43 PRINTER

ADJUSTMENTS AND SPRING TENSIONS

CONTENTS PAGE

1. GENERAL

1.01 This section provides printer adjustments and spring tensions.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

1.03 Belt tensions are checked with a spring scale held at the angle shown in the adjustment illustration.

1.04 When ordering replaceable components, unless otherwise specified, prefix each part number with "TP" (ie, TP430028).

1.05 After an adjustment is complete, tighten any screws or nuts loosened to make the adjustment.

1.06 Reference in the procedure to left or right, up or down, and top or bottom, etc, refer to the printer in its normal operating position.

1.07 Adjustments should be checked and performed when a trouble indicates a specific adjustment may be out of tolerance or when an adjustment is disturbed to enable a part to be removed or replaced.

1.08 Spring tension checks should be performed when a trouble indicates a possible defective spring or to verify proper part numbers.

1.09 Springs that do not meet the tension requirements should be replaced.

Prepared for American Telephone and Telegraph Company by Teletype Corporation

2. TOOLS REQUIRED

2.01 Refer to Maintenance Tools Section 570-005-800 for a complete listing of various types of hand tools available for maintenance of TELETYPE® Equipment.

2.02 The following tools may be required when performing adjustments or spring tension checks. Most of these items should normally be present in standard maintenance tool kits.

Tools

Wrench	3/16" socket	125752
Wrench, open end	3/16" and 1/4"	129534
Wrench, open end	5/16" and 3/8"	152835
Nut driver	Handle	135676
Nut driver	1/4"	135677
Nut driver	5/16"	135678
Screwdriver	1/8", 2" blade	95368
Screwdriver	1/4", 6" blade	100982
Screwdriver	(blade less than 5/32")	94647
Allen wrench	0.062	124682
Tweezers		151392
Spring hook (pull)		142554
Spring hook (pull)		75765
Spring hook (push)		142555
Gauge set, feeler		117781
Scale, spring (8 oz)		110443
Scale, spring (32 oz)		110444
Scale, spring (64 oz)		82711
Scale, spring (15 lb)		135059
Ruler, 6"		95960

3. PRINTER ADJUSTMENTS

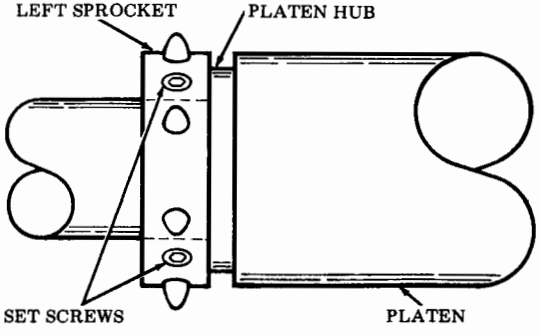
LEFT PAPER SPROCKET

Requirement

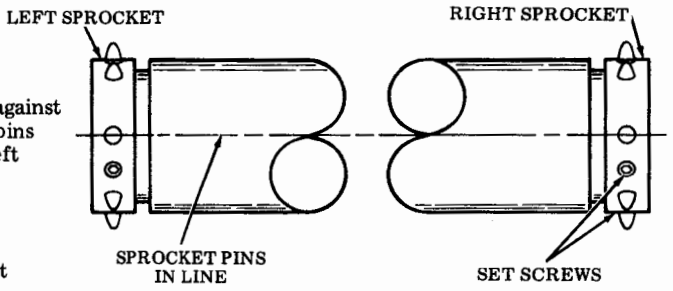
The left sprocket should be biased against the collar of the platen hub.

To Adjust

Loosen set screws and position left sprocket to meet requirement.



