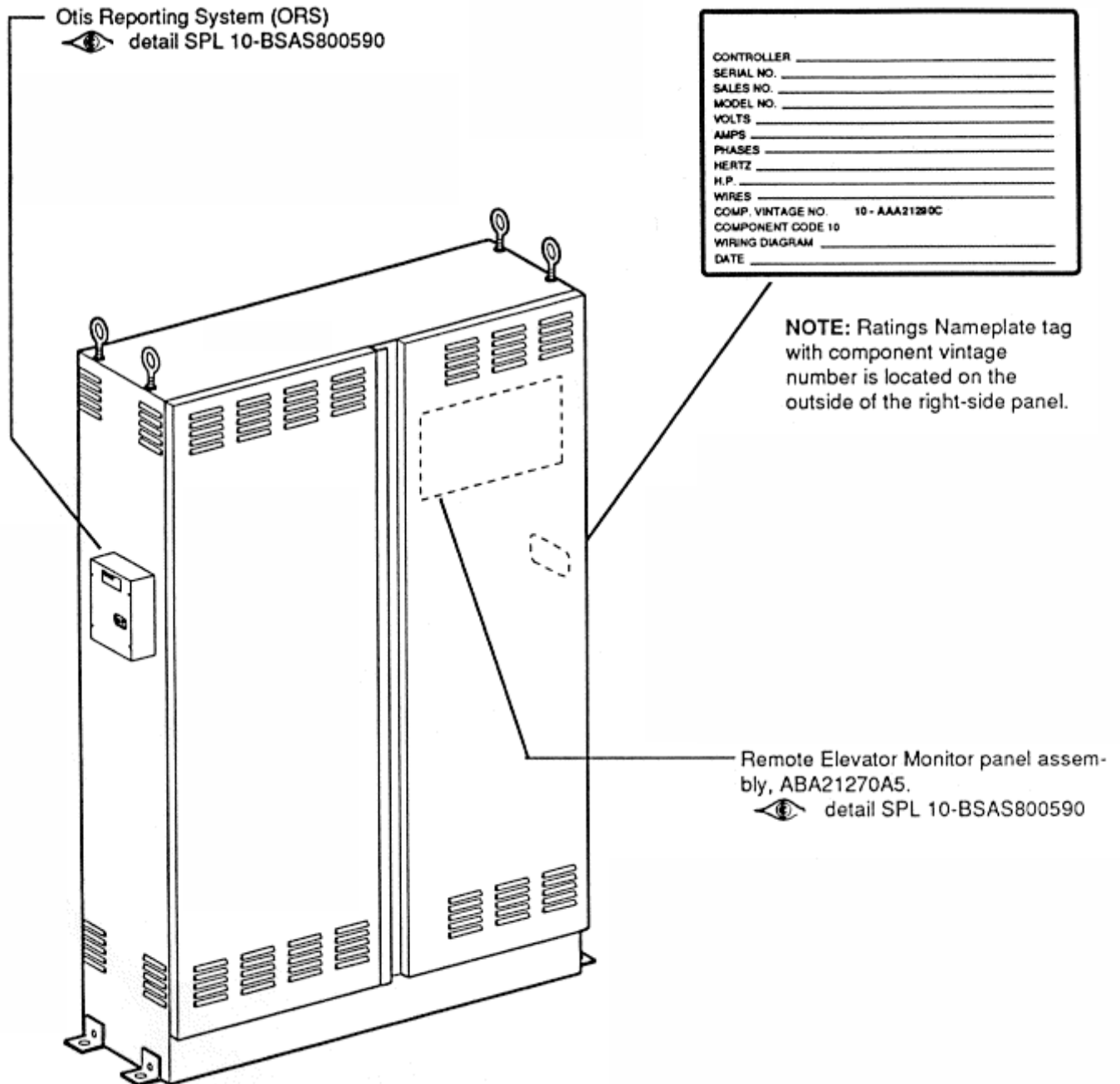


SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared ELEVONIC Model (GEM)

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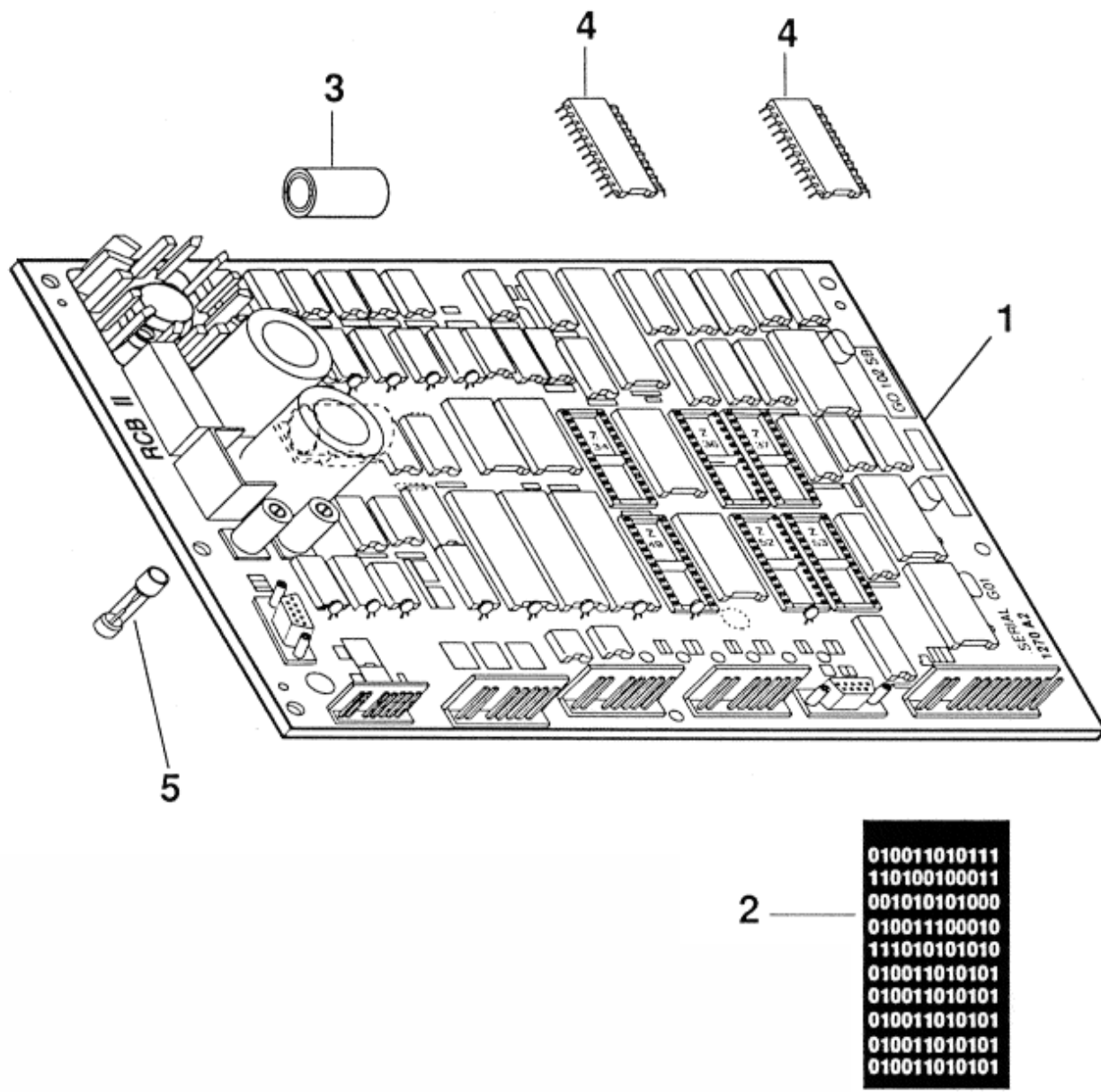
February 1993

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SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared ELEVONIC Model (GEM)

