

SIEMENS-ALLIS

Phil
Switchgear

RENEWAL PARTS ORDER GUIDE

SUPPLEMENT TO 18X10229

**MCV-500 VACUUM CIRCUIT BREAKERS
WITH
STORED ENERGY OPERATOR
NO. 515-2V**

**18X10228
January, 1978**

www.ElectricalPartManuals.com

**HOW TO USE YOUR
RENEWAL PARTS ORDERING GUIDE**

1. Locate the part or parts to be replaced in one of the drawings in this manual. Refer to the usage code table on page ii for drawings applicable to your breaker.
2. Identify each part by item number, description and part number. Give drawing figure number in which part is shown.
3. Include breaker type, rating and breaker serial number with your order.
4. Place order with your Siemens-Allis representative.

ORDERING EXAMPLE

Type	<u>MCV-500</u>	Rated Amps	<u>1200</u>	Serial Number	<u>H61064-1</u>
Renewal Parts Ordering Guide		<u>18X10228</u>			
<u>Fig</u>	<u>Item</u>	<u>Description</u>	<u>Part Number</u>	<u>Quantity</u>	
1	2	Stud	18-724-685-001	1	
1	6	Insulator	00-871-275-001	2	
2	148	Shock Absorber	15-171-424-010	1	

If required part is not identified in this manual — — —

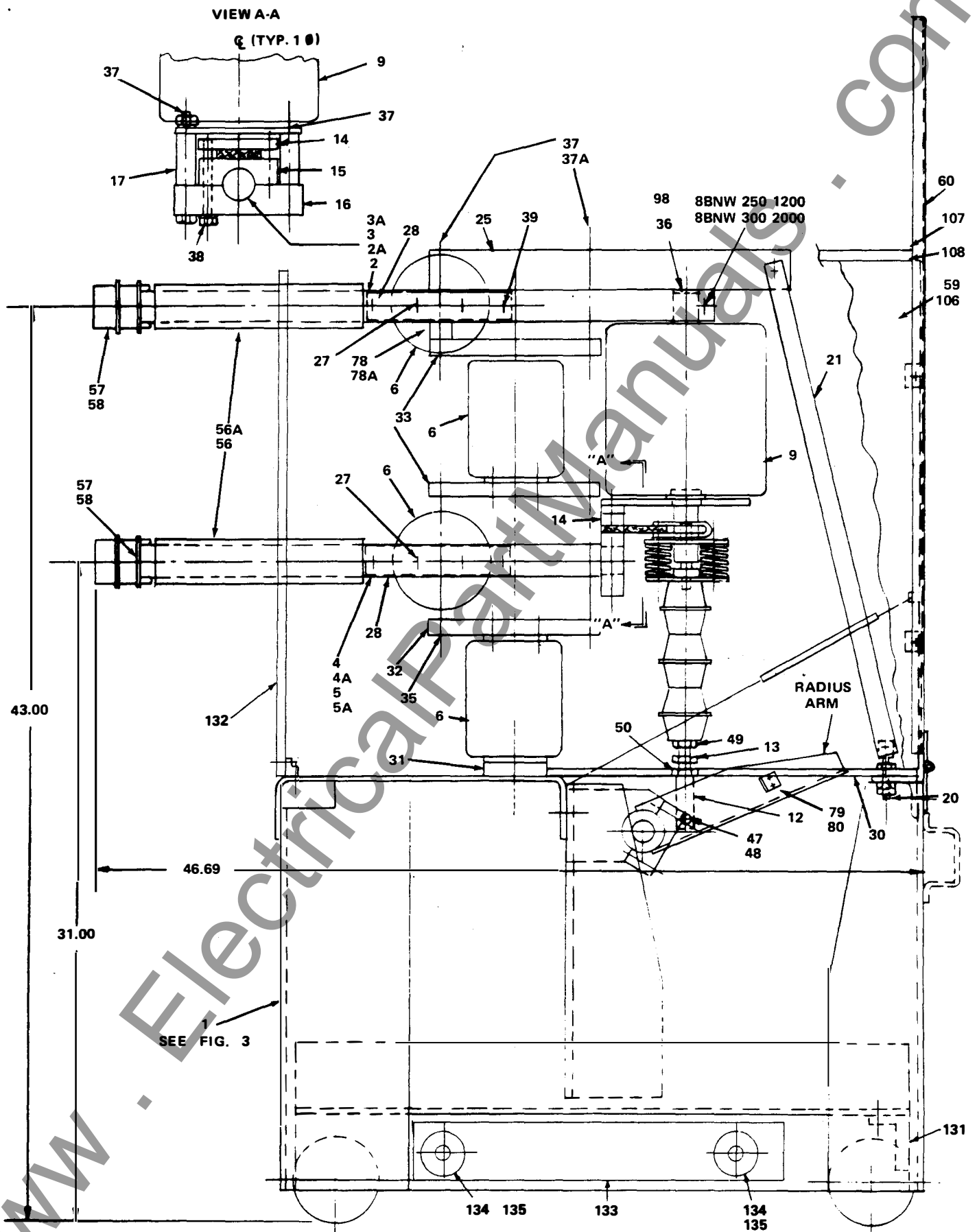
1. Make a copy of the drawing figure in which the part would appear.
2. Indicate with arrows or other markings location of part.
3. Describe or sketch required part.
4. Include breaker type, rating and breaker serial number with your order.
5. Place order with your Siemens-Allis representative.

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- Figure 1. Breaker Assembly
 Figure 2. Frame and Operator
 Figure 3. Operator Assembly

ITEM DESCRIPTION FOR FIGURE 1 & FIGURE 1A

ITEM DESCRIPTION	PART NUMBER	USAGE
1 Frame & Operator	18-472-957-501	
2 Stud #1 & 3 Upper	18-396-561-501 (1200A)	
2A Stud #1 & 3 Upper	18-396-791-501 & 502 (2000A)	
3 Stud #2 Upper	18-730-889-001	
3A Stud #2 Upper	18-731-105-001	
4 Stud #1 & 3 Lower	18-396-444-501 & 503 (1200A)	
4A Stud #1 & 3 Lower	18-396-794-501 & 503 (2000A)	
5 Stud #2 Lower	18-396-444-502 (1200A)	
5A Stud #2 Lower	18-396-794-502 (2000A)	
6 Insulator	00-871-275-001	
9 Vacuum Tube Ass'y. (See Figure 1A)		
MCV-500, 1200A	18-657-815-587	
MCV-500, 2000A	18-657-815-589	
12 Pivot	18-657-521-190	
13 Adjusting Screw	18-657-780-183	
14 Clamp Bar	18-657-270-301	
15 Contact	18-657-270-298	
16 Support	18-657-521-183	
17 Spacer	18-657-270-304	
20 Eye Bolt	18-657-521-188	
21 Insulator Bar	18-657-521-181	
25 Stud Support	18-657-521-193	
27 Stud	18-724-451-008	
27A Stud	18-724-451-015	
28 Support	18-657-521-182	
29 Stud	18-657-822-284	
30 Barrier	18-726-887-001	
31 Support	18-724-680-001	
32 Support	18-724-679-001	
33 Support	18-724-679-002	
35 Stud	18-724-451-007	
36 Washer	00-651-007-215	
36A Spacer	18-194-796-001	
37 Bolt	00-611-315-566	
37A Bolt	00-611-315-568	
38 Bolt	00-611-315-564	
39 Bolt	00-611-315-480	
47 Pin	71-104-754-035	
48 Cotter Pin	00-671-195-191	
49 Nut R.H. Thd.	00-631-143-108	
50 Nut L.H. Thd.	00-631-146-208	
56 Tube	18-724-687-002 (1200A)	
56A Tube	18-726-879-003 (2000A)	
57 Contact Finger Ass'y.	18-657-456-579	
57A Contact Finger Ass'y.	18-723-565-501	
Screw	00-611-447-463	
58 Round Washer	00-651-007-214	
Lockwasher	00-651-017-214	
-59 Phase Barrier, Center	18-657-411-303	
60 Panel	18-730-888-501	
61 Spring	71-113-600-001	
78 Spacer	18-166-847-004	
78A Spacer	18-166-847-010	
79 Angle	71-113-680-001	
80 Shim	71-113-679-001	
-106 Phase Barrier Outer	18-657-825-057	
-107 Strip (Guide)	71-116-468-001	
-108 Rivet	00-671-501-070	
131 Racking Angle	18-657-897-300	
132 Support	18-657-897-014 or 18-657-898-225	
133 Guide Wheel Suppt.	18-731-103-001	
134 Wheel	71-100-784-001	
135 Stud	18-657-901-121	



