Operation and Service Manual

Model Y140b – Rabbit 2
Thermo-Seal
Temporary Identification System

Thermopatch

Revision 030105

TABLE OF CONTENTS

WARRANTY **iii**

SECTION 1

INTRODUCTION TO Y140b – RABBIT 2

System Overview 1-1

System Specifications 1-1

INSTALLATION AND SET-UP

Checking your order 1-2

Unpacking and setting up your machine 1-2

Assembling the Air Filter 1-2

Checking air pressure 1-3

Turning on your machine 1-4

Loading Label Tape 1-5

Installing the Ink Cartridge 1-6

Changing temperature to Centigrade 1-7

Changing temperature setting 1-7

Changing heat seal time 1-8

SECTION 2

MACHINE OPERATION

Before you begin 2-1

Keyboard Command Keys 2-2

Keyboard options 2-4

Production Counter 2-7

Running the machine 2-8

Turning off the machine 2-9

Setting Time, Temperature and Air Pressure 2-10

SECTION 3

TROUBLESHOOTING AND MAINTENANCE

Problem analysis 3-1

Display messages 3-1

Troubleshooting problems 3-2

Maintenance 3-4

Supplies 3-6

SECTION 4

PARTS IDENTIFICATION

Machine assembly and part listing 4-1

Machine Wiring Diagrams 4-17

SECTION 5

PARTS REPLACEMENT AND ADJUSTMENT
Sealing Shield replacement 5-1
Case removal and installation 5-3
Printer Head replacement 5-5
Ceramic Heater Element replacement 5-7
Main Circuit Board replacement 5-11
Tape Out Sensor adjustment 5-14
Cutting Shear adjustment 5-15
Sealing Platen replacement 5-16

SECTION 6

CUSTOMER SERVICE 6-1

WARRANTY

Thermopatch Corporation, Syracuse, New York ("Seller") warrants this product to be free from defects in material and workmanship under normal use and service. Any part which proves to be defective in material or workmanship within one (1) year of the date of original purchase for use, -- except for the Printer Head (warranty of six (6) months) will be repaired or replaced, at Seller's option, free of service or labor charges, with a new functionally operative part. Seller's liability under the Warranty shall be limited to repairing or replacing at it's own factory or through an authorized service distributor or dealer, material which is determined by Seller to have been defective in manufacture and upon which a claim has been made by the original purchaser or user to Seller (or an authorized distributor or dealer) within the warranty period. An authorized officer of the Seller will honor claims under this Warranty only upon written approval. Approved return of parts or products will be on a prepaid transportation charges basis only. Claims under this Warranty will be honored only upon Seller's determination that the claim is covered by this Warranty, and Seller shall incur no obligation under this Warranty prior to such determination. This Warranty does not apply: (1) to any machinery or equipment which has been altered or repaired, except by Seller or it's authorized representatives, or (2) to any machinery or equipment which has been subject to misuse, negligence, or accident, including, without limitation, use and operation of such machinery or equipment while parts are loose, broken, out of order, or damaged by the elements. Parts replaced under this Warranty are warranted only through the remainder of the original Warranty. Any and all claims for Warranty service must include such information as Seller designates, and shall include specifically the serial number of each unit (if appropriate).

The foregoing shall constitute the sole and exclusive remedy of any using purchaser and the sole and exclusive liability of Seller in connection with this product. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OR MECHANTABILITY OR FITNESS AND ALL OTHER OBLIGATIONS OR LIABILITIES OF SELLER, INCLUDING ANY TORT LIABILITY, FOR NEGLIGENT DESIGN OR MANUFACTURE OF THIS PRODUCT, OR OTHERWISE.**

It is expressly agreed that Buyer shall not be entitled to recover any incidental or consequential damages, as those terms are defined in the Uniform Commercial Code, and that Buyer shall have no right of rejection or of revocation of acceptance of any part or of revocation of acceptance of any part or all of the goods covered hereby.

If the Keyboard “Skin” covering is removed from the Keyboard proper, the Warranty for Keyboard is null and void.

SECTION 1

INTRODUCTION TO THE Y140b – RABBIT 2

SYSTEM OVERVIEW

The Y140b Rabbit 2 Thermo-Seal® machine prints, cuts and applies temporary identification tags to textile items for easy owner identification throughout the laundering process. The identification tag is able to withstand commercial wash operation, and the tag can be easily removed without leaving marks or adhesive residue.

The Y140b Rabbit 2 machine is a self-contained unit, complete with a printer, a PS/2 keyboard, display, tag cutter and heat-seal unit. The Y140b Rabbit 2 machine features several label identification options.

SYSTEM SPECIFICATIONS

Specifications for the Y140b Rabbit 2 machine are shown in the chart below.

Dimensions	-	Height: 16.0 inches Width: 17.3 inches Depth: 17.5 inches	40.6 cm 43.9 cm 44.5 cm
Weight	-	71 pounds	32.2 kg
Air Pressure	-	.1 cfm at 60 psi	.05 ltr/sec at 4.2 bars
Electrical		100 VAC, .75 amps 50/60 Hz. or 115 VAC, .68 amps 50/60 Hz. or 230 VAC, .34 amps 50/60 Hz.	

Figure 1-1 Y140b Rabbit 2 Specifications

INSTALLATION AND SET-UP

As you install and set-up your Y140b Rabbit 2 Thermo-Seal® machine, refer to the figures and diagrams shown for a visual explanation of the steps involved in set-up.

CHECKING YOUR ORDER

The Y140b Rabbit 2 Thermo-Seal® machine includes:

- 1 Power Cord (TP# 115V 20080-70, 230V 41969)
- 1 Air Hose Assembly (TP# DH-6795)
- 1 Air Filter Assembly 115V TP# 22045-91)230V(TP# 22045-94)
- 1 Ink Cartridge (TP# RC0140-15)
- 1 Operation Manual (TP# 46724)
- 1 Rubber Platen (TP# DH-3187)
- 11 Tape Dispensers (TP# DH-2817)
- 1 EZ-OFF or JIFFY Iron Cleaner (TP# DH-6873)
- 1 Tape Dispenser Storage Rack (TP# 46681)
- 1 PS/2 Style Full Function Keyboard (TP# 20200-39)
- 1 Tape Dispenser Bracket (TP# 46673)
- 1 Clipboard (TP# 46670)

Unpacking and setting up the machine:

1. Remove all packaging materials, parts and the machine from the box.

2. Have a sturdy work table ready to set the machine up on.

3. Connect the air filter screwing it into the fitting on the back side of the machine. Tighten the air filter so that it is positioned as in Figure 1-2, page 1-3.

4. Connect the air hose to the air filter (located on the back side of the machine) by pushing the receptacle firmly onto the air inlet.

NOTE: Make sure that there is no water or dirt in the air supply line before you attach it.

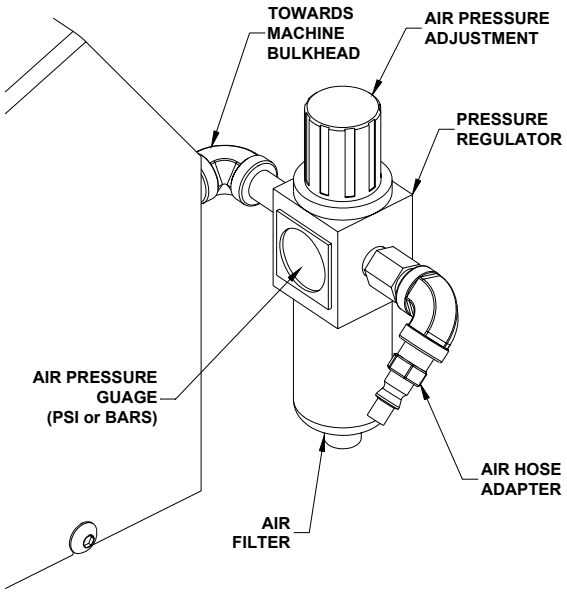


Figure 1-2 Assembling the Air Filter

The line pressure coming into the machine should be a minimum of 70 psi (4.9 Bars). This is not the air gauge pressure.

To confirm that the machine air pressure is correct, check the gauge located on the front of the filter. The gauge should register 60 psi (4.2 bars). If the setting is incorrect for your process, see "Setting Air Pressure" (Page 2-11).

5. Plug in the power cord, left-hand side of the machine. Plug the external PS/2 keyboard into the connector labeled “Keyboard” on the back of the machine.

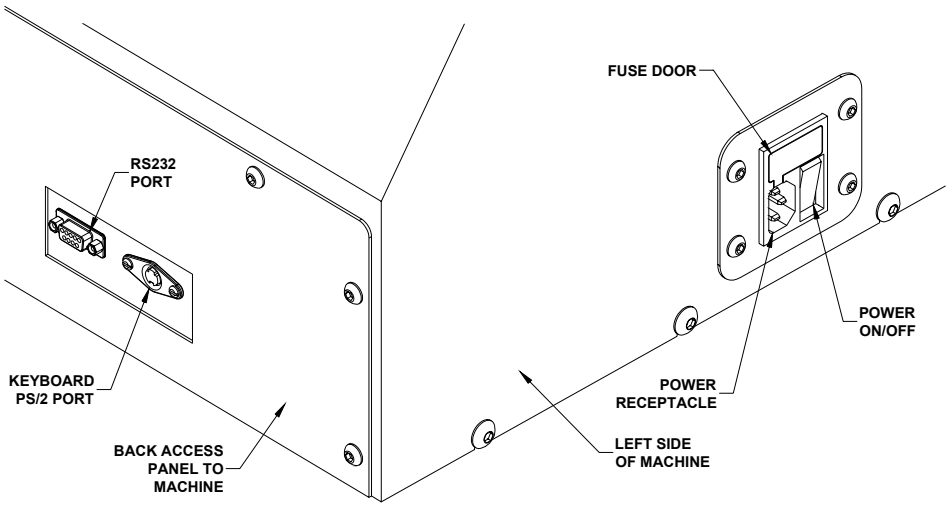


Figure 1-3 Plug in Power Cord/External Keyboard

6. Check that the main power switch is in the OFF position which is marked with a circle. If it isn't, switch it to the off position.

7. Plug the machine into a power source of the correct line voltage for your machine.

8. Turn on the machine by pushing the switch in on the side marked with a vertical line, which is the ON position. The power switch is located on the left side of the machine towards the front. When the machine is turned ON and no label tape is loaded, it will beep twice and the display will show "Y140 BUSY". It will beep twice again and if the machine is not up to operating temperature it will display "NO Y140 TAPE".

9. To load tape into the machine:

- Put the desired tape in the tape dispenser case and place the case into the tape dispenser bracket.
- Pull out approximately one foot (30cm) of label tape off of the tape roll.
- Insert the label tape into the tape guide entrance hole with the adhesive side (shiny side) of the tape facing towards the front of the machine.
- Push the tape into the entrance until it stops.
- Press the Load Tape (F1) key, and the tape will load into the machine, see Figure 1-4, below.

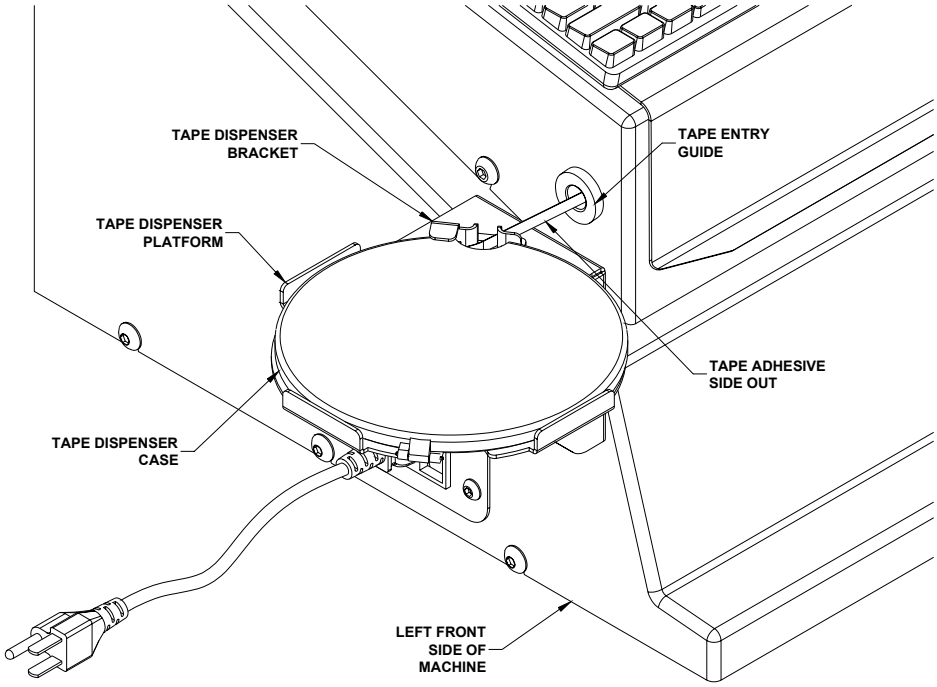


Figure 1-4 Load Label Tape Roll

11. If there is label tape loaded in the machine when it is turned on and is not up to operating temperature a "LOW TEMPERATURE" message will appear. When the machine reaches operating temperature the "LOW TEMPERATURE" message will disappear.

12. Install the ink cartridge into the machine.

- Remove plastic wrap from cartridge.
- Advance the ribbon in the ink cartridge by turning the ribbon advance knob in the direction of the arrow on the cartridge for a few turns. This is to make sure that the ribbon is advancing freely.
- Open the cover-lid on the top of the machine.
- Tip the ink cartridge forward slightly so the ink ribbon falls into the print head slot, as shown in Figure 1-5, page 1-7.
- Lower the cartridge into the machine. Push the mounting clip forward so the cartridge is behind it. Make sure that the locating pins on the machine are between the arms of the ink cartridge.
- Set the cartridge onto the mounting plate. The cartridge may need to be turned, until the cartridge drops into place.
- The mounting clip should now be holding the cartridge in place. If not, pull the end of the mounting clip up until it snaps over the cartridge.
- To the left of the ink cartridge there is a black switch mounted on the transformer shroud. Press the switch labeled INK RIBBON; the ink cartridge ribbon should now be advancing. Do so until the ribbon has dropped into the print head slot and the ribbon is level with the ink cartridge.
- Close the cover-lid on top of the machine.

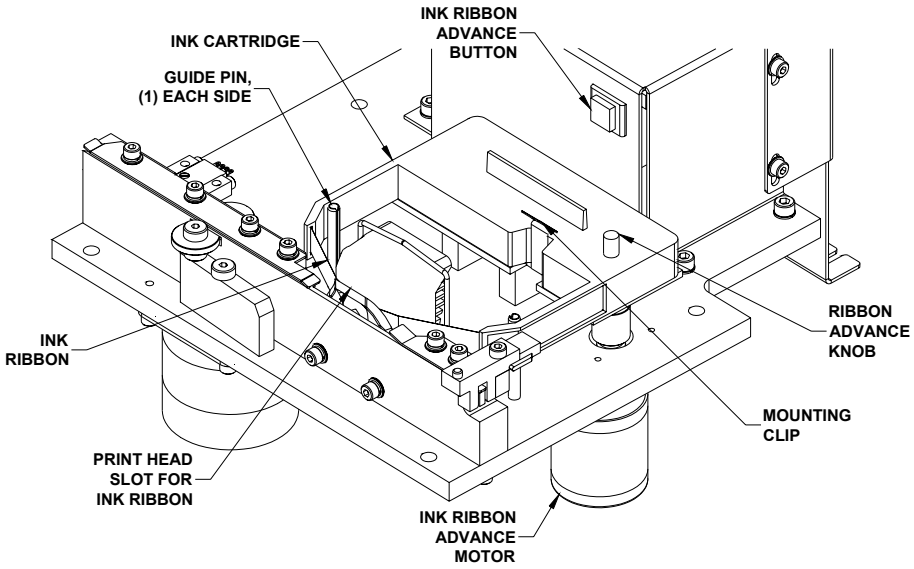


Figure 1-5 Installing Ink Cartridge

13. The factory setting for the temperature scale is Fahrenheit. To change to Centigrade, press the KEYBOARD OPTIONS (F6) key on the keyboard. The display will show the message "PRINT LABELS BY QUANTITY" (or CONTINUOUS). Press the arrow down (⮟) key three times and the display should now show "TEMP SCALE FAHRENHEIT". To change the setting press either the arrow left (⮜) or arrow right (⮞) keys once and the temperature scale will change to CELSIUS. The temperature setting will change respectively. Press the END OPERATION (ESC) key and the display will show the message "SAVING OPTIONS".

14. The heat sealing temperature is pre-set at 380°F(193°C). To change the temperature setting, press the KEYBOARD OPTIONS (F6) key on the keyboard. The display will show "PRINT LABELS BY QUANTITY" (or CONTINUOUS), press the arrow down (⮟) key twice and the display should now show "TEMP SETTING 380". To increase the temperature press the arrow right (⮞) key, to decrease the temperature press the arrow left (⮜)key, until the desired temperature setting shows. Press the END OPERATION (ESCAPE) key and the display will show the message "SAVING OPTIONS". The machine may take some time before it reaches and displays the selected temperature.

15. The cycle time for the seal is factory set. There are two different sealing cycle times, normal seal time, which is 2.7 seconds and heavy seal time, which is 4.8 seconds.

To change the cycle length:

Press the NORMAL/HEAVY (F3) key on the keyboard. The display will show the message of either "NORMAL SEAL TIME" or "HEAVY SEAL TIME". The message shown is the current selection. If in heavy seal time mode an "H" will show on the right side of the display.

At this point, the machine is ready to be operated. Refer to Section 2 for further instructions and options.

