
PISTORIUS

MACHINE CO., INC.

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1785 EXPRESS DRIVE, HAUPPAUGE, NEW YORK, U.S.A. 11788

DOUBLE MITER SAW

MN100, MN101 - 10"

MN200, MN201 - 12"

MN300, MN301 - 14"

OPERATING INSTRUCTIONS

SERVICE & PARTS MANUAL

SERIAL NUMBER _____

SA



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PISTORIUS DOUBLE MITER SAW
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MACHINE SPECIFICATIONS

Sawblade capacity (maximum diameter).	MN-100, MN-101 (10") MN-200, MN-201 (12") MN-300, MN-301 (14")
Arbor diameter.	5/8" (15.9mm)
Horsepower (standard).	1-1/2 horsepower
Horsepower (optional).	3 horsepower
Motor RPM (60 cycle).	3450
Motor RPM (50 cycle).	2950
Electrics (standard).	208-230/460 volt, 3 phase, 60 cycle
Electrics (optional).	575 volt, 3 phase, 60 cycle 380 volt, 3 phase, 50 cycle
Amps (1-1/2 horsepower motors)	
208 volts	10.0A
230 volts	8.7A
460 volts	4.4A
575 volts	3.5A
380 volts, 50 cycle.	5.3A

Note; For special electrics, amp ratings are listed on motor label.

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Switch. Two IEC size A, magnetic starters mounted in a common enclosure with recessed start switch and extended stop switch. Control circuit operates on 24 volt and a pilot light indicates the machine is running.

Air consumption (w/o accessories). 1.5 SCFM

Air pressure 65 psi

Miter Cutting Capacities

MN-100, MN-101 (10" blade).	2-5/8" H x 2-5/8"W (67mm) (67mm)
MN-200, MN-201 (12" blade).	2-5/8" H x 3-5/16"W (67mm) (84mm)
MN-300, MN-301 (14" blade).	2-5/8" H x 4"W (67mm) (102mm)

Toe notch cutting capacities

MN-101 (10" blade).	3-1/4" x 3-1/4" (83mm) (83mm)
MN-201 (12" blade).	4-1/4" x 4-1/4" (108mm) (108mm)
MN-301 (14" blade).	5-1/4" x 5-1/4" (133mm) (133mm)

Note: Maximum thickness capacity when toe kick notching is 1-1/4" to 1-1/2".

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Table height from floor.35-1/2" (902mm)
Exhaust Outlet (optional)	Two 4" OD (102mm)
(requires approximately 400 CFM per outlet for a total of 800 to 900 CFM)	
Drive	Non slip cog belt
Actuation.	Air valve, fully guarded, foot operated, spring return.
Cycle rate.	Fully adjustable, actual rate is dependent on material being processed.
Weight (without accessories)	
Uncrated.	551 lbs. (250 kg.)
Crated domestic	651 lbs. (296 kg.)
Crated export.	676 lbs. (307 kg.)
Overall Size	39"W x 24"D x 54"H
	991mm 610mm 1372mm

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WARRANTY (See back of invoice)

The products covered herein are warranted, for a period of six (6) months from date of shipment, against defects in material and workmanship under normal use and service by Buyer. NO OTHER WARRANTIES ARE TO BE IMPLIED WITH RESPECT THERE-TO. The liability of Seller under its warranty is limited to adjustment, in accordance with the Warranty Adjustment Terms set forth below, for products which are found to be defective by Seller in the form in which they were originally shipped. In no event will Seller be liable for collateral, consequential or other damages of any kind or nature.

WARRANTY ADJUSTMENT TERMS

- (a) Adjustments will be limited to claims which are presented promptly after the product is found to be defective, and within the aforesaid warranty period.
- (b) All products claimed to be defective will be subject to an inspection and test by Seller. Normally, Seller will request return of products for inspection and testing. However, Seller reserves the right to make inspection and test on buyer's premises. Returns are to be made only as and if authorized in writing by Seller.
- (c) Buyer will pay all packing, inspection, labor, and transportation costs involved. Credit for the transportation costs will only be issued by Seller provided adjustment subsequently is allowed.
- (d) No adjustment will be allowed for products which have been subjected to abuse, improper installation or application, alteration, accident or negligence in use, storage, transportation or handling; nor for products on which original identification markings have been removed, defaced or altered.

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(e) Final determination as to whether any adjustment is allowable, and as to the extent thereof, rests with the Seller. Full adjustment, if allowed, will normally be replaced in kind on an exchange basis. Pro rata adjustment, if allowed, will be made by the issuance of credit. In all cases, however, Seller reserves the right to make adjustment by repair, replacement or credit.

(f) Replacements for products found subject to adjustment, whether new or repaired, will be shipped F.O.B. city of destination with transportation charges prepaid by Seller.

RESPONSIBILITY OF INSTALLATION

Buyer shall install machinery purchased from Seller at Buyer's cost and expense, unless otherwise expressly stipulated, in writing: At the request of Buyer, Seller will recommend competent engineers to supervise the installation and to instruct the Buyer in the proper operation of the machinery and equipment. During such period of supervision and instruction, such personnel shall be deemed to be employees of the Buyer who shall pay the wages, remuneration, board and traveling expenses of such personnel. Seller's recommendation of such personnel shall not make Seller liable, directly or indirectly, in any manner whatsoever, for any damages resulting from any act of commission, or omission or any misfeasance, on the part of any of said personnel.

IMPORTANT NOTICE TO PURCHASER AND USER

All material contained herein is based on tests and information we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential arising out of the use or the inability to use the product described herein. Manufacturer offers inspection by buyer and user of product prior to shipment from factory with adequate notice. **BEFORE USING, USER SHALL SOLELY DETERMINE THE**

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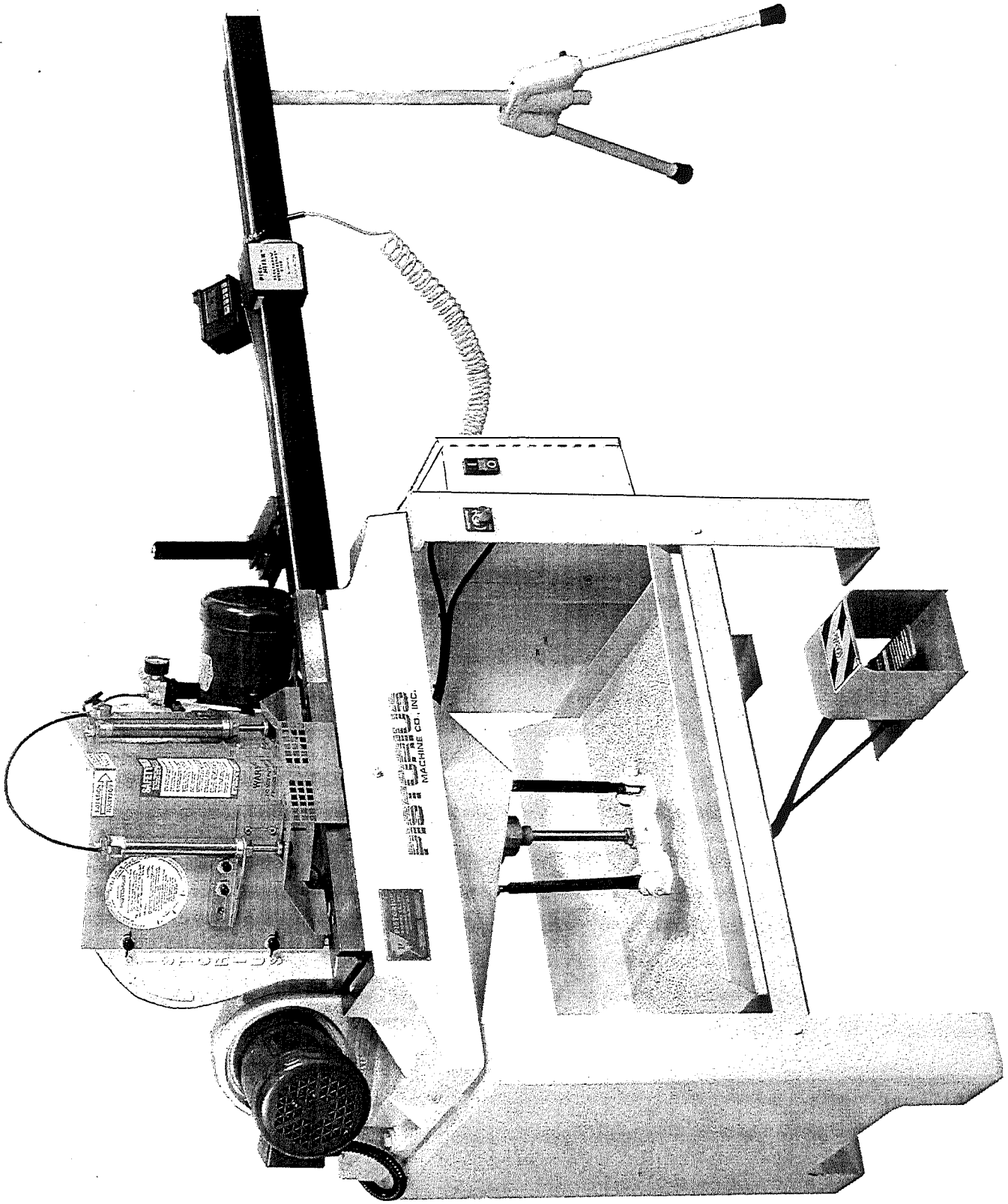
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SUITABILITY OF THE PRODUCT FOR HIS INTENDED USE AND USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION WITH STRICT COMPLIANCE WITH FEDERAL, STATE AND LOCAL HEALTH AND SAFETY ORDINANCES TO ITS INTENDED USE.



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SECTION 1 : STANDARD SAFETY DEVICES

Safety at Pistorius is always a mayor concern and all double miter machines are equipped with the following safety devices:

A. FOOT PEDAL SAFETY GUARD (pneumatic activation)

- The actuating footpedal is equipped with a heavy sheet metal guard surrounding the pedal tongue. The shield will help prevent unintentional actuation by falling material, etc.

B. CONTROLS

- The actuating footpedal is equipped with a spring which automatically reverses the cycle of the machine when it is released by the operator.

C. SAWHOOD/ GUARD

- On all models, when the sawblade is in the home position (fully up), the cast aluminum and steel hood and front cover completely surrounds the blade.

D. FRONT SAFETY GUARD

- On all models, a heavy gauge sheet metal safety guard is provided to reduce the work tunnel opening to the minimum required to suit the material being cut. The sheet metal can easily be cut to the shape of the part being cut to allow minimum work tunnel opening with the material in place. Additional safety guards should be ordered for additional material shapes that are to be cut on the saw so as to always maintain a minimum opening for the material to pass through when cut.

E. ILLUMINATED ON SWITCH

- All models are equipped with illuminated ON/OFF switch which lights when the machine is on to alert all workers that the machine is running in a noisy enviroment.

F. LOCKOUTS

- All machines are equipped with electrical and pneumatic lock-able lockouts.

NOTE: Electrical and pneumatic lockouts became standard equipment beginning in the 1989 / 90 year- Consult Pistorius Machine Co. to see if your machine is equipped with this features to meet current OSHA guidelines.

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SECTION 2: SAFETY RULES

READ CAREFULLY BEFORE ATTEMPTING TO OPERATE THE MACHINE

1. NEVER ATTEMPT TO OPERATE OR SERVICE THE MACHINE UNLESS THOROUGHLY INSTRUCTED IN ITS SAFE AND PROPER USE.
2. DO NOT OPERATE THE MACHINE UNLESS ALL SAFETY GUARDS, SHIELDS AND COVERS ARE IN POSITION AND PROPERLY ADJUSTED.
3. REMOVE OR CONFINE ALL LOOSE ARTICLES OF CLOTHING, HAIR, JEWELRY, BRACELETS, NECKLACES, ETC.
4. USE SAFETY GLASSES TO PROTECT EYES, GLOVES TO PROTECT HANDS AND APPROVED RESPIRATOR WHEN PROCESSING WOOD, FIBERGLASS AND USING SPRAY MIST LUBRICANTS.
5. DO NOT PLACE ANY PART OF THE BODY INSIDE GUARDS, SHIELDS OR COVERS.
6. WHEN MAKING ADJUSTMENTS, CHANGING TOOLING, CLEANING, ROUTINE MAINTENANCE OR SERVICE, DISCONNECT INCOMING COMPRESSED AIRLINE AND ELECTRICAL SERVICE TO RENDER THE MACHINE TOTALLY INOPERABLE. NEVER ASSUME THAT THE MACHINE IS OFF.
7. WHEN LEAVING THE WORK AREA FOR ANY EXTENDED TIME (LUNCH BREAK, ETC), TURN THE MACHINE OFF.
8. KEEP THE FLOOR, MACHINE AND SURROUNDING AREA CLEAN AND FREE FROM SCRAP, SAWDUST/CHIPS, OIL AND GREASE TO AVOID THE DANGER OF SLIPPING.
9. PRIOR TO USE, INSPECT THE MACHINE FOR PROPER FUNCTIONING, WORN OR BROKEN PARTS, CORRECT SAWBLADE ROTATION, SHARP AND PROPER TOOLING.
10. DO NOT USE THE MACHINE UNLESS IT IS CLEAN AND IN GOOD OPERATING CONDITION.
11. DO NOT ATTEMPT TO ALTER THE MACHINE OR TO OPERATE OUTSIDE OF ITS DESIGN LIMITS OR INTENDED USE.

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SECTION 3: INSTALLATION

3.1 UNPACKING/INSPECTION

Upon receipt, check the machine and shipping container for any damage. Report any transportation damage to the delivering carrier and indicate same on the bill of lading, and request an immediate inspection for assessment of damage. Claim should then be entered with the carrier. In the event of any damage or shortage we are willing to assist you in every possible way in collecting claims for loss or damage. This willingness on our part does not make us responsible for collection of claims or replacement of the material.

3.2 PLACEMENT

After unpacking, select a suitable location, allowing enough room around the machine for safe unobstructed work flow (material handling), cleaning and maintenance.

3.3 SEATING

The machine should sit firmly on the ground without rocking or wobbling. If necessary shim under the machine legs. The legs are supplied with mounting holes to secure the machine to the floor if possible.

3.4 ELECTRIC CONNECTION

Route electrical line to the machine with the proper electrical characteristics and wire into the provided switch located on the machine cabinet. Be sure to provide a fused disconnect switch. It is recommended that the machine not be hardwired, but that a cord with a NEMA approved plug be installed to allow positive disconnect of the machine during cleaning, adjustments, maintenance, etc. Check the tag on the machine for the proper electric connection (The machine should be wired by a licensed electrician to meet all Federal, State, and local electrical codes). If the tag is missing check with the factory.

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CAUTION; Before attempting to run the machine after making final electrical connection, you must determine the direction of rotation. The spindle/sawblades must rotate in the direction indicated by the installed rotation arrows. To sample direction of the spindles as wired, jog the start switch and immediately push the stop switch. The spindles will begin to turn in the direction according to the wiring. If the rotation sampled is opposite to the required rotation indicated, do not attempt to operate the machine. Change wiring to correct rotation. If the machine is run with reverse wiring, it could cause the sawblades to loosen on the spindle shaft, regardless of how tight the spindle flange is made.

3.5 COMPRESSED AIR

All models require the use of an external source of compressed air. For all models route an airline to the machine. CAUTION; If a rubber hose is used be sure that it does not lay on the floor in the way of normal operator movement. It should not be allowed to cause a fall. It is recommended that the compressed airline drop from the overhead. The airline connection should be made with a quick disconnect fitting to allow for positive lockout disconnect of the machine from the air source when performing adjustments, cleaning, maintenance, etc.

On machines equipped with the optional airline filter, regulator and lubricator, make the air connection to the incoming end of the unit mounted on the side of the machine cabinet. On machines not so equipped, air connection is made directly to the footpedal or other marked and identified inlet.

CAUTION; When air pressure is introduced to the machine, the sawheads may immediately move to their home position within the sawhood. Therefore use extreme caution to stand clear of the machine on initial startup.

Note: For shipping purposes the footpedal is temporarily stored between the sawheads and the table on the back side of the machine. Lift up sawheads and place footpedal in front of machine.

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After air pressure is applied the saw is activated by stepping on the footpedal. The footpedal is equipped with a spring which will immediately reverse the direction of the saw when it is released, thereby allowing the operator to interrupt the cycle at any time. The pedal must be held down until the saw has completed its full stroke and parted the material being cut.

NOTE; NEVER ATTEMPT TO OPERATE THE MACHINE UNLESS ALL SAFETY GUARDS, SHIELDS, COVERS AND SAFETY WARNINGS ARE IN PLACE.

The sawblade feed rate is normally factory set, however it is infinitely adjustable on the downstroke only. To adjust the downstroke speed of the saw, locate the drive cylinder mounted under the table of the machine. The flow control is located at the bottom end of the cylinder.

Flow control adjustments are made by loosening the lock nut on the flow control stem and rotate the stem left or right to adjust speed. After the desired speed is achieved, retighten the lock nut. The correct feed speed is a function of the type of material, the shape of the material and the sawblade design. As a general rule the proper speed should not allow the motor to labor and the quality of cut should be as good as the cutter and material will allow.

NOTE; NEVER ATTEMPT TO OPERATE THE MACHINE UNLESS ALL SAFETY GUARDS, SHIELDS, COVERS AND SAFETY WARNINGS ARE IN PLACE.

3.6 DUST COLLECTION

If the machine has been equipped with the optional sawdust/ chip exhaust duct, route high quality 4" ID (inside diameter) flexible rubber hoses to the outlets. Secure the hose with a stainless steel adjustable hose clamp.

CAUTION; NEVER MAKE A RIGID CONNECTION WITH SHEET METAL TO THE HOOD WHICH WILL IN ANY WAY HINDER ITS ABILITY TO FREELY MOVE WITHIN ITS FULL RANGE OF INTENDED MOVEMENT.

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Attach the flexible hose on the opposite end to a suitable dust collection device or system adequate for the volume and nature of the dust/chips created. Each 4" requires at least 400 CFM of air volume.

When running the machine ensure that the dust/chips are clearing the sawhood and not clogging the hose inlet. If the machine is run without dust collection, the dust/chips will be thrown from the sawblade during cutting. Ensure that the exhausted dust/chips are not a hazard to the operator or passing traffic.

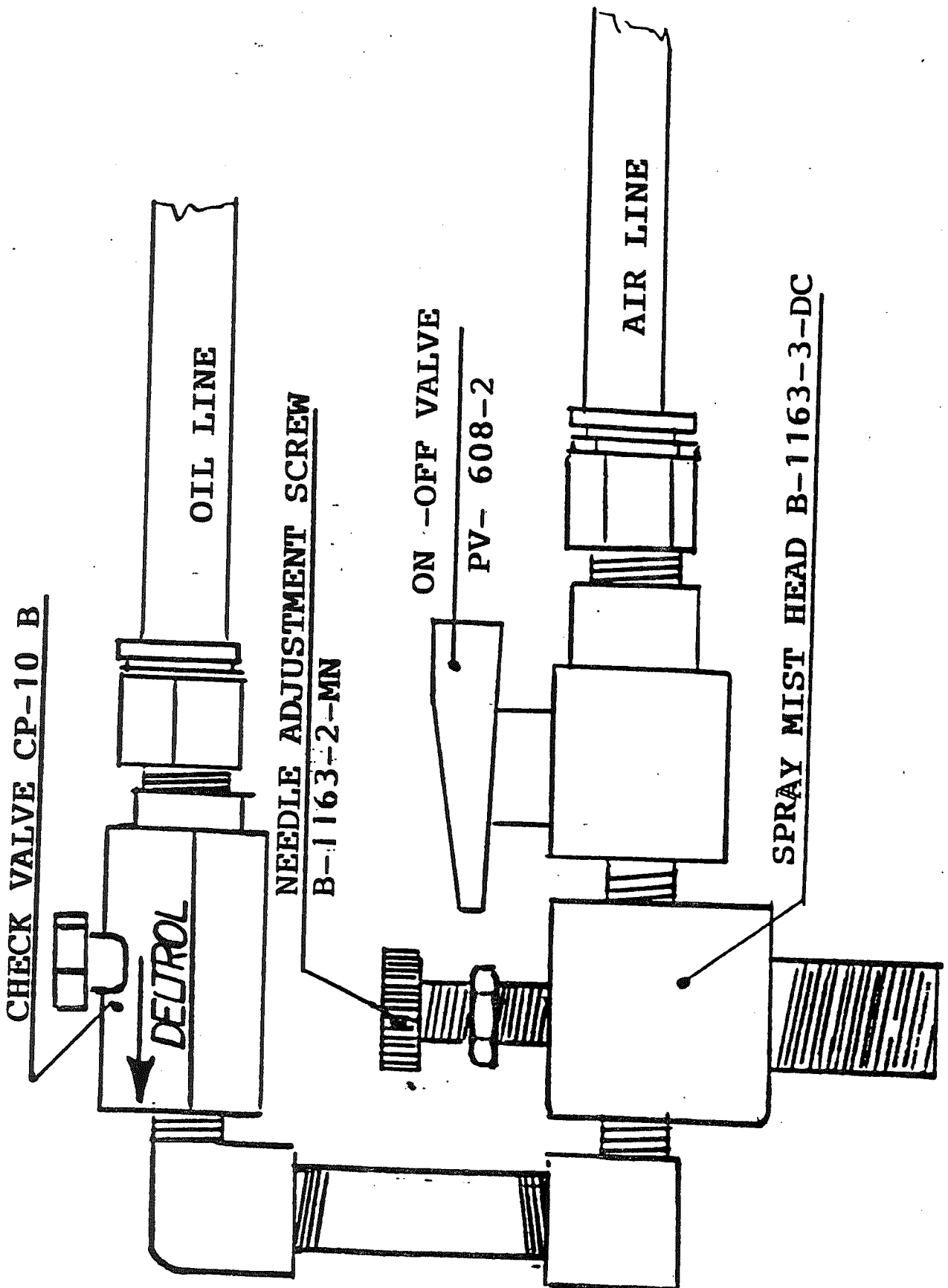
Accumulations of dust/chips and waste on the floor or the machine is a hazard and must be monitored and cleaned up continuously. Do not allow waste accumulations to fall into the footpedal area that could cause accidental actuation, or the inability of the footpedal to function normally.

When using spray mist lubricating systems, ensure that the inside of the exhaust hood and hoses are cleaned out of accumulations which can restrict the air flow.

CAUTION; THE OPERATOR MUST BE EQUIPPED WITH AN APPROVED RESPIRATOR, PROTECTIVE SAFETY GLASSES/GOGGLES AND GLOVES FOR THE MATERIAL BEING CUT TO GUARD AGAINST ANY DUST, CHIPS OR FUMES THAT ARE NOT COLLECTED BY THE DUST COLLECTING SYSTEM.

3.7A SPRAY MIST SYSTEM - VENTURI TYPE

The optional spray mist system is designed to provide lubrication to the sawblade. This system is only required when cutting aluminum or brass extrusions. The system should be adjusted to use an absolute minimum of spray per cycle. The spray volume (liquid to air) is adjusted by loosening the lock nut on the needle adjustment screw and turning the screw left or right to suit. The spray mist system is designed to only spray during the cutting cycle. As soon as the saw returns to the home position the spray mist unit will shut off.



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Coolant liquid is stored in the removable one gallon container mounted on the side of the machine stand. mixture (proportion) is subject to the manufacturers specifications and recommendations. Generally the proportion is approximately one part soluble oil mixed with 10 to 20 parts water. Do not use other than water soluble oils.

CAUTION; THE OPERATOR MUST BE EQUIPPED WITH AN APPROVED RESPIRATOR, PROTECTIVE SAFETY GLASSES/GOGGLES AND GLOVES. ENSURE THAT THE MSDS IS ON FILE AND ALSO AT THE POINT OF STORAGE AND USE FOR THE OPERATORS REFERRAL. ASSURE PROPER VENTILATION TO PROTECT THE AIR QUALITY. USE OF WAX STICKS FOR BLADE LUBRICATION IS NOT SAFE.

3.7B SAWBLADE LUBRICATION SYSTEM

The Acculube automatic pulse type, metered sawblade lubrication system uses a minute quantity of biodegradable mineral type oil per cycle.

