

Challenge Hydraulic Single Cornering Machine

Instruction Manual



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Serial Numbers 2167A & Up

INSTRUCTION AND PARTS MANUAL



The Challenge Machinery Company
6125 Norton Center Drive
Norton Shores, MI 49441-6081 USA

www.ChallengeMachinery.com

SCM/MSCM
SINGLE CORNERING MACHINE

Sold and Serviced by

F.329-B

1.0 Introduction

Keep this manual in a safe, convenient place for quick reference by operators and service personnel.



SAFETY ALERT! This symbol means **CAUTION: Personal safety instructions!** Pay special attention to the instructions in bold type. Personal injury may result if the precautions are not read and followed.

READ THIS MANUAL BEFORE OPERATING! If you follow precautions and instructions, you should have years of trouble-free operation. Contact your Authorized Challenge Dealer for replacements.

FOR PARTS AND SERVICE, contact the Authorized Challenge Dealer from whom you purchased your machine. Use the illustrations and parts lists at the back of this manual to identify the correct parts needed. Always give the **SERIAL NUMBER** and **MODEL** of your machine to insure the correct parts are sent as soon as possible.

RECORD YOUR MACHINE SERIAL NUMBER in the space provided on the front cover of this manual. Also fill out the warranty card accompanying this manual and return it **DIRECTLY TO CHALLENGE.**

If you bought a used machine, it is important to have the following information on record at Challenge. Copy this page, fill in the information and send it care of The Challenge Service Department, 6125 Norton Center Drive • Norton Shores • MI 49441-6081.

CHALLENGE MODEL	SERIAL NUMBER	
ATTN	COMPANY	
ADDRESS		
CITY	STATE/PROVINCE	ZIP
PHONE	DATE INSTALLED	
DEALER NAME & CITY		

* WARRANTY INFORMATION *

PLEASE REVIEW THE ENCLOSED WARRANTY INFORMATION SHEET

It is very important that you read and understand the conditions outlined in the *Warranty Information Sheet* attached to the outside of the shipping container of your machine.

The *Warranty Information Sheet* must be filled out completely and returned to THE CHALLENGE MACHINERY COMPANY in order for the warranty to be issued for this machine.

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2.0 Safety

2.1 Precautions

- By nature of the functions the cornering machine performs, it has some inherent dangers associated with its use. Read and thoroughly understand the safety precautions outlined below.
- This machine is designed for one-person operation. Never operate the machine with more than one person.
- Cut/crush hazard. Keep hands from under the knife and plunger while in operation.
- Do not operate with any covers removed.
- Safe use of this machine is the responsibility of the operator. Use good judgment and common sense when working with and around this machine.
- Read and understand all instructions thoroughly before using the machine. If questions remain, contact your Authorized Challenge Dealer. Failure to understand the operating instructions may result in personal injury.
- Only trained and authorized individuals should operate this machine.
- Disconnect power before performing maintenance. See Section 2.2 , Power Lockout Procedure.
- Observe all caution labels on this machine.
- When replacing hydraulic parts, loosen the connections slowly to relieve pressure. Never loosen connections while the machine is running. Allow hydraulic fluid to cool before performing maintenance on the hydraulic system.
- Never leave the machine unattended while running.
- If the machine operates abnormally, consult Appendix C- Troubleshooting.

2.2 Power Lockout Procedure

For maximum safety while making adjustments or repairs to your machine, be sure to disconnect power from the machine. Disconnect the power plug from its socket.

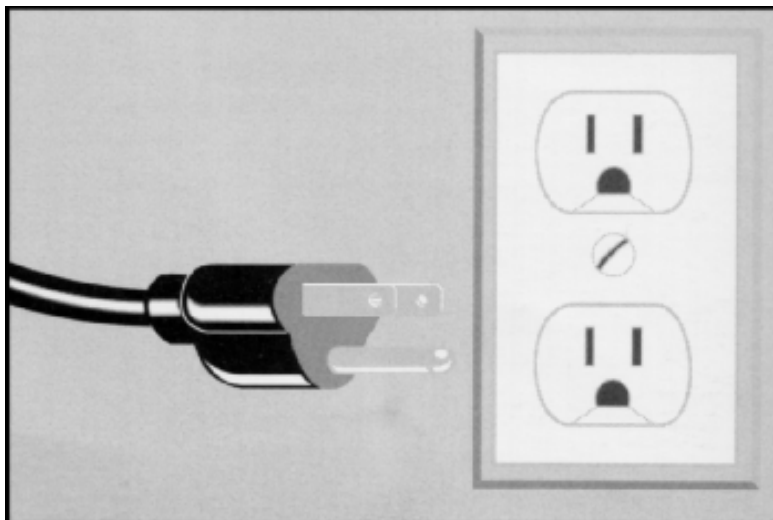


Figure 1 – Main Power Disconnect

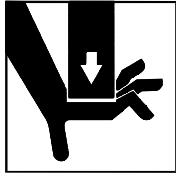
2.3 Warning Label Definitions

The following warning label is found on the front cover of the machine. Read and understand the meaning of this symbol. If this label is lost from the machine, it should be replaced.



SINGLE PERSON OPERATION

Do not operate with more than one person.



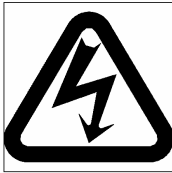
CUT/CRUSH HAZARD

Keep hands from under plunger and knife while in operation.



CRUSH HAZARD

Do not operate with any covers removed.



SHOCK HAZARD

Disconnect power before removing cover. Replace covers before operation.

3.0 Packing List



SCM Single Cornering Machine



MSCM Single Cornering Machine

Part No.	Description	Qty.
CMC-431A	Single Cornering Machine	1
or		
CMC-431M	Manual Single Cornering Machine	1
Each machine includes the following tool kit items.		
8315	Knife Hold-Down Block	1
6751	Holder- Plunger	1
6751-1	Clamp Holder- MSCM (MSCM only)	1
W-171	1/8" hex wrench- long arm	1
W-172	3/16" hex T-wrench (extra long)	1
83014	Jogging Aid	1
W-130	3/16" hex wrench	1
6629	Gib Lube	1
W-105	1/4" hex wrench	1
W-131	5/16 hex wrench	1

4.0 Specifications

Description	US Units	Metric Units
Maximum Pile Height	4"	10 cm
Table Depth	24"	61 cm
Table Width	20"	51 cm
Table Height	35"	89 cm
Overall Height	51"	130 cm
Footprint	20 X 24"	51 X 61 cm
Net Weight (SCM)		
Shipping Weight (SCM)		
Net Weight (MSCM)		
Shipping Weight (MSCM)		
Electrical (SCM only)		
	½ HP	
	115 V/ 15 A	
	1 PH	
	60/50 Hz	
	20 A service size	

5.0 Accessories

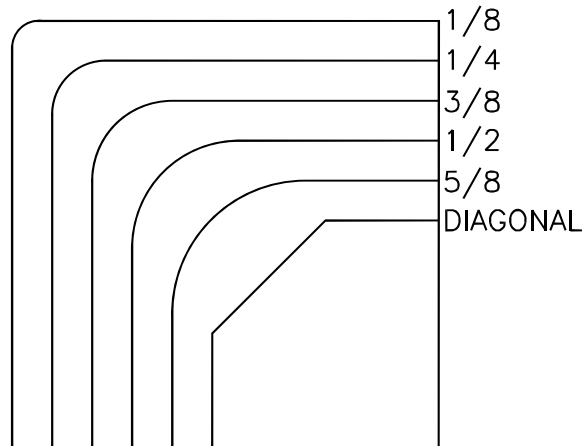


Figure 2 Knives and Dies

Size	Knife Number	Die Number
1/8" / 3.2 mm	6721-2	6722-2
1/4" / 6.3 mm	6721-4	6722-4
3/8" / 9.5 mm	6721-6	6722-6
1/2" / 12.7 mm	6721-8	6722-8
5/8" / 15.9 mm	6721-10	6722-10
Straight Diagonal	6761	6762
1-1/4" / 32 mm maximum Straight Diagonal cut		

6.0 Installation Guide

6.1 Inspecting Shipment

The cornering machine has been carefully packed to prevent damage during shipment. However, claims for damage or loss are the responsibility of the recipient. Inspect all shipments as soon as they are received. If there is any noticeable damage, note it on the freight bill. Visual and/or hidden damage must be reported to the claims department of the carrier within 15 days. Contact your dealer if you need any assistance. Check the contents of the crate against the packing list on page 6. Make sure there are no missing items.

6.2 Unpacking

Remove the packing materials and braces. Use a safe material-handling device to lift the machine off the skid. The machine weighs over 250 lbs. Note that the installation location must have a 115 VAC wall outlet nearby.

6.3 Leveling

Once positioned, level the machine to the floor by turning one or more of the four levelers to the floor. Turning a leveler clockwise moves it to the floor.

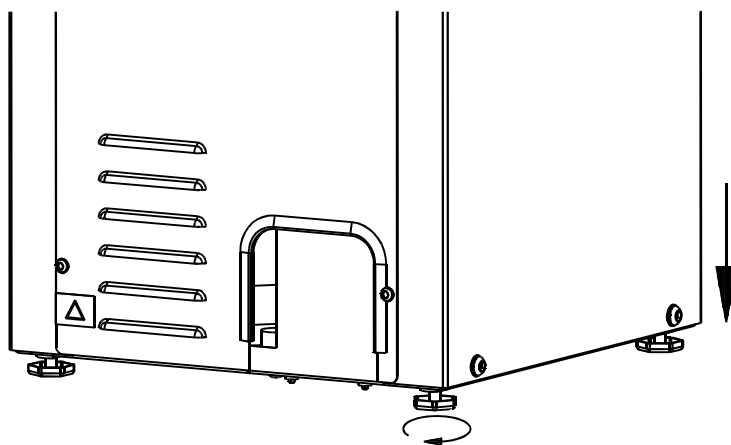


Figure 3 - Leveling

6.4 Cleaning

It may be necessary to clean the machine after installation. It may be cleaned with a solution of dish soap and water. Do not use petroleum or acid based solvents to clean the machine. Damage may result.

6.5 Power Hook-up (SCM only)

Insert the power plug into nearby wall outlet. The machine should operate on a 20 Amp circuit. If the pump motor stalls or operates sluggishly, test the line voltage. Too many machines on one circuit will reduce the voltage to each, affecting their performance.

6.6 Knife and Die Installation

Go to Section 7.5 Knife and Die Change on page 14.

