Sampson

Insole Rib Attaching Machine

Operator's Guide

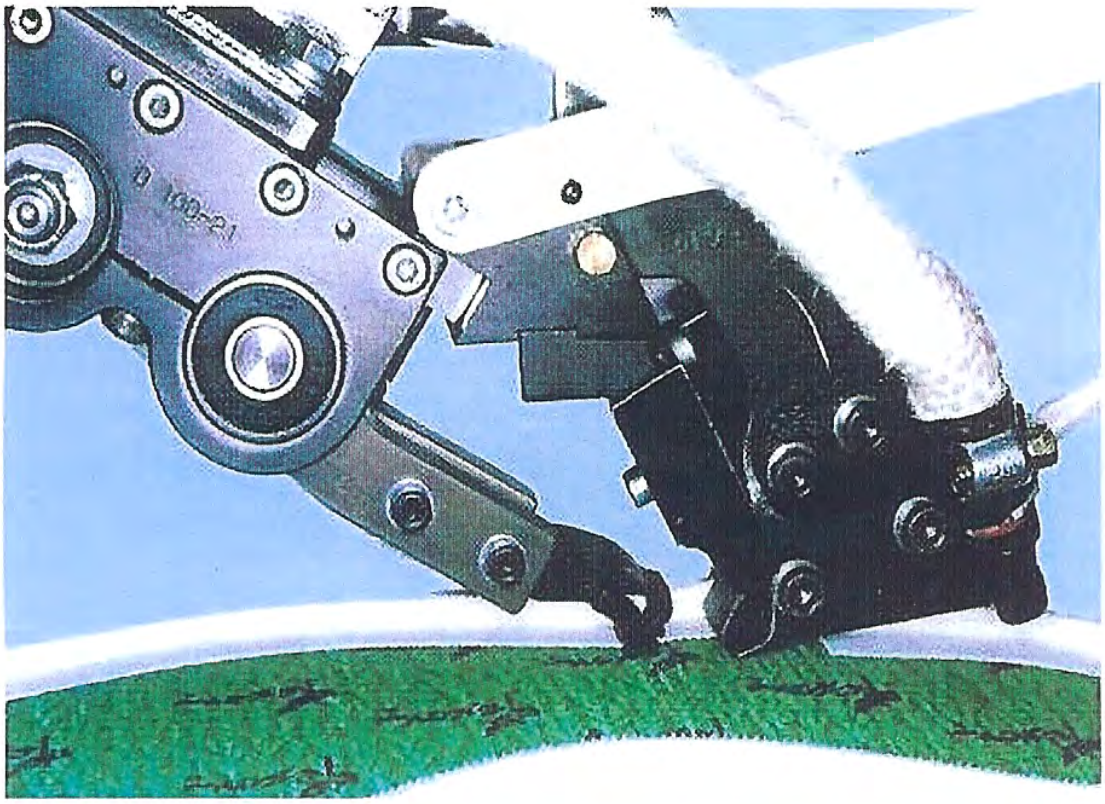

TABLE TOP MODEL

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WORTHEN INDUSTRIES

ODELL-WILLIAMS INC.

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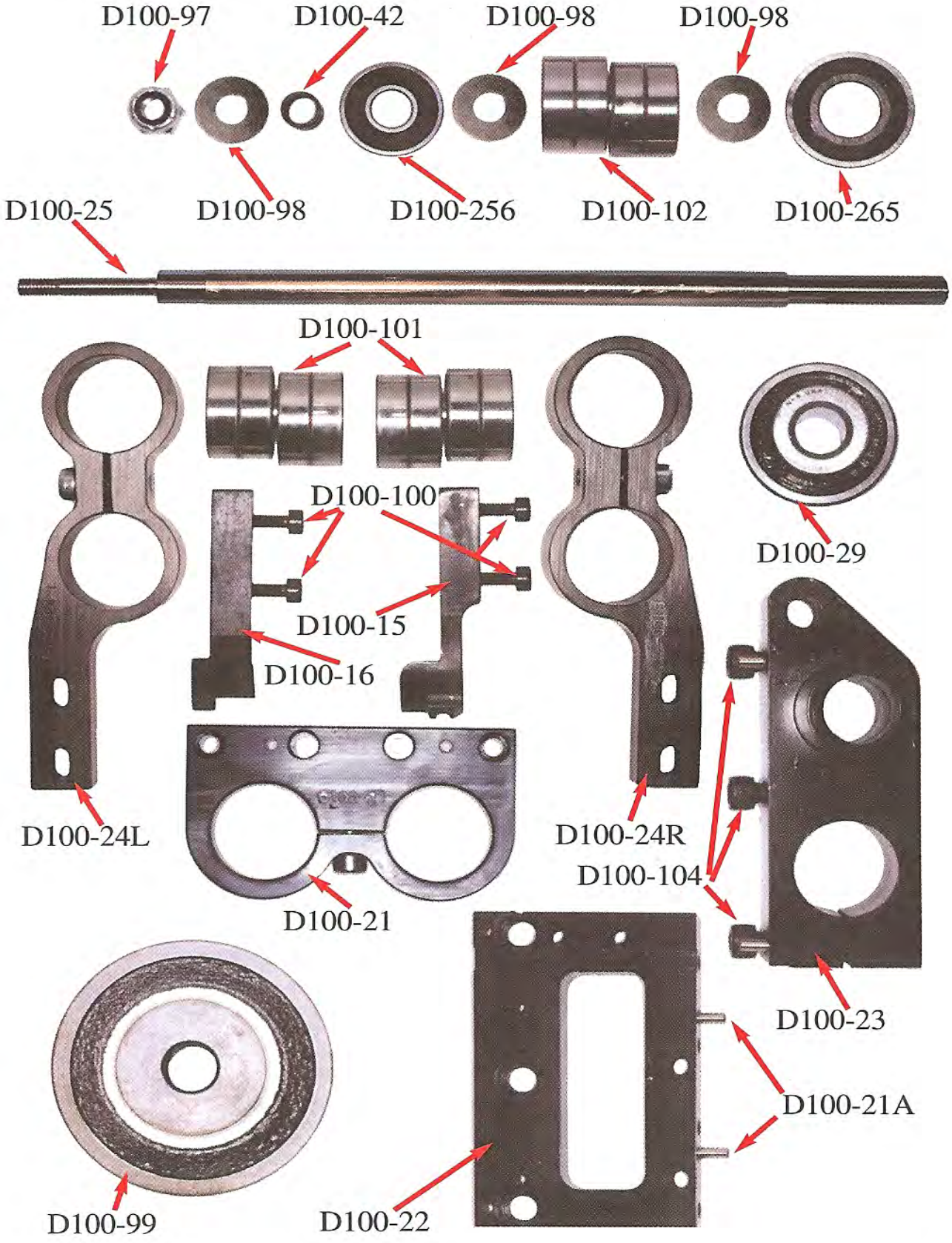
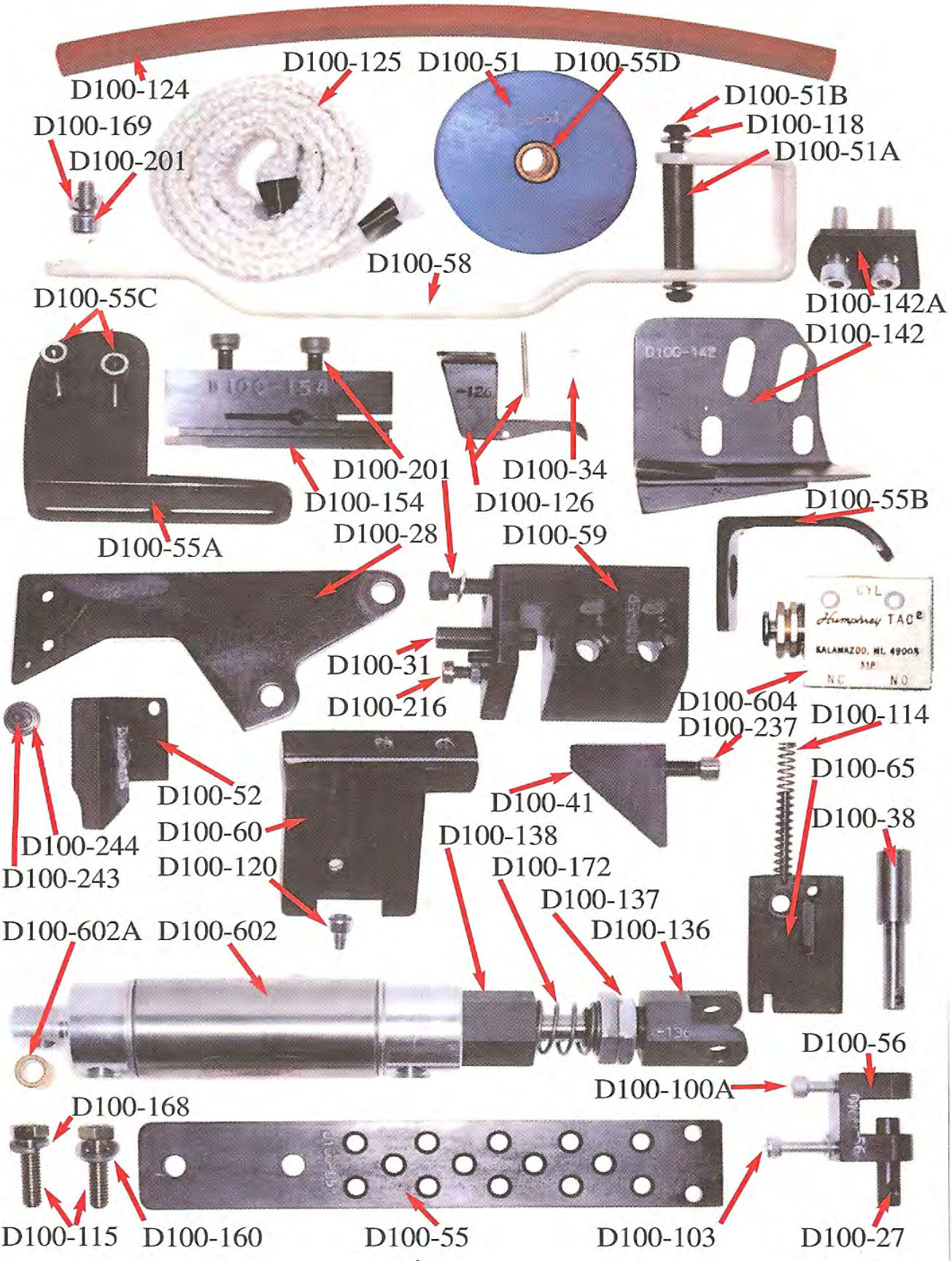
Cam Parts


D100-97
D100-42
D100-98
D100-98
D100-98
D100-256
D100-102
D100-265
D100-25
D100-101
D100-100
D100-29
D100-15
D100-16
D100-24L
D100-24R
D100-104
D100-21
D100-23
D100-21A
D100-99
D100-22

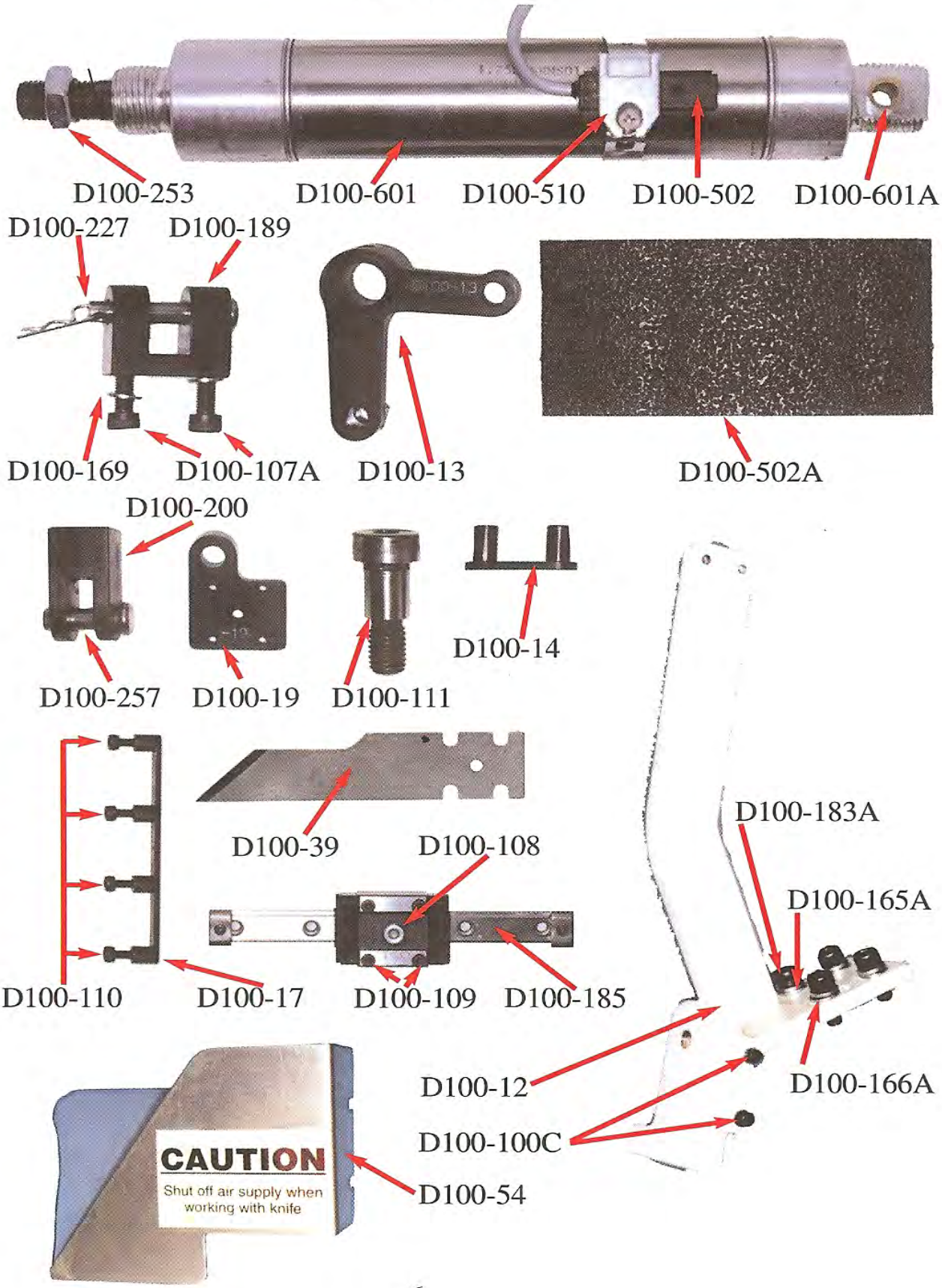
Quantity	Part Number	Description
1	D100-15	Right Slotted Foot
1	D100-16	Left Foot
1	D100-21	Outer Bearing Block
2	D100-21A	Alignment Pins for D100-21
4	D100-21B	Screws for D100-21-Not Shown
1	D100-22	Cam Top Plate
1	D100-23	Shaft Bearing Block Cam
1	D100-24B	Clamp Bolt 24L/R-Not Shown
1	D100-24L	Left Foot Holder
1	D100-24R	Right Foot Holder
1	D100-25	Main Shaft
1	D100-29	Rear Bearing Cam
1	D100-42	End Bearing Bushing
1	D100-97	Nylon Locking Nut for Shaft
3	D100-98	Washer for Main Shaft
1	D100-99	Main Shaft Drive Pulley
2	D100-100	Foot Mount Screws
2	D100-101	Idle Eccentric Bearing Cam Set
1	D100-102	Main Shaft Cam Assembly
3	D100-104	Cam Top Plate Screws
1	D100-256	Bearing Cam Shaft (Front)
1	D100-265	Bearing Cam Shaft (Middle)

Chute Assembly



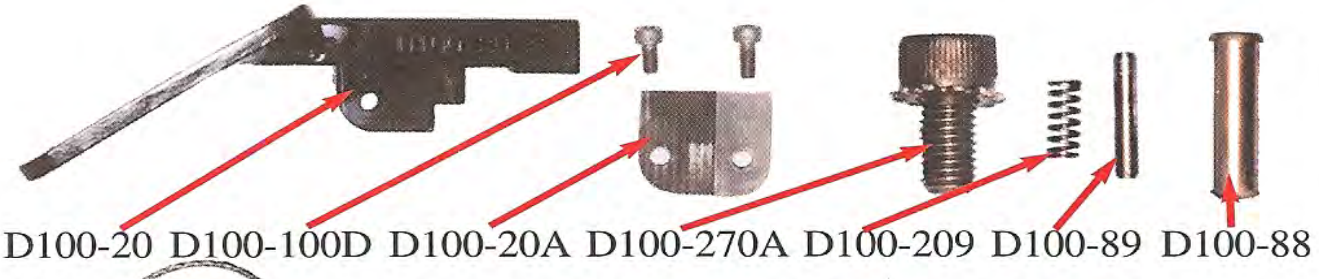
Quantity	Part Number	Description
1	D100-27	Chute Cylinder Clevis Pin Rear
1	D100-28	Chute Cylinder Arm
1	D100-31	Chute Cylinder Arm Pivot Pin
1	D100-34	Rib Lock Lever Spring
1	D100-38	Chute Front Clevis Safety Pin
1	D100-41	Chute Cylinder Arm Lift Block
1	D100-51	Tape Guide Wheel
1	D100-51A	Shaft for D100-51
2	D100-51B	Mount Screws for D100-51A
1	D100-52	Knife Guard
1	D100-55	Chute Cylinder Mount Bar
1	D100-55A	Safety Switch Bracket
1	D100-55B	Safety Switch Cover
2	D100-55C	Mount Screws for Bracket
2	D100-55D	Bushing for D100-51
1	D100-56	Chute Cylinder Rear Clevis
4	D100-58	Tape Guide Wheel Mount Arm
1	D100-59	Base Mount for D100-28/60
1	D100-60	Dropdown Guide Slide Mount
1	D100-65	Dropdown Guide
1	D100-100A	Short Mount Screw Rear Clevis
1	D100-103	Long Mount Screw Rear Clevis
1	D100-114	Dropdown Guide Spring
2	D100-115	Chute Cylinder Bar Mount Bolt
1	D100-120	Dropdown Guide Stop Screw
1	D100-124	Red Rubber Heater Hose
1	D100-125	Protective Sleeve for Hose
1	D100-126	Rib Lock Lever with Pin
1	D100-136	Chute Assembly Adj. Clevis
2	D100-137	Chute Assembly Adjusting Nuts
1	D100-138	Chute Cyl. Nut for D100-172
1	D100-142	Chute Bracket (Bottom)
1	D100-142A	Side Plate for D100-142
1	D100-154	Chute Top 2/3 Iron & QN
2	D100-160	Flat Washer for D100-115
2	D100-168	Lock Washer for D100-115
2	D100-169	Flat Washer for D100-201
1	D100-172	Chute Cylinder Spring
1	D100-201	Mount Screw for D100-58/142
1	D100-216	Brass Pressure Screw & Nut
1	D100-237	Mount Screw for D100-41
1	D100-243	Dropdown Guide Lift Bearing
1	D100-244	Mount Screw for D100-243
1	D100-602	Chute Cylinder
1	D100-602A	Chute Cylinder Bushing
1	D100-604	Chute Safety Valve (31P)

