

PHARMAFILL™

DEITZ COMPANY, WALL, NJ, USA



Model CS10 Cotton Inserter

Operation Manual

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Bottles fall over or jump suddenly.	
Plunger crushes or damages the product.	
Cotton comes out top of bottle.	
Synthetic cotton issues: Rayon and polyester.	
Turret not centered on insertion cylinders.	
Insertion cylinders extend, then machine stops in extended position.	
Insertion cylinders extend, then retract, then machine stops, will not cycle again.	
Message: "TURRET ROTATE ERROR".	
Message: "ROLLER TRAVEL ERROR".	
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(Technical Notes/Drawings Begin After Last Page)



Warning



This machine contains moving parts and operates automatically. This may present a hazard to personnel.

Never operate this machine with any covers or guards removed or any guard switches or safety devices removed or bypassed.

Only people who have been correctly trained should operate or clean this machine.

Only people who are correctly qualified and trained should carry out maintenance, installation or any other service work.



Never clean or service the machine without isolating the electrical supply and isolating the air supply.



Always test for the presence of voltage before touching or working on electrical components.

Note that there might be other requirements that could apply.

Refer to the manuals supplied by the component manufacturers for further safety instructions.

Section 1: INTRODUCTION

Thank you for purchasing a Pharmafill Model CS10 Cotton Inserter. We at Deitz Company hope you will find that the Model CS10 meets or exceeds your expectations and requirements for an affordable, reliable, and innovative addition to your packaging operation.

Pharmafill products are designed and manufactured by Deitz Company Inc., in Wall, NJ, USA. We have manufactured machinery for the bottle filling industry since 1966 and began directly marketing our Pharmafill line in 1993. We are a small (but growing) family-owned business that emphasizes quality, innovation, and superior customer service.

If you have any questions or comments, please contact us by phone or visit our website. Chances are someone whose last name is Deitz will handle your inquiry personally.

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The operation manual is designed to make it easier for you to know the machine and to make use of its intended range of operation. It contains important instructions on how to operate the machine safely, adequately, and economically. Observing these instructions helps to avoid risks, to reduce cost for repair work and machine downtime, and enhances the machine's operational reliability and lifetime.

The operation instructions are to be supplemented by further instructions due to existing national regulations on accident prevention and environmental protection.

If used in compliance with the instructions contained in this manual and if safety devices are regularly maintained and properly working, this machine is not dangerous to the operator.

This manual is to be kept accessible to all operators using this machine and it is assumed that before use the operator will read fully and understand this manual and will follow the instructions stated within.

As this machine may be used in the packaging of hazardous substances, the operator should be aware of the precautions required for these substances.

In addition to the operating instructions and the binding regulations on accident prevention valid in the country where the machine is being used and at its operational site, the recognized technical rules on safe and proper working must be observed as well.

These operating instructions and the information contained therein have been compiled with due care and attention. However, DEITZ COMPANY does not take any responsibility for misprints, translation errors or other errors and any damage resulting from.

DEITZ COMPANY retains the right to make changes to the described products to improve functionality, reliability, and design. The measurements or data shown on schematics, sketches and photos are not binding. They are for description purposes.

The information and drawings found in the operation manual are the intellectual property of DEITZ COMPANY and may not be copied or given to third parties.

Section 2: SPECIFICATIONS

MODEL	CS10 COTTONER
TYPE	AD 1070
TURRET TUBE LENGTH	3, 4 or 5 inches
TURRET TUBE DIAMETER	.75 or 1 inch
COTTON TYPE	Natural or Synthetic (Rayon, Polyester) Coil
COTTON WEIGHT	6 TO 20 gm
COTTON LENGTH OUTPUT	2 to 9 inches

TURRET LENGTH	TURRET INSIDE DIAMETER	COTTON WEIGHT	COTTON LENGTH MAX
3 inches	.75 inch	6 to 12 gm	5 inches
3	1.00	9 to 20	5
4	.75	6 to 12	7
4	1.00	9 to 20	7
5	.75	6 to 12	9
5	1.00	9 to 20	9

MAX. OUTPUT SPEED (3" turrets)	180 per minute
MAX. OUTPUT SPEED (4" turrets)	172 per minute
MAX. OUTPUT SPEED (5" turrets)	165 per minute

Maximum output speed will vary with input air pressure, quality of input air and the age and/or condition of the machine components. Final (actual) output will also depend on the characteristics of the cotton used and the speed at which cotton, and bottles are fed to the machine.

HEIGHT ADJUSTMENT RANGE	9"
MINIMUM BOTTLE HEIGHT	1" (for standard conveyor height of 36")

(Continued on next page)

INPUT REQUIREMENTS

VOLTAGE*	115 VAC
CYCLES	50/60 HZ
PHASE	1
AMPERAGE	20 AMPS
COMPRESSED AIR**	3.0 FT ³ /MIN AT 80 LB/IN ²
ROOM HUMIDITY	85% RH NON-CONDENSING

*Other input voltages are available as factory options if specified at the time of order

** Compressed air must be clean and dry, free of moisture (water) and oil.

PHYSICAL DIMENSIONS

WEIGHT	800 LBS
FLOOR FOOTPRINT	49" WIDE X 40-1/2" DEEP
HEIGHT	ADJUSTABLE FROM 56" TO 64" ***
FILLING HEIGHT	ADJUSTABLE FROM 37-1/4 TO 45-1/4" ***
STANDARD CONVEYOR HEIGHT	36" TO TOP SURFACE ***
BOTTLE HEIGHT	FROM 1" TO 9" ***

*** May be adjusted further by adjusting or modifying leveling feet.

Section 3. INSTALLATION

- A. Unpacking
- B. Commissioning
- C. Compressed Air
- D. Electric

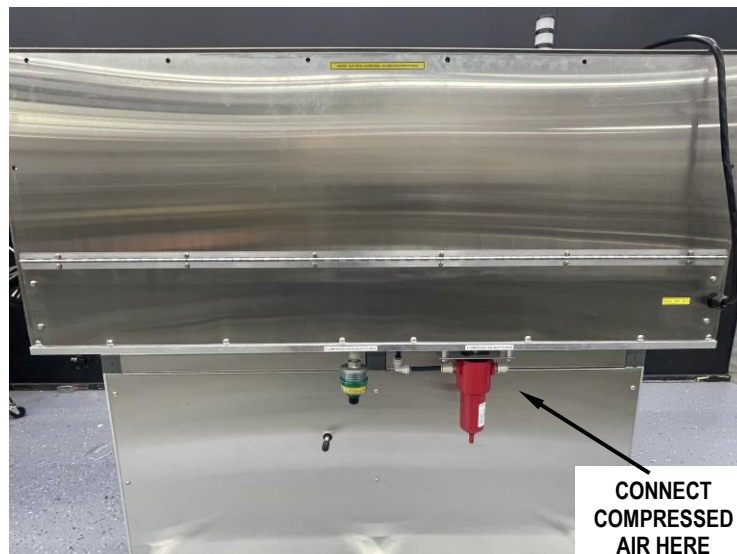
3A. Unpacking

- ❑ Carefully remove equipment from crate and remove all packing materials.
- ❑ Inspect all supplied equipment for damage (if any damage is present, please notify DEITZ COMPANY immediately).
- ❑ Assemble any components such as control panels, etc. using the drawings in this manual as a guide for mechanical, electrical, and pneumatic assembly.
- ❑ Position the machine on the line and adjust the legs of the machine to level the machine. Note that the machine is designed for a standard conveyor height of 36 inches from the floor to the top of the belt.

3B. Commissioning

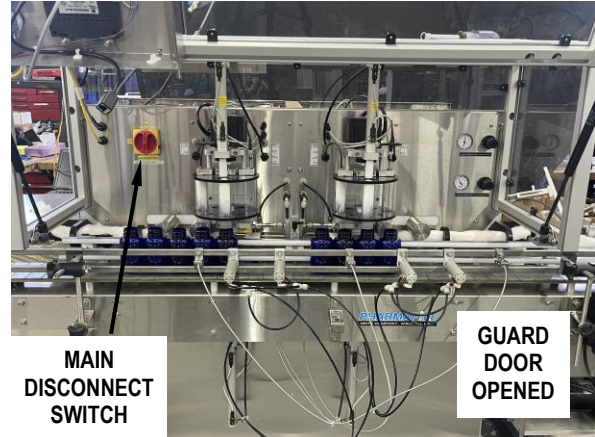
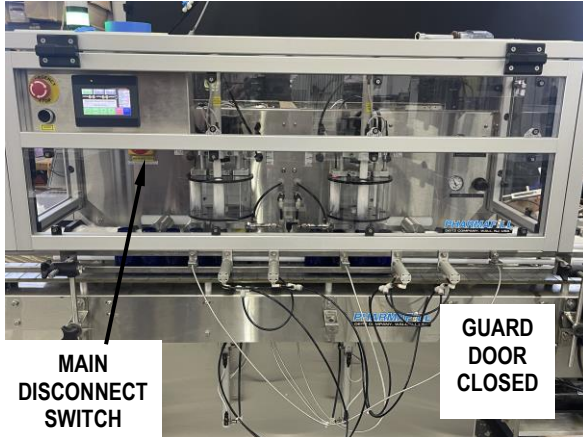
- ❑ Check that the machine is correctly installed, levelled up and aligned.
- ❑ Check that there are no loose bolts or screws and that all electrical connections are tight.
- ❑ Ensure that the machine isolator (main disconnect switch) is in the OFF position.
- ❑ Do not “megger” the machine (high voltage insulation test) as damage to electronic components may result.
- ❑ Apply power to the machine and check polarity and voltage of the incoming supply.
- ❑ Check that all emergency stops work correctly.
- ❑ Check that all guard switches operate correctly.
- ❑ Check that the machine operates correctly.

3C. Compressed Air



- ❑ Compressor must be adequate to meet the specifications (see Section 2).
- ❑ The supply air should be clean and dry, free of condensation and oil.
- ❑ Connect the pneumatic supply.
- ❑ Apply compressed air to the machine and turn both pressure regulators to 80 PSI.
- ❑ Check for air leaks and rectify any leaks found.

3D. Electric



- ❑ Power source must be adequate to meet the specifications (see Section 2).
- ❑ Check the polarity and voltage of the incoming supply.
- ❑ The machine must be solidly earthed.
- ❑ Make sure the Main Disconnect Switch is in the OFF position. If it is not, no action will take place, but this is good practice.
- ❑ Connect the main electrical supply.
- ❑ Turn the Main Disconnect Switch to the ON position. No action will take place.
- ❑ To confirm that the machine is powered up, the Operator Interface panel should be lit.
- ❑ The machine is now ready for operation.

Section 4. FEATURES

- A. General
- B. Operator Interface (Control Panel)
- C. Safety Enclosure
- D. Turrets
- E. Rollers
- F. Shelf
- G. Air Pressure Controls
- H. Bottle Indexing and Bottle Sensors
- I. Optional Tamper – contact Deitz Co. for availability
- J. Lift Platform

4A. General

The Model CS10 is an automatic dual station cotton inserter designed to convert continuous cotton coil to individual pieces and insert them into a bottle or other container at each station. The cotton coil is cut by the tearing action of two sets of pinch rollers, so that uniform lengths are produced. The cut piece is then pushed up into a tube, so that it is folded in half to form an inverted-U shape. The tube is then moved under a sensor to confirm the presence of the cotton piece. If confirmed, the tube then is moved into position to align with the bottle filling station. If a bottle is present, cotton is inserted. Because of the inverted-U shape, the ends of the cut piece are inside the bottle and only the fold is visible at the top. Once a bottle is filled, the machine automatically releases the bottle and repeats the cycle. These actions are typical of each station.

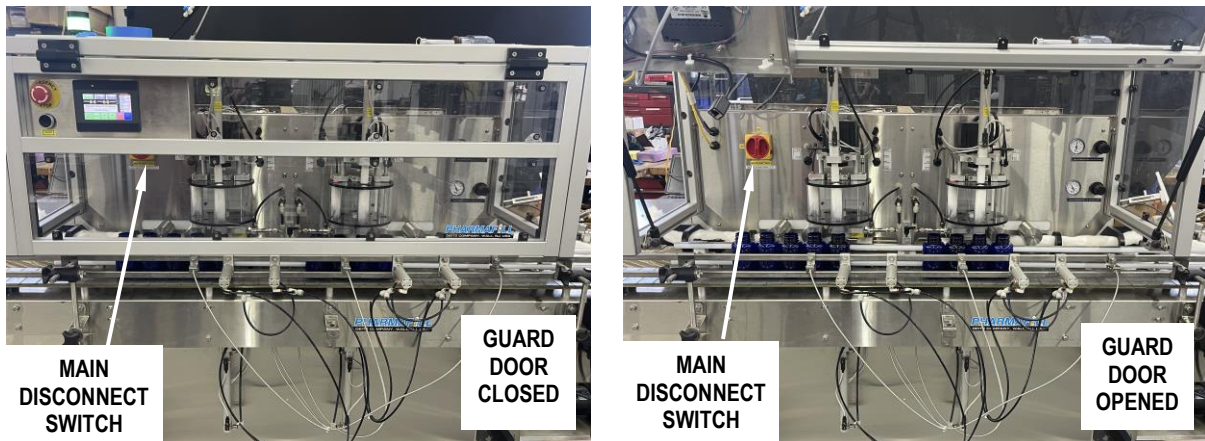
In addition to the insertion function, there are several secondary functions, which aid in using and setting up the machine. All functions are detailed in Section 5.

4B. Operator Interface (Control Panel)



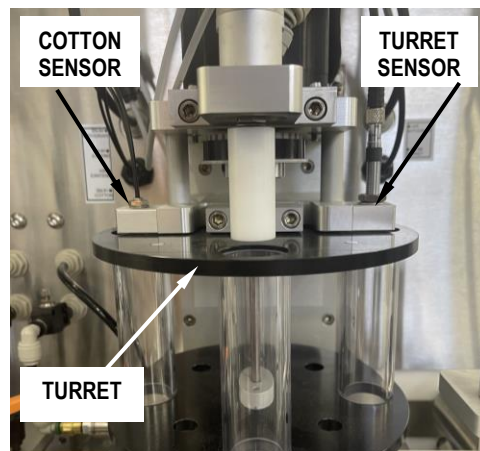
The machine operation is controlled with an Operator Interface Panel, or simply a Control Panel. This is a flat panel device with membrane push buttons, alert indicator lights and a 2-line text display for input and output. See Section 5 for a full explanation. Next to the Control Panel are two pushbutton switches labeled “Emergency Stop” and “Start”.

4C. Safety Enclosure



The operator is protected from encountering the moving parts of the machine by the safety enclosure, which is made of clear polycarbonate with a metal and plastic frame. The front of the enclosure is a hinged door and swings up to provide full access to the components. The Guard Door contains the Control Panel and has an interlock device, which will prevent the machine from operating once the door is opened.

4D. Turrets

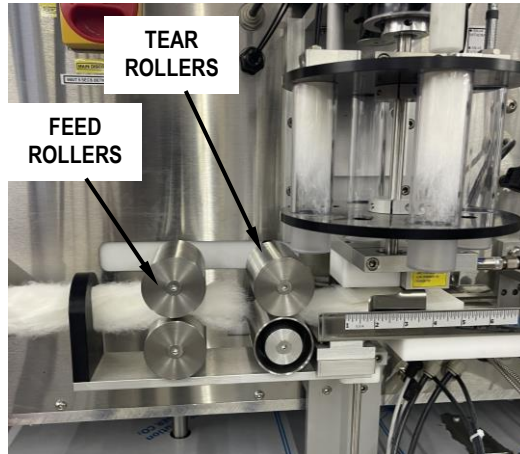


Each turret assembly transports and inserts the cut cotton pieces. Each turret itself consists of four clear tubes, arranged vertically, 90 degrees apart, between two discs. A stepper motor rotates the turret 90 degrees per cycle. The turrets come in different sizes and lengths and are easily changed over.

There are two sensors built into each turret assembly. On the right is the Turret Sensor (proximity), which measures and confirms the movement and position of the turret in each cycle. If either turret fails to rotate, the machine will stop, and an error message will be displayed (see Sec. 9A). On the left is the Cotton Sensor (fiber optic), which confirms the presence of cotton after each cycle. If cotton is not detected at the end of each cycle when in automatic mode, the machine will stop, and an error message will be displayed (see Sec. 9A).

The lower insertion air cylinder (under the shelf) pushes cut cotton up into the rear tube. At the same time, the upper insertion air cylinder (on the turret) pushes cut cotton down out of the front tube and into the bottle. The motion of both air cylinders is confirmed by cylinder sensors (magnetic).

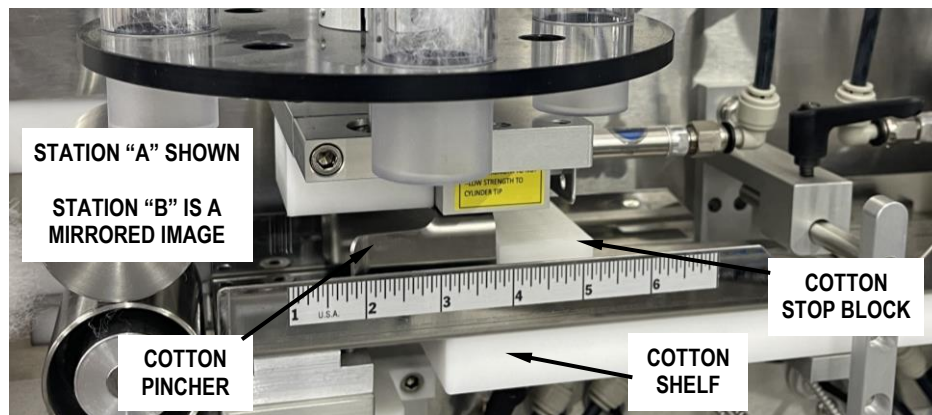
4E. Rollers



Two sets of pinch rollers control the cotton cutting process at the “A” (left) and “B” (right) stations. At station A, the set of rollers on the left are the feed rollers and the set at the right are the tear rollers. At station B, the set on the right are the feed rollers and the set at the left are the tear rollers. Separate stepper motors drive each set. The feed rollers feed an exact length of cotton coil into the tear rollers, which tear the cotton to length and places the cut piece on the cotton shelf. The amount of force pressing the rollers together is controlled by air pressure and may be changed. Air pressure is also used to open the rollers for loading or unloading cotton coil. See Section 5E.

When a new length of cotton is selected, the roller assembly automatically repositions itself to assure that the cut cotton piece is centered under the rear tube. A stepper motor controls this motion.

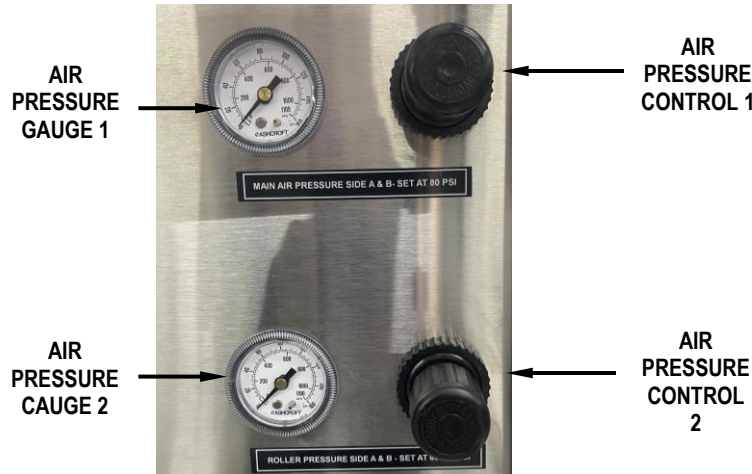
4F. Shelf



The Cotton Shelf is where the cut cotton piece is placed prior to being inserted into the rear tube. The lower insertion air cylinder is mounted under the shelf. The Cotton Stop Blocks are part of each

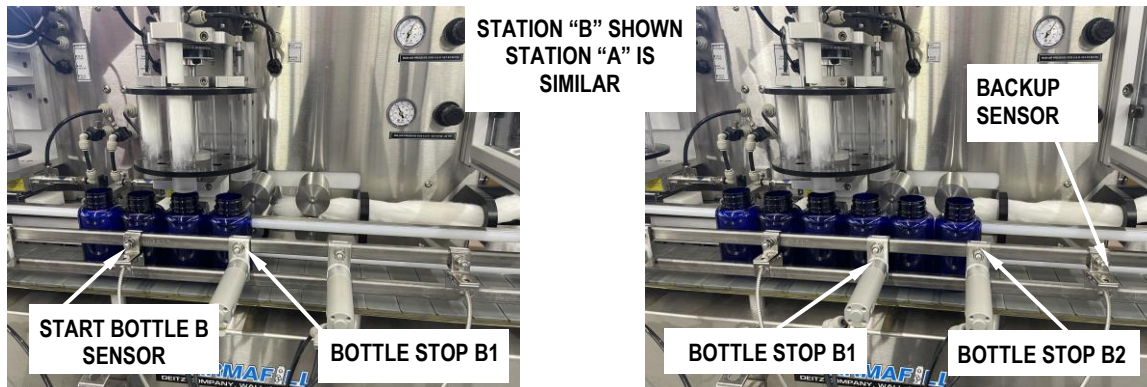
opposing shelf. These blocks limit the distance the cut piece can travel away from the tear rollers, assuring correct centering of the piece under the tube. The Cotton Stop Block adjusts automatically when a new length is selected. Directly above each shelf is a Cotton Pincher assembly. Each has an air cylinder and two moving arms that hold the cotton in place as it is inserted into the rear tube.

4G. Air Pressure Controls



There are two air regulators with gauges that control pressure to two separate air circuits in the machine. Air Pressure Control 1 controls the insertion of air cylinders and the pincher mechanisms. Air Pressure Control 2 controls the bottle stops and pinch roller pressure.

4H. Bottle Indexing and Bottle Sensors

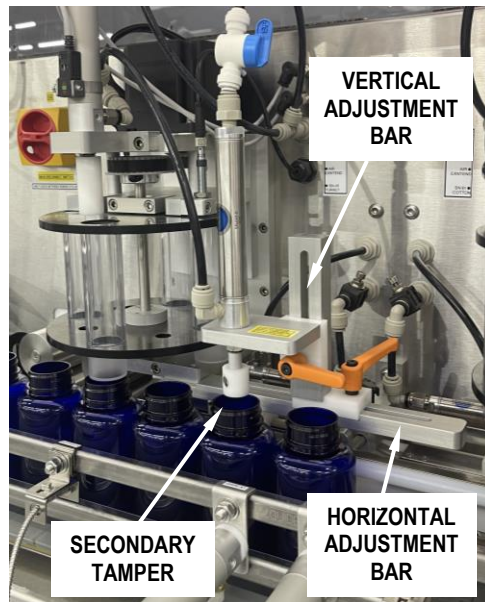


The machine controls the bottle flow on the conveyor by using air-controlled bottle indexing. This system uses two bottle-stop air cylinders at each station, mounted on the conveyor rail, which can be adjusted manually side to side. The air cylinder pushes a finger out to stop the bottle. The first stop is positioned to center the bottle under the filling tube. The second stop is positioned to allow one bottle to move past the filling point.

There are three sensors (fiber-optic) that detect the presence of bottles. The first two are the START BOTTLE sensors, which are positioned ahead of station A and B. In automatic mode, whenever the

sensors detect a bottle (and if all other conditions are correct), the machine will perform an insertion cycle at that station. The third one is the BACKUP sensor, which is positioned down line after station B. If a downline process stops, bottles will accumulate on the conveyor. When this sensor detects a bottle, it stops automatic or manual insertion. Once the bottle backup is cleared, insertion will resume without operator intervention.

4I. Optional Tamper - contact Deitz Co. for availability



4J. Lift Platform

The machine incorporates an electrically operated lift platform, which is used to adjust the height of the filling tube over the conveyor. The height must be set by visual observation, as there is no feedback or digital readout of relative height. There is also a manual override feature in case of an electrical problem. A manual crank handle is stored inside the machine, accessible through the rear access door.



Section 5. OPERATION

- A. Control Panel
- B. Insert Cotton
 - Show Values
- C. Adjust Settings
 - Cotton Length
 - Number Of Pieces
 - Release Time
 - Dwell Time
- D. Change Height
- E. Open Rollers
- F. Clear Tubes
- G. Extend Insert Rods
- H. One Step Index
- I. Index Bottles Only
- J. Set Count To Zero
- K. Options
- L. Technician Only

(Section begins on next page)

Section 5A: CONTROL PANEL

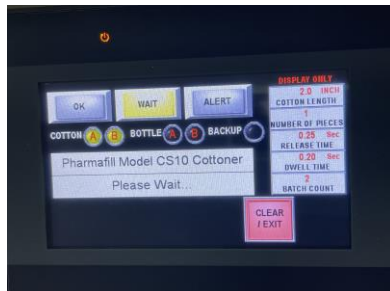
This is the operator interface for control functions and message display.



1. Note the locations of the EMERGENCY STOP button, the START button, and the CONTROL PANEL.



2. When “STOPPED- Press Start” is displayed, twist and release the STOP button then press the START button.



3. The machine will now initialize, and the turrets will execute the “find home” routine. The guard door must be down.



4. When the “find home” routine is complete, you will see the top menu. The machine is now ready to operate.



5. From the top menu, press MENU to select the mode of operation. At any time press the CLEAR to return to the top menu.

Section 5A: CONTROL PANEL

(Continued)



6. Press a menu option or press CLEAR/EXIT to return to the top menu. The choices are explained in the following sections.



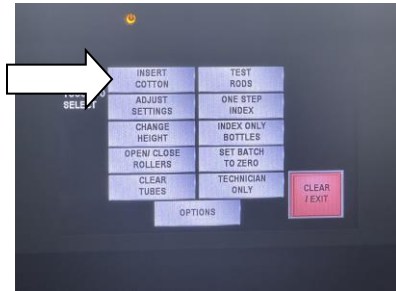
7. The PLC/IO button will access the Inputs and Outputs on the PLC in real time. This will be explained further in the Troubleshooting section.

END Section 5A

Section 5B: INSERT COTTON
This function controls the inserting process.



1. Press MENU.



2. Press INSERT COTTON.



3. To start a single insertion cycle, press MANUAL.



4. Press Side A or Side B. The machine will make one complete cycle, including indexing the bottles.

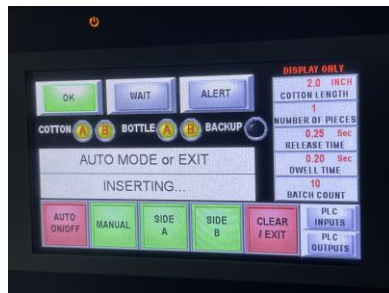


5. To cycle continuously, press and hold Side A or Side B arrow.

**Section 5B: INSERT COTTON
(Continued)**



6. Press MANUAL again to return to SELECT screen.



7. To start fully automatic operation, press AUTO ON/OFF. If all conditions are correct, cotton will be inserted (cotton present in tube, bottle present, no backup).



8. If the BACKUP SENSOR detects a bottle downline of station B, the machine will pause and display “BOTTLE BACKUP DOWNSTREAM”. Once the backup clears, insertion will BEGIN.



9. If there is no bottle at one or both BOTTLE SENSORS, the machine will pause and display the message “Waiting For Bottle... Side A / Side B”. As soon as bottles are detected at both sensors, insertion will begin.



10. If either of the COTTON SENSORS fails to detect cotton in the left-hand tubes, the machine will stop and display the message “NO COTTON IN TUBE A / TUBE B”. Insertion will not resume automatically.

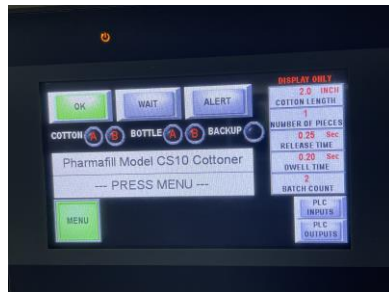
Section 5B: INSERT COTTON
(Continued)



11. Inserting cotton will only occur in AUTO mode or MANUAL mode, not both.



12. To exit automatic operation, press AUTO ON/OFF...

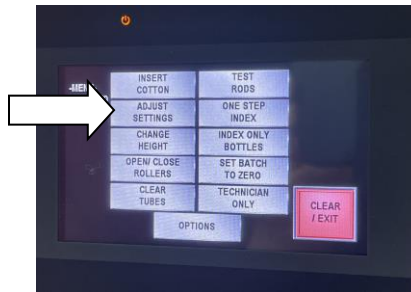


or press CLEAR/EXIT.

END Section 5B

Section 5C: ADJUST SETTINGS

This function sets the values for length of cotton and other parameters.

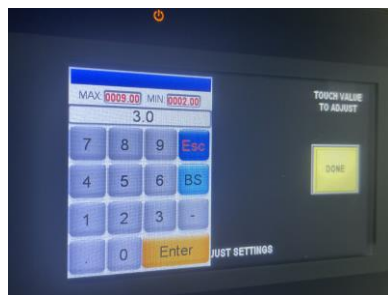


1. Press MENU.

2. Press ADJUST SETTINGS.

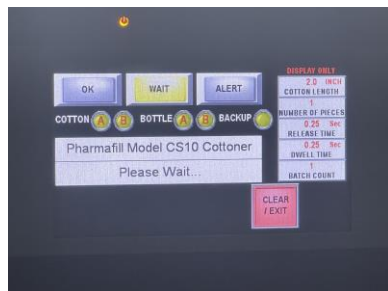


3. Current Values are displayed. Ranges for each setting appear in numeric keypad upon selection of each setting.

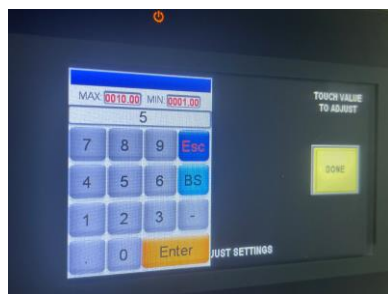


4. "Cotton Length" ranges from 2.0 to 6.0, 7.5 or 9.0 inches (based on 3", 4" or 5" turret size).

This is the straight length that is fed through the rollers. The length is approximate and varies with the qualities of the cotton.



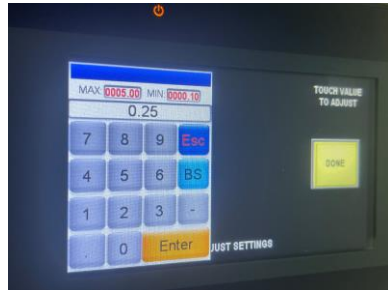
5. When you press ENTER, the computer will briefly update the drive system with the new length. The lengths will be similar for station A (left) and station B (right).



6. "Number of Pieces" ranges from 1 to 9.

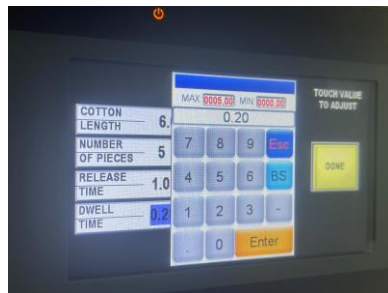
This is the number of pieces of cotton that will be inserted into each bottle and will be similar for station A (left) and station B (right).

Section 5C: ADJUST SETTINGS
(Continued)



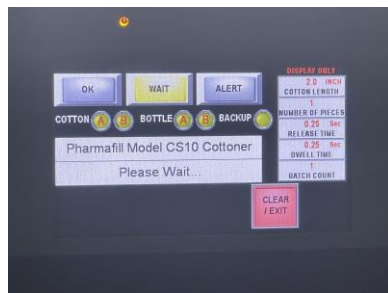
7. “Release Time” ranges from 0.10 to 2.00 seconds.

This is the time delay the bottle indexing mechanism allows for a filled bottle to move out of either of the filling positions, before starting a new cycle. The correct value depends on conveyor speed and bottle diameter.



8. “Dwell Time” ranges from .00 to 2.00 seconds.

This is the time delay after the insertion rods are extended and before they are withdrawn at each station. Sometimes cotton springs up out of the bottle. This is used to give the cotton a “set” after it is inserted in the bottle.



9. After you view or change the Dwell Time and press ENTER, the machine will first reset the position of the pinch rollers and cotton stop blocks for the current length and then “home” the turrets.

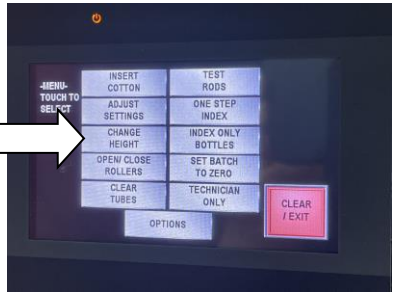


10. Press CLEAR/EXIT to return to HOME screen.

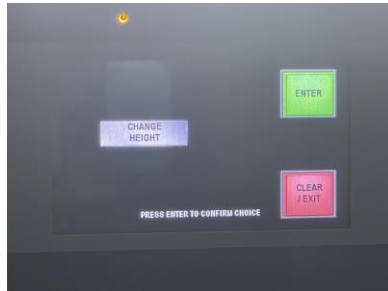
END Section 5C

Section 5D: CHANGE HEIGHT

This function raises or lowers the machine height over the conveyor.

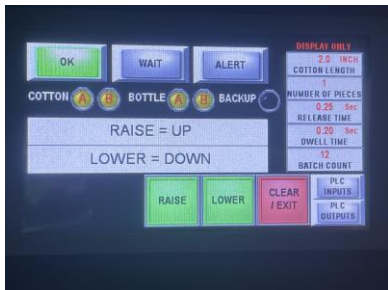


1. Press MENU.
2. Press CHANGE HEIGHT

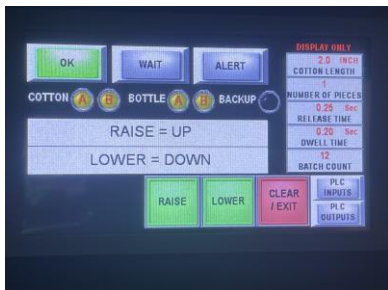


3. Press ENTER.

Exercise caution and common sense to not cause personal injury and to not damage any equipment. You must visually assure that there is no interference.



4. Press RAISE to raise the machine. Press LOWER to lower the machine. The machine is equipped with limit switches that will stop the lift motor at the ends of the adjustment range.



5. Press CLEAR to exit this function and return to the top menu.

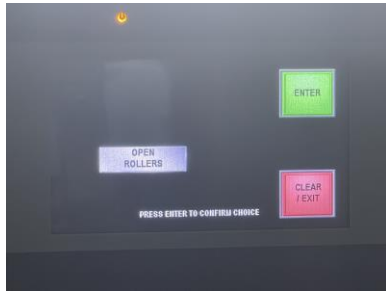
End Section 5D

Section 5E: OPEN/CLOSE ROLLERS

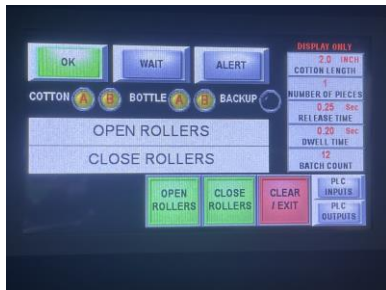
This function separates the pinch rollers to allow the cotton coil to be fed in



1. Press MENU.
2. Press OPEN/ CLOSE ROLLERS.



3. Press ENTER.
- Exercise caution and common sense to not cause personal injury and to not damage any equipment. You must visually assure that there is no interference.



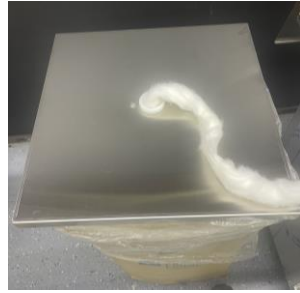
4. Press OPEN ROLLERS to feed cotton.



5. Open the guard door. The rollers are now in the open position. Station A (left) is shown in the following views. The procedures at station B (right) will be similar but in a mirrored image.



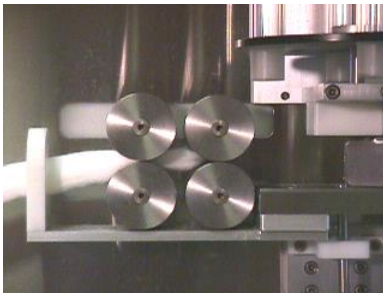
Section 5E: OPEN ROLLERS
(Continued)



6. Feed the cotton coil through the optional cotton box top (if equipped), then through the 1st cotton guide loop.



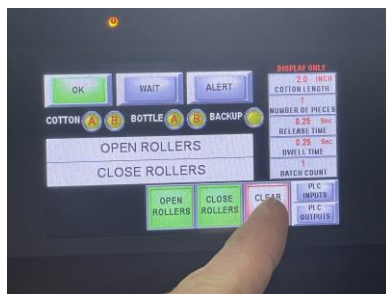
7. Feed the cotton through the 2nd and 3rd cotton guide loops and then the first pair of rollers, stopping just before the second set of rollers.



8. Close the guard door.

Press **CLOSE ROLLERS**.

The rollers will now close on the cotton coil.

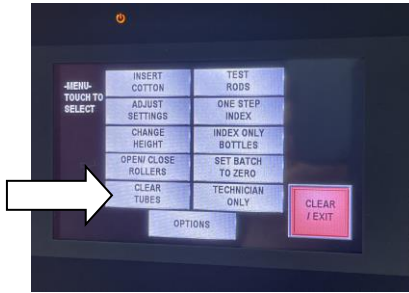


9. Press **CLEAR** to exit this function and return to the top menu. If the rollers are in the open position when you do this, they will then close.

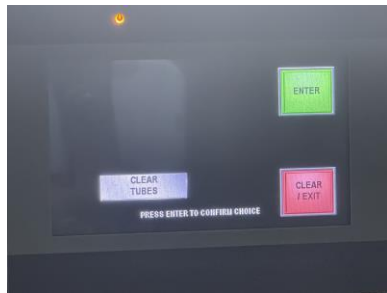
End Section 5E

Section 5F: CLEAR TUBES

This function empties the cotton from the tubes.



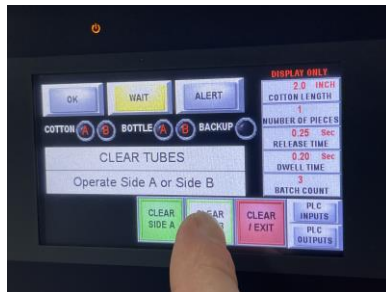
1. Press MENU.
2. Press CLEAR TUBES.



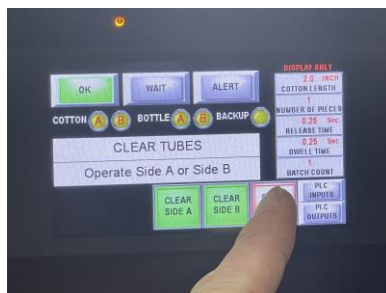
3. Press ENTER.



3. You will now see the CLEAR TUBES options.
- Press CLEAR SIDE A (left) or the CLEAR SIDE B (right).



4. The machine will now execute four cycles without feeding any cotton. This will result in all tubes being emptied at either station A or B.

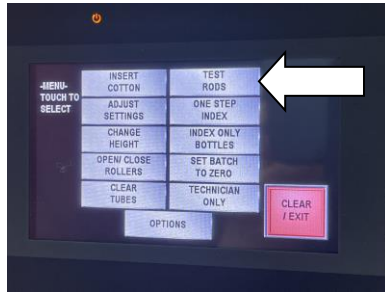


5. Press CLEAR to exit this function and return to the top menu.

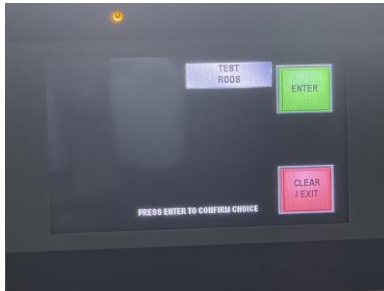
END Section 5F

Section 5G: TEST RODS

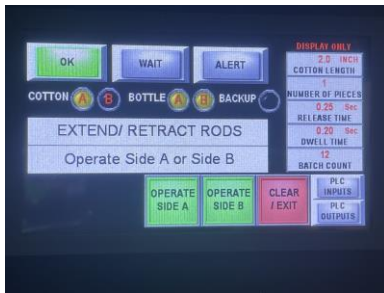
This function extends the insertion air cylinder rods for setup purposes.



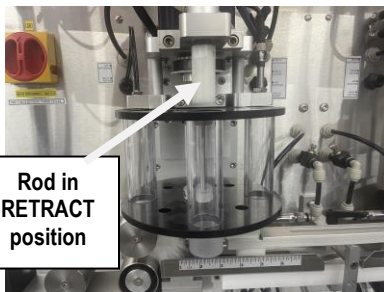
1. Press MENU.
2. Press TEST RODS.



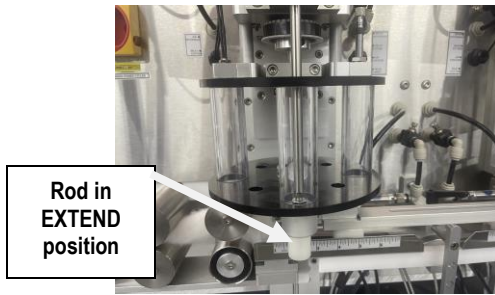
3. Press ENTER.



