

AC Gearless Machine 2.5T

Spare Parts Leaflet


06-AAA20220AK

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OBSOLESCENCE NOTICE

The product listed in this SPL is obsolete. Some components may still be available, but Otis recommends an upgrade (see TIP 32.2-1 for potential upgrade).


06	AAA20220	AK
06	ABA20220	AK

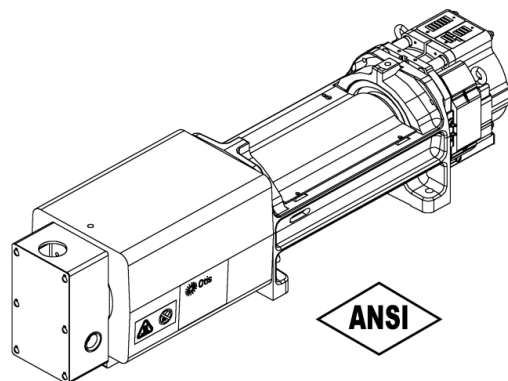
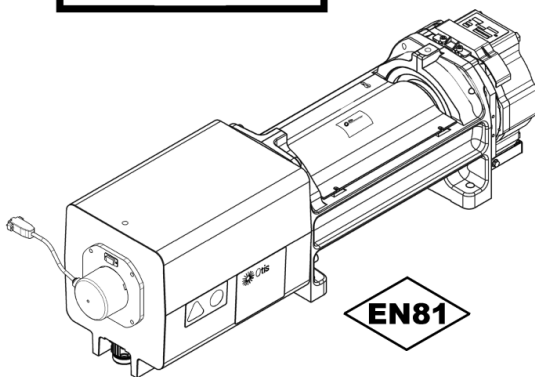
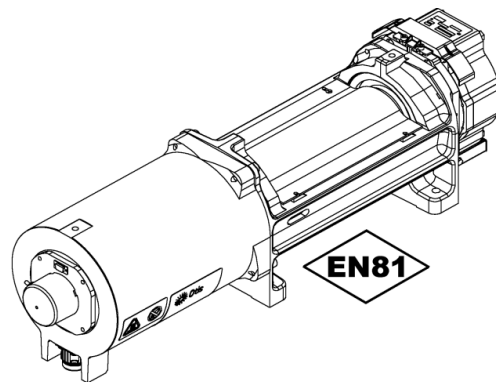

OTIS
 UNITED TECHNOLOGIES
 GEARLESS ELEVATOR TRACTION MACHINE WITH
 VARIABLE FREQUENCY AND PWM VARIABLE VOLTAGE CONTROL

06 | AAA20220 | _____
 CONTRACT NO. _____

NOMINAL RATINGS: AC 3P TIME RATING 90% HZ CONTRACT NO.
 VOLTS STARTS/HOUR KW OUTPUT
 CLASS F °C AMBIENT AMPS
 ED RPM

CAUTION: USE SUPPLY WIRES SUITABLE FOR 90°C
 ENCLLOSURE (PUSH-VENTILATED)
 NO RELUBRICATION REQUIRED

SERIAL NUMBER: _____

 MANUFACTURED BY: HOLLANDER
 MADE IN: _____
 FILE 20064 TOTAL MACHINE WEIGHT: NO (IMP.)



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

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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Leaflet Description

This leaflet provides spare parts information for the AC gearless machine, type AAA20220AK. These AC gearless machines were designed specifically for the Gen2® machine roomless elevator system and they allow very quiet and efficient operation.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
April 1, 2003	Amer Aziz	New SPL
September 18, 2003	Wendy Smerk	Part changes pp. 4 and 6
April 30, 2004	James Draper	Updated SPL number in references 1 and 2, on page 5
December 15, 2004	Ben Watson	Added NOTE to Pages 3 and 4
January 15, 2007	Scott Boulanger	Added rationalized encoder.
August 17, 2011	Val Sheynkman	Added new p. 11
August 3, 2016	Kyle Pereira	Updated p. 10, added new p. 11
Sept 7, 2021	Arianisis Mangual Camilo Cardona	Updated p. 10, added Applications and Max Load to brakes section
September 14, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover
March 22, 2023	Juan Murillo	Updated OBSOLESCENCE notice on cover
October 23, 2024	Juan Murillo	Updated OBSOLESCENCE notice on cover

Related Drawings

Drawing No.	Title	Drawing No.	Title
AAA20220AK	A.C. Gearless Machine	TBA20222BC	Brake
ABA20220AK	A.C. Gearless Machine	TBA20222BD	Brake
AAA633Z	Encoder (2-channel)	AAA27076CJ	Rescue Sensor Encoder Replacement Kit
AAA633AE	Encoder (3-channel)	- - -	- - -