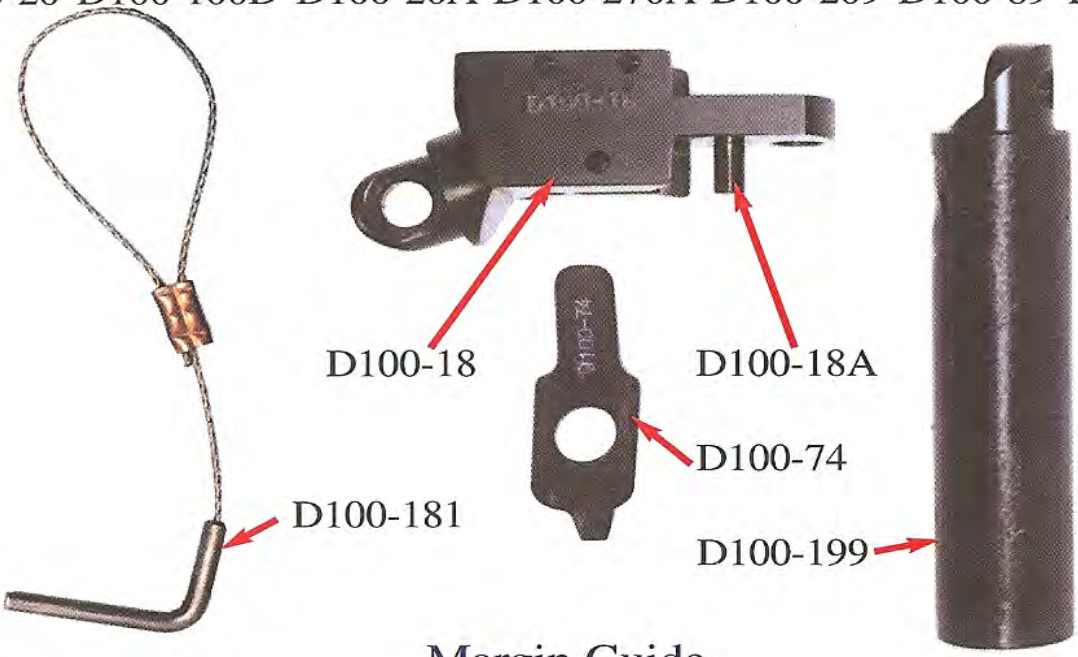
Knife Assembly



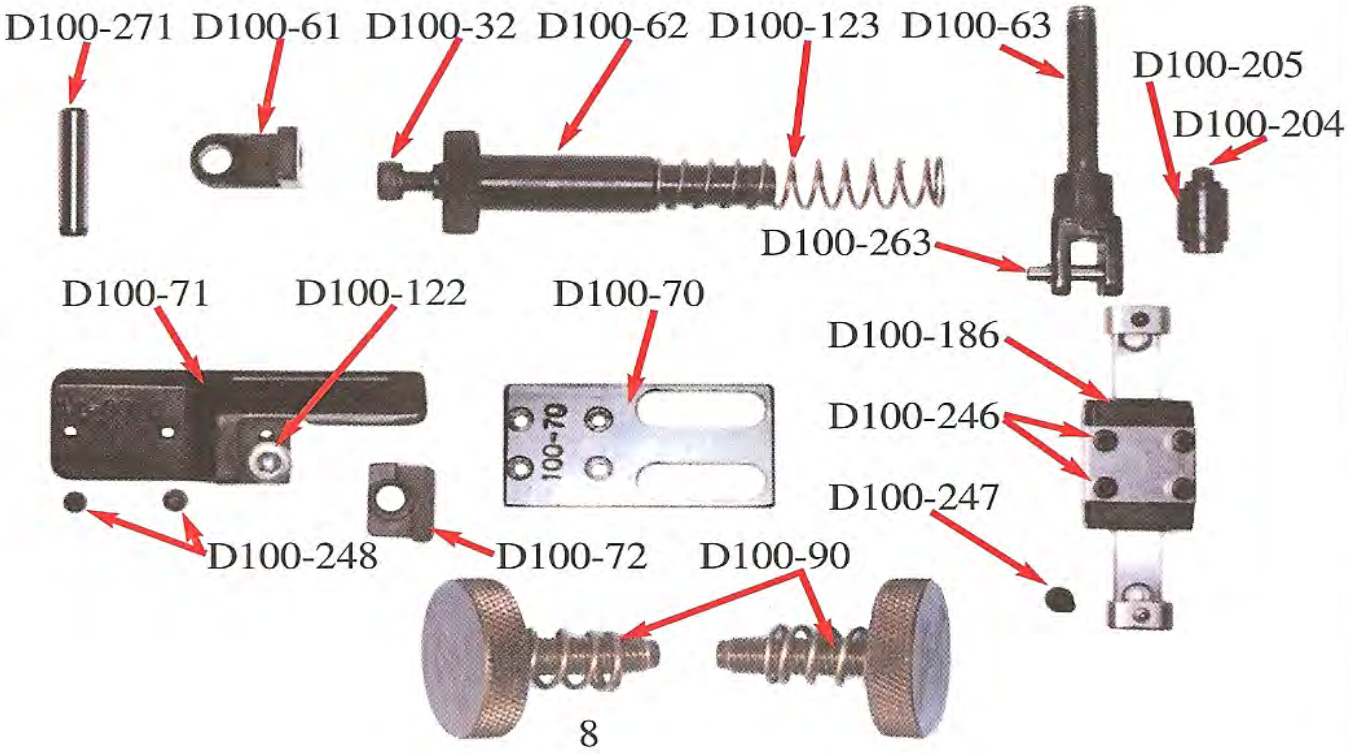
Quantity	Part Number	Description
1	D100-12	Knife Mounting Bracket
1	D100-13	90° Knife Linkage
1	D100-14	Knife Link
1	D100-17	Knife Slide Nut Block
1	D100-19	Knife Slide Plate
1	D100-39	Knife (Cutoff)
1	D100-54	Knife Guard
1	D100-100C	Knife Guard Screws
2	D100-107A	Knife Cyl. Rear Clevis Screw
1	D100-108	Knife Mount Screw
4	D100-109	Knife Slide Link Mount Screw
4	D100-110	Knife Slide Nut Block Screw
1	D100-111	Knife Linkage Shoulder Bolt
4	D100-165A	Flat Washer for D100-183
1	D100-166A	Lock Washer for D100-183
2	D100-169	Flat Washer for D100-107
1	D100-183A	Knife Mounting Bracket Bolts
1	D100-185	Knife Slide Assembly
1	D100-189	Knife Cylinder Rear Clevis
1	D100-200	Knife Clevis Front
1	D100-227	Knife Clevis Rear Mount Pin
1	D100-253	Knife Clevis Lock Nut
1	D100-257	Clevis Pin for D100-200
1	D100-502	Reed Switch
1	D100-502A	Reed Switch Grip Pad
1	D100-510	Reed Switch Strap
1	D100-601	Knife Cylinder
1	D100-601A	Knife Cylinder Bushing

Handle Parts





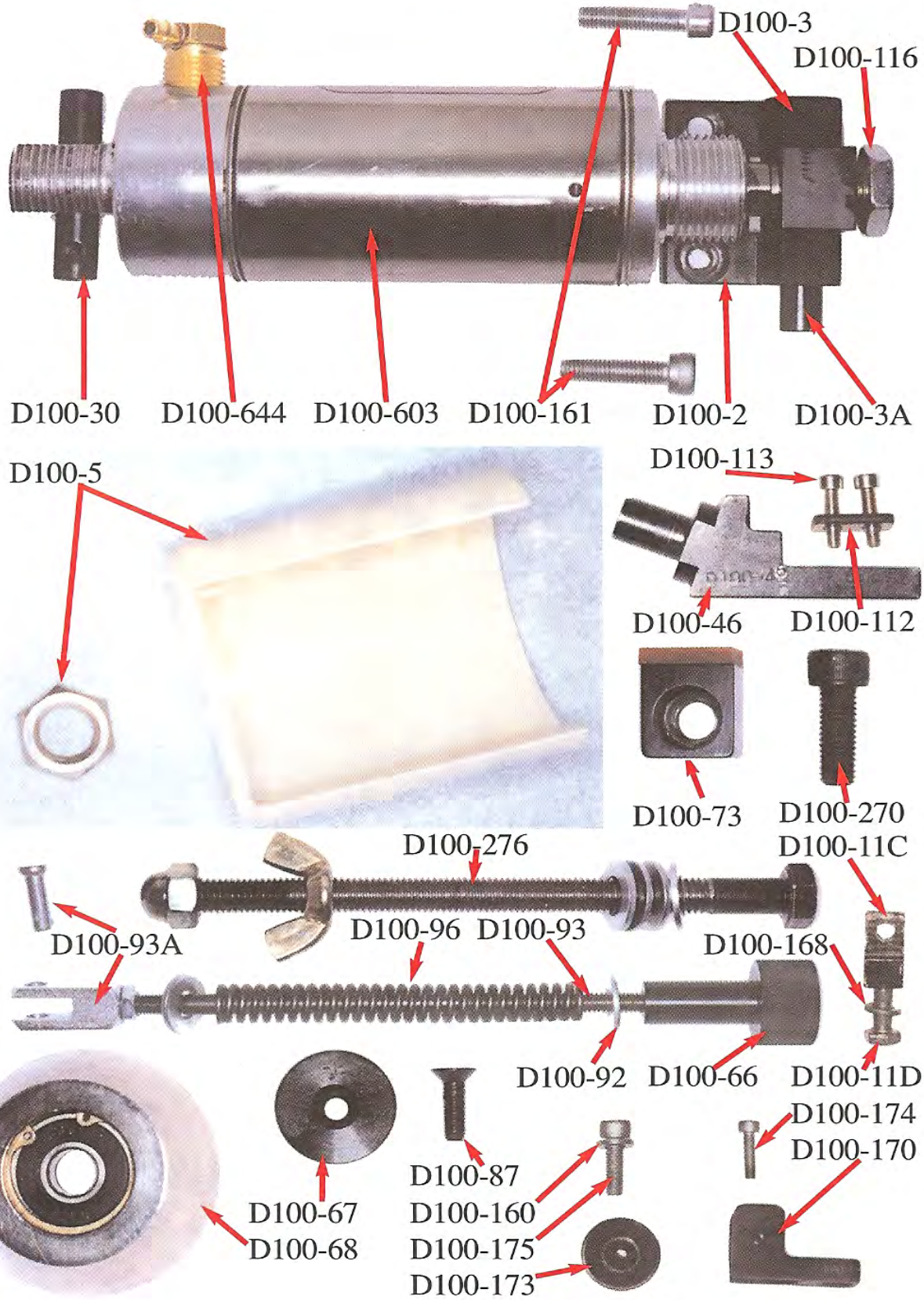
Margin Guide



Quantity	Part Number	Description
1	D100-20A	Thumb Lever Plate for Table
1	D100-18	Table Swivel Block
1	D100-18A	Margin Stop Pin
1	D100-20	Handle Thumb Lever
1	D100-74	Table Air Finger Switch
1	D100-88	Handle Table Pin
1	D100-89	Pivot Pin for Thumb Lever
2	D100-100D	Screws for Thumb Lever Plate
1	D100-181	Thumb Lever Release Pin
1	D100-199	Adjustable Handle
1	D100-209	Thumb Lever Spring
1	D100-270A	Adjustable Handle Bolt

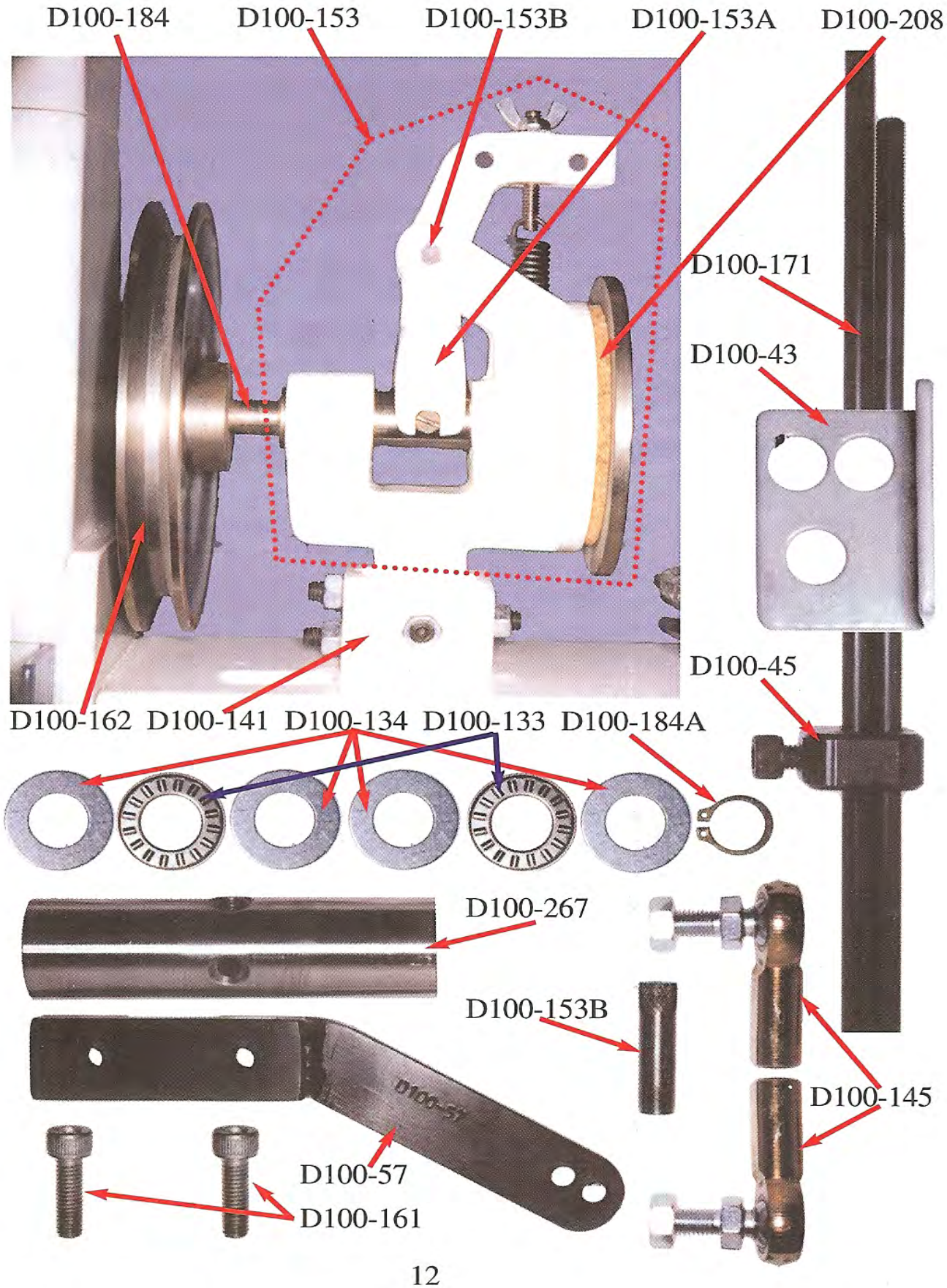
1	D100-32	Mount Screw for D100-61
1	D100-61	Edge Guide Link Bracket
1	D100-62	Margin Guide Adj. for D100-63
1	D100-63	Margin Guide Threaded Clevis
1	D100-70	Margin Guide Adapter Block
1	D100-71	Margin Guide Holder
1	D100-72	Margin Guide Square
2	D100-90	Thumb Screws for Margin Adj.
1	D100-122	Screw for D100-72
1	D100-123	Margin Guide Linkage Spring
1	D100-186	Margin Slide Only w/Screws
1	D100-204	Margin Guide Round Screw
1	D100-205	Margin Guide Round
4	D100-246	Mount Screw for D100-70
1	D100-247	Margin Slide Stop Screw
2	D100-248	Mount Screw for D100-71
1	D100-263	Pivot Pin for D100-63
1	D100-271	Pivot Pin for D100-61

Table Parts


D100-3
D100-116
D100-30
D100-644
D100-603
D100-161
D100-2
D100-3A
D100-5
D100-113
D100-46
D100-112
D100-73
D100-270
D100-276
D100-11C
D100-93A
D100-96
D100-93
D100-168
D100-92
D100-66
D100-11D
D100-174
D100-170
D100-87
D100-160
D100-175
D100-173
D100-67
D100-68

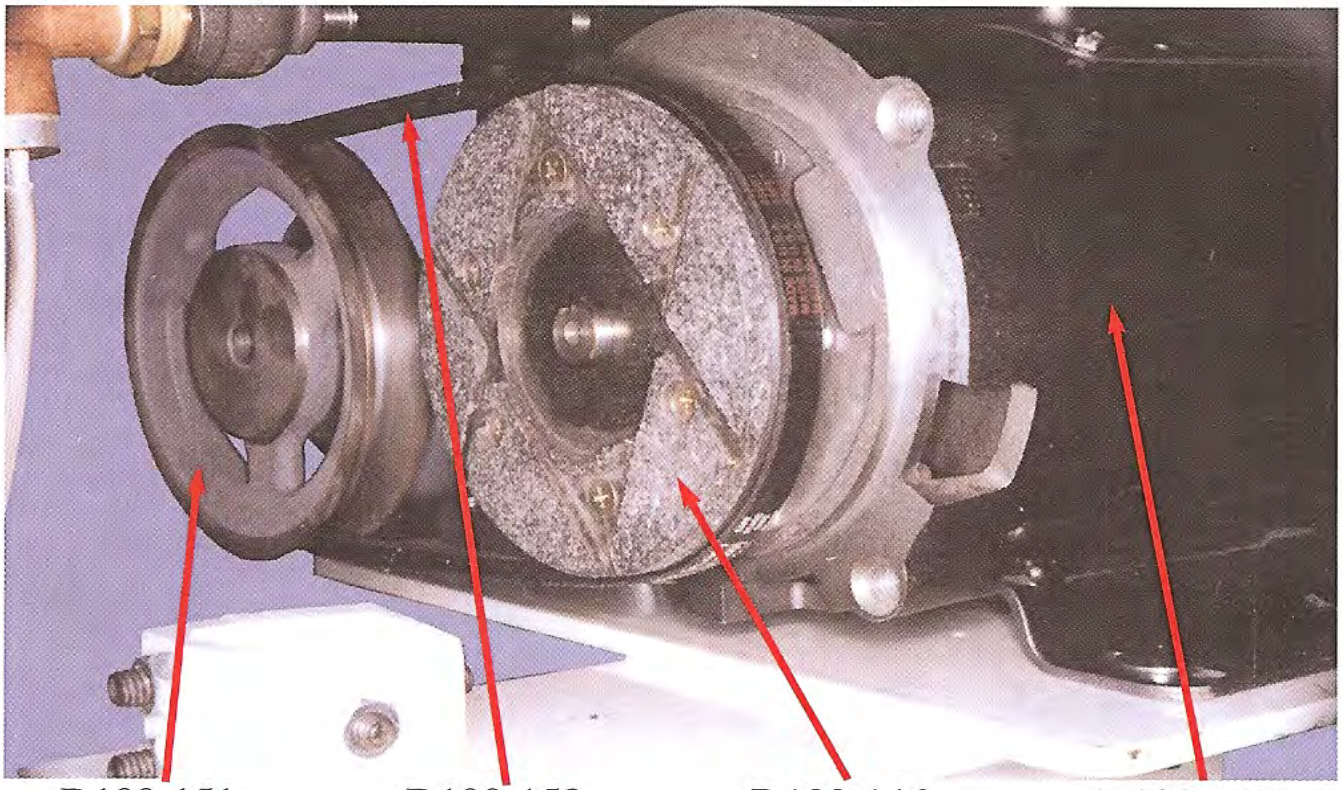
Quantity	Part Number	Description
1	D100-2	Table Cylinder to Head Mount
1	D100-3	Table Cylinder Clevis
1	D100-3A	Table Cylinder Clevis Pin Top
1	D100-5	Table Cylinder Cover and Nut
1	D100-11C	Clevis Block for D100-93
1	D100-11D	Bolt for Clevis Block
1	D100-30	Table Cylinder Clevis Pin Btm.
1	D100-46	Table Wheel Mount
1	D100-66	Table Tension Knob
1	D100-67	Table Wheel Retain Cap
1	D100-68	Table Wheel
1	D100-73	Bottom Table Stop
1	D100-87	Flat Head Screw for D100-67
1	D100-92	Flat Washer for D100-93
1	D100-93	Table Tension Rod
1	D100-93A	Table Tension Clevis & Pin
1	D100-96	Table Tension Spring
1	D100-112	Table Wheel Mounting Plate
2	D100-113	Table Wheel Mount Screw
1	D100-116	Air Cylinder Cover Mount Nut
1	D100-160	Flat Washer
2	D100-161	Table Cylinder to Head Screw
1	D100-168	Lock Washer
1	D100-170	Table Bearing Side Play Holder
2	D100-173	Table Play Bushing w/Bearing
1	D100-174	Table Side Play Mount Screw
1	D100-175	Table Side Block Mount Screw
1	D100-270	Table Stop Mount Screw
1	D100-276	Table Stop Bolt/Washers/Nuts
1	D100-603	Table Cylinder
1	D100-644	Air Fitting

