

Door Operators

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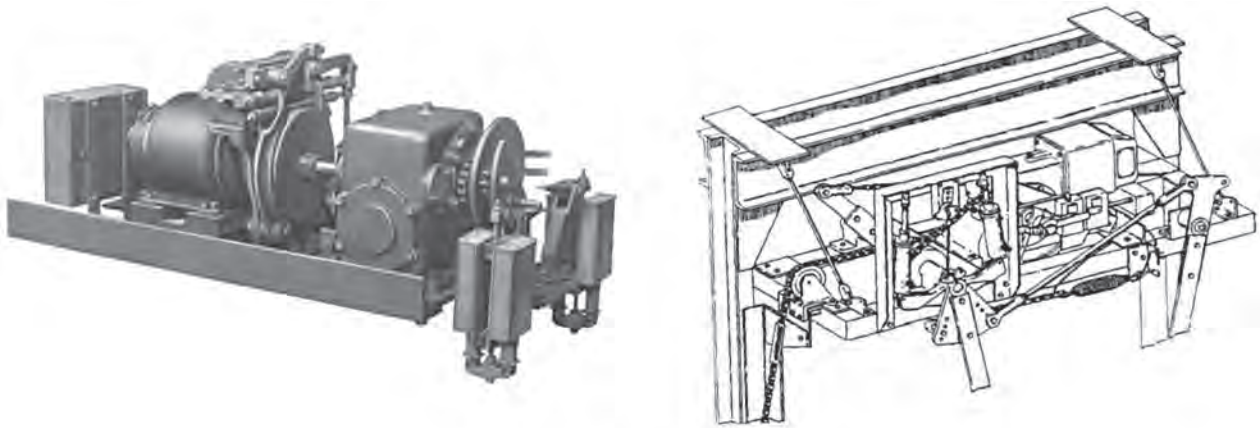
OVL Operator

OVL Operator	89
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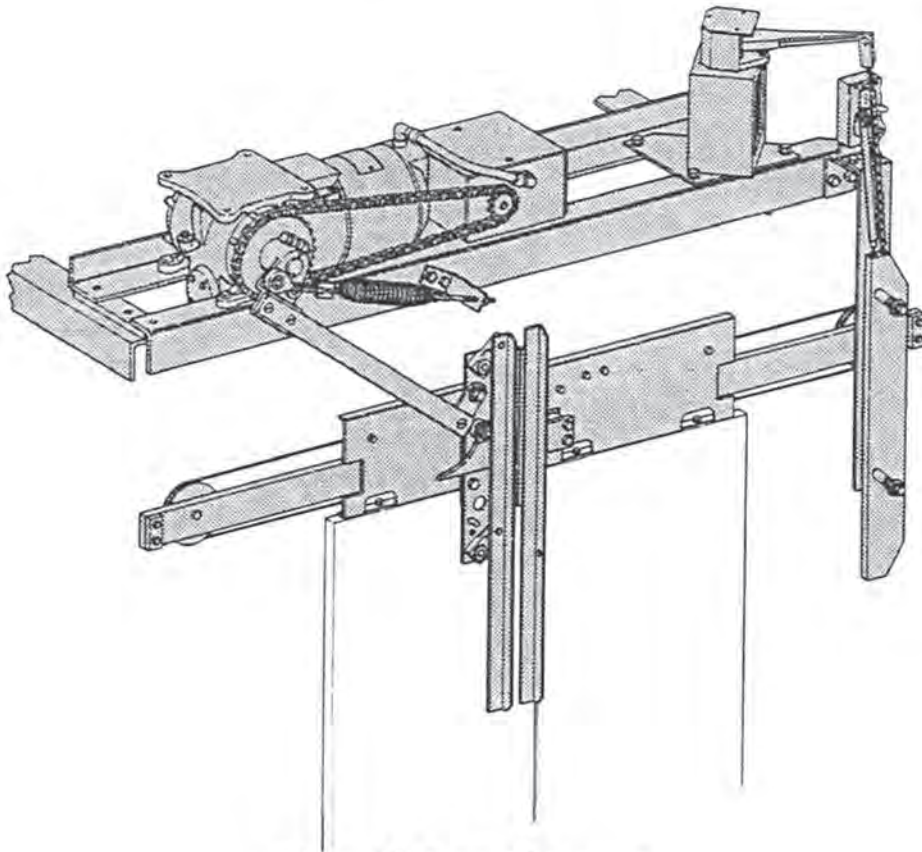
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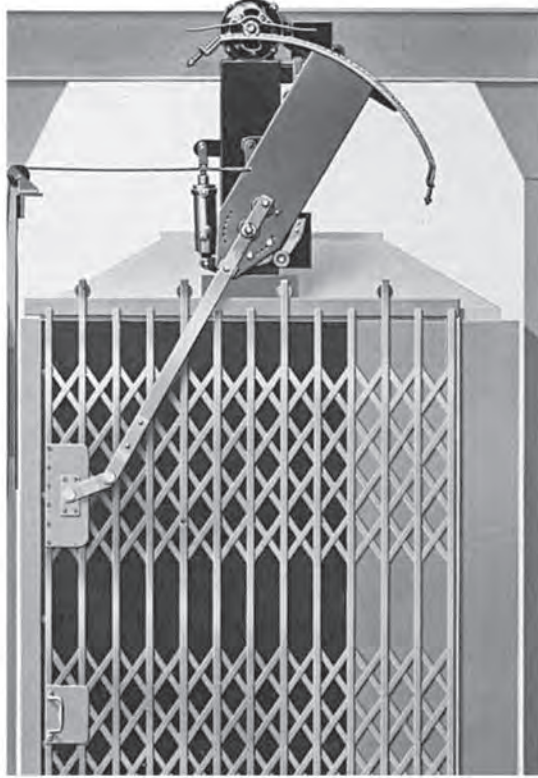


Type A Door Operator

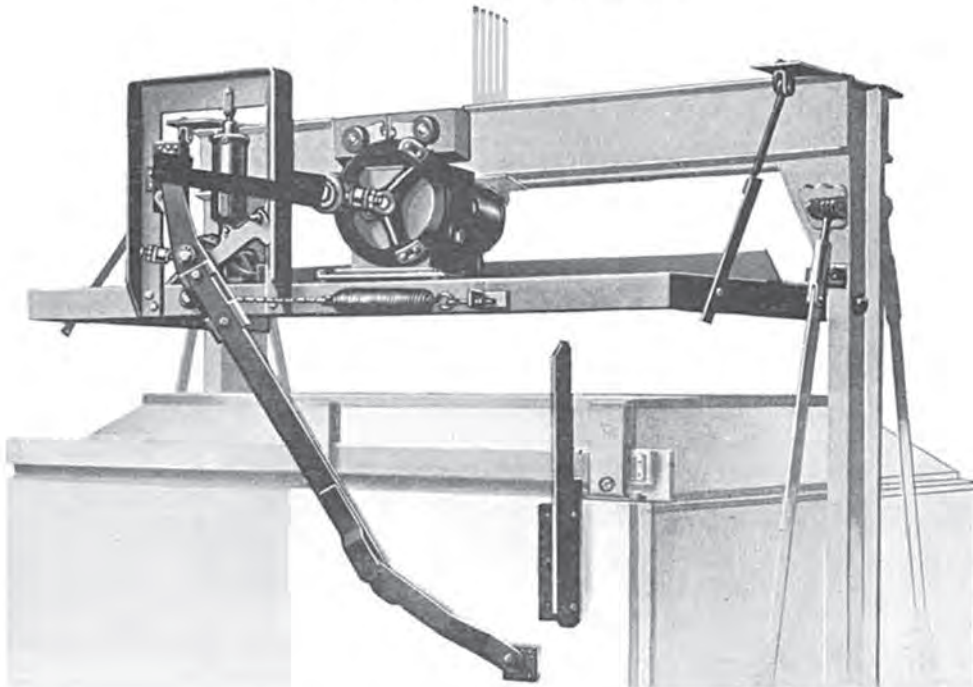


Type AB Door Operator

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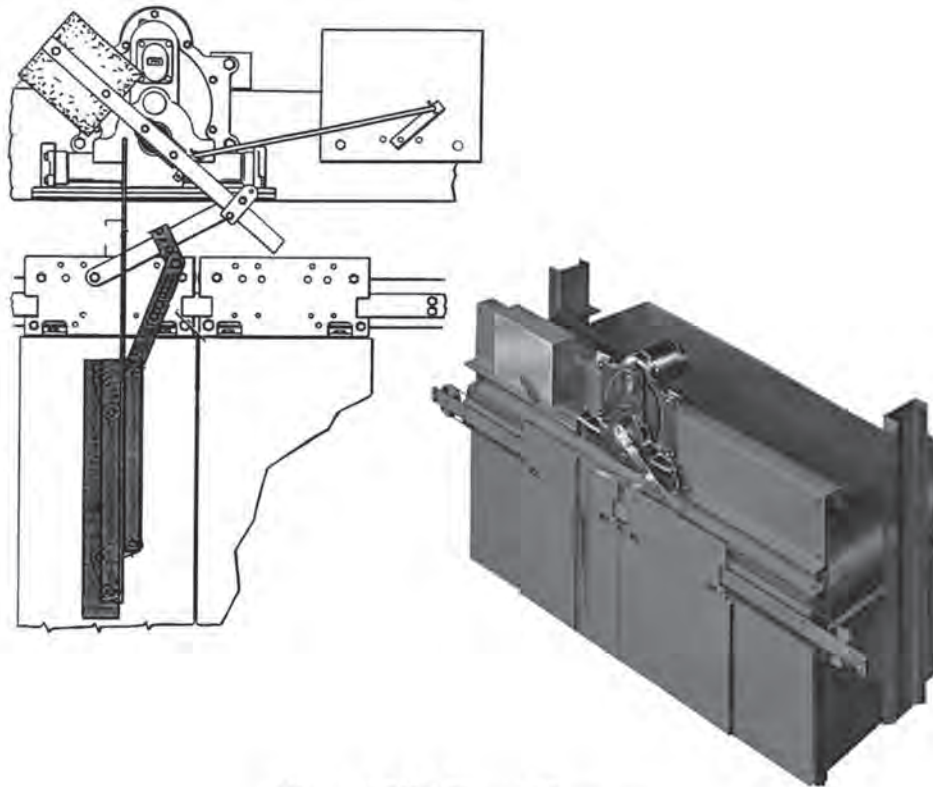


Type 30S Door Operator

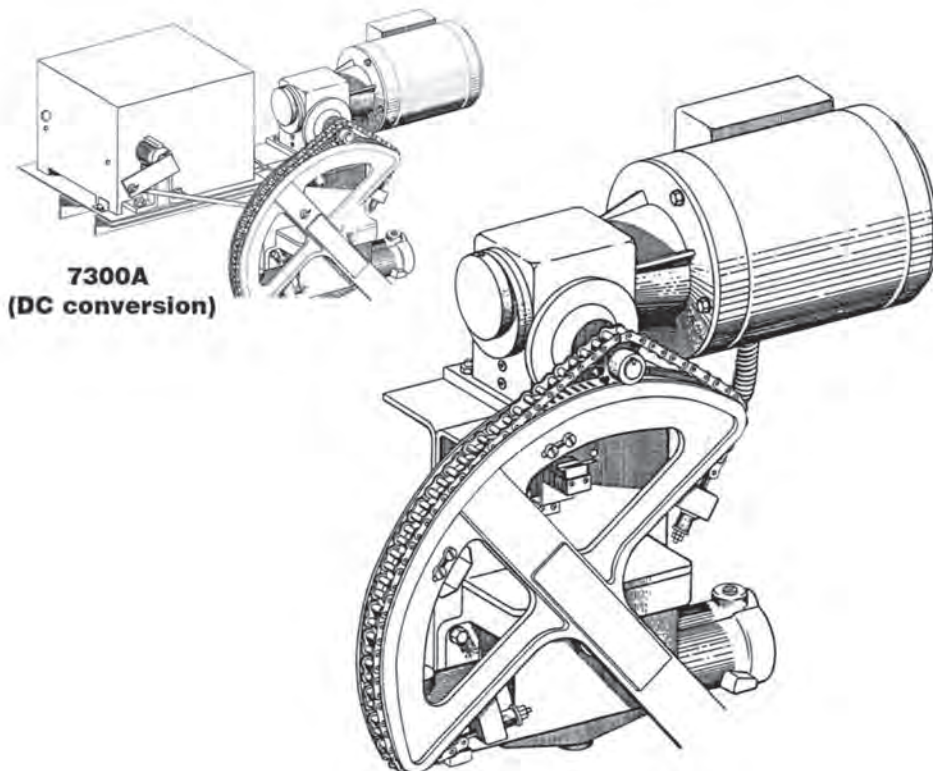


Type O Door Operator

Door Operators: Otis Door Operator Illustration Index



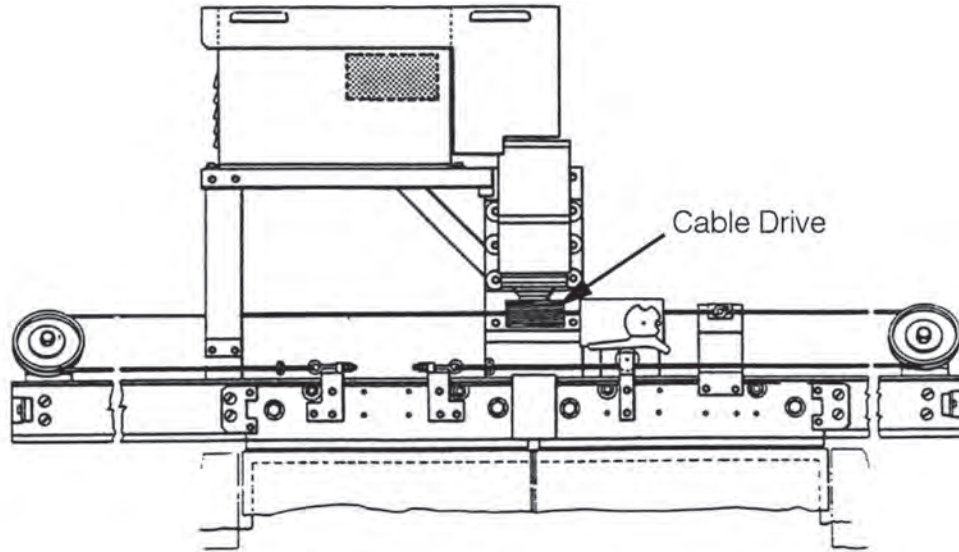
Type 6970 Door Operator



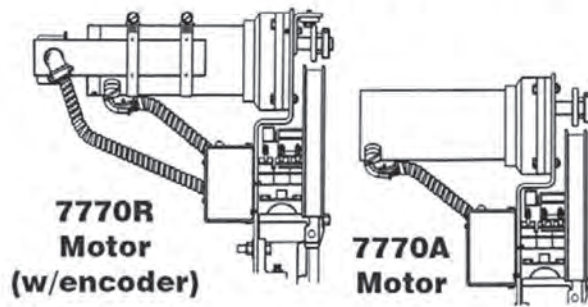
7300A
(DC conversion)

Type 7300 Door Operator

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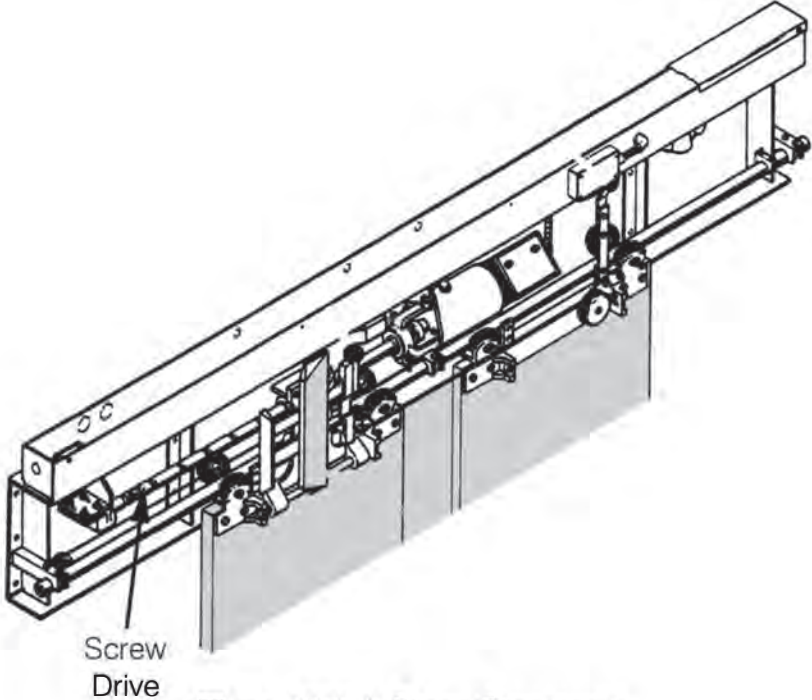


Type 7660A Door Operator



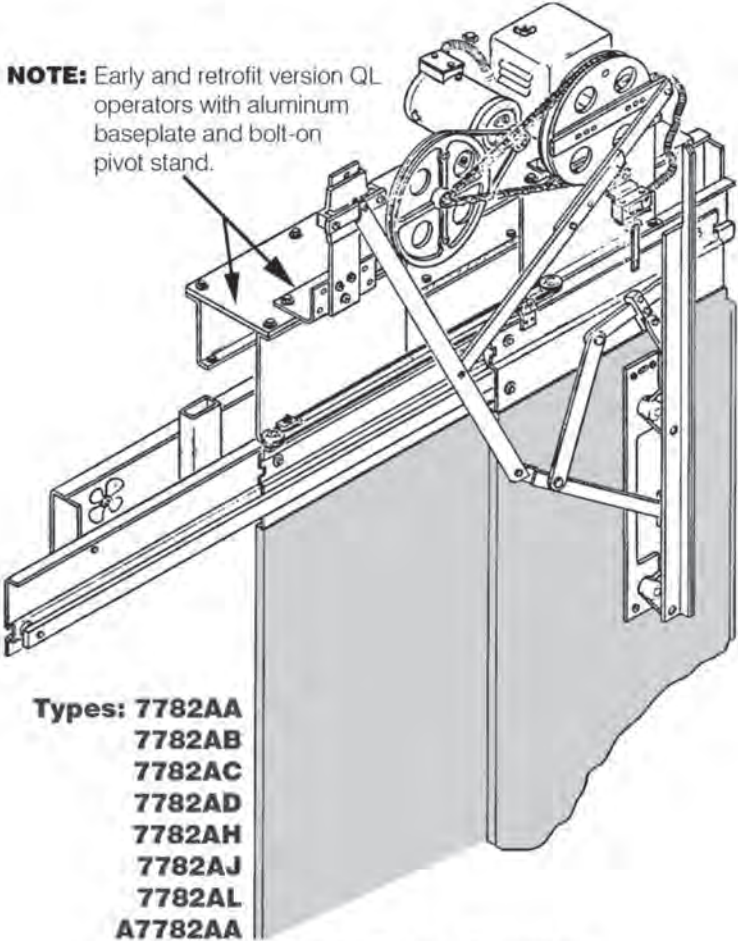
Type 7770A & R Door Operator

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Type 7777A Door Operator

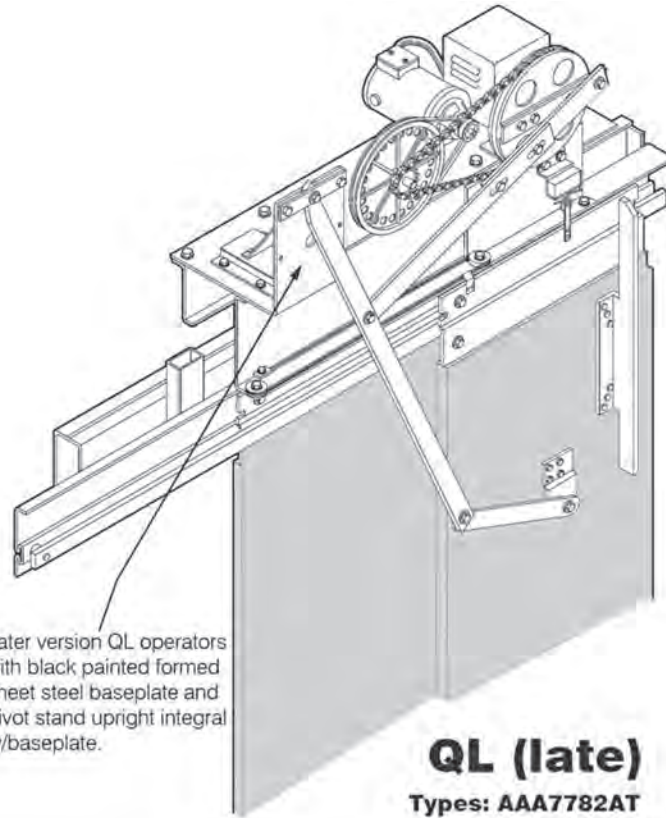
NOTE: Early and retrofit version QL operators with aluminum baseplate and bolt-on pivot stand.



- Types: 7782AA
- 7782AB
- 7782AC
- 7782AD
- 7782AH
- 7782AJ
- 7782AL
- A7782AA

Type QL Early Door Operator

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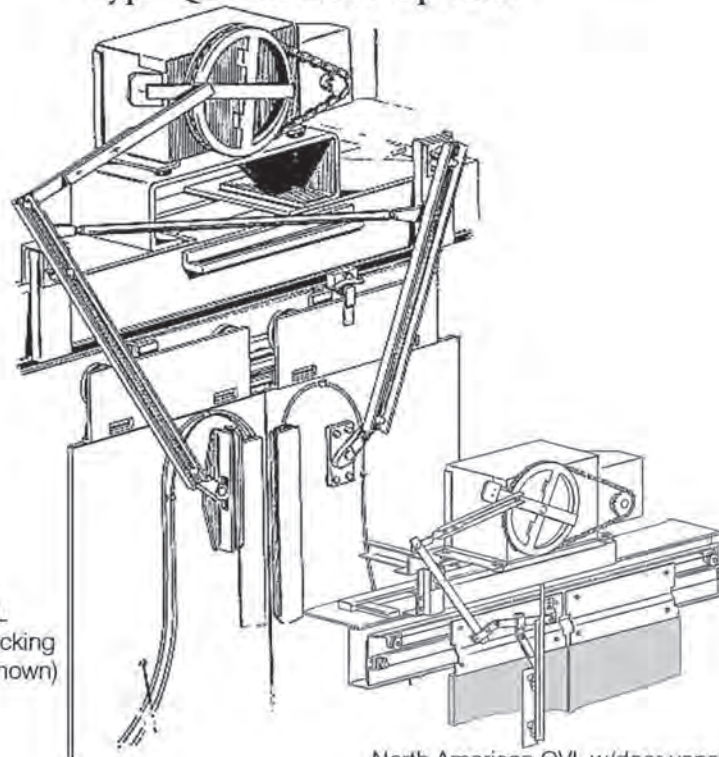


NOTE: Later version QL operators with black painted formed sheet steel baseplate and pivot stand upright integral w/baseplate.

QL (late)

Types: AAA7782AT
AAA7782AV
AAA7782AW
AAA7782AX

Type QL Late Door Operator



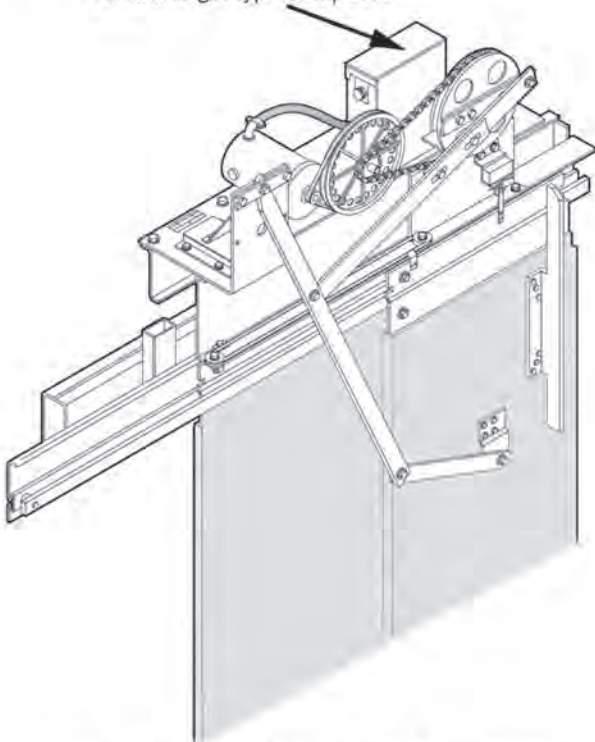
Nippon OVL
w/OVL unlocking
vane (c/o shown)

North American OVL w/door vane
for 6940 interlock (c/o shown)

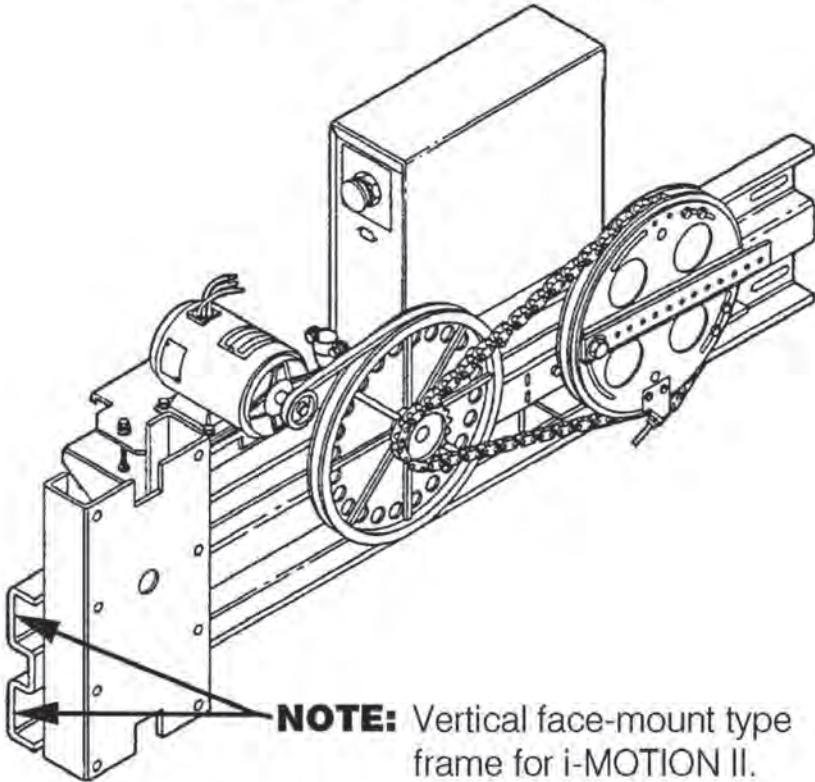
Type OVL Door Operator

Door Operators: Otis Door Operator Illustration Index

NOTE: Distinguish i-MOTION operators from late version QL operators by large control box with integral stop switch and no contact finger type campack.



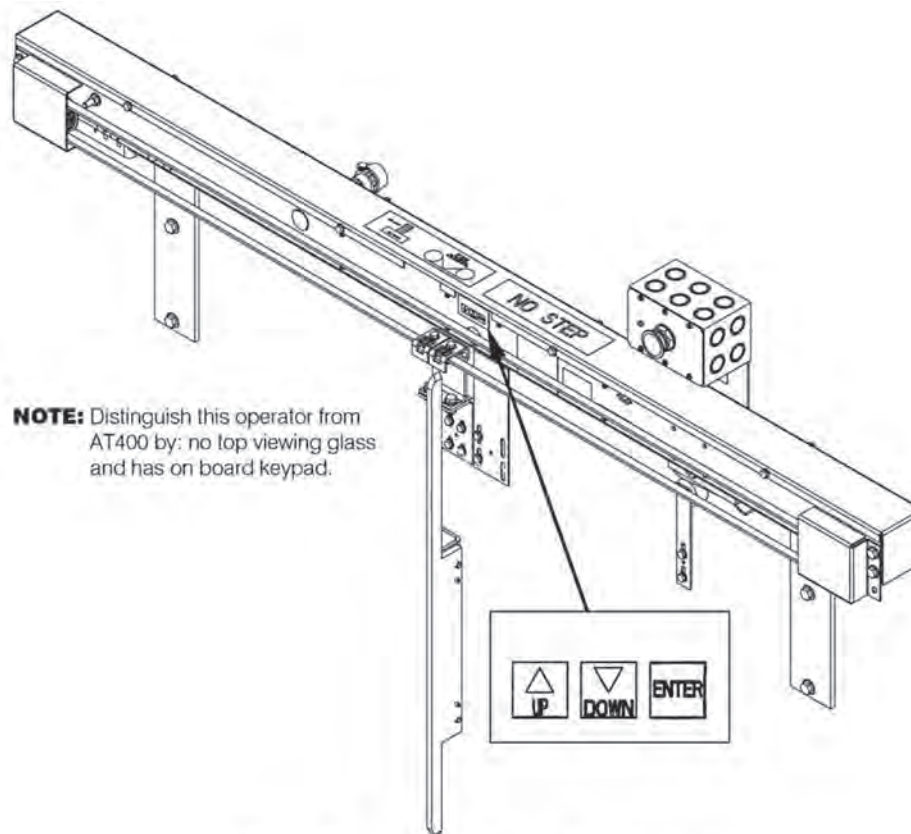
Type i-MOTION Door Operator



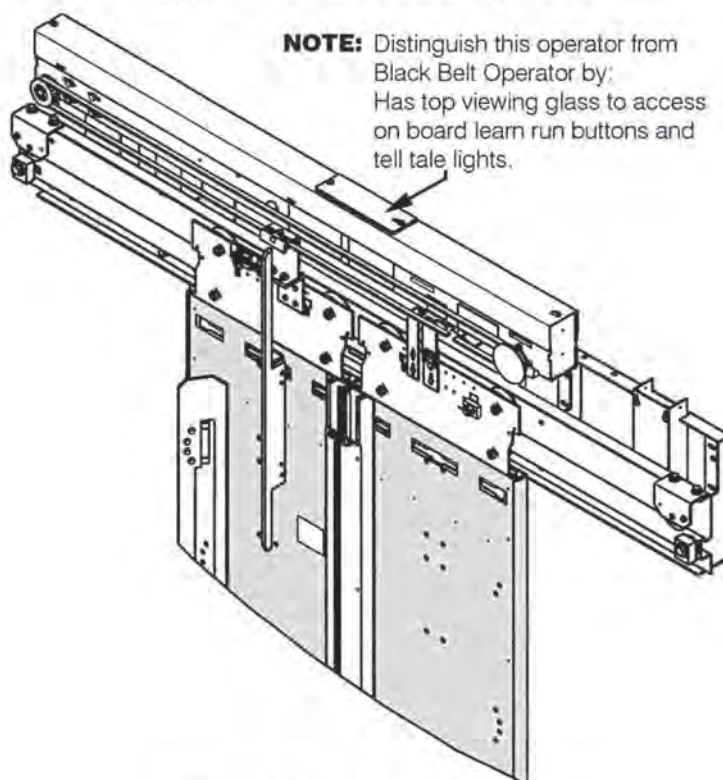
NOTE: Vertical face-mount type frame for i-MOTION II.

Type i-MOTION II Door Operator

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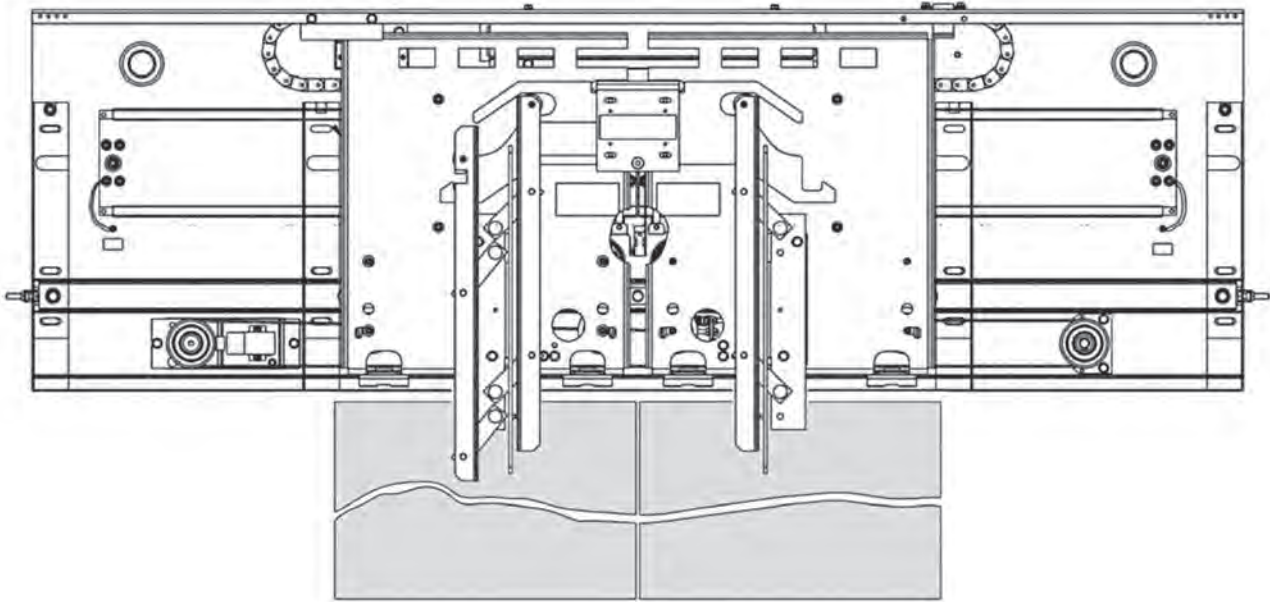


Type Black Belt Door Operator

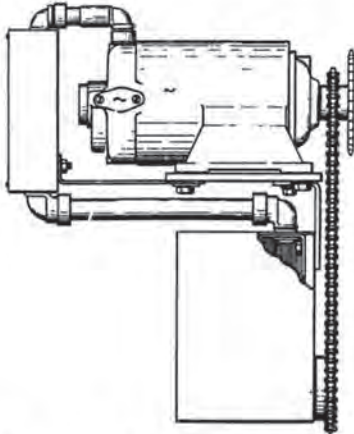


Type AT400 Door Operator

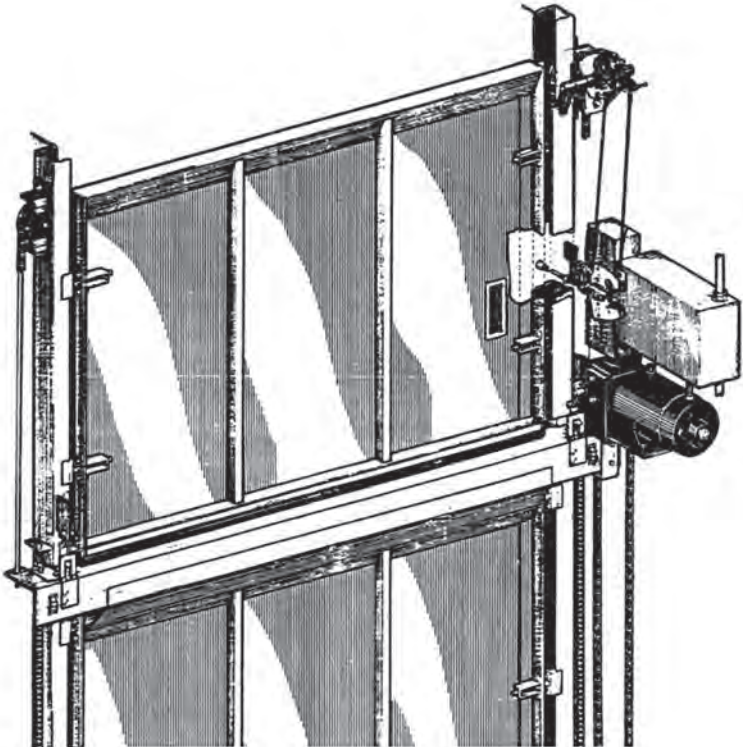
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Type HPLIM Door Operator



(car gate operator)



Type F Door Operator

Door Operators

Door Operators: Common Spare Parts List

Most Common Spare Parts List		
Operator Type	Part Number	Description
A Operator (***)	(***)	(***)
AB (***)	A332AS1	Chain, 7.2 in. L
	91W2, 3, 4	Spring, Ext'n
Type 'O' and O-1	A6393A54	31ES Motor, AC
	VP-814551	1/3 HP Motor, DC
	353Y1	Disc, Rubber 3 in.
	74358	Chain Hitch Lug
	416P1	Brake Lining
30-S (***)	(Obsolete)	Chain
	(Obsolete)	Spool Drum
F (Vertical Doors)	(Rewind Local)	Geared Motor
	332AM4-L	Climber Chain
	332AM5-L	Power Chain
	332AV-L	Relating Chain
	456AS2	Roller, Relating Chain
	195DJ2	Motor Sprocket, 12T
	195AV3	Motor Sprocket, 16T
	195CN3	Motor Sprocket, 32T
	A237AJ2	Shoe, Door Guide
	7300A Operator #	6333AM1
633BX1		Motor, 220 VAC
195GK2		Sprocket, Motor
332BC2		Chain w/Stud Ends
320BE2		Chain Bushing
177AJ1		Microswitch SPDT
6970 Operator	E6970A501	Seals Kit
	E6970A500	Comp. Rebuild Kit
	6333AJ1	Motor
7660A (***)	(***)	(***)
7770A Operator	6333CC13, 14	Gearmotor
7770R Operator	6333CC15, 18	Gearmotor
7770A and R	332BC2	Chain w/Stud Ends
	177AJ1	Microswitch SPDT
7777A (Screw) #	A456FC1	Roller, Hanger
	AAA456ZE2	Roller, Upthrust
QL Operators	AAA717J1, 2, 3	Belt
	AAA6333EZ1	Motor
	AAA7782AY400	Cam Set and Shaft
	AAA332BM500	Chain and Belt Upgrade
	AAA332BM3	Chain Upgrade Kit
	288TJ*	Drive Arm, Aluminum
	395E1 through 4	Pulley Arm, Drive
	395F1 or F2	Transmission Arm

* Part number varies. Specify based on contract conditions.

Most Common Spare Parts List		
Operator Type	Part Number	Description
A Operator (***)	(***)	(***)
OVL Operator	JO332J1 through 4	Chains
	ACA327MS3	Cam, Split
	JO320AS2	Stop Bumper
	JO195AN* Type	Sprocket, Motor
	JAA2690IAAE101	Set, Contact Finger
	AAA6333EH1	Gearmotor
HPLIM Operator	AAA50ATR1-1600	Guide, Secondary
	AAA24450P1	Encoder Assembly
	ABA24450N1	Brake Assembly
	AAA24350AK*	Copper Secondary
I-MOTION Operator	AAA717J1, 2, 3	Belt
	AAA6333EZ1	Motor
	395E4	Pulley Arm, Drive
	395F2	Transmission Arm
	AAA608D8	Sensor
	AAA717L1	Belt
I-MOTION II Operator	AAA6333EZ1	Motor
	AAA332BM2	Chain
	ABA2680AED*	PC Board
	AAA608D8	Sensor
Black Belt Operator	AAA717T1	Belt
	AAA26800AHJ1	PC Board
	AAA24350BL3, 4	Gearmotor
	6098MV2	Gate Switch
AT400 Operator	AAA717T*	Belt
	AAA24350BL1, 2	Gearmotor
	AAA25580AL*	Controller
	AAA24431B1	Inductor Prox. Switch
	AAA25590T or W	Gate Switch Assembly
	AAA661B101	Gate Switch Cont.

