

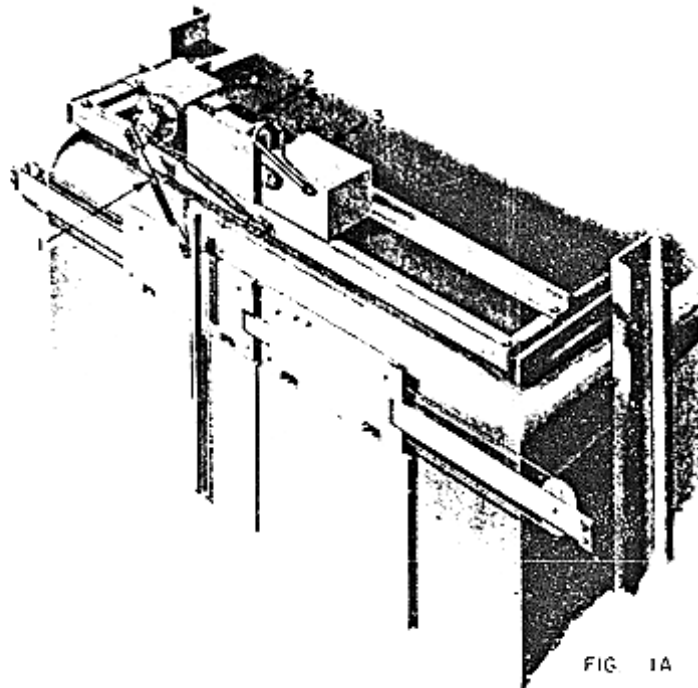
OBSOLESCENCE NOTICE

The product covered in this SPL has been designated as obsolete and is no longer supported. See TIP 32.2-1, *Obsolete Components*, for potential upgrade. Replacement lower level parts listed within and unique to this design are not being restocked when depleted. Some of these parts, depending on availability and other factors, may be quoted through Customer Service, but most will have extended lead times and increased cost due to low volume production.

October 1, 1957

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ORDER FORM O-808A & O-808B



Center Opening Doors - Illustrated

- 1 - Arm, operating (Car Door) See Fig. 7
- 2 - Engine See Fig. 4
- 3 - Switch, Type 6897C Mech. See Fig. 5
- 4 - Unit, Gear Motor Reduction See Fig. 4

(For "AB" Operators furnished since June 1, 1956)

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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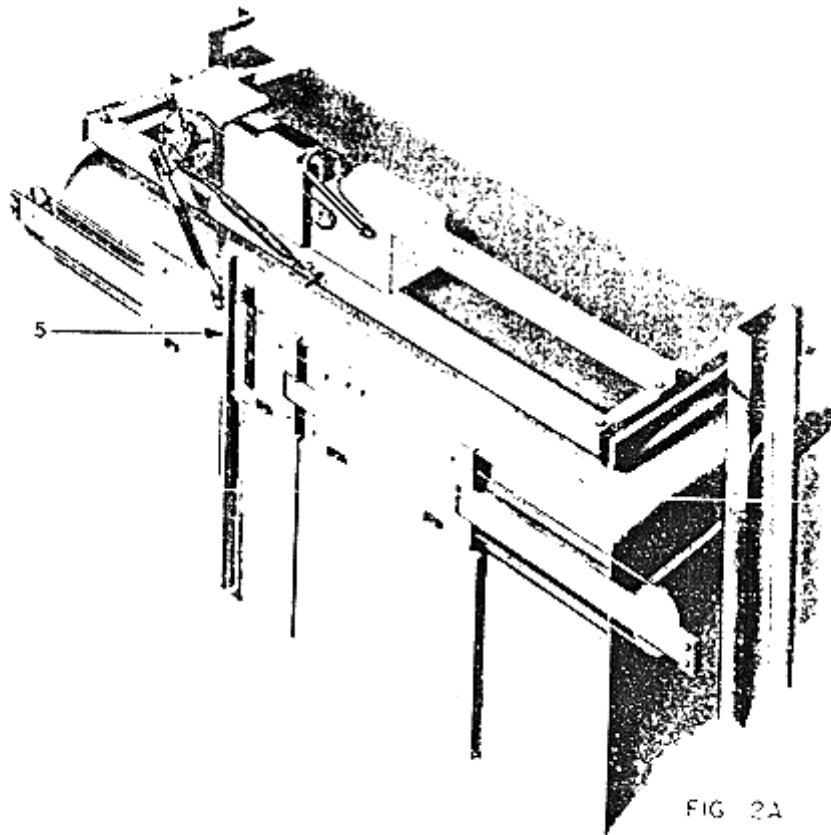