Lubricant is supplied to the pumps from a reservoir that is pre-vented. The pumps are air driven and require a minimum of 60 psi to operate properly. Lubricant is delivered to the sawblades through tubing, compressed air is then supplied at the end of the lubricant line to carry the lubricant to the cutting edge of the sawblade. The nozzle and air line work on the venturi principle which eliminates misting and fogging.

ADJUSTMENT

Accu-Lube applicators are pre-set by the factory to deliver approximately one ounce of fluid per eight hours per nozzle. This rate of lubricant delivery is accomplished by setting the pumps at 38 clicks from 0 (0 being wide open) and, also, by setting the timing control for the pumps (frequency generator) to allow the pumps to stroke once every three (3) seconds. To increase the amount of fluid being dispensed you can either turn the adjustment knob on the pumps clockwise or you can increase the stroke rate on the pumps. By adjusting the timing control to decrease the amount of fluid being dispensed, you can either turn the adjustment

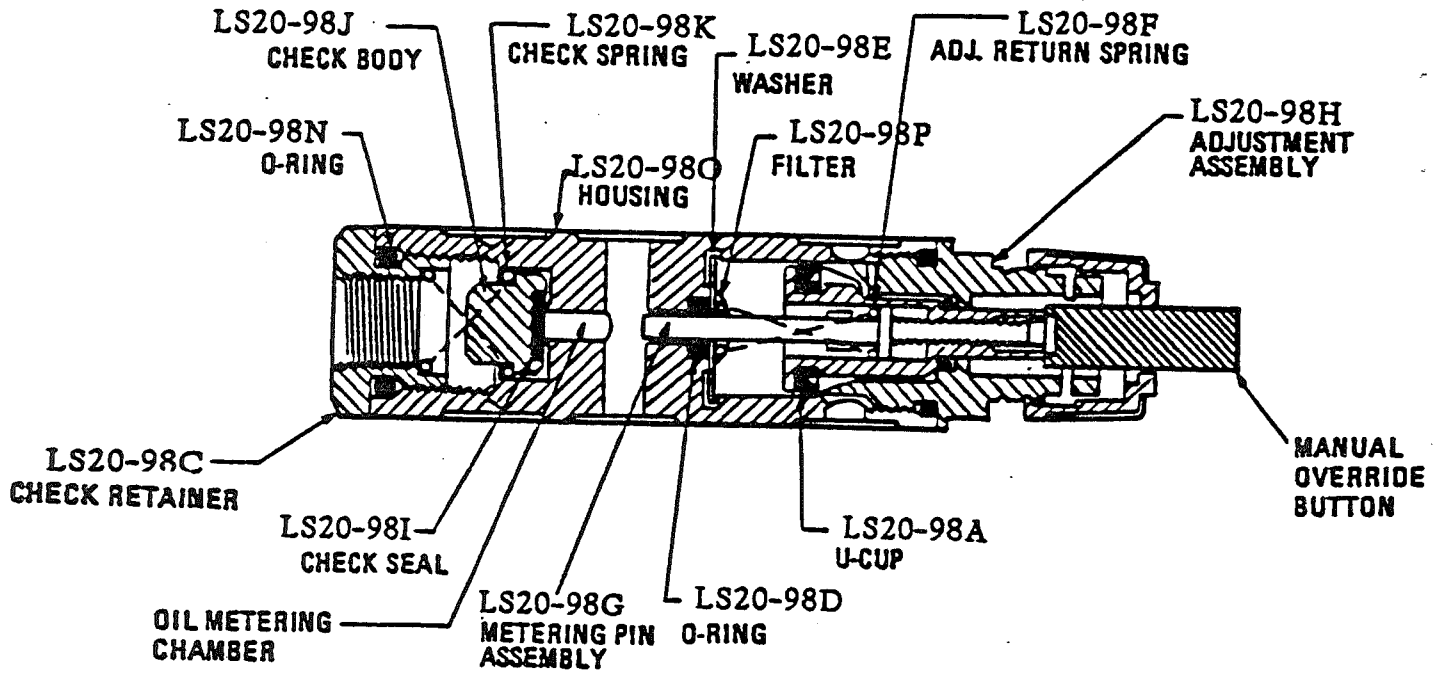
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knob on the pumps counter clockwise or reduce the stroke rate on the pumps by adjusting the timing control.

Note: Once you have turned the adjustment knob on the pumps counter-clockwise beyond 50 clicks, the pumps will not dispense and fluid. There is a locking assembly on the adjustment knobs of the pumps. When depressed the knob will not turn, when opened it is adjustable.

TROUBLE-SHOOTING

- 1 - SYMPTOM - Manual override button stays "in" at all times.
 - a. Foreign particles may be wedged between the metering pin (LS20-98G) and the oil metering chamber.
 - b. If the adjusting knob on the pumps is rotated too far clockwise, the manual override button may stick "in" not allowing the piston to stroke.
 - c. Injector may have been connected to a continuous pressure source.
 - d. If no other causes of the condition can be found, the return spring (LS20-98F) could be broken or missing (uncommon).
- 2 - SYMPTOM - Manual override button does not go "in".
 - a. Air pressure is less than the required 60 psi minimum.
 - b. Air signal source not operating.
- 3 - SYMPTOM - Injector functions but does not pump oil.
 - a. Check valve seal (LS20-98I) has failed, or is being held open by dirt. Remove check valve retainer (LS20-98C) and clean. If injector still does not pump oil, reverse urethane seal and re-install.

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- b. Adjusting knob has been rotated counter-clockwise more than 50 clicks and is shut off.
- c. Oil delivery lines may not have been pre-filled with oil. Pre-fill the tubing by cycling machine or operating manual override button on rear of each injector, or use an oil gun.
- d. Air in the injector oil supply may prevent oil being pumped.
 1. Assure that there is a sufficient supply of oil and refill reservoir.
 2. It is necessary during the initial start-up to assure dissipation of any remaining air bubbles in the injector in the following way;

Turn the adjusting knob clockwise to the maximum oil setting. Push manual override button, or operate equipment being lubricated 25 to 50 times. If this is done at start-up it will not normally be necessary to do it again during the operating life of the injector.

3.8 FILTER-REGULATOR-LUBRICATOR

The optional combination airline filter, regulator and lubricator is mounted on the machine cabinet. Incoming airline connections should be made to the inlet side of the unit. The filter unit (NAF3000) is equipped with a sintered brass element. This element should be inspected occasionally and cleaned or replaced as necessary. The filter bowl is clear plastic and allows the liquid level to be observed. Drain the bowl daily or as necessary to suit local humidity conditions. Never allow the liquid level to exceed the line on the bowl cover. To drain the bowl, press the white button located at the bottom of the bowl. To remove the bowl for inspection or replacement, pull the black tab down and rotate the bowl approximately 1/8 turn. Pull down on the bowl assembly to remove. When replacing the bowl be sure that the "O" ring is in

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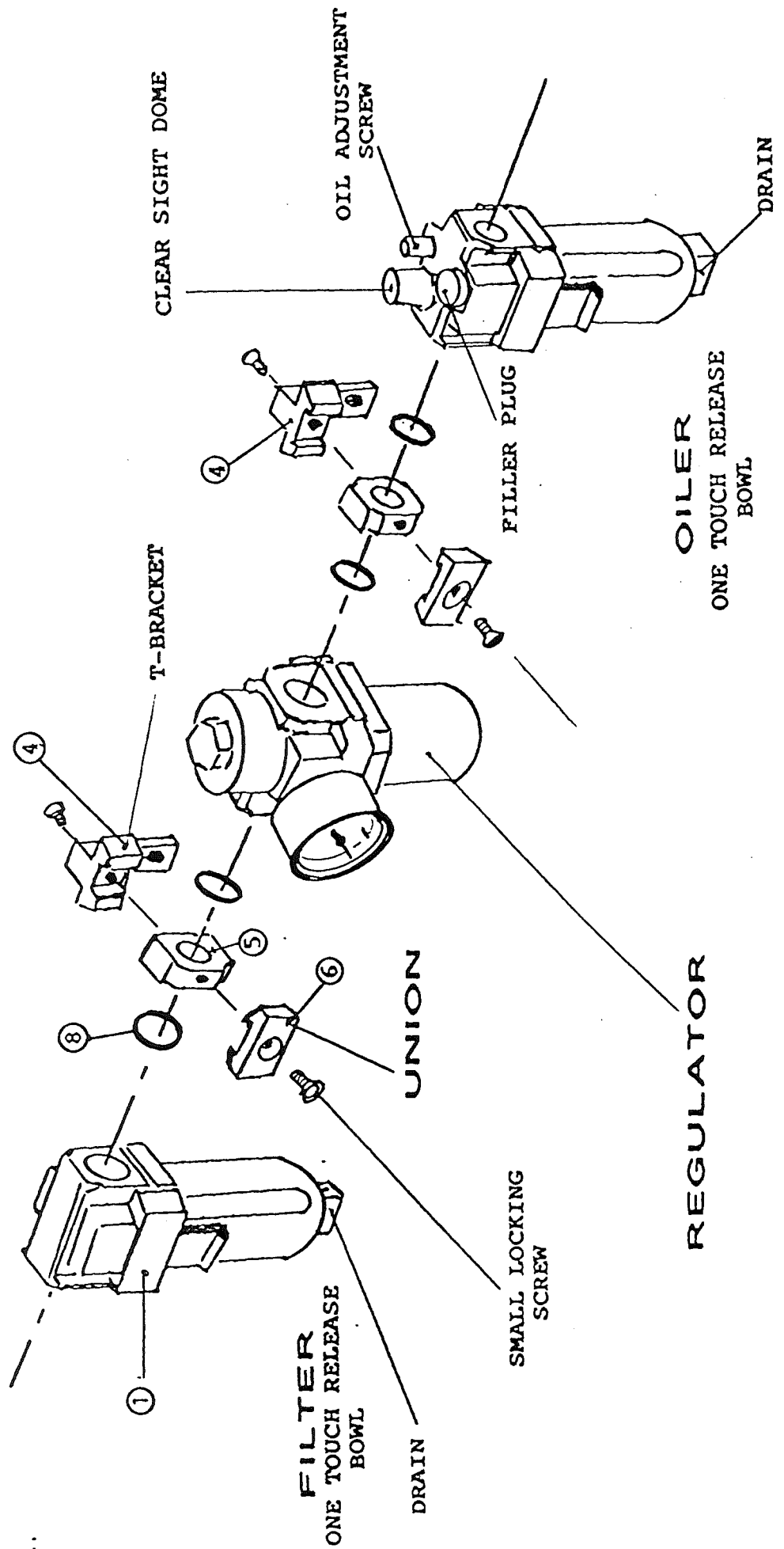
AIR FILTER / REGULATOR / LUBRICATOR
EXPLODED VIEW
OPERATION AND SETTING INSTRUCTIONS

- AIR SUPPLY LINE FROM COMPRESSOR INTO FILTER SIDE OF UNIT
- CONNECT LINE FROM OILER INTO MACHINE

OPERATING INSTRUCTIONS

- Connect air pressure into FILTER side of unit. If unit was installed at factory a PRESSURE RELEASE (safety device) valve is attached to this unit to evacuate air from machine. Slide valve in direction of printed arrow to supply air into unit.
 - To set pressure pull regulator knob down to release from locking mechanism in unit. By rotating knob pressure will increase / decrease, adjust until gage shows between 60 to 75 PSI. If unit was installed at the factory, settings should be pre-set.
 - The OILER/LUBRICATOR should be filled with PNEUMALUBE, 10W non detergent air tool oil into the MAXIMUM line printed on the shell of unit. If oil level is low, disconnect air into machine, remove FILLER PLUG and fill unit accordingly. Replace plug before connecting air into unit.
 - On top of the unit the clear SIGHT DOME (percolator) will show the amount of oil drops passing through the unit into machine. To increase or decrease the amount of oil rotate ADJUSTMENT SCREW following the arrows imprinted on casing of unit (+/-). Proper setting 1 drop of oil for 20 - 25 complete cycles.
 - Machines equipped with spray mist systems will increase air consumption, adjust oiler with the spray mist system on.
- *NOTE- FILTER bowl will accumulate water and loose particles typical on dirty compressed air systems in humid and hot environment. Bowl should be drained and cleaned on regular basis to prevent damage to machine.

MODULAR TYPE F.R.L MODEL NAC3000-N03-3



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place and in good condition.

To change the pressure setting on the regulator (NAR3000), pull the large adjustment knob down and turn left or right as necessary. When the adjustment is completed push the knob back up to lock the setting.

The lubricator unit (NAL3000) is equipped with an adjustable flow valve. The flow valve is located on the top and is adjusted left (+) or right (-) to regulate lubricant flow. Flow setting is approximately one drop of oil to every 20 cycles of the machine. The drop of oil can be seen forming in the brass tube located in the plastic dome. To fill the bowl, disconnect air pressure and remove bowl or remove fill plug. Fill with Pneumalube oil or equivalent and replace fill plug or bowl. If necessary to purge bowl, press white button at the bottom of the bowl.

Note: See additional warnings printed on bowl housings.

3.9 SAWBLADE CHECK, CHANGE OR REPLACEMENT

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

CHECK THE SPINDLE FLANGES HOLDING THE BLADES ON, TO MAKE SURE THEY DID NOT COME LOOSE WHEN THE MACHINE WAS WIRED AND THE ROTATION OF THE MOTORS WAS CHECKED (SEE SECTION 3.4 ELECTRICAL CONNECTION) When changing sawblades wear gloves to protect hands from sharp teeth/edges. After removing the sawblades lay them on a wood or cardboard surface. If the sawblades come into contact with metal it can cause micro-chips in the carbide teeth which will seriously affect the cutting quality and life of the blade. To remove the sawblades a special spindle wrench and a taper pin are provided. Remove the front cover guard to gain access to sawblades. At the pulley end of the spindle, insert the small end of the taper pin into the hole. Rotate the spindle to allow the large end of the taper pin to contact the hood on the machine.

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On the sawblade side of the spindle, place the four pins on the spindle wrench into the corresponding holes in the spindle nut. Apply downward pressure on the handle of the wrench while holding the wrench into the spindle flange with the opposite hand and remove the spindle nut in the direction of sawblade rotation.

Install a new or resharpened sawblade of the correct diameter (10", 12" or 14") and bore (5/8") and with the proper tooth style and clearances to suit the material being cut. The sawblade should be installed with the teeth pointing in the direction of rotation. Install the spindle nut and gently tighten. Do not overtighten! Make sure the blades are properly seated. When installing the sawblades be sure that the spindle flanges and sides of the blade are clean of any debris. Never damage the surface of the spindle flanges with any tools.

IMPORTANT; WHEN INSTALLING SAWBLADES BE SURE THAT THEY DO NOT TOUCH EACH OTHER THROUGH THEIR FULL RANGE OF MOTION. SAWBLADES USED CANNOT BE OVERSIZED. SAWBLADES SHOULD NOT COME CLOSER TOGETHER THAN APPROXIMATELY 3/32".

Before running the machine, visually check to be sure that there is no interference between the sawblades and the machine through its full range of movement. Start the machine and carefully make test cuts. See Section 5 for blade adjustments.

CAUTION: CYCLING THE MACHINE WITH THE BLADES RUNNING AND THE GUARD OFF IS EXTREMELY DANGEROUS - DO NOT DO THIS!!! SHOULD INTERFERENCE OCCUR THE BLADE COULD BREAK APART AND INJURE ANY PERSON IN THE SURROUNDING AREA AND DAMAGE THE MACHINE!!!

If sawblade whistling occurs, check the blade for missing expansion hole plugs. If the plugs are all in place and whistling persists, a different style of tooth or gullet design may be required. You can also install a 5/8" to 3/4" thick felt type material in the sawhood to act as a baffle against the air travelling with the sawblade and reduce the noise.

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If the noise level is too high for worker safety with the material being cut, the operator and all adjacent workers should be provide with approved ear protection devices.

3.10 SAWBLADE SAFETY GUIDES

- 1 - Always inspect the cutting tool completely before installing. Never attempt to operate a tool which has chipped or bent teeth or cutting edges of teeth that are not sharp.
- 2 - Never operate a cutting tool that is not properly aligned to the direction of feed. Do not allow sideward, twisting or other than forward pressure on the cutting tool.
- 3 - Make sure that the cutting tool is mounted to rotate in the proper direction before cutting any material.
- 4 - Do not cut materials of a type, hardness or density other than that which the cutting tool was designed to cut. Never attempt to cut materials with a tool unless you have personally checked with a supervisor to make sure the cutting tool was designed for the specific material you wish to cut.
- 5 - Never force feed a cutting tool into the material being cut such that it causes the tool or machine motor/s to slow down below operating speeds. If undue cutting pressure is required or if undue vibration is experienced, do not continue the cut. Turn off all power and correct the condition.
- 6 - Keep body and clothing well clear of all cutting tools and other moving parts. Use work holding fixtures in all possible cases.

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- 7 - Never attempt to clean a cutting tool or clear pieces of cut materials from the cutting area while the machine is on or when cutting tools are moving. Never attempt to stop or slow a rotating cutting tool by applying a hand held or any object to the cutter, arbor or spindle.

3.11 MATERIAL CLAMPS

Optional material clamps are custom installed to suit specific applications. Clamps can be installed in both the vertical and horizontal planes depending on the material size and profile. When installing clamps it is desirable to clamp on both sides of the machine.

For some materials, it may be necessary to use a soft face clamp pad to prevent marking, or a separate pressure regulator that can be adjusted to suit the application. When using pneumatic clamps the circuit should be arranged to release the clamps only after full retraction of the sawblade to the home position within the sawhood with the use of the Pistorius Button Return Circuit.

SECTION 4: OPERATION

4.1 EMERGENCY SHUTDOWN

Emergency shutdown can be done in one of several fashions.

1. The motors and sawblades can be stopped at any time by pressing the electrical stop buttons.
2. The pneumatic pressure can exhausted to the atmosphere and shut-off from the air supply by pressing the black lever on the yellow lockout block. -CAUTION SHOULD ALWAYS BE EXERCISED WHEN DOING THIS SINCE PRESSURE WILL RELIEVE FROM SOME AREAS OF THE PNEUMATIC CIRCUIT BEFORE OTHERS, THAT COULD RESULT IN UNNATURAL CYCLING OR CLAMPING OF THE MACHINE.

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3. On all models, releasing the footpedal will immediately return the saw heads to their home position with the sawblades retracted into the machine hood.

4.2 MACHINE STARTUP

1. Before attempting to start the machine, make sure all electric and pneumatic controls are off. Any operator not familiar with the machine should follow the normal start up procedure with the saw blade removed. See Section 3.9 for blade removal.
2. Make sure the operator has been informed of the correct and safe operating procedure of the machine and understands them.
3. Make sure the operator has read and understands all safety rules contained in this manual and those posted on the machine.
4. Make sure all safety devices are in place and operating properly. See Section 1 - IF ANY SAFETY DEVICE IS NOT IN PLACE OR OPERATING PROPERLY - DO NOT OPERATE THE MACHINE - CONTACT THE MANUFACTURE IMMEDIATELY.
5. Make sure the machine is in good operating condition.
6. Make sure the machine is clean and there are no parts or scraps that could hinder its operation.
7. Adjust the front safety guard such that it leaves just enough space to allow for the material being cut to pass through. See Section 1.
8. Adjust the optional clamps for the material being processed, to securely hold the material in place.
9. Make sure the operator and any surrounding workers are wearing proper safety glasses, gloves, respirator and other protective clothing that would be necessary for the material being cut.

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10. Engage the machine pneumatics, the machine's sawheads should return to their home position on the machine, if they are not already there. Then carefully start the machine electrics by pressing the start button to start the sawblades. The light on the start button should come on and stay lit.
11. The saw heads are cycled by a single air cylinder and activated by the foot pedal.
12. Before actually operating the machine, remove the sawblades and cycle the machine to become familiar with its operation.
13. Hold the material in the proper orientation against the machine front fence. Light hand pressure down against the table and back against the fence is all that is necessary. If you should feel the material trying to pull away from your hands or the fence during cutting, check the up and down cycle speed as being excessive and slow down accordingly. Check the sharpness of the sawblades and replace if dull. If movement of the material persists install pneumatic hold down clamps with a button return circuit. Clamps should only release after the sawblades have completed their cut and returned to the full up position.
14. Position the material to be cut against the stop face. Hold the material securely in place, making sure that the front safety guard is in place and properly formed to the material being cut.

CAUTION: DO NOT AT ANY TIME PLACE ANY PART OF YOUR BODY OR ATTACHED CLOTHING OR JEWELRY UNDERNEATH THE SAW HOOD OR IN THE CUTTING PATH.

15. Depress the foot pedal to bring the saw heads down and cut. When the material has been cut through, release the footpedal and the saws will return to their home position.
16. Remove any scrap material.

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SECTION 5: ADJUSTMENTS

5.1 SAWHEAD PIVOT ADJUSTMENTS

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

The sawhead pivot assembly consists of a high quality 6-1/2" diameter ball thrust bearing and a phenolic faced cast iron retaining ring. See figure 2 below. The following instructions are for disassembly, removal and cleaning of the bearing, and reassembly and adjustment of the sawhead pivot movement. Removal and cleaning of the bearing should only be necessary once every two to three years depending on the frequency of use and the nature of the material being cut.

REMOVAL PROCEDURE

- 1 - Disconnect air and electricity and lockout these sources.
- 2 - Remove and store sawblades.
- 3 - Remove two 3/8" x 16 allen screws which fasten the saw hood to the table of the machine. Label any hoses that you may remove for reinstallation later.
- 4 - Remove belt guards and belts.
- 5 - Belts remove by rotating backwards and applying sideware pressure until the belt slides off the motor pulley.
- 6 - Disengage pull arms by removing 1/2" x 13 hex jam nuts and screws.
- 7 - Rotate sawheads towards back of machine.
- 8 - Inspect and carefully cycle air cylinder with footpedal. Listen for signs of air leaks, especially when the shaft is all the way down. If air leaks are present, the air cylinder should be rebuilt.
- 9 - Remove the motor pulley by loosening set screws (two) and pull off the motor shaft with a pully puller. Do not use excessive force.

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- 10- Mark the retainer casting and sawhead before removal. Using the 5/16" allen wrench loosen and remove the three large allen cap screws. The sawhead and retainer ring are now loose. Carefully lift them off the machine. Be careful that the thrust bearing ball cage does not fall out. Do not reverse ball bearing cage on reassembly.
- 11- Inspect the condition of the ball cage and the balls for cracks, missing balls. Wash thoroughly using gasoline or strong solvent (wear gloves) to remove dirt, grime, old grease or any foreign matter. Blow out with compressed air if necessary. Inspect the retainer ring to ensure that the phenolic wear strip is in good condition. If not replace with new strip gluing into place.
- 12- Wipe races of bearing with a clean rag. DO NOT REMOVE BEARING RACES FROM SAWHEAD CASTING OR MOTOR BASE CASTING.
- 13- Using heavy duty bearing grease, pack bearing cage and balls thoroughly. Apply a generous amount of grease to bearing races. Apply a light coating of grease to retainer ring casting. Locate small allen set screws on retainer casting and back off several turns.

