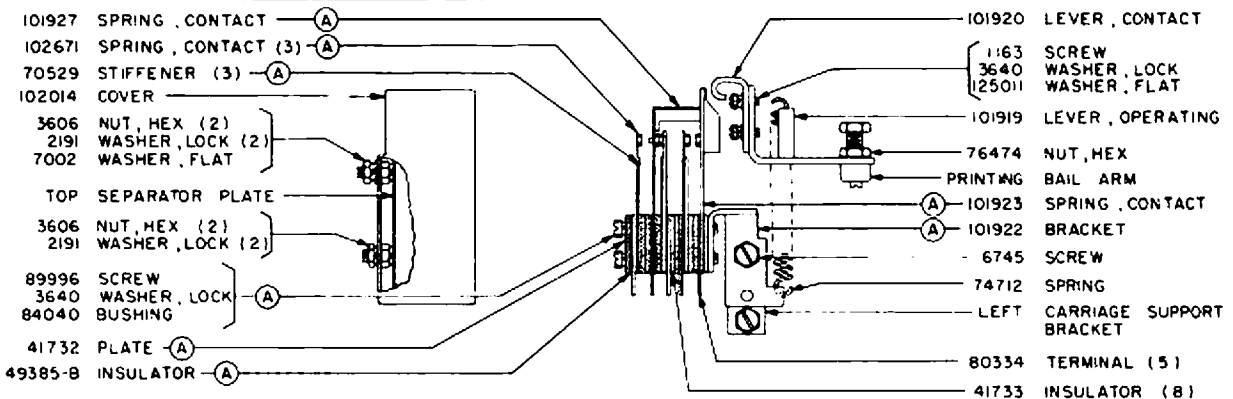


SECTION II

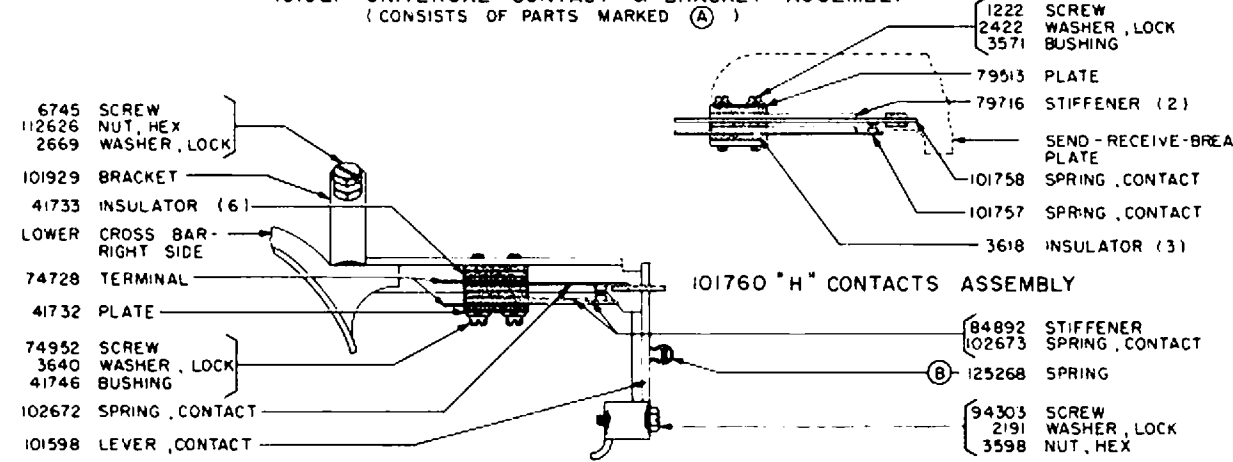
BELL SYSTEM UNITS

PAGES II- 1 THROUGH II- 4

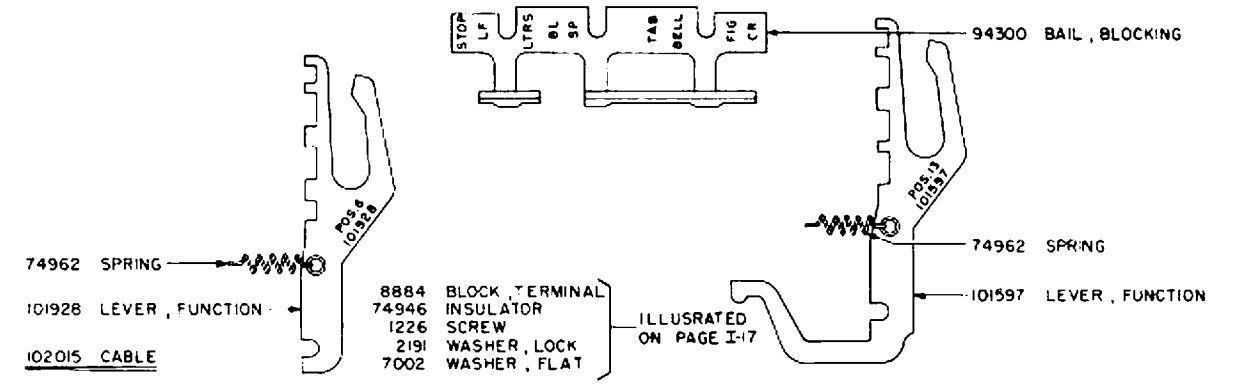
THE PARTS ILLUSTRATED OR LISTED ON THIS PAGE AND THE FOLLOWING PAGES APPLY TO BELL SYSTEM UNITS.



