43 TRACTOR FEED 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 parts or components, unless otherwise specified, prefix each part number with "TP" (ie, TP410055).

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 tensions 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.

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 Corporation 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

Bit, 1/4 Inch Socket	135677
Bit, 5/16 Inch Socket	135678
Gauge Set	117781
Handle	135676
Hook, Pull Spring	75765
Hook, Pull Spring	142554
Hook, Push Spring	142555
Scale, Spring (64 ounce)	82711
Scale, Spring (8 ounce)	110443
Scale, Spring (32 ounce)	110444
Scale, 15 Pound Spring	135059
Screwdriver, 3-1/2 Inch Blade	94647
Screwdriver	95368
Screwdriver With Clip	100982
Tweezers	151392
Wrench, Hex Key	124682
Wrench, 3/16 Inch Socket	125752
Wrench, 3/16 Inch and 1/4 Inch Open End	129534
Wrench, 5/16 Inch and 3/8 Inch Open End	152835

Prepared for American Telephone and Telegraph Company by Teletype Corporation

3. PRINTER ADJUSTMENTS

PRINT HEAD TO PLATEN

Requirement

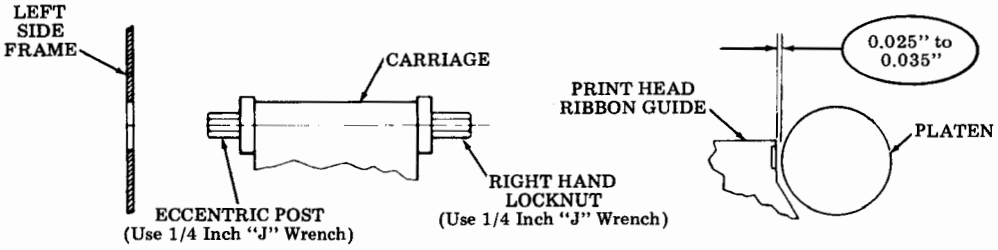
There should be

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, 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.



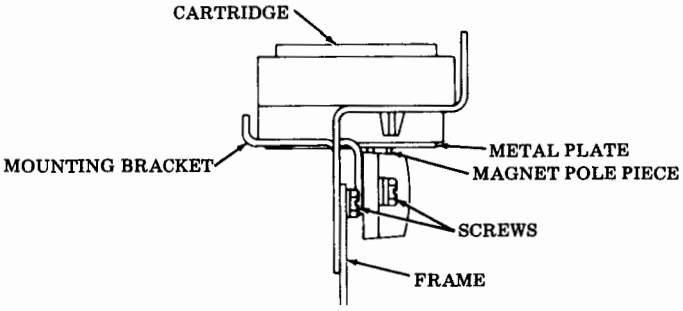
RIBBON CARTRIDGE MAGNETIC LATCH

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.



PRESSURE ROLLER BAIL

Requirement

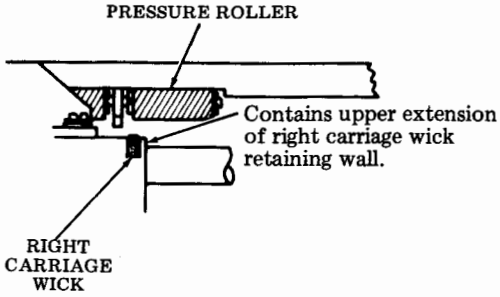
With the paper release lever in the forward position and the right end of the carriage next to the right rear carriage wick located immediately under the arm of the pressure roller bail (between the two pressure rollers) there should be from

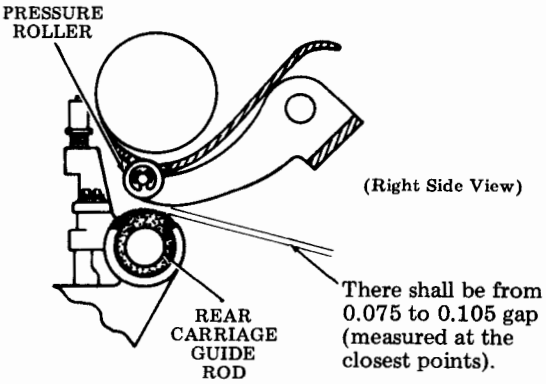
Min 0.075 inch--Max 0.105 inch

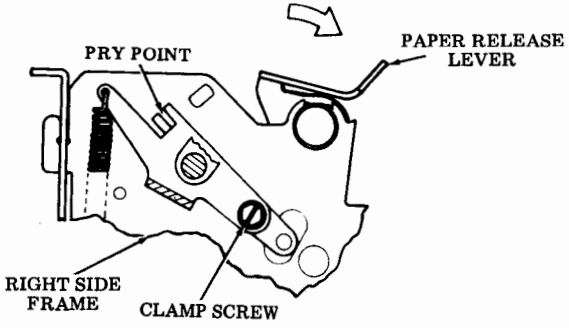
gap between the carriage and the bail arm when measured at the closest point.

