

**Variable Frequency
(OVF30) Drives:
70A–210A**

**Spare Parts Leaflet
10-AAA21290AK**

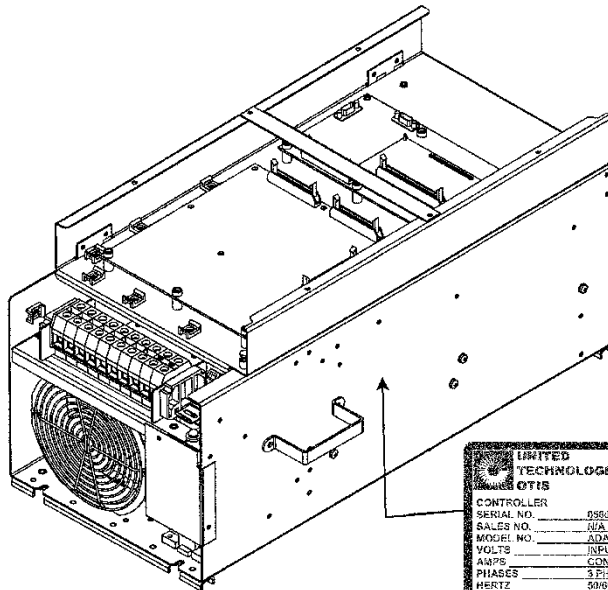
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OBSOLESCENCE NOTICE

Some of the products covered in this SPL are no longer available as a new part. See the TIPS and SWP referenced in this SPL and the TIP 32.2-1, *Obsolete Components*, for potential upgrades. Replacement lower-level parts listed within and unique to this design will be reviewed for obsolescence.

This document includes spare parts for the following drives:

70A	A*A21290AK
90A	A*A21290BJ
120A	A*A21290BA
210A	A*A21290BM



UNITED TECHNOLOGIES OTIS	
ESTABLISHED 1900 700 WESTERN AVENUE MILWAUKEE, WISCONSIN 53212-1000	
CONTROLLER	DS6011
SERIAL NO.	05A
SALES NO.	05A
MODEL NO.	AA21290AK
VOLTS	INPUT 320VAC MINIMUM - 520 MAXIMUM
AMPS	CONTINUOUS/ACCELERATING = 35/70AMPS
PHASES	3 PHASE
HERTZ	50/60 Hz
ILF	N/A
WIRER	N/A
COMP. VINTAGE NO.	AA21290AK
COMPONENT CODE	10
WIRING DIAGRAM	AA21290AK
DATE	03/2011



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 detail information for all the Otis Variable Frequency (OVF) Drive systems: A*A21290AK (70A); A*A21290BJ (90A); A*A21290BA (120A); and A*A21290BM (210A). Various PC boards are also included in this document. Additional replacement parts are called out where appropriate.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
November 1, 1999	Anh Pham	New leaflet, Initial Release
August 15, 2003	Anh Pham	Changed the component code from 09 to 10; modified the leaflet title to reflect the amp rating of OVF drives; removed AAA174TP cable reference; added processor board kit.
November 15, 2005	Anh Pham	Removed obsolete parts and pages; added new notes for the replacement software & drives.
March 6, 2007	Anh Pham	p. 13 update part number
January 10, 2018	Ali Bozorgzadeh	Corrected part number on p. 4
September 21, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover
February 15, 2023	Anh Pham	Removed obsolete parts; Added UDX relay to low voltage interface board; Added Magnetek Quattro drive replacement reference

Related Drawings

Drawing No.	Title	Drawing No.	Title
ADA21290AK	Assembly: 70A Drive	ACA21290BA	Assembly: 120A Drive
ACA21290BJ	Assembly: 90A Drive	ACA21290BM	Assembly: 210A Drive

Related Documents

Document ID	Title
SPL 10-AAA21290R	<i>Controller, Elevonic 311VF (MVS, HVS) & Geared Elevonic (GEM)</i>
SPL10-AAA21255V	<i>Controller, Elevonic 411M-MS</i>
SWP N-1.1.12.0-2	<i>Drive Replacement on Existing Site</i>
TIP 1.1.11.0-3.	<i>OVF30 Low Voltage Interface Board LVIB with AAA26800BCZ1 Relay Assembly</i>
TIP 1.1.11.2-1	<i>GEM/MVS OVF30 Drive Replacement with Magnetek Drive</i>
TIP 1.1.13.2-3	<i>411M-VF OVF30 Drive Replacement with Magnetek Drive</i>

Subject Matter Expert

Name	Department
Anh Pham	OSC Service Engineering

About Spare Parts Leaflets...

