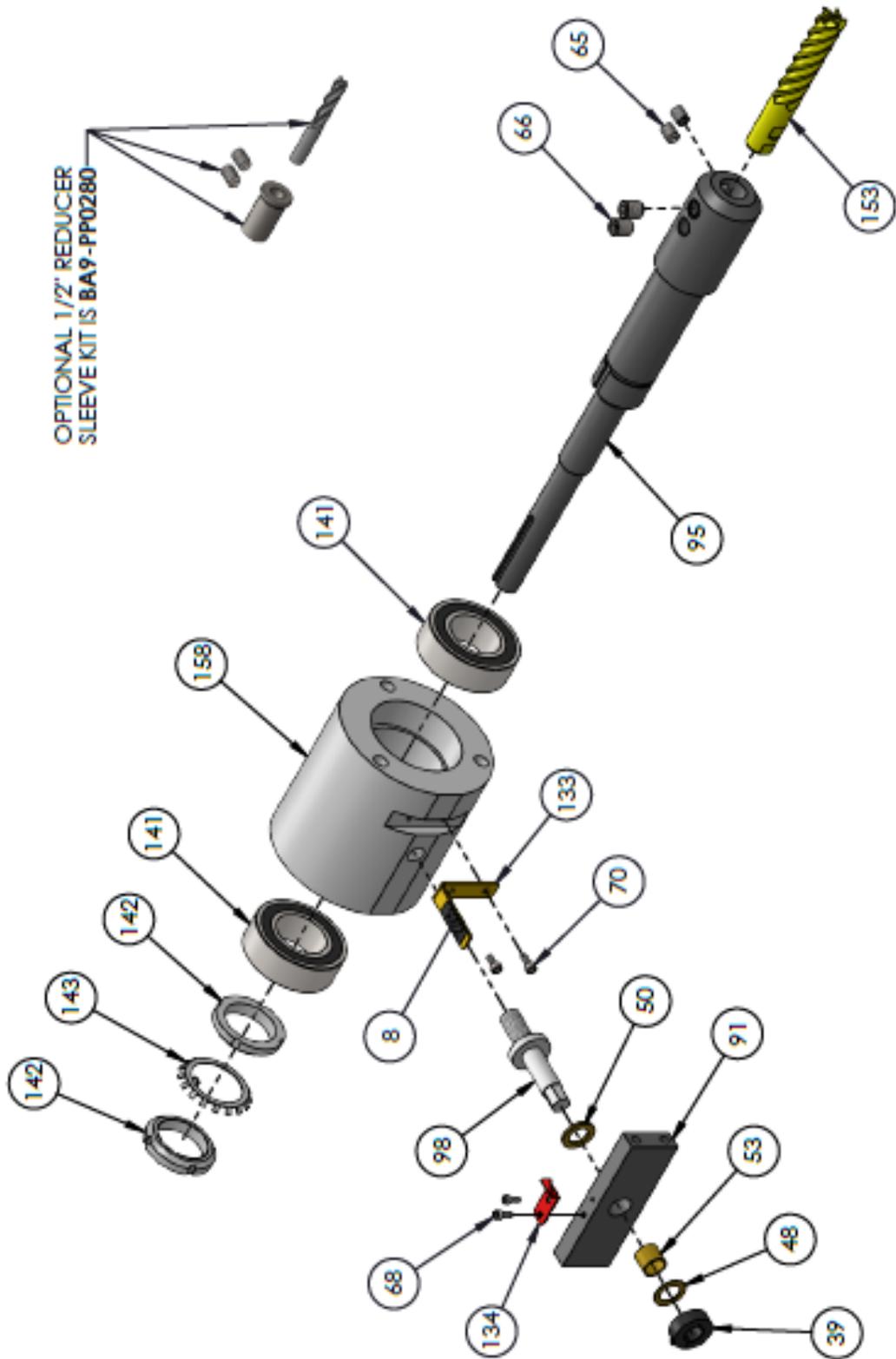
Problem	Solution
Chattering	Material too far out past vise
	Material not clamped tight in vise
	Vise lock lever is too loose
	Cutter is dull or loose
	"X", "Y" table gibs set too loose
	"V" rollers set too loose
Motor stops while notching	Feeding to fast
	Cutter is dull
	Not a good power source, circuit should be dedicated to this machine only
Main handwheel is tight or sticks in spots	Chips are stuck in the "v" rollers
	"V" rollers are set too tight, The "V" roller can be adjusted

