

CATALOG NO.

PL1096E

REVISED
6/94

ADJUSTING INSTRUCTIONS

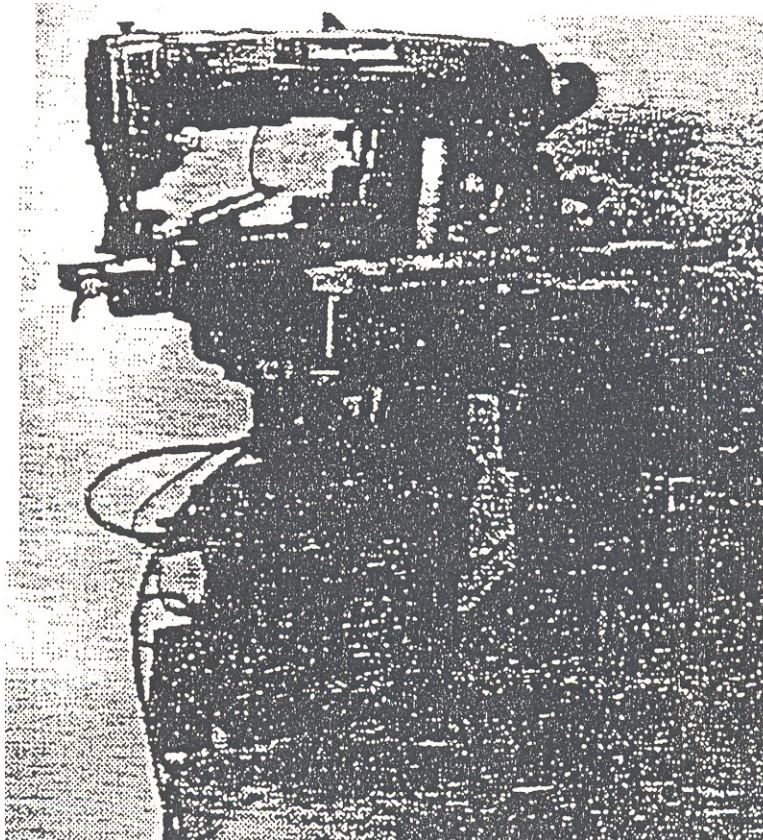
and illustrated parts list

STYLES

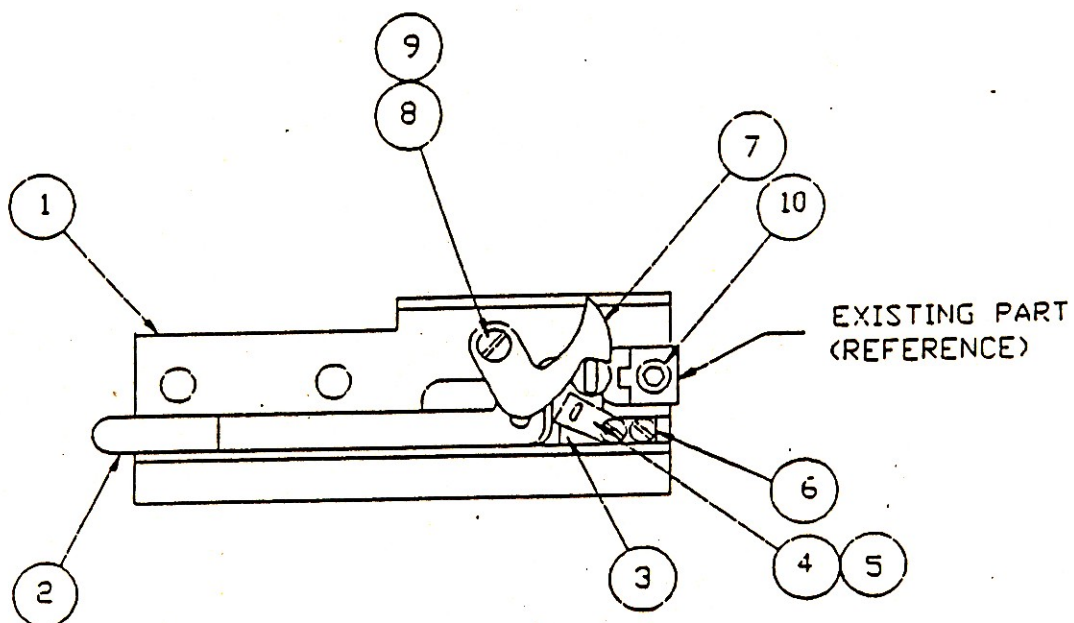
1/2

63900AMZ904
AND
63900AMLZ904

WS42800LA4
moderna



Union Special



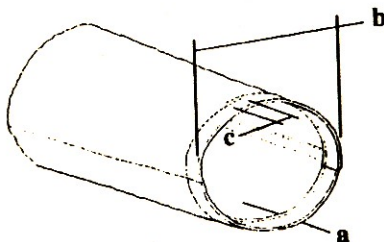
10	1	5-40 X 3/8" S.H.C. SCREW
9	1	AS9-16 BUSHING
8	1	AS9-15 4-40 SCREW
7	1	AS9-17 BLADE ASS'Y
6	2	1787L 2-56 X 3/16 SCREW
5	1	AS9-14 SPACER
4	1	AS9-13 SPRING
3	1	AS9-12 STATIONARY BLADE
2	1	AS9-10 ARM ASS'Y
1	1	AS9-9 THROAT PLATE
DET.	AM'T	DESCRIPTION
- MATERIAL -		

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GENERAL INFORMATION

Application Range:



	-a. width of hem $\frac{3}{8}$" to $\frac{1}{2}$" (9.5 to 12.7 mm) standard setting: $\frac{3}{8}$"
	-b. minimum circumference 12 $\frac{1}{2}$" (32 cm)
	-c. overlap operator controlled
Productivity:	-Production per hour 200 units
	-Production per 8 hours: 1600-1700 pairs of pants
Features/ Benefits:	• automatic thread trimming • uses "Quick-Digital Synchro" motor • synchronizer controlled • pneumatic knee-switch folder opener, tension release, trimmer and presser foot lift -increased production -ergonomically efficient: reduces operator's hand motion -quiet operation -eliminates clutch and brake maintenance -programmable functions -no flags or potentiometers to adjust -easy loading and unloading

Application:	-Hemming & closing of denim jeans, skirts or bags made of heavy material.	
Operation:	-An operator picks up a garment and pre-folds the hem. The foot treadle is heeled back to lift the presser foot and open the folder. The pre-folded hem is laid over the sewing head cylinder and into the folder; releasing the foot treadle lowers the presser foot and closes the folder. The operator controls the sewing speed by toeing the foot treadle forward. -When the beginning of the hem approaches, the operator opens the folder with a pneumatic knee switch to complete overlapping of the stitch. The foot treadle is heeled to automatically activate the trim cycle and raise the presser foot to unload the garment.	
Mechanical:	-Stitch type	-Hem: 301 EFb-1 (inverted)
	-Needle type	180 GYS 140/054
	-Sewing speed	-5200 R.P.M.
	-Stitch range	-6 to 12 stitches per inch (4.2-2.1 mm) standard setting: 6 stitches per inch (4.2 mm)
Electrical:	WS42800LA-1: 1 Ph., 50 / 60 Hz, 100 / 110 / 120 V +/-10% WS42800LA-2: 1 Ph., 50 / 60 Hz, 190 / 208 / 220 / 240 V +/-10%	
Pneumatic:	-Operating pressure	-60 P.S.I. (4 bar) minimum 75 P.S.I. (5 bar) required
Physical Information: (Unit is shipped in two parts)	-Shipping crate size	-Sewing head: 25"L, 13"W, 17"H (64 x 33 x 43 cm) Workstation: 39"L, 20"W, 45"H (99 x 51 x 114 cm)
	-Shipping weight	-Sewing Head: 77 lbs. (35 Kg.) -Workstation: 221 lbs. (100 Kg.)

INSTALLATION

The sewing head and pedestal workstation are shipped each in its own carton. Always visually inspect the outside of the cartons before opening to check for and report any signs of damage.

Refer to the information on the opposite page for electrical and pneumatic requirements.



Note: The pedestal workstation uses Single Phase Voltage. The factory main power source must match the voltage indicated for the workstation style to be installed. One phase of a three phase power source can be used; have a qualified electrician complete the main power connection.

1. Remove the strapping from the pedestal workstation carton. Pull out all the nails holding the carton to the pallet to completely remove it. Make sure the sewing head carton is right side up, then open its top.
2. Visually inspect the inside of both cartons to check and report any damage to the sewing head or workstation.
3. Remove all bolts securing the workstation to its pallet. Carefully position the pedestal workstation onto the floor.
4. Assemble the thread stand and pedestal as shown on page 26 .



Note: Avoid damage to the trimmer mechanism; do not grab or lift the sewing head from anywhere near the hook area.

5. Make sure the sewing head isolators are in position then carefully place the sewing head onto the pedestal workstation.

INSTALLATION



Note: The sewing head has been drained of oil before shipping. Fill using UNION SPECIAL Specification No. 175 or equivalent oil before operating.

6. Remove the sewing head cover and directly oil the bearings of the needle bar link, the take-up and its lever and needle bar. Replace the cover and remove the black plug screw on the top of the sewing head to fill it with oil.

Check the oil level at its gauge: oil is at maximum level when the needle is in the yellow band marked "full". Do not over-fill; if necessary, use the oil plug on the bottom pan to drain the sewing head.