FIG. 2A

VIEW OF CAR AND HOISTWAY DOOR OPERATOR

5 - Cam Part No. 32762

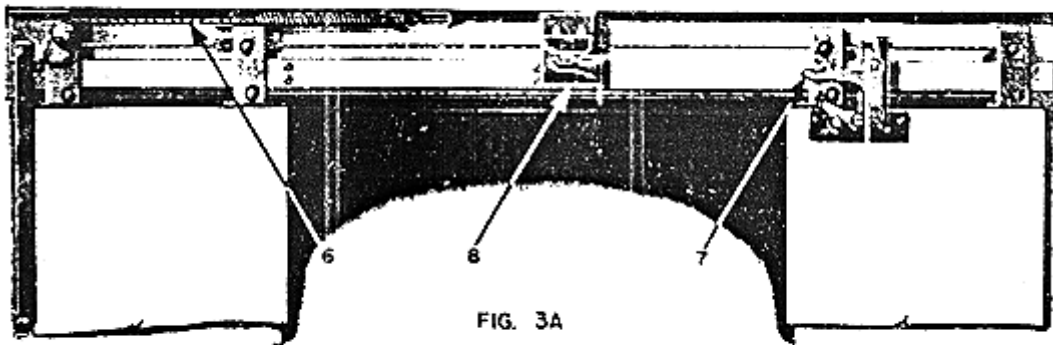


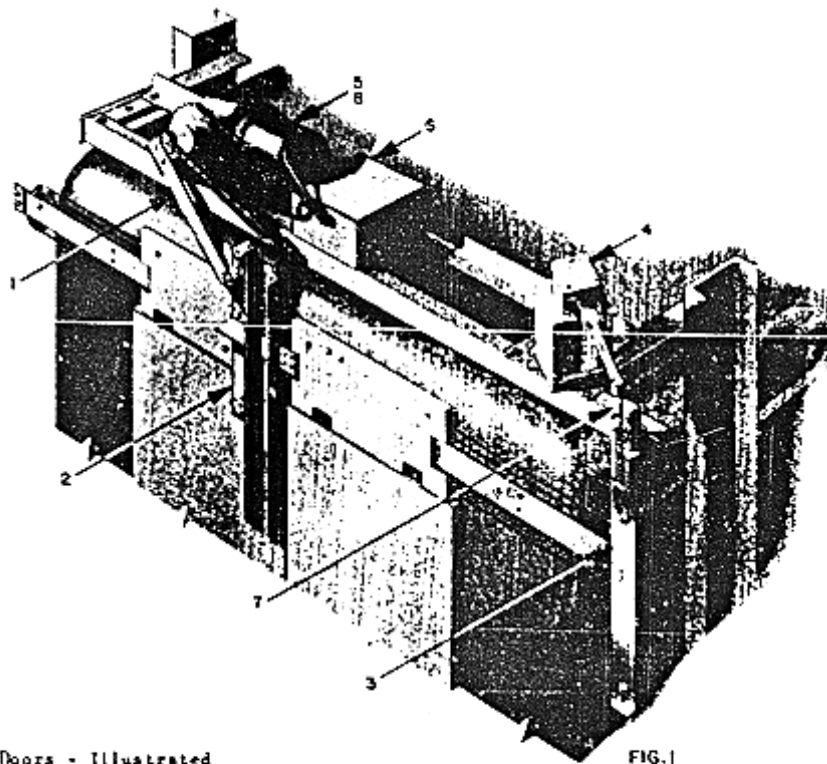
FIG. 3A

VIEW OF HOISTWAY DOORS - FIG. 3A

6 - Closure, Spring Door	See Leaflet C-1009
7 - Lock, Type 6940A Door	See Leaflet C-1009
8 - Switch, Type 6940A Interlock	See Leaflet C-1008

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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Center Opening Doors - Illustrated

- | | |
|--------------------------------|-------------------|
| 1 - Arm, Operating (Car Door) | See Fig. 7 |
| 2 - Cam, Engaging | See Fig. 9 |
| 3 - Cam, Retiring | See Fig. 10 |
| 4 - Device, Retiring Cam | See Leaflet C-856 |
| 5 - Engine | See Fig. 4 |
| 6 - Switch, Type 6897C Mech. | See Fig. 3 |
| 7 - Switch, Type 6098 Mech. | See Leaflet C-919 |
| 8 - Unit, Gear Motor Reduction | See Fig. 4 |

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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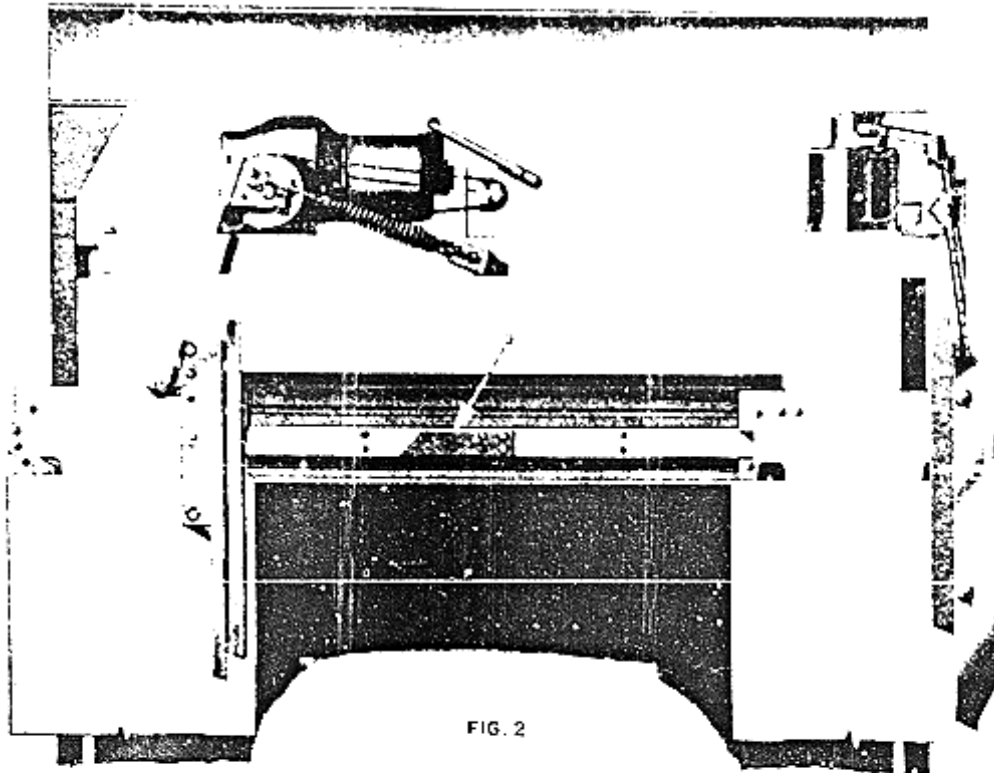