7.0 User's Guide

7.1 SCM/MSCM Diagrams

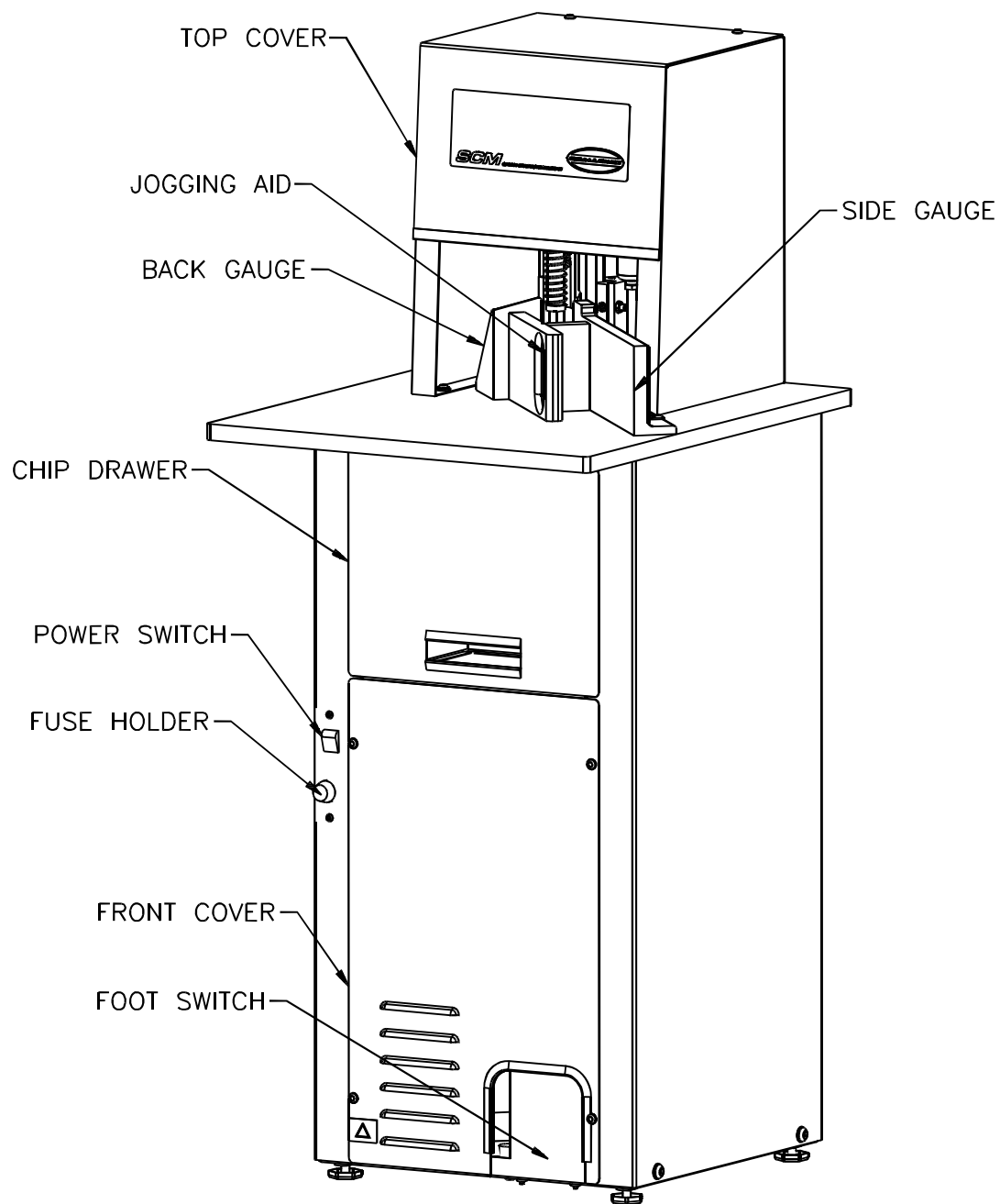


Figure 4 - SCM Components

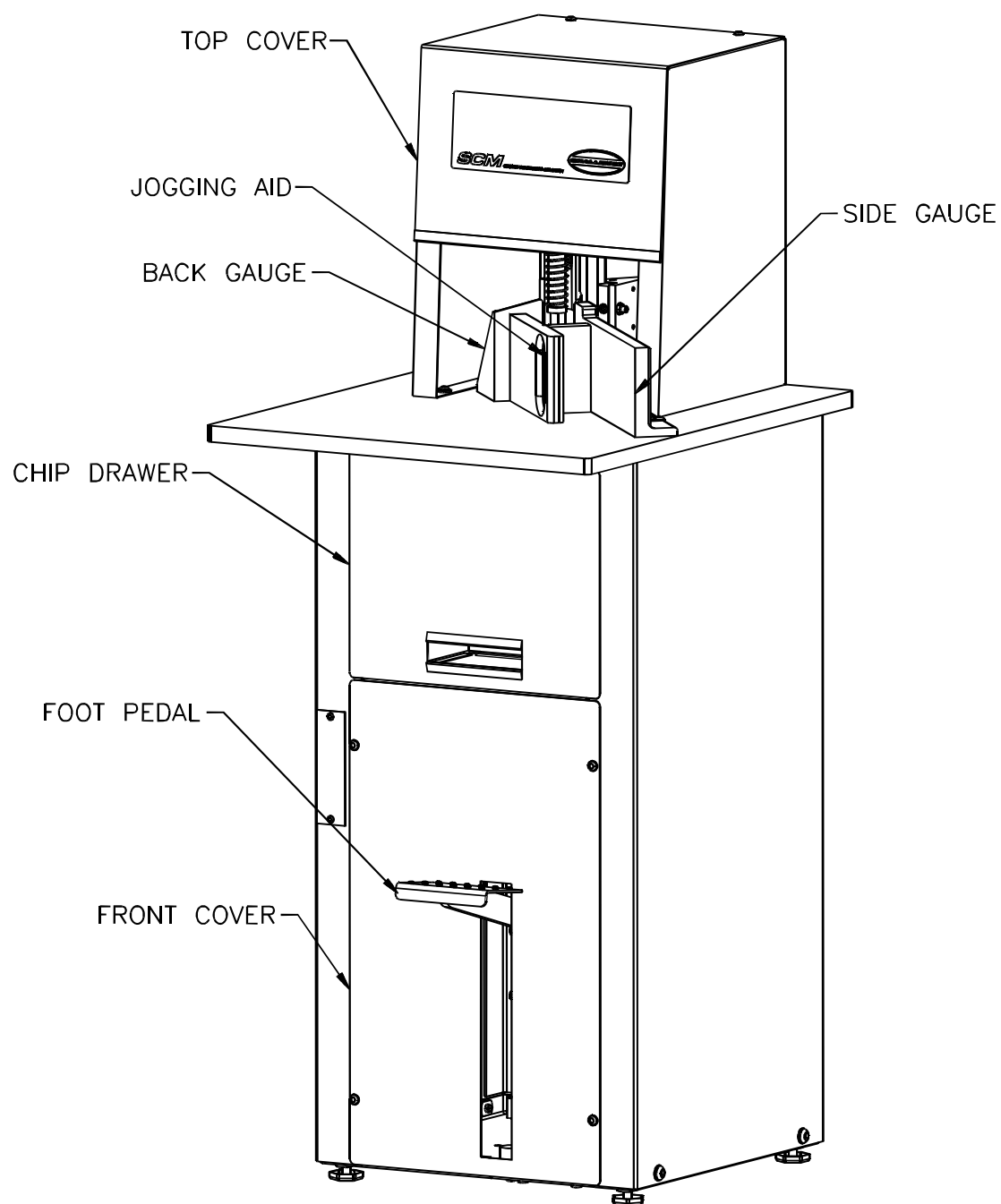


Figure 5 - MSCM Components

7.2 SCM Operation

1. Switch on the main power. The main power switch is located on the left side of the stand, underneath the table. Both the pump and the table light will switch on.
2. Load the stock using the jogging aid. Jog the stock against the side gauge to line it up. Push and jog it against the back gauge.



Keep hands away from the knife and plunger!
Always use the jogging aid while cutting.

3. Depress and hold the foot switch to cut. Release the foot switch after the knife stops moving down. The knife returns to the up position.

7.3 MSCM Operation (Manual Machine)

1. Load the stock using the jogging aid. Jog the stock against the side gauge to line it up. Push and jog it against the back gauge.



Keep hands away from the knife and plunger!
Always use the jogging aid while cutting.

2. Depress the foot pedal to cut. Let up on the foot pedal after the cut is complete.

7.4 Side and Back Gauge Adjustment

1. Switch off the machine and disconnect power. See Power Lockout Procedure on page 4.
2. Open the top cover.
3. Loosen the side gauge mounting screws and use a straight edge to align it tangent to the radius on the die. Tighten the mounting screws.
4. Loosen the back gauge mounting screws. Place a square against the side gauge.
5. Adjust the back gauge square to the side gauge and tangent to the radius on the die. Tighten the mounting screws.
6. Reconnect power to the machine

7.5 Knife and Die Change

CAUTION

Sharp knives! Even used knives are extremely sharp. Severe lacerations may result from improper handling of knives.

1. The knife head assembly must be held in the down position. Remove the chip drawer. Depress and hold the foot switch. Insert the hold-down block as shown in the following figure.

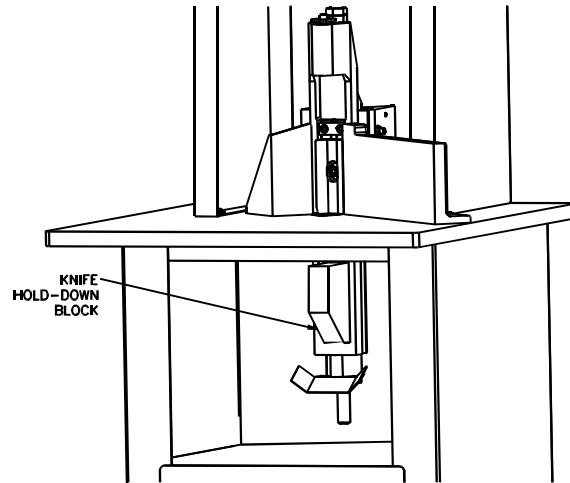


Figure 6 - Knife Hold-Down Block

2. Switch off the machine and disconnect power from the machine. See Power Lockout Procedure on page 4.
3. Open the top cover.
4. Lift the plunger by pulling the washer on top of the knife holder, Figure 7, page 14.

