

CAM ADJUSTMENT

1. Remove Cover (Item 6) by removing 4 Cover Screws (Item 25).
2. Remove Contact Element (Item 27) by removing 2 Mounting Bracket Screws (Item 26).
3. Be sure Starwheel (Item 20) is in the correct position for your application. If Starwheel is not set in correct position refer to adjustment of Starwheel position #1A. Thru #5A.
4. Loosen Hex Nut (Item 12) on Shaft using a 3/4 inch wrench until all Cams (Item 5) can be slid from set position on hex part of Shaft to adjustment position on round parts of Shaft. Adjustment positions are located adjacent to each Cam on the side away from the Starwheel.
NOTE: Insert screw driver under Starwheel stops (see Fig. 2) when tightening or loosening Hex Nut (Item 12) to avoid bending the Stop Screw (Item 18). See Fig. 5.
5. Set Cam nearest Starwheel first by placing "Cam Adjustment Template" in position behind the Cam (semicircular notch on Template rests on Shaft Spacer (Item 13) behind Cam while the bottom of the Template rests on the case). Then rotate the Cam to outline of desired Cam setting on Template. After adjustment, slide Cam back onto hex part of the Shaft toward Starwheel (See Fig. 6).
6. While holding Cam on Hex Shaft, slide Spacer up against Cam.
7. Repeat Step 5 and 6 for remaining Cam adjustments.
8. Hand tighten Hex Nut and check Cam positions against Template.
9. Tighten Hex Nut with wrench again using a screw driver to protect Stop Screw.
10. Replace Contact Element (Item 27).
11. Replace Cover.

STARWHEEL ADJUSTMENT

- 1A. Remove Spring (Item 4). Place C-Clamp over Bracket (Item 8) and Case See Fig. 7. Tighten C-Clamp, then remove Screw (Item A) Fig. 1. Loosen Clamp until spring pressure is released.
- 2A. Back off Stop Screw (Item 18) until Starwheel stops clear of the Stop Screw.
- 3A. Loosen Hex Nut (Item 12) on shaft using a 3/4 inch open end wrench until the Starwheel can be slid to the adjustment slot in the Shaft (See Figure 2).
NOTE: Insert screw driver under Starwheel stops when tightening or loosening Shaft Hex Nut to avoid bending the Stop Screw (Item 18). See Figure 5.
- 4A. Adjust Starwheel until the letters (A-A) for Cam A align on the flat of the Shaft (Item 10) or Letters (C-C) align with the flat of the Shaft for Cam C. See Figure 3. Then tighten (Item 12) to secure Starwheel. Tighten Stop Screw (Item 18).
- 5A. Replace Spring. Place Spring in position. Tighten C-Clamp and replace Screw (Item A). See Fig. 7. (cont. cam adjustment #4)

B **70-7869** SH. 1 of 3 SH.

