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Instruction Manual

Model No.....: Scott 10,000

Year of Manufacture : 2004

Manufactured by: Scott-Precision

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1 INTRODUCTION & SAFETY

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1 Introduction & Safety

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1.1 Introduction

The Scott 10,000™ uses a vacuum feeder for accuracy with many stocks, heated bonding rollers, tab cutting knives and cross conveyor for hands-off operation.

Tab sizes range from 1/2 inch to 5 inches (12.7 mm to 127 mm) by simply rotating the Tab Size handwheel. The extra long tool steel knives quickly and easily cut a one inch (25.4 mm) tab in the first position on a 14 inch (355.6 mm) long sheet.

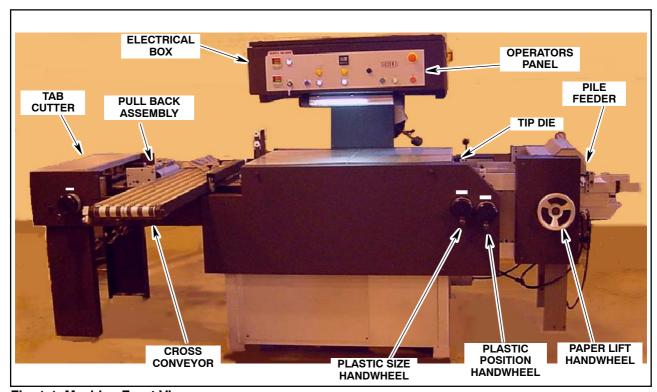


Fig. 1-1. Machine Front View

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1 Introduction & Safety

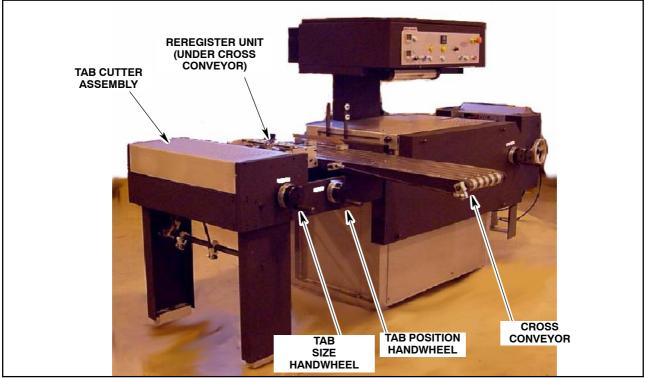


Fig. 1-2. Reregister / Cross Conveyor

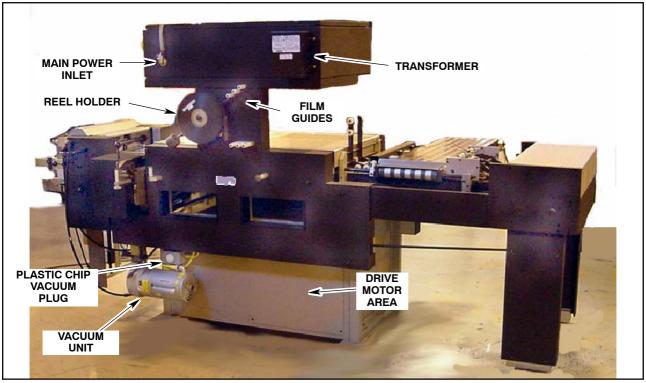


Fig. 1-3. Machine Back View

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1.1.1 Scott 10,000 Machine Specifications and Utility Requirements

Model____Scott 10,000[™] **Speed** Up to 10,000 plastic index tabs per hour **Sheet Size**_____355.6 mm x 342.9 mm (14" x 13-1/2") maximum 127 mm x 111.1 mm (5" x 4-3/8") minimum **Plastic Size**_____139.7 mm (5-1/2") maximum 25.4 mm (1") minimum Tab Cut Size_____127 mm (5") maximum 12.7 mm (1/2") minimum Paper Load _____Approximately 2000 sheets Counter_____1 - 999,999 Motor_____2 Horsepower Electrical Requirements___40 Amps, 220VAC single phase, 50 or 60 Hz Decibel Rating 94db Dimensions L- 3200 mm, (126") includes conveyor W- 1219 mm (48") W- 1955 mm (77") with conveyor H-1752 mm (69") Shipping Weight_____Approximately 1509.55 kg (3,325 lbs) Warranty One year against defects in parts and workmanship. Labor Not Included.

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1 Introduction & Safety

1.2 General Safety Guidelines

Providing a safe working environment for operating your machine is the responsibility of the user. The suggested precautions, material safety data and other suggestions that follow do not have preference over the user's own plant practices, regulations or safety committee recommendations.

Personal injury and equipment damage can be avoided by the continued adherence to the safety features provided with this machine and in keeping with the necessary governmental requirements. The guarding and interlocking safety switches have been installed on the machine for the operator's safety. These items should be maintained in good working order by the user.

It is assumed that the user's safety department has established a safety program that is in keeping with a complete analysis of industrial hazards. Before installing and operating or performing maintenance and clean-up procedures on the machine, it is suggested that the safety program be reviewed to ensure that it covers the possible hazards that might occur with the operation of this machine.

Due consideration must be given to those hazards which arise from the presence of electrical power, high temperature, and cleaning materials used in the operational areas of the machine. Proper installation and care of protective devices and over-pressure protective equipment should be considered an essential part of any safety program.

Special lock-out features are to prevent the possibility of applying power to the equipment at any time when maintenance work is in progress.

In general, personnel should be guided by all basic rules of safety associated with the equipment and the process. It should be further understood that information contained in this manual does not relieve operating and maintenance personnel of the responsibility of exercising normal good judgment in operating and care of the machine and its attendant equipment.

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1.3 Safety Features

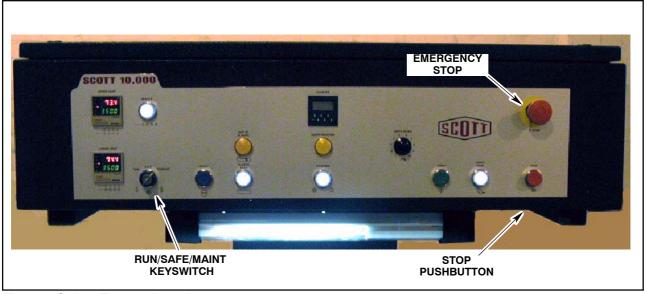


Fig. 1-4. Safety Feature Locations

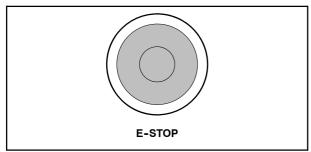


Fig. 1-5. Know Where Emergency Stop Button is Located

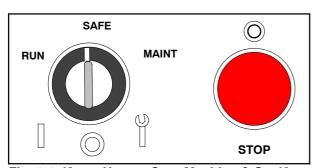


Fig. 1-6. Know How to Stop Machine & Set Key Switch to SAFE

These safety features are to be used in conjunction with the installation, operation and maintenance instructions contained in this manual.

1.3.1 Emergency Stop

Stops machine drive immediately. This pushbutton must be manually pulled out to reset.

1.3.2 Stop and Safe

The machine operator, clean-up and maintenance personnel MUST be shown how to stop the machine and place the **KEY SWITCH** on the operator's **CONTROL PANEL** in the **SAFE** mode whenever machine is accessed or clean-up operations are performed.

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1 Introduction & Safety



Fig. 1-7. Turn Machine Off Before Making Adjustments



Fig. 1-8. Blade Hazard Warning

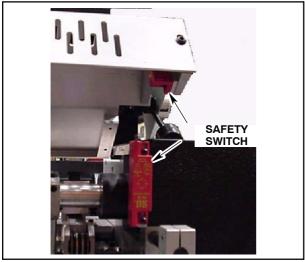


Fig. 1-9. Safety Devices

1.3.3 Main Power Switch

If machine is to be shut down for adjustments or repairs, turn the power supply to the machine off.

1.3.4 Guards and Covers

All safety guards, protective screens and covers **MUST** be in place and securely fastened before operating the machine.

Observe Danger warnings. Use extra care around moving cutting blades.

1.3.5 Safety Switches

The covers of the machine are connected to interlock safety devices for your protection.

Machine will stop operating if a safety cover or guard is opened while the machine is running. The rollers will continue to maintain unless the rear machine roller guard is removed.

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1.4 Warnings, Cautions & Notes

In order to emphasize certain areas in the interest of personal safety and a properly operated and maintained machine, you will encounter the words **WARNING**, **CAUTION**, and **NOTE** throughout this manual.

WARNING!

Fig. 1-10. Warnings Indicate Personal Danger

1.4.1 Warnings

WARNING!

AN OPERATING PROCEDURE, PRACTICE, ETC. WHICH IF NOT CORRECTLY FOLLOWED, COULD RESULT IN PERSONAL INJURY OR LOSS OF LIFE.

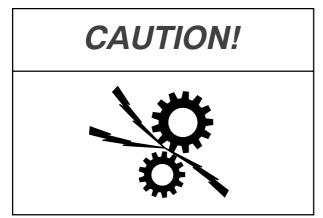


Fig. 1-11. Cautions Indicate Potential Damage to Equipment

1.4.2 Cautions

CAUTION!

AN OPERATING PROCEDURE, PRACTICE, ETC. WHICH, IF NOT STRICTLY OBSERVED, COULD RESULT IN DAMAGE TO OR DESTRUCTION OF EQUIPMENT.

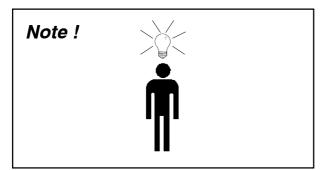


Fig. 1-12. Notes Indicate Essential Information

1.4.3 Notes

Note!

An Operating Procedure, Condition, etc. Which is Essential To Highlight.

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1 Introduction & Safety

1.5 On Machine Warnings



Fig. 1-13. Heat Hazard



Fig. 1-14. Electrical Shock Hazard

1.5.1 Heat Hazards

For example, there is HOT SURFACE sign on top of the Tab Wiper assembly. Look for warning signs throughout the machine. They are there to alert you to hazards.

1.5.2 Electrical Shock Hazards

Look for warning signs on electrical cabinets and circuit breaker boxes. They are there to alert you to hazards of electrical shock.

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Safety Procedures 1.6



Fig. 1-15. Do Not Disable Safety Devices

1.6.1 **Safety Devices**

Tampering with safety mechanisms in order to disable them should not be tolerated.

Warning!

IT IS EXTREMELY DANGEROUS TO ACCESS MACHINE WHEN IT IS OPERATING OR CAPABLE OF OPERATING.

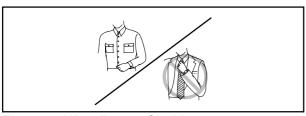


Fig. 1-16. Wear Proper Clothing

Appropriate Dress

1.6.2

Personnel working in the machine operation area must remove jewelry and neckties. Personnel must wear clothing appropriate for the work area.



Fig. 1-17. Keep Work Area Clean and Neat

1.6.3 **Keep Area Clean**

Loose materials, tools and equipment, not essential to the operation of the machine, must be removed from the machine work area.

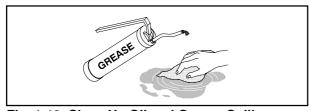


Fig. 1-18. Clean Up Oil and Grease Spills

Grease and Oil 1.6.4

Clean up all oil and grease spills around the machine work area.

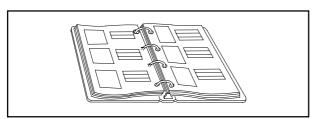


Fig. 1-19. Read Manuals First

1.6.5 **Manual Usage**

Read and understand the instructions in the manual before operating, adjusting or servicing machine.

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2 INSTALLATION

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2 Installation

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2.1 Installation Requirements



Fig. 2-1. Scott 10,000

All procedures in this section provide advance planning and site preparation data for installation of the Scott 10,000. Environmental requirements, unpacking instructions, electrical and physical specifications are included. This information should be used as a reference during the development of site preparation plans before you install your machine.

If any questions arise while performing any of the following procedures, contact:

 Scott-Precision
 Tel.631.468.8776

 1555A Ocean Avenue
 Fax.631.468.8775

Bohemia, NY 11716 USA www.scottprecision.com

Training is available from Scott Office Systems at \$1500/ eight hour day, plus all travel expenses.

Note! A forklift is required to lift the machine off the shipping skid and place it on the floor.

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2.2 Pre-Installation Requirements

The environmental requirements of the Scott 10,000 must be considered well in advance of the actual installation. Providing a well suited operating environment will help ensure a trouble free installation process. Consideration should be given to the following items:

- Power, location and rating of power connections.
- Floor strength
- Level floor
- Adequate space must be provided around all four sides of the machine to permit normal operation and maintenance procedures. The figure shows the minimum space required.

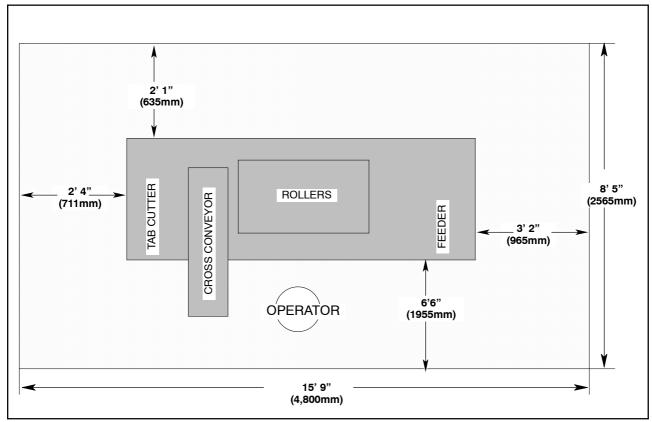


Fig. 2-2. Scott 10,000 Space Requirements

- Space should be allocated near the feeder for a small table that can be used for jogging stock, small jobs, samples, etc.
- Provide plenty of space In front of the machine so large jobs can be easily moved in and out with skids or carts.

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2.3 Uncrating & Placement

The machine will arrive in two crates. Inspect the external condition of the crates for visible signs of damage before opening. If damage is noticeable, notify the carrier or Scott before proceeding with the installation. To assist in the ease of installation, the machine is disassembled prior to shipping and requires some minor assembly before the machine is operational.

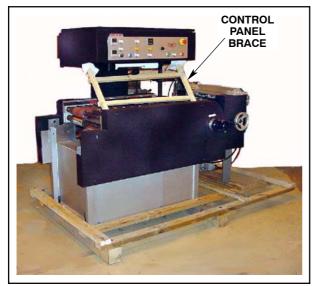


Fig. 2-3. Scott Ten Thousand - Crate 1



Fig. 2-4. Remove Lag Screws from Shipping Skid

2.3.1 Crate 1 - Main Machine

Step: 1. Remove metal banding straps from cardboard surrounding shipping crates.

CAUTION!

EXTREME CAUTION MUST BE EXERCISED WHEN MOVING MACHINE TO INSTALLATION LOCATION TO PREVENT DAMAGE.

Step: 2. Use a fork lift to place the main machine shipping skid near the designated floor area of operation.

- **Step: 3.** Remove four lag screws holding machine to shipping skid.
- **Step: 4.** Raise main machine with fork lift, remove shipping skid assembly from under machine.
- Step: 5. Lower main machine to floor.
- **Step: 6.** Remove all protective wrapping from machine.
- **Step: 7.** Remove front and rear covers and place them aside so they won't be damaged.

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2 Installation

2.3.2 Crate 2 - Additional Assemblies

Crate 2 contains all remaining equipment that was removed for shipping.

- Chip Removal Vacuum
- Tab Cutter Assembly
- Cross Conveyor Assembly
- Instruction Manual
- Miscellaneous Parts

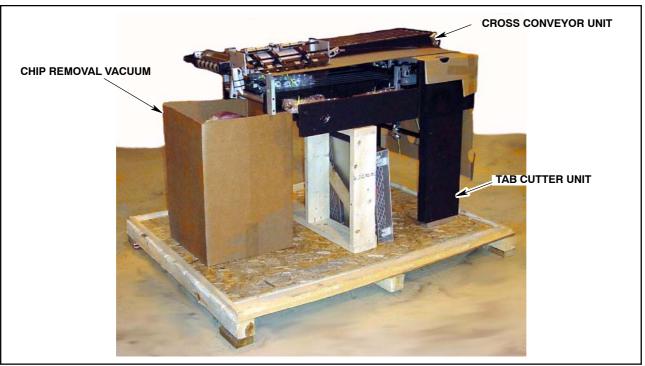
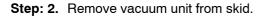


Fig. 2-5. Scott 10,000 on Shipping Skid (Crate 2)

Step: 1. Remove Cross Conveyor assembly from shipping skid. Place it to the side for later installation.



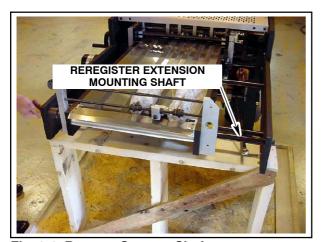


Fig. 2-6. Remove Support Shaft

2.3.3 Install Tab Cutter Unit

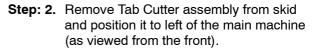
Step: 1. Loosen hardware and slide reregister extension frame mounting support shaft out of tab cutter frame housing.

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Fig. 2-7. Align Tab Cutter Assembly with Main Machine



Step: 3. Align support shaft holes in Tab Cutter assembly with holes in the main machine housing.

CAUTION!

THIS PROCEDURE REQUIRES 2-3 PERSONS.

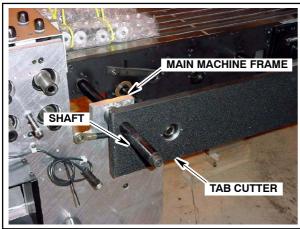


Fig. 2-8. Reinstall Tab Cutter Shaft



Fig. 2-9. Secure Tab Cutter Shaft

Step: 4. Reinstall reregister extension frame mounting shaft through the Tab Cutter assembly and the gusset in the main machine frame.

Step: 5. Secure the tab cutter shaft with socket head screw.

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2.3.4 Leveling the Machine

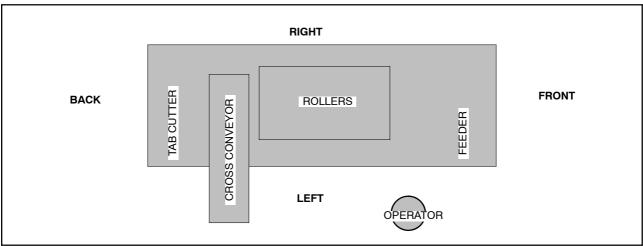


Fig. 2-10. Locator

The machine should be on a level surface. However, if the machine is to be placed on an abnormally uneven floor, the machine must be leveled in the following manner:

Note! Tab Cutter/ Reregister / Conveyor section must be level with the main machine. Level the knife section with the main machine to prevent excess wear of knives. It is important that the knife section has the same pitch front to back as the main machine. Place a level in the main machine across the roller keeper blocks and compare it to the knife packages. Adjust knife package to the same bubble location on the level.

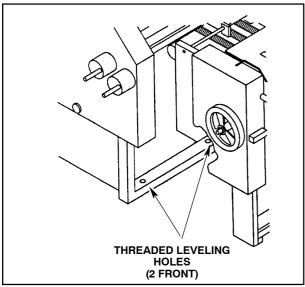


Fig. 2-11. Leveling Rod Installation (Front)

- **Step: 1.** Install the 3/4" #10 leveling bolts through four threaded holes in the machine weldment.
- **Step: 2.** The leveling bolts can be then used to level the machine. Tighten jam nuts to maintain level position when attained.

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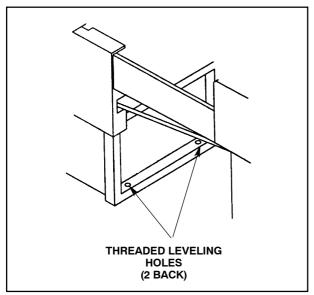


Fig. 2-12. Leveling Rod Installation (Back)



Fig. 2-13. Place Level on Main Machine Frame

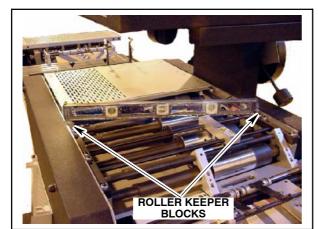


Fig. 2-14. Place Level Across Machine as Shown

Step: 3. Place a level on the machined surface of the main machine frame.

Step: 4. Adjust threaded rods in machine base to obtain level machine side to side.

Step: 5. Place a level across the roller keeper blocks.

Step: 6. Adjust threaded rods in machine base to obtain level machine front to rear.

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2 Installation



Fig. 2-15. Level Tab Cutter Assembly Side to Side



Step: 8. Place a level on machine frame to level Tab Cutter assembly from *Front* to *Back*.

Step: 7. Place a level on machine frame to level

Tab Cutter assembly from Side to Side.



Fig. 2-16. Level Tab Cutter Assembly Front to Back



Fig. 2-17. Remove Packing on Hold-Down Roller Assembly

2.3.5 Continue Assembling Machine

Step: 1. Remove packing wrap from the Hold-Down Roller assembly.

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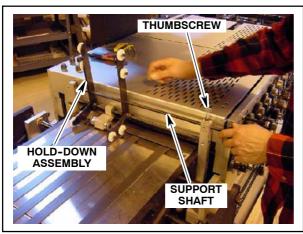


Fig. 2-18. Attach Hold-Down Assembly

- **Step: 2.** Loosen hardware and remove register hold-down support shaft from mounting blocks.
- **Step: 3.** Rotate the longer Hold–Down Roller assembly up and reinstall support shaft through assembly and mounting blocks.
- **Step: 4.** Tighten mounting hardware.

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2 Installation

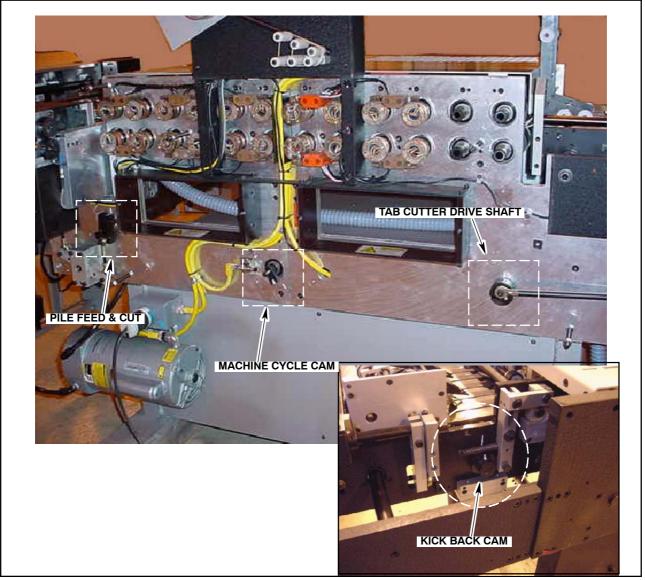


Fig. 2-19. Make Sure Tlming Marks Are Aligned

Note! Before installing the Tab Cutter drive chain, it is critical that all of the timing marks shown in Fig. 2-19. are aligned and that the heat rollers are set in the positions shown in Fig. 2-20.

Step: 5. Make sure the timing marks on Pile Feed and Cut Linkage, the Machine Cycle Cam, Tab Cutter Drive and Kick Back Cam are aligned.

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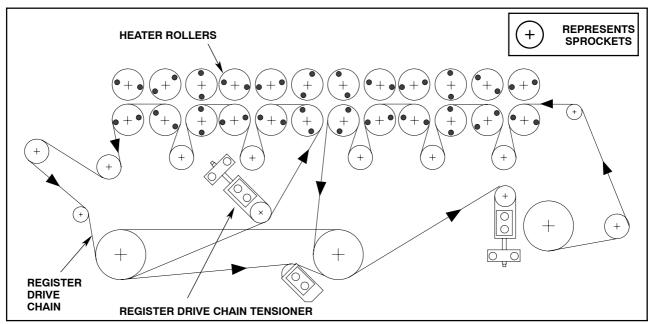


Fig. 2-20. Heat Roller Positions (Front)

Step: 6. Make sure all heaters are aligned as shown above.

Step: 7. Install register drive chain.

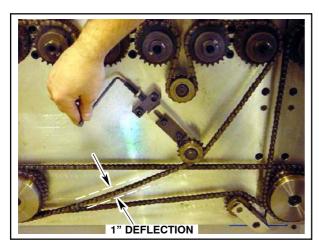


Fig. 2-21. Tighten Chain Tension

Step: 8. Adjust register drive chain tensioner so that there is approximately one inch (1/2" either side of centerline) of deflection in chain.

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2 Installation

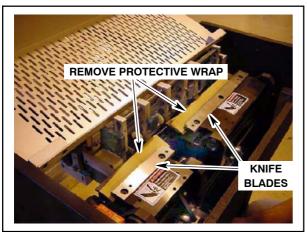


Fig. 2-22. Remove Shipping Wrap from Knife Blades

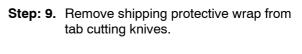




Fig. 2-23. Attach Tab Cutter Drive Linkage



Step: 11. Remove tie wrap from safety wiring harness.

Step: 10. Attach tab cutter drive linkage.



Fig. 2-24. Safety Wiring Harness

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Fig. 2-26. Install Cross Conveyor Assembly

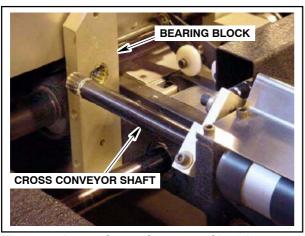


Fig. 2-27. Insert Cross Conveyor Shaft Into **Bearing Block**

Step: 12. Connect safety wiring harness to tab cutter guard safety switch.

2.3.6 **Install Cross Conveyor**

Step: 1. Install the Cross Conveyor assembly.

CAUTION!

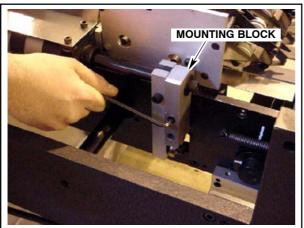
ASSEMBLING THE CROSS CONVEYOR IS A TWO PERSON TASK.

Step: 2. Insert cross conveyor drive shaft into bearing block on the main machine.

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2 Installation



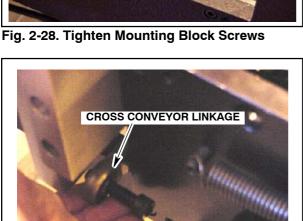


Fig. 2-29. Attach Cross Conveyor Linkage

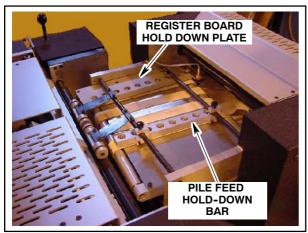
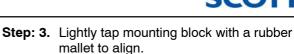


Fig. 2-30. Install Ball Bearings



Step: 4. Tighten socket head screws in cross conveyor mounting block.

Step: 5. Attach the cross conveyor linkage.

Install Steel Balls 2.3.7

Step: 1. Install steel balls in the register board hold-down plate and the pile feed hold-down bar.

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Fig. 2-31. Install Vacuum Canister

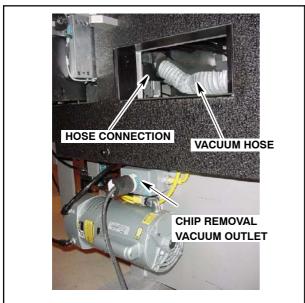


Fig. 2-32. Connect Vacuum Hose

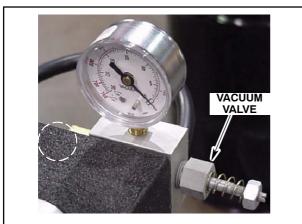


Fig. 2-33. Install Vacuum Valve

2.3.8 Connect Vacuum Canister

Step: 1. Once the machine is in place, assemble the vacuum blower and canister.

- **Step: 2.** Route the vacuum hose under the tab cutter end of the machine and connect to the opening under the Tip Die assembly.
- **Step: 3.** Plug power cord for vacuum blower into auxiliary outlet located on the back of the machine.

2.3.9 Install Vacuum Valve

Step: 1. Install vacuum adjustment valve.

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2 Installation



Fig. 2-34. Pile Feed Area



Fig. 2-35. Loosen Set Screws in Block

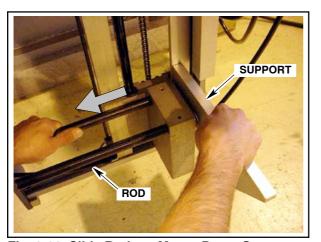


Fig. 2-36. Slide Rods to Mount Paper Support

2.3.10 Install Paper Supports on Pile Feeder

For shipping purposes, the paper support assembly is removed from the machine.

Step: 1. Loosen set screws in stack support bar mounting block.

Step: 2. Slide rods toward front of machine to create clearance for end paper support.

Step: 3. Install paper support.

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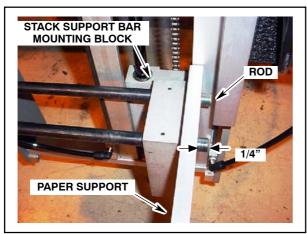
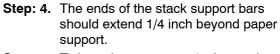


Fig. 2-37. Rods Should Extend 1/4" Beyond Supports



Step: 5. Tighten the set screws in the stack support bar mounting block.



Fig. 2-38. Install Remaining Support Blocks

Step: 6. Install remaining paper supports on stack support rods.

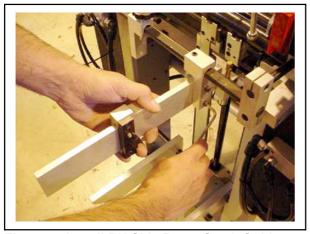


Fig. 2-39. Install RH Side Paper Stack Guide

Step: 7. Install RH paper stack guide.

Step: 8. Tighten set screws.



2 Installation

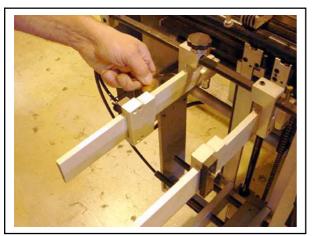


Fig. 2-40. Install LH Side Paper Stack Guide

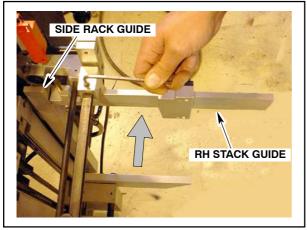


Fig. 2-41. Slide the RH Stack Guide Flush with Side Rack Guide

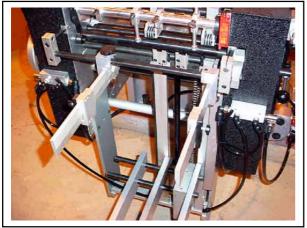


Fig. 2-42. Pile Feed With All Supports and Guides Installed

Step: 9. Install LH paper stack guide.

Step: 10. Tighten set screws.

Step: 11. Slide the RH stack guide so that it is flush with the edge of the side rack guide.

Step: 12. Tighten set screws.





Fig. 2-43. Remove Wire Ties From Air Hoses

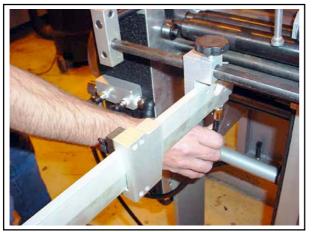


Fig. 2-44. Insert Air Hoses into Connectors

Step: 13. Carefully remove the wire ties holding the air hoses.

Step: 14. Insert air hoses into connectors.



WARNING!

DANGER: ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED ELECTRICIAN FAMILIAR WITH APPLICABLE ELECTRICAL CODES AND REGULATIONS. ELECTRICAL CONNECTIONS MUST THEN BE MADE ONLY AFTER REVIEWING AND UNDERSTANDING THE ELECTRICAL SCHEMATICS SUPPLIED WITH MACHINE AND SAFETY SECTION OF THIS MANUAL, FAILURE TO EXERCISE NECESSARY SAFETY PRECAUTIONS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH.

2.4 Utility Connections

2.4.1 Electrical Connections

The machine requires No. 8, 3 wire cable including ground for 220 volt, single phase electrical power.

Note! Electrical cables going to machine should be routed overhead and be of sufficient height to allow personnel to travel around entire machine without interference. The figure below shows recommended installation configuration.



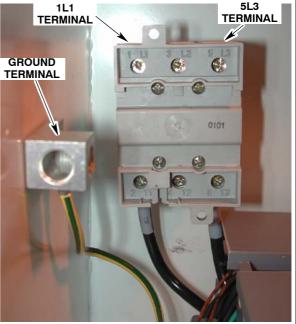


Fig. 2-45. Installation Wiring Route

- 1. Route main power electrical cable through the conduit opening in the back of the control cabinet.
- 2. Connect two "hot" leads onto terminals 1L1 and 5L3 on main power relay. Connect neutral lead to ground terminal.

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3 OPERATION



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3.1 GENERAL INFORMATION

3.1.1 Before Operating the Machine

WARNING!

AVOID SERIOUS INJURY OR EQUIPMENT DAMAGE. RESTRICT OPERATION OF THIS MACHINE TO TRAINED, QUALIFIED PERSONNEL ONLY.

WARNING!

EACH OPERATOR SHOULD KNOW THE LOCATION AND FUNCTION OF ALL MACHINE STOPPING CONTROLS. REVIEW MANUAL FOR EMERGENCY STOP BUTTON LOCATION.

Do not attempt to operate the machine before reading and understanding the manual. Pay close attention to all **WARNINGS**, **CAUTIONS** and **NOTES**. Failure to do so may cause serious injury and extensive machine damage.

Read through the inspection and pre-start procedures before starting the machine. Make these checks part of your routine to insure efficiency and quality during the production run.



3.2 Operating Controls and Indicators Descriptions

3.2.1 Operator's Control Panel Layout

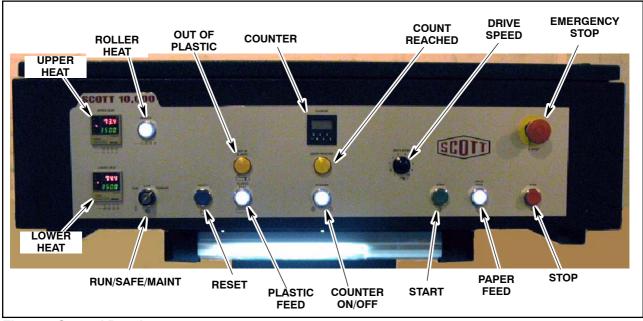


Fig. 3-1. Control Panel

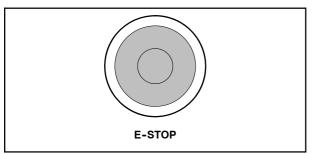


Fig. 3-2. Emergency Stop Pushbutton

3.2.2 Machine Stopping Device

3.2.2.1 EMERGENCY STOP - Red Pushbutton

Stops the machine drive immediately. The **Emergency Stop Button** is on the front of the machine. After a stop, the button must be manually pulled out and the **Reset** button pushed before cycling can resume.

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3.2.3 Main Operator's Panel Control Descriptions

The following is a list of each control on the operator's panel and a description of the functions performed at each setting.

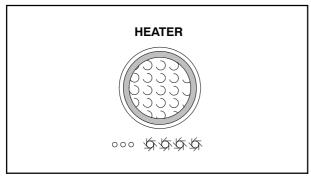


Fig. 3-3. Heaters Illuminated Pushbutton

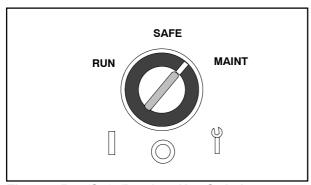


Fig. 3-4. Run/Safe/Pendant Key Switch

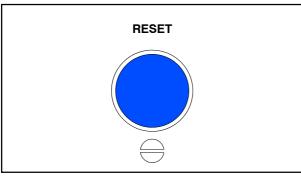


Fig. 3-5. Reset Pushbutton

3.2.3.1 ROLLER HEAT ON / OFF -

ON - When pushed, the button illuminates, indicating upper and lower heaters are turned ON.

OFF - When pushed again, the heaters are turned OFF.

Approximate warm up time for heaters is between 25–30 minutes.

3.2.3.2 SAFE / RUN / MAINT - Key Switch

RUN - The machine drive cycles continuously. This is the normal switch position for production. If conditions are safe, pushing RESET will allow the machine to operate.

SAFE - No machine cycle is possible.

MAINT (Maintenance) - When the keyswitch is in this position, the machine can only be indexed at a slower speed. The safety doors and guards (except for the tabcutter guard) can be removed to perform maintenance and adjustments. If the rear machine guard is removed, the rollers will not heat. Always press the RESET button after changing the switch from RUN to MAINT or visa versa.

3.2.3.3 RESET - Blue Pushbutton

Resets machine, and verifies it is safe to run after an emergency stop.

Press this button when changing the RUN/SAFE/MAINT switch from SAFE position to RUN.

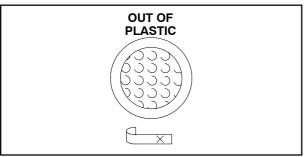


Fig. 3-6. Out of Plastic Lamp

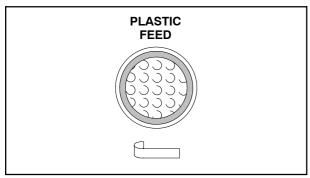


Fig. 3-7. Plastic Feed Pushbutton

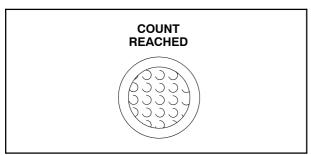


Fig. 3-8. Count Reached Lamp

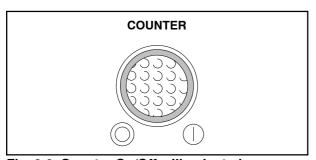


Fig. 3-9. Counter On/Off - Illuminated Pushbutton

3.2.3.4 OUT OF PLASTIC - LAMP

Lamp will illuminate when upon pushing the Plastic Feed button, the proximity switch on the plastic feed does not sense plastic at the feeder discharge. The plastic chip removal vacuum and the paper feed vacuum pump will also be disabled until the plastic spool is refilled.

3.2.3.5 PLASTIC FEED - White Illuminated Pushbutton

Turns on the chip removal vacuum and allows plastic to enter the Tip Die, if the reel is threaded onto the machine. The plastic chip removal vacuum operates only when Plastic Feed is on and the machine is in Run with machine running.

3.2.3.6 COUNTER REACHED - Amber Indicator Lamp

This lamp will illuminate when the machine has produced the amount predetermined by the counter. Once the count has been reached, the paper feed vacuum pump will shut off so that paper feed will stop. Also, if plastic is being applied to the paper stock, the plastic chip removal vacuum will shut off. Both units will resume operation once the counter has been reset.

3.2.3.7 COUNTER ON / OFF - White Illuminated Pushbutton

When the counter button is pushed, the button illuminates indicating that the counter is on.

This will allow the operator to turn off the counter to run make product without losing the current count.

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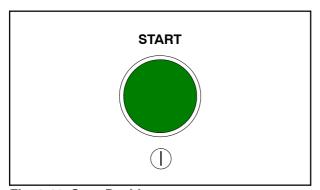


Fig. 3-10. Start Pushbutton

3.2.3.8 START - Green Pushbutton

Turns on main drive motor to begin machine cycling.

This means:

- The safety switches indicate all the guards are in place.
- The EMERGENCY STOP buttons are reset.
- The RESET button is pushed.
- The pushbutton turns on the main drive motor for continuous machine cycling with the KEY switch in RUN position only.

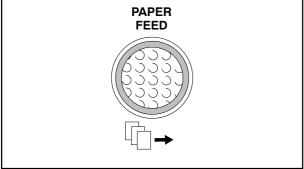


Fig. 3-11. Paper Feed Pushbutton

3.2.3.9 PAPER FEED - White Illuminated Pushbutton

Starts the vacuum pump for the pile feeder vacuum nozzles while the machine is cycling.

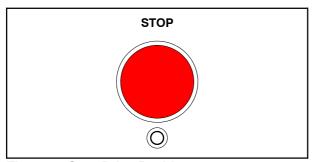


Fig. 3-12. Stop Drive Pushbutton

3.2.3.10 STOP - Red Pushbutton

The pushbutton stops the machine drive. This is a "soft" stop and is intended for planned stops, not emergencies.

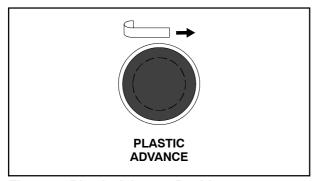


Fig. 3-13. Plastic Advance Pushbutton

3.2.3.11 PLASTIC ADVANCE - Black Pushbutton (Side of Machine)

It brings plastic into the Tip Die when the machine is in Run position and cycling. It is used when loading a new reel of film and must be held in to move plastic to Tip Die area.



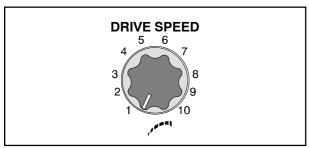


Fig. 3-14. Main Drive Feed

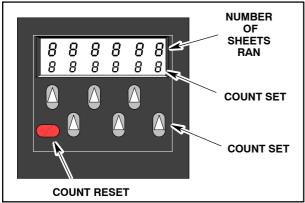


Fig. 3-15. Counter



Fig. 3-16. Production Sheet Counter

3.2.3.12 SPEED - Adjustment Control

Adjusts main drive motor speed. The dial is turned clockwise to increase, and counterclockwise to decrease the machine drive speed.

3.2.3.13 COUNTER

Activating the Counter, allows operator to specify an exact number of sheets to be run. The feeder shuts off after the requirement has been met.

Note! Additional sheets may be fed depending on machine speed.

The counter only counts when the machine is in RUN mode and the Counter button is ON. The digital counter counts forwards to the number specified, then shuts feeder and vacuum OFF when that number is reached.

• Do not change setting while counter is running.

3.2.3.14 PRODUCTION SHEET COUNTER

This counter will record total number of sheets.

The counter is located in the control cabinet (CTR2).

Note! Counter can not be reset.

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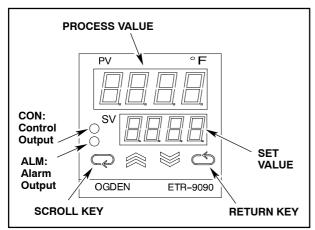


Fig. 3-17. Heater Temperature Control

3.2.3.15 Heater Temperature Control

Controls wheel heat temperature by cycling power to the heaters. The setpoint temperature is adjusted by using the buttons below the indicator display.

The controller maintains process parameters when power is off.

Touch Keys	Description	Function
	Scroll Key	Advances the index display to the desired position.
		Indexes advanced continuously and cyclically by pressing this keypad.
	Up Key	Increases the parameter (Set Point or Other)
	Down Key	Decreases the parameter (Set Point or Other)
	Return Key	Resets the controller to its normal status. Also stops auto-tuning, output percentage monitoring and manual mode operation.
Press for 6 seconds	Long Scroll	Allows more parameters to be inspected or changed.
Press for 6 seconds	Long Return	Executes auto-tuning function.
		2. Calibrates control when in calibration level.
Press and	Output Percentage Monitoring	Allows the set point display to indicate the control output value in percent.
Press and	Manual Mode Execution	Allows the controller to enter the manual mode.
for 6 seconds		This can be used if the sensor fails.



3.2.4 Telemecanique PLC Control

The Scott 10,000 incorporates two Telemecanique TSX07 Programmable Logic Controllers. Each controller has a series of LEDs indicating the on/off status of its inputs and outputs. Separate LEDs also verify communication between controllers. Check Electrical Sheets for a listing of the devices that are attached to the controller and to which location (input/output), the device is attached.

When a device is active, the green LED is lit. The yellow com LED should always be lit. The second smaller PLC will have a blinking red LED in the error position which is normal. The larger primary PLC error lamp should not be lit.

Both PLC's run LEDs should be solid green.

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3.3 Preliminary Inspection and Start-Up Procedure



Fig. 3-18. Correctly Set Space Between Upper & Lower Rollers

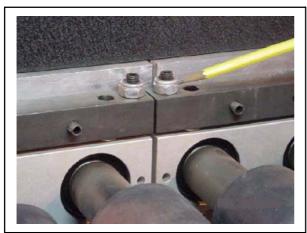


Fig. 3-19. Tighten Nuts to Raise Rollers

3.3.1 Preliminary Set-Up

3.3.1.1 Adjustment of the Space Between Upper & Lower Bonding Rollers

It is important that the space between the upper and lower bonding rollers is set correctly so that the rollers grip the sheets properly but do not actually contact each other. The rollers must not bounce against each other as the sheets pass through them.

If the rollers ride against each other, this will cause the finish on the rollers to be damaged. Excessive bouncing of the rollers will cause wear on the drive gears and the chain drive. Bouncing will also cause poor quality work since the rollers may not maintain good contact with the tab just behind the leading tab.

Step: 1. The machine must be in the *Pendant Mode* when you adjust the space between the rollers.

Step: 2. Raise the rollers by tightening the nuts on the bearing blocks so as to lift the upper rollers.



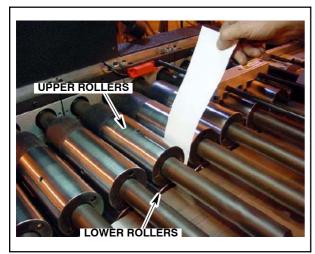


Fig. 3-20. Raise the Rollers By Tightening the Nuts on the Bearing Blocks.

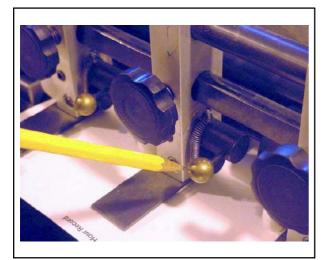


Fig. 3-21. Reregister Roller Assembly

Step: 3. Insert a sheet of paper between the rollers.

Step: 4. Lower the rollers until the paper is lightly gripped.

Step: 5. Work back and forth between the two rollers supported by each bearing block until both rollers grip the paper lightly.

Step: 6. Check the rollers near the ends and adjust between the inner and outer bearing blocks until both ends of the rollers grip the sheet uniformly.

Note! The last step is important because if the rollers and shaft are not parallel, then many problems may occur. First, if the gear set at the ends of the shaft are either too tight or too loose, this may cause the gears to wear excessively. Second, if the rollers do not grip the sheet all the way across, this may cause the sheets to twist causing quality problems.

3.3.1.2 Adjust Reregister Roller Assembly

These units provide the grip on the sheet to drive it in tightly against the tab cutter back stop and hold it there while the sheet is being registered and tabcut. Each of these units is provided with an extension spring which is adjustable in tension by turning the brass knob. When running the normal range of paper stocks, this spring tension should not require adjustment. However, when running either lighter or heavier stocks, it may be necessary to adjust the tension. Lighter stocks have a tendency to buckle if the roller pressure is too great and heavier stocks tend to bounce and not cut uniformly.

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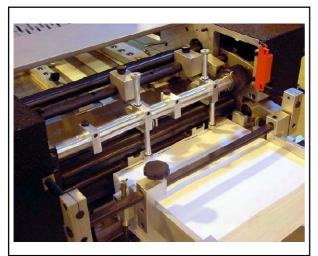


Fig. 3-22. Pile Feeder Assembly

3.3.2 Pile Feeder

The paper feeder is specially designed to feed index stocks at high speeds. It is very important for the operator to keep the feeder in good working condition and to learn how to adjust and correct for various operating conditions. The importance of this is magnified by two conditions. First, the machine is handling papers which have already been through two or three other machines and, because of this, may not be in pristine condition. Second, the stocks being fed may vary, and will vary greatly in feeding ability. Knowing how to make fine adjustments to compensate for various paper conditions will greatly increase the productivity of this machine.

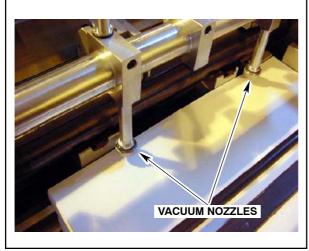


Fig. 3-23. Vacuum Nozzles

The most critical area in any paper feeder is at the point where the vacuum nozzles contact the top sheet to lift it from the stack. If papers and operating conditions were uniform all of the time, this would not present a problem. However, the papers handled by this machine tend to have various curls, warpage, ripples, etc., which greatly hamper feeding. The sheets may tend to curl up or down or the entire stack may be tilted due to moisture from printing. The following "hints" will help the operator to keep the Scott 10,000 operating at maximum production speeds.

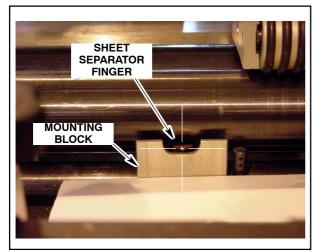


Fig. 3-24. Adjustment to Feeder Nozzle

3.3.2.1 Sheet Separator Fingers

The position and condition of the sheet separator fingers should be carefully maintained. Each sheet separator finger should be centered both top and bottom and right to left of the mounting block opening. Care should be taken to make certain that the fingers are free and extend into the sheet about 1/8-inch (6.3mm). Whenever the position of nozzles is changed, the stack guide should be moved until the finger is slightly to the left of the nozzle.

The separator finger should be 1/2" (12.7mm) above the paper stack.



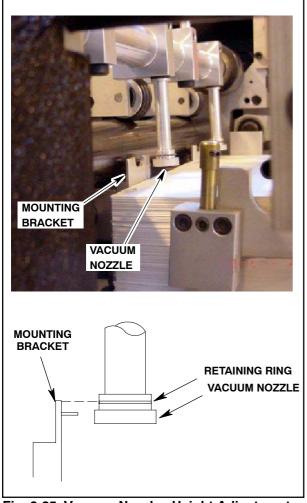


Fig. 3-25. Vacuum Nozzles Height Adjustment

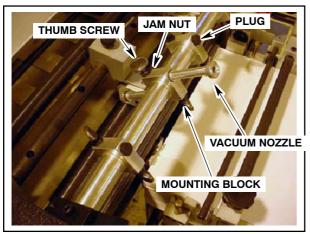


Fig. 3-26. Nozzle Set Up Side to Side

3.3.2.2 Vacuum Nozzles

The machine is equipped with a floating nozzle cup which does two things. First, it allows for slight variations in the height of the stack and, second, it allows the cup of the nozzle to conform to the curl of the paper. The advantage of the floating nozzle cup is that it will compensate for a much wider range of operating conditions. It is important to make certain that there is no binding condition in the floating "cup" of the nozzle which prevents it from dropping down on the paper each time.

The height of the vacuum nozzle is correctly set when the retaining ring is even with the top of the horseshoe shaped mounting bracket for the sheet separater finger.

Vacuum Nozzle Adjustments

Depending on size of the stock used, the vacuum nozzles may have to be moved from one mounting block to another.

To remove the vaccum nozzles and rubber plugs:

Step: 1. Loosen jam nuts and thumb screws.

Step: 2. Loosen the thumb screws and remove nozzles and rubber plugs.

To Install Nozzles and Rubber Plugs:

Step: 1. Push nozzles all the way into the mounting block and gently tighten thumb screws and jam nuts.

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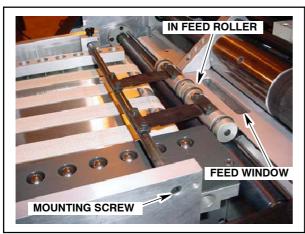


Fig. 3-27. Plastic Feed Window



Fig. 3-28. Window Assembly



Fig. 3-29. Feed Index Stock Under Window Assembly

3.3.2.3 Plastic Feed Window Adjustment

The plastic feed window holds the mylar in its proper open position.

- **Step: 1.** Loosen the in-feed roller shaft mounting screw
- Step: 2. Rotate in-feed roller out of the way.

- **Step: 3.** Loosen the jam nut on the plastic thumb screw.
- **Step: 4.** Turn the plastic thumb screw counter-clockwise until the window assembly is touching the tip die and the plastic feed tunnel.
- **Step: 5.** Lift up the window assembly and place a piece of the index stock (that will be used during the production run) over the tip die area.
- **Step: 6.** Set the window assembly down on the index stock and slowly turn the thumb screw clockwise until the piece of index stock can be slide back and forth easily without any drag or resistance.
- Step: 7. Gently tighten the jam nut.



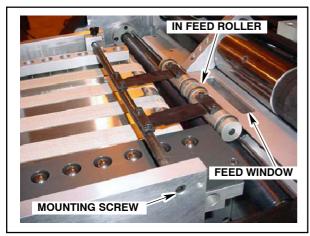


Fig. 3-30. Adjust Feed Roller Tension

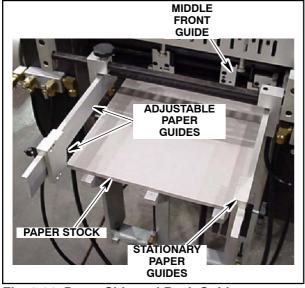


Fig. 3-31. Paper Side and Back Guides

3.3.2.4 In-Feed Roller Tension Adjustment

The In-Feed Rollers are used to assist sheets into the Heat Rollers.

To Adjust the In-Feed Rollers

Step: 1. Loosen the In–Feed roller shaft mounting screw.

Step: 2. Use your fingers to apply downward pressure to the spring plates and tighten the mounting screws.

3.3.2.5 Paper Side and Back Guides

The right hand guide remains in the same position for all sheet sizes. The left hand guide must be adjusted for sheet size. Allow approximately 1/16" (1.5mm) freedom in the stack. The back guides should be adjusted close to the stack.

3.3.2.6 Compensating for a Tilted Stack of Paper

Uneven paper stacks can be compensated for by inserting strips of binder's board every so often on the low side of the stack. It is recommended to use a piece of binder's board the same size as the sheet as a platform for the stack. Make sure it is heavy enough not to be picked up by the nozzles.

3.3.2.7 Curled Stock

The nozzles will compensate for quite a bit of curl in the paper. However, if the curl is too bad, it may be necessary to roll the stock by hand before loading it into the pile feeder.

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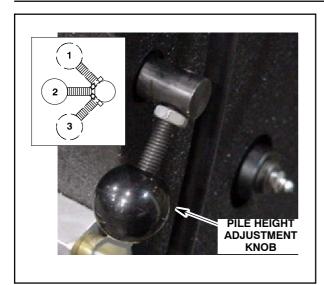


Fig. 3-32. Pile Height Adjustment Knob

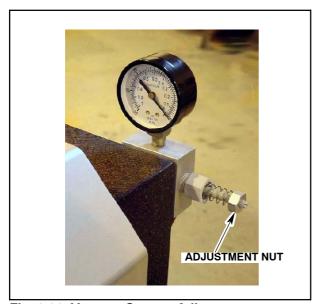


Fig. 3-33. Vacuum System Adjustment

3.3.2.8 Pile Height Adjustment

During the operation of the machine, the paper stack automatically rises until the top sheet reaches a predetermined height. The stack height is controlled by a checking bar above the stack. As the stack approaches the feeding height, the checking bar begins to strike the top of the stack. The higher the stack, the less the bar moves and the less the stack rises until it finally stops rising at all. As sheets are fed into the machine, this has the effect of lowering the top of the stack and the stack begins to rise.

The height that the stack will rise to is controlled by a hand knob on the outside of the R.H. feeder cover. Lifting this hand knob will cause the stack to rise to a higher point. Lowering the hand knob will cause the stack to stop rising at a lower point. During operation, the operator should lower the hand knob to it's bottom point; then with the machine running and the vacuum on, gradually lift the knob until the feeder begins to feed. The knob should be kept at it's lowest position possible allowing stock to feed.

3.3.2.9 Vacuum System for Feeding Paper

The machine is equipped with a vacuum pump which provides both vacuum for pick-up and blown air for separating the sheets. The degree of vacuum can be adjusted by adjusting the nut on the vacuum relief valve located on the vacuum gage.

The degree to which the vacuum is adjusted depends on the weight and porosity of the paper being fed. Generally speaking, the lighter and thinner the paper, the lower the vacuum required. The normal range of vacuum required will vary from about 5 to 10 inches (.18 to .34 BAR) of mercury as shown on the gage. The best practice is to run as low as possible with continuous feeding and with as least vacuum as possible.



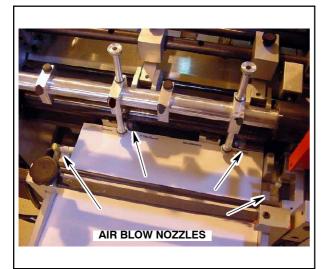


Fig. 3-34. Blow-Air System

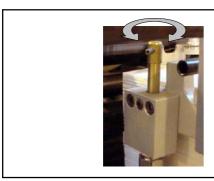


Fig. 3-35. Side Air Blow Nozzles

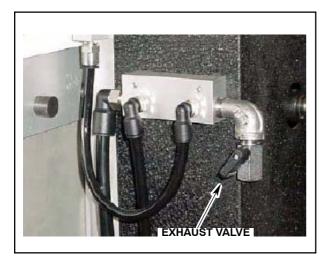


Fig. 3-36. Adjust the Air Blow At the Exhaust Valve

3.3.2.10 Blow-Air System

The blow-air system performs several functions. First, it separates the sheets so the effect of the vacuum bleeding through the paper is less critical. Also, with the second sheet separated from the first sheet, it allows air to get in between the sheets when the top sheet is removed from the stack. This prevents the first sheet from sucking up the second sheet. Another function of the blow-air is to lift the top few sheets until the top sheet is up against the sheet separator finger. This establishes a uniform height for the top sheet so that it will be in the proper position when the nozzles come down for the pick-up.

The feeder is equipped with four blow nozzles. Two of these blow in from the edges of the stack and two blow in from the front of the stack.

Blow air nozzle height is pre-set at the factory and should not need to be adjusted. If they need adjusting, the side nozzles are adjusted in height by screwing them either up or down. The front nozzles can be adjusted in height by first tilting them toward the stack and then screwing them either up or down.

To adjust direction of air nozzle, rotate nozzle to desired location.

The amount of blow-air from the nozzles can be adjusted by use of the exhaust valve located on the feeder guards.

The right exhaust valve controls the RH side air blow nozzle and RH top air blow nozzle. The left exhaust valve controls the LH side and top air nozzles.

CAUTION!

DO NOT RESTRICT THE BLOW AIR TO THE POINT WHERE IT OVERLOADS THE VACUUM PUMP. THIS CAN CAUSE THE MOTOR TO BE DAMAGED.

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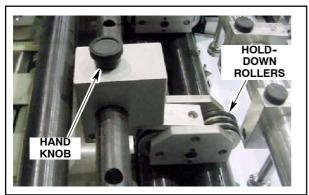


Fig. 3-37. Pull-In / Hold-Down Rollers

3.3.2.11 Moving the Pull-In / Hold-Down Rollers

The rollers can be positioned in any one of four positions. To change, pull the hand knob up to disengage and slide the assembly along the shaft to the position desired.

3.3.3 Adjusting the Reregister Unit

Once the reregister section is adjusted for paper size, no operating adjustment should be necessary except for dial positioning.

When the basic size of the sheet is changed, then it is necessary to adjust the unit.



Fig. 3-38. Sheet Length

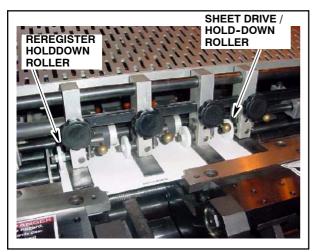


Fig. 3-39. Sheet Width

3.3.3.1 Sheet Length

This is the length of the sheet from the binding side to the edge of the tab.