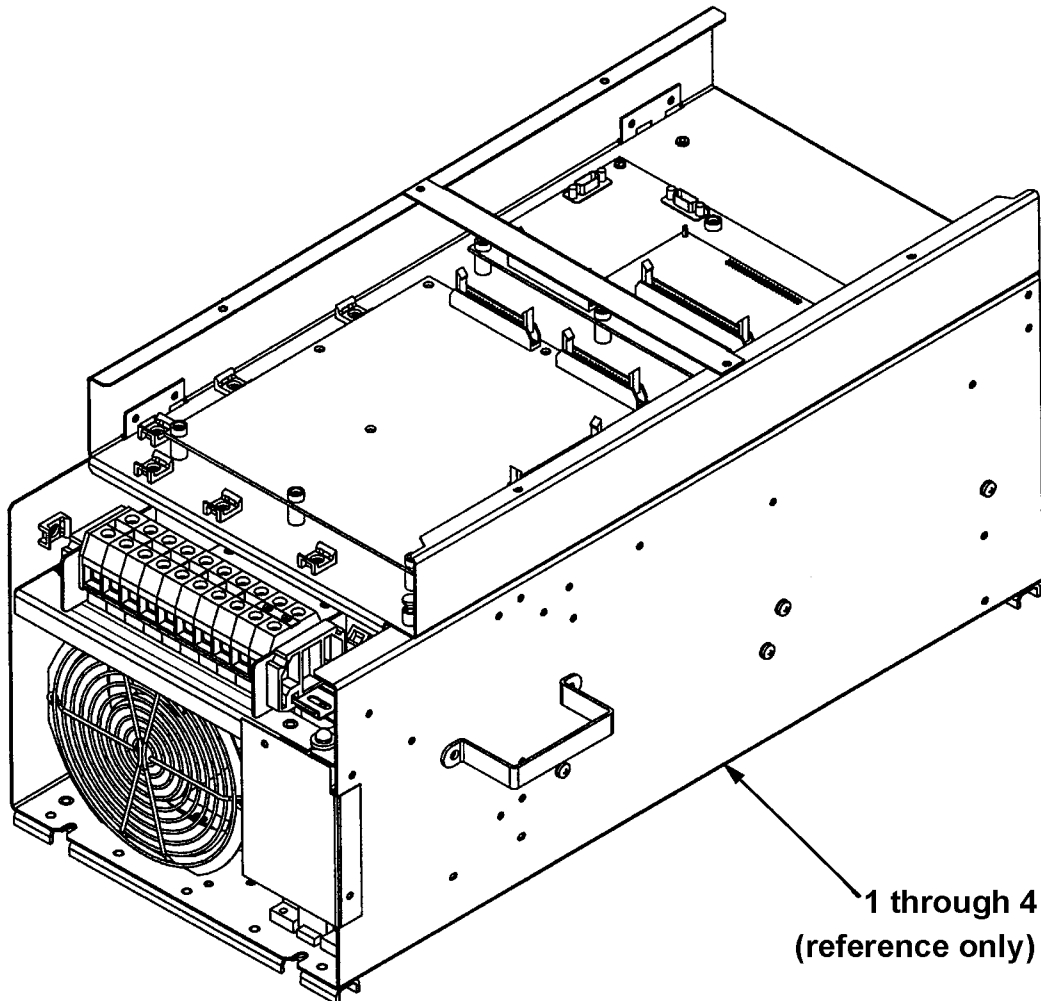
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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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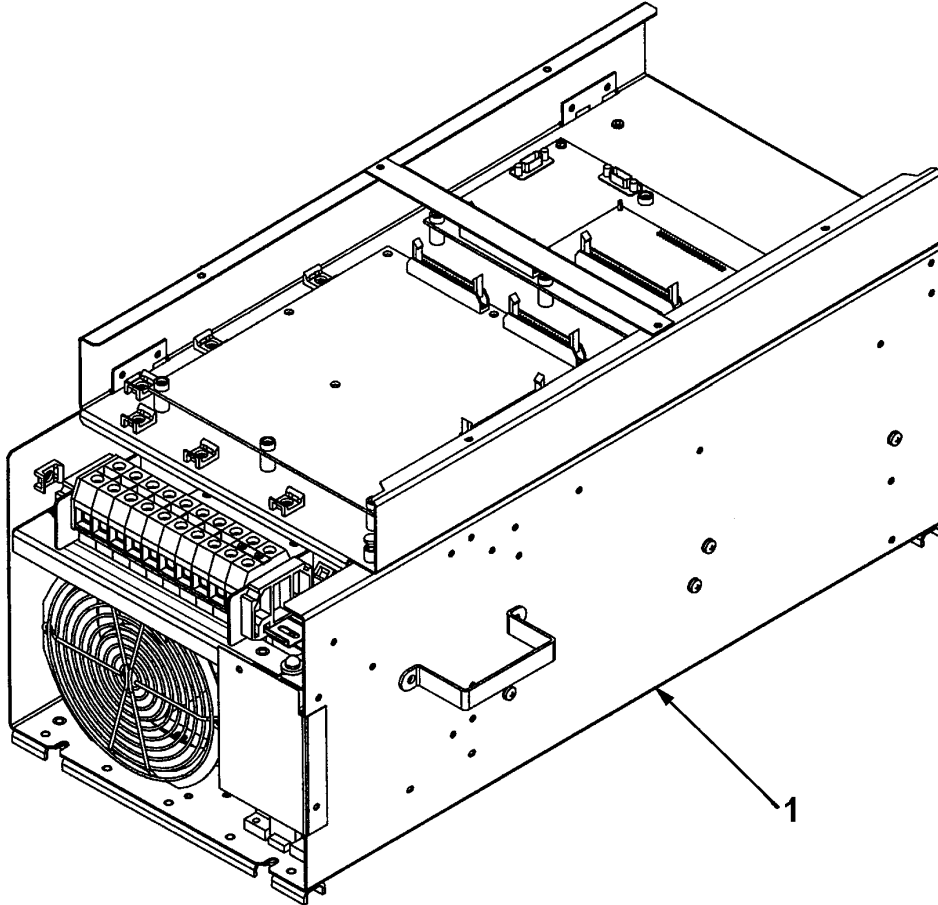


REF. No.	OVF DRIVE PART No.	DESCRIPTION	PAGE No.
1	A*A21290AK_	70A, 480 VAC, OVF	👁 p. 4
2	A*A21290BJ_	90A, 480 VAC, OVF	👁 p. 6
3	A*A21290BA_	120A, 480 VAC, OVF	👁 p. 8
4	A*A21290BM_	210A, 480 VAC, OVF	👁 p. 10

NOTE: For additional drive replacement options, refer to TIP 1.1.11.2-1 for GEM/MVS controller and TIP 1.1.13.2-3 for 411M-VF controller.

