

## 1336 PLUS, PLUS II, FORCE, IMPACT & REGEN Spare Parts

0.37-597 kW / 0.5-800 HP  
(200-240V), (380-480V), (500-600V)

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**ATTENTION:** Hazardous voltages are present in the drive. Serious or fatal injury can occur from electric shock. DO NOT attempt repair without a troubleshooting manual or contacting Allen-Bradley for assistance.

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**Significance of Level Numbers**

Level 1 - Major Assemblies  
Recommended stocking locations include large users and OEM's, distributors, and GTS.

Level 2 - Minor Assemblies  
Recommended stocking locations include distributors and GTS.

Level 3 - Discrete Components  
Recommended stocking locations include GTS.

**Installation Instructions** Spare Parts installation instructions are documented in the troubleshooting manuals.

### Spare Part Catalog Number Description (Example)

**1336**    --       **BDB**    --    **SP1**    --    **A**

|                            |                 |                 |     |
|----------------------------|-----------------|-----------------|-----|
| 1336 = PLUS, FORCE, IMPACT | Spare Part Type | Common Spare    | Rev |
| 1336S = 1336 PLUS          |                 | Part Delineator |     |
| 1336F = 1336 PLUS II       |                 |                 |     |
| 1336T = 1336 FORCE         |                 |                 |     |
| 1336E = 1336 IMPACT        |                 |                 |     |
| 1336R = 1336 REGEN         |                 |                 |     |

### General Procedure For Ordering Parts Not Listed In This Spare Parts Matrix

- 1) Contact A-B Standard Drives Technical Support during normal business hours - 7 A.M. to 6 P.M. (CST).
- 2) Technical Support will provide the part number that needs to be ordered, PROVIDED:
  - a) The Catalog Number(s) of the drive(s), the system, or the equipment in question is known.
  - b) The RA Sales Order Number (SO) for the drive(s) or equipment in question is known.
  - c) You have the correct Troubleshooting Manual to help identify the parts you are seeking.
- 3) Place parts order through your local RA Distributor.
- 4) Local RA Distributor will place an order, in PASSPORT, then contact Customer Service (E-Team) to process and/or expedite your parts order. The CS representative will provide P & A.

**IMPORTANT NOTES:** Only A-B distributors may contact Customer Service. Calls from end users are not accepted by Customer Service. CS has precedence on any P & A issues.

### Your Comments Are Welcome

If you have comments on how to improve this Spare Parts Index or Parts Ordering Issues, please contact:  
A-B Standard Drives Technical Support      Phone: 262 512 8176

**Spare Parts - 230V PLUS, PLUS II, FORCE & IMPACT Drives**

| Level                             | Catalog Number   | Description  | T.G. SYMBOL -> Troubleshooting Guide Symbol<br>(SA) = Stand Alone / (CB) = Common Bus<br>No Designator = Applies to all drives<br>X = not applicable |
|-----------------------------------|--|--|--|
|                                   |  |  |  |
| no 'Level' rating for these items |  | <b>Series C Conversion Kit</b><br><b>(includes Gate Drive PCB, Inductor and Precharge SCR)</b>       |  |
|                                   | 1336-CONV-SP11A  | Series A or B to C Upgrade Kit, 1336STEF, 230V, 7.5 HP   |  |
|                                   | 1336-CONV-SP12A  | Series A or B to C Upgrade Kit, 1336STEF, 230V, 10 HP  |  |
|                                   | 1336-CONV-SP13A  | Series A or B to C Upgrade Kit, 1336STEF, 230V, 15 HP  |  |
|                                   |  | <b>Bus Fuse Upgrade Kit - D Frame</b><br><b>(includes higher amperage bus fuse and fuse adapter)</b> |  |
|                                   | 1336-CONV-SP15A  | Bus Fuse and Busbar Upgrade Kits, STEF, 250A, 230V, 40 HP  |  |
|                                   | 1336-CONV-SP16A  | Bus Fuse and Busbar Upgrade Kits, STEF, 300A, 230V, 50 HP  |  |
|                                   | 1336-CONV-SP17A  | Bus Fuse and Busbar Upgrade Kits, STEF, 350A, 230V, 60 HP  |  |
|                                   |  | <b>Plus to PlusII Upgrade Kit</b>  |  |
|                                   | 1336F-UPGRA11  | Main Control Bd, HAS2, and decal, A Frames, Latest FRN   |  |
| 1336F-UPGRB11                     | Main Control Bd, HAS2, and decal, Frames B-G, Latest FRN |  |  |
| Le                                |  | <b>Main Control PCBs</b><br><b>T.G. Symbol -&gt; MAIN CTL</b>  |  |
|                                   | 1336E-MCB-4UPGRD   | PROM, Language and CP, Firmware 4.03   |  |
|                                   | 1336E-MC1-SP23A  | PCB, Main Control 1336E, 2.03 Firmware, Frames A1-A4   |  |
|                                   | 1336E-MC2-SP23A  | PCB, Main Control 1336E, 2.03 Firmware, Frames B-H   |  |
|                                   | 1336E-MC1-SP31B  | PCB, Main Control 1336E, w/ English LM, V3.01, Frames A1-A4  |  |
|                                   | 1336E-MC2-SP31B  | PCB, Main Control 1336E, w/ English LM, V3.01, Frames B-H  |  |
|                                   | 1336E-MC1-SP43A  | PCB, Main Control 1336E, w/ English LM, V4.03, Frames A1-A4  |  |
|                                   | 1336E-MC2-SP43A  | PCB, Main Control 1336E, w/ English LM, V4.03, Frames B-H  |  |
|                                   | 1336S-MCB-SP2B   | PCB, MAIN CONTROL 1336S,A FRAME/WITH LM  |  |
|                                   | 1336S-MCB-SP1B   | PCB,MAIN CONTROL 1336S,B-H FRAME   |  |
|                                   | 1336F-MCB-SP1M   | PCB, Main Control 1336F, Frames B-G, Latest FRN, Supersedes 1336F-MCB-SP1A through SP1L              |  |
|                                   | 1336F-MCB-SP2M   | PCB, Main Control 1336F, A Frames, Latest FRN, Supersedes 1336F-MCB-SP2A through SP2L                |  |

| Quantity of Kits Required per Drive |         |       |       |         |       |       |         |       |       |         |        |        |
|-------------------------------------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|--------|--------|
| A                                   | Frame B |       |       | Frame C |       |       | Frame D |       |       | Frame E |        |        |
| .5-10 HP                            | 7.5 HP  | 10 HP | 15 HP | 20 HP   | 25 HP | 30 HP | 40 HP   | 50 HP | 60 HP | 75 HP   | 100 HP | 125 HP |
|                                     | 1       |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         | 1     |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       | 1     |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       | 1       |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         | 1     |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       | 1     |         |        |        |
| 1                                   |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |
| 1                                   | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |
| 1                                   |         |       |       |         |       |       |         |       |       |         |        |        |
| 1                                   | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |
| 1                                   |         |       |       |         |       |       |         |       |       |         |        |        |
| 1                                   | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |
| 1                                   |         |       |       |         |       |       |         |       |       |         |        |        |
| 1                                   | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |



**Spare Parts - 230V PLUS, PLUS II, FORCE & IMPACT Drives**

| Level          | Catalog Number                           | Description   |
|----------------|--|---|
| Level 1        |  | <b>Gate Drive PCBs</b><br>T.G. Symbol -> <b>BASE DRV / POWER SUPPLY</b>                   |
|                | 1336-BDB-SP61A, C                        | Obsolete--replaced by 1336-BDB-SP61D  |
|                | 1336-BDB-SP61D                           | PCB, Gate Driver, 1336T, 230V, 1 HP, Series C & up  |
|                | 1336-BDB-SP62A, C                        | Obsolete--replaced by 1336-BDB-SP62D  |
|                | 1336-BDB-SP62D                           | PCB, Gate Driver, 1336T, 230V, 3HP, Series C & up   |
|                | 1336-BDB-SP11A, C                        | Obsolete--replaced by 1336-BDB-SP11D  |
|                | 1336-BDB-SP11D                           | PCB, Gate Driver, 1336STE, 230V, 7.5 HP, Series C & up<br>1336F, 230V, 7.5 HP, Ser A & up |
|                | 1336-BDB-SP12A, C                        | Obsolete--replaced by 1336-BDB-SP12D  |
|                | 1336-BDB-SP12D                           | PCB, Gate Driver, 1336STE, 230V, 10 HP, Series C & up<br>1336F, 230V, 10 HP, Ser A & up   |
|                | 1336-BDB-SP13A, C                        | Obsolete--replaced by 1336-BDB-SP13D  |
|                | 1336-BDB-SP13D                           | PCB, Gate Drive, 1336STE, 230V, 15 HP, Series C & up<br>1336F, 230V, 15 HP, Ser A and Up  |
|                | 1336-BDB-SP14A, C                        | Obsolete--replaced by 1336-BDB-SP14D  |
|                | 1336-BDB-SP14D                           | PCB, Gate Driver, 1336STEF, 230V, 20 HP   |
|                | 1336-BDB-SP15A, C                        | Obsolete--replaced by 1336-BDB-SP15D  |
|                | 1336-BDB-SP15D                           | PCB, Gate Driver, 1336STEF, 230V, 25 HP   |
|                | 1336-BDB-SP16A, C                        | Obsolete--replaced by 1336-BDB-SP16D  |
|                | 1336-BDB-SP16D                           | PCB, Gate Driver, 1336STEF, 230V, 30 HP   |
|                | 1336-BDB-SP25A, C                        | Obsolete--replaced by 1336-BDB-SP25D  |
|                | 1336-BDB-SP25D                           | PCB, Gate Driver, 1336STEF, 230V, 40 HP   |
|                | 1336-BDB-SP26A, C                        | Obsolete--replaced by 1336-BDB-SP26D  |
|                | 1336-BDB-SP26D                           | PCB, Gate Driver, 1336STEF, 230V, 50 HP   |
|                | 1336-BDB-SP27A, C                        | Obsolete--replaced by 1336-BDB-SP27D  |
|                | 1336-BDB-SP27D                           | PCB, Gate Driver, 1336STEF, 230V, 60 HP   |
|                | 1336-BDB-SP35A, C                        | Obsolete--replaced by 1336-BDB-SP35D  |
|                | 1336-BDB-SP35D                           | PCB, Gate Driver, 1336STEF, 230V, 75 HP   |
|                | 1336-BDB-SP36A, C                        | Obsolete--replaced by 1336-BDB-SP36D  |
|                | 1336-BDB-SP36D                           | PCB, Gate Driver, 1336STEF, 230V, 100 HP  |
|                | 1336-BDB-SP67A, C                        | Obsolete--replaced by 1336-BDB-SP67D  |
| 1336-BDB-SP67D | PCB, Gate Driver, 1336STEF, 230V, 125 HP |   |
| Level 2        |  | <b>Bus Capacitors</b><br>T.G. Symbol -> <b>C1 - Cx or C1 - Cxx</b>                        |
|                | 1336-CAP-SP6A                            | CAP, Assem., 1336STF, 230V, 7.5 - 10 HP (1 Assem. = 2 bus caps)                           |
|                | 1336-CAP-SP7A                            | CAP, assem., 1336STEF, 230V, 15 HP (1 assem. = 4 bus caps)                                |
|                | 1336-CAP-SP9A                            | CAP, assem., 1336STEF, 230V, 20 - 30 HP (1 assem. = 6 bus caps)                           |
|                | 1336-CAP-SP11A                           | CAP, assem., 1336STEF, 230V, 40 - 60 HP (1 assem. = 1 bus cap)                            |
|                | 1336-CAP-SP12A                           | CAP, assem., 1336STEF, 230V, 75 - 125 HP (1 assem. = 1 bus cap)                           |
|                |  | <b>Bus Fuses (also see Bus Fuse Upgrade Kits above)</b><br>T.G. Symbol -> <b>F1</b>       |
|                | 1336-F1-SP18A                            | Bus Fuse, 200A, 1336STEF, 230V, 20-30HP   |
|                | 1336-F1-SP1A                             | Obsolete, use 1336-CONV-SP15A   |
|                | 1336-F1-SP2A                             | Obsolete, use 1336-CONV-SP16A   |
| 1336-F1-SP3A   | Obsolete, use 1336-CONV-SP17A            |   |
| 1336-F1-SP6A   | Bus Fuse, 600A, 1336STEF, Frame E        |   |

T.G. SYMBOL -> Troubleshooting Guide Symbol  
(SA) = Stand Alone / (CB) = Common Bus  
No Designator = Applies to all drives  
X = not applicable

| Quantity of Kits Required per Drive |         |       |       |         |       |       |         |       |       |         |        |        |
|-------------------------------------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|--------|--------|
| A                                   | Frame B |       |       | Frame C |       |       | Frame D |       |       | Frame E |        |        |
| 5-10 HP                             | 7.5 HP  | 10 HP | 15 HP | 20 HP   | 25 HP | 30 HP | 40 HP   | 50 HP | 60 HP | 75 HP   | 100 HP | 125 HP |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         | 1     |       |         |       |       |         |       |       |         |        |        |
|                                     |         | 1     |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       | 1     |         |       |       |         |       |       |         |        |        |
|                                     |         |       | 1     |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       | 1       |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         | 1     |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       | 1     |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       | 1       |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         | 1     |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       | 1     |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       | 1       |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         | 1      |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        | 1      |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     | 1       | 1     |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       | 1     |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       | 1       | 1     | 1     |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       | 6       | 6     | 8     |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       | 8       | 10     | 10     |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       | 1     | 1       | 1     |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       | 1       | 1      | 1      |





