

# MRQ Controller

## Spare Parts Leaflet

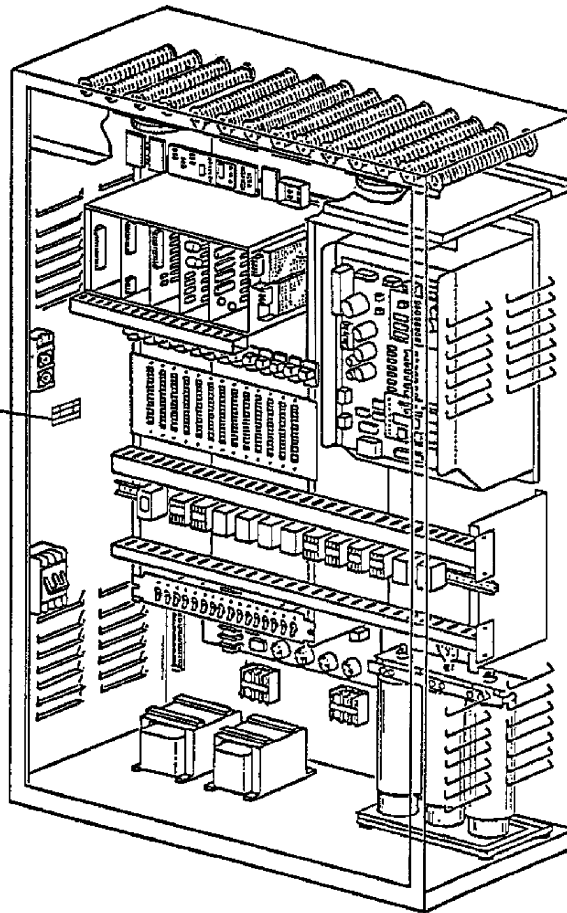
10-7417C

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# 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 will be reviewed for obsolescence.

10	7417C	
*	VINTAGE	*
REV	EN	



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 spare parts leaflet provides detailed information about the MRQ controller and related parts and panels.

**Leaflet Revisions**

<b>Date Revised</b>	<b>Subject Matter Expert</b>	<b>Reason for Revision</b>
June 1988	---	New Leaflet
September 1989	---	Updated parts
October 1, 1999	Val Minnes	Updated parts list on p. 6
November 9, 2005	Anh Pham	Updated the template; Updated a p/n on p. 6, ref. 1
August 30, 2006	John Dwyer	Updated the parts list on p. 8
April 15, 2008	Anh Pham	Updated parts on pp. 6, 8, 9, 10, 12, 13, 14, 15, 16, 19, 20.
October 30, 2008	Anh Pham	Corrected Ref. 1 description on page 6.
January 23, 2009	Anh Pham	Corrected part numbers on pp. 6 and 15
January 30, 2013	Anh Pham	Made corrections to description of AAA613DL22 on p. 14.
August 28, 2013	Ali Bozorgzadeh	Made corrections on p. 8
December 1, 2021	Ali Bozorgzadeh	Corrected p/n in Ref. 5 on p. 7; Added a note on p. 7
September 21, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover

**Related Documents**

<b>Document ID</b>	<b>Title</b>
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**Subject Matter Expert**

<b>Name</b>	<b>Department</b>
Anh Pham	OSC Service Engineering

**About Spare Parts Leaflets...**

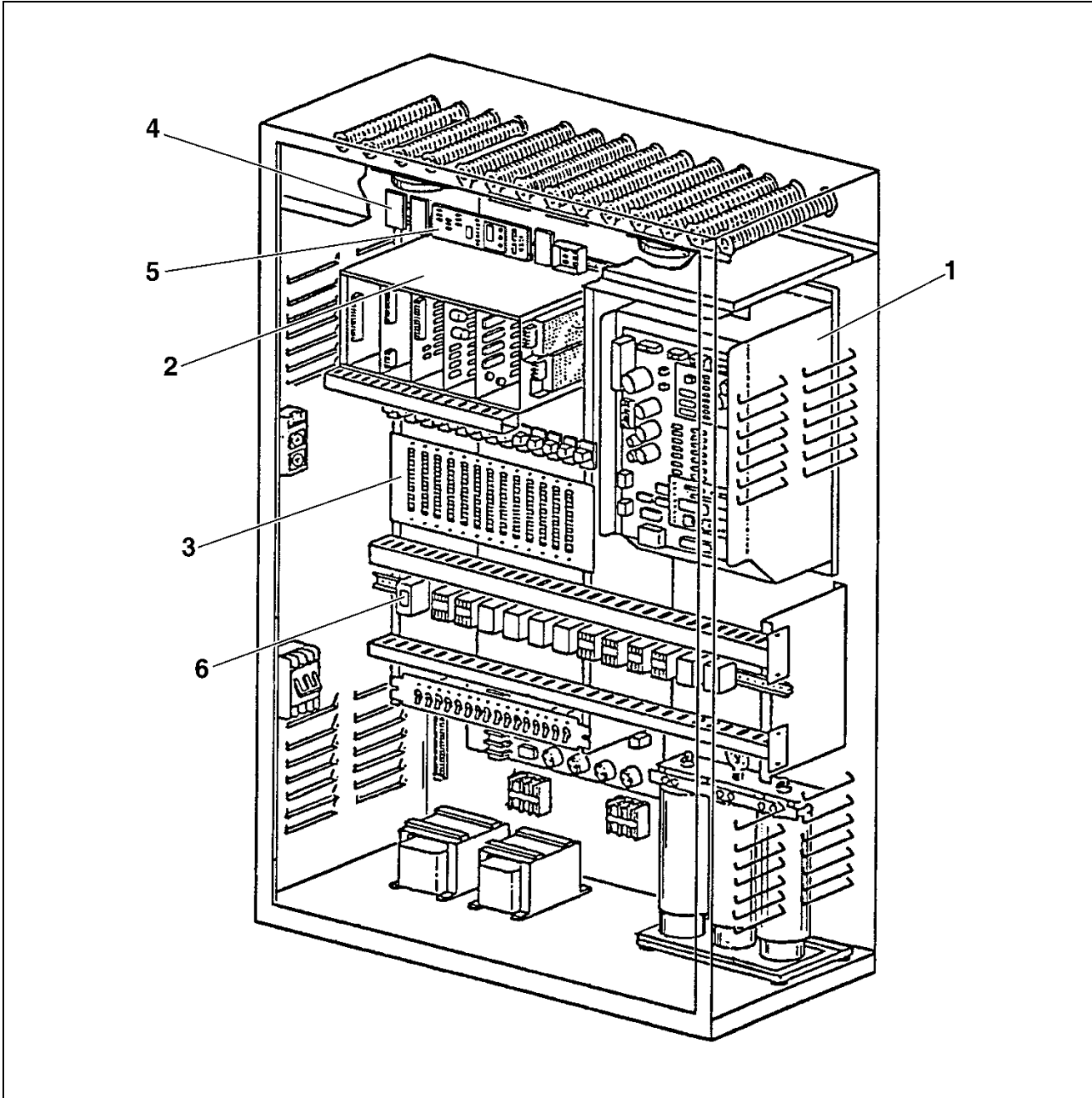
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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.

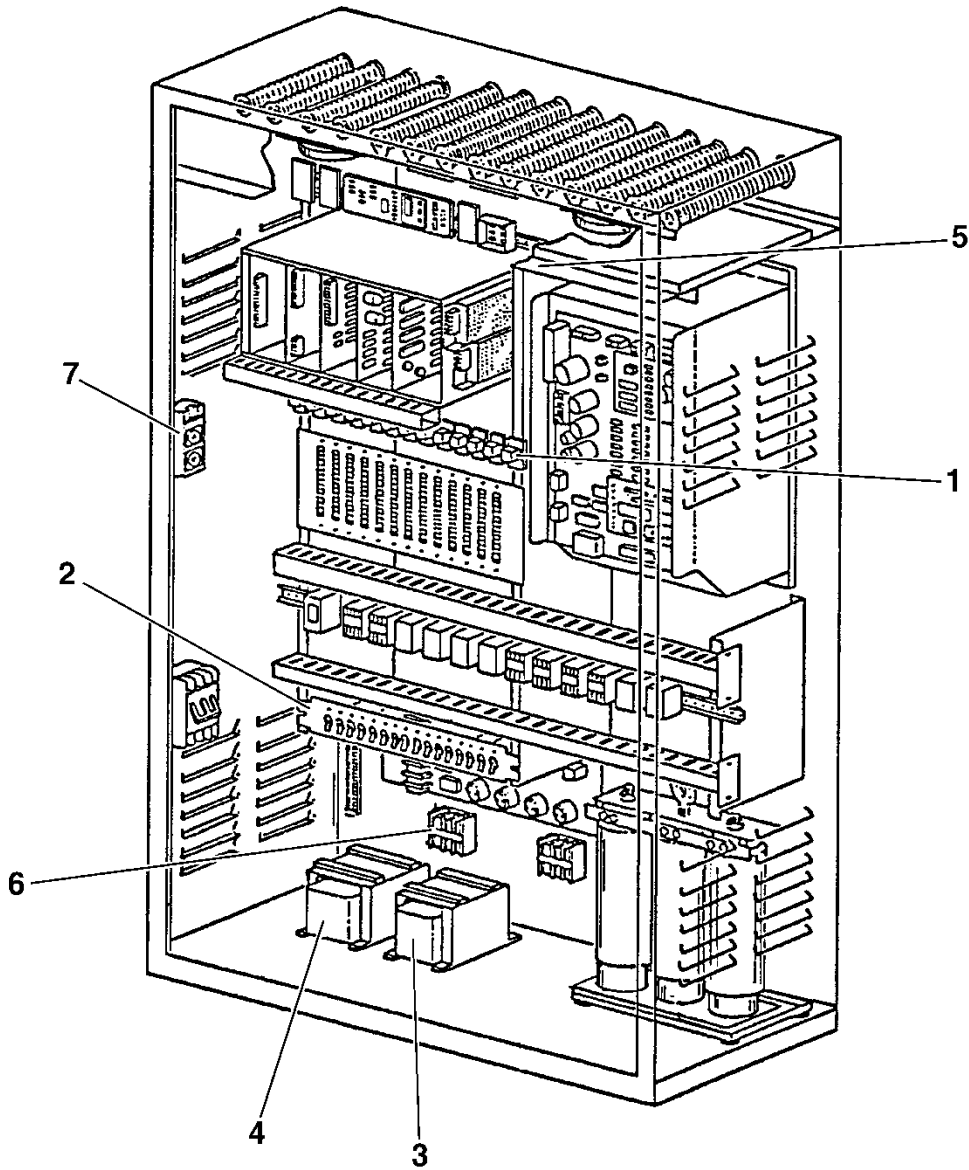
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1	p. 6	Assembly, Inverter, Type 10260P
2	p. 7	Assembly, Card Cage, Type 326R
3	p. 11	Assembly, Panel, Type A433NW
4	p. 12	Module, Remote Station, Type 7145AY
5	p. 13	Module, Switchover, Type 9693F
6	p. 14	Relay, Type 613BX