13.0 Replacement Parts

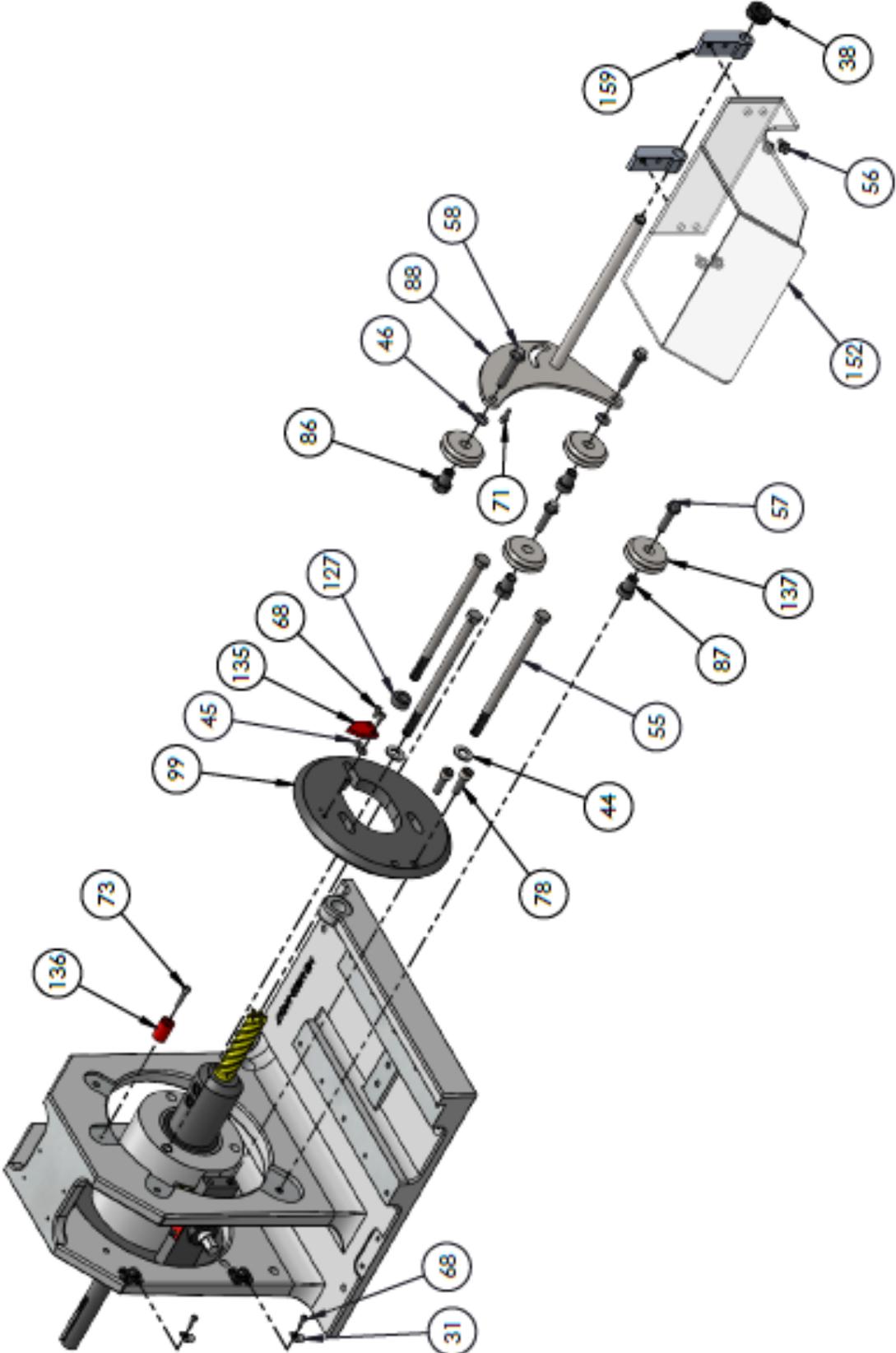
13.1.1 Upright Assembly – Exploded View



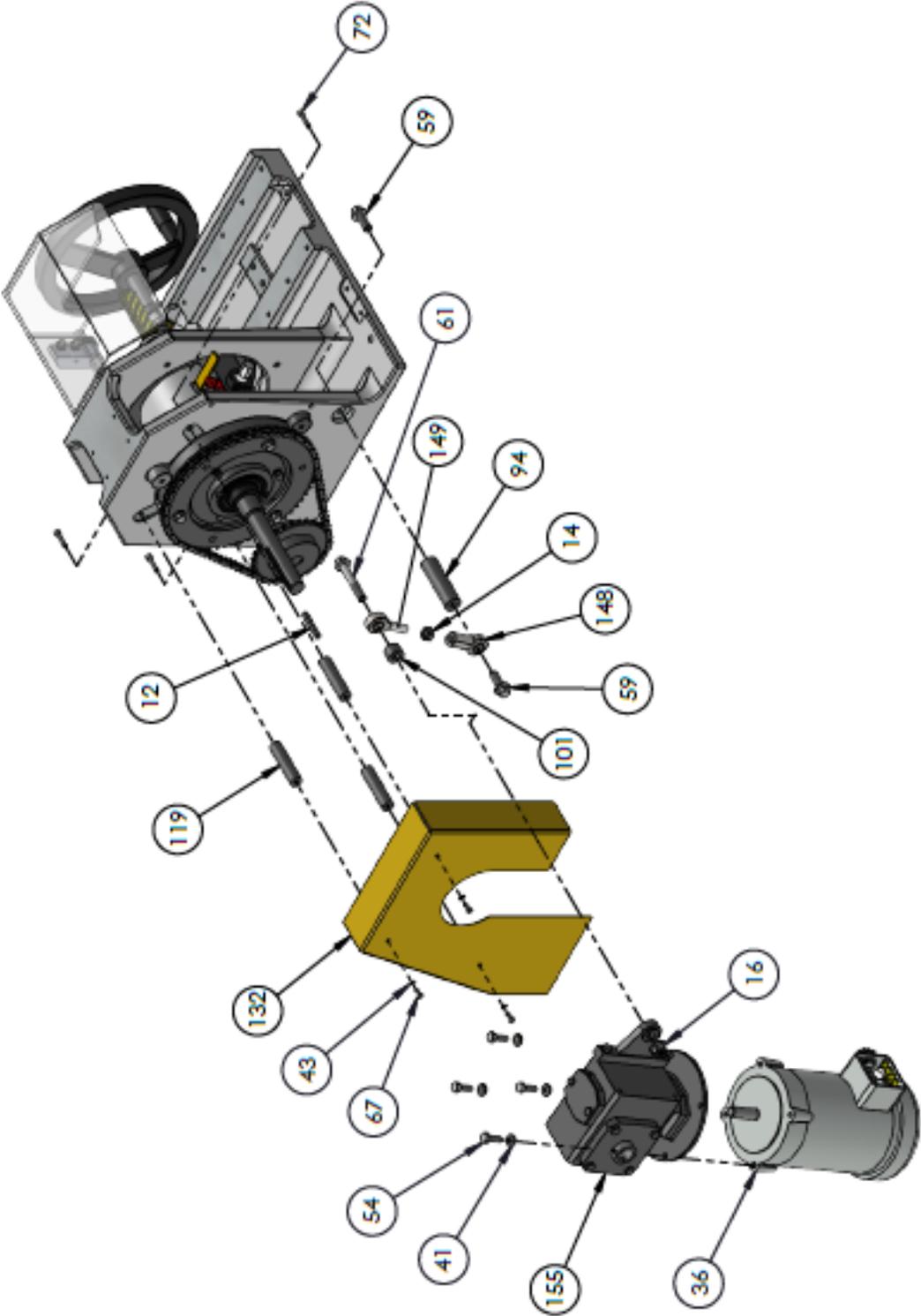
13.1.2 Spindle Assembly – Exploded View



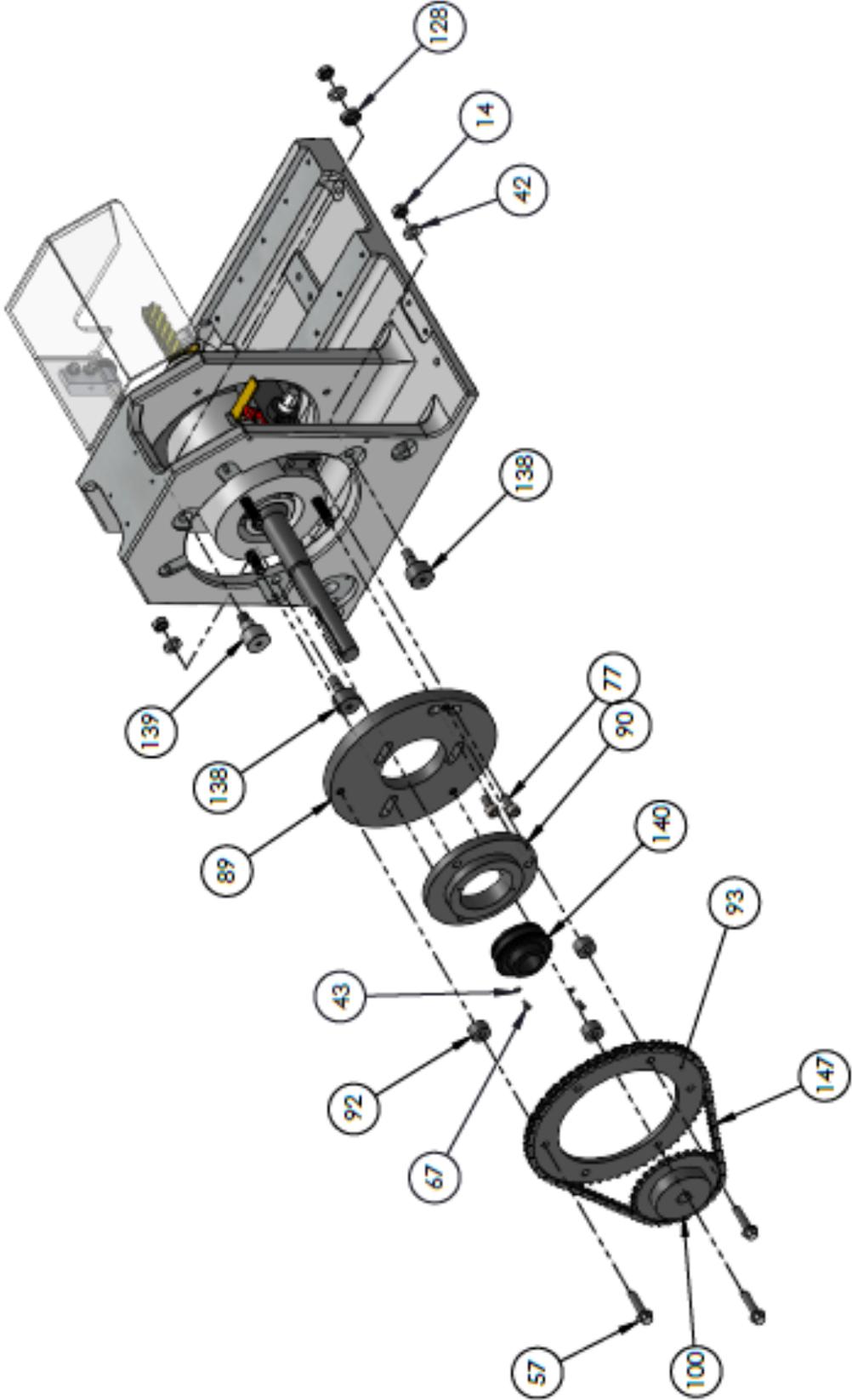
13.1.3 Forward Riser Assembly – Exploded View