To Adjust

Loosen the clamp screw to friction tight. Move pry point down to increase gap or up to decrease gap.







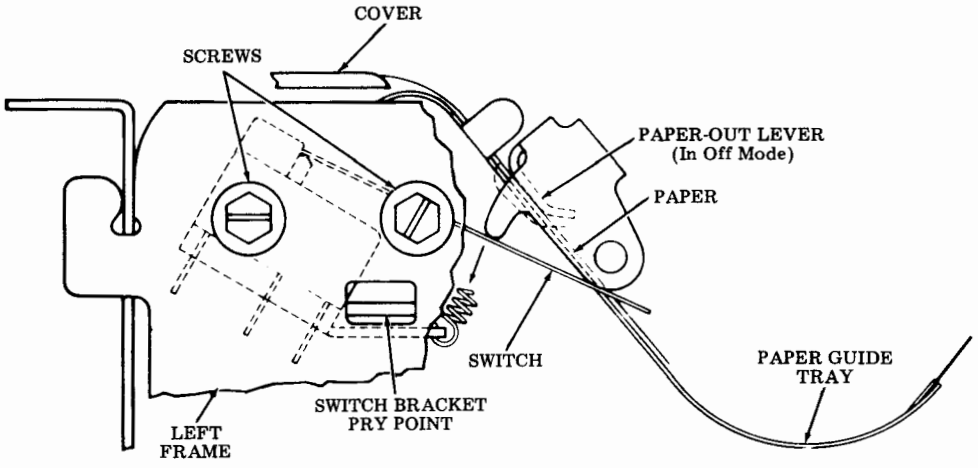
PAPER ALARM CONTACT LEVER

Requirement

With the paper alarm contact lever resting on the paper and the paper held taut 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)

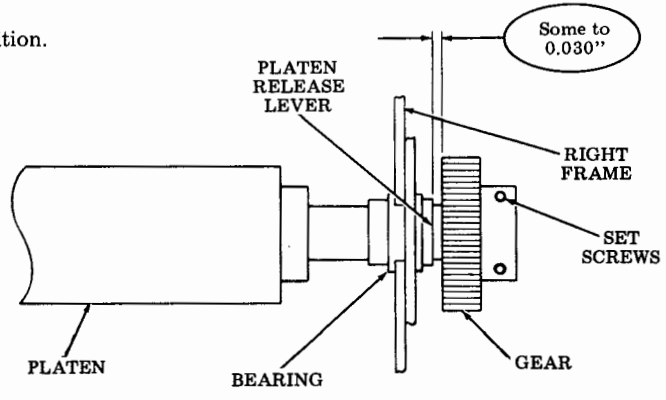
PLATEN ENDPLAY

Requirement

With the platen biased against the right bearing, there shall be
Min some---Max 0.030 inch
clearance between the right bearing and the gear.

To Adjust

Loosen the gear set screws and position.



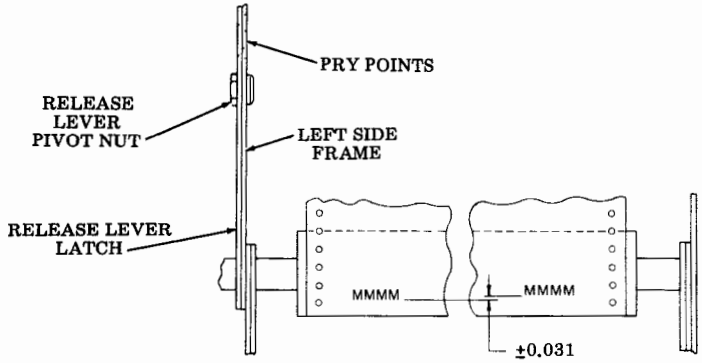
PRINTED LINE POSITION

Requirement

The printed line shall not vary more than ±0.031 from an arbitrary horizontal reference line (lined paper) when a line is drawn even with the bottom of the first and last character of a 10 inch long printed line. It is recommended that a single character (ie, M) be repeated on the entire line.

To Adjust

Remove the left end cover, loosen the release lever pivot nut and position release lever latch to meet the requirement. Retighten the shoulder nut and recheck the requirement.



PRINT HEAD ARMATURE

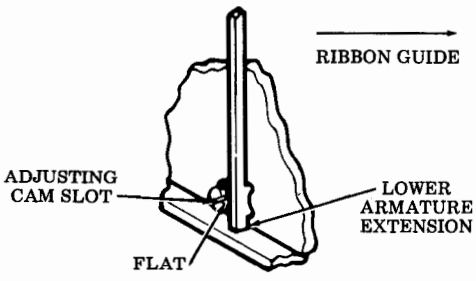
Requirement

With a good ribbon installed and the print head positioned and locked toward the palten, no wires shall stick through the ribbon (will not retract) and no dots shall be missing or noticeably lighter than other dots on printed copy.