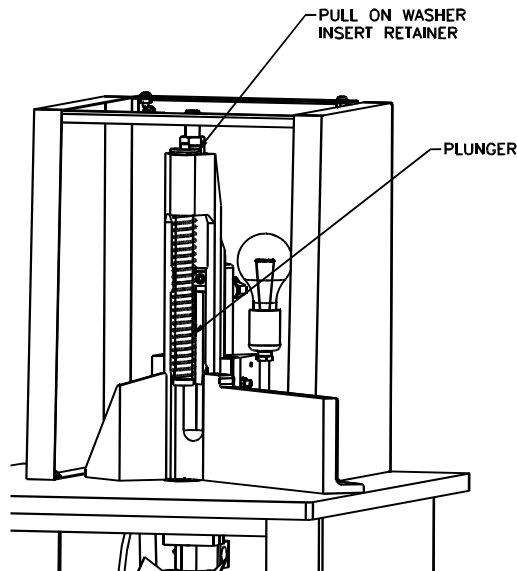


Figure 7 - Retain the Plunger in the Up Position

5. Insert the spring retainer between the washer and the knife holder.
6. Back off the knife adjustment setscrew to prevent damage to the new knife.

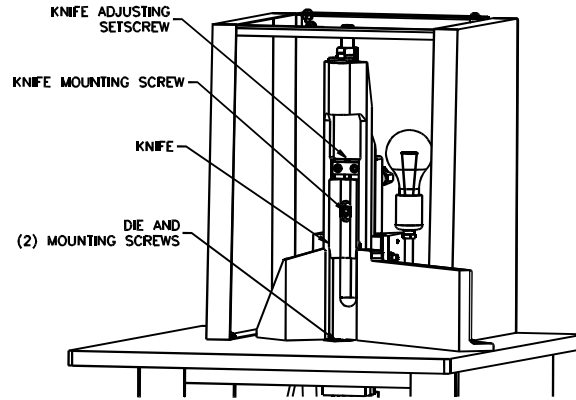


Figure 8 - Knife and Die Change
(Plunger not shown for clarity)

7. Remove the die mounting screws and die.
8. Remove the knife mounting screws and knife.
9. Insert the new knife against the adjustment setscrew and install the knife mounting screw. Snug the screw but do not tighten at this time.
10. Using the knife adjustment setscrew, adjust the knife until the cutting edge is 1/8" above the surface on which the die mounts.
11. Securely tighten the knife mounting screw.
12. Place the die on its mounting surface on the table and reinstall its mounting screws.
13. Place a piece of tissue paper between the knife and the die to ensure proper clearance.

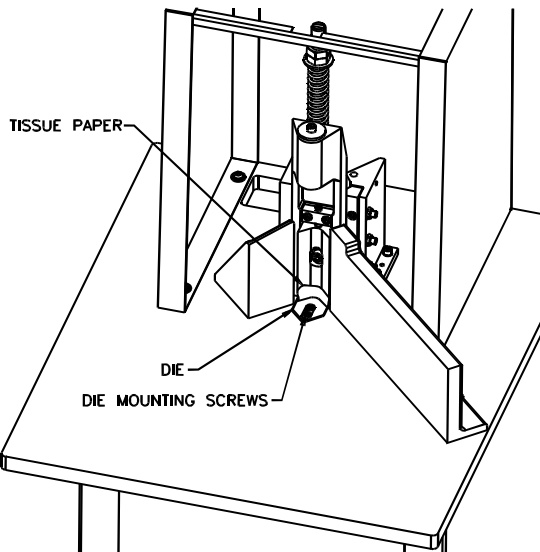


Figure 9 - Die Adjustment

14. Adjust the die to make perfect contact with all points against the knife. Securely tighten the die mounting screws.
15. Remove all tools from the table. Remove the plunger retainer.
16. Close the top cover and reconnect power to the machine.
17. Switch on the machine.
18. Depress and hold the foot switch. Carefully remove the knife assembly hold-down block.
19. Release the foot switch.
20. Reinstall the chip drawer.

7.6 Straight Diagonal Cutting

Adjusting the side gauge will change the length of a straight diagonal cut. This length should not exceed 1" when cutting 4" thick piles. It is possible to cut piles 2" thick and below at 1-1/4" length of diagonal. See section 7.4 Side and Back Gauge Adjustment for side gauge adjustment instructions.

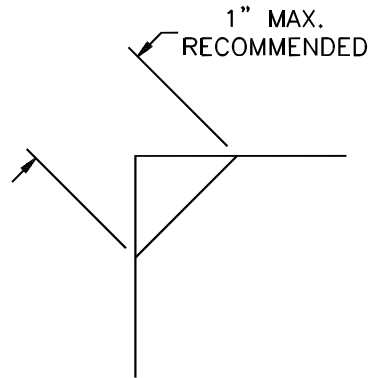
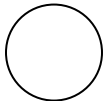


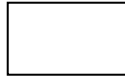
Figure 10 - Maximum Recommended Cut

7.7 Lubrication

Proper lubrication is critical to prevent excessive wear to the machine.



Gib Lube Weekly



Light Machine Oil Weekly

CAUTION

Disconnect main power.
See Section 2.2 Power Lockout Procedure.

- Use gib lube to lubricate the gib and both sides of the dovetail.
- Use light machine oil to knife return rod and springs. Wipe off excess oil.

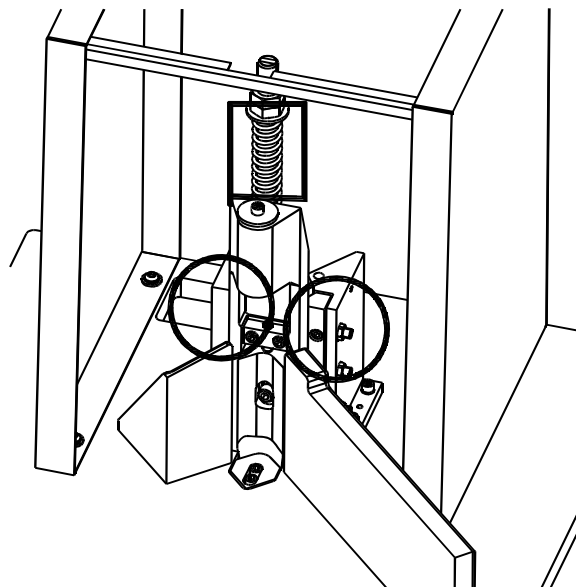


Figure 11 - Lubrication Locations

- Use light machine oil to lubricate the rear pillow blocks, the foot pedal pull-down pin, and the pull-down shoulder screw on the MSCM, Manual Single Cornering Machine.

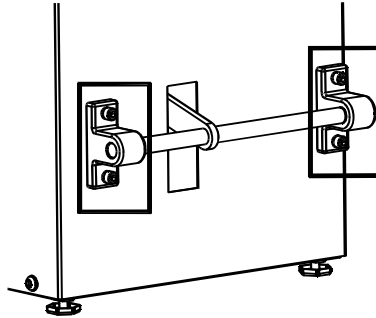


Figure 12 - Pillow Blocks

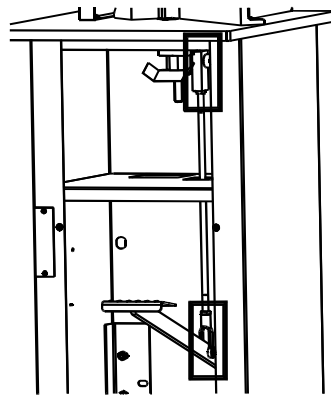


Figure 13 - Pin and Shoulder Screw

7.8 Operating Tips

- Keep the knife and shoe sharp and in good alignment. A dull knife and poor adjustments lead to irregular cuts. New or re-sharpened dies should be purchased through an authorized Challenge dealer in order to insure proper sharpening.
- Exercise care when handling and changing knives.
- Firm placement of paper against side and back gauges will ensure good cuts.
- Unusual noise and irregular operation indicates a maintenance check is due. A qualified service technician should check the machine.
- Follow the routine maintenance procedures. Keep chips off bearings and sliding parts. Lubricate frequently with the Gib Lube provided in the toolkit. Always disconnect power before lubricating. See Power Lockout Procedure on page 4.

8.0 Appendix A - Maintenance Guide

NOTICE

The instructions on the following pages are for the use of trained service personnel only!

Attempting to perform repair and replacement procedures without proper training may cause machine damage or operator injury!

PARTS CUSTOMERS: The Challenge Machinery Company provides parts with the express understanding that they are to replace parts found missing or no longer serviceable on equipment designed and/or manufactured at Challenge. The Challenge Machinery Company assumes no liability for any modification or alteration to any Challenge products, and any such modification or alteration to any Challenge product is not authorized by The Challenge Machinery Company. Any modification or alteration of any Challenge product will void any remaining warranty.

8.1 Mechanical System

8.1.1 Knife Return Springs

It may be necessary to adjust the knife return spring(s) at some time. More compression increases the return force while less compression reduces the return force. The length of the spring should be adjusted between 13.6 and 14 inches. Do not compress the spring(s) more than necessary. Over-compression will cause undue wear to the spring(s). The following procedure describes how to adjust the spring compression.



CAUTION

Disconnect main power.

See Section 2.2 Power Lockout Procedure.

1. Switch off the machine and disconnect power. (SCM only)
2. Open the top cover.
3. Loosen the top jam nut on the end of the knife return rod.
4. Turn the lower jam nut clockwise to increase the compression on the spring(s).
5. Turn the lower jam nut counter-clockwise to decrease the compression on the spring(s).
6. Retighten the top jam nut onto the lower jam nut to lock it in place.
7. Close the top cover.
8. Reconnect power to the machine. (SCM only)

8.1.2 Dovetail Gib

The dovetail gib may require adjustment occasionally. The following procedure describes how to adjust the dovetail gib.

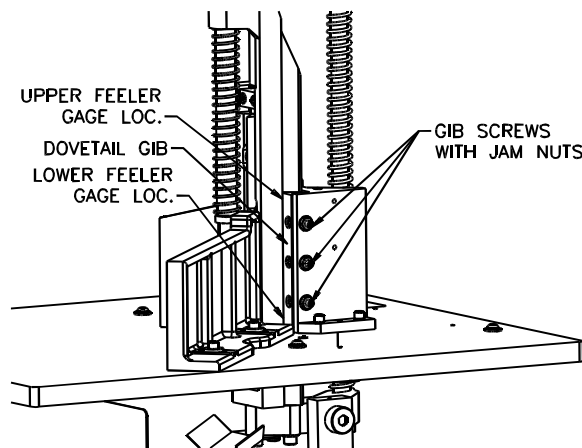


Figure 14 - Gib Adjustment

1. Remove the chip drawer.
2. Switch on the machine. Depress and hold the foot switch. (SCM only)
3. Depress the foot pedal. (MSCM only)
4. Insert the knife hold-down block as shown in Figure 15.

