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Worldwide Dependability — Can Packaging & Processing Equipment —

OPERATOR'S MANUAL DIRECT DRIVE DIXIE DOUBLE SEAMER

Model 25D-TWIN-AL



INTRODUCTION

The DIXIE Model 25D-700-TWIN-AL is adaptable for closing containers from 1½" to 4¼" diameters, up to 7" tall. Change parts are required for closing each size container. The Model 25D-TWIN-AL is designed with an air lift assembly to raise containers into position with the seaming rolls and chuck. The Model 25D-TWIN-AL may be equipped with a single or dual switches to activate the air lift and subsequently the seaming cycle. Alternatively, it may be equipped with a sensor switch and programmed at the factory for a built-in delay, suitable for your container, to allow adequate time to place containers in the seamer before the sensor switch activates the air lift to raises the containers into position for the automatic seaming cycle. An average capacity is 30 cans per minute depending on container size and operator dexterity.

OPERATION

WITH SINGLE SWITCH: Operator positions cans with tops then presses the start switch. The cans are automatically raised, double seamed, and lowered. Operator removes cans and repeats the operation.

WITH DUAL SWITCHES: Operator positions cans with tops then simultaneously presses both start switches. The cans are automatically raised, double seamed, and lowered. Operator removes cans and repeats the operation.

WITH SENSOR SWITCH: Operator positions cans with tops. After a brief programmed delay, the cans are automatically raised, double seamed, and lowered. Operator removes cans and repeats the operation.

*** INSTALLATION ***

BEFORE OPERATING YOUR DIXIE DOUBLE SEAMER REVIEW THIS MANUAL. Also make certain that:

1. The seamer is secured directly to the floor or other stable base with concrete drill-in anchor bolts or lag screws using the appropriate anchoring system suitable for your specific flooring and/or sub-flooring. Four (4) mounting brackets with 9/16" diameter holes are located at each corner of the cabinet base.
2. The machine is properly connected to 115 VAC, 60 Hz electrical and 85 to 100 psi maximum air supply.
3. Auxiliary and accessory items are properly attached.
4. All moving parts are periodically oiled to prevent unnecessary wear.
5. The machine is properly adjusted for the cans to be closed. Inspect machine adjustments periodically to assure proper results.
6. If used occasionally or inactive for more than a few days, give special attention to servicing before and after storage.



BASE PLATE PRESSURE ADJUSTMENTS

Proper base plate pressure is required to produce essential body hooks and prevent slipping of cans during the seaming cycle.

Each base plate has an adjusting screw (57) and set screw (56) in its stem for making minute base plate adjustments as follows:

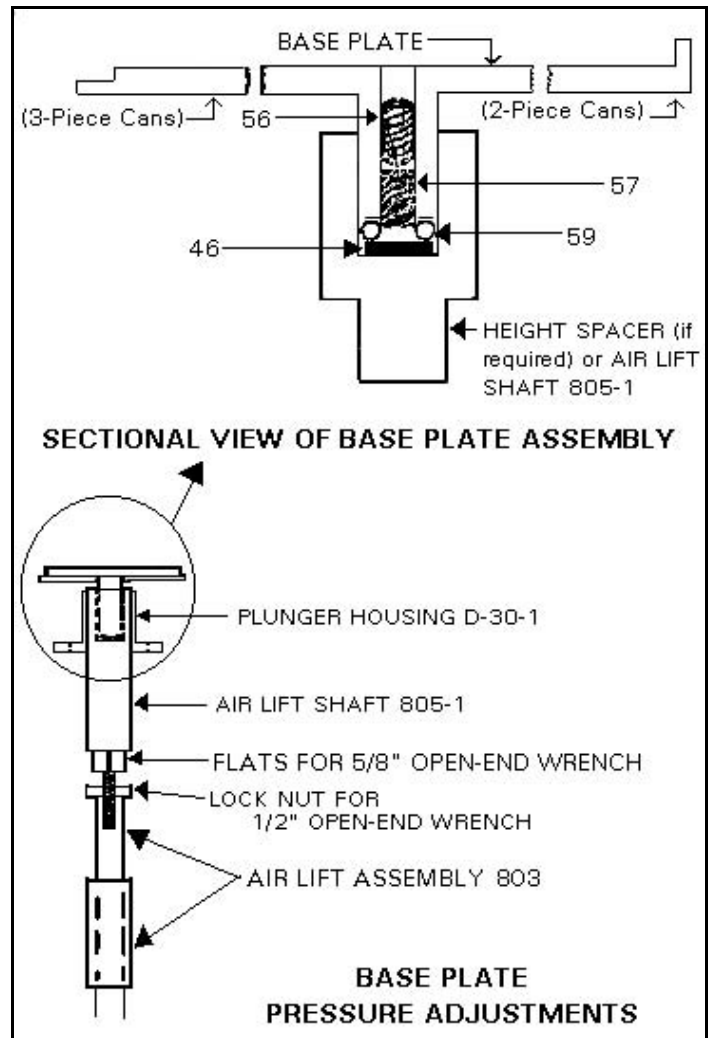
1. Lift base plate out of Air Lift Shaft (805-1) or Height Spacer and inspect the metal discs (46). If there is any sign of undue wear or breakage of the metal discs, they must be replaced. NOTE: If height spacers are used to stabilize base plates for short cans, both the Height Spacers and the Air Lift Shafts (805-1) will have 46 Metal Discs and 59 Retainer Springs.