7. Install the drive belt and adjust the motor for proper belt tension. Attach the belt-guard making sure the belt does not rub against the sides. Adjust the belt catcher on the guard to keep the drive belt in the groove of the pulley.

8. Mount the synchronizer onto the sewing head handwheel. Align the mark* on the synchronizer with the mark on the handwheel; then tighten the two set screws.



Note: A mark has been placed on both the sewing head and synchronizer during factory adjustment. Its important to align these marks during installation. This eliminates the need to program the motor.

*No mark will be found if the synchronizer is new; refer to the programming instructions on page 13.

Have a qualified electrician complete the following electrical connections:

9. Remove the cover from the switch box and route a three wire power cable thru the strain relief and into the box.

Use wire size AWG 14 unless otherwise specified for this machine by the electrical code of the local authority.



Note: Disconnect the power cable from the factory power source when changing or connecting lines inside the switch box!

10. On the inside of the box are three terminals. The top terminal is the green-wire equipment ground. The lower two are for the main power. **With the power cable disconnected**, connect the three wires using the compression screw terminals.

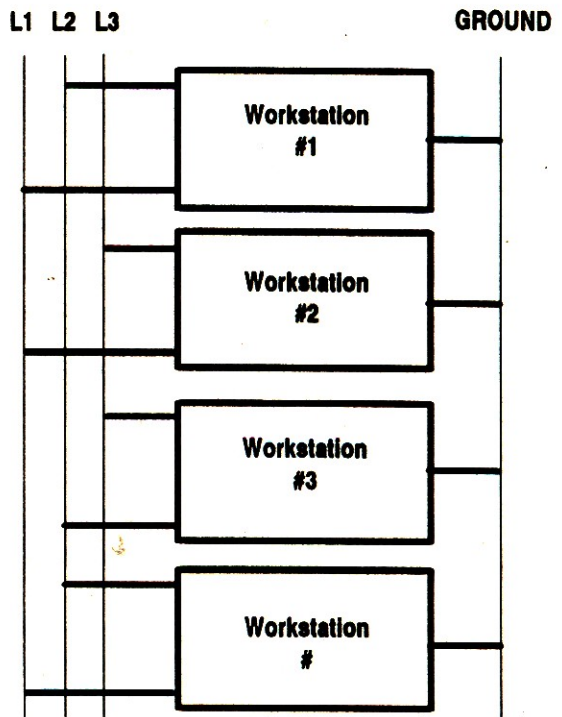


11. If many workstations are used in a factory with a three-phase power supply, it is recommended that each machine be connected to alternate phases. The idea is that the total load is balanced between the three phases.

The drive motor uses single phase power supply. Switching between different phases on a three phase factory power supply will not affect the rotation of the motor.

For best results, identify each machine with its phase connection so that if machines are moved about, a reasonable phase balance may be maintained.

Press the red button on the switch box to the down position then connect the power cable to the factory power supply.



INSTALLATION

12. The input to the transformer in the switch box should be matched to the factory power source. Use a volt-meter to carefully measure the factory power supplied to the switch box.



Note: Disconnect the main power line from the factory power source when changing or connecting lines inside the switch box!

If necessary, **disconnect the main power line** then set the input line on the transformer tap to match the factory power source. The choice of taps are 100 / 110 / 120 V on the 110 Volt workstation and 190 / 208 / 220 / 240 V on the 220 Volt workstation.

The idea is to make sure the transformer power supply to the motor is not too high or too low. The output should measure 24 V.A.C.

Replace the cover on the switch box and review the connections of all the cables:

13. The cable extending from the switch box connects on the right side of the motor control box.

14. The synchronizer cable connects to its matching plug on the upper right side of the motor control panel.

15. The treadle speed control connects to its matching plug on the lower left side of the motor control panel.

16. Two cables extending from the motor connect to left side of the motor control box.

17. A black 10-pin connector extending from the pneumatic assembly connects to the front of the motor control panel.

This completes the installation.

SAFETY AND OPERATING HINTS

Please review all of the safety and operating hints below before using the machine:



Note: Look for this symbol for safety information and important hints.

1. To stop the machine in an emergency, use the red, lighted button on the power switch.

2. This workstation uses a very quiet drive motor. The machine is ready for use if the red, lighted button on the power switch is on.

3. Always turn off the main power when changing needles, threading, servicing, or leaving the machine unattended. Make sure the red button is in the down position and its light is off.

To sew:

4. Pick up a garment and pre-fold the hem. Heel back the foot treadle to lift the presser foot and open the folder.

5. Lay the pre-folded hem over the sewing head cylinder and into the folder. Release the foot treadle to lower the presser foot and close the folder.

6. Toe forward on the foot treadle to begin sewing and control the sewing speed.

7. When the beginning of the hem approaches, open the folder with the pneumatic knee switch to complete overlapping of the stitch.

8. Heeling the foot treadle will automatically activate the trim cycle and raise the presser foot to unload the garment.

CHANGING THE NEEDLES

The needles should be changed whenever there is a persistent problem with sewing before attempting to adjust the machine. If a needle was broken, always check the cloth contact surfaces and advise the mechanic if there are any nicks or scratches.



Note: For safety purposes turn off the power switch. Make sure the red button is in the down position and its light is off.

1. Needle type 180 GYS size 140/054 is recommended for this machine.

2. If necessary, rotate the handwheel to position the needle bar to its up position.

3. Use a small screwdriver to loosen the needle clamp screw about a $\frac{1}{4}$ turn.

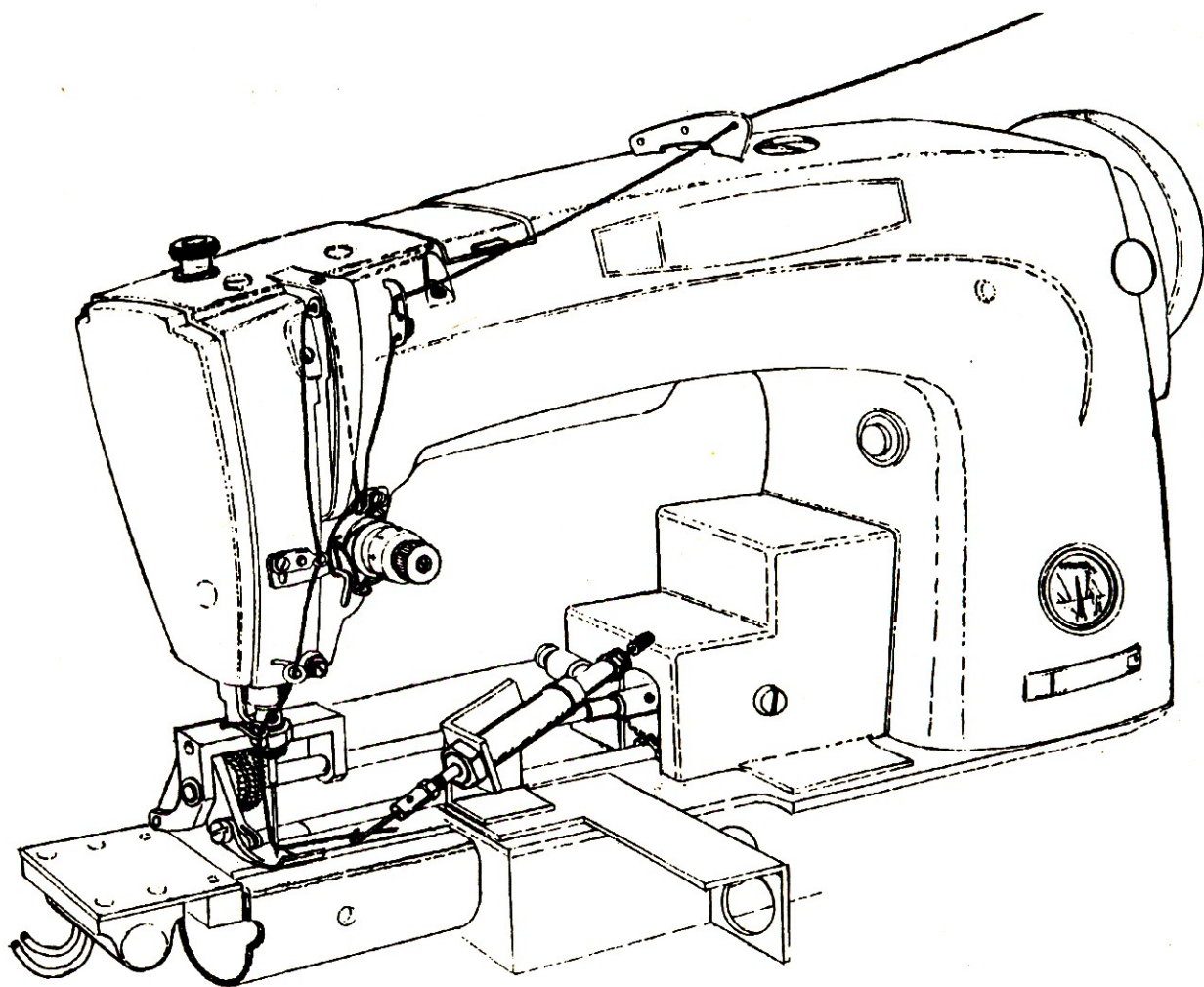
4. Remove and discard the old needle. Insert a new needle into the needle bar as far as it will go.

5. Position the needle with the spot (sometimes called scarf) toward the right, facing the handwheel. Tighten the set screw tightly.

THREADING DIAGRAM



Note: Turn off the power switch when threading the sewing head, or changing the needles.