ASSEMBLY PROCEDURE

- 1 - Place thrust bearing ball cage into sawhead in the same direction as it was originally removed.
- 2 - Place sawhead with thrust bearing into position against the motor base casting.
- 3 - Place the retainer casting into position lining up the marks made prior to disassembly. Insert the three large 3/8" allen cap screws into the holes in the retainer ring casting and find the mating threaded holes in the motor base. Lightly tighten the three screws.
- 4 - Using a Tee handle 5/16" allen key, sequentially tighten the three 3/8" allen screws. Each screw should be tightened slightly more each circuit of the retaining ring, until all three screws are tight using one hand on the Tee handle key. The sawhead should not be able to move freely at this point. It is important that all

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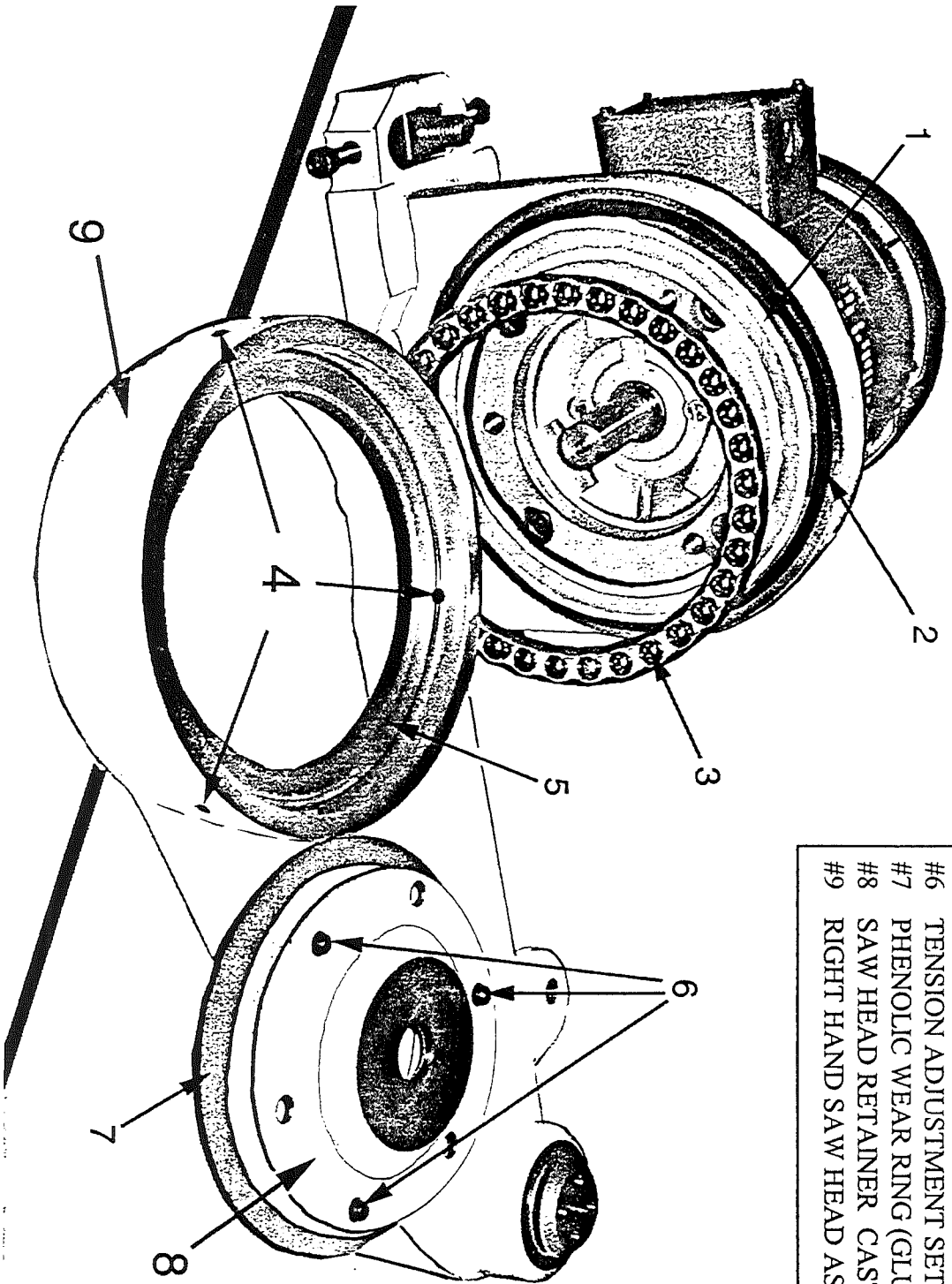
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- three screws are approximately equally tightened.
- 5 - Locate the three small allen set screws located in the retainer ring casting. Sequentially tighten the screws until enough back pressure has been applied to allow the sawhead to pivot. Resistance should be felt, however there should not be any side play in the sawhead. If play is found, redo the procedure as described above until all side play is removed. When both heads are reinstalled, the machine should be able to cycle freely at 65 psi with a smooth non jerky movement.
 - 6 - Reinstall motor pulley. Make sure that you replace the 3/16" key. Align motor pulley with spindle pulley and retighten the two set screws. Reinstall belts.
 - 7 - Replace pull arms and tighten bolts.
 - 8 - Replace belt covers and tighten bolts.
 - 9 - Replace sawhood and sawdust exhaust ducts and tighten bolts.

CAUTION: CYCLING THE MACHINE WITH THE BLADES RUNNING AND THE GUARD OFF IS EXTREMELY DANGEROUS - DO NOT DO THIS!!! SHOULD INTERFERENCE OCCUR THE BLADE COULD BREAK APART AND INJURE ANY PERSON IN THE SURROUNDING AREA AND DAMAGE THE MACHINE!!!

1. Make sure all bolts are tight, and the blades mounted securely on their spindles.
2. Reinstall all guards.
3. Follow all normal safety precautions.
4. Start the machine and carefully make test cuts.
5. Readjust as necessary.



- #1 BEARING RACE (MOTOR BASE CASTING)
- #2 BEARING SEAL (NEW MACHINES ONLY)
- #3 BALL BEARING CAGE ASSEMBLY
- #4 CALIBRATION SET SCREWS (3)
- #5 BEARING RACE (SAW HEAD)
- #6 TENSION ADJUSTMENT SET CREWS (3)
- #7 PHENOLIC WEAR RING (GLUED)
- #8 SAW HEAD RETAINER CASTING
- #9 RIGHT HAND SAW HEAD ASSEMBLY

CAUTION:
 IF CALIBRATION SET SCREWS (#4) HAVE BEEN ALTERED, THE COMPLETE SAW
 ARM ASSEMBLY MUST BE RETURNED TO THE FACTORY FOR RE-CALIBRATION

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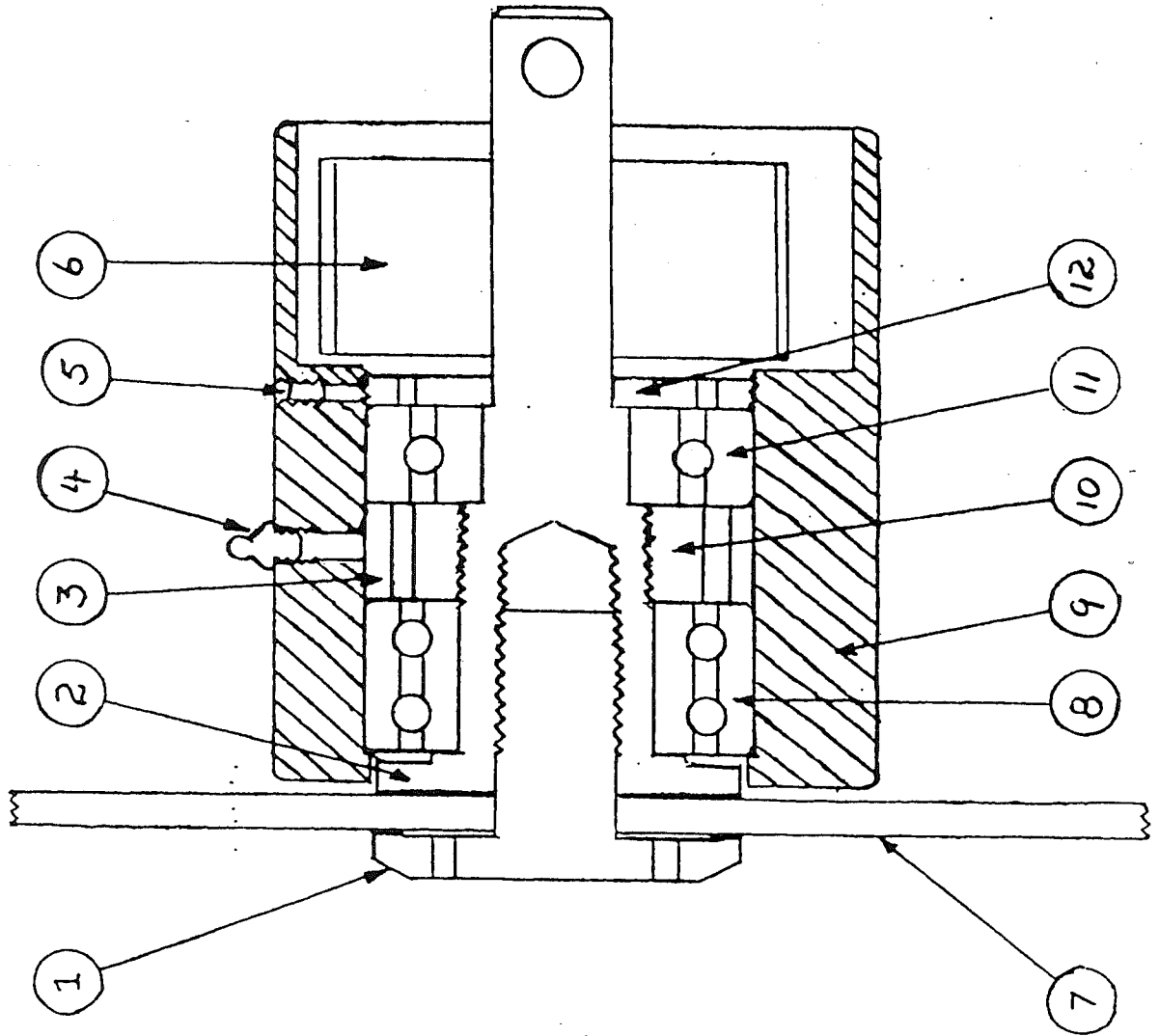
5.2 REMOVAL/INSTALLATION OF SPINDLE OR SPINDLE BEARINGS

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

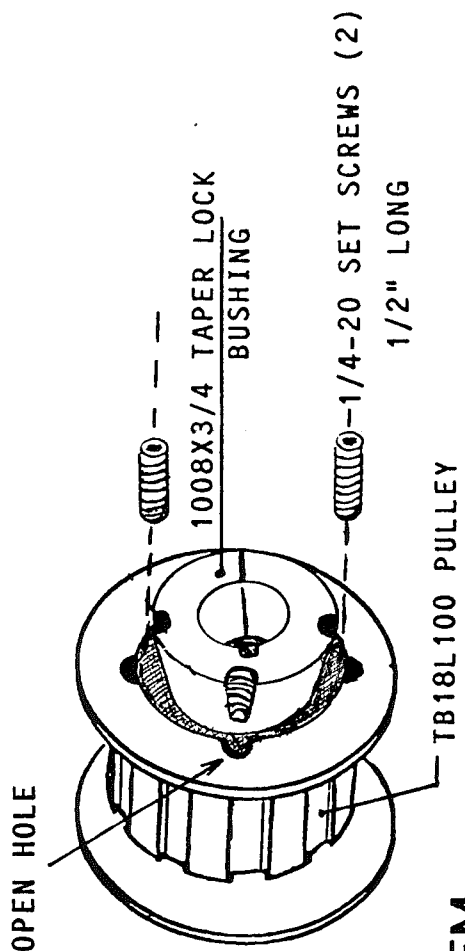
1. Remove blades, beltguard, and belt. Removal is achieved by pulling belt off at the motor pulley, at the same time rotating the belt towards the motor. Keep rotating until belt slides off the motor pulley. DO NOT PRY BELT OFF PULLEY.
2. File off any distorted metal around open hole at the end of the spindle shaft. If the shaft is not completely round you will not be able to remove the pulley.
3. Remove the two set screws out of taper lock bushing located in the center of the pulley. Using one of the removed screws, insert into the third open hole which will act as a "jackscrew" to separate the taper-lock bushing from the pulley.
4. Locate and loosen the 10/32" set screw located on the outside of the sawhead casting next to the grease fitting. SCREW MUST BE LOOSENED UNTIL RIM OF SCREW IS OUT OF CASTING.
5. After the spindle pulley is removed you will see a flat ring called the outer bearing lock nut. The lock nut has two holes in its face. The lock nut is held in place by the set screw previously removed (4). The lock nut holds the spindle into the cast iron sawhead. To remove the lock nut, place the spindle taper pin into one of the two holes and tap the end of the pin carefully with a hammer counterclockwise. The lock nut has tapered fine threads. When the lock nut is loose, unscrew and remove.
6. Spindle must be removed through pulley end of head. Place a piece of wood on the spindle flange and tap toward the back of the machine until spindle comes clear.

MITER NOTCHER SPINDLE ASSEMBLY FOR ALL MODELS

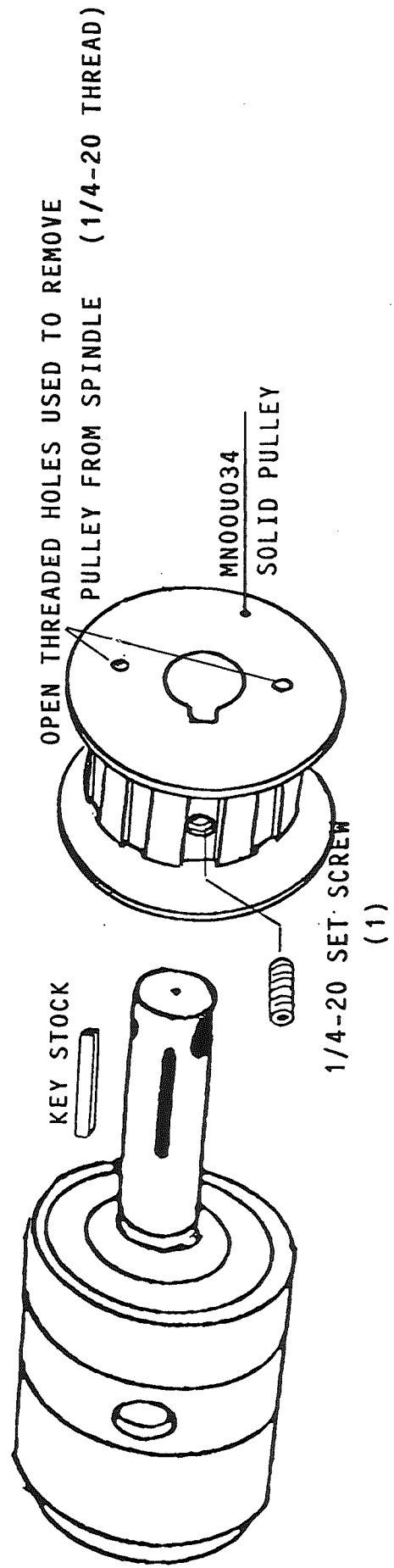
Note: Specify hand of spindle required when ordering.



- 1. SPINDLE NUT
- 2. SPINDLE
- 3. BEARING SPACER
- 4. GREASE FITTING
- 5. RETAINING NUT LOCK
- 6. PULLEY
- 7. CUTTING BLADE
- 8. DOUBLE ROW BALL BEARING
- 9. HEAD CASTING
- 10. BEARING NUT
- 11. SINGLE ROW BALL BEARING
- 12. BEARING RETAINING NUT



OLD PULLEY SYSTEM

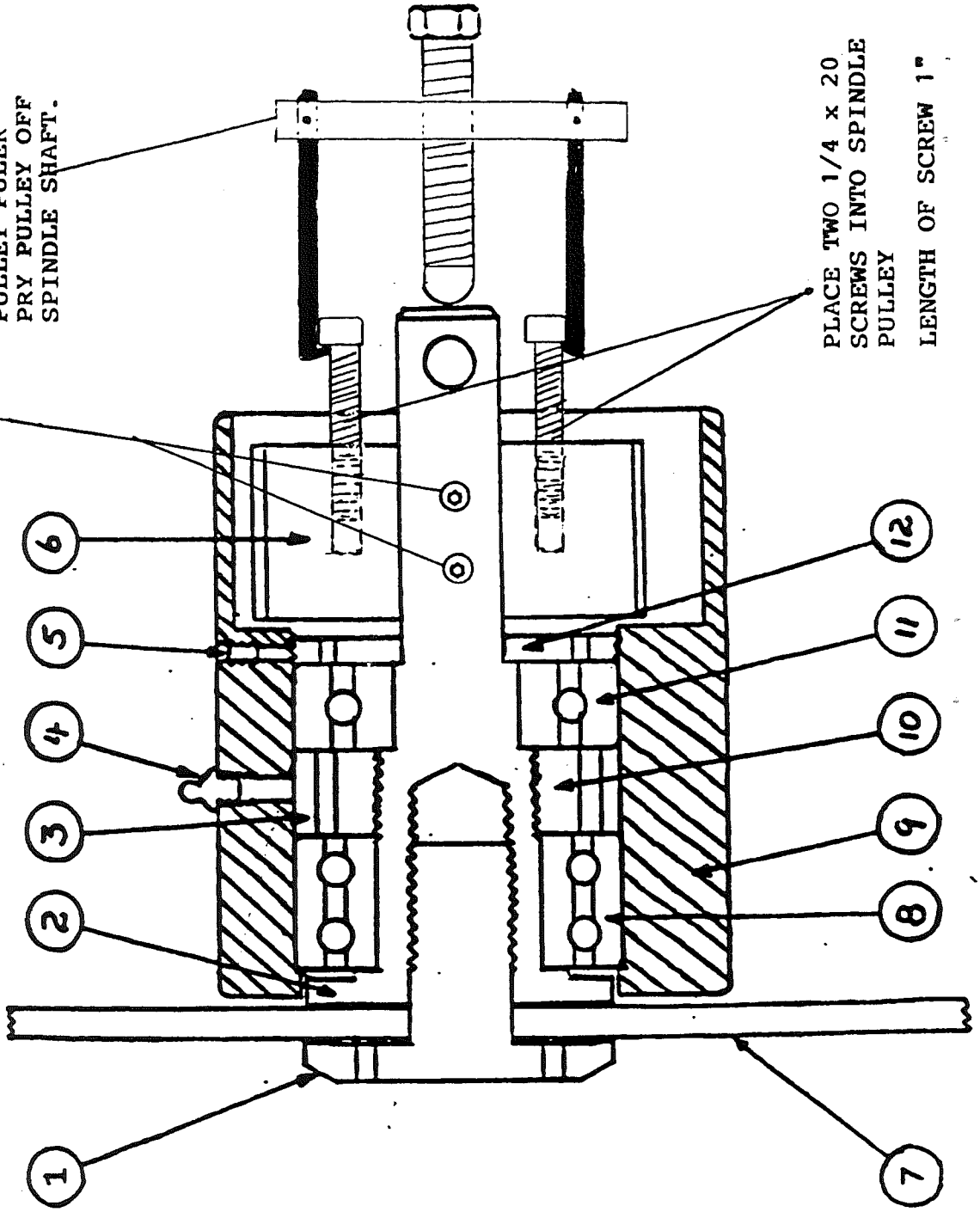


NEW SOLID PULLEY

NEW MN & EMN SPINDLE PULLEY REMOVAL PROCEDURE

LOOSEN 1 OR 2 SET
SCREWS LOCKING PULLEY
BEFORE REMOVAL

Note: Specify hand of spindle required when ordering.



USING A SMALL
PULLEY PULER
PRY PULLEY OFF
SPINDLE SHAFT.

PLACE TWO 1/4 x 20
SCREWS INTO SPINDLE
PULLEY
LENGTH OF SCREW 1"

- 1. SPINDLE NUT
- 2. SPINDLE
- 3. BEARING SPACER
- 4. GREASE FITTING
- 5. RETAINING NUT LOCK
- 6. PULLEY
- 7. CUTTING BLADE
- 8. DOUBLE ROW BALL BEARING
- 9. HEAD CASTING
- 10. BEARING NUT
- 11. SINGLE ROW BALL BEARING
- 12. BEARING RETAINING NUT

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7. Clean inside of casting of foreign matter & grease.
8. Slide the new spindle assembly into the casting. Be sure that the hole in the spacer between the two bearings aligns with grease fitting hole on the inside of the casting bore, failure to do this will prevent grease from reaching the bearings.

DO NOT HAMMER ON THE SPINDLE SHAFT AT ANY TIME. Tapping with a rubber mallet or press fitting is acceptable. It is recommended to press the assembly into the casting bore by pressing against the outside of the bearing race, not the inside.

9. Replace the outer bearing lock nut, carefully aligning the threads. Failure to align the threads could cause the threads in the sawhead casting to be destroyed by cross threading. Tighten the outer bearing lock nut against the spindle bearing by using the taper pin. The lock nut should be tight enough to remove all end play from the spindle. When the end play has been removed, tighten the set screw on the outside of the sawhead casting. DO NOT OVER TIGHTEN.
10. Install taper-lock and pulley onto spindle shaft. Keep both screws in correct holes. Prior to tightening the lock screws ensure that the spindle pulley is in line with the motor pulley. Failure to do this will cause improper tracking and premature failure of the drive belt.
11. Install the drive belt and replace the belt guard. Turn machine on and immediately grease the new spindle with approximately 4-5 shots of CLEAN HIGH SPEED SPINDLE GREASE. DO NOT OVER GREASE BEARINGS. OVER GREASING WILL NOT ALLOW FOR HEAT DISSIPATION.
12. Grease spindles every six months or 200 hours whichever comes first with approximately one to two shots. ALWAYS CLEAN THE GREASE FITTING BEFORE GREASING.

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1. Make sure all bolts are tight, and the blades mounted securely on their spindles.
2. Reinstall all guards.
3. Follow all normal safety precautions.
4. Start the machine and carefully make test cuts.
5. Readjust as necessary.

5.3 SAWHEAD FEED RATE ADJUSTMENTS

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

The sawblade feed rate is normally factory set, however it is infinitely adjustable on the downstroke only. To adjust the downstroke speed of the saw, locate the drive cylinder mounted under the table of the machine. The flow control is located at the bottom end of the cylinder. Loosening the lock nut and turning the knurled adjusting knob clockwise will slow the feed rate down, counterclockwise to speed it up. Tighten the lock nut when finished.

5.4 RETURN CUSHION ADJUSTMENTS

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

On the top of the drive cylinder there is a screw fitting that is threaded into the side of the cylinder. This is the cylinder cushion control. By loosening the lock nut and adjust the screw in and out the uncontrolled head return movement will be decelerated the last 1/2" of stroke to a soft stop.

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5.5 SAWHEAD MITER ANGLE ADJUSTMENTS

DISCONNECT AIR AND ELECTRICITY AND LOCKOUT THESE SOURCES

The left and right pivot type sawhead assemblies are mounted on cast iron motor bases which are located on each side of the table to the rear of the machine. See illustration.

If the miters cut do not correctly come together, check the following items first;

- 1 - Sawblades are of the proper tooth design to suit the application. Ridges or burning in the miter face, excessive tearout or a hollow in the center of the miter joint are evidence of improper design.
- 2 - Sawblades without the proper radial clearances can bind up on the scrap piece and will cause a back cut to occur on the return stroke.
- 3 - Sawblades are sharp and all teeth are straight and in place. CAUTION; DO NOT USE A SAWBLADE THAT IS DAMAGED OR DULL, REPLACE IMMEDIATELY. CONTINUED USE COULD CAUSE SERIOUS INJURY.
- 4 - Sawblades are mounted with the teeth facing in the direction of spindle rotation. Facing the machine the left hand spindle rotates clockwise and the right hand spindle rotates counter-clockwise. Sawblade teeth should be facing in the direction of rotation. Spindles should be rotating in the proper direction, check the installed rotation arrows. CAUTION; DO NOT OPERATE THE MACHINE IF THE SAWBLADES ARE INCORRECTLY INSTALLED OR THE SPINDLE DIRECTION IS WRONG. CONTINUED USE COULD CAUSE SERIOUS INJURY.
- 5 - Material support fixturing, if required, should properly support the material to prevent movement during cutting. If movement of the material exists during cutting, pneumatic work clamps should be installed before further cutting should be allowed.