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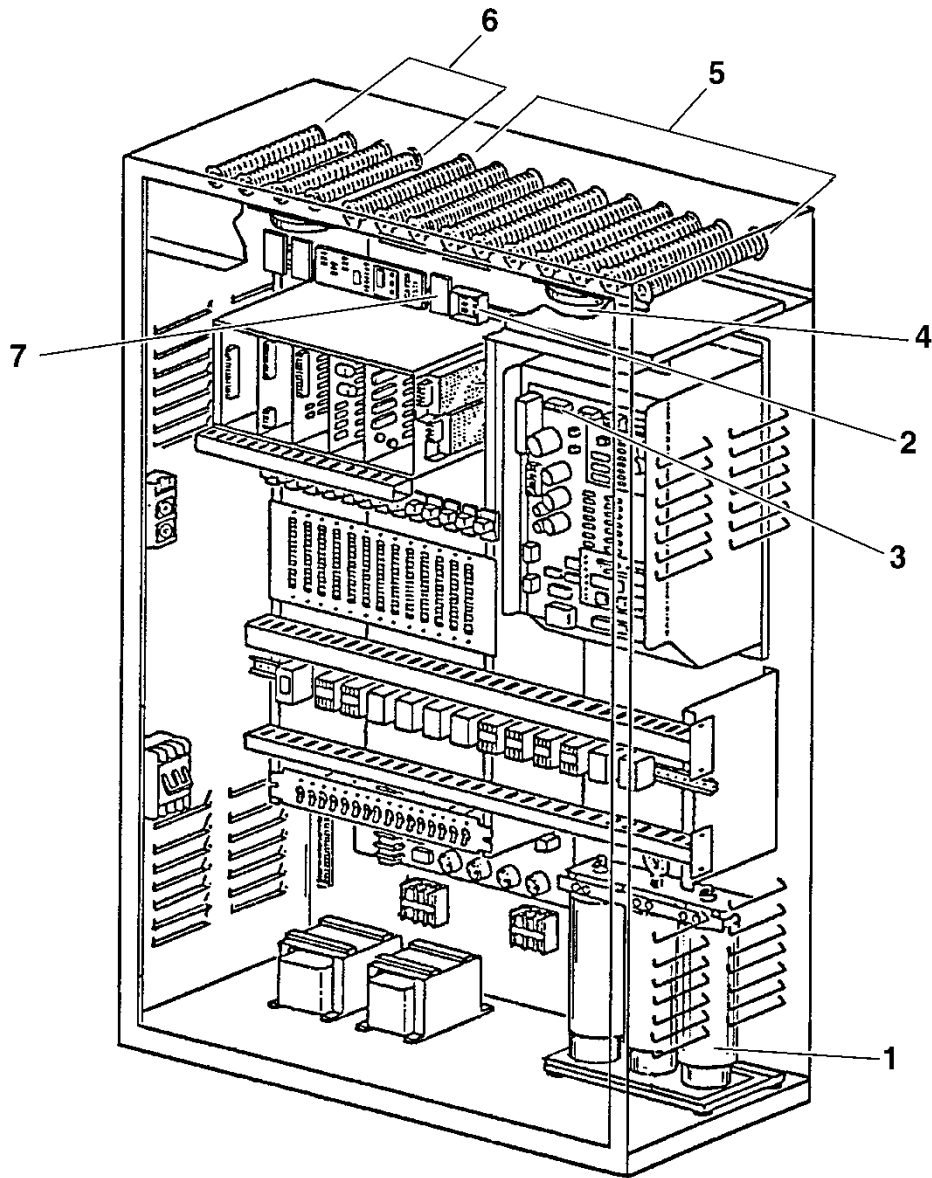


REF. No.	PAGE	DESCRIPTION
1	👁 p. 15	Relay, Type P613AY
2	👁 p. 16	Breaker, Circuit, Type 375B
3	👁 p. 17	Transformer, Type 235EB
4	👁 p. 17	Transformer, Type A235EA
5	👁 p. 18	Block, Fuse, Type P180CC
6	👁 p. 18	Block, Terminal, Type P303BP
7	👁 p. 18	Box, Switch, Inspection, Type 7003BF

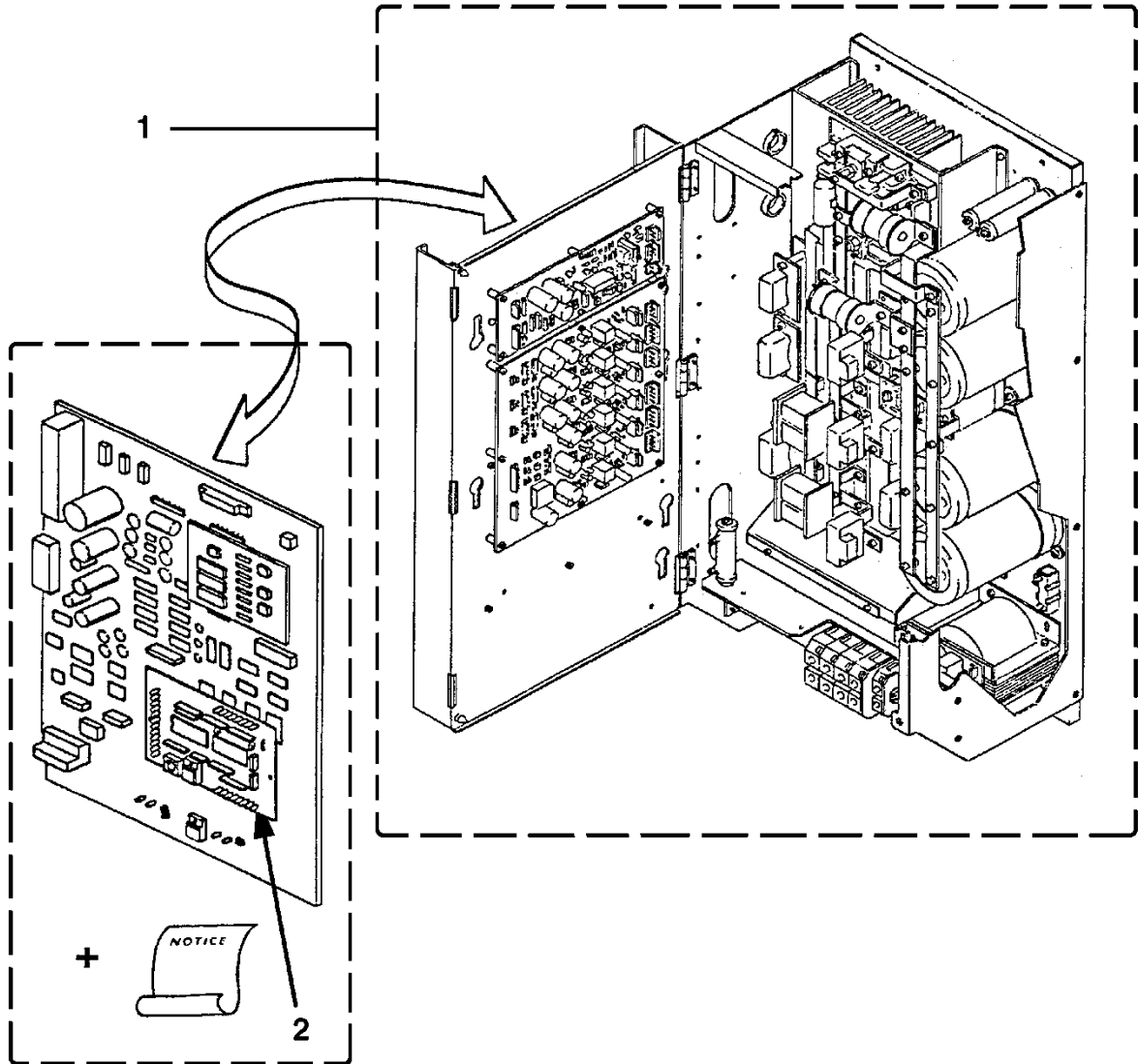
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1	👁 p. 18	Choke
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5	👁 p. 19	Resistor, Type 232AA
6	👁 p. 19	Resistor, Type AAA617K
7	👁 p. 20	Seismic Reset Switch