When you are finished using the machine and would like to save the tag data, press the END OPERATION (ESCAPE) on the keyboard. The message "WANT TO QUIT? key “Y or N" will appear. Press Y (Yes) to save the data or N (No) not to save. If "Y" is pressed the tag data will be saved and the message "OK TO POWER OFF" appears. The machine can be turned off with the main power switch. If "N" is pressed the machine will return to the beginning screen. It is not necessary to disconnect the air and electricity.

SECTION 2

MACHINE OPERATION

BEFORE YOU BEGIN

Before printing and sealing with your Y140b Rabbit 2 Thermo-Seal® machine, make sure you have completed all instructions for installation as listed in Section 1.

This includes:

- Assembling the air filter on the machine.
- Assembling tape dispenser bracket & dispenser rack on the back of the machine cover.
- Installing the ink cartridge.
- Loading the label tape.

Also, make sure you understand the features and messages of the machine. See the following pages and Page 3-1.

When you begin printing and sealing, the display should show an F or a C for temperature scale, current temperature, and a daily count of printed tags. If it does not it will show a message. To find out what the messages mean, see "MESSAGES" on Page 3-1.

If the temperature and time settings show those required for the materials being used, printing and sealing can begin.

If you need to change the settings, see "Installation and Setup" steps # 11, 12, and 13. For air pressure changes see "Setting Air Pressure" on Page 2-11.

KEYBOARD COMMAND KEYS

It is important to understand all the controls of the Y140b Rabbit 2 Thermo-Seal® machine for efficient operation. Figure 2-1 shows a diagram of the keyboard function key layout and Figure 2-2 gives a description of each command key and its use.

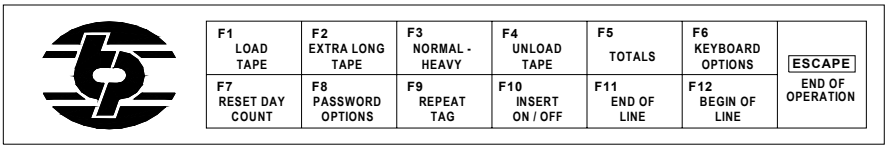


Figure 2-1 Keyboard Command Keys

FUNCTION KEY	DESCRIPTION AND USE
F1 (LOAD TAPE)	Loads the label tape into the machine.
F2 (EXTRA LONG TAPE)	Extra Long Tape: Makes the tag being printed extra long for a button tag, only for one seal. It will require two sealing cycles, one for cutting the tag and one for sealing the tag ends together. The display will show the message "EXTRA LENGTH".
F3 (NORMAL/HEAVY)	Changes the seal time between normal (2.7 sec.) and heavy (4.8 sec.) sealing cycles. The display will show the currently selected setting when the key is pressed.
F4 (UNLOAD TAPE)	Pushes the label tape out of the machine. The display will show UNLOAD TAPE and the tape will back out of the machine.
F5 (TOTALS)	Displays the continuous count and the daily count of total tags printed on the display. The display will return to the beginning screen after a few seconds.
F6 (KEYBOARD OPTIONS)	Goes into a menu of machine operating features to change. When the changes are made press the END OPERATION (Esc) key and if changes were made the display will show the message "SAVING OPTIONS". See Page 2-4.
FEATURES	**DESCRIPTION AND USE**

F7 (RESET DAY COUNT)	Will reset the daily counter to zeroes. Requires a YES or NO response. The display will show the message "RESET COUNTER key Y or N". Note that turning the machine off then on will also reset the daily counter.
F8 (PASSWORD OPTIONS)	For Thermopatch use only. Requires a password. Use the END OPERATION (Esc) to leave the password options selection.
F9 (REPEAT TAG)	Pressing this key will make a copy of the last tag that was printed. This will require another seal.
F10 (INSERT ON/OFF)	Allows a number or letter to be inserted between two characters already typed in, without erasing them. When this selection is on, the display will show the symbol _←.
F11 (END OF LINE)	Used with the entering of label characters. When this key is pressed it will move the cursor (-) to the last character position of the tag. This is where the tag character will be placed when typed in.
F12 (BEGIN OF LINE)	Used with the entering of label characters. When this key is pressed it will move the cursor (-) to the first character position of the tag. This is where the tag character will be placed when typed in.

Figure 2-2 Continued

KEYBOARD OPTIONS

The Keyboard Options (F6) selection allows the Y140b Rabbit 2 Thermo-Seal® operating features to be changed. When this command key is pressed the display will show the first option in the selections, which is "PRINT TAGS BY QUANTITY (or CONTINUOUS). By pressing the arrow up (⮝) or arrow down (⮟) keys on the keyboard these options will change on the display.

Once the option that needs to be changed appears on the display, press the arrow left (⮜) or arrow right (⮞) keys until the desired selection appears on the second line of the display. Continue until all the desired options have been changed. Press the END OPERATION (Esc) key on the keyboard and the message "SAVING OPTIONS" will appear on the display. The display will then return to the beginning screen. Each time the machine is turned on, the last option changes made will be restored.

Print Tags by: (Default = Quantity)

QUANTITY: To print tags by Quantity means that each time a tag is entered the display will show the message "QUANTITY", looking for a set amount of tags to be printed. The amount of tags will be printed and when the amount entered has been printed and sealed the cycle will stop and return to the default screen display.

CONTINUOUS: To print tags continuous means that when a tags characters are entered the machine it will continuously print tags until the END OPERATION (Esc) on the keyboard is pressed. The display will then return to the default screen display.

Number of Chars: (Default = 7)

This option sets how many characters that can be entered for a tag, the range to choose from is as follows:

- Large characters – 1 to 7
- Small characters – 8 to 12

Sequence Numbers: (Default = By Bundle)

This option allows automatic indexing of the numbering of tags printed by bundle or by piece. If this option is used the numbers on the right end of the tag will increase by one after for each bundle or piece that is sealed, depending on which is selected. The sequencing of numbers can be disabled by selecting **NO** (no advance). Numbers at the beginning of the label will not increase, and the numbers have to be side by side with no spaces or letters in between at the right end of the tag.
EXAMPLE: If the tag entered is "ABCDE001", the next batch tag printed will be "ABCDE002".
NO: Disables this option.

BY BUNDLE: This selection will increase the bundle number after a bundle of garments are tagged. When the PRINT TAG BY option is in the QUANTITY mode the bundle number will increase when the ENTER key is pressed to start the next bundle. When in the CONTINUOUS mode, the number will increase when the END OPERATION (Esc) key is pressed to end one bundle and ENTER key is pressed to start the next bundle.

BY PIECE: This selection increases the tag number for each item that is tagged. This option is effective only when the PRINT TAGS BY is in the CONTINUOUS mode.

Add Invoice to Tag ?: (Default = NO)

This option creates an extra tag to be attached to the invoice itself. When active, the message "INVOICE TAG" will appear when the invoice tag is being printed.
NO: Disables this option
AFTER TAGS: The machine prints an extra tag at the end of each bundle. If the PRINT TAGS BY option is in the QUANTITY mode, the invoice tag will be printed when the amount of tags entered are all printed and sealed. If in the CONTINUOUS mode the invoice tag will print when the END OPERATION (Esc) key is pressed to stop printing the bundle tags.

BEFORE TAGS: The machine prints an extra tag before the bundle is printed. In QUANTITY or CONTINUOUS mode the invoice tag will be printed after the ENTER key is pressed to start the tags printing.

NOTE: Do not include the invoice tag in the quantity of items to be marked.

Button/Tag Size: (Default = TAG)

TAG: This selection will make the tag 1-1/4 inches long. This is used when a tag will be sealed on a garment.

BUTTON: This selection is used to print and seal a 3 inch long tag through a button hole. It will require two sealing cycles for each tag, the first to print and cut the tag, and the second to seal the tag ends together through a buttonhole on the shirt.

Temp Scale: (Default = FAHRENHEIT)

This option allows the machine temperature scale to be changed between FAHRENHEIT and CELSIUS. The display will show either an F or a C after the machine temperature for which ever is selected. Changing this option will change the TEMP SETTING accordingly.

Temp Setting: (Default = 380)

This option sets the machine sealing temperature. The degree setting is either in Fahrenheit or Celsius depending on the TEMP SCALE setting. To increase the temperature press the arrow right (➢) key. To decrease the temperature setting press the arrow left (➢) key. Do so until the desired temperature is displayed.

Language: (Default = ENGLISH)

Sets the display to the desired language. Not all languages are currently available.

PRODUCTION COUNTER

There are two counters on the Y140b Rabbit 2 Thermo-Seal® machine, one for tracking **DAILY** production and one for **CONTINUOUS** production counting of the number of total sealing operations. Both counters are shown on the display.
The daily counter is shown as "CNT 00000", when the machine is in the opening screen on the display. If the TOTALS (F5) key on the keyboard is pressed the display will show the CONTINUOUS and DAILY count as "C0000000 D00000". The display will return to the beginning screen after a few seconds.

DAILY
The DAILY production counter shows the number of seals made since the RESET DAY COUNT (F7) key was last pressed, or when the machine is turned on. The DAILY production counter automatically restores the last count displayed, when you turn the machine off then back on.
To Reset the Daily counter press the RESET DAY COUNT (F7) key on the keyboard. The display will show the message "RESET DAY COUNT key Y or N".

- Press the Y key if you want to reset the daily counter. The display will show the message "RESET DAY CNT" and return to the beginning screen. The daily production count should now be all zeroes.
- Press the N key on the keyboard if you don't want to reset the counter. The display will return to the normal screen.

CONTINUOUS
The CONTINUOUS counter shows the number of seals made since the machine was installed. To view the continuous count, press the TOTALS (F5) key on the keyboard. The display will return to the beginning screen after a few seconds.

The CONTINUOUS counter cannot be reset.

RUNNING THE MACHINE

Printing/Cutting/Sealing:

1. Make sure you have followed the instruction described in "Before You Begin" on Page 2-1 and understand the features and messages on the machine.

2. ALWAYS keep hands clear of the ceramic heater. It is HOT and the high pressure during the sealing cycle can cause severe injury.

3. The machine must now be set up for the type of labeling system desired. Choose the laundry code (lot, bundle number, store, day, week, etc.) that will be used for the tags. Determine the number of characters to be used whether to sequence number the tags by bundle, by piece or no numbering. Decide whether to print by tags by a set quantity or continuous printing, if invoice tags are needed, if the tags will be sealed on the garment or through the buttonhole of the garment. For changes to any these options see KEYBOARD OPTIONS on Page 2-4.

4. Key in the laundry code for the tags and press the ENTER key. If the machine is set to print tags by Quantity then the display will show the message "QUANTITY". Key in the number tags to be printed and press the ENTER key. If printing invoice tags, do not include them in the quantity of tags to print. The machine will start printing the tags. If the machine is set to print tags Continuously the printing will automatically start without asking for a quantity.

> **NOTE:** **It is best to test a seal first on a piece of scrap cloth before sealing to garments.**

5. Place the garment over the sealing platen with the platen directly behind the area where the tag is to be sealed.

6. Grasp the garment and handles on both sides of the sealing platen. Raise the arm until the platen touches the face of the sealing iron. The sealing arm will lock in and start the sealing cycle at the set time, pressure and temperature. If the quantity of tags to be printed is two or more, the next tag will print during the sealing cycle, but will not advance until the arm has dropped to the resting position. During the sealing cycle the next garment can be prepared.

7. If a tag is unsatisfactory wait until the tag has cooled slightly. Pull it off the garment from the unsealed end of the tag.

    - If the machine is set up to run with number incrementing by piece, press the END OPERATION (Esc) key. If there is one label left to seal the machine will require this seal. The message Y140 BUSY" will appear. Seal this label to a piece of scrap cloth to discard it. The display will return to the beginning screen. Re-enter the laundry code exactly as it appears on the bad tag. Press ENTER and continue printing and sealing.

    - If the machine is set up to increment by: bundle, continuous or quantity mode without incrementing tags; after the last tag in the bundle or quantity is printed, press the REPEAT TAG (F9) key and tag will reprint for another seal.

8. When the machine is going to be turned off the tag laundry code can be saved. The printing can continue the next time the machine is turned on without re-entering the laundry code.

    When the display is in the beginning screen, press the END OPERATION (Esc) key. The message "WANT TO QUIT? key Y or N" will appear on the display. If Y (Yes) is pressed the machine will save the laundry code information and the message "OK TO POWER OFF" will appear. Turn off the machine. If N (No) is pressed the machine will return to the beginning screen again without saving the laundry code.

9. After running a few cycles you may notice adjustments are needed.

NOTE: **Together; time, temperature and pressure settings effect the printing quality. Testing of different settings is necessary to determine the correct combination.**

For temperature and time adjustments see below, or page 1-7 for temperature and page 1-8 for time.

10. It may be helpful to keep notes of these settings for future use to save time.

Setting seal time and temperature.

Factory settings are shown in Figure 2-5

SETTING	PRE-SET AT:
Temperature	380°F (193°C)
Normal Seal Time	2.7 seconds
Heavy Seal Time	4.8 seconds
Air Pressure	60p.s.i.(4.2 bars)

Figure 2-5 Factory Settings (Heat and Time)

11. You can change the time and temperature settings by using keyboard command keys.

To change the time setting:

Press the NORMAL/HEAVY (F3) key on the Keyboard. The display will show the currently selected seal time. To change the setting back, press the same key again and the original setting will return. When the heavy seal time is selected an "H" will appear in the lower right corner of the display.

To change the temperature setting:

Press the KEYBOARD OPTIONS (F6) key on the keyboard. The display should now show "PRINT LABELS BY QUANTITY" (or CONTINUOUS), press the arrow down (⮟) key twice and the display will show "TEMP SETTING 380". To increase the temperature press the arrow right (⮞) key, to decrease the temperature press the arrow left (⮜) key, until the desired temperature setting shows. Press the END OPERATION (Escape) key the display will show the message "SAVING OPTION" and return to the normal screen.

Setting Air Pressure

The line pressure to the Y140b Rabbit 2 Thermo-Seal® machine should be a minimum of 70 psi (4.9 bars). The machine maximum operating pressure is 100 psi (7.0 bars). The machine comes pre-set at 60 psi (4.2 bars). If you want to change the pressure, follow the instructions below.

1. Make sure the air is connected, and the air gauge is working. The air filter/regulator/gauge is located on the back right side of the machine.

2. Pull up the knob on top of the air filter.

3. Slowly turn the knob, counter clockwise to decrease air pressure, or clockwise to increase air pressure, until the gauge shows the desired air pressure.

4. Pushing the knob back down locks the setting in place.

NOTE: **Periodically check the supply pressure to the machine to ensure a good seal.**

SECTION 3

TROUBLESHOOTING AND MAINTENANCE

PROBLEM ANALYSIS

Before referring to the information below, check for proper set up and operation as outlined in preceding sections of this manual. Some repair procedures require a person with mechanical and electrical skills.

MESSAGES:

- READ OPTION ERROR:

If a "READ OPTIONS ERR" message appears on the display when the machine is turned ON, but the message goes away and the machine continues with normal operation, the KEYBOARD OPTIONS were set to default and may have to be changed. See Page 2-4 for information on this procedure.

If the "READ OPTION ERR" message does not clear, press the END OPERATION (Escape) key and normal operation should begin. The KEYBOARD OPTIONS may need changes in this case also. If this error occurs, notify Thermopatch immediately.

- LOW TEMPERATURE:

The "LOW TEMPERATURE" message means the machine has not yet reached operating temperature. Wait until the message clears and the temperature has reached the set amount.

- Y140 BUSY:

When the message "Y140 BUSY" appears on the display the machine has not yet finished a step. It is either looking for label tape to print on, or a sealing cycle was missed. If the machine is out of label tape, reload it. If the machine is waiting for a sealing cycle, seal it. The machine should return to normal operation.

- END OF TAPE:

This message appears when the machine has either run out of tape or come to a splice in the label tape. The splice and end of the roll are marked with a piece of silver tape. Press the UNLOAD TAPE (F4) key and the label tape will back out of the machine. For a splice the silver tape is ahead of the splice; remove the silver tape, tear it off and discard. To reload the label tape, insert the label tape into the tape entry guide and press the LOAD TAPE (F1) key. The tape will load and the machine will return to normal operation.

- NO Y140 TAPE:

This message will show when the machine is turned on with no label tape loaded. Load the label tape, and continue operating.

