Bulletin No. 167
Issue 1
March, 1941

TELETYPE

PRINTING TELEGRAPH SYSTEMS

Bulletin No. 167

DESCRIPTION AND ADJUSTMENTS
TAPE PERFORATOR
(FIVE UNIT)

TELETYPE
CORPORATION
SUBSIDIARY OF
Western Electric Company
CHICAGO, U.S.A.

“ The Iron Horse”
GPE - 5-Unit Perforator (Bell 14A)
Above example of Western Union configuration for weather symbols. Unit is housed in a sound-absorbing apparatus cabinet. Circa 1941

CHANGES IN LUBRICATION SPECIFICATIONS WHICH APPLY TO ALL TELETYPE APPARATUS

The following lubricants have been standardized for use on all types of Teletype apparatus. These lubricants supersede those referred to in preceding Teletype specifications. The lubricants can be ordered from Teletype as follows:

88970	1 Qt. of KS-7470 Oil
88971	1 Gal. of KS-7470 Oil
88973	1 Lb. of KS-7471 Grease
*88975	KS-8319 Grease Gun
97116	4-oz. Tube of KS-7471 Grease

The above grease is recommended instead of oil for lubricating motors equipped with ball bearing. The 88975 grease gun should be used for injecting grease into the bearings of Teletype ball bearing motors. The gun may be used also for applying grease to other parts of the apparatus and no other grease container need be carried. If this grease gun is not available, the oil listed in the foregoing should be substituted for lubricating ball bearing motors.

* Instructions for Filling the Grease Gun

1. Unscrew the lubricant tube from the cap casting of the grease gun.

2. Insert fresh lubricant through the open end of the tube with the fingers. Apply gradually to eliminate air pockets.

3. Tamp the lubricant down solidly in the tube by pounding the closed end solidly against the palm of the hand. Continue to add lubricant until the tube is completely filled and the metal follower rests against the perforated tube cover.

4. Fill the cap casting with lubricant flush to the bottom side of the tube threads.

5. Screw the lubricant tube into the cap casting part way only. Then insert a pencil or rod through the perforated tube cover and exert pressure against the metal follower so as to expel any entrapped air past the tube threads. When lubricant begins to ooze through the threads, tighten the lubricant tube securely in the cap casting.

6. Operate the handle back and forth for several strokes or until lubricant is pumped from the nozzle. The gun is then ready for use. If the lubricant does not flow from the nozzle in a solid stream, it is an indication that all air has not been expelled from the lubricant tube. Invert the gun and pound the cap casting end against the palm of the hand to jar the lubricant into the pump cylinder.

* Instructions for Lubricating Motor Ball Bearings

The motor bearings are packed with grease before the motor leaves the factory and under ordinary operating conditions need no additional lubrication for

approximately two months. At the regular lubricating intervals one or two strokes of the plunger of the gun should apply sufficient grease to each bearing. To lubricate, press the nozzle of the gun against the ball oiler and force the grease into the hole by pushing on the plunger of the gun. Care should be taken that the bearings are not overloaded. Overloading will result in the grease oozing out of the end castings and being forced into the motor or being thrown on other parts of the mechanism. After lubricating, the motor should be run for a few minutes and then any excess grease that has been forced out of the ends of the castings should be wiped off. Each time that the gun is used for lubricating a motor bearing, the plunger should first be depressed slightly to make sure that grease will be delivered.

CHANGE IN BULLETIN 167, ISSUE 1,
ADJUSTMENTS OF TAPE PERFORATOR (FIVE-UNIT)

The changes outlined in this correction sheet apply only to perforators equpped with an adjustable end-of-line indicating mechanism, as indicated by the two asterisks preceding the title of the adjustment.

Page 5

Add the following adjustment after -**Release Rod Holding Pawl Spring Tension:

**Stop Screw Bracket Yield Spring Tension (Figure 7A)*

Unhook the stop screw bracket yield spring from the spring bar. Hook a 32-oz. scale in the spring eye and pull up vertically. It should require from 15 to 19 ozs. to extend the spring to 1-5/8" as measured from the top of the formed section of the stop screw bracket to the eye of the spring. The end of the scale used to measure the length just mentioned should rest against the top of the formed section of the stop screw bracket. Rehook the spring.

Page 6

Substitute the following in place of -**Release Rod Holding Pawl Stop Screw Adjustment (Figure 9):

**Release Rod Holding Pawl Stop Screw and Bracket Adjustment

There should be from .065" to .080" clearance between the engaging peak of the release rod holding pawl and the release rod when the pawl is held against its stop screw and the stop screw is held against its post.

To adjust, loosen the stop screw bracket mounting screws, loosen the stop screw lock nut, and adjust the screw to meet the foregoing requirement. Check to see that after the stop screw lock nut is tightened, a flat on the stop screw will bear against the stop post. Also, check to see that the spring washer assembled on the stop screw bracket mounting screw nearest the stop is around its bushing. This may be determined by moving the stop screw bracket after its mounting screws have been carefull tightened. The bracket should be free to move with an appreciable amount of friction.

Hold the stop screw bracket as far as it will go away from the stop post, position the contact screw bracket so that the contact screw is in alignment with the contact on the contact operating lever, and tighten the stop screw bracket mounting screws. Recheck the clearance between the engaging peak of the release rod holding pawl and the release rod.

Page 10

Substitute the following in place of -**Indicator Gear Stop Plate Adjustment (Figure 6):

**Indicator Gear Stop Plate Adjustment - See Note (A)

The adjustable plate on the indicator gear provides for varying the starting position of the gear so that the lamp contacts will be closed on the 64th to 70th character perforated. When it is desired to close the contacts on the 70th character, move the plate in a counterclockwise direction, and when it is desired to close the lamp contacts on the 64th character, move the plate in a clockwise direction.

* Adjust as follows: With the idler pinion fully in mesh with the tape feed roll pinion, position the stop plate so that the 7th tooth, for 65 characters, or 2nd tooth, for 70 characters, etc., on the indicator gear is fully in mesh with the idler pinion. With the stop screw bracket held against its stop post, and with the release rod holding pawl held against the stop screw, move the stop plate toward the release rod holding pawl so that there is from .010" to .025" clearance between the formed projection on the stop plate and the pawl.

With power on the perforator, fully depress and slowly release the carriage return key lever. Operate a key lever, other than the carriage return key lever, the desired number of times to see that the lamp lights on the proper character.

Note: If readjustment of the stop plate is necessary, remove power from the perforator.

After the correct position of the stop plate has been determined, carefully move the plate as far as it will go toward the center of the gear and securely tighten the adjustable plate clamping screws. Recheck this adjustment several times, with power on the perforator, normally operating the carriage return key lever.

Teletype Corporation
Chicago, Illinois, U.S.A.

EE-561
Issue 1
December, 1946

CHANGES IN BULLETIN 167, ISSUE 1
DESCRIPTION AND ADJUSTMENTS
TAPE PERFORATOR
(5 UNIT)

Page 11

PUNCH MAGNET YOKE CONTACT SPRING ADJUSTMENT (Figure 18)

Change the clearance requirement in Paragraph (b) to read .020" to .030" instead of .015" to .020."

REPEAT RELAY ADJUSTMENTS (Figure 19)

Change the clearance requirement in Paragraph (b) to read .015" to .018" instead of .012" to .015."

Change the spring tension requirement in Paragraph (c) to read "2-1/4 to 3 ozs." instead of "1-1/2 to 1-3/4 ozs."

Change the spring tension requirement in Paragraph (d) to read "1-3/4 to 2 ozs." instead of "1 to 1-1/2 ozs."

Printed in U.S.A.

Teletype Corporation
Chicago, Illinois, U.S.A.

EE-587
Issue 1
January, 1948

CHANGES AND ADDITIONS TO BULLETIN 108 (ISSUE 2) DESCRIPTION AND ADJUSTMENTS OF THE FIVE UNIT TAPE PERFORATOR AND BULLETIN 167 (ISSUE 1) DESCRIPTION AND ADJUSTMENTS TAPE PERFORATOR (FIVE UNIT)

PAGE 5, Bulletin 108
PAGE 5, Bulletin 167

LOOP STOP SKIMS ADJUSTMENT

Add the following to the first sentence in this adjustment:

"_____ except in the case of the power loop."

PAGE 9, Bulletin 108
PAGE 7, Bulletin 167

PUNCH MAGNET CONTACT SCREW ADJUSTMENT

Add the following additional requirement to this adjustment:

"When the LETTERS keylever is fully depressed, there should be at least .002" clearance between the power loop and the loop stop."

* * *

Teletype Corporation
Chicago, Illinois, U.S.A.

EE-645
Issue 1
September, 1948

CHANGES IN BULLETINS 108, ISSUE 2, and 167, ISSUE 1 DESCRIPTION AND ADJUSTMENTS OF THE FIVE UNIT TAPE PERFORATOR

In order to prevent disengagement of the loops from the bell cranks during shipment, the 122-25 loop bearing (left) has been provided with a tapped hole and fitted with a 1035 adjusting screw and a 34-9 nut. This screw may be adjusted to hold the loops toward the right and prevent their disengagement from the bell cranks. The following adjustment applies to perforators so equipped:

BULLETIN 108, PAGE 5 - immediately preceding the LOOP SPRING TENSION (Figure 6)
BULLETIN 167, PAGE 4 - immediately preceding the LOOP SPRING ADJUSTMENT (Figure 7)

Add the following adjustment:

LOOP ADJUSTING SCREW ADJUSTMENT

There should be some clearance, not more than .015", between the outer surface of the power loop and the end of the adjusting screw at the bell crank end. To adjust, turn the adjusting screw to meet the requirement and position the lock nut.

NOTE

When making this adjustment a moderate force should be applied to the loops in the direction to make this clearance a maximum. Avoid bending or forcing the loops which may result in a false adjustment.

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Printed in U.S.A.

Teletype Corporation
Chicago, Illinois, U.S.A.

716EE
Issue 1
December, 1950

CHANGES IN ADJUSTMENT BULLETINS

164, Issue 1 - Tape Perforator, Page 5
147, Issue 2 - Montyping Reperforator, Page 11
148, Issue 2 - Perforator Transmitter, Page 16
165, Issue 3 - Typing Reperforator, Page 2-14
166, Issue 2 - Perforator Transmitter, Page 18
171, Issue 2 - Typing Reperforator, Page 14
178, Issue 1 - Reperforator Transmitter Distributor, Page 25
193, Issue 1 - Reperforator Transmitter Distributor, Page 22
203, Issue 1 - Reperforator Transmitter Distributor, Page 2-15
167, Issue 1 - Tape Perforator, Page 6

Bulletins 178, 193, and 203 - PERFORATOR TAPE TENSION LEVER STUD ADJUSTMENT
Bulletins 147, 148, 165, 166, and 171 - TAPE TENSION LEVER STUD ADJUSTMENT

Change these adjustments to read as follows:

The tape tension lever stud should be centrally located with respect to the feed roll pins. This requirement should be measured as follows:

(a) Take up the feed roll end play towards the star wheel and the tension lever end play towards its adjusting nut. The edge of the lever slot may touch the feed roll pins on the side of the pins nearest the ratchet but there must be clearance on the other side.

(b) Take up the feed roll end play away from the star wheel and the tension lever end play away from the tension adjusting nut. The edge of the lever slot may touch the feed roll pins on the side farthest away from the ratchet but there must be clearance on the other side.

To adjust, add or remove shims between the shoulder on the tape tension lever stud and its mounting bracket.

Bulletins 164 and 167 - TAPE TENSION LEVER STUD ADJUSTMENT

Insert the above adjustment immediately before the TAPE TENSION LEVER SPRING TENSION ADJUSTMENT.

* * *

Printed in U.S.A.

Teletype Corporation
Chicago, Illinois, U.S.A.

76LEE
Issue 1
November, 1951

CHANGES IN ADJUSTMENT BULLETINS

108, Issue 2, Five Unit Tape Perforator, Page 5
164, Issue 1, Seven Unit Tape Perforator, Page 4
167, Issue 1, Five Unit Tape Perforator, Page 5

Release Rod Holding Pawl Eccentric Adjustment

In the bulletins listed above the following adjustment should be inserted in place of the present adjustment.

a. With the release rod latched in its operated position by the release rod holding pawl, there should be from .010" to .030" clearance between the tops of the teeth on the idler gear and the tops of the teeth on the tape feed roll pinion. Check this clearance throughout a complete revolution of the gear and pinion.

To adjust, position the release rod holding pawl eccentric.

b. Rotate the indicator gear approximately 1/4 turn and hold it in this position. With the carriage return key lever fully depressed and the release rod holding pawl in the notch in the release rod, there should be at least .004" clearance between the release rod holding pawl and the holding surface of the notch. If necessary, readjust the holding pawl eccentric within the limits of its adjustment to obtain this clearance.

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Printed in U.S.A.

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Bulletin No. 167
Issue 1
March, 1941

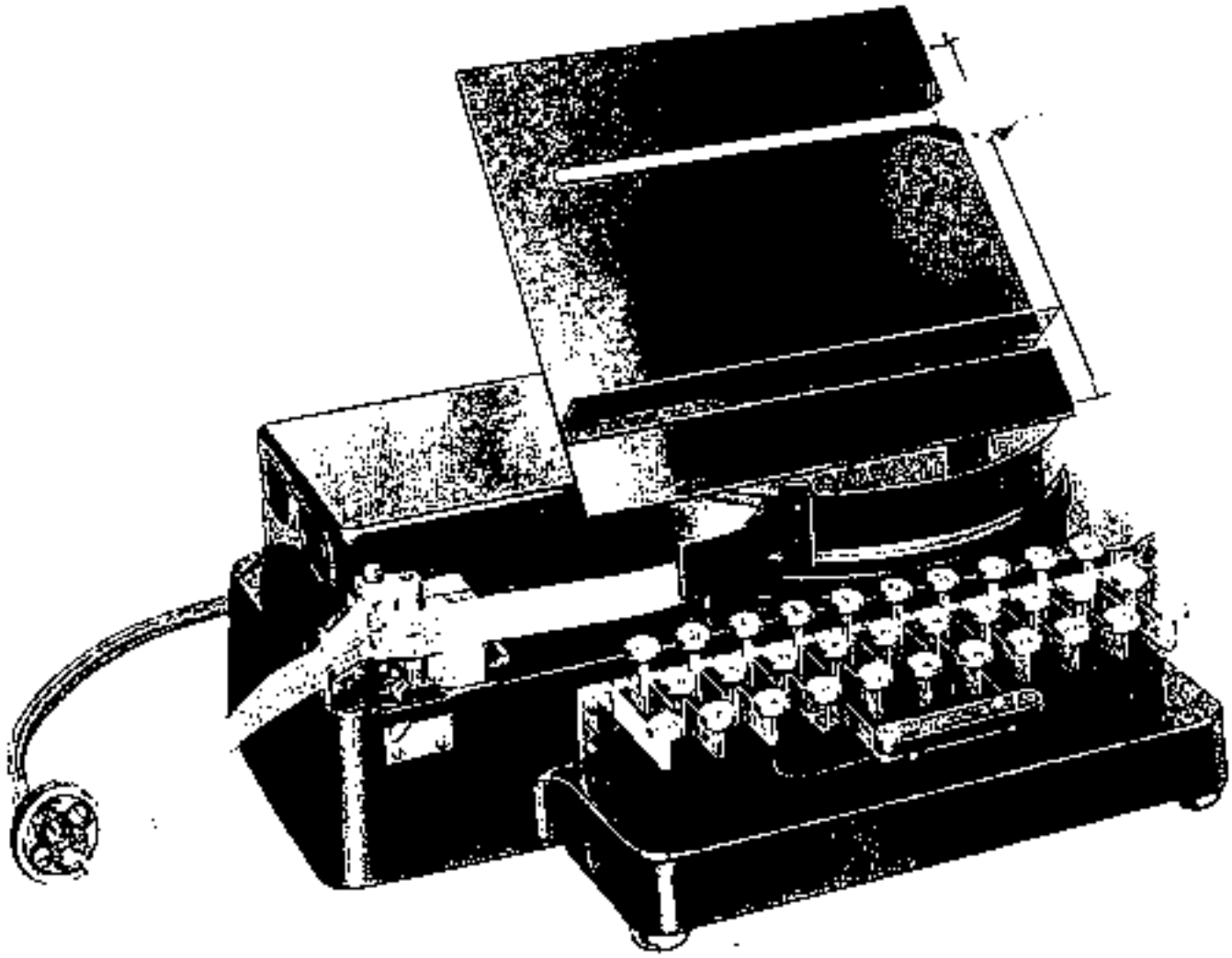
TELETYPE

PRINTING TELEGRAPH SYSTEMS

DESCRIPTION AND ADJUSTMENTS
TAPE PERFORATOR
(FIVE UNIT)

TELETYPE
CORPORATION
SUBSIDIARY OF
Western Electric Company
CHICAGO, U.S.A.

Printed in U.S.A.



CONTENTS

DESCRIPTION OF THE FIVE-UNIT TAPE PERFORATOR

General

The Five-Unit Tape Perforator is a unit of apparatus that is used to prepare perforated tape for automatic telegraph transmission. Combinations of holes are perforated in the tape, which correspond to the key lever depressed. The perforator taps with the code combinations thus recorded may be fed automatically through a tape transmitting device, operating a printer unit at a distant point.

The Five-Unit Tape Perforator is a self-contained magnet (solenoid type) operated, portable unit. It consists essentially of a set of keys and key levers; perforating, tape feeding, and end-of-line indicating mechanisms. The unit is equipped with a power cord and attachment plug for making connections to a source of direct current power supply.

NOTE: In all the figures of this bulletin, fixed pivot points are designated by solid black circles.

Signaling Code

The signaling code used to transmit characters is the "Five-Unit Code," which consists of five selecting impulses used in various combinations of spacing and marking intervals. The large holes in the tape represent marking impulses, whereas the impulse positions on the tape that are not perforated represent spacing impulses. The small holes are feed holes, which are used to feed the tape through the perforator and the transmitting device. Figure 1 shows how the code combination for each character or function appears when perforated in the tape.

Perforating Mechanism

The perforating mechanism (Figure 2) consists essentially of a set of punches for perforating the tape; a pair of punch magnets and a punch hammer for operating the punches; a set of punch bars and bell cranks; and loops and combs attached to each key lever used in selecting the punches (Figure 3). The five punch bars are fitted in guide slots in the punch hammer, just behind the punches and in line with them (Figure 2). The right end of each punch bar is attached to a bell crank and the opposite end of each bell crank engages a notch in a loop extension. Each character or function key lever has a comb with notches arranged so that its particular code combination will be selected and perforated. The combs are cut out in such a manner that the depression of a key will cause the comb to strike the top edge of one or several of the loops, moving them downward (Figure 3).

In addition to the five loops controlling the five punch bars, there is a sixth or power loop (Figure 3) which is operated by the depression of any key. The downward movement of this loop closes the punch contacts (Figure 2), energizing the punch magnet, and thus operating the punch hammer.

The depression of a loop causes the punch bar connected to it to be moved away from a punch so that when the punch hammer is operated by the magnet, the tape will not be perforated at this position; but when a loop is not depressed, the punch bar connected to it will be allowed to remain in the path of a punch and a hole will be perforated. A feed hole is perforated with each forward movement of the punch hammer.

For instance, if the "K" key lever is depressed, only the #5 punch bar will be moved away from its punch. All the other punch bars, however, will be driven against their punches, causing the first four impulses to be perforated in the tape (Figure 1).

Tape Feeding Mechanism

The tape feed roll is located to the left of the punches (Figure 2). Spaced at equal intervals around the tape feed roll is a series of projecting feed pins which mesh with the feed holes punched in the tape. A tape tension lever holds the tape against the tape feed roll, keeping the feed holes in the tape in constant mesh with the tape feed roll pins.

During the forward movement of the punch hammer, the tape feed pawl, which is attached to the punch hammer, engages a tooth on the tape feed roll. When the punch hammer moves back, the tape feed roll will revolve, advancing the tape one character space. A star wheel affixed to the lower end of the feed roll and a detent insure equal spacing of the tape (Figure 4).

End-of-Line Indicating Mechanism (Nonadjustable) - See Note (A)

The end-of-line indicating mechanism is intended for use in connection with page printer reception. When sixty-four or sixty-five combinations have been perforated in the tape, a red lamp, under the keyboard, is lighted by the closing of contacts. These contacts are closed by the action of the indicator gear (Figure 5). This gear meshes, through an idler gear mounted on a lever, with the tape feed roll pinion on the tape feed roll. Whenever the tape feed roll moves the tape forward one space, the indicator gear is advanced one tooth.

Mounted on the indicator gear is a pin "A" (Figure 5). When the indicator gear is advanced sixty-four or sixty-five teeth from its starting position, pin "A" will move the lamp contact lever so that its contact spring will touch the lamp contact screw, lighting the lamp.

The advancing of the indicator gear winds up an indicator return spring, one end of which is attached to the indicator gear. When the operator depresses the "Carriage Return" key, the key lever strikes a bell crank which moves the release rod to the left. This throws the indicator idler gear out of mesh with the tape feed roll pinion and the indicator gear is returned to its starting position by the indicator return spring.

Since the "Carriage Return" key may not be held depressed long enough to allow the indicator gear to completely return to its starting position, a release rod holding pawl is provided to insure that the gears stay out of mesh while the indicator gear is returning. This holding pawl moves into a notch in the release rod when the release rod is in its left-hand position. When the indicator gear is almost returned to its starting position, pin "B" (on the indicator gear) moves the holding pawl out of the notch in the release rod and permits the gears to again mesh.

End-of-Line Indicating Mechanism (Adjustable) - See Note (A)

The adjustable end-of-line indicating mechanism (Figure 6) is similar to the non-adjustable end-of-line indicating mechanism described in the foregoing except for the following:

(A) When the perforator is used to transmit to tape printers, wires to the lamp circuit are disconnected (See Figure 20).

The adjustable end-of-line indicating mechanism has an adjustable stop plate mounted on the indicator gear. A projection, extending downward from this stop plate, is used instead of pin "B" to move the release rod holding pawl out of the notch in the release rod.

The adjustable stop plate moves the release rod holding pawl against an adjustable stop screw which determines the stop position of the indicator gear. The adjustable stop plate may be positioned so that the lamp contacts close on any operation from the sixty-fourth to the seventieth.

Backspace Lever

A backspace lever is provided for moving the tape backwards for the correction of errors (Figure 4). When the backspace lever is being moved from left to right, it engages a pin projecting from the tape feed pawl and cams the tape feed pawl out of engagement with the tape feed roll ratchet. Toward the end of the travel of the backspace lever, the backspace pawl (which is mounted on the backspace lever) engages a tooth of the star wheel, rotating it backwards one space. The "Letters" key may then be depressed, causing five holes to be perforated over the previous perforation. This combination may be passed through the tape transmitting device without causing any character or letter to be printed on the receiving printer. However, if a character in the upper case is corrected, it will be necessary to strike the shift key (Figures) again, because the "Letters" combination will unshift the receiving printer.

Repeat Mechanism

The repeat mechanism provides a means of continually perforating a desired code combination in the tape. With any key lever and the repeat push button simultaneously held depressed, the code combination corresponding to the key lever depressed will continue to be perforated until the repeat push button is released.

When any key lever is held depressed, the punch magnet circuit is completed through the punch magnet contacts (Figure 20). The operation of the punch magnet permits the magnet yoke contacts to close, completing a circuit through the winding of the repeat relay if the repeat push button is depressed. The operation of the repeat relay breaks the punch magnet circuit. The punch magnet yoke is released, opening its contacts, which open the repeat relay circuit. The repeat relay releases its armature, closing the punch magnet circuit, thus setting up a repeated cycle of operation. Repeat action will continue as long as any key lever and the repeat push button are simultaneously held depressed.

ADJUSTMENTS OF THE FIVE-UNIT TAPE PERFORATOR

The following adjustments are arranged in a sequence that would be followed if a complete readjustment of the perforator were undertaken. This fact should be kept in mind when a single adjustment is to be made.

The spring tension values given in this bulletin were derived from measurements made with Teletype spring scales. These spring scales are calibrated for use in a vertical "pull" position. When used in any other position, the reading is an indicated value. Therefore, in order to obtain the proper spring value readings, the spring scales which are included in the Teletype printer catalog tool list should be used.

NOTE: Adjustments marked with two asterisks (**) apply only to perforators equipped with the adjustable end-of-line indicating mechanism, and replace similar adjustments marked with one asterisk (*) which apply only to perforators equipped with the nonadjustable end-of-line indicating mechanism. All other adjustments apply to perforators equipped with either the adjustable or the nonadjustable end-of-line indicating mechanism.

Loop Spring Adjustment (Figure 7)

With the perforator resting on its right-hand side, hook an 8 oz. scale over each loop approximately at its center, and pull in a direction away from the key levers. It should require from 1-1/2 to 2 ozs. to start the punch bar loops moving away from the key levers and 2-1/2 to 3 ozs. to move the power loop away from the key levers.

Adjust the punch bar loop and power loop springs by bending.

Key Lever Spring Adjustment (Figure 7)

The opening between the ends of all key lever springs, excepting the "Space" key lever spring, should measure 1-5/8". The "Space" key lever spring should measure 2" across the opening between the ends.

Adjust by bending.

NOTE: After making a single adjustment, check related adjustments.

Loop Stop Shims Adjustment

When the "Blank" key lever is fully depressed, there should be from .002" to .030" clearance between the loops and the loop stop.

Adjust the position of the loop stop by means of shims. See Figure 7.

*Release Rod Holding Pawl Spring Tension

Unhook the release rod holding pawl spring from its post. Hook an 8 oz. scale in the spring eye and pull up vertically. It should require from 1-1/4 to 2-1/2 ozs. to extend the spring to 1" measured from the top of the release rod holding pawl to the outside loop of the spring. Replace the spring.

**Release Rod Holding Pawl Spring Tension

Unhook the release rod holding pawl spring from its bracket, hook an 8 oz. scale in the spring eye and pull up vertically. It should require 1/2 to 1-1/2 ozs. to extend the spring to 3/4" measured from the top of the release rod holding pawl to the outside loop of the spring. Replace the spring.

Release Rod Holding Pawl Eccentric Adjustment (Figure 8)

With the release rod latched in its operated position by the release rod holding pawl, there should be some clearance, not over .010", between the tops of the teeth on the idler gear and the tops of the teeth on the tape feed roll pinion. Check this clearance throughout a complete revolution of the gear and pinion.

To adjust, position the release rod holding pawl eccentric.

Rotate the indicator gear approximately 1/4 turn and hold it in this position. With the carriage return key lever fully depressed and the release rod holding pawl in the notch in the release rod, there should be some clearance, not less than .004", between the release rod holding pawl and the holding surface of the notch. If necessary, readjust the holding pawl eccentric within the limits of its adjustment to obtain this clearance.

NOTE: After making a single adjustment, check related adjustments.

Release Rod Holding Pawl Stop Screw Adjustment (Figure 9)

There should be .105" to .120" clearance between the engaging peak of the release rod holding pawl and the release rod when the pawl is held against its stop screw and the stop screw is resting against its post.

To adjust, loosen the stop screw bracket mounting screws, loosen the stop screw lock nut, and adjust the screw to meet the foregoing requirement. Position the stop screw so that a flat on the stop screw rests against the stop post before tightening the stop screw lock nut. Hold the stop screw against its stop post, position the contact screw bracket so that the lamp contact screw is in alignment with the contact on the lamp contact spring, and tighten the screws which mount both brackets. See Figure 6 for location of parts. Recheck the clearance between the engaging peak of the release rod holding pawl and the release rod.

Idler Lever Spring Tension

Unhook the release rod spring. With the indicator gear in its returned position, hook an 8 oz. scale over the release rod bell crank at the "Carriage Return" key lever and pull upwards at right angles to the key levers. It should require from 5 to 8 ozs. to start the idler lever moving. Replace the release rod spring. See Figure 8 for location of parts.

Release Rod Spring Tension

With the indicator gear in its returned position, apply the push end of an 8 oz. scale to the right end of the release rod (through the hole in the casting), and push in line with the release rod. It should require from 1 to 3-1/2 ozs. to start the release rod moving. See Figure 8 for location of parts.

NOTE: While taking this tension, hold the idler gear away from the feed roll pinion just enough to disengage the two.

Lamp Contact Lever Spring Tension

Unhook the lamp contact lever spring from its post. With the perforator upside down, hook an 8 oz. scale in the spring eye and pull up vertically. From 6 to 7-1/2 ozs. should be required to extend the spring to 1-7/8". Replace the spring on the spring post.

Tape Tension Lever Spring Tension Adjustment (Figure 10)

Hook an 8 oz. scale over the end of the slotted extension of the tape tension lever and pull at right angles to the lever. It should require from 5 to 5-1/2 ozs. to start the lever moving away from the tape feed roll.

To adjust, loosen the tape tension lever shaft lock nut and turn the spring, by rotating the tape tension lever shaft to obtain the required tension.

Tape Feed Roll Detent Roller Eccentric Preliminary Adjustment (Figure 11)

With the punch hammer in the operated position, insert the tape feed roll positioning gauge (Catalog No. 73517) into the punch block so that the projection of the

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NOTE: After making a single adjustment, check related adjustments.

gauge stops against the tape feed hole punch. Under this condition a pin of the tape feed roll should line up with the center hole on the gauge.

To adjust, remove the indicator gear and adjust the position of the tape feed roll by means of the detent lever eccentric. See Figure 12 for location of parts.