RIGHT PAPER SPROCKET



Requirement

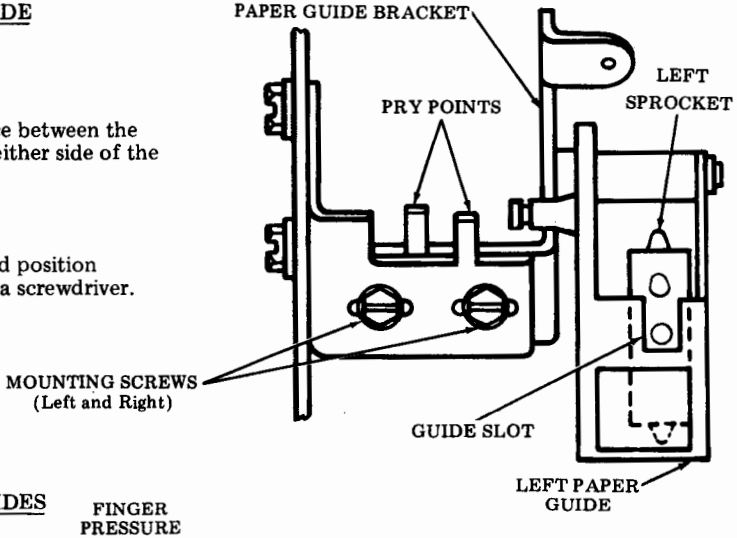
The right sprocket should be biased against the collar of the platen hub and the pins shall be in line with the pins of the left sprocket.

To Adjust

Loosen set screws and position right sprocket to meet requirement.

Note: This adjustment to be refined when making the PRINTED LINE POSITION adjustment.

LEFT AND RIGHT PAPER GUIDE
(Horizontal Positioning)



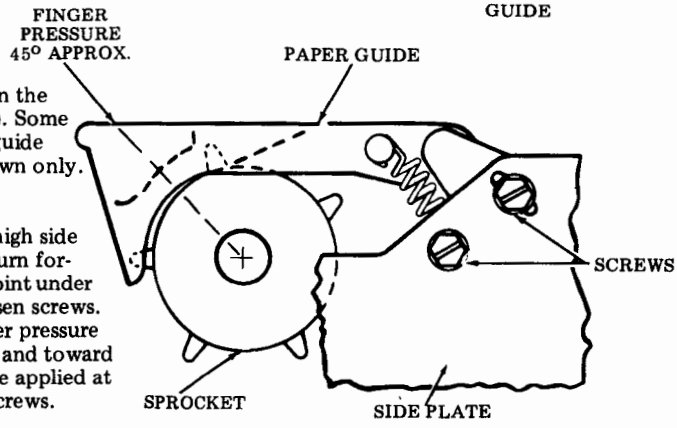
Requirement

There should be some clearance between the base of the sprocket pins and either side of the paper guide slot.

To Adjust

Loosen screws finger tight and position paper guide bracket by using a screwdriver.

LEFT AND RIGHT PAPER GUIDES
(Angular Positioning)



Requirement

The paper guides should seat fully on the paper sprockets (left and right sides). Some gap at the lower front of the paper guide is permissable. Check by pushing down only.

To Adjust

Turn platen until paper guide is on high side of the sprocket. Rotate platen 1/2 turn forward (one sprocket pin) to put high point under lower front of the paper guide. Loosen screws. To seat the paper guides, apply finger pressure to top of paper guides at 45 degrees and toward center of platen. With finger pressure applied at approximately 45 degrees, tighten screws.