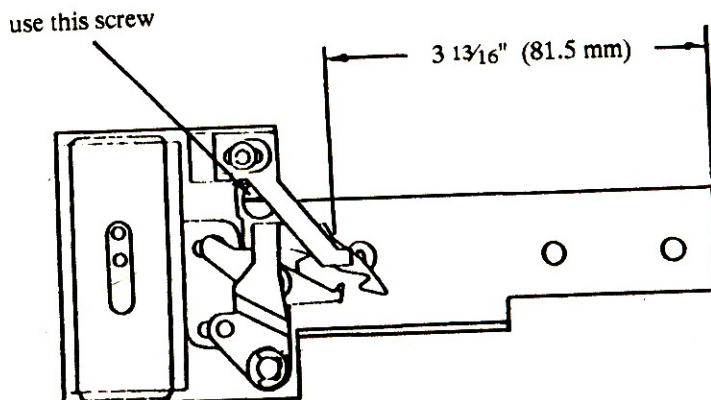
TRIMMER ADJUSTMENTS

The sewing head is factory adjusted and sewn-off with the trimmer mechanism installed. To avoid trimming problems, be sure that the synchronizer is positioned properly during installation as outlined on page 4. Firing of the trimmer is controlled by the motor, see page 13 for information on programming the Drive Motor.

Always check the stitch formation including the thread tensions before attempting to remove or adjust the trimmer mechanism. Also refer to the Pneumatic Schematic on the next page for flow controls that affect firing of the trimming cycle.

1. With the trimmer mechanism removed from the machine, position the point of the upper stationary knife as shown.

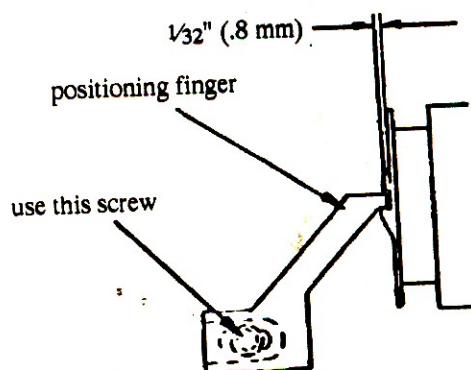
Its point should measure $3 \frac{13}{16}$ " (81.5 mm) from the back end of the mechanism. Tighten the knife screw securely.



2. Check that the needle and hook is properly set before installing the trimmer mechanism. Be sure the positioning notch on the hook basket is facing up as the trimmer mechanism is installed.

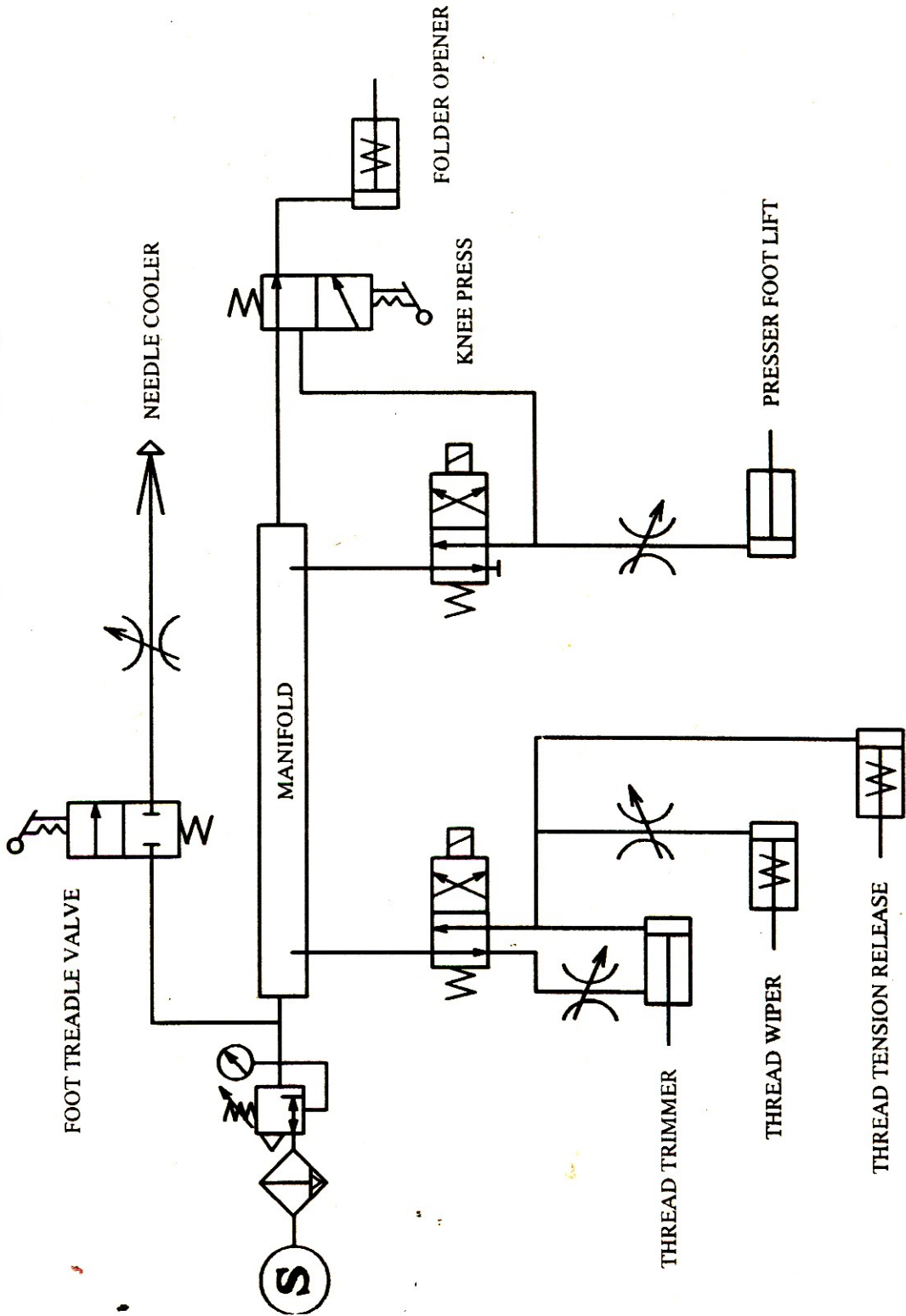
3. Center the needle in the throatplate hole then tighten the throatplate screws securely.

Loosen the positioning finger screw and slide the finger forward or backward until a dimension of $\frac{1}{32}$ " (.8 mm) is obtained. Tighten the positioning finger screw securely.

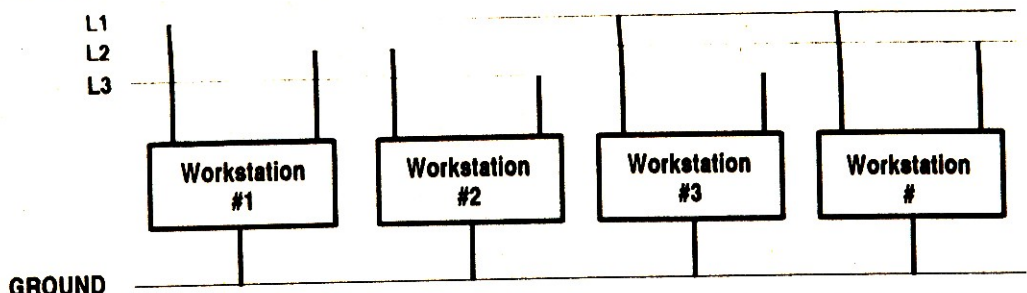


PNEUMATIC SCHEMATIC

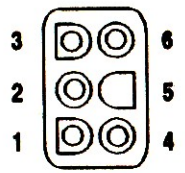
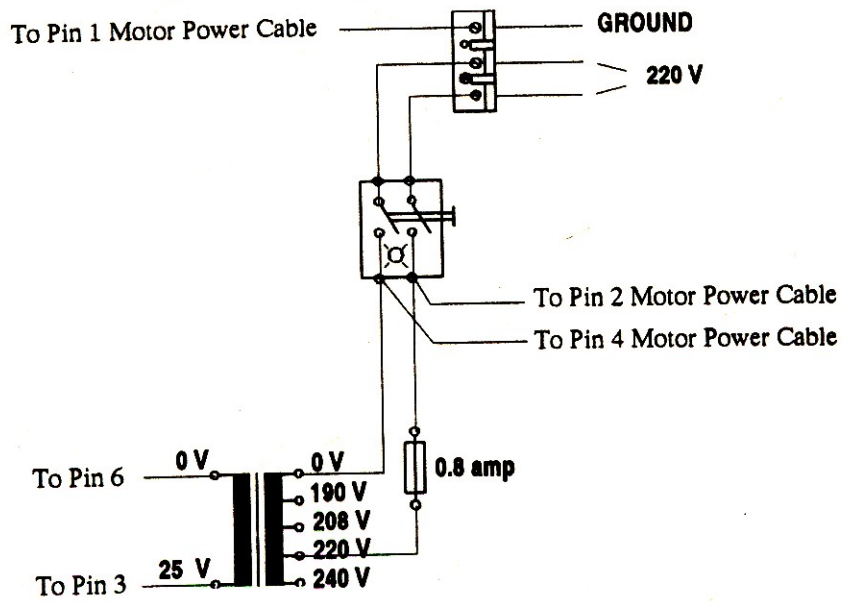
SCHEMATIC SHOWN WITH
POWER AND AIR ON