FIG. 2

VIEW OF CAR DOORS FROM OUTSIDE OF CAR - FIG. 2
(for Operators furnished prior to June 1, 1956)

11 - Car See Fig. 5

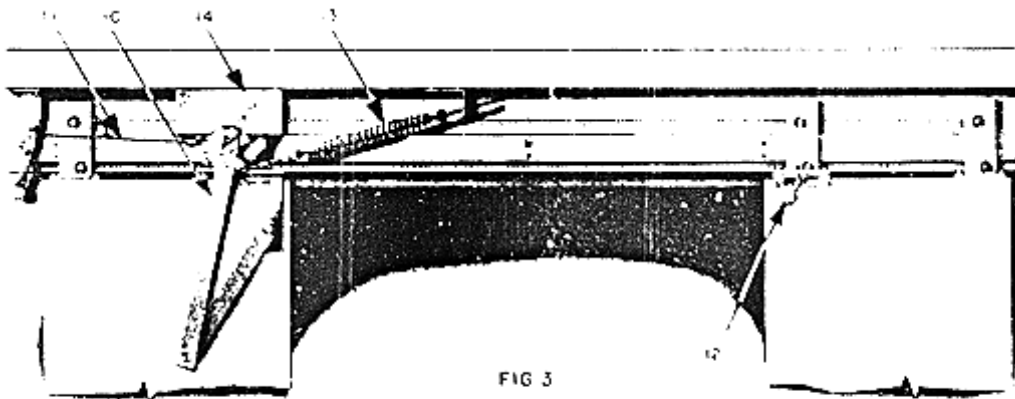


FIG. 3

VIEW OF HOISTWAY DOORS FROM INSIDE OF CAR - FIG. 3
(for Operators furnished prior to June 1, 1956)

- 10 - Arm Operating (Hoistway Doors) See Fig. 8
- 11 - Rod, Switch See Fig. 13
- 12 - Roller, Operating See Fig. 11-12
- 13 - Spring, Bolt and Chain See Fig. 14
- 14 - Switch, Door Interlock See Fig. 6

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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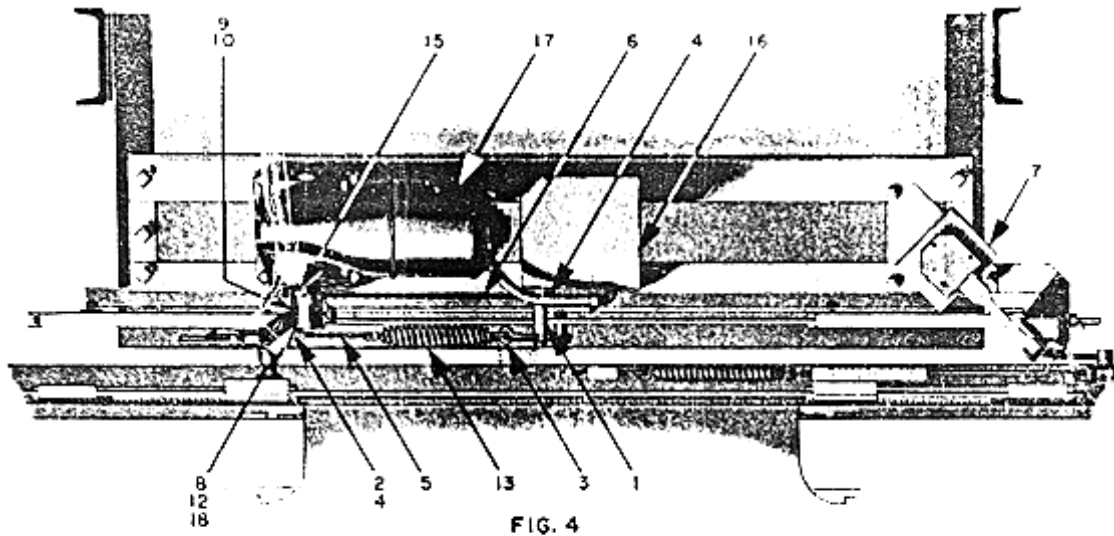


FIG. 4
PLAN VIEW TYPE AB GENERATOR ENGINE
R.H. ILLUSTRATED - FOR CENTER OPENING CAR DOORS

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

TYPE "AB" OPERATOR ENGINE - FIG. 4
 FOR TYPE "AB" OPERATOR (SINGLE ENTRANCE)
 SINGLE SLIDE OR 2 SPEED CAR DOORS
 CENTER OPENING OR 2 SPEED CENTER OPENING CAR DOORS
 ORDER FORM O-808A- & 808B-