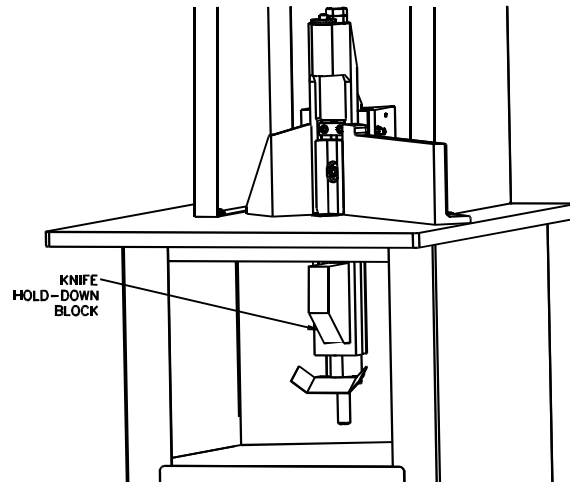


Figure 15 - Knife Hold-Down Block Placement

CAUTION

Disconnect main power.
See Section 2.2 Power Lockout Procedure.

5. Switch off the machine and disconnect power. (SCM only)
6. Open the top cover.
7. Loosen three, gib-screw jam nuts and gib screws.
8. Place a .002" feeler gauge between the dovetail and the gib at the lower end of the gib.
9. Adjust the lower gib adjustment screw until the lower end of the gib contacts the feeler gauge. Lock its jam nut in place and remove the feeler gauge.
10. Close the top cover.
11. Reconnect power, and switch on the machine. (SCM only)
12. Depress and hold the foot switch to remove the knife hold-down block. (SCM only)
13. Depress the foot pedal and remove the knife hold-down block. (MSCM only)

CAUTION

Disconnect main power.
See Section 2.2 Power Lockout Procedure.

14. Switch off the machine and disconnect power. (SCM only)
15. Open the top cover.
16. Place the .002" feeler gauge between the dovetail and the gib at the upper end of the gib.
17. Adjust the two, upper gib-screws until the gib contacts the feeler gauge. Lock their jam nuts in place and remove the feeler gauge.
18. Close the top cover and reinstall the chip drawer.
19. Reconnect power. (SCM only)

8.1.3 Hydraulic System (SCM only)

The hydraulic fluid should be checked every six months and topped off as necessary. Depending on usage, it may need to be checked more frequently.

8.1.4 Hydraulic Fluid Check

To check the hydraulic fluid level:

CAUTION

Disconnect main power.
See Section 2.2 Power Lockout Procedure.

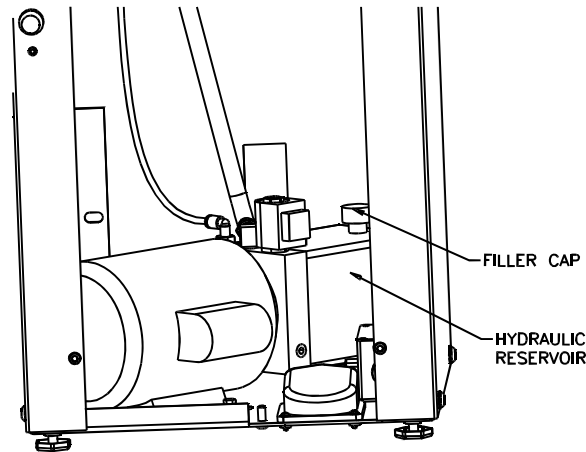


Figure 16 – Hydraulic Reservoir Location

1. Switch off the machine and disconnect power.
2. Remove the front cover.
3. View the hydraulic reservoir sight line.
4. If the fluid level is below the fill line on the side of the tank, remove the filler cap and add fluid until it reaches the filler line. **DO NOT OVERFILL!**
5. Only use 100-weight hydraulic fluid. This can be ordered from Challenge in five-gallon containers, part number **S-1991-3**. See Section 8.1.6 for a compatibility list. Do not use transmission fluid. Transmission fluid will damage power unit.
6. Screw the filler cap back into the reservoir and replace the front cover.

8.1.5 Replacing Hydraulic Fluid

The hydraulic fluid should be replaced annually.



Do not replace the hydraulic fluid while it is hot. Severe burns may result.

Use the following procedure to replace the hydraulic fluid:



Disconnect the main power.
See Section 2.2 Power Lockout Procedure.

1. Switch off the machine and disconnect main power.
2. Remove the front cover.
3. Remove the filler cap from the reservoir.
4. Use a transfer pump or syphoning tool to remove the used fluid from the reservoir. Transfer pumps can be found at most hardware stores.
5. Refill tank to the fill line.
6. Replace the front cover.
7. Reconnect power to the machine.

8.1.6 Hydraulic Fluid Compatibility List

Any of the following oils can be used as a substitute for S-1991-3 hydraulic fluid.

Product Name	Distributor
Rykon No. 100	AMOCO
Energol HLP 100	BP
AW 100	Chevron
Pacemaker XD 100	Citgo
Super Hydraulic 100	Conoco
Univis N100	Exxon
Security AW 100	Gulf
Knoil R&O AW 100	Kendall
Tellus 100	Shell

8.2 Electrical System (SCM only)

8.2.1 Fuse Check and Replacement

If the machine is plugged in but the hydraulics will not turn start, a fuse may be blown. The fuse should be checked first.

To check and replace fuses:



Disconnect the main power.

See Section 2.2 Power Lockout Procedure.

1. Switch off the machine and disconnect main power.
2. Push and turn the fuse holder counter-clockwise. The fuse holder is located beneath the power switch.
3. Check the fuse for damage and replace as necessary.
4. Push fuse holder into the receptacle and turn clockwise.

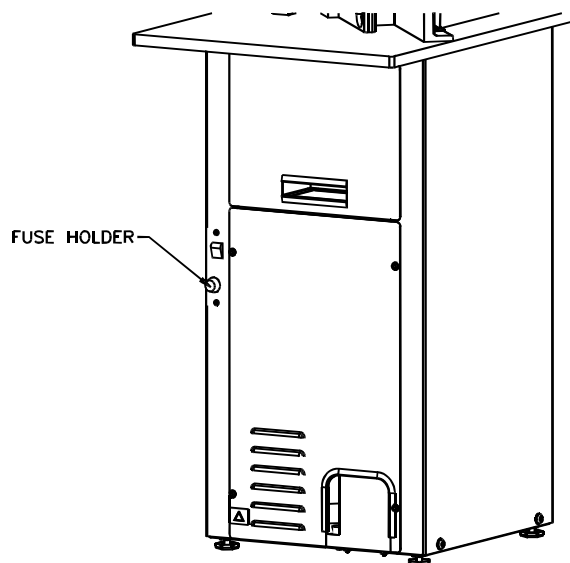
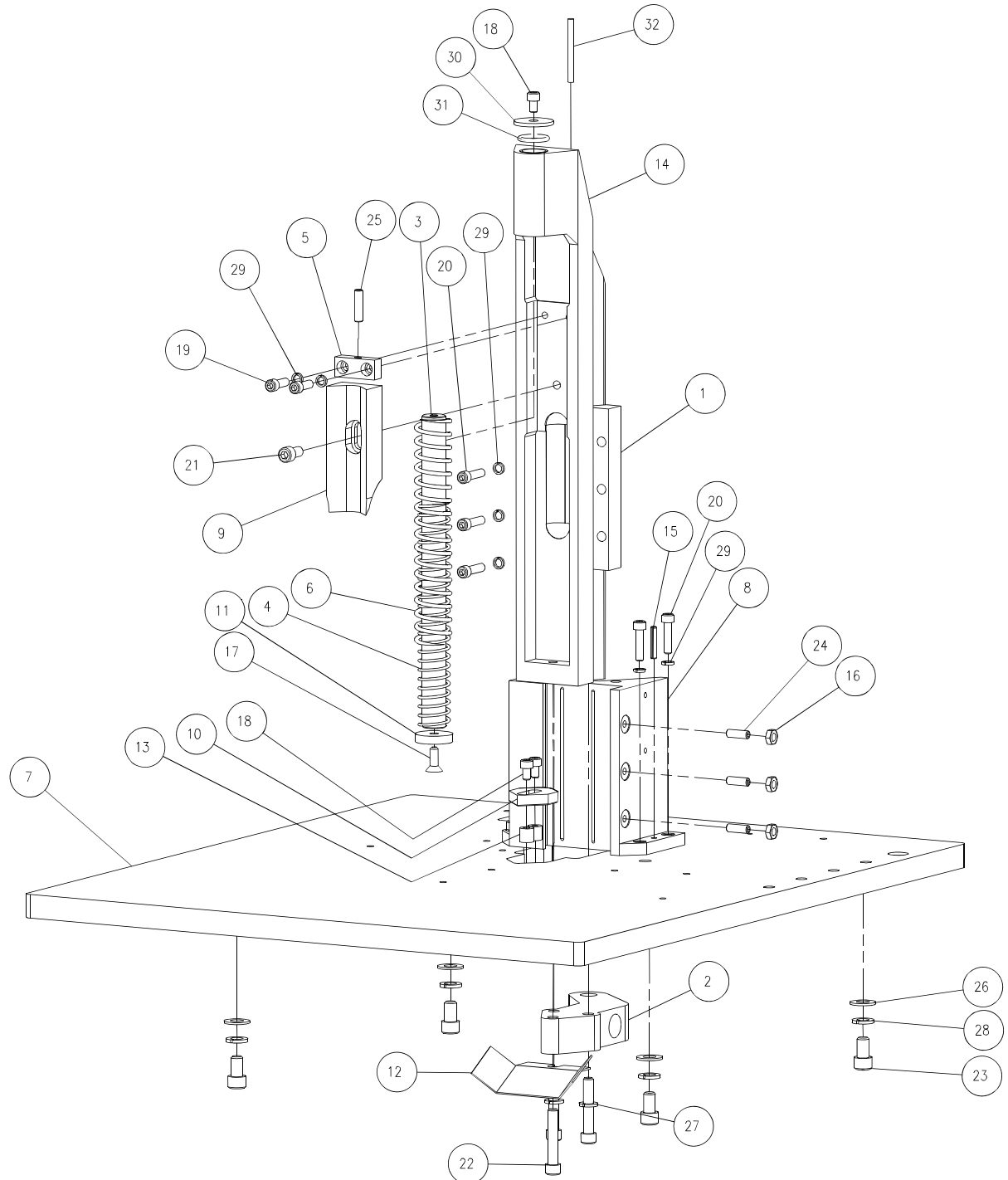


