

# AC Gearless Machine, 1.5 T

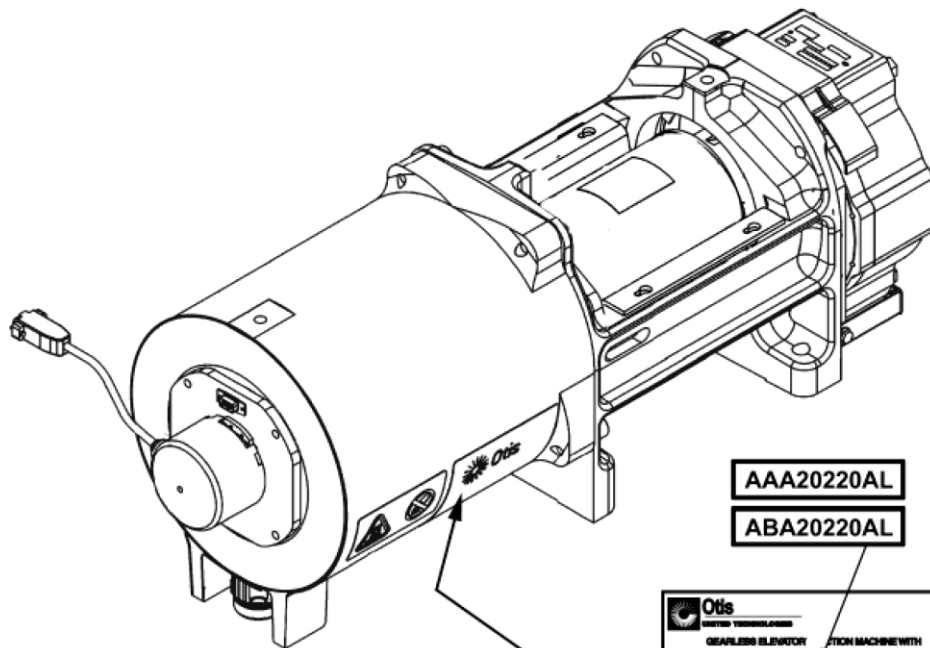
## Spare Parts Leaflet

### 06-AAA20220AL

March 22, 2023 / Page 1 of 7

# OBSOLESCENCE NOTICE

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



<b>Otis</b> ELEVATOR TECHNOLOGIES		GEARLESS ELEVATOR WITH VARIABLE FREQUENCY AND F		ATCH MACHINE WITH VARIABLE VOLTAGE CONTROL	
06-AAA20220		PART A		2220	
<b>NOMINAL RATINGS:</b>					
<input type="checkbox"/> VOLTS	<input type="checkbox"/> AMPS	<input type="checkbox"/> kW OUTPUT			
<input type="checkbox"/> Hz	<input type="checkbox"/> rpm	<input type="checkbox"/> STARTS/HOUR			
<input type="checkbox"/> %INTERMITTENT DUTY	<input type="checkbox"/> °C AMBIENT				
<input type="checkbox"/> ENCLOSURE-IP60, NON-VENTILATED					
LOT: _____					
<b>NO RELUBRICATION REQUIRED</b>					
MANUFACTURED BY KOLLMORGEN MADE IN USA					



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

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

Unpublished Work—© Otis Elevator Co.; 2023

**Leaflet Description**

This elevator machine is designed for use with coated steel belts (CSB) of dimensions 30 mm wide x 3 mm thick. There are four basic machine variations referenced in this document:

1. 1.5T-A (340V) EN: For 490 to 680kg, 1.6m/s elevator duties, EN81:1 code compliant brake with single coil
2. 1.5T-B (340V) EN: For 490 to 680kg, 1.0m/s elevator duties, EN81:1 code compliant brake with single coil
3. 1.5T-P (170V) JIS: For 600kg, 1.0m/s elevator duties, EN81:1 code compliant brake with single coil (Japan)
4. 1.5T-M (170V) JIS: For 600kg, 1.75m/s elevator duties, EN81:1 code compliant brake with single coil (Japan)