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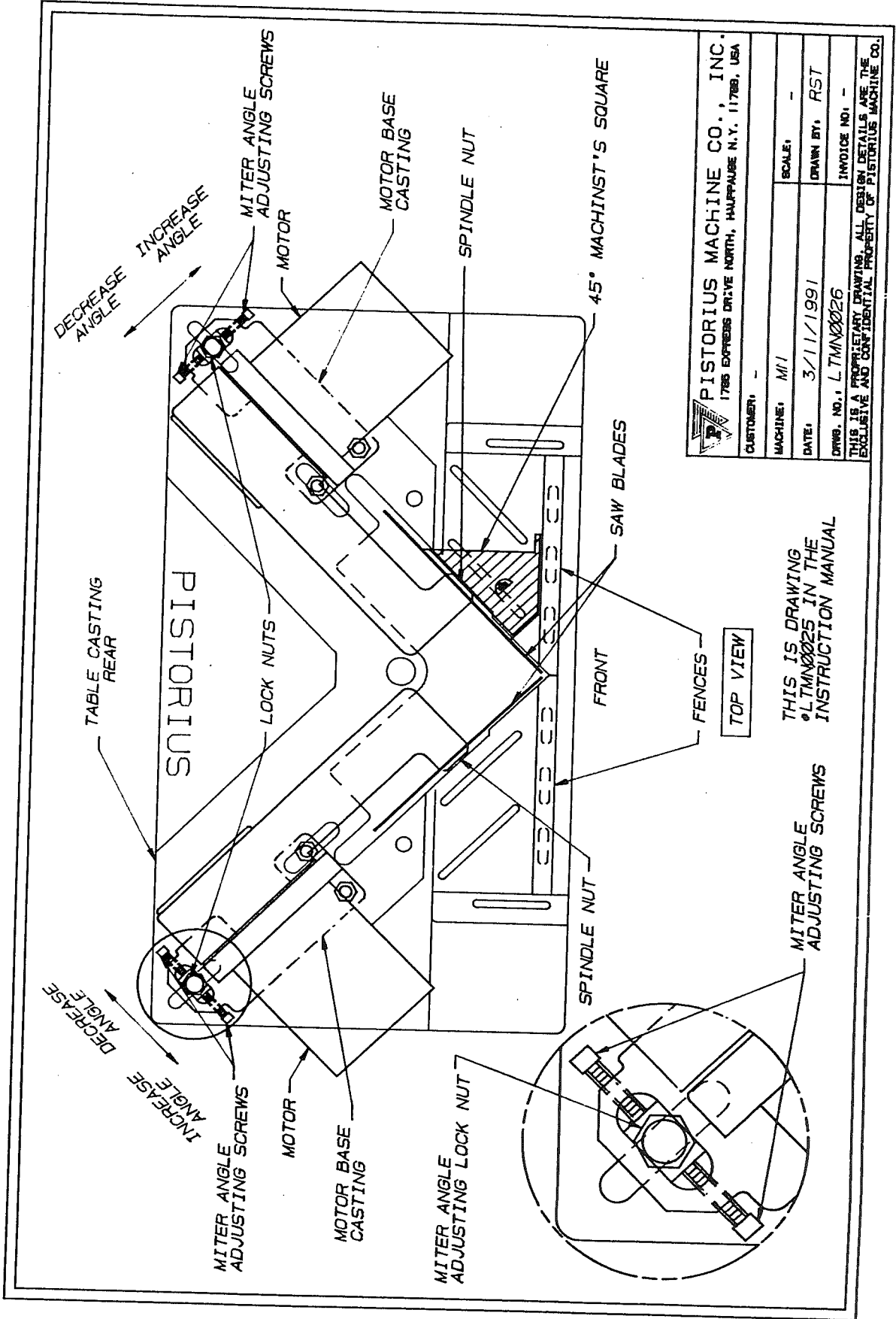
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- 6 - Examine the material being cut for evidence of bowing, bending or warping. Select a straight length of material for test cuts to determine if the miter angle is correct. The base of the material must be flat to prevent rolling during cutting.
- 7 - Check the sawhead feed speed to ensure that the cutting motion is not faster than the sawblade can properly handle, especially if the sawblades are beginning to dull.
- 8 - Check machine fences to be sure that they are in line with one another and are free of any surface blemishes or distortion which would prevent the material to be cut from laying against them properly. Use caution when using tools around the machine fences, table and spindle flanges which might nick or damage them.
- 9 - Check to be sure the spindle flanges and sawblade sides are clean of dirt or metal distortion that would prevent the sawblades from laying tightly against the flanges.
- 10- Check the tightness of the pivot sawhead assembly and make any adjustments necessary.
- 11- Be sure that the spindle bearings are not worn allowing sawblade runout.
- 12- Check to ensure that the outfeed gage bar bed is perfectly flat with the machine table surface and the gage bar fence, if so equipped, should be in line with the machine fences.

5.6 CHECKING THE MITER ANGLE

If all of the above have been carefully checked and are satisfactory in all respects, cut four pieces of flat, wide material approximately 4" to 6" long. Assemble the mitered parts with rubber bands around the perimeter of the frame.

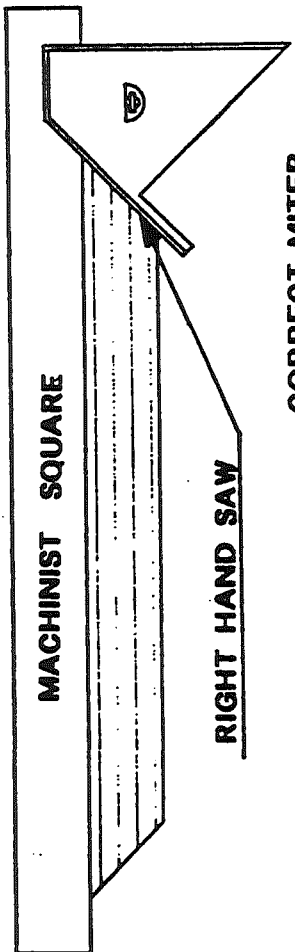


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CUSTOMER: -	SCALE: -
MACHINE: M/1	DRAWN BY: RST
DATE: 3/11/1991	INVOICE NO.: -
DRWG. NO.: LTMN0026 THIS IS A PROPRIETARY DRAWING. ALL DESIGN DETAILS ARE THE EXCLUSIVE AND CONFIDENTIAL PROPERTY OF PISTORIUS MACHINE CO.	

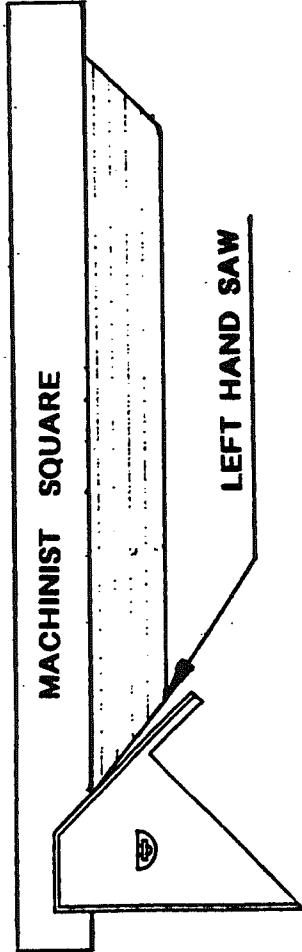
TOP VIEW

THIS IS DRAWING
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 INSTRUCTION MANUAL

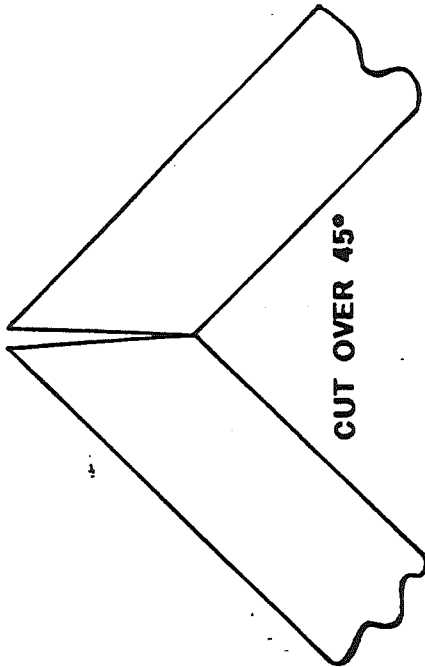
MITER ANGLE
 ADJUSTING SCREWS



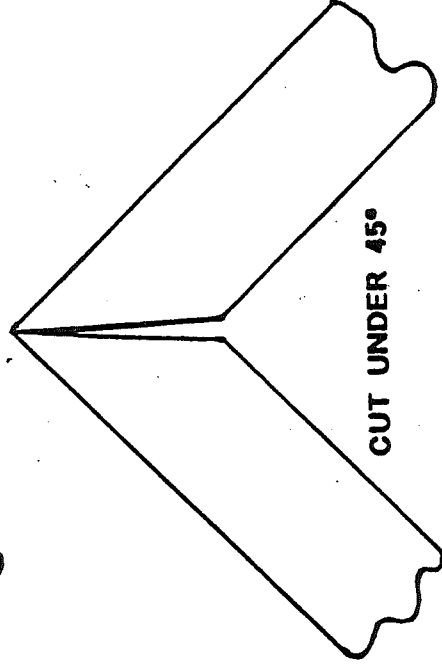
CORRECT MITER



INCORRECT MITER



CUT OVER 45°



CUT UNDER 45°

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1785 EXPRESS DRIVE NORTH, HAUPPAUGE N.Y. 11788, USA

CUSTOMER:		SCALE:	
MACHINE:		DRAWN BY:	
DATE:		INVOICE NO.:	
DESIG. NO.:		THIS IS A PROPRIETARY DRAWING. ALL DESIGN DETAILS ARE THE EXCLUSIVE AND CONFIDENTIAL PROPERTY OF PISTORIUS MACHINE CO.	

ALL UNSPECIFIED TOLERANCES	
.XX	+/- .01
.XXX	+/- .006
FRACTIONS	+/- 1/64
ANGLES	+/- 1 DGR

NAME:	
QUANTITY:	
MATERIAL:	
TREATMENT:	

Ca. 4/85

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Inspect the resultant miter joints. If the miters are consistently open on the outside of the joint the miter angle is over 45 degrees. If the miters are consistently open on the inside of the joint the miter angle is under 45 degrees. See illustration.

If the miters are off on only one or two of the corners, it is likely that the material is not straight or that it is not laying properly on the machine in relation to the sawblades during cutting.

To determine which saw assembly requires angle adjustment, check each miter carefully with a high quality machinists square as shown in the illustration.

5.7 ADJUSTING THE MITER ANGLE

- 1 - DISCONNECT ELECTRICAL POWER TO MACHINE.
- 2 - Remove front guard for easy access to sawblades. USE EXTREME CAUTION WHEN CYCLING SAWHEADS, KEEP HANDS CLEAR OF SAWBLADES AT ALL TIMES.
- 3 - If available install a flat ground test disc in place of sawblades. This is available from Pistorius Machine if desired.
- 4 - Depress footpedal to lower sawblades so teeth clear the machine table. Hold footpedal to maintain sawblade position.
- 5 - Slide machinist square body between fence and sawblade or test disc. If a gap exists then a miter angle adjustment is necessary.
- 6 - Use illustration to locate miter angle adjusting lock nut. Loosen lock nut on the sawhead requiring miter angle adjustment.

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- 7 - Adjust miter angles by tightening the miter angle adjusting screws against the steel block, be sure to loosen the opposite screw first, to pivot the sawhead assembly in the direction of miter adjustment as indicated in the prior steps above.

A very small amount of movement is necessary as it is unlikely that the angle is out more than a few minutes of a degree. A maximum of 1 degree of angle adjustment is provided on each sawhead.

- 8 - Check to see that the two sawblades do not touch each other. There should be approximately 3/32" clearance between the sawblades. Rotate the sawblades by hand to ensure there is no interference.
- 9 - Reinstall the front safety guard and recut four pieces and assemble as described in 5.2 above. If the angle has not improved or gotten worse, readjust the miter angle in the opposite direction.
- 10- When the miters are satisfactory, retighten the miter adjusting lock nut.

CAUTION: CYCLING THE MACHINE WITH THE BLADES RUNNING AND THE GUARD OFF IS EXTREMELY DANGEROUS - DO NOT DO THIS!!! SHOULD INTERFERENCE OCCUR THE BLADE COULD BREAK APART AND INJURE ANY PERSON IN THE SURROUNDING AREA AND DAMAGE THE MACHINE!!!

1. Make sure all bolts are tight, and the blades mounted securely on their spindles.
2. Reinstall all guards.
3. Follow all normal safety precautions.
4. Start the machine and carefully make test cuts.
5. Readjust as necessary.

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SECTION 6: MAINTENANCE

- 1 - Very little is required to keep the machine in perfect operating condition.
- 2 - Keep the sawblades sharp and running true.
- 3 - When changing sawblades, inspect flanges to be sure they are free of foreign matter.
- 4 - Keep the machine table clean and free of rust. Do not lay tools on the table surface to protect it from nicks and gouges.
- 5 - Regularly drain the filter bowl on the incoming air line of any accumulated dirt and water.
- 6 - Be sure to keep the bowl of the automatic airline lubricator filled with oil. Use Pneumalube or equivalent.
- 7 - On motors equipped with grease fittings, insert one "shot" of bearing grease every 200 hours of operation. On motors not equipped with grease fittings, the motors are sealed and lubricated for life, no further lubrication is necessary.
- 8 - Check sawhead pivot bearings for signs of play and adjust as necessary.
- 9 - Inspect drive belts for wear and proper tension. Replace belts when worn, sloppy or split.
- 10- Inspect hoses for breaks, splits, crimps or holes once a month (or as required) and replace as necessary. Replace leaking fittings. Repair worn and leaking air cylinders and footpedal packings.
- 11- Inspect footpedal return spring once a month and check for any signs of wear or fatigue. Replace immediately if the spring is broken or fatigued.

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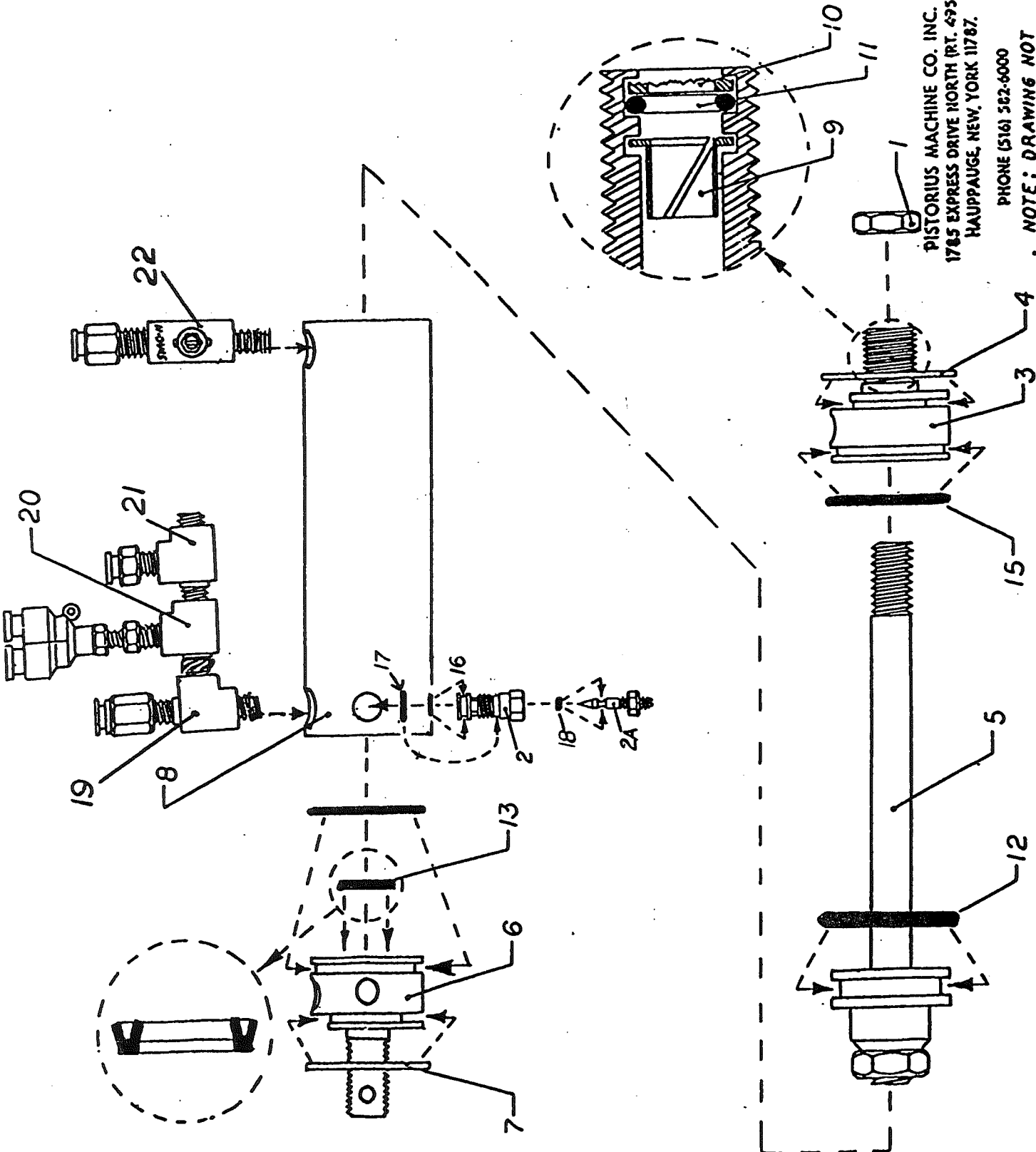
- 12- Grease spindle bearings with one "shot" of high speed bearing grease every 450 hours of operation.
- 13- Check spindle bearings for excessive wear and runout and replace as necessary.
- 14- Replace unreadable, missing or damaged safety warning labels.
- 15- Empty scrap pan as it fills.
- 16- On models equipped with the optional spray mist system, clean out sludge in the bottom of plastic container dispenser.

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PROCEDURE FOR REMOVAL & REBUILDING

DRIVE CYLINDER MODEL MN MITER SAW

- A- DISCONNECT POWER INTO MACHINE AND REMOVE SAW BLADES.
- B- Using a 3/16" drift pin, remove roll pin located at center of yoke casting (CI-1286-1-MN).
- C- DISCONNECT AIR INTO MACHINE AND BRING SAW HEADS DOWN.
- D- With a hex wrench, back out locking nut (1) and main cylinder shaft out of yoke casting. Also remove 1/2" pivot screws and pull arms. Check condition of brass bushings in the pull arms and pivot screws. If signs of wear replace.
- F- Proceed to remove large locking nuts fastening the tail end of cylinder to the table.
Caution: Hand hold the cylinder from underneath the machine.
- G- Make note of hose fittings before removal, from foot valve #19, spraymist #20, accessory #21 and at the other end the speed control #22.
- H- Secure tail end of cylinder (6) into a table vise and remove locking nut (1) and cushion valve (2). Do not crimp shaft of cylinder or damage will occur.
- I- At the nose end of cylinder (3), center snap ring (4) over flat area of nose piece. Place snap-ring pliers into the ring and squeeze shut, at same time pull main shaft (5) out of cylinder body (8) removing the entire internal assembly. The snap ring should release from internal groove at the shell or cylinder casing (8), it may be necessary to center ring.
- J- At the tail end of the cylinder (6), squeeze second snap ring (7) and remove cylinder body casing. Inspect inside of casing and cylinder main shaft (5) for any signs of wear or scars. If they are present cylinder can not be repaired and must be replaced.
- K- Using a mild cleaning solvents, wash and wipe clean all parts.
- L- Start at the inside of nose (3), remove white plastic sleeve (9) by squeezing and rolling it out of the internal groove. Next using a long sharp pin, carefully remove the two "O" rings (leather #10 and rubber #11).



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NOTE: DRAWING NOT TO SCALE.

DRAWING #REF-6979

(06)

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- 2 -

- M- Replace plastic sleeve (9). Leather "O" ring (10) making sure soft area (not painted) faces outward.
Rubber "O" ring (11) is placed in same groove and in between the plastic sleeve and leather "O" ring. See diagram.
- N- Replace main "O" ring (12) on piston shaft (5).
- O- Replace cone shaped ring (13) at the tail end of (6) cylinder. Note configuration of shape for proper installation.
- P- Replace large diameter "O" rings (14 & 15) located outside of each end of cylinder.
- Q- Disassemble cushion valve (2) and replace the three small "O" rings (16,17 & 18).
- R- Prior to re-assembly, lubricate all rubber parts using a 10 W non detergent (air tool oil).
- S- Starting at the tail end (6), re-assemble main cylinder body casing (8); main shaft (5); and nose end (3). A slight twist motion will make nose assembly easier.
- T- Replace cushion valve (2) assembly, do not over tighten. To increase the cushion on saw head return, adjust needle screw (2A) clockwise, and lock jam nut against valve. If it is adjusted too far, air will be locked inside the tail end of the cylinder creating a sudden stop. Cushion is used to prevent a loud noise when cylinder returns to up position, creating a slow air release at the top of cylinder return. (Only slows down the last 3/4" of return stroke)
- U- Replace all air fittings previously removed.
- V- Before cylinder is installed on the machine make sure saw heads can be rotated by hand. If they do not rotate smoothly contact Pistorius Machine Co.
- W- Install cylinder into machine table and lock large diameter locking nuts.
CAUTION: THE THREAD ON THIS NUTS CAN BE CROSS-THREADED. MAKE SURE THEY CAN BE ROTATED BY HAND UNTIL THEY COME IN CONTACT WITH THE TABLE OF MACHINE.
- X- Lock cylinder shaft (5) into yoke casting with lock nut (1) and replace 3/16" setting pin.
- Y- When installing a new cylinder 3/16" hole must be drilled and setting pin must be replaced.

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SECTION 7: TROUBLE SHOOTING

Repairs, other than those described here, should be performed only by trained, qualified personnel. Call Pistorius for further information.

