

28 ELECTRICAL SERVICE UNIT (LESU)
for KEYBOARD SEND-RECEIVE and RECEIVE-ONLY SETS
PARTS

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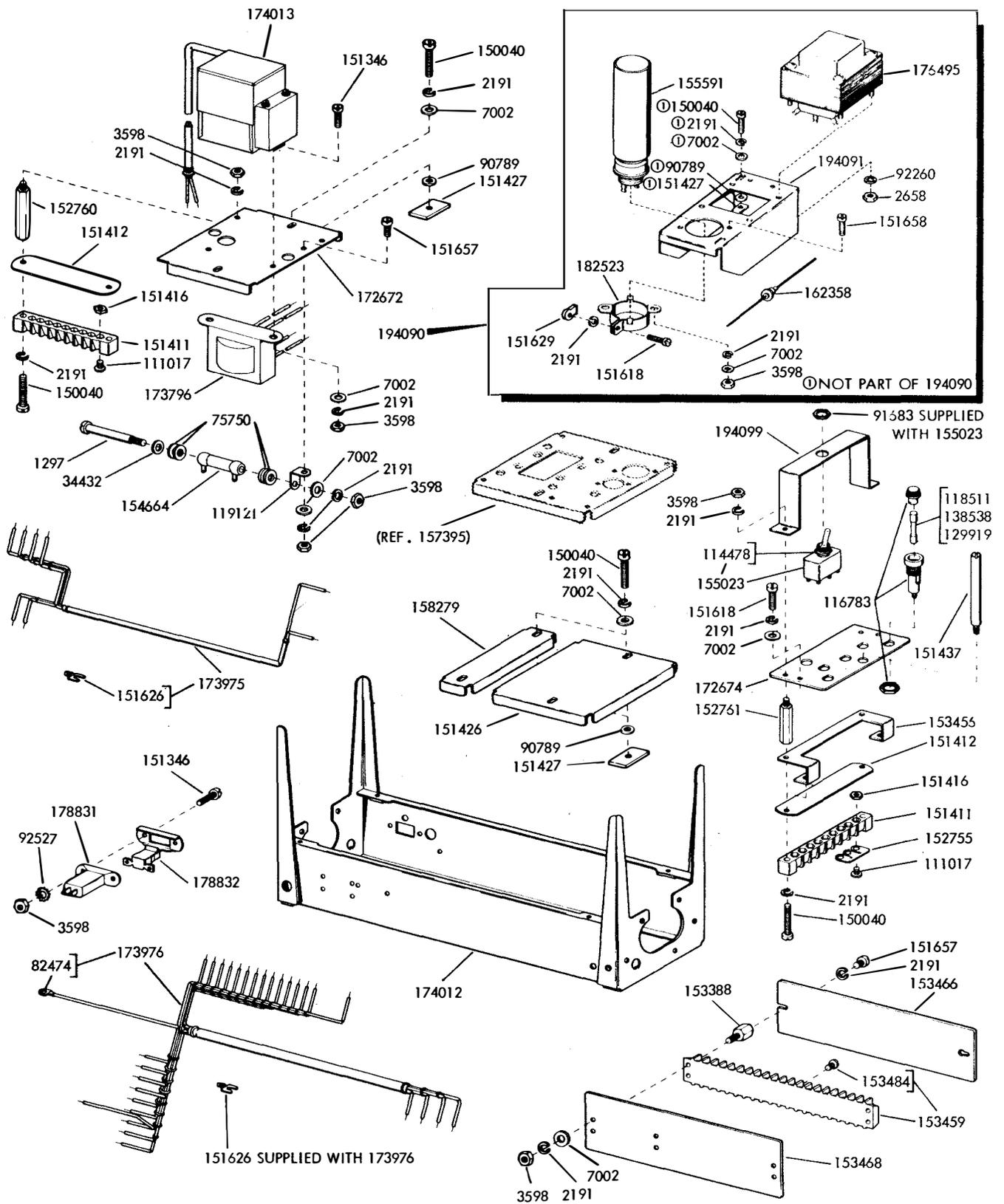


FIGURE 3. ELECTRICAL SERVICE UNIT

Cable Assembly	171555 50 pin Connector	142899 24 pin Connector	161526 14 pin Connector
145013	X		X
145014	X	X	X