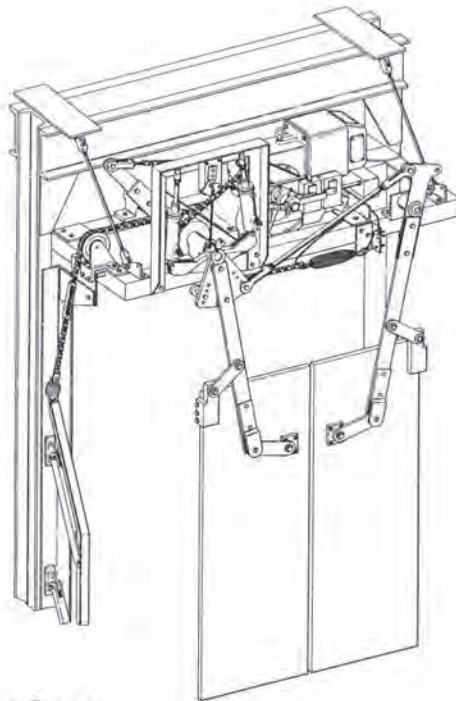
* Part number varies. Specify based on contract conditions.

Door Operators: Service Status & Spare Parts Support

Service Status (see Key)	
Operator Type	
***	'A'
***	'AB'
***	30-S
oo	'O'
^	6970A
#	7300A
*	'F'
***, oo	7660A
#	7770A
*, %	7770R
#	7777A
@, #, ^	QL (early vintage)
@, #, ^	QL (late vintage)
@	OVL
@	i-MOTION
@, %	i-MOTION II
@, %	Black Belt
@, %	AT400
@	HPLIM

Key	Spare Parts Support
***	Obsolete or Very Limited Spare Part Support—Consider Modernizing
oo	Little Spare Part Support—Upgrade to AT400
^	Rebuild Kits Available
#	Use Pre-Engineered or Generic Package Adapting AT400
*	Most Spare Parts Supported
@	Full Spare Part Support—More Contemporary Operator
%	Closed Loop Control

Door Operators: [Type A(6411)] High Speed Operator

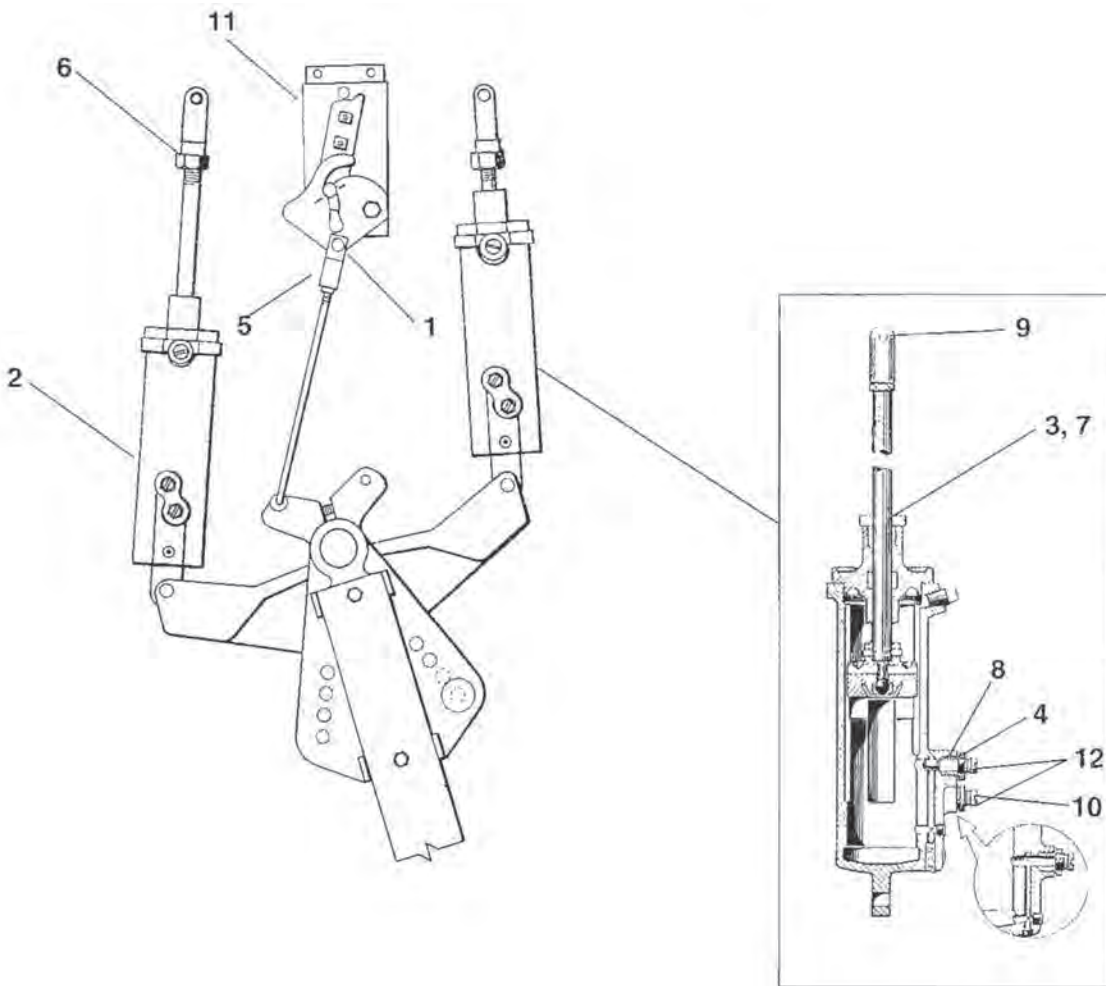


Motor Driven Power Unit Spare Parts

Part No.	Descriptions
207Z18	Bearing, ball
207W6	Bearing, ball (for worm shaft)
209B1	Bearing, roller (for gear shaft)
72609*	Block, terminal, 8 wire (for limit switch leads)
240C1	Brush, motor, 1/4" x 1"
221G1*	Coil, field, set of 2, for 110 or 220 volts
346B1*	Cover, worm shaft bearing
435B1	Fitting, 90° lubricator
435C1	Fitting, straight lubricator
376C1	Gasket, worm shaft bearing housing, .007" Thk., 2-25/32" I.D., paper
376D1	Gasket, worm shaft bearing cover, .007" Thk, 2-1/16" I.D., paper
376D2	Gasket, worm shaft bearing cover, .005" Thk., 2-1/16" I.D., paper
376T2	Gasket, gear shaft cover, .006" Thk., 7-29/32" I.D., paper
6189A1*	Holder, brush, complete
33A13	Seal, oil
255VB1	Shim, roller beaing, .005"
6098BC1	Switch, limit, complete (for open limit RH operator, close & speed limit LH operators)

*This item may require special order

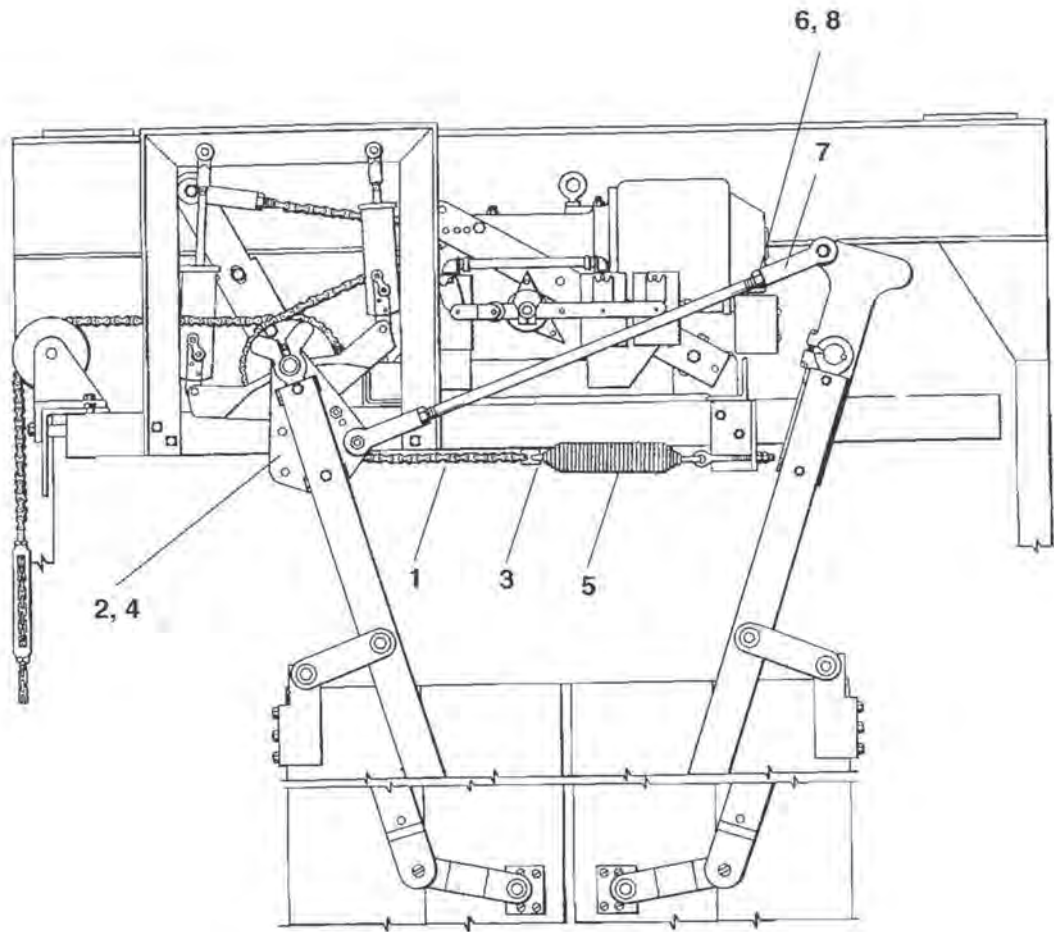
Door Operators: [Type A(6411)] Car Door Check & Switch Unit Spare Parts



Ref. No.	Part No.	Descriptions
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1.	321LA1	Bushing
2.	6546A1	Check, two port door, complete
3.	381B1	Gland, rod
4.	381C1	Gland, valve
5.	432A1	Lug, switch rod
6.	432E1	Lug, door check piston rod
7.	182B1	Packing, square flax
8.	182C1	Packing, asbestos ring
9.	77AM1	Pin, shouldered
10.	124DA1	Screw, 10-32 flat head machine (drilled for cotter pin)
11.	6098C5	Switch, complete, for RH operator
	6098C7	Switch, complete, for LH operator
12.	271D1	Valve

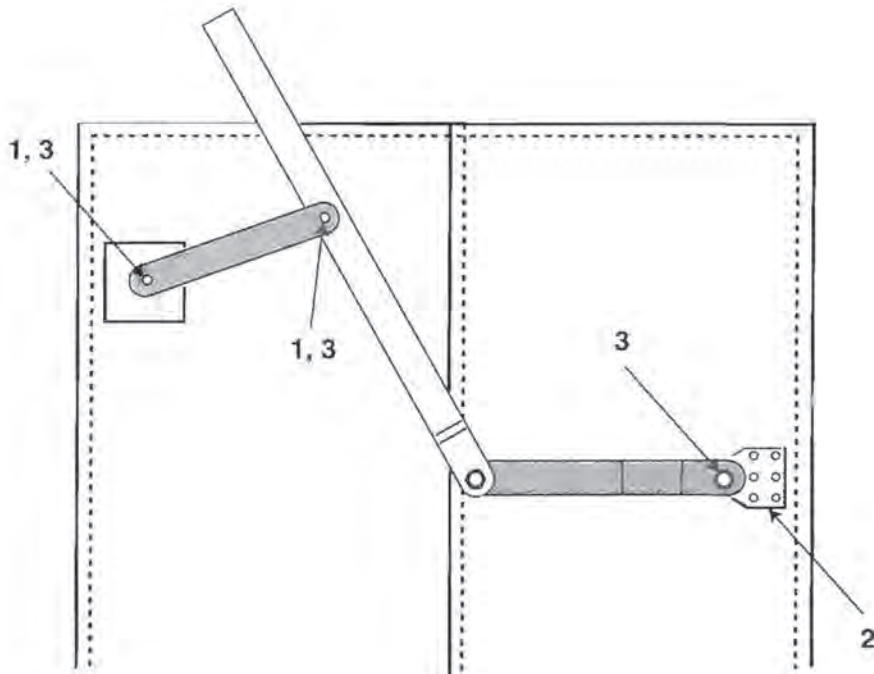
Door Operators: [Type A(6411)] Door Closing Spring Unit Spare Parts & Connecting Rod & Clevis Hitches



Ref. No.	Part No.	Descriptions
1.	332A3	Chain, spring, complete w/connecting links
2.	396AG2	Housing, complete w/ball bearing
3.	430S1	Link, spring chain (for 2S doors)
4.	462HA6	Spacer
5.	91T1	Spring, extension, 28 active turns (for C/O doors)
	91W1	Spring, extension, 30 active turns (for 2S/2S C/O doors)
6.	207H1	Bearing, ball, 1.26" O.D., .472" I.D.
7.	338Z1*	Clevis, 3/4" RH thread (for driving unit end of connecting rod)
	338Z2*	Clevis, 3/4" LH thread (for idler unit end of connecting rod)
8.	129AE1	Washer, felt, 1/4" x 1-3/4" x 3/32"

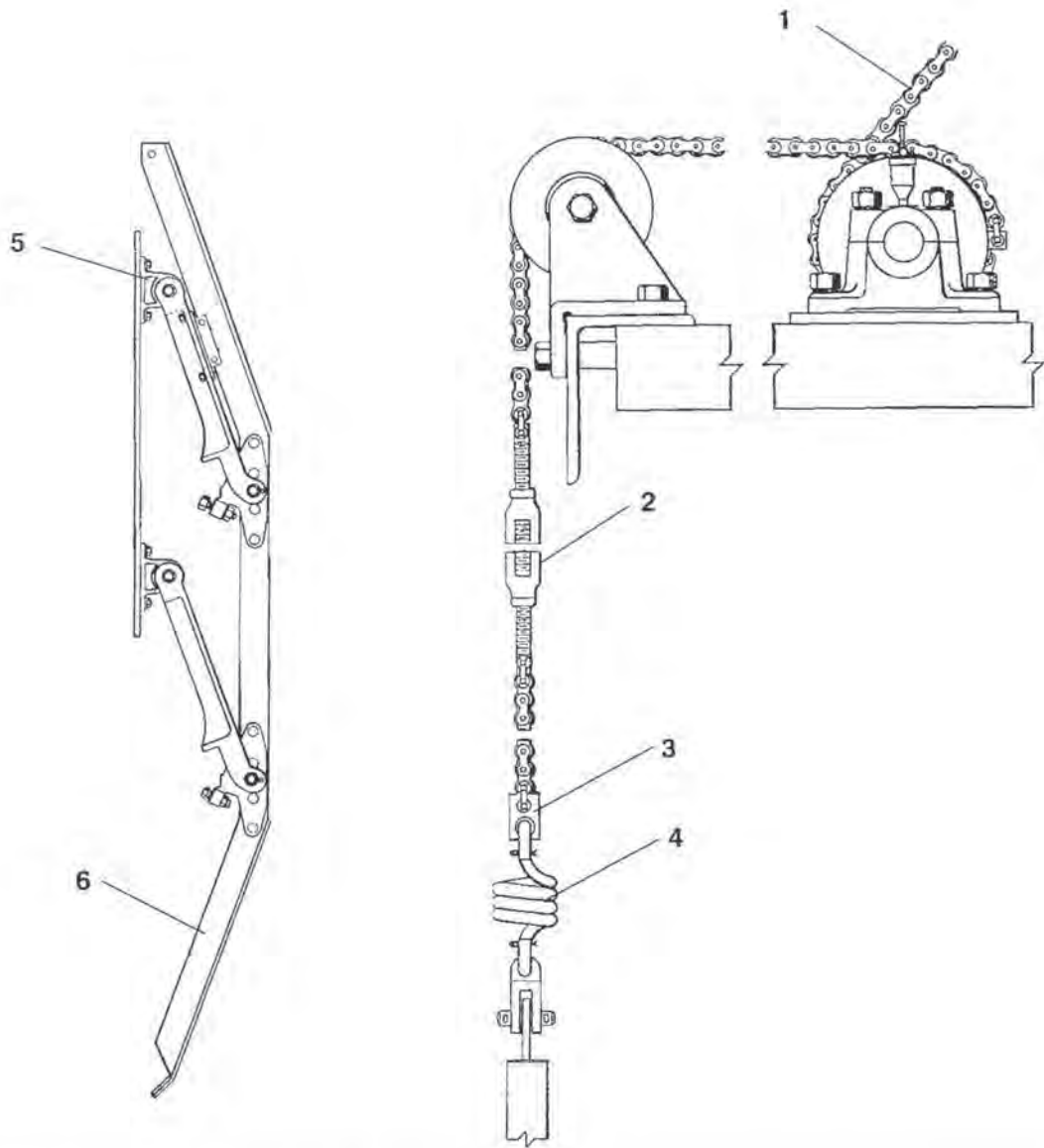
* This item may require special order

Door Operators: [Type A(6411)] Arm & Link Pivot Spare Parts



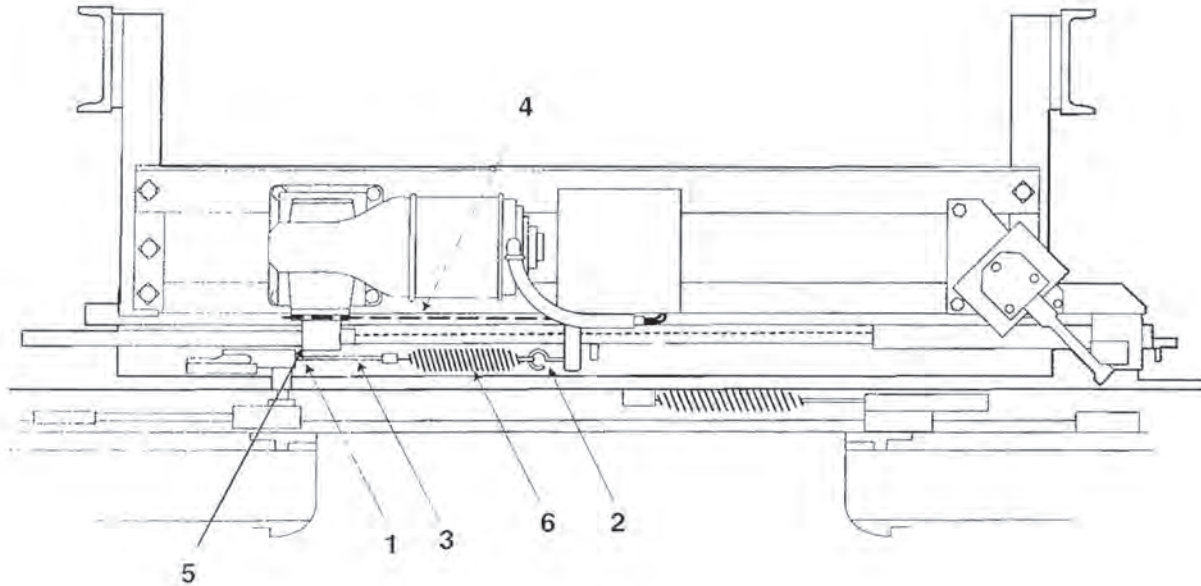
Ref. No.	Part No.	Descriptions
1.	207R2	Bearing, ball, 1.81" O.D., .393" I.D.
2.	386ZC1	Plate, link, 3" x 3-7/8" w/6 holes
3.	207H1	Bearing, ball (door slide), 1.26" O.D., .472" I.D.

Door Operators: [Type A(6411)] Car Cam Chain Spare Parts



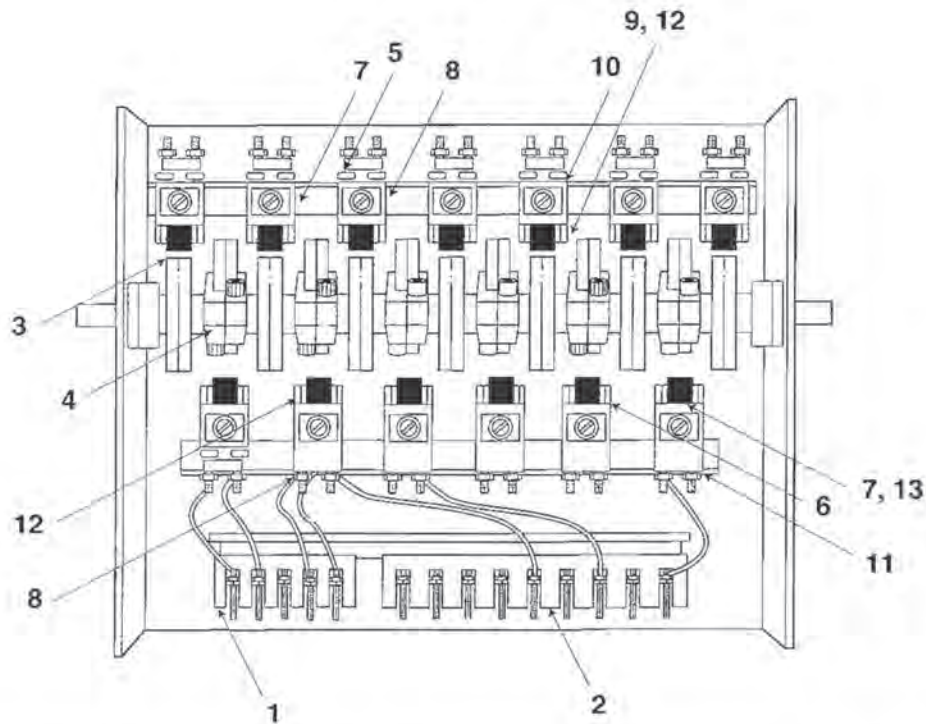
Ref. No.	Part No.	Descriptions
1.	332A4*	Chain, cam lever, #70 roller, 26-7/8" L
	332H1	Chain, car cam, #70 roller, 9'- 6-5/8" L (not shown)
2.	485B1	Trunbuckle
3.	430S1	Link, spring chain
4.	91Z1	Spring, extension
5.	207Z5	Bearing, ball (for lever bearing stand), 1.57" O.D., .67" I.D.
6.	207AA1	Bearing, ball (for cam), 1.57" O.D., .67" I.D., shielded

Door Operators: [Type AB] Operator Engine Spare Parts



Ref. No.	Part No.	Descriptions
1.	207J1	Bearing, ball (for housing), 1.37" O.D., .502" I.D.
2.	56B1	Bolt, eye (for spring), 1-1/2" O.D., 3/4" I.D., 6-3/4" L
3.	332A5	Chain, spring, #147 diamond roller, 5/8" pitch, 3-1/8" L with links
4.	332AR1	Chain, ASA, #35 rollerless, 3/8" pitch, 57" L with links
	VP-736300	Chain, #35, 3/8" pitch
5.	396AG2	Housing with ball bearing
6.	186133	Brush, carbon motor, 3/4" W, 1/4" Thk, 7/8" L with pigtail

Door Operators: [Type AB] 6897C Mechanical Switch



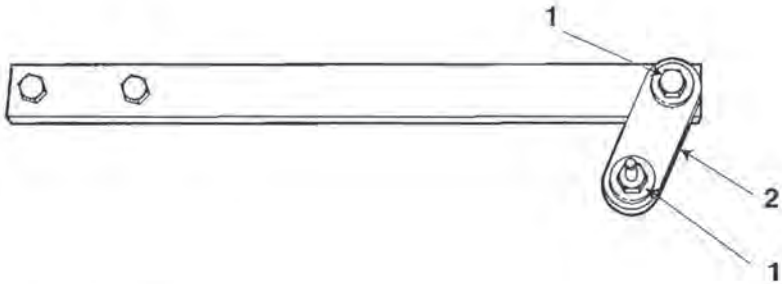
Ref. No.	Part No.	Descriptions
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- | | | |
|----|-----------|--|
| 1. | 303H2 | Board, 10 stud terminal |
| 2. | 303H1 | Board, 18 stud terminal |
| 3. | AAA327MV4 | Cam assembly |
| | 102CD9 | Plate, marking (for 303H1) (not shown) |
| 4. | 172GF1 | Ring, 7/32" I.D. |
| 5. | 6554A1 | Switch, mechanical, making contact |
| 6. | 6554B1 | Switch, mechanical, breaking contact |

Switch Parts:

- | | | |
|-----|--------|----------------------------------|
| 7. | 287AD2 | Arm, switch with roller & pin |
| 8. | 306AK2 | Base, contact with bushing |
| 9. | 335E13 | Bushing, oil-less (for roller) |
| | 93A2 | Contact, movable (not shown) |
| 10. | 152T1 | Contact, stationary (for 6554A1) |
| 11. | 152R1 | Contact, stationary (for 6554B1) |
| 12. | 77AP1 | Pin, headed (for roller) |
| 13. | 456AE2 | Roller, with bushing |

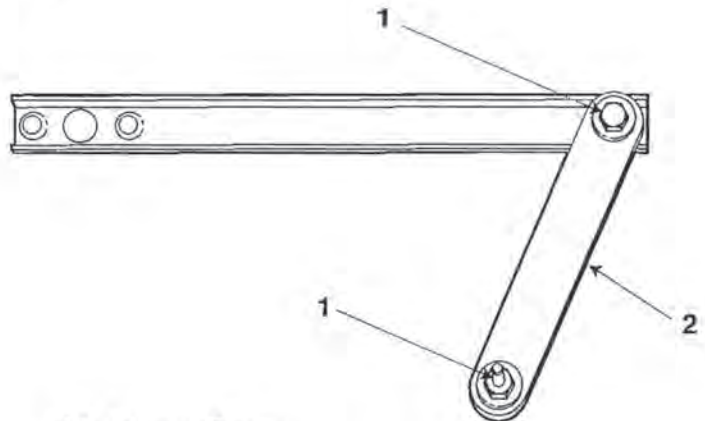
Door Operators: [Type AB] Operating Arm Spare Parts



Car Door

Ref. No.	Part No.	Descriptions
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- | | | |
|----|---------|--|
| 1. | 207R2 | Bearing, ball (for link),
1.811" O.D., .393" I.D. |
| 2. | 430TA5 | Link, 7-3/4" L |
| | 430TA9 | Link, 8-3/4" L |
| | 430TA35 | Link, 13" L |
| | 430TA39 | Link, 20-1/4" L |

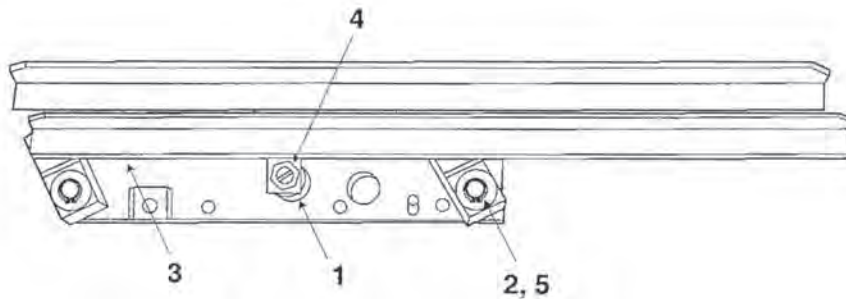


Hoistway Door

Ref. No.	Part No.	Descriptions
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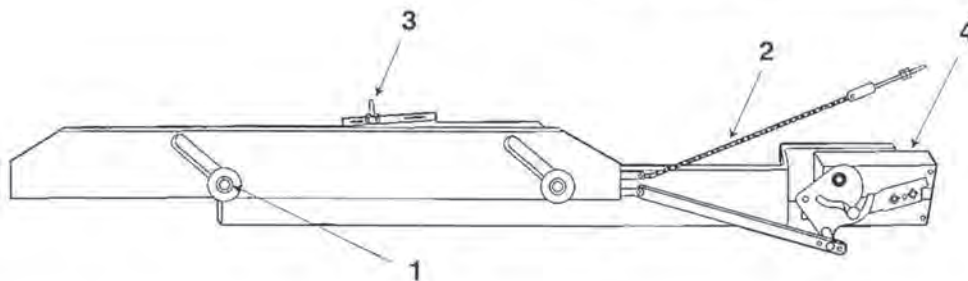
- | | | |
|----|---------|--|
| 1. | 207R2 | Bearing, ball (for link),
1.811" O.D., .393" I.D. |
| 2. | 430TA35 | Link, 13" L |
| | 430TA38 | Link, 18-1/4" L |
| | 430TA39 | Link, 20-1/4" L |

Door Operators: [Type AB] Engaging Cam Spare Parts



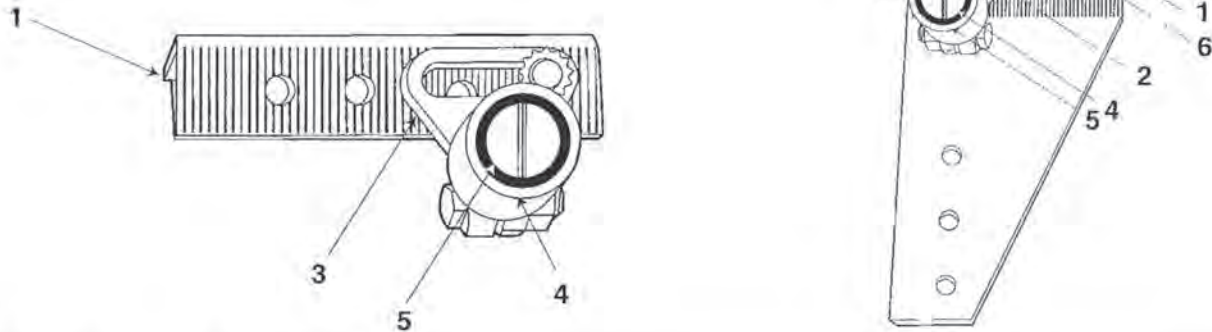
Ref. No.	Part No.	Descriptions
1.	207Z4	Bearing, ball with pin, 1.37" O.D., .591" I.D.
2.	209E1	Bearing, roller (for link), 1.45" O.D., .502" I.D.
3.	320AP1	Bumper, rubber
4.	72AF2	Nut, special, 1/2" hex (for ball bearing)
5.	172DE9	Ring, external retaining

Retiring Cam Spare Parts



Ref. No.	Part No.	Descriptions
1.	207P1	Bearing, ball, .75" O.D., .25" I.D.
2.	332AN1	Chain with rod & links
3.	95BL1	Stud, adjusting, 5" L
4.	6098C3	Switch, mechanical (as shown)
	6098C1	Switch, mechanical (opposite)

Door Operators: [Type AB] Operator Roller Spare Parts

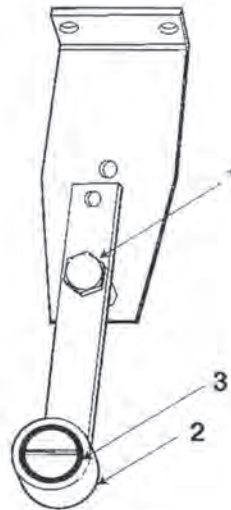


Ref. No.	Part No.	Descriptions
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- | | | |
|----|----------|--|
| 1. | 316BCR1* | Bracket, mounting |
| 2. | 316BCS5* | Bracket, roller, with roller, pin & washers (for SS & 2-speed doors) |
| 3. | 316BCS3 | Bracket, roller, with roller, pin & washers (for C/O doors) |
| 4. | 77A5 | Pin, roller, 2-5/32" L |
| 5. | 456C3 | Roller, rubber, 1-9/32" L |
| 6. | 131BT1 | Washer, 1" Sq, 1/4" Thk |

*This item may require special order

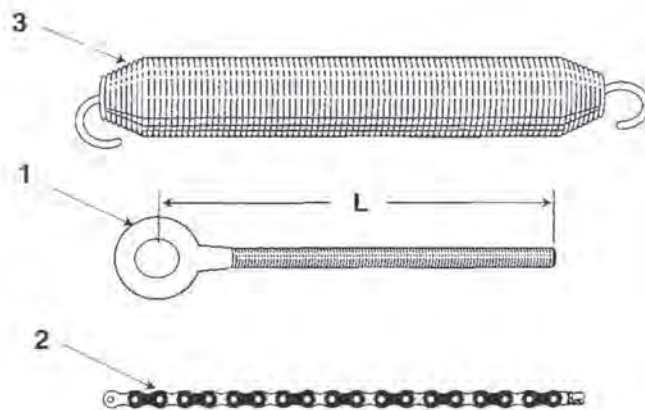
Unlocking Lever Spare Parts



Ref. No.	Part No.	Descriptions
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- | | | |
|----|--------|---------------------------------|
| 1. | 72A1 | Nut, 3/8" hex, 3/16" thk, steel |
| 2. | 456C2 | Roller, rubber, 1-5/32" L |
| 3. | 124BG1 | Screw, 2" L |

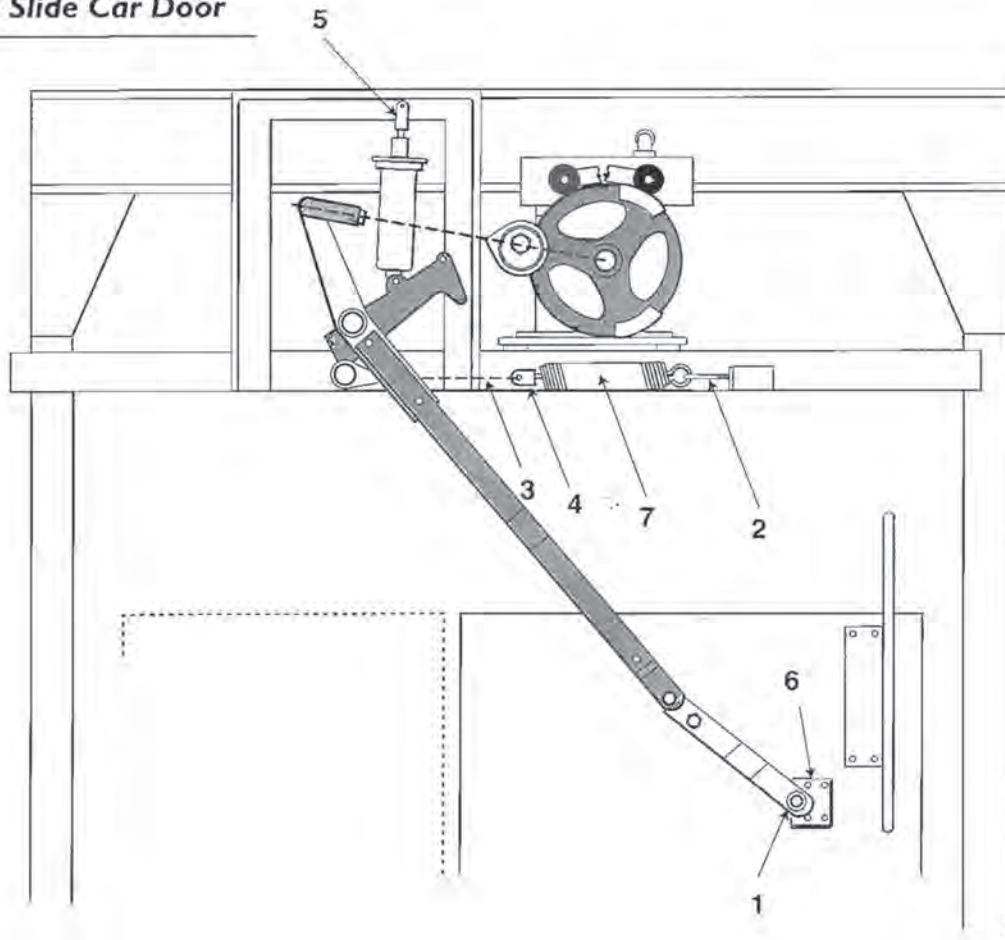
Door Operators: [Type AB] Hoistway Door Springs



Ref. No.	Part No.	Descriptions
1.	56B1	Bolt, eye, 1-1/2" O.D., 3/4" I.D., L=6-3/4"
2.	A332AS1	Chain, 7-1/8" L, with link & stud
3.	91W2	Spring, extension, 1-3/8" O.D., 10-3/4" L, 64 active turns
	91W3	Spring, extension, 1-3/8" O.D., 13-11/16" L, 80 active turns
	91W4	Spring, extension, 1-3/8" O.D., 14-3/4" L, 80 active turns

Door Operators: [O&O-1] Door Operator Spare Parts Single Slide Car Door

Single Slide Car Door



Ref. No.	Part No.	Descriptions
----------	----------	--------------

- | | | |
|----|---------|--|
| 1. | 207R2 | Bearing, ball 1.811" O.D., .393" I.D. |
| 2. | 56B1 | Bolt, spring eye |
| 3. | 332A1 | Chain, spring, 10-5/8" L |
| 4. | 430S1 | Link, spring chain |
| 5. | 432E1 | Lug, door check |
| 6. | 386TR1* | Plate, link, 2-1/2" W x 3-1/4" L, with 4 holes |
| | 386ZC1 | Plate, link, 3" W x 3-7/8" L, with 6 holes |
| 7. | 91W1 | Spring, extension |

*This item may require special order

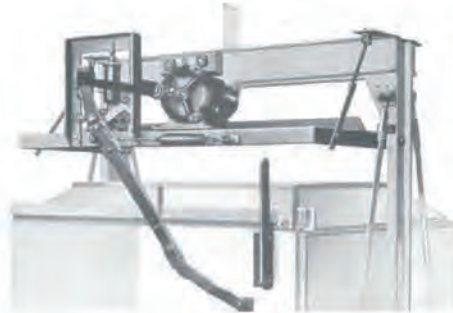
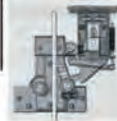
HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

YESTERDAY The Otis 'O' Door Operator

A Great History and Workhorse reputation
...but that's the problem

- ◇ Dwindling Castings
- ◇ Expensive Spare Parts
- ◇ Lots of Maintenance

& Interlock



"O" Operator Conversion Kit

Includes:

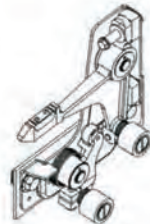
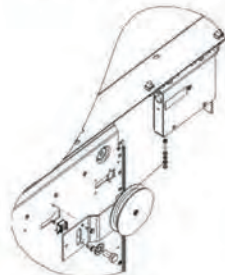
- ◇ AT400 Operator and associated kits
- ◇ 6940 type locks with unlocking devices
- ◇ Folding door restrictor
- ◇ Lambda III door protection device

