

Introduction

Thank you for purchasing your new Cooper-Weymouth, Peterson equipment. It is precision equipment engineered and constructed to give you maximum satisfaction in performance and durability. A thorough knowledge of the information contained in this manual will help you in the installation and operation of your unit. The proper application of this information will reward you with long, trouble-free operation.

Warranty Policy

The products described in this manual are warranted from date of shipment, to be free from defects in material and workmanship for a period of two (2) years. Cooper-Weymouth, Peterson will repair or replace, at its option, any components which, upon inspection, it finds to be defective. Defects arising from damage in shipment, faulty installation, misuse or negligence by others is not covered by this warranty. The buyer must request written permission from Cooper-Weymouth, Peterson to return defective components and then must send them with all transportation charges prepaid to the plant designated in the written permission. Cooper-Weymouth, Peterson will in no event be liable for incidental consequential damages of any kind whatsoever. This warranty is extended only to the original purchaser from Cooper-Weymouth, Peterson.

Products and specifications are subject to change without notice.

Product Identification & Specification

MODEL NO.		SERIAL NO.	
MAX. COIL WEIGHT		MAX. COIL O.D.	
MANDREL EXPANSION RANGE			
STOCK THICKNESS IN MILD STEEL			
STOCK WIDTH		FEED LENGTH	
MACHINE DIRECTION		MTG. POSITION	
SPEED			
PASS LINE		AIR SUPPLY	
POWER SUPPLY			

* SEE MANUAL OR CONSULT FACTORY

Term Descriptions

CAUTION

Hazards or unsafe practices that could result in minor personal injury or product or property damage.

WARNING

Hazards or unsafe practices which could result in severe personal injury or death.

DANGER

Immediate hazards which will result in severe personal injury or death.

The words "**should**" and "**must**" as used in this manual shall have the following meanings. The use of should means that we strongly suggest that the instruction be followed. The use of must means that the instruction is mandatory for the safety of equipment and personnel.

Safety Precautions



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.



WARNING

Before any machine is used by an employee or is loaned or rented, make absolutely certain that the operator(s), prior to operating:

- 1) Is instructed in safe and proper use.
- 2) Reviews and understands the manual(s) pertaining to the machine.

It is the user's responsibility to understand and follow the manufacturer's instructions on machine operation and maintenance, and to observe pertinent laws and regulations.



WARNING, NEVER USE STOOLS, BOXES, CRATES OR SIMILAR ITEMS AS SUBSTITUTES FOR WORK PLATFORMS, SCAFFOLDING, OR LADDERS.



WARNING, KEEP THE WORK AREA CLEAR OF OBSTRUCTIONS AND FLOOR CLEAN AND DRY.



WARNING, DO NOT OPERATE ANY EQUIPMENT WITHOUT ALL GUARDS IN PLACE.



WARNING, DO NOT OPERATE ANY EQUIPMENT, WHICH HAS LOOSE, WORN, OR BROKEN PARTS.



REMEMBER, A CAREFUL OPERATOR IS ALWAYS THE BEST INSURANCE AGAINST AN ACCIDENT. GIVE COMPLETE AND UNDIVIDED ATTENTION TO THE JOB AT HAND.



DANGER, YOU MUST NEVER CHECK THE DIMENSIONS OF WORKPIECE WHILE EQUIPMENT IS OPERATING.



WARNING, IF ANY PART OF THIS MACHINE SHOULD BECOME OVER LUBRICATED AND LUBRICANT SPILLS OVER OR BUILDS UP, IT SHOULD BE CLEANED UP IMMEDIATELY, SO AS NOT TO HINDER THE PROPER OPERATION OF THE MACHINE OR ENDANGER PERSONNEL.



WARNING, A POSITIVE EARTH GROUND MUST BE CONNECTED FOR PROPER MACHINE SAFETY.



DANGER, DISCONNECT AND LOCK OUT ALL POWER SOURCES BEFORE INITIATING ANY MAINTENANCE OR REPAIRS.



CAUTION, IMPROPER OPERATION OF THIS MACHINE MAY CAUSE PERSONAL INJURY OR DAMAGE TO THE MACHINE.



WARNING, DO NOT OVERLOAD EQUIPMENT BEYOND ITS STATED OR IMPLIED CAPACITIES.



WARNING, BEFORE PERFORMING ANY MAINTENANCE ON THIS MACHINE BE SURE THAT THE MAIN DISCONNECT SWITCH IS SHUT OFF AND LOCKED IN PLACE.



WARNING, YOU MUST NEVER PLACE YOURSELF OR ALLOW ANY OTHER PERSON TO BE IN THE PATH OF A COIL SHOULD IT UNWIND IN AN UNCONTROLLED MANNER.



WARNING, DO NOT WEAR LOOSE CLOTHING, JEWELRY, OR UNRESTRAINED HAIR OR BEARD STYLES WHICH MAY CATCH IN MOVING PARTS.



WARNING, THE OPERATOR MUST AT ALL TIMES HAVE AUXILIARY OPERATING PERSONNEL CLEARLY WITHIN HIS FIELD OF VIEW.



WARNING, DO NOT HANDLE MATERIAL (COIL, SHEET, OR BLANK) WITHOUT WEARING GLOVES.



WARNING, NARROW OR UNSTABLE COILS MUST NOT BE TRANSPORTED WITHOUT THE AID OF BLOCKING AND/OR SIDE SUPPORTS.



DANGER, COILS MUST NEVER BE CARRIED OVER THE HEADS OF EMPLOYEES.



WARNING, KEEP LIQUIDS (SOLVENTS, LUBRICANTS, ETC.) AWAY FROM ELECTRICAL EQUIPMENT.



WARNING, YOU MUST NEVER DISCONNECT OR REMOVE ANY SAFETY DEVICE OR OPERATE ANY MACHINE WHO'S SAFETY DEVICES HAVE BEEN DISCONNECTED OR REMOVED.

Safety Message

Safety in the workplace demands cooperation and alertness on everyone's part. Supervisor, operators and other workers who notice hazards in need of safeguarding, or existing systems that need repair or improvements, should notify the proper authority immediately.

Supervisors have these additional, special responsibilities with regard to safety in the workplace: encouraging safe work habits and correcting unsafe ones; explaining to the worker all the potential hazards associated with the machines and processes in the work area; and being responsive to employee requests for action or information regarding machine hazards. The first-line supervisor plays a pivotal role in communicating the safety needs of the worker to management and the employer's safety rules and policies to the worker.

Sometimes the solution to safeguarding of hazards may require expertise that is not available in a given establishment. The readers of this manual are encouraged to find out where information is available, and when necessary, to request it. See Safety Information References.

Safety Information References

Standards Index - AMT - The Association for Manufacturing Technology

Safety Requirements for Construction, Care and Use of Machinery and Machine Systems for the Processing of Coiled Strip, Sheet and Plate ANSI B11.18-Latest revision.

Federal Register - Occupational Safety and Health Administration

National Electrical Code - NFPA Latest revision

Mechanical Power Presses, Safety Requirements for the Construction, Care and Use of ANSI B11.1-Latest revision

Shears, Safety Requirements for the Construction, Care and Use of ANSI B11.3-Latest revision

Power Press Brakes, Safety Requirements for the Construction, Care and Use of ANSI B11.3-Latest revision

Power Press Safety Manual, A Guide for Guarding Power Press Operations, National Safety Council

Noise Measurement Techniques - AMT

Accident Prevention Signs, Specifications for ANSI Z35.1 latest revision

Safety Color Code for Marking Physical Hazards ANSI Z53.1 Latest revision

Metal Scrap Processing Equipment, Safety Requirements for Design, Use and Maintenance of ANSI Z229.1-Latest revision

Shops Fabricating Structural Steel and Steel Plate, Safety Requirements for ANSI Z229.1-Latest revision

Minster Power Press Safety Manual #805A

Product Safety Sign and Label System - FMC Corporation

Conveyors and Related Equipment, Safety Standards for ANSI B20.1 latest revision

The above list is presented to assist the customer in effecting safe operation of equipment. It is not intended to be a complete list of all available materials on the subjects involved. We recommend that other standards, manuals and literature, as well as federal, state and local codes be referred to for additional pertinent information.

Source of References

AMT

The Association for Manufacturing Technology
7901 Westpark Drive
McLean, VA 22102

Occupational Safety and Health Administration
Administration, Room N-3106
U.S. Department of Labor
Washington, D.C. 20210

NFPA

National Fire Protection Association
470 Atlantic Avenue
Boston, MA 02210

ANSI

American National Standards Institute
1430 Broadway
New York, NY 10018

National Safety Council
435 North Michigan Avenue
Chicago, IL 60611

The Minster Machine Company
Minster, OH 45865

FMC Corporation
Central Engineering Laboratories
P.O. Box 5801
Santa Clara, CA 95052

Guidelines for Operator Training

It is the user's responsibility to provide and evaluate operator training. To assist in developing a program to do so, the following guide is provided.

NOTE: The Supervisor doing the instructing must be qualified.

1. Have the prospective operator read the operation manual. The Supervisor should then review the contents of the Operation Manual with the prospective operator answering any questions he may have and then evaluating his understanding of the instructions.
2. Allow the prospective operator to observe and experienced operator or supervisor running the equipment.
3. After steps 1 and 2 have been satisfactorily demonstrated to the Supervisor, allow the prospective operator to run the equipment under the close supervision making recommendations and corrections as necessary.
4. Before assigning the responsibility of operating the equipment, the Supervisor must be sure the prospective operator is fully qualified.
5. The Supervisor should make periodic observations to assure compliance with proper operating procedures and safety guidelines, making any needed corrections immediately.
6. Keep your instructions current. Any revisions should be reviewed with the operator to assure proper and safe operation of the equipment.

Receiving

Upon receiving your coil equipment it should be inspected for visual signs of damage. If damage has occurred, you should immediately notify the carrier for claims inspection. Save any damaged packing to substantiate the claim.

Do not discard any wrappings before looking through them closely for shipping documents, instructions and parts shipped with the machine.

The equipment should remain on the skid until it is moved to its approximately permanent location.

Initial Cleaning

Prior to being placed in its permanent location, the equipment should be thoroughly cleaned to remove any foreign particles (dust, sand, pieces of packing material, etc.) which may have accumulated during shipping. Use a stiff brush and/or soft lint-free rags. Do not use compressed air to blow off the equipment. It may drive the foreign particles into bearings, machine slides, etc. where they may cause rapid wear or part failure.

To remove rust-preventive compounds use warm kerosene 100/110 degree Fahrenheit. We do not recommend the use of solvents. Many are toxic and some are flammable. These characteristics present unnecessary personnel hazards. Solvents may also be corrosive and cause damage to the equipment.



WARNING, KEEP LIQUIDS (SOLVENTS, LUBRICANTS, ETC.) AWAY FROM ELECTRICAL EQUIPMENT.

Set-Up and Aligning

- A. After each machine is uncrated, it should be placed in sequence with any other companion equipment



CAUTION, WHEN PLANNING THE PLACEMENT OF ANY PIECE OR LINE OF EQUIPMENT, CARE SHOULD BE TAKEN THAT THERE IS AMPLE ROOM BETWEEN THIS EQUIPMENT AND OTHER MACHINES, WALLS, COLUMNS, BARRIERS, WALKWAYS OR AN AISLE USED FOR TRUCKING TO ENSURE THE SAFETY OF THE OPERATOR AND OTHER PERSONNEL

- B. Alignment between the feed and the press and tooling, vertically and horizontally, as well as being level is extremely important for the proper operation of the feed.

It is also important to assure that any supporting coil handling equipment is properly aligned, leveled and squared with respect to the feed and tooling.

Leveling should be accomplished both parallel and perpendicular to the stock direction.

Positioning should accommodate both stock material requirements and minimal angles of entry from the supporting equipment to the feed. Refer to Slack Loop.

- C. Once the equipment is in its permanent position it must be bolted in place.



DANGER, NEVER OPERATE ANY PIECE OF EQUIPMENT THAT IS NOT SECURED PROPERLY.

- D. To adjust feeder to proper stock line height above bolster plate.

Lift top roll by depressing the button on the valve located on the top of the feed. Top roll can be held open by turning the 90 degrees when depressed. Insert a rigid, straight piece of stock between rolls.

NOTE: A 12-inch steel rule may be used for convenience.

Lay stock flat across stock guide roll and bottom roll. Measure height between stock and bolster plate.

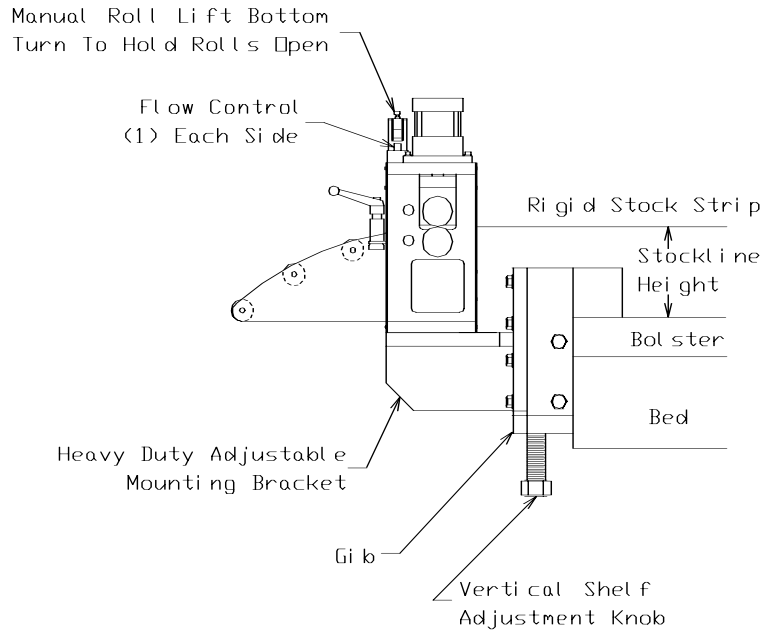
ADJUST STOCK LINE HEIGHT.

- a.) **MOUNTING BRACKETS**-Loosen gibs on both sides of feeder mounting bracket. Turn vertical adjusting screw to attain the desired stock line height, then retighten gibs.
- b.) **CABINETS**-Loosen press mounting bracket bolts and adjust cabinet to desired stock line height, then retighten press mounting bracket bolts.

Set Up and Aligning (continued)

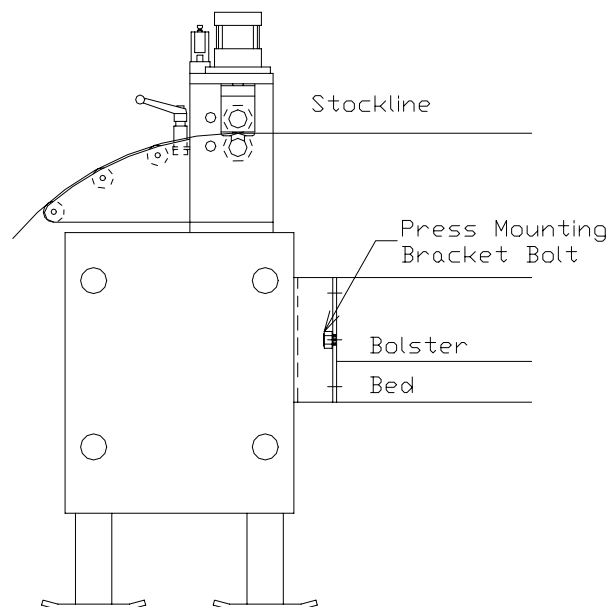
ServoMax SE with Adjustable Mounting Bracket

Adjust stock height by loosening gibs on both sides of feeder mounting bracket. Turn vertical adjusting screw to attain the desired stock line height, then retighten gibs.