VACUUM CIRCUIT BREAKER

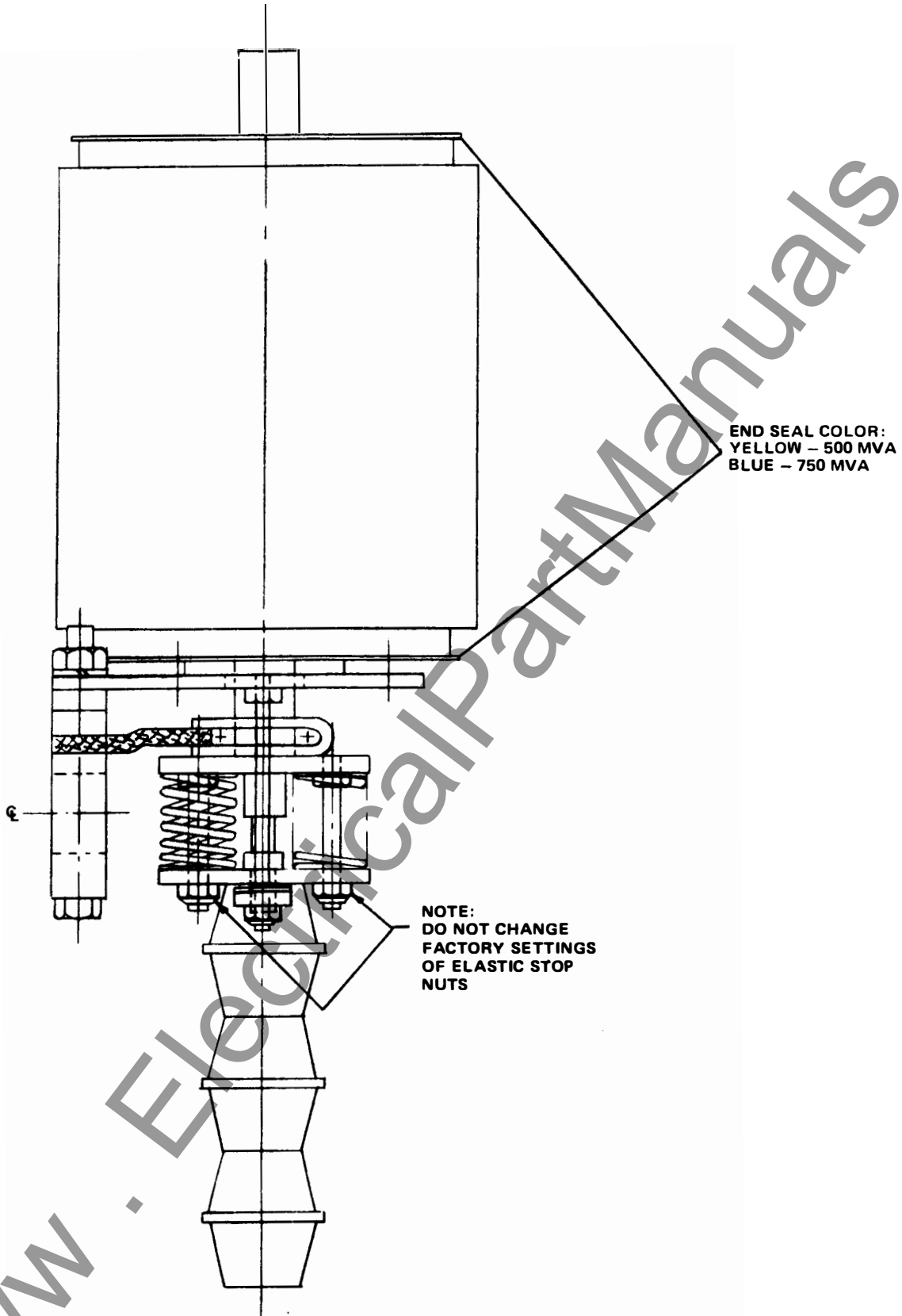


Fig. 1A – Vacuum Interrupter Assembly – One Pole

ITEM DESCRIPTION FOR FIGURES 2 & 2A

ITEM	DESCRIPTION	PART NUMBER	USAGE	ITEM	DESCRIPTION	PART NUMBER	USAGE
1	Frame & Operator	18-472-957-501		74	Hex Hd Cap SCR	00-611-315-466	
4	Operator Assembly	18-657-770-515		75	Hex Hd Cap SCR	00-611-315-546	
6	(Radius) Arm Ass'y.	18-392-990-501		76	Hex Hd Cap SCR	00-611-315-548	
7	Push Rod Assembly	18-723-509-501		77	Hex Hd Cap SCR	00-611-315-562	
8	Crank Assembly	18-724-407-501		79	Cap	00-633-182-060	
9	Manual Charge Arrgt.	18-391-037-501		80	Hex Hd Cap SCR	00-611-315-382	
11	Indicator Arm Ass'y.	71-113-474-501		81	Hex Nut	00-631-003-204	
13	Guide Assembly	18-657-862-569		82	Hex Nut	00-631-059-106	
14	Ground Contact Ass'y.	71-114-787-502		84	Locknut	15-171-063-006	
15	Bracket Assembly	18-657-889-528		85	Locknut	15-171-063-011	
16	Lever Assembly	72-120-568-502		86	Locknut	15-171-063-012	
17	Foot Pedal Assembly	18-657-506-562		88	Nut	00-633-074-105	
18	Frame Assembly	18-472-657-501		89	Nut	00-633-025-220	
19	Spring	71-204-604-028		92	Cotter Pin	00-671-195-049	
20	Stud	18-292-228-031		93	Cotter Pin	00-671-195-115	
21	Pin	71-104-754-034		94	Cotter Pin	00-671-195-119	
22	Pin	71-104-754-035		95	Cotter Pin	00-671-195-191	
23	Pin	71-104-754-040		96	Roll Pin	00-671-176-377	
24	Shield Stud	71-108-105-003		97	Clevis Pin	00-957-211-901	
25	Oper. Counter	71-110-940-002		98	Clevis Pin	00-957-211-903	
26	Plunger	71-113-442-001		99	RD Washer	00-651-007-146	
29	Angle	71-113-530-001		100	RD Washer	00-651-007-900	
32	Rod End	71-113-633-001		101	RD Washer	00-651-007-214	
33	Spring	18-657-853-386		102	RD Washer	00-651-007-285	
40	Rod	12-120-329-001		103	Lockwasher	00-655-017-026	
41	Comp. Spring	71-140-125-001		104	Lockwasher	00-655-017-032	
42	Spring	71-153-031-001		105	Lockwasher	00-655-017-040	
43	Bracket	72-120-708-001		106	Wheel	15-171-067-002	
44	Pin	18-657-523-124		108	Spring	00-837-455-012	
45	Angle	18-657-898-147		109	Lock Nut	00-655-017-030	
46	Pull, Rod	18-657-229-198		110	Jam Nut	00-631-171-104	
