

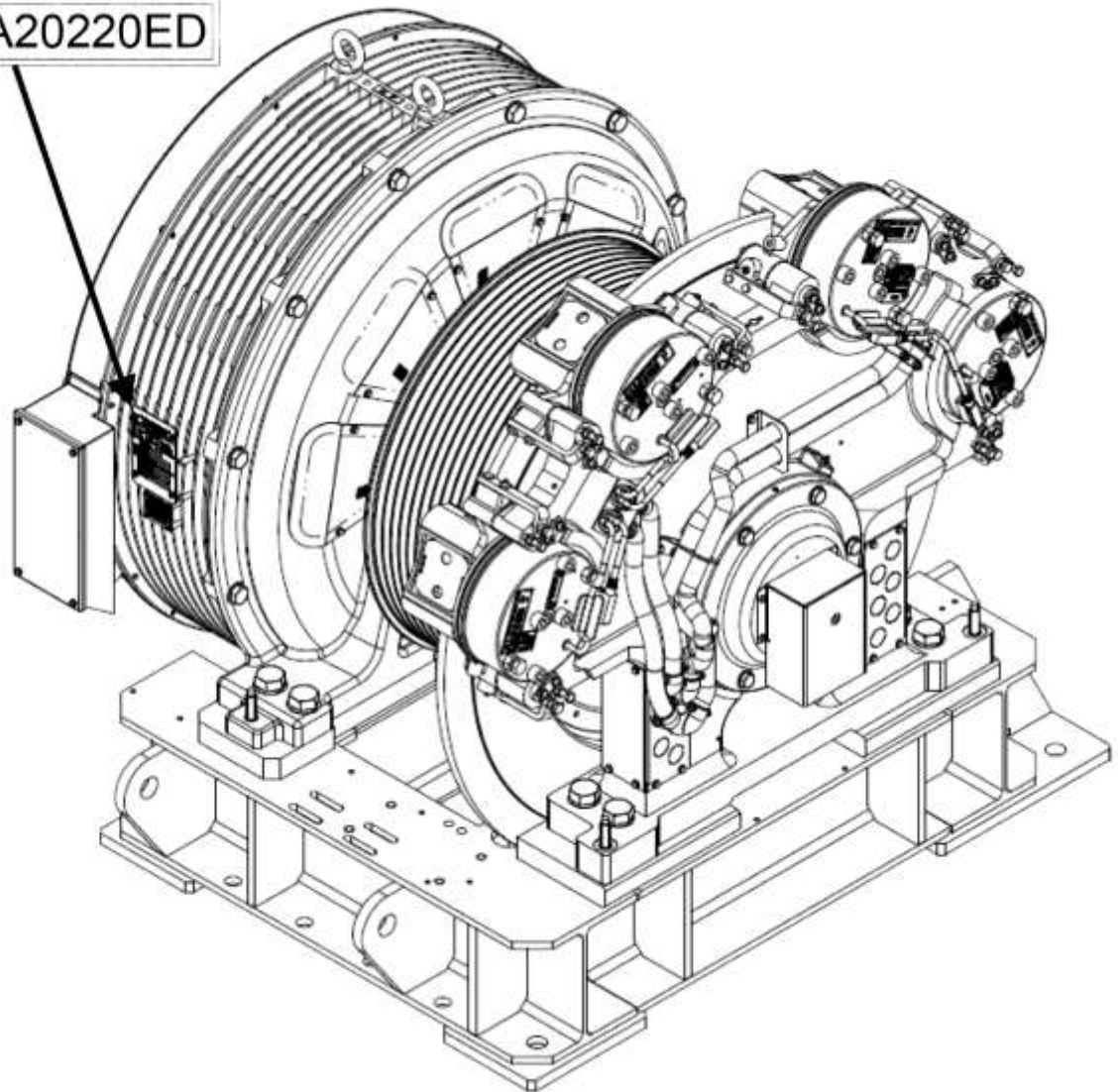
SkyMotion® 160 (32T) Machine

Spare Parts Leaflet

06-DAA20220ED

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OTIS

This document does not contain any
technical data subject to EAR or ITAR

OTIS ENGINEERING CENTER
Otis Elevator Company
Farmington, Connecticut USA

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Leaflet Description

This leaflet provides spare parts information for the PM gearless machine, type DAA20220ED (also known as SkyMotion® 160 or 32T machine). DAA20220ED covers duty loads up to 2250 kg @ 1:1 roping and elevator speeds up to 7 m/s.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
September 27, 2018	Kyle Connolly	Original Document
September 16, 2020	Kyle Connolly	Clarifications & part number corrections on pp. 7, 10, 12, 14, 15, and 16
October 13, 2021	Gary Mendrala and James Hubbard	Added brake switch lever on p. 7

Related Drawings

Drawing No.	Title	Drawing No.	Title
DAA20220ED	Machine Assembly	DAA29509E	Brake
JAA20226ABK	Motor	DAA20700R	Secondary Sheave Assembly
DAA20850A	Isolation Arr.	DAA29509F	Deflector Sheave Assembly
DAA208050A	Machine Isolation	DAA29509G	Guarding

Related Documents

Document ID	Title
	Order Data Sheet for Skymotion 160 Machine
DAA20220ED_BD	Basic Data for Skymotion 160 Machine

Subject Matter Expert

Name	Department
Gary Mendrala and James Hubbard	OSC Service Engineering

About Spare Parts Leaflets...

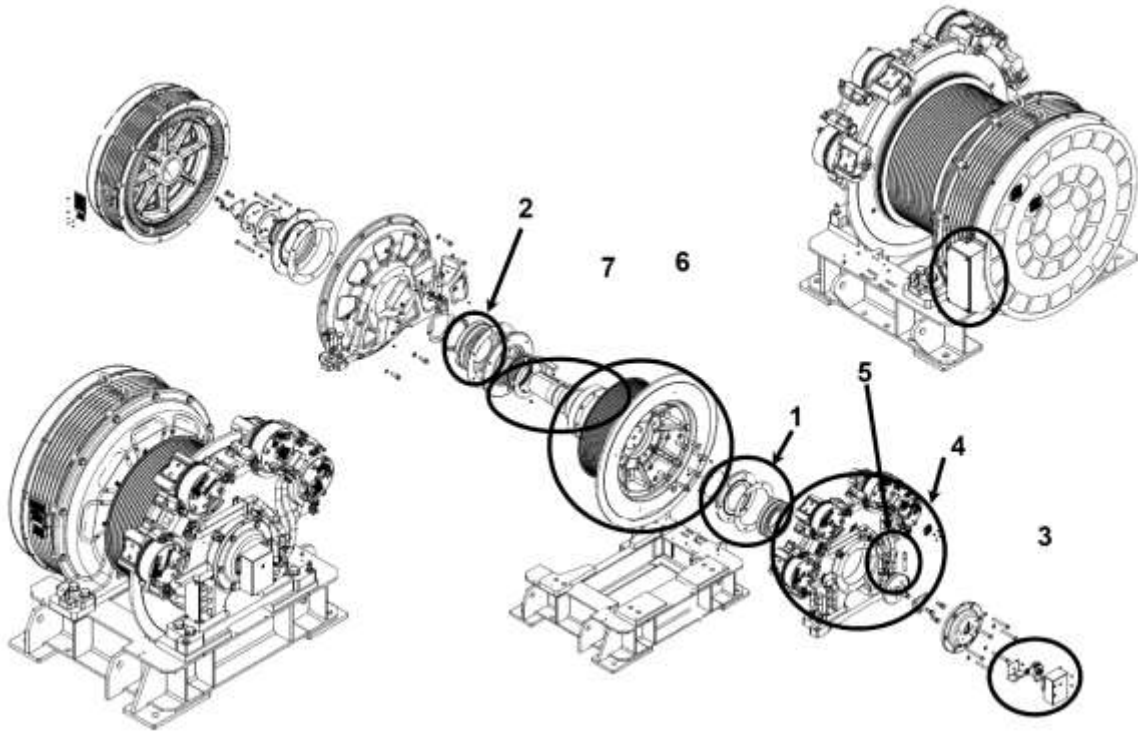
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field Education Articles, Construction Letters, etc. for further information.

