



#45-930

#45-935

Shielded Twisted Pair (STP)

Cable Stripping System

For 115V or 230V

Operation Manual



Shielded Twisted Pair (STP) Cable Stripping System

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Introduction

The IDEAL Shielded Twisted Pair Cable Stripping System (STP) is a programmable bench top machine that accurately removes the outside jacket from shielded twisted pair cable. The STP addresses occupational ergonomic needs by offering an alternative to manual stripping methods which are known to have contributed to cumulative tissue trauma.

The STP system automatically adjusts to the size of the cable being stripped up to a maximum diameter of 0.3125 inches. Cable strip length is programmable by inches or millimeters. The strip length is adjusted in preset increments from a minimum of 1-1/4 inches to a maximum of 6.00 inches. A strip operation cycle can be completed in as little as five seconds.

The large, easy-to-read display shows the operating function status and facilitates program entry. A memory module stores up to 500 user defined "batch" programs and incorporates a battery back-up system. A service machine message can be programmed for display when the machine completes a preset amount of operations. All operating parameters can be secured from unauthorized modifications by a programmable security code. The intuitive front panel keypad provides tactile feedback and is highly resistant to harsh industrial environments.

The STP stripping system consistently produces quality levels achieved in the aerospace industry. With its wide array of powerful features, the IDEAL STP is extremely flexible, simple to program and easy to use.



Caution and Safety Instructions

Please read, understand and follow the warnings and instructions in this manual. Failure to do so can result in serious personal injury.

- Do not alter, modify or misuse the machine.
- Do not operate the machine using an ungrounded electrical system.
- Do not perform any maintenance on the machine unless both the electrical power and air supply are disconnected.
- Do not operate the machine in a damp, wet, gaseous, hazardous or poorly ventilated work environment.
- Do not obstruct any ventilation or air flow around the machine.

CAUTION – Hazardous parts inside, refer servicing to qualified service personnel.

CAUTION – Blade area can create high temperatures; refer servicing to qualified service personnel.

CAUTION – Use proper heavy lifting procedures.

Environmental Conditions

Indoor use only

Altitude up to 2,000m

Temperature 5°C to 40°C

Maximum relative humidity 80% for temperatures up to 31° decreasing linearly to 50% humidity at 40°C

Mains voltage fluctuations not to exceed ±10% of normal voltage

Insulation Category II

Pollution degree 2

 Unit can produce sound levels greater than 85 dB, proper hearing protection is required.

Warranty & Service Policy

Each unit is warranted to be free from defects in materials and workmanship under normal use and service for a period of 12 months after the date of purchase. The obligations of IDEAL under this warranty shall be limited to repairing at the Sycamore, Illinois manufacturing facility any unit which shall, within the 12 month period, be returned to us with the transportation charges prepaid, and with our examination shall disclosed to our satisfaction to have been defective. This warranty shall not apply to any model which has been altered or repaired outside the factory in any way so as to affect its operation nor which has been subject to misuse, negligence, accident or installed or operated in any other way than in accordance with our instructions, nor shall this warranty extend to repairs or replacement made necessary by the use of accessories not recommended by IDEAL.

Unpacking

The IDEAL Shielded Twisted Pair (STP) Cable Stripping System is shipped in protective foam packaging. You may wish to save this packaging for future transportation.

The STP unit is equipped with a power cord, air hose, slug tray, IDEAL T®-Cutter Lite wire cutter, keys, key chain, air regulator kit and an operation manual.

Lifting Instructions for the STP

Locate the front and rear of the machine. The front of the machine has the keypad and display. Position the machine so the front of the machine is pointing to your left and the rear of the machine is to your right. Also position the machine as close to your body as possible. Place your left hand underneath the bottom plate and center it between the two front rubber feet. Place your right hand underneath the bottom plate and center it between the two rear rubber feet. Pull the machine up and toward your body. When carrying the STP, always keep the machine as close to your body as possible.

Note: Where ever possible, lift with your legs slightly bent and your back straight (vertical). Lift the load by straightening your legs not by pulling up with your arms.

Description	Cat. No.
STP, 115 VAC, 60 Hz 4A	45-930
STP, 230 VAC, 50 Hz 2A	45-935
Power Cord	K-6773
T®-Cutter Lite	45-260
Air Hose	K-6865
Slug Tray	IA-3124
Air Regulator	45-906
Operation Manual	ND-3514
Security keys	1301.012
IDEAL Key Chain	99-020

STP Service Setup (Qualified Service Personnel)

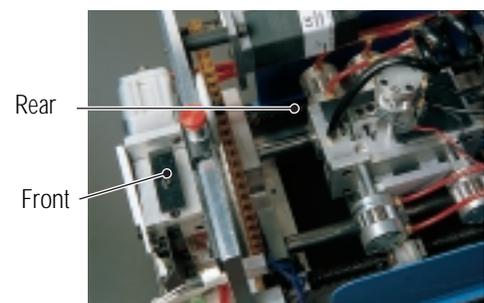
The STP front cover is secured with two (2) screws for shipping. Remove the screws from lower right and left sides of cover before opening lid.

Gripper pad pins are secured with plates for shipping. Remove these plates from both front and rear gripper pad housings before machine use.

NOTE: Do not invert the unit after shipping plates have been removed. Gripper retaining pins will fall out when inverted.

Close cover and replace screws removed.

Install slug tray - Insert the long screws provided, tighten.



STP Service Setup Continued

Electrical Connection Requirements

Voltage Selection

The STP operates on either 115V/230V AC; 45-930, 115V AC 4A 60 Hz ; 45-935, 230V AC 2A 50 Hz. Proper voltage will be preset at the factory.

Fuse Replacement

Disconnect power cord and remove the fuse cartridge using a small blade screwdriver or similar tool. Replace two fuses with recommended fuses. 45-930, 4AT 250V, 1/4" x 1-1/4"; 45-935, 2AT 250V, 5 mm x 20 mm, insert the fuse cartridge back into the unit making certain the proper voltage is selected.

On-Off Switch — Located on the back of the unit, the on/off switch controls the main electrical power supply.

Air Connection Requirements

Connect 1/4" coiled air hose to the air inlet fitting located on the back of the unit. This is a reusable compression type fitting.

To connect air hose:

1. Disconnect electrical power supply.
2. Connect the air hose by inserting it firmly into compression fitting.

Air must be clean, dry and pressure regulated to **100 PSI**.

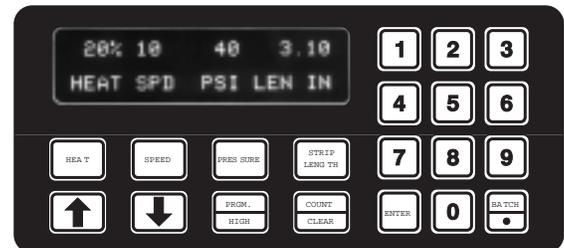
The STP consumes approximately 50 cubic inches (about .03 cubic feet) of compressed air per cycle. Total air volume consumed depends on frequency of operation.

To disconnect air hose:

1. Disconnect electrical power supply.
2. Disconnect air supply.
3. Depress the red ring and pull on the air hose.

STP Operating Principles and Terms

The following section describes the basic principles of operation of the 45-930, STP. The STP uses a combination of four variables to perform each strip. It is important to understand each of these four control parameters and how they interrelate to obtain the desired stripping results. The four variables are **HEAT**, **SPEED**, **PRESSURE** and **STRIP LENGTH**. Each variable is described in terms of settings, ranges and effects on stripping. The individual variable settings may affect the other variables and the final stripping results. Please refer to the "Electrical Controls" section for instructions on how to regulate each setting via the control panel.



HEAT: Thermal Blade

The **HEAT** setting controls the level of power (heat) directed to the blades during the thermal cutting phase of the stripping cycle, with **10%** being lowest heat and **100%** highest. The STP may also be operated with a heat setting of **0%**, which runs the unit through a complete cycle without using the blades. This is intended to pull off a slug that has already been cut either by the STP or manual methods.

Since the STP is a thermal stripper, heat plays a very important role in the stripping process. Insulation materials have a wide variety of melting temperatures, requiring the STP to produce a full range of blade **HEAT** settings. The melting temperature of an insulation material, high or low, must be consistently matched by the STP blade heat setting for a successful stripping operation.

Another important factor is the rate at which the blade heat penetrates the insulation material. A tendency may be to strip at the highest blade heat available. This produces two undesirable results. First, the higher blade **HEAT** setting is inversely proportional to blade life. Second, the blade may displace the insulation material too quickly, producing an excessive amount of contact with the inner shield. For these reasons it is important to correlate the blade **HEAT** setting with the blade rotation **SPEED** setting.

STP Operating Principles and Terms (continued)

SPEED: Thermal Head Rotation

SPEED refers to the rate of rotation by the Thermal Head of the STP. This is the rate at which the blades are rotated about the wire being stripped. The slowest speed is 1 and 10 the highest.

Running at a faster speed requires a higher blade heat setting which may shorten the blade life. A superior strip quality is obtained at lower blade **HEAT** and **SPEED** settings. However, the various types and thicknesses of insulation material requires a wide variety of **HEAT** and **SPEED** setting combinations (to avoid touching the inner braid).

PRESSURE: Rear Grip Mechanism

The **PRESSURE** setting regulates the air pressure delivered to the internal, rear grip mechanism. This mechanism is used to pull the stripped slug off the wire. Based on a line pressure of **100 PSI**, which is required for operation of the unit, the internal rear grip can be set to operate from **5 PSI** to **100 PSI** in increments of **5 PSI**. Various insulation materials and shield types require varying grip pressures to obtain optimal slug removal results. The rest of the machine runs on a constant **100 PSI** line pressure.