PROBLEM	CAUSED BY	SOLUTION
1. Air leaks at connection.	-loose fittings -loose hose	-replace fitting -recut hose and insert hose back in fitting
2. Electric motor will not start.	-no power -overheating -blown fuse	-check plug -wait 10 minutes for cooling down and try to start again -replace fuse
3. Head doesn't move.	-no air to cylinder -flow control valves shut -broken foot pedal -sticking valves	-check line pressure and connection -open flow control valves -replace pedal -put oil into hose line openings and shift valve several times
4. Head slows down as it is cutting through material	-dull blade -misalignment of head -too aggressive cutting	-replace blade -check slide movement parallel with blade -adjust flow control to slow feed rate
5. Other problems		-contact Pistorius

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DOUBLE MITER SAWS

8.1 PARTS LIST

MODELS MN-100, MN-200, MN-300

REF #	PART NUMBER	DESCRIPTION	# ON MACHINE
1	CI-4244-MN	TABLE CASTING	1
2	CA-4311-MN	LEFT HAND HOOD CASTING	1
3	CA-4312-MN	RIGHT HAND HOOD CASTING	1
4	S-4313-1-MN	BLADE GUARD	1
5	S-4313-2-MN	BLADE GUARD CLAMP	2
5A	S-4313-3-MN	GUARD CLAMP TEE SCREWS	4
6	S-5290	FOOT PEDAL GUARD	1
7	VSF-4302	FOOT PEDAL - SPRING RETURN	1
8/9	AE16ANSOT	MAGNETIC STARTER ASSEMBLY	1
9A	H2007	HEATER PACK	6
9B	B050R7XK	380 VOLT TRANSFORMER	1
12	S-4249-1-MN	RIGHT HAND FENCE 1-1/2"	1
13	S-4249-2-MN	LEFT HAND FENCE 1-1/2"	1
14	S-4249-3-MN	RIGHT HAND FENCE 2-3/4" (OPT)	0
15	S-4249-4-MN	LEFT HAND FENCE 2-3/4" (OPT)	0
16	S-4019-MN	SUPPORT LEG (NOT SHOWN)	2

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17	35H175-81	1-1/2 HORSEPOWER MOTOR, 3 PHASE	2
18A	CI-4253-2-MN	LEFT HAND MOTOR BASE	1
18B	CI-4253-1-MN	RIGHT HAND MOTOR BASE (NOT SHOWN)	1
19	S-4250-1-MN	MOTOR BASE ADJUSTING BLOCK	2
19A	2816-3	MOTOR BASE GASKET (NOT SHOWN)	2
20	51132FD	6-1/2" THRUST BEARING	2
21	CI-1272-1-MN	RIGHT HAND SAW HEAD	1
21A	CI-1272-2-MN	LEFT HAND SAW HEAD (NOT SHOWN)	1
22	CI-4227-MN	RETAINING RING	2
23	P-3339-2-MN	PHENOLIC WEAR RING	2
24	18LM100-7/8	MOTOR PULLEY	2
25	322L100	TIMING BELT	2
26	CI-1273-MN	HEAD BELT COVER	2
27	5/16"	HEX ADJUSTING WRENCH	1
28	S-5343-2-MN	ADJUSTABLE PULL ARM (OPTIONAL)	0
29A	S-4285-5-MN	PULL ARM (MN-100 ONLY)	2
29B	S-4285-6-MN	PULL ARM (MN-200 ONLY)	2
29C	S-4285-7-MN	PULL ARM (MN-300 ONLY)	2
30	AA-650-1	PULL ARM BUSHINGS	4
30A		SET PULL ARM LINK BOLTS & WASHERS	1
31	A-RC2-1/2" X 6	DRIVE CYLINDER (MN-100,200 ONLY)	1

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31A	A-RC2-1/2" X 7	DRIVE CYLINDER (MN-300 ONLY)	1
32	CI-1286-1-MN	CYLINDER JOKE CASTING	1
33	NAS2000-NO2	SPEED - FLOW CONTROL	1
34	EB-64	SET PNEUMATIC HOSES	1
35	A-314	DRIVE CYLINDER MOUNT NUT	2
36	ASRF 1-1/8"X2	CLAMP CYLINDER (OPTIONAL)	0
36A	D-49032-A	REPLACEMENT CLAMP CYLINDER (NEW)	0
37	PV608-2	CLAMP SHUT-OFF COCK (OPTIONAL)	0
38	ASP-1	CLAMP EXHAUST FILTER (OPTIONAL)	0
39A	S-1291-1-MN	RH CLAMP BRACKET (OPTIONAL)	0
39B	S-1291-2-MN	LH CLAMP BRACKET (OPTIONAL)	0
40	S-5344-1-MN	CLAMP PAD ADAPTOR (OPTIONAL)	0
41	R-5344-2-MN	RUBBER CLAMP PAD (OPTIONAL)	0
42	S-1153-5-MN	SPINDLE WRENCH	1
43A	S-1150-2-MN	LH SPINDLE NUT	1
43B	S-1150-6-MN	RH SPINDLE NUT (NOT SHOWN)	1
44A	S-5288-1-MN	LH SPINDLE SHAFT	1
44B	S-5288-2-MN	RH SPINDLE SHAFT (NOT SHOWN)	1
45	5205-S	DOUBLE ROW SPINDLE BEARINGS	2
46A	8-1153-6-MN	BEARING LOCK NUT - RH THREAD	1
46B	8-1153-7-MN	BEARING LOCK NUT - LH THREAD	1
47	S-1150-7-MN	BEARING SPACER	2

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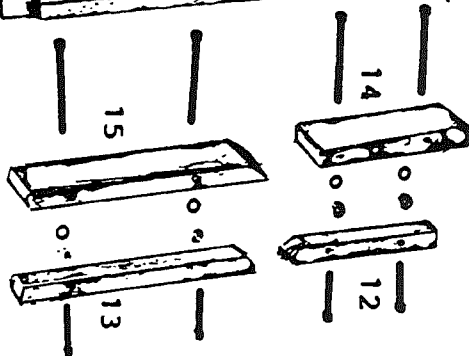
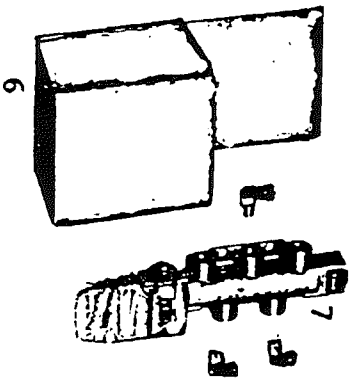
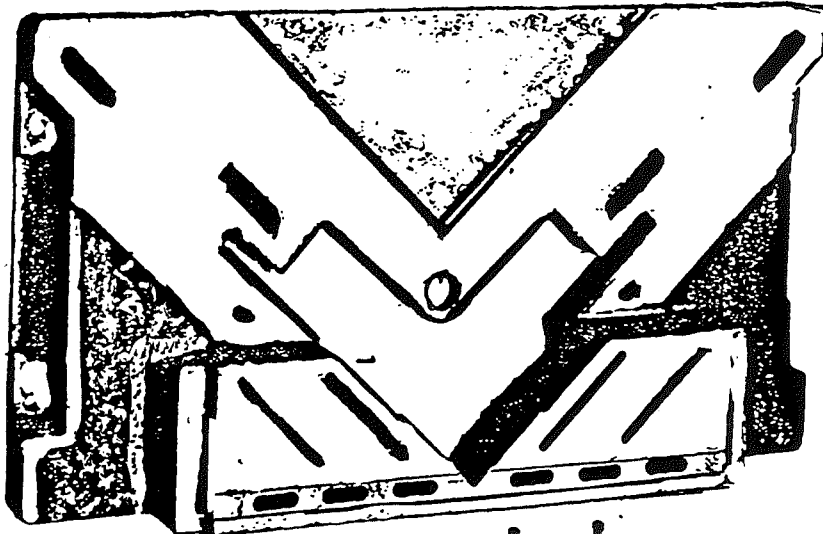
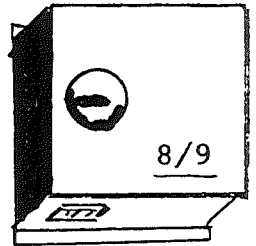
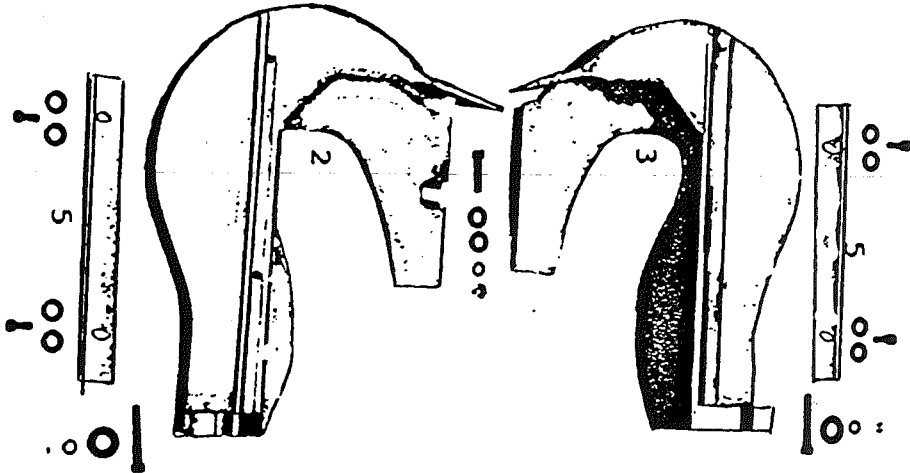
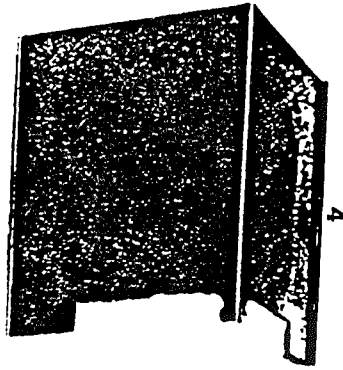
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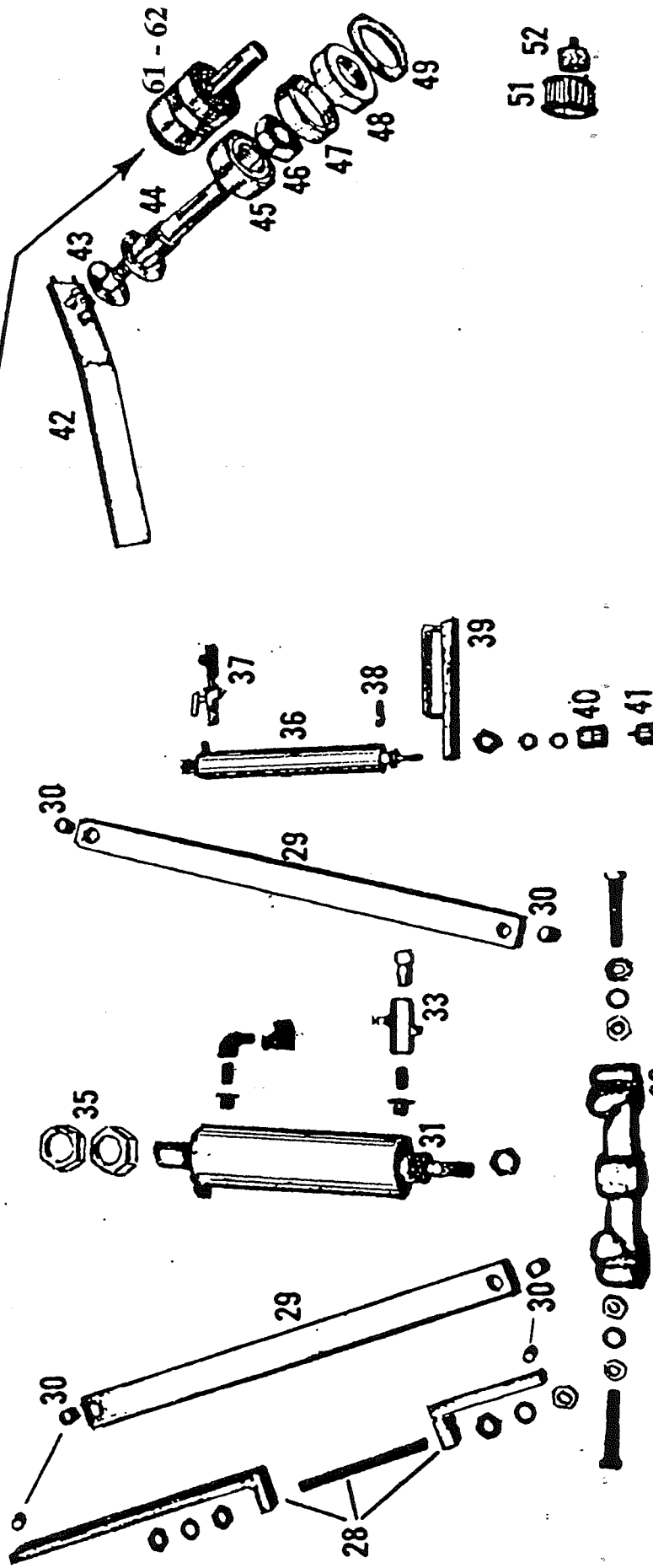
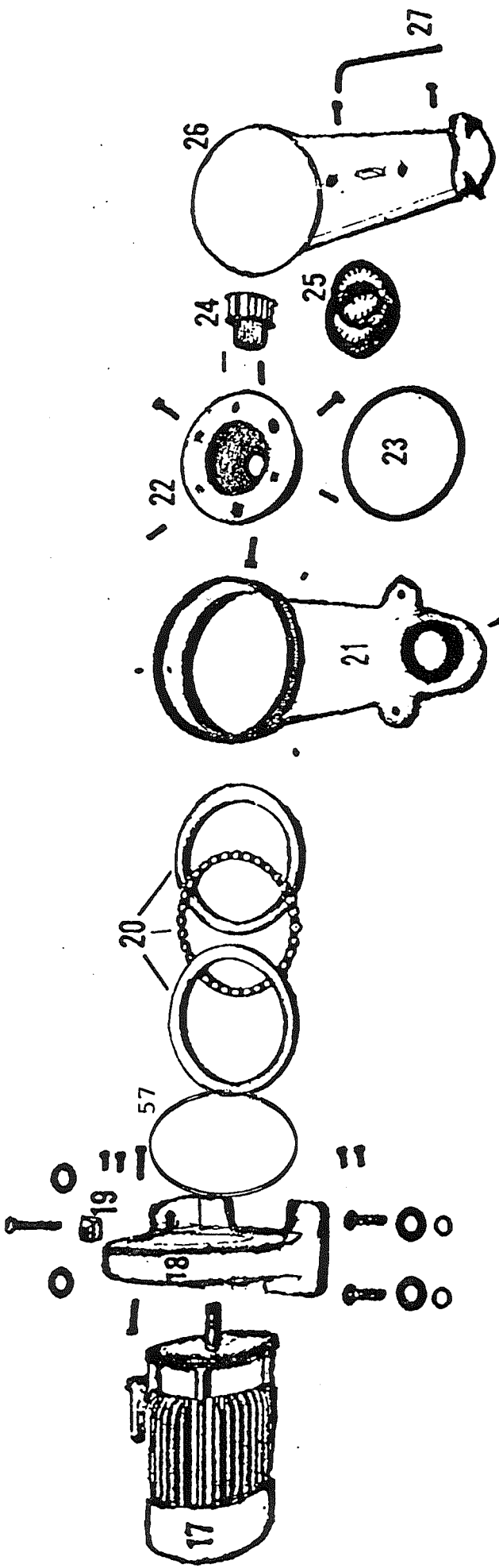
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48	6304-S	SINGLE ROW SPINDLE BEARINGS	2
49	S-1150-8-MN	OUTER BEARING LOCK NUT	2
50	798	TAPER PIN (NOT SHOWN)	1
51	TL18L100	SPINDLE PULLEY	2
52	1008-3/4	TAPER LOCK BUSHING	2
53	14/4-S	SET ELECTRIC WIRE	1
54	B-1163-3-DC	SPRAY MIST BODY (OPTIONAL)	2
55	B-1163-2-DC	SPRAY MIST NEEDLE WITH NUT	2
56	631 X 6	SPRAY MIST CHECK VALVE	2
57	V200L	BEARING SEAL "V" SHAPE	2
58	PV608-2	SPRAY MIST SHUT-OFF COCK	2
59	CT12802	12" CARBIDE SAWBLADE FOR ALUMINUM	2
60	NAC3000-N03-3	FILTER, REGULATOR, LUBRICATOR	1

ASSEMBLIES

61	S-6872-1-MN	LH SPINDLE COMPLETE ASSEMBLY INCLUDING: NUT, SINGLE & DOUBLE ROLL BEARINGS AND SPACER
62	S-6872-2-MN	RH SPINDLE COMPLETE ASSEMBLY INCLUDING: NUT, SINGLE & DOUBLE ROLL BEARINGS AND SPACER
63	B-1163-A	SPRAY MIST ASSEMBLY INCLUDING BODY, NEEDLE VALVE, CHECK VALVE & SHUT-OFF COCK



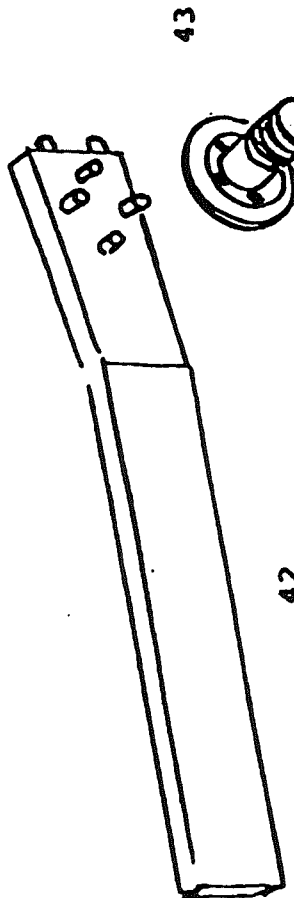


COMPONENTS:

- 42 S-1153-5-MN SPINDLE WRENCH
- 49 S-1150-8-MN OUTER BEARING LOCK NUT

SPINDLE ASSEMBLY COMPONENTS:

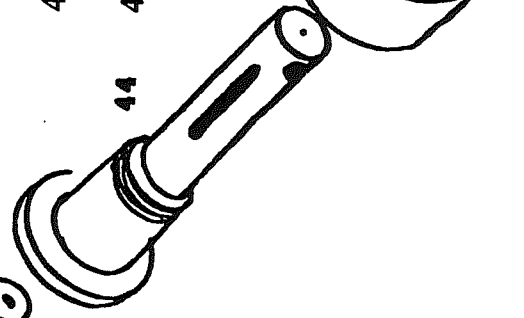
- 43 MN00G056 LH SPINDLE NUT
- 43A MN00G057 RH SPINDLE NUT
- 44 S-5288-1-MN LH SPINDLE SHAFT (STANDARD)
- 44A S-5288-2-MN RH SPINDLE SHAFT (STANDARD)
- 45 5205-S DOUBLE ROW BEARING
- 46 S-1153-6-MN RH BEARING LOCK NUT
- 46A S-1153-7-MN LH BEARING LOCK NUT
- 47 S-1150-7-MN OBSOLETE - USE S-6530-1-MN
- 47 S-6530-7-MN BEARINGS SPACER
- 48 6304-S SINGLE ROW BEARING



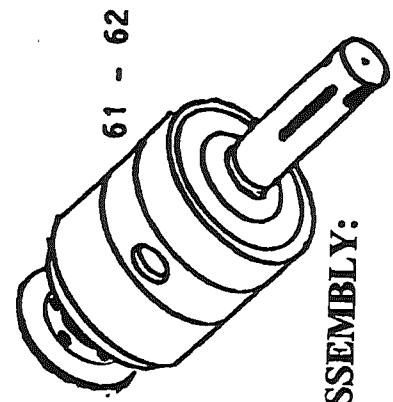
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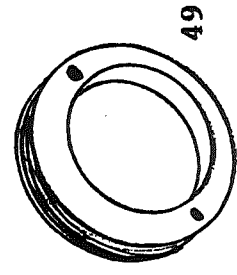
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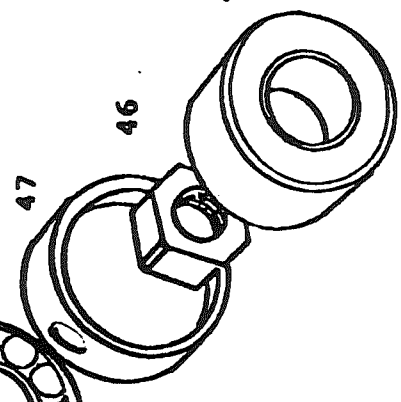
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61 - 62



49



46

47



48

SPINDLE ASSEMBLY:

61 - 62 LH / RH SPINDLE ASSEMBLY

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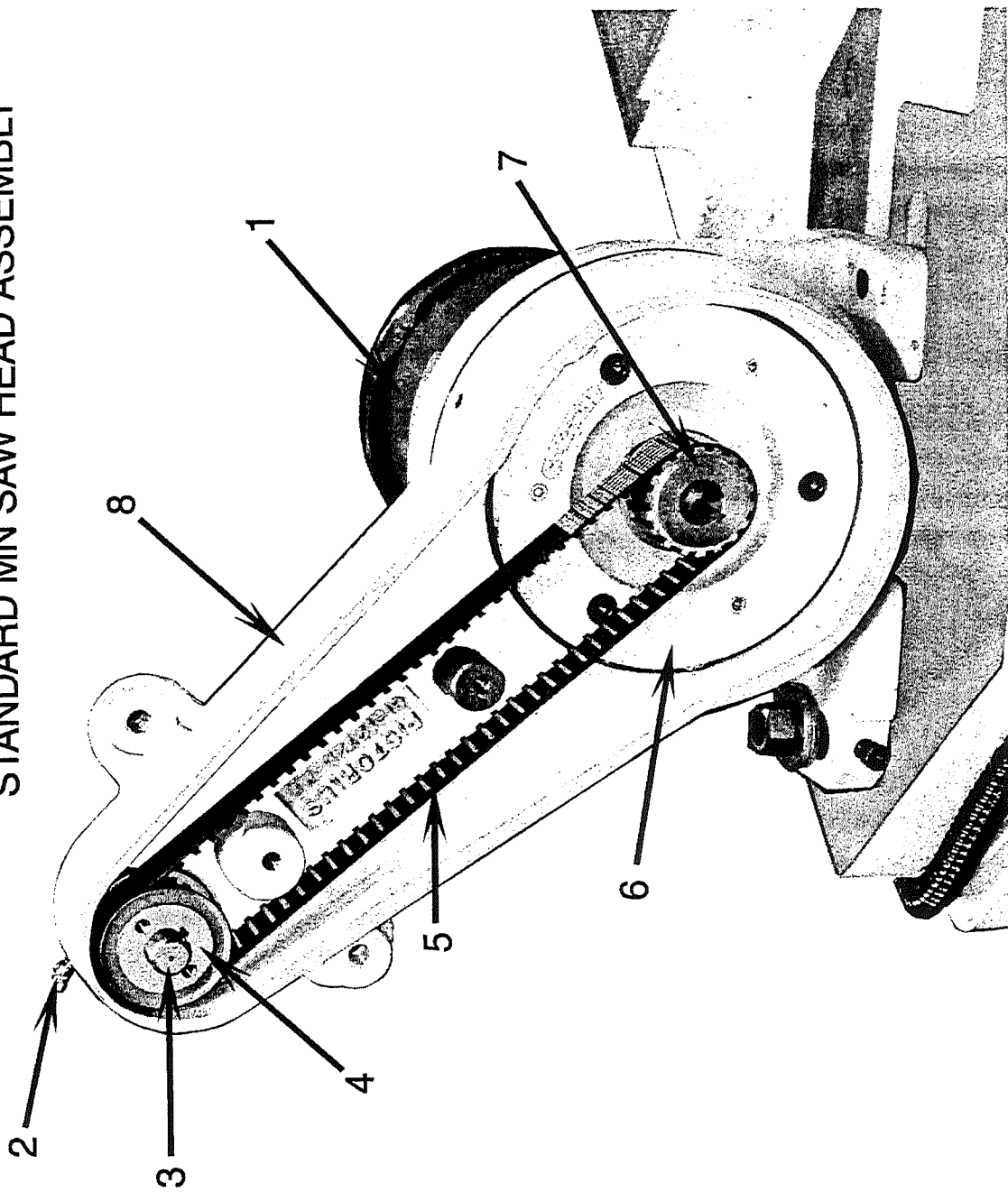
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Web Site: <http://www.pistorius.com>

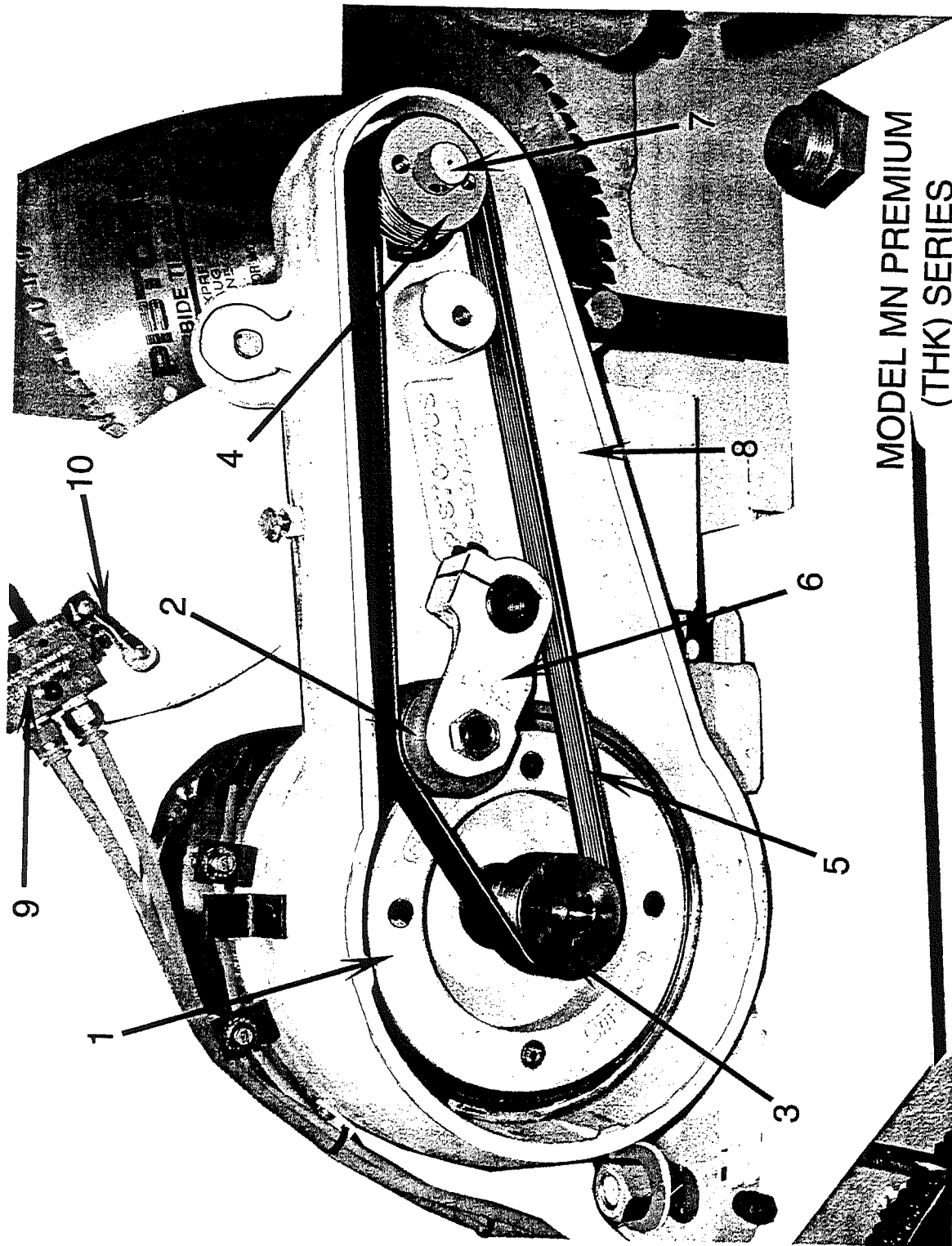
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MODEL MN SERIES STANDARD SAW HEAD ASSEMBLY