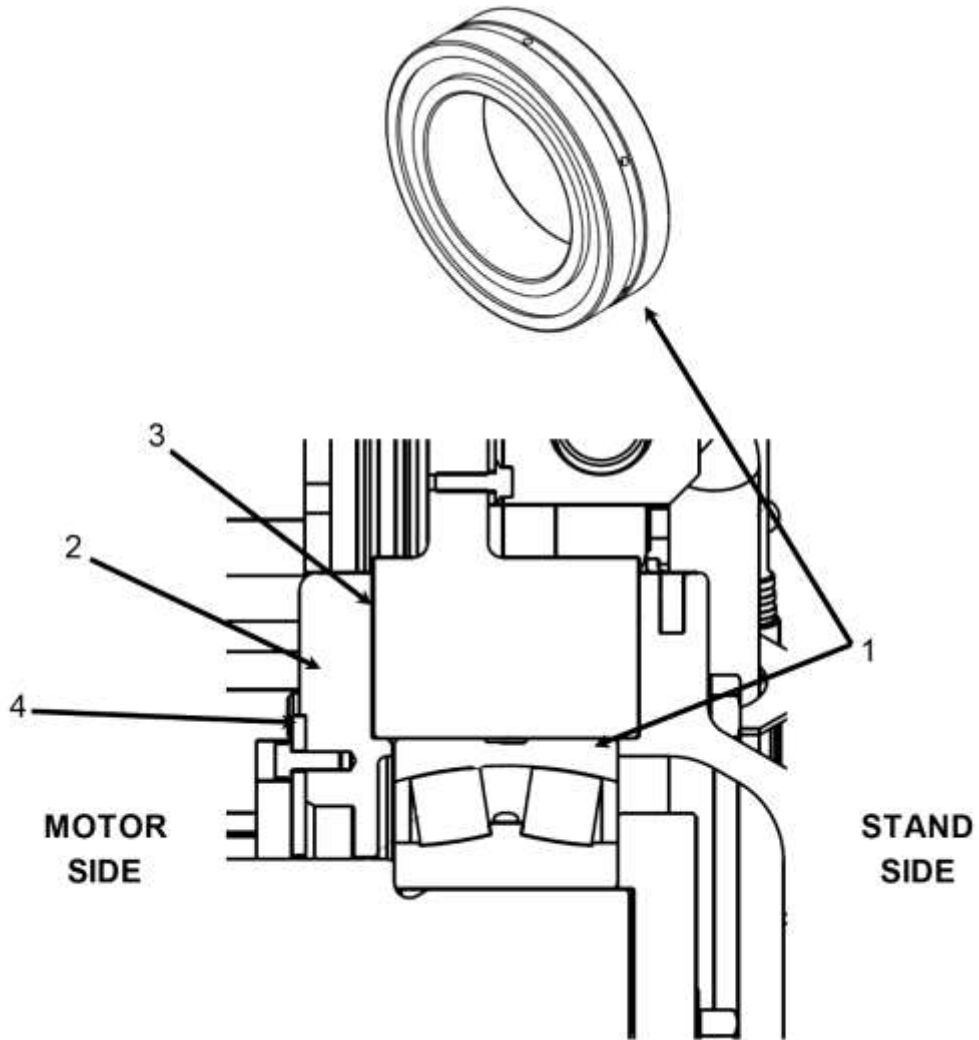
If you have any suggestions about this document, please contact the subject matter expert listed on this page.

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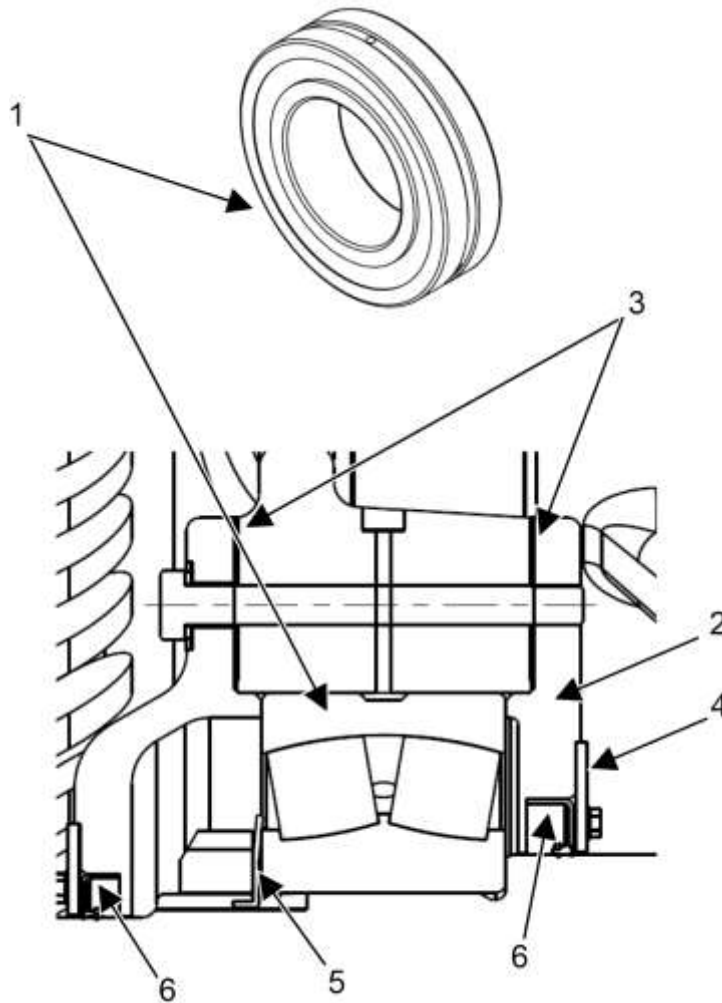
REF. No.	PAGE No.	DESCRIPTION
1	4	Brake Side Bearing Assembly Detail
2	5	Motor Side Bearing Assembly Detail
3	6	Encoder Assembly Detail
4	7	Brake Assembly Detail
5	8	Terminal Box Assembly Detail
	9-10	Deflector/Secondary Sheave Assembly
	11	Isolation Assembly
	12-15	Guarding
6	16	Traction Sheave Assembly Detail
7	17	Sheave Shaft Assembly Detail