10-AAA21290AK

**70A Drive Assembly:
A*A21290AK**

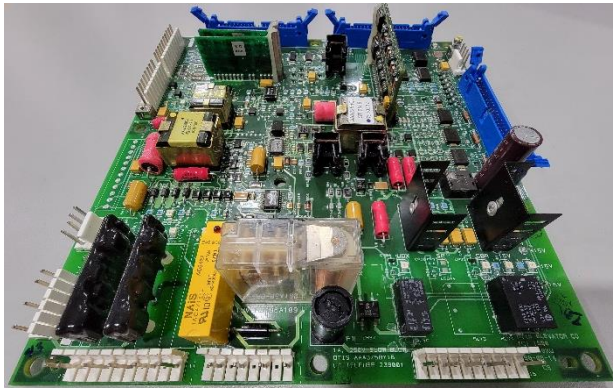
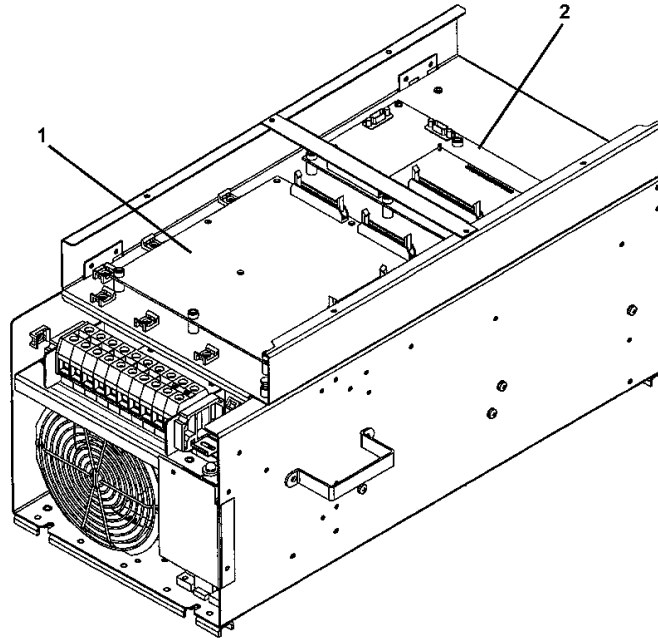


REF. No.	PART No.	REPLACEMENT PART NO.	DESCRIPTION
1	AAA21290AK1	ADA21290AK2	OVF 30, 70 A / 480 VAC Drive
	ABA21290AK1		
	ACA21290AK1		
	ADA21290AK1		
	ABA21290AK2		
	ACA21290AK2		

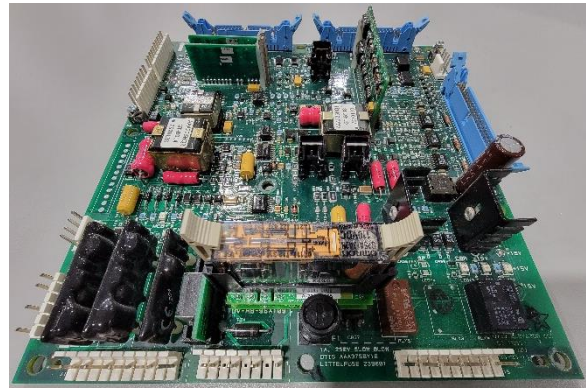
NOTE: When old vintage drives are replaced by new ones, refer to SWP N-1.1.12.0-2 (included in the laminated bus drive) for drive replacement adjustment.

70A Drive PC Boards

10-AAA21290AK



UDX Relay without Socket



UDX Relay with Socket

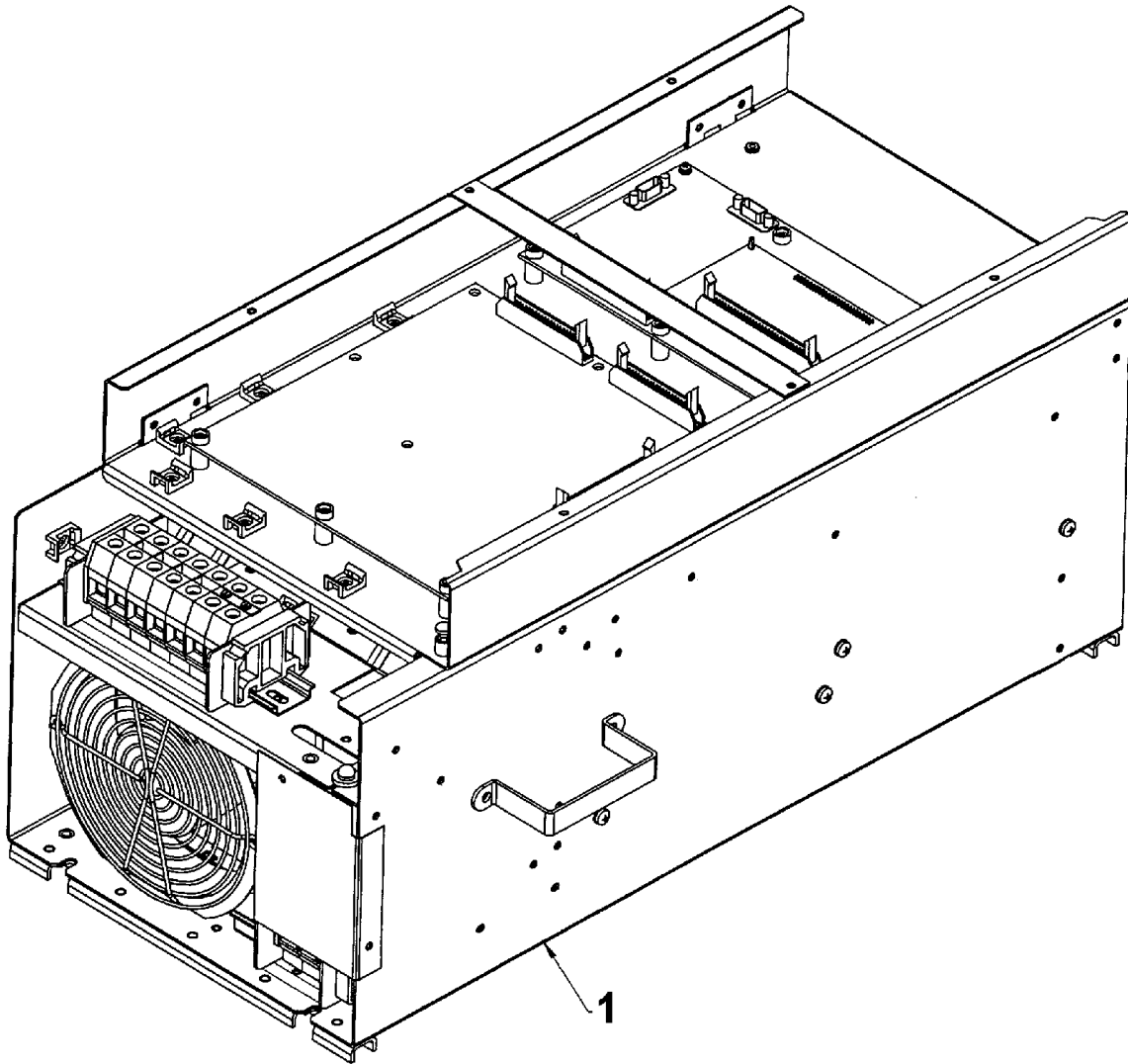
REF. No.	PART No.				DESCRIPTION
	AAA21290AK1	ABA21290AK1	ACA21290AK1	ADA21290AK1	
		ABA21290AK2	ACA21290AK2	ADA21290AK2	
1	ABA26800SA1 ABA26800XU1 ACA26800XU1	ADA26800SA1 ABA26800XU1 ACA26800XU1	ABA26800XU4 ACA26800XU1	ABA26800XU4 ACA26800XU1	LVIB (low voltage interface board). See NOTE 1
2	ABA26800GW1 ABA26800GW4	ABA26800GW1 ABA26800GW4	ABA26800GW1 ABA26800GW4	ACA26800VA1 ADA26800VA1	Processor Board See NOTE 2