"O" OPERATOR CONVERSION

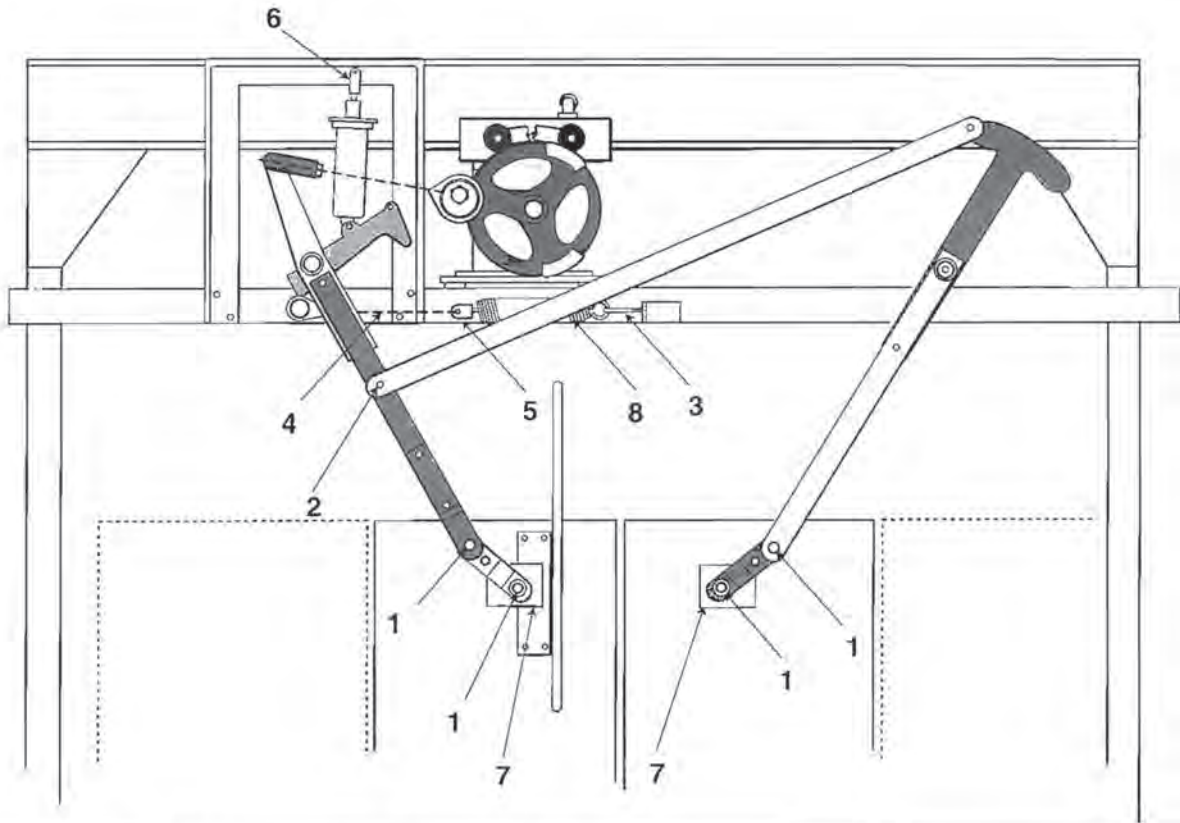
TODAY AT400 DOOR OPERATOR

The Go-To Operator

- ◇ Lightweight-Feedback Control
- ◇ Linear Belt Driven
- ◇ Quiet and Less Maintenance



Door Operators: [O&O-1] Door Operator Spare Parts Center Opening Car Doors



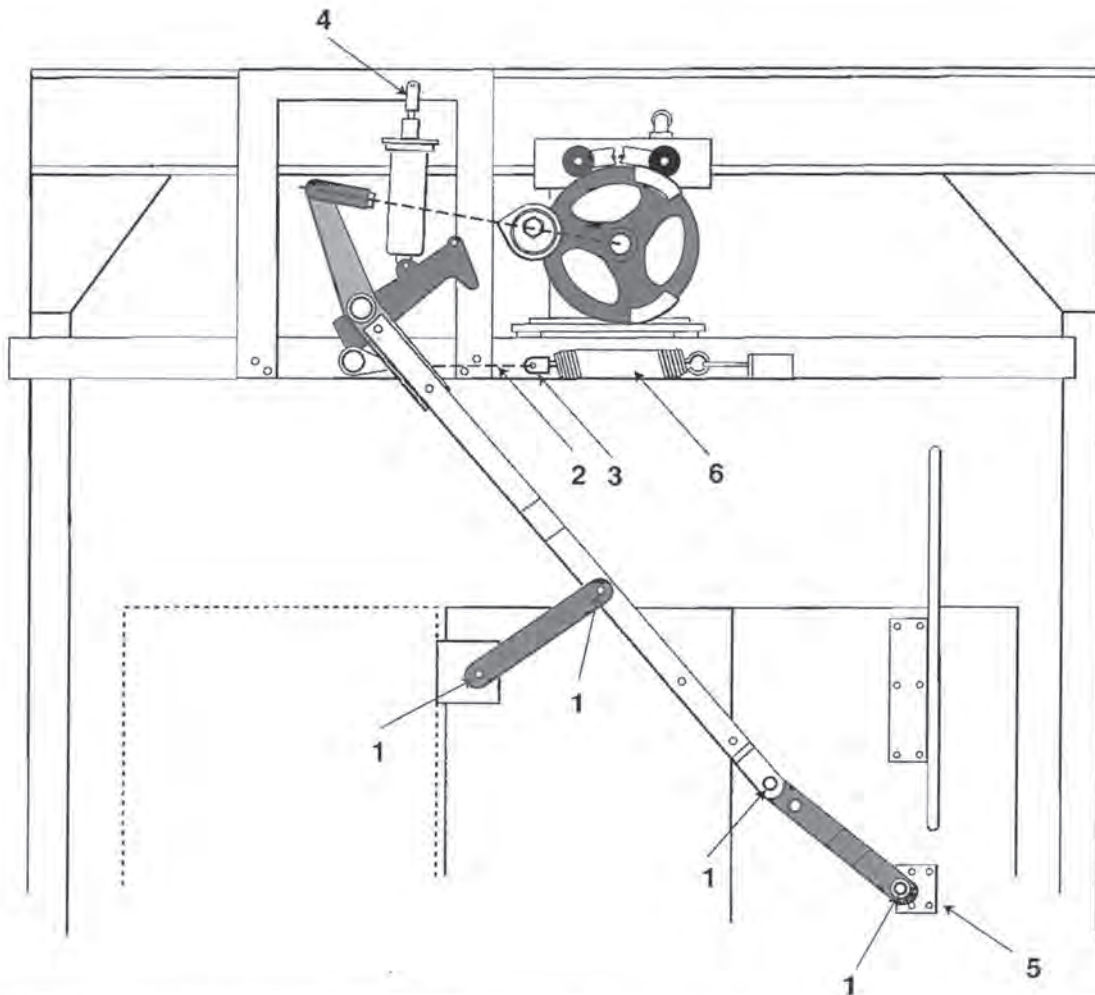
Ref. No.	Part No.	Descriptions
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1.	207R2	Bearing, ball, 1.811" O.D., .343" I.D.
2.	207H1	Bearing, ball, 1.26" O.D., .472" I.D.
3.	56B1	Bolt, spring eye
4.	332A2	Chain, spring, 13-1/8" L
5.	430S1	Link, spring chain
6.	432E1	Lug, door check
7.	386TR1*	Plate, link, 2-1/2" W x 3-1/4" L, with 4 holes
	386ZC1	Plate, link, 3" W x 3-7/8" L, with 6 holes
8.	91W1	Spring, extension

*This item may require special order

Door Operators: [O&O-1] Door Operator Spare Parts

Two Speed Car Doors

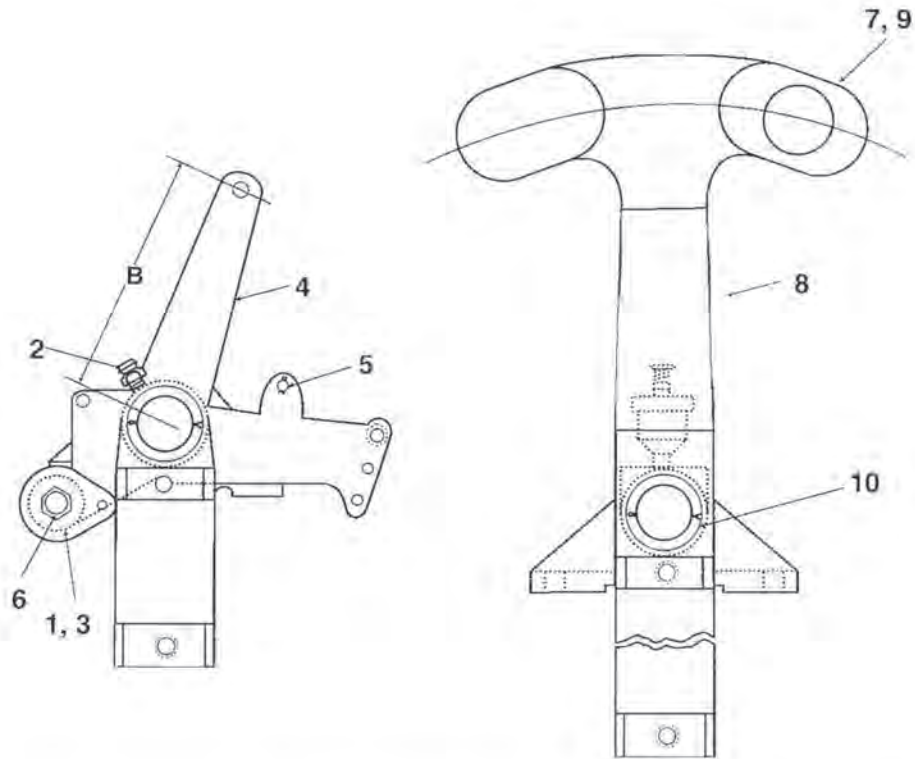


Ref. No.	Part No.	Descriptions
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- | | | |
|----|---------|--|
| 1. | 207R2 | Bearing, ball, 1.811" O.D., .393" I.D. |
| 2. | 332A2 | Chain, spring, 13-1/8" L |
| 3. | 430S1 | Link, spring chain |
| 4. | 432E1 | Lug, door check |
| 5. | 386TR1* | Plate, link, 2-1/2" W x 3-1/4" L, with 4 holes |
| | 386ZC1 | Plate, link, 3" W x 3-7/8" L, with 6 holes |
| 6. | 91W1 | Spring, extension |

*This item may require special order

Door Operators: [O&O-1] Drive Swinging Arm Pivot Assembly

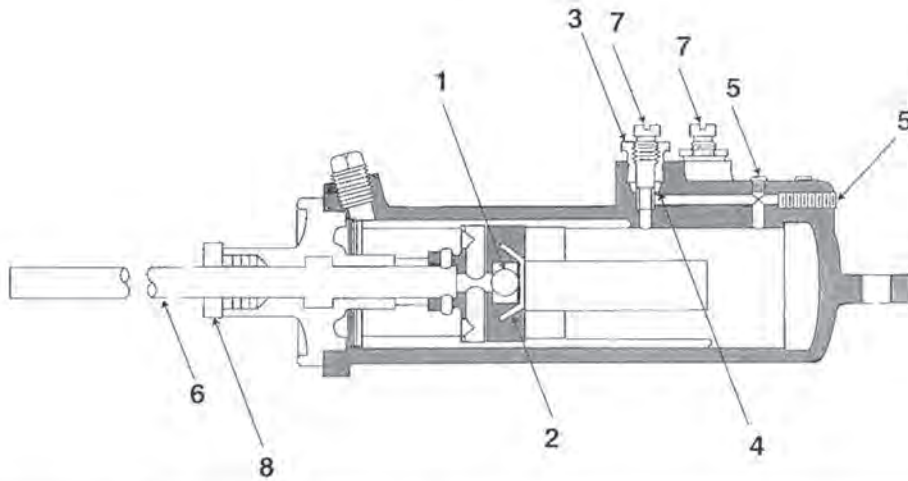


Ref. No.	Part No.	Descriptions
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1.	207J1	Bearing, ball, .502" I.D., 1.37" O.D.
2.	435C1	Fitting, lubricator
3.	396AG2	Housing with bearing
4.	379C1*	Lever, operating, RH, B= 8"
	379C2	Lever, operating, LH, B= 8"
	379P1	Lever, operating, RH, B= 10-9/16"
	379P2	Lever, operating, LH, B= 10-9/16"
5.	82A29	Pin, 3/8" Dia., 1-3/4" L
6.	127A1	Washer, steel, 1-5/16" I.D., 2" O.D., 7/64" Thk
7.	207H1	Bearing, ball, .472" I.D., 1.26" O.D.
8.	A6098B32	Switch, mechanical
9.	129AE1	Washer, felt, 1-1/4" I.D., 1-3/4" O.D., 3/32" Thk
10.	127A1	Washer, steel, 1-5/16" I.D., 2" O.D., 7/64" Thk

*This item may require special order

Door Operators: [O&O-1] Door Check Spare Parts

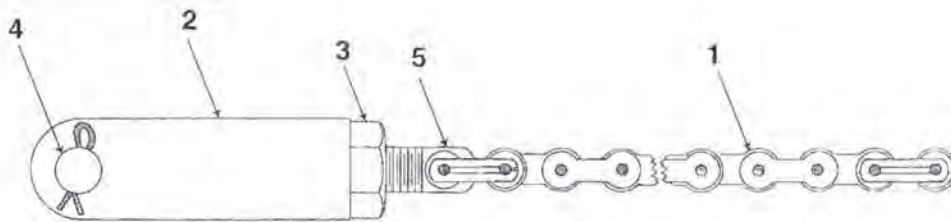


Ref. No.	Part No.	Descriptions
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1.	295B1	Ball, steel, 3/8"
2.	339AD1	Clip
3.	381C1	Cylinder
4.	182C1	Packing
5.	97G1	Rod, 1/4" Dia., 5/8" L
6.	96HA1*	Rod, 1/2" Dia., 8-7/8" L
7.	271D1	Valve
8.	129AE6	Washer, leather

*This item may require special order

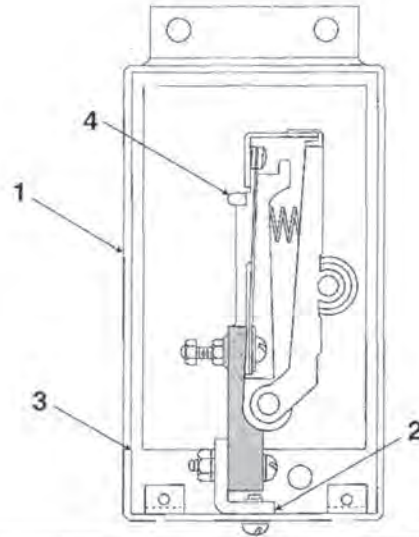
Chain Assembly



Ref. No.	Part No.	Descriptions
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1.	VP-736975	Chain, #148 diamond, 1/4" W, 5/8" pitch
2.	FA1135	Jaw
3.	72AF2	Nut
4.	78E1	Pin, chain hitch
5.	814628	Screw, chain hitch

Door Operators: [O&O-1] Mechanical Switch



Ref. No.	Part No.	Descriptions
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- | | | |
|----|--------|-------------------------------|
| 1. | 308HA2 | Box, switch, with lining |
| 2. | 316RZ1 | Bracket, switch |
| 3. | 346DP2 | Cover, switch box with lining |
| 4. | 6554B1 | Switch, mechanical, breaking |

Latch Operating Cam (For emergency key)

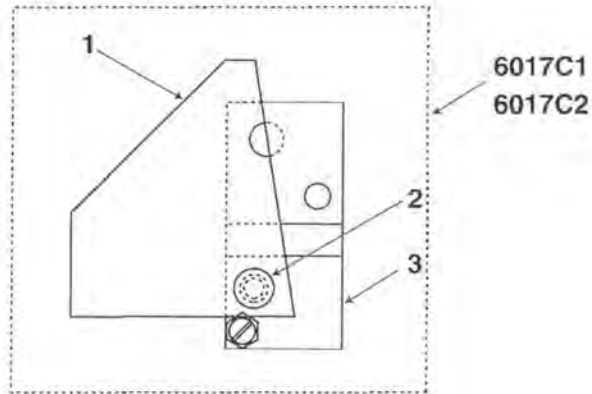
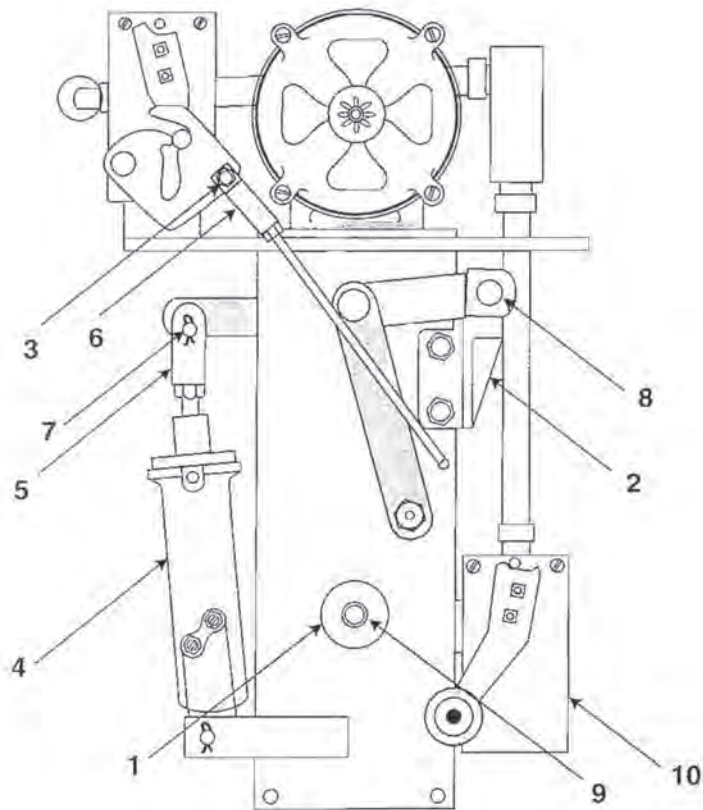


Plate A

Ref. No.	Part No.	Descriptions
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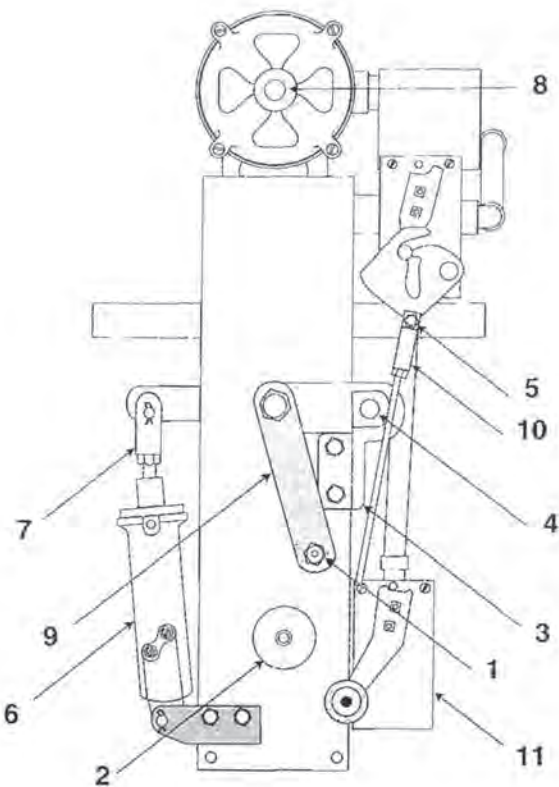
- | | | |
|----|---------|---|
| | 6017C1 | Latch operating cam, complete, as shown |
| | 6017C2 | Latch operating cam, complete, opposite |
| 1. | A327BA1 | Cam, latch |
| 2. | 77AA1 | Pin |
| 3. | B386LC1 | Plate A, as shown |
| | B386LC2 | Plate A, opposite |
| | 194D2 | Key, emergency, lunar (not shown) |

Door Operators: [30-S] Electric Operator Spare Parts with 6256A Operator Engine with Gear Drive



Ref. No.	Part No.	Descriptions
1.	209E3	Bearing, roller
2.	316FK1	Bracket, check yoke lever
	184450	Brush, motor, 7/16" Sq., 1" (not shown)
3.	321LA1	Bushing, switch lug
4.	6546A1	Check, door, complete
5.	338Y3	Clevis, piston rod
6.	432A1	Lug, switch rod
7.	82A1	Pin, 3/8" Dia., 1-5/16" L
8.	82G1	Pin, 5/8" Dia., 2-7/16" L
9.	77GC1	Pin, shoulder, 1" Dia., 4-3/8" L
10.	6098C5	Switch, mechanical (for door or gate contact)
	A6098B31	Switch, mechanical (for limit switch)

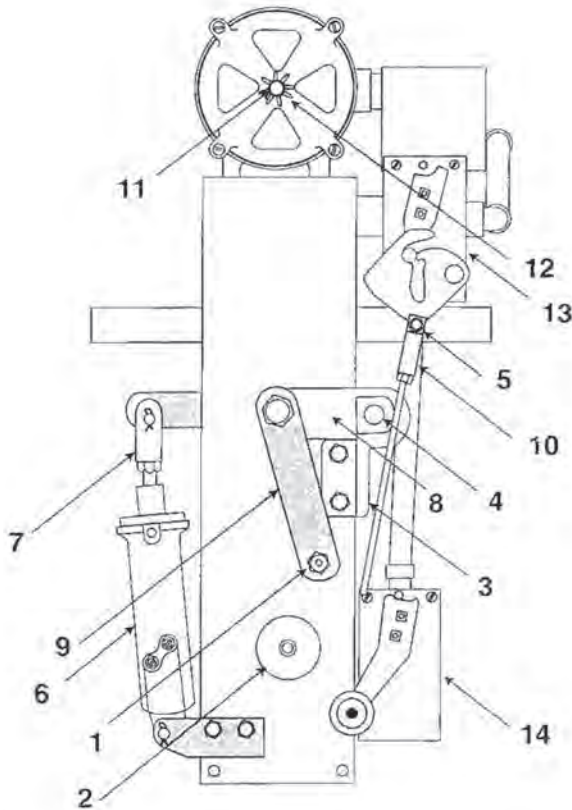
Door Operators: [30-S] Electric Operator Spare Parts with 6256W Operator Engine with Chain Drum Drive



Ref. No.	Part No.	Descriptions
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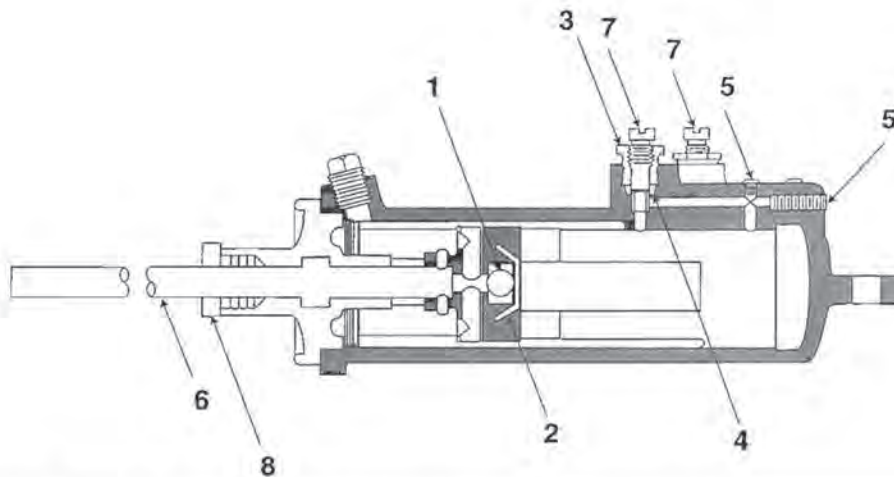
- | | | |
|-----|----------|--|
| 1. | 207E4 | Bearing, ball (for link) ,
1.12" O.D., .5" I.D. |
| 2. | 209E3 | Bearing, roller,
1.75" O.D., 1.00" I.D. |
| 3. | 316FK1 | Bracket, check yoke lever |
| | 184450 | Brush, motor, 7/16" Sq., 1" L
(not shown) |
| 4. | 335E9 | Bushing, check yoke lever |
| 5. | 321LA1 | Bushing, switch lug |
| 6. | 6546A1 | Check, door, complete |
| 7. | 338Y3 | Clevis, piston rod |
| 8. | 6487A1 | Drum, chain, complete |
| 9. | 430TA24 | Link with 1-1/8" holes on
6-9/16" centers |
| | 430TA25 | Link with 1-1/8" holes on
7-13/32", centers (not shown) |
| 10. | 432A1 | Lug, switch rod |
| | 90LB3 | Spring, compression (for chain)
(not shown) |
| 11. | 6098C5 | Switch, gate, complete |
| | A6098B31 | Switch, limit, complete |

Door Operators: [30-S] Electric Operator Spare Parts with 6256W Operator Engine with Chain Sprocket Drive



Ref. No.	Part No.	Descriptions
1.	207E4	Bearing, ball (for link), 1.12" O.D., .5" I.D.
2.	209E3	Bearing, 1.75" O.D., 1.00" I.D.
3.	316FK1	Bracket, check yoke lever
4.	335E9	Bushing, check yoke lever
5.	321LA1	Bushing, switch lug
6.	6546A1	Check, door, complete
7.	338Y3	Clevis, piston rod
8.	B379EA2	Lever, check yoke, with link, bearings, bolt, nut & washers (for 60 angle swing)
	B379EA3	Lever, check yoke, with link, bearings, bolt, nut & washers (for 75 angle swing)
9.	430TA24	Link with 1-1/8" holes on 6-9/16" centers
	430TA25	Link with 1-1/8" holes on 7-13/32" centers
10.	432A1	Lug, switch lug
11.	172ES3	Ring, external retaining (for sprocket)
12.	195CP2	Sprocket, 9 teeth
13.	6098C5	Switch, gate, complete
14.	A6098B35	Switch, limit, complete (for AC collective w/attendant only)
	A6098B31	Switch, limit, complete (for all conditions other than AC collective w/attendant)

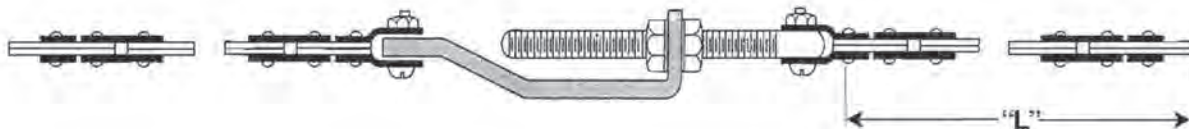
Door Operators: [30-S] Two Port Door Check (6546A)



Ref. No.	Part No.	Descriptions
1.	295B1	Ball, steel, 3/8"
2.	339AD1*	Clip
3.	381C1	Cylinder
4.	182C1	Packing
5.	97G1	Rod, 1/4" Dia., 5/8" L
6.	96HA1*	Rod, 1/2" Dia., 8-7/8" L
7.	271D1	Valve
8.	129AE6	Washer, leather

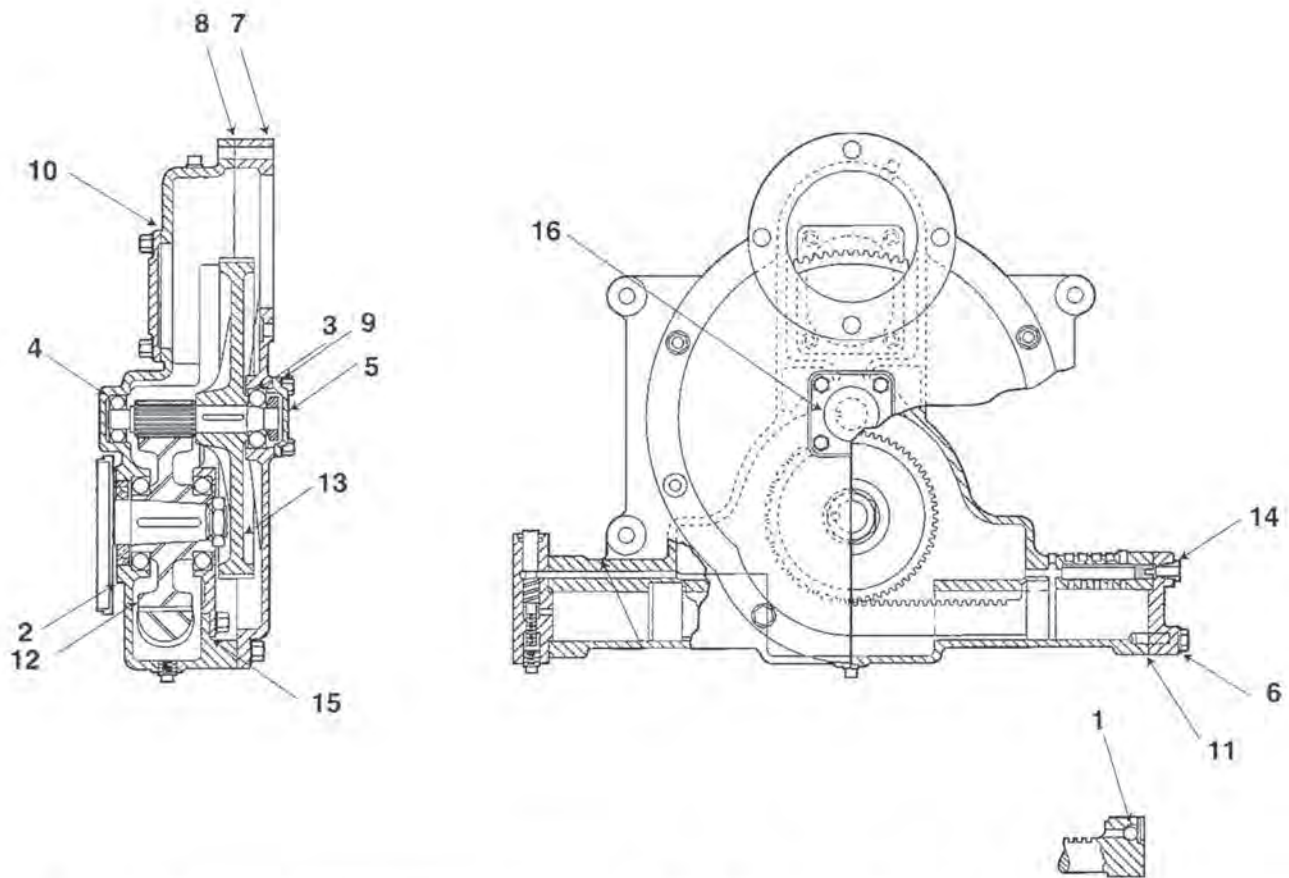
*This item may require special order

Retiring Cam Chain Spare Parts For hoistway Doors with 'L' Door Locks



Part No.	Descriptions
6257A1	Chain, cam, complete "L" approx. 62" long
130784	Connector, chain
80624	Pin, 3/32" Dia., 1/2" L (chain to cam & engine)

Door Operators: [6970A] Reciprocating Gear Unit Spare Parts

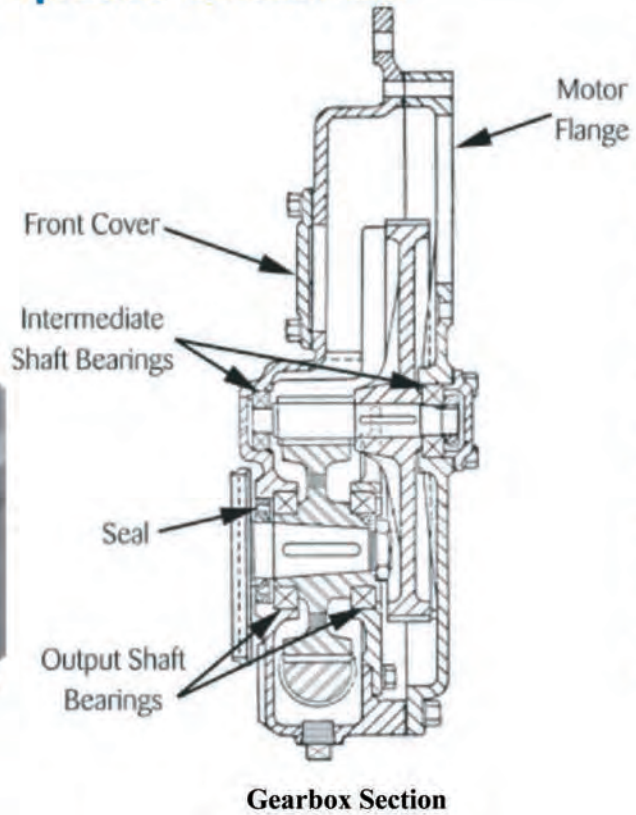
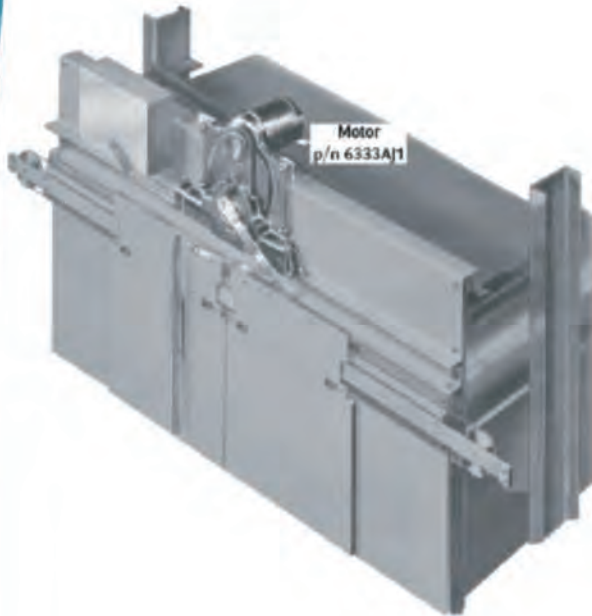


Ref. No.	Part No.	Descriptions	Ref. No.	Part No.	Descriptions
1.	295B1	Ball, 3/8" steel (for piston)	10.	376CV1	Gasket, plastic, (access cover to case)
2.	207AY1	Bearing, ball (for slow-speed shaft)	11.	376CX1	Gasket, plastic (cylinder cover to case)
3.	207Z39	Bearing, ball (for gear case cover)	12.	A205E1	Gear, spur, 69 teeth, tapered bore
4.	209P3	Bearing, roller (for gear case)	13.	A199AB1 /A199AA1	Gear/pinion set, 8.54:1
5.	346YX1*	Cover, bearing	14.	381C2	Gland (for cylinder cover)
6.	346YY1	Cover, cylinder	15.	396DP1	Housing, bearing
7.	346AAA1*	Cover, gear case	16.	192G112	Key, 3/16" sq., 1-1/2" L (for spiral gear)
8.	376DB1	Gasket, plastic (gear case cover to case)			
9.	376CY1	Gasket, plastic (bearing cover to gear case cover)			

* This item may require special order

HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

Otis 6970A Operator Rebuild Kits



Gearbox Section

OTIS 6970A OPERATOR REBUILD KITS

Door Operators

*Ever start a job
and not have all the parts?*

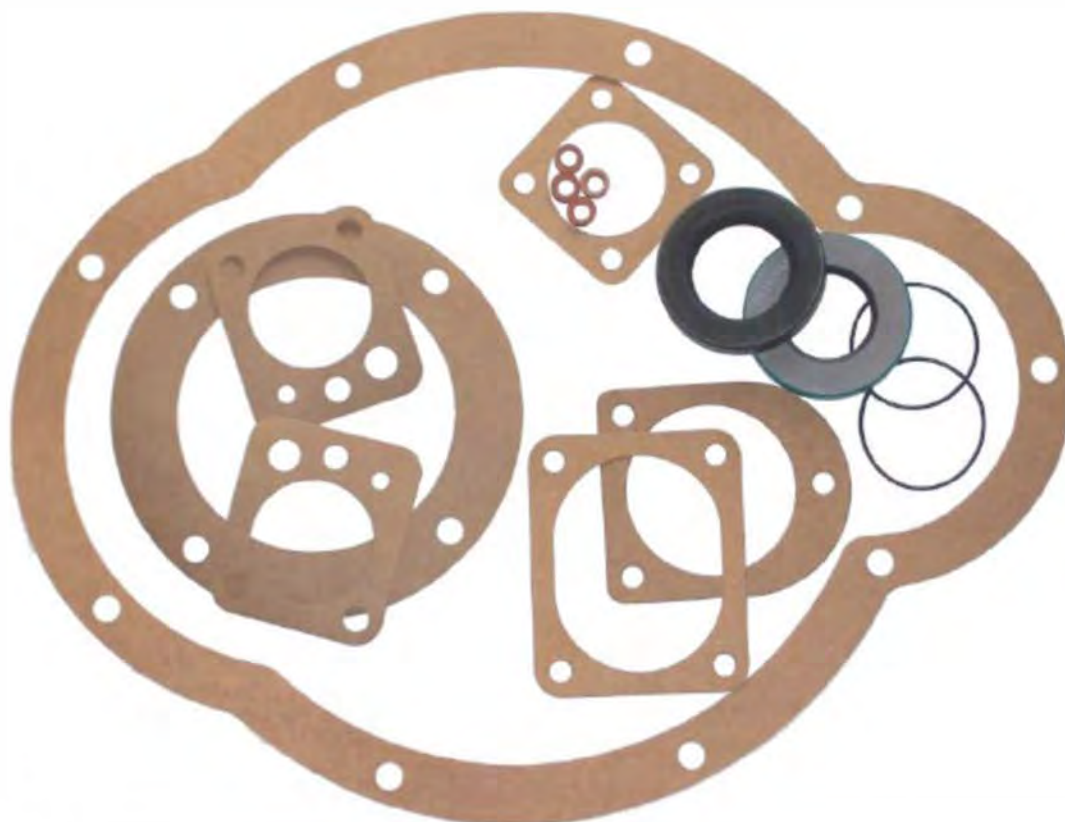
*Don't start another 6970A
operator rebuild
without a complete kit!*



6970A Operator Rebuild Kit (p/n E6970A500)

HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

Rebuild kits for your Otis 6970A door operator provide all the key components to make your repair a success.

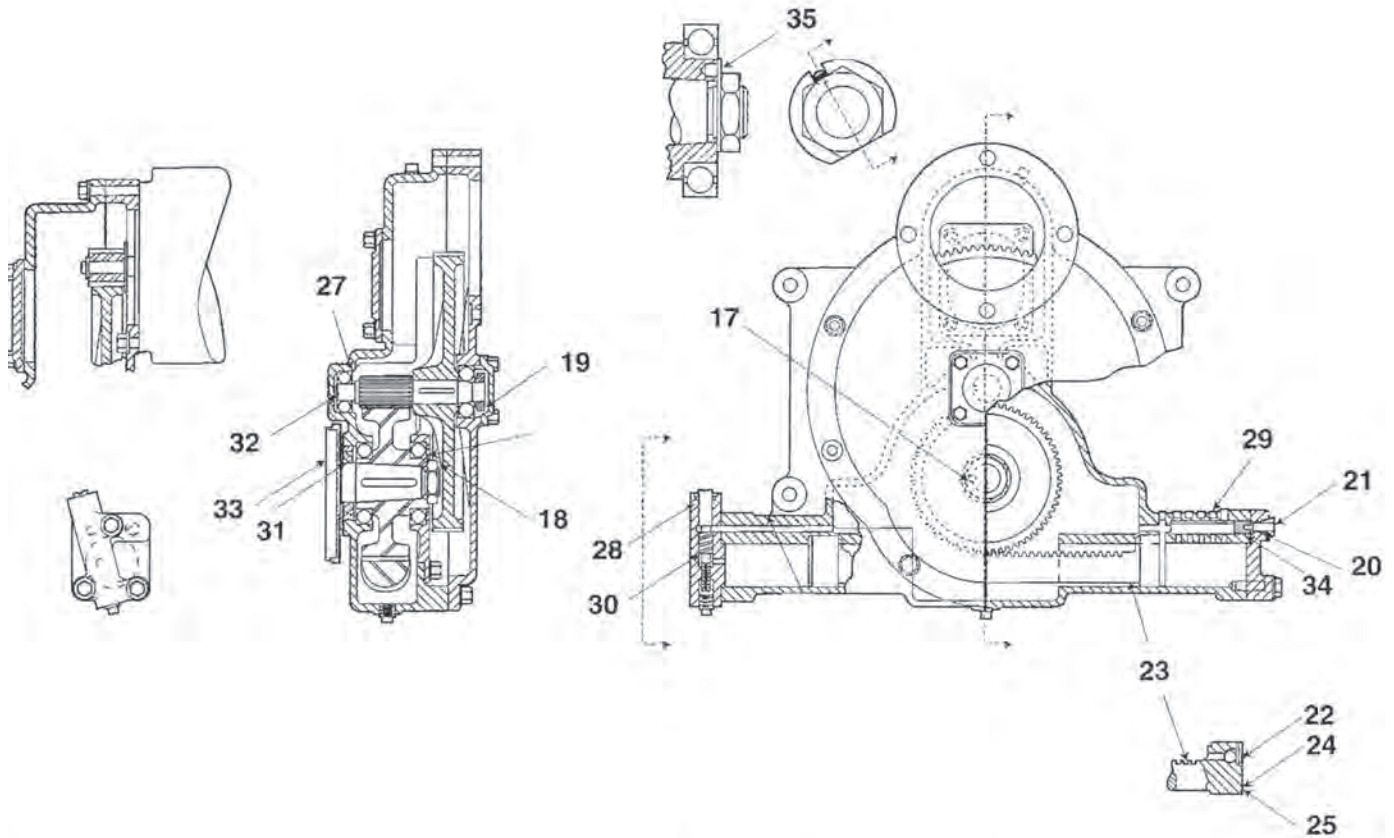


6970A Gaskets and Seals Kit (p/n E6970A501)

Whether you're just replacing seals & gaskets or doing a complete recondition (including bearings & brushes), we've got you covered.