Clutch Parts

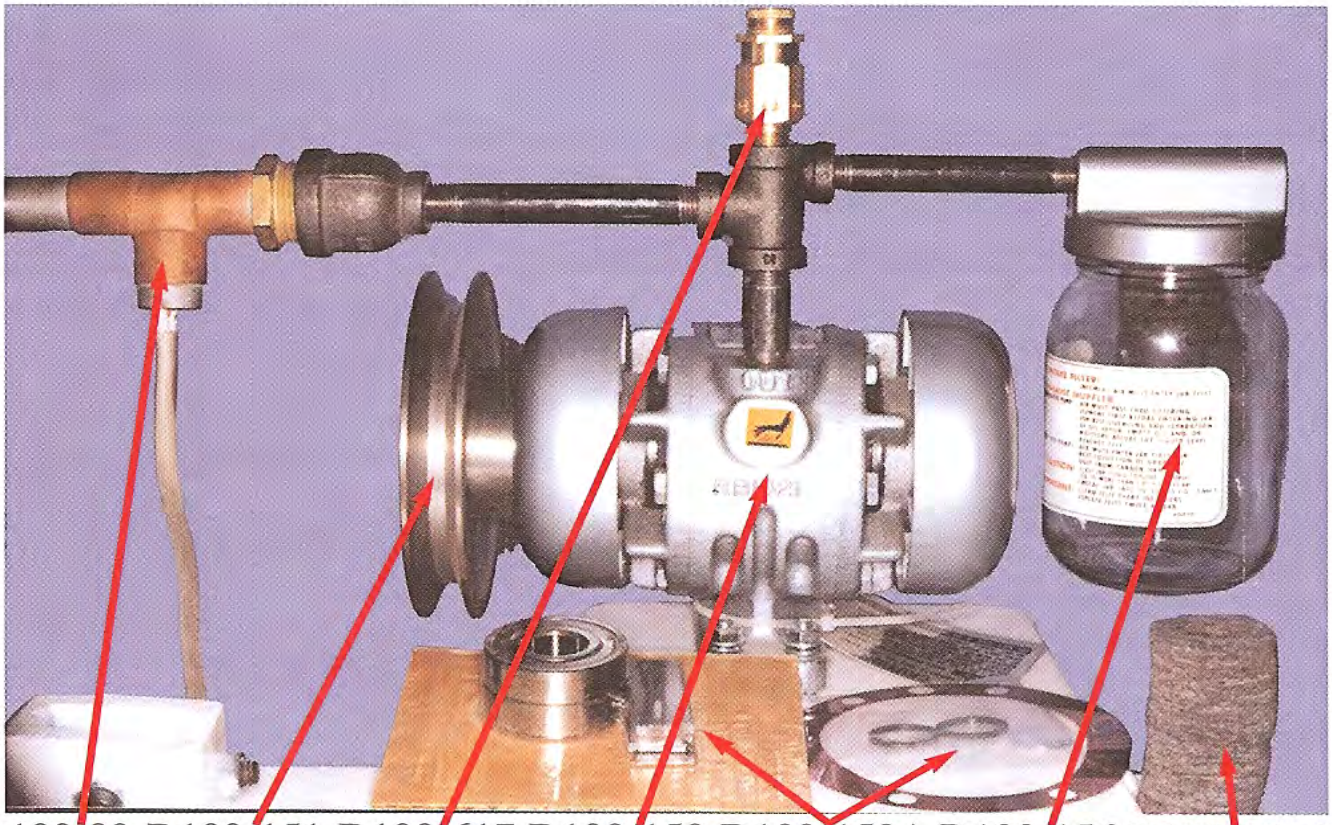


Quantity	Part Number	Description
1	D100-43	Linkage Rod Bracket
1	D100-45	Foot Pedal Adjustment Block
1	D100-57	Clutch Lever
2	D100-133	Thrust Bearing
4	D100-134	Thrust Washer
1	D100-141	Clutch Base Block
2	D100-145	Clutch Pedal Rod Ends
1	D100-153	Complete Clutch Assembly
1	D100-153A	Clutch Yoke
1	D100-153B	Clutch Yoke Pin
2	D100-161	Mount Screws for D100-57
1	D100-162	Clutch Pulley
2	D100-171	Foot Pedal Linkage Rod
1	D100-184	Clutch Plate and Shaft
1	D100-184A	Snap Ring
1	D100-208	Brake (Cork)
1	D100-267	Clutch Shaft Bearing

Motor & Air Pump



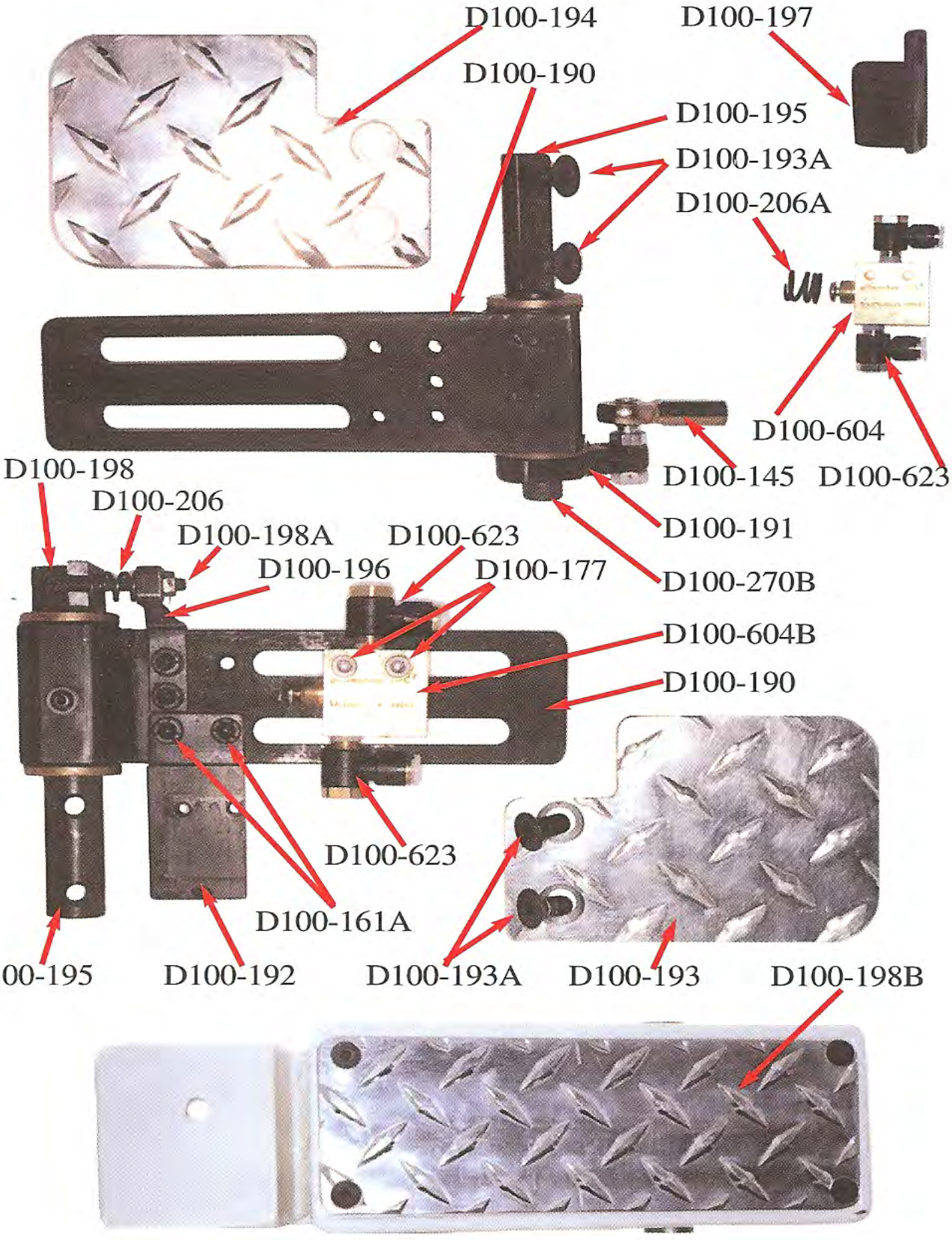
D100-151 D100-152 D100-146 D100-148



D100-80 D100-151 D100-617 D100-150 D100-150A D100-156 D100-150C

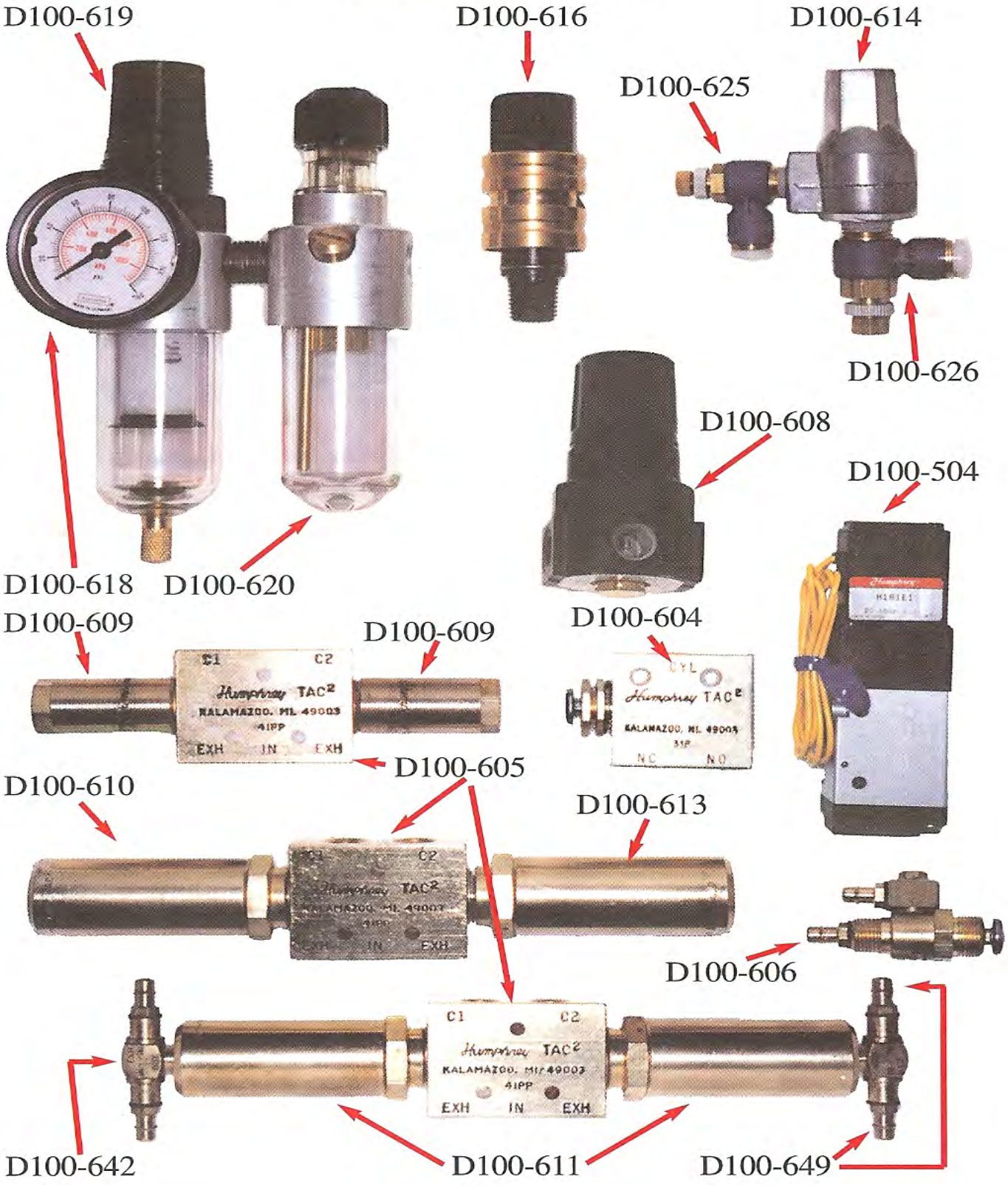
Quantity	Part Number	Description
1	D100-80	Electrical Heater
1	D100-146	Motor Pulley & Clutch Disc
1	D100-148	Motor
1	D100-150	Air Pump
1	D100-150A	Pump Rebuilding Kit
1	D100-150C	Felt Filter
1	D100-151	Pump Pulley
1	D100-152	Motor/Pump Pulley Belt
1	D100-156	Filter Bowl
1	D100-617	Air Relief Valve

Foot Pedal Parts
Standard Model Only



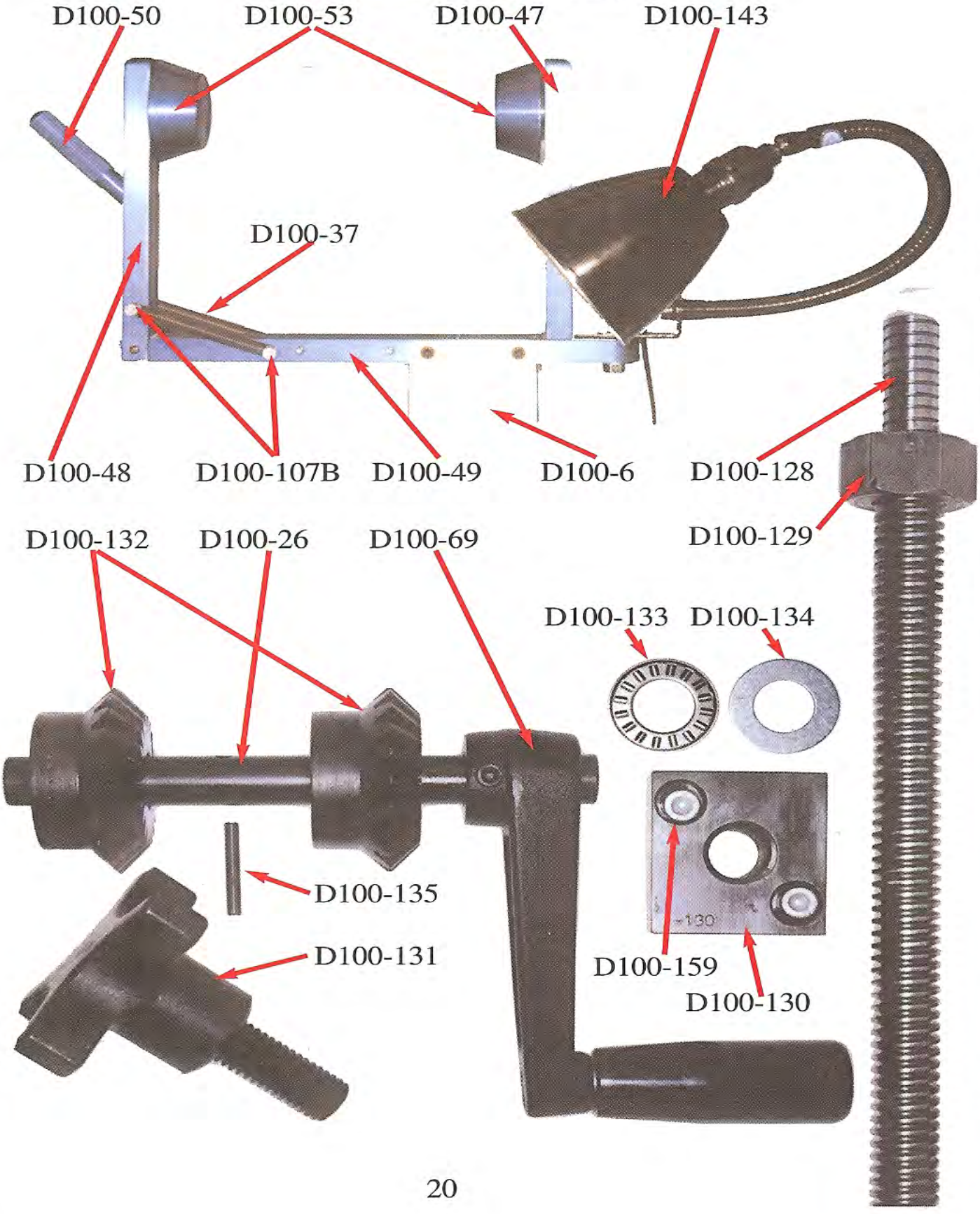
Quantity	Part Number	Description
2	D100-145	Clutch Pedal Rod End
2	D100-161A	Mounting Screws for D100-192
2	D100-177	Mounting Screws for D100-604
1	D100-190	Foot Pedal Base Bracket
1	D100-191	Clutch Pedal Rod End Connect
1	D100-192	Foot Pedal Knife Switch Mount
1	D100-193	Left Foot Pedal
2	D100-193A	Foot Pedal Screw
1	D100-194	Right Foot Pedal
1	D100-195	Foot Pedal Shaft
1	D100-196	Foot Pedal Adjust Block
1	D100-197	Foot Pedal Air Switch Trigger
1	D100-198	Foot Pedal End for Spring Adj.
1	D100-198A	Bolt and Nut for D100-196/198
1	D100-198B	Optional Knife Pedal
1	D100-206	Foot Pedal Spring
1	D100-206A	Spring for Optional Knife Pedal
1	D100-270B	Mount Screw for D100-191
1	D100-604B	Knife Valve 31P
2	D100-623	Air Elbow Fitting