ServoMax SE with Adjustable Height Mounting Cabinet

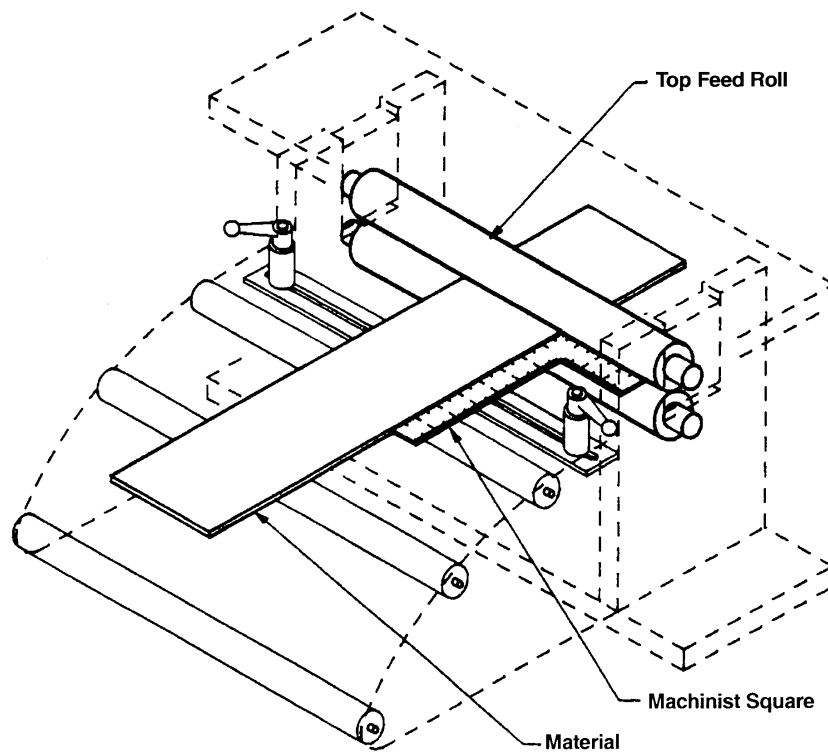
Loosen press mounting bracket bolts and adjust cabinet to desired stock line height, then retighten press mounting bracket bolts.



Set Up and Aligning (continued)

- E. Align die perpendicular to feeder

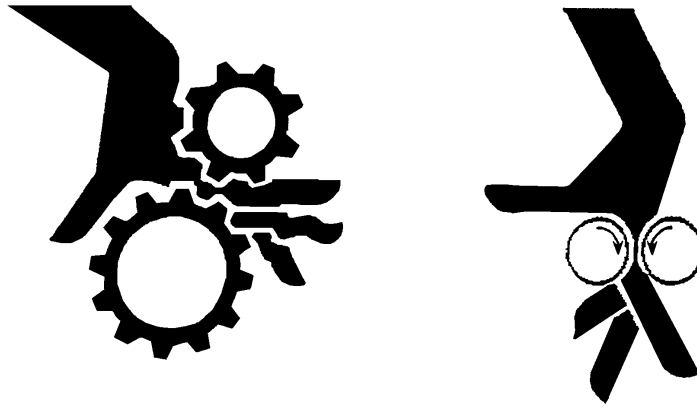
Using a machinist square, place base of square against top feed roll and align die parallel to stock and clamp in place.



**CAUTION, FAILURE TO ALIGN FEED LINE EQUIPMENT TO DIE
MAY RESULT IN MISFEEDS AND/OR DRIVE FAULTS.**

Guarding

- A. The ServoMax SE is supplied as standard with pinch point guarding. These guards are designed to minimize the possibility of personal injury and yet afford easy adjustability.



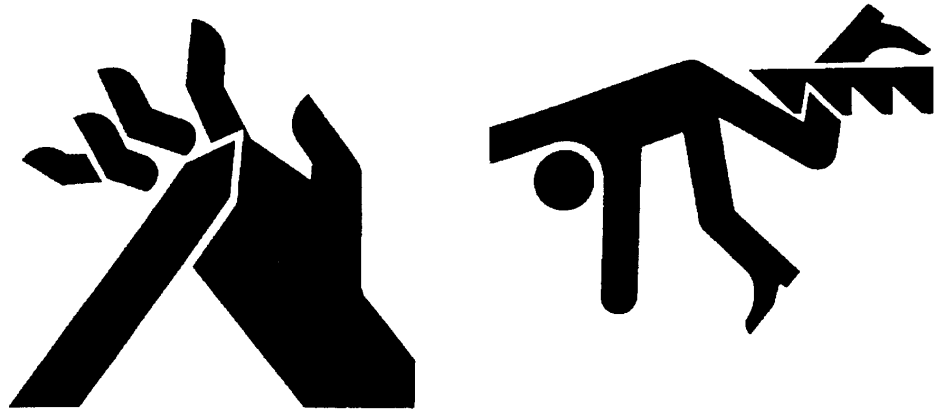
- B. Because of the wide variety of materials, floor plans, loading facilities and related equipment with which Cooper-Weymouth, Peterson machines can be used it is not possible to fully guard the machines and their operating area at the factory. It is therefore necessary to complete guarding at installation as the individual circumstance demand for safe operating conditions.

Throughout the coil processing line there will be spacing between the machines as well as certain types of machines that must be guarded to prevent injury.

There are many types of safety devices and guarding or combination, one of which may suit your particular application best.

Guarding (continued)

A commonly used type of barrier guard. Personnel access to the hazard area is restricted by the placement of fencing, cables or rails. In certain applications, further restrictions may be desired. This can be done by electrically interlocking the barriers. Removal of the barrier must actuate the stop control of the equipment. Refer to current regulations and standards for manufacturing and installation information.



Initial Lubrication

All Cooper-Weymouth, Peterson equipment is lubricated prior to shipping so that when you receive it, it is ready to operate.



CAUTION, BEFORE OPERATING ANY PIECE OF COOPER-WEYMOUTH PETERSON EQUIPMENT, BE SURE THAT ALL OPERATORS AND SUPERVISORS ARE COMPLETELY FAMILIAR WITH THE LUBRICATION MAINTENANCE INSTRUCTIONS INCLUDED IN THIS MANUAL.

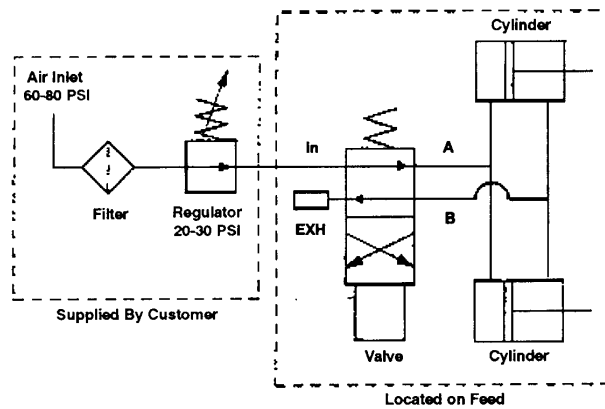
Pneumatic Instructions

A permanent air supply must be provided. An unlubricated, filtered, regulated shop air supply is required (60-80 psi).

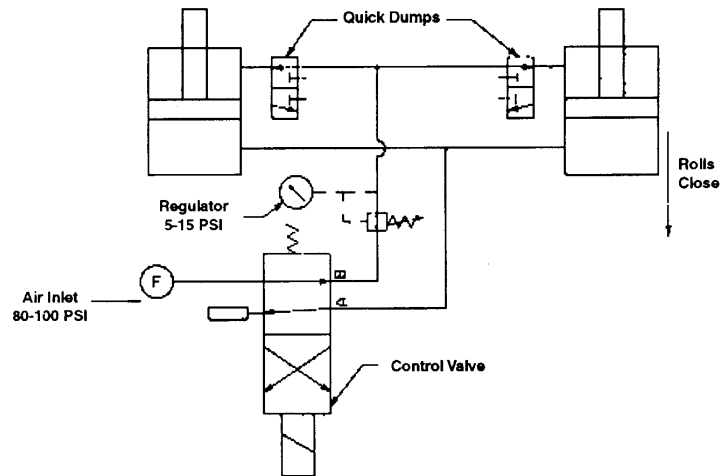


CAUTION, EXTREME CAUTION SHOULD BE USED IN THE HANDLING OF AIR SUPPLY LINES. ONLY QUALIFIED TECHNICIANS SHOULD PERFORM ANY INSTALLATION OR MAINTENANCE.

SMX FEEDS



SMX -H FEEDS



Feeder Operation Input Signals

(Reference Electrical Control drawing.)

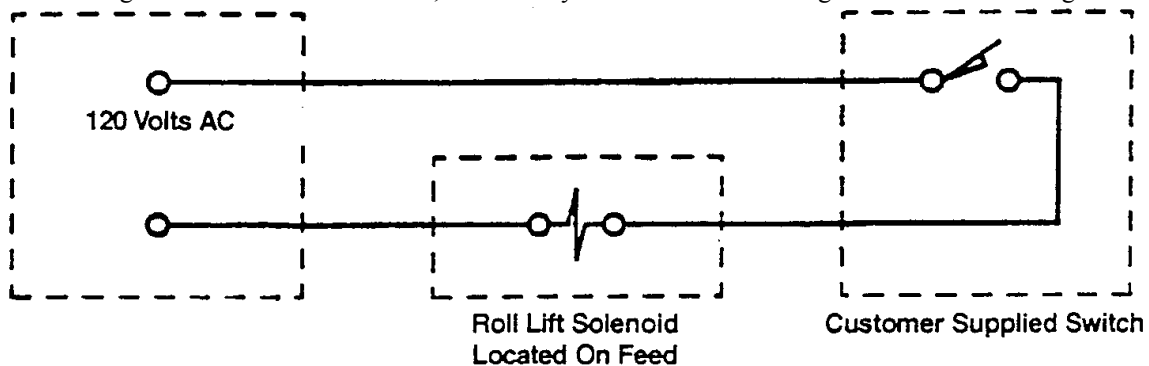
- A. FEED INITIATE: The feed initiate circuit (terminal #1 and #2) needs to be closed for a minimum of 25 milliseconds with either a press mounted limit switch or a programmable controller.



WARNING, DO NOT OPERATE ANY EQUIPMENT WITHOUT ALL GUARDS IN PLACE.

- B. ROLL RELEASE: Control the solenoid with a customer supplied programmable controller or limit switch. As press speed is increased, it will be necessary to energize the airlift valve earlier in the cycle to accommodate time needed for valve to react. (Refer to **Timing ServoMax SE Feed To Press** drawing on next page.)

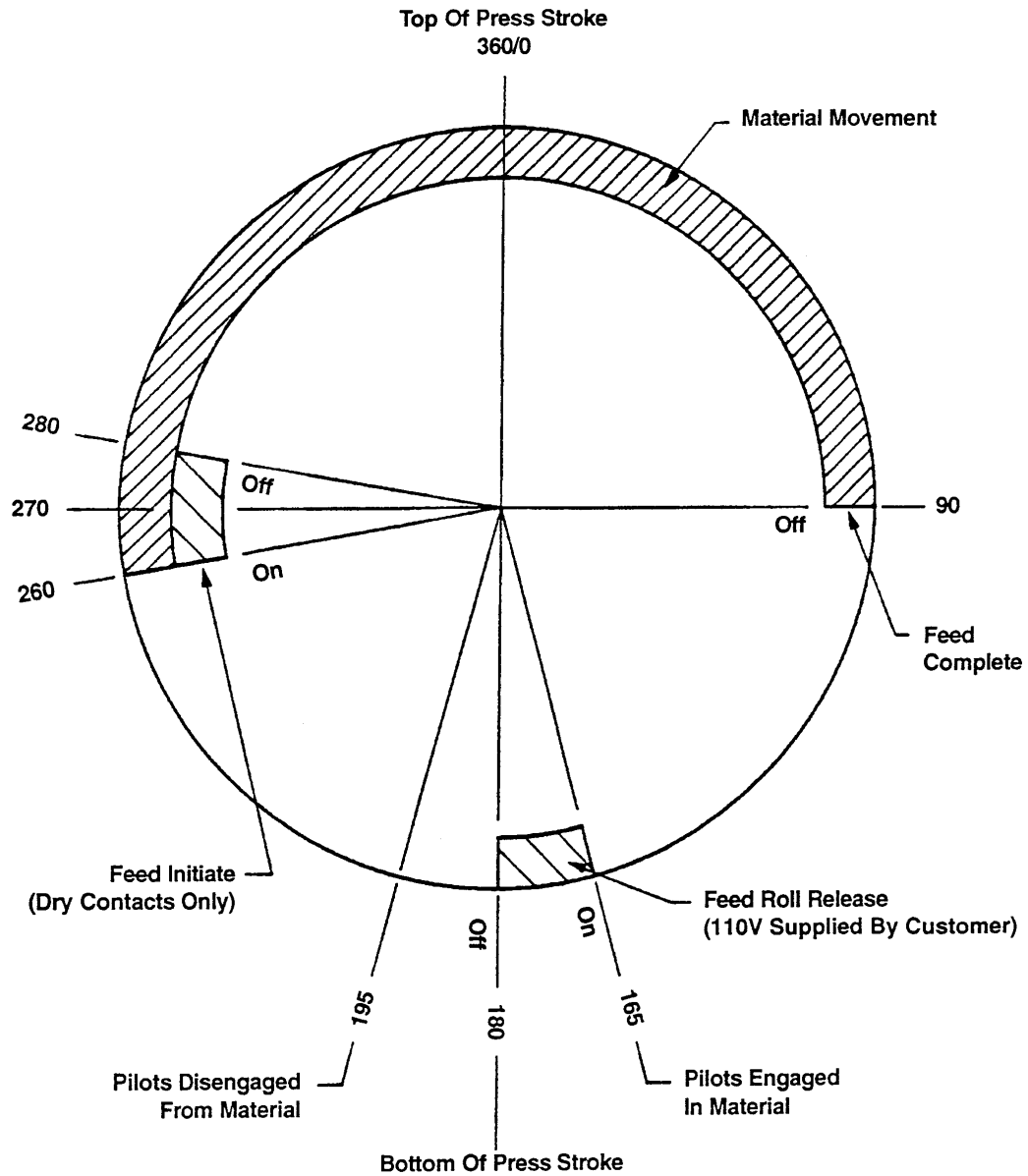
Example: 100 strokes/minute of the press, roll lift may be turned on at 165 degrees and off at 180 degrees. At 150 strokes/minute, roll lift may be turned on at 150 degrees and off at 170 degrees.



- C. STRAIGHTENER INTERLOCK: A dry contact closure (terminal #1 and #6) is required to enable the ServoMax SE control.
- D. TIGHT LOOP INTERLOCK: A dry contact closure (terminal #1 and #3) is required to enable the ServoMax SE control.
- E. REMOTE AUTOMATIC: A dry contact closure (terminal #1 and #10) can place the ServoMax SE control in Automatic Mode.
- F. REMOTE CYCLE STOP: A dry contact closure (terminal #1 and #7) can drop the ServoMax SE control out of Automatic Mode.
- G. POINT OF OPERATION: A dry contact closure (terminal #1 and #12) is required to enable the automatic mode of the ServoMax SE control. Motion is prevented or stopped when the contact is interrupted.
- H. SELECT LENGTH/LENGTH SELECT: Consult the factory for binary operation of Servomax SE feed control.

Timing ServoMax SE Feed to Press

This is an example set up only!



Feeder Operation Output Signals

Six optically isolated digital outputs are available from ServoMax SE to monitor operation of the positioning system and synchronize external operations of the feed unit. (Refer to Electrical Drawing). The outputs are rated 100mA maximum. A 12V D.C. power supply is included for external use at 500mA, maximum.

Any D.C. relays that are connected to the I/O of the control must have a suppressor diode across their coil. This prevents any voltage from being induced back into the controller. Improper installation will destroy the control and void warranty.

Batch Complete: Terminals 19 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the ServoMax SE control when the physical batch count (i.e. Number of press strokes) equals the programmed batch count.

Feed Complete: Terminals 20 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the ServoMax SE feed control when the given feed progression is finished.

Error: Terminals 25 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the ServoMax SE control at the time of a fault condition (i.e. drive fault, incomplete feed length, encoder signal fault, etc.)

Job Running: Terminals 21 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the Servomax SE control indicating that feeder status is ok.

Auto Granted (Press tie-in to Cycle Stop) : Terminals 18 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the Servomax SE control indicating that feeder status is ok.

Drive status: Terminals 27 and 26. A customer supplied D.C. device (relay, PLC input, etc.) that is energized by the Servomax SE control when the drive status is ok.



WARNING, KEEP LIQUIDS (SOLVENTS, LUBRICANTS, ETC.) AWAY FROM ELECTRICAL EQUIPMENT.