**Leaflet Revisions**

<b>Date Revised</b>	<b>Subject Matter Expert</b>	<b>Reason for Revision</b>						
October 16, 2002	James Hubbard	New release						
December 15, 2004	Ben Watson	Added <b>NOTE</b> to Page 3.						
March 25, 2006	Ben Watson	Added ABA20220AL arrangement.						
January 15, 2007	Scott Boulanger	Added rationalized encoder.						
January 12, 2011	Michael Lang	Updated brake part numbers on p. 6 (TAA. .to TBA ../TCA. .)						
October 6, 2021	Arianisis Mangual Camilo Cardona	Updated replacement brakes as follows:						
		<table border="1" style="width: 100%;"> <thead> <tr> <th><b>Legacy Brake Part No.</b></th> <th><b>New Brake Part</b></th> </tr> </thead> <tbody> <tr> <td>TCA20222BC7</td> <td rowspan="3">TAA20236AC (EN Only)</td> </tr> <tr> <td>TCA20222BC6</td> </tr> <tr> <td>TAA20222BC8</td> </tr> </tbody> </table>	<b>Legacy Brake Part No.</b>	<b>New Brake Part</b>	TCA20222BC7	TAA20236AC (EN Only)	TCA20222BC6	TAA20222BC8
		<b>Legacy Brake Part No.</b>	<b>New Brake Part</b>					
		TCA20222BC7	TAA20236AC (EN Only)					
TCA20222BC6								
TAA20222BC8								
Added Brake Max Load								
March 22, 2023	Juan Murillo	Added OBSOLESCENCE notice on the cover						

**Related Drawings**

<b>Drawing No.</b>	<b>Title</b>	<b>Drawing No.</b>	<b>Title</b>
AAA20220AL	A. C. Gearless Machine Permanent Magnet 3 Phase Motor	AAA633Z	Encoder, Incremental Encoder, Gen 2 Rel 2
ABA20220AL	A. C. Gearless Machine Permanent Magnet 3 Phase Motor	---	---

**Related Documents**

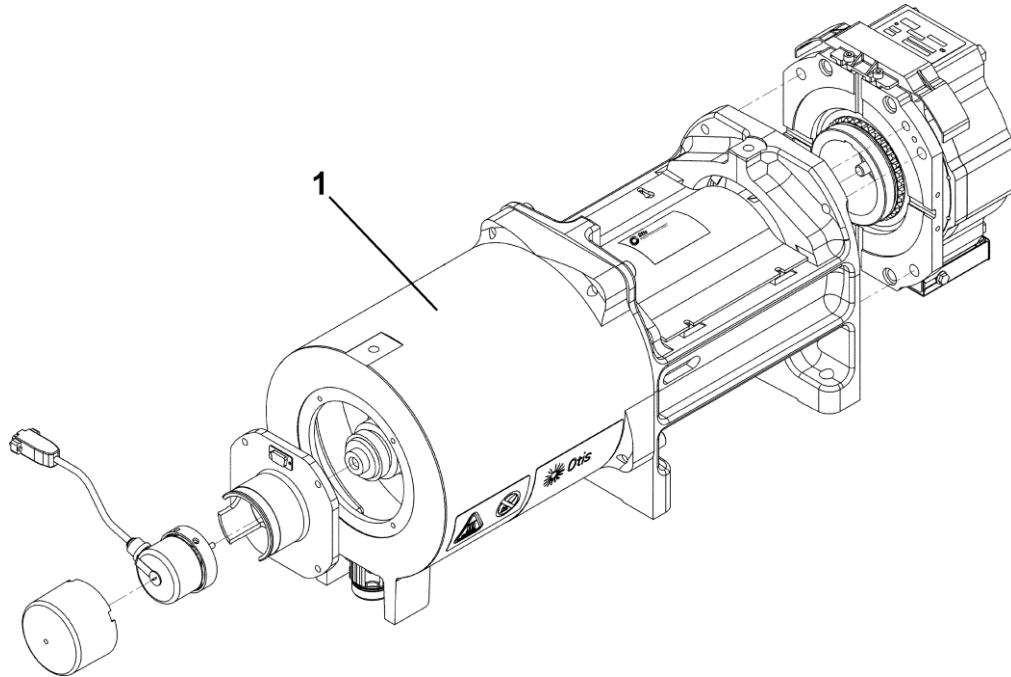
<b>Document ID</b>	<b>Title</b>
SPL 07-TBA20222BC	CR Brake for Gen2 System