47	Washer	71-152-809-002		111	Hex Hd Cap SCR	00-611-315-468	
49	Bracket	18-657-522-326		121	Pin	18-657-464-105	
50	Crank Assembly	18-731-272-501		122	Retaining Ring	00-673-165-075	
51	Roller	72-120-706-001		123	Washer	71-152-809-026	
52	Hex Hd Bolt	00-611-343-030		124	Indicator	71-101-247-001	
53	Bracket	18-723-506-002		125	Indicator	71-101-248-001	
54	Handle	15-171-175-001		126	Sec. Disc	72-120-239-501	
55	Arm	72-120-399-001		127	Cotter Pin	00-671-195-257	
56	Switch	15-171-044-004		128	Nyliner Flg. Bushing	00-815-279-020	
57	Round (Rod)	71-104-107-013		130	Rod End	00-691-713-102	
58	Needle Bearing	00-813-119-814		131	Jam Nut	00-631-171-204	
66	Yoke End Adj.	00-691-701-901		132	Roll Pin	00-671-176-187	
67	Yoke End Adj.	00-691-701-903		133	Roll Pin	00-671-176-453	
68	Self Tap SCR	00-615-598-124		134	Bracket	18-724-562-001	
69	Hex Hd Cap SCR	00-611-315-378		135	Drive Support	18-657-768-200	
70	Hex Hd Cap SCR	00-611-315-419		136	Drive Shaft	18-724-563-001	
71	Hex Hd Cap SCR	00-611-315-422		137	Drive Shaft	18-724-563-002	
72	Hex Hd Cap SCR	00-611-315-424		138	Miter Gear	18-657-783-356	
73	Hex Hd Cap SCR	00-611-315-465		139	Cover	18-657-769-375	
				140	Roll Pin	00-671-176-189	
				141	Roll Pin	00-671-176-187	
				142	Bearing	15-171-387-001	
				143	V Joint	18-657-768-261	

ITEMS DESCRIPTION FOR FIGURES 2 & 2A (CONTINUED)

ITEM	DESCRIPTION	PART NUMBER	USAGE
144	Bearing	00-815-081-040	
145	Roll Pin	00-671-171-313	
146	Aux. Switch	71-208-922-504	
147	Support	18-657-804-082	
148	Shock Absorber	15-171-424-010	
149	Support	18-657-804-081	
151	Rod Eye	00-691-713-103	
152	Jam Nut	00-631-171-205	
153	Stop Bar	18-727-107-001	
154	Spring	15-171-331-011	
155	Tore End	71-113-487-002	
156	Jam Nut	00-631-171-110	
157	Clevis Pin	00-957-212-007	
159	Cotter Pin	00-671-195-193	
160	Jam Nut	00-631-171-108	
161	Support Block	18-657-804-080	
162	Pin	71-104-754-047	
163	Washer	71-152-809-024	
164	Shim	18-657-765-182	

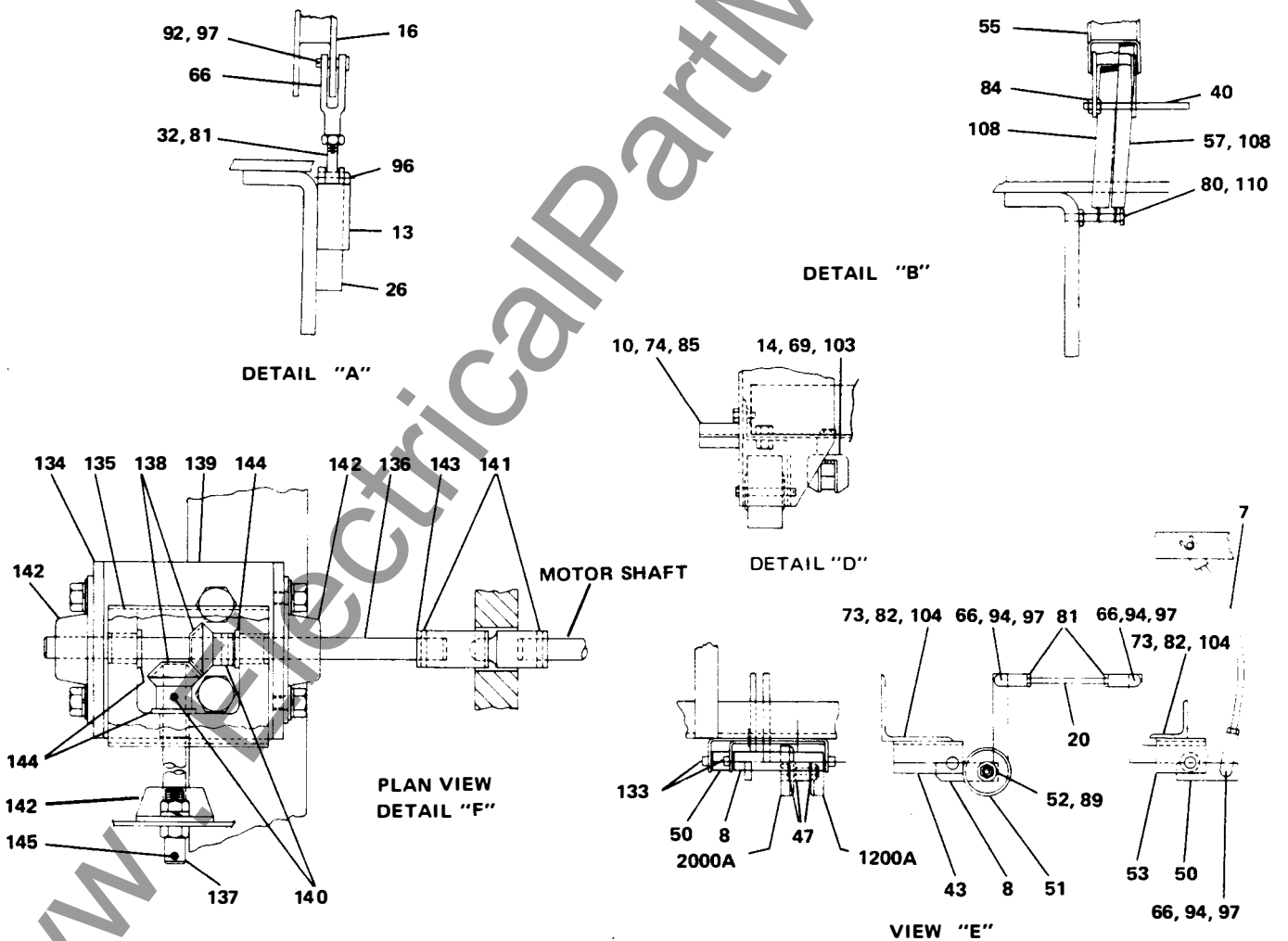


Figure 2A. Circuit Breaker Frame and Operator Assembly (Continued)