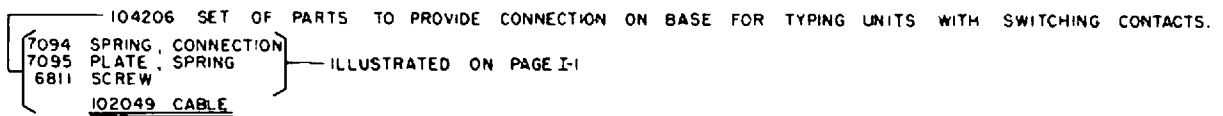
101921 UNIVERSAL CONTACT & BRACKET ASSEMBLY (CONSISTS OF PARTS MARKED (A))



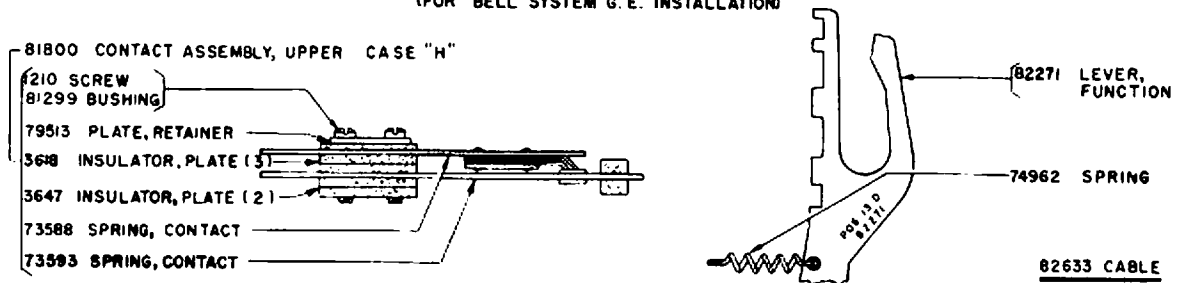
101930 "FIGURES" CONTACT AND BRACKET ASSEMBLY (EXCLUDES PART MARKED (B))



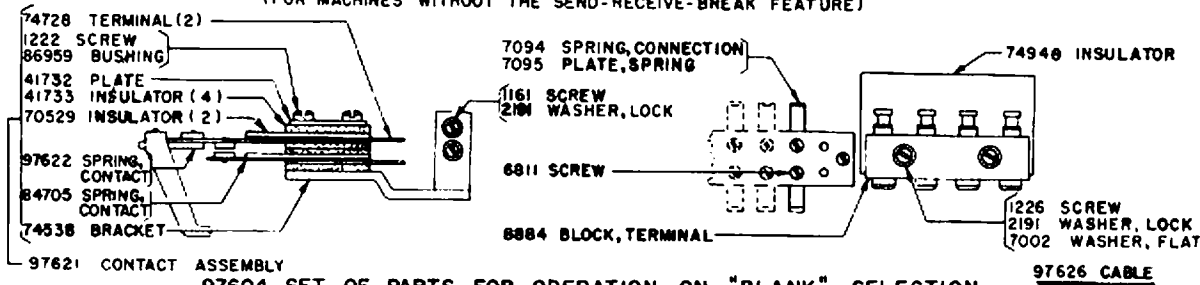
113660 SET OF PARTS TO PROVIDE SWITCHING CONTACTS ON TYPING UNITS BP99 (BELL SYSTEM 15AB) AND BPIO5 (BELL SYSTEM 15AD) INCLUDES ALL PARTS LISTED ABOVE.



UPPER CASE "H" AND "BLANK" CONTACTS
(FOR BELL SYSTEM G. E. INSTALLATION)



101384 SET OF PARTS FOR UPPER CASE "H" CONTACT MECHANISM
(FOR MACHINES WITHOUT THE SEND-RECEIVE-BREAK FEATURE)



SETS OF CONVERSION PARTS (BELL SYSTEM ONLY)

- 86192 set of parts for converting Bell System 15C** keyboard to 15B** consists of the following parts:
- | | | | | | | |
|-------|------------------------------|-----|--------|-------------|------------|-----|
| 78981 | Keytop, Spring Cushion (H #) | (1) | 120453 | Plate, Code | (Keyboard) | (1) |
| 78995 | Keytop, Spring Cushion (J ') | (1) | | | | |
- 86193 set of parts for converting Bell System 15C** keyboard to 15A** consists of the following parts:
- | | | | | | | |
|-------|------------------------------|-----|--------|------------------------------|------------|-----|
| 78947 | Keytop, Spring Cushion (B ?) | (1) | 78956 | Keytop, Spring Cushion (K) | (1) | |
| 78948 | Keytop, Spring Cushion (C :) | (1) | 78957 | Keytop, Spring Cushion (L) | (1) | |
| 78951 | Keytop, Spring Cushion (F !) | (1) | 78959 | Keytop, Spring Cushion (N ,) | (1) | |
| 78953 | Keytop, Spring Cushion (H #) | (1) | 78966 | Keytop, Spring Cushion (V ;) | (1) | |
| 78955 | Keytop, Spring Cushion (J ') | (1) | 120453 | Plate, Code | (Keyboard) | (1) |
- 97693 set of parts for Bell System name plate (with window) consists of the following parts:
- | | | | | | |
|-------|-------------|-----|-------|--------|-----|
| 92003 | Plate, Name | (1) | 91621 | window | (1) |
|-------|-------------|-----|-------|--------|-----|
- 87868 set of parts for converting Bell System 15S and 15T typing units to 15J and 15L consists of the following parts:
- | | | | | | |
|-------|---------------------------------|-----|-------|------------------------|-----|
| 81800 | Upper Case "H" Contact Assembly | (1) | 82788 | Spring, Function Lever | (1) |
| 82271 | Lever, Function | (1) | 82633 | Cable | (1) |
- 90253 set of parts for converting Bell System 15S typing unit to 15J consists of the following parts:
- | | | | | | | |
|-------|-------------------------|-------|--------|-----------------------------|-------|-----|
| 74185 | Bar, Pull | (1) | 74765 | Pallet, Type | (H #) | (1) |
| 7634 | Spring, Pull Bar | (1) | 120452 | Plate, Code (Typing Unit) | (1) | |
| 74542 | Bar, Type (with pallet) | (. .) | 83408 | Screws, Code Plate Mounting | (2) | |
| 74318 | Pallet, Type | (J ') | | | | |