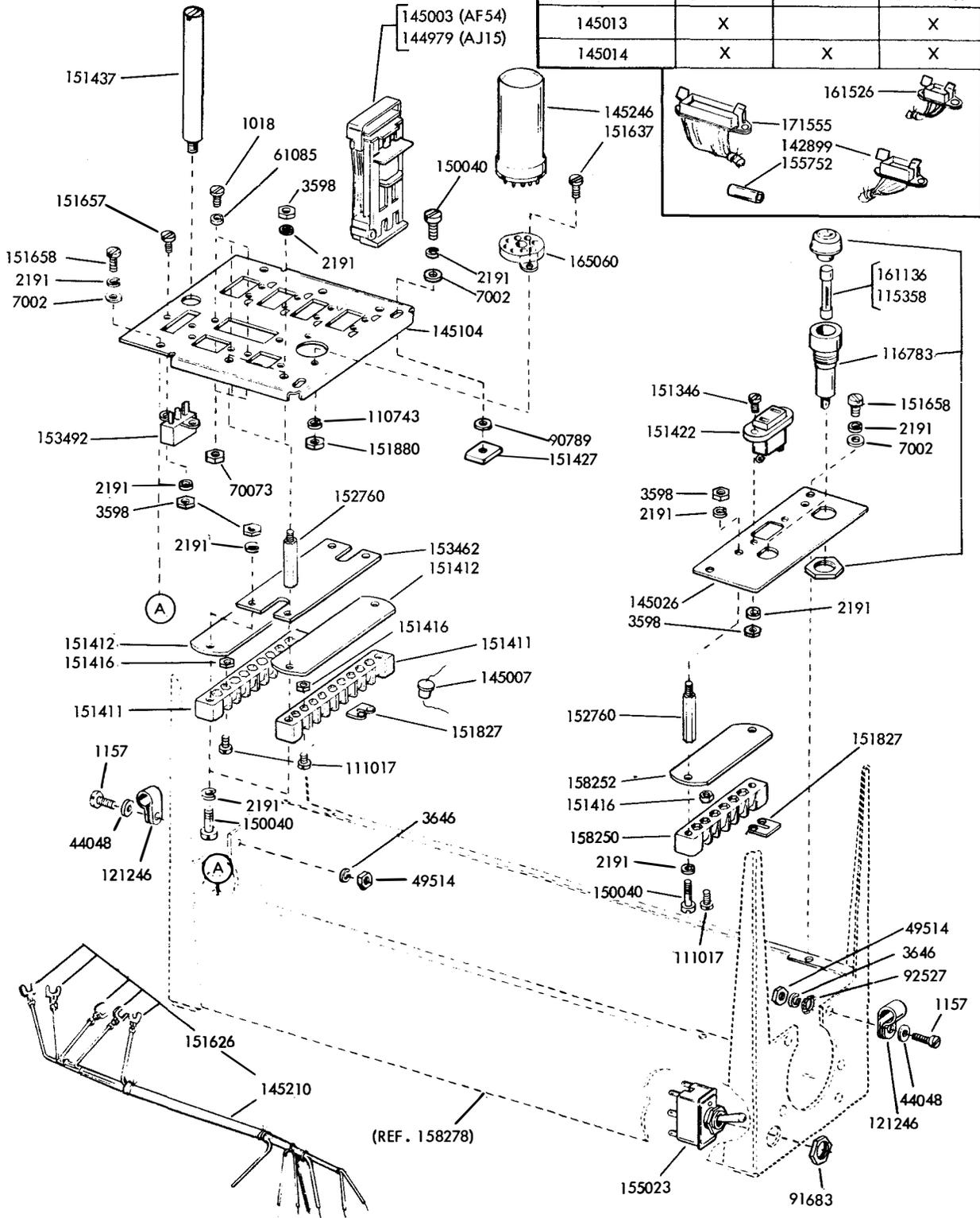


FIGURE 4. ELECTRICAL SERVICE UNIT

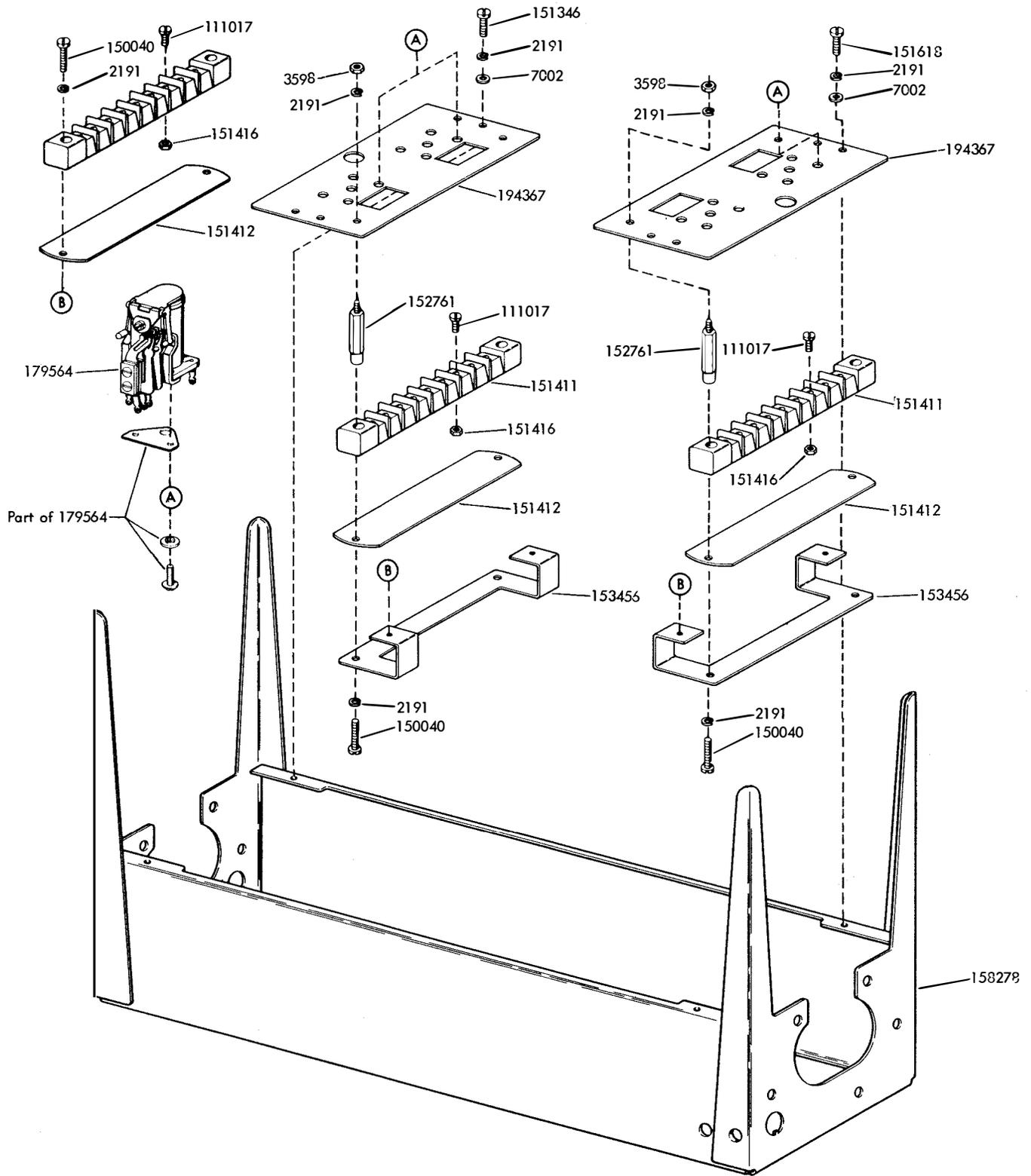


FIGURE 5. ELECTRICAL SERVICE UNIT

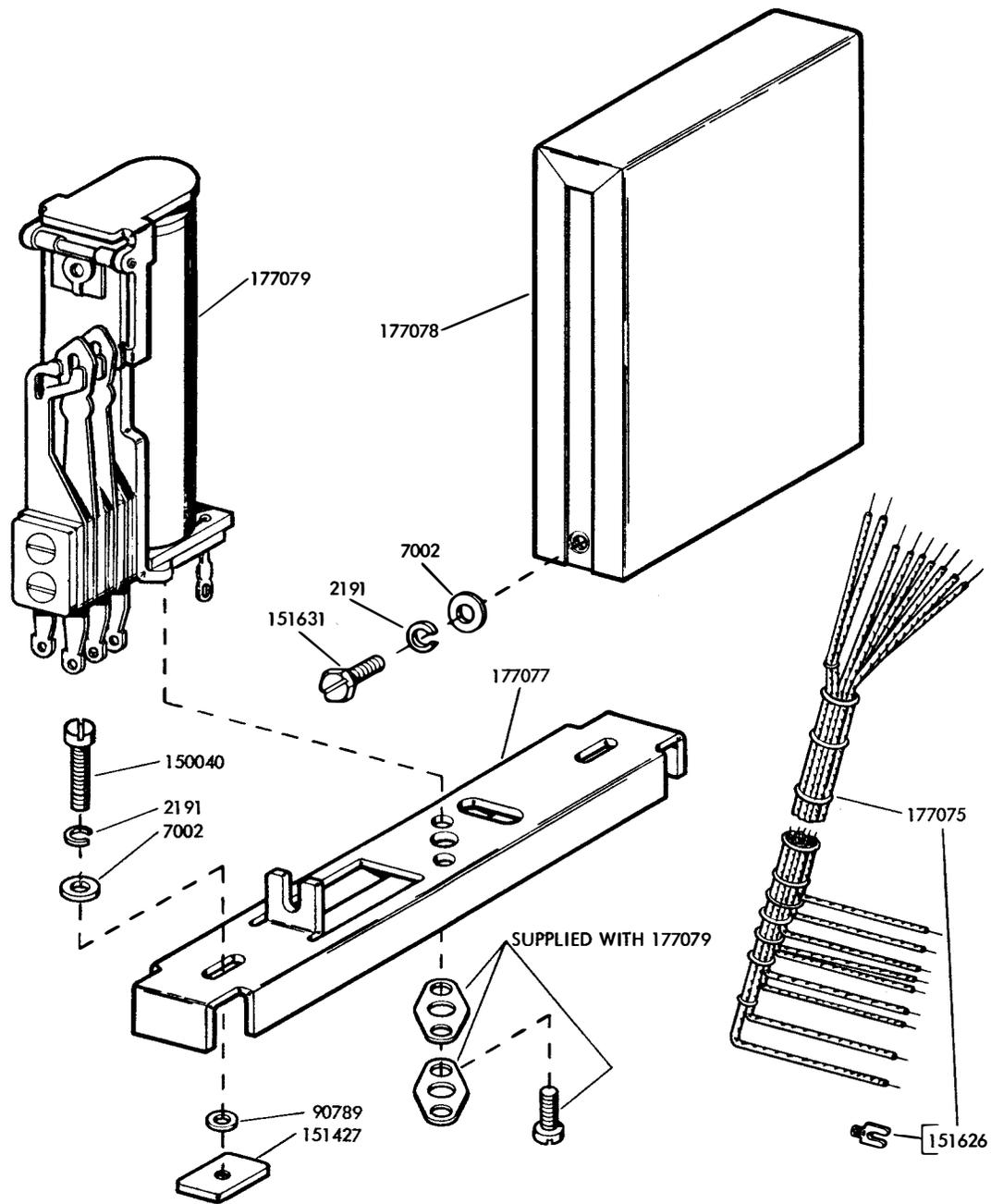


FIGURE 6. 177076 RELAY ASSEMBLY

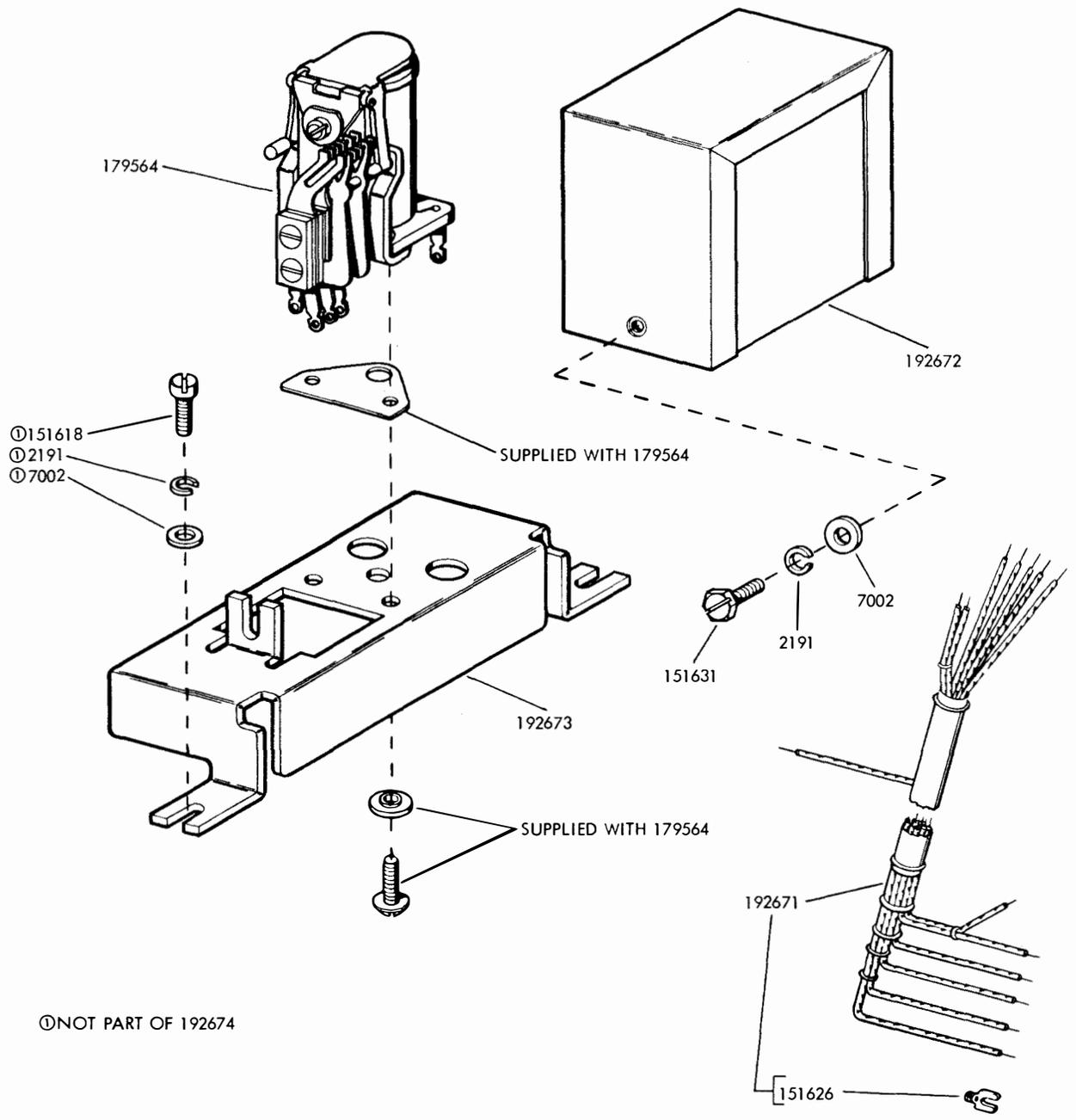
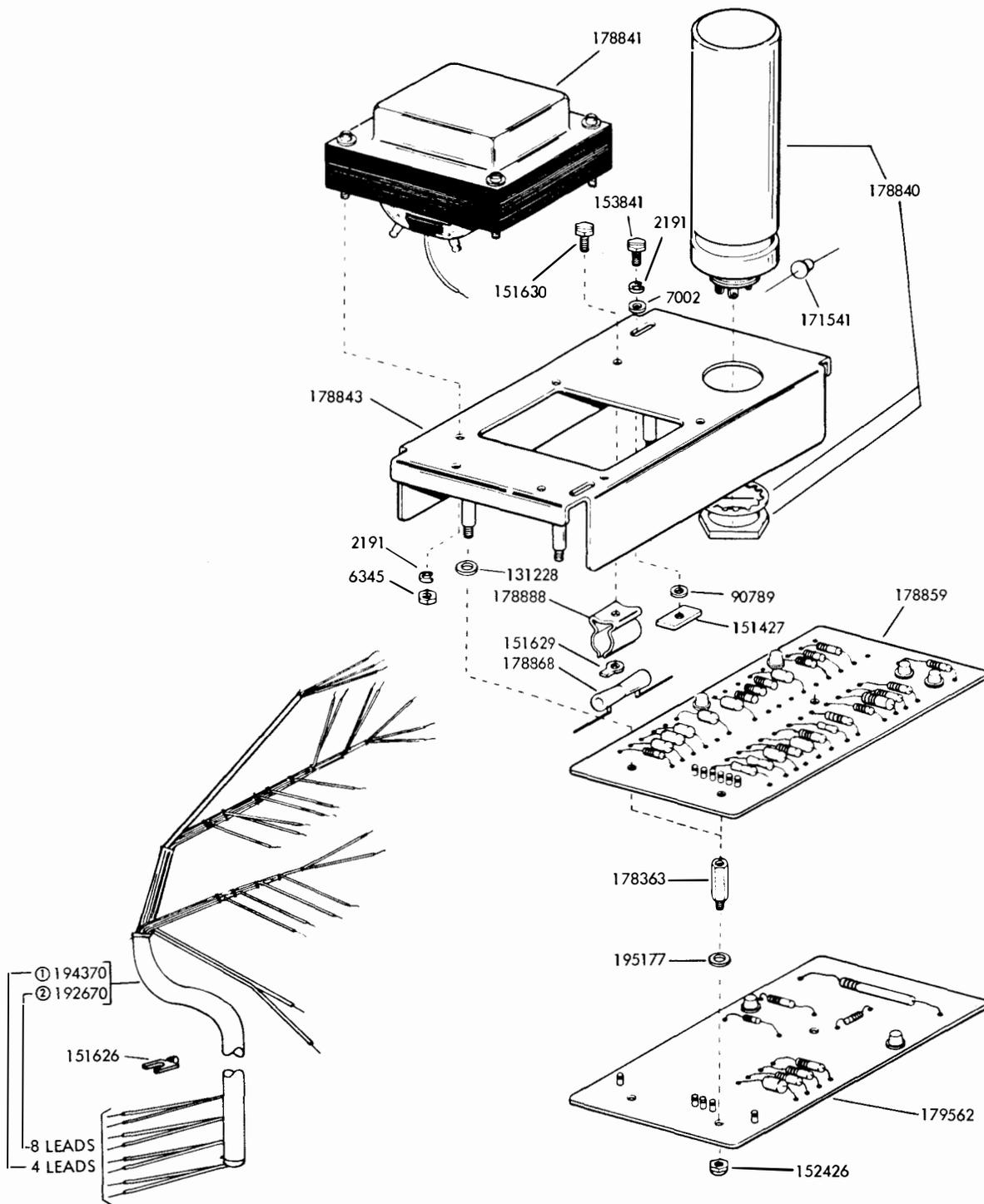


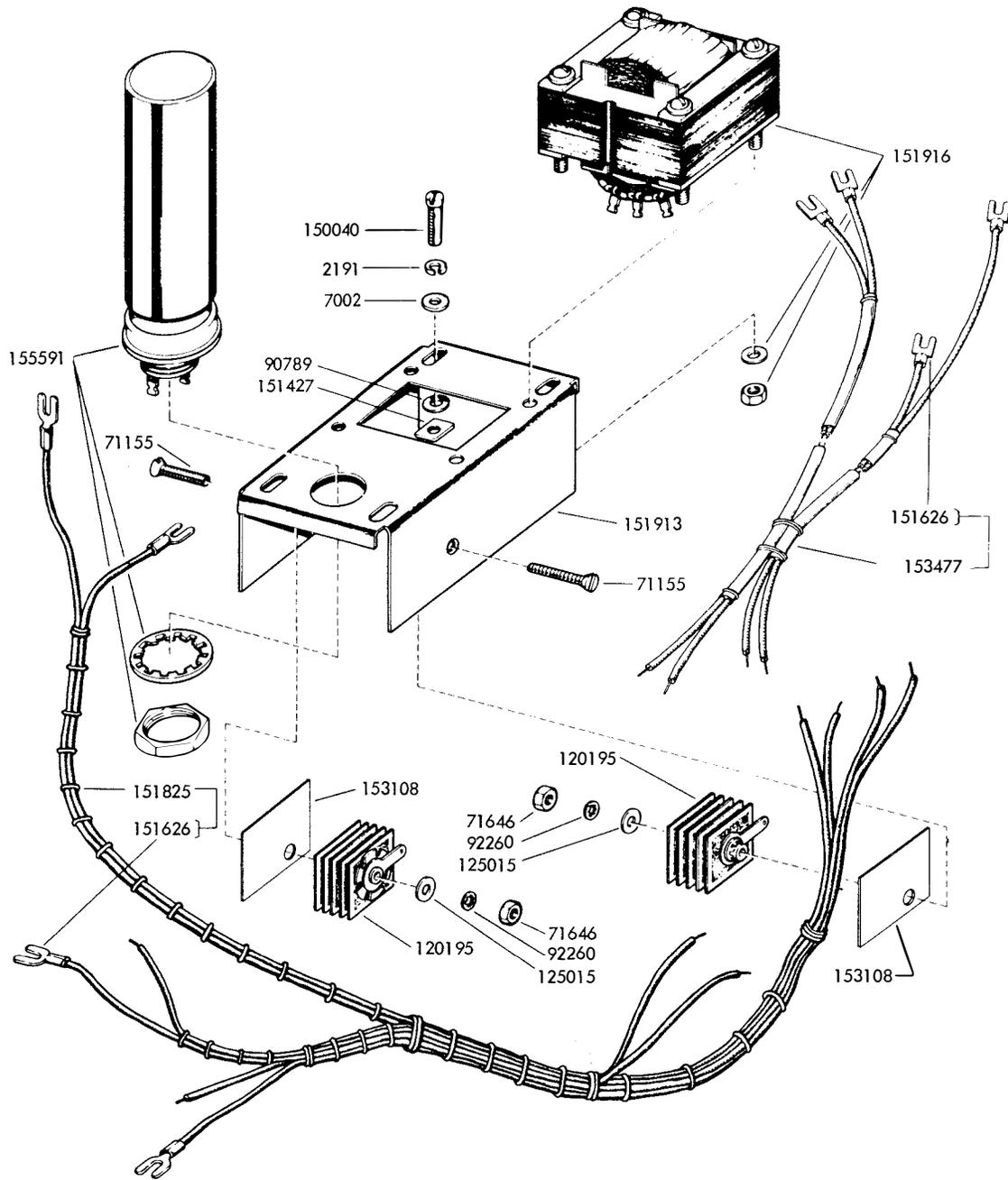
FIGURE 7. 192674 RELAY ASSEMBLY



① PECULIAR TO 194369

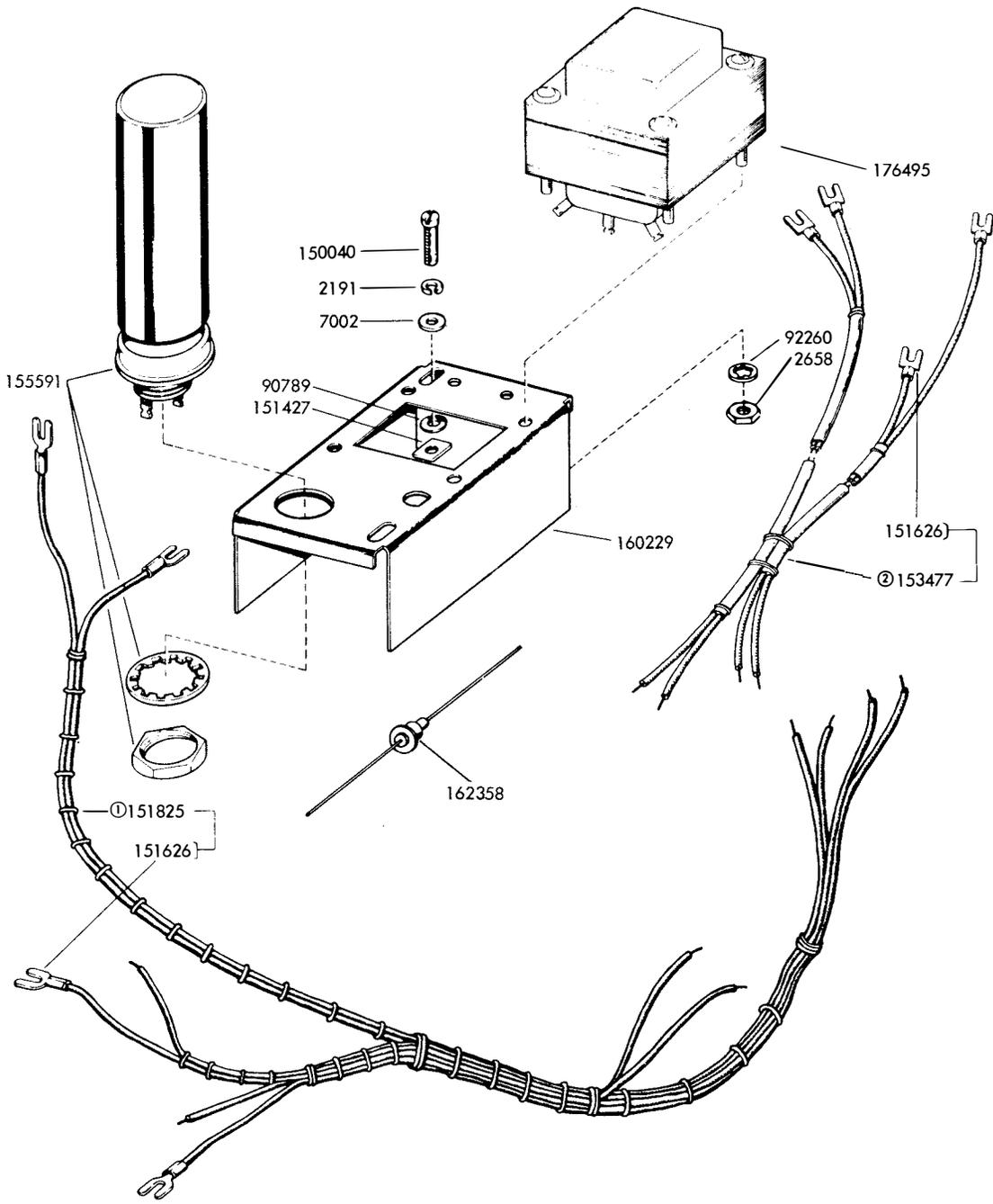
② PECULIAR TO 192669

FIGURE 8. 192669 AND 194369 SELECTOR MAGNET DRIVER ASSEMBLIES
