# 28 TAPE PRINTER UNIT (STOCK TICKER)

## ADJUSTMENTS

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1.05 When disengaged, a clutch is latched so
that a shoe lever is held in its stop posi-
tion between a trip lever, which bears against
the shoe lever, and a latchlever, which seats in
a notch in a clutch cam disc. The shafts and
clutch drums will then turn freely without the
clutch shoes dragging. When the clutch is en-
gaged or tripped, the shoe lever and cam disc
stop-lug are moved apart, and the clutch shoes
are wedged against the drum so that the clutch
turns in unison with the shaft.

Note: When rotating the main shaft by hand,
the clutches will not fully disengage upon
reaching the stop position. In order to re-
lieve the drag on the clutch and permit the
main shaft to rotate freely, apply pressure
on the lug of the clutch disc to permit the
latchlever to fully latch. This procedure
should be followed prior to applying power
to the unit.

1.06 Where applicable, all adjustments should
be made with the related cam follower on
that half of the two-cycle cam which causes the
clearance to be least, unless otherwise speci-
fied.

MANUAL OPERATION OF THE UNIT

1.07 To manually operate the unit, apply cur-
rent to the selector coils while the ad-
justments are being made to hold the armature
in the marking position. To manually select the
"rubout" code combination, push the armature
to the rear into the spacing position momentarily
to permit the selector clutch to engage. Rotate
the main shaft slowly, using a handwheel (see
the appropriate tools section) until no. 6 push
lever has been selected by no. 6 selector lever
and no. 6 lever is on the high part of its cam.
Levers are numbered 1 to 6 from left to right.

1.08 Strip levers from under selector levers

...
Then rotate the main shaft until the required condition is set up or the character has been cleared through the tape printer unit.

**CONDITIONING OPERATIONS**

1.09 To prevent damage when making a complete adjustment to the tape printer unit, observe the following conditions before proceeding with any adjustments:

(a) Loosen the scissors operating lever clamp.

(b) Loosen the print hammer shift link clamp screw.

1.10 Before mounting the tape printer on its base, loosen the four mounting screws on the two rear legs. Fasten unit to base before tightening the leg screws.
2. TAPE PRINTER

2.01 Selector Mechanism

RANGE FINDER KNOB PHASING

To Check
Turn the range finder knob to its extreme right and left positions.

Requirement
0 mark---120 mark should overtravel the scribed line on the knob mounting plate by an equal amount.

To Adjust
Position range scale knob with its mounting nut loosened.

STOP ARM BAIL
CLAMP SCREW
CLUTCH SHOE LEVER
STOP ARM
SELECTOR CLUTCH

SELECTOR CLUTCH STOP ARM

To Check
Set range scale at 60. Place armature in marking position. Disengage (latch) clutch.

Requirement
As gauged by eye, the clutch stop arm should engage the clutch shoe lever by the full thickness of the stop arm.

To Adjust
Position the stop arm with its clamp screw loosened.
2.02 Selector Mechanism (continued)

Note 1: To facilitate making the following adjustments, remove the range finder assembly and selector magnet assembly. (For instructions, see the appropriate tape printer disassembly and reassembly section.)

SELECTOR ARMATURE

Note 2: This requirement need not be made or checked if the SELECTOR MAGNET BRACKET and SELECTOR RECEIVING MARGIN requirements are met.

Requirement
(1) Armature Clamp Strip
Min 0.015 inch—Max 0.045 inch clearance between armature clamp strip and casting.

(2) Armature Alignment
Outer edge of the armature should be flush, within 0.015 inch with outer edge of pole pieces.

To Adjust
Position the armature spring adjusting nut to hold the lower button of the armature firmly against casting. Position armature with mounting screws loosened.

(LEFT SIDE VIEW)

(TOP VIEW)
2.03 Selector Mechanism (continued)

SELECTOR ARMATURE STOP

To Check
Place gauge between armature and upper pole piece. Check requirement when magnets are de-energized and armature is resting against its stop button.

Requirement
Min 0.020 inch—Max 0.025 inch between the end of the armature and the rear edge of the upper pole piece.

To Adjust
Position the stop bracket with its mounting screw loosened.

STOP BRACKET
STOP BUTTON

(TOP VIEW)

GAUGE
ARMATURE
POLE PIECE
ARMATURE STOP BRACKET
MOUNTING SCREW

(LEFT SIDE VIEW)
2.04 Selector Mechanism (continued)

SELECTOR ARMATURE SPRING

To Check
With no distortion test set available, place marking locklever, spacing locklever, and start lever on high part of their cams.