Air Assembly
Standard Model Only



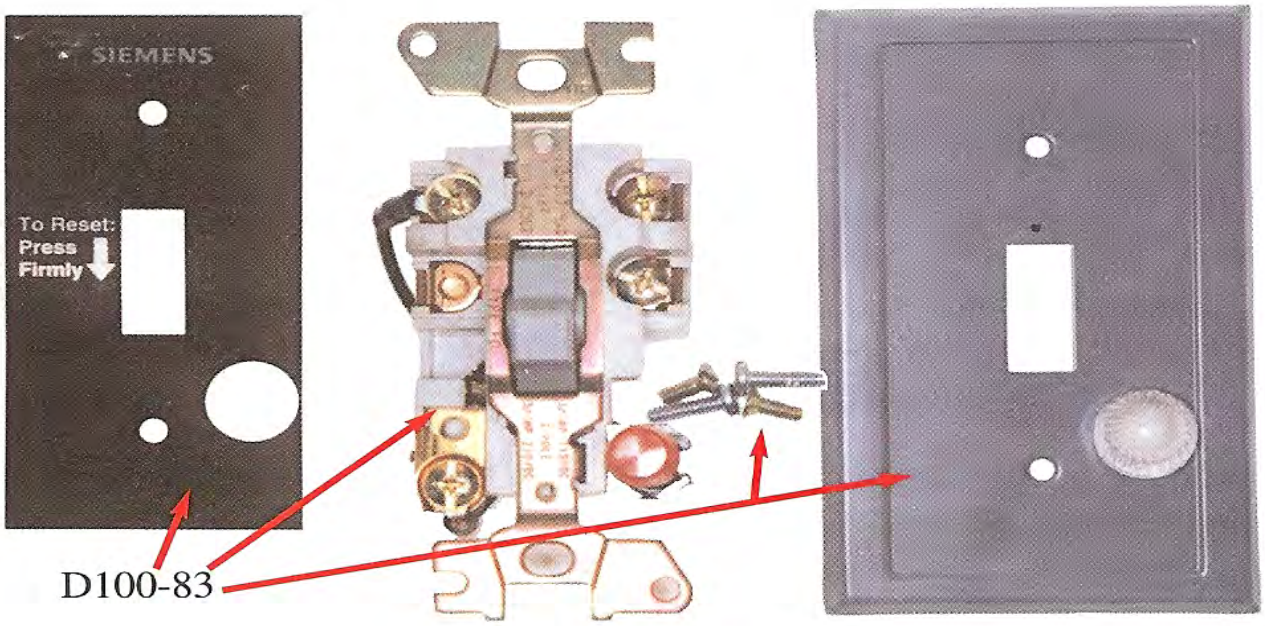
Quantity	Part Number	Description
1	D100-504	Solenoid Valve
1	D100-604	Air Valve 31P
3	D100-605	Air Valve 41PP
1	D100-606	Air Trigger Valve 3P
1	D100-608	Knife Regulator
2	D100-609	Knife Pedal Valve
1	D100-610	Knife Cyl. Valve (Left) 341AS
2	D100-611	Table Cyl. Valve 34AR
1	D100-613	Knife Cyl. Valve (Right) 341AR
2	D100-614	Quick Exhaust
1	D100-616	Slide Valve
1	D100-618	Air Gauge
1	D100-619	Filter Regulator
1	D100-620	Oil Regulator
1	D100-625	1/4 " Air Control Valve
1	D100-626	3/8 " Flow Control Valve
2	D100-642	Quick Exhaust T-Connector
4	D100-649	Fitting

Unit Base
Standard Model Only



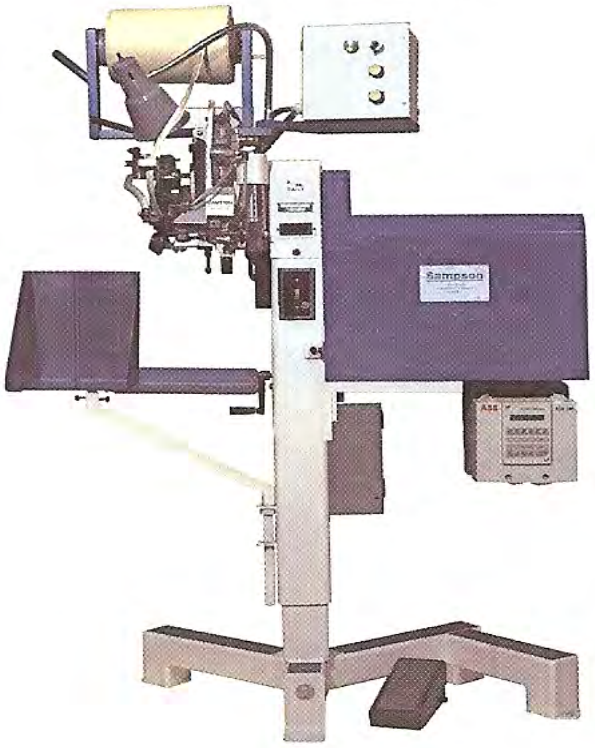
Quantity	Part Number	Description
1	D100-6	Rib Holder Mount Plate
1	D100-26	Height Adjust Pinion Gear Shaft
2	D100-37	Springs for Rib Holder
1	D100-47	Rib Holder, Solid Post
1	D100-48	Rib Holder, Swing Post
1	D100-49	Rib Holder, Bottom Bar
1	D100-50	Swing Post Handle
2	D100-53	Tape Holder Wheels
1	D100-69	Base Height Adjustment Handle
2	D100-107B	Mount Screw for D100-37
1	D100-128	Threaded Acme Rod
1	D100-129	Height Adjust Locking Collar
1	D100-130	Threaded Acme Block
1	D100-131	Leg Adjust Locking Knob
2	D100-132	Beveled Gears
1	D100-133	Thrust Bearing
4	D100-134	Thrust Washers
1	D100-135	Thrust Pin for Leg Adjust
1	D100-143	Lamp
2	D100-159	Mounting Screws for D100-130

Unit Base (Continued)
All Models



Quantity	Part Number	Description
1	D100-83	Main On/Off Switch w/Plates
1	D100-211A	Digital Temperature Gauge
1	D100-222	Temp Gauge Mount Plate
2	D100-224	Mount Screw for D100-222
1	D100-538	Thermocouple Wire
1	D100-663	Hose Clamp

Other Machine Styles Available
Automatic Model



Tabletop Model

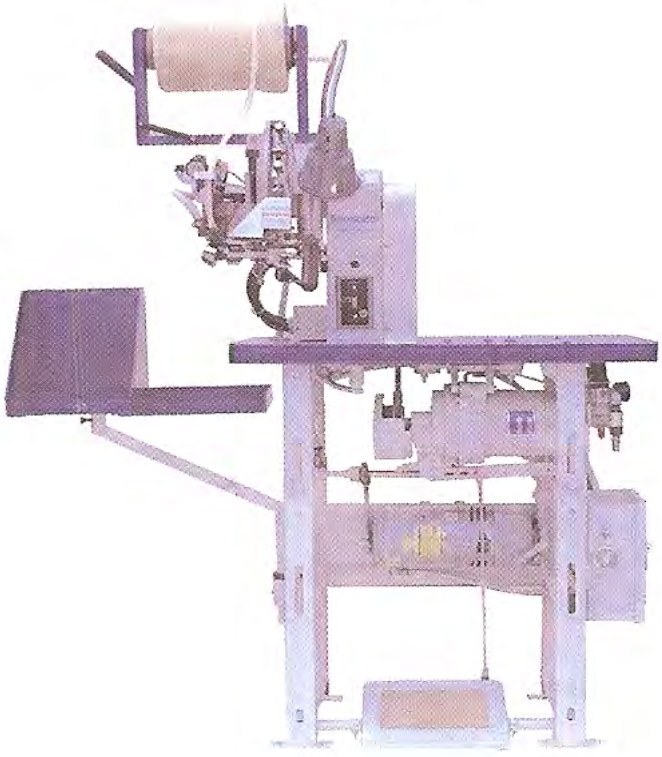
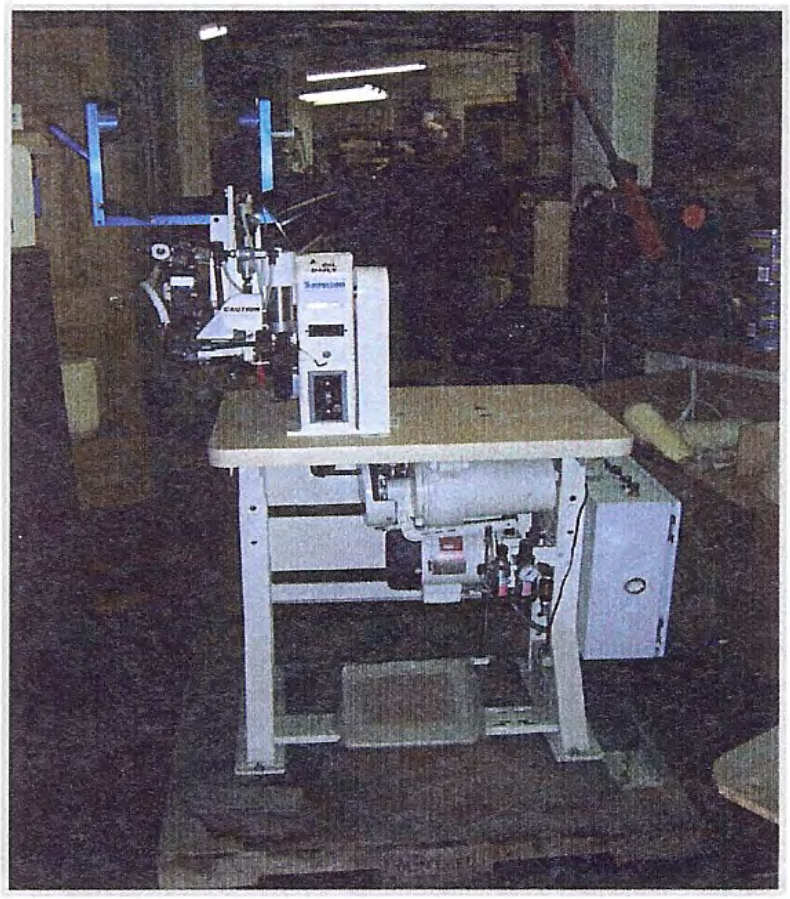
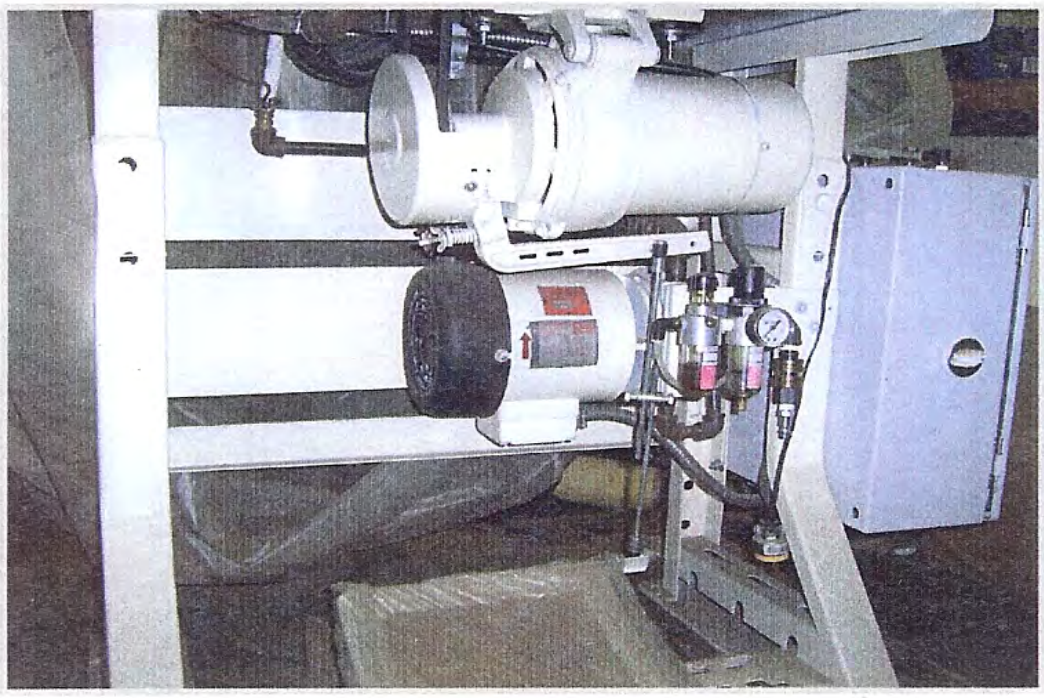
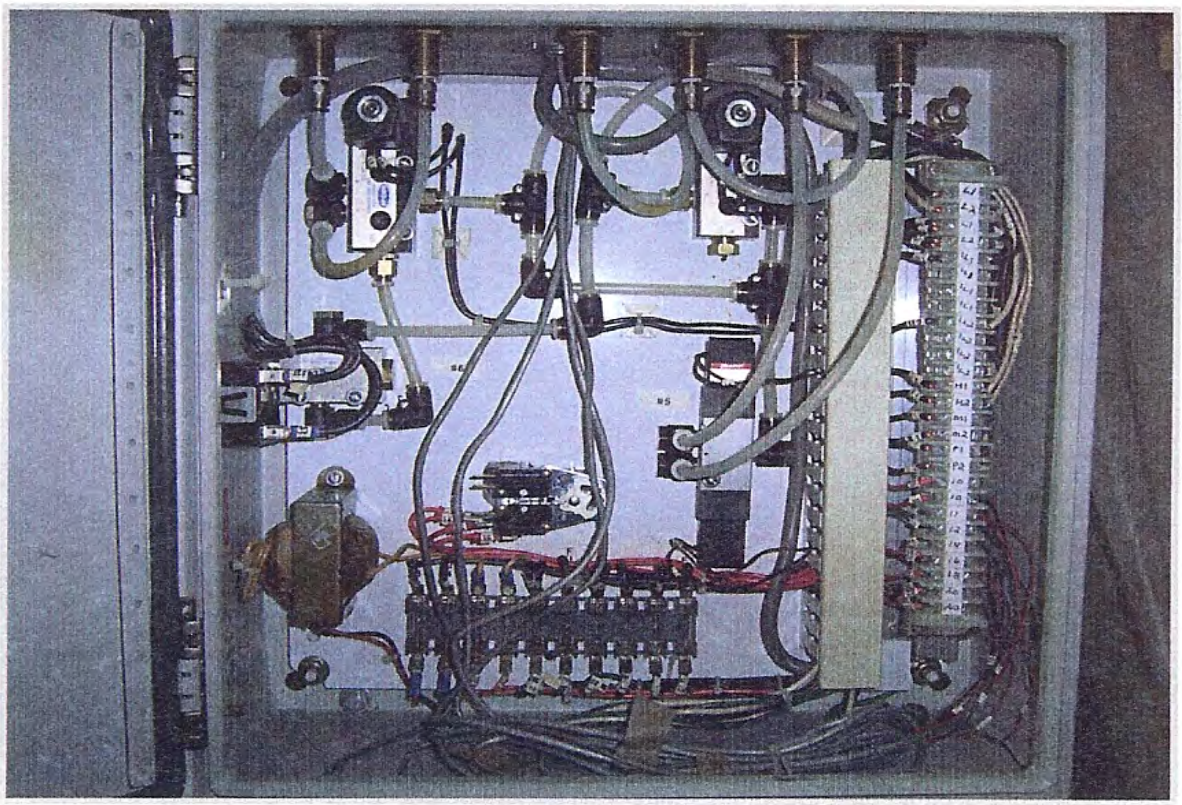
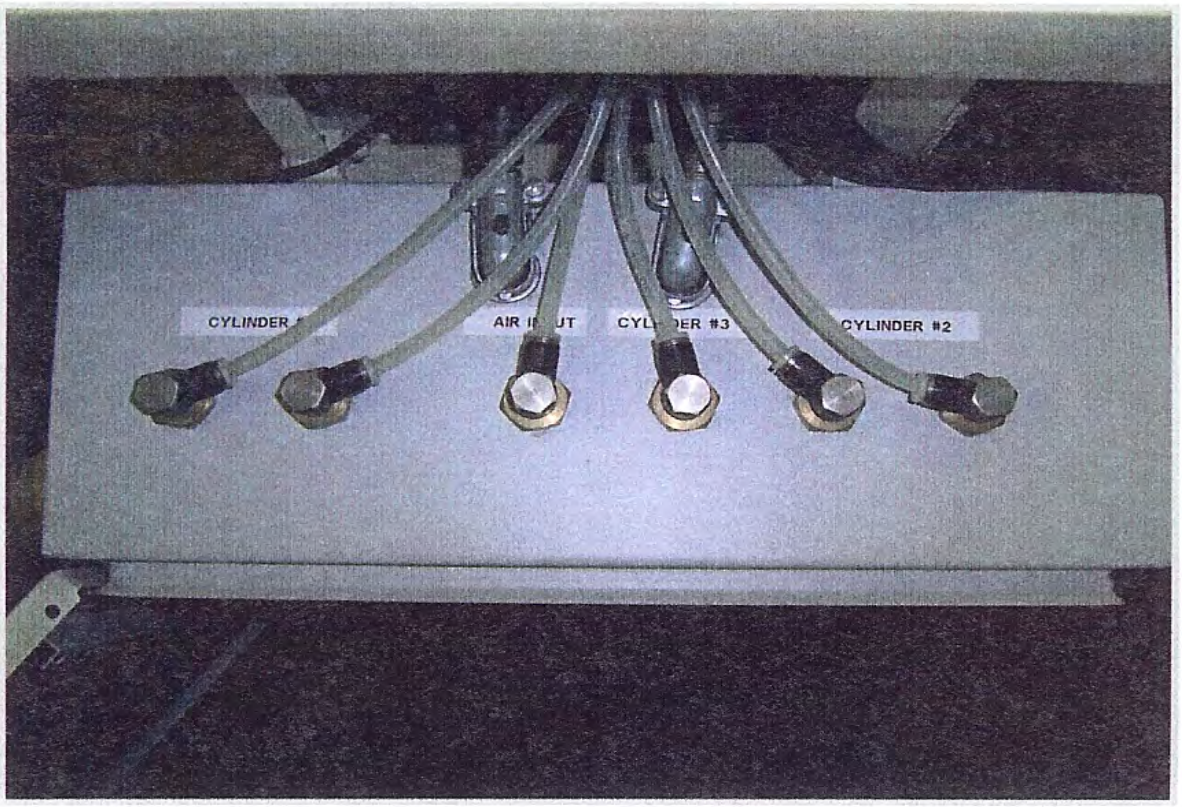