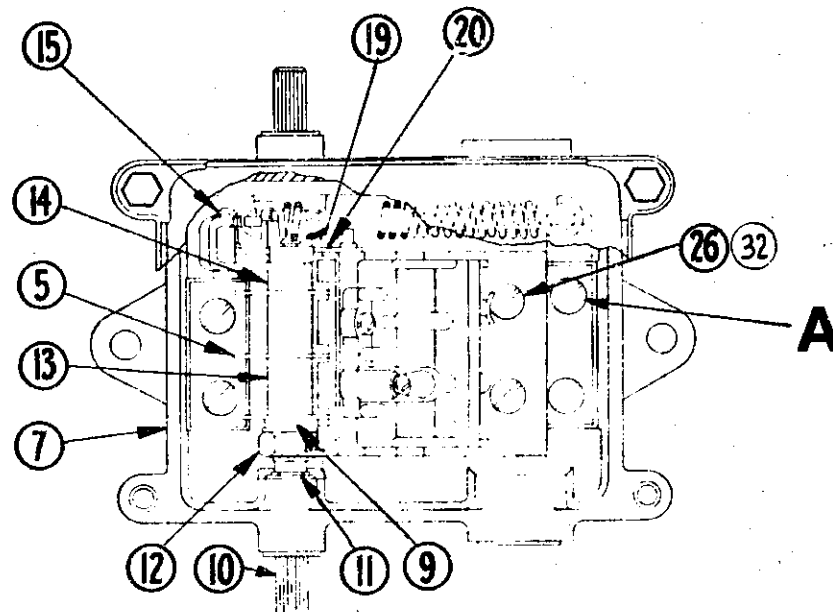
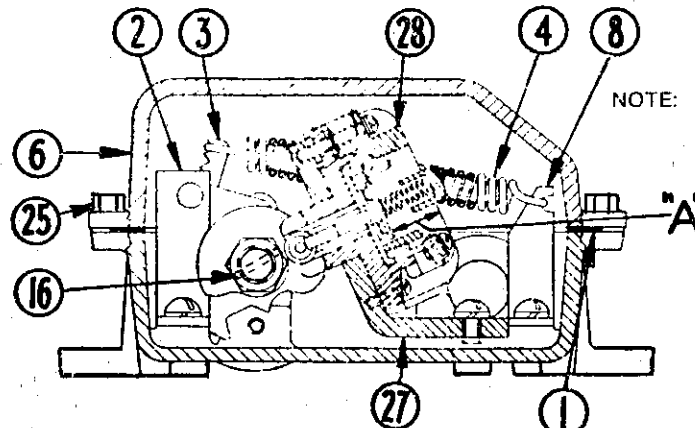


FIGURE 1



NOTE: SPRING ITEM 4 IN LOWEST NOTCH FOR HOIST LIMIT SWITCH

LUBRICATION

- Approximately every 6 months, lubricate as follows:
1. Starwheel and Cams with a long life grease (mobile grease "BBB") as required.
 2. Shaft bearings with SAE 20 oil.

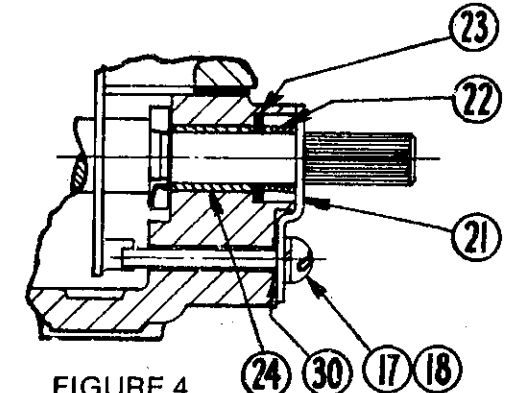


FIGURE 4

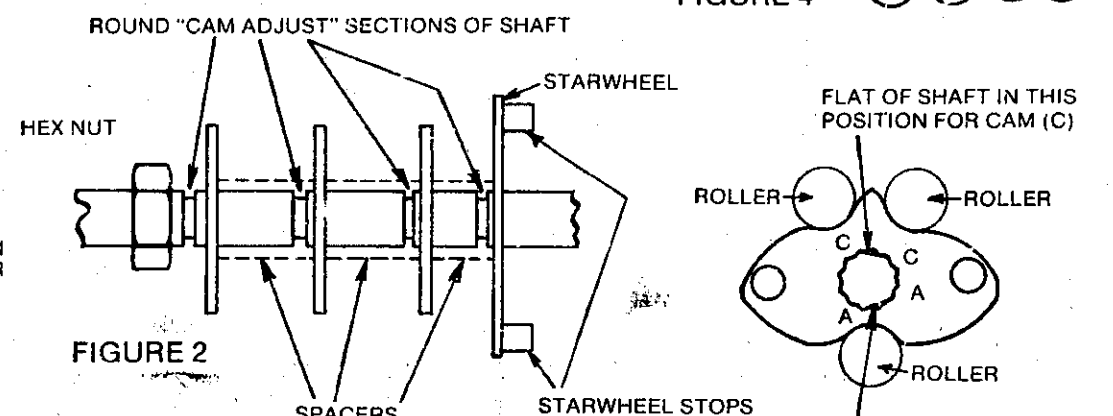


FIGURE 3

WHEN CONTACTS ARE NEW DIMENSION "A" SHOULD BE 23/32 REPLACE ASSEMBLY WHEN "A" MEASURES 25/32"

