

NOVEMBER, 1967

No. 40 DC YOUNGSTOWN LIMIT STOP  
SINGLE (Type EG) AND DUPLEX (Type EEG)  
SERIES A

**INSTRUCTIONS****INSTALLATION**

The #40 YOUNGSTOWN SAFETY LIMIT STOP for crane hoist service must be mounted in the horizontal position. The weight arm can be bolted to the operating shaft in either of two positions, 180° apart. The limit stop is normally assembled for right-hand operation. It is desirable to so mount the limit stop that the suspended weight is directly over the hook-block with one of the hoisting idler cables passing through the bakelite guide tube on the suspended weight. This tube is split and clamped with "U" straps to facilitate installation. A bracket or platform should be attached to the hook-block for the purpose of lifting the weight.

A special 90° weight arm may be optionally supplied. If the limit stop cannot be so mounted that the suspended weight hangs directly over the hook-block, an auxiliary sheave and this 90° weight arm can be used. Since the steel cable is 1/2" in diameter, it is recommended that the sheave be at least 10" in diameter. The bearings in the sheave should be as free from friction as possible at all times.

**CAUTION** should be taken in mounting the limit stop to keep the space clear under the heavy end of the weight arm; otherwise obstructions may interfere with the switch operation. When the stop is floor-mounted, it is recommended that an opening be cut in the floor at this point.

**FOR LEFT-HAND OPERATION**, turn the weight arm 180° about the vertical line through the shaft center and change wiring connections in accordance with the wiring diagram.

The weight hangs down a maximum of 120" for the Type EG and 135" for the Type EEG when the standard amount of cable is used. The limit stop trips when this weight is lifted approximately 9" and resets when the weight is lowered to a point approximately 6" above the normal position.

Since no special connections are required between the limit stop and the hoist controller, no additional trolley bars are required along the crane girders.

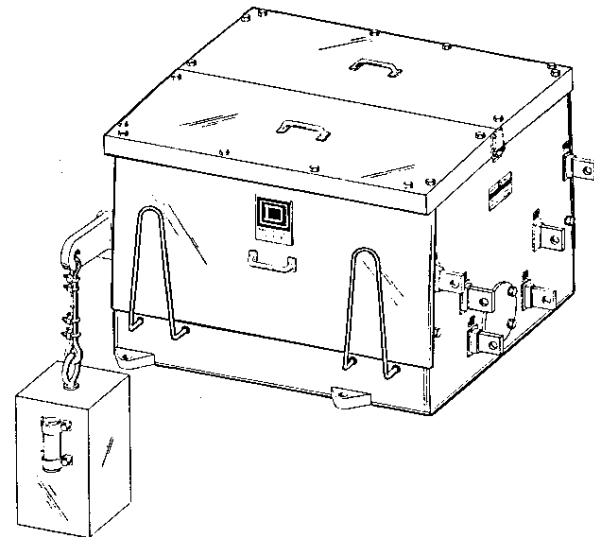
**DUPLEX OPERATION**

When two motors operate in parallel on a single hoist, a duplex limit stop is recommended in which there are two complete sets of electrical contacts operated by heavier weights and a stronger spring. Twelve leads are brought out at one end of the duplex limit stop.

**MAINTENANCE**

Contacts should be checked periodically for contact wear allowance (follow-up). The contacts should be replaced when the wear allowance decreases to 1/16". An Allen wrench is supplied for removing hex socket head cap screws holding in Contact Tips. No adjustment of contacts is necessary beyond proper alignment.

Be sure the cover is always replaced after inspection.



RATING - MAX. H.P. (ONE MOTOR)

230V D.C.  
360550V D.C.  
660**LUBRICATION**

No lubrication of bearings is required as bearings are sealed cartridge ball bearings. It is recommended that the latching surfaces on both latch arms be periodically lubricated with heavy lubricating grease.