Related Documents

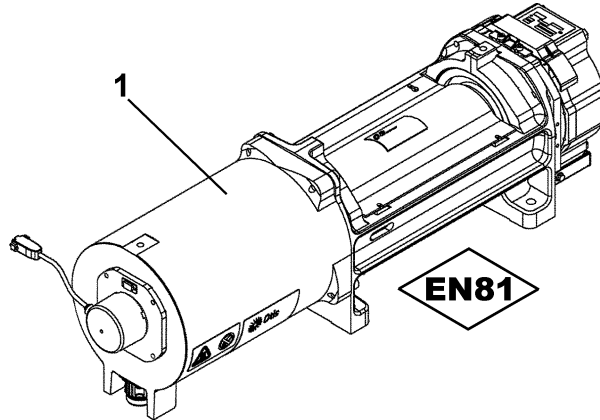
Document ID	Title
SPL 07-TBA20222BC	CR Brake for Gen2 System
SPL 07-TBA20222BD	2.5T NAA/ANSI Brake for Gen2 System
SPL 07-TAA20222BF	EN 81 Brake (48V) for Gen2 System
TIP 6.1.11-15	Gen2® Main and Rescue Encoder Retrofit

Subject Matter Expert

Name	Department
Camilo Cardona	LDC-F Machines

2.5T Machine (EN81)

06-AAA20220AK

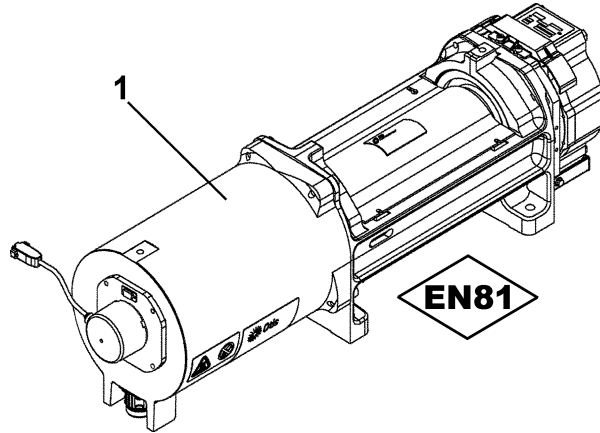


**AAA20220AK
ABA20220AK**

REF. No.	PART No.	APPLICATION	DUTY LOAD (kg)	SPEED (m/s)	DESCRIPTION
1	AAA20220AK11 AAA20220AK1 ABA20220AK11 ABA20220AK1	EN	700–840	1.6	Assembly, AC Gearless Machine, 24 V Brake and Incremental Encoder; Motor Voltage = 340 (minimum)
	AAA20220AK12 AAA20220AK2 ABA20220AK12 ABA20220AK2		900–1050		
	AAA20220AK13 AAA20220AK3 ABA20220AK13 ABA20220AK3		700–840	1.0	
	AAA20220AK14 AAA20220AK4 ABA20220AK14 ABA20220AK4		900–1050		
	ABA20220AK44	Korea	770	1.6	
	ABA20220AK42		1150		
	ABA20220AK43		770	1.0	
	ABA20220AK41		1150		

NOTE: Data plates on some machines have been imprinted with part no. that indicates motor w/o brake (e.g., AAA20220AK11). The field replacement assembly should be the complete motor with brake (e.g., AAA20220AK1), shown as a substitution for each of these identities / applications.

(Continued on next page)