Tape Feed Roll Detent Lever Spring Tension (Figure 12)

Remove the cover plate which covers the opening in the casting for the backspace lever. Hold the backspace lever in the operated position and insert the push end of a 12 lb. scale through the opening in the casting. Apply the scale to the arm of the detent lever where the spring is hooked as close to the spring as possible, and push parallel to the spring toward the rear of the perforator. It should require from 3 to 4 lbs. to start the lever moving.

Backspace Pawl Spring Tension (Figure 13)

Insert an 8 oz. scale through the opening in the casting. Hook the scale over the right end of the backspace pawl and pull towards the front of the perforator at right angles to the pawl. It should require from 1-1/4 to 2 ozs. to start the backspace pawl moving. Replace cover plate.

Backspace Lever Spring Tension (Figure 13)

Hook an 8 oz. scale over the backspace lever near the cover plate and pull at right angles to the backspace lever. It should require from 1 to 1-1/2 ozs. to start the backspace lever moving.

Tape Feed Pawl Eccentric Adjustment (Figure 14)

When the punch bars are just touching the punches, the tape feed pawl should engage a tooth on the tape feed roll ratchet without overtravel.

Adjust the tape feed pawl eccentric to meet this requirement.

Tape Feed Pawl Spring Tension (Figure 14)

Hook an 8 oz. scale in the notch of the tape feed pawl. With the tape feed pawl resting against the tape feed roll, pull the scale parallel to the lower mounting strip of the celluloid tape chute. It should require from 2 to 3 ozs. to start the tape feed pawl moving away from the tape feed roll.

Punch Magnet Contact Screw Adjustment

The punch magnet contact should be adjusted so that the contacts close with sufficient operating margin when any key lever is depressed.

To adjust, back off the contact screw, depress a key lever, and advance the contact screw enough to just make contact. In this manner, depress every key lever and determine which key lever gives the contact spring the least travel. With this key lever depressed, turn the contact screw just enough to close the contacts. Then give the contact screw one full additional turn and tighten the lock nut.

NOTE: After making a single adjustment, check related adjustments.

Plunger Rod Adjustment

Connect the perforator to the proper power supply.

The plunger rod should be adjusted so that all the punches are driven through the tape with proper operating margin. This adjustment may be made as follows: Place a piece of tape between the die plates. Loosen the lock nut and back off the plunger rod head until perforations in the tape are incomplete when the "Letters" key is depressed. Advance the plunger rod head slowly until all the perforations are just punched cleanly in the tape. Then give the plunger rod head an additional one-third turn and tighten the lock nut against its head. See Figure 2 for location of parts.

Punch Hammer Spring Tension (Figure 14)

With the punch hammer in the unoperated position, hook a 12 lb. scale over the punch hammer, just above the plunger rod head, and pull towards the front of the perforator and in line with the punch hammer spring. It should require from 5 to 6 lbs. to start the punch hammer moving.

Bell Crank Adjustment

The end of each punch bar should be in alignment with the left edge of its corresponding punch when no key levers are depressed.

Adjust by bending the bell cranks to the left or right. To do this, hold the loop extensions in their unoperated position with the thumb and grasp the end of the bell cranks with a pair of long nose pliers. See Figure 2 for location of parts.

Tape Tension Spring Adjustment

The tape tension spring should hold the tape upward firmly against the guide on the die block, without buckling the tape. Check this tension by pressing the edge of the tape against the spring. When the pressure on the tape is released, the spring should return the tape so that it is firmly against the top of the guide.

Adjust by bending the tape tension spring. See Figure 2 for location of parts.

Tape Feed Roll Detent Roller Eccentric Final Adjustment (Figure 15)

Refine the tape feed roll detent eccentric adjustment, if necessary, so that the perforations in the tape meet the standard spacing of ten holes to the inch. This may be checked by perforating a length of tape consisting of a series of nine "Blanks" followed by a "Letters" combination and checking it against the tape gauge (catalog No. 2215).

NOTE: If this adjustment is changed, recheck the "Tape Feed Pawl Adjustment."

*Indicator Gear Return Spring Tension Adjustment (Figure 16)

Rotate the indicator gear as far as it will go in a counterclockwise direction.

NOTE: After making a single adjustment, check related adjustments.

Loosen the indicator gear shaft retaining nut and rotate the spring retaining plate in a clockwise direction until the spring is wound tightly. Then rotate the spring retaining plate one turn in a counterclockwise direction and tighten the nut.

If the indicator gear return spring is wound too tightly, it will bind and the indicator gear will not return to its initial position when the "Carriage Return" key lever is depressed. If the indicator gear return spring is not wound tightly enough, the indicator gear will be slow in returning, and perhaps will not have force enough to disengage the release rod holding pawl out of the notch in the release rod.

**Indicator Gear Return Spring Tension Adjustment (Figure 17)

In order to check this adjustment, it is necessary to remake it. Rotate the indicator gear in a counterclockwise direction until the idler gear is in mesh with the last tooth on the indicator gear. Loosen the indicator gear shaft retaining nut and rotate the spring retaining plate in a clockwise direction until the spring is wound tightly. Then rotate the spring retaining plate one turn in a counterclockwise direction, set the lamp contact lever stop so that the end of the lamp contact lever will rest approximately midway between the ends of the formed section of the stop, and tighten the nut.

If the indicator gear return spring is wound too tightly, it will bind and the indicator gear will not return to its initial position when the "Carriage Return" key lever is depressed. If the indicator gear return spring is not wound tightly enough, the indicator gear will be slow in returning, and perhaps will not have force enough to disengage the release rod holding pawl out of the notch in the release rod.

*Indicator Lamp Contacts Adjustment (Figure 16) - See Note (A)

The indicator lamp should light on the sixty-fourth or sixty-fifth character perforated.

To adjust, return the indicator gear to its starting position (with the pin on the gear resting against the end of the lamp contact lever) by operating the release rod. Connect the perforator to the proper power source, adjust the lamp contact screw so that when a character key lever is operated sixty-five times, the lamp lights on the sixty-fifth character, and give the screw an additional 1/4 turn.

**Indicator Lamp Contacts Adjustment (Figure 17)

In order to check this adjustment, it is necessary to remake it. Adjust the lamp contact screw so that the contacts just close when the idler gear is in mesh with the last tooth on the indicator gear. Then advance the screw 1/4 turn and tighten the lock nut.

(A) The indicator gear is not always fully returned to its starting position; therefore, the lamp may light one character early.

NOTE: After making a single adjustment, check related adjustments.

**Indicator Gear Stop Plate Adjustment (Figure 6) - See Note (A)

The adjustable stop plate on the indicator gear provides for varying the starting position of the gear so that the lamp contacts will close when sixty-four to seventy characters have been perforated. To check the adjustment, fully depress the carriage return key lever and release it slowly. With the perforator connected to the proper power source, count the number of character key lever operations required to light the indicator lamp. If it is desired to light the lamp earlier, it will be necessary to move the stop plate in a clockwise direction; and if it is desired to light the lamp later, the stop plate must be moved in a counterclockwise direction.

To adjust, loosen the stop plate mounting screws and position the plate. After the correct position of the stop plate has been determined, carefully move the plate toward the center of the gear as far as it will go and tighten the mounting screws securely. Recheck the adjustment several times, operating the carriage return key lever in a normal manner.

Tape Reel Tension Lever Spring Tension

Loosen the three tape reel assembly mounting screws and remove the tape reel assembly from the perforator. Hook an 8 oz. scale over the tape tension lever at the right angle, bend to the rear of the pivot screw, and pull toward the right rear corner of the perforator. It should require from 1-1/2 to 2-1/4 ozs. to start the lever moving. Replace the tape reel assembly. See Figure 2 for location of parts.

Method of Starting Tape in Perforator

Tear the tape squarely and insert it between the die plates of the punch block. Pull the tape tension lever away from the tape feed roll, and push the tape forward until the end of the tape is in position between the tape feed roll and the tape tension lever. Now press the tape tension lever against the tape feed roll, which will cause the projecting pins in the tape feed roll the grip the tape. Strike the "Blank" key a number of times and the tape will feed forward.

Punch Magnet Yoke Contact and Bracket Assembly Adjustment (Figure 18)

(a) The spring hole in the magnet yoke suspension spring arm should be in the plane of the rear surface of the magnet yoke when the yoke is in the middle of its travel.

To adjust, loosen the magnet yoke contact bracket mounting screws and position the bracket. Tighten the mounting screws.

(b) The magnet yoke suspension spring should appear to be vertical as viewed from the front of the perforator; and the tension of the spring should just balance the weight of the magnet yoke.

To adjust, loosen the suspension spring arm mounting screws and position the arm. Tighten the mounting screws.

(A) The indicator gear is not always fully returned to its starting position; therefore, the lamp may light one character early.

NOTE: After making a single adjustment, check related adjustments.

Punch Magnet Yoke Contact Spring Adjustment (Figure 18)

(a) With the magnet yoke attracted, hook an 8 oz. scale to the rear contact spring, at the contact point, and pull at right angles to the contact spring. It should require 2 to 3 ozs. to just open the contact points.

To adjust, bend the rear contact spring.

(b) There should be .015" to .020" clearance between the contact points when the magnet yoke is in the unoperated position.

To adjust, bend the front contact spring. Recheck (a).

REMOVE THE RELAY GUARD TO CHECK THE FOLLOWING ADJUSTMENTS:

Repeat Relay Adjustments (Figure 19)

(a) With the contact spring held away from the armature, there should be .002" to .010" clearance between the pole piece and the armature.

To obtain this clearance, it may be necessary to back off the armature stop nut all the way and pull the armature away from its pole piece. See Figure 19-A.

NOTE: Care should be taken to keep the armature parallel to the pole piece.

(b) When the armature is held against the pole piece, there should be .012" to .015" clearance between the armature and the stop nut. To adjust, position the stop nut. See Figure 19-B.

(c) Hold the armature contact spring off and hook an 8 oz. scale over the backstop contact spring, at the contact point, and pull at right angles to the contact spring. It should require 1-1/2 to 1-3/4 ozs. to start the contact spring moving away from the fibre insulator on the relay spool.

Adjust by bending the backstop contact spring. See Figure 19-C.

(d) With the armature held against the pole piece, apply the push end of an 8 oz. scale to the armature contact spring, at the contact point, and push at right angles to the contact spring. It should require 1 to 1-1/2 ozs. to start the contact spring moving away from the fibre stud on the armature.

Adjust by bending the armature contact spring. See Figure 19-C.

(e) When the armature is held against the stop nut, there should be some clearance, not more than .002", between the armature contact spring and the fibre stud on the armature.

To adjust, bend the stop lug on the backstop contact spring. See Figure 19-D.

(f) Recheck (c).

(g) When the armature is held against its pole piece, there should be .006" to .010" clearance between the contact points. See Figure 19-C.

NOTE: After making a single adjustment, check related adjustments.

LUBRICATION SPECIFICATION

The lubricants listed in Specification S-5288 should be used to lubricate the keyboard tape perforator.

Unless otherwise specified, one or two drops of oil at each of the places indicated will be sufficient. Use oil for lubrication at all of the places listed below, except where the use of grease is specified.

A. Locations on the Bottom of the Perforator

1. Key levers - key lever shaft and rear comb slots.
2. Loops - bearings.
3. Backspace lever - pivot and at pawl bearing screw.
4. Tape feed roll star wheel and pinion.
5. Tape feed roll detent - roller and bearing screw.
6. Lamp contact lever pivot.
7. Release rod - bearings.
8. Release rod bell crank - pivot and at point of contact with key lever.
9. Release rod holding pawl pivot and point of contact with release rod.
10. Indicator gear return spring.
11. Idler lever - pivot and idler gear.
12. All helical tension spring loops.

B. Locations on the Top of the Perforator

1. Tape feed roll - bearings, ratchet teeth.
2. Tape tension lever bearing.
3. Punch block - oil hole, punches, guide pins.
4. Tape feed pawl - pivot and spring loops.
5. Punch hammer oil hole.
6. Punch bars - retaining slots in punch hammer and pivots on bell cranks.
7. Bell cranks - bearings and at points of engagement with loop extensions.
8. Punch magnet plunger rod - at magnet bracket.
9. Punch hammer spring front loop.
10. Punch magnet yoke - at ends of solenoid (one drop only; avoid excess).
11. Tape reel tension lever - pivot.
12. Tape reel hub oil hole.
13. Key lever front guide comb slots.
14. Space bar loop - bearings and at point of engagement with its key lever.
15. Magnet yoke suspension spring loops.

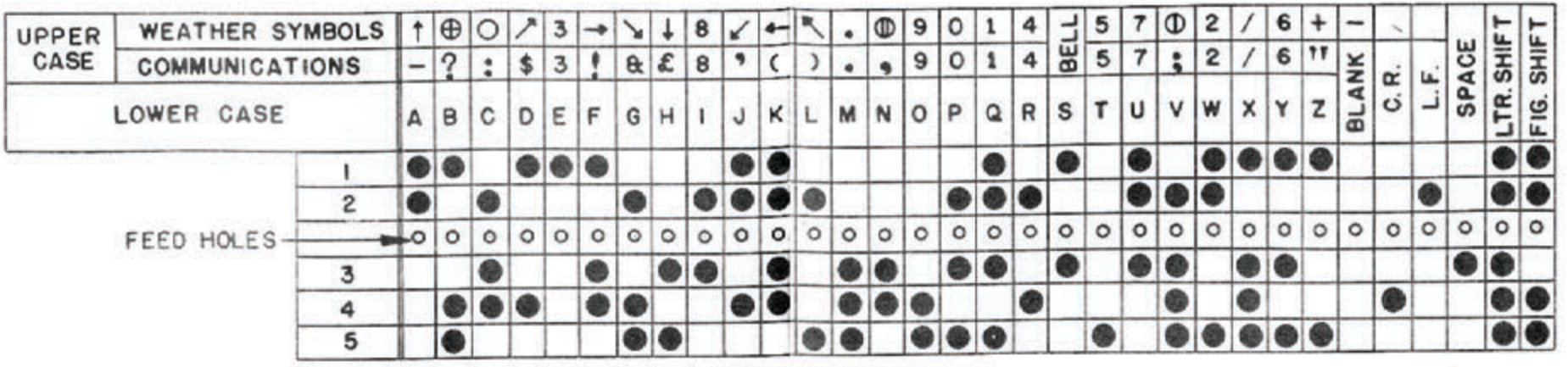

UPPER CASE
WEATHER SYMBOLS
COMMUNICATIONS
LOWER CASE
FEED HOLES
BELL
BLANK
C.R.
L.F.
SPACE
LTR. SHIFT
FIG. SHIFT
1
2
3
4
5