(1) Requirement
Min 4-1/2 oz—Max 5-1/2 oz

to pull armature to marking position.

To Check
Use distortion test set.

(2) Requirement
The selector should be relatively free from internal bias when checked as specified in the instructions furnished with the set.

To Adjust
Rotate the adjusting nut.

MARKING LOCKLEVER SPRING

To Check
Energize magnets. Select "letters" code combination, selector clutch disengaged.

Requirement
Min 9 oz—Max 12 oz
to start marking locklever moving.
2.05 Selector Mechanism (continued)

**SELECTOR MAGNET BRACKET**

**To Check**
Marking and spacing locklever on high part of their cams. Magnets de-energized.

**Requirement**
- Min 0.010 inch
- Max 0.015 inch between end of armature extension and the shoulder on the marking locklever or the tip of the spacing locklever, whichever is least.

**To Adjust**
Position the magnet bracket by means of the adjusting link with magnet bracket mounting screws loosened. Tighten link clamp screw only.

---

**To Check**
Marking locklever on low part of cam. Magnets energized. Armature in contact with both pole pieces.

**Requirement**
Some---to---0.003 inch clearance between rear surface of armature extension and forward surface of marking locklever. With magnet de-energized, should have barely perceptible motion of armature.

**To Adjust**
Position forward end of magnet bracket with mounting screws loosened.

**To Recheck**
Rotate selector cam and check for smooth operation of start lever over armature extension. Refine requirements if necessary.
2.06 Selector Mechanism (continued)

SELECTOR CLUTCH DRUM

To Check
Latch clutch in stop position with clutch drum against shoulder on main shaft.

Requirement
Some—Max 0.010 inch endplay between cam-clutch assembly and shoulder on main shaft.

To Adjust
Position clutch drum with mounting screw loosened.

SELECTOR CAM LUBRICATOR

To Check
Rotate cam sleeve until high part of selector cam is opposite lubricator tube.

(1) Requirement
The lubricator tube should clear the high part of the cam by at least 0.020 inch.

(2) Requirement
The high part of the selector lever cams should contact the wick but not deflect it more than 1/32 inch.

SELECTOR RECEIVING MARGIN

To Check
Use signal distortion test set as specified in the instructions furnished with the set.

Requirement
Overall bias 33 percent
End distortion 32 percent (at same range scale setting).
2.07 Selector Mechanism (continued)

**PUSH LEVER SPRING**

To Check
Place push levers in spacing position.

Requirement
Min 1 oz---Max 2 oz
to move push levers from the selector lever. Check all push levers.

**SELECTOR LEVER SPRING**

To Check
Rotate shaft until push lever reset bail is latched up on lever guide, and selector levers are on high part of their cams.

Requirement
Min 1-1/2 oz---Max 2-1/2 oz
to start each lever moving.

**PUSH LEVER RESET BAIL SPRING**

To Check
Place push lever in spacing position and push lever bail on low part of cam.

Requirement
Min 1 oz---Max 2 oz
to move the bail from the cam.
SPACING LOCKLEVER SPRING

To Check
Energize selector magnets. Disengage selector clutch.

Requirement
Min 19 oz -- Max 26 oz
to start the spacing locklever moving.

SELECTOR CLUTCH
SELECTOR MAGNET

LATCHLEVER SPRING
LATCHLEVER

(LEFT SIDE VIEW)

STOP ARM BAIL
START LEVER SPRING
LATCHLEVER SPRING

START LEVER SPRING
STOP ARM

(LEFT SIDE VIEW)

SELECTOR CLUTCH LATCHLEVER SPRING

To Check
Rotate shaft so that latchlever is resting on low part of cam.

Requirement
Min 2-1/2 oz -- Max 4 oz
to start latchlever moving.

START LEVER
MAGNET POLE PIECE

To Check
Unhook latchlever spring. Rotate shaft until stop arm bail is in indent of cam. Set range scale at 60.

Requirement
Min 9-1/2 oz -- Max 13 oz
to start stop arm moving.
2.09 Codebar Mechanism

(CODEBAR SHIFT LEVER DRIVE ARM)

To Check
Rotate main shaft until codebar shift lever link is in its forwardmost position. Play in shift lever and link taken up toward rear.

Requirement
Min 0.010 inch—Max 0.020 inch between forward surface of the rollers and the rear surface of the cam slot in the shift levers which provides the minimum clearance.