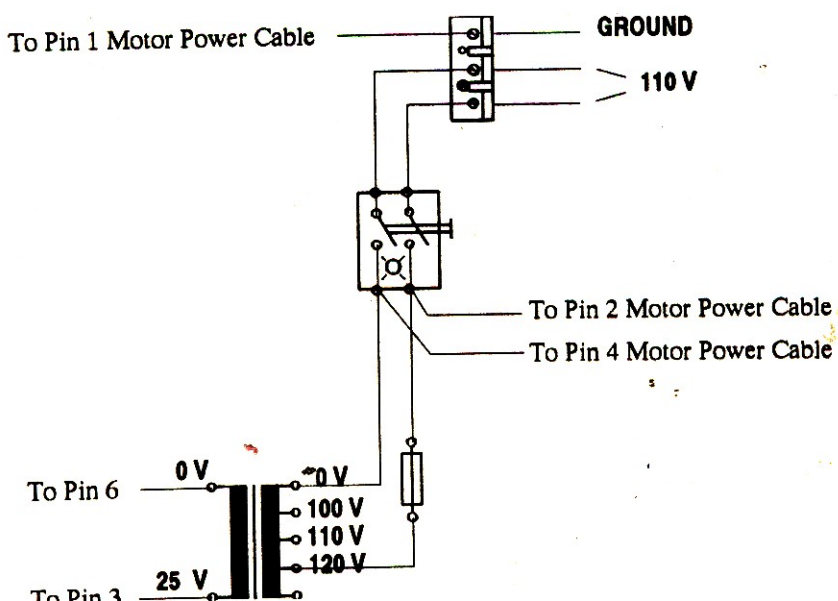
ELECTRICAL SCHEMATIC



Connect multiple machines to alternate phases on three-phase power supplies.



Motor Power Cable Front View



DRIVE MOTOR

The drive motor is a "Quick" Digital Synchro motor. No clutch or brake maintenance is required but the operator must maintain the motor free of lint and threads.

The motor is factory adjusted and programmed to standard settings. No programming is required for standard applications unless the synchronizer or motor control box is replaced. Be sure that the synchronizer is positioned properly during installation as outlined on page 4.

Programming the positioning, trimmer, and sewing speed is completed with indicator lights and a push-button inside the motor control box; there are no potentiometers or synchronizer flags to adjust. The Reference Position must be programmed whenever the synchronizer is replaced. Program both the Reference Position and Motor Speed if the motor control box is replaced.



Note: Avoid damage to the hook and trimmer. If the synchronizer or motor control panel is replaced, do not attempt to sew or trim without first programming the Reference Position.

There are no flags to adjust on the synchronizer; do not attempt to remove its cover. Removal of the synchronizer cover will void its warranty.

PROGRAMMING THE REFERENCE POSITION

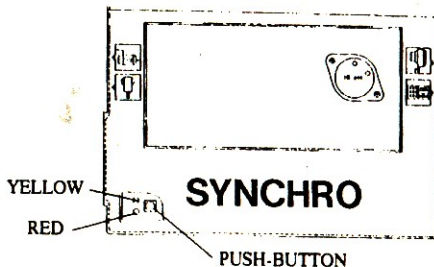
This position is the point where the needle is $\frac{3}{8}$ " (9.5 mm) above the throat plate on the down-stroke with the handwheel turning in the operating direction:

1. Toe the foot treadle forward to check the rotation of the motor (**do not heel the treadle**). The motor is factory set to run counter-clockwise.

Changing the rotation requires using an optional "Quick" Operator Control Panel (Part number RM6015). If the rotation is incorrect, contact your local service representative.

2. Turn off the main power and remove the motor control box cover by loosening the four corner screws. Carefully let the cover hang by the connected wires.

3. Locate the push-button, and the red and yellow indicator lights in the motor control box. These are clustered together in the lower-left corner of the motor control circuit board.



PROGRAMMING THE REFERENCE POSITION

4. Turn on the main power and press the push-button until both the yellow and red indicators lights are on. Look carefully; the yellow indicator is not bright.

5. Push the foot treadle forward slightly until the motor runs, then release the treadle. The machine will stop in a random position.

6. Manually rotate the handwheel counter-clockwise to position the needle in the reference position so that it is $\frac{3}{8}$ " (9.5 mm) above the throat plate on the down-stroke.

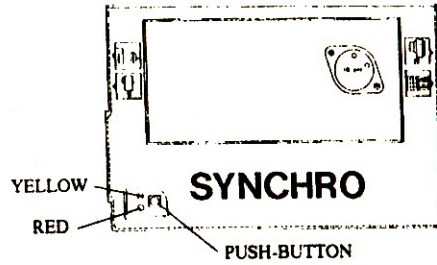
7. Again, push the treadle forward slightly until the motor runs and then release it. The machine should stop with the needle in the same reference position that was set in step 6.

If the machine does not stop with the needle $\frac{3}{8}$ " (9.5 mm) above the throat plate on the down-stroke, repeat steps 6 and 7.

8. Turn off the main power. Toe the foot treadle completely forward and press the push-button at the same time. While keeping the treadle and button pressed, turn on the main power.

The indicator lights will flash; wait until the indicator lights go off before releasing the foot treadle and push-button. When both indicator lights come back on, turn the main power off.

Once step 8 is completed, the motor automatically sets the needle-up, needle-down, and trimmer firing functions, based on the Reference Position. Continue with Setting the Sewing Speed on page 18.



CHECKING THE NEEDLE -DOWN POSITION

The standard needle-down position is set with the needle at the dead bottom of its stroke. Use the following procedure to check this or to set it to a non-standard position:

1. With the power off, locate the programming push-button inside the motor control box. Turn the power on and press the push-button until only the red indicator light is on. Look carefully; the yellow indicator is not bright and should be off.

2. Push the treadle forward just until the motor runs then release and note where the machine stops.

3. If the machine stops with the needle at the dead bottom of its stroke, this adjustment is correct. Continue with step 6.

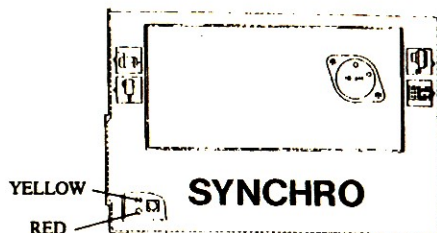
If the needle-down position is not correct or requires a non-standard setting continue with step 4:

4. Manually rotate the handwheel counter-clockwise to position the needle at the dead bottom of its stroke (or non-standard setting).

5. Push the treadle forward slightly until the motor runs and then release the treadle. The machine should stop with the needle at the needle-down position as was manually set in step 4.

If the machine does not stop with the needle at the proper needle-down position, repeat steps 4 and 5.

6. Turn off the main power to replace the motor control box cover. Or continue with checking the Needle-down Position on the next page.



With the power off, carefully remove the cover. Leave all plugs connected.

SETTING THE NEEDLE -UP POSITION

The standard needle-up position is set with the needle take-up lever $\frac{1}{8}$ " (3 mm) short of the dead top of its stroke (on its up-stroke) with the handwheel turning in the operating direction. Use the following procedure to check this or to set it to a non-standard position:

1. With the power off, locate the programming push-button inside the motor control box. Turn the power on and press the push-button until only the yellow indicator light is on. Look carefully; the yellow indicator is not bright.

2. Push the treadle forward just until the motor runs then release and note where the machine stops.

3. If the machine stops with the needle take-up lever $\frac{1}{8}$ " (3 mm) short of the dead top of its stroke (on its up-stroke), this adjustment is correct. Continue with step 6.

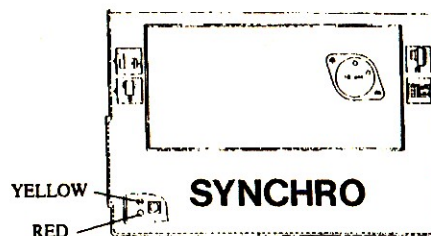
If the needle-up position is not correct or requires a non-standard setting, continue with step 4:

4. Manually rotate the handwheel counter-clockwise to position the needle take-up lever $\frac{1}{8}$ " (3 mm) short of the dead top of its stroke (or non-standard setting).

5. Push the treadle forward slightly until the motor runs and then release the treadle. The machine should stop with the needle at the needle-down position as was manually set in step 4.

If the machine does not stop with the needle at the proper needle-down position, repeat steps 4 and 5.

6. Turn off the main power to replace the motor control box cover. Or continue with checking the Trimmer Firing Position on the next page.



With the power off, carefully remove the cover. Leave all plugs connected.

SETTING THE TRIMMER FIRING POSITION

The standard trimmer firing position is set with the hook point at the 6:30 position. The idea is to avoid damaging the hook point as the trimmer fires in its path when cutting the threads. Use the following procedure to check this or to set it to a non-standard position:

1. With the power off, locate the programming push-button inside the motor control box. Turn the power on and press the push-button until only the yellow indicator light is flashing. Look carefully; the yellow indicator is not bright.

2. Heel the foot treadle back until the motor runs, then release and note where the machine stops.

3. If the machine stops with the hook point at the 6:30 position, this adjustment is correct. Continue with step 6.

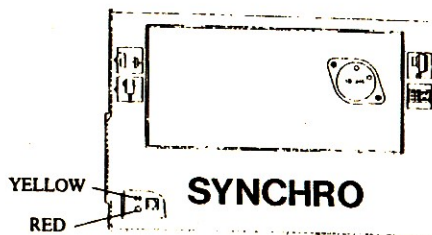
If the trimmer firing position is not correct or requires a non-standard setting, continue with step 4:

4. Manually rotate the handwheel counter-clockwise to position the hook point at the 6:30 position (or non-standard setting).