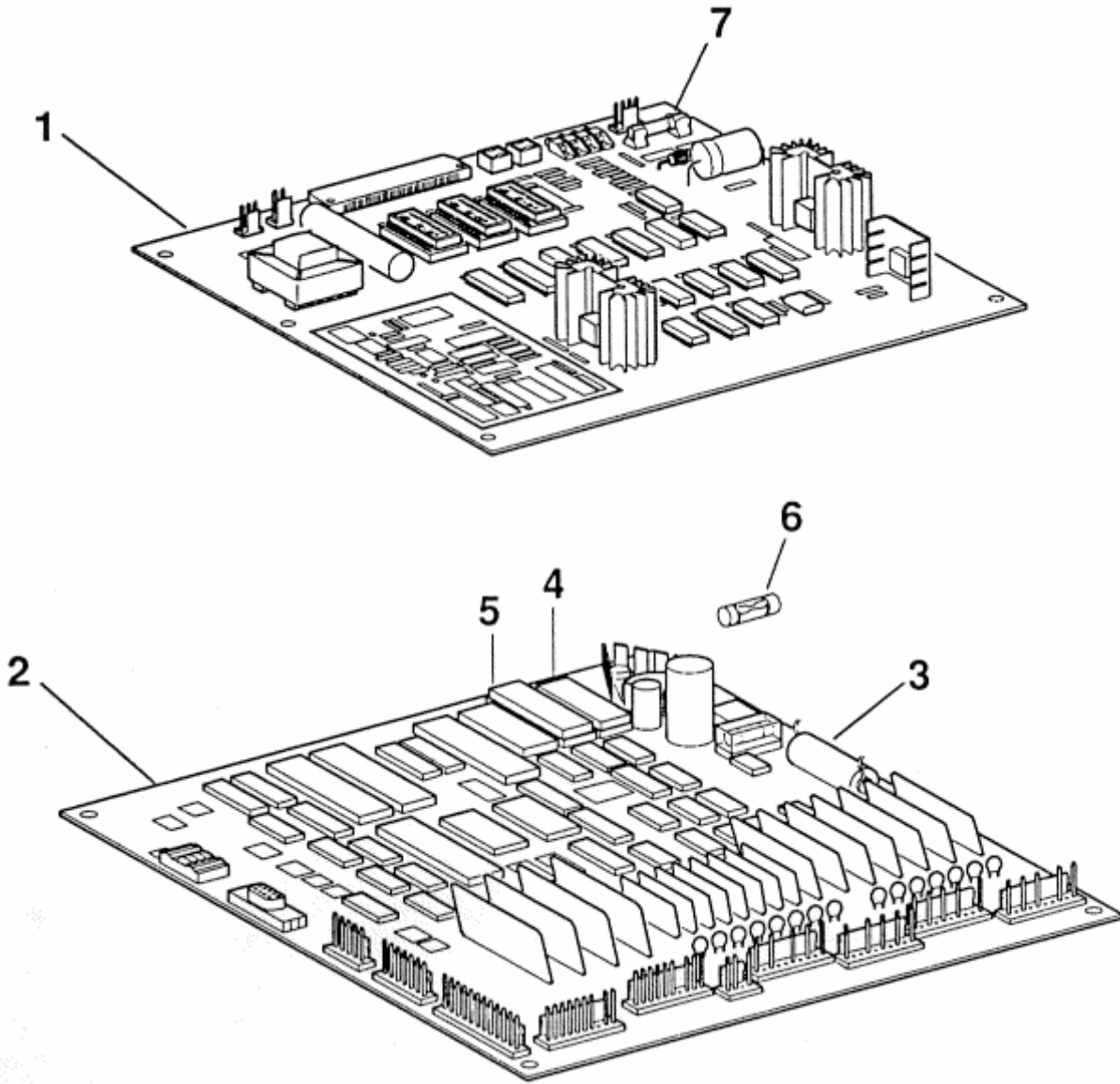
Page 2 - ELEVONIC® 311VF & GEM CONTROLLER



| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|-------------|--|--------------------|
| 1 | GCA21270A3 | PC Board, Ring Car | RCB II |
| 2 | AAA30005xxx | PC Board, Software (refer to OSC for latest version) | RCB II |
| 3 | GAA718C1 | Battery, 3V | RCB II |
| 4 | AAA616KM2 | EEPROM (RCB II) | Z34 Z49 |
| | AAA616LX2 | EPROM (RCB II) | Z36 Z37 Z52 Z53 |
| 5 | GO375AF22 | Fuse, 2A | F1 F2 |

SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared ELEVONIC Model (GEM)

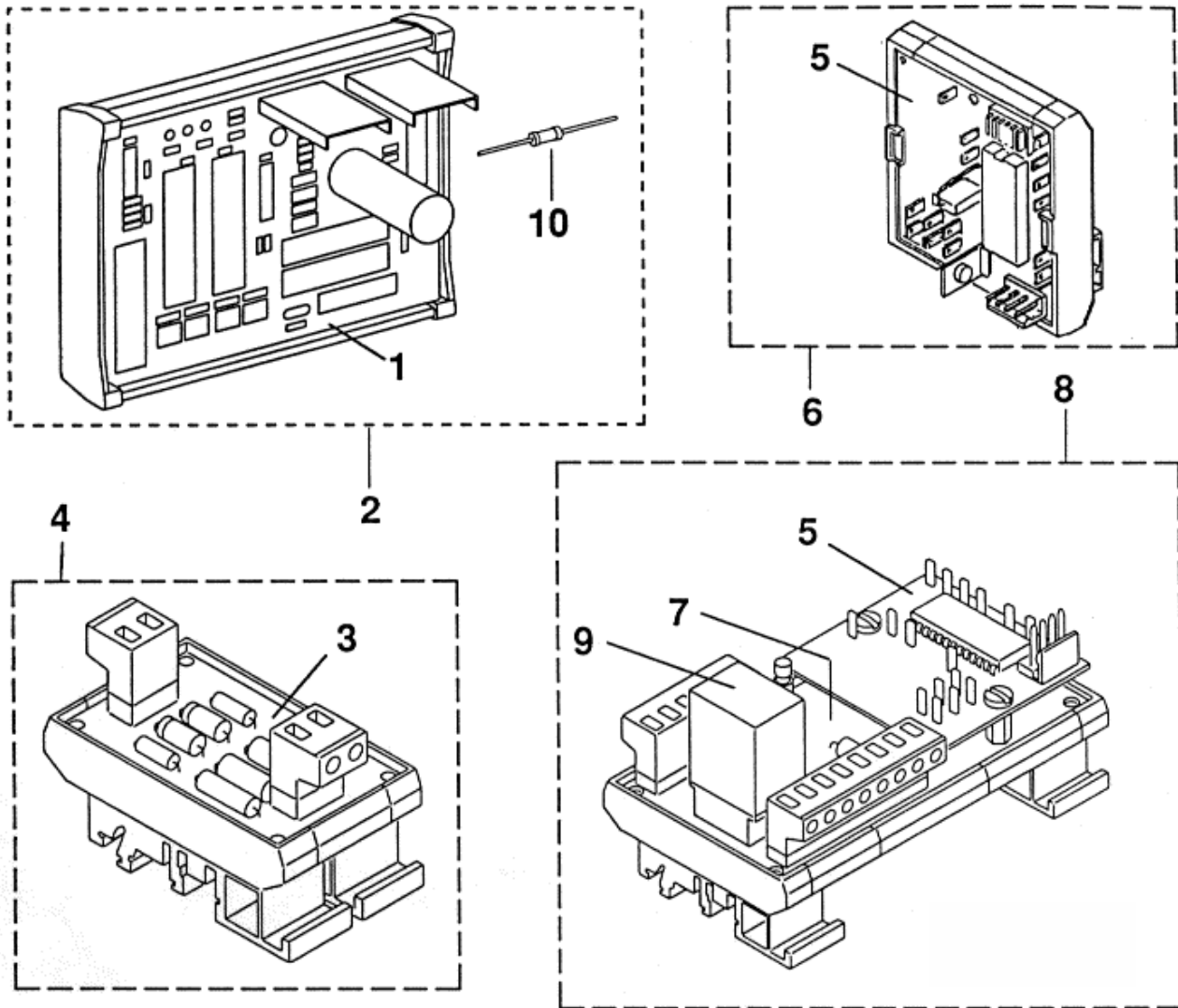
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| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|-----------------------------------|--------------------------------|--------|
| | AAA21290C AAA21290R | | |
| 1 | AAA26800ABL001 | PC Board, Chime | |
| 2 | JBA260801AAF002 JDA26801AAF002 | PC Board, Motion Control | MCB |
| 3 | JAA00718AAA001 | Battery | MCB |
| 4 | AAA616KM2 | EEPROM (MCB) | U44 |
| 5 | AAA616LX2 | EPROM (MCB) | U37 |
| 6 | JO375B2 | Fuse, (used on JDA26801AAF002) | F1 |
| 7 | 375P1 | Fuse, 1A, (used on Chime PCB) | F1 |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