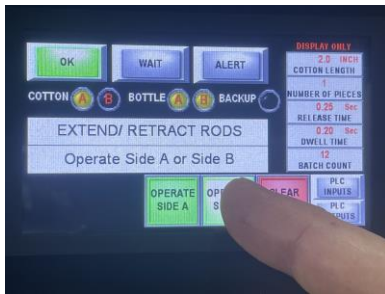
4. Press OPERATE SIDE A to cause the insertion air cylinders at station A (left) to extend fully and hold in that position or press the OPERATE SIDE B (right). The guard door must be closed, or no action will take place. You may open the guard while the cylinder is extended. (Note that the pincher air cylinder is also actuated.)



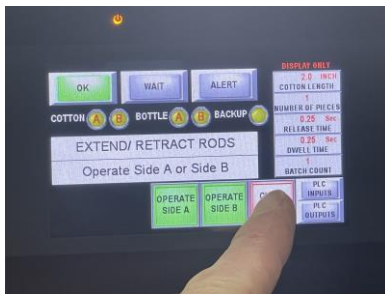
Section 5G: EXTEND RODS
(Continued)



5. With the rod in the fully extended position, you may test a filled bottle to see that the contents are not being crushed by the cotton insertion action. You may also see that the rods are extending properly and that the associated position sensors (mounted on the cylinders) are adjusted and functioning correctly.



5. Close the guard and press OPERATE SIDE A (left) or OPERATE SIDE B (right) to retract the insertion air cylinders.

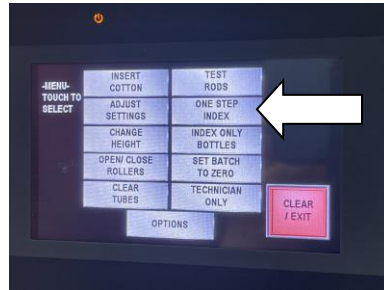


6. Press CLEAR to exit this function and return to the top menu. If the rods are extended when you do this, they will then retract.

END Section 5G

SECTION 5H: ONE STEP INDEX

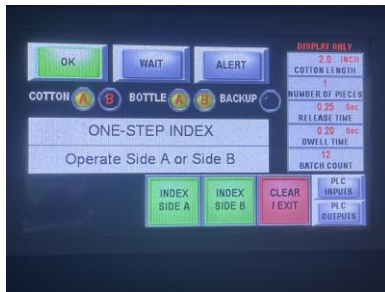
This function jogs the bottle indexing mechanism for setup purposes.



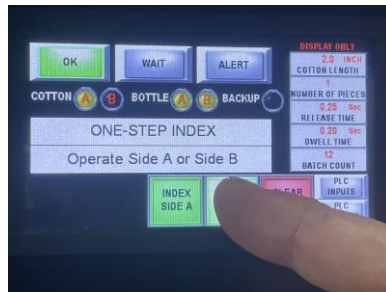
1. Press MENU.
2. Press ONE STEP INDEX.



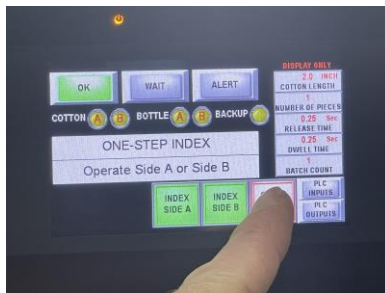
3. Press ENTER



4. Press INDEX SIDE A to cause the bottle gating mechanism at station A (left) to switch to the release position and hold there or press the INDEX SIDE B for the same action at station B (right).



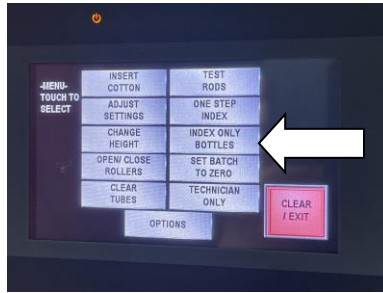
5. Press INDEX SIDE A for station A or INDEX SIDE B for station B again to return to the hold position. By doing this several times, you may test the accuracy and smoothness of the bottle indexing action and make mechanical adjustments to the gating accordingly.



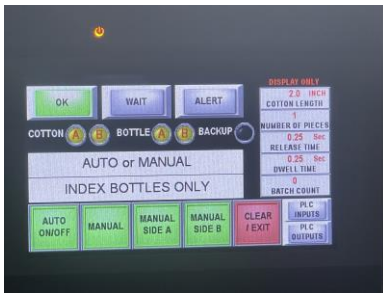
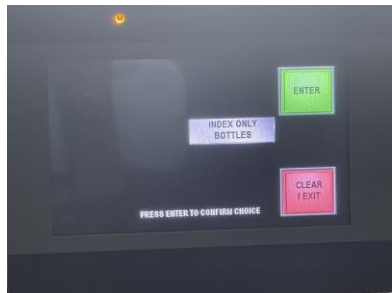
5. Press CLEAR to exit this function and return to the top menu.
END Section 5H

Section 5I: INDEX BOTTLES ONLY

This function cycles the bottle gating mechanism without inserting cotton.



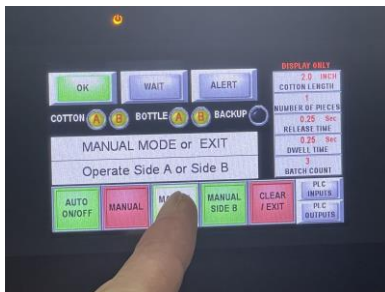
1. Press MENU.
2. Press INDEX BOTTLES ONLY



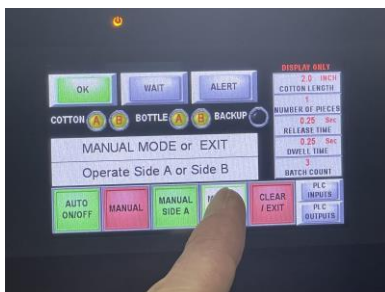
3. Press ENTER.



4. To start a single insertion cycle, press MANUAL.



5. Press MANUAL SIDE A or MANUAL SIDE B. The machine will now execute a single bottle index cycle at the appropriate station. The gating mechanism will release one bottle and load another into the filling position.

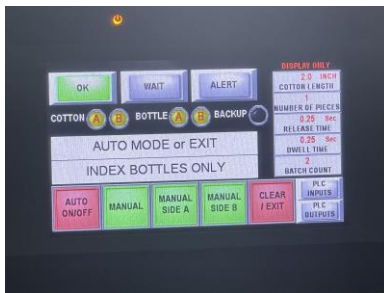


6. To cycle continuously, press and hold MANUAL SIDE A or MANUAL SIDE B.

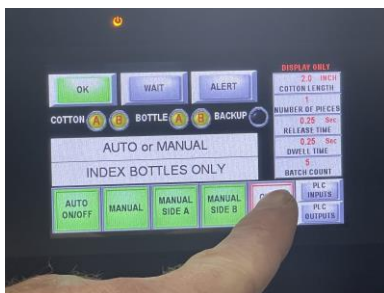
Section 5I: INDEX BOTTLES ONLY
(Continued)



7. Press **MANUAL** again to return to **SELECT** screen.



8. To start automatic indexing operation, press **AUTO ON/OFF**. If all conditions are correct, the machine will automatically execute one bottle index cycle at each station each time a bottle is detected by the bottle sensor. This is useful when making a production run which does not use cotton and must bypass the cottoner. Bottles will have a uniform minimum spacing as they leave the machine.



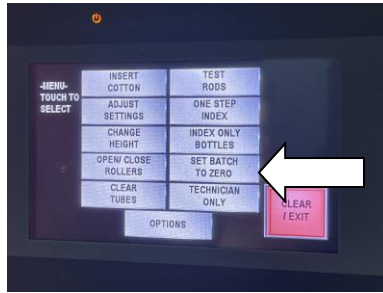
9. Press **AUTO ON/OFF** again to stop automatic operation.

10. Press **CLEAR** to exit this function and return to the top menu

END Section 5I

Section 5J: SET BATCH TO ZERO

This function will reset the internal batch counter value to zero.

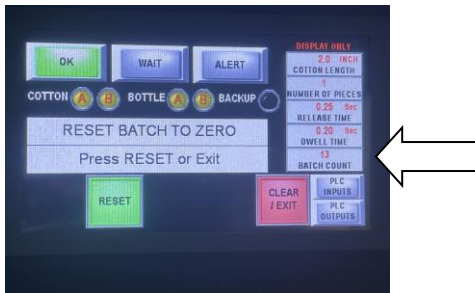


1. Press MENU.

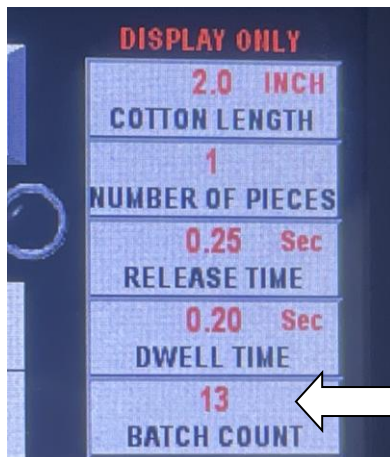
2. Press SET BATCH TO ZERO



3. Press ENTER.



4. The current machine cycle count will be displayed.

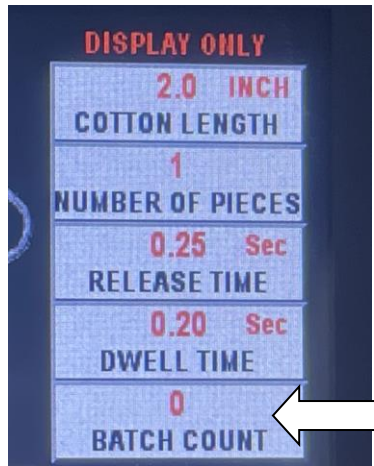


Note: The count value is visible in the DISPLAY ONLY window.

Section 5J: SET BATCH TO ZERO
(Continued)



5. Press RESET.



Note: The count value is now ZERO.



6. Press CLEAR to exit this function and return to the top menu.

END Section 5J

Section 5K: OPTIONS

This function will allow the operator to use Both sides, only Side A or only Side B.

		<p>1. Press MENU.</p> <p>2. Press OPTIONS.</p>
	<p>3. Press ENTER.</p>	
		<p>4. Enable Both Sides?</p> <p>Press NEXT to advance screen.</p>
		<p>5. Disable Side A?</p> <p>Press NEXT to advance screen.</p>
		<p>6. Disable Side B?</p> <p>Press NEXT to advance screen.</p>

Section 5K: OPTIONS
(Continued)



7. If no options are selected, press CLEAR/EXIT and no changes will take place.



8. To select an option, press ACCEPT.

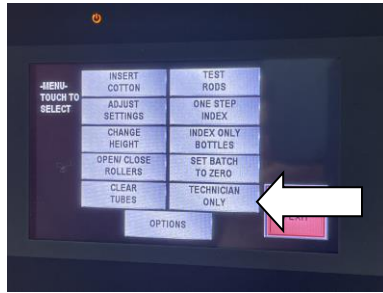


9. Press CLEAR to exit this function and return to the top menu.

END Section 5K

Section 5L: TECHNICIAN ONLY

THIS FUNCTION SHOULD ONLY BE ACCESSED BY A QUALIFIED TECHNICIAN



1. Press MENU.
2. Press TECHNICIAN ONLY.



3. Press and hold ENTER.



4. Technicians should refer to the *Technical Notes* at the end of this manual.
- Press DONE to exit this function and return to the top menu.
- END Section 5L*

Section 6. SETUP FOR A RUN

QUICK START

- A. Start Up
- B. Setup Conveyor
- C. Adjust Settings
- D. Adjust Machine Height
- E. Load Cotton Coil
- F. Setup Bottles
- G. This Section intentionally left blank
- H. Test Cotton Inserting

DETAILED EXPLANATION

6A. Start Up

- ❑ Lift open the Guard Door.
- ❑ Turn the Main Disconnect Switch ON.
- ❑ Close the Guard Door.
- ❑ Press the STOP Button.
- ❑ Twist and release the STOP Button.
- ❑ Press the START Button. The turrets will “find home”.

6B. Setup Conveyor

- ❑ Raise the machine so that it clears the bottles by several inches.
- ❑ Adjust the conveyor rails so the bottles move freely, but with minimum side clearance.

6C. Adjust Settings for Length, Etc.

- ❑ Follow the procedure under Section 5C Adjust Settings

6D. Adjust Machine Height

- ❑ Place a bottle directly under the front Turret Tube.
- ❑ Lower the machine using the Change Height function (Sec. 5D) until the bottom of the front tube is 1/8 to 1/4 inch above the bottle.

6E. Load Cotton Coil

- ❑ Place a box of cotton coil on the left and right sides of the machine.
- ❑ If equipped with the optional Cotton Box Lids, feed the cotton through the lids, and place the lids securely on the boxes.
- ❑ Load the cotton as explained in Section 5E Open Rollers.
- ❑ If there is any cotton from the previous run in the turret, use the Clear Tubes function (Sec. 5F) to remove it.
- ❑ Use the Manual Insert function (Sec. 5B) to make one piece of cut cotton. This will make a clean starting cut on the end of the coil.
- ❑ Open the Guard Door and remove this piece, to be discarded. Close the door.
- ❑ Use the Manual Insert function (Sec. 5B) to make several pieces of cut cotton.
- ❑ Check that the cut cotton pieces meet expectations for length and proper inverted-U fold.
- ❑ With the conveyor turned off (not moving), place a bottle (filled with product, to the specified level) under the front tube of either turret.
- ❑ Extend the insertion rods using the Extend Rods function (Sec. 5G).
- ❑ Open the Guard Door and confirm that the plunger inserts cotton into the bottle without crushing or damaging the product.
- ❑ Close the door and withdraw the insertion rods.

6F (a). Setup Bottles – Station “A” (see technical drawing Sec. 9E)

- Turn on conveyor, set to operating speed.



- With several bottles on the conveyor, adjust Stop A1 (normally extended) so the first bottle is centered directly under the front tube.
- Use the One Step Index function (Sec. 5H) to extend Stop A2.



- Set Stop 2 so that the third bottle is centered under the front tube, or just 1/8 to 1/4 inch upstream from centered position.
- Alternately extend the stops several times using the One Step Index function to see if the indexing action is smooth, without any bottles jumping or being crushed.
- Make any necessary further adjustments until the indexing is smooth.
- With the conveyor on and moving at the desired speed, use the Auto Index function (Sec. 5I) to index several bottles. Confirm that the Release Time is adequate to allow the bottles to leave the filling station before a new bottle is brought in.



- Position the station START BOTTLE “A” sensor so it is centered on an empty bottle. This bottle may be the one directly under the filling tube or any bottle upstream of the filling position. It is recommended that the sensor be positioned at least 3 bottles upstream. In that way, the bottle in the filling position is stabilized by the other bottles pressing on it.

STATION B
SHOWN



BACKUP BOTTLE
SENSOR

- Position the BACKUP SENSOR downstream from filling position of station B (right side) to detect any bottle which may be backing up from a downstream function which has stopped or is slower than the cottoner.

6F (b). Setup Bottles – Station “B” (see technical drawing Sec. 9E)

- Turn on conveyor, set to operating speed.

STATION B
SHOWN



BOTTLE
STOP B1

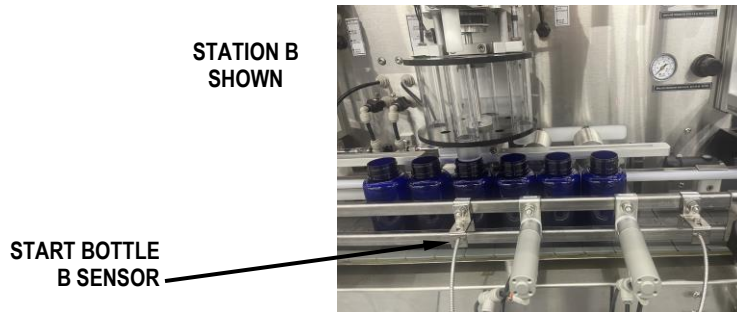
- With several bottles on the conveyor, adjust Stop B1 (normally extended) so the first bottle is centered directly under the front tube.
- Use the One Step Index function (Sec. 5H) to extend Stop B2.

STATION B
SHOWN



BOTTLE
STOP B2

- ❑ Set Stop 2 so that the third bottle is centered under the front tube, or just 1/8 to 1/4 inch upstream from centered position.
- ❑ Alternately extend the stops several times using the One Step Index function to see if the indexing action is smooth, without any bottles jumping or being crushed.
- ❑ Make any necessary further adjustments until the indexing is smooth.
- ❑ With the conveyor on and moving at the desired speed, use the Auto Index function (Sec. 5I) to index several bottles. Confirm that the Release Time is adequate to allow the bottles to leave the filling station before a new bottle is brought in.



Position the station START BOTTLE “B” sensor so it is centered on an empty bottle. This bottle may be the one directly under the filling tube or any bottle upstream of the filling position. It is recommended that the sensor be positioned at least 3 bottles upstream. In that way, the bottle in the filling position is stabilized by the other bottles pressing on it.

6G. This Section intentionally left blank

6H. Test Cotton Inserting

- ❑ Use the Manual Insert function (Sec. 5B) several times to check the complete operation.

Section 7. RUNNING PRODUCTION

QUICK START

- A. Start Up
- B. Check Cotton
- C. Check Bottles
- D. Test Operation
- E. Begin Operation
- F. Stopping the Machine Manually
- G. When the Machine Stops Automatically

7A. Start Up

- ❑ Lift open the Guard Door.
- ❑ Turn the Main Disconnect Switch ON.
- ❑ Close the Guard Door.
- ❑ Press the STOP Button.
- ❑ Twist and release the STOP Button.
- ❑ Press the START Button. The turrets will “find home”.

7B. Check Cotton

- ❑ Check that there is adequate cotton coil in the box.
- ❑ Check that it is the correct cotton (material and gram weight)
- ❑ Check that the cotton is present on the cotton shelf and in the rear and left tubes. The turrets will “find home”.

7C. Check Bottles

- ❑ Check that there is an adequate supply of bottles.
- ❑ Check that they are the correct type of bottle.

7D. Test Operation

- ❑ Use the Manual Insert function (Sec. 5B) to make several test cycles.

7E. Begin Operation

- ❑ Use the Auto Insert function (Sec. 5B) to begin production.

7F. Stopping the Machine Manually

- ❑ To stop the machine after the current cycle is complete and stay in INSERT mode, press AUTO ON/OFF to stop automatic operation. To resume, press AUTO ON/OFF again.
- ❑ To stop the machine after the current cycle is complete, you may also press CLEAR/EXIT to stop automatic operation. To resume, you will have to enter the INSERT mode again (Sec. 5B).
- ❑ To stop the machine after the current cycle is complete, you may also raise the GUARD DOOR, which cancels automatic operation. To resume, you will have to close the door and enter the INSERT mode again (Sec. 5B).
- ❑ To stop the machine instantly, press the EMERGENCY STOP button. The machine will stop in the middle of the cycle. All air cylinders will return to their normal positions. All motors will power down. To resume, twist and release the STOP button and press START. Then you will have to enter the INSERT mode again (Sec. 5B).

7G. When the Machine Stops Automatically

- ❑ If you raise the guard door while in automatic mode, the machine will stop. To resume, you will have to close the door and enter the INSERT mode again (Sec. 5B).
- ❑ If no cotton is present in the left tube, the message “NO COTTON IN TUBE A” or “NO COTTON IN TUBE B” will be displayed. You must correct the situation by opening the guard door. See previous paragraph.

- If the bottles begin to backup from the downline direction of station B, the Backup Sensor will cause the machine to pause and display the message “BOTTLE BACKUP DOWNSTREAM”. Once the backup is cleared, automatic operation will resume immediately.
- If there is no bottle in front of the START sensor of either station when in automatic mode, the message “WAITING FOR BOTTLE... SIDE A” or “WAITING FOR BOTTLE... SIDE B” will be displayed and the machine is paused. When a bottle is detected, automatic operation will resume immediately. If the START sensors are positioned several bottles upstream from the filling station (as recommended), the machine may have several bottles ready to be filled while it waits for the missing bottle. This is normal.

Section 8. ROUTINE MAINTENANCE

- A. Insertion Air Cylinders
- B. Compressed Air Filters
- C. Cooling Fan Air Filters
- D. Lubrication
- E. General Cleaning

8A. Insertion Air Cylinders

NOTE: Do not add lubrication to the air cylinders or air supply. Cylinders are pre-lubricated. If the lubrication fails, the cylinder has reached the end of its life and must be re-built.

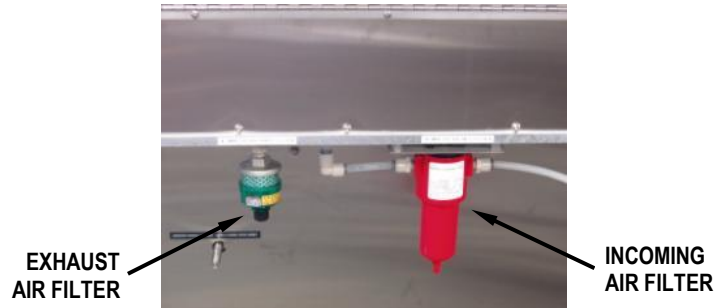
Insertion air cylinder life expectancy varies widely with each installation, usually due to air supply quality (oil, water). Insertion air cylinders may be returned to the factory to be rebuilt, at no charge other than shipping costs for the 1-year warranty period (from date of machine purchase) and for a small charge thereafter. Typically, replacing the cylinder and wiper will take up to 20 to 30 minutes each. You may also purchase the seal kit to do-it-yourself, but we are not responsible for the quality of your work. Typically, rebuilding alone will take 20 minutes plus replacement time.

CS2 or CS10 Air Cylinder (Also buy one P0157 per cylinder)	(where x is the stroke in inches 4,5,6,7 or 8)	P0158-x
CS2 or CS10 Cylinder Rebuild Parts Kit - consists of (1) FM3283F, (2) P0156, (2) P0157		AD1071-1
Cylinder Internal Seal Set (1 per cylinder)		FM3283F
Brass Air Fitting 10-32 to ¼" Tube (2 per cylinder)		P0156
Air Cylinder Rod Wiper (1 per cylinder)		P0157

(Also see service parts list in Section 9D)

8B. Compressed Air Filters

There are two replaceable filters in the compressed air system, one for the incoming air filter and one for the exhaust filter. They are found at the lower rear of the machine.



Incoming Compressed Air Filter – Specially designed stainless-steel elements to remove condensate and contamination down to 1 micron. It has an automatic float style drain and a filter-service indicator (on top of filter behind glass) that tells you when to replace the filter (Green = good, Red = bad). It has a metal bowl and is rated 150 PSI. Replace when the indicator changes color to red or once per month, whichever occurs first.

CS2 or CS10 Air-In Filter Element

P9052-1

Exhaust Filter/Silencer – Reduces noise contamination by 35 dB. It has a drain cock that exhausts 99.9% of all oil mist. Replace the element once every 6 months.

CS2 or CS10 Air Exhaust Filter Element

P9051-1

8C. Cooling Fan Air Filters



The upper cabinet is fan cooled. There are two replaceable foam-type filter elements, one for the inflow and one for the outflow. These are located on the sides of the machine. Replace them when they appear dirty or once per month, whichever occurs first.

CS2 or CS10 Cooling Fan Foam Filter Element

FM3049-2

8D. Lubrication

There are no lubrication points on the machine. All bearings are permanently lubricated and/or are sealed. Feed screws for the roller carriage travel (one, behind turret assembly inside upper cabinet) and lift platform (two, inside lower cabinet) may occasionally need to be coated with any common grease. The pneumatic system should NOT add lubricant to the incoming air.

8E. General Cleaning

You may use any typical surface cleaner on all stainless-steel parts and all white or black plastic parts (acetal). Do not use acetone, alcohol, or any highly evaporative cleaner on any clear plastic parts (polycarbonate), such as the turret tubes or the safety enclosure. Instead use a mild solution of water and soap, or a mild solution of water and ammonia.

Section 9. TECHNICAL INFORMATION

- A. Cycle of Operation
- B. Troubleshooting
- C. Options
- D. Technical Notes/Drawing Index

9A. Typical machine cycle (insertion process sequence of operations)

TO START CYCLE - Press MENU, press INSERT COTTON, press ENTER...
Press MANUAL (to cycle once) or press AUTO ON/OFF (for continuous insertion).

SEQUENCE OF OPERATIONS:

1. PINCH - Pincher arms close.
2. INSERT – After a very short delay, the lower and upper insertion cylinders extend.
3. DWELL - Upon sensing both insertion cylinders are extended, wait for dwell time delay. then both cylinders withdraw, and pincher opens.
4. INDEX BOTTLES– As soon as the upper insertion cylinder begins to withdraw, start bottle indexing cycle:
 - a. INDEX - Stop 1 withdraws and Stop 2 extends. All bottles move up.
 - b. RELEASE - After release time delay, Stop 2 withdraws and Stop 1 extends. Filled bottle is released.
5. FEED and ROTATE- Upon sensing both cylinders are withdrawn:
 - a. Turret rotates 90 degrees.
 - b. Rollers produce a new cut piece of cotton.

CYCLE COMPLETE, NEW CYCLE MAY BE STARTED IMMEDIATELY

9B. Troubleshooting

1. Bottles fall over or jump suddenly
 - ❑ Check the positioning of the Bottle Stops. Use the One Step Index function (Sec. 5H) to test the action.
 - ❑ Check that the Release Time is adequate for the conveyor speed and bottle size (Sec. 5C). Use the Index Bottles Only function to test the action (Sec. 5I). Increase the Release Time or increase conveyor speed.

2. Cotton comes out top of bottle
 - ❑ Check that the Cotton Length is correct for bottle and contents (Sec. 5C).
 - ❑ Check that the plunger tip is the correct size for the application.
 - ❑ Check that the cotton is being properly folded into the inverted-U configuration, with equal length on each side of fold (folded in middle).
 - ❑ Check that there is adequate space in the bottle, above the contents for cotton to occupy. Cotton is best inserted below the shoulder, not only within the neck of the container.
 - ❑ Install the optional Tamper Assembly – contact Deitz Co. for availability.

3. Synthetic cotton issues: Rayon and polyester
 - ❑ Pure cotton coil always runs best. It cuts most easily and consistently.
 - ❑ Synthetics have longer fibers and stretch a great deal before parting. Synthetics in larger gram sizes do not make good pieces in the shorter lengths (2 or 3 inches).

4. Turret not centered on insertion cylinders
 - ❑ Normally the turret will stop so the plunger is closest to the left side of the hole. This is normal and necessary for high-speed operation.
 - ❑ Plunger hits the turret, turret has play when power is on: sprocket collars or setscrew on the turret drive belt sprockets may have come loose. Check and tighten them. Do not worry about timing the belt sprockets. They are self-timing each cycle.
 - ❑ Plunger hits turret, turret has no play when power is on: Turret Sensor (proximity) may have failed on connector may have come loose.

Insertion cylinders extend, then the machine stops in extended position.

- ❑ The turret sensor may be out of position or defective. Consult drawing TN 0000.

Insertion cylinders extend, then retract, then the machine stops and will not cycle again.

- ❑ The turret sensor may be out of position or defective. Consult drawing TN 0000.

Message: “TURRET ROTATE ERROR”

- ❑ If the turret can be easily manually rotated with power on, sprocket collars or setscrew on the turret drive belt sprockets may have come loose. Check and tighten them. Do not worry about timing the belt sprockets. They are self-timing each cycle.
- ❑ Turret electronic components may be defective or becoming defective. Stop the machine, CLEAR TUBES, and try again. If it continues to occur, contact a technician.

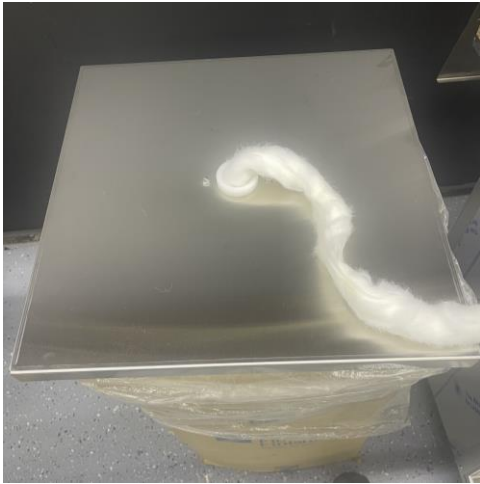
Message: “ROLLER TRAVEL ERROR”

- Roller carriage drive electronic components may be defective or becoming defective. Stop the machine and try again. If it continues to occur, contact a technician.

9C. Options

Cotton Box Cover Assembly (center draw, no breaks)

AD1035-1



CS10 Secondary Tamper Assembly

AD1029-4



Cotton Feed Reject (CFR) System

AD1271-5



9D. Technical Notes/Drawing Index

(Technical Notes/Drawings Begin After Last Page)

Number	Title	No. of Pages
TECH NOTES		
TN0076	Using ***Technician Only*** Menu	5
TN0075-3	CS10 Service Parts List	4
DRAWINGS		
2006-19	CS10 Dimensional Drawing	1
2006-22	CS10 Bottle Gating Setup - No Tamper	1
SC1007	CS10 Wiring Schematic	23
SC1008	CS10 Air Line Schematic	6
Addendums or additional technical data		
CS10-AD1070-CCD	CS10 Contact Compliance Document	1
CS10-AD1070-PM	CS10 Preventative Maintenance	1
TN0098	CS2 Drive Unit Removal Procedure	16
_____	_____	---
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Using the ***TECHNICIAN ONLY*** Menu Item

1A. Explanation

This function allows the qualified technician to access some settings within the PLC that can be used to fine-tune the characteristics of the machine's operation. This function should never be used by the operators or by any personnel who are not authorized to service the machine. Using this function incorrectly can make the machine operate poorly. For most applications, there is never any need to access the function. Section 3-B details how to access and adjust the settings. Factory settings are noted there and should be adequate for most situations.

The following explains the purpose of each setting:

-OFFSET TURRET: the exact position of the turret after each 90° move is controlled by a proximity sensor that detects a metal pin on the top of the turret assembly. As the turret moves, the metal pin is detected, and the stepper motor will come to a stop at a fixed number of steps after the pin is detected. This is the "turret offset" relative to the pin. The theoretical number would be 100, but the actual number to center the turret is around 106. To get higher speeds, we prefer that the turret tube comes to a stop a bit past center, so the insert cylinder can fire earlier. Therefore, the actual range is 106 to 110. The units are "steps".

NOTE: The ideal position of the turret relative to the insertion plunger is slightly past center.

- FEED TIME FACTOR: The insertion cylinders must not extend until the cotton piece is fully clear of the rollers. The amount of time it takes to feed the piece of cotton depends on the length of the cotton. This is the feed time. The Feed Time Factor sets the ratio of length to time. The range is 1-9; factory setting is 6. Any change to this number directly affects cycle time (a larger value increases cycle time).

- PINCH TIME DELAY: After the cotton is fed out of the rollers, the pincher arms compress it before it is inserted into the rear tube. This setting controls the time delay between the pincher action and the insertion action. Any change to this number directly affects cycle time (a larger value increases cycle time).

- FEED LENGTH FACTOR: When the operator selects a number for cotton length, the PLC converts that number to the corresponding number of motor steps for the feed rollers. This setting changes the number that is used to calculate the steps. A value of 10 represents 100%; that is, the feed rollers will turn the exact length selected. Due to stretching, the actual length produced may be longer. If you wish to compensate for this stretch, you may change this setting. To under feed, make the number lower (such as 9 = 90%). To over feed, make the number higher (11 = 110%). There are no units for this value.

- TEAR LENGTH ADDER: The tear rollers must tear the cotton from the feed rollers and deliver it to the insertion area. Therefore, they must turn more than the feed rollers. The setting sets the number of additional steps the tear rollers will make after the feed rollers have stopped. Units are "steps". One roller revolution = 800 steps.

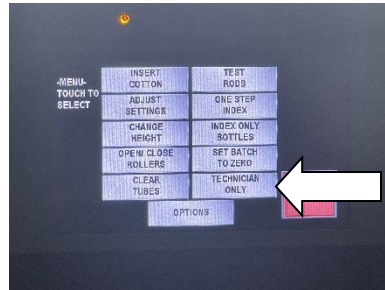
- **TURRET TIME:** To maximize the top speed of the machine, the insertion plunger will begin its motion before the turret has come to rest. This value sets the time delay between the start of turret rotation and the action of the insertion plunger. The shorter the delay, the faster the machine can cycle; but if the delay is too short, the plunger will strike the turret. This is only effective when the machine is cycling continuously, such as when the **MANUAL** insertion mode is held on, or when bottles are coming in at the maximum rate in the **AUTO** insertion mode. Any change to this number directly affects cycle time (a larger value increases cycle time).

- **MAXIMUM LENGTH:** this value is set according to the type of turret assembly that is installed on the machine. For 3-inch-long turret tubes, it is set to 6. For 4-inch-long tubes, it is set to 7. For 5-inch-long tubes, it is set to 9.

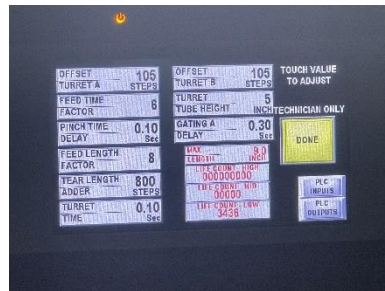
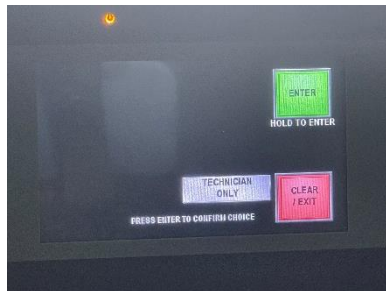
- **LIFE COUNT:** (display only) This value displays the numbers of insertion cycles the machine has made since it was new. It is like the odometer on a car. “**HIGH**” shows hundreds of millions; “**MID**” shows tens of thousands; and “**LOW**” shows one.

Section 1B: TECHNICIAN ONLY

This function adjusts special values in the PLC control program.



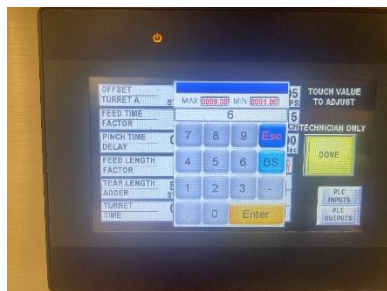
1. Press MENU.
2. Press TECHNICIAN ONLY



3. Press and hold ENTER for three (3) seconds.



4. OFFSET TURRET A
MAX: 150
MIN: 50
Normal values are from 100 to 110. Factory Default is 106.



5. FEED TIME FACTOR
MAX: 9.00
MIN: 1.00
Factory default is 6.



6. PINCH TIME DELAY
MAX: 1.00
MIN: 0.00
Normal values are from 0 to 0.1. Factory default is .1.



7. FEED LENGTH FACTOR

MAX: 15.0

MIN: 5.0

Normal value is 10. Factory default is 10.



8. TEAR LENGTH ADDER

MAX: 1500

MIN: 500

Factory default is 800.



9. TURRET TIME

MAX: 0.99

MIN: 0

Normal values are from .05 to 0.25. Factory default is .18.



10. OFFSET TURRET B

MAX: 150

MIN: 50

Normal values are from 100 to 110. Factory default is 106.



11. TURRET TUBE HEIGHT

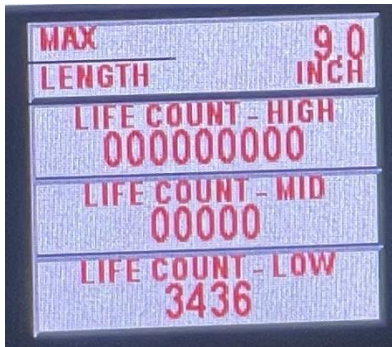
MAX: 5.0

MIN: 3.0

Based on size of Turret Tube.



12. GATING “A” DELAY
 MAX: 1.00
 MIN: 0.00



MAX LENGTH is based on the size of the Turret Tube. This setting can only be changed by changing the TURRET TUBE HEIGHT setting.
 LIFE COUNT shows the number of insertion cycles the machine has performed.