TROUBLESHOOTING PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Machine won't turn on	• Not plugged in • No power to outlet • Fuse(s) blown in fuse drawer or on main control board	-Check connection -Check -Check/ Replace fuse(s),see page 1-4
Sealing pressure drops/ fluctuates	• Leak in air supply hose • Dust or water in air lines, regulator, solenoid valve	-Repair/ Replace -Disassemble and clean, see section 4 (Pneumatic Assy.)
Sealing cycle won't lock in	• Insufficient air pressure • Start switch dirty/bad • Solenoid valve not working	-Check/ Adjust See Page 2-11) -Clean/ Replace -Clean/ Replace, see section 4 (Sealing Arm Assy.)
No Heat	• No power to machine • Heating element defective • Main circuit board defective • Temperature control board defective • Solid state relay board defective	-Check connection -Replace, Page 5-9 -Replace, Page 5-11 -Replace, Page 5-11 -See section 4 (Electronic Box Assy.)
Poor sealing quality	• Temperature setting wrong. • Air pressure setting wrong. • Time setting wrong • Heater shield is loose • Heater shield or sealing platen bad/dirty.	-See Page 2-10 -See Page 2-10 -Try heavy seal time, Page 2-10 Correct/Clean/ Replace, Page 5-1
Poor printing quality	• Ink Cartridge dry • Print Head spacing wrong • Print Head defective • Ink cartridge not moving	-Replace -Check/ Adjust -Replace, Page 5-5 -Replace cartridge

TROUBLESHOOTING PROBLEMS continued

PROBLEM	POSSIBLE CAUSE	SOLUTION
Shear not Cutting Properly	• Shear needs adjustment • Shear is dull • Problem with shear link	-Adjust, Page 5-16 -Replace -Check
Label tape jamming up in tape guide	• Tape guide is dirty • Fold in label tape • Print Head spacing wrong • Label tape roll bound up in tape tray • Tape is hitting the shear or the iron (shear is binding)	-Clean out with air gun, Page 3-5 -Remove and tear off bad piece -Adjust -Check -Clean & Adjust shear, See Page 5-16, Replace shear if bad
Label tape will not load into machine	• Label tape position sensor blocked by dirt/dust • There is a splice in the label tape(with reflective tape) • Tape out sensor needs adjustment or defective	-Clean tape guide with compressed air, Page 3-5 -Tear off label tape after the splice and load label tape Page 5-14, Replace if bad
Unreadable or no display	• Loose connection in display cable • Bad display cable • Bad display	-Check,see section 4 (Display Assy.) -Replace -Replace
Incorrect character spacing on label tape	• Print head too close to label tape • Obstruction in tape guide • Friction roller worn • Drive motor bad	-Adjust -Clean, Page, 3-5 -Replace, See section 4 (Tape and Printer Assy)
Marks on garment after sealing	• Build up on the platen • Build up on the Heater shield	-Clean / Replace -Clean / Replace -See Page 5-2

MAINTENANCE

The machine requires periodic cleaning of several items:

- The Heater Shield on the Ceramic Heater should be cleaned at least once a day with a coarse, clean cloth. Rub briskly while heater is hot, being careful not to get burned. You may also wish to use Easy Off Cleaner TP# DH-6873, available from Thermopatch Corporation.

- The Sealing Platen should be cleaned daily with a soft clean cloth. When the platen becomes compressed or cracked it should be replaced to ensure quality seals, with Sealing Platen TP# DH-3187, available from Thermopatch Corporation.

- Maintain a filtered air supply. Check the air filter daily. Drain, if needed, by pushing up on the button at the bottom of the filter bowl.

- The Tape Guide should be cleaned periodically to eliminate tape loading and positioning problems. Remove label tape from the tape guide. Remove the ink cartridge to prevent damage to or getting debris on the ink ribbon. Use an air gun or can of compressed air to clean the tape guide. Point the nozzle so the air blows into the tape guide as shown in Figure 3-1, page 3-5. This will remove any dirt or dust from the tape guide, which can cover the tape-positioning sensor and tape out sensor. It is also advised to clean lint and dirt off the rest of the machine.

Call Thermopatch Corporation for part replacement information. Have the machine serial numbers on hand when calling, refer to Section 4 for part number and part locations.

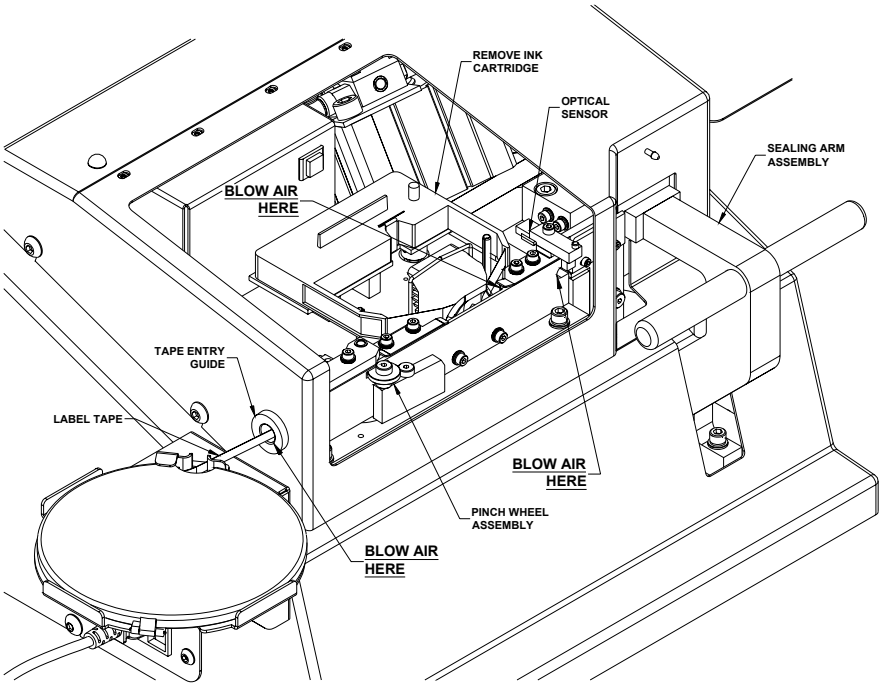


Figure 3-1 Periodic Machine Maintenance

CLEANING THE PRINT HEAD

- Remove the ink ribbon, see figure 3-2, page 3-6.
- Rotate retainer spring forward away from printer head, and lift printer head, up and out carefully.
- Wipe away all debris from the front of the printer head with alcohol and a dry rag.
- Reinstall printer head and return the retainer spring to the lock position on top of the printer head.
- Reinstall ink ribbon cartridge (refer to **INSTALLATION AND SET-UP** page 1-5).

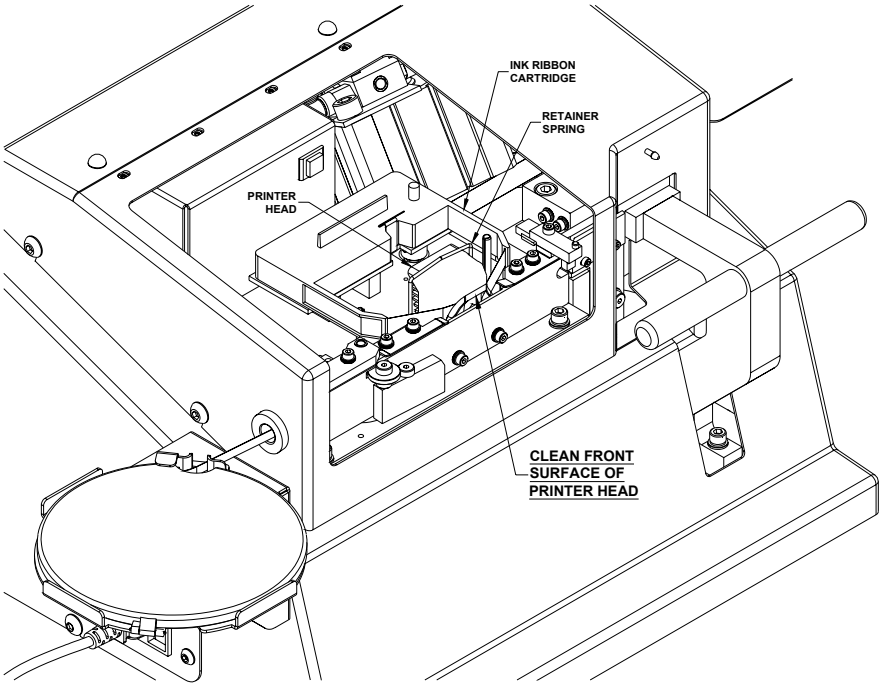


Figure 3-2 Cleaning the Printer Head

Y140b RABBIT 2 – THERMOSEAL MACHINE SUPPLIES

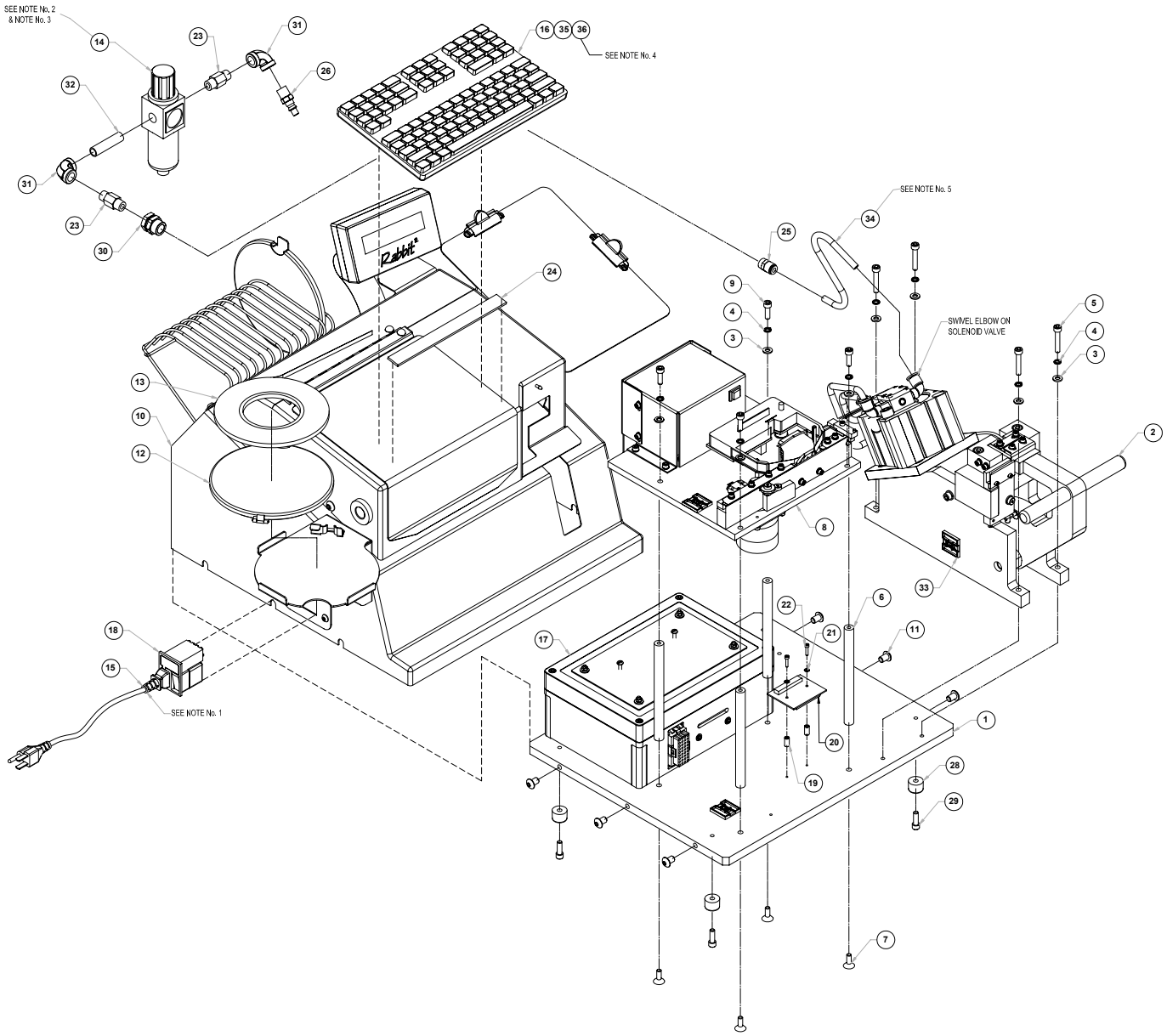
THERMO-SEAL Tape rolls
Sold in packages of 6

White	TS4635-01
Tan	TS4635-02
Blue	TS4635-03
Gray	TS4635-05
Lavender	TS4635-06
Yellow	TS4635-07
Green	TS4635-08
Red	TS4635-09
Orange	TS4635-11
Pink	TS4635-13
Gold	TS4635-14

THERMO-FLAG Tags (Sold only in White) # TFLAGS-01 (1000 box)
Ink Ribbon Cartridge # RC0140-15
Iron Cleaner (EZ-OFF or JIFFY) # DH-6783

SECTION 4

PART IDENTIFICATION



Y140b – RABBIT 2 OVERALL ASSEMBLY

REVISION 030105

ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	PLATE, CHASSIS BASE	1	46626
2	ASSEMBLY, SEALING ARM	1	46627
3	FLAT WASHER, PLAIN (M6)	8	21047-07
4	LOCKWASHER, SPLIT LOCK (M6)	8	21046-07-A
5	SOCKET HEAD CAP SCREW, M6 x 1.0 x 35mm	4	21043-15-E
6	STAND-OFF, MACHINE CHASSIS	4	46663
7	FLAT HEAD CAP SCREW, M6 x 1.0 x 16mm	4	21044-07-D
8	ASSEMBLY, TAPE FEED AND PRINTER HEAD	1	46647
9	SOCKET HEAD CAP SCREW, M6 x 1.0 x 20mm	4	21043-11-E
10	ASSEMBLY, MACHINE COVER	1	46687
11	BUTTON HEAD CAP SCREW, M8 x 1.25 x 10mm	6	21061-19-O
12	CASSETTE, TAPE ROLL	11	DH-2817
13	TAPE ROLL, THERMOSEAL	1	TS4635-01
14	AIR FILTER/REGULATOR & PRESSURE GAUGE	1	22045-91
15	LINE CORD, (SEE NOTE No. 1)	1	20080-70
16	KEYBOARD, FULL FUNCTION USB w/PS 2 ADAPTER	1	20200-39
17	ASSEMBLY, ELECTRONICS BOX	1	46693
18	MODULE, POWER ENTRY	1	20056-18
19	SPACER, NYLON	2	24015-79
20	BOARD, TRANSLATOR	1	46708
21	LOCKWASHER, #4 INTERNAL TOOTHED	2	21021-03-A
22	SOCKET HEAD CAP SCREW, M3 x 0.5 x 20mm	2	21043-11-B
23	HEX PIPE NIPPLE (1/4" MNPT x 2" LG)	2	DH-6786
24	VELCRO HOOK STRIP, 8 in (203mm) LONG	1	23025-04
25	CONNECTOR, MALE, (8mm x 1/4" MNPT)	1	22030-62
26	ADAPTER, HOSE	1	DH-6797
27	FLAT WASHER, PLAIN (M5)	1	21047-06
28	BUMPER FOOT, RUBBER	4	24090-79
29	SOCKET HEAD CAP SCREW, 1/4-20UNC x 3/4	4	21063-06-K
30	BULKHEAD FITTING, 1/4" FNPT	1	22030-38
31	ELBOW, 90° 1/4" FNPT	2	DH-6761
32	PIPE NIPPLE, 1/4" MNPT x 2" LONG	1	DH-6766
33	TIE MOUNT	3	20080-68
34	TUBING, PNEUMATIC 8mm x 254mm LONG	1	22035-18
35	SKIN, KEYBOARD PROTECTION	1	20200-40
36	VELCRO LOOP STRIP, 8 in (203mm) LONG	1	23025-05

GENERAL ASSEMBLY NOTES:

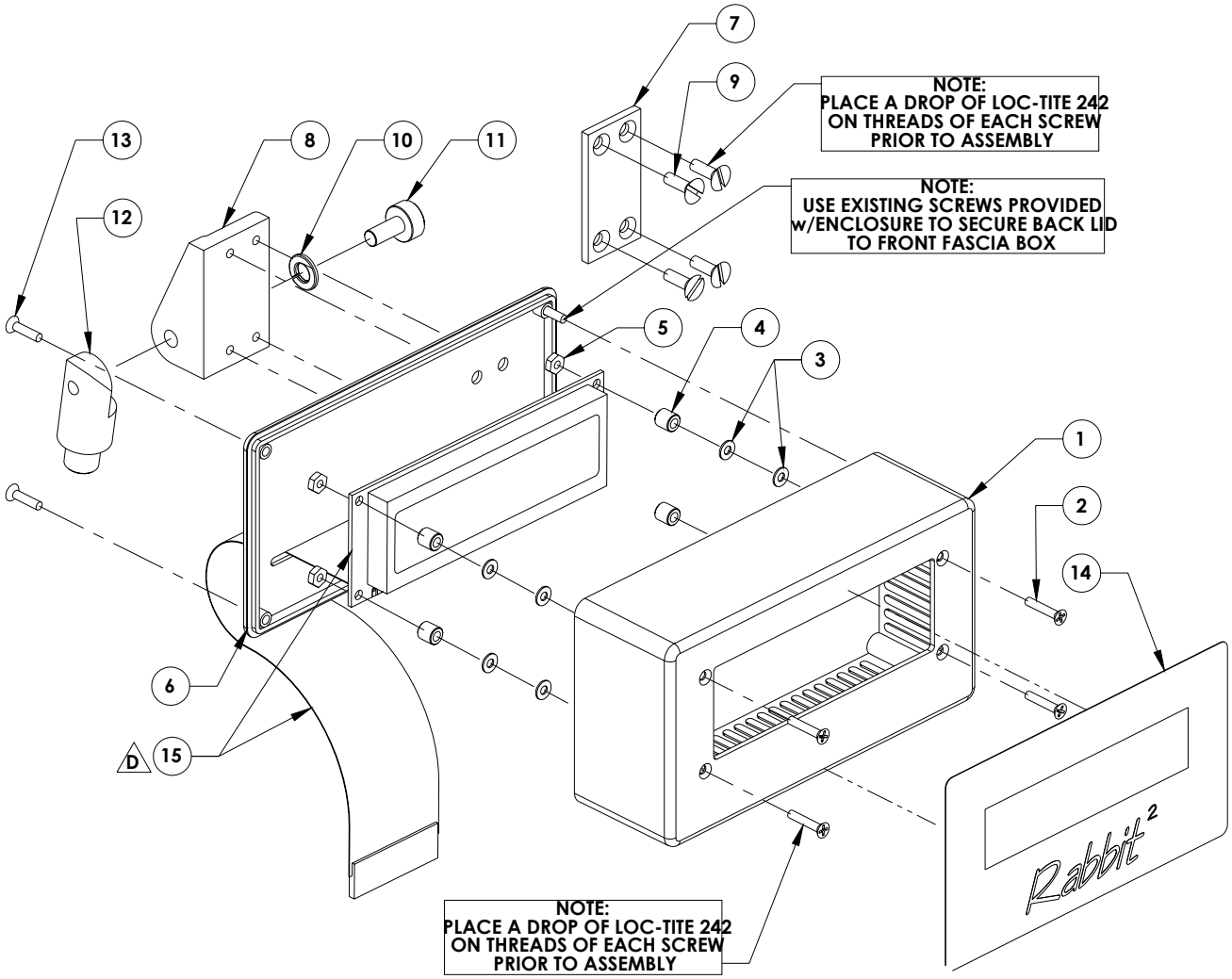
1. **European machines use line cord, Thermopatch part number 41969.**