The position of the delivery conveyor and the pull-back unit should be adjusted so that the spring gates are located approximately 1/2" in back of the back edge (binding edge) of the sheet when the front edge of the sheet is resting against the tab cutter back stop in the position where it will be tabcut. The sheet drive /holddown roller should be tensioned as necessary using as many as necessary to control the sheet. Adjust the sheet catcher on the delivery conveyor so that it will catch the sheets properly.

3.3.3.2 Sheet Width

When the width of the sheet is changed, it may be necessary to change one or more of the following items:

 Sheet Drive / Hold-Down Rollers: These should be adjusted so that they hold the sheets down near the outer edge. They must ride on the feed tapes.

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Fig. 3-40. Adjust Sheet Drive / Hold-Down Rollers

PAPER HOLD-DOWN BAR

PAPER
HOLD-DOWN
ROLLERS

Fig. 3-41. Rollers

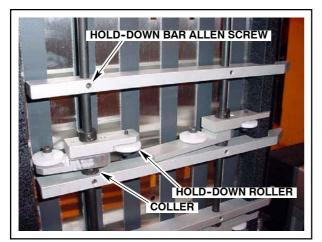


Fig. 3-42. Adjust Hold-Down Rollers and Bars

Loosen knob and slide hold-down roller assemblies where necessary.

CAUTION!

MAKE CERTAIN THAT THE REAR TIP OF THE HOLD-DOWN SHOE IS NEITHER DOWN TOO TIGHT ON THE LOWER TABCUTTER KNIFE SO AS TO CAUSE THE SHEETS TO BIND OR SO HIGH THAT THE INCOMING SHEETS TEND TO STRIKE THE UPPER TABCUTTER KNIVES.

2. Paper Hold-Down Rollers underneath the delivery conveyor: These rollers should be aligned so that they on top of the register belts. The paper hold-down bars should be between the belts when the cross conveyor is in the operating position (down).

To adjust the hold-down roller position: Loosen the Allen screws in the retaining collars and slide rollers into correct position. Tighten Allen screw on collers when roller assembly is in correct position.

To adjust the hold-down Bars: Loosen the Allen screws in the bars and slide into position. Tighten .



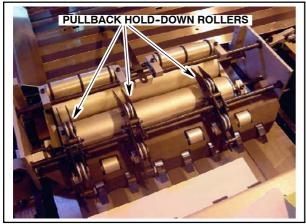


Fig. 3-43. Pullback Hold-Down Rollers

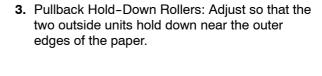




Fig. 3-44. Adjust Pullback Hold-Down Rollers

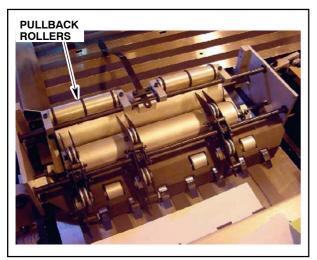


Fig. 3-45. Kick Back Rollers

Loosen the Allen screw to move the guide assembly. Always make sure the lower roller is on the crown of the small pullback roller.

4. Pull-Back Rollers: Normally no adjustment is necessary.

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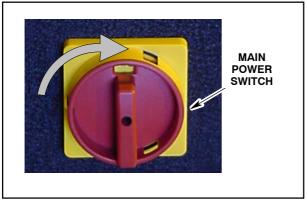


Fig. 3-46. Circuit Breaker Switch (ON)

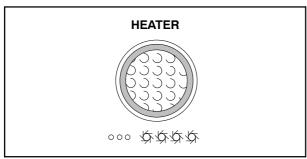


Fig. 3-47. Warm Up Heater

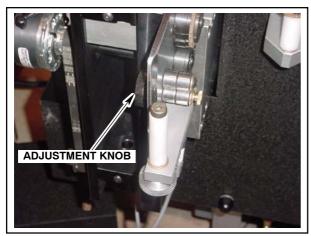


Fig. 3-48. Loosen Folding Roller Guide Adjustment Knob

3.3.4 Machine Start-Up

Step: 1. Main Power Switch ON.

To laminate plastic to paper:

Step: 2. Press HEATER pushbutton.

Step: 3. Set temperature controllers to 220–230°F as a starting point.

Note! Starting Heaters now will allow heaters to reach operating temperature while the rest of the machine is being set up.

Reel Holder

Step: 1. Loosen adjustment knob on the bottom folding roller guide.



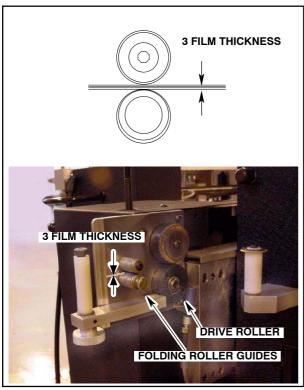


Fig. 3-49. Set Gap Between Plastic Feed Roller Guides to 3 Film Thickness

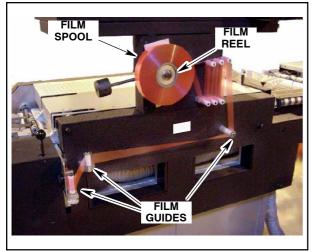


Fig. 3-50. Loading the Film

- **Step: 2.** Set the gap between the plastic folding roller guides to three film thickness by moving the lower roller guide.
- Step: 3. Tighten the adjustment knob.

- **Step: 4.** Load film reel on the reel holder.
- Note! Film from the factory is wound on the spool with the glue side facing out.
- **Step: 5.** Thread film through the film guides as shown.

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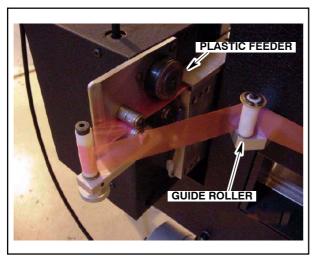


Fig. 3-51. Hand Feed Film into Machine

Step: 6. Hand feed film into the plastic feed mechanism.

Note! The glue side of the film should be against the guide roller.

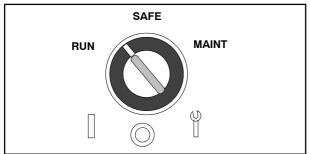


Fig. 3-52. Key Switch

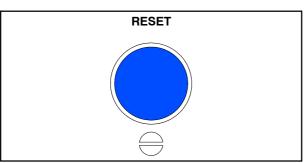


Fig. 3-53. Reset Pushbutton

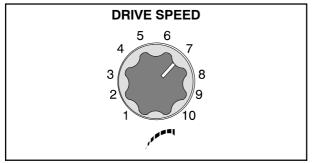


Fig. 3-54. Adjust Drive Speed to 7

Step: 7. Turn key switch to RUN.

Step: 8. Press RESET pushbutton.

Step: 9. Adjust Drive Speed to 7.



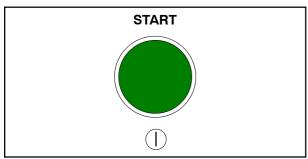


Fig. 3-55. Start Pushbutton

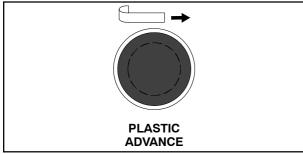


Fig. 3-56. Plastic Advance Pushbutton

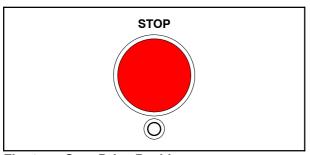


Fig. 3-57. Stop Drive Pushbutton

Step: 10. Press START pushbutton.

Step: 11. Press and hold PLASTIC ADVANCE pushbutton till plastic (Mylar) enters the Tip Die.

Note! The Plastic Advance button is located on the right side of the electrical cabinet directly over the Tip Die assembly.

Step: 12. Press STOP pushbutton.



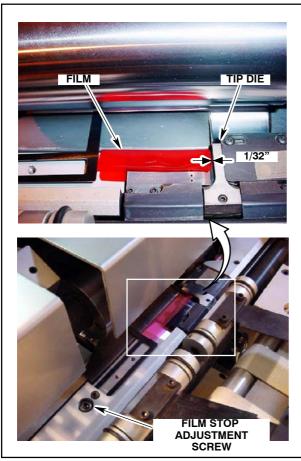


Fig. 3-58. Remove Film Scrap from Tip Die Area

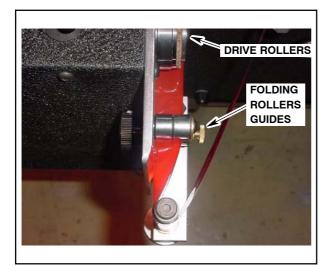


Fig. 3-59. Inspect Plastic Feed Area

Step: 13. Lift the window assembly to expose the Tip Die.

Step: 14. Loosen the film stop adjustment screw.Step: 15. Set film stop to 1/32" from edge of film after plastic size handwheel has been set.

Step: 16. Retighten the film stop adjustment screw.

Step: 17. Remove film from Tip Die. **Step: 18.** Lower the window assembly.

Step: 19. Inspect the folded plastic (Mylar) film that has been fed through the folding roller guides and into the drive roller assembly.



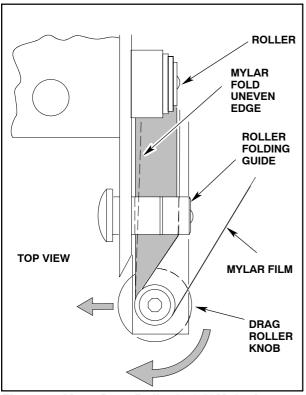


Fig. 3-60. Move Drag Roller Left If Mylar is Tracking Unevenly

Step: 20. If the plastic (Mylar) fold is uneven, move roller to the left as shown in Fig. 3-60.

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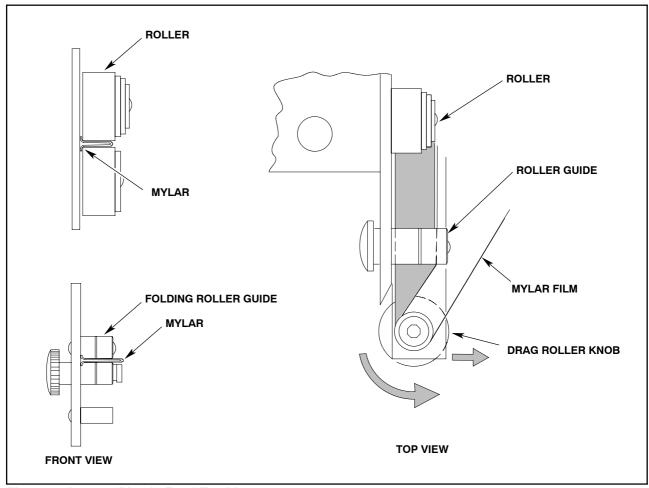
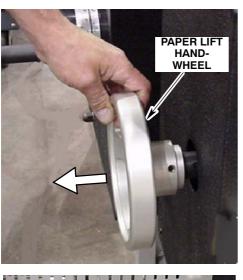


Fig. 3-61. Inspect Plastic Feed Tracking

Step: 21. If Mylar is tracking behind the fold and drive rollers, move roller to the right as shown in Fig. 3-61.





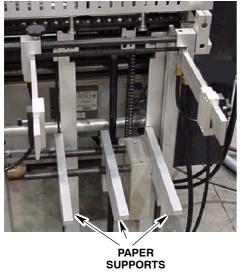


Fig. 3-62. Set Paper Lift

Loader Set-Up.

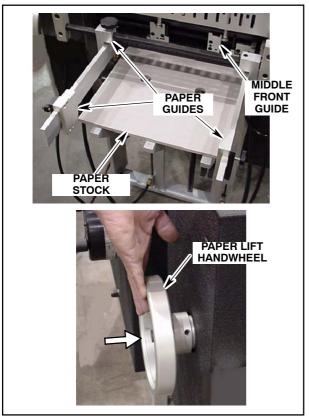
Step: 1. Pull out the paper lift handwheel and lower the paper lift.

Step: 2. Set paper supports to fit paper.

Note! Make sure left support is not underneath left guide rail.

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Step: 3. Load paper stock.

Step: 4. Push handwheel in and raise the paper lift till the paper is level with top screw of the middle front guide.

Note! Make sure paper lift handwheel is fully engaged. If not, the stack may fall without warning.

Step: 5. Adjust paper guides (length & width).

Fig. 3-63. Load Stock

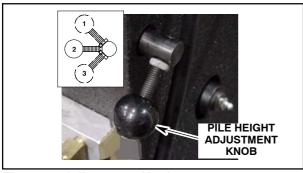


Fig. 3-64. Adjustment Knob

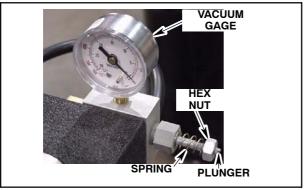


Fig. 3-65. Vacuum Setting

Step: 6. Depending on the curl and weight of the stock, adjust the pile height with the adjustment knob.

- Up for heavier or downward curl stock.
- Middle for normal and straight stock.
- Down for lighter or upward curl stock.

Step: 7. Adjust Vacuum.

Note! The vacuum starting point is 10 inch pounds (0.34 kPa) for standard index stock. The vacuum can be adjusted by turning the hex nut to tighten or loosen the spring, while keeping the plunger stationary.



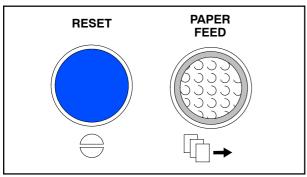


Fig. 3-66. Start Up Air Valves

Set Sheet Separators And Separator Air Valves

Adjust valves according to the size and weight of the paper. The following steps will start the Blower, so that the system can be adjusted.

Step: 1. Push RESET button.

Step: 2. Push PAPER FEED button.

Step: 3. If the vacuum nozzles are not in an upward position, index machine to place

them there.

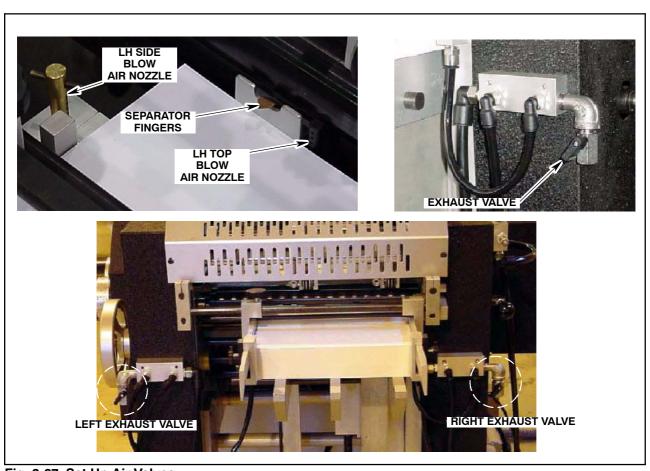


Fig. 3-67. Set Up Air Valves

The right exhaust valve controls the RH side air blow nozzle and RH top air blow nozzle. The left exhaust valve controls the LH side and top air nozzles.

Step: 4. Use exhaust valve to adjust blow air for each side.

- The higher the vacuum required, the more closed the exhaust valve will need to be.
- Heavier stocks will need more blow air, lighter stock will need less blow air.
- The higher the vacuum is set, the less blow air is available.

Step: 5. Open valves until the stock touches the separator fingers. Adjust the air valves according to size and weight of the stock.

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Fig. 3-68. Set Handwheels for Tabs

Step: 6. Use the charts in the back of this section to set the machine up for the desired tabs.

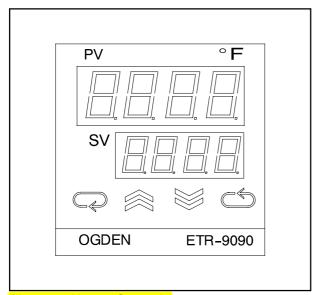


Fig. 3-69. Heater Controls

Step: 7. If laminating plastic to paper, check heat controls to see if they have reached their operating temperature.

Note! The starting point for the heaters is 220-230 °F. This may need to be changed depending on thickness of stock and the length or type of plastic

Temperature is dependant on paper and plastics being run. Ex. Clear heavyweight film with

90-110lb. index stock, 2-3 inch plastic length will need 300-325°F running at "7" on the speed control.

The heavier the stock and longer the paper length, the faster the speed and more heat is necessary. Thinner stocks and shorter lengths of plastic require lesser temperature. Always keep temperature as low as possible.

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3 Operation

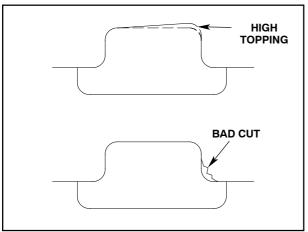


Fig. 3-70. Test Sheets

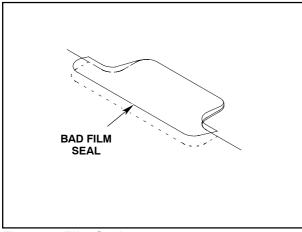


Fig. 3-71. Film Seal

Step: 8. Run at least six test sheets of stock. Check each sheet for:

High Topping

- Roller tension.
- Steel ball placement.

Cut (tab and edge of stock)

- Knife blade adjustment
- Dull knives

Film Seal (adhesiveness to stock)

- Heat or seal time
- Bad film
- Bad paper stock

Make necessary adjustments and repeat until problem is corrected.

Note! The film may not adhere to some coated stocks. Aqueous and Varnished stocks tend to release gas when laminated and cause bubbles in the film. Also, coated stocks tend to isolate the film from the paper thus not allowing the plastic to adhere to the paper fibers.

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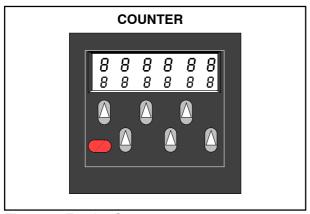


Fig. 3-72. Feeder Counter

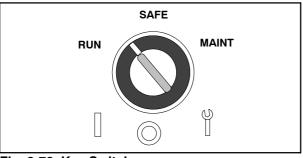


Fig. 3-73. Key Switch

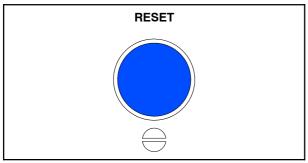


Fig. 3-74. Reset Pushbutton

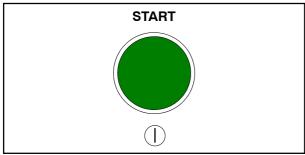


Fig. 3-75. Start Pushbutton

3.3.5 Start-Up for Run

Step: 1. Set feeder counter to desired quantity of sheets to be run.

Step: 2. Turn key switch to RUN.

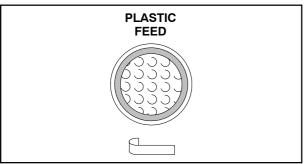
Step: 3. Press RESET pushbutton.

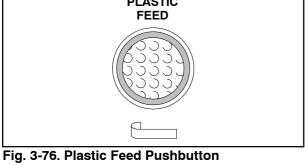
Step: 4. Press START pushbutton.

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3 Operation





Step: 6. Press PAPER FEED pushbutton to turn ON machine for the run.

Note! If tabs are to be laminated, include

this Step. If not, skip this Step.

Step: 5. Press PLASTIC FEED pushbutton to turn

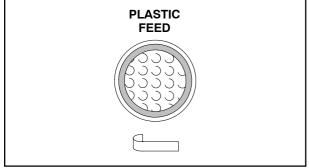


Fig. 3-77. Paper Feed Pushbutton



Fig. 3-78. Remove Finished Tabs

Step: 7. Collect finished tabs on the cross conveyor.

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3.4 Handwheel and Tab Set-Up

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3.4.1 Hand Wheel and Tab Set-Up Definitions

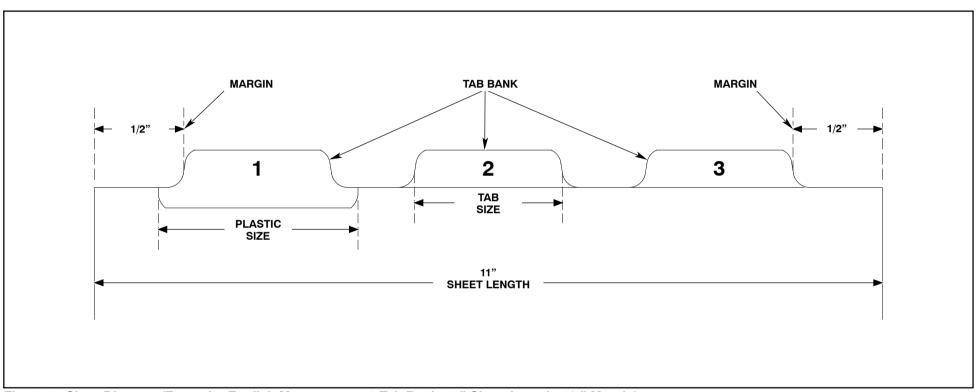


Fig. 3-79. Chart Diagram (Example: English Measurement 3 Tab Bank, 11" Sheet Length, 1/2" Margin)

Use the definitions in the above diagram to determine hand wheel set ups.

Margin: The dimension from the top or bottom edge of the sheet to the outwardmost flat edge of the first or last tab on the page.

The top and bottom margins will be the same dimension.

Sheet Length: The overall length of the sheet of tab stock paper.

Tab Blank: The quantity of tab divisions desired on page.

Plastic Size: Dimension of plastic film applied to tab area prior to cutting.

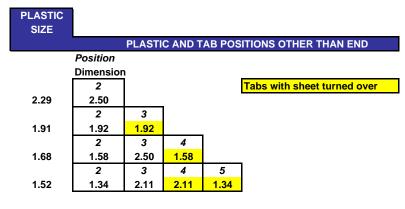
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Standard Tabs



Tab Side	5 inch
Margin	0.19 inch (3/16")

TAB BANK	TABS	TAB SIZE	PLASTIC SIZE	PLASTIC POSITION	TAB POSITION
2	-	2.31	2.87	1.45	1.34
3	1&3	1.54	2.10	1.06	0.96
4	1&4	1.16	1.71	0.87	0.77
5	1&5	0.93	1.48	0.75	0.65
6	1&6	0.77	1.33	0.67	0.57

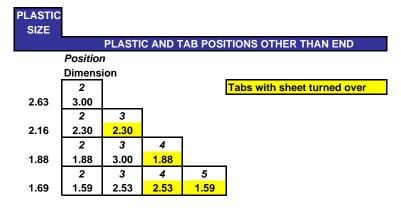


Standard Tabs



Tab Side	6 inch
Margin	0.19 inch (3/16")

TAB BANK	TABS	TAB SIZE	PLASTIC SIZE	PLASTIC POSITION	TAB POSITION
				1	
2	-	2.81	3.37	1.70	1.59
3	1&3	1.88	2.43	1.23	1.13
4	1&4	1.41	1.96	0.99	0.89
5	1&5	1.13	1.68	0.85	0.75
6	1&6	0.94	1.50	0.76	0.66



Standard Tabs



PLASTIC

Tab Side	7.25 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	3.44	4.00	2.01	1.91
3	1&3	2.29	2.85	1.43	1.33
4	1&4	1.72	2.28	1.15	1.05
5	1&5	1.38	1.93	0.98	0.88
6	1&6	1.15	1.70	0.86	0.76
7	1&7	0.98	1.54	0.78	0.68
8	1&8	0.86	1.42	0.72	0.62
9	1&9	0.76	1.32	0.67	0.57
10	1&10	0.69	1.25	0.63	0.53
11	1&11	0.63	1.18	0.60	0.50
12	1&12	0.57	1.13	0.58	0.47
13	1&13	0.53	1.09	0.55	0.45

SIZE									_		
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND			
Position											
	Dimension										
	2				Tabs wi	th sheet	turned	over			
3.04	3.63										
	2	3									
2.47	2.77	2.77		_							
	2	3	4	Ì							
2.13	2.25	3.63	2.25		_						
	2	3	4	5							
1.90	1.91	3.05	3.05	1.91		_					
	2	3	4	5	6						
1.73	1.66	2.64	3.63	2.64	1.66						
	2	3	4	5	6	7					
1.61	1.48	2.34	3.20	3.20	2.34	1.48					
	2	3	4	5	6	7	8				
1.51	1.33	2.10	2.86	3.63	2.86	2.10	1.33		1		
	2	3	4	5	6	7	8	9			
1.44	1.22	1.91	2.59	3.28	3.28	2.59	1.91	1.22			
	2	3	4	5	6	7	8	9	10		
1.38	1.13	1.75	2.38	3.00	3.63	3.00	2.38	1.75	1.13		
	2	3	4	5	6	7	8	9	10	11	
1.32	1.05	1.62	2.19	2.77	3.34	3.34	2.77	2.19	1.62	1.05	
	2	3	4	5	6	7	8	9	10	11	12
1.28	0.98	1.51	2.04	2.57	3.10	3.63	3.10	2.57	2.04	1.51	0.98

Standard Tabs



PLASTIC

Tab Side	7.25 inch
Margin	0.25 inch (1/4")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB		
BANK		SIZE	SIZE	POSITION	POSITION		
2	-	3.38	4.00	2.01	1.94		
3	1&3	2.25	2.87	1.45	1.38		
4	1&4	1.69	2.31	1.16	1.09		
5	1&5	1.35	1.97	1.00	0.93		
6	1&6	1.13	1.75	0.88	0.81		
7	1&7	0.96	1.58	0.80	0.73		
8	1&8	0.84	1.46	0.74	0.67		
9	1&9	0.75	1.37	0.70	0.63		
10	1&10	0.68	1.30	0.66	0.59		
11	1&11	0.61	1.23	0.63	0.56		
12	1&12	0.56	1.18	0.60	0.53		
13	1&13	0.52	1.14	0.58	0.51		

CIZE											
SIZE		PI ASTI	C AND T	AR POS	ITIONS	OTHER 1	THAN EN	ID.			
PLASTIC AND TAB POSITIONS OTHER THAN END Position											
	Dimens										
	2				Tabs wi	th sheet	turned	over			
3.00	3.63										
	2	3									
2.44	2.78	2.78									
	2	3	4								
2.10	2.28	3.63	2.28								
	2	3	4	5							
1.88	1.94	3.06	3.06	1.94							
	2	3	4	5	6						
1.71	1.70	2.66	3.63	2.66	1.70						
	2	3	4	5	6	7					
1.59	1.52	2.36	3.20	3.20	2.36	1.52		-			
	2	3	4	5	6	7	8				
1.50	1.38	2.13	2.88	3.63	2.88	2.13	1.38				
	2	3	4	5	6	7	8	9			
1.43	1.26	1.94	2.61	3.29	3.29	2.61	1.94	1.26		•	
	2	3	4	5	6	7	8	9	10		
1.36	1.17	1.78	2.40	3.01	3.63	3.01	2.40	1.78	1.17		•
	2	3	4	5	6	7	8	9	10	11	
1.31	1.09	1.66	2.22	2.78	3.34	3.34	2.78	2.22	1.66	1.09	
	2	3	4	5	6	7	8	9	10	11	12
1.27	1.03	1.55	2.07	2.59	3.11	3.63	3.11	2.59	2.07	1.55	1.03

Standard Tabs



Tab Side	7.75 inch
Margin	0.19 inch (3/16")

BANK SIZE SIZE POSITION POSITION 2 - 3.69 4.25 2.13 2.03 3 1&3 2.46 3.02 1.52 1.42 4 1&4 1.84 2.40 1.21 1.11 5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47 14 1&14 0.53 1.08 0.55 0.45 <th>TAB</th> <th>TABS</th> <th>TAB</th> <th>PLASTIC</th> <th>PLASTIC</th> <th>TAB</th>	TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
3 1&3 2.46 3.02 1.52 1.42 4 1&4 1.84 2.40 1.21 1.11 5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	BANK		SIZE	SIZE	POSITION	POSITION
3 1&3 2.46 3.02 1.52 1.42 4 1&4 1.84 2.40 1.21 1.11 5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
4 1&4 1.84 2.40 1.21 1.11 5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	2	-	3.69	4.25	2.13	2.03
4 1&4 1.84 2.40 1.21 1.11 5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	3	1&3	2.46	3.02	1.52	1.42
5 1&5 1.48 2.03 1.03 0.93 6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	4	1&4	1.84	2.40	1.21	1.11
6 1&6 1.23 1.79 0.90 0.80 7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	_					
7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	5	1&5	1.48	2.03	1.03	0.93
7 1&7 1.05 1.61 0.82 0.71 8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47		400	4.00	4.70	2.22	
8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	6	1&6	1.23	1.79	0.90	0.80
8 1&8 0.92 1.48 0.75 0.65 9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	7	18.7	1.05	1.61	0.82	0.71
9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	,	70.7	1.03	1.01	0.02	0.71
9 1&9 0.82 1.38 0.70 0.60 10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	8	1&8	0.92	1.48	0.75	0.65
10 1&10 0.74 1.30 0.66 0.56 11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	9	1&9	0.82	1.38	0.70	0.60
11 1&11 0.67 1.23 0.62 0.52 12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47	10	1&10	0.74	1.30	0.66	0.56
12 1&12 0.61 1.17 0.60 0.49 13 1&13 0.57 1.12 0.57 0.47						
13 1&13 0.57 1.12 0.57 0.47	11	1&11	0.67	1.23	0.62	0.52
13 1&13 0.57 1.12 0.57 0.47						
	12	1&12	0.61	1.17	0.60	0.49
	42	4942	0.57	4.40	0.57	0.47
14 1&14 0.53 1.08 0.55 0.45	13	76.73	0.57	1.12	0.57	0.47
	14	1814	0.53	1.08	0.55	0.45
	17	70.17	0.00	1.00	0.00	0.40
15 1&15 0.49 1.05 0.53 0.43	15	1&15	0.49	1.05	0.53	0.43

PLASTIC SIZE													
0.22		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND	1				
	Positio		-			-							
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
3.21	3.88												
	2	3											
2.59	2.95	2.95											
	2	3	4										
2.23	2.40	3.88	2.40		_								
	2	3	4	5									
1.98	2.03	3.26	3.26	2.03									
	2	3	4	5	6								
1.80	1.77	2.82	3.88	2.82	1.77								
	2	3	4	5	6	7							
1.67	1.57	2.49	3.41	3.41	2.49	1.57							
	2	3	4	5	6	7	8						
1.57	1.42	2.24	3.06	3.88	3.06	2.24	1.42		1				
	2	3	4	5	6	7	8	9					
1.49	1.29	2.03	2.77	3.51	3.51	2.77	2.03	1.29					
	2	3	4	5	6	7	8	9	10				
1.42	1.19	1.86	2.53	3.20	3.88	3.20	2.53	1.86	1.19		•		
	2	3	4	5	6	7	8	9	10	11			
1.36	1.11	1.72	2.34	2.95	3.57	3.57	2.95	2.34	1.72	1.11		i	
	2	3	4	5	6	7	8	9	10	11	12		
1.32	1.04	1.61	2.17	2.74	3.31	3.88	3.31	2.74	2.17	1.61	1.04		1
	2	3	4	5	6	7	8	9	10	11	12	13	
1.28	0.98	1.50	2.03	2.56	3.08	3.61	3.61	3.08	2.56	2.03	1.50	0.98	<u> </u>
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.24	0.93	1.42	1.91	2.40	2.89	3.38	3.88	3.38	2.89	2.40	1.91	1.42	0.93

Standard Tabs



Tab Side	7.75 inch
Margin	0.25 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
•					
2	-	3.63	4.25	2.13	2.06
3	1&3	2.42	3.04	1.53	1.46
4	1&4	1.81	2.43	1.23	1.16
5	1&5	1.45	2.07	1.05	0.98
3	10.5	1.45	2.07	1.05	0.90
6	1&6	1.21	1.83	0.92	0.85
7	1&7	1.04	1.66	0.84	0.77
8	1&8	0.91	1.53	0.77	0.70
9	1&9	0.81	1.43	0.72	0.65
10	1&10	0.73	4.05	0.00	0.64
10	10.10	0.73	1.35	0.68	0.61
11	1&11	0.66	1.28	0.65	0.58
12	1&12	0.60	1.22	0.62	0.55
13	1&13	0.56	1.18	0.60	0.53
14	1&14	0.52	1.14	0.58	0.51
15	1915	0.40	1.10	0.56	0.40
15	1&15	0.48	1.10	0.56	0.49

PLASTIC SIZE													
OILL		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Position								I				
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
3.17	3.88			'									
	2	3											
2.56	2.97	2.97											
	2	3	4										
2.20	2.43	3.88	2.43		_								
	2	3	4	5									
1.96	2.06	3.27	3.27	2.06									
	2	3	4	5	6								
1.79	1.80	2.84	3.88	2.84	1.80								
	2	3	4	5	6	7							
1.66	1.61	2.52	3.42	3.42	2.52	1.61							
	2	3	4	5	6	7	8						
1.56	1.46	2.26	3.07	3.88	3.07	2.26	1.46		Ī				
	2	3	4	5	6	7	8	9					
1.48	1.34	2.06	2.79	3.51	3.51	2.79	2.06	1.34		·			
	2	3	4	5	6	7	8	9	10				
1.41	1.24	1.90	2.56	3.22	3.88	3.22	2.56	1.90	1.24		ı		
	2	3	4	5	6	7	8	9	10	11			
1.35	1.16	1.76	2.36	2.97	3.57	3.57	2.97	2.36	1.76	1.16		İ	
	2	3	4	5	6	7	8	9	10	11	12		
1.31	1.09	1.64	2.20	2.76	3.32	3.88	3.32	2.76	2.20	1.64	1.09		1
	2	3	4	5	6	7	8	9	10	11	12	13	
1.27	1.03	1.54	2.06	2.58	3.10	3.62	3.62	3.10	2.58	2.06	1.54	1.03	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.23	0.98	1.46	1.94	2.43	2.91	3.39	3.88	3.39	2.91	2.43	1.94	1.46	0.98

Standard Tabs

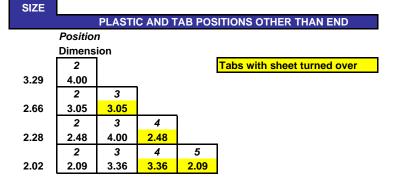


PLASTIC

Tab Side	8 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION

3	1&3	2.54	3.10	1.56	1.46
4	1&4	1.91	2.46	1.24	1.14
5	1&5	1.53	2.08	1.05	0.95
6	1&6	1.27	1.83	0.92	0.82



Standard Tabs



Tab Side	8.5 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	4.06	4.62	2.32	2.22
3	1&3	2.71	3.27	1.64	1.54
4	1&4	2.03	2.59	1.30	1.20
5	1&5	1.63	2.18	1.10	1.00
3	100	1.03	2.10	1.10	1.00
6	1&6	1.35	1.91	0.97	0.86
7	1&7	1.16	1.72	0.87	0.77
8	1&8	1.02	1.57	0.80	0.70
9	1&9	0.90	1.46	0.74	0.64
9	10.9	0.90	1.40	0.74	0.04
10	1&10	0.81	1.37	0.70	0.59
11	1&11	0.74	1.30	0.66	0.56
12	1&12	0.68	1.23	0.63	0.53
40	40.40	2.22	4.40	2.22	0.50
13	1&13	0.63	1.18	0.60	0.50
14	1&14	0.58	1.14	0.58	0.48
15	1&15	0.54	1.10	0.56	0.46

PLASTIC SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ID					
	Position	1							•				
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
3.46	4.25		-						='				
	2	3											
2.78	3.23	3.23											
	2	3	4										
2.38	2.63	4.25	2.63										
	2	3	4	5									
2.10	2.22	3.57	3.57	2.22									
	2	3	4	5	6								
1.91	1.93	3.09	4.25	3.09	1.93								
	2	3	4	5	6	7							
1.77	1.71	2.73	3.74	3.74	2.73	1.71		ı					
	2	3	4	5	6	7	8						
1.65	1.54	2.44	3.35	4.25	3.35	2.44	1.54		ı				
	2	3	4	5	6	7	8	9					
1.56	1.41	2.22	3.03	3.84	3.84	3.03	2.22	1.41		1			
	2	3	4	5	6	7	8	9	10				
1.49	1.30	2.03	2.77	3.51	4.25	3.51	2.77	2.03	1.30		1		
	2	3	4	5	6	7	8	9	10	11			
1.43	1.20	1.88	2.56	3.23	3.91	3.91	3.23	2.56	1.88	1.20		İ	
	2	3	4	5	6	7	8	9	10	11	12		
1.38	1.13	1.75	2.38	3.00	3.63	4.25	3.63	3.00	2.38	1.75	1.13		ì
4.00	2	3	4	5	6	7	8	9	10	11	12	13	
1.33	1.06	1.64	2.22	2.80	3.38	3.96	3.96	3.38	2.80	2.22	1.64	1.06	44
4.00	2	3	4	5	6	7	8	9	10	11	12	13	14
1.29	1.00	1.54	2.08	2.63	3.17	3.71	4.25	3.71	3.17	2.63	2.08	1.54	1.00

Standard Tabs



Tab Side	8.5 inch
Margin	0.25 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	4.00	4.62	2.32	2.25
3	1&3	2.67	3.29	1.65	1.58
4	1&4	2.00	2.62	1.32	1.25
5	1&5	1.60	2.22	1.12	1.05
6	1&6	1.33	1.95	0.99	0.92
7	1&7	1.14	1.76	0.89	0.82
8	1&8	1.00	1.62	0.82	0.75
9	1&9	0.89	1.51	0.76	0.69
10	1&10	0.80	1.42	0.72	0.65
11	1&11	0.73	1.35	0.68	0.61
12	1&12	0.67	1.29	0.65	0.58
13	1&13	0.62	1.24	0.63	0.56
14	1&14	0.57	1.19	0.61	0.54
15	1&15	0.53	1.15	0.59	0.52

PLASTIC SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Position	1											
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
3.42	4.25		_						<u>-</u> '				
	2	3											
2.75	3.25	3.25											
	2	3	4										
2.35	2.65	4.25	2.65										
	2	3	4	5									
2.08	2.25	3.58	3.58	2.25		•							
	2	3	4	5	6								
1.89	1.96	3.11	4.25	3.11	1.96								
	2	3	4	5	6	7							
1.75	1.75	2.75	3.75	3.75	2.75	1.75							
	2	3	4	5	6	7	8						
1.64	1.58	2.47	3.36	4.25	3.36	2.47	1.58		Ī				
	2	3	4	5	6	7	8	9					
1.55	1.45	2.25	3.05	3.85	3.85	3.05	2.25	1.45		ı			
	2	3	4	5	6	7	8	9	10				
1.48	1.34	2.07	2.80	3.52	4.25	3.52	2.80	2.07	1.34		1		
	2	3	4	5	6	7	8	9	10	11			
1.42	1.25	1.92	2.58	3.25	3.92	3.92	3.25	2.58	1.92	1.25		i	
	2	3	4	5	6	7	8	9	10	11	12		
1.37	1.17	1.79	2.40	3.02	3.63	4.25	3.63	3.02	2.40	1.79	1.17		,
	2	3	4	5	6	7	8	9	10	11	12	13	
1.32	1.11	1.68	2.25	2.82	3.39	3.96	3.96	3.39	2.82	2.25	1.68	1.11	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.28	1.05	1.58	2.12	2.65	3.18	3.72	4.25	3.72	3.18	2.65	2.12	1.58	1.05

Standard Tabs



PLASTIC

Tab Side	8.5 inch
Margin	0.50 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	3.75	4.50	2.38	2.38
3	1&3	2.50	3.25	1.75	1.75
4	1&4	1.88	2.63	1.44	1.44
	40.5	4.50	2.25	4.05	4.05
5	1&5	1.50	2.25	1.25	1.25
6	1&6	1.25	2.00	1.13	1.13
	700	1.20	2.00	1.10	1.10
7	1&7	1.07	1.82	1.04	1.04
8	1&8	0.94	1.69	0.97	0.97
9	1&9	0.83	1.58	0.92	0.92
10	1&10	0.75	1.50	0.88	0.88
11	1&11	0.68	1.43	0.84	0.84
''	10:11	0.00	1.43	0.04	0.04
12	1&12	0.63	1.38	0.81	0.81
13	1&13	0.58	1.33	0.79	0.79
14	1&14	0.54	1.29	0.77	0.77
		_			
15	1&15	0.50	1.25	0.75	0.75

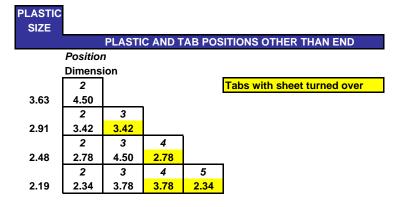
SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Position	า							-				
	Dimens	ion							_				
	2				Tabs wi	th sheet	turned	over					
3.25	4.25		_										
	2	3											
2.63	3.31	3.31		-									
	2	3	4										
2.25	2.75	4.25	2.75		_								
	2	3	4	5									
2.00	2.38	3.63	3.63	2.38		_							
	2	3	4	5	6								
1.82	2.11	3.18	4.25	3.18	2.11		-						
	2	3	4	5	6	7							
1.69	1.91	2.84	3.78	3.78	2.84	1.91		_					
	2	3	4	5	6	7	8						
1.58	1.75	2.58	3.42	4.25	3.42	2.58	1.75		_				
	2	3	4	5	6	7	8	9					
1.50	1.63	2.38	3.13	3.88	3.88	3.13	2.38	1.63		-			
	2	3	4	5	6	7	8	9	10				
1.43	1.52	2.20	2.89	3.57	4.25	3.57	2.89	2.20	1.52		_		
	2	3	4	5	6	7	8	9	10	11			
1.38	1.44	2.06	2.69	3.31	3.94	3.94	3.31	2.69	2.06	1.44			
	2	3	4	5	6	7	8	9	10	11	12		
1.33	1.37	1.94	2.52	3.10	3.67	4.25	3.67	3.10	2.52	1.94	1.37		_
	2	3	4	5	6	7	8	9	10	11	12	13	
1.29	1.30	1.84	2.38	2.91	3.45	3.98	3.98	3.45	2.91	2.38	1.84	1.30	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.25	1.25	1.75	2.25	2.75	3.25	3.75	4.25	3.75	3.25	2.75	2.25	1.75	1.25

Standard Tabs



Tab Side	9 inch
Margin	0.19 inch (3/16")

TAB BANK	TABS	TAB SIZE	PLASTIC SIZE	PLASTIC POSITION	TAB POSITION
2	-	4.31	4.87	2.45	2.34
3	1&3	2.88	3.43	1.73	1.63
4	1&4	2.16	2.71	1.37	1.27
5	1&5	1.73	2.28	1.15	1.05
6	1&6	1.44	2.00	1.01	0.91



Standard Tabs



Tab Side	9.5 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB	
BANK		SIZE	SIZE	POSITION	POSITION	
2	-	4.56	5.12	2.57	2.47	
3	1&3	3.04	3.60	1.81	1.71	
4	1&4	2.28	2.84	1.43	1.33	
5	1&5	1.83	2.38	1.20	1.10	
6	1&6	1.52	2.08	1.05	0.95	
7	1&7	1.30	1.86	0.94	0.84	
,	707	1.50	1.00	0.34	0.04	
8	1&8	1.14	1.70	0.86	0.76	
9	1&9	1.01	1.57	0.80	0.69	
10	1&10	0.91	1.47	0.75	0.64	
11	1&11	0.83	1.39	0.70	0.60	
12	1&12	0.76	1.32	0.67	0.57	
13	1&13	0.70	1.26	0.64	0.54	
13	10:13	0.70	1.20	0.04	0.34	
14	1&14	0.65	1.21	0.61	0.51	
15	1&15	0.61	1.17	0.59	0.49	

PLASTIC SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ID					
•	Position	1											
	Dimens	ion							_				
	2				Tabs wi	th sheet	turned	over					
3.79	4.75												
	2	3											
3.03	3.61	3.61		ı									
	2	3	4										
2.58	2.93	4.75	2.93		1								
	2	3	4	5									
2.27	2.47	3.99	3.99	2.47		ı							
	2	3	4	5	6								
2.05	2.14	3.45	4.75	3.45	2.14		ì						
	2	3	4	5	6	7							
1.89	1.90	3.04	4.18	4.18	3.04	1.90		İ					
4.70	2	3	4	5	6	7	8						
1.76	1.71	2.72	3.74	4.75	3.74	2.72	1.71	•	İ				
1.66	2 1.56	3 2.47	<i>4</i> 3.38	5 4.29	6 4,29	7 3.38	8 2.47	9 1.56					
1.00	2	3	3.36	4.29 5	6	3.36 7	8	9	10	ì			
1.58	1.43	2.26	3.09	3.92	4.75	3.92	3.09	2.26	1.43				
1.50	2	3	4	5	6	7	8	9	10	11	I		
1.51	1.33	2.09	2.85	3.61	4.37	4.37	3.61	2.85	2.09	1.33			
1.01	2	3	4	5	6	7	8	9	10	11	12		
1.45	1.24	1.94	2.64	3.35	4.05	4.75	4.05	3.35	2.64	1.94	1.24		
	2	3	4	5	6	7	8	9	10	11	12	13	1
1.40	1.17	1.82	2.47	3.12	3.77	4.42	4.42	3.77	3.12	2.47	1.82	1.17	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.36	1.10	1.71	2.32	2.93	3.53	4.14	4.75	4.14	3.53	2.93	2.32	1.71	1.10

Standard Tabs



PLASTIC

Tab Side	9.5 inch
Margin	0.25 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	4.50	5.12	2.57	2.50
3	1&3	3.00	3.62	1.82	1.75
4	1&4	2.25	2.87	1.45	1.38
5	1&5	1.80	2.42	1.22	1.15
6	1&6	1.50	2.12	1.07	1.00
7	1&7	1.29	1.91	0.96	0.89
8	1&8	1.13	1.75	0.88	0.81
9	1&9	1.00	1.62	0.82	0.75
10	1&10	0.90	1.52	0.77	0.70
11	1&11	0.82	1.44	0.73	0.66
12	1&12	0.75	1.37	0.70	0.63
13	1&13	0.69	1.31	0.67	0.60
14	1&14	0.64	1.26	0.64	0.57
15	1&15	0.60	1.22	0.62	0.55

LACTIO													
SIZE		DI 4071	0 AND =	45.500	ITIONS.			15	İ				
	5 '''		C AND T	AB POS	ITIONS	OTHER	THAN EN	ND					
	Position												
	Dimens	ion		ı	+ -1				Ì				
0.75	2				l abs wi	tn sneet	turned	over					
3.75	4.75	•	Ì										
2.00	2	3											
3.00	3.63	3.63	_	1									
2.55	2.95	3 4.75	4 2.95										
2.55	2.95	3	2.95 4	5	_								
2.25	2.50	4.00	4.00	2.50									
2.23	2.30	3	4.00	5	6								
2.04	2.18	3.46	4.75	3.46	2.18								
2.04	2	3	4	5	6	7)						
1.88	1.94	3.06	4.19	4.19	3.06	1.94							
	2	3	4	5	6	7	8						
1.75	1.75	2.75	3.75	4.75	3.75	2.75	1.75						
	2	3	4	5	6	7	8	9					
1.65	1.60	2.50	3.40	4.30	4.30	3.40	2.50	1.60					
	2	3	4	5	6	7	8	9	10				
1.57	1.48	2.30	3.11	3.93	4.75	3.93	3.11	2.30	1.48				
	2	3	4	5	6	7	8	9	10	11			
1.50	1.38	2.13	2.88	3.63	4.38	4.38	3.63	2.88	2.13	1.38		1	
	2	3	4	5	6	7	8	9	10	11	12		
1.44	1.29	1.98	2.67	3.37	4.06	4.75	4.06	3.37	2.67	1.98	1.29		_
	2	3	4	5	6	7	8	9	10	11	12	13	1
1.39	1.21	1.86	2.50	3.14	3.79	4.43	4.43	3.79	3.14	2.50	1.86	1.21	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.35	1.15	1.75	2.35	2.95	3.55	4.15	4.75	4.15	3.55	2.95	2.35	1.75	1.15

Standard Tabs



PLASTIC

Tab Side	9.5 inch
Margin	0.50 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	4.25	5.00	2.63	2.63
3	1&3	2.83	3.58	1.92	1.92
4	1&4	2.13	2.88	1.56	1.56
5	1&5	1.70	2.45	1.35	1.35
	400	4.40	0.47	4.04	4.04
6	1&6	1.42	2.17	1.21	1.21
7	1&7	1.21	1.96	1.11	1.11
8	1&8	1.06	1.81	1.03	1.03
9	1&9	0.94	1.69	0.97	0.97
10	1&10	0.85	1.60	0.93	0.93
11	1&11	0.77	1.52	0.89	0.89
12	1&12	0.71	1.46	0.85	0.85
13	1&13	0.65	1.40	0.83	0.83
14	1&14	0.61	1.36	0.80	0.80
15	1&15	0.57	1.32	0.78	0.78

SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Positio	า											
	Dimens	ion							Ī				
	2				Tabs wi	th sheet	turned	over					
3.58	4.75												
	2	3											
2.88	3.69	3.69		ı									
	2	3	4										
2.45	3.05	4.75	3.05										
	2	3	4	5									
2.17	2.63	4.04	4.04	2.63		i							
	2	3	4	5	6								
1.96	2.32	3.54	4.75	3.54	2.32								
	2	3	4	5	6	7							
1.81	2.09	3.16	4.22	4.22	3.16	2.09							
	2	3	4	5	6	7	8						
1.69	1.92	2.86	3.81	4.75	3.81	2.86	1.92		Ī				
	2	3	4	5	6	7	8	9					
1.60	1.78	2.63	3.48	4.33	4.33	3.48	2.63	1.78		ı			
	2	3	4	5	6	7	8	9	10				
1.52	1.66	2.43	3.20	3.98	4.75	3.98	3.20	2.43	1.66		ī		
	2	3	4	5	6	7	8	9	10	11			
1.46	1.56	2.27	2.98	3.69	4.40	4.40	3.69	2.98	2.27	1.56			
	2	3	4	5	6	7	8	9	10	11	12		
1.40	1.48	2.13	2.79	3.44	4.10	4.75	4.10	3.44	2.79	2.13	1.48		
	2	3	4	5	6	7	8	9	10	11	12	13	
1.36	1.41	2.02	2.63	3.23	3.84	4.45	4.45	3.84	3.23	2.63	2.02	1.41	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.32	1.35	1.92	2.48	3.05	3.62	4.18	4.75	4.18	3.62	3.05	2.48	1.92	1.35

Standard Tabs



Tab Side	11 inch
Margin	0.13 inch (1/8")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	5.38	5.87	2.95	2.81
		_			
3	1&3	3.58	4.08	2.05	1.92
4	1&4	2.69	3.18	1.60	1.47
1	70.4	2.03	3.10	1.00	1.47
5	1&5	2.15	2.65	1.33	1.20
6	1&6	1.79	2.29	1.15	1.02
7	1&7	1.54	2.03	1.03	0.89
8	1&8	1.34	1.84	0.93	0.80
9	1&9	1.19	1.69	0.85	0.72
	740	0	1.00	0.00	02
10	1&10	1.08	1.57	0.80	0.66
11	1&11	0.98	1.47	0.75	0.61
12	1&12	0.90	1.39	0.71	0.57
42	4842	0.02	4.22	0.67	0.54
13	1&13	0.83	1.32	0.67	0.54
14	1&14	0.77	1.26	0.64	0.51

15	1&15	0.72	1.21	0.62	0.48

PLASTIC SIZE													
		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN E	ND					
	Position	1											
	Dimens	ion							_				
	2				Tabs wi	th sheet	turned	over					
4.33	5.50												
	2	3											
3.44	4.16	4.16											
	2	3	4										
2.90	3.35	5.50	3.35		1								
	2	3	4	5									
2.54	2.81	4.60	4.60	2.81									
	2	3	4	5	6								
2.29	2.43	3.96	5.50	3.96	2.43		ı						
	2	3	4	5	6	7							
2.09	2.14	3.48	4.83	4.83	3.48	2.14		•					
	2	3	4	5	6	7	8						
1.94	1.92	3.11	4.31	5.50	4.31	3.11	1.92		ı				
	2	3	4	5	6	7	8	9					
1.83	1.74	2.81	3.89	4.96	4.96	3.89	2.81	1.74		1			
	2	3	4	5	6	7	8	9	10				
1.73	1.59	2.57	3.55	4.52	5.50	4.52	3.55	2.57	1.59		1		
	2	3	4	5	6	7	8	9	10	11			
1.65	1.47	2.36	3.26	4.16	5.05	5.05	4.16	3.26	2.36	1.47		ī	
	2	3	4	5	6	7	8	9	10	11	12		
1.58	1.37	2.19	3.02	3.85	4.67	5.50	4.67	3.85	3.02	2.19	1.37		ì
4 = -	2	3	4	5	6	7	8	9	10	11	12	13	
1.52	1.28	2.04	2.81	3.58	4.35	5.12	5.12	4.35	3.58	2.81	2.04	1.28	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.47	1.20	1.92	2.63	3.35	4.07	4.78	5.50	4.78	4.07	3.35	2.63	1.92	1.20

Standard Tabs



Tab Side	11 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	5.31	5.87	2.95	2.84
3	1&3	3.54	4.10	2.06	1.96
	40.4	0.00	0.04	4.00	4.50
4	1&4	2.66	3.21	1.62	1.52
5	1&5	2.13	2.68	1.35	1.25
		20			0
6	1&6	1.77	2.33	1.17	1.07
7	1&7	1.52	2.08	1.05	0.95
8	1&8	1.33	1.89	0.95	0.85
9	1&9	1.18	1.74	0.88	0.78
10	1&10	1.06	1.62	0.82	0.72
11	1&11	0.97	1.52	0.77	0.67
	10.10				
12	1&12	0.89	1.44	0.73	0.63
13	1&13	0.82	1.37	0.70	0.60
	,	0.02		00	0.00
14	1&14	0.76	1.32	0.67	0.57
15	1&15	0.71	1.27	0.64	0.54

PLASTIC SIZE													
0.22		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Positio		-			-							
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.29	5.50		_										
	2	3											
3.41	4.17	4.17		1									
	2	3	4										
2.88	3.38	5.50	3.38										
	2	3	4	5									
2.52	2.84	4.61	4.61	2.84		ı							
	2	3	4	5	6								
2.27	2.46	3.98	5.50	3.98	2.46		ı						
	2	3	4	5	6	7							
2.08	2.18	3.51	4.84	4.84	3.51	2.18		1					
	2	3	4	5	6	7	8						
1.93	1.96	3.14	4.32	5.50	4.32	3.14	1.96		_				
1.81	2 1.78	3 2.84	4	5	6 4.97	7 3,91	8 2.84	9 1.78					
1.81	2	2.84	3.91 4	4.97 5	4.97 6	3.91 7	2.84 8	9	10	ì			
1.72	1.64	2.60	3.57	5 4.53	5.50	4.53	3.57	2.60	1.64				
1.72	2	3	4	5	6	7	8	9	1.04	11			
1.64	1.52	2.40	3.29	4.17	5.06	5.06	4.17	3.29	2.40	1.52			
1.04	2	3	4	5	6	7	8	9	10	11	12		
1.57	1.41	2.23	3.05	3.87	4.68	5.50	4.68	3.87	3.05	2,23	1.41		
	2	3	4	5	6	7	8	9	10	11	12	13	1
1.51	1.33	2.08	2.84	3.60	4.36	5.12	5.12	4.36	3.60	2.84	2.08	1.33	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.46	1.25	1.96	2.67	3.38	4.08	4.79	5.50	4.79	4.08	3.38	2.67	1.96	1.25

Standard Tabs



Tab Side	11 inch
Margin	0.25 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
					1
2	-	5.25	5.87	2.95	2.88
3	1&3	3.50	4.12	2.07	2.00
4	1&4	2.63	3.25	1.63	1.56
5	1&5	2.10	2.72	1.37	1.30
,	10.5	2.10	2.12	1.37	1.30
6	1&6	1.75	2.37	1.20	1.13
			-		
7	1&7	1.50	2.12	1.07	1.00
8	1&8	1.31	1.93	0.98	0.91
9	1&9	1.17	1.79	0.90	0.83
10	1&10	1.05	1.67	0.85	0.78
10	10.10	1.03	1.07	0.03	0.70
11	1&11	0.95	1.57	0.80	0.73
12	1&12	0.88	1.50	0.76	0.69
13	1&13	0.81	1.43	0.72	0.65
	4044		4.07	0.70	
14	1&14	0.75	1.37	0.70	0.63
15	1&15	0.70	1.32	0.67	0.60
13	10.13	0.70	1.32	0.07	0.00

PLASTIC SIZE													
OIZE		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND.					
	Position												
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.25	5.50												
	2	3											
3.38	4.19	4.19											
	2	3	4										
2.85	3.40	5.50	3.40		_								
	2	3	4	5									
2.50	2.88	4.63	4.63	2.88		-							
	2	3	4	5	6								
2.25	2.50	4.00	5.50	4.00	2.50								
	2	3	4	5	6	7							
2.06	2.22	3.53	4.84	4.84	3.53	2.22							
	2	3	4	5	6	7	8						
1.92	2.00	3.17	4.33	5.50	4.33	3.17	2.00						
	2	3	4	5	6	7	8	9					
1.80	1.83	2.88	3.93	4.98	4.98	3.93	2.88	1.83					
	2	3	4	5	6	7	8	9	10				
1.70	1.68	2.64	3.59	4.55	5.50	4.55	3.59	2.64	1.68		1		
	2	3	4	5	6	7	8	9	10	11			
1.63	1.56	2.44	3.31	4.19	5.06	5.06	4.19	3.31	2.44	1.56		Ī	
	2	3	4	5	6	7	8	9	10	11	12		
1.56	1.46	2.27	3.08	3.88	4.69	5.50	4.69	3.88	3.08	2.27	1.46		1
	2	3	4	5	6	7	8	9	10	11	12	13	
1.50	1.38	2.13	2.88	3.63	4.38	5.13	5.13	4.38	3.63	2.88	2.13	1.38	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.45	1.30	2.00	2.70	3.40	4.10	4.80	5.50	4.80	4.10	3.40	2.70	2.00	1.30

Standard Tabs



Tab Side	11 inch
Margin	0.50 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
	1				
2	-	5.00	5.75	3.00	3.00
3	1&3	3.33	4.08	2.17	2.17
4	1&4	2.50	3.25	1.75	1.75
5	1&5	2.00	2.75	1.50	1.50
6	1&6	1.67	2.42	1.33	1.33
_					
7	1&7	1.43	2.18	1.21	1.21
8	1&8	1.25	2.00	1.13	1.13
	700	1.20	2.00	1.10	1.10
9	1&9	1.11	1.86	1.06	1.06
10	1&10	1.00	1.75	1.00	1.00
11	1&11	0.91	1.66	0.95	0.95
12	1&12	0.83	1.58	0.92	0.92
12	10.12	0.03	1.50	0.32	0.32
13	1&13	0.77	1.52	0.88	0.88
14	1&14	0.71	1.46	0.86	0.86
15	1&15	0.67	1.42	0.83	0.83

PLASTIC SIZE													
0.22		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND	1				
	Position												
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.08	5.50								•				
	2	3											
3.25	4.25	4.25											
	2	3	4										
2.75	3.50	5.50	3.50		_								
	2	3	4	5									
2.42	3.00	4.67	4.67	3.00									
	2	3	4	5	6								
2.18	2.64	4.07	5.50	4.07	2.64								
	2	3	4	5	6	7							
2.00	2.38	3.63	4.88	4.88	3.63	2.38							
	2	3	4	5	6	7	8						
1.86	2.17	3.28	4.39	5.50	4.39	3.28	2.17		1				
	2	3	4	5	6	7	8	9					
1.75	2.00	3.00	4.00	5.00	5.00	4.00	3.00	2.00		,			
	2	3	4	5	6	7	8	9	10				
1.66	1.86	2.77	3.68	4.59	5.50	4.59	3.68	2.77	1.86		i		
	2	3	4	5	6	7	8	9	10	11			
1.58	1.75	2.58	3.42	4.25	5.08	5.08	4.25	3.42	2.58	1.75		Ī	
	2	3	4	5	6	7	8	9	10	11	12		
1.52	1.65	2.42	3.19	3.96	4.73	5.50	4.73	3.96	3.19	2.42	1.65		1
	2	3	4	5	6	7	8	9	10	11	12	13	
1.46	1.57	2.29	3.00	3.71	4.43	5.14	5.14	4.43	3.71	3.00	2.29	1.57	44
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.42	1.50	2.17	2.83	3.50	4.17	4.83	5.50	4.83	4.17	3.50	2.83	2.17	1.50

