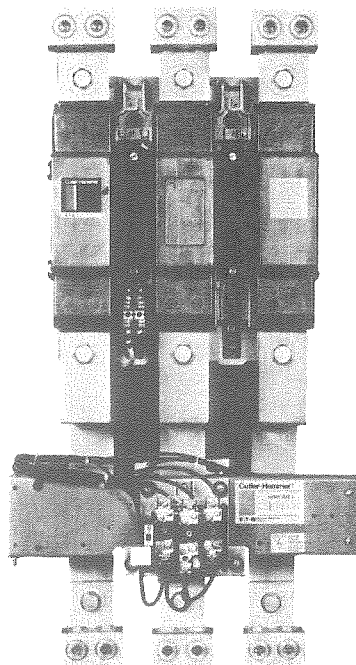


## RENEWAL PARTS PUB NEMA SIZE 6 NON-REVERSING & REVERSING CONTACTORS & STARTERS



TYPICAL SIZE 6 STARTER

### INTRODUCTION

This publication is designed to simplify inspection and maintenance through the use of photographs and detail views for easy identification of parts. Illustrated steps on assembly and disassembly are shown. This information should be read carefully.

### DESCRIPTION

This publication covers 2 pole and 3 pole, 3 phase non-reversing and reversing, contactors and starters with ratings as shown on the nameplates.

### CARE

These contactors/starters require no mechanical maintenance. If maintenance is needed, please note that these devices use **metric hardware**. All power contacts should be renewed at the same time before the contact tip material has worn away. Refer to publication 14183 for helpful information on inspecting and determining when to replace the contacts. When renewing contacts, check all terminal screws to insure they are tight and secure.

During routine electrical maintenance, the arc chutes are to be removed to inspect the main contacts for wear. Please note Fig. 4 exploded view drawing for service or repair.

### ARC CHUTE REMOVAL

1. Disconnect all power to the contactor/starter.
2. Loosen the 4 screws attached to the arc chute.
3. Remove the arc chute.
4. To reinstall arc chute reverse the above.

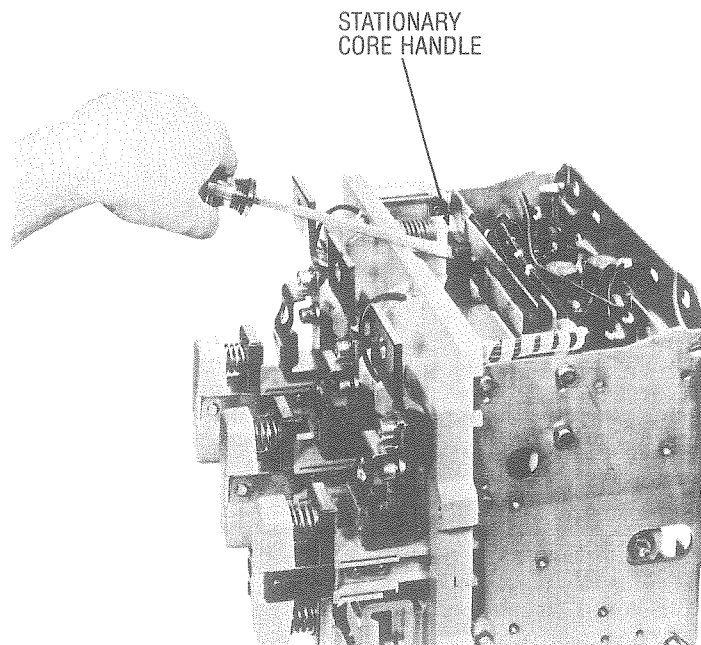


FIG. 1 — COIL REMOVAL

### MAIN COIL RENEWAL

**Caution** — If the device has been in service, many parts may still be thermally hot.

1. Disconnect all power to the contactor/starter.
2. Remove arc chute.
3. Loosen the 2 screws that secure each coil.
4. Remove feeder group cover and insert the tip of a long shaft screwdriver into the eye of the stationary-core handle as shown in Fig. 1. Using the screwdriver as lever, gently pry stationary core upward until detents on the sliding blocks engage stop bars of contactor frame.
5. Grasp the coil by its handle and pull straight forward to remove.
6. Slide in new coils and tighten the screws to secure in place.
7. Reinsert stationary core into contactor by alternately compressing the right and left hand sliding blocks, while pushing the stationary core down into the contactor until stationary core bottoms out.
8. Reinstall feeder group cover and arc chute.

