



# Dixie Canner Company

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Worldwide Dependability — Can Packaging & Processing Equipment

## Model UVD-AL Operators Manual



MODEL UVD-AL

# INSTALLATION INSTRUCTIONS

## Vacuum Sealers

BEFORE OPERATING YOUR DIXIE DOUBLE SEAMER REVIEW THE OPERATOR'S MANUAL, supplementary information pertaining to the Vacuum Pump, Regulator, Motors and other auxiliary or accessory items furnished with this machine.

1. Position the machine and secure 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. Fill the port on the vacuum pump to the recommended level. Capacity is approximately 0.5 quart. A quart of Vacuum Pump Oil is supplied with the seamer.
3. Plug the electrical cord into a 25 amp outlet.
4. Provide an external source of compressed air at 4 CFM (not to exceed 125 psi). Connect the air supply to the 1/4" quick-connect fitting of the 816 Air/Filter/Regulator on the rear of the seamer. A consistent supply of 95 psi is required for most type containers. The 816 Air/Filter/Regulator on your seamer was preset at the factory to provide the correct air pressure for closing the sample containers submitted with your order. (Refer to your Operator's Manual for more detail on the 816 Air/Filter/Regulator Assembly.)
5. For models with gas flush or multiflush modes, connect an external gas tank or cylinder and a regulator to the 3/4" opening of the upper 666 solenoid valve located on the right side of the seamer. (The gas tank and regulator are not provided and should be obtained locally.)
6. Lubricate/grease all locations on the seamer as indicated in your Operator's Manual.
7. Connecting the air supply to the seamer will lower the base plate and allow you to remove the sample sealed can from the vacuum chamber. (Change parts are installed on the seamer for closing the sample sealed container. Follow the instructions in your Operator's Manual for changing from one size can to another.)

## EXPORT INSTALLATION

### WHEN EQUIPPED WITH TRANSFORMER AND 220-50-1 VACUUM PUMP

1. Position the machine and secure 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. Fill the port on the vacuum pump to the recommended level. Capacity is approximately 0.5 quart. A quart of Vacuum Pump Oil is supplied with the seamer.
3. Two electrical connections are required.
  - A. Connect 220 volts, 50 Hz, 1-Phase electrical supply to the transformer. This will operate the gearhead motor on the seamer.
  - B. Connect 220 volts, 50 Hz, 1-Phase electrical supply to the vacuum pump motor.
4. Provide an external source of compressed air at 4 CFM (not to exceed 125 psi). Connect the air supply to the 1/4" quick-connect fitting of the 816 Air/Filter/Regulator on the rear of the seamer. A consistent supply of 95 psi is required for most type containers. The 816 Air/Filter/Regulator on your seamer was preset at the factory to provide the correct air pressure for closing the sample containers submitted with your order. (Refer to your Operator's Manual for more detail on the 816 Air/Filter/Regulator Assembly.)
5. For models with gas flush or multiflush modes, connect an external gas tank or cylinder and a regulator to the 3/4" opening of the upper 666 solenoid valve located on the right side of the seamer. (The gas tank and regulator are not provided and should be obtained locally.)
6. Lubricate/grease all locations on the seamer as indicated in your Operator's Manual.
7. Connecting the air supply to the seamer will lower the base plate and allow you to remove the sample sealed can from the vacuum chamber. (Change parts are installed on the seamer for closing the sample sealed container. Follow the instructions in your Operator's Manual for changing from one size can to another.)

## INTRODUCTION

Model UVD-AL offers your choice of vacuum or atmospheric double seaming.

RANGE: 1½" to 6¼" diameter, up to 7" tall.  
Change parts are required for each size can.

CAPACITY: 10+ Cans Per Minute - Atmospheric  
8+ Cans Per Minute - Vacuum  
(Based on 15" Hg)

## OPERATION

Pull red ON/OFF switch to supply power to the machine.  
Select or change the Operating Modes as outline below.

Refer to separate sections in this manual for identification of change parts and how to use the 201-5 Can Top Retainers, if needed.

### ATMOSPHERIC:

Turn black selector switch to Atmospheric (ATMOS). Operator positions can with top and depresses the green start button. The can is double seamed automatically and the machine stops. Operator removes can and repeats the operation. It is not necessary to close the chamber door for atmospheric can seaming.

### VACUUM ONLY:

Preset desired vacuum value (P1). See instructions on page 2 for the Digital Vacuum and Gas Programmer (648). Turn the black selector switch to Vacuum Only (VAC ONLY). Operator positions can and top and closes the chamber door; the preset vacuum value is performed; the can is lifted and double seamed automatically then stops turning; remaining chamber vacuum is released. Operator opens door, removes can and repeats the operation.

### \*\*\*CAUTION\*\*\*

BEFORE OPERATING YOUR DIXIE DOUBLE SEAMER REVIEW THIS MANUAL, supplementary information pertaining to the Vacuum Pump, Regulator, Motors and other auxiliary or accessory items furnished with this machine. Also make certain that:

1. The machine is properly connected to your electrical supply.
2. Auxiliary and accessory items are properly attached.
3. Oil filling port on the vacuum pump is filled to recommended levels. \*IMPORTANT\* Use only SAE 20 motor oil. Capacity is 0.5 quart.
4. All moving parts are oiled. These parts will require periodical oiling 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. The machine is cleaned and oiled as needed. If used occasionally or inactive for more than a few days, give special attention to servicing before and after storage.



MODEL UVD-AL

## DIGITAL VACUUM AND GAS PROGRAMER (648)

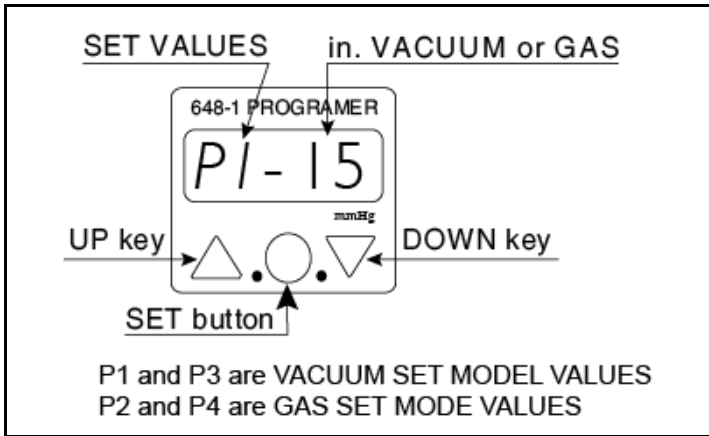
## CHANGING THE 648 TO DISPLAY mmHg

The 648 Digital Vacuum and Gas Programmer reads in inches of Hg. Calibrations are in increments of 0.2" Hg. The vacuum pump is rated 29.8" Hg; the maximum recommended vacuum value which may be entered is 29.8" Hg. The lowest recommended value for setting vacuum or gas is 1" Hg. [The 648 Digital Vacuum and Gas Programmer is rated  $\pm 0.5\%$  accuracy.] Use your finger to set a desired value in the program as explained below.