(WITH OPEN LINE DETECTOR)



See Figure 10 for new style

FIGURE 9. EARLY DESIGN RECTIFIER AND CABLE ASSEMBLY (120 MA)



① PECULIAR TO 151999

② PECULIAR TO 152950

SPECIFICATION 5707S

See Figure 9 for Early Design

FIGURE 10. 151999 AND 152950 RECTIFIER AND CABLE ASSEMBLIES (150 MA)

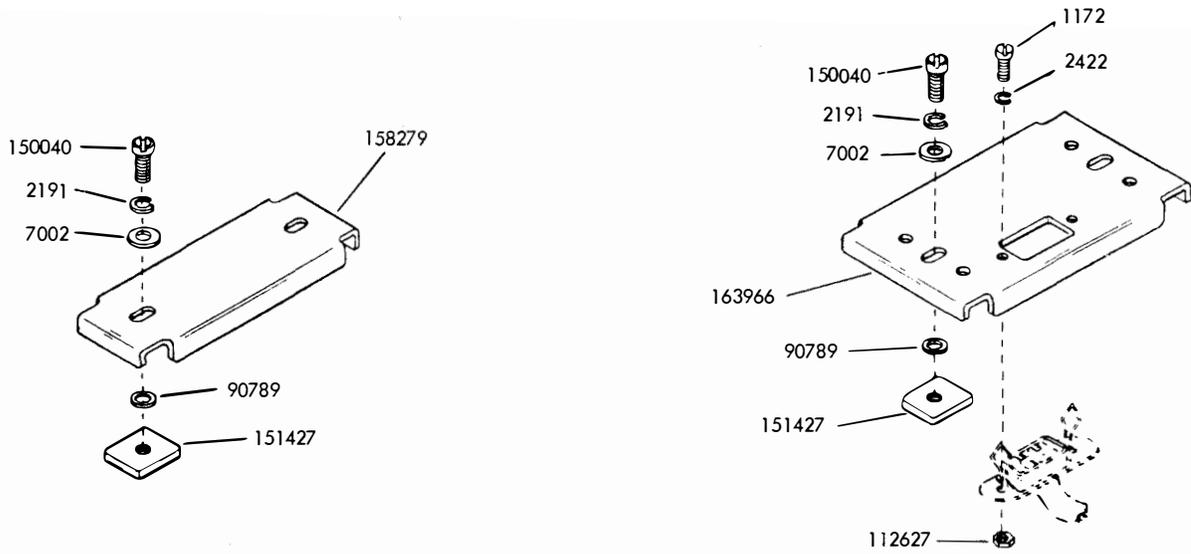


FIGURE 11. VARIABLE FEATURES FOR THE ELECTRICAL SERVICE UNIT

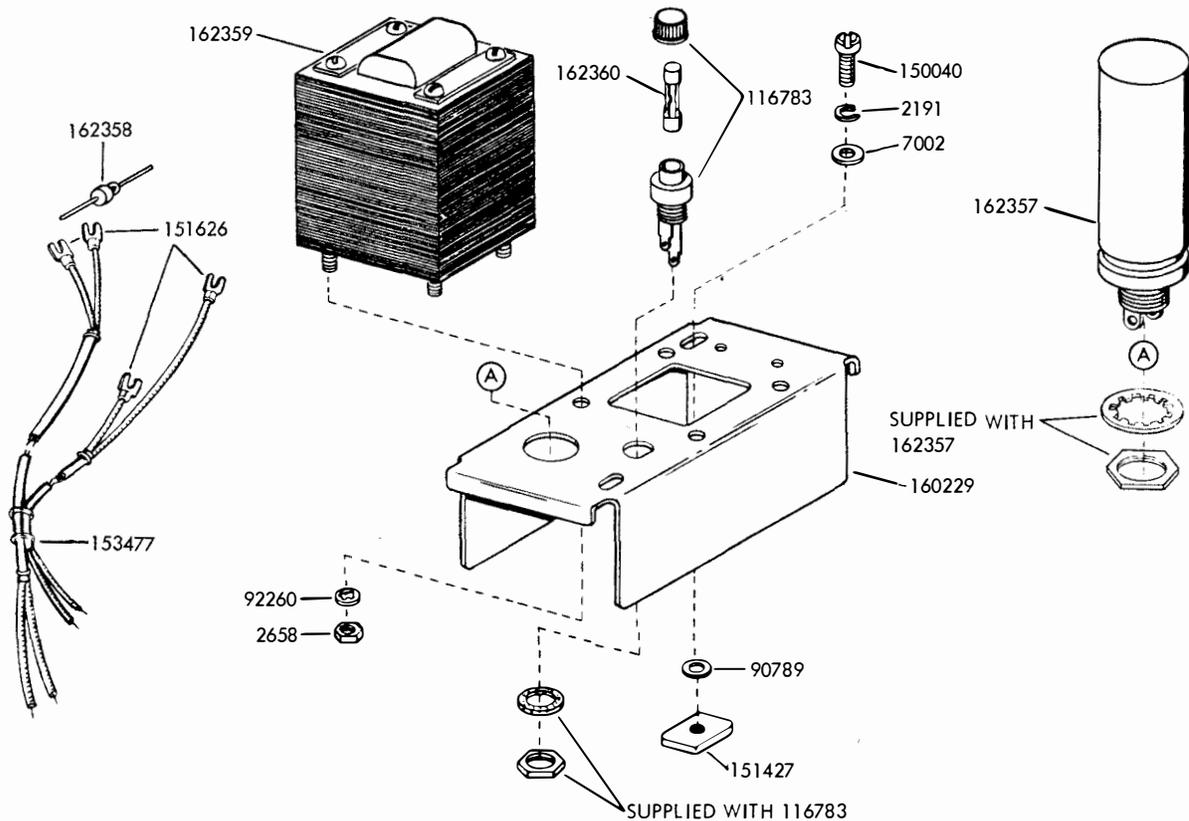


FIGURE 12. 162361 RECTIFIER AND CABLE ASSEMBLY (500MA)