Having air pressure controlled electronically allows the STP to use a variable amount of grip force to hold the insulation slug while trying to pull off the slug. This is important for three reasons. First, various materials adhere to the braid differently and require more or less grip pressure to be pulled from the shield. Excessive grip pressure increases internal friction between the slug and shield, preventing removal of the slug. Second, different materials have varying coefficients of friction with the grip pads. This creates the need for a wide variety of grip **PRESSURE** settings. Finally, the strip length affects the amount of grip pressure required.

STRIP LENGTH

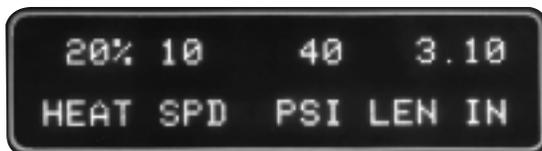
The strip length range of the STP is from **1.25 to 6.00 inches (31 to 150 mm)**. It can be set in increments of **.01 in. or 1 mm**. The strip length required for a given wire is a user-defined variable.

Longer or shorter strip lengths may require varying grip **PRESSURE** settings. Once the STP is set to strip 3.00 inches or longer the grip **PRESSURE** setting remains fairly constant for a given wire type. However, when stripping less than 3.00 inches it may be necessary to increase the grip **PRESSURE** setting. This is due to the fact that the internal, rear grip mechanism is about 4.00 inches long and consists of separate pressure points. When less than 3.00 inches is to be removed, the grip mechanism is not fully utilized and may require a higher **PRESSURE** setting to accomplish the task.

Any given wire may be successfully stripped over a range of setting combinations. It is important to look at all of the variables and resulting performances in order to select the combination that best suits the specific stripping requirements.

IDEAL INDUSTRIES, INC. offers free application assistance... for immediate assistance, call our technical service hotline at 1-800-338-4495.

STP Operation



Example: Ready Mode Display

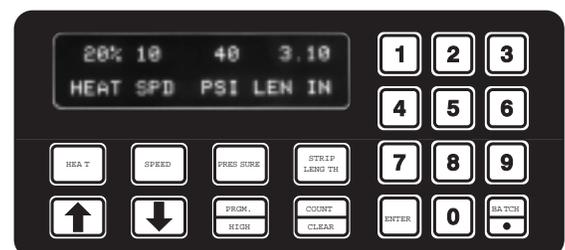
When the machine is turned on, the software version is briefly displayed followed by the machine initializing.

Then the Machine Status display appears showing the present settings. During operation there are three different status displays: **READY MODE**, **"ENTER VALUE"** (a value is being entered or the machine is adjusting to a new value) and **"CYCLE IN PROGRESS"** (the machine is in a strip cycle).

At this point, you can proceed stripping wire, enter new values or retrieve a preset batch with different settings.

Use the following procedures to change the machine settings via the control panel keeping in mind the "Operating Principles and Terms" described on page 4, while selecting process variables.

All control settings can be set by either using the arrow keys or setting discrete values on numeric key pad.

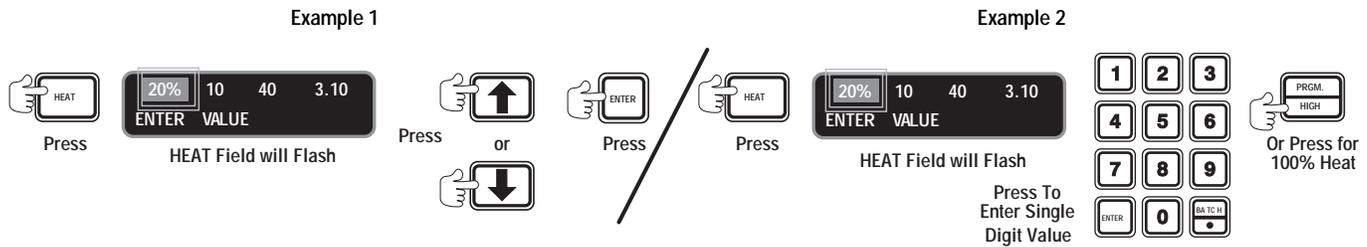


STP Operation continued

Heat Adjustment

Heat can be adjusted by pressing [0] through [9] producing corresponding heat values of 0% through 90%. Pressing **HIGH** sets the heat at 100%. If the heat is set at 0%, the machine completes the cycle without using the blades. The heat can also be adjusted by pressing **HEAT** and using the [↑] and [↓] keys. The heat is adjusted from 0% to 100% in increments of 10%. Pressing the **ENTER** key exits from the heat entry mode and returns to the ready mode.

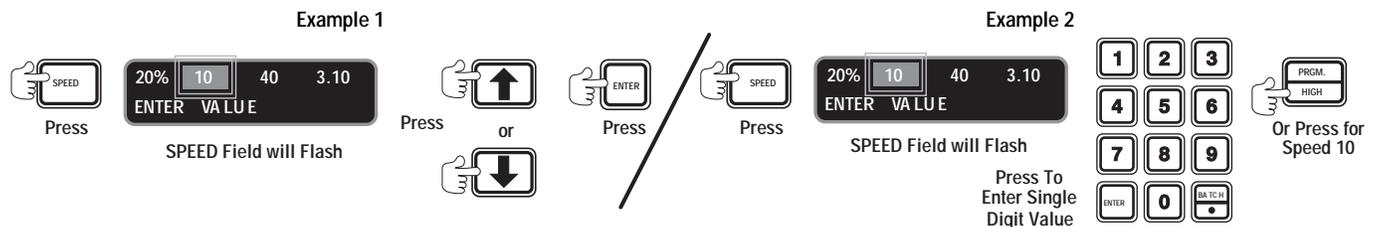
If **CLEAR** is pressed during a **HEAT** entry, it returns to the beginning of the **HEAT** entry mode. If **CLEAR** is pressed at the beginning of the **HEAT** entry mode, it exits the **HEAT** entry mode and the previous settings are returned.



Thermal Head Rotation Speed Adjustment

Speed can be adjusted by pressing [1] through [9] corresponding to speeds 1 through 9, and pressing **HIGH** for speed 10. The speed at which the thermal blades rotate around the wire being stripped can also be adjusted by pressing **SPEED** and using the [↑] and [↓] keys. The speed is set from 1 to 10, the fastest setting being 10. Pressing the **ENTER** key exits from the speed adjustment mode and returns to the run mode.

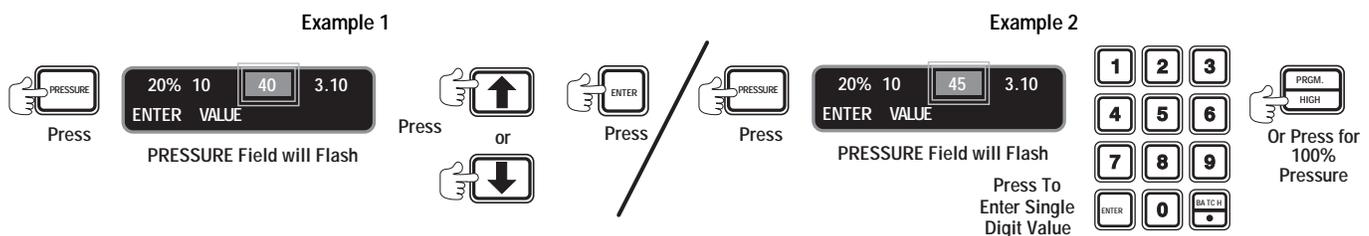
If **CLEAR** is pressed during a **SPEED** entry, it returns to the beginning of the **SPEED** entry mode. If **CLEAR** is pressed at the beginning of the **SPEED** entry mode, it exits the **SPEED** entry mode and the previous settings are returned.



Pull Grip Pressure Adjustment

Pressure can be adjusted by pressing the numbers corresponding to pressures 05% through 95%, pressing **HIGH** sets the pressure at 100%. **EXAMPLE: press [4] then [5] to get pressure at 45%.** The pressure can also be adjusted by pressing **PRESSURE** and using the [↑] and [↓] keys. Pressure can be adjusted from 5 to 100 PSI in increments of 5 PSI. Pressing the **ENTER** key exits from the pressure entry mode and returns to the ready mode.

If **CLEAR** is pressed during a **PRESSURE** entry, the display returns to the beginning of the **PRESSURE** entry mode. If **CLEAR** is pressed at the beginning of the **PRESSURE** entry mode, the display exits the **PRESSURE** entry mode and the previous settings are returned.



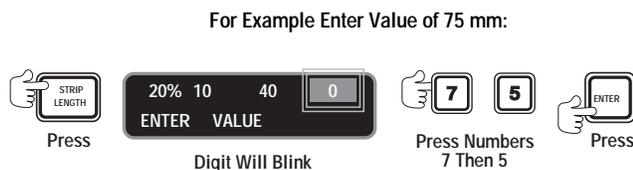
STP Operation continued

Strip Length Adjustment, *by Discrete Value*

METRIC LENGTH MODE (31 mm to 152 mm)

- Press **STRIP LENGTH**.
- The strip length display will blink.
- Enter the strip length and then press **ENTER**.

A strip length is automatically entered after a third digit is pressed.



ENGLISH LENGTH MODE (1-1/4 inches to 6.00 inches)

- Press **STRIP LENGTH**.
- The first digit will blink. Press the appropriate number key and it will be entered.
- Press the decimal point.
- The tenths digit will blink, press the appropriate number key.
- Next the hundredth position will blink, press the appropriate number key.
- After typing the hundredth position, the new strip length is set.