Ref. No.	Part or ML No.	Quan- tity	Description
1	272AE3	1	Angle, Clip (for Bolt #56B1)
2	207J1	1	Bearing Ball (for Housing)
<i>2 Arrow indicates location, the parts themselves not showing in the illustration.</i>			
3	56B1	1	Bolt, Eye (for Spring #91T1)
4	<83A3		Bolt, Hex. Hd. In Undersize Fin. Body, 1/2" diam., 2" long (for Housing)
5	-	1	Chain, Spring, < Diamond, 5/8" pitch, 3-1/8" long, with connect- ing links
5	332A5	1	Chain, Spring, #147 Diamond Roller, 5/8" pitch, 4 - 3/8" long, with con- necting links
6	332AR1	1	Chain, A.S.A. #35 Rollerless, 3/8" pitch, 57" long, with connecting links
6	332AR2	1	Chain, A.S.A. #35 Rollerless, 3/8" pitch, 63" long, with connecting links
6	332AR3	1	Chain, A.S.A.#35 Rollerless, 3/8" pitch, 65 - 1/4" long, with con- necting links
7	6859A9	1	Device, Type 6859A Retiring Cam, complete (for details, see leaflet C-856)
8	396AG2	1	Housing, with Ball Bearing
9	192D54	1	Key, 3/8" sq., 2-1/4" long (for Lever)
<i>9 Arrow indicates location, the parts themselves not showing in the illustration.</i>			
10	288HJ1	1	Lever, Operating
11	81AX23	1	Pin, Roll, 5/32" OD, 1-3/8" long (for Sprocket #195DB2)
<i>11 Arrow indicates location, the parts themselves not showing in the illustration.</i>			
11	<81A25	1	Pin, Roll, 5/32" OD, 2" long (for Sprocket #195DD2)

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

12 Arrow indicates location, the parts themselves not showing in the illustration.	462HA12	1	Spacer, 17/32" ID, 1" <CR>11/64" thick (for Housing)
13	91T1	1	Spring, Extension. 10-3/4" long (for Eye Bolt)
14	195DB2	1	Sprocket, 16 teeth (for Switch)
14	195DD2	1	Sprocket, 23 teeth (for Switch)
15	195DE2	1	Sprocket, 54 teeth (for Lever)
16	6897C2	1	Switch, Type 6897C Mechanical, complete (for details, see Page 4, Fig. 5)
17	6333J1	1	Unit, Gear Motor Reduction (for RH Operator)
17	6333J2	1	Unit, Gear Motor Reduction (for LH Operator)
			<i>Replacement parts for above Unit.</i>
-	See Note	1	Armature Assembly
-	186134	1	Bearing, Ball, <Ct. #1487 (for Commutator End)
-	186133	2	Brush, Motor, carbon, 3/4" wide, 1/4" thick, 7/8" long, with pigtail, Cat. #1253
18 Arrow indicates location, the parts themselves not showing in the illustration.	127VB4	1	Washer, 33/64" ID, 7/8" OD., 1/16" thick (for Housing)

NOTE: When ordering give complete data shown on data plate on Unit also Elevator Sales number.

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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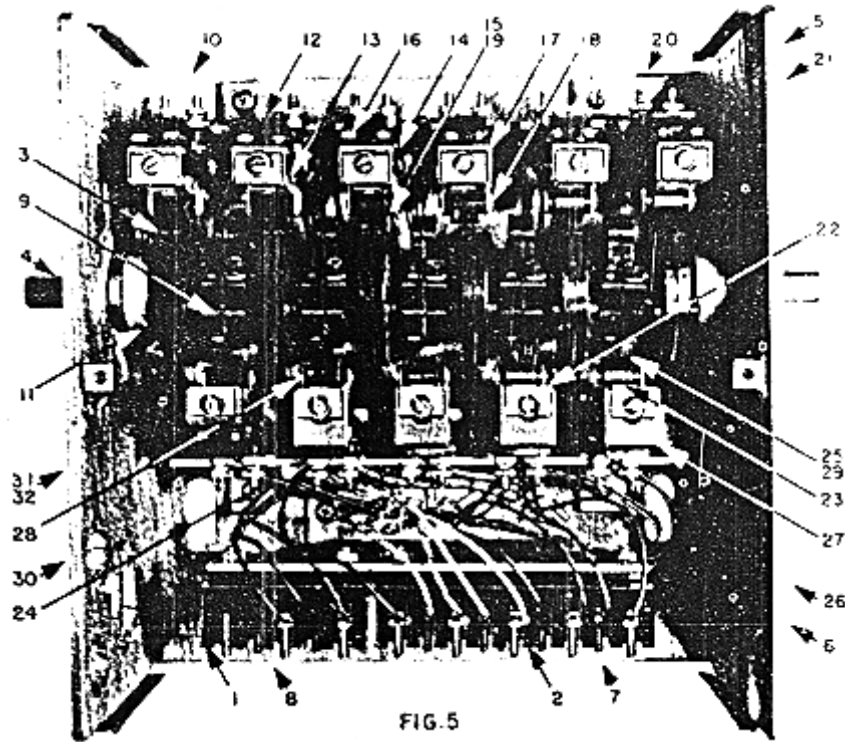