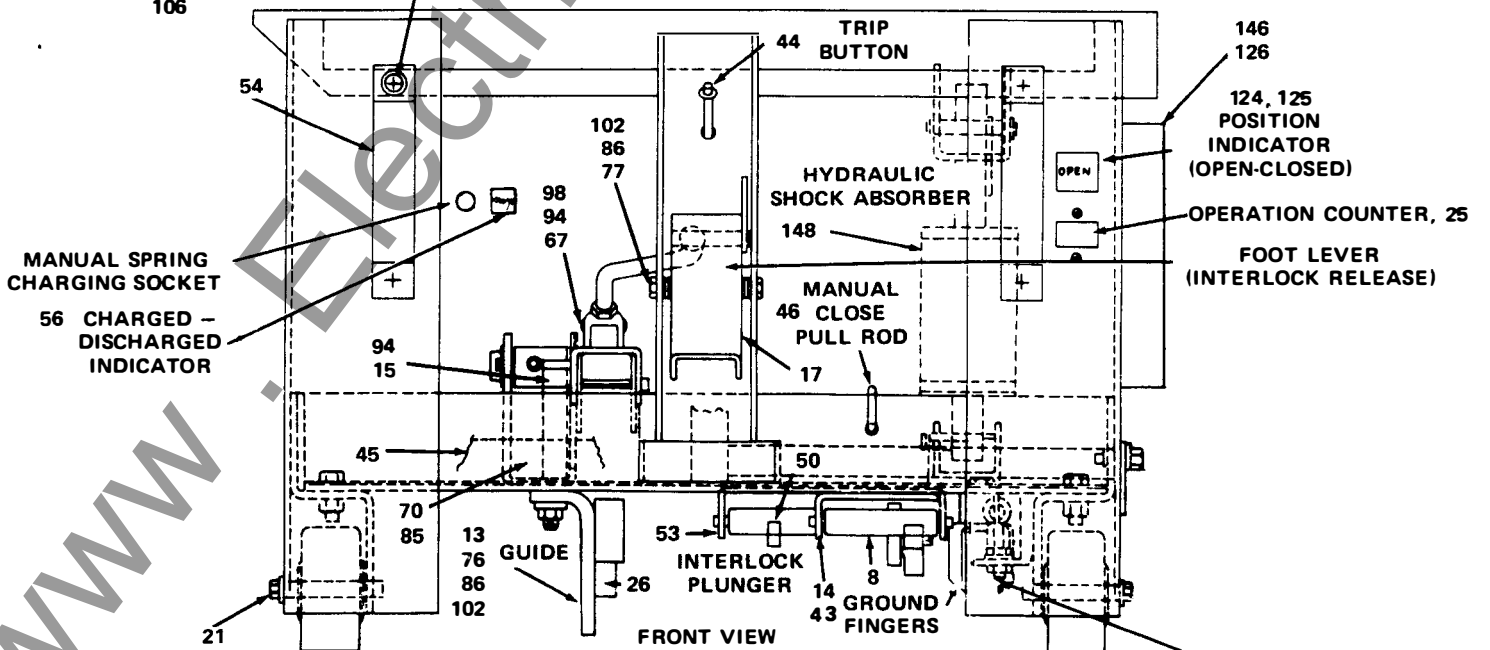
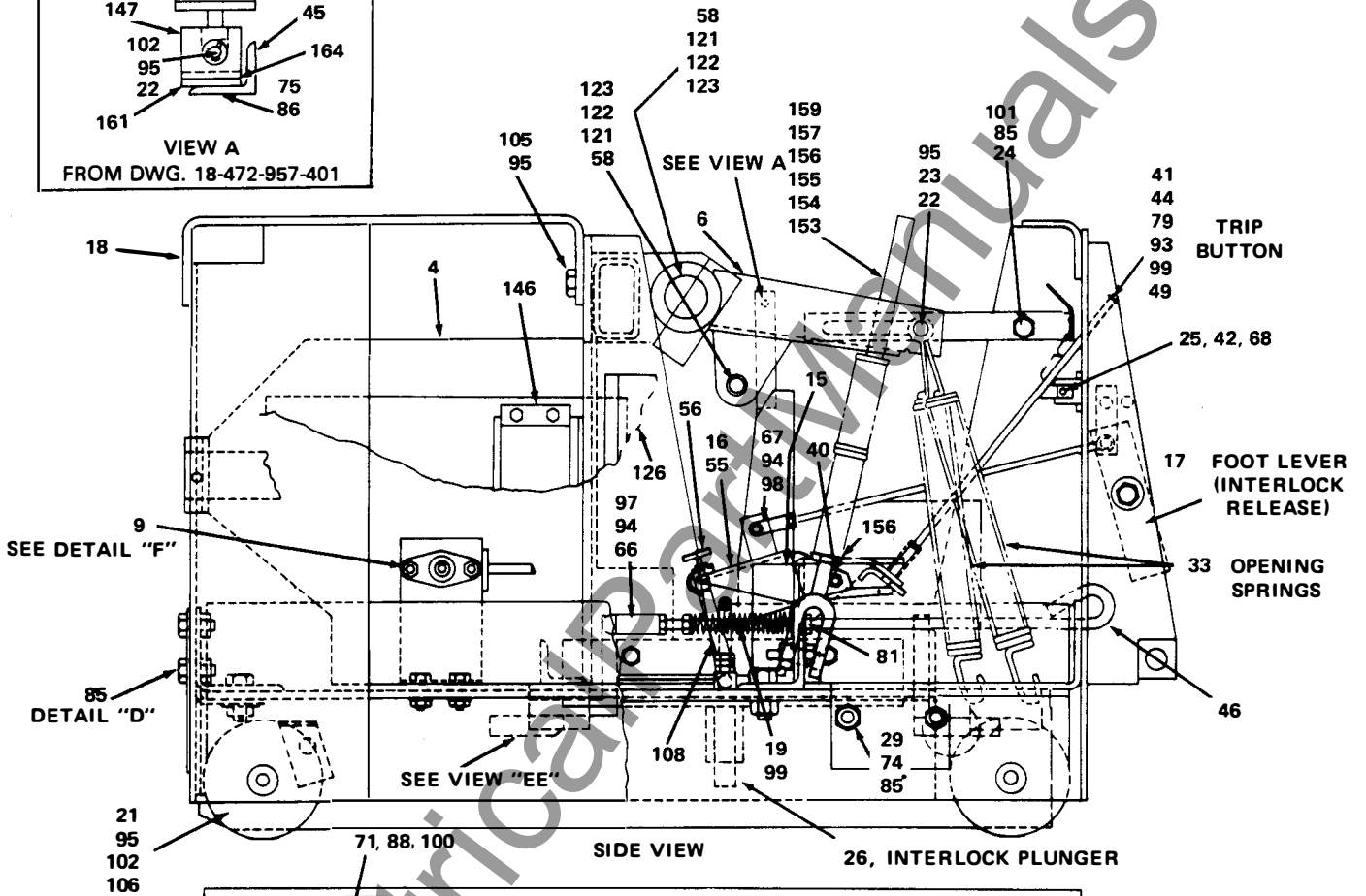
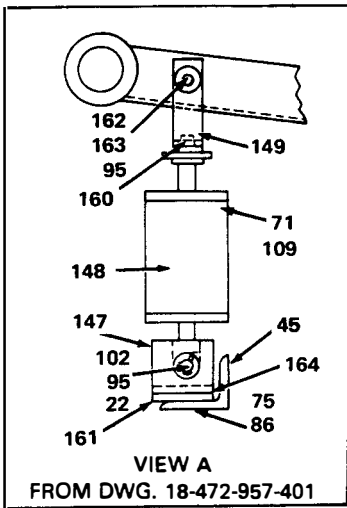