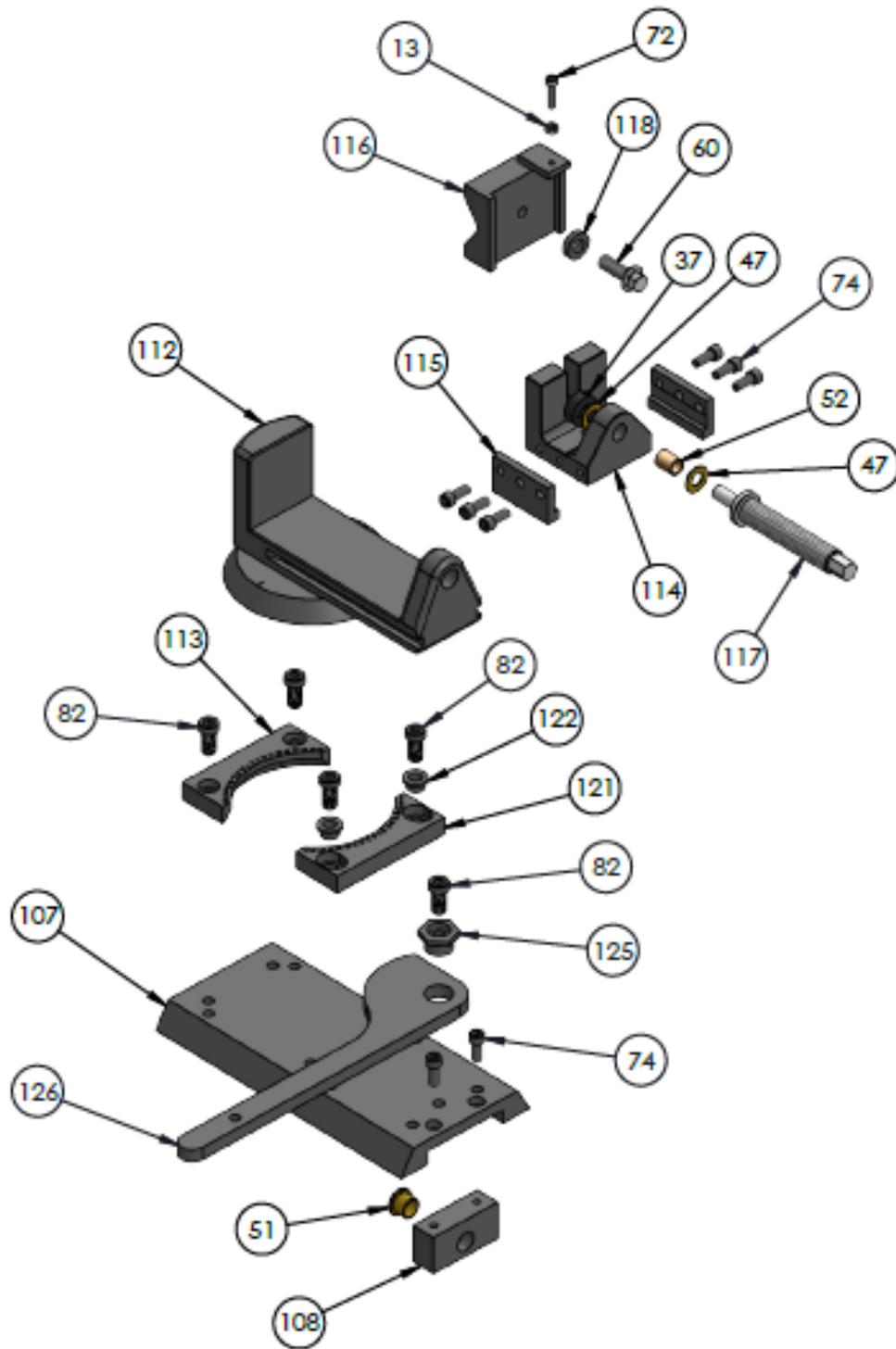
13.1.4 Motor and Gearbox Assembly – Exploded View