ITEM NO.	DESCRIPTION OF PART	NO. REQ.	PART NO.	ITEM NO.	DESCRIPTION OF PART	NO. REQ.	PART NO.
1	GASKET	1	32-468	17	#10 LOCKWASHER	2	916-484Z
2	BRACKET	1	79-2008	18	10-32 x 1-3/8 LG RD HD SCR	1	911-524Z
3	STARWHEEL LEVER	1	24-2359-3	19	SPACER	1	29-220-12
4	SPRING	1	69-1317	20	STARWHEEL CAM	1	54-11696
5	CAM	3	54-2179	21	RETAINING BRACKET	2	55-801
6	COVER	1	49-2842	22	SPRING	2	69-850
7	CASE	1	49-2843-2	23	NEOPRENE WASHER	2	16-900-17
8	BRACKET	1	79-2693	24	BUSHING	2	29-1543-17
9	WASHER	1	929-995	25	1/4-20 x 5/8 HEX SCR	4	911-5445Z
10	SHAFT	1	13-1994	26	1/4-20 x 1/2 RD HD SCR	4	911-848Z
11	SNAP RING	1	29-1264	27	MOUNTING BRACKET	1	79-2129
12	NUT 1/2-20	1	15-72	28	SWITCH UNIT ASSEM 3 CKT	1	83-530-5
13	SPACER	2	29-220-35	29	TEMPLATE PUB.	1	18805
14	SPACER	1	29-220-34	30	NEOPRENE WASHER	1	16-900-14
15	SNAP RING	1	28-71	31	C-CLAMP	1	55-3507
16	KNURLED PIN	1	13-1994	32	FLAT WASHER 1/4	4	916-641Z