Observe and note the original placement of the lock nut on the threaded end of the air lift shaft before disassembly. You will need to reference the original setting when reinstalling. In order to replace the metal discs in the air lift shaft (805-1), loosen the 5/16" lock nut, completely unscrew the shaft and lift it out through the plunger housing (30). Remove the retainer spring (59) from the opening in the air lift shaft then tap the shaft against a padded surface to dislodge the metal discs. To remove the metal discs from a height spacer, lift it out of the air lift shaft, remove the retainer spring and tap the height spacer against a padded surface to dislodge the metal discs. Replace with new discs and reassemble, making certain that the retainer spring and metal discs are properly seated and that the entire assembly is adequately lubricated (oiled).

2. Insert screwdriver into hole in top of base plate and remove the set screw (56) by turning counterclockwise.
3. Insert screwdriver into same hole and turn adjusting screw (57) in the proper direction to lengthen or shorten effective height of the base plate, as may be required for proper tension (pressure).
4. Replace set screw and tighten snugly. It may be necessary to hold the end of the adjusting screw firmly while tightening the set screw.
5. Make certain that the base plate assemblies are properly lubricated and replace the base plates in the plunger housings or height spacers.

If further base plate pressure adjustment is needed, incremental adjustments may be made to the air lift system as follows:

Loosen the 5/16" lock nut with a 1/2" open-end wrench; then use a 5/8" open end wrench to turn the air lift shaft (805-1). Adjust upward to increase base pressure, downward to

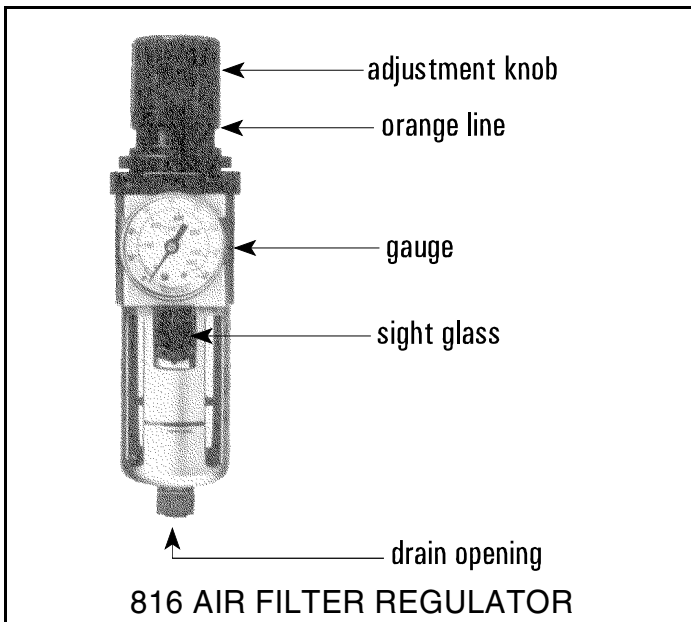


reduce base pressure. Use a 1/2" open end wrench to tighten the lock nut against the shaft of the air lift assembly (803).

Note: Excessive base plate pressure may cause the plunger of the air lift assembly (803) to fail to extend to its locked position causing inconsistent lift. If the air lift operates erratically and cans are not raised and lowered properly although correct air pressure is maintained, a lessening of base plate pressure may be required. Refer to the following section on Air Filter/Regulator Adjustment for more information.