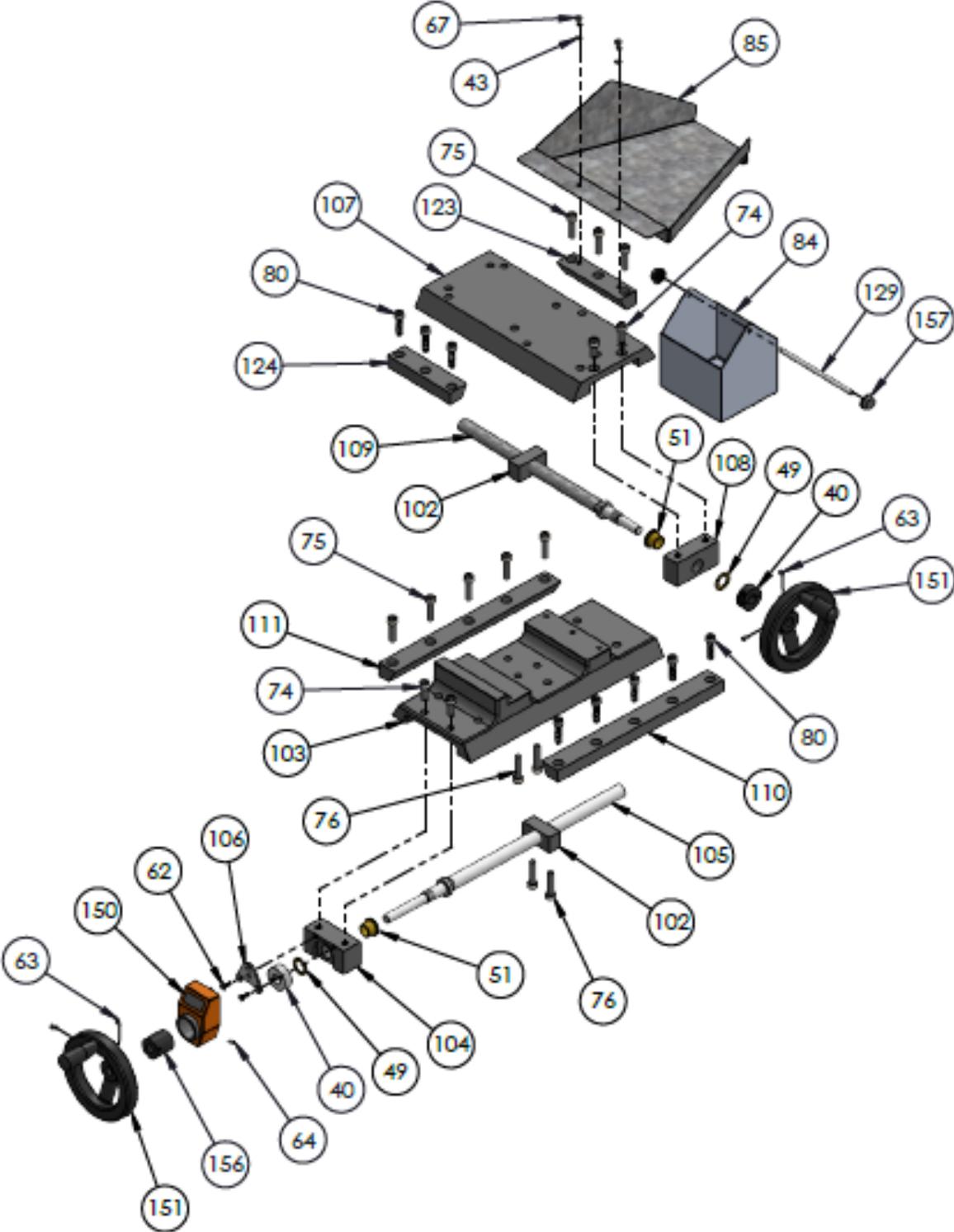
13.1.5 Rare Riser Assembly – Exploded View



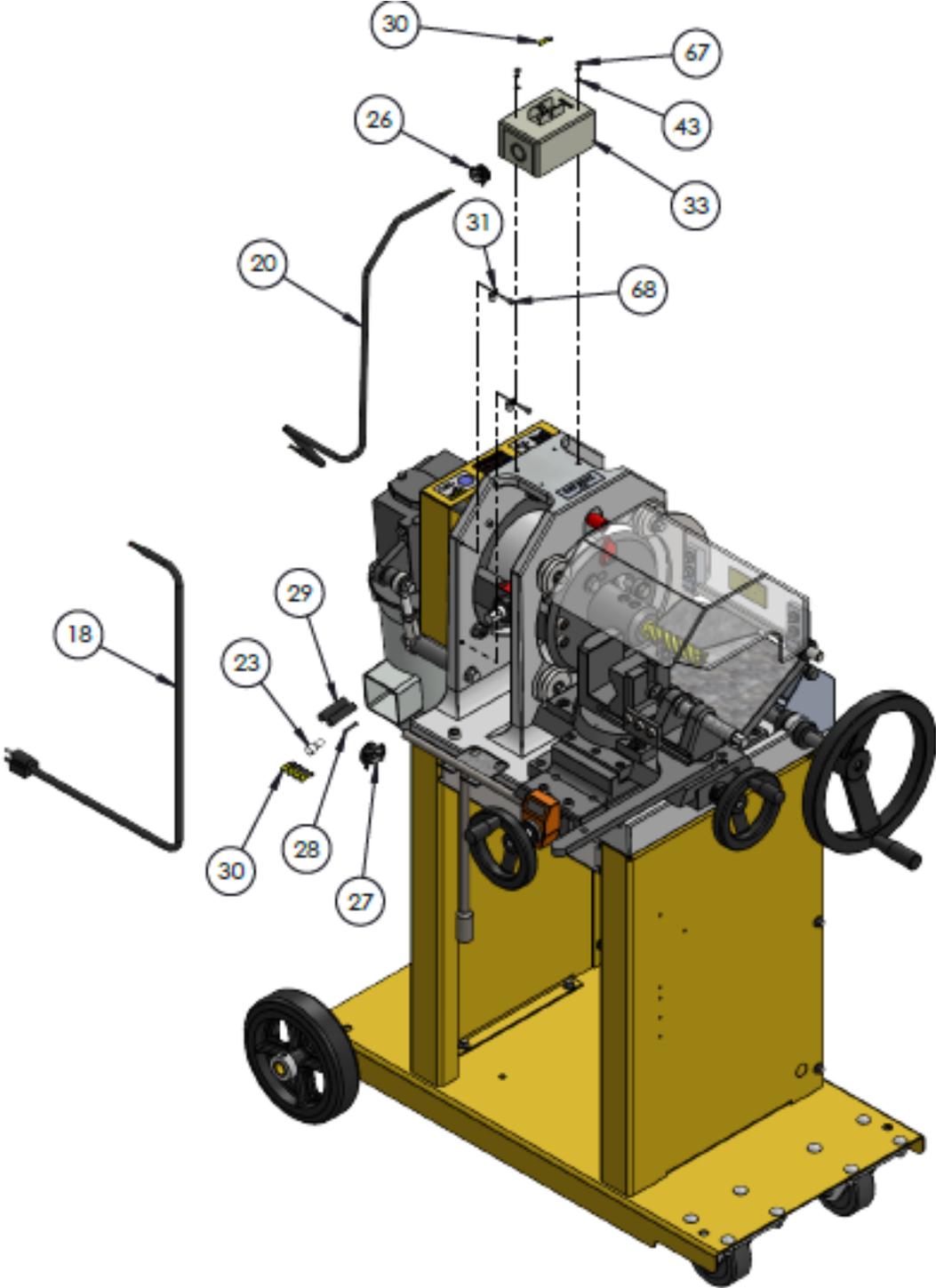
13.1.6 Crankshaft Assembly – Exploded View