13. Press DONE to return to Home Screen.
 (END 1B)

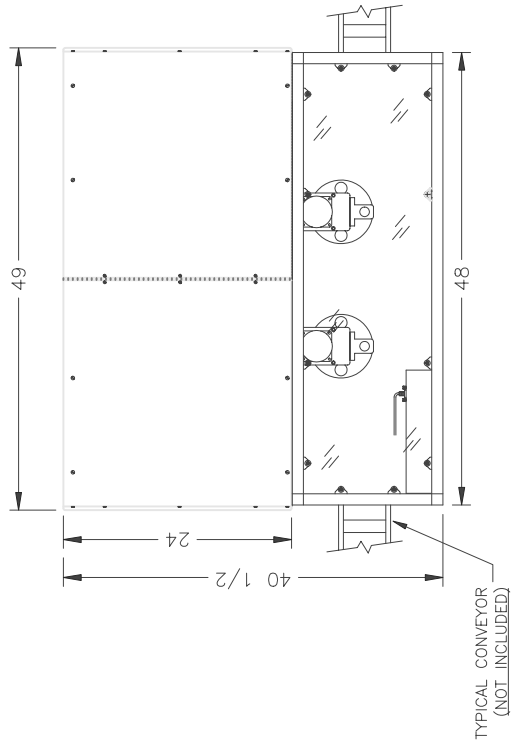
<u>Part Number</u>	<u>Description</u>	<u>Type</u>	<u>Quan Used</u>	<u>Call for Prices</u>	<u>Ref</u>	<u>Where Used</u>
AD1071-1	CS2/10 Cylinder Rebuild Kit	WEAR	4			Incl. (1) FM3283F, (2) P0156, (2) P0157
AD1085-3	CS10 Spare Fuse Kit	WEAR	1			
FM3049-2	Cooling Fan Foam Filter Element	WEAR	12			Upper cabinet, both sides, towards front
P0158-4	Lower Insertion Air Cyl, Stroke 4", 5", 6"	WEAR	2			Upper for 3" turret tube length
P0158-6	Upper Insertion Air Cyl, Stroke 6", 7", 8"	WEAR	2			Upper for 5", lower for 3" turret tube length
P0182	Grease, Synthetic, for cylinder rebuilds	WEAR	1			Use when rebuilding air cylinders
P5816	Relay, DPST 24VDC	WEAR	4		REL2, 3	Electronics panel, top
P9029	PLC Battery	WEAR	1			Electronics panel, rear (see P9064)
P9051-1	Air Exhaust Filter Element	WEAR	1			Rear of machine, below cabinet
P9052-1	Air In HD Filter Element	WEAR	1			Rear of machine, below cabinet
AD1088-1	CS10 Wear Parts Kit (Quan Used X Price)					
AD0918-2	Motor Speed Control, LPC2/10	SPARE	1		SC1	Lift Platform
FA1015-1	Pincher Arm Assembly LH Inner	SPARE	2			Pincher assembly
FA1015-2	Pincher Arm Assembly RH Outer	SPARE	2			Pincher assembly
FM3015-1	Pincher Slide Block (-2 is OBS)	SPARE	2			Pincher assembly
FM3216-1	Cylinder Tip, Upper, .75 diam x 1.75	SPARE	2			Upper insertion cylinder assembly
FM3264F	Air Cylinder-20mm x 1" Stroke (Modified)	SPARE	2			On conveyor railing, to index bottles
FM3270-1	Air Cyl Sensor, 13", Upper	SPARE	4		SN4, SN5	Upper insertion cylinder
FM3270-2	Air Cyl Sensor, 20", Lower	SPARE	4		SN6, SN7	Lower insertion cylinder
FM3283F	CS1 Cylinder Internal Seals Set	SPARE	8			For rebuilding insertion air cylinder
FM3297-1	Step Motor Indexer, Modified PCL511	SPARE	6		INDX1, 2, 3	Electronics panel, rear
P0142	Air Valve 4 Way 24VDC 1/4 Tube	SPARE	8		VAL1,2,3,4	Electronics panel, rear
P0416	Belt, Gear - 80T	SPARE	4			Roller drive assembly
P0417	Belt, Gear - 100T	SPARE	2			Turret drive assembly

<u>Part Number</u>	<u>Description</u>	<u>Type</u>	<u>Quan Used</u>	<u>Call for Prices</u>	<u>Ref</u>	<u>Where Used</u>
P0418	Belt, Gear - 150T	SPARE	1			Carriage drive assembly
P1822-1	Step Motor Driver/Translator, Small	SPARE	3		SMDT1, 2	Electronics panel, top
P5016	Fib-Op Cable (use w/P5018)	SPARE	6			Cotton, bottle and backup sensors
P5018	Fib-Op Sensor (use w/P5016)	SPARE	6		SN1,2,3	Electronics panel, rear (see P5016)
P5703	Power Supply 24 VDC (PS2)	SPARE	2		PS2	Electronics panel, top
P6981	Sensor - Proximity PNP (use w/P6983)	SPARE	3		SN8,9,11	Turret & carriage drive assemblies (A SIDE ONLY)
P6984	Sensor - Proximity NPN (use w/P6983)	SPARE	1		SN8,9,11	Turret (B SIDE)
P9027	Step Motor Driver/Translator, Large	SPARE	4		LGDT1,2	Electronics panel, top
P9034	PLC Operator Interface OP1510	SPARE	1		OPTINTF	Front control panel (must be programmed)
P9035	Power Supply 24 VDC Class 2 (PS1)	SPARE	1		PS1	Electronics panel, rear
P9036	Relay Power-Type-25amp, 25vdc	SPARE	1		REL1	Electronics panel, rear
P9064	PLC Main Controller DL-06	SPARE	1		PLC1	Electronics panel, rear (must be programmed)
AD1088-2	CS10 Critical Spare Parts Kit (1 Each X Price)					
AD1054-2	Stepper Mtr 2 Stk w/Std Conn	REPAIR	2		M3	Turret drive motor
AD1054-3	Stepper Mtr 3 Stk w/Lock Conn	REPAIR	4		M1, M2	Roller drive assembly
AD1054-4	Stepper Mtr 2 Stk w/Lock Conn	REPAIR	1		M4	Carriage drive motor
FM2891-1	Gearbelt Pulley Mods 16T	REPAIR	3			Turret & carriage drive assemblies, motor
FM2891-4	Gearbelt Pulley 14T	REPAIR	4			Roller drive assembly, motor
FM2891-5	Gearbelt Pulley 28T	REPAIR	4			Roller drive assembly
FM2951-1	Clear Turret Tube, 3", 4" or 5"	REPAIR	4			Turret tube assembly
FM2953	Pivot Block	REPAIR	8			Roller drive assembly (req. 4 pcs P0308)
FM2958-1	CS1/CS2 Roller Gear, Steel	REPAIR	4			Roller drive assembly
FM2958-2	CS1/CS2 Roller Gear, Nylon	REPAIR	4			Roller drive assembly
FM2977	Turret Disc Hub	REPAIR	4			Turret tube assembly

<u>Part Number</u>	<u>Description</u>	<u>Type</u>	<u>Quan Used</u>	<u>Call for Prices</u>	<u>Ref</u>	<u>Where Used</u>
FM3031	LP Bevel Gear	REPAIR	2			Lift Platform
FM3155-1	Turret Disc Upper	REPAIR	2			Turret tube assembly
FM3155-2	Turret Disc Lower	REPAIR	2			Turret tube assembly
FM3156-1	Tube Extension, ID .75", 1.00", 1.25"	REPAIR	1			Turret tube assembly
FM3157-1	Primary Idler/Pivot Shaft	REPAIR	2			Turret drive assembly
FM3157-2	Primary Upper Roller Shaft	REPAIR	2			Turret drive assembly
FM3157-3	Primary Lower Driven Shaft	REPAIR	2			Turret drive assembly
FM3157-4	Secondary Upper Roller Shaft	REPAIR	2			Turret drive assembly
FM3157-5	Secondary Driven Pivot Shaft	REPAIR	2			Turret drive assembly
FM3157-6	Secondary Lower Roller Shaft	REPAIR	2			Turret drive assembly
FM3157-7	Secondary Driven Idler Shaft	REPAIR	2			Turret drive assembly
FM3196	Turret Shaft Bearing Retainer Block	REPAIR	4			Turret drive assembly
FM3202-1	Turret Shaft, for Tube Length 3", 4", 5"	REPAIR	1			Turret drive assembly
FM3213	Roller Subassy	REPAIR	8			Roller drive assembly
FM3238	CS2/CS10 Air Cyl Mtg Bar	REPAIR	4			Insertion air cylinders
FM3250	Lower Cylinder Ext Guide Bar	REPAIR	2			Lower insertion cylinder assembly
FM3251-1	Lower Cyl Extension Rod, for 6", 7", 8"	REPAIR	1			Lower insertion cylinder
FMA2890	Gearbelt Pulley 32T	REPAIR	3			Turret & carriage drive assemblies
P0135	Cooling Air Fan	REPAIR	1		FAN1	Upper cabinet, right side, towards front
P0156	Brass Air Fitting 10-32 To 1/4 Tube	REPAIR	16			Insertion, pincher & roller air cylinders, 2 per
P0157	Insertion Air Cylinder Rod Wiper	REPAIR	8			Upper & lower insertion cyl ass'ys, 2 per
P0175	Roller Pressure Air Cyl 1/2" Stroke	REPAIR	4			Roller drive assembly
P0308	Bearing, Oilite .50x.62x.50	REPAIR	16			Roller drive assembly (4 per FM2953)
P0320	Bearing, Ball 1604DS 3/8 I.D.	REPAIR	4			Turret drive assembly
P0321	Bearing, Ball 1/2 I.D. 1621DS	REPAIR	20			Roller drive assembly

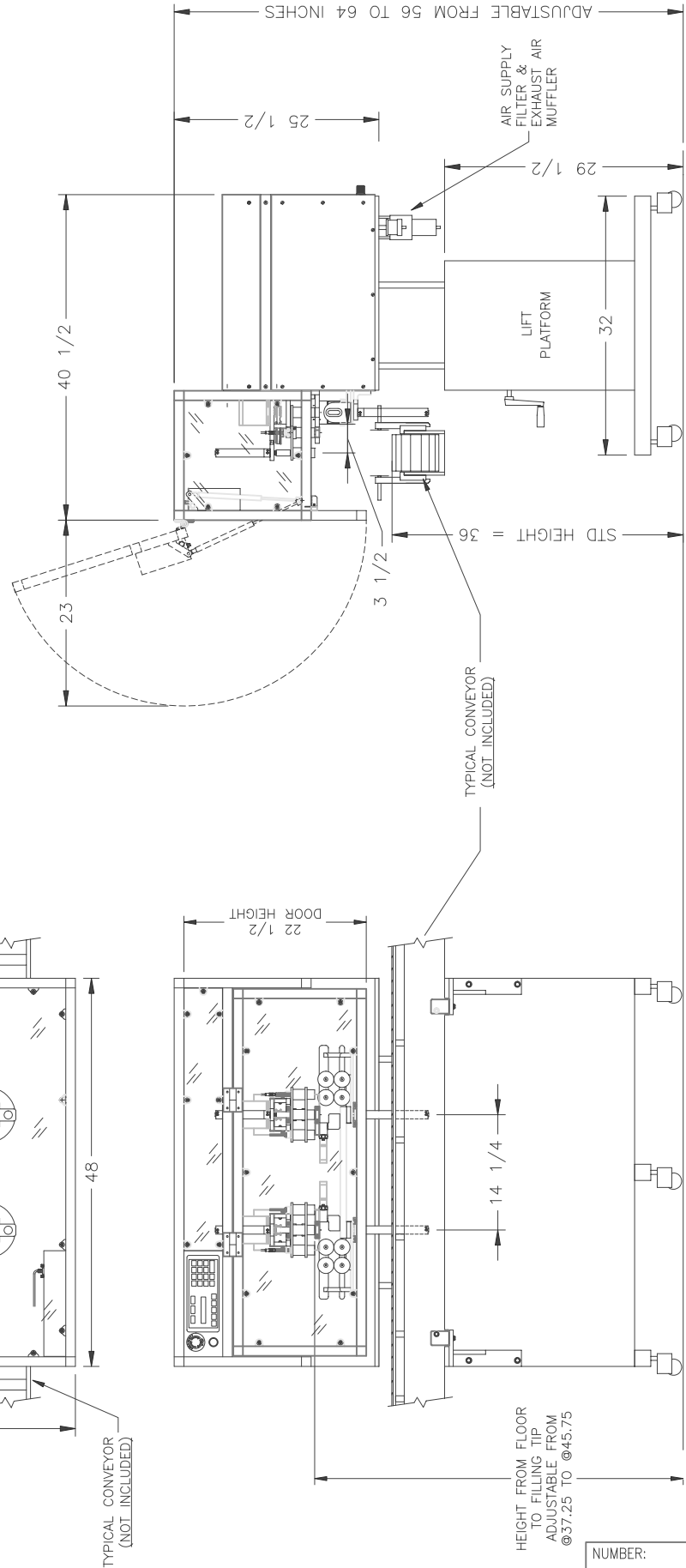
<u>Part Number</u>	<u>Description</u>	<u>Type</u>	<u>Quan Used</u>	<u>Call for Prices</u>	<u>Ref</u>	<u>Where Used</u>
P0337	Bearing Mounted, 1 Flange Type #1A399	REPAIR	4			Lift platform
P0338	Bearing Mounted .50 #1A396-9	REPAIR	8			Main frame (2 per) & Lift platform (6 per)
P0347	Bearing Frelon Lined-Open 1/2"	REPAIR	8			Main Frame
P1718	Shaft Coupler, Lower Cyl Extension Rod	REPAIR	2			Lower insertion cylinder
P1822-3	Step Motor Transformer - Small	REPAIR	2		SMXF1	Electronics panel, top
P4420	Motor, Gearhead, 1/8 HP	REPAIR	1		M-L1	Lift Platform
P5019	Cordset 4pin (use w/P5018)	REPAIR	6		CS-SN1,2,3	Electronics panel, rear (see P5016)
P6713	Spring, Gas Filled	REPAIR	2			Guard door
P6924	Switch PB Blk 22 mm	REPAIR	1		SW3	START switch
P6929-1	Emer Stop Actuator Red (use w/P6929-2&3)	REPAIR	1		SW2	STOP switch
P6929-3	Emer Stop Contact Blk (use w/P6929-1&2)	REPAIR	1		SW2	STOP switch
P6931	Switch, Micro w/roller, 20amp	REPAIR	2		SWL1,2	Lift Platform
P6983	Sensor Cordset, 3-pin (use w/P6981)	REPAIR	3		CS-SN8,9,11	Electronics panel, top (see P6981)
P7006	Switch Contact Blk SPST NO	REPAIR	1		SW3	START switch
P7508	Step Motor Transformer - Large	REPAIR	2		LGXF1	Electronics panel, top
P9011	DIN Circuit Breaker 20A	REPAIR	1		CB1	Electronics panel, rear
P9039	Switch, Main Disconnect	REPAIR	1		SW1	Front panel, rotary switch
P9048	Pincher Air Cylinder	REPAIR	2			Pincher assembly
P9051	Air Exhaust Filter Housing	REPAIR	1			Rear of machine, below cabinet
P9052	Air In HD Filter Housing	REPAIR	1			Rear of machine, below cabinet
P9055	Air Needle Valve	REPAIR	2			Below Roller Air Valves
P9057	Air Pressure Regulator, Panel Mount	REPAIR	2			Front panel

NOTE	REV	DESCRIPTION	DATE
-	-	-	--/--/---
REVISION			NUMBER:
-			2006-19



INSTALLATION SPECIFICATIONS

WEIGHT: 450 LBS.
 ELECTRIC: 115 VAC, 50/60 HZ, 30 AMP
 COMPRESSED AIR: 3.0 CFM, CLEAN AND DRY



- NOTES:
- 1.) THIS DRAWING TO BE USED AS A GENERAL OVERVIEW OF MAJOR COMPONENTS.
 - 2.) NOT ALL DETAILS ARE SHOWN.
 - 3.) ALL DIMENSIONS ARE IN INCHES AND ARE APPROXIMATE.

BY: SJD2	DATE: 01/17/02
SHEET 1 OF 1	REVISION -
NUMBER 2006-19	
PRODUCT CS10	TITLE CS10 COTTONER DIMENSIONS AND SPECIFICATIONS
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING -- PRODUCT INFO	
NUMBER: 2006-19	REVISION: -

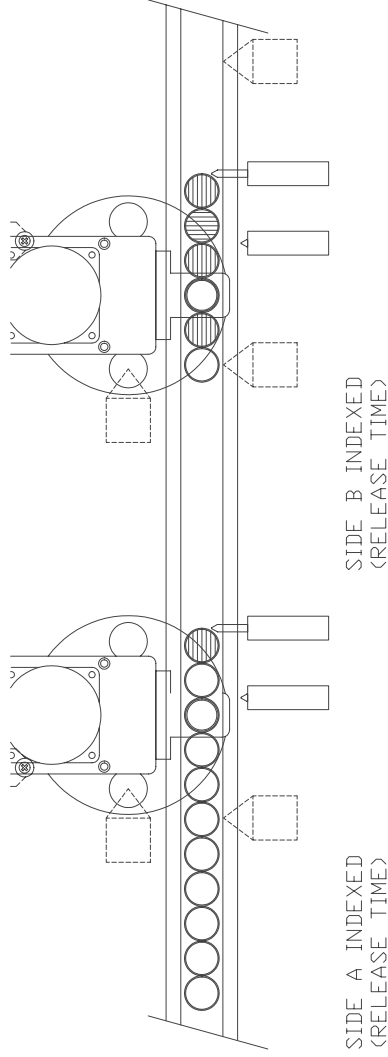
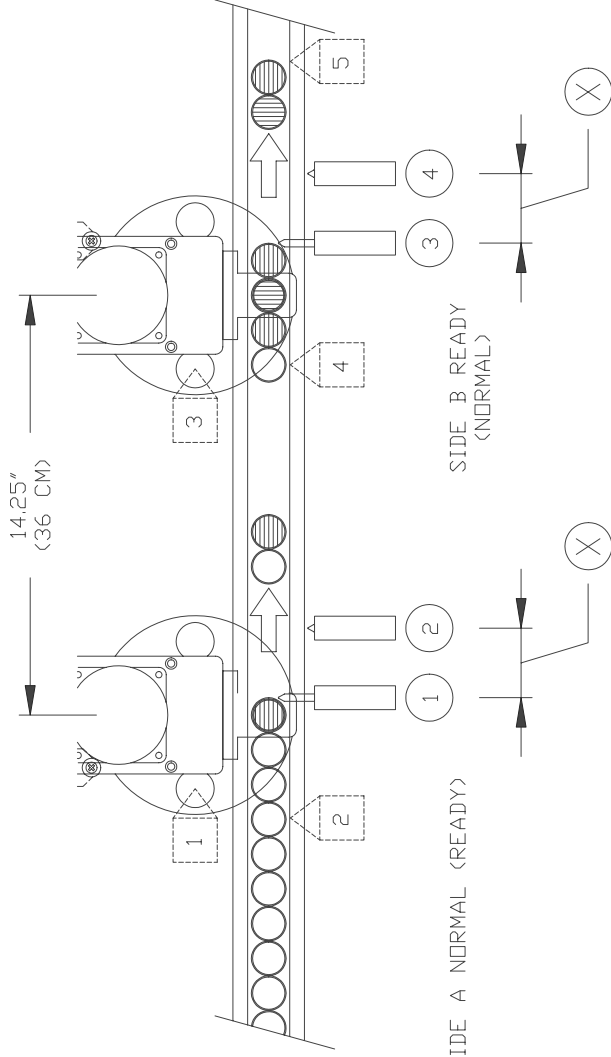
FIBER-OPTIC SENSORS

- 1 - COTTON PRESENT IN TUBE, SIDE A
- 2 - BOTTLE SUPPLY PRESENT, SIDE A
- 3 - COTTON PRESENT IN TUBE, SIDE B
- 4 - BOTTLE SUPPLY PRESENT, SIDE B
- 5 - BOTTLE BACKUP DOWNLINE

BOTTLE INDEXING (GATING) CYLINDERS

CYLINDER SPACING: (X) = WIDTH OF 2 BOTTLES

- 1 - (A1) FILLING POSITION SIDE A
- 2 - (A2) INDEX POSITION, SIDE A
- 3 - (B1) FILLING POSITION SIDE B
- 4 - (B2) INDEX POSITION, SIDE B



NOTE	REV	DESCRIPTION	DATE
-	A	UPDATED	12/01/04





NUMBER:
2006-22

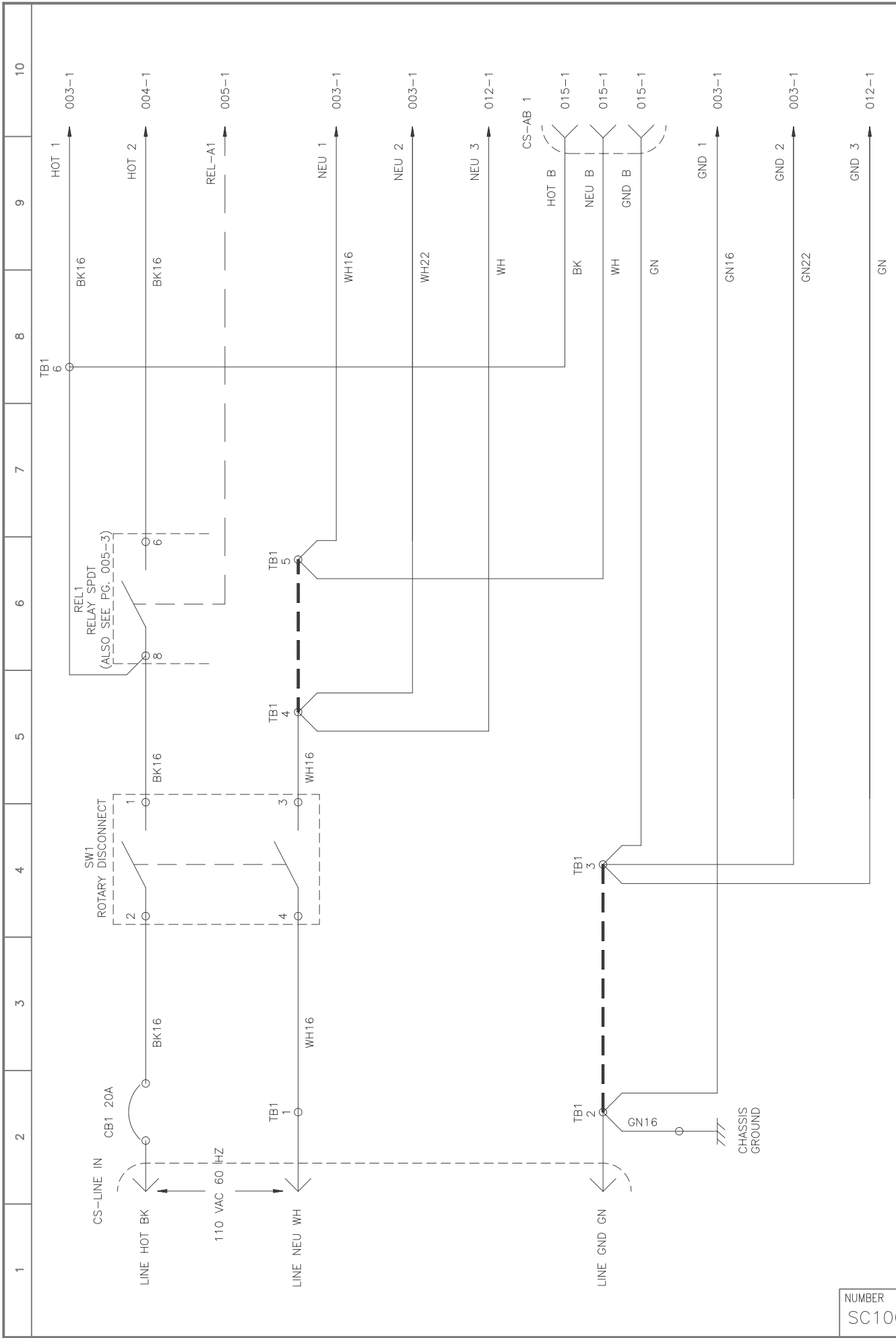
REVISION
A

PART NO	QTY. REQ.	DESCRIPTION	MAIL	BY	DATE:	USED ON
-	-	-	UNLESS OTHERWISE SPECIFIED: TOL: DEC= .XXX ±.005 FRAC= ±1/64 .XX ±.01	SJD2	2/5/02	-
			FIN	SCALE	NONE	
				SHEET	1 OF 1	
				NUMBER	2006-22	
				TITLE	BOTTLE INDEXING AND SENSORS	REVISION
					CS10	A

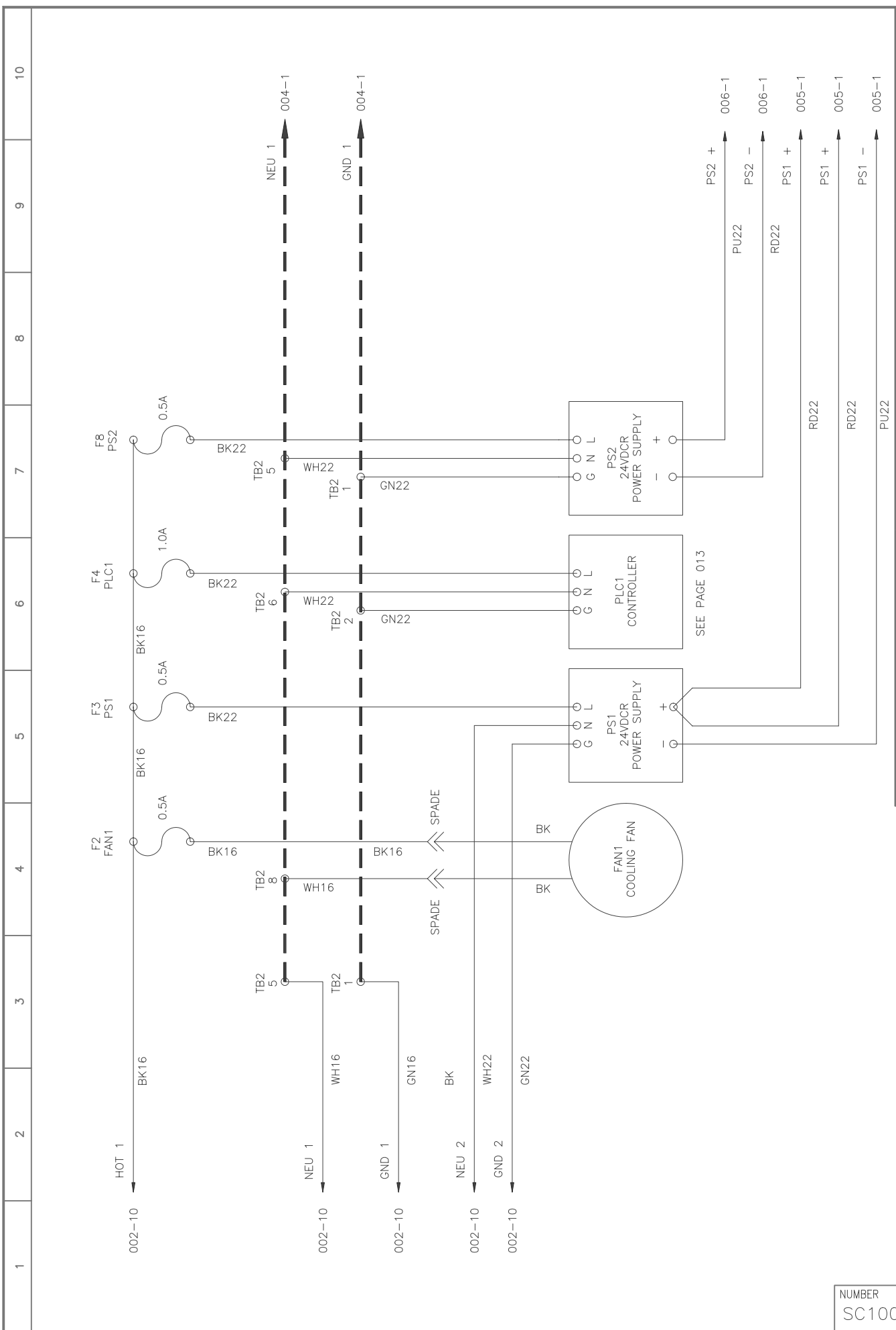
2006-22

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

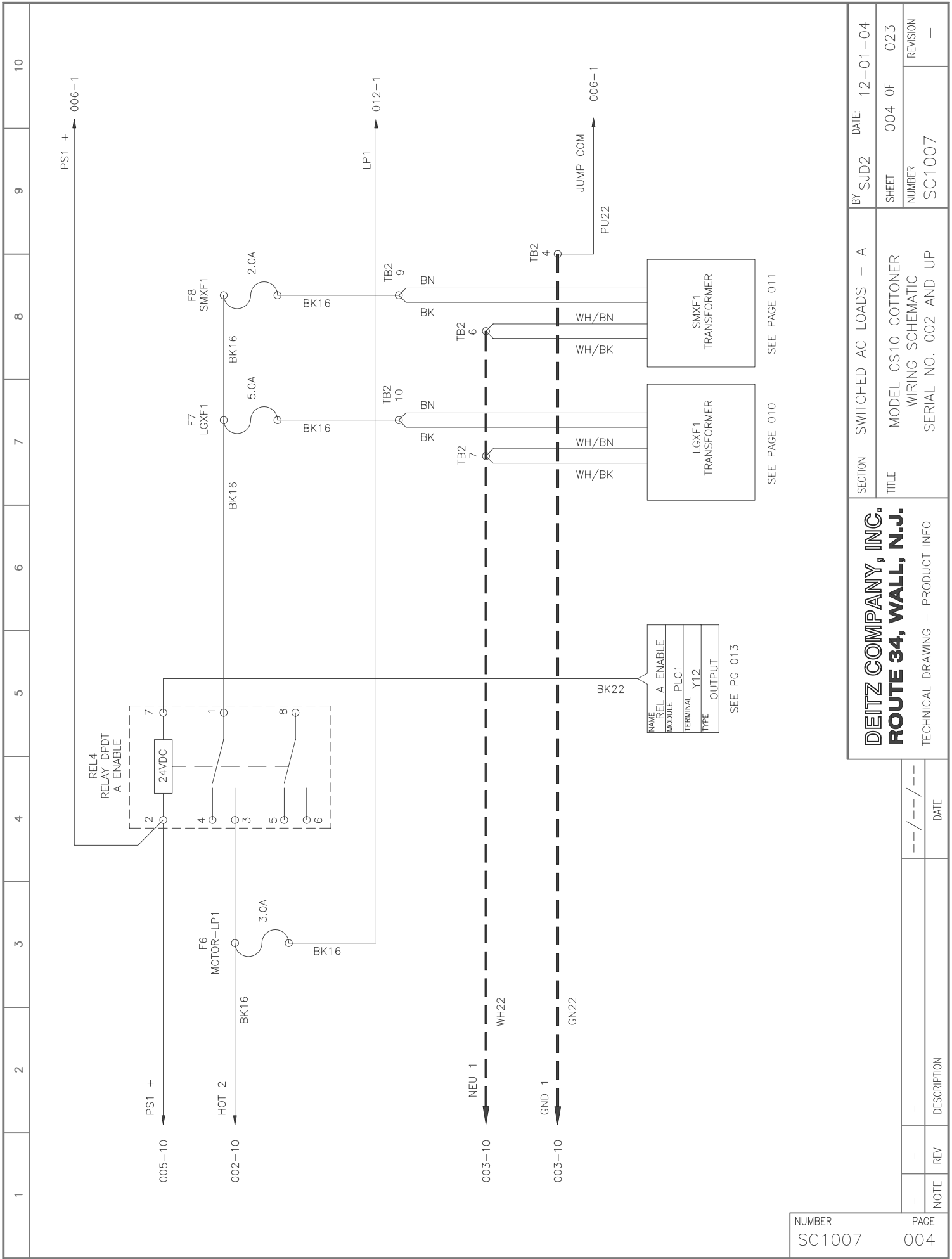
1	2	3	4	5	6	7	8	9	10		
<p><u>REVISIONS</u></p>											
<p><u>CONTENTS</u></p> <ol style="list-style-type: none"> 1. NOTES AND REVISIONS 2. AC POWER ENTRY – MAIN 3. UNSWITCHED AC LOADS – A 4. SWITCHED AC LOADS – A 5. START/STOP/OPERATOR INTERFACE 6. DC POWER DISTRIBUTION – A1 7. DC POWER DISTRIBUTION – A2 8. AIR VALVES – A 9. POSITION SENSORS – A 10. ROLLER DRIVES – A 11. TURRET/CARRIAGE DRIVES – A 12. LIFT PLATFORM 13. MASTER PLC 14. INDEXERS – A 15. AC POWER ENTRY – B 16. SWITCHED AC LOADS – B 17. DC POWER DISTRIBUTION – B1 18. DC POWER DISTRIBUTION – B2 19. AIR VALVES – B 20. POSITION SENSORS – B 21. ROLLER DRIVES – B 22. TURRET/CARRIAGE DRIVES – B 23. INDEXERS – B 											
<p><u>KEYS</u></p> <p>  JUMPED TERMINALS  NETWORK CABLE  INTERFACE CABLE  MULTI-PIN CONNECTOR </p>											
<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.</p> <p>TECHNICAL DRAWING – PRODUCT INFO</p>				<p>SECTION</p> <p>TITLE</p>			<p>NOTES AND REVISIONS</p> <p>MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP</p>			<p>BY SJD2 DATE: 12-01-04</p> <p>SHEET 001 OF 023</p> <p>NUMBER SC1007 REVISION –</p>	
<p>NUMBER SC1007</p>		<p>PAGE 001</p>		<p>DATE ---/---/---</p>		<p>DESCRIPTION</p>		<p>REV</p>		<p>NOTE</p>	



1	2	3	4	5	6	7	8	9	10
<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO</p>									
SECTION AC POWER ENTRY - MAIN					BY SJD2 DATE: 12-01-04				
TITLE MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP					SHEET 002 OF 023				
					NUMBER SC1007				
					REVISION -				
NUMBER	SC1007	PAGE	002	NOTE	REV	DESCRIPTION	DATE		



DEITZ COMPANY, INC.		SECTION	UNSWITCHED AC LOADS - A	BY	SJD2	DATE:	12-01-04
ROUTE 34, WALL, N.J.		TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC	SHEET	003 OF	023	REVISION
		TECHNICAL DRAWING - PRODUCT INFO	SERIAL NO. 002 AND UP	NUMBER	SC1007		
NUMBER	SC1007	PAGE	003	NOTE	REV	DESCRIPTION	DATE

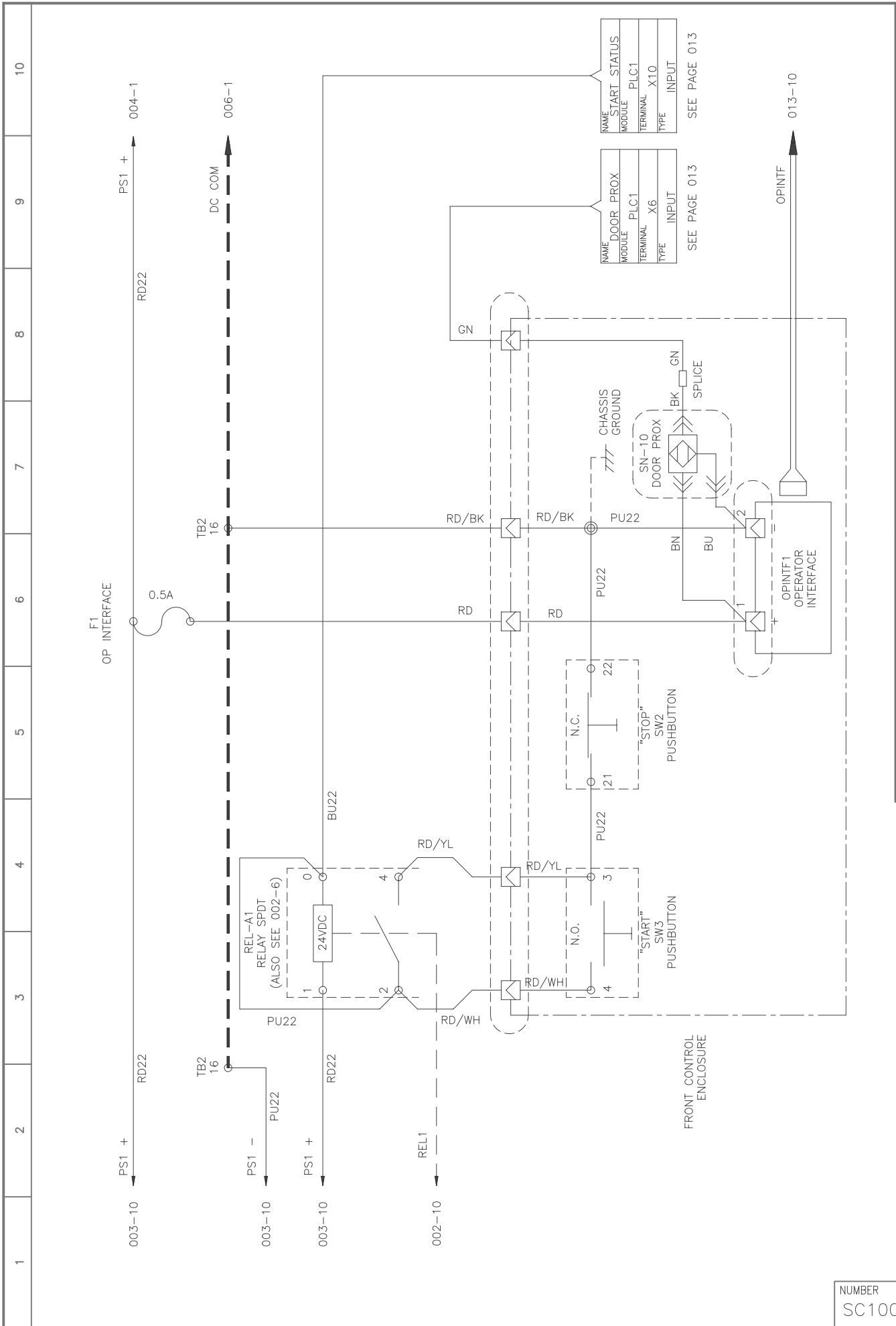


DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

SECTION SWITCHED AC LOADS - A
 TITLE MODEL CS10 COTTONER
 WIRING SCHEMATIC
 SERIAL NO. 002 AND UP

BY SJD2 DATE: 12-01-04
 SHEET 004 OF 023
 NUMBER SC1007
 REVISION -

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



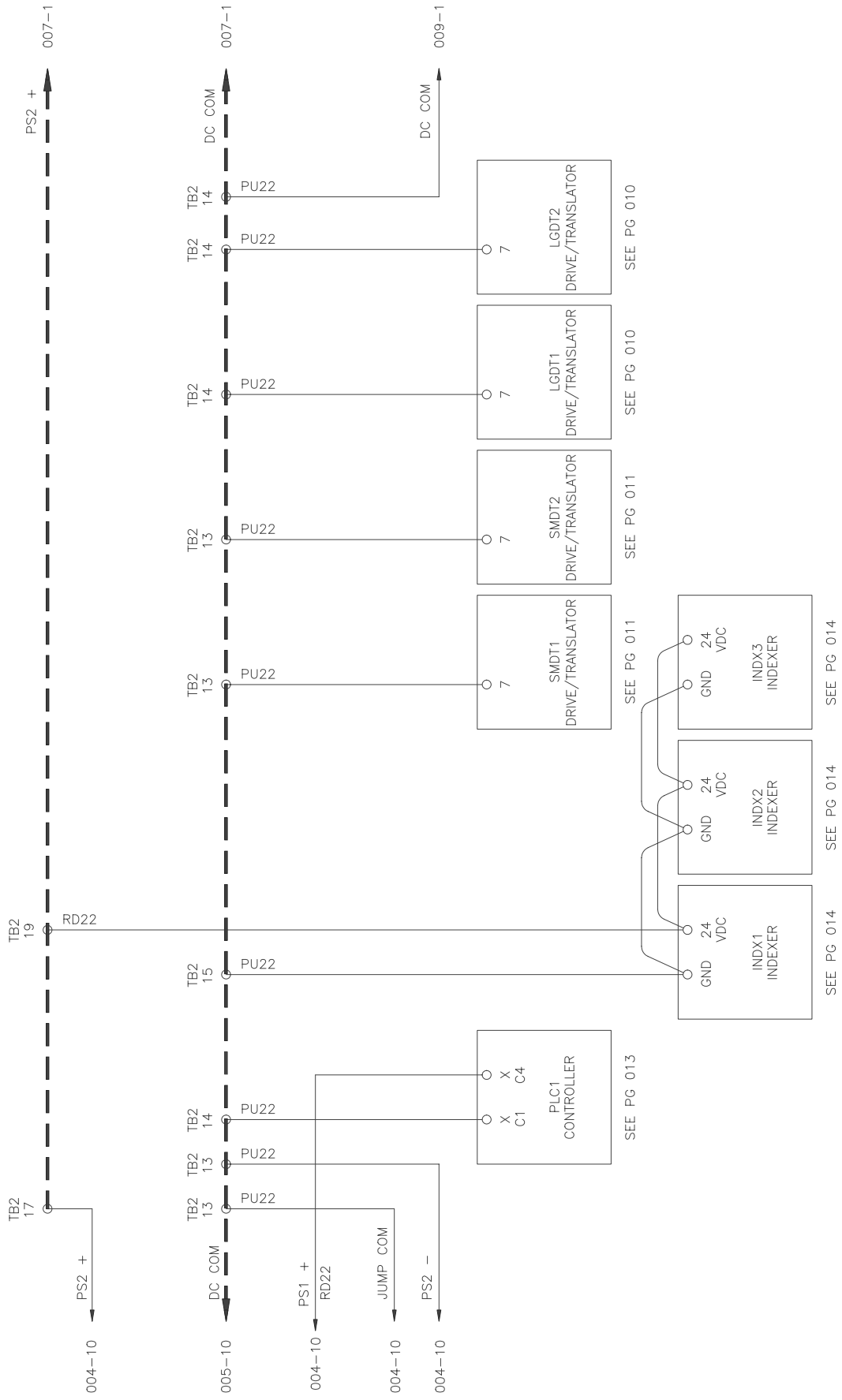
NAME	DOOR_PROX
MODULE	PLC1
TERMINAL	X6
TYPE	INPUT

SEE PAGE 013

NAME	START_STATUS
MODULE	PLC1
TERMINAL	X10
TYPE	INPUT

SEE PAGE 013

DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		SECTION	START/STOP/OP INTERFACE	BY	SJD2	DATE:	12-01-04
TECHNICAL DRAWING -- PRODUCT INFO		TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET	005 OF	023	REVISION
NUMBER	SC1007	PAGE	005	NUMBER	SC1007	REVISION	-

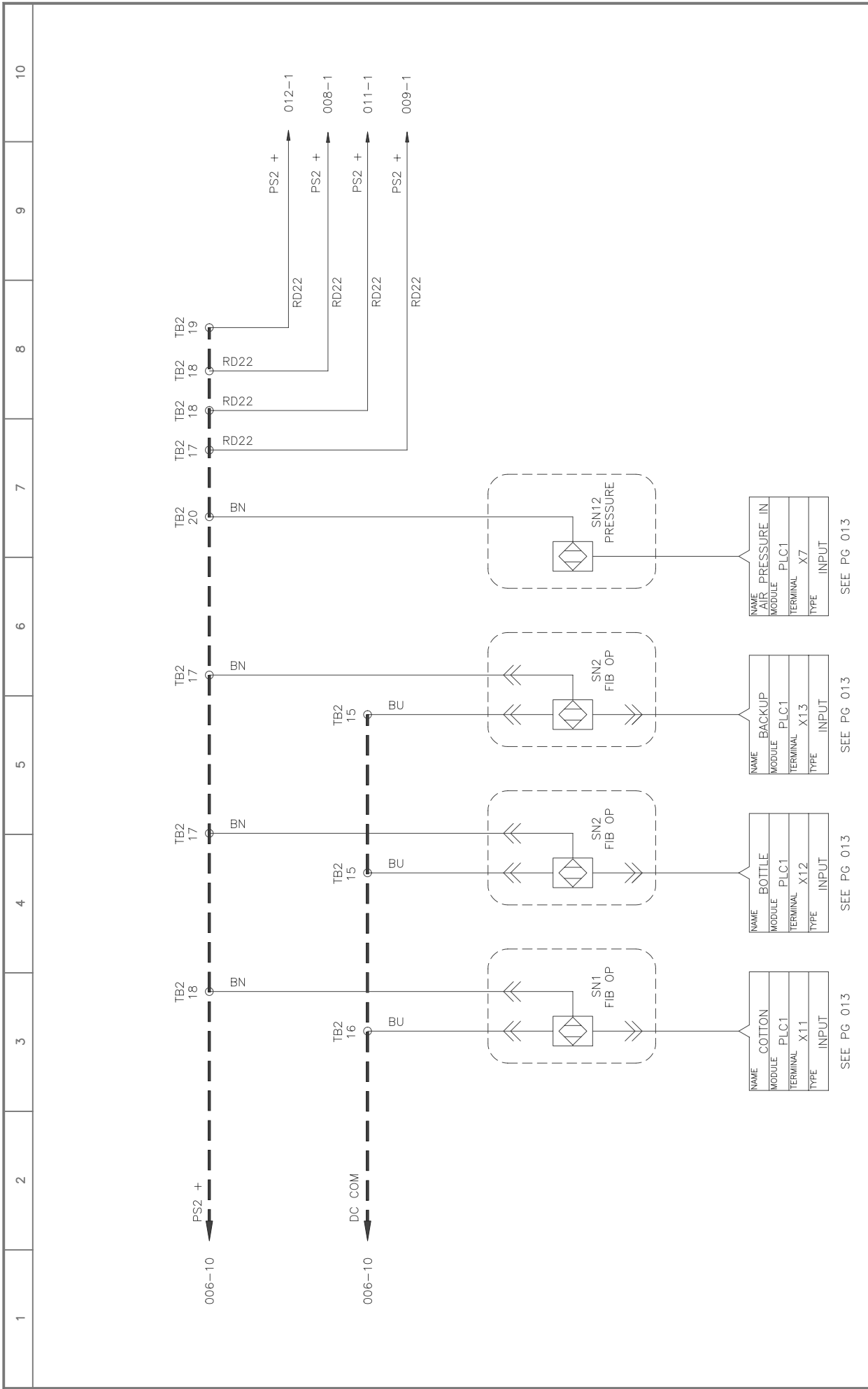


DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
TECHNICAL DRAWING -- PRODUCT INFO

