

INSTRUCTIONS FOR INSTALLING AND ADJUSTING

PNEUMATIC CLAMP LIFT AND CYCLE START

495050

FOR 269W MACHINES

THE SINGER COMPANY

I P D A

SOMERVILLE FACTORY

SOMERVILLE, NEW JERSEY

Rev. 2/72

THE SINGER PNEUMATIC CLAMP LIFT AND CYCLE START DEVICEDESCRIPTION

The Singer Pneumatic Clamp Lift and Cycle Start Device is a completely air powered and air controlled unit designed for 269W Class Machines. The clamp lift and starting mechanisms are interlocked so that the clamp cannot be raised while the machine is sewing nor can the machine be started until the clamp is lowered.

The foot control operates in two stages. The first downward movement lowers the clamp. The second or final downward movement starts the sewing cycle, after which the foot control is released. The machine will complete the sewing cycle and stop. The clamp will then raise automatically.

The clamp can be raised and lowered by means of the foot control to position the work piece any number of times without starting the machine. This is an advantage with garments that are difficult to position properly.

The inherent advantage in a pneumatic unit of this kind is reflected in the reduction in the amount of effort and skill required of the operator. Another advantage which is not so immediately apparent is the result of the soft action of the pneumatic type control in relation to the stop motion parts. This means less wear and ultimately, less down time.

NOTE:

If the clamp lift-cycle start device is to operate properly, the 269W machine on which it is installed must be in good sewing condition. This is especially true with respect to stop motion parts and adjustments. Check the machine thoroughly before installing the clamp lift-cycle start device.

INSTALLATION

When it is required, use the paper template included with these instructions, to enlarge the present hole in the table to facilitate mounting the valve and cylinder assembly at the rear of the machine. (See Figure H Page 15.)

Mount the valve and cylinder assembly by means of the bracket (which duplicates Belt Guard Base 239444) with four #10 X 3/4" round head wood screws and #10 flat washers which are included in the accessories.

Mount the filter, lubricator, regulator unit in a convenient location on the underside of the table, preferably at the left of the machine base. Use two #10 x 3/4" round head wood screws.

Installation (Continued)

Connect the tubing extending from the bottom of the cylinders to the tee connection at the air spring.

Connect the three unions on the foot control tubing to the ends of the tubing marked with the corresponding red, yellow and blue bands.

Fill the lubricator to a point just below the indicator line. Use Singer Type C Oil for this purpose.

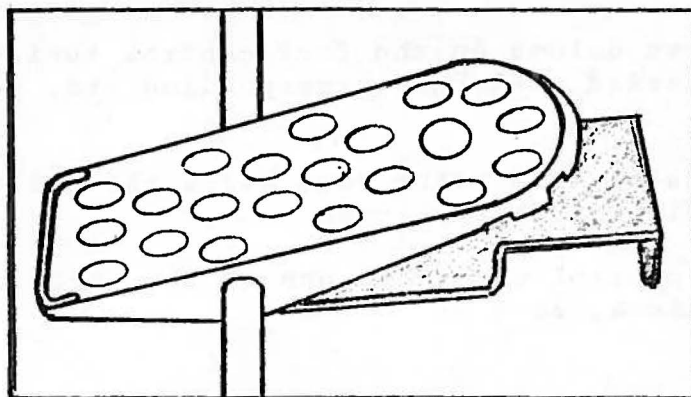
Mount the foot control using any one of the three methods illustrated, in Figure A, page 3.

ADJUSTMENTS

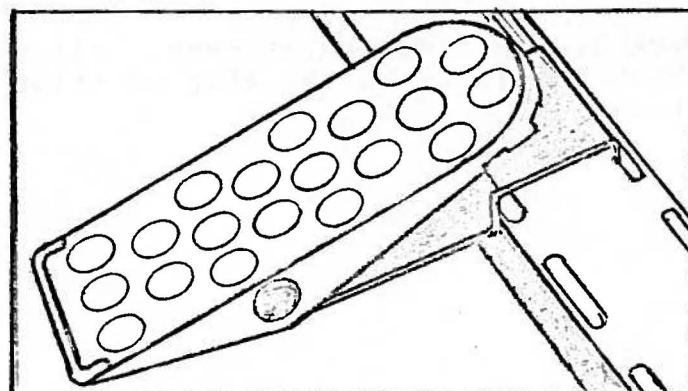
The unit is now ready for final adjustment. All power should be off and the machine should be in the stop position for this phase of the installation.