WARNING, THE PRESS, SHEAR, PRESS BRAKE, ETC. MUST BE EQUIPPED WITH A POINT OF OPERATION DEVICE AND SHALL BE INTERLOCKED INTO THE FEEDER CONTROL CIRCUIT TO PREVENT OR STOP MOTION WHEN THE INTERLOCK CIRCUIT IS INTERRUPTED.

Power

Check I.D. on front of control for proper voltage. Connect power to disconnect switch located inside the control enclosure.



WARNING, A POSITIVE EARTH GROUND MUST BE CONNECTED FOR PROPER MACHINE SAFETY.



WARNING, KEEP LIQUIDS (SOLVENTS, LUBRICANTS, ETC.) AWAY FROM ELECTRICAL EQUIPMENT.



WARNING, ELECTRICAL SHOCK HAZARD. LOCK OUT POWER AT MAIN PANEL. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

Power (continued)

Problems with Power Spikes

The servo control amplifiers are the brains of the equipment so the following factors need to be considered when wiring up the equipment.

Power spikes in the AC feed lines from lighting, motors starting, unbalanced loads, of etc. will generate noise, which can travel via the DC common and AC ground connection and corrupt personality modules or other sensitive electronic components. This AC “noise” will cause many problems so it is best to eliminate this noise by wiring into “clean” power circuits, using suppressors, shielded wires and grounding the shields of any wires that attach to the inputs/outputs (I/O) of the control amplifier. The feed initiate input wire, for example, should be a shielded cable and should not be routed near AC wiring.

I/O signals wired into the control amplifier need to be free of AC noise.

Wires for I/O should not be in the same conduit as power wires.

Wires for I/O connected to the amplifier control should be shielded and the shield needs to be connected to a good clean ground reference source.

Check for loose connections at the main power lugs to be sure that all terminations are tight.

An oscilloscope can be used to find AC noise or spikes on power and control circuits.

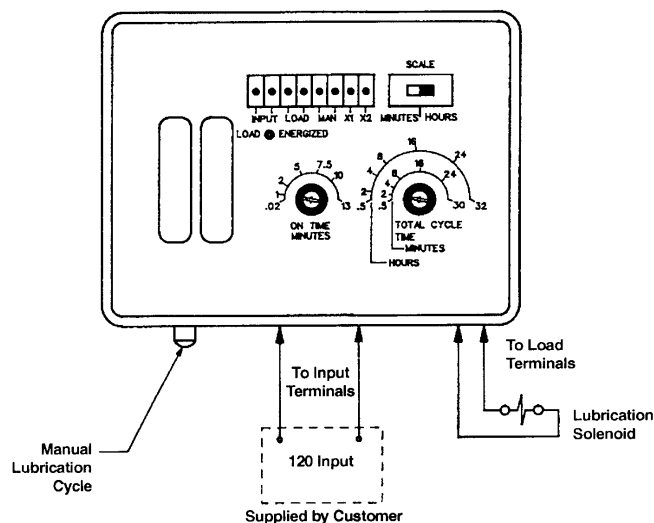
High inductive loads, such as large motors or welding equipment, should not be on the same circuit that supplies power to the control amplifiers.

Any DC relays that are connected to the I/O of the control amplifier must have a suppressor diode across their coil. This prevents any voltage from being induced back into the control amplifier.

Automatic Lubrication Option

Note Settings:

Scale.....Hours
On Time.....1
Total Cycle Time....2 Hours



Feed Operation

A. Disconnect Switch

The switch is used to power-up and power-down the control. Caution: Material should be in a "safe condition" before disengaging the disconnect switch. With power off, rolls become free to rotate by the pull of the material. Material should either be removed from the feed prior too moving disconnect switch to off position or secured against movement.

B. Operator Panel Controls

EMERGENCY STOP: When red mushroom-shaped button depressed, all controlled motion of the feed will stop and roll becomes freewheeling. Upon release of the button, motor will place the feed in a "holding" mode. In order to restart the feed, the desired function will have to be re-selected.

C. Keypad Operator Controls

AUTO: When depressed the display will read AUTOMATIC specifying that control is in the automatic mode and is ready to accept an initiation signal from the press or similar device. Note: Desired job must be selected before auto button is active.

CYCLE STOP: If this key is depressed while in the "AUTO" mode, the feed system will drop out of the auto mode. To restart, the AUTO key must be depressed.

LENGTH +/-: When in AUTO mode the feed length can be adjusted in one thousandth increment by depressing these keys (in motion feed length adjustment).

JOG MODE: This function can only be used while the feed is in the manual mode. When the selector is placed in "blind feed", the jog forward and jog reverse pushbuttons on the pendant will rotate the feed rolls as long as the pushbutton remains depressed. When the selector is placed in "jog feed" the feed rolls will only rotate up to the preset feed length when the jog forward pushbutton is depressed and held. If the pushbutton is released before the feed length is complete, the feed rolls will stop and advance only the remainder of the feed length the next time the button is depressed and held. If part of a length is advanced and then stopped, perhaps because a buckle is detected, the rolls can be reversed until the buckle is relieved and they will still advance to the proper length the next time the jog forward pushbutton is depressed and held. This latter condition occurs only if rolls are not reversed beyond the position from which the jog forward began. In all, the provision is particularly advantageous in threading multiple station dies, and is commonly referred to as a "progressive die threadup feature".

Feed Operation (continued)

INCH/M.M.: This key provides a direct inch/metric conversion. When in the "inch" position, all controls will function in inches with three places to the right of the decimal point. When in the "mm." position, controls will function in millimeters, with only two places to the right of the decimal point.

PROGRAM: This key is utilized to choose the "program/edit" mode of your feeder. When in the program mode, the control is ready to program or edit as outlined in this manual. Once in the program mode, the unit cannot be put into automatic or run in manual/jog mode until the editing is completed.

BATCH RESET: The batch reset key will reset the batch count display to zero. It is disabled when the feed is in automatic mode.

—: This key allows the operator to reverse the direction of the feed length (useful for pull through feeders).

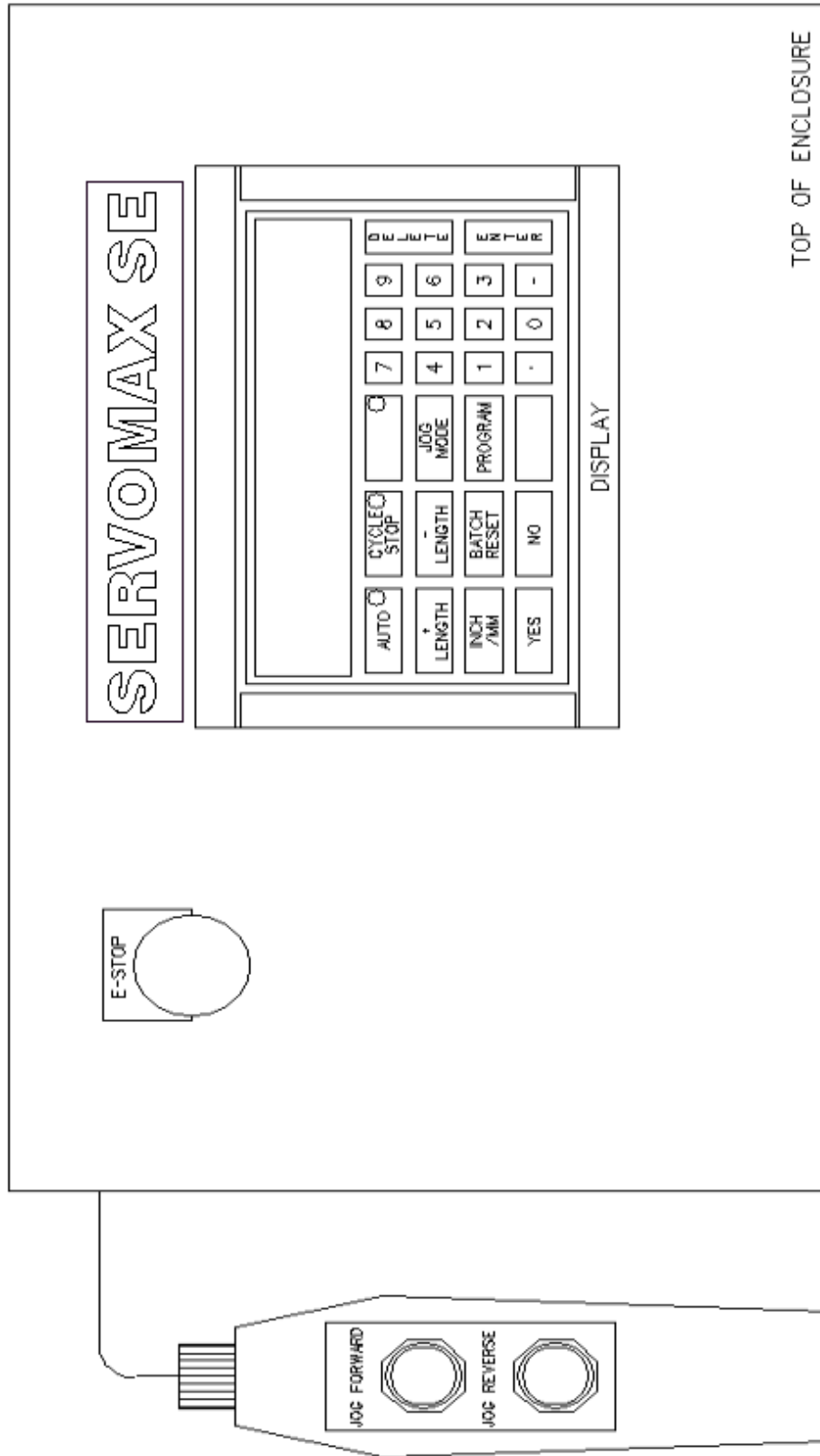
◀: This key allows the operator to step back through the information already programmed so that it can be changed.

D. Program Features

500 Job Memory: The operator may utilize up to 500 job spaces or programs. This feature saves time in reprogramming the more common parts.

Batch Count: A batch count is the total number of lengths for a particular program. The programmable input for batch size enables the desired number of counts (parts) for the job to be entered up to 999,999. When the batch count reaches the programmed number, the feed will stop, drop out of automatic and the batch complete output is turned on. If you wish the feed to run continuously, a zero must be entered for Batch Size. In this case, the ServoMax will not drop out of the automatic mode unless cycle stop or E-stop is pressed. In continuous operation, batch counter will count up to 999,999, reset to zero (0) and continue.

Speed: The keypad system enables the operator to set the speed appropriate to the job. The lowest setting is one (1) and the highest is ten (10). The stroke per minute rate of the press and the length of the feed will determine the proper setting. Ideally, the slowest speed that will deliver the material within the required portion of the press cycle is the proper speed. This approach maximizes the performance of the feed.



Feed Operation (continued)

E. Standard Programming Example

(Note: < > represents a flashing cursor.)

Example: Job #1 is a feed length of 1.000 inch. It is to be run at speed 5 and 3 parts are required.

Procedure	Keys Pressed Or Operation Performed	Display
Power Up	Turn Machine On	SERVOMAX SE JOB 0 0.000 IN SPD 0 BLIND FEED
Program	Press Program Key	JOB 0 0.000 IN SPD 0 PROGRAM BATCH SIZE 0 0 CHANGE < >
Change Program	Yes/ENT	JOB 0< > 0.000 IN SPD 0 PROGRAM BATCH SIZE 0 ENTER JOB NUMBER
Enter Job Number	1/ENT	JOB 1 0.000< > IN SPD 0 PROGRAM BATCH SIZE 0 ENTER FEED LENGTH
Enter Feed Length	1.000/ENT	JOB 1 1.000 IN SPD 0< > PROGRAM BATCH SIZE 0 ENTER SPEED
Speed	5/ENT	JOB 1 1.000 IN SPD 5 PROGRAM BATCH SIZE 3 CHANGE?
Batch Size	3/ENT	JOB 1 1.000 IN SPD 5 PROGRAM BATCH SIZE 3 CHANGE?
More Changes?	No/Ent	JOB 1 1.000 IN SPD 5 BLIND FEED BATCH SIZE 3 BATCH COUNT 0

You have now completed the Standard Program Procedure. At this point, The SERVOMAX SE control is ready to be run in the jog or automatic mode.

To run other jobs, exit the automatic mode by depressing the CYCLE STOP key. Press the PROGRAM key and follow the above procedure. When you want to change the job number that you are running, follow steps one and two and when asked for the job number, enter the new number that you wish to use. The display will then read:

JOB 2 1.000 IN SPD 5 PROGRAM
BATCH SIZE 7 CHANGE?< >

At this point you must answer yes and enter the new job number again. Then you may change all other fields by following the same procedure that you used to set up a program.

NOTES:

Maximum Batch Count: 999,999

Maximum Feed Length: 999.999

Maximum Speed: 10

Threading Instructions (Feed)



WARNING, DO NOT HANDLE MATERIAL (COIL, SHEET OR BLANK) WITHOUT WEARING GLOVES.

A. Entrance Guides (feeder):

The entrance guide system is designed so that the material will enter the feed rolls at the proper elevation and on the lateral centerline with the least amount of friction

>> Engage Feed control Disconnect Switch to lock rolls.

>> Open feed rolls.

>> Load stock between the rolls.

>> Close the feed rolls.

To adjust the edge guides, loosen the edge guide handle and slide the edge guides to desired position, approximately 0.005 to 0.015 inches from the edge of the material should be adequate in most cases for the variations in material width, then tighten.

B. Exit Stock Guides (Feeder)

Due to the wide range of applications (press makes and models, also individual customers tooling sizes) it is not practical to guide the material from the feed rolls to the tooling area. However, since the accuracy of the feed can be greatly affected by the lack of, or improper material guidance, we make the following suggestions:

1. The material should be supported for as much of the space between the feed and the die as possible (Figure 1A). Underneath, use a plate or rollers (rollers are not recommended for thin material). If material finish is critical, we suggest covering the contact surface with a nylon sheet. On top of the material, nylon conveyor rollers can be used (Figure 1B, Section A - A). Top rolls should be adjustable to allow for varying thickness of material.
2. For lateral control we suggest using cam followers, recessed approximately 0.030 inches to prevent thin material from getting under the roller (Figure 1B, Section B - B). Also, the cam follower should be adjustable up to the maximum width capacity of the feed. For maximum control, the cam followers should be placed as far as possible from the feed.