## Spare Parts - 230V PLUS, PLUS II, FORCE & IMPACT Drives

| Level       | Catalog Number  | Description  |
|-------------|---|--|
| Level 3     |   | <b>Miscellaneous</b><br><b>1/4 turn Standoffs, Screw Kits, and Ribbon Cables</b> |
|             | 1336-STD0FF-SP1A  | Kit, 1/4-Turn Standoff, (10 Pcs.), 1336STEF, used w/Gate Driver Bds              |
|             |   | <b>Screw Kits</b>  |
|             | 1336-SCREW-SP3A   | Kit, Screw, (25 Pcs) M4 x 0.7 x 89 mm, 1336STEF                                  |
|             | 1336-SCREW-SP4A   | Kit, Screw, (25 Pcs) M5 x 0.8 x 10 mm, 1336STEF                                  |
|             | 1336-SCREW-SP5A   | Kit, Screw, (25 Pcs) M5 x 0.8 x 16 mm, 1336STEF                                  |
|             | 1336-SCREW-SP6A   | Kit, Screw, (25 Pcs) M6 x 1.0 x 12 mm, 1336STEF                                  |
|             |   | <b>Cables</b>  |
|             | 1336-RCBL-SP1B  | Kit, Ribbon Cable w/ Ferrite Clamp, 1336STE, Frame A-E                           |
|             |   | <b>Thermistors</b><br><b>T.G. Symbol -&gt; ST or NTC1</b>                        |
|             | 1336-TR-SP1A  | Kit, Thermistor, 1336STEF, Frame B   |
|             | 1336-TR-SP2A  | Kit, Thermistor, 1336STEF, Frame C   |
|             | 1336-TR-SP3A  | Kit, Thermistor, 1336STEF, Frame D   |
|             | 1336-TR-SP4A  | Kit, Thermistor, 1336STEF, Frame E   |
|             | <b>Transformers (Stand Alone Only)</b><br><b>T.G. Symbol -&gt; T1</b> |  |
| 1336-T-SP1A | XFER, 1336STEF, 230V, 40 - 60 HP                                      |  |
| 1336-T-SP3A | XFER, 1336STEF, 230V, 75 - 125 HP                                     |  |

T.G. SYMBOL -> Troubleshooting Guide Symbol  
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No Designator = Applies to all drives  
X = not applicable

| Quantity of Kits Required per Drive |         |       |       |         |       |       |         |       |       |         |        |        |
|-------------------------------------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|--------|--------|
| A                                   | Frame B |       |       | Frame C |       |       | Frame D |       |       | Frame E |        |        |
| .5-10 HP                            | 7.5 HP  | 10 HP | 15 HP | 20 HP   | 25 HP | 30 HP | 40 HP   | 50 HP | 60 HP | 75 HP   | 100 HP | 125 HP |
|                                     |         |       |       | 2       | 2     | 2     | 2       | 2     | 2     |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       |         |        |        |
| 1                                   | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      |
|                                     | 1       | 1     | 1     |         |       |       |         |       |       |         |        |        |
|                                     |         |       |       | 1       | 1     | 1     |         |       |       |         |        |        |
|                                     |         |       |       |         |       |       | 1       | 1     | 1     |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       | 1       | 1      | 1      |
|                                     |         |       |       |         |       |       | 1       | 1     | 1     |         |        |        |
|                                     |         |       |       |         |       |       |         |       |       | 1       | 1      | 1      |





**Conformal Coated Spare Parts - PLUS, PLUS II, FORCE & IMPACT Drives**

|       |                       | Quantity of Kits Required Per Drive   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|-------|-----------------------|---|---|-------|-------|-------|---------------------|---------------------|---------|-------|-------|--------|---------------------|---------------------|---------|-----|-------|-------|--------|--------|---------|------|--------|---------|--------|---------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|---------|--------|--------|
|       |                       | A   | Frame B   |       |       |       |                     |                     | Frame C |       |       |        |                     |                     | Frame D |     |       |       |        |        | Frame E |      |        | Frame F |        |         | Frame G |        |        | H      |        |         |        |        |        |        |        |         |        |        |
|       |                       | 5-20 HP   | 7.5 HP  | 10 HP | 15 HP | 20 HP | 25 HP               | 30 HP               | 48A     | 25 HP | 30 HP | X40 HP | 40 HP               | 50 HP               | X60 HP  | 78A | 60 HP | 75 HP | 100 HP | 125 HP | X150 HP | 180A | 150 HP | 200 HP  | 250 HP | X300 HP | 250 HP  | 300 HP | 350 HP | 400 HP | 450 HP | X250 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600/650 | 700 HP | 800 HP |
| Level | <b>Catalog Number</b> | <b>Description</b>  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | T.G. SYMBOL -> Troubleshooting Guide Symbol<br>(SA) = Stand Alone<br>(CB) = Common Bus<br>No Designator = Applies to all drives |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>Precharge PCBs CONFORMAL COATED</b><br><b>T.G. Symbol -&gt; PRECHARGE</b>  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>460V</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-PBMX3-SP2A   | PCB, Precharge (SA), 1336STEF, 460V, X40 - X60 HP Conformal coated              |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-PBMX3-SP8A   | PCB, P-C, (SA), 460V, 60 - X150 HP Conformal coated                             |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>460V (650VDC) Common Bus</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-PBMX3-SP10A  | PCB, Precharge (CB), 1336STEF, 650VDC, 60 - 800 HP Conformal coated             |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>575V</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-PBMX3-SP10A  | PCB, Precharge (SA), 1336STEF, 575V, 75 - 600 HP Conformal coated               |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>Snubber PCBs CONFORMAL COATED</b>  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>T.G. Symbol -&gt; INVERTER &amp; CONVERTER SNUBBER BDS</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>230V</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       |   |   |       |       |       |                     | <b>230V D-frame</b> |         |       |       |        |                     | <b>230V E-frame</b> |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-SNMX3-SP9A   | PCB, Converter Snubber (SA), 1336STEF, D-Frame, (A11) Conformal coated          |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-SNMX3-SP4A   | PCB, Inverter Snubber (SA), 1336STEF, D-Frame, (A20-A22) Conformal coated       |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-SNMX3-SP10A  | PCB, Converter Snubber (SA), 1336STEF, E-Frame, (A11-A13) Conformal coated      |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | 1336-SNMX3-SP7A   | PCB, Inverter Snubber, 1336STEF, 460V, 150 - 250 HP, (A20-A22) Conformal coated |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       | <b>460V</b>   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       |   |   |       |       |       |                     | <b>460V D-frame</b> |         |       |       |        |                     | <b>460V E-frame</b> |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP9A       | PCB, Converter Snubber (SA), 1336STEF, D-Frame, (A11) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP6A       | PCB, Inverter Snubber, 1336STEF, 460V, 60 - 100 HP, (A20-A22) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP4A       | A22) Conformal coated   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP10A      | PCB, Converter Snubber (SA), 1336STEF, E-Frame, (A11-A13) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP7A       | PCB, Inverter Snubber, 1336STEF, 460V, 150 - 250 HP, (A20-A22) Conformal coated   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP8A       | PCB, Inverter Snubber, 1336STEF, 460V, X250 - 800 HP (A23-A28) Conformal coated   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | <b>575V</b>           |   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       |                       |   |   |       |       |       | <b>575V D-frame</b> |                     |         |       |       |        | <b>575V E-frame</b> |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP10A      | PCB, Converter Snubber (SA), 1336STEF, 575V, Frame E, (A11 - A13) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP12A      | PCB, Inverter Snubber, 1336STEF, 460V, 150 - X300 HP, (A20-A22) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP9A       | PCB, Converter Snubber (SA), 1336STEF, 575V, D-Frame, (A11) Conformal coated  |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |
|       | 1336-SNMX3-SP5A       | PCB, Inverter Snubber, (SA) 1336STEF, 575V, D-frame, (A20-A22) Conformal coated   |   |       |       |       |                     |                     |         |       |       |        |                     |                     |         |     |       |       |        |        |         |      |        |         |        |         |         |        |        |        |        |         |        |        |        |        |        |         |        |        |