AIR FILTER/REGULATOR & AIR LIFT ASSEMBLY ADJUSTMENTS

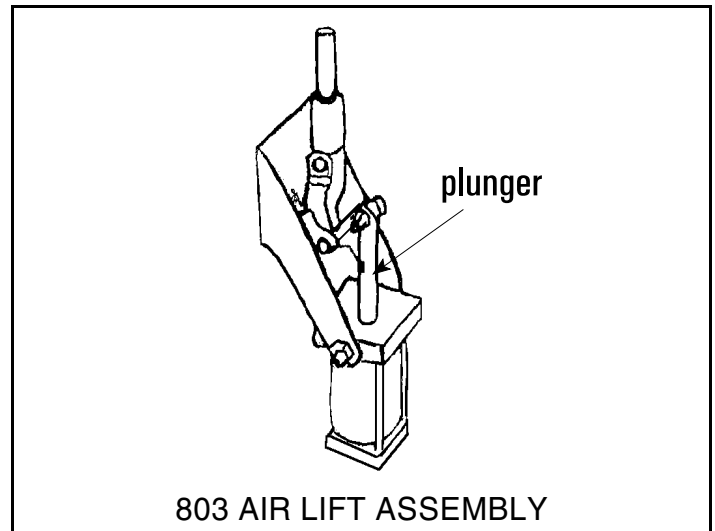
Recommended air supply is 80-100 psi maximum. Different types of containers may require specific psi settings. The air pressure filter/regulator (816) on your machine has been set at the factory for the sample containers submitted with your order. If you find your air supply is inconsistent, or if you change containers or lids, you may need to adjust the air pressure filter/regulator. Too much air pressure may cause your container to crush your lid against the chuck. Too little air pressure will not lift the container against the lid properly. Any adjustments to the air pressure regulator should be made in small increments until a satisfactory pressure is achieved.



816 AIR FILTER REGULATOR

To set or change the air pressure, pull up on the black knob on top of the regulator until the orange band is visible. Turning the adjustment knob clockwise increases the pressure and turning the knob counterclockwise reduces the pressure. Adjust as necessary while observing the pressure gauge. *Do not exceed 100 psi.* Push down on the adjustment knob to lock air filter/regulator at selected psi to prevent accidental setting change.

The filter element should be changed after 1 year or when a pressure drop of 15 psi is reached. Periodically observe condensate level through sight glass in filter and manually drain as needed.



803 AIR LIFT ASSEMBLY

NOTE: Sufficient air pressure must be provided to cause the plunger of the air lift assembly (803) to extend to its locked position. *Do not exceed 100 psi.*

NEUTRAL POSITION

The machine is in a neutral position when both cam rolls (20) are in their innermost position and both seaming rolls are in their outermost position.

TIMING THE MACHINE

The machine is properly timed (or in neutral position) when both cam rolls (D-20) are at their innermost position and both seaming rolls (1st and 2nd) are at their outermost position. There are ten (10) revolutions per seaming cycle. Therefore, with power to the machine ON, by pressing the actuator on the clutch/brake assembly to turn the clutch/brake assembly one revolution at a time, the machine will have been "timed" by or before the 9th revolution.

If it should be necessary to turn the clutch/brake assembly less than a full revolution, proceed as follows. Turn power to machine OFF. Press the actuator one time to release the clutch brake. Grasp the collar (508) by hand, OR, use a wrench to turn the chuck shaft, to turn the assembly in a clockwise direction as needed. Turn power to machine ON and verify that the machine is now in time.

****IMPORTANT**** Once neutral position is reached, *turn off power to the machine to reset the counter.* Then turn power on and resume operation.

SEAMING ROLL ADJUSTMENTS

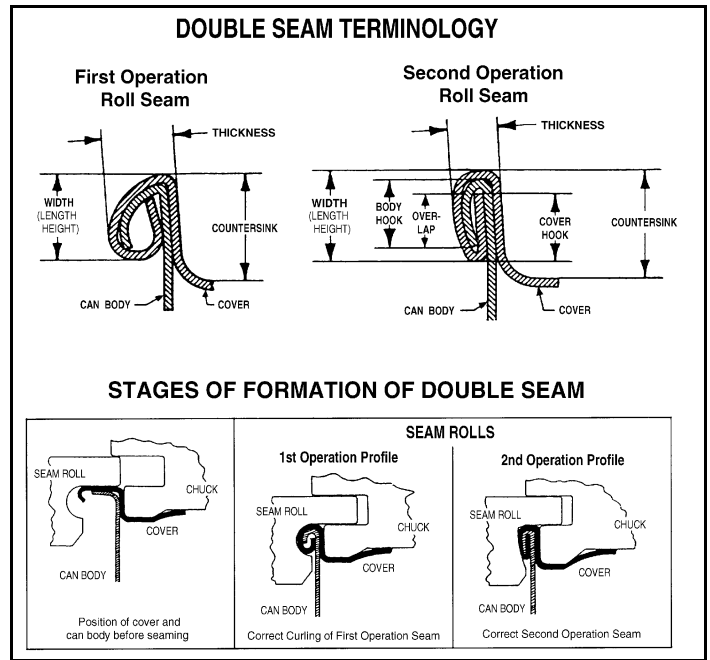
There are ten (10) revolutions per seaming cycle, five (5) for each seaming roll. The function of the first operation seaming roll is to curl the cover hook and body hook into proper position. The function of the second operation seaming roll is to complete the sealing of the can.