FIGURE A

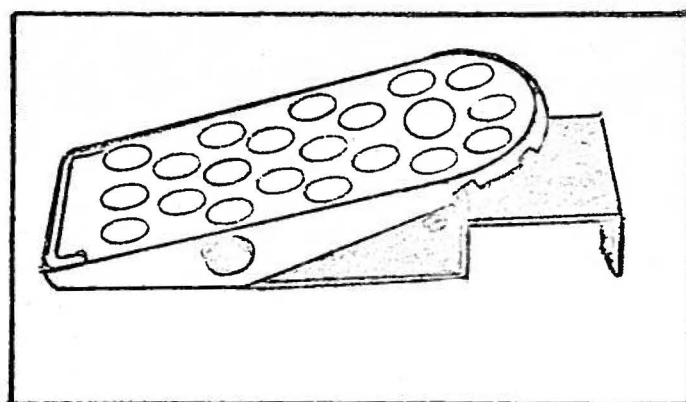
METHODS FOR MOUNTING FOOT CONTROL



TUBE MOUNTING



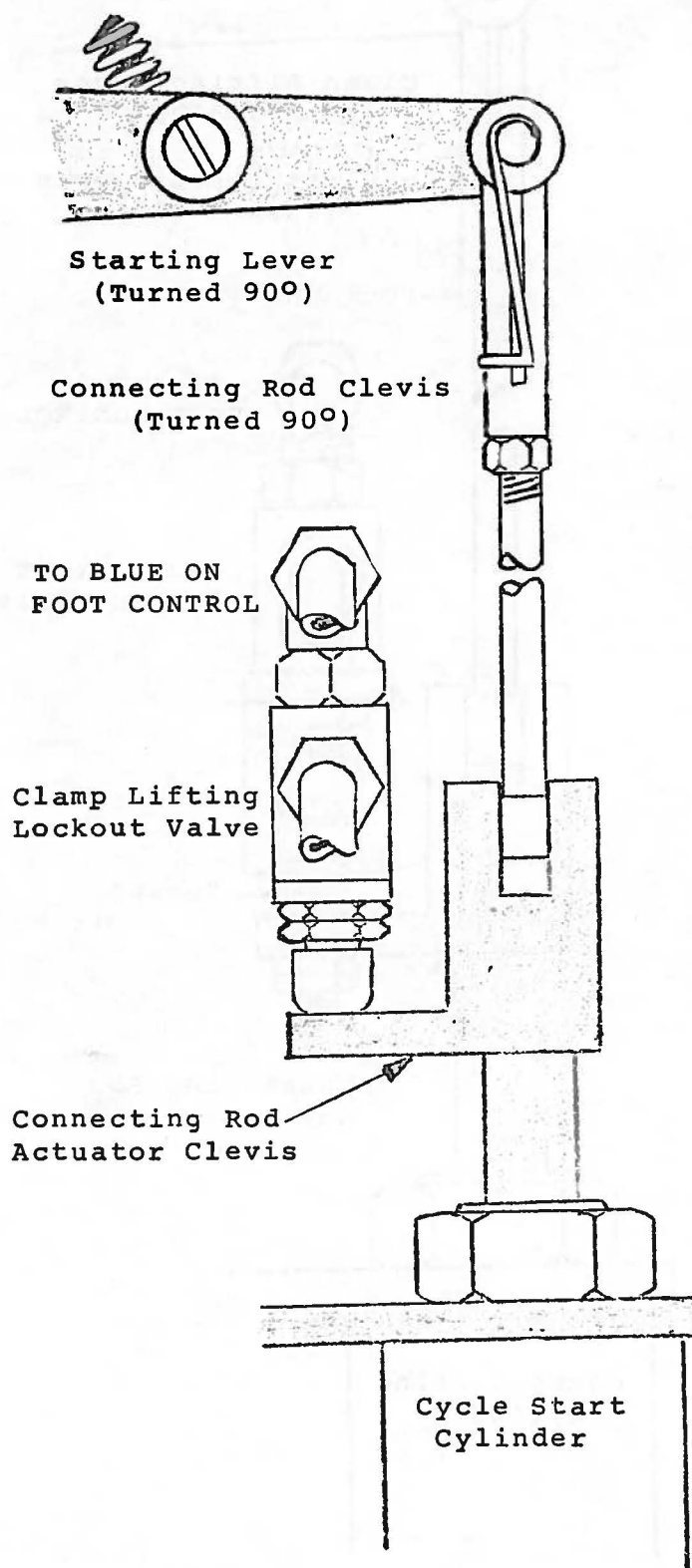
TREADLE PLATFORM MOUNTING



FLOOR MOUNTING

FIGURE B

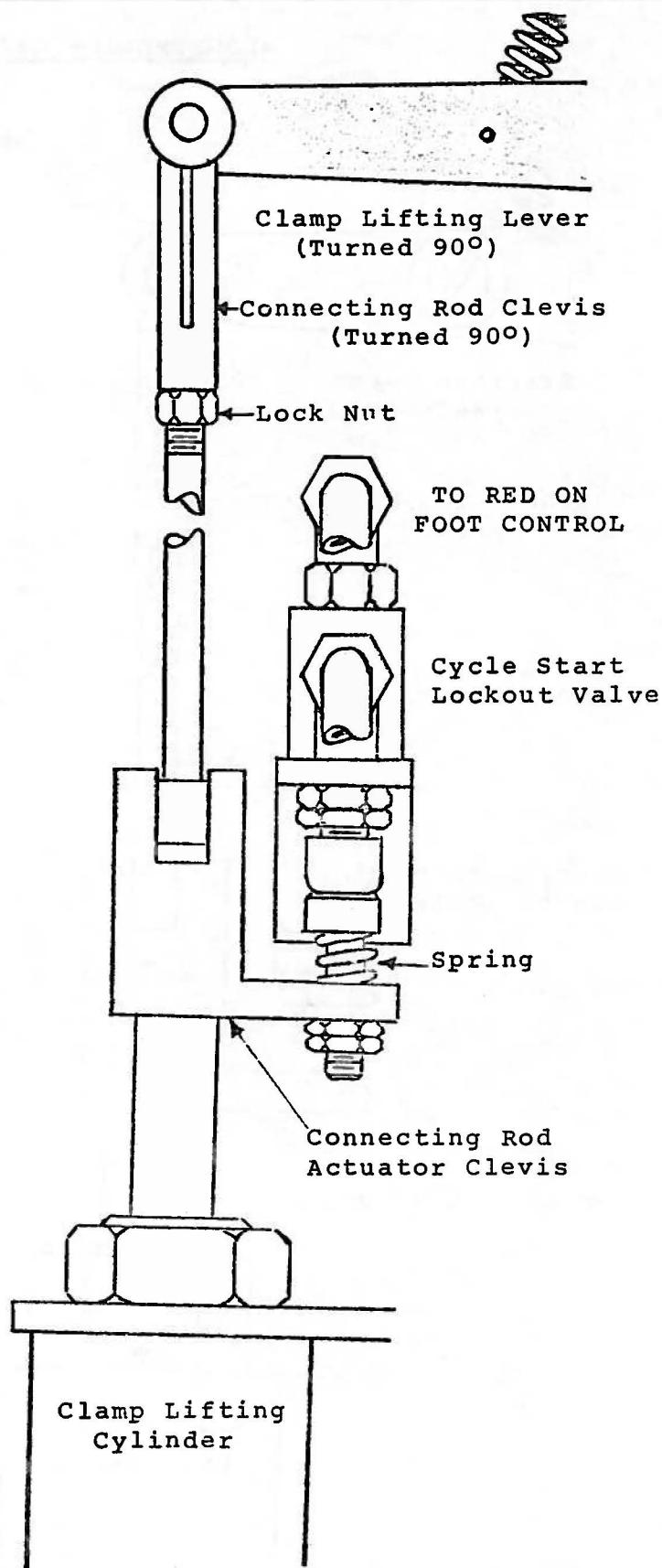
ADJUSTMENT - CYCLE START CYLINDER



1. Loosen screws holding the lockout valve and raise the valve mounting bracket to the top of the slots.
2. Pull up the air cylinder connecting rod until the cylinder is in the full up position.
3. Adjust the clevis on the connecting rod so that the hole in the clevis is about $1/16"$ to $3/32"$ higher than the hole in the machine starting lever.
4. Align the holes and insert the clevis pin and retaining spring. Tighten the clevis lock nut.
5. Adjust the lockout valve downward until the button on the valve stem is seated against the valve housing.
6. Tighten the screws to secure the valve in this position.

FIGURE CADJUSTMENTS - CLAMP LIFT LEVER

1. Loosen screws holding the lockout valve and raise the valve mounting bracket to the top of the slots.
2. Engage sewing machine manually.
3. Manually operate sewing machine until it has sewn five (5) stitches.
4. Pull up the connecting rod of the clamp lifting cylinder as far as it can go.
5. Adjust the clevis on the connecting rod until the hole in the clevis is approximately 1/16" above the hole in the clamp lifting lever.
6. Align the two holes - insert the clevis pin and retaining spring. Tighten the clevis locking nut.
7. Manually operate the sewing machine until it goes into stop.
8. Adjust the lockout valve downward until the button on the valve stem compresses the override spring about the length of one coil.
9. Tighten the screws to secure the lockout valve in this position.