**See Sec. IV, Page 4 for explanation

- 90254 set of parts for converting Bell System 15K typing unit to 15F consists of the following parts:
- | | | | | | |
|-------|------------------------------|-----|--------|-----------------------------|----------|
| 74038 | Lever, Function | (1) | 74318 | Pallet, Type | (J ')(1) |
| 74185 | Bar, Full | (1) | 74765 | Pallet, Type | (H #)(1) |
| 7634 | Spring, Full Bar | (1) | 120452 | Plate, Code (Typing Unit) | (1) |
| 74642 | Bar, Type (with pallet)(. .) | (1) | 83408 | Screws, Code Plate Mounting | (2) |
- 90255 set of parts for converting Bell System 15I typing unit to 15G consists of the following parts:
- | | | | | | |
|-------|------------------------------|----------|--------|-----------------------------|----------|
| 74185 | Bar, Full | (1) | 74765 | Pallet, Type | (H #)(1) |
| 7634 | Spring, Full Bar | (1) | 120452 | Plate, Code (Typing Unit) | (1) |
| 74642 | Bar, Type (with Pallet)(. .) | (1) | 83408 | Screws, Code Plate Mounting | (2) |
| 74318 | Pallet, Type | (J ')(1) | | | |
- 90256 set of parts for converting Bell System 15H typing unit to 15H consists of the following parts:
- | | | | | | |
|-------|------------------------------|-----|--------|-----------------------------|----------|
| 74038 | Lever, Function | (1) | 74318 | Pallet, Type | (J ')(1) |
| 74185 | Bar, Full | (1) | 74765 | Pallet, Type | (H #)(1) |
| 7634 | Spring, Full Bar | (1) | 120452 | Plate, Code (Typing Unit) | (1) |
| 74642 | Bar, Type (with Pallet)(. .) | (1) | 83408 | Screws, Code Plate Mounting | (2) |
- 91827 set of parts for converting 74839 (Bell System 15A) motor unit to 91830 (Bell System 15J) motor unit consists of the following parts:
- | | | | | | |
|-------|------------------------|-----|--------|--------------------------|-----|
| 91761 | Bracket | (1) | 2191 | Washer, Lock | (2) |
| 78206 | Resistor Unit Assembly | (1) | 91762 | Cable | (1) |
| 6746 | Screw | (2) | 120460 | Plate, Code (Motor Unit) | (1) |
| 7002 | Washer, Flat | (2) | | | |
- 91828 set of parts for converting 74840 (Bell System 15B) motor unit to 91831 (Bell System 15K) motor unit consists of the following parts:
- | | | | | | |
|-------|------------------------|-----|--------|--------------------------|-----|
| 91761 | Bracket | (1) | 2191 | Washer, Lock | (2) |
| 78206 | Resistor Unit Assembly | (1) | 91763 | Cable | (1) |
| 6746 | Screw | (2) | 120460 | Plate, Code (Motor Unit) | (1) |
| 7002 | Washer, Flat | (2) | | | |
- 92232 set of parts for converting Bell System 15E** keyboard to 15D** consists of the following parts:
- | | | | |
|-------|---------------------------------|--------|---------------------------------------|
| 78947 | Keytop, Spring Cushion (B ?)(1) | 78957 | Keytop, Spring Cushion (L))(1) |
| 78948 | Keytop, Spring Cushion (C :)(1) | 78959 | Keytop, Spring Cushion (N ,)(1) |
| 78951 | Keytop, Spring Cushion (F !)(1) | 78966 | Keytop, Spring Cushion (V ;)(1) |
| 78953 | Keytop, Spring Cushion (H &)(1) | 120453 | Plate, Code (Keyboard)(1) |
| 78955 | Keytop, Spring Cushion (J ')(1) | 120456 | Plate, Code (Teletypewriter Base) (1) |
| 78956 | Keytop, Spring Cushion (K)(1) | | |
- 111182 set of parts for converting Bell System 15F** keyboard to 15C** consists of the following parts:
- | | | | |
|-------|----------------------------------|--------|-----------------------------------|
| 78961 | Keytop, Spring Cushion (P O)(1) | 78987 | Keytop, Spring Cushion(N 7/8)(1) |
| 78982 | Keytop, Spring Cushion (F i)(1) | 78988 | Keytop, Spring Cushion(K 1/2)(1) |
| 78983 | Keytop, Spring Cushion(L 3/4)(1) | 78993 | Keytop, Spring Cushion (J ')(1) |
| 78984 | Keytop, Spring Cushion(C 1/8)(1) | 82607 | Keytop, Spring Cushion(H Stop)(1) |
| 78985 | Keytop, Spring Cushion(J 3/8)(1) | 120453 | Plate, Code (Keyboard)(1) |
| 78986 | Keytop, Spring Cushion(B 5/8)(1) | | |