FIRST OPERATION

1. Put machine in neutral position.
2. With power ON, press and release the actuator on the clutch/brake assembly four (4) times. Turn machine OFF, then press the actuator ONE more time to release the clutch brake. Then manually turn the clutch ONE HALF revolution. Grasp the collar (508) by hand, OR, use a wrench to turn the chuck shaft, to turn the assembly in a clockwise direction. These 4½ revolutions of the clutch/ brake assembly places the first operation seaming roll in its innermost position with the chuck.
3. While power to machine remains OFF, loosen lock nut (16) and adjust set screw (17-A) until the first operation seaming roll is snugly in position with the chuck. While holding the first operation gauge wire (40) in position between the chuck lip and the ground profile of the first operation seaming roll, tighten the lock nut. The larger diameter gauge wire (40) is the approximate THICKNESS of the first operation seam. Final adjustments may be made after a can is closed and the double seam inspected.

SECOND OPERATION

1. Turn power to machine ON which will automatically complete the fifth revolution. Press and release the actuator FOUR times and turn power to machine OFF. This is a total of nine (9) revolutions from the beginning and puts the second operation seaming roll into its innermost position with the chuck.
2. Use your wrench to loosen the lock nut (16), then turn the set screw (17-A) to adjust the second operation seaming roll into position. Use the second operation gauge wire (41) to fit the seaming roll snugly in position with the chuck then tighten the lock nut. The small diameter gauge wire (41) represents the approximate THICKNESS of the second roll seam. Final adjustments may be made after a can is closed and the double seam inspected.



3. Press the actuator ONE time and turn power to machine ON to complete the 10th revolution and cycle. This will return the machine to its neutral position.
4. Close a can, tear down and inspect the double seam. Make final adjustments of the seaming rolls and base plate pressure to produce essential body hook, cover hook, overlap and tightness recommended by the container manufacturer or for a hermetically sealed can. NOTE: If you are unable to obtain the essential measurements recommended or a hermetically sealed container, you may need seaming rolls with different profiles.

CHANGING TO DIFFERENT CAN SIZES

Change parts consisting of chucks, base plates and height spacers may be required for each different can diameter, top or style. Also, different sets of seaming rolls may be required for each. Your can manufacturer or supplier may recommend the seam roll profiles for your cans. Dixie stocks or may be able to furnish the seam roll profile needed. Therefore, make sure you have the correct change parts available when changing your machine from one can size to another, then proceed as follows for each seaming head.

1. Put seaming head in neutral position.
2. Loosen lock nuts (16) and set screws (17-A) until both seaming roll levers (12) are back as far as they will go. If needed, change seaming rolls.
3. Change chucks. ****CAUTION**** — When loosening or tightening a chuck, hold the chuck shaft with an open end wrench at the flat surface on the chuck shaft to avoid damage to the clutch/brake unit.

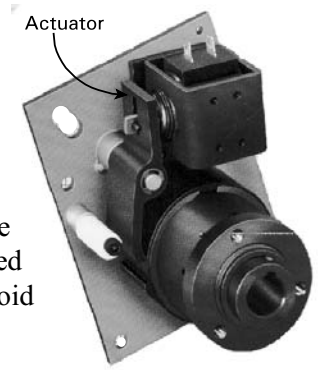
To remove a chuck, hold the chuck shaft with a 5/8" wrench on the cut side of the shaft, located under the clutch/brake assembly and above the gear housing. Then place the two pins of the 44 chuck wrench (provided with your seamer) into two of the four holes located on the bottom of the chuck. [The pins of the chuck wrench will fit into either diagonal or adjacent holes depending on the diameter of the chuck.] To loosen, turn the chuck to the left. Finish removing the chuck by hand.

To install a new chuck, hold the chuck shaft with a 5/8" wrench, as described above, while using your hand to thread the chuck onto the lower end of the chuck shaft. Turn to the right to thread the chuck onto the chuck shaft. Use the chuck wrench, as described above, to tighten snugly. Make certain that the new chucks are properly tightened into position against the shoulders of the chuck shafts.

4. Install the proper base plates, and height spacers if required, for the cans to be closed. Adjust the base pressures (see page 2) and seaming rolls (see page 4) as described in this manual.

CLUTCH/BRAKE/SOLENOID ASSEMBLY

****WARNING**** — The clutch/ brake/solenoid assembly is very complex. We recommend replacing the entire assembly (502-1) and returning the defective unit for factory repair for later use as a spare. Care should be used when removing this unit to avoid irreparable damage.



NOTES AND TROUBLESHOOTING

► Machine won't operate:

1. Solenoid in the clutch-brake assembly (502-1) doesn't work. 2. Air lift doesn't work, or 3. Direct Drive Motor doesn't run — check FUSES.

Open electrical box on rear of machine. Study the schematic drawing on the inside of the door, which details the fuses (3) and their individual function. The black, 3-section fuse box is located at the bottom-right section in the electrical box. Each of the sections have two (2) fuses — one is a spare. Proceed to replace the top fuse, one section at a time until problem is solved. Order spare fuses as needed. NOTE: Two fuses are 10 amps and one is 4 amps.