TABLE TOP MODEL







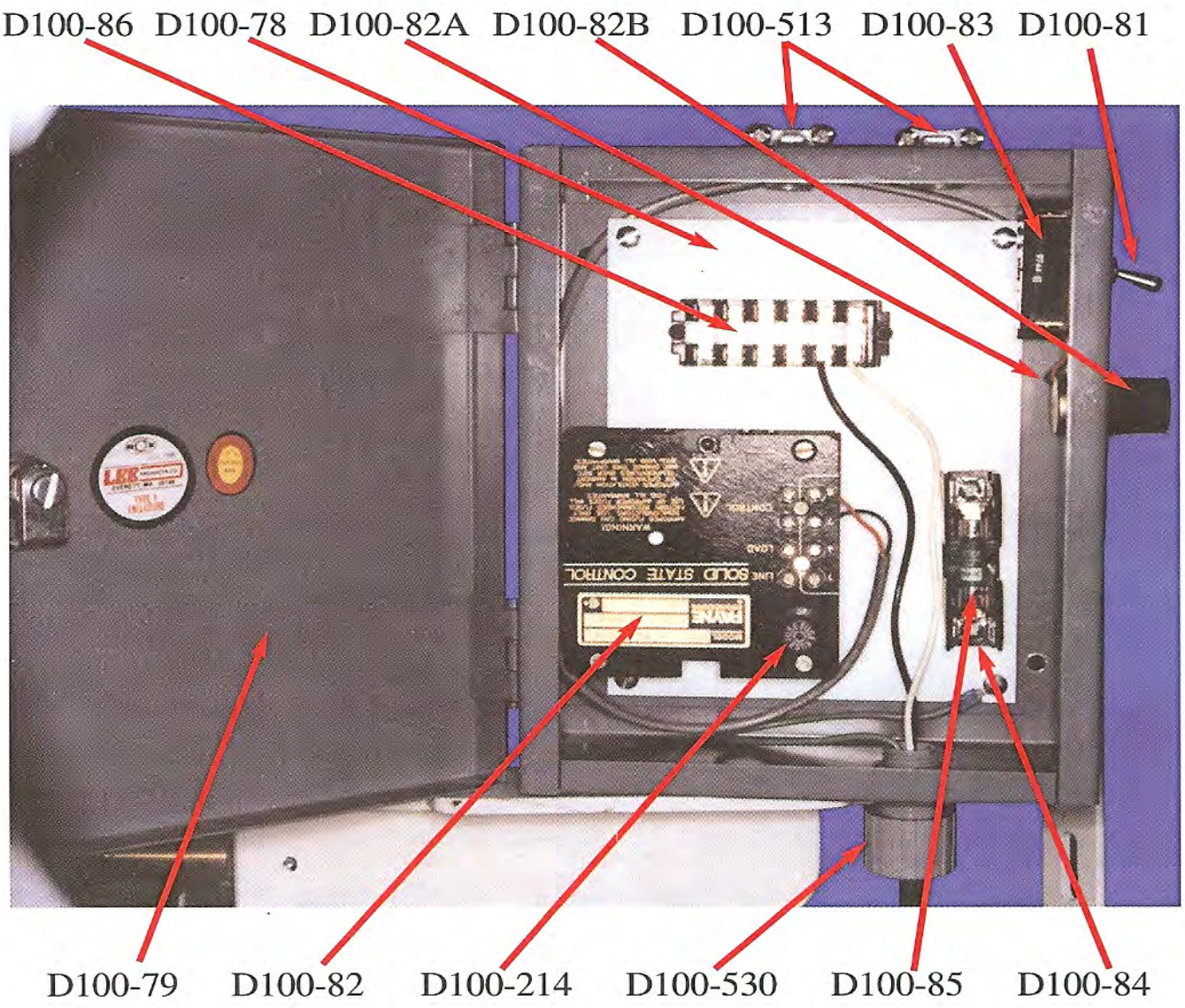


24B

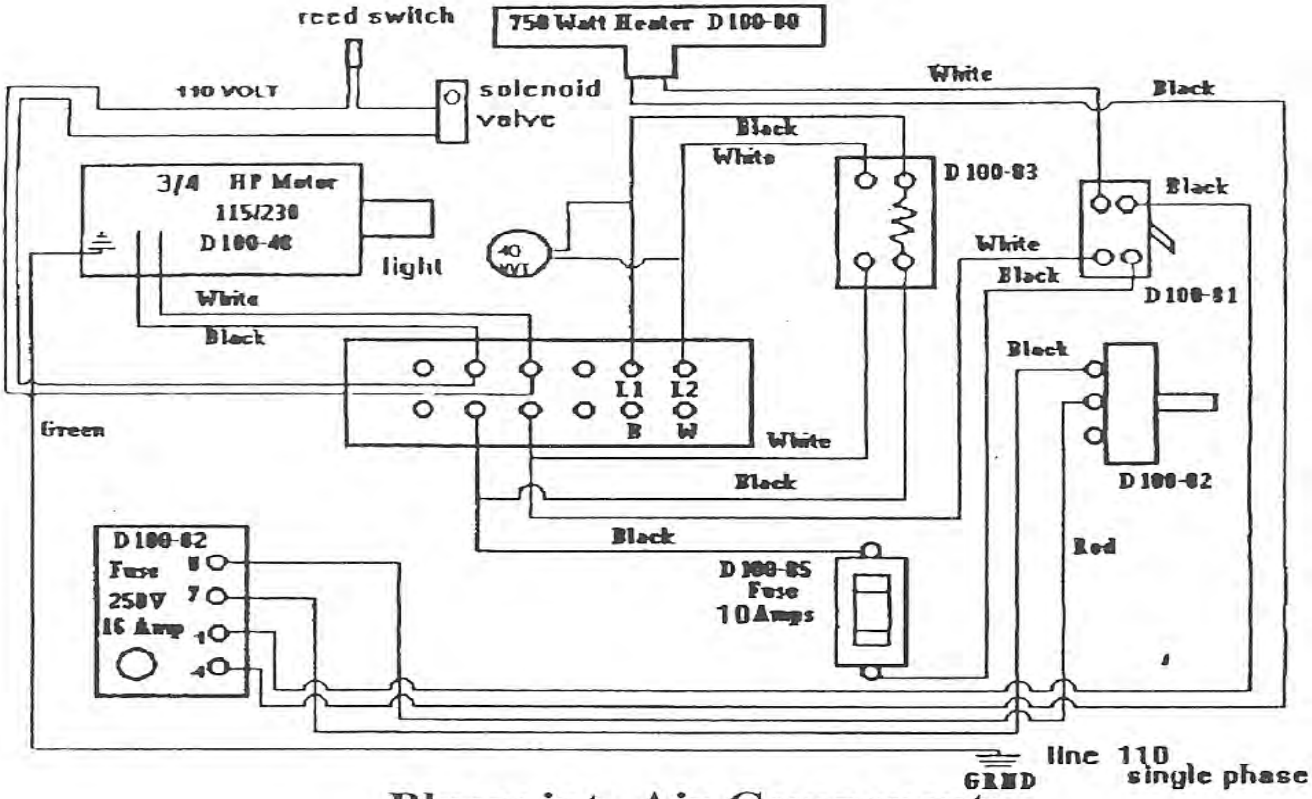
Rib Styles

Quantity	Part Number	Description
1	D100-78	Electrical Panel in Box
1	D100-79	Electrical Box
1	D100-81	Heat Switch On/Off
1	D100-82	Temperature Control
1	D100-82A	Temp Control Pot
1	D100-82B	Temperature Control Knob
1	D100-84	Fuses Block
1	D100-85	10-Amp Fuses
1	D100-86	6-Terminal Junction Block
2	D100-214	Fuse (250V 16 Amp)
2	D100-513	$^3/_8$" Straight Connector
1	D100-530	Nylon Power Cord Connector

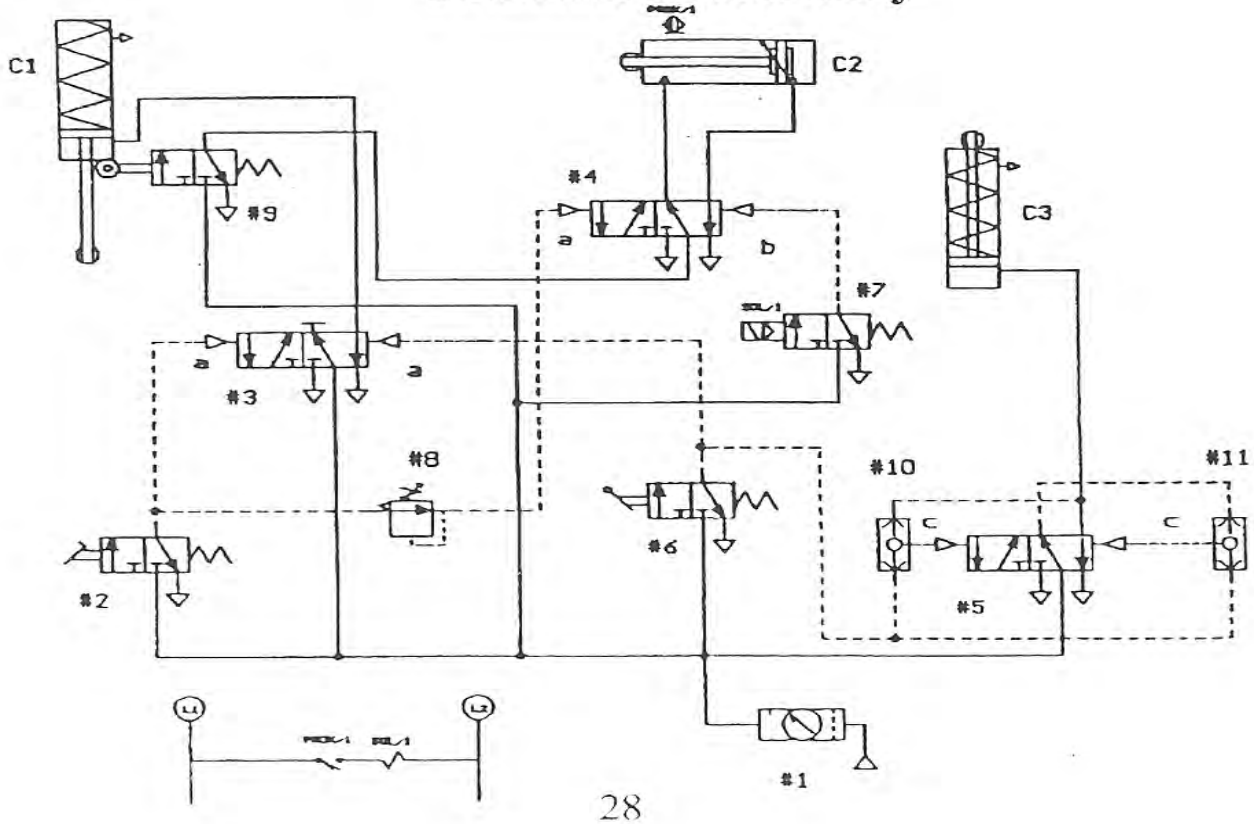
Electrical Parts
Standard Model Only

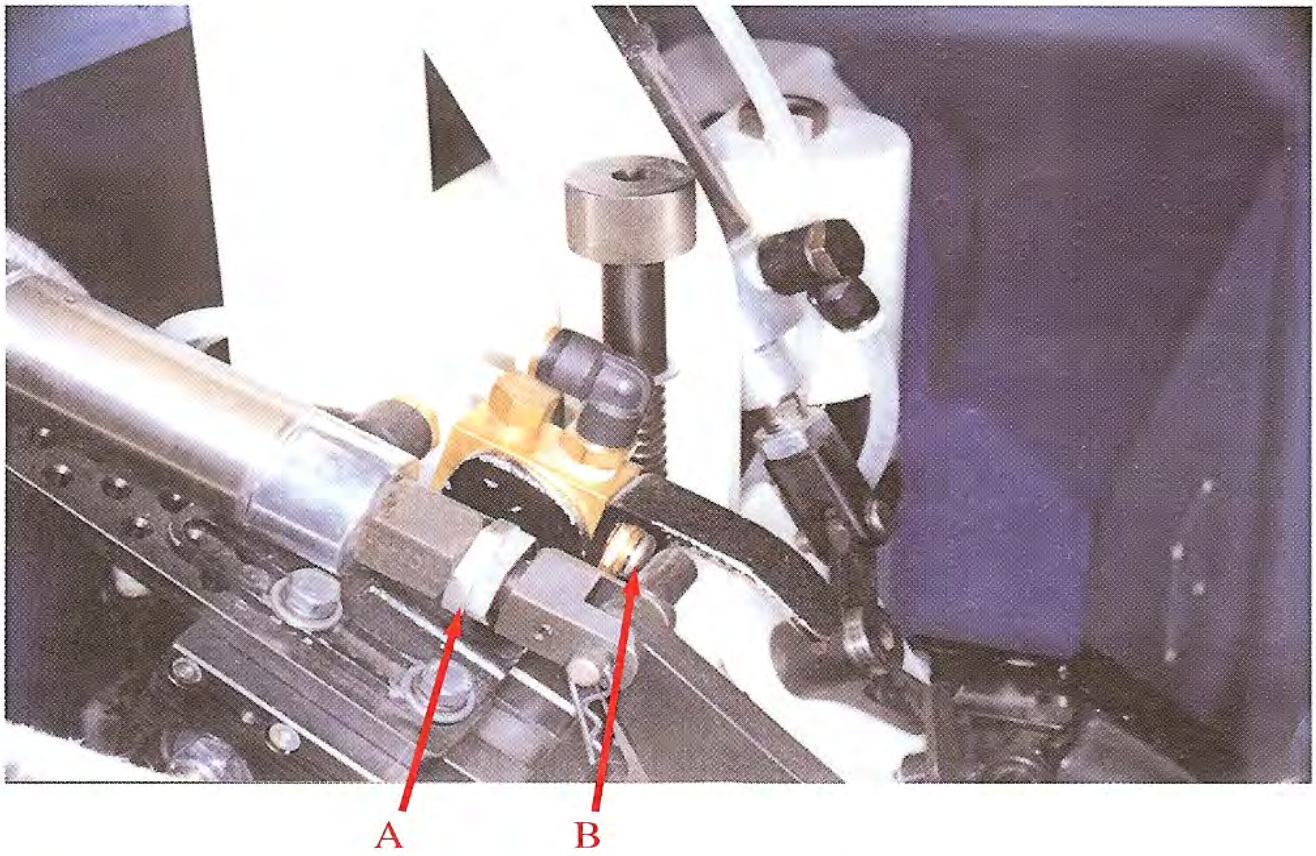


Blueprint--Electrical Components
Standard Model Only



Blueprint--Air Components
Standard Model Only

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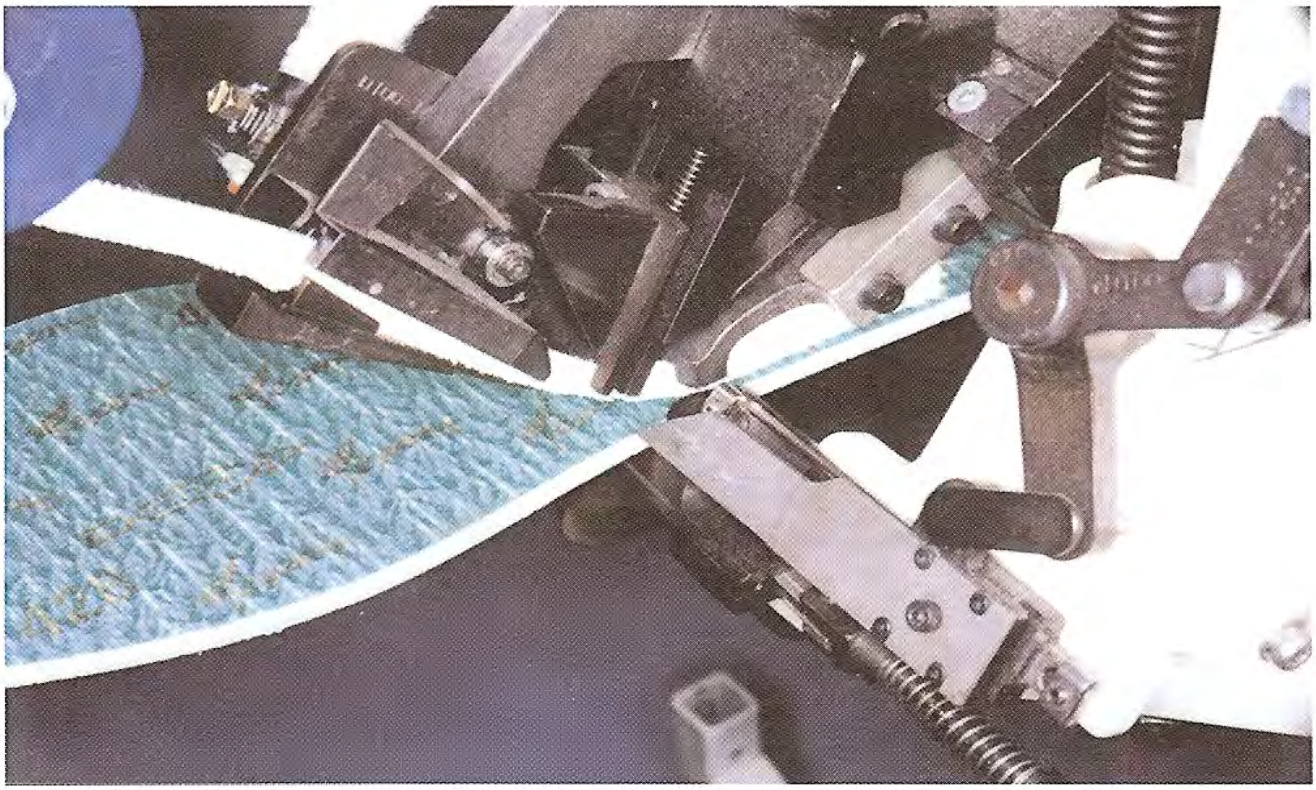


Operator Position

The operator should be seated directly in front and facing the Sampson Rib Attacher (SRA), within easy reach of both Foot Pedals, and the Margin Guide Handle.

Note: Turn the SRA on five minutes before operating, to give the SRA time to reach the proper heat level.

Operating Instructions

1. The operator begins by placing a spool of Odell Rib in the Rib Holder, located at the top of the SRA. The rib is then fed through the Tapered Guide Roll into the Rib Chute and then through the Slotted Foot.

2. With the table in the lowest position, the operator takes a cemented insole and places it against the Margin Guide, at the desired starting point. Pressing the trigger (located below the handle) will lift the table, and hold the insole in place. Margin Adjustments are explained in a separate section (see Table of Contents).

3. To operate the SRA, apply pressure to the Right Foot Pedal, at the same time guide the insole around, keeping the insole against the Margin Guide.

4. To stop or slow the SRA down, release the Right Foot Pedal.

5. To cut the rib, apply pressure to the Left Foot Pedal. This will lift the Rib Chute. The Knife will extend and cut the rib, and then retract. Apply pressure to the Right Foot Pedal, and press the Trigger to reset for the next insole.

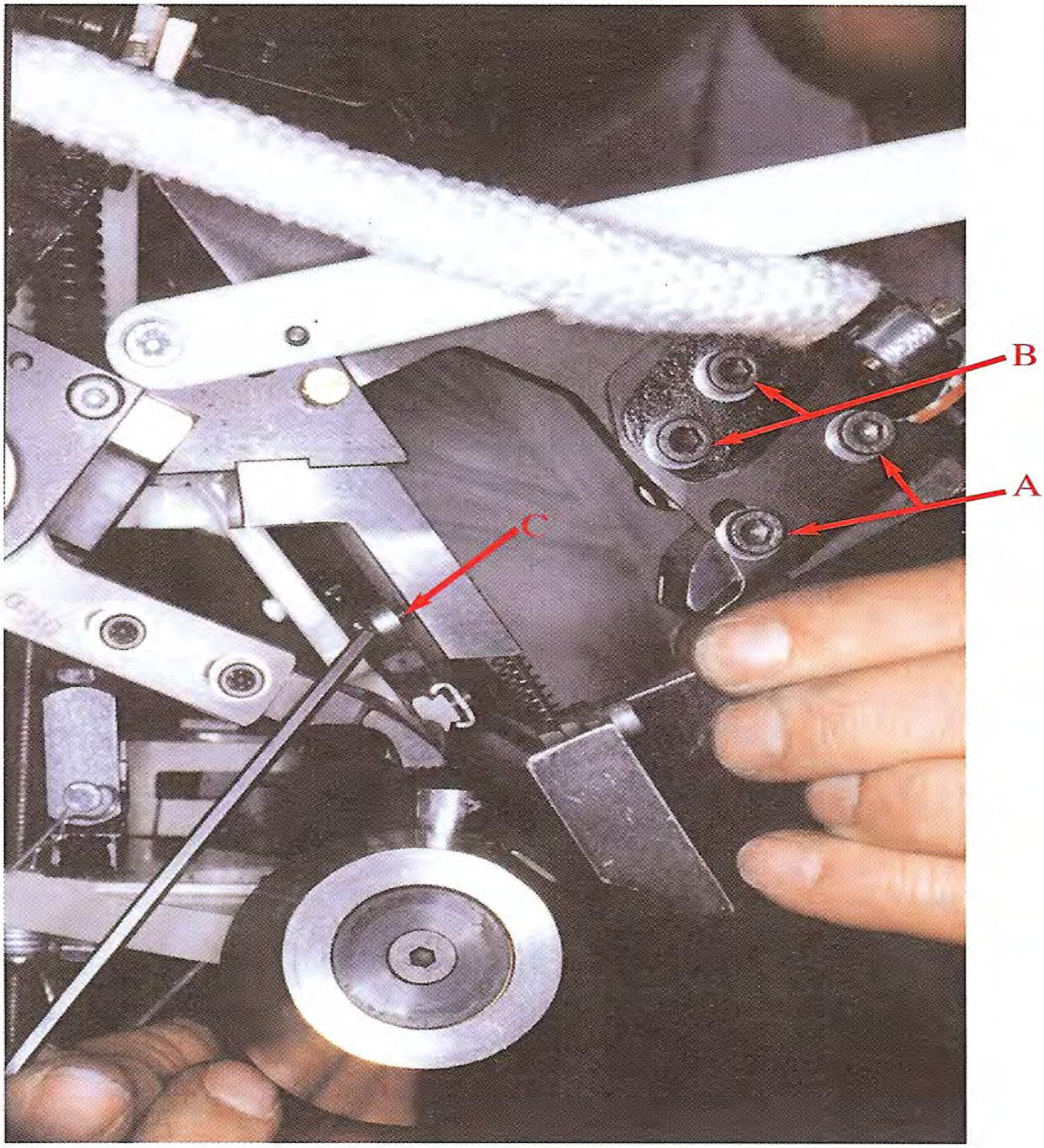
Caution: Pressing the Left Foot Pedal (which activates the Knife) and the Trigger at the same time will cause poor adhesion of the rib to the insole at the point it is being cut.