SECTION: DC POWER DISTRIBUTION -- A 1
TITLE: MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP
BY: SJD2 DATE: 12-01-04
SHEET NUMBER: 006 OF 023
REVISION NUMBER: SC1007

NUMBER: SC1007
PAGE: 006

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



1	2	3	4	5	6	7	8	9	10									
006-10	PS2 +	TB2 18	BN	TB2 17	BN	TB2 17	BN	TB2 20	BN	TB2 17	RD22	TB2 18	RD22	TB2 18	RD22	TB2 19	PS2 +	012-1
006-10	DC COM	TB2 16	BN	TB2 15	BN	TB2 15	BN	TB2 17	BN	TB2 18	RD22	TB2 18	RD22	TB2 18	RD22	TB2 19	PS2 +	008-1
																	PS2 +	011-1
																	PS2 +	009-1

SECTION: DC POWER DISTRIBUTION - A 2		BY: SJD2	DATE: 12-01-04
TITLE: MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET: 007 OF 023	NUMBER: SC1007	REVISION: -

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

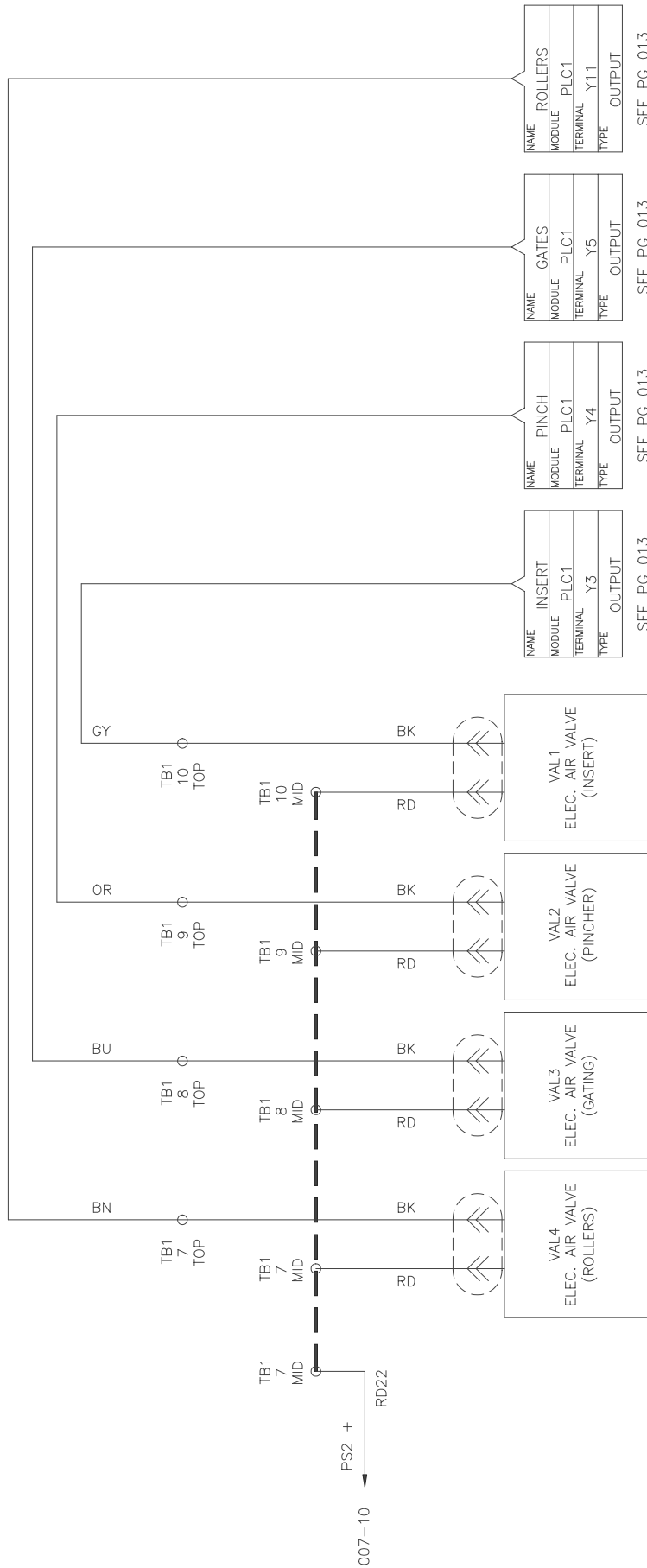
NUMBER: SC1007	PAGE: 007	DATE: ---/---/---
NOTE	REV	DESCRIPTION
-	-	-

SEE PG 013

SEE PG 013

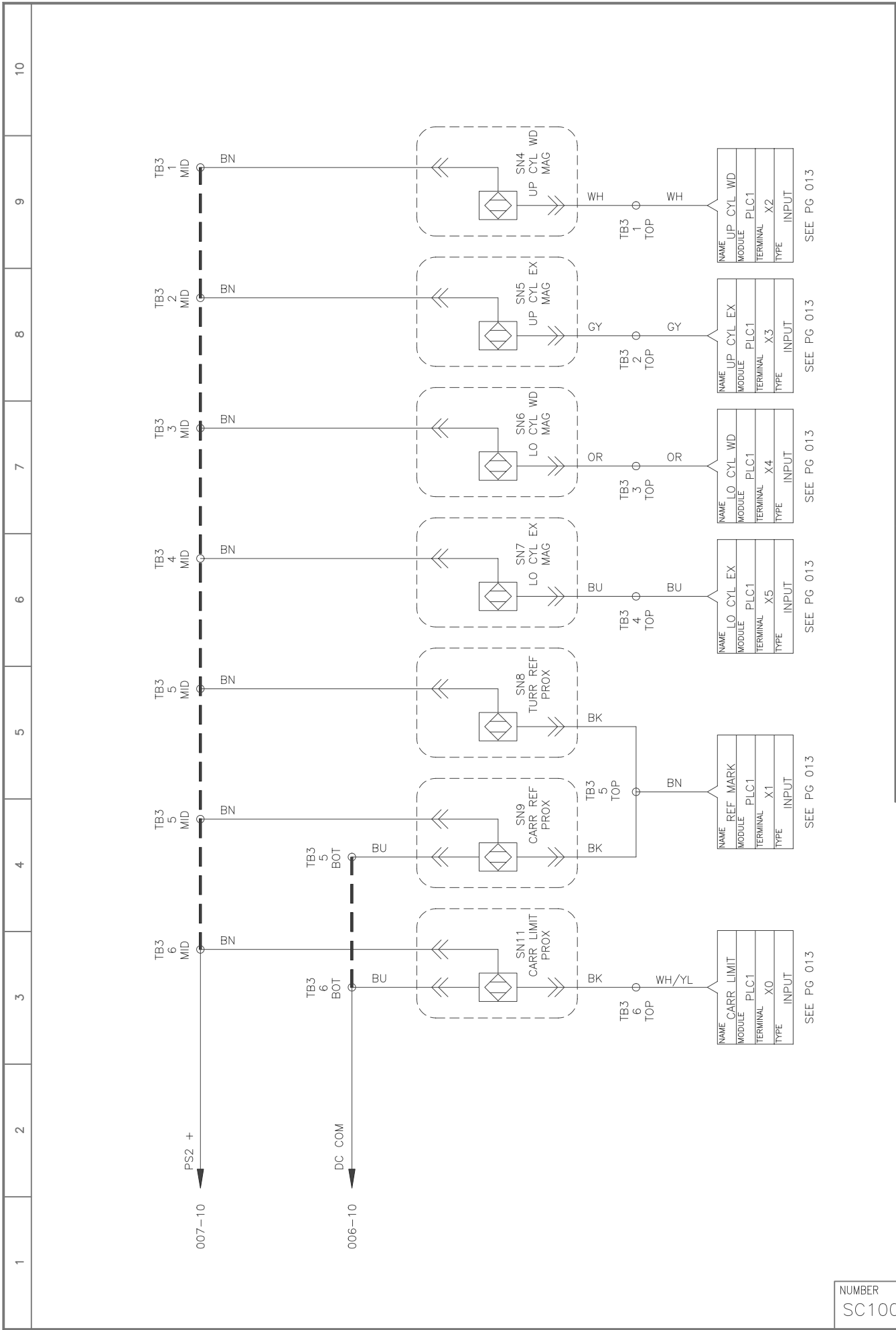
SEE PG 013

SEE PG 013

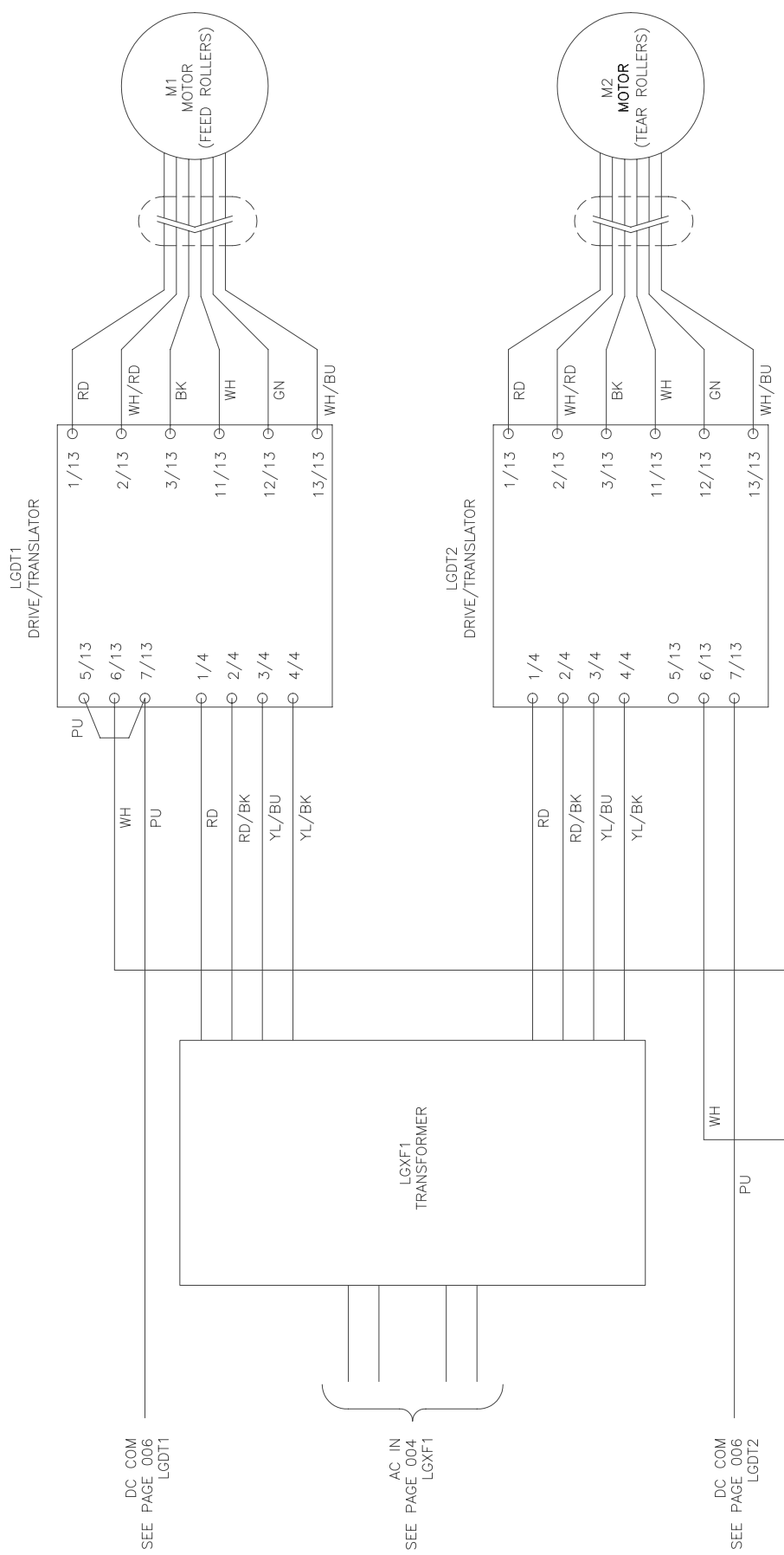


SEE AIR SCHEMATIC DIAGRAM SC1008

BY SJD2		DATE: 12-01-04
SECTION AIR VALVES - A		SEE PG 013
TITLE MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP		SEE PG 013
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		SEE PG 013
TECHNICAL DRAWING - PRODUCT INFO		SEE PG 013
NUMBER	SHEET	REVISION
SC1007	008 OF 023	023
NOTE	REV	DESCRIPTION
-	-	-
-	-	-
-	-	-
DATE	---	



BY SJD2		DATE: 12-01-04	
SECTION POSITION SENSORS - A		SHEET 009 OF 023	
TITLE MODEL CS10 COTTONER WIRING SCHEMATIC		NUMBER SC1007	
TECHNICAL DRAWING - PRODUCT INFO		REVISION -	
NUMBER SC1007	PAGE 009	NOTE -	DESCRIPTION -
REV -	DATE ---/---/---	REV -	DATE ---/---/---



DC COM
PAGE 006
LGDT1

AC IN
PAGE 004
LGXF1

DC COM
PAGE 006
LGDT2

NAME	PULSE
MODULE	INDX1
TERMINAL	CLK
TYPE	OUTPUT

SEE PG 014

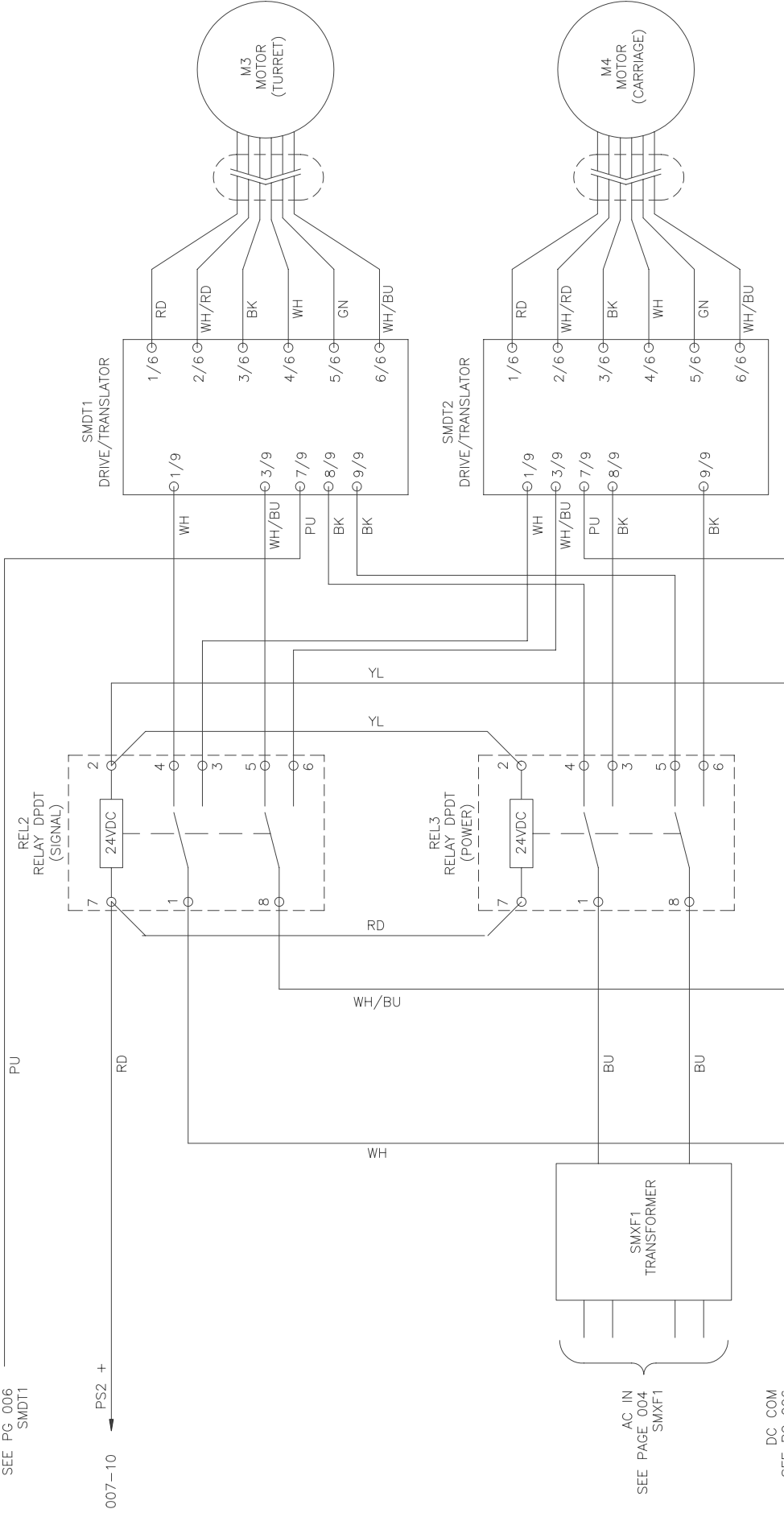
NAME	PULSE
MODULE	INDX2
TERMINAL	CLK
TYPE	OUTPUT

SEE PG 014

<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.</p>		<p>SECTION: ROLLER DRIVES - A</p>	<p>BY: SJD2 DATE: 12-01-04</p>
<p>TECHNICAL DRAWING - PRODUCT INFO</p>		<p>TITLE: MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP</p>	<p>SHEET: 010 OF 023 NUMBER: SC1007 REVISION: -</p>
<p>NUMBER: SC1007</p>	<p>PAGE: 010</p>	<p>NOTE: -</p>	<p>REV: -</p>
<p>DESCRIPTION: -</p>	<p>DATE: ---/---/---</p>	<p>REVISION: -</p>	<p>REVISION: -</p>

DC COM
SEE PG 006
SMDT1

007-10
PS2 +



NAME	SELECT_M3/M4
MODULE	PLC1
TERMINAL	Y6
TYPE	OUTPUT

SEE PG 013

NAME	DIRECTION
MODULE	INDX3
TERMINAL	DIR
TYPE	OUTPUT

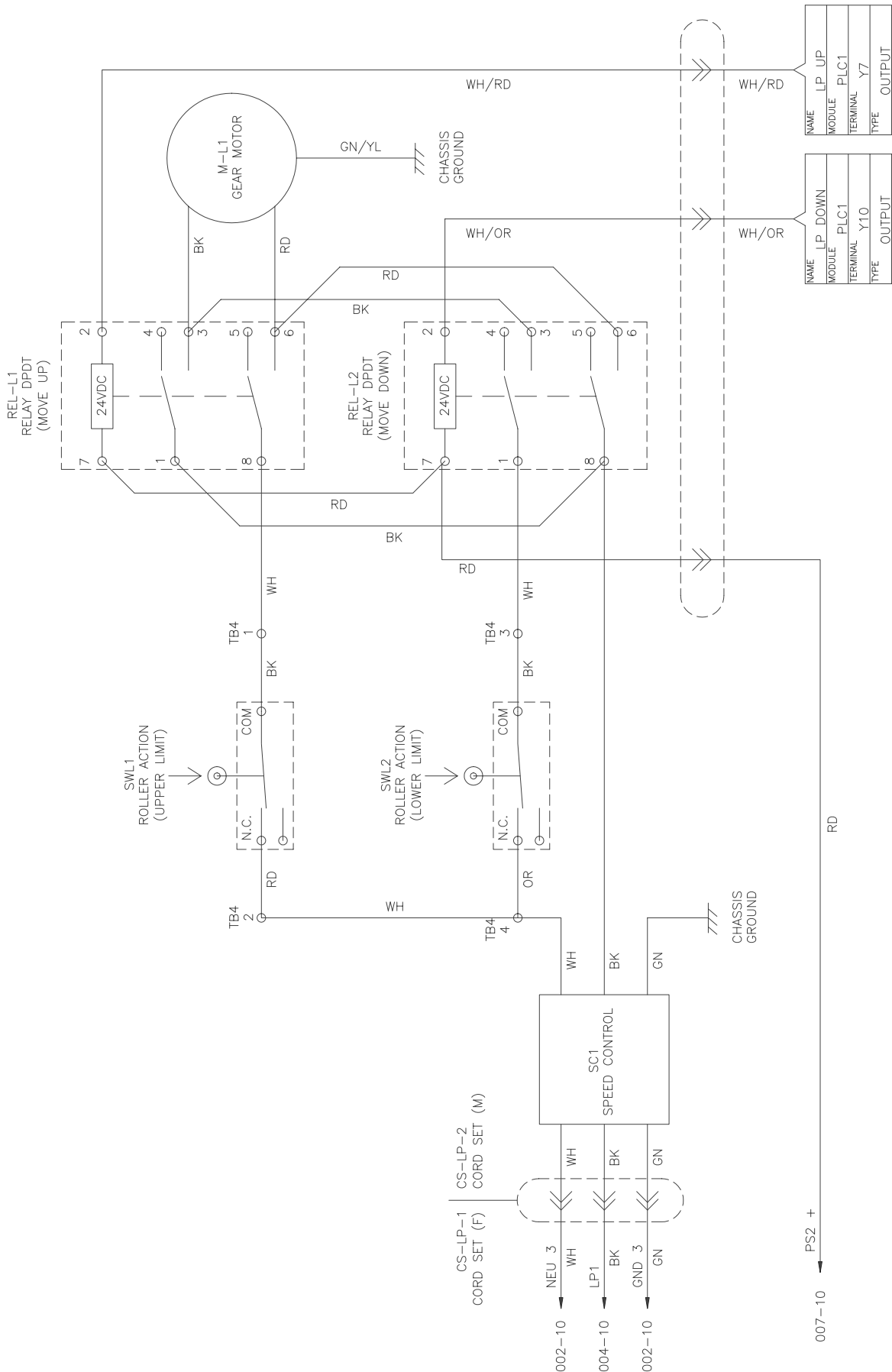
SEE PG 014

NAME	PULSE
MODULE	INDX3
TERMINAL	CLK
TYPE	OUTPUT

SEE PG 014

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
TECHNICAL DRAWING - PRODUCT INFO

SECTION	TURRET & CARRIAGE DRIVES - A	BY	SJD2	DATE:	12-01-04
TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET	011 OF	023	REVISION
		NUMBER	SC1007		-



NAME	LP_UP
MODULE	PLC1
TERMINAL	Y7
TYPE	OUTPUT

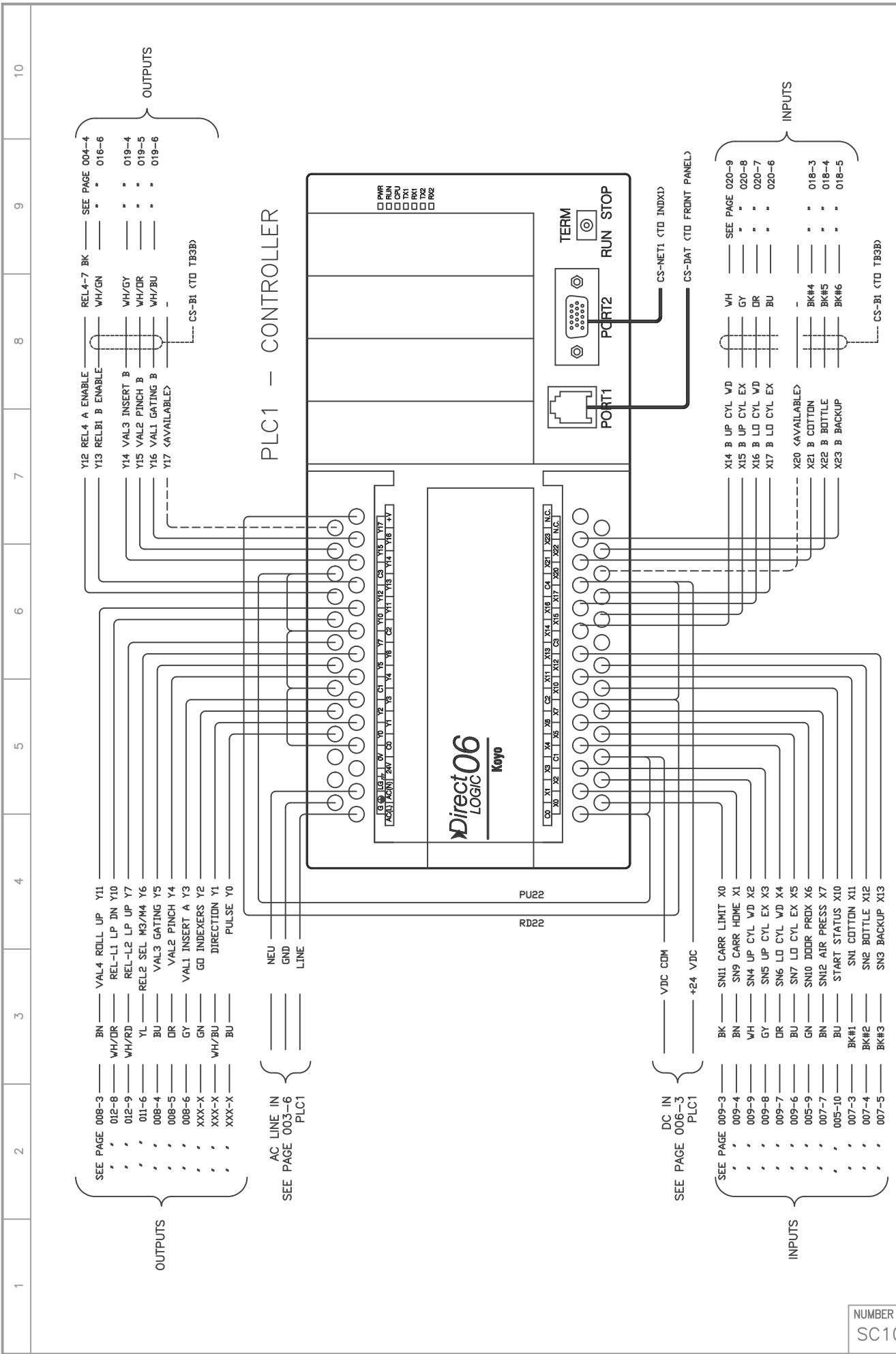
SEE PG 013

NAME	LP_DOWN
MODULE	PLC1
TERMINAL	Y10
TYPE	OUTPUT

SEE PG 013

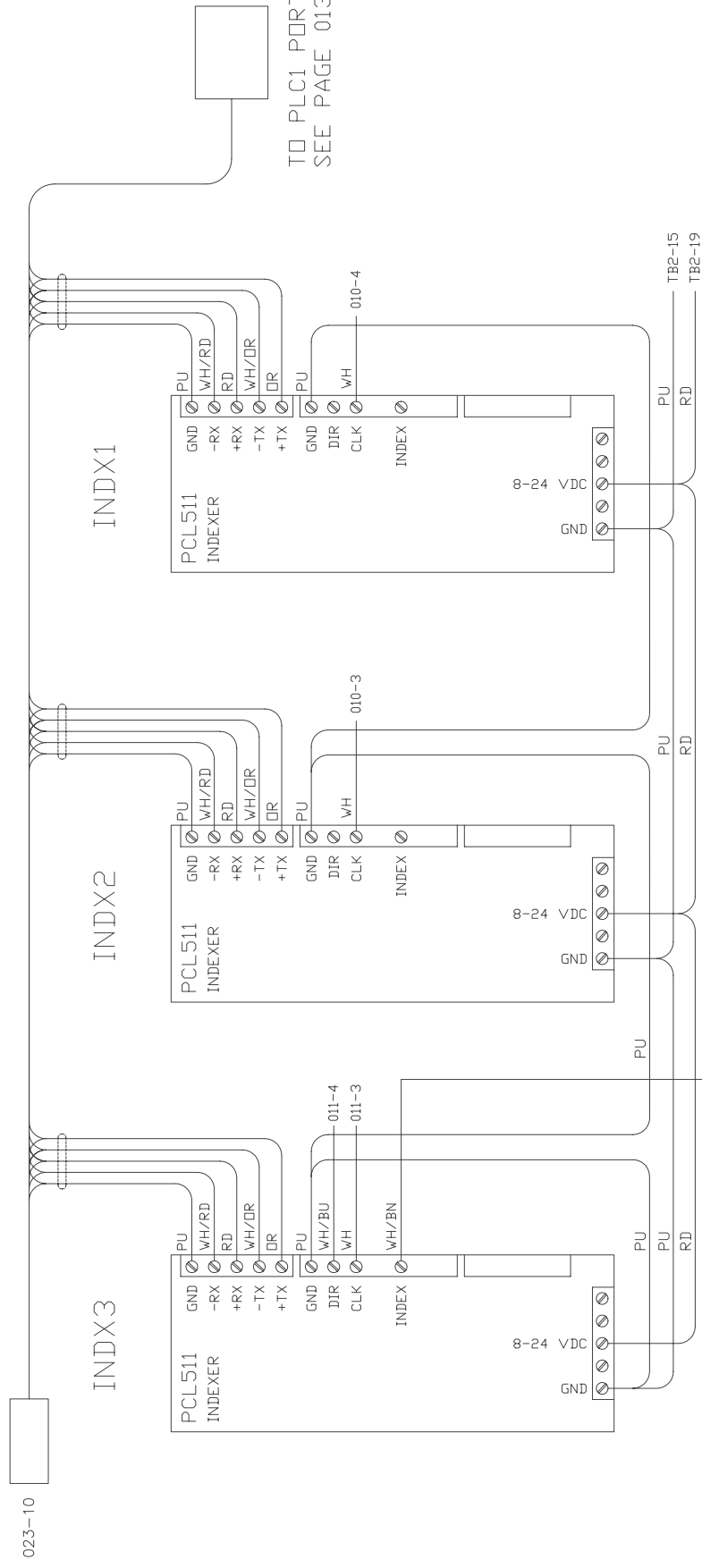
DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

SECTION	LIFT PLATFORM	BY	SJD2	DATE:	12-10-04
TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET	012 OF	023	REVISION
		NUMBER	SC1007		—



1	2	3	4	5	6	7	8	9	10
<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO</p>									
SECTION		MASTER PLC			DATE: 12-01-04		BY: SJD2		
TITLE		MODEL CS10 COTTONER WIRING SCHEMATIC			SHEET 013 OF 023		REVISION		
SERIAL NO. 002 AND UP		SC1007			NUMBER			D	
NOTE	REV	DESCRIPTION	DATE						
NUMBER		SC1007			PAGE		013		

CS-NET4-1 CS-NET3 CS-NET2 CS-NET1

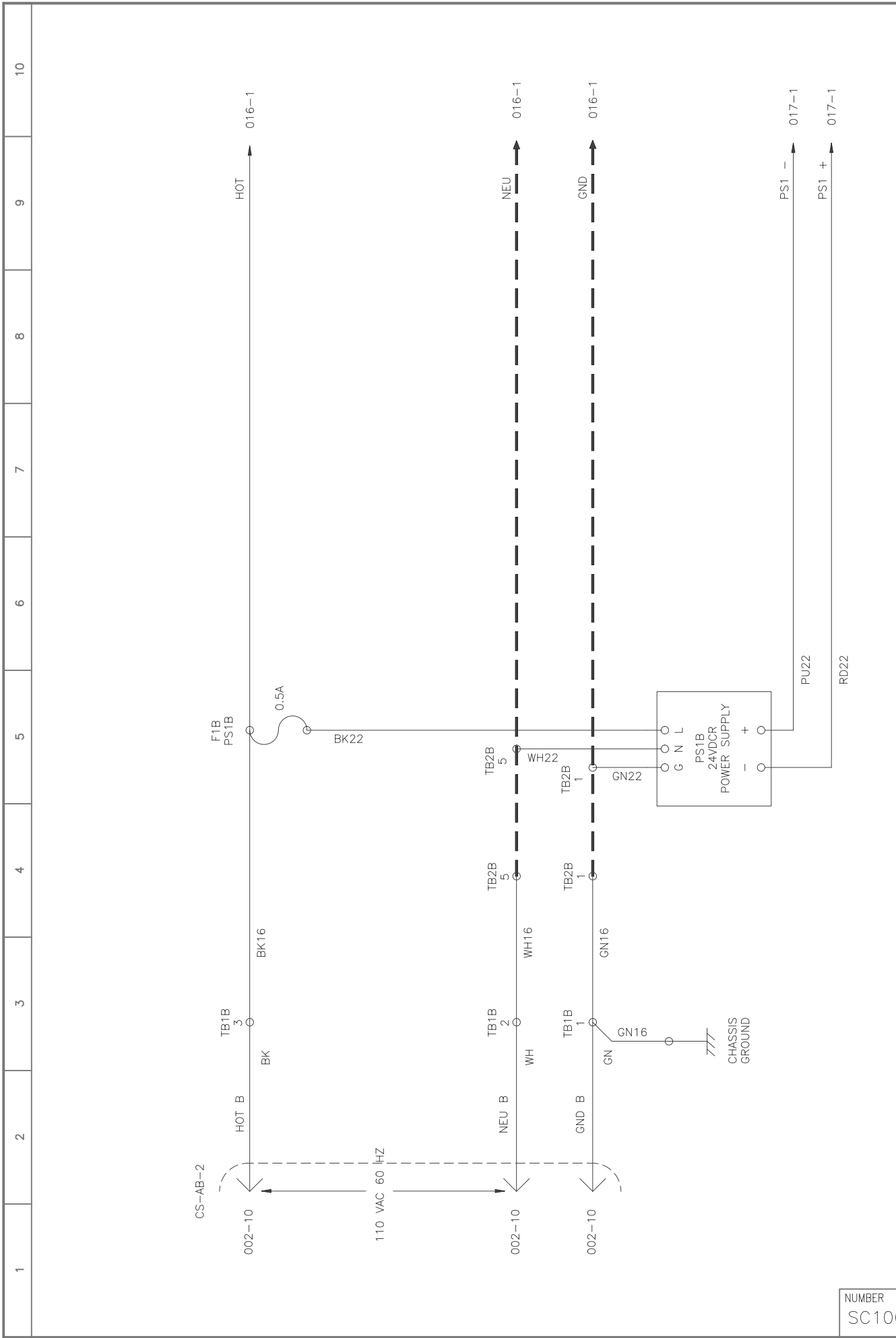


TO PLC1 PORT 2
SEE PAGE 013

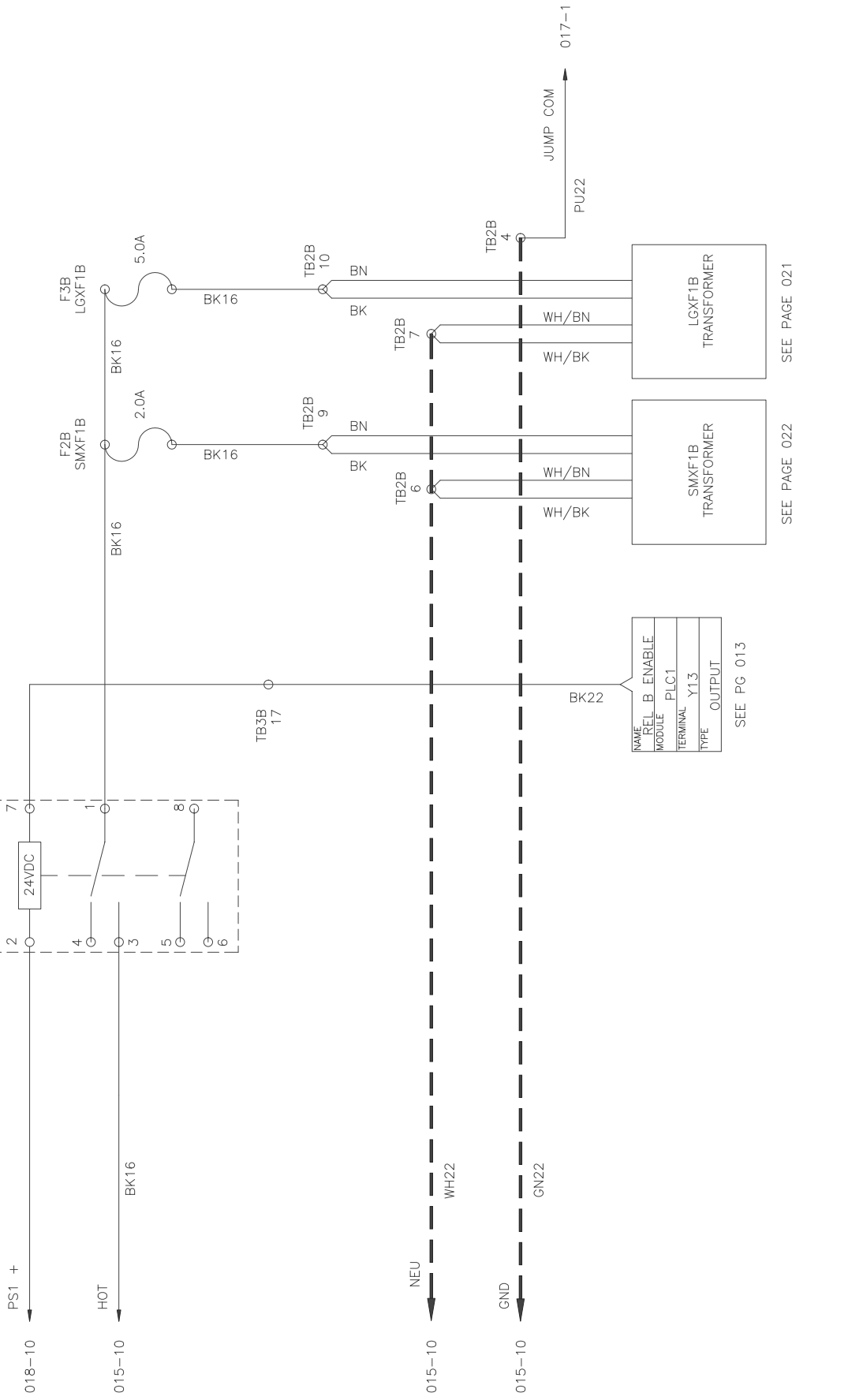
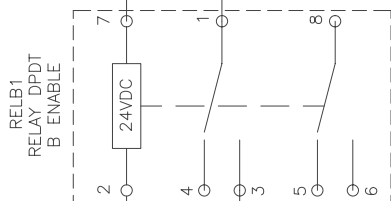
NAME	SIGNAL_OUT
REF.	PLC1
MODULE	Y1
TERMINAL	Y1
TYPE	OUTPUT

SEE PG 013

<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.</p>		SECTION	INDEXERS - A	BY	SJD2	DATE:	12-01-04
<p>TECHNICAL DRAWING - PRODUCT INFO</p>		TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC	SHEET	014 OF	023	REVISION
			SERIAL NO. 002 AND UP	NUMBER	SC1007		-



1	2	3	4	5	6	7	8	9	10	
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO										
SECTION					AC POWER ENTRY - B					
TITLE					MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP					
BY					SJD2					
DATE:					12-01-04					
SHEET					015 OF 023					
NUMBER					SC1007					
REVISION					-					
NUMBER	SC1007								PAGE	015
NOTE	REV	DESCRIPTION	DATE							