**Subject Matter Expert**

<b>Name</b>	<b>Department</b>
Camilo Cardona	Otis Engineering Center, Farmington (OECF)

**About Spare Parts Leaflets...**

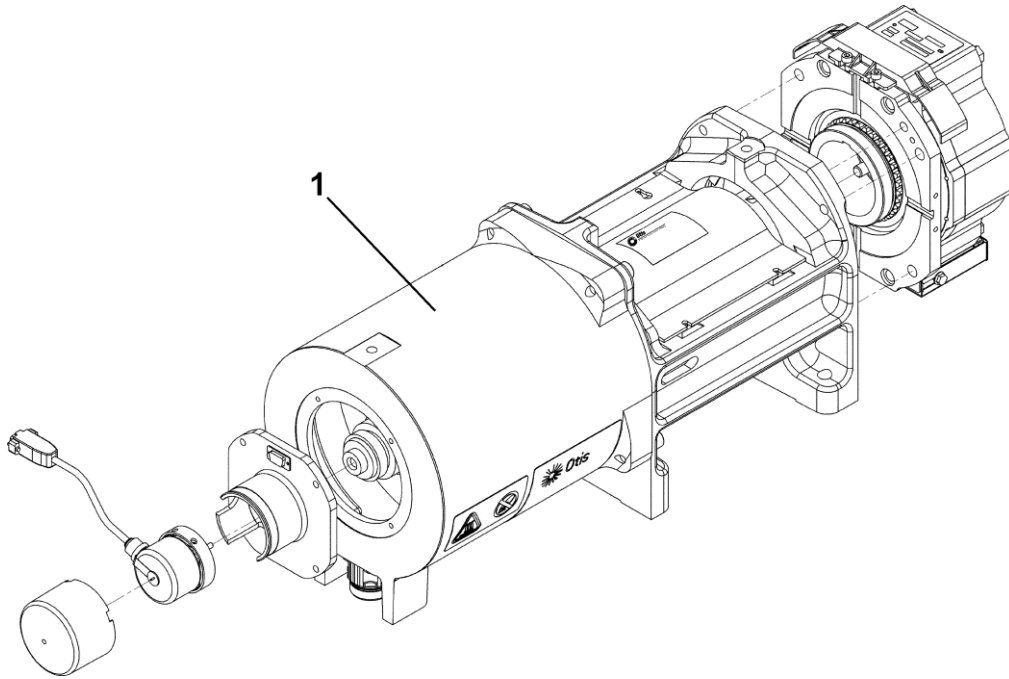
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing. While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. 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.



AAA20220AL ABA20220AL							
REF. No.	PART No.	APPL:	DUTY LOAD (kg)	SPEED (m/s)	MOTOR (V)	BRAKE (V)	DESCRIPTION
1	AAA20220AL11 AAA20220AL1 AAA20220AL12 AAA20220AL2 ABA20220AL12 ABA20220AL2	EN	420–680	1.6	340 (minimum)	24 VDC	Assembly, AC Gearless Machine, EN81 Certified Brake, and Incremental Encoder
	1.0						
	AAA20220AL13 AAA20220AL3 AAA20220AL14 AAA20220AL4 ABA20220AL14 ABA20220AL4						

**NOTE:** See mounting hardware on p. 5.

(Continued on next page)



