

TELETYPEWRITERS TT-7/FG AND TT-8/FG AND
TELETYPE MODEL 19 TELETYPEWRITER SET 4.2A-1TM 11-2216
TO 31W4-2FG-131 }
CHANGES No. 3 }DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
WASHINGTON 25, D. C., 5 June 1958

TM 11-2216/TO 31W4-2FG-131, 11 October 1951, is changed as indicated so that the manual also applies to the following equipment:

<i>Equipment</i>	<i>Order No.</i>
Teletypewriter Set TT-7/FG.....	29842-Phila-55
Teletype Model 19 Teletypewriter Set 4.2A-1.	28198-Phila-55

Change the title of the manual to: TELETYPEWRITERS TT-7/FG AND TT-8/FG AND TELETYPE MODEL 19 TELETYPEWRITER SET 4.2A-1.

Page 1. Add the following note below the title of chapter 1:

Note. Teletype Model 19 Teletypewriter Set 4.28-1 is similar to Teletypewriter TT-7/FG except for the rectifier differences (par. 3g) and motor differences (par. 6f).

Page 1, paragraph 1. Add the following to the last sentence of subparagraph *a*: and Teletype Model 19 Teletypewriter Set 4.2A-1.

2. Forms and Records (Superseded)

a. Unsatisfactory Equipment Reports.

- (1) Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U. S. Army Signal Equipment Support Agency, Fort Monmouth, N. J., as prescribed in AR 700-38.
- (2) Fill out and forward AFTO Form 29 (Unsatisfactory Report) to the Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, as prescribed in AFTO 00-35D-54.

b. Report of damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army) (Navy Shipping Guide, Article 1850-4 (Navy)) and AFR 71-4 (Air Force).

c. Preventive Maintenance Form. Prepare DA Form 11-252 (Maintenance Check List for Signal Equipment (Teletypewriter)) in accordance with instructions on the form.

d. Comments on Manual. Forward comments on this publication to Commanding Officer, U. S. Army Signal Publications Agency, Fort Monmouth, N. J.

Page 1, paragraph 3.

Subparagraph *a*. Line 6. Change "model 14 transmitter distributor" to: **Transmitter Distributor TT-52/FG.**

Line 7. Change "a model 19 table" to: **Teletypewriter Table FN-89/FG.**

Page 2, paragraph 3. Make the following changes:

Subparagraph *f*. Change the heading to: **Teletypewriter Table FN-89/FG.**

Subparagraph *g*, lines 1 and 2. Delete "The rectifier is designed to provide" and substitute: **Rectifier REC-30 (part of TT-7/FG and TT-8/FG) provides.**

Page 3, paragraph 3g. Add the following after the last sentence:

Rectifier REC-13 (part of Teletype Model 19 Teletypewriter Set 4.2A-1) provides .6 ampere, 120-volt dc and operates with an input of 105- to 125-volt, 60-cycle, single-phase ac. The REC-13 does not provide an adjusted ac output for operation of the teletypewriter motors.

Page 3, figure 2.

After "TRANSMITTER DISTRIBUTOR" add: TT-52/FG. Change "TABLE" to: **TELETYPEWRITER TABLE FN-89/FG.**

Page 7, figure 5. Draw an arrow from the upper left corner of figure 5 to the plug-type fuse mounted to the right of the MOTOR CONTROL RELAY. Identify the fuse as FUSE F1.

Page 9, paragraph 6c. Change the heading to: **Transmitter Distributor TT-52/FG.**

Page 10, paragraph 6.

Subparagraph *e*. Change the heading to: **Relay RE-163/G** (fig. 11). Change the first sentence to: **Relay RE-163/G (formerly Relay-30) is a WECO 255A polar relay.**

Subparagraph *f*. Delete the first sentence and substitute: **Motor Unit PU-109/GG (formerly Motor MU-27) furnished with the TT-7/FG and TT-8/FG includes a motor, governor, target lamp assembly, and filter mounted on a metal plate (fig. 12).**

Delete the tenth and eleventh sentences and substitute: **The motor of the PU-109/GG is series-governed and requires a 110- to 120-volt, 50- to 60-cycle power source. Motor Unit PD-22/UG (formerly Motor MU-4) is furnished with Teletype Model 19 Teletypewriter Set 4.2A-1. The PD-22/UG includes a synchronous motor, attached to a base plate. The PD-22/UG requires a regulated 110-volt, 60-cycle, single-phase power source.**

Page 11, figure 10. Change the caption to: **Transmitter Distributor TT-52/FG.**

Page 11, figure 11. Delete the figure caption and substitute: **Relay RE-163/G, bottom view.**

Page 18, paragraph 6.

Subparagraph *j*, line 2. After "motors" add: **of the TT-7/FG and TT-8/FG.** Third sentence. Delete "that is part of each teletypewriter set".

Subparagraph *k*. Change the heading to: **Teletypewriter Table FN-89/FG.**

Page 22, paragraph 10.

Subparagraph *e*, first sentence. Change "paragraphs 18 and 139" to: **paragraphs 18, 139, and 139.1.** Delete subparagraph *f* (2) and substitute:

(2) **Rectifier.** The switch that controls input power to the rectifier is mounted on the table (fig. 2). Rectifier REC-30 includes an additional input control switch mounted on the rear panel of the rectifier. This switch is normally left in the ON position at all times

and the rectifier switch on the table is used to turn the rectifier on and off. Rectifier REC-13 does not include an on-off switch.

Page 26 paragraph 12b, chart.

"TT-7/FG" column, fourth item. Change "2JCFCG" to: **2J6F6G.** "TT-8/FG" column, fourth item. Change "2JCFCG" to: **2J6F6G.** "Components parts" column. Line 1. Change "Table" to: **Teletypewriter Table FN-89/FG.** Line 12. Change "Motor unit" to: **Motor Unit PU-109/FG.** Line 14. After "Relay" add: **RE-163/G.** Line 15. Change "Transmitter distributor" to: **Transmitter Distributor TT-52/FG.**

Page 36, paragraph 18. Delete subparagraph *d*.

Page 37, figure 28. Draw an arrow from the right-hand side of figure 28 to the screw directly above switch S-605 and label the screw **TABLE GROUND SCREW.**

Page 38, paragraph 18. Change subparagraph *e* to subparagraph *d* and add new subparagraph *e*:

e. Power Connections.

(1) **Ac input power.** Use the two bottom terminals of terminal board E-601 (fig. 28) for connection of ac input power to the table. Connect the grounded side of the input ac to the lowest left-hand terminal and the ungrounded side of power to the lowest right-hand terminal. When the equipment includes Rectifier REC-30 and series-governed motors (TT-7/FG and TT-8-FG), the ac input voltage range is 90 to 130 volts and 180 to 260 volts. The frequency may be 25, 40, 50, or 60 cycles. When Rectifier REC-13 is used, operation of the set is limited to 115-volt, 60-cycle ac only.

(2) **Dc input power.** If reliable 115-volt dc and 115-volt, 60-cycle ac power sources are available, use of the rectifier in the set is not necessary. Connect the positive side of the 115-volt dc power source to the lowest right-hand terminal of terminal board E-602 (fig. 28) and the negative side to the lowest terminal on the left-hand side of E-602. Make table strap-

ping changes as indicated in NOTE 7c, figure 275.

Page 38, paragraph 18f.

Subparagraph (1) Add "REC-30" to the heading. After the second sentence add: Move switch S601 (fig. 28) to the upper position.

Subparagraph (2). Delete the second sentence and substitute: Fuse F1 in the teletypewriter base (fig. 5) should be a 1.6-amp fuse if the teletypewriter includes a series-governed motor and a 3.2-amp fuse if the motor is a synchronous type. If the transmitter distributor and reperforator motors are series-governed, fuse F601 in the rear of the table (fig. 28) should be a 1.25-amp fuse and F602 should be a 1.4-amp fuse. If the motors are the synchronous type, both F601 and F602 should be 3.2-amp fuses.