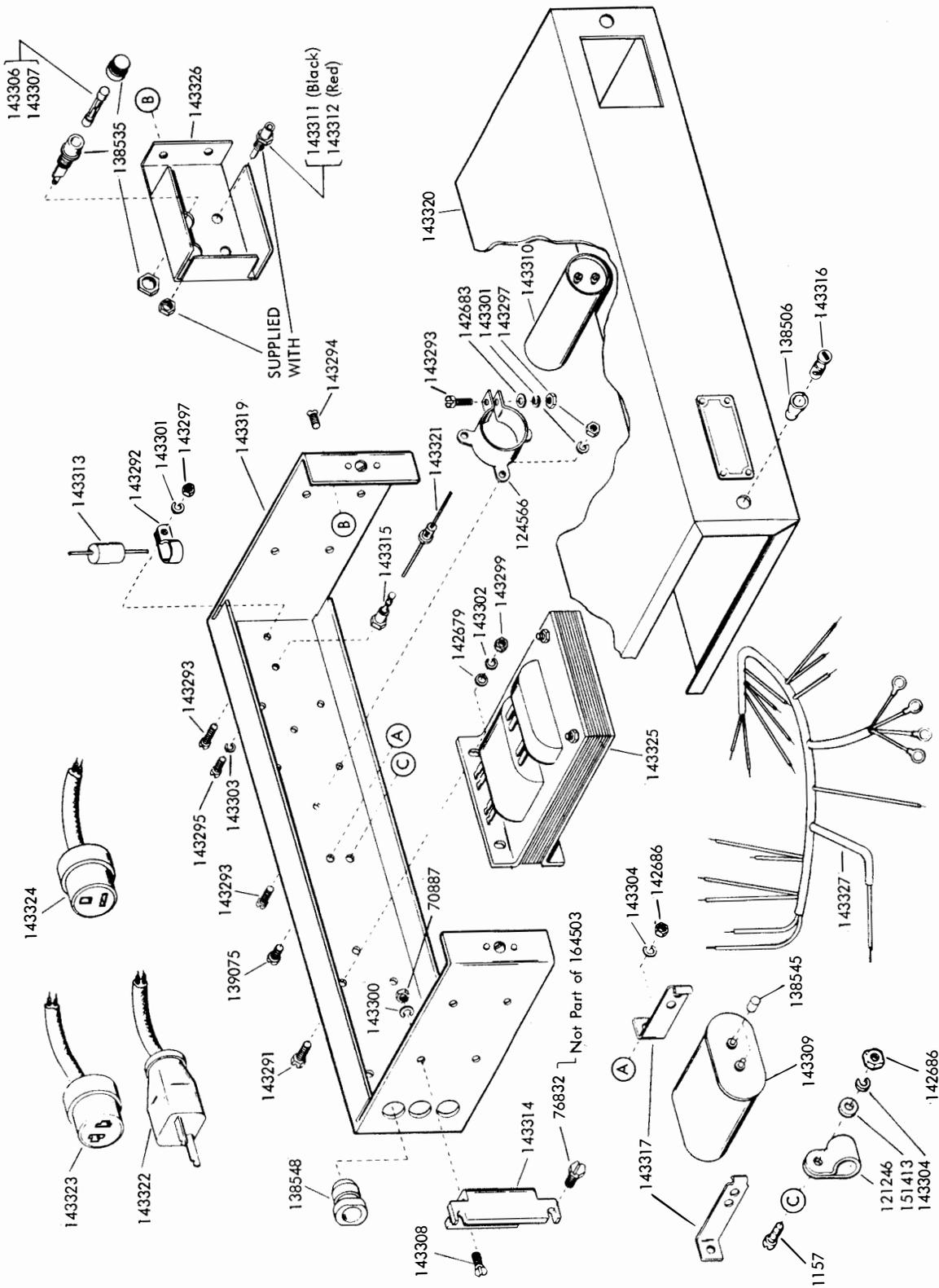


FIGURE 13. 164503 RECTIFIER ASSEMBLY

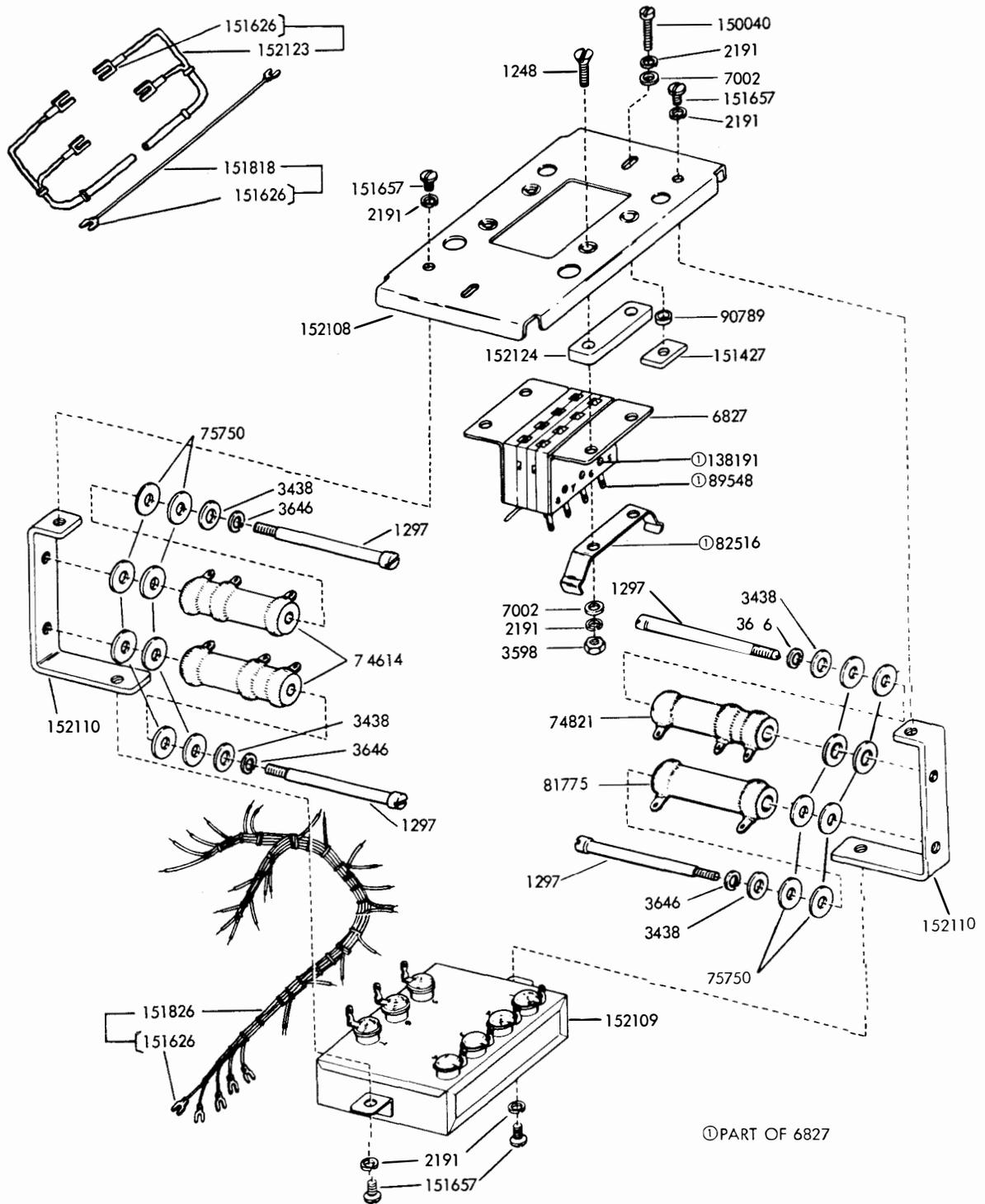


FIGURE 14. 151822 LINE RELAY MOUNTING ASSEMBLY

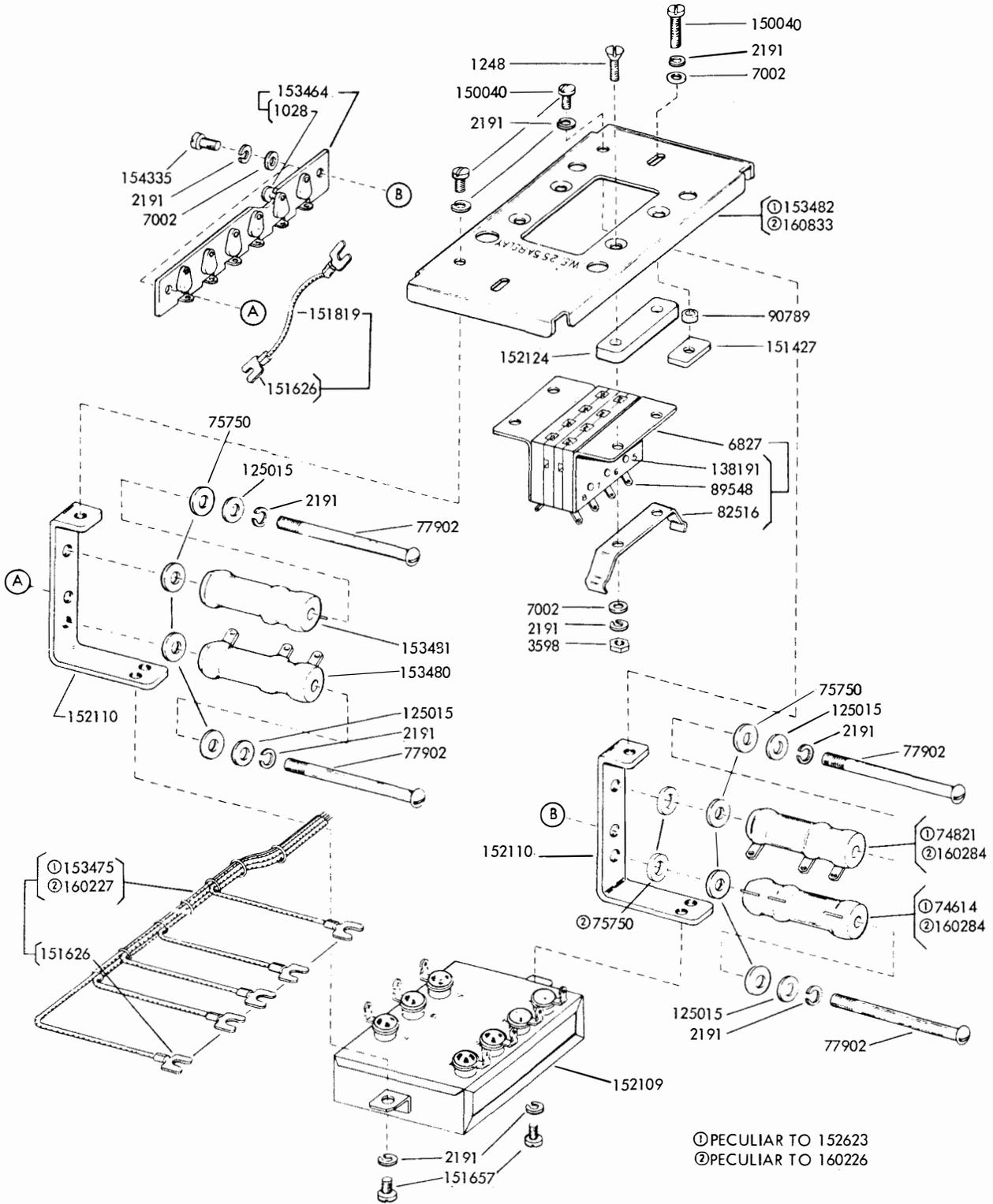


FIGURE 15. 152623 AND 160226 LINE RELAY MOUNTING ASSEMBLIES

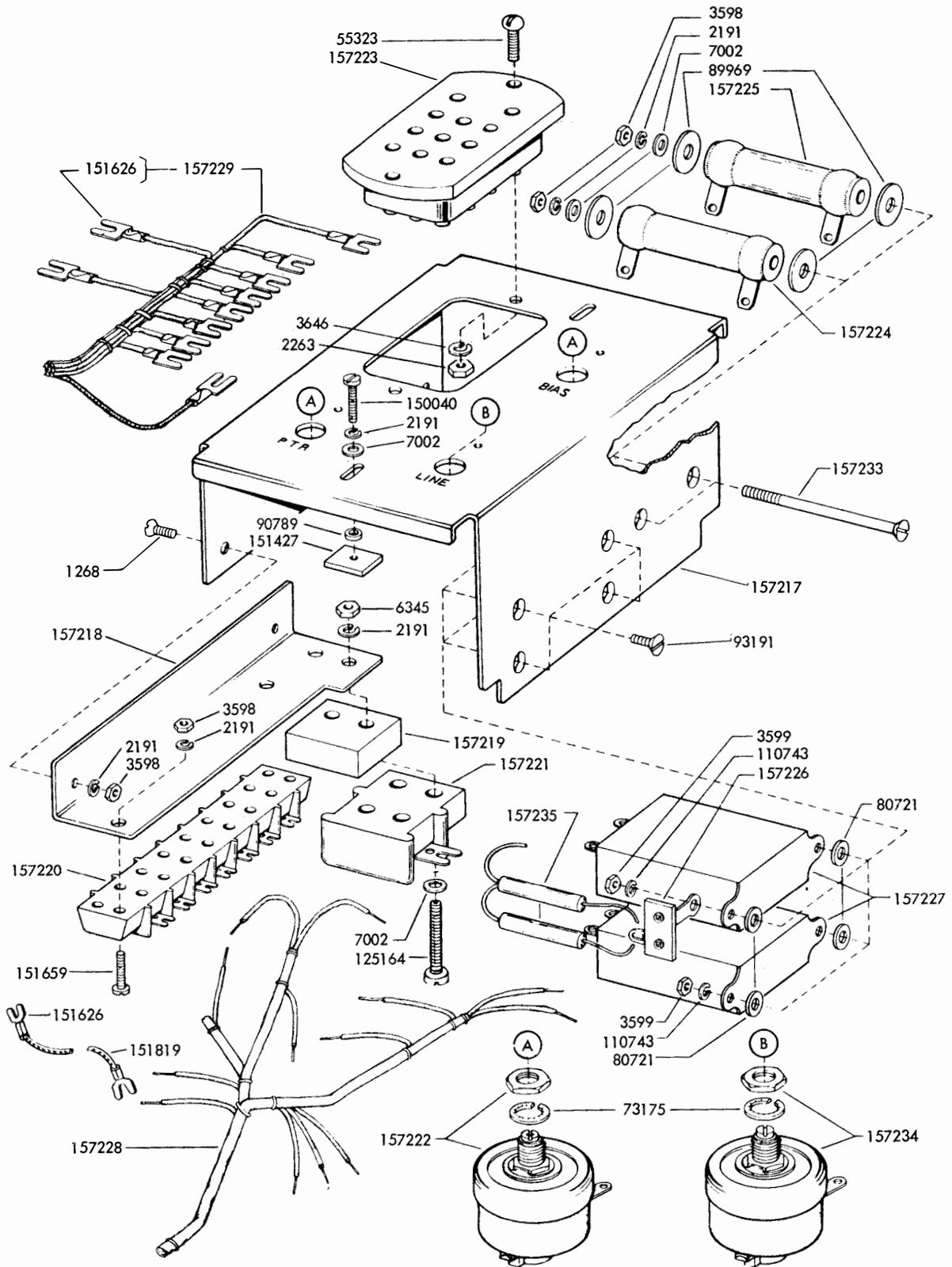


FIGURE 16. 157216 LINE RELAY MOUNTING ASSEMBLY

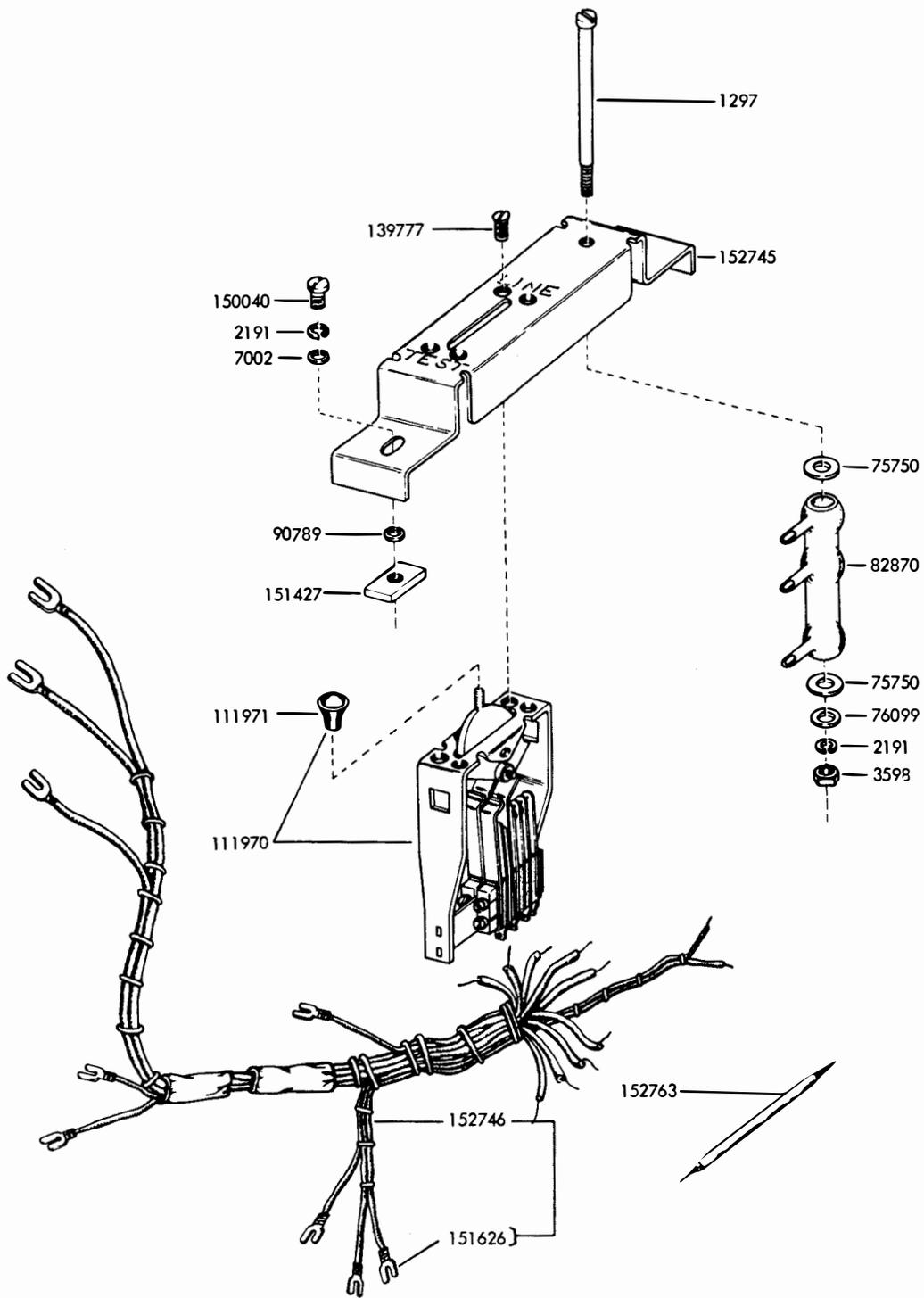


FIGURE 17. 152744 LINE TEST KEY ASSEMBLY

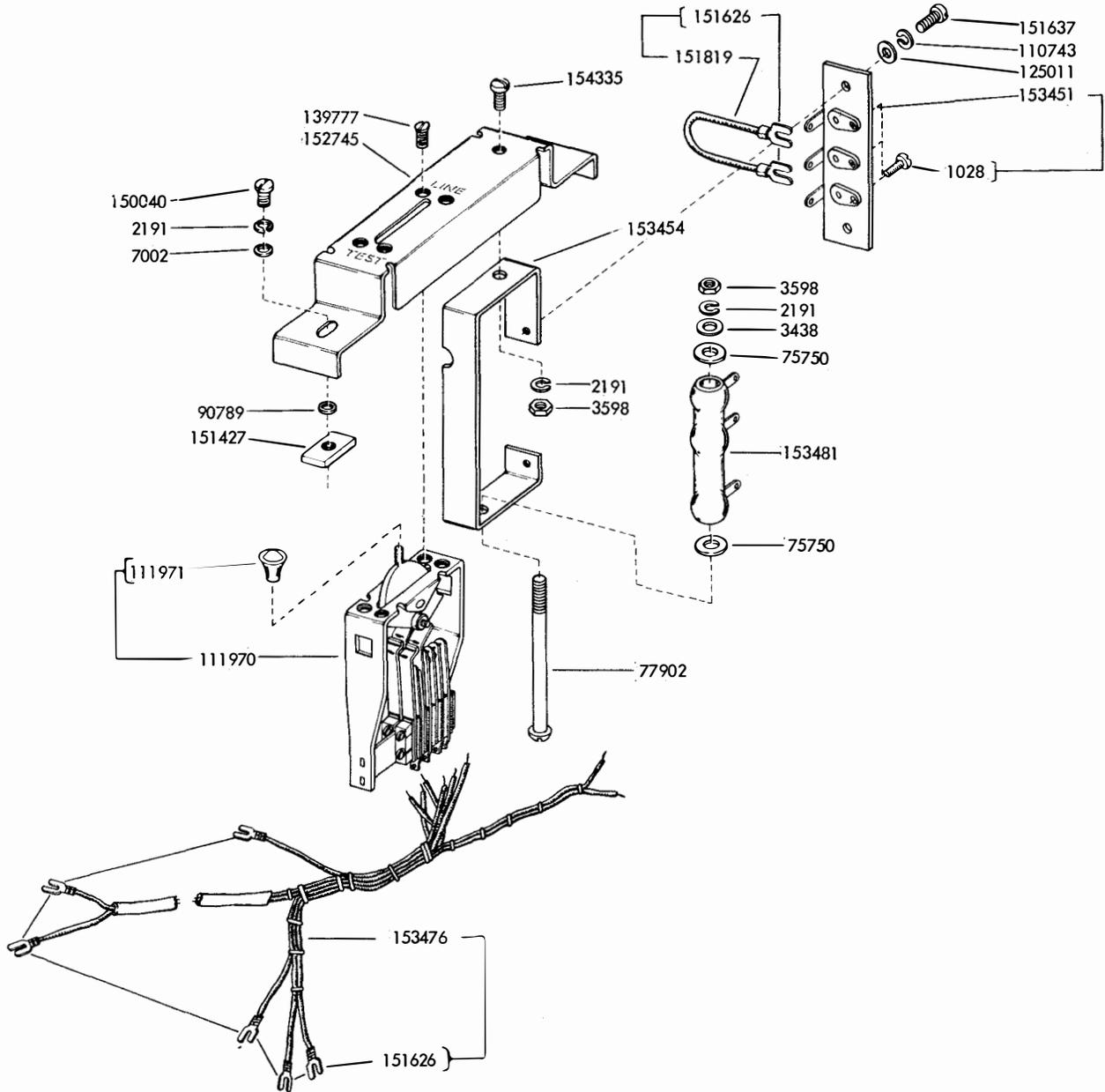


FIGURE 18. 152625 LINE TEST KEY ASSEMBLY

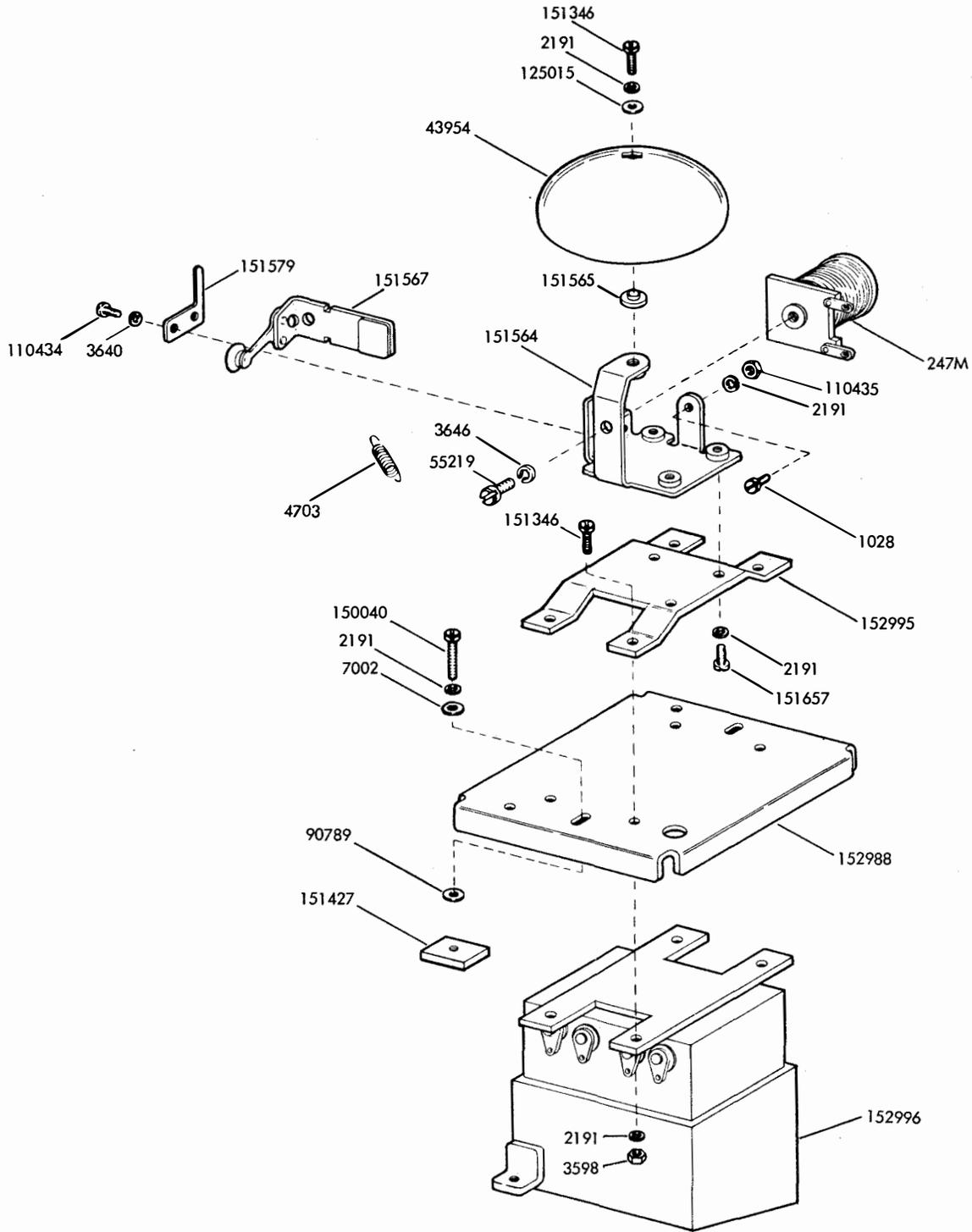
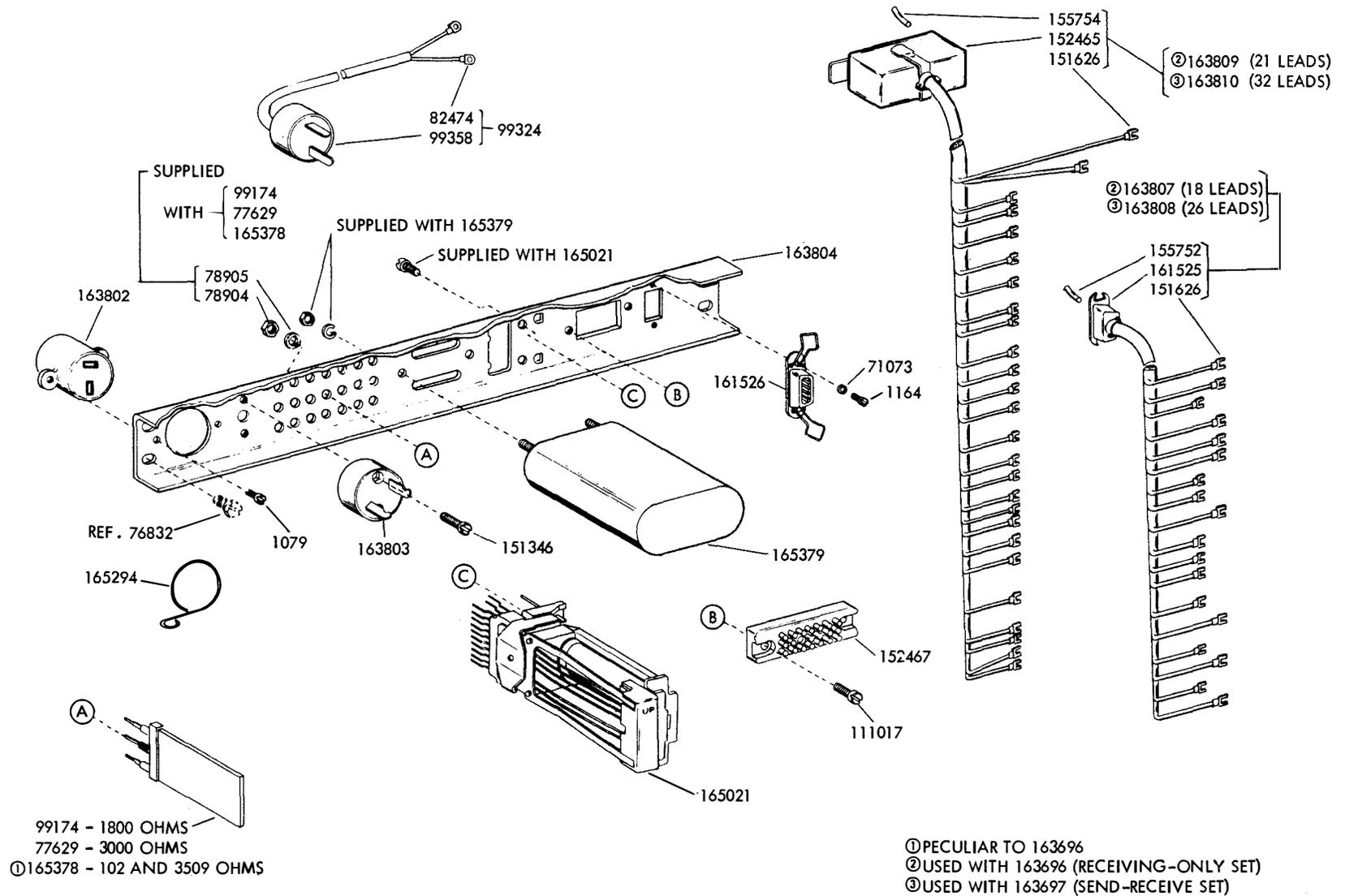