**See Sec. IV, Page 4 for explanation

CABLES WITH PART NUMBERS LISTED BELOW APPLY TO BELL SYSTEM UNITS

BASE

74574 Line } Associated with pulling magnet (for use with three terminal blocks -
 74573 Power } Twelve terminals each).

91770 Line } Associated with holding magnet (for use with one terminal block -
 91769 Power } Twenty-six terminals).

91789 Line Relay - Part of 91786 set of parts

74575 Line Relay

KEYBOARD

114749 For use with line test key (cam type).

92238 For use without local test.

92237 For use with line test key locking and non-locking - push type (color coded).

74572 For use with line test key locking and non-locking - push type (all black).

TYPING UNIT

91277 Selector unit (holding magnets) - with 8884 terminal block.

91898 Selector unit (holding magnets) - without 8884 terminal block (for use with 94490 series-parallel switch).

124591 Selector unit (holding magnets) (for use with 113703 terminal block assembly).

74625 Selector unit (pulling magnets).

82633 For upper case "H" contacts.

74789 For motor stop contacts.

BELL SYSTEM CODE DESIGNATION PLATES



120452



120453



120460



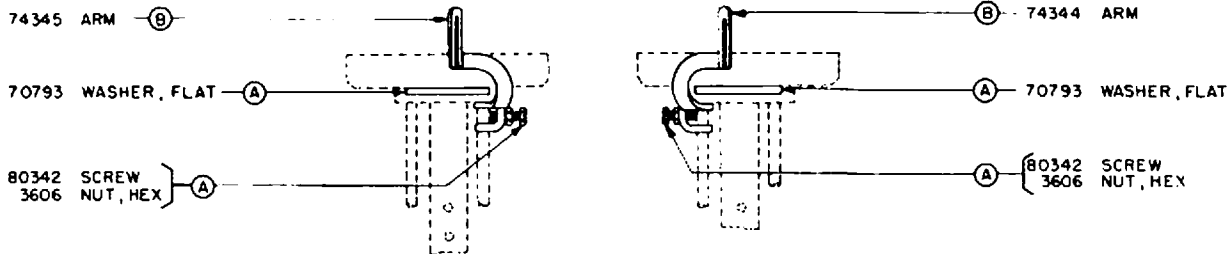
120456

TWO 83408 SCREWS ARE USED TO SECURE ANY OF THE ABOVE CODE PLATES.

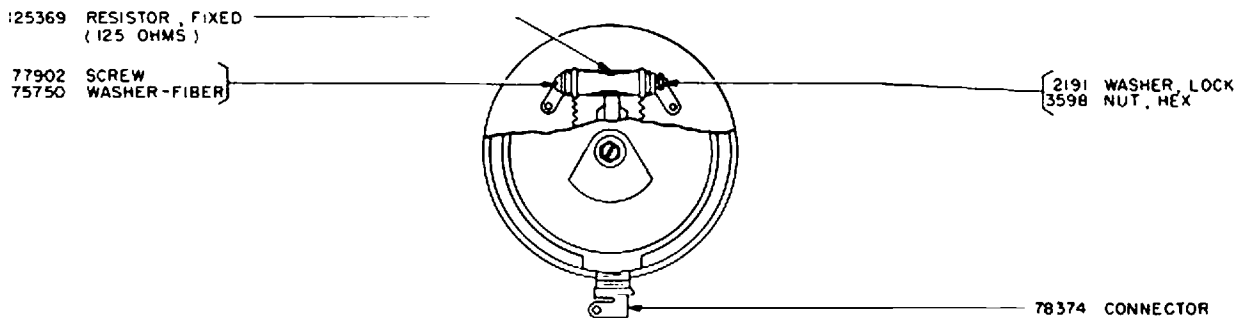
SECTION III

OLD STYLE PARTS

PAGES III-1 THROUGH III-3

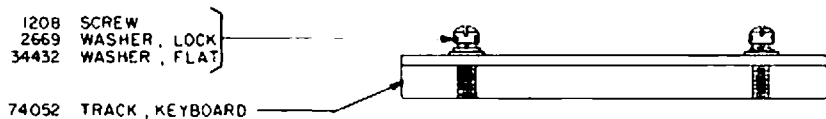


RIBBON FEED PARTS
(OLD STYLE - SEE PAGE I-21 FOR NEW STYLE)



REMOTE SIGNAL BELL - OLD STYLE
(SEE PAGE I-65 FOR NEW STYLE)