Spare Parts - 460V PLUS, PLUS II, FORCE, IMPACT & REGEN Drives

| Level                             | Catalog Number  | Description  |
|-----------------------------------|---|--|
|                                   |   | T.G. SYMBOL -> Troubleshooting Guide Symbol<br>(SA) = Stand Alone / (CB) = Common Bus<br>No Designator = Applies to all drives<br>X = Not Applicable |
| no 'Level' rating for these items |   | <b>Series C Conversion Kit</b><br><b>(includes Gate Drive PCB, Inductor and Precharge SCR)</b>   |
|                                   | 1336-CONV-SP1A  | Series A / B to Series C Upgrade Kit, 1336ST, 460V, 7.5 HP   |
|                                   | 1336-CONV-SP2A  | Series A / B to Series C Upgrade Kit, 1336ST, 460V, 10 HP  |
|                                   | 1336-CONV-SP3A  | Series A / B to Series C Upgrade Kit, 1336STE, 460V, 15 HP   |
|                                   | 1336-CONV-SP4A  | Series A / B to Series C Upgrade Kit, 1336STE, 460V, 20 HP   |
|                                   | 1336-CONV-SP5A  | Series A / B to Series C Upgrade Kit, 1336STE, 460V, 25 HP   |
|                                   | 1336-CONV-SP6A  | Series A / B to Series C Upgrade Kit, 1336STE, 460V, 30 HP   |
|                                   |   | <b>Bus Fuse Upgrade Kits - D Frame</b>   |
|                                   | 1336-CONV-SP14A   | Bus Fuse Upgrade Kits, 1336STE, 200A, 460V, 60 HP  |
|                                   | 1336-CONV-SP15A   | Bus Fuse Upgrade Kits, 1336STE, 250A, 460V, 75 HP  |
|                                   | 1336-CONV-SP16A   | Bus Fuse Upgrade Kits, 1336STE, 300A, 460V, 100HP  |
|                                   | 1336-CONV-SP17A   | Bus Fuse Upgrade Kits, 1336STE, 350A, 460V, 125 & X150 HP  |
|                                   |   | <b>Bus Fuse Upgrade Kits - F Frame</b>   |
|                                   | 1336-CONV-SP18A   | Bus Fuse Upgrade Kits , 1336SFTE, 450A, 575V, 350-400 HP<br>NOTE: kit includes CF4, CF5, and D1 -- All Necessary Bus Bars Are Included               |
|                                   |   | <b>C-Frame Front End Conversion Kit</b>  |
|                                   | 1336-CONVCF-SP1B  | Series E Front End Conversion Kit for C-frame, 1336STEF, 460V  |
|                                   |   | <b>Plus to PlusII Upgrade Kit</b>  |
|                                   | 1336F-UPGRA11   | Main Control Bd, HAS2, and decal, A Frames, Latest FRN   |
|                                   | 1336F-UPGRB11   | Main Control Bd, HAS2, and decal, Frames B-G, Latest FRN   |
|                                   |   | <b>Main Control PCBs</b><br><b>T.G. Symbol -&gt; MAIN CTL</b>  |
| 1336S-MCB-SP1B                    | PCB, Main Control 1336S, Frames B-G   |  |
| 1336S-MCB-SP2B                    | PCB, Main Control 1336S, Frames A1-A4   |  |
| 1336F-MCB-SP1M                    | PCB, Main Control 1336F, Frames B-G, Latest FRN, Supersedes 1336F-MCB-SP1A through SP1L |  |
| 1336F-MCB-SP2M                    | PCB, Main Control 1336F, A Frames, Latest FRN, Supersedes 1336F-MCB-SP2A through SP2L   |  |
|                                   | <b>1336F FLASH FILES</b>  |  |
| 1336F-FRN                         | 1336 PLUS II, Latest FIRMWARE   |  |

|         |         | Quantity of Kits Required Per Drive |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|---------|---------|-------------------------------------|-------|-------|-------|-------|---------|--------|-------|-------|---------|-----|-------|-------|---------|--------|---------|---------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--|--|--|--|--|--|--|
| A       | Frame B |                                     |       |       |       |       | Frame C |        |       |       | Frame D |     |       |       | Frame E |        |         | Frame F |        |        |        | Frame G |        |        |        | H      |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
| 5-20 HP | 7.5 HP  | 10 HP                               | 15 HP | 20 HP | 25 HP | 30 HP | 48A     | X40 HP | 40 HP | 50 HP | X60 HP  | 78A | 60 HP | 75 HP | 100 HP  | 125 HP | X150 HP | 180A    | 150 HP | 200 HP | 250 HP | 250 HP  | 300 HP | 350 HP | 400 HP | 450 HP | X250 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600/650 | 700 HP | 800 HP |  |  |  |  |  |  |  |
|         | 1       |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         | 1                                   |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     | 1     |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       | 1     |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       | 1     |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       | 1     |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       | 1     |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |
|         |         |                                     |       |       |       |       |         |        |       |       |         |     |       |       |         |        |         |         |        |        |        |         |        |        |        |        |         |        |        |        |        |        |         |        |        |  |  |  |  |  |  |  |