FIG. 5

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

Type 6897C Mechanical Switch - Fig. 5

ML 6897C2

Ref. No.	Part No.	Quan- tity	Description
1	303H2	1	Board, 10 Stud Terminal
2	303H1	1	Board, 18 Stud Terminal
3	327DJ2	22	Cam, with Ring, screw and washer
4	<77K4	1	Pin, Shouldered, 12-1/8" long
5	102CJ1	1	Plate, Data
5	<i>Arrow indicates location, the parts themselves not showing in the illustration.</i>		
6	102CJ2	1	Plate, Data
6	<i>Arrow indicates location, the parts themselves not showing in the illustration.</i>		
7	102CD9	1	Plate, Marking (for Board #303H1)
7	<i>Arrow indicates location, the parts themselves not showing in the illustration.</i>		
8	102CD10	1	Plate, Marking (for Board #303H2)
8	<i>Arrow indicates location, the parts themselves not showing in the illustration.</i>		
9	172GF1	22	Ring, 7/32" ID (for Cam #327DJ2)
10	255BB67	44	Shim, 5/8" wide, 15/16" long, #22 ga. thick
10	<i>Arrow indicates location, the parts themselves not showing in the illustration.</i>		
11	462HA41	2	Spacer, 41/64" ID, 1-1/8" OD, 27/64" thick (for Pin #77FK4)
12	6554A1	7	Switch, Mechanical (Making Contact)
12	each consisting of:		
13			1 - Arm, Switch, with Roller and Pin part #287AD2 <i>Not furnished separately, for replacement, order a complete switch.</i>
14			1 - Base, Contact, with bushing part #306AK2 <i>Not furnished separately, for replacement, order a complete switch.</i>
15			1 - Bushing, Oil-less (for Roller) part #335R13
16			2 - Contact, Movable part # 93A2
17			1 - Contact, Stationary part # 152T1
18			1 - Pin, Headed (for Roller) part # 77AP1

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

19			1 - Roller, with Bushing part #456AE2
20 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			1 - Spring, Compression part # 90JA4
21 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			1 - Washer, Rectangular part #131BA1
22	<655B1	4	Switch, Mechanical (Breaking Contact) each consisting of:
23			1 - Arm, Switch, with Roller and Pin part #287AD2 <i>Not furnished separately, for replacement, order a complete switch.</i>
24			1 - Base, Contact, with bushing part #306AK2 <i>Not furnished separately, for replacement, order a complete switch.</i>
25			1 - Bushing, Oil-less (for Roller) part #335E13
26 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			2-Contact, Movable part # 93A2
27			1 - Contact, Stationary part # 152R1
28			1 - Pin, Headed (for Roller) part #77AP1
29			1 - Roller, with Bushing part #456AE2
30 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			1 - Spring, Compression part # 90JA4
31 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			2 - Washer, Rectangular, 1/2" long part # 128H1
32 <i>Arrow indicates location, the parts themselves not showing in the illustration.</i>			2 - Washer, Rectangular, 5/8" long part # 131BA1

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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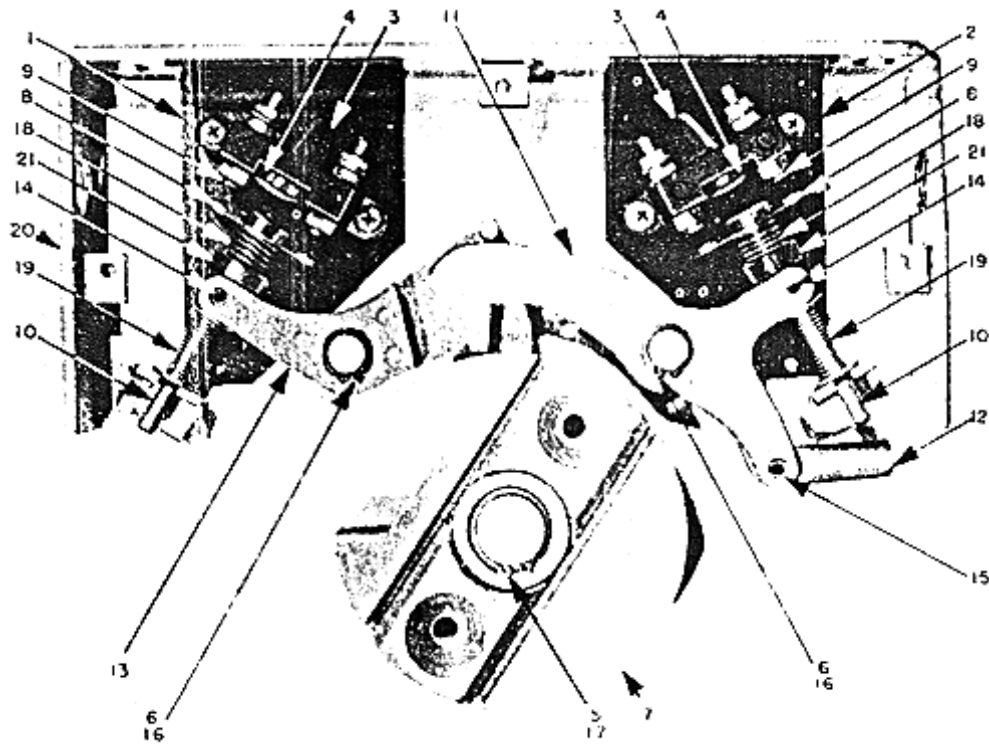


FIG. 6

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

Parts for Type 6910B Door Interlock Switch For Type 6940 Interlock Switch, see Parts Leaflet C-1009. - Fig. 6

ML 6910B1 - For LH Operator, Center Opening Doors and RH Operator, Two Speed Doors over 48" Door Travel (3/8" and/or 2" Interlock Zone)

ML 6910B2 - For RH Operator, Center Opening Doors and LH Operator, Two Speed Doors over 48" Door Travel (3/8" and/or 2" Interlock Zone)

ML 6910B3 - For LH Operator, Center Opening Doors (3/8" and/or 4" Interlock Zone)

ML 6910B4 - For RH Operator, Center Opening Doors (3/8" and/or 4" Interlock Zone)

ML 6910B5 - For RH Operator, Single Slide or Two Speed Doors (3/8" and/or 4" Interlock Zone)