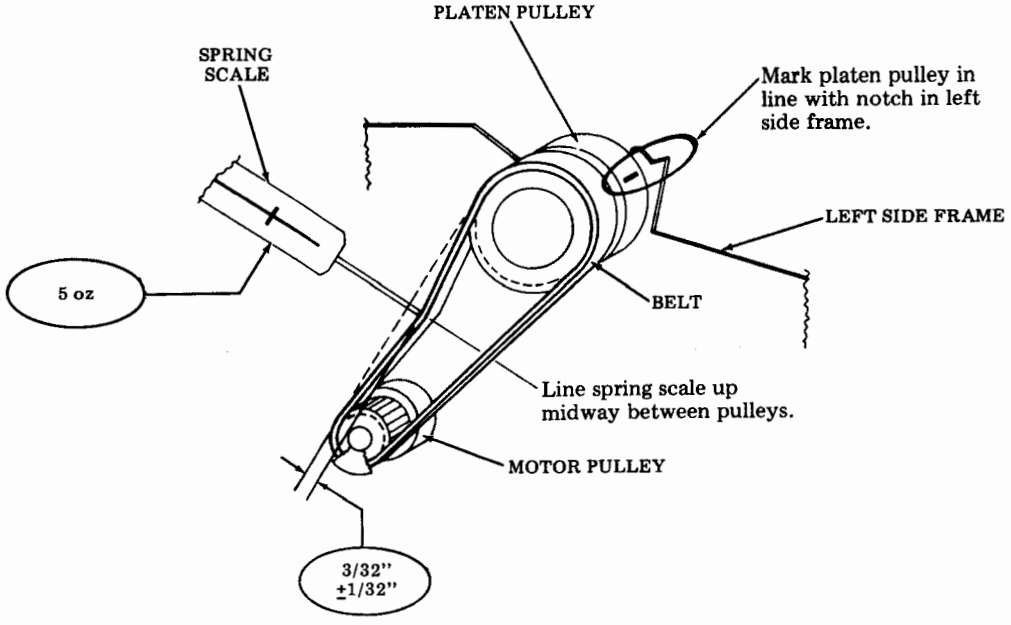
LINE FEED BELT TENSION

Requirement

When the belt and sprocket system is at the point of least slack; a force of 5 ounces applied with a spring scale midway between the sprockets the belt should deflect 3/32 inch ±1/32 inch.

To Adjust

By feel and by eye, locate the point of least slack as the platen is rotated through one revolution. Mark this point relative to the side frame, as shown below, for future reference. Loosen motor screws, position motor to meet requirement at the point of least slack. Tighten screws.



(Left Side View)

PRINT HEAD TO PLATEN

Requirement

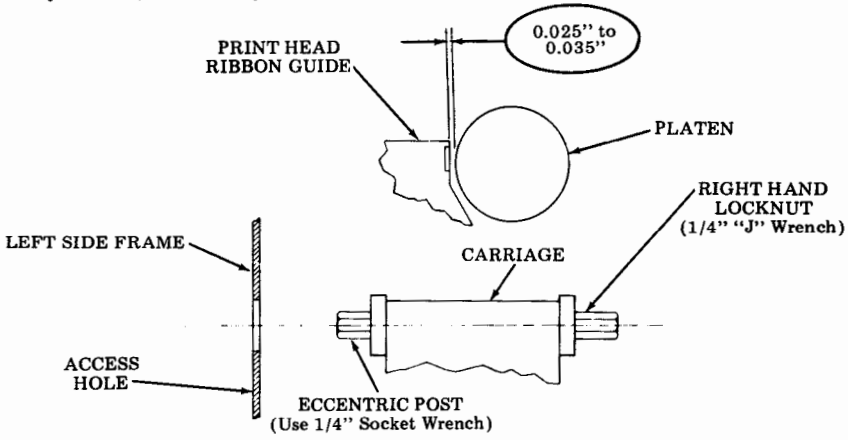
There should be

Min 0.025 inch---Max 0.035 inch

gap between the ribbon guide of the print head and the platen (without paper or ribbon) and at all positions of the carriage and platen, when platen play at the right end is biased down and to the rear and the print head is locked.

To Adjust

Position carriage to the extreme left position. Unlock locking handle, use 1/4 inch "J" wrench to loosen right-hand locknut and with carriage biased rearward, insert 1/4 inch socket wrench through access hole in left side frame and rotate eccentric post to adjust. Tighten locknut. Check adjustment with carriage locked. Check adjustment on extreme right end of platen, while biasing platen down and to the rear. Refine adjustment, if necessary.



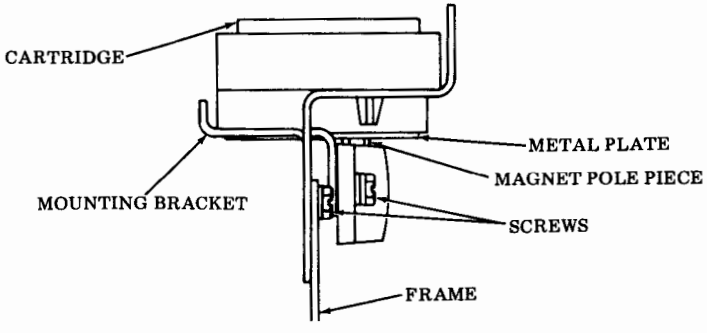
RIBBON CARTRIDGE MAGNETIC LATCH

Requirement

The magnetic pole pieces of the magnetic latch should be firmly engaged with the cartridge lower metal plate when the cartridge is installed in the right-hand cartridge mounting bracket.

To Adjust

Loosen the two magnetic latch mounting screws. Install cartridge onto the mounting bracket. While holding the cartridge down firmly, allow the magnetic latch to fully engage the lower metal plate of the cartridge. Tighten the latch mounting screws.