5. Heel the treadle back until the motor runs and then release the treadle. The machine should stop with the hook point at the trimmer firing position as was manually set in step 4.

If the machine does not stop with the hook point at the proper trimmer firing position, repeat steps 4 and 5.

6. Turn off the main power to replace the motor control box cover. Or continue with Setting The Sewing Speed on the next page.



With the power off, carefully remove the cover. Leave all plugs connected.

PROGRAMMING THE SEWING SPEED

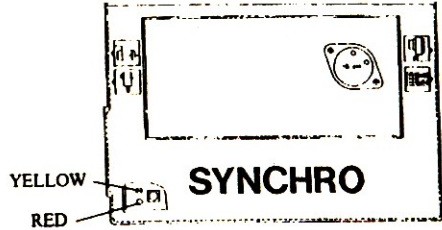
The maximum recommended sewing speed is 5200 RPM:

1. If necessary, pull back the needle thread until the needle take-up eyelet is unthreaded.

2. With the power off, locate the programming push-button inside the motor control box.

Turn the power on and push the foot treadle fully forward to run the motor. With the foot treadle held down, press and hold the programming push-button. The machine speed will reduce to 500 RPM.

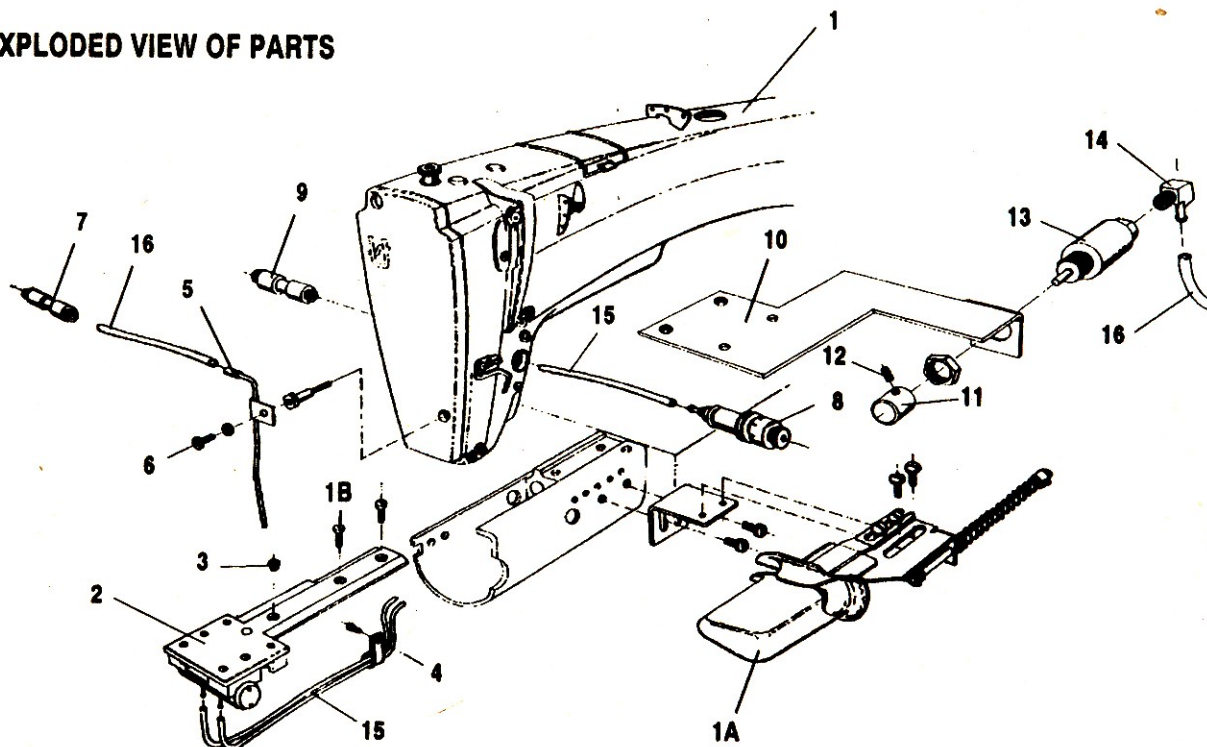
Keep both the treadle and push-button pressed. The motor will increase in 100 RPM increments. When the desired speed is obtained, release the push-button and foot treadle.



With the power off, carefully remove the cover. Leave all plugs connected.

3. Turn off the main power to replace the motor control box cover.

EXPLODED VIEW OF PARTS

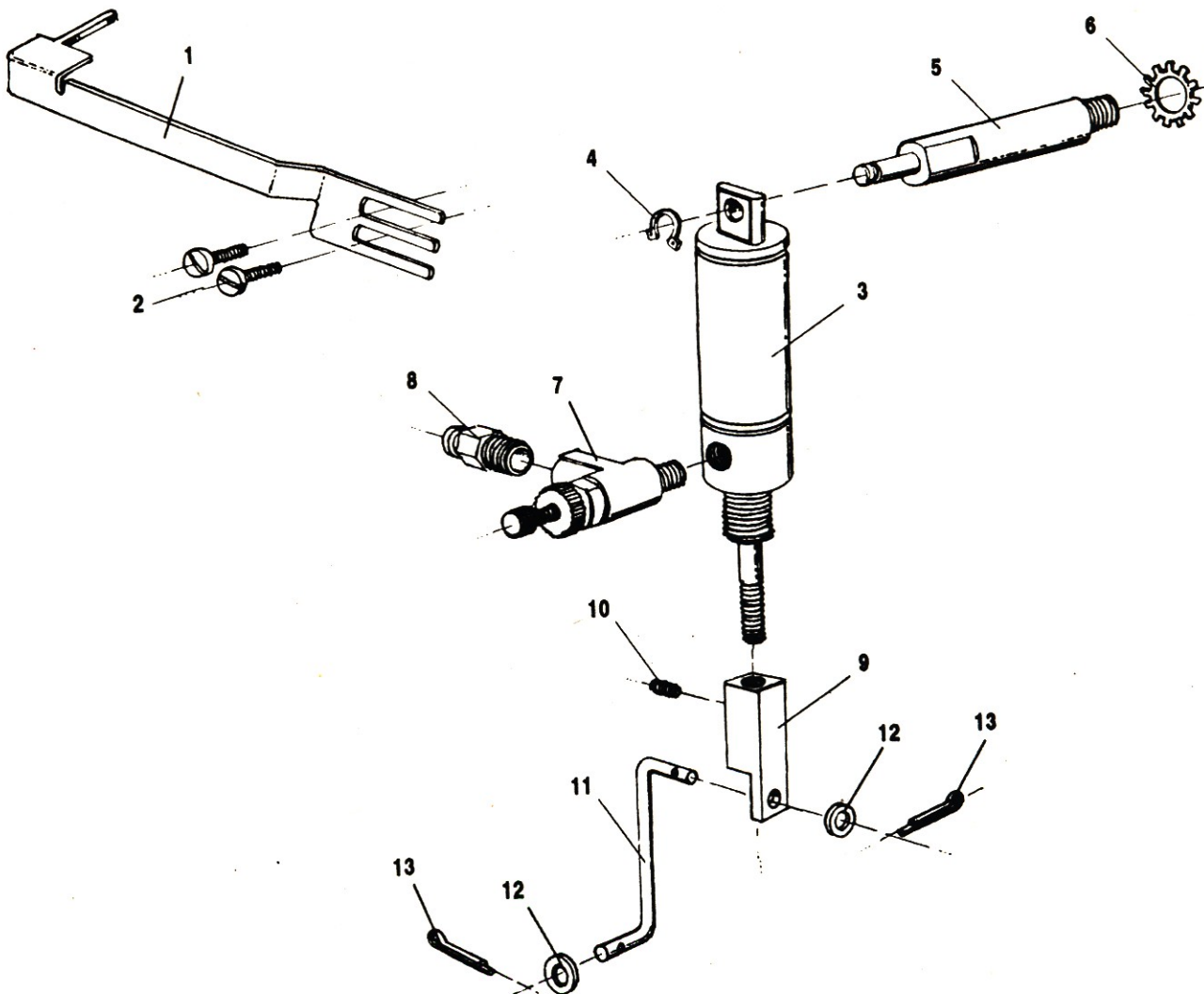


NO.	COMPONENT	QTY PER	DESCRIPTION
1-16	63900AMZ-900	1	ADJUSTED MACHINE
1	63900AM1/2	1	SEWING HEAD (refer to catalog # 126R)
1A	23564	1	HEMMER ASSEMBLY (refer to catalog # 126R)
1B	22569C	2	THROATPLATE SCREWS
	63421A	1	HANDWHEEL ASSEMBLY FOR SYNCHRONIZER
		1	PRESSER FOOT LIFT ASSEMBLY
	29480ABS	1	THREAD WIPER ASSEMBLY
	63970B	1	THREAD WIPER WIRE (refer to catalog # 126R)
	180QYS140/054	6	STRAIGHT NEEDLE (refer to catalog # 126R)
	29474VA	1	ROTARY HOOK ASSEMBLY (refer to catalog # 126R)
	H61212	5	BOBBIN (refer to catalog # 126R)
2	639-34-000	1	REFREY TRIMMER ASSEMBLY
3	63928A	1	THROAT PLATE NDL HOLE
4	RM3305-4	1	5/16" CABLE CLAMP
	80	1	CABLE CLAMP SCREW
5	AS9-7	1	NEEDLE COOLER AIR TUBE
6	22585A	1	SCREW
	RM2747-2	1	#6 INTERNAL TOOTH LOCK WASHER
	21237CK	1	ADAPTOR STUD
7	671F86D	1	1/4" TUBE UNION
8	634-27-00	1	THREAD TENSION ASSEMBLY
9	671F86F	1	5/32 TUBE UNION
10	AS9-1	1	FOLDER OPENER BRACKET
11	AS9-2	1	FOLDER OPENER PLUNGER
12	RM2808-1	2	SCREW
13	671A56	1	AIR CYLINDER
14	RM3728-1	1	BARB ELBOW
15	671B37A	1	5/32 TUBING
16	HO-103	1	1/4" TUBING