ML 6910B6 - For LH Operator, Single Slide or Two Speed Doors (3/8" and/or 4" Interlock Zone)

Ref. No.	Part No.	Quan- tity	Description
1	275AL1	1	Barrier, Insulating
2	275AL2	1	Barrier, Insulating
3	306ET1	2	Base, Contact, with Bumper
4	320AR2	1	Bumper, rubber for Base)
5	335H20	1	Bushing, Flanged, Oil-less (for Cam)
6	335E59	2	Bushing, Straight, Oil-less (for Latch and Pawl)
7	327EK1	1	Cam, with Bushing
8	150P36	2	Contact, Movable
9	150C10	4	Contact, Stationary
10	385FJ1	2	Guide, 3-1/16" long
11	331AK1	1	Latch, with Bushing (for Switch #6910B1 or 2)
11	331AK2	1	Latch, with Bushing (for Switch #6910B3 or 4)
11	331AK3	1	Latch, with Bushing (for Switch #6910B5 or 6)
12	432D1	1	Lug, 1-13/16" long (for Latch)
13	439T1	1	Pawl, with Bushing
14	81AX1	2	Pin, Roll, 3/16" diam., 3/4" long (for Latch and Pawl to Guide)
15	81AX19	1	Pin, Roll, 1/4" diam., 3/4" long (for Latch to Lug)
16	172DE11	2	Ring, External Retaining (for Latch and Pawl)
17	172DE7	1	Ring, External Retaining (for Cam)
18	90TA2	2	Spring, 17/32" ID, 11/16" long, 6 active turns
19	90TA7	2	Spring, 9/32" ID, 2-1/8" long, 17 active turns
20	129BG1	3	Washer, #10-32 tap, 3/8" OD, 1/16" thick, nylon (for Cover)
21	133AK1	2	Washer, Spring, Seat, phenolic

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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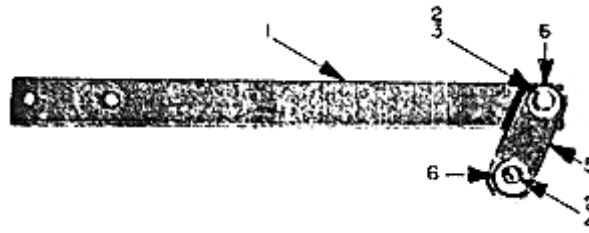


FIG. 7

Parts for Operating Arms (Car) - Fig. 7

ML 6899D1 TO 8 (without Pivot Plate)
 ML A6899D1 TO 8 (with Pivot Plate) Not illustrated.

Ref. No.	Part No.	Quantity	Description
1	288HK1	1	Arm, Operating, 20-3/4" long (for Link #430TAS or 32)
1	288HK3	1	Arm, Operating, 24-1/8" long (for Link #430TA9 or 34)
1	288HK5	1	Arm, Operating, 27-3/4" long (for Link #430TA35)
1	288HK7	1	Arm, Operating, 29-3/4" long (for Link #430TA36)
1	288HK9	1	Arm, Operating, 31-3/4" long (for Link #430TA37)
1	288HK11	1	Arm, Operating, 33-3/4" long (for Link #430TA39)
2 Arrow indicates location, the part itself not showing in the illustrations.	207R1	2	Bearing, Ball (for Link)
3	65FA2	1	Bolt, Hex. Hd., 3/8" diam., 13/16" long
4	59A2	1	Bolt, Hex. Hd., 3/8" diam., 1-1/16" long
5	430TA32	1	Link, 4-7/8" long (for Arm #288HK1)
5	430TA5	1	Link, 7-3/4" long (for Arm #288HK1)
5	430TA9	1	Link, 8-3/4" long (for Arm #288HK3)
5	430TA34	1	Link, 11-1/4" long (for Arm #288HK3)
5	430TA35	1	Link, 13" long (for Arm #288HK5)
5	430TA36	1	Link, 15" long (for Arm #288HK7)
5	430TA37	1	Link, 17-1/4" long (for Arm #288HK9)
5	430TA39	1	Link, 20-1/4" long (for Arm #288HK11)
Not illustrated.	386ARB1	1	Plate, Pivot (for Links)
6	127VB52	4	Washer, 25/32" ID, 1-1/4" OD, 1/32" thick