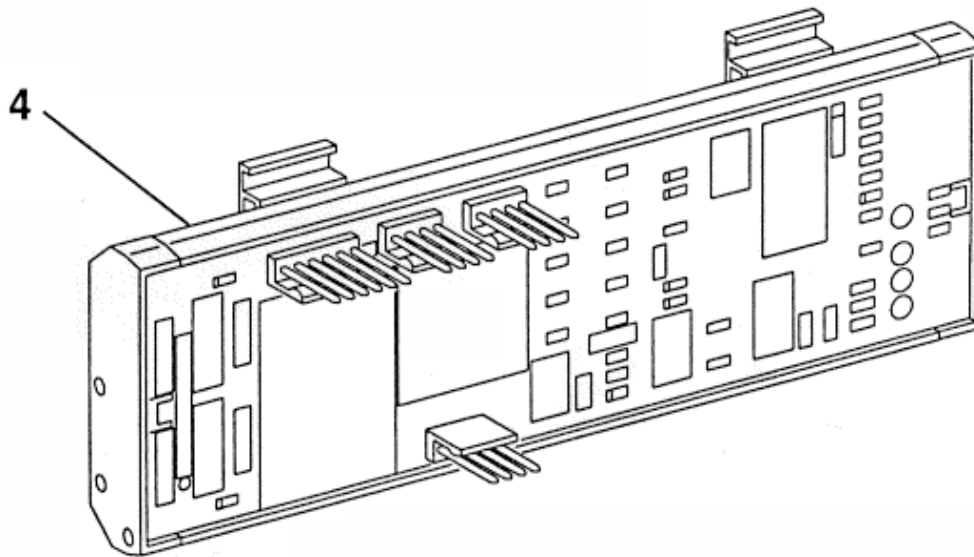
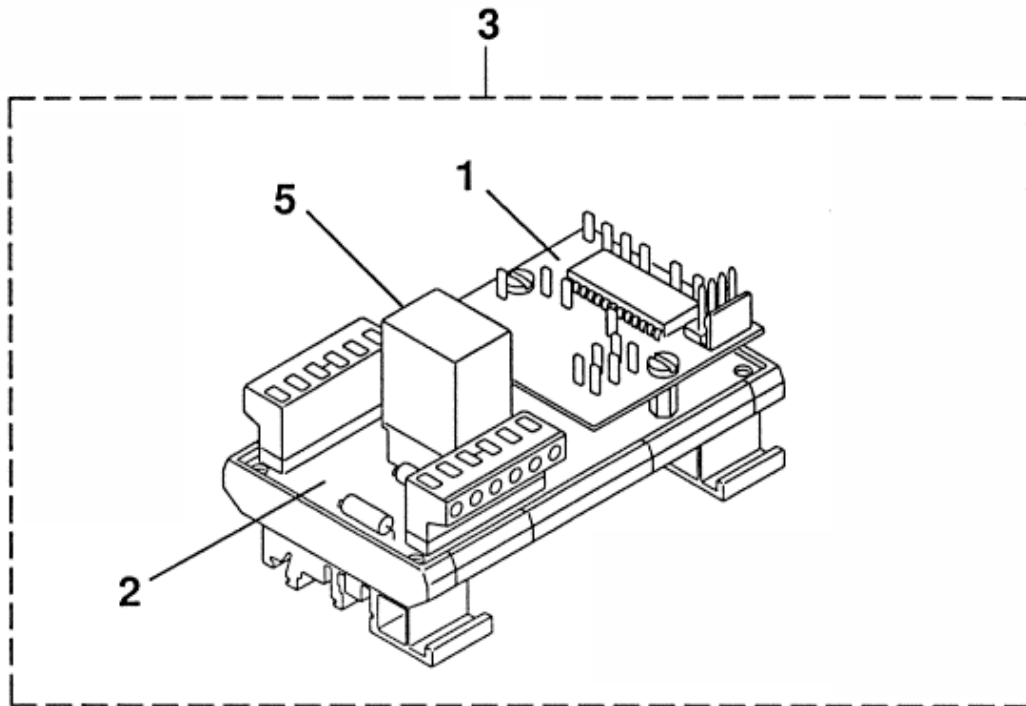
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| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|-------------|--|-----------|
| 1 | AAA26800GG1 | PC Board, ANSI Speed Check without Holder | ASCB |
| 2 | AAA21380M1 | ANSI Speed Check Module Assembly | ASCB |
| 3 | AAA26800KP1 | PC Board, Filter Module w/o Holder or Connectors | |
| 4 | AAA21380D1 | Filter Module Assembly | |
| 5 | A9693C4 | PC Board, Remote Station | C5RS EQI8 |
| 6 | 7145AY1 | Remote Sttion-4 Module Assembly | C5RS |
| 7 | AAA26800KT1 | PC Board, Seismic Module | EQIB |
| 8 | AAA21380E1 | Seismic Module Assembly | EQIB |
| 9 | AAA613CZ2 | Relay, 24VDC, 4-Pole (EQIB, SPIB) | |
| 10 | AAA375BM7 | Fuse, Picofuse, 1A, 125V (to ANSI speed check PCB) | F1, F2 |
| | AAA375BM13 | Fuse, Picofuse, 4 Amp, 125V (to ANSI Speed check) | F3 |

SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared ELEVONIC Model (GEM)