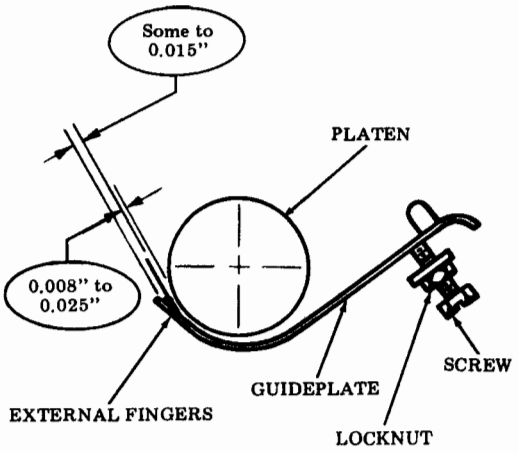
PAPER GUIDE PLATE CLEARANCE

(1) Requirement
With no sprocket forms in the platen mechanism and the platen oriented with the slot in the right platen hub in the top uppermost position there should be
Min 0.008 inch---Max 0.025 inch
between the platen and the left and right ends of the paper guideplate. Record the two clearances.

To Adjust
Loosen locknut and adjust screw. Tighten locknut.

(2) Requirement
The fingers at both the left and right ends of the platen should be
Min Some---Max 0.015 inch
beyond the recorded gap between the platen and the left and right ends of the paper guideplate.

To Adjust
Bend fingers to meet requirement.

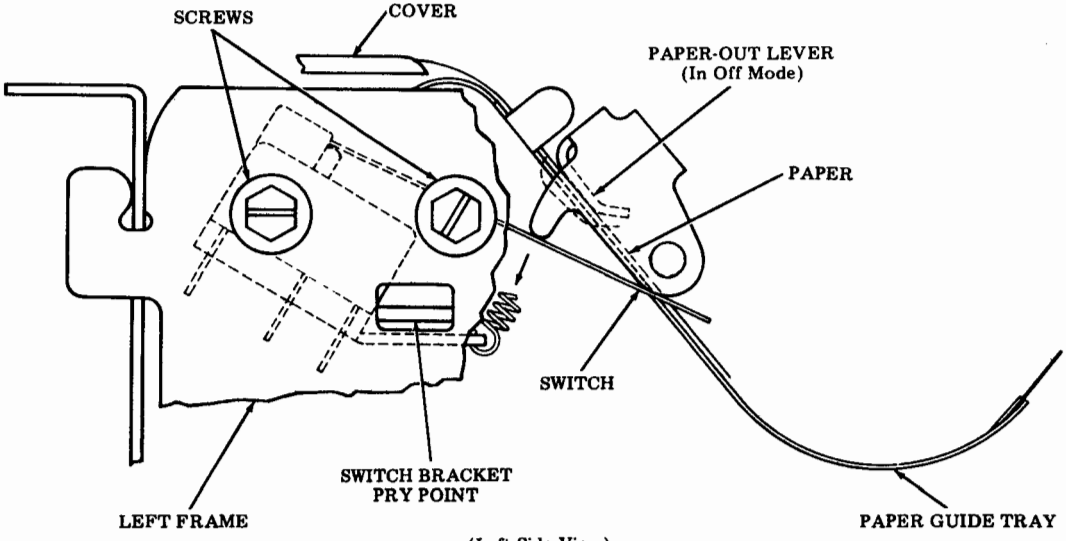


(Right Side View)

PAPER ALARM CONTACT LEVER

Requirement
With the paper alarm contact lever resting on the paper and the paper held taught over the cutout in the paper guide tray, the switch will be in the off mode (nonalarm). With the paper out, the lever should activate the switch (alarm mode).

To Adjust
Loosen screws and position switch bracket to meet requirement.

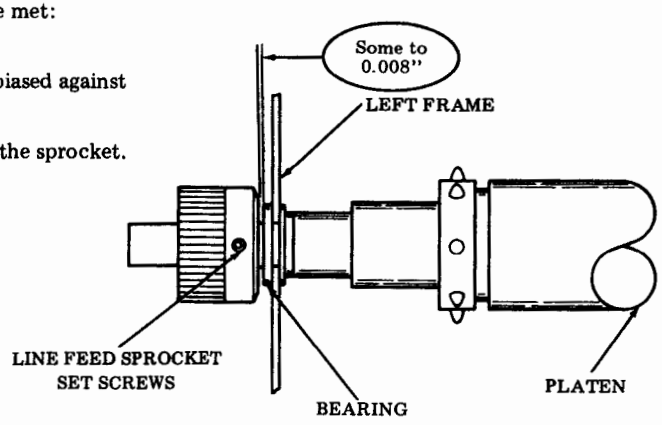


(Left Side View)