FIGURE 19. FILTER AND BELL ASSEMBLY

FIGURE 20. 163696 AND 163697 RELAY PANEL ASSEMBLIES



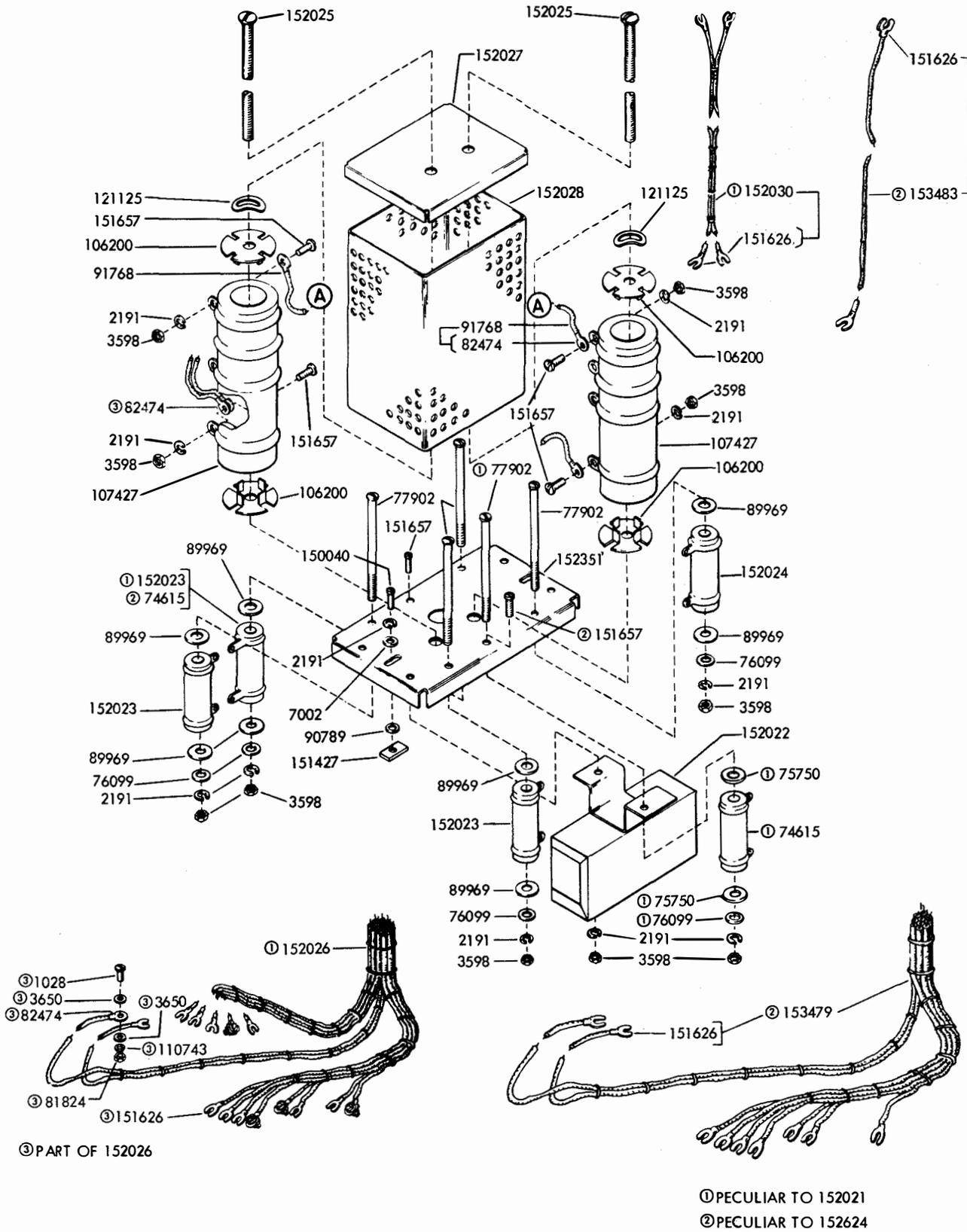
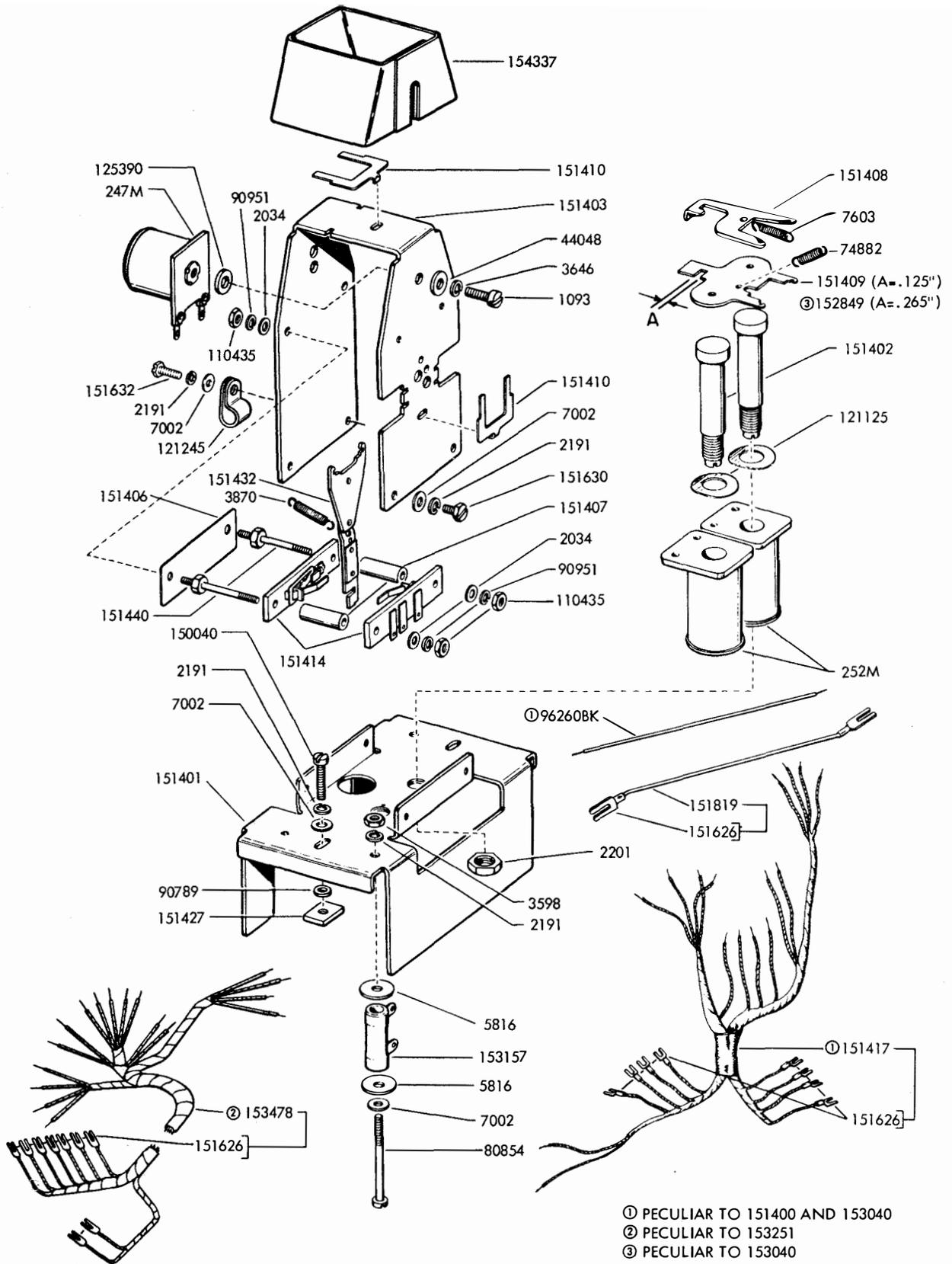