Figure 2. Circuit Breaker Frame and Operator Assembly

ITEMS DESCRIPTION FOR FIGURES 3, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H

ITEM	DESCRIPTION	PART NUMBER	USAGE	ITEM	DESCRIPTION	PART NUMBER	USAGE
1A	Operator Assembly	18-657-770-515		62	Roll Pin	00-671-176-309	
1	Frame Assembly	18-469-509-501		63	Closing Coil*	15-171-339-001	48V DC
2	Needle Bearing	00-813-119-810		63A		15-171-339-002	125V DC
3	Needle Bearing	00-813-119-814		63B		15-171-339-003	250V DC
4	Needle Bearing	00-813-119-821		63C		15-171-339-004	120V AC
5	Pawl Assembly	18-657-485-536		63D		15-171-339-005	240V AC
6	Stop Bracket Ass'y.	18-657-816-564		63E		15-171-339-012	24V DC
8	Slit Spacer	18-657-800-113		64	Trip Solenoid *	15-171-339-006	24V DC
9	Collar	18-657-467-290		64A		15-171-339-007	48V DC
10	Inner Race**	18-657-467-335		64B		15-171-339-008	125V DC
11	Spacer	18-158-935-009		64C		15-171-339-009	250V DC
12	Thrust Washer	00-815-225-131		64D		15-171-339-010	120V AC
13	Needle Bearing	15-813-119-003		64E		15-171-339-011	230V AC
14	Pin	18-657-463-368		66	Strip	18-657-467-239	
15	Stop Latch	18-657-463-388		67	Screw	00-615-223-172	
16	Trip Latch	18-657-463-390		68	Lockwasher	00-655-017-020	
17	Pin	18-657-464-012		69	Screw	00-615-245-222	
18	Pin	18-657-523-064		70	Lockwasher	00-655-017-022	
19	Shaft	18-657-463-389		71	Screw	00-615-245-218	
20	Motor*	18-469-223-001	{ 48V DC 115 AC 125V DC 230 AC 250V DC	72	Term. Block Supp. Bracket	18-657-524-111	
	C.W. Rotation	18-469-223-002		73	Term. Block with Hardware	00-857-036-012	
20A	Motor Brushes	15-171-450-001		74	Screw	00-615-471-124	
21	Charge Disc. Actuator	18-657-522-305		75	Lock washer	00-655-047-060	
22	Bracket	18-657-522-304					
23	Interlock Rod	18-657-522-269		80	Chain Link	00-831-349-065	
24	Roller Bearing	15-813-073-003		81	Pin	18-657-464-105	
25	Torsion Spring	18-657-466-081		82	Retaining Ring	00-673-165-075	
26	Torsion Spring	18-657-466-080		83	Washer	71-152-809-026	
27	Pawl Return Spring	18-657-229-240		85	Stop	18-657-464-118	
28	Comp. Spring	15-837-321-005		86	Washer	00-655-067-200	
29	Retaining Ring	00-673-165-062		87	Thrust Washer	15-813-129-004	
30	Spacer	18-158-935-011		88	Grease (1 lb. container)	00-337-131-001	
31	Adj. Screw	00-617-499-375		90	Spring Retainer	18-657-523-038	
32	Roll Pin	00-671-176-224		91	Shaft	18-657-463-369	
33	Roll Pin	00-671-176-325		92	Drive Block	18-657-465-170	
34	Roll Pin	00-671-176-383		93	Bearing Block	18-657-463-370	
35	Roll Pin	15-671-173-002		94	Spring	15-171-331-001	
36	Roll Pin	00-671-171-375		96	Retaining Ring	00-673-165-100	
37	Washer	18-657-522-303		97	Retaining Ring	00-673-165-087	
38	Washer, Thrust Race	15-171-091-005		98	Shim	18-657-784-007	
39	Screw	00-615-245-218		99	Universal Joint	18-657-768-261	
40	Lockwasher	00-655-017-022		100	Roll Pin	00-671-176-187	
41	Screw	00-611-315-392		101	Washer	71-114-297-001	
42	Washer	00-651-007-160		102	Screw	00-615-114-556	
43	Lockwasher	00-655-017-026		103	Flywheel	18-392-067-001	
44	Elastic Stop Nut	00-633-025-116		103A	Bumper	18-657-822-286	
45	Jam Nut	00-631-143-104		104	Link	71-118-258-504	
46	Roll Pin	00-671-176-373		105	Link	18-657-510-524	
47	Roll Pin	00-671-171-379		106	Roller	15-813-073-001	
48	Spacer	18-657-523-278		107	Pin	18-657-464-104	
50	Roll Pin	00-671-176-189		108	Spring	18-657-523-331	
51	Ratchet Assembly	18-390-202-501		109	Washer	71-152-809-026	
52	Cam Assembly	18-389-061-501		110	Spring Holder	18-657-523-332	
53	Cam Assembly	18-389-061-502		111	Retaining Ring	00-673-165-075	
54	Linkage Assembly (Consists of items 104 to 113)	18-469-116-501		112	Spring Anchor	18-657-523-333	
55	Motor & Closing Control (Consists of items 115 to 149)	18-390-246-501		113	Link	18-657-800-115	
56	Indicator Assembly	18-723-511-502		114	Needle Bearing	00-813-119-813	
57	Bracket*	18-657-782-273		115	Plate	18-723-641-001	
58	Pin	18-724-690-003		116	Terminal Block	00-857-036-012	
60	Solenoid Trip Link Assembly	18-657-770-518		117	Closing Latch Check Switch	15-171-323-001	AC

ITEM DESCRIPTION FOR FIGURES 3, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H (CONTINUED)

ITEM	DESCRIPTION	PART NUMBER	USAGE	ITEM	DESCRIPTION	PART NUMBER	USAGE
118	Closing Latch Check Switch	15-171-323-002	DC	134	Washer	00-655-047-080	
119	Actuator Arm	18-657-769-376		135	Screw	00-615-223-174	
120	Shield	18-657-468-090		136	Relay	25-134-022-501	
121	Extension Spring	18-657-523-061				25-134-022-502	
122	Screw	00-615-471-130		137	Capacitor Trip Device*	71-301-550-502	
123	Washer	00-655-047-060		138	Motor Cutoff Switch All Except 250 DC	18-657-514-567	
124	Nut	14-147-052-002		138A	Motor Cutoff Switch 250V DC Only	18-724-271-502	
125	Screw	00-617-247-470				NO-NO-NO-NC	
126	Nut	00-631-171-106		139	Washer	00-651-007-059	
127	Washer	00-655-017-032		140	Nut	00-631-109-106	
128	Washer	00-651-007-230		141	Eyelet	00-691-651-003	
129	Screw	00-615-471-124		142	Washer Rd.	00-651-007-123	
130	Screw	00-615-485-216		143	Screw	00-615-245-375	
131	Washer	00-655-017-022		144	Elastic Nut	00-633-103-216	
132	Washer	00-651-007-907		145	Screw	00-615-471-174	
133	Relay, Anti-Pump	00-871-797-107	125V DC	146	Lockwasher	00-655-047-080	
133A	Relay, Anti-Pump	00-871-797-108	250V DC	147	Screw	18-657-780-193	
133B	Relay, Anti-Pump	00-871-797-109	48V DC	148	Lockwasher	00-655-017-018	
133C	Relay, Anti-Pump	00-871-797-115	24V DC	149	Spring	15-171-366-007	
133D	Relay, Anti-Pump	15-171-405-002	120V AC				
133E	Relay, Anti-Pump	15-171-405-001	230V AC				