**AAA20220AL  
ABA20220AL**

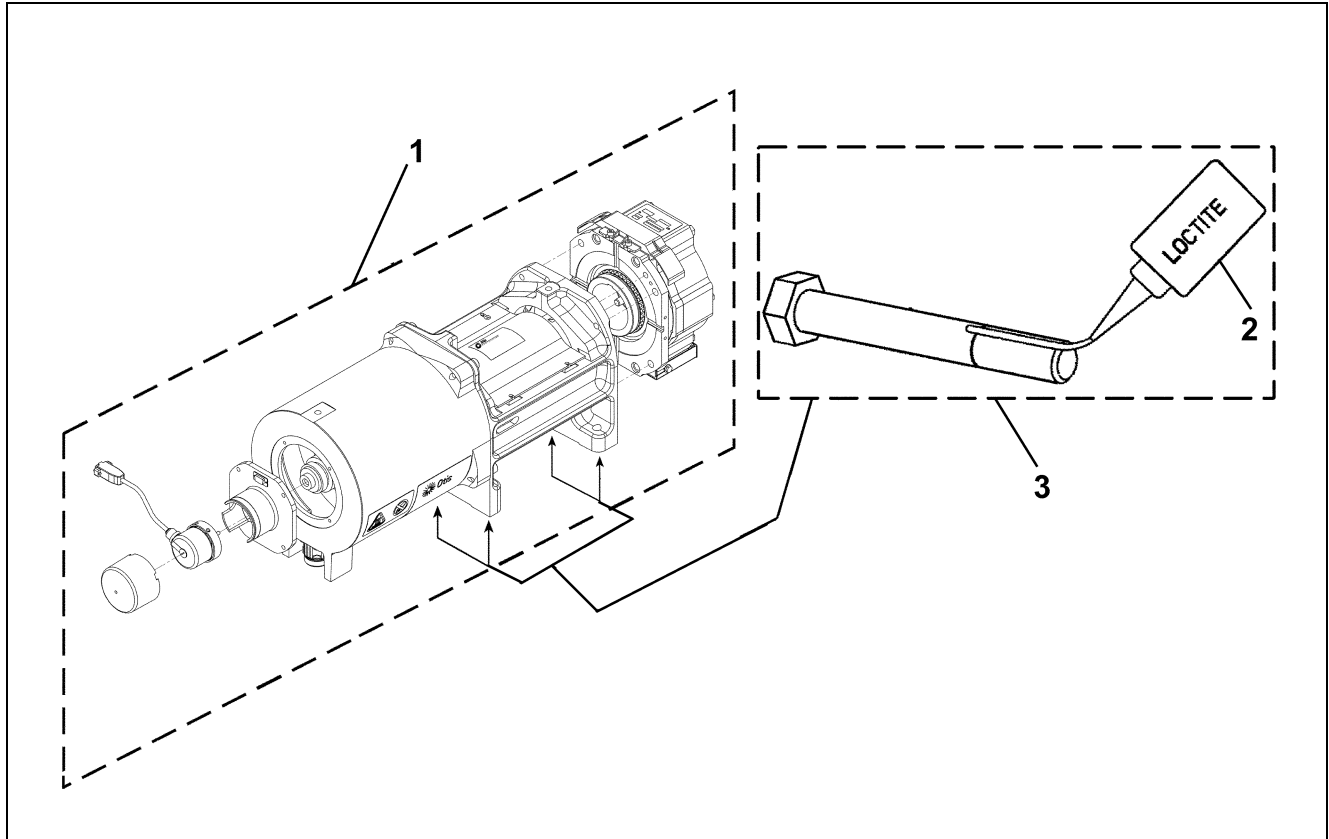
REF. No.	PART No.	AREA	DUTY LOAD (kg)	SPEED (m/s)	MOTOR (V)	BRAKE (V)	DESCRIPTION
1	AAA20220AL15 AAA20220AL5 ABA20220AL15 ABA20220AL5	JIS	600	1.0	170	24 VDC	Assembly, AC Gearless Machine, w/EN81 Certified Brake and Incremental Encoder; Motor Voltage = 513 V
	AAA20220AL16 ABA20220AL16 ABA20220AL6			1.75			
	AAA20220AL17 AAA20220AL7 ABA20220AL17 ABA20220AL7		490	1.0			
	AAA20220AL18 AAA20220AL8 ABA20220AL18 ABA20220AL8			1.75			
	AAA20220AL52 ABA20220AL51	Korea	630	1.0			
				1.6			