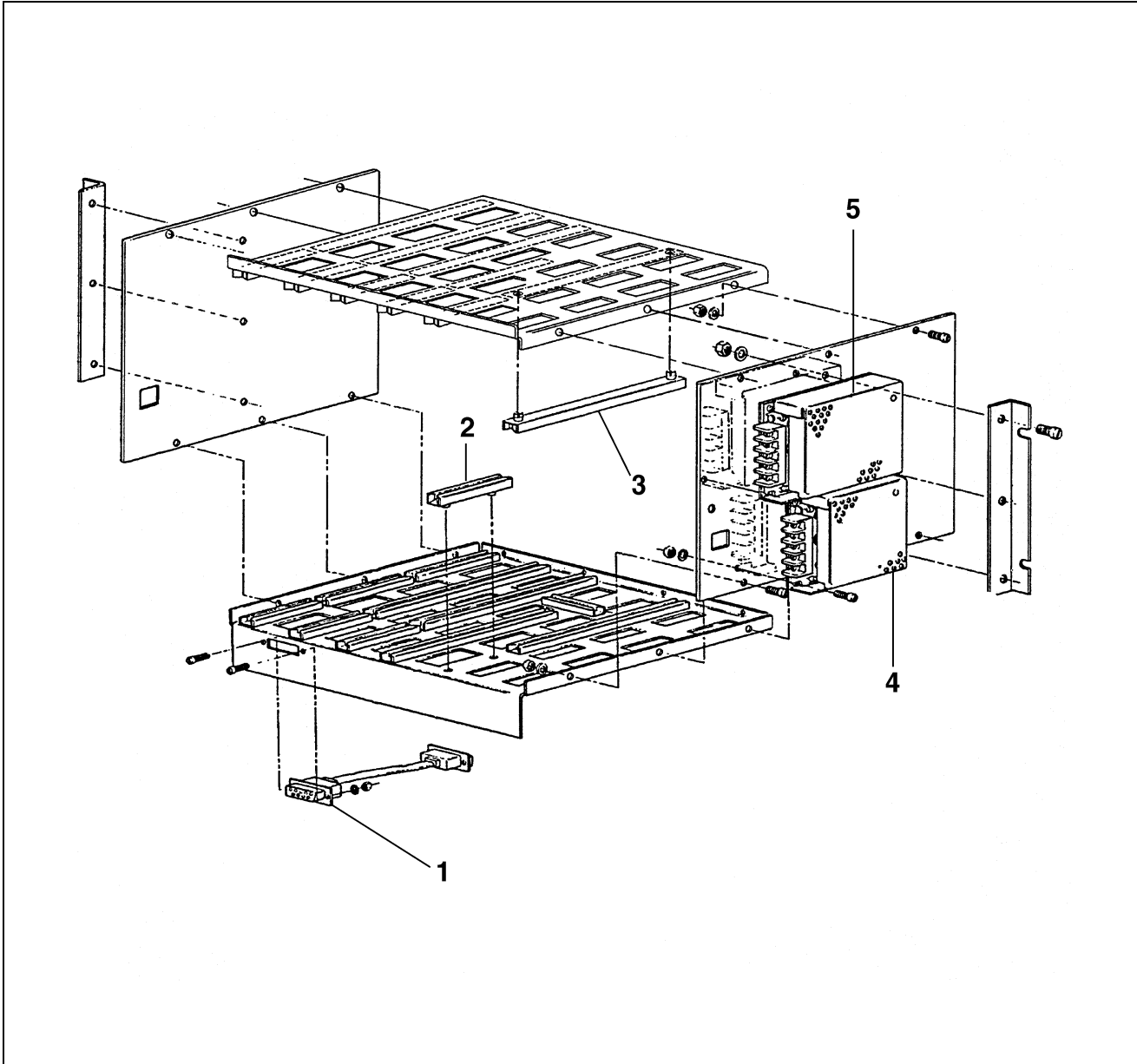


VINTAGE Y 01		
REF. No.	PART No.	DESCRIPTION
1	40260P5	Assembly, Inverter, 2000 lb. / 937 kg and 2500 lb. / 1134 kg, VFCU. 👁 NOTE.
	2700CAA5 10260P10	Assembly, Inverter, 3000 lb. / 1360 kg and 3500 lb. / 1588 kg, VFCU 👁 NOTE.
2	J0616AD6	Software, Microcontroller (located under JO6840KG PC board)

**NOTE:** Meidensha Drive and all its related PCBs and power components are obsolete and only supported through the OSC repair program as long as board-level repair parts remain available. See TIP 32.2-1.

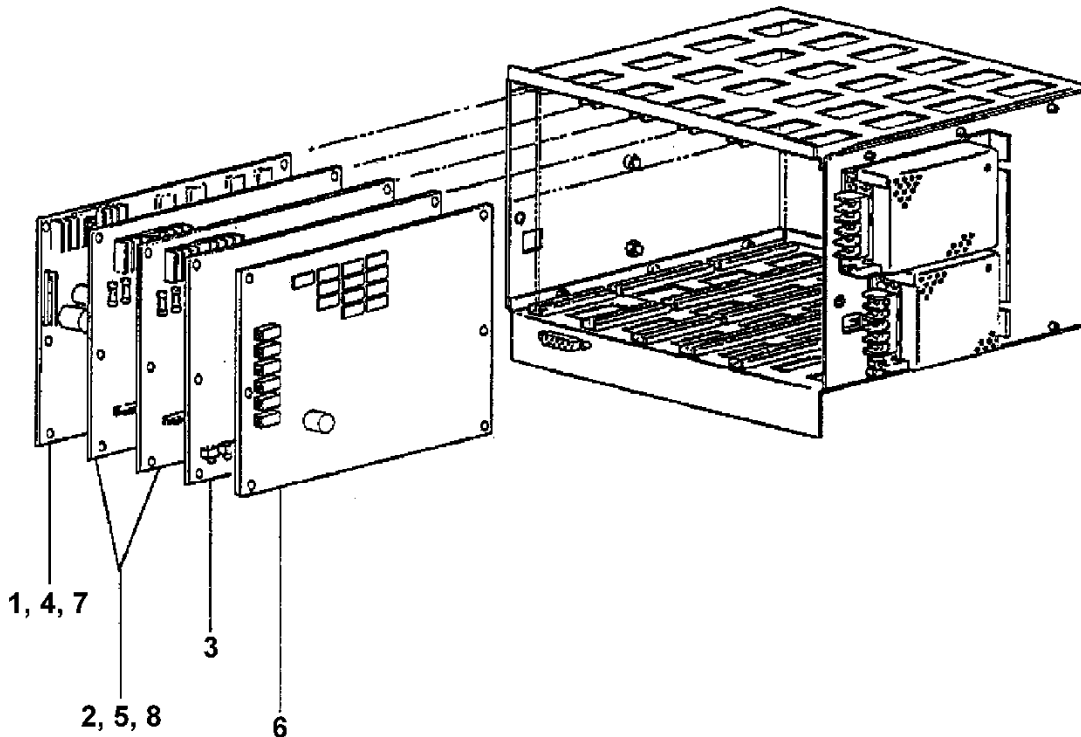
# Type 326R Card Cage

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VINTAGE Y 01		
REF. No.	PART No.	DESCRIPTION
1	174GH1	Cable
2	385PK3	Guide, 4 in.
3	385PK2	Guide, 8 in.
4	621AB1	Power Supply, 5 V Output
5	621AA1 621AA2	Power Supply, 24 V Output; See NOTE

**NOTE:** If replacing 621AA1 for the first time, also order adapter kit p/n AAA27076FM3.



**VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA616KS1	EEPROM, Blank, LCB	Z30
2	AAA616KM2	EEPROM, Blank, RCB II	Z34, Z49
3	A8128DP1	PC Board, Counter.  NOTE 3.	CUB
4	B9693A3 C9693A3 C9693A60 YXC9693A103	PC Board, Limited Car NOTE 1	LCB
5	A9693D1	PC Board, Ring Car	RCB
	GHA21270A3		RCB II
6	B8128DR1	PC Board, SC I/O.  NOTE 3.	SC
7	AAA30000BAE	Software, Baseline, LCB	Z29
8	AAA30002BAB	Software, Baseline,  NOTE 2.	RCB I
	AAA30116AAA		RCB II