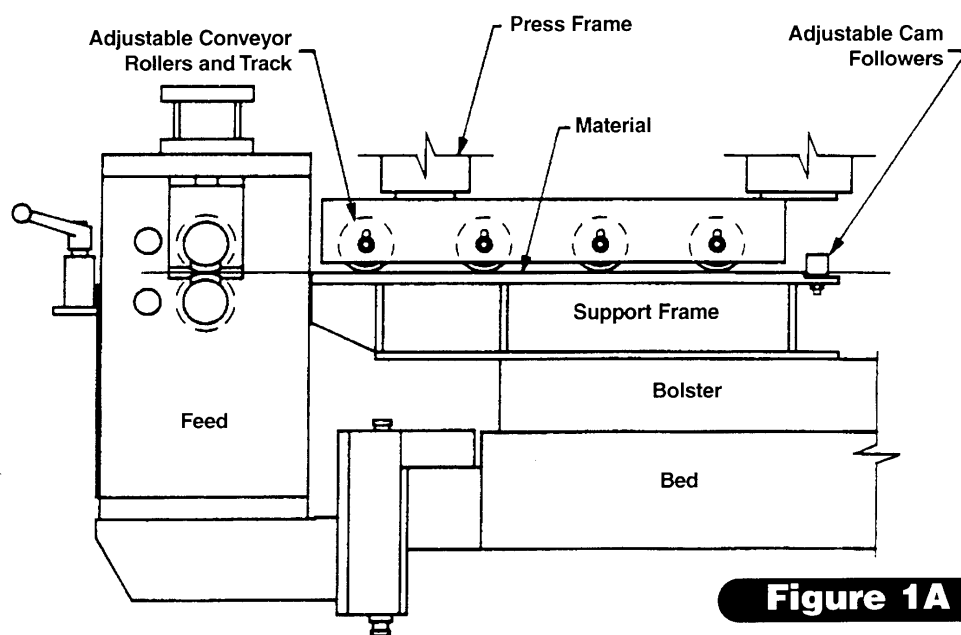
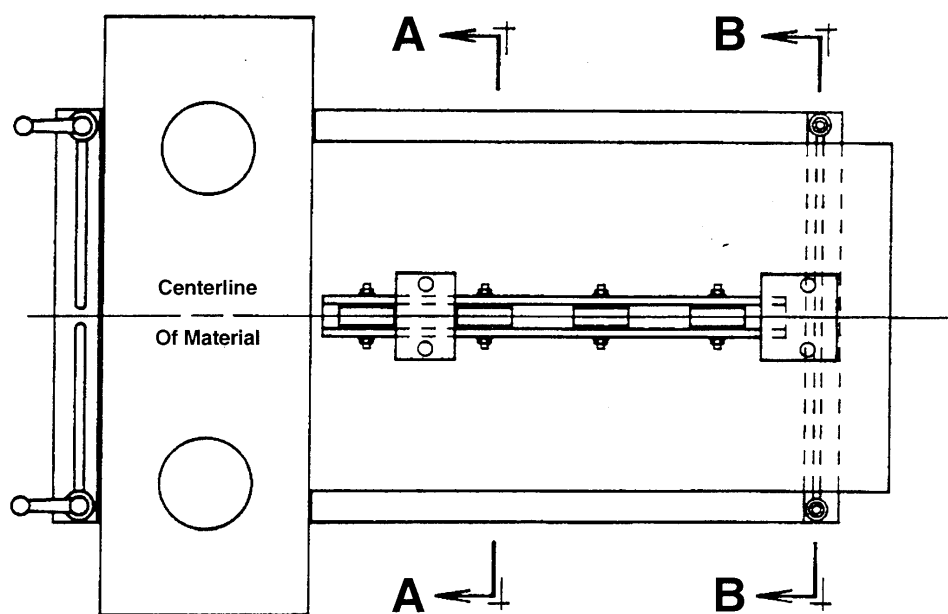
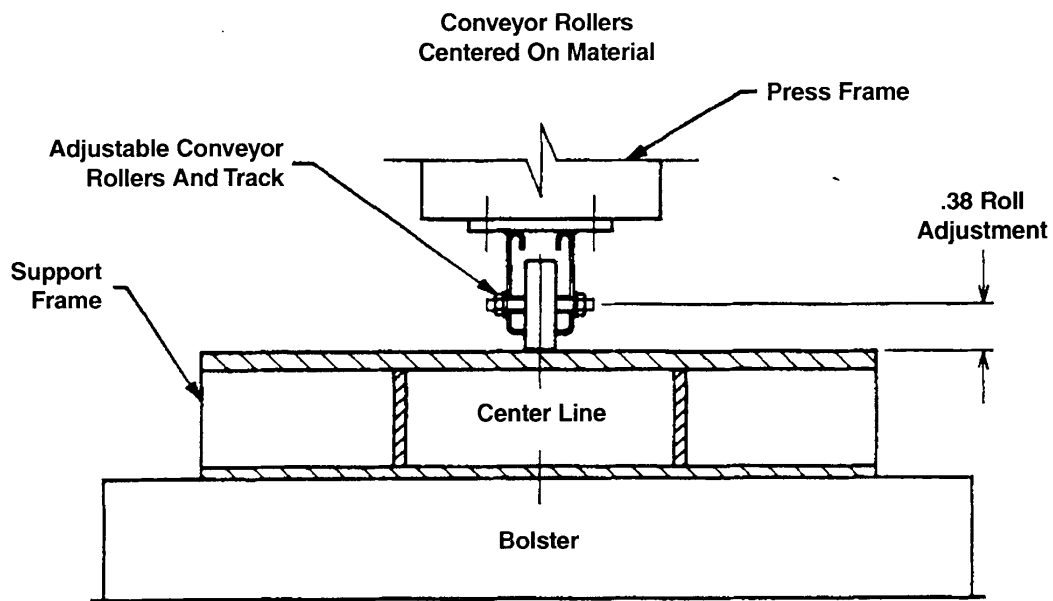
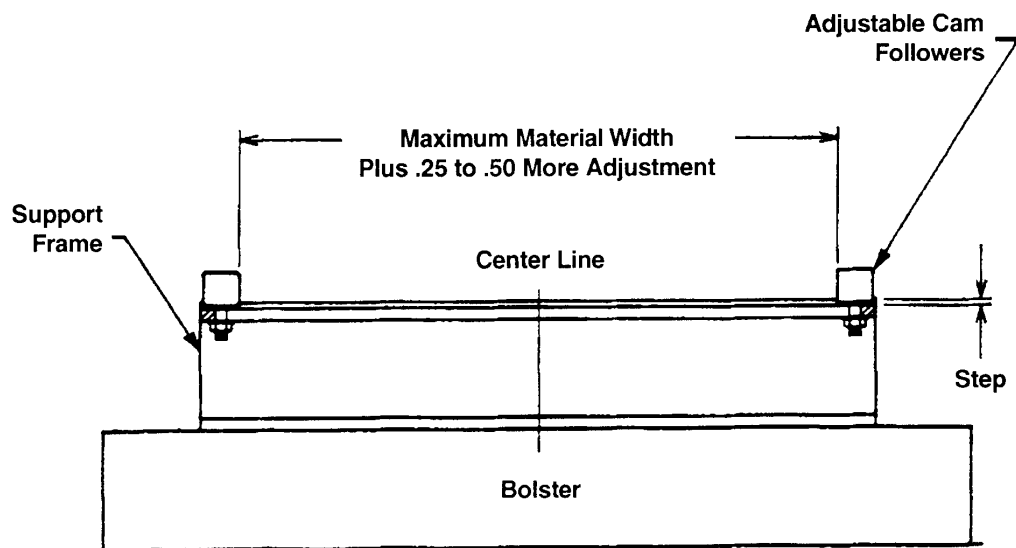


Figure 1A



Section A - A



Section B - B

Figure 1B

Threading Instructions (Feed) (continued)

C. Positioning Stock in the Die

With the ServoMax SE control in the "BLIND FEED" mode, jog the material into the die using the jog forward push-button. For die equipped with pilot pins, jog the material into the first station of the die that pierces the pilot locator (hole, notch, etc.) (Figure 2). Select "Program" mode by depressing the "Program" key.



CAUTION, DO NOT ENTER THE SECOND STATION; OTHERWISE THE PILOT PIN WILL TEND TO PUNCH A HOLE INTO SOLID MATERIAL, RESULTING IN DAMAGE TO THE TOOLING.

Program in the desired feed length, then place the feed in the automatic mode by depressing the "AUTO" key (display will read "AUTOMATIC").

At this time, **single stroke** the press. As the press begins its cycle from top dead center (refer to Timing ServoMax SE Feed to Press), the die will close and the tooling in the first station will contact the material, performing its work (punch the pilot hole, create a notch, etc.). As the press continues its cycle beyond 180 degrees, the die will open, clearing the material once again. As the die clears, the ServoMax SE feed will receive its feed initiate signal from the customer supplied contact on the press and will feed the material into the die based on the feed length you have programmed.

A special "L" shaped tool of the same diameter as the pilot pin should be used to ensure alignment of the pilot locator in the material with the pilot pin of the die (Figure 3).

If at this point the material is not aligned with the die, check to ensure the proper feed length is being used and adjust if necessary. Also, be sure adequate feed roll pressure is used to avoid material slippage. Finally, check to insure that the feed rolls are not opened until the piloting has started to engage the material.

Single stroke the press and check the stock progression to see if there has been any roll slippage (Sometimes evident by slip marks on the stock). If slippage occurs, increase roll pressure only enough to eliminate. Use customer supplied regulator to adjust roll pressure.

NOTE:

Due to the construction of some dies, it may be necessary to thread the entire die, station-by-station, in the "JOG FEED" mode using the jog pushbuttons only. This is to make certain that the leading edge of the material clears all obstructions, such as lifters, pins, etc.

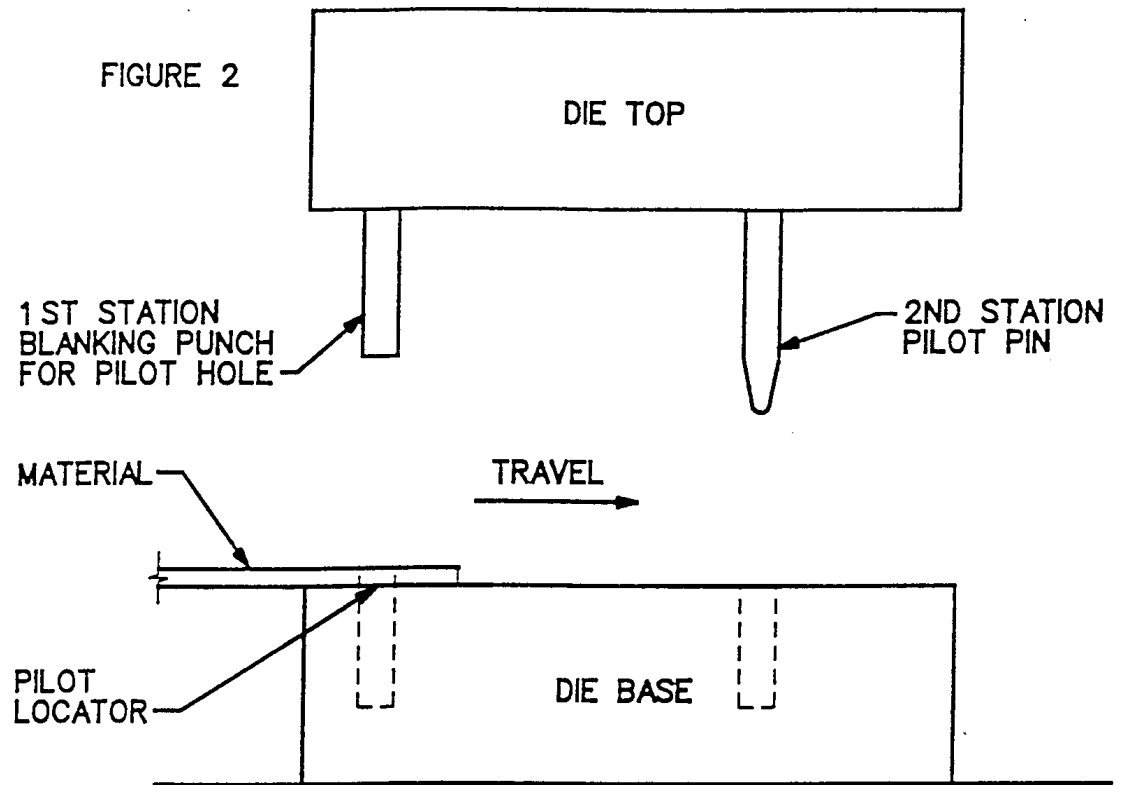


FIGURE 2

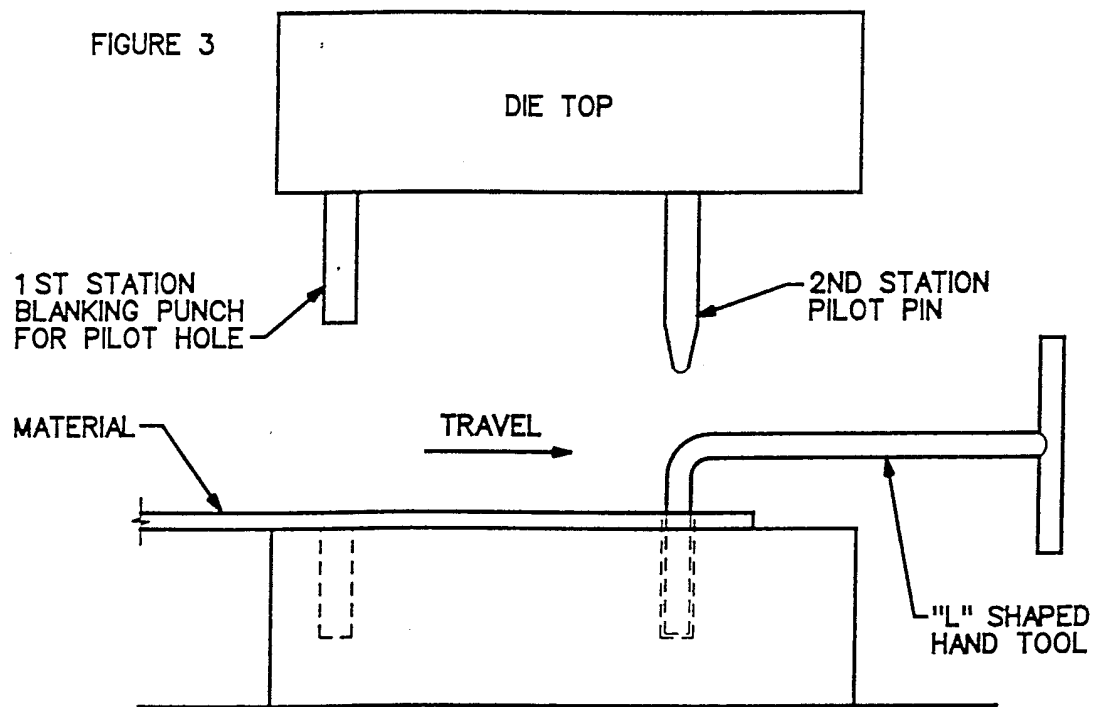


FIGURE 3

Threading Instructions (Feed) (continued)



CAUTION, TOO MUCH PRESSURE WILL CAUSE STOCK TO WEAVE AND JAM.

Adjust the speed appropriate to the job. Ideally, the slowest speed that will deliver the material within the required portion of the press cycle is the proper speed.



WARNING, DO NOT OVERLOAD EQUIPMENT BEYOND ITS STATED OR IMPLIED CAPACITIES.



CAUTION, YOU MUST NEVER FEED AGAINST POSITIVE STOPS WITH A SERVOMAX SE FEED.

D. Feeding Against Positive Stops

You must never feed against positive stops with a ServoMax SE feed. When such a practice is used, it is detected as an overload condition by the feed. Repetitively cycling the unit under these conditions could result in much shortened life expectancy and may cause extensive damage to the drive.

Stock Release

The function of the stock release is to release the feed rolls grip on the material so that the pilots can align the material if necessary.



CAUTION, YOU MUST INCH THE PRESS THROUGH ITS CYCLE SEVERAL TIMES TO ASSURE THAT THE TOOLING HAS CONTROL OF THE MATERIAL BEFORE THE FEED ROLLS HAVE BEEN OPENED.

For some jobs, it may be desirable to release the material even though the tooling is not equipped with pilots for material positioning. For example, material having camber may tend to track toward one side of the feed roll causing an excessive friction loads. If tracking occurs, by releasing after each feed cycle the material will be allowed to return to center.



CAUTION, WHEN USING THE STOCK RELEASE FEATURE WHERE THE TOOLING IS NOT EQUIPPED WITH PILOTS, YOU MUST BE SURE SOME PART OF THE TOOLING HAS CONTROL OF THE MATERIAL PRIOR TO RELEASING. (PUNCHES ENTERED, PRESSURE PAD ENGAGED, ETC.)



CAUTION, IMPROPER OPERATION OF THIS MACHINE MAY CAUSE PERSONAL INJURY OR DAMAGE TO THE MACHINE.



WARNING, DO NOT OVERLOAD EQUIPMENT BEYOND ITS STATED OR IMPLIED CAPACITIES.

Having followed all of the foregoing instructions, the feed should now be ready for automatic operation. A final visual check should be made of the feed, all other related equipment and the work area.

Stock Release (continued)



REMEMBER, A CAREFUL OPERATOR IS ALWAYS THE BEST INSURANCE AGAINST AN ACCIDENT. GIVE COMPLETE AND UNDIVIDED ATTENTION TO THE JOB AT HAND.



WARNING, THE OPERATOR MUST AT ALL TIMES HAVE AUXILIARY OPERATING PERSONNEL CLEARLY WITHIN HIS FIELD OF VIEW.



WARNING, KEEP THE WORK AREA CLEAR OF OBSTRUCTIONS AND THE FLOOR CLEAN AND DRY.

