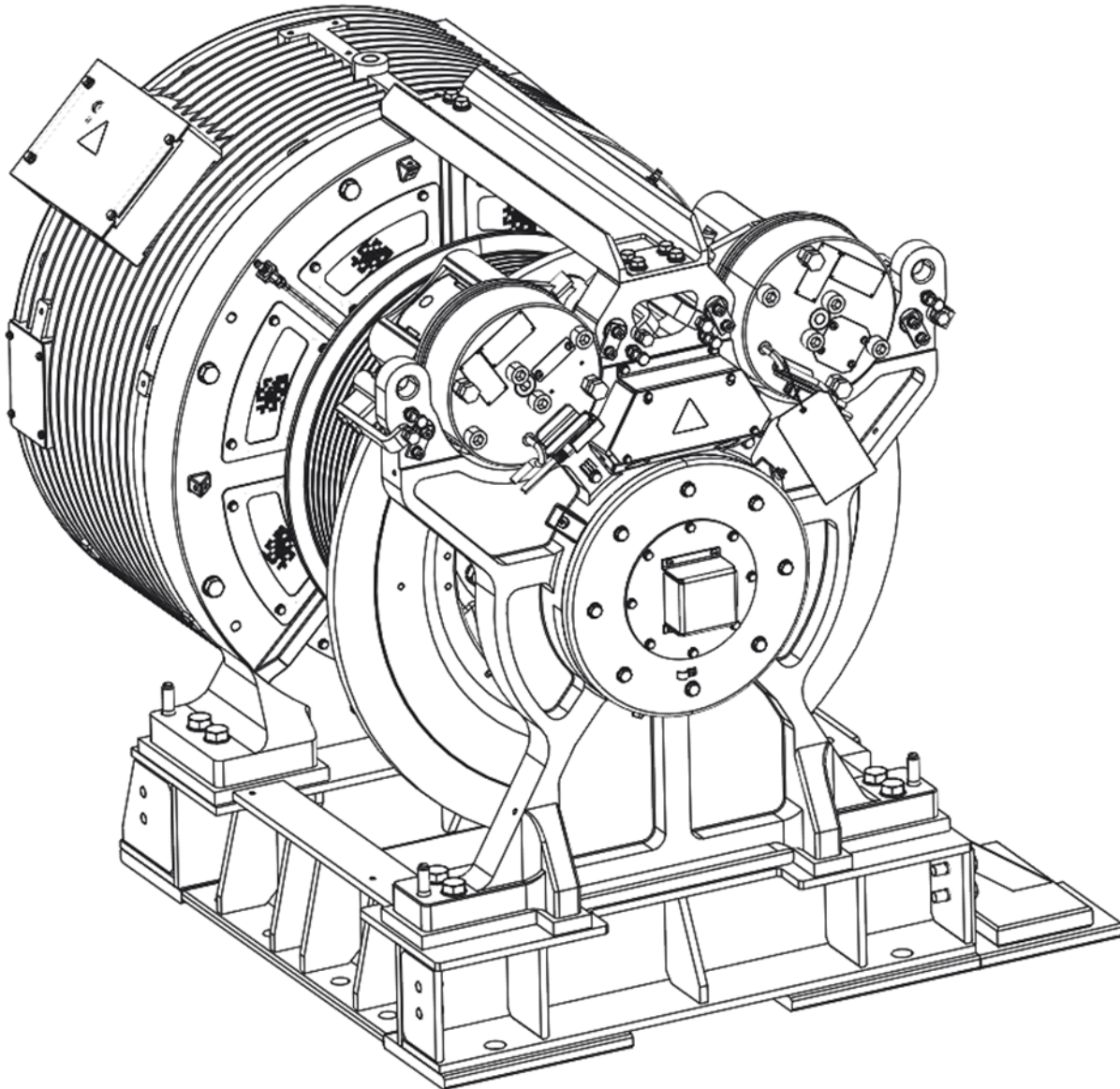


**Elevator Machine:  
SkyMotion 155**

**Spare Parts Leaflet**

**06-WAA20220A**

**May 15, 2024 / Page 1 of 15**



**OTIS**

This document contains technical data  
subject to the EAR. ECCN = EAR99

**SERVICE ENGINEERING**  
**Otis Elevator Company**  
**Bloomfield, Connecticut USA**

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# History

**06-WAA20220A**

## Leaflet Description

This leaflet provides spare parts information for the PM gearless machine, type WAA20220A (also known as SkyMotion 155). WAA20220A covers duty loads up to 1600kg @ 1:1 roping and elevator speeds up to 8 m/s

## Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
August 24, 2021	Kyle Connolly	New SPL
May 15, 2024	Kyle Connolly	Removed Ø12.7mm sheaves from SPL (p. 15).

## Related Drawings

Drawing No.	Title	Drawing No.	Title
WAA20220A	Machine Assembly	WAA29509A	Brake
DAA20226H	Motor	DAA20700R	Secondary Sheave Assembly
WAA20850A	Isolation Arrt.	WAA29509C	Guarding

## Related Documents

Document ID	Title
WAA20220A_ODF	Order Data Sheet For Skymotion 160 Machine
WAA20220A_BD	Basic Data For Skymotion 160 Machine

## Subject Matter Expert

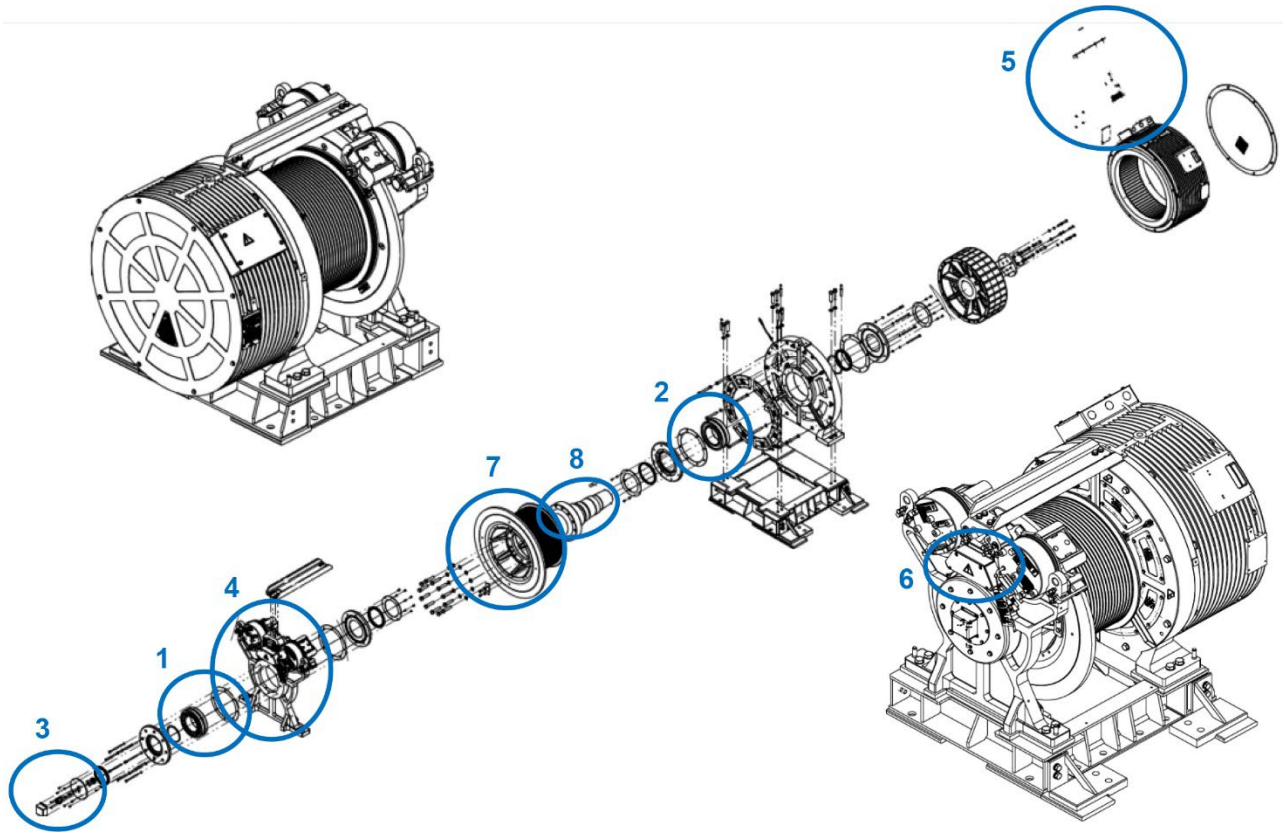
Name	Department
Kyle Connolly	Otis Engineering Center - Farmington