To Adjust
Position the cam follower arm on its drive shaft with its clamp screw loosened. Provide up to 0.006 inch endplay.
2.10 Codebar Mechanism (continued)

TRANSFER LEVER SPRING

To Check
Place transfer levers in spacing position and hold them while pulling on spring.

Requirement
Min 1-1/2 oz—Max 2-1/2 oz to move the intermediate arm.

TRANSFER LEVERS

ECCENTRIC BUSHING

INTERMEDIATE ARM

PUSH LEVER

(LEFT SIDE VIEW)

TRANSFER LEVER ECCENTRIC

To Check
Set up "rubout" code combination on the pushbars. Disengage (latch) selector clutch. Rotate codebar shift lever link to its forwardmost position.

Requirement
Min 0.010 inch—Max 0.025 inch clearance between the lower shift lever and the lower edge of codebar shiftbar which is farthest from the lower shift lever when play is taken up to make clearance maximum.

To Adjust
Loosen the transfer lever clamp screw. Rotate the eccentric bushing to the desired position by using the adjusting holes. Keep the high part of the eccentric to the front of the vertical centerline.

SELECTOR LEVER

SHIFTBAR

CODEBAR SHIFT LEVER

CLAMP SCREW

ECCENTRIC BUSHING

(TOP VIEW)
2.11 Codebar Mechanism (continued)

INTERMEDIATE ARM DOWNSTOP BRACKET

To Check
Rotate selector clutch to stop position. Strip the pushbars. Rotate shaft until codebar shift lever link is in rearward position.

Requirement
Min 0.010 inch--Max 0.025 inch between the upper codebar shift lever and the upper edge of inner step on the codebar shiftbar which is farthest from the upper shift lever when play is taken up for maximum clearance.

To Adjust
Position downstop bracket with its clamp screws loosened.
2.12 Codebar Mechanism (continued)

CODEBAR SHIFT LEVER LINK

(TOP VIEW)

CODEBAR SHIFT LEVER LINK BRACKET

To Check (Upper)
Select "blank" code combination. Rotate main shaft until codebar shift lever link reaches its forwardmost position.

Requirement
The motion of front and rear codebar shift levers should be equalized with respect to codebar travel. Clearance between upper codebar shift lever and shoulder on nearest codebar shiftbar
- Min 0.002 inch - Max 0.012 inch
when play is taken up to make clearance maximum.

To Check (Lower)
Select "rubout" code combination. Check clearance between lower codebar shift lever and shoulder on nearest codebar shiftbar in the same manner.

Requirement
- Min 0.002 inch - Max 0.012 inch
when play is taken up to make clearance maximum.

To Adjust
Position adjusting plate (upper and lower) with clamp screws loosened.
2.13 Codebar Mechanism (continued)

CODEBAR DETENT

To Check (No. 1 Codebar)
Select blank combination and put unit in stop position. Shift No. 1 codebar to marking. Rotate main shaft until stop lug just clears stop slide extension. Apply 32 oz scale to No. 1 trip slide extension and pull to spacing. Note force required to return to marking position when codebar is manually shifted to spacing. Apply scale to keep trip slide in spacing position and manually detent codebar to marking position. Note force required.

Requirement
The force should be Min 9 oz---Max 16 oz and equal within 3 oz

To Check (No. 5 Codebar)
Unhook print hammer detent spring and apply scale to pry point opening. Apply same procedure as that used for No. 1 codebar.

Requirement
The force should be Min 12 oz---Max 20 oz and equal within 3 oz

To Adjust
Equalize the detenting by adding or removing shims between detent casting and codebar bracket.

STOP LUG

STOP SLIDE EXTENSION

PRY POINT

CODEBAR DETENT SPRING

To Check
Remove the codebar detent assembly and apply scale to the detent balls.

Requirement
Min 4 oz---Max 6 oz to start depressing a ball. Check each ball.
2.14 Codebar Mechanism (continued) and Function Mechanism

CODEBAR CLUTCH AND FUNCTION CLUTCH TRIP LEVERS

To Check
Latch each clutch in stop position.

Requirement
The clutch trip levers should engage their respective clutch shoe lever by the full thickness of the shoe lever, when checked at the stop position with the least bite.

To Adjust
Position the trip lever on its shaft with its clamp screw loosened. Leave some endplay Max 0.006 inch.