#### Main Coils

Control Voltage		Main Coil Part No. 1 Required Per Contactor
Volts	Hertz	
110-120	50/60	9-2698
220-240	50/60	9-2698-2
440-480	50/60	9-2698-3
550-600	50/60	9-2698-4
208	50/60	9-2698-5
380-415	50/60	9-2698-6
48-52	50/60	9-2698-8

**NOTE:** Voltage ratings of the main coils must match those of the feeder group for proper operation of the starter/contacto-  
tor.

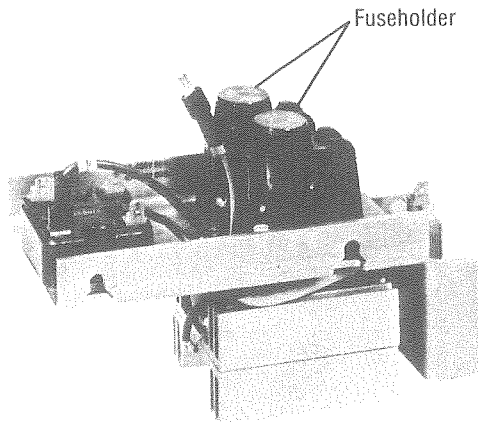


FIG. 2 — FEEDER GROUP

**FEEDER GROUP**

This is the panel assembly located beneath the feeder group cover. It supplies the main contactor coils with DC control voltage. See instruction pub for wiring diagram.

**FEEDER GROUP RENEWAL**

1. Disconnect all power to the contactor/starter.
2. Remove feeder group cover.
3. Disconnect the 6 wires going to the feeder group.
4. Using an 8mm wrench, loosen the four hex head feeder group mounting screws and remove feeder group from contactor.
5. Reverse the above to install new feeder group.

**Feeder Group Renewal**

Control Voltage		Feeder Group (Complete)
Volts	Hertz	
110-120	50/60	9-2705
220-240	50/60	9-2705-2
440-480	50/60	9-2705-3
550-600	50/60	9-2705-4
208	50/60	9-2705-5
380-415	50/60	9-2705-6
48-52	50/60	9-2705-8

**NOTE:** Voltage ratings of feeder group must match those of the main coils for proper operation of the starter/contactor.

**MAIN CONTACT RENEWAL**

**Caution** — If the device was in service the contacts may still be very hot.

1. Disconnect all power to the contactor/starter.
2. Remove arc chute.
3. Press down on the movable contact assembly until the locking pins become loose. Then remove locking pins by sliding them to the right or left. See Fig. 3.
4. Release pressure on the movable contact assembly and remove.
5. Remove stationary contacts by removing the allen screws. Use a 6mm allen wrench.
6. Install new stationary contacts and screws.
7. Assemble movable contact, springs, and spring retainers. Press down on the movable contact assembly and install the locking pins.
8. Install arc chute.

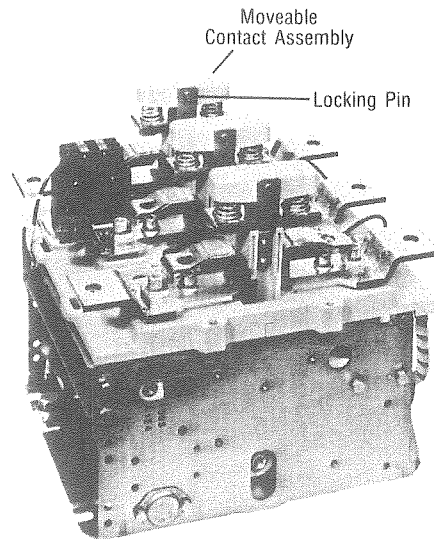


FIG. 3 — MAIN CONTACT RENEWAL

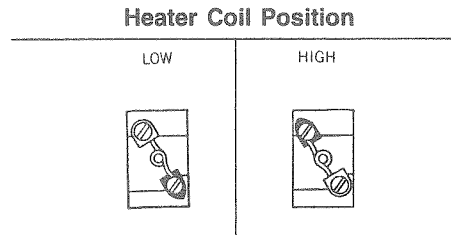
**RENEWAL OF CURRENT TRANSFORMERS**

1. Disconnect all power to the starter.
2. Remove the two screws holding the top plate to the right-hand side plate. This will allow the top plate to swing away from the transformers.
3. Disconnect the transformer wiring.
4. Remove the mounting hardware that secures the bus bar connectors which pass through the transformers.
5. Remove the two screws that secure the transformer to its mounting brackets. Note the location of the polarity mark.
6. Remove the bus bar connectors and the transformers.
7. Reinstall new transformers by reversing the above. Make sure the transformer polarity is correct. Refer to instruction publication for wiring diagram.