FIGURE 21. 152021 AND 152624 CAPACITOR-RESISTOR ASSEMBLIES



- ① PECULIAR TO 151400 AND 153040
- ② PECULIAR TO 153251
- ③ PECULIAR TO 153040

FIGURE 22. 151400, 153040 AND 153251 MOTOR CONTROL ASSEMBLIES

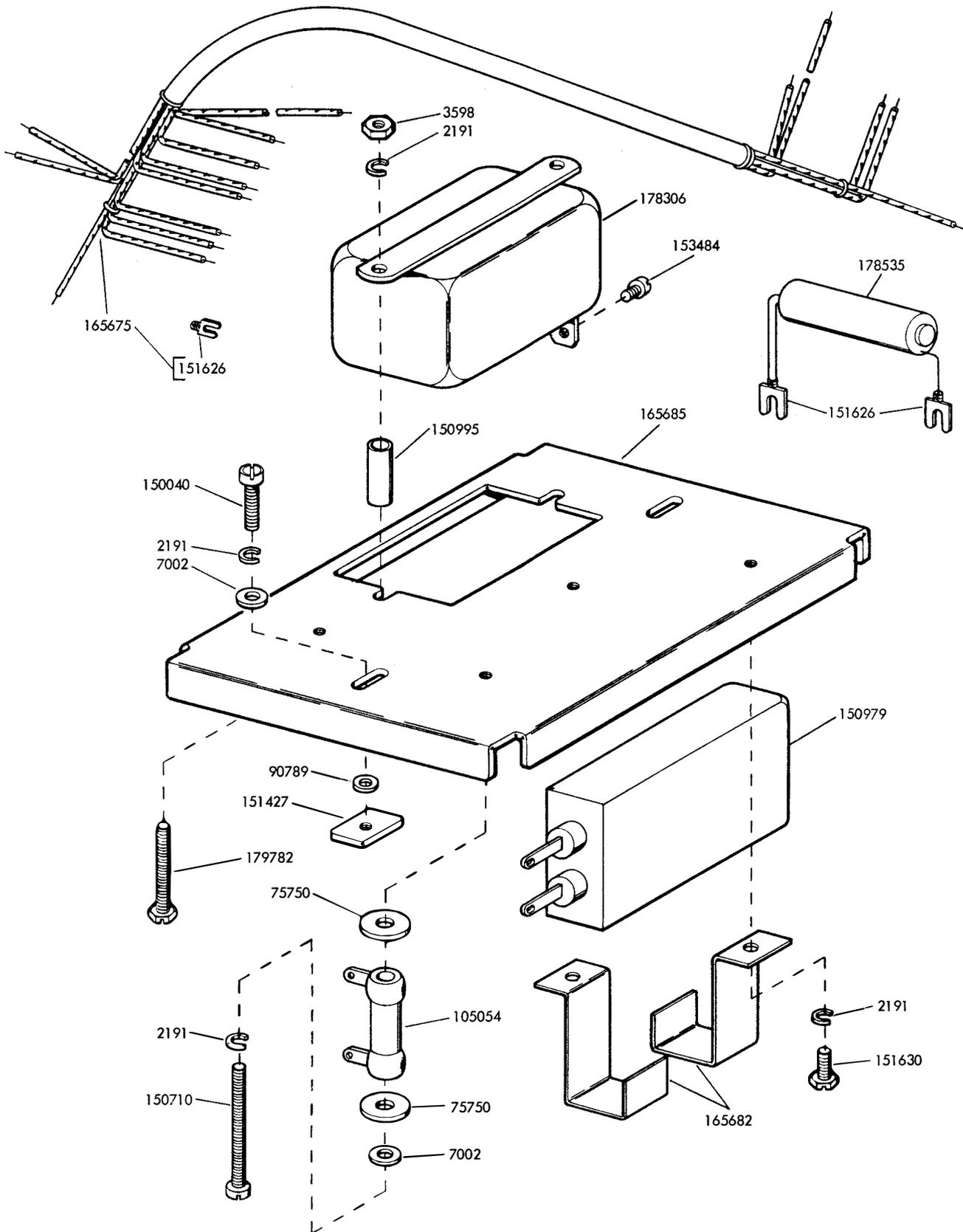


FIGURE 23. 165687 MOTOR CONTROL RELAY ASSEMBLY

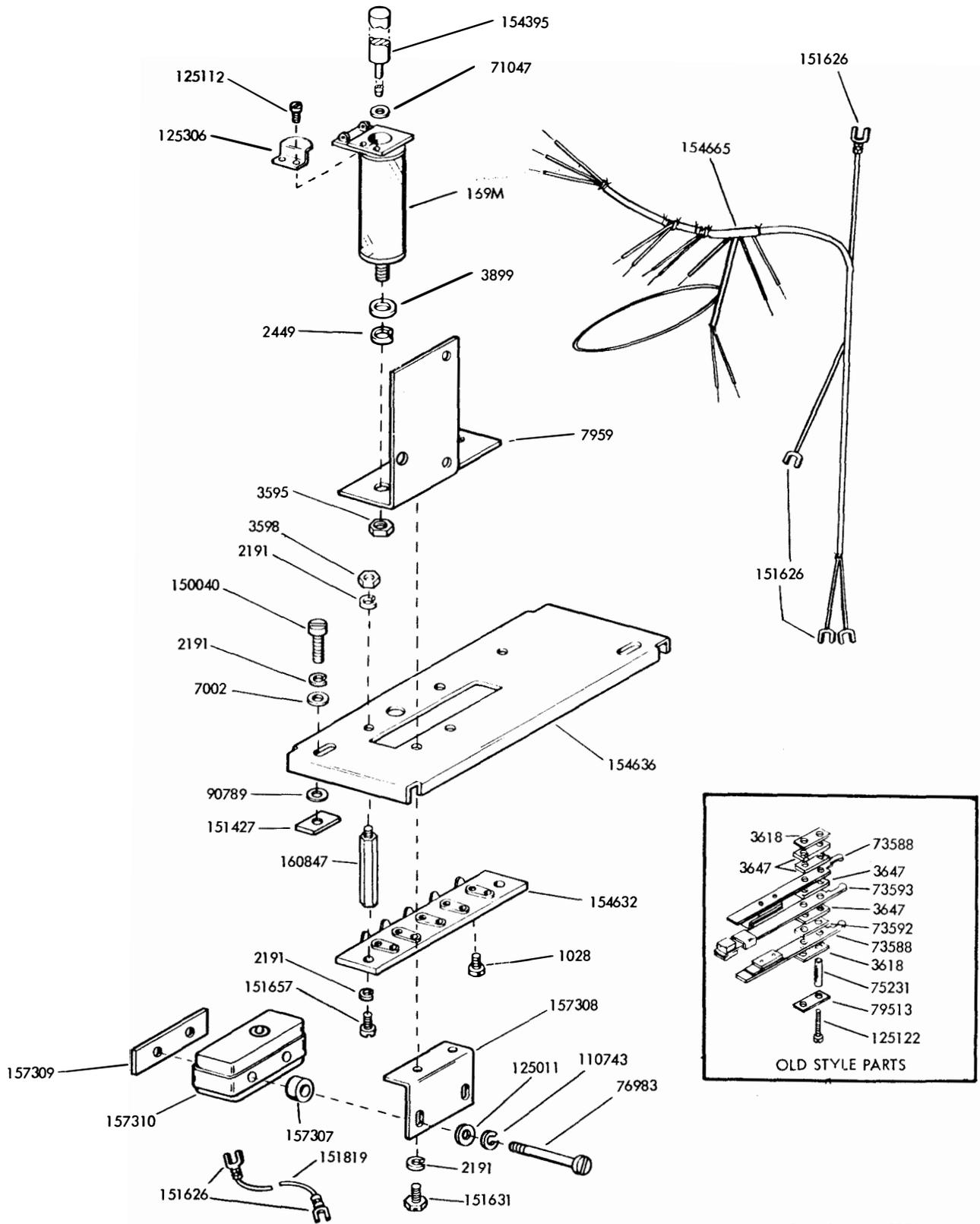


FIGURE 24. 152332 MOTOR CONTROL RELAY ASSEMBLY

Specification 57795

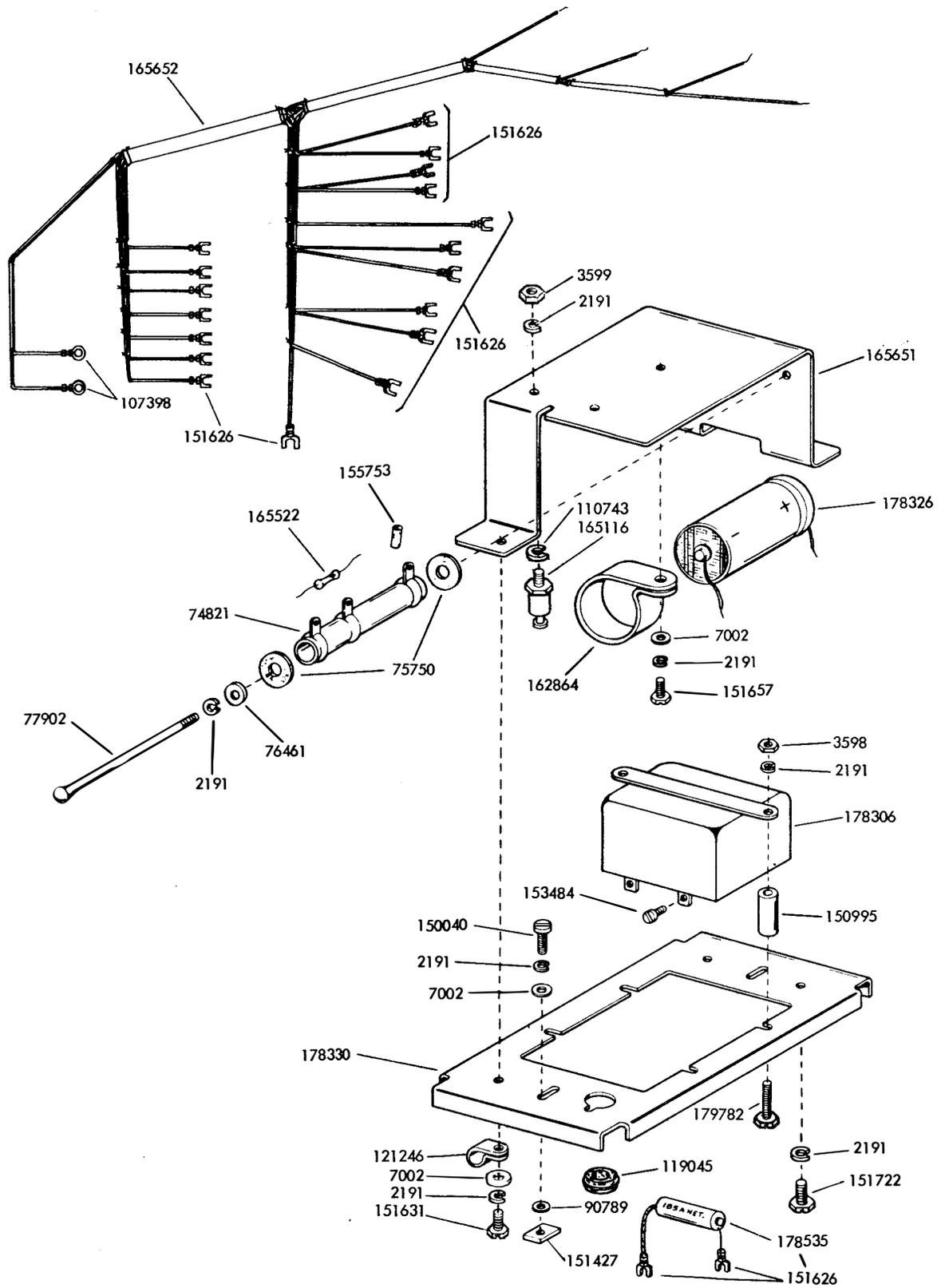


FIGURE 26. 165650 MOTOR CONTROL AND ANSWER-BACK CONTROL RELAY ASSEMBLY

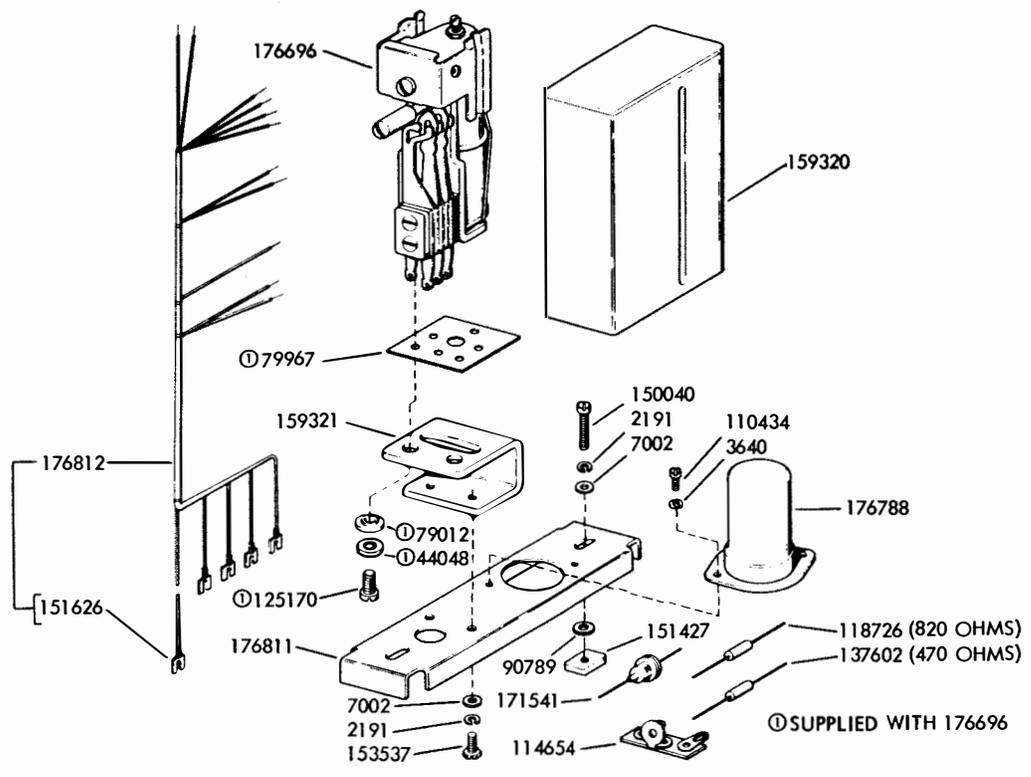


FIGURE 27. 176810 ANSWER-BACK CONTROL RELAY ASSEMBLY

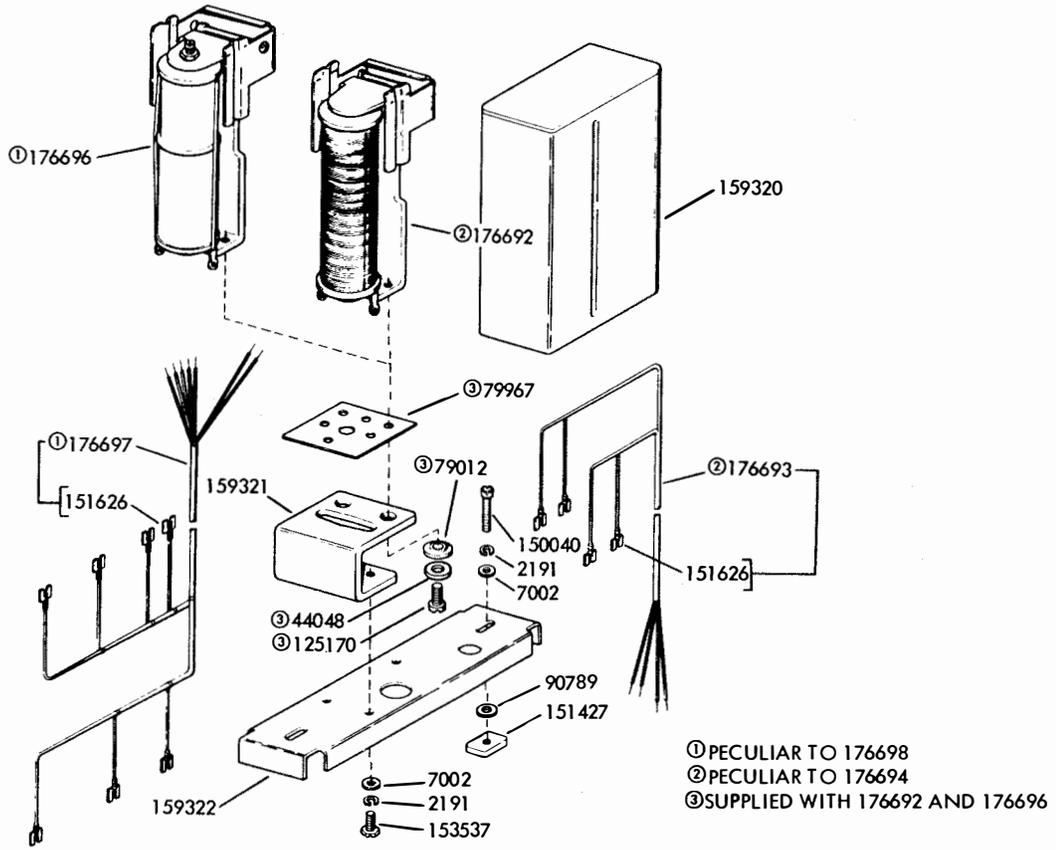
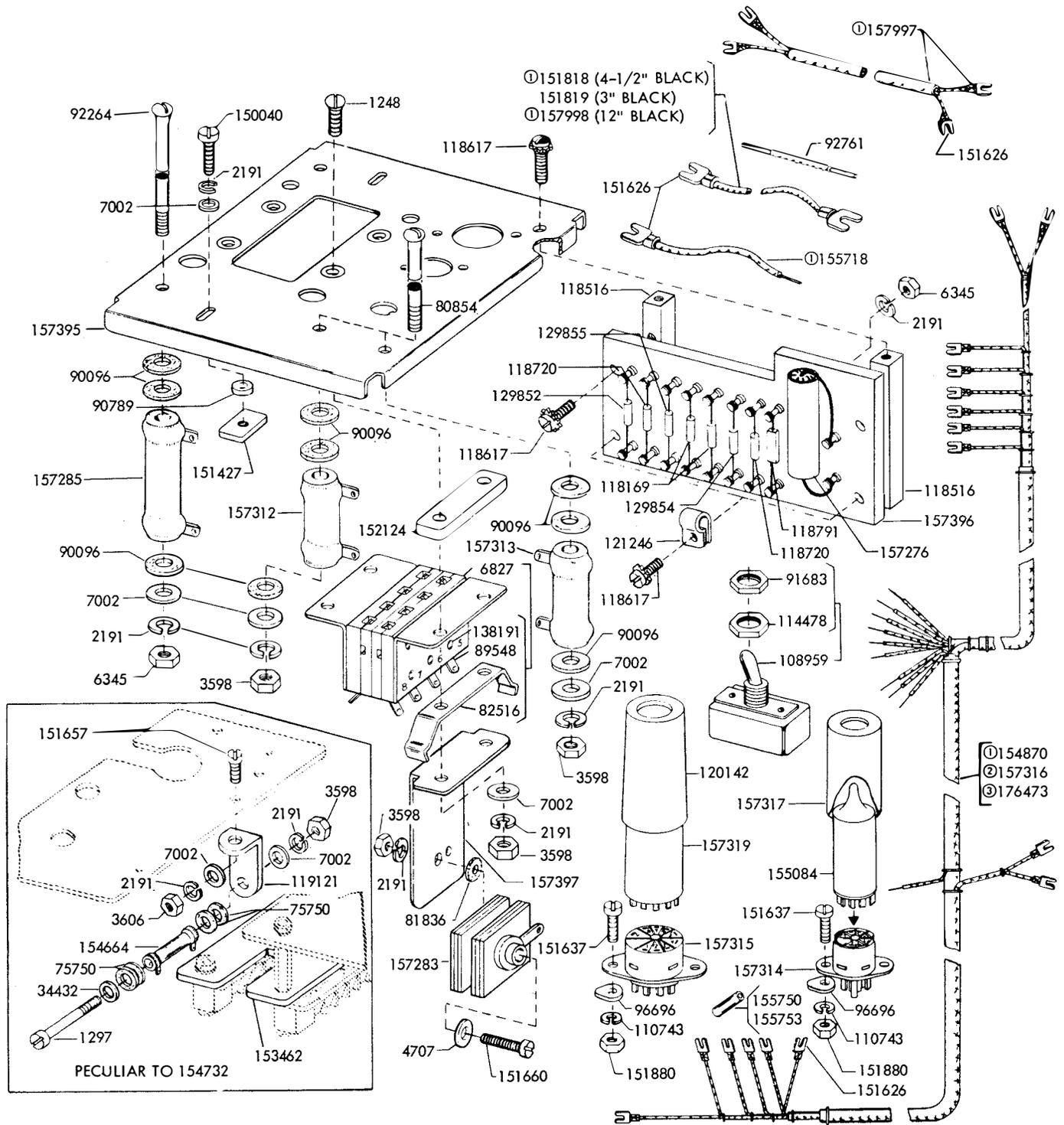