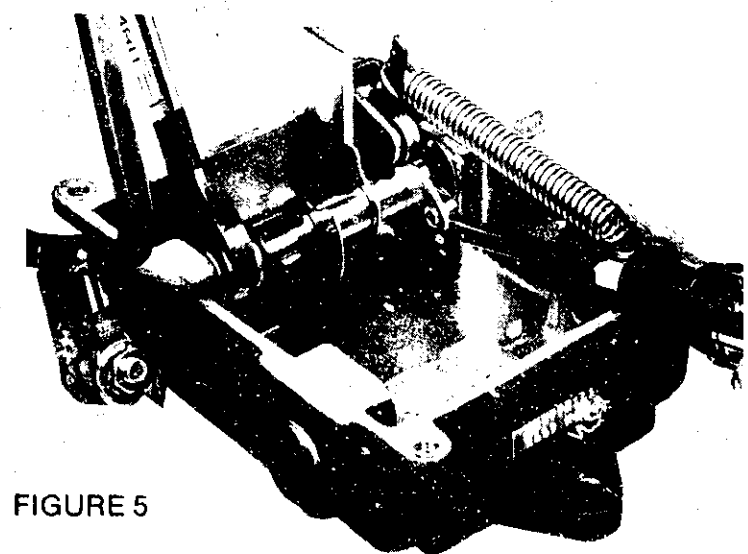


FIGURE 5

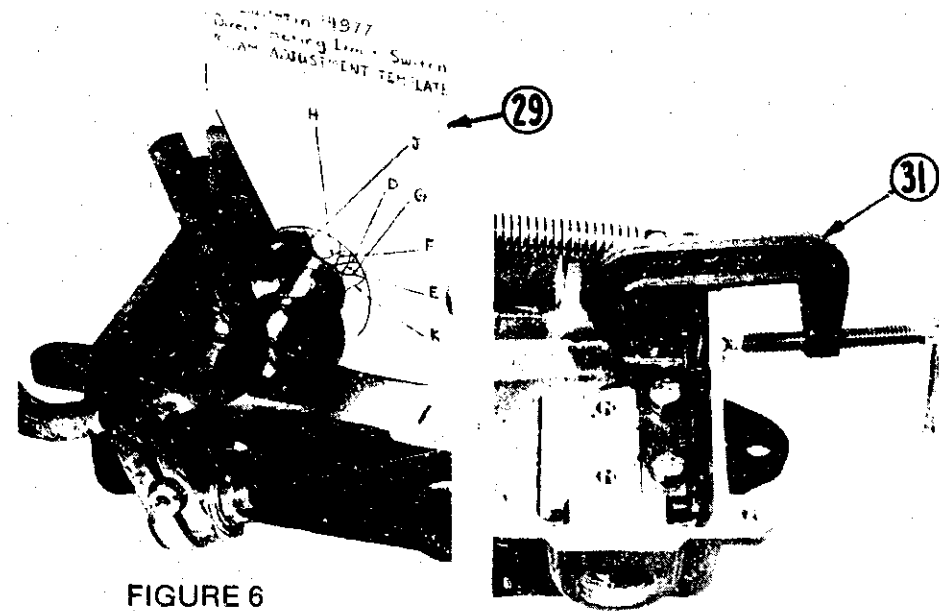


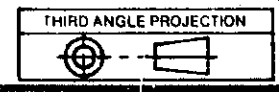