ADJUSTMENTS (Cont'd)

Connect the unit to an air supply using the Qwik-Change coupler provided. Set the main regulator pressure at 50 psi and the air spring pressure at 3 psi. Some adjustment may be required to balance the pressure on the cycle start cylinder.

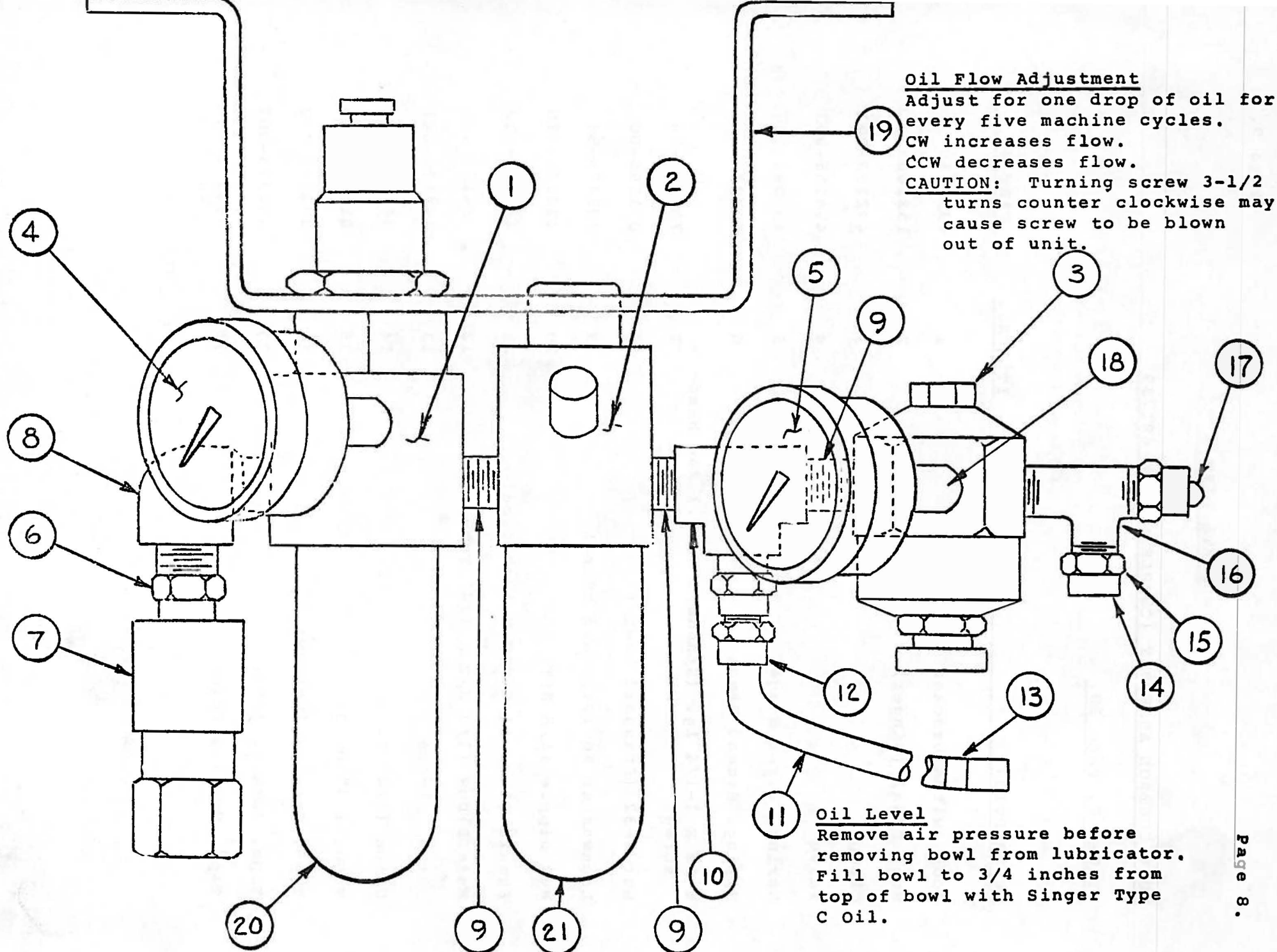
The lubricator should be set to provide one (1) drop of oil every five (5) cycles. The method of adjusting oil flow is described in the lubricator instruction sheet.