DAA20220ED		
REF. No.	PART No.	DESCRIPTION
1	DAA209Z1	Bearing
2	JAA346AXL1	Cover
3	JAA376AAS2	Gasket
4	JAA172AAW2	Ring

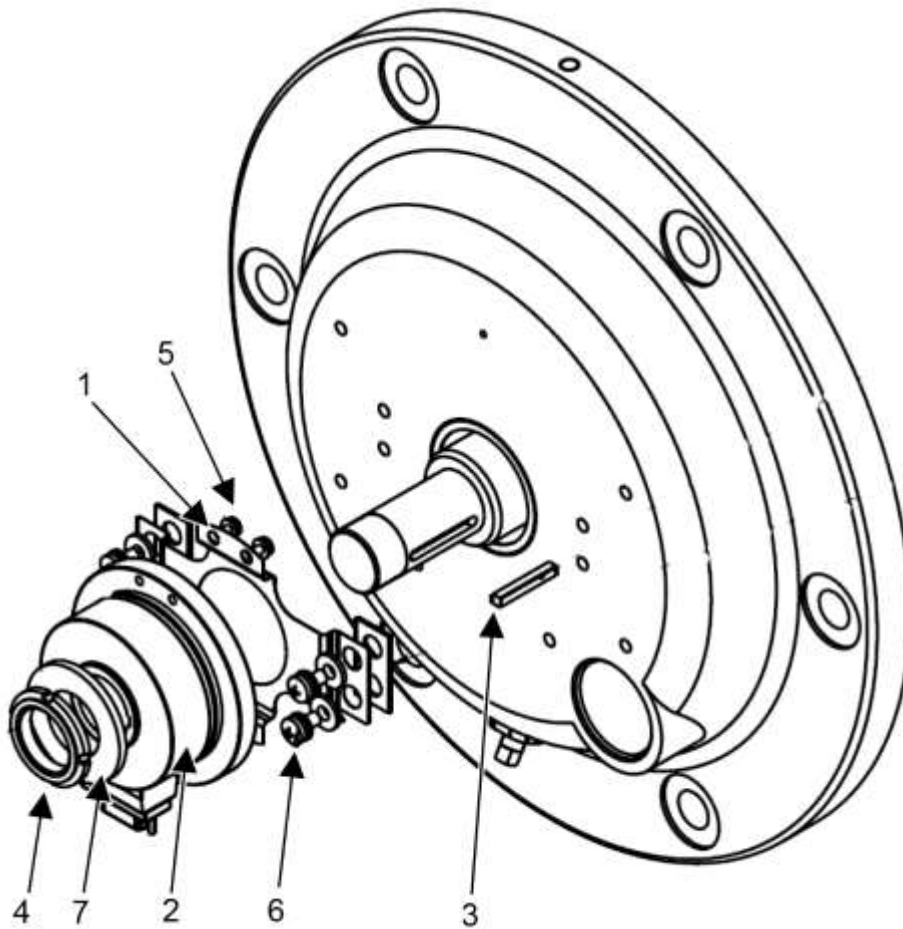
Motor-Side Bearing Assembly

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DAA20220ED		
REF. No.	PART No.	DESCRIPTION
1	DAA209AB1	Bearing
*	VP-420240	Bearing Grease (Otis #12)
2	JAA346AXN1	Cover
3	JAA376AAS1	Gasket (Qty = 2)
4	JAA172AAW1	Ring
5	JAA33AAW1	Seal
6	JAA33AAW3	Seal

*Not Shown



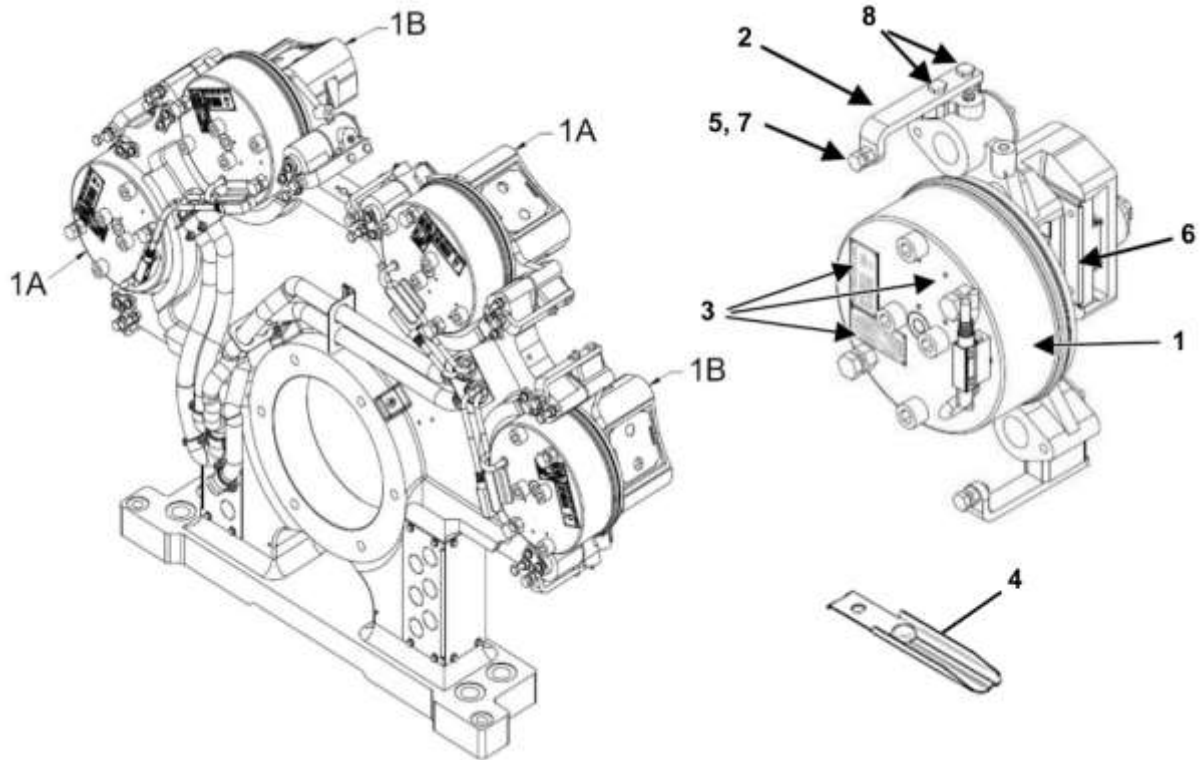
JBA21410ABF

REF. No.	PART No.	DESCRIPTION
1	JAA00316DBF001	Bracket
2	JAB633ACD1	Encoder
3	JAA194AAP2	Key
4	JAA72ABP1	Nut
5	PSM04X008-RL	Screw, M4x8 Pan Head (Qty = 4)
6	PSM06X012-RL	Screw, M6x12 Pan Head (Qty = 4)
7	RWS30	Washer, M30 Plain

NOTE: For nut JAA72ABP1, use 40-42 mm hook spanner wrench for removal.