Sampson Rib Attacher (SRA) Adjustments

1. Table / Feet Adjustments:

With the machine turned on, press down on the Right Foot Pedal slowly, making sure that the two Feet (D100-15&16) are not hitting the Table Wheel (D100-68). There should be 1/16" or 1.6MM between the Feet and the Table Wheel at their lowest point, if not, loosen the Table Stop Adjusting Bolt (**Page 35, Arrow A**). Adjust by unlocking the Wing Nut and turning it up or down.

Both Feet have a slight forward and backward adjustment (**Page 39 Arrow D**). This is so you can adjust the Feet to the same height off the Table Wheel. This can be checked by running an insole without the rib --- look at the pattern the feet leave on the insole after you have run it without the rib. By looking at the pattern left on the insole you can determine if you have the correct height adjustment. You can adjust the pressure by turning the Tension Knob (D100-66). The tension should be set around thirty pounds (use a spring scale) (**Page 37 Arrow B**).


B
A
C

The Table Wheel and the outside of the Slotted Foot should line up evenly. Aligning the Feet and the Table Wheel can be done two different ways. First, loosen the two Table Wheel Mounting Screws and then move the Table Wheel left or right, to line it up with the Slotted Foot. Or, you can loosen the center screw on the Right Foot Holder (D100-24R) and move the Right Foot Holder to the left or right, but make sure the Feet are not hitting each other. (**Page 39 Arrow E**)

2. Rib / Chute / Feet Alignment Adjustments:

There are two adjustments for the Rib Chute. The bottom two screws on the Chute Bracket are to adjust the way the rib fits in the Chute. The rib should be tight enough so it does not flip over, but loose enough that it does not cause the insole to curl. If the Chute is too loose, the margin can vary, resulting in problems with the rib cutoff.(**Page 31 Arrow A**)

The second adjustment requires a complete Chute adjustment. There are four screws on the Chute, the top two are for the complete Chute adjustment (**Page 31 Arrow B**). The best way to adjust the Chute is to start with your thickest insole:

A. Adjust the height of the Chute. It should be slightly above the insole, if not it will create a drag, which can cause the insole to curl as the rib is being attached.

B. With the Slotted Foot (D100-15) all the way forward, move the Chute as close to the Slotted Foot as possible. If it is too close it will cause the Chute and the Drop Down Guide (D100-65) to bind. (**See Cover**)

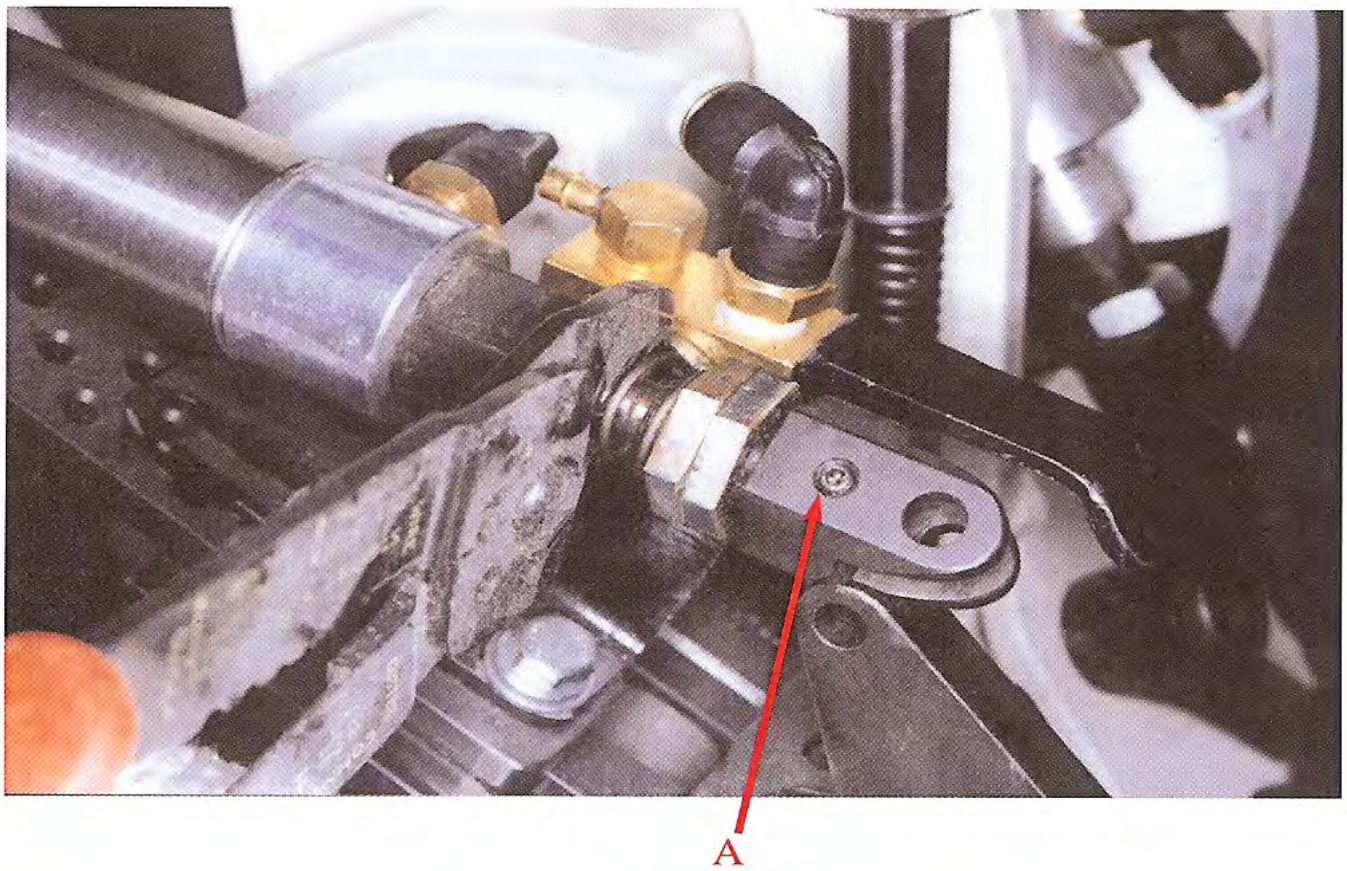
C. After the rib is inserted through the Chute, the rib should not touch the top of the opening on the Slotted Foot with the Slotted Foot in the lowest position. (**Page 45 Arrow A**)

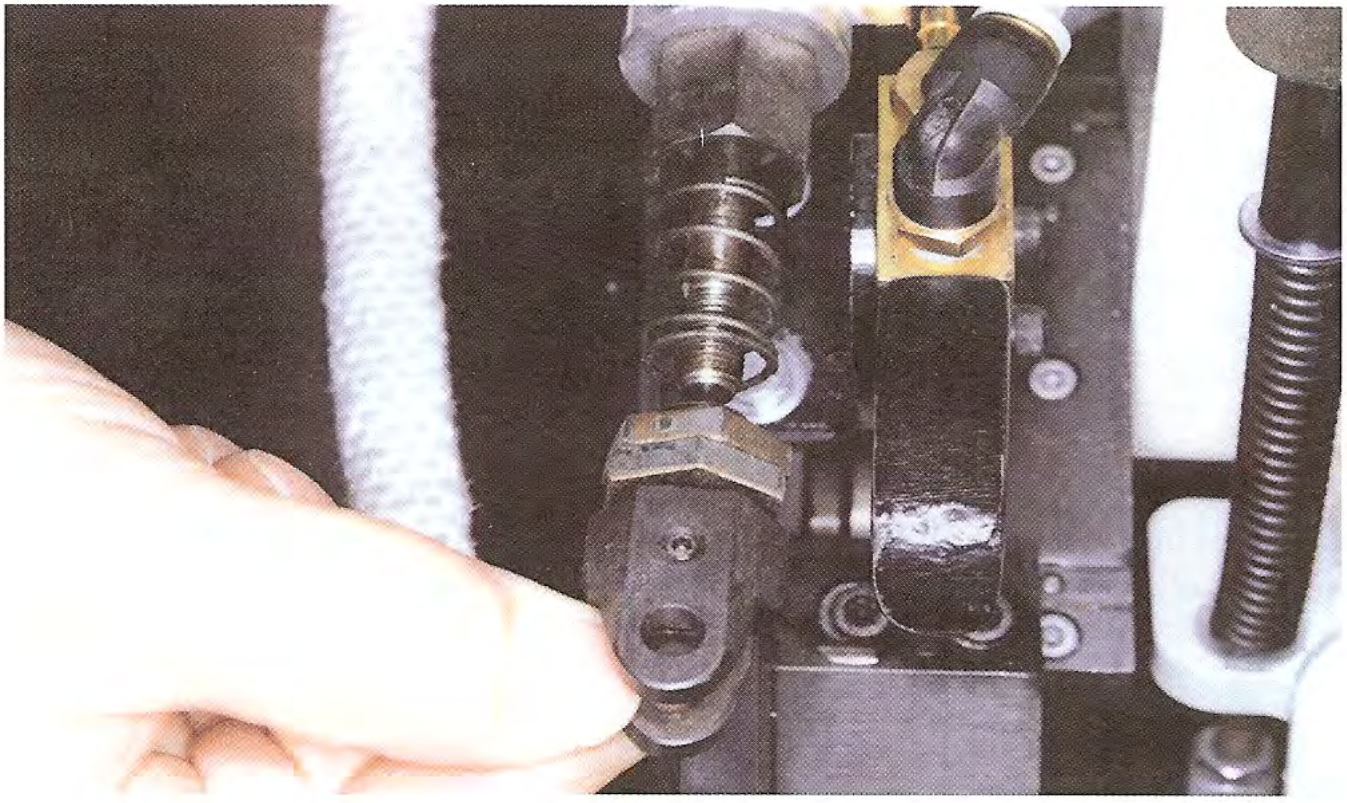
3. Rib Length through the Feet:

The length of the rib, after cutting, has to be long enough to fall back into the Slotted Foot after the SRA has reset. There are two adjustments that have to be made if you need to alter the length of the rib through the Slotted Foot.

A. Loosen both Jam Nuts located on the front of the Chute Cylinder Adjustable Clevis (D100-136). Turn the Jam Nuts (D100-604) towards the front of the Chute Cylinder Adjustable Clevis to increase the length of the rib, towards the back will decrease the length of the rib. (**Page 29 Arrow A**)

B. When you move the Jam Nuts, you must also adjust the Safety Switch Mount Bracket (D100- 55A). First you need to step on the Knife Pedal to actuate the knife, so the Chute is in the up position. Now look at the space between the Safety Switch (D100-604) and the Safety Pin


A



(D100-38), there should be a small space between them. If there is no space you can break the Safety Pin. If there is too much space the Knife will not actuate properly. To adjust loosen the two 10MM bolts on the Safety Switch Mount Bracket*. **(Page 29 Arrow B)**

* Even with the proper adjustment a broken Chute Cylinder Spring can cause the rib length to vary. A broken Rib Lock Lever Spring (D100-34) or a dull point on the Rib Lock Lever (D100-126) can cause the same problem. **(Page 4)**

4. Replacing the Drop Down Guide Spring:

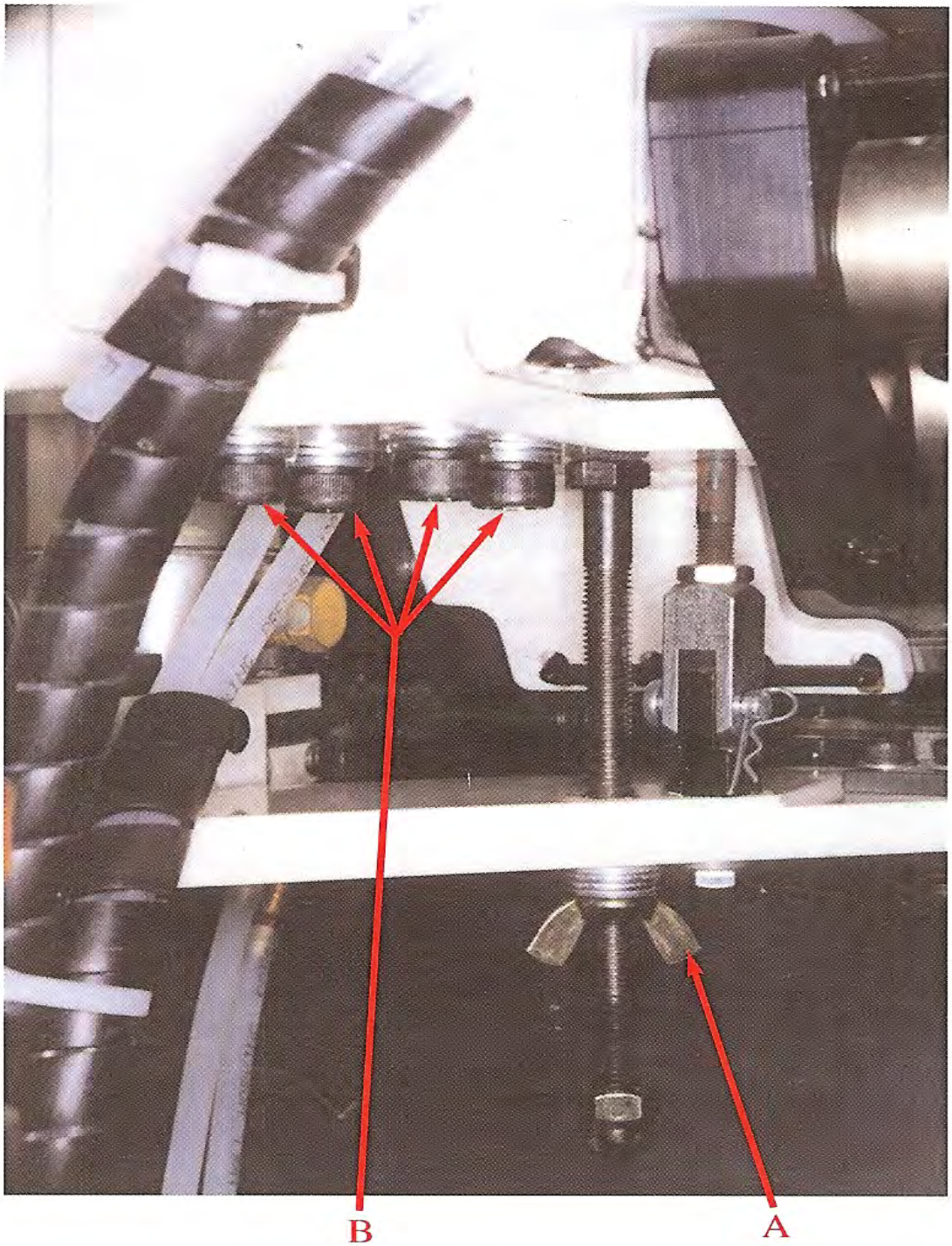
Remove the Cotter pin from the Safety Pin and remove the Safety Pin. Lift the Chute Cylinder Arm. In the back of the Drop Down Guide Slide Mount (D100-60) there is a small stop screw. Loosen the Stop Screw, it does not have to be removed. While holding up the Chute Cylinder Arm, loosen the screw until the Drop Down Guide and the Drop Down Guide Spring come all the way out. Replace the spring and reverse the procedure. **(Page 31 Arrow C)**

5. Replacing Chute Cylinder Clevis Spring (D100-172):

Remove the Cotter Pin from the Safety Pin, and remove the Safety Pin. loosen the set screw located on the side of the Adjustable Chute Clevis (D100-136). **(Page 33 Arrow A)**. You should hold the Chute Cylinder with a pair of electrical crimping pliers. Measure how far the Adjustable Chute Clevis is on the Cylinder Shaft before you start to take it off, because if you do not put it back in the same spot you will change the position of the Safety Pin, which may change the amount of rib going into the Slotted Foot. Replace the Clevis Spring and screw the Adjustable Chute Clevis onto the Chute Cylinder Shaft. **(Page 33 Lower Picture)** Before tightening the set screw, push the Chute Drop Down Guide Mount Arm (D100-28) to its lowest position. With the Chute Cylinder fully extended and the Chute Drop Down Guide Mount Arm down, put the Safety Pin in. If the holes do not line up, screw the Chute Cylinder Clevis in or out until they line up. Tighten the set screw and then check for clearance between the Safety Pin and the Safety Switch. **(Page 29 Arrow B)**

6. Rib / Chute / Drop Down Guide / Slotted Foot Alignment:

When you push the rib through the Chute it should line up with the Drop Down Guide (D100-65) and the Slotted Foot. To confirm you have the proper alignment, with the rib in the Chute and the heat and air off, lift the Chute. This will allow the slotted part of the Drop Down Guide to catch the standing section of the rib. If it does not catch the rib you will have difficulty cutting the rib. At the same time check to see how the rib lines up with the Slotted Foot. To adjust, loosen the two screws located on the Chute / Drop Down Guide Base Mount (D100-59) and move the


B
A

base left or right to get proper alignment. **(Page 45 Arrow B)**

7. Cutoff Knife / Knife Cylinder Adjustments:

Periodically the Knife will need to be sharpened. You should use a hand stone or sandpaper; using a grinding wheel may change the hardness of the steel.