Figure 17 – Fuse Location

9.0 Appendix B—Parts List

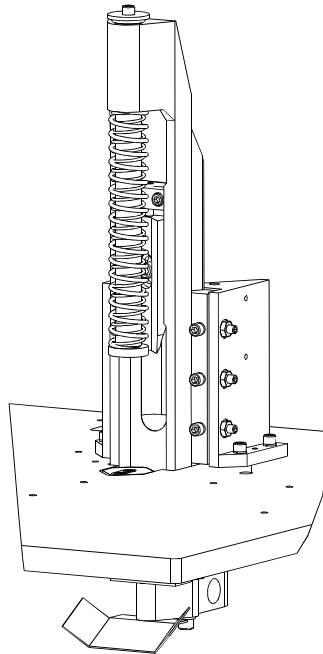
9.1 Mechanical

9.1.1 A-8300-2 Main Assembly- Knife Head

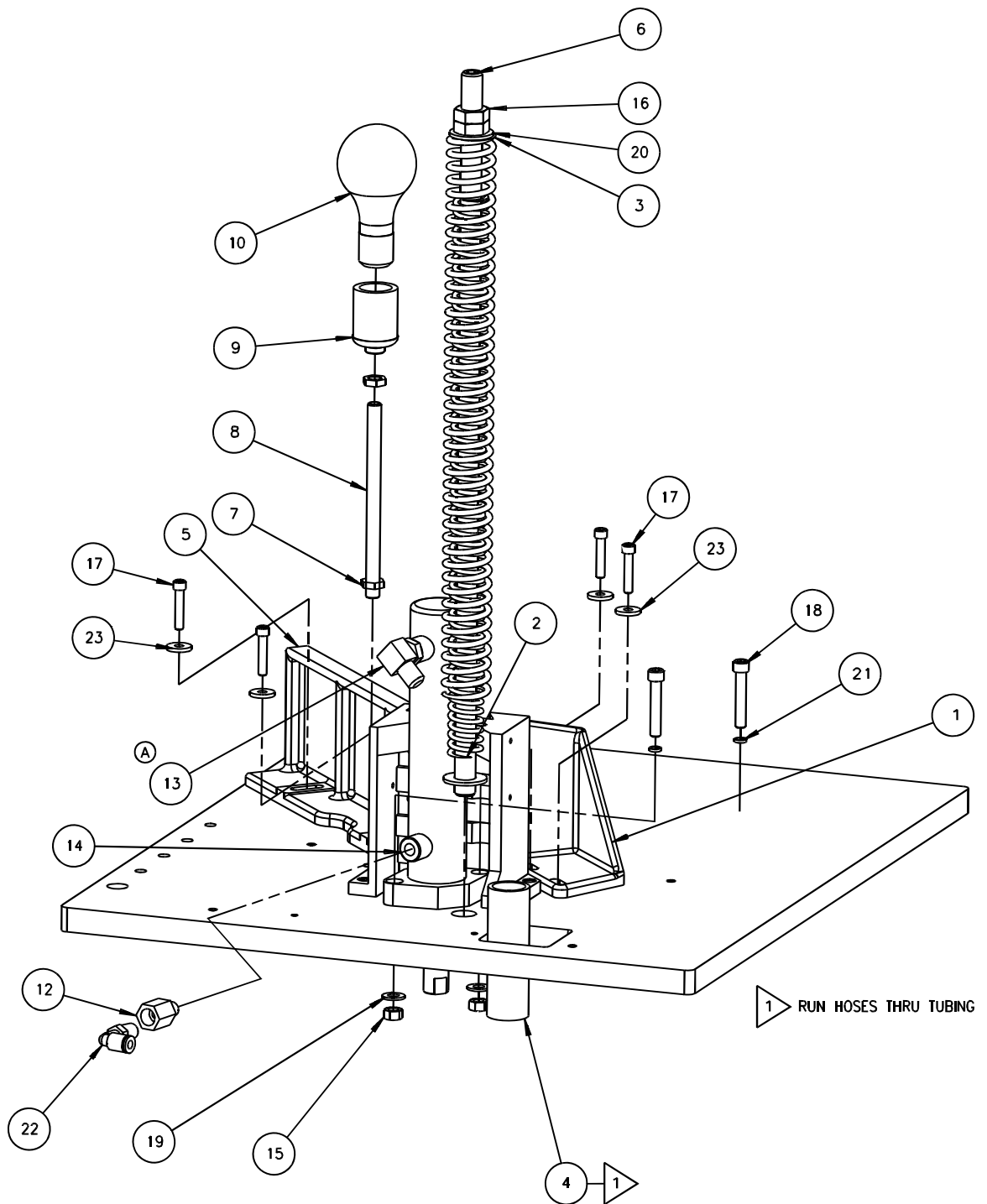


A-8300-2 Main Assembly- Knife Head Parts List

Item	Part No.	Description	Qty.
1	6707	GIB	1
2	6708	ARM- PUSH	1
3	6726	GUIDE- PRESSURE FOOT- DCM	1
4	6727	SPRING- CLAMP	1
5	6733	BLOCK- KNIFE BACKUP	1
6	83020	SPRING- OUTER	1
7	6705-2	SCM TABLE	1
8	6706-2	MOUNTING BRACKET- DOVETAIL	1
9	6721-6	KNIFE	1
10	6722-6	DIE SHOE	1
11	6724-1	FOOT- PRESSURE	1
12	6749-5	CHIP DEFLECTOR	1
13	83007-0407	THREADED INSERT	2
14	A-6736	BEARING AND KNIFE HOLDER ASM	1
15	H-21S-187-1000	ROLL PIN - 3/16 X 1	2
16	H-6424-4	NUT - 1/4-20 HEX JAM	3
17	H-6909-406	SCREW - 1/4-20 X 3/4" FLAT HEAD CAP	1
18	H-6918-403	SCREW - 1/4-20 X 3/8 SOCKET HEAD CAP	3
19	H-6918-406	SCREW - 1/4-20 X 3/4 SOCKET HEAD CAP	2
20	H-6910-410	SCREW - 1/4-20 X 1-1/4 BUTTON HEAD CAP	7
21	H-6918-505	SCREW - 5/16-18 X 5/8 SOCKET HEAD CAP	1
22	H-6918-514	SCREW - 5/16-18 X 1-3/4 SOCKET HEAD CAP	3
23	H-6918-605	SCREW - 3/8-16 X 5/8 SOCKET HEAD CAP	4
24	H-6938-412	SCREW - 1/4-20 X 3/4 CUP SOC SET	3
25	H-6938-416	SCREW - 1/4-20 X 1 CUP SOC SET	1
26	H-7321-6	WASHER - 3/8 SAE PLAIN	4
27	H-7327-10	WASHER - 5/16 MEDIUM LOCK	3
28	H-7327-12	WASHER - 3/8 MEDIUM LOCK	4
29	H-7329-4	WASHER - 1/4 HIGH COLLAR LOCK	9
30	S-982	WASHER	1
31	S-1810-16	O-RING	1
32	SU-46-104	3/16 FELT WICKING	1

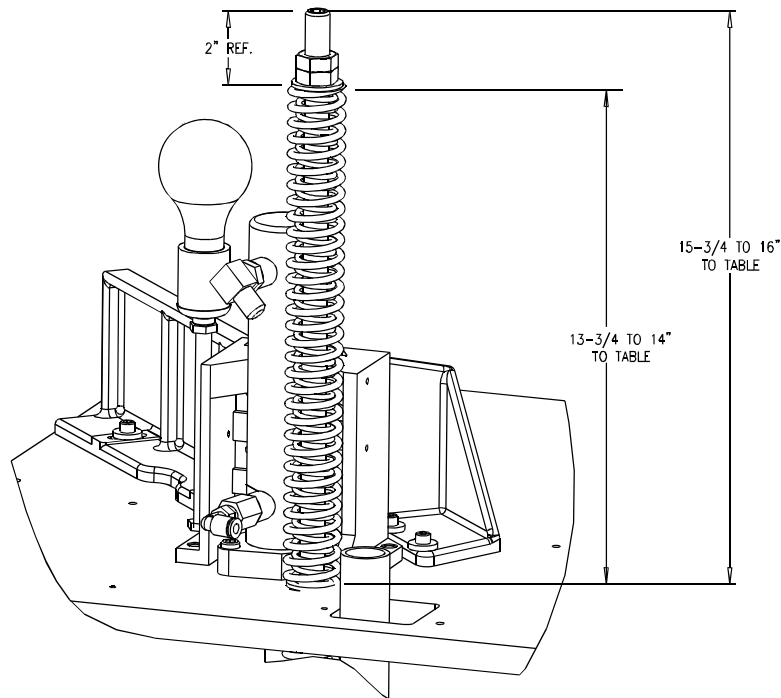


9.1.2 A-8300-2 Main Assembly- Knife Head (Rear)



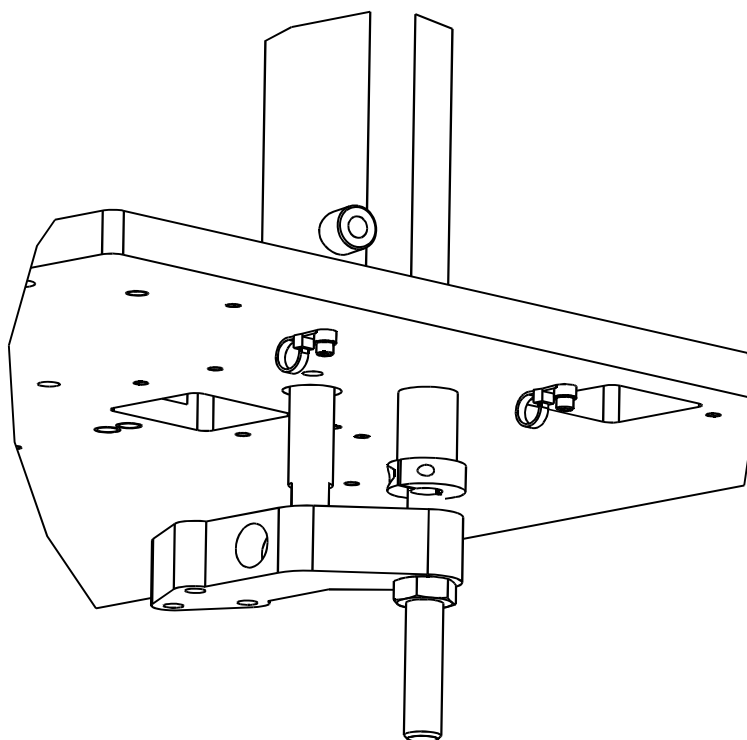
A-8300-2 Main Assembly- Knife Head (Rear) Parts List