FIGURE 1

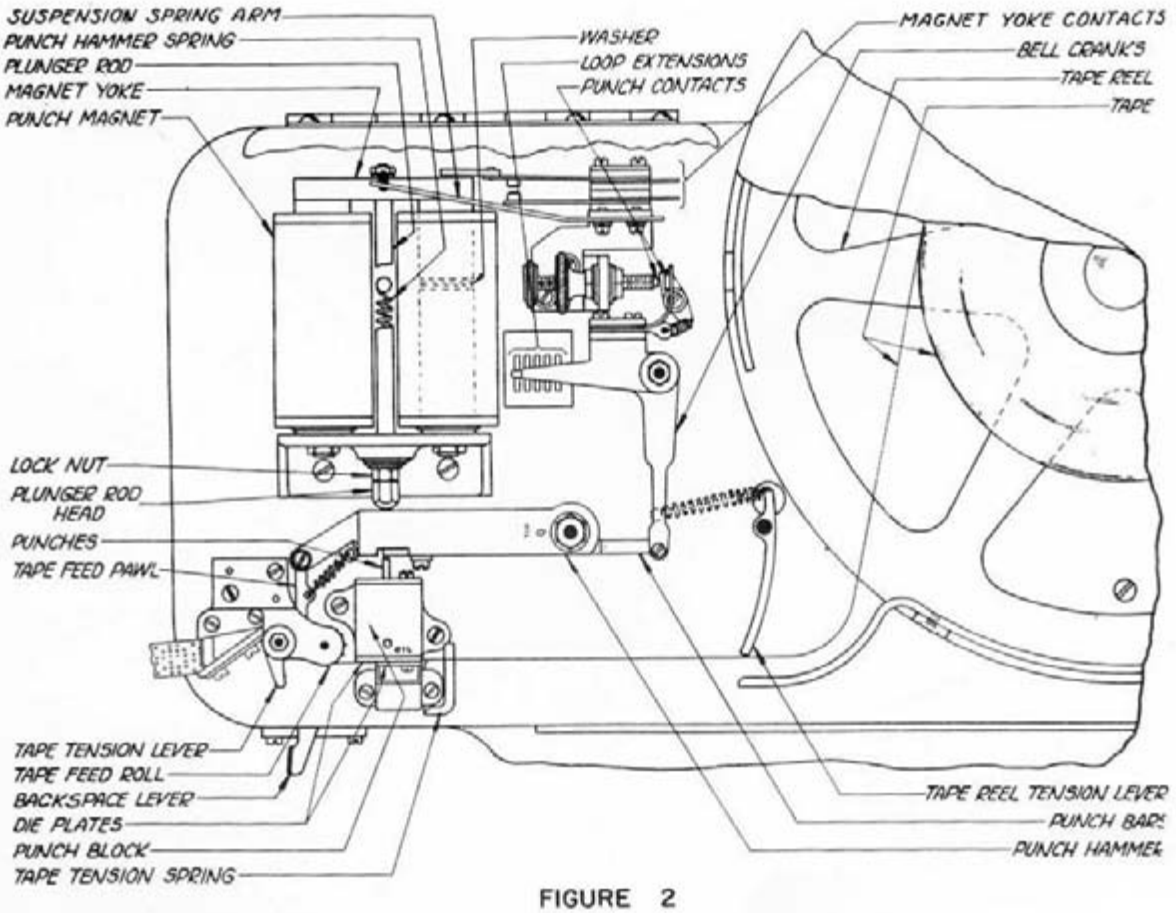


FIGURE 2

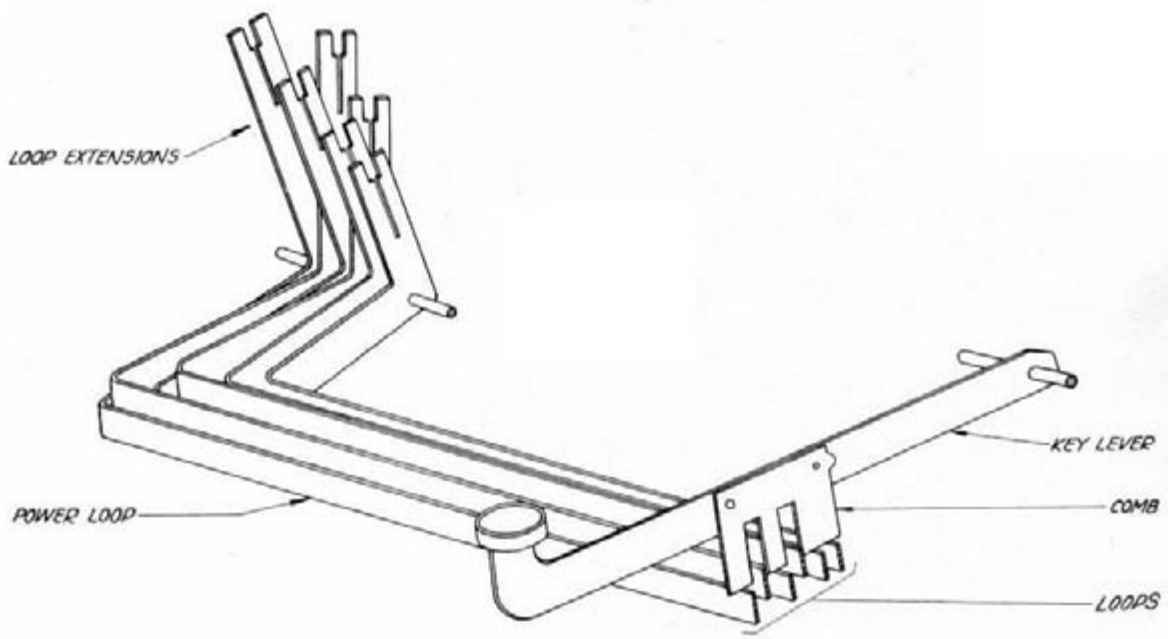


FIGURE 3

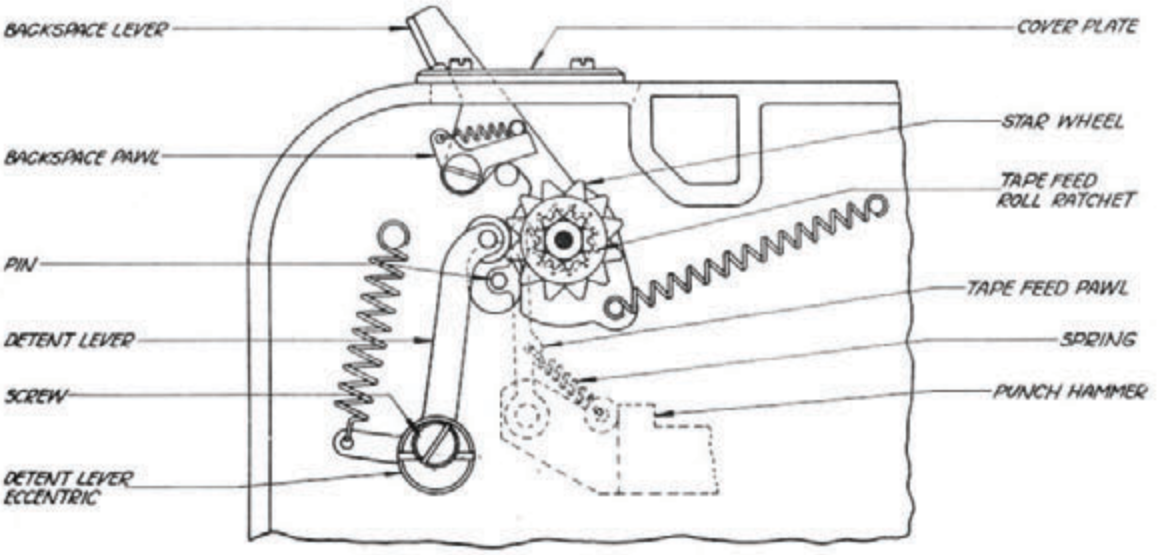


FIGURE 4

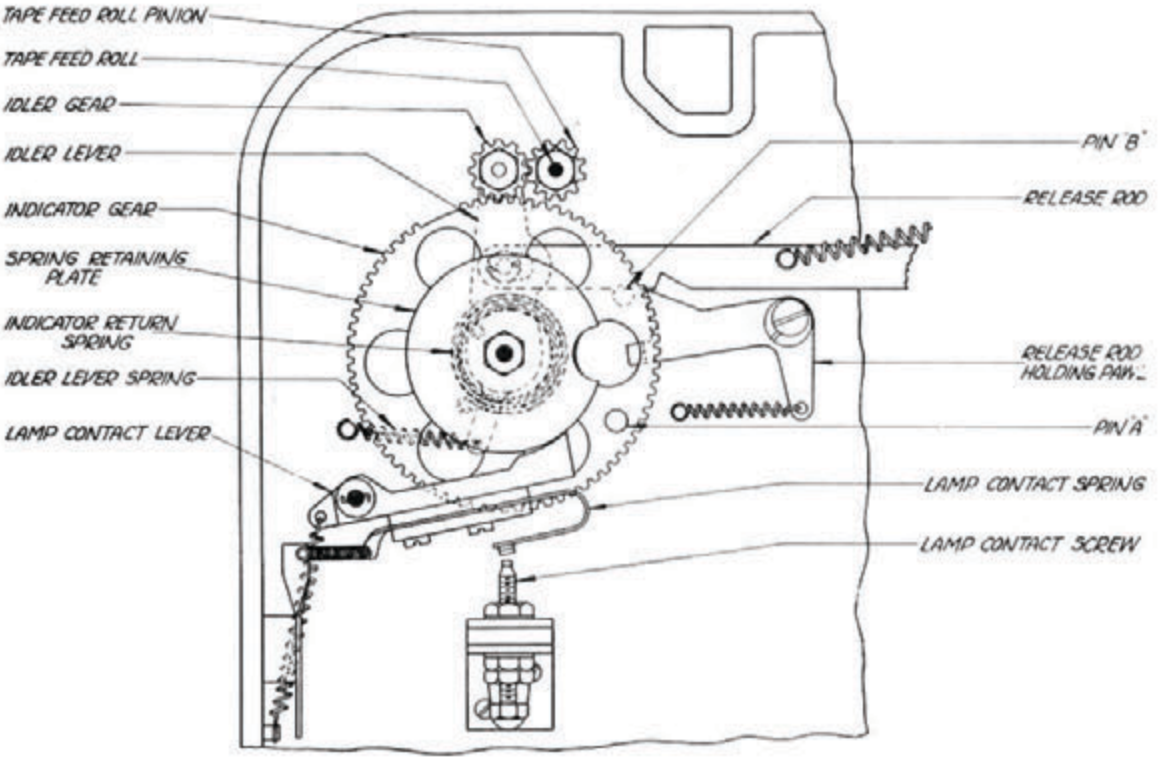


FIGURE 5

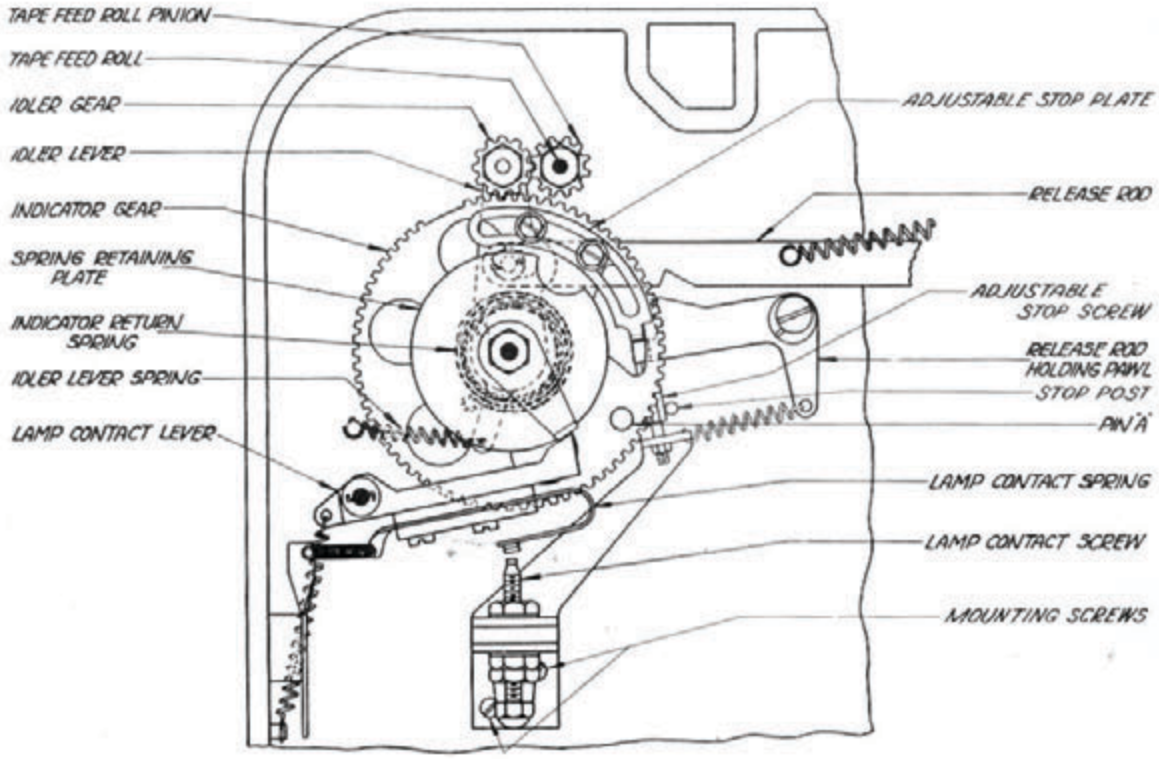


FIGURE 6

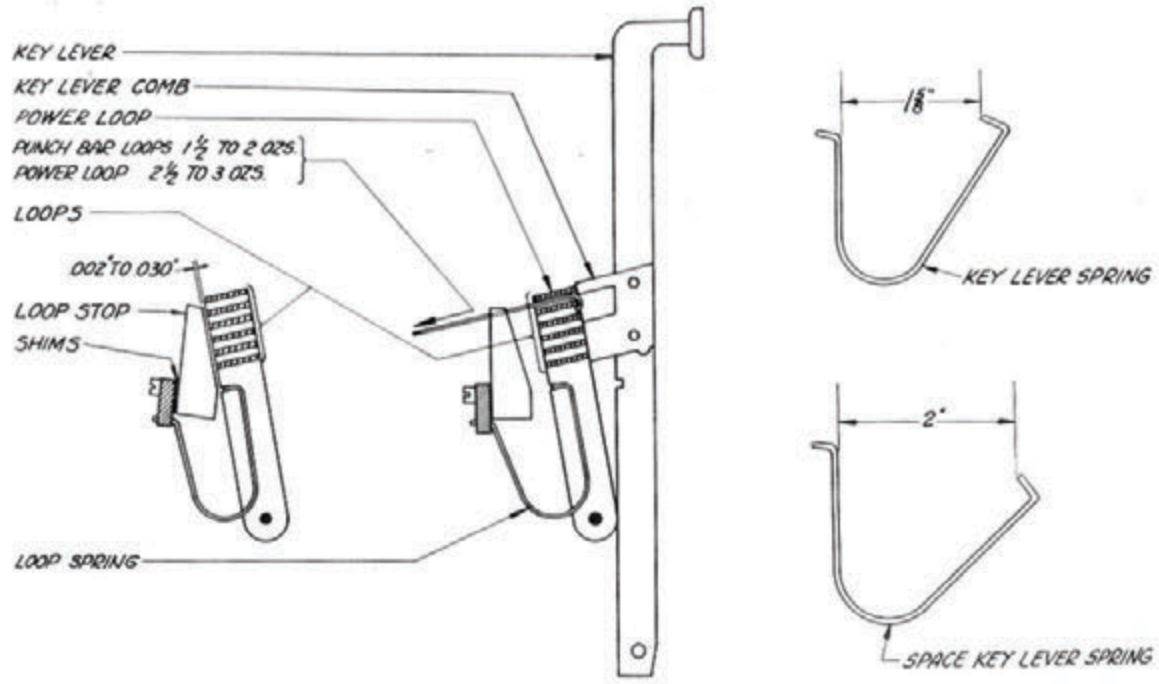


FIGURE 7

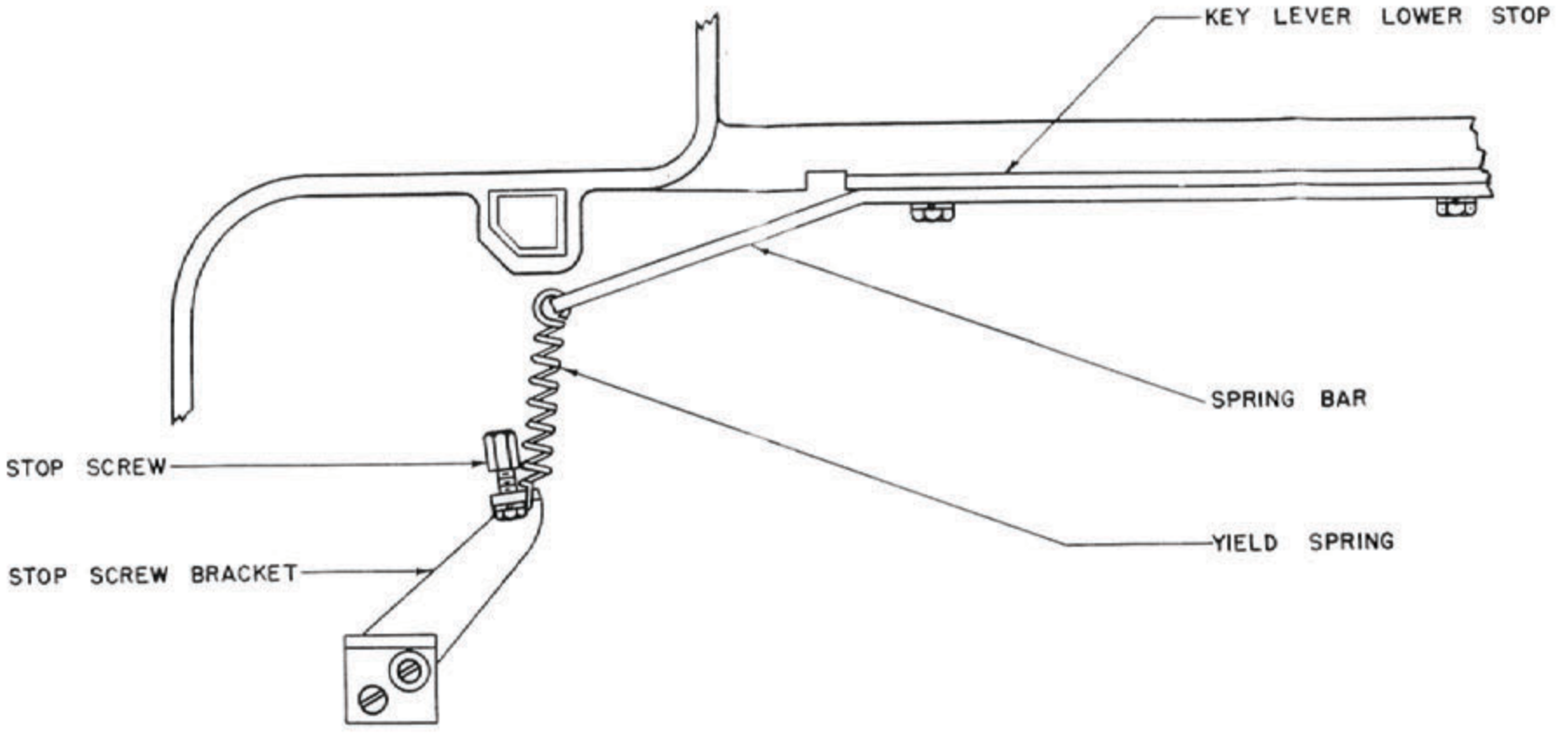

KEY LEVER LOWER STOP
SPRING BAR
STOP SCREW
YIELD SPRING
STOP SCREW BRACKET

FIGURE 7A

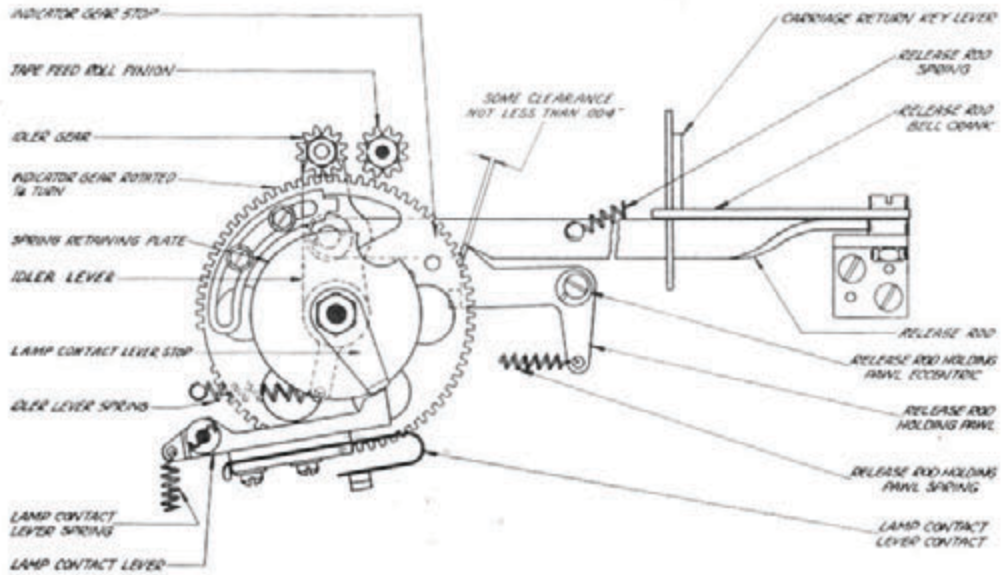


FIGURE 8

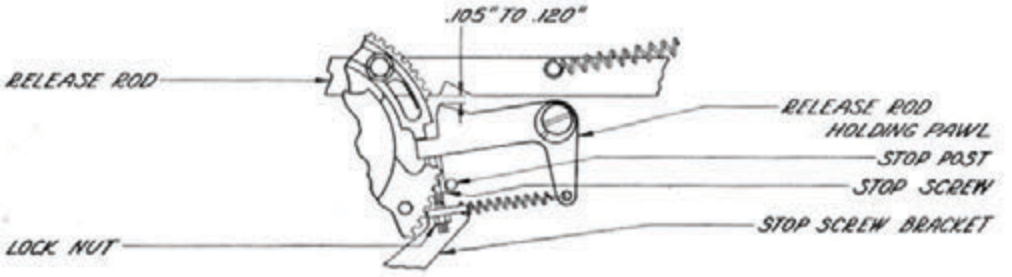


FIGURE 9

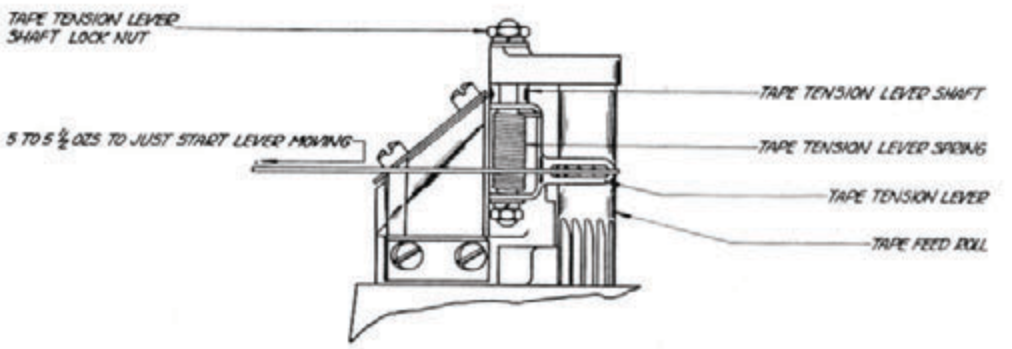


FIGURE 10

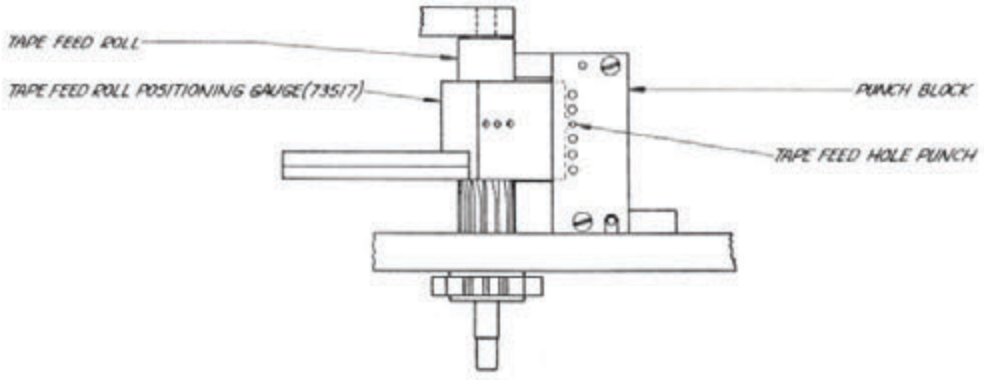


FIGURE 11

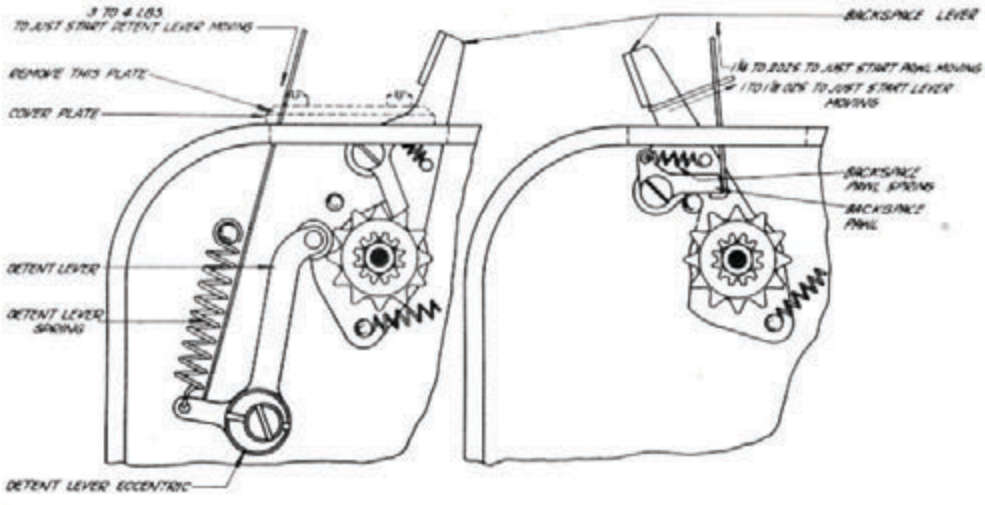


FIGURE 12

FIGURE 13

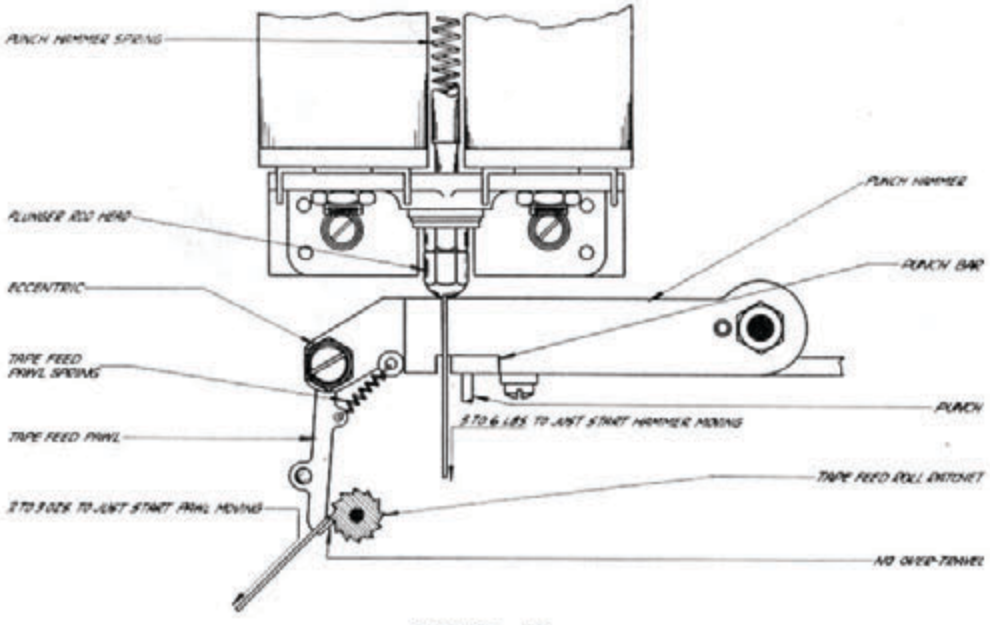


FIGURE 14

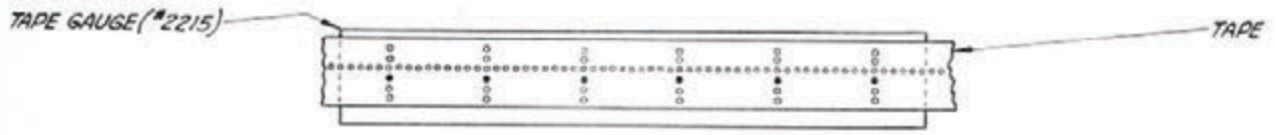


FIGURE 15

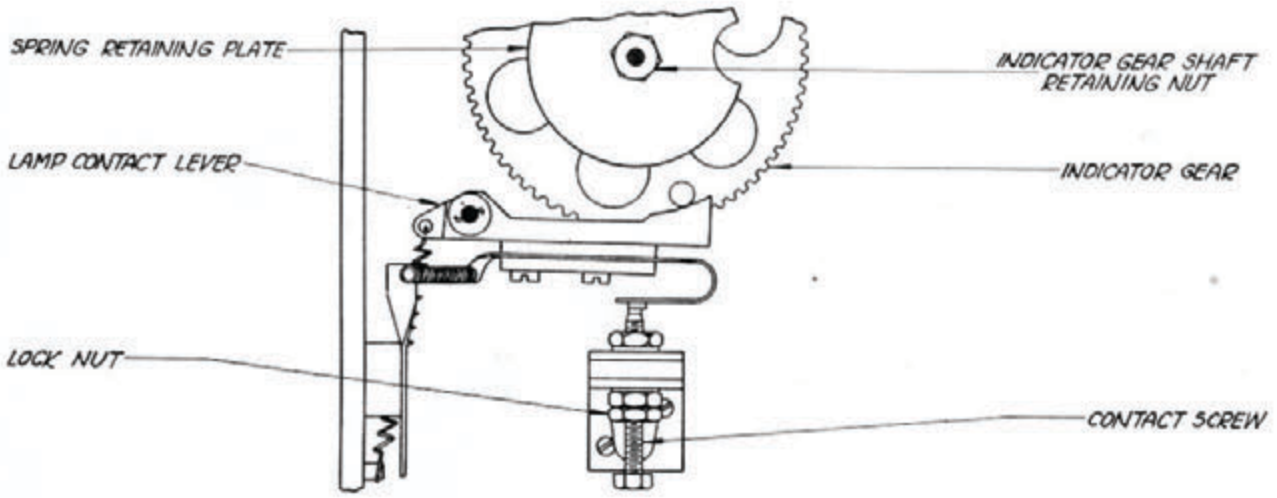


FIGURE 16

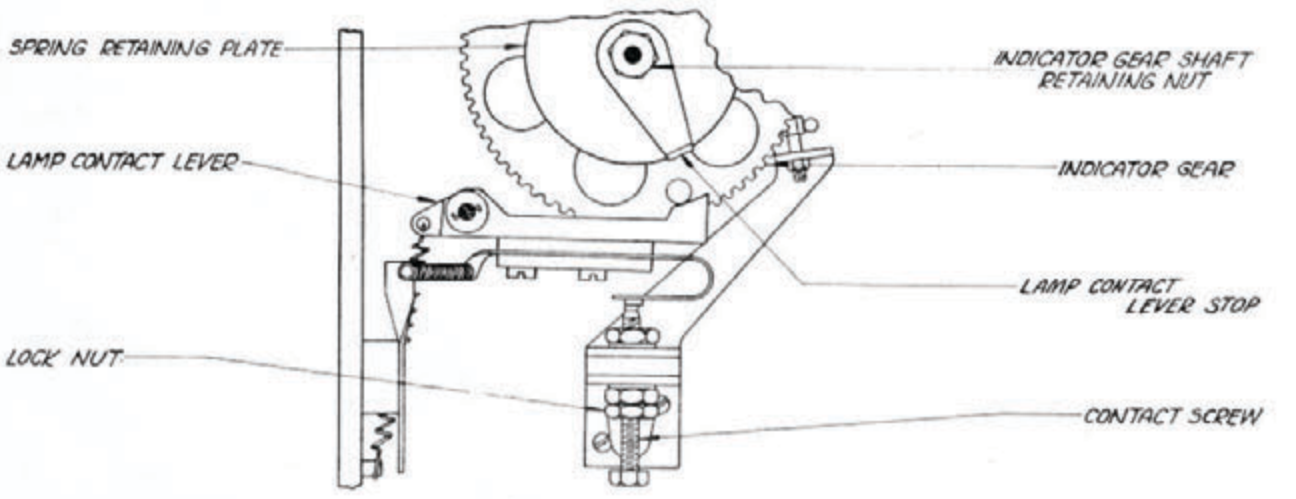


FIGURE 17

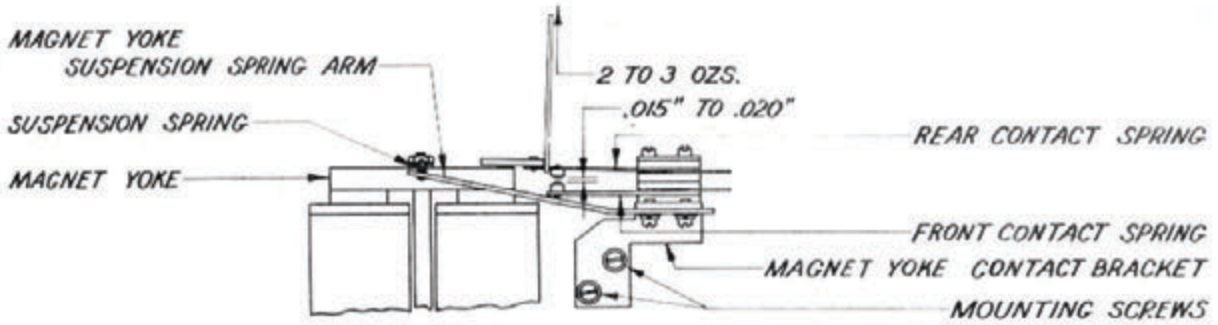


FIGURE 18

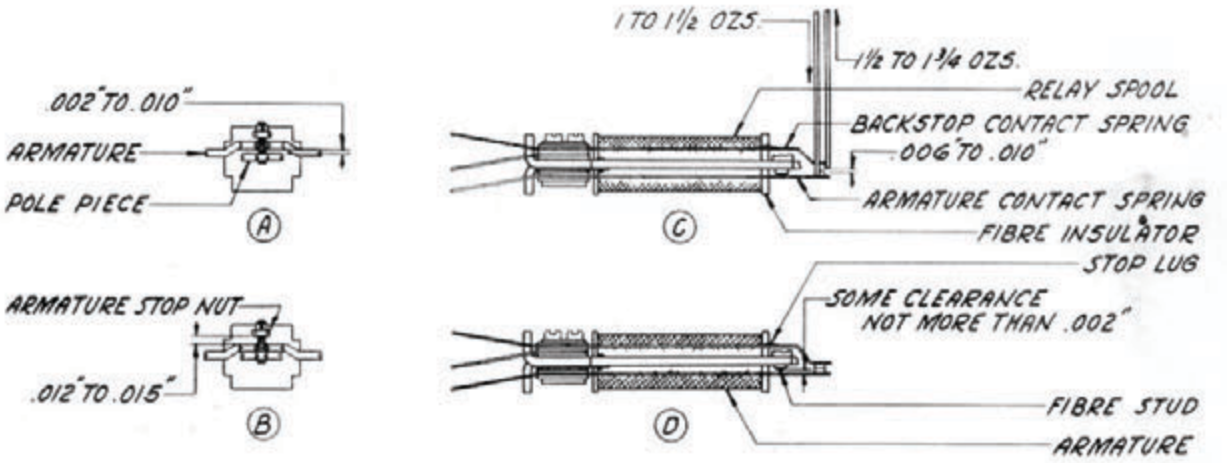
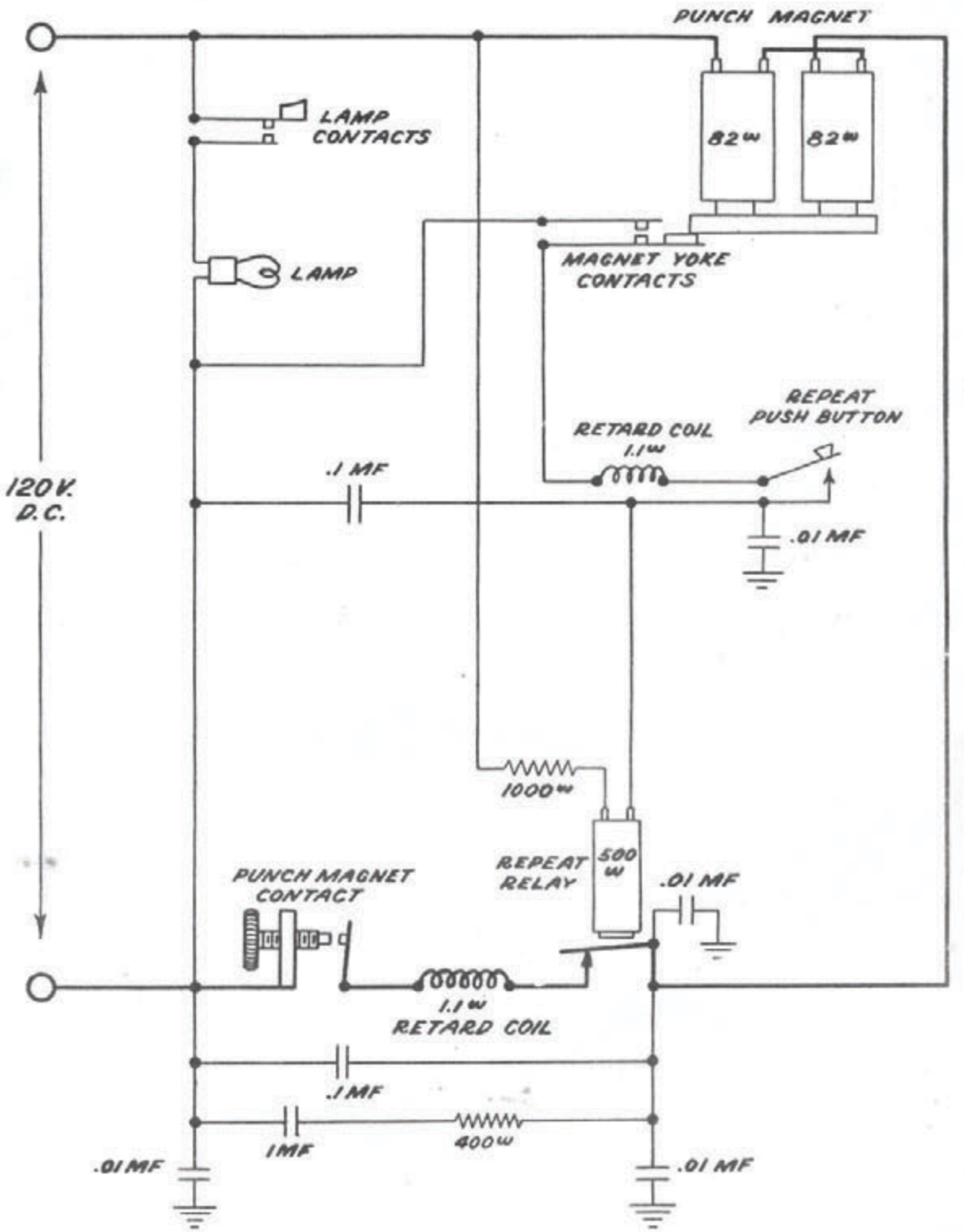


FIGURE 19



SCHEMATIC DIAGRAM

FIGURE 20

Bulletin No. 1093
Issue 1
March, 1941

TELETYPE

PRINTING TELEGRAPH SYSTEMS

PARTS
PERFORATOR

TELETYPE
CORPORATION
SUBSIDIARY OF
Western Electric Company
CHICAGO, U.S.A.

Printed in U.S.A.

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CHANGES AND ADDITIONS TO BULLETIN NO. 1093, ISSUE 1
PARTS - PERFORATOR

Page 1

The 33-14 screw used to mount the 122-380 tape tension lever should read "33-114 screw."

Page 3

The plunger rod illustrated between the two M-25 magnet coils may be ordered as "75789 plunger rod" and is a part of the 122-85 punch magnet bracket (assem.)

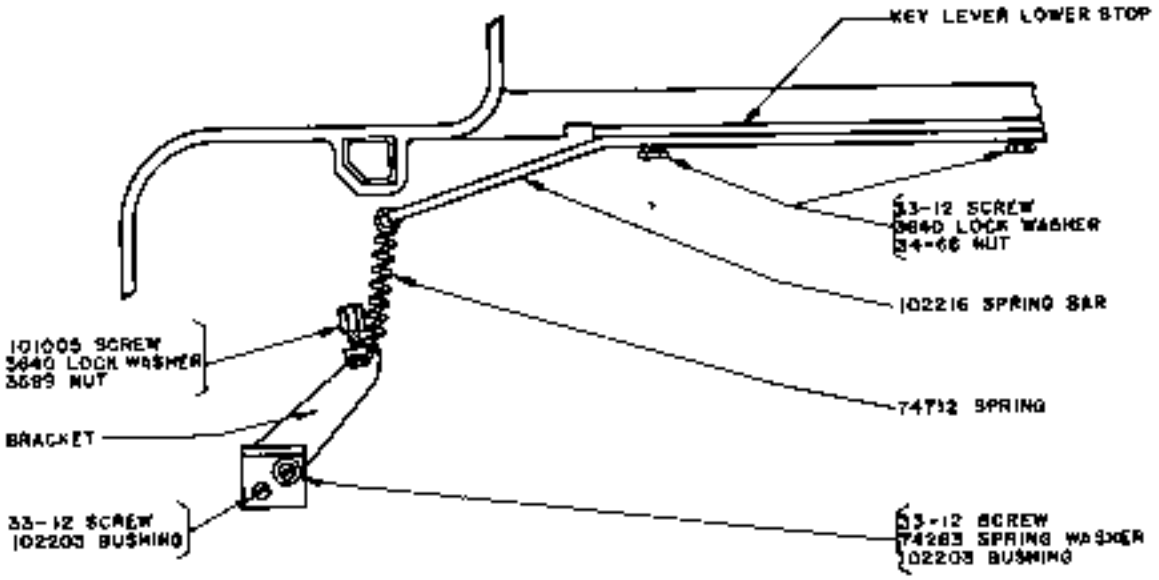
Page 6

The 35-86 spring for the 7103 pawl has been replaced by a 35-70 spring.

The 3598 nut used with the 101005 screw on the 99829 bracket should read "3599 nut."

The 103-102 screw-contact and 34-13 nut are not included in the 122-128 lamp contact bracket (assem.) as indicated by the bracket.

The design of the end-of-line indicating mechanism has been changed to provide a slight yield in the mounting of the 99829 bracket. The following figure shows the new parts introduced by this change:



Page 7

To improve operating margins, a 103965 relay support has been added. This support is mounted on top of the 99961 relay bracket and requires the use of the 1161 mounting screws instead of the 1176 screws formerly used to mount the 99961 relay bracket.

The 72570 strap used to mount the 101089 condenser has been replaced by a 104284 strap.