If at any time during the strip length entry **ENTER** is pressed, the current strip length will be set. If **CLEAR** is pressed during a strip length entry, it returns to the beginning of the strip length entry mode. If **CLEAR** is pressed at the beginning of the strip length entry mode, it exits the strip length entry mode and the previous settings are returned.

For Example Enter Value 3.25 Inches:



Strip Length Adjustment By Increment

While in the ready mode, the strip length can be changed up or down by increments using the [↑] and [↓] keys. Programming the increment is explained in the **Set** section of **Program**.

In either of the strip length entry methods, the strip length is checked. If the strip length is invalid, an appropriate message appears and the previous strip length is displayed.

Cycle Mode

NORMAL STRIP CYCLE

- To select a new cycle mode, press Program/High
- Enter in the 3-digit security code



Note: All units are factory preset to a 3-digit security code of "111." To make any changes in the Program Mode the security code must be entered.

- The display will show
 - 1 - Test
 - 2 - Set
 - 3 - Mode
 - Clear_Esc
- Select [3] for Mode
- Select [1] NORMAL CYCLE MODE
- Press count/clear on your key pad
- Self Check - Press enter and hold to display batch number and selected cycle mode.
- Insert wire for normal cycle mode
- Remove wire when cycle is completed

STP Operation continued

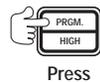
TWO STAGE CYCLE

The TWO STAGE CYCLE is intended to break the STP's stripping cycle into two separate stages; stage one is for cutting, stage two is removal. When the cable is inserted, the first stage will thermally cut the insulation. When this stage is completed and the cable is removed, the cable can be inspected for a complete cut, or the cable can be flexed to insure a complete cut has been achieved. When the cable is re-inserted into the STP, the slug is removed thus completing stage two. Some insulations will require all material to be separated prior to the removal stage. Between the two stages the display will show that the cable must be re-inserted to complete the cycle or the cycle may be terminated by pressing clear.

- To select a new cycle mode
Press PROGRAM/HIGH
Enter in the 3-digit security code

Note: All units are factory preset to a 3-digit security code of "111." To make any changes in the Program Mode the security code must be entered.

- The display will show
1 - Test 2 - Set
3 - Mode Clear_Esc



- Press [3] for mode
- The display will show
[1] - Normal [2] - Two Stage
[3] - Double Cut
Select [2] for Two Stage Mode
- Self Check - Press enter and hold to display batch number and selected cycle mode.
- Insert wire into wire port. Note: This stage will cut only the outer insulation.
- Remove cable from unit, inspect and possibly flex to insure all material has been separated to complete the cut.
- Re-insert wire into port to complete second stage. Note: Slug is removed in this stage.
- Remove wire from port.

DOUBLE CUT CYCLE

The DOUBLE CUT CYCLE is designed to make two cuts in the jacket and then remove the outer most slug while leaving the inner most slug in place to protect the braid. The length of the inner slug can be selected. The total of the two slug sections is equal to the overall strip length value.

- To select a new cycle mode
Press PROGRAM/HIGH
Enter in the 3-digit security code



Note: All units are factory preset to a 3-digit security code of "111." To make any changes in the Program Mode the security code must be entered.

- The display will show
1 - Test 2 - Set
3 - Mode Clear_Esc
- Press [3] for Mode
- The display will show
[1] - Normal [2] - Two Stage
[3] - Double Cut
Select [3] for Double Cut
- Set Slug length for Double Cut 0.00 in. - The tenths digit will be blinking, when this value is entered, the hundredths place will blink. After the hundredths place is entered the value is automatically entered. Due to the nature of the double cut cycle, some combinations of strip lengths and slug lengths cannot be performed.
- Press Count/Clear on your key pad
- Self Check - Press enter and hold to display batch number and selected cycle mode.
Note: Slug length too long for strip length - This message appears on the screen when the cycle is triggered. The cycle will not run. When the system receives a trigger, an audible tone will beep and the above message will continue to be displayed on the screen for two seconds. The system then returns to the ready mode. In order to get a Double Cut cycle to run, one must increase the strip length or decrease the slug length until an acceptable combination is reached. Min. 1.25 strip length.
- Insert wire for double cut cycle mode
- Remove wire when cycle is complete.

STP Operation continued

Set Mode

1—INCR 2—CODE 3—UNIT
4—LOCK OUT 5—COUNT

1 — STRIP LENGTH INCREMENT

SET STRIPLength
INCREMENT 0.00 IN

SET STRIPLength
INCREMENT 0 MM

This allows programming the strip length in increments by using the arrow keys to increase or decrease the length appearing on the display.
ENGLISH LENGTH MODE - (0.01 in. to 0.99 in.) The tenths position begins blinking. After the tenths digit is entered, the hundredth position blinks. After the hundredth digit is entered the unit will automatically return to ready mode.
METRIC LENGTH MODE - (1 mm to 99 mm) Enter the increment length, 1mm to 9 mm, and press **ENTER**. Increment lengths of 10 mm to 99 mm are automatically entered after being typed in.

2 — SECURITY CODE

ENTER NEW CODE
NEW CODE =

Enter the new 3-digit code. CLEAR can be pressed any time during this process and the current 3-digit code is restored.

3 — SELECT UNITS (IN/MM)

SELECT
1—ENGLISH 2—METRIC

This allows the selection of English or metric units. Press [1] for English or [2] for metric.

4 — KEYBOARD LOCKOUT

LOCK OUT
1—LOCK ON 2—LOCK OFF

This allows locking out everything on the keyboard except for calling up batches and adjusting the strip length. Press [1] for lock on or [2] for lock off.

5 — COUNTS

There is an 8-digit counter that starts at 0 when the machine is built and counts every cycle. This counter is nonresettable. There is a 6-digit counter that counts every cycle and is resettable.

[1] (**Warning On**) activates the "SERVICE MACHINE" warning that appears at the end of a cycle if the resettable count is equal to or above the limit that has been set.

[2] (**Warning Off**) disables the "SERVICE MACHINE" warning.

[3] (**Set Service Limit**) allows setting the limit of cycles to when the warning should go off (from 0 to 999999). This also is a reminder to reset the count.

[4] (**Clear Service Count**) resets the count.

1—WARN ON 2—WARN OFF
3—SET LIM 4—CLR CNT

When the service count is reached a warning is flashed at the end of every cycle if the "warning on" is set.

The counts can be displayed during the ready mode by pressing and holding down **COUNT**. When the **COUNT** key is released, the display returns to the ready to strip mode.

STP Operation continued

Batching

Storing a Batch

- Press **BATCH**
- Press **PROGRAM**
- Enter the 3-digit security code
- Enter in the batch number for storage
- Press **ENTER**



All of the current inputs are then stored in this batch. Press CLEAR to exit to the ready mode.

Retrieving a Batch

- Press **BATCH**
- Enter in the batch number to be retrieved.
- Press **ENTER**



If the batch number is valid, the values of that batch are put in as the new setting and the machine resets itself. Press CLEAR to exit to the ready mode.

Batch Number Identification

From the ready mode depress and hold down the enter button.

On the top line the batch number will be displayed.

The display will read either:

BATCH #NNN (where NNN = the actual batch number)

or if batch is not currently running;

NO BATCH IS RUNNING

On the second line of the display the type of operating cycle is displayed.

One of the following three cycle types will be displayed.

NORMAL CYCLE

TWO STAGE CYCLE

DOUBLE CUT CYCLE

This status screen will be displayed until the enter button is released.

STP Service (Qualified personnel only)

The quantities listed are replacement parts needed per unit. The quantities needed depend upon machine usage.

Test Mode

This mode is used to test the systems sensor functional components. Each option is explained in next section.

- To select test mode
Press PROGRAM/HIGH
Enter in the 3-digit security code
- Display will show
1 - Test 2 - Set
3 - Mode Clear_Esc
Press [0] to review the six options
Press [1] for test



0 — TEST THE SENSORS

This option tests any of the five sensors. Each of six options may be selected in the same manner as before. The six options are listed below.

1 — BLADE HOME SENSOR

(senses if the thermal blades are at home)

2 — GRIP HOME SENSOR

(senses if the pull cylinder is forward)

STP Service continued

3 — GRIP BACK SENSOR

(senses if the pull cylinder is back)

4 — TRIGGER SENSOR

(senses if the trigger is being pressed)

5 — WIRE OUT SENSOR

(senses if the wire is out of the insertion hole)

6 — SENSOR TEST OFF

(turns all sensor tests off)

If a sensor test is enabled a tone sounds when the test conditions are present. When a sensor test is enabled all other sensor tests are disabled. To return back to the test mode, press **CLEAR**. The sensor test will remain enabled when returning back to the test mode, but will be disabled once the test mode is exited.

0 — TEST THE SENSORS

A list of options, 0 to 11, will appear on the display by using the [↑] and [↓] keys.

1 — AIR BLAST

(toggles the air blast on and off)

2 — PULL CYLINDER

(toggles the pull cylinder forward and back)

3 — CHUTE

(toggles the chute opened and closed)

4 — TRIGGER

(toggles the trigger up and down)

5 — REAR GRIP

(toggles the pull clamp opened and closed)

6 — FRONT GRIP

(toggles the front clamp opened and closed)

7 — WIRE GATE

(toggles the entry hole open and closed)

8 — BLADE ROTATION

This routine is used rotate the thermal blades around. This can be done in three ways.