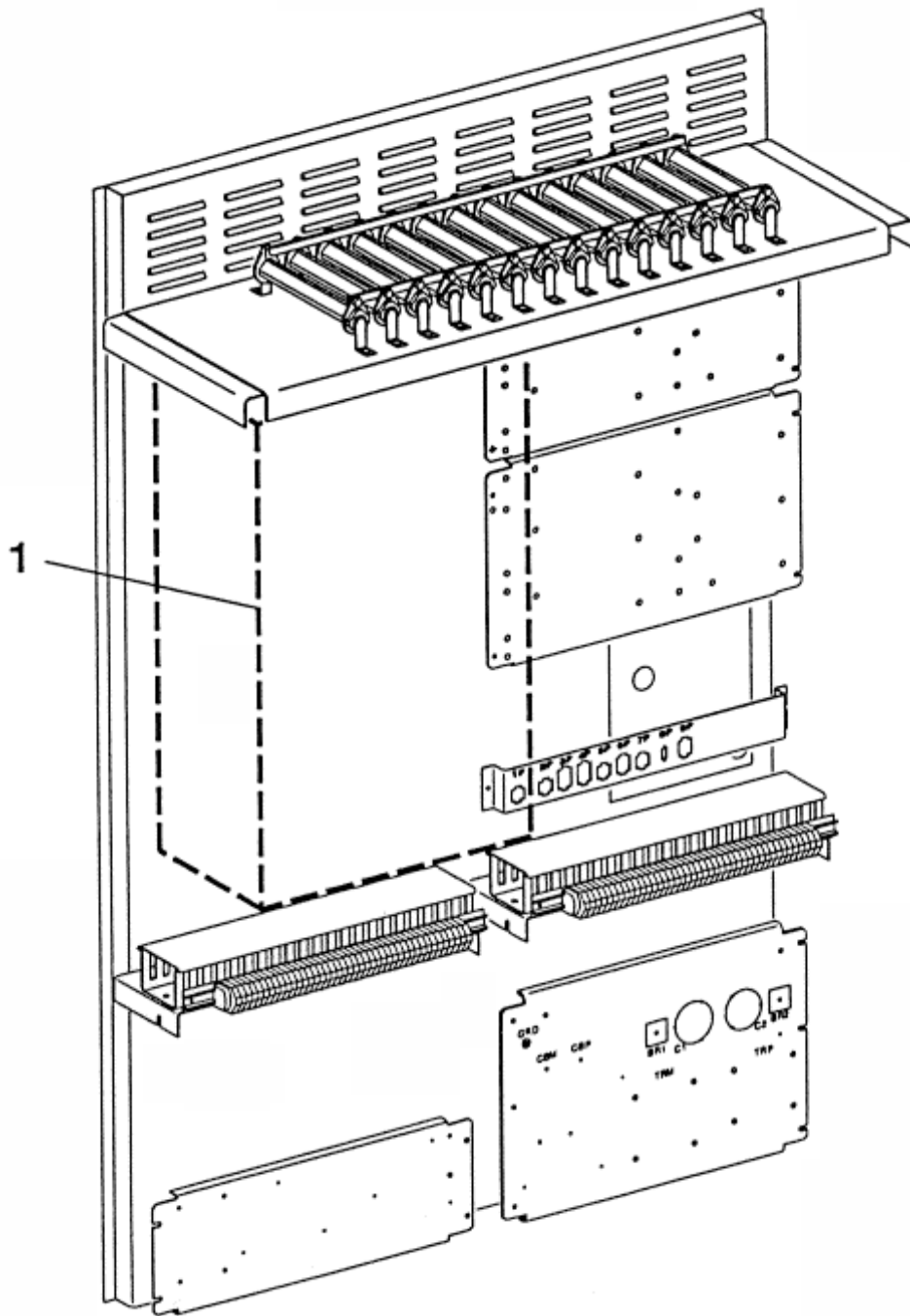
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| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|------------------------|--|--------|
| | AAA21290C AAA21290R | | |
| 1 | A9693C4 | PC Board, Remote Station-4 (C2RS) | RS-4 |
| 2 | AAA26800KS1 | PC Board, Standby Power Module w/Relay | SPIB |
| 3 | AAA21380F1 | Standby Power Module Assembly | SPIB |
| 4 | 9693F1 | Switchover Module | SOM |
| 5 | AAA613CZ2 | Relay, 24VDC, 4-Pole (EQIB, SPIB) | |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

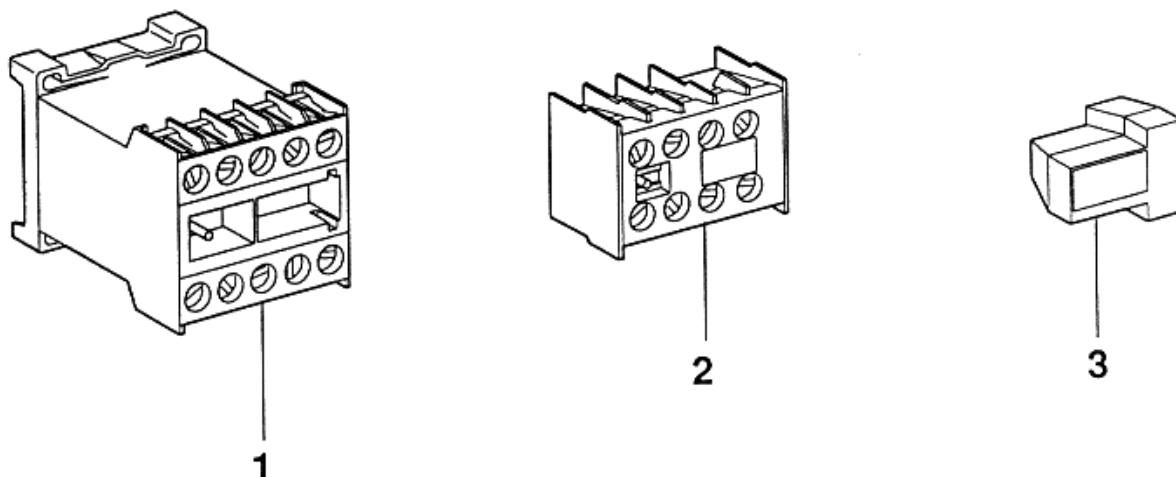
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| REF. No. | AAA21290C | AAA21290R | DESCRIPTION | SYMBOL |
|----------|----------------|------------|------------------------------|--------|
| | PART OR ML | | | |
| 1 | JAA21340AAC011 | | IGBT Drive Assembly, 90 Amp | IGBT |
| | JAA21340AAC012 | AAA21290M1 | IGBT Drive Assembly, 120 Amp | |
| | JAA21340AAC013 | | IGBT Drive Assembly, 180 Amp | |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

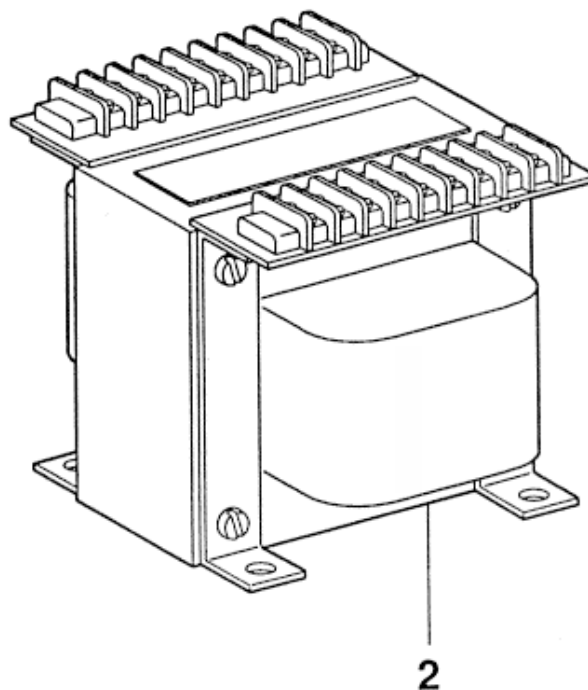
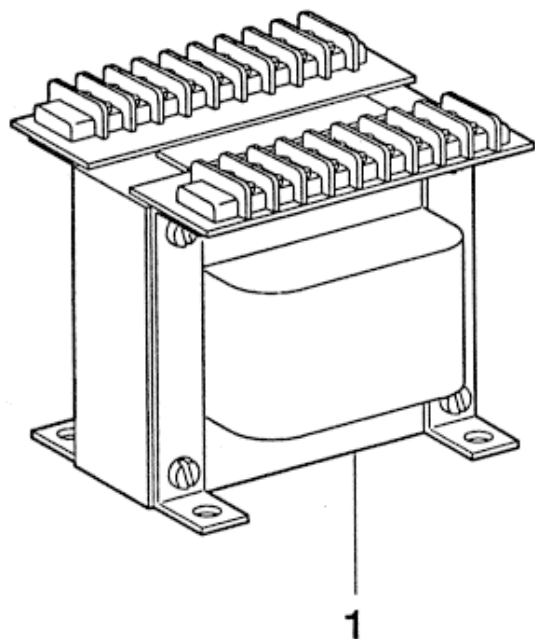
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| REF. No. | AAA21290C | AAA21290R | DESCRIPTION | SYMBOL |
|----------|-------------|-------------|--|--|
| 1 | AAA613CX104 | | Relay, Control, 120VAC, 4 Making Contacts | AUD, ETSC, U, D, SC, EES LSP |
| | | AAA613CX104 | Relay, Control, 120VAC, 4 Making Contacts | ETSC, SC EES LSP |
| | AAA613CX105 | | Relay, Control, 120VAC, 3 Making, 1 Breaking Contacts | INA, DZ, GDS ADZ, C, UD, LB |
| | | AAA613CX105 | Relay, Control, 120VAC 3 Making, 1 Breaking Contacts | DZ, GDS, C, LB, AUD, U, D, ADZ, DRO |
| | AAA613CX106 | | Relay, Control, 120VAC, 2 Making, 1 Breaking Contacts | INB |
| | | AAA613CX114 | Relay, Control, 24VAC 3 Making, 1 Breaking Contacts | ETP |
| | AAA613CX115 | | Relay, Light/Fan, 24VDC, 2 Making, 2 Breaking Contacts | LR |
| 2 | AAA613CX207 | | Auxiliary Contact, 1 Making, 3 Breaking Contacts | SC, DZ, ADZ |
| | | | | |
| 3 | AAA613CX305 | | Suppressor, (RC with Varistor), 127-240 VAC | |
| | AAA613CX304 | | Suppressor, 12-250VDC (Diode) | |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