Item	Part No.	Description	Qty.
1	6716	GAGE- LH- DCM	1
2	6730	SPRING- INNER	1
3	6731	SPRING- RETURN (OUTER)- DCM	1
4	6775	TUBING- DCM	1
5	8312	SIDE GUIDE- R.H.	1
6	A-6737	RETURN ROD ASM- DCM	1
7	E-439	NUT- PIPE NIPPLE- JAM	2
8	E-436-3	TUBE- LIGHT SOCKET-6"	1
9	E-887-1	BASE- LIGHT BULB	1
10	E-933-2	75 WATT LIGHT BULB- MED BASE	1
11	EE-3044	CABLE ASM- TABLE LIGHT	1
12	H-233	ADAPTER - PIPE TO O-RING	1
13	H-230-10	ELBOW- ORING TO TUBE	1
14	H-344-1	CYLINDER ASM- SCM	1
15	H-6417-5	NUT - 5/16-18 HEX	2
16	H-6424-10	NUT - 5/8-11 HEX JAM	2
17	H-6918-410	SCREW - 1/4-20 X 1-1/4 SOCKET HEAD CAP	4
18	H-6918-514	SCREW - 5/16-18 X 1-3/4 SOCKET HEAD CAP	2
19	H-7321-5	WASHER - 5/16 SAE PLAIN	2
20	H-7321-10	WASHER - 5/8 SAE PLAIN	2
21	H-7329-4	WASHER - 1/4 HIGH COLLAR LOCK	2
22	P-503-402	ELBOW-1/4 TUBE X 1/4 NPT	1
23	S-1815	WASHER	4

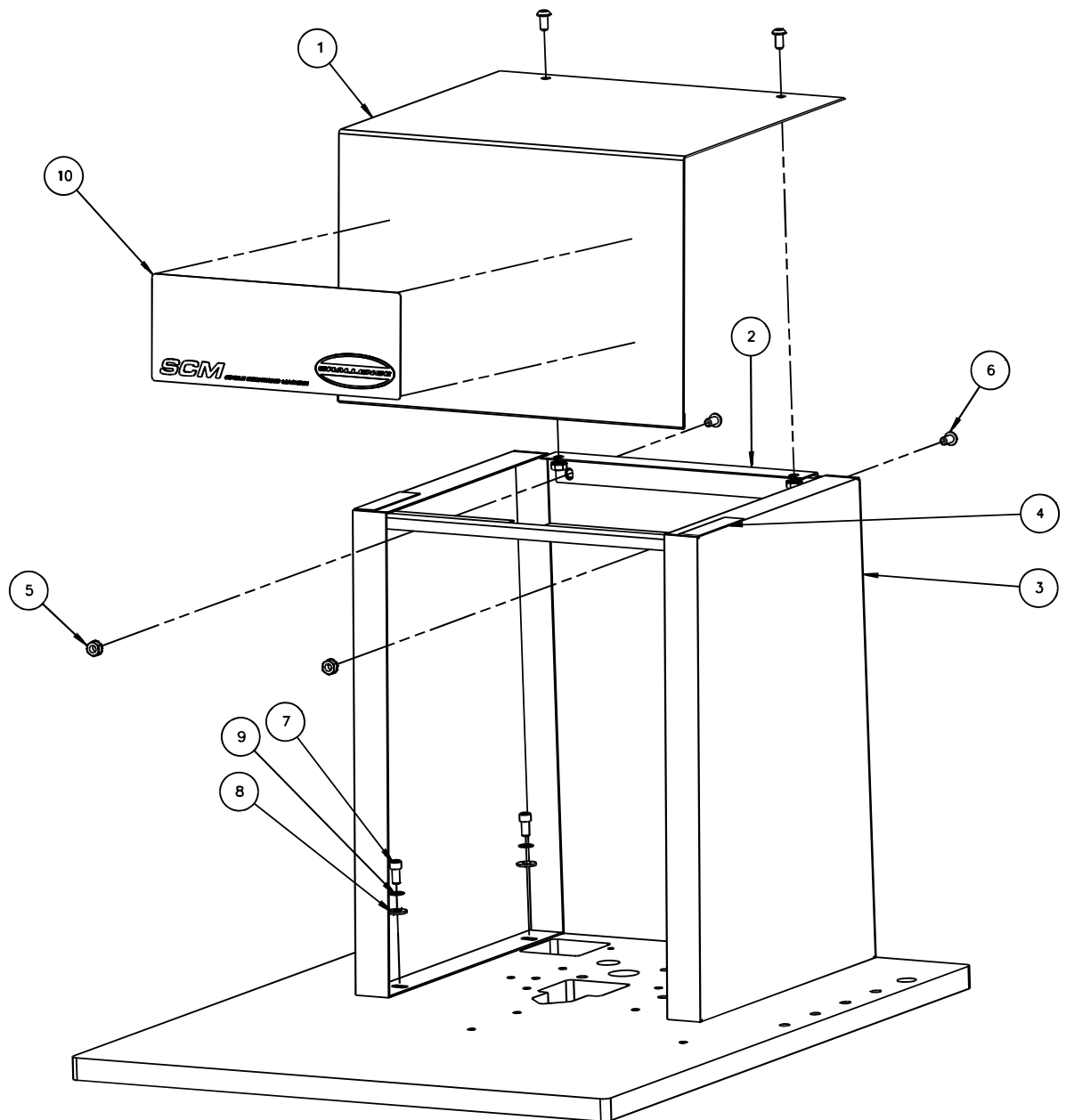


A-8300-2 Main Assembly- Underside Parts List

Item	Part No.	Description	Qty.
1	6743	SPACER- DCM	1
2	H-6424-10	NUT - 5/8-11 HEX JAM	1
3	H-6918-102404	SCREW - #10-24 X 1/2 SOCKET HEAD CAP	2
4	H-7324-#10	WASHER - #10 INT TOOTH	2
5	S-1694-2	TYRAP - #10	2