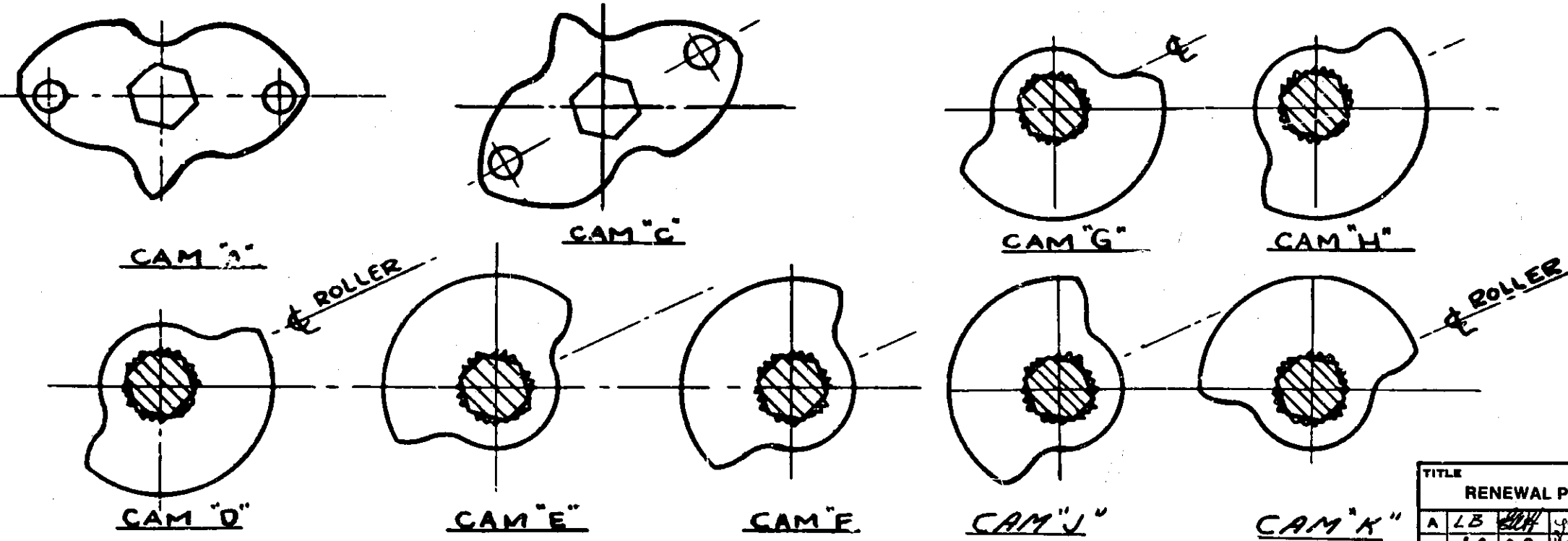
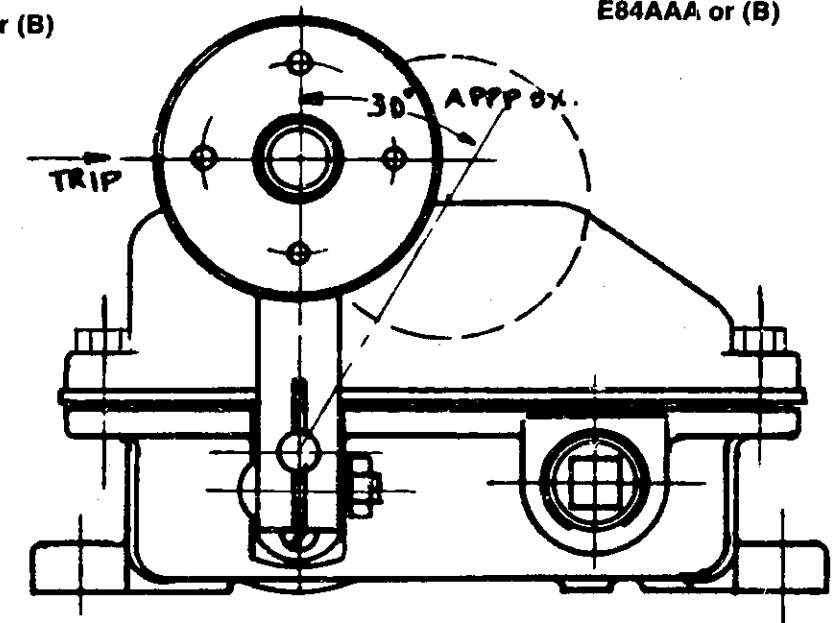
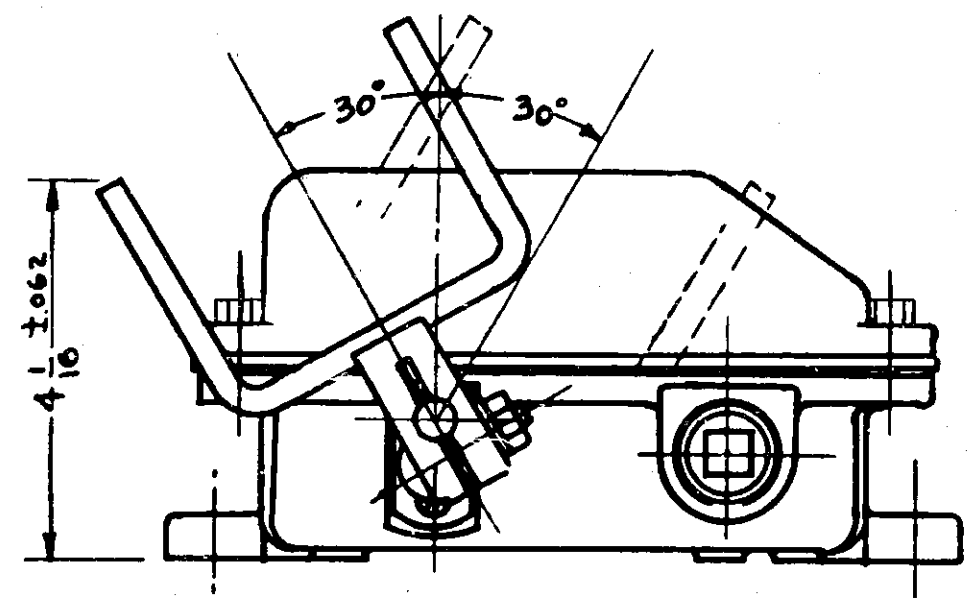