Spare Parts - 460V PLUS, PLUS II, FORCE, IMPACT & REGEN Drives

| Level | Catalog Number          | Description  |
|-------|-------------------------|--|
|       |                         | T.G. SYMBOL -> Troubleshooting Guide Symbol<br>(SA) = Stand Alone / (CB) = Common Bus<br>No Designator = Applies to all drives<br>X = Not Applicable |
|       | 1336T-MCB-SP34B         | PCB, Main Control 1336T, Series B, V3.04   |
|       | 1336T-MCB-SPM34B        | PCB, Main Control 1336T, Series B, Master, V3.04   |
|       | 1336T-MCB-SPS34B        | PCB, Main Control 1336T, Series B, Slave, V3.04  |
|       | 1336T-MCB-SP51B         | PCB, Main Control 1336T, V5.01   |
|       | 1336T-MCB-UPGRAD        | PROM, Firmware Upgrade, MAIN CONTROL, V5.01  |
|       | 1336E-MCB-4UPGRD        | PROM, Language and CP, Firmware 4.03   |
|       | 1336E-MCB-SP1A          | Obsolete--replaced by 1336E-MC1-SP23A  |
|       | 1336E-MCB-SP2A          | Obsolete--replaced by 1336E-MC2-SP23A  |
|       | 1336E-MC1-SP21A, B      | Obsolete--replaced by 1336E-MC1-SP23A  |
|       | 1336E-MC2-SP21A, B      | Obsolete--replaced by 1336E-MC2-SP23A  |
|       | 1336E-MC1-SP43A         | PCB, Main Control 1336E, w/ English LM, V4.03, Frames A1-A4  |
|       | 1336E-MC2-SP43A         | PCB, Main Control 1336E, w/ English LM, V4.03, Frames B-H  |
|       | 1336R-MCB-SP3A          | PCB, Main Control All 1336R, Series A, V3.xx   |
|       | <b>Adapter PCBs</b>     |  |
|       | 1336T-GT1-SP34B         | PCB, PLC Communications Adapter, Series B, V3.03   |
|       | 1336T-GT1-SP51A         | PCB, PLC Communications Adapter, w/ English LM, V5.01  |
|       | 1336T-GT1-UPGRAD        | Firmware Upgrade, PLC Communications Adapter, V5.01  |
|       | 1336T-GT2-SP42B         | PCB, Standard Adapter, Series B, V4.02   |
|       | 1336T-GT2-SP51A         | PCB, Standard Adapter, w/ English LM, V5.01  |
|       | 1336T-GT3EN             | Controlnet Adaptor board   |
|       | <b>Language Modules</b> |  |
|       | 1336E-EN43              | Language Module Kit, 1336E, English, V4.03   |
|       | 1336S-EN6               | LANGUAGE MODULE,V6.XX,ENGLISH  |
|       | 1336T-LM1EN51           | Language Module Kit, 1336T, PLC Comm Adapter, English, V5.01   |
|       | 1336T-LM1FR51           | Language Module Kit, 1336T, PLC Comm Adapter, French, V5.01  |
|       | 1336T-LM1ES51           | Language Module Kit, 1336T, PLC Comm Adapter, Spanish, V5.01   |
|       | 1336T-LM1DE51           | Language Module Kit, 1336T, PLC Comm Adapter, German, V5.01  |
|       | 1336T-LM1IT51           | Language Module Kit, 1336T, PLC Comm Adapter, Italian, V5.01   |
|       | 1336T-LM2EN51           | Language Module Kit, 1336T, Standard Adapter, English, V5.01   |
|       | 1336T-LM2FR51           | Language Module Kit, 1336T, Standard Adapter, French, V5.01  |
|       | 1336T-LM2ES51           | Language Module Kit, 1336T, Standard Adapter, Spanish, V5.01   |
|       | 1336T-LM2DE51           | Language Module Kit, 1336T, Standard Adapter, German, V5.01  |
|       | 1336T-LM2IT51           | Language Module Kit, 1336T, Standard Adapter, Italian, V5.01   |

|   |  | Quantity of Kits Required Per Drive |        |       |       |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|---|--|-------------------------------------|--------|-------|-------|-------|---------|-------|-----|--------|---------|-------|--------|-----|---------|-------|--------|---------|---------|------|--------|---------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|---------|--------|--------|---|---|---|---|
| A |  | Frame B                             |        |       |       |       | Frame C |       |     |        | Frame D |       |        |     | Frame E |       |        | Frame F |         |      |        | Frame G |        |        |        | H      |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|   |  | 5-20 HP                             | 7.5 HP | 10 HP | 15 HP | 20 HP | 25 HP   | 30 HP | 48A | X40 HP | 40 HP   | 50 HP | X60 HP | 78A | 60 HP   | 75 HP | 100 HP | 125 HP  | X150 HP | 180A | 150 HP | 200 HP  | 250 HP | 250 HP | 300 HP | 350 HP | 400 HP | 450 HP | X250 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600/650 | 700 HP | 800 HP |   |   |   |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | 1   | 1      | 1       | 1     | 1      | 1   | 1       | 1     | 1      | 1       | 1       | 1    | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 |   |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | 1   | 1      | 1       | 1     | 1      | 1   | 1       | 1     | 1      | 1       | 1       | 1    | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | 1   | 1      | 1       | 1     | 1      | 1   | 1       | 1     | 1      | 1       | 1       | 1    | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | 1   | 1      | 1       | 1     | 1      | 1   | 1       | 1     | 1      | 1       | 1       | 1    | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | X                                   | X      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 |   |   |
|   |  |                                     |        |       |       |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|   |  |                                     |        |       |       |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|   |  |                                     |        |       |       |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|   |  | X                                   | X      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 |   |
|   |  |                                     |        |       |       |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 |   |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     | 1     | 1       | 1     | X   | 1      | 1       | 1     | 1      | X   | 1       | 1     | 1      | 1       | 1       | X    | 1      | 1       | 1      | X      | 1      | 1      | 1      | 1      | X       | 1      | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1 | 1 | 1 | 1 |
|   |  | 1                                   | 1      | 1     | 1     |       |         |       |     |        |         |       |        |     |         |       |        |         |         |      |        |         |        |        |        |        |        |        |         |        |        |        |        |        |         |        |        |   |   |   |   |

