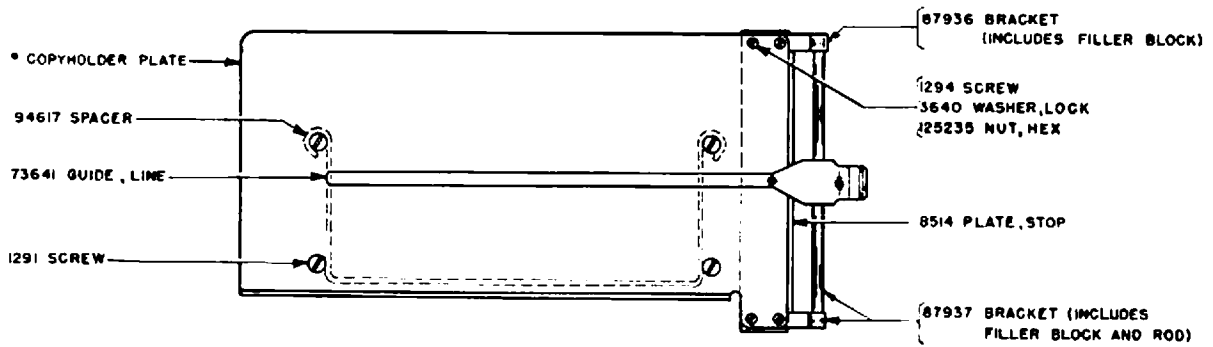
82363 SIGNAL BELL SUPERSEDED BY 110763
80564 SIGNAL BELL SUPERSEDED BY 110761
80565 SIGNAL BELL SUPERSEDED BY 110762



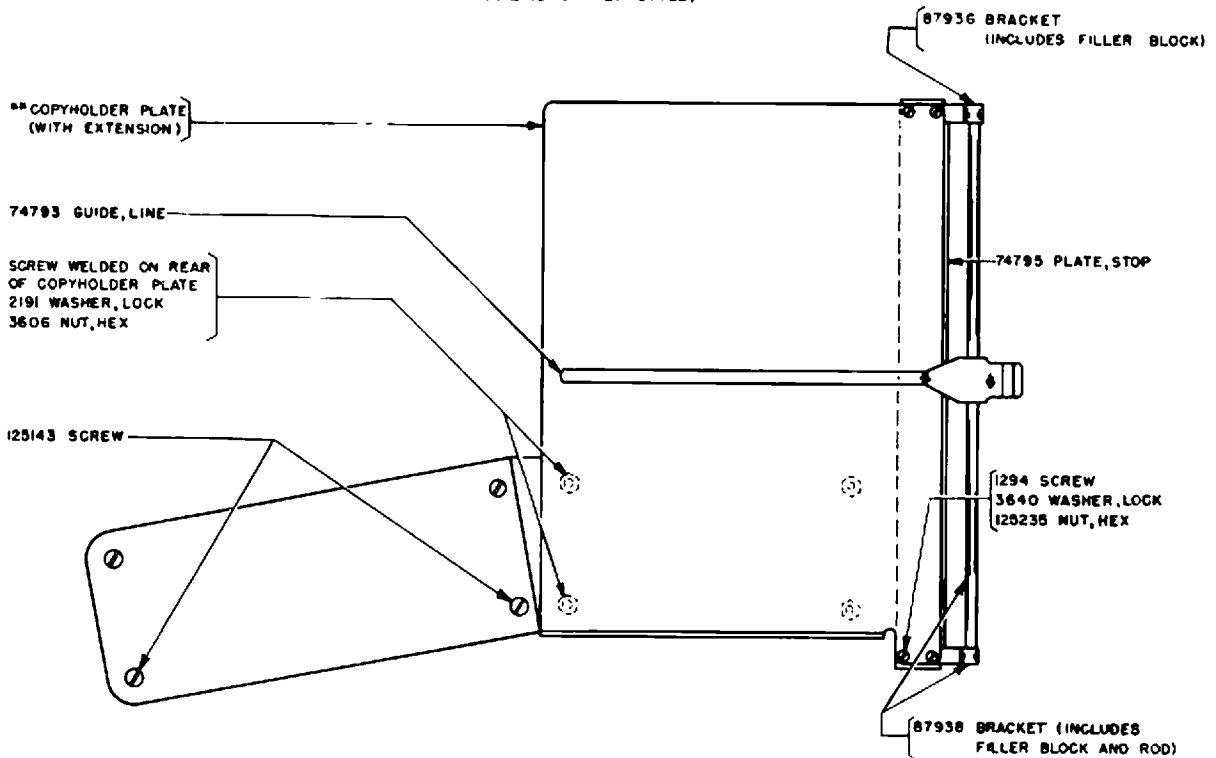
KEYBOARD TRACK
(SEE PAGE I-1 FOR NEW STYLE)

(A) AND (B) SEE SEC III FOR EXPLANATION

(ONLY PARTS LISTED ABOVE ARE AVAILABLE FOR MAINTENANCE)