## 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.

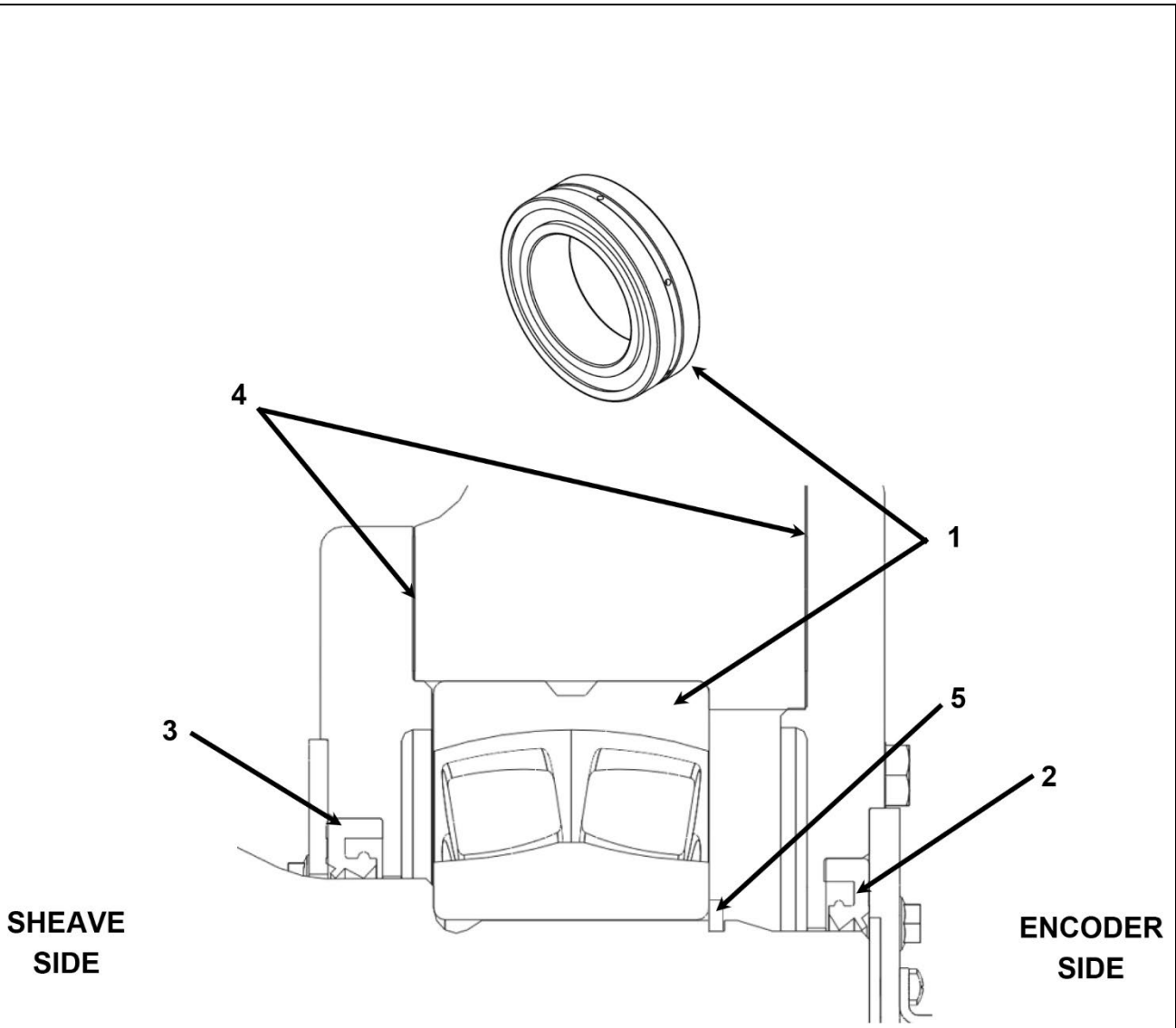
If you have suggestions about this document, please contact the subject matter expert listed on this page.



REF. No.	DESCRIPTION
1	👁 Brake Side Bearing Assembly Detail
2	👁 Motor Side Bearing Assembly Detail
3	👁 Encoder Assembly Detail
4	👁 Brake Assembly Detail
5	👁 Motor Side Terminal Box Assembly Detail
6	👁 Brake Side Terminal Box Assembly Detail
7	👁 Traction Sheave Assembly Detail
8	👁 Sheave Shaft Assembly Detail