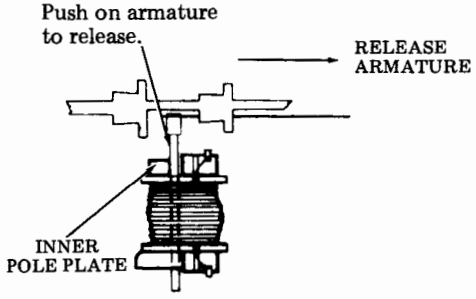
To Adjust

Note: This adjustment applies to all nine levels. (Power must be off for this adjustment.)

Remove the ribbon and print head cover. Release the print head and position away from the platen. With the lower armature extension on the high part of the cam (adjusting cam slot horizontal and the flat facing toward the ribbon guide) and the armature released from the inner pole plate, rotate the adjusting cam slowly clockwise until the armature is magnetically pulled up. Continue rotating cam clockwise for 3 more clicks.



(Right Side View)



(Top View — Cover Removed)

LINE FEED MOTOR GEAR-BACKLASH

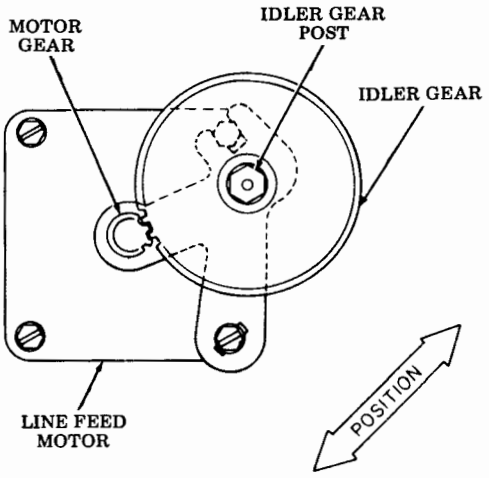
Requirement

There should be a minimum backlash between the motor pinion and the idler gear, when checked at point of least clearance between gears.

To Adjust

Rotate gears until the least clearance between the gears is found. Loosen the nut on the idler gear post and position the idler gear to minimize the backlash. Retighten the nut. Turn the gear and check for any binding. Remake the adjustment if necessary.

Note: When loosening the idler gear post, be careful not to loosen more than just enough to slide gear in and out towards the motor gear. If post is too loose, it will come out of the slot in the mounting bracket.



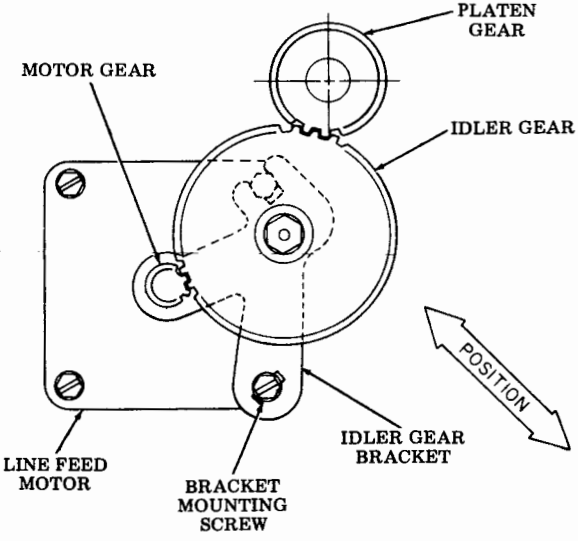
IDLER GEAR AND PLATEN GEAR

Requirement

There should be a minimum backlash between the idler gear and the platen gear.

To Adjust

Loosen the idler gear bracket mounting screw friction tight. Position the idler gear to minimize the backlash. Retighten the mounting screw. Turn the platen and check for binding. Remake the adjustment if necessary.