Brake Assembly

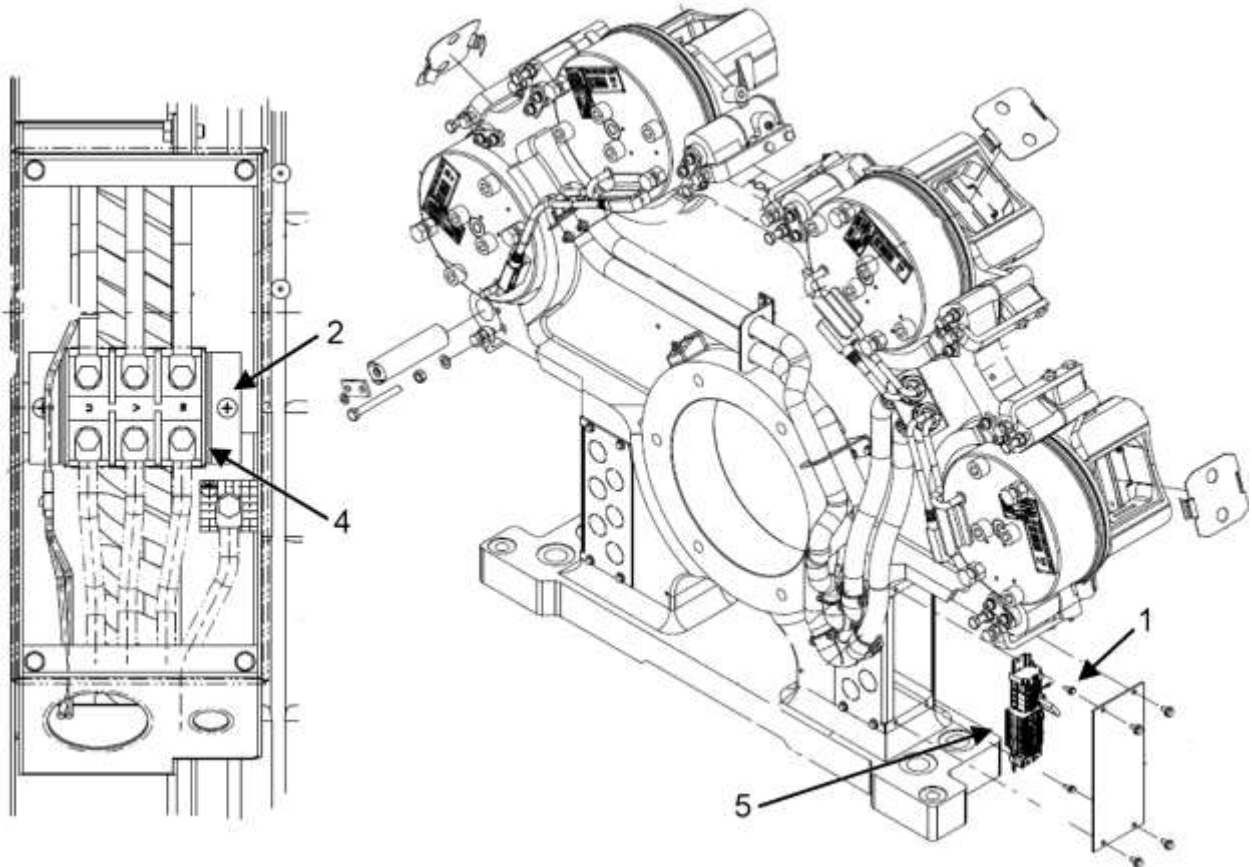
06-DAA20220ED



REF. No.	DAA20220ED	DESCRIPTION	QTY.	USED
	PART No.			
1A	AAA20236AD11 AAA20236AD14	Assembly, Brake Caliper, Position, 1 and 3	1	DAA29509E
1B	AAA20236AD12 AAA20236AD13	Assembly, Brake Caliper, Position, 2 and 4	1	
2	AAA316HYB1	Bracket (See NOTE 2)	1	
3 NOTE 1	AAA102AYM1	Label, Emergency Brake (ASME)	1	DAA20220ED
	AAA102AYN1	Label, Brake (ASME)	1	
	DAA102WF1	Label, Brake (GB)	1	
4	AAA287DL1	Lever, Brake Switch	1	AAA20236AD1 AAA20236AD2 AAA20236AD3 AAA20236AD4
5	ISO8673M10X1-8-Z	Nut	1	
6	AAA415AV1	Pad Kit (2 Pads)	1	
7	AAA124JR1	Screw, Adjustment	1	
8	NON1241M8X25-8.8Z	Screw, M8 X 25 Hex Hd (Qty = 2)	2	

NOTES:

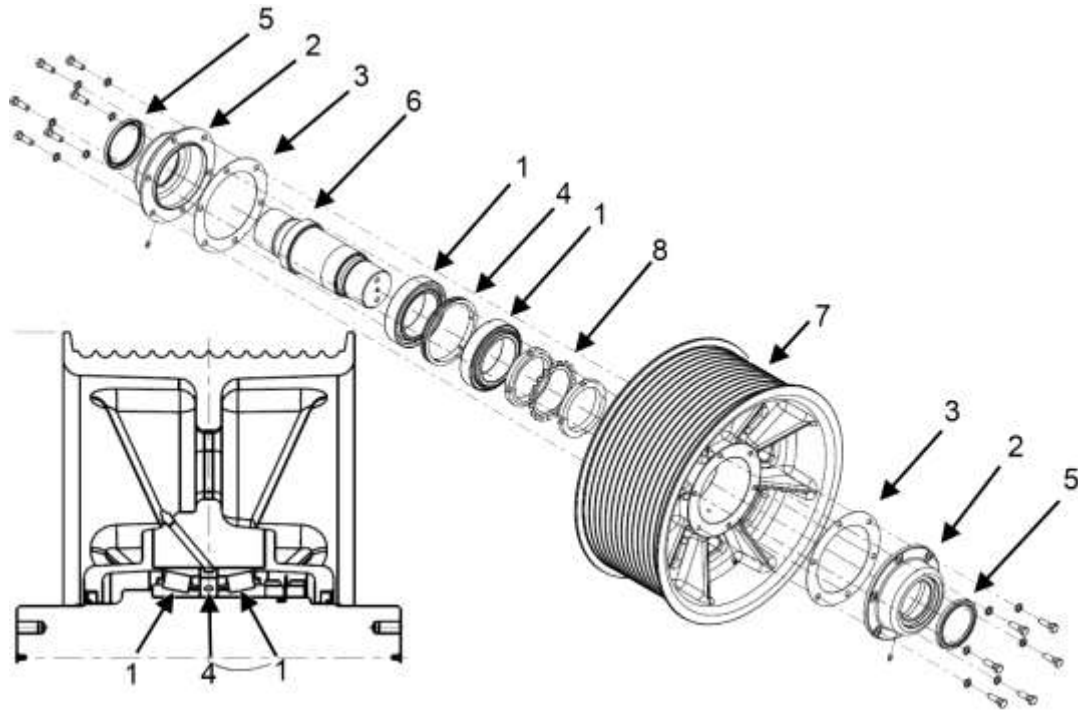
1. When replacing brake calipers (item 1), the existing labels with contract-specific information must be transferred to the new brake caliper.
2. The brake should be replaced as an assembly including items 2, 5, 6, & 7.