IF PROBLEM is not a "blown" fuse, your electrician may locate and correct a loose connection in the wiring — or contact the factory.

- Machine won't stop, continues running. Check the clutch-brake (502-1) to see if the Magnet (664-A) is in place. The Sensor (664) needs the magnet in place on the clutch-brake to count each revolution. Use "Krazy Glue" to replace the magnet if needed.
- Power "accidentally" turned OFF during a seaming cycle will cause the machine to be "out of time" or "not in neutral."

CHANGE PARTS AND REPAIR PARTS

A Parts/Price List is furnished separately. When ordering parts, always furnish both the part number and the name of the part. When ordering change parts for cans, always send six (6) loose tops and can bodies of the size can(s) to be closed.

REPAIR PARTS AND REBUILDING SERVICE

A complete stock of parts is maintained by Dixie Canner Equipment Co., Athens, Georgia, USA. Parts may be ordered as needed to replace worn or damaged parts. Your Dixie Double Seamer may be returned to Athens, Georgia for a complete rebuilding at a nominal service charge, plus the cost of parts needed. When returning the machine for the rebuilding service please observe the following:

1. Return the complete machine and include several cans and tops of the exact size and type closed. Properly crate the machine and cans for safe delivery and return shipment, and prepay shipping cost.
2. Write a letter authorizing the rebuilding service and mention any problem with the machine. Also mention particular instructions concerning return shipment, urgency, and other pertinent instructions.

HELPFUL HINTS — TROUBLESHOOTING

Until the operator is familiar with the mechanics of your can closing machine and learns to recognize irregularities in the essential requirements of the double seam, the outline below is intended to help notice obvious defects and list some causes that may serve as a guide in correcting minor troubles.