Ref.	Part #	Description
1	35H175	MOTOR 1 1/5 HP, 3PH, 208 / 460 VOLT
2	1103K23	ELBOW GREASE FITTING
3*	S-6872-1-MN	LEFT HAND SPINDLE ASSEMBLY
3*	S-6872-2-MN	RIGHT HAND SPINDLE ASSEMBLY
4*	MN00U034	TIMING SPINDLE PULLEY (SOLID ONE PIECE)
4*	TB18L100	TIMING SPINDLE PULLEY (NEEDS 1008 3/4 TAPER LOCK BUSHING)
5	322L100	TIMING BELT
6	CI-4227-MN-ASSY	RETAINER CASTING ASSEMBLY W/ WEAR RING
7	18LM100X7/8	TIMING MOTOR PULLEY W/ HUB
8	CI-1272-MN	SAW HEAD CASTING

STANDARD MN SAW HEAD ASSEMBLY





MODEL MN PREMIUM
(THK) SERIES

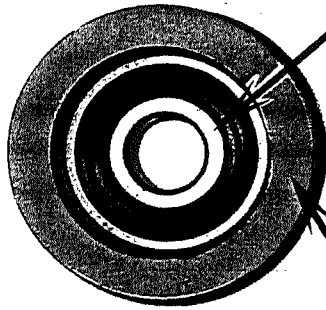
**SAW HEAD PARTS MODEL
MN / PREMIUM (THK) SERIES**

Ref	Part#	Description
1	CIMNP025	RETAINER CASTING (PREMIUM)
2	S-6939-1-MN	IDLER PULLEY
2*	1621-DCTN	INTERNAL IDLER PULLEY BEARING (NOT SHOWN)
2*	N5000-137	BEARING SNAP RING (NOT SHOWN)
3	S-6976-1-MN	MOTOR PULLEY POLY-V (STANDARD 2" DIAMETER)
3*	MNP00029	MOTOR PULLEY POLY-V (HIGH SPEED 2 - 5/8" DIAMETER)
4	MNP0U025	SPINDLE PULLEY POLY-V
5	323J10	POLY-V BELT (STANDARD)
5*	330J10	POLY-V BELT / HIGH SPEED (LARGER MOTOR PULLEY)
6	CI-6896L-H-MN	LEFT HAND IDLER ARM CASTING
6*	CI-6896R-H-MN	RIGHT HAND IDLER ARM CASTING
7	SA-6876-1-MN	LH - PREMIUM SPINDLE ASSEMBLY (SEALED BEARINGS)
7*	SA-6876-2-MN	RH - PREMIUM SPINDLE ASSEMBLY (SEALED BEARINGS)
8	S-1272-MN	SAW HEAD CASTING
9	41P	PILOT VALVE 4 WAY
9*	31P	PILOT VALVE 3 WAY
10	34C	ROLLER ARM ASSEMBLY

IDLER ARM COMPONENTS

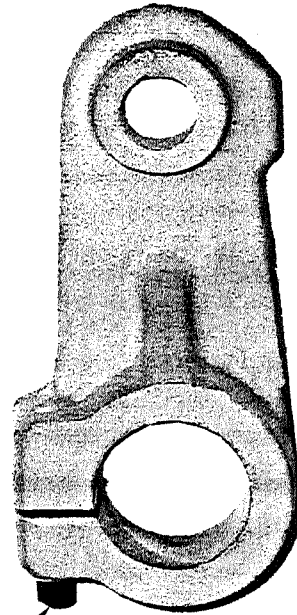


N5000 -137 SNAP RING



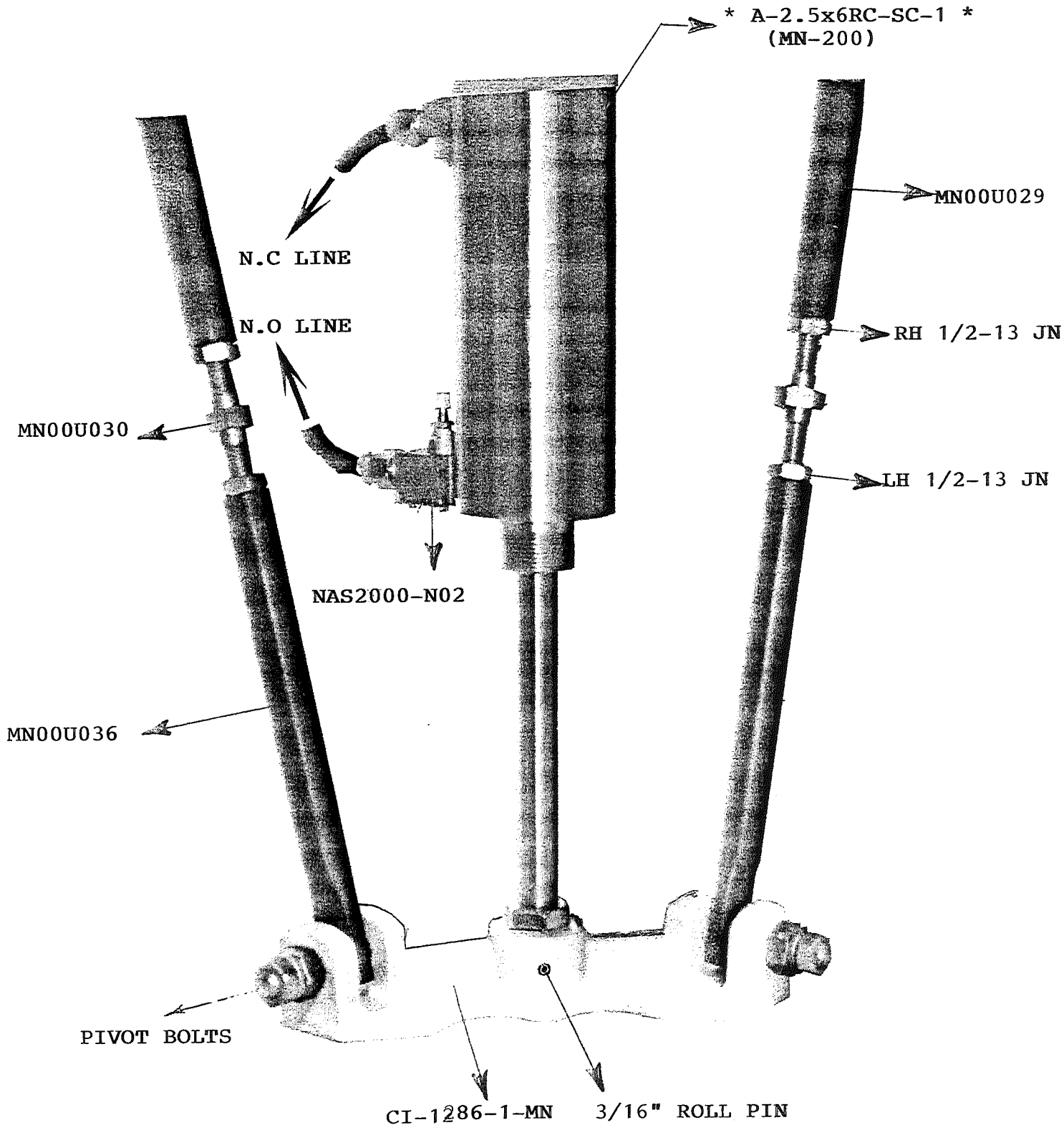
1621-DCTN IDLER BEARING

S-6939-1-MN IDLER PULLEY



LOCKING SCREWS (2)

CI-6896L-H-MN LEFT HAND IDLER CASTING
CI-6896R-H-MN RIGHT HAND IDLER CASTING



MN00U037 COMPLETE PULL ARM ASSEMBLY

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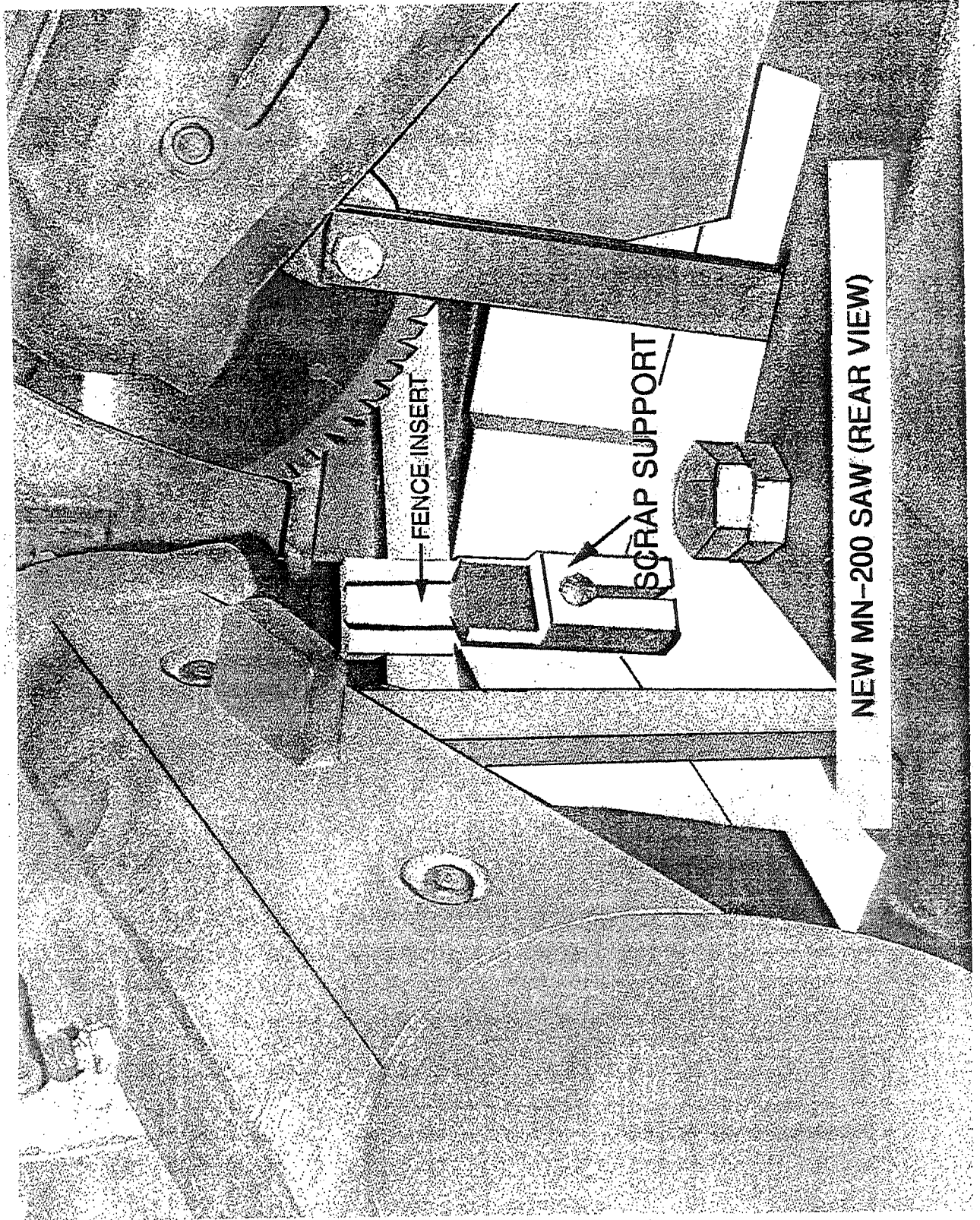
E-Mail: info@pistorius.com

Web Site: <http://www.pistorius.com>

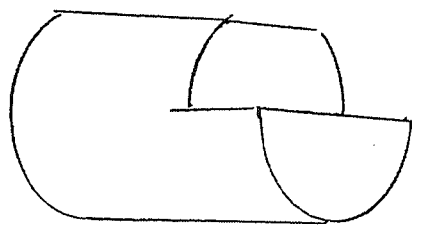
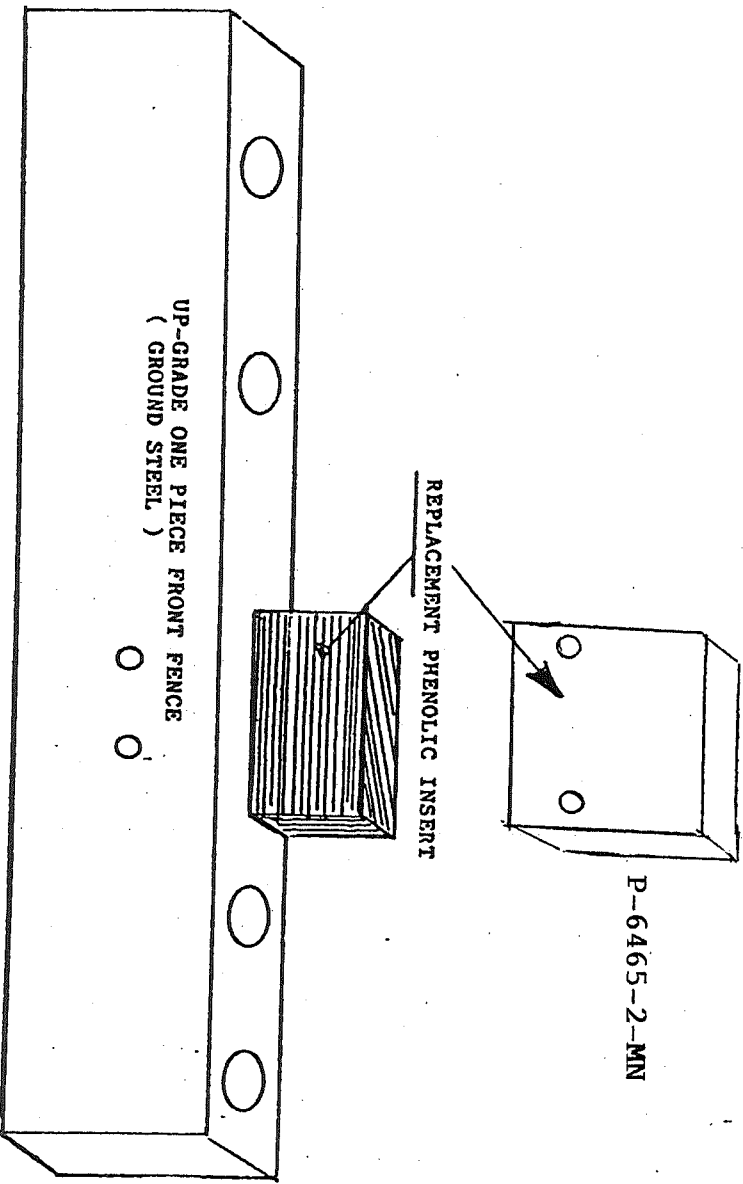
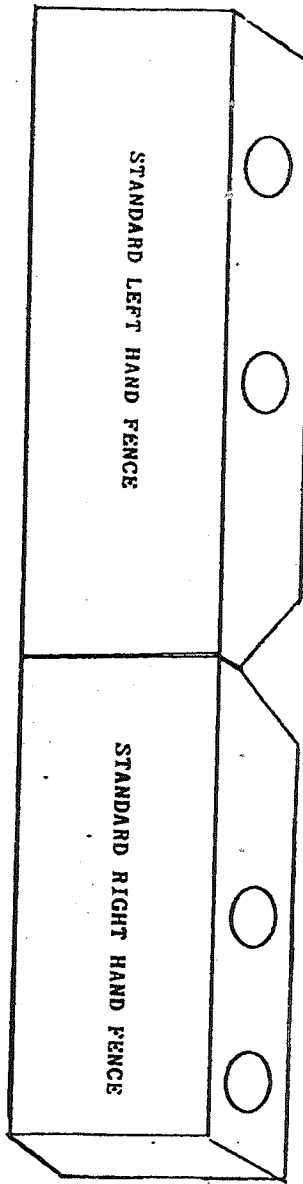
1785 EXPRESS DRIVE NORTH • HAUPPAUGE, NEW YORK, U.S.A. 11788

SERIES MODEL MN MAIN AIR CYLINDER COMPONENTS

Ref	Part #	Description
1	MN00U029	ADJUSTABLE PULL ARM UPPER LINK
2	MN00U030	PULL ARM ADJUSTMENT STUD
3	MN00U036	ADJUSTABLE PULL ARM LOWER LINK
*	MN00U037	ADJUSTABLE PULL ARM ASSEMBLY (INCLUDING #1, #2, & #3)
4	S-7313-KIT-MN	PIVOT BOLTS AND NUTS KIT (UPPER AND LOWER)
5	CI-1286-1-MN	CYLINDER YOKE CASTING
6	NAS2000-N02	FLOW CONTROL VALVE
7	KQL-11-35S	AIR FITTING (STRAIGHT)
8	A-2.5X6RC-SC1	DRIVE CYLINDER / 6" STROKE (MN-100, -200)
8*	A-2.5X7RC-SC1	DRIVE CYLINDER / 7" STROKE (MN-300)
9	1A-074-01	3/8" OD PLASTIC TUBING (PER FOOT)
10	FL-51-6	FLANGE BRASS BUSHING (LOWER)
10*	AA-650-1	BRASS BUSHING (UPPER)



NEW MN-200 SAW (REAR VIEW)



FRONT

MN 100-400

BOTTOM SCRAP SUPPORT

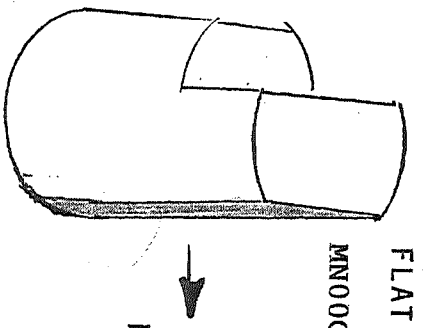
MN00G040
(CHIP BREAKER)

OLD

EMN14 USES

EMN 30037

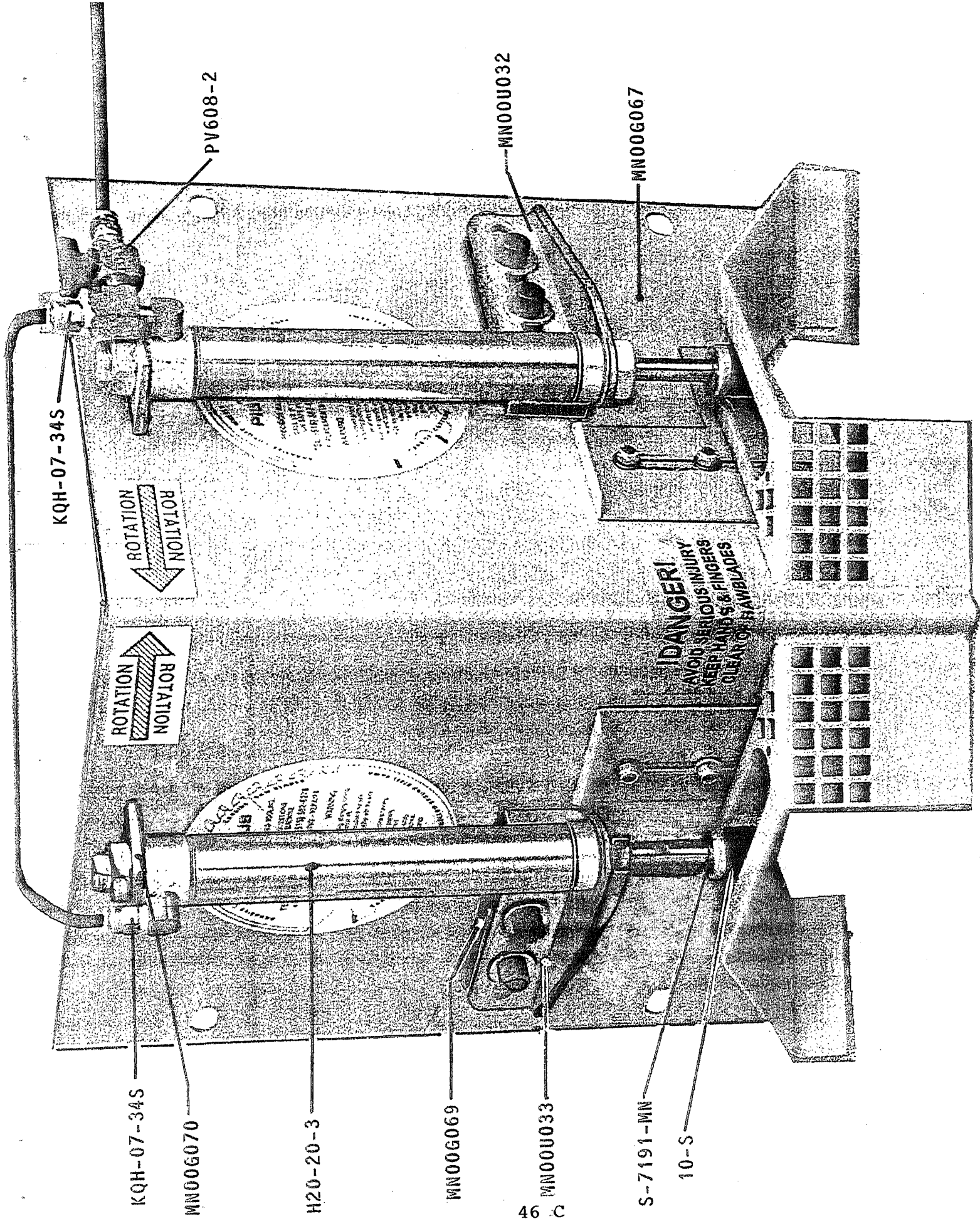
OUR SAWS HAVE
NEW METAL SCRAP SUPPORT.



FRONT

FLAT
MN00G075

BOTTOM SCRAP SUPPORT
(CHIP BREAKER)



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9.4 MODEL # 6G VISI-MITER GAGE

The patented "VISI-MITER GAGE" is designed to measure the rabbet dimensions. Etched and colored visual sighting lines are parallel to the right saw blade for rapid setting. The Gage is designed for right hand use only.

INSTALLATION:

Locate and assemble the tripod type outboard leg (see illustration) using the supplied 5/16" allen wrench. This assembly consists of four major components, one cast iron union, one 1 1/4" diameter center support shaft and two 1" diameter legs. Two rubber feet, "T" nut and assembly screws are also included.

Slide the two 1" rods bars into the precast holes on each side of the union casting. Make sure that the leg shaft is bottomed inside the cast union. Use a hammer and tap the end of the shafts to ensure they are inserted all the way into the precast union. Install the two allen screws and secure rods in position. Slide the rubber feet over the end of shafts. If the optional aluminum "TOE CASTINGS" were ordered do not place the rubber feet on the end of the rods. Install the "TOE CASTINGS" over the end of the two rods and secure them in place. Make sure both units are secured at same distance.

Included with the screws is a small section of threaded rod 3/8- 16 and a "T" nut. Place threaded rod into the threaded end of the larger rod (1 1/4") and also the "T" nut, but do not fasten. Keep assembly loose.