NAME	REL B ENABLE
MODULE	PLC1
TERMINAL	Y13
TYPE	OUTPUT

SEE PG 013

SEE PAGE 021

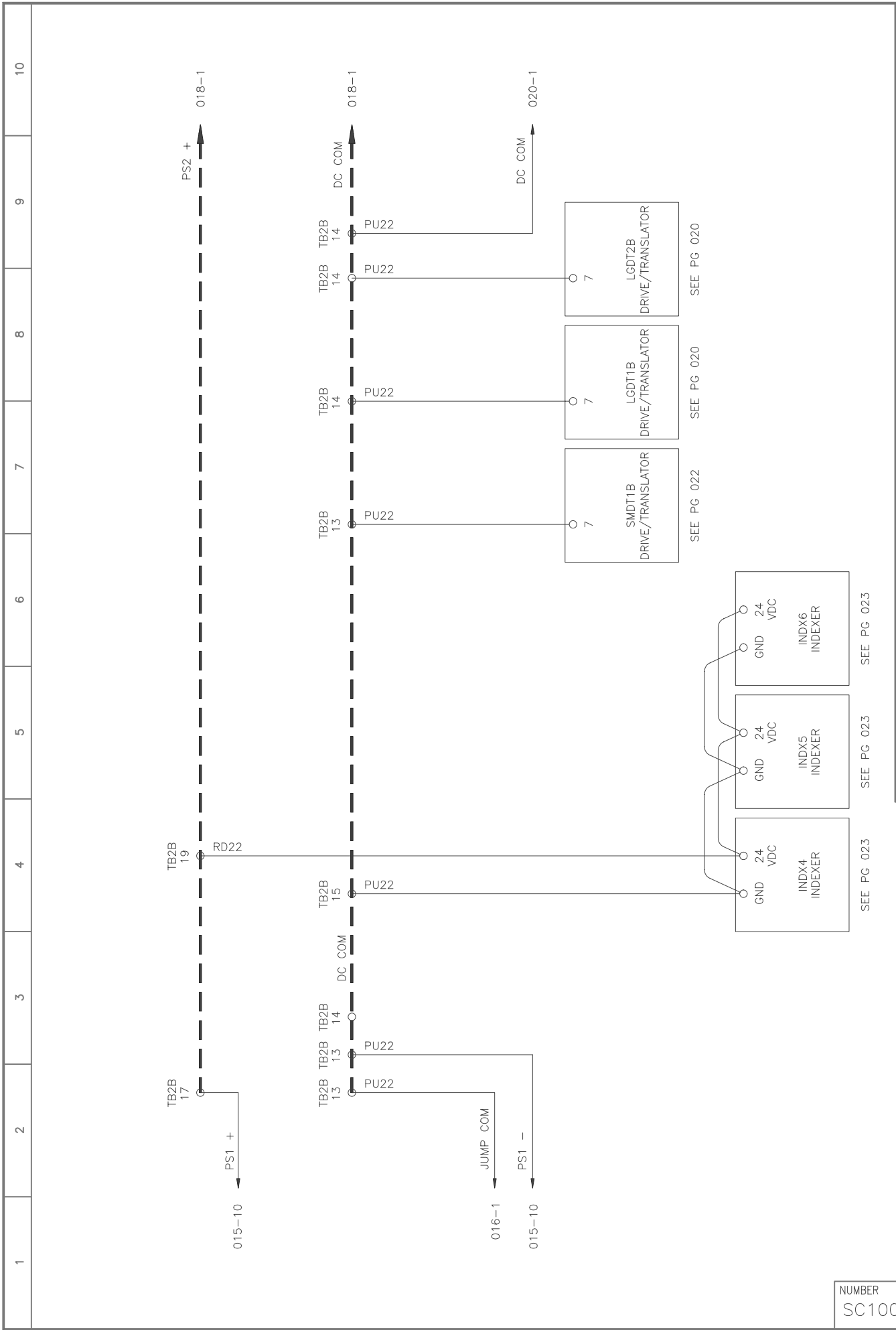
SEE PAGE 022

SECTION	SWITCHED AC LOADS - B	BY	SJD2	DATE:	12-01-04
TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC	SHEET	016 OF	023	REVISION
	SERIAL NO. 002 AND UP	NUMBER	SC1007		-

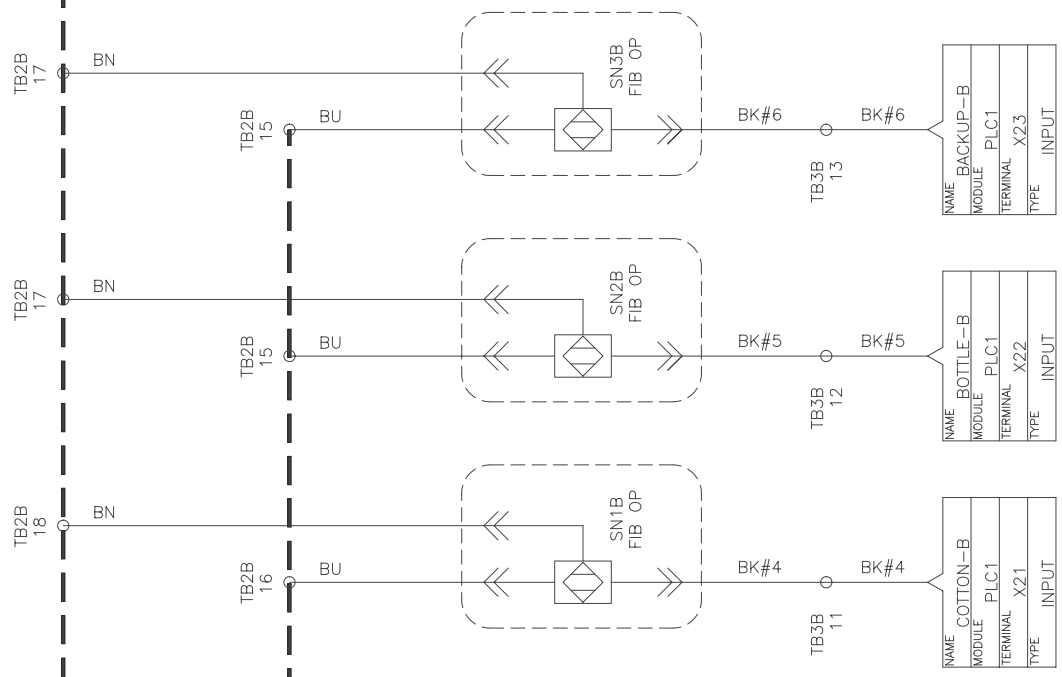
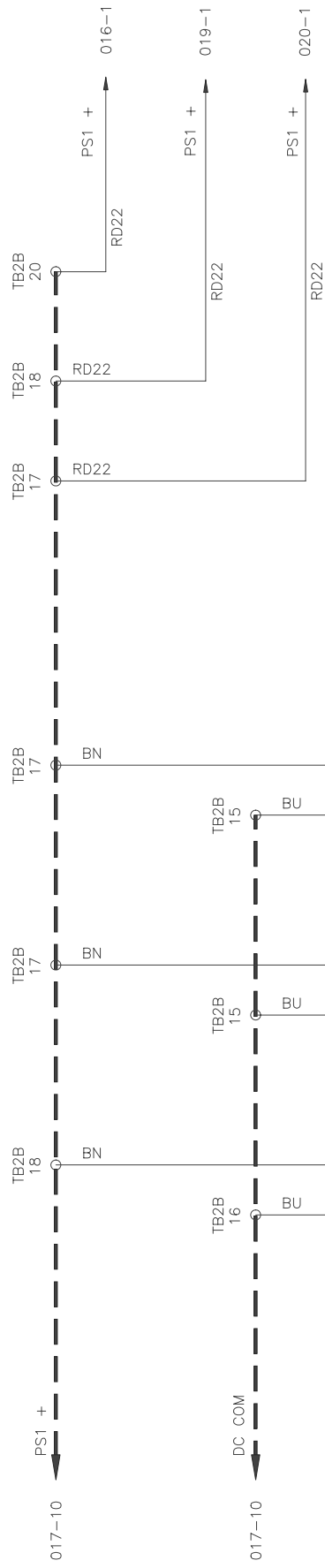
DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

TECHNICAL DRAWING - PRODUCT INFO

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



1	2	3	4	5	6	7	8	9	10
<p>SECTION: DC POWER DISTRIBUTION - B 1</p> <p>TITLE: MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP</p> <p>BY: SJD2 DATE: 11-24-03</p> <p>REVISION: 023 SHEET: 017 OF 023</p> <p>NUMBER: SC1007</p>									
<p>DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO</p>									
NUMBER	SC1007	PAGE	017	DESCRIPTION	REV	NOTE	DATE	---	---



DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

SECTION DC POWER DISTRIBUTION - B 2

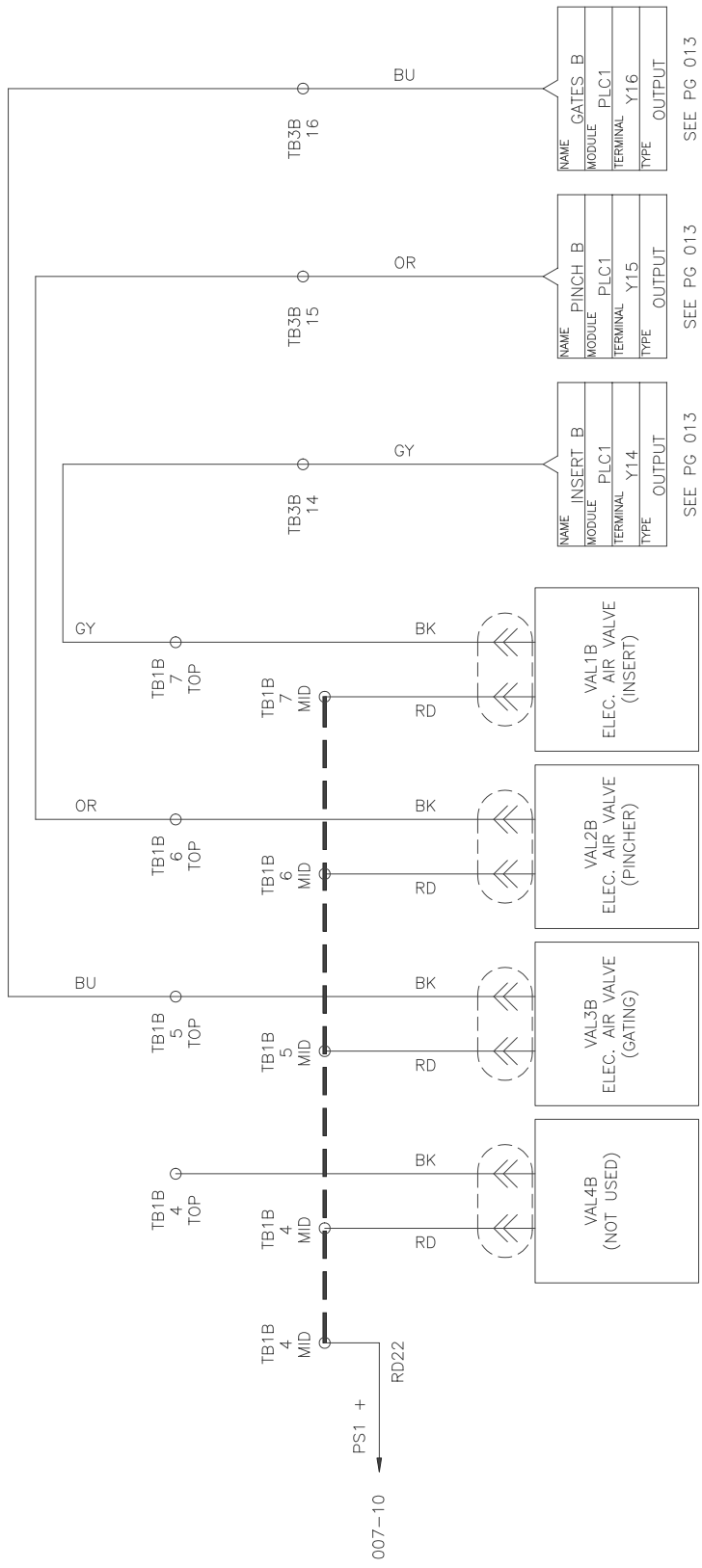
BY SJD2 DATE: 12-01-04

TITLE MODEL CS10 COTTONER WIRING SCHEMATIC SHEET 018 OF 023

SERIAL NO. 002 AND UP NUMBER SC1007 REVISION -

TECHNICAL DRAWING - PRODUCT INFO

NUMBER	SC1007	PAGE	018
NOTE		REV	
		DESCRIPTION	
		DATE	



NAME	GATES_B
MODULE	PLC1
TERMINAL	Y16
TYPE	OUTPUT

SEE PG 013

NAME	PINCH_B
MODULE	PLC1
TERMINAL	Y15
TYPE	OUTPUT

SEE PG 013

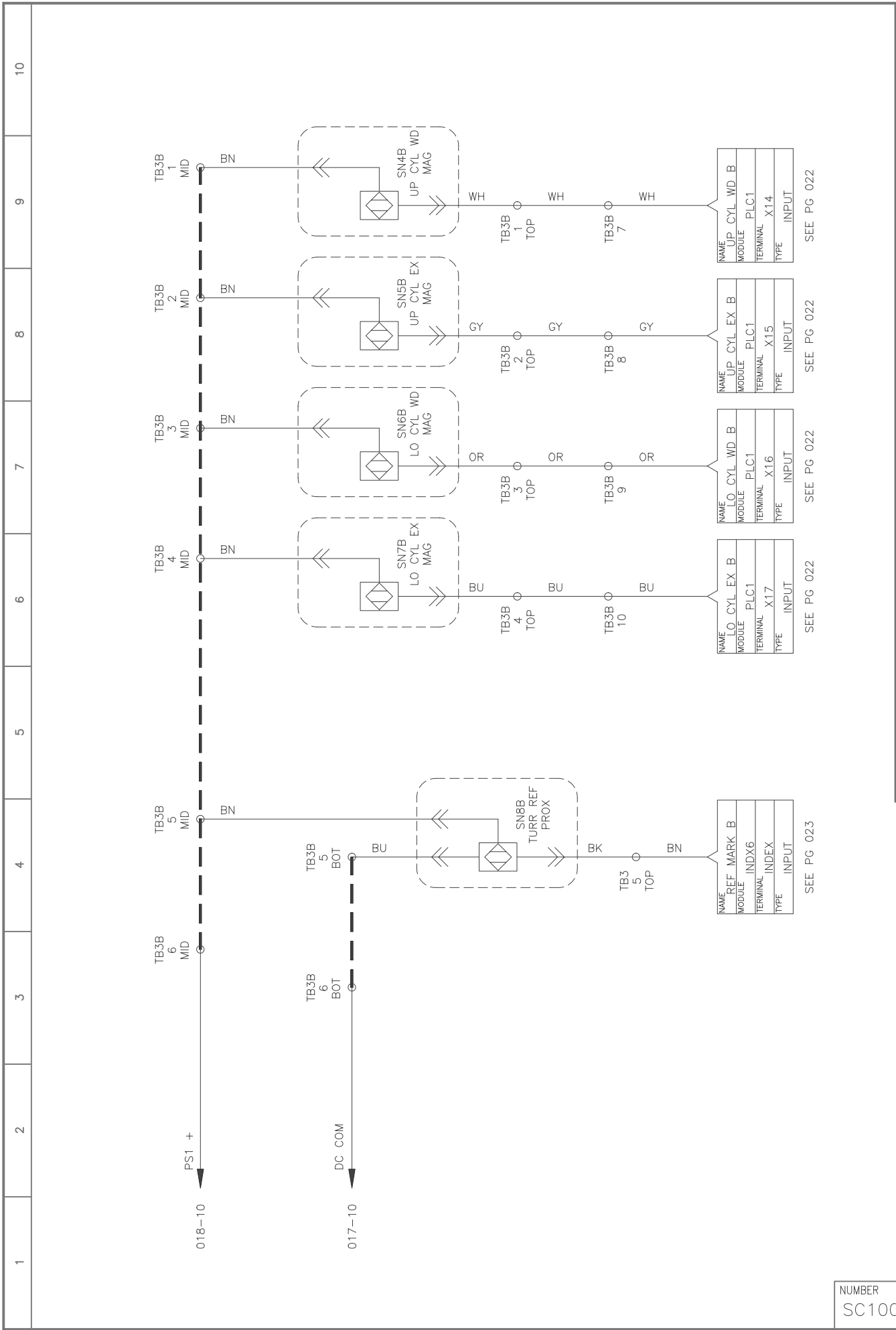
NAME	INSERT_B
MODULE	PLC1
TERMINAL	Y14
TYPE	OUTPUT

SEE PG 013

SEE AIR SCHEMATIC DIAGRAM SC1008

DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO		SECTION	AIR VALVES - B	BY	SJD2	DATE:	12-01-04
		TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET	019 OF	023	REVISION

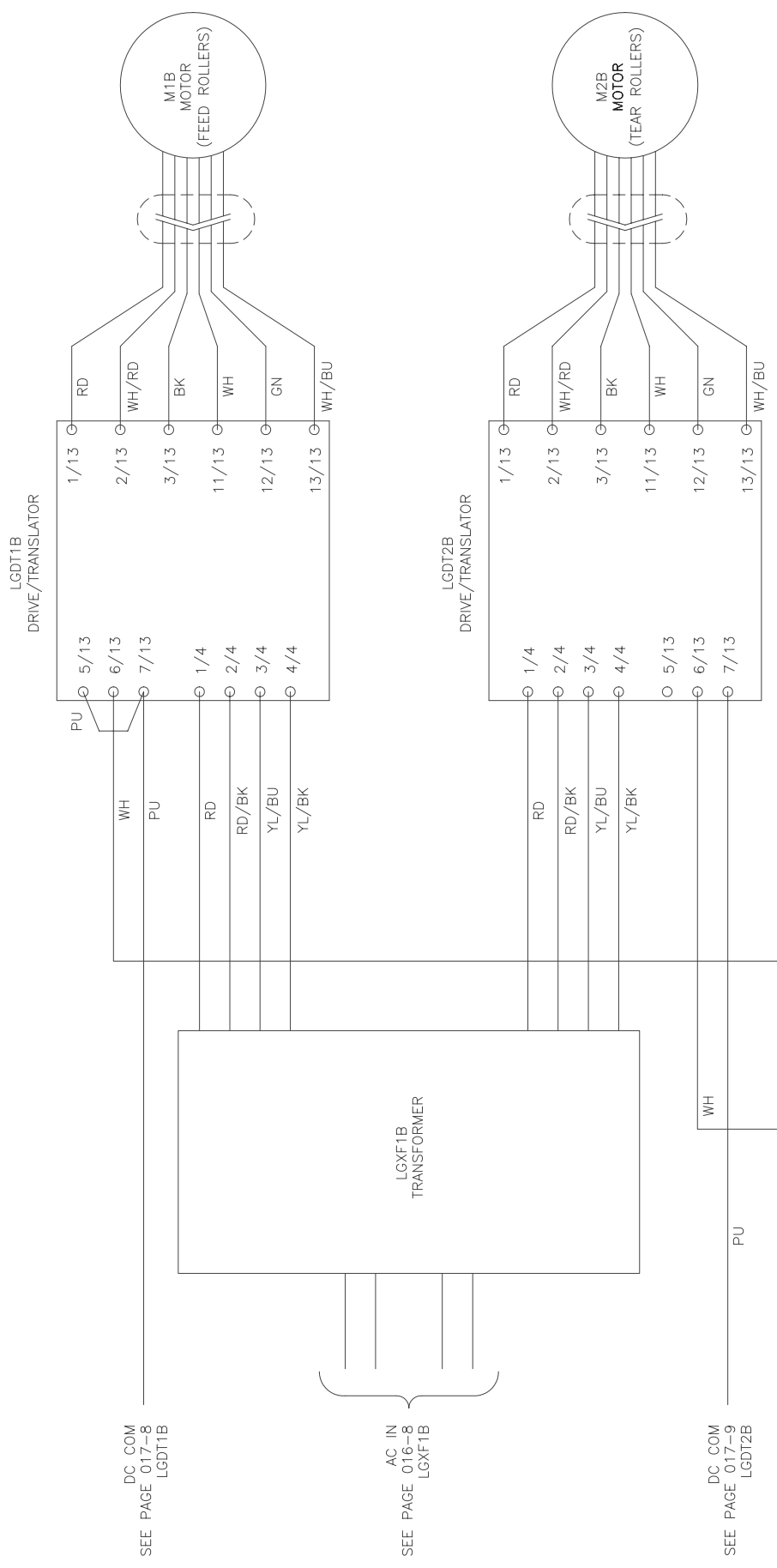
NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

SECTION	POSITION SENSORS - B	BY	SJD2	DATE:	12-01-04
TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP	SHEET	020 OF	023	REVISION
NUMBER	SC1007	REVISION			

NUMBER	SC1007	PAGE	020
NOTE		REV	
		DESCRIPTION	
		DATE	



DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

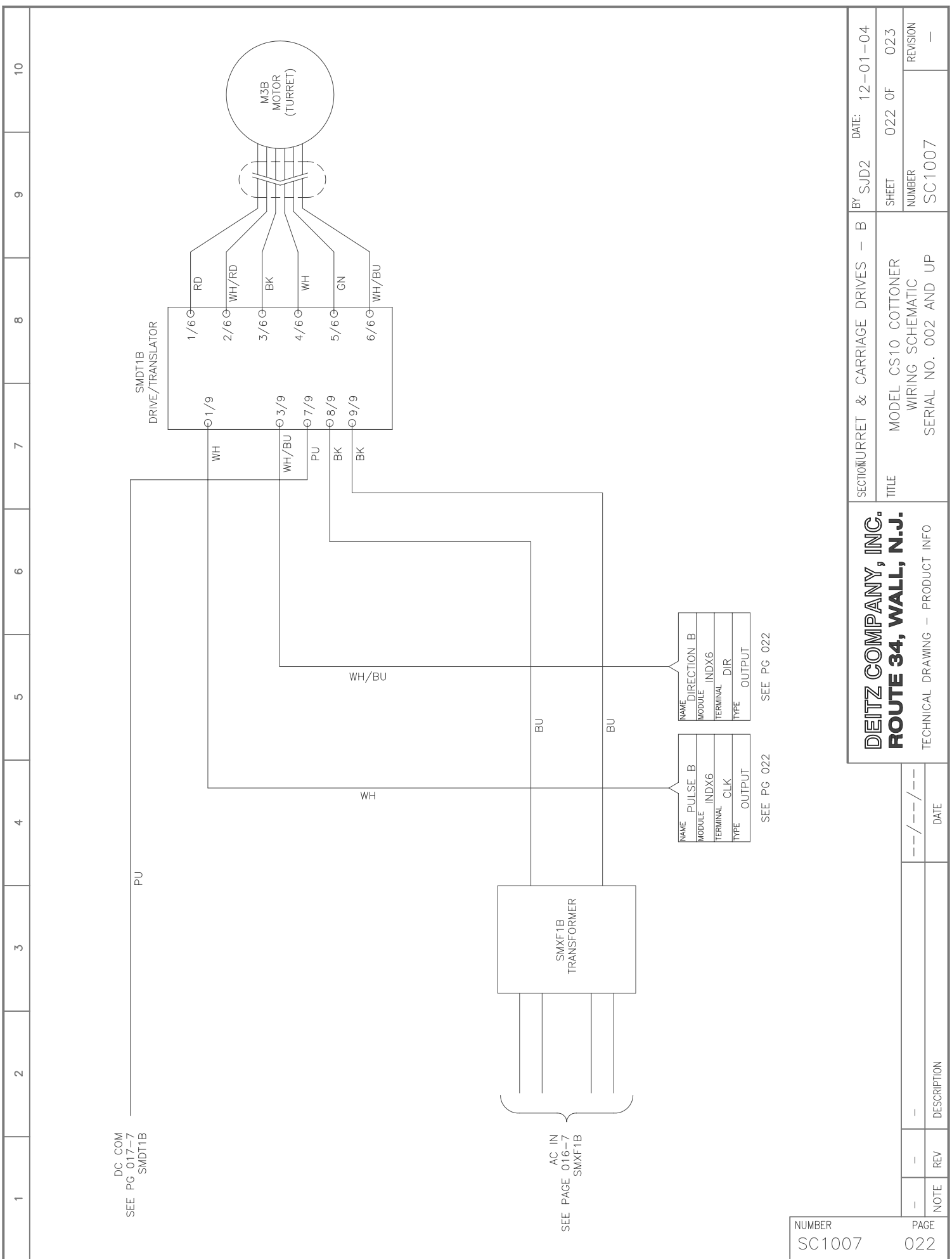
TECHNICAL DRAWING - PRODUCT INFO

SECTION	ROLLER DRIVES - B
TITLE	MODEL CS10 COTTONER WIRING SCHEMATIC SERIAL NO. 002 AND UP
BY	SJD2
DATE	12-01-04
SHEET NUMBER	021 OF 023
REVISION NUMBER	SC1007
REVISION	-

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---

SEE PG 023-4

SEE PG 023-7

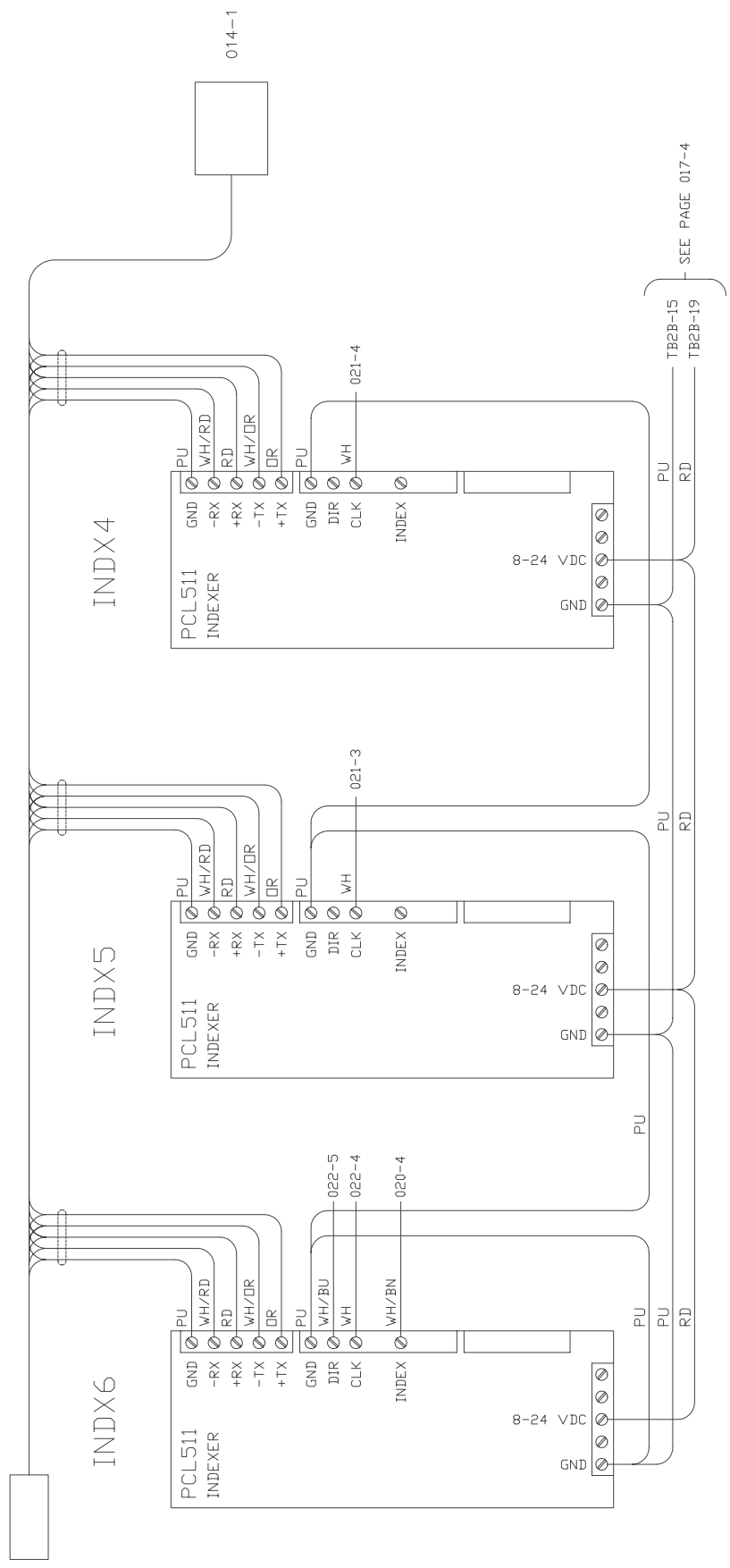


SECTION: TURRET & CARRIAGE DRIVES - B	BY: SJD2	DATE: 12-01-04
TITLE: MODEL CS10 COTTONER WIRING SCHEMATIC	SHEET: 022 OF 023	REVISION: 023
SERIAL NO. 002 AND UP	NUMBER: SC1007	REVISION: -

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---

TEST PORT CS-NET7 CS-NET6 CS-NET5 CS-NET4-2



DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

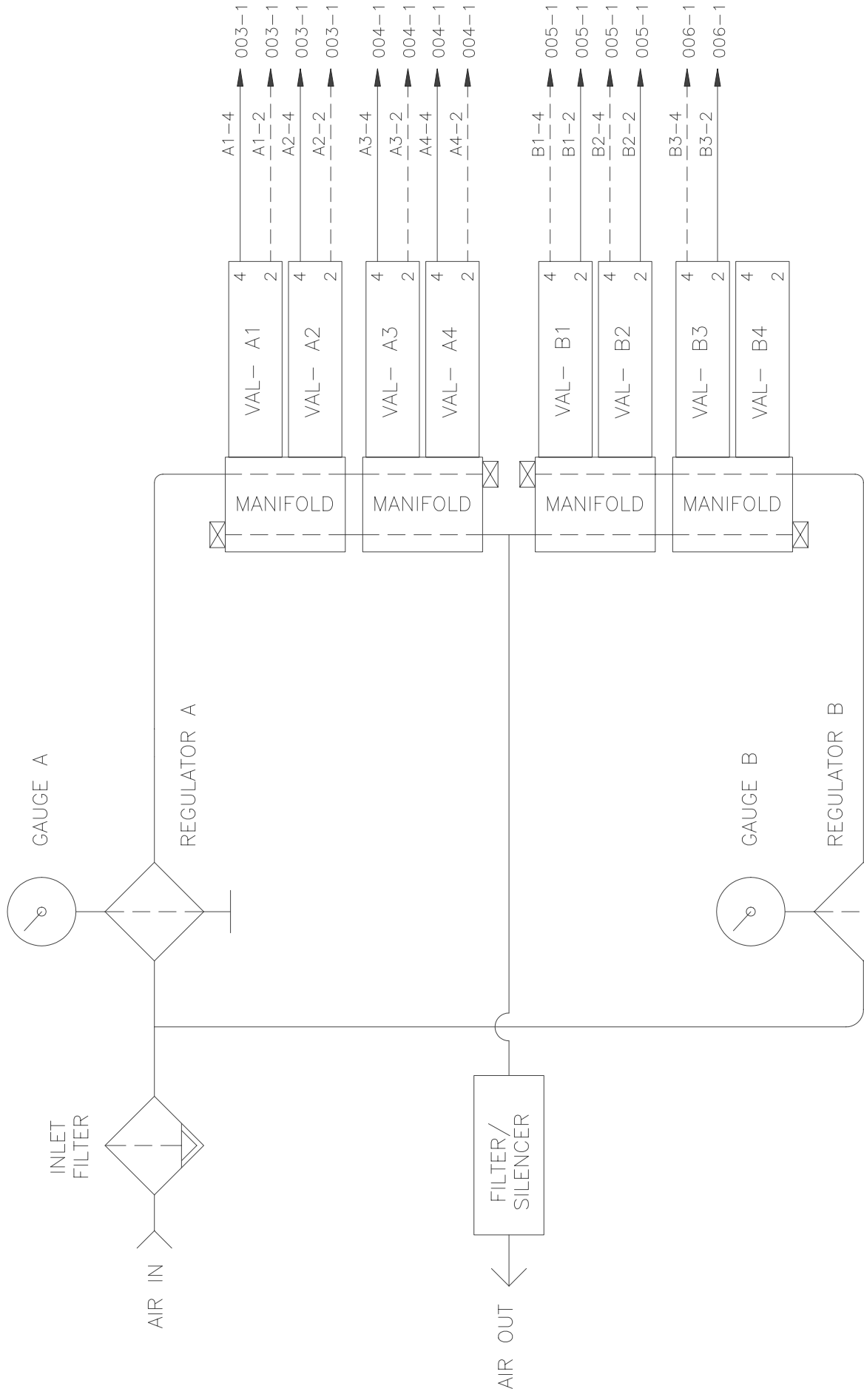
SECTION INDEXERS - B
 TITLE MODEL CS10 COTTONER WIRING SCHEMATIC
 SERIAL NO. 002 AND UP

BY SJD2 DATE: 12-01-04
 SHEET 023 OF 023
 NUMBER SC1007 REVISION -

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---

1	2	3	4	5	6	7	8	9	10
<p style="text-align: center;"><u>CONTENTS</u></p> <ol style="list-style-type: none"> 1. NOTES AND REVISIONS 2. INLET/CONTROL VALVES -A & B 3. AIR CYLS: INSERT/PINCHER/TAMPER - A 4. AIR CYLS: GATING/ROLLERS - A 5. AIR CYLS: INSERT/PINCHER/TAMPER - B 6. AIR CYLS: GATING - B 									
<p style="text-align: center;"><u>NOTES</u></p> <p style="text-align: center;">TYPICAL AIR VALVE 4 PORT/2 POSITION 24 VDC</p>									

BY SJD2		DATE: 12-03-04	
SHEET 001 OF 006		REVISION	
NUMBER SC1008		-	
SECTION	NOTE AND REVISIONS		
TITLE	MODEL CS10 COTTONER AIR LINE SCHEMATIC FROM SERIAL NO. 002		
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING - PRODUCT INFO			
NUMBER	PAGE	---/---/---	
SC1008	001	NOTE	REV
		-	-



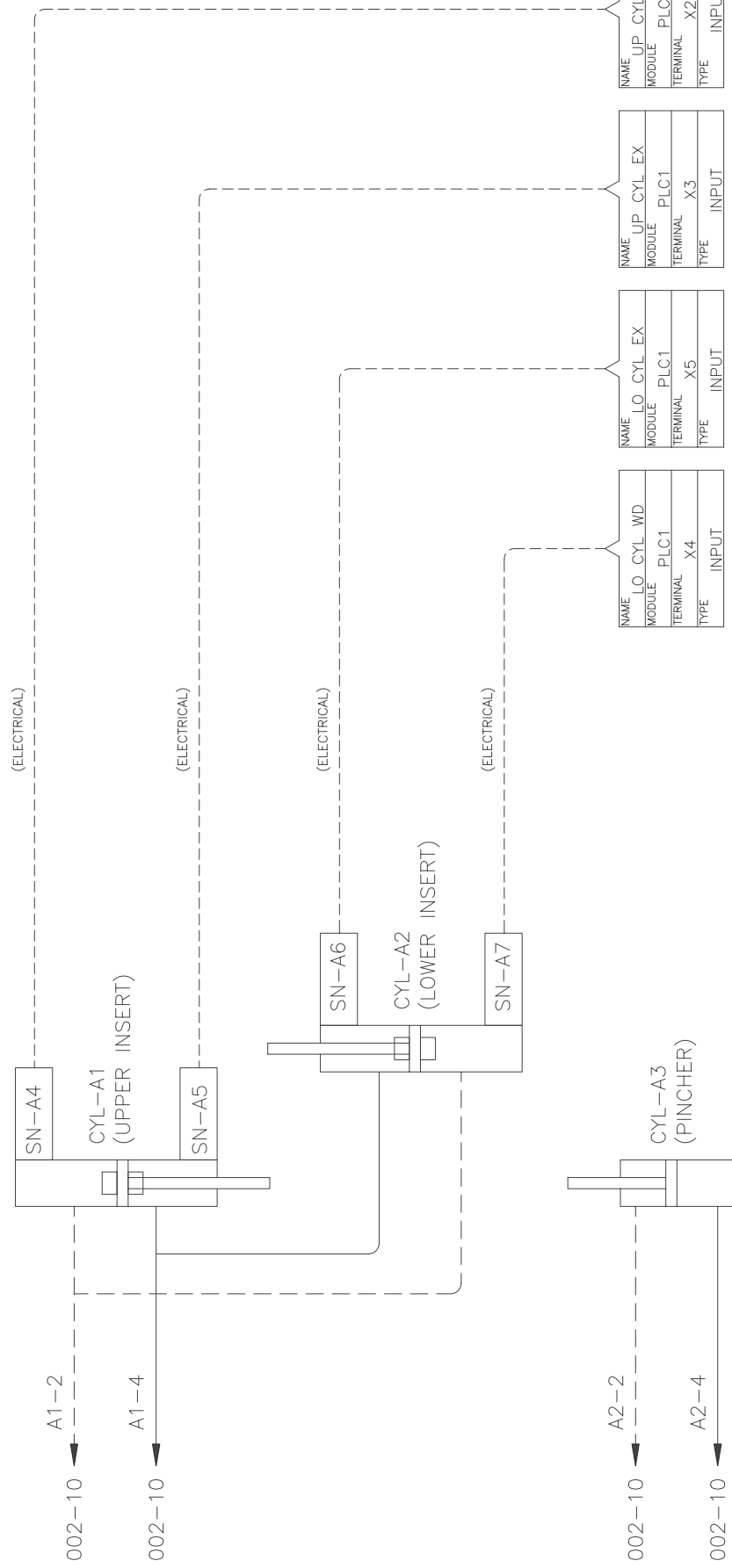
NUMBER	PAGE
SC1008	002

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

SECTION TITLE
 INLET/CONTROL VALVES
 MODEL CS10 COTTONER
 AIR LINE SCHEMATIC
 FROM SERIAL NO. 002

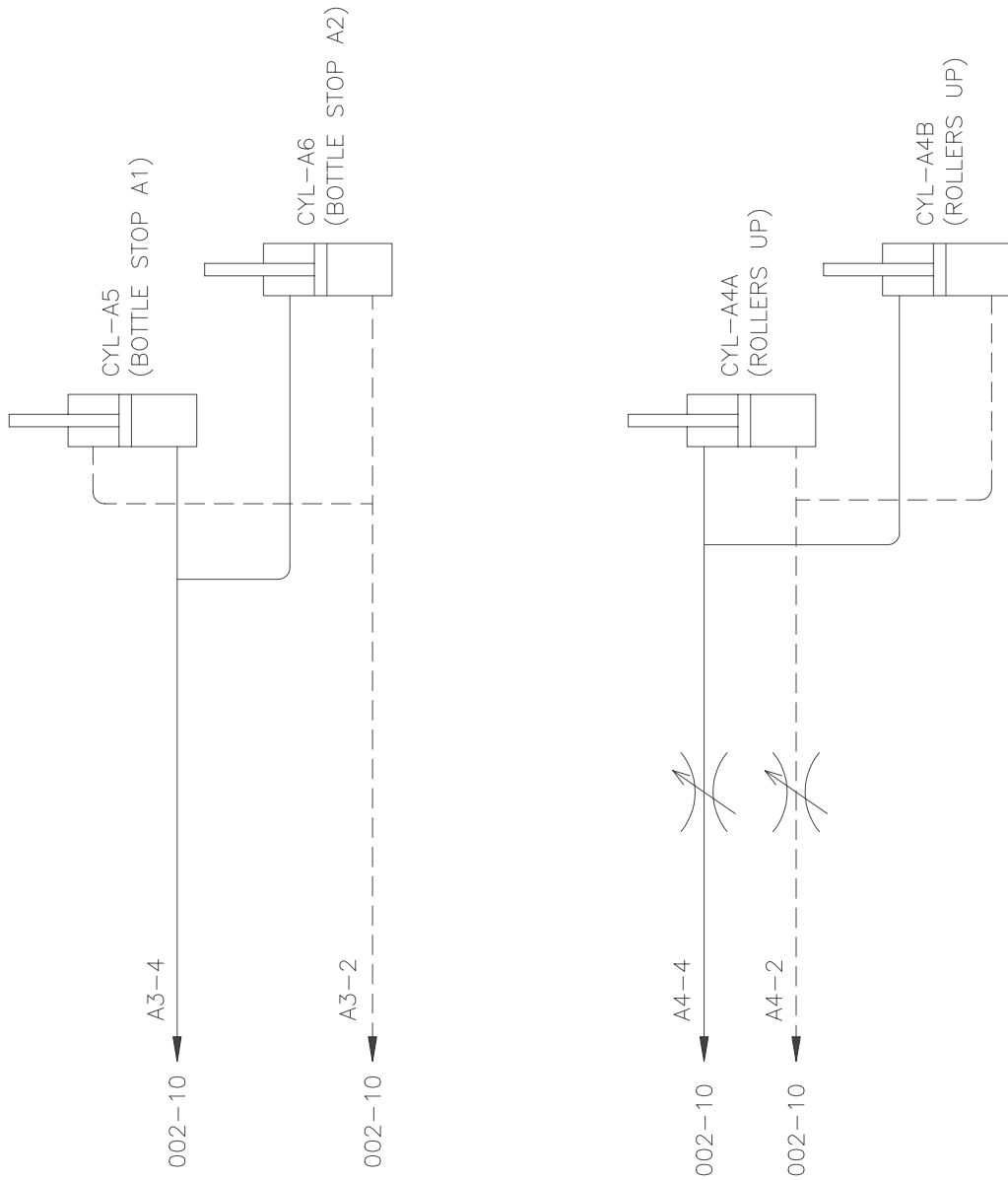
BY SJD2 DATE: 12-03-04
 SHEET 002 OF 006
 NUMBER SC1008 REVISION -

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



SEE DWG SC1007 SEE DWG SC1007 SEE DWG SC1007 SEE DWG SC1007

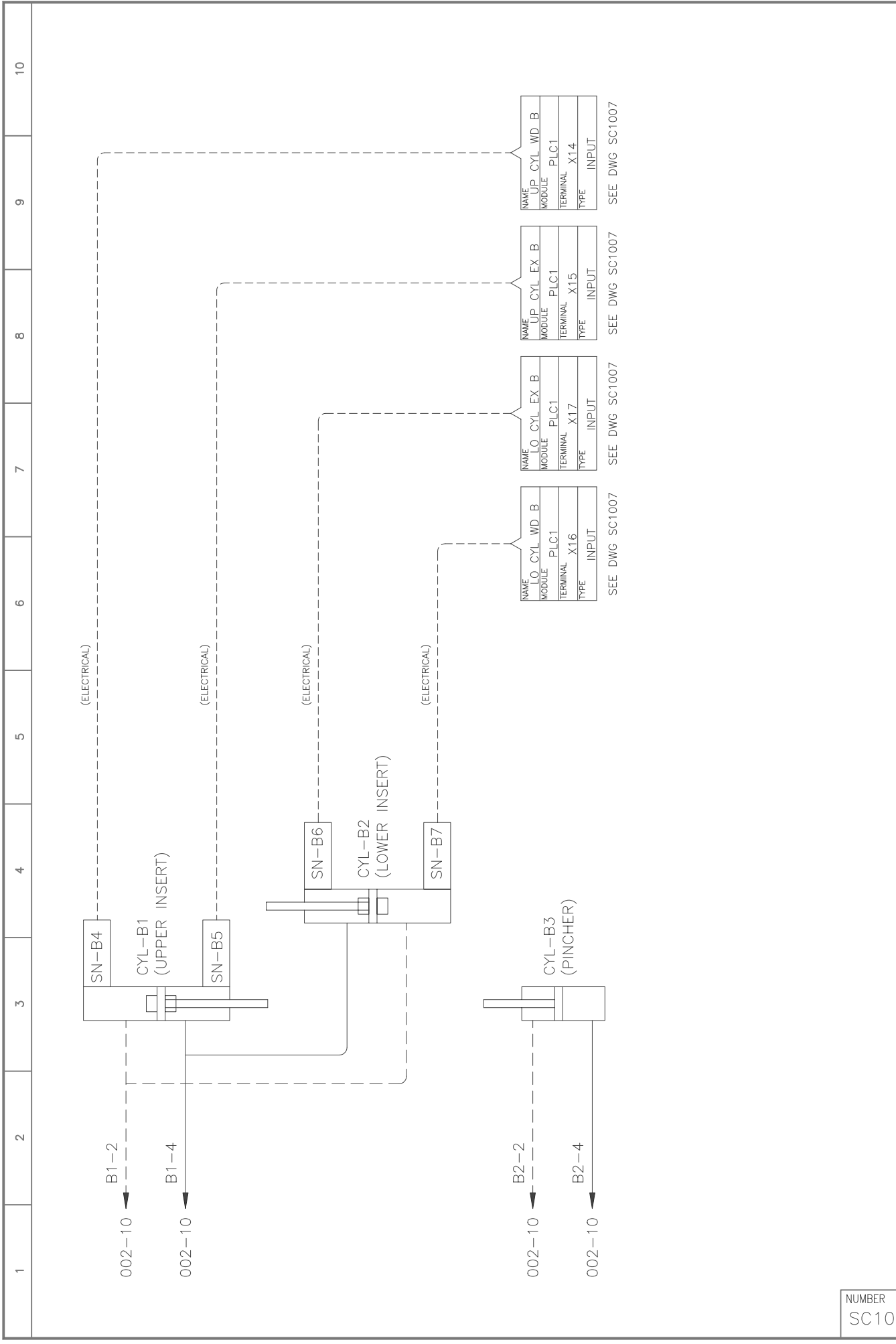
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—	—	—	—/—/—



SECTION	AIR CYLS: GATING/ROLLERS	BY	SJD2	DATE:	12-03-04
TITLE	MODEL CS10 COTTONER AIR LINE SCHEMATIC FROM SERIAL NO. 002	SHEET	004 OF	006	REVISION
		NUMBER	SC1008		—

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING — PRODUCT INFO

NOTE	REV	DESCRIPTION	DATE
-	-	-	--/--/--

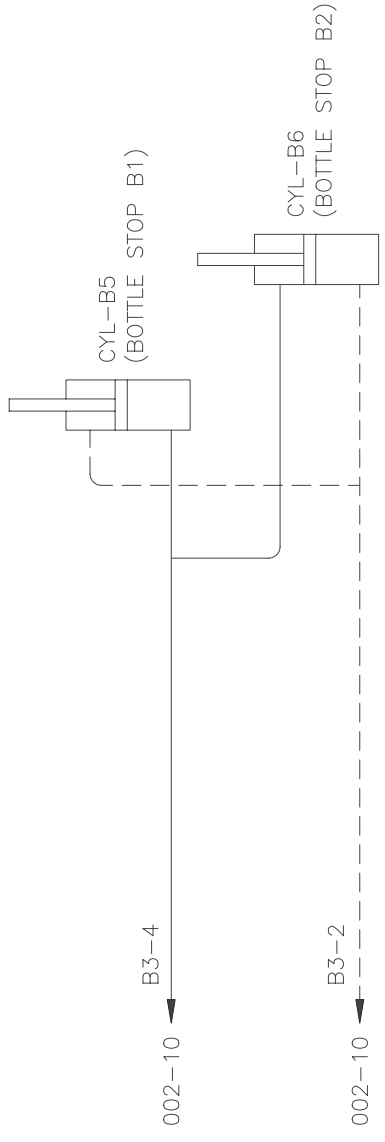


NUMBER	PAGE
SC1008	005

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.
 TECHNICAL DRAWING - PRODUCT INFO

SECTION	AIR	CYLS:	INSERT/PINCH/TAMP	BY	SJD2	DATE:	12-03-04
TITLE	MODEL	CS10	COTTONER	SHEET	005	OF	006
	AIR LINE	SCHEMATIC		NUMBER	SC1008		
	FROM	SERIAL NO. 002		REVISION	-		

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/--/---



NUMBER	PAGE
SC1008	006

DEITZ COMPANY, INC.
ROUTE 34, WALL, N.J.