Page 39, paragraph 18. f.1 (added) *Installing Rectifier REC-13.*

- (1) Move switch S605 (fig. 28) to the lower position and move the rectifier switch beneath the front of the table (fig. 2) to OFF.
- (2) Check the fuses in the table and teletypewriter base for proper fuse value (f(2) above).
- (3) Open the door of the REC-13 and check the fuses on the left-hand (input) and right-hand (output) panels (fig. 273.1). The ac input fuse should be a 6-amp fuse and the dc output fuse should be a 1.25-amp fuse.
- (4) Check the power cord connections to the input and output panels. The leads of the ac input power cord should be attached securely to the two upper terminals marked AC LINE on the input panel. The white lead should be connected to the left-hand terminal. The leads of the dc output cord should be attached securely to the terminals marked 120V on the output panel. The white lead should be connected to the terminal directly below the 120V panel marking.
- (5) Connect the flexible lead on the input panel to the terminal on the panel

which corresponds to the voltage of the ac input.

- (6) Close the door of the REC-13 and set the rectifier on the shelf at the back of the table.
- (7) Connect the ground lead to the table ground screw (fig. 28).
- (8) Insert plug P-4 (four-prong plug on ac power cord from teletypewriter base) into receptacle J-607 (fig. 28). Insert plug P-3 (three-prong plug on dc power cord from teletypewriter base) into receptacle J-606. Insert plugs P-1 (red) and P-2 (black) into jacks J-601 and J-602 respectively (fig. 28).
- (9) Insert the two-prong plug of the rectifier input power cord into jack J-605.
- (10) Test the dc output of the REC-13 as follows:

Warning: Be sure the rectifier switch (fig. 2) is in the OFF position before performing step (a) below.

- (a) Open the door of the rectifier and connect a 60-watt, 115-volt lamp in series with ammeter across the terminals marked 120V on the output panel. The terminal directly above the 120V panel marking is the negative terminal. Use an ammeter that will measure a current greater than .5 amp.
- (b) Move the rectifier switch on the table (fig. 2) to ON and observe the current reading of the ammeter. If the current reading is .5 ampere, no further adjustment is required. If the reading is above or below .5 ampere, perform step (c) below.
- (c) Move the rectifier switch (fig. 2) to OFF. Adjust the output voltage by moving the regulating taps on the right-hand panel until the current reading is .5 ampere. Use the coarse tap adjustment lead and terminals L, M, and H to adjust the output voltage in approximately 8-volt steps. Use the fine tap adjustment lead and terminals 1

through 5 to adjust the output in approximately 2-volt steps.

(d) Disconnect the lamp and ammeter from the rectifier and close the door of the rectifier.

(e) Insert the three-connector, female plug of the rectifier output cord into receptacle J-603 (fig. 28)

Page 50, paragraph 26a.

Subparagraph (1). Change the heading to:
Rectifier REC-30.

(1.1) (added) *Rectifier REC-13*. Be sure the ac input cord is plugged firmly into receptacle J-605 (fig. 28) and the dc output cord is plugged firmly into receptacle J-606. Move the rectifier switch (fig. 2) to ON.

Page 53, paragraph 30f, chart. In the "Item" column, add the following to item 4: (frequency selector taps on REC-30 only).

Page 56, paragraph 30 f, chart. In the "Item" column, add the following to item 27: (REC-30 only).

Page 61, paragraph 39b, chart.

"Description" column. Delete "Carbon tetrachloride" and substitute: **Cleaning Compound**. Delete "Oil, lubricating, Teletype part No. 88970" and substitute: **Oil, lubricating (WECO spec KS 7470)**. Delete "Grease, lubricating, Teletype part No. 88973" and substitute: **Grease (WECO spec KS 7471)**. Delete "Grease lubricating, special (GL), Ordnance spec No. AXS637". "Signal Corps stock No." column. Delete "6G184.1" and substitute: **7930-395-9542 (Fed stk. No.)**. Delete "6G673.7".

In the note below the chart, delete the third sentence, and add the following warning at the end of the note:

Warning: Cleaning Compound, Federal stock No. 7930-395-9542 is flammable and its fumes are toxic. Do not use near a flame. Provide adequate ventilation.

Page 62, paragraph 41, chart. "Standard nomenclature" column. Delete "Grease, lubricating, special (GL)" and substitute: **Grease (WECO spec KS 7471)**. Delete "Oil, lubricating, preservative, special (PL Special)" and substitute: **Oil, lubricating**

(WECO spec KS 7470). Delete the last item in both columns.

Page 90, paragraph 59. Subparagraph b. Add the following to the third sentence: of the REC-30. Change the fifth sentence to: Do not turn the slotted potentiometer shaft that protrudes through the center of terminal board E-502 of the REC-30 (fig. 28). Subparagraph d. After "490" add: (REC-30) and 490.1 (REC-13).

Page 90, paragraph 61c, line 8. Delete "carbon tetrachloride" and substitute: **cleaning compound**.

Page 98, paragraph 68c. Lines 13 and 16. Delete "power unit" and substitute: **REC-30**. Change subparagraph (1) to: (1) **The 10-amp fuse F-501 (fig. 28) is in good condition**. Change subparagraph (2) to: (2) **The 3-amp plate transformer fuse F-503 (fig. 28) is in good condition**.

Page 116, paragraph 83. Delete the second sentence of subparagraph b.

Page 163, paragraph 132c. Third sentence. After "rectifier" add: REC-30. Change the fourth sentence to: **This adjusted ac motor terminal voltage from the REC-30, or the correct voltage from an external power source when the REC-13 is used, is delivered to receptacle J604.**

Page 170, paragraph 139. Change the heading to: **Rectifier REC-30.**

Page 172.

139.1. Rectifier REC-13 (Added)

a. *General*. The REC-13 provides power for the local dc circuits and, when required, for the signal line. The rectifier is capable of furnishing .6 ampere of dc at 120 volts from a 105- to 125-volt, 60-cycle single-phase power source.

b. *Circuitry* (fig. 128.1).

(1) The ac input voltage is connected to the primary of the power transformer. The 6-amp fuse, connected in series with the ac input, protects the primary winding of the power transformer. The power transformer increases the input voltage to a voltage high enough to compensate for the