Spare Parts - 575V PLUS, PLUS II, FORCE, IMPACT & REGEN Drives

Revised: 5/25/2007

| Level                             | Catalog Number  | Description   |
|-----------------------------------|---|---|
|                                   |   | T.G. SYMBOL --> Troubleshooting Guide Symbol<br>(SA) = Stand Alone --- (CB) = Common Bus<br>No Designator --> Applies to all 1336X drives<br>X = Not Applicable |
| no 'Level' rating for these items |   | <b>Series C Conversion Kit<br/>(includes Gate Drive PCB, Inductor and Precharge SCR)</b>  |
|                                   | 1336-CONV-SP7A  | Series A / B to Series C Upgrade Kit, 1336ST, 575V, 7.5 HP  |
|                                   | 1336-CONV-SP8A  | Series A / B to Series C Upgrade Kit, 1336ST, 575V, 10 HP   |
|                                   | 1336-CONV-SP9A  | Series A / B to Series C Upgrade Kit, 1336STE, 575V, 15 HP  |
|                                   | 1336-CONV-SP10A   | Series A / B to Series C Upgrade Kit, 1336STE, 575V, 20 HP  |
|                                   |   | <b>Bus Fuse Upgrade Kits - D Frame</b>  |
|                                   | 1336-CONV-SP14A   | Bus Fuse Upgrade Kits, 1336STE, 200 A, 575V, 75HP   |
|                                   | 1336-CONV-SP15A   | Bus Fuse Upgrade Kits, 1336STE, 250A  |
|                                   | 1336-CONV-SP16A   | Bus Fuse Upgrade Kits, 1336STE, 300A, 575V, 125HP   |
|                                   |   | <b>Bus Fuse Upgrade Kits - F Frame</b>  |
| 1336-CONV-SP18A                   | F-Frame Bus Fuse Upgrade Kits, 1336FTE, 450A, 575V, 350-400 HP<br><b>NOTE: kit includes CF4, CF5, and D1 -- All Necessary Bus Bars Are Included</b> |   |
|                                   | 1336-CONVCF-SP2A  | Series E Front End Conversion Kit for C-frame, 1336STEF, 575V   |
|                                   | 1336F-UPGRA11   | Main Control Bd, HAS2, and decal, A Frames, Latest FRN  |
|                                   | 1336F-UPGRB11   | Main Control Bd, HAS2, and decal, Frames B-G, Latest FRN  |
|                                   |   | <b>Main Control PCBs</b>  |
|                                   | 1336S-MCB-SP1B  | PCB, Main Control 1336S, Frames B-H   |
|                                   | 1336S-MCB-SP2B  | PCB, Main Control 1336S, Frames A1-A4   |
|                                   | 1336F-MCB-SP1M  | PCB, Main Control 1336F, Frames B-G Latest FRN, Supersedes 1336F-MCB-SP1A through SP1L  |
|                                   | 1336F-MCB-SP2M  | PCB, Main Control 1336F, A Frames, Latest FRN, Supersedes 1336F-MCB-SP2A through SP2L   |
|                                   |   | <b>1336F FLASH FILES</b>  |
|                                   | 1336F-FRN   | 1336 PLUS II, Latest FIRMWARE   |

|           |         | Quantity of Kits Required Per Drive |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|-----------|---------|-------------------------------------|-------|-------|-------|---------|-------|---------|-------|-------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| A         | Frame B | Frame C                             |       |       |       | Frame D |       | Frame E |       |       |        | F      |        | Frame G |        |         |        | H      |        |        |        |        |        |        |        |        |        |   |
| 0.5-20 HP | 7.5 HP  | 10 HP                               | 15 HP | 20 HP | 25 HP | 30 HP   | 40 HP | 50 HP   | 60 HP | 75 HP | 100 HP | 125 HP | 150 HP | 200 HP  | 250 HP | X300 HP | 350 HP | 400 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600 HP | 650 HP | 700 HP | 800 HP |   |
|           | 1       |                                     |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         | 1                                   |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         |                                     | 1     |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         |                                     |       | 1     |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         |                                     |       |       |       |         |       |         |       | 1     |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         |                                     |       |       |       |         |       |         |       |       | 1      |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         |                                     |       |       |       |         |       |         |       |       |        |        | 1      |         |        |         |        |        |        | 1      | 1      |        |        |        |        |        |        |   |
|           |         |                                     |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           | 1       |                                     |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         | X                                   | X     | X     | X     | 1       | 1     | 1       | 1     | 1     | 1      | 1      | 1      | 1       | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1 |
|           |         |                                     |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           | 1       |                                     |       |       |       |         |       |         |       |       |        |        |        |         |        |         |        |        |        |        |        |        |        |        |        |        |        |   |
|           |         | X                                   | X     | X     | X     | 1       | 1     | 1       | 1     | 1     | 1      | 1      | 1      | 1       | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1 |