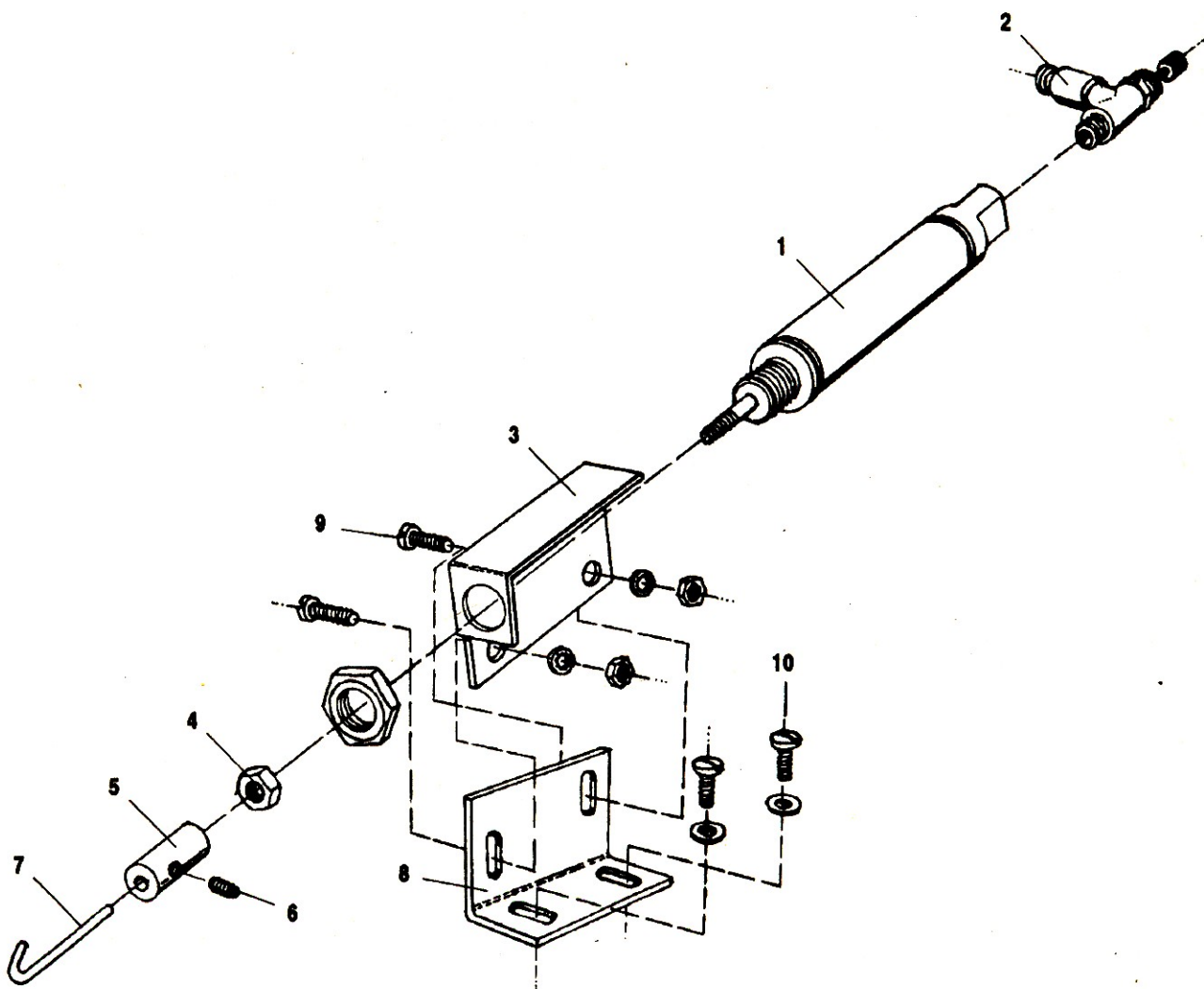
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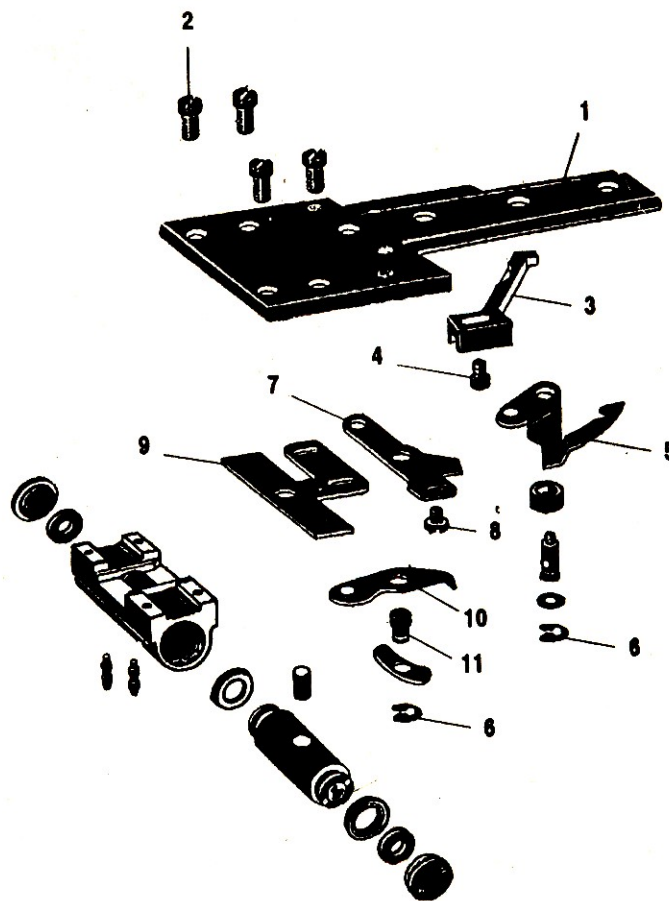
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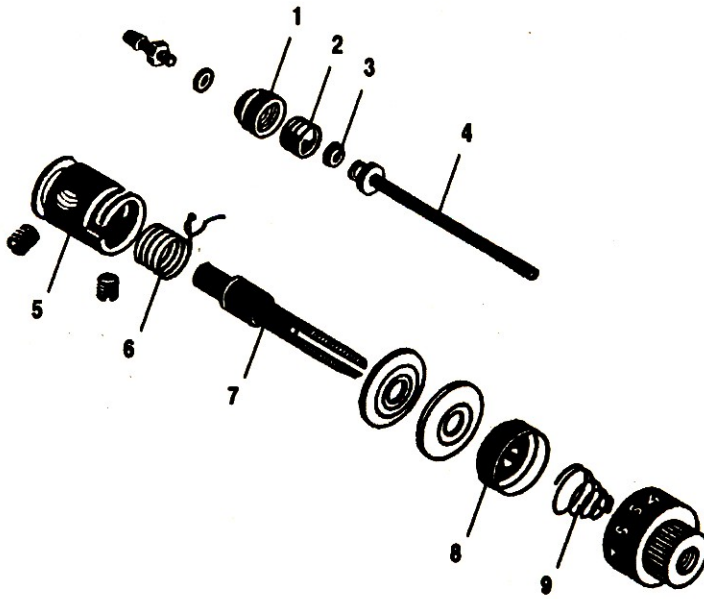
NO.	COMPONENT	QTY PER	DESCRIPTION
1-13		1	PRESSER FOOT LIFT ASSEMBLY
1	63495R	1	BRACKET
2	376A	2	SCREW
3	660-397	1	AIR CYLINDER
4	660-245	1	RETAINER RING
5	63468B	1	EXTENSION STUD
6	652B20	1	WASHER
7	671-102B	1	FLOW CONTROL, METER IN
8	671F81D	1	PUSH-IN 1/4" TUBE CONNECTOR
9	63468A	1	CLEVIS
10	22894W	1	SCREW
11	63468C	1	AIR CYL LINK
12	53634C	2	WASHER
13	660-142	2	COTTER PIN