**RENEWAL OF EUTECTIC OVERLOAD RELAY**

The overload relay has two steps of adjustment (low or high) obtained by POSITIONING THE HEATER COILS as shown in the illustration below. **Note:** The location of the pointed terminal on the heater coil.

The heater coil selection table furnished with the starter illustrates the proper mounting position. All coils must be mounted in the same position for a given overload relay.



**Reset and tripped indication —**

A transparent rectangular window above the reset button provides visual indication.

**Relay Reset** — Dark window.

**Relay Tripped** — Light (silver) window.

**DO NOT** disassemble this relay!

The parts illustrated (Fig. 5) and listed on page 4 are available for repairs. If parts are required other than those listed, replace the complete relay.

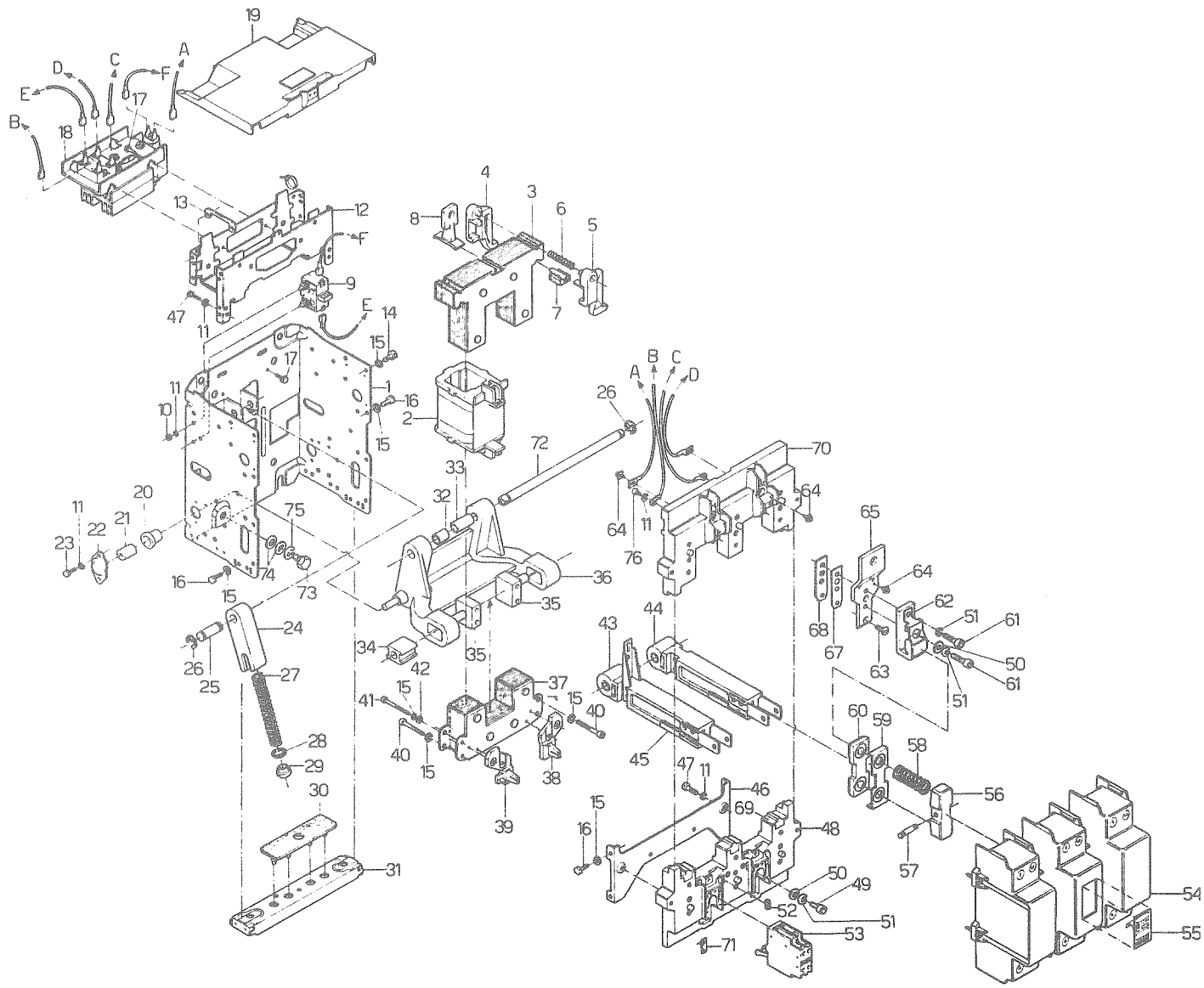


FIG. 4

(FIGS. 4 & 5)