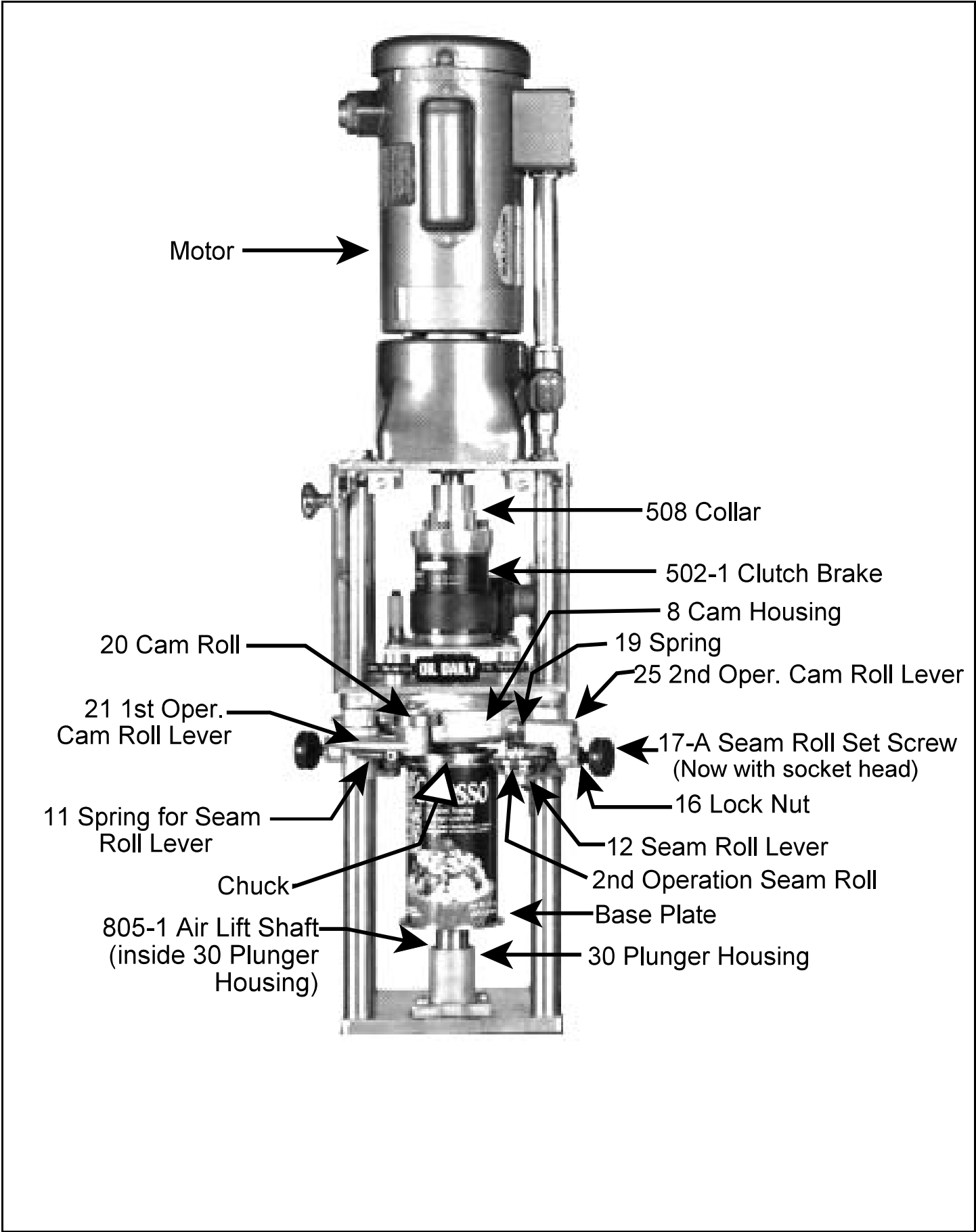
MECHANICAL DEFECTS & COMMON CAUSES

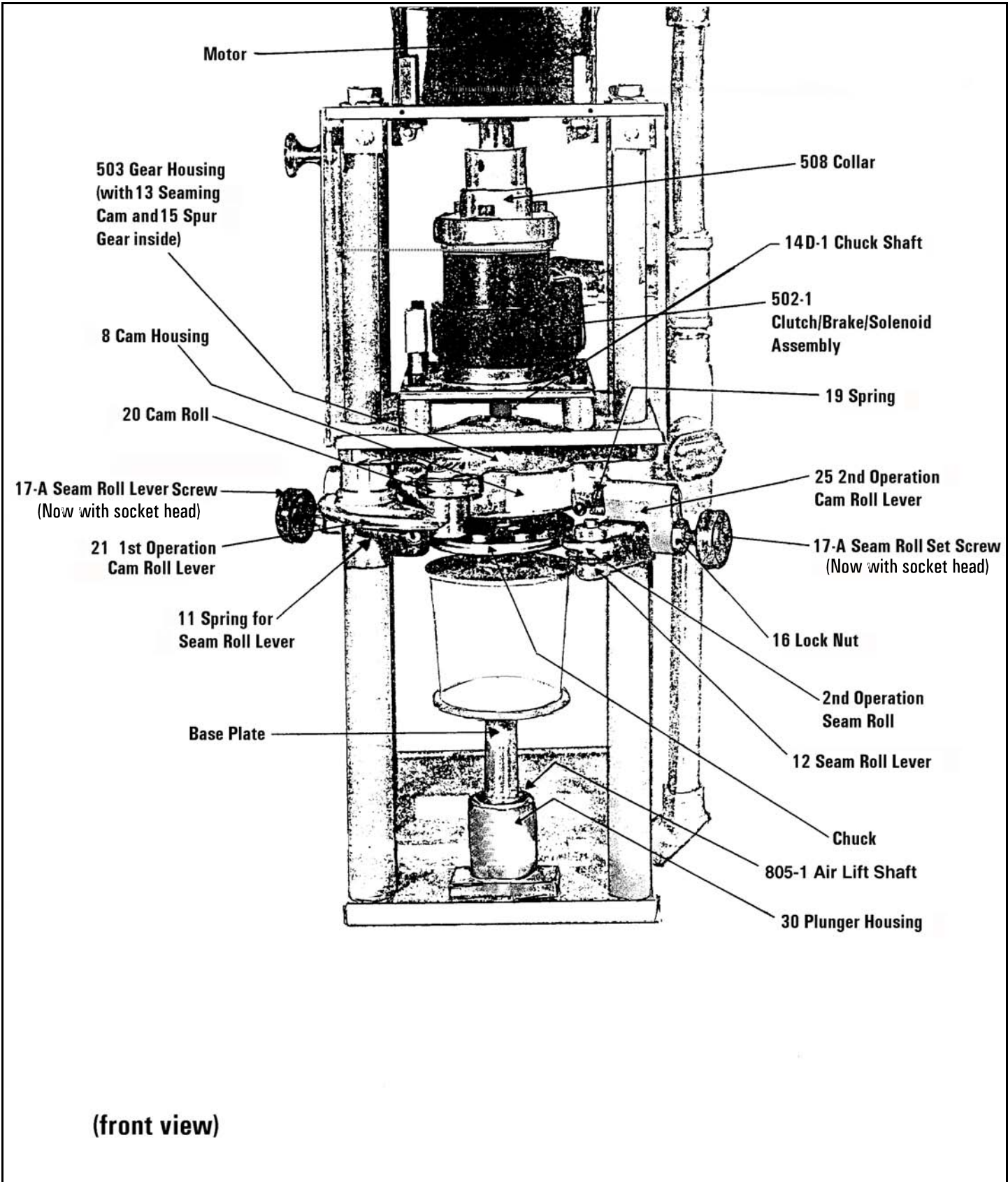
- A. Can slips during seaming operation
 1. Damage or lack of oil in the base plate, lift shaft, height spacer or steel ball
 2. Insufficient base plate pressure
 3. Worn or wrong size chuck
 4. Seaming rolls binding on pins
- B. Machine operates with undue noise or "locks"
 1. Machine not properly timed
- C. Unusually loose seaming rolls
 1. Seaming roll or pins worn
- D. Seaming rolls do not return to neutral position
 1. Seaming roll levers binding
 2. Seaming lever spring weak or broken
 3. Machine not properly timed