The 648 Digital Programmer may be programmed to display millimeters of Hg. To change the display settings:

1. Press and hold the SET button until the display reads U-1. Release the SET button.
2. Press the UP or DOWN key until the display reads U-6 (wherein the U represents Unit Set Mode and the 6 indicates mmHg).
3. Press the SET button to store your changes to the display mode.
4. Set desired values as per above instructions, substituting mmHg values for inHg values.

(NOTE: A convenient equation is  $25 \times \text{inHg} = \text{mmHg}$ .)



1. NOTE: The 648 Digital Vacuum Programmer should display "0.0" when the machine is turned on under atmospheric conditions. If the display fails to read "0.0," reset by pressing the UP and DOWN keys simultaneously.

2. Press the SET button until P1 appears on the display followed by the current P1 value. (In the diagram above, 15 represents the current setting for the P1 mode). Release the SET button.

Press the UP key to increase the vacuum value for P1, or press the DOWN key to decrease the vacuum value for P1.

3. Continue pressing the SET button until the display shows "0.0." The vacuum value selected in the previous steps are now programmed into memory and the procedure is complete.

NOTE: Only the P1 value is recognized by the Model UVD-AL. All other P values will be ignored.

*Example - Vacuum Only:*

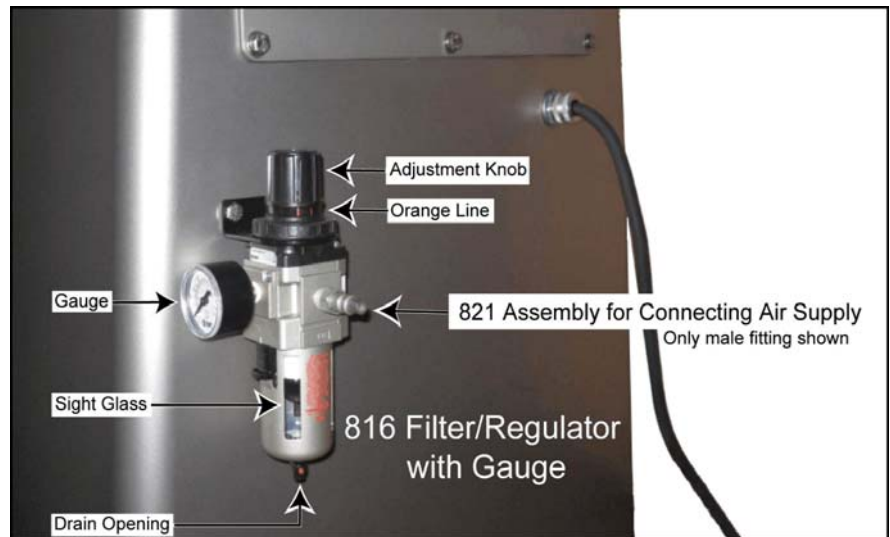
- A. Set the digital programmer to stop the vacuum pump at 18" Hg by setting the P1 mode at 18.
- B. See OPERATION for seaming instructions.

## AIR FILTER/REGULATOR ADJUSTMENT

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.

As a general rule, composite containers require a pressure setting of 70 psi; aluminum containers, 85 psi; and tin or steel containers require about 95 psi. However, particular container types may require minimal experimentation to determine the optimum pressure setting.

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.