# Brake Side Bearing Assembly

**06-WAA20220A**

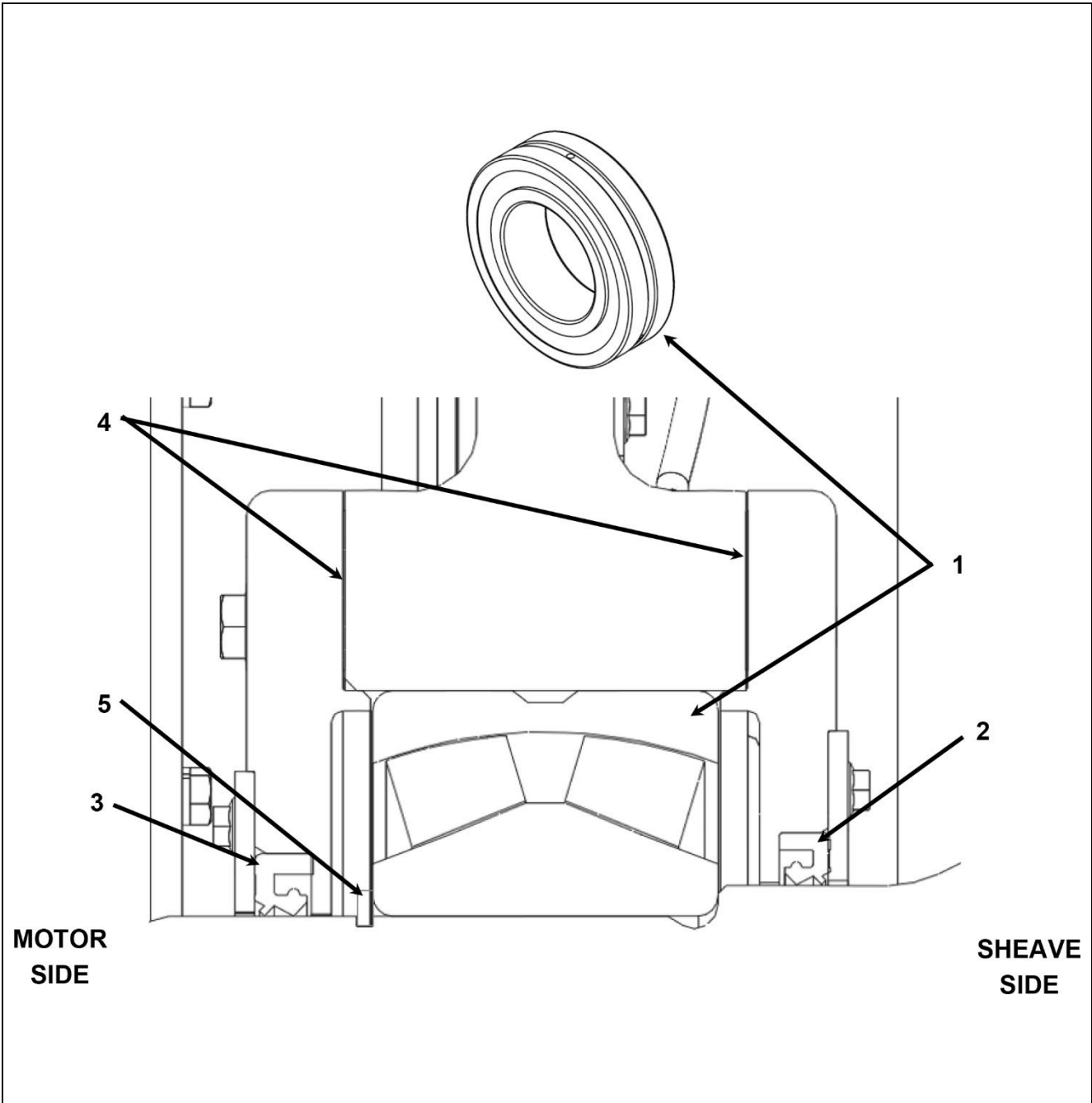


<b>WAA20220A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	DAA209AC1	Bearing	1
2	DAA33AL1	Seal	1
3	DAA33AK1	Seal	1
4	DAA376GV1	Gasket	2
5	DIN471N_150_440HV	Retaining Ring	1

**NOTE:** Bearing lubricant (Item 1) is Otis #12.

# Motor Side Bearing Assembly

**06-WAA20220A**

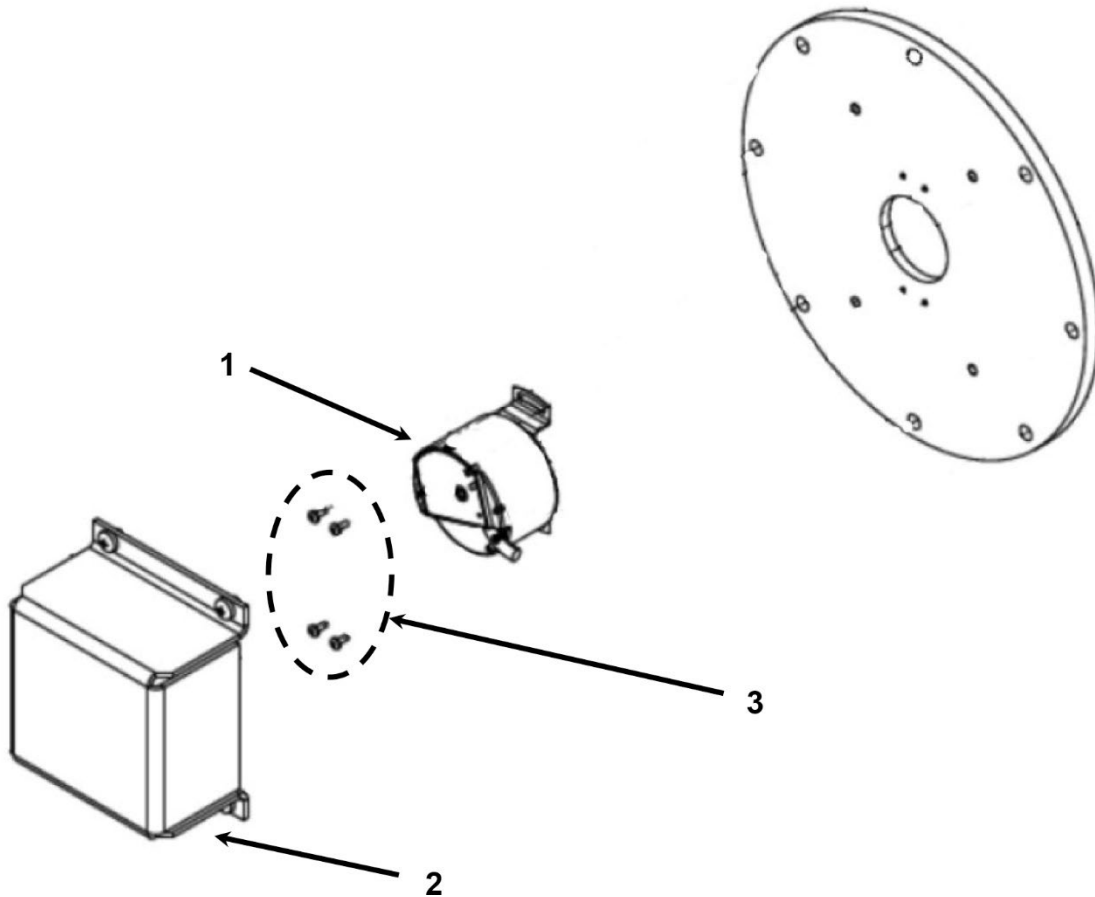


WAA20220A			
REF. No.	PART No.	DESCRIPTION	QTY
1	AAA212AK2	Bearing	1
2	DAA33AJ1	Seal	1
3	DAA33AK1	Seal	1
4	DAA376GV2	Gasket	2
5	DIN471N_170_440HV	Retaining Ring	1