Water accumulation in the filter should be checked at regular intervals. When draining water from the system, be sure the air pressure is off.

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PARTS LISTFILTER, LUBRICATOR, REGULATOR ASSEMBLY (COMPLETE) P/N 492109Figure D, Page 8.

<u>DESCRIPTION</u>	<u>ITEM NO.</u>	<u>PART NO.</u>
Filter, Regulator	1	494208-006
Lubricator	2	494208-004
Regulator (Air Spring)	3	494208-008
Gauge (0-160 psi)	4	494263-002
Gauge (0-30 psi)	5	494263-001
Male Connector	6	494171-002
Qwik Change Coupler	7	494171-001
Reducing Street Elbow (1/8 NPT X 1/4 NPT)	8	494176-005
Close Nipple (1/8 NPT)	9	494176-003
Tee, Female (1/8 NPT)	10	494176-002
Tubing	11	811750-014
Straight Coupling (1/8 NPT X 1/4" Tube)	12	494176-010
Tape, Marking (Yellow)	13	494373-009
Sleeve for 1/4" Nut	14	494176-007
1/4" Nut	15	494176-008
Tee (1/8 NPT X 1/4" Tube)	16	494176-013
Plug 1/4" Tube	17	494176-006
Street Elbow, 45° (1/8 NPT)	18	494176-004
Bracket	19	492772
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<u>REPLACEMENT PARTS -</u>		
Filter Bowl (Norgren)	20	494187-013
Lubricator Bowl (Norgren)	21	494187-014
Lubricator & Filter Bowls (Wilkerson)	20/21	494208-009
Repair Kit - Lubricator (Norgren)	-	494187-022
Repair Kit - Filter (Norgren)	-	494187-023



FILTER - REGULATOR - LUBRICATOR ASSEMBLY

FIGURE D

PARTS LISTFOOT CONTROL ASSEMBLY (COMPLETE) P/N 491739FIGURE E, Page 10.

<u>DESCRIPTION</u>	<u>ITEM NO.</u>	<u>PART NO.</u>
Foot switch bracket	1	491733
Foot Pedal (Singer)	2	152168
Clamp	3	492299-001
Valve	4	494155-002
Spring, First Stage	5	492092
Spring, Second Stage	6	492079
6-32 X 1-1/4 lg. (Standard Hdwr.) Pan Head-screw	7	788816-06
Nut 6-32 (Standard hdwr.)	8	051795-00
Lockwasher #6 (Standard hdwr.)	9	703473-66
Hex nipple (1/8 NPT)	10	494176-018
Female Elbow (1/8 NPT X 1/4" Tube)	11	494176-012
Male Elbow (1/8 NPT X 1/4" Tube	12	494176-011
Nut w/ sleeve	13	494176-041
Union (1/4" Tube)	14	494176-009
Tube, 1/4" O. D.	15	811750-005
Tape, Marking (Yellow)	16	494373-009
Tape, Marking (Red)	17	494373-007
Tape, Marking (Blue)	18	494373-002