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.*

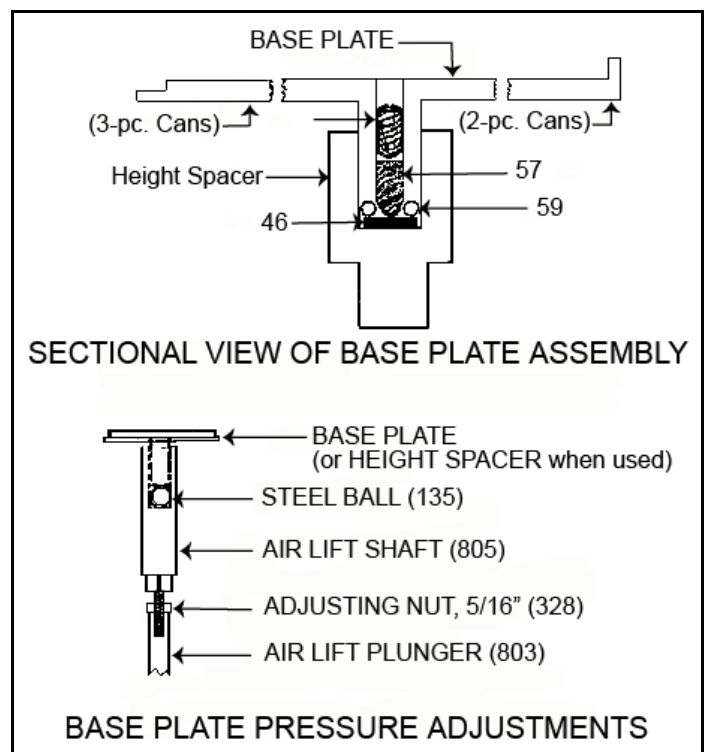
## BASE PLATE PRESSURE ADJUSTMENTS

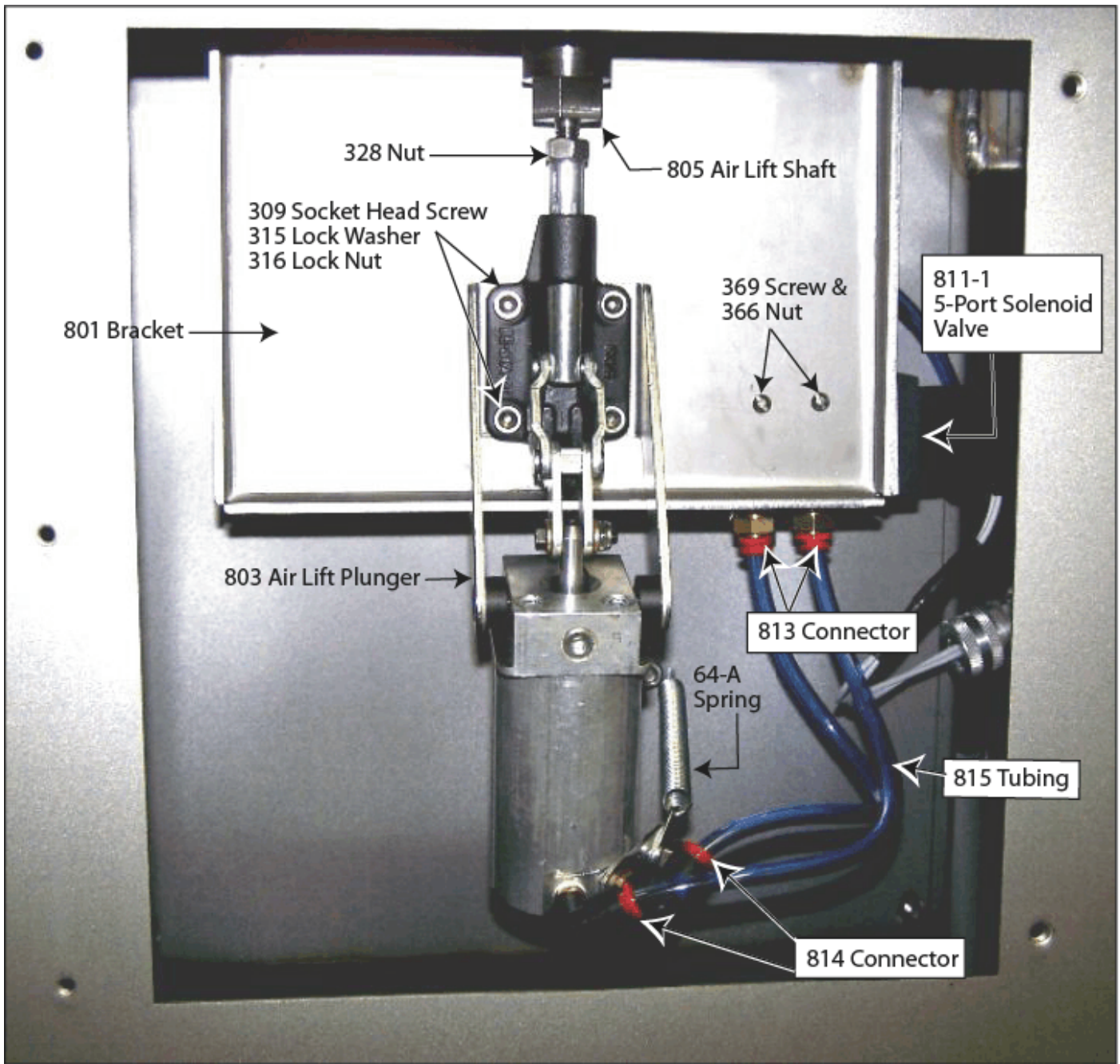
Proper base plate pressure is required to produce essential body hook, and also prevents slipping during the seaming cycle.

Initially, the machine was set-up and adjusted to close cans size 603 x 700 then changed and tested for closing other size cans. Before shipping the machine was equipped and tested to close the cans specified on your order. To make minute adjustments in base plate pressure or to change to cans shorter than 7" proceed as follows:

1. Cans 7" tall do not require a height spacer. Base plate pressure adjustments are made by loosening the 5/16" nut at the base of the 805 lift shaft then turning the lift shaft with a 5/8" open-end wrench at the "flats" on the lift shaft.
2. Cans shorter than 7" require a height spacer and a separate base plate which has an adjusting screw (57) and set screw (56) in it's stem. After loosening the set screw with a screwdriver inserted into the hole, the adjusting screw can be turned with fingers or carefully with pliers to the proper setting. CAUTION: If using pliers or nippers to turn the adjusting screw, be careful not to damage threads.

After making adjustments, tighten jam nuts or set screw.





View inside access panel on front of cabinet

## SEAMING ROLL ADJUSTMENTS

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

**NOTE:** It may be helpful to remove or back off the second operation seam roll while setting the first operation. This will perform the seaming cycle without engaging the second operation seam roll. The first operation seam may be visually inspected and/or measured to insure the setting is correct before proceeding with adjustments to the second operation seam roll.

### 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 seam roll into its innermost position with the chuck.
2. Using your wrench and screwdriver, adjust the second operation seam roll into position. Use the second operation gauge wire (41) to fit the seam 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 seam rolls with different profiles.

## CHANGING FROM ONE SIZE CAN TO ANOTHER:

Change parts consisting of a chuck, a base plate and a height spacer may be required for each different can diameter, top or style. Also, a different set of seaming rolls may be required for each. Your can manufacturer or supplier may recommend the seam roll profiles for your cans. Be sure you have the correct change parts available when changing your machine from one can size to another, then proceed as follows:

1. Put seam rolls in neutral position.
2. Loosen lock nuts (16) and adjust set screws (17-A) until both seaming roll levers (206) are back as far as they will go. If needed, change seaming rolls and/or reposition seam levers on the splined shafts (204-A). Leave the seaming roll levers backed into this position until after the chuck has been changed.
3. Change chucks. Make certain that the new chuck is properly tightened into position against the shoulder of the chuck shaft.

**CAUTION:** (a) Use an open end wrench at the flat surface on the chuck shaft and the chuck wrench while loosening or tightening the chuck to prevent damage to the clutch/brake. (b) If it is necessary to reposition 206 and 204-A, make certain the lip of each seaming roll runs freely in the chuck groove when in their innermost (seaming) position after the cap screws (322) are tightened.

### CHANGING CHUCKS

**To remove** the chuck, hold the chuck shaft with a 5/8" wrench on the cut side of the shaft, located in the exposed area under the gear housing. Then place the two pins of the chuck wrench (44) 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.