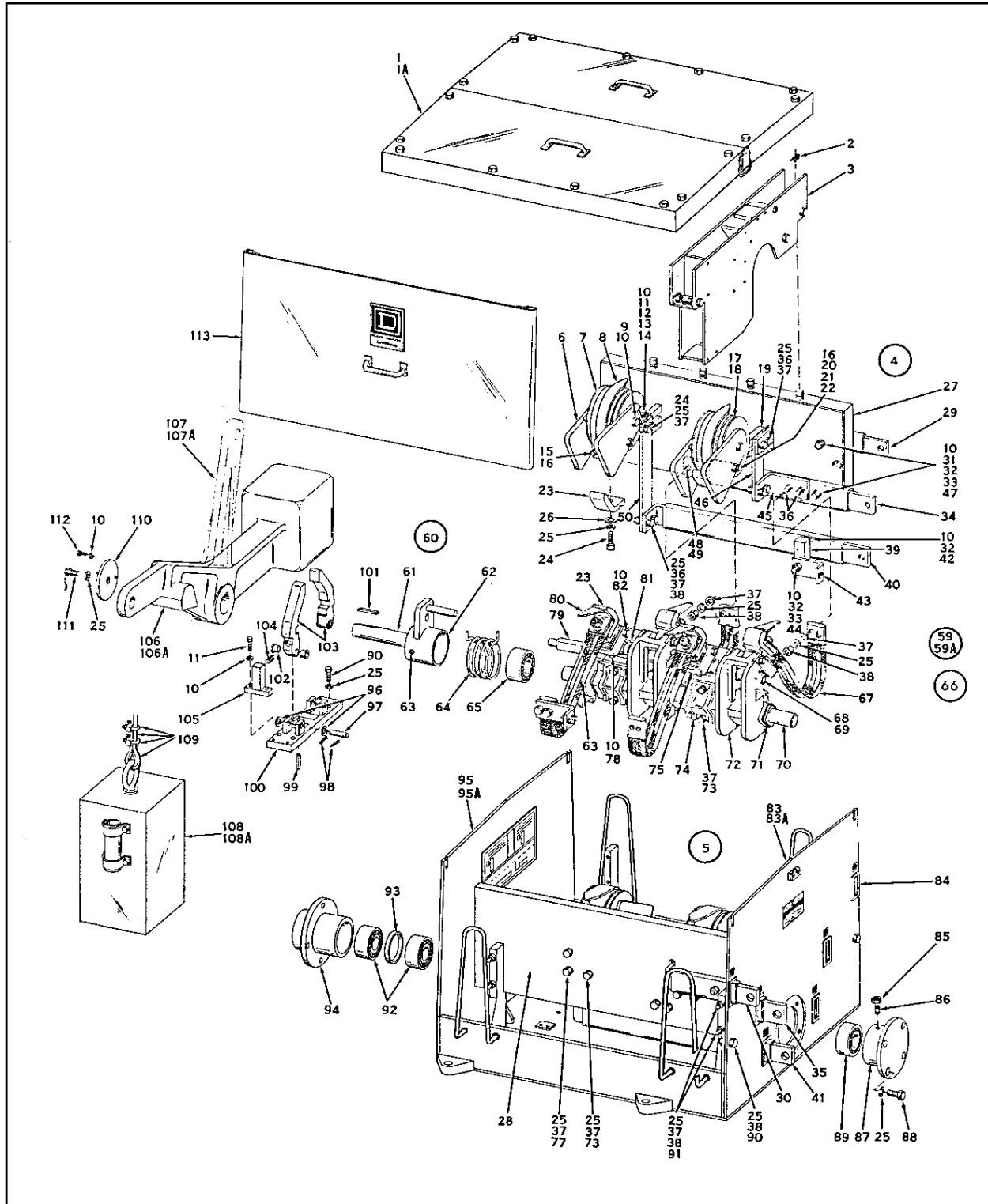
**OPERATION D.C.**

The #40 Youngstown Safety Limit Stop has double-pole, double-throw contacts. When the stop is "tripped" by over-travel of the hoist, two normally closed contacts are opened to remove power from the motor and two normally open contacts are closed to provide a dynamic braking circuit. In order to reset the limit stop, the hook-block must be lowered by the controller until the suspended weight has traveled to the reset position.

**CAUTION**

The Youngstown Limit Stop is intended primarily as an emergency equipment which can be depended upon to prevent the crane operator from running the hook-block into the hoisting drum. It is not intended to take the place of the off-point on the controller. The operator should aim to stop hoisting before the final limit is reached. Repeated unnecessary operation of the stop because of carelessness in this regard will result in excessive burning and wear on the contact tips.