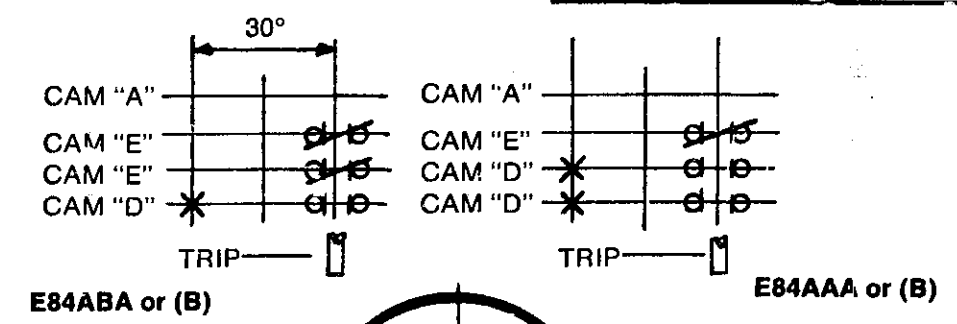
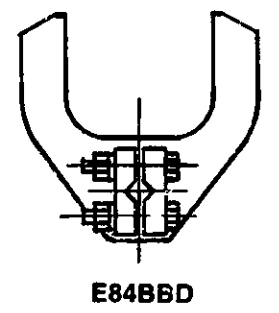
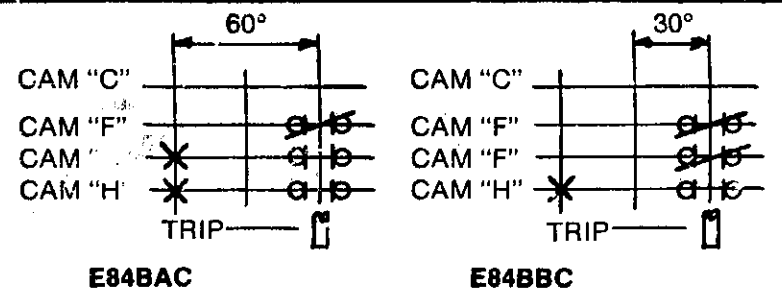
FIGURE 6