Item No.	Description	Part Number	Quantities					
			C10	A10	C50	A50		
1.	Contacteur frame	▲▲ See table—p. 1	1	1	2	2		
2.	Main coil set		1	1	2	2		
3.	Stationary core		1	1	2	2		
4.	Right sliding block		2	2	4	4		
5.	Left sliding block		2	2	4	4		
6.	Sliding block spring		2	2	4	4		
7.	Core stop		2	2	4	4		
8.	Stationary core handle		1	1	2	2		
9.	Saving resistor—AC interlock		10-6144	1	1	2	2	
10.	M5x3.5, hex nut	2		2	4	4		
11.	5.3m, spring washer	12		12	24	24		
12.	Stationary core support	1		1	2	2		
13.	Core stop plate	2		2	4	4		
14.	M6x12, screw	4		4	8	8		
15.	6.3m lockwasher	24		24	48	48		
16.	M6x10, hex screw	16		16	32	32		
17.	M5x7 hex screw	4		4	8	8		
18.	Feeder group (complete)	See table—p. 2 for voltage selection		1	1	2	2	
19.	Feeder group cover			56-6190	1	1	2	2
20.	Lever flange				2	2	4	4
21.	Lever bushing	2			2	4	4	
22.	Flange plate	2			2	4	4	
23.	M5x8 hex screw	4			4	8	8	
24.	Return spring lever	1			1	2	2	
25.	Return spring pivot	1			1	2	2	
26.	Locking ring	4			4	8	8	
27.	Return spring	1	1		2	2		
28.	Return spring washer	1	1		2	2		
29.	Return spring slide	1	1		2	2		
30.	Shock absorber	1	1		2	2		
31.	Moving core cross bar	1	1		2	2		
32.	Spacer	1	1		2	2		
33.	Spacer (long)	1	1		2	2		
34.	Core bushing	2	2		4	4		
35.	Pivot support	2	2		4	4		
36.	Core lever	1	1		2	2		
37.	Moving core	1	1	2	2			
38.	Right aux. driver	1	1	2	2			
39.	Left aux. driver	1	1	2	2			
40.	M6x45 hex screw	4	4	8	8			
41.	M6x50 hex screw	4	4	8	8			
42.	6.4m flat washer	4	4	8	8			
43.	Moving contact holder (pole 1)	1	1	2	2			
44.	Moving contact holder (poles 2 & 3)	1	1	2	2			
45.	Slide	3	3	6	6			
46.	Lower base support	1	1	2	2			
47.	M5x10 hex screw	4	4	8	8			
48.	Lower base	1	1	2	2			
49.	M8x16 hex screw	4	4	8	8			
50.	8.4m flat washer	10	10	20	20			
51.	8.4m lockwasher	16	16	32	32			
52.	Arc chute grommet	4	4	8	8			
53.	Aux. contact (2 NO-2 NC)	C320KA6	1	1	2	2		

Item No.	Description	Part Number	Quantities				
			C10	A10	C50	A50	
54.	Arc chute assy.	62-874	1	1	2	2	
55.	Label (not supplied)		—	—	—	—	
56.	Spring retainer		*3	3	6	6	
57.	Retaining pin		*3	3	6	6	
58.	Contact spring		*6	6	12	12	
	Inner contact spring (not shown)		▲	—	—	—	
59.	Bridge		3	3	6	6	
60.	Moving contact		*3	3	6	6	
61.	M8x25 allen hd. screws		12	12	24	24	
62.	Stationary contact		*3	3	6	6	
63.	M6x16 screw		*6	6	12	12	
64.	Wire clamp		6	6	12	12	
65.	Bus bar		*6	6	12	12	
66.	Bus bar (not shown)		—	—	6	6	
67.	0.5mm shim plate		*6	6	12	12	
68.	3mm shim plate		*6	6	12	12	
69.	Contact holder slide		3	3	6	6	
70.	Upper base		1	1	2	2	
71.	On/Off label	1	1	2	2		
72.	Core lever rod	1	1	2	2		
73.	M10x16 hex screw	1	1	2	2		
74.	10.5m flat washer	2	2	4	4		
75.	10.5m lock washer	1	1	2	2		
76.	M5x7 hex screw	2	2	4	4		
77.	Fuse holder — (See fig. 2, includes mounting screws)	C320FBR	2	2	4	4	
78.	Lug (750 mcm—2 wire)		80-6294	*6	6	6	6
	(750 mcm—3 wire)		80-5731	6	6	6	6
79.	½-13 x 1.25 hx hd. screw		911-5890Z	*6	9	9	9
80.	½-13 keps nut (not shown)		15-920-8	*6	6	6	6
81.	Bus bar		25-7150	—	3	—	3
82.	Side plate		47-28267	—	2	—	2
83.	Insulator (not shown)		56-5980	—	3	—	3
84.	Current transformer		42-3418-3	—	3	—	3
85.	Reset button		53-1236-6	—	1	—	1
86.	Overload relay		—	—	1	—	1
87.	Contact kit (not shown) includes items 50, 51 & 56 thru 62)		—	—	—	—	—
	3 pole kit		6-601	1	1	2	2
	2 pole kit		6-601-2	▲1	—	—	—