# No. 40 DC YOUNGSTOWN LIMIT STOP SINGLE (Type EG) AND DUPLEX (Type EEG) SERIES A



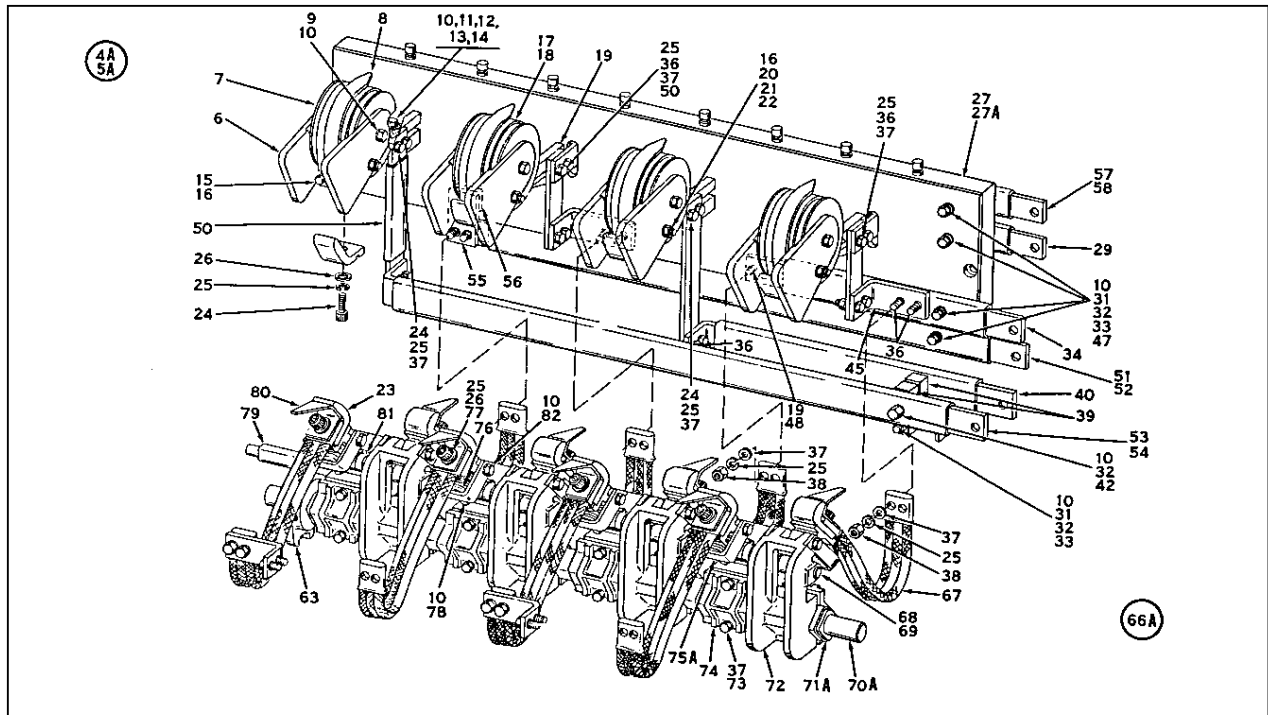
ADVISE NAMEPLATE MARKING WHEN ORDERING PARTS

**No. 40 DC YOUNGSTOWN LIMIT STOP**  
**SINGLE (Type EG) AND DUPLEX (Type EEG)**  
**SERIES A**

Item No.	List No.	Description	Single No. Req'd	Duplex No. Req'd	Item No.	List No.	Description	Single No. Req'd	Duplex No. Req'd
1	B5-1068-007-50	Top Cover .....	1		35	A5-1068-022-51	Bus Bar, L.H. ....	1	1
1A	B5-1068-084-50	Top Cover .....		1	36	21401-28560	1/2"-13x1-3/4" Hx. Hd. Cap Screw .....		
2	RS-130 T-293	Special Cotter Pin .....	8	16	37	23601-00280	1/2" Std. Washer & Nut .....		
3	A5-1068-046-50	Arc Chute .....	4	8	38	23002-00280	1/2" Nut .....		
4	A5-1068-032-51	Stationary Contact Assembly, R.H. (Includes Items 6 thru 27, 73 and 77) .....	1		39	A5-1068-014-50	Bus Bar Support .....	2	4
4A	A5-1068-087-51	Stationary Contact Assembly, R.H. (Includes Items 6 thru 26, 27A, 73 and 77) .....		1	40	A5-1068-041-50	Bus Bar, R.H. ....	1	1
5	A5-1068-032-50	Stationary Contact Assembly, L.H. (Includes Items 6 thru 26, 28, 73 and 77) (Same as Item 4 except assembled in reverse) .....	1		41	A5-1068-041-51	Bus Bar, L.H. ....	1	1
5A	A5-1068-087-50	Stationary Contact Assembly, L.H. (Includes Items 6 thru 26, 28A, 73 and 77) (Same as Item 5 except assembled in reverse) .....		1	42	21401-24480	3/8"-16x1-1/2" Hx. Hd. Cap Screw .....		
6	A5-1068-039-50	Blowout Ear .....	8	16	43	A5-1068-009-01	Bus Support .....	2	2
7	B5-0512-001-27	Blowout Insulating Washer .....	8	16	44	21401-24660	3/8"-16x2-1/4" Hx. Hd. Cap Screw .....		
8	A5-1068-038-50	Blowout Guard .....	4	8	45	A5-1068-022-03	Bus Bar .....	2	4
9	21401-24280	3/8"-16x7/8" Hx. Hd. St. Cap Screw .....			46	A5-1068-044-01	Bus Bar .....	2	4
10	23701-00240	3/8" Lk. Washer .....			47	23003-00280	1/2" Jam Nut .....		
11	21401-24400	3/8"-16x1-1/4" Hx. Hd. St. Cap Screw .....			48	21401-28800	1/2"-13x4" Hx. Hd. Cap Screw .....		
12	23601-00240	13/32" I.D. Std. Washer .....			49	23002-00320	5/8"-11 Std. Nut .....		
13	B5-0512-051-01	Spacer .....	4	8	50	A5-1068-041-01	Bus Bar .....	2	4
14	B5-0512-001-25	Insulating Washer .....	4	8	51	A5-1068-090-50	Bus Bar, R.H. ....		1