OTIS

Door Operators: [6970A] Reciprocating Gear Unit Spare Parts

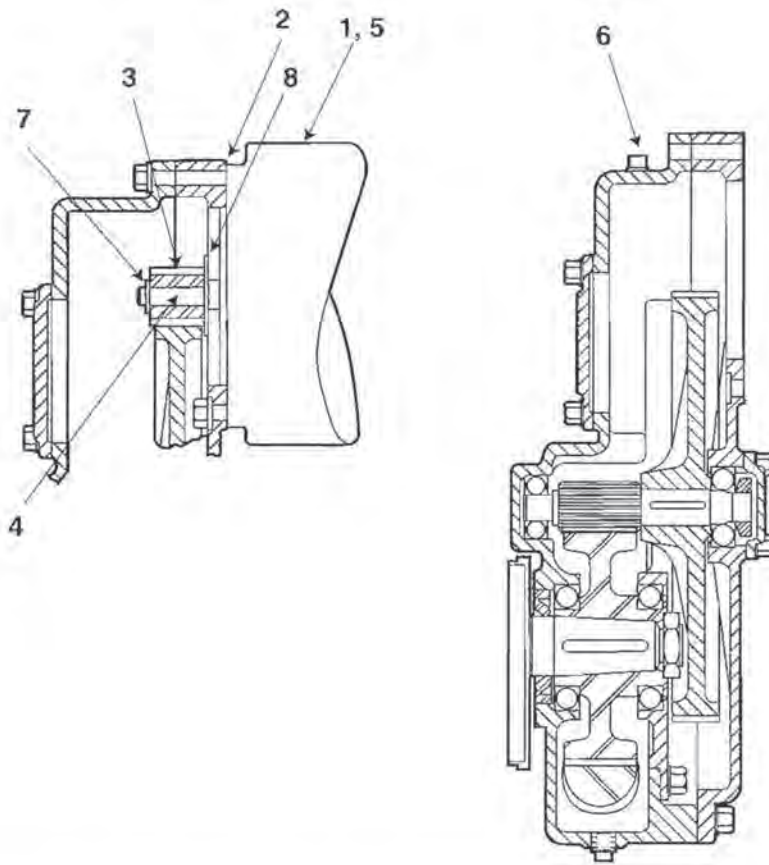


Ref. No.	Part No.	Descriptions
17.	192G12	Key (for shaft #A494GG1)
	192D56	Key, 5/16" sq., 2-21/2" L
18.	72AF3	Nut, 1"- 20EF thread
19.	72BV15	Nut, slotted lock
20.	182C1	Packing, 9/32" I.D., 1/2" O.D., 5/32" Thk
21.	77PJ1	Pin, adjusting
22.	78T29	Pin, 1/16" Dia., 11/16" L
23.	A442AF1	Piston, rack
24.	172GN2	Ring, inner piston
25.	172GN1	Ring, outer piston
26.	172DE14	Ring, external retaining

Ref. No.	Part No.	Descriptions
27.	172CY2	Ring, internal retaining
28.	172JJ1	Ring, rubber, 1/2" Dia., 11/16" O.D., 3/32" Thk
29.	97G1	Rod, 1/4" Dia., 5/8" L
30.	124BM1	Screw, adjusting
31.	33D14	Seal, clipper oil, 2-3/4" O.D., 1-11/16" I.D.
	33D19	Seal, clipper oil, 2-3/4" O.D., 1-1/2" I.D.
32.	A494GG1*	Shaft, slow speed, tapered
33.	A494GH1	Shaft, pinion
34.	271E1	Valve, 1/2" O.D., 3" L
35.	130AA15	Washer, bearing lock

* This item may require special order

Door Operators: [6970A] Mounting Parts for Motor

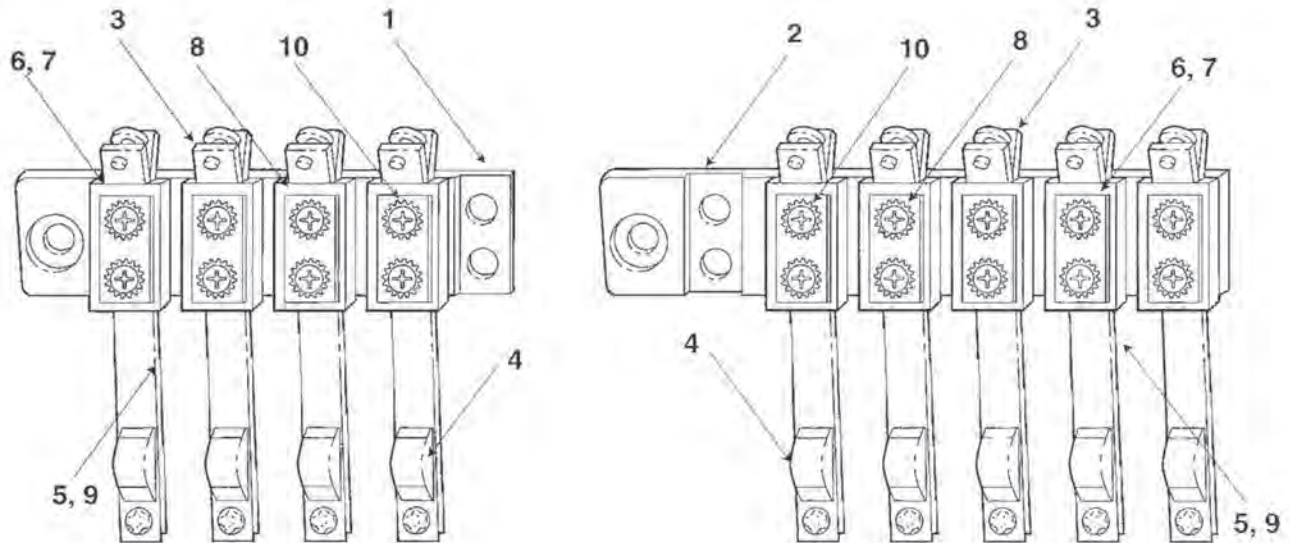


Ref. No.	Part No.	Descriptions
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1.	186206	Brush, motor, carbon, 1/2" sq., 13/16" L with spring & pigtail
	186207	Brush, motor, carbon, 1/4" x 3/8" x 13/16" L with spring & pigtail
2.	376DE1	Gasket, plastic (Motor to unit)
3.	A199AB1/A199AA1	Gear/Pinion set
4.	192E49	Key, 1/28" sq., 1-3/8" L (for gear)
5.	6333AJ1	Motor, G.E., 1/2 HP, D.C.
6.	444AT1	Plug, vent, 1/4"
	444AT2	Plug, vent, 1/2"
7.	172DE11	Ring, external retaining (for gear)
8.	131CD1	Washer, oil sling (for motor shaft)



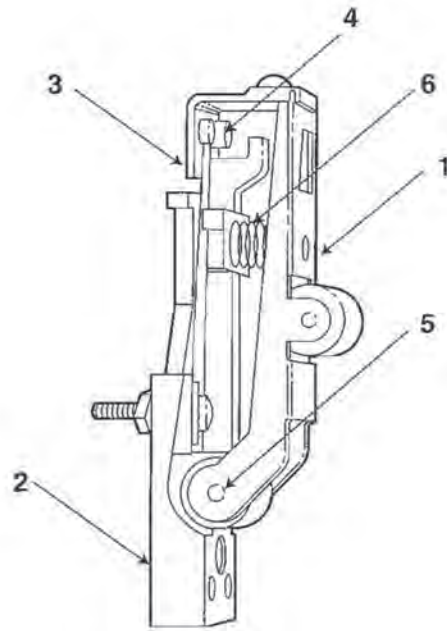
Door Operators: [6970A] Stopping Switch (4, 5 or 6 Contacts)



Contact assembly part numbers: 6850Y1 thru Y5.
OSC can help identify.

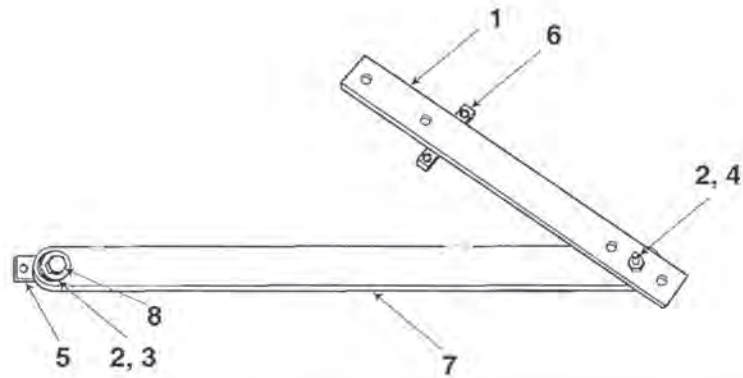
Ref. No.	Part No.	Descriptions
1.	306DS3	Base, contact, 4-5/16" L (for 4 contacts)
2.	306DS1	Base, contact, phenolic, 5-1/16" L (for 5 or 6 contacts)
3.	176BF1	Connector, copper
4.	150P43	Contact, movable spring, with cam
5.	150P32	Contact, stationary spring
6.	464P3	Separator, phenolic, insulating, 15/16" L
7.	464P4	Separator, phenolic, insulating, 1-1/8" L
8.	255EB27	Shim, steel, 15/16" L
9.	93BM2	Spring, contact backing
10.	137E7	Tube, polyvinyl, 5/8" L

Door Operators: [6970A] Mechanical Switch



Ref. No.	Part No.	Descriptions
1.	287AD2	Arm, switch, with roller & pin
2.	306AK2	Base, contact, with bushing
3.	152R1	Contact, copper, with silver inlay
4.	93A2	Contact, spring
5.	77AP1	Pin, headed
6.	90JA4	Spring, compression

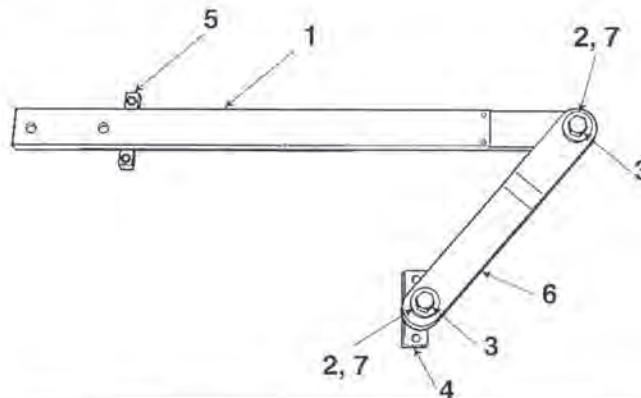
Door Operators: [6970A] Operator Arm Assemblies for Center Opening Doors



Ref. No.	Part No.	Descriptions
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- | | | |
|----|---------|--------------------------------------|
| 1. | 288KL1 | Arm, operator with bushings |
| 2. | 207R2 | Bearing, ball (for link) |
| 3. | 65EA4 | Bolt, hex head, 3/8" Dia., 23/32" L |
| 4. | 59A2 | Bolt, hex head, 3/8" Dia., 1-1/16" L |
| 5. | 316BTW2 | Bracket |
| 6. | 335E52 | Bushing, oil-less (for arm) |
| 7. | 430TA44 | Link, 26-3/4" L, with bearings |
| 8. | 127VB52 | Washer |

For Single Slide/ 2-Speed Doors

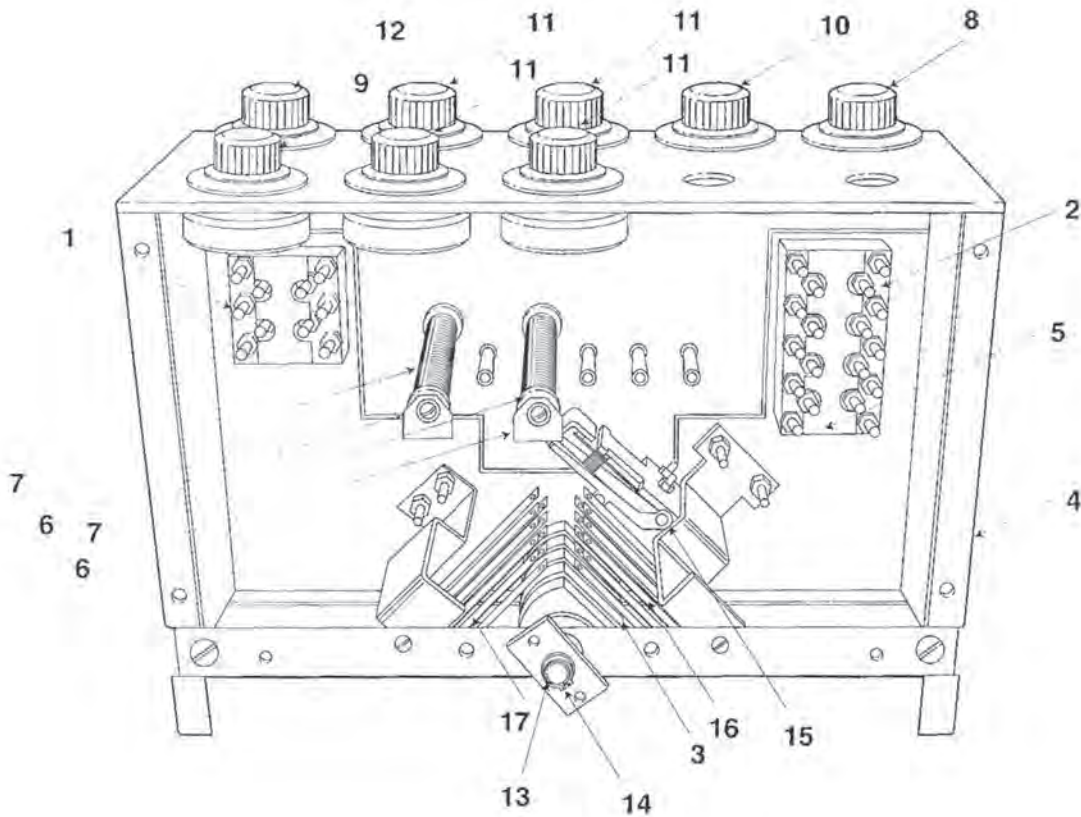


Ref. No.	Part No.	Descriptions
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- | | | |
|----|---------|---|
| 1. | A288JY1 | Arm, 26-7/8" L, complete with link #B430CG1 |
| | A288JY2 | Arm, 29-11/16" L, complete with link #B430CG2 |
| | A288JY3 | Arm, 32-3/8" L, complete with link #B430CG3 |
| 2. | 207R2 | Bearing, ball (for link) |
| 3. | 65EA4 | Bolt, hex head |
| 4. | 316BTW1 | Bracket |
| 5. | 335E52 | Bushing, oil-less (for arm) |
| 6. | B430CG1 | Link, 13-5/8" L, without bearings |
| | B430CG3 | Link, 19" L, without bearings |
| 7. | 127VB52 | Washer |

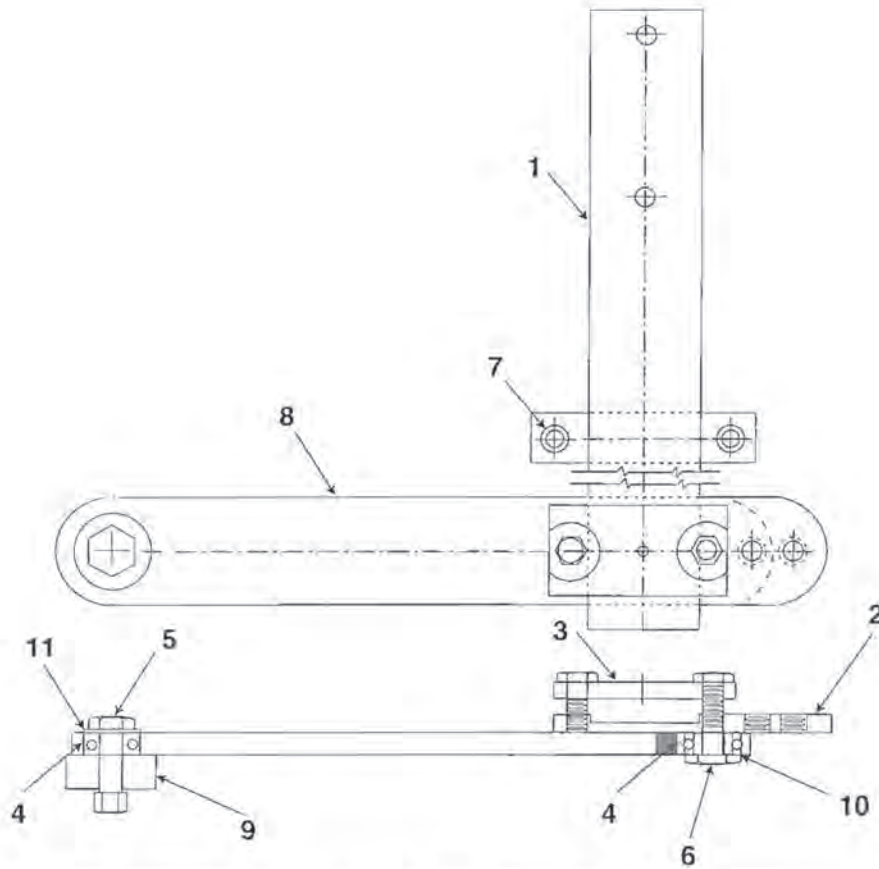
Door Operators

Door Operators: [6970A] Door Control Box Spare Parts



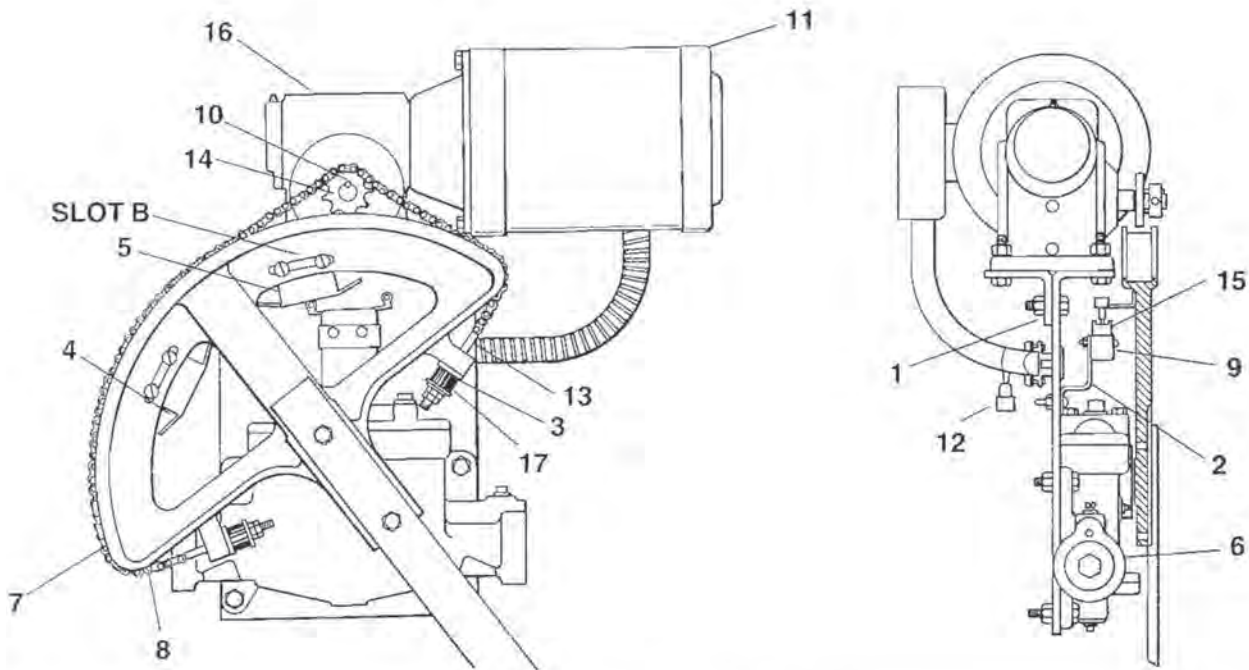
Ref. No.	Part No.	Descriptions	Ref. No.	Part No.	Descriptions
	9970A1	Control box, complete	10.	232P22	Rheostat, 50 Watts, 1000 Ohms
1.	303H2	Block, 10 stud terminal	11.	232P18	Rheostat, 50 Watts, 2500 Ohms
2.	303H1	Block, 18 stud terminal	12.	232P19	Rheostat, 50 Watts, 300 Ohms
3.	AAA327MV4	Cam	13.	172DE20	Ring, external retaining
4.	336CZ1	Clamp, plastic	14.	494GX2	Shaft, with bushings,
5.	102CD13	Plate, marking	15.	6554B1	Switch, mechanical
6.	102DA1	Plate, marking	16.	6850Y5	Switch, stopping (5 contacts)
7.	232B18	Resistor, 1000 Ohms	17.	6850Y1	Switch, stopping (6 contacts)
8.	232P20	Rheostat, 50 Watts, 500 Ohms		6599A3	Switch, toggle, SPST
9.	232P21	Rheostat, 50 Watts, 800 Ohms			

Door Operators: [6970A] For 1-Speed, 2-Speed & C/O Doors



Ref. No.	Part No.	Descriptions
1.	288KL7	Arm, operator, with bushings
	288KL9	Arm, operator, with bushings
2.	299XT1	Bar, 4-7/16" L
3.	299XW1	Bar, 2-7/8" L
4.	207R2	Bearing, roller (For link), .393" I.D., 1.81" O.D.
5.	59A4	Bolt, 3/8-24, 1-5/8" L
6.	59A5	Bolt, 3/8-24, 1-5/16" L
7.	355E52	Bushing, oil-less, 1/4" I.D., 7/16" O.D., 1/2" L
8.	430TA38	Link, 18-1/4" L
	430TA39	Link, 20-1/4" L
	430TA46	Link, 14-3/4" L
9.	462HA45	Spacer, 13/32" I.D., 1/32" Thk
10.	127VB52	Washer, .395" I.D., 1/32" Thk
	7300E__	Link, assembly, complete (specify link size)

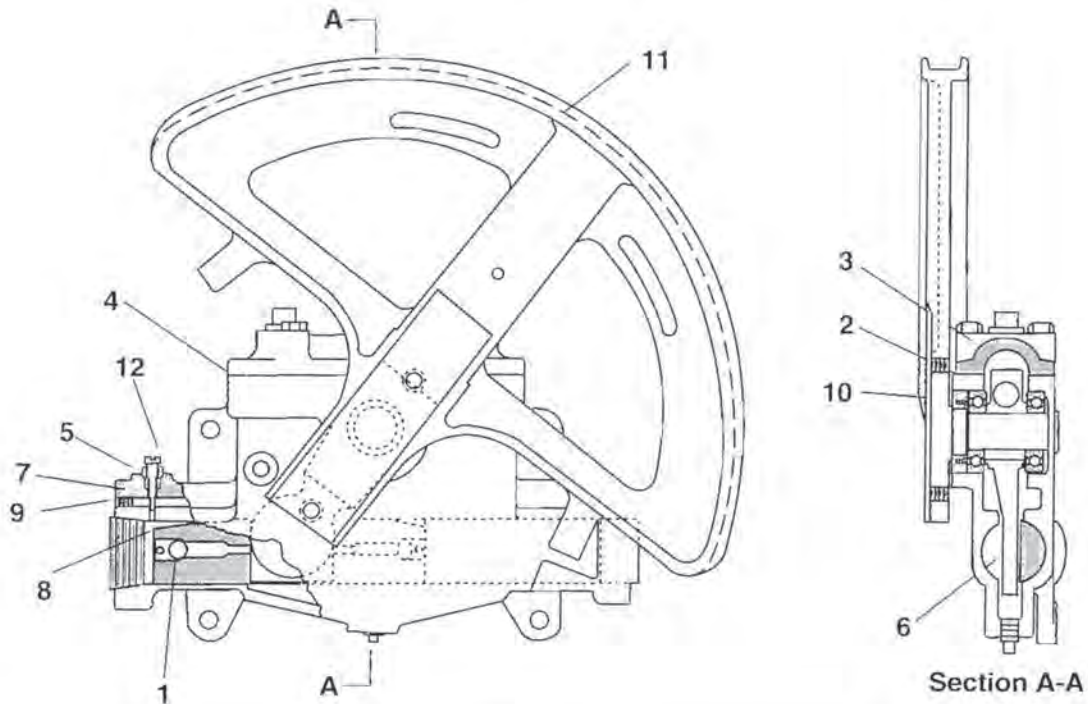
Door Operators: [7300A & 7300AA] 7300A Door Operator Engine Spare Parts



Ref. No.	Part No.	Descriptions
1.	A283FG1*	Angle, steel, 9" x 2-3/8" x 1-15/16" x 1/4"
2.	316CAW1	Bracket for micro switch
3.	320BE2	Bumper, rubber, 15/16" Dia., 7/8"
4.	A327HM1	Cam
5.	327JD1	Cam
6.	A7300B1	Check, door, complete
	A7300B2	Check, door, complete without piston
7.	332BC2	Chain, complete w/link & rods
8.	332BC1	Chain, roller, #40 ASA, 1/2" pitch, 28-1/2" L
9.	346AFA1	Cover, plastic for micro switch
10.	192E16	Key, ends square, 3/16" x 3/16" x 1" L
11.	6333AM1	Motor, 220V, 1.9 amps, 60 cycles
12.	444AT2	Plug, vent pipe, 1/2" L
13.	95BV2	Rod, shouldered, 5/16"- 18 thd., 3-3/4" L (For 332BC2 chain)
14.	195GK2	Sprocket w/collar & key (For segment)
15.	177AJ1	Switch, micro, SPDT, with roller
16.	197B1	Unit, gear reduction
17.	133A7	Washer, spring seat, 11/32" I.D. (For bumpers)

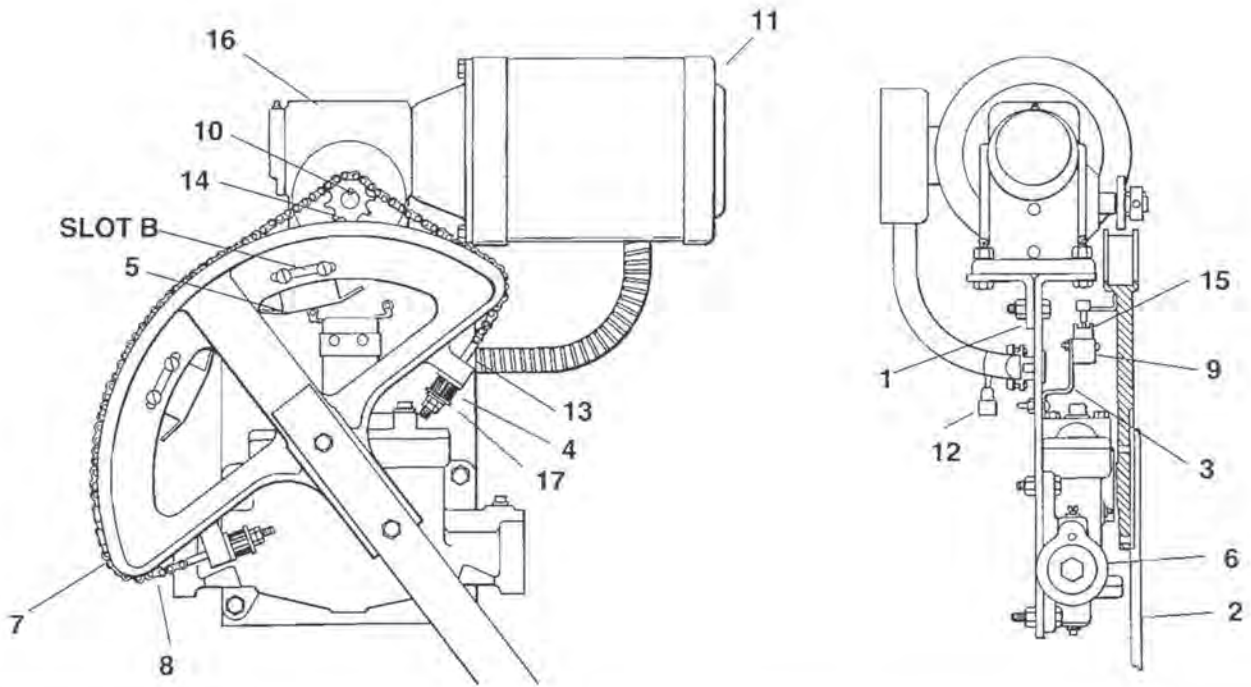
*This item may require special order

Door Operators: [7300A & 7300AA] Door Check Spare Parts



Ref. No.	Part No.	Descriptions
1.	295B1	Ball, steel, 3/8" Dia. (For piston)
2.	207Z51	Bearing, ball, 2.00" O.D., 1.00" I.D. (For segment)
3.	346AEX1	Cover, case
4.	376BC3	Gasket, vellumoid, 7-1/8" L, 2-3/8" W, .022" Thk (For cover)
5.	381C1	Gland, brass, 3/8"- 32N- 3 I.D., 9/16"- 24N-3 O.D. (For valve)
6.	288LK1	Lever, 5-11/16" L (Keyed to segment)
7.	182C1	Packing, asbestos, 9/32" I.D., 1/2" O.D., 5/32" Thk (For valve)
8.	442AL2	Piston, 1-1/2" Dia., 6-1/2" L
9.	97G1	Rod, brass, 1/4"-28-NF-3, 5/8" L
10.	33D22	Seal, oil, 1-1/4" I.D., 2.00" O.D., 3/8" Thk
11.	165D1	Segment
12.	271D1	Valve, brass, shouldered, 1-1/4" L
	VP-792553	Heater, 25W, 110V
	VP-896660	Thermostat

Door Operators: [7300A & 7300AA] 7300AA Door Operator Engine Spare Parts



Ref. No.	Part No.	Descriptions
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1.	A283FG1*	Angle, steel, 9" x 2-3/8" x 1-15/16" x 1/4"
2.	288KL10	Arm, operator, 36" L
3.	316CAW1	Bracket for micro switch
4.	320BE2	Bumper, rubber, 15/16" Dia., 7/8" L
5.	327JM1	Cam (for micro switch)
6.	A7300B1	Check, door, complete
7.	332BC2	Chain, complete with link & rods
8.	332BC1	Chain, roller, #40 ASA, 1/2" pitch, 5/16" Dia., 28-1/2" L
9.	346AFA1	Cover, plastic for micro switch
10.	192E16	Key, ends square, 3/16" x 3/16" x 1" L
	7300E8	Link, assembly, complete
11.	6333BM1	Motor, 220V, 1.9 amps, 60 cycles, with thermal protector
12.	444AT2	Plug, vent pipe, 1/2" L
13.	95BV2	Rod, shouldered, 5/16"- 18 Thd., 3-3/4" L (for 332BC2 chain)
14.	195GK2	Sprocket, teeth (for segment)
15.	177AJ1	Switch, micro, SPDT, with roller
16.	197B1	Unit, gear reduction
17.	133A7	Washer, spring seat, 11/32" I.D. (for bumpers)

* This item may require special order

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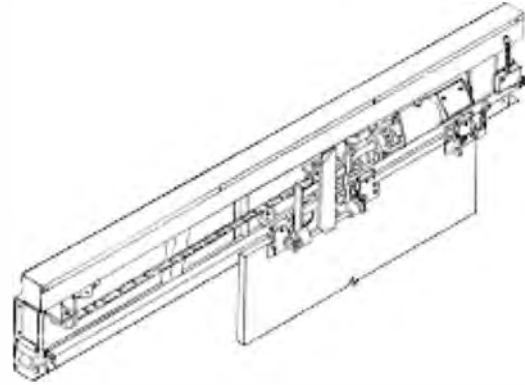
AT400 Door Operators

If You Have This:

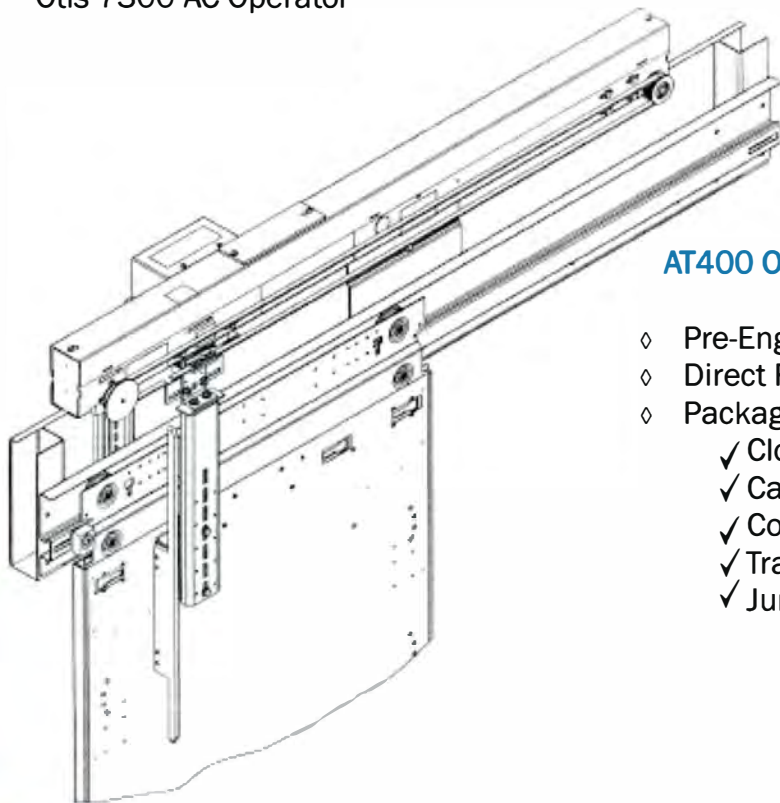


Otis 7300 AC Operator

Or This:



Otis Screw (7777) Operator



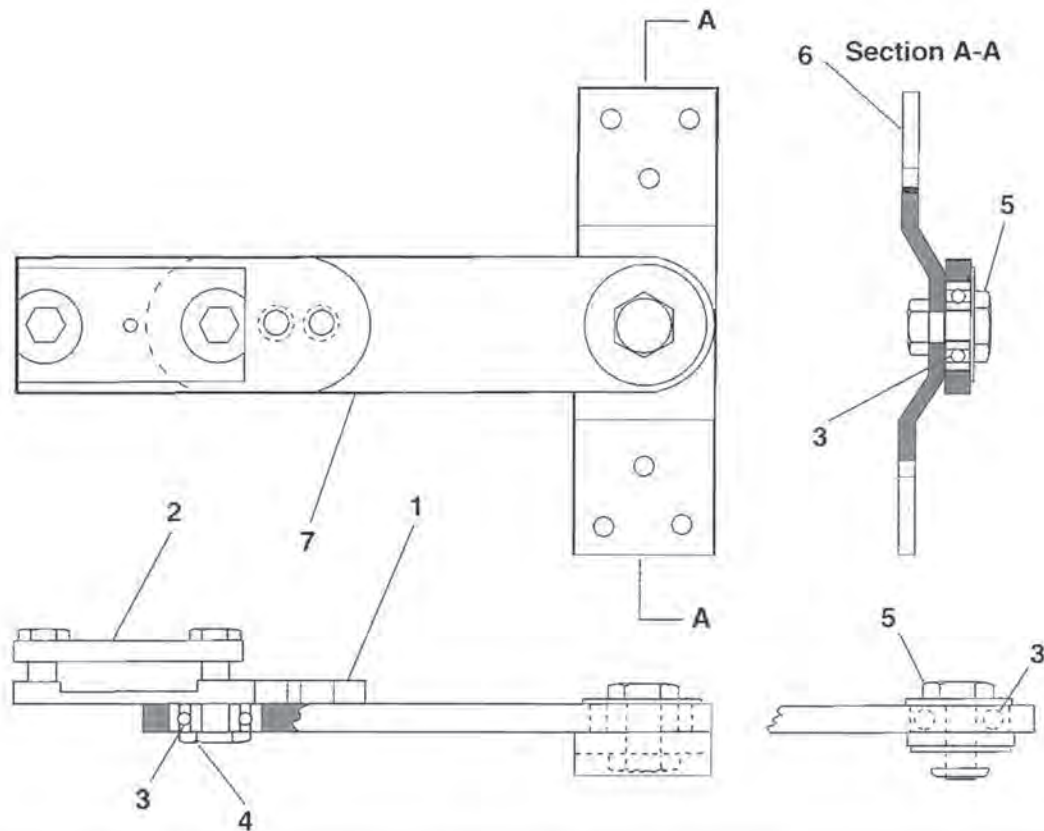
AT400 Operator

- ◇ Pre-Engineered
- ◇ Direct Replacement Upgrade/Retrofit
- ◇ Package Includes:
 - ✓ Closed-Loop Door Operator
 - ✓ Car Door Vane
 - ✓ Control Components
 - ✓ Transformer/Power Supply
 - ✓ Junction Box

AT400 DOOR OPERATORS

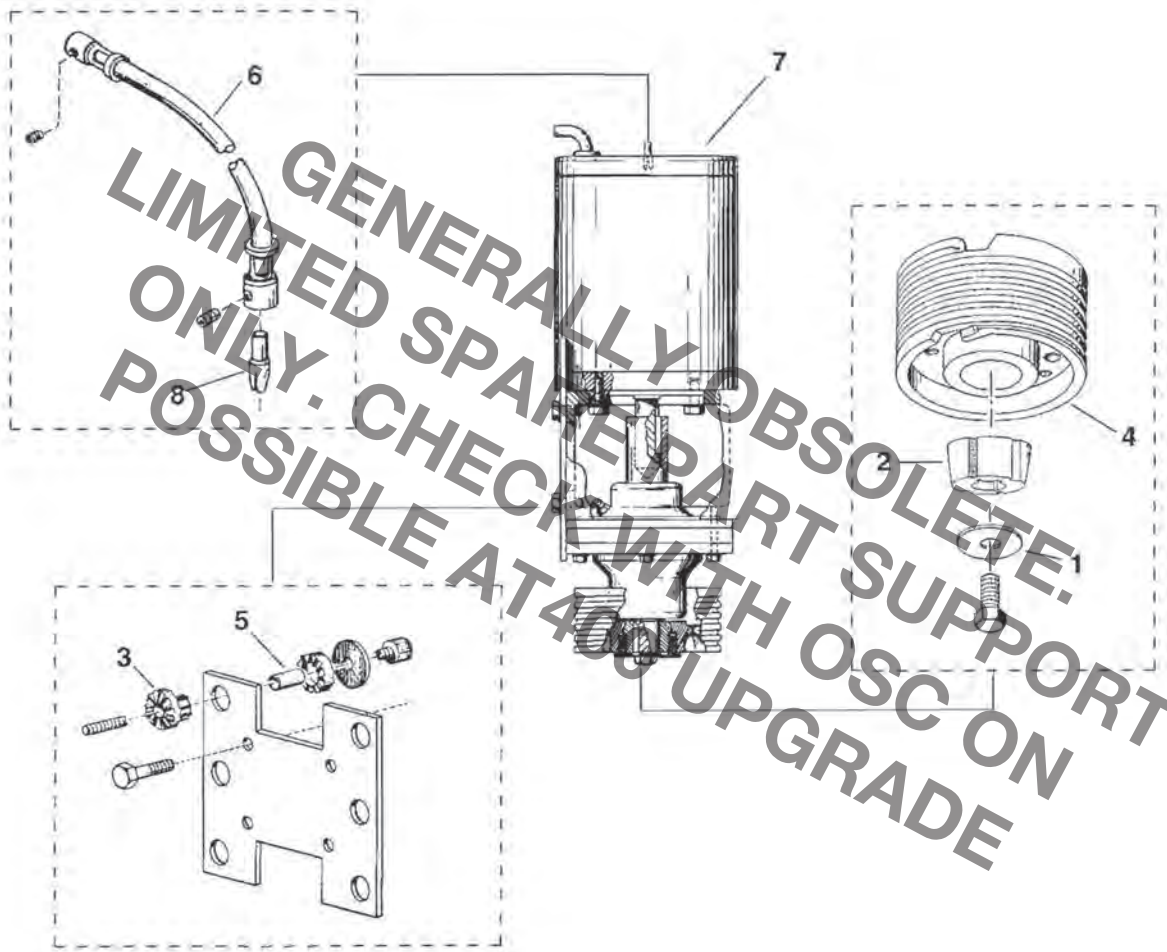
Door Operators

Door Operators: [7300A & 7300AA] Door Link Assembly Spare Parts



Ref. No.	Part No.	Descriptions
1.	299XT1	Bar, 1-3/4" W, 4-7/16" L, 5/16" Thk
2.	299XW1	Bar, 1-1/2" W, 2-7/8" L, 1/4" Thk
3.	207R2	Bearing, ball, .393" I.D., 1.811" O.D.
4.	59A5	Bolt, shouldered, 3/8"-24 x 1-13/32" L
5.	59A1	Bolt, shouldered, 3/8"-24 x 1-1/16" L
	65EA2	Bolt, 3/8" -24 x 1"
6.	316CBC1	Bracket, 1-3/4" W, 6" L, 3/16" Thk
7.	430TA3	Link, 1-3/4" W, 7-1/8" L, 5/16" Thk
	430TA9	Link, 1-3/4" W, 8-3/4" L, 5/16" Thk
	430TA12	Link, 1-3/4" W, 9-3/4" L, 5/16" Thk
	430TA33	Link, 1-3/4" W, 6-1/4" L, 5/16" Thk
	430TA35	Link, 1-3/4" W, 13" L, 5/16" Thk
	430TA47	Link, 1-3/4" W, 6-3/4" L, 5/16" Thk