**NOTE 1:** All of these boards are interchangeable.

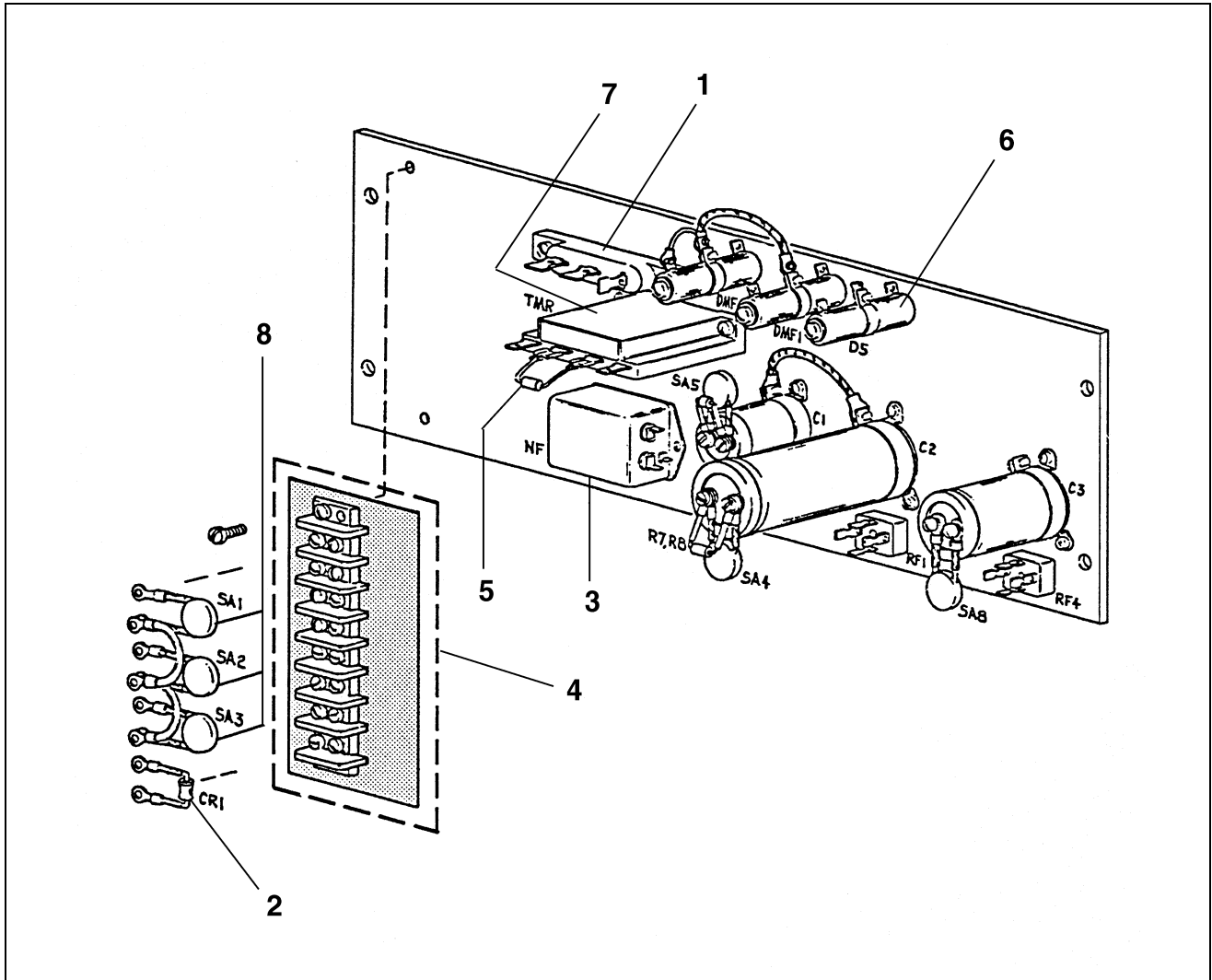
**NOTE 2:** Contact Customer Service for the latest version of software.

**NOTE 3:** A8128DP1 and B8128DR1 have limited availability and are only supported through the OSC Repair and Return program. Refer to TIP 32-2-1.



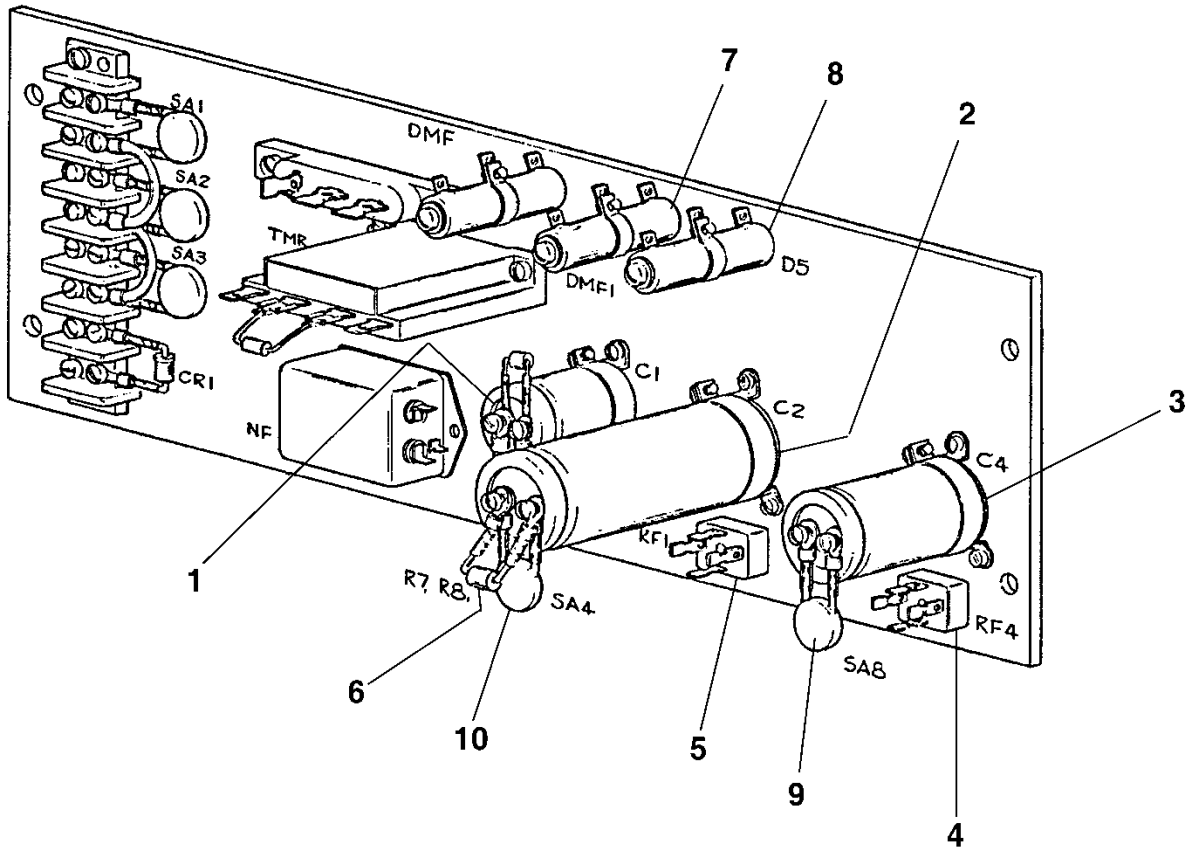
# 433NX Panel Assembly

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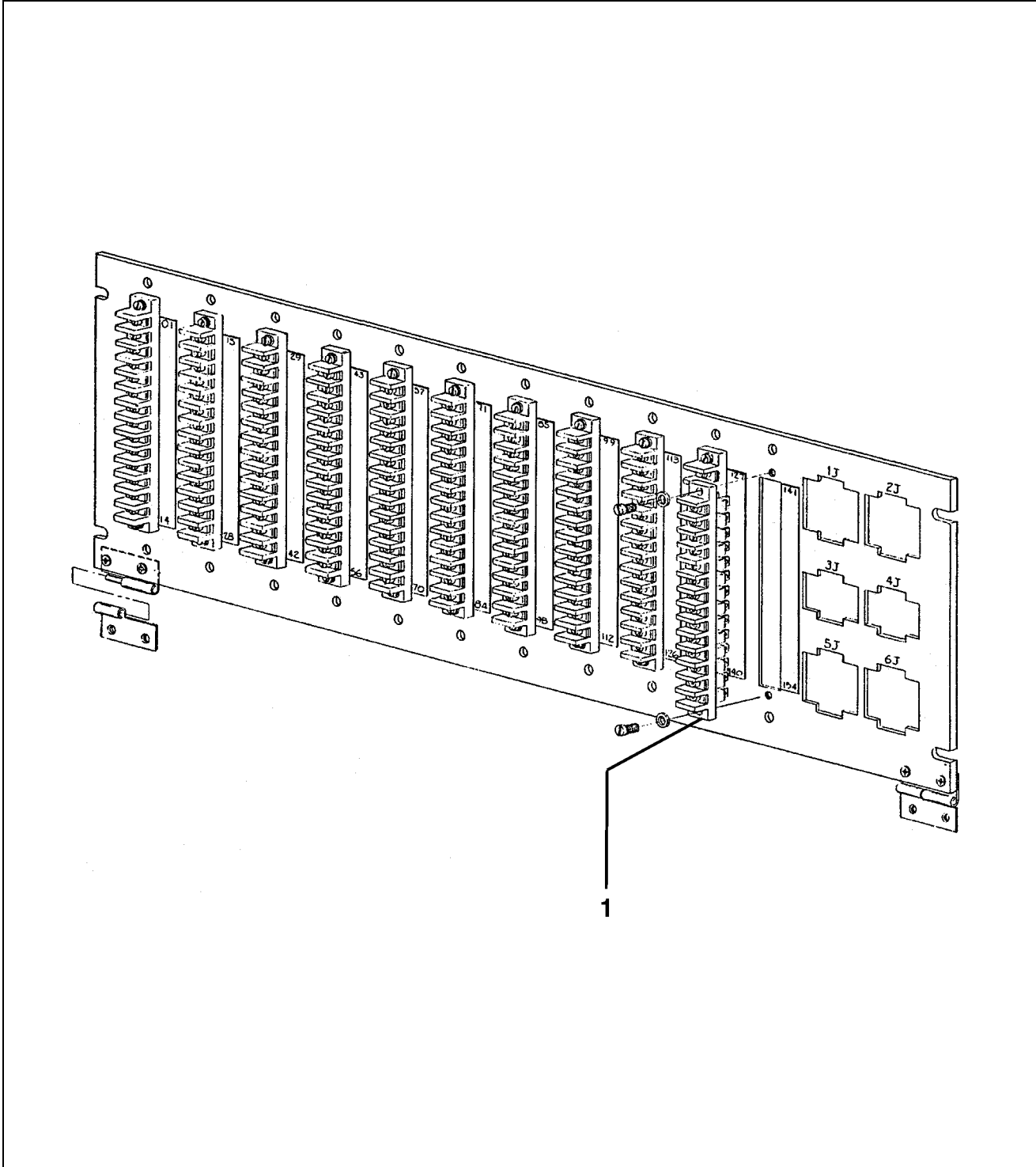
**VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	P230BN1	Block, Diode	---
2	P612M1 AAA612T4	Diode (IN 4004)	CR1
3	234F2	Filter	NF
4	2700CAA2	Kit, Terminal Block & Insulation Barrier	---
5	P232F60	Resistor, 27K Ohm, 1/2 Watt	---
6	232B164	Resistor, 75 Ohm, 30 Watt	DMF
7	P623P1	Timer	TMR
8	604F7 AAA605AA45	Varistor, 510 V Continuous RMS	SA1, SA2, SA3