15	21601-20240	1/4"-20x3/4" Hx. Socket Hd. Cap Screw .....			52	A5-1068-090-51	Bus Bar, L.H. ....		1
16	23701-00200	1/4" Lk. Washer .....			53	A5-1068-041-52	Bus Bar, R.H. ....		1
17	B5-0502-776-11	Blowout Core .....	4	8	54	A5-1068-041-53	Bus Bar, L.H. ....		1
18	B5-0512-052-16	Insulator for Blowout Core .....	4	8	55	A5-1068-066-01	Bus Bar .....		1
19	A5-1068-036-50	Contact Bracket Assembly .....	4	8	56	B5-0502-408-07	Spacer .....		2
20	B5-0502-103-12	Stud .....	4	8	57	A5-1068-091-50	Bus Bar, R.H. ....		1
21	A5-1068-040-01	Blowout Ear Spacer .....	4	8	58	A5-1068-092-50	Bus Bar, L.H. ....		1
22	23002-00200	1/4"-20 Hx. Nut .....			59	A5-1068-015-51	Contact Shaft Assembly (Includes Items 60 thru 82) .....	1	
†23	A5-0005-015-01	Contact Tip .....	8	16	59A	A5-1068-085-51	Contact Shaft Assembly (Includes Items 60 thru 82) .....		1
24	21601-28480	1/2"-13x1-1/2" Hx. Socket Hd. Cap Screw .....			60	A5-1068-027-50	Trip Assembly (Includes Items 61 thru 63) .....	1	1
25	23701-00280	1/2" Lk. Washer .....			61	A5-1068-028-01	Shaft .....	1	1
26	23601-00282	1-3/8" O.D. Std. Washer .....			62	C5-1068-029-01	Operating Arm .....	1	1
27	C5-1068-034-50	Base, R.H. ....	1		63	24209-32780	1/2"x3-3/4" Spring Roll Pin ..		1
27A	C5-1068-089-50	Base, R.H. ....		1	64	A5-1068-030-01	Torsion Spring .....	1	1
28	C5-1068-033-50	Base, L.H. ....	1		65	FP-24H-24	Bearing .....	1	1
28A	C5-1068-088-50	Base, L.H. ....		1	66	A5-1068-016-51	Contact Shaft Assembly (Includes Items 23, 63, 67 thru 82) .....	1	
29	A5-1068-042-50	Bus Bar, R.H. ....	1	1	66A	A5-1068-086-51	Contact Shaft Assembly (Includes Items 23, 63, 67 thru 82) .....		1
30	A5-1068-043-50	Bus Bar, L.H. ....	1	1	67	A5-1068-058-50	Connector Assembly .....	4	8
31	21401-24740	3/8"-16x3-1/4" Hx. Hd. Cap Screw .....			68	L6056	Auxiliary Arm Pin .....	4	8
32	23601-00240	3/8" Std. Washer .....			69	LT3394	Set Screw .....	4	8
33	23002-00240	3/8"-16 Nut .....			70	A5-1068-017-01	Shaft .....	1	
34	A5-1068-022-50	Bus Bar, R.H. ....	1	1	70A	A5-1068-017-02	Shaft .....		1
					71	B5-0512-251-24	Shaft Insulator .....	1	
					71A	B5-0512-251-25	Shaft Insulator .....		1
					72	C5-1068-018-50	Contact Arm Assembly .....	4	8
					73	21401-28680	1/2"-13x2-1/2" Hx. Hd. Cap Screw .....		