Spare Parts - 575V PLUS, PLUS II, FORCE, IMPACT & REGEN Drives

Revised: 5/25/2007

| Level                   | Catalog Number   | Description   | T.G. SYMBOL --> Troubleshooting Guide Symbol<br>(SA) = Stand Alone --- (CB) = Common Bus<br>No Designator --> Applies to all 1336X drives<br>X = Not Applicable |  |
|-------------------------|--|---|---|--|
|                         |  |   |   |  |
| Level 1                 | 1336T-MCB-SP34B  | PCB, Main Control 1336T, Series B, V3.04                    |   |  |
|                         | 1336T-MCB-SPM34B   | PCB, Main Control 1336T, Series B, Master, V3.04            |   |  |
|                         | 1336T-MCB-SPS34B   | PCB, Main Control 1336T, Series B, Slave, V3.04             |   |  |
|                         | 1336T-MCB-SP51B  | PCB, Main Control 1336T, V5.01                              |   |  |
|                         | 1336T-MCB-UPGRAD   | PROM, Firmware Upgrade, MAIN CONTROL, V5.01                 |   |  |
|                         | 1336E-MCB-4UPGRD   | PROM, Language and CP, Firmware 4.03                        |   |  |
|                         | 1336E-MCB-SP1A   | Obsolete--replaced by 1336E-MC1-SP23A                       |   |  |
|                         | 1336E-MCB-SP2A   | Obsolete--replaced by 1336E-MC2-SP23A                       |   |  |
|                         | 1336E-MC1-SP21A, B   | Obsolete--replaced by 1336E-MC1-SP23A                       |   |  |
|                         | 1336E-MC2-SP21A, B   | Obsolete--replaced by 1336E-MC2-SP23A                       |   |  |
|                         | 1336E-MC1-SP23A  | PCB, Main Control 1336E, 2.03 Firmware, Frames A1-A4        |   |  |
|                         | 1336E-MC2-SP23A  | PCB, Main Control 1336E, 2.03 Firmware, Frames B-H          |   |  |
|                         | 1336E-MC1-SP31A  | Obsolete--replaced by 1336E-MC1-SP31B                       |   |  |
|                         | 1336E-MC1-SP31B  | PCB, Main Control 1336E, w/ English LM, V3.01, Frames A1-A4 |   |  |
|                         | 1336E-MC2-SP31A  | Obsolete--replaced by 1336E-MC2-SP31B                       |   |  |
|                         | 1336E-MC2-SP31B  | PCB, Main Control 1336E, w/ English LM, V3.01, Frames B-H   |   |  |
|                         | 1336E-MC1-SP42A  | PCB, Main Control 1336E, w/ English LM, V4.02, Frames A1-A4 |   |  |
|                         | 1336E-MC2-SP42A  | PCB, Main Control 1336E, w/ English LM, V4.02, Frames B-H   |   |  |
|                         | 1336E-MC1-SP43A  | PCB, Main Control 1336E, w/ English LM, V4.03, Frames A1-A4 |   |  |
|                         | 1336E-MC2-SP43A  | PCB, Main Control 1336E, w/ English LM, V4.03, Frames B-H   |   |  |
|                         | <b>Adapter PCBs</b>  |   |   |  |
|                         | 1336T-GT1-SP34B  | PCB, PLC Communications Adapter, Series B, V3.03            |   |  |
|                         | 1336T-GT1-SP51A  | PCB, PLC Communications Adapter, w/ English LM, V5.01       |   |  |
|                         | 1336T-GT1-UPGRAD   | Firmware Upgrade, PLC Communications Adapter, V5.01         |   |  |
| 1336T-GT2-SP42B         | PCB, Standard Adapter, Series B, V4.02                       |   |   |  |
| 1336T-GT2-SP51A         | PCB, Standard Adapter, w/ English LM, V5.01                  |   |   |  |
| 1336T-GT3EN             | Controlnet Adaptor board                                     |   |   |  |
| <b>Language Modules</b> |  |   |   |  |
| 1336E-EN43              | Language Module Kit, 1336E, English, V4.03                   |   |   |  |
| 1336S-EN3               | Language Module Kit, 1336S, English, FRN 3.04                |   |   |  |
| 1336S-EN4               | 1336S, English, FRN 4.03, no longer available thru Passport  |   |   |  |
| 1336S-EN5               | Language Module Kit, 1336S, English, FRN 5.02                |   |   |  |
| 1336S-EN6               | LANGUAGE MODULE,V6.XX,ENGLISH                                |   |   |  |
| 1336T-LM1EN51           | Language Module Kit, 1336T, PLC Comm Adapter, English, V5.01 |   |   |  |
| 1336T-LM1FR51           | Language Module Kit, 1336T, PLC Comm Adapter, French, V5.01  |   |   |  |
| 1336T-LM1ES51           | Language Module Kit, 1336T, PLC Comm Adapter, Spanish, V5.01 |   |   |  |
| 1336T-LM1DE51           | Language Module Kit, 1336T, PLC Comm Adapter, German, V5.01  |   |   |  |
| 1336T-LM1IT51           | Language Module Kit, 1336T, PLC Comm Adapter, Italian, V5.01 |   |   |  |
| 1336T-LM2EN51           | Language Module Kit, 1336T, Standard Adapter, English, V5.01 |   |   |  |
| 1336T-LM2FR51           | Language Module Kit, 1336T, Standard Adapter, French, V5.01  |   |   |  |
| 1336T-LM2ES51           | Language Module Kit, 1336T, Standard Adapter, Spanish, V5.01 |   |   |  |
| 1336T-LM2DE51           | Language Module Kit, 1336T, Standard Adapter, German, V5.01  |   |   |  |
| 1336T-LM2IT51           | Language Module Kit, 1336T, Standard Adapter, Italian, V5.01 |   |   |  |

|   |           | Quantity of Kits Required Per Drive |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|---|-----------|-------------------------------------|-------------------------------------|-------|---------|-------|-------|-------|---------|-------|-------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| A | Frame B   |                                     |                                     |       | Frame C |       |       |       | Frame D |       |       | Frame E |        |        | F      |        | Frame G |        |        |        |        | H      |        |        |        |        |        |        |
|   | 0.5-20 HP | 7.5 HP                              | 10 HP                               | 15 HP | 20 HP   | 25 HP | 30 HP | 40 HP | 50 HP   | 60 HP | 75 HP | 100 HP  | 125 HP | 150 HP | 200 HP | 250 HP | X300 HP | 350 HP | 400 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600 HP | 650 HP | 700 HP | 800 HP |
|   |           | 1                                   | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           | 1                                   | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           | 1                                   | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           | 1                                   | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           | 1                                   | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           | 1                                   | X                                   | X     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           | 1                                   |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | X                                   | X     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           | 1                                   |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | X                                   | X     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           | 1                                   |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | X                                   | X     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     |                                     |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | 1                                   | X     | X       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | Check Hub stock for this spare part |       |         |       |       |       |         |       |       |         |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|   |           |                                     | 1                                   | 1     | 1       | 1     | 1     | 1     | 1       | 1     | 1     | 1       | 1      | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |









Spare Parts - 575V PLUS, PLUS II, FORCE, IMPACT & REGEN Drives

Revised: 5/25/2007

|                 |  | Quantity of Kits Required Per Drive                                   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|-----------------|--|---|-----------|--------|-------|-------|---------|-------|-------|-------|---------|-------|---------|--------|--------|---------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--|
|                 |  | A   | Frame B   |        |       |       | Frame C |       |       |       | Frame D |       | Frame E |        | F      | Frame G |        |        |         | H      |        |        |        |        |        |        |        |        |        |        |   |  |
| Level           | Catalog Number   | Description   | 0.5-20 HP | 7.5 HP | 10 HP | 15 HP | 20 HP   | 25 HP | 30 HP | 40 HP | 50 HP   | 60 HP | 75 HP   | 100 HP | 125 HP | 150 HP  | 200 HP | 250 HP | X300 HP | 350 HP | 400 HP | 300 HP | 350 HP | 400 HP | 450 HP | 500 HP | 600 HP | 650 HP | 700 HP | 800 HP |   |  |
| Level 2         |  | <b>Input SCRs</b><br>T.G. Symbol -> SCR1, SCR1 - SCR3                 |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP2A  | SCR, Assem (SA), 1336STEF, 575V, 75 - 125 HP                          |           |        |       |       |         |       |       |       |         |       |         | 3      | 3      | 3       |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP4A  | SCR, Assem (CB), 1336STEF, 575V, 75 - 100 HP                          |           |        |       |       |         |       |       |       |         |       | 1       | 1      |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP6A  | SCR, Assem (CB), 1336STEF, 575V, 125 HP                               |           |        |       |       |         |       |       |       |         |       |         |        | 1      |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP8A  | SCR, Input (SA), 1336STEF, 575V, 150 - 300 HP                         |           |        |       |       |         |       |       |       |         |       |         |        |        |         | 3      | 3      | 3       | 3      |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP10A   | SCR, Input (CB), 1336STEF, 575V, 150 - 300 HP                         |           |        |       |       |         |       |       |       |         |       |         |        |        |         | 1      | 1      | 1       | 1      |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP16A   | SCR, Input (SA), 1336TEF, 575V, Frame F, 1 / Kit                      |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 3      | 3      |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP17A   | SCR, Input (CB), 1336TEF 460V, F-Frame                                |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 1      | 1      |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-SCR-SP12A   | SCR, Input (SA), 1336STEF, 575V, 300 - 650 HP (2 / Kit)               |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3 |  |
|                 | 1336-SCR-SP14A   | SCR, Input (CB), 1336STEF 575V, 300 - 650 HP                          |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1 |  |
| Level 2         |  | <b>Transistors / IGBTs</b><br>T.G. Symbol -> Q1 - Q3 or Q1 - Q6       |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP2A   | TSTR, Assem, Output, 1336STE, 575V, 7.5 - 15 HP, Series A             |           | 3      | 3     | 3     |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP9A   | TSTR, Assem, Output, 1336STEF, 575V, 25 HP                            |           |        |       |       | 3       | 3     |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP10A  | TSTR, Assem, Output, 1336STEF, 575V, 30 - 40 HP                       |           |        |       |       |         |       | 3     | 3     |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP11A  | TSTR, Assem, Output, 1336STEF, 575V, 50 - 60 HP                       |           |        |       |       |         |       |       |       | 3       | 3     |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP15A  | TSTR, Assem, Output, 1336STEF, 575V, 75 HP                            |           |        |       |       |         |       |       |       |         |       | 3       |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP16A  | TSTR, Assem, Output, 1336STEF, 575V, 100 HP                           |           |        |       |       |         |       |       |       |         |       | 3       |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP17A  | TSTR, Assem, Output, 1336STEF, 575V, 125 HP                           |           |        |       |       |         |       |       |       |         |       |         | 3      |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP19A  | TSTR, Assem, Output, 1336STEF, 575V, 150 - 300 HP                     |           |        |       |       |         |       |       |       |         |       |         |        |        | 3       | 3      | 3      | 3       |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QOUT-SP26A  | TSTR, Assem, Output, 1336TEF, 575V, 350 - 450 HP, 2 transistors / kit |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 3      | 3      |        |        |        |        |        |        |        |        |   |  |
| 1336-QOUT-SP22A | TSTR, Assem, Output, 1336STEF, 575V, 300 - 350 HP, 4 transistors / kit |   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 3      | 3      |        |        |        |        |        |        |        |        |   |  |
| 1336-QOUT-SP23A | TSTR, Assem, Output, 1336STEF, 575V, 400 - 800 HP, 4 transistors / kit |   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      |   |  |
| 1336-QOUT-SP24A | TSTR, Assem, Output, 1336STE, 575V, 15 HP                              |   |           |        | 3     |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
| Level 3         |  | <b>Precharge Modules</b><br>T.G. Symbol -> PCMODULE                   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QPRE-SP2A   | for 1336STE, 575V, 7.5-15 HP, Series A & B--order 1336-CONV-SPxA      |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QPRE-SP2C   | for 1336STE, 575V, 7.5-20 HP, Series C & up                           |           | 1      | 1     | 1     | 1       |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QPRE-SP4A   | for 1336STE, 575V, 20 HP, Series A & B--order 1336-CONV-SPxA          |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-QPRE-SP6A   | SCR, precharge, (CB) 1336STEF, 575V, 25-60 HP                         |           |        |       |       |         |       |       | 1     | 1       | 1     | 1       | 1      |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 |  | <b>Current Transducers</b>  |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-CT-SP1A   | Current Transducer, 1336STEFR, Frame D                                |           |        |       |       |         |       |       |       |         |       |         | 2      | 2      | 2       |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-CT-SP2A   | Current Transducer, 1336STEF, Frame E                                 |           |        |       |       |         |       |       |       |         |       |         |        |        |         | 2      | 2      | 2       | 2      |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-CT-SP4A   | Current Transducer, 1336TEF, Frame F                                  |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 2      | 2      |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-CT-SP3A   | Current Transducer, 1336STEF, Frames G, H                             |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2 |  |
| Level 3         |  | <b>Fans</b><br>T.G. Symbol -> FAN                                     |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP1A  | Fan, 1336STEF, Frame B and C  |           | 1      | 1     | 1     | 1       | 1     | 1     | 1     | 1       | 1     |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP8A  | Fan, 1336STEF, Frame B and C, NEMA 4X                                 |           | 1      | 1     | 1     | 1       | 1     | 1     | 1     | 1       | 1     |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP2A  | Fan, 1336STEFR, Frame D ( includes CHB1 Fan Capacitor )               |           |        |       |       |         |       |       |       |         |       | 1       | 1      | 1      |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP3A  | Fan, 1336STEF, Frame E ( includes CHB1 Fan Capacitor )                |           |        |       |       |         |       |       |       |         |       |         |        |        | 1       | 1      | 1      | 1       |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP6A  | Obsolete, replaced by 1336-FAN-SP6B                                   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP6B  | Fan, 1336STEF, Frame F ( includes CHB1 Fan Capacitor )                |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        | 1      | 1      |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP4A  | Obsolete, replaced by 1336-FAN-SP4B                                   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
|                 | 1336-FAN-SP4B  | Fan, Heatsink Bottom, 1336STEF, Frames G, H (FAN 1)                   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1 |  |
|                 | 1336-FAN-SP5A  | Fan, Heatsink Side, 1336STEF, Frames G, H (FAN 2)                     |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1 |  |
| 1336-FAN-SP7A   | Fan, 1336STEF, Frame A4 only, includes grill & mounting screws         | 1   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        |        |        |   |  |
| 1336-FAN-SP9A   | Fan, Converter, 1336E, Frame H   |   |           |        |       |       |         |       |       |       |         |       |         |        |        |         |        |        |         |        |        |        |        |        |        |        |        |        | 3      | 3      |   |  |