The operator should familiarize himself with the normal operating conditions and become used to listening and watching for unusual conditions which might signal equipment or application problems. Should such conditions develop, the line must be immediately shut down and inspected to determine and correct the problem.

With thorough understanding and observance of the information contained in the manual and thorough familiarization with the equipment, the best operation should be achieved.

If any questions concerning this equipment should arise, please do not hesitate to contact the factory, where our Customer Service Department will be pleased to assist.

Maintenance and Repair

Good maintenance and repair procedures can contribute significantly to the safety of the maintenance crew as well as to that of machine operators. The variety and complexity of machines to be serviced, the hazards associated with their power sources, the special dangers that may be present during machine breakdown and the service time constraints often placed on maintenance personnel to get the equipment back in operation, make safe and repair work difficult.

Training and aptitude of people assigned to these jobs is of extreme importance and should make them alert for the intermittent electrical failure, the worn part, the inappropriate noise, the cracks or other signs that warn of impending breakage or that a safeguard has been damaged, altered or removed. By observing machine operators at their tasks and listening to their comments, maintenance personnel may learn where potential trouble spots are and give them early attention before they develop into sources of accidents and injury. Sometimes all that is needed to keep things running smoothly and safely is machine lubrication adjustment. Any damage observed or suspected must be reported to the supervisor. If the condition impairs safe operation, the machine must be taken out of service for repair. Safeguards that are missing, altered or damaged also must be reported so appropriate action can be taken to insure against worker injury.



DANGER, DISCONNECT AND LOCK OUT ALL POWER SOURCES BEFORE INITIATING ANY MAINTENANCE OR REPAIRS.



WARNING, YOU MUST NEVER DISCONNECT OR REMOVE ANY SAFETY DEVICE OR OPERATE ANY MACHINE WHOSE SAFETY DEVICES HAVE BEEN REMOVED.



WARNING, NEVER USE STOOLS, BOXES, CRATES OR SIMILAR ITEMS AS SUBSTITUTES FOR WORK PLATFORMS, SCAFFOLDING OR LADDERS.

Maintenance and Repair (Continued)

A. ServoMax SE Roll Feed

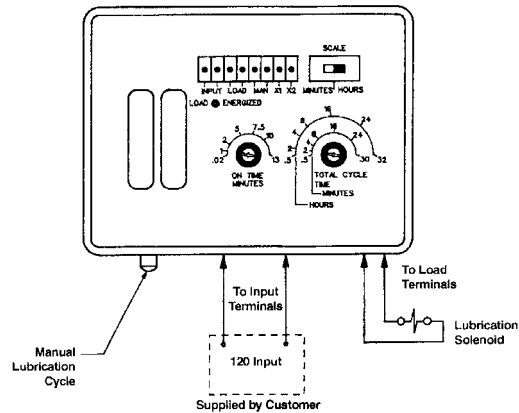
1. Lubrication Instructions

- a. Remove the covers on each side of the ServoMax SE feed to expose the grease fittings. Use Mobil Mobilith AW-1 grease or equivalent to lubricate these points weekly.

For units equipped with automatic central lubrication, refill grease reservoir with Mobil Mobilith AW-1 grease or equivalent. Check lubrication lines for leaks and breaks weekly.

Note Settings:

Scale.....Hours
On Time.....1 Minute
Total Cycle Time.....2 Hours



Should any of the lines get plugged, the Automatic Lubrication pump has a pressure relief disc that will allow grease to spill out. When this happens, there is probably a line plugged or a manifold plugged. Replace the disc and check where grease is not being received and remove any blockage or replace any pinched tubes.

Contamination Blockage

If dirt, foreign material or any other form of contamination is found in a feeder, cleaning that feeder will only temporarily solve contamination blockage problems. The source of the contamination must be eliminated for satisfactory service. The system filtering method must be investigated; filter elements should be inspected or changed as required. The reservoir must be inspected and cleaned if necessary. The reservoir filling method should be reviewed to eliminate any chance of foreign material entering the reservoir during filling. All lubricating systems require filtered lubricant.

Separation Blockage

If a hard wax or soap like material is found in the intermediate section grease separation is occurring. This means that the oil is being squeezed from the grease at normal system operating pressure and the grease thickener is being deposited in the feeder. Cleaning the feeder will usually result in only temporarily solving the problem.

Consult your lubricant supplier for recommendations on alternate lubricants and your local Trabon Distributor to verify compatibility with centralized lubricating systems.

Maintenance and Repair (continued)

- b. Gears must be checked and lubricated every 1000 hours of operation. Remove the gear guards on each side of the servofeed to expose the gears. Use Loctite Anti-Seize Lubricant or equivalent.
- c. 4-Roll Feed Inline Couplings: Lubricate every 500 hours of operation. Use Shell Darina #2 or equivalent.

B. ServoMax SE Control

Scribe Test or Accuracy test of feed length and feed roll revolution.

Remove material from the feeder rolls. Calculate the feed roll circumference as (roll diameter X 3.1416) and enter this number into the feed control as a feed length. Now scribe two lines - one on the lower feed roll and a matching one on the side plate. "DRY CYCLE" The feeder and observe the scribe lines. The purpose is to have these marks line up after each revolution of the feed rolls. (SEE TROUBLESHOOTING GUIDE PG. 40).

The ServoMax SE Control has been designed to require minimum maintenance. The following are suggestions for preventive maintenance.

1. Keep the control as clean as possible. This will result in cooler operation and more reliable performance.
2. Ensure that the printed circuit boards do not collect metal particles that may cause short circuits.
3. Periodically check that all connections and fasteners are tight.
4. Check the incoming AC line periodically for high or low line conditions. If the line is consistently high or low, correct the AC distribution system (plant transformer taps, etc.).

Troubleshooting Guide for ServoMax SE Feed

The ServoMax SE feed control has been designed to provide troubleshooting aids that help isolate problems that may occur with a component in the system. This design prevents problems with one component from causing damage to another.

We suggest reviewing the following Troubleshooting Guide for ServoMax SE Feed prior to calling for service.

TROUBLE	CAUSE	REMEDY
Drive will not go on (Display remains blank)	No power to amp	Check disconnect and fuses Consult factory
Display reads: "MOTOR OVER-TEMPERATURE" Note: This machine is not designed to hit positive stops!	Thermal Overload tripped due to excessive loading	Motor will reset after it cools down Check for binding in die
	Missing signal from motor	Check motor cables for connection and visible damage
	Hitting positive stops with material causing motor overload	Check for tracking, binding and stops in die (refer to page 12, Set-up and Aligning)
Display reads: "LOST ENABLE"	Connection between wire terminals # 15 and # 20 is broken	Restore connection between terminals # 15 and # 20
Jogging: Feed will not jog Note: Display must show: "BLIND JOG" or "JOG FEED"	Loose connection	Check connections at drive terminals and pushbutton
	Unit in Program mode	Exit Program mode
	Unit in Auto mode	Press cycle stop
Feed will jog in one direction but not the other	Loose connection	Check connections at drive terminals and pushbutton
Drive is on, but display is blank	Loose cable	Check cable no. 4 for continuity
	5V DC not present	Check power supply, terminal +5 and VO
Unit shuts down when in Auto mode, Display reads: "EXCESSIVE FOLLOWING ERROR"	Material jam Note: Feed rolls must be allowed to move the programmed distance	Check for tracking, binding and stops in die (refer to page 12, Set-up and Aligning)
Feed rolls not opening Note: Separate 110V AC power required for roll lift	Low or no air pressure	Increase air pressure Check air supply
	Loss of signal	Check wiring
	Bad solenoid valve	Change valve

Troubleshooting Guide for ServoMax SE Feed

TROUBLE	CAUSE	REMEDY
Auto Mode. Unit will not go into Auto mode	Drive not on	Turn on disconnect
	Jog feed not done	Finish jog feed
	Unit in Program mode	Exit Program mode
	Drive faulting	Consult factory
Feed lengths short or inconsistent Note: Feed must be square and perpendicular to die and companion equipment (Refer to page 12, Set-up and Aligning) See Page 38 and perform scribe test.	Wrong feed length	Check for proper feed length
	Feed rolls slipping	Increase air pressure on feed rolls Check for material tracking or binding
	Roll lift out of time	Check timing (Refer to page 19, Timing Feed to Press)
	Roll lift too slow	Contact factory for assistance
	Loose locking element or coupling on main drive gears	Reference assembly drawings and retighten locking element bolts
Display reads: "POSITION FEEDBACK LOSS"	No resolver feedback	Check resolver cable for connection and visible damage
	Bad resolver	Change motor/resolver assembly
Display reads: Tight loop fault Display reads: Straightener fault Display reads: Point of Operation interlock open Display reads: Remote Cycle Stop	Input connection has opened	Reference electrical drawing and restore proper connection

Periodic Cleaning

Periodically clean the CWP equipment, wipe off any dirt, dust and debris. Be sure to clean up any excess grease or lubricants that may have spilled or built-up. For further instructions on proper cleaning refer to Initial Cleaning Instructions on page 11.



WARNING, IF ANY PART OF THIS MACHINE SHOULD BECOME OVER LUBRICATED AND LUBRICANT SPILLS OVER OR BUILDS UP, IT SHOULD BE CLEANED UP IMMEDIATELY, SO AS NOT TO HINDER THE PROPER OPERATION OF THE MACHINE OR ENDANGER THE PERSONNEL.

Inspection

Since the CWP equipment is a precision product, its accuracy depends on all its components being tight, properly lubricated, and properly adjusted. It is for these reasons that CWP would strongly suggest a full inspection periodically. This inspection should include checking all couplings and belts and chains making sure that they are tight, also, check gears for wear and broken teeth. Check central lubrication feed lines and fillings to see that they are all properly connected. Be sure that all fasteners have been checked and that nothing is loose. Check both the upper and lower feeder rolls for wear. If any part of this machine shows signs of wear, shut the machine down until the part or parts have been replaced or repaired. Preventive maintenance will help insure the accuracy of your machine and also increase its life expectancy, so be thorough and religious about your inspections.



WARNING, DO NOT OPERATE ANY EQUIPMENT WITHOUT ALL GUARDS IN PLACE.



WARNING, DO NOT OPERATE ANY EQUIPMENT THAT HAS LOOSE, WORN OR BROKEN PARTS.



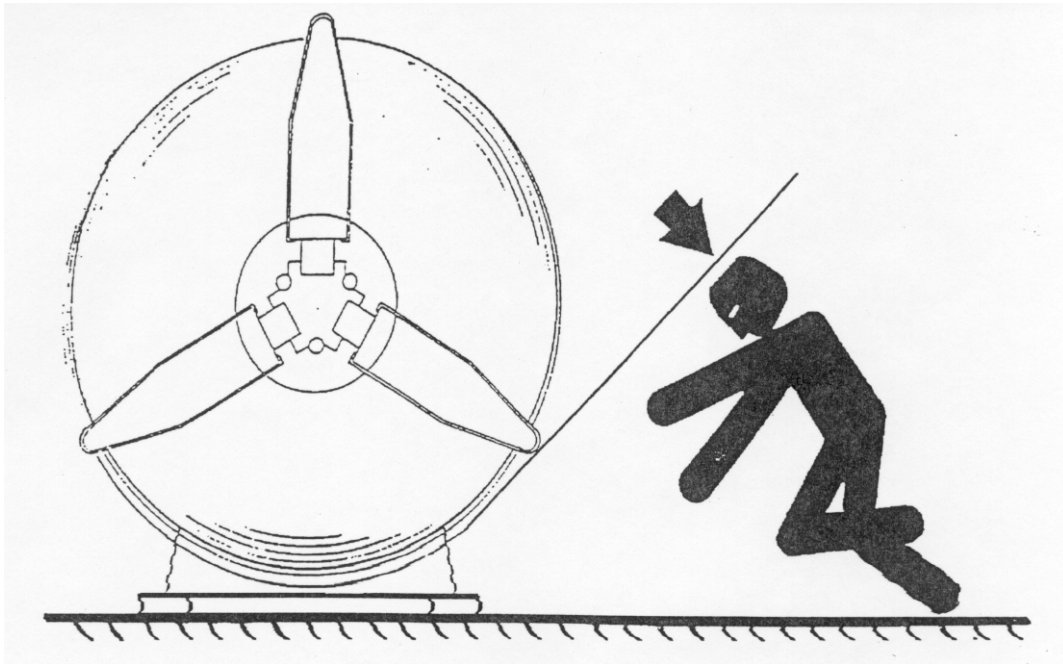
WARNING, KEEP THE WORK AREA CLEAR OF OBSTRUCTIONS AND THE FLOOR CLEAN AND DRY.

Banding of Coils

From time to time it may become necessary to remove a partially used coil from the processing line, reband and place in storage for future use. As you are backing the material out of the processing line, you must always, maintain control of the lead edge of the material until a band has been placed through the eye of the coil.



WARNING, YOU MUST NEVER PLACE YOURSELF OR ALLOW ANY OTHER PERSON TO BE IN THE PATH OF A COIL SHOULD IT UNWIND IN AN UNCONTROLLED MANNER.



Banding of Coils (continued)

The following are recommendations for the proper banding of coils

1. Banding material must be a minimum of 1.25 inches wide x 0.031 inches thick, heat-treated.
2. All banding seals must be double crimped.
3. Corner protectors must be used on all bands placed through the eye of the coil. They shall be sufficient enough to protect against rupture of the band due to the sharp edges of the material or too acute a bend.
4. A minimum of 3 bands (equally spaced) must be placed through the eye of the coil.

Bands must be placed on the circumference of the coil as follows:

Place a minimum of one band (centered) on coils up to 12 inches in width. For coils over 12 inches in width, place a minimum of two bands (equally spaced).

Transporting of Coils

- A. Many types of handling devices are available for the safe handling of coils. You should always use a type designed for that purpose. Proper care and maintenance must be practiced for the safe use of these devices.

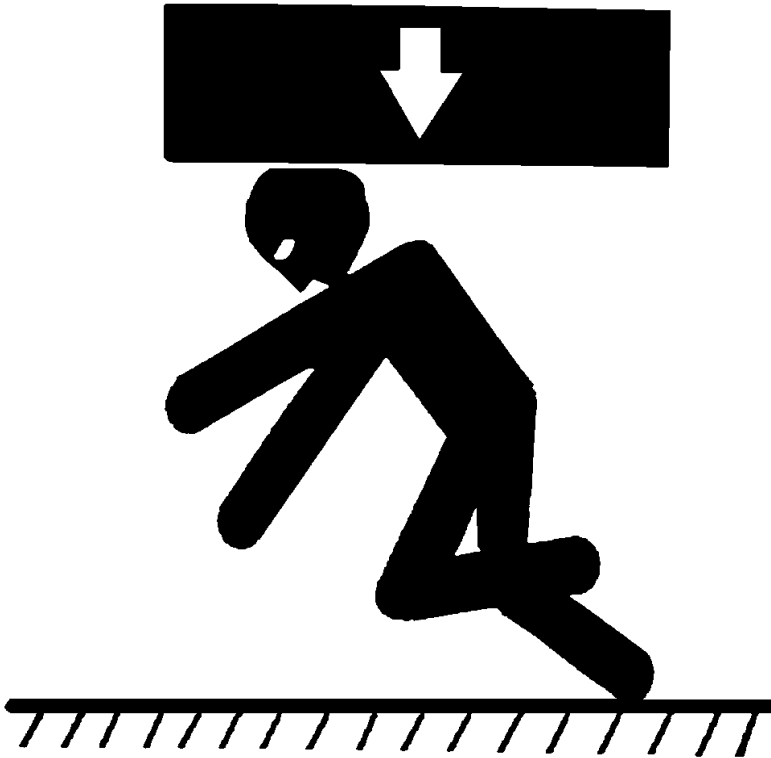


WARNING, NARROW OR UNSTABLE COILS MUST NOT BE TRANSPORTED WITHOUT THE AID OF BLOCKING AND/OR SIDE SUPPORTS.

- B. All coils must be carried as close to the floor as possible.



DANGER, COILS MUST NEVER BE CARRIED OVER THE HEADS OF EMPLOYEES.