†Essential parts for general maintenance.

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Item No.	List No.	Description	Single No. Req'd	Duplex No. Req'd	Item No.	List No.	Description	Single No. Req'd	Duplex No. Req'd
74	B5-1068-019-01	Contact Arm Clamp .....	4	8	93	B5-0502-053-21	Bearing Spacer .....	1	1
75	A5-1031-035-50	Contact Spring Bracket Assembly .....	4		94	A5-1068-011-01	Front Bearing Housing .....	1	1
75A	A5-1068-022-50	Contact Spring Bracket Assembly .....		8	95	D5-1068-005-50	Frame Assembly .....	1	
†76	B5-0502-601-34	Contact Spring .....	4	8	95A	D5-1068-082-50	Frame Assembly .....		1
77	21401-28660	1/2"-13x2-1/4" Hx. Socket Hd. Cap Screw .....			96	23602-13209	Washer .....	4	4
78	23003-00240	3/8" Jam Nut .....			97	B5-0502-276-31	Pivot Pin .....	2	2
79	C5-1068-026-50	Rocker Arm Assembly .....	1	1	98	24201-06320	Cotter Pin .....	4	4
80	A5-1068-025-01	Arc Horn .....	4	8	99	24209-32480	1/2"x1-1/2" Roll Pin .....		
81	B5-1068-021-01	Auxiliary Arm .....	4	8	100	A5-1068-013-50	Base Assembly .....	1	1
82	21401-24240	3/8"-16x3/4" Hx. Hd. Cap Screw .....			101	B5-0502-407-22	Key .....	1	1
83	B5-1068-010-50	Rear Panel Assembly .....	1		102	FP-24B-35	Oilite Bearing .....	4	4
83A	B5-1068-010-51	Rear Panel Assembly .....		1	103	A5-1068-031-01	Latch Arm .....	2	2
84	A5-1202-062-01	Gasket .....	6	12	104	B5-0502-601-37	Latch Arm Spring .....	1	1
85	23003-00200	1/4"-20 Jam Nut .....			105	A5-1068-045-01	Stop Plate .....	2	2
86	22003-20241	1/4"-20x3/4" Set Screw .....			106	C5-1068-053-50	Weight Arm Assembly .....	1	
87	A5-1068-012-01	Bearing Housing .....	1	1	106A	C5-1068-053-51	Weight Arm Assembly .....		1
88	21402-29480	1/2"-20x1-1/4" Hx. Hd. Cap Screw .....			107	D5-1068-059-50	Weight Arm Assembly, 90° ..	1	
89	FP-24H-24	Bearing .....	1	1	107A	D5-1068-059-51	Weight Arm Assembly, 90° ..		1
90	21401-28400	1/2"-13x1-1/4" Hx. Hd. Cap Screw .....			108	A5-1068-055-50	Suspended Weight Assembly ..	1	
91	21401-28760	1/2"-13x3-1/2" Hx. Hd. Cap Screw .....			108A	A5-1068-055-51	Suspended Weight Assembly ..		1
92	FP-24H-25	Bearing .....	2	2	†109	A5-1068-056-50	Wire Rope & Fittings .....	1	1
					110	X3332	Washer .....	1	1
					111	X-2319	Hx. Hd. Cap Screw .....	1	1
					112	X-2222	Hx. Hd. Cap Screw .....	1	1
					113	B5-1068-051	Side Cover Assembly .....	2	2

†Essential parts for general maintenance.