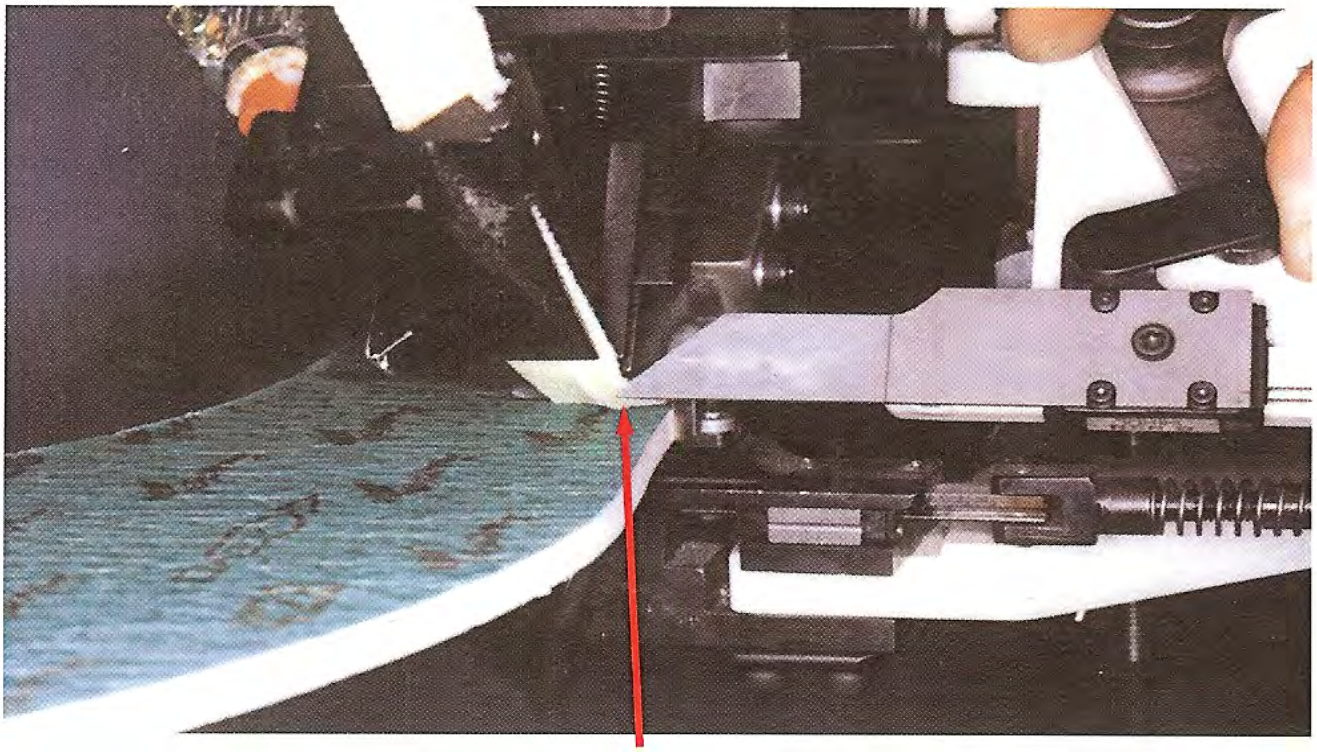
There are four adjustments that can affect the way the knife works:

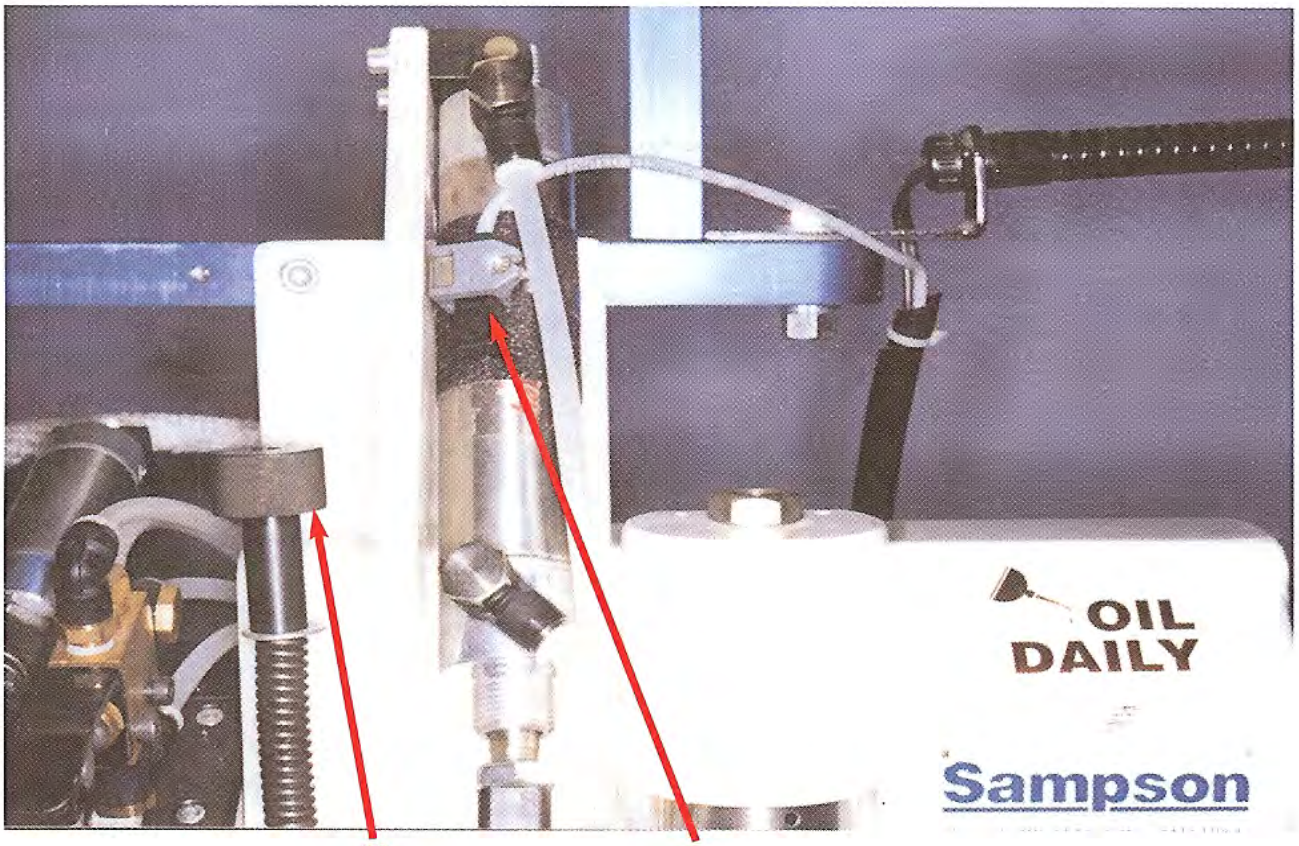
A. Centering the Knife Mount on the Knife Slide Assembly: Remove the Knife Guard by loosening the two screw that hold it in place. **(Page 6)** The Knife Cylinder Clevis (D100-200) is mounted to the Knife Slide Assembly (D100-85). The Knife Slide Assembly (D100-185) has stops at each end (these should not be removed, or the bearings will fall out). The Knife Mount should not hit the stops in the extended or retracted position. Check this by turning the air to the SRA off, and remove the Knife. With your finger, push the Knife Mount as far as you can to the left and check for clearance. If you have to make an adjustment loosen the lock nut on the Knife Cylinder Shaft, using a 3/8" wrench, turn the Knife Cylinder Shaft left to bring the knife mount closer to the right stop, or turn the shaft right to bring the knife mount closer to the left stop. **(Page 45 Arrows C, D, E)**

B. Centering the Knife in the Drop Down Guide (D100-65): The whole Knife Slide Assembly is mounted on the Knife Mounting Bracket (D100-17). The Knife Mounting Bracket has four slotted holes, which are used to move the Knife forward or back. This will allow you to center the knife in the Drop Down Guide. **(Page 35 Arrow B)**

C. Knife cutting height: With the SRA turned on, and the heat and the air off, insert the rib into the Chute through the Slotted Foot. Put an insole between the Table Wheel and the Feet and bring the table up. Run the insole forward two inches and stop. Lift the Chute to its highest point and manually push the Knife forward, towards the rib. The bottom of the Knife should be 1/8 of an inch below the rib, if not, remove the Knife and adjust the Knife Slide Assembly. **(Page 37 Arrow A)**

The Knife Slide is mounted to the Knife Mounting Bracket by four screws. Remove the Knife, loosen the four mounting screws on the Knife Slide Assembly and move the Knife Slide Assembly up or down until you think the gap is about 1/8 of an inch. Tighten two mounting screws to secure. Put the Knife back on and lift the Chute to it's highest point and manually push the Knife forward, towards the rib. The bottom of the Knife should be 1/8 of an inch below the rib, if not, remove the Knife and continue to adjust the Knife Slide Bracket. When it is in the correct position make sure to tighten all four mounting screws, put the Knife and the Knife Guard back on. **(Page 45 Arrow F)**


A


OIL
DAILY
Sampson
B
C

D. **Reed Switch adjustment**: The Reed Switch (D100-502) is located on the Knife Cylinder (**Page 37 Arrow C**). Its function is to shift the Solenoid Valve (D100-504) located on the electrical cabinet. When you step on the cut-off pedal the Knife extends to cut the rib. When the magnet on the piston passes the Reed Switch, it shifts the Solenoid, which retracts the Cylinder. When the SRA is running it has some vibration, and this can cause the Reed Switch to move slightly, causing the Knife to extend but not retract. Measure the distance from the top of the Cylinder to the top of the Reed Switch. The distance should be about three inches or 76.2MM. If it is not the right distance loosen the strap on the Reed Switch, reposition, and re-tighten the strap.

8. **Temperature Control**:

The temperature of the air flowing through the Chute can be regulated by turning the Control Knob located on the left side of the electrical cabinet. The recommended temperature is 300 - 350 degrees farenheight (#7 or 8 on the dial). The On and Off Switch is locate above the Temperature Control Knob. (**Page 39 Arrows A,B**) Allow the SRA to be on for five minutes before operating to allow the temperature to stabilize.

9. **Cam Adjustments:**

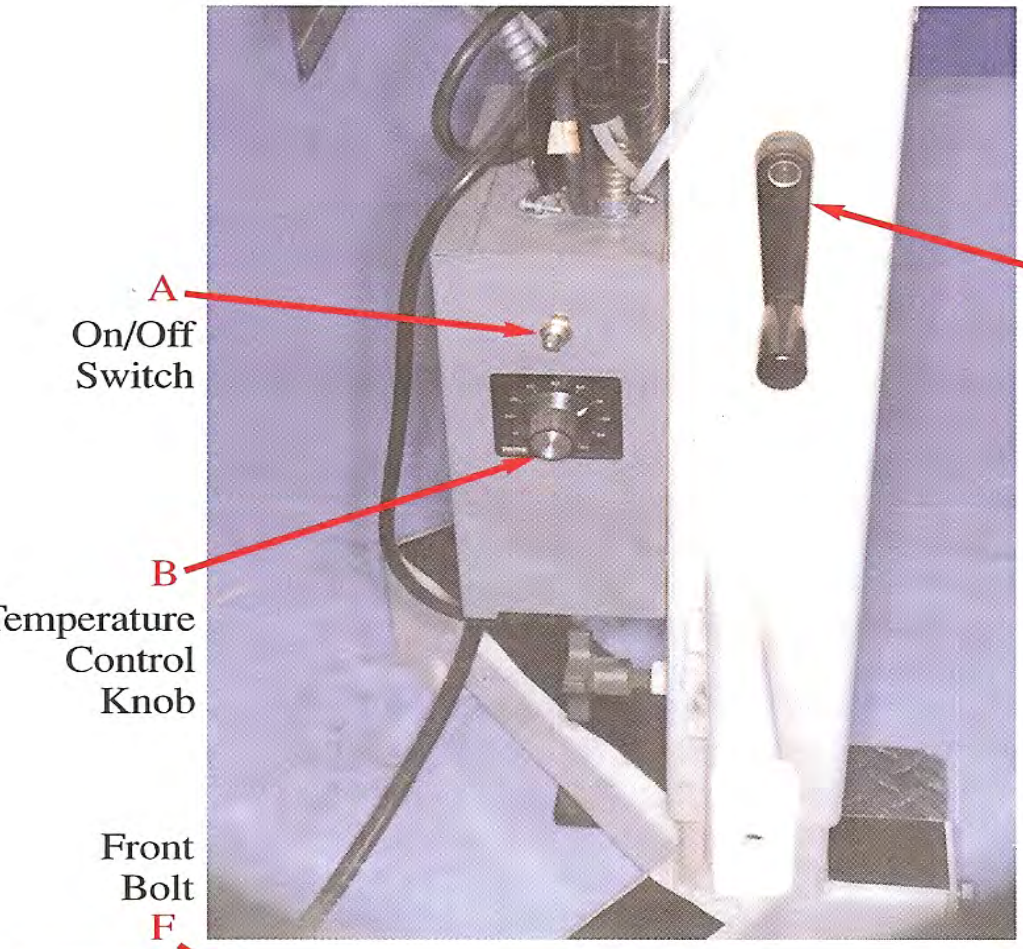
The Cam Assembly is the most important part of the SRA. If you take it out for any reason, it must be re installed correctly, because the Knife Mounting Bracket is adjusted to this setting. Insert the Cam Assembly (the shaft) into the Head, pushing the Shaft through the Rear Bearing. Lightly tighten the Front Bolt (which is counter sunk). Lift the Cam Assembly to its highest position, then tighten the Front Bolt just enough to keep the Cam Assembly from moving. Tighten the bottom Clamp Bolt located on the bottom and left of the Head and then tighten the Front Bolt, and finally tighten the Set Screws on the Rear Bearing. (**Page 39 Arrows F,G**)

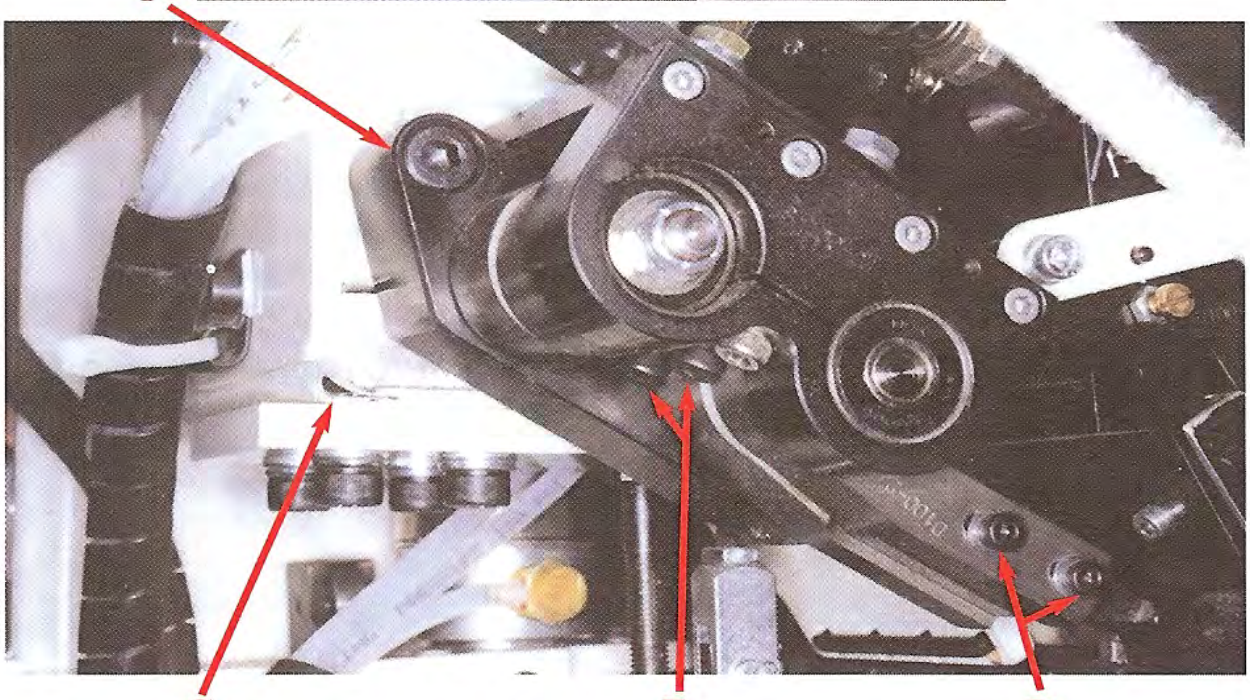
10. **Clutch Assembly**:

Although the Standard and Table Models vary in some aspects, both Clutch Assemblies have a manual style brake adjustment. (threaded rod, a spring and a wing nut). If you loosen the wing nut, when you take your foot off the Run Pedal, the SRA will stop slowly. If you tighten the wing nut the SRA will stop more quickly. (**Page 41 Arrow A**)

11. **Working Height and Table Height Adjustments**:

To adjust the working height, loosen the Lock Knob located on the tube stand under the electrical cabinet. Next loosen the Adjusting Block Set Screw located on the Foot Pedal Linkage Rods (D100-171). (**Page 12**) The handle on the left side of the tube stand will raise or lower the height of the SRA. After setting the height go back and tighten the Block Set Screw and the Lock Knob. (**Page 39 Arrow C**)


A
On/Off
Switch
B
Temperature
Control
Knob
C
Front
Bolt


F
G
Clamp
Bolt
E
Foot Holder
Adj. Screws
D
Feet
Adj. Screws

The work table is easily adjusted by loosening the set screws on the collar on the shaft.

12. Foot Pedal Adjustments:

Both the Knife Pedal and the Clutch Pedal can be adjusted and moved. Located on the bottom of the left and right leg are three tapped holes. By loosening the bolt you can adjust the position of the pedals. If you want to move the pedals, you can remove the bolt and position the pedal with one of the other holes, and re-tighten the bolt. **(Page 16)**

Margin Adjustments

1. Single Margin (Example will use a setting of 3 for the margin, which is 3/16 of an inch.)

The Thumb Lever should be set against the Stop on the Thumb Lever Plate (D100-11B). Tighten both Left and Right Thumb Screws (D100-90). Adjust the margin by turning the Thumb Wheel (D100-62) up or down. **(Page 45 Arrow G)**

2. Two Margins (Example will use settings of 5 in the shank and 3 in the ball of the insole)

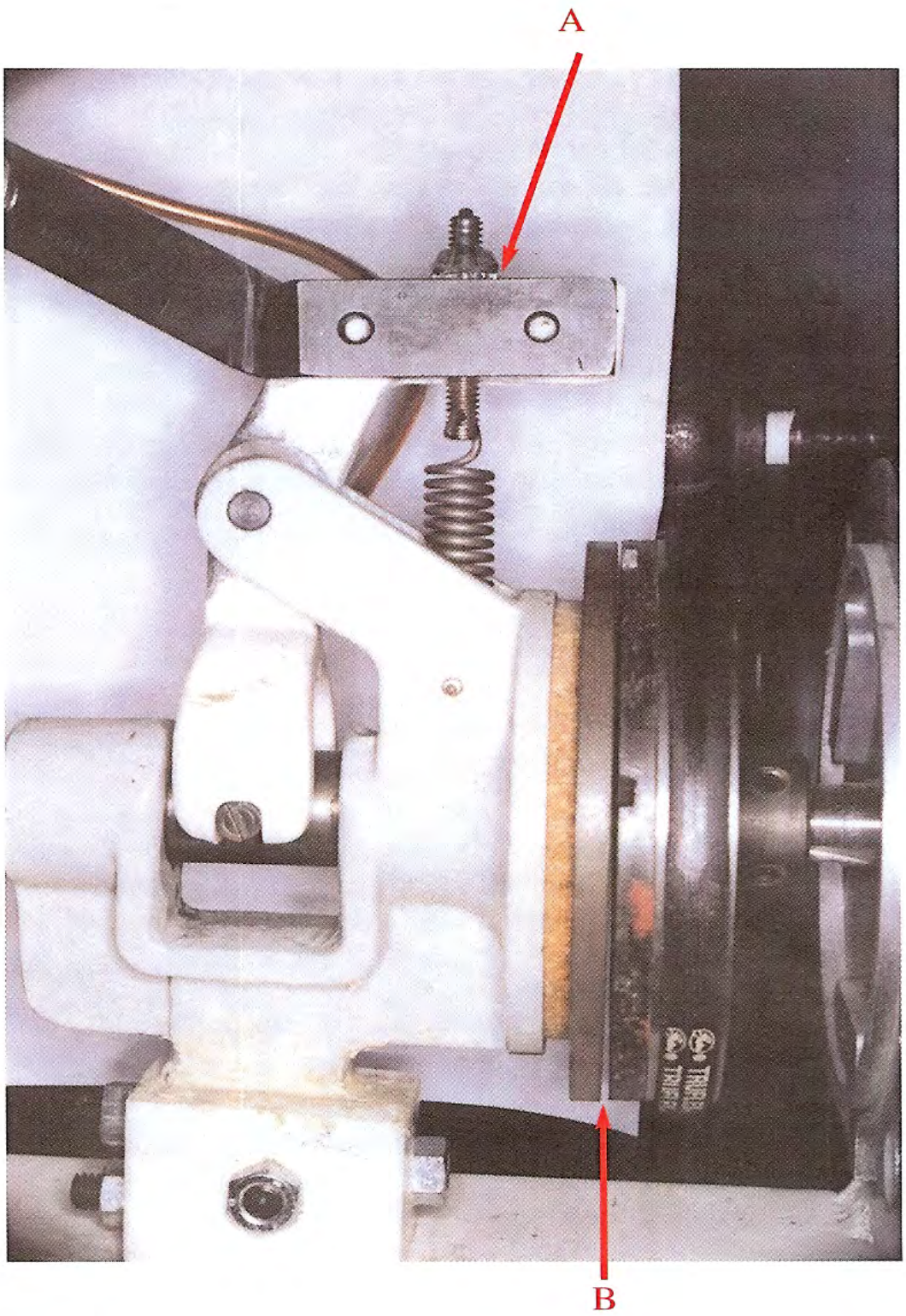
Push the Thumb Lever down and insert the Thumb Pin (D100-181) in the hole located on the right side of the Swivel Block (D100-18). Look at the space between the margin guide (D100-72) and the Table Wheel, The Shank Margin is adjusted by pushing the handle lightly to the right and turning the Right Thumb Screw counterclockwise for a larger margin, clockwise for a smaller margin. The Ball Margin is adjusted by turning the Left Thumb Screw clockwise for a larger margin, and counterclockwise for a smaller margin. **(Page 45 Arrows H,I,K)**