CODEBAR CLUTCH LATCHLEVER SPRING
FUNCTION CLUTCH LATCHLEVER SPRING

Requirement
Min 5 oz---Max 7-1/4 oz to move latchlever away from disc.

(BOTTOM VIEW)

SPRING

CODEBAR CLUTCH LATCHLEVER

CLAMP SCREW

(BOTTOM LEFT SIDE VIEW)

CLUTCH SHOE LEVER

CODEBAR CLUTCH TRIP LEVER

TRIP SHAFT LEVER SPRING

To Check
Trip shaft lever on low part of cam.

Requirement
Min 1 oz---Max 2 oz to start trip shaft lever moving.

(LEFT SIDE VIEW)
2.15 Codebar Mechanism and Function Mechanism (continued)

**FUNCTION CLUTCH TRIP LEVER FOLLOWER SPRING**

To Check
Place cam follower on low part of cam. Unhook cam follower spring from its bracket.

Requirement
Min 20 oz --- Max 24 oz to pull spring to its installed length.

**CODEBAR CAM FOLLOWER SPRING**

To Check
Place codebar clutch in stop position. Unhook codebar cam follower spring from follower.

Requirement
Min 11 oz --- Max 14 oz to pull spring to installed length.
2.16 Selector Mechanism, Codebar Mechanism, and Function Mechanism (continued)

CLUTCH SHOE LEVER
(Selector, Codebar, Function)

To Check
With clutch disengaged and latched in stop position, measure the gap between the clutch shoe lever and stop-lug. Trip the clutch and rotate the clutch until the shoe lever is toward the rear of the unit. Apply 32 oz pressure against stop lug to make gap maximum. Again measure the gap between the shoe lever and lug.

Note 1: When measuring, use the stop-lug adjacent to the notch in the clutch adjustment plate.

Requirement
The gap between the clutch shoe lever and stop-lug should be
Min 0.055 inch—Max 0.070 inch
greater when clutch is engaged (unlatched) than when it is disengaged (latched). Measure clearance at the stop-lug which has the least.

To Adjust
Rotate the adjusting plate by means of a screwdriver or wrench with the plate clamp screws loosened.

Note 2: After making this adjustment, disengage the clutch, remove the drum screw, and rotate the drum in the normal direction. There should be no drag on the drum. If necessary, refine the adjustment toward the maximum clearance.

CLUTCH DRUM POSITION
(Except Selector)

Requirement
Each clutch should have some endplay
Max 0.015 inch.

To Adjust
Position the clutch drum on the main shaft with its mounting screw and spacing clutch set collar mounting screw loosened.
2.18 Positioning Mechanism

CLAMP SCREW

PRY POINT

(TOP VIEW)

CLUTCH LATCHLEVERS
(This adjustment applies to all four clutches.)

To Check
Disengage (latch) all clutches. Measure gap between clutch shoe lever and stop-lug. Trip clutch, and remeasure gap.

Requirement
Min 0.015 inch gap (disengaged).
Min 0.040 inch --- Max 0.070 inch
greater gap when clutch is engaged (tripped) than when clutch is disengaged (latched).
This applies to both positions of the clutch.

To Adjust
Position clutch latchlever, while latched, by means of its pry point with its clamp screw loosened.
2.19 Positioning Mechanism

**AGGREGATE MOTION SPRING**

To Check
Select "E" code combination, and rotate unit to stop position. Unhook the spring.

Requirement
Min 22 oz --- Max 26 oz to pull spring to installed length. Check both springs.

**CLUTCH LATCHLEVER SPRING**

**CLUTCH LATCHLEVER SPRINGS (4 Springs)**

To Check
Place latchlevers in latched position. Unhook spring.

Requirement
Min 8 oz --- Max 10 oz to pull spring to installed length.

**Note:** This adjustment applies to all four positioning clutches.
2.20 Positioning Mechanism (continued) and Function Mechanism (continued)

**CLUTCH SHOE LEVER SPRING**

To Check
Trip (engage) clutch. Hold clutch.

Requirement
- Min 9 oz --- Max 11 oz
to move shoe lever into contact with stop-lug.

**PRINT HAMMER MECHANISM SELECTOR SLIDE**

To Check
Select "rubout" code combination, rotate shaft to stop position, and have selector slide roller fully detented.

Requirement
- Min 0.002 inch --- Max 0.008 inch
clearance between left edge of selector lever fork and no. 6 codebar extension roller.

To Adjust
Position selector lever by means of pry point with clamp screw loosened.