**NOTE:** Bearing lubricant (Item 1) is Otis #12.

# Encoder Assembly

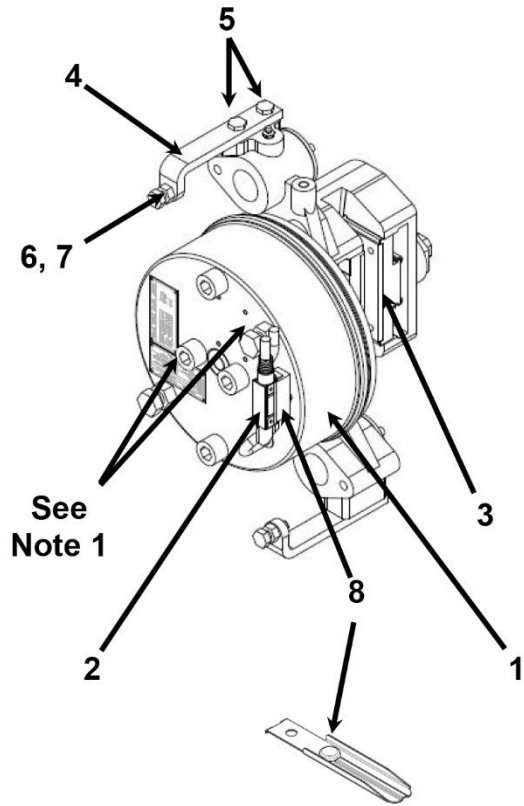
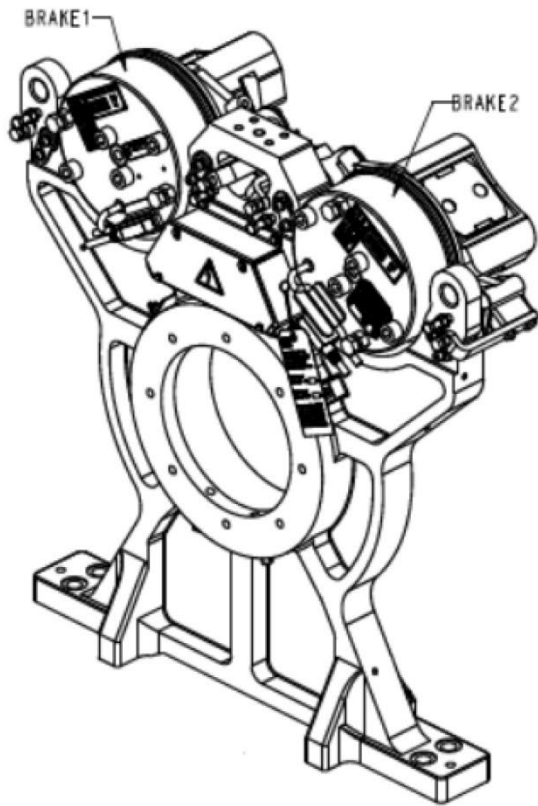
**06-WAA20220A**



<b>WAA20220A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	DAA633W3	Encoder	1
2	DAA285JH1	Cover	1
3	ISO7045M2_5x6_Z	M4x8 Pan Head Screw	4

# Brake Assembly

**06-WAA20220A**



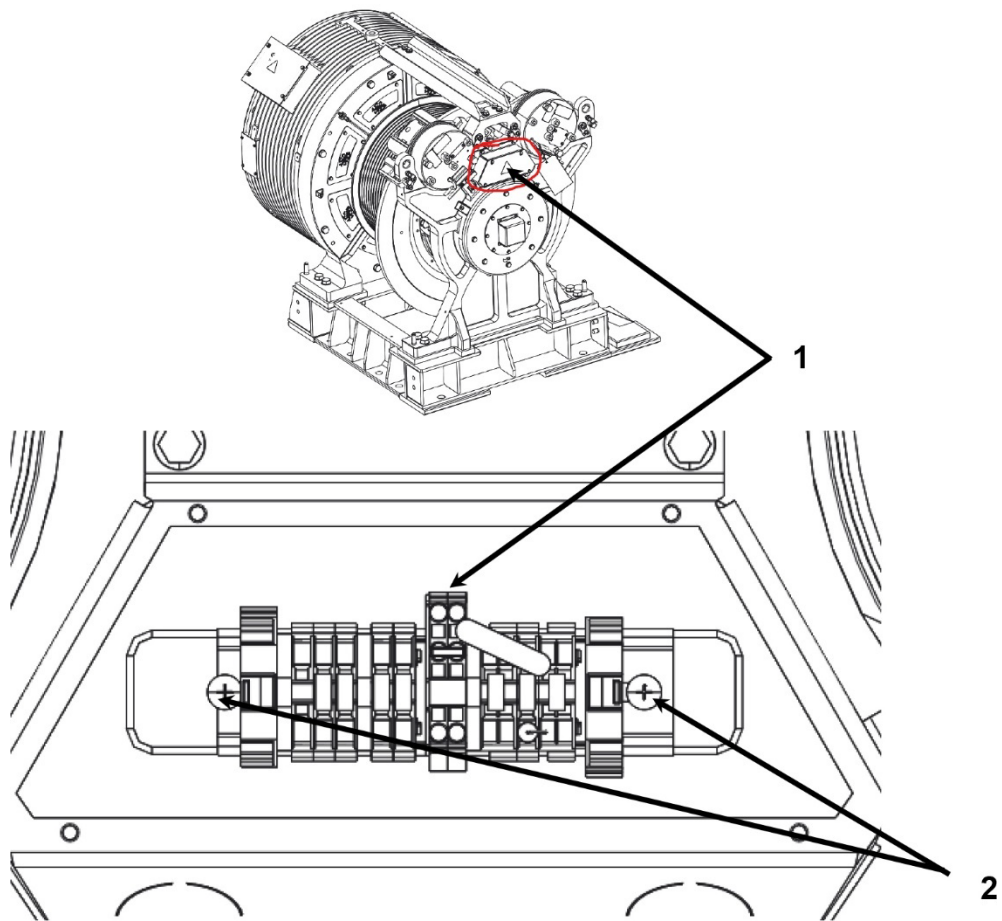
REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	AAA20236AD12 (EC-4026) AAA20236AD13 (EC-4023)	Brake Caliper, Position 1	1	WAA29509A
	AAA20236AD11 (EC-4026) AAA20236AD14 (EC-4023)	Brake Caliper, Position 2	1	WAA29509A
(see Note 1)	AAA102AYM1	Label, Emergency Brake (ASME)	1	WAA20220A
	AAA102AYN1	Label, Brake (ASME)	1	WAA20220A
	DAA102WF1	Label, Brake (GB)	1	WAA20220A
2	AAA177EX1	Switch Assy	1	AAA20236AD1 AAA20236AD2 AAA20236AD3 AAA20236AD4
3	AAA415AY1	Pad Kit (2 Pads)	1	
4	AAA316HYB1	Bracket (See Note 2)	1	
5	NON1241M8X25-8.8Z	M8 X 25 Hex Hd Screw	2	
6	AAA124JR1	Adjustment Screw	1	
7	ISO8673M10X1-8-Z	Nut	1	
8	AAA287DL1	Lever, Brake Switch	1	

NOTE 1: In case of brake caliper (Item 1) replacement, the existing “emergency brake” label which include contract specific information must be transferred to the new brake caliper.