Door Operators: [7660A] Type 7660A & A7660A Door Operator
Spare Parts



Door Operators

Ref. No.	Part No.	Descriptions
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1.	127VB143	Washer
2.	321EE1	Bushing, taperlock
3.	334AM1	Bushing, sound isolation
4.	360R1	Drum
5.	462HA102	Spacer
6.	494JL1	Flexible shaft
7.	6333BY1	Motor, 90VDC, 2 amps, 1/6 HP
8.	81BD10	Pin

Door Operators: [7660A] Type 6840CA and A6840CA Panel Spare Parts

CAPACITOR



Part No.	Descriptions
P226BF11	Capacitor, 60 MFD
P226BL1	Capacitor, 0.1 MFD
P226BY4	Capacitor, 20 MFD

DIODE



AAA612AF2	Diode
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RECTIFIER



230BS3	Rectifier, bridge
P607H1	Rectifier, SCR, 25A, 4V

RELAY



P613AB1	Relay, 3-Pole, SPDT, 110VDC
P613AT1	Relay, 1-Pole, SPDT, 110V

RESISTOR



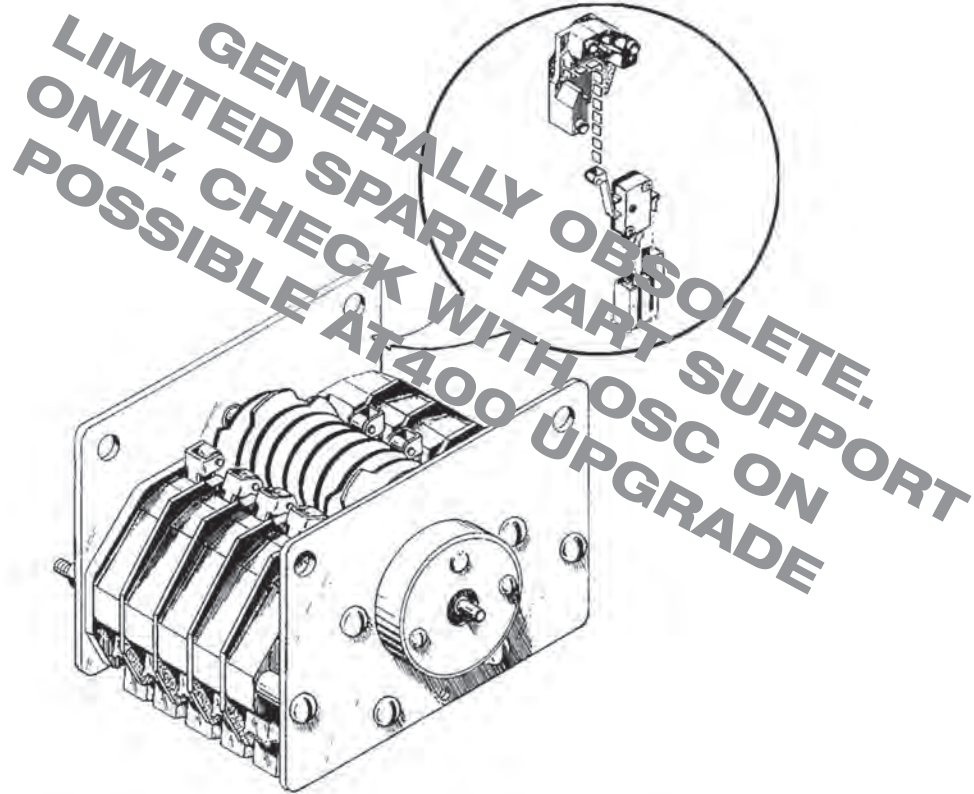
232T2	Resistor, 2W, 1000 Ohm
AAA232FP33	Resistor, 2W, 220 Ohm
AAA232FP13	Resistor (Dim)

SOCKET



P467AE2	Socket, relay
V618J1	Socket, relay

Door Operators: [7660A] Type 6934Y Cam Pack Spare Parts

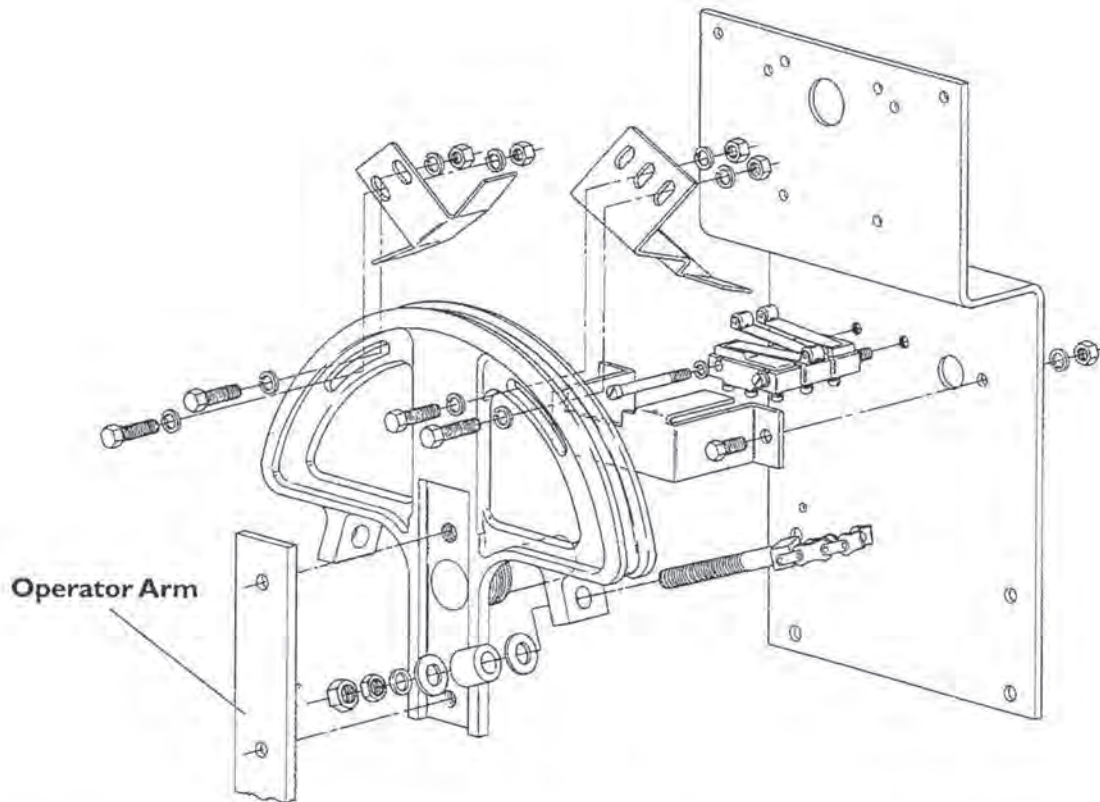


Part No.	Descriptions
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P177AX2	Microswitch, SPDT
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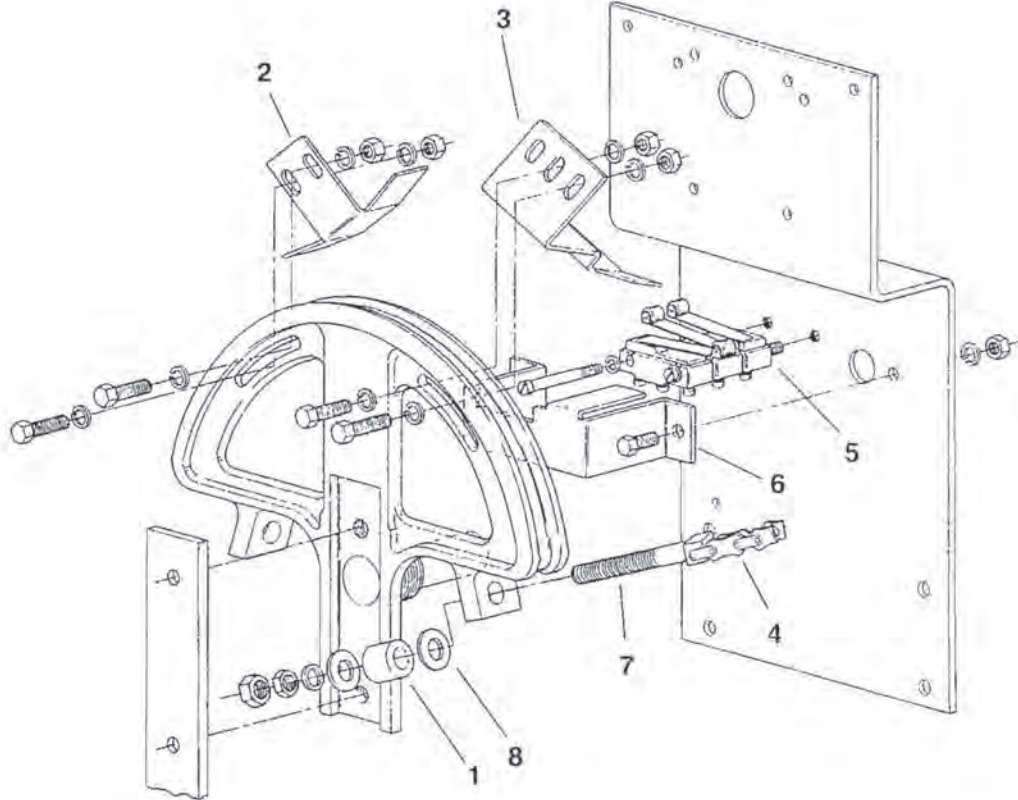
Door Operators

Door Operators: [7770A] Door Operator Arms



Part No.	Door Type	Opening Width	Arm Length
288KL10	Single slide	32", 36"	36"
288KL11	Single slide/ 2-Speed	42"	44"
288KL12	Center opening	42", 48"	24-7/8"
288KL13	Center opening	36"	21-1/2"
288PN6	2-Speed	48"	46"

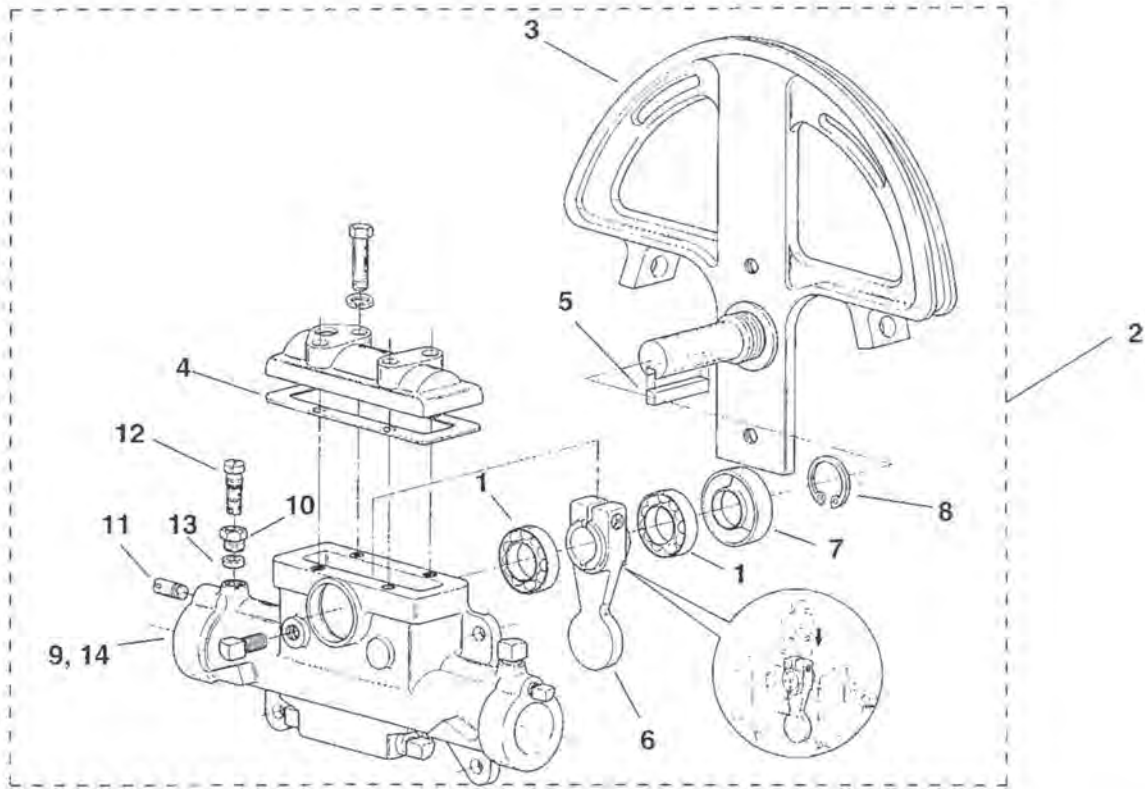
Door Operators: [7770A] Door Operator Spare Parts



Ref. No.	Part No.	Descriptions
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1.	320BE2	Bumper
2.	327KM1	Cam
3.	327KN1	Cam
4.	332BC1	Chain, #40, 33" L
5.	177AJ1	Micro switch
6.	346AFA1	Micro switch cover
7.	95BV2	Rod
8.	133A7	Washer

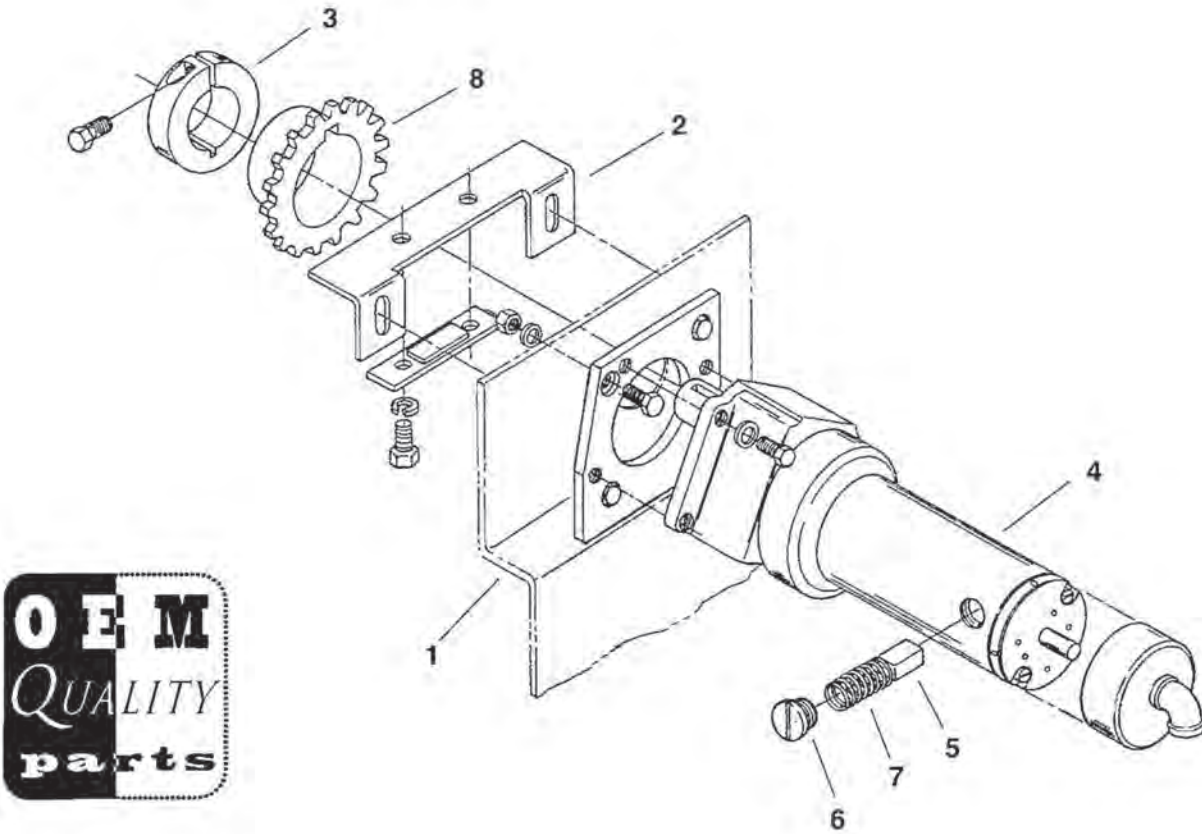
Door Operators: [7770A] Door Check Spare Parts



Ref. No.	Part No.	Descriptions
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1.	207Z51	Bearing, ball, 2.00" O.D., 1.00" I.D.
2.	A7300B1	Door check assembly
3.	165D1	Drive segment
4.	376BC3	Gasket
5.	192D9	Key
6.	288LK1	Lever
7.	33D22	Seal, oil, solid, 2.00" O.D., 1.25" I.D.
8.	172CY15	Retaining ring
9.	295B1	Steel ball, 3/8"
10.	381C1	Gland, brass
11.	97G1	Rod, brass
12.	1271D1	Valve, brass
13.	182C1	Packing
14.	442AL2	Piston

Door Operators: [7770A] Motor & Spare Parts



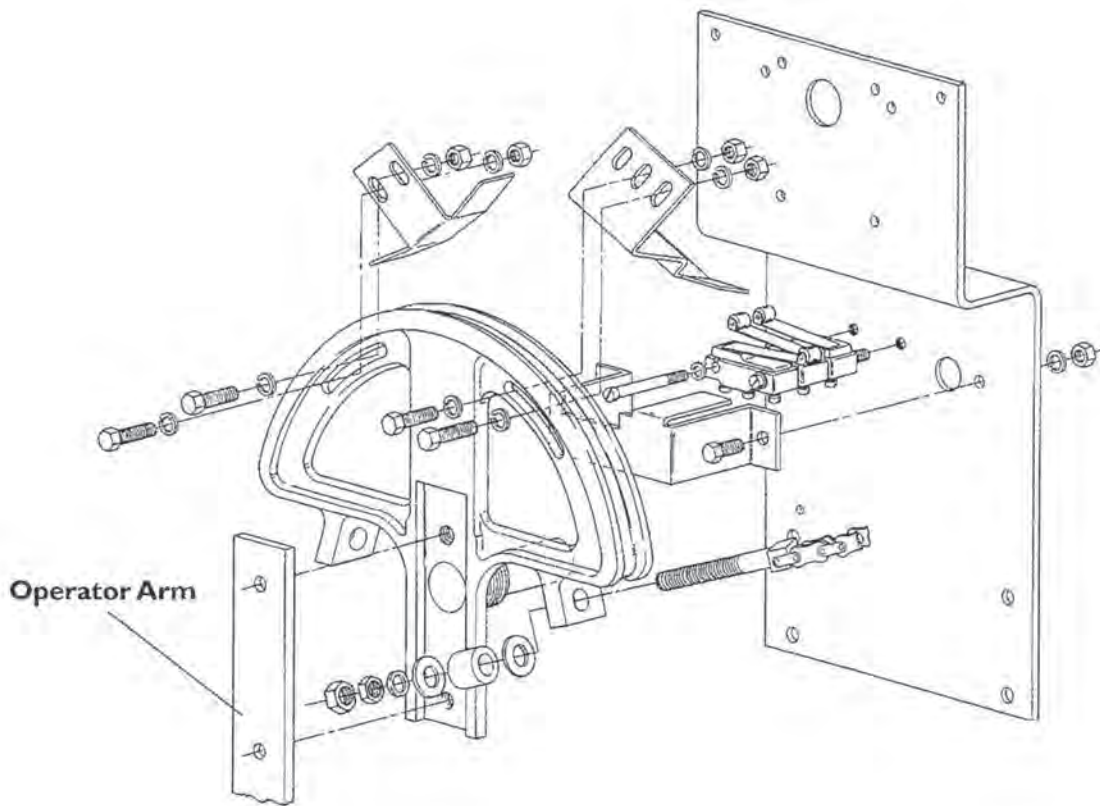
Ref. No.

Part No.

Descriptions

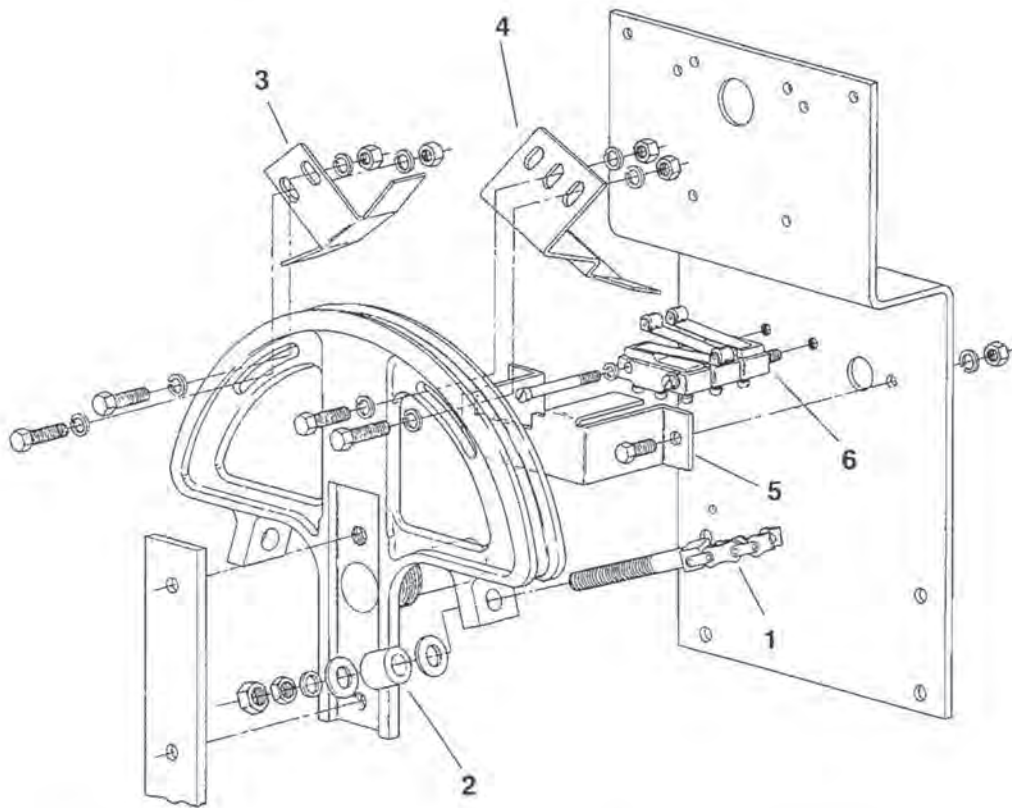
1.	283WK1	Angle bracket
2.	P226DH1	Capacitor
3.	340BJ1	Collar
4.	6333CC1	Motor, 1/4 HP, 90VDC, 2.2 Amps, 1725 RPM
5.	240BA1	Brush
6.	329BY1	Motor brush cap
7.	178AY1	Motor brush holder
8.	195GK4	Sprocket

Door Operators: [7770R] Door Operator Arms



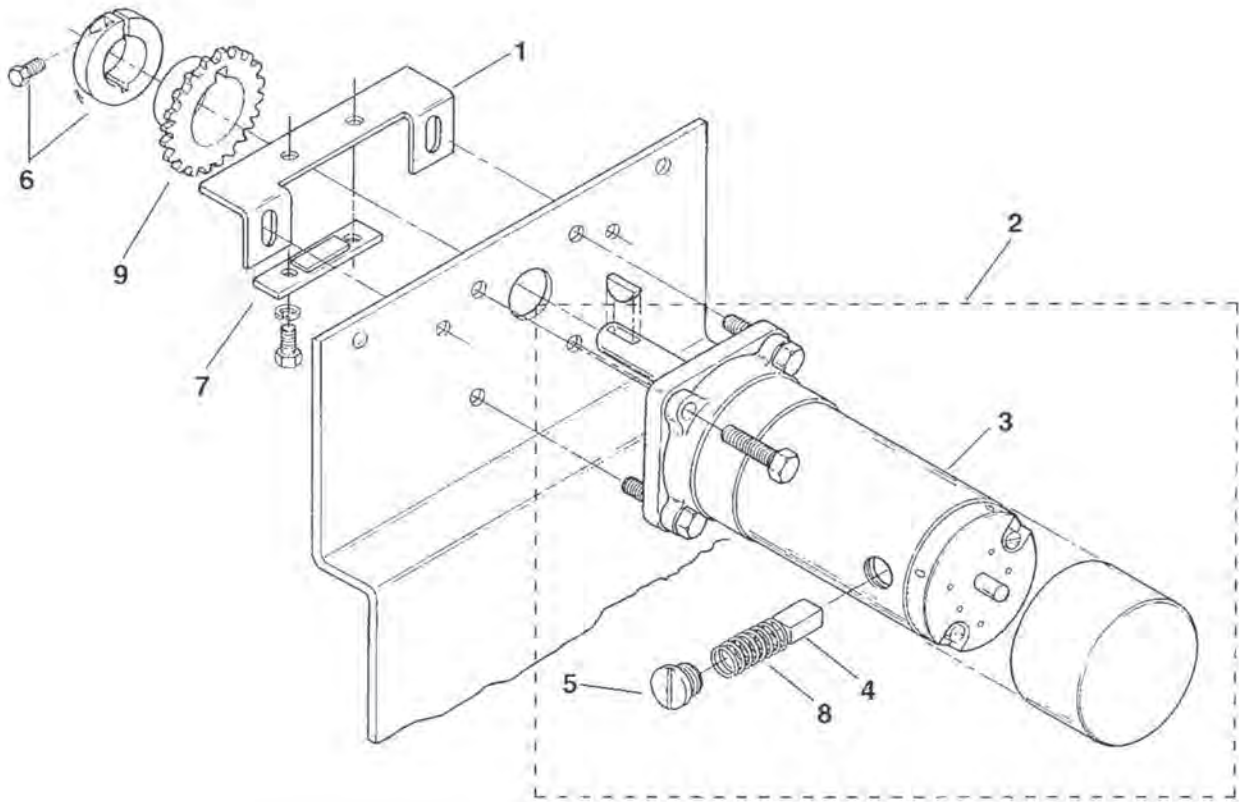
Part No.	Door Type	Opening Width	Arm Length
288KL10	Single slide	32", 36"	36"
288KL11	Single slide/ 2-Speed	42"	44"
288KL12	Center opening	42", 48"	24-7/8"
288KL13	Center opening	36"	21-1/2"
288PN6	2-Speed	48"	46"

Door Operators: [7770R] Door Operator Spare Parts



Ref. No.	Part No.	Descriptions
1.	332BC1	Assembly, chain without rods
	332BC2	Assembly, chain with two rods
2.	320BE2	Bumper, 5/16" Dia., 7/8" L.
3.	327KP1	Cam, operator
4.	327KR1	Cam, operator
5.	346AFA1	Cover, switch
6.	177AJ1	Switch, micro, SPDT

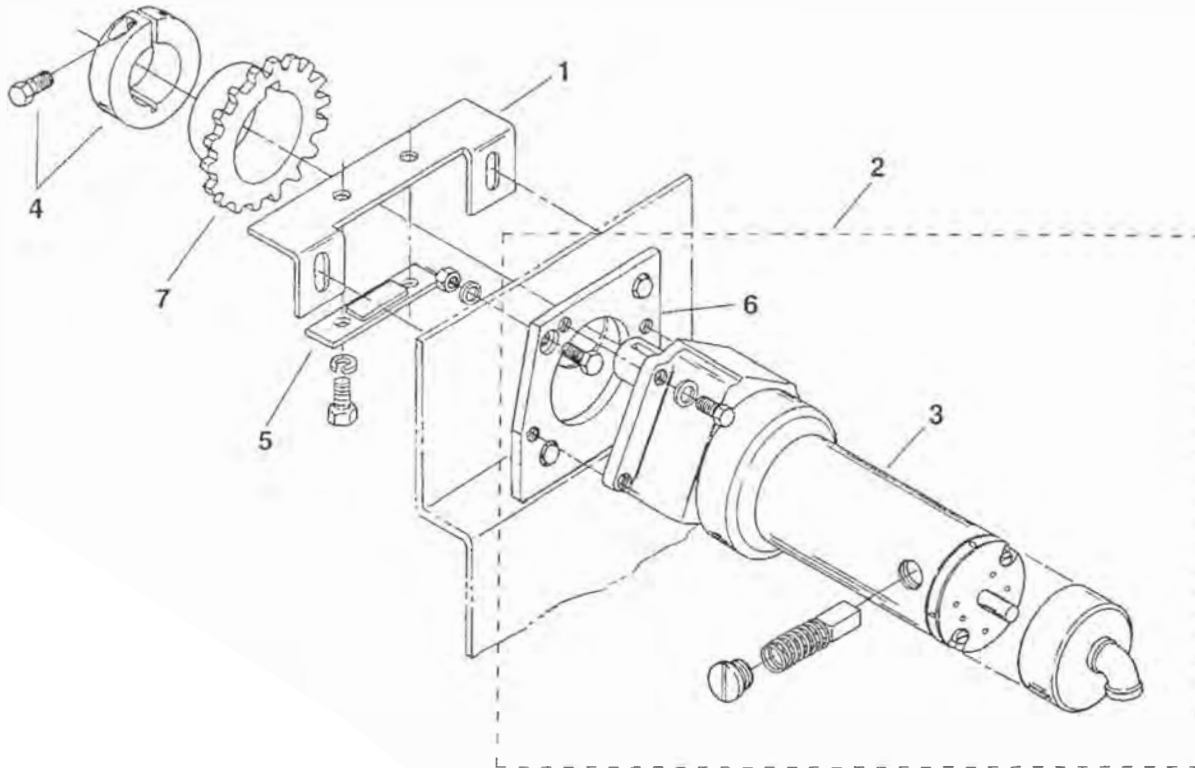
Door Operators: [7770R] GE Motor Assembly



Ref. No.	Part No.	Descriptions
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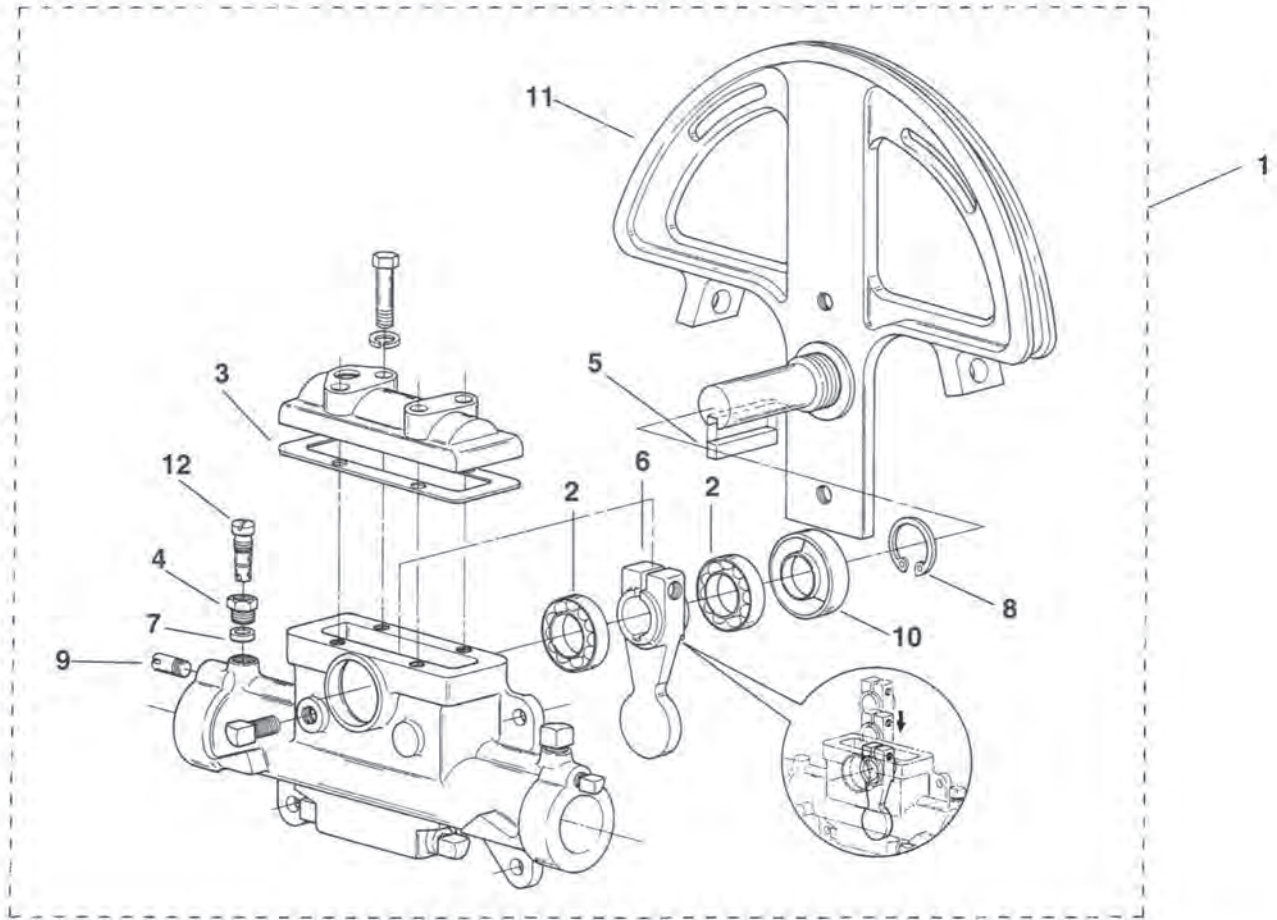
1.	283YT1	Angle
2.	HT201341-1	Assembly, motor-encoder, C/O doors
	HT201342-1	Assembly, motor-encoder, SS/2-Speed doors
3.	HT201337-1	Assembly, motor, 1/4HP, 90VDC, 1725RPM, for C/O doors
	HT201338-1	Assembly, motor, 1/6HP, 90VDC, 880RPM, for SS/2-speed doors
4.	240BA1	Brush, motor
5.	329BY1	Cap, brush
6.	340BJ1	Collar with screw
7.	385NF1	Guide
8.	178AY1	Holder, brush
9.	195GK4	Sprocket

Door Operators: [7770R] IGW Motor Assembly



Ref. No.	Part No.	Descriptions
1.	283YT1	Angle
2.	HT201341-1	Assembly, motor-encoder, C/O doors
	HT201342-1	Assembly, motor-encoder, SS/2-Speed doors
3.	HT201337-1	Assembly, motor, 1/4HP, 90VDC, 1725RPM, for C/O doors
	HT201338-1	Assembly, motor, 1/6HP, 90VDC, 880RPM, for SS/2-speed doors
4.	340BJ1	Collar with screw
5.	385NF1	Guide
6.	6800JC1	Plate, motor adaptor
7.	195GK4	Sprocket

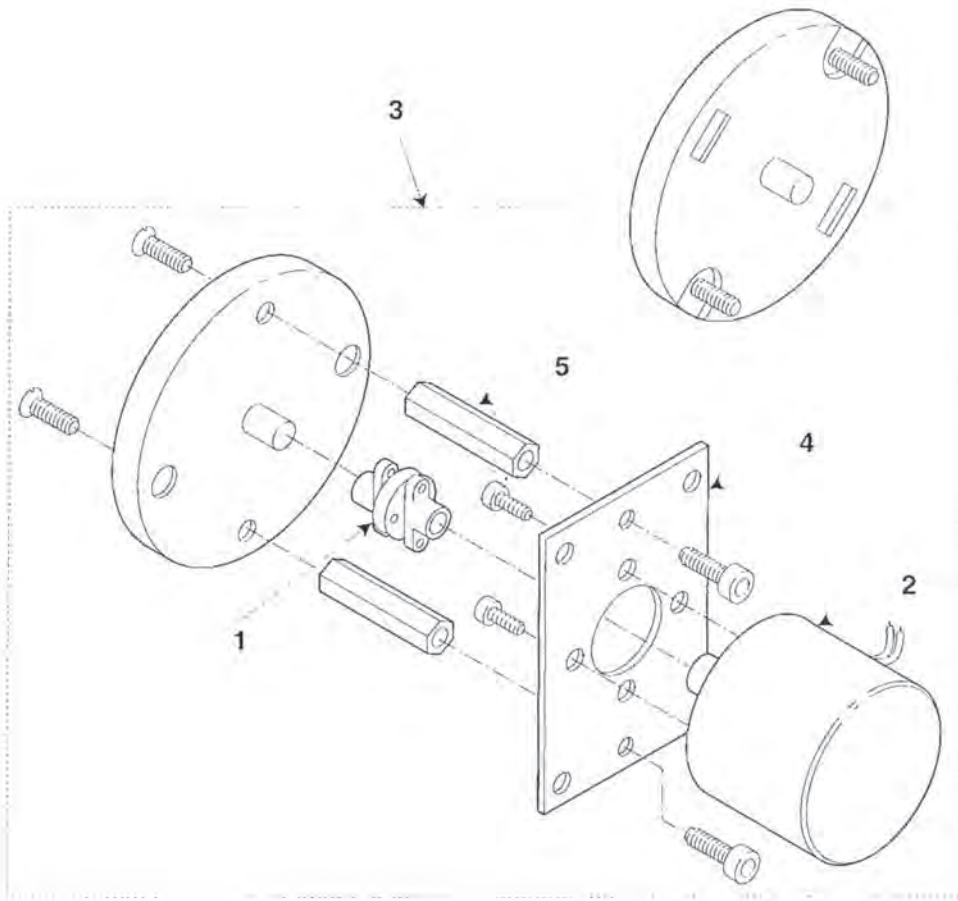
Door Operators: [7770R] Door Check Spare Parts