Standard Tabs



Tab Side	12 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	5.81	6.37	3.20	3.09
3	1&3	3.88	4.43	2.23	2.13
	40.4	0.04	0.40	4 74	4.04
4	1&4	2.91	3.46	1.74	1.64
5	1&5	2.33	2.88	1.45	1.35
ŭ	700	2.00	2.00	1.40	1.00
6	1&6	1.94	2.50	1.26	1.16
7	1&7	1.66	2.22	1.12	1.02
8	1&8	1.45	2.01	1.02	0.91
0	480	4.00	4.05	0.02	0.02
9	1&9	1.29	1.85	0.93	0.83
10	1&10	1.16	1.72	0.87	0.77
		•		0.0.	•
11	1&11	1.06	1.61	0.82	0.72
12	1&12	0.97	1.53	0.77	0.67
13	1&13	0.89	1.45	0.74	0.63
14	1&14	0.83	1.39	0.70	0.60
14	10:14	0.03	1.38	0.70	0.00
15	1&15	0.78	1.33	0.68	0.58
	-7.0				

PLASTIC SIZE													
0.22		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND	1				
	Positio		-			-							
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.63	6.00		_						-				
	2	3											
3.66	4.55	4.55		1									
	2	3	4										
3.08	3.68	6.00	3.68										
	2	3	4	5									
2.69	3.09	5.03	5.03	3.09									
	2	3	4	5	6								
2.41	2.68	4.34	6.00	4.34	2.68								
	2	3	4	5	6	7							
2.20	2.37	3.82	5.27	5.27	3.82	2.37		•					
	2	3	4	5	6	7	8						
2.04	2.13	3.42	4.71	6.00	4.71	3.42	2.13		ı				
	2	3	4	5	6	7	8	9					
1.91	1.93	3.09	4.26	5.42	5.42	4.26	3.09	1.93		ì			
	2	3	4	5	6	7	8	9	10				
1.81	1.77	2.83	3.89	4.94	6.00	4.94	3.89	2.83	1.77		i		
4 = 0	2	3	4	5	6	7	8	9	10	11			
1.72	1.64	2.61	3.58	4.55	5.52	5.52	4.55	3.58	2.61	1.64	40		
4.04	2	3	4	5	6	7	8	9	10	11	12		
1.64	1.53	2.42	3.32	4.21 5	5.11	6.00 7	5.11	4.21	3.32	2.42	1.53	40	Ì
4.50	2	3	-	-	6	-	8	9	10	11	12	13	
1.58	1.43	2.26 3	3.09 4	3.92 5	4.75 6	5.58 7	5.58 8	4.75 9	3.92 10	3.09 11	2.26	1.43 13	14
1.53	1.35	3 2.13	2.90	3.68	6 4.45	5.23	6.00	5.23	4.45	3.68	12 2.90	2.13	1.35
1.53	1.33	2.13	2.90	3.00	4.43	3.23	0.00	3.23	4.43	3.00	2.90	2.13	1.33

Standard Tabs



Tab Side 12 inch
Margin 0.25 inch

	TABS	TAB	PLASTIC	PLASTIC	TAB	
BANK		SIZE	SIZE	POSITION	POSITION	
2	-	5.75	6.37	3.20	3.13	
3	1&3	3.83	4.45	2.24	2.17	
4	1&4	2.88	3.50	1.76	1.69	
_						
5	1&5	2.30	2.92	1.47	1.40	
6	1&6	1.92	2.54	1.28	1.21	
7	1&7	1.64	2.26	1.14	1.07	
8	1&8	1.44	2.06	1.04	0.97	
9	1&9	1.28	1.90	0.96	0.89	
10	1&10	1.15	1.77	0.90	0.83	
11	1&11	1.05	1.67	0.84	0.77	
12	1&12	0.96	1.58	0.80	0.73	
13	1&13	0.88	1.50	0.76	0.69	
14	1&14	0.82	1.44	0.73	0.66	
15	1&15	0.77	1.39	0.70	0.63	

PLASTIC SIZE													
OILL		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND					
	Positio												
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.58	6.00												
	2	3											
3.63	4.56	4.56											
	2	3	4										
3.05	3.70	6.00	3.70		_								
	2	3	4	5									
2.67	3.13	5.04	5.04	3.13									
	2	3	4	5	6								
2.39	2.71	4.36	6.00	4.36	2.71								
	2	3	4	5	6	7							
2.19	2.41	3.84	5.28	5.28	3.84	2.41							
	2	3	4	5	6	7	8						
2.03	2.17	3.44	4.72	6.00	4.72	3.44	2.17		1				
	2	3	4	5	6	7	8	9					
1.90	1.98	3.13	4.28	5.43	5.43	4.28	3.13	1.98					
	2	3	4	5	6	7	8	9	10				
1.80	1.82	2.86	3.91	4.95	6.00	4.95	3.91	2.86	1.82		•		
	2	3	4	5	6	7	8	9	10	11			
1.71	1.69	2.65	3.60	4.56	5.52	5.52	4.56	3.60	2.65	1.69		1	
	2	3	4	5	6	7	8	9	10	11	12		
1.63	1.58	2.46	3.35	4.23	5.12	6.00	5.12	4.23	3.35	2.46	1.58		1
	2	3	4	5	6	7	8	9	10	11	12	13	
1.57	1.48	2.30	3.13	3.95	4.77	5.59	5.59	4.77	3.95	3.13	2.30	1.48	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.52	1.40	2.17	2.93	3.70	4.47	5.23	6.00	5.23	4.47	3.70	2.93	2.17	1.40

Standard Tabs



Tab Side	12 inch
Margin	0.50 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
r	•				
2	-	5.50	6.25	3.25	3.25
3	1&3	3.67	4.42	2.33	2.33
4	1&4	2.75	3.50	1.88	1.88
			0.00		
5	1&5	2.20	2.95	1.60	1.60
6	1&6	1.83	2.58	1.42	1.42
7	1&7	1.57	2.32	1.29	1.29
8	1&8	1.38	2.13	1.19	1.19
°	10.0	1.30	2.13	1.19	1.19
9	1&9	1.22	1.97	1.11	1.11
10	1&10	1.10	1.85	1.05	1.05
11	1&11	1.00	1.75	1.00	1.00
12	1&12	0.92	1.67	0.96	0.96
13	1&13	0.85	1.60	0.92	0.92
'3	, 475	0.00	1.00	0.32	0.32
14	1&14	0.79	1.54	0.89	0.89
15	1&15	0.73	1.48	0.87	0.87

PLASTIC SIZE													
0.22		PLASTI	C AND T	AB POS	ITIONS	OTHER 1	THAN EN	ND	1				
	Position												
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
4.42	6.00								•				
	2	3											
3.50	4.63	4.63											
	2	3	4										
2.95	3.80	6.00	3.80										
	2	3	4	5									
2.58	3.25	5.08	5.08	3.25									
	2	3	4	5	6								
2.32	2.86	4.43	6.00	4.43	2.86								
	2	3	4	5	6	7							
2.13	2.56	3.94	5.31	5.31	3.94	2.56		•					
	2	3	4	5	6	7	8						
1.97	2.33	3.56	4.78	6.00	4.78	3.56	2.33		ī				
	2	3	4	5	6	7	8	9					
1.85	2.15	3.25	4.35	5.45	5.45	4.35	3.25	2.15		1			
	2	3	4	5	6	7	8	9	10				
1.75	2.00	3.00	4.00	5.00	6.00	5.00	4.00	3.00	2.00		ì		
	2	3	4	5	6	7	8	9	10	11			
1.67	1.88	2.79	3.71	4.63	5.54	5.54	4.63	3.71	2.79	1.88		l)	
	2	3	4	5	6	7	8	9	10	11	12		
1.60	1.77	2.62	3.46	4.31	5.15	6.00	5.15	4.31	3.46	2.62	1.77	- 10	ì
4.57	2	3	4	5	6	7	8	9	10	11	12	13	
1.54	1.68	2.46	3.25	4.04	4.82	5.61	5.61	4.82	4.04	3.25	2.46	1.68	44
4.40	2	3	4	5	6	7	8	9	10	11	12	13	14
1.48	1.60	2.33	3.07	3.80	4.53	5.27	6.00	5.27	4.53	3.80	3.07	2.33	1.60

Standard Tabs



PLASTIC

Tab Side	14 inch
Margin	0.19 inch (3/16")

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
		<u> </u>	<u> </u>		
2	-	6.81	7.37	3.70	3.59
3	1&3	4.54	5.10	2.56	2.46
4	1&4	3.41	3.96	1.99	1.89
5	1&5	2.73	3.28	1.65	1.55
6	1&6	2.27	2.83	1.42	1.32
7	1&7	1.95	2.50	1.26	1.16
8	1&8	1.70	2.26	1.14	1.04
9	1&9	1.51	2.07	1.05	0.94
10	1&10	1.36	1.92	0.97	0.87
11	1&11	1.24	1.80	0.91	0.81
12	1&12	1.14	1.69	0.86	0.76
13	1&13	1.05	1.61	0.81	0.71
14	1&14	0.97	1.53	0.78	0.67
15	1&15	0.91	1.47	0.74	0.64

SIZE									_				
		PLASTI	C AND T	AB POS	SITIONS	OTHER 1	THAN EN	ND					
	Position	า											
	Dimens	ion							_				
	2				Tabs wi	ith sheet	turned	over					
5.29	7.00								_				
	2	3	Ì										
4.16	5.30	5.30											
	2	3	4										
3.48	4.28	7.00	4.28		_								
	2	3	4	5									
3.02	3.59	5.86	5.86	3.59		_							
	2	3	4	5	6								
2.70	3.11	5.05	7.00	5.05	3.11		_						
	2	3	4	5	6	7	Ì						
2.45	2.74	4.45	6.15	6.15	4.45	2.74		_					
	2	3	4	5	6	7	8						
2.26	2.46	3.97	5.49	7.00	5.49	3.97	2.46		_				
	2	3	4	5	6	7	8	9	1				
2.11	2.23	3.59	4.96	6.32	6.32	4.96	3.59	2.23					
	2	3	4	5	6	7	8	9	10				
1.99	2.05	3.28	4.52	5.76	7.00	5.76	4.52	3.28	2.05				
	2	3	4	5	6	7	8	9	10	11			
1.89	1.89	3.03	4.16	5.30	6.43	6.43	5.30	4.16	3.03	1.89		_	
	2	3	4	5	6	7	8	9	10	11	12		
1.80	1.76	2.81	3.86	4.90	5.95	7.00	5.95	4.90	3.86	2.81	1.76		
	2	3	4	5	6	7	8	9	10	11	12	13	
1.72	1.65	2.62	3.59	4.57	5.54	6.51	6.51	5.54	4.57	3.59	2.62	1.65	_
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.66	1.55	2.46	3.37	4.28	5.18	6.09	7.00	6.09	5.18	4.28	3.37	2.46	1.55

Standard Tabs



Tab Side	14 inch
Margin	0.25 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
2	-	6.75	7.37	3.70	3.63
3	1&3	4.50	5.12	2.57	2.50
	40.4	2.20	4.00	0.04	4.04
4	1&4	3.38	4.00	2.01	1.94
5	1&5	2.70	3.32	1.67	1.60
	740	20	0.02		1.00
6	1&6	2.25	2.87	1.45	1.38
7	1&7	1.93	2.55	1.28	1.21
8	1&8	1.69	2.31	1.16	1.09
9	1&9	1.50	2.12	1.07	1.00
9	10.9	1.50	2.12	1.07	1.00
10	1&10	1.35	1.97	1.00	0.93
11	1&11	1.23	1.85	0.93	0.86
12	1&12	1.13	1.75	0.88	0.81
	1010				
13	1&13	1.04	1.66	0.84	0.77
14	1&14	0.96	1.58	0.80	0.73
1-7	75.7	0.00		0.00	""
15	1&15	0.90	1.52	0.77	0.70

PLASTIC SIZE													
		PLASTI	C AND T	AB POS	SITIONS	OTHER 1	THAN E	ND					
	Position	1											
	Dimens	ion							_				
	2				Tabs wi	th sheet	turned	over					
5.25	7.00												
	2	3											
4.13	5.31	5.31											
	2	3	4										
3.45	4.30	7.00	4.30		1								
	2	3	4	5									
3.00	3.63	5.88	5.88	3.63		ī							
	2	3	4	5	6								
2.68	3.14	5.07	7.00	5.07	3.14		ı						
	2	3	4	5	6	7							
2.44	2.78	4.47	6.16	6.16	4.47	2.78		1					
	2	3	4	5	6	7	8						
2.25	2.50	4.00	5.50	7.00	5.50	4.00	2.50		Ì				
0.40	2	3	4	5	6	7	8	9					
2.10	2.28	3.63	4.98 4	6.33 5	6.33 6	4.98 7	3.63 8	2.28	10	1			
1.98	2.09	3.32	4 4.55	5.77	7.00	5.77	4.55	9 3.32	2.09				
1.90	2.09	3.32	4.55	5.77	6	7	8	9	10	11			
1.88	1.94	3.06	4.19	5.31	6.44	6.44	5.31	4.19	3.06	1.94			
1.00	2	3.00	4.13	5	6	7	8	9	10	111	12		
1.79	1.81	2.85	3.88	4.92	5.96	7.00	5.96	4.92	3.88	2.85	1.81		
5	2	3	4	5	6	7.00	8	9	10	11	12	13	
1.71	1.70	2.66	3.63	4.59	5.55	6.52	6.52	5.55	4.59	3.63	2.66	1.70	
	2	3	4	5	6	7	8	9	10	11	12	13	14
1.65	1.60	2.50	3.40	4.30	5.20	6.10	7.00	6.10	5.20	4.30	3.40	2.50	1.60

Standard Tabs



Tab Side	14 inch
Margin	0.50 inch

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	SIZE	POSITION	POSITION
•					
2	-	6.50	7.25	3.75	3.75
3	1&3	4.33	5.08	2.67	2.67
4	1&4	3.25	4.00	2.13	2.13
5	1&5	2.60	3.35	1.80	1.80
,	163	2.00	3.33	1.00	1.00
6	1&6	2.17	2.92	1.58	1.58
7	1&7	1.86	2.61	1.43	1.43
8	1&8	1.63	2.38	1.31	1.31
	400	4.44	0.40	4.00	4.00
9	1&9	1.44	2.19	1.22	1.22
10	1&10	1.30	2.05	1.15	1.15
11	1&11	1.18	1.93	1.09	1.09
12	1&12	1.08	1.83	1.04	1.04
13	1&13	1.00	1.75	1.00	1.00
14	1&14	0.93	1.68	0.96	0.96
	1017	0.55	1.00	0.50	0.50
15	1&15	0.87	1.62	0.93	0.93

PLASTIC SIZE													
OIZE		PLASTI	C AND T	AB POS	ITIONS	OTHER T	THAN EN	ND					
	Positio												
	Dimens	ion											
	2				Tabs wi	th sheet	turned	over					
5.08	7.00												
	2	3											
4.00	5.38	5.38											
	2	3	4										
3.35	4.40	7.00	4.40		-								
	2	3	4	5									
2.92	3.75	5.92	5.92	3.75		i							
	2	3	4	5	6								
2.61	3.29	5.14	7.00	5.14	3.29								
	2	3	4	5	6	7							
2.38	2.94	4.56	6.19	6.19	4.56	2.94		1					
	2	3	4	5	6	7	8						
2.19	2.67	4.11	5.56	7.00	5.56	4.11	2.67		ı				
	2	3	4	5	6	7	8	9					
2.05	2.45	3.75	5.05	6.35	6.35	5.05	3.75	2.45		1			
	2	3	4	5	6	7	8	9	10				
1.93	2.27	3.45	4.64	5.82	7.00	5.82	4.64	3.45	2.27		1		
	2	3	4	5	6	7	8	9	10	11			
1.83	2.13	3.21	4.29	5.38	6.46	6.46	5.38	4.29	3.21	2.13		İ	
4 ==	2	3	4	5	6	7	8	9	10	11	12		
1.75	2.00	3.00	4.00	5.00	6.00	7.00	6.00	5.00	4.00	3.00	2.00	40	1
4.00	2	3	4	5	6	7	8	9	10	11	12	13	
1.68	1.89	2.82	3.75	4.68	5.61	6.54	6.54	5.61	4.68	3.75	2.82	1.89	44
4.60	2	3	4	5	6	7	8	9	10	11	12	13	14
1.62	1.80	2.67	3.53	4.40	5.27	6.13	7.00	6.13	5.27	4.40	3.53	2.67	1.80

METRIC TABS 297mm x 210mm - A4



Tab Side	297 mm
Margin	0 mm

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB	
BANK		SIZE	LENGTH	POSITION	POSITION	
2	-	148.50	158.50	84.25	74.25	
3	1&3	99.00	109.00	59.50	49.50	
4	1&4	74.25	84.25	47.00	37.00	
5	1&5	59.25	69.25	39.50	29.50	
6	1&6	49.50	59.50	34.75	24.75	
7	1&7	42.25	52.25	31.00	21.00	
8	1&8	37.00	47.00	28.50	18.50	
9	1&9	33.00	43.00	26.50	16.50	
10	1&10	29.50	39.50	24.75	14.75	
11	1&11	27.00	37.00	23.50	13.50	
12	1&12	24.75	34.75	22.25	12.25	
13	1&13	22.75	32.75	21.25	11.25	
14	1&14	21.00	31.00	20.50	10.50	
15	1&15	19.75	29.75	19.75	9.75	

LENGTH													
		PLASTI	C AND T	AB POS	ITIONS	OTHER	THAN EN	ND					
	Position	1											
	Dimens	ion											
	2				Tabs w	ith she	et turne	d over					
118.00	148.50		•										
	2	3											
93.25		111.25		•									
	2	3	4										
78.25	89.25	148.50			ı								
	2	3	4	5									
68.50	74.25		123.75			1							
	2	3	4	5	6								
61.25				106.25	64.00		İ						
F0 00	2	3	4	5	6	7							
56.00	55.50	92.50		129.50		<u>55.50</u>	_						
52.00	2 49.50	82.50	4	5 148.50	6	7 82.50	8 40 F0						
52.00	49.50	3	4	5	6	62.30 7	49.50 8	9	l				
48.50	44.25	•	-	138.00	-	-	73.75	44.25					
46.50	2	3	4	5	6	7	8	9	10	_			
46.00	40.50	67.50	-	121.50	_	-	94.50	67.50	40.50				
40.00	2	3	4	5	6	7	8	9	10	11			
43.75	37.00	61.75	•	111.25	_	-	-	86.50	61.75	37.00			
10110	2	3	4	5	6	7	8	9	10	11	12		
41.75	34.75	57.50	80.25	_	_	148.50	-	-	80.25	57.50	34.75		
	2	3	4	5	6	7	8	9	10	11	12	13	
40.00	31.50	52.50	73.50	94.50	115.50	136.50	136.50	115.50	94.50	73.50	52.50	31.50	
	2	3	4	5	6	7	8	9	10	11	12	13	14
38.75	30.00	49.75	69.50	89.25	109.00	128.75	148.50	128.75	109.00	89.25	69.50	49.75	30.00

METRIC TABS 297mm x 210mm - A4



Tab Side	210 mm
Margin	0 mm

TAB	TABS	TAB	PLASTIC	PLASTIC	TAB
BANK		SIZE	LENGTH	POSITION	POSITION
2	-	105.00	115.00	62.50	52.50
3	1&3	70.00	80.00	45.00	35.00
	404		22.52		22.25
4	1&4	52.50	62.50	36.25	26.25
5	1&5	42.00	52.00	31.00	21.00
э	160	42.00	52.00	31.00	21.00
6	1&6	35.00	45.00	27.50	17.50
·	100	00.00	40.00	27.00	17.00
7	1&7	30.00	40.00	25.00	15.00
8	1&8	26.25	36.25	23.00	13.00
9	1&9	23.25	33.25	21.50	11.50
10	1&10	21.00	31.00	20.50	10.50
44	4044	40.00	22.22	40.50	0.50
11	1&11	19.00	29.00	19.50	9.50
12	1&12	17.50	27.50	18.75	8.75
12	10.12	17.50	27.50	10.73	0.73
13	1&13	16.00	26.00	18.00	8.00
				1 2 1 0 0	
14	1&14	15.00	25.00	17.50	7.50
15	1&15	14.00	24.00	17.00	7.00

LENGTH									_				
		PLASTI	C AND T	AB POS	ITIONS (OTHER 1	THAN EN	ID					
	Position	1											
	Dimens	ion		,					•				
	2												
89.00	105.00		•										
	2	3											
71.50	78.75	78.75											
	2	3	4										
61.00	63.00	105.00	63.00		•								
	2	3	4	5									
54.00	52.50	87.50	87.50	52.50		•							
	2	3	4	5	6								
49.00	45.00	75.00	105.00	75.00	45.00								
	2	3	4	5	6	7							
45.25	39.25	65.50	91.75	91.75	65.50	39.25		•					
	2	3	4	5	6	7	8						
42.25	35.25	58.50	81.75	105.00	81.75	58.50	35.25		•				
	2	3	4	5	6	7	8	9					
40.00	31.50	52.50	83.50	104.00	104.00	83.50	52.50	31.50					
	2	3	4	5	6	7	8	9	10				
38.00	29.00	48.00	67.00	86.00	105.00	86.00	67.00	48.00	29.00				
	2	3	4	5	6	7	8	9	10	11			
36.50	26.25	43.75	61.25	78.75	96.25	96.25	78.75	61.25	43.75	26.25		i	
	2	3	4	5	6	7	8	9	10	11	12		
35.00	25.00	41.00	57.00	73.00	89.00	105.00	89.00	73.00	57.00	41.00	25.00		
	2	3	4	5	6	7	8	9	10	11	12	13	
34.00	22.50	37.50	52.50	67.50	82.50	97.50	97.50	82.50	67.50	52.50	37.50	22.50	
	2	3	4	5	6	7	8	9	10	11	12	13	14
33.00	21.00	35.00	49.00	63.00	77.00	91.00	105.00	91.00	77.00	63.00	49.00	35.00	21.00

METRIC TABS 297mm X 210mm - A4



Tab Side	297 mm
Margin	1 mm

TAB BANK	TABS	TAB SIZE	PLASTIC LENGTH	PLASTIC POSITION	TAB POSITION
DAINI		OILL	LENOTH	TOOMON	TOOMON
2	-	147.50	157.50	80.75	74.75
3	1&3	98.25	108.25	56.00	50.00
4	1&4	73.75	83.75	43.75	37.75
5	1&5	59.00	69.00	36.50	30.50
6	1&6	49.00	59.00	31.50	25.50
7	1&7	42.00	52.00	28.00	22.00
8	1&8	36.75	46.75	25.25	19.25
9	1&9	32.75	42.75	23.25	17.25
10	1&10	29.50	39.50	21.75	15.75
11	1&11	26.75	36.75	20.25	14.25
12	1&12	24.50	34.50	19.25	13.25
13	1&13	22.50	32.50	18.25	12.25
14	1&14	21.00	31.00	17.50	11.50
15	1&15	19.50	29.50	16.75	10.75

LENGTH													
		PLASTI	C AND T	AB POS	ITIONS (OTHER 1	THAN EN	ID					
	Position	1											
	Dimension												
	2		Tabs with sheet turned over										
117.25	148.50			•					<u>-</u> '				
	2	3											
92.75	111.50	111.50		_									
	2	3	4										
78.00	89.50	148.50	89.50										
	2	3	4	5									
68.00	74.50	123.50	123.50	74.50		_							
	2	3	4	5	6								
61.00	64.50	106.50	148.50	106.50	64.50								
	2	3	4	5	6	7							
55.75	56.00	92.75	129.50	129.50	92.75	56.00							
	2	3	4	5	6	7	8						
51.75	50.25	83.00	115.75	148.50	115.75	83.00	50.25		_				
	2	3	4	5	6	7	8	9					
48.50	45.25	74.75	114.25	136.00	136.00	114.25	74.75	45.25					
	2	3	4	5	6	7	8	9	10				
45.75	41.50	68.25	95.00	121.75	148.50	121.75	95.00	68.25	41.50				
	2	3	4	5	6	7	8	9	10	11			
43.50	37.75	62.25	86.75	111.25	135.75	135.75	111.25	86.75	62.25	37.75			
	2	3	4	5	6	7	8	9	10	11	12		
41.50	36.00	58.50	81.00	103.50	126.00	148.50	126.00	103.50	81.00	58.50	36.00		
	2	3	4	5	6	7	8	9	10	11	12	13	
40.00	32.50	53.50	74.50	95.50	116.50	137.50	137.50	116.50	95.50	74.50	53.50	32.50	
	2	3	4	5	6	7	8	9	10	11	12	13	14
38.50	31.50	51.00	70.50	90.00	109.50	129.00	148.50	129.00	109.50	90.00	70.50	51.00	31.50

METRIC TABS 297mm X 210mm - A4



Tab	Side	210 mm
Margir)	1 mm

TAB BANK	TABS	TAB SIZE	PLASTIC LENGTH	PLASTIC POSITION	TAB POSITION
			-		
2	-	104.00	114.00	59.00	53.00
3	1&3	69.25	79.25	41.50	35.50
4	1&4	52.00	62.00	33.00	27.00
5	1&5	41.50	51.50	27.75	21.75
6	1&6	34.50	44.50	24.25	18.25
7	1&7	29.50	39.50	21.75	15.75
8	1&8	26.00	36.00	20.00	14.00
9	1&9	23.00	33.00	18.50	12.50
10	1&10	20.75	30.75	17.25	11.25
11	1&11	18.75	28.75	16.25	10.25
12	1&12	17.25	27.25	15.50	9.50
13	1&13	16.00	26.00	15.00	9.00
14	1&14	14.75	24.75	14.25	8.25
15	1&15	13.75	23.75	13.75	7.75

LENGTH													
		PLASTIC	C AND T	AB POS	ITIONS (OTHER 1	THAN EN	ID					
	Position	1											
	Dimens	ion		Ī									
	2	Tabs with sheet turned over											
88.25	105.00												
	2	3											
71.00	79.00	79.00		Ī									
	2	3	4										
60.50	63.50		63.50		1								
	2	3	4	5									
53.50	52.75	87.25	87.25	52.75		İ							
	2	3	4	5	6								
48.50	46.00	75.50			46.00								
	2	3	4	5	6	7							
45.00	40.00	66.00	92.00	92.00	66.00	40.00							
	2	3	4	5	6	7	8						
42.00	36.00	59.00	82.00		82.00	<u>59.00</u>	36.00						
	2	3	4	5	6	7	8	9					
39.75	32.00	52.75		100.75		83.50	52.75	32.00					
	2	3	4	5	6	7	8	9	10				
37.75	30.00	48.75	67.50			86.25	67.50	48.75	30.00				
20.05	2	3	4	5	6	7	8	9	10	11			
36.25	26.75	44.00	61.25 4	78.50	95.75	95.75 7	78.50	61.25	44.00	26.75	40		
25.00	2	3	-	5	6	-	8	9	10	11	12		
35.00	25.00	41.00 3	57.00 4	73.00 5	89.00	105.00 7	89.00 8	73.00 9	57.00	41.00	25.00	42	
22.75	2	-	-	-	6	-	_	-	10	11 52.50	12	13	
33.75	23.00	37.75 3	52.50 4	67.25 5	82.00 6	96.75 7	96.75 8	82.00 9	67.25 10	52.50 11	37.75 12	23.00 13	14
32.75	22.50	36.25	50.00	63.75	77.50	, 91.25	o 105.00	91.25	77.50	63.75	50.00	36.25	22.50
32.13	22.30	30.23	30.00	03.73	11.30	31.23	103.00	91.20	77.30	03.75	30.00	30.23	22.50



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4.1 Maintenance

4.1.1 Machine Lubrication



Fig. 4-1. Main Drive Gear

4.1.1.1 Main Drive

The Dodge Tigear reducer incorporates the unique *Relialube* system which eliminates the lengthy preparation normally required to put a reducer into service. The Dodge Tigear reducer is properly filled at the factory with sufficient lubricant for all mounting positions.

The lubricant is Mobil SHC-634, a synthesized hydrocarbon formulated for extremely long life. Do not add or remove oil at installation or change oil after break-in. Change oil only when performing maintenance that requires gearbox disassembly.

Note !If oil must be replaced, use only Mobil SHC-634 or Ultrachem Chemlube 140. Do not confuse Mobil SHC-634 with Mobilgear 634. Mobilgear 634 is an EP type gear oil NOT suitable for use in the Relialube system.





Fig. 4-2. Kick Back Gearbox Location (Under Cross Conveyor)

4.1.1.2 Kick Back Gearbox

The Hub City Model M2 gearbox is located under the cross conveyor assembly.

Do not operate the machine without making sure that the Kickback gearbox contains the correct amount of oil. Do not overfill or underfill the unit.

Changing Lubricant

After the first 100 hours of operation, drain initial oil, flush gear case with an approved non-flammable, non-toxic, solvent and refill. Thereafter, oil should be changed every 2500 operating hours or every 6 months whichever occurs first.

Oil should be changed with greater frequency if the unit is used in a severe environment such as dusty or humid.

Recommended Lube:

Hub City GL-90 AGMA Number: <u>5EP</u>

ISO-ASTM Viscosity Grade: 220

Lube Quantity: .25 pints

Hub City GL-90 Lubricant is a heavy-duty industrial gear lubricant containing sulfur phosphorous antiwear additives. Lubricants of this type may be substituted where Hub City Lubricants are recommended. Lubricants must be compatible with nitrile rubber seals.

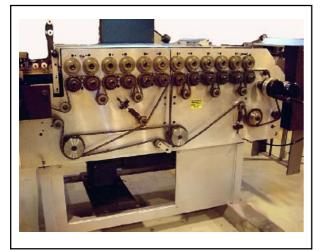


Fig. 4-3. Drive Chains

4.1.2 Chain Lubrication

Use chain lubrication CRC 03050 or Superior Graphite 35201G. Apply Lubricant to chain with machine set to 2 or 3 on the speed adjustment control. Lubricant should be applied before chain is dry, once a month or about every 200 operating hours.

Note !Use CRC 03050 or Superior Graphite 35201G for Chain Lubrication.

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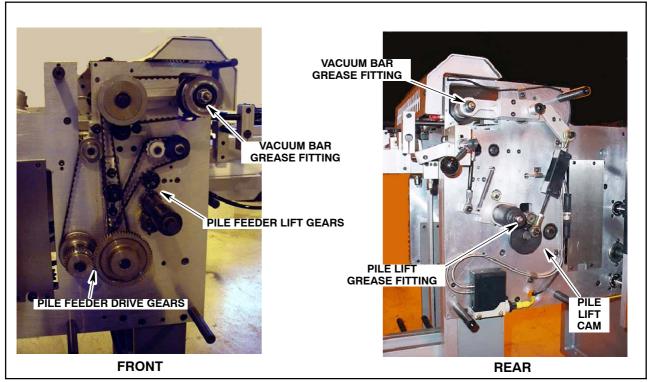


Fig. 4-4. Paper Feeder



Fig. 4-5. Grease Fitting - Inside Pile Feeder

4.1.2.1 Feeder

There are four grease fittings on the paper feeder.

- Two fittings located on the ends of the vacuum bar.
- One fitting is located on the back side of the pile lift rocker arm cam follower and must be accessed from inside the pile feeder.
- One fitting is located on the pile lift shaft.

To lubricate, remove pile feeder covers. All fittings should be greased every 200 operating hours or once a month. One shot of grease is all that is necessary.



Lightly grease pile feeder drive and lift gears with white lithium grease.

Lightly lubricate the face of the pile lift cam with Superior Graphite 35201G.

Note! Use White Lithium Grease for paper pile feeder lubrication.



Fig. 4-6. Plastic Feed Slide

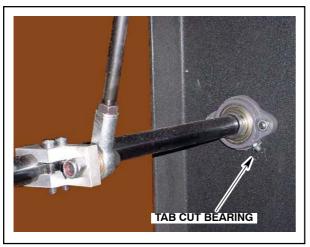


Fig. 4-7. Grease Rear Bearings in Tab Cut Section

4.1.2.2 Plastic Feed Slide

There is one grease fitting located on the plastic feed slide inside the cover on the plastic feed mechanism. This fitting should be lubricated <u>once every month.</u> One shot of grease is all that is necessary.

Note !Use White Lithium Grease for Plastic Feed Slide Lubrication.

There is one grease fitting on each of the (2) tab cut drive bearings.

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ASSEMBLY UNIT / VENDOR	UNITS	INTERVAL	LUBE SPECIFICATION		
REDUCER (DODGE TIGEAR) RELIALUBE SYSTEM			MOBIL SHC-634 OR ULTRACHEM CHEMLUBE 140 (Change oil only when performing maintenance that requires gearbox disassembly.)		
KICK BACK GEAR BOX (HUB CITY MODEL M2)		AFTER 1ST 100 HRS 2500 HRS (OR 6 MONTHS)	Hub City GL-90		
CHAINS	3 CHAINS	200 HOURS	CRC 03050 or Superior Graphite 35201G		
PILE FEEDER	4 FITTINGS	200 HOURS	WHITE LITHIUM GREASE		
PILE FEEDER DRIVE GEARS	-	200 HOURS	WHITE LITHIUM GREASE		
PILE FEEDER LIFT GEARS	-	200 HOURS	WHITE LITHIUM GREASE		
PLASTIC FEED SLIDE	1 FITTING	200 HOURS	WHITE LITHIUM GREASE		
REAR BEARING - TAB FEED SECTION (2 BEARINGS)	1 FITTING	200 HOURS	WHITE LITHIUM GREASE		
GAST VACUUM PUMP	-	AS NEEDED	FLUSH UNIT Use only Gast AH225B flushing solvent or equivalent.		
Table 4-1. HAND LUBE LOCATIONS	Part 1 of 1				

SCOTT

4 Maintenance



Fig. 4-8. Gast Vacuum Pump Model 1023-101Q-G608X

4.1.3 Vacuum Pump Maintenance

Regular inspection can prevent unnecessary damage and repairs. Intake and exhaust filters require periodic inspection and replacement. Initial inspection is suggested at 500 hours. After that, user should determine the frequency. Keeping filter clean can prevent most problems. Dirty filter decrease unit performance and service life.

WARNING - Muffler box may become very hot during operation. Do not touch these parts until unit has been turned off and allowed to cool.

Vacuum Pump Service Kit: HW-47110

Includes: Vanes (4) Gasket (1) O Ring (2) Felt (2)

VACUUM PUMP TROUBLESHOOTING GUIDE							
REASON FOR PROBLEM	LC	LOW		HIGH		MOTOR OVER-	
	VACUUM	PRESSURE	VACUUM	PRESSURE	OVER- HEATING	LOAD	
FILTER DIRTY	Х	Х	AT PUMP		Х	Х	
VACUUM LINE COLLAPSED	Х		AT PUMP		Х	Х	
RELIEF VALVE SET TOO HIGH				Х	Х	Х	
RELIEF VALVE SET TOO LOW	Х	Х					
PLUGGED VACUUM / PRESSURE LINE	Х	Х	AT PUMP	AT PUMP	Х	Х	
VANES STICKING	Х	Х					
RUNNING AT TOO HIGH RPM			Х	Х	Х	Х	
VANES WORN (REPLACE)	Х	Х					
SHAFT SEAL WORN (REPLACE)	Х	Х					
DUST OR OFFSET POWDER IN PUMP	Х	Х			Х	Х	
MOTOR NOT WIRED CORRECTLY	Х	Х			Х		

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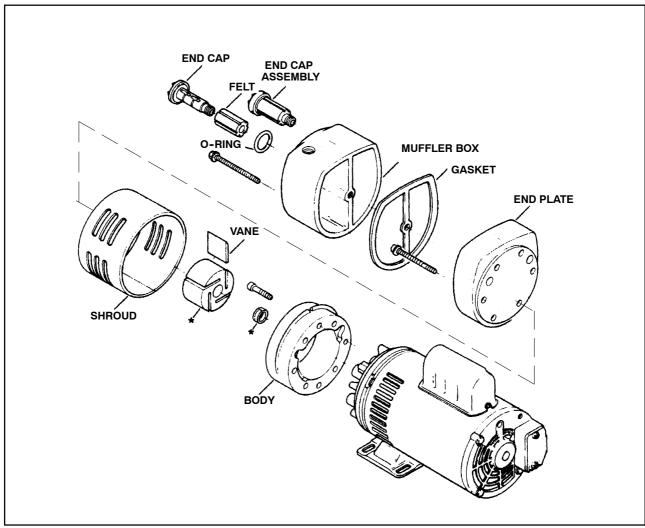


Fig. 4-9. Gast Vacuum Pump Model 1023-101Q-G608X

4.1.3.1 Filter Inspection and Replacement

- **Step: 1.** Make sure all power is turned off and all pressure and vacuum is released from the unit.
- Step: 2. Remove filters and inspect.
- Step: 3. Check for rips, tears, cuts, brittleness and excessive foreign matter.

 Replace immediately if any of the above conditions exist.

 If not, precede to the next step.
- **Step: 4.** Clean with compressed air if filter looks serviceable. *Recheck for above conditions.*
- **Step: 5.** Inspect filter/muffler for compacted debris. *Replace immediately if present.*
- **Step: 6.** Check o-ring for softness and pliability. *Replace if not.*

- Step: 7. Remove muffler box and inspect.
- Step: 8. Clean out debris.
- **Step: 9.** Check for cracks and tears in gasket. *Replace if necessary.*
- Step: 10. Reassemble muffler box.
- Step: 11. Install filters and end cap.

Flushing

Should excessive dirt, foreign particles, moisture, or oil be permitted to enter unit, vanes will act sluggish or even break. Flushing unit should remove these materials.

Caution - Do not use kerosene or other combustible solvents to flush unit. Use only Gast AH225B flushing solvent or equivalent.

4.2 Machine Timing

Proper timing must exist to obtain acceptable machine operation. Operation of machine while out of time will result in unacceptable production and may result in machine damage and/or personal injury. Disturbances to the timing of the machine requires completion of the following adjustment procedures.

- Vacuum Bar
- Plastic Feed & Cut Operating Arm
- Tab Cutter Drive Eccentric
- Switch Cams

- Kick Back Cam
- Reregister Slide Operating Arm
- Rubber Kick Back Rollers
- Tab Cutting

Note! Fig. 4-10. and Fig. 4-11. provide views of the front and rear sections of the machine.

Fig. 4-13. is a view of the drive chain connection. All figures within this section can be easily located on the machine by referring to the appropriate view and/or drive chain for component location.

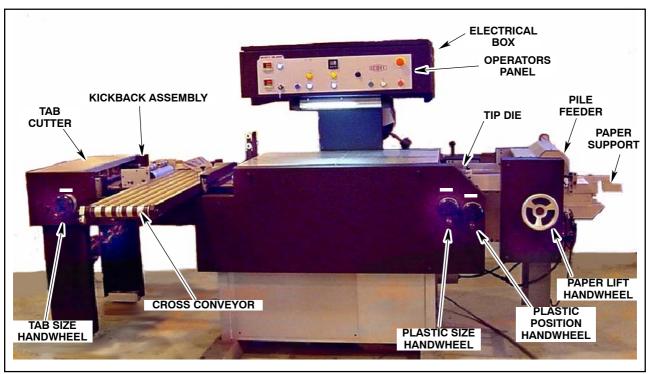


Fig. 4-10. Machine Front View

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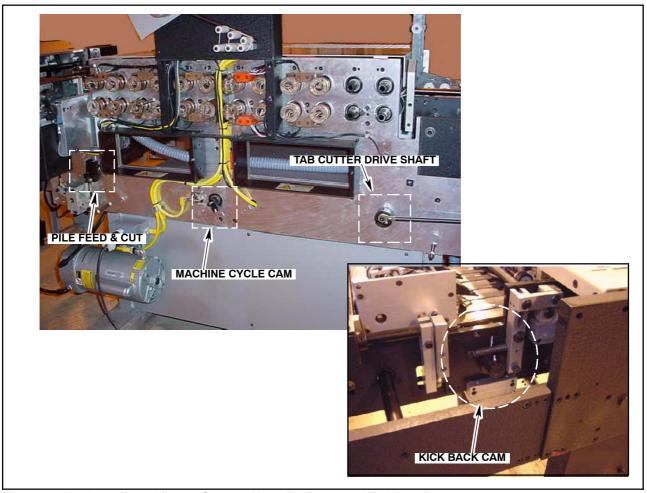


Fig. 4-11. Machine Back View - Guards Must Be Removed To View Parts

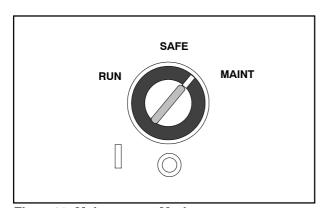


Fig. 4-12. Maintenance Mode

4.2.1 Maintenance Mode

The Maintenance mode position on the key switch is used to perform maintenance and diagnostic functions. Maximum speed of the machine in the Maintenance Mode can be adjusted to up to 22% of the maximum machine speed. The machine will operate with the roller and feeder guards removed.

Note! The machine will not operate if the Tabcutter guard is removed.

4.2.2 Preparation for Timing Procedures

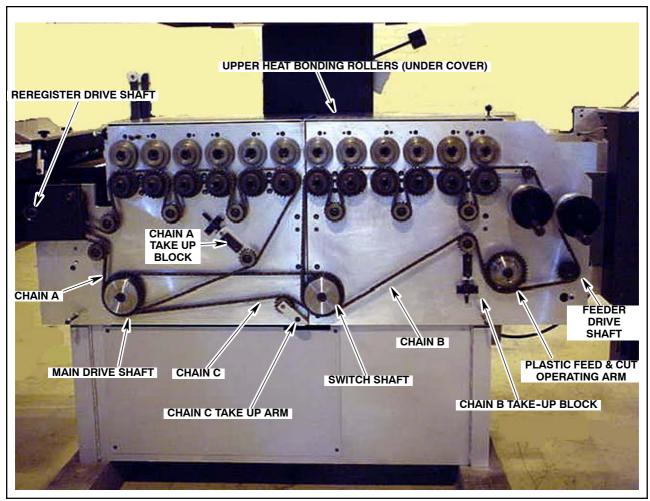


Fig. 4-13. Drive Chain Identification - Covers Removed

CAUTION!

BEFORE ATTEMPTING TIMING PROCEDURES, DISCONNECT POWER FROM MACHINE AT THE SOURCE CONNECTION AND LOCKOUT/TAG-OUT THE POWER SWITCH (REFER TO SAFETY TAGS). FAILURE TO COMPLY CAN RESULT IN SERIOUS BODILY INJURY OR DEATH FROM ELECTRIC SHOCK OR UNEXPECTED MACHINE MOVEMENT.

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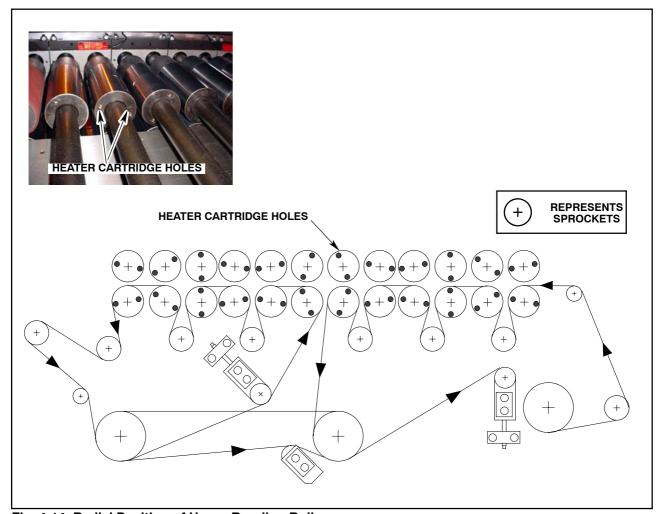


Fig. 4-14. Radial Position of Upper Bonding Rollers



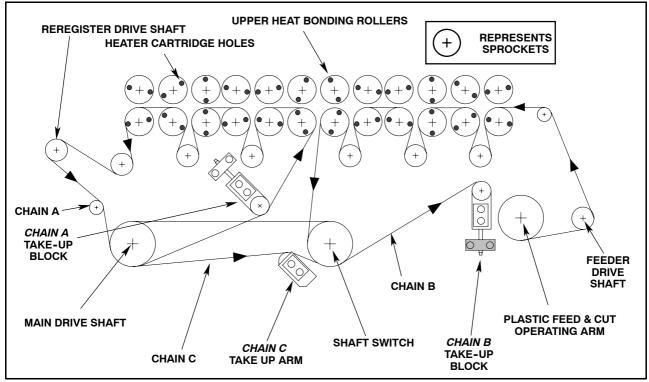


Fig. 4-15. Loosen Chain Idlers for Chain A & B - Remove Chains

4.2.3 Chain A & B Removal

- **Step: 1.** Loosen the chain take-up block idlers for the Chain A & Chain B. Do not loosen chain take-up arm for Chain C.
- Step: 2. Remove Chain B from feeder drive shaft, plastic feed & cut cam and switch shaft sprockets.
- **Step: 3.** Remove Chain A from main drive shaft and reregister sprockets.

Note! If this is the initial installation of the machine or the installation of a new set of chains, heater cartridge holes on the upper heat bonding rollers must be aligned prior to the machine being re-chained. The alignment pattern shown in Fig. 4-14. is set to stagger the holes in the heater. This will prevent the holes from landing on the tab plastic during rotation thereby eliminating unsealed spot on plastic tab.

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4.2.4 Feeder Timing

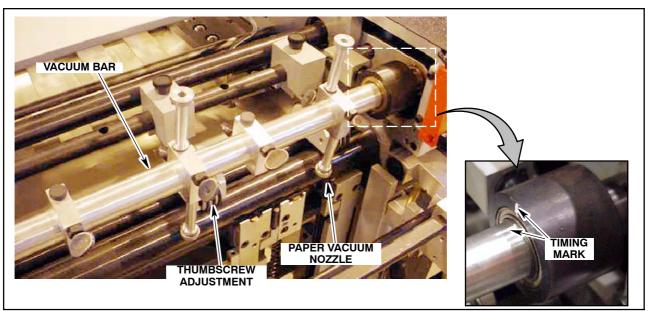


Fig. 4-16. Position the Paper Vacuum Nozzle

- Step: 1. Locate vacuum bar on feeder section.
- Step: 2. Nozzles on vacuum bar are correctly timed when positioned as shown in Fig. 4-16.
- Step: 3. If nozzles are incorrectly aligned, perform Steps 4 and 5.
- **Step: 4.** Turn feeder drive shaft sprocket counterclockwise to move nozzles through normal rotation cycle.(See Fig. 4-13.)
- Step: 5. When nozzles have reached correct position, vacuum bar will be properly timed. (See Fig. 4-16.).

CAUTION!

Incorrect rotation (clockwise) of feeder drive sprocket will set vacuum bar out of proper timing sequence with machine. If this occurs, perform the following:

- Cycle paper pile feeder through two complete rotations. (See Fig. 4-13.)
- Turn feeder drive shaft counterclockwise to relocate nozzles in correct position. (See Fig. 4-13.)

Note! Rotation of vacuum bar to position nozzles will not set feeder assembly in proper timed position.



4.2.5 Plastic Feed & Cut Operating Arm

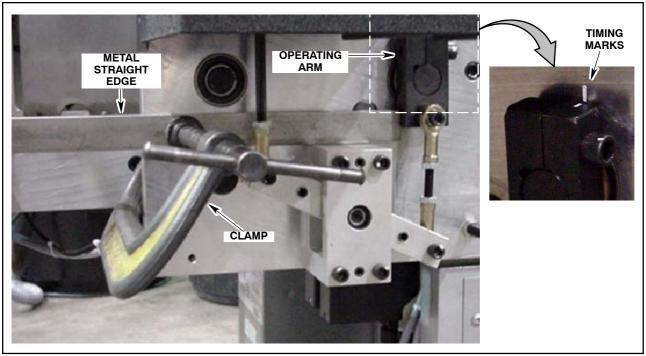


Fig. 4-17. Cut Operation Arm

The Plastic Feed and Cut operating arm is located on backside of machine just above the vacuum pump assembly.

Timing marks are located on the top of rectangular block and the frame of the machine.

- **Step: 1.** Align mark on rectangular block with mark on frame of machine.
- **Step: 2.** To keep block from moving while the chains are removed, secure with metal straight edge to left of block and clamp straight edge to frame of machine. (See Fig. 4-17.)

CAUTION!

IT IS IMPORTANT TO REMOVE THE FILE AND BLOCK AFTER THE CHAINS ARE RECONNECTED BEFORE RUNNING OR JOGGING THE MACHINE. FAILURE TO DO SO MAY RESULT IN MACHINE DAMAGE AS WELL PERSONAL INJURY.

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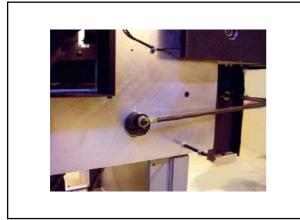


Fig. 4-18. Location of Tab Cutter Eccentric



Fig. 4-19. Position of Tab Cutter Drive Eccentric

4.2.6 Tab Cutter Timing

Tab cutter eccentric is located on the backside of the machine.

- **Step: 1.** Locate long rod at the opposite end of the rear plate that connects to the tab cutter drive eccentric.
- **Step: 2.** Timing marks are located on tab cutter drive eccentric and machine frame.
- **Step: 3.** Rotate output sprocket of motor gearbox assembly located inside rear motor access cover. This will rotate the main drive shaft to allow for alignment of the timing marks.



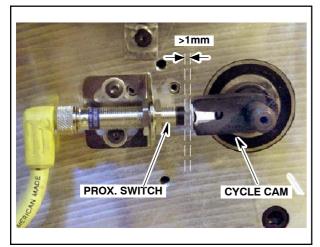


Fig. 4-20. Adjust Proximity Switch to Less Than 1 mm From Machine Cycle Cam

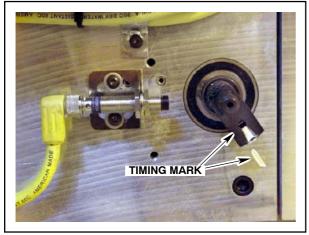


Fig. 4-21. Align Machine Cycle Cam with Alignment Mark on the Machine (4 O'Clock)

4.2.7 Machine Cycle Cam Timing

Step: 1. Adjust the proximity switch as close as possible to the machine cycle cam without touching the cam. The gap should be less that 1mm.

- **Step: 2.** Align the machine cycle cam alignment mark with the alignment mark on the machine, approximately 4 o'clock.
- **Step: 3.** Make sure that all screws are tight when adjustment is complete.

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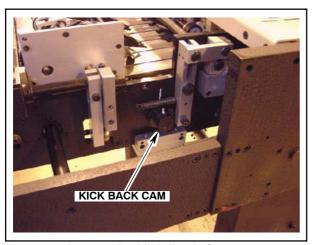


Fig. 4-22. Locate the Kick Back Cam

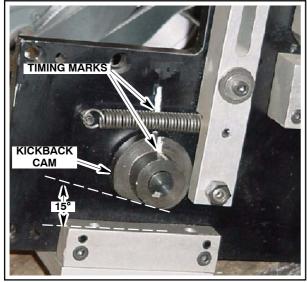


Fig. 4-23. Position of Kick Back Cam

4.2.8 Position of Kick Back Cam

Step: 1. Locate the kick back cam that moves the kick back rollers up and down.

- Note! Kickback cam does not require alignment when the flat of the cam is 15 degrees offset. The left side is higher than the right side. A wedge can be made to fit.
- **Step: 2.** Timing marks are located on the kick-back cam and machine frame.
- **Step: 3.** Reach under the reregister section and grab hold of reregister belt drive shaft.
- **Step: 4.** Rotate shaft until the timing marks are aligned.



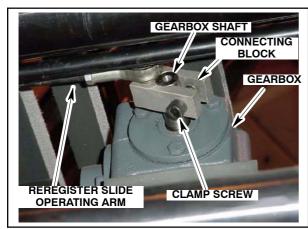


Fig. 4-24. Locate the Reregister Section (View from Under Machine)

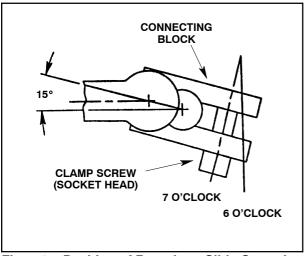


Fig. 4-25. Position of Reregister Slide Operating Arm

4.2.9 Reregister Section

Reregister section is located after the heat rollers underneath the cross conveyor before the tab cutter end of the machine. The reregister arm is attached to the gearbox output shaft. The gearbox drives the reregister slide operating arm or "jogger" back and forth.

- Step: 1. The socket head clamp screw located on the block should be aligned to the 7 o'clock position when viewed from the tab cutter end of the machine.
- **Step: 2.** To reposition clamp screw, loosen screw and rotate block until the screw is in the correct position.
- Step: 3. Retighten screw.

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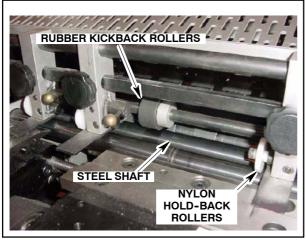


Fig. 4-26. Locate the Kick Back Rollers

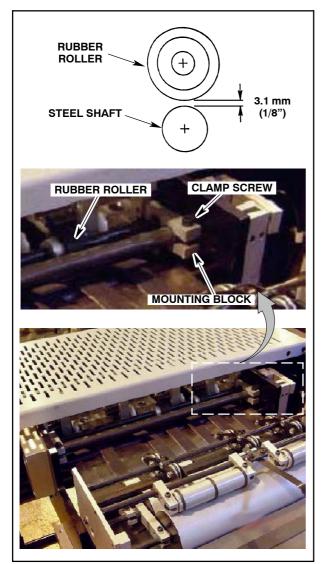


Fig. 4-27. Position of the Rubber Kick Back Roller

4.2.10 Rubber Kick Back Roller

Rubber kick-back rollers are located behind the nylon hold down rollers, in front of the tab cutter when viewed, from a standing position in front of the tab cutter.

- Step: 1. To adjust the rubber kick-back rollers, locate the blocks on both ends of the rubber kick-back shaft.
- **Step: 2.** Loosen the set screw on each block. Adjust rollers to 3.1 mm (1/8 inch) above the steel shaft located below the rollers.
- **Step: 3.** Retighten the socket head screws when proper set–up dimension is achieved.

Note !Use two spacers of equal thickness placed between rubber kick-back roller and steel shaft to obtain proper height. Minor adjustments to height may be required if the rollers tend to kick sheets back crooked.





Fig. 4-28. Locate the Tab Cutter Knives

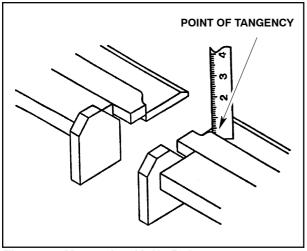


Fig. 4-29. Measuring Knife Point

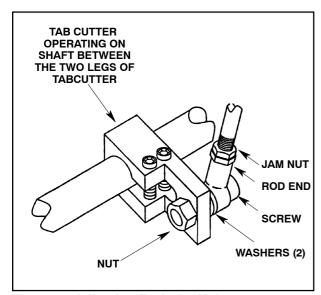


Fig. 4-30. Adjusting Rods for Knives

4.2.11 Tab Cutting

The tab cutter knives are located near the tab cutter handwheel on the left end of the machine.

Step: 1. Measure the height of the knives at the point where the long straight edge meets the first curve.

Note !If Replacing Knives
Height of the newer set of knives
should be .250 to .300 inches (5/16) .
Height of the older sets of knives
should be .200-.250 inches (slightly
less than 1/4 inch).

Step: 2. Make sure the tab size is set to 3.00 inches when a 1/2 inch set of knives is installed.

Step: 3. To adjust the knives, unlock both jam nuts on the connecting rods and rotate the rod to adjust the rod length.

Note !Never loosen and rotate block to adjust the height of knives. This will lead to other problems with the machine.

Step: 4. Retighten both jam nuts on connecting rods.

Step: 5. Ensure both knives are of equal height.

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4.2.12 Reinstall Chains

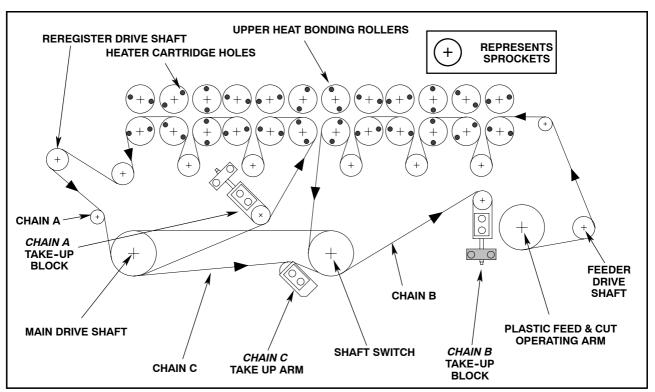


Fig. 4-31. Reinstall Chains and Tighten Idlers

- Step: 1. Reinstall Chain A. Pull tight on Chain A at both ends of rollers in roller section to remove slack.
- Step: 2. Reinstall Chain B. Pull tight on Chain B at both ends of rollers in roller section to remove slack.
- **Step: 3.** Retighten take-ups, leaving about one one inch of slack in middle of *Chain C* between both sprockets. For *Chain B*, between both shaft and take up, for *Chain A* between main drive shaft and take up.

Step: 4. Replace front and rear cover guards.

4.2.13 Calibration

Proper calibration must exist to obtain acceptable machine operation. Re-calibration of the handwheels may become necessary when difficulties arise in making the tab size, tab location, plastic size, or correct location of the plastic in regards to dimensions set on the handwheels.

4.2.13.1 Prepare for Calibration Procedures

Prior to attempting the calibration procedures, it is important to have proper materials and ensure that the initial settings on the handwheels correspond to the size of the paper being used.

Paper size is not critical during normal run cycles of the machine. Tabs that are slightly "off" can be corrected by adjustment of the handwheels to correspond to the position of the tab or plastic. The printing can be off due to to improper printing registration or improper sheet cutting which can also be adjusted with the handwheels.

The handwheel should be set as accurate as possible during the calibration procedures. Therefore, paper size must be accurate. Measure the paper stock prior to preforming calibrations. Stock sizes vary and can be under or over by as much as 1/16th or more of an inch. This will not affect machine operation, if the printing is perfect but positioning of the dials must be corrected when stock is reversed to do corresponding tab positions.

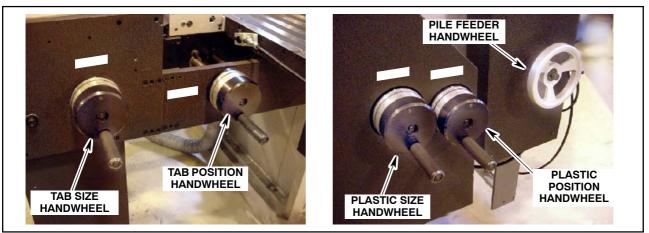


Fig. 4-32. Set Handwheels for Tabs

There are FIVE handwheels located on the front of the machine.