2. **European machines use Air Filter/Regulator and Pressure Gauge, Thermopatch part number 22045-94 (0 – 10 Bars).**

3. **To prevent cracking of Air filter/Regulator and Pressure Gauge during installation, do not over tighten fittings.**

4. **Apply the loop potion of the Velcro Strip, Thermopatch part number 23025-05 to the underside of the keyboard.**

5. **Connect part item number 34 (8mm Pneumatic Tubing) to part item number 25 Male Connector. Connect the other end of the tubing to the swivel elbow on the solenoid valve.**



LCD PANEL BOX ASSEMBLY

Assembly

46675

REVISION 030105

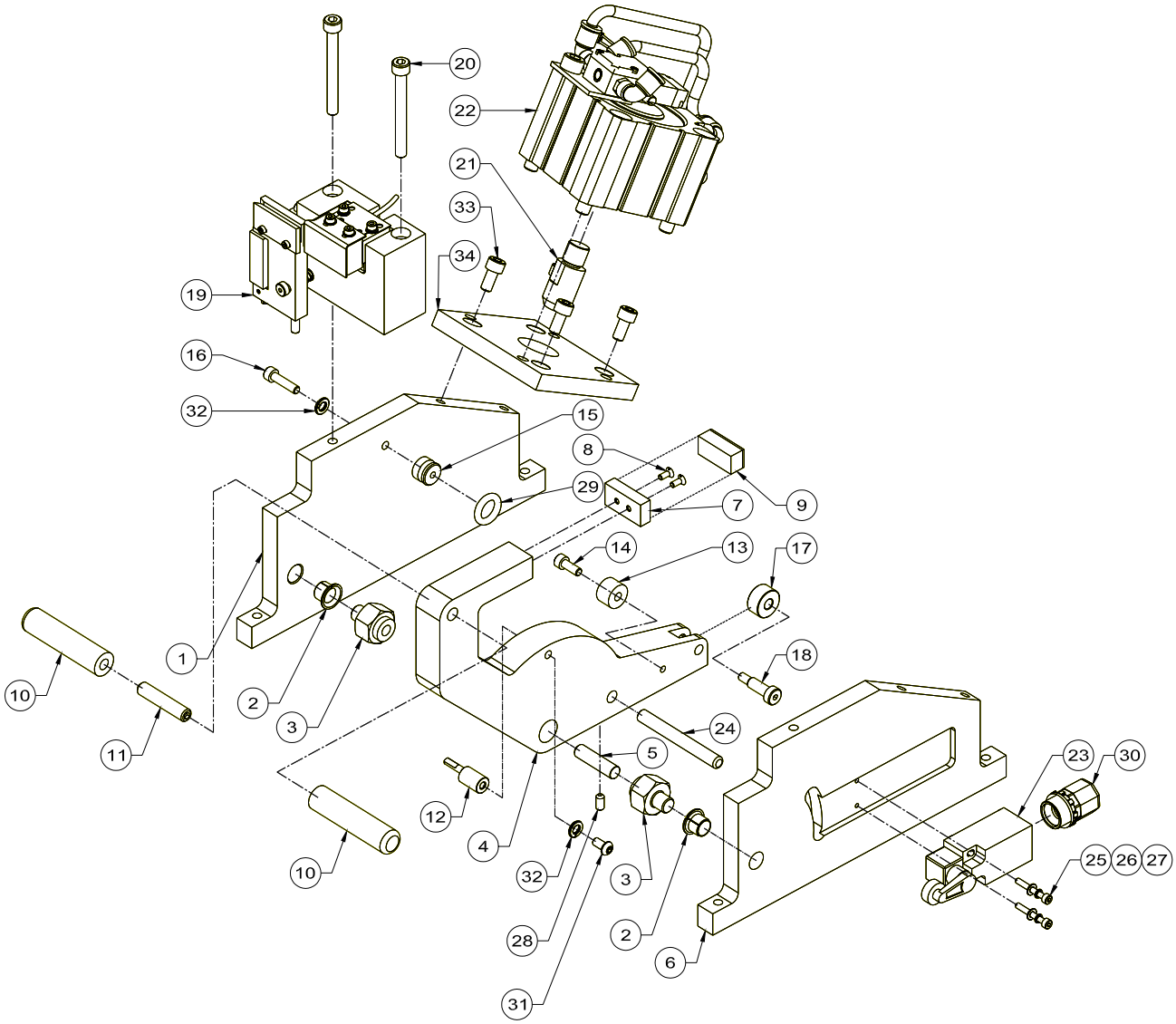
ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	FRONT FASCIA, LCD DISPLAY ENCLOSURE	1	46676
2	FLAT HEAD PHILLIPS SCREW, #4-40UNC x 5/8 LG	4	21056-08-C
3	FLAT WASHER, ZINC PLATE (M3)	8	21047-03
4	SPACER, NYLON (.140 ID x .250 OD x .250 LG)	4	24015-75
5	HEX NUT, ZINC PLATED, #4-40UNC	4	21051-03-A
6	LCD ENCLOSURE LID (PROVIDED w/FRONT FASCIA)	1	46676-LID
7	CLAMP PLATE, LCD ENCLOSURE	1	46679
8	MOUNTING PLATE, LCD ENCLOSURE	1	46678
9	FLAT HEAD SLOTTED SCREW, M4 x 0.7 x 12mm	4	21044-06-B
10	LOCKWASHER, ZINC PLATED, M6	1	21046-07-A
11	THUMB SCREW, KNURLED, M6 x 1.0 x 16mm	1	21029-43
12	DISPLAY POST, LCD ENCLOSURE	1	46677
13	FLAT HEAD PHILLIPS SCREW, M3 x 0.5 x 13mm	4	PROVIDED w/BOX
14	OVERLAY, LCD ENCLOSURE	1	46682
15	ASSEMBLY, LCD PANEL w/FLEX FLAT CABLE	1	47004

LCD PANEL BOX ASSEMBLY

Assembly

46675

REVISION 030105



SEALING ARM ASSEMBLY

Assembly

46627

REVISION 030105

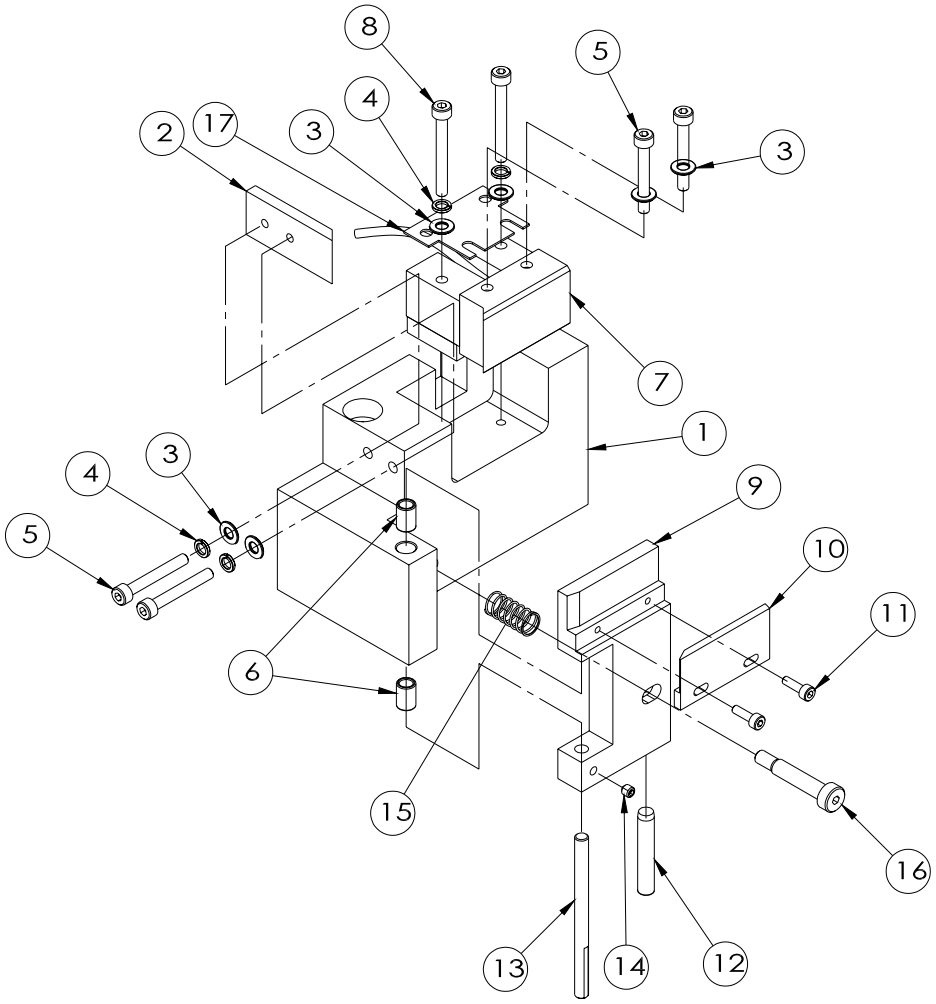
ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	SIDE PLATE, LEFT	1	46628
2	FLANGE BEARING, METRIC 12mm ID x 14mm OD	2	24004-35
3	STUD, PIVOT	2	46630
4	ARM, SEALING	1	46629
5	CUP POINT SET SCREW, M10 x 1.5 x 40mm	1	46733
6	SIDE PLATE, RIGHT	1	46631
7	HOLDER, PLATEN	1	46644
8	FLAT HEAD SLOTTED SCREW, M4 x 0.7 x 10mm	2	21044-05-B
9	SEALING PLATEN, RUBBER	1	DH-3187
10	HANDLE, SEALING ARM	2	46632
11	CUP POINT SET SCREW, M10 x 1.5 x 50mm	1	21049-17-H
12	PIN, ECCENTRIC	1	46705
13	BUTTON, STOP	1	46633
14	SOCKET HEAD CAP SCREW, M6 x 1.0 x 16mm	1	21043-09-E
15	BUMPER	1	46634
16	SOCKET HEAD CAP SCREW, M6 x 1.0 x 25mm	1	21043-13-E
17	ROLLER, SEALING ARM	1	46635
18	SOCKET HEAD SHOULDER SCREW, Ø8 x 20mm	1	21067-04-C
19	ASSEMBLY, HEATER/CUTTER	1	46637
20	SOCKET HEAD CAP SCREW, M8 x 1.25 x 75mm	2	21043-23-F
21	ROD END	1	46636
22	PNEUMATICS KIT, BIMBA	1	46701
23	LIMIT SWITCH, ROLLER LEVER	1	20082-32
24	SWITCH ACTUATOR	1	46683
25	FLAT WASHER, ZINC PLATE, M4	2	21047-05
26	LOCKWASHER, SPLITLOCK, ZINC PLATE, M4	2	21046-05-A
27	SOCKET HEAD CAP SCREW, M4 x 0.7 x 30mm	2	21043-14-C
28	CUP POINT SET SCREW, M6 x 1.0 x 12mm	1	21049-09-F
29	O-RING, 70 DUROMETER, METRIC	1	24089-04
30	STRAIN RELIEF, NON-METALLIC	1	20082-33
31	BUTTON HEAD CAP SCREW, M6 x 1.0 x 12mm	1	21061-20-N
32	LOCKWASHER, SPLITLOCK, ZINC PLATE M6	2	21046-07-A
33	SOCKET HEAD CAP SCREW, M8 x 1.25 x 16mm	4	21043-09-F
34	ADAPTER PLATE	1	46645

SEALING ARM ASSEMBLY

Assembly

46627

REVISION 030105



HEATER/CUTTER ASSEMBLY

Assembly

46637

REVISION 030105

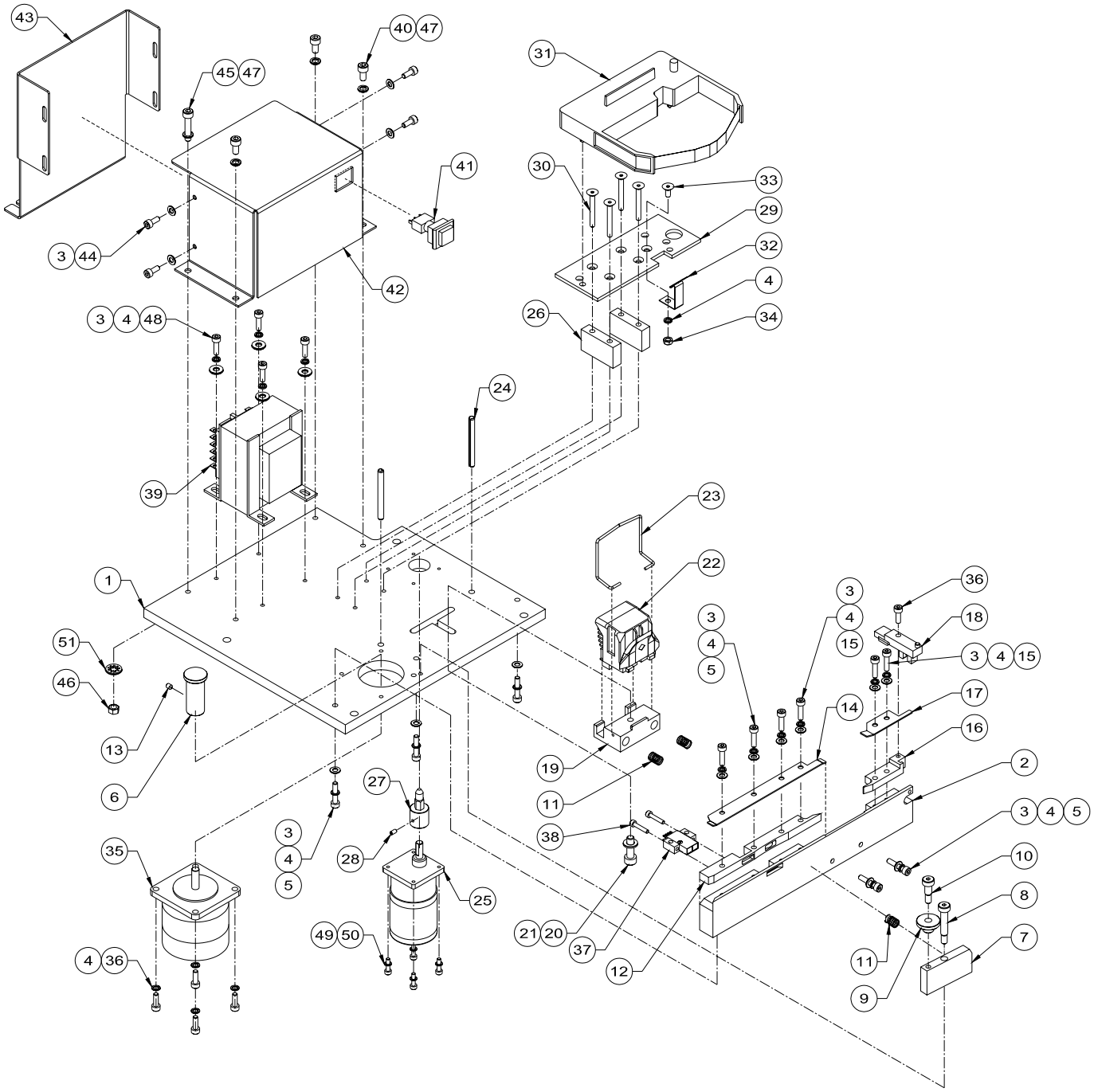
ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	BLOCK, HEATER/CUTTER MOUNTING	1	46638
2	CUTTER, STATIC	1	46640
3	FLAT WASHER, ZINC PLATED (M4)	6	21047-05
4	LOCKWASHER, SPLIT LOCK (M4)	4	21046-05-A
5	SOCKET HEAD CAP SCREW, M4 x 0.7 x 30mm	4	21043-14-C
6	SLEEVE BEARING, (5mm ID x 7mm OD x 10mm LG)	2	24010-14
7	ASSEMBLY, HEATER ELEMENT	1	46685
8	SOCKET HEAD CAP SCREW, M4 x 0.7 x 35mm	2	21043-15-C
9	ARM, CUTTER	1	46641
10	CUTTER, DYNAMIC	1	46642
11	SOCKET HEAD CAP SCREW, M3 x 0.5 x 10mm	2	21043-06-B
12	DOWEL PIN, HARDENED (Ø6mm x 35mm)	1	21048-23-E
13	HINGE PIN, CUTTER	1	46643
14	SOCKET HEX SET SCR, CUP POINT, M4 x 0.7 x 4mm	1	21049-05-D
15	COMPRESSION SPRING	1	24075-43
16	SOCKET HEX SHOULDER SCREW, Ø6mm x 25mm	1	21067-05-B
17	STRAP, WIRE HARNESS	1	46707