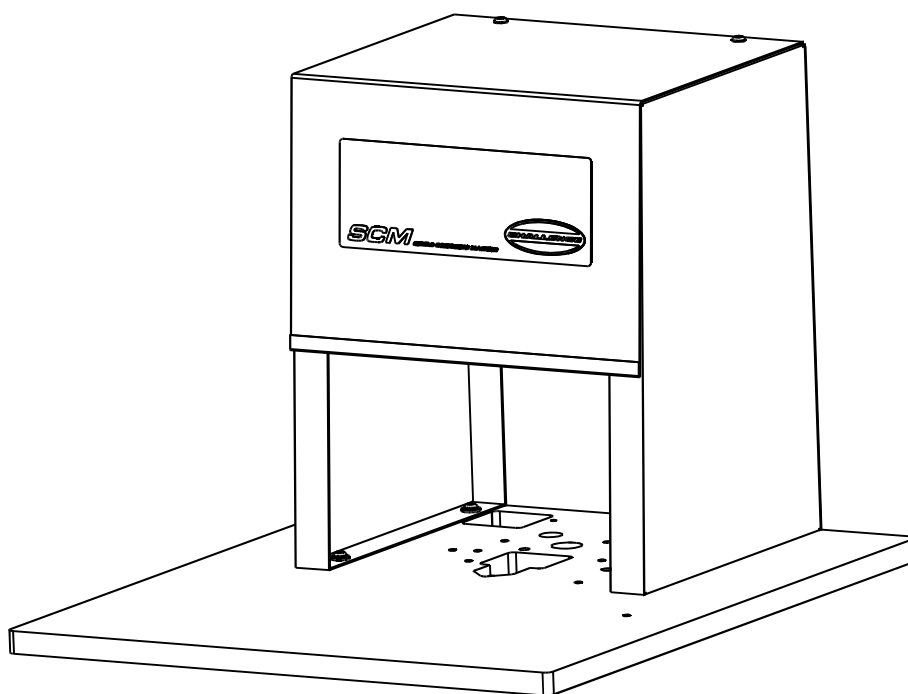


9.1.4 A-8300-2 Main Assembly- Hood

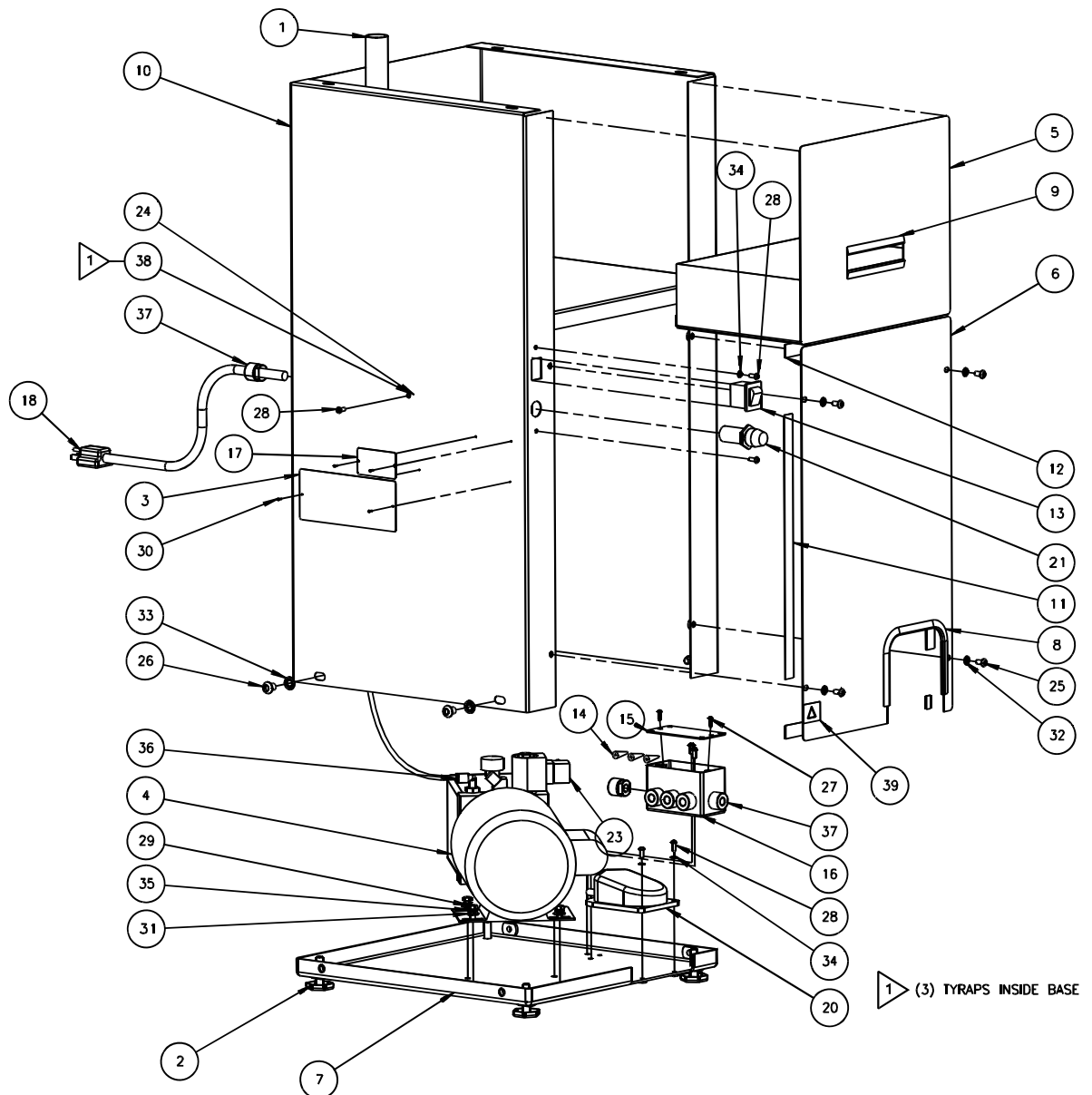


A-8300-2 Main Assembly- Hood Parts List

Item	Part No.	Description	Qty.
1	8306	TOP COVER- SCM	1
2	8307	HINGE- MPS CONSOLE	1
3	A-8302	COVER ASSEMBLY	1
4	A-7545	CORK STRIP	2
5	H-6423-4	NUT - 1/4-20 HEX KEP	4
6	H-6910-404	SCREW - 1/4-20 X 1/2 BUTTON HEAD CAP	4
7	H-6918-404	SCREW - 1/4-20 X 1/2 SOCKET HEAD CAP	4
8	H-7321-4	WASHER - 1/4 SAE PLAIN	4
9	H-7324-8	WASHER - 1/4 INT TOOTH	4
10	S-1781-119	LABEL- FRONT PANEL	1



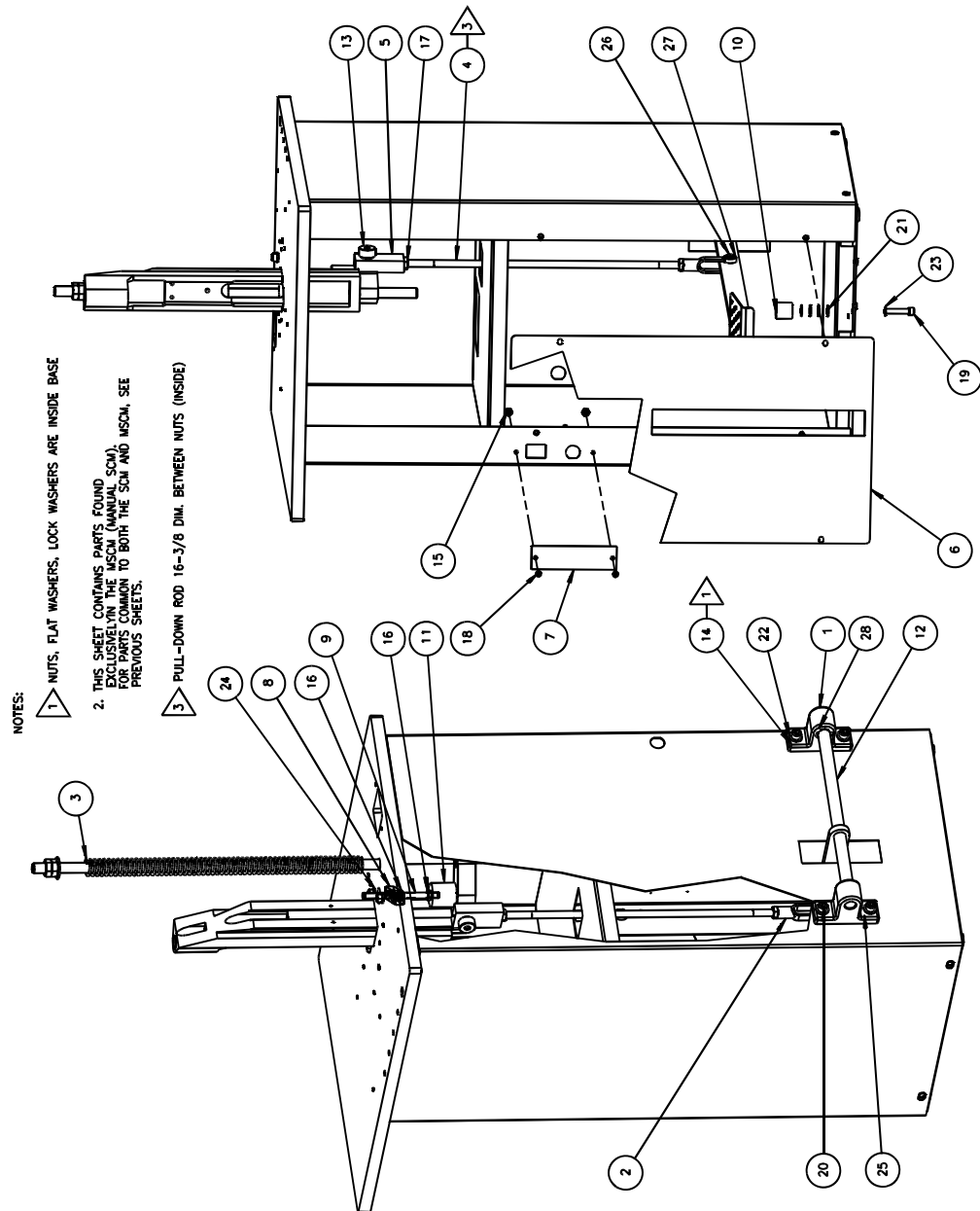
9.1.5 A-8300-2 Main Assembly- Base



A-8300-2 Main Assembly- Base Parts List

Item	Part No.	Description	Qty.
1	6775	TUBING- DCM	1
2	16543	LEVELER- BASE	4
3	41130	PLATE - SERIAL NUMBER	1
4	83001	HYD. POWER UNIT ASM.	1
5	83010	DRAWER ASSEMBLY	1
6	83015	FRONT COVER- POWER- SCM	1
7	4757-6	BASE- HYDAULIC POWER UNIT	1
8	7032-M	TRIM- 12-1/8" LONG	1
9	7032-M	TRIM- 5" LONG	2
10	A-4656-4	SCM STAND ASSEMBLY	1
11	A-7545	CORK STRIP- 15"	2
12	A-7545	CORK STRIP	2
13	E-1140-11	ROCKER SWITCH	1
14	E-1237-1	WIRE NUT	3
15	E-1369-3	COVER - JUNCTION BOX	1
16	E-1370-4	JUNCTION BOX	1
17	E-1503-M	LABEL- FUSE RATING	1
18	EE-3045	CABLE ASM- POWER CORD	1
19	EE-3046	CABLE ASM- SWITCH/FUSE HOLDER	1
20	EE-3047	FOOT SWITCH ASSEMBLY	1
21	EE-3048	FUSE HOLDER ASM	1
22	EE-3049	CABLE ASM- HYDRAULIC MOTOR	1
23	EE-2769-6	CABLE ASM- SOLENOID PLUG	1
24	H-6423-#10	NUT - #10-24 HEX KEP	3
25	H-6910-404	SCREW - 1/4-20 X 1/2 BUTTON HEAD CAP	4
26	H-6910-604	SCREW - 3/8-16 X 1/2 BUTTON HEAD CAP	4
27	H-6910-63204	SCREW - #6-32 X 1/2 BUTTON HEAD CAP	2
28	H-6910-102404	SCREW - #10-24 X 1/2 BUTTON HEAD CAP	7
29	H-6913-405	SCREW - 1/4-20 X 5/8 HEX HEAD CAP	4
30	H-6924-004	SCREW - #0 X 1/4 DRIVE SCREW	4
31	H-7321-4	WASHER - 1/4 SAE PLAIN	4
32	H-7324-8	WASHER - 1/4 INT TOOTH	4
33	H-7324-12	WASHER - 3/8 INT TOOTH	4
34	H-7324-#10	WASHER - #10 INT TOOTH	5
35	H-7327-8	WASHER - 1/4 MEDIUM LOCK	4
36	P-303	TUBING- 1/4" VINYL	1
37	S-1350-16	STRAIN RELIEF BUSHING	6
38	S-1694-2	TYRAP - #10	2
39	S-1781-50	LABEL - ELECTRIC SHOCK	1