Page 9

The 103-102 screw-contact and 34-13 nut are not included in the 122-128 lamp contact bracket (assem.) as indicated by the bracket.

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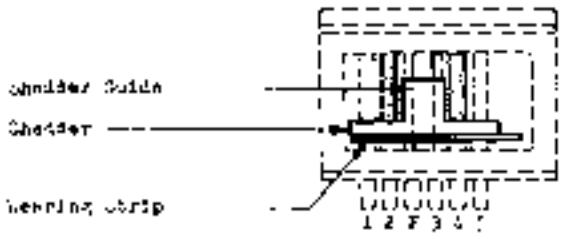
CHANGES AND ADDITIONS TO PARTS BULLETINS

1001	Issue 1	1067	Issue 2	1090	Issue 2
1012	Issue 2	1080	Issue 1	1093	Issue 1
1038	Issue 2	1082	Issue 2	1100	Issue 2
1052	Issue 1	1085	Issue 2	1117	Issue 2
1064	Issue 2	1089	Issue 1		

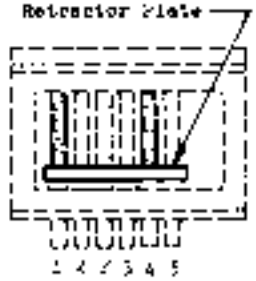
The punch block assemblies shown in the above bulletins have been redesigned and assigned new assembly numbers. Old style punch block assemblies are no longer furnished. On orders for old style blocks, new style assemblies which are fully interchangeable with the old style will be furnished.

The sketches below illustrate the difference between the old and new style assemblies, and it should be noted that the shedder and wearing strip are replaced by a retractor plate, and the shedder guides are not used. The shedder and wearing strip are no longer being furnished. When it is desired to replace a shedder or wearing strip, a retractor plate should be ordered instead.

The chart below may be used to determine the new style punch block assembly number which replaces an old style, and which retractor plate must be ordered to replace the old style shedder, and/or wearing strip.



OLD STYLE PUNCH BLOCK
(spring on punches 2 & 4)



NEW STYLE PUNCH BLOCK
(Spring on punches 1 & 4)

Old Style Assembly Number	Apparatus Used On	Type of Punch Block			New Style Assembly Number	Retractor Plate
		Number of Code Punch Holes	Type of Feed Hole	Grinding on Punches	Shedder	Wearing Strip		
122-386	Perf. & Montyp. Reperf. (5 mag.)	5	Advanced	Cup Ground	122-367	122-368	112660	110902
122-575	Perf. & Montyp. Reperf. (5 mag.)	5	Straight	Cup Ground	122-367	122-574	111019	110901
77987	Perforator	5	Straight	Cup Ground	75121	77986	112642	110901
81510	Perforator	6	Advanced	Cup Ground	75121	75120	112643	110904
81792	Perf. Trans.	5	Straight	Cup Ground	75121	77986	111020	110901
85156	Montyp. Reperf.	5	Advanced	V Notch	75121	75120	112645	110904
86113	Montyp. Reperf.	5	Straight	V Notch	75121	77986	111021	110901
89504	Perf. Trans.	5	Straight	Cup Ground	75121	77986	111022	110901
91114	Perf. Trans.	5	Advanced	Cup Ground	75121	75120	112646	110902
94904	Perforator	7	Advanced	Cup Ground	94948	94950	114647	110905
95451	Typ. Reperf.	5	Straight	Cup Ground	122-367	122-574	111023	110901
97472	Montyp. Reperf.	5	Advanced	V Notch	75121	75	112648	110902
102790	Typ. Reperf.	5	Straight	Cup Ground	122-367	122-574	111024	110901
104573	Typ. Reperf.	5	Advanced	Cup Ground	122-367	122-368	112649	110902

Teletype Corporation
Chicago, Illinois, U.S.A.

BB-6C2
Issue 1
August, 1947

CHANGES AND ADDITIONS TO BULLETIN NO. 1012 (ISSUE 2) PARTS - PERFORATOR

Page 4

The old style 122-587 tension lever, 122-591 spring and 122-595 shaft, used on the 122-586 feed roll bracket assembly, are no longer manufactured. When it becomes necessary to replace any one of these three parts, one each of the parts marked "new style" should be ordered instead.

All other old style parts are still available for use with the old style assembly.

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Teletype Corporation
Chicago, Illinois, U.S.A.

CHANGES IN TELETYPE PART AND ASSEMBLY NUMBERS

In order to facilitate the use of automatic business machines in the conduct of its business, Teletype Corporation finds it necessary to eliminate all of its present part and assembly numbers containing dashes and/or letter prefixes. Such numbers have been replaced by others having 3 to 6 digits which may have a one-letter or a two-letter suffix.

The prefixes used with magnet, packing material, raw material such as wire in bulk, Teletype literature and wiring diagram numbers have been changed to suffixes, and in the case of bulletins and instruction manuals a suffix has been added to identify the items without reference to descriptions as shown in the following illustrations:

Old Designation	New Designation	Description
M121	121M	Magnet
PK10718	10718PK	Carton
RM31571	31571RM	Wire
121	121B	Bulletin
ER121	121EE	Correction Sheet
121	121MA	Instruction Manual
WD2186	2186WD	Wiring Diagram
S5037	5037S	Specification
S5333A	5333SA	Specification
S5333B	5333SB	Specification

All Teletype parts bulletins and price lists will eventually be changed to show the new as well as the old numbers for the convenience of Teletype Corporation customers.

When an item is ordered under an old number, the new number will be substituted for the old one and the old number will be shown immediately after the description of the items on all shipping papers and invoices.

Attached are two conversion lists of the active numbers involved; one with the old numbers and descriptions arranged numerically and the other with the new numbers arranged numerically. It is to be noted that some of the new numbers have already been used in Teletype parts catalogs.

Many numbers containing dashes cover parts considered obsolete and are not included in the attached lists. Occasionally one of these parts is reinstated, in which case the part will be shipped under the new number with the dash number shown immediately after the description. It is not intended to add such numbers to the correction sheet lists unless the part is to be commonly used.

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OLD TO NEW NUMBER CONVERSION LIST

Old No.	New No.	Description
2-3	125100	Washer
4-4	125101	Stud
4-8	76879	Stud
4-11	125102	Stud
6-1	125103	Thumb Wheel
6-2	125104	Sleeve
23-8	125105	Terminal
25-21	125106	Stud
26-15	125107	Dowel
33-1	1157	Screw
33-2	125108	Screw
33-3	1158	Screw
33-4	1159	Screw
33-5	1159	Screw
33-6	1160	Screw
33-7	1161	Screw
33-8	125109	Screw
33-9	125110	Screw
33-10	1162	Screw
33-11	1163	Screw
33-12	121111	Screw
33-13	5760	Screw
33-14	1164	Screw
33-15	125112	Screw
33-16	1165	Screw
33-17	1166	Screw
33-18	125113	Screw
33-19	1167	Screw
33-21	112620	Screw
33-22	125114	Screw
33-23	125115	Screw
33-29	125116	Screw
33-32	125117	Screw
33-35	1168	Screw
33-36	125118	Screw
33-37	1169	Screw
33-38	125119	Screw
33-39	1222	Screw
33-41	125120	Screw
33-42	125121	Screw
33-43	125122	Screw
33-45	125123	Screw
33-49	1170	Screw
33-50	125124	Screw
33-51	125125	Screw
33-53	1171	Screw
33-54	1172	Screw
33-57	125126	Screw
33-58	125127	Screw
33-59	125128	Screw
33-60	125129	Screw
33-63	125130	Screw
33-64	1173	Screw
33-65	125131	Screw
33-69	1223	Screw
33-70	125132	Screw
33-72	125133	Screw
33-73	125134	Screw
33-74	125000	Screw
33-75	125135	Screw
33-78	110741	Screw
33-79	125136	Screw
33-82	125137	Screw
33-85	125138	Screw
33-86	125139	Screw
33-88	125140	Screw
33-89	125141	Screw
33-98	125142	Screw
33-101	125143	Screw
33-108	125144	Screw
33-110	110134	Screw
33-111	47054	Screw
33-114	125146	Screw
33-121	125147	Screw
33-123	125148	Screw
33-130	125149	Screw
33-132	125001	Screw
33-133	125150	Screw
33-141	125151	Screw
33-143	125152	Screw
33-151	125153	Screw
33-153	125154	Screw
33-156	1162	Screw
33-157	1174	Screw
33-158	125155	Screw
33-162	125156	Screw
33-163	125157	Screw
33-167	125158	Screw
33-168	125159	Screw
33-169	1175	Screw
33-170	112621	Screw
33-175	125160	Screw
33-176	125161	Screw
33-179	125002	Screw
33-180	125162	Screw
33-185	125163	Screw
33-193	125164	Screw
33-194	125165	Screw
33-195	1176	Screw
33-196	125166	Screw
33-197	125167	Screw
33-198	125168	Screw
33-202	125169	Screw
33-206	125003	Screw
33-207	125170	Screw
33-208	125171	Screw
33-209	125172	Screw
33-210	125173	Screw
33-211	125174	Screw
33-212	125175	Screw
33-213	125176	Screw
33-217	125177	Screw
33-224	125178	Screw
33-225	125179	Screw
33-227	125180	Screw
33-228	125181	Screw
33-234	1177	Screw
33-235	125183	Screw
33-236	125184	Screw
33-237	1178	Screw
33-238	1179	Screw
33-240	950	Screw
33-241	185	Screw
33-244	186	Screw
33-245	187	Bolt
33-250	125188	Screw
33-252	125189	Screw
33-253	125190	Screw
33-254	1191	Screw
33-255	92	Screw
33-257	125193	Screw
33-264	125194	Screw
33-267	125182	Screw
33-270	87636	Screw
33-271	125195	Screw
33-272	125004	Screw
33-274	125196	Screw
33-275	126250	Spring
33-276	125197	Screw
33-278	125199	Screw
33-280	125005	Screw
33-282	125200	Screw
33-283	125201	Screw
33-285	125202	Screw
33-289	125203	Screw
33-290	1199	Screw
33-296	125205	Screw
33-311	110742	Screw
33-333	125006	Screw
33-334	112622	Screw
33-335	112623	Screw
33-336	125206	Screw
33-337	112624	Screw
33-339	125207	Screw
33-340	125208	Screw
33-341	125209	Screw
33-344	125211	Screw
33-346	125212	Screw
33-347	112625	Screw
33-348	125213	Screw
33-349	125214	Screw
33-350	125215	Screw
33-356	125216	Screw
33-360	1181	Screw
33-362	125217	Screw
34-1	125218	Nut
34-2	3595	Nut
34-3	125219	Nut
34-4	112626	Nut
34-5	5475	Nut
34-6	3597	Nut
34-7	70073	Nut
34-8	3598	Nut
34-9	3599	Nut
34-10	125220	Nut
34-11	112627	Nut
34-12	55257	Nut
34-13	125221	Nut
34-14	5815	Nut
34-16	125222	Nut
34-19	125223	Nut
34-24	125224	Nut
34-25	3600	Nut
34-27	125225	Nut
34-28	3602	Nut
34-29	3603	Nut
34-35	125226	Nut
34-39	125227	Nut
34-43	125228	Nut
34-48	125229	Nut
34-50	3604	Nut
34-51	1036	Nut
34-53	3605	Nut
34-54	125230	Nut
34-55	3606	Nut

Old No.	New No.	Description
34-56	110435	Nut
34-58	125231	Nut
34-59	125009	Nut
34-60	125232	Nut
34-61	125233	Nut
34-62	125234	Nut
34-63	2723	Nut
34-64	112628	Nut
34-66	125235	Nut
35-1	112629	Spring
35-2	112630	Spring
35-8	112631	Spring
35-13	125236	Spring
35-16	125237	Spring
35-23	125238	Spring
35-24	125239	Spring
35-26	125240	Spring
35-27	125241	Spring
35-28	125242	Spring
35-33	112632	Spring
35-34	125243	Spring
35-40	125244	Spring
35-42	110436	Spring
35-43	125245	Spring
35-47	125246	Spring
35-48	125247	Spring
35-52	4702	Spring
35-53	125248	Spring
35-54	112633	Spring
35-58	3606	Spring
35-66	125249	Spring
35-68	125250	Spring
35-69	125251	Spring
35-70	110437	Spring
35-71	125252	Spring
35-72	125253	Spring
35-78	125254	Spring
35-80	125255	Spring
35-84	125256	Spring
35-85	125257	Spring
35-86	4703	Spring
35-87	4708	Spring
35-88	110438	Spring
35-89	112634	Spring
35-99	125258	Spring
35-101	125259	Spring
35-106	125260	Spring
35-111	125261	Spring
35-116	125262	Spring
35-123	125263	Spring
35-124	125264	Spring
35-125	125265	Spring
35-126	3610	Spring
35-129	3611	Spring
35-131	125266	Spring
35-132	125267	Spring
35-133	125268	Spring
35-134	4705	Spring
35-137	112635	Spring
35-140	112636	Spring
36-19	125270	Pin
36-23	125271	Pin
36-24	125272	Pin
36-28	125273	Pin
36-35	125274	Pin
36-38	125275	Pin
36-39	125276	Pin
36-45	125277	Pin
36-51	125278	Pin
36-56	3614	Pin
36-72	125279	Pin
36-73	125280	Pin
36-80	125281	Pin
36-85	125282	Pin
36-103	125283	Pin
36-104	125284	Pin
36-105	125285	Rivet
36-106	125286	Pin
36-109	125287	Pin
36-110	125288	Pin
36-113	125289	Pin
36-114	125290	Pin
36-120	125269	Pin
36-124	125291	Pin
36-131	125092	Dowel
36-132	125292	Pin
36-134	125293	Pin
36-136	125294	Pin
36-137	3614	Pin
36-139	125295	Pin
36-146	110439	Pin
36-147	125296	Pin
36-150	125297	Pin
36-151	125298	Pin
36-152	3615	Pin
36-153	110440	Pin
36-154	125299	Pin
36-164	125300	Pin
36-165	125301	Pin
36-170	125302	Pin
36-172	125303	Pin
36-173	3616	Pin
36-174	125304	Rivet
43-10	125306	Stop
43-12	71047	Washer
46-3	125307	Washer
47-2	125308	Buffer Assem.
47-4	125309	Buffer
47-5	125310	Screw
52-4	125099	Washer
52-5	125311	Buffer
54-3	125312	Washer
61-7	3618	Insulator
61-9	125313	Washer
61-10	125314	Screw
61-12	125315	Washer
61-21	125116	Screw
61-24	125010	Washer
61-25	125317	Insulator
80-1	125318	Tube
80-2	125319	Terminal
80-3	125320	Washer
80-4	125321	Pole Piece
80-5	125322	Magnet Core
100-70	125323	Magnet Core
100-71	125324	Magnet Core
100-72	125325	Terminal
100-73	125326	Washer
100-74	5816	Washer
100-75	3620	Washer
100-79	125327	Screw
100-80	125328	Bushing
100-81	125329	Bushing
100-84	125130	Screw
100-85	3621	Terminal
100-88	9574	Screw
100-92	125331	Bushing
100-93	125332	Terminal
100-96	110441	Shim
100-97	3623	Washer
100-100	125333	Pole Piece
100-101	125334	Pole Piece
100-106	125335	Spring
100-108	3624	Washer
100-109	125336	Spring Assem.
100-110	125337	Spring
100-111	125338	Spring
100-112	125339	Terminal
100-113	125340	Eyelet
100-140	125341	Bushing
100-145	125343	Strip
100-148	125344	Terminal
100-151	125345	Spool
100-152	125346	Screw
100-153	125347	Screw
100-159	125348	Terminal
100-167	125349	Terminal
100-173	125350	Contact Point
100-178	125351	Terminal Block
100-179	125352	Terminal
100-187	125353	Terminal
100-188	125354	Terminal Block
100-217	125355	Relay Spool
100-218	125356	Terminal
100-219	125357	Terminal
100-220	125358	Terminal
100-227	125359	Washer
100-228	125360	Washer
100-234	125361	Washer
100-235	125362	Washer
100-246	125363	Screw
100-253	125364	Spring
100-254	125365	Spring
100-255	125366	Bushing
100-256	125367	Washer
100-257	125368	Washer
103-27	125011	Washer
103-75	125369	Resistor
103-77	125370	Resistor
103-102	125371	Screw
103-151	125372	Pinion
112-7	125373	Screw
112-8	125374	Screw
112-44	125375	Screw
120-20	125376	Washer
122-5	125379	Post
122-11	125380	Coute
122-12	125381	Stud
122-18	125382	Cable
S-122-19	125383	Bracket
S-122-20	125384	Bracket
S-122-21	125385	Bracket
S-122-22	125386	Bracket
S-122-23	125387	Bracket
S-122-24	125388	Bracket

Old No.	New No.	Description
122-25	125389	Bracket
122-26	125390	Washer
122-27	125391	Shaft
122-28	125392	Stop
122-29	125393	Pin
122-35	125394	Plate
122-36	125395	Pin
S-122-37	125396	Guide
S-122-38	125397	Bar
S-122-39	3625	Shaft
S-122-40	125398	Bracket
122-41	125399	Roller
122-42	125400	Gear
122-43	125401	Gear
122-46	125402	Post
122-48	125012	Socket
122-49	125403	Fitting
122-50	125404	Lamp
122-51	125405	Bell Crank
122-52	125406	Bell Crank
122-53	125407	Bell Crank
122-54	125408	Bell Crank
122-55	125409	Bell Crank
122-56	125410	Bushings
122-57	125411	Bushings
122-58	125412	Stud
122-60	125413	Ratchet
122-61	125414	Post
122-62	125415	Pin
122-63	125416	Post
122-65	125417	Stud
122-67	125418	Post
122-68	3626	Post
S-122-69	125419	Stop
122-80	125420	Guide
122-84	125421	Pin
122-86	125422	Pin
122-88	125423	Solenoid Assem.
122-89	125424	Bracket
122-94	125425	Terminal Board
122-95	125426	Insulator
122-97	125427	Bushing
122-100	125428	Plate
122-101	125429	Head
122-102	125430	Post
122-106	1254310	Bracket Assem.
122-106A	125432	Bracket Assem.
122-107	125433	Bracket
122-108	125434	Bushing
122-111	125435	Screw
122-112	125436	Strip
122-113	9975	Screw
122-115	125437	Contact Point
122-116	125438	Lever Assem.
122-117	125439	Lever
122-118	125440	Terminal
122-119	125441	Contact Assem.
122-120	125442	Spring
122-121	125443	Contact
122-124	125444	Spring
122-126	125445	Insulator
122-127	125446	Stud
122-128	125447	Bracket Assem.
122-129	125448	Bracket
S-122-130	125449	Lever Assem.
122-133	125450	Post
S-122-134	125451	Bell Crank
122-135	125452	Washer
S-122-136	125453	Bracket
122-137	125454	Gear Assem.
122-139	125455	Pin
122-140	125456	Stud
122-143	125457	Connector
122-146	125458	Bearing
122-147	125459	Bushing
W-122-152	125798	Key Assem.
122-192	121168	Cup
122-193	125462	Washer
122-194	125463	Disk
122-195	125464	Disk
122-196	125465	Metal
S-122-234	3627	Bar
122-241	125466	Roller
122-242	125467	Lever Assem.
122-244	125468	Post
122-245	125469	Pawl
122-246	125470	Post
122-247	125471	Disk Assem.
122-249	125472	Stud
122-250	125473	Spool Assem.
122-251	125474	Tube
122-252	125475	Terminal End
122-253	125476	Magnet Spool
122-256	125477	Core
122-257	125478	Plunger
122-259	125479	Disk
122-260	125480	Hub
122-275	125481	Bracket
122-276	125013	Plate
122-290	125482	Terminal End
122-337	125014	Washer
122-345	1199590C	Container Assem.
122-346	125484	Plate
122-347	125485	Guard
122-348	126247	Bracket
122-349	125486	Pivot
122-350	125487	Tape Reel
122-352	8052080	Cover
122-356	126248	Shelf
122-355	126249	Bracket
122-356	8052390	Cover
122-357	125488	Spacer
122-358	125489	Sprocket
122-359	125490	Ratchet
122-363	125491	Pin
122-364	125492	Bracket
122-365	125493	Punch Pin
122-366	125494	Punch Pin
122-367) - 122-368)	110902	Plate
122-369	125495	Guide Plate
122-370	125496	Guide Plate
122-371	125497	Die Plate
122-373	125498	Punch Holder
122-376	125499	Punch Bar
122-375	125500	Punch Bar
122-376	125501	Punch Bar
122-377	125502	Punch Bar
122-378	125503	Punch Bar
122-380	125504	Lever
122-381	125505	Lever
122-382	125506	Ball
122-383	125507	Key Lever
122-384	112640	Die Block
122-386	125508	Ball Assem.
122-387	125509	Cover
122-388	125510	Hinge
122-389	125511	Pawl Assem.
122-390	125512	Contact Assem.
122-392	12550980	Cover
122-396	125514	Hammer Assem.
122-397	125515	Hinge
122-399	125516	"Blank" Comb
122-400	125517	Comb
122-401	125518	Comb
122-402	125519	Comb
122-403	125520	Comb
122-404	125521	Comb
122-405	125522	Comb
122-406	125523	Comb
122-407	125524	Comb
122-408	125521	Comb
122-409	125526	Comb
122-410	125527	Comb
122-411	125528	Comb
122-412	125529	Comb
122-413	125530	Comb
122-414	125531	Comb
122-415	125532	Comb
122-416	125533	Comb
122-417	125534	Comb
122-418	125535	Comb
122-419	125536	Comb
122-420	125537	Comb
122-421	125538	Comb
122-422	125539	Comb
122-423	125540	Comb
122-424	125541	Comb
122-425	125542	Comb
122-426	125543	Comb
122-427	125544	Comb
122-428	125545	Comb
122-429	125546	Comb
122-430	125547	Comb
122-431	125548	Paper Keytop
122-432	125549	Paper Keytop
122-433	125550	Paper Keytop
122-434	125551	Paper Keytop
122-435	125552	Paper Keytop
122-436	125553	Stud
122-437	125554	Spring
122-438	125555	Head
122-439	125556	Spring Eye
122-444	11996080	Plate
122-445	119757	Guard Assem.
122-447	125558	Spring
122-450	125559	Keys
122-451	125560	Lever Assem.
122-452	125561	Lever Assem.
122-453	125562	Cable Assem.
122-454	125563	Cable
122-457	125564	Loop Blank
122-459	125565	Paper Keytop
122-460	125566	Paper Keytop
122-461	125567	Paper Keytop

Old No.	New No.	Description
122-469	125568	Paper Keytop
122-469	125569	Paper Keytop
122-464	125570	Paper Keytop
122-465	125571	Paper Keytop
122-466	125572	Paper Keytop
122-467	125573	Paper Keytop
122-468	125574	Paper Keytop
122-469	125575	Paper Keytop
122-470	125576	Paper Keytop
122-471	125577	Paper Keytop
122-472	125578	Paper Keytop
122-473	125579	Paper Keytop
122-474	125580	Paper Keytop
122-475	125581	Paper Keytop
122-476	125582	Paper Keytop
122-477	125583	Paper Keytop
122-478	125584	Paper Keytop
122-479	125585	Paper Keytop
122-480	125586	Paper Keytop
122-481	125587	Paper Keytop
122-482	125588	Paper Keytop
122-483	125589	Paper Keytop
122-484	125590	Paper Keytop
122-485	125591	Paper Keytop
122-487	125592	Paper Keytop
122-490	11995780	Guard
122-498	125510	Hinge
122-511	125594	Guide Assem.
122-526	125595	Roller
122-528	125596	Key Lever Assem.
122-529	125597	Key Lever Assem.
122-530	125598	Key Lever Assem.
122-531	125599	Key Lever Assem.
122-532	125600	Key Lever Assem.
122-533	125601	Key Lever Assem.
122-534	125602	Key Lever Assem.
122-535	125603	Key Lever Assem.
122-536	125604	Key Lever Assem.
122-537	125605	Key Lever Assem.
122-538	125606	Key Lever Assem.
122-539	125607	Key Lever Assem.
122-540	125608	Key Lever Assem.
122-541	125609	Key Lever Assem.
122-542	125610	Key Lever Assem.
122-543	125611	Key Lever Assem.
122-544	125612	Key Lever Assem.
122-545	125613	Key Lever Assem.
122-546	125614	Key Lever Assem.
122-547	125615	Key Lever Assem.
122-548	125616	Key Lever Assem.
122-549	125617	Key Lever Assem.
122-550	125618	Key Lever Assem.
122-551	125619	Key Lever Assem.
122-552	125620	Key Lever Assem.
122-553	125621	Key Lever Assem.
122-554	125622	Key Lever Assem.
122-555	125623	Key Lever Assem.
122-556	125624	Key Lever Assem.
122-557	125198	Key Lever Assem.
122-558	125625	Key Lever Assem.
122-559	125626	Key Lever Assem.
122-562	41495	Guard
122-563	125628	Guard Clip
122-564	125629	Guard Clip
122-565	125630	Guard

Old No.	New No.	Description
122-567	125631	Hammer Assem.
122-570	125632	Base
122-571	125633	Guide Plate
122-572	125634	Guide Plate
122-573	125635	Die Plate
122-574) — 122-367)	110901	Plate
122-575	111019	Blank
122-576	125636	Plate Assem.
122-577	125637	Ratchet Assem.
122-580	125638	Paper Keytop
122-581	125639	Paper Keytop
122-582	125640	Paper Keytop
122-583	125641	Bushing
122-586	125642	Bracket Assem.
122-589	125643	Washer
122-590	125644	Handle
122-592	125645	Guide
122-593	125646	Plate
122-594	125647	Plate
122-596	125648	Key Lever
122-597	125649	Key Lever
122-598	125650	Key Lever
122-599	125651	Key Lever
122-600	125652	Key Lever
122-601	125653	Key Lever
122-602	125654	Key Lever
122-603	125655	Key Lever
122-604	125656	Key Lever
122-605	125657	Key Lever
122-606	125658	Key Lever
122-607	125659	Key Lever
122-608	125660	Key Lever
122-609	125661	Key Lever
122-610	125662	Key Lever
122-611	125663	Key Lever
122-612	125664	Key Lever
122-613	125665	Key Lever
122-614	125666	Key Lever
122-615	125667	Key Lever
122-616	125668	Key Lever
122-617	125669	Key Lever
122-618	125670	Key Lever
122-619	125671	Key Lever
122-620	125672	Key Lever
122-621	125673	Key Lever
122-622	125674	Key Lever
122-623	125675	Key Lever
122-624	125676	Key Lever
122-625	125677	Key Lever
122-626	125678	Key Lever
122-627	125679	Key Lever
122-628	125680	Key Lever
122-629	125681	Key Lever
122-630	125682	Comb
122-697	125683	Bushing
122-698	125684	Lever Assem.
122-699	125685	Stud
122-700	125686	Lever Assem.
122-702	125687	Bushing
122-703	125688	Bracket Assem.
122-704	125689	Paper Keytop
122-705	125690	Paper Keytop
122-706	125691	Paper Keytop
122-707	125692	Paper Keytop

Old No.	New No.	Description
122-708	125693	Paper Keytop
122-709	125694	Paper Keytop
122-710	125695	Paper Keytop
123-7	3628	Bushing
123-8	71644	Bushing
123-10	3629	Collar
123-36	3630	Housing
123-37	125696	Foot
123-38	125697	Contact Pin
123-133	125698	Roller
123-135	125699	Pin
123-136	125700	Hub
123-138	125701	Hub
123-159	125702	Dowel
123-163	3632	Terminal
123-164	3633	Bushing
123-165	3634	Bushing
123-166	3635	Washer
123-167	3636	Washer
123-194	3637	Ball Bearing
123-204	125014	Washer
123-308	125703	Terminal
123-314	125704	Rivet
123-342	125705	Oil Cup
123-343	125706	Wick
123-357	125707	Terminal
123-362	125708	Washer
123-364	125709	Hinge-Rust
123-432	125710	Ring - Blank
123-447	125711	Disk
125-9	3638	Condenser
125-23	125712	Clamp
125-55	125713	Card Holder
125-161	125714	Resistor
125-169	125715	Fuse
125-176	125716	Switch Box
125-184	125717	Fuse Box
125-196	125718	Resistor
125-197	125097	Nipple
125-198	125098	Nut
125-208	125719	Nipple
125-209	125720	Nut
125-211	125721	Clamp
125-217	136253	Receptacle
125-221	125091	Receptacle
125-237	125723	Fuse
125-238	125724	Fuse
125-239	125725	Fuse
125-240	125683	Key
125-242	125726	Resistor
125-269	125727	Handle
125-270	125728	Hinge
125-274	125729	Switch Box
126-11	125730	Housing
F-126-24	125077	Pinion
126-64	125731	Cam
126-92	125732	Washer
126-93	125733	Washer
126-95	125734	Armature
126-107	125735	Screw
126-108	125736	Brush Holder
126-113	125737	Coil
126-114	125738	Washer
126-118	125739	Bushing
126-129	125016	Grommet