DAA20220ED		
REF. No.	PART No.	DESCRIPTION
1	NON1241M5X12-8.8Z	Screw, M5 X 12 Hex Head w/ Serrated Flange, (Qty = 2)
2	PSM06X012-LW	Screw, M6 X 12 Pan Head w/Slw
3	9700K-06-215	Switch, Thermal. Supplier: Klixon
4	JAA303AFK1	Terminal Block – Motor
5	DAA21303DL1	Terminal Block – Signals

Deflector/Secondary Sheave Assembly

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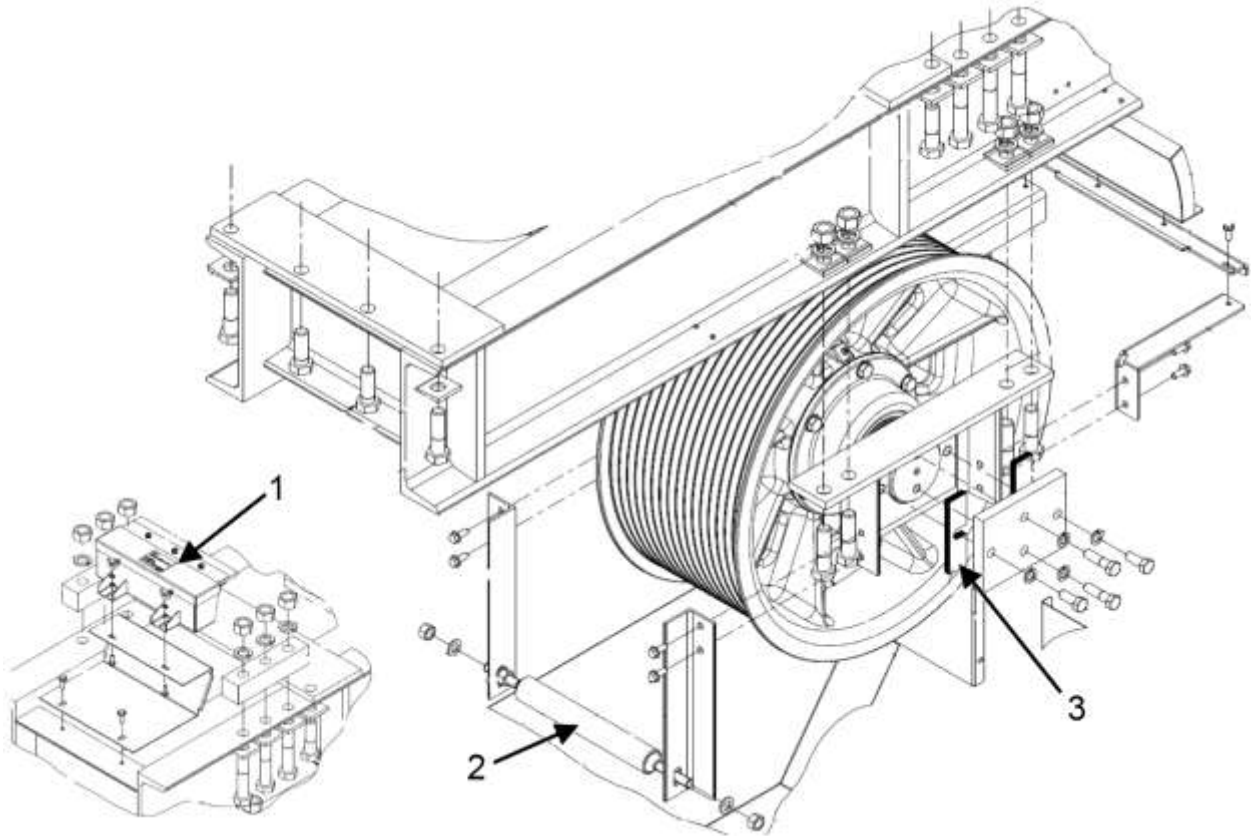


REF. No.	DAA20700R PART No.	DESCRIPTION
1	DAA209AA1	Bearing, Tapered Roller (Qty. = 2 Required)
2	JAA346AXK1	Cover (Qty. = 2 Required)
3	JAA376AAS3	Gasket (See Note 2) (Qty. = 2 Required)
4	JAA172AAX1	Ring
5	JAA33AAX1	Seal (Qty. = 2 Required)
6	DAA494GR1	Shaft Assembly (includes shaft and 2 nuts [BNM140X2])
7	DAA262AG1	Sheave (DWT 16 mm Rope, Ø 720 mm, 16 Grooves)
	DAA262AG2	Sheave (DWT 18 mm Rope, Ø 720 mm, 14 Grooves)
	DAA262AG3	Sheave (SWT 16 mm Rope, Ø 720 mm, 10 Grooves)
8	BWT140	Washer, AW28 Bearing

NOTES:

1. The bearings must be replaced as an assembled unit of the shaft (item 6), 2 bearings (item 1) and the ring (item 4) as shown above.
2. The cover gaskets (item 3) should be replaced at the same time as the bearing assembly.