NOTE 1: If ordering LVIB PCB with socketed UDX relay, order qty. 1 of space kit AAA27076KR1. Refer to TIP 1.1.11.0-3.

NOTE 2: If the processor PC board is ABA26800GW*, consider replacing the drive. Refer to TIP 1.1.11.2-1 for GEM/MVS controller and TIP 1.1.13.2-3 for 411M-VF controller.

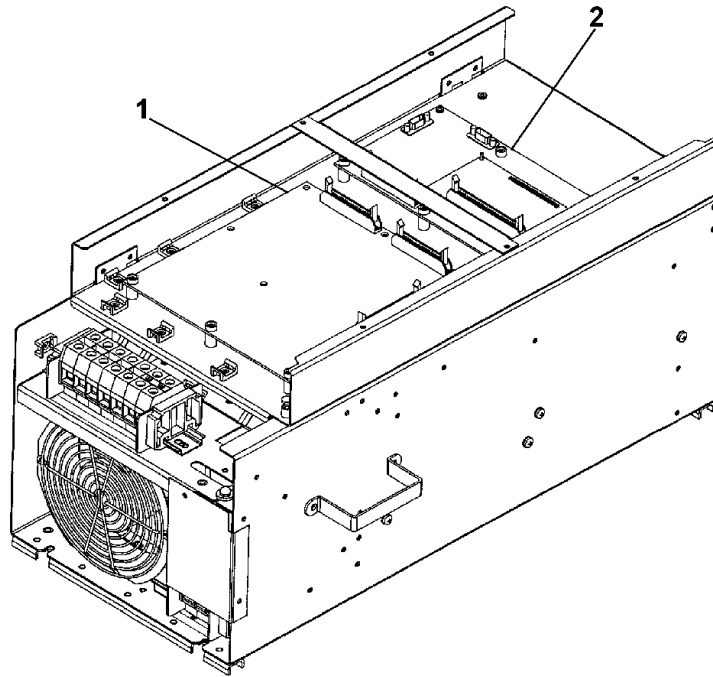
10-AAA21290AK

**90A Drive Assembly:
A * A21290 BJ**

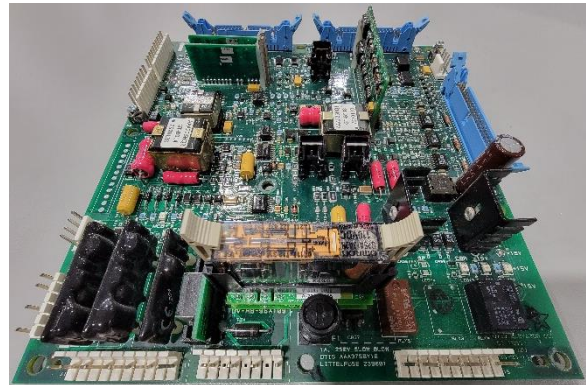


REF. No.	PART No.	REPLACEMENT PART NO.	DESCRIPTION
1	AAA21290BJ1	ACA21290BJ2	OVF 30, 90 A / 480 VAC Drive
	ABA21290BJ1		
	ACA21290BJ1		
	AAA21290BJ2		
	ABA21290BJ2		

NOTE: When old vintage drives are replaced by new ones, refer to SWP N-1.1.12.0-2 (included in the laminated bus drive) for drive replacement adjustment.