Free Loop Area & Slack Material Availability For Mild Steel Coil Stock

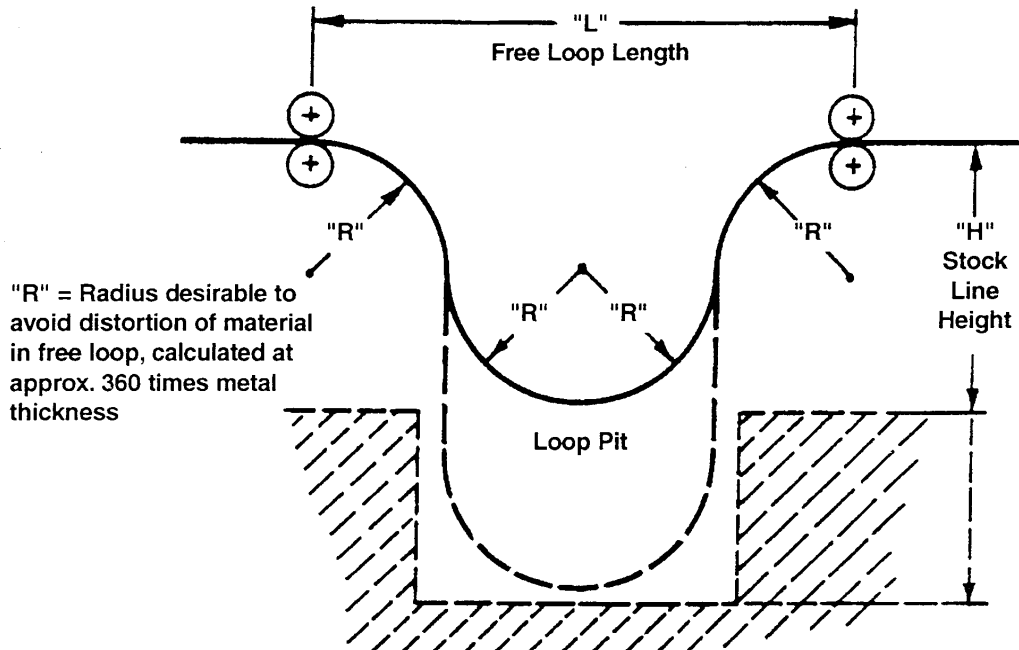


Chart below shows inches of loop length required for a given thickness, and inches of slack material in a full loop.

Material Thickness	"L" Loop Length	"H" Stock Line Height					
		30"	36"	42"	48"	54"	60"
.015	48	39	51	63	75	87	99
.031	72	35	41	53	65	77	89
.062	96	25	36	46	55	67	79
.093	144	22	27	34	43	52	54
.125	180	16	26	30	37	44	48
.187	276	15	17	19	28	39	42
.250	360	Materials beyond 3/16" thickness are often handled more effectively in a controlled loop system. The engineering staff can recommend the most suitable system to individual application specifications.					
.312	456						

Slack material equals the amount of material in the loop less the free loop length.

PLEASE NOTE:

At least two feed lengths of slack material should be made available in each application. Slack material availability actually decreases as the loop length is increased for a given stock line. The optimum slack availability therefore occurs at the minimum practical loop length for a given thickness. A loop pit (shown on diagram in dotted lines) can provide 2 inches of additional slack material for each inch of depth. Once "H" is equal to at least two times "R".

Replacement Parts Ordering Procedure

All components for Cooper-Weymouth, Peterson equipment may be purchased for replacement as individual parts or subassemblies.

Assistance in identifying and ordering can be obtained through our representative or direct from:

Cooper-Weymouth, Peterson
Hinckley Road
Clinton, Maine 04927
Attention: Customer Service Department
Phone: (207) 426-2351

Orders for parts should be directed to the same address.

The model and serial number of the machine, for which the parts are needed, should be advised in discussing or placing an order. The model and serial numbers are imprinted on the General Data Plate that is affixed to the side of the machine. This plate also designates the capacities of the unit.

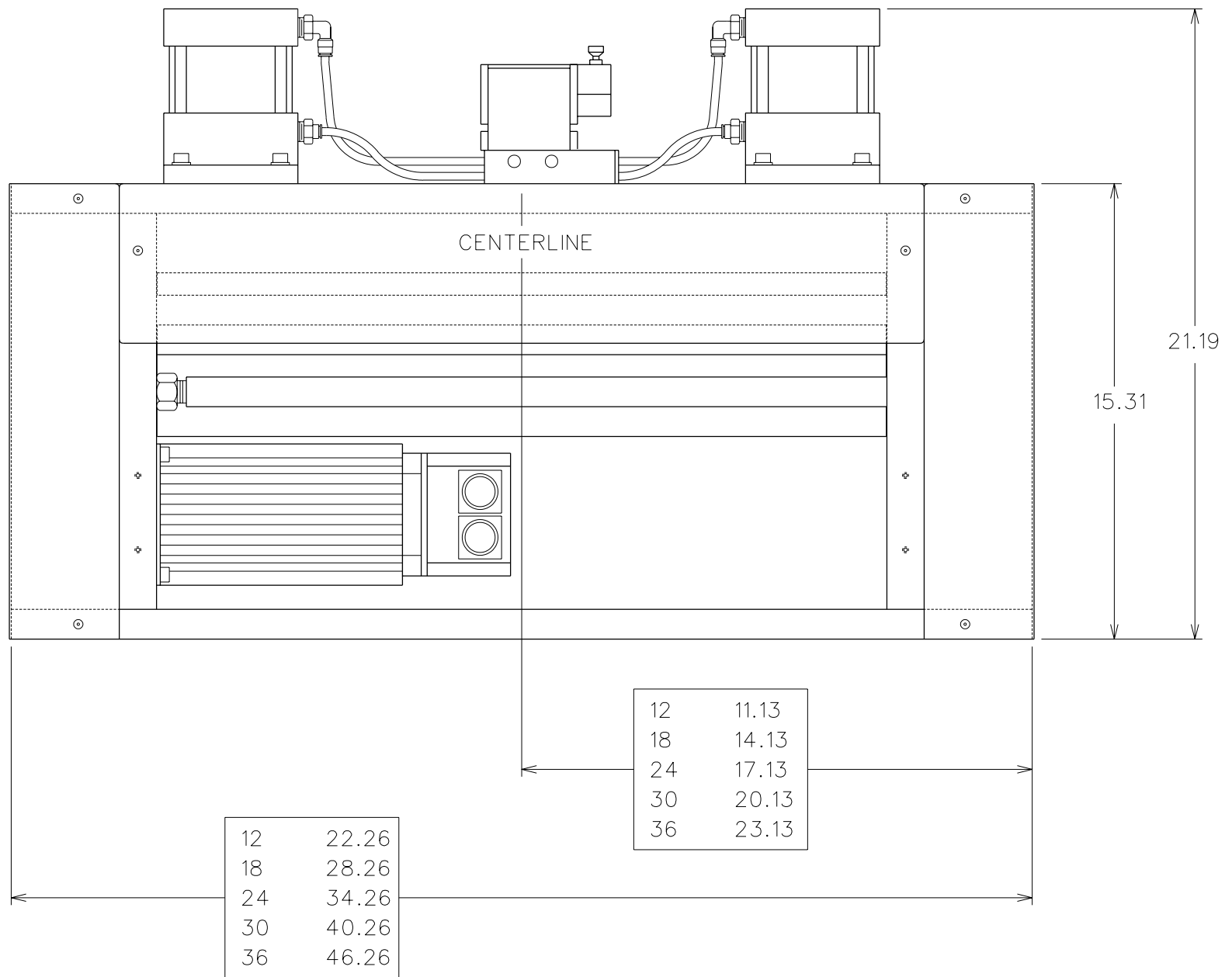
In lieu of a model and serial number, should the plate be missing or illegible, as thorough a description of the machine as possible should be given. It is particularly important to have an approximate date of manufacture, in lieu of a model and serial number, in order to assure proper revision levels of replacement parts. The customer service department will assist in obtaining adequate description to assure proper replacement parts are identified.

Once the machine has been identified, parts can be ordered by advising

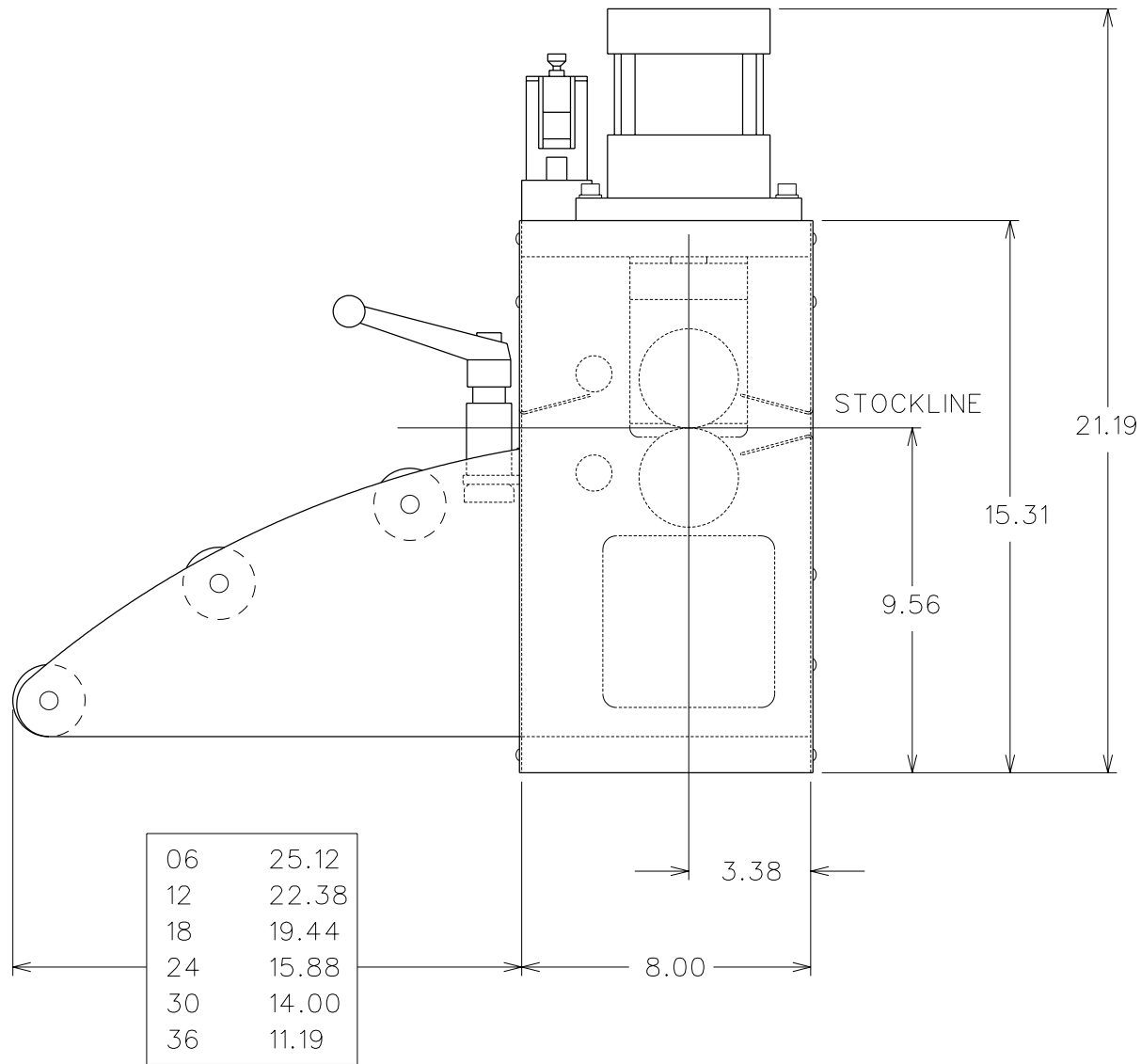
1. The quantity required.
2. The assembly drawing number being used for identification.
3. The parts detail number from the assembly drawing.
4. The parts description from the parts list.
5. The parts number, where available.

Naturally, the complete billing and shipping addresses should be given along with the purchase order number.

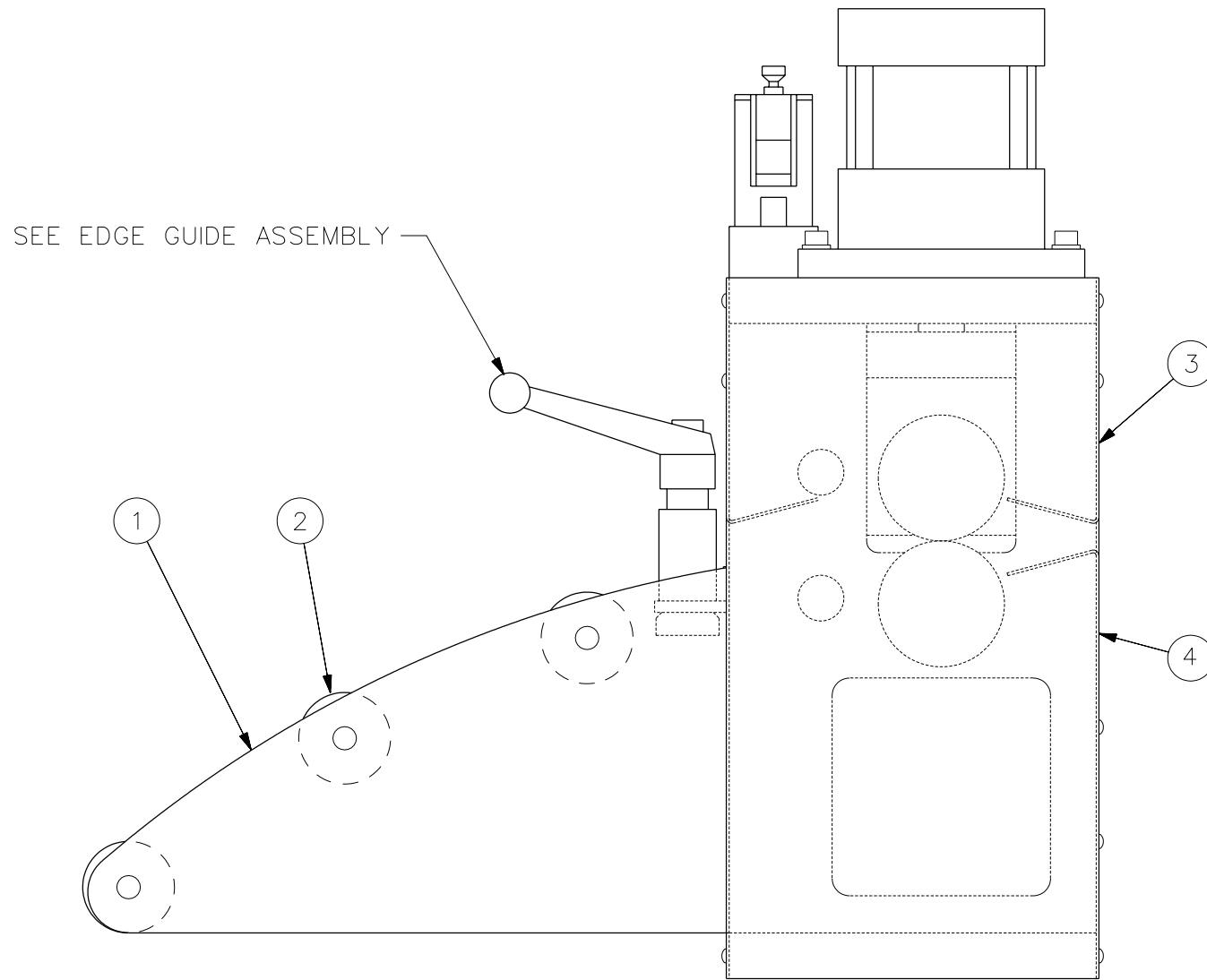
Following these procedures thoroughly, will best assure the expeditious and accurate handling of your replacement parts order. Remember, we are always ready, willing and able to assist whenever we are needed.