TECHNICAL DRAWING - PRODUCT INFO

SECTION AIR CYLS: GATING/ROLLERS B	BY SJD2	DATE: 12-03-04
TITLE	SHEET	006 OF 006
MODEL CS10 COTTONER	NUMBER	REVISION
AIR LINE SCHEMATIC	SC1008	—
FROM SERIAL NO. 002		

NOTE	REV	DESCRIPTION	DATE
-	-	-	---/---/---



JOHN DEITZ
President

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Wall, NJ USA 07719

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Email sjd2@deitzco.com

CONTACT COMPLIANCE DATA

Model CS10 Cotton Inserter Type AD1070

FOOD COMPLIANCE STATEMENTS

MATERIALS IN DIRECT CONTACT WITH PRODUCT

Deitz Company Inc hereby certifies that the list below contains all the parts of the above-cited machine that come in direct contact with the product, and that those parts are manufactured using raw materials and surface treatments which conform to the requirements of such parts as established by the Food and Drug Administration of the United States. Certificates of compliance for raw materials and treatments are maintained according to our internal Quality Control System.

CONTACT PARTS, MATERIALS AND TREATMENTS

PART NUMBER	DESCRIPTION	MATERIAL	CERTIFICATION
FM3177-1, -2, -3	Cotton Guide Loops	Acetal	FDA 21 CFR 177.2480
SD1648	Roller Tubes	INOX AISI 304	ASTM Standard
FM3322-1, -2	Pincher Arms	INOX AISI 304	ASTM Standard
FM3164-2	Cotton Shelf	INOX AISI 304	ASTM Standard
FM3324	Stop Block Arm	INOX AISI 304	ASTM Standard
FM3323-2	Stop Block	Acetal	FDA 21 CFR 177.2480
FM3251-3	Insert Cylinder Rod Ext.	INOX AISI 303	ASTM Standard
FM3156-2	Tube Extension	Acetal	FDA 21 CFR 177.2480
FM2951-3	Turret Tube 5"	Polycarbonate	FDA 21 CFR 177.15803
FM3216-1	Upper Cylinder Rod Top	Acetal	FDA 21 CFR 177.2480

Legal disclaimer: Deitz Company believes the above information to be truthful, based on information provided to us from our suppliers. However, Deitz Company cannot guarantee the accuracy of the reporting, testing or procedures of our suppliers and assumes no liability or obligation as to the same. Deitz Company also assumes no liability as to the suitability of the above materials to the application for which the customer intends to use the machine. It is the customer's responsibility to assure that the above materials meet the customer's requirements.

This document is submitted only in English language.



JOHN DEITZ
President

Deitz Company Inc.
1750 Route 34 PO Box 1108
Wall, NJ USA 07719

Tel 732-681-0200
Fax 732-681-8468
Email sjd2@deitzco.com

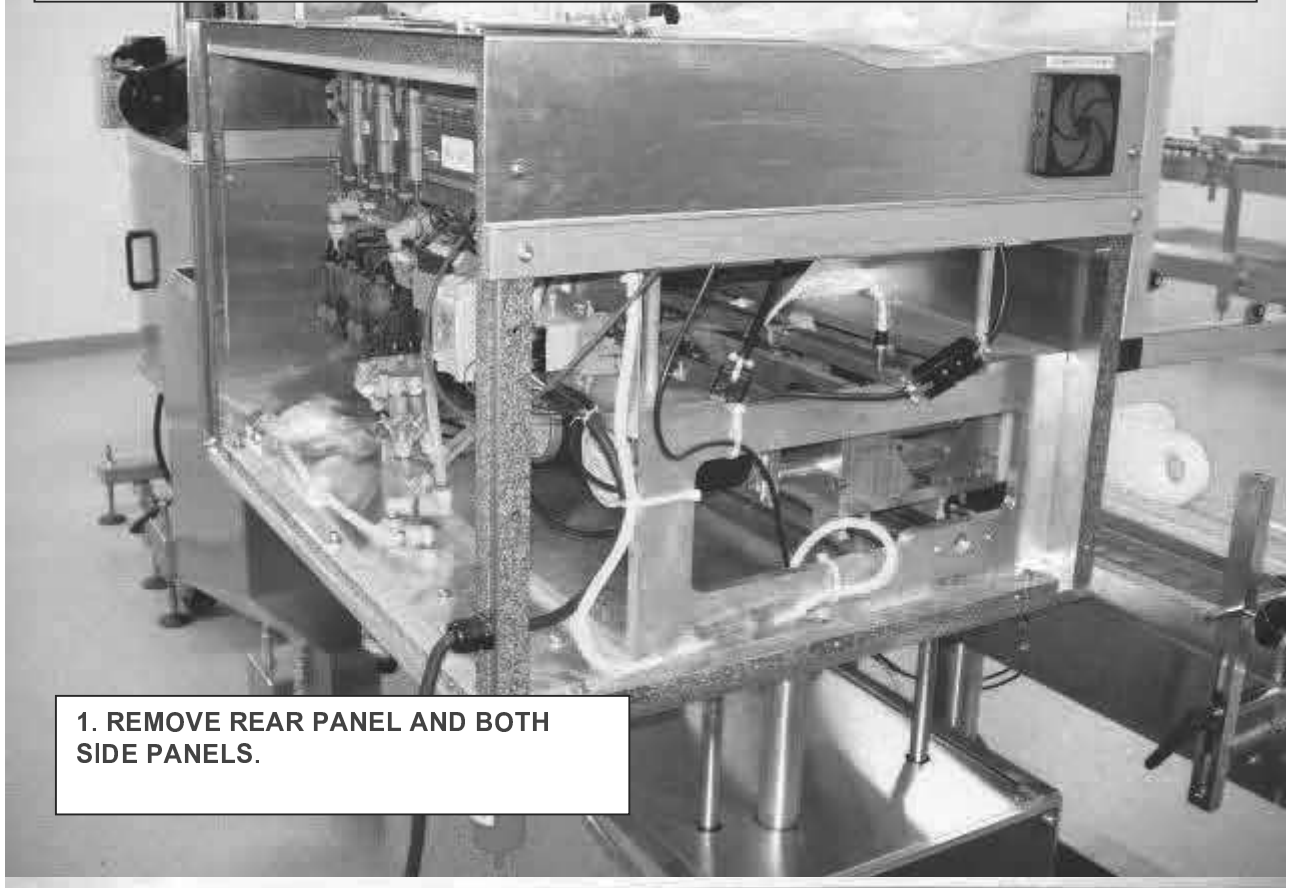
AD1070-PM Preventative_Maintenance CS10

Monthly

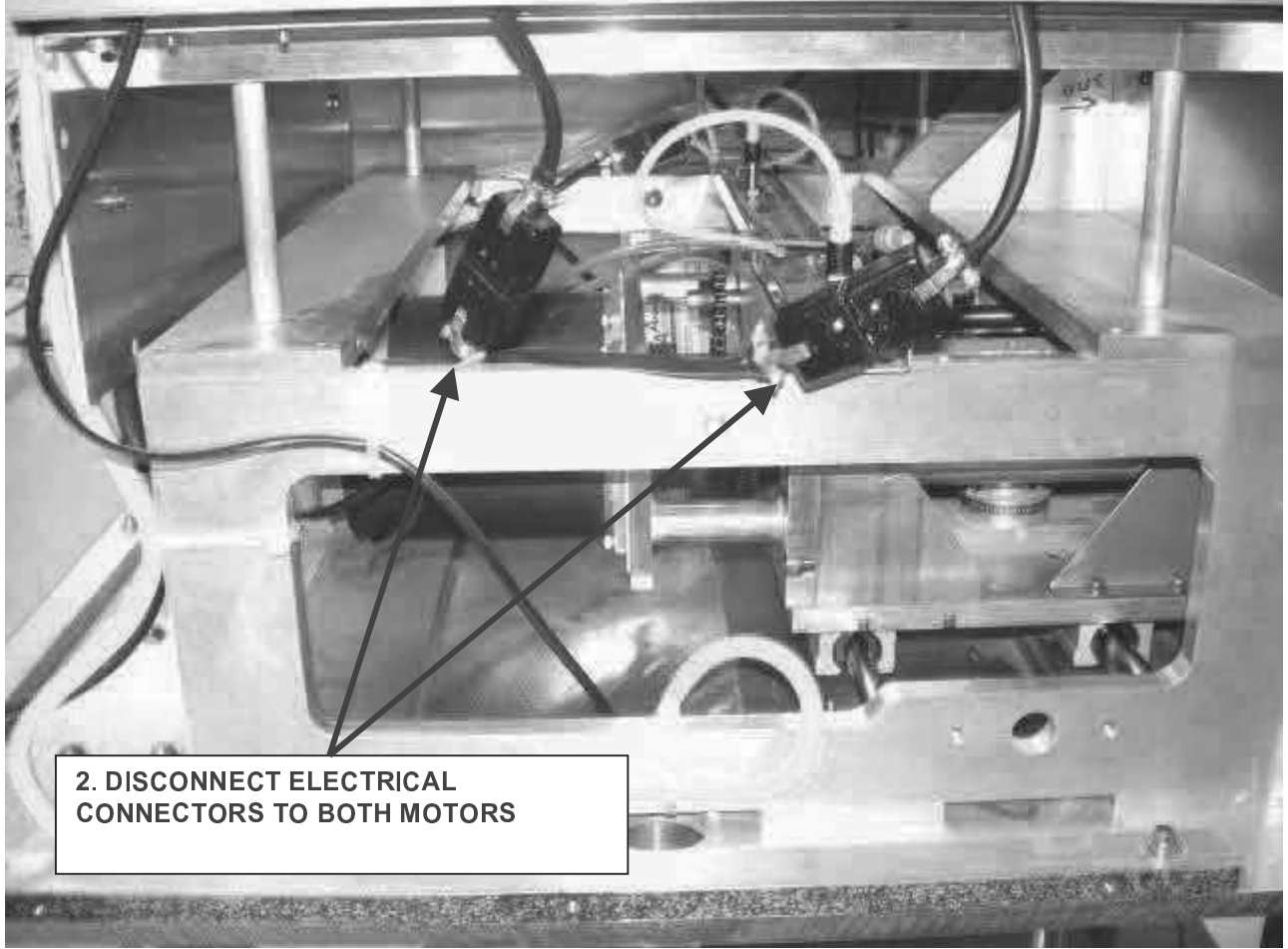
1. Pincher Assembly
 - a. Inspect condition of pincher arms, looking for cracks in the bend area. Replace both arms if any cracks are found.
 - b. Check up-and-down free play of pincher arm at pivot screw. If excessive, tighten pivot screws, in small increments and re-inspect. Some free play is necessary for arms to move freely.
 - c. Check open-close free play. If excessive, replace slide block.
 - d. Check that space between pincher arms when closed = ½ inch. Adjust by turning threaded air cylinder rod into or out of slide block.
 - e. Check that locknut on air cylinder rod is tight against slide block
2. Turret Assembly
 - a. By hand, move turret assembly back and forth. Look for freeplay at turret pulley and motor pulley. Tighten as necessary.
 - b. Inspect condition of belt. Replace if necessary.
 - c. Inspect condition of turret tubes for cracking. Replace if necessary.
3. Rollers
 - a. Inspect surfaces for scratched or gouges. Replace if necessary.
4. Miscellaneous
 - a. Clean or replace cooling fan air filters.
 - b. Check all external hardware for tightness.
 - c. Check condition of all external electrical and fiber optic cables for wear or damage. Replace if necessary.

Annually

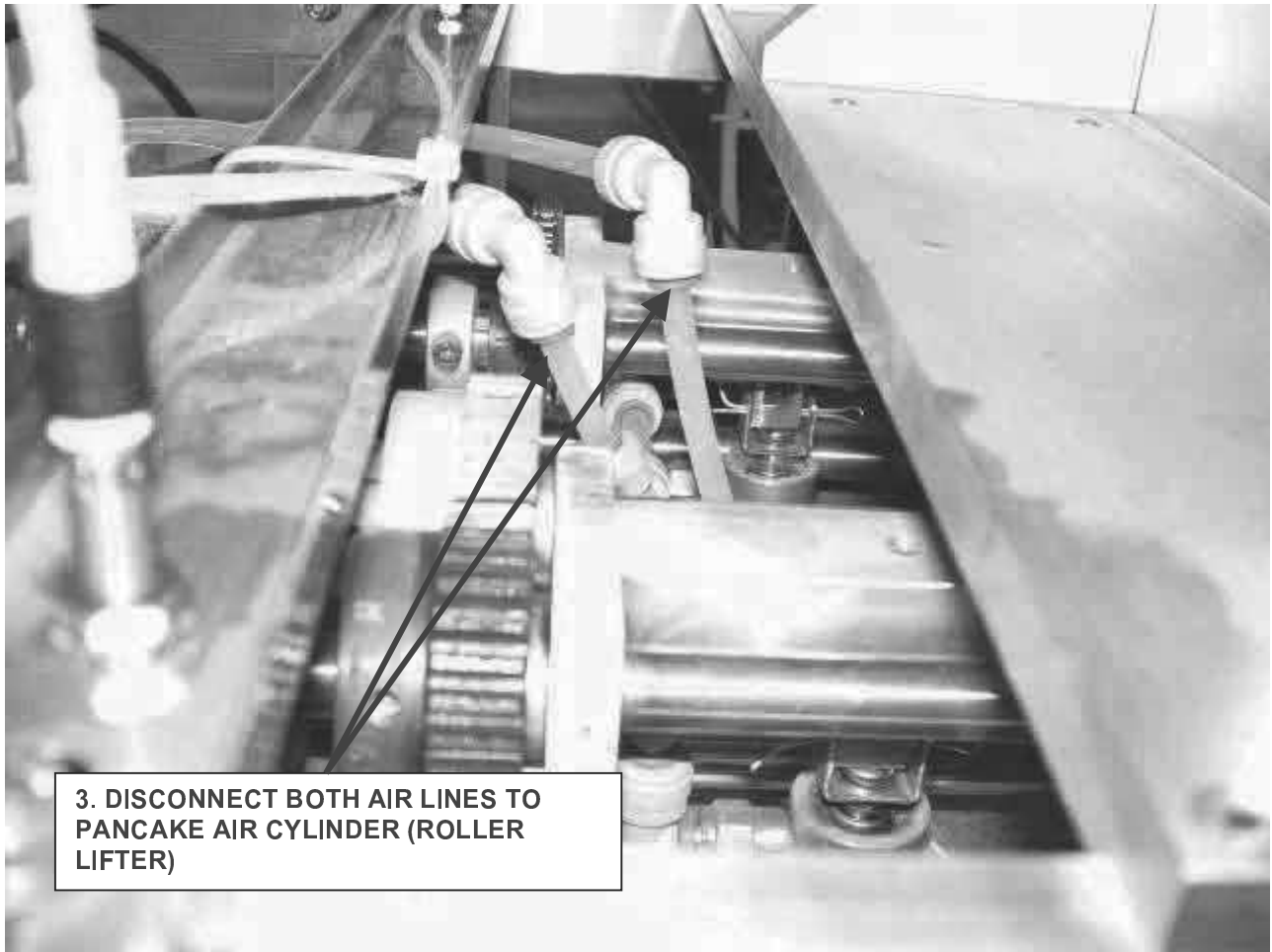
1. Roller Drive Unit (internal)
 - a. Remove and inspect drive unit, following procedure TN0098 CS2 Drive Unit Removal (also applies to CS10). Allow two hours, per drive unit, to remove, inspect and replace. Allow additional time if further service is required.
 - b. Inspect condition of belts and chains. Replace if necessary.
 - c. Inspect condition of bearings and shafts in roller pivot block. Replace if necessary.
 - d. Inspect condition of linkage on roller pressure air cylinder. Replace if necessary.
2. Carriage Drive Unit (internal)
 - a. Inspect condition of carriage drive screw. Clean and lubricate with a small amount of lithium grease.



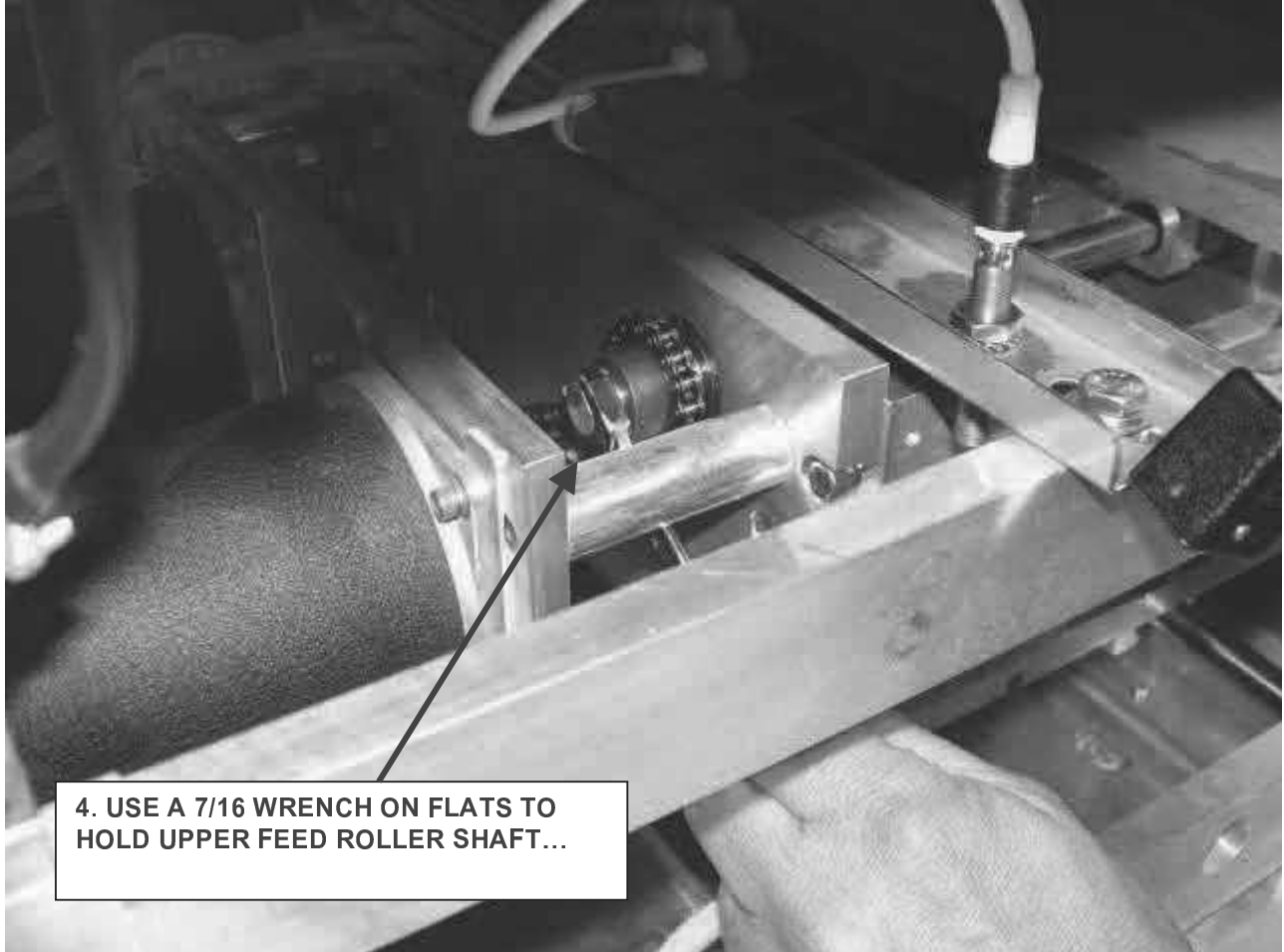
1. REMOVE REAR PANEL AND BOTH SIDE PANELS.



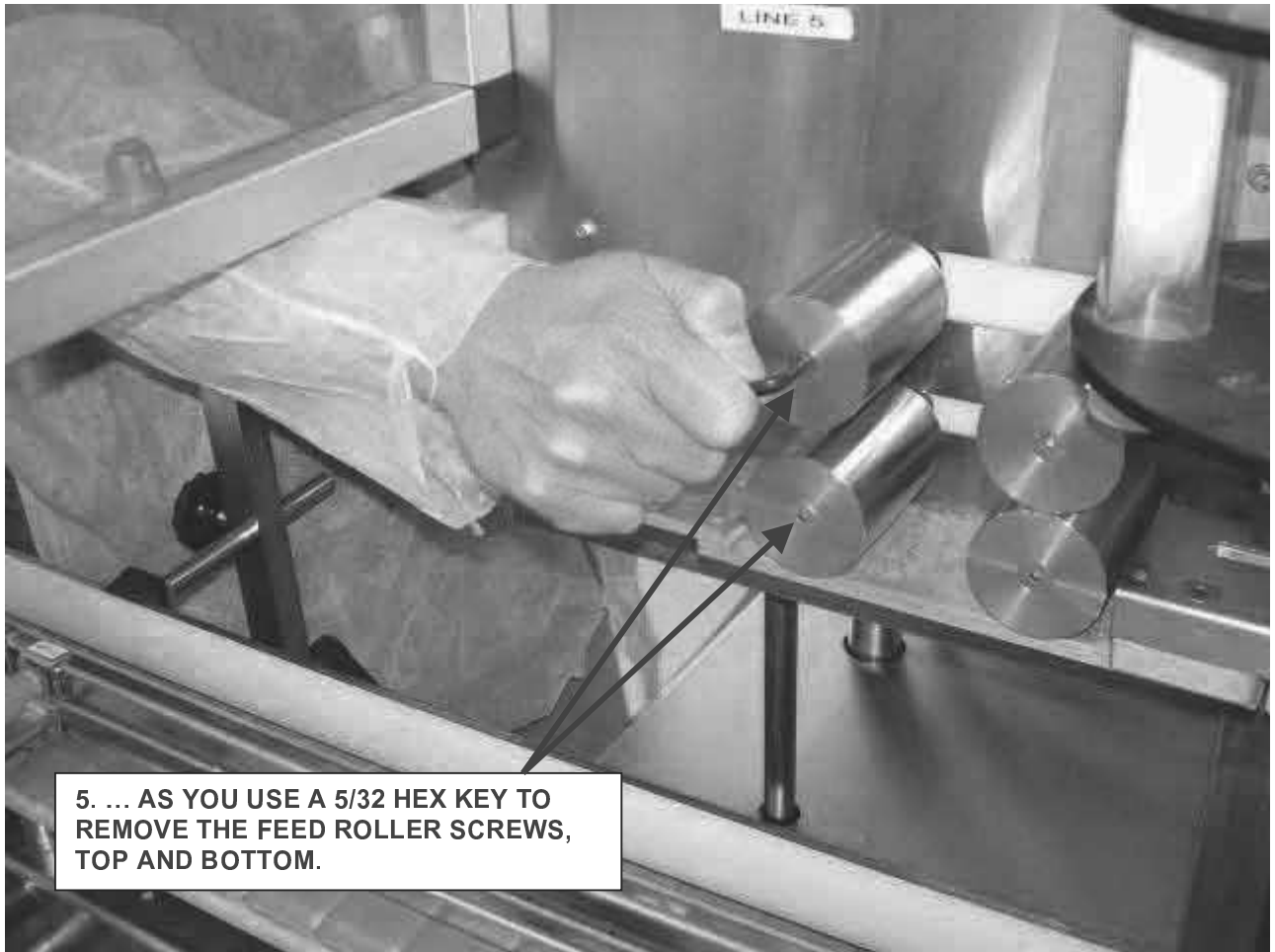
2. DISCONNECT ELECTRICAL CONNECTORS TO BOTH MOTORS



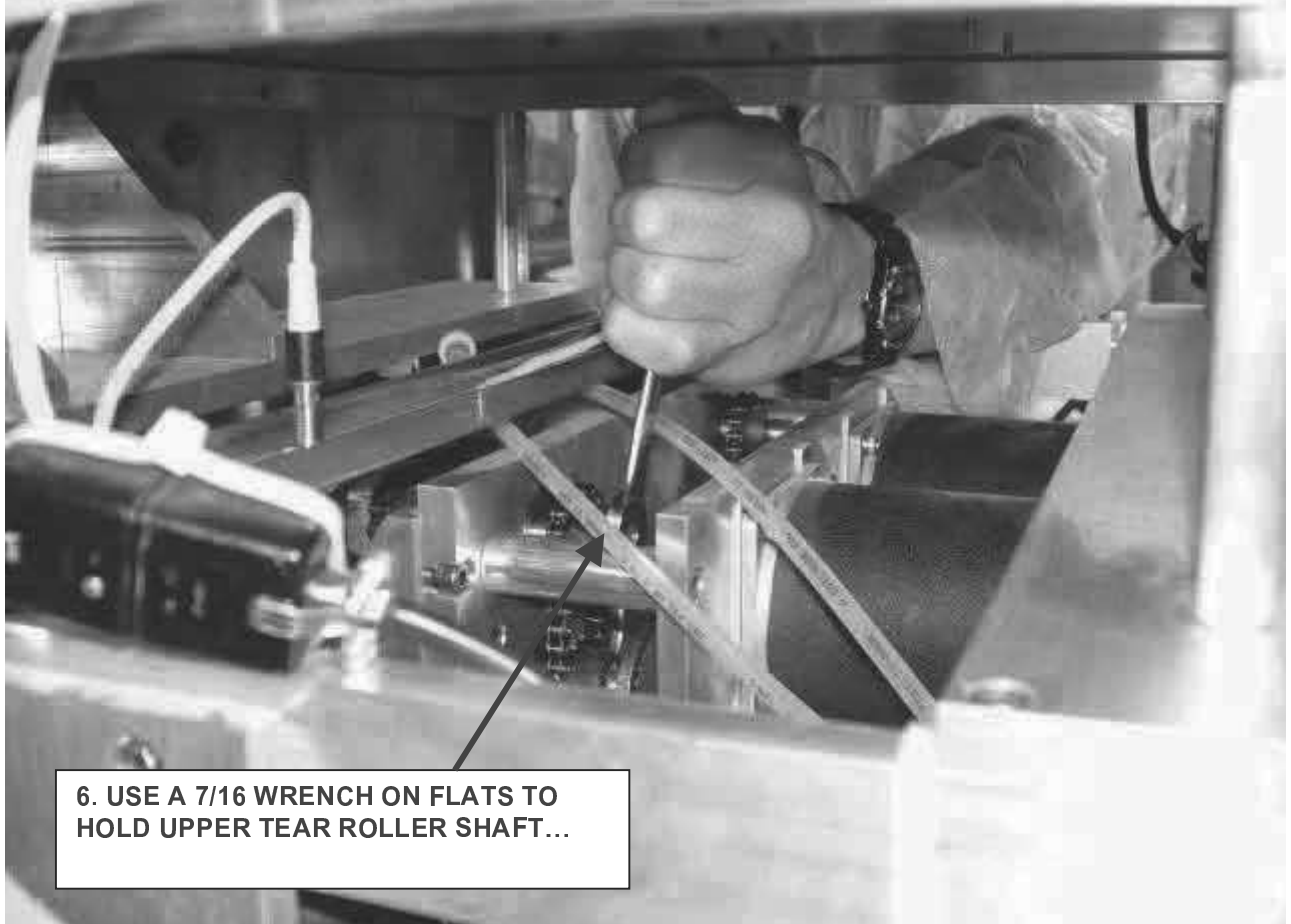
3. DISCONNECT BOTH AIR LINES TO PANCAKE AIR CYLINDER (ROLLER LIFTER)



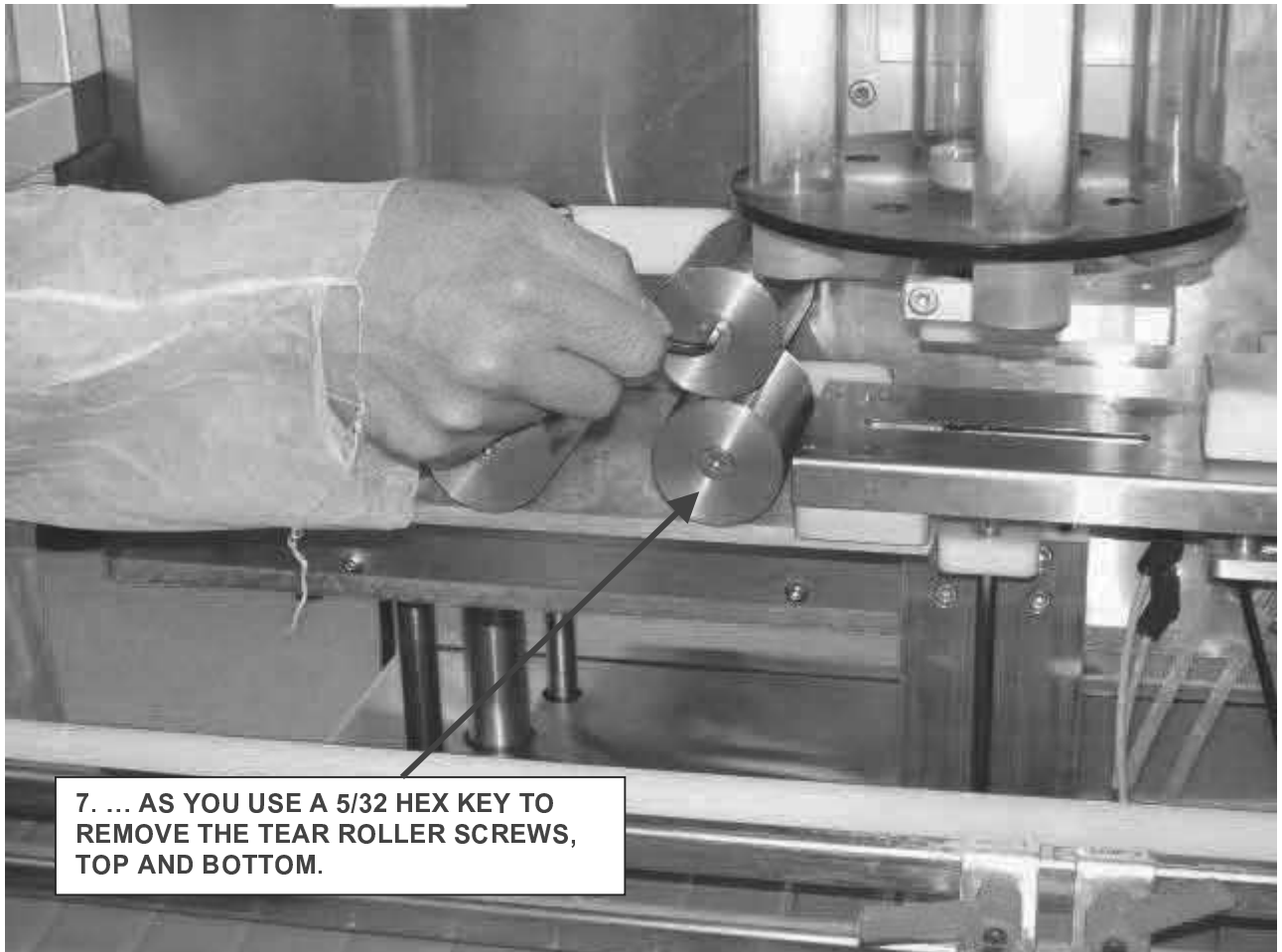
4. USE A 7/16 WRENCH ON FLATS TO HOLD UPPER FEED ROLLER SHAFT...



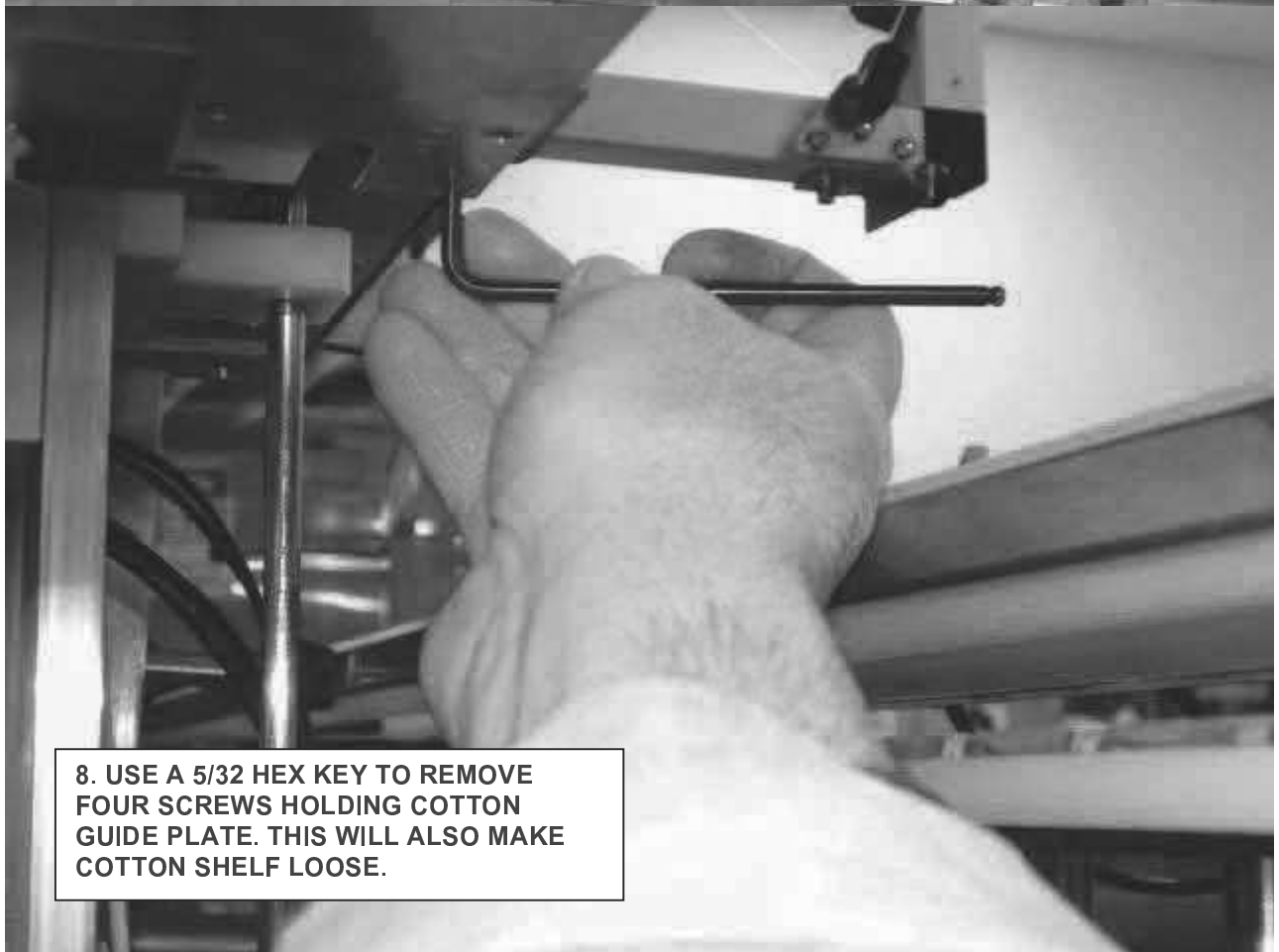
5. ... AS YOU USE A 5/32 HEX KEY TO REMOVE THE FEED ROLLER SCREWS, TOP AND BOTTOM.