NOTES:

- *Give Breaker S/N and Control Voltage when Ordering Item
- **Must Be Supplied in Pairs
- ***Must Be Supplied as a Matched Set

SEE FIG. 3H

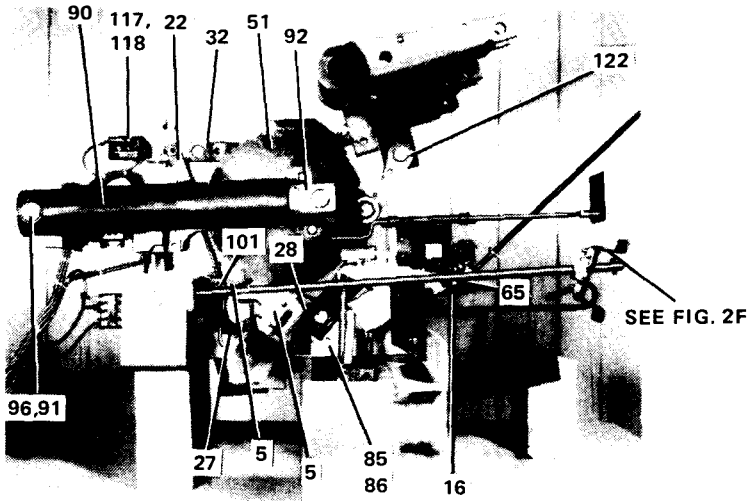


Figure 3A. 515-2V Operator L.H. View

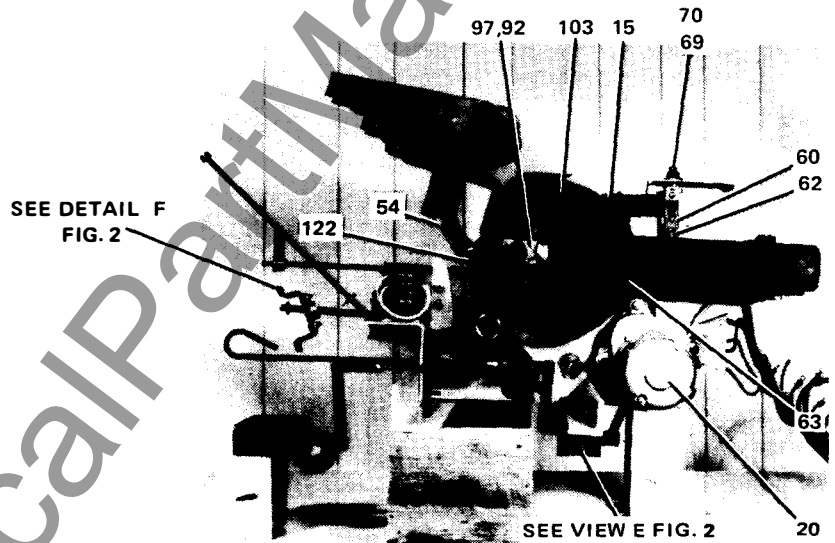


Figure 3B. 515-2V Operator R.H. View

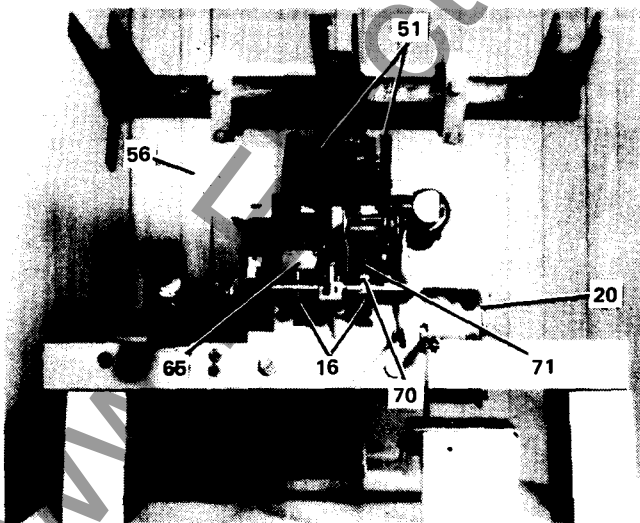


Figure 3C. 515-2V Operator Front View

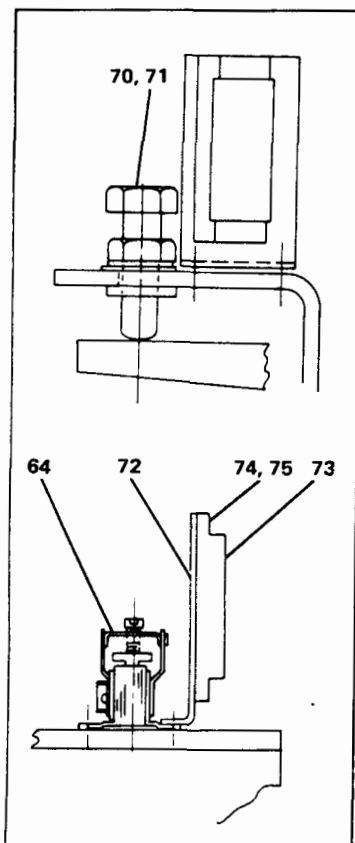


Figure 3D. Type 515-2 Stored Energy Operator Assembly

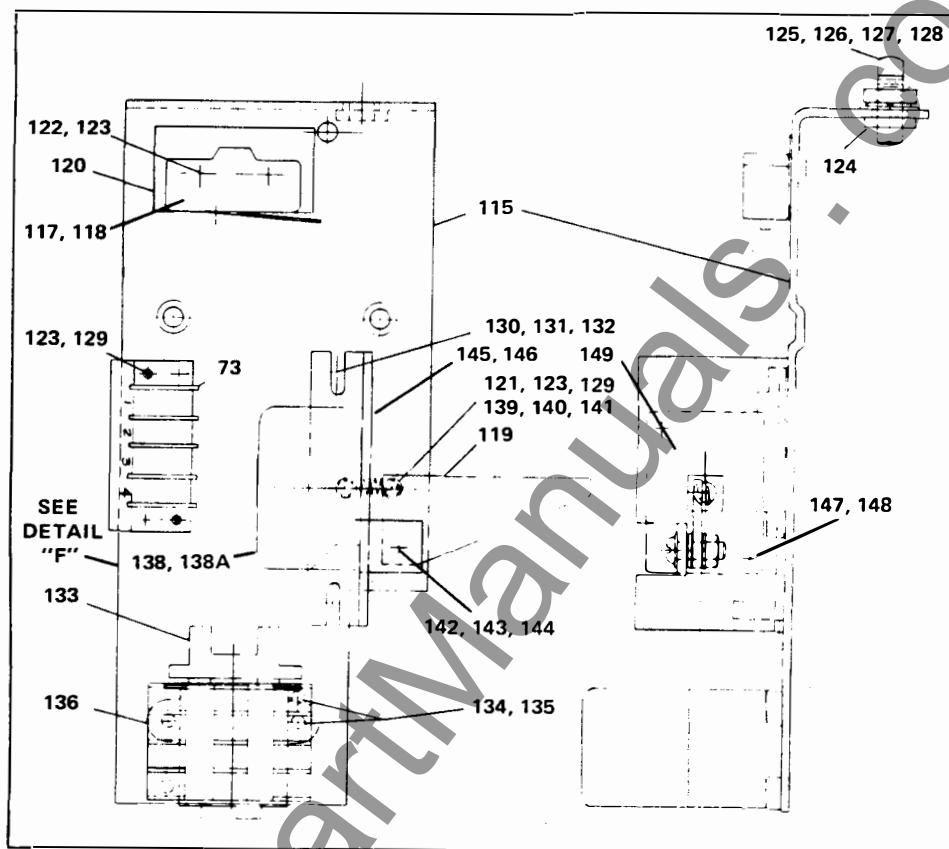


Figure 3E.