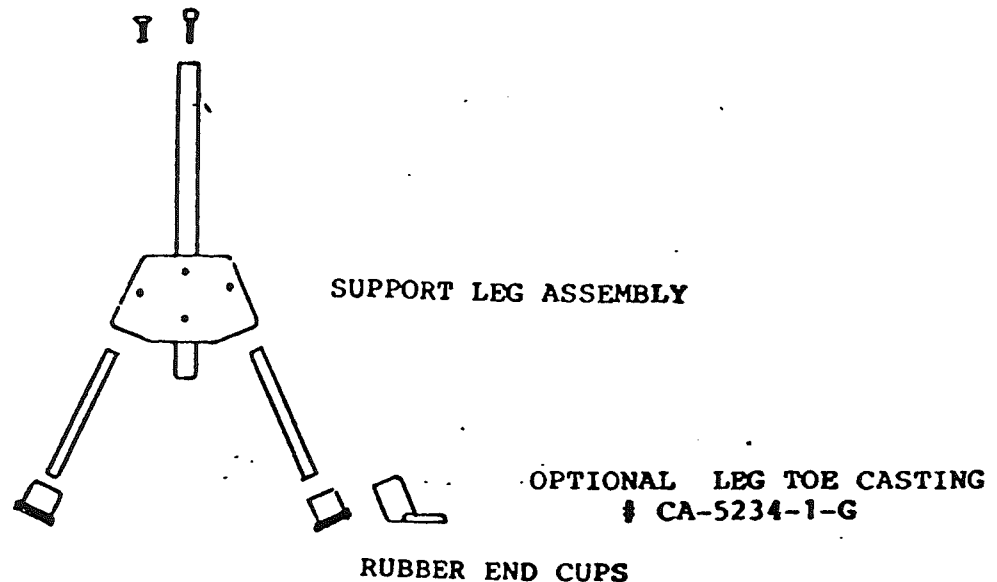
With the help of a second person supporting the outboard end of the gage bar, place the tip end of the black anodized gage bed into the right side of machine next to the 5/16" spacer plate on top of the table of the machine. Make sure the bottom spacer on the gage bed secures inside the 1" machined groove on the table. Place the 3/8 - 16 x 2 1/4" long screw through the open hole on the fence and from the bottom of the table secure the washer, lock washer and nut setting the bed into the machine, keep items loose until setup has been completed. Slide the "T" nut and rod assembly into the appropriate slot on the extrusion of the gage bar approximately 12" away from the edge and by rotating the rod tighten against the bottom of the gage. Lift the end of the entire gage and slide the tripod assembly by inserting the 1 1/4" rod into the center hole at the tripod cast and secure the two allen screws against the rod.

Using a straight edge align the gage fence with the stationary fences on the machine. Level the gage with the machines table and adjust the height. This adjustments is made by lifting / lowering the central rod on the tripod assembly. Secure all screws.

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CALIBRATION:

After all the screws are tighten and the scale is set parallel to the stationary fences on the machine the following calibration is recommended

Place a scrap piece of moulding into the machine. Turn on the machine by activating the "ON" switch located on the main electric box at the right hand side of machine. Miter the left edge of the moulding.

Slide the moulding across the table of the machine, pick a random number on the scale and match the etched line with the rabbet corner section of the material. Slide the stop assembly against the tip of material and secure stop handle.

Cut again using at this time both saws, carefully remove the mitered piece from the machine and measure the length of the rabbet dimension on the material.

This measurement must match with the color edged line you have selected on the scale, if they do not match, fine tune the gage by loosening the 3/8 x 16 x 2 1/4" locking screw and slide the gage assembly (left / right) until both dimensions match precisely.

**** NOTE: GAGE STRIP TOLERANCE IS (+ / -) 1/16" OVER 48" LONG ****

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RABBIT OR INSIDE MEASUREMENT GAGES

MODEL #6G "VISI-MITER" GAGE

(for inside, rabbet or outside "tip-to-tip" measurements)
Patent #224,717

The exclusive, patented "Visi-Miter"™ gage enables you to easily and without computations, measure either inside, rabbet or outside "tip to tip" dimensions to suit the size of the item being framed.

The gage strip is stainless steel with alternating color coded sighting lines etched to a depth of .010". Every inch line is white and every 1/8" increment between inches is alternating black and red lines. On metric scales, every centimeter line is white with alternating white and black lines every 2.5 mm.

HOW IT WORKS

Etched and colored visual sighting lines are parallel to the sawblade on the right hand side of the double miter saw. When material to be measured is placed on the stainless scale, the mitered face of the material is at right angles to the visual sighting lines. If the rabbet dimension is desired, the operator places the rabbet corner of the moulding directly on the sighting line for the dimension desired. The stop is then placed against the miter and tightened with the handle. For each change of size required the above process must be repeated.

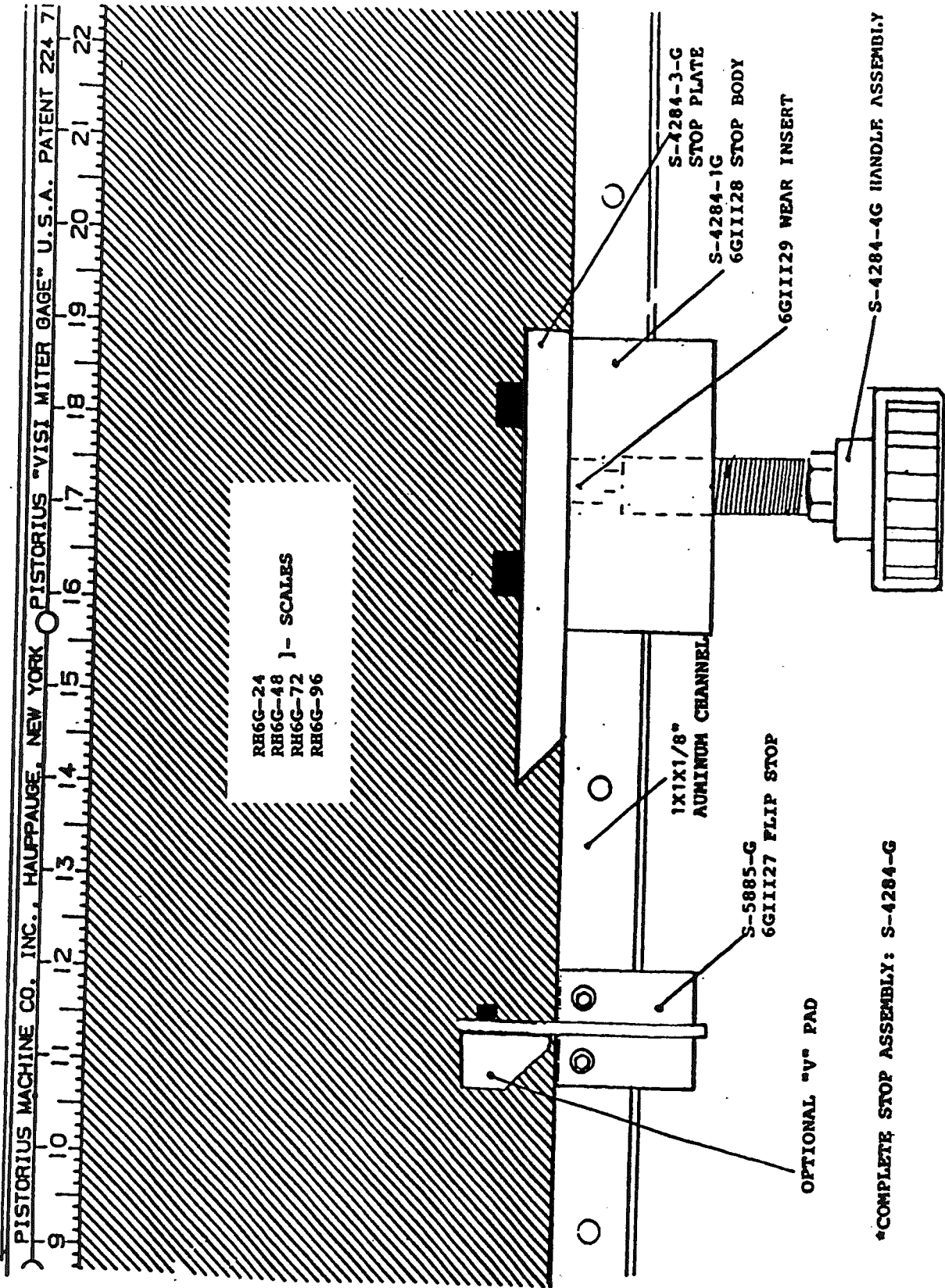
SPECIFICATIONS

Four standard sizes are available:

Weight	4" to 48" gage		4" to 72" gage		4" to 96" gage		10 to 152cm	
	(Imperial calibrations)				(Metric calibrations)			
Crated	118lbs	138lbs	157lbs	126lbs				
	(53kg)	(63kg)	(71kg)	(57kg)				
Uncrated ...	66lbs	86lbs	105lbs	74lbs				
	(30kg)	(39kg)	(47kg)	(33kg)				

All gages are for right hand mounting only.

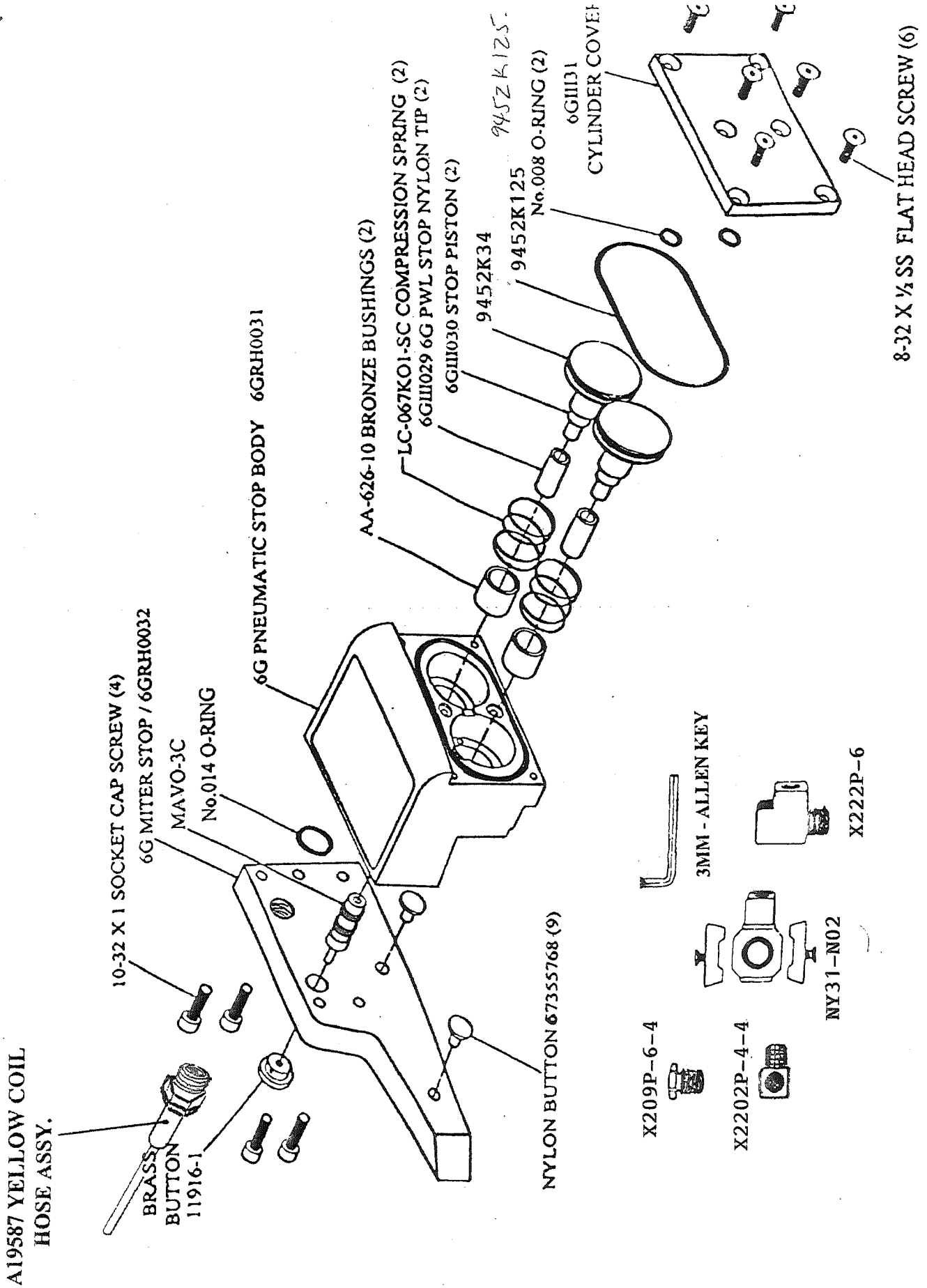
Note: Gage strip tolerance— ± 1/16" over 48"

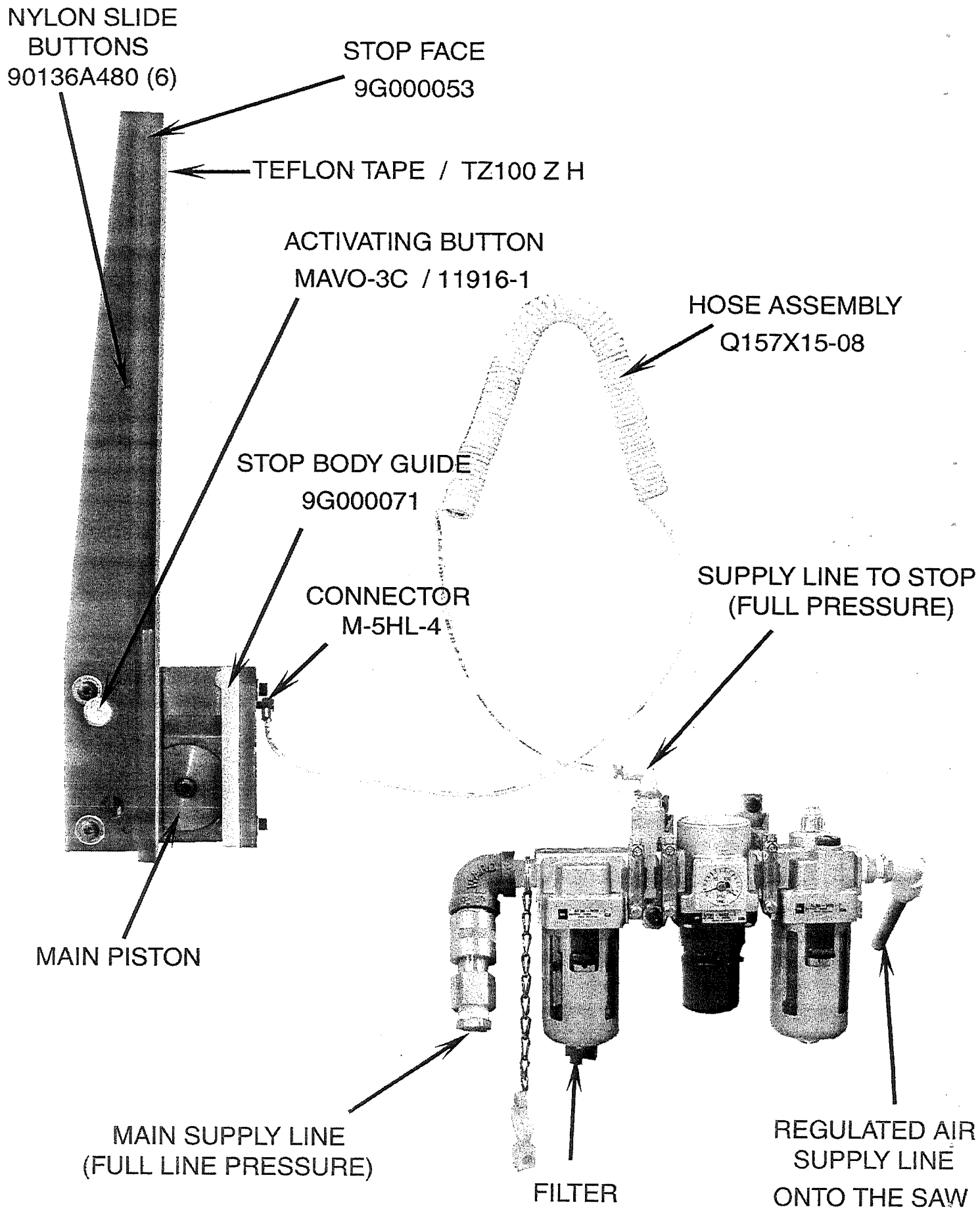


*COMPLETE STOP ASSEMBLY: S-4284-G

6G POW-R-LOK STOP ASSEMBLY

OLD STYLE





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9. MODEL # 7G MITERSIZE GAGE

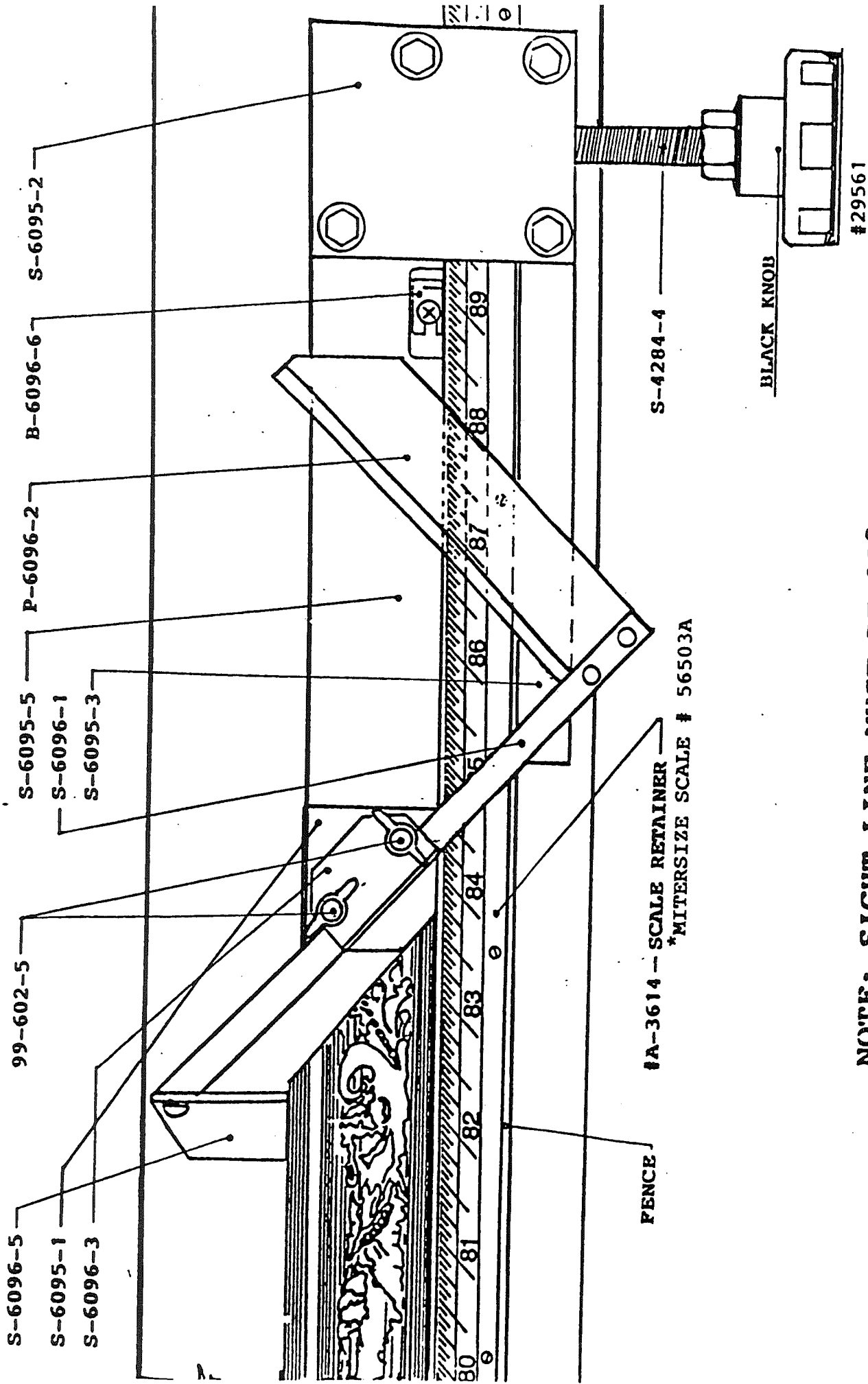
The design of the "MITERSIZE GAGE" allows accurate measurements for either inside rabbet, or outside "tip to tip" dimensions without any computations.

This gage is for right hand operation only.

INSTALLATION:

- a) Reference adjustable support leg instructions.
- b) Gage is bolted into machined $7 \frac{1}{4}$ " long x $1 \frac{5}{8}$ " wide x $\frac{3}{8}$ " deep recessed step on the table. Protuding $6 \frac{1}{2}$ " x 1" fence of gage fits into the 1" wide x $\frac{1}{4}$ " deep machine fence slot. Hand tighten the three allen screws into the table of machine. (Two allen flat screws and one allen cup)
- c) With a machinist level and a straight edge, adjust gage bed level with table and align gage 1" fence parallel with the fences of machine. Once aligned, tighten all screws .
- d) Open screws on scale retainer . (A-3614) and slide ruler tape under retainer, keep screws loose.
- e) Secure steel (S-6096-1) and plexiglass sight measuring arm (P-6096-2) into groove in stop using the two screws provided. (S-6096-3). (See illustration)
- f) Slide complete stop body and sight gage along the gage to approximately 10" to 12" from the saw blade, lock handle.
- g) Place a scrap piece of moulding into machine about 20" long. Start saw and miter right end of scrap piece with left hand saw head, slide scrap piece across the machine table into the machined coner of stop.
- h) Cut a piece and remove it without disturbing stop, using a measuring tape read rabbet dimension. After reading the rabbet measurement, place the scrap piece back into machine and against stop. Slide the rabbet measurement sensor (S-6096-5) against the inside rabbet of moulding and tighten the locking screws (S-6096-3), see illustration. To calibrate the dimension slide the ruler (underneath retainer A-3614) until line on the plexiglass matches with the rabbet measurement of moulding. Once calibration is been completed fasten all screws on the retainer. Rabbet dimension is now set.
- i) Next remove moulding out of machine again without disturbing the stop and measure the scrap piece from tip to tip. Adjust the brass pointer (B-6096-6) to correspond with scrap piece. Gage is now set for both dimensions.

#7G MITERSIZE GAGE



NOTE: SIGHT LINE MUST BE 90° TO S-6096-1

MNP

SECTION 9: GAGE INSTALLATION

The #2G Accurcut gage is available for installation on either the right hand or left hand side of the machine. The preferred hand of the gage is indicated at the time of ordering and the bar is drilled to suit.

The gage bar mounts directly to the machined step found on the end of the table casting. The machine step in the table casting has a cast slot to receive the mounting bolts (flathead allen).

For installation onto the machine follow these steps;

- 1 - Locate and assemble the tripod type outboard support leg. the leg consists of four major components. The cast iron union, the center support shaft and the two legs. Two rubber feet and assembly screws are also included.

Slide the two 1" round bars into the precast holes on each side of the union casting. To be sure the leg is bottomed in the cast union, hit the end of the leg with a hammer to seat all the way down. After both legs are inserted, slide the rubber feet onto the ends of the legs. If the optional cast aluminum bolt down "feet" were ordered, slide these on in place of the rubber feet and secure with the allen set screws. Install and tighten the allen cap screws into the side of the cast union to secure the legs in place.

Slide the 1-1/4" center bar into the center hole of the union with the countersunk hole facing up.

- 2 - Place the gage bar with the two countersunk holes onto the machined step on the machine table and insert the two bolts through the gage and the table. Using the supplied washers and nuts loosely tighten the gage bar into place while a helper supports the outboard end of the gage bar. Install the adjustable support leg into the countersunk hole located on the back side of the stiffening brace. Adjust the center bar of the support leg so that the gage bar is level with the machine and then lock the bolts in the center union casting.