- Plastic Position Register Handwheel: sets the paper position to the plastic position. It is measured from the edge of paper furthermost away from the operator to the center of the plastic being applied.
- Plastic Size Handwheel: sets the length of plastic being applied to the paper.
- **Tab Position Handwheel:** positions the paper to be tab cut. It is measured from the edge of the paper furthermost from the operator to the center of the tab. The sheet is pushed 1/4 inch when both Pile Feed and Reregister Handwheels are set to the same settings.
- Tab Cutter Handwheel: sets the size of the tab cut on the sheet.
- Pile Feeder Handwheel: when pulled out, will lower the paper supports to reload paper stock.

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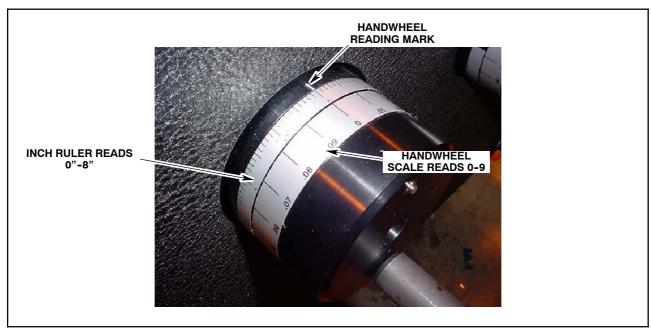


Fig. 4-33. Handwheel Configuration

4.2.14 Handwheel Settings

The recommended settings for the plastic size handwheels and tab size handwheel is 3.00 inches and 4.00 inches (76.25mm & 101.5mm) respectively. (See Fig. 4-32. for handwheel locations) These settings are to be used no matter what size paper is being used for calibration procedures.

Set the pile feeder register handwheel and reregister handwheel to the centerline of the paper size (i.e. on 11 inch paper, the handwheels are set to 5.50 inches). Handwheels are set to the same measurement.

All handwheels display two decimal places, tenths and hundredths.

The handwheel calibration procedures in this section are based on the following parameters:

11 Inch (279.4mm) Sheet Size					
Handwheel	Settings				
Plastic Position Handwheel	5.50 (139.75mm)				
Plastic Size Handwheel	3.00 (76.25mm)				
Tab Position Handwheel	5.50 (139.75mm)				
Tab Size Handwheel	4.00 (101.5mm)				

Note !Do not change handwheel settings after they have been correctly set.

Note! Metric Scales have a 0.25mm resolution.



4.2.15 Handwheel Calibration Procedures

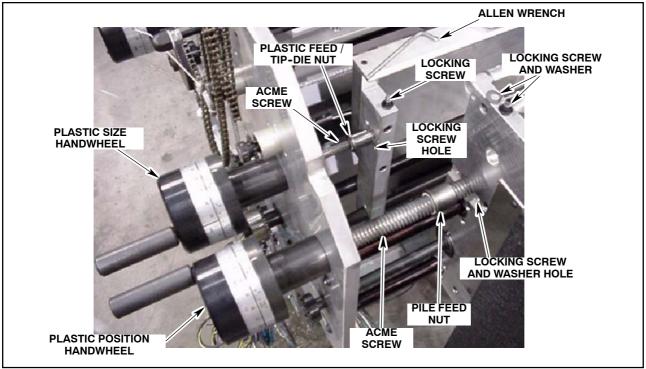


Fig. 4-34. Handwheel Calibration Components

Note! When calibrating any of the four handwheels, DO NOT turn the handwheel. Always leave the handwheel in the setup position.

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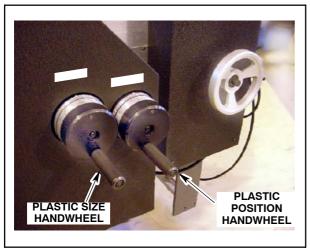


Fig. 4-35. Plastic Position Handwheel

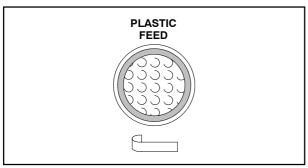


Fig. 4-36. Turn Plastic Feed ON

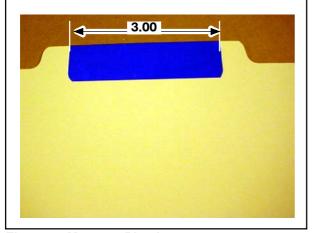


Fig. 4-37. Measure Plastic

4.2.16 Plastic Size Handwheel

Step: 1. If power has not been applied to machine, do so at this time. Make sure the heaters are turned on and up to temperature.

- Step: 2. Turn plastic feed ON.
- **Step: 3.** Check heaters to see if they are up to operating temperature.
- **Step: 4.** Run one piece of paper through the machine.

Note !If length of plastic equals 3.00 inches (76.2mm) proceed to next set-up.
If length is more than or less than 3.00 inches (76.2mm), perform the following steps.

- **Step: 5.** To adjust plastic size. remove locking screw that retains nut located on side of plastic feed/tip-die mounting plate (See Fig. 4-34.).
- **Step: 6.** By rotating nut clockwise, the plastic lengths will become longer. A counterclockwise rotation will shorten plastic lengths. Make sure plate location is up against shoulder of the nut when checking piece size.
- Step: 7. Run one piece of paper through machine, then measure the plastic.
- **Step: 8.** If plastic is at desired length, you may then reinstall locking screw. If not, repeat steps 6 and 7 until desired length is achieved.





Fig. 4-38. Feed Plastic Just Before Cut

Step: 9. Finally, use the machine speed control to slowly index one piece of paper up into machine, feeding plastic out. Stop paper just before plastic is about to cut. Position plastic stop away from end of plastic piece approximately 1/32th inch (.75mm).

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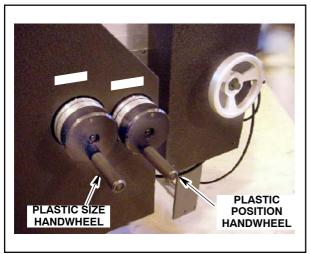


Fig. 4-39. Plastic Position Handwheel

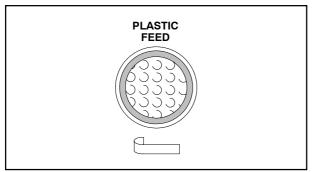


Fig. 4-40. Turn Plastic Feed Button ON

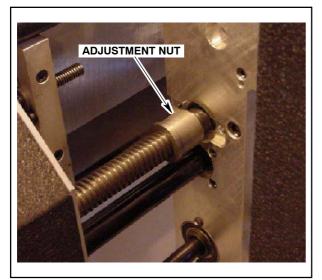


Fig. 4-41. Plastic Position Handwheel Adjustment

4.2.17 Plastic Position Handwheel

Step: 1. Turn plastic feed ON, then run two sheets of paper through the machine.

Note !Ensure that plastic stop is not set too close or too far away from plastic.



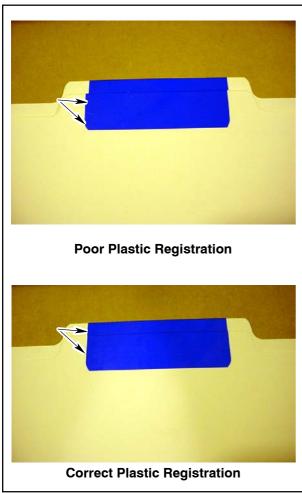


Fig. 4-42. Plastic Registration

- **Step: 2.** Jog both sheets together to insure plastic registration is good.
- Step: 3. Flip one sheet over, then jog both sheets together. The plastic on the reversed sheet should back up to the plastic on the other sheet. If this is not achieved, perform feeder adjustment in Step: 4. through Step: 6.
- **Step: 4.** Remove locking screw that retains nut in the side plate of the feeder. Do not lose washer located behind shoulder of locking screw.
- Step: 5. Rotate nut clockwise to move plastic toward middle of paper. Rotate nut counter clockwise to move plastic toward end of sheet. Make sure washer is located between nut shoulder and plate.
- **Step: 6.** Adjust feeder forward or backward until the two sheets can run through machine with the plastic properly backing up reversed sheet.
- **Step: 7.** Repeat Steps 1, 2, 3, 4 and 5 until the plastic is properly centered.
- Step: 8. Reinstall locking screw and tighten.

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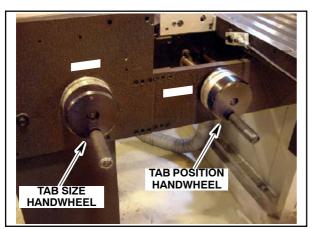


Fig. 4-43. Turn Plastic Feed Button Off

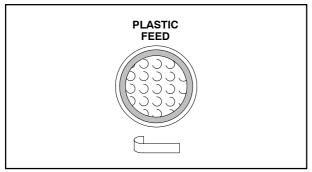


Fig. 4-44. Turn Plastic Feed Button Off

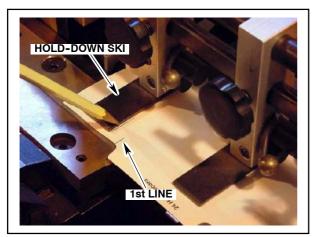


Fig. 4-45. Draw a Line on the Paper Using the Hold Down Ski As A Reference

4.2.18 Tab Position Handwheel

Step: 1. Turn plastic feeder OFF.

Step: 2. Jog one piece of paper through the machine up to the tab cutter. Stop paper just before reregister side guide touches the paper.

Step: 3. Use hold down ski as a reference point then draw one line along paper to indicate current position of paper.

Step: 4. Jog paper slowly to where jogger has pushed paper as far as it will go, then draw a second line on the paper.



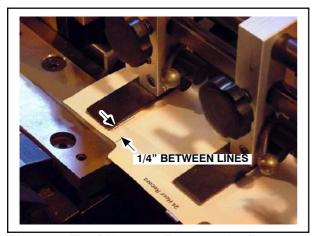


Fig. 4-46. The Difference Between the Two Lines Should be 1/4 Inch



Fig. 4-47. Remove the Locking Screw That Retains Nut into Reregister Section

Step: 5. The measured difference between both lines should be 1/4 inch. Up to 1/32nd of an inch on either side of 1/4 inch pushover dimension is acceptable.

Note !If 1/4 inch pushover is not achieved, perform Steps 6 through 8.

Step: 6. Remove locking screw that retains nut into side of reregister section. Do not lose the washer located behind shoulder of nut, (locking screws and nuts are similar).

Step: 7. Adjust the reregister nut backwards or forwards to achieve the 1/4 inch pushover.

Note !Do not move the handwheel.

Step: 8. Reinstall locking screw and tighten with washer under lip of nut.

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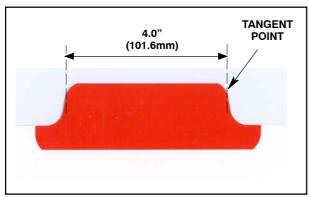


Fig. 4-48. Tab Position

LOCKING SCREW

Fig. 4-49. Move Knife Package

4.2.19 Tab Position Calibration

Tab position calibration sets two dimensions at the same time: the tab size and the center line of tabcut on the paper. Measure tab at tangent point along side of tab where small straight side meets curve near top of tab. This is approximately 1/3 the distance down from edge of paper. (See Fig. 4-48.)

Step: 1. Run two sheets through the machine, if tab measurement equals 4.0 inches (101.6mm) as set on handwheel, proceed to Step 4. If not, perform Steps 2 and 3, then perform Steps 4 through 8.

Note! When the Tab Size handwheel is rotated, both knife packages move simultaneously. The smaller size selected on Tab Size handwheel relates to closeness of knife packages.

Step: 2. Remove one locking screw on one knife package that holds nut in place. There is one left hand and right hand threaded acme screw that operates each knife package.



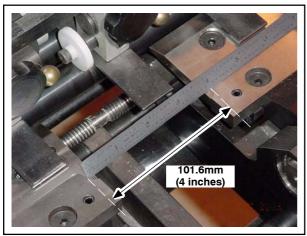


Fig. 4-50. Adjust Knife Package to Achieve 4.0" Dimension

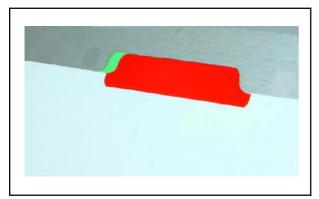


Fig. 4-51. Example of Knife Packages Not Aligned

Step: 3. Adjust one knife package to achieve the 4.0 inch (101.6mm) dimension by moving the package backwards or forwards.

Note! The package that you move depends which way the tab is out of center.
This can be determined by turning a sheet over and jogging both together, if they do not back each other up, move the knife package that helps to bring the tab toward the center of the sheet. Run another sheet through and measure the tab. If size is correct, proceed to step 4. If not, repeat this method until correct.

- **Step: 4.** Run two sheets of paper through machine.
- **Step: 5.** Jog sheets together to insure tab registration is correct.
- **Step: 6.** Flip one sheet over, then jog sheets together again. Tabs should back up each other if knife packages are correctly aligned.
- Step: 7. If tabs do not back up to each other, move both knife packages half of distance that the tabs are off by.

 Direction to move knife packages depends on which side tabs are out of center.

Note !Ensure both knife packages are moved equally to maintain 4.0 inch (101.6mm) tab dimension.

Step: 8. Reinstall locking screws and tighten.

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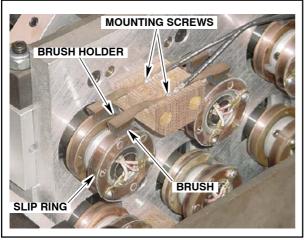


Fig. 4-52. Slip Rings & Brushes



Fig. 4-53. Orange Brush Mounting Block for Temperature Rollers

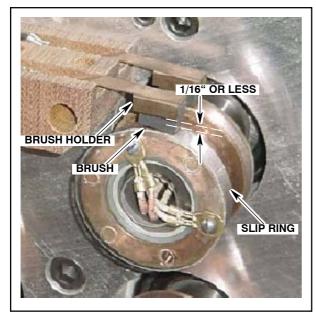


Fig. 4-54. Replacing the Brushes

4.2.20 Slip Rings and Brushes

Electricity to heat each rollers is applied through a brush and slip ring assembly.

The brushes are held in brush holder spring clips which force the carbons against the rings. Since the brushes are manufactured from graphite, they will gradually wear away and have to be replaced.

The same system is also used on the 7th set of rollers to check and control the temperature of the rollers. The temperature monitoring rod is powered by the extra silver brushes that are mounted on the *orange* brush mounting block.

Note !Inspect Brush Wear Every Two Weeks. Tighten Set Screws in Slip Rings.

Periodic checking and cleaning of slip ring and brush assemblies will prevent future problems. The brushes should be replaced when they wear to the point that there is only about 1/16" space between the brush holder spring clip and the slip ring. In any case, the carbon dust which flakes off the brushes should either be brushed or blown off the rings. If blown off, make certain that the carbon is not blown into the other areas that will cause a problem.

To replace the brushes, remove the screws holding the fiber block which mounts the brush holders. This will allow the brushes to be replaced without damaging the brush holders.



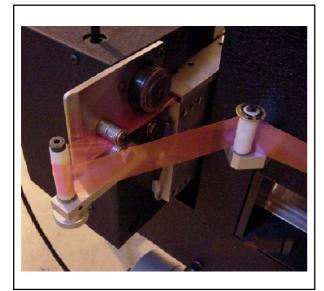


Fig. 4-55. Plastic Feed & Fold



Fig. 4-56. Loosen Guide Roller Adjustment Knob

4.2.21 Plastic Feed and Fold Mechanism

The incoming plastic is folded by passing between two roller assemblies just before it reaches the drive rollers. The space between these rollers determines the sharpness of the fold or crease. The degree of fold or crease is very important since it determines the ability of the cut piece to open and be picked up by the sheet. If the fold is too tight, the piece will tend to be slow in opening or will not open sufficiently for the sheet to pick it up. If the fold is too open, the edge of the sheet may not always find the apex of the fold and the plastic may go on the sheet with uneven legs. <u>Use three thickness of mylar as a general gap.</u>

Adjusting Plastic Feed and Fold Tension

Step: 1. Loosen adjustment knob on the bottom folding roller guide.

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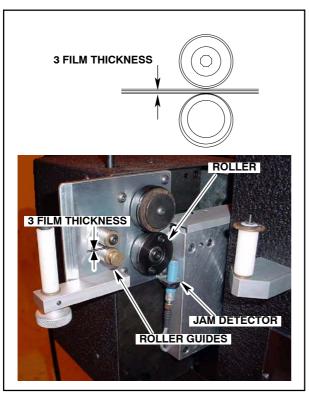


Fig. 4-57. Set Gap Between Plastic Feed Roller Guides to 3 Film Thickness

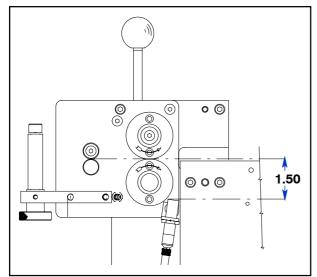


Fig. 4-58. Plastic Feed Photoswitch

Step: 2. Set the gap between the plastic feed roller guides to 3 film thickness by moving the lower roller guide.

Step: 3. Tighten the adjustment knob.

Note ! The Plastic Feed Photoswitch is preset at the factory.

The distance from the photoswitch to the film is set at 1.50 inches.



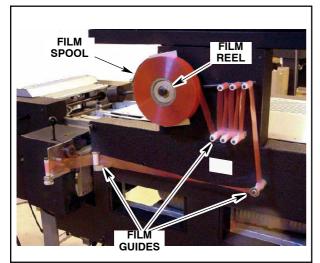


Fig. 4-59. Loading the Film

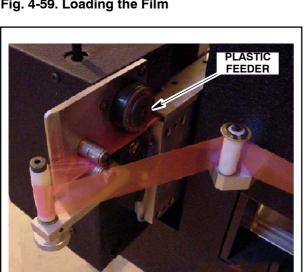


Fig. 4-60. Hand Feed Film into Machine

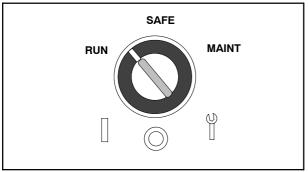


Fig. 4-61. Key Switch to RUN

Step: 4. Load film reel on the reel holder.

Step: 5. Thread film through the film guides as shown.

Step: 6. Fold the film in half and hand feed film into the plastic feed mechanism.

Step: 7. Turn key switch to RUN



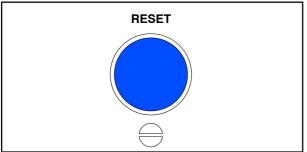


Fig. 4-62. Reset Pushbutton

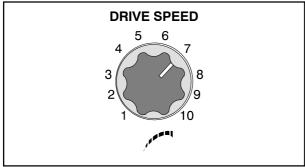


Fig. 4-63. Adjust Drive Speed

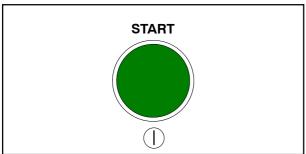


Fig. 4-64. Start Pushbutton

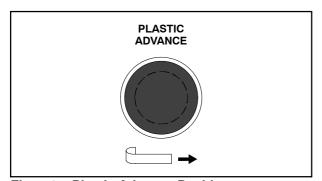


Fig. 4-65. Plastic Advance Pushbutton

Step: 8. Press RESET pushbutton.

Step: 9. Adjust Drive Speed to 7.

Step: 10. Press START pushbutton.

Step: 11. Press and hold PLASTIC ADVANCE pushbutton till plastic enters the Tip Die.

Step: 12. Press STOP pushbutton.

Step: 13. Remove cut piece of mylar from the Tip





Fig. 4-66. Chip Removal System

4.2.22 Chip Removal System

The machine is equipped with an automatic chip removal system which pulls the cut-out or plastic chip from between the dies and deposits it in a waste container. This eliminates the need to sweep up the chips and insures that the chips are removed from the tip die to help prevent plastic jam-ups.

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4.2.23 Tip Die Assembly

With Scott Equipment's tip die exchange program, it is not necessary for you to set the dies. Simply remove the entire unit and return it to Scott. For a modest fee, a factory refurbished die will be returned in it's place. To decrease your down time, we may pre-ship a die to you before the return of your unit. Contact your Scott Equipment representative for further details.

The plastic tip die is one of the "key" components of the machine. The machine will not function in the correct manner unless this device is working properly. Aside from its primary cutting and making plastic tip functions, it also has openers to align the strip for the cut and make ends open even though they have a tendency to stick together. The openers are light enough to compress during cutting but still open the tip.

- The first two openers are located inside the strip in order to open ends of the tape.
- The openers are located in such a way to ensure the strip is fed out over and under them.
- Shape of the openers is very critical since they must perform their function, but not interfere with feeding of the tape.
- If openers become damaged they must be replaced.
- When replacement is necessary, openers must be bent to an exact shape. See "Installing Plastic Openers In Plastic Tip-Die".



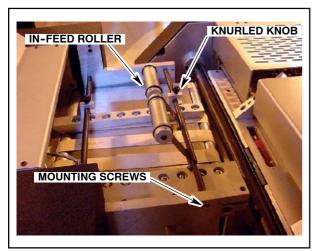


Fig. 4-67. Removing the Tip Die Unit

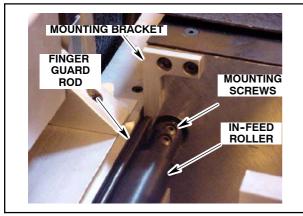


Fig. 4-68. Remove In-Feed Roller



Fig. 4-69. Remove the In-Feed Roller

4.2.23.1 Removing and Replacing the Plastic Tip-Die Unit

The plastic tip-die unit is designed in such a way that it can be easily removed from the machine.

- Step: 1. Set the Plastic Length Handwheel to: 3"
- Step: 2. Set the Plastic Position Handwheel to: 4"
- Step: 3. Depress E-Stop button.
- **Step: 4.** Loosen the knurled knob on the paper guide.
- **Step: 5.** Loosen the mounting screw for the in-feed roller shaft.
- **Step: 6.** Rotate the in-feed roller out of the way as shown in Fig. 4-67.
- **Step: 7.** Remove the button head screws that mount the finger guard rod mounting bracket.
- **Step: 8.** Lift the mounting bracket out and remove finger guard rod.
- **Step: 9.** Remove the four button head screws which mount the nylon in-feed roller.

Note !Hold free hand under the in-feed roller mounting screws while loosening so that nut plate on opposing side can be caught.

Step: 10. Reposition the handwheels to the following dimensions:

Plastic Length Handwheel 6"

Plastic Position Handwheel 1/2"

Step: 11. Remove the in-feed roller.

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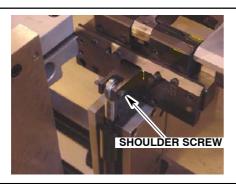


Fig. 4-70. Remove Connecting Pin

Step: 12. Remove the pin (shoulder screw and Nylock nut) which connects the drive linkage to the cutting package.



Fig. 4-71. Disconnect Linkage from Cutting



Package

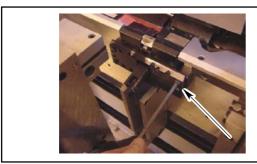


Fig. 4-72. Remove the Mounting Screws for the **Cutting Package**

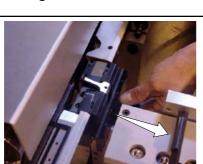


Fig. 4-73. Slide Package Toward Feeder and Remove

CAUTION!

USE CAUTION WHILE DISCONNECTING LINKAGE FROM CUTTING PACKAGE. LINKAGE IS SPRING LOADED AND UNDER PRESSURE.

Step: 13. To decrease pressure on the linkage spring, slowly jog the machine until the rod end is at it's lowest point.

Step: 14. Disconnect drive linkage from cutting package.

Step: 15. Remove the cutting package mounting screws.

Step: 16. Slide the package toward the feeder and lift to remove.



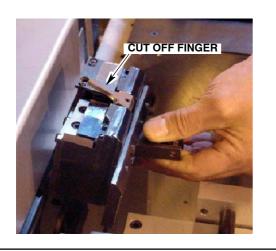


Fig. 4-74. The Cut Off Finger Should Be Horizontal

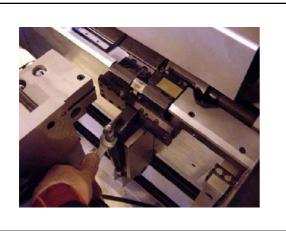


Fig. 4-75. Use an Open Ended Wrench to Compress Spring Pressure on Linkage

4.2.24 Reinstalling the Tip Die Assembly

When re-installing the plastic tip-die unit, carefully do the following:

Step: 1. Follow the reverse of the above procedure.

Step: 3. Use a open ended wrench to compress spring pressure.

CAUTION!

USE CAUTION WHEN REINSTALLING THE SPRING LOADED DRIVE LINKAGE.

Note! When replacing the hold down rollers, make certain that there is enough spring pressure to cause the sheets to be gripped by the nylon roller.

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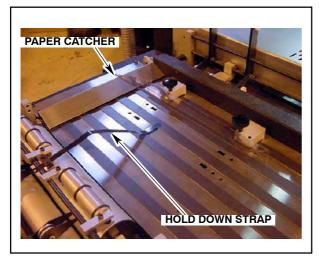


Fig. 4-76. Spring Hold Down Strap on Delivery Conveyor

4.2.25 Hold Down Strap on Delivery Conveyor

The hold down strap should be curved and the tip should rest lightly on the delivered stack of sheets. It should be set light enough to allow the sheet being delivered to lift it and slide against the catcher.

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Fig. 4-77. Tab Cutter Unit

4.2.26 Setting Tab Cutter Knives

The following procedure must be followed in setting the tab cutting knives. If this procedure is not followed, you will ruin your knives, spend an unnecessary amount on sharpening charges and eventually damage the tabcutting packages on your machine.

All operators should read this section.

Note !The knives are precision made and must be sent to Scott for sharpening.

Before going into a detailed explanation, a summery of the procedure is as follows:

Step: 1. Disconnect the rods which move the rotating knives.

Step: 2. Before locking the lower knife, rotate the upper knife for clearing action.

Step: 3. If knives bump or rub, repeat the above step.

Step: 4. Check Mylar cutting ability of the knives with .002 Mylar. (the index tab film that is used on the machine).

Step: 5. If the knives do not cut the Mylar, go through the procedure again.

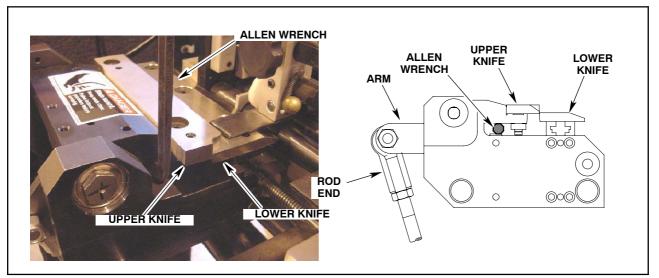


Fig. 4-78. Tab Cutter Components

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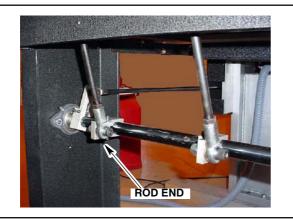


Fig. 4-79. Disconnect the Lower Drive Rods

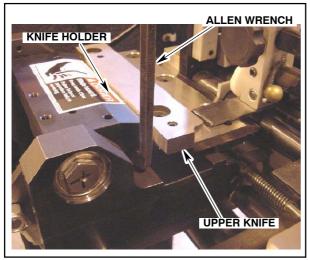


Fig. 4-80. Support the Upper Knife

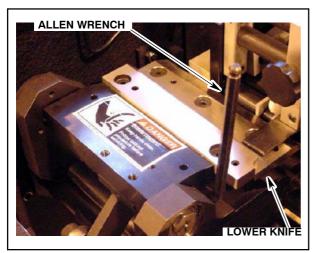


Fig. 4-81. Set the Lower Knife Against the Upper Knife

4.2.26.1 To Install Knives

Step: 1. Depress E-Stop button. This is for the operator's safety. The operator must rotate the upper knives by hand. Unless this is done, you cannot get a proper setting.

Step: 2. Disconnect the lower rod ends which rotate the upper knives. This permits the operator to rotate the upper knives by hand. Unless this is done, you cannot get a proper setting.

Step: 3. When installing lower knife, run all screws down until stop then back off 1/4 turn

Step: 4. Insert a 5/16" Allen wrench under the knife holder at the contoured end to support the upper knife. This will prevent the knife from falling into a downward position.

Step: 5. Install the upper knife and lock firmly in place with the screws.

Step: 6. Adjust height of the upper knife so that the side away from the tab contour does not have a gap. Use the Allen wrench to set this height.

Step: 7. Slide the lower knife into position against the upper knife so that you have full contact of the two blades at the contour and the entire length of the blades (always below the cutting edge of the lower knife).

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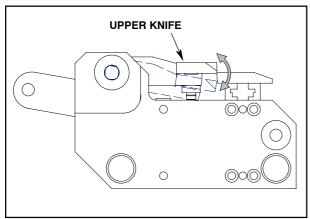


Fig. 4-82. Clear the Knife Blades

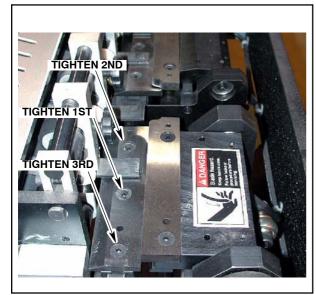


Fig. 4-83. Tighten the Screws

Step: 8. "Clear" the knives so that although they are set closely, they will not bump or rub. To do this, remove the Allen wrench and very carefully rotate the upper knife once or twice.

Note !Leave the lower knife free when rotating the upper knife. Do not push the lower knife against the upper knife or hold the knife in place. This "clearing" action will move the lower blade away from the upper.

Step: 9. After the clearing action, the knives are still very close to each other. If they were too close, the procedure automatically puts the lower knife in the proper position since the screws on the lower knife have not yet been tightened.

Step: 10. Tighten the center screw.

Step: 11. Tighten the screw at the contour end. **Step: 12.** Tighten the screw at the off-contour end.

Note !It is sometimes necessary to alter the order in which screws are tightened to help keep the blade from moving.

Note! The "Clearing Action" may be used after each screw is tighten to insure that the lower knife has not been twisted or pushed against the upper knife. The knives must not bump or rub.

Step: 13. After the three screws have been tightened, "clear" the blades to make sure that the blades are will not bump or rub. A very slight "brushing" of the blades is acceptable.

Step: 14. Again, use a piece of .002 Mylar index tab film and check the cutting ability of the knives. It is necessary that they cut this thin film at the contour and at least one inch away from the contour. It is not necessary that they cut the thin film the entire length of the blade. All that is necessary is that this part will cut 20lb. paper.

Step: 15. Tighten all the other screws and recheck with the clearing action with the .002 Mylar.

Step: 16. If the blades do not cut the Mylar, repeat the above steps until the cutting satisfactory.

Note! If you have a "perfect" setting but after running the machine a while you notice that the knives "squeak", go through the entire procedure again. If you have to do this once, we have found that the squeak will not reoccur. Do not put oil on the knives to eliminate the noise, You must reset the knives.

Step: 17. Repeat above steps for the right side knives.



If you cannot get the proper setting by performing the above procedure, send the knives to Scott for sharpening. DO NOT JAM THE KNIVES INTO EACH OTHER TO MAKE THEM CUT.

The above procedure is important for the following reasons:

- 1. If the above is not done, they will require much more sharpening than they should.
- 2. You will require new knives much more frequently thus incurring unnecessary cost.
- 3. If the machine is run with dull knives or the lower knives are jammed against the upper knives, you can ruin the tabcutting packages on the machine. To replace the tabcutting packages, you will incur unnecessary expense and face the risk that your machine will be down for an extended period of time based on the availability of replacement parts.

4.2.27 Paper Stocks

The ability of the machine to produce high quality work with a minimum of scrap at a high net rate is very much dependent on the type and condition of the index paper being used. Although the machine will do a good job on a wide range of sheet sizes and paper weights, the following factors should be considered in order to realize the best production and highest profit from the operation of the Scott Ten Thousand:

1. Bonding Ability of the Paper Stock.

Although the plastic tab films used to produce indexes are very high in quality and will bond well to most types of paper stocks, there are several factors which make some papers less desirable for indexes. Some papers will not allow a good bond under any condition—clay filled stocks, coated stocks, high rag content papers, etc. Some stocks will bond well to one side and not to the other. Some stocks will bond satisfactorily by varying the machine speed and roller temperature. FOR BEST RESULTS IN QUALITY OF BOND AND HIGH NET PRODUCTION RATES, USE PAPERS WHICH BOND EASILY.

2. Flatness of the Sheets.

By the time indexes reach the plastic tab machine they have already been run through two or three other machines, have picked up moisture from the printing operation and, in many cases, have been poorly stored so by the time they reach the plastic tab operation, the paper is in very poor condition. There are several things which can be done to improve the condition of the paper stock. First, it will pay to select papers which tend to remain more stable after several operations. If possible, it is desirable to have printing, storage and index tabbing in in humidity controlled atmosphere. If this is not possible, then it may be desirable to cover the jobs with plastic between operations. Sometimes a "curl" will cause problems in feeding and sometime it will not, depending on the position of the curl. Under the normal procedure for producing indexes, the producer prints the full bank of tabs in sequence. This creates a problem since it requires that the paper be loaded with a certain side up for a particular tab position. In order for the paper to feed properly, it may be necessary to hand-roll the stock before loading when running some of the tab positions. On larger jobs this condition can be eliminated by changing the procedure in plate making and printing.

Example: 5-tab bank A ----- B ----- C ----- D ----- E--

The normal procedure is to make 2 plates and print as follows:

SIDE ONE--PLATE ONE

An improved procedure for printing larger runs to allow the indexes to be run with either side up when plastic tabbing:

Divide the paper into two equal lots.

Make two plates and print as follows:

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3. Weight of the paper stock being fed.

The weight of the paper stock, within the normal range of stocks used for index tabs, has some effect on the running rate or production of the machine. If the stock becomes warped or curled, the lighter stocks will be harder to handle. Stocks lighter than 28# (105 g/m^2) may tend to buckle when the leading edge picks up the plastic and reaches the rollers.

4. Damaged Sheets.

Sheets with bent corners, bad paper cutting or some other mechanical defect can not only slow down the production rate of the machine but will also cause a much higher percentage of scrap work. It will increase your profits to keep stocks in the best possible condition when running on high speed equipment.



4.2.28 Hot Roller

A "hot" roller is a roller which becomes overheated and will not be controlled by the temperature controllers. This condition is due to an electrical failure. When this condition exists, the machine will not produce plastic tabs properly because the plastic may adhere to the rollers or bubble from excessive heat.

A "Hot" roller is caused by the following:

1. <u>Frozen Contacts on the Heat Control Relays.</u> If you have "hot rollers" in multiples (not just one), then the problem is due to frozen contacts in the relays. When this happens it will be in one of the following combinations:

a. Top Rollers 2 to 6 Relay KA506b. Bottom Rollers 2 to 6 Relay KA606

To correct the problem:

Step: 1. Turn off (lockout/tagout) your 220V single phase electricity to prevent damage to the rollers and shafts.

Step: 2. Locate the faulty relays and replace.

- 2. Short Circuits. There are three types of short circuits which can cause "hot" rollers:
 - a. Heat element shorted to ground.

Note! If you do not have time to fix the roller before the end of your production run, you can continue to operate by disconnecting this particular roller. This is done by disconnecting the heat element wire at the slip rings and placing heat element wires inside the roller shaft.

- **b.** Short Circuits in heating elements wires. Check wires leading into ceramic end of heating element to see if there are exposed wires or insulations slipped.
- c. <u>Cut insulation or frayed wires</u>. Check wires leading from slip rings to heat elements.

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4.2.28.1 Installing Plastic Openers On Plastic Tip-Die

The purpose of the "inside" plastic openers is to ensure that the end of the folded strip of plastic (Mylar) is positively opened after each cut. The "outside" plastic opener performs two functions. First, it helps to ensure plastic tabs open after they are cut-off. Secondly, it helps to control the piece of plastic as it opens so that it does not "jump" out of position.

Inside and outside openers are furnished as flat pieces. In order for them to function correctly, they must be carefully shaped and mounted into the plastic tip-die mechanism.

4.2.28.2 Shaping of Inside Openers

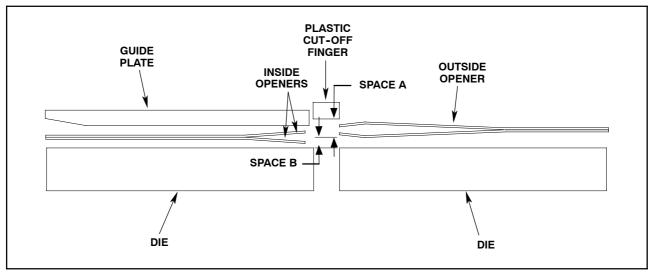


Fig. 4-84. Inside / Outside Openers

Step: 1. Carefully bend upper and lower portions of inside openers near tip until it is just off contact of the die

IMPORTANT: The openers are viewed from the back of the tip-die in this illustration (Fig. 4-84.). Notice that the plastic tip-die finger is shown from the narrow tip end of the finger – not from the hinge or pivot end of the finger.

4.2.29 Plastic Reel Holder Adjustment Procedure

The following procedure will allow you to adjust the plastic reel holder assembly for proper operation.

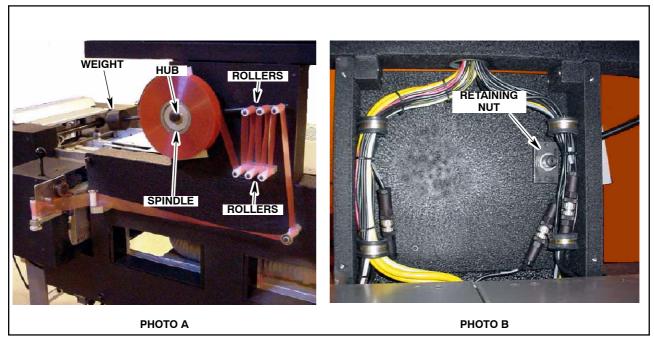


Fig. 4-85. Reel Holder Assembly

As shown in Photo A, the spindle of the reel holder assembly is located in the middle of the unit. As the plastic reel unwinds and finally runs out, the weight on the left side of the reel holder causes the spindle to become loosened. This causes the rollers on the right side to start tracking up toward the bottom of the control cabinet. When the rollers become too high, tension will be lost on the tape. This causes the tape to become inconsistent in plastic lengths.

To adjust the reel holder spindle, it is necessary to loosen both the jam nut and set screw located in the center of the left side of the retaining nut. The retaining nut is located just underneath the control panel on the front side as shown in Photo B. Use a 1/8 inch Allen wrench to loosen the set screw.

Note! You must not loosen the set screw completely or you will not be able to maintain your adjustment of the reel holder spindle.

After the set screw is slightly backed off, start running plastic through the machine. Adjust the spindle so that the reel holder rollers are staying around a 3 o'clock position. The rollers should not move up or down more than an inch either side of this position when the plastic is running. If this does occur, it may be necessary to clean, oil, and/or replace the bearings of the reel holder assembly.

Once the reel holder assembly has been property adjusted, make sure you tighten the set screw in the retaining nut and the jam nut to keep the reel holder spindle from moving.

You will have to occasionally readjust the reel holder assembly because of the severe jolt given to the assembly when the tape completely runs out.

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Fig. 4-86. Fiber Optics Amplifier Location

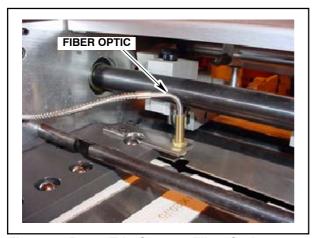


Fig. 4-87. Paper Trip Counter Fiber Optic Sensor

4.2.30 Fiber Optics

The Scott 10,000 has one set of fiber optics for the Paper Trip / Counter. It is mounted inside the pile feed cover on the R.H. side.

4.2.30.1 Fiber Optic Cleaning - Daily

Machine function may be interrupted if paper dust builds up in the fiber optics.

Step: 1. Before daily production begins, use compressed air to blow paper dust off fiber optics.

Step: 2. Wipe off tip of fiber optics with a clean dry cloth or use a mild detergent soap.

Note !Do not use harsh chemicals to clean fiber optics. This can cause damage to the unit.





Fig. 4-88. Calibrating Fiber Optics



Fig. 4-89. Remove Rear Pile Feeder Cover and Amplifier Cover

4.2.30.2 Calibrating Fiber Optics

The fiber optic amplifier is preset at the factory and should not require too much adjustment but due to variations in index stocks, the amplifier may have to be slighty recalibrated.

If the sensitivity is set too strong, it may read right through certain paper stocks. If it is set too weak, it will not read the paper stock at all.

Note !Do not attempt adjustments to the Fiber Optic Amplifier unless you are familiar with performing this type of adjustment.

To adjust the Fiber Optic Amplifier

Step: 1. E-Stop the machine.

Step: 2. Remove the air lines and right side pile feeder cover.

Step: 3. Remove the cover of the amplifier box.

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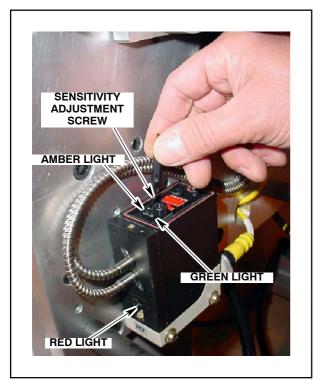


Fig. 4-90. Fiber Optic Amplifier Adjustment

- **Step: 4.** Remove the front cover of the amplifier box.
- **Step: 5.** Turn the sensitivity screw counter-clockwise until both the green and amber lights go out. (Adjustment screwdriver is located inside cover).
- **Step: 6.** Turn Sensitivity screw back clockwise until the green light goes on and the amber light turns off.

Test the amplifier setting:

- **Step: 7.** Use a piece of 20# bond (copy paper) and put it between the tips of the optic. A red light should turn on indicating that the amplifier is now set.
- Step: 8. Replace front cover of amplifier box.

4.2.31 Machine Cleaning

4.2.32 Feed, Drive, Hold Down & Tension Rollers

All Feed/Drive/Hold Down and Tension Rollers should be cleaned with a mild detergent soap only.

Note! Do not use harsh chemicals to clean the machine. This could cause damage to the rollers.



Fig. 4-91. Cleaning Heated Rollers



Fig. 4-92. Remove Top Cover

CAUTION!

USE CAUTION WHEN CLEANING HEATED ROLLERS. ROLLERS MUST BE HEATED TO 255° F FOR CLEANING

To insure optimum operation, it is necessary to clean the heated rollers every ______.

Note! The heated rollers have a precision chrome finish - Do not use any metal objects to remove adhesive buildup from heated rollers.

Step: 1. Turn on Main Power.

Step: 2. Heat up rollers to a minimum of 255° F.

Step: 3. Remove both rear access covers.

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Fig. 4-93. Remove Top Cover

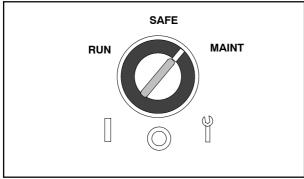


Fig. 4-94. Turn Key Switch to Pendant Position

Step: 4. Remove both top covers

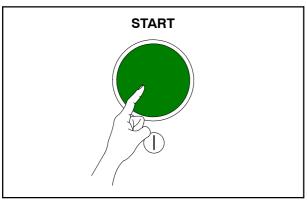
Step: 5. Turn Key switch to MAINT position.





Step: 6. Apply a light oil or baby oil to a clean cotton shop rag and wipe adhesive build-up off of upper and lower heat rollers.





LOWER HEAT ROLLERS

Fig. 4-96. Rotate Machine With Start Button, Wipe Rollers with Cloth / Light Oil

- **Step: 7.** Use Start button to rotate the rollers to next position to be cleaned.
- **Step: 8.** Use a clean, dry shop rag to wipe excess oil from rollers.

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5 SCOTT 10,000 PARTS

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5 Scott 10,000 Parts

5-2

SCOTT OFFICE SYSTEMS PARTS ORDERING INFORMATION

- 1. When corresponding or ordering parts from *SCOTT OFFICE SYSTEMS* include complete Business Name, Street Address, City, State, Country, Zip Code and Machine Serial Number.
- 2. Order by part number and description as shown in the manual.
- 3. No minimum charge on orders.
- **4.** Specify how shipments are to be made Freight, Parcel Post, or Express. If routing is not specified, we will use our own judgement and not be responsible for the additional costs or delays.
- 5. Always confirm fax or phone orders by clearly marking "Confirmation".
- **6.** Address all correspondence to:

Scott-Precision 1555A Ocean Avenue Bohemia, NY 11716 USA Tel.631.468.8776 Fax.631.468.8775 www.scottprecision.com

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PARTS RETURN

To enable us to handle credit efficiently and promptly, and to save our Customers unnecessary expense and delay, the following procedures have been established.

- 1. Customers are requested not to return parts of any kind without first communicating by letter or telephone with the Parts Service Department. We will advise what procedures to follow to expedite the issue of credit and the applicable restocking charge. A Return Material Code Number indicating the authorization to return parts will be issued. NOTE: Proof of purchase must be established before credit can be approved.
- 2. All shipments returned MUST contain a copy of the Invoice Number or Packing List that parts were received on and the reason for return noted. Shipments may be refused if the above procedure is not followed.
- 3. No parts are to be returned without a Return Authorization Number issued by Parts Service.
- 4. Requests for credit of returned parts must contain Invoice Number and Date of Purchase.
- 5. Parts are to be returned "Prepaid".
- **6.** Parts shipped out over one (1) year cannot be accepted. Any parts for which an invoice (proof of purchase) cannot be found, will not be accepted.

7. Return all Parts to: Scott-Precision Tel.631.468.8776

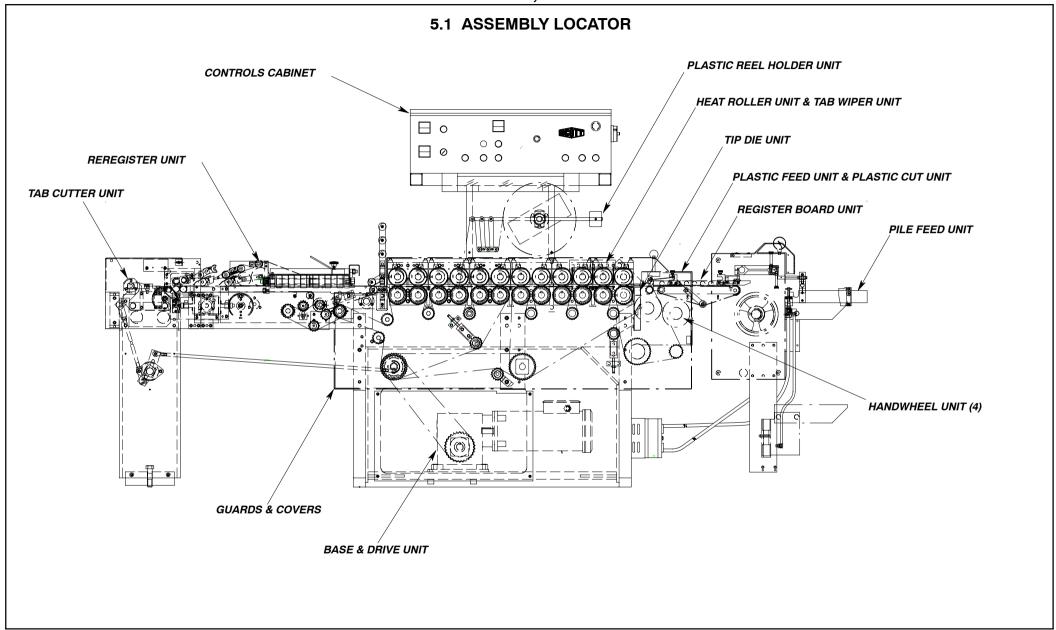
1555A Ocean Avenue Fax.631.468.8775

Bohemia, NY 11716 USA www.scottprecision.com

- 8. Restocking charge is \$25.00 or 10% whichever is greater.
- **9.** Warranty Part Shipments Shipment of parts under warranty will be handled by U.P.S. Ground. Customer will incur all shipping expenses by other than U.P.S. Ground.

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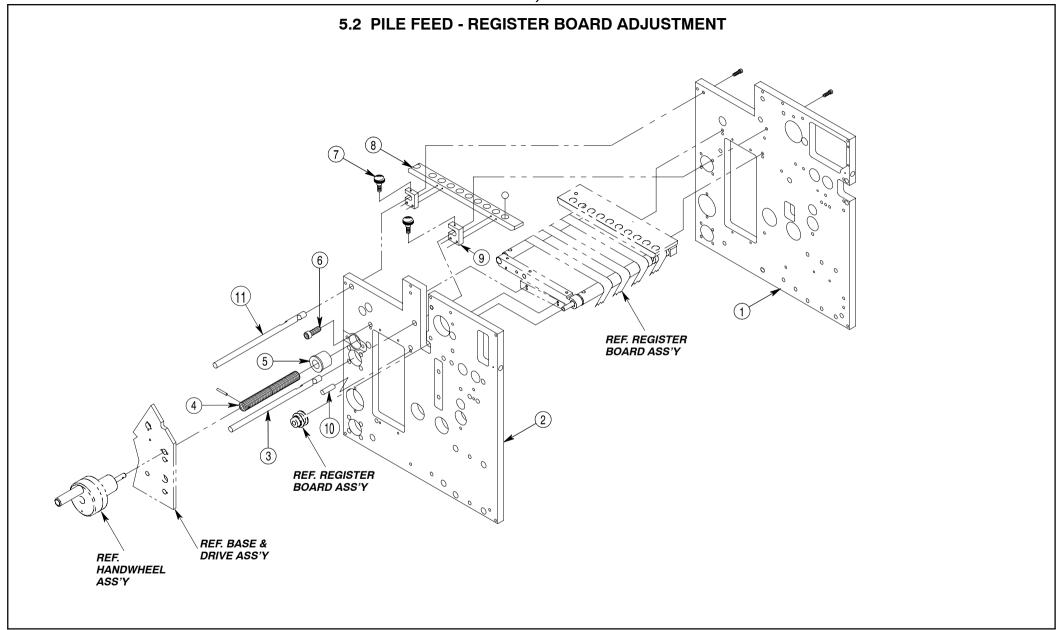
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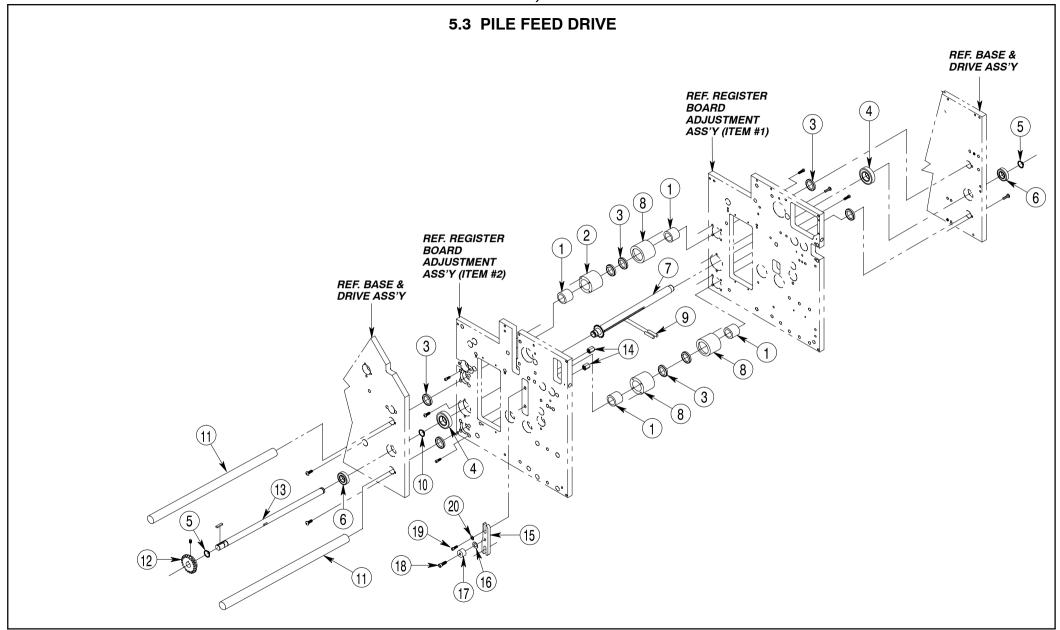


5 Scott 10,000 Parts

ITEM#	PART #	DESCRIPTION	# REQ
1	PF-0196-1	PLATE, FRONT SIDE, RH	1
2	PF-0195	PLATE, FRONT SIDE, LH	1
3	PF-0170-2	BAR, CROSS	1
	HW-51230	SCREW, SHC,	1
4	PF-0183	SCREW, ACME ADJUST	1
	HW-57090	PIN, SPRING,	1
5	PF-0184	NUT, ACME	1
	HW-82030	SCREW, LOCK	2
	HW-49130	D-SHAPED WASHER	2

ITEM#	PART #	DESCRIPTION	# REQ
6	HW-51230	SCREW, SHC,	4
7	HW-81010	KNOB,	2
8	PF-0243	BAR, HOLD DOWN	1
	HW-84080	BALL, STEEL,	9
9	PF-0159-1	CLAMP, PAPER HOLD, DOWN	2
	HW-51100	SCREW, SHC,	4
10	HW-57190	PIN, SPRING	4
11	PF-0224	BAR, CROSS	1
	HW-51230	SCREW, SHC,	1





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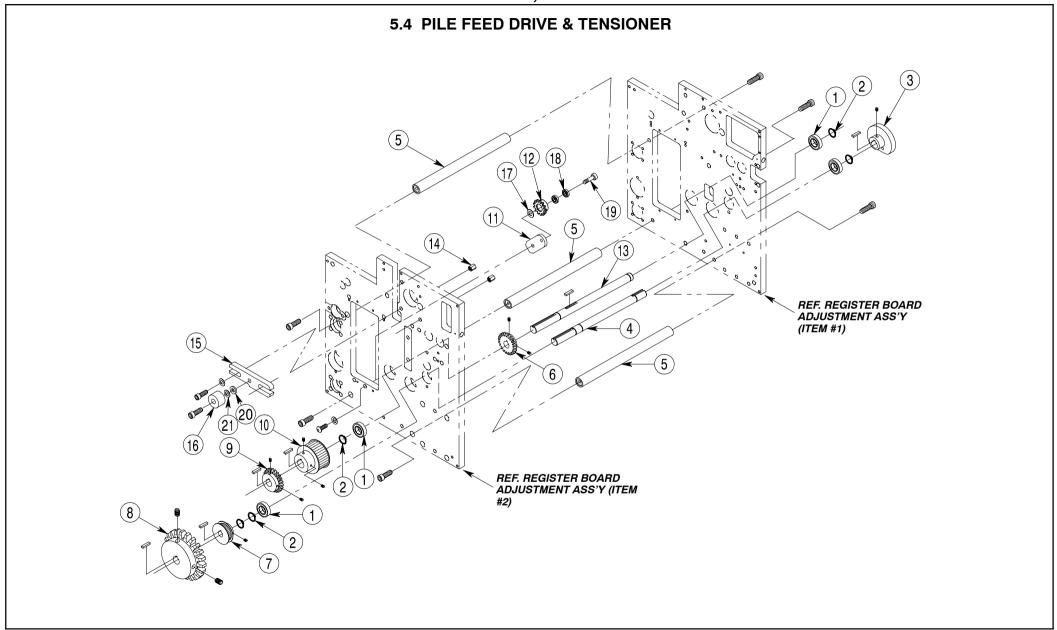


5 Scott 10,000 Parts

ITEM#	PART#	DESCRIPTION	# REQ
1	HW-65040	BUSHING, BALL	4
2	PF-0113	BLOCK, BALL BUSHING	1
	HW-51230	SCREW, SHC,	4
3	HW-73030	SEAL	8
4	HW-66060	BEARING, BALL	2
	HW-53150	SCREW, BUTTON HD.,	4
5	HW-61050	RING, RETAINING	2
6	HW-66040	BEARING, BALL	2
7	PF-0110	TUBE, DRIVE	1
8	PF-0112	BLOCK, BALL BUSHING	3
	HW-51230	SCREW, SHC,	12
9	HW-57190	PIN, SPRING,	2
10	HW-61080	RING, RETAINING	1

ITEM#	PART #	DESCRIPTION	# REQ
11	PF-7801	SHAFT	2
	HW-53150	SCREW, BUTTON HD.,	3
	HW-49040	WASHER, FLAT,	3
12	HW-87030	SPROCKET,	1
13	PF-0111	SHAFT, MAIN DRIVE	1
	HW-59030	KEY, SQUARE,	1
14	HW-85070	NUT, ALLEN	2
15	PF-0157	BAR, TENSION ROLLER MTG.	1
16	HW-49060	WASHER, FLAT S.A.E.	1
17	HW-71060	ROLLER YOKE	1
18	HW-51480	SCREW, SHC.,	1
19	HW-51380	SCREW, SHC,	2
20	HW-49050	WASHER, FLAT,	2





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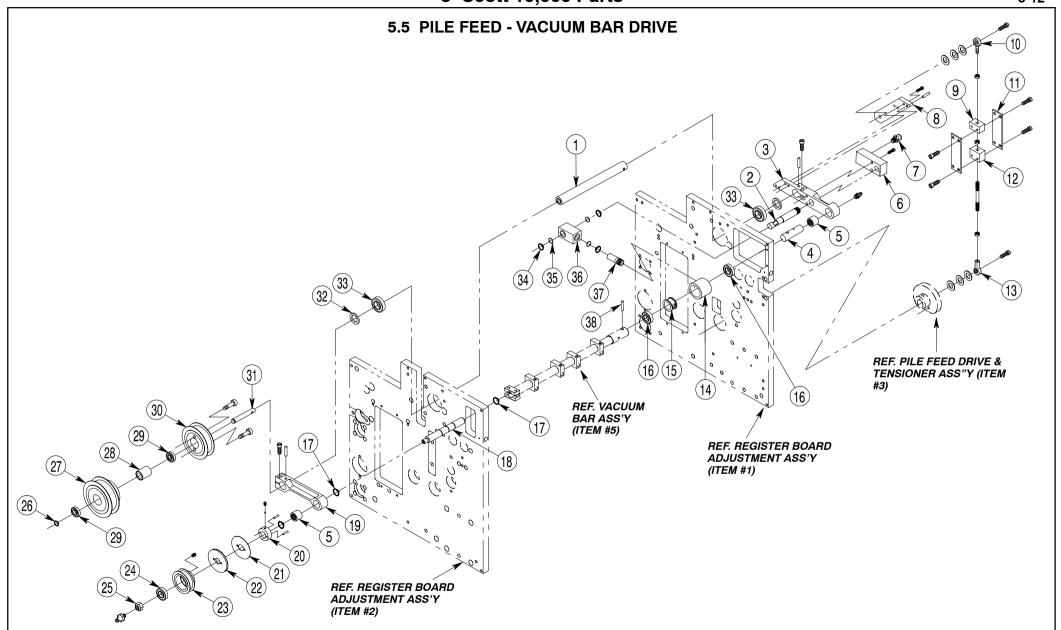


5 Scott 10,000 Parts

ITEM#	PART#	DESCRIPTION	# REQ
1	HW-66040	BEARING, BALL	4
2	HW-61050	RING, RETAINING	5
3	PF-0108	CAM, PILE LIFT	1
	HW-52090	SCREW, SET,	1
	HW-59030	KEY, SQUARE,	1
4	PF-0107	SHAFT, PILE LIFT CAM	1
5	PF-0114	SPACER, MAIN SLIDE PLATE	3
	HW-51480	SCREW,SHC,	6
6	HW-87070	SPROCKET,	1
	HW-59030	KEY, SQUARE,	1
7	HW-86040	PULLEY, TIMING GEAR	1
	HW-59030	KEY, SQUARE,	1
8	HW-88030	GEAR, BROWNING	1
	HW-59030	KEY, SQUARE,	1
9	HW-88020	GEAR, BROWNING	1
	HW-59030	KEY, SQUARE,	1
10	HW-86060	PULLEY, TIMING GEAR	1
	HW-59030	KEY, SQUARE,	1