Old No.	New No.	Description
126-126	125740	Brush
126-127	125741	Spring
138-1	125742	Tuning Fork
138-2	125743	Tuning Fork
138-3	125744	Tuning Fork
138-4	125745	Tuning Fork
138-5	114756	Tuning Fork
138-6	125747	Tuning Fork
138-7	125748	Tuning Fork
138-11	125749	Tuning Fork
138-20	125751	Tuning Fork
138-22	110442	Screw Driver
138-23	125752	Wrench
138-24	125753	Wrench
138-25	125754	Wrench
138-26	125755	Wrench
138-27	125756	Wrench
138-28	125757	Wrench
138-30	125758	File
138-32	125759	Wrench
138-33	125760	Wrench
138-34	125761	Wrench
138-35	125762	Wrench
138-36	125763	Wrench
138-38	125764	Screw Driver Blade
138-43	126242	Gauge
138-44	126243	Gauge
138-49	126244	Gauge
138-52	125765	Wrench
138-55	110443	Scale
138-58	110444	Scale
138-67	125766	Handle
138-68	125767	Shank
138-69	125768	Shank
138-74	125769	Shank
138-100	88993	Burnisher
138-119	125771	Handle
138-120	125772	Shank
138-122	125773	Handle
138-123	125774	Shank
138-125	126245	Gauge
138-126	126246	Gauge
138-127	125775	Wrench
138-128	125776	Wrench
138-129	125777	Wrench
138-130	125778	Shank
138-133	125779	Wrench
138-134	125780	Handle
138-135	125781	Shank
138-136	125782	Wrench Grip
138-137	110445	Tool
138-139	125783	Stone
138-141	116758	Tuning Fork
200-20	3639	Washer
200-133	125785	Spring
200-137	125786	Spring
200-139	125787	Button
200-146	125788	Post
200-153	3640	Washer
200-214	125789	Shim
200-704	3662	Washer
200-705	125790	Bushing
200-1028	125791	Washer
200-1031	6033	Washer
200-1032	3646	Washer
200-1132	125792	Insulator
200-1134	125793	Pin
200-1135	9576	Contact Spring
200-1136	125794	Spring Blank
200-1137	9577	Spring
200-1138	125795	Spring Blank
200-1139	3647	Insulator
200-1175	125796	Spring
200-1176	125797	Spring
200-1177	126251	Insulator
200-1178	125799	Spring
200-1179	125800	Stiff
200-1345	125801	Valve
200-1348	125802	Washer
200-1703	125803	Hub
200-2002	125804	Strip
200-2210	125805	Post
200-2212	3649	Washer
200-2217	125806	Post
200-2800	125807	Spindle
200-2802	125808	Pivot
300-3	125809	Cable
300-103	125810	Armature
300-104	125812	Armature
300-105	125813	Bearing
300-106	125814	Guide
300-107	125815	Contact Assem.
300-108	125816	Mounting Bar
300-109	125817	Mounting Bar
300-110	125818	Insulator
300-111	125819	Plate
300-113	125820	Disk
300-114	125821	Lever Blank
300-115	125822	Lever #1
300-116	125823	Lever #2
300-117	125824	Lever #3
300-118	125825	Lever #4
300-119	125826	Lever #5
300-120	125827	Lever
300-121	125828	Shaft
300-128	125829	Lever
300-130	125830	Armature
300-131	125831	Cont. Spring
300-132	125832	Cont. Spring
300-137	125833	Lever Guide
300-138	125834	Spool
300-139	125835	Tube
300-140	125836	Magnet Core
300-142	125837	Magnet Yoke
300-143	125838	Plunger
300-144	125839	Bracket
300-145	125840	Rod
300-146	125841	Lever
300-147	125842	Button
300-150	125843	Plate
300-152	125844	Adj. Lever
300-153	125845	Yoke
300-154	125846	Cont. Point
300-155	125847	Plate
300-170	125848	Cont. Lever
300-171	125849	Cont. Lever
300-172	125850	Cont. Lever
300-173	125851	Cont. Lever
300-174	125852	Cont. Lever
300-175	125853	Cont. Lever
300-177	125854	Terminal
300-178	125855	Terminal
300-179	125856	Terminal Block
300-180	125857	Terminal Block
300-181	125858	Feed Panel
300-200	125859	Bracket
300-201	125860	End Bracket
300-301	5556	Top Plate
300-302	125861	Feed Wheel
300-303	125862	Bearing
300-304	125863	Bracket
300-306	125864	Plate
300-307	125865	Plate
300-308	125866	Strip
300-312	125867	Bracket
300-314	125868	Detent Assem.
300-315	125869	Detent Lever
300-316	125870	Detent Roller
300-319	125871	Bracket
300-320	125872	Shaft
300-322	125873	Latch
300-400	125874	End Bracket
300-501	125875	Base
300-502	125876	Switch
300-503	125877	Strip
300-504	125878	Terminal
300-505	4706	Washer
300-506	4707	Washer
300-507	125879	Base
300-508	125880	Armature
300-509	125881	Washer
300-510	125882	Terminal
300-511	125883	Armature
300-512	125884	Spring
300-513	125885	Armature Handle
300-515	125886	Terminal
300-516	125887	Base
300-517	125888	Decalcomania
300-518	125889	Base
300-519	125890	Armature
300-601	125891	Bracket
300-602	125892	Shaft
300-603	125893	Shaft
300-604	125894	Lever
300-605	125895	Bracket
300-606	125896	Shaft
300-607	125897	Bracket
300-608	125898	Panel
300-609	125899	Post
300-700	125900	Panel
300-701	125557	Panel
300-702	125901	Stud
400-2	125902	Rod
400-3	125903	Brush
400-6	125904	Lamp
400-102	125905	Strip
400-203	125906	Gear
400-206	125907	Washer
400-207	125908	Pinion
400-209	125909	Shaft
400-210	125910	Shaft
400-211	125911	Wheel
400-212	125912	Segment Ring
400-215	125913	Collector Ring
400-218	125914	Terminal

Old No.	New No.	Description
400-221	125915	Disk
400-222	125916	Range Scale
400-302	125917	Bushing
400-402	125918	Bushing
400-509	125342	Sleeve
400-510	125230	Shaft
400-513	125919	Washer
400-519	125920	Sleeve
400-801	125921	Gear
400-1002	125922	Decalcomania
400-1404	125924	Lever
500-4	125925	Switch
500-6	125926	Connector
500-7	125927	Locknut
500-19	125928	Washer
500-80	125929	Resistor
500-96	125930	Washer
500-99	125931	Switch
500-104	125932	Spring
500-105	125933	Plate
500-112	125934	Spring
500-203	125935	Spring
500-308	125936	Pin
500-309	125937	Pin
500-310	125938	Chain
500-311	125939	Pin "S" Hook
500-403	125940	Block
500-404	125941	Socket
500-406	125942	Frame
500-600	125943	Bar
500-703	125944	Foot
500-1008	125945	Switch
M-666	126233	Pivot
M-667	74877	Spring
M-669	117313	Spindle
700-51	125946	Screw
700-55	125947	Screw
700-59	125948	Screw
700-60	125949	Screw
700-61	125722	Screw

Old No.	New No.	Description
700-68	73202	Washer
700-71	3650	Washer
700-75	125750	Screw
700-76	125970	Terminal
1000-203	125923	Washer
1000-252	110446	Nut
M-1098	70793	Spacer
M-1238	126234	Pin
M-1241	126235	Collar
M-1958	71681	Spool
M-2328	72669	Clip
M-2657	126236	Spring
M-6095	84990	Screw
M-6104	126237	Nut
M-9277	126238	Handle
M-9278	126239	Journal
M-9279-A	126240	Crank
M-9337-F	69883	Nut
M-9410	86341	Screw
M-9542	74878	Paper Drag
M-10074	110743	Washer
M-10076	3646	Washer
M-10077	45835	Washer
M-10080	3640	Washer
M-10082	4814	Washer
M-10083	3639	Washer
M-10086	126241	Washer
M-10088	70071	Washer
M-10090	70072	Washer
55083-1	126096	"T" Bar
55083-2	126097	"T" Bar
55083-3	126098	"T" Bar
55083-4	126099	"T" Bar
55083-5	126100	"T" Bar
55083-6	126101	"T" Bar
55083-7	126102	"T" Bar
55083-8	126103	"T" Bar
55083-9	126104	"T" Bar
55083-10	126105	"T" Bar
55083-11	126106	"T" Bar

Old No.	New No.	Description
55083-12	126107	"T" Bar
55083-13	126108	"T" Bar
55083-14	126109	"T" Bar
55083-15	126110	"T" Bar
55083-16	126111	"T" Bar
55083-17	126112	"T" Bar
55083-18	126113	"T" Bar
55083-20	126114	"T" Bar
55083-21	126115	"T" Bar
55084-A2	126156	Bar
55084-A4	126157	Bar
55084-A6	126158	Bar
55084-A8	126159	Bar
55084-A10	126160	Bar
55084-A12	126161	Bar
55084-A14	126162	Bar
55084-A16	126163	Bar
55084-A18	126164	Bar
55084-A20	126165	Bar
55084-B1	126166	Bar
55084-B3	126167	Bar
55084-B5	126168	Bar
55084-B7	126169	Bar
55084-B9	126170	Bar
55084-B11	126171	Bar
55084-B13	126172	Bar
55084-B15	126173	Bar
55084-B17	126174	Bar
74274-1	126232	Button

NEW TO OLD MEMBER CONVERSION LIST

New No.	Old No.	New No.	Old No.	New No.	Old No.	New No.	Old No.	New No.	Old No.
1036	34-51	3642	200-704	112622	33-334	125127	33-58	125198	122-557
1157	33-1	3646	200-1032	112623	33-335	125128	33-59	125199	33-278
1158	33-3	3646	M-10076	112624	33-337	125129	33-60	125200	33-282
1159	33-5	3647	200-1139	112625	33-347	125130	33-63	125201	33-283
1160	33-6	3649	200-9212	112626	34-6	125131	33-65	125202	33-285
1161	33-7	3650	700-71	112627	34-11	125132	33-70	125203	33-289
1162	33-10	4702	35-52	112628	34-64	125133	33-72	125205	33-296
	33-156	4703	35-86	112629	35-1	125134	33-73	125206	33-336
1163	33-11	4705	35-134	112630	35-2	125135	33-75	125207	33-339
1164	33-14	4706	300-505	112631	35-8	125136	33-79	125208	33-340
1165	33-16	4707	300-506	112632	35-33	125137	33-82	125209	33-342
1166	33-17	4708	35-87	112633	35-54	125138	33-85	125210	400-510
1167	33-19	4814	M-10082	112634	35-69	125139	33-86	125211	33-344
1168	33-35	5475	34-5	112635	35-137	125140	33-88	125212	33-348
1169	33-37	5556	300-502	112636	35-260	125141	33-89	125213	33-348
1170	33-49	5740	33-13	112640	122-384	125142	33-98	125214	33-349
1171	33-53	5815	34-14	114756	138-5	125143	33-101	125215	33-350
1172	33-54	5816	100-74	114758	138-141	125144	33-108	125216	33-356
1173	33-64	6033	200-1031	117313	M-669	125146	33-111	125217	33-362
1174	33-157	9574	100-88	11995780	122-490	125147	33-121	125218	34-1
1175	33-169	9575	122-113	11995980	122-365	125148	33-123	125219	34-3
1176	33-195	9576	200-1135	11996080	122-444	125149	33-130	125220	34-10
1177	33-234	9577	300-1137	12049980	122-570	125150	33-135	125221	34-13
1178	33-237	45815	M-10077	125000	33-74	125151	33-142	125222	34-16
1179	33-238	49054	33-111	125001	33-132	125152	33-143	125223	34-19
1181	33-360	55257	34-12	125002	33-179	125153	33-151	125224	34-24
1222	33-39	70071	M-10088	125003	33-206	125154	33-153	125225	34-27
1223	33-69	70072	M-10090	125004	33-272	125155	33-158	125226	34-31
1263	33-4	70073	34-7	125005	33-280	125156	33-162	125227	34-39
1299	33-290	70793	M-1098	125006	33-333	125157	33-163	125228	34-41
2725	34-43	71047	43-12	125009	34-59	125158	33-167	125229	34-48
3595	34-2	71444	123-8	125010	61-24	125159	33-168	125230	34-54
3597	34-6	71681	M-1958	125011	103-27	125160	33-175	125231	34-58
3598	34-8	72669	M-2328	125012	122-48	125161	33-176	125232	34-60
3599	34-9	73202	700-68	125013	122-476	125162	33-180	125233	34-61
3600	34-25	74877	M-667	125014	122-337	125163	33-185	125234	34-62
3601	34-28	74878	M-954.2	125015	123-244	125164	33-193	125235	34-66
3603	34-29	74879	4-8	125016	126-123	125165	33-194	125236	35-13
3604	34-50	80523080	122-352	125091	125-221	125166	33-196	125237	35-16
3605	34-53	80523380	122-356	125092	36-131	125267	33-197	125238	35-23
3606	34-15	84695	122-562	125097	125-197	125168	33-198	125239	35-24
3608	35-58	84990	M-6095	125098	125-198	125169	33-202	125240	35-26
3610	35-126	86341	M-9470	125099	52-4	125170	33-207	125241	35-27
3611	35-129	86850	33-240	125100	2-3	125171	33-208	125242	35-28
3614	36-56	87636	33-270	125101	4-4	125172	33-209	125243	35-34
3614	35-137	88993	138-100	125102	4-11	125173	33-210	125244	35-40
3615	35-152	89883	M-9337-F	125103	6-1	125174	33-211	125245	35-43
3616	36-173	110436	33-110	125104	6-2	125175	33-212	125246	35-47
3618	61-7	110435	34-56	125105	23-8	125176	33-213	125247	35-48
3620	100-75	110436	35-62	125106	25-21	125177	33-217	125248	35-53
3621	100-85	110437	35-70	125107	26-19	125178	33-224	125249	35-66
3623	100-97	110438	35-88	125108	33-2	125179	33-225	125250	35-68
3624	100-106	110439	36-146	125109	33-8	125180	33-227	125251	35-69
3625	8-122-39	110440	36-153	125110	33-9	125181	33-228	125252	35-71
3626	122-68	110441	100-96	125111	33-12	125182	33-267	125253	35-72
3627	8-122-234	110442	138-22	125112	33-15	125183	33-235	125254	35-78
3628	123-7	110443	138-55	125113	33-18	125184	33-236	125255	35-80
3629	123-10	110444	138-58	125114	33-22	125185	33-241	125256	35-84
3630	123-36	110445	138-137	125115	33-23	125186	33-244	125257	35-85
3632	123-163	110446	1000-252	125116	33-29	125187	33-245	125258	35-99
3633	123-164	110741	33-78	125117	33-32	125188	33-250	125259	35-101
3634	123-165	110742	33-311	125118	33-36	125189	33-252	125260	35-104
3635	123-166	210743	M-10074	125119	33-38	125190	33-253	125261	35-111
3636	123-167	110901	122-574	125120	33-41	125191	33-254	125262	35-116
3637	123-194		122-367	125121	33-42	125192	33-255	125263	35-123
3638	129-9	110902	122-367	125122	33-43	125193	33-257	125264	35-124
3639	200-20		122-368	125123	33-45	125194	33-264	125265	35-125
3639	M-10083	111019	122-575	125124	33-50	125195	33-271	125266	35-131
3640	200-155	112620	33-21	125125	33-51	125196	33-274	125267	35-132
		3671	33-179	125126	33-[illegible]		33-276	125268	35-133

New No.	Old No.
125269	36-130
125270	36-19
125271	36-23
125272	36-24
125273	36-26
125274	36-35
125275	36-38
125276	36-39
125277	36-41
125278	36-51
125279	36-72
125280	36-73
125281	36-80
125282	36-85
125283	36-107
125284	36-104
125285	36-105
125286	36-106
125287	36-109
125288	36-110
125289	36-113
125290	36-114
125291	36-124
125292	36-132
125293	36-134
125294	36-136
125295	36-139
125296	36-147
125297	36-150
125298	36-151
125299	36-154
125300	36-164
125301	36-165
125302	36-170
125303	36-179
125304	36-174
125306	43-10
125307	44-3
125308	47-2
125309	47-4
125310	47-5
125311	52-5
125312	54-3
125313	61-9
125314	61-10
125315	61-19
125316	61-21
125317	61-25
125318	80-1
125319	80-2
125320	80-3
125321	80-4
125322	80-8
125323	100-70
125324	100-71
125325	100-72
125326	100-73
125327	100-79
125328	100-80
125329	100-81
125330	100-84
125331	100-92
125332	100-93
125333	100-100
125334	100-101
125335	100-104
125336	100-109
125337	100-110
125338	100-111
125339	100-112
125340	100-113
125341	100-120

New No.	Old No.
125343	100-145
125344	100-148
125345	100-151
125346	100-152
125347	100-153
125348	100-159
125349	100-167
125350	100-173
125351	100-178
125352	100-179
125353	100-187
125354	100-189
125355	100-217
125356	100-218
125357	100-219
125358	100-220
125359	100-227
125360	100-228
125361	100-234
125362	100-235
125363	100-246
125364	100-253
125365	100-254
125366	100-255
125367	100-256
125368	100-257
125369	103-75
125370	103-77
125371	103-102
125372	103-133
125373	112-7
125374	112-8
125375	119-64
125376	120-80
125377	W-126-24
125378	122-5
125380	122-11
125381	122-12
125382	122-18
125383	S-122-19
125384	S-122-20
125385	S-122-21
125386	S-122-22
125387	S-122-23
125388	S-122-24
125389	122-25
125390	122-26
125391	122-27
125392	122-28
125393	122-29
125394	122-35
125395	122-36
125396	S-122-37
125397	S-122-38
125398	S-122-40
125399	122-41
125400	122-42
125401	122-43
125402	122-46
125403	122-49
125404	122-50
125405	122-51
125406	122-52
125407	122-53
125408	122-54
125409	122-55
125410	122-56
125411	122-57
125412	122-58
125413	122-60

New No.	Old No.
125417	122-65
125418	122-67
125419	S-122-69
125420	122-80
125421	122-84
125422	122-86
125423	122-88
125424	122-89
125425	122-94
125426	122-95
125427	122-97
125428	122-100
125429	122-101
125430	122-102
125431	122-106
125432	122-1060
125433	122-107
125434	122-108
125435	122-111
125436	122-112
125437	122-115
125438	122-116
125439	122-117
125440	122-118
125441	122-119
125442	122-120
125443	122-121
125444	122-124
125445	122-126
125446	122-127
125447	122-128
125448	122-129
125449	S-122-130
125450	122-131
125451	S-122-134
125452	122-135
125453	S-122-136
125454	122-137
125455	122-139
125456	122-140
125457	122-143
125458	122-146
125459	122-147
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125468	122-244
125469	122-245
125470	122-246
125471	122-247
125472	122-249
125473	122-250
125474	122-251
125475	122-252
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125477	122-254
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125481	122-275
125482	122-290
125483	122-340
125484	122-346
125485	122-347
125486	122-349
125487	122-350

New No.	Old No.
125491	122-363
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125493	122-365
125494	122-366
125495	122-369
125496	122-370
125497	122-371
125498	122-373
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125507	122-383
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125558	122-447
125559	122-450
125560	122-451
125561	122-452

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125564	122-457
125565	122-459
125566	122-460
125567	122-461
125568	122-462
125569	122-463
125570	122-464
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125599	122-531
125600	122-532
125601	122-533
125602	122-534
125603	122-535
125604	122-536
125605	122-537
125606	122-538
125607	122-539
125608	122-540
125609	122-541
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125634	122-572
125635	122-573
125636	122-574

New No.	Old No.
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125642	122-586
125643	122-587
125644	122-590
125645	122-592
125646	122-593
125647	122-594
125648	122-596
125649	122-597
125650	122-598
125651	122-599
125652	122-600
125653	122-601
125654	122-602
125655	122-603
125656	122-604
125657	122-605
125658	122-606
125659	122-607
125660	122-608
125661	122-609
125662	122-610
125663	122-611
125664	122-612
125665	122-613
125666	122-614
125667	122-615
125668	122-616
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125675	122-623
125676	122-624
125677	122-625
125678	122-626
125679	122-627
125680	122-628
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125682	122-630
125683	122-697
125684	122-698
125685	122-699
125686	122-700
125687	122-702
125688	122-703
125689	122-704
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125692	122-707
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125695	122-710
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125793	200-1134
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126115	55083-21
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126158	55084-A6
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126160	55084-A10
126161	55084-A12
126162	55084-A14
126163	55084-A16
126164	55084-A18
126165	55084-A20
126166	55084-B2
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126171	55084-B11
126172	55084-B13
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126174	55084-B17
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126235	W-1241
126237	W-6104
126238	W-9077
126239	W-9278
126240	W-9274-A
126241	W-10086
126242	138-43
126243	138-44
126244	138-49
126245	138-125
126246	138-126
126247	122-348
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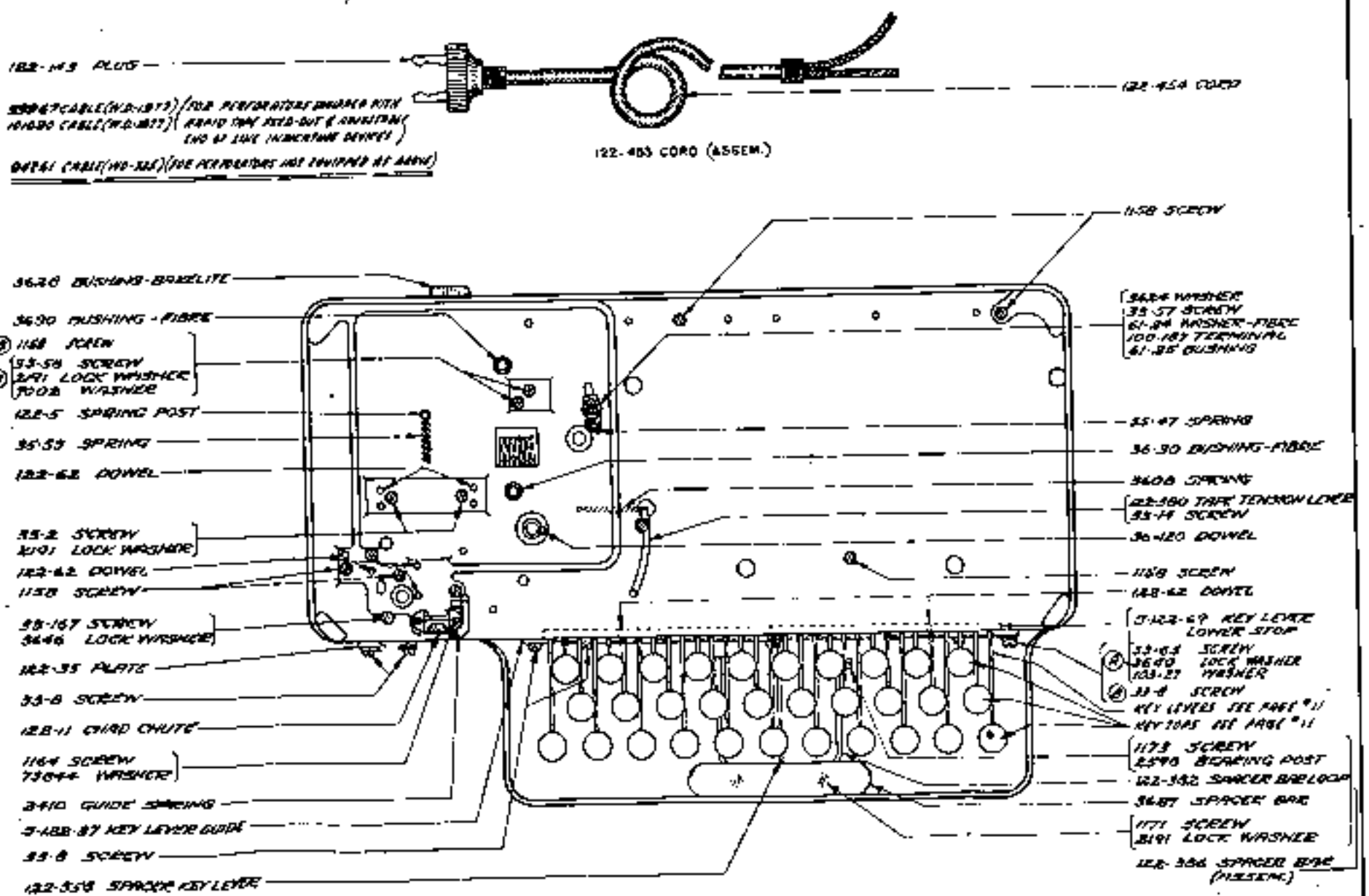
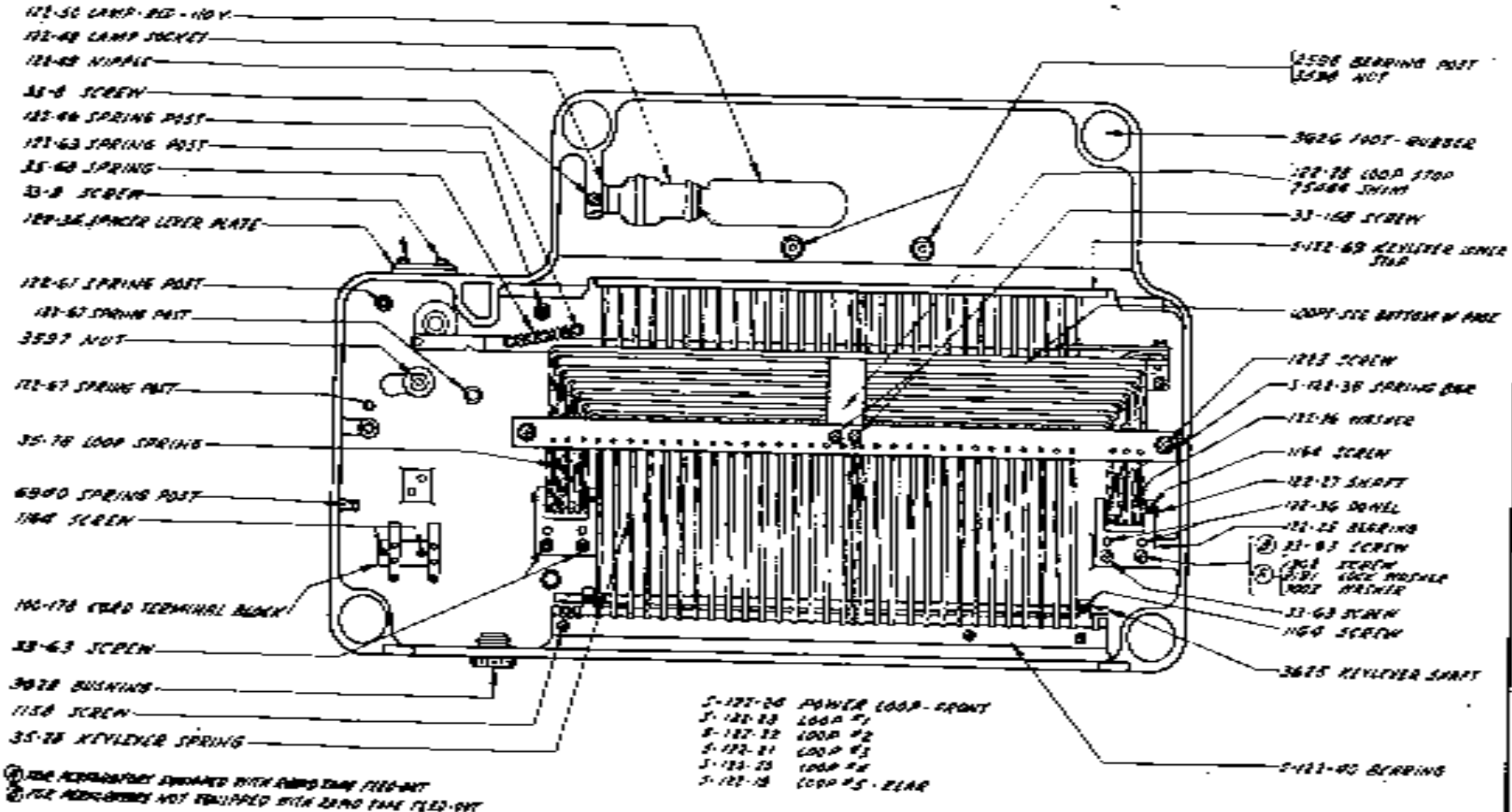
126249	122-355
126250	33-378
126251	200-1177