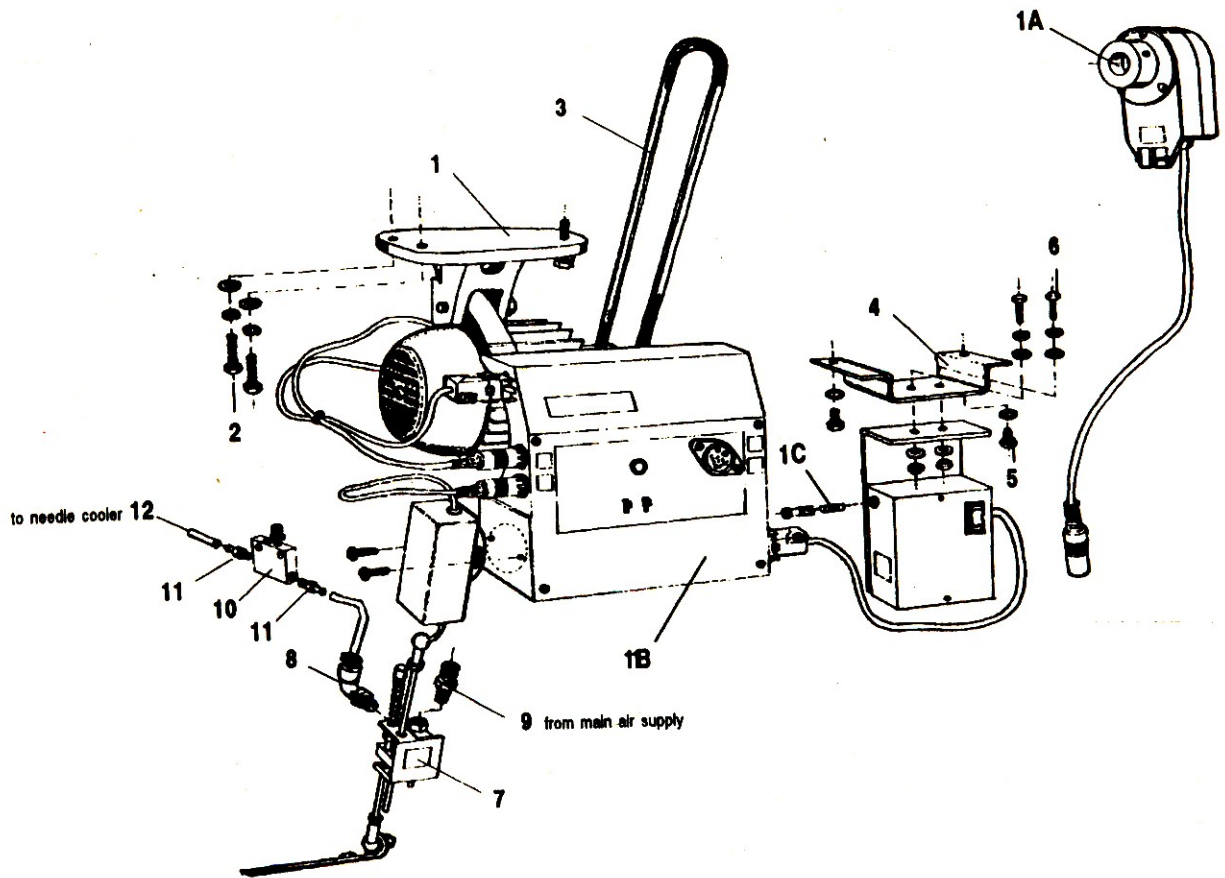
NO.	COMPONENT	QTY PER	DESCRIPTION
1-10	29480ABS	1	THREAD WIPER ASSEMBLY
1	871A57	1	CYLINDER
2	871-102C	1	FLOW CONTROL ELBOW, METER OUT
3	AS9-3	1	WIPER CYLINDER BRACKET
4	RM2791-7	1	#10-32 HEX NUT
5	AS9-5	1	THREAD WIPER CLAMP
6	RM2808-2	1	#6-32 X 1/8 H.S.S.S. CUP POINT
7	AS9-6	1	THREAD WIPER WIRE
8	AS9-4	1	THREAD WIPER BRACKET
9	RM2813-3	2	8-32 X 3/8 B.H.M.S
	RM2747-6	2	#8 INTERNAL TOOTH LOCK WASHER
	RM2741-1	2	#8-32 HEX NUT
10	22569J	2	SCREW FILISTER HEAD
	RM3293-5	2	#8 F.W



NO.	COMPONENT	QTY PER	DESCRIPTION
1-11	639-34-000	1	REFREY TRIMMER ASSEMBLY
1	639-34-5	1	THROATPLATE
2	F830	4	SCREW
3	639-14-50	1	POSITIONING FINGER
4	639-14-51	1	SCREW
		1	THREAD CATCHER ASSEMBLY
5	940-34-040	1	THREAD CATCHER
		1	BUSHING
		1	PIVOT PIN
		1	WASHER
6	RM3144-3	2	RETAINING RING
7	940-34-035	1	STATIONARY UPPER KNIFE
8	940-34-036	1	SCREW
9	940-34-030	1	ADJUSTING PLATE
10	940-34-045	1	LOWER KNIFE
11	639-34-046	1	PIVOT PIN
		1	SPRING
		1	AIR CYLINDER ASSEMBLY
		2	END CAP
		2	WASHER
		1	MANIFOLD
		2	AIR FITTINGS
		1	PISTON ASSEMBLY
		1	PISTON ROD
		2	SEAL
		1	PIN



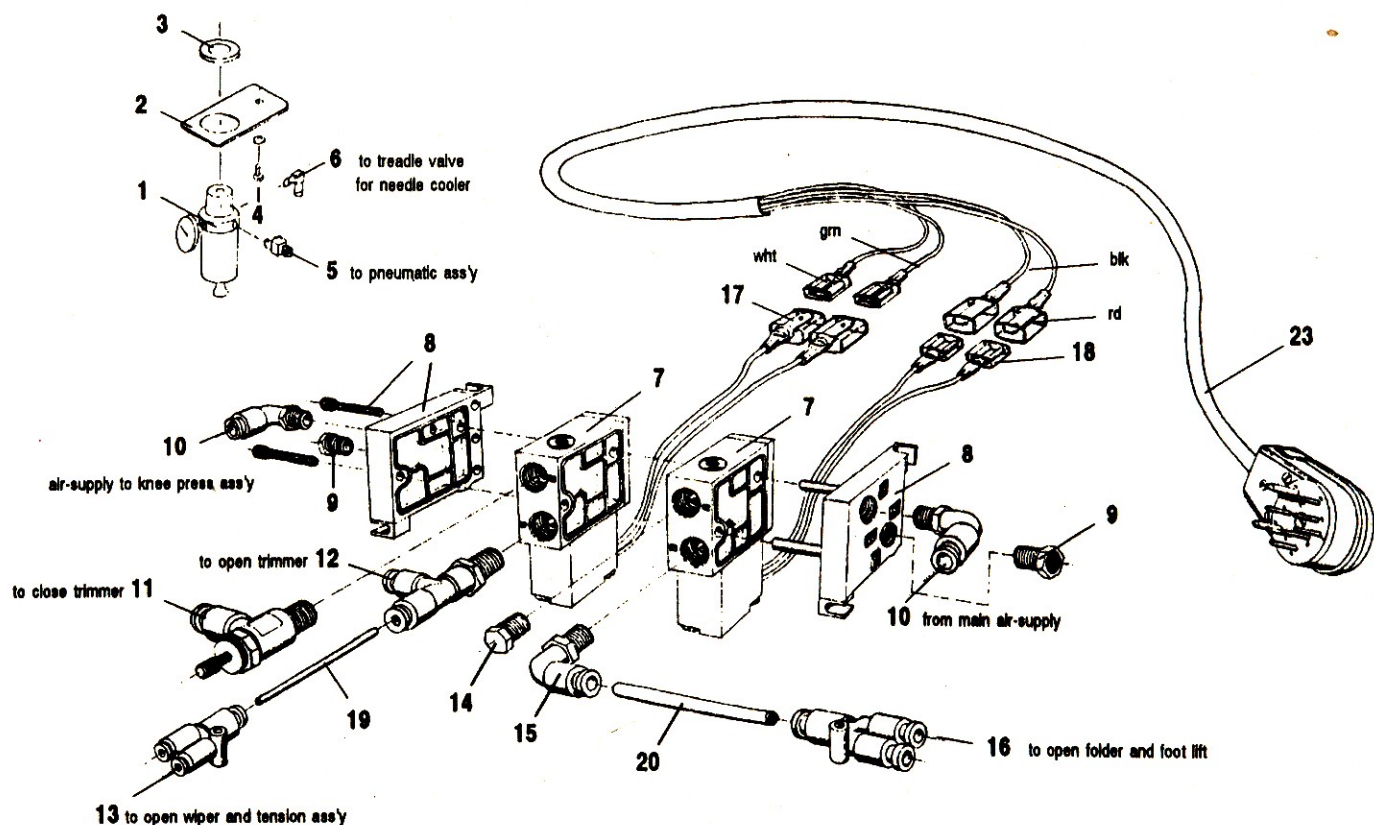
NO.	COMPONENT	QTY PER	DESCRIPTION
1-9	634-27-00	1	TENSION RELEASE ASSEMBLY
		1	AIR FITTING
		1	O-RING
1	92-27-44	1	PISTON BUSHING COVER
2	92-27-42	1	PISTON BUSHING
3	92-27-38-1	1	PISTON GASKET
4	92-27-36	1	PISTON ROD
5	634-27-01	1	CHECK SPRING BARREL
	91-05-03	2	SET SCREW
6	92-5-10-1	1	CHECK SPRING
7	92-27-05-1	1	TENSION SHAFT
		2	TENSION DISCS
8	91-5-20-1	1	TENSION OPENING DISK
9	92-5-25-1	1	TENSION SPRING
		1	KNURLED NUT