ITEM#	PART #	DESCRIPTION	# REQ
11	C-2059	PLATE, TAKE UP	1
	HW-53220	SCREW, BUTTON HD.,	1
	HW-49050	RACE, THRUST	1
12	HW-87020	SPROCKET,	1
13	PF-0109	SHAFT	1
14	HW-85070	NUT, ALLEN,	2
15	PF-0157	BAR, TENSION ROLLER MTG.	1
	HW-49050	WASHER, FLAT,	2
	HW-51390	SCREW, SHC,	2
16	HW-71060	ROLLER, YOKE	1
	HW-51520	SCREW, SHC,	1
17	HW-49060	WASHER, FLAT,	1
18	HW-66100	BEARING, BALL,	2
19	HW-51390	SCREW, SHC,	1
20	PF-0156	SPACER	1
21	HW-49060	WASHER, FLAT S.A.E.	1





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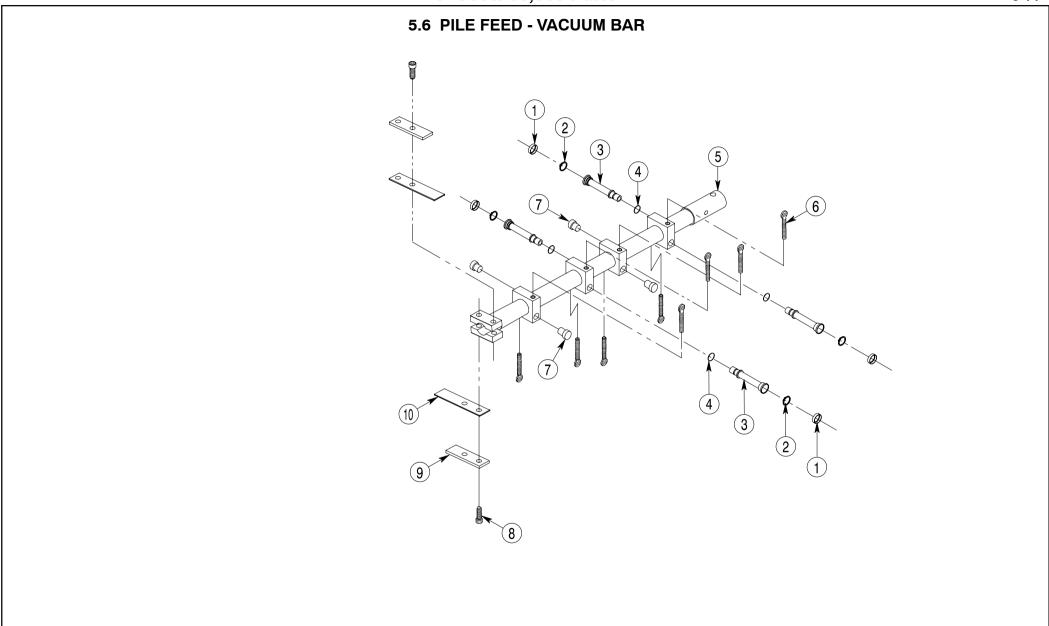
5 Scott 10,000 Parts

ITEM#	PART#	DESCRIPTION	# REQ
1	PF-0147	SHAFT, VACUUM PICK UP	1
2	PF-0140	PIPE, VACUUM CONNECTION	1
3	PF-0198	ARM, NOZZLE LIFT RH.	1
	HW-57200	PIN, SPRING,	1
	HW-51240	SCREW, SHC.,	2
4	PF-0217	SHAFT, VACUUM BAR PIVOT	1
	HW-63100	FITTING, GREASE,	1
5	HW-72030	ROLLER, CLUTCH	2
6	PF-0143	BLOCK, VACUUM, CONNECTION	1
	HW-51240	SCREW, SHC.,	2
7	HW-63300	CONNECTOR, MALE,	1
8	PF-0150	ARM, VACUUM PICK UP	1
	HW-51210	SCREW,SHC,	2
	HW-57180	PIN, SPRING,	2
9	PF-0160	BLOCK, SPACER	1
10	HW-70090	ROD END, MALE	1
	HW-51470	SCREW, SHC.,	1
	HW-60230	NUT, NYLON INSERT,	1
	HW-49060	WASHER, SAE,	3
11	PF-0161	SIDE, PLATE	2
	HW-51190	SCREW, SHC,	8
12	PF-0162	BLOCK, SPACER	1
13	HW-70030	ROD END, FEMALE	1
	HW-60070	NUT, HEX,	1
	PF-0163	CONNECTING ROD	1
	HW-60210	NUT, NYLON INSERT	1
	HW-51380	SCREW, SHC.,	1
	HW-49050	WASHER, SAE,	3
14	PF-0136	RING, VACUUM CONNECTION	1
15	PF-0137	RING, VACUUM CONNECTION	1
16	HW-66160	BEARING, BALL	2

ITEM#	PART#	DESCRIPTION	# REQ
17	HW-61050	RING, RETAINING	3
18	PF-0134	SHAFT, VACUUM BAR DRIVE	1
19	PF-0146	ARM, NOZZLE LIFT LH.	1
	HW-57200	PIN, SPRING,	1
	HW-51240	SCREW, SHC.,	2
20	PF-0216	RING, SLIP CLUTCH PLATE MTG.	1
	HW-52090	SCREW, SHC.,	1
	HW-84020	BALL, NYLON,	1
	HW-57090	PIN, SPRING,	2
	HW-57080	PIN, SPRING,	2
21	PF-0139	PLATE, SLIP CLUTCH	1
22	PF-0138	CLUTCH PLATE	1
23	PF-8605-A	PULLEY, GEAR BELT	1
	HW-79060	SPRING, COMPRESSION	2
24	HW-66040	BEARING, BALL	1
25	HW-60250	NUT, NYLON INSERT,	1
	HW-63120	FITTING, GREASE	1
26	HW-61040	RING, RETAINING	1
27	PF-8607-A	PULLEY, GEAR BELT	1
28	PF-0223	SPACER, BEARING	1
29	HW-66020	BEARING, BALL	2
30	PF-8606-A	PULLEY, GEAR BELT	1
	HW-51230	SCREW, SHC,	2
31	PF-0145	SHAFT, IDLER	1
32	HW-69120	THRUST, RACE	2
33	HW-66050	BEARING, BALL	2
34	HW-61220	RING, RETAINING	3
35	HW-74030	O-RING, PARKER	3
36	PF-0141	BLOCK, VACUUM CONNECTION	1
37	PF-0142	PIPE, VACUUM CONNECTION	1
38	HW-57170	PIN, SPRING,	1

22B PF-0138-1 LINER 1



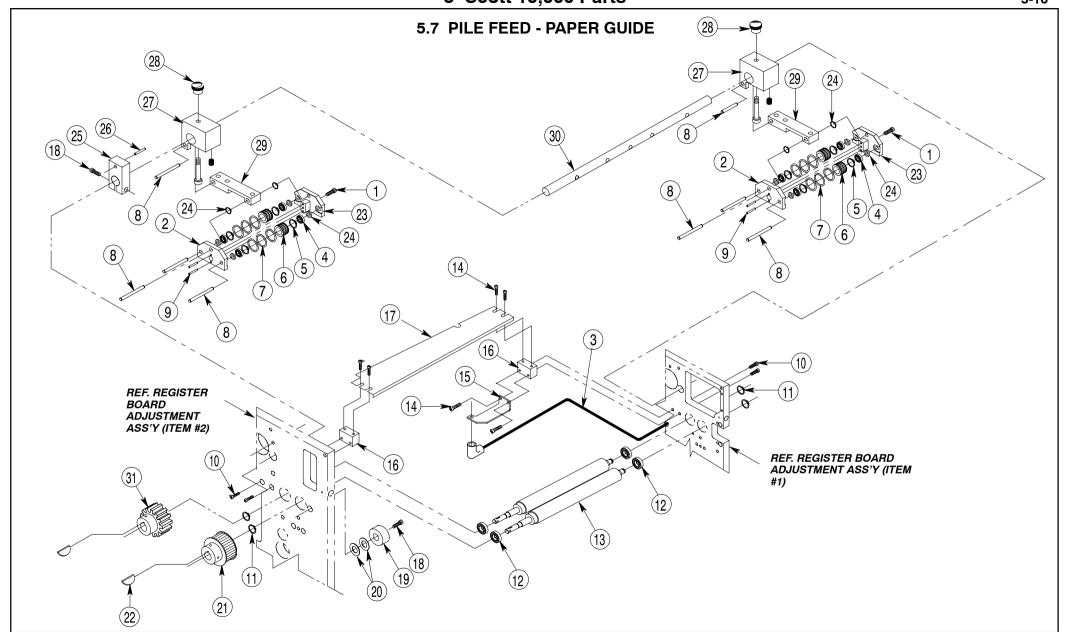




ITEM#	PART #	DESCRIPTION	# REQ
1	PF-0228	CUP, PICKUP NOZZLE	4
2	HW-61040	RING, RETAINING	4
3	PF-0231	VACUUM, NOZZLE	4
4	HW-74020	O-RING	4
5	PF-0135	BAR, VACUUM	1

ITEM#	PART #	DESCRIPTION	# REQ
6	HW-55470	SCREW, THUMB,	8
7	PF-0151	PLUG	4
8	HW-51260	SCREW, SHC,	2
9	PF-0149	PLATE, RETAINING	2
10	PF-0148	FINGER, SPRING	6



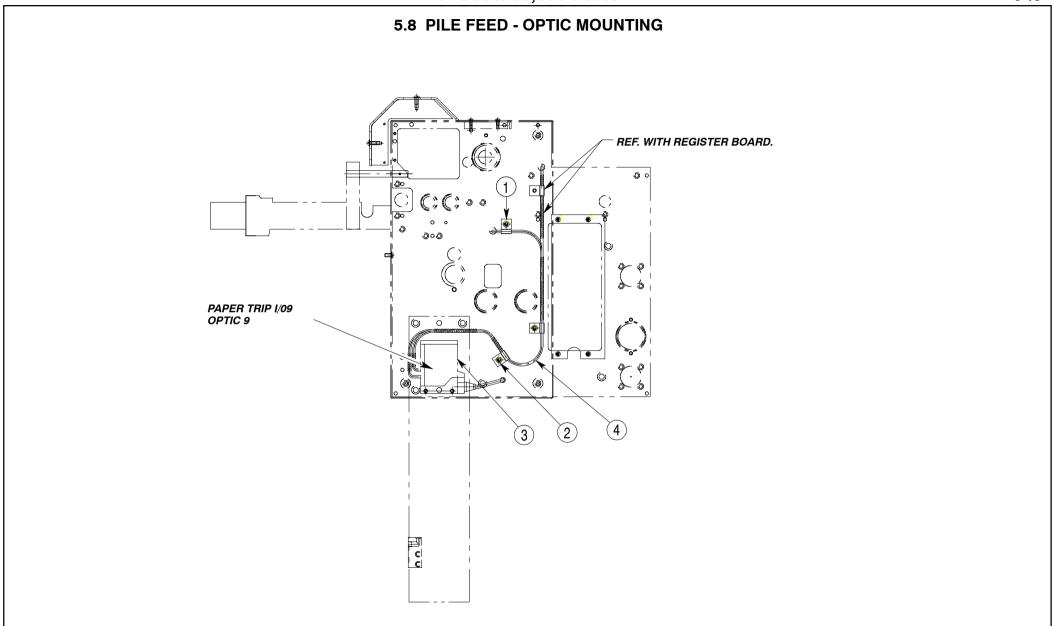




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-51120	SCREW, SHC	2
2	PF-0124	PLATE, HOLD DOWN ROLLER	2
3	HW-97010	FIBER, OPTIC	1
4	HW-66009	BEARING, BALL	8
5	HW-62010	RING, RETAINING	8
6	PF-0123	ROLLER, PAPER HOLD DOWN	4
7	HW-74060	O-RING, PARKER	12
8	HW-56120	DOWEL, PIN	8
9	HW-57050	PIN, SPRING	4
10	HW-51210	SCREW, SHC	4
11	HW-61040	RING, RETAINING	4
12	HW-66020	BEARING, BALL	4
13	PF-0115	ROLLER, MAIN FEED	2
14	HW-51200	SCREW, SHC	6
15	FP-0102	BRACKET, SWITCH	1
16	PF-0232	BLOCK, PAPER SUPPORT PLATE	2
17	PF-0233-2	PLATE, PAPER SUPPORT	1
18	HW-51390	SCREW, SHC	2

ITEM#	PART #	DESCRIPTION	# REQ
19	HW-71050	ROLLER, YOKE	1
20	HW-49050	WASHER, FLAT	2
21	HW-86030	PULLEY, TIMING GEAR	1
22	HW-58010	KEY, WOODRUFF	2
23	PF-0122	PLATE, HOLD DOWN ROLLER	2
24	HW-61200	RING, RETAINING	12
25	PF-0127	BLOCK, SHAFT MTG.	1
26	HW-57200	PIN, SPRING	1
27	PF-0125	BLOCK, MOUNTING	2
	HW-79090	SPRING, COMP	2
28	HW-81000	KNOB,	2
	HW-55040	SCREW, SHOULDER	2
29	PF-0121	LEVER, ROLLER	2
30	PF-0126	SHAFT, PAPER HOLD	1
31	PF-8603-A	PULLEY, TIMING GEAR	1



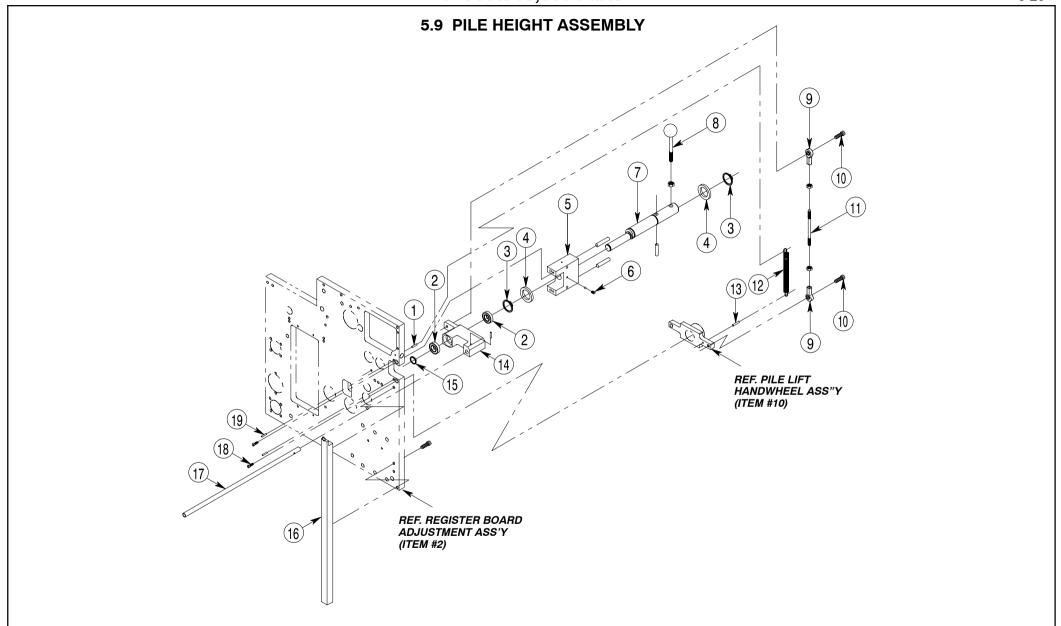




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-95010	CHANNEL, TRAC	4
2	HW-53140	SCREW, BUTTON HD.,	4

ITEM#	PART #	DESCRIPTION	# REQ
3	HW-97017	AMPLIFIER	1
4	HW-97010	FIBER OPTIC	REF.
3B	HW-97018	ADAPTER	1
3C	FP-0107	BRACKET, AMPLIFIER	1
3D	HW-51026	SCREW, SHCS	2
3E	HW-51080	SCREW, SHCS	2



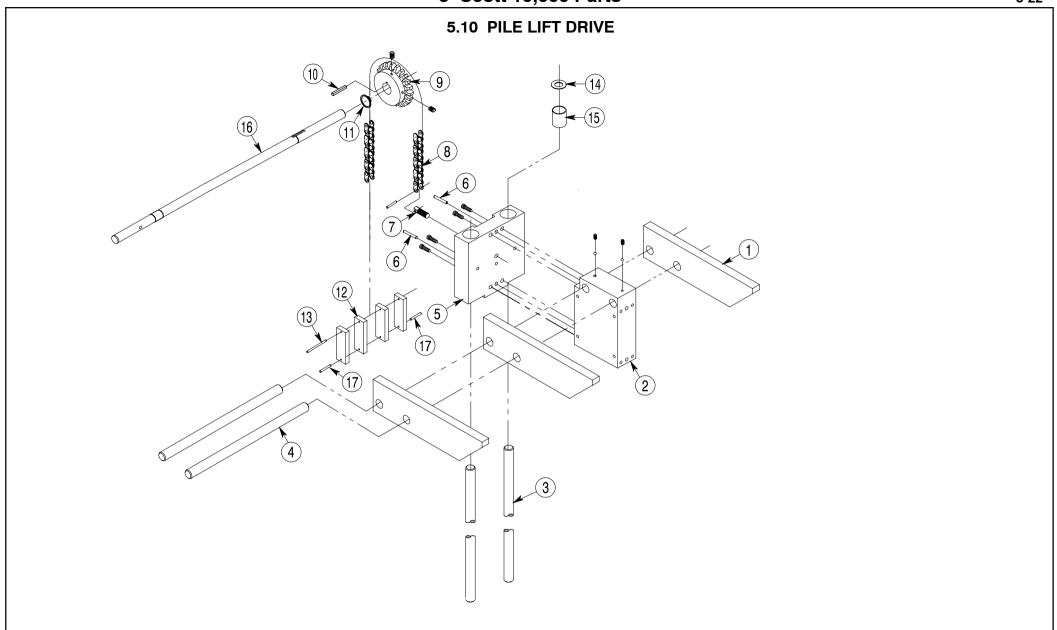




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-57140	PIN, SPRING,	1
2	HW-66020	BEARING, BALL	2
3	HW-61130	RING, RETAINER	2
4	HW-69090	THRUST, RACE	2
5	PF-0169	BLOCK, SHEET CHECK MTG.	1
	HW-57170	PIN, SPRING,	2
6	HW-52080	SCREW, SET,	1
	HW-84020	BALL, NYLON,	1
7	PF-0166	SHAFT, SHEET CHECK PIVOT	1
	HW-57190	PIN, SPRING,	1
8	HW-81060	BALL	1
	HW-60140	NUT, JAM,	1
	HW-52250	SCREW, SET,	1
9	HW-70030	ROD, END FEMALE	2

ITEM#	PART #	DESCRIPTION	# REQ
10	HW-51370	SCREW, SHC.,	2
11	PF-0194	CONNECTING ROD	1
	HW-60070	NUT, HEX,	2
12	HW-80050	SPRING, EXTENSION,	1
13	HW-57110	PIN, SPRING,	1
14	PF-0165	ROCKER, ARM	1
	HW-57030	PIN, SPRING,	1
15	HW-61110	RING, RETAINING	1
16	PF-0168	GUIDE, SIDE RACK	1
	HW-51230	SCREW, SHC.,	2
17	PF-0167	BAR, PILE HEIGHT CHANGE	1
18	HW-51230	SCREW, SHC.,	2
19	HW-57190	PIN, SPRING,	2



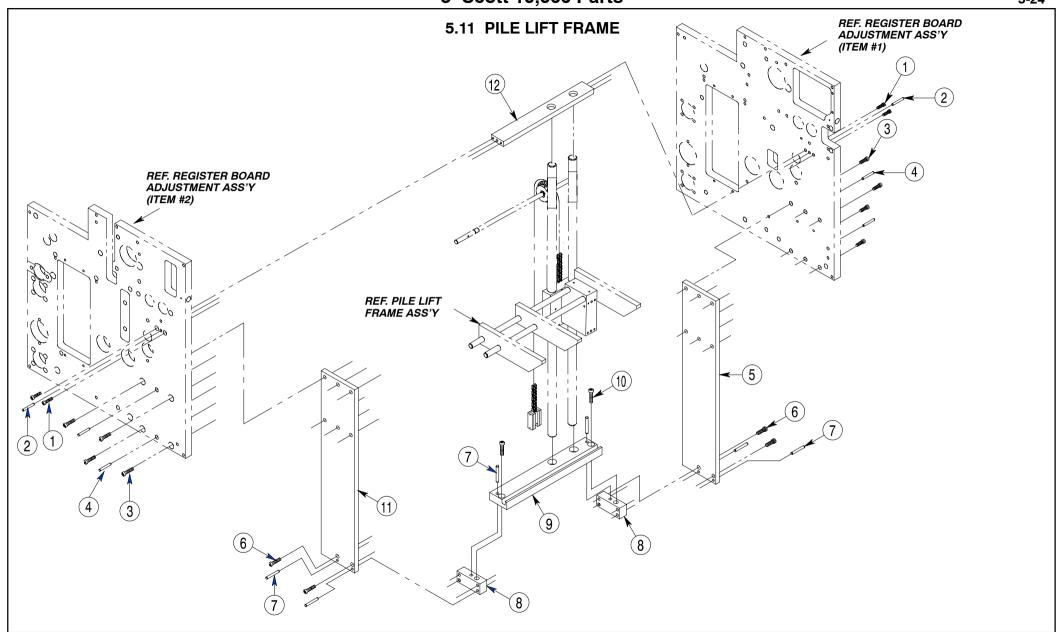




ITEM#	PART #	DESCRIPTION	# REQ
1	PF-0193	SUPPORT, PAPER	3
2	PF-0155	HORN, PAPER LIFT	1
	HW-84020	BALL, NYLON	2
	HW-52090	SCREW, SET	2
3	PF-7802	SHAFT, GUIDE	2
4	PF-0199	BAR, STACK SUPPORT	2
5	PF-0154	SLIDE, PAPER LIFT	1
	HW-51410	SCREW, SHC	4
6	HW-57260	PIN, SPRING	2
7	PF-0236	SCREW, CHAIN	1
8	HW-77010	ROLLER, CHAIN	1
	HW-77030	CONNECTING, LINK	1

ITEM#	PART #	DESCRIPTION	# REQ
9	HW-87060	SPROCKET,	1
10	HW-59030	KEY, SQUARE	1
11	HW-61050	RING, RETAINING	1
12	PF-0230 -1	WEIGHT, CHAIN STACK	, <u>, , , , , , , , , , , , , , , , , , </u>
13	HW-57060	PIN, SPRING	1
14	HW-73020	SEAL,	4
15	HW-65030	BUSHING, BALL	4
16	PF-0105	SHAFT, PILE LIFT	1
		-	



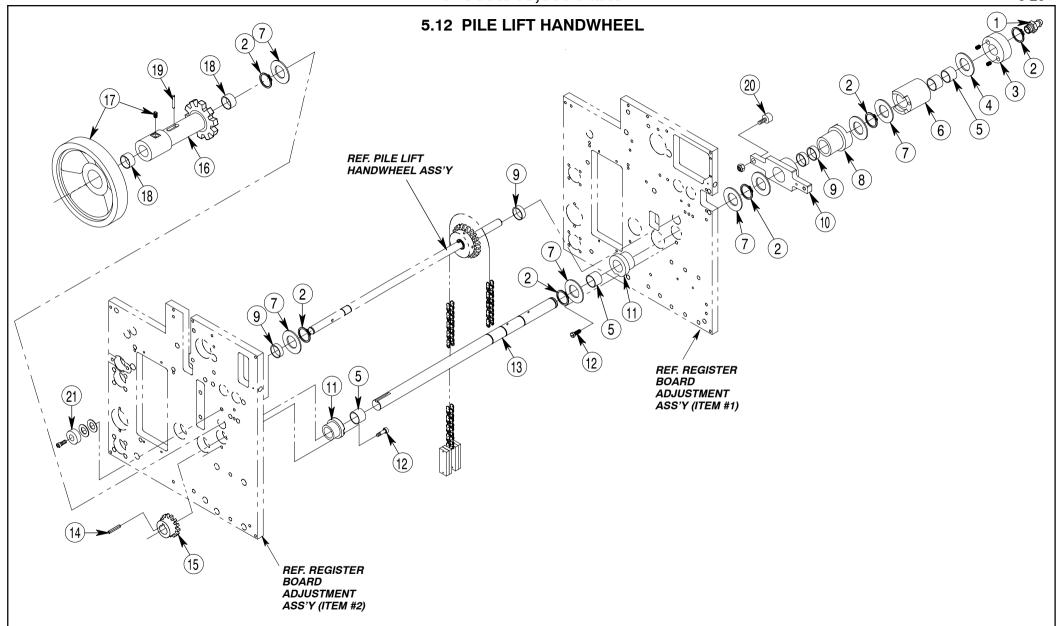




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-51230	SCREW, SHC	4
2	HW-56160	DOWEL, PULL	2
3	HW-51470	SCREW, SHC	8
4	HW-57300	PIN, SPRING	4
5	PF-0190	EXTENSION, STACK RH	1
6	HW-51210	SCREW, SHC	4

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-57190	PIN, SPRING	6
8	PF-0187	BLOCK, BOTTOM RAIL	2
9	PF-0188	RAIL, BOTTOM	1
10	HW-51460	SCREW, SHC	2
11	PF-0186	EXTENSION, STACK LH	1
12	PF-0129	BAR, UPPER SLIDE SUPPORT	1



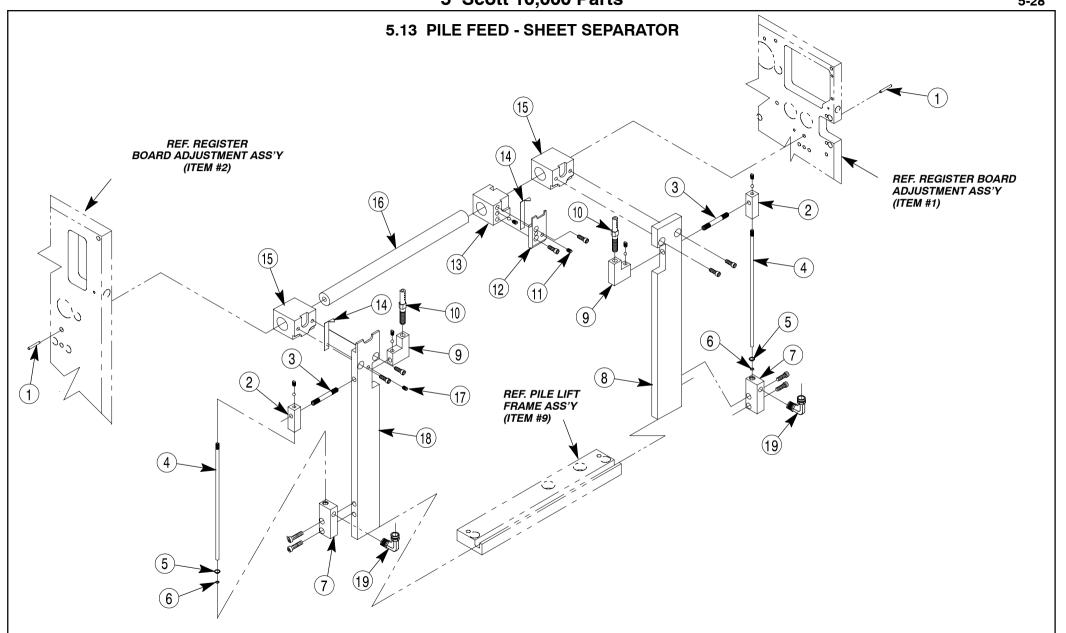




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-63100	FITTING, GREASE,	1
2	HW-61050	RING, RETAINING	6
3	PF-9801-A	COLLAR	1
	HW-79030	SPRING, COMP.	2
4	HW-69110	THRUST, RACE	1
5	HW-72030	ROLLER, CLUTCH	4
6	PF-0103	HOUSING, PILE LIFT	1
7	HW-69080	THRUST, RACE	7
8	PF-0102	HOUSING, ROCKER ARM	1
9	HW-67120	BEARING, NEEDLE	4
10	PF-0106	ROCKER, ARM	1
11	PF-8301	BUSHING	2
12	HW-82040	SCREW, LOCK	2

ITEM#	PART #	DESCRIPTION	# REQ
13	PF-0101	SHAFT, PILE LIFT	1
14	HW-59030	KEY, SQUARE	1
15	HW-88010	GEAR, BROWNING,	1
16	PF-0104	GEAR, PILE LIFT, HANDWHEEL	1
17	PF-8101	HANDWHEEL	1
	HW-52280	SCREW, SET CONEPOINT	1
18	HW-64010	BUSHING, BRONZE	2
19	HW-57200	PIN, SPRING	1
20	HW-71040	CAM, FOLLOWER	1
	HW-60240	NUT, NYLON INSERT	1
21	HW-71060	ROLLER, YOKE	1
	HW-51480	SCREW, SHC	1
	HW-49060	WASHER,	2



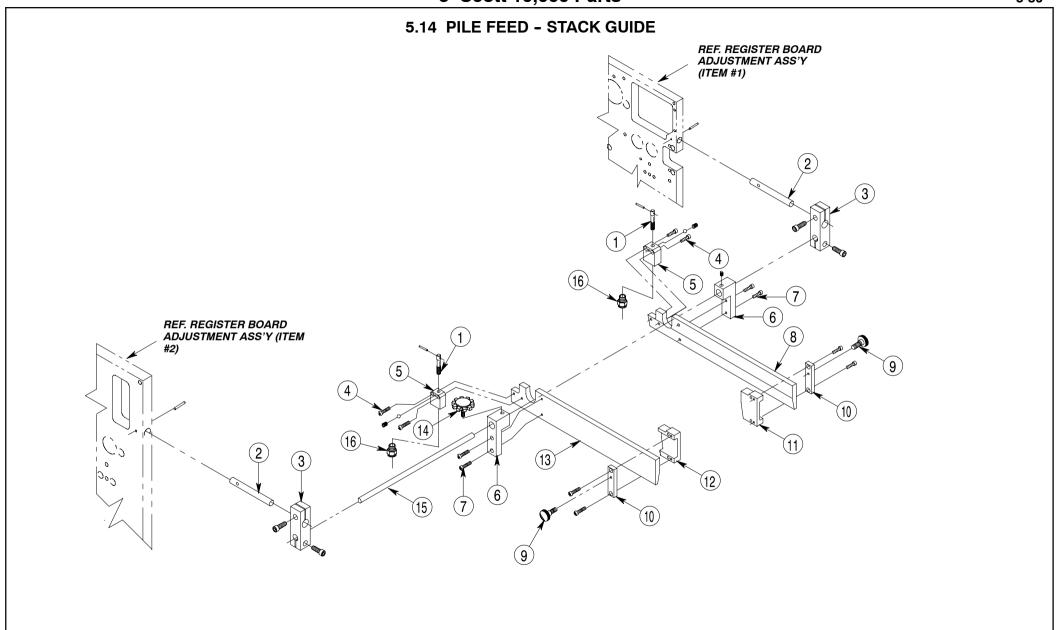




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-56160	DOWEL, PULL	2
2	PF-0200	FITTING, BLOW AIR	2
	HW-52010	SCREW, SET	2
	HW-84010	BALL, NYLON	2
3	PF-0201	TUBE, BLOW AIR	2
4	PF-0204	TUBE, BLOW AIR	2
5	HW-61200	RING, RETAINING	2
6	HW-74010	O-RING, PARKER	2
7	PF-0211	FITTING BLOW AIR	2
	HW-51230	SCREW, SHC	4
8	PF-0131	GUIDE, SHEET STACK RH	1
	HW-51200	SCREW, SHC	2
9	PF-0203	FITTING, BLOW AIR	2
	HW-52010	SCREW, SET	2
	HW-84010	BALL, NYLON	2

ITEM#	PART #	DESCRIPTION	# REQ
10	PF-0202	NOZZLE, FRONT BLOW AIR	2
11	HW-52080	SCREW, SET	1
12	PF-0225	PLATE, HOLDER	1
	HW-51200	SCREW, SHC	2
13	PF-0226	BLOCK, SEPARATOR FINGER	1
	HW-52080	SCREW, SET	1
	HW-84020	BALL, NYLON	1
14	PF-0132-1	FINGER, SHEET SEPARATOR	2
15	PF-0133	BLOCK, STACK GUIDE MTG.	2
16	PF-0128	BAR, LIFT GUIDE MTG.	1
17	HW-52080	SCREW, SET	1
18	PF-0130	GUIDE, SHEET STACK LH	1
	HW-51200	SCREW, SHC	2
19	HW-63360	ELBOW, MALE,	2



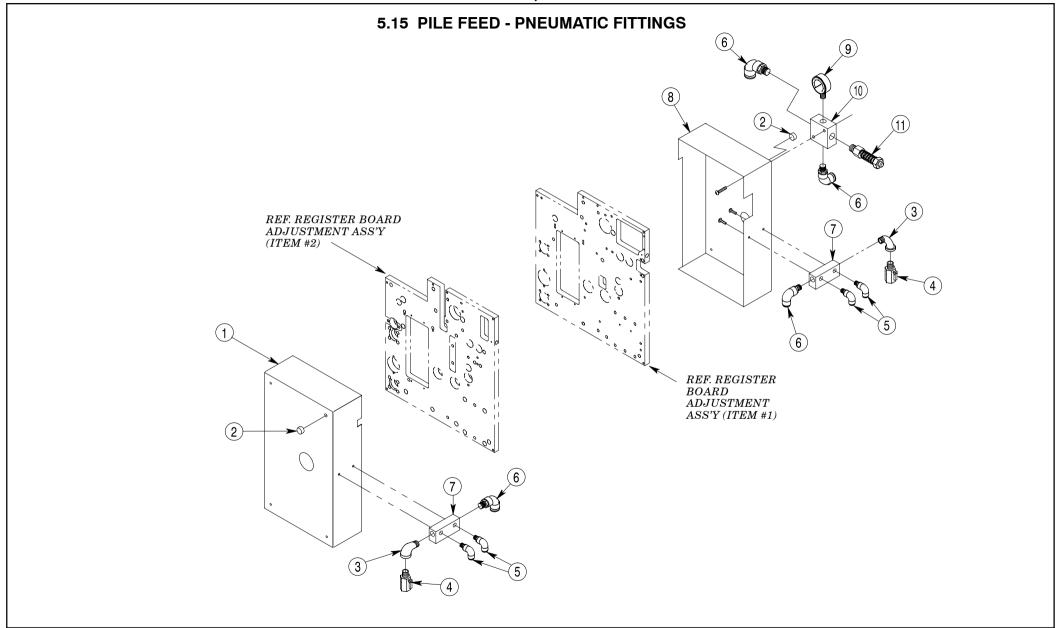




ITEM#	PART#	DESCRIPTION	# REQ
1	PF-0172	NOZZLE, SIDE BLOW	2
	HW-57050	PIN, SPRING,	2
2	PF-0173	BAR, STACK GUIDE MTG.	2
	HW-57030	PIN, SPRING,	2
3	PF-0185	BLOCK, FEED GUIDE	2
	HW-51210	SCREW, SHC,	4
4	HW-51100	SCREW, SHC,	4
5	PF-0174	BLOCK, NOZZLE MTG.	2
	HW-84020	BALL, NYLON,	2
	HW-52080	SCREW, SET,	2
6	PF-0175	BLOCK, CLAMP	2
	HW-52220	SCREW, SET,	1
7	HW-51100	SCREW, SHC,	4

ITEM#	PART #	DESCRIPTION	# REQ
8	PF-0180	GUIDE, STACK RH	1
9	HW-81020	KNOB,	2
10	PF-0176	BAR, STACK GUIDE	2
	HW-51210	SCREW, SHC,	4
11	PF-0179	GUIDE, STACK RH	1
12	PF-0178	GUIDE, STACK LH	1
13	PF-0181	GUIDE, STACK LH	1
14	HW-81030	KNOB,	1
15	PF-0177	BAR, PAPER GUIDE, SUPPORT	1
16	HW-63050	CONNECTOR, MALE,	2



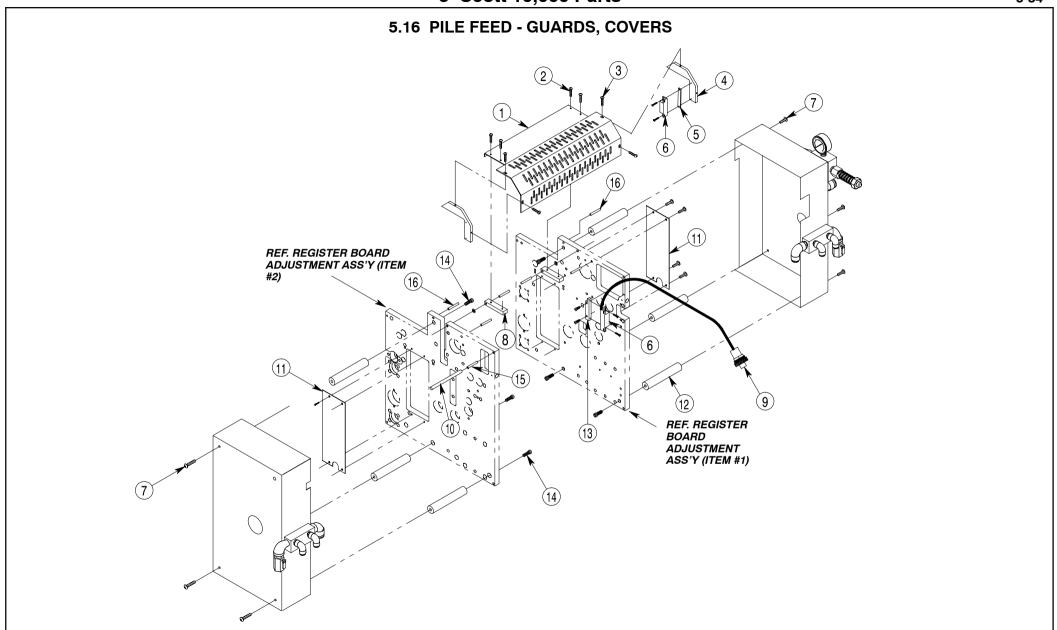




ITEM#	PART #	DESCRIPTION	# REQ
11	PF-0220-1	COVER, FEEDER L.H.	11
3	HW-63260	ELBOW, STREET,	2
4	HW-47045	VALVE, BALL,	2
5	HW-63370	ELBOW, MALE,	4
6	HW-63310	CONNECTOR, MALE,	4
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ITEM#	PART #	DESCRIPTION	# REQ
7	PF-0222	MANIFOLD, BLOW AIR	2
	HW-53140	SCREW, BUTTON HD.,	4
8	PF-0221-1	COVER, FEEDER R.H.	1
9	HW-47080	GAGE, VACUUM,	1
10	PF-0214	MANIFOLD, VACUUM	1
	HW-53140	SCREW, BUTTON HD.,	2
11	HW-47090	VALVE, RELIEF	1
12	HW-RP-08035	PLATE PAPER LIFT	1



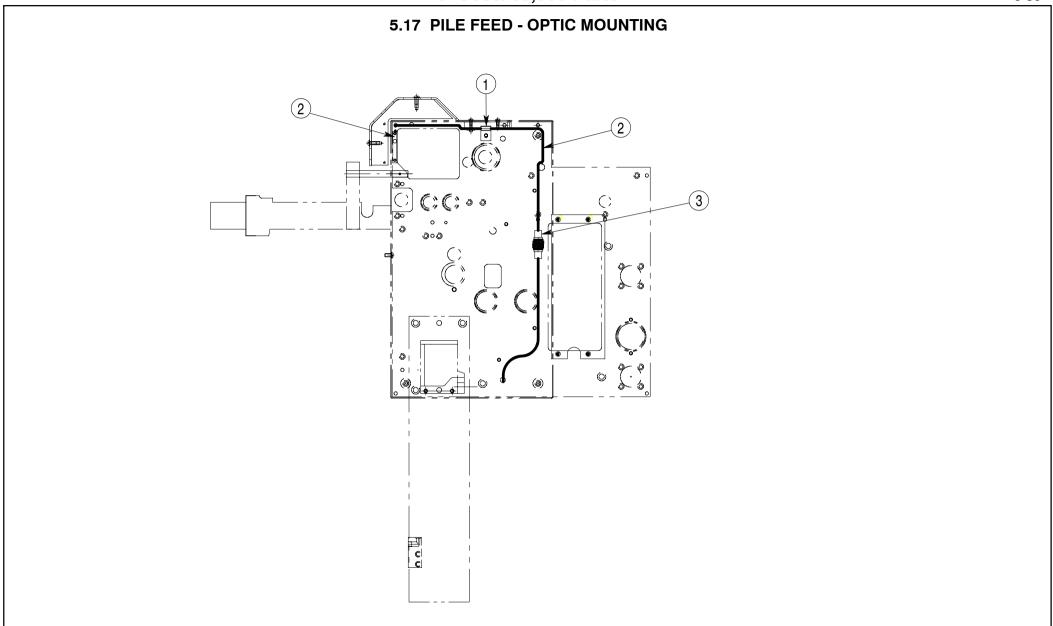




ITEM#	PART#	DESCRIPTION	# REQ
1	PF-0218-1	TOP GUARD	1
2	HW-53060	SCREW, BUTTON HD.,	4
3	HW-53150	SCREW, BUTTON HD,	4
4	PF-0240	SIDE SHIELD	2
5	PF-0238	PLATE SPACER	1
6	HW-97050-SA	SENSOR & ACTUATOR,	1
	HW-95190	CONNECTER	1
	HW-53030	SCREW, BUTTON HD.,	4
7	HW-53140	SCREW, BUTTON HD.,	6
8	PF-0219	BLOCK,GUARD MTG.	2
	HW-49090	WASHER, FLAT, HARDENED	2
	HW-56120	DOWEL PIN,	2

ITEM#	PART #	DESCRIPTION	# REQ
9	HW-97054	RECEPTACLE, MALE	1
10	PF-0241	POST, GUARD HOLD	1
11	PF-0235	COVER	1
	HW-53060	SCREW, BUTTON HD.,	4
12	PF-0215	POST, SIDE GUARD MTG.	6
13	PF-0237	BLOCK, SENSOR	1
	HW-51100	SCREW, SHC,	2
14	HW-51210	SCREW, SHC,	6
15	HW-57190	PIN, SPRING,	1
16	HW-57190	PIN SPRING,	4





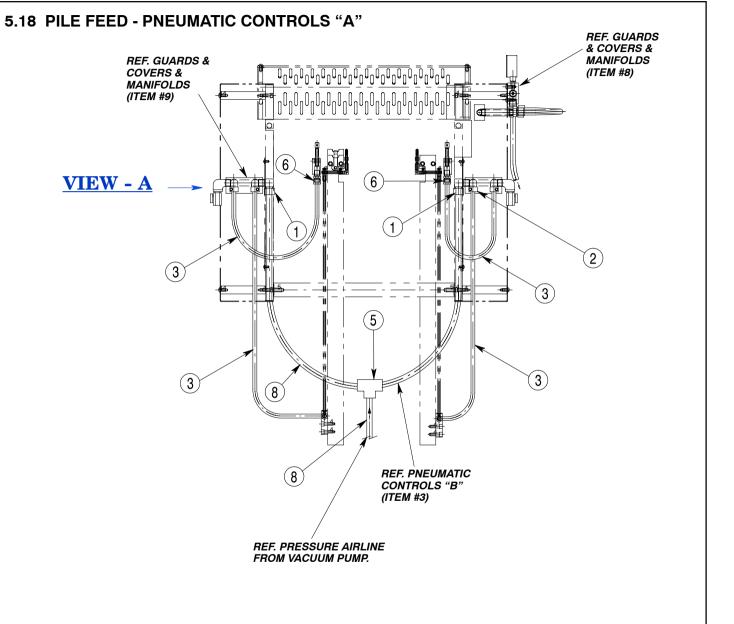


ITEM#	PART #	DESCRIPTION		# REQ
1	HW-95088	CHANNEL, TRAC		2
	HW-53140	SCREW, BUTTON HD.,	•	1
2	HW-97050-SA	SENSOR & ACTUATOR		 1

ITEM#	PART#	DESCRIPTION	# REQ
3	HW-97054	RECEPTACLE, MALE	1



REF. GUARDS & COVERS & **MANIFOLDS** (ITEM #9) (4) VIEW - A

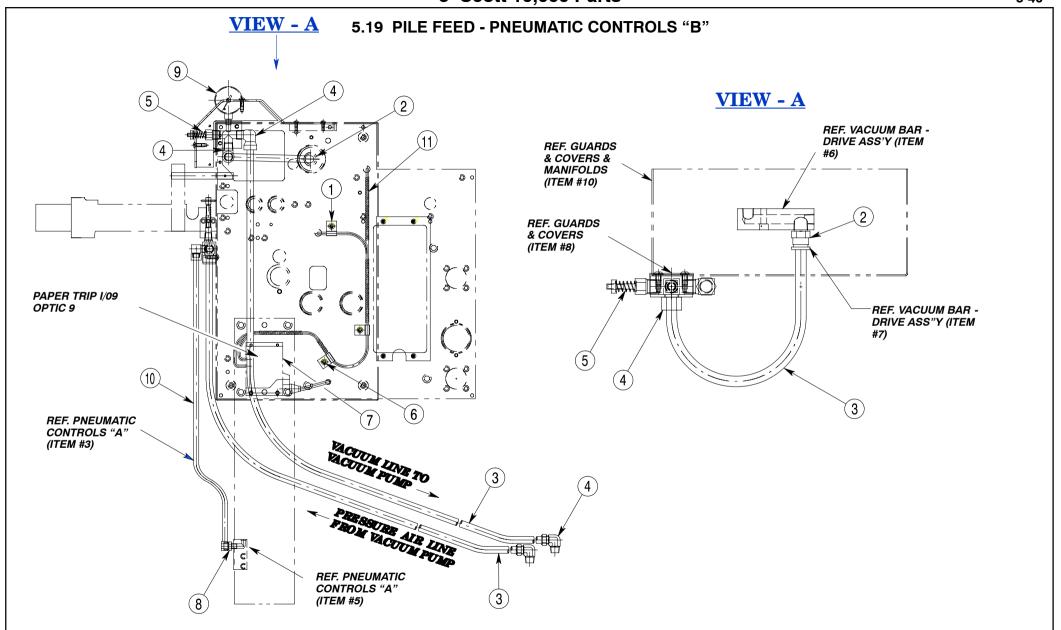




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-63310	ELBOW, MALE,	2
2	HW-63370	ELBOW, MALE,	4
3	HW-63150	TUBING,	10 FT.
4	HW-63260	ELBOW, STREET,	2

ITEM#	PART #	DESCRIPTION	# REQ
5	HW-63350	TEE, UNION,	1
6	HW-63050	CONNECTOR, MALE,	2
7	HW-47045	VALVE, BALL,	2
8	HW-63210	TUBING,	REF.



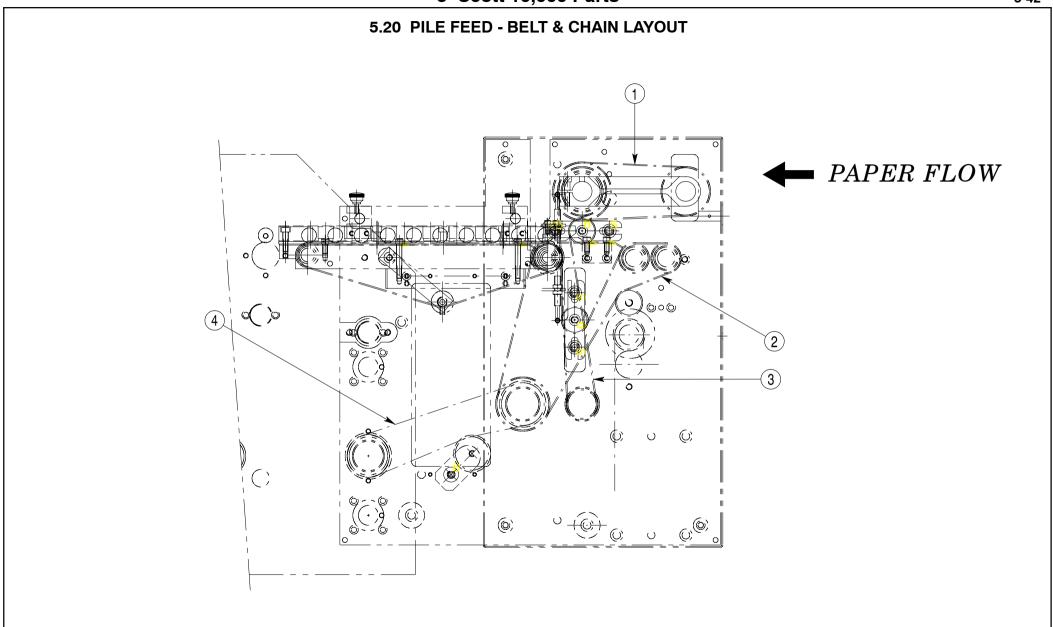




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-95010	CHANNEL, TRAC	REF
2	HW-63300	CONNECTOR, MALE,	REF
3	HW-63155	TUBING,	16 FT.
4	HW-63310	ELBOW, MALE,	REF
5	HW-47090	VALVE, RELIEF	REF
6	HW-53140	SCREW, BUTTON HD.,	REF

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-97017	AMPLIFIER	REF
8	HW-63360	ELBOW, MALE,	2
9	HW-47080	GAGE, VACUUM	REF
10	HW-63150	TUBING,	REF.
11	HW-97010	FIBER OPTIC	2



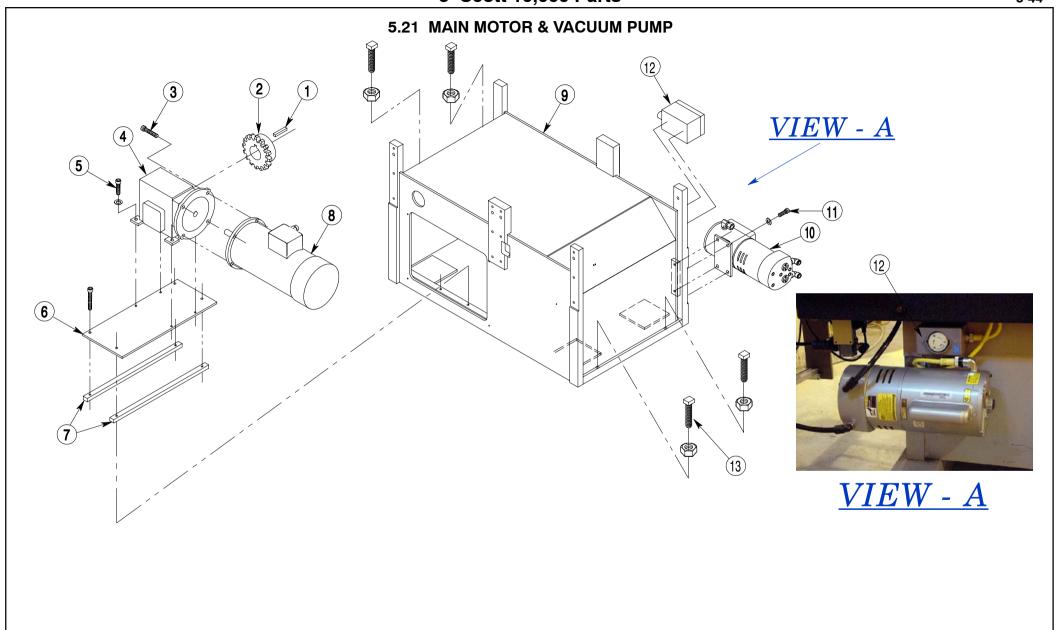




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-76010	GEARBELT,	1
2	HW-76050	GEARBELT,	1

ITEM#	PART #	DESCRIPTION		# REQ
3	HW-76030	GEARBELT,		1
4	C-7704-FO	ROLLER, CHAIN,	-	1
	HW-77020	CONNECTOR, LINK,		1



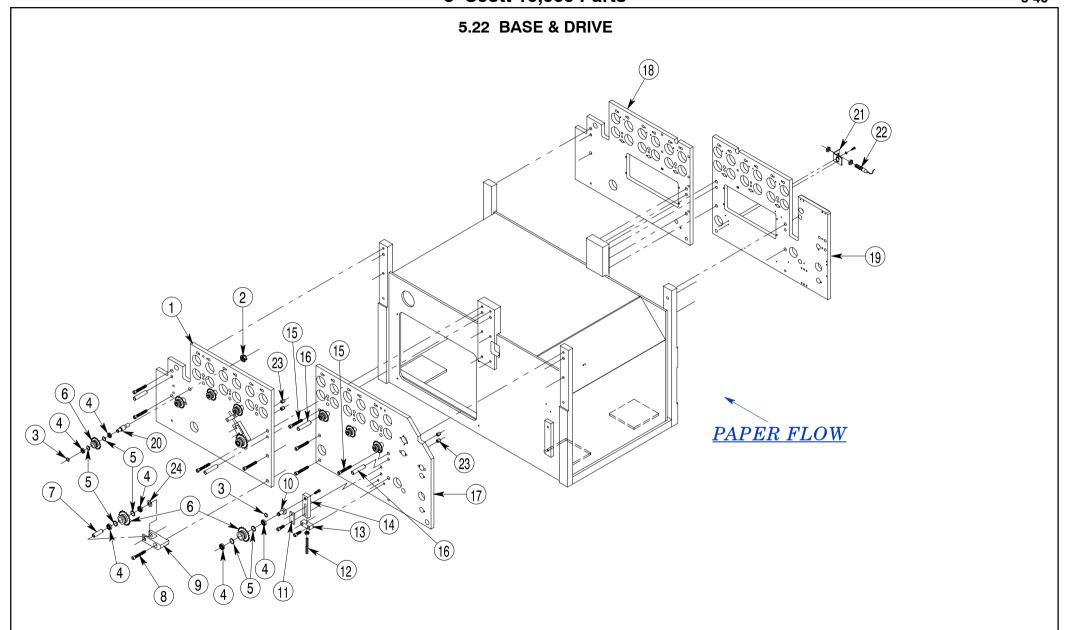




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-59070	KEY, SQUARE,	1
2	HW-87130	SPROCKET,	1
3	HW-51470	SCREW, SOC. HD. CAP,	4
4	C-1113	REDUCER, RIGHT ANGLE W/ KEY	1
5	HW-51490	SCREW, SOC. HD. CAP,	4
	HW-49060	WASHER, FLAT,	4
6	C-1104	PLATE, MOTOR DRIVE MTG.	1
	HW-51522	SCREW, SOC. HD. CAP,	4
7	C-1105	TIE, DOWN STRAP	2
8	C-1111	DC MOTOR, 2HP	1
	HW-95180	CONNECTOR, BUTT	2
	HW-95215	CONNECTOR, RING EYE	1
	HW-95093	RECEPTACLE (PART OF MOTOR)	1
9	C-1101	MACHINE BASE	1

ITEM#	PART #	DESCRIPTION	# REQ
10	C-4701-1	PUMP, VACUUM GAST	1
	HW-95094	RECEPTACLE, 3 PIN MALE	1
	HW-63310	ELBOW,	2
	HW-95215	CONNECTOR, RING EYE	1
	HW-95216	CONNECTOR, SLIP ON	2
11	HW-55370	SCREW, HEX HD.,	4
	HW-49050	WASHER, FLAT,	4
12	HW-95074	RECEPTACLE BOX	1
	HW-51200	SCREW, SOC HD. CAP,	2
	HW-95073	VACUUM, RECEPTACLE	1
	HW-95092	RECEPTACLE, 3 PIN MALE	1
13	HW-55450	SCREW, SQ. HD.,	4
	HW-60155	NUT, HEX JAM,	4





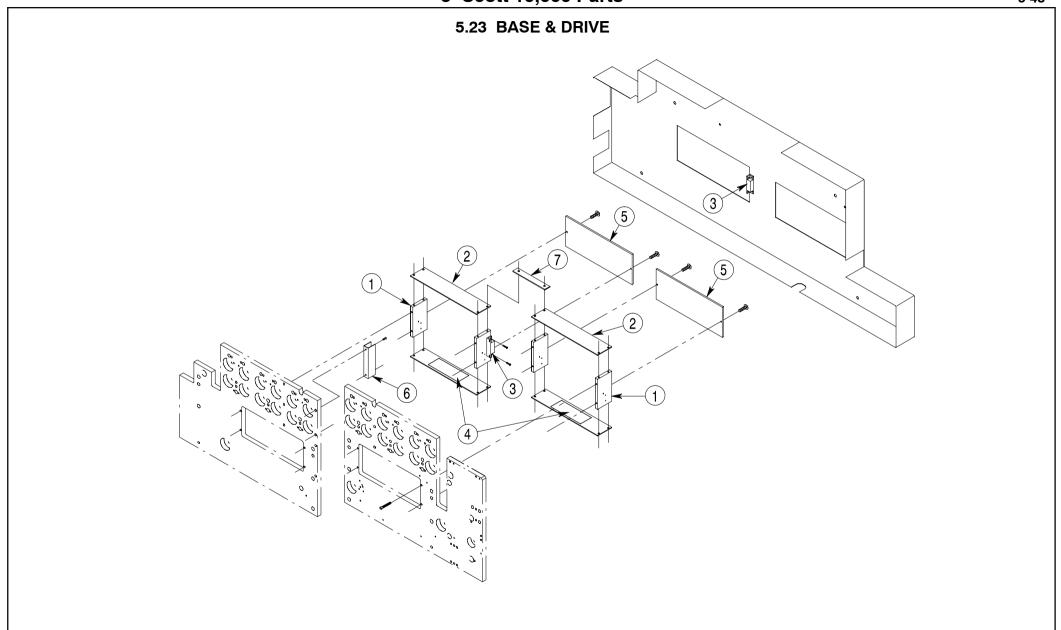


ITEM#	PART#	DESCRIPTION	# REQ
1	C-0901	PLATE, MAIN MACHINE, L.H. REAR	1
2	HW-60270	NUT, W/ NYLON INSERT,	7
3	HW-61110	RING, RETAINING,	9
4	HW-66020	BEARING, BALL,	20
5	HW-62030	RING, RETAINING	20
6	C-8706	SPROCKET, IDLER	10
7	HW-56270	PIN, DOWEL,	1
8	HW-51522	SCREW, SOC. HD. CAP,	1
9	C-0911	ARM, CHAIN TAKE-UP	1
	HW-52020	SCREW, SET,	1
10	C-0908	PIN, TAKE-UP	2
	HW-51380	SCREW, SOC. HD. CAP,	2
11	C-0909	RETAINER	2
	HW-51410	SCREW, SOC. HD. CAP,	4
12	HW-52250	SCREW, SET,	2
	HW-60140	NUT, JAM,	2

ITEM#	PART #	DESCRIPTION	# REQ
13	C-0906	BLOCK, ADJUSTMENT	2
	HW-51490	SCREW, SOC. HD. CAP,	4
14	C-0910	BLOCK, CHAIN	2
15	HW-51470	SCREW, SOC. HD. CAP,	19
16	HW-56270	PIN, DOWEL,	8
17	C-0902	PLATE, MAIN MACHINE, L.H. FRONT	1
18	C-1002	PLATE, MAIN MACHINE, R.H. REAR	1
19	C-1001	PLATE, MAIN MACHINE, R.H. FRONT	1
20	C-0907	PIN, IDLER	7
21	HW-97080	BRACKET, SENSOR	1
	HW-53070	SCREW, BUTTON HD.,	2
	HW-49030	WASHER, FLAT,	2
22	HW-97099	SENSOR, PROX.	1
23	HW-85070	NUT, ALLEN,	4
24	HW-69060	THRUST RACE	1