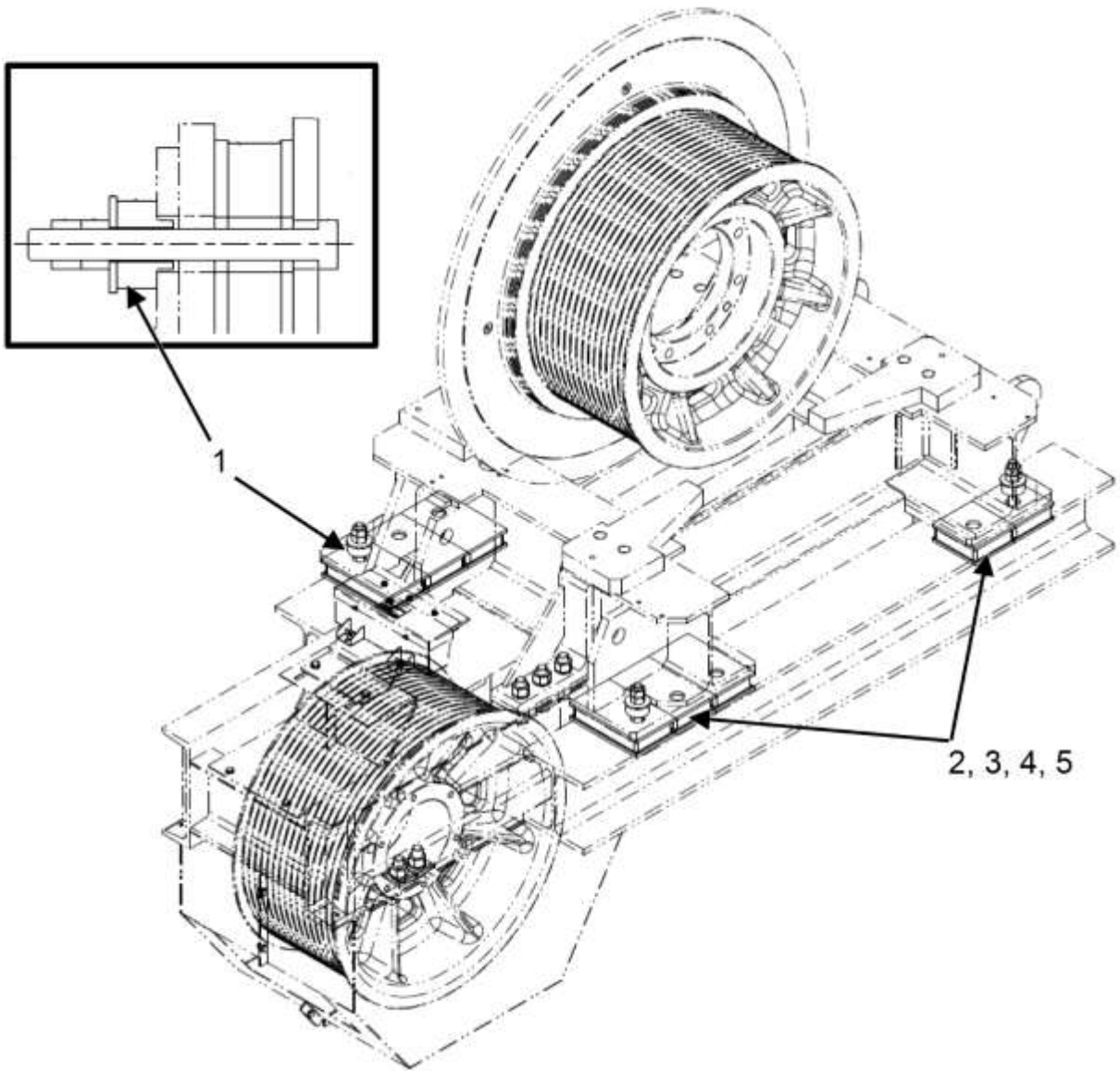
Deflector/Secondary Sheave Assembly



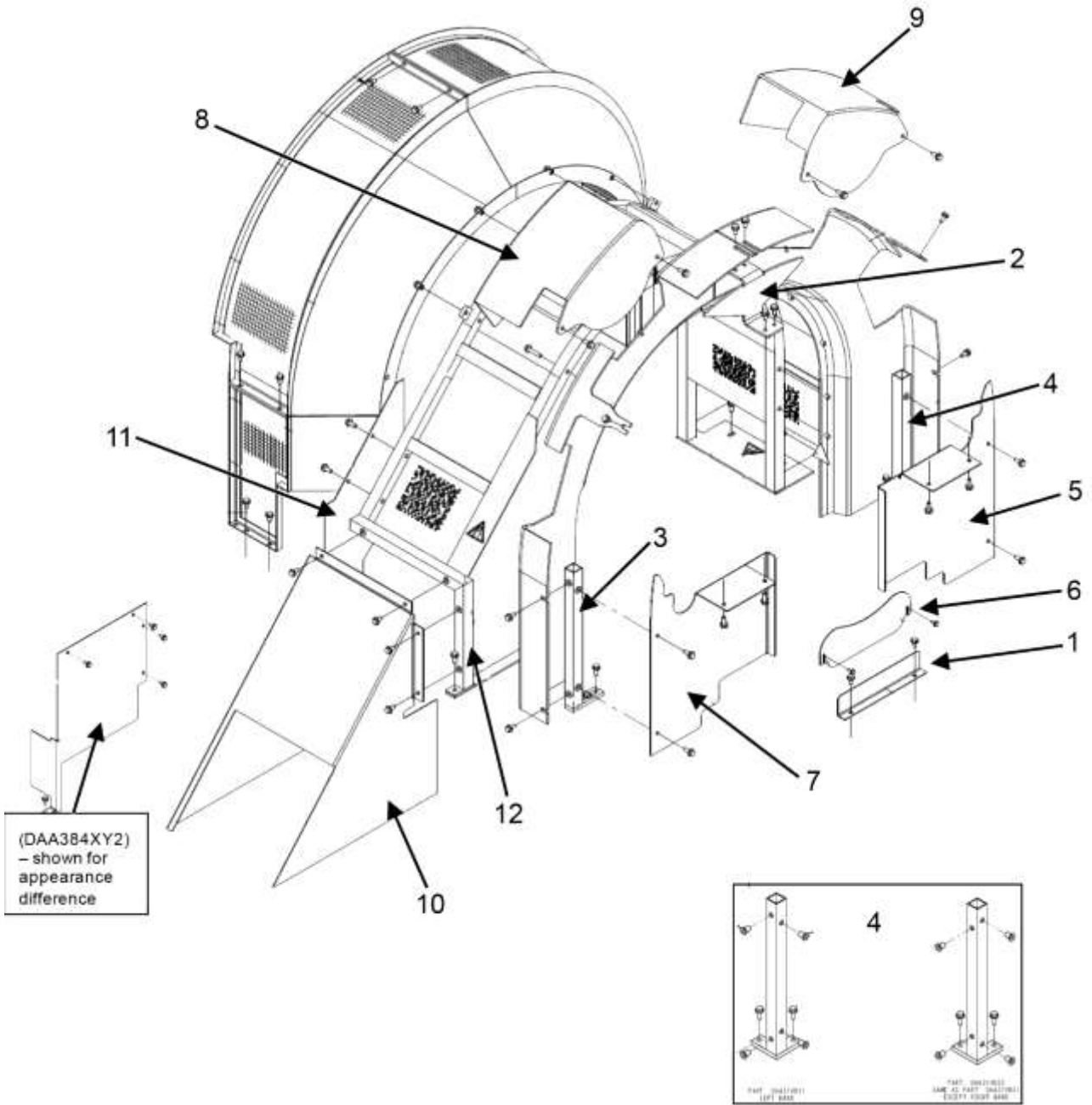
DAA20700R		
REF. No.	PART No.	DESCRIPTION
1	JAA508AAX4	Lubricator, Rope
2	DAA98HX1	Rod
3	DAA255KJ1	Shim (Qty = 48 Required)