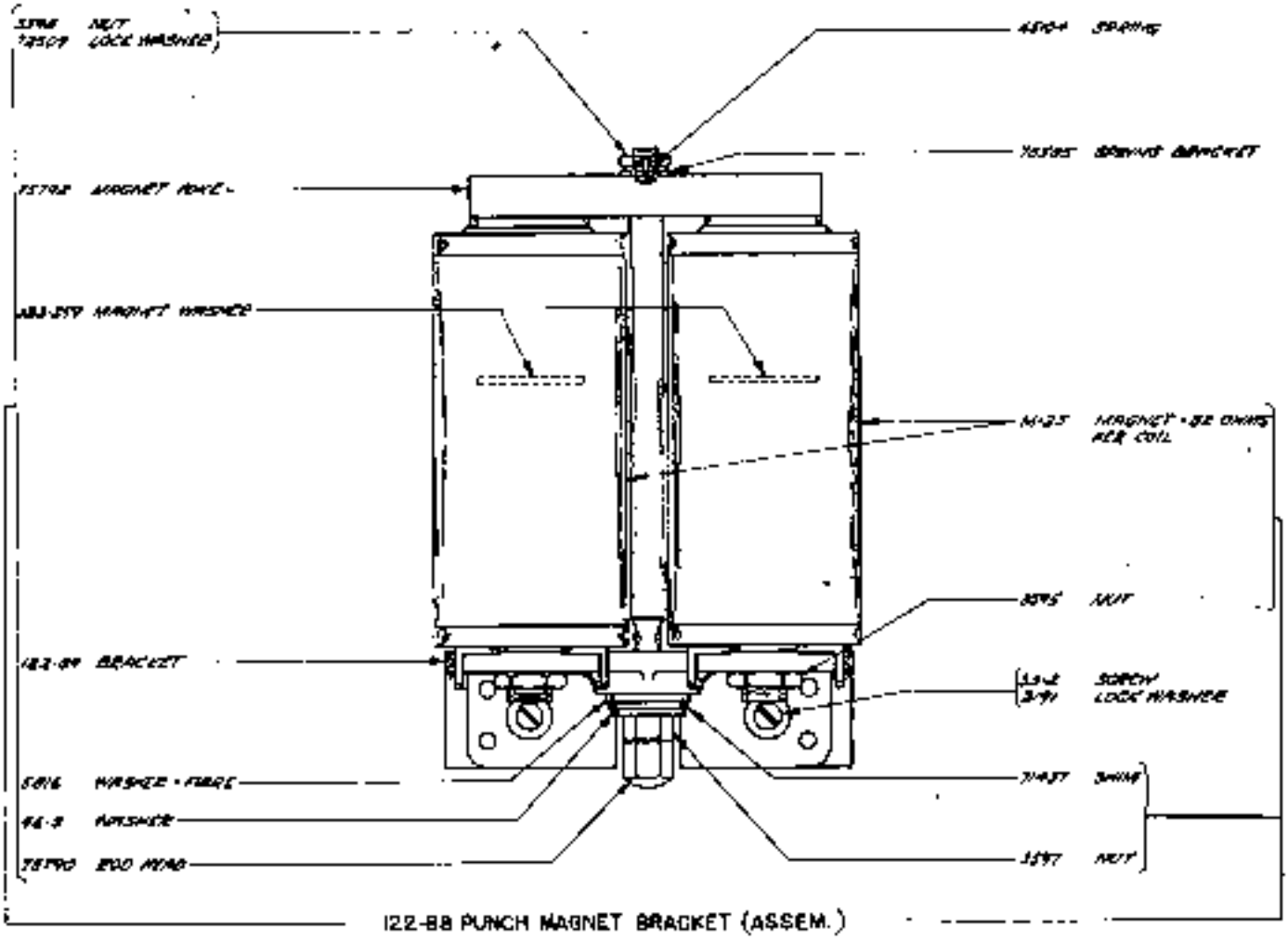
ALPHABETICAL INDEX


122-463 PLUG
122-454 CORD
122-463 CORD (ASSEM.)
1158 SCREW
3626 BUSHING-BAKELITE
3630 BUSHING-FIBRE
1168 SCREW
33-58 SCREW
3491 LOCK WASHER
1008 WASHER
122-5 SPRING POST
35-53 SPRING
122-62 DOWEL
35-2 SCREW
3401 LOCK WASHER
122-62 DOWEL
1158 SCREW
33-167 SCREW
3446 LOCK WASHER
122-35 PLATE
33-8 SCREW
122-11 CHORD CHUTE
1164 SCREW
73044 WASHER
3410 GUIDE SPACING
3-122-37 KEY LEVER GUIDE
33-8 SCREW
122-358 SPACER KEY LEVER
3624 WASHER
33-57 SCREW
61-84 WASHER-FIBRE
100-187 TERMINAL
61-35 BUSHING
35-47 SPRING
36-30 BUSHING-FIBRE
3608 SPRING
122-380 TAPE TENSION LEVER
33-14 SCREW
36-120 DOWEL
1158 SCREW
122-62 DOWEL
3-122-69 KEY LEVER LOWER STOP
33-65 SCREW
3640 LOCK WASHER
103-27 WASHER
33-8 SCREW
KEY LEVERS SEE PAGE "11"
KEY TOPS SEE PAGE "11"
1173 SCREW
2490 BUMPING POST
122-382 SPACER BAR LOOP
36-87 SPACER BAR
1171 SCREW
3491 LOCK WASHER
122-386 SPACER BAR (PLASTIC)
122-463 CORD (ASSEM.) FOR PERFORATORS EQUIPPED WITH RAPID TAPE FEED-OUT & ANNUNCIATOR (NO AT LEAST INDICATING DEVICES)
CABLE (W.O. 1877)
CABLE (W.O. 1877)
122-461 CABLE (W.O. 335) (FOR PERFORATORS NOT EQUIPPED AS ABOVE)
(A) FOR PERFORATORS EQUIPPED WITH RAPID TAPE FEED-OUT
(B) FOR PERFORATORS NOT EQUIPPED WITH RAPID TAPE FEED-OUT
BASE - TOP VIEW

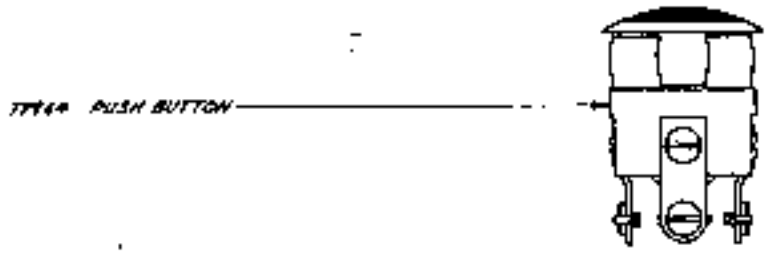
6370 LAMP GUARD - BLACK

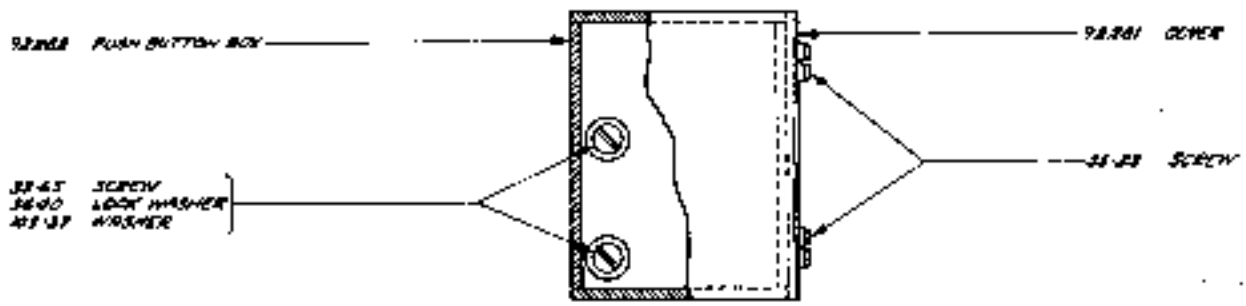


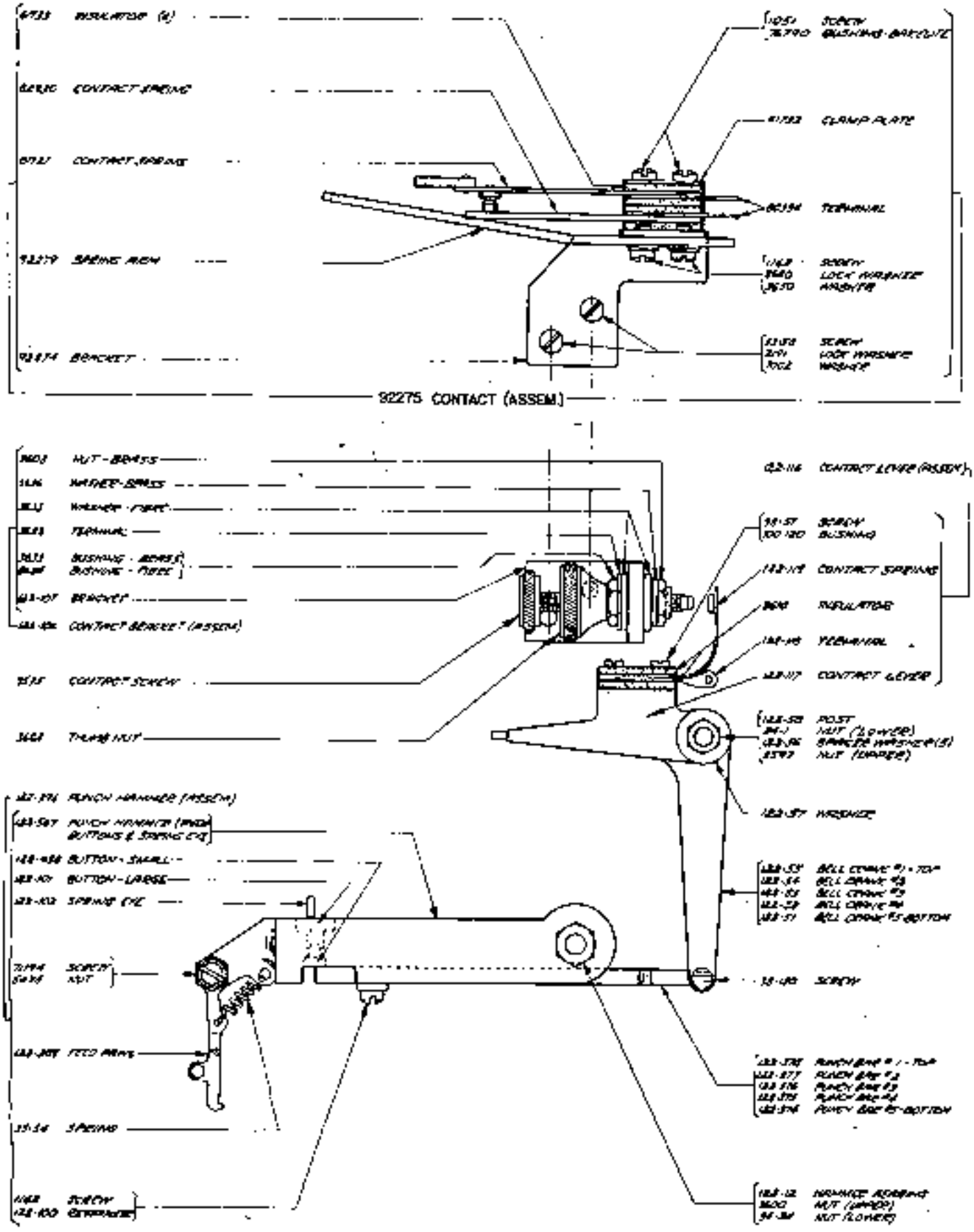
BASE - BOTTOM VIEW

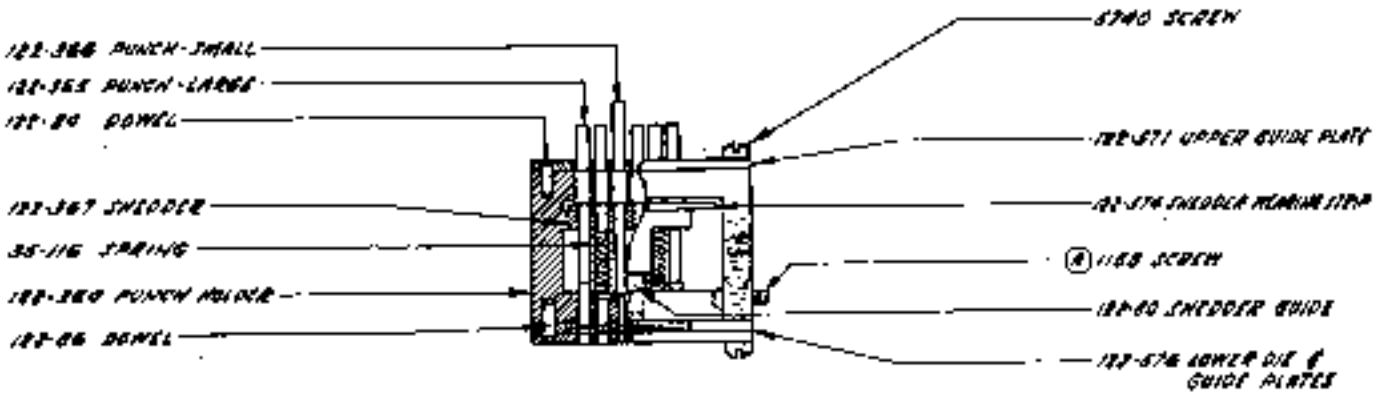


122-88 PUNCH MAGNET BRACKET (ASSEM.)

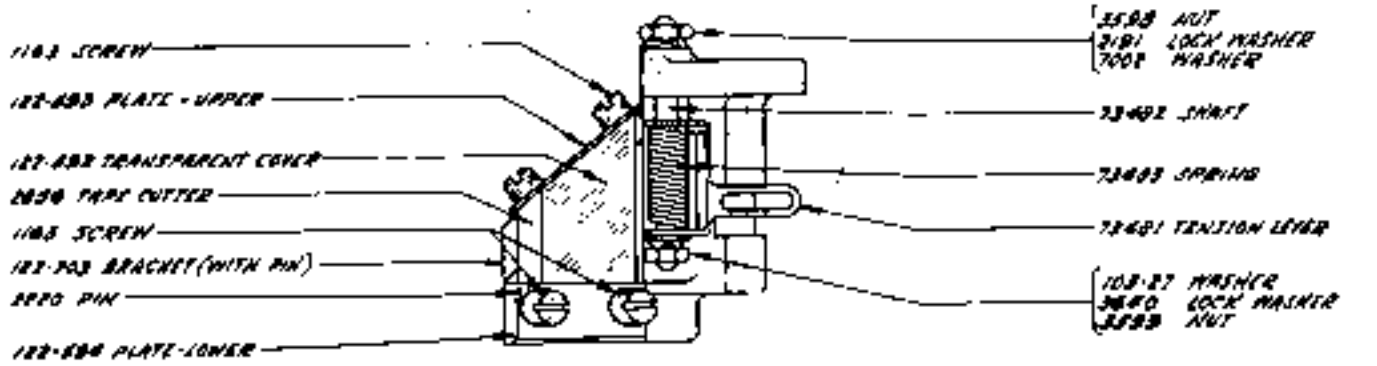




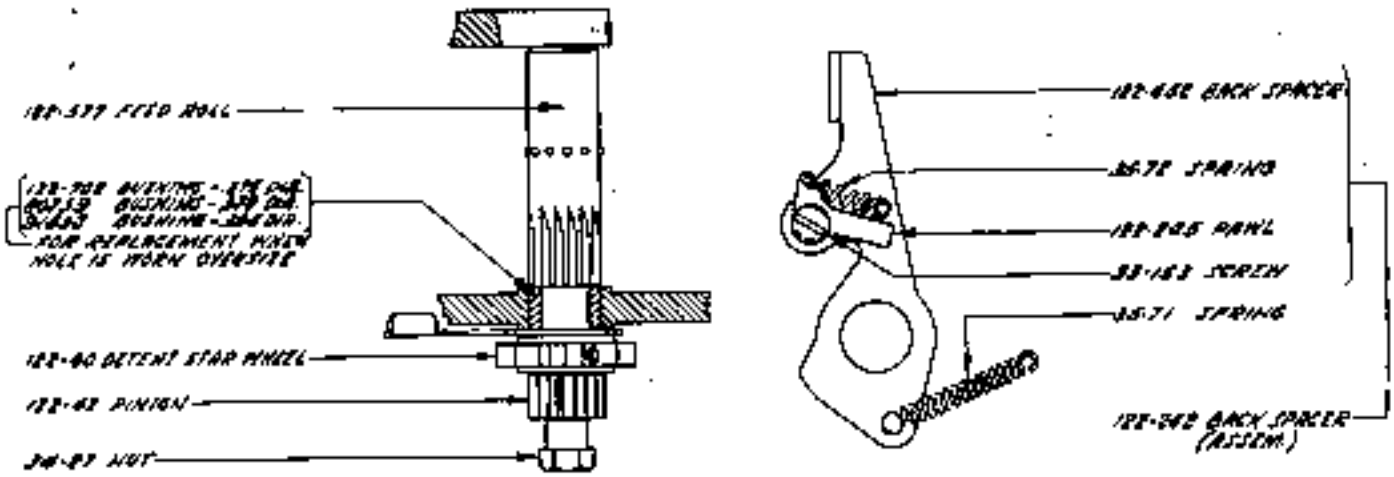

92275 CONTACT (ASSEM.)

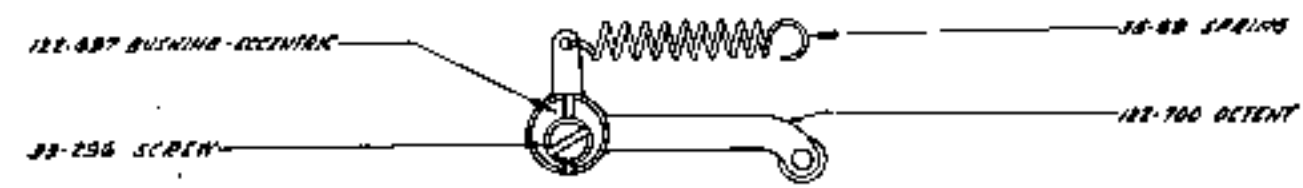


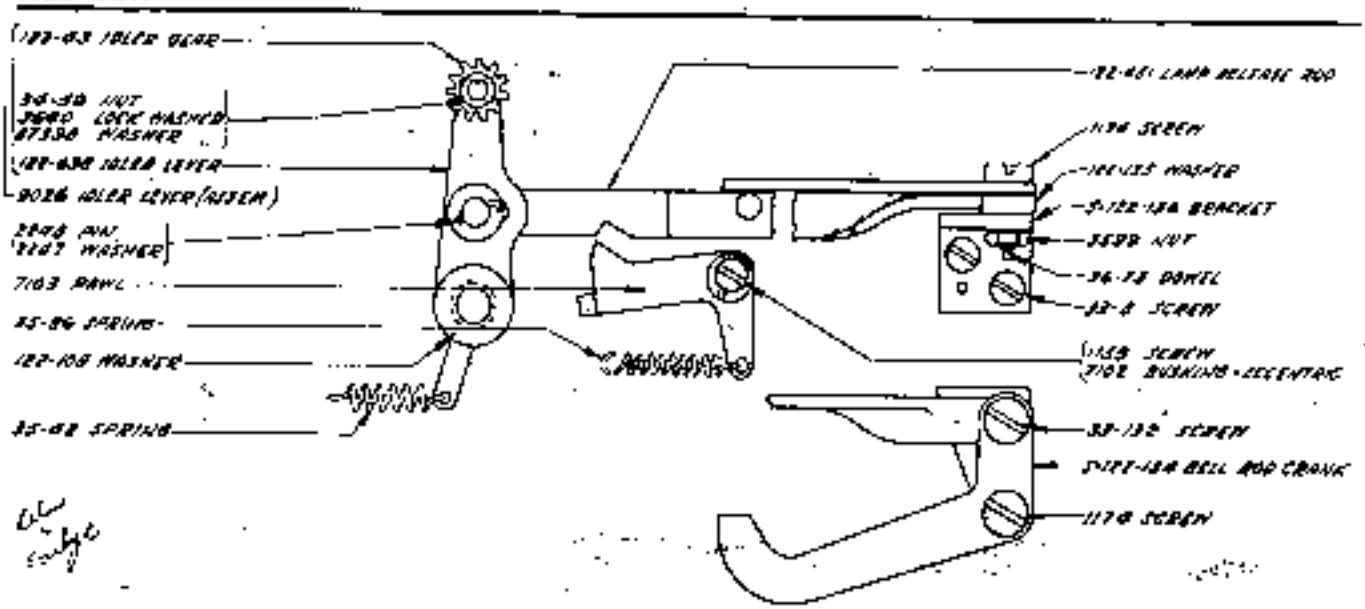
122-678 PUNCH BLOCK (ASSEM.) STRAIGHT FEED HOLE
EXCLUDES PARTS MARKED (A)

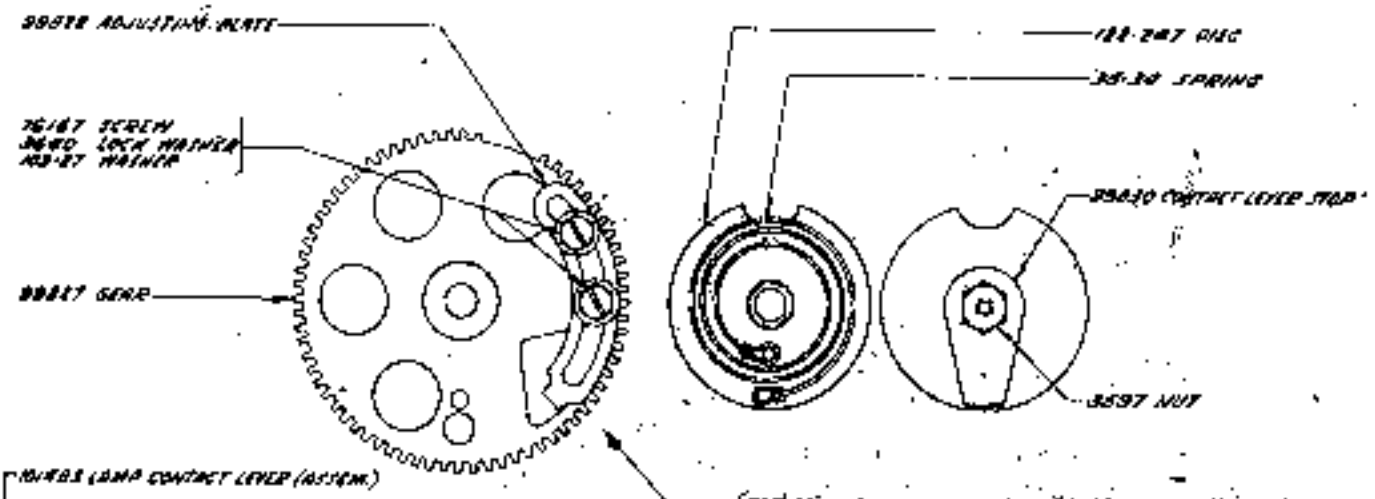


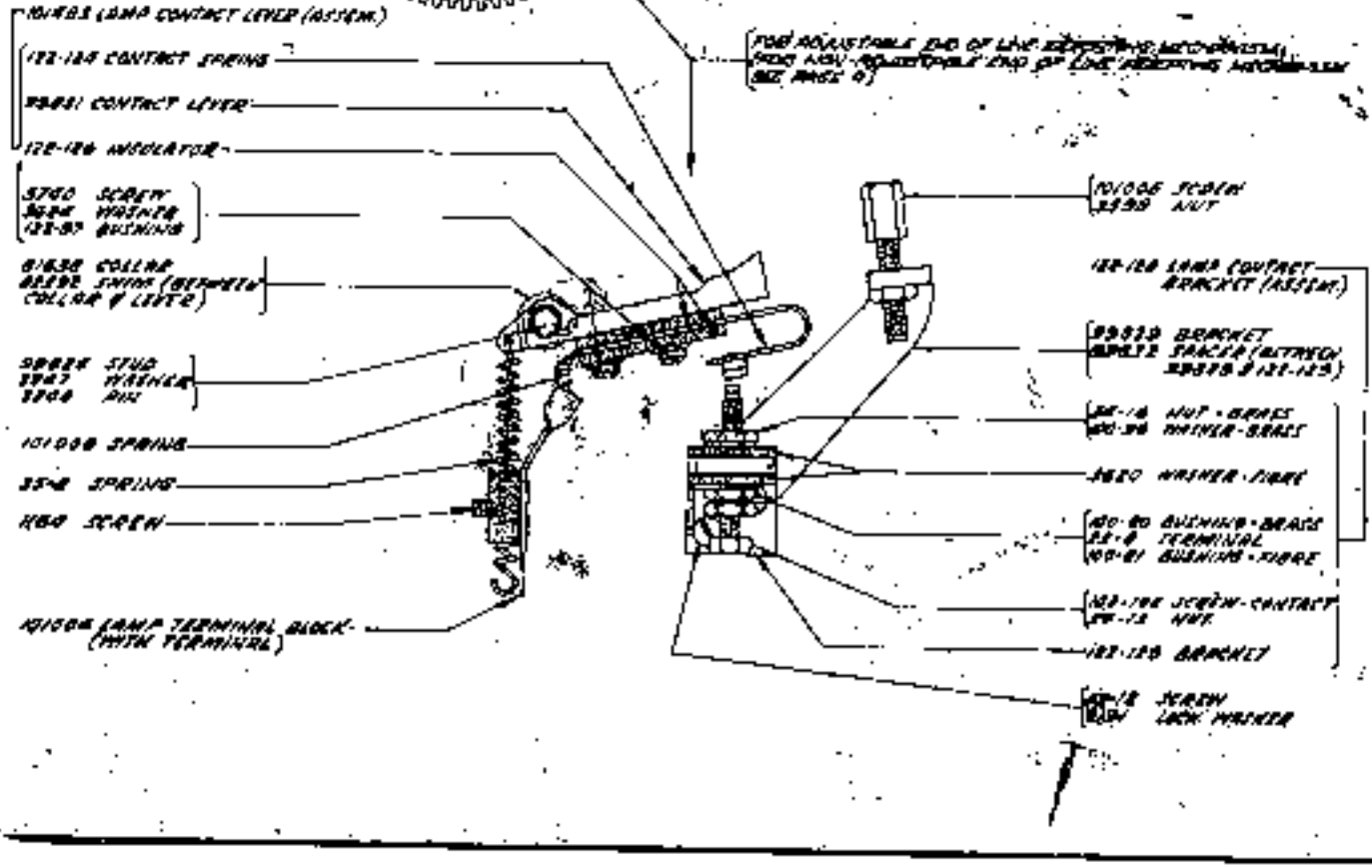
128-686 FEED ROLL BRACKET (ASSEM.)