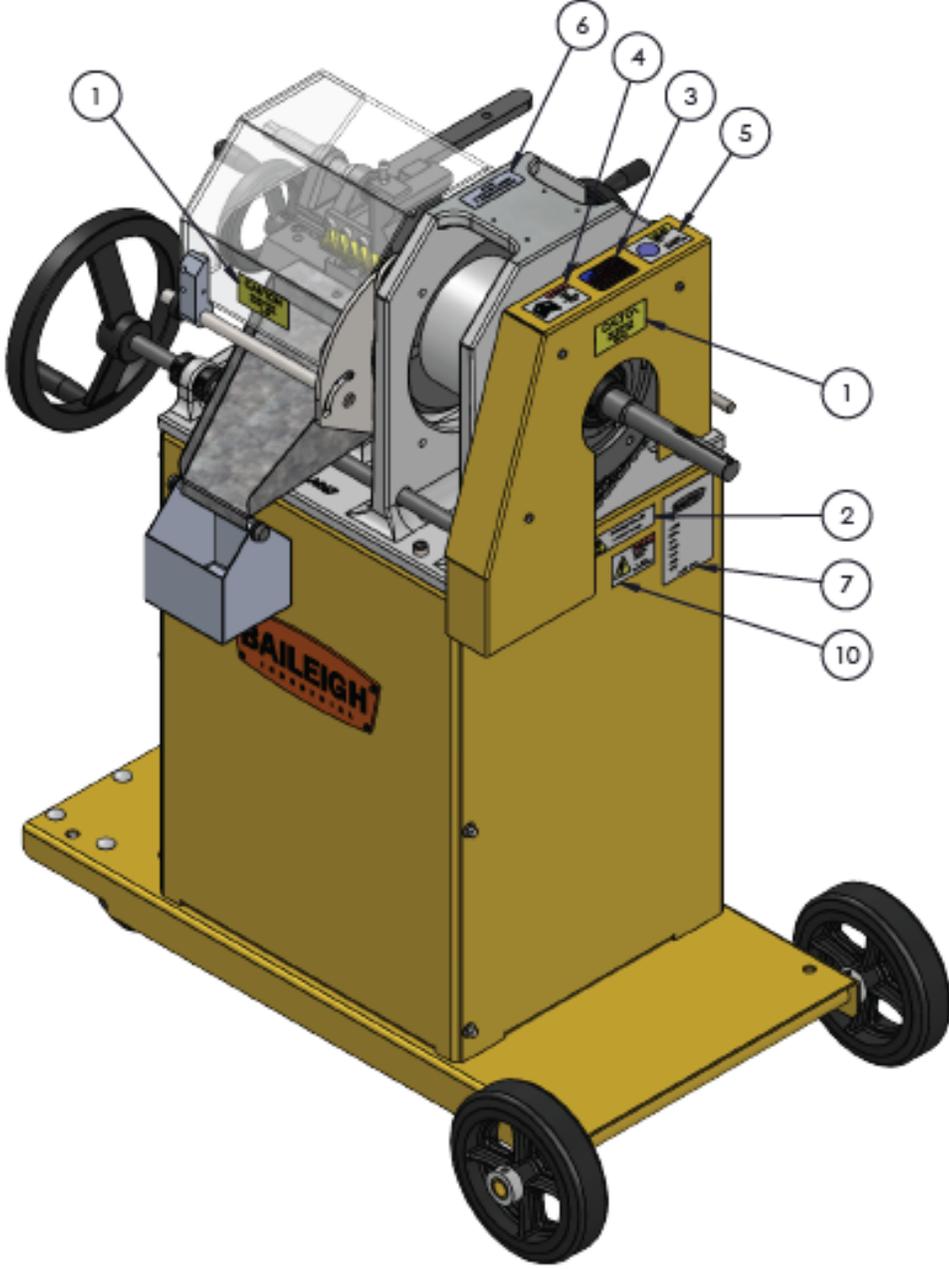
13.1.7 Slide Base Assembly – Exploded View



13.1.8 Electrical Assembly (U.S.) – Exploded View



13.1.9 U.S. & CSA Stickers Assembly – Exploded View



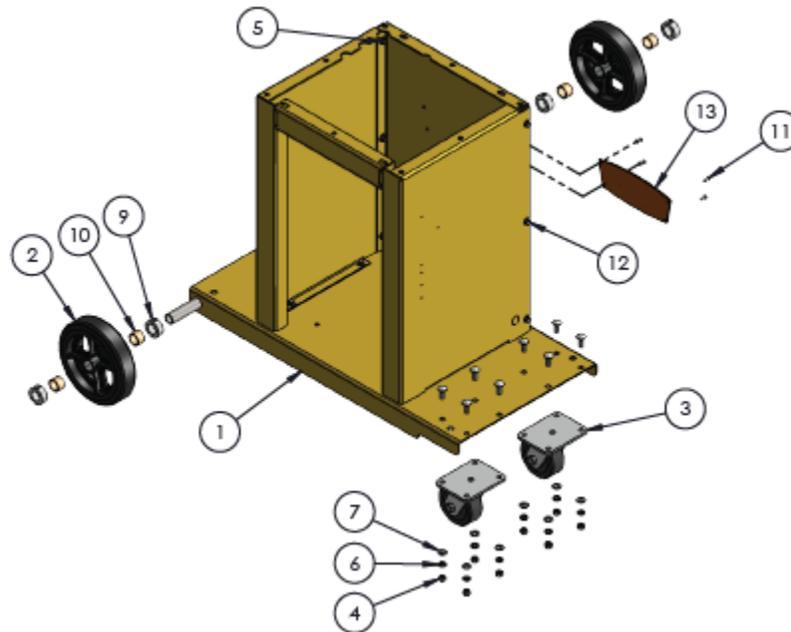
13.1.10 ME-TN800 (US, CE, CSA) – Parts List

Index No.	Part No.	Description	Size	Qty
1	BA9-PP0199	CAUTION: GAURDS STICKER		2
2	BA9-PP2260	WARNING: P65 CANCER STICKER		1
3	BA9-PP0260	PROUDLY MADE IN USA STICKER		1
4	BA9-PP1904	WARNING: READ MANUAL STICKER		1
5	BA9-PP1905	CAUTION: EYE PROTECTION STICKER		1
6	BA9-PP1207	PATENT STICKER		1
7	BA9-PP2095	BLANK ID TAG		1
8	BA9-PP0465	STICKER, INDICATOR (M800/TN800)		1
9	BA9-PP2094	BLANK ID TAG, CE		1
10	BA9-PP1908	WARNING: HAZARD VOLTAGE STICKER		1
11	BA9-PP2225	KEYSTOCK	3/16" X 1"	2
12	BA9-PP2226	KEYSTOCK	1/4" X 2"	1
13	CM9-BSM0182	HEX NUT, SILV ZINC, GR. 8.8	M6 X 1.0	1
14	CM9-BS0121	1/2-20 HEX NUT, SILV ZINC, GR. 5		4
15	CM9-BSM0206	SER FLG HEX NUT, SILV ZINC, GR. 8.8	M10 X 1.5	2
16	CM9-BSM0096	SER FLG HEX NUT, SILV ZINC, GR. 8.8	M12 X 1.75	1
17	CM9-BSM0207	NYLOCK NUT, SILV ZINC, GR. 8.8	M10 X 1.5	2
18	BA9-PP0519	U.S. POWER CORD 15 FT LONG		1
19	BA9-PP1010	CE POWER CORD (15 FT LG, 3G1.5)	M800	1
20	BA9-PP0026	US MOTOR CORD 12-3 AWG (39" LG)	M800	1
21	BA9-PP1010	CE MOTOR CORD (40" LG, 3G1.5)	M800	1
22	BA9-PP1023	DBL CABLE CLAMP (M800-CE)	5/16-3/8	2
23	BA9-PP2074	CRIMP CONNECTOR	8 AWG	1
24	BA9-PP2073	CRIMP CONNECTOR	22-12 AWG	1
25	BA9-PP0773	BLACK FERRULE (16 GA.)		4
26	BA9-PP0411	CORD CLAMP ASSEMBLY	1/2"	3
27	BA9-PP1187	CORD CLAMP ASSEMBLY	3/4"	1
28	BA9-PP1014	DIA HEAT SHRINK TUBING	3/16" (1" LG)	1
29	BA9-PP1086	DIA HEAT SHRINK TUBING	1/2" (2" LG)	3
30	CM9-BS0192	YELLOW #10 INSUL. RING TERM.	12-10 AWG	5
31	BA9-PP0371	NLYON CORD CLAMP	3/8"	2
32	BA9-PP1296	ON/OFF SWITCH (CE M800 120V)		1
33	BA9-PP0152	ON/OFF SWITCH (U.S.)		1
34	BA9-PP0366	SWITCH HEATER, CSA	M800	1
35	BA9-PP0365	ON/OFF SWITCH (CSA)		1
36	BA9-PP1080	1-HP 1-PHASE 115V MOTOR		1
37	BA9-PP0037	CLAMP COLLAR, BLK OXIDE	1/2"	1
38	BA9-PP0958	CLAMP COLLAR, BLK OXIDE	5/8"	1
39	BA9-PP0090	CLAMP COLLAR, BLK OXIDE	3/4"	3
40	BA9-PP0169	5/8-18 UNF CLAMP COLLAR, BLK OXIDE		2
41	CM9-BS0074	LOCK WASHER, SILVER ZINC, GR. 5	3/8"	4
42	CM9-BS0075	LOCK WASHER, SILV ZINC, GR. 5	1/2"	3
43	CM9-BSM0197	EXTERNAL STAR WASHER, SILV ZINC, GR. 8.8	M5	9
44	CM9-BS0085	FLAT WASHER, SILV ZINC, GR. 5	1/2"	2
45	CM9-BSM0196	FLAT WASHER, SILV ZINC, GR. 8.8	M5	2
46	CM9-BSM0199	EXTRA THICK FLAT WASHER, SILV ZINC, GR. 8.8	M10	2
47	BA9-PP0055	THRUST WASHER	.5 ID X 1.0 OD X .063 THK	2
48	BA9-PP0101	BRZ WAHSER	.75 ID X 1.25 OD X .0625 THK	1
49	BA9-PP0168	THRUST WASHER	.625 ID X 1.0 OD X .063 TK	2
50	BA9-PP0322	THRUST WASHER	0.75 ID X 1.25 OD X .125 TK	3
51	BA9-PP0167	LG FLG BUSH	0.625 ID X .625 ID X .75 OD X .625	2
52	BA9-PP0051	LG SLEEVE BUSHING	.5 ID X .625 OD X .75	1
53	BA9-PP0053	LG SLEEVE BUSHING	3/4 ID X 7/8 OD X 3/4	2