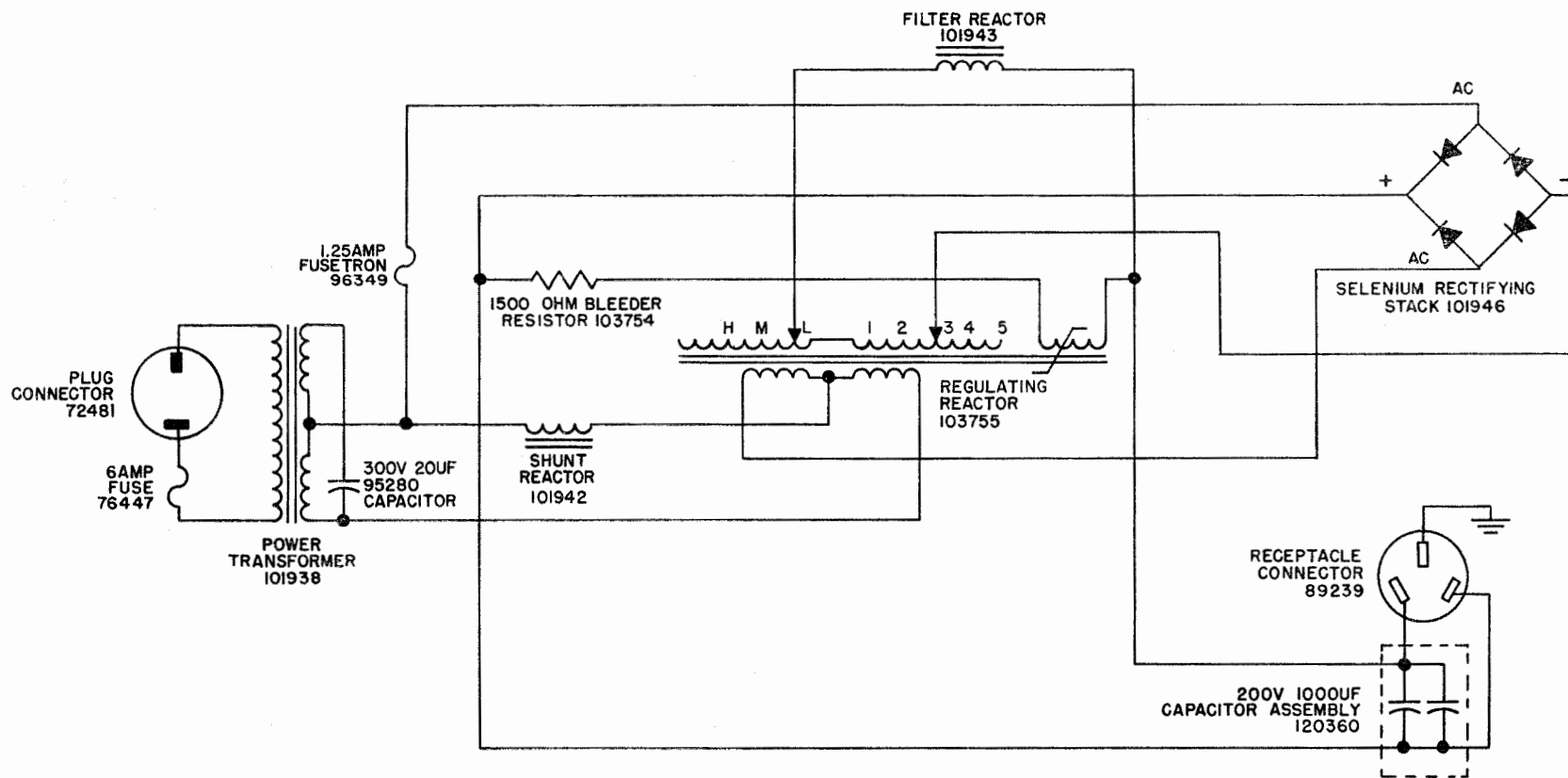


Figure 128.v (Added) Rectifier REC-13, schematic diagram.

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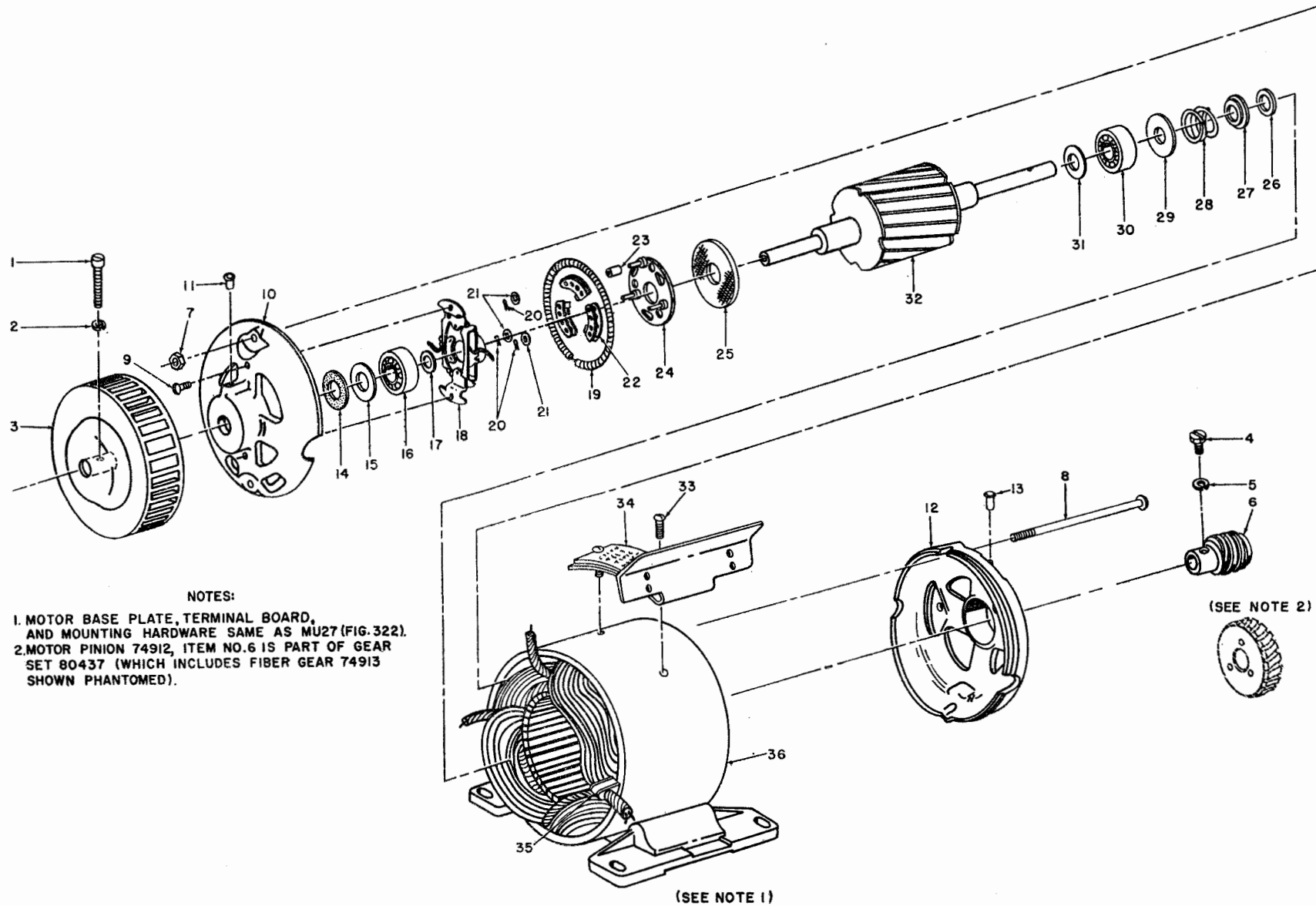


Figure 323.1 (Added) Motor PD-22/U (Motor MU-4), exploded view.

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- 1 Machine screw 1179.
- 2 Lockwasher 2191.
- 3 Fan 76484.
- 4 Screw 6746.
- 5 Lockwasher 2191.
- 6 Pinion 74912.
- 7 Hexagonal nut 126237.
- 8 Clamping screw 102774.
- 9 Machine screw 86713.
- 10 End shield 82850.
- 11 Oiler 80754.
- 12 End shield 80558.
- 13 Oiler 80754.
- 14 Felt washer 80309.
- 15 Split washer 80313.
- 16 Ball bearing 80358.
- 17 Flat washer 82845.
- 18 Commutator 82841.
- 19 Spring 82843.
- 20 Cotter pin 89407.
- 21 Spring washer 89406.
- 22 Brush holder 82848.
- 23 Spacing post 89405.
- 24 Support plate 88879.
- 25 Insulator 94707.
- 26 Felt washer 80310.
- 27 Cupped washer 80311.
- 28 Spring 80299.
- 29 Washer 122208.
- 30 Ball bearing 80358.
- 31 Flat washer 82845.
- 32 Rotor 82840.
- 33 Screw 78025.
- 34 Nameplate.
- 35 Rubber grommet 103431.
- 36 Stator and base 90263.

Figure 323.1—Continued.

internal resistance of the rectifier. The shunt reactor and 20-uf capacitor help maintain a steady voltage in the secondary winding of the power transformer.