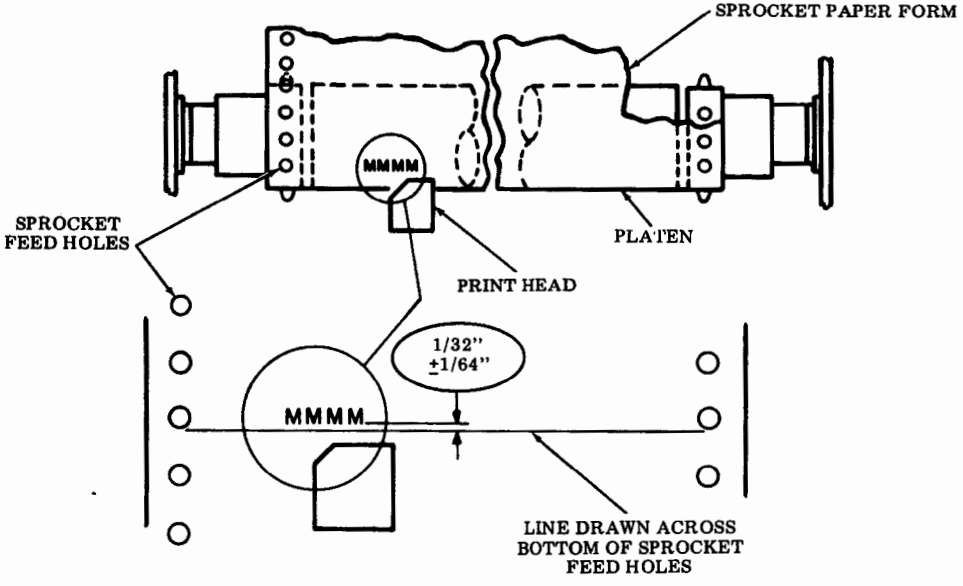
PLATEN ENDPLAY AND PRINTED LINE POSITION

The following 2 requirements must be met:

(1) Requirement
Platen Endplay — With the platen biased against the left bearing there should be
Some to 0.008 inch
clearance between the bearing and the sprocket.



(2) Requirement
Printed Line Position — The lower edges of a typed line should be 1/32 inch ±1/64 inch above a horizontal line drawn even with the bottom edge of any sprocket hole. If horizontal ruled lines are provided on which typing is to be done, the lower edges of a typed line should be even with, or a multiple of 1/6 inch from the bottom of any sprocket hole within a tolerance of ±1/64 inch. (Power must be on line feed motor for this adjustment.)



(Top View)

To Adjust
Loosen the line feed sprocket (at platen) set screws and position. Print the character "M" across the line and check (2) Requirement. If necessary, loosen set screw on right sprocket to meet alignment requirement.

4. SPRING TENSIONS

① 430028 Lead Screw Spring

On left side of lead screw, push to start to compress spring — 9 to 11 pounds.

② 430030 Carriage Nut Spring

Place carriage on left side of unit. Hold lead screw pulley. Insert spring scale through top hole of left bearing housing. Push carriage with 46 ±8 ounces to compress carriage nut spring.

③ 430242 Ribbon Tension Spring

4-1/2 to 6-1/2 ounces to pull spring to installed length with ribbon installed.

④ 101386 Paper Finger Springs (Left and Right) (2)

2 to 4 ounces to start to lift paper fingers at front edge of fingers (with center paper guide installed).

⑤ 430021 SP Belt Tension Arm Spring

18 to 22 ounces to pull spring to installed length.

⑥ 110437 Paper-Out Spring

1/2 to 1 ounce to start paper-out lever moving.