**NOTE:** See mounting hardware on p. 5.

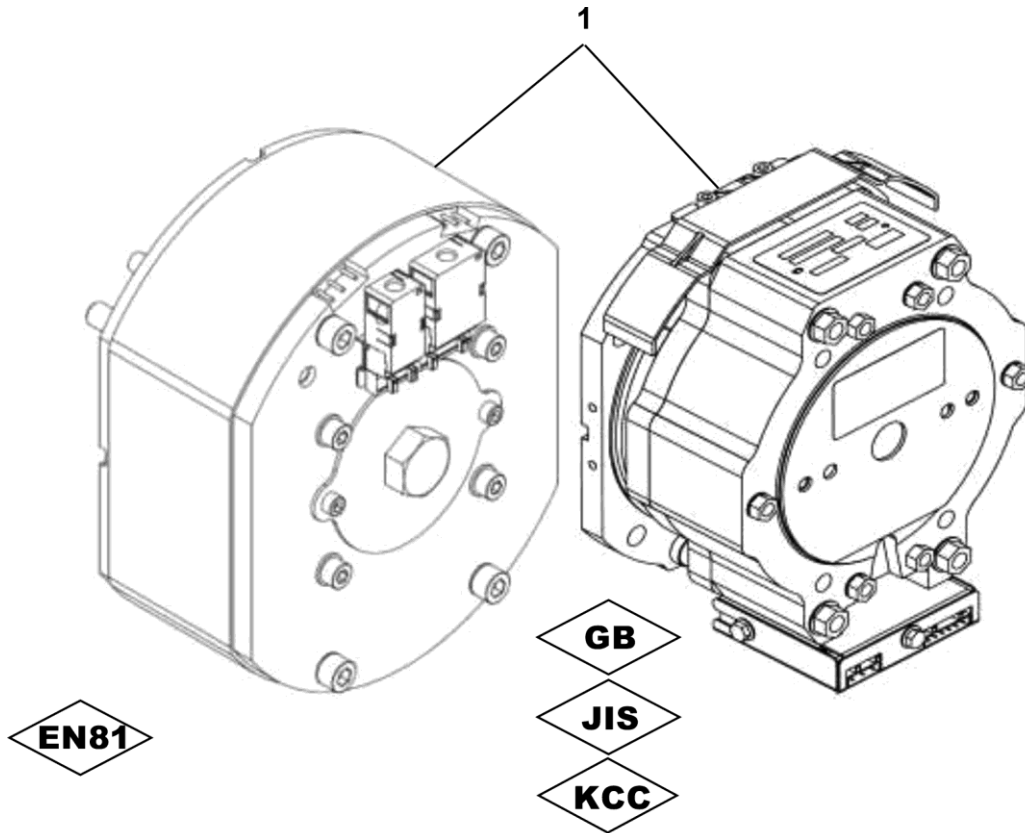
**(Continued on next page)**

# AC Gearless Machines

**06-AAA20220AL**



AAA20220AL ABA20220AL							
REF. No.	PART No.	AREA	DUTY LOAD (kg)	SPEED (m/s)	MOTOR (V)	BRAKE (V)	DESCRIPTION
1	ABA20220AL42	EN, XOEC	420-680	1.6	340 minimum	24 VDC	Assembly, AC Gearless Machine, w/EN81 Certified Brake and w/o Encoder;
	ABA20220AL44			1.0			
	ABA20220AL22	EN		1.6		48 VDC	Assembly, AC Gearless Machine, w/48 V Brake and Rationalized 5 V 2-Channel Encoder
	ABA20220AL24			1.0			
	ABA20220AL32			1.6			
	ABA20220AL34			1.0			
2	AAA180JB1	Glue, Loctite® 243 Sealant, 0 ml Bottle					
3	AAA27076AJ1	Kit, Hex Head Bolt, M16 x 120 mm, Including AAA180JB1					