- (2) Two coils in the regulating reactor that are connected to the secondary winding of the power transformer and a dc coil within the regulating reactor help maintain a constant output voltage despite load variations. The voltage across the two series coils is varied by saturation of the reactor core by the current in the dc coil. When the load varies, increasing or decreasing the output voltage, the ac input to the selenium rectifying stack increases or decreases in accordance with the strength of the magnetic field set up by the dc coil in the regulating reactor. The bleeder resistor controls the current level in the dc coil to maintain the dc field under no-load conditions.

- (3) The filter reactor and 200-volt, 1,000- μ f capacitor assembly insure a low-ripple dc output. The 1.25-amp fuse-tron protects the output circuit from damage due to overload.

Page 172, paragraph 146.

Line 6. After "frequencies" add: Rectifier REC-13 can provide the dc power necessary for all required tests of the teletypewriter but is not capable of providing an adjusted ac voltage for operation of the motors. An external ac power source of the proper voltage and frequency must be available for operation of the motors (par. 6f).

Line 8. After "490" add: and 490.1.

Line 9. Change "If the rectifier power unit" to: **If either the FEC-30 or REC-13.**

Lines 11 and 12. Change "rectifier power unit" to: **REC-30.**

Page 204, paragraph 195, heading. After "Rectifier" add: REC-30.

195.1. Repair of Rectifier REC-13 (Added)

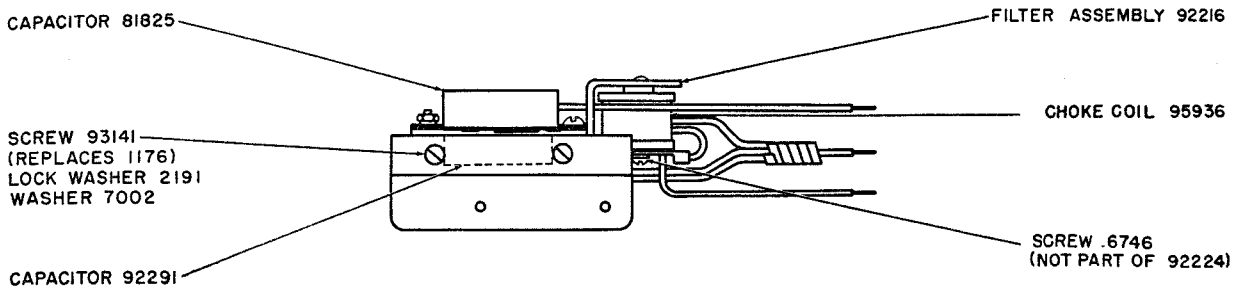
Disconnect the rectifier power cords from the table receptacles and place the rectifier on a work bench. Perform all applicable maintenance procedures described in paragraph 59. Refer to paragraph 139.1, and figures 128.1 for circuit details. If replacement of a part is required, refer to figure 331.1 for part identification information. After repair, adjust the dc output voltage (par. 490.1). If the required output cannot be obtained with this adjustment, replace the selenium rectifying stack and readjust the output voltage.

Warning: The secondary voltage of the power transformer is approximately 300 volts. Discharge all capacitors before disconnecting any components. When making operating tests, be careful not to touch the panel terminals or component connection points.

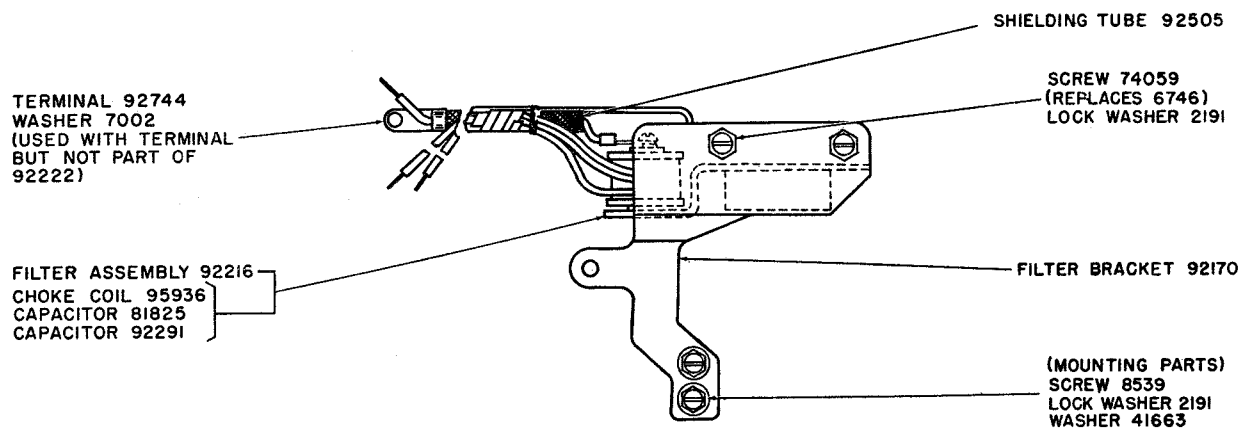
Page 213, paragraph 204.

Subparagraph *a*, line 1. After "circuit" add: of the REC-30.

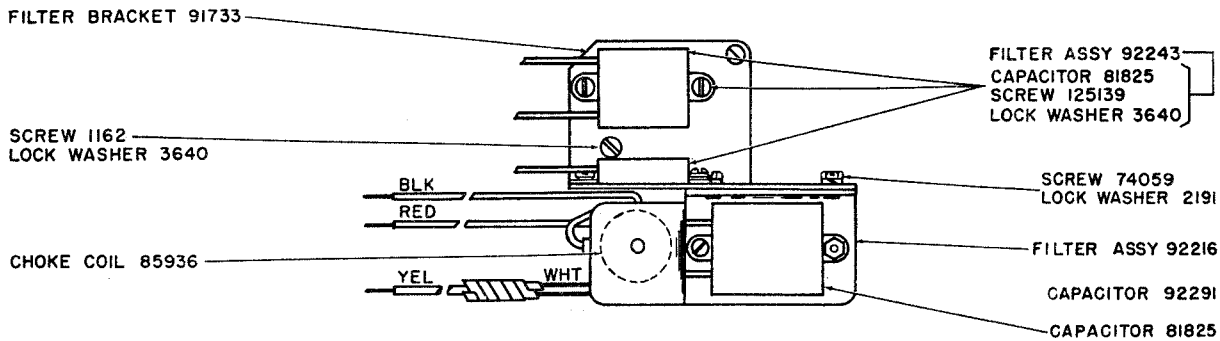
Subparagraph *b*, line 2. After "cover" add: of the REC-30.



A. FILTER UNIT ASSEMBLY 92224
(CAM PULSING CONTACTS)



B. FILTER UNIT ASSEMBLY 92222
(KEYBOARD TRANSMITTING CONTACTS)
(105964 WITHOUT MOUNTING PARTS)



C. FILTER UNIT ASSEMBLY 92225
(PUNCH MAGNET) (EXCLUDES 92243)

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Figure 325 (Superseded) Filter assemblies for cam pulsing contacts, keyboard transmitting contacts, and punch magnet contacts.

c. (Added) Refer to paragraph 139.1 and figure 273.1 for details of the circuits in the REC-13.

Page 213, paragraph 205, line 2. Change "490" to: 490.1.

490.1. Rectifier REC-13 Adjustment
(Added)

As the selenium rectifying stack elements age, the dc output voltage of the REC-13 gradually decreases. The voltage decrease is greatest during the first few months of use. After this initial period of voltage decrease, the output voltage remains relatively stable for long periods of operation. Disconnect the output plug of the REC-13 from table receptacle J-603 (fig. 28) and test and adjust the output as described in paragraph 39f.1(10).

Page 315, paragraph 493, first sentence. Change "TT-7/FG and TT-8/FG." to: **TT-7/FG, TT-8/FG, and Teletype Model 19 Teletypewriter Set 4.2A-1.**

Page 317, figure 270, caption. After "transmitter" add: *PEX25*.