FIGURE 28. 176694 (MOTOR CONTROL) AND 176698 (SLOW RELEASE) RELAY ASSEMBLIES



SPECIFICATION 58715

SPECIFICATION 502885

FIGURE 29. 154732, 154779 AND 172667 MODIFICATION KITS TO ADD A RELAY SHIFT TO AN ELECTRICAL SERVICE UNIT

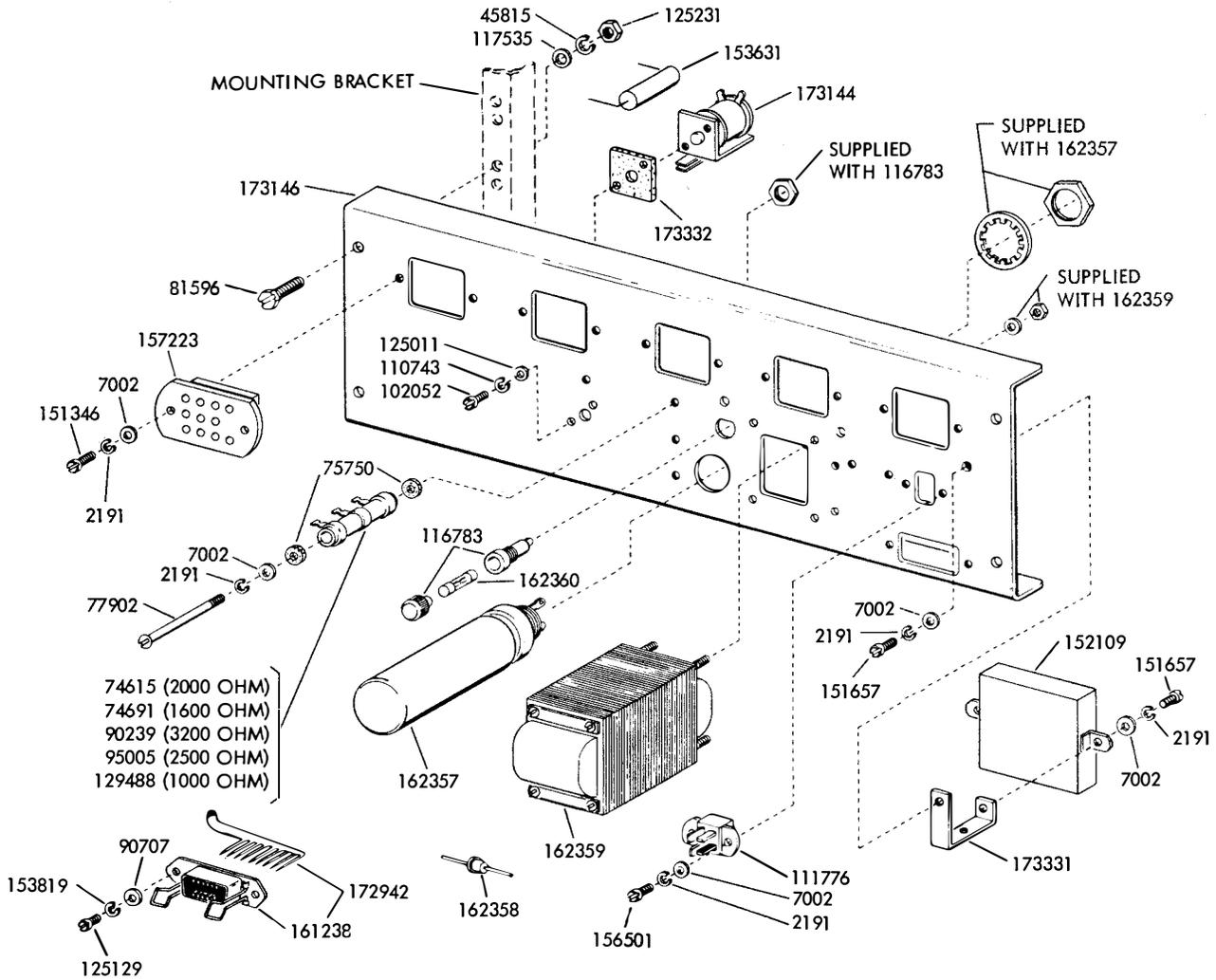


FIGURE 30. 164271 ELECTRICAL SERVICE ASSEMBLY

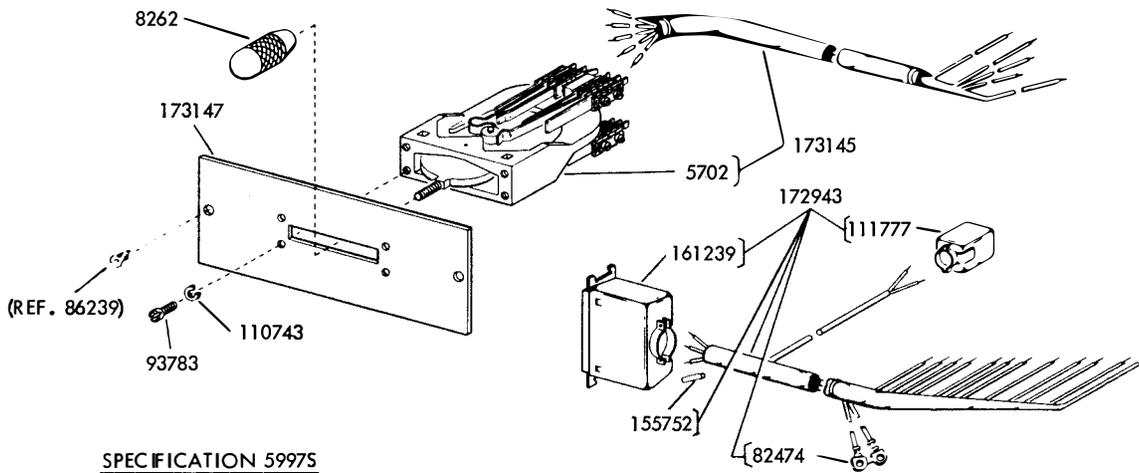
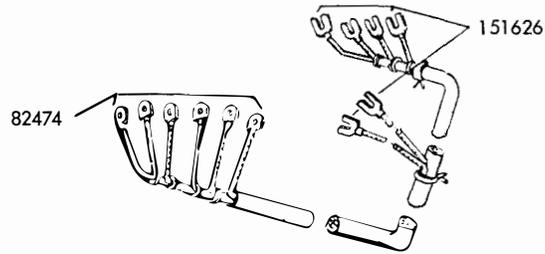
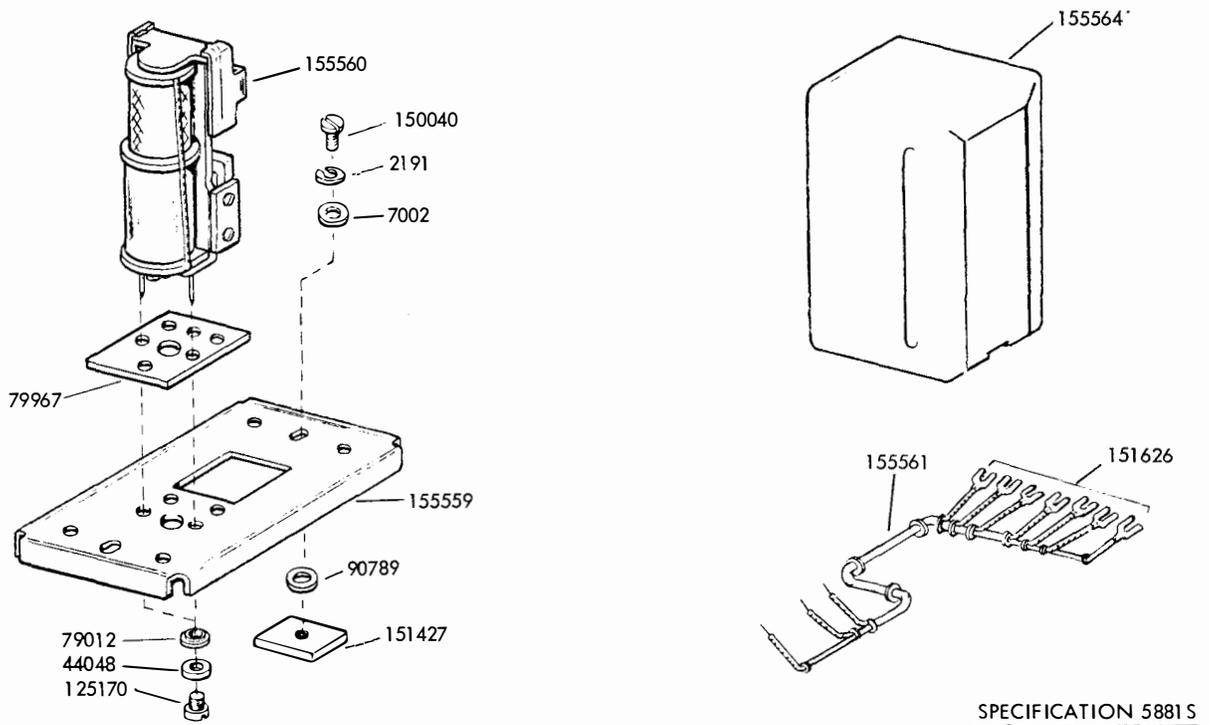


FIGURE 31. 173363 MODIFICATION KIT TO ADAPT A 164271 ELECTRICAL SERVICE ASSEMBLY FOR USE IN A CABINET



160223 (APPROXIMATELY 35" LONG)
 179434 (APPROXIMATELY 92" LONG)

FIGURE 32. 160223 AND 179434 AUXILIARY CABLE ASSEMBLIES



SPECIFICATION 5881 S

FIGURE 33. 15558 DC CONTROL RELAY ASSEMBLY

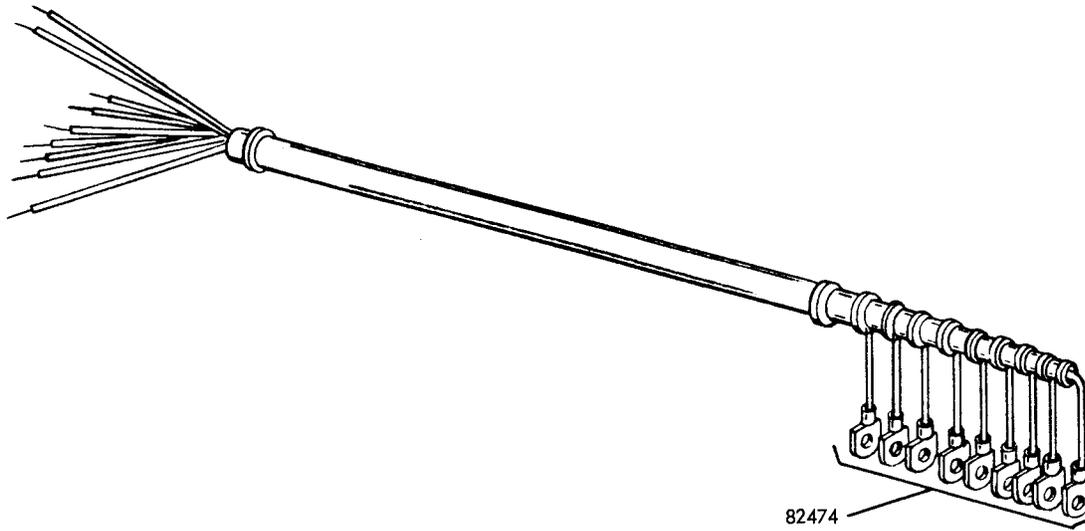
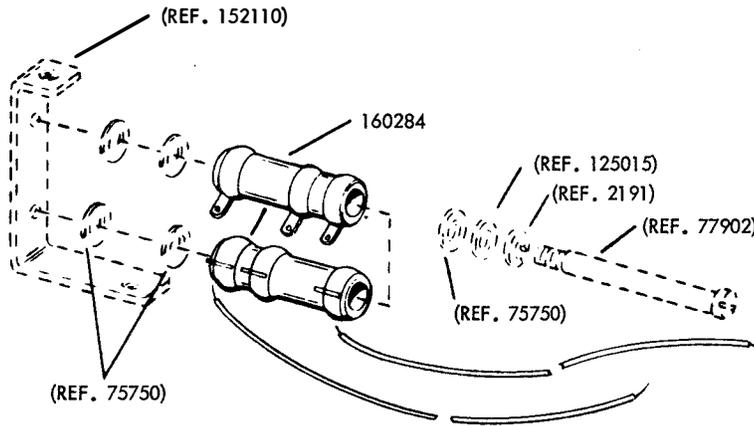


FIGURE 34. 155785 CABLE EXTENSION



SPECIFICATION 56645

FIGURE 35. 159397 MODIFICATION KIT TO CONVERT THE 152623 LINE RELAY MOUNTING ASSEMBLY TO THE 160226 ASSEMBLY

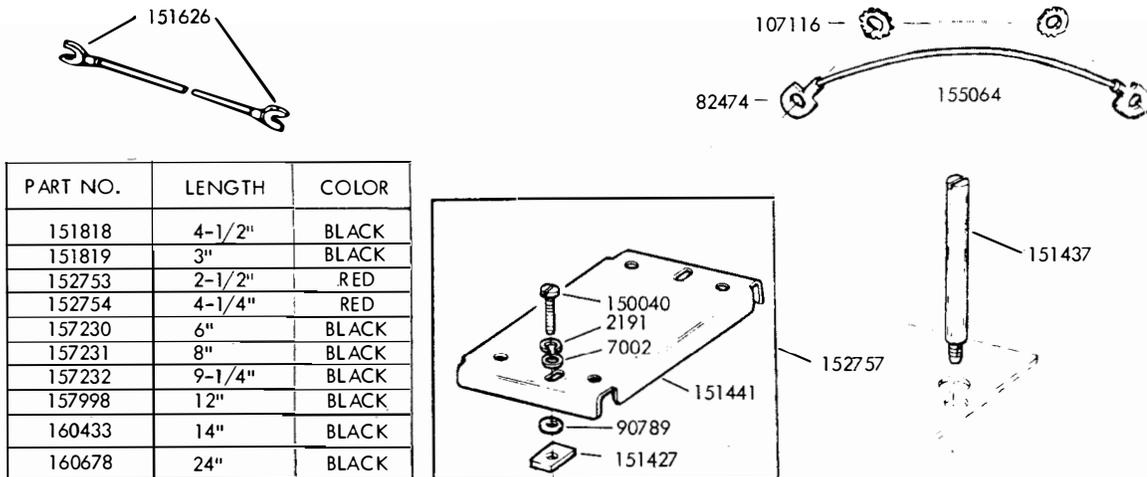
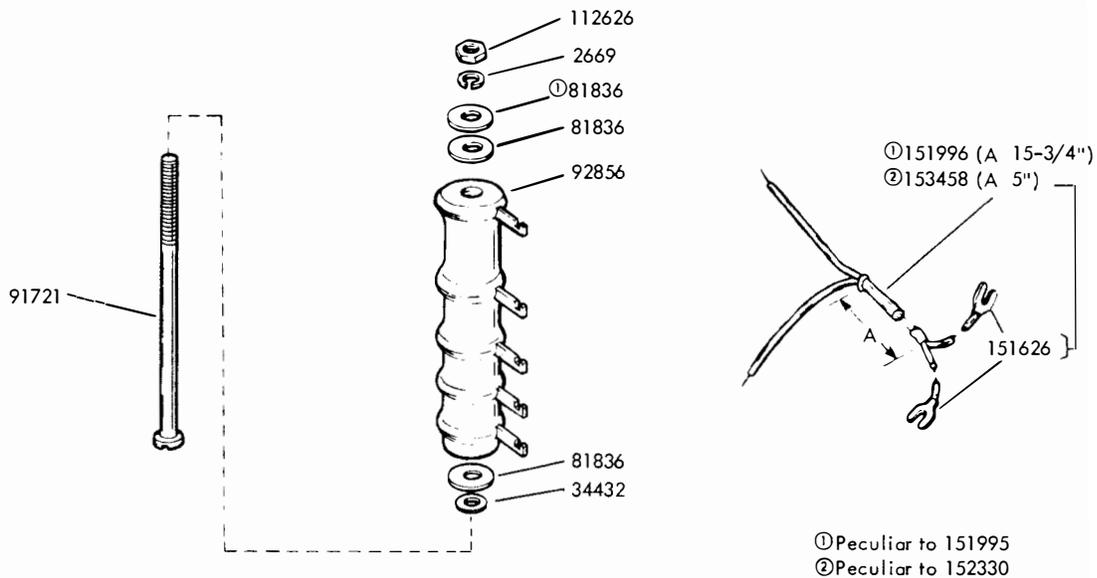
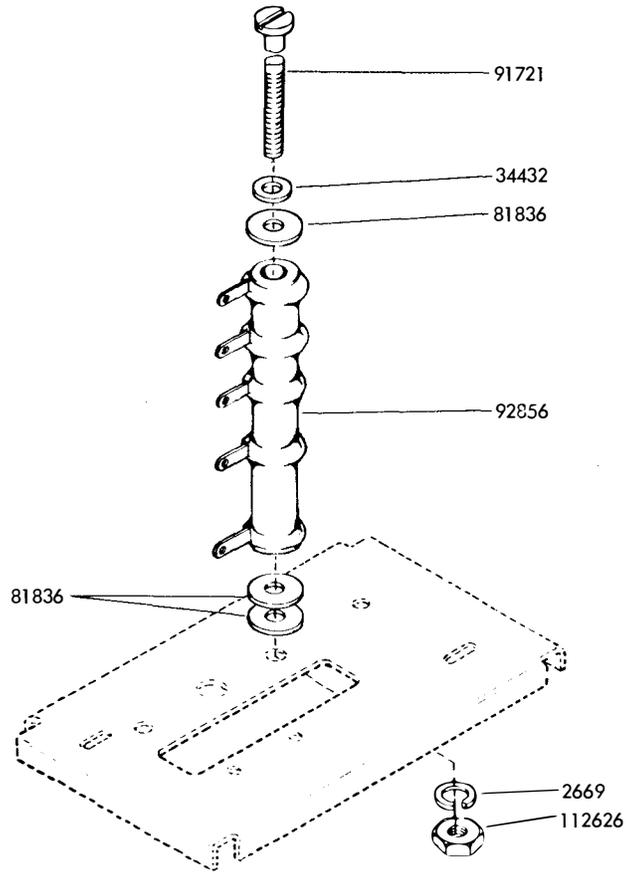


FIGURE 36. VARIABLES FOR THE ELECTRICAL SERVICE UNIT



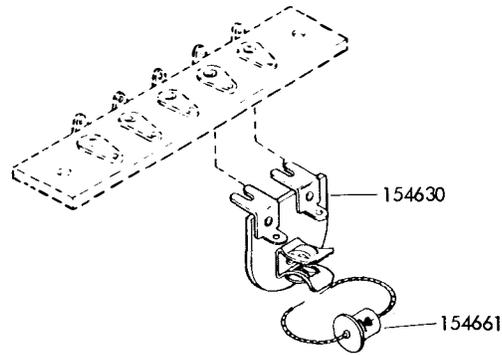
SPECIFICATION 5774S

FIGURE 37. 151995 AND 152330 MODIFICATION KITS TO ADD LINE PAD RESISTOR TO LESU



USED WITH 152332
SEE FIGURE 24

FIGURE 38. 93073 1500 OHM RESISTOR MODIFICATION KIT



Specification 5779S
USED WITH 152332
SEE FIGURE 24

FIGURE 39. 152331 RECTIFIER ASSEMBLY

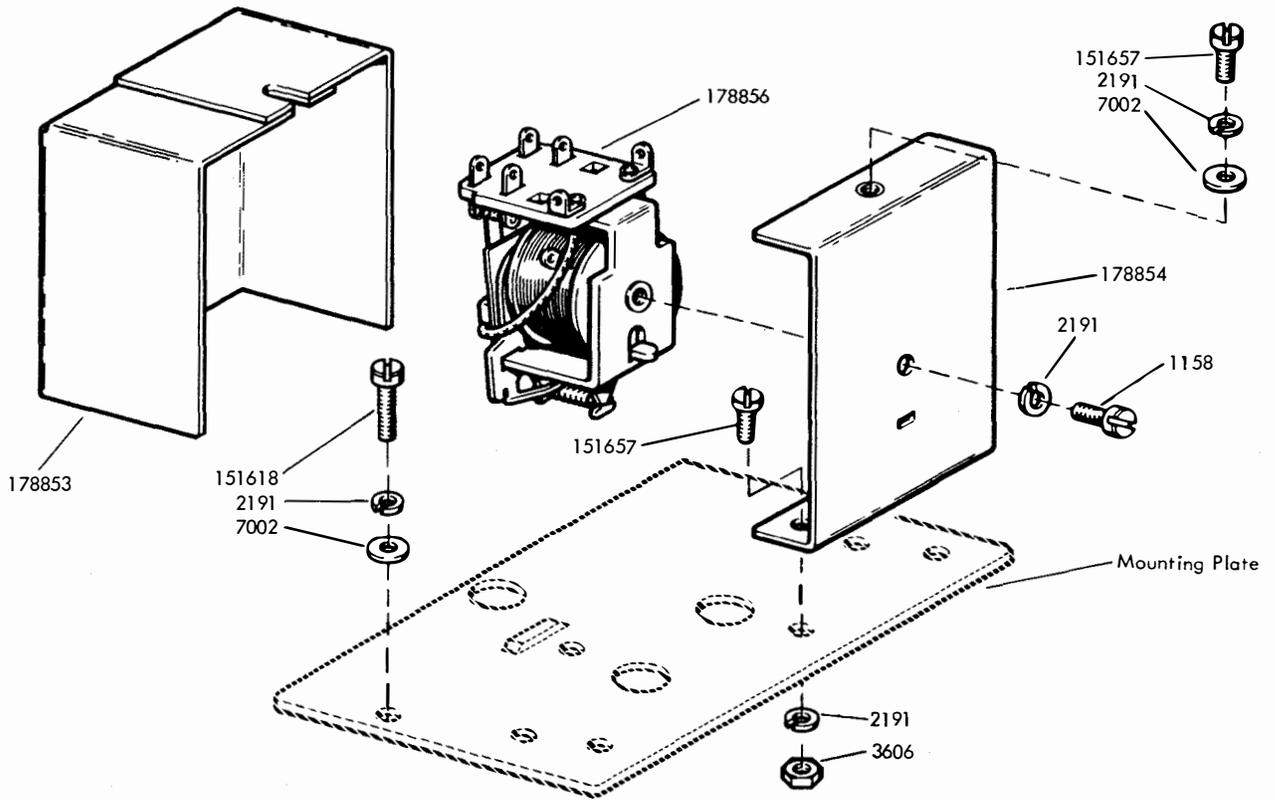
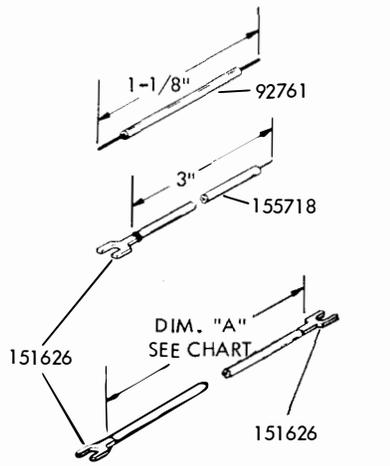


FIGURE 40. LINE SHUNT RELAY (NEW STYLE)



PART NUMBER	"A" DIMENSION	PARTS REQUIRED
151819	3"	151626 (2)
157231	8"	151626 (2)
157232	9-1/4"	151626 (2)