6. USE A 7/16 WRENCH ON FLATS TO HOLD UPPER TEAR ROLLER SHAFT...



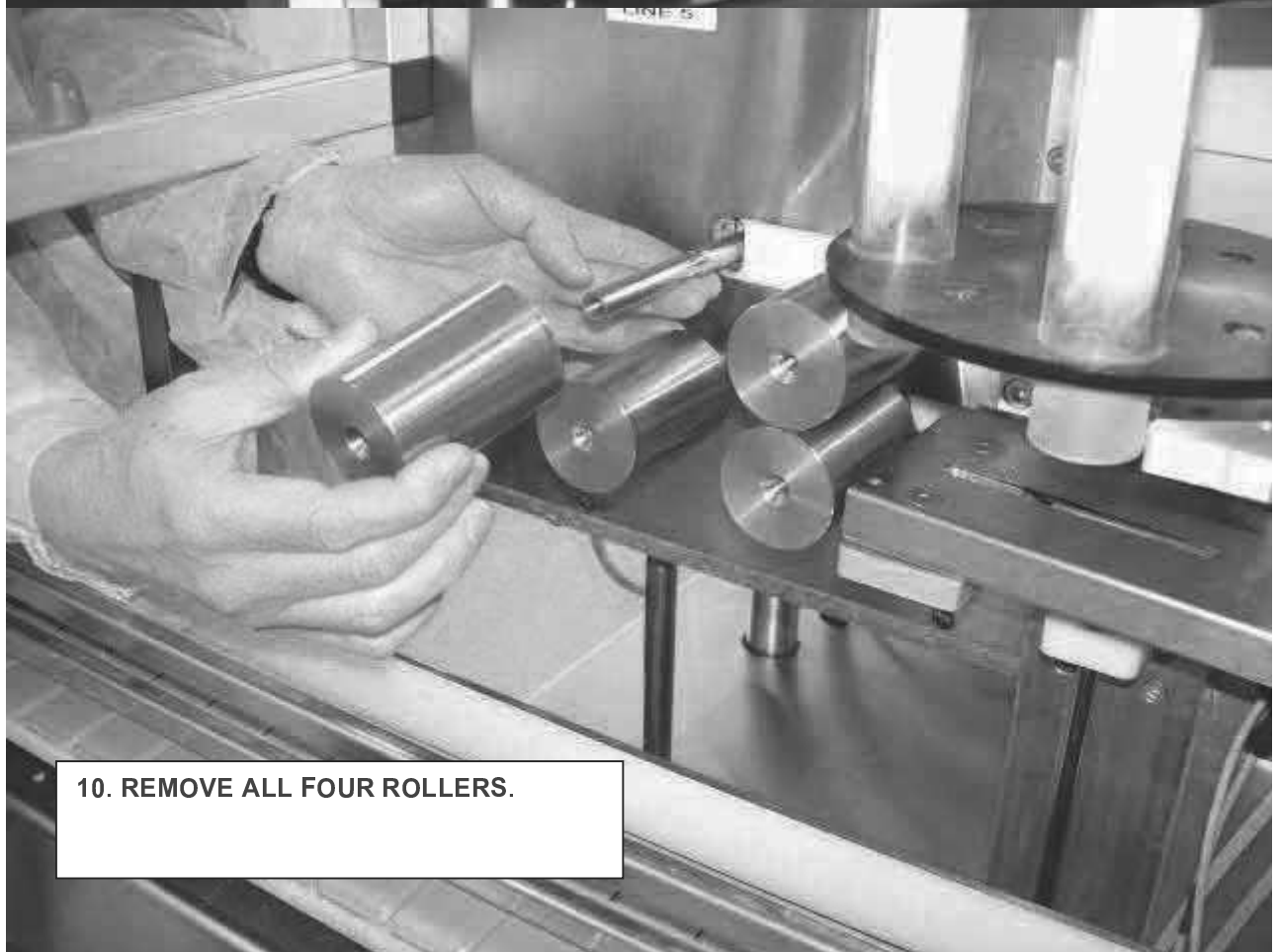
7. ... AS YOU USE A 5/32 HEX KEY TO REMOVE THE TEAR ROLLER SCREWS, TOP AND BOTTOM.



8. USE A 5/32 HEX KEY TO REMOVE FOUR SCREWS HOLDING COTTON GUIDE PLATE. THIS WILL ALSO MAKE COTTON SHELF LOOSE.



9. REMOVE COTTON GUIDE PLATE.



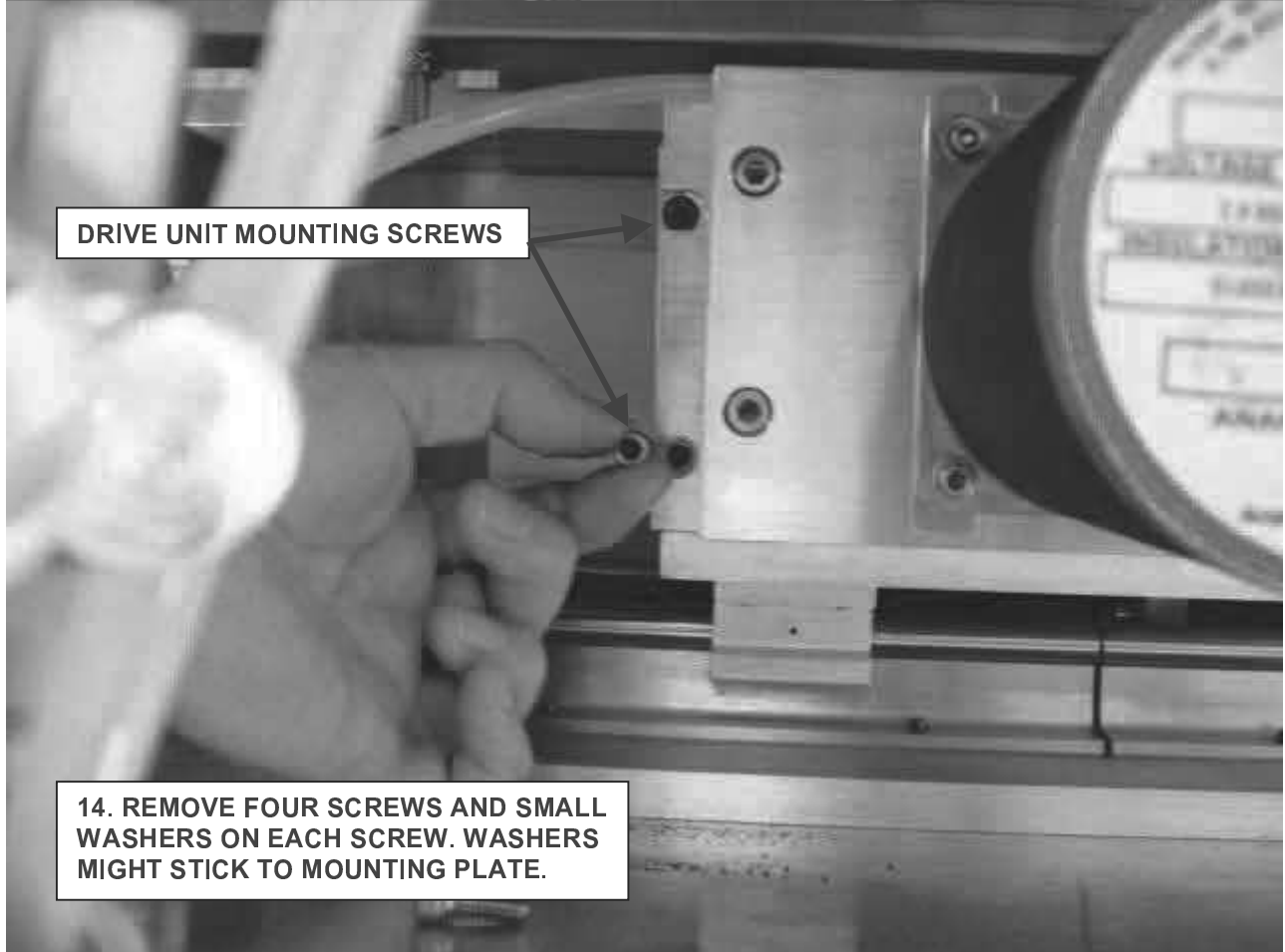
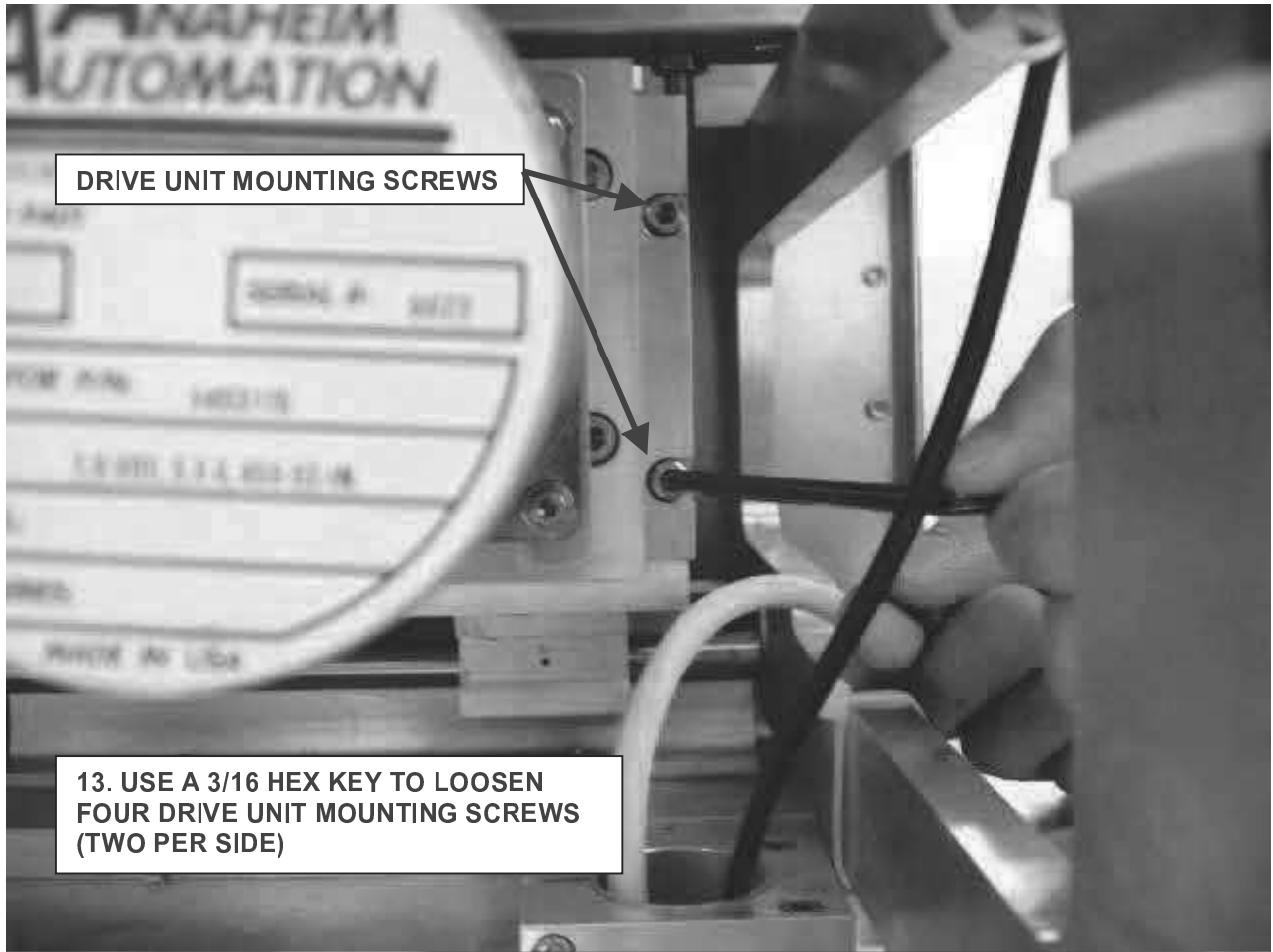
10. REMOVE ALL FOUR ROLLERS.

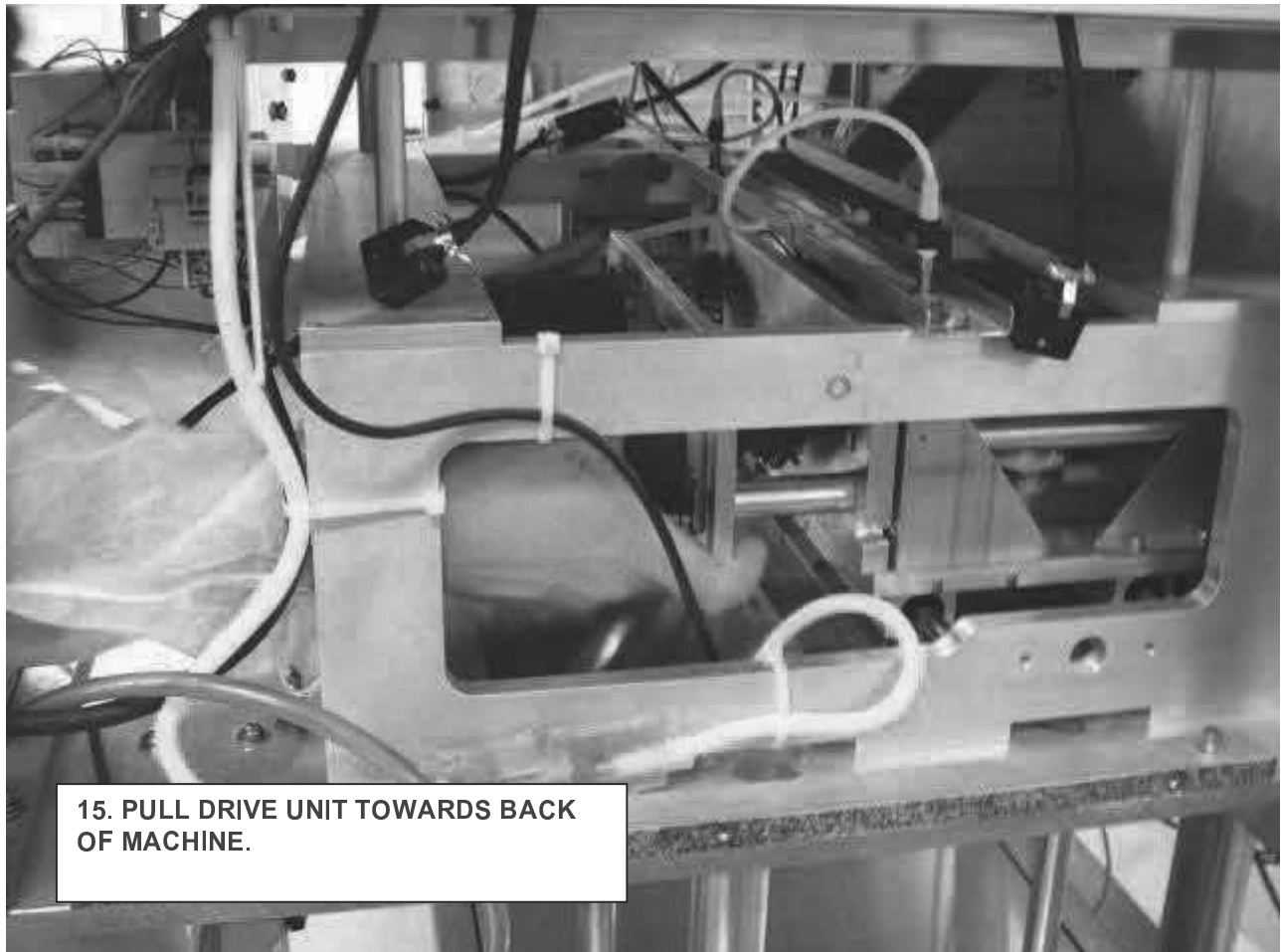


11. REMOVE ALL FOUR LOCATING PINS FROM ROLLER SHAFTS.

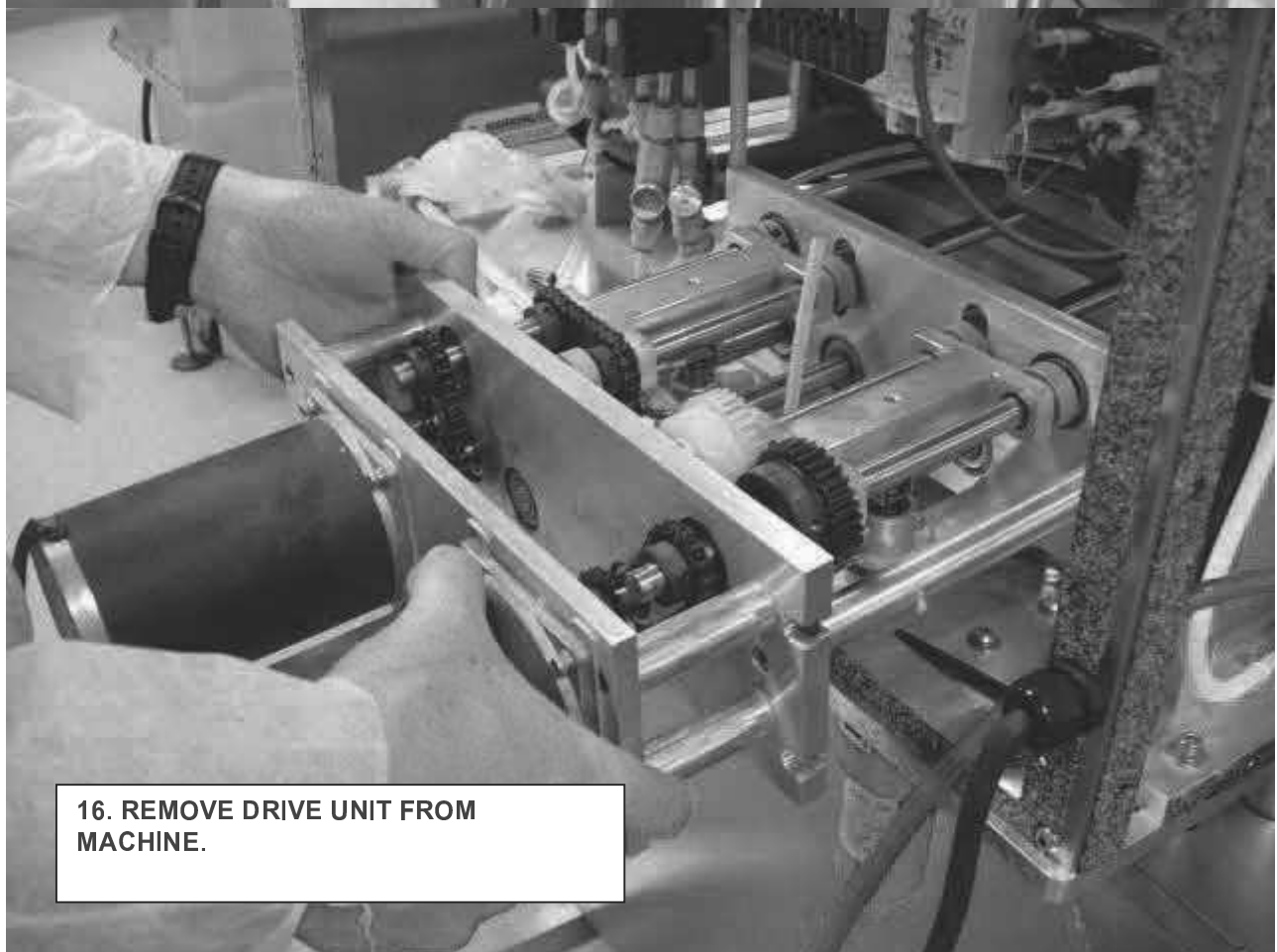


12. COTTON SHELF REMAINS IN PLACE LOOSELY.

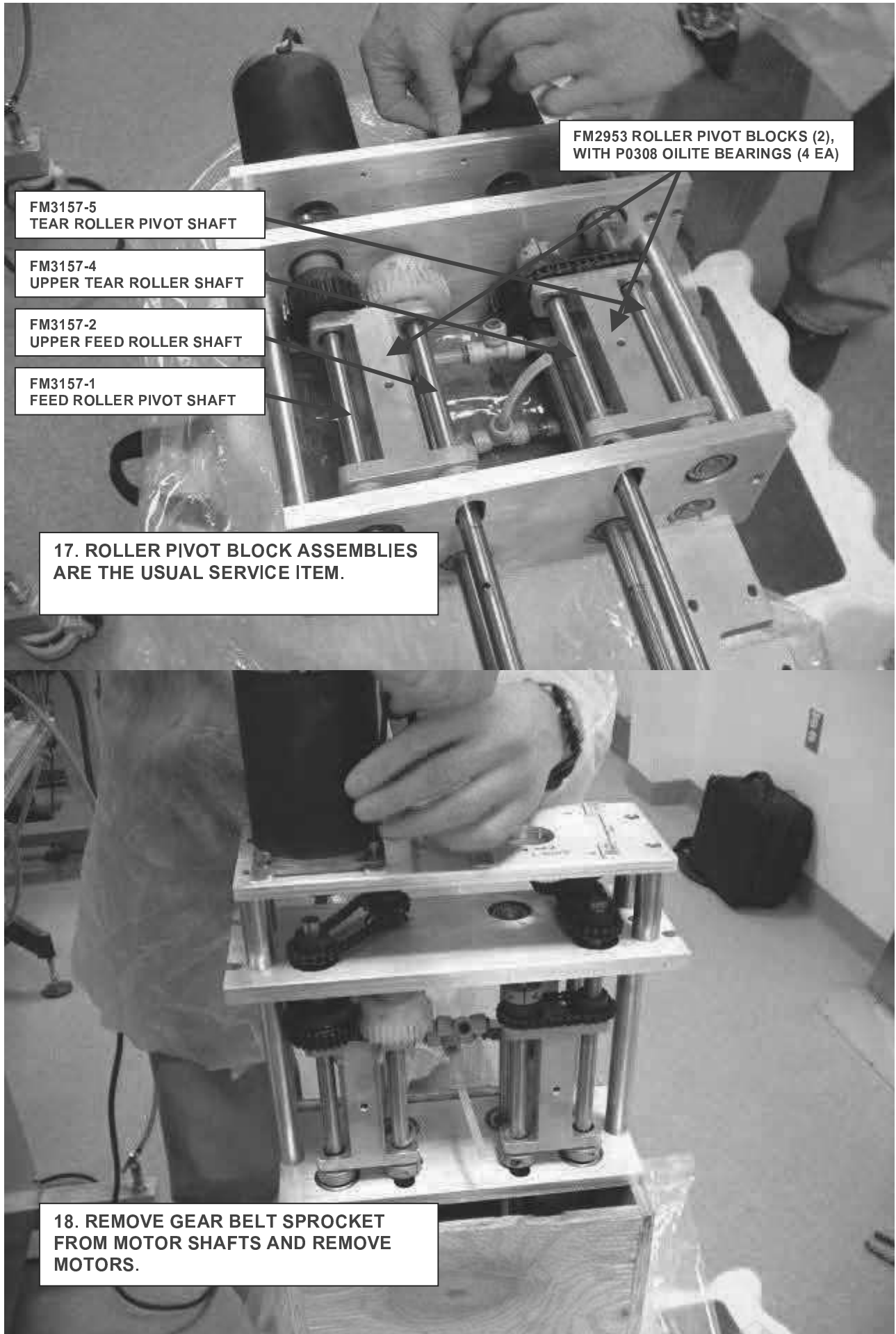




15. PULL DRIVE UNIT TOWARDS BACK OF MACHINE.



16. REMOVE DRIVE UNIT FROM MACHINE.



FM2953 ROLLER PIVOT BLOCKS (2),
WITH P0308 OILITE BEARINGS (4 EA)

FM3157-5
TEAR ROLLER PIVOT SHAFT

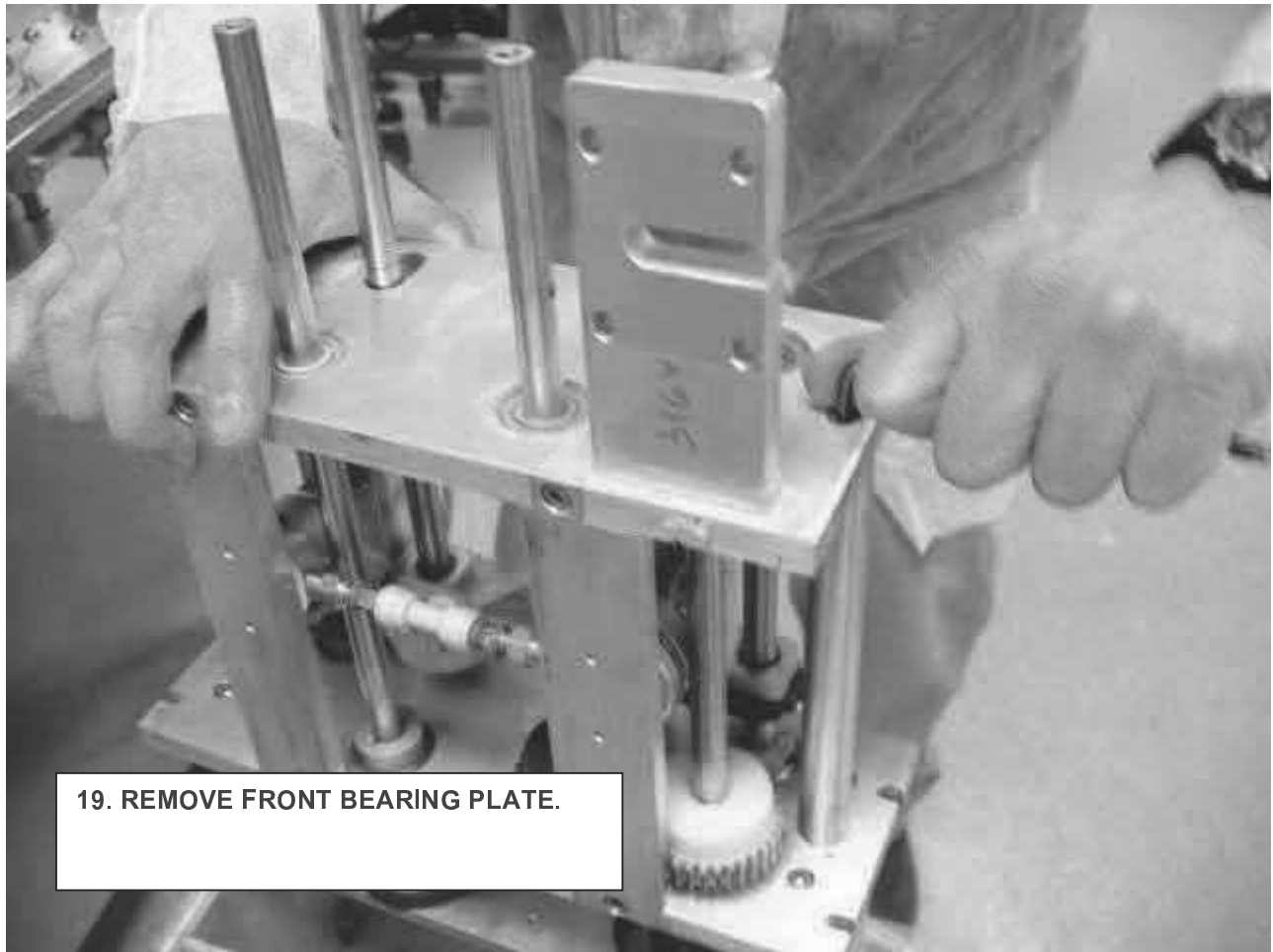
FM3157-4
UPPER TEAR ROLLER SHAFT

FM3157-2
UPPER FEED ROLLER SHAFT

FM3157-1
FEED ROLLER PIVOT SHAFT

17. ROLLER PIVOT BLOCK ASSEMBLIES
ARE THE USUAL SERVICE ITEM.

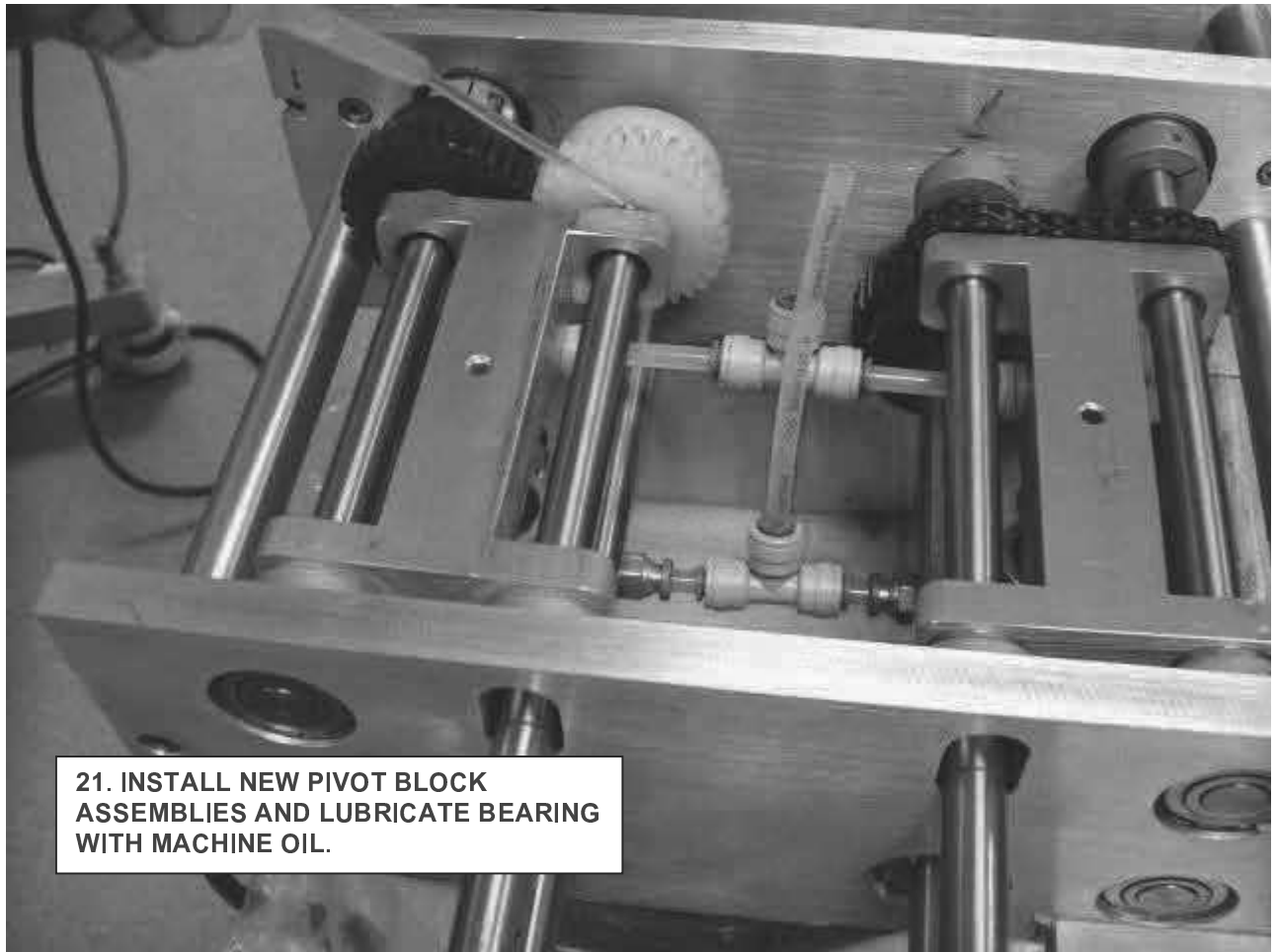
18. REMOVE GEAR BELT SPROCKET
FROM MOTOR SHAFTS AND REMOVE
MOTORS.



19. REMOVE FRONT BEARING PLATE.



20. REMOVE PIVOT BLOCK ASSEMBLIES FOR INSPECTION AND SERVICE.

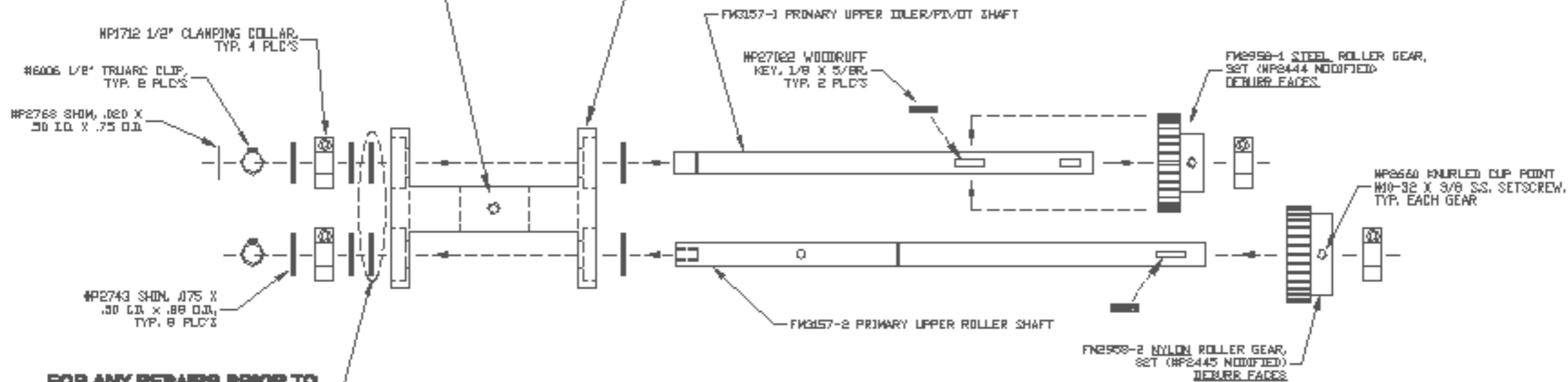


**21. INSTALL NEW PIVOT BLOCK
ASSEMBLIES AND LUBRICATE BEARING
WITH MACHINE OIL.**

NOTE	REV	DESCRIPTION	DATE
	A	REVISED FOR NEW PIVOT BLOCKS W/BALL BEARINGS - SEE REV "-" FOR OLDER STYLE	5/2/2019
	B	REVISED TO SHOW UPDATED PIVOT BLOCK DESIGN AND ANCHOR MOUNTING DETAILS	7/20/22

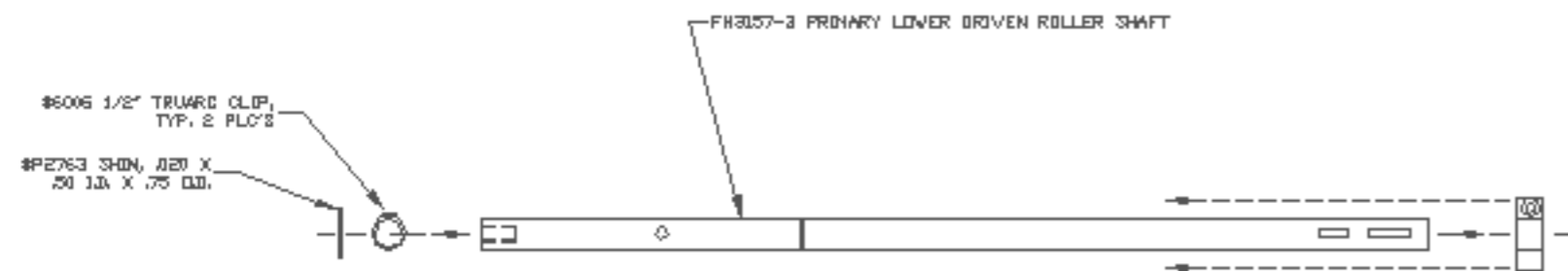
NOTICE: ASSEMBLE WITH THE FLAT SURFACE ON NEAR SIDE FOR AD1046-1 LH FEED -OR- ASSEMBLE WITH THE FLAT SURFACE ON FAR SIDE FOR AD1046-2 RH FEED

AD1248 PIVOT BLOCK W/BALL BEARINGS (SEE DETAIL 'A' AT RIGHT)

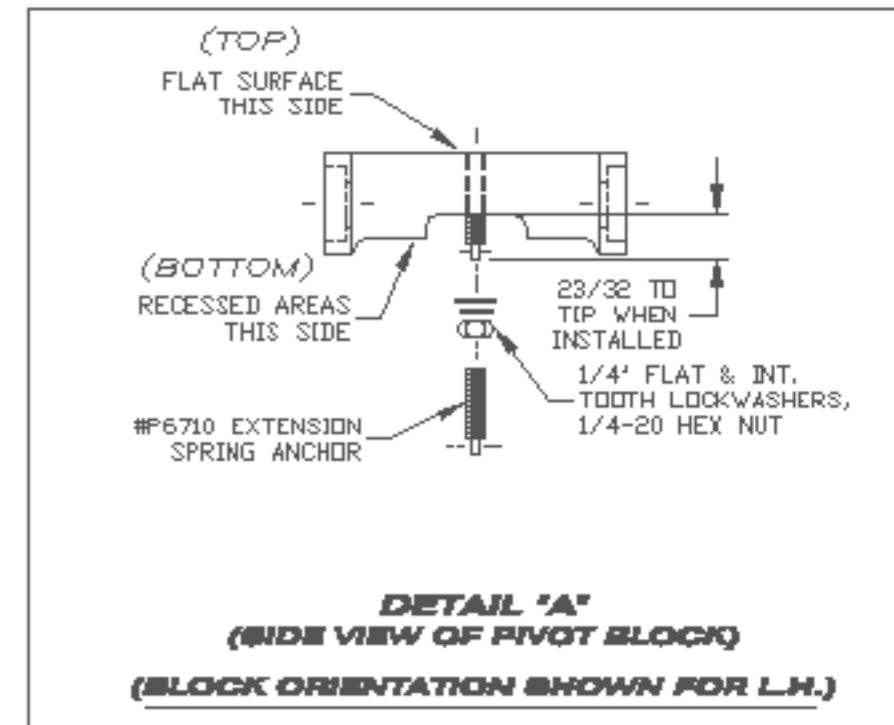


UPPER PRIMARY ROLLER & IDLER SHAFT SUB-ASSEMBLY

FOR ANY REPAIRS PRIOR TO 5/2019 LEAVE THESE 2 SHIMS OUT FOR PROPER ALIGNMENT WITH THE PANCAKE AIR CYLINDER



LOWER PRIMARY DRIVEN ROLLER SHAFT SUB-ASSEMBLY

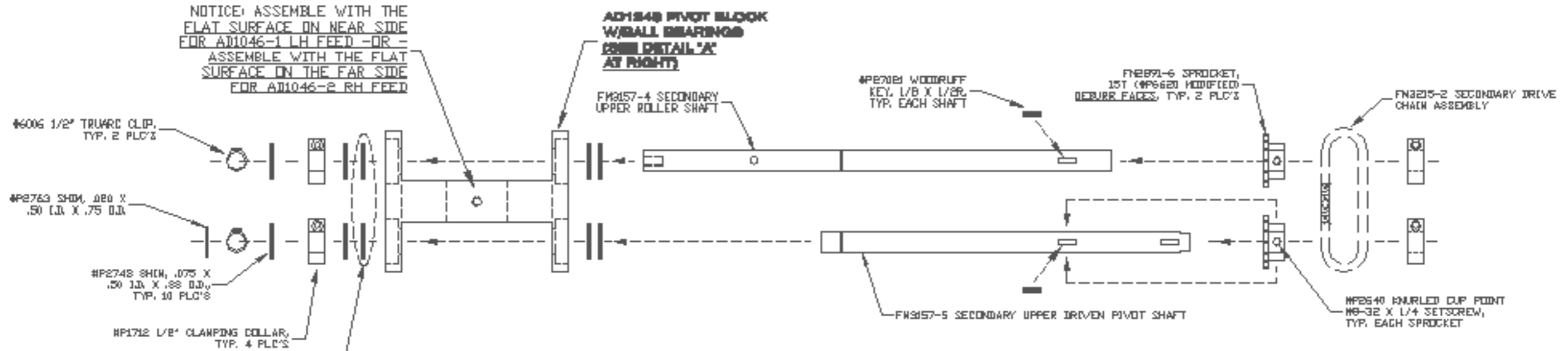


AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1D39	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON

UNLESS OTHERWISE SPECIFIED: TOL: DEC= .XXX ±.005 FRAC= ±1/64 XX ±.01	MATERIAL:	---	DRWN BY:	DATE:
	FINISH:	---	SEVIN JOHNSON	7/9/20/02
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.			TITLE:	CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)
			SCALE:	1 = 1
			SHEET:	1 OF 8
			NUMBER:	AD1046
			REVISION:	B

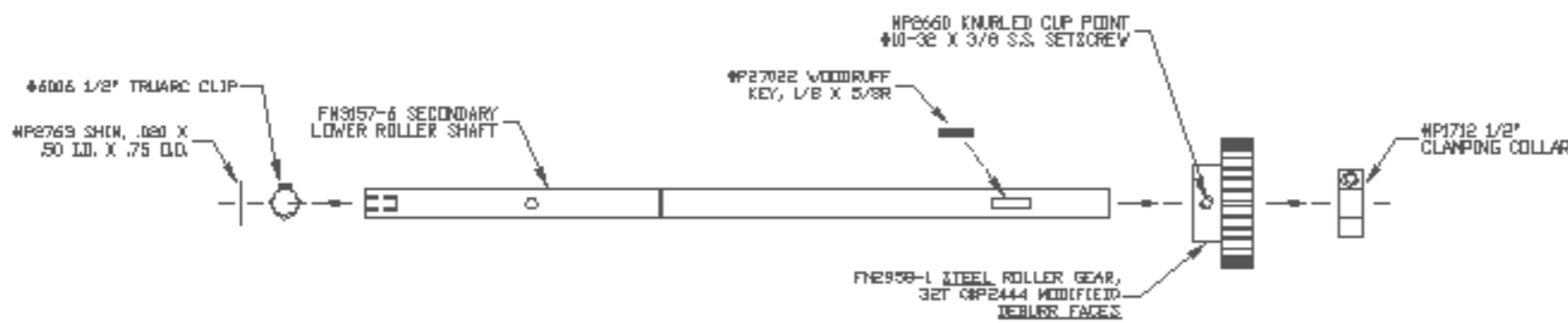
NOTE	REV	DESCRIPTION	DATE
	A	REVISED FOR NEW PIVOT BLOCKS W/BALL BEARINGS - SEE REV "B" FOR OLDER STYLE	5/2/19
	B	REVISED TO SHOW UPDATED PIVOT BLOCK DESIGN AND ANCHOR DETAILS	7/20/22

NOTICE: ASSEMBLE WITH THE FLAT SURFACE ON NEAR SIDE FOR AD1046-1 LH FEED -OR- ASSEMBLE WITH THE FLAT SURFACE ON THE FAR SIDE FOR AD1046-2 RH FEED

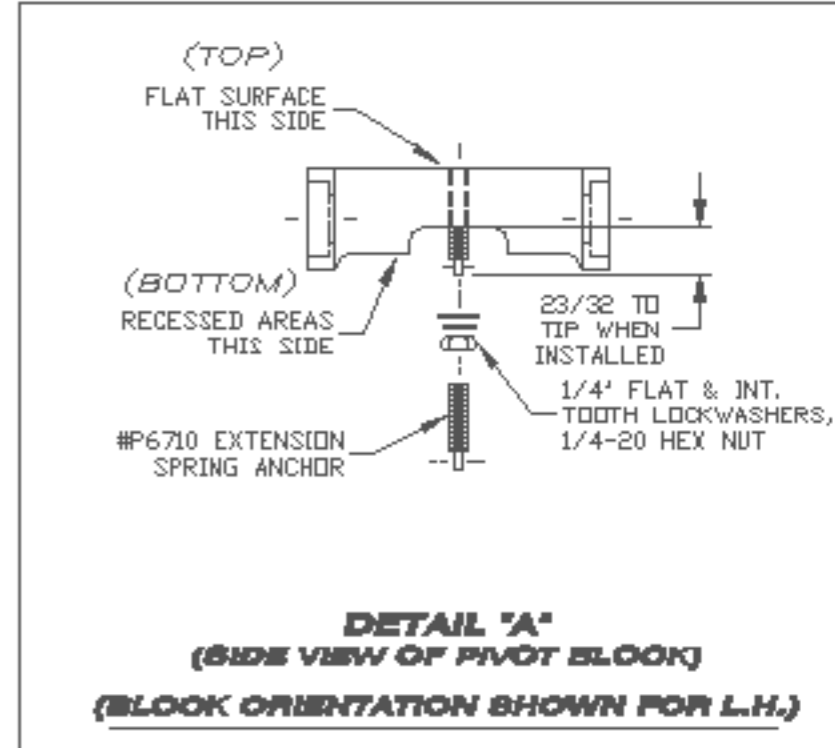


UPPER SECONDARY ROLLER & IDLER SHAFT SUB-ASSEMBLY

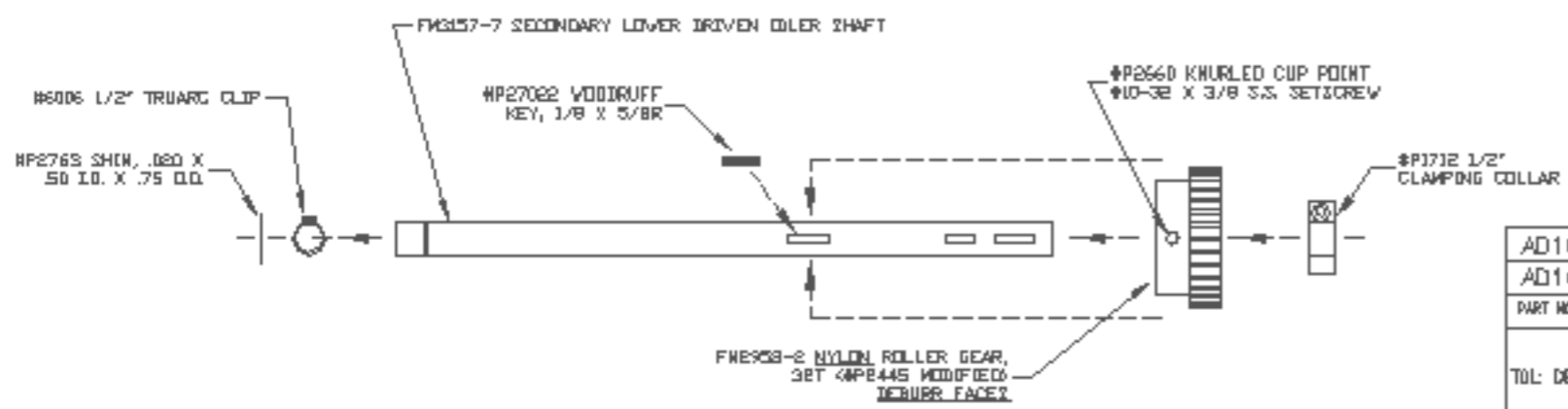
FOR ANY REPAIRS PRIOR TO 5/2019 LEAVE THESE 2 SHIMS OUT FOR PROPER ALIGNMENT WITH THE PANCAKE AIR CYLINDER



LOWER SECONDARY ROLLER SHAFT SUB-ASSEMBLY



DETAIL 'A'
(SIDE VIEW OF PIVOT BLOCK)
(BLOCK ORIENTATION SHOWN FOR L.H.)