Page 317, figure 271 (fold-out), caption. After "transmitter" add: *PEX25*.

Page 318, figure 272. Change the caption to: **Rectifier REC-30, schematic diagram.**

Page 318, figure 273 (fold-out). Change the caption to: **Rectifier REC-30, wiring diagram.**

Page 344. Add the following note at the end of paragraph 1:

Note. Parts which are available in various paint finishes are identified by a number followed by two asterisks. To obtain the complete identification number of a part painted with a specific finish, replace the asterisks with the appropriate pair of letters from the following chart:

Finish	Nonfungus treated	Fungus treated
Black wrinkle.....	AA	XA
Black semigloss.....	BB	YB
Black high-gloss.....	BA	YA
Light gray, smooth....	BR	YR
Medium gray, smooth..	BS	YS
Dark gray, smooth....	BJ	YJ
Gray-green, wrinkle...	AB	XB
Dark brown wrinkle...	AD	XD

Page 359, figure 297. Delete "117447 PLATE,

RETAINER (BLACK WRINKLE)" and substitute: 117447** **PLATE, RETAINER.**
Page 389, figure 327.

Change "107304 DOOR, RANGE FINDER (BLACK WRINKLE)" to: 107304** **DOOR, RANGE FINDER.**

Change "80870 RETAINER, WINDOW-LEFT (BLACK WRINKLE)" to: 80870** **RETAINER, WINDOW-LEFT.**

Change "80869 RETAINER, WINDOW-RIGHT (BLACK WRINKLE)" to: 80869** **RETAINER, WINDOW-RIGHT.**

Change "83572 GUIDE, PAPER (BLACK WRINKLE)" to: 83572** **GUIDE, PAPER.**

Change "74825 STRIP, PAPER SLOT (BLACK WRINKLE)" to: 74825** **STRIP, PAPER SLOT.**

Change "PEXC200 COVER-BLACK WRINKLE (INCLUDES 117750

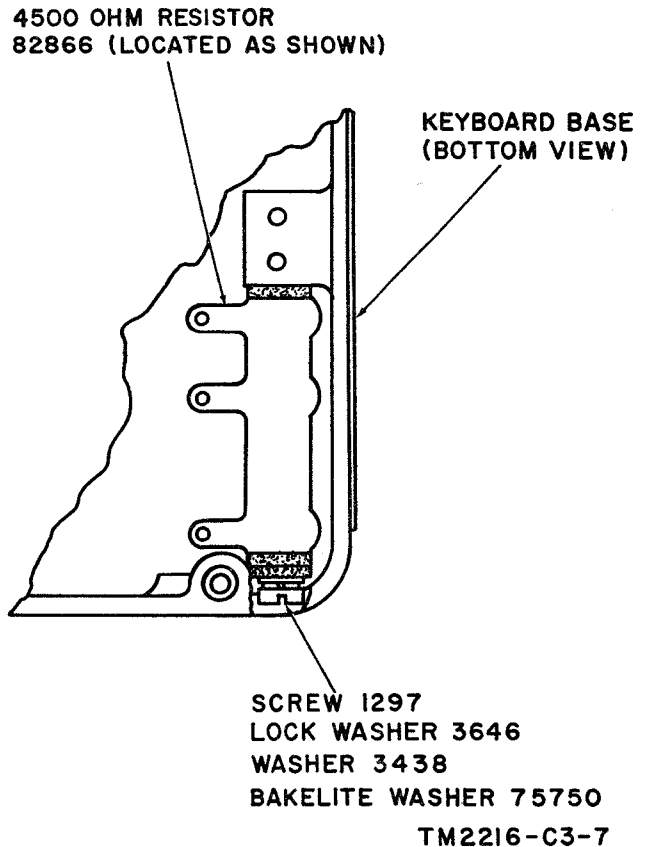


Figure 325.1 (Added) Resistor R705, part of Perforator Transmitter *PEX27*, mounting details.

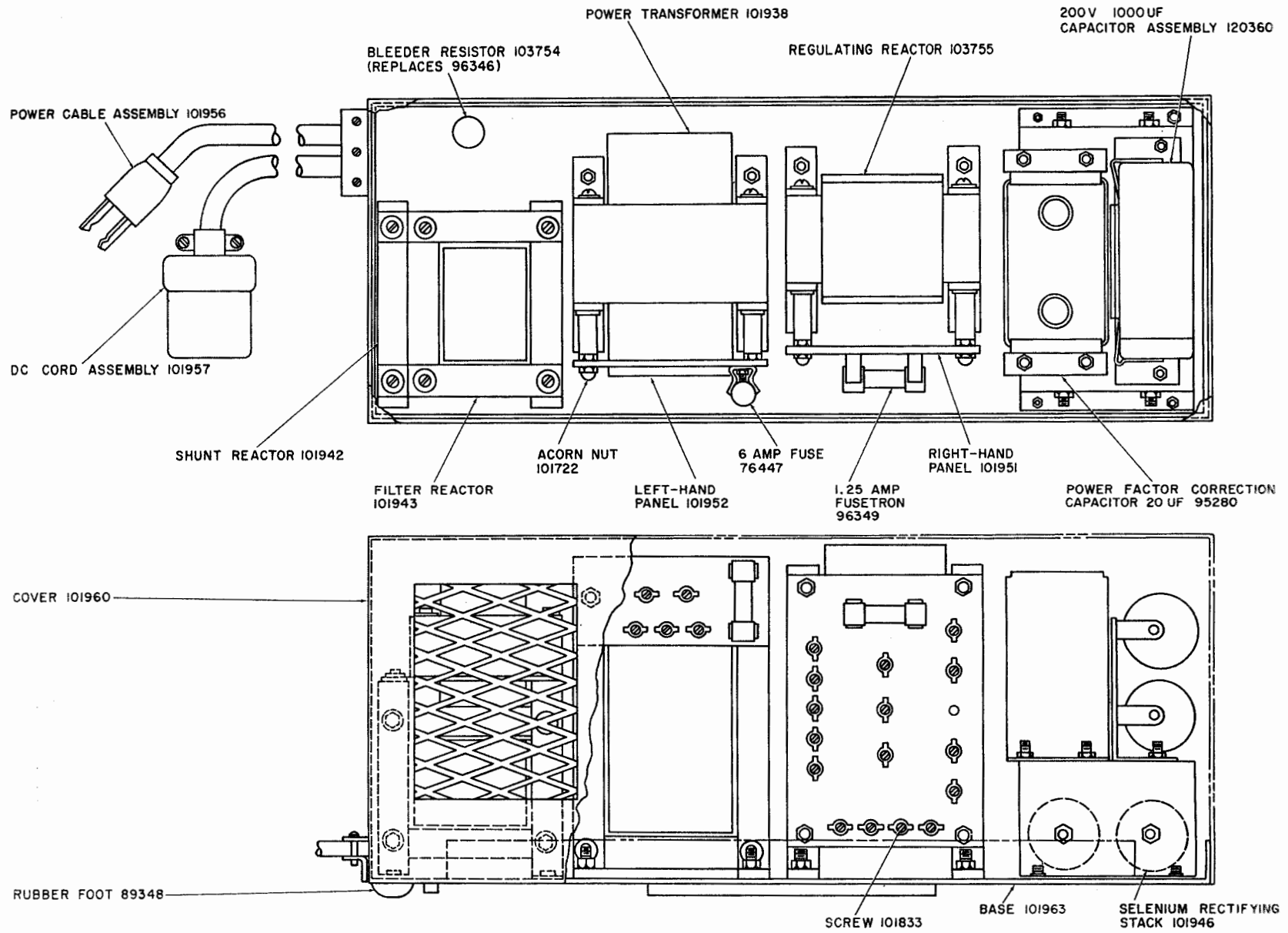


Figure 331.1 (Added) Rectifier REC-13, parts identification.