UDX Relay without Socket



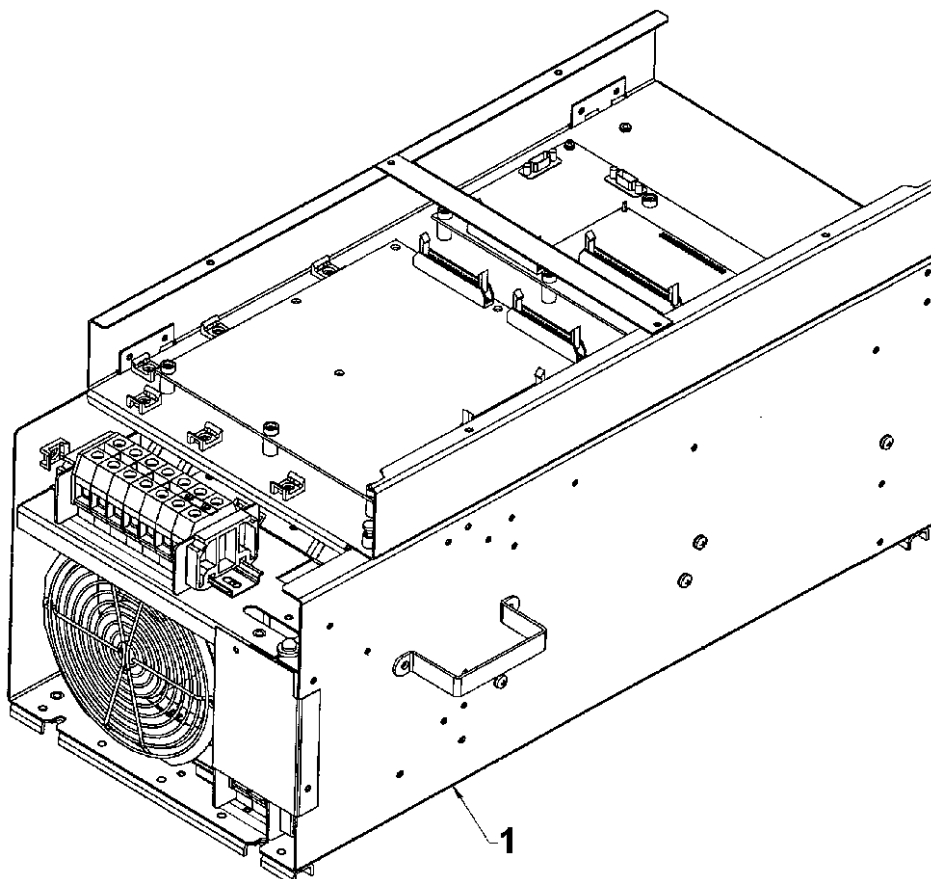
UDX Relay with Socket

REF. No.	PART No.			DESCRIPTION
	AAA21290BJ1 AAA21290BJ2	ABA21290BJ1 ABA21290BJ2	ACA21290BJ1 ACA21290BJ2	
1	ADA26800SA2	ABA26800XU2	ABA26800XU2	LVIB (Low Voltage Interface Board) See NOTE 1
	ABA26800XU2	ACA26800XU2	ACA26800XU2	
	ACA26800XU2			
2	ABA26800GW4	ABA26800GW4	ACA26800VA4	Processor Board See NOTE 2
	ABA26800GW4	ABA26800GW4	ADA26800VA1	

NOTE 1: If ordering LVIB PCB with socketed UDX relay, order qty 1 of space kit AAA27076KR1. Refer to TIP 1.1.11.0-3.

NOTE 2: If the processor PC board is ABA26800GW*, consider replacing the drive. Refer to TIP 1.1.11.2-1 for GEM/MVS controller and TIP 1.1.13.2-3 for 411M-VF controller.

**120A Drive Assembly:
A*A21290BA**

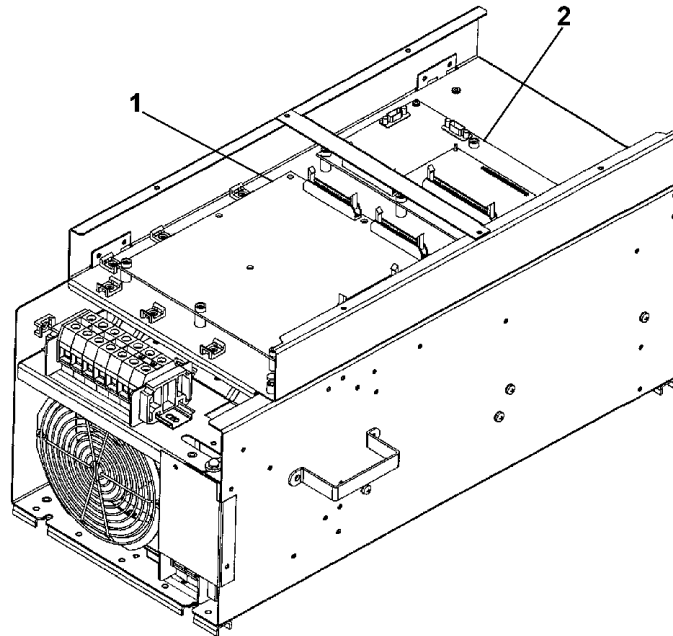


REF. No.	PART No.	REPLACEMENT PART No.	DESCRIPTION
1	AAA21290BA1	ACA21290BA2	OVF 30, 120 A / 480 VAC, NAO, PAO
	ABA21290BA1		
	ACA21290BA1		
	AAA21290BA2		
	ABA21290BA2	ACA21290BA4	OVF 30, 120 A / 480 VAC, ETO
	AAA21290BA3		
	ABA21290BA3		
	ACA21290BA3		
	AAA21290BA4		
	ABA21290BA4		

NOTE: When old vintage drives are replaced by new ones, refer to SWP N-1.1.12.0-2 (included in the laminated bus drive) for drive replacement adjustment.