4. When necessary remove and reset the seam roll levers (206) so the seam rolls will be about 1/2" from the chuck lip. Minimum travel of the seam roll levers is desired when turning the adjusting screws. **CAUTION:** Use a box wrench to loosen or tighten the bolt securing the seaming roll levers in position on the splined seam roll lever drive shaft. After tightening the bolt make certain that the lip of each seaming roll runs freely in the chuck groove when they are in their innermost (seaming) position and if necessary repeat the adjustment until the seaming roll levers are properly secured into position on the splined shaft.
5. Install the proper base plate and height spacer for the can to be closed. Adjust the base pressure and seaming rolls as outlined above.

# GAUGE WIRES

Gauge wires are used as a starting point for adjusting seaming rolls. Final adjustments may be necessary to obtain specific seam dimensions recommended by your can supplier or manufacturer.

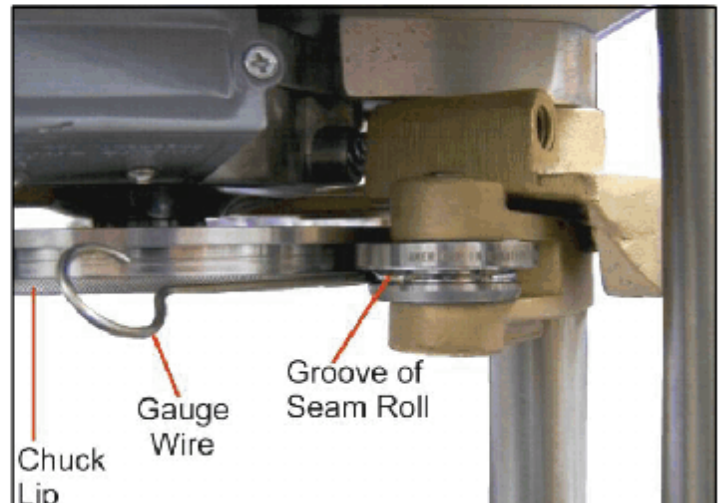
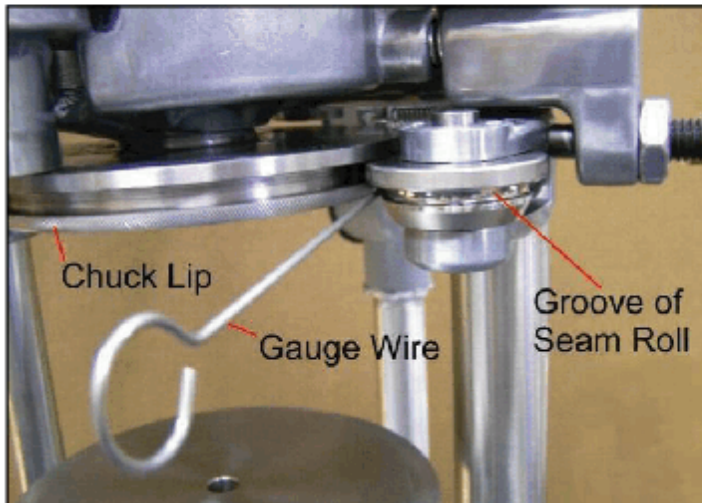
The first operation gauge wire is the approximate thickness of the first operation seam. The second operation gauge wire is the approximate thickness of the second operation seam.

## Gauge Wire Sizes

	Dixie Part No.	Thickness
Metal containers:	40 1st Operation	0.062
	41 2nd Operation	0.031
Composite Containers:	40-C 1st Operation	0.080
	41-C 2nd Operation	0.050
Plastic Containers:	40-P 1st Operation	0.090
	41-P 2nd Operation	0.075

## Correct Positioning of Gauge Wire

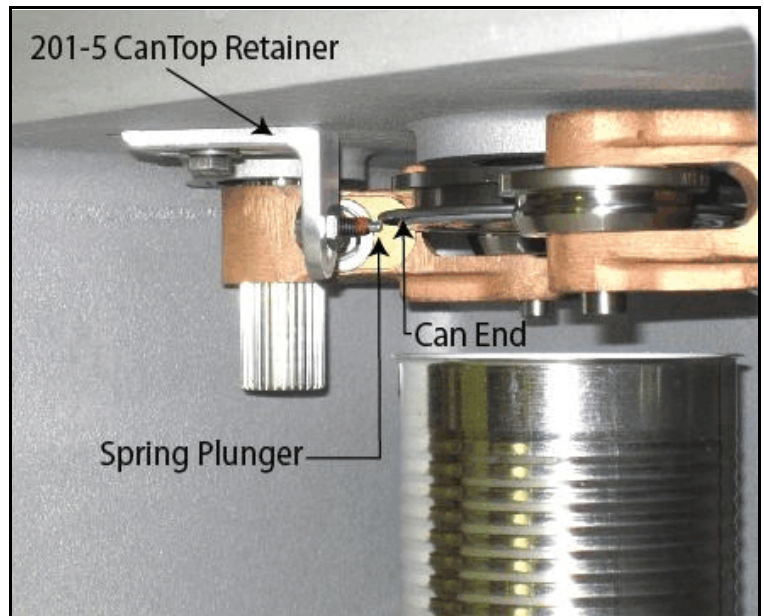
Gauge wires should be positioned in the groove of the seaming roll and against the lip of the chuck.



## ADJUSTING THE CAN TOP RETAINER

The purpose of the can top retainer (201-5) is to hold the can top in position on the chuck, separated from the can, when desired. This feature is particularly useful to permit maximum exchange of vacuum to gas when using the Vacuum Then Gas or the Multiflush modes. The can top retainer is adjusted as follows:

1. After the machine has been properly equipped and adjusted for the size cans to be closed, place the can end snugly into position on the chuck.
2. Adjust the can top retainer so the tip of the spring plunger is just barely against the can top curled edge and tighten both nuts holding the plunger in place.
3. If necessary, relocate the screw holding the can retainer bracket to another hole. This allows a greater range of adjustments. Minute adjustments may be made by adjusting the lock nuts and spring plunger.



Magnets are pressed in chucks fabricated for plain steel or tin can tops to hold the tops in position on the chuck. The can top retainers are not used for chucks with magnets and may be removed or rotated 180° when not needed.

## 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

"Timing" and "in a neutral position" are synonymous. The machine is properly timed (or in neutral position) when both cam rolls (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. Then turn the power OFF, which allows the revolutions counter to "reset" while the machine is in a neutral position. Turn power ON again and continue closing cans.