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PERFORATOR AND COUNTER COVER) to: **PEXC200** COVER (INCLUDES 117750** PERFORATOR AND COUNTER COVER).**

Page 390, figure 328.

Change "114240 PLATE, COPYHOLDER-BLACK WRINKLE" to: **114240** PLATE, COPYHOLDER.**

Change "121058 DOOR, LINE TEST KEY-BLACK WRINKLE" to: **121058** DOOR, LINE-TEST KEY.**

Change "118485 PLATE, COVER-BLACK WRINKLE" to: **118485** PLATE, COVER.**

Change "119639 BUTTON-BLACK WRINKLE" to: **119639** BUTTON.**

Change "104865 COVER-BLACK WRINKLE" to: **104865** COVER.**

Change "117750 PERFORATOR AND COUNTER COVER BLACK WRINKLE" to: **117750** PERFORATOR AND COUNTER COVER.**

Change "115700 COPYHOLDER ASSEMBLY 6 "BLACK WRINKLE" to: **115700** COPYHOLDER ASSEMBLY 6.**

Page 391, figure 329.

Change "83392 CONTAINER-WITH HOOKS (BLACK WRINKLE)" to: **83392** CONTAINER-WITH HOOKS.**

Change "83394 COVER (BLACK WRINKLE)" to: **83394** COVER.**

Change "115726 TAPE CONTAINER (BLACK WRINKLE)" to: **115726** TAPE CONTAINER.**

Page 394, figure 332.

Change "115932" to: **115932****

Change "117919 PLATE, COVER (BLACK WRINKLE)" to: **117919** PLATE, COVER.**

Page 395, figure 333.

Change "55318 SCREW, MACHINE (FOR

SECURING 117918 PLATE, COVER-BLACK WRINKLE)" to: **55318 SCREW MACHINE (FOR SECURING 117918** PLATE, COVER).**

Change "55318 SCREW, MACHINE (FOR SECURING 117920 PLATE, COVER-BLACK WRINKLE)" to: **55318 SCREW, MACHINE (FOR SECURING 117920** PLATE, COVER).**

Change "55318 SCREW, MACHINE (FOR SECURING 117916 PLATE, COVER-BLACK WRINKLE)" to: **55318 SCREW, MACHINE (FOR SECURING 117916** PLATE, COVER).**

Change "55318 SCREW, MACHINE (FOR SECURING 117917 PLATE, COVER-BLACK WRINKLE)" to: **55318 SCREW, MACHINE (FOR SECURING 117917** PLATE, COVER).**

Page 396, figure 334.

Change "102607 RAIL, GUIDE (BLACK HIGH GLOSS)" to: **102607** RAIL, GUIDE.**

Change "115933 PLATE, MOUNTING (BLACK HIGH GLOSS)" to: **115933** PLATE MOUNTING.**

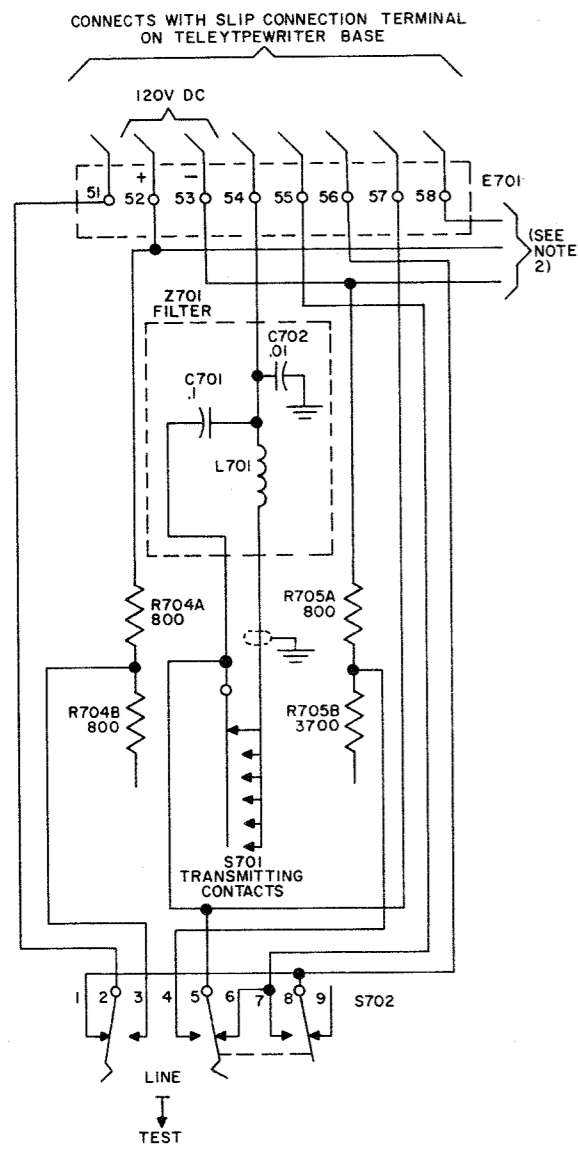
Change "102069 RAIL, GUIDE (BLACK HIGH GLOSS)" to: **102069** RAIL, GUIDE.**

Change "115937 GUARD, TERMINAL (BLACK HIGH GLOSS)" to: **115937** GUARD TERMINAL.**

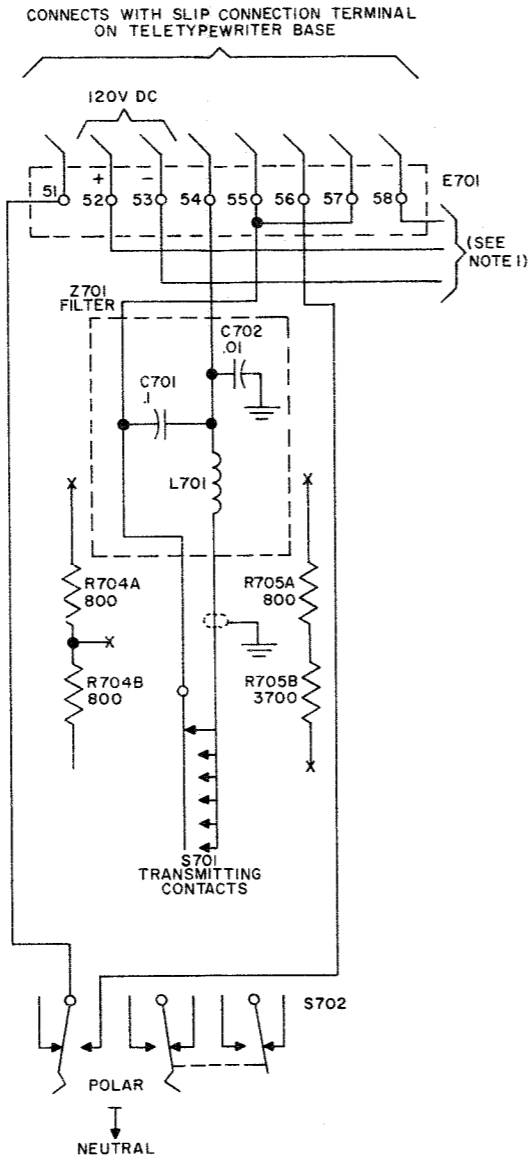
Change "115935 GUARD, TERMINAL-LEFT (BLACK HIGH GLOSS)" to: **115935** GUARD, TERMINAL-LEFT.**