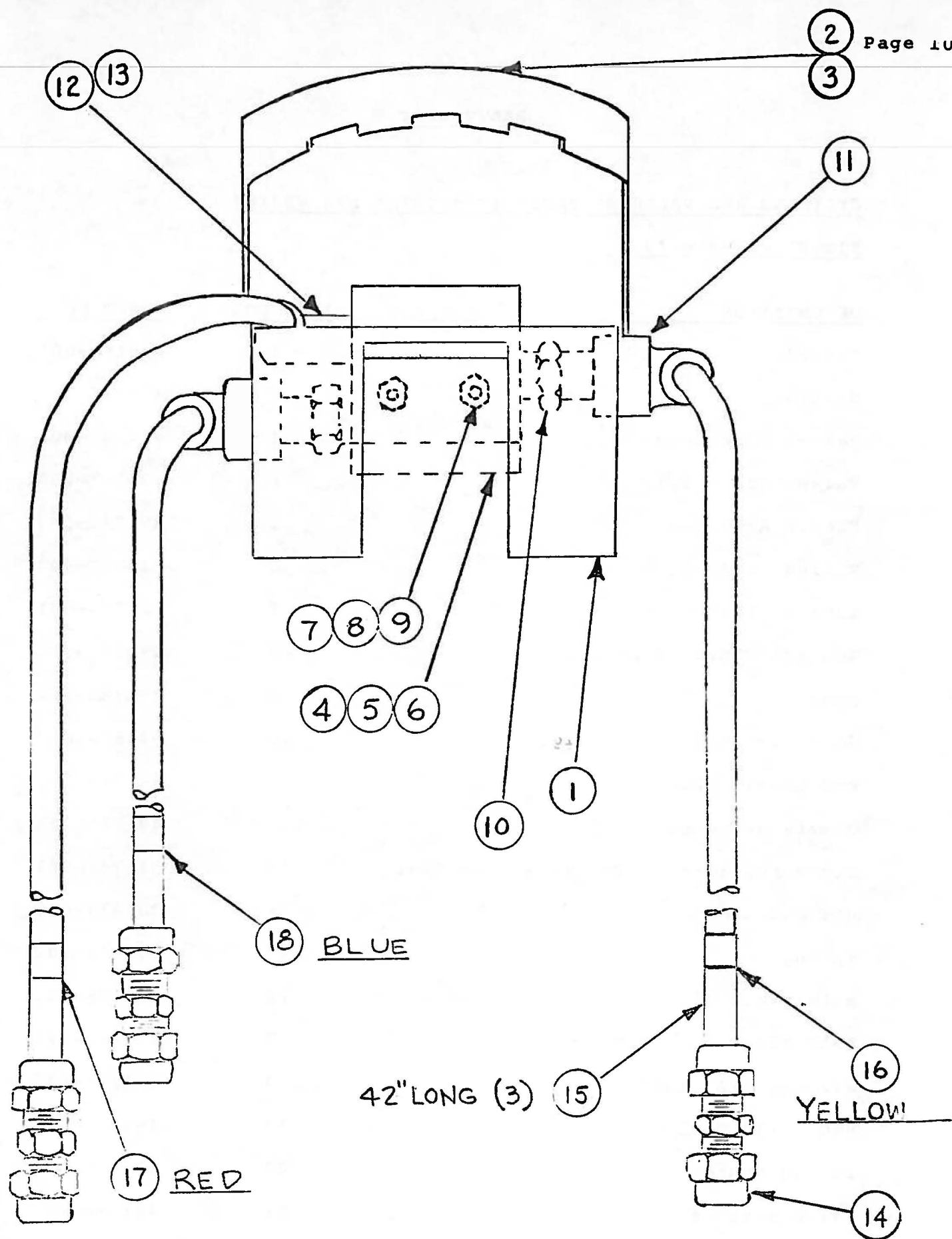


FIGURE E
FOOT CONTROL ASSEMBLY - P/N 491739

PARTS LISTCYLINDER AND VALVE ASSEMBLY (COMPLETE) P/N 492107FIGURE F, Page 13

<u>DESCRIPTION</u>	<u>ITEM NO.</u>	<u>PART NO.</u>
Cylinder	1	494156-001
Bracket	2	491782
Valve, Three way	3	494161-001
Valve, Quick dump	4	494197-003
Clevis Actuator	5	491779-002
Tubing, 1/4" O. D.	6	811750-002
Tubing, 1/4" O. D.	7	811750-001
Rod and Clevis assembly	8	492152-004
Stop	9	491781-002
Screw set 6-32 X 1/8" lg.	10	930590-06
Rod Clevis shaft	11	491977
Clevis actuator	12	491779-001
Screw shoulder 10-24 Hex Socket Head	13	811743-001
Hex nut 10-24	14	703477-060
Spring	15	494179-002
Male elbow (1/8 NPT X 1/4" Tube)	16	494176-011
Male elbow (1/8 NPT)	17	494201-001
Sleeve, 1/4" tube	18	494176-007
Nut, 1/4" Tubing	19	494176-008
Spring guard	20	494176-001
Valve, Support bracket	21	491780
Cap screw, hex socket head 6-32 X 1/4	22	930758-009

(Continued)

PARTS LISTCylinder and Valve Assembly (Complete) P/N 492107 - Continued

<u>DESCRIPTION</u>	<u>ITEM NO.</u>	<u>PART NO.</u>
Male connector (1/8 NPT X 1/4" tube) Located at bottom of Quick Dump Valve	23	494176-010
Tubing, 1/4" O.D. - Located at bottom of Cycle Start Cylinder	24	811750-004
Tubing, 1/4" O.D. - Located at bottom of Clamp Lift Cylinder	25	811750-003
Tape, wire marking, light blue	26	494373-005
Tape, wire marking, red	27	494373-007