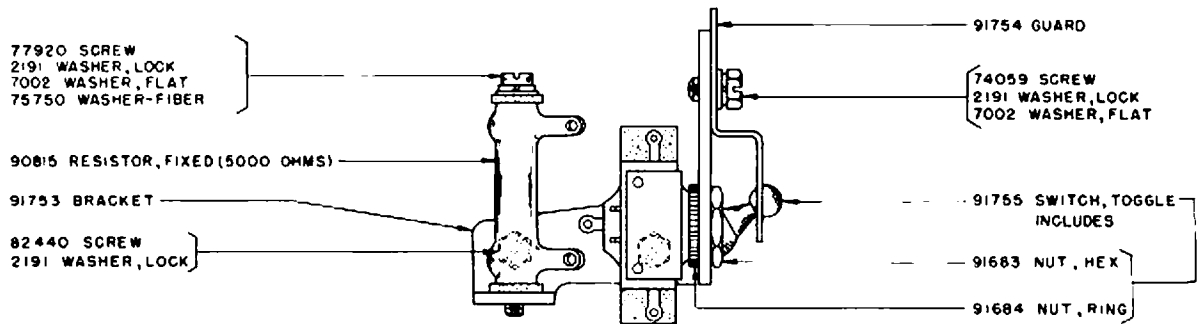
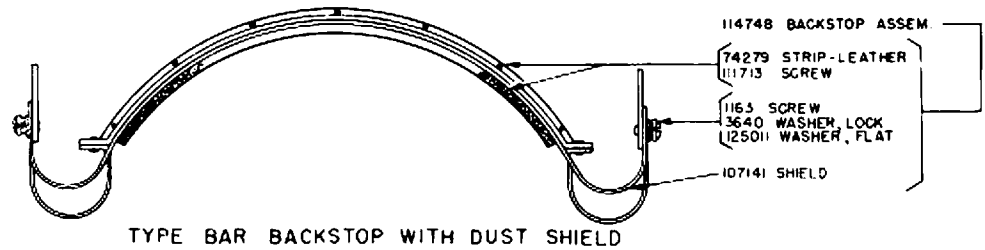
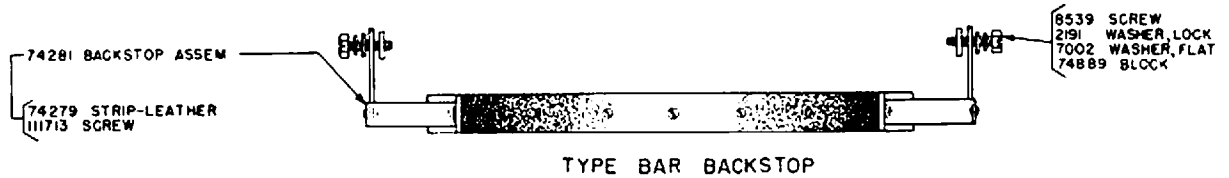
COPYHOLDER - 6" (OLD STYLE)
(SEE PAGE I-49 FOR NEW STYLE)



COPYHOLDER - 12" (OLD STYLE)
(SEE PAGE I-49 FOR NEW STYLE)

* THE OLD STYLE COPYHOLDER PLATE IS NO LONGER AVAILABLE. WHEN IT BECOMES NECESSARY TO REPLACE AN OLD STYLE COPYHOLDER PLATE, A NEW STYLE COPYHOLDER PLATE, SHOWN ON PAGE I-49, ALONG WITH ONE 110920 ROD, ONE 2191 LOCK WASHER AND ONE 3598 NUT SHOULD BE ORDERED INSTEAD.

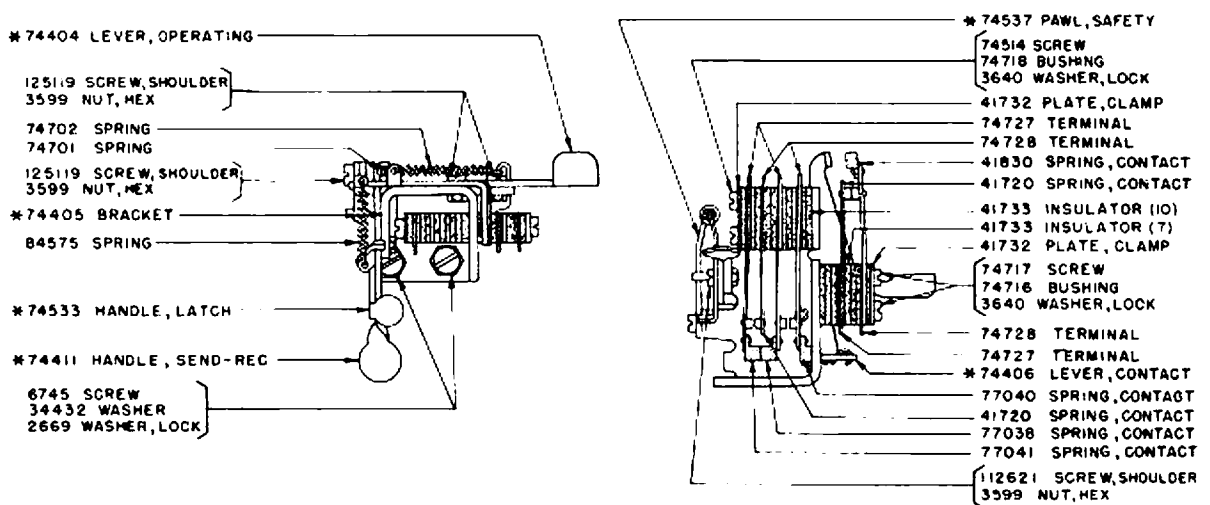
** THE OLD STYLE COPYHOLDER PLATE (WITH EXTENSION) IS NO LONGER AVAILABLE. WHEN IT BECOMES NECESSARY TO REPLACE AN OLD STYLE COPYHOLDER PLATE (WITH EXTENSION), A COMPLETE NEW STYLE 12" COPYHOLDER (WITH EXTENSION), SHOWN ON PAGE I-49, SHOULD BE ORDERED INSTEAD.