## NOTES AND TROUBLESHOOTING

Refer to this manual and supplementary information pertaining to the vacuum pump and other auxiliary or accessory items furnished with this machine for troubleshooting assistance. If you have any doubts concerning your diagnosis of a problem or its correct solution, please contact Dixie Canner Company technicians before making changes or adjustments to factory settings.

- ▶ If machine stops and door won't open, turn power OFF then ON again which will allow the vacuum in the chamber to be released so door may be opened. Check machine for proper adjustments before resuming operation.
- ▶ Machine won't operate: 1. Solenoid (666) in vacuum and gas pipes won't open or close, or the 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 and locate the fuse blocks. Refer as need to the separate page on Electrical Box provided in this manual. Each of the three sections of the fuse blocks 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 4 amp and one is 15 amp.  
IF PROBLEM is not a "blown" fuse, your electrician may locate and correct a loose connection in the wiring — or contact the factory.
- ▶ Vacuum pump does not operate. Check switch on top of vacuum pump to make sure it has not been accidentally turned off.
- ▶ Vacuum pump "labors" or cuts off. First, check filter and clean if dirty. Second, disconnect the union, if present, between the filter and vacuum chamber, then swivel elbow to expose inside of pipe and if closed, clean and reconnect the union.
- ▶ Oil in the vacuum pump should be changed after 500 operating hours or every three months, whichever comes first.
- ▶ 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."

- ▶ Close door and machine does NOT start: switch (659) and magnet (659-1) on door may be out of alignment. Realign and adjust to 1/8" space when door is closed.
- ▶ You may wish to connect your seamer to a power surge suppresser if your electrical supply is subject to electrical spikes or surges.

## CHANGE PARTS AND REPAIR PARTS

Photographs or schematics of parts, assemblies, machine sections, base plates and height spacers are shown on other pages. 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 Company, Athens, Georgia, USA. Parts may be ordered as needed to replace worn or damaged parts.

Your Dixie Model UVD-AL 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 the 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

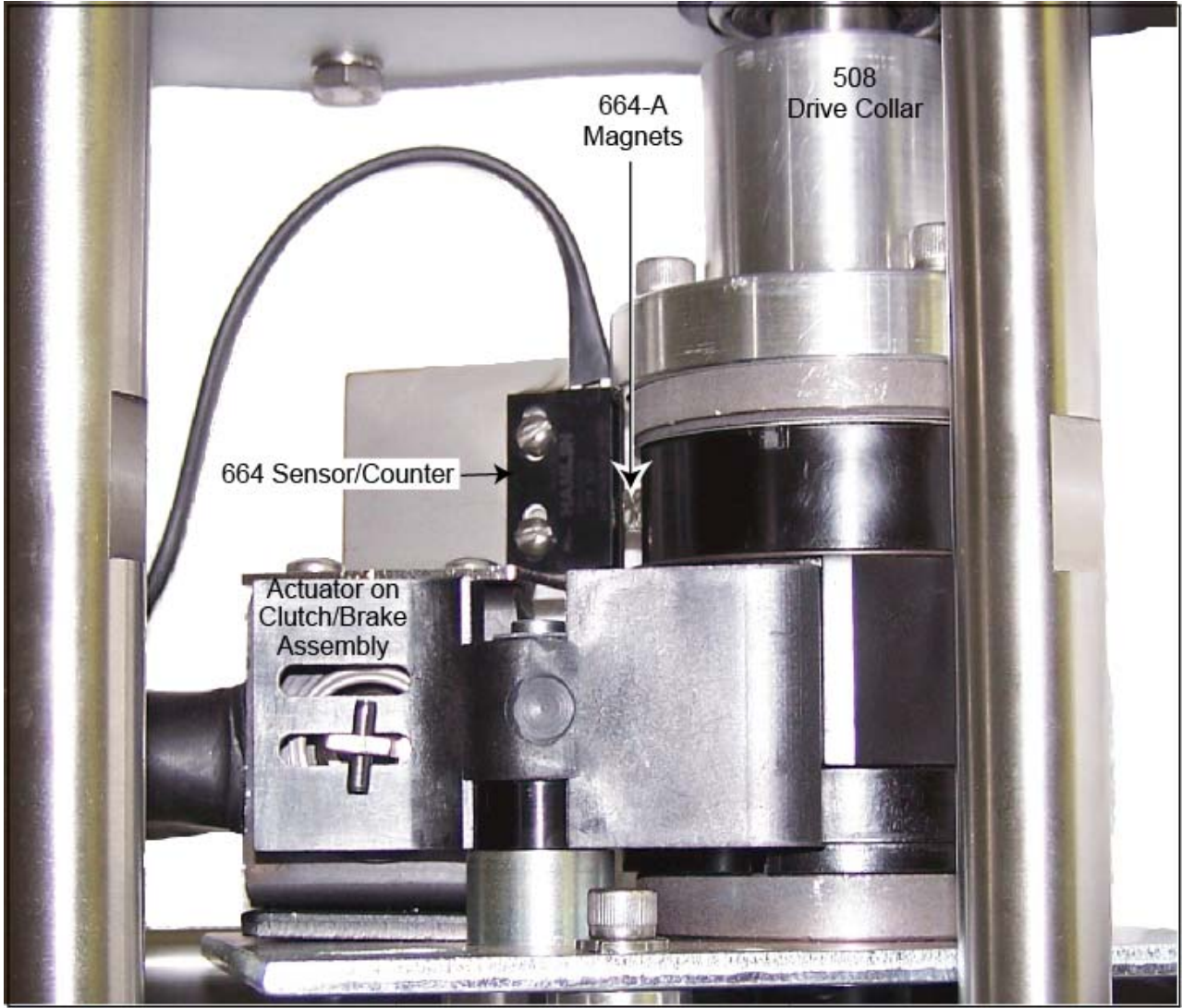
Until the operator is familiar with the mechanics of your can closing machine and learns to recognize irregularities in the essential requirements of the double seam, the outline below is intended to help notice obvious defects and list some causes that may serve as a guide in correcting minor troubles.