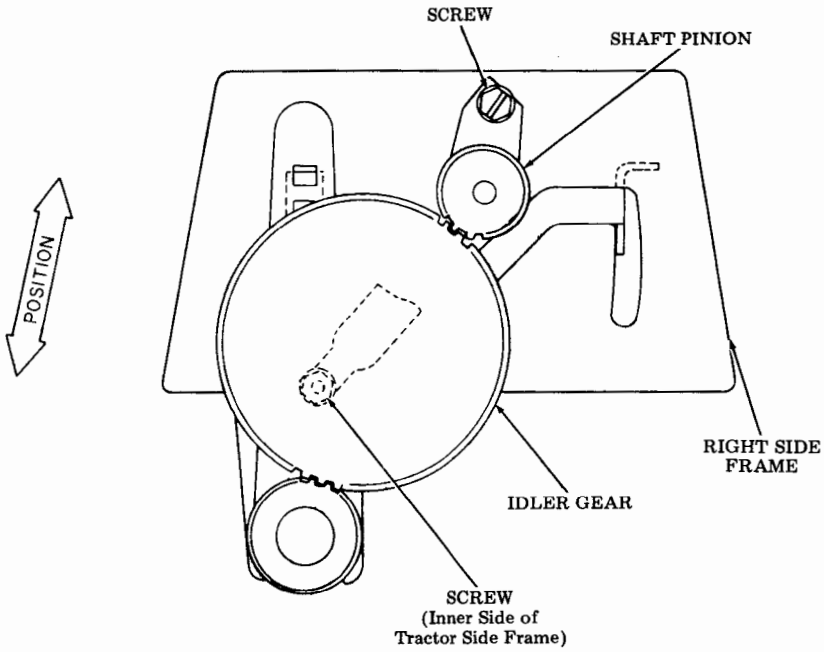
TRACTOR IDLER GEAR BACKLASH

Requirement

There should be a minimum backlash between the tractor idler gear and the shaft pinion.

To Adjust

Loosen the screws securing the idler gear bracket to the side frame and position the idler gear to minimize the backlash. Retighten the screws and turn the gear to insure free rotation. Remake the adjustment, if necessary.



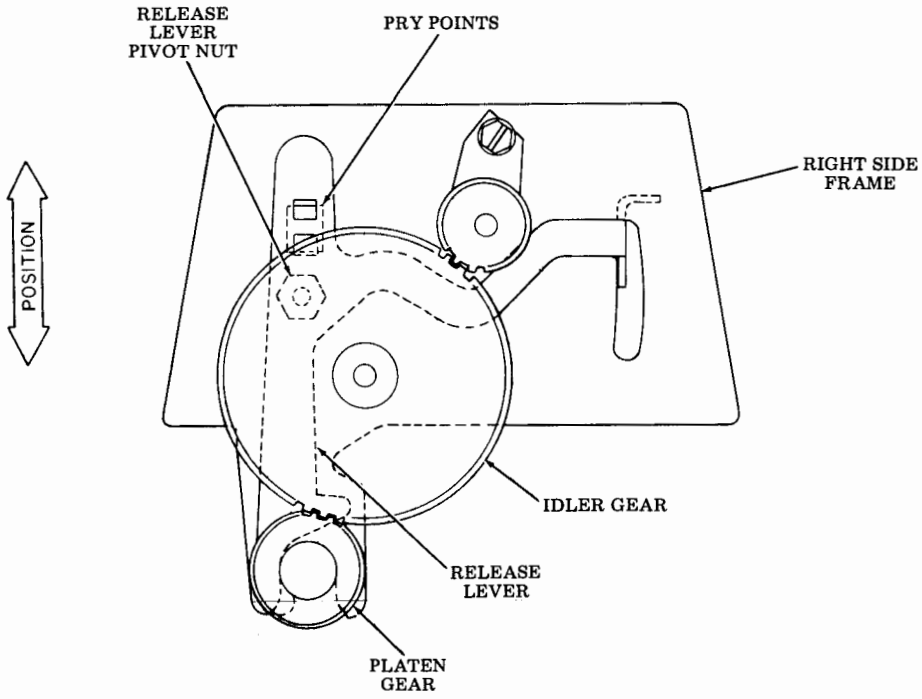
TRACTOR IDLER GEAR TO PLATEN GEAR

Requirement

With the tractor mechanism installed on the printer (latched on the platen bushings) there should be a minimum backlash between the platen drive gear and the tractor idler gear.

To Adjust

Remove the end cover from the right tractor frame, loosen the release lever pivot shoulder nut, and use the pry points to make the adjustment. Retighten the shoulder nut and rotate the platen with the line feed motor de-clutched (soft roll) to insure the mechanism rotates freely and there is no binding. Remake the adjustment, if necessary.



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) 430366 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) 430366 Bias Spring

The free length of the bias spring (not assembled on the lead screw nuts) should be between 1.55 inch and 1.65 inch.

(4) 130242 Ribbon Tension Spring

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

(5) 430021 SP Belt Tension Arm Spring

13-1/2 to 18-1/2 ounces to pull spring to installed length.

(6) 110437 Paper-Out Spring

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

(7) 430410 Bell Plunger Spring

1 to 10 grams for striker (430411) to contact gong.

(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) 82727 Pressure Roller Bail Spring

With the paper release lever in the rear position and pulling the pressure roller bail at the spring mounting hole at a right angle to the bail arm, it should take 46 to 56 ounces to start the roller bail moving.

(10) 152871 Tractor Latch Lever Spring

10 to 20 ounces to pull spring to installed length.

SPRING IDENTIFICATION