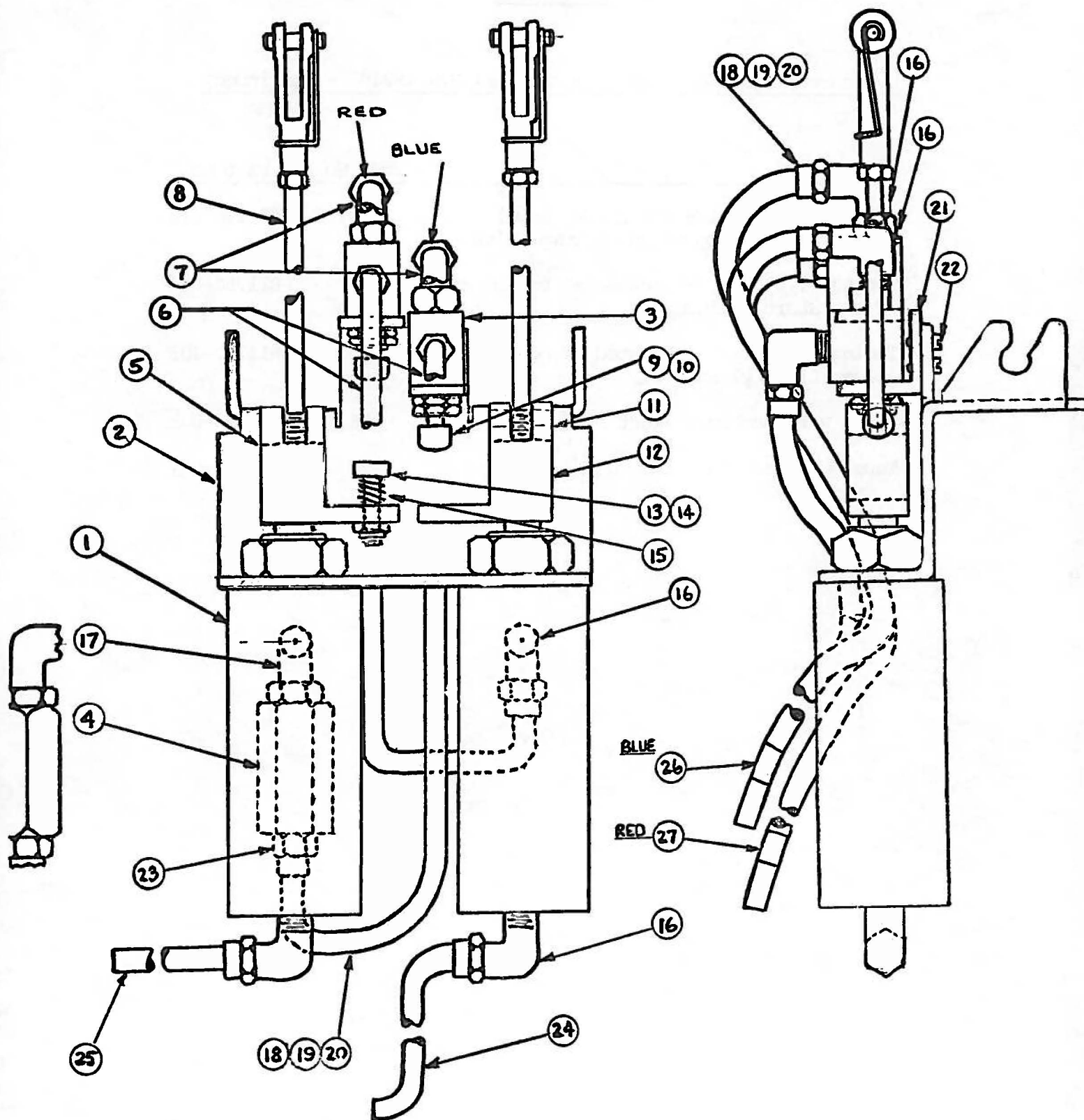


FIGURE F

CYLINDER AND VALVE ASSEMBLY (COMPLETE) P/N 492107

FIGURE G
PNEUMATIC CONNECTION DIAGRAM

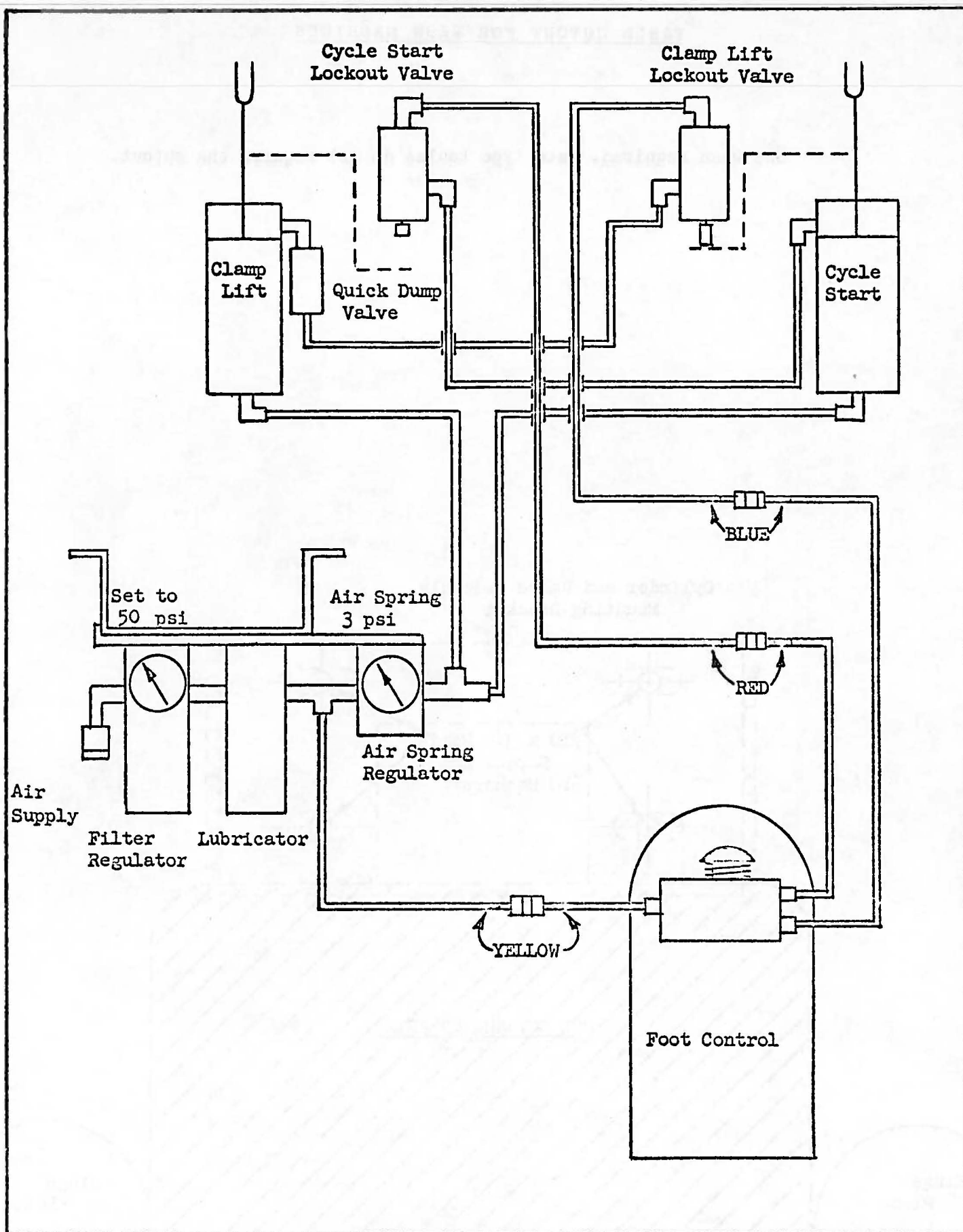
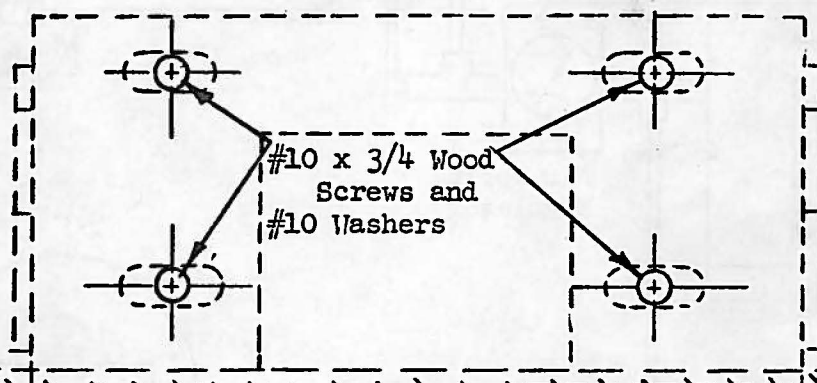


FIGURE HTABLE CUTOUT FOR 269W MACHINES

Use when required. Late type tables do not require the cutout.

Cylinder and Valve Assembly
Mounting Bracket



CUT OUT SHADED AREA

Hinge
Plate

Hinge
Plate