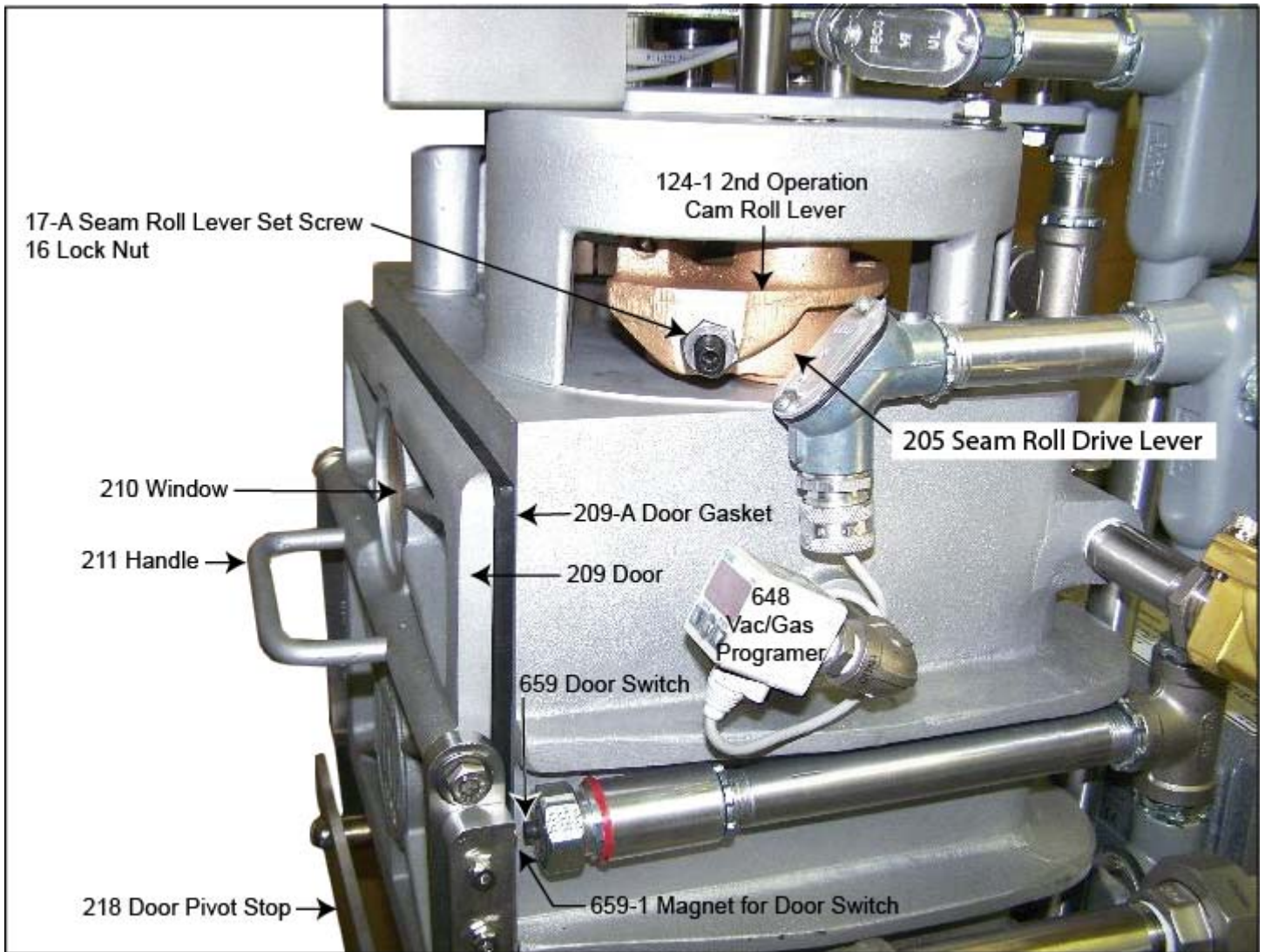
### MECHANICAL DEFECTS AND COMMON CAUSES

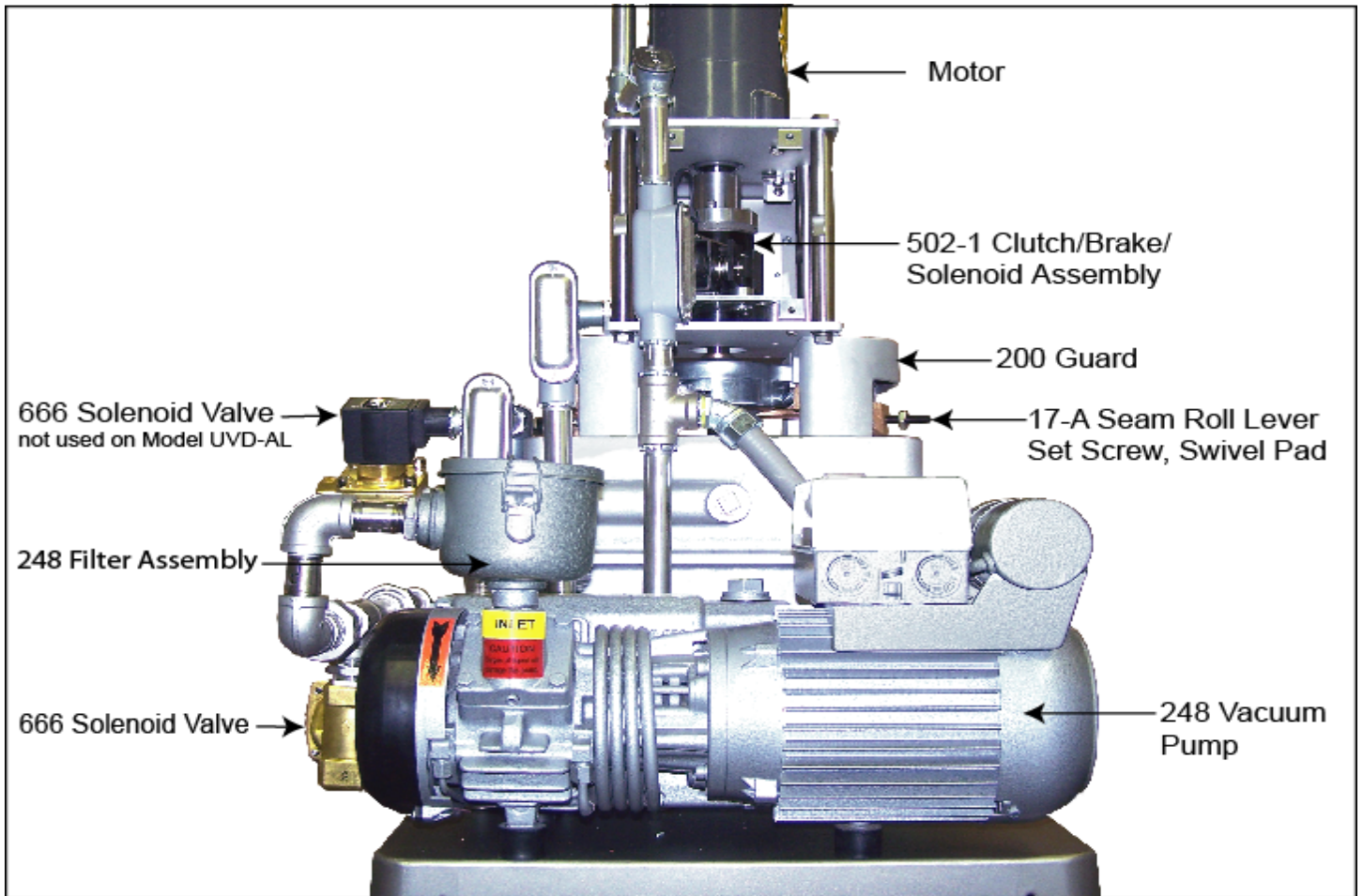
- A. Can slips during seaming operation
  - 1. Damage or lack of oil in the base plate, lift shaft, height spacer or steel ball
  - 2. Insufficient base plate pressure
  - 3. Worn or wrong size chuck
  - 4. Seaming rolls binding on pins
- B. Machine operates with undue noise or "locks"
  - 1. Machine 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 and COMMON CAUSES