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

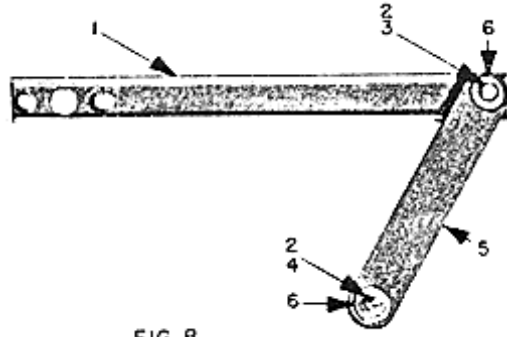


FIG. B

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

PARTS FOR OPERATING ARMS (HOISTWAY) - FIG. 8

ML 6899F1 TO 16

Ref. No.	Part No.	Quan- tity	Description
1	288HL17	1	Arm, Operating, 17" long (for Link #430TA35)
1	288HL1	1	Arm, Operating, 19" long (for Link #430TA34 or 35)
1	288HL3	1	Arm, Operating, 20-1/2" long (for Link #430TA35 or 36)
1	288HL5	1	Arm, Operating, 22-1/4" long (for Link #430TA35 or 42)
1	288HL7	1	Arm, Operating, 24" long (for Link #430TA36 or 37)
1	288HL9	1	Arm, Operating, 26" long (for Link #430TA37)
1	288HL18	1	Arm, Operating, 27" long (for Link #430TA39)
1	288HL11	1	Arm, Operating, 28" long (for Link #430TA38 or 40)
1	288HL13	1	Arm, Operating, 30-1/2" long (for Link #430TA40 or 43)
1	288HL15	1	Arm, Operating, 33" long (for Link # 430TA41)
	207R1	2	Bearing, Ball (for Link)
<i>2 Arrow indicates location, the part itself not showing in the illustrations.</i>			
3	65EA2	1	Bolt, Hex. Hd., 3/8" diam., 13/16" long
4	59A2	1	Bolt, Hex. Hd., 3/8" diam., 1-1/16" long
5	430TA34	1	Link, 11-1/4" long (for Arm #288HL1)
5	430TA35	1	Link, 13" long (for Arm #288HL1, 3, 5 or 17)
5	430TA36	1	Link, 15" long (for Arm #288HL3 or 7)
5	430TA42	1	Link, 16" long (for Arm #288HL5)
5	430TA37	1	Link, 17-1/4" long (for Arm #288HL7 or 9)
5	430TA38	1	Link, 18-1/4" long (for Arm #288HL11)
5	430TA39	1	Link, 20-1/4" long (for Arm #288HL18)
5	430TA40	1	Link, 21-1/4" long (for Arm #288HL11 or 13)
5	430TA43	1	Link, 23-1/4" long (for Arm #288HL13)
5	430TA41	1	Link, 24-1/4" long (for Arm #288HL15)
6	127VB52	4	Washer, 25/64" ID, 1-1/4" OD, 1/32" thick

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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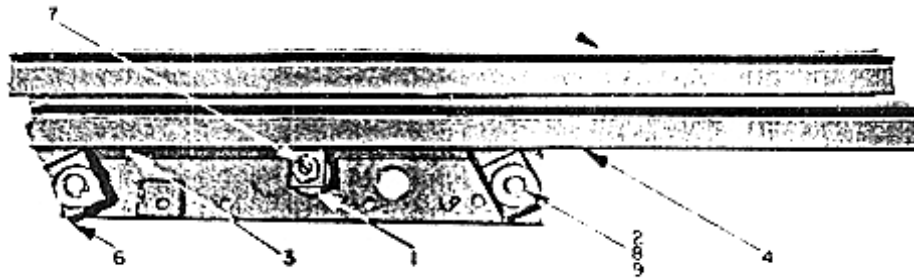


FIG. 9

PARTS FOR ENGAGING CAM - FIG. 9
 ML 6899C1 - FOR RH OPERATOR - ILLUSTRATED
 ML 6899C2 -FOR LH OPERATOR - OPPOSITE

Ref. No.	Part No.	Quantity	Description
1	207Z4	1	Bearing, Ball, with pin
2 Arrow indicates location, the parts themselves not showing in the illustration:	209E1	4	Bearing, Roller (for Link)
3	320AP1	1	Bumper, rubber (for Stationary Cam)
4	327EH1	1	Cam, Movable, with pins (for RH Operator)
4	327EH2	1	Cam, Movable, with pins (for LH Operator)
5	327EJ1	1	Cam, Stationary, with pins (for RH Operator)
5	327FJ2	1	Cam, Stationary, with pins (for LH Operator)
-	327IG1	<i>This Cam is used in conjunction with the Engaging Cam; but is not a part of the above material list.</i>	Cam, phenolic (see Fig. 2, Ref. 9)
6	<4361	2	Link, Cam
7	72AF2	1	Nut, Special, 1/2" Hex. (for Ball Bearing)
8	172DE9	4	Ring, External Retaining (for Cams)
9	127VB83	4	Washer, 41/64" ID, 1-1/2" OD, 3/64" thick (for Cams)