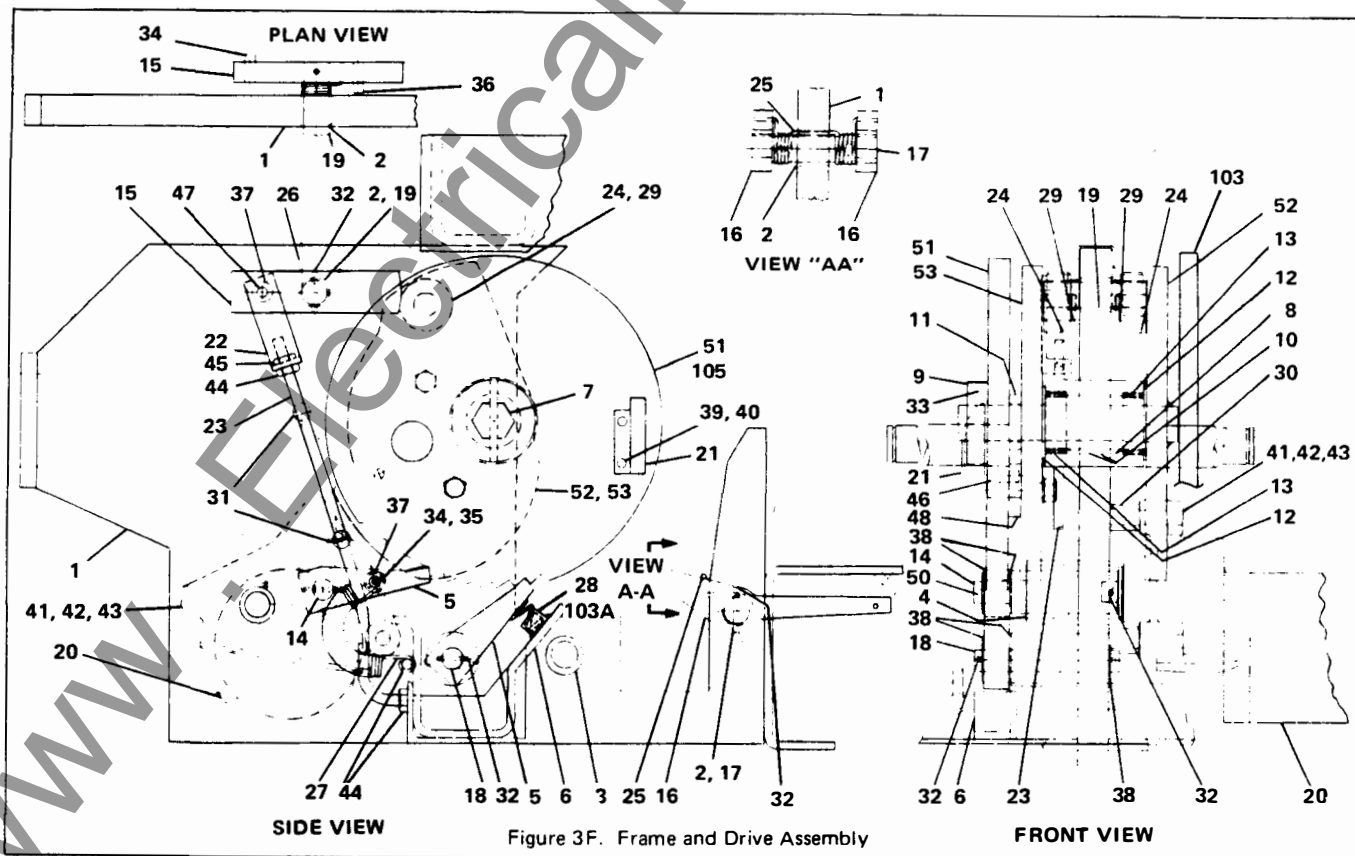


Figure 3F. Frame and Drive Assembly

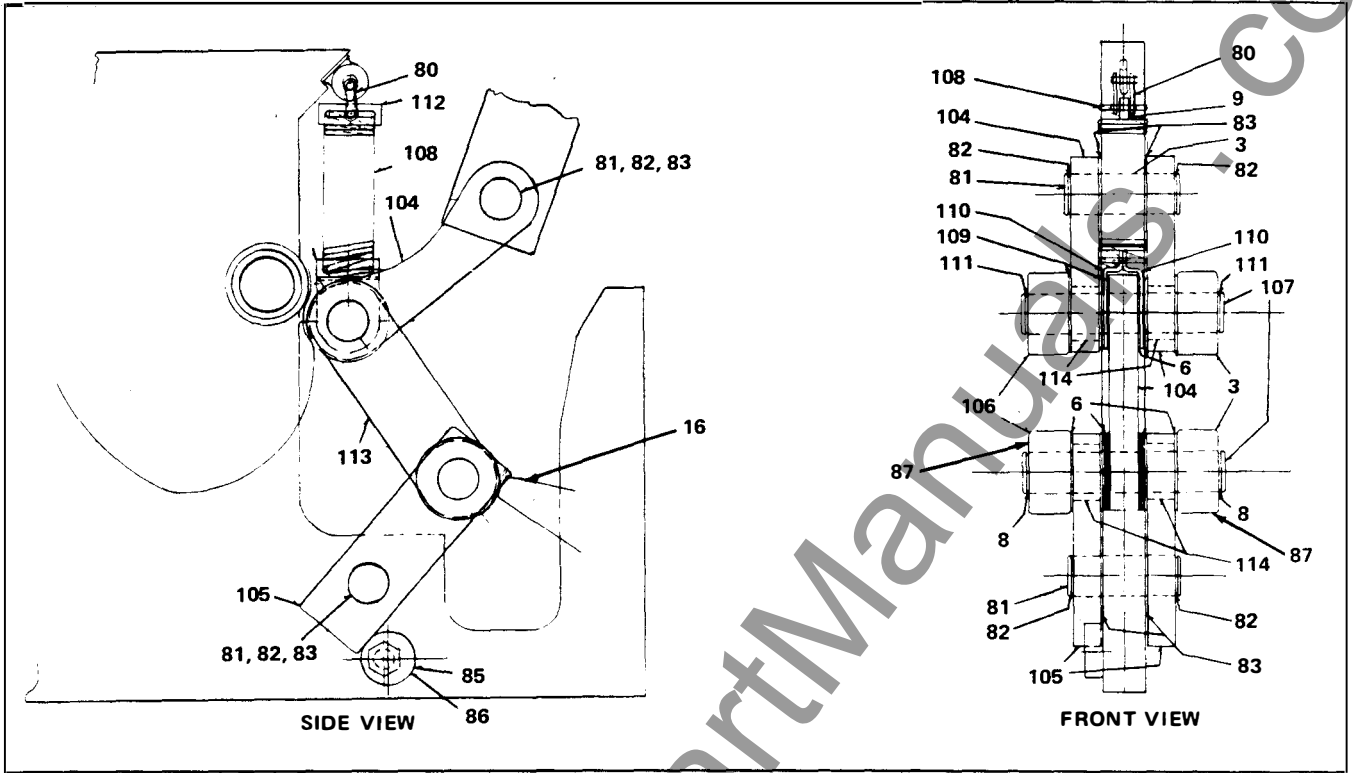


Figure 3G.