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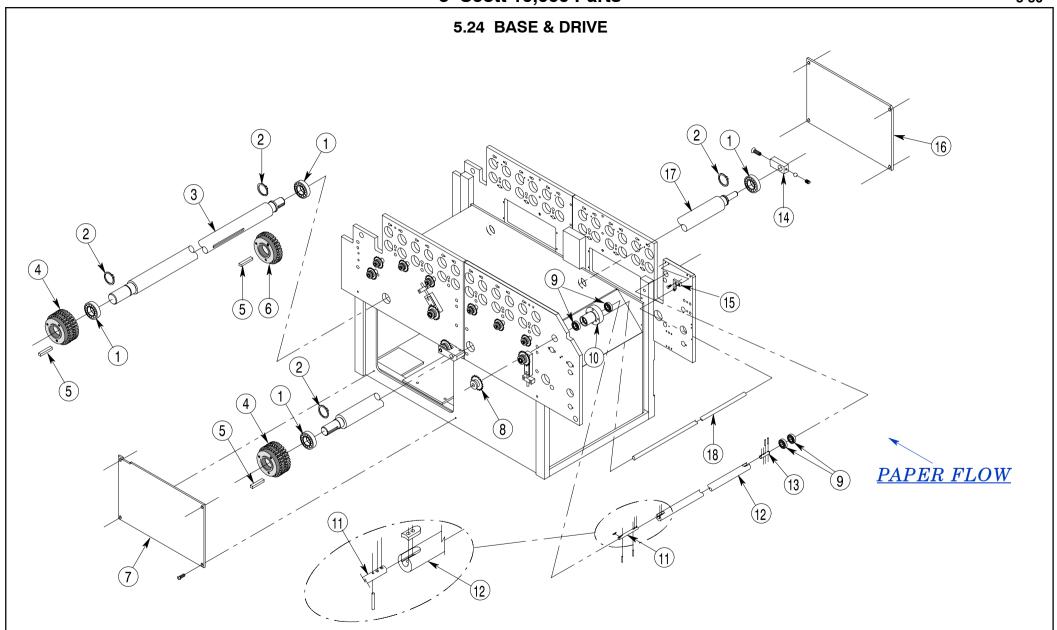


ITEM#	PART#	DESCRIPTION	# REQ
1	C-1005	BLOCK, SIDE	4
	HW-51240	SCREW, SOC. HD. CAP,	8
2	C-1006	PLATE, ACCESS OPENING	4
	HW-53150	SCREW, BUTTON HD.,	16
3	HW-97050	SENSOR & ACTUATOR	1
	HW-53030	SCREW, BUTTON HD.,	4
	HW-97054	RECEPTACLE, MALE, FIELD ATTACHABLE	1
	HW-49010	WASHER, FLAT, SAE	2
	HW-60010	NUT, HEX,	2

ITEM#	PART #	DESCRIPTION	# REQ
4	C-1112	LABEL, CAUTION, HOT ROLLER	2
5	C-1013	COVER, CLEAR LEXAN	2
	HW-53150	SCREW, BUTTON HD.,	4
6	C-1011	RUNWAY, WIRE	2
	HW-54090	SCREW, FLAT HD.,	4
7	C-1536	PLATE, COVER SUPPORT	1

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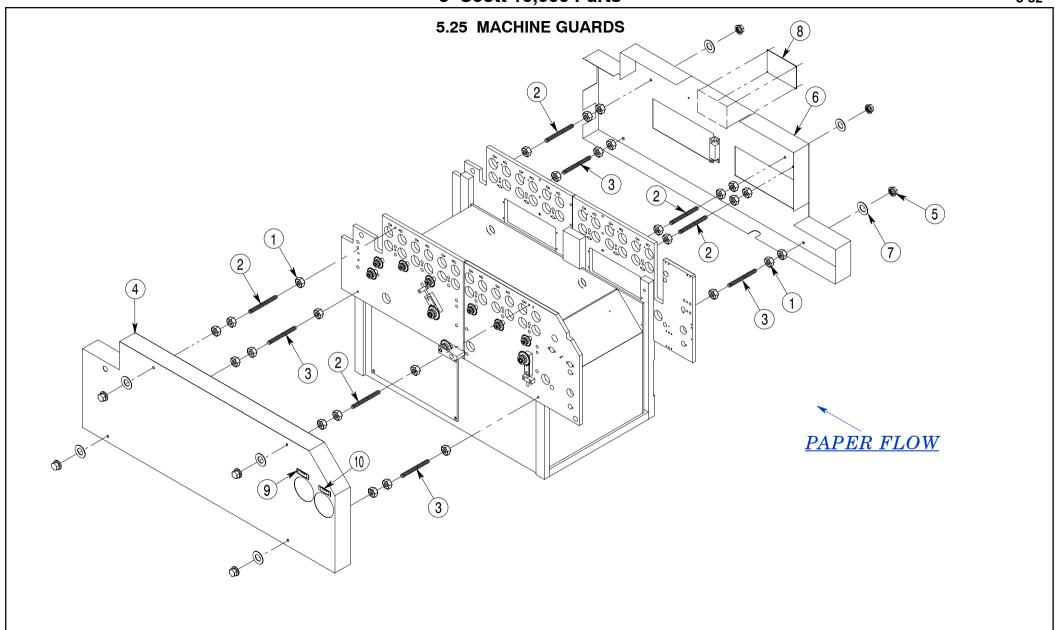


ITEM#	PART#	DESCRIPTION	# REQ
1	HW-66050	BEARING, BALL,	4
2	HW-61160	RING, RETAINING,	4
3	C-1102	SHAFT, DRIVE PLAIN	1
4	C-8717-1	SPROCKET, DOUBLE	2
5	HW-59070	KEY, SQUARE,	3
6	HW-87120	SPROCKET, DRIVE SHAFT	1
7	C-1106 -2	COVER, FRONT MOTOR	1
	HW-53180	SCREW, BUTTON HD.,	4
8	C-8702	SPROCKET, CROSS SHAFT	1
	HW-52080	SCREW, SET,	2
9	HW-66020	BEARING, BALL	4
10	C-0210-1	BEARING, HOUSING, CROSS SHAFT	1
	HW-51230	SCREW, SOC. HD. CAP,	4
11	F-1125	ROD, DRIVE, CROSS SHAFT	1
	HW-57030	PIN, SPRING,	2
	HW-58010	KEY, WOODRUFF,	1

ITEM#	PART #	DESCRIPTION	# REQ
12	F-1107	SHAFT, CROSS, REMOVABLE	1
	F-1121	PLATE, NUT	2
	HW-53160	SCREW, BUTTON HD.,	4
13	F-1124	ROD, CROSS SHAFT	1
	HW-57030	PIN, SPRING,	2
14	C-1008-1	CAM, MACHINE CYCLE	1
	HW-52010	SCREW, SET,	1
	HW-84010	BALL, NYLON,	1
	HW-54100	SCREW, FLAT HD.,	1
15	F-1126	BLOCK, MOUNTING	1
	HW-53140	SCREW, BUTTON HD.,	2
16	C-1103	COVER, REAR MOTOR	1
	HW-53180	SCREW, BUTTON HD.,	4
17	C-1108	SHAFT, SWITCH ACTIVATING	1
18	F-1127	ROD, GUARD	1
19	HW-6410	BUSHING	1

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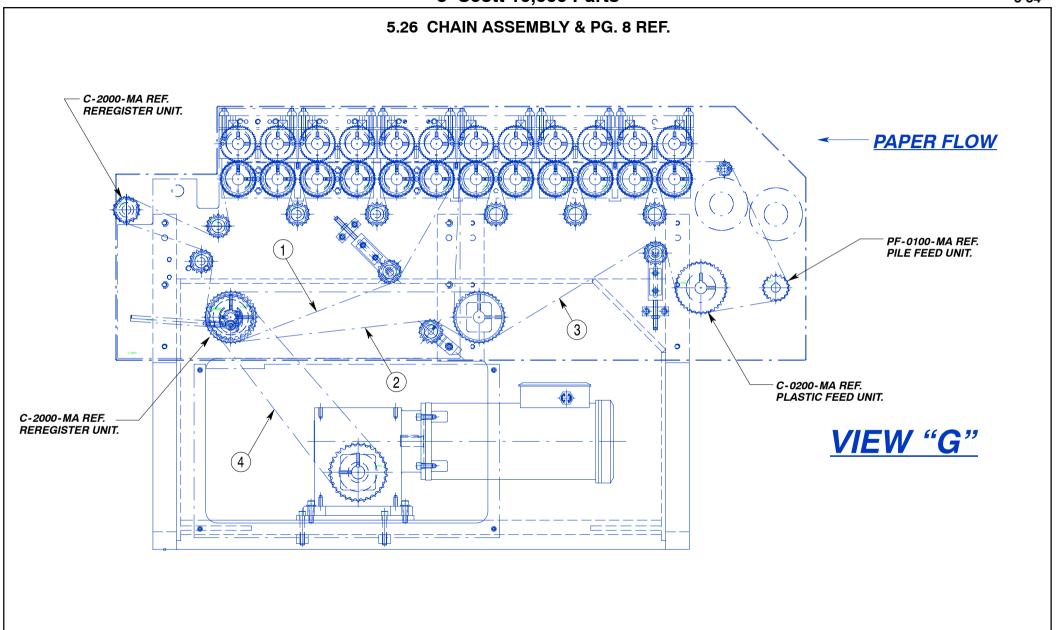




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-60140	NUT, HEX,	27
2	C-0904	STUD, GUARD MTG.	2
3	C-0905	STUD, GUARD MTG.	6
4	C-0903	MACHINE, GUARD, L.H.	1
5	HW-60340	NUT, HIGH CROWN HEX,	9
6	C-1004	MACHINE, GUARD, R.H.	1

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-49240	WASHER, FLAT NYLON,	9
8	F-1226	LEGEND PLATE, REEL HOLDER	1
	HW-55353	SCREW, DRIVE,	4
9	F-1228-1	LEGEND PLATE, PLASTIC SIZE	1
	HW-55353	SCREW, DRIVE,	2
10	F-1227-1	LEGEND PLATE, PLASTIC POSITION	1
	HW-55353	SCREW, DRIVE,	2



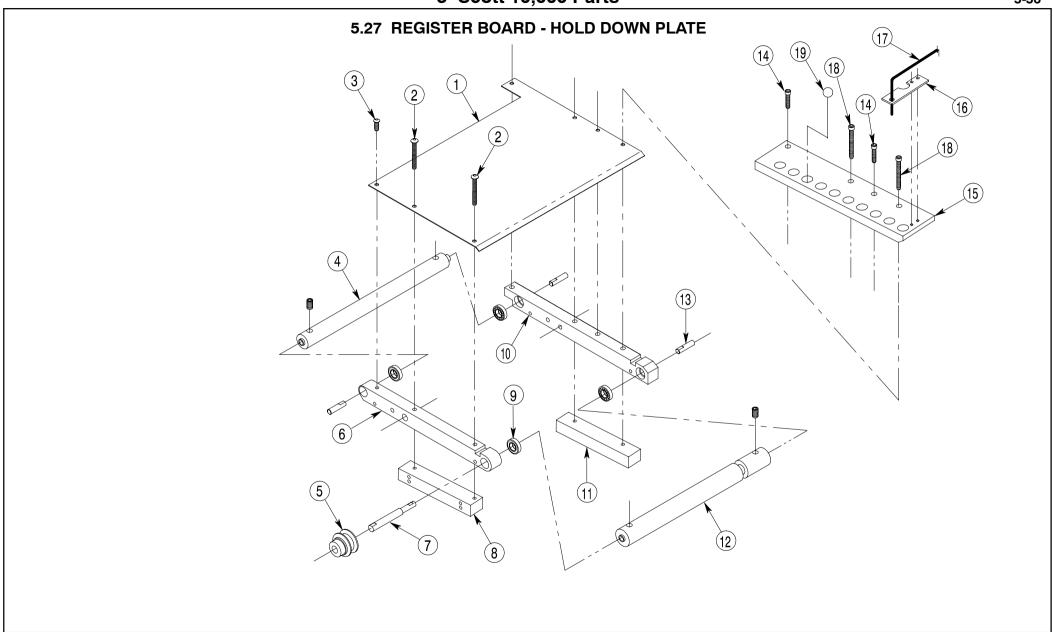




ITEM#	PART #	DESCRIPTION	# REQ
1	C-7704-RL	ROLLER, CHAIN,	1
	HW-77020	LINK, CONNECTING,	1
2	C-7704-MD	ROLLER, CHAIN,	1
	HW-77020	LINK, CONNECTING,	1

ITEM#	PART #	DESCRIPTION	# REQ
3	C-7704-F	ROLLER, CHAIN,	1
	HW-77020	LINK, CONNECTING,	1
4	HW-77040	ROLLER, CHAIN,	1
	HW-77050	LINK, CONNECTING,	1
5	HW-77030	LINK	1



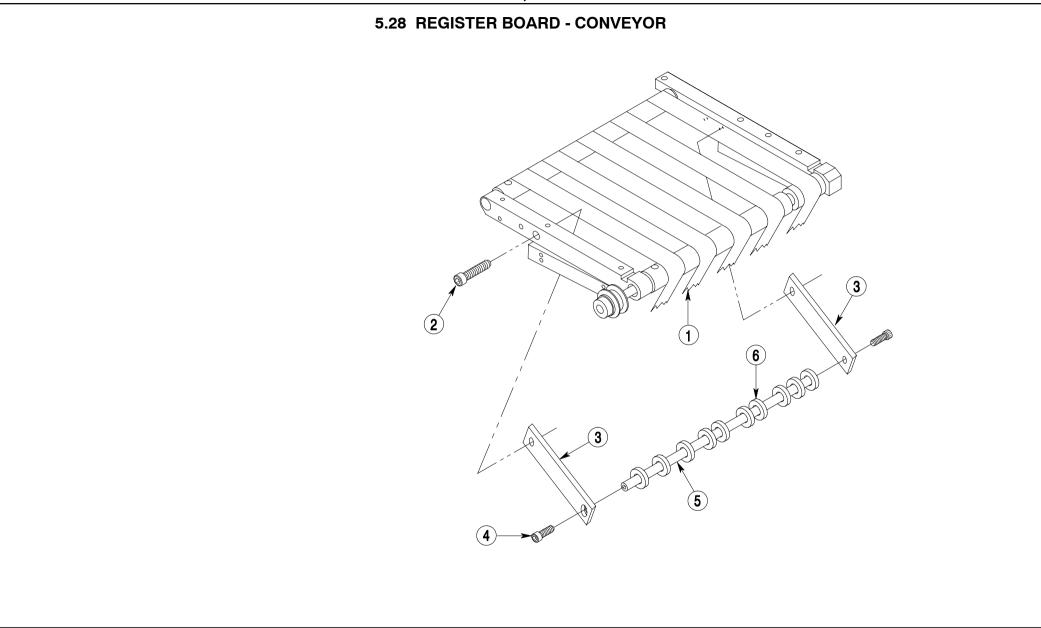




ITEM#	PART#	DESCRIPTION	# REQ
1	RB-0102	COVER, FEED BOARD	1
2	HW-53166	SCREW, SOC. HD. CAP,	2
3	HW-53150	SCREW, BUTTON HD.,	1
4	RB-0109	ROLLER, BELT BACK	1
	HW-52080	SCREW. CUP POINT SOC. SET,	2
5	HW-86030	PULLEY	1
6	RB-0103-0	BAR, L.H. SIDE FRAME	1
7	RB-0110	SHAFT, PULLEY	1
8	RB-0101	BAR, L.H. MOUNTING	1
	HW-51230	SCREW, SOC. HD. CAP	2
	HW-57190	SPRING, PIN	2
9	HW-66010	BALL BEARING	4
10	RB-0106-2	BAR, R.H. SIDE FRAME	1

ITEM#	PART #	DESCRIPTION	# REQ
11	RB-0107	BAR, R.H. MOUNTING	1
	HW-51230	SCREW, SOC. HD. CAP	2
	HW-57190	SPRING, PIN	2
12	RB-0111	ROLLER, BELT FRONT	1
	HW-52080	SCREW, CUP POINT SOC. SET,	2
13	RB-0108	SHAFT ROLLER	3
14	HW-51230	SCREW, SOC. HD. CAP, STEEL BLACK OXIDE	2
15	RB-0117-0	PLATE, HOLD DOWN	1
16	FB-0103	PLATE, PHOTO SWITCH	1
	HW-51070	SCREW, SOC. HD. CAP, STEEL BLACK OXIDE	2
17	HW-97010	FIBER OPTICS	1
18	HW-51280	SCREW, SOC. HD. CAP, STEEL BLACK OXIDE	2
19	HW-84080	BALL, STEEL,	10



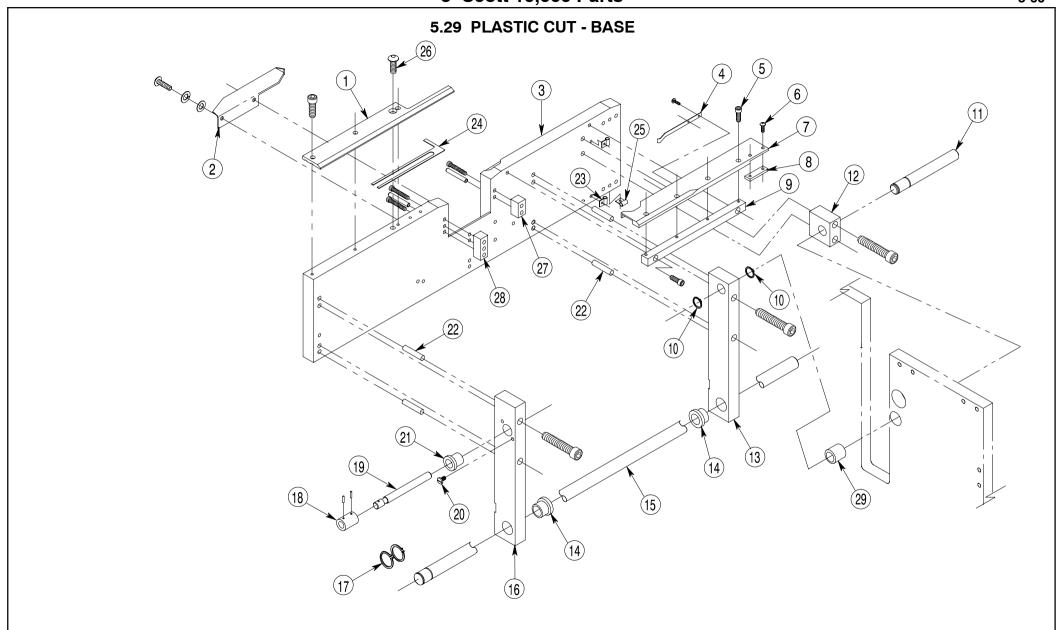




ITEM#	PART #	DESCRIPTION	# REQ
1	RB-9902	BELT,	5
2	HW-51380	SCREW, SOC. HD. CAP, STEEL BLACK OXIDE	2
3	RB-0112	ARM, BELT TENSION	2
4	HW-51200	SCREW, SOC. HD. CAP, STEEL BLACK OXIDE	2

ITEM#	PART #	DESCRIPTION	# REQ
5	RB-0113	BAR, BELT TAKE-UP	1
6	HW-98030	COLLAR, 1-PIECE,	10
	HW-84010	BALL, NYLON,	10
	HW-52130	SCREW, CUP POINT SET,	10



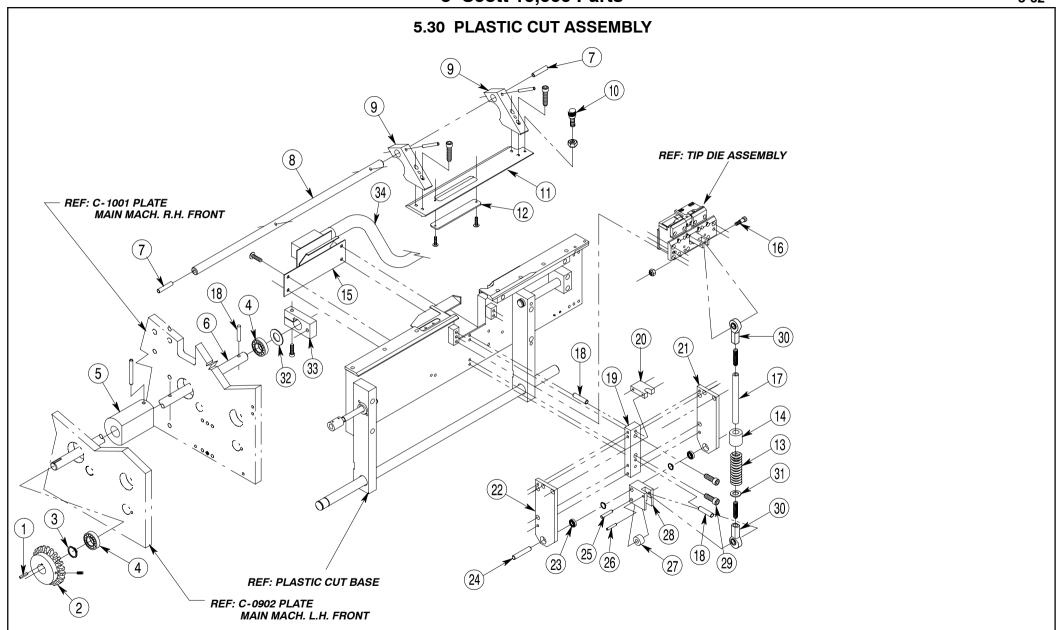




ITEM#	PART#	DESCRIPTION	# REQ
1	C-0244	PLATE, GUIDE	1
	HW-51080	SCREW, SOC. HD. CAP,	3
2	C-0239	GUIDE, LOWER TIP	1
	HW-53060	SCREW, BUTTON HD.,	2
	HW-49220	WASHER, LOCK	2
	HW-49030	WASHER, FLAT	2
3	C-0243	PLATE, PLASTIC FEED & CUT	1
4	C-0211	SIDE GUIDE (FOR 1-5/8 MYLAR)	1
	C-0246	SIDE GUIDE (FOR 1" MYLAR)	1
	HW-53015	SCREW, BUTTON HD.,	2
5	HW-51080	SCREW, SOC. HD. CAP,	4
6	HW-53060	SCREW, BUTTON HD.,	2
7	C-0242	PLATE, PLASTIC RETAINER	1
8	C-0132	PLATE, TAPPING	1
9	C-0227	ADAPTER, PLASTIC RETAINER	1
	HW-51210	SCREW, SOC. HD. CAP,	2
10	HW-61130	RING, RETAINING	2
11	C-0229	SHAFT, RETAINER	1
12	C-0228	RETAINER, SHAFT	1
	HW-51430	SCREW, SOC. HD. CAP,	2
13	C-0224	GUIDE, BAR BRACKET, R.H.	1
	HW-51430	SCREW, SOC. HD. CAP,	2
14	HW-64070	BUSHING, BRONZE	2

ITEM#	PART#	DESCRIPTION	# REQ
15	C-0219	SHAFT, BAR	1
16	C-0218	GUIDE, BAR BRACKET, L.H.	1
	HW-51430	SCREW, SOC. HD. CAP,	2
17	HW-61150	RING, RETAINING	2
18	C-0232	COUPLING	1
	HW-57030	PIN, SPRING,	2
19	C-0216	ACME SCREW, ADJ.	1
20	HW-82030	SCREW, LOCK	1
21	C-0215	NUT, ADJ. R.H. ACME THREAD	1
22	HW-57250	PIN, SPRING,	4
23	HW-95091	CLAMP- NYLON,	2
	HW-53060	SCREW, BUTTON HEAD,	2
24	C-0245	STOP, PLASTIC	1
25	HW-95090	CLAMP, NYLON,	1
	HW-53060	SCREW, BUTTON HD.,	1
26	HW-53205	SCREW, BUTTON HD.,	1
27	C-0315	BLOCK, MOUNTING, R.H.	1
	HW-56140	PIN, DOWEL,	1
	HW-51230	SCREW, SOC HD. CAP,	1
28	C-0307	BLOCK, MOUNTING, L.H.	1
	HW-56140	PIN, DOWEL,	1
	HW-51230	SCREW, SOC HD. CAP,	2
29	HW-64010	BUSHING, BRONZE	1



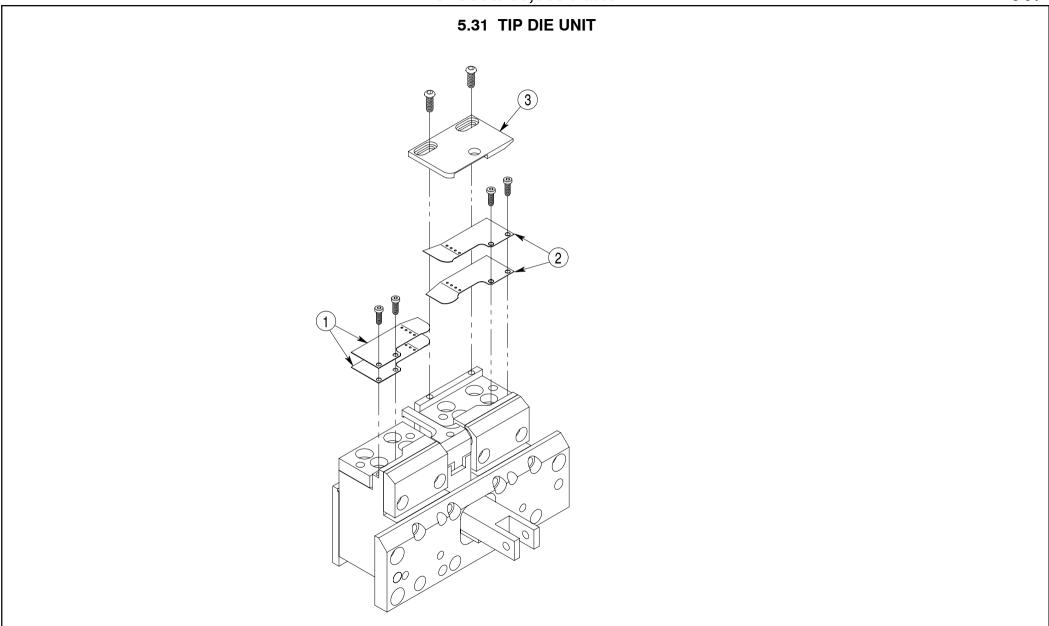




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-59060	KEY, SQUARE,	1
2	HW-87090	SPROCKET,	1
	HW-52179	SCREW, SOC. SET,	2
3	HW-61160	RING, RETAINING	1
4	HW-66050	BEARING, BALL	2
5	C-0222	CAM, PLASTIC CUT	1
	HW-57220	PIN, SPRING,	1
6	C-0101	SHAFT, PLASTIC FEED & CUT	1
7	HW-56186	DOWEL, PULL,	2
8	C-0212	SHAFT, PLASTIC TAB	1
9	C-0201	ARM, PLASTIC TAB	2
	HW-57200	PIN, SPRING,	2
	HW-51210	SCREW, SOC. HD. CAP,	4
10	HW-55005	SCREW, THUMB NYLON	1
	HW-60030	NUT, HEX,	1
11	C-0202	PLASTIC, TAB RETAINER	1
12	C-0236	WINDOW	1
	HW-54010	SCREW, FLAT HD.,	2
13	HW-79180	SPRING	1
14	C-0235	SPACER, SPRING	1
15	F-0203	ADAPTER, VACUUM	1
	HW-53150	SCREW, BUTTON HD.,	4
16	HW-55015	SCREW, SHOULDER,	1
	HW-60165	NUT, HEX JAM, NYLON,	1
17	C-0204	ROD, CONNECTING	1

ITEM#	PART#	DESCRIPTION	# REQ
18	HW-57170	PIN, SPRING,	3
19	C-0203	BLOCK, ADAPTER	1
20	C-0220	PLATE, SPRING RETAINER	1
21	C-0226	PLATE, BEARING, R.H.	1
	HW-51200	SCREW, SOC. HD. CAP,	4
	HW-57160	PIN, SPRING,	2
22	C-0221	PLATE, BEARING, L.H.	1
	HW-51200	SCREW, SOC. HD. CAP,	4
	HW-57160	PIN, SPRING,	2
23	HW-66010	BEARING, BALL	2
24	HW-56220	PIN, DOWEL,	1
	HW-61210	RING, RETAINING	2
25	HW-57250	PIN, SPRING,	1
26	HW-57120	PIN, SPRING,	1
27	HW-71030	CAM, FOLLOWER	1
28	C-0205	CUT, CAM FOLLOWER	1
29	HW-51210	SCREW, SOC. HD. CAP,	2
30	HW-70070	ROD END, FEMALE	2
	HW-52120	SCREW, SOC. SET,	2
31	HW-69030	THRUST RACE	1
32	HW-69220	THRUST RACE,	1
33	C-0102	ARM	1
	HW-51480	SCREW, SOC HD. CAP,	1
34	HW-99030	HOSE, VACUUM,	1





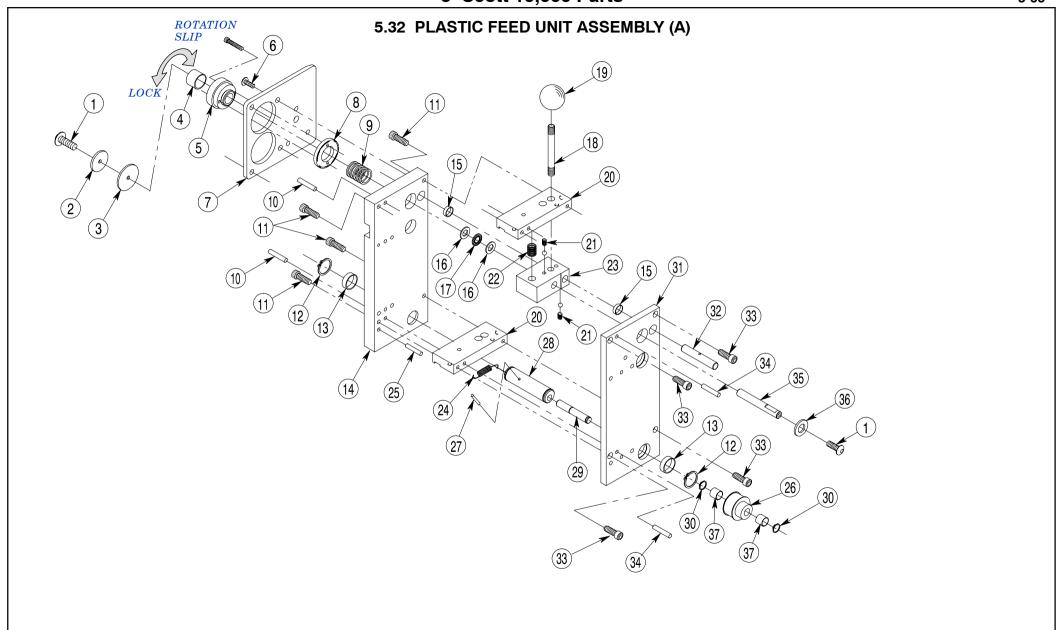


ITEM#	PART #	DESCRIPTION	# REQ
1	C-0316	OPENER, PLASTIC, OUTER	2
	HW-51010	SCREW, SOC. HD. CAP,	2
2	C-0316-IS	OPENER, PLASTIC	2
	HW-51010	SCREW, SOC HD, CAP,	2

ITEM#	PART #	DESCRIPTION	# REQ
3	C-301	GUIDE, PLASTIC	1
	HW-53020	SCREW, BUTTON HD.,	2

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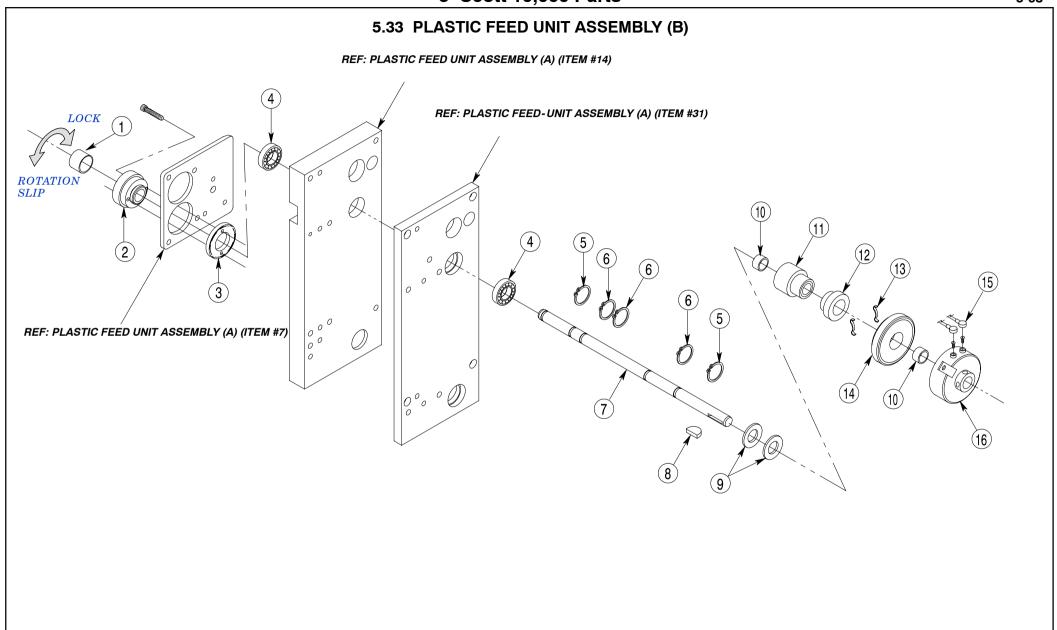




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-53150	SCREW, BUTTON HD.,	2
2	C-0136	PLATE, SLIP CLUTCH	1
3	C-0137	DISC, BRAKE	1
4	HW-72020	ROLLER, CLUTCH	1
5	C-0124-1	ROLLER	1
	HW-51120	SCREW, SOC. HD. CAP,	2
6	HW-53160	SCREW, BUTTON HD.,	4
7	C-0116	PLATE	1
8	C-8801-A	GEAR, FEED ROLLER	1
9	HW-79130	SPRING, COMPRESSED,	1
10	HW-57200	PIN, SPRING,	2
11	HW-51230		4
	1111	SCREW, SOC. HD. CAP,	
12	HW-61060	RING, RETAINING,	2
13	HW-67130	BEARING, NEEDLE,	2
14	C-0129	PLATE, ROLLER MOUNTING	1
15	HW-67070	BEARING, NEEDLE,	2
16	HW-69070	THRUST RACE,	2
17	HW-68010	THRUST BEARING,	1
18	HW-50010	STUD, THREADED,	1

ITEM#	PART #	DESCRIPTION	# REQ
19	HW-81060	KNOB, PLASTIC BALL,	1
20	C-0122	BLOCK, SPACER	2
21	HW-52080	SCREW, SET,	2
	HW-84020	BALL, NYLON,	2
22	HW-79150	SPRING, COMPRESSED,	1
23	C-0123	BLOCK, UPPER FEED	1
24	HW-80100	SPRING,	1
25	HW-57210	PIN, SPRING,	1
26	HW-86020	PULLEY, TIMING GEAR, BORE	1
27	HW-57030	PIN, SPRING,	1
28	C-0130	SHAFT, BELT TENSION	1
29	C-0119	SHAFT	1
30	HW-61030	RING, RETAINING,	2
31	C-0128	PLATE, SLIDE MOUNTING	1
32	C-0110	ROD, PIVOT	1
33	HW-51200	SCREW, SOC. HD. CAP,	4
34	HW-57170	PIN, SPRING,	2
35	C-0121	SHAFT, UPPER	1
36	HW-69140	THRUST RACE,	1
37	HW-67030	BEARING, NEEDLE,	2



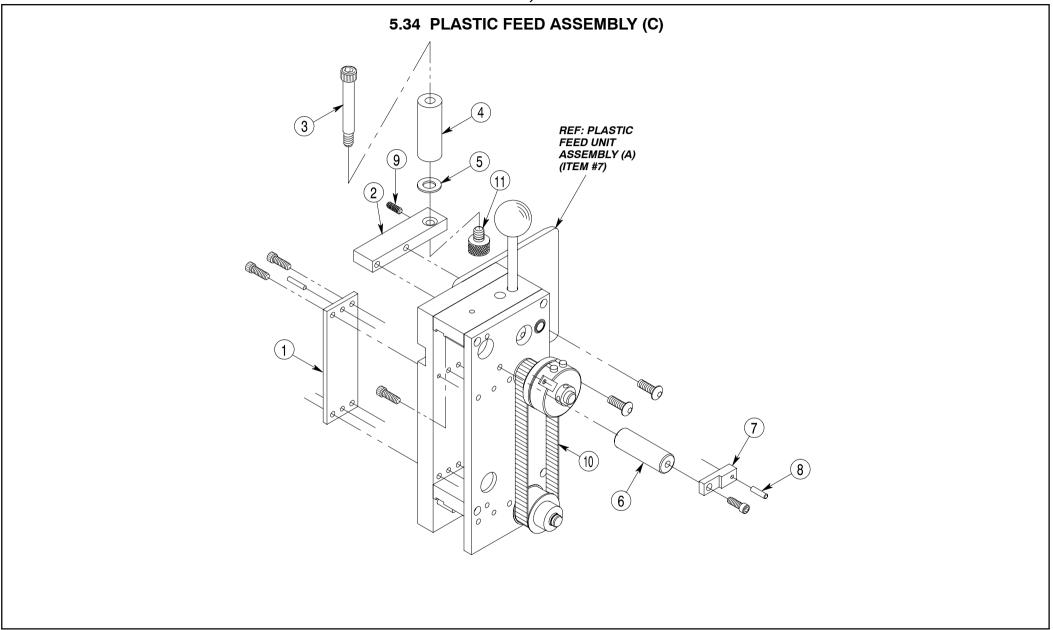




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-72020	ROLLER, CLUTCH	1
2	C-0124-1	ROLLER	1
	HW-51120	SCREW, SOC. HD. CAP,	2
3	C-8801-A	GEAR, FEED ROLLER	1
4	HW-66020	BEARING, BALL	2
5	HW-61040	RING, RETAINING	2
6	HW-61110	RING, RETAINING	3
7	C-0120	SHAFT, LOWER FEED	1
8	HW-58010	KEY, WOODRUFF	1
9	HW-69070	THRUST RACE	2

ITEM#	PART#	DESCRIPTION	# REQ
10	HW-67070	BEARING, NEEDLE	2
11	C-8608	PULLEY, GEARBELT	1
12	C-9104	ARMATURE, HUB	1
13	HW-91060	ARMATURE RELEASE, SPRING	2
14	HW-91020	ARMATURE DISC	1
15	HW-91040	SCREW & INSULATORS	1 SET
16	HW91010	CLUTCH, ELECTRIC	1



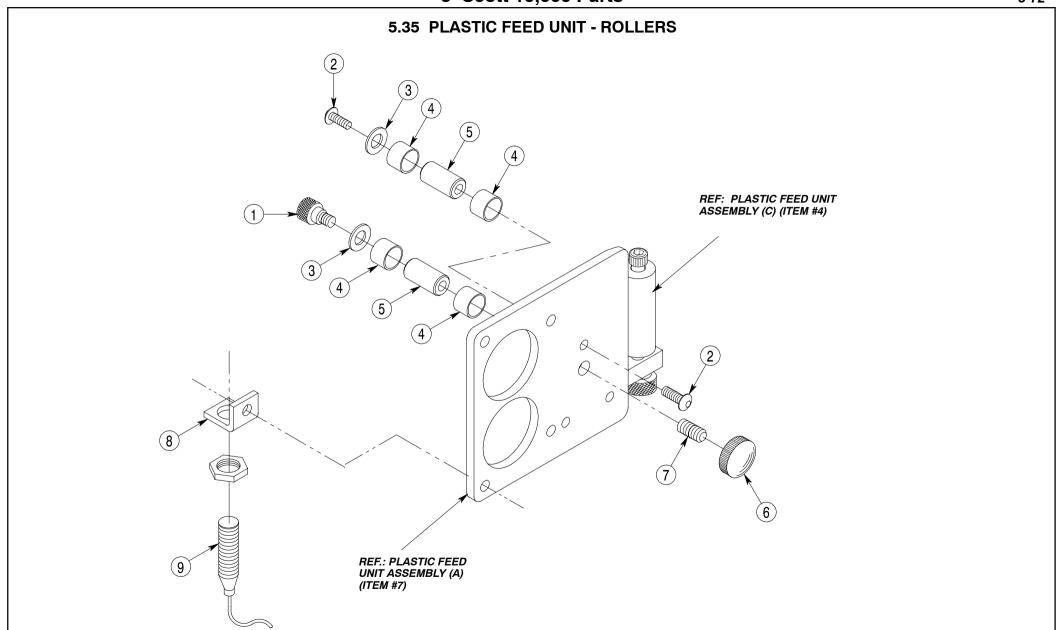




ITEM#	PART #	DESCRIPTION	# REQ
1	C-0133	SPACER, PLASTIC FEED MOUNTING	1
	HW-51250	SCREW, SOC. HD. CAP,	4
	HW-57260	PIN, SPRING,	2
2	F-0102	BAR, PLASTIC TENSION ROLLER MTG.	1
	HW-53160	SCREW, BUTTON HD.,	2
3	HW-55090	SCREW. SHOULDER.	1
4	C-0125	ROLLER, DRAG	1
5	HW-69160	THRUST RACE	1

ITEM#	PART #	DESCRIPTION	# REQ
6	C-0113	POST, SPACER	1
	HW-51210	SCREW, SOC HD. CAP,	1
7	C-0114	LINK, CLUTCH	1
	HW-51200	SCREW, SOC. HD. CAP,	1
8	HW-57030	PIN, SPRING,	1
9	HW-52350	SCREW, SOC SET,	1
10	HW-76010	BELT, GEAR,	1
11	F-0101	KNOB, ADJUSTABLE	1



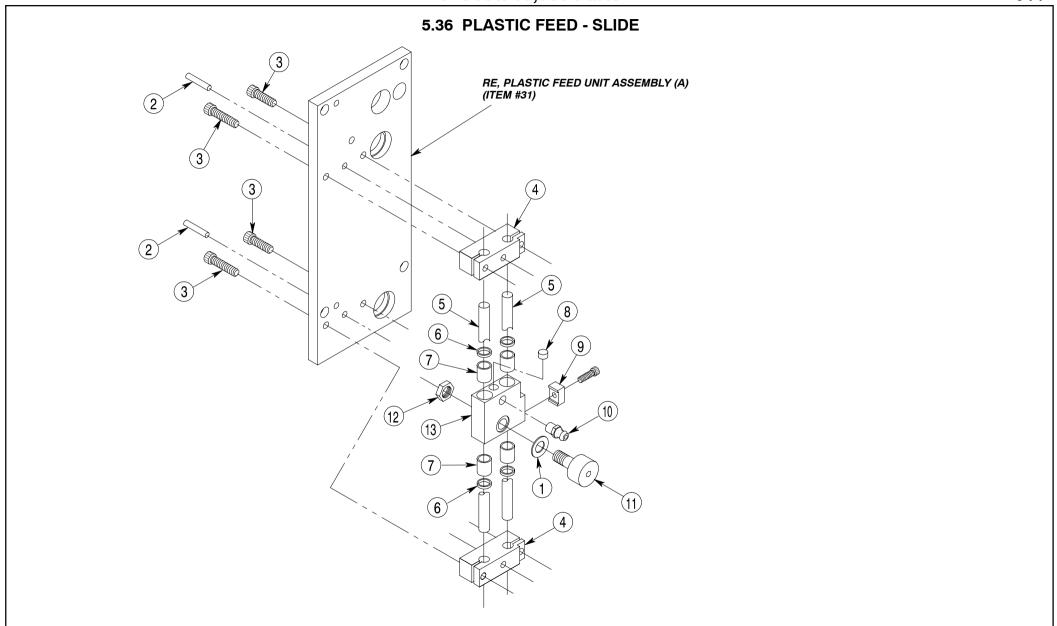




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-55200	KNOB, KNURLED,	1
2	HW-53180	SCREW, BUTTON HD.,	2
3	HW-69140	THRUST RACE	2
4	HW-67070	BEARING, NEEDLE	4
5	C-0117	SHAFT, FOLDING ROLLER	2

ITEM#	PART #	DESCRIPTION	# REQ
6	HW-81070	KNOB, KNURLED,	1
7	HW-52150	SCREW, SOC SET,	1
8	C-0138	BRACKET, SENSOR	1
9	HW-97030	SENSOR, ULTRASONIC	1



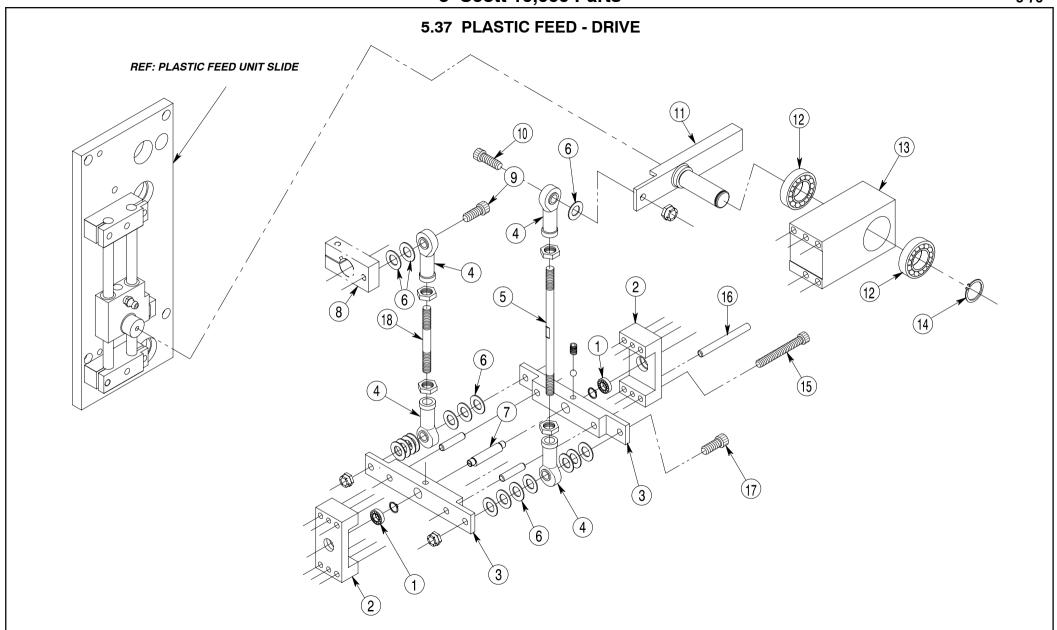




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-69160	RACE, THRUST	1
2	HW-57170	PIN, SPRING,	2
3	HW-51240	SCREW, SOC. HD. CAP,	4
4	C-0109	BLOCK, PLASTIC FEED SLIDE	2
5	C-7801	ROD, SLIDE	2
6	HW-73010	SEAL	4
7	HW-65010	BUSHING, BALL	4

ITEM#	PART #	DESCRIPTION	# REQ
8	HW-63080	PLUG,	1
9	C-0112	CLAMP, TIMING BELT	1
	HW-51090	SCREW, SOC. HD., CAP,	1
10	HW-63100	FITTING, GREASE,	1
11	HW-71010	CAM, FOLLOWER	1
12	HW-60090	NUT, HEX HD.,	1
13	C-0111	SLIDE	1



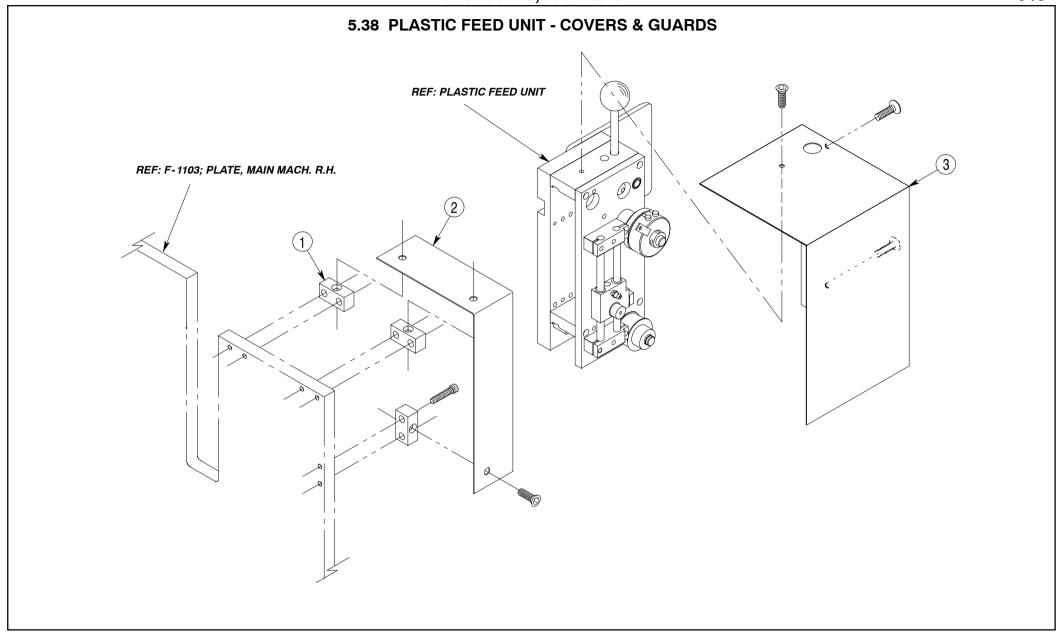




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-66010	BEARING, BALL	2
2	C-0104	BLOCK, ROCKER ARM MOUNTING	2
3	C-0103	ARM, ROCKER	1
	HW-57250	PIN, SPRING,	2
	HW-52080	SCREW, SET,	1
	HW-84020	BALL, NYLON,	1
4	HW-70030	ROD END, FEMALE	4
	HW-60070	NUT, HEX,	4
5	C-0106	ROD, CONNECTING	1
6	HW-49050	WASHER, FLAT, SAE	17
7	C-0134	PIN, ROCKER ARM PIVOT	1
	HW-61210	RING, RETAINING	2
8	C-0102	ARM	REF.
9	HW-51390	SCREW, SOC. HD., CAP,	1

ITEM#	PART #	DESCRIPTION	# REQ
10	HW-51380	SCREW, SOC. HD., CAP,	1
	HW-60200	NUT, NYLON INSERT,	1
11	C-0115-A	SLIDE, ARM WELDMENT	1
12	HW-66120	BEARING, BALL	2
13	C-0108	BLOCK, SLIDE ARM BEARING	1
	HW-51380	SCREW, SOC. HD. CAP,	3
	HW-57250	PIN, SPRING,	2
14	HW-61140	RING, RETAINING	1
15	HW-51450	SCREW, SOC. HD., CAP,	4
16	HW-57280	PIN, SPRING,	2
17	HW-51410	SCREW, SOC. HD. CAP,	2
	HW-60200	NUT, NYLON INSERT,	2
18	HW-52212	STUD, THREADED,	1



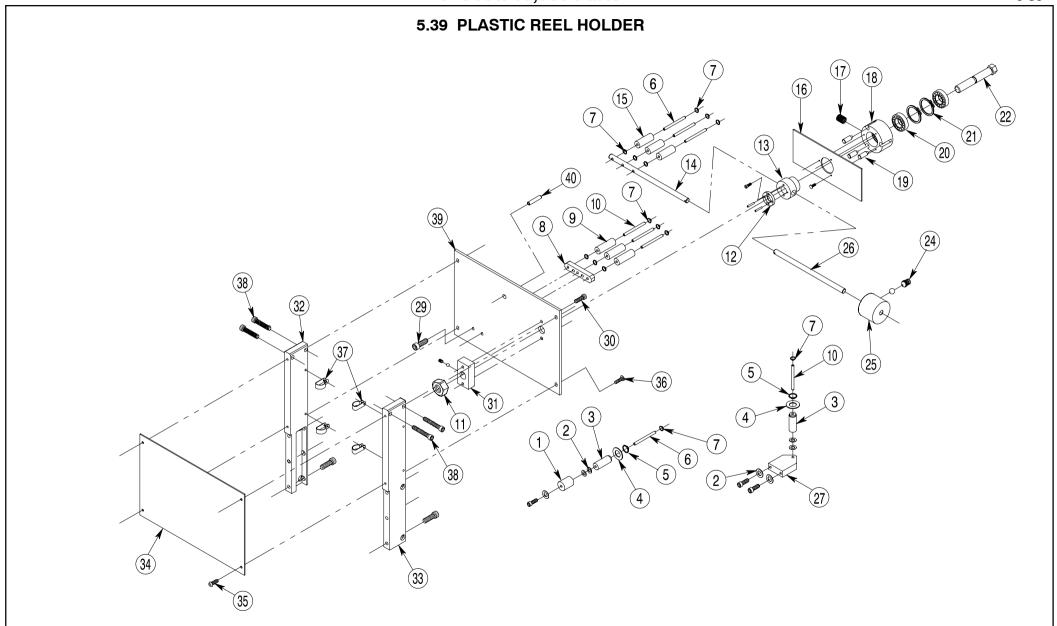




ITEM#	PART #	DESCRIPTION	# REQ
1	C-1010	BLOCK, MOUNTING	3
	HW-51210	SCREW, SOC. HD. CAP,	6
2	C-1003	GUARD, PLASTIC FEED	1
	HW-54090	SCREW, FLAT HD.,	3

ITEM#	PART #	DESCRIPTION	# REQ
3	C-0135	GUARD	1
	HW-53150	SCREW, BUTTON HD.,	3



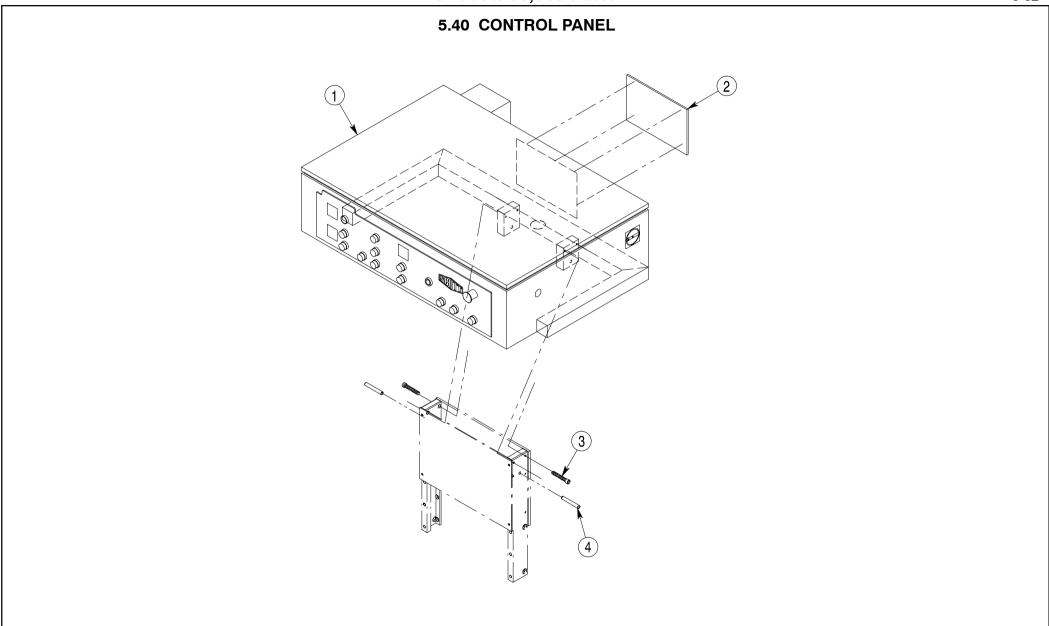




ITEM#	PART #	DESCRIPTION	# REQ
1	C-1518	ROLLER, SPACER	1
	HW-51200	SCREW, SOC. HD. CAP,	1
	HW-49040	WASHER, FLAT,	1
2	HW-69140	THRUST RACE	4
3	C-1517	ROLLER, PLASTIC GUIDE	2
4	HW-69190	THRUST RACE	2
5	HW-61230	RING, RETAINING	2
6	C-1512	SHAFT, ROLLER	4
7	HW-61200	RING, RETAINING	14
8	C-1552	SUPPORT, ROLLER	1
9	C-1516	ROLLER, PLASTIC GUIDE	3
10	C-1515	SHAFT, ROLLER	4
11	HW-60120	NUT, HEX,	1
12	C-1534	NUT, PLATE	1
	HW-57030	PIN, SPRING,	2
	HW-51070	SCREW, SOC. HD. CAP,	2
13	C-1535-A	HUB, UNWIND TENSION ARM	1
14	C-1508	SHAFT, RETAINER	1
15	C-1513	ROLLER, PLASTIC GUIDE	3
16	C-1505	PLATE, PLASTIC MTG. HUB	1
	HW-55360	SCREW, DRIVE P-K,	3
17	HW-79050	SPRING,	3
18	C-1509	HUB, PLASTIC MOUNTING	1
19	C-1511	PLUNGER, PLASTIC MOUNTING HUB	3
20	HW-66040	BEARING, BALL	2
21	HW-61290	RING, RETAINING	2
22	C-1533-1	SPINDLE, PLASTIC UNWIND	1
23	HW-52090	SCREW, SOC. SET,	1
	HW-84020	BALL, NYLON,	1

ITEM#	PART #	DESCRIPTION	# REQ
24	HW-52201	SCREW, SOC. SET,	1
	HW-84030	BALL, NYLON,	1
25	C-1503	COUNTER WEIGHT	1
26	C-1504	ROD, COUNTER WEIGHT	1
27	C-1501	SUPPORT, ROLLER	1
	HW-51200	SCREW, SOC. HD. CAP,	2
	HW-49040	WASHER, FLAT,	2
28	HW-55050	SCREW, SHOULDER,	1
	HW-49030	WASHER, FLAT,	1
	HW-60020	NUT, HEX,	1
29	HW-51210	SCREW, SOC HD., CAP,	2
30	HW-51210	SCREW, SOC HD. CAP,	2
31	C-1521	RETAINER, PLATE	1
	HW-52090	SCREW, SOC SET,	1
	HW-84020	BALL, NYLON,	1
32	C-1558-1	POST, BAR REAR	1
	HW-51490	SCREW, SOC HD. CAP,	3
33	C-1554-1	POST, BAR FRONT	1
	HW-51490	SCREW, SOC HD. CAP,	3
34	C-1555	PLATE, FRONT	1
35	HW-53150	SCREW, BUTTON HD.,	4
36	HW-53160	SCREW, BUTTON HD.,	4
37	HW-99520	CLAMP	4
	HW-53150	SCREW, BUTTON HD.,	4
	HW-49040	WASHER, FLAT,	4
38	HW-51400	SCREW, SOC HD. CAP,	4
39	C-1556-2	PLATE, BACK	1
40	HW-57200	PIN, SPRING,	1