Index No.	Part No.	Description	Size	Qty
54	CM9-BS0041	HEX HEAD, SILV ZINC, GR. 5	3/8-16 X 1"	4
55	CM9-BS0055	HEX HEAD, SILV ZINC, GR. 5	1/2-13 X 8-1/2"	3
56	CM9-BSM0192	HEX FLG, SILV ZINC, GR. 10.9	M8 X 1.25 X 12	4
57	CM9-BSM0061	HEX FLG, SILV ZINC, GR. 10.9	M10 X 1.5 X 40	5
58	CM9-BSM0189	HEX FLG, SILV ZINC, GR. 10.9	M10 X 1.5 X 55	2
59	CM9-BSM0067	HEX FLG, SILV ZINC, GR. 10.9	M12 X 1.75 X 30	2
60	CM9-BSM0174	HEX FLG, SILV ZINC, GR. 10.9	M12 X 1.75 X 35	1
61	CM9-BSM0072	HEX FLG, SILV ZINC, GR. 10.9	M12 X 1.75 X 70	1
62	CM9-BSM0208	FSHCS, BLK OXIDE, GR. 12.9	M5 X 0.8 X 14	2
63	CM9-BS0313	CUP PT. SS, BLK OXIDE, GR. 8	1/4-20 X 1/4	6
64	CM9-BSM0093	CUP PT. SS, BLK OXIDE, GR. 12.9	M4 X 0.7 X 12	1
65	CM9-BSM0239	CUP PT. SS, BLK OXIDE, GR. 12.9	M12 X 1.75 X 16	2
66	CM9-BSM0204	CUP PT. SS, BLK OXIDE, GR. 12.9	M16 X 2.0 X 20	2
67	CM9-BSM0132	PPHMS, SILV ZINC, GR. 8.8	M5 X 0.8 X 10	9
68	CM9-BSM0115	SHCS, BLK OXIDE, GR. 12.9	M5 X 0.8 X 12	12
69	CM9-BSM0143	SHCS, BLK OXIDE, GR. 12.9	M5 X 0.8 X 20	2
70	CM9-BSM0183	SHCS, BLK OXIDE, GR. 12.9	M6 X 1.0 X 12	2
71	CM9-BSM0001	SHCS, BLK OXIDE, GR. 12.9	M6 X 1.0 X 16	1
72	CM9-BSM0003	SHCS, BLK OXIDE, GR. 12.9	M6 X 1.0 X 25	4
73	CM9-BSM0004	SHCS, BLK OXIDE, GR. 12.9	M6 X 1.0 X 30	5
74	CM9-BSM0008	SHCS, BLK OXIDE, GR. 12.9	M8 X 1.25 X 20	10
75	CM9-BSM0010	SHCS, BLK OXIDE, GR. 12.9	M8 X 1.25 X 30	8
76	CM9-BSM0298	SHCS, BLK OXIDE, GR. 12.9	M8 X 1.25 X 35	4
77	CM9-BSM0014	SHCS, BLK OXIDE, GR. 12.9	M10 X 1.5 X 20	2
78	CM9-BSM0016	SHCS, BLK OXIDE, GR. 12.9	M10 X 1.5 X 30	2
79	CM9-BSM0178	SHCS, BLK OXIDE, GR. 12.9	M10 X 1.5 X 35	4
80	CM9-BSM0195	SHCS W/THRD LOCK, BLK OXIDE, GR. 12.9	M8 X 1.25 X 30	8
81	CM9-BSM0102	BSHCS, BLK OXIDE, GR. 12.9	M8 X 1.25 X 10	2
82	CM9-BSM0171	LHSCS, BLK OXIDE, GR. 12.9	M12 X 1.75 X 25	5
83	BA9-M8006A102	HANDLE BRACKET		1
84	BA1-9488	CHIP CATCHER		1
85	BA1-9478	CHIP CHUTE OPEN END		1
86	BA9-MEM8007A041	ADJUSTABLE BUSHING		2
87	BA9-MEM8007A040	NON ADJUSTING BUSHING		2
88	BA9-M8005A017	STRADDLE ASSEMBLY		1
89	BA9-MEM8006A005	SUPPORT DISC		1
90	BA9-MEM8007A005	TAPPING PLATE		1
91	BA9-MEM8006A006	TIE BLOCK		1
92	BA9-M8007A007	SPROCKET SPACER		3
93	BA9-M8006A011	SPROCKET	60T	1
94	BA9-MEM8007A014	SPACER SHAFT		1
95	BA9-MEM8007A012	SPINDLE		1
96	BA9-MEM8007A020	BEARING BLOCK		1
97	BA9-M8007A009	HANDLE SHAFT		1
98	BA9-M8007A004	ADJUSTMENT SHAFT		1
99	BA9-MEM8006A004	FRONT VEE DISC		1
100	BA9-PP0150	30 TOOTH SPROCKET		1
101	BA9-M8007A008	ROD END SPACER		1
102	BA9-MEM8006A033	LEADSCREW BLOCK		2
103	BA9-MEM8006A025	BASE PLATE		1
104	BA9-MEM8006A072	END BLOCK		1
105	BA9-M8007A019	LONG LEAD SCREW		1
106	BA9-MEM8006A074	COUNTER SUPPORT		1
107	BA9-MEM8006A073	SLIDE BASE (TOP)		1
108	BA9-MEM8006A075	END BLOCK (W/O TAP)		1
109	BA9-M8007A018	SHORT LEAD SCREW		1
110	BA9-MEM8006A069	LONG GIB (THIN)		1
111	BA9-MEM8006A068	LONG GIB (THICK)		1
112	BA9-M8006A037	WISE BASE		1
113	BA9-MEM8006A059	FIXED WISE CLAMP		1
114	BA9-MEM8006A039	WISE SLIDE BLOCK		1