Ref. No.	Part No.	Descriptions
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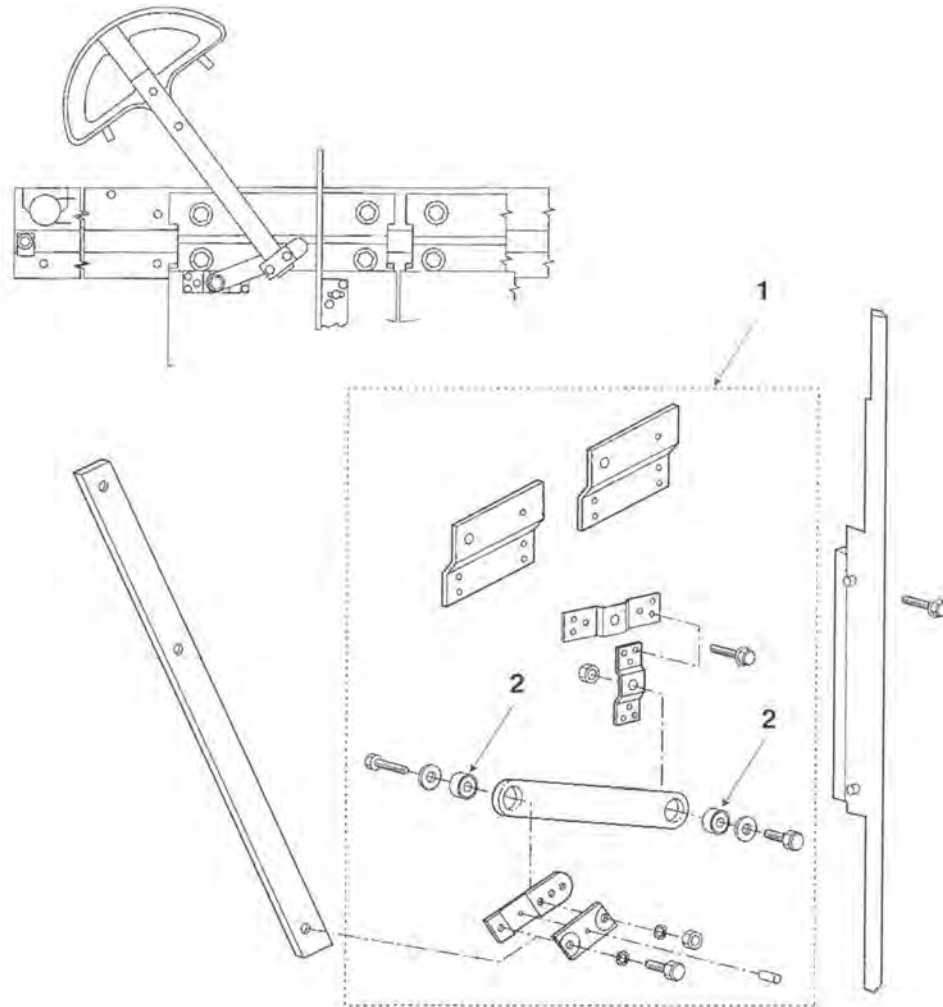
1.	A7300B2	Assembly, door check without piston
2.	207Z51	Bearing, ball, 2.00" O.D., 1.00" I.D.
3.	376BC3	Gasket
4.	381C1	Gland, brass
5.	192D9	Key
6.	288LK1	Lever
7.	182C1	Packing
8.	172CY15	Ring, retaining
9.	97G1	Rod, brass
10.	33D22	Seal, oil
11.	165D1	Segment, drive
12.	271D1	Valve, brass

Door Operators: [7770R] Retrofit Encoder Assembly



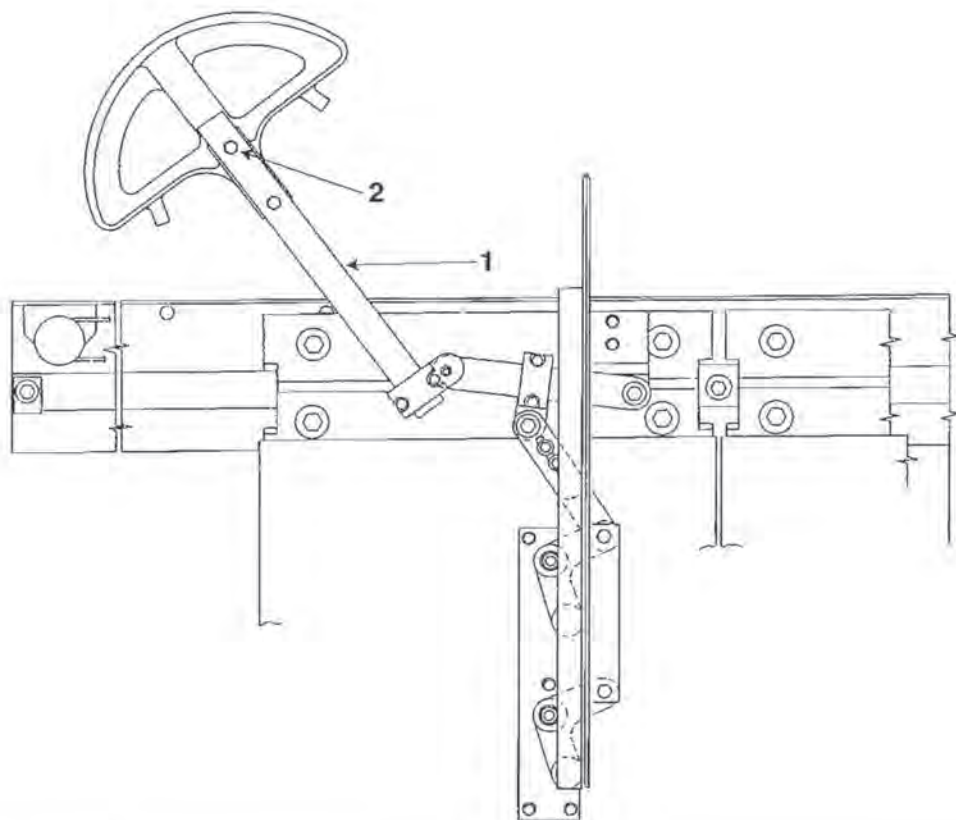
Ref. No.	Part No.	Descriptions
1.	VP-755800	Coupling
2.	VP-766000	Encoder, incremental shaft
3.	VP-798605	Kit, encoder retrofit
4.	386BRL1-MOD	Plate, mounting
5.	VP-877577	Standoff, 1-3/8" L

Door Operators: [7770R] Link Assembly Spare Parts for Stationary Vanes



Ref. No.	Part No.	Descriptions
1.	2700CAC13 2700CAC14 2700CAC18 2700CC16	Kit, link assembly, pin & hardware for 42"/48" C/O doors Kit, link assembly, pin & hardware for 36" C/O doors Kit, link assembly, pin & hardware for 32" SS doors Kit, link assembly, pin & hardware for 48" 2-speed doors
2.	207R2	Bearing, ball with washers

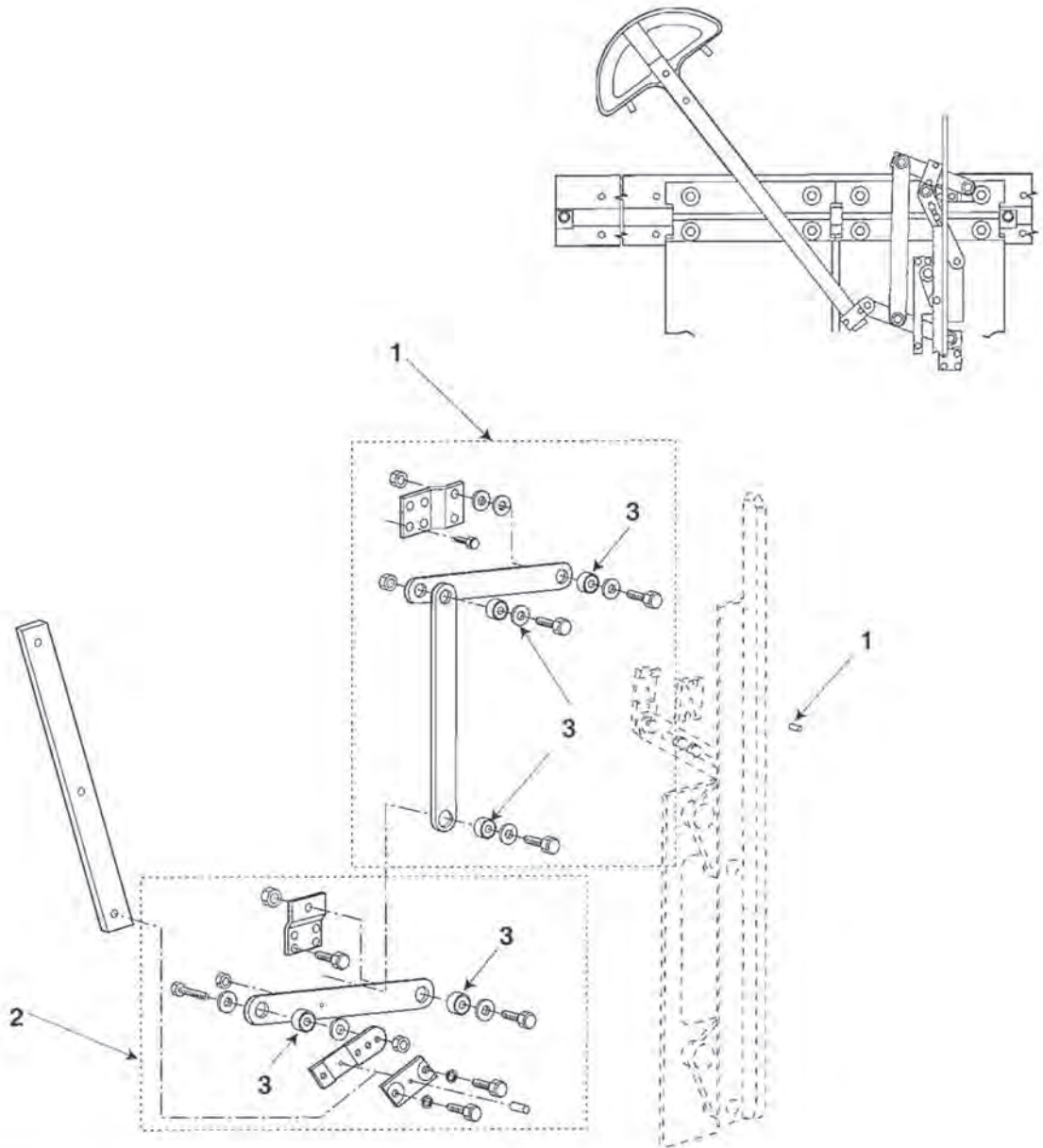
Door Operators: [7770R] Link Assembly Spare Parts for C/O Doors with Movable Vanes



Ref. No.	Part No.	Descriptions
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- | | | |
|----|-----------|--|
| 1. | 2700CAC19 | Kit, link assembly, pin & hardware for 42"/48" doors |
| 2. | 207R2 | Bearing, ball with washers, 1.811" O.D., .393" I.D. |

Door Operators: [7770R] Link Assembly Spare Parts for 2-Speed Doors with Movable Vanes



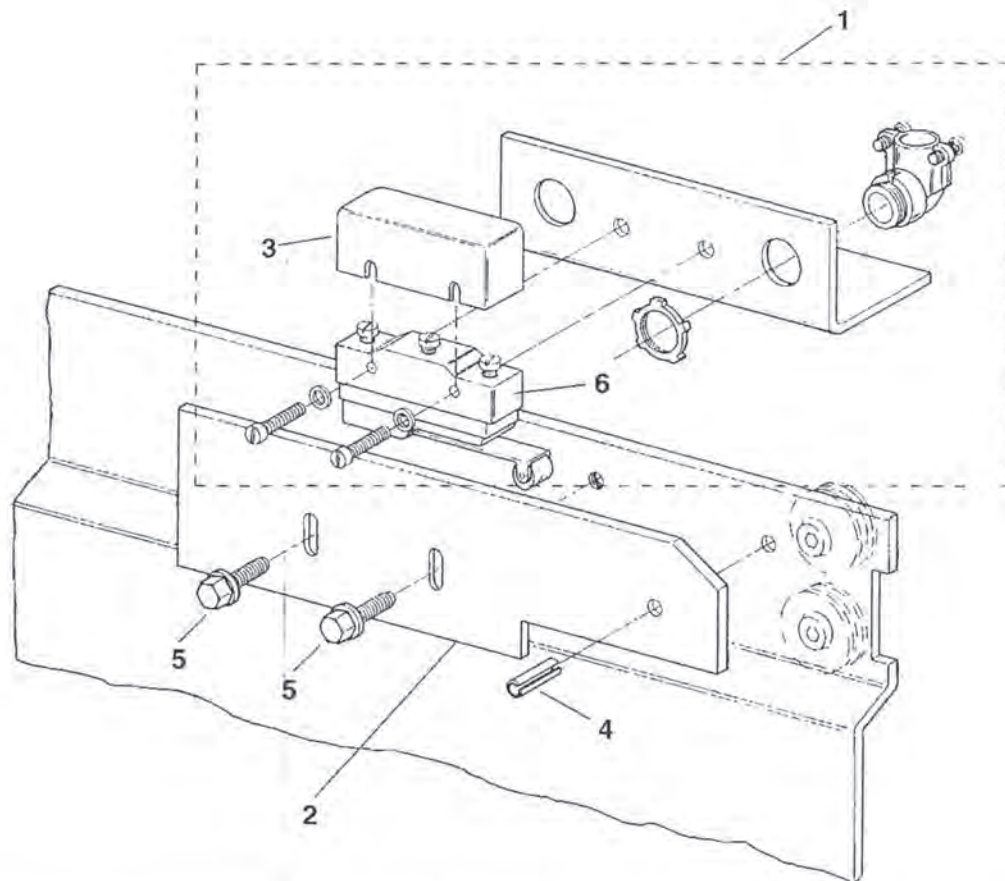
Ref. No.	Part No.	Descriptions
1.	2700CAC21	Kit, idler link assembly & hardware, RH, 42" opening
	2700CAC22	Kit, idler link assembly & hardware, LH, 42" opening
	2700CAC23	Kit, idler link assembly & hardware, RH, 48" opening
	2700CAC24	Kit, idler link assembly & hardware, LH, 48" opening
2.	2700CAC25	Kit, link assembly, pin & hardware, LH, 48" opening
3.	207R2	Bearing, ball with washers, 1.811" O.D., .393" I.D.

Door Operators: [7770R] Movable Vanes Assemblies



Part No.	Door Opening	Door Hand	Opening Height	Cab Height	Door Type
C6970F1	36"	RH	84"	96"	C/O
	36"	RH	96"	155"	C/O
	42"	RH	84"	115"	2-Speed
C6970F2	42"	LH	84"	115"	2-Speed
C6970F3	36"	RH	84"	115"	C/O
C6970F5	42"	RH	84"/96"	96"/115"	C/O
C6970F9	42"/48"	RH	84"	115"	C/O
C6970F11	48"	RH	84"	115"	2-Speed
C6970F12	48"	LH	84"	115"	2-Speed
C6970F14	42"/48"	LH	84"/96"	96"/115"	2-Speed

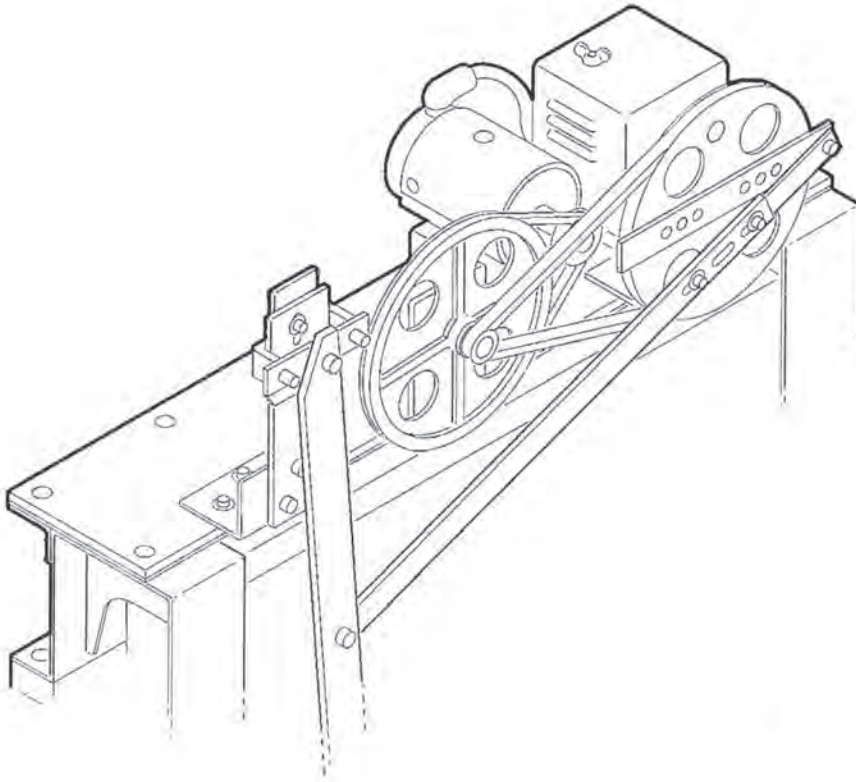
Door Operators: [7770R] Detector Desensitizing Switch



Ref. No.	Part No.	Descriptions
1.	7048BV1	Assembly, switch
2.	327LR1	Cam
3.	346AFA1	Cover, switch
4.	81AX1	Pin, roll
5.	109P2	Screw, thread rolling
6.	177AJ1	Switch, micro, SPDT

Door Operators: [QL] Operator Engine Assembly

Harmonic Drive "QL"



Door Operators

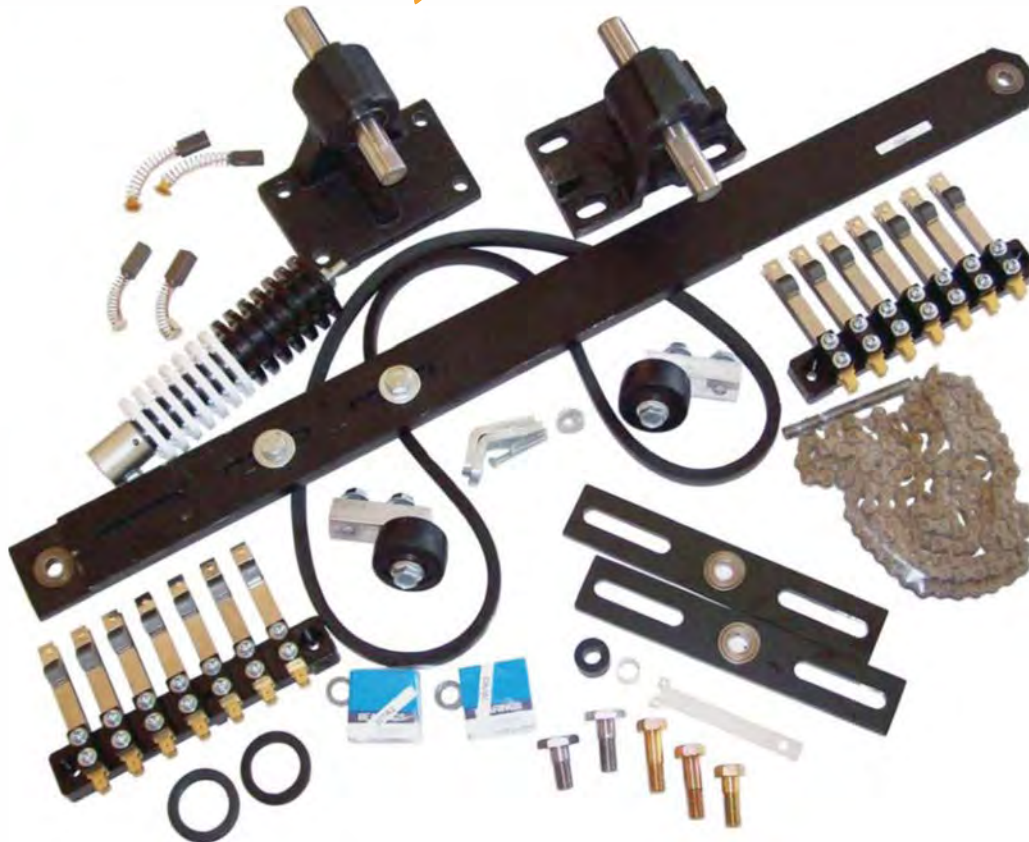
Part No.	Descriptions
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- | | |
|----------|--|
| A7782AA1 | Assembly, operator engine, for 36"/42" SS & 48" 2S doors, RH |
| A7782AA2 | Assembly, operator engine, for 36"/42" SS & 48" 2S doors, LH |
| A7782AA3 | Assembly, operator engine, for 42" C/O doors |

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UP GRADE**

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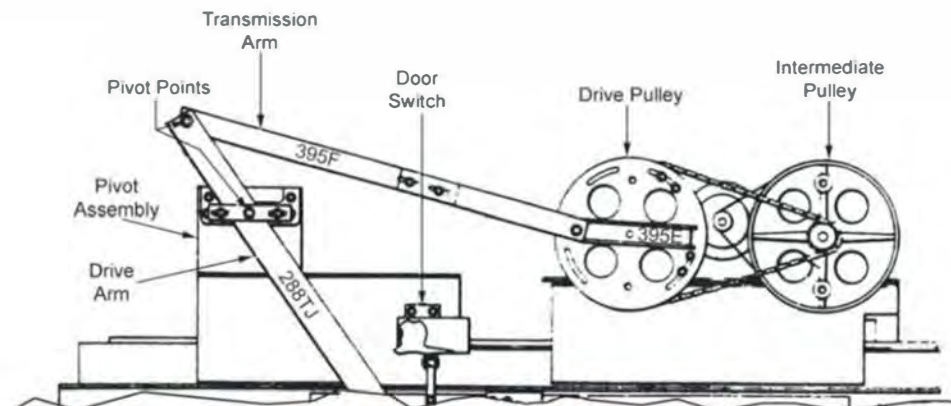
Rebuild It, Eliminate Callbacks!



QL OPERATOR REBUILD KIT

QL Operator Rebuild Kit p/n A7782AA500

(Kit contents satisfies rebuilds of earliest aluminum baseplate QL operators.
Should your QL have the later black-painted formed steel baseplate, advise your OSC representative.)



Typical c/o QL Operator Arrangement

OTIS

Door Operators

HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

For a proper comprehensive rebuild, choose one appropriate door link, one type 395E arm, and one main drive arm from the tables below.

QL Operator Rebuild Kit



1C-7770AF1 (w/ 8 in. link
(AF2 is the same except 12 in.)



1C-7770AF3 is 9-1/2 in.
1C-7770AF4 is 13-1/2 in.
(end-to-end dimension)



E1 = 15"
E2 = 11.5"
E3 = 14.25"
395E1, E2, and E3 shown
(395E4 is the same as E3 except
Has 8 tapped holes)



AF3 uses this
bracket
7770AF3 or AF4 (shown bottom)
(both 13-3/4 in. overall link)

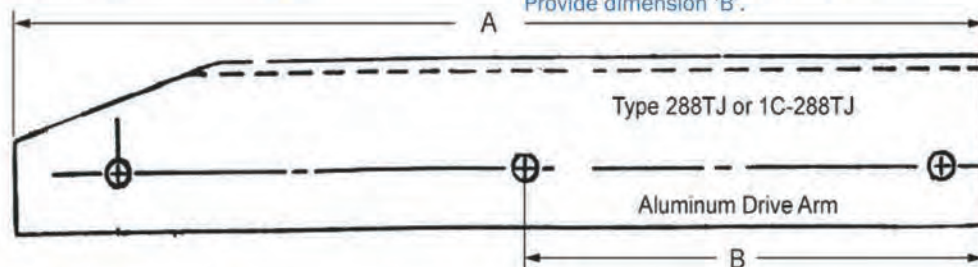


7770P7

Drive Arm Part Numbers	Length 'A' (in.)	Dimension 'B' (in.)
288TJ1	41-11/16	
288TJ2	47-11/16	
288TJ3	53-11/16	
288TJ4*	33-5/16	10-5/16
288TJ5	41-11/16	
288TJ6*	33-5/16	---
288TJ7*	51-11/16	---
288TJ8	30-3/16	
288TJ9	34-5/16	
288TJ10*	59-11/16	38-1/8
288TJ11	39-3/4	
288TJ12*	59-11/16	39-1/8
288TJ13	55-3/16	

Drive Arm Part Numbers	Length 'A' (in.)	Dimension 'B' (in.)
1C-288TJ1	48-11/16	
1C-288TJ2	52-3/16	
1C-288TJ3*	51-11/16	30-3/16
1C-288TJ4	52-11/16	
1C-288TJ5	49-7/16	
1C-288TJ6	47-3/16	
1C-288TJ7	38-7/8	
1C-288TJ8	37-1/4	
1C-288TJ9	34-11/16	
1C-288TJ10	45-1/16	
1C-288TJ11	50-13/16	
1C-288TJ12	49-11/16	

*Second p/n with same length exists.
Provide dimension 'B'.

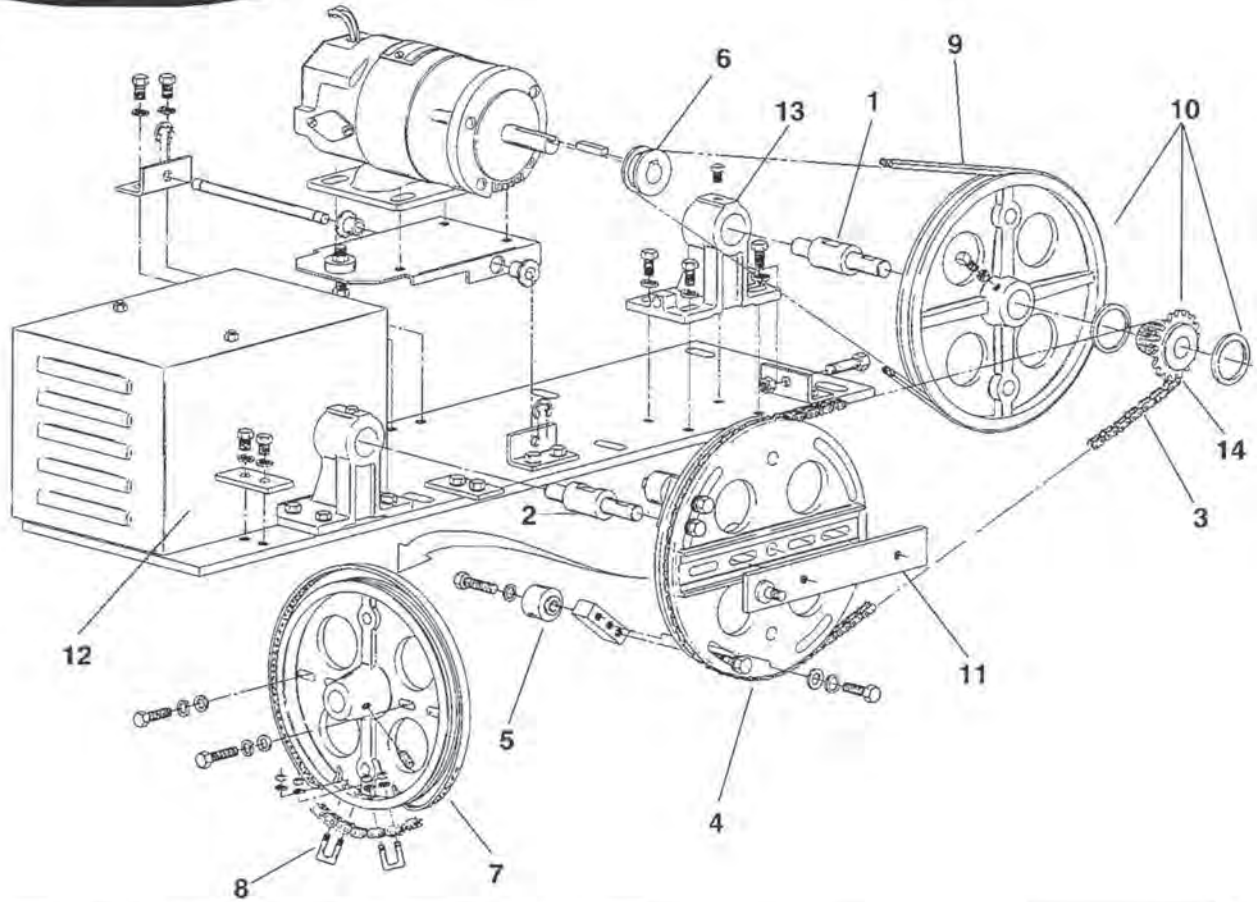


OTIS

Door Operators

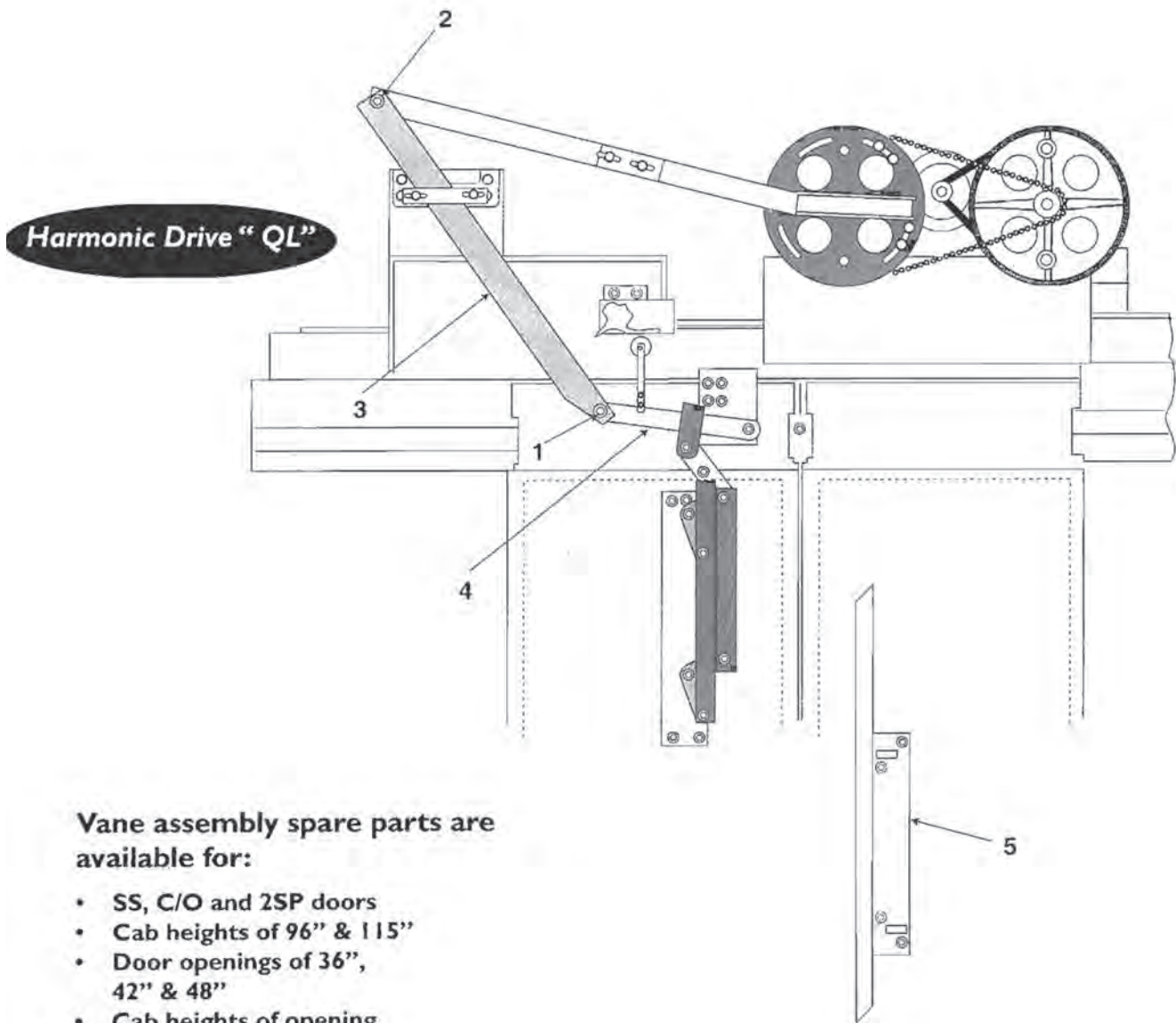
Door Operators: [QL] Operator Engine Spare Parts

Harmonic Drive "QL"



Ref. No.	Part No.	Descriptions
1.	212AF1	Bearing, integral shaft, with 3 sides machined flat
2.	212AF2	Bearing, integral shaft
3.	332AW28	Chain, 58.5" endless
4.	B198AJ1	Pulley, drive
5.	456EY1	Roller, stop
6.	265BX1	Sheave, V-belt
7.	298SF1	Strip, rubber silencer
8.	65FG1	U-bolt, chain hold down
9.	717B1	V-belt, 44.25" L
10.	198AH1	Assembly, intermediate pulley w/sprocket & washer
11.	395E3	Arm, drive pulley lever
12.	471GB1	Bearing stand (for drive pulley)
13.	471FY1	Bearing stand (for intermediate pulley)
14.	195GS1	Sprocket

Door Operators: [QL] Linkage - Center Opening Doors



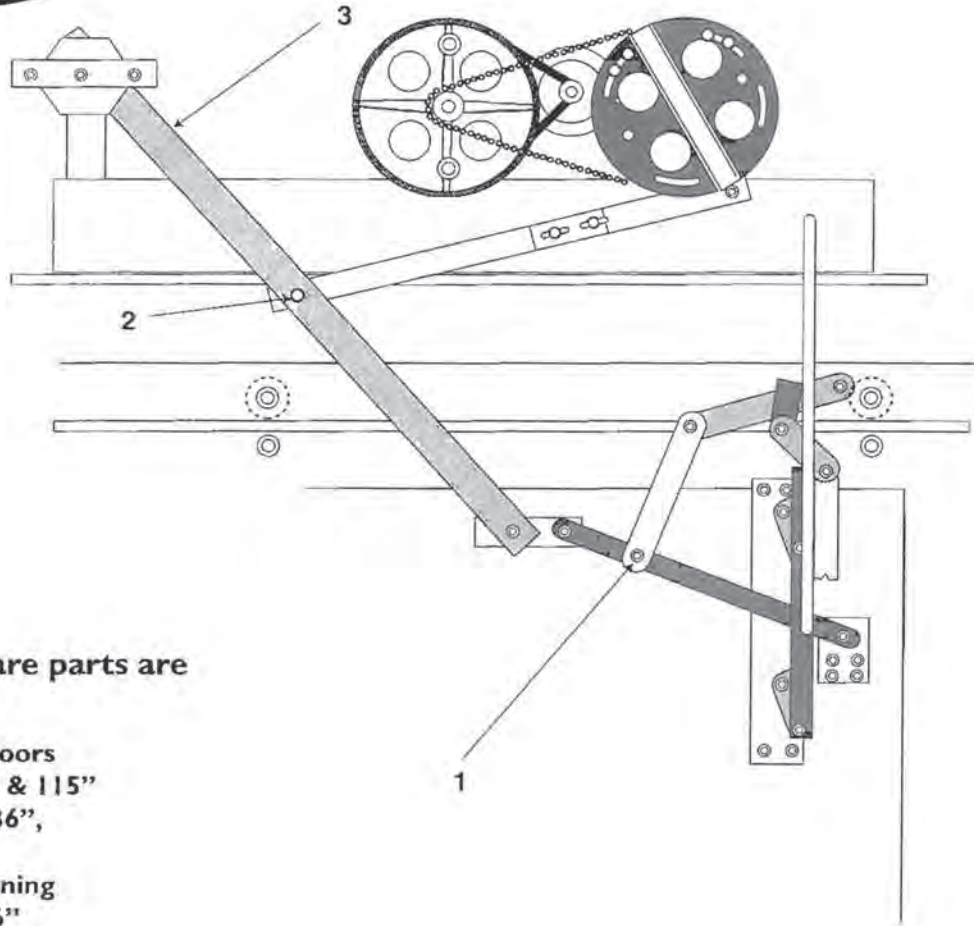
Vane assembly spare parts are available for:

- SS, C/O and 2SP doors
- Cab heights of 96" & 115"
- Door openings of 36", 42" & 48"
- Cab heights of opening heights of 84" & 96"

Ref. No.	Part No.	Descriptions
1.	207R2	Bearing, 1.811" O.D., .393" I.D.
2.	209AN3	Bearing, .875" O.D., .375" I.D.
3.	288TJ4	Drive arm
4.	2700CCF4	Kit, link assembly, 42" opening
5.	A6940AT1	Vane assembly, stationary

Door Operators: [QL] Linkage - Single Slide Doors

Harmonic Drive "QL"



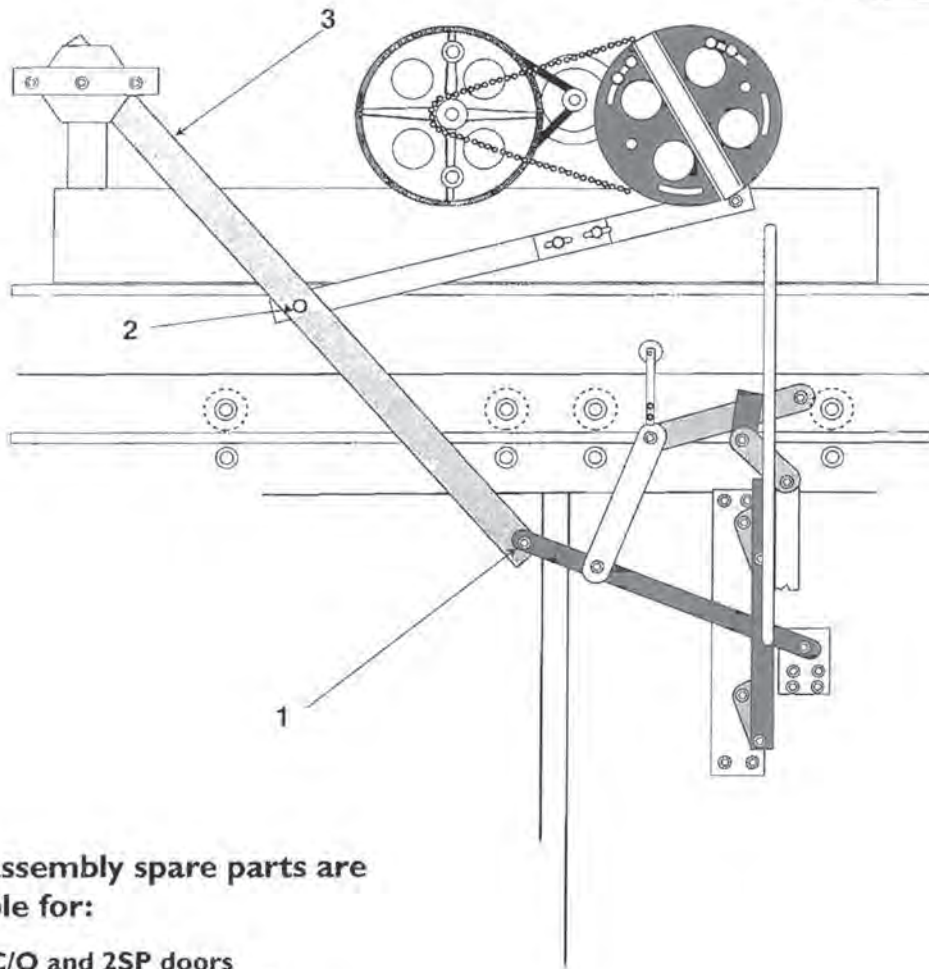
Vane assembly spare parts are available for:

- SS, C/O and 2SP doors
- Cab heights of 96" & 115"
- Door openings of 36", 42" & 48"
- Cab heights of opening heights of 84" & 96"