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

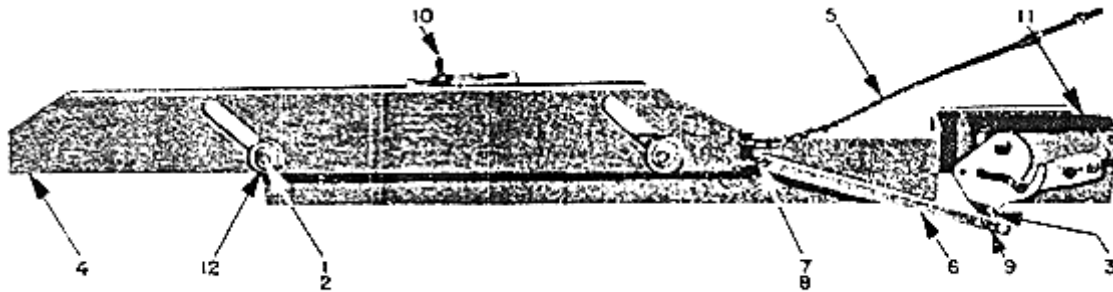


FIG. 10

PARTS FOR RETIRING CAM - FIG. 10
 ML 6899H1 - ILLUSTRATED
 ML 6899H2 - OPPOSITE

Ref. No.	Part or ML No.	Quantity	Description
1 Arrow indicates location, the parts themselves not showing in the illustration:	207P1	4	Bearing, Ball (for Cam)
2	59BC1	2	Bolt, Hex. Hd., 1/4" diam., 1-1/16" long
3	321LA2	1	Bushing, Hex. Hd., 1-1/16" long,
4	327EP1	1	Cam, 3-1/2" wide, 30" long, 3/8" thick
5	332AN1	1	Chain, with rod and links
Not illustrated.	215AA2	2	Coupling, Vibration Isolator
6	430BP1	1	Link, 5/8" wide, 10-7/16" long
7 Arrow indicates location, the parts themselves not showing in the illustration:	78T28	2	Pin, 3/32" diam., 5/8" long (for Screw)
8	124BD1	2	Screw, Anchor, 1-3/8" long (for Link and Chain to Cam)
9	124DA3	1	Screw, Fl. Hd. Mach., #10-32, 1-1/2" long (Link to Switch)
10	95BL1	1	Stud, Adjusting, 5" long
11	6098C3 For details, see Leaflet <919.	1	Switch, Mechanical (as illustrated)
11	6098C1 For details, see Leaflet <919.	1	Switch, Mechanical (opposite)
12	129TS	4	Washer, 49/64" ID, 1-3/8" OD, 1/18" thick, phenolic

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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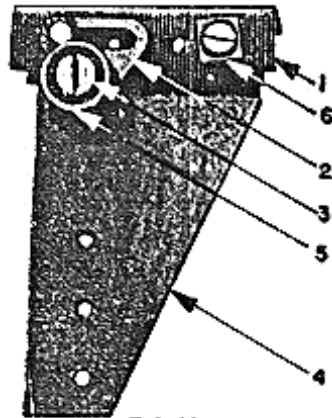


FIG. 11

PARTS FOR OPERATING ROLLER - FIG. 11
 PART NO. 456BR6 FOR RH OPERATOR (ILLUSTRATED)
 PART NO. 456BR2 FOR LH OPERATOR (OPPOSITE)

SINGLE SLIDE OR TWO SPEED HOISTWAY DOORS

Ref. No.	Part No.	Quantity	Description
1	316BCR1	1	Bracket, Mounting
2	316BCS5	1	Bracket, Roller, with Roller, Pin and washers
3	77A5	1	Pin, Roller, 2-5/32" long (for Bracket #316BCS5)
4	386AJW1	1	Plate, Pivot
5	456C3	1	Roller, rubber (for Bracket #316BCS5)
6	131BT1	1	Washer, 1" square, 1/4" thick

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

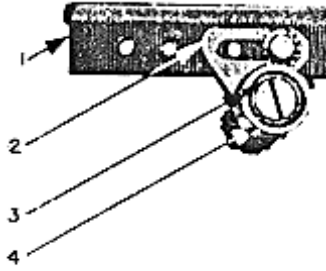


FIG. 12

PARTS FOR OPERATING ROLLER - FIG. 12

PART NO. 456BP2

FOR CENTER OPENING HOISTWAY DOORS

Ref. No.	Part No.	Quantity	Description
1	316BCR1	1	Bracket, Mounting
2	316BCS3	1	Bracket, Roller, with Roller, Pin and washers
3	77A5	1	Pin, Roller, 2-5/32" long (for Bracket #316BCS3)
4	456C3	1	Roller, rubber (for Bracket #316BCS3)

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

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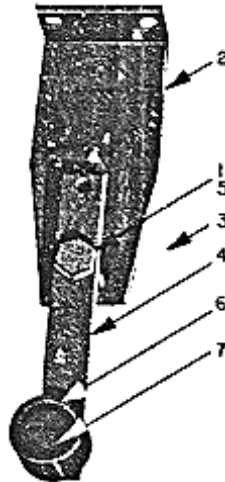


FIG. 13

PARTS FOR UNLOCKING LEVER - FIG. 13

ML 6899B1

Ref. No.	Part No.	Quantity	Description
1	59CA2	1	Bolt, Hex. Head, 1-5/8" long
2	316BCJ1	1	Bracket, steel
3*	335E57	1	Bushing, Oil-less, 1/2" ID, 5/8" OD, 1-1/8" long (for Lever)
4	288HH1	1	Lever, with Bushing
5*	72A1	2	Nut, 3/8" Hex. 3/16" thick, steel
-	-		<i>This Rod is used in conjunction with the Unlocking Lever, but is not a part of the above material list.</i>
6	456C2	1	Roller, rubber
7	124BG1	1	Screw, 2" long

C-990A - (OBSOLETE) Type "AB" Door Operator for Car and Hoistway Doors

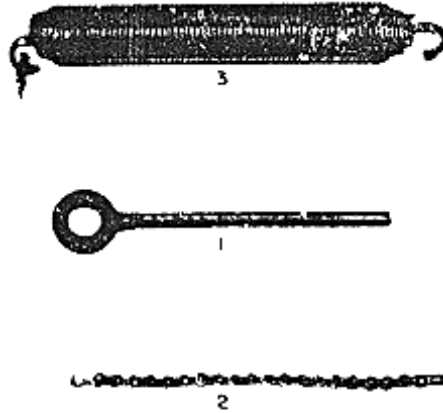


FIG 14

HOISTWAY DOOR SPRINGS Used with Type 6910B Door Interlock Switch: for Door Closers used with Type 6940 Interlock Switch, see Leaflet C-1009. - FIG. 14

Ref. No.	Part No.	Quantity	Description
1	56B1	1	Bolt, Eye
2	332AS1	1	Chain, 7-1/8" long, with link and stud
3	91W2	1	Spring, Extension, 1-3/8" OD, 10-3/4" long, 64 active turns
3	91W3	1	Spring, Extension, 1-3/8" OD, 13-11/16" long, 80 active turns
3	91W4	1	Spring, Extension, 1-3/8" OD, 14-3/4" long, 80 active turns

NOTE: See Fig. 3, Ref. 13.