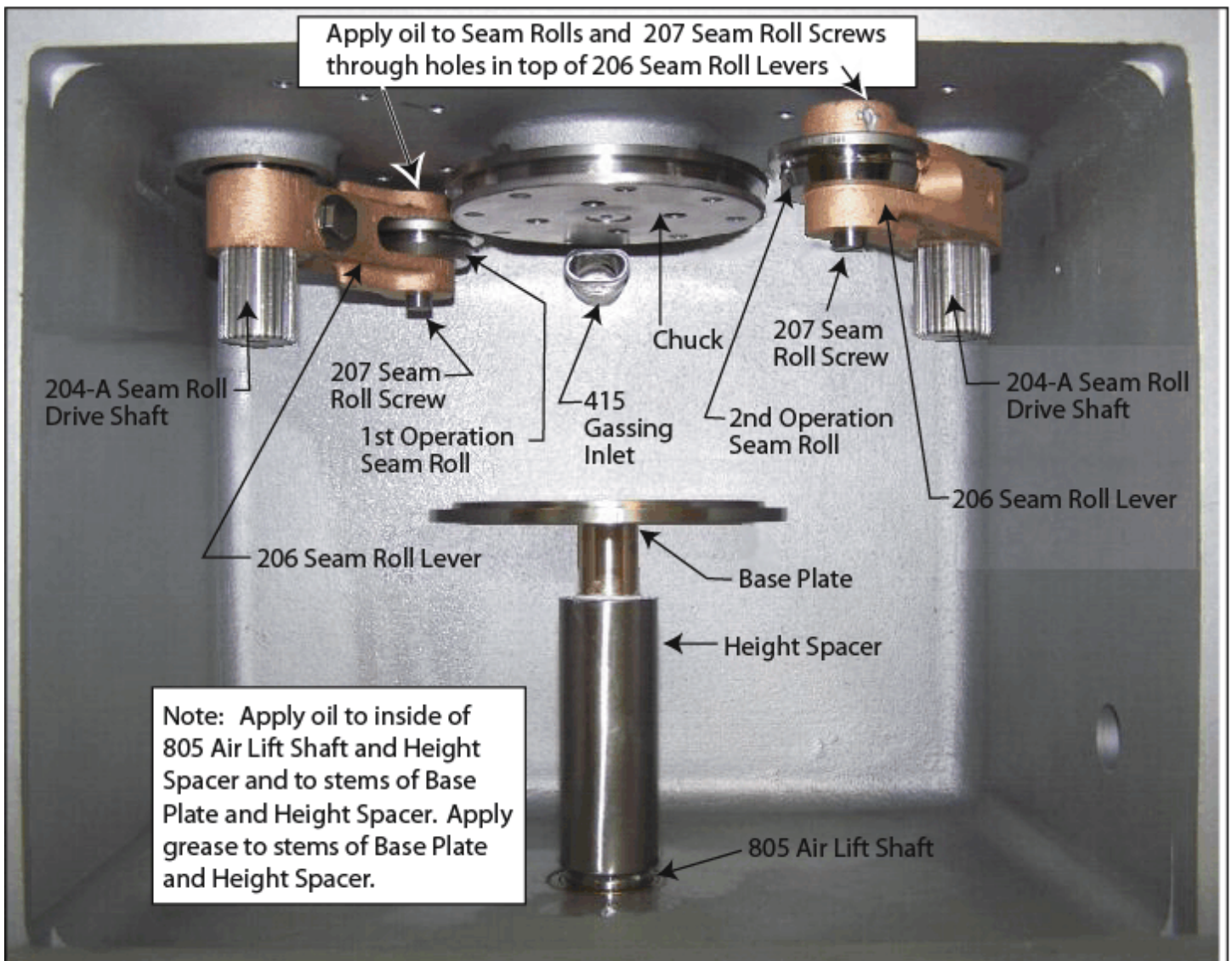
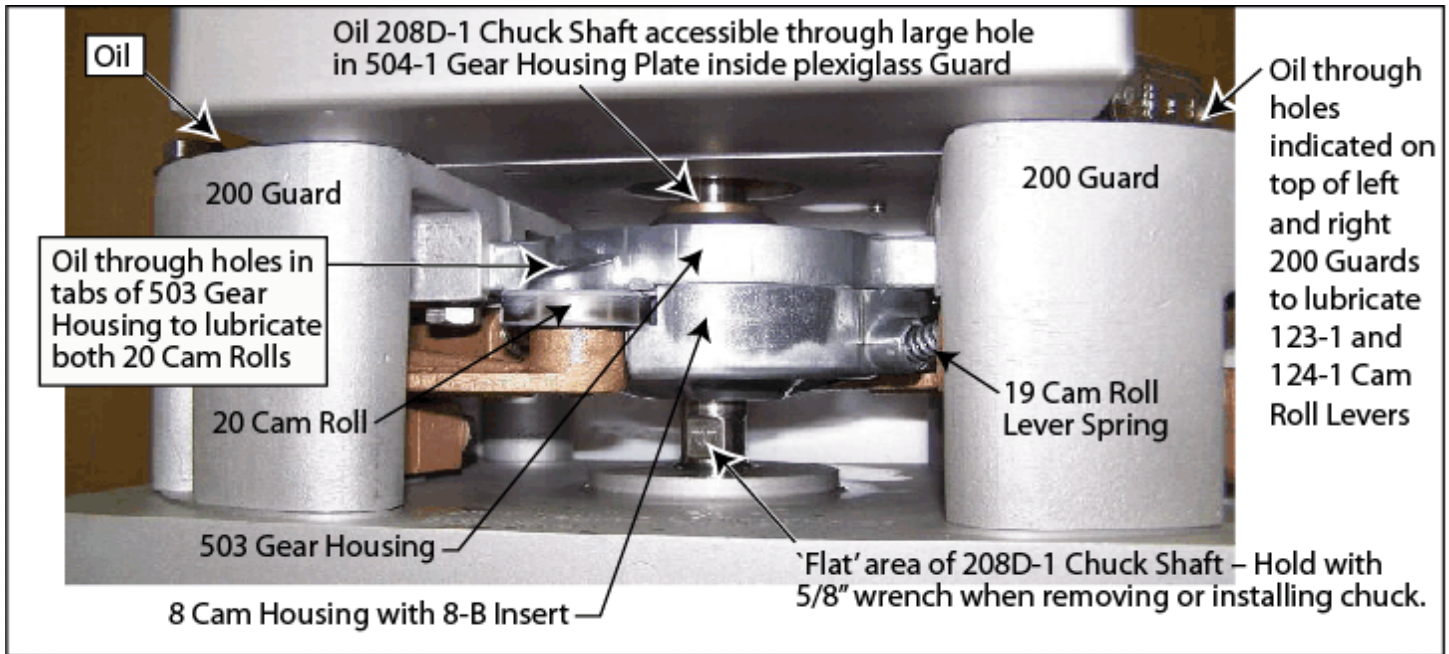
- A. Cut over. Unusually sharp edge at top inside edge of seam
  - 1. 1st or 2nd operation seam roll set too tight
  - 2. Worn seam rolls or worn chuck
- B. Cut or fractured seam
  - 1. Seam rolls set too tight
- C. Droop or lap in double seam at or near can body side seam
  - 1. Too much base pressure
  - 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