3. Three Margins (Example will use settings of 5 in the shank, 3 in the ball, and 4 in the toe of the insole)

The toe is the first margin you adjust. With the Thumb Lever Pin removed and the Thumb Lever against the Stop on the Thumb Lever Plate you turn the Thumb Wheel (D100-62) up. This moves the Margin Guide away from the Table Wheel, increasing the margin. Turning the Thumb Wheel down moves the Margin Guide closer to the Table Wheel and reduces the size of the margin. After making this adjustment, you should run a sample insole, and measure the Toe Margin, it should be 4. Press the Thumb Lever down, push the handle lightly to the right, and adjust the Right Thumb Screw until you get your 5 Shank Margin. Push the handle lightly to the left and adjust the Left Thumb Screw until you have a margin of 3 in the ball of the insole. **(Page 45 Arrows G,H,I,K)**

Running Three Margins

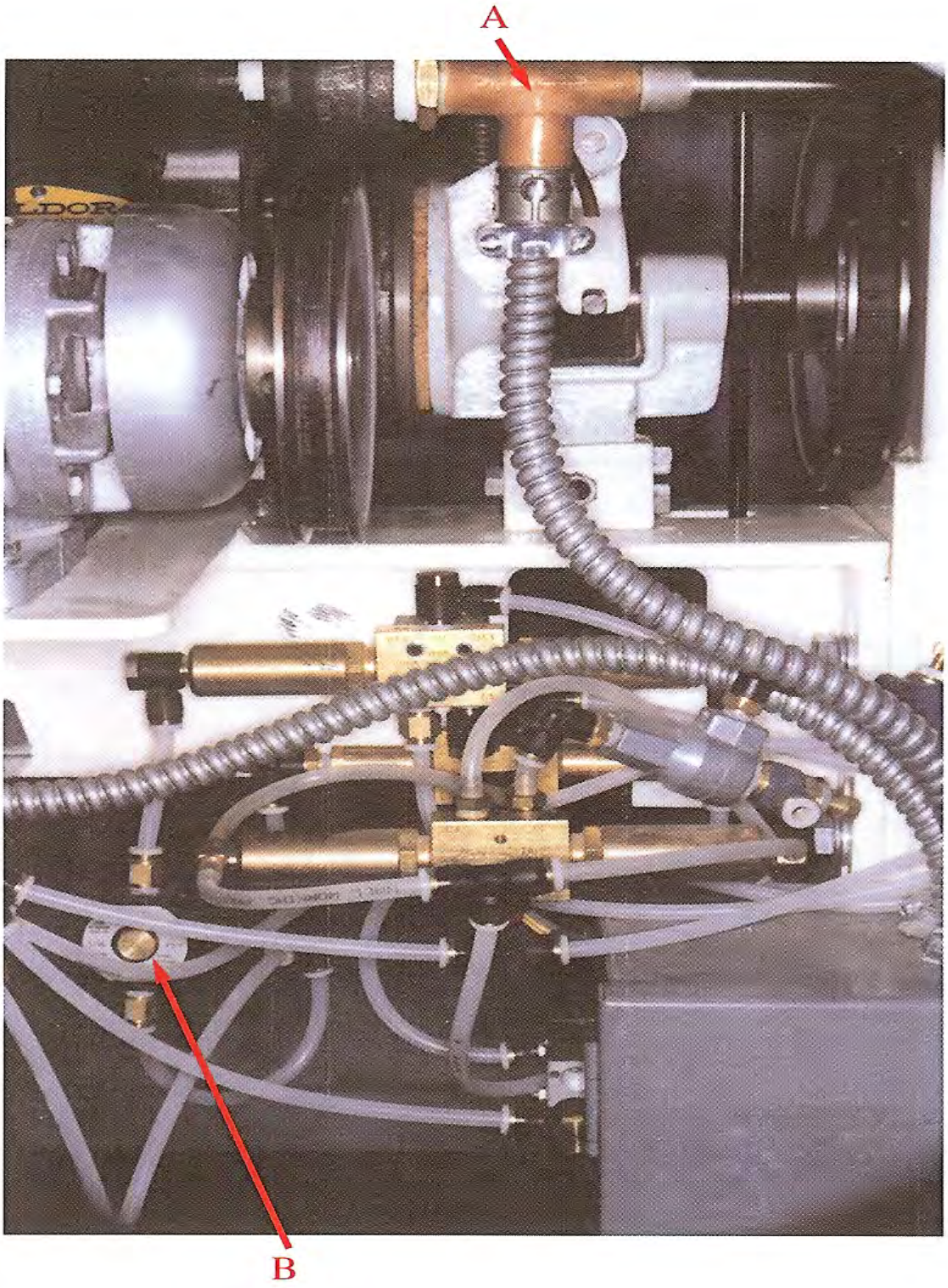
1. Press the Thumb Lever Down, and move the Handle to the right


A
B

(shank - 5 margin),
2. Insert an insole against the Margin Guide, and bring the table up and run
3. When you get to the spot you want to start your ball margin, move the Handle to the left, against the Stop, and release the Thumb Lever (ball - 3 margin),
4. With the Thumb Lever released, move the Handle to the right against the Stop (toe - 4 margin),
5. Move the Handle left for the ball margin,
6. Press the Thumb Lever down, and move the Handle all the way to the right (back for the shank margin).
The reason for applying pressure to the handle when you are adjusting for the different margins is so you will be able to see the space between the margin guide and the table wheel.
Caution -- When you adjust the Left Thumb Screw make sure the Margin Guide does not hit the Table Wheel or the Slotted Foot. Too much pressure on the Slotted Foot can create problems for the Cam Assembly. Too much pressure on the Table Wheel will cause the SRA to run slower.

Trouble Shooting and Repairs

1. **The SRA Does Not Start:**
   - A. Check the electrical outlet.
   - B. Check the power cord 110 volt. (power cord not supplied with 220-440 volt SRA)
   - C. Check main fuse (D100-85). (**Page 27**)
   - D. Check for loose wires
   - E. Reset main switch and try again.
2. **SRA Speed Varies** (slows down when operating)
   - A. A loose nylon lock nut on the Cam Assembly Shaft.
   - B. The drive belt or the drive pulley is loose.
   - C. Poor clutch alignment. (**Page 41 Arrow B**)
   - D. Clutch pedal adjustment.
   - E. Table Tension Adjustment. (**Page 37 Arrow B**)
   - F. Table Wheel and Feet Height Adjustment. (**Page 35 Arrow A**)
3. **No Heat**
   - A. Check the heat ON / Off Switch located on the left side of the electric panel.
   - B. Check fuse in Temperature Control Panel.
   - C. Check voltage to heating element.
   - D. Other possibilities: bad solid state control unit, faulty adjustable heat potentiometer, bad heating element. (**Page 43 Arrow A**)


A
B

4. **No Air From Pump**
   A. Clean air pump filters and check bowl for clogged inlet.
   B. Check for loose belt or loose pulley.
   C. Air pump (D100-150) may be bound (air veins may be worn or broke). Replace or purchase pump rebuilding kit (D100-150A).
   D. The ceramic surrounding the wires going into the heating element may be cracked. This will cause hot air to leak into the Flexible Cable. **(Page 43 Arrow A)**

   Caution: if the ceramic is cracked bad enough the cable will get extremely hot. Heating Element (D100-80) can reach temperatures of 500 degrees farenheight.

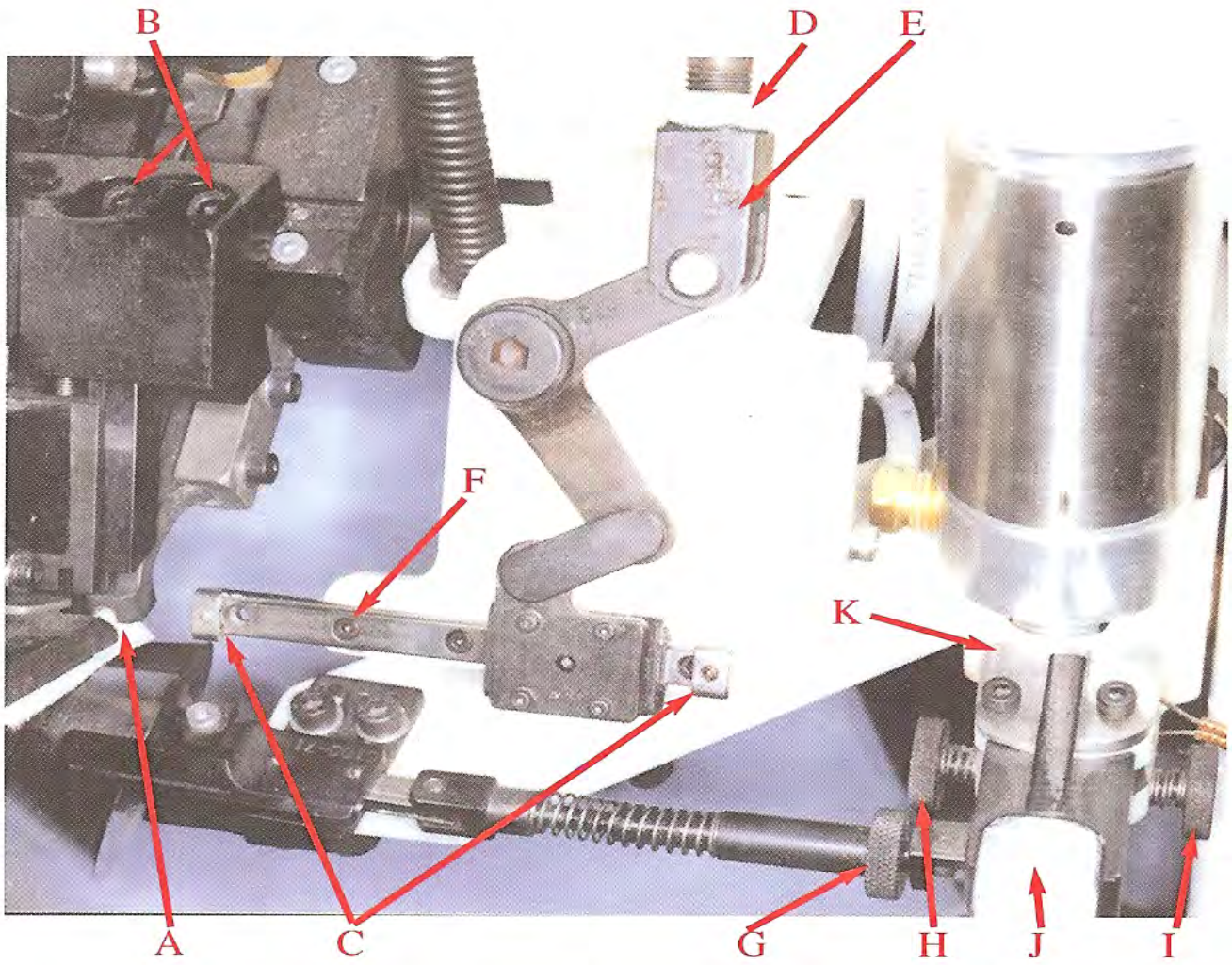
   Limited or no air will cause the heating element to burn out.

5. **Bad Temperature Reading**
   A. No Reading: faulty temperature gauge, loose or broken wire. Make sure the heat on/off switch is on. **(Page 39 Arrow A)**
   B. The reading is much lower than the actual temperature. Check the thermocouple wire, it may be loose or broken at the clamp. **(Page 22)**
   C. If you check the temperature on the Chute, where the air comes out, with a Pyrometer, you will notice a difference in temperature readings. Example: the temperature gauge reads 400 degrees but the Pyrometer reads 360 degrees. This is all right, because you are tacking the temperature in two separate places.

6. **Knife Does Not Activate During Cutoff:**
   A. Check the air inlet, pressure should be 80 pounds per square inch.
   B. The Spring on the Knife Pedal (D100-206A) could be broken and will need to be replaced. **(Page 16)**
   C. Too much space between the Safety Switch and the Safety Pin.
   D. There is not enough pressure to the Knife Regulator (D100-608). **(Page 43 Arrow B)** Too much pressure will cause the Knife to double fire.
   E. Faulty Reed Switch. **(Page 37 Arrow C)**

7. **Knife Extends, But Does Not Retract:**
   A. Reed Switch adjustment. **(Page 38)**
   B. Broken foot pedal spring.
   C. Faulty Solenoid Valve (D100-504) **(Page 18)**
   D. Worn or dirty Cylinder Valves (D100-610 & 613) **(Page 18)**

   Note: The air filter bowl needs to be drained regularly, and oil



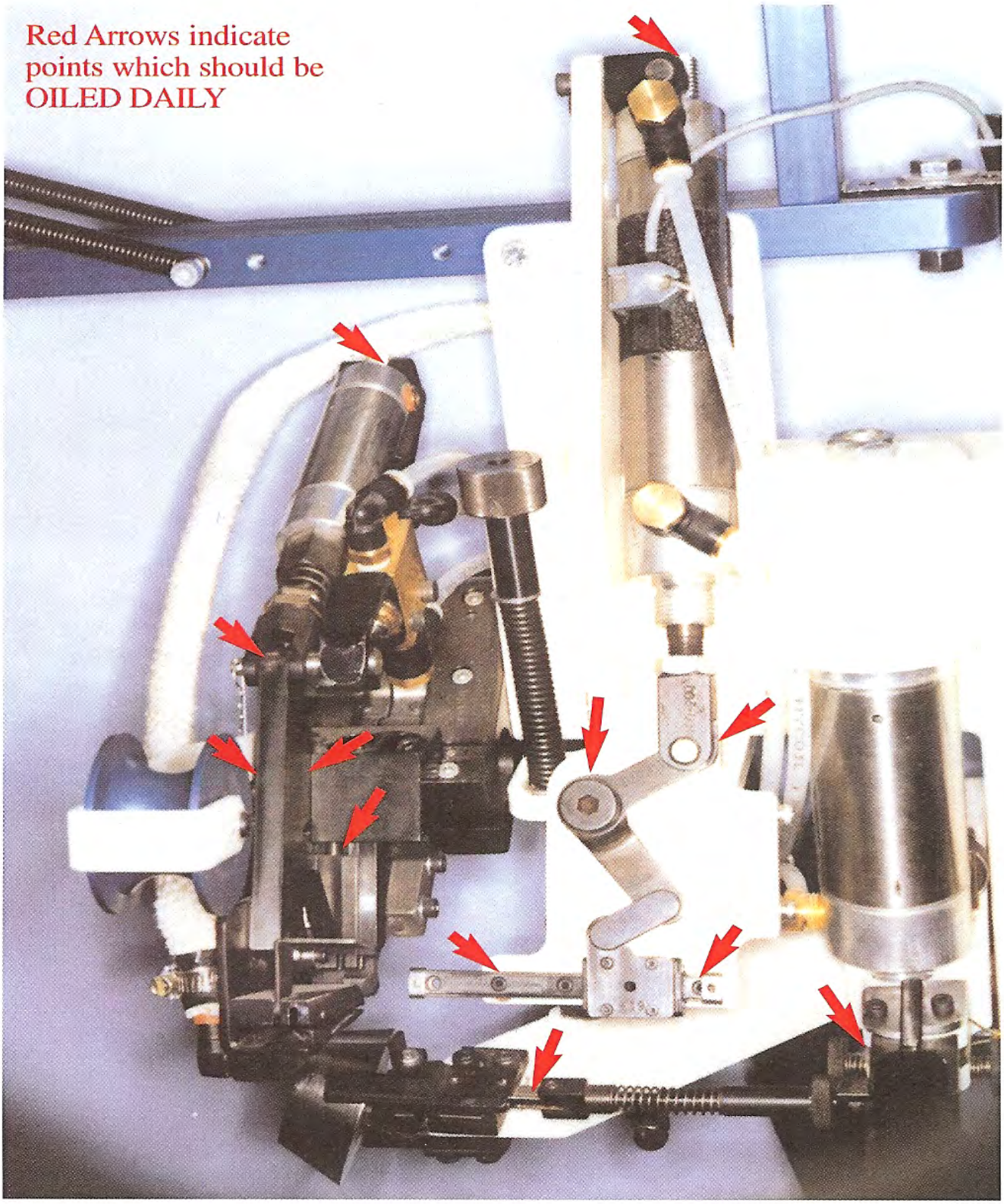
A	Proper Rib in Foot Alignment
B	Base Mount Adjusting Screws
C	Knife Slide Assembly Stops
D	Lock Nut
E	Knife Cylinder Clevis
F	Knife Slide Mounting Screw
G	Thumb Wheel
H	Left Thumb Screw
I	Right Thumb Screw
J	Thumb Lever
J	Thumb Lever Plate

filter level must be maintained. Failure to perform this routine maintenance may cause some or all of the above problems.

8. **Poor Cut-off by Knife**
   - A. Check air pressure (recommended 80 psi)
   - B. Knife may be dull, or has been sharpened so often that it is too short.
   - C. Rib is too loose in chute.
   - D. Drop Down Guide (D100-65) is worn, or Spring (D100-114) is broken. (**Page 4**)
   - E. Knife Slide Bearings (D100-185) may be worn. Mount Screws (D100-109) may be loose or missing. (**Page 6**)
   - F. Check Knife height adjustment. (**Page 36**)
   - G. Operator may be pressing the Table Lever and the Knife Pedal at the same time.

9. **Margin Problems**
   - A. The Edge Guide Bracket Mount Screw (D100-32) (**Page 8**) may be loose.
   - B. The Margin Stop Pin may be loose.
   - C. Check Handle Table Pin and Table Swivel Block for wear.
   - D. Chute Cylinder Arm may be loose.
   - E. Operator may be pushing insole too hard against the margin guide.

Oiling Diagram



Note: There are two oil tubes on the rear of the machine and two holes on the foot holders that need to be OILED DAILY.

Operator's Notes

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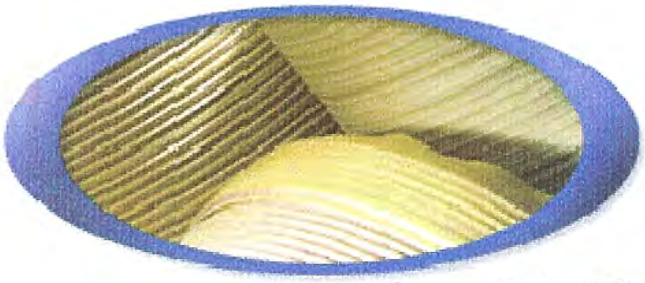

Sampson's Rib Group

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