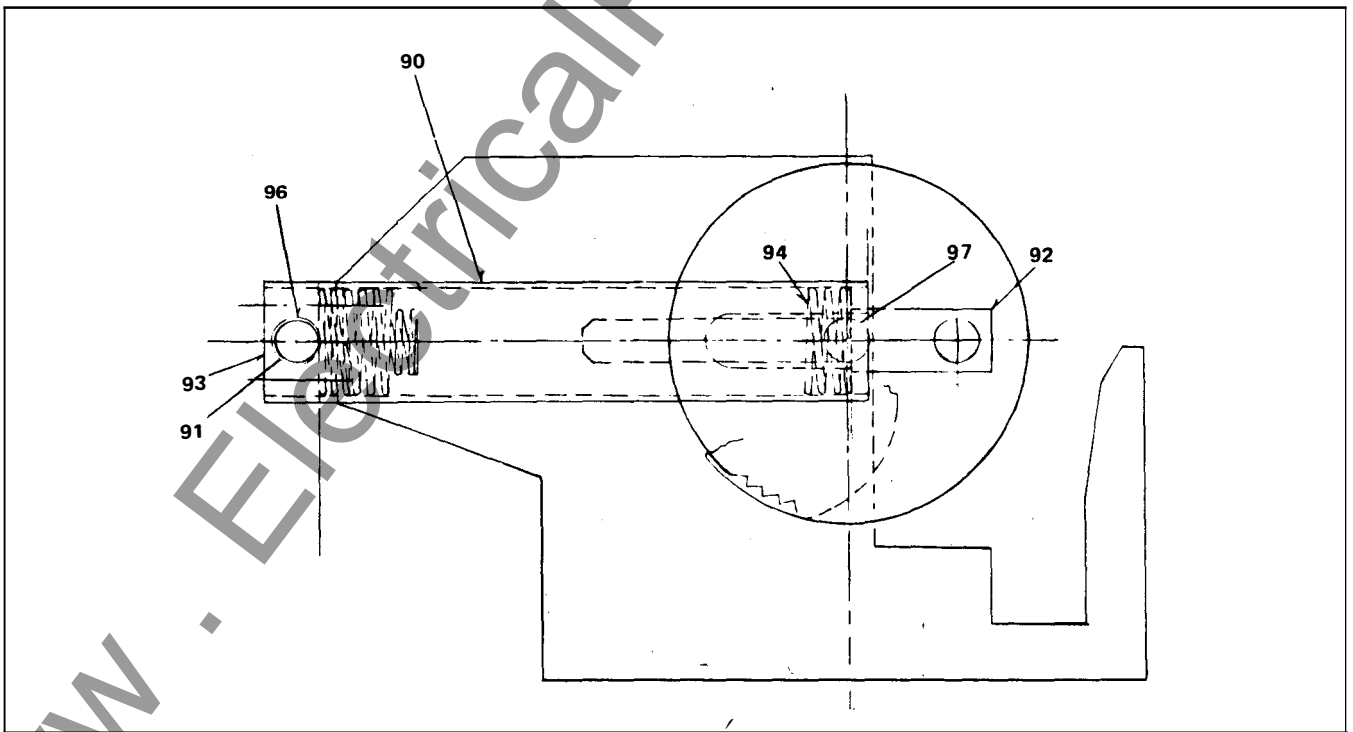
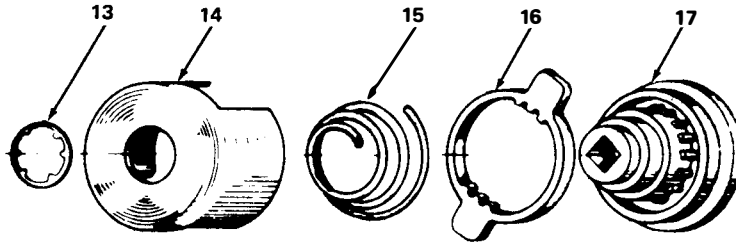
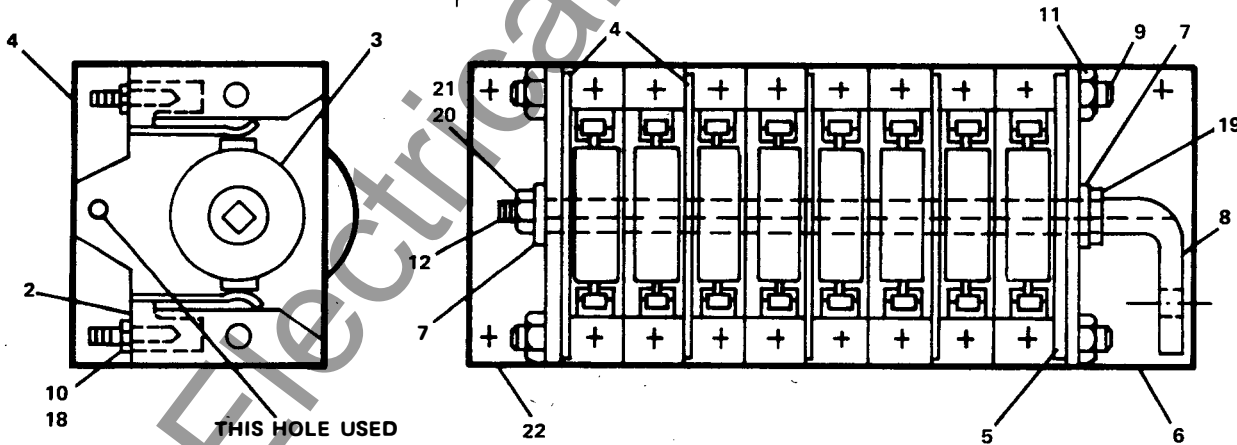


Figure 3H.



2	Contact Finger	18-657-524	224
3	Rotor Assembly	71-109-293	501
4	Barrier	18-723-775	001
5	Barrier	18-657-523	123
6	Bracket	71-208-921	003
7	Bushing	71-109-282	001
8	Shaft	71-114-838	001
9	Stud	18-292-228	029
10	Hex Nut (10-32) Brass	00-631-133	030
11	Stv. Locknut	15-171-063	003
12	Cotter Pin	00-671-195	049
13	Retaining Ring	Rotor 71-109-293-501	
14	Shell		
15	Spring		
16	Rotor		
17	Retainer		
18	#10 Lockwasher	00-655-059	100
19	Washer	71-110-035	001
20	Hex Nut (.250)	00-631-059	204
21	.25 Lockwasher	00-655-017	026
22	Bracket	71-208-921	004



THIS HOLE USED
ONLY ON CUBICLE
SWITCHES

SECTION "A" "A"

COMPLETE SWITCH AS SHOWN
5 KV 71-208-922-505
15 KV 71-208-922-504

NOTE:

ITEMS 2, 3, 4, 5, 7, 10, 11, 12, 18,
19, 20 & 21 ARE ALSO USED
ON CUBICLE AUXILIARY SWITCH.

Figure 4. Auxiliary Switch

SIEMENS-ALLIS

Switchgear

P.O. Box 14505

West Allis, Wisconsin 53214

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