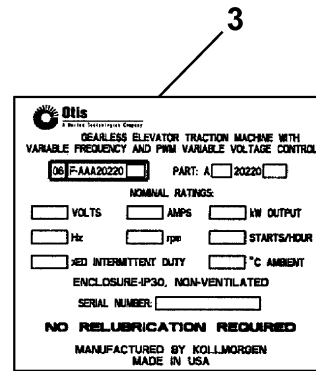
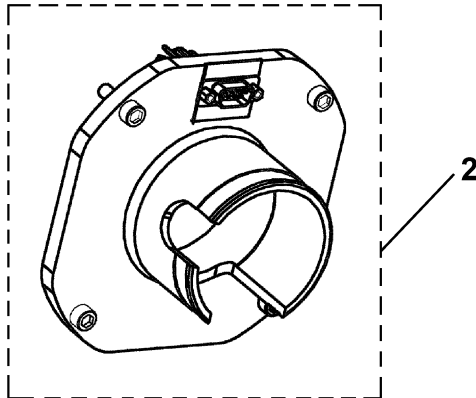
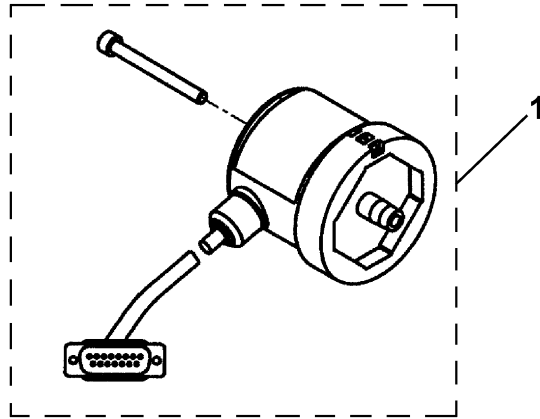


AAA20220AL ABA20220AL					
REF. No.	PART No.	APPLICATION	MAX LOAD (kg)	DESCRIPTION	
1	TCA20222BC6 TCA20222BC7 TAA20222BC8 TAA20236AC1*	Used w/ ABA20220AL2(EN Only), 4(EN Only), 41(EN Only), 42(EN Only), 44(EN Only)	1150	EN81-Certified 24 V Brake, 👁️ SPL 07-TBA20222BC	
	TCA20222BC7	Used w/ ABA20220AL2(GB), 4(GB), 41 (GB), 42(GB), 44(GB)	680	Certified 24 V Brake, 👁️ SPL 07-TBA20222BC	
	TCA20222BC6	Used w/ ABA20220AL51(KCC), 52(KCC)	630		
	TBA20222BC56	Used w/ ABA20220AL5, 6	600		
		TBA20222BC57	Used w/ ABA20220AL7, 8	490	
		TBA20222BF6 TAA20236AD1*	Used w/ ABA20220AL22 (EN only), 24 (EN only)	840	Certified 48 V Brake, 👁️ SPL 07-TAA20222BF
		TBA20222BF6	Used w/ ABA20220AL22, 24	840	Certified 48 V Brake, 👁️ SPL 07-TAA20222BF

\* Only available for countries in EN81 jurisdiction.

# Encoder and Data Plate

**06-AAA20220AL**



REF. No.	PART No.	APPLICATION	DESCRIPTION
1	AAA633Z1	Encoder, Incremental, w/ 5.1 m Cable	Used w/ AAA20220AL1, 2-18, 41-52
	AAA633AG22	Encoder, Rationalized 5 V 2-Channel, w/ 5.1 m Cable	Used w/ AAA20220AL22, 24, 32, 34
2	AAA20220R3	Kit, Encoder Hall Effect Replacement	All AAA20220AL Machines
3	AAA102AHZ2	Plate, Data	