120A Drive PC Boards

10-AAA21290AK



UDX Relay without Socket



UDX Relay with Socket

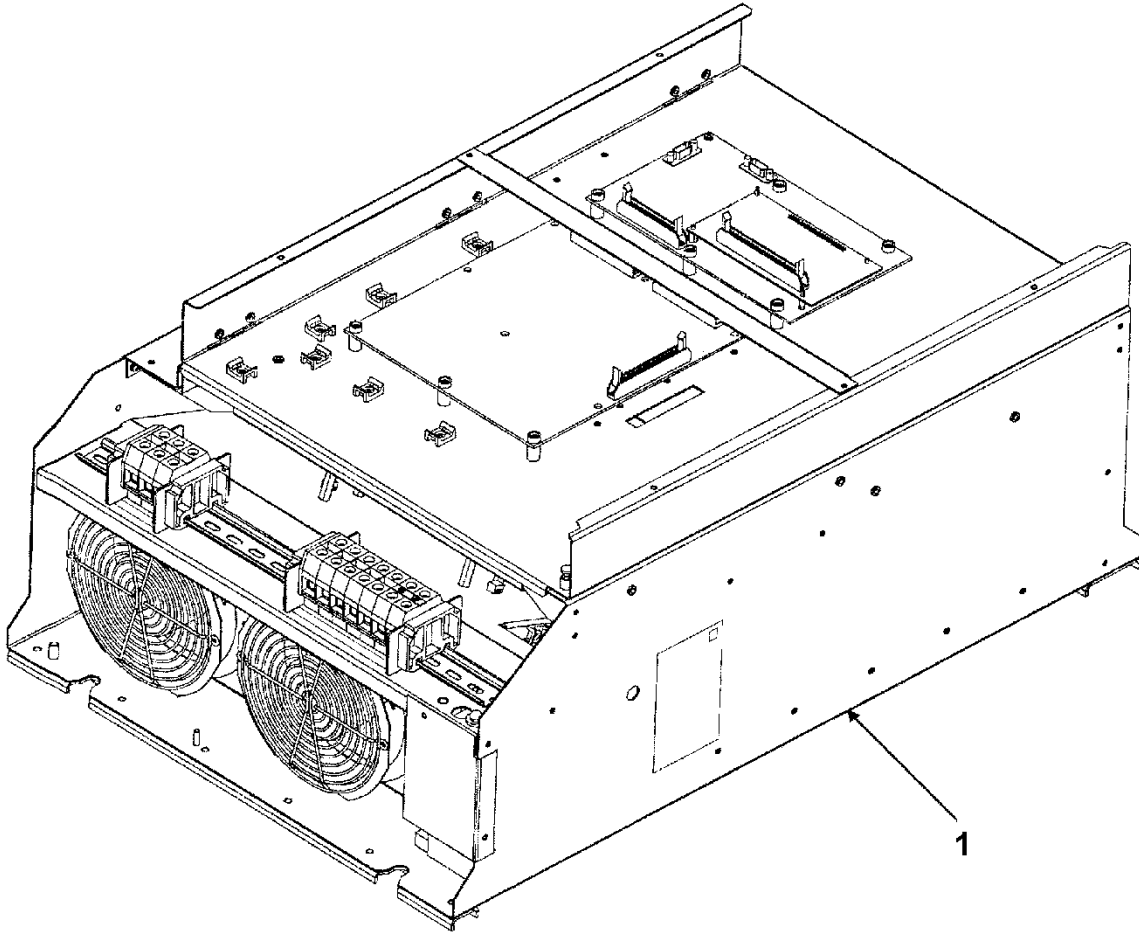
AAA21290BA1	ABA21290BA1	ACA21290BA1
AAA21290BA2	ABA21290BA2	ACA21290BA2
AAA21290BA3	ABA21290BA3	ACA21290BA3
AAA21290BA4	ABA21290BA4	ACA21290BA4

REF. No.	PART No.			
1	ADA26800SA2	ABA26800XU2 ACA26800XU2	ABA26800XU2 ACA26800XU2	LVIB (Low Voltage Interface Board). See NOTE 1
	ABA26800XU2			
	ACA26800XU2			
2	ABA26800GW1	ABA26800GW1 ABA26800GW4	ACA26800VA1 ADA26800VA1	Processor Board
	ABA26800GW4			

NOTE 1: If ordering LVIB PCB with socketed UDX relay, order qty. 1 of space kit AAA27076KR1. Refer to TIP 1.1.11.0-3.

NOTE 2: If the processor PC board is ABA26800GW*, consider replacing the drive. Refer to TIP 1.1.11.2-1 for GEM/MVS controller and TIP 1.1.13.2-3 for 411M-VF controller.