1 — **FULL** (rotates the thermal blades a full cycle)

2 — **HALF** (rotates the thermal blades a half cycle around the wire and when the decimal point is pressed it will finish the cycle)

3 — **STEP**

[↑] — **CCW** (by pressing the [↑] key the thermal blades rotate around in the counter clockwise direction)

[↓] — **CW** (by pressing the [↓] key the thermal blades rotate around in the clockwise direction)

CLEAR — (the thermal blades are rotated back to home, one level back)

CLEAR — (pressing the **CLEAR** key a second time brings the thermal blades into a full home position and the program back to the test mode)

9 — STRIP POSITION

[↑] — **BK** (moves the set plate toward the back of the machine)

[↓] — **FWD** (moves the set plate toward the front of the machine)

CLEAR — (brings the program back to the test mode)

10 — BEEPER

(turns the beeper on and off. This will not work with a sensor test on)

11 — BLADE HEAT

(toggles the blade heat to the current heat setting)

Recommended Replacement Parts

The quantities listed are spare parts needed per unit. The quantities needed depend upon machine usage.

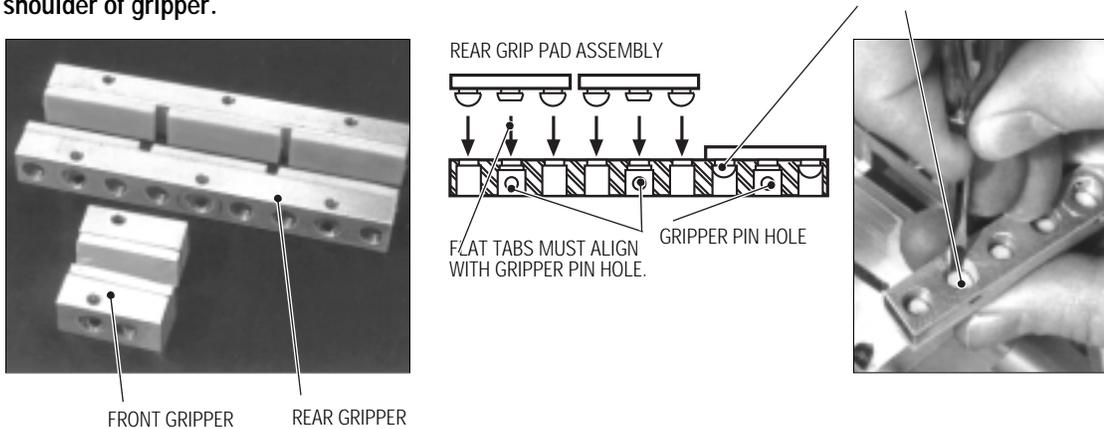
Name	Part No.	Quantity Per Unit
Blade Set	K-7763	1
Front Grip Pad	LA2408	2
Rear Grip Pad	LA2414	6

STP Operation continued

Gripper Pad Replacement

The STP has two sets of grippers. The front grippers hold the wire while the rear grippers pull off the slug. Both sets of grippers have pads that require periodic replacement.

NOTE: To replace pads press caps firmly in place, then use a small screwdriver to pop up the tops so they catch on the inner shoulder of gripper.



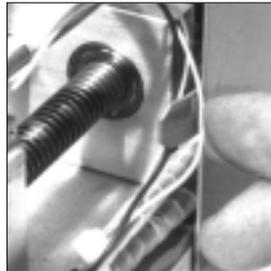
Front Gripper Pad Replacement

1. Disconnect power
2. Disconnect air
3. Open case
4. Remove screw and top plate

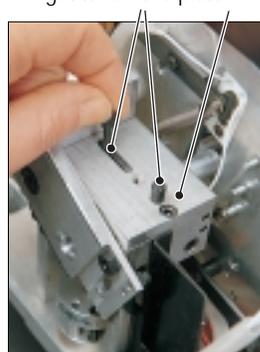
NOTE: Open case by removing screws, pressing buttons and lifting lid.



NOTE: When closing the lid, make sure all wires and air hoses do not interfere.



5. Pull out the 2 gripper pins. Remove screw and pull plate and up to the right to remove plate.

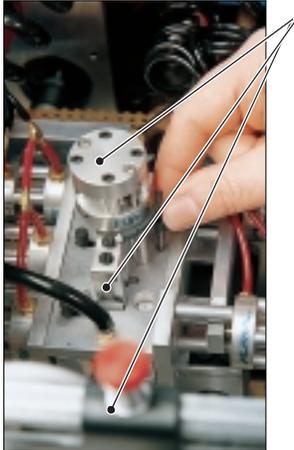


6. Remove grippers.
7. Pull off old pads and replace with new set.
8. Replace grippers. Install left gripper pad on to cylinder adapter and replace grip pin. Locate right gripper and replace grip pin.
9. Replace top plate, screw and gripper pins.

STP Service continued

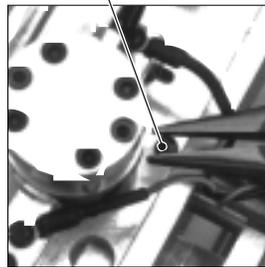
Rear Gripper Pad Replacement

1. Disconnect power
 2. Disconnect air
 3. Open case
- ⚠ Caution blades may be hot.

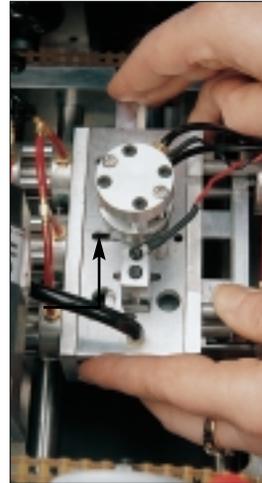


4. Move pull cylinder all the way forward. This allows removal of the gripper pads toward the rear.
5. *Pull out grip pins. Moveable gripper has 3 grip pins. Stationary gripper has 1 pin.

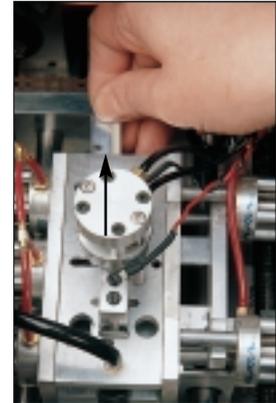
A NEEDLE-NOSE PLIER MAY BE USED TO REMOVE THE PINS.



6. Remove grippers. Stationary gripper slides straight out. Moveable gripper must be removed from cylinder adapter and then slid straight out.



MOVE TO RIGHT, THEN TO REAR

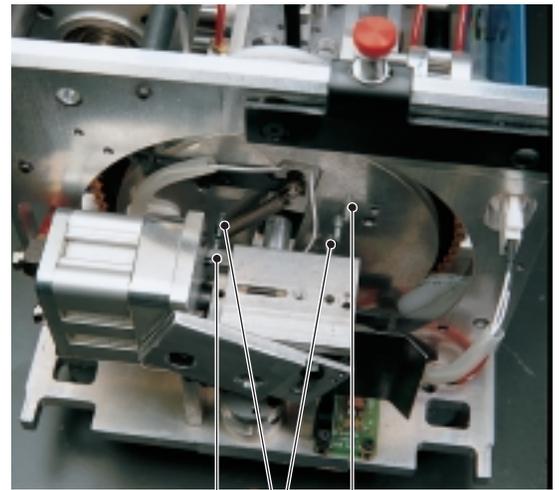


7. Replace pads. Refer to diagram.
8. Replace grippers.
9. Replace pins.
10. Close case
11. Connect power
12. Connect air

Tension Springs

Tension springs control the blade pressure on the cable insulation.

1. Disconnect power
2. Disconnect air
3. Open case
Caution: Blades may be hot.
4. Remove one end of spring from current spring post with needle nose pliers to the desired position. Note: Be sure to rotate thermal head assembly area to adjust both springs equally.
Low position – extruded insulation
Medium position – wrapped insulation
High position – wrapped insulation
5. Close case
6. Connect power
7. Connect air



Gripper Pins

STP Service continued

Blade Replacement

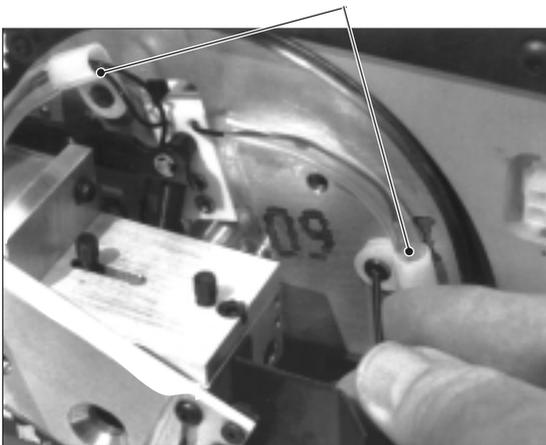
1. Electronically set strip length to 6". This moves the stop bar all the way back allowing more room to replace the blades.
2. Disconnect power. (rear gripper will retract all the way back).
3. Disconnect air.
4. Open lid. Note: Open lid by pressing button and lifting lid.
5. Unplug blade electrical connection and cut off connector (a new connector is supplied with replacement blade set).



CUT OFF CONNECTOR



6. Remove the two hold-down clamps.



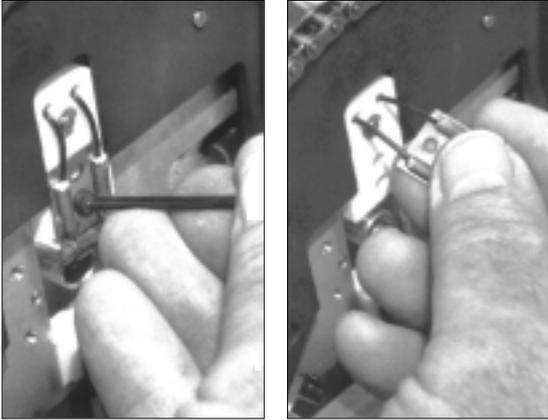
7. Unplug the wire connection between the two blades (inside silicone tube).