91898 CABLE

94490 "SERIES PARALLEL" SWITCH & RESISTOR BRACKET ASSEMBLY

(ALSO SEE SEC IX, PARAGRAPH FOR PAGE I-31 (B))



74428 SEND-REC-BREAK MECHANISM ASSEMBLY

NOTE. * INDICATES AN OLD STYLE PART WHICH IS NO LONGER FURNISHED. WHEN IT BECOMES NECESSARY TO REPLACE ANYONE OF THESE PARTS A COMPLETE NEW STYLE 82917 SEND-REC. BREAK MECHANISM ASSEM. SHOULD BE ORDERED. ALL OTHER OLD STYLE PARTS ARE STILL AVAILABLE FOR MAINTENANCE PURPOSES

SECTION IV

NOTES OF EXPLANATION

PAGES IV-1 THROUGH IV-4

PAGE I-1

- (A) The 74720 thumb screw has been redesigned to include a captive lock washer, preassembled. The 2322 lock washer previously used is still available for use with the old style thumb screw.

PAGE I-2

- (A) The 99816 base has provisions for mounting the 99745 line and selector jack. The 74719 base does not have such provisions.

PAGE I-5

- (A) The 2980 retaining strap is used only when the 74430 bracket and 73670 terminal block are not used.
- (B) The 103746 resistor (5 ohm) is added in series with the 1 mf. capacitor in the governor circuit to improve the effect of this circuit when D.C. power is used.

PAGE I-6

- (B) The 1245 screws are replaced by 86850 screws when mounting capacitor on top of base (without 74814 relay mounting assembly).

PAGE I-12

- (A) In order to obtain a more flexible adjustment the 6800 screw (shoulder) has been replaced by a 107485 screw (eccentric shoulder).

PAGE I-16

- (A) To permit adjustment of the selector clutch torque without the necessity of removing the selector cam sleeve, a 119540 keyed nut, a 122974 capstan nut, and a 122838 spacer replace the 72517 nut and 72515 keyed nut.

Shims formerly supplied to adjust the selector clutch torque in the field are still available under the following numbers:

96763 Shim (0.012" thick) 96764 Shim (0.016" thick) 96765 Shim (0.020" thick)

Old and new style parts are not individually interchangeable but are interchangeable in sets.

PAGE I-19

- (A) In order to eliminate the possibility of erroneously gaining a fifth pulse, the following changes have been made:

The 74184 code bar No. 5D has been replaced by a 114432 code bar No. 5N which has additional portions cut away to reduce its weight. The 74025 bell crank No. 5 (0.050" thick) has been replaced by a 114139 bell crank No. 5 (0.025" thick). The 74199 bushing (shoulder 0.057" thick) has been replaced by a 113872 bushing (shoulder 0.032" thick). When either the 74025 bell crank or the 74199 bushing requires replacement, both parts must be replaced by new parts as the new style parts are not interchangeable with old style parts.

- (B) The 87509 spring post (threaded) has replaced the 8486 spring post (not threaded). The 74244 printing bail, which is now tapped, includes the 87509 spring post. Old style 74244 printing bails (not tapped) necessitate the use of the 8486 spring post for replacement purposes.

PAGE I-23

- (A) The 74041 type bar basket has been modified for use with two-color ribbon control and has been assigned part number 97380. It should be ordered under this number when required for use with two-color control.

PAGE I-24

- (A) The 74264 platen shaft has been redesigned, but retains its original number. The new design differs from the old design in that it has a hole near the left end for a 104995 pin instead of a tapped hole for the 80255 screw. The 80255 screw, however, is still available for maintenance purposes on the old style shafts.
- (B) The 74446 line feed ratchet (33 teeth) and the 74447 detent ratchet (33 teeth) are used for the standard single line feed of six lines per inch.
- (C) On typing units equipped with aluminum platen brackets a 55088 platen balance spring is required. However, the 74706 spring is still used on units having cast iron platen brackets.
- (D) The 105029 collar is used only when the portion of the hub on the platen extending beyond the line feed ratchet is removed.
- (E) The 135771 screw is used on units equipped with aluminum cross bars. A 6811 screw replaces the 135771 screw on units equipped with cast iron cross bars.

PAGE I-25

- (A) Units equipped with one roller per shaft have four 104473 spacing collars in place of the four end rollers.

The 114657 spring is used in place of a 74708 spring on these units.

- (C) On friction feed units equipped with the ribbon lock-out feature for stencil cutting, a 74371 ribbon carrier should be ordered.

PAGE I-26

- (A) The 117313 paper spindle, for all widths of paper, has replaced all of the old wooden spindles. Wooden spindles are no longer available, however, the 74877 spring used on these spindles is still available for maintenance purposes.

PAGE I-27

- (A) The 89858 pressure roller (long), which is 1/16" longer than the standard 80413 pressure roller, has been designed for use on sprocket feed printers handling forms which have sprocket holes on the left-hand side only of the carbon and on the right-hand side only of the paper.
- (B) The 107174 paper stripper replaces the 80398 pulley and 80399 paper carrier belt. However, the 80398 pulley and 80399 paper carrier belt are still available for maintenance purposes.
- (D) On sprocket feed units equipped with the ribbon lock-out feature for stencil cutting, a 74875 ribbon carrier should be ordered.