**210A Drive Assembly:
A* A21290BM**

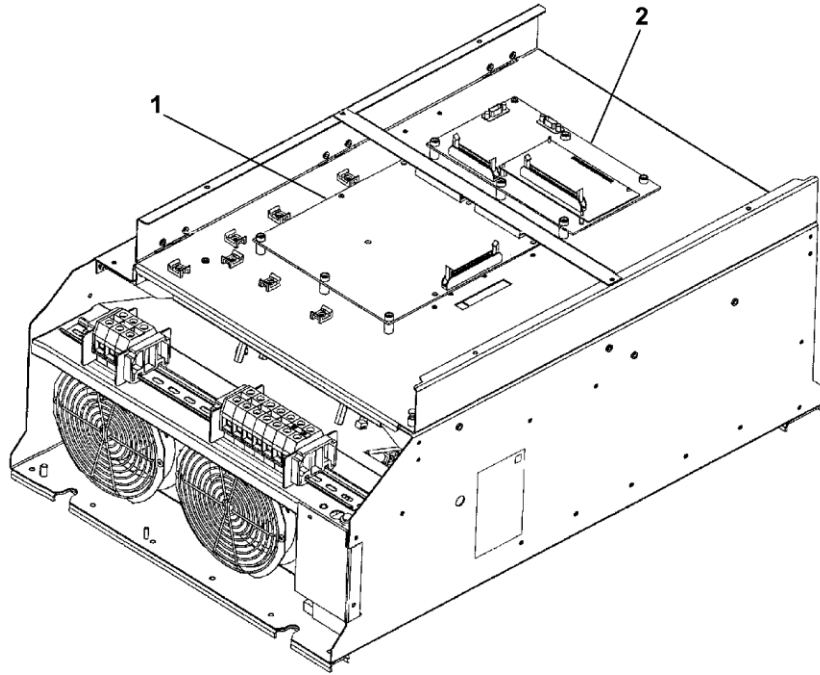


REF. No.	PART No.	REPLACEMENT PART No.	DESCRIPTION
1	AAA21290BM2	ACA21290BM1	OVF 30, 210 A / 480 VAC
	ABA21290BM2		
	ACA21290BM2		
	AAA21290BM1		
	ABA21290BM1		

NOTE: When old vintage drives are replaced by new ones, refer to SWP N-1.1.12.0-2 (included in the laminated bus drive) for drive replacement adjustment.

210A Drive PC Boards

10-AAA21290AK



UDX without Socket



UDX with Socket

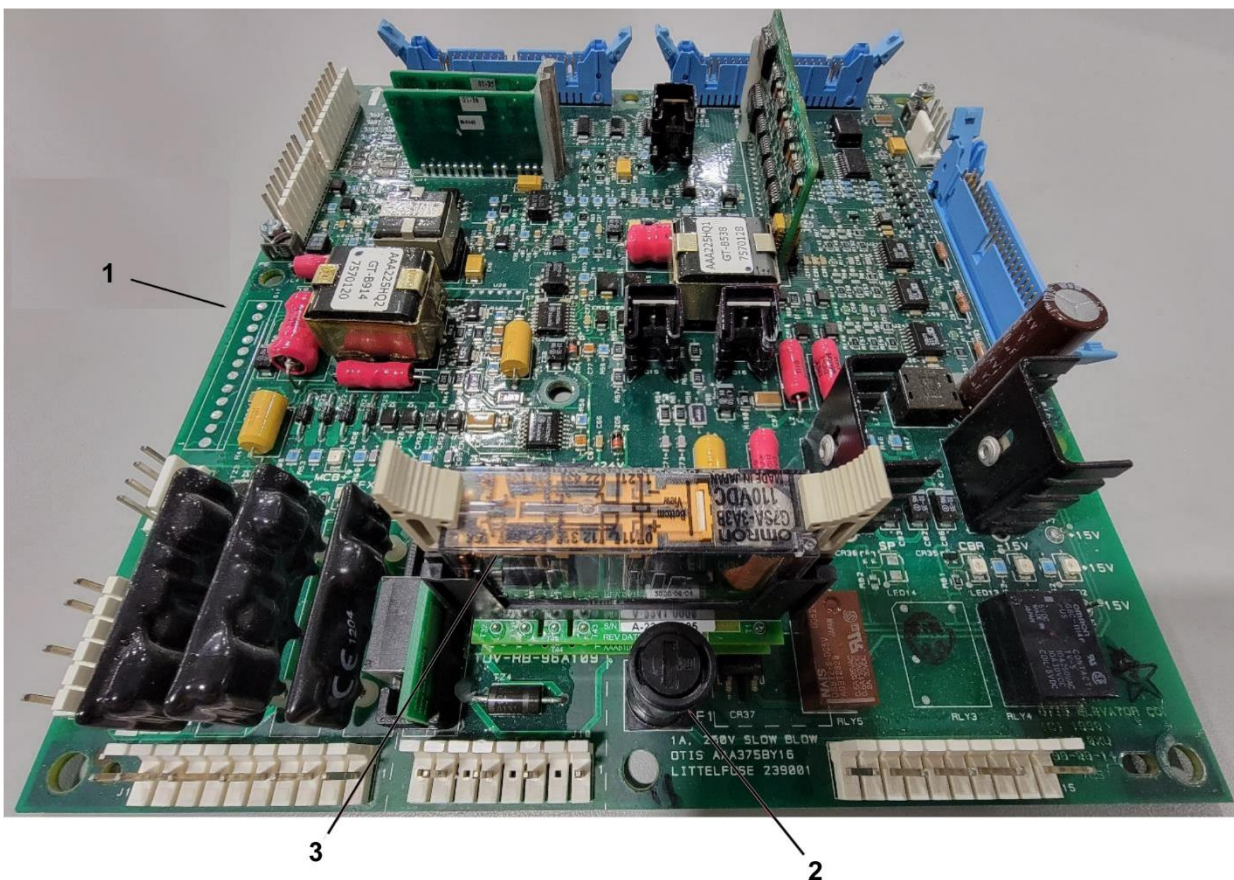
REF. No.	PART No.			DESCRIPTION
	AAA21290BM1 AAA21290BM2	ABA21290BM1 ABA21290BM2	ACA21290BM1 ACA21290BM2	
1	ADA26800SA5	ABA26800XU5	ABA26800XU5	LVIB (Low Voltage Interface Board). See NOTE 1
	ABA26800XU5 ACA26800XU5	ACA26800XU5	ACA26800XU5	
2	ABA26800GW1	ABA26800GW1	ACA26800VA1	Processor Board See NOTE 2
	ABA26800GW4	ABA26800GW4	ADA26800VA1	

NOTE 1: If ordering LVIB PCB with socketed UDX relay, order qty. 1 of space kit AAA27076KR2. Refer to TIP 1.1.11.0-3.

NOTE 2: If the processor PC board is ABA26800GW*, replace the drive with Magnetek Quattro drive. Refer to NOTE on p. 3 for correct drive replacement.