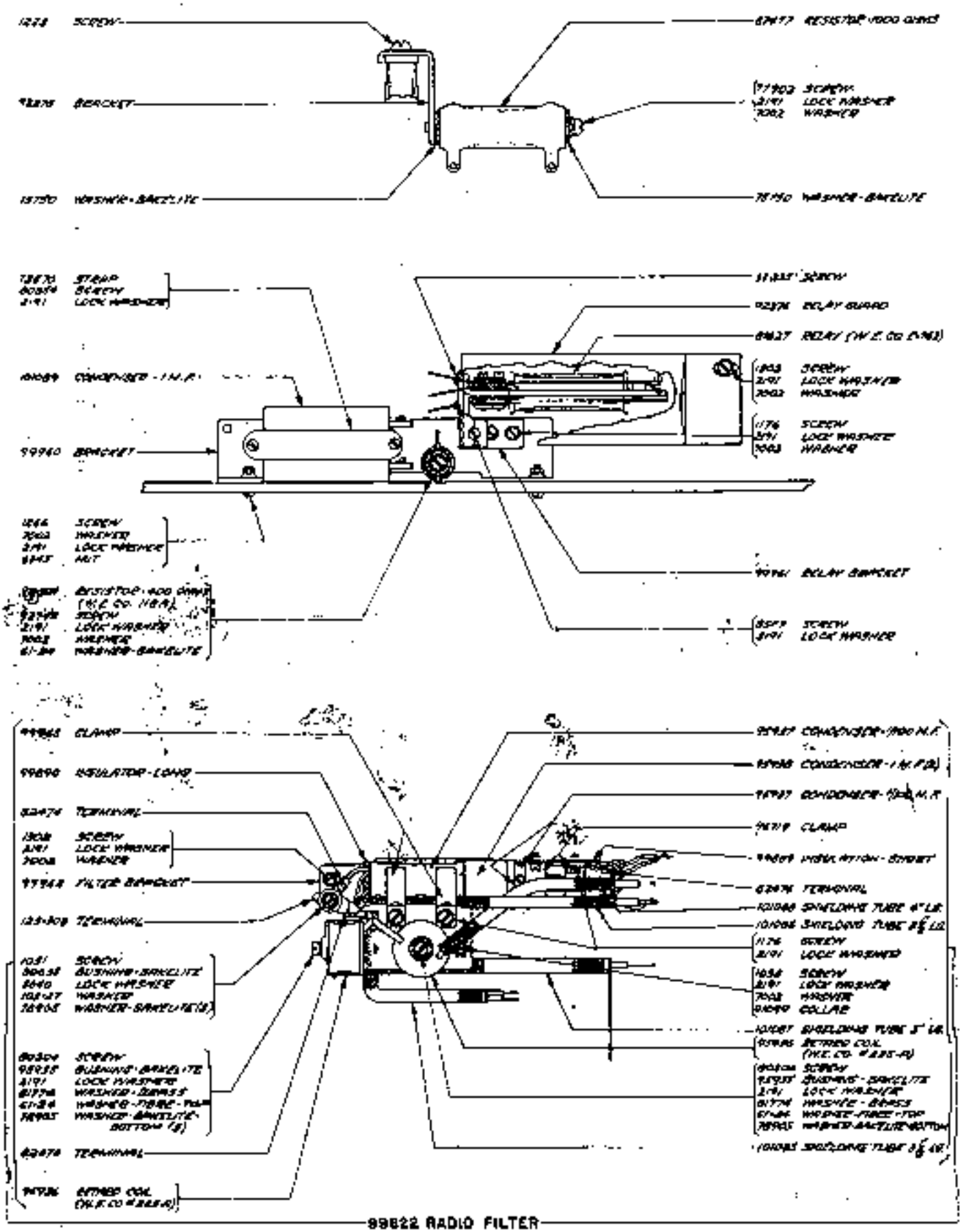




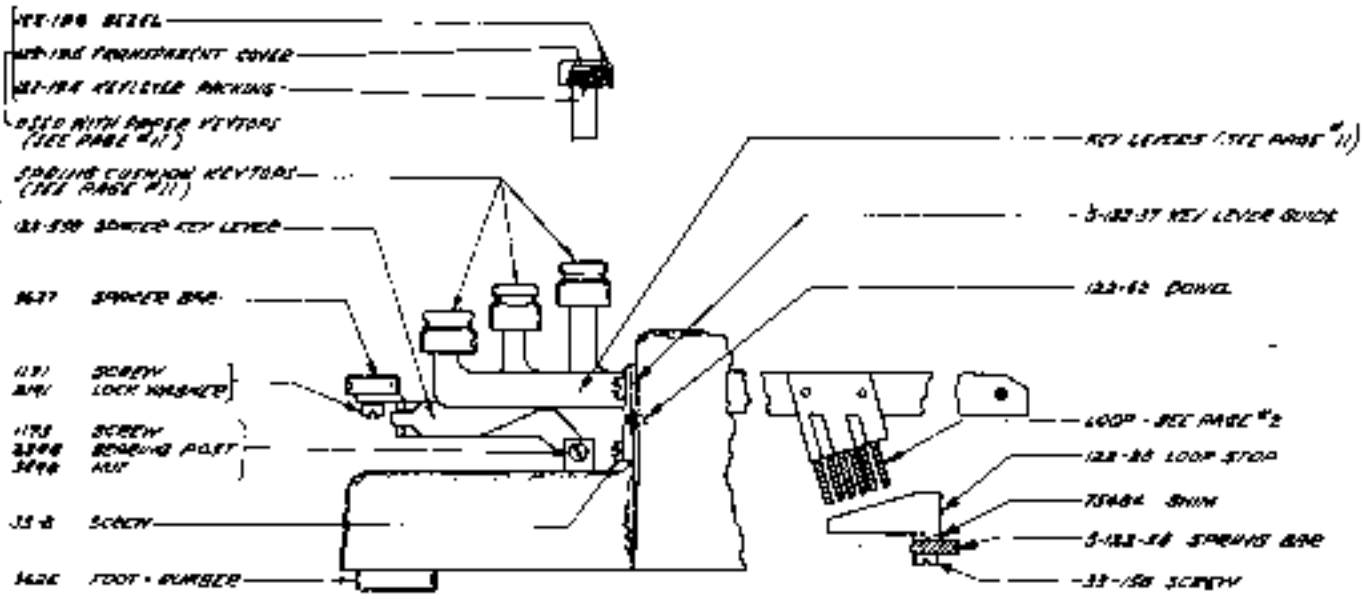

122-63 IDLER GEAR
94-30 NUT
3680 LOCK WASHER
87398 WASHER
122-63B IDLER LEVER
90216 IDLER LEVER (ASSEM.)
2848 PIN
2187 WASHER
7103 PAWL
35-86 SPRING
122-108 WASHER
35-62 SPRING
92-61 LAMP BRACKET 200
1194 SCREW
101135 WASHER
5-122-128 BRACKET
3598 NUT
94-72 DOWEL
32-8 SCREW
1158 SCREW
7102 BUSHING-ECCENTRIC
32-132 SCREW
5122-124 BELL ROD CRANK
1178 SCREW


99898 ADJUSTING PLATE
76187 SCREW
3680 LOCK WASHER
103-27 WASHER
99817 GEAR
122-247 DISC
35-30 SPRING
99830 CONTACT LEVER STOP
3597 NUT


101883 LAMP CONTACT LEVER (ASSEM.)
122-124 CONTACT SPRING
99881 CONTACT LEVER
122-126 INSULATOR
5760 SCREW
3684 WASHER
122-87 BUSHING
81638 COLLAR
88292 SPRING (BETWEEN COLLAR & LEVER)
99824 STUD
2187 WASHER
2848 PIN
101888 SPRING
35-8 SPRING
1180 SCREW
101886 LAMP TERMINAL BLOCK (WITH TERMINALS)
FOR ADJUSTABLE END OF LINE SENSING MECHANISM SEE PAGE 6)
101006 SCREW
3598 NUT
122-128 LAMP CONTACT BRACKET (ASSEM.)
99838 BRACKET
99832 SPACER (BETWEEN 99838 & 122-128)
8-16 NUT-BRASS
80-36 WASHER-BRASS
3680 WASHER-FIBRE
80-80 BUSHING-BRASS
32-8 TERMINAL
100-81 BUSHING-FIBRE
122-106 SCREW-CONTACT
8-32 NUT
122-130 BRACKET
10-12 SCREW
3684 LOCK WASHER



99822 RADIO FILTER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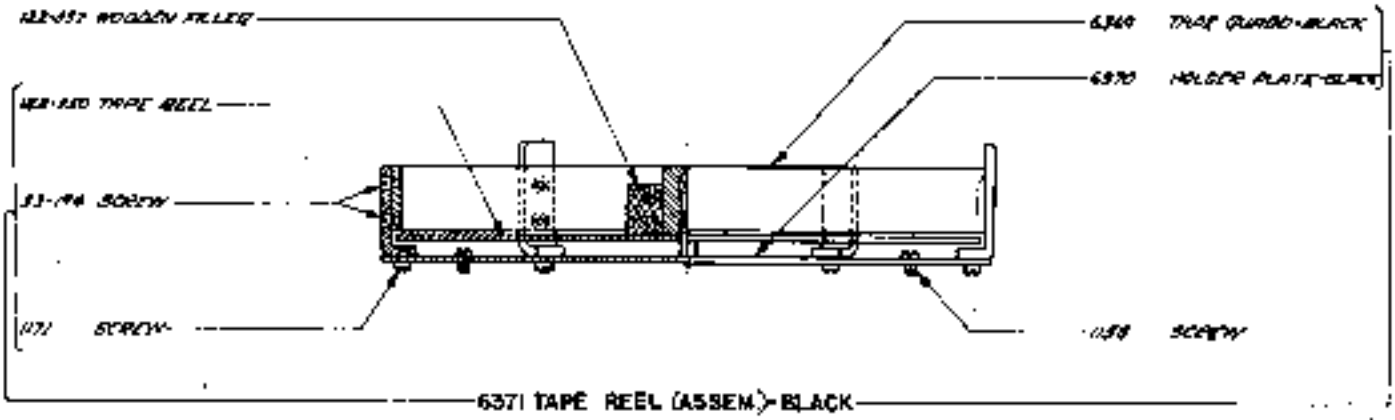
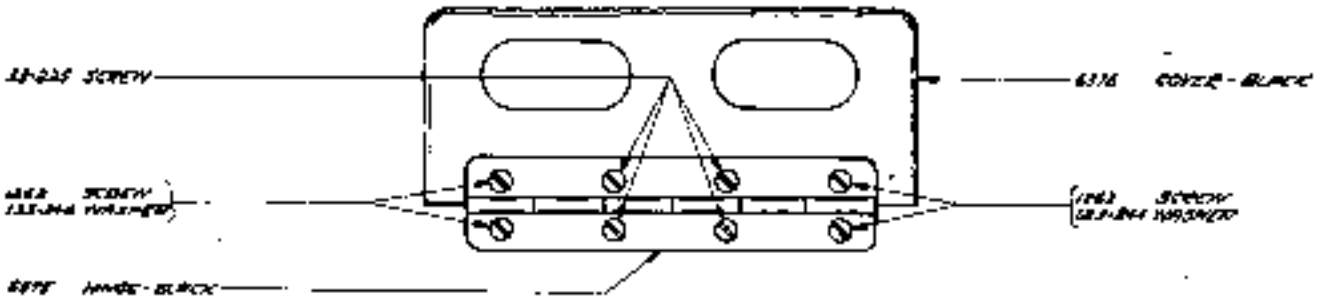
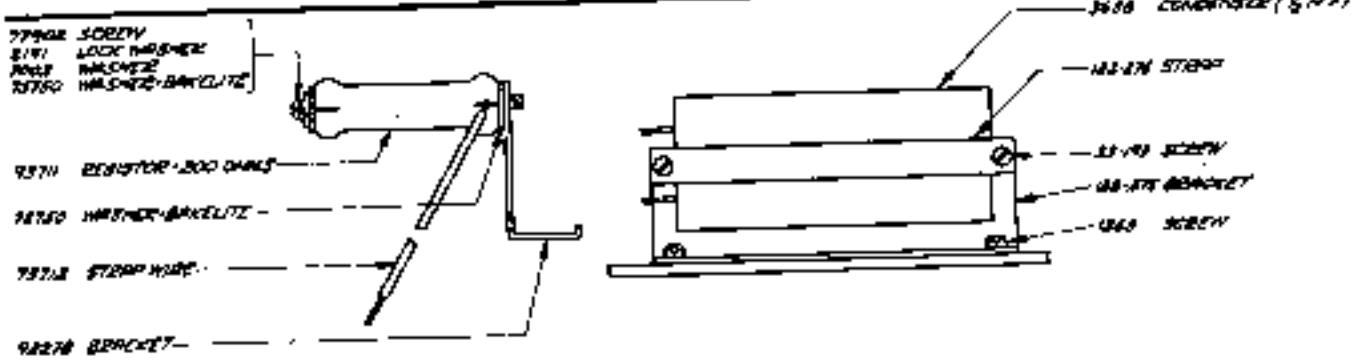
SCREW
SCREW
SCREW
FOOT - RUBBER


6340 TAPE GUIDE-BLACK
6370 HOLDER PLATE-BLACK
SCREW
SCREW
SCREW
6371 TAPE REEL (ASSEM.)-BLACK


6316 COVER - BLACK
SCREW
SCREW
HINGE - BLACK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78760 WASHER-BAKELITE
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92278 BRACKET
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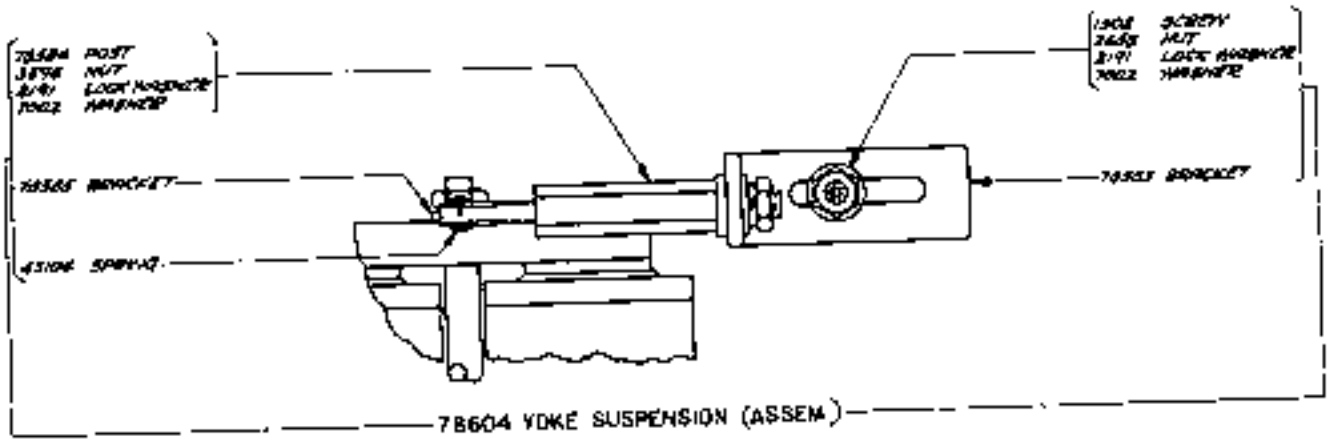
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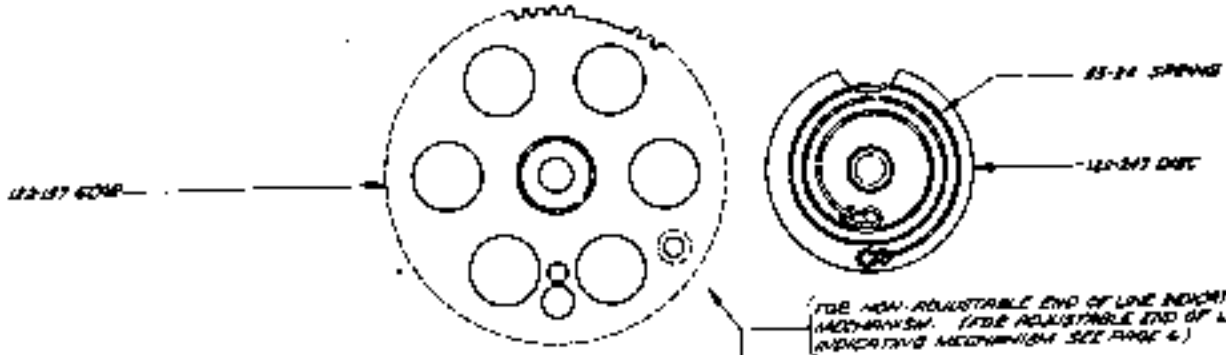
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83-24 SPRING
122-247 DISC
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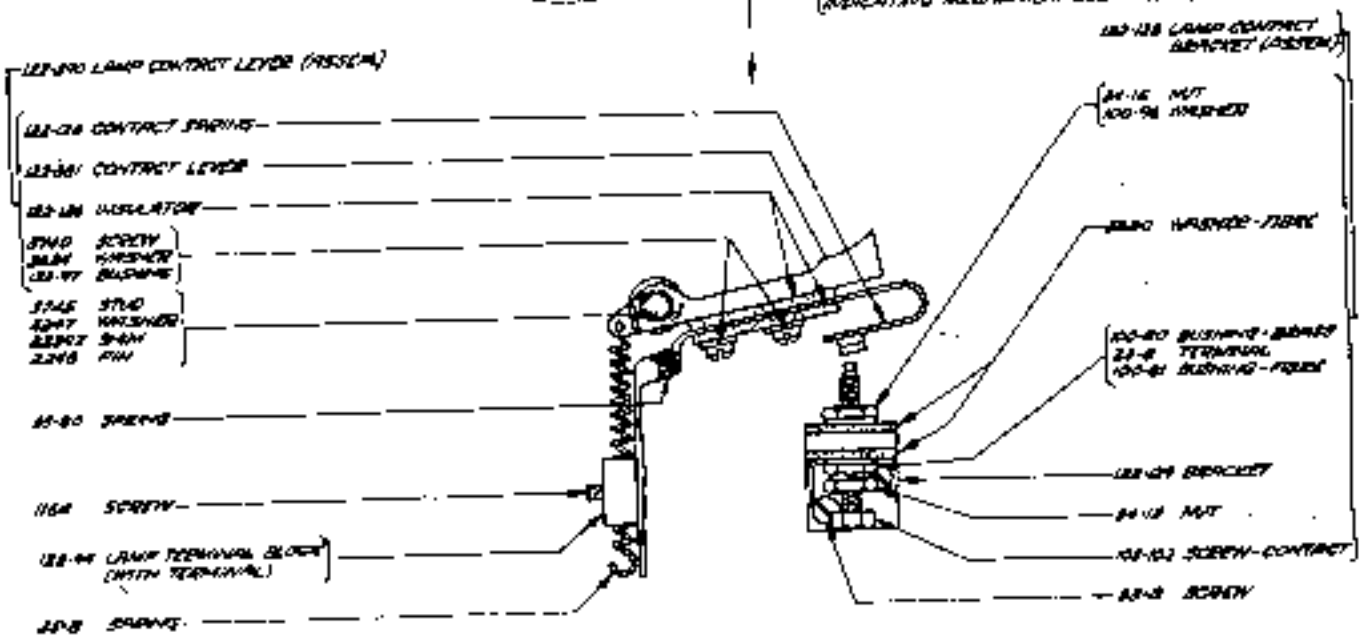
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122-128 LAMP CONTACT BRACKET (ASSEM.)
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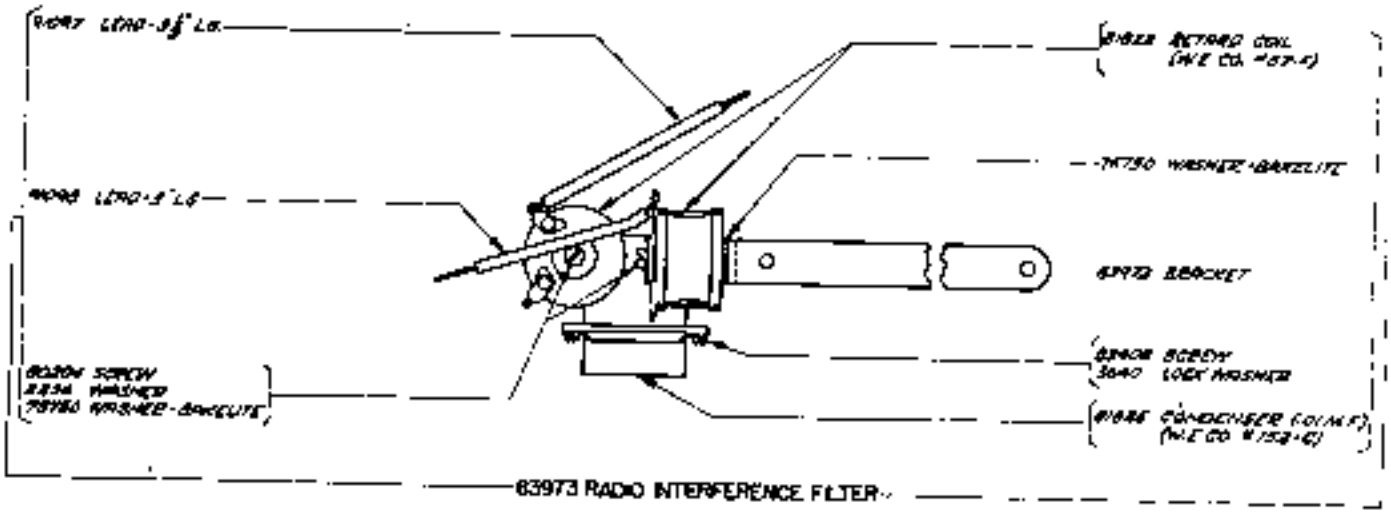
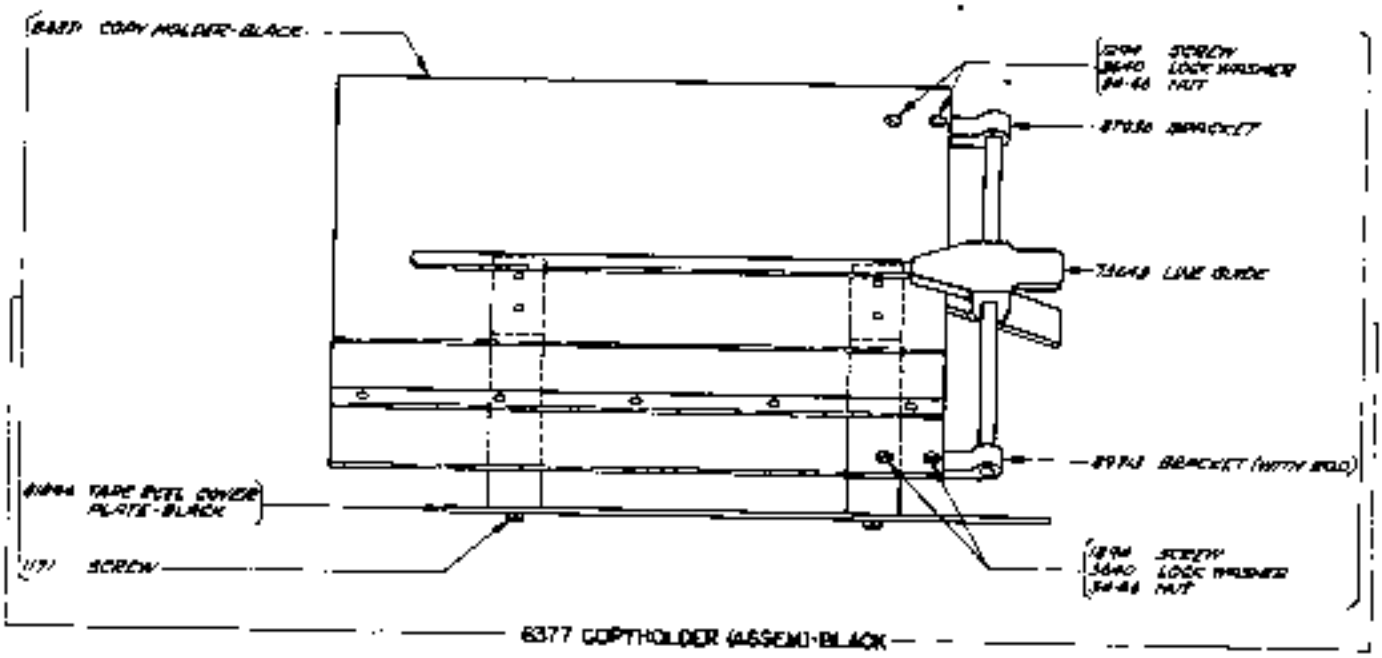

63973 RADIO INTERFERENCE FILTER


6377 COPYHOLDER (ASSEM)-BLACK

Description	KEYTOPS — TELETYPE: #89410 Set of Spring Cushion Keytops	KEYTOPS — TELETYPE: #84026 Set of Paper Keytops	KEYTOPS — COMMUNICATIONS: #75732 Set of Spring Cushion Keytops	KEYTOPS — COMMUNICATIONS: #92325 Set of Paper Keytops	KEY LEVERS (WITH CODES): For Spring Cushion Keytops	KEY LEVERS (WITH CODES): For Paper Keytops
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B	89425	84038	78947	122-460	78914	122-597
C	89423	84036	78948	122-461	78915	122-598
D	89415	84028	78949	122-462	7719	122-599
E	78950	122-463	78950	122-463	78916	122-600
F	89416	84029	78951	122-581	78917	122-601
G	89417	84030	78952	122-465	78918	122-602
H	89418	84031	78953	122-466	7728	122-603
I	78954	122-467	78954	122-467	7716	122-604
J	89419	84032	78955	122-582	7717	122-605
K	89420	84033	78956	122-469	7712	122-606
L	89421	84034	78957	122-470	78919	122-607
M	78958	122-471	78958	122-471	78920	122-608
N	89426	84071	78959	122-472	7710	122-609
O	78960	122-473	78960	122-473	78921	122-610
P	78961	122-474	78961	122-474	7713	122-611
Q	78962	122-475	78962	122-475	78922	122-612
R	78963	122-476	78963	122-476	78923	122-613
S	78980	122-710	78980	128-730	78924	122-614
T	78964	122-478	78964	122-478	78925	122-615
U	78965	122-479	78965	122-479	7724	122-616
V	89424	84037	78966	122-480	7727	122-617
W	78967	122-481	78967	122-481	78926	122-618
X	78968	122-482	78968	122-482	78927	122-619
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1 - ⊕ ? ○ : / $ 3 ' ! - / & (8 / ,) . ⊗ 9 0 1 4 BELL 5 7 Ⓞ ; 2 / 6 + "

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BULLETIN NO. 1012
ISSUE 2
SEPTEMBER, 1931

TELETYPE

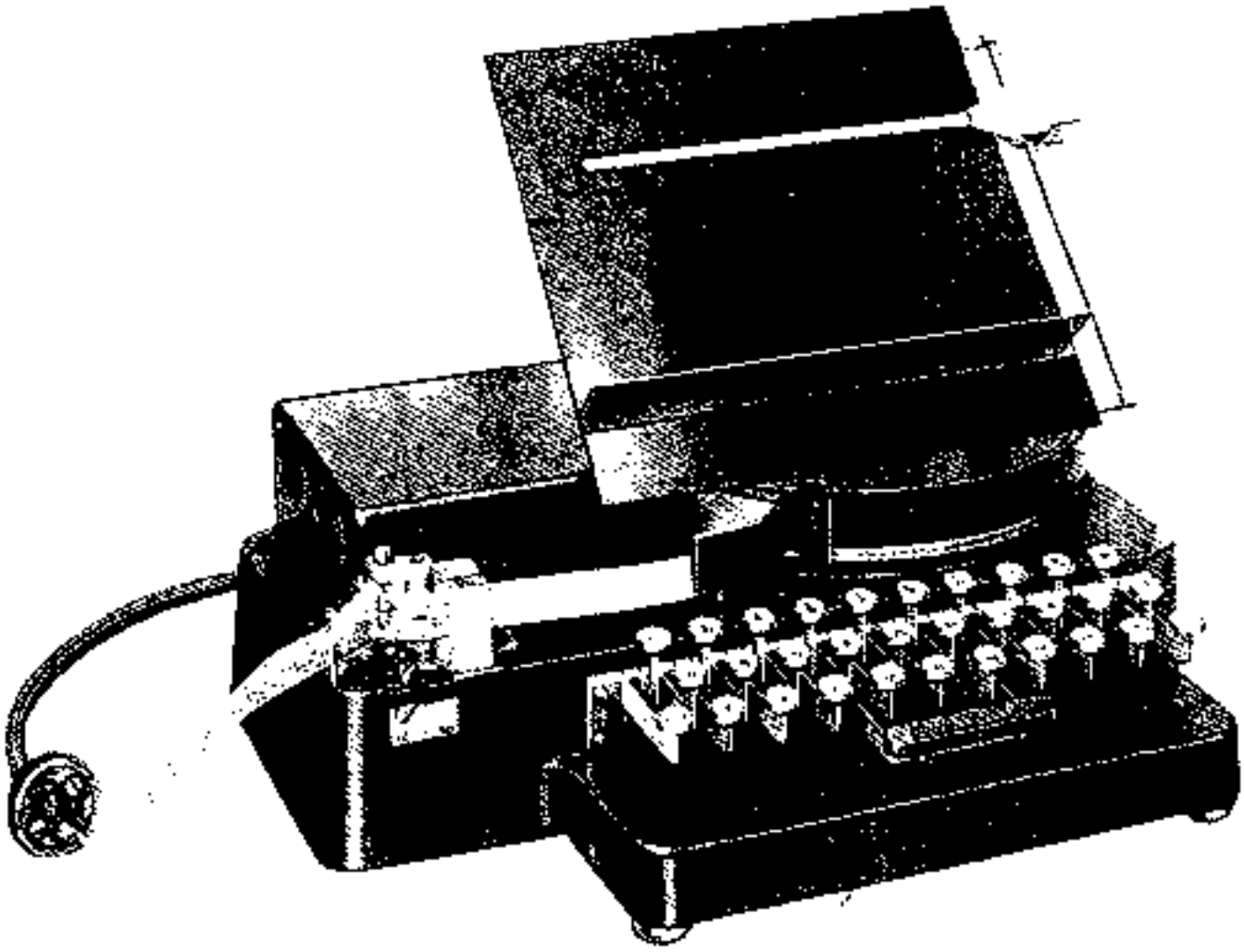
PRINTING TELEGRAPH SYSTEMS

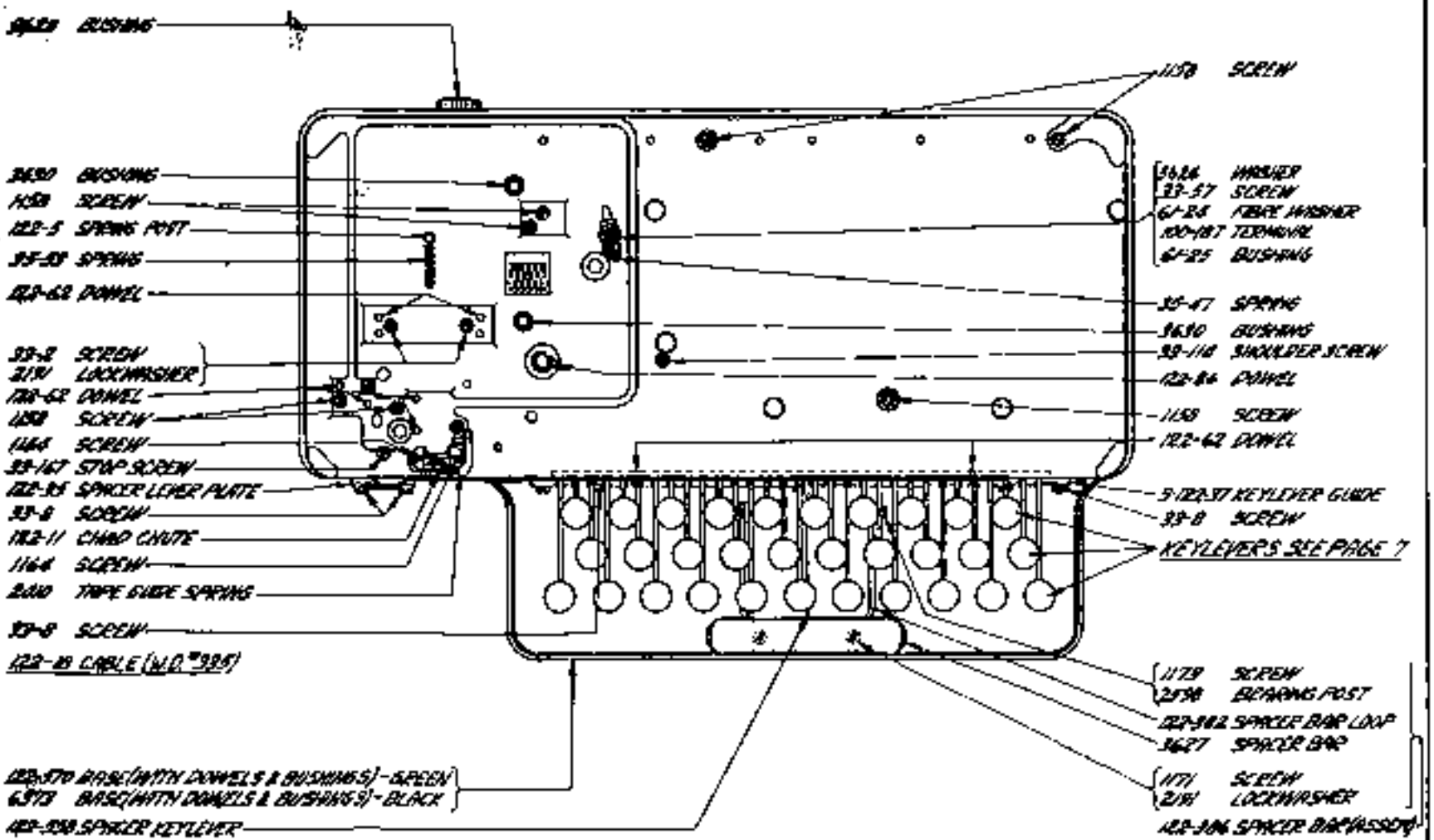
Historical Reference only.
Replaced by Bulletin 1093
March 1941

PERFORATOR PARTS
BLACK & GREEN

TELETYPE
CORPORATION
SUBSIDIARY OF
Western Electric Company
CHICAGO, U.S.A.