**ACCELERATOR LEVER**

**DETENT SPRING**

To Check
Operate unit to stop position with detent lever fully detented.

Requirement
- Min 2-1/2 oz --- Max 3-1/4 oz
to start lever moving.
PRINT HAMMER ACCELERATOR TRIP LEVER OVERTRAVEL

To Check
Select "rubout" code combination, and rotate main shaft until the print mechanism cam follower is on high part of function cam. Select "blank" code combination and check other trip lever.

Requirement
Min 0.002 inch – Max 0.010 inch clearance between latch surface of the accelerator and trip latch on the side with least clearance.

To Adjust
Position cam follower on drive shaft with its clamp screw loosened. Refine with eccentric.

FUNCTION CAM FOLLOWER

CAM FOLLOWER SPRING

FUNCTION CAM FOLLOWER SPRING

To Check
Place function clutch in stop position. Unhook spring.

Requirement
Min 20 oz – Max 25 oz to pull spring to position length.
2.22 Function Mechanism (continued)

ACCELERATOR DRIVE SPRING
To Check
Place unit in stop position.
Requirement
Min 10 oz --- Max 13 oz
to start the lever moving.

DRIVE SPRING

PRINT HAMMER TRIP LEVER
To Check
Place unit in stop position and manually
raise the accelerator lever so that its
latch extension lines up with the latch-
ing surface of the latchlever.

Requirement
Min 0.002 inch --- Max 0.015 inch
clearance between latchlever and
accelerator extension. This applies
to both latches.

To Adjust
Rotate the adjusting screw in the
adjusting plate with its locknut
loosened.
PRINT HAMMER LEVER SPRING

To Check
Place unit in stop position.

Requirement
Min 1 oz —— Max 2 oz
to move lever away from accelerator.

PRINT HAMMER TRIP LEVER SPRING

To Check
Place unit in stop position.

Requirement
Min 3 oz —— Max 5 oz
to start lever moving away from the accelerator.
2.24 Positioning Mechanism (continued)

TYPEBOX RAIL POSITIONING TRIP SLIDE

To Check
Detent the no. 5 codebar alternately in the marking and spacing position.

Requirement
The clutch shoe lever should engage the marking and spacing stop surfaces of the trip slide by approximately equal amount when the no. 5 codebar is detented to each position.

To Adjust
Position the trip slide arm operating arm by rotating the eccentric.
TYPEBOX RACK AND PINION

To Check
Take up play between typebox rack and pinion.

Requirement
Some---to---0.003 inch clearance between the typebox rack and its roller. This requirement applies to both racks.

To Adjust
Position the guide lever at its pry point with its clamp screw loosened.
2.26 Function Mechanism (continued)

TAPE MARGIN

To Check
Hold the tape against the rear edge of the tape guide.

Requirement
The margin between the top edge of the tape and the top edge of the letter T
Min 0.170 inch---Max 0.210 inch (Min 11/64 inch---Max 7/32 inch)

To Adjust
Position the mounting bracket by means of the eccentric with the bracket mounting screws loosened.

TAPE FEED - RIBBON FEED CAM FOLLOWER SPRING

To Check
Unhook the function cam follower spring from its bracket.

Requirement
Min 18 oz---Max 23 oz
to pull spring to installed length.
2.27 Function Mechanism (continued)

**TAPE FEED PAWL SPRING**

To Check
Place unit in stop position with typebox rail toward rear (no. 5 codebar marking).

Requirement
Min 2 oz---Max 3 oz to start lever moving.

**TAPE FEED RATCHET DETENT**

To Check
Place unit in stop position with typebox rail toward the front (no. 5 codebar spacing).

Requirement
Min 5 oz---Max 7 oz to start the detent lever moving.

(FRONT VIEW)

**TAPE FEED WHEEL DETENT**

To Check
Trip codebar clutch, rotate main shaft until feed pawl just contacts ratchet tooth. Step feed shaft to detented position. Rotate main shaft until feed pawl is in lowest position.

Requirement
Feed pawl should advance feed ratchet one full tooth with minimum perceptible overtravel beyond fully detented position.

To Adjust
Position detent by rotating the detent eccentric. Keep high part of eccentric to left of center.