Isolation Assembly

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DAA20850A		
REF. No.	PART No.	DESCRIPTION
1	JAA321AET1	Isolation Bushing - Rubber
2	JAA310BGB1	Isolation Pad - Rubber (220 mm x 130 mm)
3	JAA310BGB2	Isolation Pad - Rubber (180 mm x 130 mm)
4	JAA310BGB3	Isolation Pad - Rubber (140 mm x 130 mm)
5	JAA310BGB4	Isolation Pad - Rubber (160 mm x 100 mm)



See Page 13 for Parts

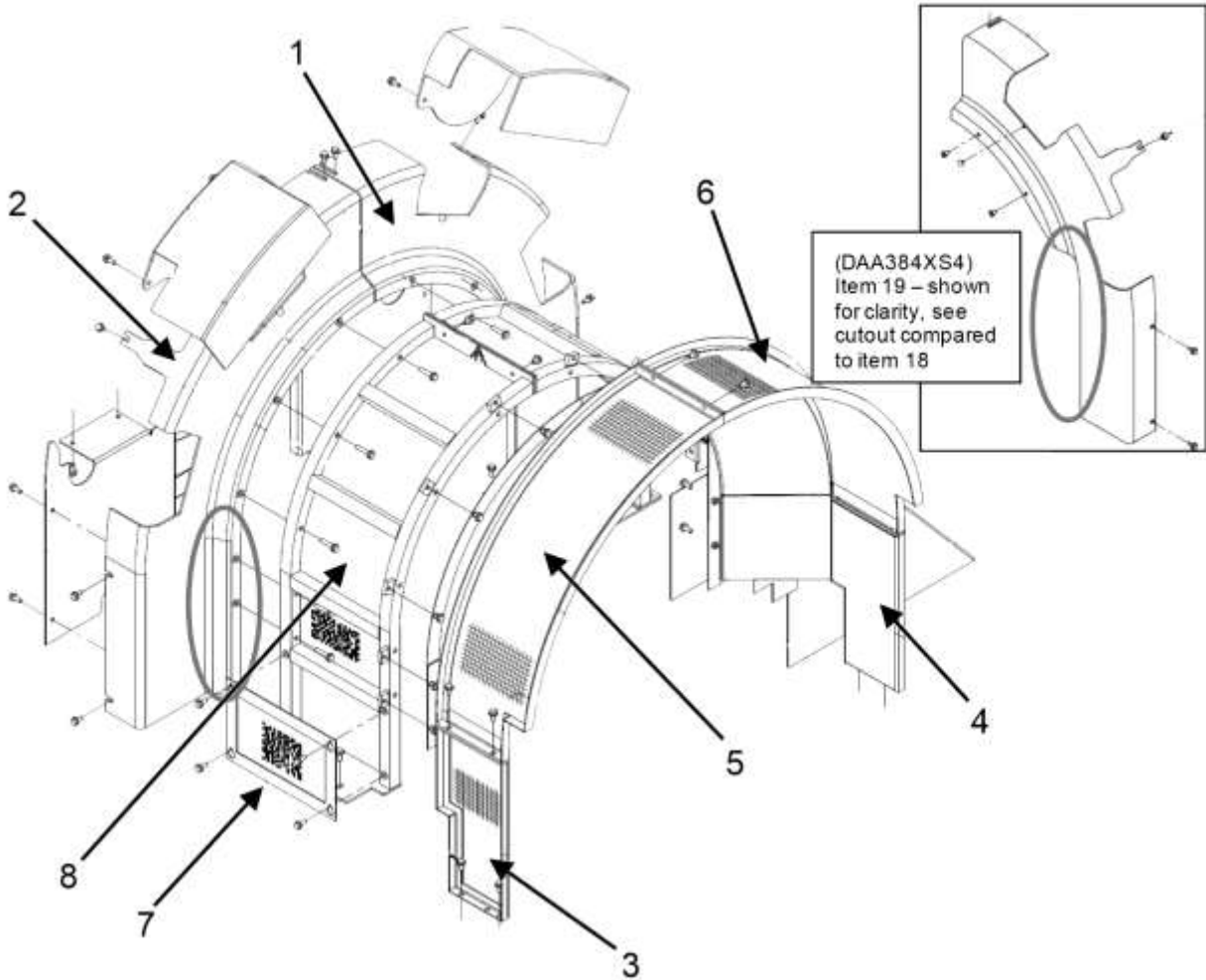
Guarding

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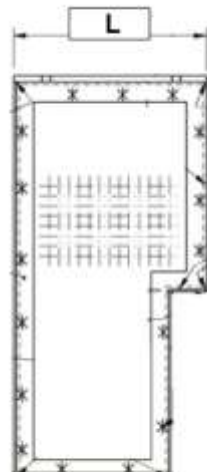
REF. No.	DAA29509G	
	PART No.	DESCRIPTION
1	DAA283BJC1	Angle, Formed
2	DAA315PF1	Brace
3	DAA374KT2	Frame, Brake Disc, Rope Drop Side (as shown)
	DAA374KT1	Frame, Brake Disc, Rope Drop Side (opposite of shown)
4	DAA374KS2	Frame, Brake Disc, Terminal Box Side (as shown)
	DAA374KS1	Frame, Brake Disc, Terminal Box Side (opposite of shown)
5	DAA384XX1	Guard, Brake Stand, Left Hand Side
6	DAA384YB1	Guard, Brake Stand, Middle
7	DAA384XX2	Guard, Brake Stand, Right Hand Side
8	DAA384XT1	Guard, Brake, Slot 2
9	DAA384XT2	Guard, Brake, Slot 3
10	DAA384XY1	Guard, Rope Drop ≥ 850 mm & ≤ 1150 mm (opposite of shown)
	DAA384XY2	Guard, Rope Drop ≥ 850 mm & ≤ 1150 mm (as shown)
	DAA384XZ1	Guard, Rope Drop ≥ 1151 mm & ≤ 1300 mm (opposite of shown)
	DAA384XZ2	Guard, Rope Drop ≥ 1151 mm & ≤ 1300 mm (as shown)
	DAA384YA1	Guard, Rope Drop ≥ 1301 mm & ≤ 1700 mm (opposite of shown)
	DAA384YA2	Guard, Rope Drop ≥ 1301 mm & ≤ 1700 mm (as shown)
11	DAA384XV2	Guard, Rope Drop, Back (as shown)
	DAA384XV1	Guard, Rope Drop, Back (opposite of shown)
12	DAA384YC2	Guard, Sheave, Rope Drop Side (as shown)
	DAA384YC1	Guard, Sheave, Rope Drop Side (opposite of shown)

NOTES:

1. Brake guard for slot 2 (DAA384XT1) is needed in 3-brake applications. Brake guards for slots 2 and 3 are needed in 2-brake applications.
2. Items 3, 4, 10, 11, & 12 are handed. Make sure to select correct version (looking from motor side of machine).