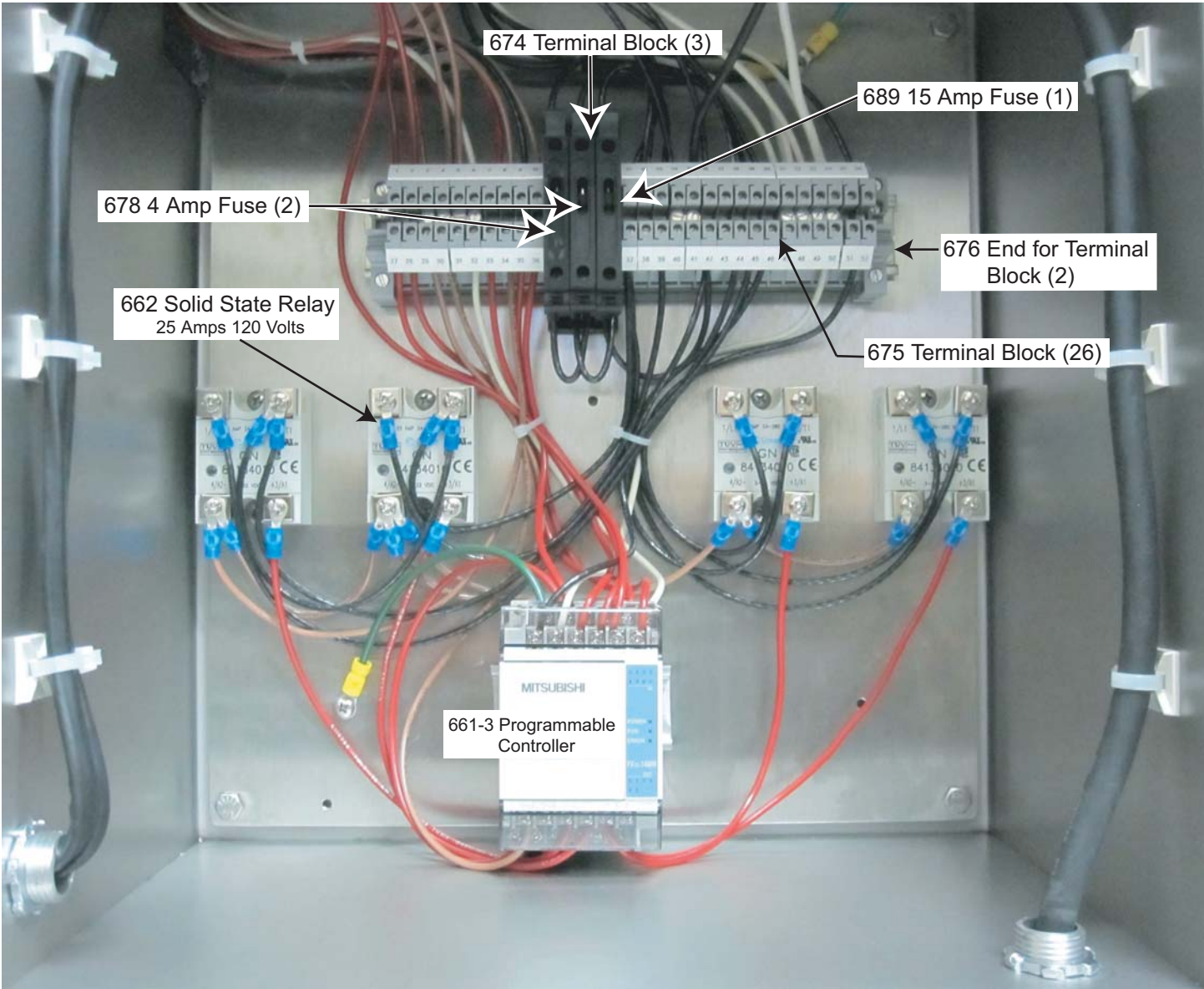






Rear View





Model UVD-AL ELECTRICAL PANEL