Change "115936 GUARD, TERMINAL RIGHT (BLACK HIGH GLOSS)" to: **115936** GUARD, TERMINAL RIGHT.**

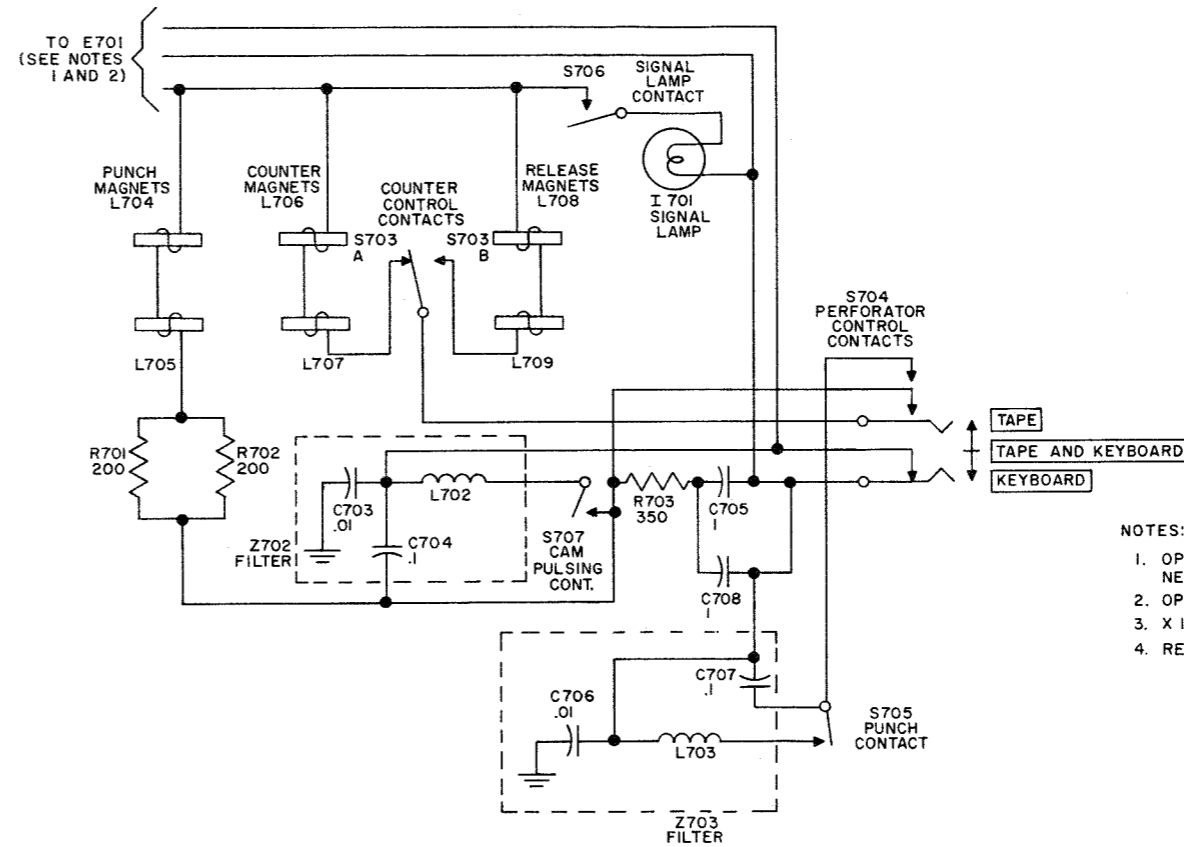
Change "115932 PLATE ASSEMBLY, MOUNTING (BLACK HIGH GLOSS)" to: **115932** PLATE ASSEMBLY, MOUNTING.**



OPTION A



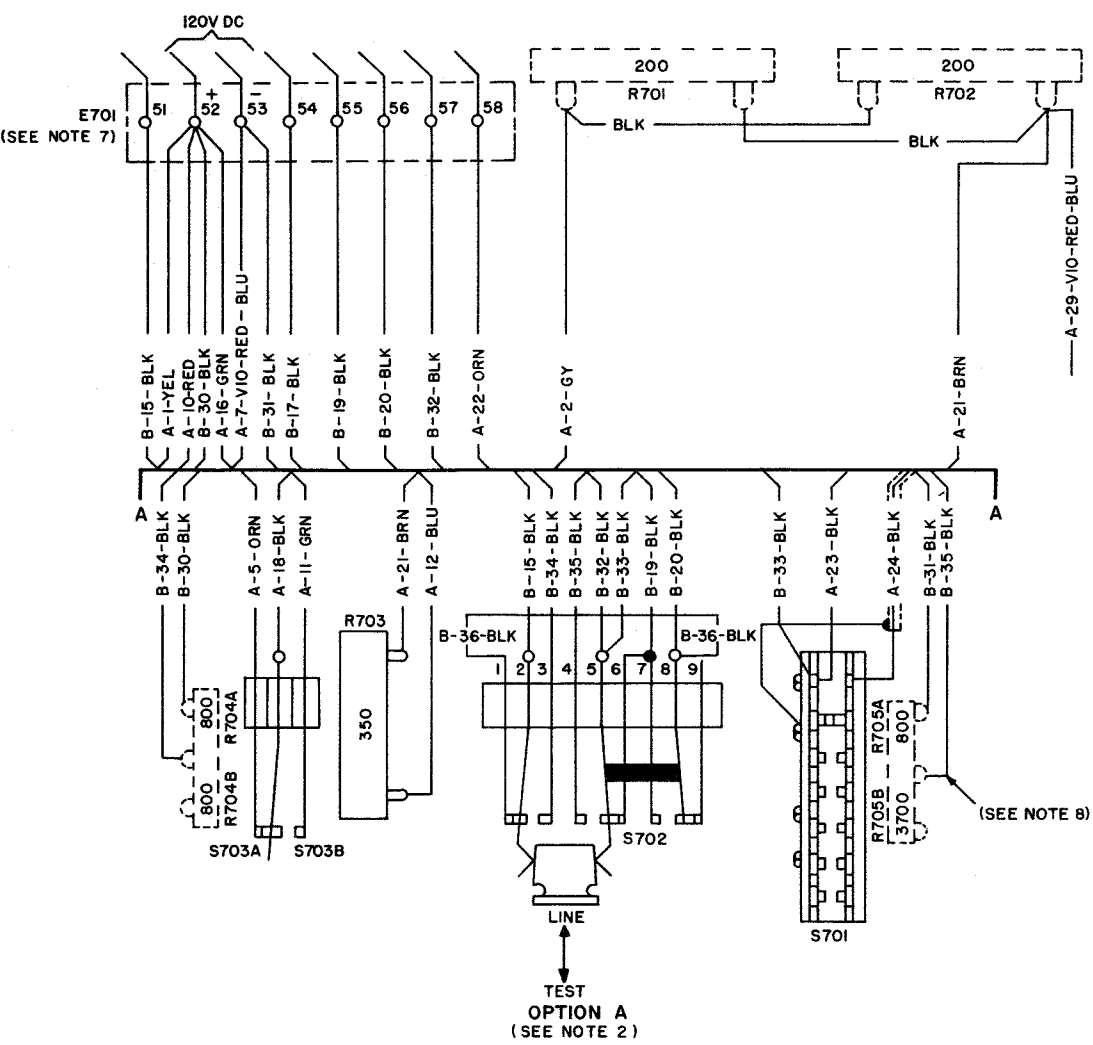
OPTION B



NOTES:

1. OPTION B SHOWS S702 AND E701 WIRED FOR POLAR-NEUTRAL OPERATION.
2. OPTION A SHOWS S702 WIRED FOR LINE-TEST OPERATION.
3. X INDICATES WIRE TAPED OR SPLICED AND TAPED.
4. RESISTANCE IS IN OHMS, CAPACITANCE IS IN MICROFARADS.

Figure 271.1 (Added) Perforator Transmitter PEX27, schematic diagram.