SPECIFICATION 57765

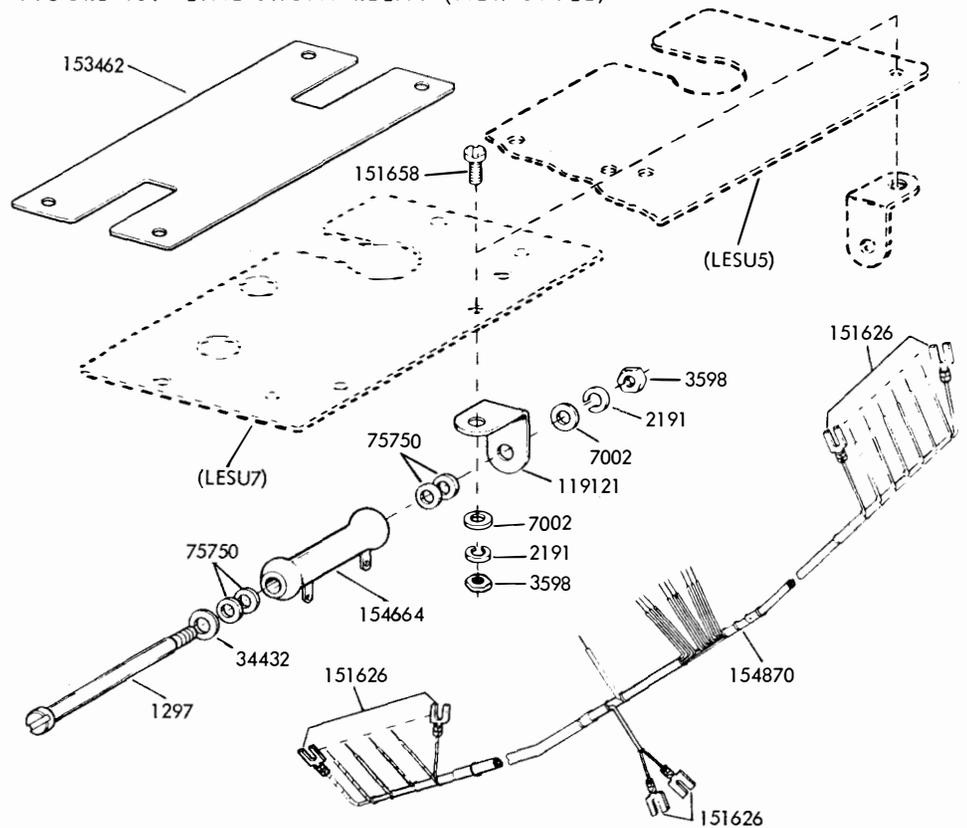


FIGURE 41. 154747 MODIFICATION KIT TO EQUIP AN LESU FOR CONTINUOUS SPACING

CABLE CLAMPS

Part No.	I.D.
121242	1/8
121243	3/16
121244	1/4
121245	5/16
121246	3/8
121247	7/16
121248	1/2
121249	5/8
121250	3/4
121251	1

INSULATING SLEEVES

Part No.	I.D.	Length
155750	3/32	1/2"
155751	1/8	1"
155752	5/64	1/2"
155753	1/8	1/2"
155754	1/16	1/2"
155755	11/64	5/8"

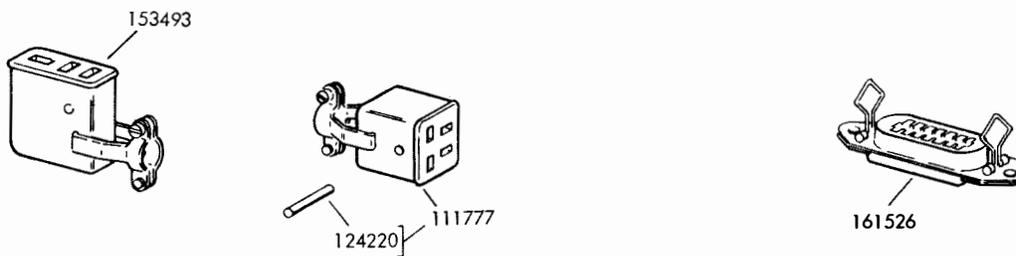
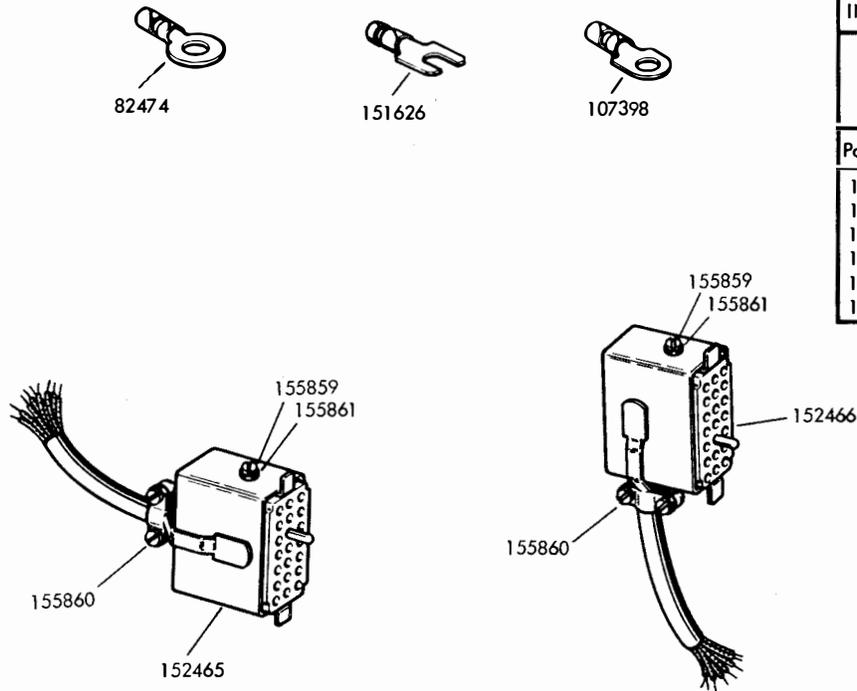
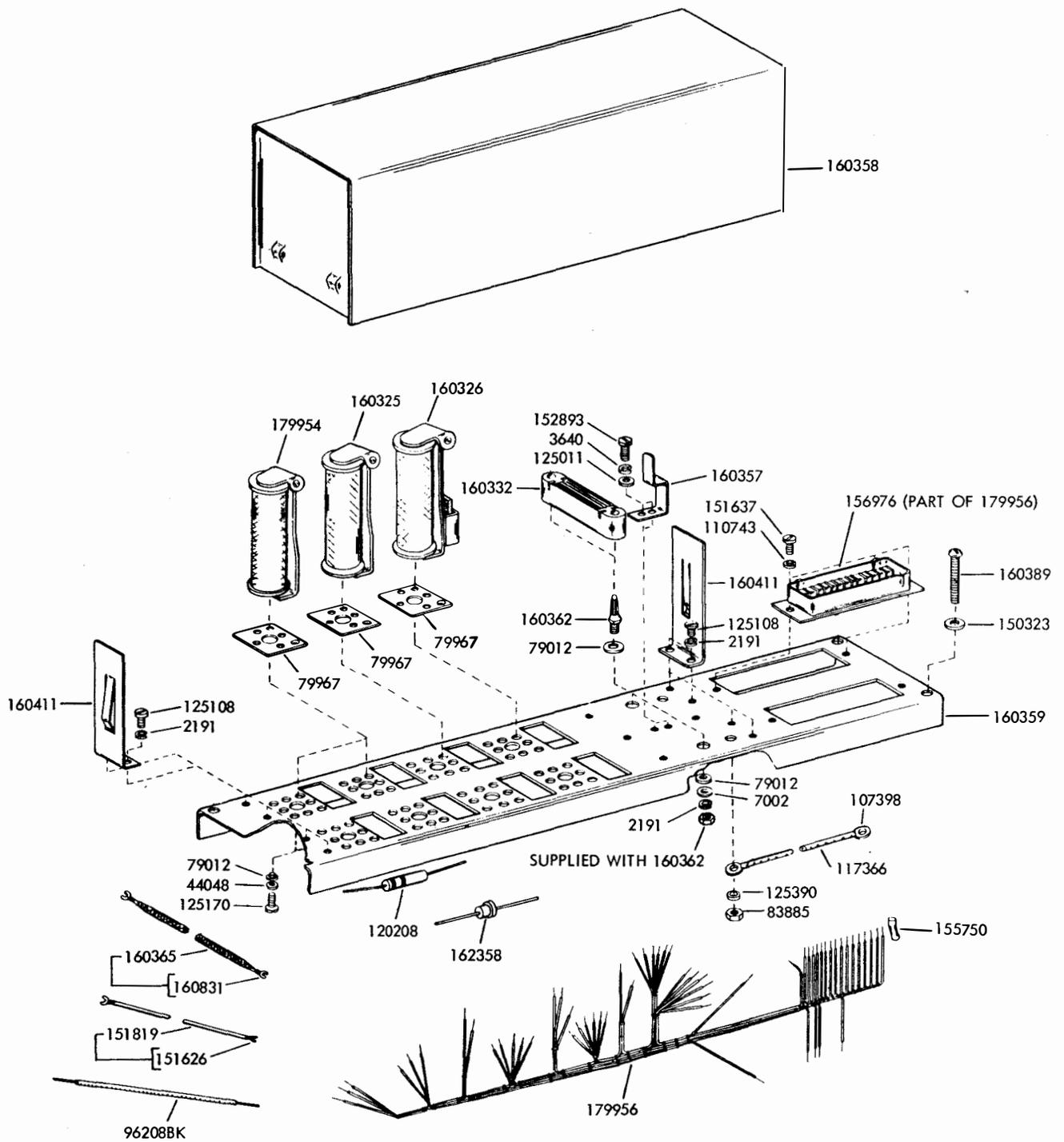


FIGURE 42. CABLE COMPONENTS



SPECIFICATION 58875

FIGURE 43. 179472 MODIFICATION KIT TO PROVIDE TRANSMITTER AND REPERFORATOR CONTROL

NUMERICAL INDEX

Part Number	Description and Page Number	Part Number	Description and Page Number	Part Number	Description and Page Number
169M	Coil, Magnet 25	73588	Spring, Contact 25	107427	Resistor (25 Ohm) 22
247M	Coil, Magnet 20, 23	73592	Plate 25	108959	Switch, Toggle (DP-ST) 29
252M	Coil, Magnet 23	73593	Spring, Contact 25	110434	Screw (4-40 x 3/16 Fil) 20, 28
1018	Screw (3-48 x 5/16 Fil) 6	74614	Resistor (2,600 Ohm) 15, 16	110435	Nut (4-40 Hex) 20, 23
1028	Screw (4-40 x 1/4 Fil) 16, 19, 20, 22, 25	74615	Resistor (2,000 Ohm) 22, 30	110743	Washer, Lock 6, 17, 19, 22, 25, 27, 29, 30, 37
1079	Screw (6-32 x 5/16 Rd) 21	74691	Resistor (1,600 Ohm) 30	111017	Screw (6-40 x 5/16 Fil) 3 To 7, 21
1093	Screw (8-32 x 7/16 Fil) 23	74821	Resistor (2,810 Ohm) 15, 16, 27	111776	Connector, Plug (4 Pt) 30
1157	Screw (8-32 x 1/2 Fil) 3, 6, 14	74882	Spring 23	111777	Connector, Receptacle (4 Pt) 30, 36
1158	Screw (6-32 x 5/16 Fil) 35	75231	Bushing, Insulating 25	111970	Key, Line Test 18, 19
1164	Screw (2-56 x 3/16 Fil) 21	75750	Washer, Insulating 5, 15, 16, 18, 19, 22, 24, 26, 27, 29, 30, 35	111971	Knob 18, 19
1172	Screw (2-56 x 5/16 Fil) 13	76099	Washer, Flat 4, 18, 22	112626	Nut (10-32 Hex) 33, 34
1248	Screw (6-40 x 1/2 Flat) 15, 16, 29	76461	Washer, Flat 27	112627	Nut (2-56 Hex) 13
1268	Screw (6-40 x 5/16 Flat) 17	76832	Screw (12-24 x 5/8 Hex) 14	114478	Nut (15/32-32 Hex) 5, 29
1297	Screw (6-40 x 2-7/16 Fil) 5, 15, 18, 29, 35	76983	Screw (4-40 x 1-1/4 Fil) 25	114654	Strip, Terminal 28
2034	Washer, Flat 23	77629	Resistor (3,000 Ohm) 21	115358	Fuse (1 Amp) 6
2191	Washer, Lock 3 To 13, 15 To 20, 22 To 31, 33, 35, 37	77902	Screw (6-40 x 2-3/8 Rd) 16, 19, 22, 27, 30	116783	Holder, Fuse 3 To 6, 13, 30
2201	Nut (5/16-32 Hex) 23	78904	Nut (8-32 Hex) 21	117366	Jumper (8-1/2" Green) 37
2263	Nut (8-32 Hex) 17	78905	Washer, Insulating 21	117535	Washer, Flat 30
2422	Washer, Lock 13	79012	Insulator 27, 28, 31, 37	118169	Resistor (1.0 Meg Ohm) 29
2449	Washer, Lock 25	79513	Plate, Contact Top 25	118511	Fuse (.125 Amp) 5
2658	Nut (6-32 Hex) 5, 12, 13	79967	Insulator 27, 31, 37	118516	Post 29
2669	Washer, Lock 33, 34	80721	Washer, Flat 17	118617	Screw, Self-Tapping (6-32) 29
3438	Washer, Flat 15, 19	80854	Screw (6-40 x 1-7/16 Fil) 4, 23, 26, 29	118720	Resistor (100,000 Ohm) 29
3595	Nut (1/4-32 Hex) 25	81596	Screw (10-32 x 1-3/8 Hex) 30	118726	Resistor (820 Ohm) 28
3598	Nut (6-40 Hex) 3 To 7, 15 To 21, 23 To 27, 29, 35	81775	Resistor (8,000 Ohm) 15	118791	Capacitor (1,000 MFD) 29
3599	Nut (4-40 Hex) 17, 27	81824	Nut (4-40 Hex) 22	119045	Grommet, Rubber 27
3606	Nut (6-40 Hex) 3, 4, 29, 35	81836	Washer, Insulating 29, 33, 34	119121	Bracket 5, 29, 35
3618	Insulator (.062") 25	82474	Terminal 5, 21, 22, 30 To 33, 36	120142	Shield, Tube 29
3640	Washer, Lock 20, 27, 37	82516	Spring, Retaining 15, 16, 29	120175	Plate (ON-OFF) 4
3646	Washer, Lock 3, 6, 15, 17, 20, 23	82870	Resistor (6,300 Ohm) 18	120195	Rectifier 11
3647	Insulator (.094") 25	83885	Nut (6-32 Hex) 37	120208	Resistor (22 Ohm) 37
3650	Washer, Flat 22	89548	Spring, Contact 15, 16, 29	121125	Washer, Spring 22, 23
3870	Spring 23	89969	Washer, Insulating 4, 17, 22	121242	Clamp, Cable (1/8" ID) 36
3899	Spacer (.188") 25	90096	Washer, Insulating 29	121243	Clamp, Cable (3/16" ID) 26, 36
4703	Spring 20	90239	Resistor (3,200 Ohm) 30	121244	Clamp, Cable (1/4" ID) 36
4707	Washer, Flat 29	90707	Washer, Flat 30	121245	Clamp, Cable (5/16" ID) 23, 36
5702	Key 30	90789	Washer, Flat 5, 6, 8, 10 To 13, 15 To 20, 22 To 29, 31, 33	121246	Clamp, Cable (3/8" ID) 6, 14, 27, 29, 36
5816	Washer, Insulating 23	90951	Washer, Lock 23	121247	Clamp, Cable (7/16" ID) 36
6345	Nut (6-32 Hex) 10, 17, 29	91683	Nut (15/32-32 Hex) 3 To 6, 29	121248	Clamp, Cable (1/2" ID) 3, 36
6827	Block 15, 16, 29	91721	Screw (10-32 x 2-3/4 Fil) 33, 34	121249	Clamp, Cable (5/8" ID) 3, 36
7002	Washer, Flat 3 To 13, 15 To 20, 22 To 31, 33, 35, 37	91768	Jumper (3-1/2" Black) 22	121250	Clamp, Cable (3/4" ID) 3, 36
7603	Spring 23	92260	Washer, Lock 5, 11, 12, 13	121251	Clamp, Cable (1" ID) 36
7959	Bracket, Magnet 25	92264	Screw (6-32 x 2-1/4 Rd) 29	124220	Pin, Drive 36
8262	Knob 30	92527	Washer, Lock 3, 5, 6	124566	Clamp, Condenser 14
34432	Washer, Flat 5, 29, 33, 34, 35	92761	Jumper (1-1/2" Black) 29, 35	125011	Washer, Flat 19, 25, 30, 37
43954	Bell 20	92856	Resistor (1,500 Ohm) 33, 34	125015	Washer, Flat 11, 16, 20
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45815	Washer, Lock 30	93191	Screw (4-40 x 5/16 Flat) 17	125112	Screw (2-56 x 1/8 Fil) 25
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