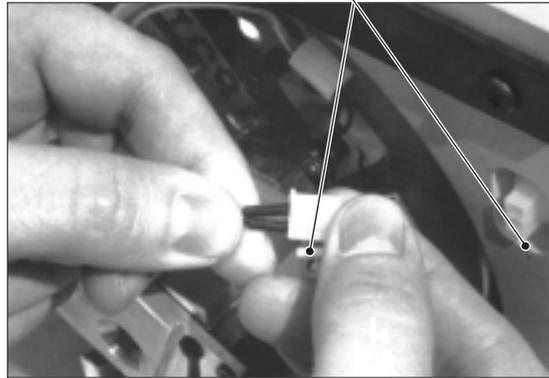
STP Service continued

Blade Replacement

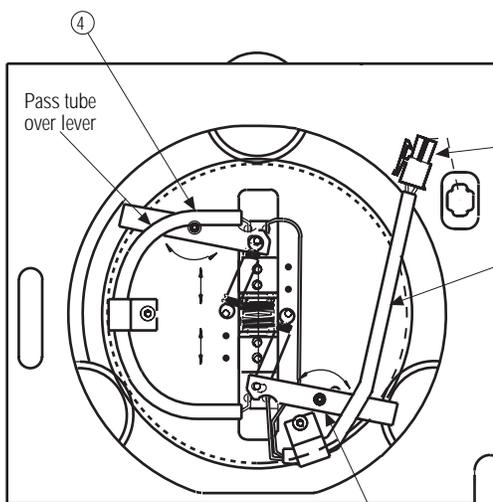
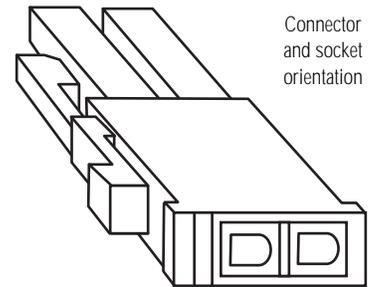
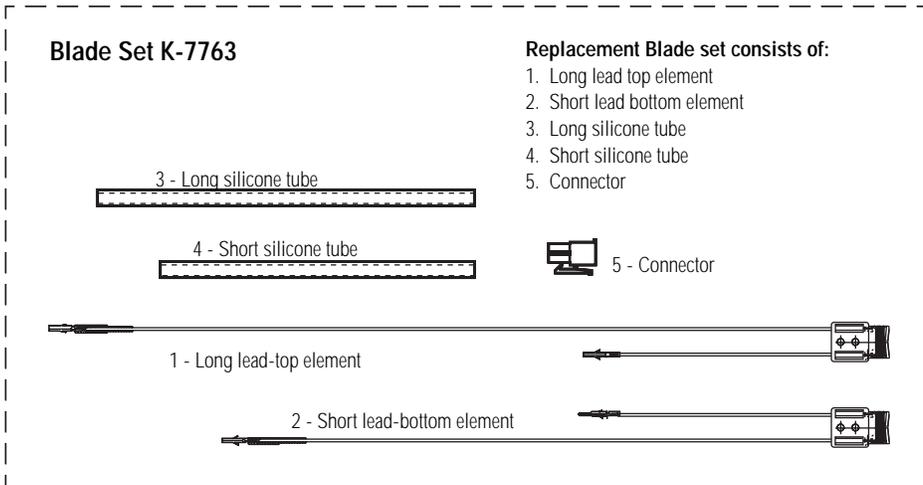
- 9. Remove the four #4-40 socket head screws positioning blades.
- 10. Pull elements guiding lead wire through holes.



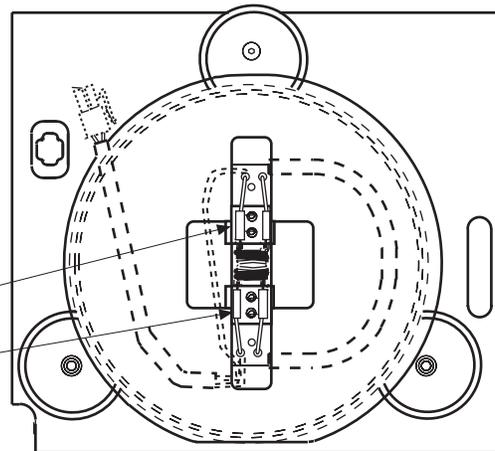
- 11. Reverse the process by feeding the new blade wires through the holes and silicone tubes.
- 12. Replace the four #4-40 socket head screws for positioning blades.
- 13. Connect the two short leads inside silicone tube.
- 14. Pass the two long leads through the long silicone tube and plug into its electrical connection. NOTE: alignment of connector pin.
- 15. Check blade assembly to make sure it has free blade movement.
- 16. Close lid making sure all wires and air hoses do not interfere.
- 17. Connect air and power.



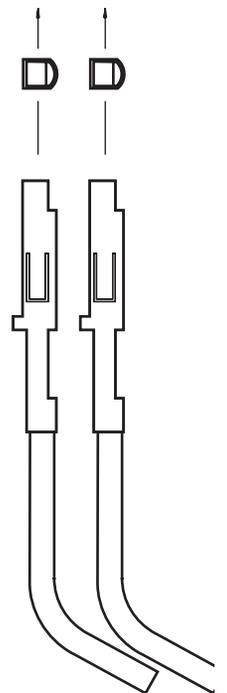
SILICONE TUBE NOT SHOWN FOR CLARITY.



Front View



Rear View



STP Service continued

CPU Module Replacement

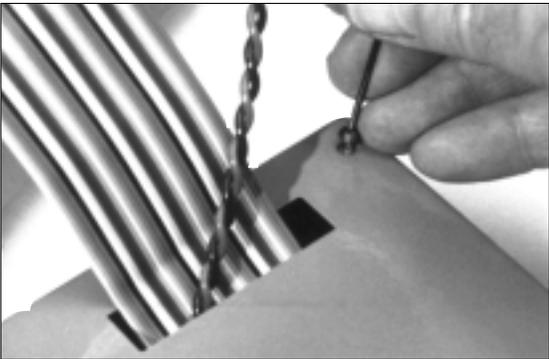
The CPU Module (Central Processing Unit) and the Power Module are not field repairable, they must be returned to IDEAL for service.

The CPU is located behind the faceplate on the inside of front lid.

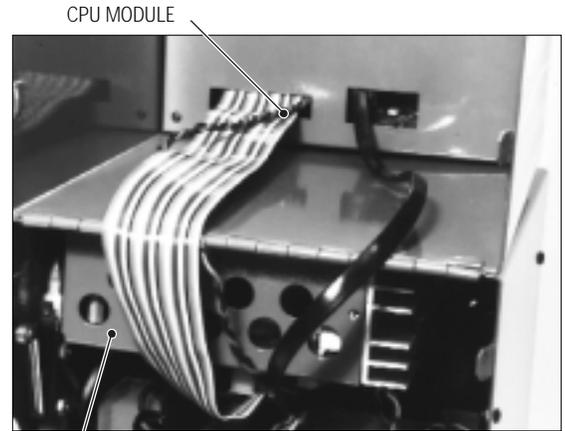
1. Disconnect power.
2. Disconnect air.
3. Open front lid all the way so that it rests on top of rear cover.
4. Remove the six #8-32 button head screws from faceplate.



5. Lay module flat and remove the four screws from the back of the CPU and lift cover off.

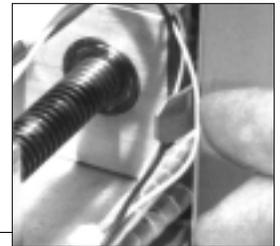


7. Replace cover and return entire module to IDEAL for service.
8. Reverse process to replace module.

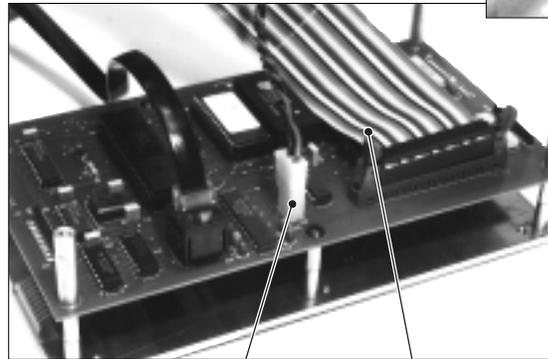


POWER MODULE

NOTE: When closing the lid, make sure all wires and air hoses do not interfere.



6. Disconnect ribbon cable, 2 wire cable and pull wires out of cover.



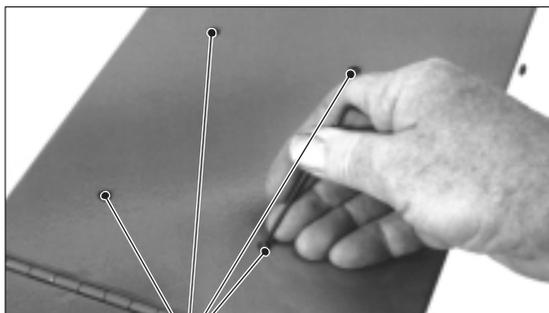
TWO WIRE CABLE

RIBBON CABLE

Power Module Replacement

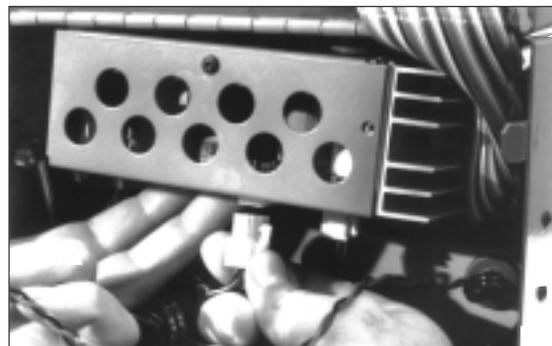
The Power Module is attached to the top of rear cover.