FIGURE 7

TITLE							
RENEWAL PART DRAWING AND INSTRUCTIONS FOR E84 LIMIT SWITCH							
A	LB	EDH	3/25/84	OR L. BARTLEIN	1/2/84	APP. G.M. DOMINIAK	1/2/85
B	J.D.	C.B.	8/9/82	CHK. V. SHAIKHA	1/2/84	FIRST ASSEM. WHERE LISTED.	DB6-4945
C	RFM	J.M.	4/1/84				
D							
E							

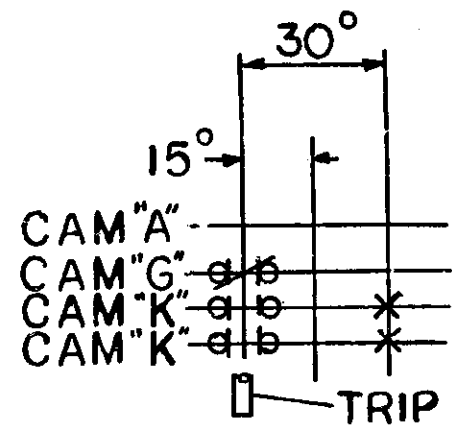


Cutler-Hammer E.T.N. Electrical/Electronic Control

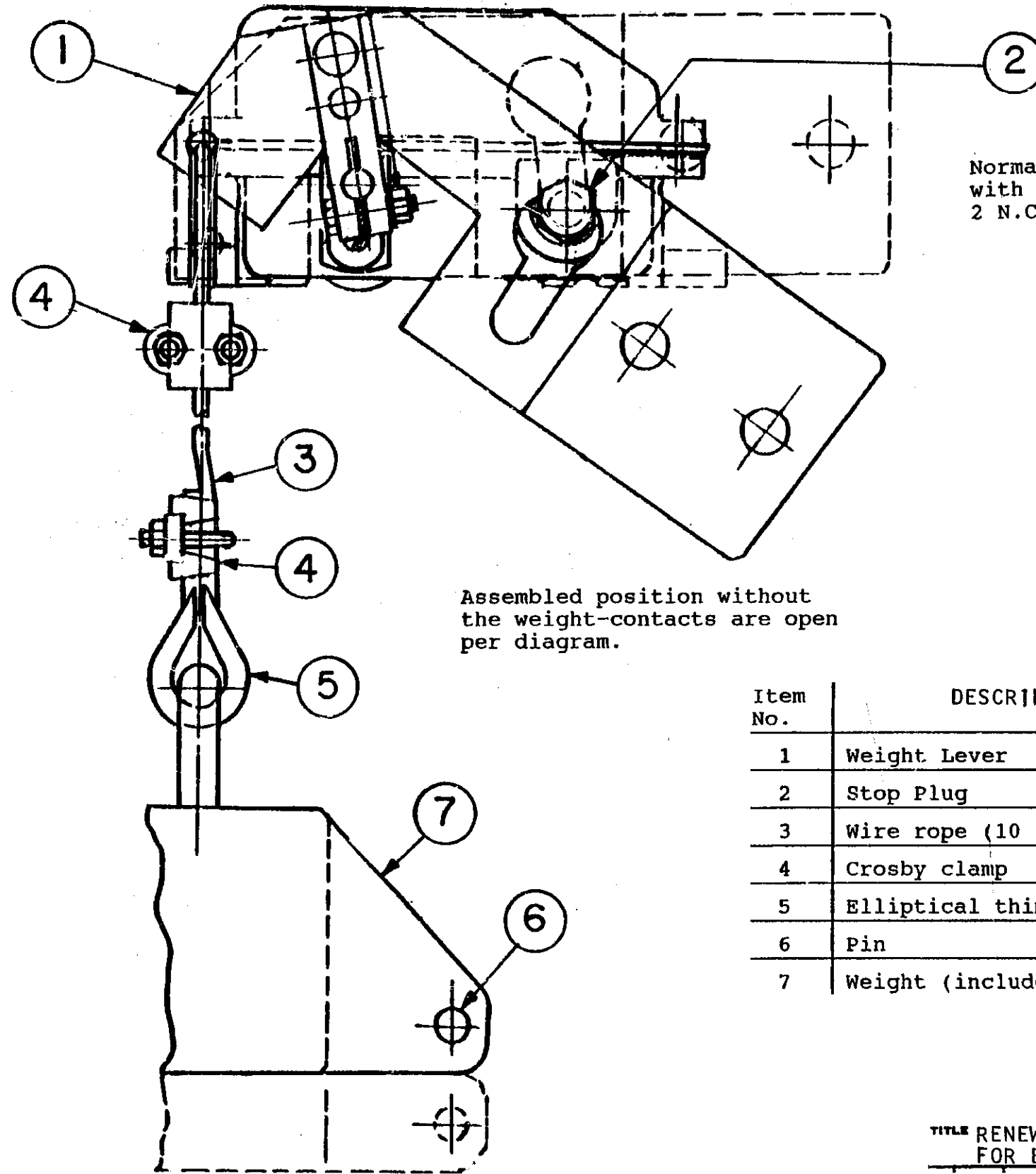


TITLE									
RENEWAL PART DRAWING AND INSTRUCTIONS FOR E84 LIMIT SWITCH									
A	LB	2/24	4/27/53	3/5/53	DR. L. BARTLEIN	12/19/54	APP. G. M. DOMINIAK	1/2/55	
B	J.O.	C.B.	1/10/53	7/16/53					FIRST ASSEM. WHERE LISTED.
C					CHK. S. SATOICA	12/1/54			
D									
E									

Cutler-Hammer F.T.N. Electrical / Electronic Control



Note: 1
Spring item 4 (sheet 1)
in lowest notch.



Normal operating position
with weight-contacts are
2 N.C.-1 N.O.

Assembled position without
the weight-contacts are open
per diagram.

Item No.	DESCRIPTION OF PART	No. Req.	Part No.
1	Weight Lever	1	24-3070
2	Stop Plug	1	27-578
3	Wire rope (10 feet long)	1	901-57
4	Crosby clamp	2	3433-3
5	Elliptical thimble	2	999-841
6	Pin	1	956-563F
7	Weight (includes item 6)	1	54-716

TITLE RENEWAL PART DRAWING AND INSTRUCTIONS
FOR E84 LIMIT SWITCH

DR. <i>OLESINSKI</i> 8/4/42	APP. <i>M. J. Damianich</i> 8/4/42
CHR. <i>Carl J. Bethen</i> 8/4/42	FIRST ASSEM. WHERE LISTED.
Cutler-Hammer W.T.M. Electrical/Electronic Control	