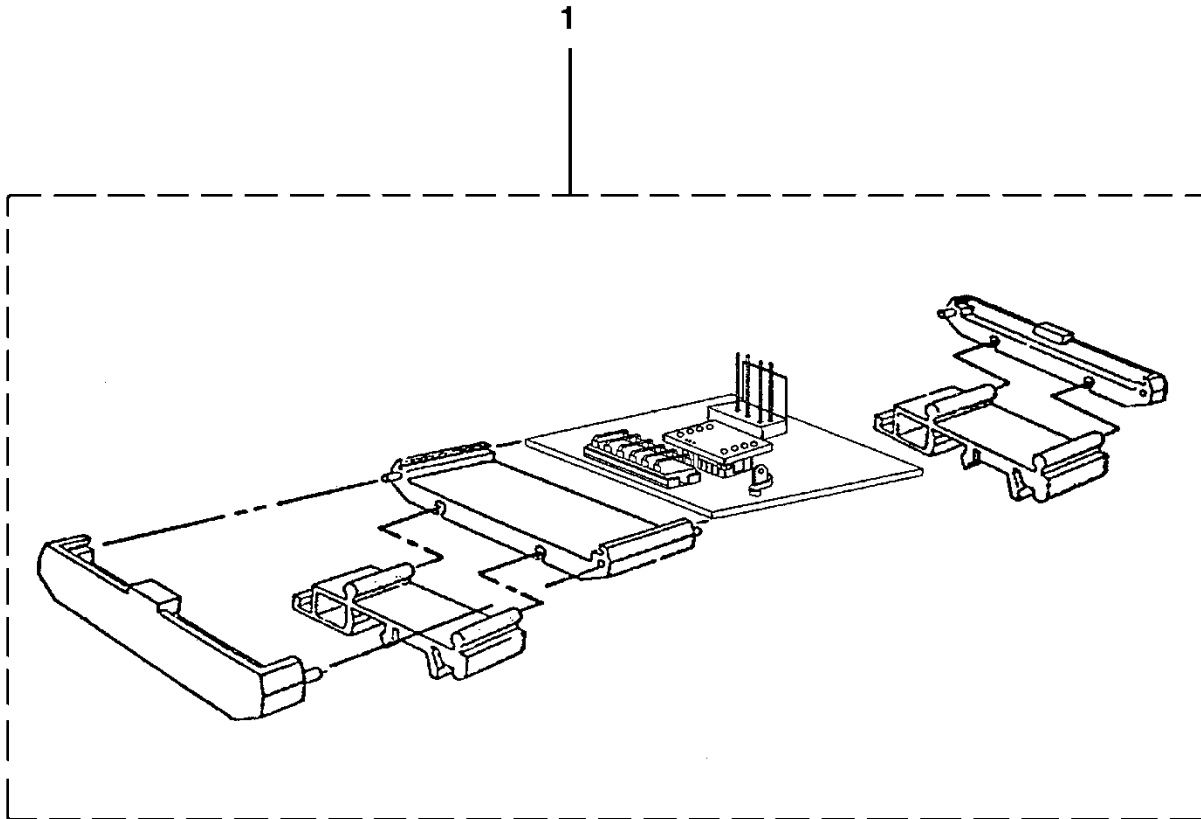
**VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	226DR2	Capacitor, 340 Microfarad, 250 V	C1
2	226DR3	Capacitor, 3,000 Microfarad	C2
3	226EJ1	Capacitor, 19,000 Microfarad.	C4
4	230BS1	Rectifier, Bridge	RF4
5	230BS2	Rectifier, Bridge	RF1, RF2
6	232FB7 AAA232FJ2	Resistor, 4K Ohm, 10 Watt	R7, R8
7	232B207	Resistor, 75 Ohm, 30 Watt	DMF1, RDMF1
8	AAA232FD14 AAA617H14	Resistor, 250 Ohm, 30 Watt	D5, RD5
9	604F6 AAA605AA13	Varistor, 30 V Continuous RMS	SA8
10	604F5 AAA605AA29	Varistor, 130 V Continuous RMS	SA4, SA5

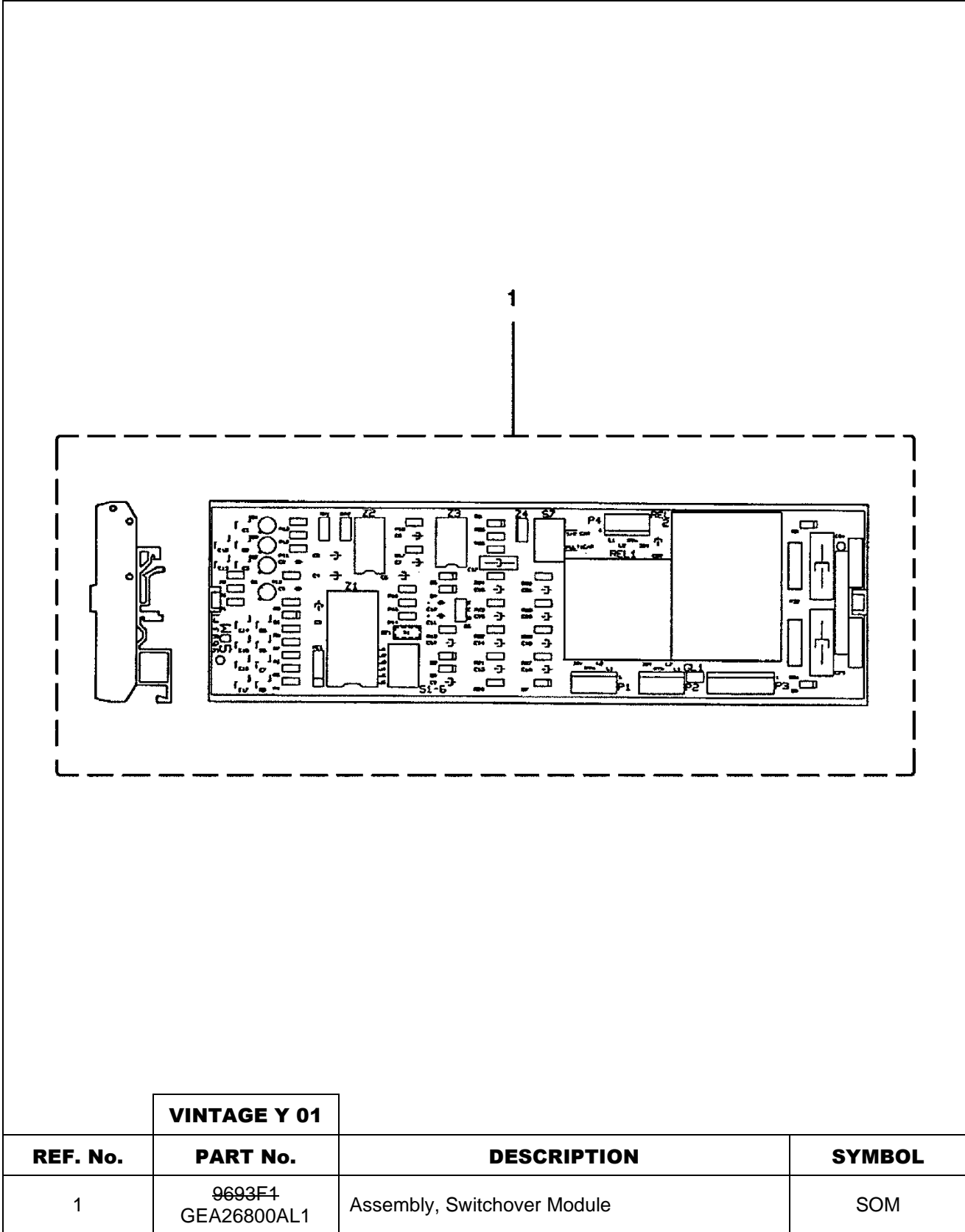


**VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION
1	303DB1	Block, Terminal, 14-Position



<b>VINTAGE Y 01</b>		
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>
1	7145AY4 AAB26810A1	Assembly, Remote Station