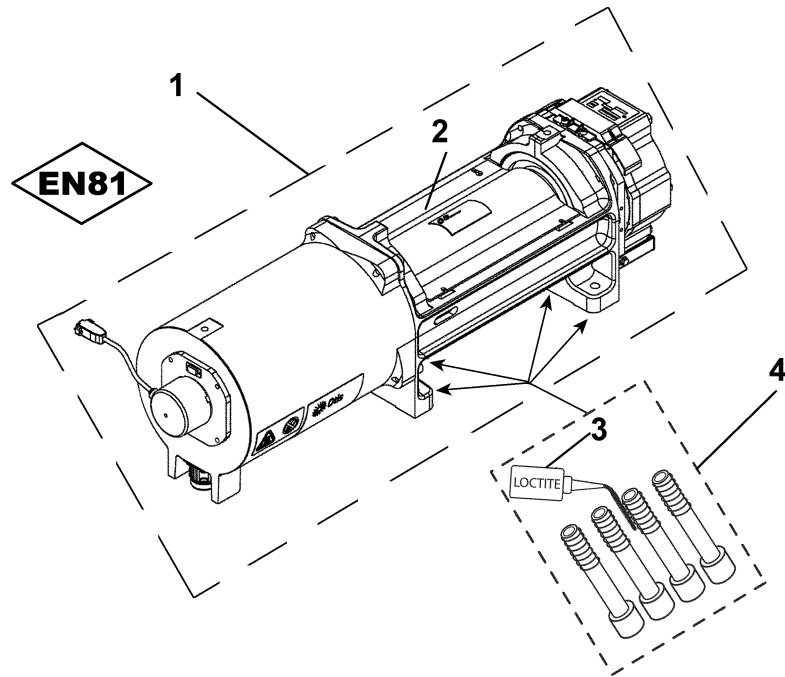
AAA20220AK
ABA20220AK

REF. No.	PART No.	APPLICATION	DUTY LOAD (kg)	SPEED (m/s)	DESCRIPTION
1	ABA20220AK168	Swift	630	1.6	Assembly, AC Gearless Machine, 48 V Brake and 5 V Incremental Encoder; Motor Voltage = 340 (minimum)
	ABA20220AK165		840		
	ABA20220AK162		1050		
	ABA20220AK167		630	1.0	
	ABA20220AK164		840		
	ABA20220AK161		1050		
	ABA20220AK55	OTI	750		Assembly, AC Gearless Machine, 24 V Brake and Incremental Encoder; Motor Voltage = 170
	ABA20220AK45		850		
	AAA20220AK17				
	AAA20220AK7				
	ABA20220AK17				
	ABA20220AK7				

NOTE: Data plates on some machines have been imprinted with part no. that indicates motor w/o brake (e.g., AAA20220AK55). The field replacement assembly should be the complete motor with brake (e.g., AAA20220AK45), shown as a substitution for each of these identities / applications.

2.5T Machine (EN81) Components

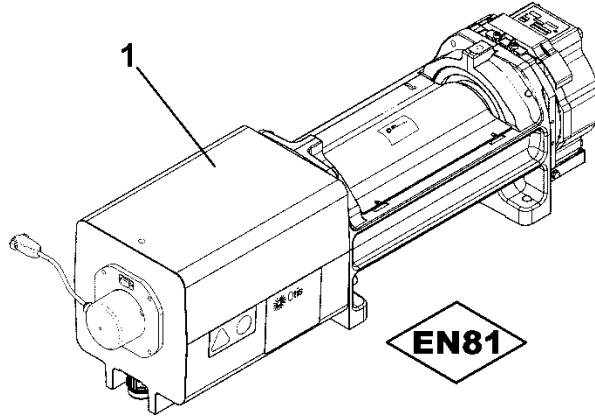
06-AAA20220AK



REF. No.	PART No.	DESCRIPTION
	AAA20220AK ABA20220AK	
1	AAA20220AK19 AAA20220AK9 ABA20220AK19 ABA20220AK9 ABA20220AK161	Assembly, AC Gearless Machine, 48 V Brake and 5 V Incremental Encoder; Motor Voltage = 340 (minimum); Application = Gen2 Underslung; Duty Load = 900–1050 kg; Speed = 1.0 m/s
2	AAA384AHT1	Cover (Guard)
3	AAA180JB1	Glue, Loctite®243, Threadlocker, 10 ml Bottle
4	AAA27076AJ1	Kit, Consists of: (4) Hex Socket Head Screws, M16 x 120 mm and (1) Ref. 3

NOTE: Data plates on some machines have been imprinted with part no. that indicates motor w/o brake (e.g., AAA20220AK19). The field replacement assembly should be the complete motor with brake (e.g., AAA20220AK9), shown as a substitution for each of these identities / applications.

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AAA20220AK
ABA20220AK

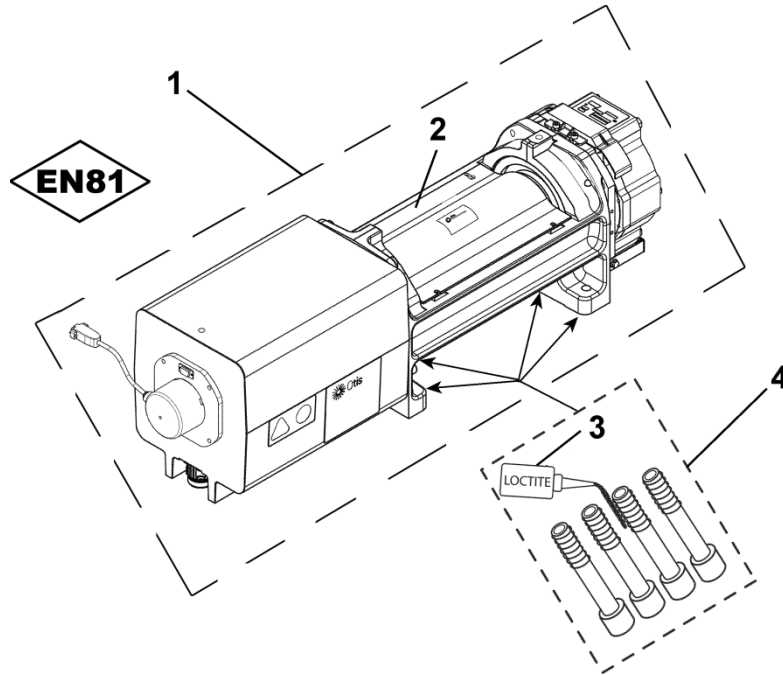
REF. No.	PART No.	APPLICATION	DUTY LOAD (kg)	SPEED (m/s)	DESCRIPTION
1	AAA20220AK15 AAA20220AK5 ABA20220AK15 ABA20220AK5	EN	700–840	1.75	Assembly, AC Gearless Machine, 24 V Brake and Incremental Encoder; Motor Voltage = 372 (minimum)
	AAA20220AK16 AAA20220AK6 ABA20220AK16 ABA20220AK6		900–1050		
	ABA20220AK169	Swift	630		Assembly, AC Gearless Machine, 48 V Brake and 5 V Incremental Encoder; Motor Voltage = 372 (minimum)
	ABA20220AK166		840		
	ABA20220AK163		1050		
	ABA20220AK56 ABA20220AK46	OTI	750		Assembly, AC Gearless Machine, 24 V Brake and Incremental Encoder; Motor Voltage = 170
	AAA20220AK18 AAA20220AK8 ABA20220AK18 ABA20220AK8		850		

NOTE: Data plates on some machines have been imprinted with part no. that indicates motor w/o brake (e.g., AAA20220AK15). The field replacement assembly should be the complete motor with brake (e.g., AAA20220AK5), shown as a substitution for each of these identities / applications.

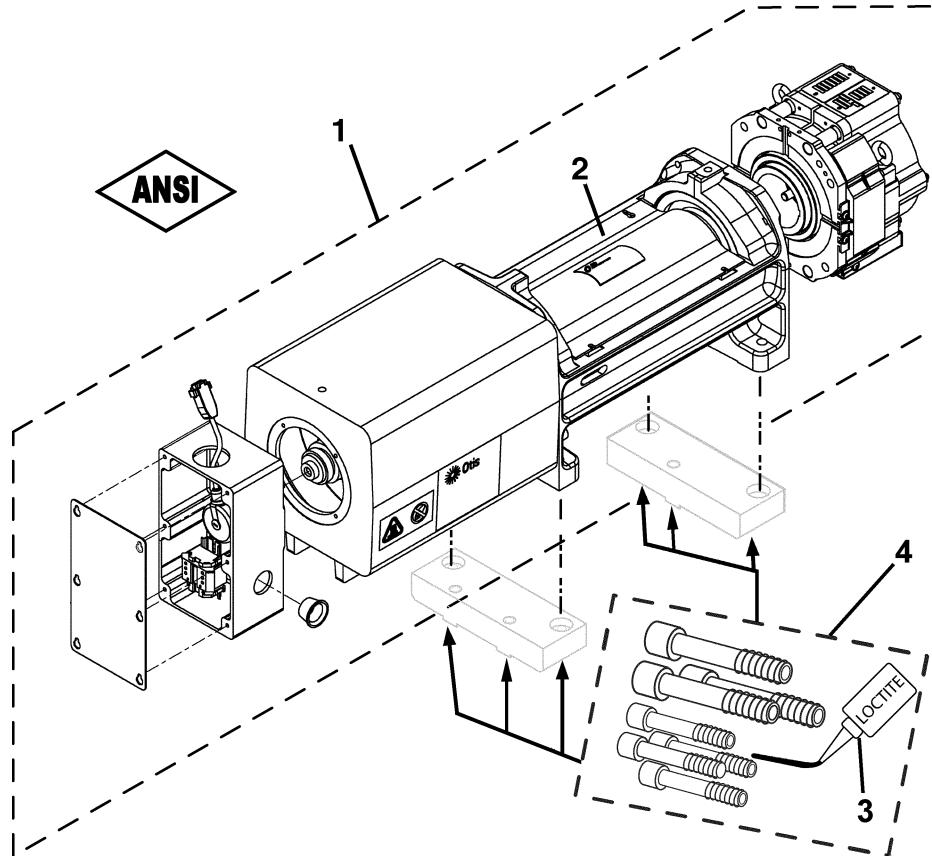
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2.5T Machine (EN81) Components

06-AAA20220AK



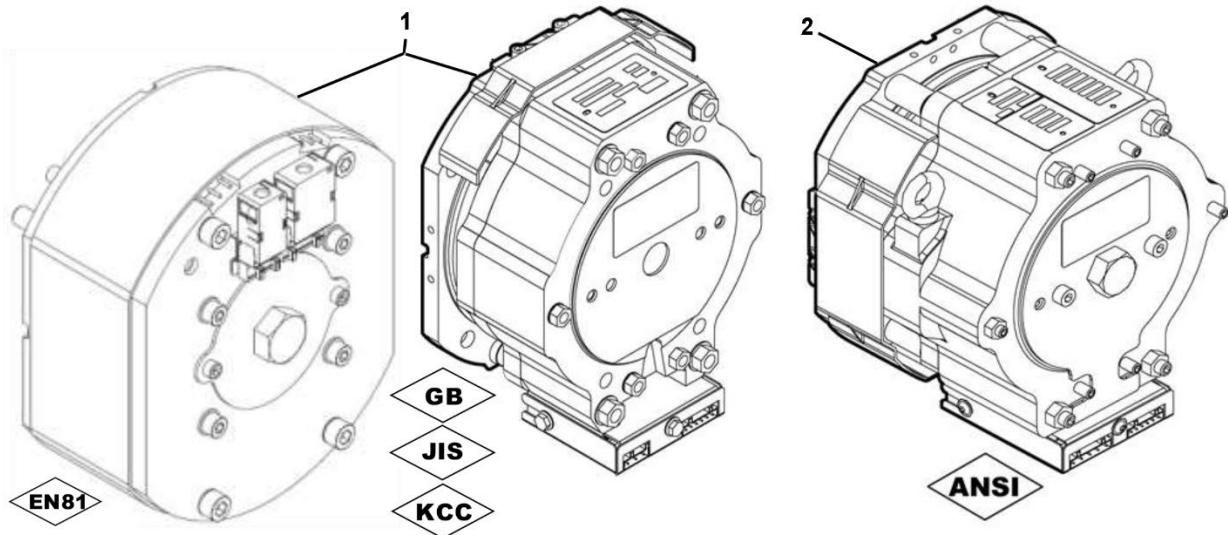
REF. No.	PART No.	APPLICATION	DUTY LOAD (kg)	SPEED (m/s)	DESCRIPTION
	AAA20220AK ABA20220AK				
1	ABA20220AK102	EN (Korea)	900–1050 (770)	1.5–1.6	Assembly, AC Gearless Machine, 48 V Brake and Rationalized 5 V Encoder; Motor Voltage = 372 (minimum)
	ABA20220AK101	EN	700–840		
	ABA20220AK103		1.0		
	ABA20220AK104			900–1050	
	ABA20220AK105		700–840	1.75	
	ABA20220AK106		900–1050		
	ABA20220AK111		700–840	1.5–1.6	
	ABA20220AK112		900–1050		
	ABA20220AK113		700–840	1.0	
	ABA20220AK114		900–1050		
	ABA20220AK115		700–840	1.75	
	ABA20220AK116		900–1050		
2	AAA384AHT1	Cover (Guard)			
3	AAA180JB1	Glue, Loctite®243, Threadlocker, 10 ml Bottle			
4	AAA27076AJ1	Kit, Consists of: (4) Hex Socket Head Screws, M16 x 120 mm and (1) Ref. 3			



REF. No.	PART No.	DESCRIPTION
	AAA20220AK ABA20220AK	
1	AAA20220AK35 AAA20220AK36 ABA20220AK36	Assembly, AC Gearless Machine with 26 V Brake and Incremental Encoder; Motor Voltage = 372 (minimum); Application = ANSI; Duty Load = 2100–2500 lb. (955–1135 kg); Speed = 200–350 FPM (1.02–1.78 m/s)
2	AAA384AHT1	Guard, Sheave
3	AAA180JB1	Glue, Loctite®243, Threadlocker, 10 ml Bottle
4	AAA27076AJ2	Kit, including (4) Hex Socket Head Cap Screws, M16 x 50 mm, (3) Hex Head Screws, M16 x 55 mm, and (1) Ref. 3

Brake Assemblies

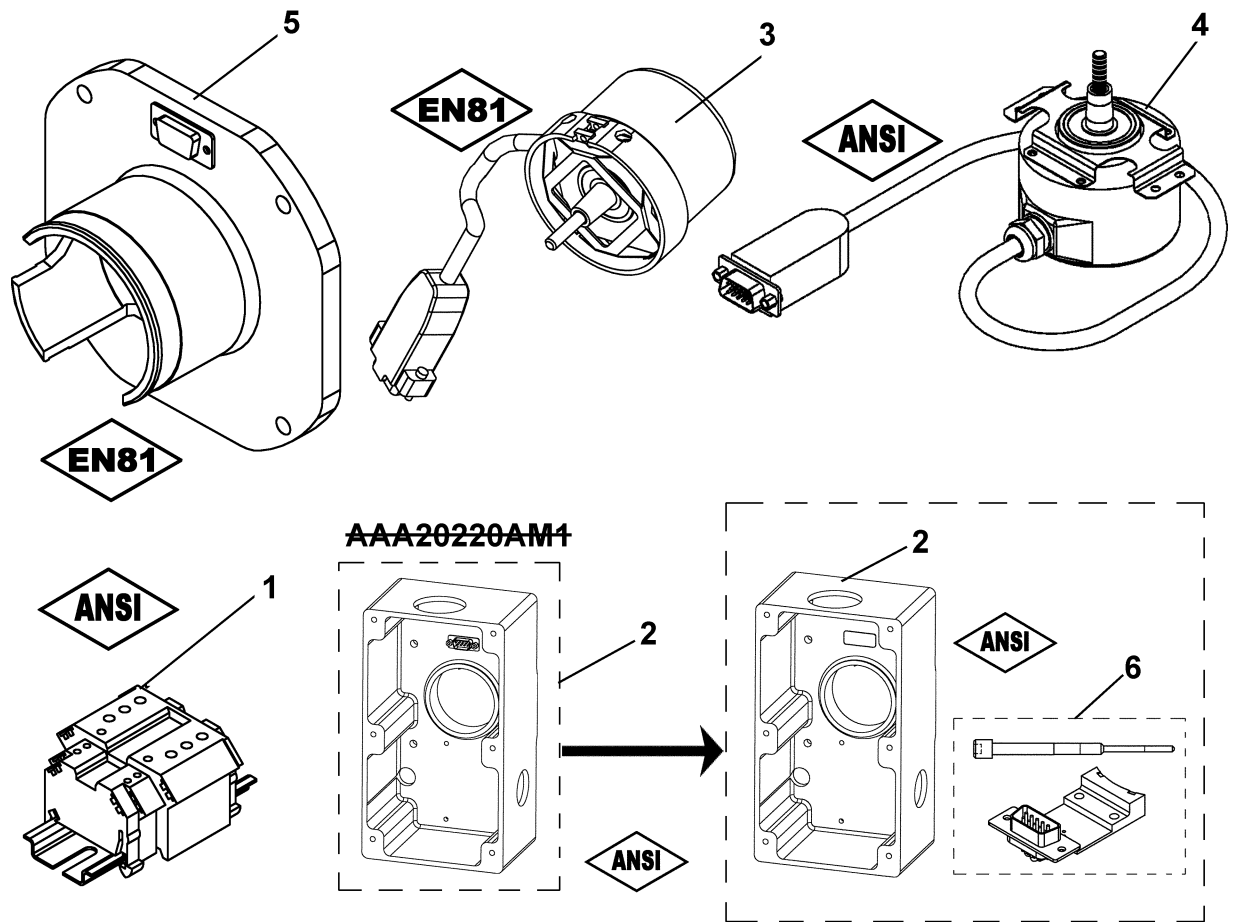
06-AAA20220AK




AAA20220AK
ABA20220AK

REF. No.	PART No.	APPLICATION	MAX LOAD (kg)	DESCRIPTION
1	TAB20222BC5 TBA20222BC5 TBA20222BC6 TAA20236AC1*	Used w/ ABA20220AK1, 2(EN Only), 3, 4(EN Only), 5, 6(EN Only), 43, 44, 45, 91(EN Only), 92(EN Only), 93(EN Only), 94(EN Only), 95(EN Only), 96(EN Only),	1150	EN81-Certified 24 V Brake, SPL 07-TBA20222BC
	TAA20222BF5 TBA20222BF5 TAA20222BF6 TBA20222BF6 TAA20222BF7 TBA20222BF7 TAA20236AD1*	Used w/ ABA20220AK101 (EN only), 102(EN only), 103(EN only), 104(EN only), 105(EN only), 106(EN only), 161 (EN only), 162 (EN only), 163 (EN only), 164 (EN only), 165 (EN only), 166 (EN only), 167 (EN only), 168 (EN only), 169 (EN only)	1150	EN81-Certified 48 V Brake, SPL 07-TBA20222BF
	TBA20222BC5	Used w/ ABA20220AK2(KCC), 4(KCC), 6(KCC), 7, 92(GB), 94(GB), 96(GB)	1050	Certified 24 V Brake, SPL 07-TBA20222BC for Details
	TAB20222BC5	Used w/ ABA20220AK8	850	
	TAB20222BC55	Used w/ ABA20220AK7, 8	1050	
	TBA20222BC56	Used w/ ABA20220AK46	750	
	TBA20222BC6	Used w/ ABA20220AK91(GB), 93(GB), 95(GB)	1050	
	TBA20222BC109	Used w/ ABA20220AK41, 42	1150	
	TAA20222BF1	Used w/ ABA20220AK9	1050	Certified 48 V Brake, SPL 07-TAA20222BF
	TAA20222BF5	Used w/ ABA20220AK102, 104, 106, 161, 162, 163	1050	
	TAA20222BF6	Used w/ ABA20220AK101, 103, 105, 164, 165, 166	840	
	TAA20222BF7	Used w/ ABA20220AK167, 168, 169,	680	
	TAA20222BF55	Used w/ ABA20220AK107, 108	1000	
	TAA20222BF56	Used w/ ABA20220AK145, 146	750	
	TAA20222BF105	Used w/ ABA20220AK9	1050	
2	TBA20222BD102	Used w/ ABA20220AK36	1135	ANSI-Certified Dual Solenoid 26 V Brake, SPL 07-TBA20222BD

* Only available for countries in EN81 Jurisdiction (this brake is currently not certified for Korea/KCC, Japan/JIS and China/GB).

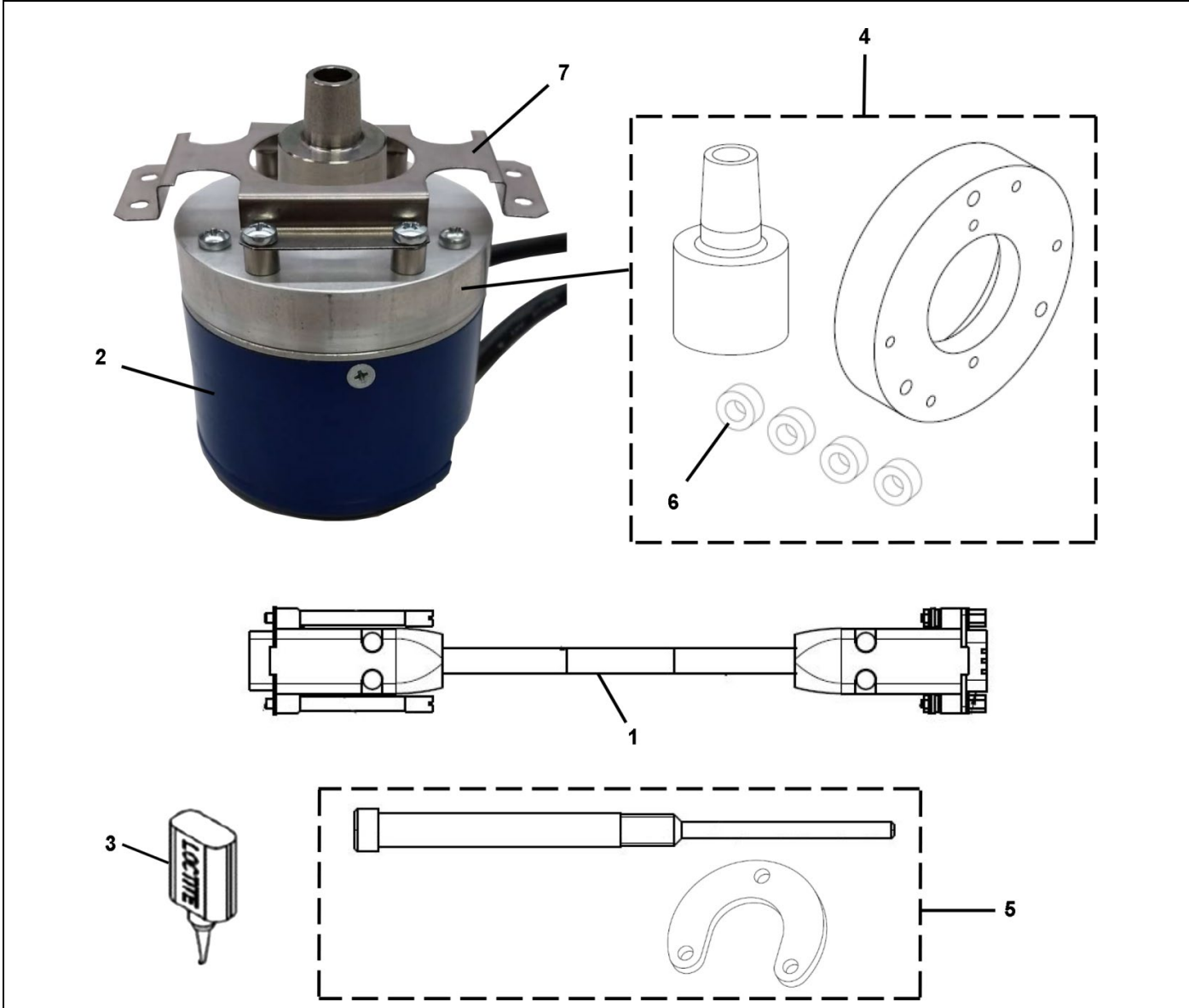



**AAA20220AK
ABA20220AK**

REF. No.	PART No.	DESCRIPTION	W→ AAA20220AK ARRANGEMENT	W→ ABA20220AK ARRANGEMENT	REMARKS	
1	AAA21303CU1	Block, Terminal	35, 36	36	ANSI	
2	AAA20220AM1	Box, Terminal			ANSI	ANSI
	AAA20220AM2					ANSI plus Ref. 6
3	AAA633Z1	Encoder, Main, 10 V Incremental, 2-Channel with Mounting Hardware and Allen Wrenches	1-8	1-8, 11-18, 41-56, 101-156	EN81	
	AAA633Z5	Encoder, Main, 5 V Incremental, 2-Channel with Mounting Hardware and Allen Wrenches	9	9, 19, 161-169	EN81	
4	AAA633AE1	Encoder, Main, Incremental, 3-Channel with Mounting Hardware and Allen Wrenches	35, 36	36	ANSI	
5	AAA20220R3	Kit, Rescue Sensor Encoder Replacement, Hall Effect	1-9	1-18, 41-169	EN81	
6	AAA27076CJ4	Kit, Rescue Sensor Encoder Replacement,  p. 11	35, 36	36	ANSI	

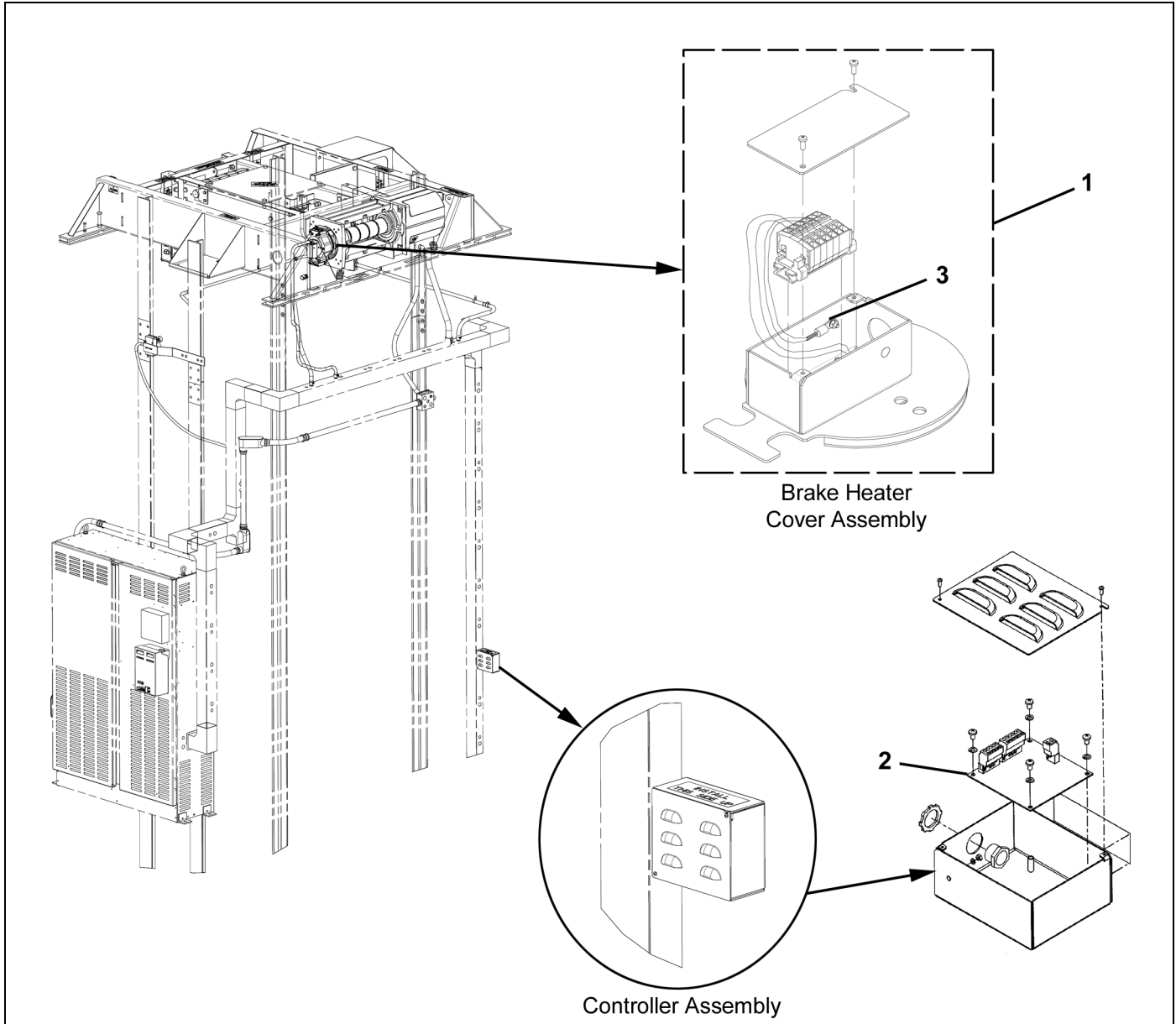
Retrofit Encoder

06-AAA20220AK



AAA20220AK ABA20220AK			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA174BVG2	Cable, Adaptor, 9-pin to 15-pin, 8 ft.	 TIP 6.1.11-15 for installation instructions and further details.
2	AAA633AJ402	Encoder	
3	AAA180JB1	Glue, Loctite®243, Threadlocker, 10 ml Bottle	
4	AAA27076HD400	Kit, Adaptors and Hardware	
5	AAA27076HD402	Kit, Encoder Removal and Hardware	
6	AAA462FD2	Spacer, 5 mm	
7	---	Spring, Attaching (reuse existing from AAA633AE1)	

Brake Heater Assembly



AAA20220AK ABA20220AK			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA24430T1	Assembly, Brake Heater Cover	For ANSI machine brakes with data tag prefix "TAB"
	AAA24430T2		For ANSI machine brakes with data tag prefix "TBA"
2	ABA26800ANC1	Assembly, Controller PCB	ANSI / CSA
3	AAA660A16	Thermistor	

NOTE: For details, see SWP N-1.1.18.0-3.