Ref. No.	Part No.	Descriptions
1.	207R2	Bearing, 1.811" O.D., .393" I.D.
2.	209AN3	Bearing, .875" O.D., .375" I.D.
3.	288TP1	Drive arm, 36" opening
	288TP2	Drive arm, 42" opening

Door Operators: [QL] Linkage - Two Speed Doors

Harmonic Drive "QL"

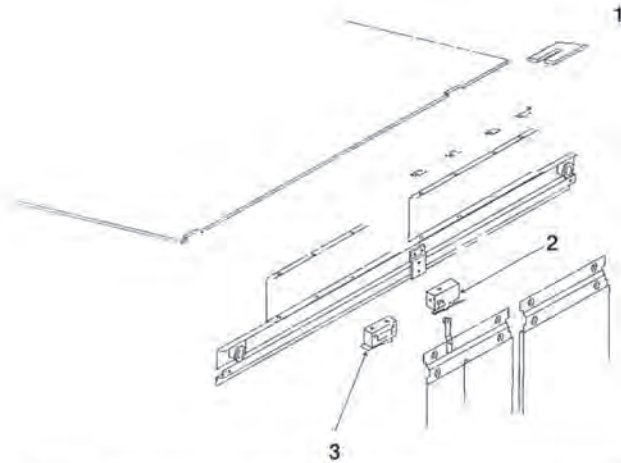


Vane assembly spare parts are available for:

- SS, C/O and 2SP doors
- Cab heights of 96" & 115"
- Door openings of 36", 42" & 48"
- Cab heights of opening heights of 84" & 96"

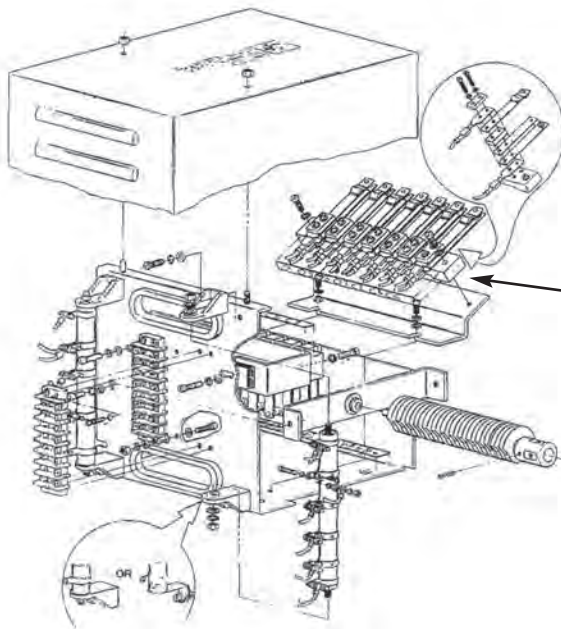
Ref. No.	Part No.	Descriptions
1.	207R2	Bearing, 1.811" O.D., .393" I.D.
2.	209AN3	Bearing, .875" O.D., .375" I.D.
3.	288TJ4	Drive arm

Door Operators: [QL] Door Operator Spare Parts & Cam Pack



Ref. No.	Part No.	Descriptions
----------	----------	--------------

- | | | |
|----|---------|-------------------------------|
| 1. | 256AD1 | Cork shim |
| 2. | 6098E6 | Gate switch, RH, C/O doors |
| 3. | 6098MV1 | Gate switch, RH, SS, 2S doors |
| | 6098MV2 | Gate switch, LH, SS, 2S doors |

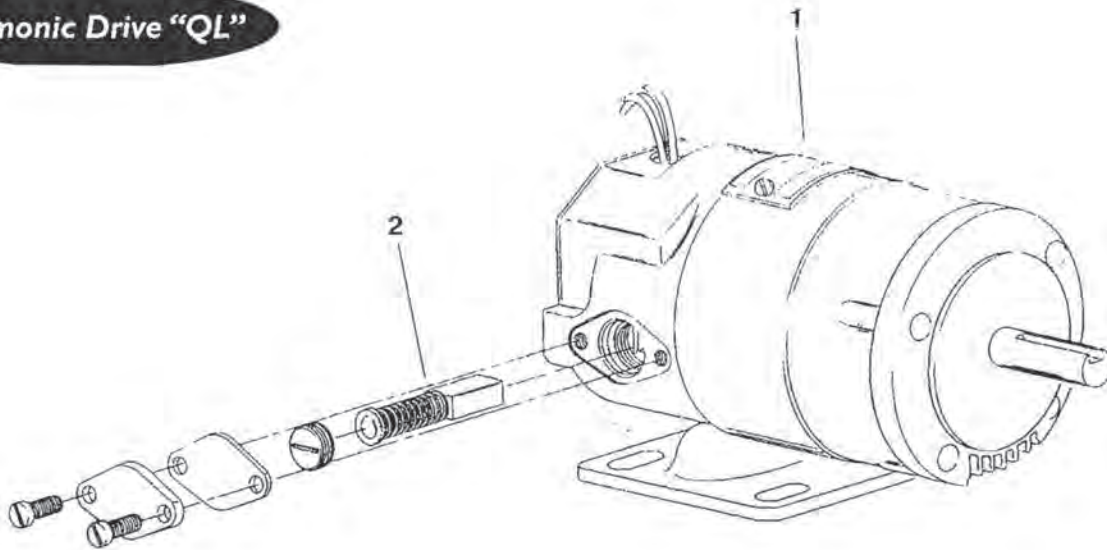


QTY (2) SEVEN CONTACT SWITCH SET WERE USED HERE.
SPECIFY (2) 177DB2

Part No.	Descriptions
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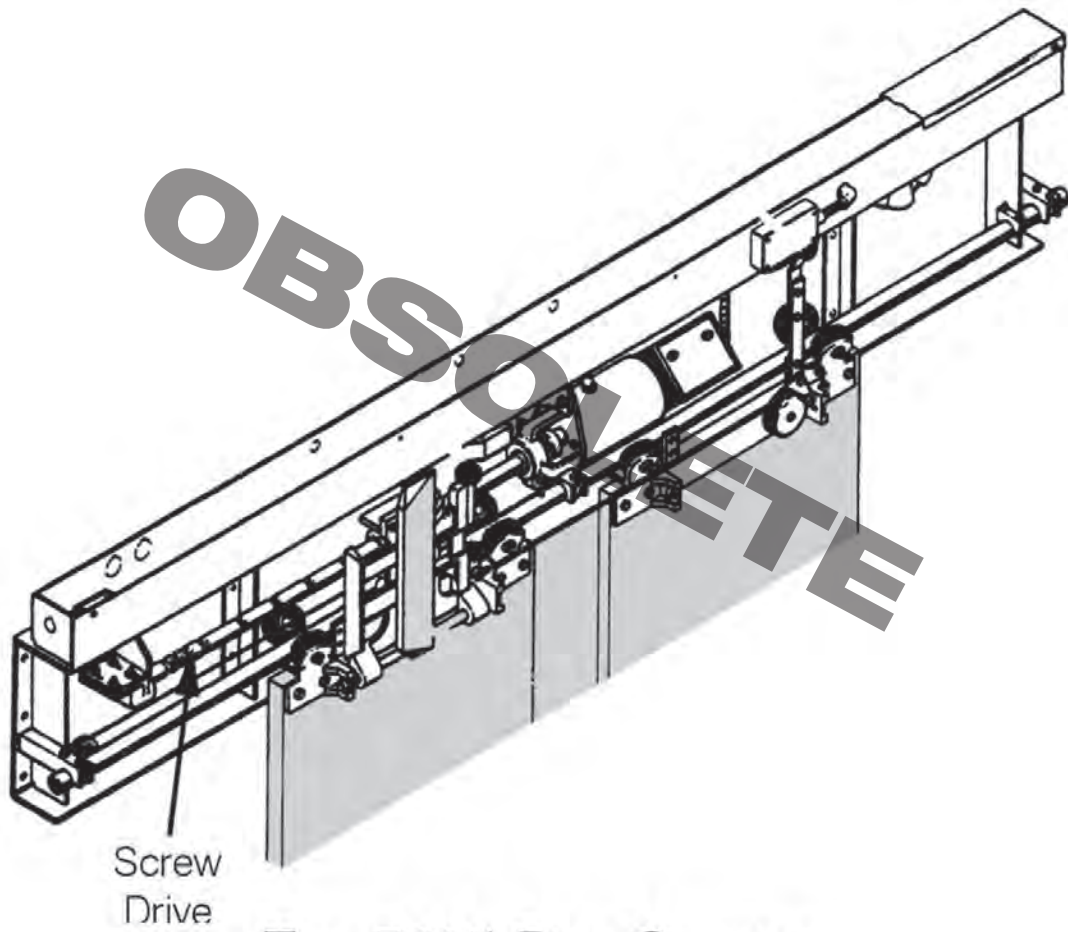
- | | |
|--------------|---|
| AAA7782AY1 | Cam pack assembly w/resistors & terminal blocks, RH |
| AAA7782AY2 | Cam pack assembly w/resistors & terminal blocks, LH |
| AAA7782AY400 | Cam & shaft subassembly (w/14 cams black & white) |
| 314AD1 | Cam Adjusting Wrench |

Harmonic Drive "QL"



Ref. No.	Part No.	Descriptions
1.	6333DP1	Motor, 120VDC, 1/6 HP, 1140 RPM
2.	240BA3	Brush (for G.E. motor)
	AAA240AK1	Brush (for L/S motor)

Above motor ref. 6333DP1 is now obsolete and replaced by a permanent magnet version motor p/n: AAA6333EZ1. Only armature wire terminals (A1 & A2) are used going forward. Motor Field wires are no longer present. No adjustment of motor fields is necessary or possible with replacement motor. Leave motor field wire terminals blank.



Type 777A Door Operator

HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

AT400 OPERATOR UPGRADES

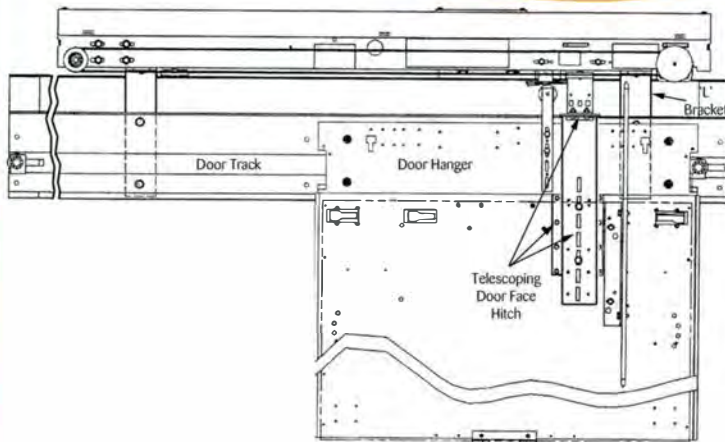
ADAPTING THE AT400 OPERATOR COULD NOT BE MUCH SIMPLER

AT400 OPERATOR UPGRADES



HITCH TO BELT

TELESCOPING HITCH TO DOOR



- Interlock Independent
- Pre Engineered Power Supply Available
- Call About Our Mod Packages with AT400 Included



7300A Operator



7777A Operator



QL Operator



Type O Operator



7770A Operator

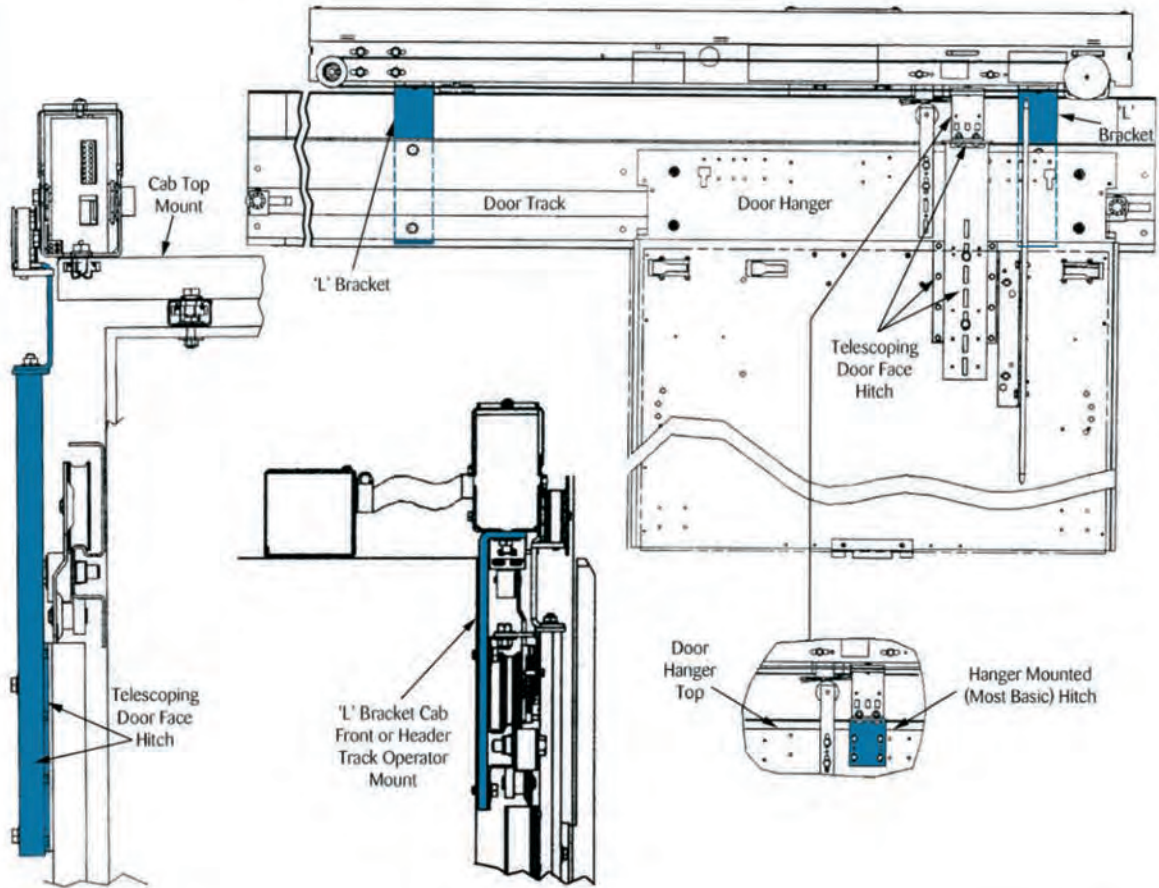
Replace each of these operators with the AT400!

Door Operators

Door Operators: AT400 Operator Upgrades Flyer

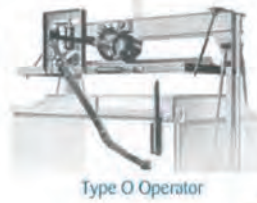
HIGHEST QUALITY PRODUCTS • UNBEATABLE CUSTOMER SERVICE

Cab Front or Header Track Operator Mount



AT400 OPERATOR UPGRADES

Door Operators



Replace

each

of

these

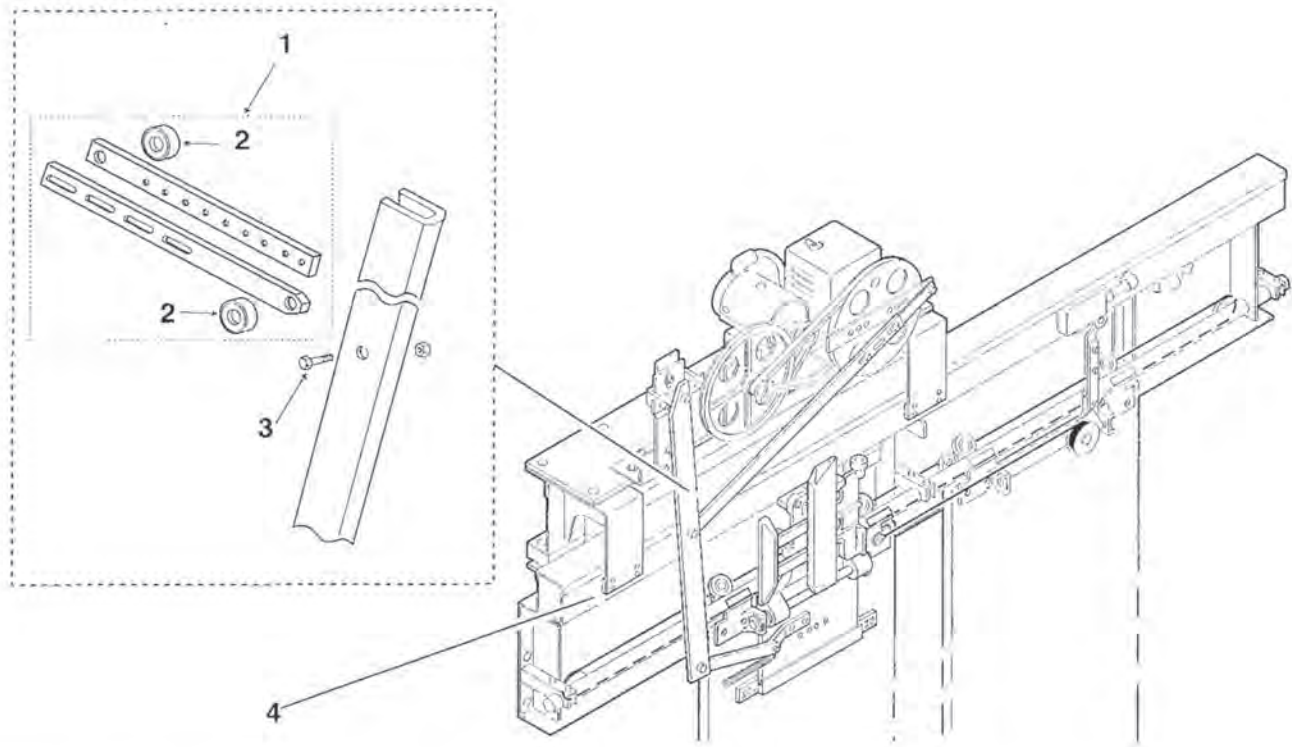
operators

with

the

AT400!

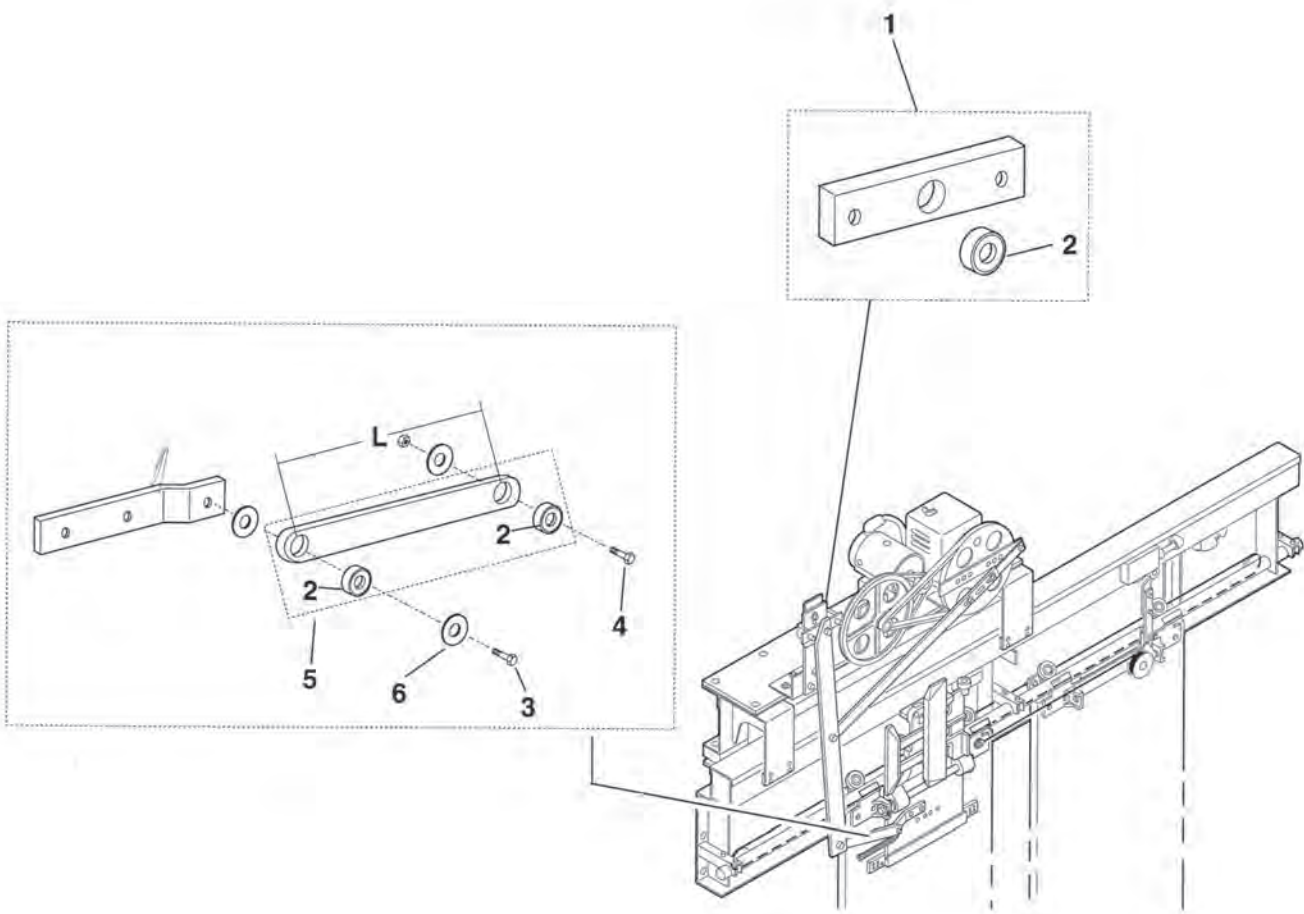
Door Operators: [7777A to QL] Link Assembly Spare Parts



Door Operators

Ref. No.	Part No.	Descriptions
1.	395F1	Assembly, transmission arm
2.	209AN3	Bearing, .875" O.D., .375" I.D.
3.	58AP1	Bolt, shoulder, 1.25" L, 3/8-16 threads
4.	1C-288TJ7	Drive arm, 38.87" L, for 42" SS
	1C-288TJ8	Drive arm, 37.24" L, for 36" SS
	1C-288TJ10	Drive arm, 45.06" L, for 42" C/O
	1C-288TJ11	Drive arm, 50.81" L, for 42" SS
	1C-288TJ12	Drive arm, 49.67" L, for 36" SS
	1C-288TJ9	Drive arm, 34.68" L, for 42" C/O

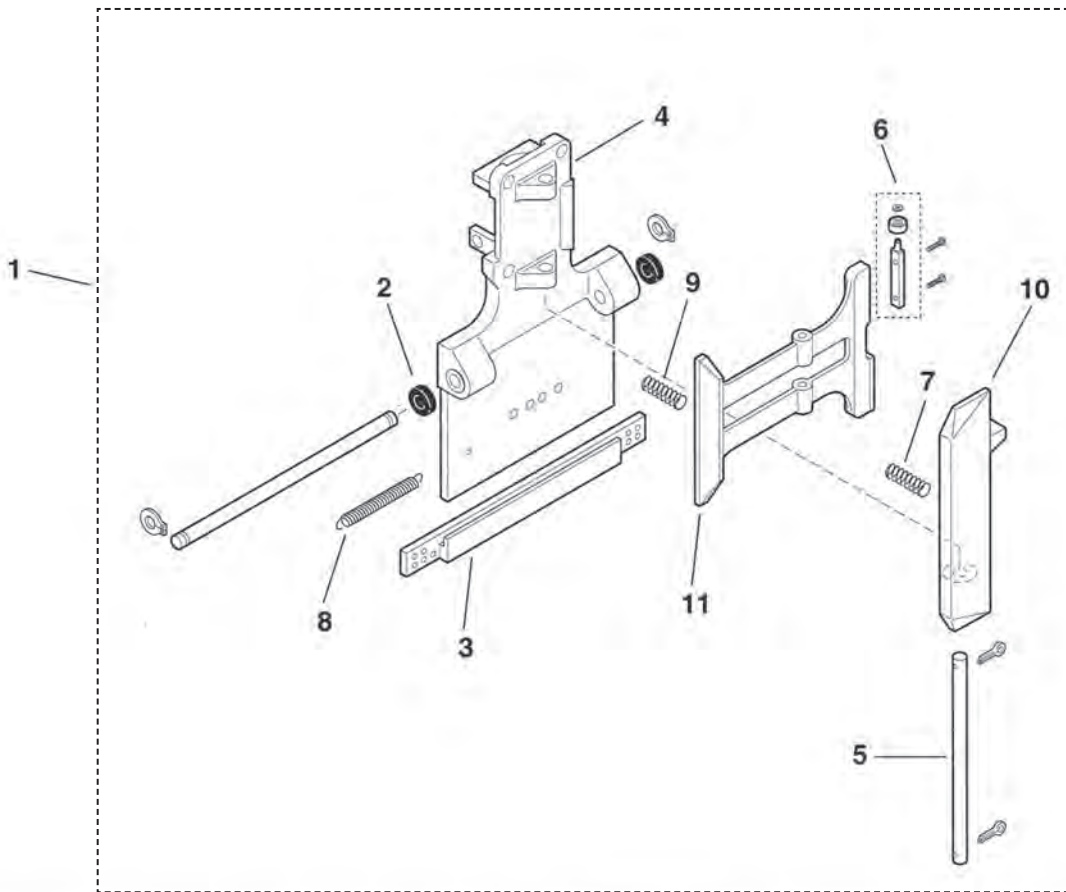
Door Operators: [7777A to QL] Drive Arm Spare Parts



Ref. No.	Part No.	Descriptions
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1.	299AKG2	Bar assembly
2.	209AN3	Bearing, .875" O.D., .375" I.D.
3.	1F-65EA1	Bolt, special, 3/8" x 1" L
4.	58AP1	Bolt, shoulder, 3/8" x 1.25" L
5.	1C-7770AF4	Link assembly, 12" L, for 36"/42" SS
	1C-7770CF3	Link assembly, 8" L, for 42" C/O
	1C-7770AF5	Link assembly, 8.5" L, for 42" C/O
	1C-7770AF6	Link assembly, 8.18" L, for 42" C/O
6.	127VB52	Washer, special, 1.25" O.D.

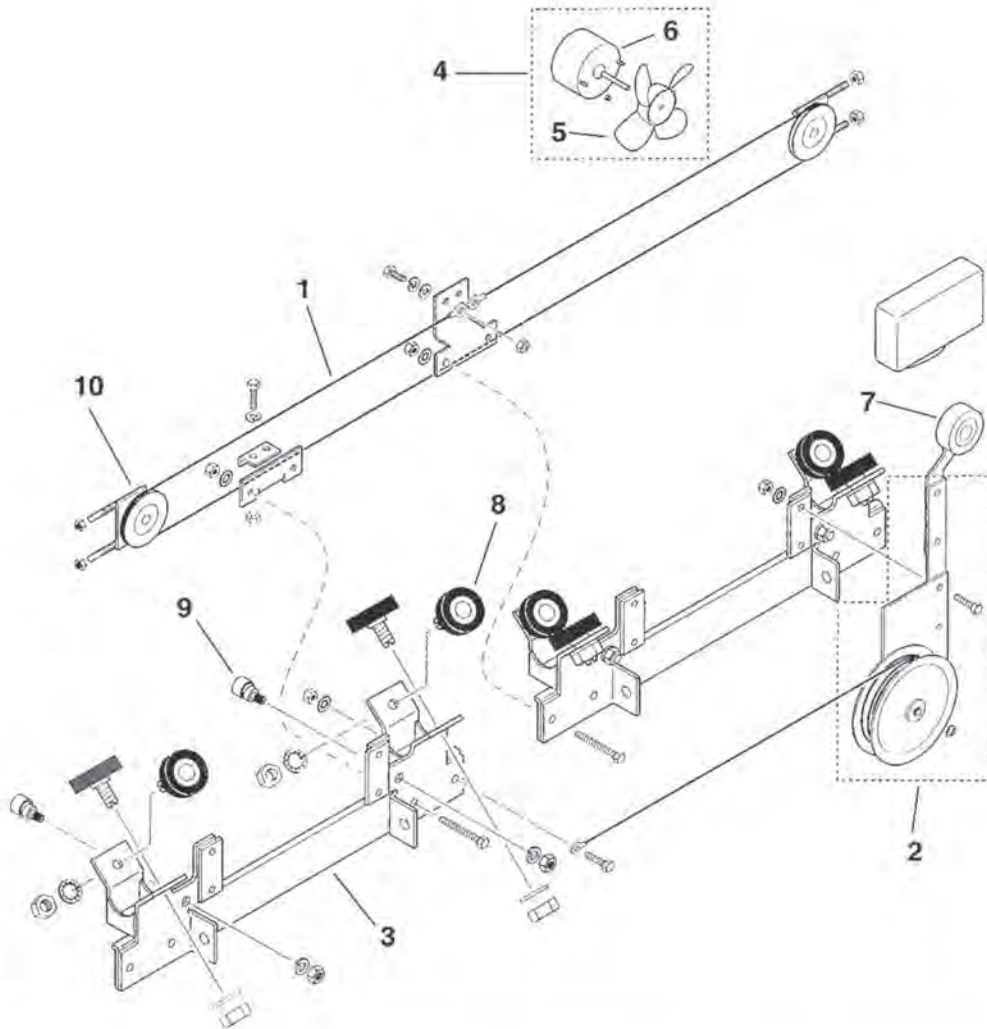
Door Operators: [7777A to QL] Clutch Vane Assembly Spare Parts



Ref. No.	Part No.	Descriptions
1.	A7777B1	Clutch vane, complete
2.	BUSH-B-81420	Bushing, ball
3.	2F-385NN1	Guide
4.	2F-A396JR1	Housing, vane
5.	82A82	Pin
6.	456FD1	Shaft/roller assembly
7.	SPG-LC-051G-10	Spring, compression
8.	CAA91A1	Spring, extension, 3" L, free length
9.	CAA90A1	Spring, compression, 2" L, free length
10.	A327KV1	Vane
11.	A327KW1	Vane

Door Operators

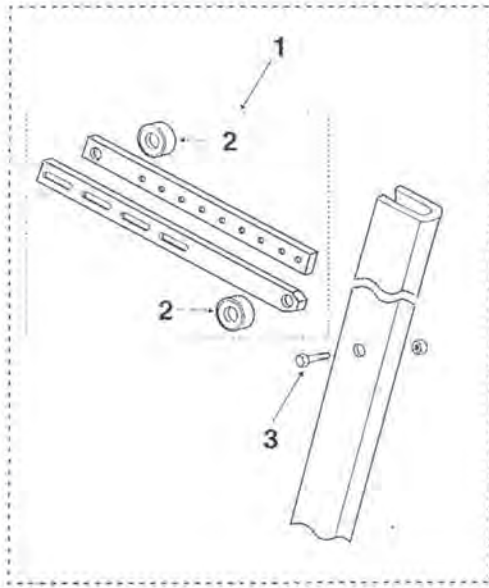
Door Operators: [7777A to QL] Door Hanger Spare Parts



Ref. No.	Part No.	Descriptions
1.	174AS10	Aircord, 1/8" W x 14" L
2.	6940BC1	Closer assembly w/bracket
3.	A316DNS1	Door hanger w/o rollers
4.	6091AB1	Fan assembly
5.	301G1	Fan blade
6.	6333DE1	Fan motor
7.	7782J2	Roller & arm
8.	A456FC1	Roller assembly, 2" O.D.
9.	456FB1	Roller, eccentric, 1" O.D.
10.	316DND1	Aircord sheave bracket assembly w/o aircord

Door Operators: [QL Upgrades (from O, 7300, 7660)] Door Link Assembly Spare Parts

O, 7300A, 7660 to QL

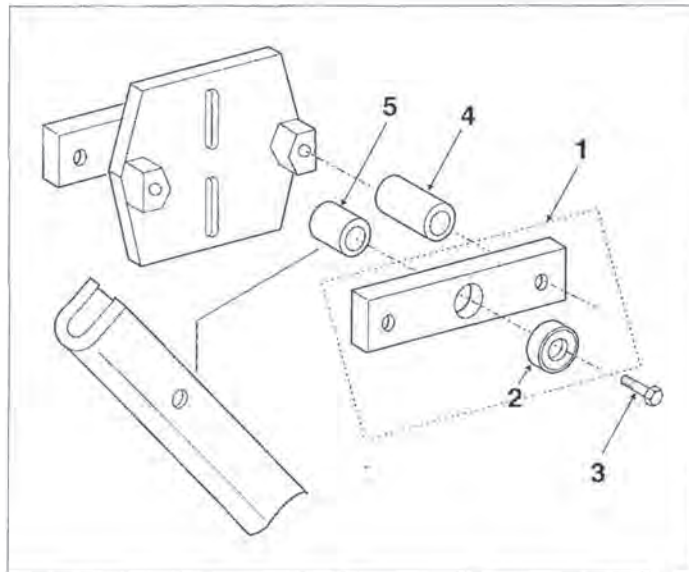


Ref. No.	Part No.	Descriptions
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- | | | |
|----|--------|--|
| 1. | 395F1 | Assembly, transmission parts |
| 2. | 209AN3 | Bearing, double shielded, .875" O.D., .375" I.D. |
| 3. | 58AP1 | Bolt, shoulder, 1.25" L, 3/8-16 threads |

Door Operators: [QL Upgrades (from O, 7300, 7660)] Drive Arm Spare Parts

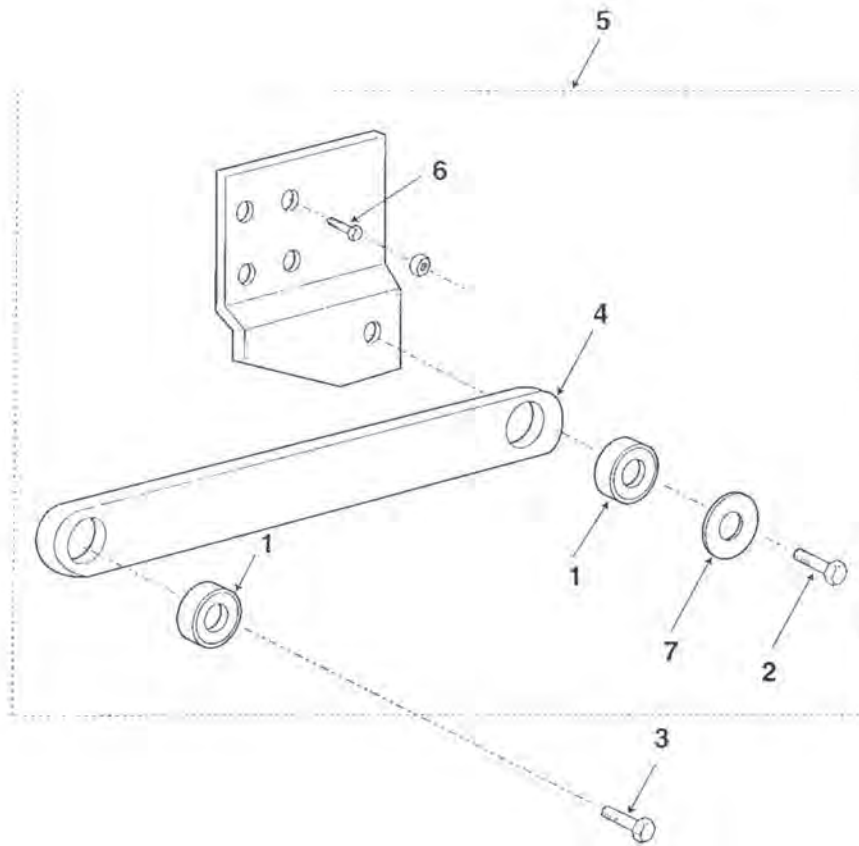
O, 7300A, 7660 to QL



Ref. No.	Part No.	Descriptions
1.	299AKG2	Bar assembly (for C/O, 2S, SS doors)
2.	209AN3	Bearing, double shielded, .875" O.D., .375" I.D.
3.	58AP1	Bolt, shoulder, 1.25" L, 3/8-16 threads (for SS, 2S doors)
	58AP2	Bolt, shoulder, 2" L, 3/8-16 threads (for C/O doors)
4.	462HA113	Spacer, 1" O.D.
5.	462HA114	Spacer, .5" O.D.

Door Operators: [QL Upgrades (from O, 7300, 7660)] Door Link Assembly Spare Parts

O, 7300A, 7660 to QL

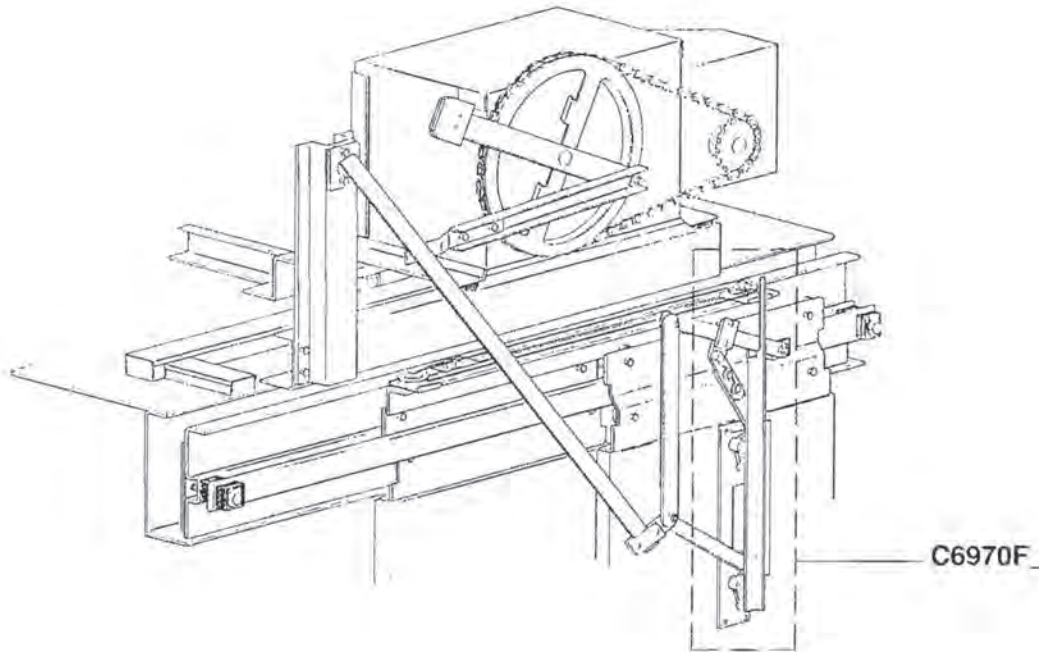


Ref. No	Part No.	Descriptions
1.	207R2	Bearing, .393" I.D., 1.811" O.D.
2.	59A1	Bolt, shoulder, 3/4" x .875" L
3.	59A2	Bolt, shoulder, 3/4" x 1-1/16" L
4.	1C-430EJ1	Link (for C/O doors)
	1C-430EJ2	Link (for SS, 2S doors)
5.	1C-7770AF1	Link assembly (for C/O doors) w/o item 6
	1C-7770AF2	Link assembly (for SS, 2S doors) w/o item 6
6.	109P2	Screw, thread forming
7.	127VB52	Washer, special, 1.25" O.D.

Door Operators

Door Operators: OVL Operator

SHOWN IS THE NAO VERSION OVL SET UP TO WORK WITH 6940 DOOR LOCKS. THERE WERE NUMEROUS VERSION OVL OPERATORS WITH DIFFERENT CAR CAMS/VANES. PLEASE CONTACT OSC WITH THE CAR VANE TYPE YOU HAVE, THE DOOR LOCK TYPE IN USE (OVL, 6940 or other), AND THE DETAILS ON THE DOOR OPENING SIZE, HAND & TYPE.