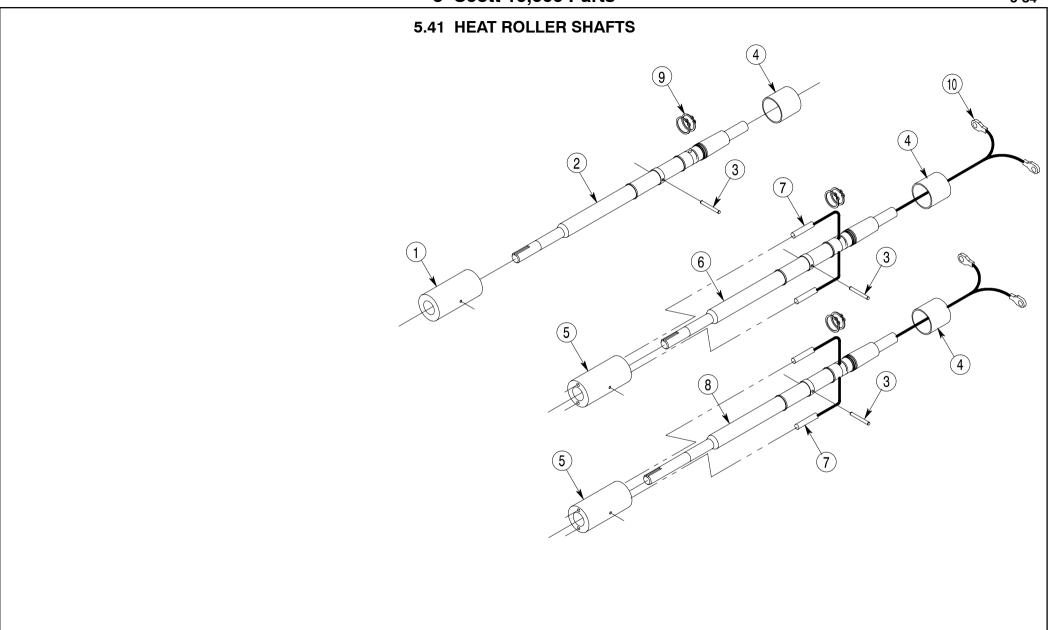




ITEM#	PART#	DESCRIPTION	# REQ
1	C-1557-1	ELECTRICAL BOX	1
2	C-1601	NAME PLATE, MAIN MACHINE	1

ITEM#	PART #	DESCRIPTION	# REQ
3	HW-51400	SCREW, SOC HD. CAP,	4
4	HW-57310	PIN, SPRING,	2



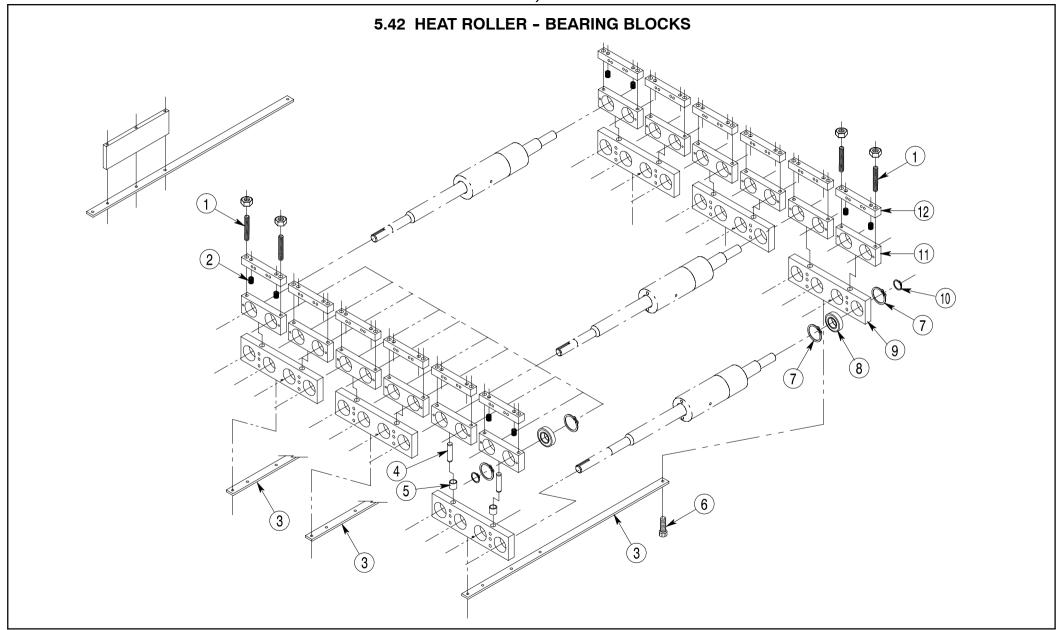




ITEM#	PART #	DESCRIPTION	# REQ
1	C-0806-R	RUBBER RLR BLOCK	2
2	C-0804-R	SHAFT, UPPER STRAIGHT	1
3	HW-57230	PIN, SPRING	24
4	C-809-A	GUARD, WIRING	24
5	C-806-R	RUBBER PLASTIC BONDING	22
6	C-804	SHAFT, UPPER ROLLER	11

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-94010	PROBE	2
	HW-93020	HEATING ELEMENT	40
8	C-805	SHAFT, LOWER ROLLER	12
9	HW-61180	RING, RETAINING	48
10	HW-95215	RING TERMINAL	84



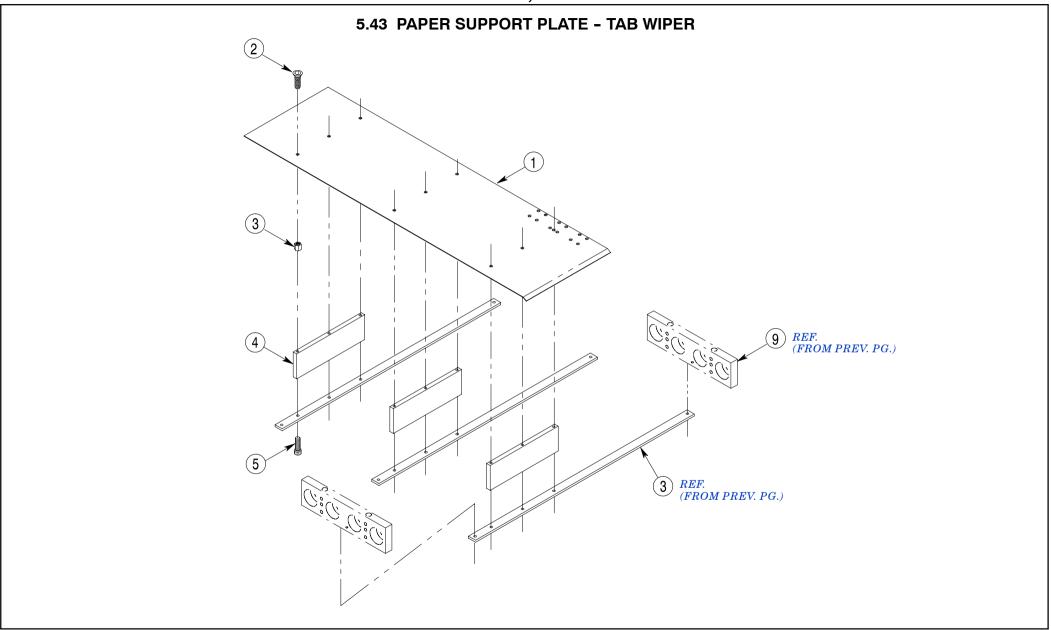




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-52250	SCREW, SET,	24
	HW-60220	NUT, NYLON INSERT,	24
2	HW-79130	SPRING,	24
3	C-0817	BAR, CROSS	3
4	C-0837	PIN, DOWEL,	12
5	HW-83040	BUSHING,	12
6	HW-51210	SCREW, SOC HD CAP,	6

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-62060	RING, RETAINING	96
8	HW-66050	BALL BEARING	48
9	C-0803	BLOCK, LWR RLR BRG	6
10	HW-61160	RING, RETAINING	24
11	C-0802	BLOCK, UPR RLR BRG	12
12	C-0801	BLOCK, SPRING KEEPER	10
12A	C-0801-2	W/ SAFTY SWITCH HOLES	2



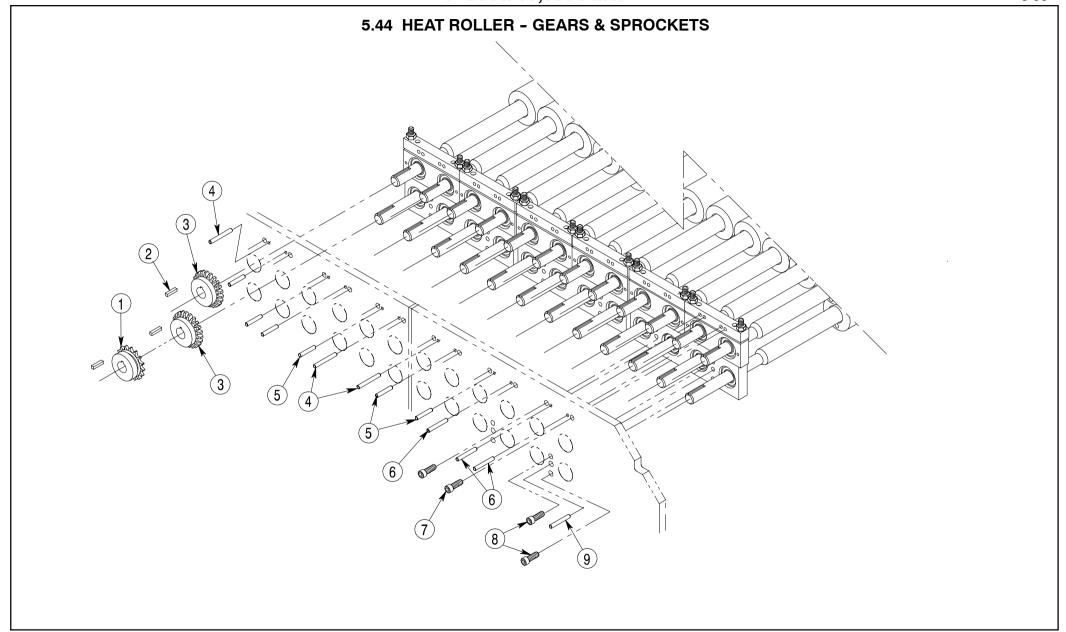




ITEM#	PART #	DESCRIPTION	# REQ
1	C-0819	PLATE, PAPER SUPPORT	1
2	HW-54030	SCREW, FLAT HD.,	9
3	HW-85020	NUT, ALLEN,	9

ITEM#	PART #	DESCRIPTION	# REQ
4	C-0818	BAR, SPACER	3
5	HW-51210	SCREW, SOC HD. CAP,	9



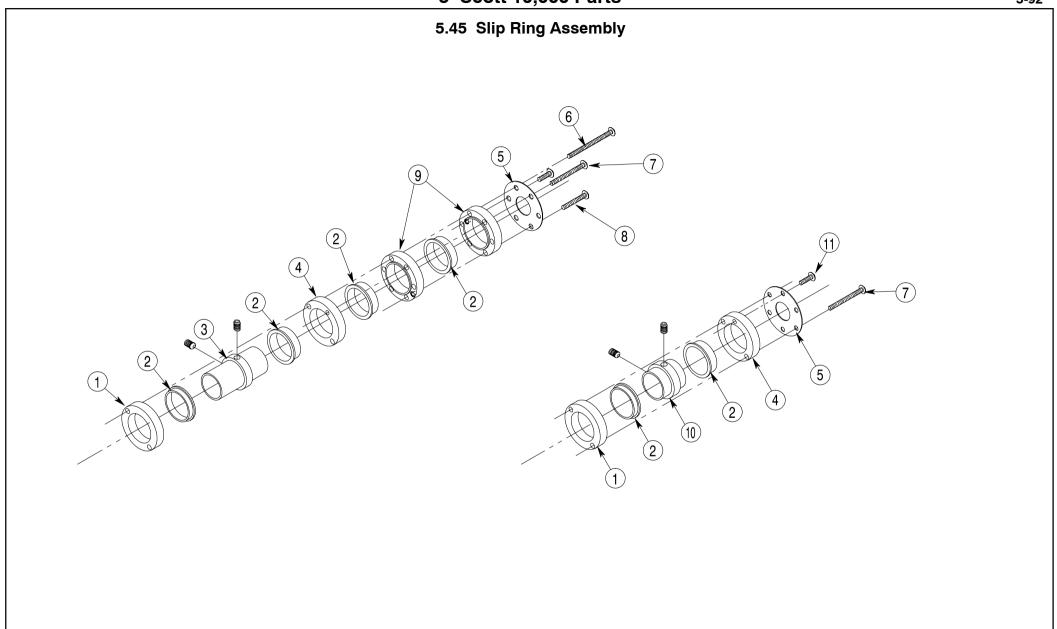




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-87080	SPROCKET, BROWNING,	12
2	HW-59060	KEY, SQUARE,	36
3	HW-88040	GEAR, SPUR,	24
4	HW-57270	PIN, SPRING,	6
5	HW-57260	PIN, SPRING,	12

ITEM#	PART #	DESCRIPTION	# REQ
6	HW-56190	DOWEL, PULL,	6
7	HW-51380	SCREW, SOC HD. CAP,	 24
8	HW-51470	SCREW, SOC HD. CAP,	 24
9	HW-57310	PIN, SPRING,	12



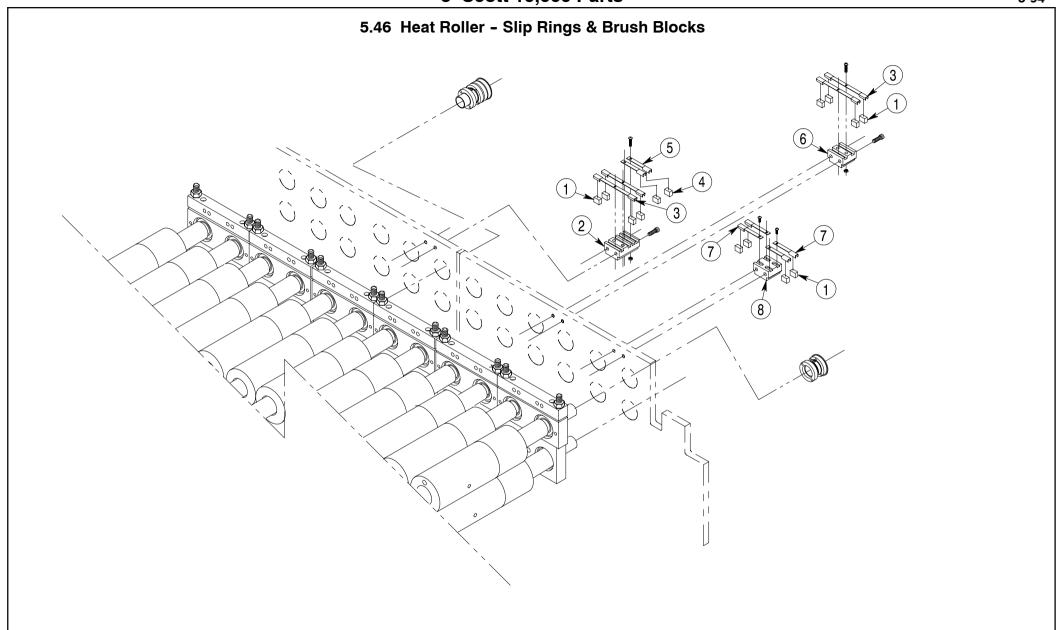




ITEM#	PART#	DESCRIPTION	# REQ
1	C-0829-A	RING, SLIP (2) HOLES	20
2	C-0824	SPACER, ELEC. INSL.	44
3	C-0833	SLEEVE, SLIP RING	2
	HW-52080	SCREW, SET,	4
4	C-0830-A	RING, SLIP (3) HOLES	20
5	C-0823-1	COVER, SLIP RING	20
6	HW-55300	SCREW, ROUND HD.,	2

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-55280	SCREW, ROUND HD.,	20
8	HW-55270	SCREW, ROUND HD.,	2
9	C-0831-A	RING, SLIP PROBE (6) HOLES	4
10	C-0832	SLEEVE, SLIP RING	18
	HW-52080	SCREW, SET,	36
11	HW-55250	SCREW, ROUND HD.,	20



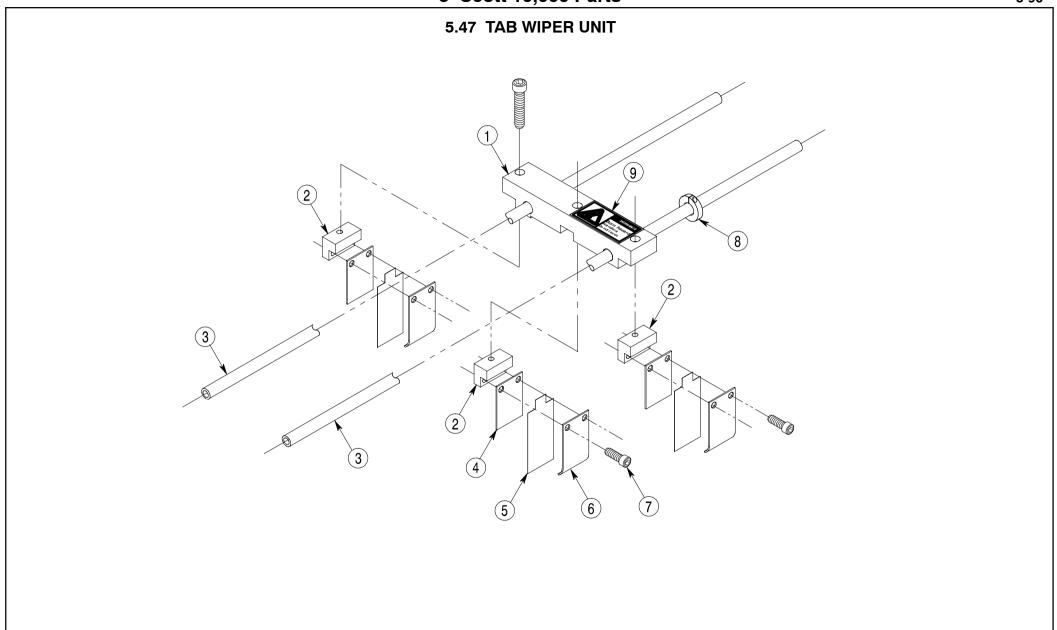




ITEM#	PART#	DESCRIPTION	# REQ
1	C-0822	BRUSH, CARBON POWER	40
2	C-0827	BLOCK, BRUSH MOUNTING	2
	HW-51230	SCREW, SOC HD. CAP,	4
3	C-0821	HOLDER, BRUSH	16
	HW-55260	SCREW, ROUND HD.,	16
4	C-0834	BRUSH, SLIVER PROBE	4
5	C-0820	HOLDER, BRUSH	4
	HW-55260	SCREW, ROUND HD.,	4

ITEM#	PART #	DESCRIPTION	# REQ
6	C-0828	BLOCK, BRUSH MOUNTING	6
	HW-51230	SCREW, SOC HD. CAP,	12
7	C-0836	HOLDER, BRUSH	8
	HW-55260	SCREW, ROUND HD.,	8
8	C-0835-1	BLOCK, BRUSH MOUNTING	2
	HW-51260	SCREW, SOC HD. CAP,	4





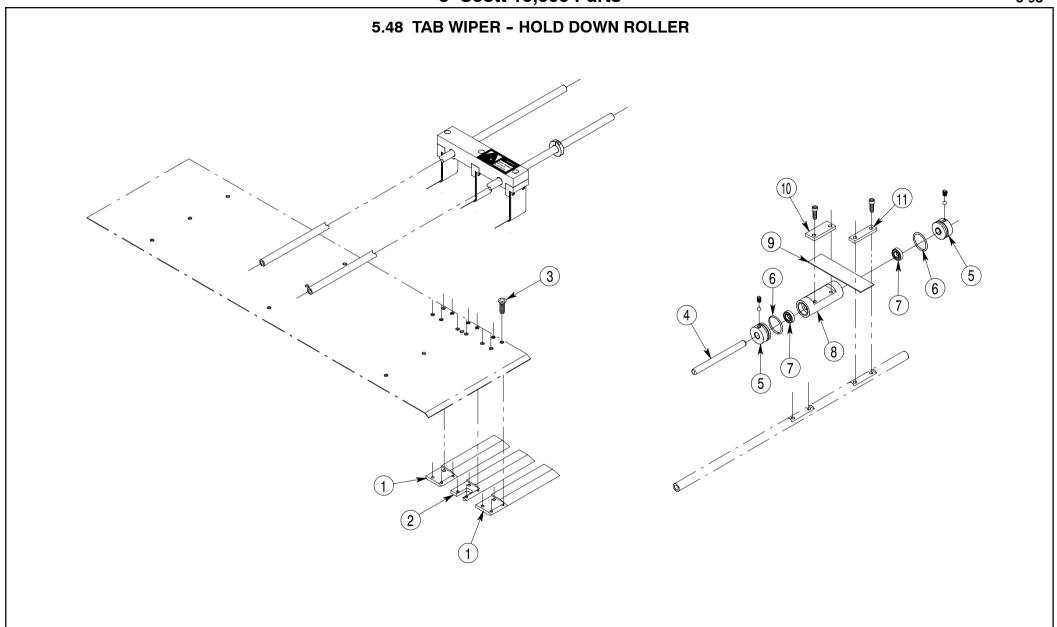


ITEM#	PART#	DESCRIPTION	# REQ
1	C-1410	BLOCK, RETAINER	1
	HW-51220	SCREW, SOC HD. CAP,	3
2	C-1411	HOLDER, TAB WIPER	3
3	C-1407	SHAFT, PLASTIC TAB RETAINER	2
4	C-1413	PLATE, KEEPER	3

ITEM#	PART #	DESCRIPTION	# REQ
5	C-1414	WIPER, PLASTIC TAB	3
6	C-1412	PLATE, BACK-UP	3
7	HW-51200	SCREW, SOC HD. CAP,	6
8	HW-98030	COLLAR,	1
9	C-1419	LABEL, CAUTION, HOT ROLLERS	1

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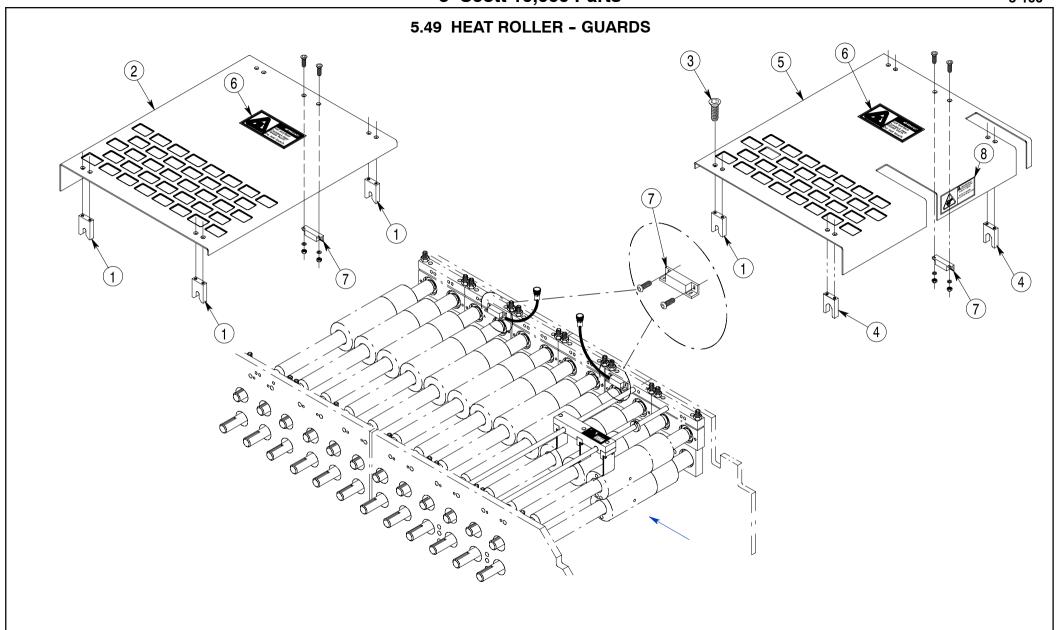




ITEM#	PART #	DESCRIPTION	# REQ
1	C-1408	GUIDE, PLASTIC TAB PAPER	2
2	C-1409	GUIDE, PLASTIC TAB PAPER	1
3	HW-54020	SCREW, FLAT HD.,	12
4	C-1406	SHAFT, ROLLER	2
5	C-1404	ROLLER	4
	HW-52020	SCREW, SET,	4
	HW-54010	BALL, NYLON,	4
6	HW-74060	O-RING,	4

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-66010	BEARING, BALL,	4
8	C-1405	HOUSING, BEARING	2
9	C-1401	STRAP	2
10	C-1403	PLATE, RETAINER	2
	HW-51080	SCREW, SOC HD. CAP,	4
11	C-1402	PLATE, RETAINER	2
	HW-51080	SCREW, SOC HD. CAP,	4



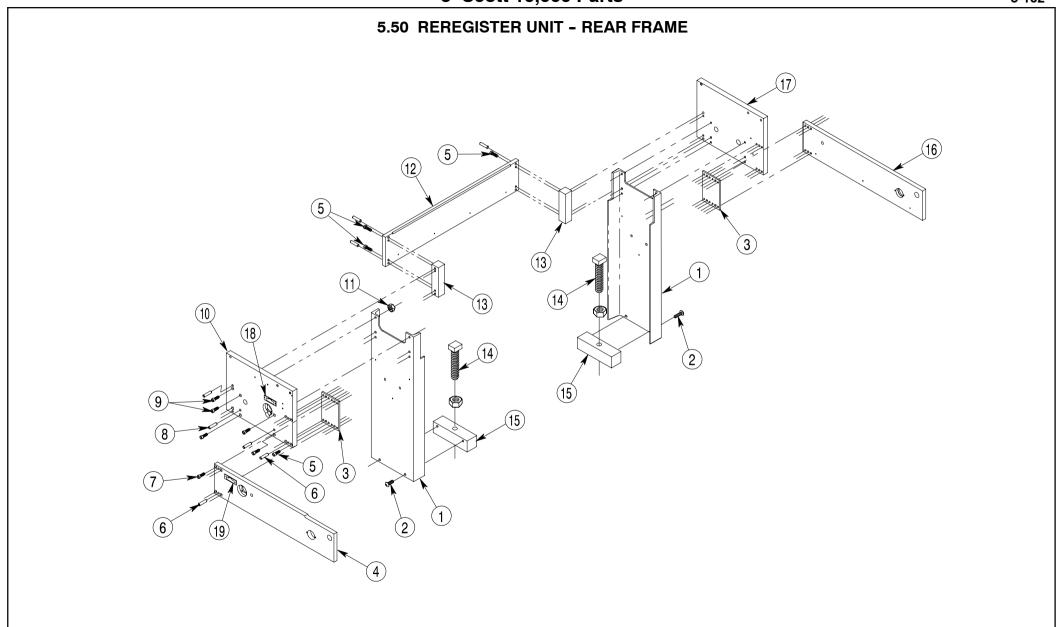




ITEM#	PART#	DESCRIPTION	# REQ
1	C-1415	YOKE, SMALL	6
2	C-1417	COVER, FRONT	1
3	HW-54090	SCREW, FLAT HD.,	16
4	C-1418	YOKE, LARGE	2
5	C-1416	COVER, REAR	1
6	C-1420	LABEL, CAUTION, HOT SURFACE	2

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-97050	SENSOR & ACTUATOR	2
	HW-97054	RECEPTACLE, ATTACHABLE, MALE	2
	HW-53030	SCREW, BUTTON HD.,	4
	HW-54030	SCREW, FLAT HD.	4
	HW-49010	WASHER, FLAT, SAE	4
	HW-60010	NUT, HEX,	4
8	C-1421	LABEL, CAUTION	1



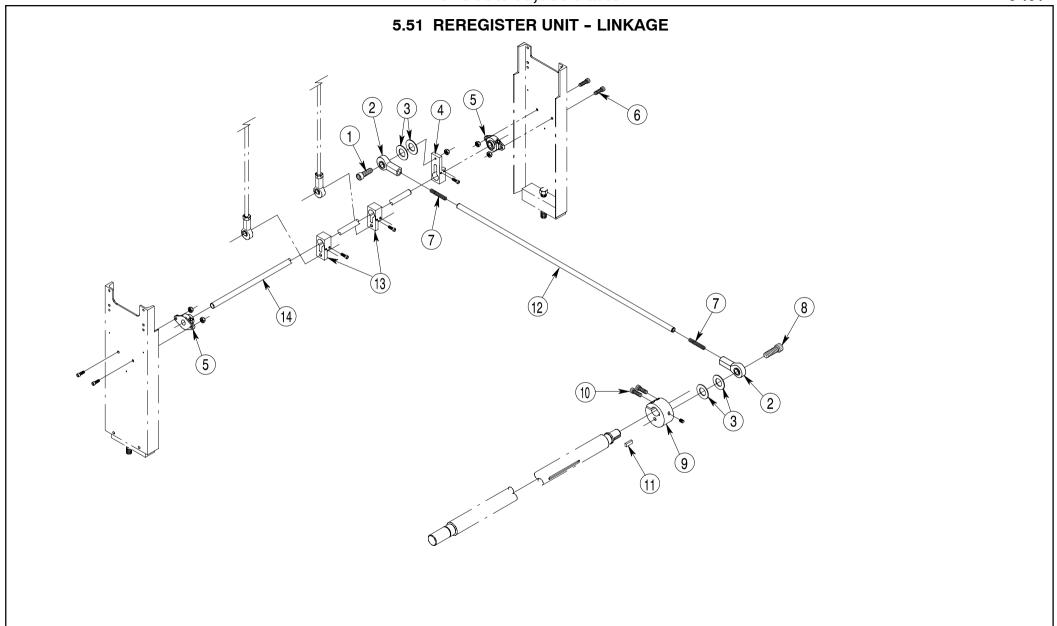




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2076	LEG, REREGISTER (FRAME SUPPORT)	2
2	HW-53210	SCREW, BUTTON HD.,	4
3	C-2049	PLATE, TIE	2
4	C-2048	FRAME, REREGISTER (FRONT L.H.)	1
5	HW-51380	SCREW, SOC HD. CAP,	12
6	HW-57290	PIN, SPRING,	8
7	HW-51370	SCREW, SOC HD. CAP,	8
8	HW-57300	PIN, SPRING,	8
9	HW-51390	SCREW, SOC HD. CAP,	12
10	C-2046	PLATE, REREGISTER (REAR FRAME LH)	1
11	HW-60060	NUT, HEX,	4

ITEM#	PART #	DESCRIPTION	# REQ
12	C-2038	PLATE, TABCUTTER (FRAME REAR)	1
13	C-2039	BAR, TIE	2
14	HW-55450	SCREW, SQ. HD.,	2
	HW-60155	NUT, HEX JAM,	2
15	C-2077	FOOT, REREGISTER (FRAME SUPPORT)	2
16	C-2047	FRAME, REREGISTER (FRONT R.H.)	1
17	C-2045	PLATE, REREGISTER (REAR FRAME RH)	1
18	F-1230-1	LEGEND PLATE, TAB SIZE	1
	HW-55353	SCREW, DRIVE,	2
19	F-1229-1	LEGEND PLATE, TAB POSITION	1
	HW-55353	SCREW, DRIVE,	2



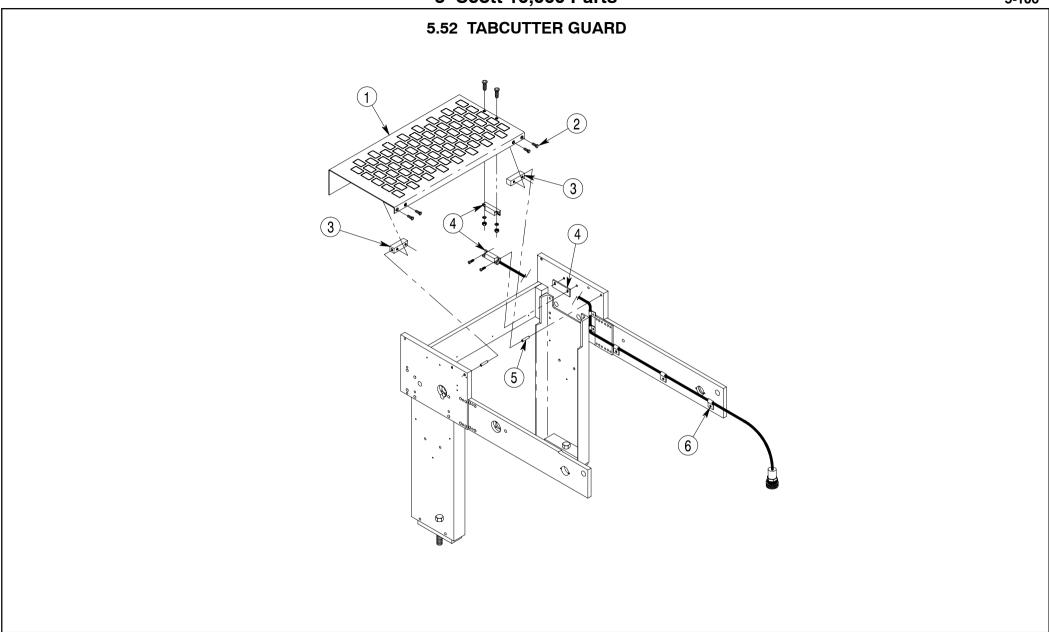




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ITEM#	PART #	DESCRIPTION	# REQ
1	HW-51400	SCREW, SOC HD.,	1
	HW-60200	NUT, NYLON INSERT,	
2	HW-70030	ROD, END FEMALE R.H	2
3	HW-49100	WASHER, FLAT HARDEN,	4
4	C-2082	ARM, BAR OPERATING	1
	HW-51400	SCREW, SOC HD. CAP,	2
5	C-6613	BEARING, FLANGE	2
6	HW-51480	SCREW, SOC HD. CAP,	4
7	HW-52210	SCREW, SET,	2
5A	HW-66170	BEARING, FLANGE	2
5B	HW-60080	NUT	4
5C	HW-49170	LOCKWASHER	4
5D	HW-49060	W/WASHER	4

ITEM#	PART #	DESCRIPTION	# REQ
8	HW-51380	SCREW, SOC HD. CAP,	1
9	C-2078	CRANK, TABCUTTER DRIVE	1
	HW-52080	SCREW, SET,	1
10	HW-51210	SCREW, SOC HD. CAP,	1
11	HW-59058	KEY, SQUARE,	1
12	C-2079	ROD, CONNECTING	1
13	C-2083	ARM, OPERATING	2
	HW-51400	SCREW, SOC HD. CAP,	4
14	C-2084	SHAFT, OPERATING	1





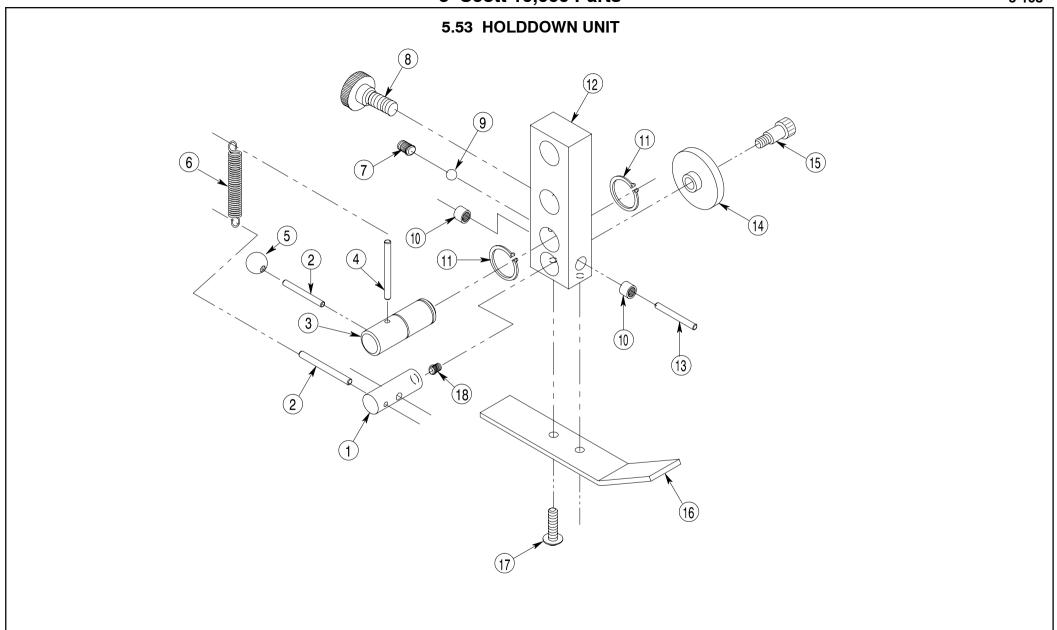


ITEM#	PART #	DESCRIPTION	# REQ
1	C-2081	GUARD, TABCUTTER	1
2	HW-54110	SCREW, FLAT HD.,	4
3	C-2080	BLOCK, GUARD MOUNTING	2
4	C-2183	BLOCK, SWITCH MOUNTING	1
	HW-97050	SENSOR & ACTUATOR	1
	HW-97054	RECEPTACLE, ATTACHABLE, MALE	1
	HW-51030	SCREW, SOC HD. CAP,	2
	HW-54030	SCREW, FLAT HD.,	2
	HW-49010	WASHER, FLAT, SAE	4
	HW-60010	NUT, HEX	2
	HW-95190	CONNECTOR, CABLE END,	2

ITEM#	PART#	DESCRIPTION	# REQ
5	HW-56210	PIN, DOWEL,	2
6	HW-95090	CLAMP, NYLON,	5
	HW-53060	SCREW, BUTTON HD.,	5

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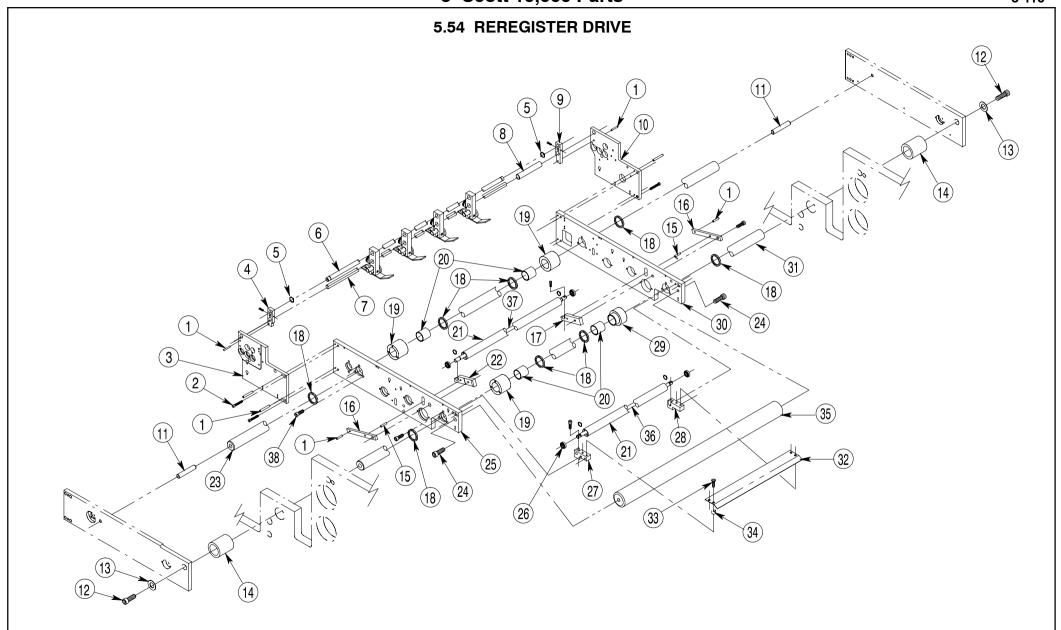


ITEM#	PART #	DESCRIPTION	# REQ
1	C-2005	SHAFT, HOLDDOWN RLR PIVOT	4
2	HW-57040	PIN, SPRING,	4
3	C-2010	SHAFT, TENSION ADJ.	4
4	HW-57030	PIN, SPRING,	4
5	C-8407-A	BALL, HANDLE,	4
6	HW-80010	SPRING, EXTENSION,	4
7	HW-52080	SCREW, SET,	4
8	HW-81030	KNOB,	4
9	HW-84020	BALL, NYLON,	4

ITEM#	PART #	DESCRIPTION	# REQ
10	HW-67010	BEARING, NEEDLE	8
11	HW-61120	RING, RETAINING	8
12	C-2009	BAR, HOLDDOWN	4
13	HW-56050	PIN, DOWEL,	4
14	C-2156	WHEEL, REREGISTER	4
15	HW-55030	SCREW, SHOULDER,	4
16	C-2158	SHOE, HOLDDOWN	4
17	HW-54090	SCREW, FLAT HD.,	8
18	HW-52060	SCREW, SET	4

Scott 10,000 Parts 5.53 HOLDDOWN UNIT June, 2003 C-9999-2 Issue 1 5-109



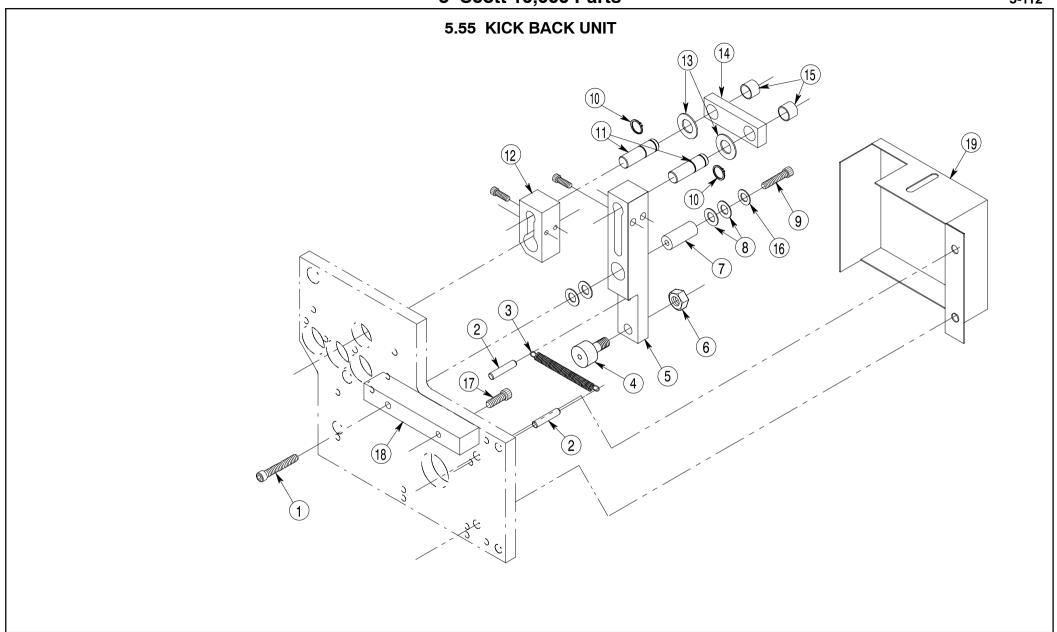




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-57170	PIN, SPRING,	8
2	HW-51370	SCREW, SOC HD. CAP,	4
3	C-2044	PLATE, KICK ROLLER	1
4	C-2166	ARM, HOLDDOWN	1
	HW-51230	SCREW, SOC HD. CAP,	1
5	HW-61120	RING, RETAINING	2
6	C-2165	ROD, HOLDDOWN	1
7	C-2011	SHAFT, REGISTER UNIT	1
8	C-2148	TUBE, SPACER	1
9	C-2001	ARM, HOLDDOWN	1
	HW-51230	SCREW, SOC HD. CAP,	1
10	C-2043	PLATE, KICK ROLLER	1
11	HW-57320	PIN, SPRING,	2
12	HW-51530	SCREW, SOC HD. CAP,	2
13	HW-49070	WASHER, FLAT,	2
14	C-2074	SPACER, EXTENSION	2
15	HW-57210	PIN, SPRING,	2
16	C-2164	ARM, IDLER ROLLER	2
	HW-51500	SCREW, SOC HD. CAP,	2
17	C-2071	BAR, L.H.	1
18	HW-73030	SEAL	8
19	C-2058	HOUSING, LINEAR BALL BEARING	3
20	HW-65040	BEARING, BALL	4

ITEM#	PART #	DESCRIPTION	# REQ
21	C-2169	ROLLER, IDLER	2
22	C-2171	BAR, R.H.	1
23	C-2057-A	SHAFT, REREGISTER	1
24	HW-51470	SCREW, SOC HD. CAP,	2
25	C-2068	PLATE, SIDE FRAME L.H.	1
26	HW-66020	BEARING, BALL	4
27	C-2173	BLOCK, LEAD IN PLATE L.H.	1
28	C-2172	BLOCK, LEAD IN PLATE R.H.	1
29	C-2170	HOUSING, BALL BEARING	1
30	C-2067	PLATE, SIDE FRAME R.R.	1
31	C-2075-P	SHAFT, EXTENSION	1
32	C-2133	PLATE, PAPER LEAD IN	1
33	HW-54020	SCREW, FLAT HD.,	4
34	HW-85020	NUT, ALLEN,	4
35	C-2136	BAR, REGISTER	1
36	C-2174	SHAFT, IDLER ROLLER	1
	HW-61040	RING, RETAINER	2
	HW-51210	SCREW, SOC HD. CAP,	2
37	C-2175	SHAFT, TAKE-UP IDLER	1
	HW-61040	RING, RETAINER	2
	HW-51210	SCREW, SOC HD. CAP,	2
38	HW-51230	SCREW, SOC HD. CAP,	12
22B	HW-51220	SCREW SOC HD CAP	4





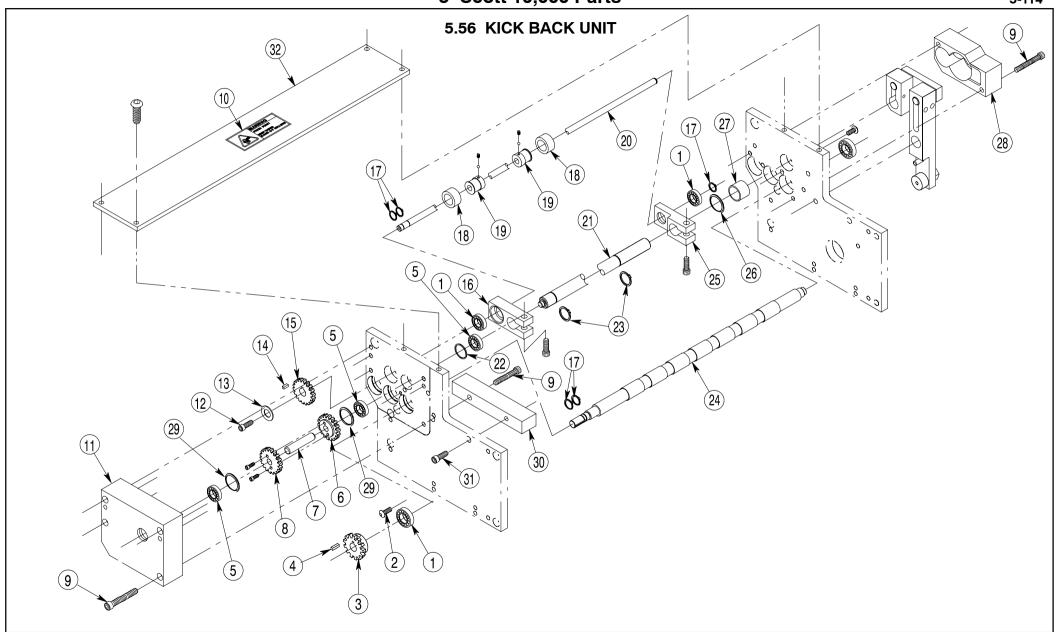


ITEM#	PART#	DESCRIPTION	# REQ
1	HW-51345	SCREW, SOC HD. CAP,	1
2	HW-57170	PIN, SPRING,	2
3	HW-80080	SPRING, EXTENSION,	1
4	HW-71020	CAM, FOLLOWER,	1
5	C-2089	ARM, CAM FOLLOWER	1
	HW-51230	SCREW, SOC HD. CAP,	2
6	HW-60230	NUT, NYLON INSERT,	1
7	C-2088-A	PIN, ARM PIVOT	1
8	HW-69060	THRUST RACE,	4
9	HW-51300	SCREW, SOC HD. CAP,	1
10	HW-61040	RING, RETAINING,	2

ITEM#	PART#	DESCRIPTION	# REQ
11	C-2087	PIN, CAM FOLLOWER	2
12	C-2090	ARM, RICK ROLLER	1
	HW-51230	SCREW, SOC HD. CAP,	2
13	HW-69060	THRUST, RACE,	2
14	C-2135	LINKAGE, KICK BACK	1
15	HW-67070	BEARING, NEEDLE,	2
16	HW-49040	WASHER, FLAT,	1
17	HW-51350	SCREW, SOC HD. CAP,	1
18	C-2185	BLOCK, SUPPORT	1
19	C-2181	COVER, BOX	1
	HW-53140	SCREW, BUTTON HD.,	2

20 HW-67070 Bearings 2



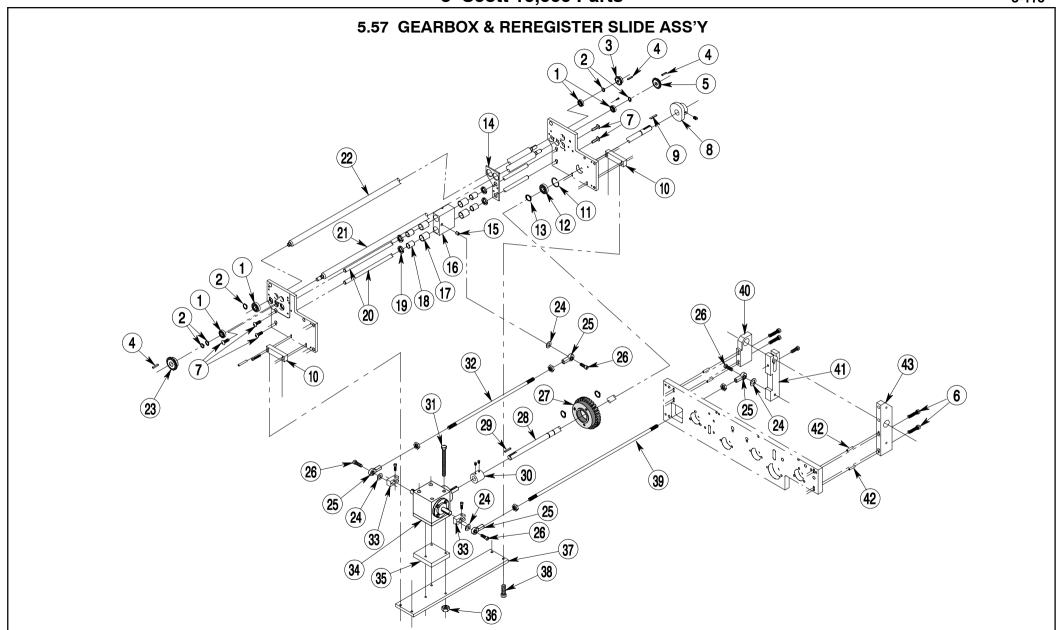




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-66020	BEARING, BALL	4
2	HW-53140	SCREW, BUTTON HD.,	2
3	C-8814-A	GEAR,	1
4	HW-59020	KEY, SQUARE,	1
5	HW-66010	BEARING, BALL,	3
6	C-8815	GEAR,	1
7	HW-56210	PIN, DOWEL,	1
8	C-8816	GEAR,	1
	HW-51070	SCREW, SOC HD. CAP,	2
9	HW-51260	SCREW, SOC HD. CAP,	7
10	C-1421	WARNING LABEL, PINCH HAZARD	1
11	C-2021	HOUSING, GEAR L.H.	1
12	HW-51200	SCREW, SOC HD. CAP,	1
13	HW-69030	THRUST RACE,	1
14	HW-59010	KEY, SQUARE,	1
15	C-8813	GEAR,	1
16	C-2016	ARM, KICKBACK SHAFT L.H.	1
	HW-51390	SCREW, SOC HD. CAP,	1
17	HW-61040	RING, RETAINING,	5

ITEM#	PART #	DESCRIPTION	# REQ
18	C-2013	ROLLER, RUBBER KICK BACK	2
19	C-2014	HUB, KICKBACK RLR.	2
	HW-52080	SCREW, SET,	2
	HW-84020	BALL, NYLON,	2
20	C-2015	SHAFT, KICKBACK RLR. DRIVE	1
21	C-2020	SHAFT, KICKBACK RLR. PIVOT	1
22	HW-62020	RING,	1
23	HW-61130	RING, RETAINING,	2
24	C-2168	SHAFT, CROWN ROLLER	1
25	C-2012	ARM, KICKBACK R.H.	1
	HW-51390	SCREW, SOC HD. CAP,	1
26	HW-61240	RING, GRIP,	1
27	HW-67110	BEARING, NEEDLE,	1
28	C-2002	HOUSING, GEAR R.H.	1
29	HW-61210	RING, GRIP,	2
30	C-2185	BLOCK, SUPPORT	1
31	HW-51350	SCREW, SOC HD. CAP,	1
32	C-2182	COVER, CLEAR LEXAN	1
	HW-53150	SCREW, BUTTON HD.,	4



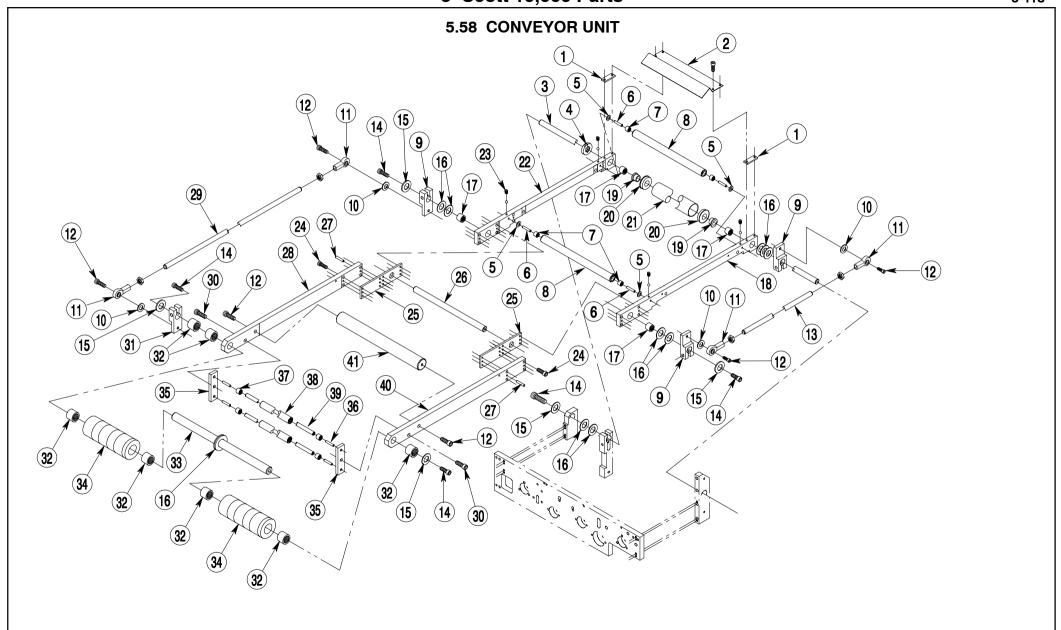




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-66020	BEARING, BALL	4
2	HW-61040	RING, RETAINING	5
3	C-8811	GEAR	1
4	HW-59020	KEY, SQUARE,	3
5	C-8812	GEAR,	1
6	HW-51270	SCREW, SOC HD. CAP,	2
7	HW-53140	SCREW, BUTTON HD.,	5
8	C-2042	CAM, KICKBACK RLR.	1
	HW-52080	SCREW, SET,	1
9	HW-59030	KEY, SQUARE,	1
10	C-2054	BAR, TIE	2
	HW-51210	SCREW, SOC HD. CAP,	4
	HW-57190	PIN, SPRING,	4
11	HW-62040	RING,	1
12	HW-66030	BEARING, BALL,	1
13	HW-61120	RING, RETAINING	1
14	C-2003	PLATE, TABCUTTER	1
	HW-51210	SCREW, SOC HD. CAP,	2
	HW-57160	PIN, SPRING,	2
15	HW-85070	NUT, ALLEN,	1
16	C-2004	BLOCK, TABCUTTER	1
17	C-C-9911	TUBE, ROLLER	4
18	HW-65020	BUSHING, BALL	4
19	HW-73040	SEAL	4
20	C-7805	SHAFT, THOMPSON	2
21	C-2017	ROLLER, KICKBACK	1
22	C-2008	ROLLER, REREGISTER	1

ITEM#	PART#	DESCRIPTION	# REQ
23	C-8814-A	GEAR,	1
24	HW-49100	WASHER, FLAT HARDEN,	4
25	HW-70030	ROD, END, FEMALE R.H.	4
	HW-60070	NUT, HEX,	4
26	HW-51390	SCREW, SOC HD. CAP,	4
27	C-8718	SPROCKET,	1
28	C-2051	SHAFT, RIGHT ANGLE	1
29	HW-59040	KEY, SQUARE,	1
30	C-2052	COUPLING	1
	HW-52080	SCREW, SET,	2
31	HW-55400	SCREW, HEX HD.,	3
32	C-2040	ROD, CONNECTING	1
33	C-2041	CRANK, REREGISTER	2
	HW-51380	SCREW, SOC HD. CAP,	2
34	C-9910	GEAR, BOX	1
35	C-2053	SPACER, RIGHT ANGLE	1
36	HW-60200	NUT, NYLON INSERT,	3
37	C-2050	PLATE, RIGHT ANGLE	1
38	HW-51370	SCREW, SOC HD. CAP,	4
39	C-2092	ROD, CONNECTING	1
40	C-2106	BRACKET, DELIVERY	1
	HW-51280	SCREW, SOC HD. CAP,	2
41	C-2091	ARM, CONVEYOR OPER.	1
	HW-51390	SCREW, SOC HD. CAP,	1
42	HW-57170	PIN, SPRING,	4
43	C-2030	BRACKET, PULL BACK	1
44	HW-67120	BEARING, NEEDLE	2



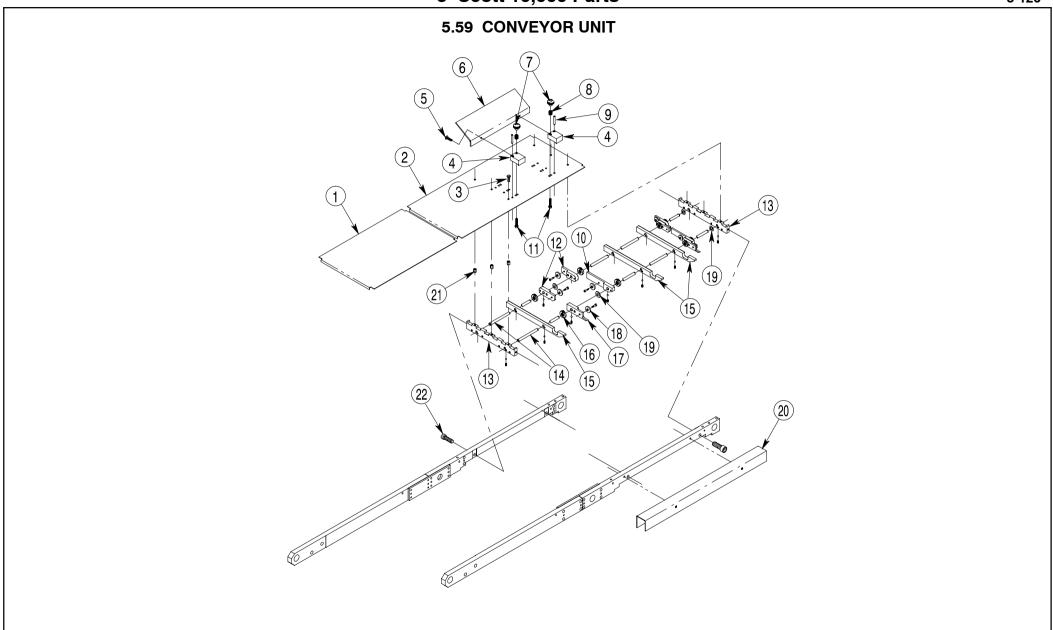




ITEM#	PART #	DESCRIPTION	# REQ
1	C-2128	SPACER, LEAD IN	2
2	C-2129	GUIDE, STACK	1
	HW-51210	SCREW, SOC HD. CAP,	4
3	C-2105	SHAFT, DELIVERY	1
4	HW-98050	COLLAR,	1
5	HW-69010	THRUST RACE	4
6	HW-56120	PIN, DOWEL,	4
7	HW-67020	BEARING, NEEDLE	4
8	C-2107	ROLLER, DELIVERY	2
9	C-2102	ARM, DELIVERY	3
10	HW-49100	WASHER, FLAT HARDEN,	4
11	HW-70030	ROD, END, FEMALE R.H.	4
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	HW-60070	NUT, HEX,	4
12	HW-51380	SCREW, SOC HD. CAP,	6
13	C-2131	ROD, CONVEYOR CONN.	1
14	HW-51460	SCREW, SOC HD. CAP,	5
15	HW-49110	WASHER, FLAT,	5
16	HW-69200	THRUST RACE	9
17	HW-67120	BEARING, NEEDLE	4
18	C-2139	BAR, CONVEYOR RIGHT	1
19	HW-64110	BEARING, FLANGE	2
20	C-9912	PLUG, BEARING	2