HEATER/CUTTER ASSEMBLY

Assembly

46637

REVISION 030105



TAPE FEED & PRINTER ASSEMBLY

Assembly

46647

REVISION 030105

ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	PLATE, TAPE FEED SUPPOR	1	46648
2	GUIDE, FRONT TAPE	1	46649
3	FLAT WASHER, ZINC PLATED, (M4)	19	21047-05
4	LOCKWASHER, SPLITLOCK, (M4)	20	21046-05-A
5	SOCKET HEX CAP SCREW, M4 x 0.7 x 20mm	7	21043-11-C
6	WHEEL, TAPE DRIVE	1	46650
7	BLOCK, PINCH WHEEL	1	46651
8	SOCKET HEX SHOULDER SCREW, Ø6mm x 25mm	1	21067-05-B
9	WHEEL, PINCH	1	46652
10	SOCKET HEX SHOULDER SCREW, Ø6mm x 10mm	1	21067-01-B
11	SPRING, COMPRESSION, Ø.300 x 0.622	3	24075-44
12	BLOCK, TAPE GUIDE, LEFT	1	46653
13	CUP POINT SET SCREW, M4 x 0.7 x 5mm	1	21049-05-D
14	PLATE, TAPE FEED COVER, (MIDDLE)	1	46655
15	SOCKET HEX CAP SCREW, M4 x 0.7 x 16mm	4	21043-09-C
16	BLOCK, TAPE FEED GUIDE (RIGHT)	1	46658
17	PLATE, TAPE FEED GUIDE, (RIGHT)	1	46657
18	PHOTO OPTIC SENSOR	1	20010-80
19	BLOCK, PRINTERHEAD MOUNTING	1	46658
20	FLAT WASHER, ZINC PLATED, (M6)	1	21047-07
21	SOCKET HEX CAP SCREW, M6 x 1.0 x 20mm	1	21043-11-E
22	PRINTERHEAD (24) PIN	1	20205-36
23	SPRING, PRINTERHEAD RETAINING	1	46659
24	SPRING PIN, M5 x 50mm	2	21068-20-D
25	ASSEMBLY, INK CARTRIDGE GEARMOTOR	1	46694
26	STAND-OFF, INK CARTRIDGE	2	46660
27	HEX DRIVE COUPLER, INK CARTRIDGE	1	46661
28	CUP POINT SET SCREW, M3 x 0.5 x 6mm	1	21049-06-C
29	PLATE, INK CARTRIDGE MOUNTING	1	46662
30	FLAT HEAD CAP SCREW, M4 x 0.7 x 35mm	4	21044-11-B
31	INK CARTRIDGE, BLACK	1	RC0140-15
32	CLIP, MOUNTING, INK CARTRIDGE	1	45177
33	FLAT HEAD CAP SCREW, M4 x 0.7 x 10mm	1	21044-05-B
34	HEX NUT, M4 x 0.7	1	21045-06-A
35	ASSEMBLY, TAPE FEED STEPPING MOTOR	1	44690

TAPE FEED & PRINTER ASSEMBLY

Assembly

46647

REVISION 030105

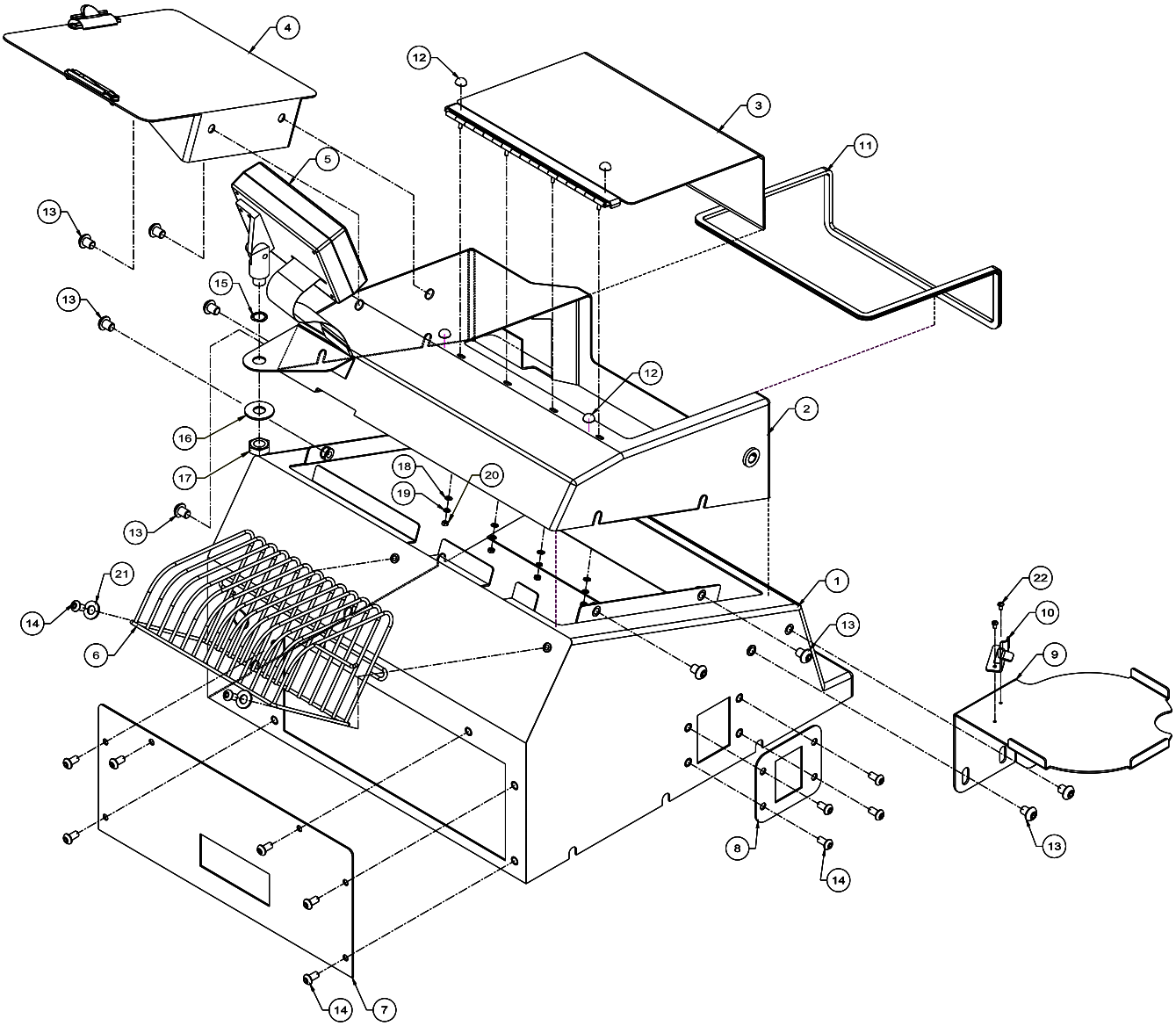
ITEM	DESCRIPTION	QTY.	PARTNUMBER
36	SOCKET HEX CAP SCREW, M4 x 0.7 x 12mm	5	21043-07-C
37	PHOTO OPTIC SENSOR, REFLECTIVE	1	20081-85
38	SOCKET HEX CAP SCREW, M3 x 0.5 x 16mm	2	21043-09-B
39	TRANSFORMER, (110v - 115v - 230v)	1	20060-19
40	SOCKET HEX CAP SCREW, M5 x 0.8 x 25mm	3	21043-06-D
41	ASM. PUSH BUTTON SWITCH, INK RIBBON JOG	1	46734
42	SHROUD, TRANSFORMER PROTECTION	1	46684
43	BRACKET, HOLD DOWN, ELECTRONICS BOX	1	46696
44	SOCKET HEX CAP SCREW, M4 x 0.7 x 10mm	4	21043-06-C
45	SOCKET HEX CAP SCREW, M5 x 0.8 x 25mm	1	21043-13-D
46	HEX NUT, M5 x 0.8	1	21045-07-A
47	LOCKWASHER, SPLITLOCK, (M5)	4	21046-06-A
48	SOCKET HEX CAP SCREW, M4 x 0.7 x 10mm	4	21043-16-C
49	SOCKET HEX CAP SCREW, M3 x 0.5 x 12mm	4	21043-07-B
50	LOCKWASHER, SPLITLOCK, (M3)	4	21046-03-A
51	LOCKWASHER, INTERNAL TOOTH, (M5)	1	21046-06-B

TAPE FEED & PRINTER ASSEMBLY

Assembly

46647

REVISION 030105



MACHINE COVER ASSEMBLY

Assembly

46687

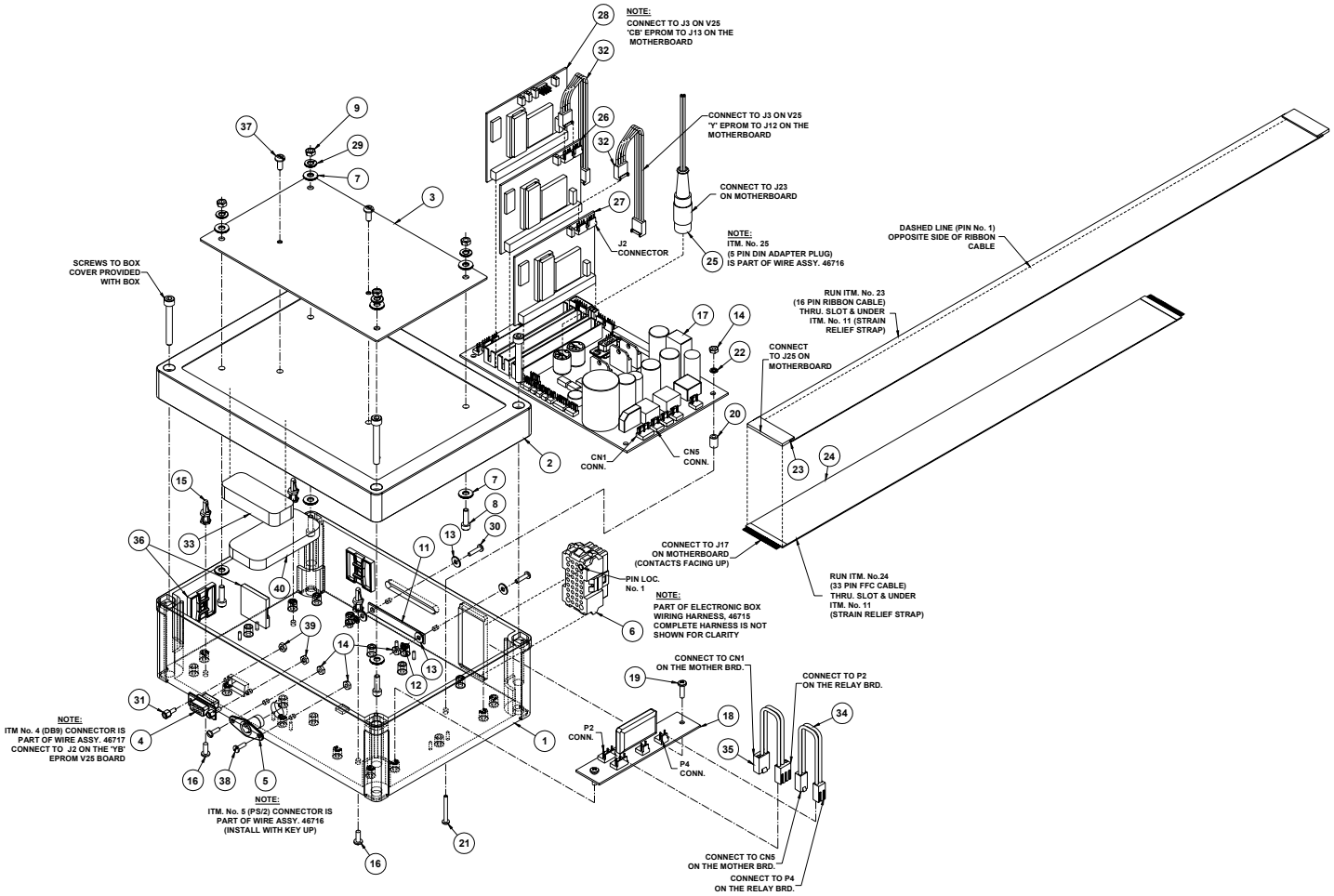
REVISION 030105

ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	ASSEMBLY, BOTTOM COVER	1	46666
2	ASSEMBLY, TOP COVER	1	46667
3	ASSEMBLY, TOP COVER LID	1	46672
4	ASSEMBLY, CLIP BOARD	1	46670
5	ASSEMBLY, LCD PANEL	1	46675
6	RACK, CASSETTE TAPE DISPENSER STORAGE	1	46681
7	PLATE, MACHINE BACK PANEL	1	46713
8	PLATE, POWER ENTRY MODULE	1	46764
9	PLATFORM, TAPE DISPENSER	1	46745
10	GUIDE, THERMOSEAL TAPE	1	DH-3562
11	GASKET, TOP COVER LID	1	24091-51
12	BUMPER, WHITE POLYURETHANE	4	24091-53
13	BUTTON HD SOCKET CAP SCREW, M8 x 1.25 x 10mm	9	21061-19-O
14	BUTTON HD SOCKET CAP SCREW, M6 x 1.0 x 12mm	12	21061-20-N
15	WASHER, WAVE DISC, .440ID x .618 OD	1	21028-48
16	FLAT WASHER, ZINC PLATE, .469 ID x .922 OD	1	21023-05
17	HEX NUT, JAM, 7/16-14unc	1	21051-17-C
18	FLAT WASHER, ZINC PLATE, (M3)	4	21047-03
19	LOCKWASHER, SPLITLOCK, (M3)	4	21046-03-A
20	HEX NUT, ZINC PLATE, M3 x 0.5	4	21045-04-A
21	FLAT WASHER, BRASS, .266 ID x .562 OD	2	21020-02
22	PAN HEAD SLOTTED SCREW, M3 x 0.5 x 5mm	2	21042-03-B
23	SPACER, NYLON, .38 OD x .166 ID x .125 LG	4	21028-55