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| PART NO. | PRIMARY | | |
|-----------|---------|-------|-------|
| | H1-H2 | H1-H3 | H1-H4 |
| AAA225GF1 | 437V | 460V | 483V |
| AAA225GF2 | 204 | 222 | 240 |
| AAA225GF3 | 545 | 575 | 605 |

| PART NO. | PRIMARY | | |
|-----------|---------|-------|-------|
| | H1-H2 | H1-H3 | H1-H4 |
| AAA225GG1 | 437V | 460V | 483V |
| AAA225GG2 | 204 | 222 | 240 |
| AAA225GG3 | 545 | 575 | 605 |

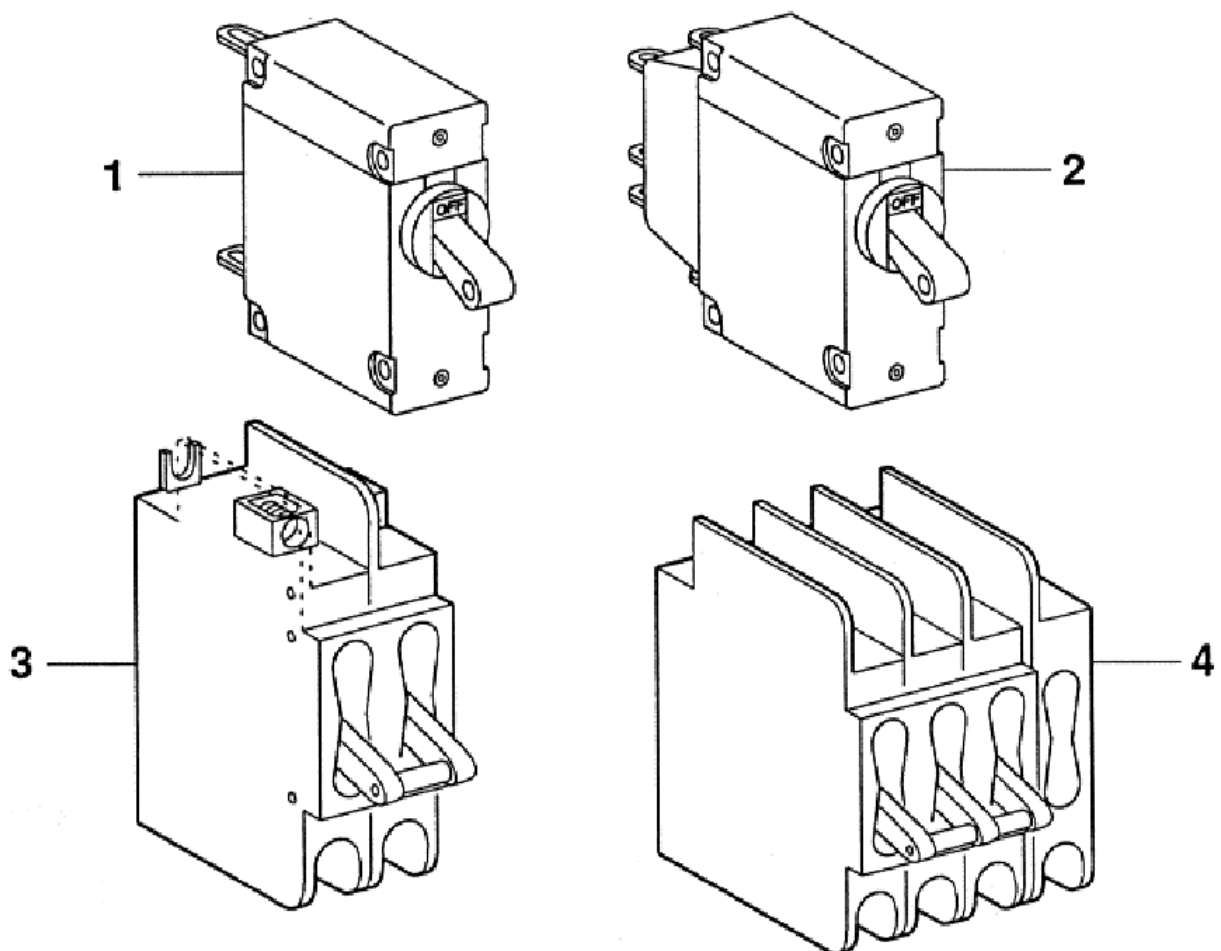
| SECONDARY | VOLT AMP RATING | |
|-----------|-----------------|-----|
| X1-X2 | 23V | 320 |
| X3-X4 | 10V | 30 |
| X5-X6 | 12V | 6 |
| X7-X8 | 10V | 30 |
| X9-X10 | 12V | 12 |

| SECONDARY | VOLT AMP RATING | |
|-----------|-----------------|-----|
| X1-X2 | 100V | 320 |
| X1-X3 | 115V | |
| X4-X5 | 82V | 250 |
| X4-X6 | 105V | |
| X4-X7 | 110V | |
| X8-X9 | 135V | 250 |

| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|------------|----------------------------|--------|
| 1 | AAA225GF2 | Transformer (200-240V sys) | TRP |
| | AAA225GF1 | Transformer (440-500V sys) | TRP |
| | AAA225GF3 | Transformer (550-625V sys) | TRP |
| 2 | AAA255GG2 | Transformer (200-240V sys) | TRM |
| | AAA255GG1 | Transformer (440-500V sys) | TRM |
| | AAA255GG3 | Transformer (550-625V sys) | TRM |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