1. Disconnect power.
2. Disconnect air.
3. Remove the five #8-32 button head screws from the rear panel and remove rear panel.
4. Open lid and support Power Module while removing the four #6-32 button head screws from top of rear cover.



REMOVE 4 SCREWS

5. Slide ribbon cable to side and remove module while disconnecting the five plug-in electrical connections



6. Return entire module to IDEAL for service.
7. Reverse process to replace module.

STP Service continued

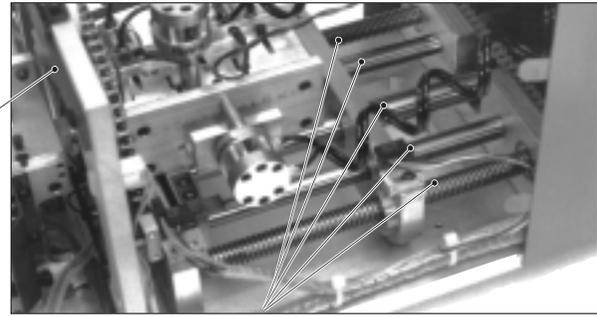
Preventative Maintenance

The STP requires very little maintenance aside from changing blades and gripper pads.

Visually inspect threaded rods and guide rods. If they look dry, lubricate with a light machine oil.

Remove slug debris from unit.

Replace nylon cable chains (2) as required.



OIL RODS WHEN DRY

Cleaning Your STP

Note: Disconnect power and air when cleaning the unit.

Clean front gripper pads and holder with rubber roller cleaner.

Clean rear gripper pads and holder with rubber roller cleaner.

Remove debris from both front and the backside of the entry gate with a clean cloth.

Empty the Isug tray in a timely manner.

Clean the outside case of the STP with mild detergent.

Changing Slug Tray Location

The STP slug tray may be repositioned:

1. Disconnect power.
2. Disconnect air.
3. Do not invert machine or gripper pins might fall out.
4. Remove screw, move to opposite side.
5. Secure slug tray by replacing screw.

Tips and Trouble Shooting

Always disconnect power and air when servicing the unit. Please read the Operation Manual thoroughly before attempting to operate the STP.

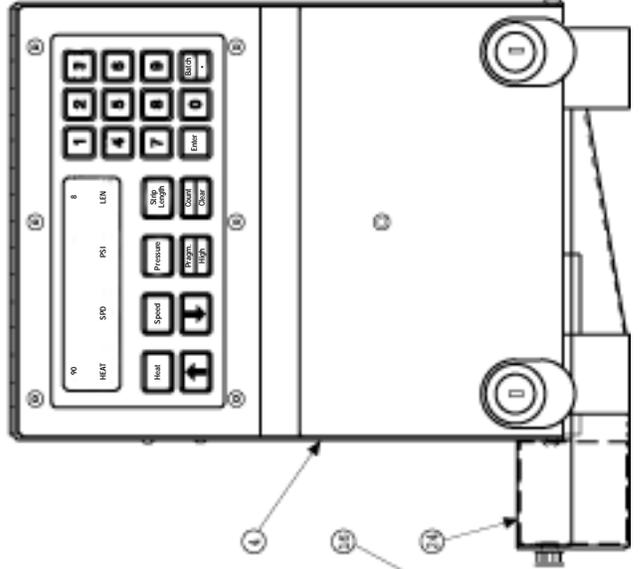
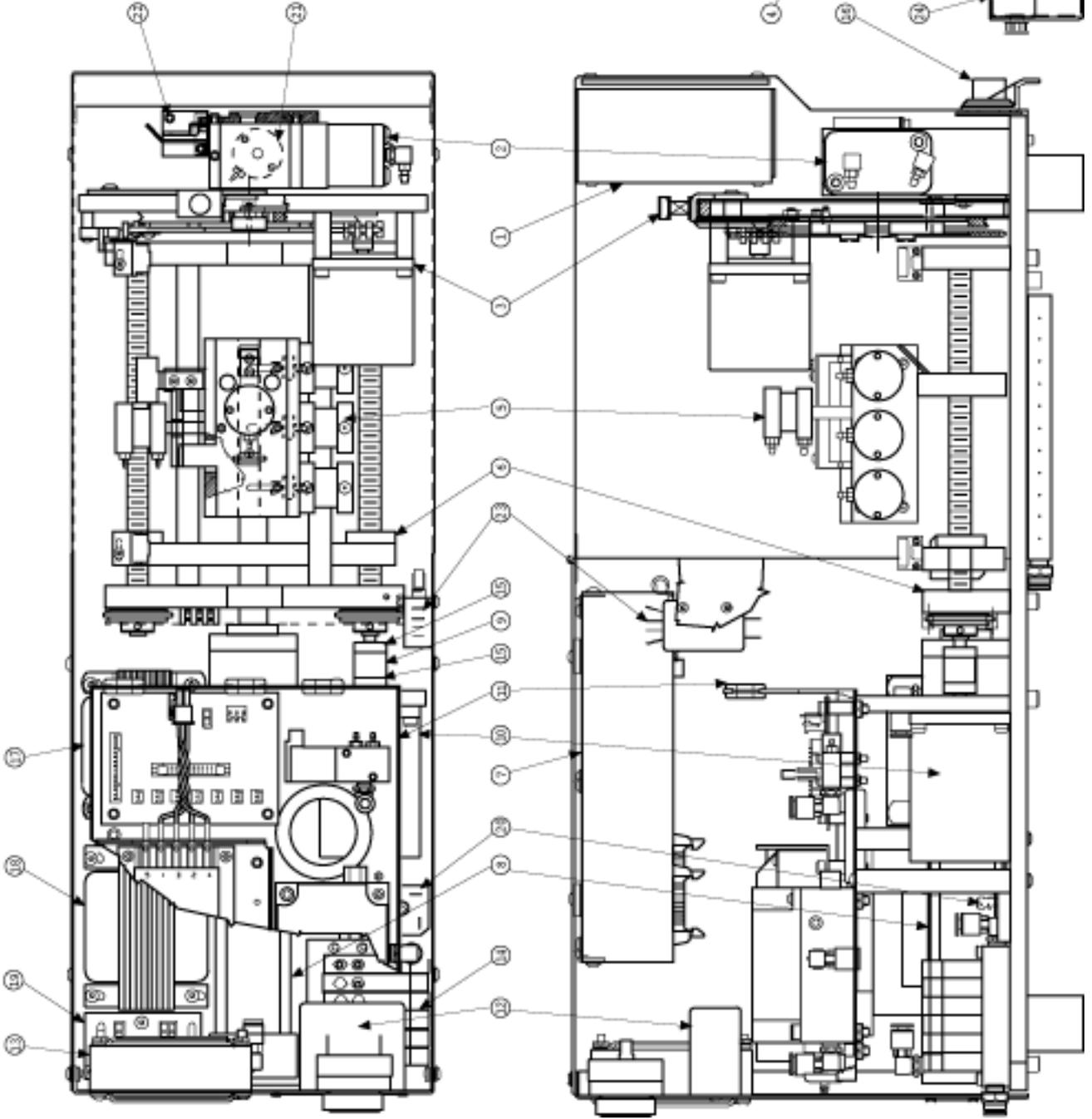
SYMPTOM	RECOMMENDATIONS
• Unit does not turn on.	<ul style="list-style-type: none"> ✓ Check electrical connections. ✓ Check electrical supply. ✓ Check fuses.
• Unit does not cycle.	<ul style="list-style-type: none"> ✓ Make sure unit is in ready mode. ✓ Check air supply and connections. ✓ Make sure cable is making contact with trigger.
• Unit does not strip wire.	<ul style="list-style-type: none"> ✓ Straighten wire to hit trigger. ✓ Check for proper control settings. ✓ Consult IDEAL for wire applications. ✓ Check blade for proper heating.
• Slug does not pull off.	<ul style="list-style-type: none"> ✓ Check for proper PRESSURE setting. ✓ Check air supply. Set at 100 PSI. ✓ Check rear grip for slug debris. ✓ Check rear grip pads. Replace if worn. ✓ Check for proper strip length. ✓ Axial cut of insulation may be required. Consult IDEAL for wire application support.

SYMPTOM	RECOMMENDATIONS
• Wire not cut completely.	<ul style="list-style-type: none"> ✓ Check for proper HEAT setting. ✓ Check for proper SPEED setting. ✓ Check for proper blade movement. ✓ Check condition of blades. Replace if necessary. ✓ Check for proper blade connections. ✓ Consult IDEAL for wire applications.
• Wire slips further into machine when gripper attempts to pull off slug.	<ul style="list-style-type: none"> ✓ Check for proper PRESSURE setting. ✓ Check front grip pads. Replace if worn. ✓ Axial cut of insulation may be required. Consult IDEAL for wire application support.
• Unit cycles repeatedly.	<ul style="list-style-type: none"> ✓ Make sure slugs are not in contact with trigger block. ✓ Check for obstruction at trigger. ✓ Check and empty slug tray. ✓ Make sure slug is not in contact with trigger.
• Wire will not fit into unit.	<ul style="list-style-type: none"> ✓ Straighten excessive curl in wire. ✓ Make sure unit is in ready mode. ✓ Check for obstruction in wire path. ✓ Check all grip pads for proper fit.