MACHINE COVER ASSEMBLY

Assembly
46687

REVISION 030105



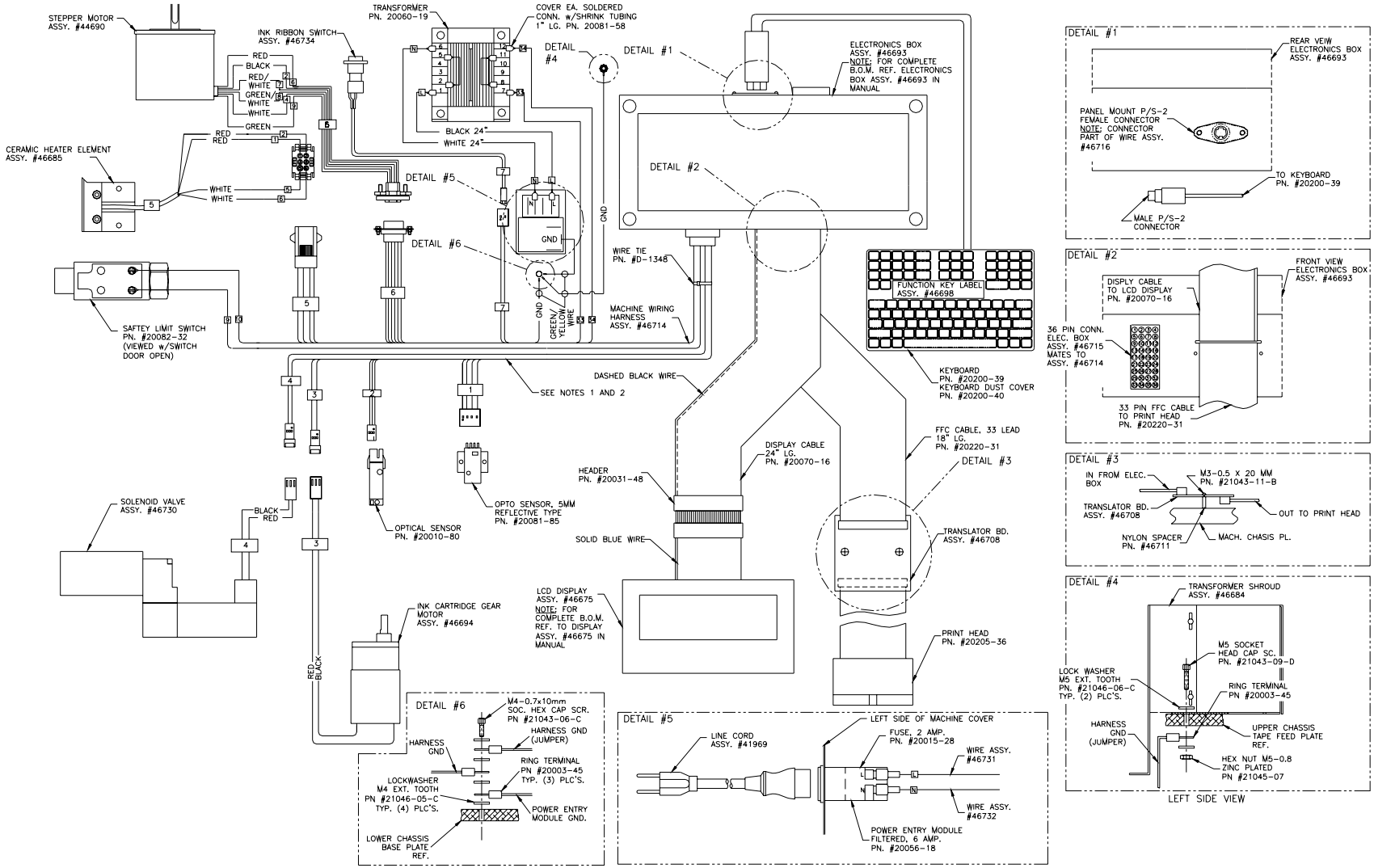
ELECTRONIC COMPONENT ASSEMBLY

Assembly

46693

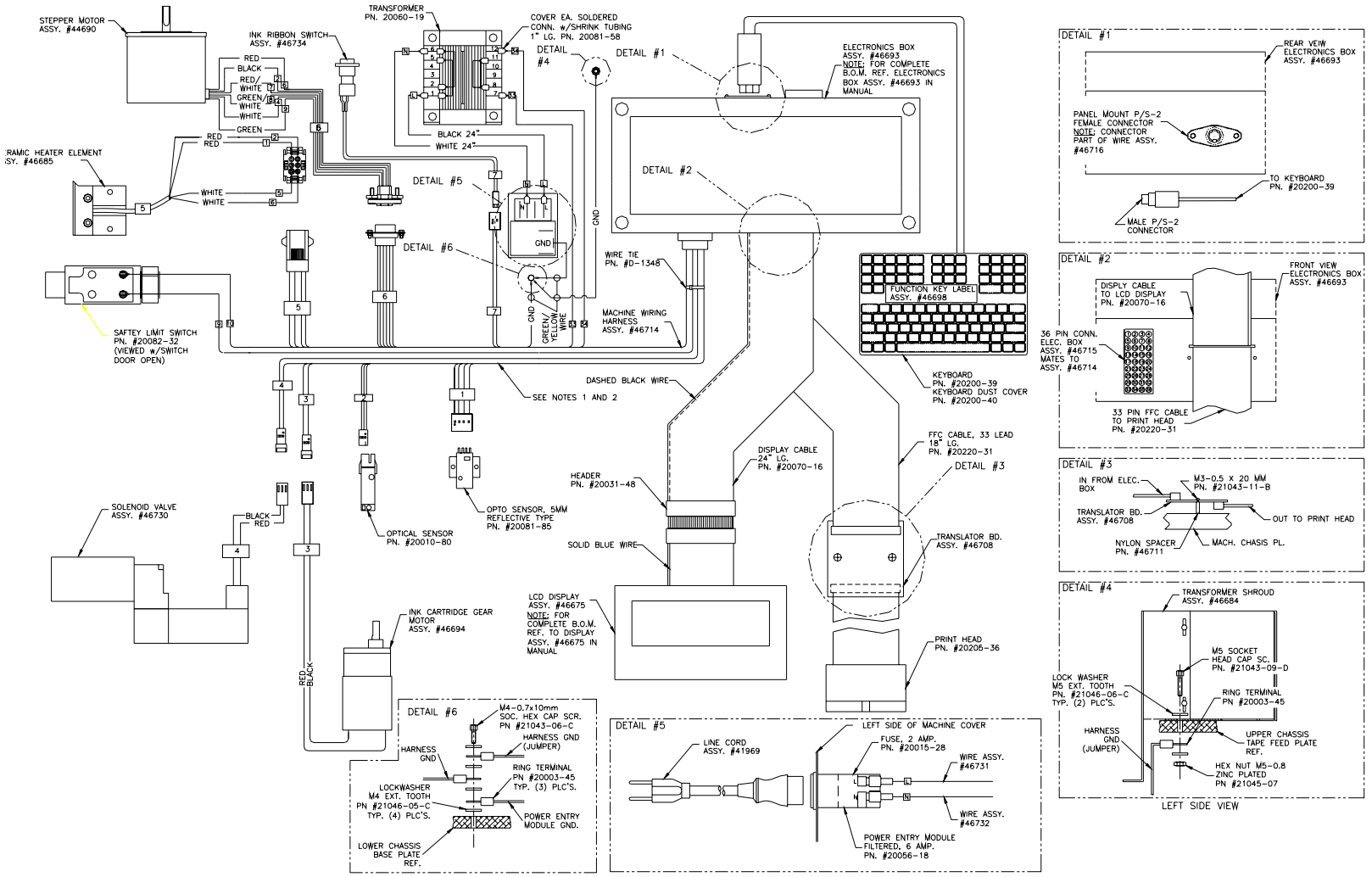
REVISION 030105

ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	BOX, ELECTRONIC COMPONENT, BOTTOM	1	46710
2	BOX, ELECTRONIC COMPONENT, LID	1	46710
3	PLATE, ELECTRONIC COMPONENT BOX LID	1	46712
4	ASSEMBLY, WIRING HARNESS, DB9 CONNECTION	1	46717
5	ASSEMBLY, WIRING HARNESS, PS/2 ADAPTER	1	46716
6	ASSEMBLY, WIRING HARNESS, ELECTRONIC BOX	1	46715
7	FLAT WASHER, ZINC PLATED (M4)	8	21047-05
8	SOCKET HEX CAP SCREW, M4 x 0.7 x 10mm	4	21043-06-C
9	HEX NUT, ZINC PLATED, M4 x 0.7	4	21045-06
10	SOCKET HEX CAP SCREW w/ENCLOSURE BOX	4	M5X0.8X40MM
11	STRAP, CABLE RESTRAINING	1	45373
12	LOCKWASHER, SPLITLOCK, #4	2	21021-03-C
13	FLAT WASHER, ZINC PLATED, #4	4	21023-21
14	HEX NUT, ZINC PLATED, #4-40unc	5	21051-03-A
15	STAND-OFF PC BOARD, NYLON, #6-32unc	3	20081-93
16	PAN HEAD PHILLIPS SCREW, #6-32unc x 3/8	3	21029-34
17	ASSEMBLY, MOTHERBOARD	1	45829
18	ASSEMBLY, RELAY BOARD	1	46709
19	PAN HEAD SCREW, SELF TAPPING w/ENCLOSURE	2	#6-32UNCX1/2
20	SPACER, NYLON, PC BOARD	1	46711
21	BINDER HD SLOTTED SCREW, #4-40unc x 1	1	21060-11-C
22	LOCKWASHER, INTERNAL TOOTH, #4	1	21021-03-A
23	CABLE, RIBBON, (16) PIN	1	20070-16
24	CABLE, FLEXIBLE FLAT (33) PIN	1	20220-31
25	ASSEMBLY, WIRE HARNESS, PS/2 ADAPTER	1	46716
26	BOARD, V25 'CB' EPROM	1	46747
27	BOARD, V25 'YB' EPROM	1	46749
28	BOARD, TEMPERATURE CONTROL w/MICRO CHIP	1	46930
29	LOCKWASHER, SPLITLOCK, (M4)	4	21046-05
30	BINDER HEAD SLOTTED SCREW, #4-40unc x 1/2	2	21060-07-C
31	SCREWLOCK, FEMALE, w/ASSEMBLY #46717	2	#4-40UNCX1/4
32	ASSEMBLY, V25 SERIAL CABLE	2	46719
33	RETAINER, DAUGHTER BOARD	1	46697
34	ASSEMBLY, POWER TO RELAY WIRE HARNESS	1	46736
35	ASSEMBLY, RELAY TO BOARD WIRE HARNESS	1	46735
36	TIE-MOUNT, NYLON	3	20080-68
37	PAN HEAD SLOTTED SCREW, M4 x 0.7 x 12mm	2	21042-07-D
38	BINDER HEAD SLOTTED SCREW, #4-40unc x 3/8	2	21060-05-C
39	HEX NUT, ZINC PLATED, w/ASSEMBLY #46717	2	#4-40UNC
40	SUPPORT PAD, MOTHERBOARD	1	46769



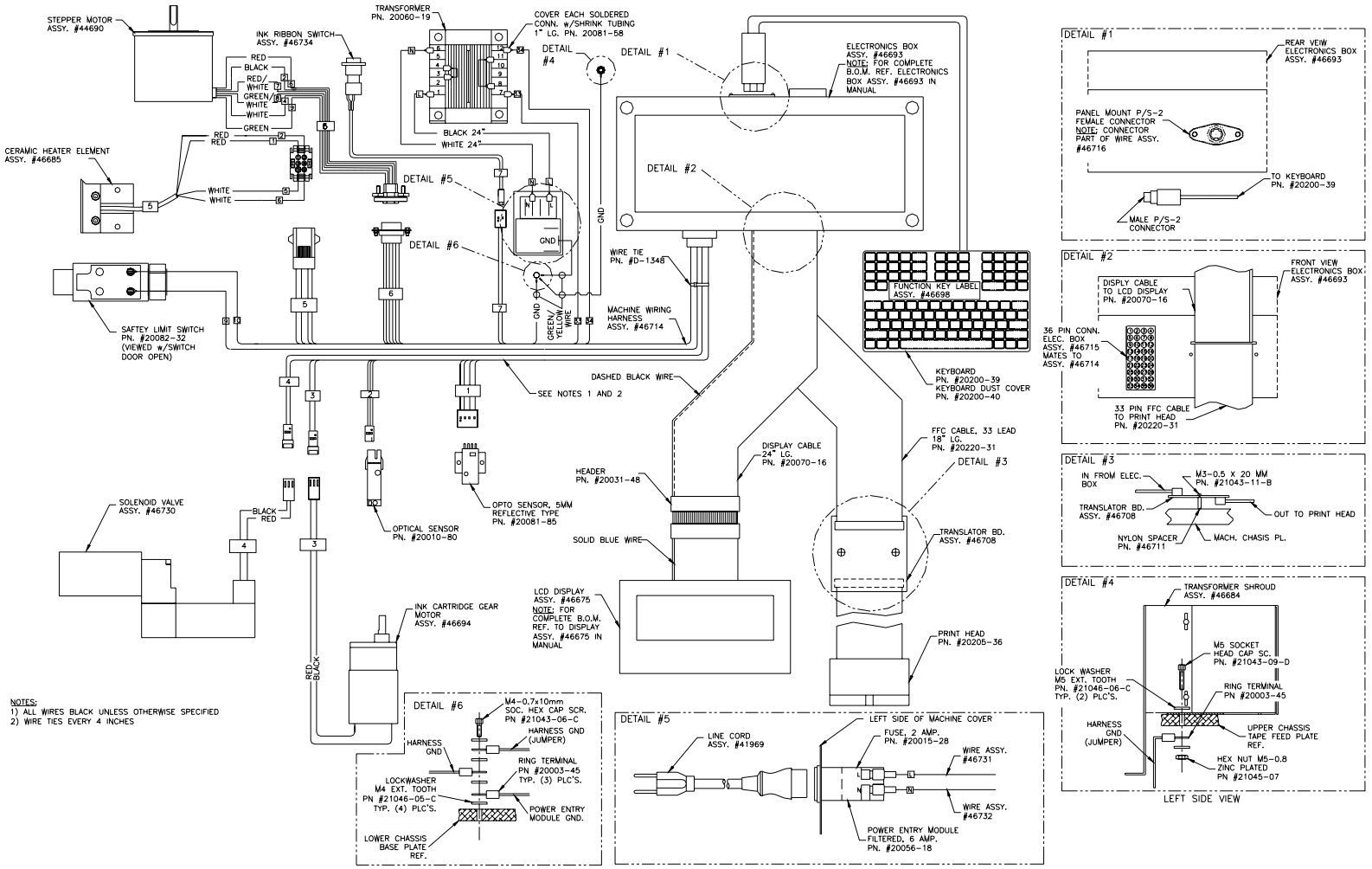
WIRING DIAGRAM – 230v

REVISION 030105



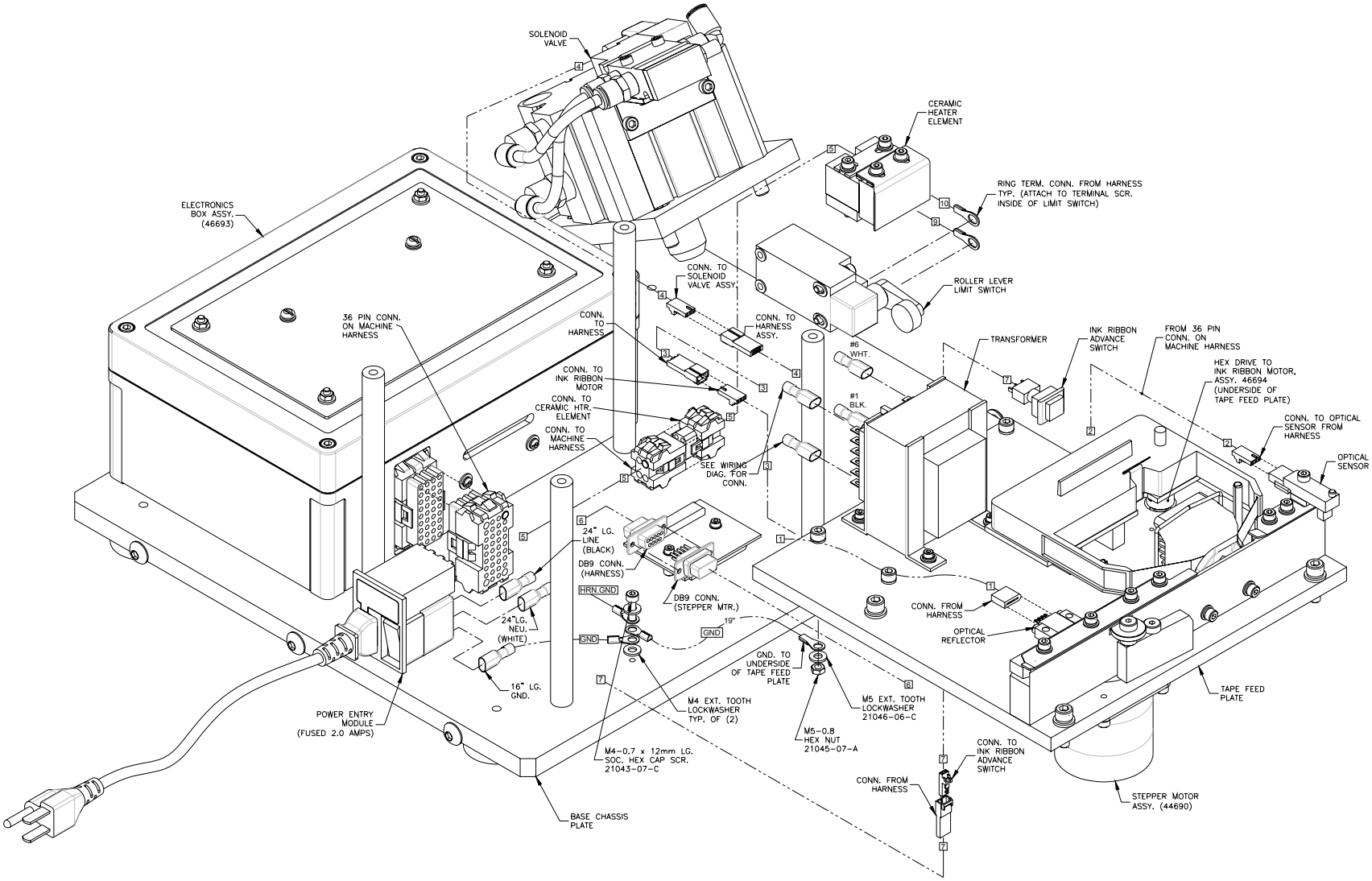
WIRING DIAGRAM – 115v

REVISION 030105



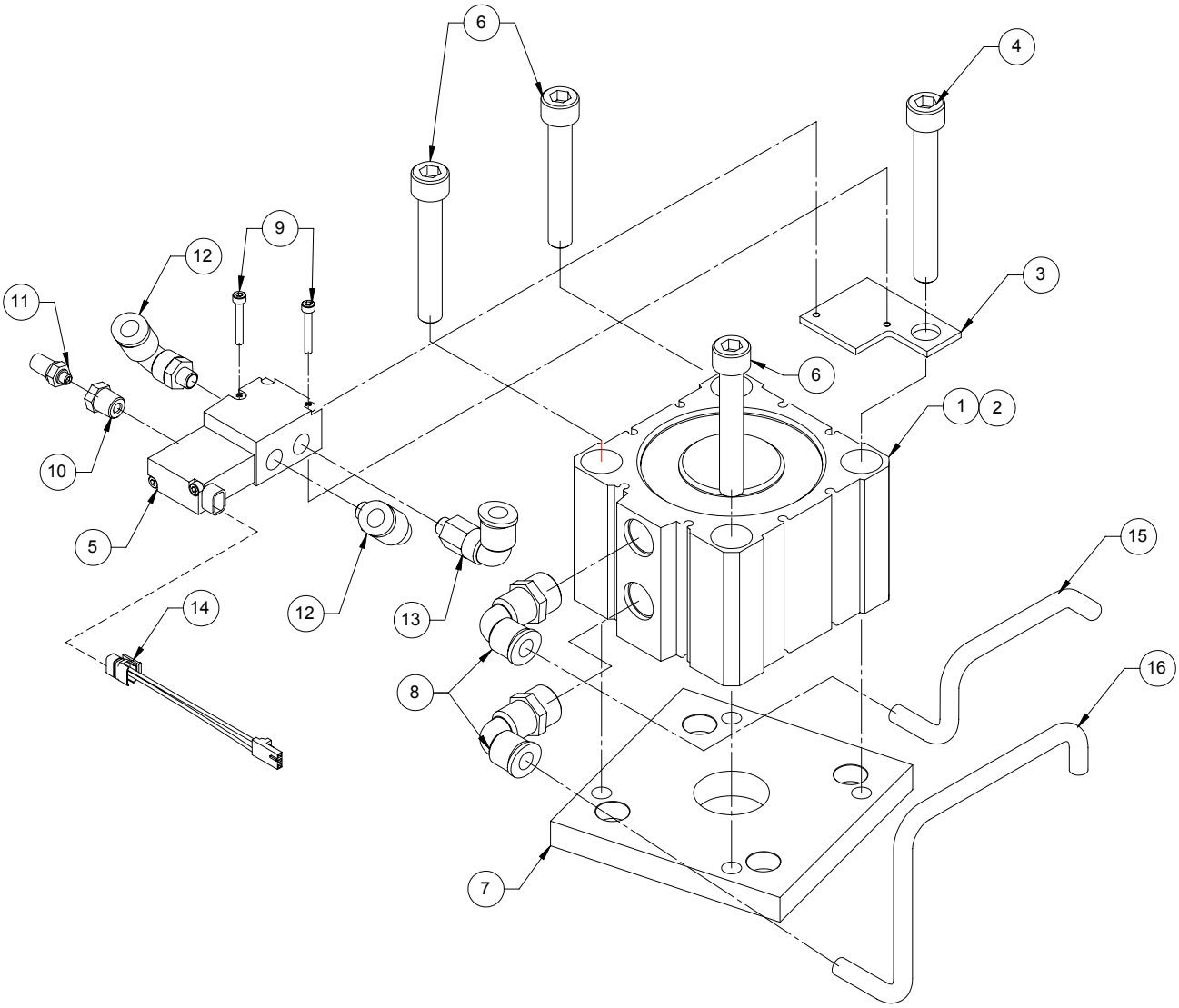
WIRING DIAGRAM – 100v

REVISION 030105



WIRE HARNESS ROUTING

REVISION 030105



PNEUMATIC COMPONENT ASSEMBLY

Assembly

46701

REVISION 030105

ITEM	DESCRIPTION	QTY.	PARTNUMBER
1	BODY, PNEUMATIC CYLINDER	1	22010-71-BODY
2	ASSEMBLY, PISTON ROD	1	22010-71-PISTON
3	PLATE, SOLENOID VALVE MOUNTING	1	46765
4	SOCKET HEX CAP SCREW, M10 x 1.5 x 80mm	1	21043-24-G
5	SOLENOID VALVE, (4) WAY (MAC VALVE)	1	22046-21
6	SOCKET HEX CAP SCREW, M10 x 1.5 x 65mm	3	21043-21-G
7	PLATE, CYLINDER ADAPTER	1	46645
8	ELBOW, 90° (SPC)	2	22030-66
9	SOCKET HEX CAP SCREW, M3 x 0.5 x 22mm	2	21043-12-B
10	ADAPTER, EXHAUST (POLYCONN)	1	22005-55
11	MUFFLER, EXHAUST, BRASS (ALLIED WITAN)	1	22046-19
12	ELBOW, 90° (SPC)	2	22030-64
13	ELBOW, 90Ø (SPC) LONG	1	22030-65
14	ASSEMBLY, MAC JACK PLUG	1	46766
15	TUBING, PNEUMATIC, (Ø8mm) (SPC)	1	22035-18
16	TUBING, PNEUMATIC, (Ø8mm) (SPC)	1	22035-18