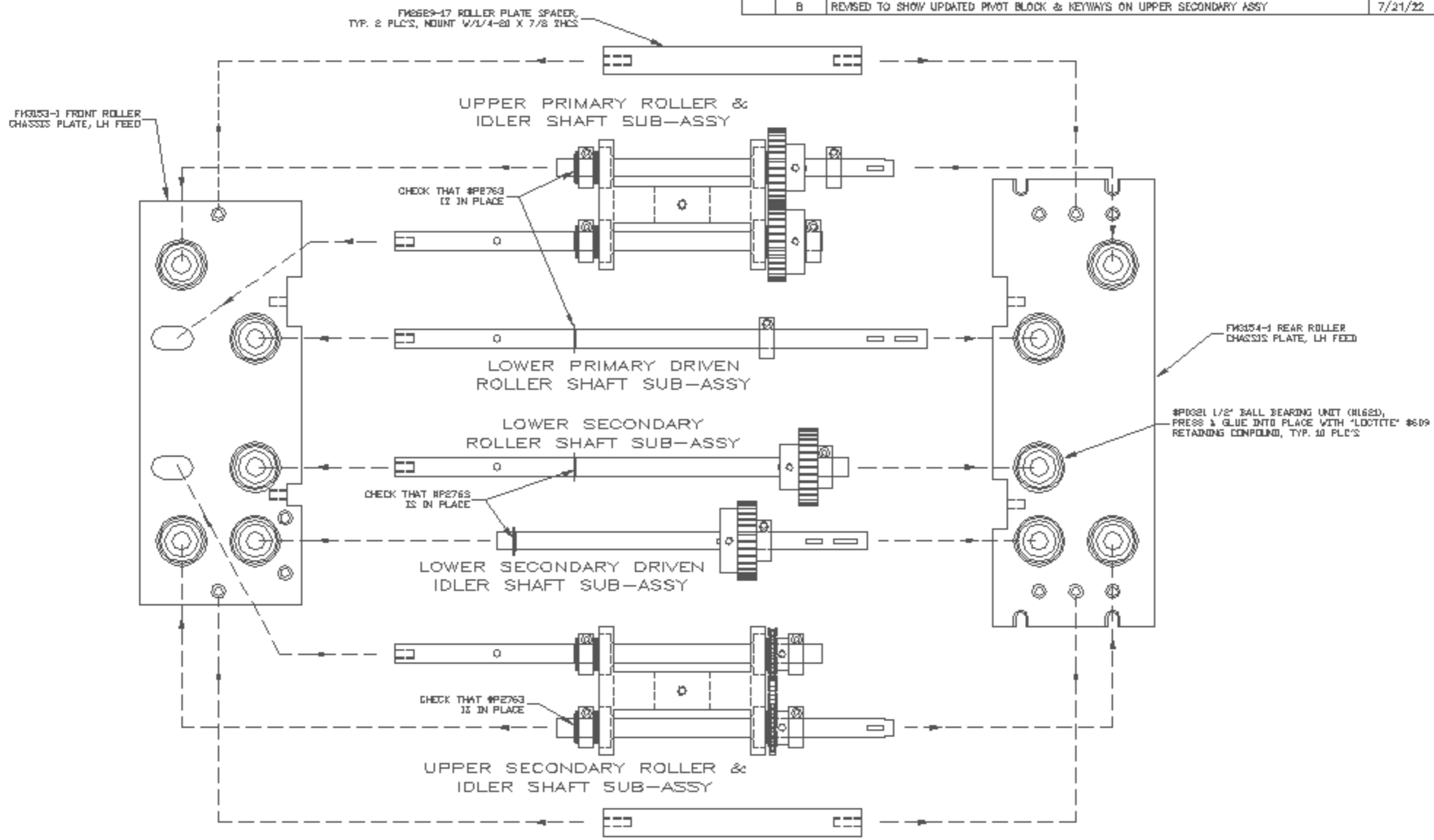


LOWER SECONDARY DRIVEN IDLER SHAFT SUB-ASSEMBLY

AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1D39	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON

UNLESS OTHERWISE SPECIFIED: TOL: DEC= .XXX ±.005 FRACTION= ±1/64 XX ±.01	MATERIAL:	---	DRWN BY:	DATE:
	FINISH:	---	SEVIN JOHNSON	10/30/08
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	SCALE: 1 = 1	SHEET 2 OF 6
			NUMBER: AD1046	REVISION: B

NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW NEW PIVOT BLOCK W/BALL BEARINGS	5/2/19
	B	REVISED TO SHOW UPDATED PIVOT BLOCK & KEYWAYS ON UPPER SECONDARY ASSY	7/21/22



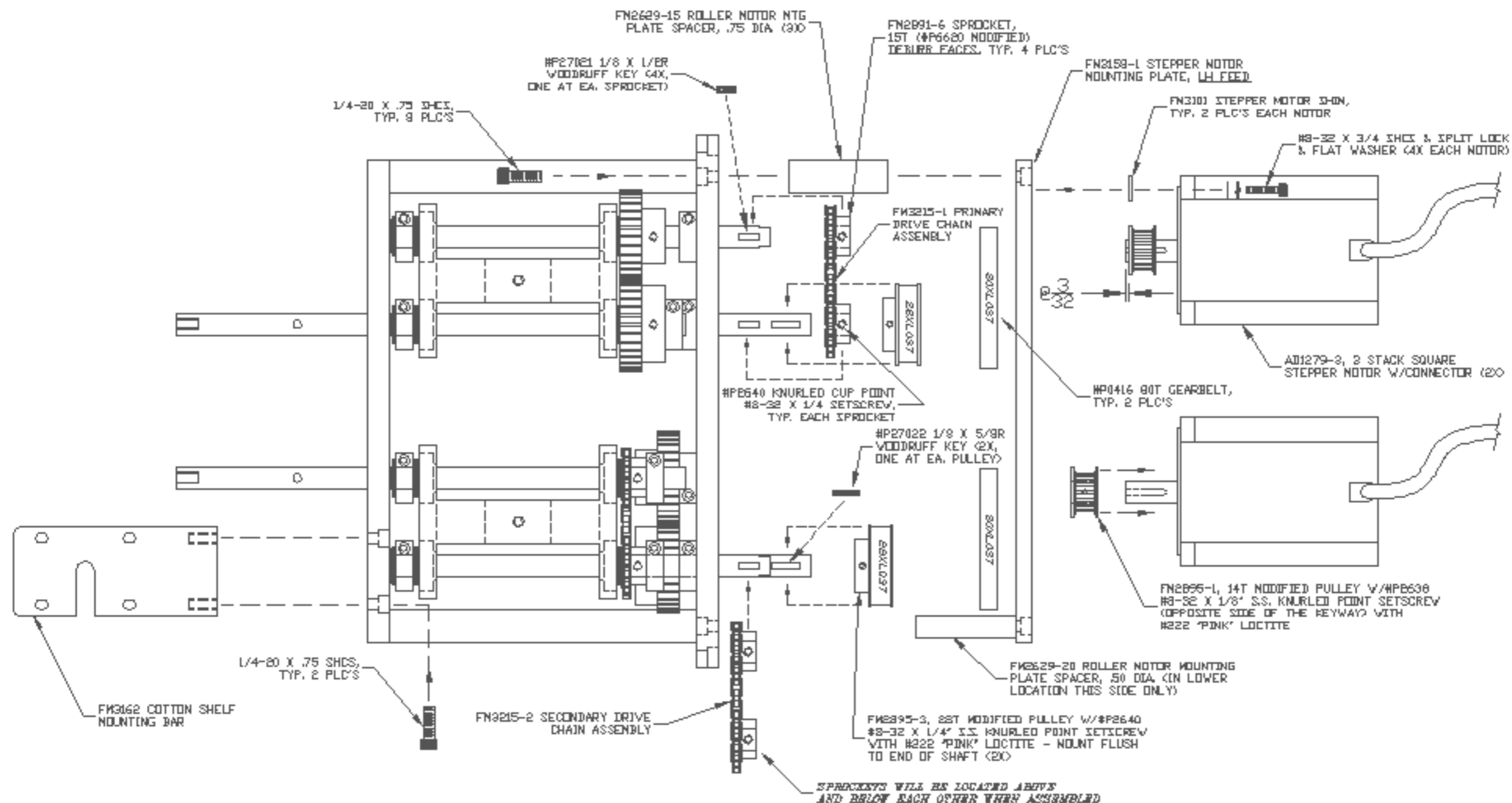
AD1046-1 LH FEED ASSY SHOWN

AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1039	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON

UNLESS OTHERWISE SPECIFIED: TOL: DEC= .XXX ±.005 FRAC= ±1/64 XX ±.01		MATERIAL: ---	FINISH: ---	DRAWN BY: SEVIN JOHNSON	DATE: 7/20/22
				SCALE: 1 = 1	
				SHEET 3 OF 6	

DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046	REVISION: B
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NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW NEW PIVOT BLOCKS W/BALL BEARINGS	5/2/18
	B	REVISED TO SHOW UPDATED PIVOT BLOCKS & PROPER 1/2"R & 5/8"R WOODRUFF KEYS	7/26/22
	C	REVISED FOR SQUARE STEPPER MOTORS AND THE 14T & 28T PULLEYS - SEE "REV B" FOR OLDER STYLE	2/8/23

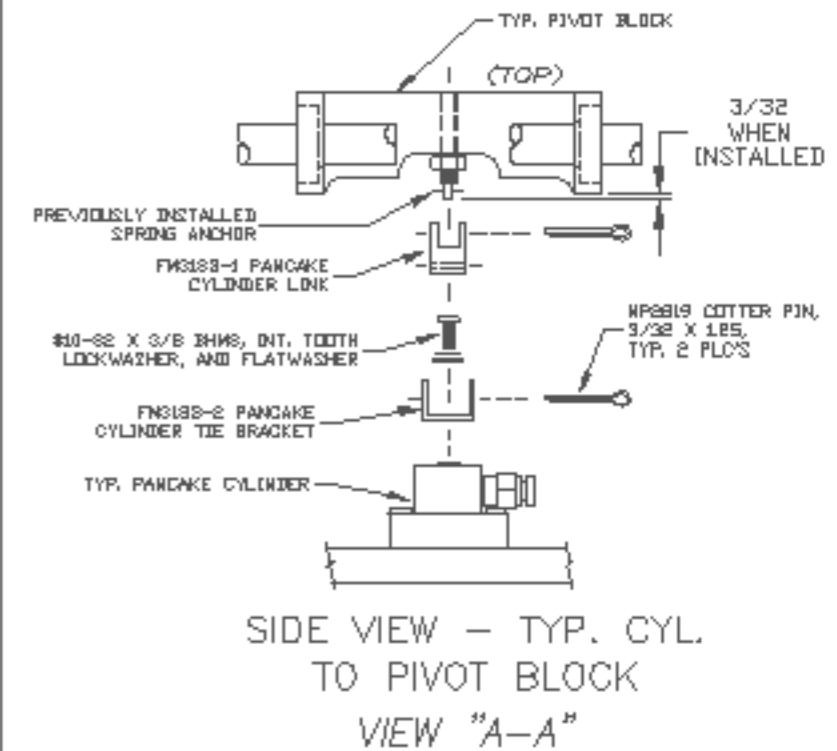
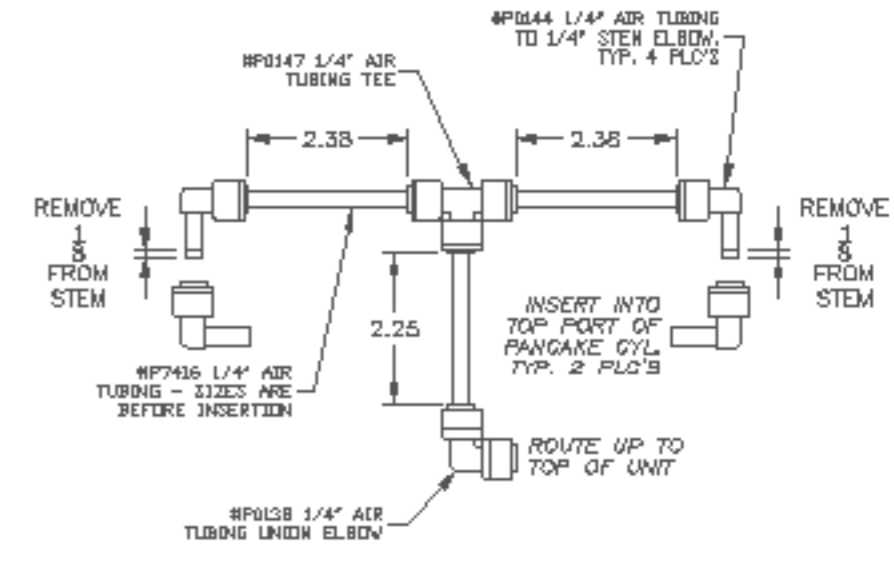
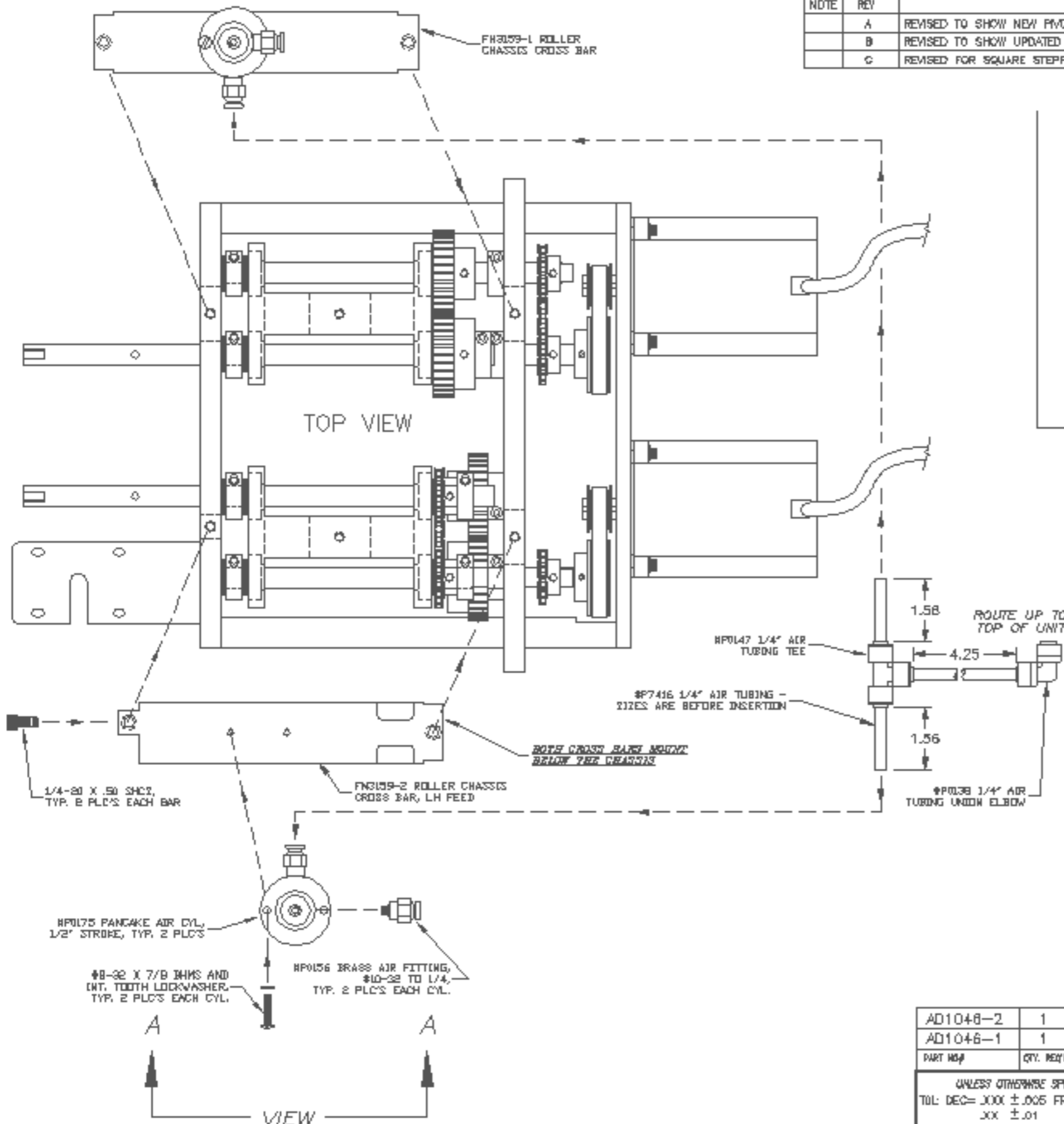


AD1046-1 LH FEED ASSY SHOWN

PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON
AD-1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1039	MODEL CS10
AD-1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10

UNLESS OTHERWISE SPECIFIED: TOL: DEC= .XXX ±.005 FRAC= ±1/64 XX ±.01		MATERIAL: ---	FINISH: ---	DRAWN BY: KEVIN JOHNSON	DATE: 10/30/02
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.				TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046
				REVISION: C	
				SCALE: 1 = 1	
				SHEET: 4 OF 8	

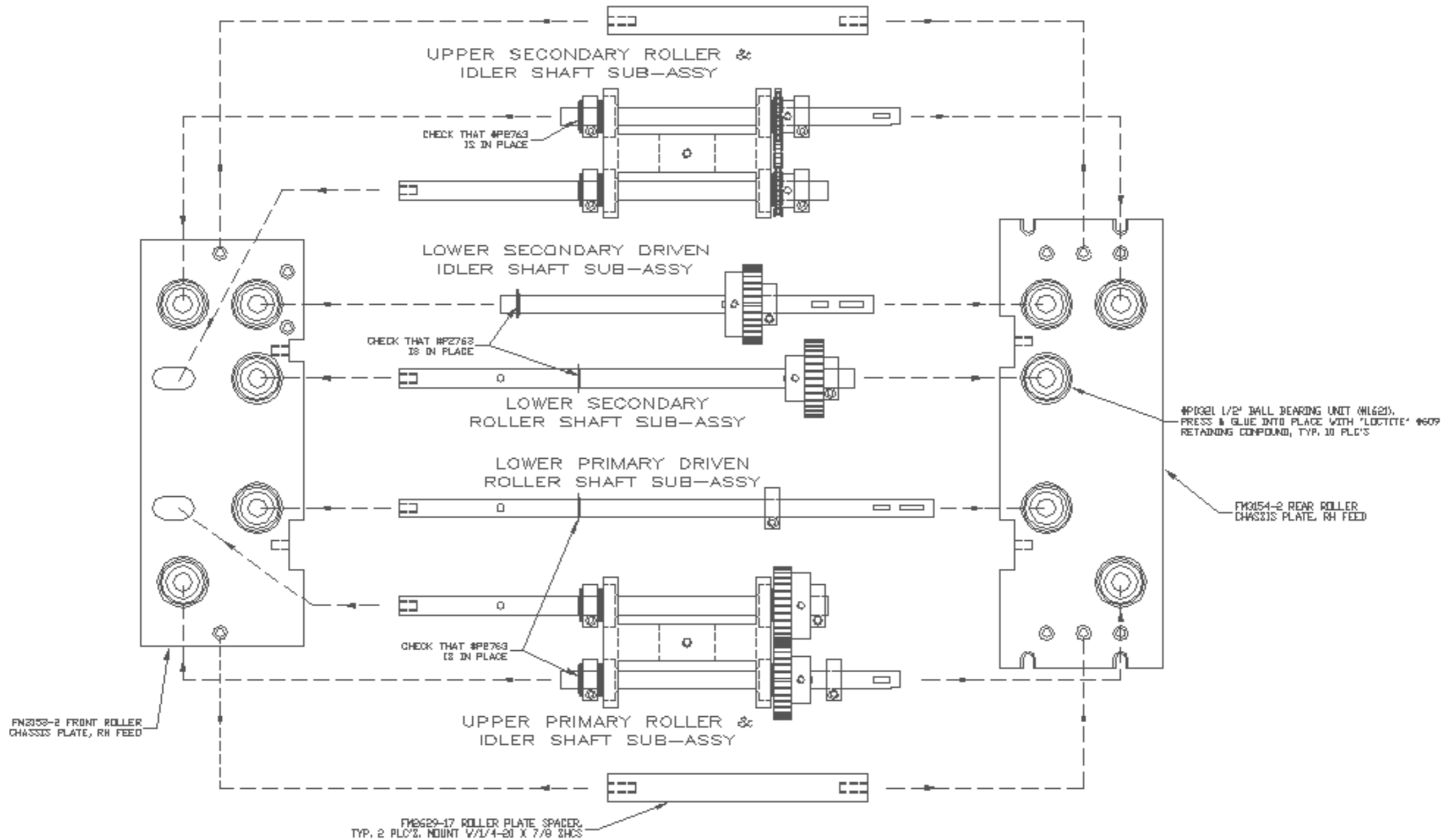
NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW NEW PIVOT BLOCKS W/BALL BEARINGS, AIR CYL MTC BLOCKS REVISED	5/2/19
	B	REVISED TO SHOW UPDATED PIVOT BLOCKS, CYL ANCHOR DETAILS AND AIR FITTING MOD'S	7/27/22
	C	REVISED FOR SQUARE STEPPER MOTORS AND THE 14T & 28T PULLEYS - SEE "REV B" FOR OLDER STYLE	2/8/23



AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1D39	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON
UNLESS OTHERWISE SPECIFIED:		MATERIAL: ---	DRWN BY: SEVIN JOHNSON	DATE: 7/20/08
TOL: DEC= .000 ±.005 FRAC= ±1/64		FINISH: ---	SCALE: 1 = 1	
XX ±.01			SHEET 5 OF 8	
DEITZ COMPANY, INC.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046	REVISION: C
ROUTE 34, WALL, N.J.				

AD1046-1 LH FEED ASSY SHOWN

NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW NEW PIVOT BLOCKS W/BALL BEARINGS	5/2/19
	B	REVISED TO SHOW UPDATED PIVOT BLOCKS & KEYWAYS	7/27/22



FN2153-2 FRONT ROLLER CHASSIS PLATE, RH FEED

#P102L 1/2" BALL BEARING UNIT (M1621), PRESS & GLUE INTO PLACE WITH "LOCTITE" #609 RETAINING COMPOUND, TYP. 10 PLC'S

FN3154-2 REAR ROLLER CHASSIS PLATE, RH FEED

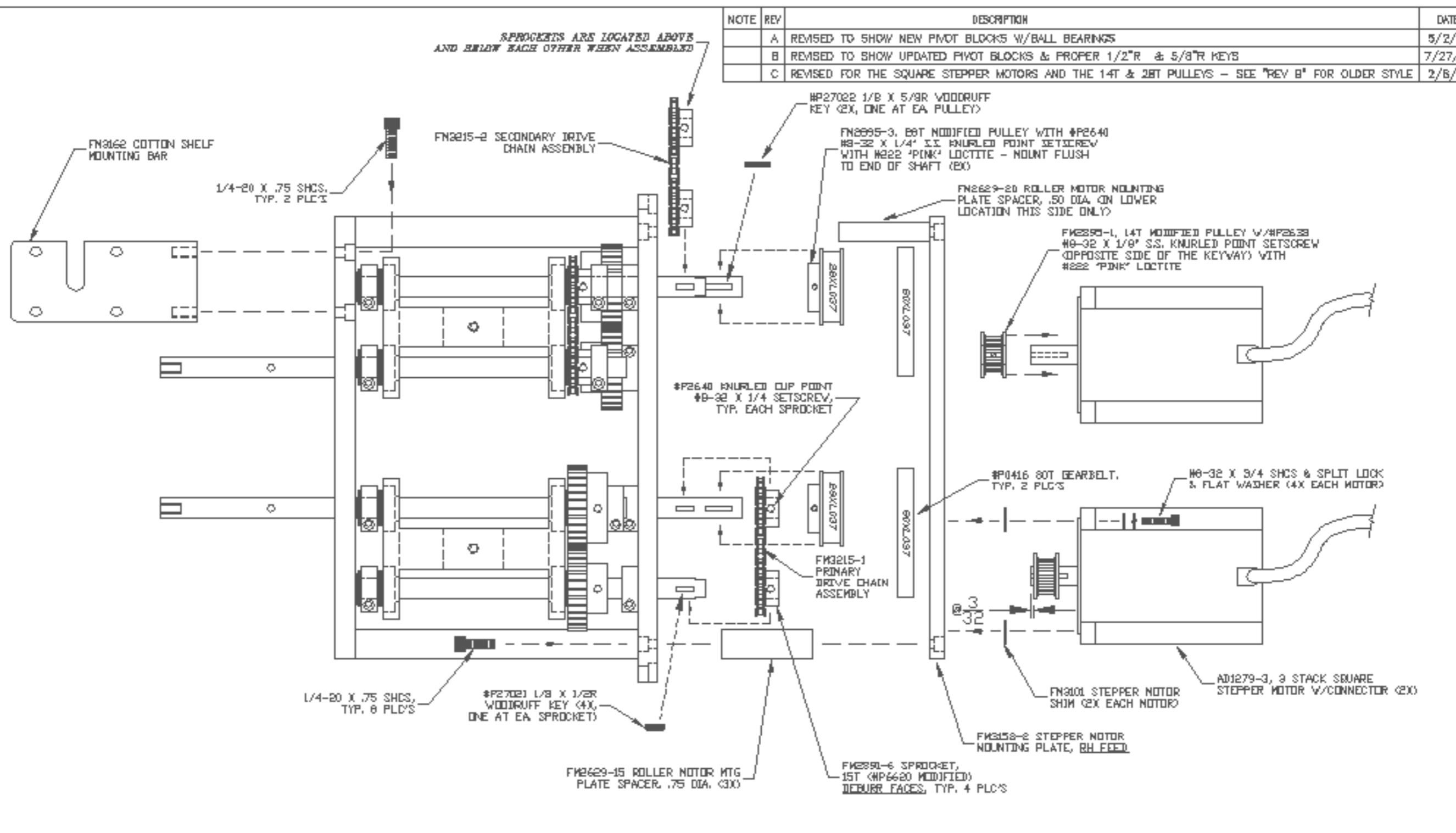
FN6629-17 ROLLER PLATE SPACER, TYP. 2 PLC'S, MOUNT 1/4-20 X 7/8 SHCS

AD1046-2 RH FEED ASSY SHOWN

AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1039	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON

UNLESS OTHERWISE SPECIFIED: TOL: DEC= .000 ±.005 FRAC= ±1/64 XX ±.01		MATERIAL: ---	FINISH: ---	DRAWN BY: SEVIN JOHNSON	DATE: 7/9/20/09
				SCALE: 1 = 1	
				SHEET 6 OF 6	

DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046	REVISION: B
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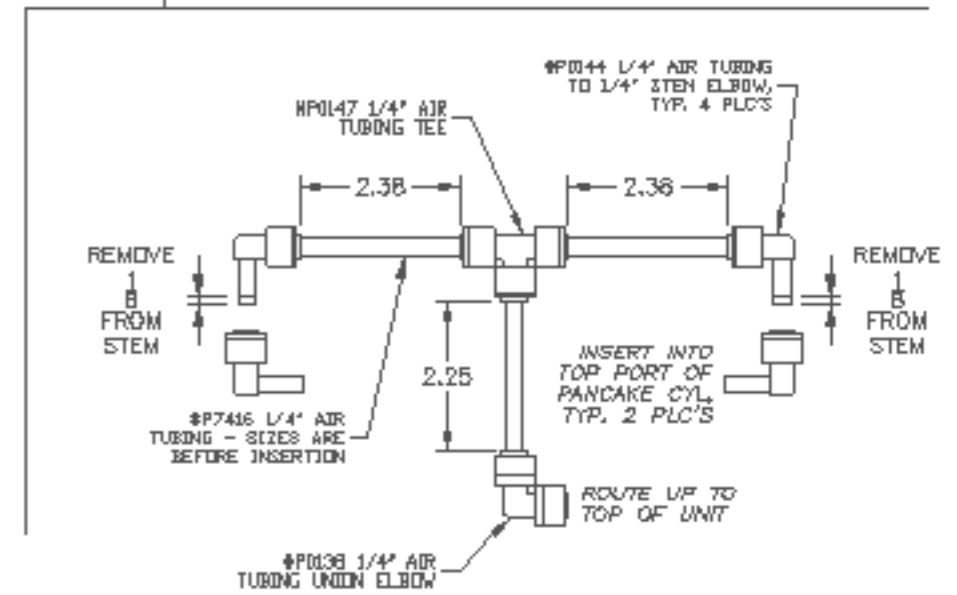
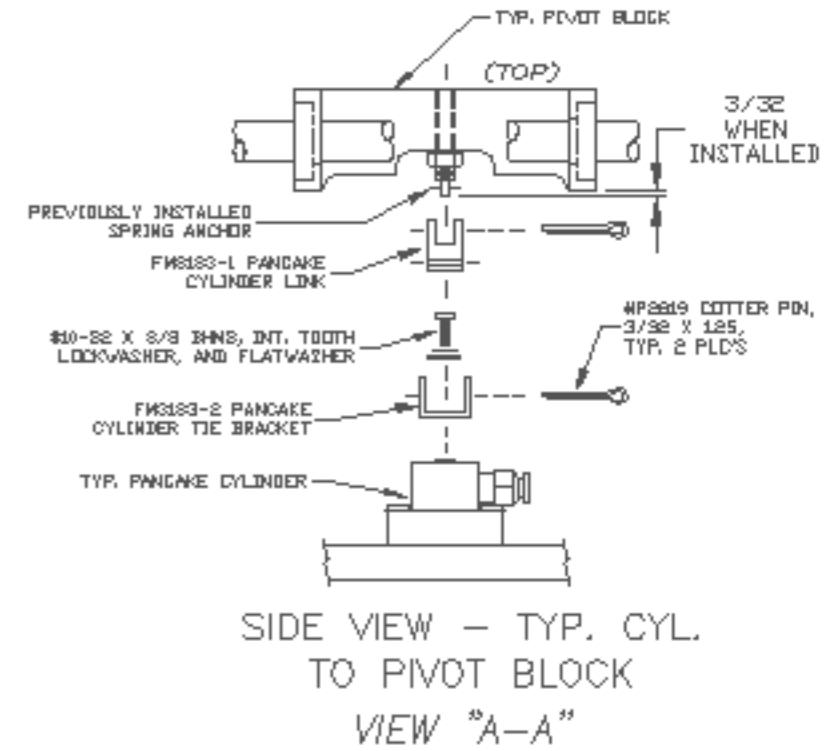
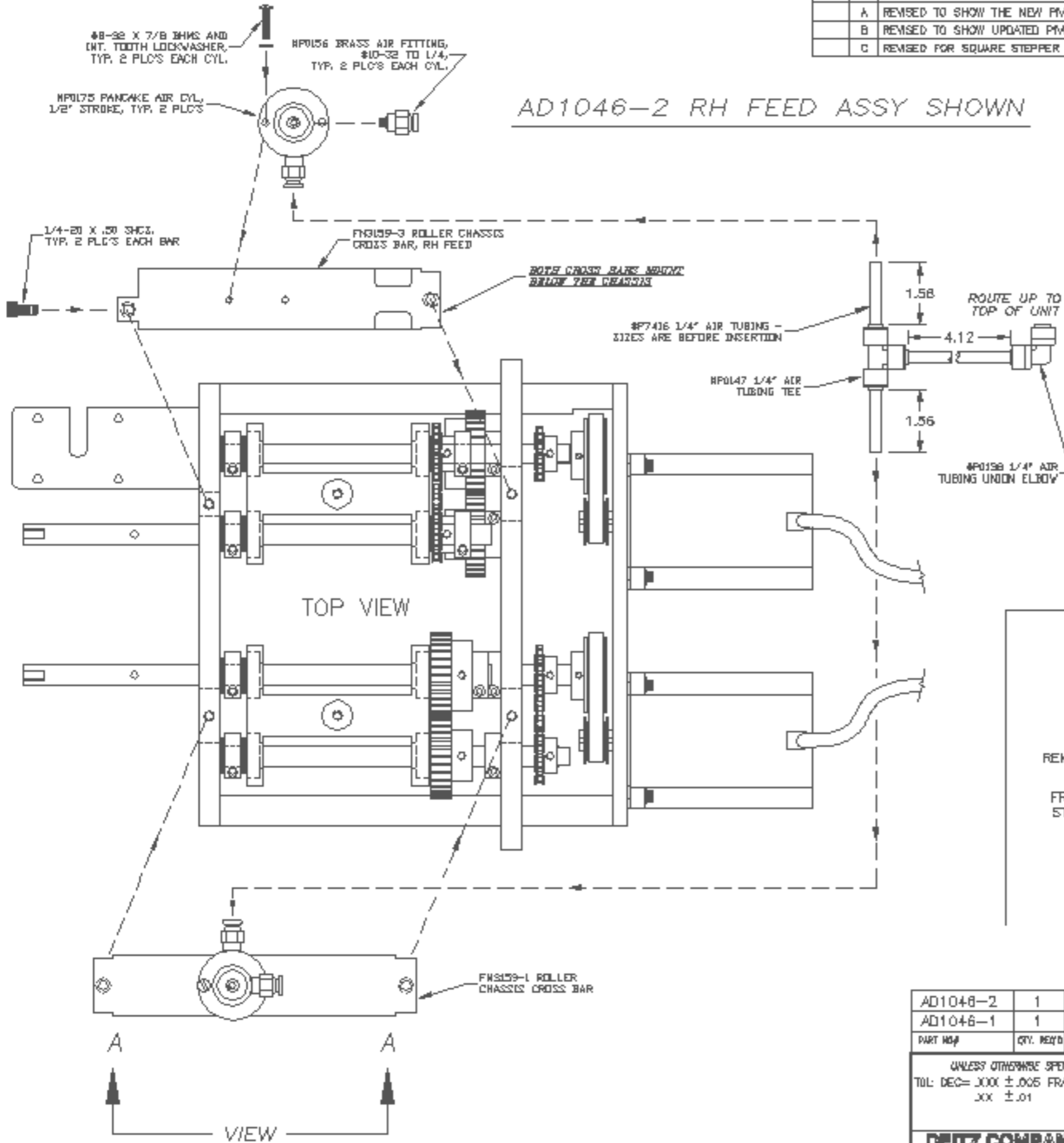
NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW NEW PIVOT BLOCKS W/BALL BEARINGS	5/2/13
	B	REVISED TO SHOW UPDATED PIVOT BLOCKS & PROPER 1/2"R & 5/8"R KEYS	7/27/22
	C	REVISED FOR THE SQUARE STEPPER MOTORS AND THE 14T & 28T PULLEYS - SEE "REV B" FOR OLDER STYLE	2/8/23

AD1046-2 RH FEED ASSY SHOWN

AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1039	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO.	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON
UNLESS OTHERWISE SPECIFIED:		MATERIAL:	DRAWN BY: KEVIN JOHNSON	
TOL: DEC= .001 ±.005 FRAC= ±1/64		FINISH:	DATE: 10/30/02	
.001 ±.01			SCALE: 1 = 1	
			SHEET 7 OF 8	
DEITZ COMPANY, INC.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046	REVISION: C
ROUTE 84, WALL, N.J.				

NOTE	REV	DESCRIPTION	DATE
	A	REVISED TO SHOW THE NEW PIVOT BLOCKS W/BALL BEARINGS. REVISED AIR CYL MTG BAR	5/2/19
	B	REVISED TO SHOW UPDATED PIVOT BLOCKS, CYL ANCHOR DETAILS AND AIR FITTING MOD'S	7/27/22
	C	REVISED FOR SQUARE STEPPER MOTORS AND THE 14T & 28T PULLEYS - SEE "REV B" FOR OLDER STYLE	2/8/23

AD1046-2 RH FEED ASSY SHOWN



AD1046-2	1	CS10 ROLLER ASSY, RH FEED	AD1039	MODEL CS10
AD1046-1	1	CS2 & CS10 ROLLER ASSY, LH FEED	AD0998/1039	MODEL CS2/10
PART NO#	QTY. REQ'D	DESCRIPTION	NEXT ASSEMBLY	USED ON
UNLESS OTHERWISE SPECIFIED: TOL: DEC= .000 ±.005 FRAC= ±1/64 XX ±.01		MATERIAL: ---	DRAWN BY: DATE: SEVIN JOHNSON 10/30/08	
		FINISH: ---	SCALE: 1 = 1	
			SHEET 8 OF 8	
DEITZ COMPANY, INC. ROUTE 34, WALL, N.J.		TITLE: CS2 & CS10 ROLLER ASSEMBLIES (LH & RH FEED)	NUMBER: AD1046	REVISION: C