10-AAA21290AK

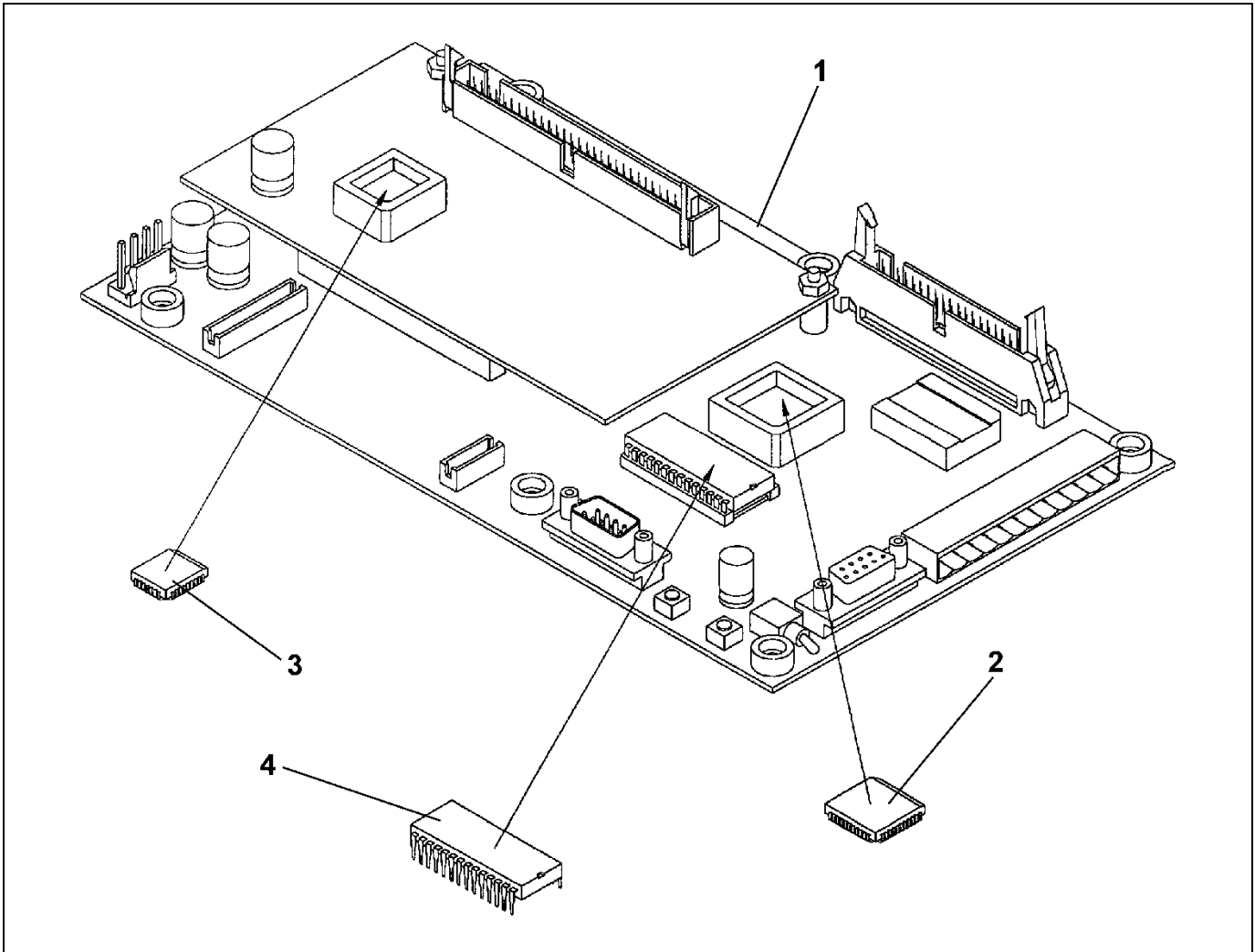
Low Voltage Interface Board



REF. No.	PART No.	DESCRIPTION	
1	A*A26800SA1 ABA26800XU1 ACA26800XU1	Board, Low Voltage Interface, w/ Socketed UDX Relay	Used with A*A21290AK
	A*A26800SA2 ABA26800XU2 ACA26800XU2		Used with A*A21290BJ, A*A21290BA
	A*A26800SA5 ABA26800XU5 ACA26800XU5		Used with A*A21290BM
2	AAA375BY16	Fuse, 1A	
3	AAA613DG65	Relay, UDX	

Processor Board

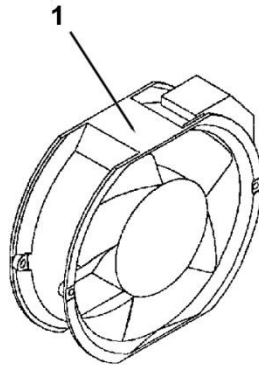
10-AAA21290AK



REF. No.	PART No.	DESCRIPTION
1	ACA26800VA1 ADA26800VA1	Board, Processor
2	AAA30288ABA1 AAA30288AAC1 AAA30288AAG AAA30288AAI	Host PROM, U6
3	AAA302889AAA1 AAA302889AAC1 AAA30923AAC	DSP PROM, U11
4	AAA616KM2	EEPROM, Blank (8K X 8) CMOS, U5

NOTE 1: The AAA30288AAI (U6) & AAA30923AAC (U11) software are used on ADA26800VA1 processor board only.

NOTE 2: The AAA30288AAG (U6) & AAA30289AAG (U11) are used on ACA26800VA1 or any early version processor boards.



REF. No.	PART No.	DESCRIPTION
1	AAA6091AJ2	Fan
2	AAA27076KR1	Kit, Adapter. Use on A*A21290AK, A*A21290BJ and A*A21290BA Drives. See AAA27076KR1_FMI and TIP 1.1.11.0-3.
3	AAA27076KR2	Kit, Adapter. Use on A*A21290BM Drive. See AAA27076KR2_FMI and TIP 1.1.11.0-3.