- NOTES**
1. OPTION B SHOWS S702 AND S701 WIRED FOR POLAR-NEUTRAL OPERATION.
 2. OPTION A SHOWS S702 WIRED FOR LINE-TEST OPERATION.
 3. X INDICATES WIRE TAPED OR SPLICED AND TAPED.
 4. RESISTANCE IS IN OHMS, CAPACITANCE IS IN MICROFARADS.
 5. A TELETYPE 99881 CABLE.
B TELETYPE 74572 CABLE.
 6. INDICATES SHIELDED WIRE
 7. CONNECTS WITH SLIP CONNECTION TERMINAL BOARD ON BASE UNIT
 8. CONNECT LEAD B-35-BLK TO CENTER TERMINAL OF R705 FOR 60 MA OPERATION; CONNECT TO OPPOSITE SIDE R705B FOR 20 MA OPERATION.

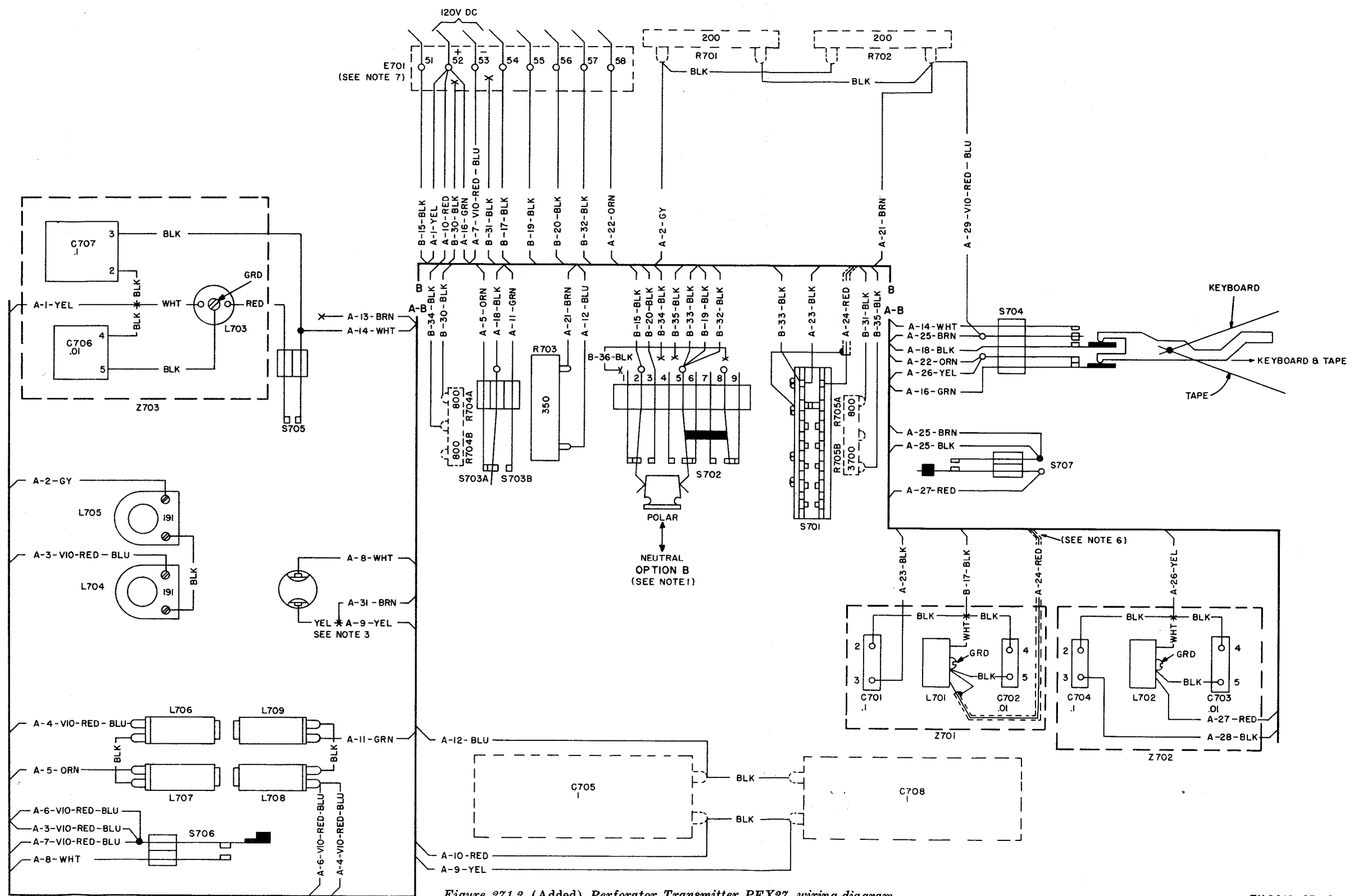


Figure 271.2 (Added) Perforator Transmitter PEX27, wiring diagram.

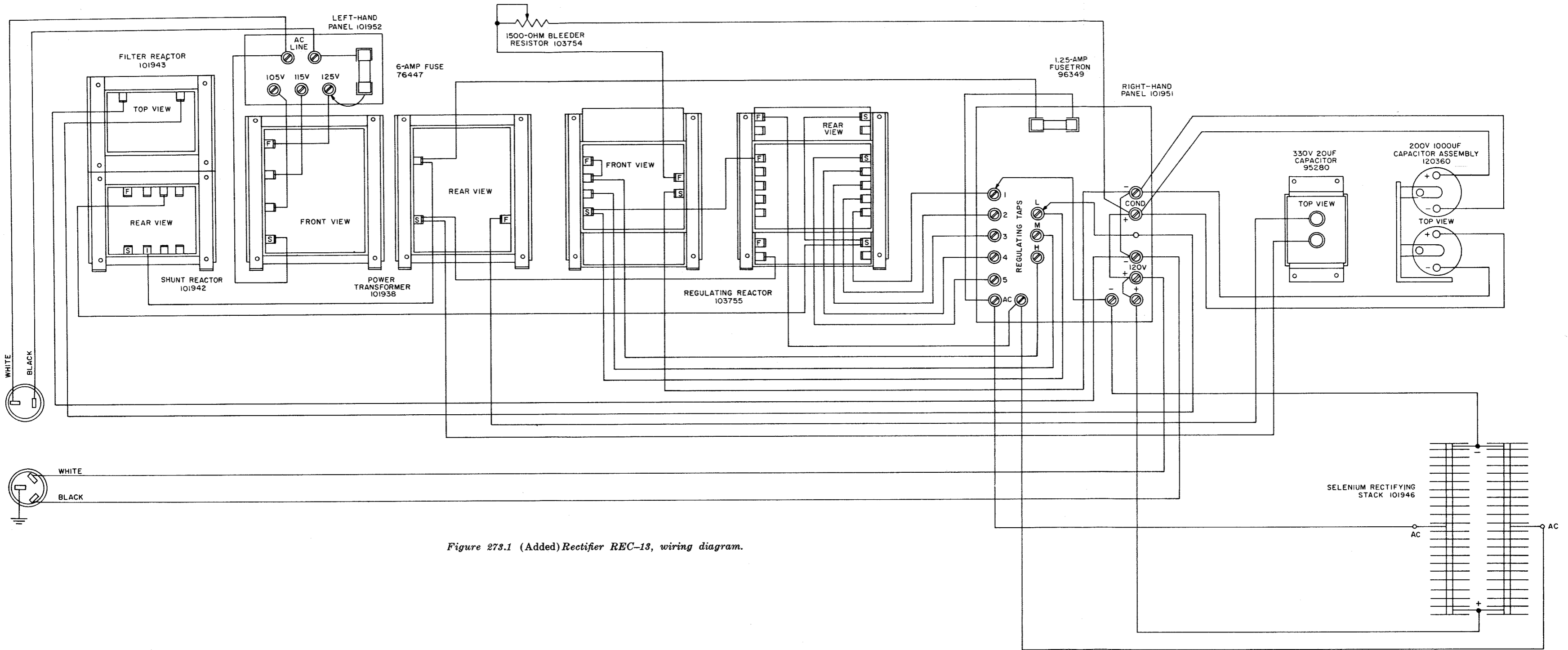


Figure 273.1 (Added) Rectifier REC-13, wiring diagram.