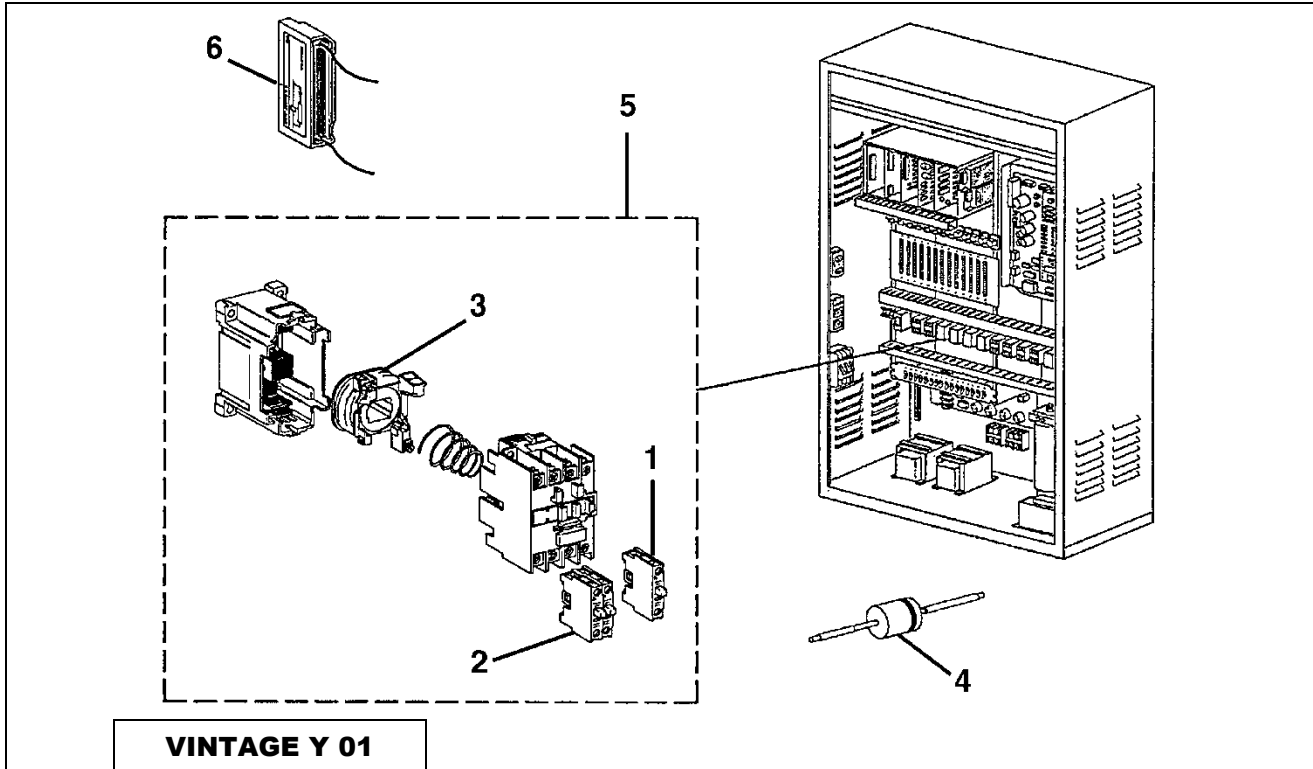


**VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	9693F4 GEA26800AL1	Assembly, Switchover Module	SOM

# 10-7417C

# Type 613BX Relay

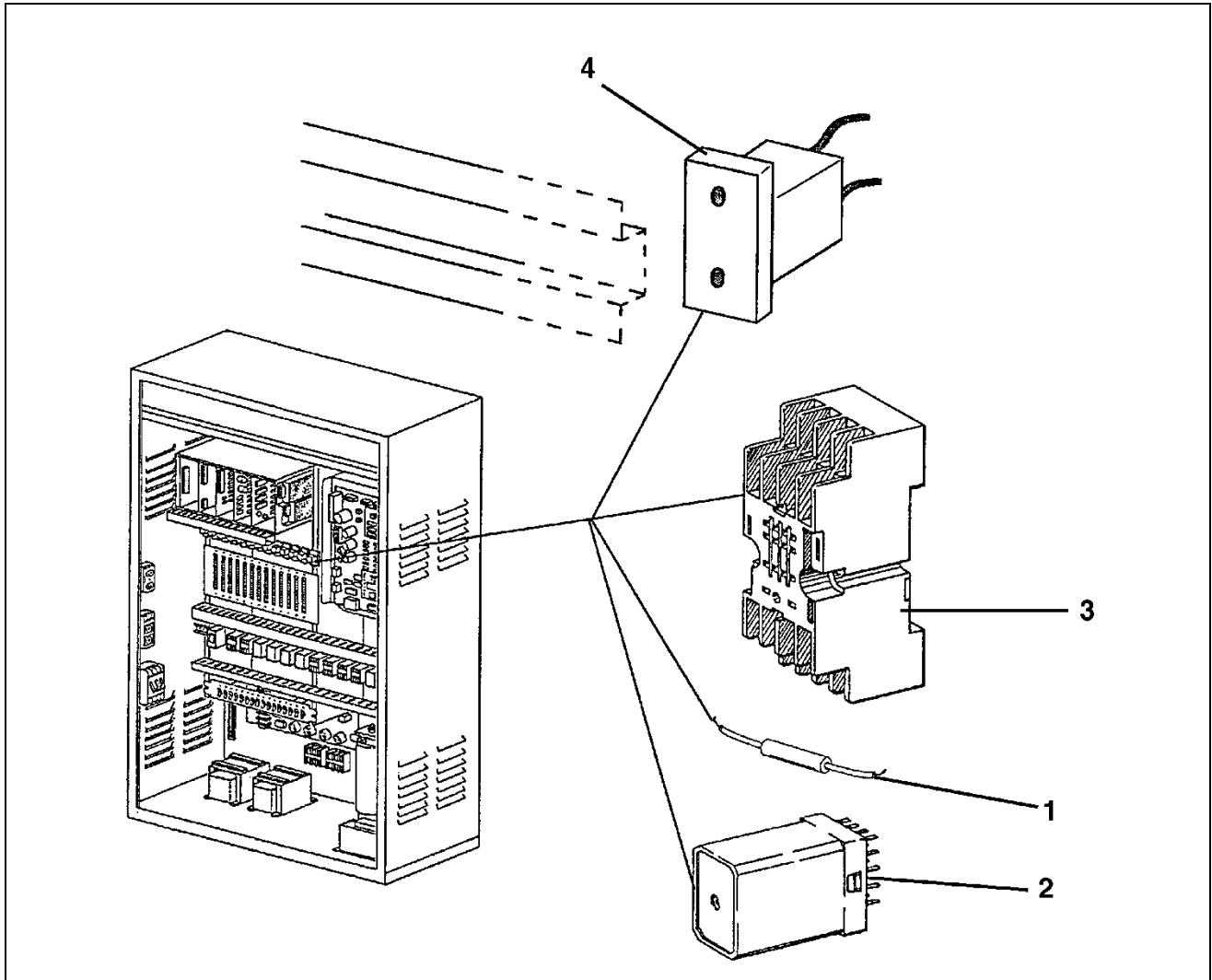


VINTAGE Y 01					
REF. No.	PART No.	DESCRIPTION	POWER POLES	AUX. CNTK	SYMBOL
1	613BX/22.122.304-33	Coil, 120 VAC	---	---	---
	613B14/22.501.304-76	Coil, 110 VDC	---	---	---
2	613BX/22.122.304-33	Contact, Auxiliary	---	2 NO	---
3	613BX/CS3-P04	Contact, Auxiliary	---	4 NC	---
4	230BD7	Diode (for 613BX14)	---	---	---
5	613BX4 AAA613DL17	Relay, 120 VAC 👁️ NOTE	2 NO, 2 NC	---	LRX, RVD, RRVD
	613BX13 AAA613DL16	Relay, 120 VAC 👁️ NOTE	3 NO, 1 NC	---	NRX, SDP, RNDGX, SDR, REV, RREV, CSA, NDGX
	613BX12 AAA613DL22	Relay, 120 VAC 👁️ NOTE	2 NO, 2 NC	2 NO, 2 NC	D, DO, RDO, INS, LVS, SRR, U, UD, AUD
	613BX4 613BX31	Relay, 120 VAC 👁️ NOTE	3 NO, 1 NC	2 NO	BR
	613BX14 AAA613DL105	Relay, 110 VDC 👁️ NOTE	3 NO, 1 NC	---	BK
6	605T2 AAA00605AAA014	Suppressor, Transient (1 per 120 VAC Relay)			