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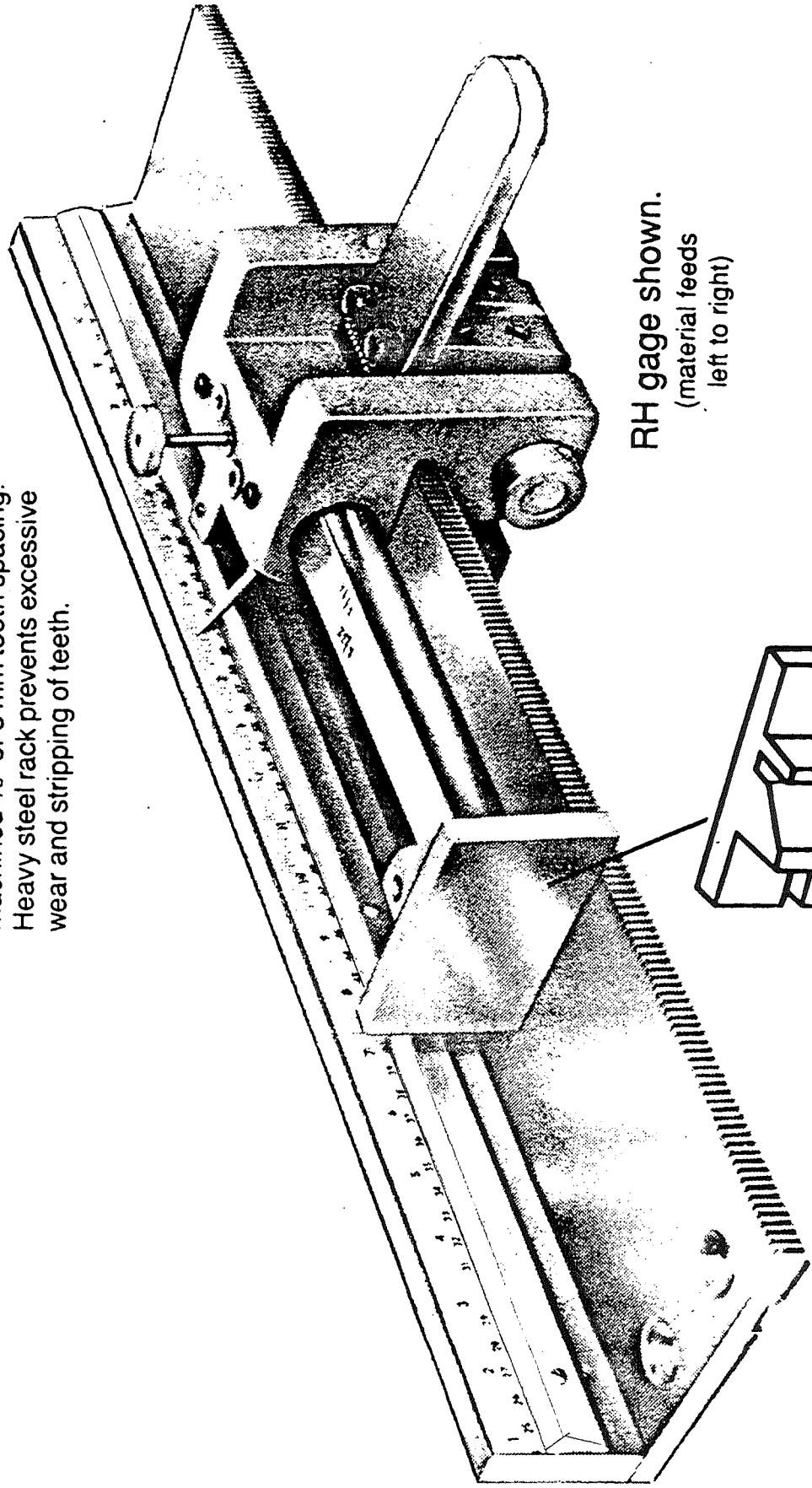
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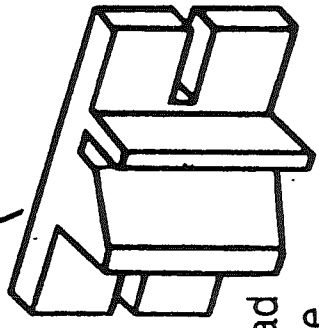
MNP .

- 3 - Locate the aluminum scale retaining strip located on the vertical stiffening fence. Loosen the screws down the length and insert the tape scale behind the strip. Do not tighten the screws at this point.
- 4 - Be sure that the gage bar is parallel with the fence on the machine. The gage bar should be adjusted from front to back using the cast slot to ensure that the material on the saw table will contact the face of the stop casting. If these steps are correct tighten the gage bar securely to the machine table with the bolts provided.
- 5 - When the machine is operational, slide the stop to any position along the bar and release the tongue to engage the teeth on the rack (bed). Cut a piece of material and measure the overall length. Slide the tape scale until the matching dimension is opposite the pointer on the stop. Tighten the screws in the retainer strip to hold the scale strip. Cut or break off the excess ends of the tape scale. Check with several additional cuts. Make sure the stop pin is in the "0" position. Make fine adjustment to the scale position if necessary.
- 6 - For cuts inbetween the 1/8" or 3mm tooth spacing, use the supplied pin and predrilled factor bar holes provided. If a cut of 20-1/16" is required, set the stop to the 20" position using the pointer and with the pin in the "0" hole. Remove the pin from the "0" hole and place it into the +1/16" hole. The stop is now correctly set for cutting an overall tip to tip length of 20-1/16". The same procedure is used for all related inbetween dimensions.

$\frac{3}{8}$ " (9.52 mm) thick, stress relieved cold rolled steel bar with precision machined $\frac{1}{8}$ " or 3 mm tooth spacing. Heavy steel rack prevents excessive wear and stripping of teeth.

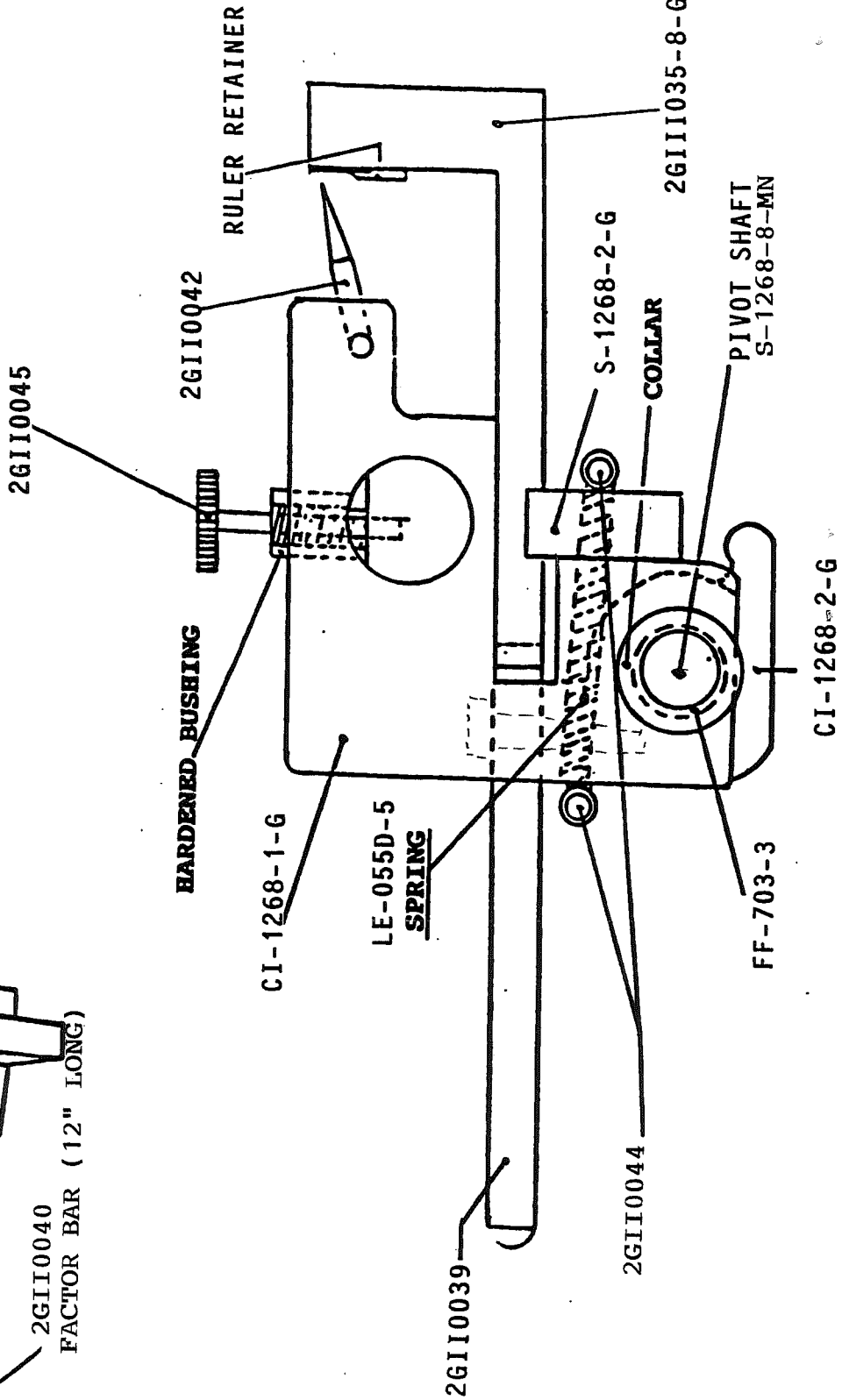
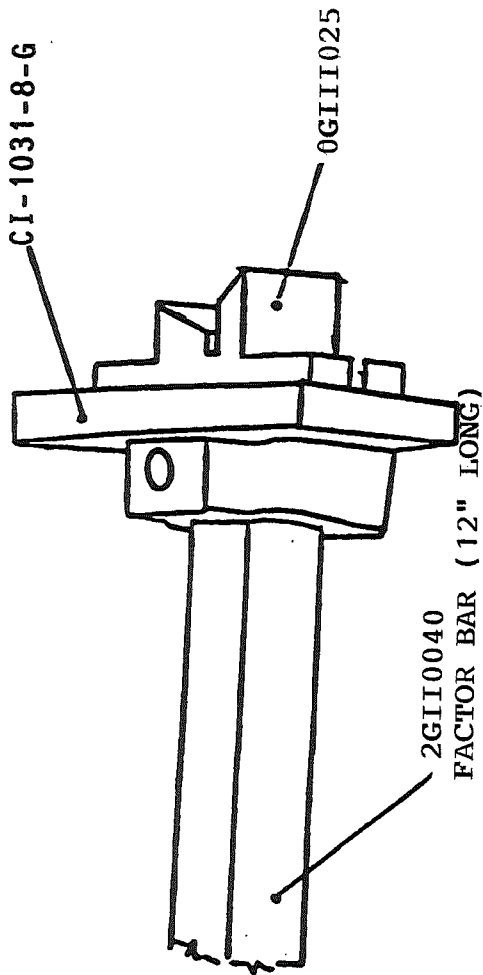


RH gage shown.
(material feeds
left to right)



Optional machined "vee" pad
installs on cast stop face.
Protects sharp points on miters.
Standard stop face supplied
is machined flat.

2G ACCURCUT GAGE STOP
ASSEMBLY (SIDE VIEW)



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ACCURCUT GAGE - PARTS LIST

REF #	PART NUMBER	DESCRIPTION	# ON UNIT
1A	S-5614-1-G	ACCURCUT WAYS - 1/8" TOOTH PITCH	1
1B	S-5614-2-G	ACCURCUT WAYS - 3MM TOOTH PITCH	1
2	CI-1268-7-G	ACCURCUT STOP BODY CASTING	1
3	PF-2024	PIVOT SHAFT BUSHING	2
4		HARDENED PIN BUSHING	4
5	3/8"-16	FACTOR BAR SET SCREW	1
6	10/32"	POINTER SET SCREW	1
7	S-1268-7-G	STOP PIN	1
8	S-1268-3-MN	POINTER	1
9	S-1268-8-MN	PIVOT SHAFT	1
10		PIVOT SHAFT COLLAR	2
11	2GII0035	PIVOT CASTING	1
12	3/8"-16	PIVOT CASTING SET SCREWS	2
13		SPRING	1
14	S-1268-4-G	SPRING PIN	2
15	S-1268-5-G	HANDLE - 1/8" TOOTH PITCH	1
16	S-1268-5A-G	HANDLE - 3MM TOOTH PITCH	1
17	3/8"-16	HANDLE MOUNTING BOLTS	2

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4 - MAINTENANCE

Virtually no maintenance is required. If compressed air is used to clean the stop or display unit, make sure the air lines are clear of water. The unit can be damaged if water gets inside.

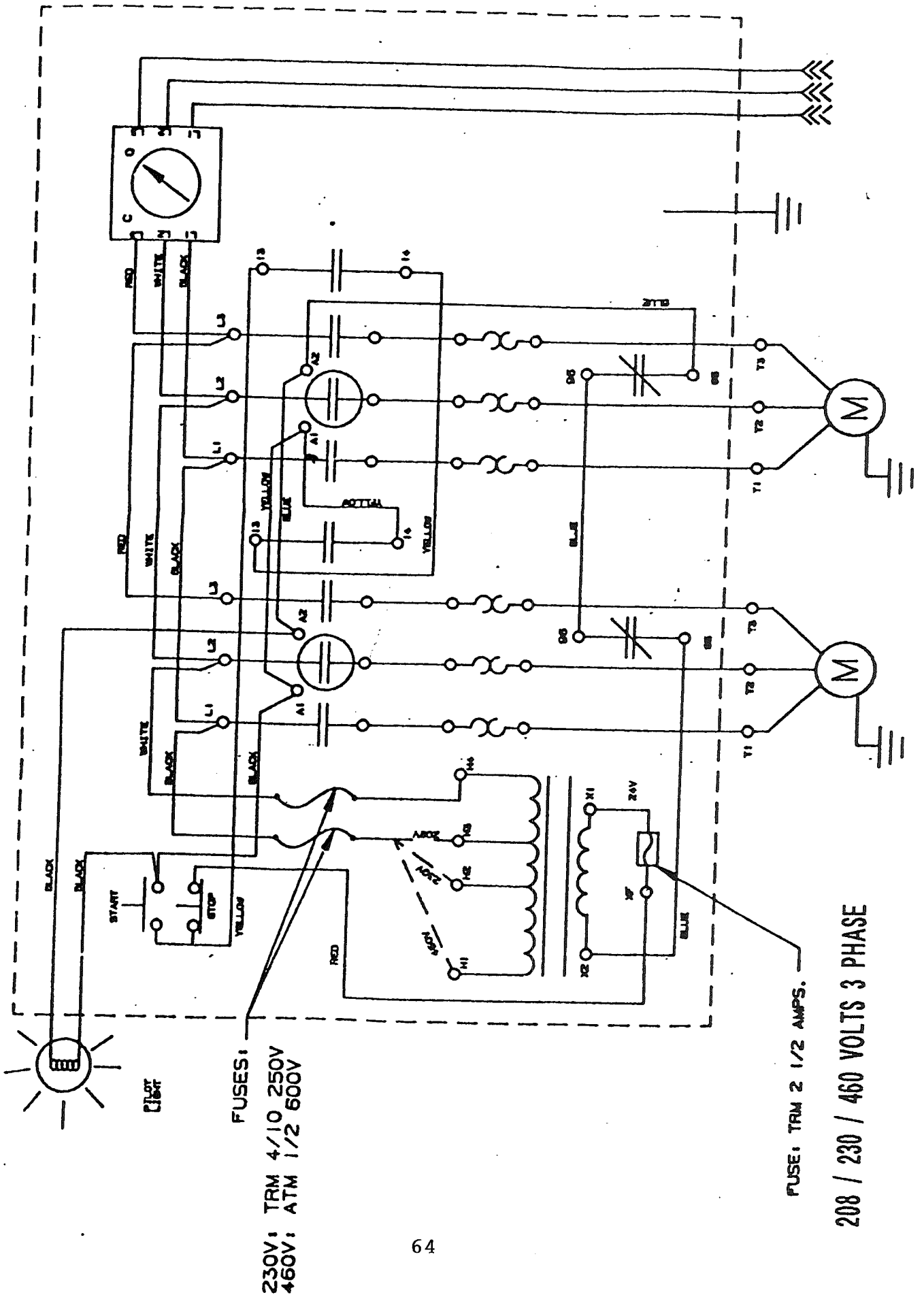
To change the batteries, remove the two screws that hold the cover to the base of the display housing. Carefully pull off the cover. Remove the batteries. Reinstall new ones, noting the proper orientation shown in the battery compartment. Replace the cover and tighten the screws.

5 - SPECIFICATIONS

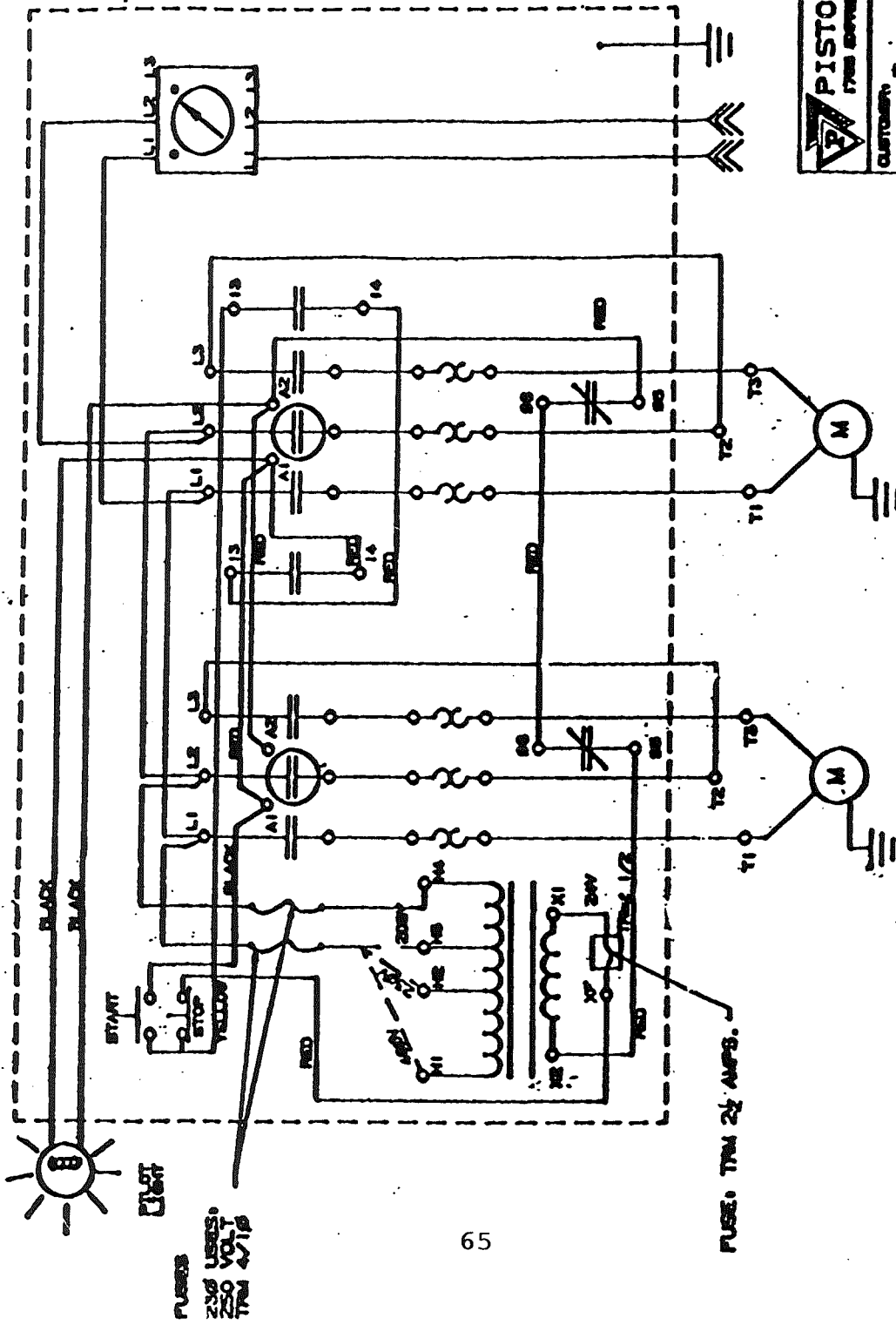
Accuracy	Within 1 digit $\pm .001$ " times scale extension in inches at 70 degrees F or 20 degrees C to maximum of .015" or .4mm.
Resolution	.001" or .01mm
Display	0 to ± 99.999 " 0 to ± 3000.00 mm 0 to 99 63/64"
Battery	Two type AA
Battery life	One year in normal use, when turned off at night. Low battery indicator on display alerts operator to replace batteries.

6 - PARTS LIST

PART NUMBER	DESCRIPTION	# ON UNIT
180-1023-001	COVER SCREWS	2
550-1026-001	AA ALKALINE BATTERY	2
700-3003-001	SCALE - 96"	1
701-1000-001	DISPLAY UNIT	1
701-1003-001	READ HEAD AND CABLE	1



230 VOLTS SINGLE PHASE ELECTRICS



FUSES
2x48 USEERS,
250 VOLT
TMM 4/18

FUSE: TMM 2x AMPS.

WIRING LOCKOUT WIRING DIAGRAM MN
1 1/2 HP
208 230
SINGLE PHASE

PISTORIUS MACHINE CO., INC.
1755 EXPRESS DRIVE NORTH, HUNTSVILLE N.Y. 17058, USA

CUSTOMER: _____

MACHINE: MN _____ SCALE: _____

DATE: DECEMBER 20, 1991 DRAWN BY: MMAY

DRAW. NO.: WDMN2027 INVOICE NO.: _____

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DRIVE CYL.
A-2-1/2 X 6-RC
ALLENAIR

OPTIONAL
HYDROCHECK
REPLACEMENT DRIVE CYL.
AD-2-1/2 X 6-FC-CH
CYL. CHECK
CH-R-RH-5-5
ROD TIE BAR
CH-378
ALLENAIR
(APT)

SPEED CONTROL
NAS2300

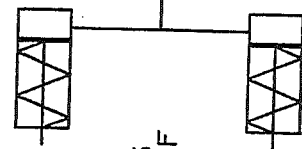
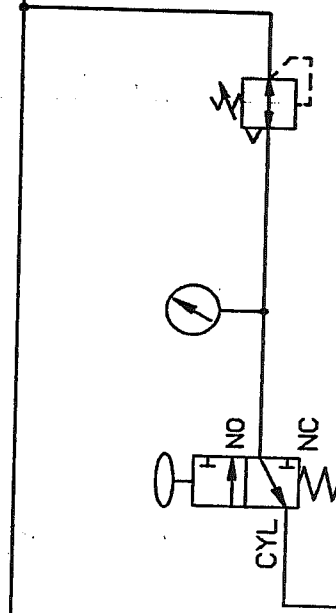
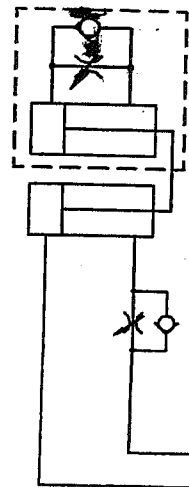
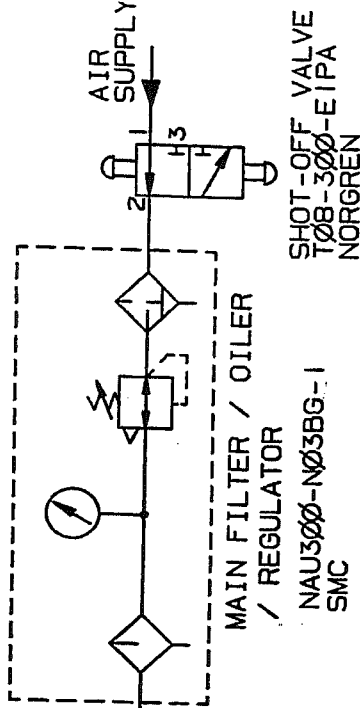
FOOT PEDAL
VSF-4302
VERSA

OPTIONAL
CLAMP CYLINDERS
A-1-1/8 X 3-SR-F
ALLENAIR

OPTIONAL
CLAMP
VALVE
3IP
HUMPHREY

OPTIONAL
CLAMP
GAGE
K-1Ø
WIKI

OPTIONAL
REGULATOR
NAR2ØØØ-NØ1
SMC



AIR DIAGRAM