ITEM#	PART #	DESCRIPTION	# REQ
21	C-2104	ROLLER, DELIVERY	1
22	C-2140	BAR, CONVEYOR RIGHT	1
23	HW-52090	SCREW, BUTTON HD.,	4
	HW-84020	BALL, NYLON,	4
24	HW-51210	SCREW, SOC HD. CAP,	16
25	C-2141	PLATE, SIDE BAR TIE	2
26	C-2100A	SHAFT, DELIVERY	1
27	HW-57170	PIN, SPRING,	8
28	C-2143	BAR, CONVEYOR LEFT	1
29	C-2130	ROD, CONVEYOR CONN.	1
30	HW-51370	SCREW, SOC HD. CAP,	2
31	C-2101	ARM, CONVEYOR	1
32	HW-72030	ROLLER, CLUTCH	7
33	C-2100	SHAFT, CONVEYOR RLR.	1
34	C-2099	ROLLER, CONVEYOR	2
35	C-2108	BAR, TAPE TAKE UP	2
36	HW-57090	PIN, SPRING,	4
37	HW-67030	BEARING, NEEDLE	4
38	C-2109	ROLLER, TAPE TAKE UP	2
39	C-2110	SHAFT, TAPE TAKE UP	2
40	C-2142	BAR, CONVEYOR LEFT	1
41	C-2111	BAR, CONVEYOR SPACER	1



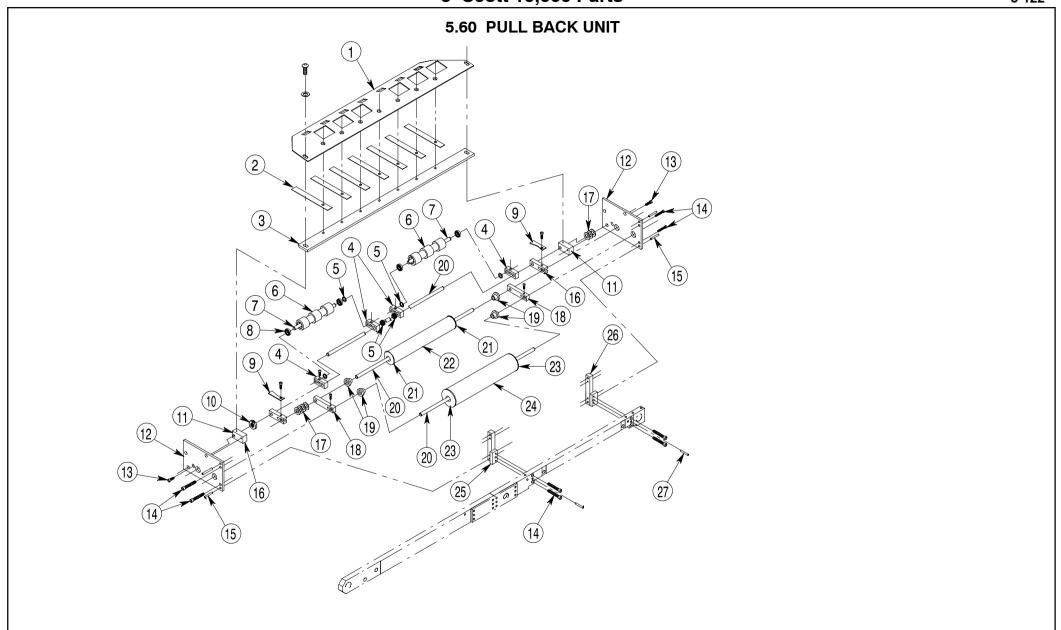




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2127	PLATE, BELT SUPPORT	1
2	C-2126	PLATE, BELT SUPPORT	1
3	HW-54020	SCREW, FLAT HD.,	6
4	C-2125	BLOCK DEFLECTOR MTG.	2
5	HW-54090	SCREW, FLAT HD.,	2
6	C-2124	PLATE, SHEET	1
7	HW-81070	KNOB,	2
8	HW-79090	SPRING, COMP.,	2
9	HW-57190	PIN, SPRING,	2
10	C-2094	ARM, PAPER HOLDDOWN	2
11	C-2194	BOLT, HEXAGON HEAD	2
12	C-2095	ARM, PAPER HOLDDOWN	4
13	C-2098	BAR, CROSS CONVEYOR	2
	HW-52080	SCREW, SET,	4
	HW-84020	BALL, NYLON,	4

ITEM#	PART #	DESCRIPTION	# REQ
14	C-2096	ROD, PAPER HOLDDOWN	2
15	C-2167	BAR, PAPER HOLDDOWN	3
	HW-52080	SCREW, SET,	6
	HW-84020	BALL, NYLON,	6
16	HW-98020	COLLAR,	8
17	C-2093	ARM, PAPER HOLDDOWN	2
18	C-2156	WHEEL, REREGISTER	8
	HW-55030	SCREW, SHOULDER,	8
19	HW-49060	WASHER, FLAT,	6
20	C-2134	GUARD, LINKAGE	1
21	HW-85020	NUT, ALLEN,	6
22	HW-51210	SCREW, SOC HD. CAP,	4



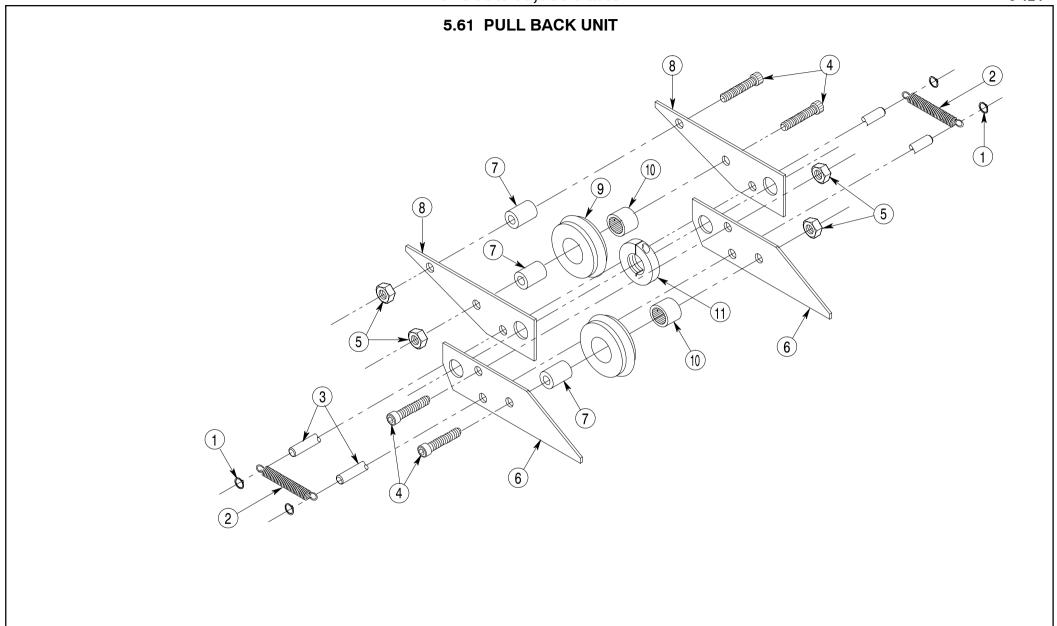




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2118	PLATE, PAPER	1
	HW-54010	SCREW, FLAT HD.,	7
	HW-53070	SCREW, BUTTON HD.,	2
	HW-49030	WASHER, FLAT,	2
2	C-2119	GATE, PULLBACK	7
3	C-2120	BAR, PULLBACK SPRING	1
4	C-2022	ARM, HOLDDOWN RLR.	4
	HW-51090	SCREW, SOC HD. CAP,	4
5	HW-61210	RING, GRIP	8
6	C-2026	ROLLER, PULL BACK	2
7	C-2025	SHAFT, PULLBACK	2
8	HW-66010	BEARING, BALL	4
9	C-2157	RETAINER, CIP LONG	2
	HW-51100	SCREW, SOC HD. CAP,	2
10	HW-98020	COLLAR,	1
11	C-2155	BLOCK, SPRING BAR	2
12	C-2116	PLATE, PULLBACK	2

ITEM#	PART #	DESCRIPTION	# REQ
13	HW-51230	SCREW, SOC HD. CAP,	2
14	HW-51210	SCREW, SOC HD. CAP,	8
15	HW-57160	PIN, SPRING,	4
16	C-2023	ARM, HOLDDOWN RLR.	2
17	HW-49060	WASHER, FLAT,	7
18	C-2024	ARM, HOLDDOWN RLR.	2
	HW-51090	SCREW, SOC HD. CAP,	2
19	HW-64100	BEARING, FLANGE	4
20	C-2029	SHAFT, PULLBACK	3
21	C-9907	PLUG, BEARING, SMALL	2
22	C-2027	POLLER, MEDIUM	1
23	C-9908	PLUG, BEARING LARGE	2
24	C-2028	ROLLER, LARGE	1
25	C-2085	BRACKET, PULLBACK	1
26	C-2086	BRACKET, PULLBACK	1
27	HW-57170	PIN, SPRING,	2



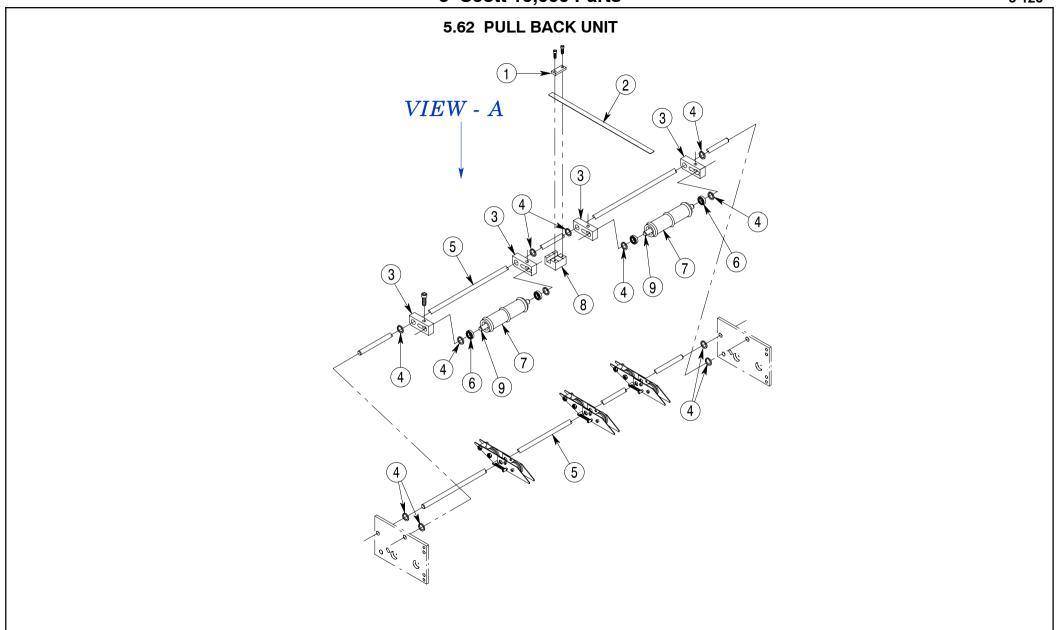




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-61190	RING, GRIP	12
2	HW-80030	SPRING, EXT.,	6
3	HW-56060	PIN, DOWEL,	6
4	HW-51100	SCREW, SOC HD. CAP,	12
5	HW-60030	NUT, HEX,	12
6	C-2154	PLATE, HOLDDOWN RLR.	6

ITEM#	PART #	DESCRIPTION	# REQ
7	C-2152	SPACER, HOLDDOWN	9
8	C-2153	PLATE, HOLDDOWN RLR.	6
9	C-2151	WHEEL, PULLBACK	6
	HW-74060	O-RING	6
10	HW-67030	BEARING, NEEDLE	6
11	HW-98020	COLLAR,	3



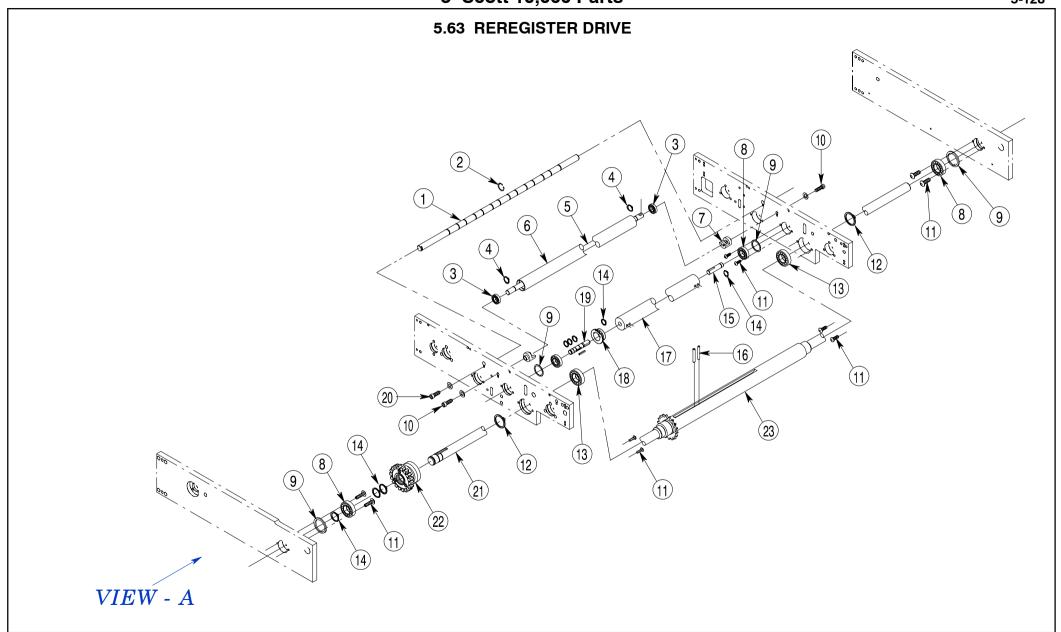




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2146	PLATE, HOLDDOWN	1
	HW-51080	SCREW, SOC HD. CAP,	2
2	C-9921	FEELER STOCK	1
3	C-2112	BAR, PULL BACK MTG.	4
	HW-51090	SCREW, SOC HD. CAP,	4
4	HW-61210	RING, GRIP	12

ITEM#	PART #	DESCRIPTION	# REQ
5	C-2029	SHAFT, PULLBACK	2
6	HW-66010	BEARING, BALL	4
7	C-2115	ROLLER, PULLBACK	2
	HW-74060	O-RING	6
8	C-2145	BLOCK, HOLDDOWN	1
9	C-2114	SHAFT, PULL BACK	2



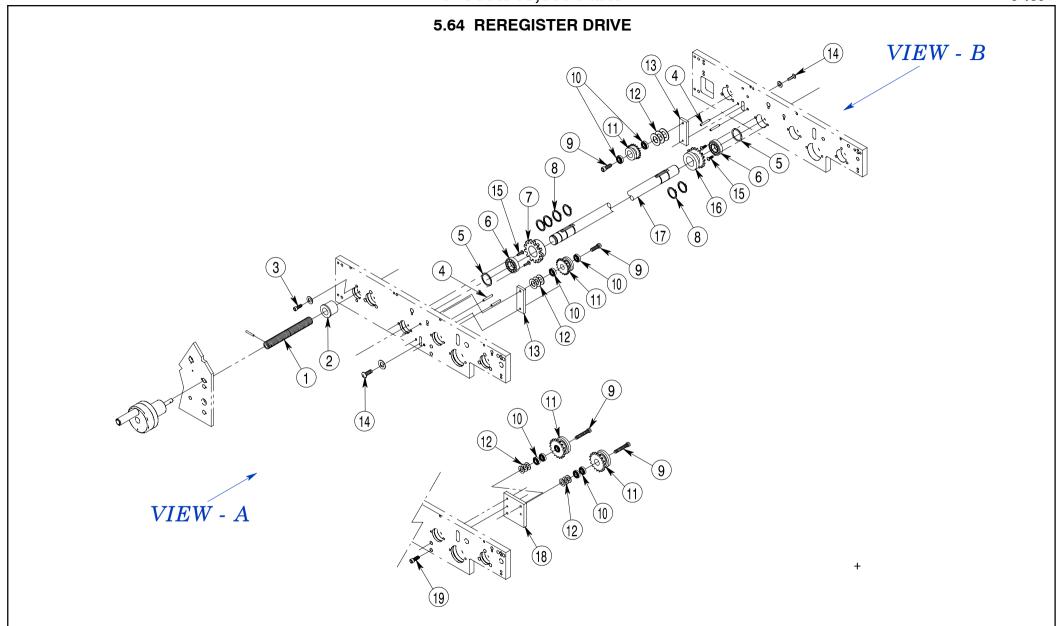




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2064	ROD, BELT GUIDE	1
2	HW-61220	RING, GRIP	14
3	HW-66020	BEARING, BALL	2
4	HW-61040	RING, RETAINING	2
5	C-2174	SHAFT, IDLER ROLLER	1
6	C-2169	ROLLER, IDLER	1
7	C-2176	ADAPTER, SHAFT MTG.	2
8	HW-66040	BEARING, BALL	4
9	HW-62050	RING	4
10	HW-51230	SCREW, SOC HD. CAP,	2
	HW-49040	WASHER, FLAT,	2
11	HW-53140	SCREW, BUTTON HD.,	10
12	HW-62070	RING	2
13	HW-66060	BEARING, BALL	2

ITEM#	PART #	DESCRIPTION	# REQ
14	HW-61130	RING, RETAINING	8
15	C-2063	SHAFT, BELT DRIVE	1
16	HW-57190	PIN, SPRING,	2
17	C-2065	ROLLER, BELT DRIVE	1
	HW-52219	SCREW, SET,	8
18	HW-87060	SPROCKET,	1
19	C-2066	SHAFT, BELT DRIVE	1
	HW-59030	KEY, SQUARE,	1
20	HW-51200	SCREW, SOC HD. CAP,	1
	HW-49040	WASHER, FLAT,	1
21	C-2072	SHAFT, REREGISTER	1
22	HW-87100	SPROCKET,	1
23	C-2073-1	TUBE, REREGISTER	1



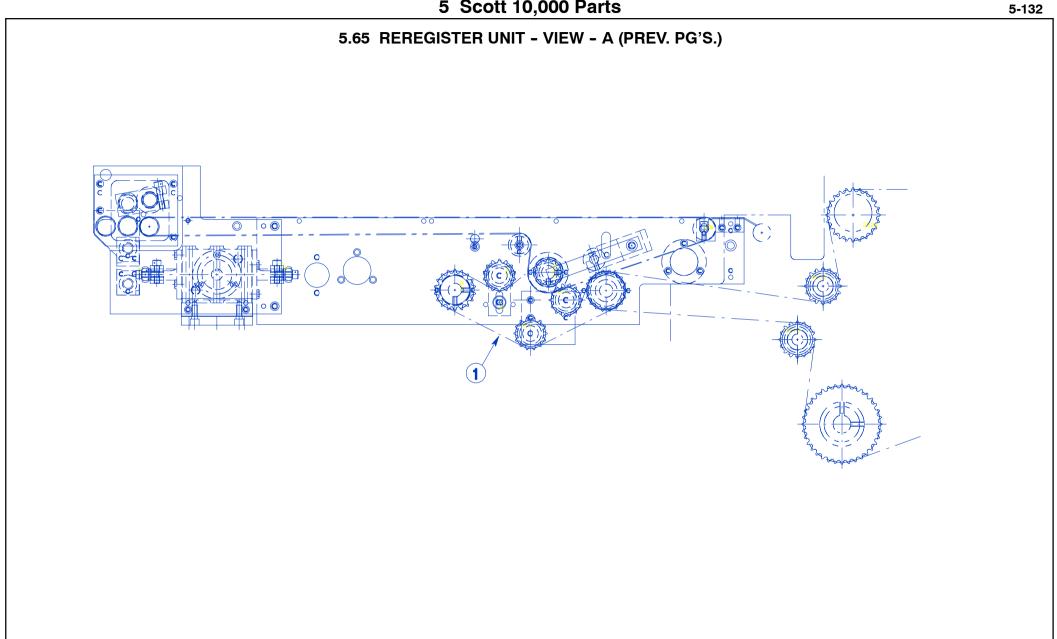




ITEM#	PART#	DESCRIPTION	# REQ
1	PF-0183	SCREW, ADJUSTMENT ACME	1
	HW-57090	PIN, SPRING,	1
2	PF-0184	NUT, ACME	1
3	HW-82030	SCREW, LOCK	2
	HW-49130	WASHER, D-SHAPE,	2
4	HW-57170	PIN, SPRING,	8
5	HW-62050	RING	2
6	HW-66040	BEARING, BALL	2
7	HW-87070	SPROCKET,	1
8	HW-61130	RING, RETAINING	6
9	HW-51390	SCREW, SOC HD. CAP,	4

ITEM#	PART #	DESCRIPTION	# REQ
10	HW-66100	BEARING, BALL,	8
11	HW-87020	SPROCKET, IDLER,	4
12	HW-49050	WASHER, FLAT,	12
13	C-2059-1	BLOCK, CHAIN TAKE-UP	2
14	HW-53220	SCREW, BUTTON HD.,	2
	HW-49110	WASHER, FLAT,	2
15	HW-53140	SCREW, BUTTON HD.,	4
16	HW-87060	SPROCKET,	1
17	C-2060	SHAFT, IDLER	1
18	C-2144	PLATE, IDLER SPKT.	1
19	HW-51220	SCREW, SOC HD. CAP,	2
20	HW-59030	KEY. SQUARE	2



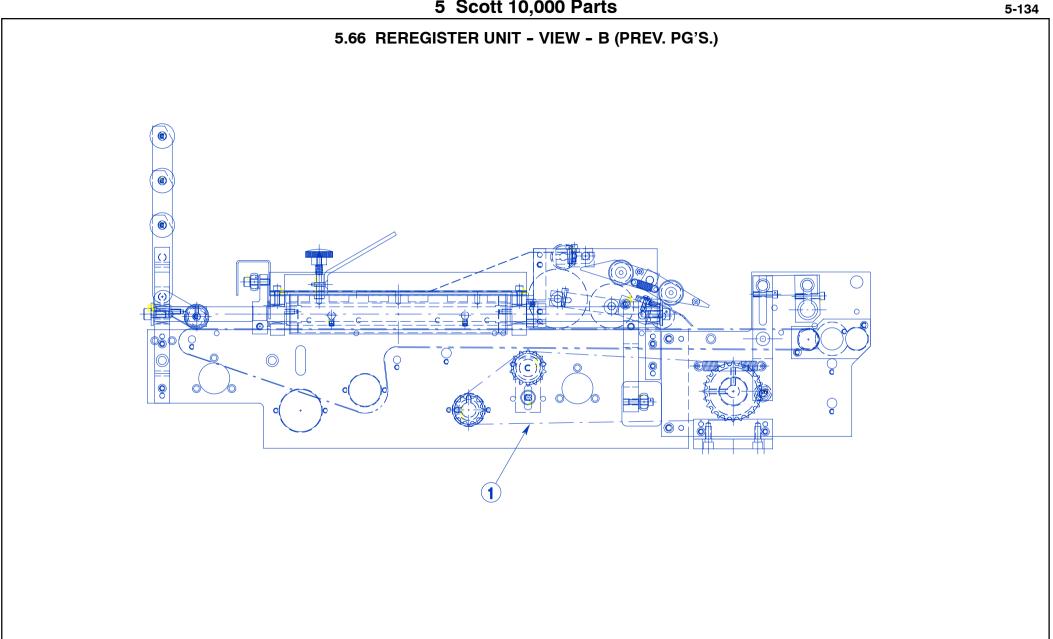




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-77010	ROLLER, CHAIN	1
	HW-77020	CONNECTING, LINK,	2

ITEM#	PART #	DESCRIPTION	# REQ







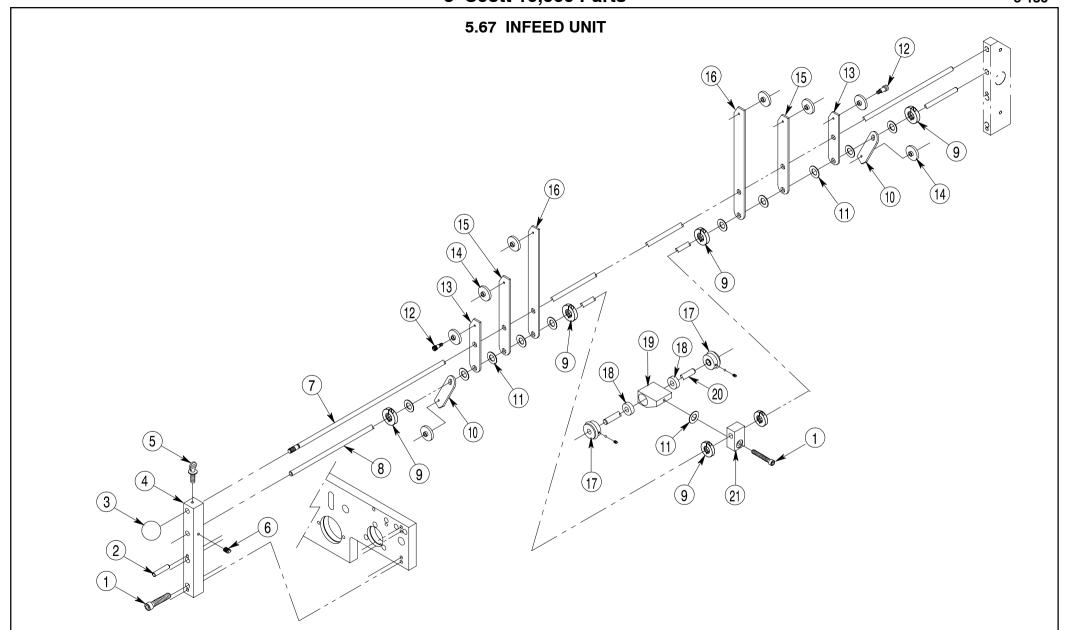
ITEM#	PART #	DESCRIPTION	# REQ
1	HW-77010	ROLLER, CHAIN	1
	HW-77020	CONNECTING, LINK,	2

Scott 10,000 Parts

ITEM#	PART #	DESCRIPTION	# REQ

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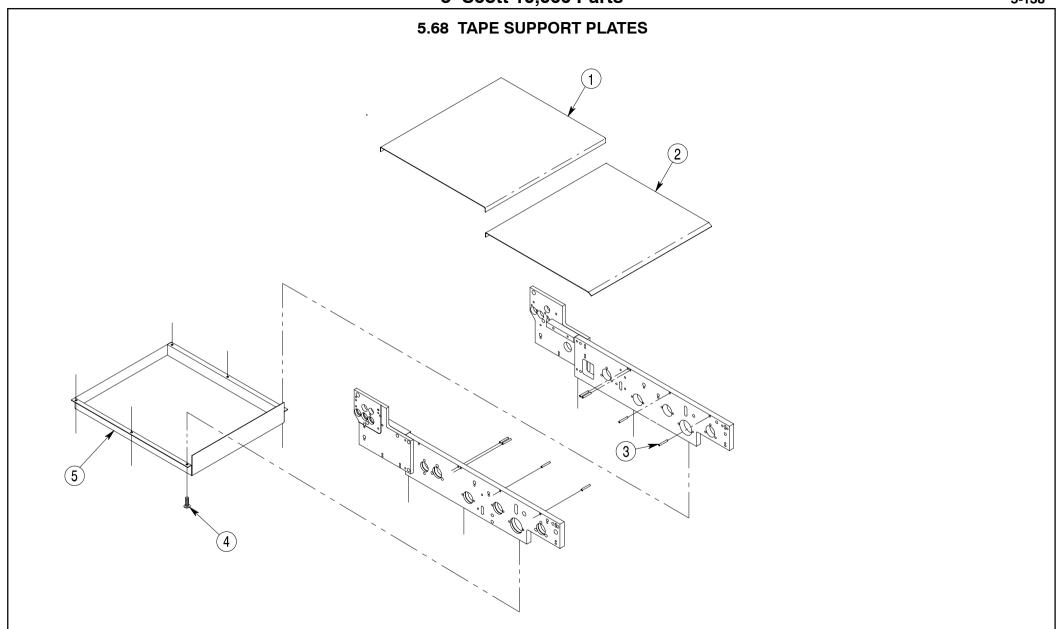


ITEM#	PART #	DESCRIPTION	# REQ
1	HW-51240	SCREW, SOC HD. CAP,	2
2	HW-57170	PIN, SPRING,	2
3	HW-81060	HANDLE, BALL,	1
4	C-2031	BRACKET, PULL BACK	1
5	HW-55480	SCREW, THUMB	1
6	HW-52080	SCREW, SET,	1
7	C-2037	ROD, INFEED ROLLER	1
8	C-2036	ROD, INFEED ROLLER	1
9	HW-98020	COLLAR,	6
10	C-2032-P	ARM, INFEED ROLLER	2
11	HW-69150	THRUST RACE	11
12	HW-55030	SCREW, SHOULDER,	8
1A	HW-51340	SCREW, SOC. HD. CAP	1

ITEM#	PART #	DESCRIPTION	# REQ
13	C-2033	ARM, INFEED ROLLER	2
14	C-2156	WHEEL, REREGISTER	8
15	C-2034	ARM, INFEED ROLLER	2
16	C-2035	ARM, INFEED ROLLER	2
17	C-2162	ROLLER, GUIDE	2
	HW-74060	O-RING	2
	HW-52020	SCREW, SET,	2
	HW-84020	BALL, NYLON,	2
18	C-2178	BEARING, NYLON	2
19	C-2161	HOUSING, GUIDE RLR.	1
20	C-2160	SHAFT, GUIDE ROLLER	1
21	C-2163	BLOCK, GUIDE ROLLER	1

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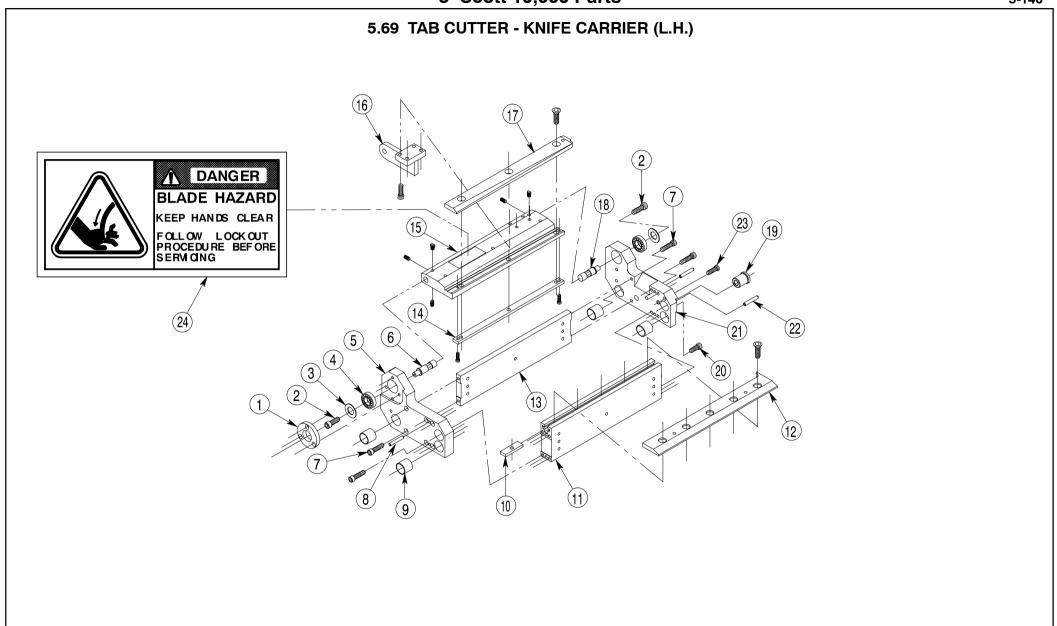




ITEM#	PART#	DESCRIPTION	# REQ
1	C-2138	PLATE, TAPE SUPPORT REAR	1
2	C-2137	PLATE, TAPE SUPPORT FRONT	1
3	HW-57170	PIN, SPRING,	8

ITEM#	PART #	DESCRIPTION	# REQ
4	HW-53150	SCREW, BUTTON HD.,	6
5	C-2184	COVER, BOTTOM REREGISTER	1



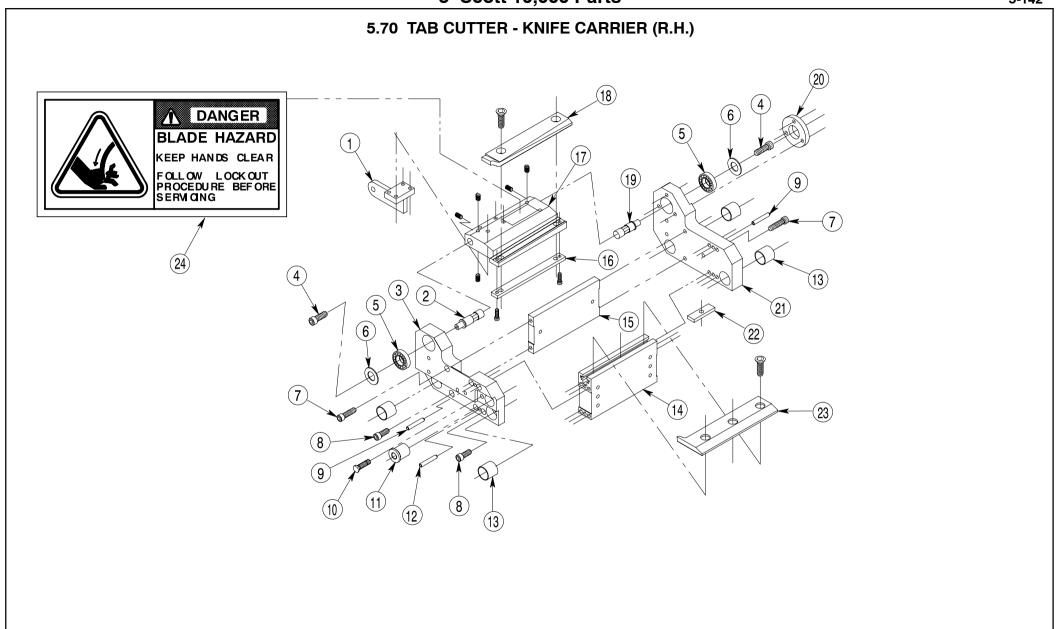




ITEM#	PART #	DESCRIPTION	# REQ
1	C-0504	RETAINER	1
	HW-51210	SCREW, SOC. HD. CAP,	3
2	HW-51070	SCREW, SOC. HD., CAP,	2
3	HW-49080	WASHER, FLAT,	2
4	HW-66080	BEARING, BALL,	2
5	C-0505	PLATE, END L.H.	1
6	C-0515	PIN, PIVOT LONG	1
7	HW-51230	SCREW, SOC. HD. CAP,	9
8	HW-57190	PIN, SPRING,	3
9	HW-64040	BEARING, BRONZE	4
10	C-0527	PLATE, T - NUT	5
11	C-0518	CROSS TIE, KNIFE MOUNTING L.H.	1
12	C-0523	KNIFE, LOWER L.H.	1
	HW-54150	SCREW, FLAT HD.,	5
13	C-0530	CROSS TIE, L.H. LONG	1

ITEM#	PART #	DESCRIPTION	# REQ
14	F-0515	PLATE, NUT LONG	1
	HW-55020	SCREW, SHOULDER,	2
15	C-0506	CARRIER, KNIFE L.H. (LONG)	1
	HW-52080	SCREW, SOC. SET,	6
16	F-0505	LEVER, KNIFE	1
	HW-51210	SCREW, SHC,	3
17	C-0524	KNIFE, UPPER L.H.	1
	HW-54170	SCREW, FLAT HD.,	3
18	C-0512	PIN, PIVOT SHORT	1
19	C-0507	NUT, ADJ. L.H. ACME THD.	1
20	HW-51210	SCREW, SOC. HD. CAP,	3
21	C-0509	PLATE, MIDDLE L.H.	1
22	HW-57170	PIN, SPRING,	1
23	HW-82030	SCREW, LOCKING	1
24	C-0564	LABEL, CAUTION, BLADE HAZARD	1



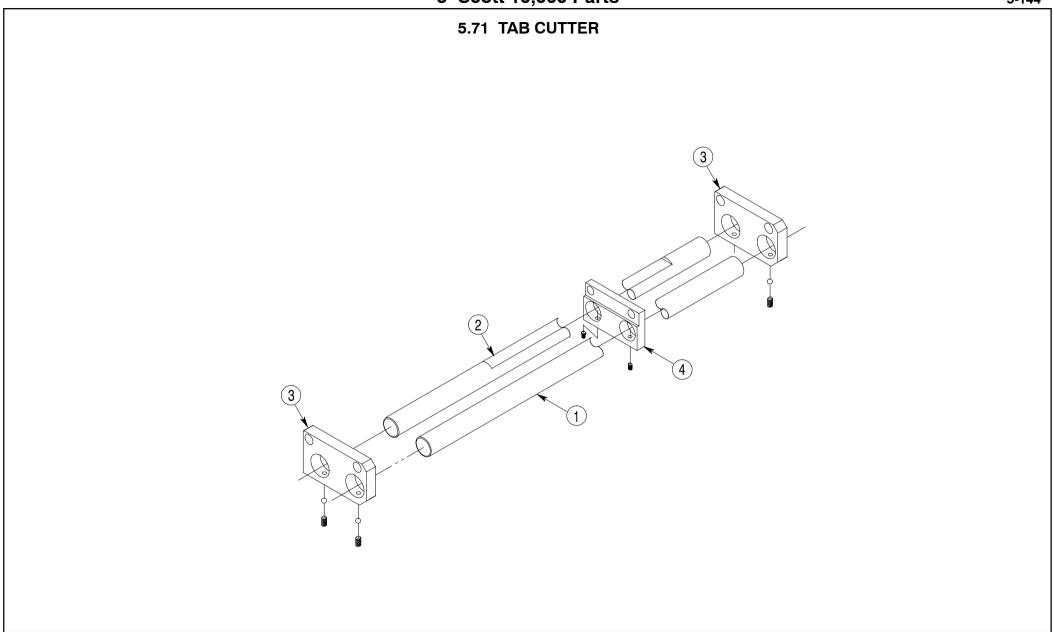




ITEM#	PART #	DESCRIPTION	# REQ
1	F-0505	LEVER, KNIFE	1
	HW-51210	SCREW, SOC. SET,	
2	C-0512	PIN, PIVOT SHORT	1
3	C-0510	PLATE, MIDDLE R.H.	1
4	HW-51070	SCREW, SOC. HD. CAP,	2
5	HW-66080	BEARING, BALL	2
6	HW-49080	WASHER, FLAT,	2
7	HW-51230	SCREW, SOC. HD. CAP,	9
8	HW-51210	SCREW, SOC. HD. CAP,	3
9	HW-57190	PIN, SPRING,	3
10	HW-82030	SCREW, LOCKING	1
11	C-0215	NUT, ADJ. R.H. ACME THD.	1
12	HW-57170	PIN, SPRING,	1
13	HW-64040	BEARING, BRONZE	4
14	C-0531	CROSS TIE, KNIFE MOUNTING R.H.	1

ITEM#	PART #	DESCRIPTION	# REQ
15	C-0529	CROSS TIE, R.H. SHORT	1
16	F-0516	PLATE, NUT SHORT	1
	HW-55020	SCREW, SHOULDER,	2
17	C-0514	CARRIER, KNIFE R.H.	1
	HW-52080	SCREW, SOC. SET,	6
18	C-0525	KNIFE, UPPER R.H.	1
	HW-54170	SCREW, FLAT HD.,	2
19	C-0515	PIN, PIVOT LONG	1
20	C-0504	RETAINER	1
	HW-51210	SCREW, SOC. HD. CAP,	3
21	C-0516	PLATE, END R.H.	1
22	C-0527	PLATE, T-NUT	3
23	C-0526	KNIFE, LOWER R.H.	1
	HW-54150	SCREW, FLAT HD.,	3
24	C-0564	LABEL, CAUTION, BLADE HAZARD	1





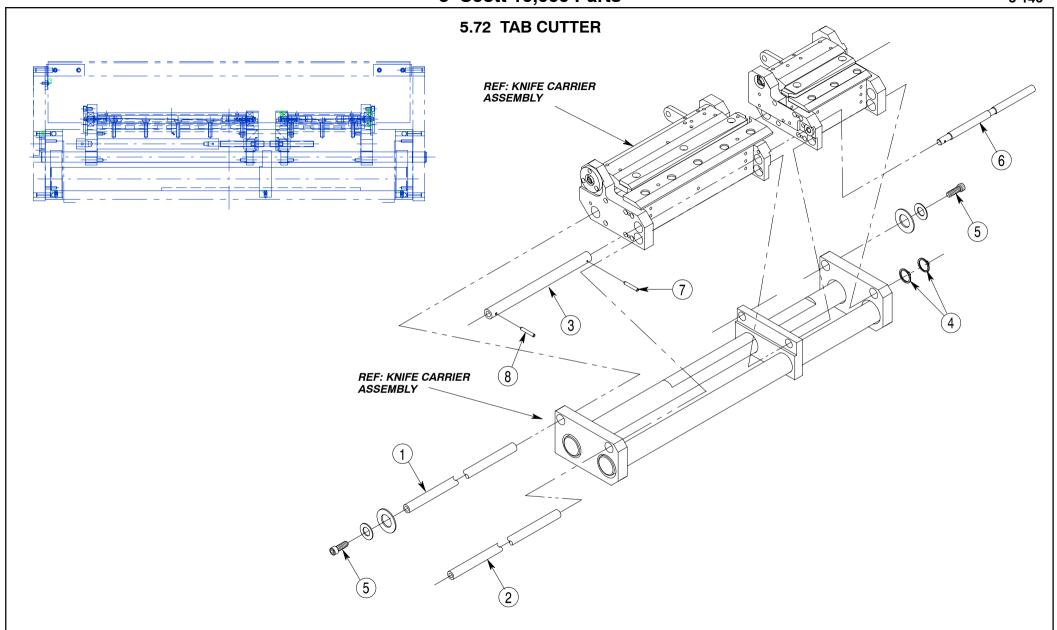


ITEM#	PART #	DESCRIPTION	# REQ
1	C-0554	SHAFT, BRACE, FRONT	1
2	C-0555	SHAFT, BRACE, REAR	1
3	C-0553	TIE PLATE ENDS	2
	HW-52100	SCREW, SOC. SET,	4
	HW-84020	BALL, NYLON,	4

ITEM#	PART #	DESCRIPTION	# REQ
4	C-0553-C	PLATE, CENTER TIE	1
	HW-52100	SCREW, SOC. SET,	2
	HW-84020	BALL, NYLON,	2

Scott 10,000 Parts 5.71 TAB CUTTER June, 2003 C-9999-2 Issue 1 5-145





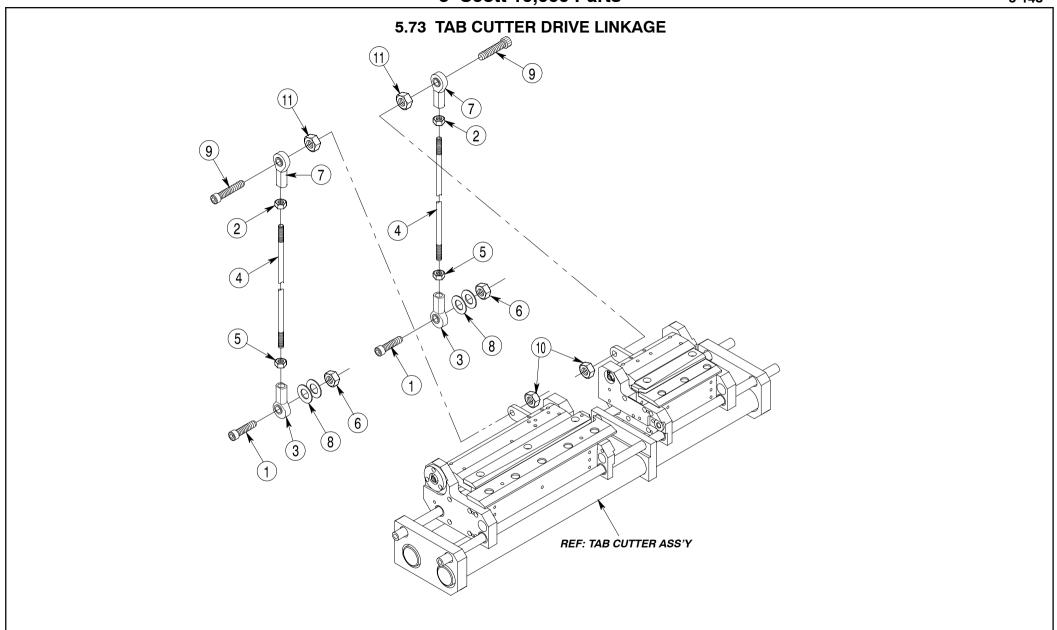


ITEM#	PART #	DESCRIPTION	# REQ
1	C-0502	BAR, GUIDE REAR	1
2	C-0503	BAR, GUIDE FRONT	1
3	C-0522	COUPLING	1
4	HW-61150	RING, RETAINING, TRUARC	2
5	HW-51460	SCREW, SOC. HD. CAP,	2
	HW-49110	WASHER, FLAT,	2
	HW-49120	WASHER, FLAT,	2

ITEM#	PART #	DESCRIPTION	# REQ
6	C-0508	SCREW, ACME	1
7	HW-57030	PIN, SPRING,	1
8	HW-57090	PIN, SPRING,	1

Scott 10,000 Parts 5.72 TAB CUTTER June, 2003 C-9999-2 Issue 1 5-147



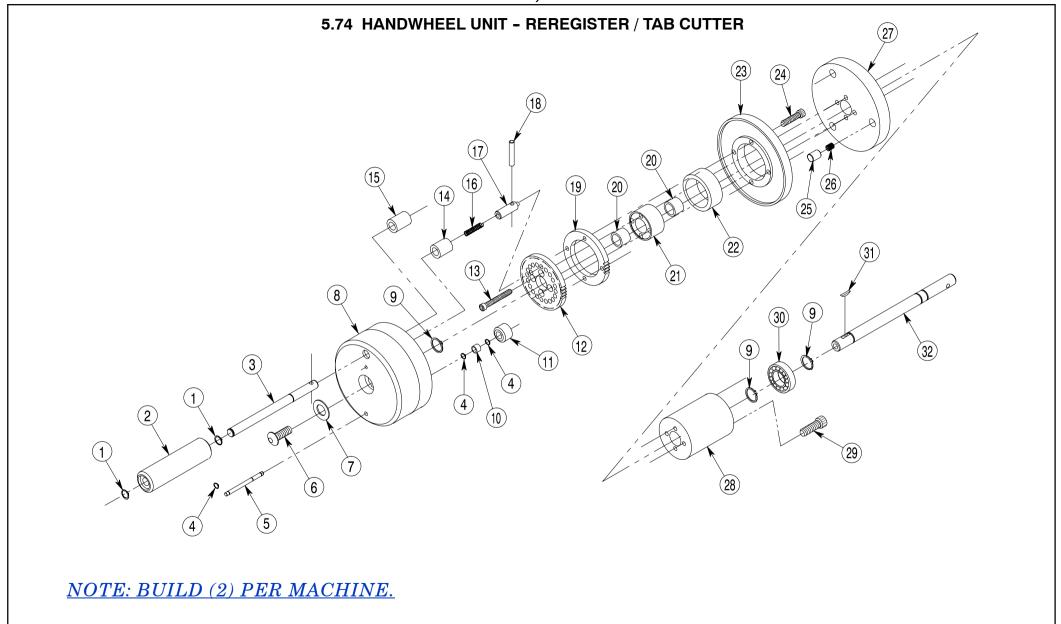




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-51550	SCREW, SOC. HD. CAP,	2
2	HW-60160	NUT, HEX HD. JAM L.H.,	2
3	HW-70060	ROD END, FEMALE L.H.	2
4	F-0508	ROD, TIE	2
5	HW-60150	NUT, HEX HD. JAM R.H.,	2
6	HW-60250	NUT, LOCK,	2

ITEM#	PART #	DESCRIPTION	# REQ
7	HW-70050	ROD END, FEMALE R.H.	2
8	HW-69070	THRUST RACE,	4
9	HW-51570	SCREW, SOC HD. CAP,	2
10	HW-60260	NUT, LOCK,	2
11	HW-60150	NUT, HEX JAM,	2



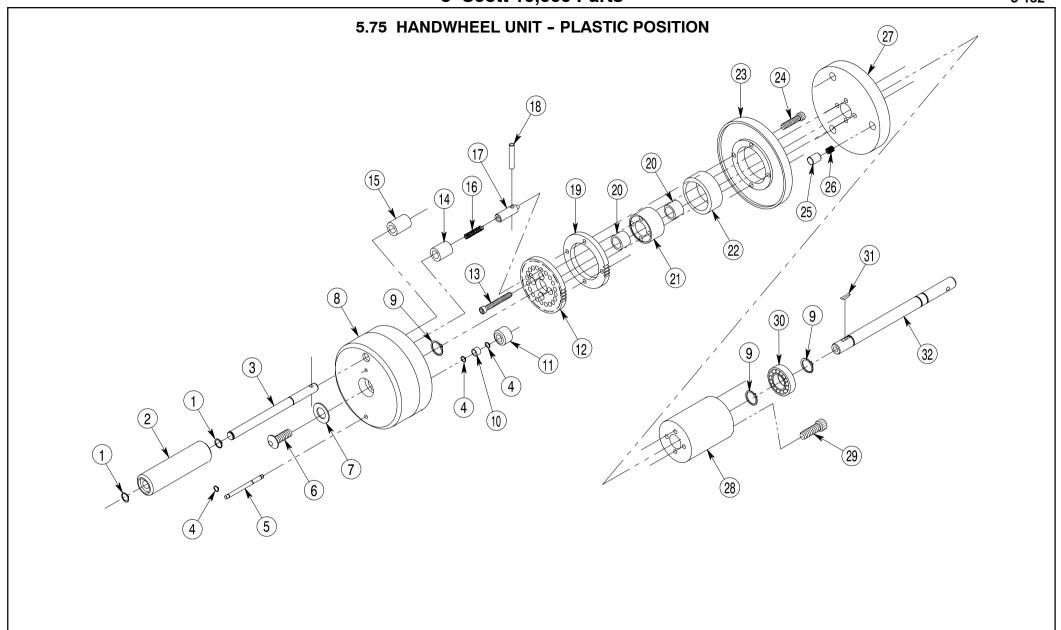




ITEM#	PART #	DESCRIPTION	# REQ
1	HW-61030	RING, RETAINING	2
2	C-0735	HANDLE	1
3	C-0733	ROD, HANDLE	1
4	HW-61010	RING, RETAINING	3
5	C-0706	ROD, PINION	1
6	HW-53150	SCREW, BUTTON HD.,	1
7	HW-49090	THRUST RACE	1
8	C-0703	TURNCAP	1
	C-0746	LABLE, OUTER, METRIC	4
	C-0748	LABLE, OUTER, BRITISH	4
9	HW-61110	RING, RETAINING	3
10	HW-67010	BEARING, NEEDLE	1
11	C-8808	GEAR, PINION	1
12	C-8802	GEAR, POSITIONING	1
13	HW-51150	SCREW, SOC. HD. CAP,	4
14	HW-83010	BUSHING, STD.	1
15	HW-83020	BUSHING, STD.	1
16	HW-79110	SPRING,	1

ITEM#	PART #	DESCRIPTION	# REQ
17	C-0734	PLUNGER	1
18	HW-57110	PIN, SPRING,	1
19	C-8803	VERNIER, RING SETTING	1
20	HW-67080	BEARING, NEEDLE	2
21	C-0732	SPACER	1
22	HW-67140	BEARING, NEEDLE	1
23	C-0707	RING, VERNIER	1
	C-0747	LABLE, INNER, METRIC	4
	C-0749	LABLE, INNER, BRITISH	4
24	HW-51080	SCREW, SOC. HD. CAP,	4
25	C-0702	PLUG, FRICTION	3
26	HW-79040	SPRING,	3
27	C-0704	PLATE, BACKING	1
28	C-0745	SPACER	1
29	HW-51210 *	SCREW, SOC. HD. CAP,	4
30	HW-66020	BEARING, BALL	1
31	HW-58010	KEY, WOODRUFF,	1
32	F-0744	SHAFT, EXTENSION	1
33	HW-59510	SPACER	1
34	HW-49520	KEYED SPACER	1



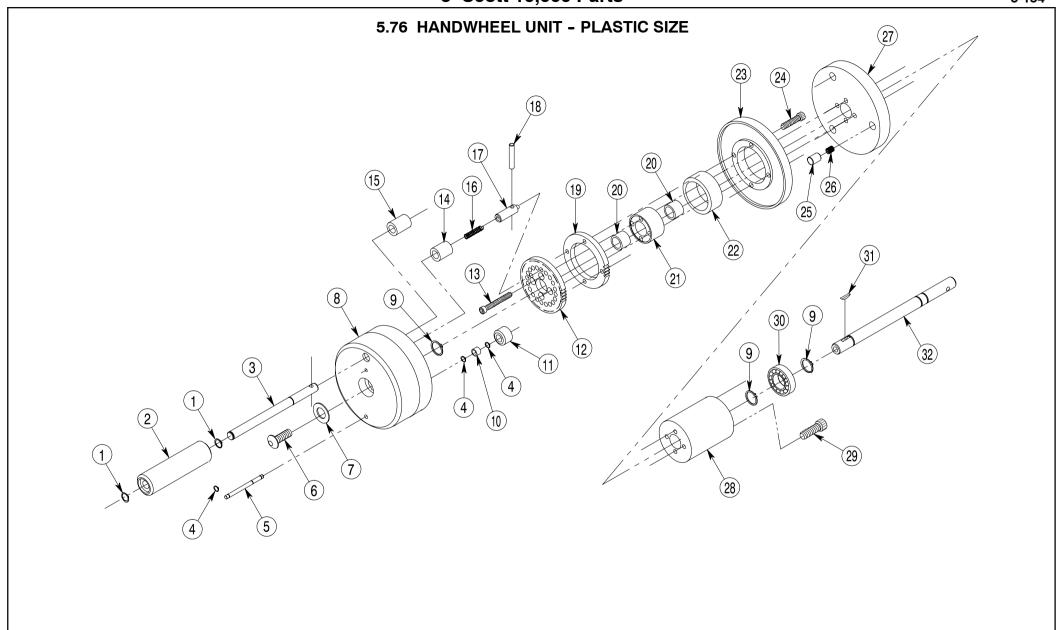




ITEM#	PART#	DESCRIPTION	# REQ
1	HW-61030	RING, RETAINING	2
2	C-0735	HANDLE	1
3	C-0733	ROD, HANDLE	1
4	HW-61010	RING, RETAINING	3
5	C-0706	ROD, PINION	1
6	HW-53150	SCREW, BUTTON HD.,	1
7	HW-49090	THRUST RACE	1
8	C-0703	TURNCAP	1
	C-0746	LABLE, OUTER, METRIC	4
	C-0748	LABLE, OUTER, BRITISH	4
9	HW-61110	RING, RETAINING	3
10	HW-67010	BEARING, NEEDLE	1
11	C-8808	GEAR, PINION	1
12	C-8802	GEAR, POSITIONING	1
13	HW-51150	SCREW, SOC. HD. CAP,	4
14	C-8306A	BUSHING, STD.	1
15	HW-83020	BUSHING, STD.	1
16	HW-79110	SPRING,	1

ITEM#	PART #	DESCRIPTION	# REQ
17	C-0734	PLUNGER	1
18	HW-57110	PIN, SPRING,	1
19	C-8803	VERNIER, RING SETTING	1
20	HW-67080	BEARING, NEEDLE	2
21	C-0732	SPACER	1
22	HW-67140	BEARING, NEEDLE	1
23	C-0707	RING, VERNIER	1
	C-0747	LABLE, INNER, METRIC	4
	C-0749	LABLE, INNER, BRITISH	4
24	HW-51080	SCREW, SOC. HD. CAP,	4
25	C-0702	PLUG, FRICTION	3
26	HW-79040	SPRING,	3
27	C-0704	PLATE, BACKING	1
28	C-0705-1	SPACER	1
29	HW-51210 *	SCREW, SOC. HD. CAP,	2
30	HW-66020	BEARING, BALL	1
31	HW-58010	KEY, WOODRUFF,	1
32	PF-0182	SHAFT, EXTENSION	1







ITEM#	PART#	DESCRIPTION	# REQ
1	HW-61030	RING, RETAINING	2
2	C-0735	HANDLE	1
3	C-0733	ROD, HANDLE	1
4	HW-61010	RING, RETAINING	3
5	C-0706	ROD, PINION	1
6	HW-53150	SCREW, BUTTON HD.,	1
7	HW-49090	THRUST RACE	1
8	C-0703	TURNCAP	1
	C-0746	LABLE, OUTER, METRIC	4
	C-0748	LABLE, OUTER, BRITISH	4
9	HW-61040	RING, RETAINING	3
10	HW-67010	BEARING, NEEDLE	1
11	C-8808	GEAR, PINION	1
12	C-8802	GEAR, POSITIONING	1
13	HW-51150	SCREW, SOC. HD. CAP,	4
14	HW-83010	BUSHING, STD.	1
15	HW-83020	BUSHING, STD.	1
16	HW-79110	SPRING,	1

ITEM#	PART #	DESCRIPTION	# REQ
17	C-0734	PLUNGER	1
18	HW-57110	PIN, SPRING,	1
19	C-8803	VERNIER, RING SETTING	1
20	HW-67080	BEARING, NEEDLE	2
21	C-0732	SPACER	1
22	HW-67140	BEARING, NEEDLE	1
23	C-0707	RING, VERNIER	1
	C-0747	LABLE, INNER, METRIC	4
	C-0749	LABLE, INNER, BRITISH	4
24	HW-51080	SCREW, SOC. HD. CAP,	4
25	C-0702	PLUG, FRICTION	3
26	HW-79040	SPRING,	3
27	C-0704	PLATE, BACKING	1
28	C-0705-1	SPACER	1
29	HW-51210 *	SCREW, SOC. HD. CAP,	2
30	HW-66020	BEARING, BALL	1
31	HW-58010	KEY, WOODRUFF,	1
32	C-0217	SHAFT, EXTENSION	1



5.77 HANDWHEEL LOCATOR