PNEUMATIC COMPONENT ASSEMBLY

Assembly

46701

REVISION 030105

SECTION 5

PARTS REPLACEMENT & ADJUSTMENT

The following procedures may require some mechanical skills. The only necessary tools required for the following replacements are: slotted screwdriver, No.2.5, No.3, No.4 and No.5 metric hex wrenches. See Page 6-1 for customer service assistance or to order replacement parts.

HEATER SHIELD REPLACEMENT (2001 to 2003 Models)

REMOVAL

- Unload the label tape from the entry guide using the UNLOAD TAPE F4 function key.
- Turn the machine off and unplug the power cord; disconnect the air hose to the external air filter/regulator.
- Allow the ceramic heater to cool down before removal of the heater shield.

> **CAUTION: The operating temperature of the heater is around 350°F (177°C). Be sure the heater is cool before working on it.**

- Remove the machine top cover by loosening four button hex cap screws, (M8-1.25) with a No.5 metric hex wrench, two each side.
- Lift the top cover up off of the screws and set the top cover down resting on the heater mounting block behind the ceramic heater and heater shield.
- Remove the two socket hex cap screws, (M4-0.7) using a No.3 metric hex wrench. Retain the shim plate under the heater shield, it must be used again under the new heater shield.

HEATER SHIELD INSTALLATION

- Clean the face of the ceramic heater with a soft rag.
- Place down a small drop of thermal conductive grease (TP #23000-06) spread it on the front face of the ceramic heater, -- creating a thin film.
- Place your new heater shield on top of the ceramic heater,

aligning the slots in the heater shield with the tapped holes in the ceramic heater.

- Place a drop of Anti-seize, (copper grade) on each of the socket hex cap screws (M4-0.7) before screwing back into the ceramic heater.

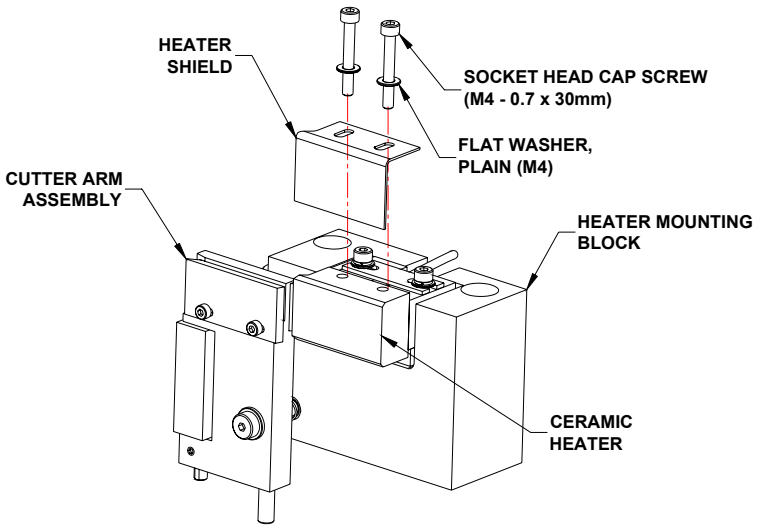


Figure 5-1 Heater Shield Replacement

Note, machines built prior to 2004 have a Heater Shield.

CASE REMOVAL/ INSTALLATION

Refer to Cover Assembly, Section 4 for part locations. Read the following instructions entirely before starting.

REMOVAL

- Unload the label tape from the entry guide using the UNLOAD TAPE F4 function key.
- Turn the machine off and unplug the power cord. Disconnect the air hose from the air filter/regulator.
- Allow the ceramic heater to cool down before going any further.
- IMPORTANT: Before lifting the case off the machine, remember that the air hose and keyboard cable is connected to the case. Take caution when removing the case so these items do not get damaged.

Remove the Tape Dispenser Rack and Top-cover first:

- Remove two button hex socket cap screws (M6-1.0) that mount the mount the tape dispenser rack to the bottom cover; use a No.4 metric wrench.
- Loosen four button hex socket cap screws (M8-1.25), two each side that holds the top-cover to the bottom-cover. It is not necessary to remove the screws.
- Unplug the LCD Display box by gently pulling the 16-pin cable up through the cable slot in the back of the machine cover. Disconnect the cable at the pin splice.
- Disconnect the keyboard plugged into the PS/2 connection on the back of the machine, -- electronics box.
- The top-cover is now free to be completely lifted off of the bottom-cover.

Remove the Bottom-Cover:

- Reach down through the top of the bottom-cover and disconnect the 8mm-air hose connected between the solenoid valve and the bulkhead fitting. It is easiest to make the disconnection at the solenoid valve air fitting.

- Loosen six button hex socket cap screws (M8-1.25), three each side; use a No.5 metric wrench. It is not necessary to remove the screws.

- Remove four button hex socket cap screws (m6 – 1.0) from the power entry plate to gain access to the power entry module; use a No.4 metric wrench. Carefully disconnect the two wires, (line and neutral) on the back of the module.

- Begin removing the bottom-cover by carefully tilting the back towards you and lifting upwards at the same time. The configuration of the bottom-cover will require working the opening in the top of the bottom-cover around the sealing arm and handles.

INSTALLATION

- Install the case in reverse of the case removal. When installing the machine case remember the wires and air tubing connected to it.

Install the Bottom-cover first:

- Begin installing the bottom-cover by tilting the back of the cover towards you and working the opening in the top of the bottom-cover over the sealing arm and handles. Once the cover is over the sealing arm and handles, the cover can come to rest upon the button hex socket screws (m8-1.25), three each side.

- Reconnect the two wires, (line and neutral) on the back of the power entry module, please refer to the wiring diagram, SECTION 4 of the manual. Attach the power entry plate to the side of the bottom-cover with the four button hex socket screws (M6 –1.0).

- Place the bottom-cover back down over the button hex socket screws (M8-1.25) three each side, and tighten them with a M5 metric hex wrench.

- Reach down through the top of the bottom-cover and re-attach the air-line 5/16 (8mm) from the bottom-cover

bulkhead fitting to the solenoid valve. Re-connect the air hose at the solenoid valve fitting.

Install the Top-Cover and Tape Dispenser Rack:

- Gently place the top-cover assembly down onto the bottom-cover. Make sure that the top-cover does not pinch the 16-pin ribbon cable going to the electronics box (the cable should be in the slot between the top-cover and bottom-cover of the machine.

- Plug the short 16-pin ribbon cable from the LCD Display Box into the 16-pin ribbon cable from the Electronics Box. Slide the remainder of the cable down through the slot in back of the machine covers.

- Plug in the Keyboard into the Electronics Box marked “Keyboard”.

- Mount the Tape Dispenser Rack with two button hex socket cap screws (M6-1.0). Use a M4 metric wrench.

- Tighten the four button hex socket cap screws (m8-1.25) – two each side, with a M5 metric wrench.

PRINT HEAD REPLACEMENT

Refer to Figure 5-4 and 5-5, page 5-7 for parts locations.

REMOVAL

- To replace the print head, the machine covers must be removed so the cable can be unplugged and reconnected. The print head cable plugs into the Translator Circuit Board and is located in the front on the machine chassis base plate. Follow the instructions on Page 5-3 and 5-4 for removal and installation of the machine covers.

- Unplug the print head cable from the connector on the Translator Circuit Board (see Figure 5-4). Pull the cable straight back out of the connector.

- Remove the ink cartridge (see Figure 5-4). Push the Ink Cartridge Mounting Clip towards the front of the machine and pull the ink cartridge straight up out of the machine.

- Rotate the Printer Head Retainer Spring forward away from the Printer Head.

- Carefully pull the cable out of the slot in the Tape Feed Plate behind the Printer Head and Printer Head Mounting Block. The Printer Head can now be removed from the Printer Head Mounting Block.

INSTALLATION

- Place the new Printer Head in where the old one was.

- Feed the Printer Head Cable down through the slot in the Tape Feed Plate.

- Plug the cable into the Translator Circuit Board connector; push it straight into the connector.

- Be sure that the Printer Head is placed in the proper position and is level.

- Rotate the Printer Head Retaining Spring back into place; this spring will hold the Printer Head in the correct position.

- Install the Ink Cartridge – make sure that the Ink Cartridge Retainer Clip is engaged.

- Install the machine case. Refer to Pages 5-3 and 5-4 for instructions on case installation.

- Note: the gap between the Printer Head Mounting Block and the inside face of the Tape Feed Guide is factory set at 0.050” [1.25mm].

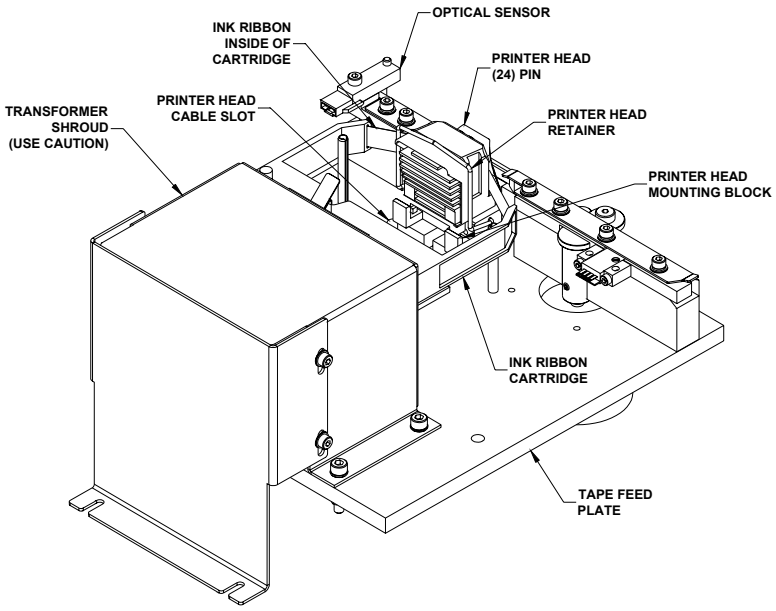


Figure 5-4 Removing and Installing Printer Head

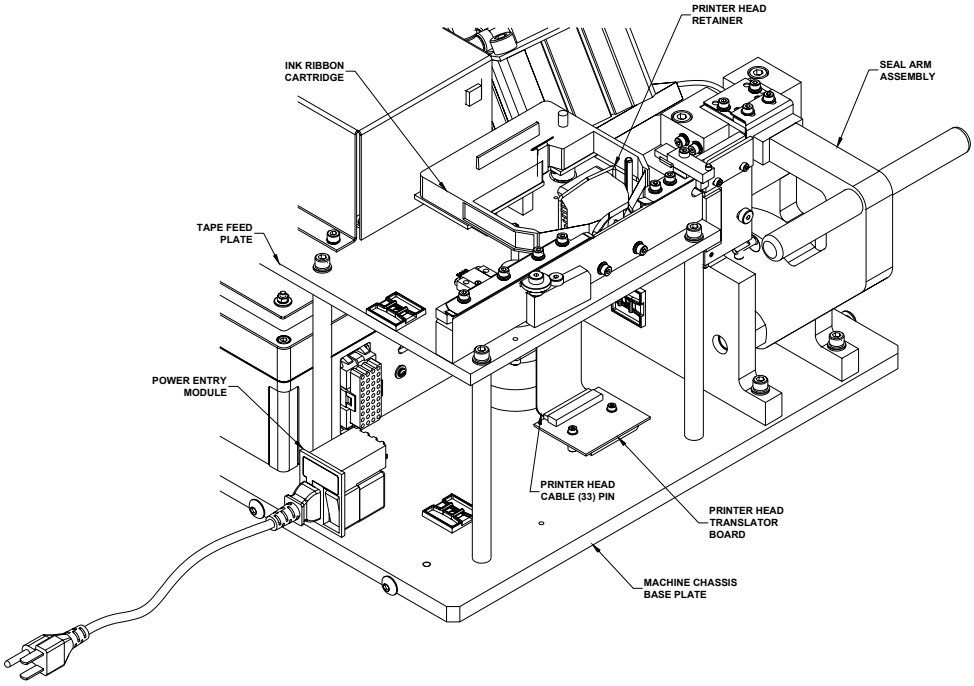


Figure 5-5 Removing and Installing Printer Head

CERAMIC HEATER REPLACEMENT

Refer to Figure 5-1 on Page 5-2 and Figure 5-6 on Page 5-9 for part locations.

To replace this item the machine covers must be removed. See Page 5-2 for instructions.

CERAMIC HEATER REMOVAL:

- Turn off the machine and unplug it from its power source. Allow the Ceramic Heater to cool near room temperature.
- Follow the wire bundle from the Ceramic Heater back and down to the connector plug at the side of the Sealing Arm Side Plate and Chassis Plate. Disconnect the connector plug.
- Carefully cut the wire tie that holds the wire bundle to the nylon wire anchor, -- mounted to the side of the Sealing Arm Side Plate.
- Remove the two stainless steel socket hex cap screws, (M4-0.7) that mount the Heater Shield the Ceramic Heater. Retain these parts for reinstallation. Note, this applies to machines built prior to 2004.
- Remove the two black oxide socket hex caps screws, (M4-0.7) that mount the Wire Strap and Ceramic Heater assembly to the Heater Mounting Block. Retain these parts for reinstallation.
- The entire assembly can be lifted away.

CERAMIC HEATER INSTALLATION:

- Mount the new Ceramic Heater assembly in the Heater Mounting Block with Wire Strap and two socket hex cap screws (M4-0.7).
- Mount the Heater Shield to the Ceramic Heater, refer to Heater Shield Installation page 5-1. Note, this applies to machines built prior 2004.
- Run the wire bundle from the new Ceramic Heater assembly down the side of the Sealing Arm Side plate and plug the connector into the Machine Wire Harness, -- the connector

plug will mate in one direction only.

- Anchor the wire bundle from the Ceramic Heater to the existing wire tie anchor, using a new wire tie.

- Replace the machine covers, and plug the machine into the power source.

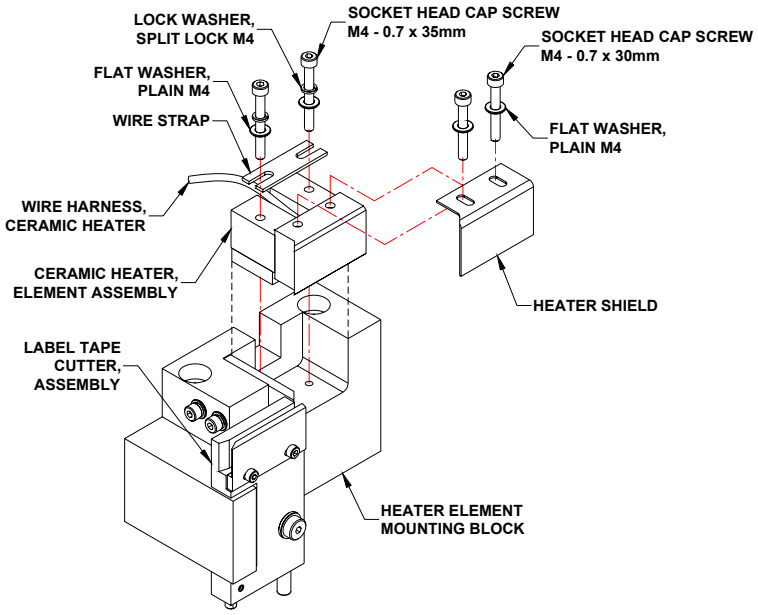


Figure 5-6 Ceramic Heater Removal and Installation

Note, machines built prior to 2004 have a Heater Shield.