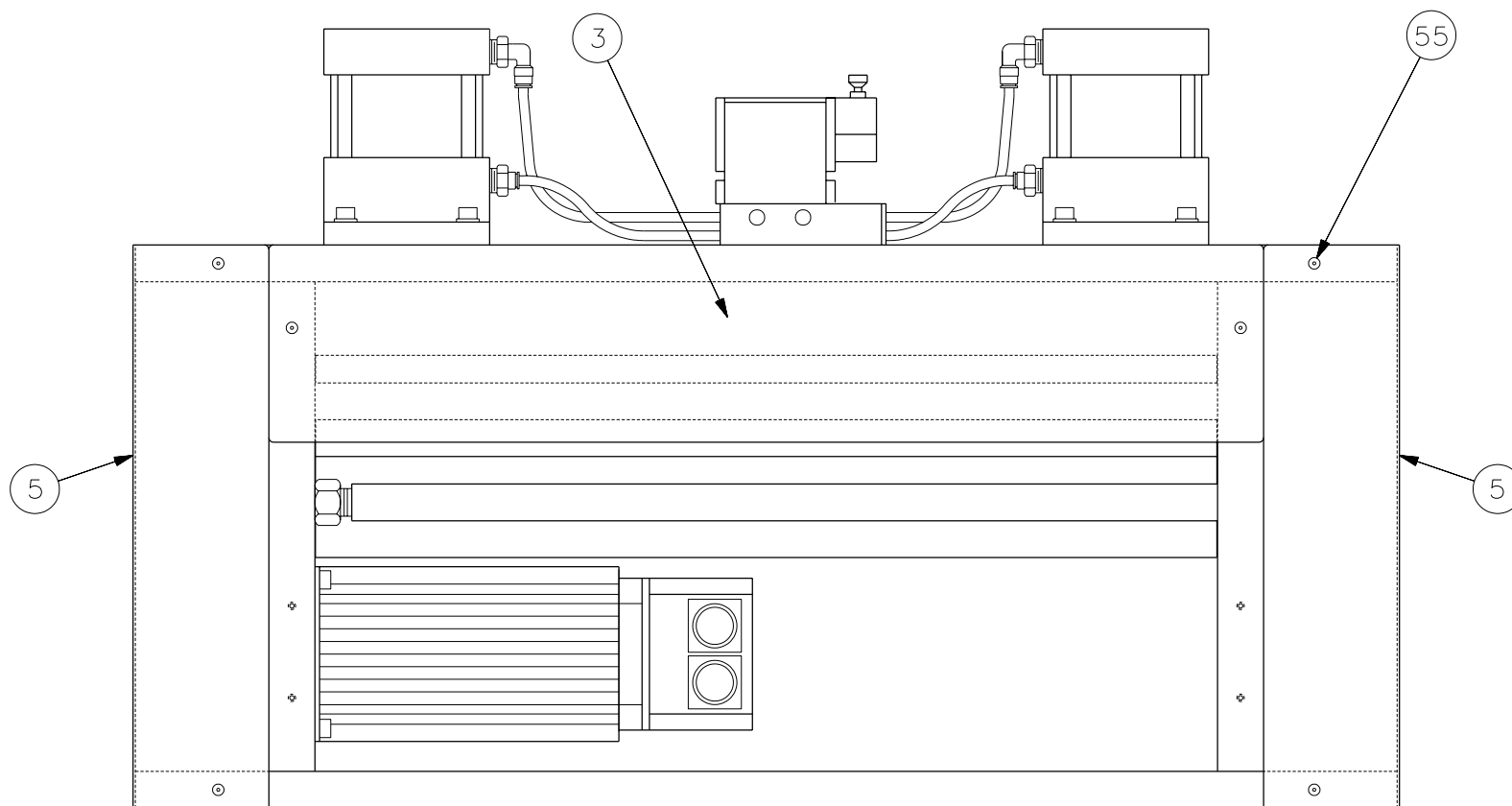
SERVOMAX DIMENSION DRAWING ENTRANCE VIEW



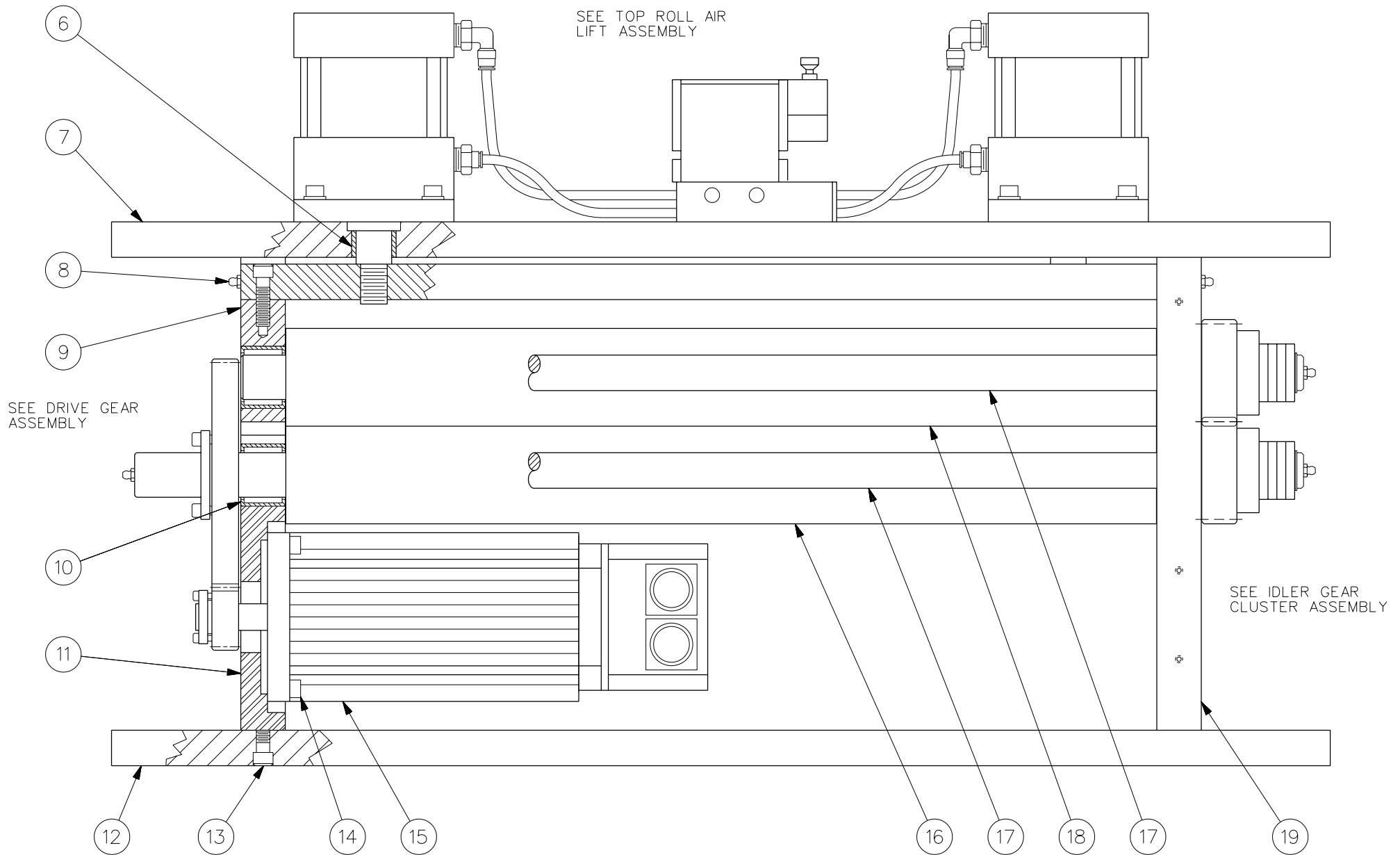
SERVOMAX DIMENSION DRAWING SIDE VIEW



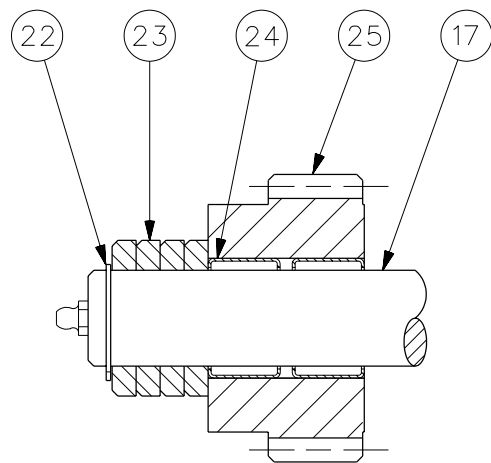
SERVOMAX ROLL GUARD LAYOUT AND CASCADE ASSEMBLY



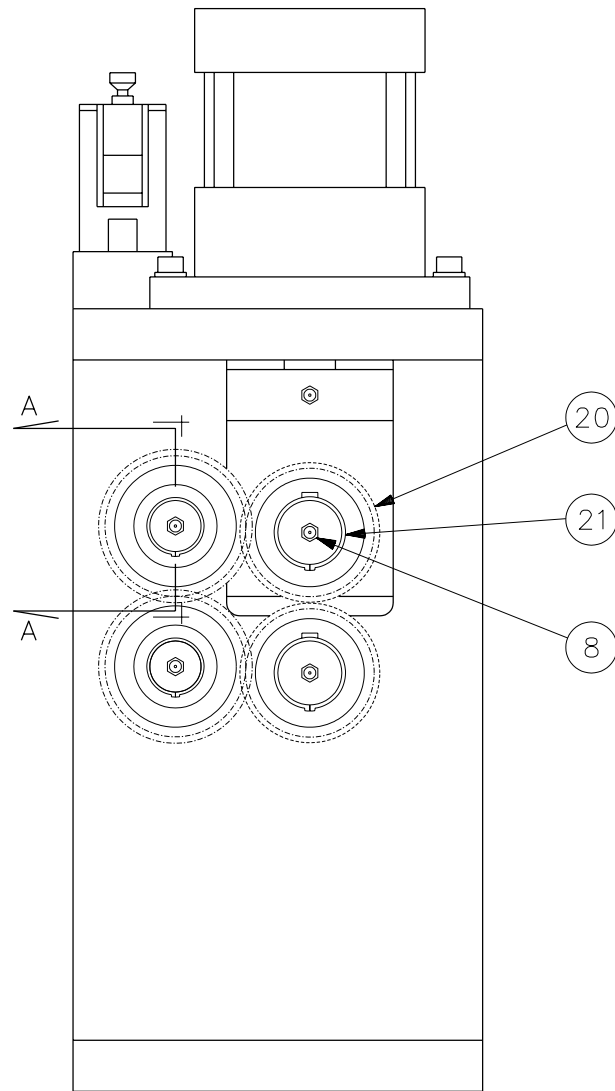
SERVOMAX ROLL GUARD LAYOUT



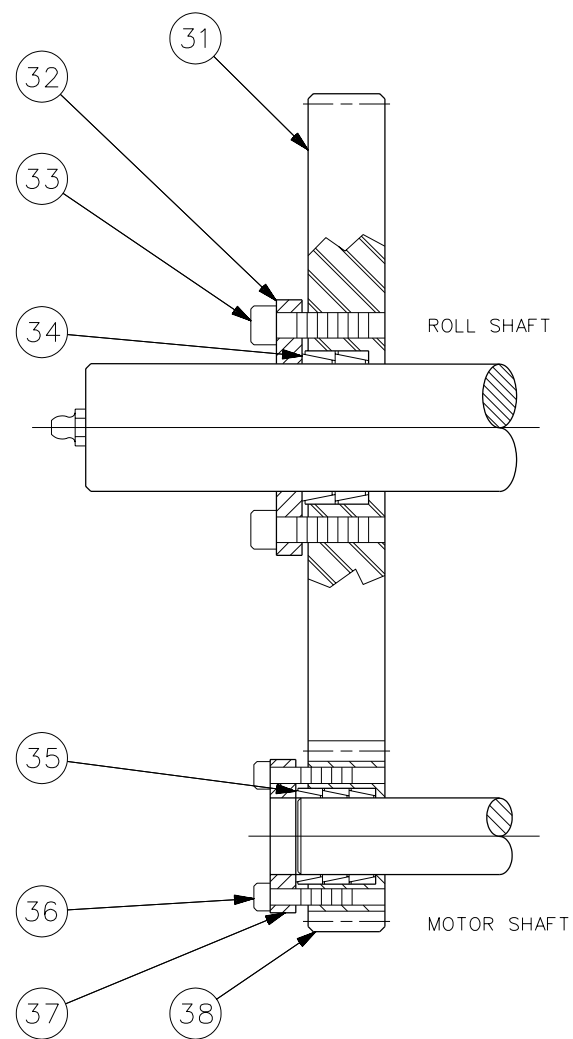
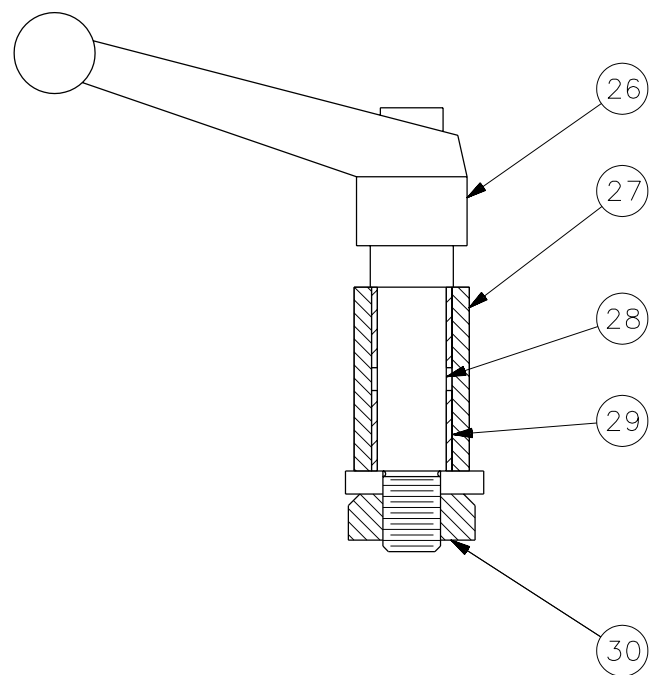
SERVOMAX MAIN FEED BODY ASSEMBLY