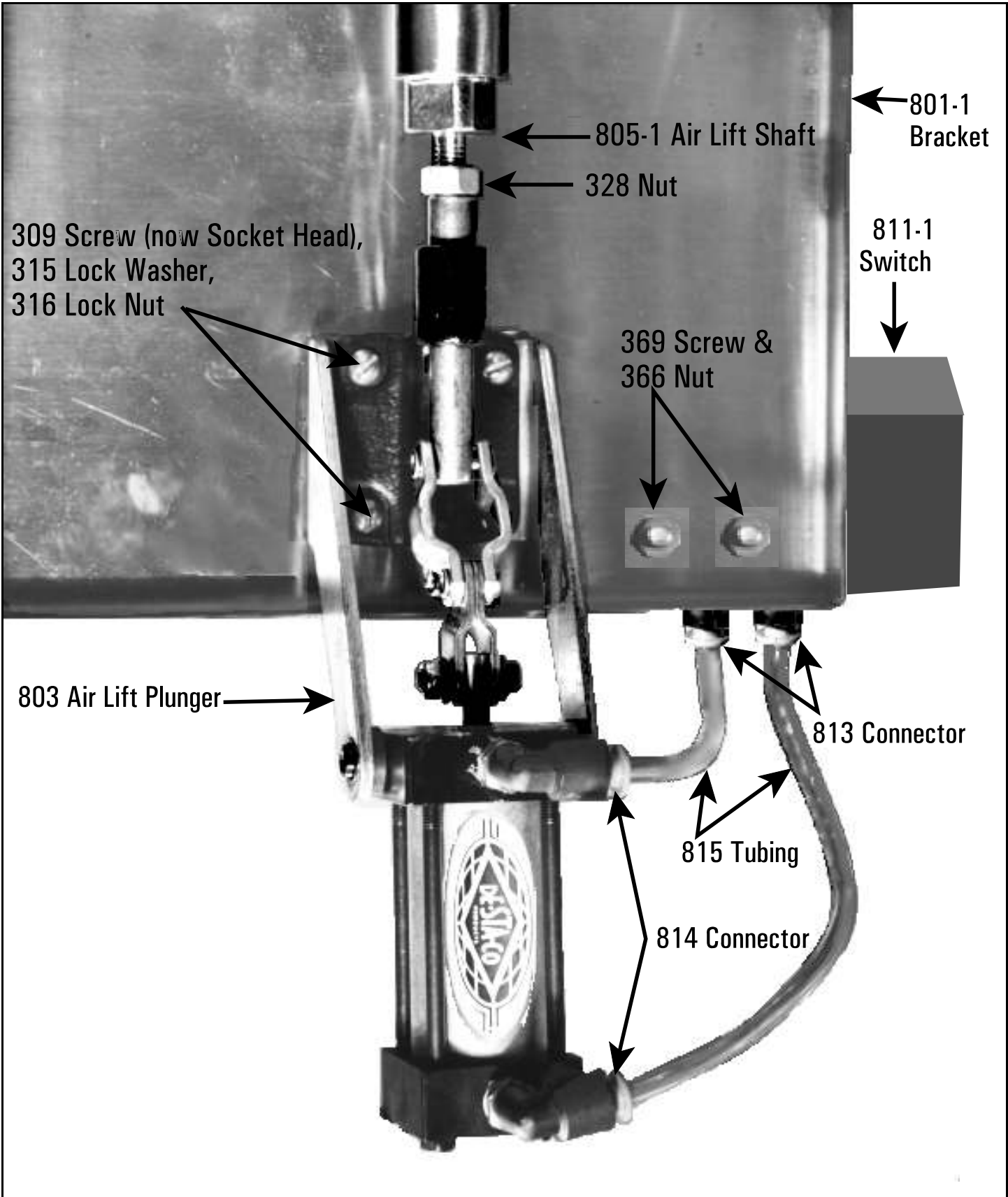
- E. Machine seems to "labor" or freeze tight
 1. Needs oil.
 2. Too much base plate pressure
 3. Seaming rolls too tight
 4. Misalignment of moving parts