**NOTE:** Replacement is functionally the same with different mechanical attributes. See TIP 1.2.0-37 for details.

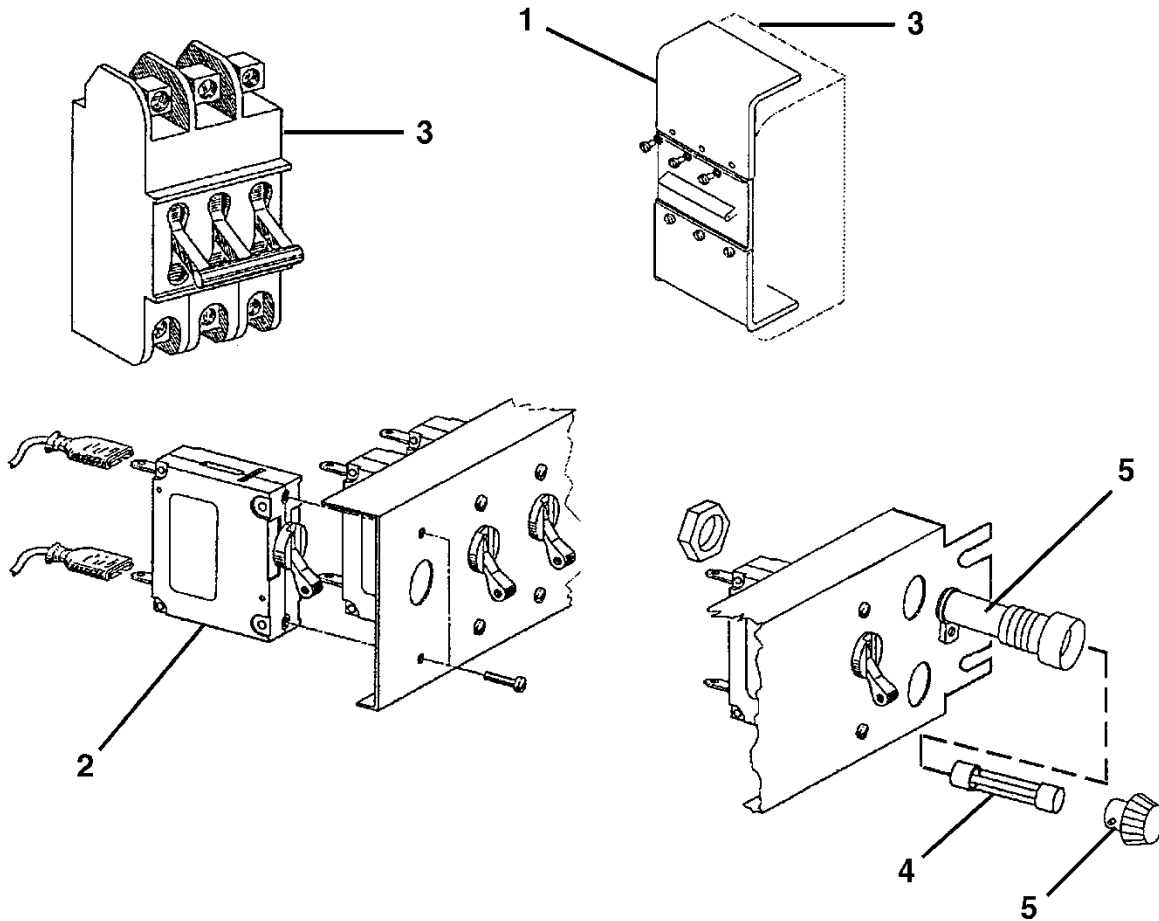
# Type P613AY Relay

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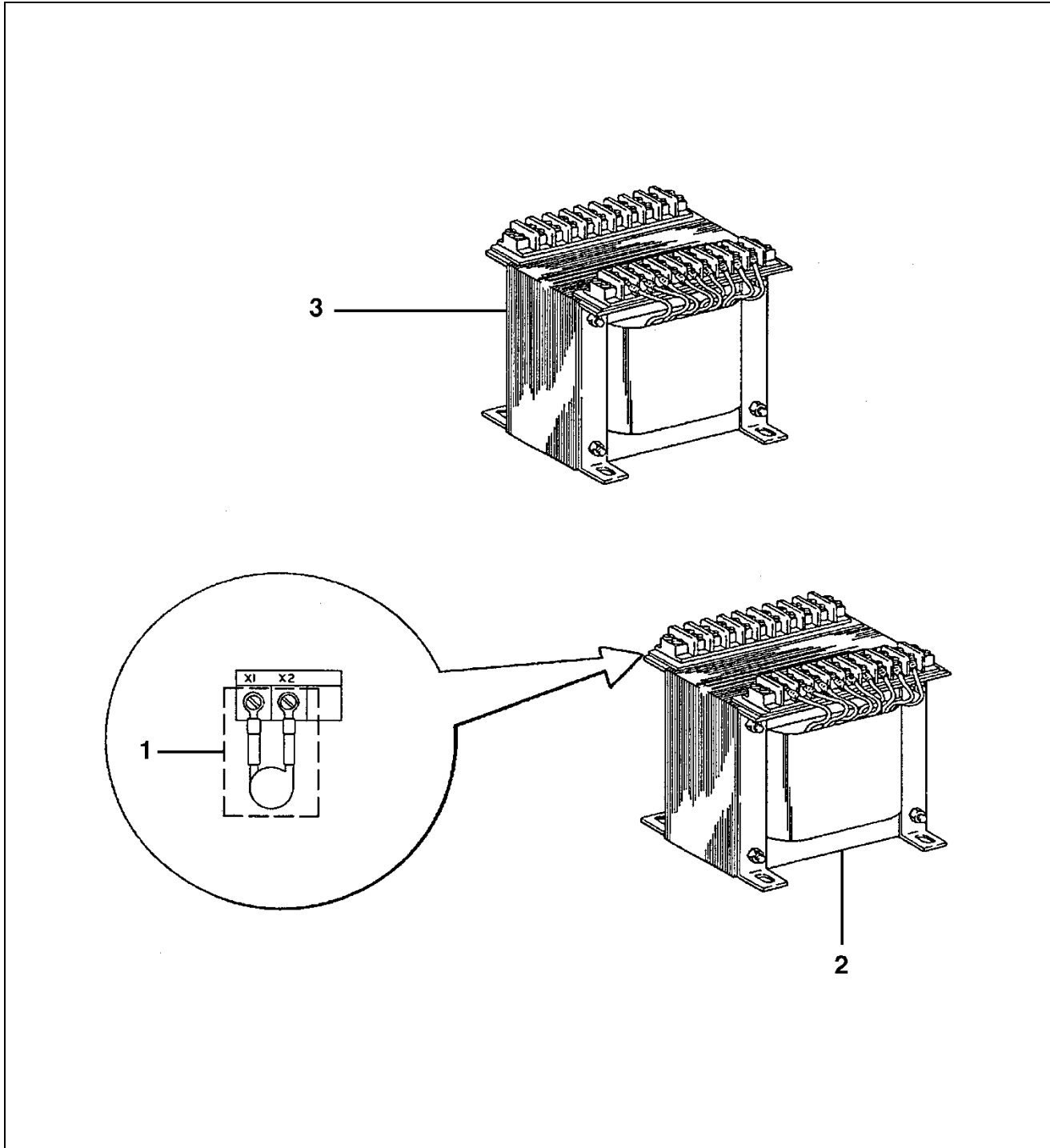
VINTAGE Y 01			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	642B3 AAA612AF3	Diode (1 per AAA613CZ8)	---
2	P613AY3 COMMICB4PDTL120AG AAA613CZ9	Relay, 115 VAC,  NOTE	REL1, REL2 XDC, LUD NDG, RNDG, CRV, DL
	630F3 AAA613CZ8	Relay, 24 VDC	LR, ZR, DZ, DZX RZR, ESSR, NR, EQR UL, XLR
3	618AE2	Socket, Relay	
4	605T4 AAA00605AAA017	Suppressor, Transient (1 per AAA613CZ9)	

**NOTE:** These boards are interchangeable.

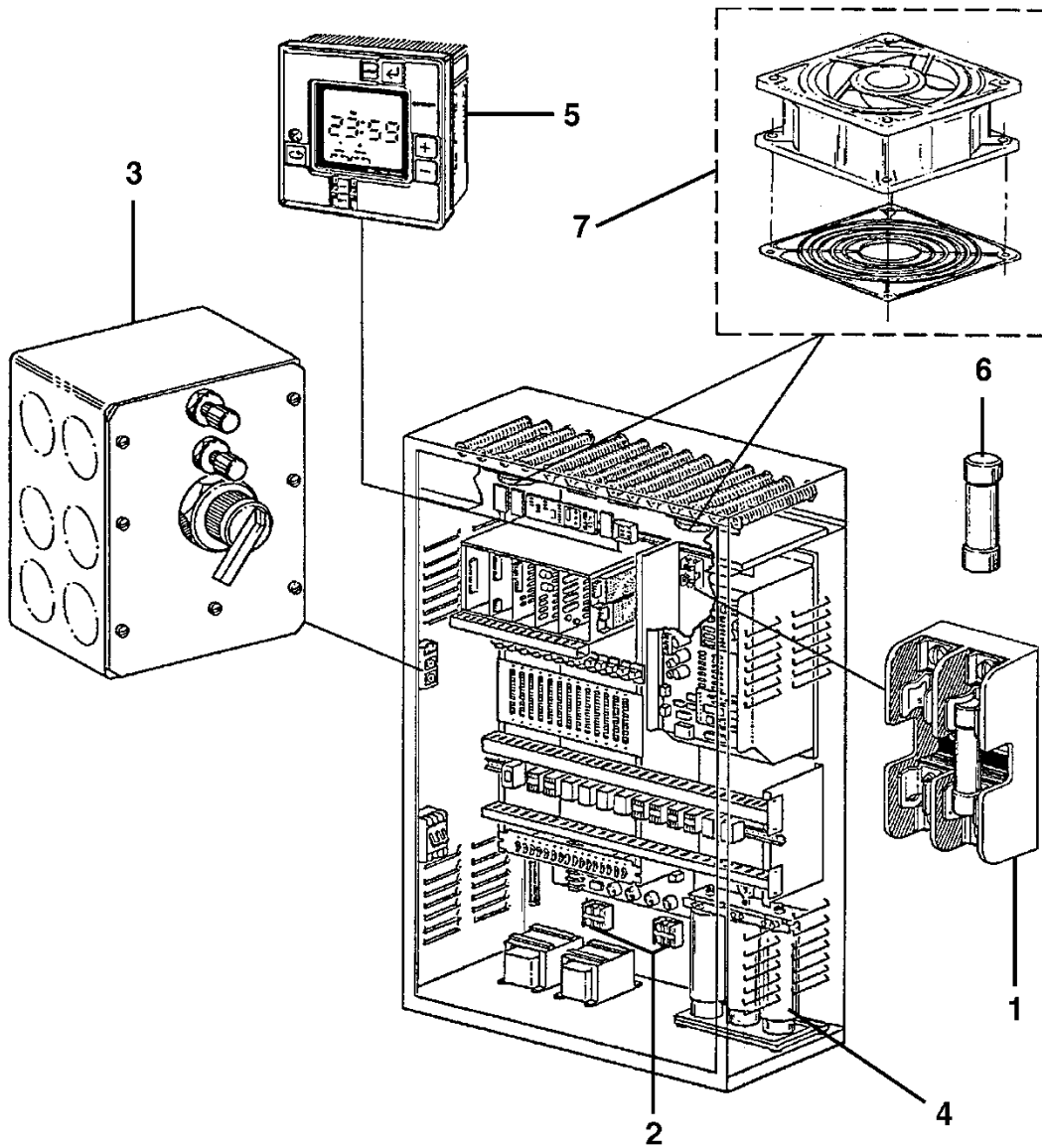
**10-7417C****Type 375B Circuit Breaker****VINTAGE Y 01**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA7417E1	Assembly, Cover w/ Hardware	---
2	375BA6 AAA637C6	Breaker, Circuit, 2-Pole, 5.0/2.5 A	CPI
	375BA2 AAA637C2	Breaker, Circuit, 1-Pole, 2.5 A	CP4, CP5, CP7, CP9 CP10, CP11
	375BA3 AAA637C3	Breaker, Circuit, 1-Pole, 5.0 A	CP8, CP12, CP13
	375BA10 AAA637C10	Breaker, Circuit	CP2, CP6
	375BA9 AAA637C9	Breaker, Circuit, 3-Pole, 10.0 A	NFBC
3	375CA1	Breaker, Circuit, 3-Pole, 100.0 A	NFBC
4	375T27 AAA375BR15	Fuse, 5.0 A (OVL Operator)	F1, F2
	375T28 AAA375BR12	Fuse, 3.0 A (Q Operator)	F1, F2
5	180AB1	Holder, Fuse	---