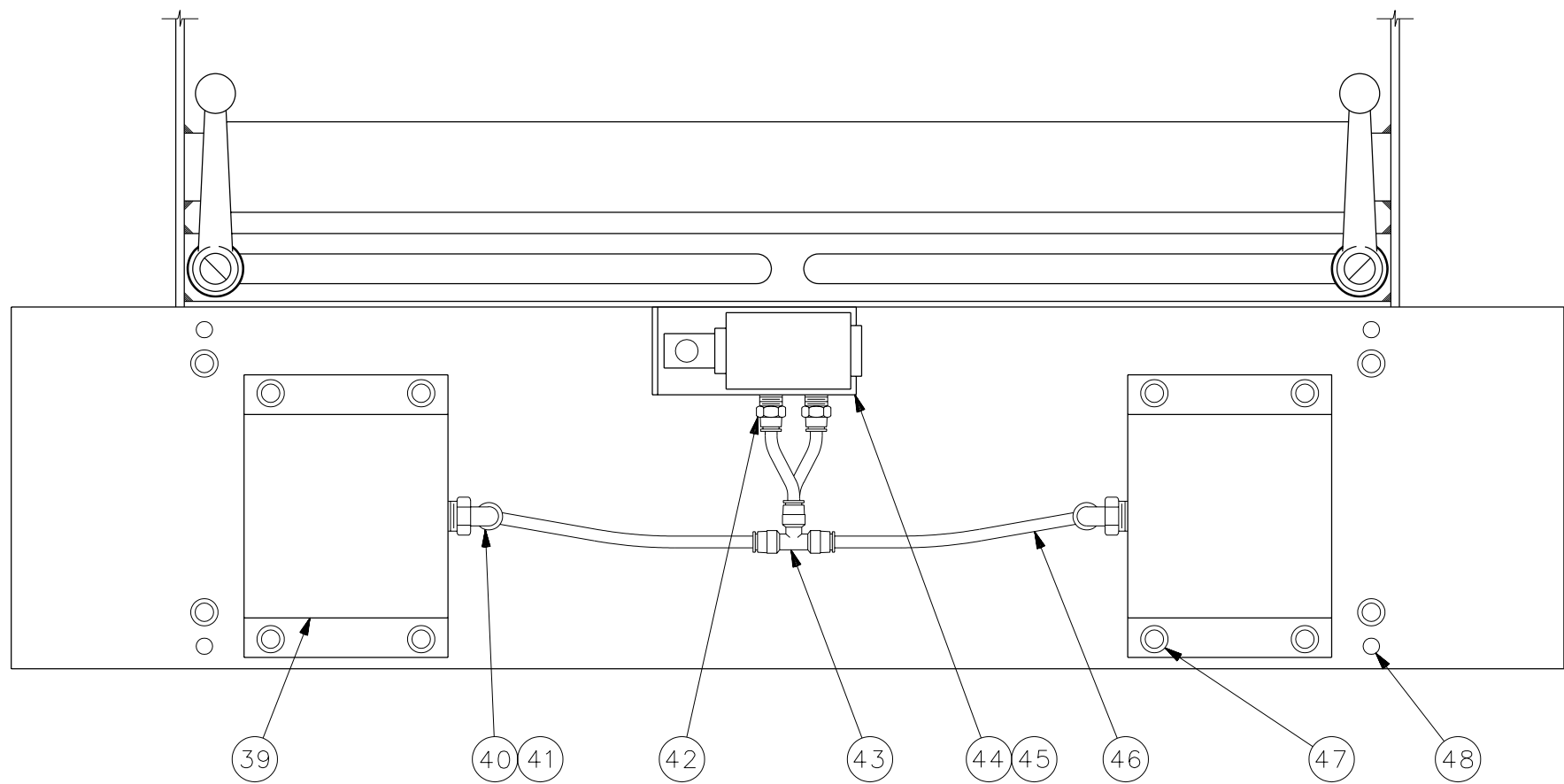
SECTION A - A



SERVOMAX IDLER GEAR CLUSTER ASSEMBLY



SERVOMAX EDGE GUIDE AND DRIVE GEAR ASSEMBLY



SERVOMAX TOP ROLL AIR LIFT ASSEMBLY

ServoMax SE Roll Feed**Parts List**

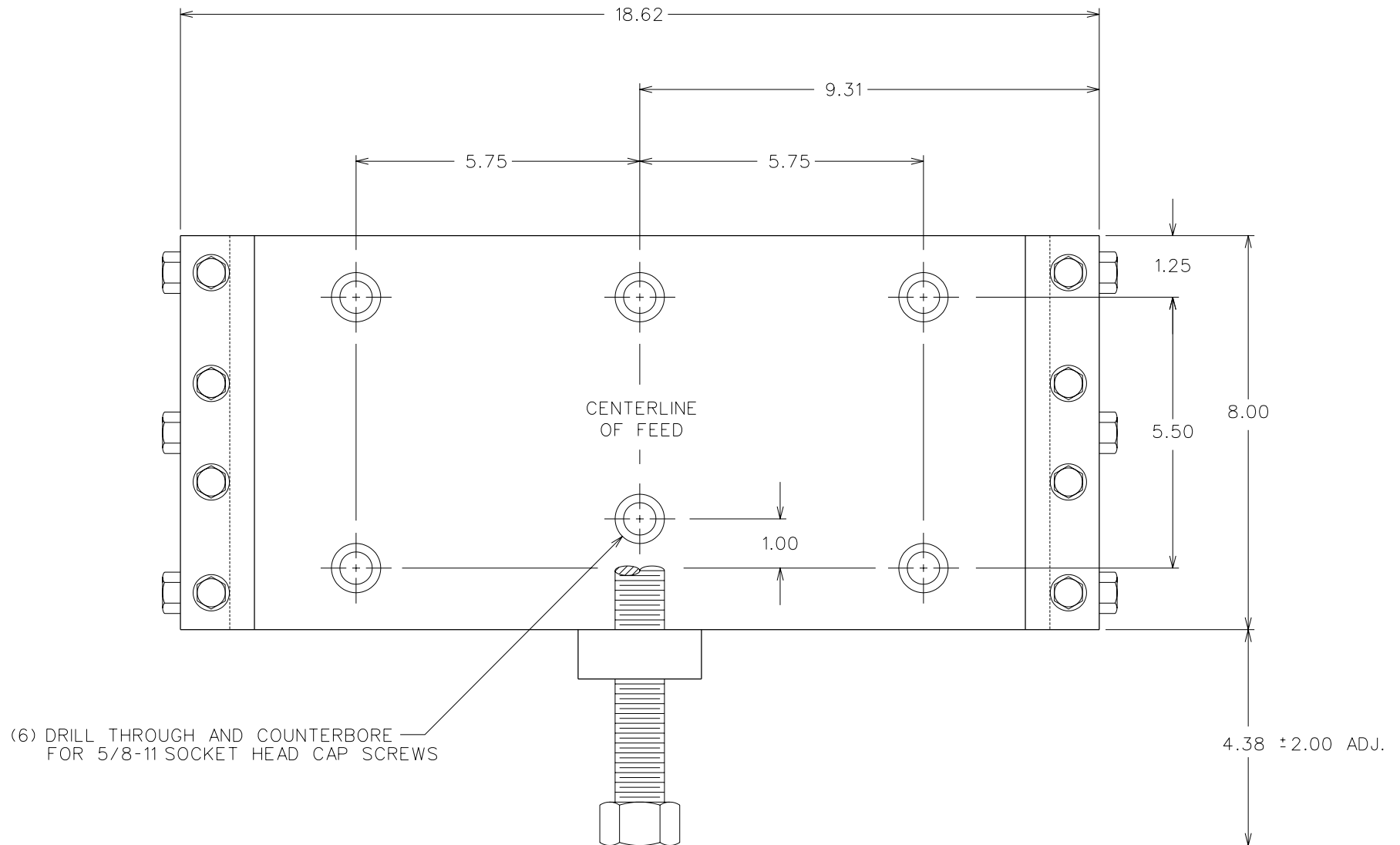
Item	Part #	Description	Qty.
1	60966-KM	ENTRANCE CASCADE FRAME	1
2	42241	CASCADE ROLLER	3
3	60968	TOP ROLL GUARD	2
4	60967	BOTTOM ROLL GUARD	1
5	60969	GEAR COVER	2
6	60943	BRONZE BUSHING	2
7	60956	TOP PLATE	1
8	A122025-28X013	GREASE FITTING	6
9	31352	ROLLER HOUSING	1
10	3524	NEEDLE BEARING	4
11	60958	MOTOR MOUNTING PLATE	1
12	60957	BASE PLATE	1
13	A102037-24X100	SHCS 3/8-24 X 1	8
14	A102037-24X125	SHCS 3/8-24 X 1.25	4
15	101212	DRIVE MOTOR	1
16	3039-MF	BOTTOM ROLL	1
17	3036	IDLER GEAR SHAFT	2
18	3040-MF	TOP ROLL	1
19	60959	END PLATE	1
20	03800-SP	DRIVE GEAR	2
21	A146125	RET. RING	2
22	A146100	RET. RING	2
23	3025	SPACER WASHER	8
24	3525	NEEDLE BEARING	4
25	3801	IDLER GEAR	2
26	32944	HANDLE	2
27	42438	EDGE GUIDE ROLL	2
28	60970-A	STOCK GUIDE PIN	2
29	32416	BRONZE BUSHING	4
30	40737	STOCK GUIDE NUT	2
31	60960	DRIVE SHAFT GEAR 76T	1
32	60961	GEAR LOCKING RING	1
33	A102025-20X050	SHCS 1/4-20 X .50	4

ServoMax SE Roll Feed

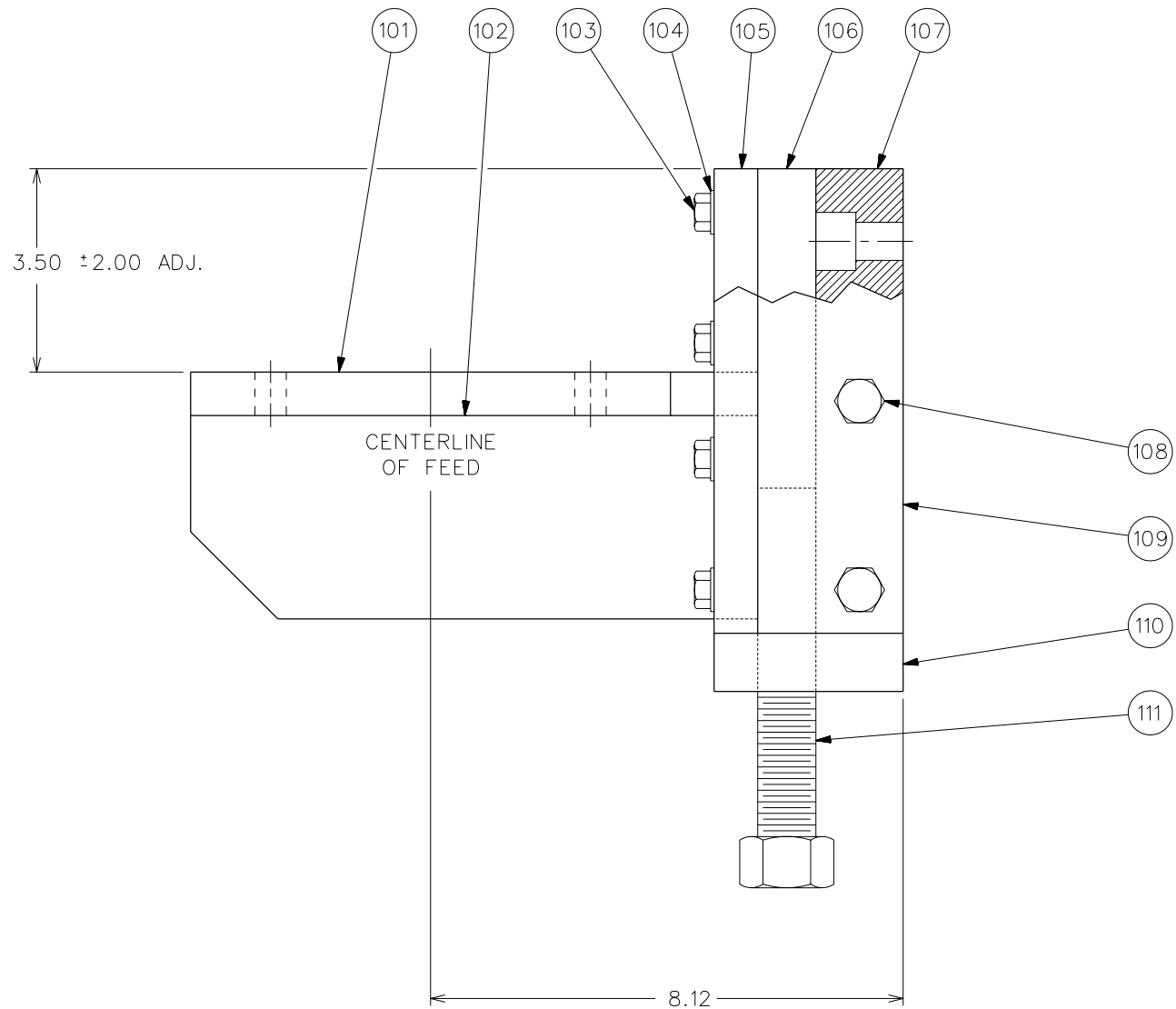
Parts List

Item	Part #	Description	Qty.
34	60955	LOCKING ELEMENT	2
35	60249	LOCKING ELEMENT	3
36	A102800-32X075	SHCS 8-32 X .75	6
37	60912	MOTOR LOCKING RING	1
38	60927	MOTOR SHAFT GEAR 20T	1
39	32448	AIR LIFT CYLINDER	2
40	60964	MALE SWIVEL ELBOW 1/4 TUBE - 3/8 NPT	2
41	60965	MALE CONNECTOR 1/4 TUBE - 3/8 NPT	2
42	60923	MALE CONNECTOR 1/4 TUBE - 1/4 NPT	2
43	60924	UNION TEE	2
44	60916	CONTROL VALVE	1
45	A10210X-32X125	SHCS 10-32 X 1.25	2
46	60925	POLYURETHANE TUBING	3FT
47	A102037-125	SHCS 3/8-16 X 1.25	8
48	A126037-125	ROLL PIN 3/8 X 1.25	8
49*	11505-	SERVOMAX NAMEPLATE	1
50*	11303	CONTROL FLOOR STAND	1
51*	31983-A	GENERAL DATAPLATE	1
52*	30868	CAUTION TAG	2
53*	31014	REMOVE TO LUBE TAG	2
54*	50170	NAMEPLATE	
55	A09310X-32-037	RHS 10-32 X 3/8	16
56*	33328	DANGER TAG	1

* NOT SHOWN



EXTRA HEAVY DUTY ADJUSTABLE MOUNTING BRACKET DIMENSION DRAWING



PART NO. 100 - EXTRA HEAVY DUTY ADJUSTABLE MOUNTING BRACKET

**Extra Heavy Duty Adjustable Mounting
Bracket For Servomax Roll Feed
Parts List**

Item	Part #	Description	Qty.
100	00342-SMF	EXTRA HEAVY DUTY ADJ. MOUNTING BRKT.	1
101	00337-09	SHELF	1
102	00338-11	BRACE	2
103	A144050-20-150	HEX HEAD BOLT 1/2-20 X 1 1/2	8
104	A084050	FLAT WASHER 1/2	8
105	336	GIB COVER	2
106	339	SLIDE	1
107	00334-01	MOUNTING PLATE W/ HOLES	1
108	A144062-18-200	HEX HEAD BOLT 5/8-18 X 2	6
109	335	GIB	2
110	340	SCREW SUPPORT PLATE	1
111	341	ADJUSTING SCREW	1

15 FEET OF 2 CONDUCTOR
SHIELDED CABLE SUPPLIED
BY CWP FOR FEED INITIATE

CUSTOMER SUPPLIED
FEED INITIATE DEVICE

FEED INITIATE

TIGHT LOOP INTERLOCK

STOP
1 PB

STRAIGHTENER INTERLOCK

REMOTE CYCLE STOP

REMOTE
JOG
PENDANT

JOG REV
3 PB
JOG FWD
2 PB

REMOTE AUTO

POINT OF OPERATION

NOTE: RELAY OR SOLENOID COILS
MUST BE SUPPRESSED AS SHOWN.

PRESS TIE-IN TO
CYCLE STOP

BATCH COMPLETE

FEED COMPLETE

JOB RUNNING

ERROR

DRIVE STATUS

LOAD .100 AMP MAXIMUM

BANDED END

BANDED END

BANDED END

BANDED END

BANDED END

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BILL OF MATERIAL				
SYMBOL	CWP NO.	DESCRIPTION	QTY	
ICC	12817	ENCLOSURE SMX SE LARGE KEYPAD	1	
IP	11317-A	ENCLOSURE PANEL	1	
	11303	STAND, FLOOR	1	
DRIVE	12573	DRIVE, SERVO AC GE*IC800SI107RS1A	1	
CBL MTR	12821-10	CABLE, MOTOR	1	
CBL FDBK	12820-10	CABLE, RESOLVER	1	
DISPLAY	12579	KEYPAD, GE*OIP-DSP1-C, 4 LINE 40 C	1	
CBL DSP	12595	CABLE, DISPLAY GE*CBL-OJR-06-RA, 6'	1	
IPB	10550-CH	PUSHBUTTON *10250T122-3x	1	
	10865	LEGEND RED "STOP"	1	
2, 3PB	11641	PENDANT, ACI*74-2002A"FOR/REV"	1	
	11642	CORD, COIL MEYER 4'/20'	1	
DISC	11150-ABB	DISCONNECT SWITCH	1	
	11383-ABB	DISCONNECT EXTENSION SHAFT	1	
FB	11185	FUSE BLOCK	1	
IFU	11177	FUSE, 15 AMP	1	
ICR	10912	CONTROL RELAY KHU-17D11-12	1	
	11036	RELAY SOCKET 700HN103	1	
POB	60303	POWER SUPPLY (120)	1	
POB	11829-A	POWER SUPPLY (230)	1	
	60304	SOCKET	1	
ITB	10271	BAR, TERMINAL-BEAU*18010 10 POSITION	1	

* 10 FEET IS THE STANDARD CABLE LENGTH.
FOR A DIFFERENT LENGTH CHANGE THE NUMBER AFTER THE DASH.

DRIVE