MAIN CONTROL CIRCUIT BOARD REPLACEMENT

REMOVAL:

To replace the circuit board, three control settings need to be written down. These settings will be entered into the new circuit board. These are "head-photosensor", "printhead-cutter" and "cutter-heater"

Call Thermopatch for the password needed to access these settings.

- Turn the machine ON and load in label tape.
- Press the PASSWORD OPTIONS (F8) key on the keyboard.
- The display will read "ENTER PASSWORD", type in the password and press the ENTER key. If the password was entered correctly the display will read PASSWORD CORRECT for two seconds and then will read "seal - normal". If it does not, press the F8 key and enter the password again.
- Press the arrow up (⮝) key until the display reads "head-photosensor xxx". Record this number.
- Press the arrow up (⮝) key until the display reads "printhead-cutter xxx". Record this number.
- Press the arrow up (⮝) key until the display reads "cutter-heater" xxx". Record this number.
- Press the ESCAPE key on the keyboard and the display will read "ENTER=DO CHANGES F1=Y140 DEFAULTS".
- Press the ENTER key, the display will read "SAVING CHANGES".
- Now the circuit board can be removed.
- Refer to Page 5-3 for machine case removal instructions. Only the machine Top-Cover, Tape Dispenser Rack and Bottom Back Panel needs to be removed.
- The Main Control Board is accessible from back of the machine and contained in the Electronics Box.

- To remove the Electronics Box, remove the six button hex socket caps screws (M6-1.0) that hold the Bottom Back Panel in place; use a M4 metric wrench.

- From the top loosen, (do not remove) two pan head slotted screws (M4-0.7x12mm) that mount the Electronics Box to the Transformer Shroud; use a straight blade screwdriver.

- Carefully slide the Electronics Box out the back of the machine. The box is connected to a Machine Wire Harness and a Flexible Flat Cable (FFC). The harness and FFC are long enough to completely remove the box from the machine and disconnect the harness from the Electronics Box, and the FFC from the Translator Circuit Board.

- Open the lid to the Electronics Box by loosening the four captivated screws mounted in each corner of the box lid. Use a Phillips head or straight blade screwdriver.

- The circuit board is mounted in the base of the Electronics Box and held in place with three snap-in standoffs and one binder head screw (#4-40UNC). Remove the three daughter boards first; remove the pan head screw, washer and hex nut; disconnect the ground wire and wiring harness in the electronics box from the Main Control Board, -- noting the connector locations. Remove three pan head screws from the underside of the Electronics Box – these screws secure the snap-in standoffs to the bottom of the box. The Main Control Circuit Board can now be lifted from the Electronics Box enclosure.

INSTALLATION:

- Install the new Main Control Circuit Board, with three new snap-in standoffs in the correct location, pushing the standoffs into the hole until it has snapped into place – see figure 5-7, page 5-12.

- Reinstall the pan head mounting screw, nylon spacer, and ground wire, washer and hex nut for the Main Control Circuit Board. Be careful not to damage the Main Control Circuit Board during installation.

- Plug in all connectors and cables to their original positions, they are numbered to match the connector numbers on the circuit board.

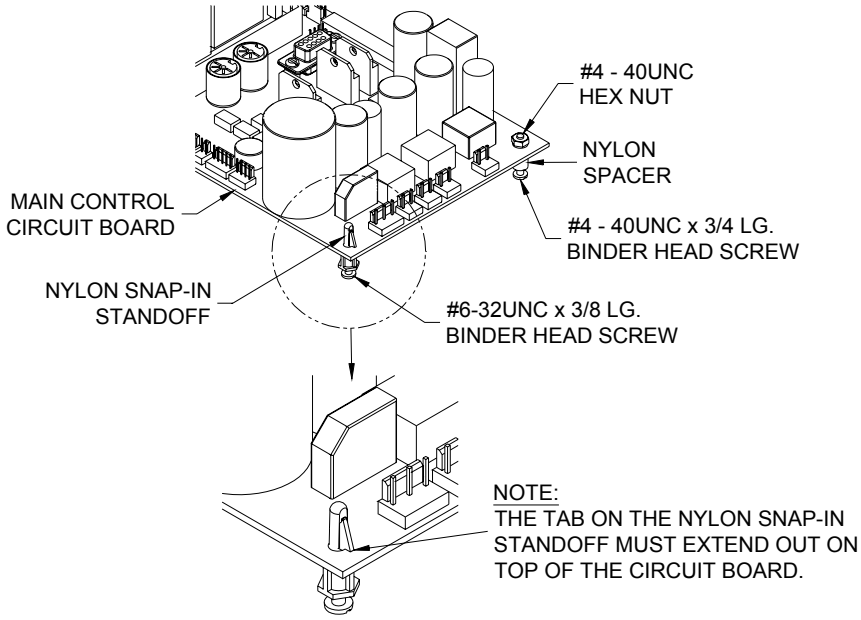


Figure 5-7 Installing Nylon Snap-in Standoff

- Install the box lid securing the lid with the four captivated screws. Slide the Electronics Box into the back of the machine, aligning the two socket hex cap screws with the slots in the Transformer Shroud. The back face of the Electronics Box should be flush with the edge of the Machine Chassis Plate.

- Connect the FFC cable to the Translator Circuit Board, and reconnect the machine harness to the Electronics Box.

- Carefully slide the Electronics Box back into the machine, aligning the two pan head slotted screws within the slots of the Transformer Shroud. The back face of the box should be parallel and flush with the back edge of the Machine Chassis Plate.

- Tighten the two screws in lid of the Electronics Box, holding the box in place; use a straight blade screwdriver.

- Mount the Bottom Back Plate and Top-Cover, turn the machine on and load the label tape into the machine.

- The settings that were written down before the old circuit board was removed must be re-entered into the machine. Press the PASSWORD OPTIONS (F8) key on the keyboard and the display will read "ENTER PASSWORD".
- Type in the password and press the ENTER key. If the password was entered correctly the display will read PASSWORD CORRECT for

two seconds and then will read "seal - normal". If it does not, press the F8 key and enter the password again.

- With the password entered correctly, press the arrow up (↑) key until the display reads "head_photosensor xxx".

- If the number in the lower left hand corner of the display does not match what you have written down, press the arrow right (→) key to increase the number value or press the arrow left (←) key to decrease the number value. Repeat the same for "printhead_cutter xxx" and "cutter_heater xxx".

- Press the Esc key and the display will read "ENTER=DO CHANGES F1=Y140 DEFAULTS".

- Press the RETURN key and the display will read "SAVING CHANGES" for a few moments and return to the beginning screen.

- Operate the machine to check that the new circuit board is installed and operating properly.

TAPE OUT SENSOR ADJUSTMENT

- To adjust the tape out sensor the only tool needed is a small straight blade screwdriver.

- Turn on the machine and open the lid on the Top-Cover exposing the Tape Guide and photo-sensors; there must be label tape in the Tape Guide to adjust the photo-sensor.

- Using a small screwdriver, turn the sensitivity adjustment screw until the sensor reads the tape, and the red LED light on the tape sensor goes out.

- UNLOAD the label tape using the F4 key, and reinsert the end of the tape into the Entry Guide. The label tape will automatically advance into the Tape Guide when the sensitivity of the reflective photo-sensor is set correctly. See figure 5-8, page 5-14.

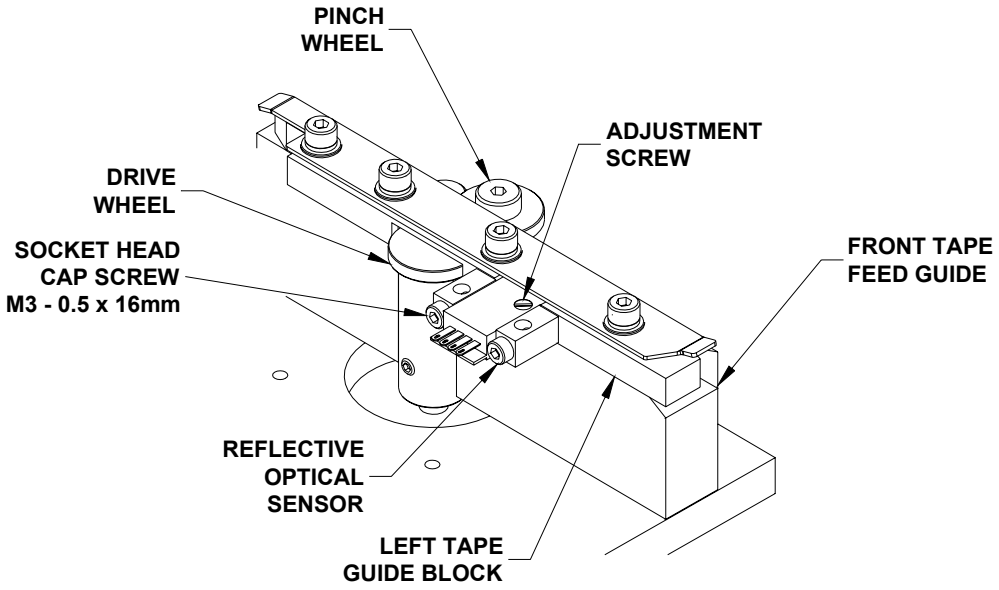


Figure 5-8 Tape-Out Sensor Adjustment

CUTTING SHEAR ADJUSTMENT

The shear cuts the label tape prior to being sealed. When the shear is out of adjustment, cutting the label tape may become difficult and possibly effect sealing of the label tape. Refer to Figure 5-9, page 5-15 showing the Cutting shear.

To adjust the Cutting Shear, first turn off the power to the machine, and unplug it from the receptacle. The Top-Cover to the machine also needs to be removed. See Page 5-3 for complete instructions.

- Loosen the two socket hex cap screws (M3-0.5) using a M2.5 metric hex wrench.
- Rotate the sealing arm forward and slide a small piece of paper between the Cutting Shear. Check to see how much of a gap there is between the paper and Cutting Shear.
- Adjust the gap of the Cutting Shear by sliding it towards the right until the shear just touches the piece of paper.
- Tighten the two socket hex cap screws (M3-0.5) using a M2.5 metric hex wrench.
- Reinstall the Top-Cover to the machine and plug it back into the power receptacle

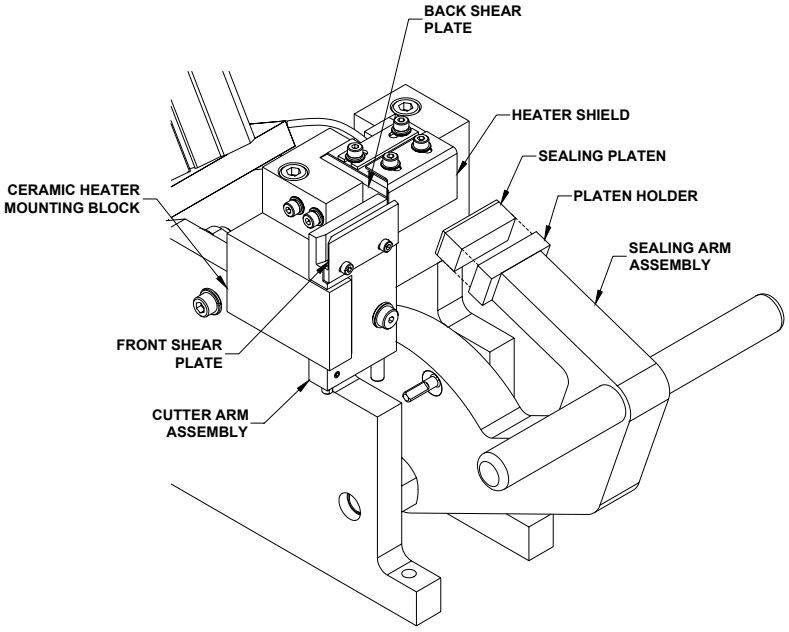


Figure 5-9 Cutting Shear Adjustment

SEALING PLATEN REPLACEMENT

Use a screwdriver to pry the old sealing platen out of the retainer. Being careful not to cut the edges, press the new sealing platen into place. Seal a few times (with the power on) to make sure the platen is correctly seated.

Thermo-Seal Supplies

Available directly from Thermopatch or your local authorized Thermopatch Distributor

Thermopatch

SECTION 6

Thermopatch Corporation's U.S. and International network of sales representatives, as well as its internal Customer Service Department, offer their assistance in the development of effective heat-seal mending, marking, and identification programs.

Thermopatch markets a complete line of heat-seal and marking machines, as well as a complete line of materials and supplies.

- Label Printing Machines: manual, automatic, and computer controlled.
- Marking Machines: high-speed permanent imprinting of decorative or informative marks on most woven fabrics.
- Heat-Seal Machines: manual, semi-automatic, and completely automatic, with high inter-platen pressure to assure excellent adhesion of label tapes and mending materials.
- Mending Materials: hundreds of weights, colors, weaves, and fibers to match most industrial and institutional fabrics.
- Label Tapes: Specially woven 100% cotton and blends with adhesives to match specific processing requirements.
- Emblems: high quality blank emblems with screen print or merrowed borders.
- Hot Paper Transfers: in sizes from 1 to 100 square inches in rolls or cut and stacked. Custom or stock designs in one to four colors.

When ordering machine parts, please include model and serial number of the equipment.

In U.S.A.: Thermopatch Corporation
P.O. Box 8007
Syracuse, New York 13217-8007
Phone: 315-446-8110
Fax: 315-445-8046
Toll Free: 1-800-252-6555 (USA only)

SECTION 6

In Canada: Thermopatch (Canada) Inc.
25 Groff Park, Unit 5
Kitchener, Ontario N2E 2L6
Phone: 519-748-5027
Fax: 519-748-1543
Toll Free: 1-800-265-6416 (Canada only)

In Australia: Thermopatch (Australia) Inc.
Unit 9, 477 Warrigal Road
Moorabbin, Victoria 3189
Phone: 011-61-3-532-5722
Fax: 011-61-3-532-5652

Netherlands: Thermopatch BV
Draaibrugweg 14
P.O. Box 50052
Almere 1332 AD
Netherlands
Phone: 011-31-36-549-1122
Fax: 011-31-36-532-0398

Germany: Thermopatch Deutschland GMBH
Werner-Von-Siemens-Strasse 3A
Postfach 1522
Stuhr 28805
Germany
Phone: 011-49-421-56481
Fax: 011-49-421-56822

France: Thermopatch France
7 Rue Chappe-Z.I. Des Garennes
B.P. 1011
Les Mureaux Cedex 78131
France
Phone: 011-33-1-3022-0808
Fax: 011-22-1-3022-1866

Internet address: http://www.thermopatch.com

Engineering Change Order

Number **3034**

NEW ITEM: YES: ____ NO: ✔

ISSUED BY: **PDM** DATE: **03/09/2005**

APPROVED BY: _____ DATE: **03/09/2005**

MACHINE MODEL **Y140b - Rabbit 2 (110v & 220v)**

SERIAL NUMBERS AFFECTED: **See note below**

SUMMARY OF CHANGE **REVISION TO OPERATOR's MANUAL**

Sheet **1** of **1**

PART #	DWG SIZE	E – EXPLANATION D – DESCRIPTION R - REASON	REV LTR	DISP. CODE
46724		**E** Miscellaneous revisions to the Operator's Manual, and revised	**note**	4
		manual format to PDF on Compact Disc media.		
		NOTE: THIS IS REVISION 030105		
		D Added color front cover sheet to manual.		
		Added color Thermo-Seal Supplies sheet to manual, between		
		Section 5 and Section 6		
		Section 4, page 4-5 : changed Bill Of Material item #5 from		
		part #45858 to part #47004 (new Customer Service part)		
		Section 4, page 4-12 : changed Bill Of Material item #35 from		
		part #46695 to part #44690 (Stepper Motor Assembly).		
		Section 5, pages 5-2, 5-9 and figures 5-1 & 5-6 : added the		
		following notation; Note, machines built prior to 2004 have a		
		Heater Shield.		
		Section 5, page 5-1 : changed section heading from		
		Heater Shield Replacement to Heater Shield Replacement (2001		
		to 2003 models)		
		Section 5, page 5-8 : section heading Ceramic Heater Installation		
		added notation; Note, this applies to machines built prior to 2004.		
		R Revised to eliminate typographical errors and comply with machine		
		enhancements.		
		This Engineering Change Notice effects the following Serial No's		
		110v Machines: 4410072 onward		
		220v Machines: 4420471 onward		

DRAWINGS AFFECTED

TYPE	SCHEMATIC	ASSEMBLY DWG.	PARTS KIT	USER MANUAL	SYSPRO
NUMBER				**46724**	**Y140b**
AFFECTED?	**NO**	**NO**	**NO**	**YES**	**YES**
STATUS				**COMPLETE**	**COMPLETE**

DISPOSITION OF INVENTORY CODE:

1. USE AS IS/ NO ACTION REQUIRED
2. REWORK PARTS ONLY
3. REWORK ALL EQUIPMENT IN HOUSE
4. USE EXISTING INVENTORY TO DEPLETION
5. USE ONLY UNTIL NEW PARTS ARE AVAILABLE
6. SCRAP AND REORDER
7. MANUFACTURING TO ADVICE
8. OTHER

ACCOUNTING	✔	PRODUCTION CONTROL	✔	ASSEMBLY	✔	PRODUCTION MANAGER	✔	MANUFACT. LEADER	
INSPECTION		PURCHASING	✔	CUSTOMER SERVICE	✔	RESEARCH MANAGER		SUPPLY	

ECNFORM:RI 3/14/02