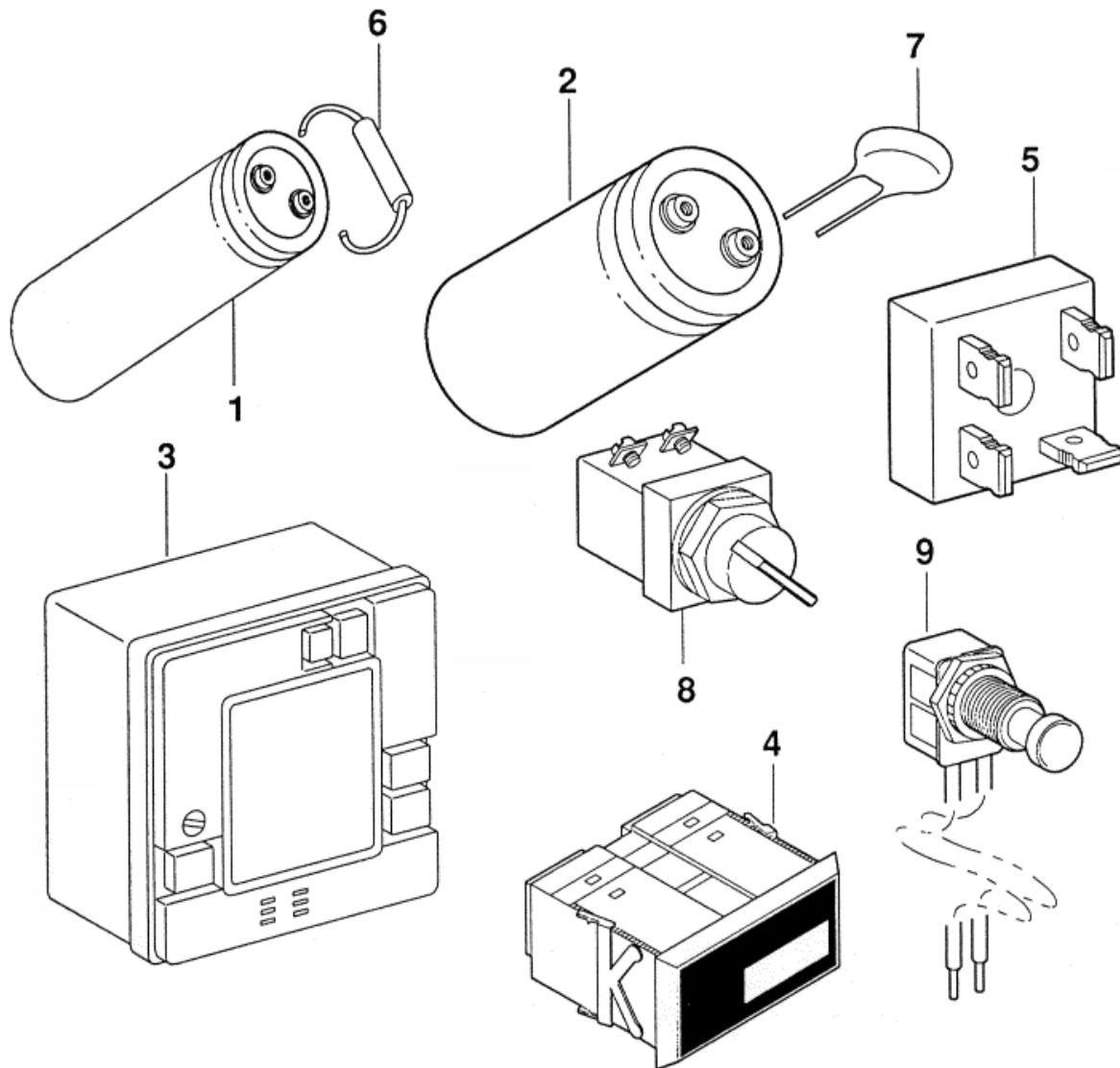
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| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|------------|---|-----------|
| 1 | AAA637C2 | Circuit Breaker, 2.5A, 1-Pole, Short Delay | CB4 |
| | AAA637C8 | Circuit Breaker, 5.0A, 1-Pole, Long Delay | CBS - CB7 |
| | AAA637C10 | Circuit Breaker, 10.0A, 1-Pole, Long Delay | CB8 |
| | AAA637C15 | Circuit Breaker, 7.5A, 1-Pole, Long Delay, (high pulse) Plus Inertial Delay | CB3 |
| | AAA637C16 | Circuit Breaker 2.5A, 1-Pole, Long Delay | CB2 |
| 2 | AAA637C17 | Circuit Breaker, 5.0A, 1-Pole, Long Delay, Aux. Sw. | CB1 |
| 3 | AAA637F12 | Circuit Breaker, 5.0A, 2-Pole (200-240V sys) | CBM, CBP |
| | AAA637F9 | Circuit Breaker, 2.0A, 2-Pole ($\geq 380V$ sys) | CPB |
| | AAA637F11 | Circuit Breaker, 3.0A, 2-Pole ($\geq 380V$ sys) | CBM |
| 4 | AAA637G3 | Circuit Breaker, 30A, 4-Pole, (pole 4, relay trip 30VDC) (GEM & E311VF duties of 2035, 2535 & 2540) | CBR |
| | AAA637G7 | Circuit Breaker, 40A, (4-Pole, (pole 4, relay trip 30VDC) (All E311VF duties above 2500 lbs. or ≥ 400 FPM) | |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

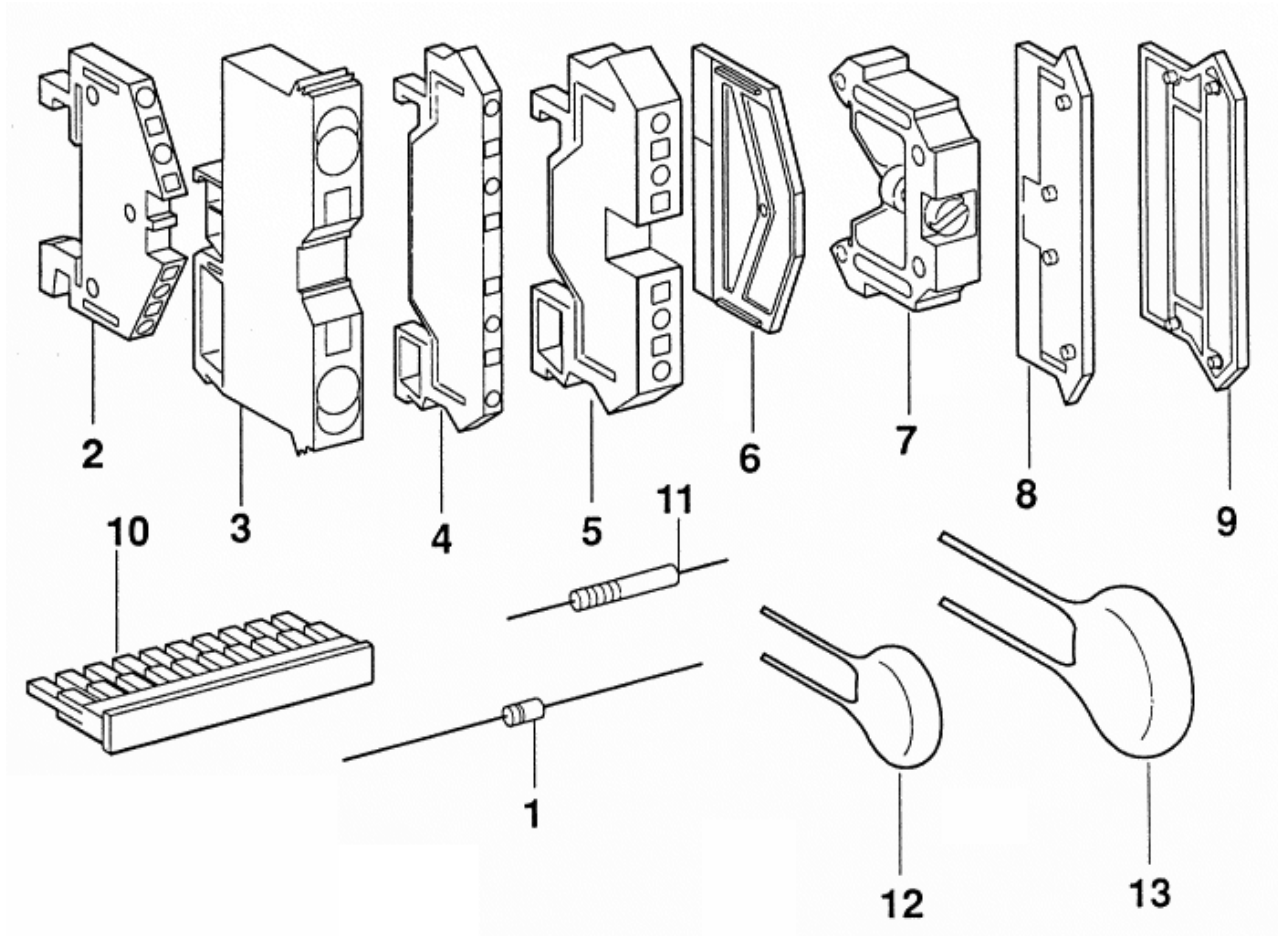
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| REF. No. | AAA21290C AAA21290R PART OR ML | DESCRIPTION | SYMBOL |
|----------|--------------------------------------|---|-------------|
| 1 | 226DR1 | Capacitor, 400 μ F, 450V | C1 |
| 2 | 226EJ1 | Capacitor, 19000 μ F, 60VDC | C2 |
| 3 | 623T1 | Clock | ELA UPC/DPC |
| 4 | CAA623C1 | Counter | |
| 5 | 230BS3 | Rectifier, 600V, 25A | BR1 BR2 |
| 6 | AAA232FJ2 | Resistor, 4K Ω , 10W \pm 1% (for Capacitor, C1) | R1 |
| 7 | AAA605AA13 | Suppressor, Transient 510V RMS | SA4 |
| 8 | 177DE3 | Switch, Lever | CIS |
| 9 | P177BX1 | Switch, Pushbutton | CUIB CDIB |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