All of the cylinders, solenoids and sensors may be tested individually. Please refer to the TEST section on page 10. Operate each individual component to determine the status. Repair and or replace components as required.

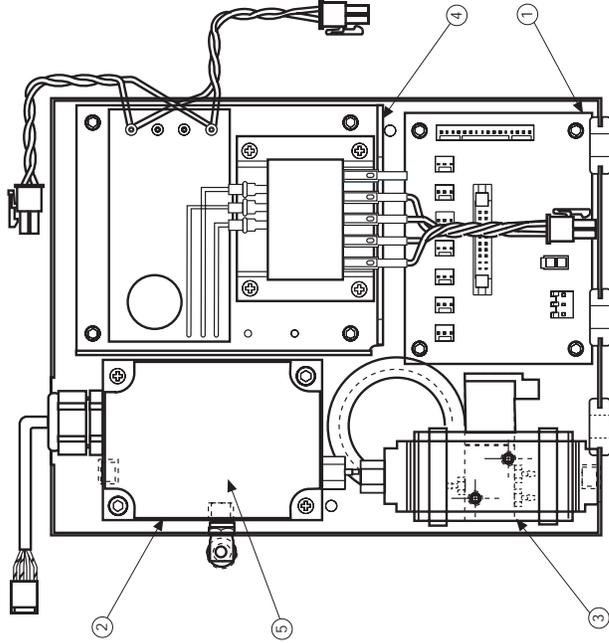
STP Machine Assembly

Item	Qty	Name	Part No.
1	1	Assy. Control Module	H-2794
2	1	Assy. Front Gripper	*
3	1	Assy. Thermal Head	*
4	1	Assy. Case	H-3360
5	1	Assy. Rear Gripper	*
6	1	Assy. Strip Length Adj.	*
7	1	Assy. Power Module	H-2810
8	1	Cylinder	391.09
9	1	Coupling, Sleeve	152.002
10	1	Assy. Stepper Motor	K-7794
11	1	Assy. Top Shelf	*
12	1	Assy. Power Input Module	K-8913
13	1	Fan	742.006
14	1	Assy. Air Solenoid Valve	K-7613RP
15	2	Coupling, Hub	152.001
16	2	Latch	1301.012
17	1	Assy. Heat Transformer	IA-4918
18	1	Assy. PC Transformer	IA-4917
19	1	Assy. AC Wiring Board	K-7628
20	1	Voltage Bridge Rectifier	741.047
21	1	Cylinder	391.007
22	1	Assy. Board Wire Sensor	LA2702
23	1	Switch, Leaf Roller	596.033
24	1	Slug Tray	IA-4912



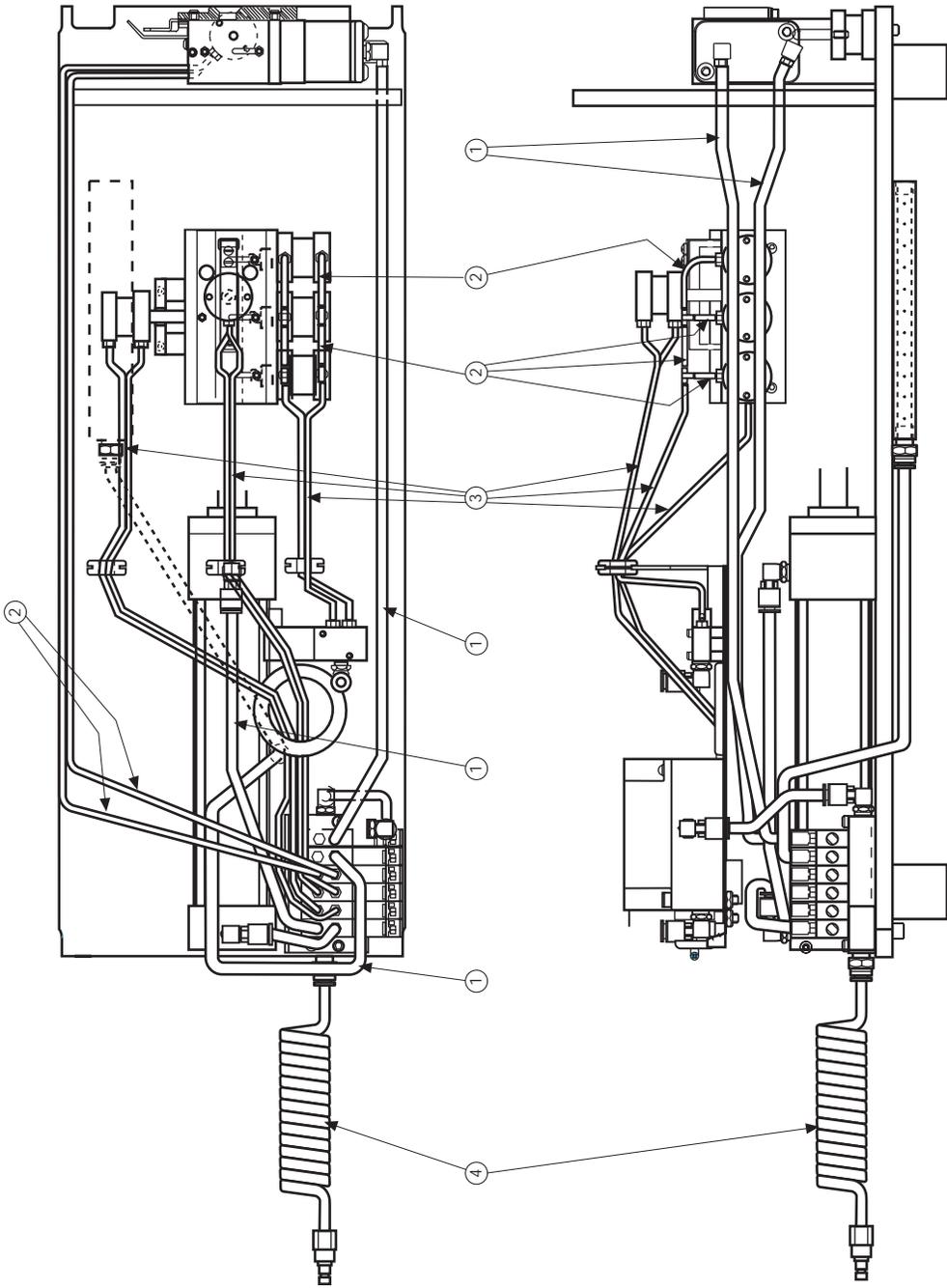
Top Shelf Assembly

Item	Qty	Name	Part No.
1	1	Assy. Interface Board	K-7468
2	1	Assy. Pressure Regulator	K-7749
3	1	Air Solenoid	392.002
4	1	Assy. Power Supply	IA3273
5	1	Air Reservoir	392.005



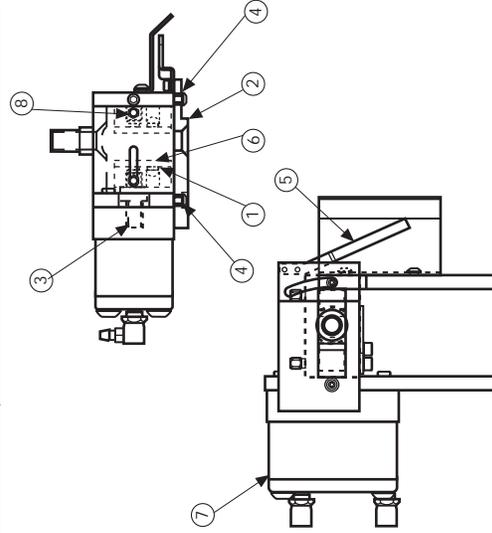
Air Tubing

Item	Qty	Name	Part No.
1	6 ft	Tubing .250" O.D. (Red)	543.048
2	6 ft	Tubing .125" O.D. (Red)	543.044
3	3	Tubing Coiled, 1.25" O.D. (2 hole) (Black)	543.052
4	1	Air Hose	K-6865



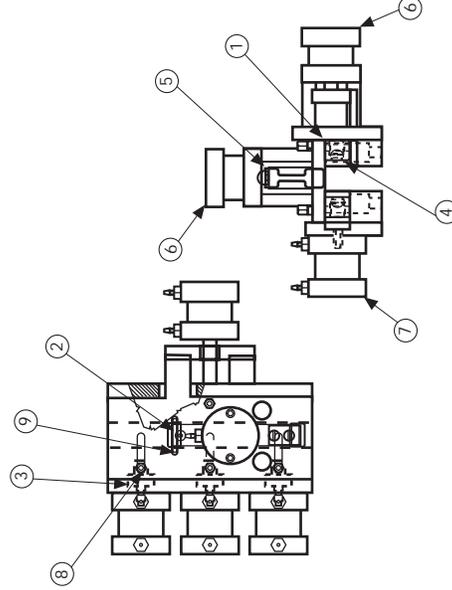
② Front Gripper Assembly

Item	Qty	Name	Part No.
1	2	Front Grip Block	LA2381
2	1	Wire Entry Guide	LA2382
3	1	Cylinder Adapter	LA2394
4	2	Spacer, Stop	LA2397
5	1	Sensor Plate	LA2406
6	2	Front Grip Pad	LA2408
7	1	Cylinder	391.008
8	2	Pin, Gripper	LA2729