⑦ 430118 Bell Plunger Spring

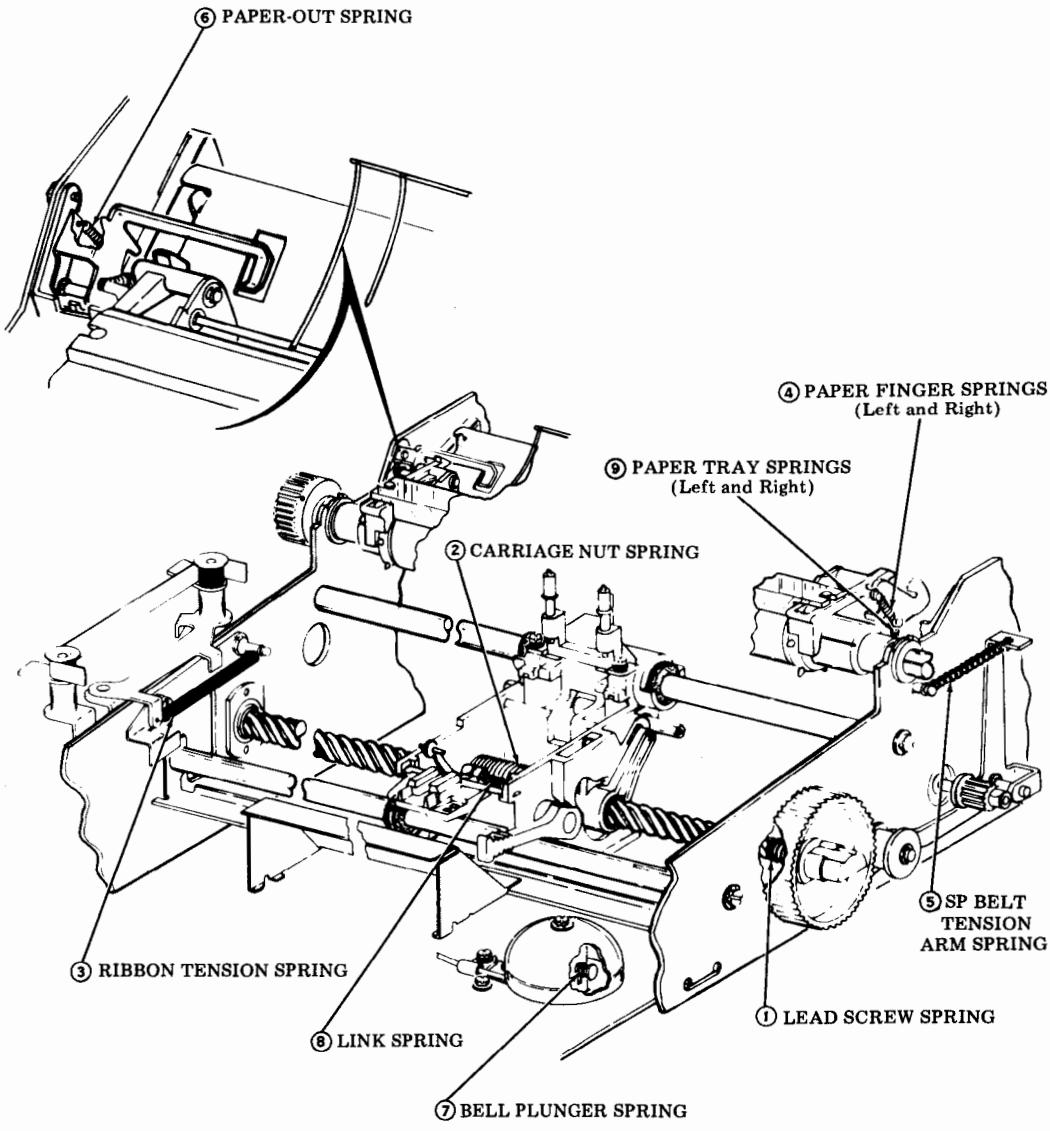
1/2 to 1 ounce to seat plunger.

⑧ Link Spring (Part of 430216)

3/4 to 1-1/4 ounces at roll pin to hold spring in lowest position with locking handle in the most forward position.

⑨ 4708 Paper Tray Springs (Left and Right) (2)

Hook paper-out lever on left paper guide. With spring scale, pull at right angle at center rear of paper tray. It should take 6 to 10 ounces to start the paper tray moving upward.


⑥ PAPER-OUT SPRING
④ PAPER FINGER SPRINGS
(Left and Right)
⑨ PAPER TRAY SPRINGS
(Left and Right)
② CARRIAGE NUT SPRING
⑤ SP BELT
TENSION
ARM SPRING
③ RIBBON TENSION SPRING
① LEAD SCREW SPRING
⑧ LINK SPRING
⑦ BELL PLUNGER SPRING