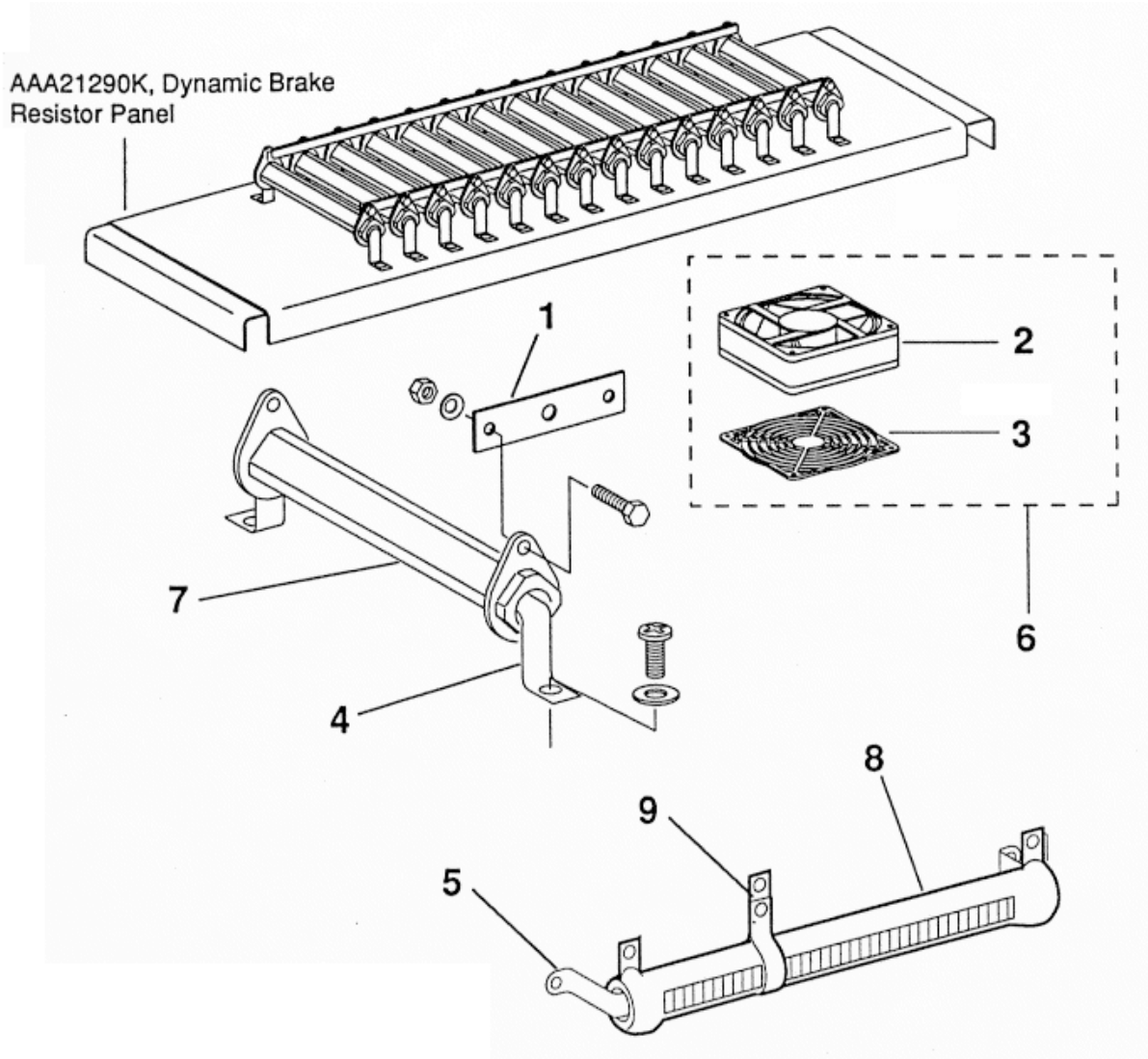
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| REF. No. | PART OR ML | DESCRIPTION | SYMBOL |
|----------|------------|--|---------------------|
| 1 | AAA612T4 | Diode, 280V Reverse RMS (1N4004) | D1 |
| 2 | AAA303EP1 | Terminal Block, 26-14AWG, 4-Entries, 1.99 in. Length | HL2, PE5, HL1 |
| 3 | AAA303EP39 | Terminal Block, 24-8AWG, 2-Entries, 4.55 in. Length | L1, L2 ,L3, U, V, W |
| 4 | AAA303EP42 | Terminal Block, 26-14AWG, 4 Entries, 2.87 in. Length | D1, RLR SA1, 2, 3 |
| 5 | AAA303EP51 | Terminal Block, 24-8AWG, 2-Entries, 2.72 in. Length | L1 L2 L2 L3 |
| 6 | AAA303EP3 | Terminal Block End Plate | PE5, HL1 |
| 7 | AAA303EP37 | Terminal Block, End Plate | D1, SA1, 2, 3 |
| 8 | AAA303EP5 | Terminal Block End Plate, 0.39in. Thick | |
| 9 | AAA303EP52 | Terminal Block End Plate | L3 |
| 10 | AAA303EP49 | Terminal Block, Jumper, 3-Pole | HL2 |
| | AAA303EP50 | Terminal Block, Jumper, 10-Pole | |
| 11 | AAA232FN51 | Resistor, 1W, 120 Ohm | RLR |
| 12 | AAA605AA13 | Suppressor, 30V RMS (working) 14mm Dia. | SA4 |
| 13 | AAA605AA45 | Suppressor, 675V RMS (working) 20mm Dia. | SA1, 2, 3 |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