Index No.	Part No.	Description	Size	Qty
115	BA9-M8006A040	GIB KEY		2
116	BA9-MEM8005A005	V JAW ASS'Y FOR 1" TO 3"		1
117	BA9-M8005A008	WISE SCREW WELDMENT		1
118	BA9-M8007A022	WISE SPACER		1
119	BA9-MEM8007A010	GUARD SPACER		3
120	BA9-M8006A085	CE SWITCH MOUNT		1
121	BA9-MEM8006A060	MOVEABLE VISE CLAMP		1
122	BA9-MEM8007A025	SHOULDER WASHER		2
123	BA9-MEM8006A070	SHORT GIB (THICK)		1
124	BA9-M8006A071	SHORT GIB (THIN)		1
125	BA9-M8007A026	ECCENTRIC ADJUSTER		1
126	BA9-M8006A061	CAM HANDLE		1
127	BA9-M8007A042	BOLT SPACER		1
128	BA9-M8007A040	CAM WASHER		1
129	BA9-M8007A032	CHIP CATCHER SHAFT		1
130	BA9-M1505A007	MACHINE CART ASSEMBLY		1
131	BA9-MEM8006A067	M800 MAIN FRAME (METRIC)		1
132	BA9-M8006A046	CHAIN GAURD		1
133	BA9-M8006A104	INDICATOR PLATE		1
134	BA9-M8006A105	TUBE DIA. INDICATOR		1
135	BA9-MEM8006A012	POINTER		1
136	BA9-M8007A015PC	INDICATOR PIN		1
137	BA9-PP0091	V ROLLER		4
138	BA9-PP0086	CAM FOLLOWER (FIXED)		2
139	BA9-PP0087	CAM FOLLOWER (ADJUSTABLE)		1
140	BA9-PP0096	BEARING, FAFNIR, ER20		1
141	BA9-PP0119	SPINDLE BEARING		2
142	BA9-PP0114	SPINDLE BEARING LOCK NUT	M800	2
143	BA9-PP0115	LOCK RING		1
144	BA9-PP0094	OUTER RACE ONE WAY CLUTCH		1
145	BA9-PP0095	INNER RACE	.75 ID X 1.0 OD X 1.03 LG.	1
146	BA9-PP1031	HANDWHEEL (.625 BORE)	10"	1
147	BA9-PP0042	#40 ROLLER CHAIN,	39" LONG	1
148	BA9-PP0268	FEMALE ROD END	1/2"	1
149	BA9-PP0107	MALE ROD END	1/2"	1
150	BA9-PP1272	ELECTRIC COUNTER		1
151	BA9-PP1032	HANDWHEEL (.5 BORE)	5	2
152	BA9-M8005A015	M800 GUARD ASSEMBLY		1
153	BA9-PP0215	HSS ROUGHING ENDMILL	1"	1
154	BA9-PP0555	FIXED T-HANDLE	16MM (5/8")	1
155	BA9-PP1083	GEARBOX W/TORQUE ARM	M800	1
156	BA9-PP1273	ELECTRONIC COUNTER REDUCING SLEEVE		1
157	BA9-PP1271	PUSH-ON RETAINING CAP	1/4"	2
158	BA9-MEM8007A002	SPINDLE HUB		1
159	BA9-MEM8006A098	GUARD PIVOT		2
160	BA9-PP1793	ROUND "CE" STICKER	3/4"	1
161	BA9-PP0737	TRIANGLE VOLTAGE STICKER	1-1/4"	1

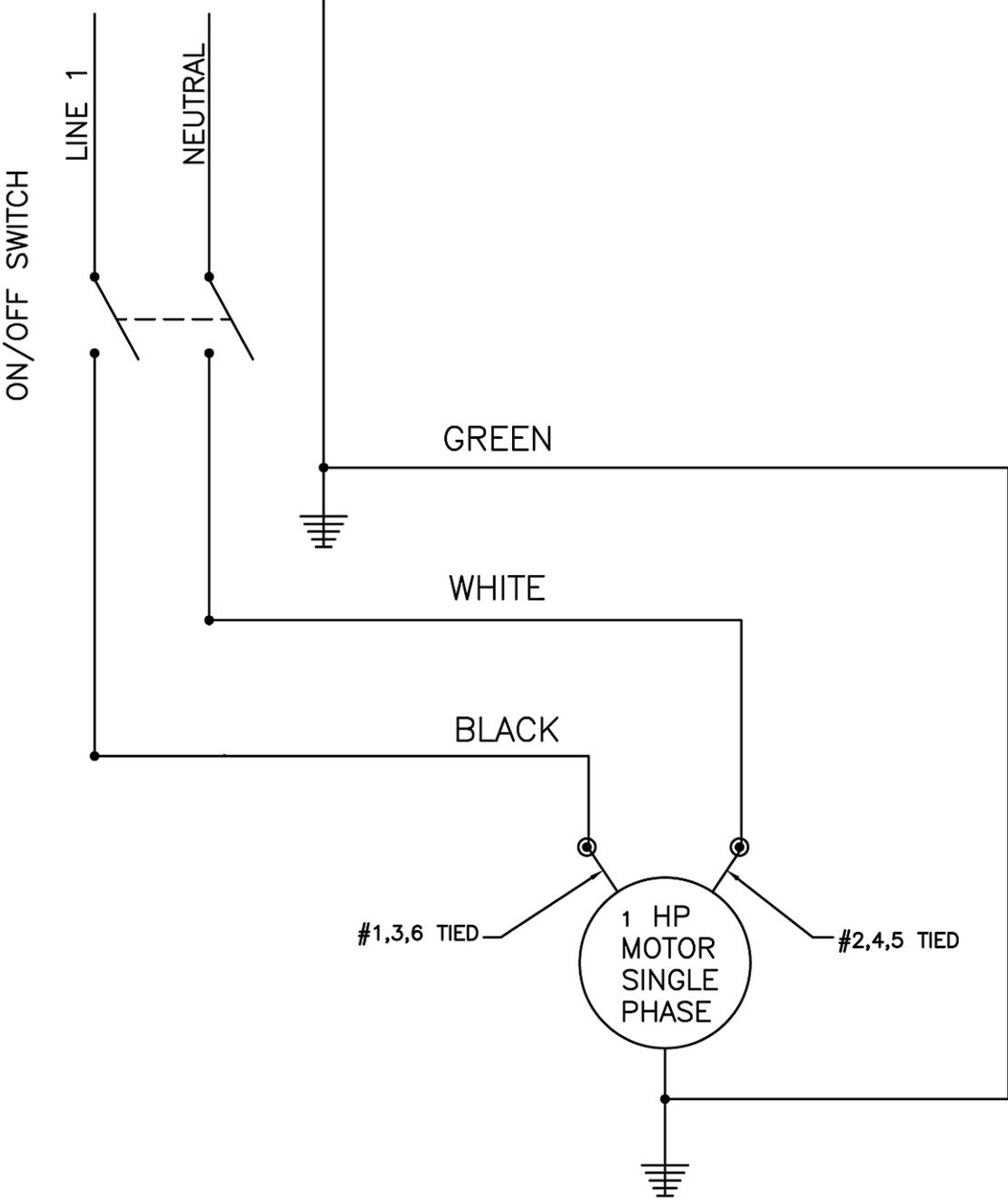
13.1.11 M150 Cart Assembly – Exploded View