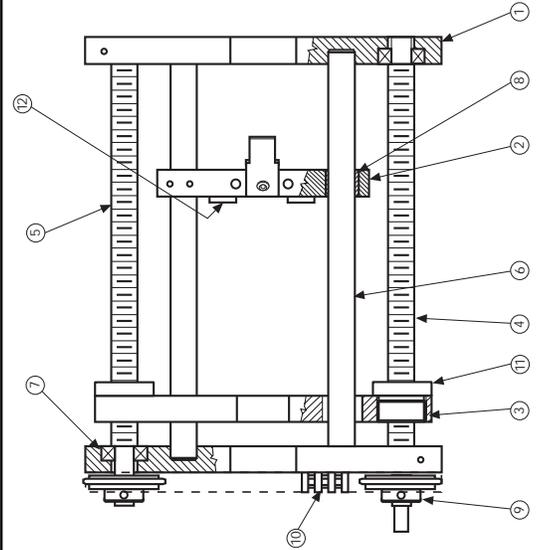
⑤ Rear Gripper Assembly

Item	Qty	Name	Part No.
1	2	Rear Grip Block	LA2388
2	1	Trigger Block	LA2389
3	3	Cylinder Adapter	LA2411
4	6	Rear Grip Pad	LA2414
5	1	Switch Trigger	LA2422
6	2	Cylinder	391.007
7	3	Cylinder	391.010
8	4	Pin, Gripper	LA2729
9	2	Spring Pin	281.124



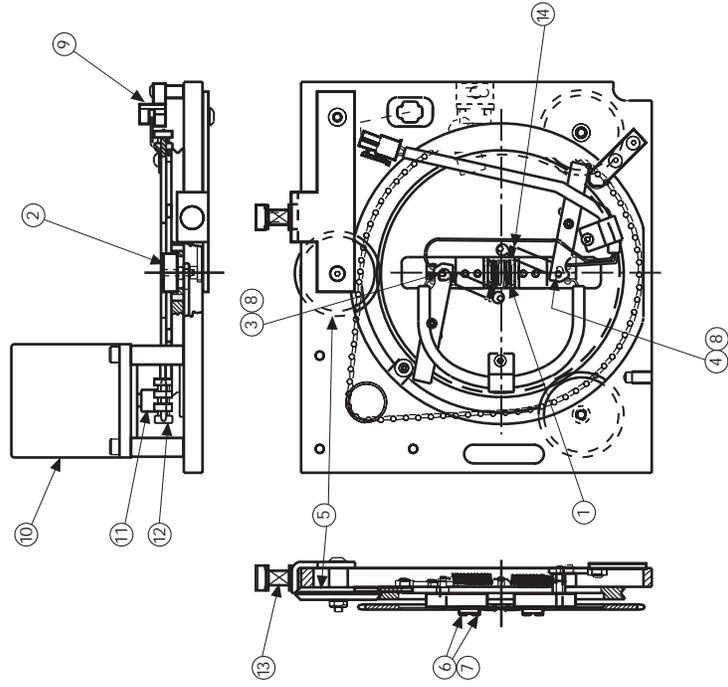
⑥ Strip Length Adjustment Assembly

Item	Qty	Name	Part No.
1	2	Rod Support Bar	K-7554
2	1	Cylinder Bar	K-7555
3	1	Stop Bar	K-7556
4	1	Motor Driver Rod	K-7560
5	1	Follower Rod	K-7561
6	2	Rod	K-7562
7	4	Bearing	21.059
8	2	Fiber Bushing	24.049
9	2	Sprocket	123.049
10	1	Cable Chain	124.005
11	2	Acme Nut	379.026
12	2	Bumper	81.017



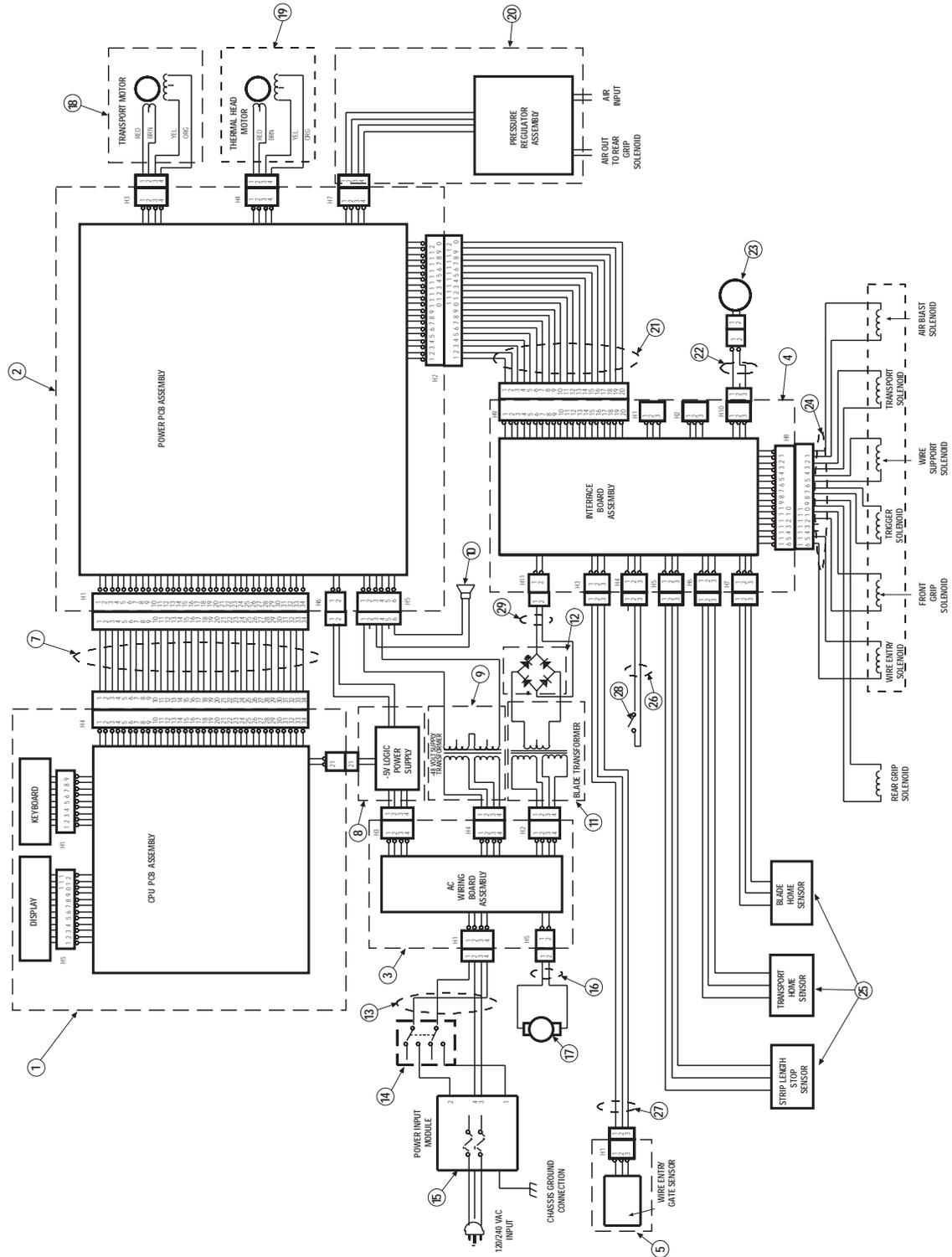
③ Thermal Head Assembly

Item	Qty	Name	Part No.
1	1	Assy, Blade Set	K-7763
2	2	Element Support Block	LA2395
3	1	Pin, Short	LA2402
4	1	Pin, Long	LA2403
5	3	Wheel, Head	LA2409
6	4	Screw 4-40 X .38 SCHS	113.098
7	4	Threaded, Standoff	1339.035
8	4	Retaining Ring	482.061
9	1	Assy, Switch	K-7743
10	1	Assy, Stepper Motor	K-7794
11	1	Sprocket	124.003
12	1	Cable Chain	123.005
13	1	Spring, Compression	88.005
14	2	Spring, Extension	89.005



Electrical Wiring Diagram

Item Qty	Name	Part No.
1	Asy, Control Module	H-2794
2	Asy, Power Module	H-2810
3	Asy, AC Wiring Board	K-7628
4	Asy, Interface Board	K-7468
5	Asy, Board Wire Sensor	LA2702
6	RS-232 Cable	K-7559
8	Asy, Power Supply	IA3273
9	Asy, PC Transformer	IA3275
10	Asy, Alarm-Audio	K-7226
11	Asy, Heat Transformer	IA3276
12	Voltage Bridge Rectifier	741.047
13	Asy, Wiring Power Input Module	IA3274
14	Switch, Leaf Roller	596.033
15	Asy, Power Input Module	K-8913
16	Fan Harness	K-7742
17	Fan	742.006
18	Asy, Stepper Motor	K-7794
19	Asy, Stepper Motor	K-7793
20	Asy, Pressure Regulator	K-7749
21	Asy, Flat Cable (20)	K-7759
22	Asy, Blade Harness	K-7744
23	Asy, Blade Set	K-7763
24	Asy, Air Solenoid Wiring	K-7748
25	Asy, Switch Wiring	K-7743
26	Asy, Trigger Harness	K-7747
27	Asy, Wire Out Harness	K-7746
28	Switch Trigger	LA2422
29	Asy, Heat Power Harness	K-7745



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