NOTE 2: The bracket should be replaced as an assembly including items 4, 5, 6, and 7.

# Brake Terminal Box Assy.

**06-WAA20220A**

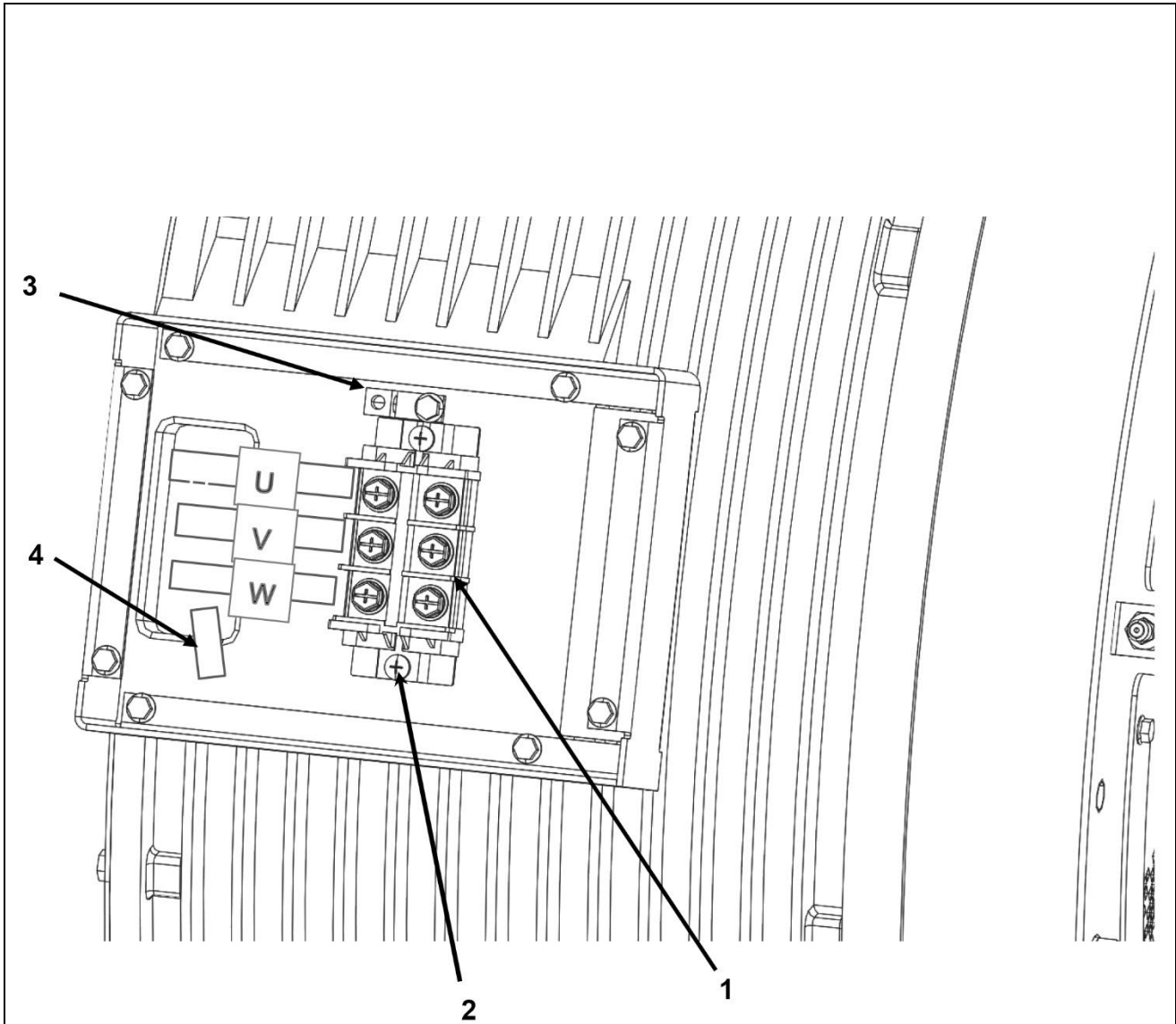


REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	DAA21303EA1	Terminal Block – Signals	1	WAA29509A
2	ISO7045 M5X12-8.8Z	M5 X 12 Cross Recessed Pan Screw	2	WAA29509A