JAA384BDA1, L1= 250 mm
 JAA384BDA3, L1= 290 mm
 JAA384BDA2, L1= 250 mm
 JAA384BDA4, L1= 290 mm



JAA384BDB1/2, L=193 mm
 JAA384BDB3/4, L= 233 mm

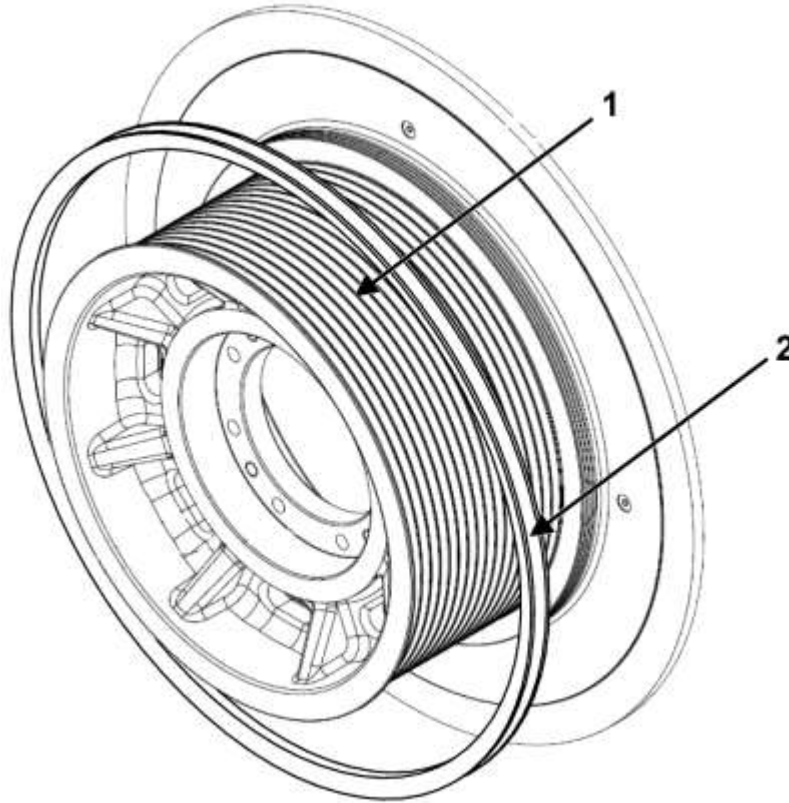
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See Page 14 for Illustrations

REF. No.	DAA29509G	DESCRIPTION
	PART No.	
1	DAA384XS4	Guard, Brake Disc, Rope Drop Side (as shown)
	DAA384XS3	Guard, Brake Disc, Rope Drop Side (opposite of shown)
2	DAA384XS2	Guard, Brake Disc, Terminal Box Side (as shown)
	DAA384XS1	Guard, Brake Disc, Terminal Box Side (opposite of shown)
3	JAA384BDB2 JAA384BDB4	Guard, Motor, Bottom, Left Hand Side
4	JAA384BDB1 JAA384BDB3	Guard, Motor, Bottom, Right Hand Side
5	JAA384BDA2 JAA384BDA4	Guard, Motor, Top, Left Hand Side
6	JAA384BDA1 JAA384BDA3	Guard, Motor, Top, Right Hand Side
7	DAA384YE1	Guard, Rope Cover
8	DAA384YD2	Guard, Sheave, Terminal Box Side (as shown)
	DAA384YD1	Guard, Sheave, Terminal Box Side (opposite of shown)

NOTES:

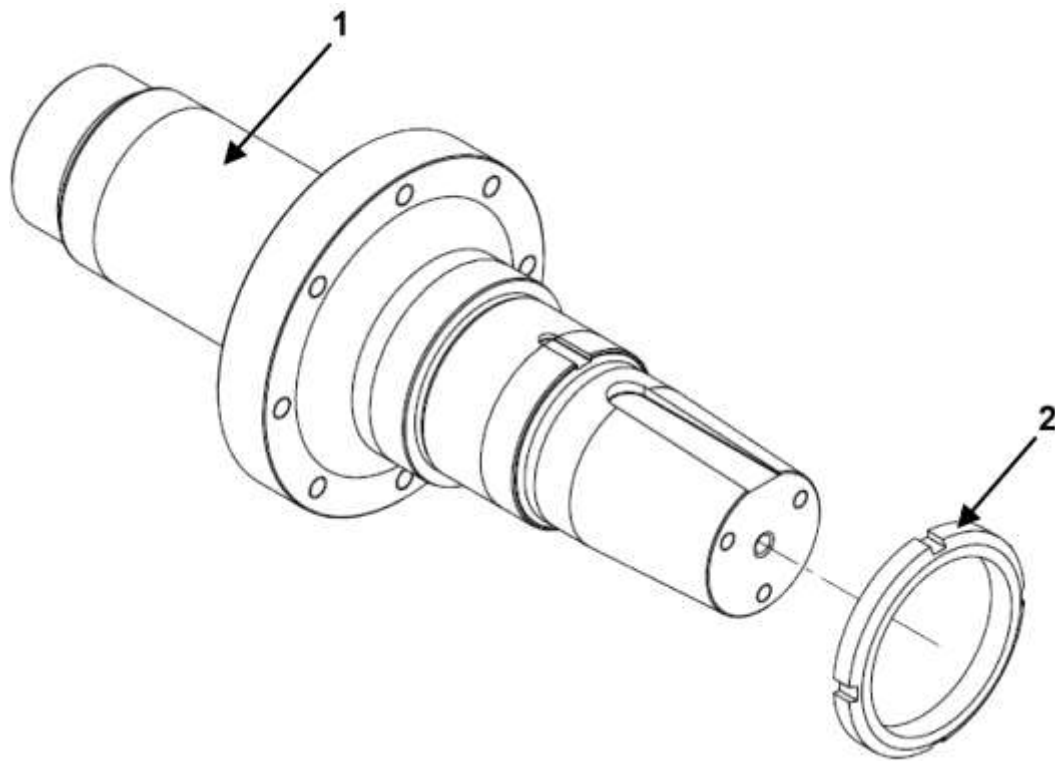
- For items 3-6, p/ns 1 & 2, are for type 1 motor, 3 & 4 are for type 2. Dimensions are shown in the lower illustration on page 14:



REF. No.	DAA20220ED		GROOVES		ROPE Ø	SHEAVE Ø
	PART No.	DESCRIPTION	NO.	PITCH		
					1	DAA261AS1
	DAA261AS2	Sheave, 30° Undercut, DWT	16	19.6	16	760
	DAA261AS6	Sheave, Liner (Existing), SWT	10	28.5	16	762
	DAA261AS8	Sheave, Round Seat, DWT	14	22	18	760
2	2F-251BV11	Sheave Liner			16	

Sheave Shaft Assembly

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DAA20220ED		
REF. No.	PART No.	DESCRIPTION
1	DAA461K10	Shaft, Rotor
2	BNM200X3	Nut, Rotor