Note: If necessary, loosen clamp screw on feed arm hub and take up play in hole to favor adjustment.
2.28 Function Mechanism (continued)

PRESSURE ROLLER SPRING TENSION

Requirement
- Min 18 oz -- Max 22 oz
  to start pressure roller moving

(FRONT VIEW)

PRESSURE ROLLER LEVER

ECCENTRIC

PRESSURE ROLLER SPRING

TAPE FEED WHEEL CENTERING

Requirement
The tape feed wheel should be centered within the tape chute opening, as gauged by eye.

To Adjust
Position the feed wheel on its shaft with its clamp screw loosened.
2.29 Function Mechanism (continued)

RIBBON FEED MECHANISM DRIVE SLIDE

To Check
Place ribbon feed cam follower on high part of function cam.

Requirement
Some clearance between the blocking edge of the ribbon reverse arm and the reversing extension of the feed pawl when the ribbon is moved under the lower reversing extension of the feed pawl. The feed pawl should not feed more than two teeth. This applies to both upper and lower feed pawl extensions.

To Adjust
Position adjusting plate with clamp screw loosened.

RIBBON RATCHET WHEEL TORSION

Requirement
Min 1 oz—Max 3 oz to start ratchet wheel moving

RIBBON REVERSE ARM

REVERSING EXTENSION

FEED PAWL SPRING

FEED PAWL

ADJUSTING PLATE

CLAMP SCREW

DETENT SPRING

To Check
Place detent in either fully detented position.

Requirement
Min 2 oz—Max 4 oz to pull spring to installed length

RIGHT SIDE VIEW

Page 32
2.30 Positioning Mechanism (continued) and Function Mechanism (continued)

**TYPEBOX ALIGNMENT (FRONT TO REAR)**

**To Check**
Select no. 5 and 6 codebars marking, and place unit in stop position. Push Figures print hammer down against pallet stem.

**Requirement**
Print hammer should be centered (front to rear) on the extreme outer left hand pallet, as gauged by eye.

**PRINT HAMMER HEAD SPRING**

**To Check**
Place unit in stop position.

**Requirement**
Min 2 oz---Max 3 oz to start hammer head moving.

---

**To Adjust**
Position the typebox rail with two clamp screws on the eccentric follower lever of the typebox rail positioning clutch.

---

**MAIN SHAFT**

---

**CLAMP SCREWS**

---

**LETTERS PRINT HAMMER**

---

**FIGURES PRINT HAMMER**

---

**TYPE PALLET STEM**

---

**LEFT SIDE VIEW**

---

**RIGHT SIDE VIEW**

---
2.31 Positioning Mechanism (continued)

**TYPEBOX ALIGNMENT (TRANSVERSE)**

To Check
Under power, select rubout (1, 2, 3, 4, 5, 6 marking) followed by E (1 marking). Push print hammer straight downward.

(1) Requirement
The print hammer should be centered on the stem of the E type pallet. Gauged by eye.

To Adjust
Rotate the eccentric on the typebox positioning link.

To Check
Under power, select rubout followed by selection of 5 (1 and 6 marking). Push figures print hammer straight downward.

(2) Requirement
Print hammer should be centered on stem of 5 type pallet.

To Adjust
Loosen the two plunger guide mounting screws and position the guide by pivoting it around its left mounting screws.

Note: Both hammers must engage their respective type pallet stems fully. Refine adjustments if necessary. Recheck PRINT HAMMER TRIP LEVER.

![Diagram of positioning mechanism](image-url)
CHARACTER ALIGNMENT

To Check
Select two character code combinations "E" and "Z."

Requirement
Characters should be in line within Max 0.008 inch.

To Adjust
Position the eccentric on the typebox rail drive arm so that the slot is aligned vertically and the large chamfer on its head is facing upward. Under power, select "E" code combination (no. 1 codebar marking) and "Z" code combination (no. 1 and 5 codebars marking). If E is higher than Z, turn the eccentric screw clockwise. If Z is higher than E, turn the eccentric screw counterclockwise. Recheck TYPEBOX ALIGNMENT (FRONT TO REAR).
2.33 Positioning Mechanism (continued)

**TYPEBOX ALIGNMENT**

**Requirement**

The impression printed by a type pallet should be equal at the top and bottom of the characters, as gauged by eye.

**To Adjust**

Position the typebox carriage so that the adjusting screw is accessible. Loosen its lock nut. Operate the printer with the character code combinations "E" and "7/8." If the impression at the top of the character is light, turn the screw in. If the impression at the bottom of the character is light, turn the screw out.

*Note: If necessary, reposition the tape chute mounting bracket with its mounting screws loosened. See TAPE MARGIN adjustment.*