\* Two pole contactors — reduce quantity by one-third.  
 ▲ Used on 2 pole contactor only.  
 ▲▲ 1 main coil set = 2 separate coils.

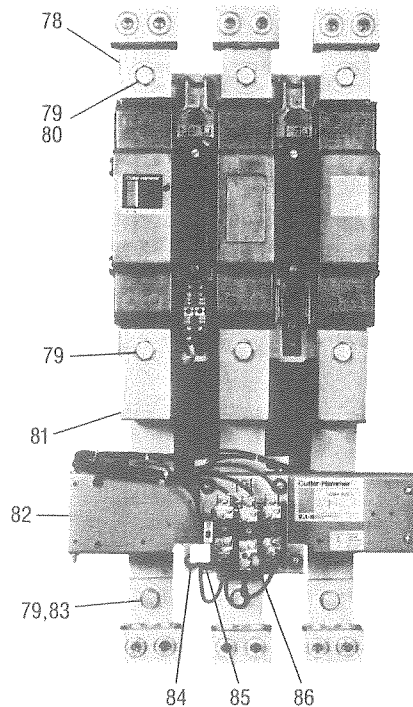


FIG. 5

**AUXILIARY INTERLOCKS (Fig. 6)**

The electrical interlocks are renewable as a complete assembly and are available in a 2 NO-2 NC configuration.

Little care is required for the interlocks beyond occasional examination to ensure that parts move freely without interference or binding.

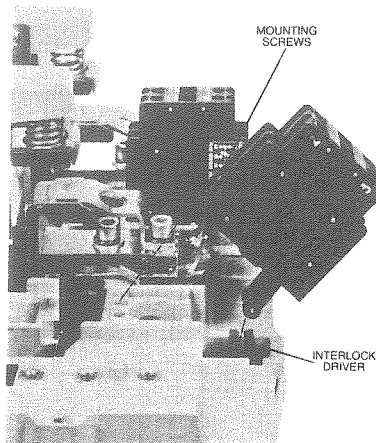


FIG. 6

**INSTALLATION INSTRUCTIONS**

1. Insert operating lever of auxiliary interlock into left or right hand interlock driver of contactor.
2. Align mounting screws of auxiliary contact with integral inserts on contactor frame and tighten screws to secure auxiliary interlock to contactor.

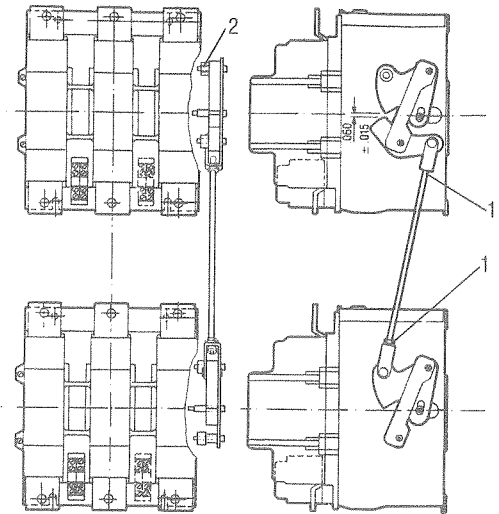
**FOR A50 AND C50 DEVICES ONLY  
VERTICAL MECHANICAL INTERLOCK**

FIG. 7

**ADJUSTMENT (Fig. 7)**

1. Tighten item 1 on lowest lever. (Bushing in U bracket will rotate.)
2. Adjust rod length so that points of upper levers are in line with each other.
3. Adjust hex bushing (item 2) to obtain  $.060 \pm .015$  between cams as shown in figure 7.
4. Cams must not touch during initial stroke of either contactor.