PRINTED IN U. S. A.

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SPRING
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SCREEN
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SCREEN
SCREEN
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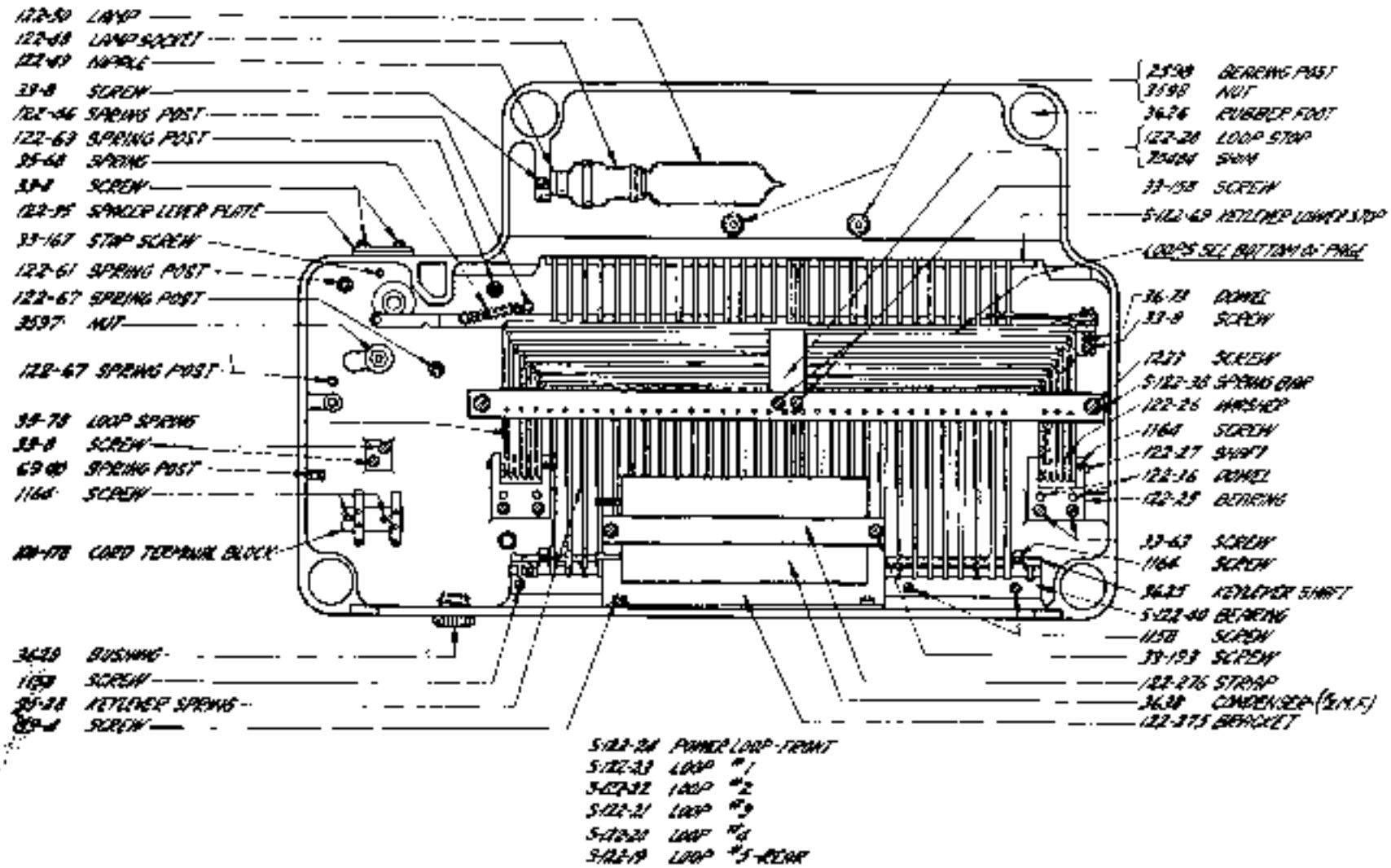
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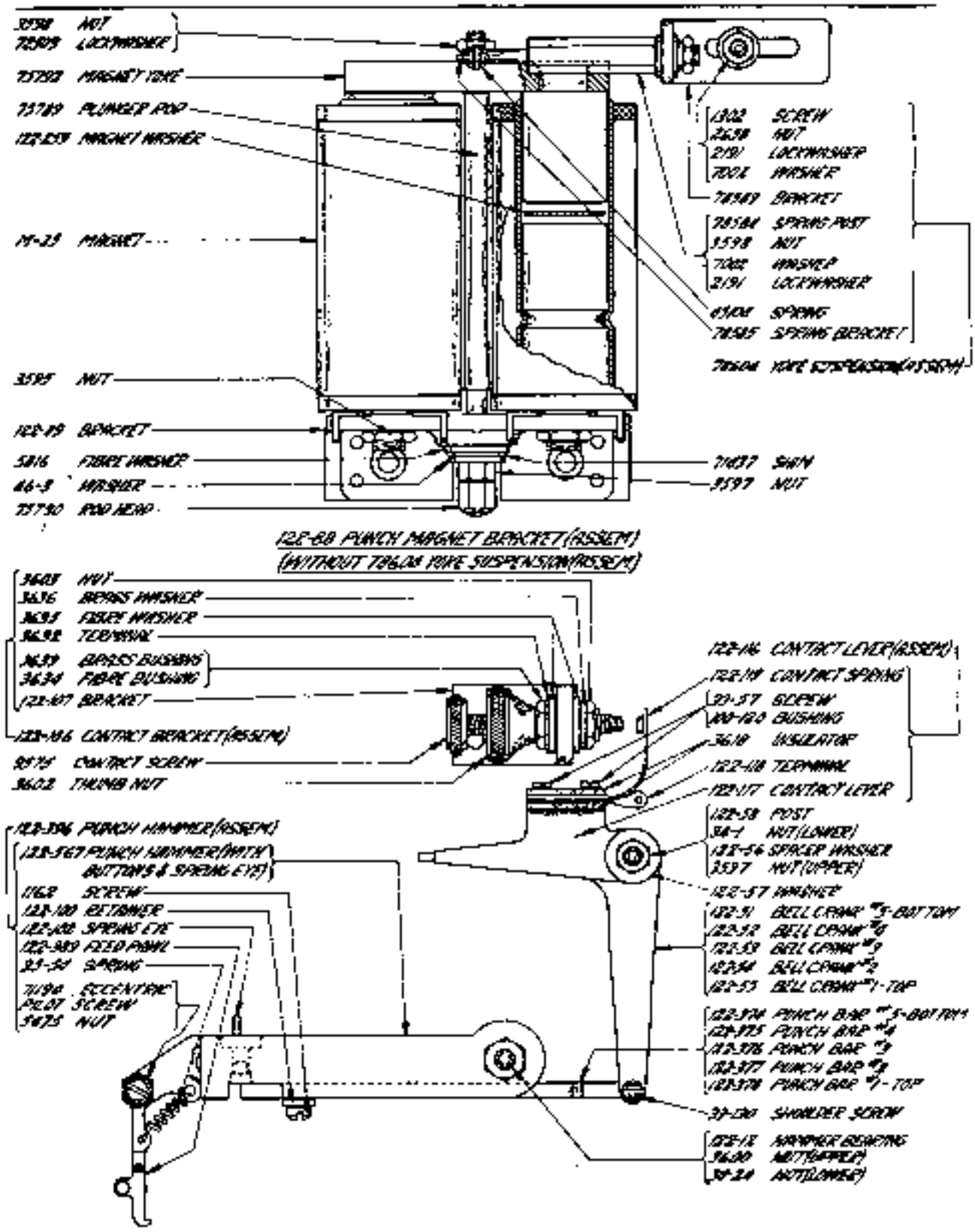
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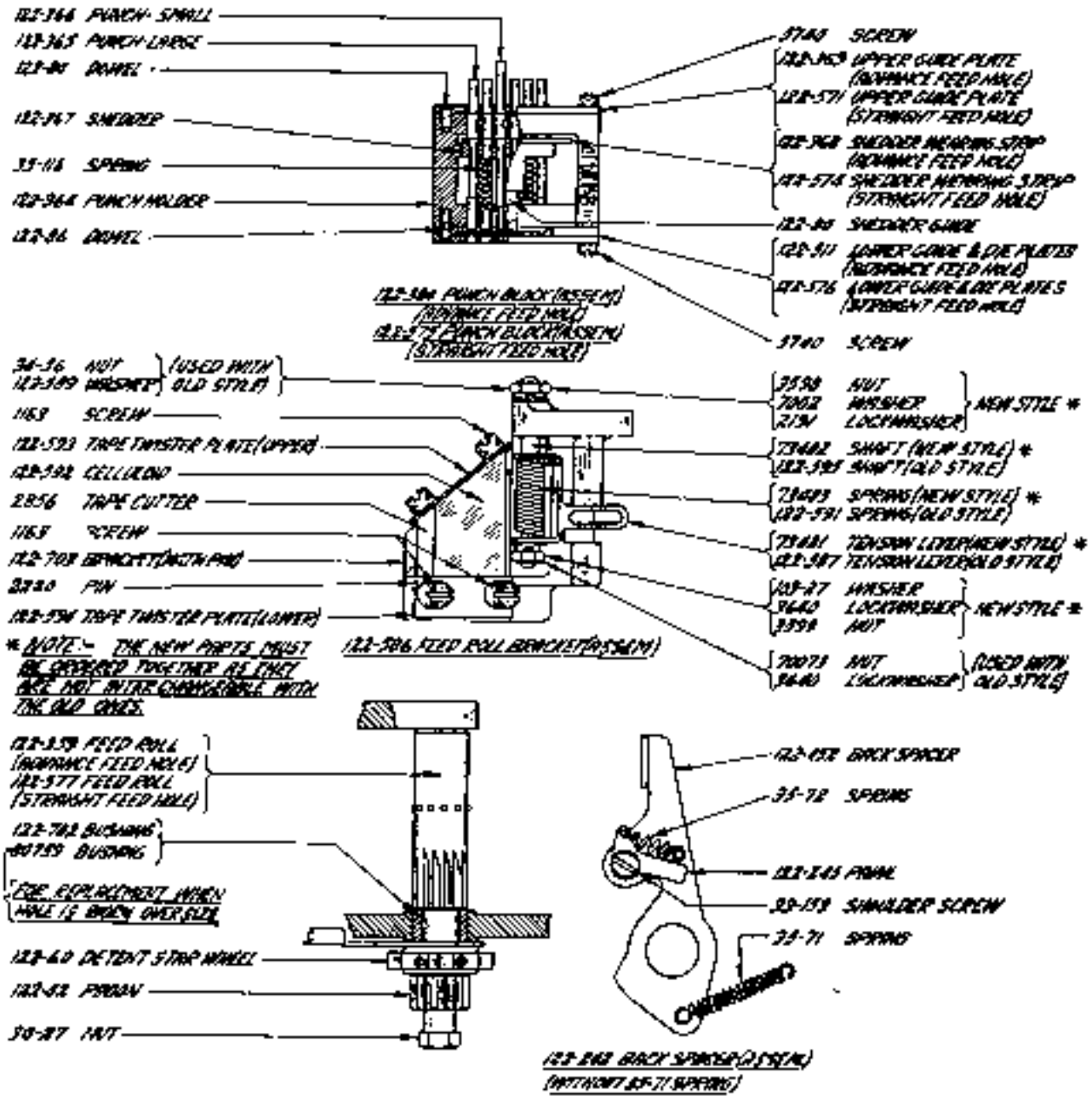
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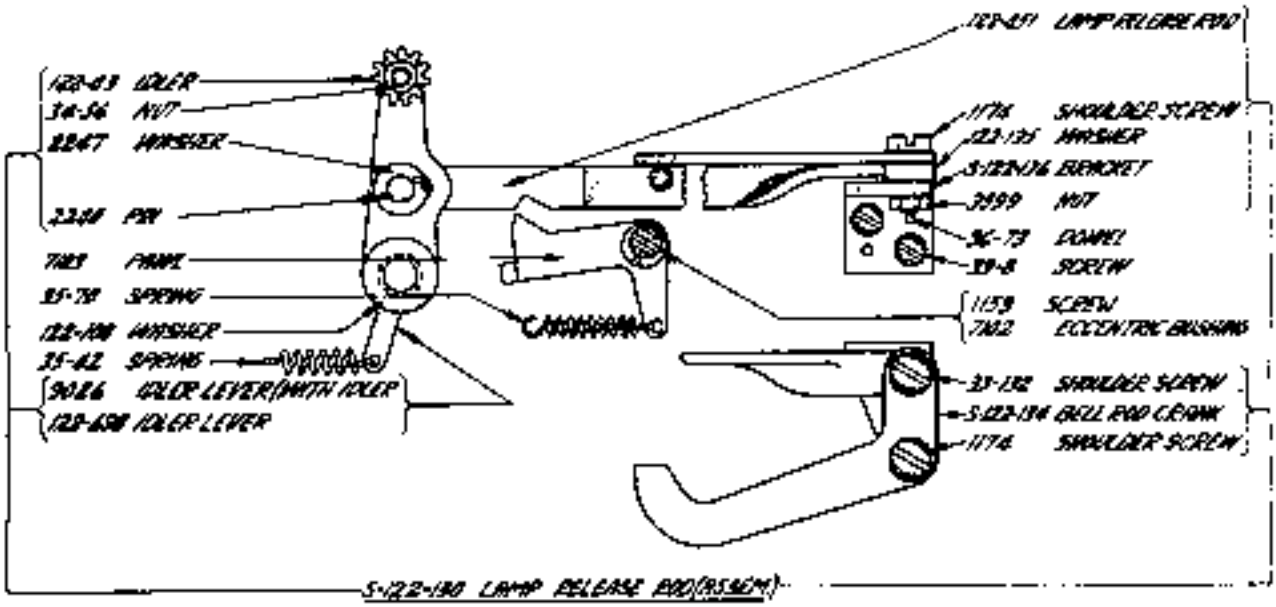
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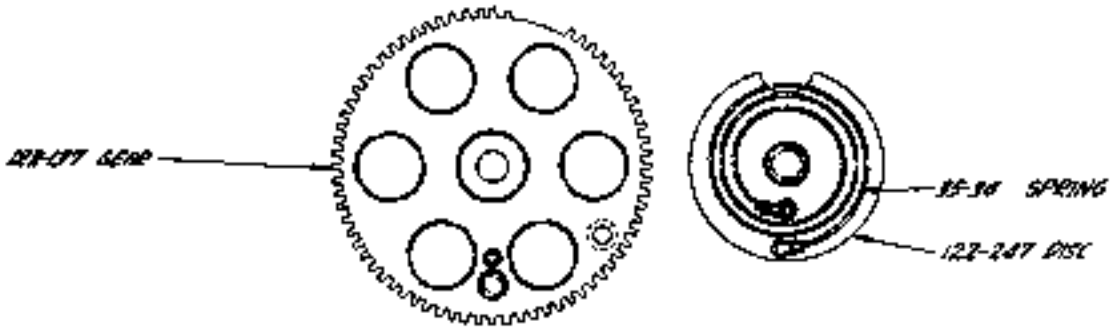
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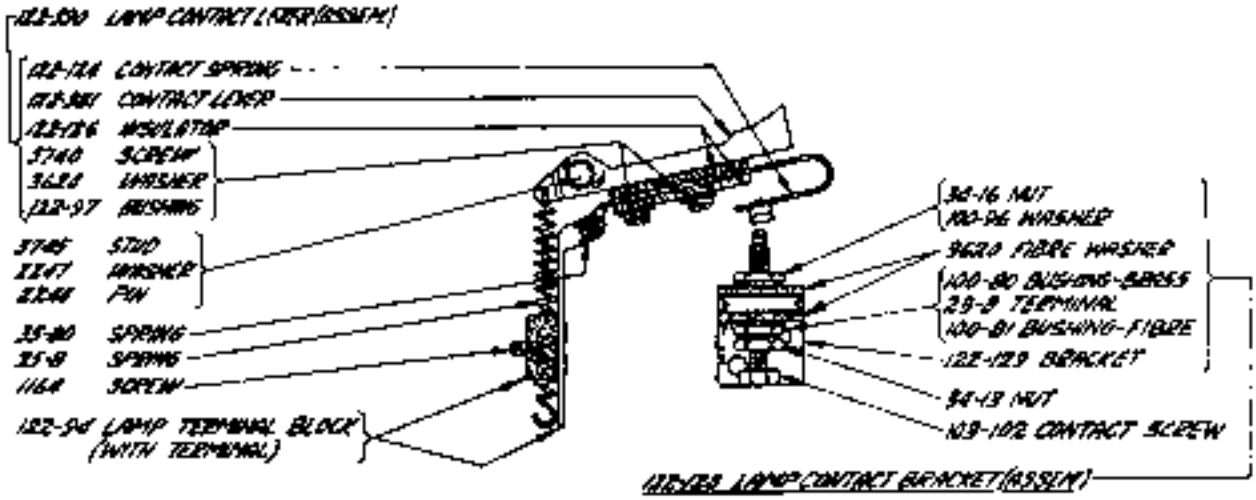
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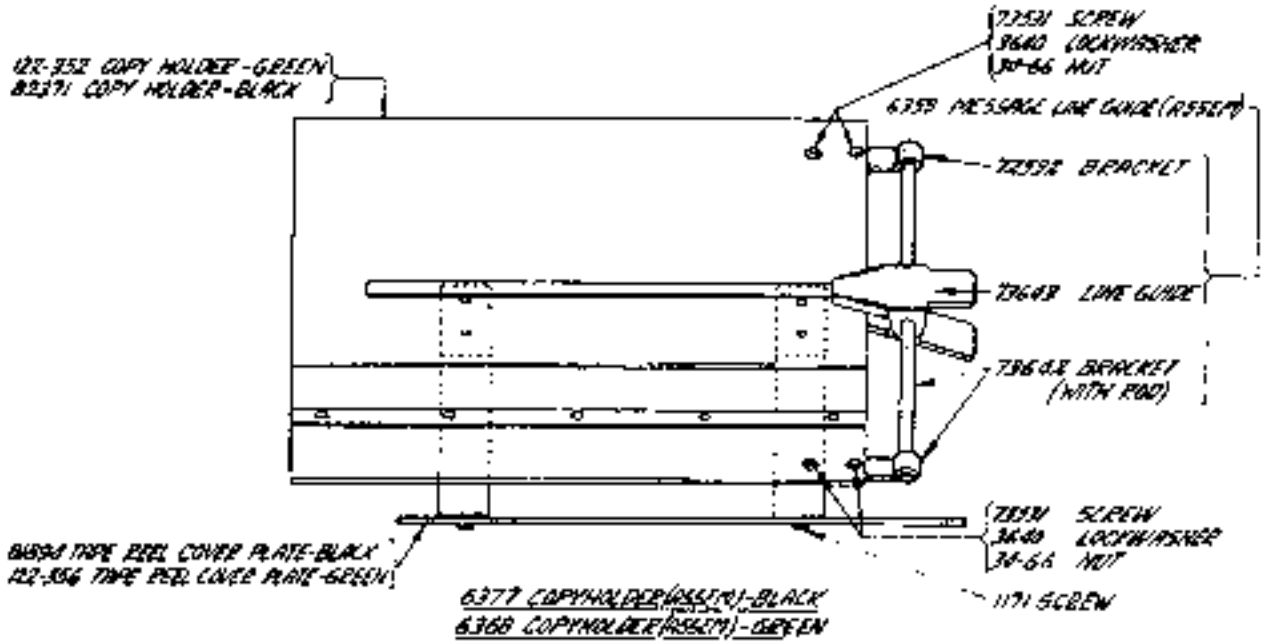
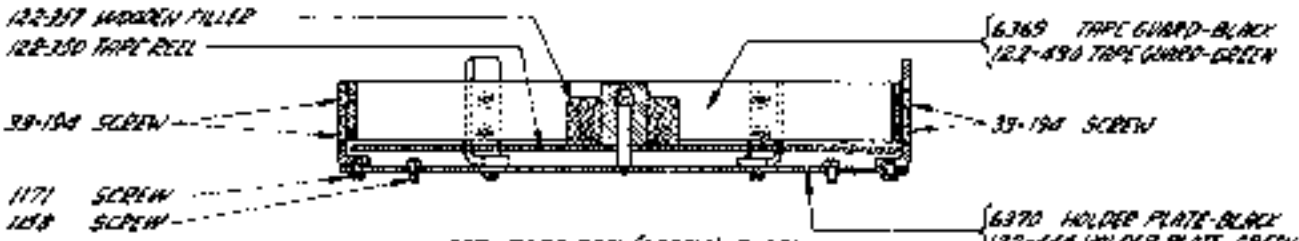


6377 COPYHOLDER (ASSEM)-BLACK
6368 COPYHOLDER (ASSEM)-GREEN



6371 TAPE REEL (ASSEM)-BLACK
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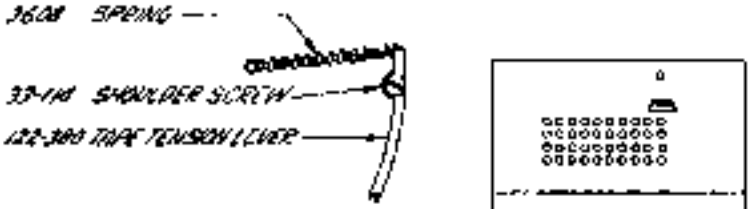

6378 LAMP GUARD-BLACK
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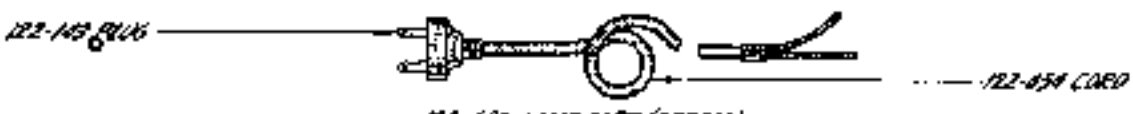

122-459 LAMP CORD (ASSEM)

KEYTOP DESCRIPTION	PRINTED KEYTOP CATALOG NUMBER	KEYLEVER	KEYLEVER COMP. WITH PRINTED KEYTOP
A -	122-459	122-596	122-528
B 7	122-460	122-597	122-529
C 8	75801	122-597	81910
D . >	122-461	122-598	122-530
E 9	75799	122-599	81911
F 0)	122-462	122-599	122-531
G / ?	122-463	122-600	122-532
H CAPS	122-464	122-601	122-533
I 4 $	75795	122-601	81912
J 5 %	122-465	122-602	122-534
K & 6	122-466	122-602	122-535
L = +	75796	122-603	81913
M 1 !	122-467	122-600	122-536
N 2 "	122-468	122-604	122-537
O '	122-532	122-603	81910
P :	122-469	122-606	122-538
Q 3 #	75797	122-606	81914
R ;	122-470	122-607	122-539
S BKSP	75798	122-607	81915
T TAB	122-471	122-608	122-540
U 0	122-707	122-608	81911
V (	80385	122-608	81932
W)	122-472	122-609	122-541
X RET	122-706	122-609	81913
Y SPACE	75802	122-609	81916
Z - _	122-473	122-610	122-542

KEYTOP DESCRIPTION	PRINTED KEYTOP CATALOG NUMBER	KEYLEVER	KEYLEVER COMP. WITH PRINTED KEYTOP
P 0	122-470	122-611	122-543
Q /	122-471	122-612	122-544
R 4	122-476	122-613	122-545
S TAB	122-477	122-614	122-546
T SEL	122-580	122-614	81914
U '	122-16	122-614	81915
V .	122-709	122-615	81916
W CTL	122-710	122-616	81917
X 5	122-478	122-615	122-547
Y 7	122-479	122-616	122-548
Z !	122-480	122-617	122-549
M 8	75800	122-617	81917
W 2	122-481	122-618	122-550
X /	122-482	122-619	122-551
Y 6	122-481	122-620	122-552
Z "	122-620	122-621	122-553
' @	122-705	122-623	81918
' ,	122-704	122-622	81919
- ;	75902	122-623	81920
' :	80385	122-623	81921
,	80383	122-623	81922
.	80382	122-624	81923
= ~	75903	122-624	81924
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TAB	122-477	122-625	122-557
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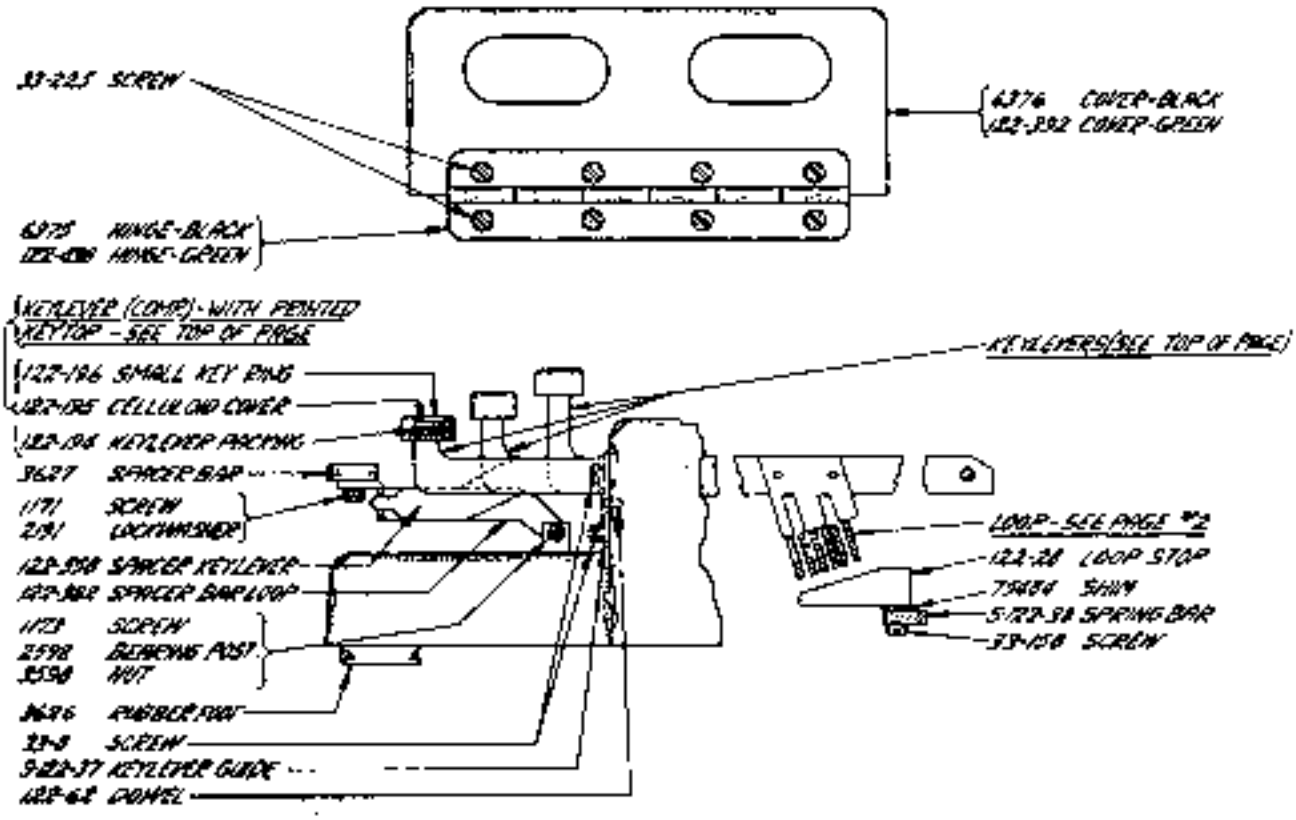

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