13.1.12 M150 Cart Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	BA9-M1505A007	M150 CABINET ASSEMBLY		1
2	BA9-PP0064	RUBBER WHEEL	8"	2
3	BA9-PP0048	CASTER ASSEMBLY	4"	2
4	CM9-BS0125	3/8-16 HEX NUT, SILV ZINC, GR. 5		8
5	CM9-BSM0260	SER FLG HEX NUT, SILV ZINC, GR. 8.8	M8 X 1.25	8
6	CM9-BS0074	LOCK WASHER, SILV ZINC, GR. 5	3/8"	8
7	CM9-BS0083	FLAT WASHER, SILV ZINC, GR. 5	3/8"	8
8	CM9-BS0108	CARRIAGE BOLT, SILV ZINC, GR. 5	3/8-16 X 1	8
9	BA9-PP0035	SET SCREW COLLAR, SILVER ZINC	1"	4
10	BA9-PP0043	LG OIL IMP BRNZ BUSH (SAE 841)	1" ID X 1-3/16" OD X 3/4"	4
11	BA9-PP0487	ALUM. POP RIVET	3/16"	4
12	CM9-BSM0166	HEX FLG SCREW, SILV ZINC, GR. 10.9	M8 X 1.25 X 16	14
13	BA9-PP1912	LOGO PLATE	9"	1

14.0 Wiring Diagram



15.0 Warranty and Service

Thank you for your purchase of a machine from Baileigh Industrial. We hope that you find it productive and useful to you for a long time to come.

Inspection & Acceptance. Buyer shall inspect all Goods within ten (10) days after receipt thereof. Buyer's payment shall constitute final acceptance of the Goods and shall act as a waiver of the Buyer's rights to inspect or reject the Goods unless otherwise agreed. If Buyer rejects any merchandise, Buyer must first obtain a Returned Goods Authorization ("RGA") number before returning any Goods to Seller. Goods returned without an RGA will be refused. Seller will not be responsible for any freight costs, damages to Goods, or any other costs or liabilities pertaining to Goods returned without an RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special-order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

Specifications. Seller may, at its option, make changes in the designs, **specifications**, or components of the Goods to improve the safety of such Goods, or if in Seller's judgment, such changes will be beneficial to their operation or use. Buyer may not make any changes in the specifications for the Goods unless Seller approves of such changes in writing, in which event Seller may impose additional charges to implement such changes.

Limited Warranty. Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain an RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without an RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 10 days from date of receipt. The foregoing warranty is Seller's sole obligation, and the original end-user's exclusive remedy, with regard to any defective Goods. This limited warranty does not apply to: (a) die sets, tooling, and saw blades; (b) periodic or routine maintenance and setup, (c) repair or replacement of the Goods due to normal wear and tear, (d) defects or damage to the Goods resulting from misuse, abuse, neglect, or accidents, (f) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

EXCLUSION OF OTHER WARRANTIES. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY AND ALL OTHER EXPRESS, STATUTORY, OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. NO WARRANTY IS MADE WHICH EXTENDS BEYOND THAT WHICH IS EXPRESSLY CONTAINED HEREIN.

Limitation of Liability. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR DOWN TIME) ARISING FROM OR IN MANNER CONNECTED WITH THE GOODS, ANY BREACH BY SELLER OR ITS AGENTS OF THIS AGREEMENT, OR ANY OTHER CAUSE WHATSOEVER, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY. BUYER'S REMEDY WITH RESPECT TO ANY CLAIM ARISING UNDER THIS AGREEMENT IS STRICTLY LIMITED TO NO MORE THAN THE AMOUNT PAID BY THE BUYER FOR THE GOODS.

Force Majeure. Seller shall not be responsible for any delay in the delivery of, or failure to deliver, Goods due to causes beyond Seller's reasonable control including, without limitation, acts of God, acts of war or terrorism, enemy actions, hostilities, strikes, labor difficulties, embargoes, non-delivery or late delivery of materials, parts and equipment or transportation delays not caused by the fault of Seller, delays caused by civil authorities, governmental regulations or orders, fire, lightning, natural disasters or any other cause beyond Seller's reasonable control. In the event of any such delay, performance will be postponed by such length of time as may be reasonably necessary to compensate for the delay.

Installation. If Buyer purchases any Goods that require installation, Buyer shall, at its expense, make all arrangements and connections necessary to install and operate the Goods. Buyer shall install the Goods in accordance with any Seller instructions and shall indemnify Seller against any and all damages, demands, suits, causes of action, claims and expenses (including actual attorneys' fees and costs) arising directly or indirectly out of Buyer's failure to properly install the Goods.

Work By Others; Safety Devices. Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation, or provision of Goods. Buyer is solely responsible for furnishing and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operator manuals, ANSI or comparable safety standards, OSHA regulations and other sources of safety standards and regulations applicable to the use and operation of the Goods.

Remedies. Each of the rights and remedies of Seller under this Agreement is cumulative and in addition to any other or further remedies provided under this Agreement or at law or equity.

Attorney's Fees. In the event legal action is necessary to recover monies due from Buyer or to enforce any provision of this Agreement, Buyer shall be liable to Seller for all costs and expenses associated therewith, including Seller's actual attorney fees and costs.

Governing Law/Venue. This Agreement shall be construed and governed under the laws of the State of Wisconsin, without application of conflict of law principles. Each party agrees that all actions or proceedings arising out of or in connection with this Agreement shall be commenced, tried, and litigated only in the state courts sitting in Manitowoc County, Wisconsin or the U.S. Federal Court for the Eastern District of Wisconsin. Each party waives any right it may have to assert the doctrine of "forum non conveniens" or to object to venue to the extent that any proceeding is brought in accordance with this section. Each party consents to and waives any objection to the exercise of personal jurisdiction over it by courts described in this section. Each party waives to the fullest extent permitted by applicable law the right to a trial by jury.

Summary of Return Policy:

- 10 Day acceptance period from date of delivery. Damage claims and order discrepancies will not be accepted after this time.
- You must obtain a Baileigh Industrial issued RGA number PRIOR to returning any materials.
- Returned materials must be received at Baileigh Industrial in new condition and in original packaging.
- Altered items are not eligible for return.
- Buyer is responsible for all shipping charges.
- A 30% re-stocking fee applies to all returns.

Baileigh Industrial makes every effort to ensure that our posted specifications, images, pricing, and product availability are as correct and timely as possible. We apologize for any discrepancies that may occur. Baileigh Industrial reserves the right to make any and all changes deemed necessary in the course of business including but not limited to pricing, product specifications, quantities, and product availability.

For Customer Service & Technical Support:

Please contact one of our knowledgeable Sales and Service team members at:
(920) 684-4990 or e-mail us at Baileigh-Service@jpwindustries.com



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