# Motor Terminal Box Assy.

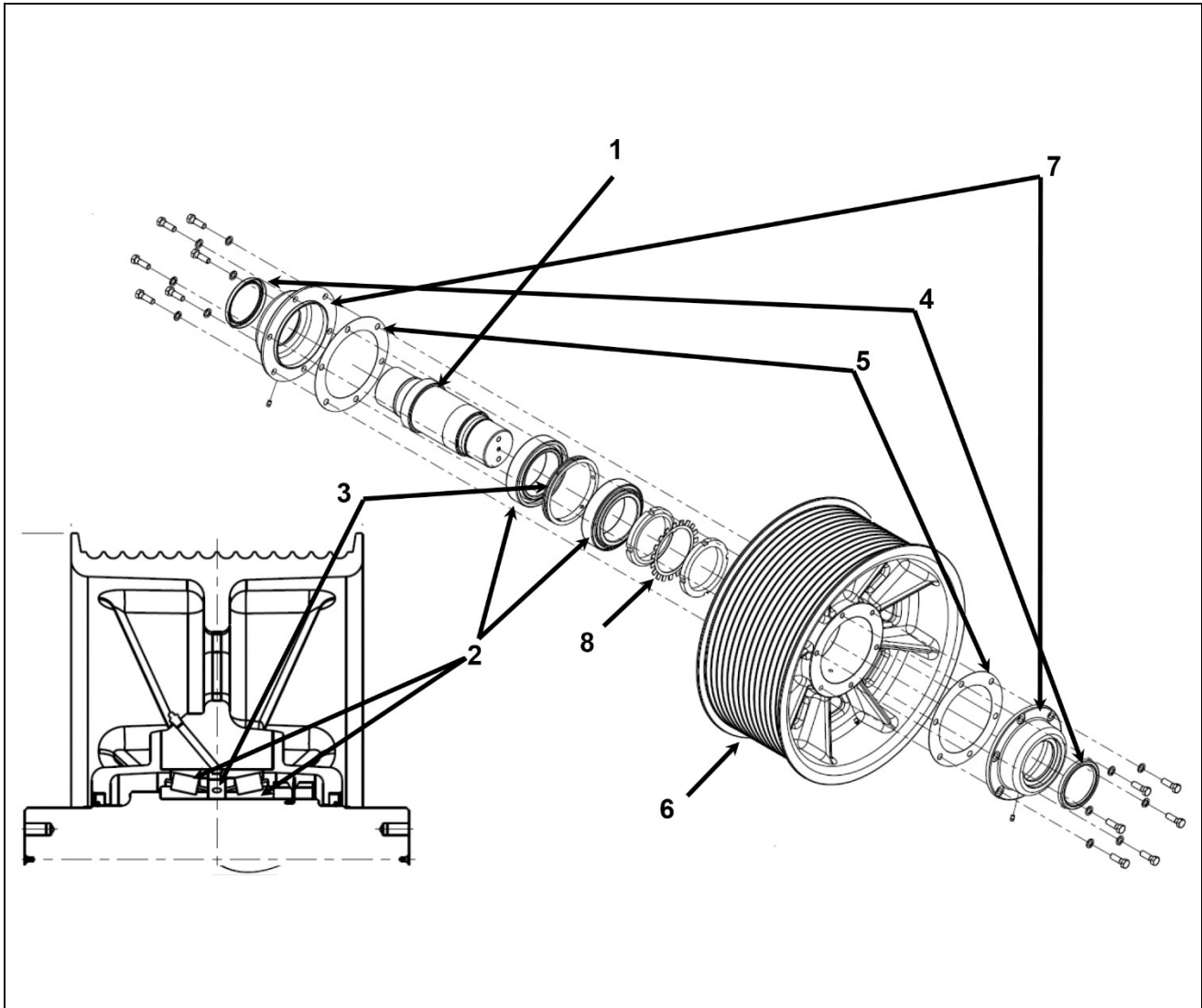
**06-WAA20220A**



<b>WAA20220A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	DAA303FZ10	Terminal Block – Motor Power	1
2	NON1241M6X12-8.8Z	M6 X 12 Hex Head Screw w/ Serrated Flange	2
3	AAA650G1	Grounding Lug	1
4	DAA176EG1	Thermal Switch Connector	1

# Deflector / Secondary Sheave

**06-WAA20220A**



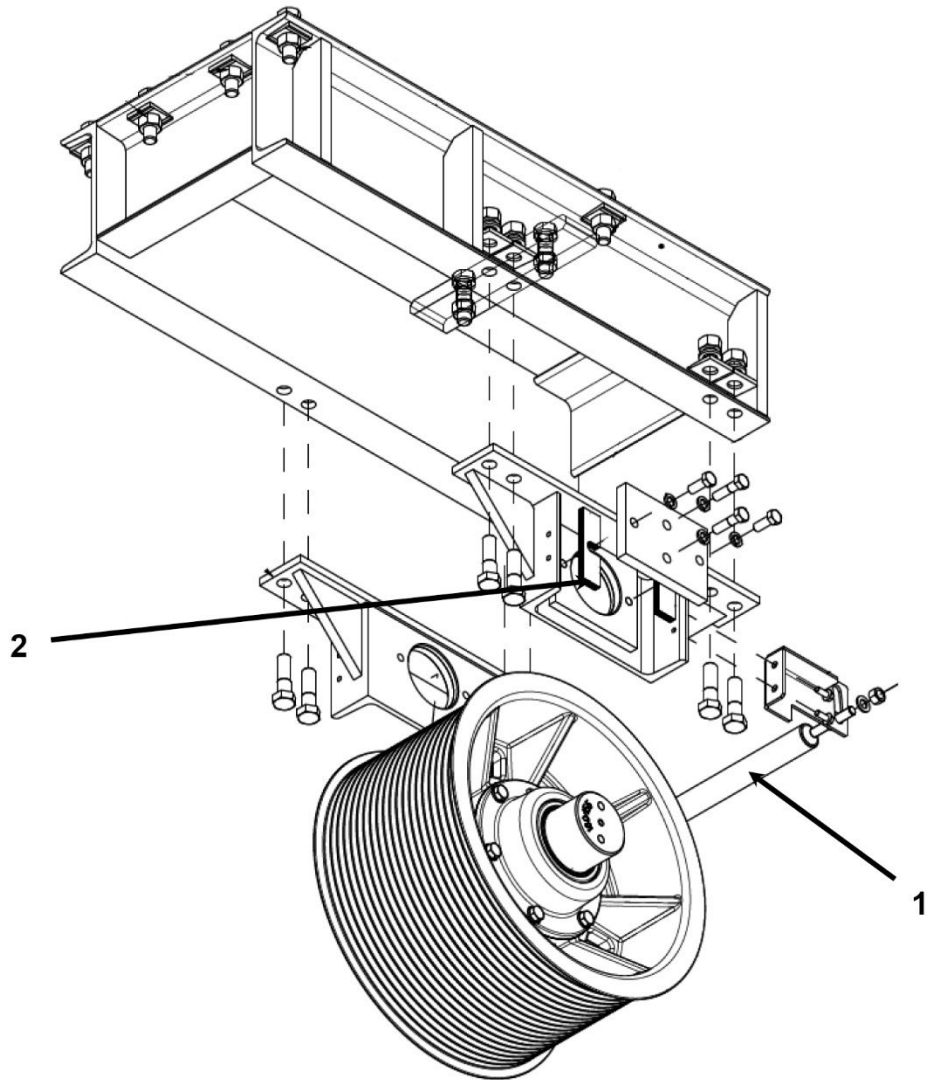
REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	DAA494GR1	Shaft Assembly	1	DAA20700R
2	DAA209AA1	Bearing, Tapered Roller	2	
3	JAA172AAX1	Ring	1	
4	JAA33AAX1	Seal	2	
5	JAA376AAS3	Gasket (See Note 2)	2	
6	DAA262AH1	Sheave (DWT 13 mm Rope, Ø 590 mm, 20 Grooves)	1	
	DAA262AH2	Sheave (DWT 12.7 mm Rope, Ø 590 mm, 20 Grooves)	1	
7	JAA346AXK1	Cover	2	
8	DIN5406_MB28	MB28 Bearing Washer	1	

NOTE 1: The bearings must be replaced as an assembled unit of the shaft (item 1), 2 bearings (item 2) and the ring (item 3) as shown above.

NOTE 2: The cover gaskets (item 5) should be replaced at the same time as the bearing assembly.