DOUBLE SEAM DEFECTS & COMMON CAUSES

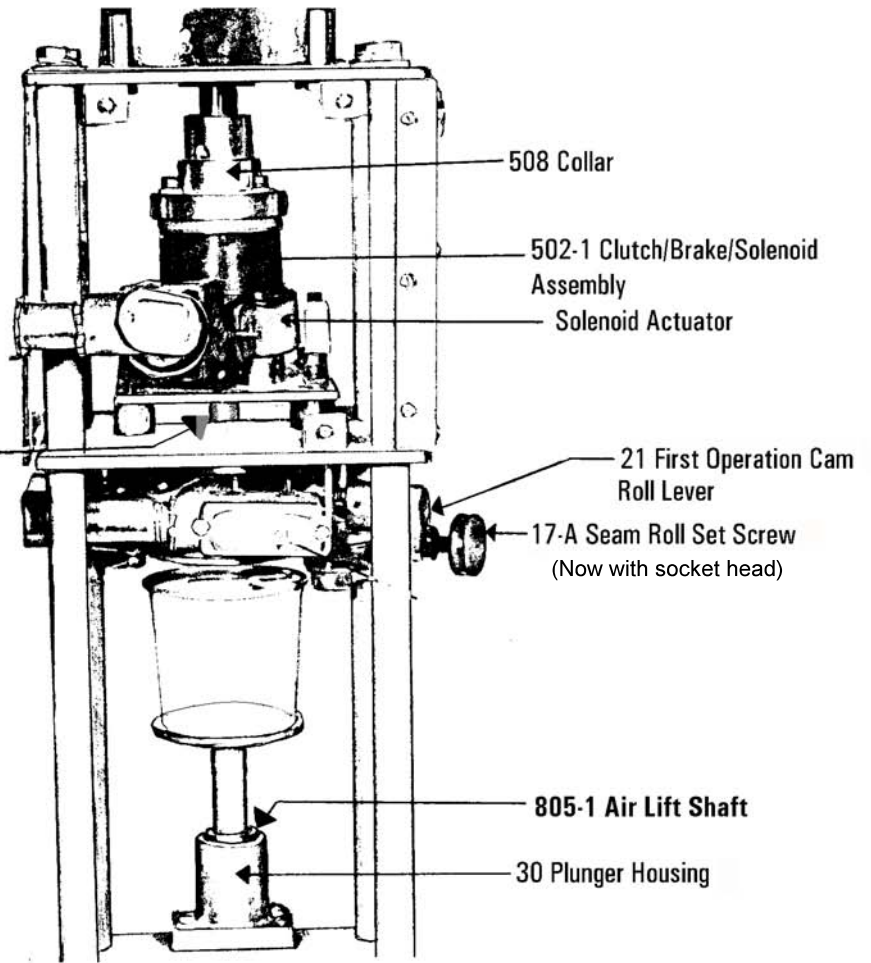
- A. Cut over. Unusually sharp edge at top inside edge of seam
 1. 1st or 2nd operation seam roll set too tight
 2. Worn seam rolls or worn chuck
- B. Cut or fractured seam
 1. Seam rolls set too tight
- C. Droop or lap in double seam at or near can body side seam
 1. Too much base pressure
 2. 1st operation seam roll set too loose
 3. Worn 1st operation seam roll
- D. Excessive countersink depth
 1. Too much base pressure
 2. 1st operation seam roll set too loose
 3. Chuck not properly seated in can top
 4. Chuck groove worn
- E. False seam. Body hook and cover hook do not overlap
 1. Can top not properly seated on can
 2. Damaged can flange or can top curl
- F. Long body hook
 1. Too much base pressure
- G. Long cover hook
 1. 1st operation seam roll set too tight
- H. Short body hook
 1. Insufficient base pressure
 2. 1st operation seam roll set too tight
 3. 2nd operation seam roll set too loose
- I. Short cover hook
 1. Too much base pressure
 2. 1st operation seam roll set too loose
 3. Worn 1st operation seam roll
 4. Excessive countersink depth
- J. Cover hook or body hook not uniform
 1. Base plate or plunger worn
 2. Chuck or seam rolls out of alignment
- K. Droops, vees, wrinkles
 1. Excessive base pressure
 2. 1st operation seam roll too loose or worn
 3. 2nd operation seam roll too tight
 4. Defects in can body or top
 5. Incorrect seam roll profiles







NOTE: The 14D-1 Chuck Shaft has an OIL GROOVE below the 5/8" flat surface. OIL DAILY for proper lubrication of the moving parts inside the seaming head.



Hold chuck shaft at this location with a 5/8" open-end wrench when removing the chuck.

To remove chuck, insert prongs of special chuck wrench in holes in the chuck. Turn chuck clockwise (from right to left) when facing machine. To install chuck, thread onto chuck shaft by hand by turning in opposite direction. Tighten snugly to prevent chuck from slipping.

OTHER OILING LOCATIONS:

Gears inside gear housing through drive collar.

Seam Rolls and Cam Rolls.

Seam Roll Levers through gear housing arms where indicated.

Base Plate stem.

Air Lift Shaft (must be lubricated to prevent binding through Plunger Housing).