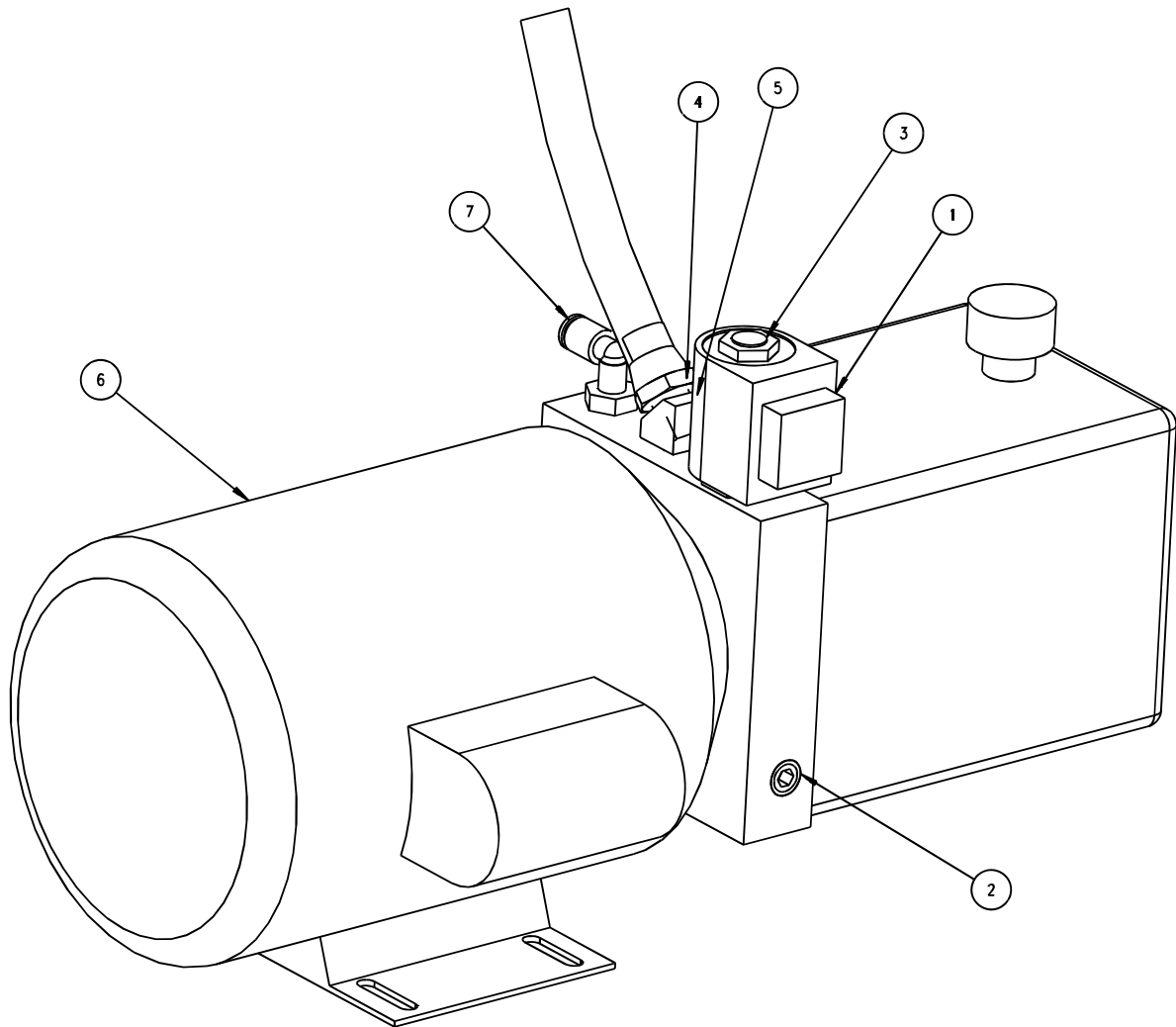
9.1.6 A-8300-2 Main Assembly- MSCM



A-8300-2 Main Assembly- MSCM Parts List

Item	Part No.	Description	Qty.
1	4668	TREADLE BRACKET	2
2	4669	CLEVIS	1
3	6730	SPRING- INNER	1
4	83002	ROD- PULL DOWN	1
5	83003	CLEVIS- MSCM	1
6	83004	FRONT COVER- MANUAL- MSCM	1
7	83009	COVER- SWITCH HOLE	1
8	83018	STOP ADJUSTMENT BLOCK	1
9	83019	THREADED ROD	1
10	40016-3	MOUNT- VIBRATION	1
11	40016-4	MOUNT- VIBRATION	1
12	A-4672	TREADLE ASSEMBLY	1
13	H-5254-1212	SCREW - 3/4 X 1-1/2 SHSS	1
14	H-6417-6	NUT - 3/8-16 HEX	4
15	H-6423-#10	NUT - #10-24 HEX KEP	2
16	H-6424-6	NUT - 3/8-16 HEX JAM	2
17	H-6428-7	NUT - 7/16-20 HEX JAM	2
18	H-6910-102403	SCREW - #10-24 X 3/8 BUTTON HEAD CAP	2
19	H-6918-512	SCREW - 5/16-18 X 1-1/2 SOCKET HEAD CAP	3
20	H-6918-612	SCREW - 3/8-16 X 1-1/2 SOCKET HEAD CAP	4
21	H-7321-5	WASHER - 5/16 SAE PLAIN	4
22	H-7321-6	WASHER - 3/8 SAE PLAIN	8
23	H-7324-10	WASHER - 5/16 INT TOOTH	1
24	H-7327-10	WASHER - 5/16 MEDIUM LOCK	2
25	H-7327-12	WASHER - 3/8 MEDIUM LOCK	4
26	S-1482	STRAIGHT PIN- DOUBLE END	1
27	S-1193-43	E-RING - 7/16"	2
28	S-1193-75	E-RING - 3/4"	2

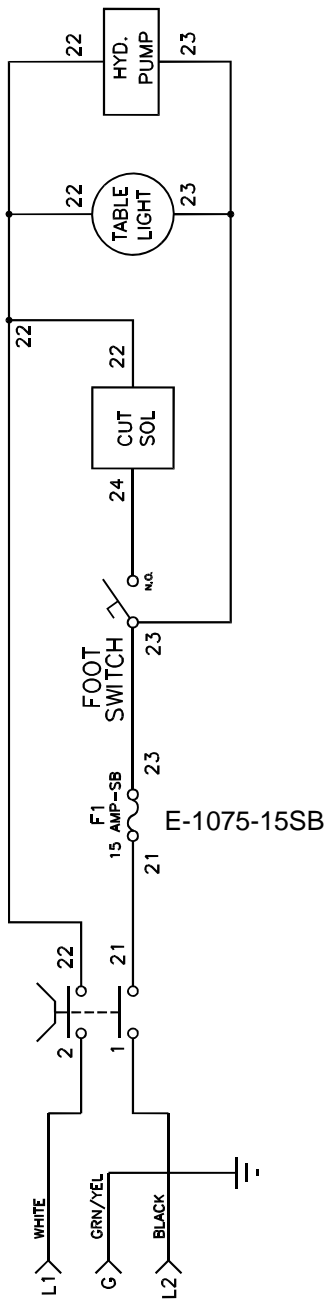
9.1.7 83001 Hydraulic Power Unit Assembly- SCM, Rev. B



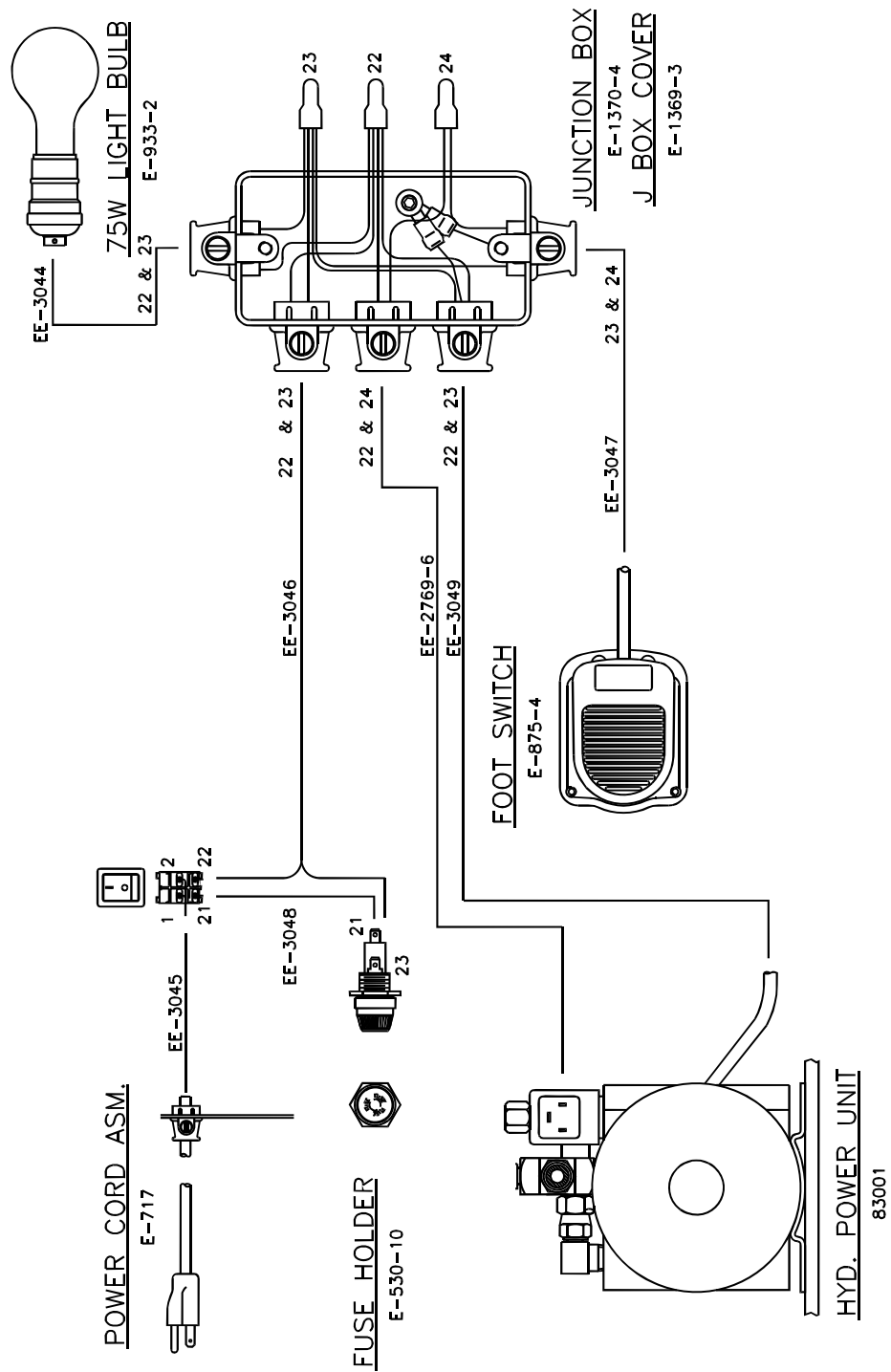
Item	Part No.	Description	Qty.
1	E-1069-13	120V COIL	1
2	H-270	PLUG- NPT	1
3	H-200-5	SOLENOID VALVE	1
4	H-242-10	HOSE ASSEMBLY- HYDRAULIC	1
5	H-254-5	ELBOW- NPT TO TUBE	1
6	H-372-5	HYDRAULIC POWER UNIT	1
7	P-503-403	ELBOW-1/4 TUBE X 3/8 NPT	1
8	H-532	PUMP COUPLING (NOT SHOWN)	REF.

9.2 Electrical

9.2.1 E-3042 Basic Machine Schematic



9.2.2 E-3042 Interconnection Diagram



10.0 Appendix C- Troubleshooting

The following list of potential problems and suggests possible causes.

Problem	Possible Cause
The machine will not cycle	Power cord is disconnected. Blown fuse Disconnected wires
Knife down motion is sluggish or erratic	Low hydraulic fluid level Hydraulic leak Insufficient voltage to machine Dovetail requires lubrication Dovetail gib improperly adjusted
The machine will not switch on	Power cord disconnected Fuse blown Defective power switch Loose wire connection.
The machine switches on, but the lamp is out	Bulb is burned out Loose wire connection
Knife return is sluggish or erratic	Knife return spring(s) worn out or improperly adjusted Dovetail requires lubrication Dovetail gib improperly adjusted
Cannot adjust knife to die	Improperly matched knife and die Knife not aligned in keyway
Poor corners	Stock improperly jogged Side or back gauges improperly adjusted Knife/die improperly adjusted Dull knife