# Deflector / Secondary Sheave

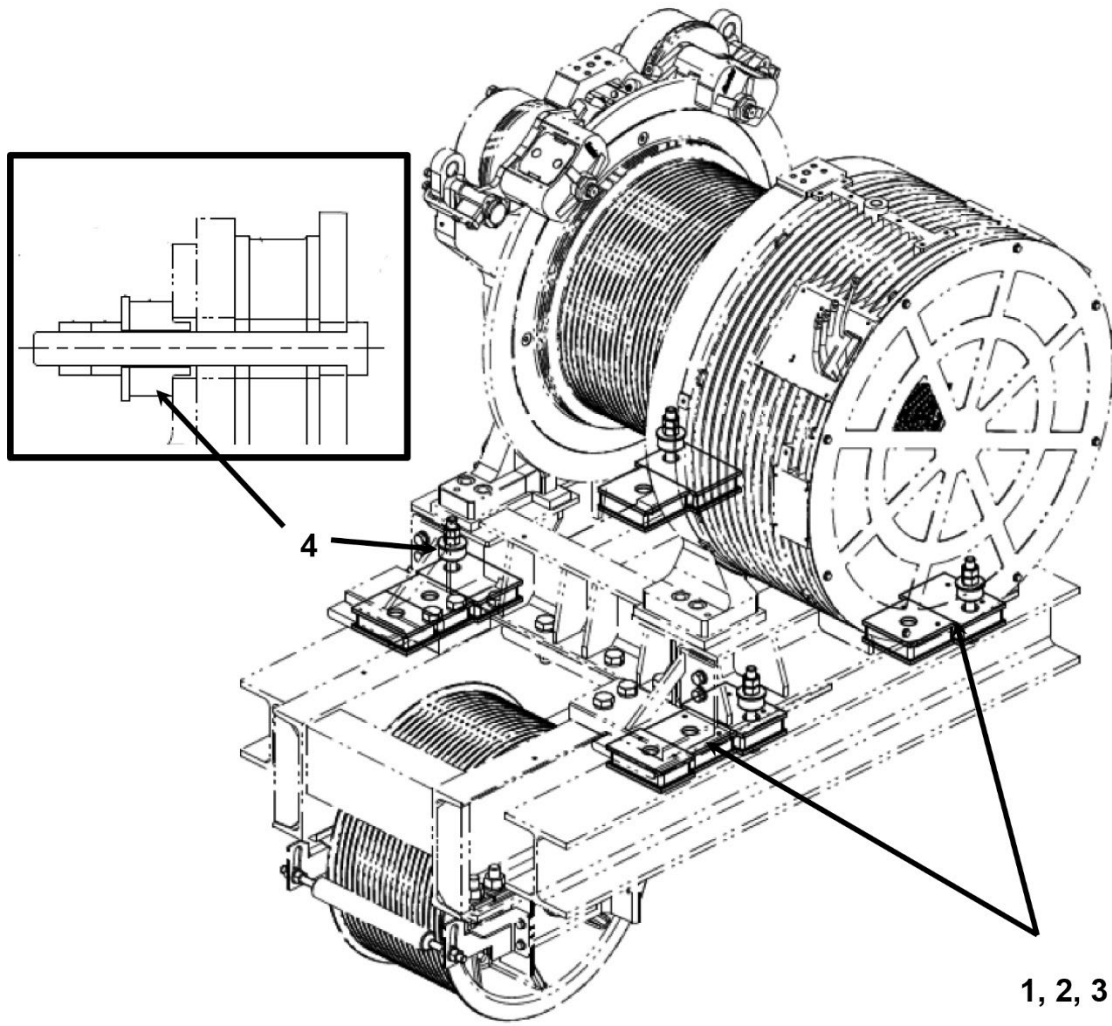
06-WAA20220A



REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	DAA98JS1	Rod	1	WAA29509B
2	DAA255KJ1	Shim	48	

# Isolation

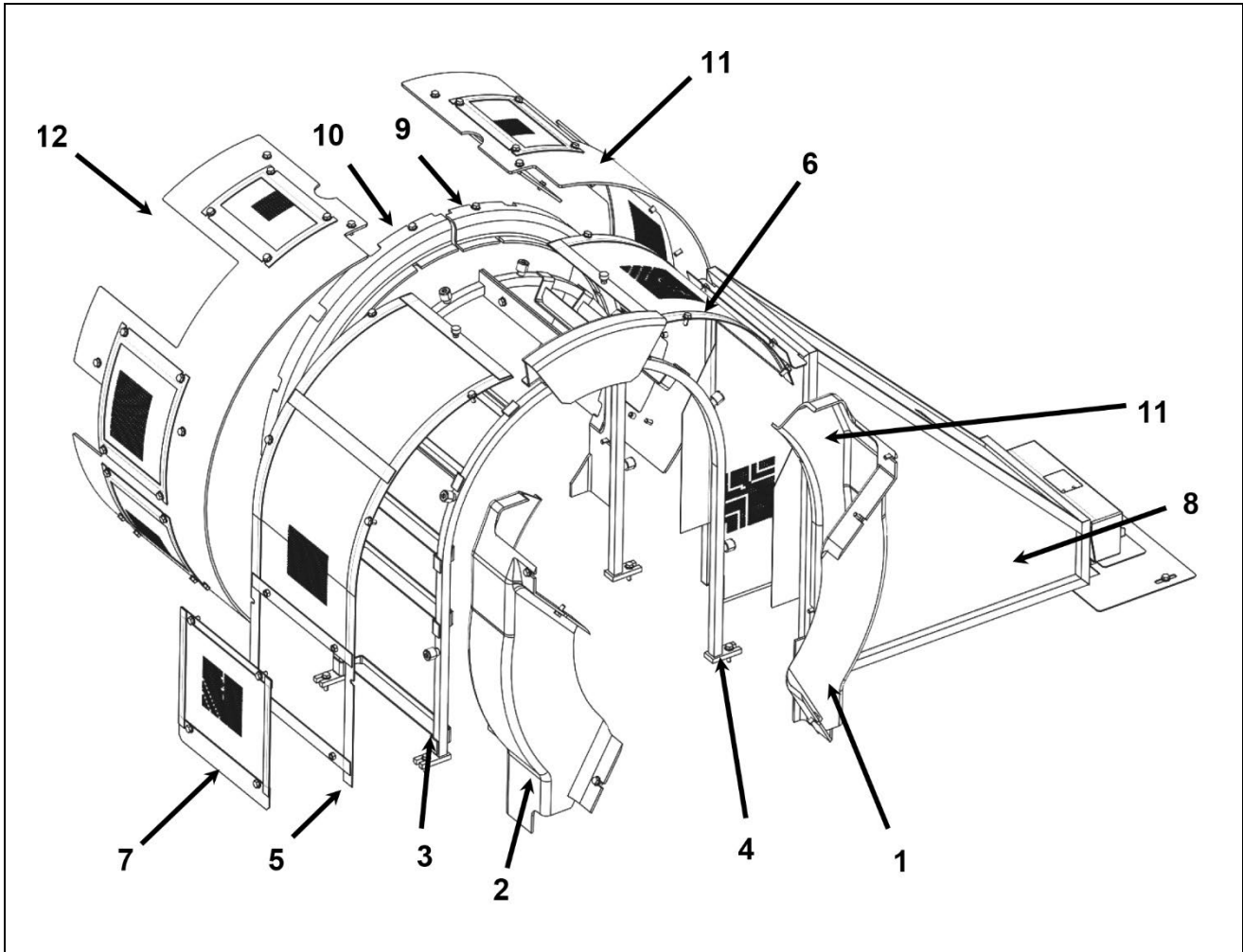
**06-WAA20220A**



REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	JAA310BGB2	Isolation Pad - Rubber (180 mm X 130 mm)	1	WAA29509B
2	JAA310BGB3	Isolation Pad - Rubber (140 mm X 130 mm)	1	
3	JAA310BGB4	Isolation Pad - Rubber (160 mm X 100 mm)	1	
4	JAA321AET1	Isolation Bushing - Rubber	1	