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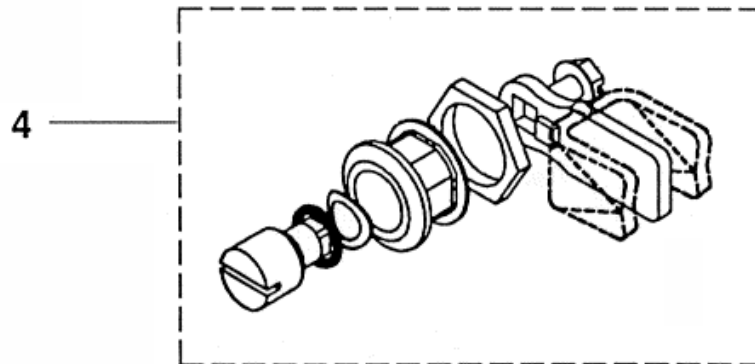
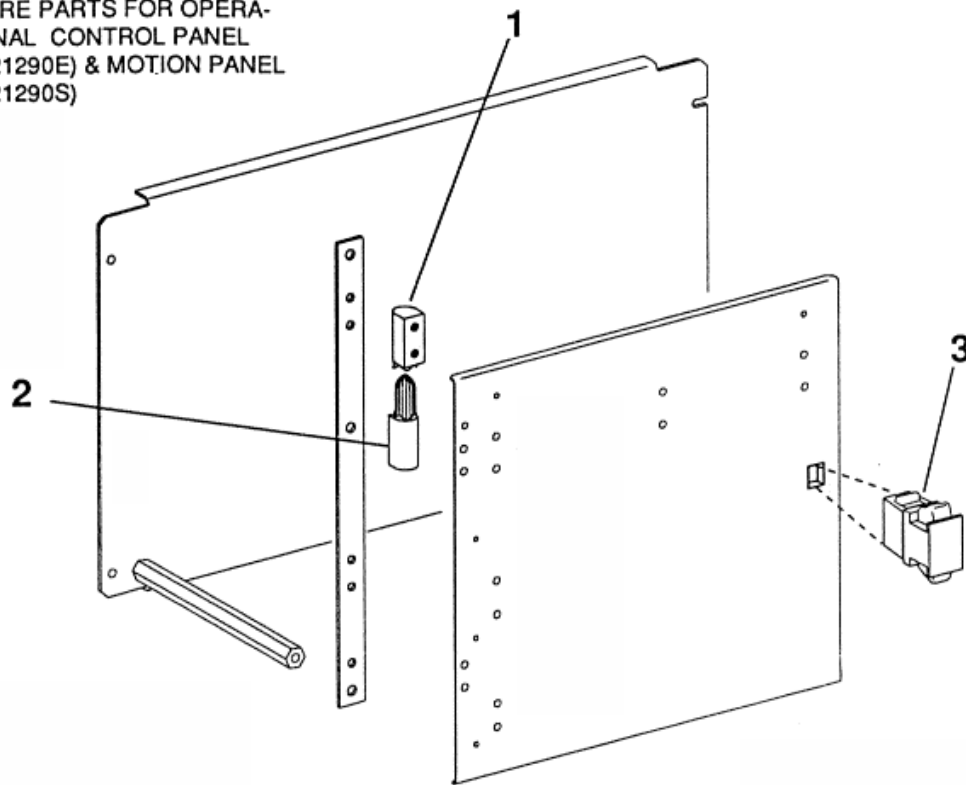


| REF. No. | PART OR ML | DESCRIPTION |
|----------|------------|---|
| 1 | 252B1 | Bus Bar |
| 2 | P727A1 | Fan, 115VAC, 50/60 Hz. |
| 3 | P727A2 | Fan Guard |
| 4 | 180AD1 | Holder, Resistor |
| 5 | AAA617K101 | Holder, Resistor (located on drive panel) |
| 6 | 2700CAA4 | Kit, Fan with Guard and Hardware |
| 7 | 232AA4 | Resistor, Power 2.61 Ohms, 700W |
| | 232AA2 | Resistor, Power, 1.65 Ohms, 700W |
| | 232AA5 | Resistor, Power, 3.82 Ohms, 700W |
| 8 | AAA617K6 | Resistor, Power, 10 Ohms, 225W, R2 (located on drive panel) |
| 9 | AAA617K102 | Resistor Lug |

**SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared
ELEVONIC Model (GEM)**

Page 13 - MECHANICAL PARTS

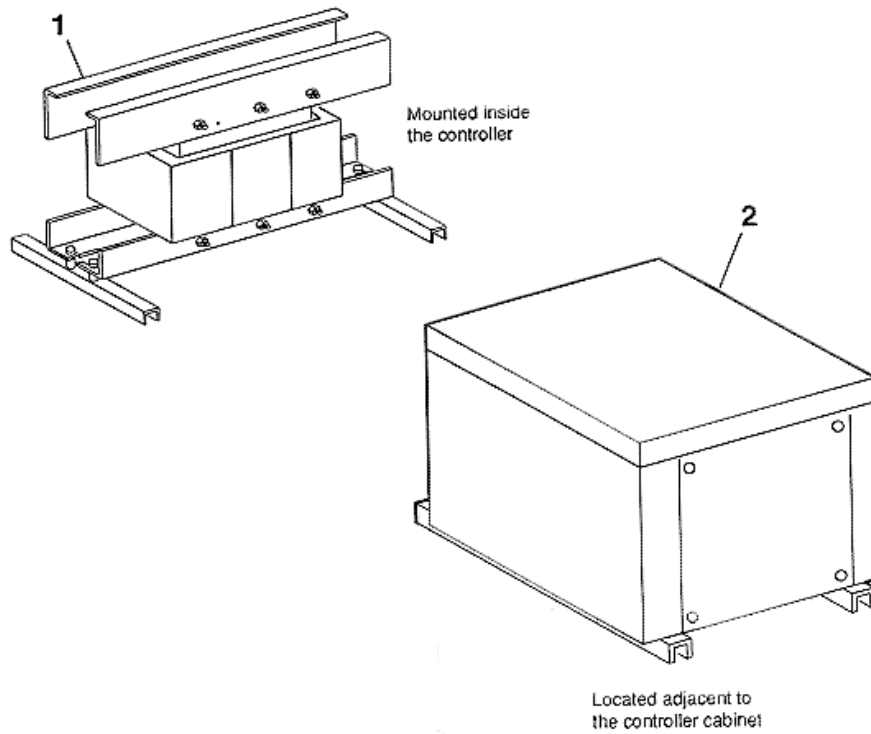
SPARE PARTS FOR OPERATIONAL CONTROL PANEL (A..21290E) & MOTION PANEL (A..21290S)



| REF. No. | PART OR ML | DESCRIPTION |
|----------|------------|--------------------------------|
| 1 | AAA391CH2 | Hinge, Female |
| 2 | AAA391CH1 | Hinge, Male |
| 3 | AAA331CL1 | Latch |
| 4 | AAA331CD4 | Latch Assembly for Front Doors |

SPL 10-AAA21290C - Controller Equipment For: ELEVONIC 311VF (MVS) & Geared ELEVONIC Model (GEM)

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| TRANSFORMER | | |
|-------------|-----------|------------|
| PART No. | TYPE | KVA RATING |
| AAA225GR1 | Auto | 28 |
| AAA225GR2 | | 35 |
| AAA225GR3 | | 45 |
| AAA225GS1 | Isolation | 28 |
| AAA225GS2 | | 35 |
| AAA225GS3 | | 45 |
| AAA225GS5 | | 28 |
| AAA225GS6 | | 35 |
| AAA225GS7 | | 45 |
| AAA225GV1 | | Auto |
| AAA225GV2 | 27 | |
| AAA225GW1 | Isolation | 20 |
| AAA225GW2 | | 27 |

| | | REF. 1 | REF. 2 | REF. 1 | REF. 2 | |
|---------------|-------------|----------------------|-----------|-----------|-----------|-----|
| | | AAA21290R | AAA21290C | AAA21290R | AAA21290C | |
| | | VOLTS | | | | |
| | | 220 | | 575 | | |
| DUTY (lbs) | SPEED (FPM) | PART No. (AAA225...) | | | | |
| 2000, 2500 | 350 | GW1 | GS1 | GR1 | GV1 | GS5 |
| 2500 | 400-500 | GW1 | GS2 | GR2 | GV1 | GS6 |
| 3000 | 350-400 | GW2 | GS2 | GR2 | GV2 | GS6 |
| 3500 | 350 | GW2 | GS2 | GR2 | GV2 | GS6 |
| 3000 | 450-500 | GW2 | GS3 | GR3 | GV2 | GS7 |
| 3500 | 400-500 | GW2 | GS3 | GR3 | GV2 | GS7 |
| 4000(H), 4500 | 350 | GW2 | GS3 | GR3 | GV2 | GS7 |