NO.	COMPONENT	QTY PER	DESCRIPTION
1-12	WS42800-LA	1	WORKSTATION ASSEMBLY
1	670H71	1	110 V SYNCHRO MOTOR
	670H72	1	220 V SYNCHRO MOTOR
1A	670M-9	1	SYNCHRONIZER
1B	RM6072	1	MOTOR CONTROL BOX, COMPLETE
1C	998-348-1	1	.8 AMP FUSE (220 V)
1D	670-31	1	SEWLIGHT TRANSFORMER
1E	RM6015	1	OPERATOR CONTROL PANEL (OPTIONAL)
2	RM3438-5	3	5/16-18 X 1-1/4 H.H.C.S
		3	LOCKWASHER
	652-20	3	WASHER
3	RM3656-21	1	49" V-BELT
4	AS9-10	1	BRACKET FOR POWER SWITCH
5	22652B8	2	SCREW
	40-126	2	WASHER
6	RM3182-1	2	1/4-20 X 5/8 H. H. C. S
	RM2791-1	2	#8-32 HEX NUT
	652C16	4	WASHER
7	29480AAB	1	TREADLE VALVE KIT
8	671F81C	1	PUSH-IN 1/4" TUBE ELBOW
9	671F81D	1	PUSH-IN 1/4" TUBE CONNECTOR
10	671-37	1	FLOW CONTROL
11	671F4	2	BARBED FITTING
		1	PNEUMATIC ASSEMBLY
	2899KP1	1	KNEE PRESS ASSEMBLY
		1	PEDESTAL ASSEMBLY
12	HO-103		1/4" TUBING

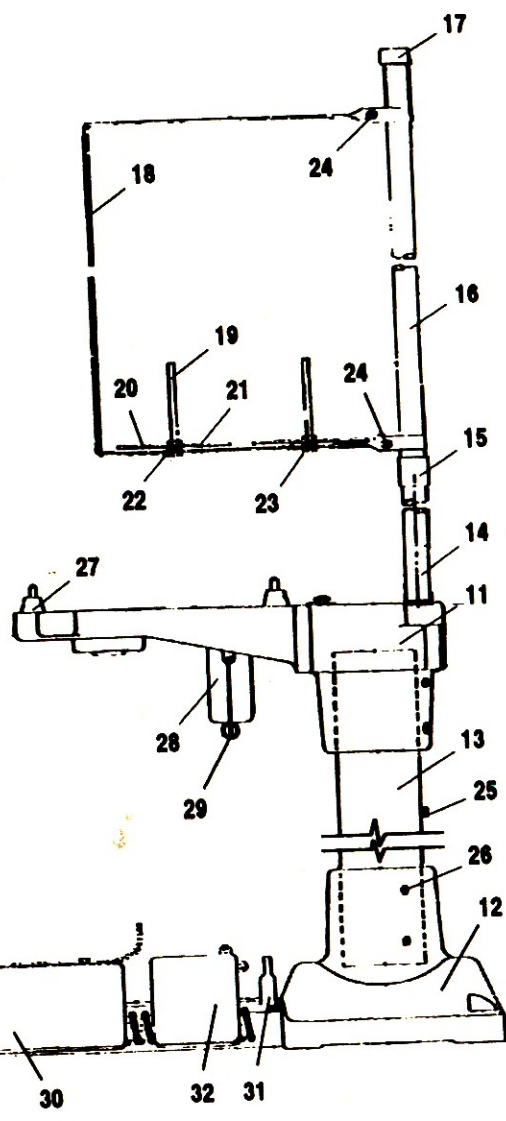
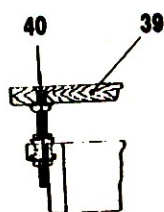
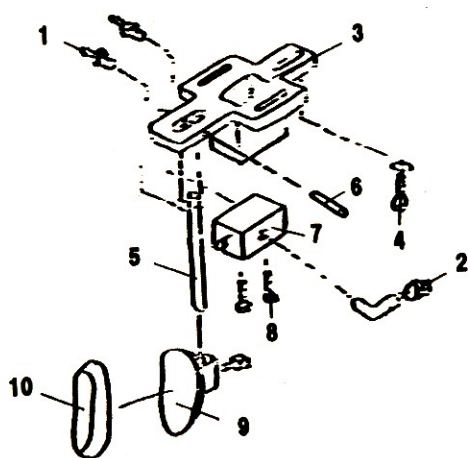
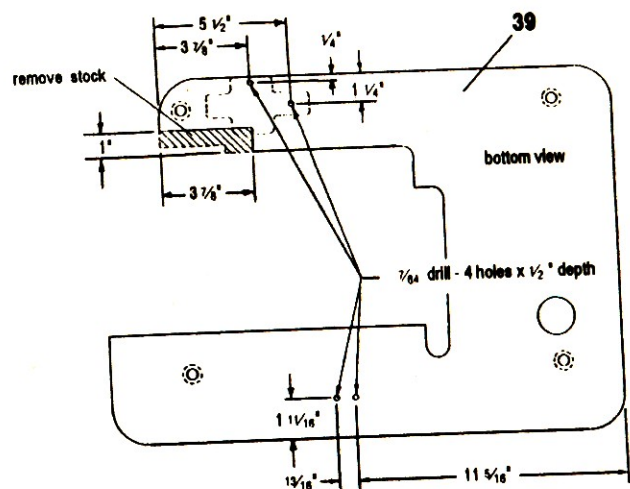
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NO	COMPONENT	QTY PER	DESCRIPTION
1-6		1	FILTER REGULATOR ASSEMBLY
1	671D42	1	FILTER REGULATOR
2	AS9-8	1	FILTER/REGULATOR BRACKET
3	21104H	1	NUT
4	RM3438-7	1	5/16" X 1" SCREW
	RM3293-2	1	FLATWASHER
5	671F81B	1	PUSH-IN 1/4" TUBE FITTING
6	671F81C	1	PUSH-IN 1/4" TUBE ELBOW
7-22	2884B11	1	PNEUMATIC ASSY
7	671-103A	2	4 WAY SOLENOID VALVE
8	671-104A	1	VALVE STACKING KIT
9	680-783	2	SILENCER
10	671F81A	2	PUSH-IN 1/4" TUBE FITTING
11	671-102	1	FLOW CONTROL VALVE
12	671F82E	1	MALE RUN TEE
13	671F86C	1	5/32" TUBE "Y" CONNECTOR
14	RM2947-1	1	HEX PIPE PLUG
15	671F81C	1	PUSH-IN 1/4" TUBE FITTING
16	671F86B	1	1/4" TUBE "Y" CONNECTOR
17	670G46B	2	PUSH-ON TERMINAL
18	670G46C	2	PUSH-ON TERMINAL
19	671B37A		5/32 TUBING
20	HO-103		1/4" NYLON TUBING
21	RM3293-8	2	#10 FLAT WASHER
22	SC329A	2	#10 X 1 WOOD SCREW
23	670E508	1	SOLENOID HARNESS

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not shown



NO	COMPONENT	QTY PER	DESCRIPTION	CODE
1	671C4	2	MALE CONNECTOR	
2	660-401	1	ELBOW	
3-10	2899KP1	1	KNEE PRESS ASSEMBLY	
3	AS7-2	1	KNEE PRESS BASE	
4	RM2864-1	3	SCREW	
	RM3293-5	3	#8 WASHER	
5	AS7-1	1	KNEE PRESS ROD	
6	667C16	1	DOWEL PIN	
7	671-85	1	3-WAY MANUAL VALVE	
8	RM2805-1	2	SCREW	
9	AS7-3	1	KNEE PRESS	
10	660-168	1	KNEE PRESS PAD	
11-40	1400D	1	PEDESTAL ASSEMBLY	
11	1460G	1	TOP BASE	
12		1	BOTTOM BASE	1401C
13		1	PEDESTAL SUPPROT	1403A
14		1	THREAD STAND POST	21104Y-18
15		1	COUPLING	660-194
16		1	THREAD STAND POST	21104Y-26
17		1	END CAP	660-181
18		1	THREAD STAND FRAME	21114Z
19		2	THREAD CONE ROD SUPPORT	21114W
20		2	THREAD CONE BASE SUPPORT	21114
21		2	THREAD CONE FOAM PAD	21104V
22	652-18	4	FLAT WASHERS	
23	258A	2	HEX NUT	
24		2	SCREW	650C-6
25	22652D6	1	SCREW	
26	22650CH10	6	SCREW	
27	51295B	4	ISOLATORS	
28	666-166	1	OIL COLLECTOR BOTTLE	
29	21393M	1	SPRING HOLDER	
30		1	TREADLE	28575F
31		1	ROD	28576F
32		1	TREADLE	B21290K
33	1451G	1	TREADLE ROD	
34		4	SPRING	660-280
35		1	BUSHING	1451F
36	22652D12	1	SCREW	
37	651B-32	2	NUT	
38		2	FOOT	22609C
39		1	TABLE TOP (MODIFIED)	21371PK
40		4	COUNTER SUNK SCREW	650AC-36
		4	HEX JAM NUT	
	651B24	8	HEX NUT	
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		8	RUBBER ISOLATOR	660-241

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940-34-035	2	STATIONARY UPPER KNIFE	22
940-34-045	2	LOWER KNIFE	22
AS9-6	1	THREAD WIPER WIRE	21
63970B	1	NEEDLE THREAD GUIDE	19
92-5-10-1	1	CHECK SPRING	23
92-5-25-1	1	CONICAL CHECK SPRING	23
29474VA	1	ROTARY HOOK ASSEMBLY	19
H61212	2	BOBBINS	19
670M-9	1	QUICK MOTOR SYNCHRONIZER	24
180QYS140/054	10	NEEDLES	19

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