# Guarding

**06-WAA20220A**

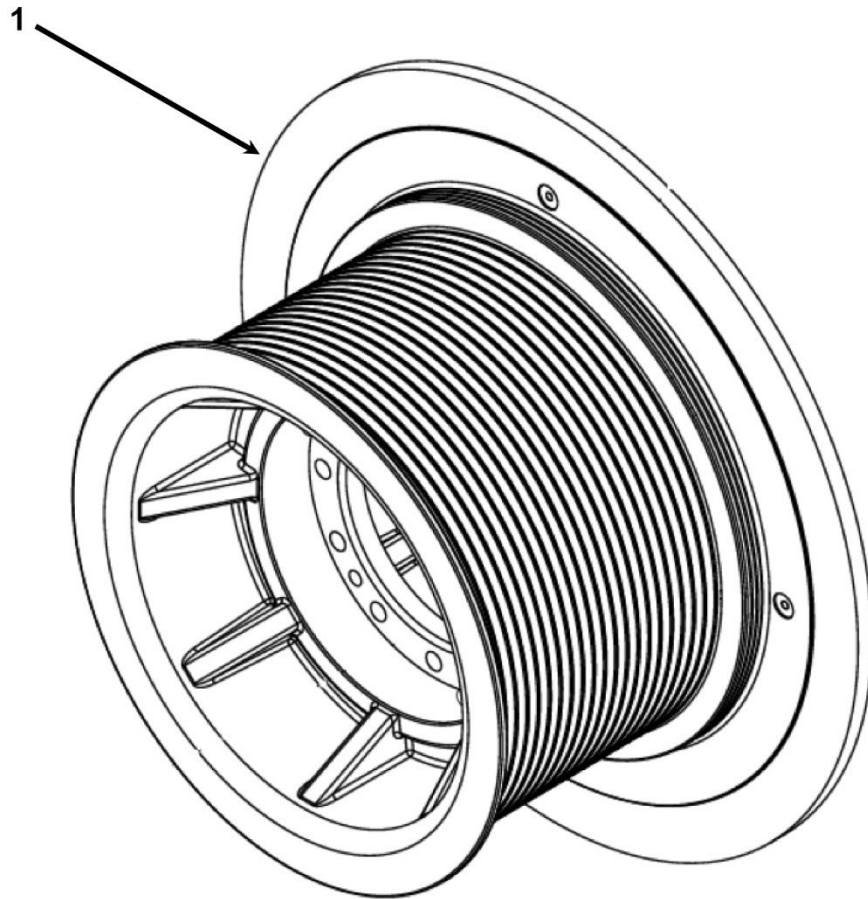


REF. No.	PART No.	DESCRIPTION	QTY	Used For
1	DAA384ABS1	Disc Guard	1	WAA29509C
2	DAA384ABS2		1	
3	DAA384ABN1	Sheave Frame	1	
4	DAA384ABQ1		1	
5	DAA384ABT1	Sheave Guard	1	
6	DAA384ABW1		1	
7	DAA384ABX1	Rope Access Panel	1	
8	DAA384ACA998 DAA384ACA997	Rope Drop Guard	1	
9	DAA384ABR1	Back Sheave Guard	1	
10	DAA384ABR2		1	
11	DAA384ACK1	Motor Guard	1	
12	DAA384ACK2		1	

NOTE: Items 3–8 are symmetrical and can be switched from the left side to the right side depending on machine hand.

# Traction Sheave

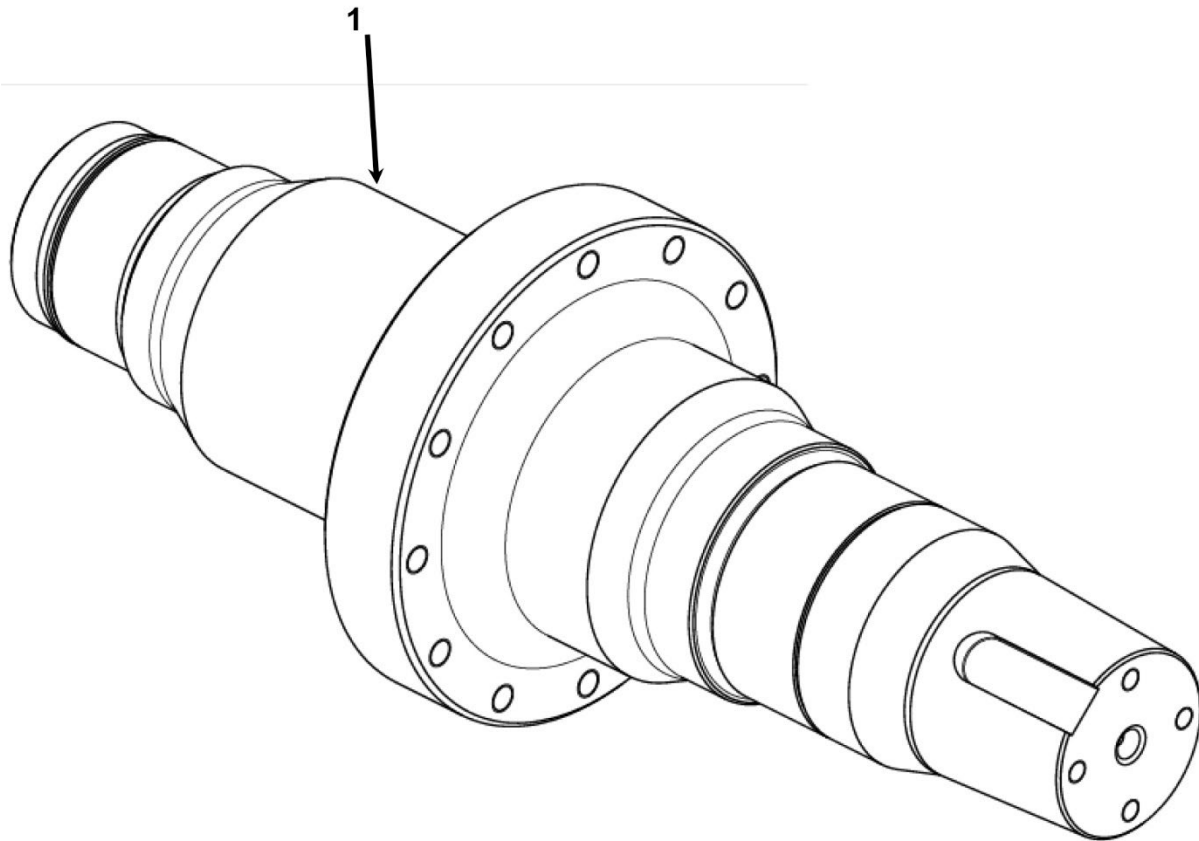
**06-WAA20220A**



	<b>WAA20220A</b>		<b>GROOVES</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>No.</b>	<b>PITCH</b>	<b>ROPE</b> Ø	<b>PITCH</b> Ø
1	DAA261AW1	Sheave, Round Seat, DWT	20	16	13	570
2	DAA261AW3	Sheave, 30° Undercut, DWT				

# Sheave Shaft Assembly

**06-WAA20220A**



<b>WAA20220A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	DAA494HQ1	Rotor Shaft	1