PAGE I-31

- (B) The 113703 or 113704 terminal block assembly (series - parallel) replaces the series parallel switch and resistor bracket assembly.

The old style 94490 series-parallel switch assembly, however, is available for maintenance purposes until present stock is exhausted. (See Page III-3).

PAGE I-34

- (A) A 119925 elastic stop nut, replacing the 2191 lock washer and 3598 nut, and a 71047 shim has been added to units equipped with the send-~~receive~~-break mechanism operating on "double blank" operation. For "single blank" operation the 71047 shim is not used.

PAGE I-35

- (A) The 90103 set of parts for converting Model 15 printer sets, equipped with spring cushion keytops, to disseminate weather map data consists of the function levers marked (A) (4708 spring used with 84060), 82750 type pallets and 90101 spring cushion keytops listed on pages I-35, I-36, I-39 and I-40, respectively.
- (B) 107160 set of parts to convert to weather map service consists of the function lever marked (B) (4708 spring used with 84060), (1) 74185 pull bar, (1) 7634 pull bar spring, (1) 84734 type bar with pallet (-), 107159 set of type pallets and 92154 set of parts for converting send-~~receive~~-break mechanism from single to double blank operation. (See pages I-34, I-35, I-36 and I-37).

PAGE I-43

- (A) The MU3 motor unit includes a 80913 resistor (illustrated on page I-45) for operation at 25 cycles.

PAGE I-47

- (A) The 104572 arm (new style) has replaced the 82411 bracket, 82412 bracket and 82413 arm (old style parts). Old style parts are no longer available.
- (B) The original screws (unslotted #6-32) welded to the cover have been replaced by smaller screws (unslotted #4-36) to provide clearance of slotted mounting bracket. On new style covers the 125235 nuts are used in place of the 83885 nuts formerly used to secure the range finder door and cover door.

PAGE I-51

- (A) In order to maintain the specified clearance between the tabulator stop and the escapement pawl the following changes have been made:

The 86759 tabulator bar has been replaced by a 124033 tabulator bar which has a piece of drill rod soldered in a "V" groove. The 86762 and 86763 tabulator stops have been replaced by 124034 and 124035 tabulator stops also having "V" grooves. New or old style tabulator stops may be used with old style tabulator bar. New style tabulator bar can only be used with new style tabulator stops.

PAGE I-52

- (A) For 1-5/6" long forms a 136394 cam (with 3 notches) replaces the standard 121112 cam. The 136394 cam is not a part of the set of parts and must be ordered separately.

(B) Gears available for use with the 121130 platen indexing mechanism are as follows:

LENGTH OF FORM (INCHES)	GEAR SET NUMBER	PLATEN SHAFT GEAR		IDLER GEAR	
		NUMBER	TEETH	NUMBER	TEETH
1-5/6	* 121221	121184	40	121184	40
2	121214	121174	55	121173	20
2-1/2	121215	121176	44	121175	20
3	121216	121178	44	121177	24
3-2/3	135266	135265	42	121179	28
4	121218	121180	44	121181	32
4-1/2	121219	121182	44	121183	36
5	121220	121182	44	121184	40
5-1/2	121221	121184	40	121184	40
6-1/2	121223	121186	33	121187	39
7	121224	121189	33	121188	42
7-1/3	126993	121189	33	121180	44
7-1/2	121225	121189	33	121190	45
8	121226	121127	33	121191	48
8-1/2	121227	121127	33	121128	51
11	121232	121196	22	121176	44

*136394 cam assembly (with 3 notches) required for the 1-5/6 inch forms.
See paragraph (A) for page I-52.

PAGE I-55

(A) To facilitate adjustment, the 115790 set of parts also includes two (2) 1169 pressure roller adjusting screws to replace the 1269 pressure roller adjusting screws (illustrated on Page I-25).

PAGE I-56

(A) The 111017 screw replaces 8543 screw which is used to secure the 74437 slide bar. The 74722 washer is used between the slide bar and platen brackets to lower the ribbon oscillator.

PAGE I-57

(A) The 129966 hub and 117314 spring have replaced the 120714 hub to permit proper functioning of the paper straightener rod. New and old style parts are interchangeable.

PAGE III-1

(A) The 110352 set of parts (page I-21) has replaced the 80342 screw, 3606 nut and the 70793 washer. However, the 80342 screw, 3606 nut and 70793 washer are available as maintenance parts for old style units. New and old style parts are not individually interchangeable.

(B) The 74344 reverse arm (right) and 74345 reverse arm (left) have been replaced by a 93168 reverse arm (right) and 93167 reverse arm (left) (page I-21). The new reverse arms have been designed to prevent the ribbon from falling out by making the opening of the slot for the ribbon at the top instead of the bottom.

NOTE:

A double asterisk (**) following a part or assembly number designates a two-letter suffix which denotes the paint finish. The following finishes are now available:

Black Wrinkle	- AA	Light Brown Wrinkle	- AC
Gray Green Wrinkle	- AB	Dark Brown Wrinkle	- AD

In addition to the colors listed above other colors may be provided on request.