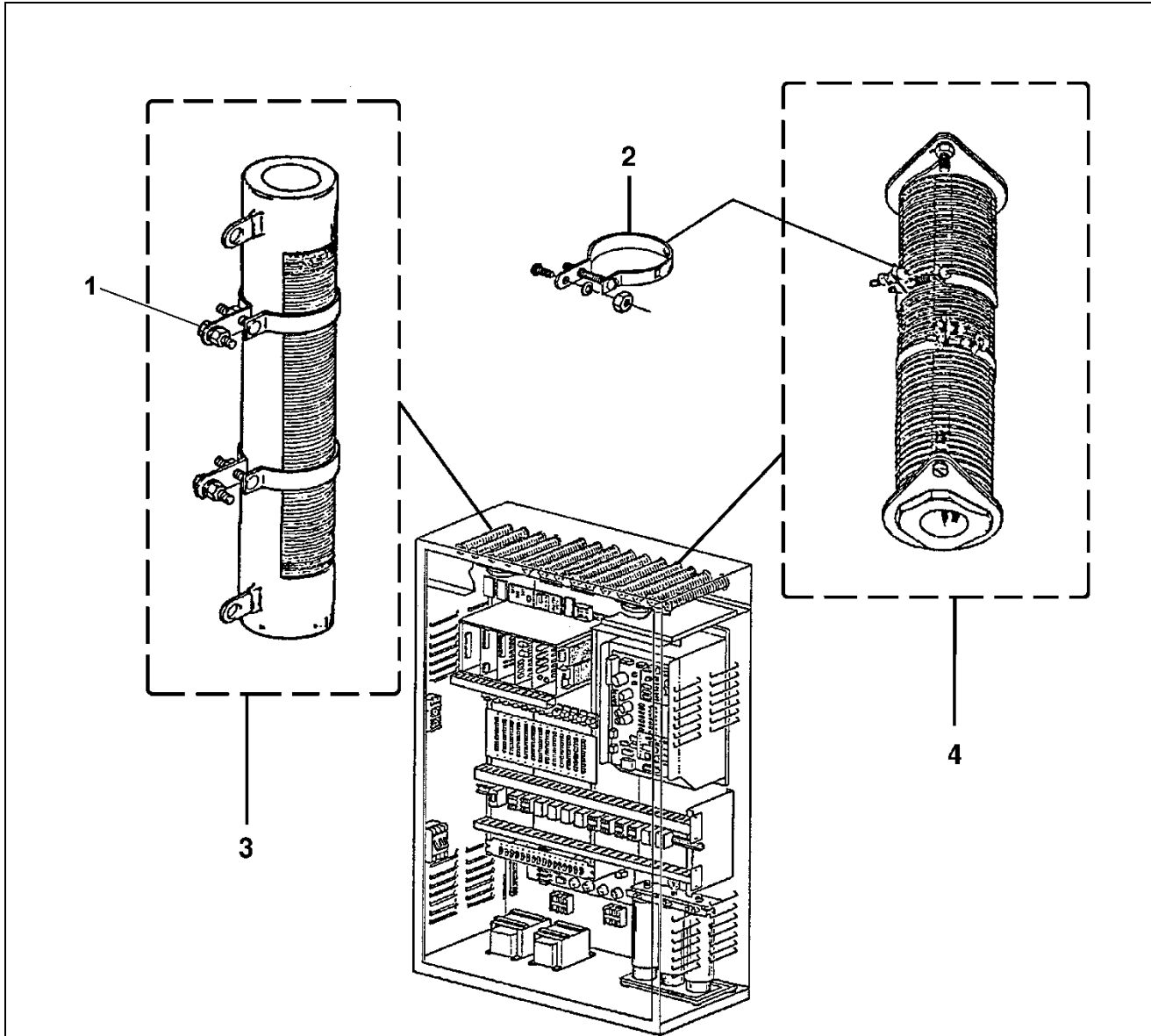




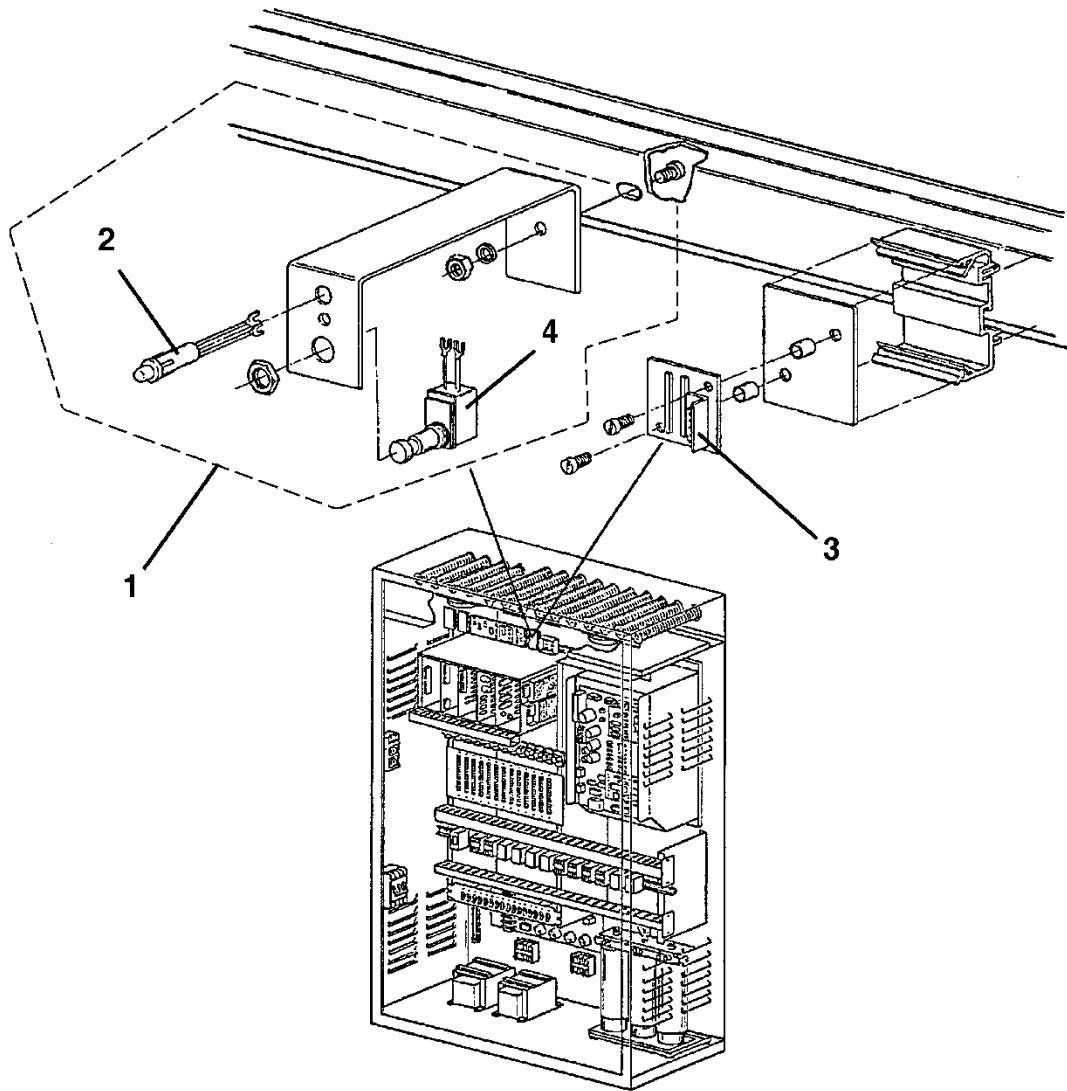
<b>VINTAGE Y 01</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>SYMBOL</b>
1	2700CAA3	Kit, Varistor & Terminal Ring	---
2	235EB1	Transformer (Sec.: 10, 10, 10, 12, 23, 105 V)	TRP
3	A235EA1	Transformer (Sec.: 85, 93, 95, 103, 105, 115 V)	TRM



VINTAGE Y 01		
REF. No.	PART No.	DESCRIPTION
1	P180CC1	Block, Fuse, 30 A, 600 V (Bussman 2087)
2	P303BP6	Block, Terminal
3	7003BF2	Box, Inspection Switch
4	AAA00234AAC	Choke
5	623T3	Clock, (GUDPC)
6	AAA375BG23	Fuse, 20 A, 600 V, (DBF, DBF1) (Bussman, KTK)
7	2700CAA4	Kit, Fan w/ Guard and Hardware



<b>VINTAGE Y 01</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>SYMBOL</b>
1	P190AR1 AAA617K102	Band, Resistor (use for AAA617K series resistor)	---
2	336CV1	Band, Resistor (use for 232AA series resistor)	---
3	P232BJ5 AAA617K8	Resistor, 225 W, 50 Ohms	B1, R2, R3, R4
4	P232BJ2 AAA617K10	Resistor, 225 W, 250 Ohms	B2, D1, D4
	232AA42	Resistor, 700 W, 2.08 Ohms	DBR, DBR1



**VINTAGE Y 01**

<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>
1	AAA00177AAA001	Assembly, Seismic Reset Switch
2	AAA00625AAB001	Indicator, Solid State
3	9693J1	PC Board, Line Terminator
4	P177BX4 AAA635L3	Switch