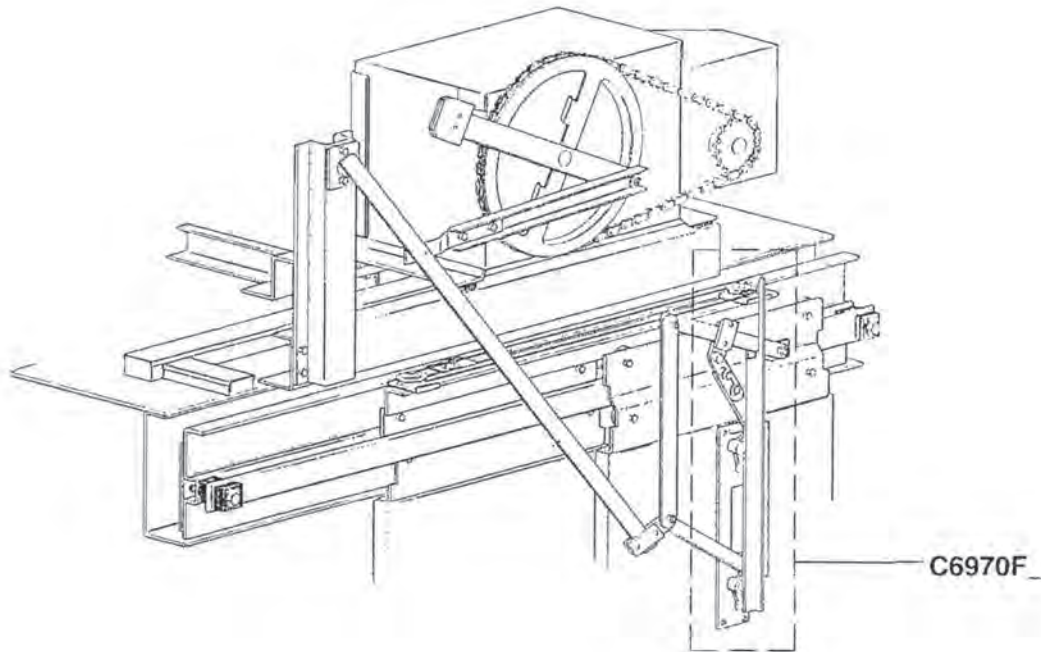
Part No.

Descriptions

YX10200K1	Assembly, arm, 36"
YX10200K2	Assembly, arm, 42" & 48"
YX10200K3	Assembly, arm, 32" & 36"
YX10200K4	Assembly, arm, 42" & 48"
10200F1	Assembly, bearing
C6970F5	Assembly, C/O 96"
2700CAC37	Assembly, cam arm (C/O doors)
2700CAC38	Assembly, cam arm (1/S, 2-speed doors)
J0288GP1	Assembly, hitch arm
207R2	Bearing for link assemblies w/ moveable & stationary vanes
207Z3	Bearing for link assemblies w/ Nippon moveable vanes
2700CAC16	Kit, link assembly plus roll pin plus hardware, 2/S, 48"
2700CAC18*	Kit, link assembly, plus roll pin plus hardware, S/S & 2/S, 32"
2700CAC19	Kit, link assembly plus roll pin plus hardware, C/O 42" & 48"

*This item may require special order

SHOWN IS THE NAO VERSION OVL SET UP TO WORK WITH 6940 DOOR LOCKS. THERE WERE NUMEROUS VERSION OVL OPERATORS WITH DIFFERENT CAR CAMS/VANES. PLEASE CONTACT OSC WITH THE CAR VANE TYPE YOU HAVE, THE DOOR LOCK TYPE IN USE (OVL, 6940 or other), AND THE DETAILS ON THE DOOR OPENING SIZE, HAND & TYPE.

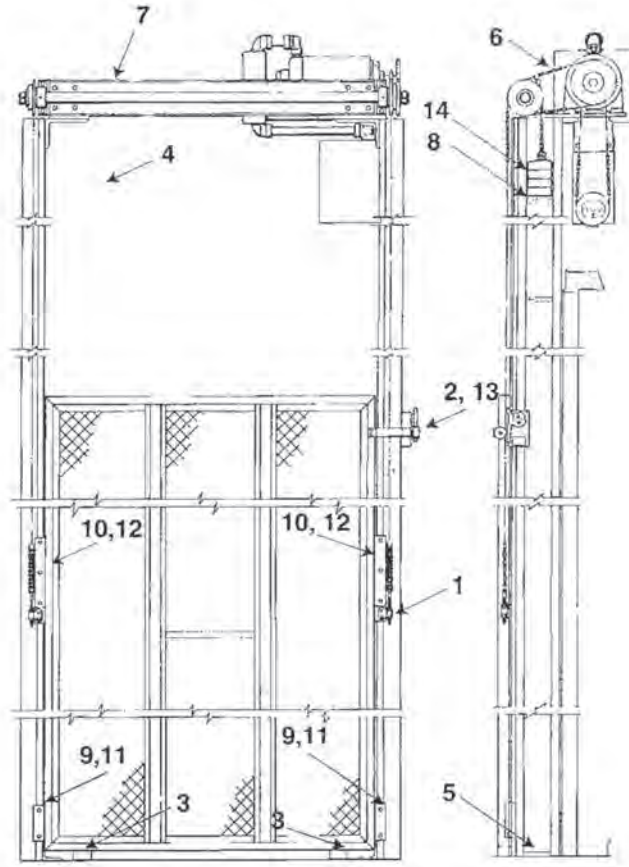


Part No.	Descriptions
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2700CAC21*	Kit, idler link, assembly, 2/S, 42"
2700CAC23*	Kit, idler link assembly plus pin plus hardware, 2/S, 48", RH
2700CAC13	Kit, link assembly plus hardware, roll pin plus hardware, C/O, 42" & 48"
2700CAC14	Kit, link assembly plus roll pin plus hardware, C/O, 36"
2700CAC31	Kit, swing arm #1 plus hardware, C/O, 42"
2700CAC32*	Kit, swing arm #1 plus hardware, 48"
C6970F1	Moveable vane assembly, C/O 36", 2/S 42", RH
C6970F2*	Moveable vane assembly, 2/S, 42", RH
C6970F9	Moveable vane assembly, C/O 42" & 48", RH

*This item may require special order

Door Operators: ['F' Type (Vertical Doors)] Power Operated Vertical Lifting Car Gate Spare Parts

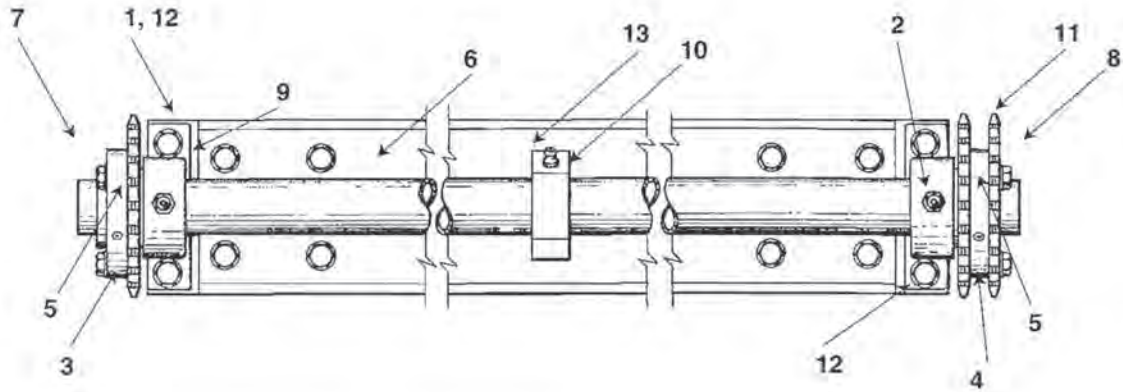


Door Operators

Ref. No.	Part No.	Descriptions
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1.	149R1	Anchor, chain
2.	A287AW2	Arm, switch, 1" W, with roller
	287AP2	Arm, switch, 1-1/2" W, with roller
3.	320AM1	Bumper, 1-3/4" Dia., 1" Thk., rubber
4.	320AE2	Bumper, 1-1/2" Sq., 1/4" Thk., leather
5.	320AN1	Bumper, 2-1/4" W, 4-1/2" L, 1/2" Thk., rubber
6.	332AL1	Chain, roller, ASA #41, 1/2" pitch, 29-1/2" L
7.	6806D2	Drive, sprocket, complete (for openings over 8')
8.	385DF1	Guide, weight, 2-5/16" W, 4-9/16" L, 1/4" Thk., leather
9.	255BB66	Shim, slotted, 7/8" W, 4-1/2" L (for 237AR2)
10.	255BX1	Shim, slotted, 7/8" W, 8" L (for 237AR1)
11.	237AR2	Shoe, guide, 4-1/2" L, bronze
12.	237AR1	Shoe, guide, 8" L, bronze
13.	6098E11	Switch, gate, RH
	6098E12	Switch, gate, LH
14.	344AE1	Weight

Door Operators: ['F' Type (Vertical Doors)] Sprocket Drive Spare Parts

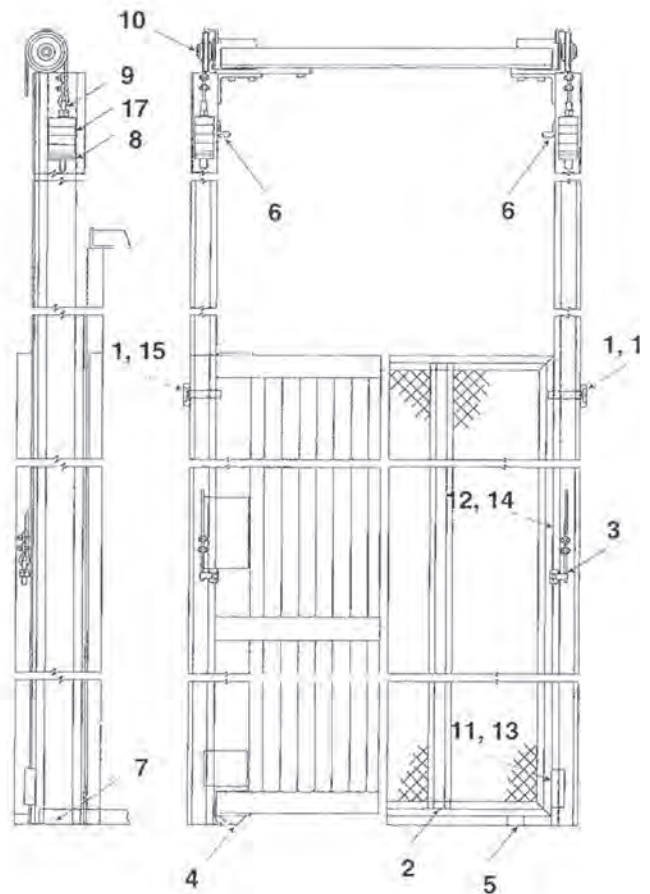


Ref. No.	Part No.	Descriptions
1.	335E51	Bushing, oil-less (not shown)
2.	435W1	Fitting, lubricator (for stands)
3.	397AF2	Hub with one sprocket
4.	397AF3	Hub with two sprockets
5.	193A1	Key
6.	386AGZ1	Plate, 4" W, 5" L, 5/16" Thk.
7.	81AX19	Pin, roll (for 397AF2)(not shown)
8.	81AX20	Pin, roll (for 397AF3)(not shown)
9.	255EB22	Shim, 1" W, 4" L
10.	255KB2	Shim, 1-1/8" W, 2-5/8" L, 1/32" Thk. (for 472CE2)
	255KB1	Shim, 1-1/8" W, 2-5/8" L, 1/16" Thk. (for 472CE2)
11.	195CM1	Sprocket, 24 teeth (for hubs)
12.	472BX2	Stand, bearing with bushing & fitting
13.	472CE2	Stand, bearing with fitting (for openings over 8')

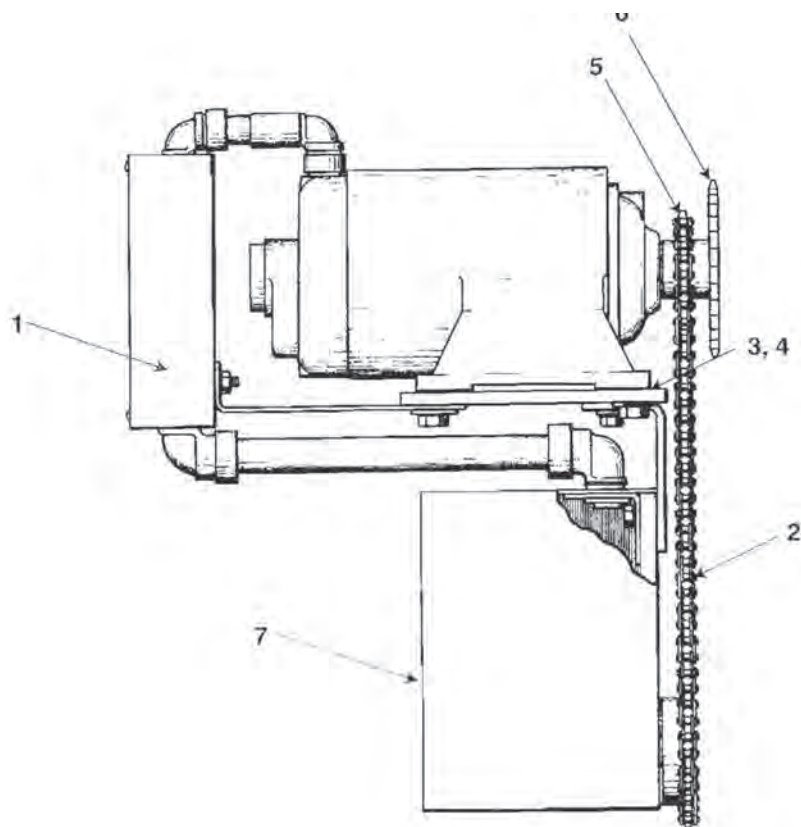
Door Operators: ['F' Type (Vertical Doors)] Vertical Lifting Car Gate Spare Parts (Manual Operation)

Ref. No.	Part No.	Descriptions
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1.	A287AW2	Arm, switch, 1" W, with roller
	287AP2	Arm, switch, 1-1/2" W, with roller
2.	297C1	Band, pull strap (for expanded metal gate)
3.	56B3	Bolt, eye, 3-15/32" L
4.	320G1	Bumper, rubber, 5/8" I.D., 3" L (for wooden gate)
5.	320AM1	Bumper, 1-3/4" Dia., 1" Thk., rubber
6.	320AE2	Bumper, 1-1/2" Sq., 1/4" Thk., leather
7.	320AN1	Bumper, 2-1/4" W, 4-1/2" L, 1/2" Thk., rubber
8.	385DF1	Guide, weight
9.	96Z4	Rod, hitch, 1/2" Dia., 7-3/4" L
10.	265AS2	Sheave with bushing & fitting (for brackets)
11.	255BB66	Shim, slotted, 7/8" W, 4-1/2" L (for 237AR2)
12.	255BX1	Shim, slotted, 7/8" W, 8" L (for 237AR1)
13.	237AR2	Shoe, guide, 4-1/2" L, bronze
14.	237AR1	Shoe, guide, 8" L, bronze
15.	6098E11	Switch, gate, RH
16.	6098E12	Switch, gate, LH
17.	344AE1	Weight

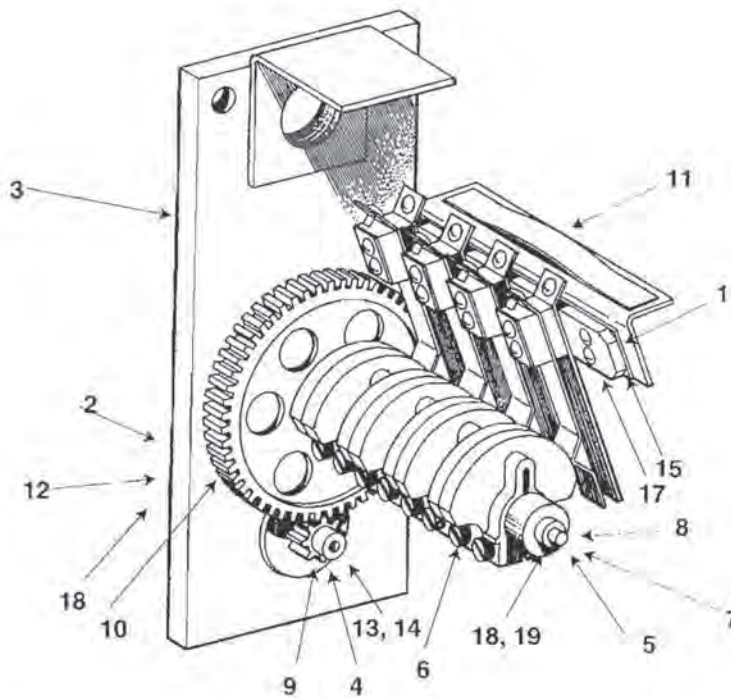


Door Operators: ['F' Type (Vertical Doors)] 'F' Operating Engine Spare Parts



Ref. No.	Part No.	Descriptions
1.	303B1	Board, terminal (for box)
2.	332AL2	Chain, roller, ASA #41, 1/2" pitch, 38-1/2" L
3.	255AB29	Shim, slotted, 1-3/8" W, 2" L, 16 ga Thk
4.	255AB30	Shim, slotted, 1-3/8" W, 2" L, 28 ga Thk
5.	195AV3	Sprocket, 16 teeth with set screws (for motor)
6.	195CN3	Sprocket, 32 teeth with set screws (for motor)
7.	6706A1	Switch, stopping, complete
	186207	Brush (for motor)

Door Operators: ['F' Type (Vertical Doors)] A6706A Stopping Switch Spare Parts



Ref. No. Part No. Descriptions

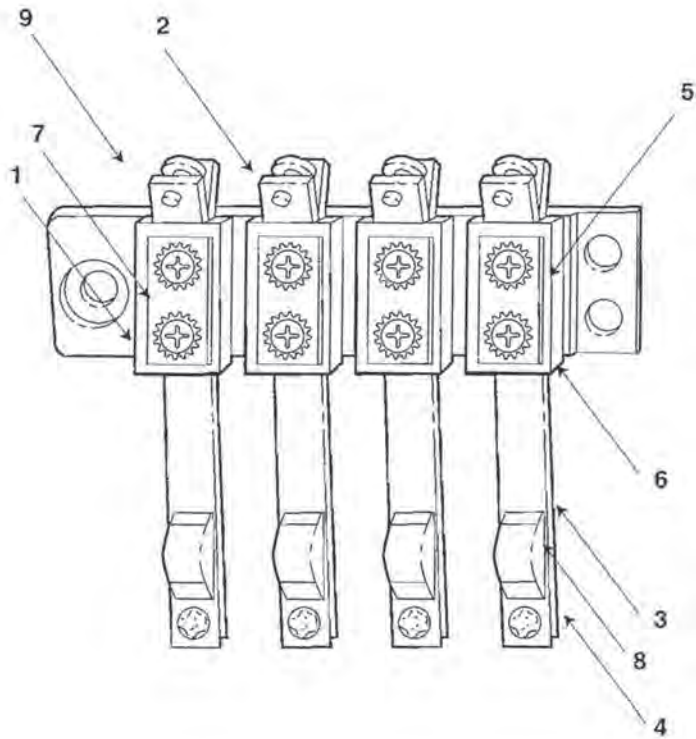
1.	275AM1	Barrier, insulating, phenolic
2.	209E4*	Bearing, roller
3.	316AHM2	Bracket, with shaft, bushings, and fittings
4.	335D1	Bushing, oilite 5/16" I.D., 7/16" long
5.	321AA1	Bushing, oilite 3/8" I.D., 1/2" long
6.	AAA327MV4	Cam assembly
7.	340AD3	Collar
8.	435AJ1	Fitting, drive
9.	201BV2	Gear, pinion, 12" teeth
10.	201AS2	Gear, spur, 84 teeth

Ref. No. Part No. Descriptions

11.	102BS1	Plate, data
12.	386AAM2*	Plate (for shaft)
13.	494BZ2	Shaft, with gear
14.	B494BZ2	Shaft, with plate & fitting
15.	255EB27	Shim, 7/16" wide, 15/16" long
16.	195AS1	Sprocket, 24 teeth
17.	6251E1	Switch, mechanical complete
18.	135AF2	Tube, with gear and bushings
19.	135AF1	Tube, 5/8" O.D., 4-3/16" long steel

*This item may require special order

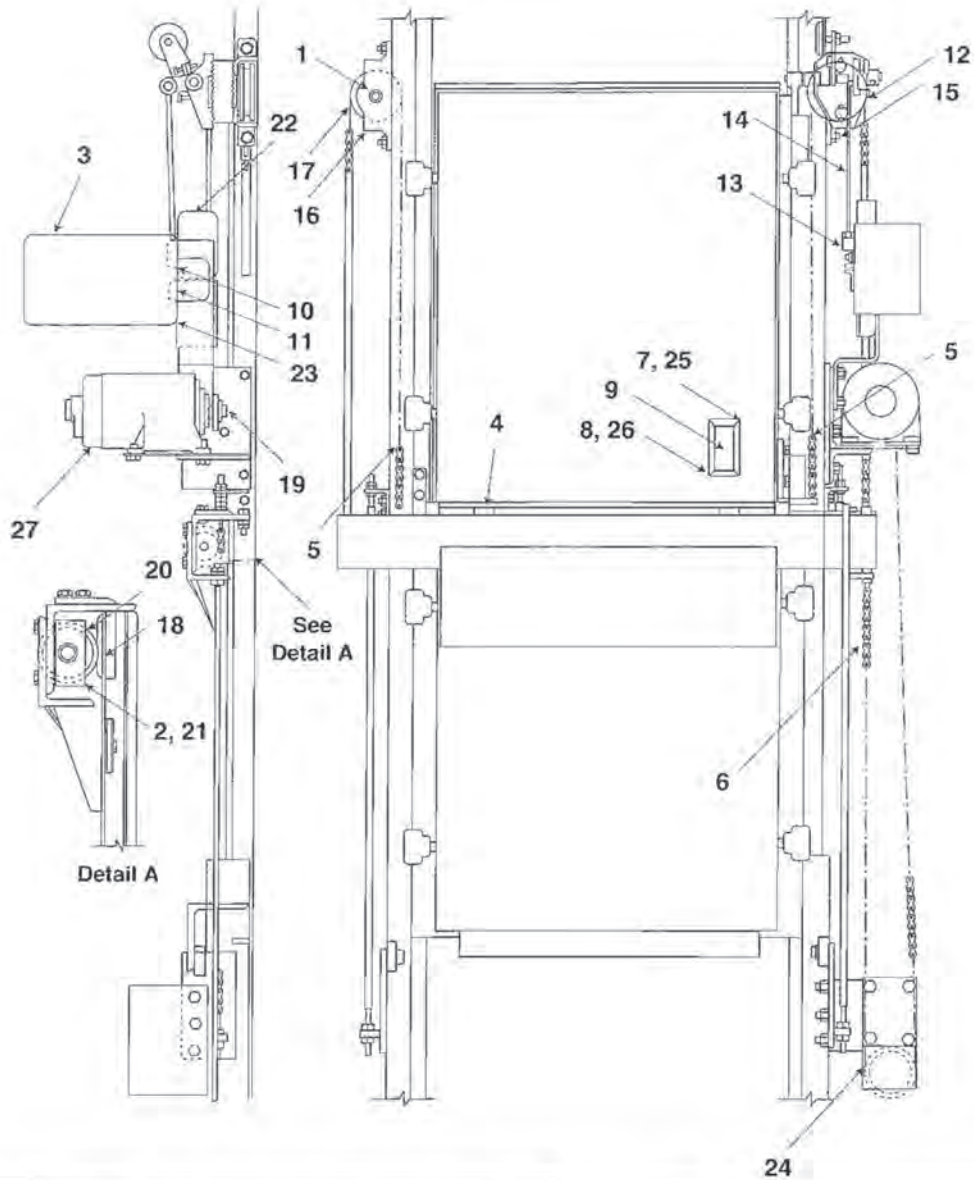
Door Operators: ['F' Type (Vertical Doors)] 6251E1 Mechanical Switch-shown (for A6706A)



Ref. No.	Part No.	Descriptions
1.	306DS2	Base, contact
2.	176BF1	Connector
3.	150P43*	Contact, movable
4.	150P32	Contact, stationary
5.	464P3	Separator, insulating 15/16" long
6.	464P4	Separator, insulating 1-1/8" long
7.	255EB27	Shim
8.	93BM3	Spring, contact
9.	137E7*	Tube, insulating, 5/8" long

*This item may require special order

Door Operators: ['F' Type (Vertical Doors)] Power Operated Vertical Bi-Parting Hoistway Door Spare Parts



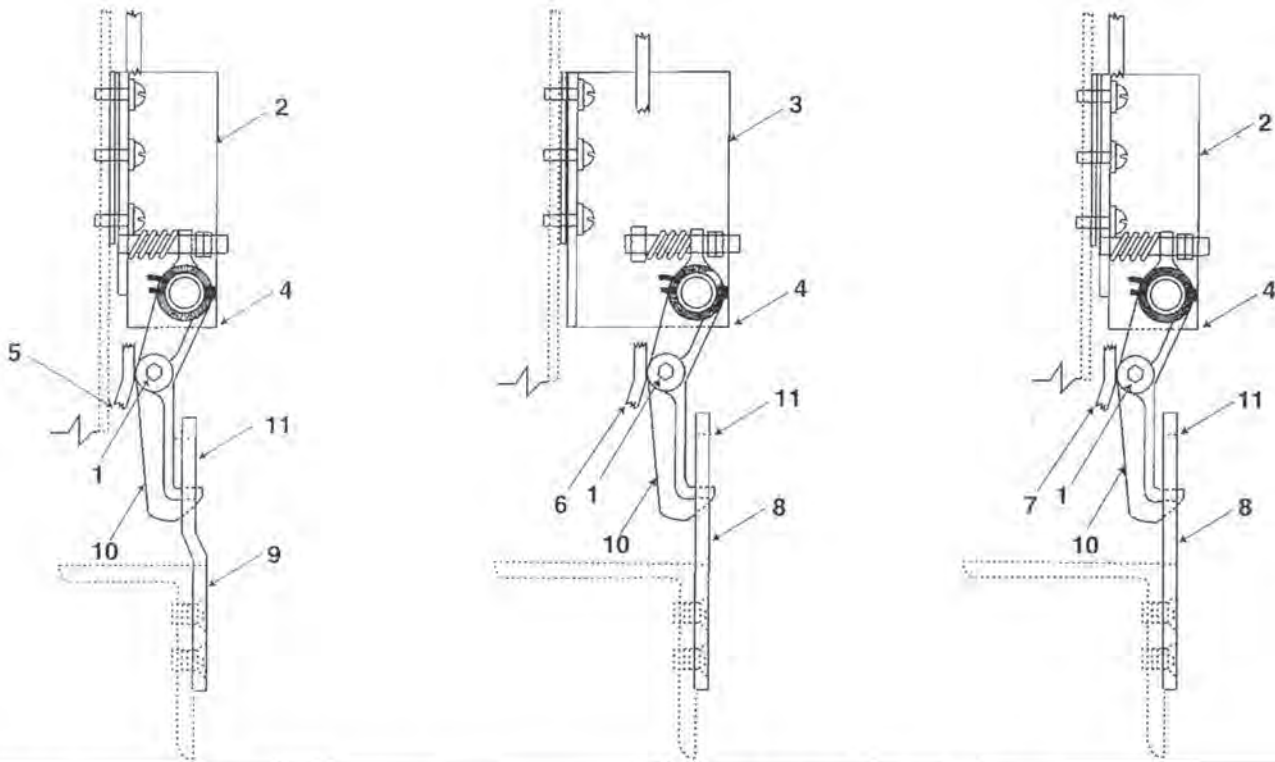
Ref. No.	Part No.	Descriptions
1.	207Z10	Bearing, ball (for 456AS2), 1.57" O.D., .67" I.D.
2.	209E1	Bearing, roller (for stand), 1.45" O.D., .502" I.D.
3.	303B1	Terminal board, 10 stud
4.	320P2	Bumper, rubber, 1-1/2" dia
5.	VP-736100	Chain, #6 steel cable, 5/8" pitch
6.	VP-736700	Chain #41 roller, 1/2" pitch

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Door Operators ['F'Type(VerticalDoors)] Power Operated Vertical Bi-Parting Hoistway Door Spare Parts

Ref. No.	Part No.	Descriptions
7.	339CH1	Clip, glass, 5" L
8.	339CH2	Clip, glass, 11-3/4" L
9.	443AF1	Glass, wire glass, 5" W x 13" L
10.	430AN1	Link, switch, with drilled hole
11.	430AN2	Link, switch, w/drilled & tapped hole
12.	6690D1	Lock, door, RH, complete
	6690D2	Lock, door, LH, complete
13.	432A1	Lug (for rod)
14.	98AT2	Rod w/spacer, 1/4" Dia., 10-5/8" L
15.	6547B1	Roller, chain type A, RH, complete
16.	6547B2	Roller, chain, type A, LH, complete
	6547B4	Roller, chain, type B, LH, complete
17.	456AS2	Roller, with ball bearing (for chain rollers)
18.	470P1	Shoe, sprocket
19.	195DJ2	Sprocket, 12 teeth w/set screws
	195AV3	Sprocket, 16 teeth w/set screws
20.	195AT2	Sprocket, 17 teeth, 5/8" bore (for roller chain)
	195AT3	Sprocket, 17 teeth, 1-1/4" bore (for roller chain)
21.	A472BB2	Stand, bearing w/roller bearings, 5/8" Dia. shaft
22.	6098BJ3	Switch, mechanical (for LH door) with spring
	6098BJ9	Switch, mechanical (for LH door)
	6098BJ4	Switch, mechanical (for RH door) with spring
	6098BJ10	Switch, mechanical (for RH door)
23.	6098BJ6	Switch, mechanical (for LH door)
	6098BJ5	Switch, mechanical (for RH door)
24.	A6706A1	Switch, stopping
25.	393Y2*	Trough, asbestos, 5" L (for glass)
26.	393Y1*	Trough, asbestos, 12" L (for glass)
	485G1	Turnbuckle (for #6 chain) (not shown)

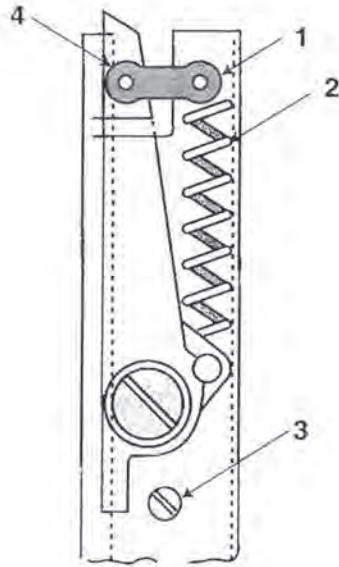
Door Operators: ['F' Type (Vertical Doors)] Fire Latch Spare Parts (Power Operation)



Ref. No.	Part No.	Descriptions	Ref. No.	Part No.	Descriptions
1.	207AS1	Bearing, ball (for 59E9) .875" O.D., .375" I.D.	7.	A327EN4	Cam, fire latch, RH, 4-1/16" L (for pass type)
2.	316BCX1	Bracket, RH, w/pin & rod (for regular type narrow sill & pass type)	8.	41G1	Keeper, plate, RH (for pass & regular type wide sill)
	316BCX2	Bracket, LH, w/pin & rod (for regular type narrow sill & pass type)		41G2	Keeper, plate, LH (for pass & regular type wide sill)
3.	316BCY1	Bracket, RH, w/pin & rod (for regular type wide sill)	9.	41G3	Keeper, plate, RH (for regular type narrow sill)
	316BCY2	Bracket, LH, w/pin & rod (for regular type wide sill)		41G4	Keeper, plate, LH (for regular type narrow sill)
4.	335E58	Bushing, straight, oil-less, 3/4" I.D., 7/8" O.D., 7/8" L	10.	331AJ2	Latch, RH w/bearing, bolt, tube, pin & bushing
5.	A327EN5	Cam, fire latch, RH, 4-1/16" L (for regular type narrow sill)		331AJ3	Latch, LH w/bearing, bolt, tube, pin & bushing
	A327EN2*	Cam, fire latch, LH, 4-1/16" L (for regular type narrow sill)	11.	135AA15	Tube, 5/8" O.D., 5/32" L, steel (for 331AJ2 & 331AJ3)
6.	A327EN6	Cam, fire latch, RH, 4-1/16" L (for regular type wide sill)			

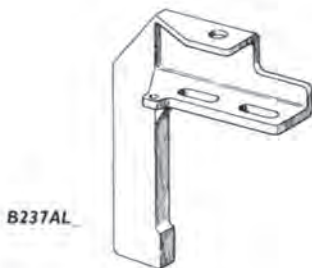
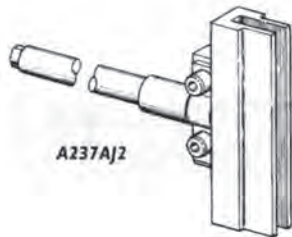
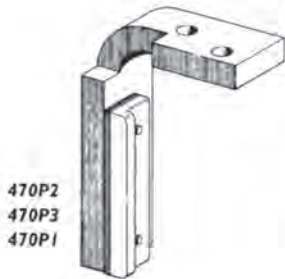
* This item may require special order

Door Operators: ['F' Type (VerticalDoors)] Fire Latch Spare Parts (Fusible Link Type)



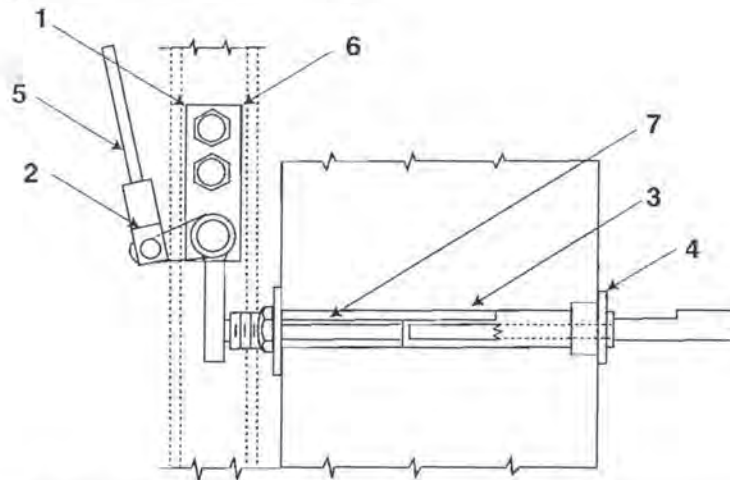
Ref. No.	Part No.	Descriptions
1.	430BL1	Link, fusible
2.	91AD1	Spring, extension, 5/8" O.D., 2-7/8" L, 15 active turns
3.	96A7	Stud, stop
4.	129W12	Washer

Door Operators: ['F' Type (Vertical Doors)] Freight Door Guide Shoes



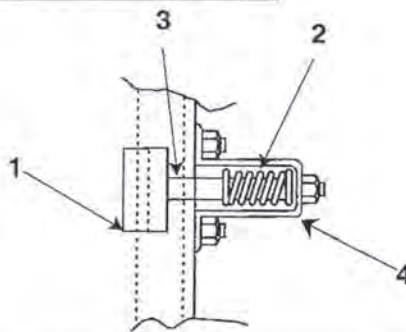
Part No.	Length	Width	Depth	Descriptions
470P2	-	-	-	Assembly of 470P1 brake shoe, 316AHF1 bracket, shims, and screws. Hand: as shown
470P3	-	-	-	Assembly of 470P1 brake shoe, 316AHF2 bracket, shims, and screws. Hand: opposite
470P1	3.00"	0.87"	0.34"	Vertical hoistway door, brake shoe steel
A237AJ2	4.00"	1.84"	0.75"	Assembly of A237AJ1 guide shoe screw and washers, 336DH1 clamp (shaft - A96AJ1 + spring 90KC10 , not included) Only available in malleable iron.
237AR2	4.50"	-	-	6806A Vertical lifting car gate. Guide shoe
237AR1	8.00"	-	-	6806A Vertical lifting car gate. Guide shoe
B237AL1	7.00"	5.81"	1.31"	6694Z5 Vertical hoistway door. guide shoe, cast iron, as shown
B237AL2	7.00"	5.81"	1.31"	6694Z5 Vertical hoistway door. guide shoe, cast iron, opposite

Door Operators: ['F' Type (Vertical Doors)] Emergency Key Device Spare Parts



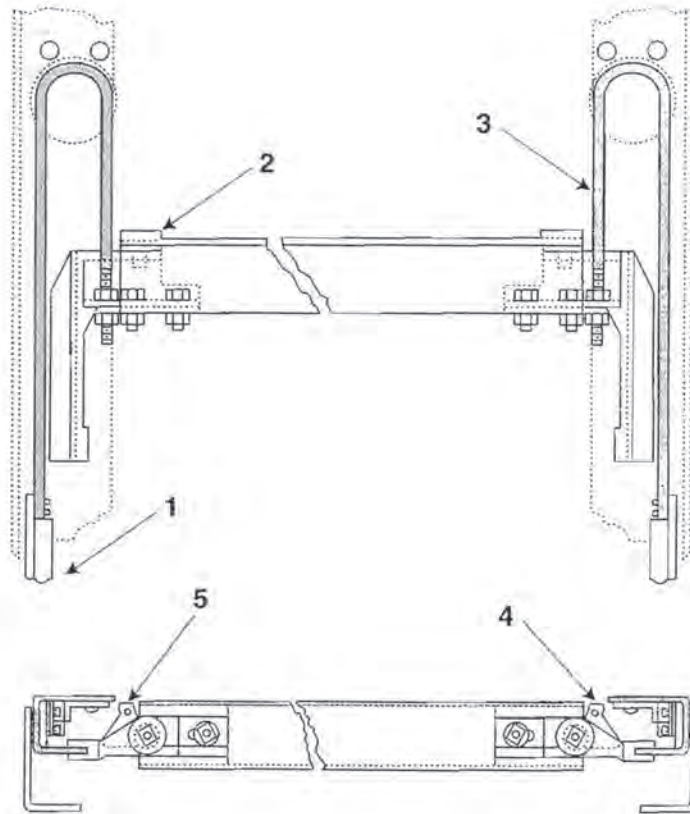
Ref. No.	Part No.	Descriptions
1.	316AYY2	Bracket w/lever, bushing & pin (for RH device)
	316AYY3	Bracket w/lever, bushing & pin (for LH device)
2.	432A3	Lug with pin
3.	377AY1	Pipe, 3/8" O.D., 12-1/2" L
4.	386HD3	Plate, escutcheon
5.	98AS1	Rod, 1/4" Dia., 24" L
	98AS2	Rod, 1/4" Dia., 38" L
6.	255EB30	Shim, 1-1/4" W, 2" L, 3/16" Thk
7.	377PA10	Pipe, spacer, 1/8" Dia. 5" L

Door Guide Shoe Spare Parts



Ref. No.	Part No.	Descriptions
1.	A237AJ2	Shoe, door guide w/clamp & screws
2.	90KC10	Spring, compression, 1" O.D., 3-1/4" L, 10 active turns
3.	A96AJ1	Stud, eccentric, 6-3/8" L
4.	VP-721550	Bracket

Door Operators: ['F' Type (Vertical Doors)] Counterbalanced Lintel (Pass Doors)



Ref. No.	Part No.	Descriptions
1.	320P1	Bumper, rubber, 3/4" Dia.
2.	320P2	Bumper, rubber, 1-1/2" Dia.
3.	392AS1	Hitch with 1/8" galvanized aircord 7' 6" L
	392AS2	Hitch with 1/8" galvanized aircord 9' 6" L
4.	B237AL1	Shoe, guide, RH
5.	B237AL2*	Shoe, guide, LH

* This item may require special order

Notes

Notes: