



# Parts Manual

## Generator Set

**QSK78 Engine with PowerCommand<sup>®</sup> 3200 Control**

DQLA (Spec A)

DQLB (Spec A)

## MODEL IDENTIFICATION

This catalog covers models produced under the Cummins®/Onan® and Cummins Power Generation brand names.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Cummins Power Generation nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION  
AND DATE (IF APPLICABLE)

## SAFETY PRECAUTIONS

The following symbols are used in Cummins Power Generation manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.



*This symbol warns of immediate hazards which will result in severe personal injury or death.*



*This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.*



*This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.*

## PRODUCT SAFETY PRECAUTIONS



***Service and repair of Cummins Power Generation equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.***



***Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.***



***Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!***



***Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!***

## Introduction

This catalog applies to Cummins Power Generation Generator Models DQLA and DQLB as listed in the Generator Set Data Table. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Unless otherwise mentioned in the description or page heading, parts are interchangeable between models. Throughout this catalog left and right sides are determined by facing the engine end (front) of the set unless noted in the description column.

Engine parts that have been modified or added by Cummins Power Generation are identified in this catalog. All other engine replacement parts must be ordered from the engine manufacturer by referring to the engine manufacturer's nameplate and supplying all available information. Contact your nearest engine parts distributor for assistance in ordering replacement parts.

## Replacement Engine

| Cummins Power Generation<br>Generator Model | Cummins Engine Model |
|---------------------------------------------|----------------------|
| DQLA (60 Hertz)                             | QSK78-G6             |
| DQLB (50 Hertz)                             | QSK78-G6             |

Contact your nearest Cummins distributor for replacement engines.

## Generator Set Data Table

| Model and<br>Specification | Electrical Data |       |       |      |       | Battery<br>Voltage |
|----------------------------|-----------------|-------|-------|------|-------|--------------------|
|                            | Watts           | Volts | Hertz | Wire | Phase |                    |
| 2700DQLA/*                 | 2,700,000       | #     | 60    | 12   | 3     | 24VDC              |
| 2660DQLB/*                 | 2,660,000       | #     | 50    | 12   | 3     | 24VDC              |

\* – The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from the standard model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.

# – Broad range reconnectible

**“Intentionally Left Blank”**



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## Abbreviations

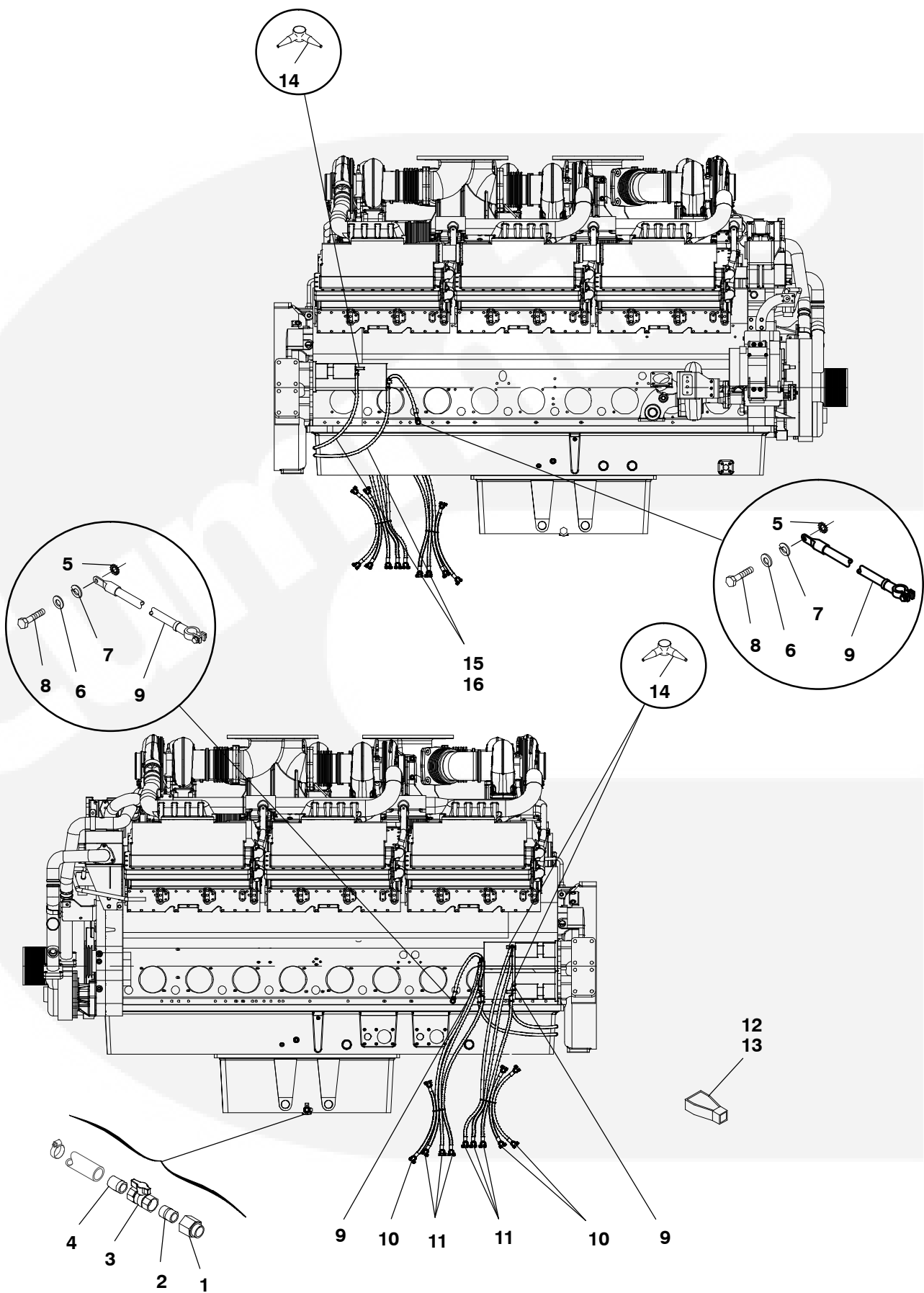
Some of the following abbreviations may be used throughout this Parts Catalog:

|                 |                                |                 |                                |
|-----------------|--------------------------------|-----------------|--------------------------------|
| AC              | Alternating Current            | mm              | Millimeter                     |
| Amp             | Ampere                         | MOH             | Mobile Off Highway             |
| A/R             | As Required                    | NFS             | Not For Sale                   |
| AVR             | Automatic Voltage Regulator    | NPT             | National Pipe Thread           |
| AWG             | American Wire Gauge            | OD              | Outside Diameter               |
| DC              | Direct Current                 | oz.             | Ounce                          |
| Deg             | Degree                         | PC              | Printed Circuit                |
| EFC             | Electronic Fuel Control        | Ph              | Phase                          |
| EIT             | External/Internal Tooth        | PMG             | Permanent Magnet Generator     |
| EPROM           | Erasable Programmable Read     | PT/CT           | Potential Transformer/Current  |
|                 | Only Memory                    |                 | Transformer                    |
| ET              | External Tooth                 | RFI             | Radio Frequency Interference   |
| GFI             | Ground Fault Interrupter       | RT              | Right                          |
| ID              | Inside Diameter                | Spec            | Specification                  |
| IEC             | International Electrotechnical | Thk             | Thick                          |
|                 | Commission                     | UL              | Underwriters Laboratories Inc. |
| IT              | Internal Tooth                 | UNC             | Union National Coarse          |
| kW              | Kilowatt                       | UNF             | Union National Fine            |
| LPG             | Liquid Petroleum Gas           | VAC             | Volts Alternating Current      |
| LT              | Left                           | VDC             | Volts Direct Current           |
| M(meter number) | Meter                          | W/(ET, IT, EIT) | With                           |

## Paint and Thread Sealant

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION                    | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|-------------------------------------|---------|----------|----------|------------------|
|         |          |          | Onan Green Enamel<br>(Non-Metallic) |         |          |          |                  |
|         | 525-0305 | -        | 12 oz. Pressurized<br>Spray Can     |         |          |          |                  |
|         | 525-0306 | -        | Quart Can                           |         |          |          |                  |
|         | 525-0304 | -        | Gallon Can                          |         |          |          |                  |
|         | 518-0601 | -        | Sealant, Thread (6 ml Tube)         |         |          |          |                  |

# Engine Accessories

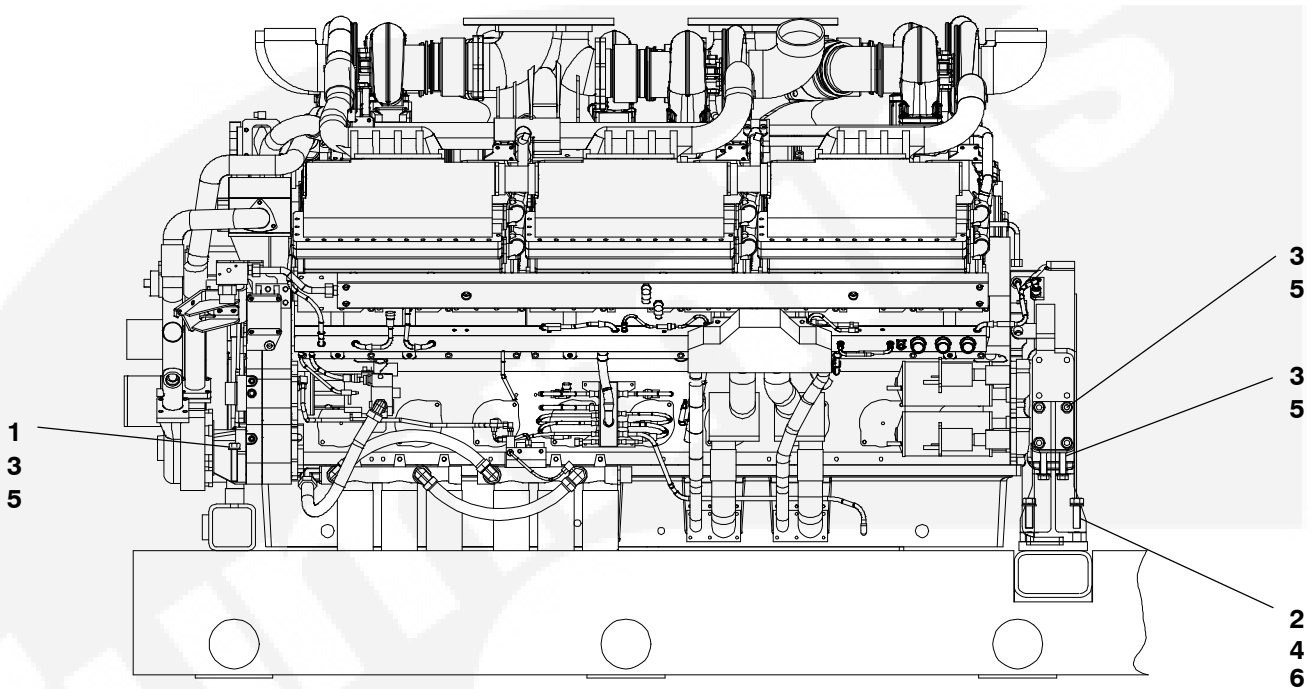




## Engine Accessories

| REF<br>NO. | PART<br>NO. | QTY<br>USED | PART<br>DESCRIPTION                        | REF<br>NO. | PART<br>NO. | QTY<br>USED | PART<br>DESCRIPTION                                      |
|------------|-------------|-------------|--------------------------------------------|------------|-------------|-------------|----------------------------------------------------------|
| 1          | 505-1508    | 1           | Adapter (M27 x 3/4)                        | 9          | 416-0680    | 4           | Cable, Starter                                           |
| 2          | 505-0102    | 1           | Nipple, Close (3/4)                        | 10         | 416-0446    | 3           | Cable, Jumper                                            |
| 3          | 504-0171    | 1           | Valve, Shutoff                             | 11         | 416-0639    | 6           | Cable, Battery                                           |
| 4          | 505-0324    | 1           | Nipple, Half (3/4 x 2)                     | 12         | 416-1019    | 3           | Boot, Battery - Red                                      |
| 5          | 856-0013    | 2           | Washer, Lock - W/EIT (1/2)                 | 13         | 416-1020    | 6           | Boot, Battery - Black                                    |
| 6          | 526-2140    | 2           | Washer, Flat (M12)                         | 14         | 416-1074    | 3           | Boot, Terminal - Starter Motor                           |
| 7          | 850-2012    | 2           | Washer, Lock - Spring (M12)                | 15         | 416-1167    | 2           | Cable, Starter - Link                                    |
| 8          | 800-2111    | 2           | Screw, Cap - Hex Head (M12 x<br>1.75 x 25) | 16         | 331-0585-04 | -           | Conduit - Bulk (Order by the<br>Foot - 12 Feet Required) |

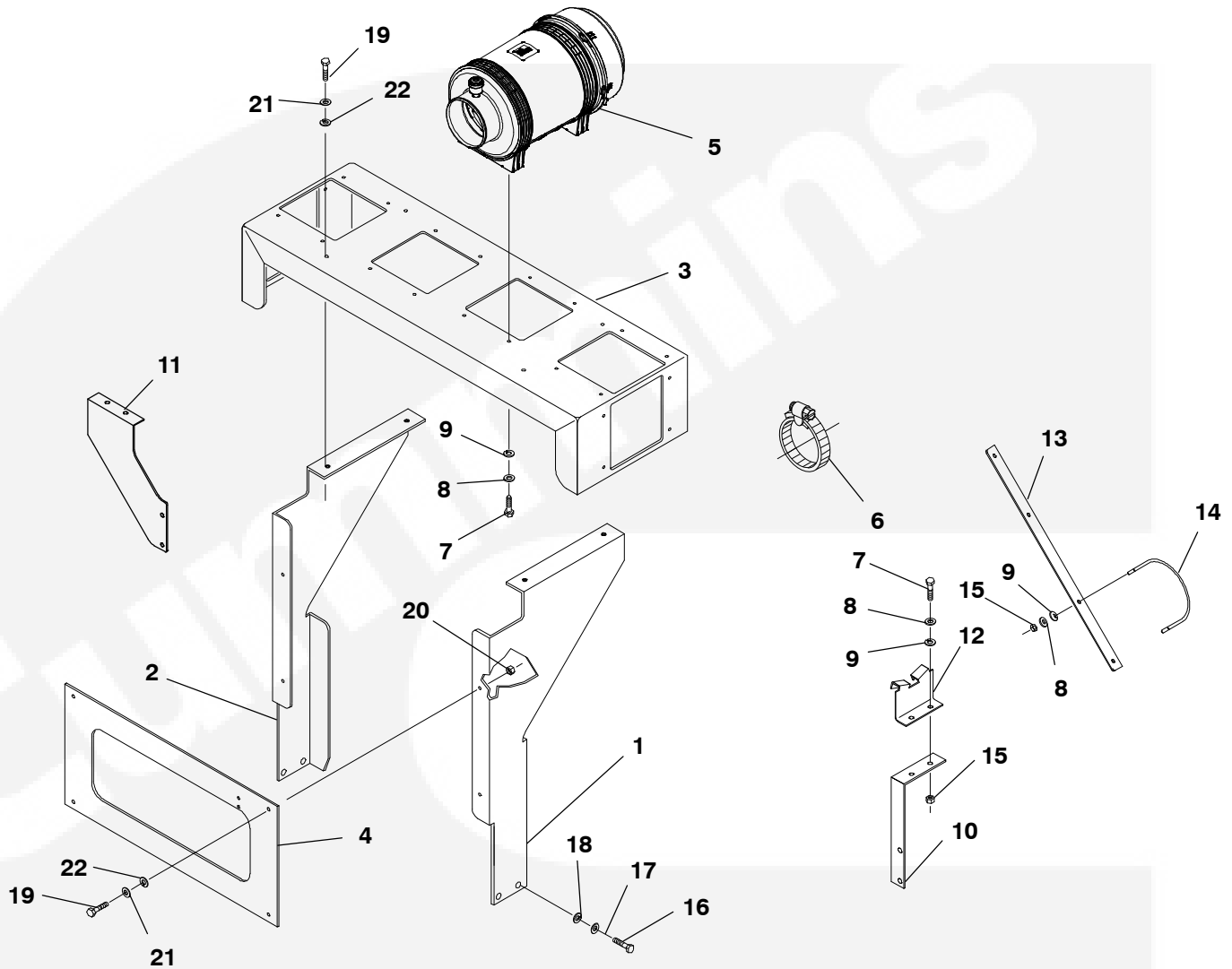
Engine Mounting



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                  |
|---------|-------------|----------|-----------------------------------|
| 1       | 800-3017-99 | 2        | Screw, Hex Head (M20 x 2.5 x 110) |
| 2       | 718-1176    | 8        | Screw, Hex Head (M24 x 3 x 80)    |

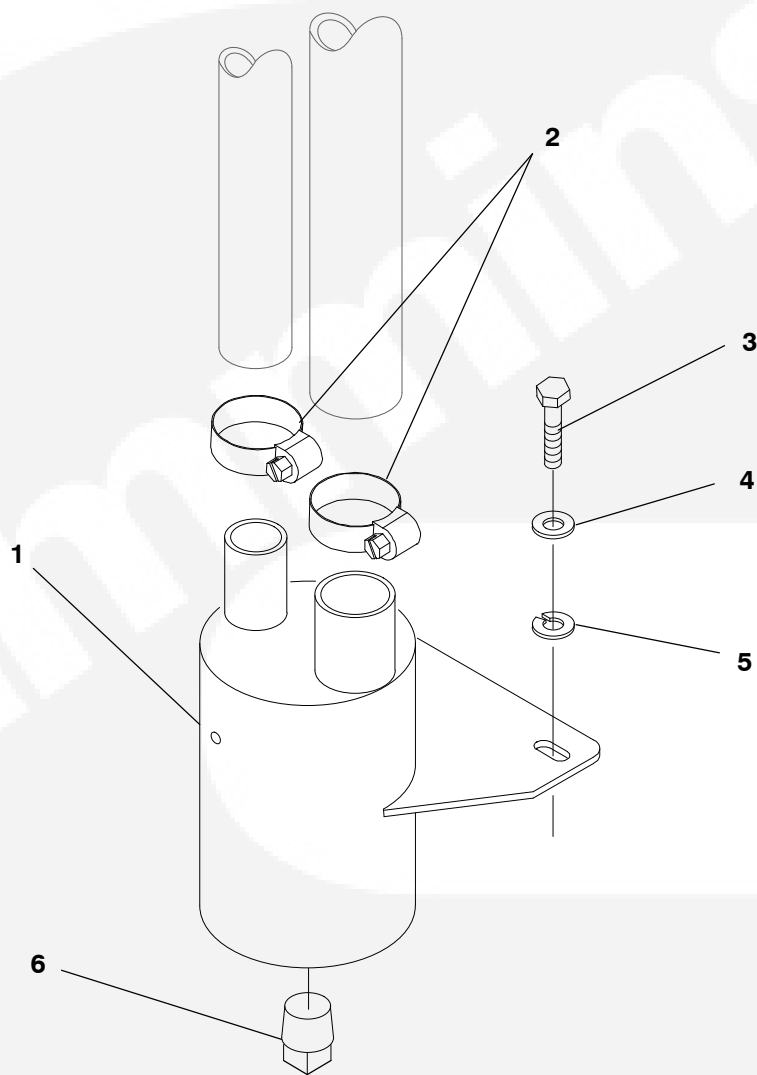
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION            |
|---------|-------------|----------|-----------------------------|
| 3       | 526-0399-70 | 2        | Washer, Flat (M20)          |
| 4       | 526-0399-72 | 8        | Washer, Flat (M24)          |
| 5       | 850-0114-58 | 2        | Washer, Lock - Spring (M20) |
| 6       | 850-0114-59 | 8        | Washer, Lock - Spring (M24) |

## Air Cleaner Normal Duty



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                        | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                |
|---------|-------------|----------|-----------------------------------------|---------|-------------|----------|-----------------------------------------------------------------|
| 1       | 140-3473-02 | 1        | Bracket, Filter Support - Left          | 13      | 140-3512-02 | 2        | Bracket, Air Cleaner - Support - Tie                            |
| 2       | 140-3472-02 | 1        | Bracket, Filter Support - Right         | 14      | 140-3513-02 | 4        | Clamp, Air Cleaner                                              |
| 3       | 140-3474-02 | 1        | Plate, Filter Support                   | 15      | 862-0026-55 | 8        | Nut, Hex (M8)                                                   |
| 4       | 140-3475-02 | 1        | Plate, Filter Support - Rear            | 16      | 800-3017-86 | 4        | Screw, Hex Head (M20 x 35)                                      |
| 5       | 140-3288-01 | 6        | Cleaner, Air                            | 17      | 526-0399-70 | 4        | Washer, Flat (M20)                                              |
| 6       | 503-1870-14 | 28       | 7.25" - 8.13"                           | 18      | 850-0114-58 | 4        | Washer, Lock - Spring (M20)                                     |
|         | 503-1870-11 | 4        | 5.75" - 6.63"                           | 19      | 800-3017-38 | 8        | Screw, Hex Head (M10 x 30)                                      |
| 7       | 800-3017-19 | 28       | Screw, Hex Head (M8 x 20)               | 20      | 862-0026-56 | 4        | Nut, Hex (M10)                                                  |
| 8       | 526-0399-60 | 36       | Washer, Flat (M8)                       | 21      | 526-0399-62 | 12       | Washer, Flat (M10)                                              |
| 9       | 850-0114-54 | 36       | Washer, Lock - Spring (M8)              | 22      | 850-0114-55 | 8        | Washer, Lock - Spring (M10)                                     |
| 10      | 140-3509-02 | 1        | Bracket, Air Cleaner - Support - Left   | 23      | AF25708M    | 6        | Element, Replacement (Not Illustrated) (Fleetguard Part Number) |
| 11      | 140-3510-02 | 1        | Bracket, Air Cleaner - Support - Right  |         |             |          |                                                                 |
| 12      | 140-3511-02 | 2        | Bracket, Air Cleaner - Support - Center |         |             |          |                                                                 |

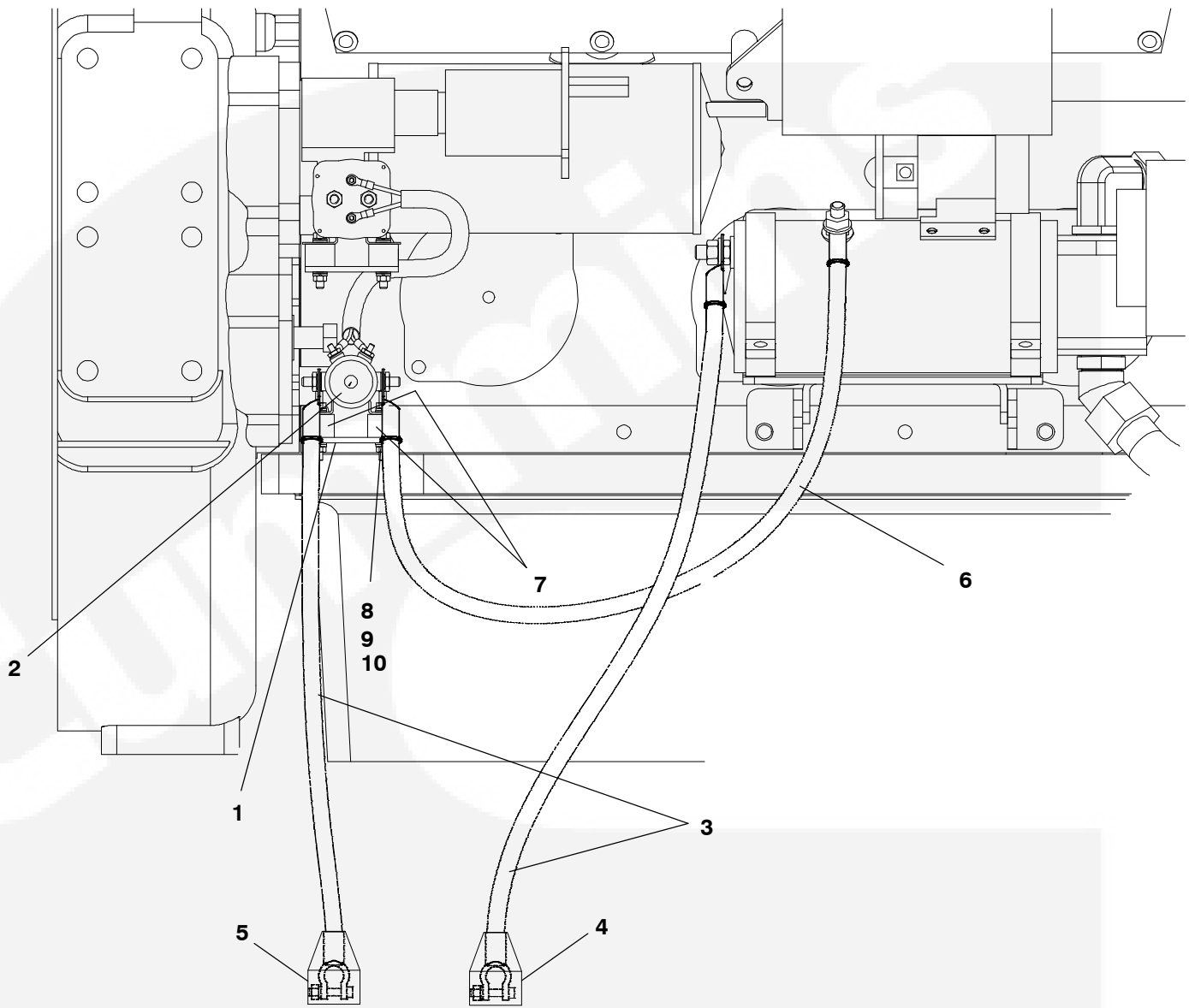
Drip Pan



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION          |
|---------|-------------|----------|---------------------------|
| 1       | 102-1510-02 | 1        | Tank, Oil                 |
| 2       | 503-1870-02 | 2        | Clamp, Hose               |
| 3       | 800-3017-20 | 2        | Screw, Hex Head (M8 x 25) |

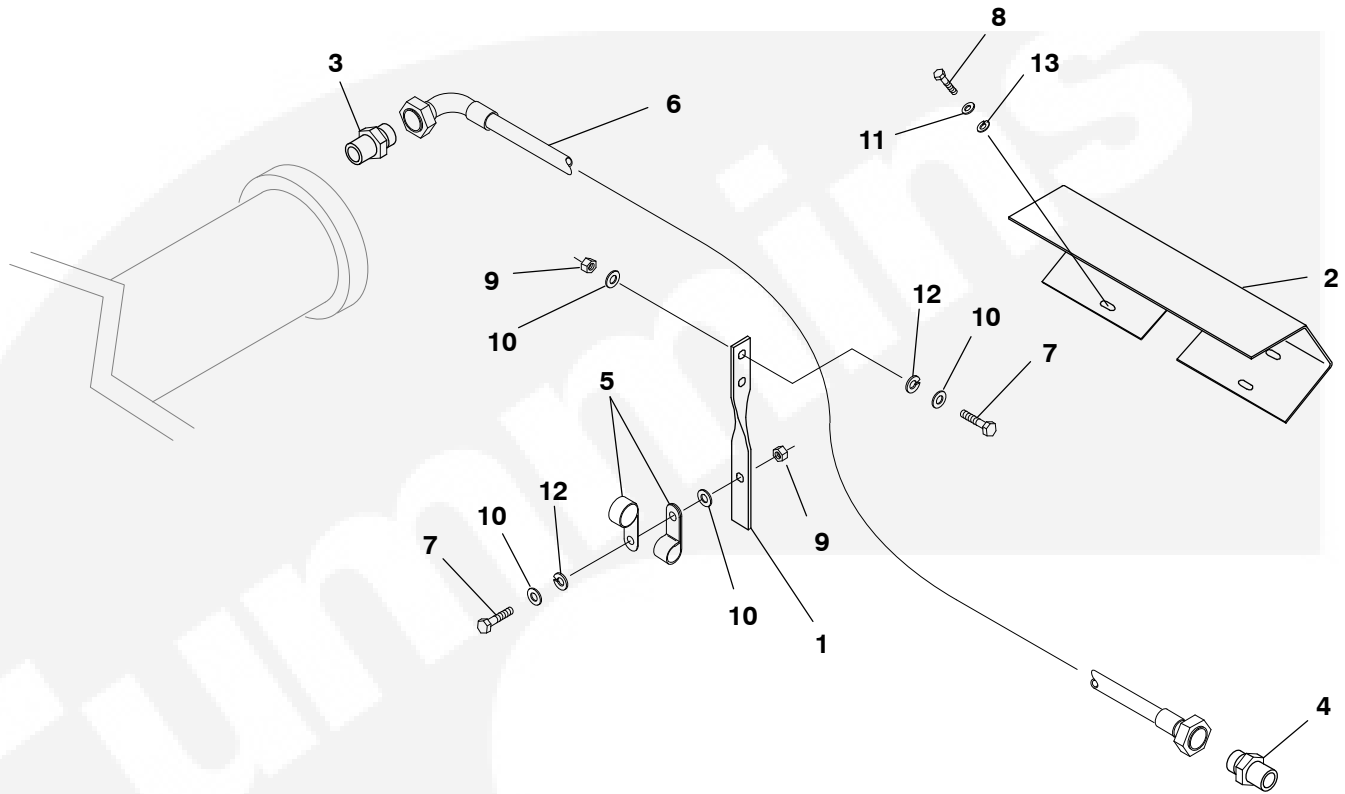
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION           |
|---------|-------------|----------|----------------------------|
| 4       | 526-0399-60 | 2        | Washer, Flat – Steel (M8)  |
| 5       | 850-0114-54 | 2        | Washer, Lock – Spring (M8) |
| 6       | 505-1603    | 1        | Plug, Pipe (3/8)           |

Oil System  
Pre-Lube



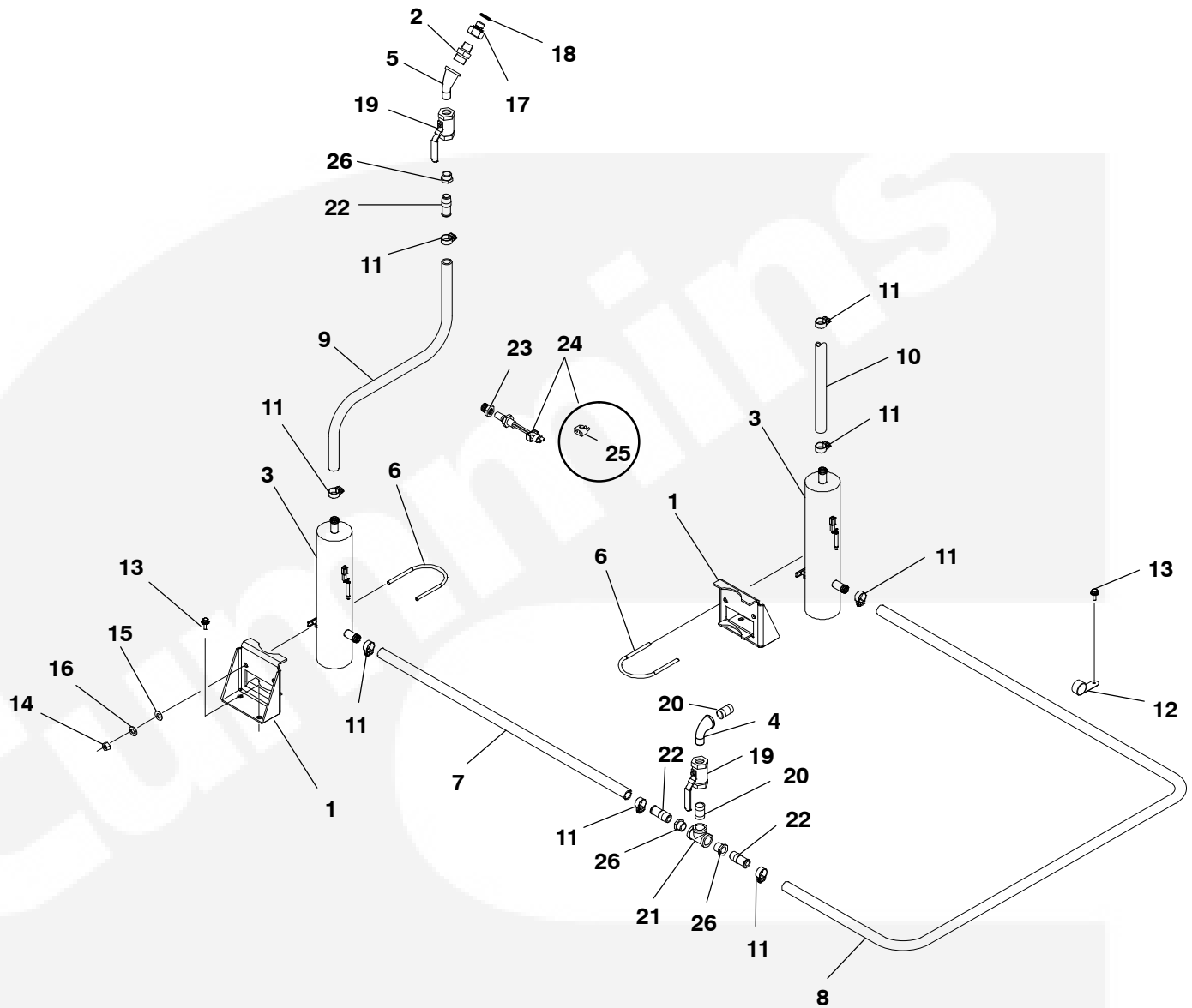
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION      | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION    |
|---------|-------------|----------|-----------------------|---------|-------------|----------|---------------------|
| 1       | 307-3037-02 | 1        | Bracket, Relay        | 6       | 226-4863-01 | 1        | Lead, Battery Cable |
| 2       | 307-3038    | 1        | Relay, Solenoid       | 7       | 402-0830    | 2        | Isolator, Vibration |
| 3       | 416-0639    | 2        | Cable, Battery        | 8       | 862-0026-54 | 4        | Nut, Hex (M6)       |
| 4       | 416-1019    | 1        | Boot, Battery - Red   | 9       | 526-0399-58 | 4        | Washer, Flat (M6)   |
| 5       | 416-1020    | 1        | Boot, Battery - Black | 10      | 850-0114-53 | 4        | Washer, Lock (M6)   |

# Oil Cooler Gearcase



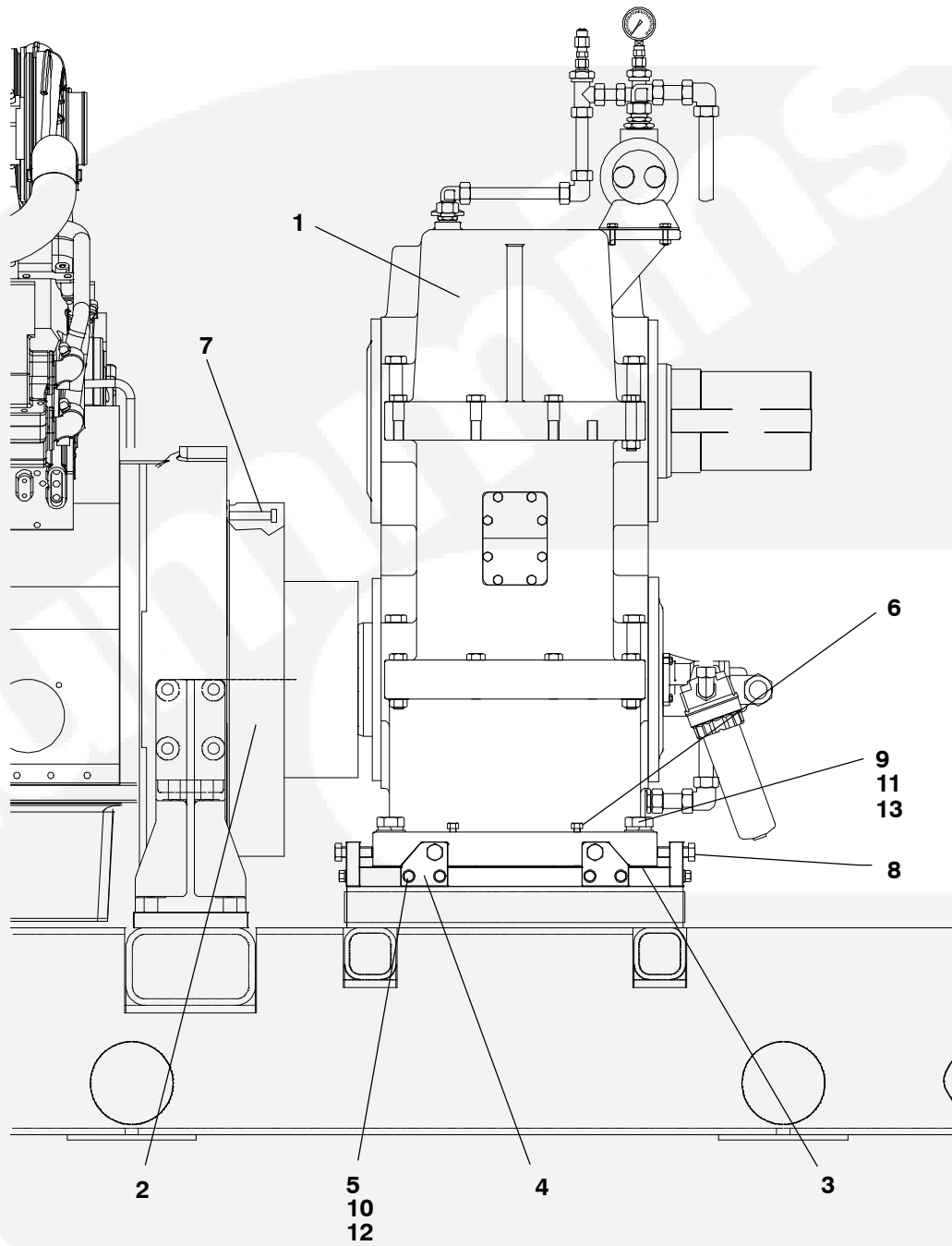
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 |
|---------|-------------|----------|----------------------------------|---------|-------------|----------|----------------------------------|
| 1       | 123-2228-02 | 1        | Bracket, Breather                | 8       | 800-3017-36 | 4        | Screw, Hex Head (M10 x 1.5 x 20) |
| 2       | 130-5855-02 | 1        | Plate, Guard                     | 9       | 862-0026-55 | 3        | Nut, Hex (M8)                    |
| 3       | 505-2145    | 2        | Adapter, Pipe (1-1/4" x 1")      | 10      | 526-0399-61 | 6        | Washer, Flat (M8)                |
| 4       | 505-2146    | 2        | Adapter, Pipe (M27 x 1")         | 11      | 526-0399-62 | 4        | Washer, Flat (M10)               |
| 5       | 518-0548-43 | 2        | Clamp, Hose (1.5")               | 12      | 850-0114-54 | 3        | Washer, Lock - Spring (M8)       |
| 6       | 501-0811    | 2        | Hose Assembly                    | 13      | 850-0114-55 | 4        | Washer, Lock - Spring (M10)      |
| 7       | 800-3017-20 | 3        | Screw, Hex Head (M8 x 1.25 x 25) |         |             |          |                                  |

## Coolant Heater



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                                 |
|---------|-------------|----------|----------------------------------|---------|-------------|----------|----------------------------------------------------------------------------------|
| 1       | 130-4546-01 | 2        | Bracket, Water Heater            | 14      | 862-0026-56 | 4        | Nut, Hex (M10)                                                                   |
| 2       | 505-2136-02 | 2        | Adapter, Pipe (1/2 x 3/4)        | 15      | 526-0399-63 | 4        | Washer, Flat (M10)                                                               |
| 3       |             |          | Heater, Coolant                  | 16      | 850-0114-55 | 4        | Washer, Lock - Spring (M10)                                                      |
|         | 333-0634-01 | 2        | 4990 Watt                        | 17      | 502-1315    | 2        | Adapter, Pipe - Stor to Female                                                   |
|         | 333-0634-02 | 2        | 6420 Watt                        | 18      | 509-0360    | 2        | Seal - "O" Ring                                                                  |
| 4       | 505-1574    | 1        | Elbow - 90° (3/4)                | 19      | 504-0239    | 3        | Valve, Ball (3/4)                                                                |
| 5       | 505-2116    | 2        | Elbow - 45° (3/4)                | 20      | 505-2086    | 2        | Nipple, Pipe (3/4)                                                               |
| 6       | 155-3451    | 2        | Clamp, Water Heater - 90° (M10)  | 21      | 505-2118    | 1        | Tee, Pipe (3/4)                                                                  |
| 7       | 503-2461-03 | 1        | Hose (3/4 x 1400)                | 22      | 502-1475    | 4        | Adapter, Hose (1/2)                                                              |
| 8       | 503-2461-04 | 1        | Hose (3/4 x 3000)                | 23      | 505-2128-02 | 1        | Bushing, Reducer                                                                 |
| 9       | 503-2461-01 | 1        | Hose (3/4 x 300)                 | 24      | 309-0649    | 1        | Thermostat (Opens at 110° F, Closes at 130° F) (Includes Connector Socket) (S11) |
| 10      | 503-2461-02 | 1        | Hose (3/4 x 800)                 | 25      | 323-1637    | 1        | Socket, Connector (2 Place)                                                      |
| 11      | 503-1872-01 | 8        | Clamp, Hose                      | 26      | 505-2137    | 4        | Bushing, Reducer (3/4 x 1/2)                                                     |
| 12      | 518-0548-05 | 6        | Clamp, Hose                      |         |             |          |                                                                                  |
| 13      | 821-6003-02 | 10       | Screw, Hex Washer Head (M8 x 20) |         |             |          |                                                                                  |

# **Gearcase DQLB**

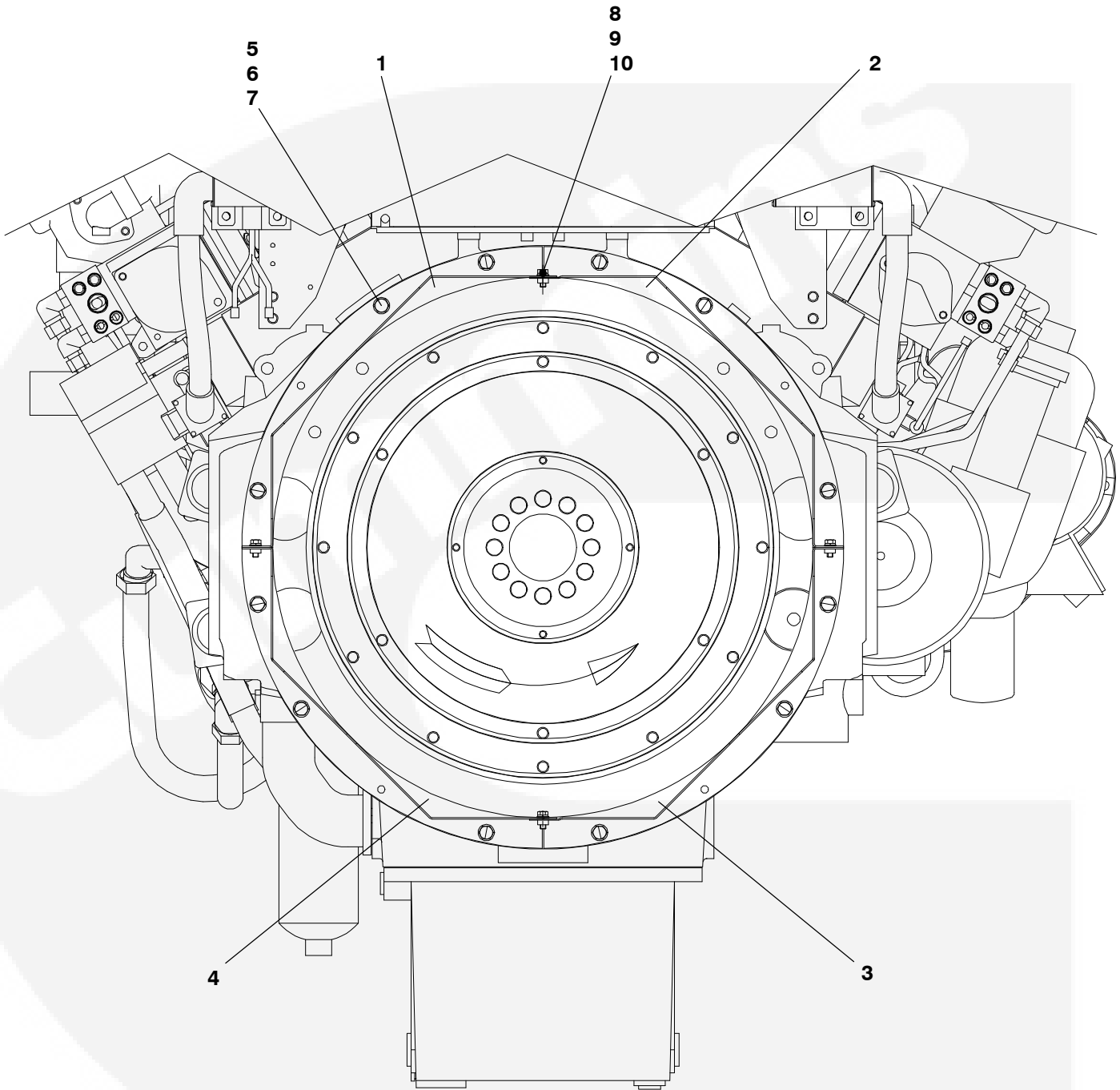




## Gearcase DQLB

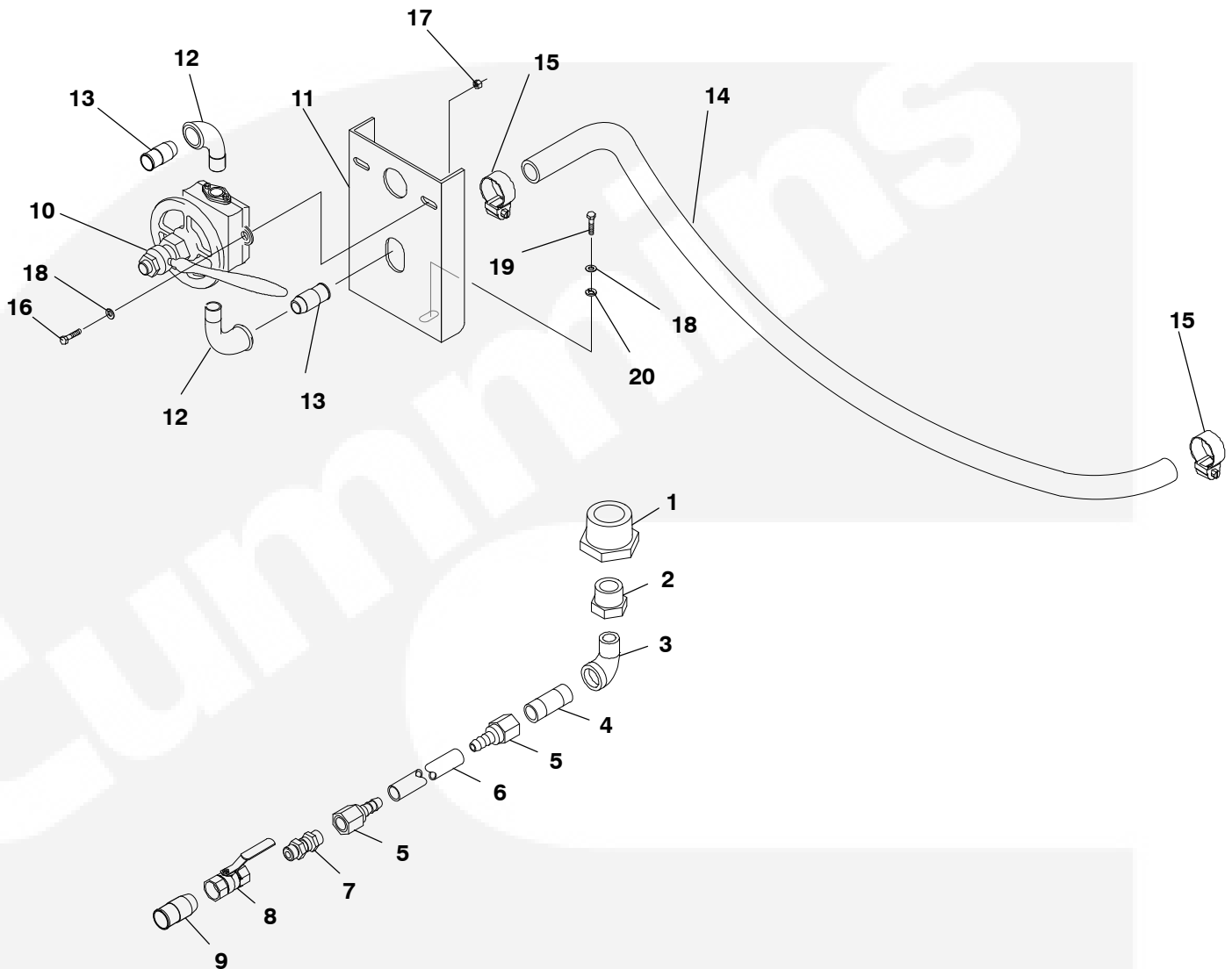
| REF NO. | PART NO.        | QTY USED | PART DESCRIPTION                  | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                           |
|---------|-----------------|----------|-----------------------------------|---------|-------------|----------|--------------------------------------------|
| 1       | 507-0003        | 1        | Gearbox                           | 7       | 725-1167    | 12       | Screw, Cap – Socket Head (M16 x 2.0 x 110) |
| 2       | 512-0265        | 1        | Coupling, Flexible                | 8       | 800-6310    | 8        | Screw, Hex Head (M20 x 1.5 x 60)           |
| 3       |                 |          | Shim                              | 9       | 800-6309    | 4        | Screw, Hex Head (M30 x 3.5 x 120)          |
|         | 232-4122-01 A/R |          | 0.1mm Thick                       | 10      | 526-0399-64 | 16       | Washer, Flat (M12)                         |
|         | 232-4122-02 A/R |          | 0.25mm Thick                      | 11      | 526-2240    | 4        | Washer, Flat (M30)                         |
|         | 232-4122-03 A/R |          | 0.5mm Thick                       | 12      | 850-0114-56 | 16       | Washer, Lock – Spring (M12)                |
|         | 232-4122-04 A/R |          | 1.0mm Thick                       | 13      | 850-2026    | 4        | Washer, Lock – Spring (M30)                |
|         | 232-4122-05 A/R |          | 2.0mm Thick                       |         |             |          |                                            |
| 4       | 403-4931-02     | 8        | Pad, Jacking – Gearbox            |         |             |          |                                            |
| 5       | 800-3017-58     | 16       | Screw, Hex Head (M12 x 1.75 x 50) |         |             |          |                                            |
| 6       | 800-3017-63     | 4        | Screw, Hex Head (M12 x 1.75 x 75) |         |             |          |                                            |

# Guard DQLB



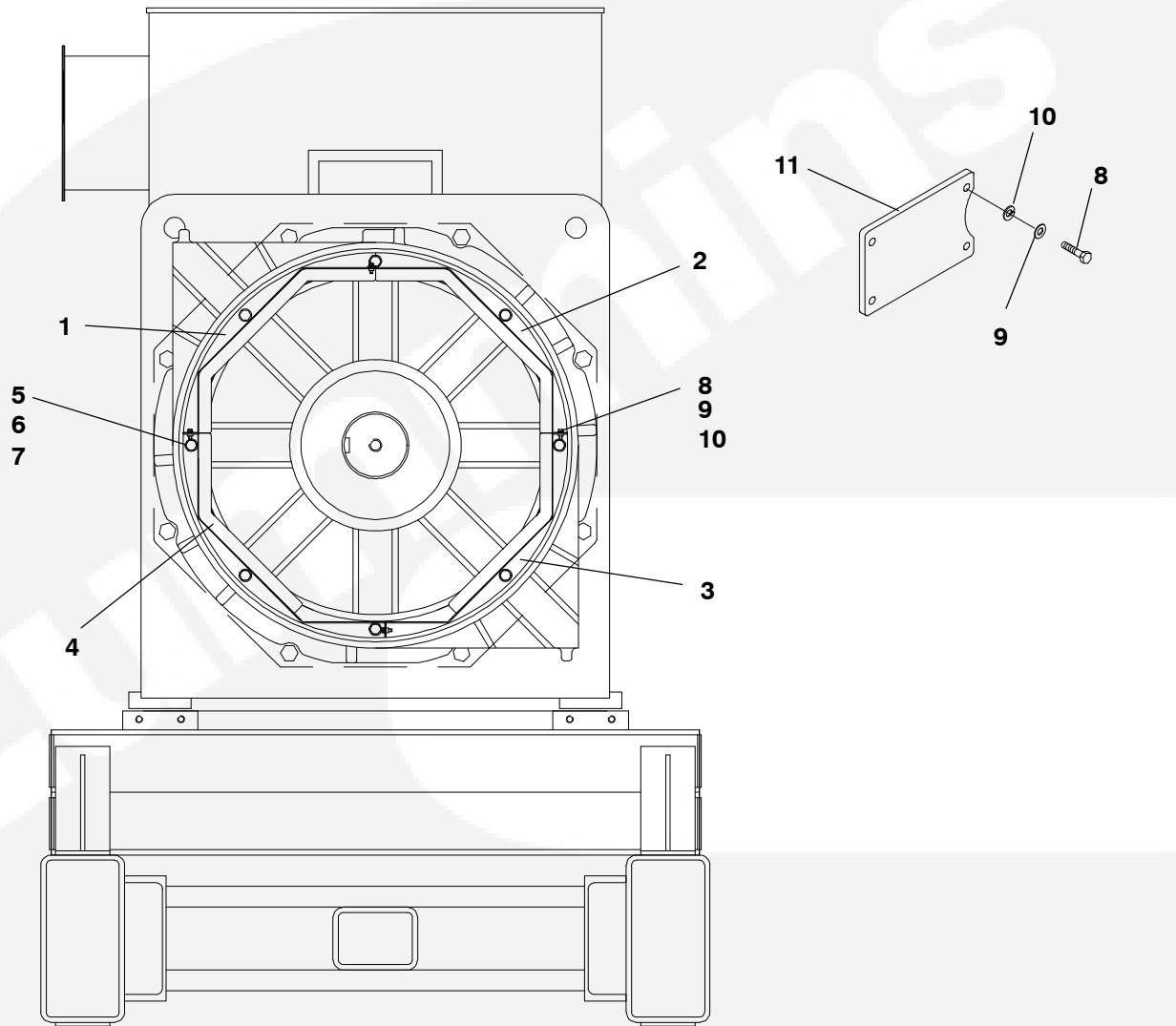
| REF<br>NO. | PART<br>NO. | QTY<br>USED | PART<br>DESCRIPTION                     | REF<br>NO. | PART<br>NO. | QTY<br>USED | PART<br>DESCRIPTION                    |
|------------|-------------|-------------|-----------------------------------------|------------|-------------|-------------|----------------------------------------|
| 1          | 190-0796-02 | 1           | Guard - Top Left                        | 6          | 526-0399-64 | 12          | Washer, Flat (M12)                     |
| 2          | 190-0797-02 | 1           | Guard - Top Right                       | 7          | 850-0114-56 | 12          | Washer, Lock - Spring (M12)            |
| 3          | 190-0795-02 | 1           | Guard - Bottom Right                    | 8          | 800-3017-19 | 8           | Screw, Cap - Hex Head (M8 x 1.25 x 20) |
| 4          | 190-0794-02 | 1           | Guard - Bottom Left                     | 9          | 526-0399-60 | 8           | Washer, Flat (M8)                      |
| 5          | 800-3017-54 | 12          | Screw, Cap - Hex Head (M12 x 1.75 x 30) | 10         | 850-0114-54 | 8           | Washer, Lock - Spring (M8)             |

## Gearcase Oil Drain DQLB



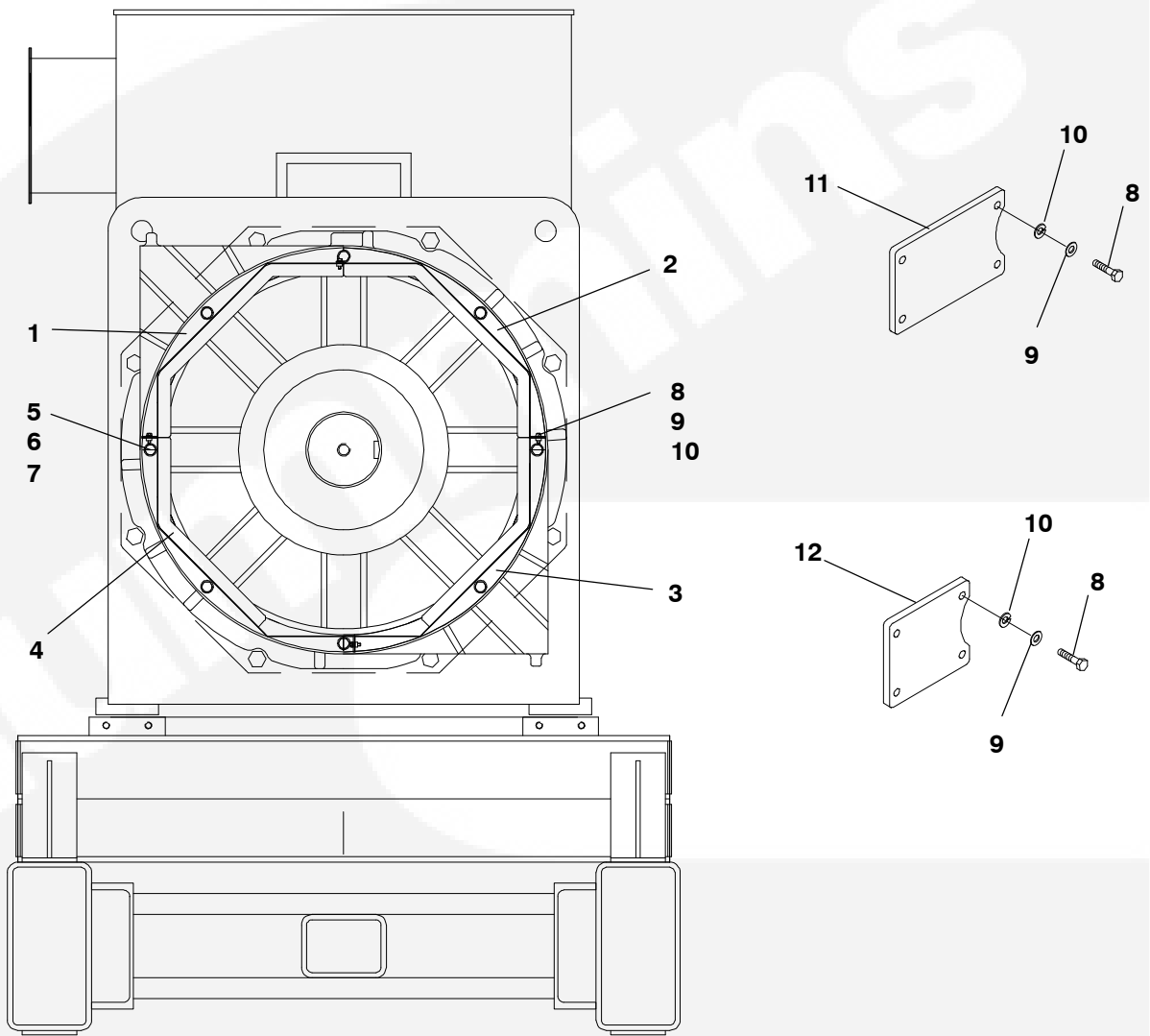
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                              | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                  |
|---------|-------------|----------|---------------------------------------------------------------|---------|-------------|----------|---------------------------------------------------|
| 1       | 505-2139    | 1        | Bushing, Reducer (2" x 1")                                    | 12      | 505-1574    | 2        | Elbow - 90° (3/4)                                 |
| 2       | 505-2140    | 1        | Bushing, Reducer (1" x 1/2")                                  | 13      | 502-1457    | 2        | Adapter, Hose (3/4)                               |
| 3       | 502-1369    | 1        | Elbow, Pipe (1/2" x 90°)                                      | 14      | 503-0249    | -        | Hose - Bulk (Order by the Foot - 5 Feet Required) |
| 4       | 505-2098    | 1        | Nipple, Pipe (1/2")                                           | 15      | 503-0189    | 2        | Clamp, Hose                                       |
| 5       | 505-2143    | 2        | Adapter, Pipe (1/2")                                          | 16      | 800-3017-40 | 2        | Screw, Cap - Hex Head (M10 x 40)                  |
| 6       | 503-2426-01 | -        | Hose, Oil (1/2") - Bulk (Order by the Foot - 4 Feet Required) | 17      | 870-2225-03 | 2        | Nut - Lock (M10)                                  |
| 7       | 505-2142    | 1        | Adapter, Pipe (1/2")                                          | 18      | 526-0399-62 | 6        | Washer, Flat - Steel (M10)                        |
| 8       | 504-0247    | 1        | Valve, Ball (1/2")                                            | 19      | 800-3017-38 | 2        | Screw, Cap - Hex Head (M10 x 30)                  |
| 9       | 502-1475    | 1        | Adapter, Hose (1/2")                                          | 20      | 850-0114-55 | 2        | Washer, Lock - Spring (M1)                        |
| 10      | 149-2687    | 1        | Pump                                                          |         |             |          |                                                   |
| 11      | 120-1345-02 | 1        | Bracket, Oil Pump                                             |         |             |          |                                                   |

# **Coupling Guard** **“C”, “D” and “E” Alternators** **DQLB**



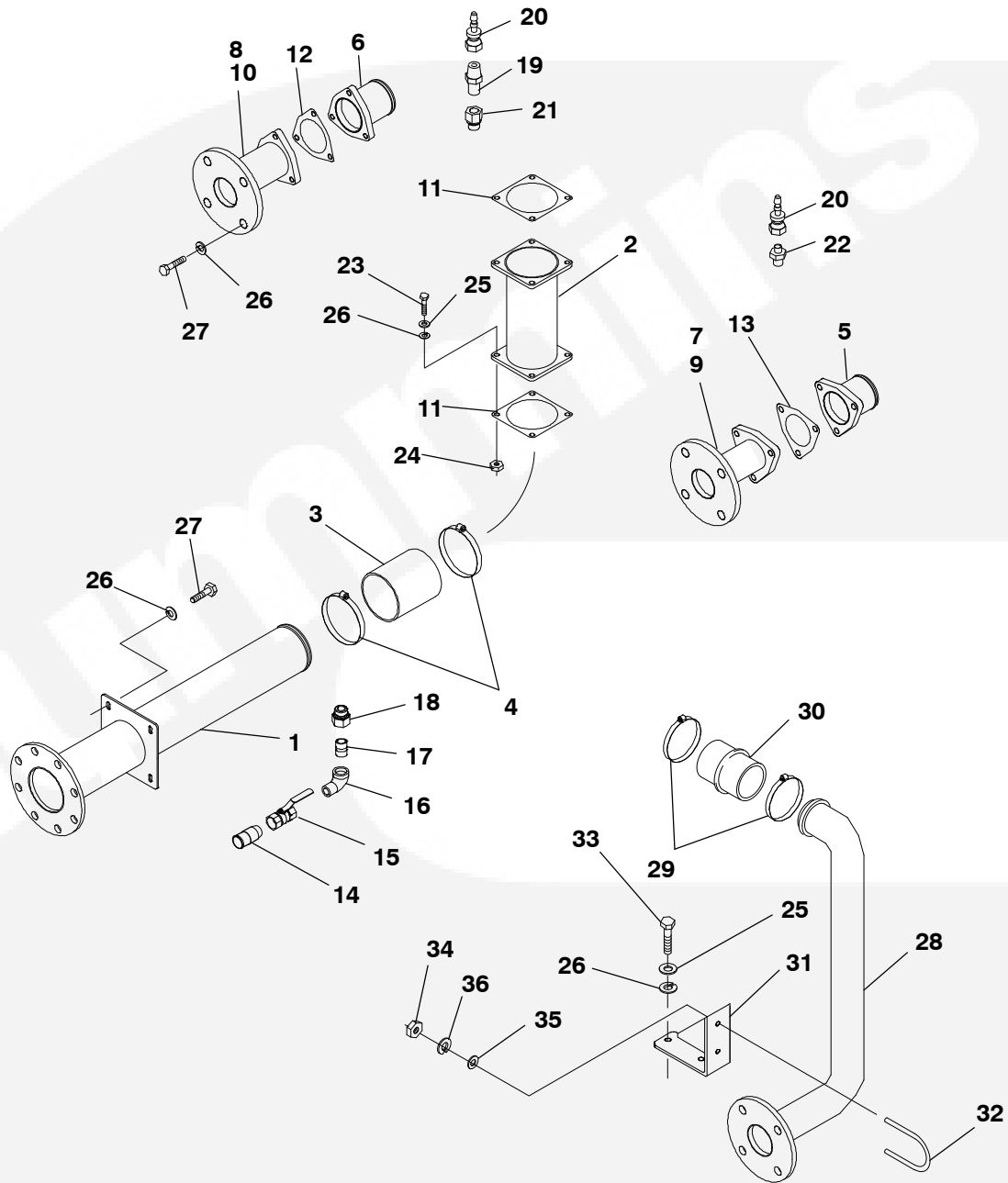
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                     | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    |
|---------|-------------|----------|--------------------------------------|---------|-------------|----------|-------------------------------------|
| 1       | 190-0813-02 | 1        | Guard, Coupling – Top Left           | 7       | 850-0114-57 | 8        | Washer, Lock – Spring (M16)         |
| 2       | 190-0814-02 | 1        | Guard, Coupling – Top Right          | 8       | 800-3017-04 | 20       | Screw, Cap – Hex Head (M6 x 1 x 20) |
| 3       | 190-0812-02 | 1        | Guard, Coupling – Bottom Right       | 9       | 526-0399-58 | 20       | Washer, Flat (M6)                   |
| 4       | 190-0811-02 | 1        | Guard, Coupling – Bottom Left        | 10      | 850-0114-53 | 20       | Washer, Lock – Spring (M6)          |
| 5       | 800-3017-70 | 8        | Screw, Cap – Hex Head (M16 x 2 x 30) | 11      | 190-0815-02 | 2        | Guard, Coupling – Closing Plate     |
| 6       | 526-0399-66 | 8        | Washer, Flat (M16)                   |         |             |          |                                     |

# **Coupling Guard “F” and “G” Alternators DQLB**



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                     | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    |
|---------|-------------|----------|--------------------------------------|---------|-------------|----------|-------------------------------------|
| 1       | 190-0800-02 | 1        | Guard, Coupling – Top Left           | 7       | 850-0114-57 | 8        | Washer, Lock – Spring (M16)         |
| 2       | 190-0801-02 | 1        | Guard, Coupling – Top Right          | 8       | 800-3017-04 | 20       | Screw, Cap – Hex Head (M6 x 1 x 20) |
| 3       | 190-0799-02 | 1        | Guard, Coupling – Bottom Right       | 9       | 526-0399-58 | 20       | Washer, Flat (M6)                   |
| 4       | 190-0798-02 | 1        | Guard, Coupling – Bottom Left        | 10      | 850-0114-53 | 20       | Washer, Lock – Spring (M6)          |
| 5       | 800-3017-70 | 8        | Screw, Cap – Hex Head (M16 x 2 x 30) | 11      | 190-0815-02 | 1        | Guard, Coupling Closing Plate       |
| 6       | 526-0399-66 | 8        | Washer, Flat (M16)                   | 12      | 190-0818-02 | 1        | Guard, Coupling Closing Plate       |

# Remote Radiator

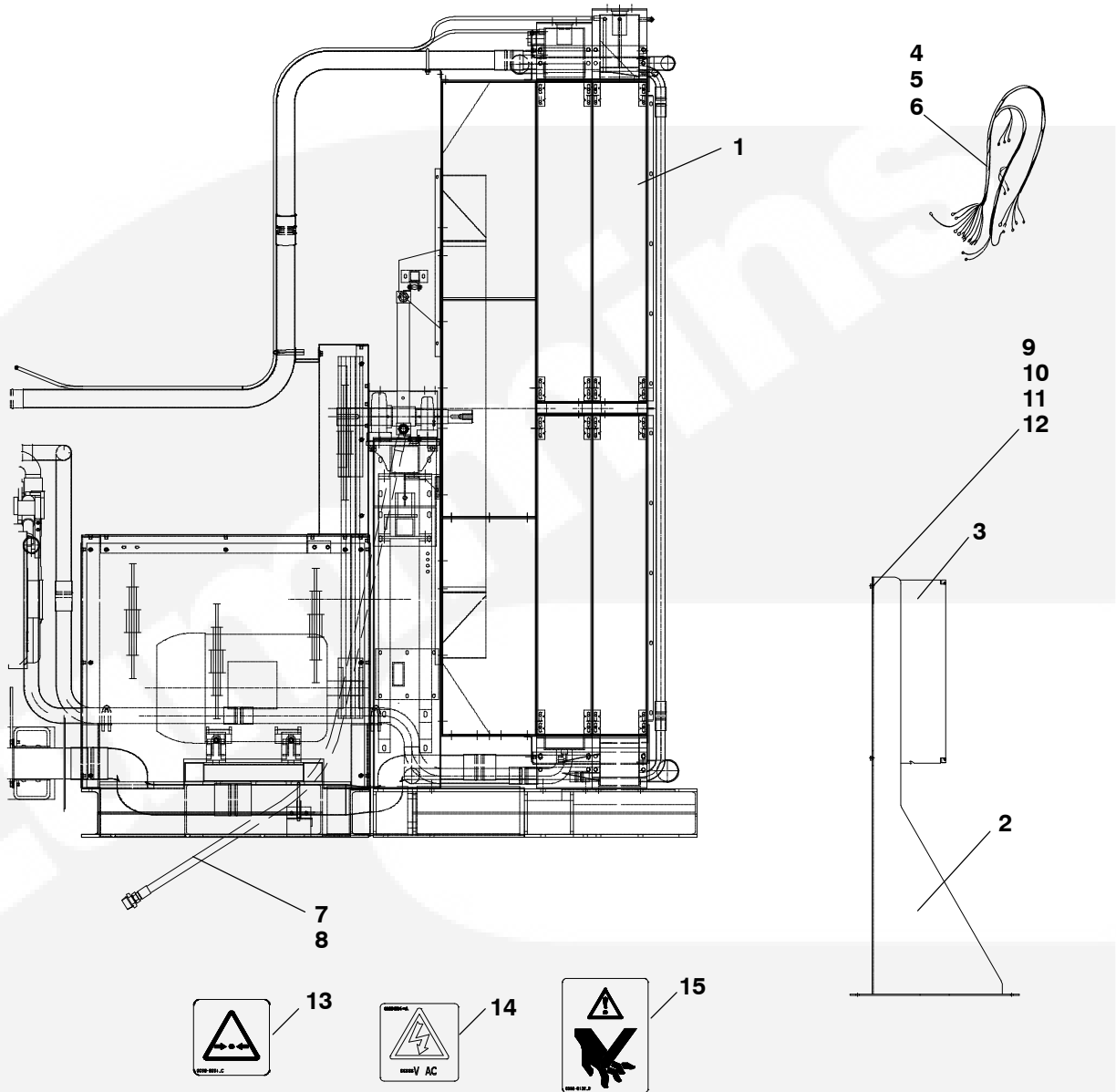


## Remote Radiator

| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                      | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                            |
|---------|-------------|----------|---------------------------------------|---------|-------------|----------|---------------------------------------------|
| 1       |             |          | Tube, Water – Inlet                   | 19      | 505-2131    | 1        | Adapter, Pipe (1/4 x 1/4)                   |
|         | 130-5893-02 | 1        | No Flanges                            | 20      | 505-2130    | 2        | Adapter, Pipe (1/4)                         |
|         | 130-5940-02 | 1        | ANSI Flanges                          | 21      | 502-1318    | 1        | Adapter, Pipe (M14 x 1/4)                   |
|         | 130-5941-02 | 1        | BS10 Flanges                          | 22      | 505-2129    | 1        | Adapter, Pipe (1/8 x 1/4)                   |
| 2       | 505-2123-02 | 1        | Adapter, Pipe – Water Inlet           | 23      | 800-3017-40 | 4        | Screw, Cap – Hex Head (M10 x 1.5 x 40)      |
| 3       | 503-1726    | 1        | Hose, Radiator                        | 24      | 862-0026-56 | 4        | Nut, Hex (M10)                              |
| 4       | 503-1872-09 | 2        | Clamp, Hose                           | 25      | 526-0399-62 | 6        | Washer, Flat (M10)                          |
| 5       | 505-2124-02 | 1        | Flange, Pipe – Water Outlet – LTA     | 26      | 850-0114-55 | 19       | Washer, Spring (M10)                        |
| 6       | 505-2125-02 | 2        | Flange, Pipe – Water Outlet           | 27      | 800-3017-38 | 13       | Screw, Cap – Hex Head (M10 x 1.5 x 30)      |
| 7       | 505-2153-02 | 2        | Adapter, Pipe – LTA Outlet – ANSI     | 28      |             |          | Tube, Water                                 |
| 8       | 505-2155-02 | 2        | Adapter, Pipe – Water Outlet – ANSI   |         | 130-5949-02 | 1        | No Flanges                                  |
| 9       | 505-2154-02 | 2        | Adapter, Pipe – LTA Outlet – BS10     |         | 130-5947-02 | 1        | ANSI Flanges                                |
| 10      | 505-2156-02 | 2        | Adapter, Pipe – Water Outlet – BS10   |         | 130-5948-02 | 1        | BS10 Flanges                                |
| 11      | 317-9035    | 2        | Gasket, Water Inlet                   | 29      | 503-1872-04 | 2        | Clamp, Hose                                 |
| 12      | 130-5900    | 2        | Gasket, Radiator – Water Outlet       | 30      | 503-0625    | 1        | Hose, Radiator                              |
| 13      | 130-5899    | 1        | Gasket, Radiator – Water Outlet – LTA | 31      | 130-5950-02 | 1        | Bracket, Tube – LTA Inlet Support           |
| 14      | 502-1457    | 1        | Adapter, Hose (3/4)                   | 32      | 155-4112-02 | 1        | Clamp, Exhaust                              |
| 15      | 504-0239    | 2        | Valve, Ball (3/4)                     | 33      | 800-3017-36 | 2        | Screw, Cap – Hex Head (M10 x 1.5 x 20)      |
| 16      | 505-2081    | 1        | Elbow – 90° (3/4)                     | 34      | 862-0026-55 | 2        | Nut, Hex (M8)                               |
| 17      | 505-0102    | 2        | Nipple, Close (3/4)                   | 35      | 526-0399-60 | 2        | Washer, Flat (M8)                           |
| 18      | 502-1326    | 1        | Adapter, Pipe (M33 x 3/4)             | 36      | 850-0114-54 | 2        | Washer, Lock (M8)                           |
|         |             |          |                                       | 37      | 231-0402-02 | 1        | Adapter, Pipe (M42 x 3/4) (Not Illustrated) |



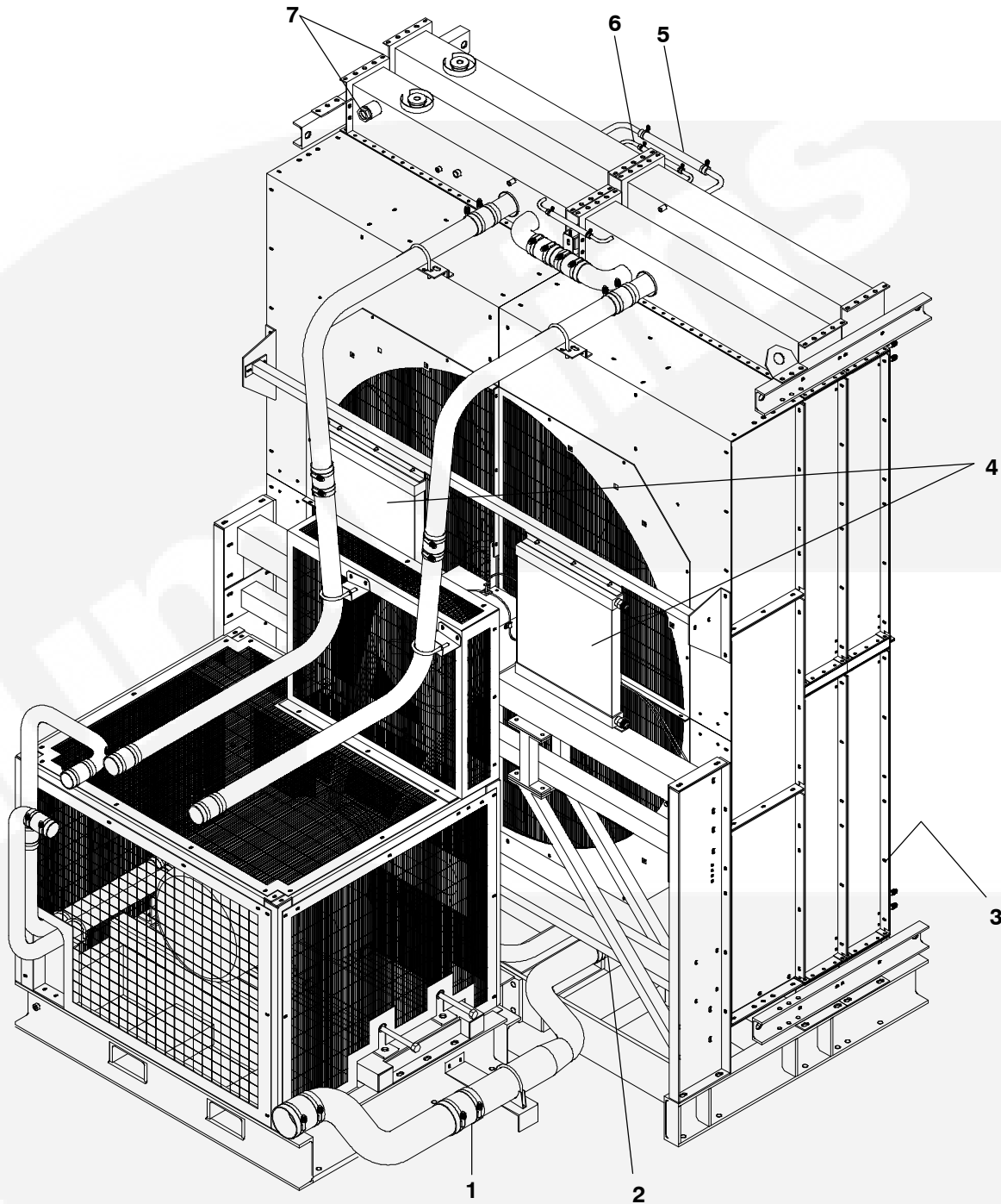
# Cooling System 40°C



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                             | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 |
|---------|-------------|----------|----------------------------------------------|---------|-------------|----------|----------------------------------|
| 1       |             |          | Radiator (See Separate Pages for Components) | 5       | 338-4407    | 1        | Harness, Control                 |
|         | 130-5975-01 | 1        | 380V-440V - 50Hz                             | 6       | 338-3832    | 1        | Harness, LCL                     |
|         | 130-5975-02 | 1        | 380V - 60Hz                                  | 7       | 501-0811    | 1        | Hose Assembly                    |
|         | 130-5975-03 | 1        | 416V-480V - 60Hz                             | 8       | 505-2161-02 | 1        | Adapter, Pipe (1" x 1-1/2")      |
|         | 130-5975-04 | 1        | 380V UL NEMA - 60Hz                          | 9       | 800-3017-20 | 4        | Screw, Hex Head (M8 x 1.25 x 25) |
|         | 130-5975-05 | 1        | 416V-480V UL NEMA - 60Hz                     | 10      | 862-0026-55 | 4        | Nut, Hex (M8 x 1.25)             |
| 2       | 319-5235-02 | 1        | Frame, Cabinet                               | 11      | 526-0399-60 | 8        | Washer, Flat (M8)                |
| 3       | 300-5819    | 1        | Control (See Page 29 for Components)         | 12      | 850-0114-54 | 4        | Washer, Lock - Spring (M8)       |
| 4       | 338-4402    | 1        | Harness, Power                               | 13      | 098-8094    | 4        | Label, Warning                   |
|         |             |          |                                              | 14      | 098-8104-04 | 2        | Label, Warning                   |
|         |             |          |                                              | 15      | 098-8130    | 2        | Label, Caution                   |



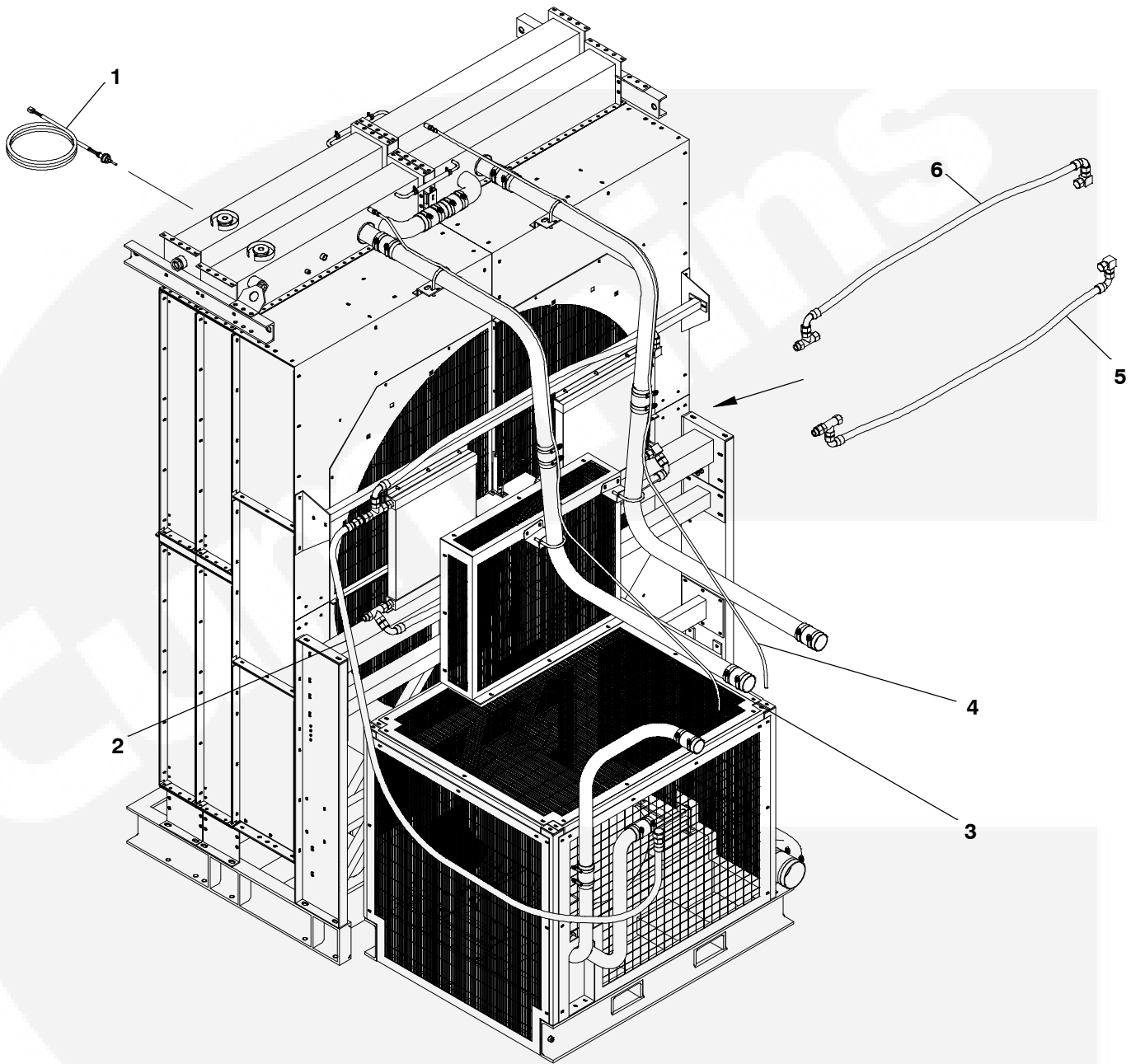
# Radiator – 40°C Kits



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION                      |
|---------|----------|----------|---------------------------------------|
| 1       | 130-5356 | 1        | Hose (5")                             |
| 2       | 130-5354 | 1        | Hose (4")                             |
| 3       | 130-5347 | 1        | Kit, Connector Pipe (J/W Bottom Tank) |
| 4       | 130-5339 | 2        | Cooler, Fuel                          |
| 5       | 130-5345 | 1        | Kit, Connector Pipe (J/W Top Tank)    |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION                             |
|---------|----------|----------|----------------------------------------------|
| 6       | 130-5346 | 1        | Tube, Vent (Interconnection)                 |
| 7       | 130-5342 | 2        | Glass, Sight                                 |
| 8       | 130-5341 | 1        | Kit, Bearing Lube (Not Shown)                |
| 9       | 130-5344 | 1        | Kit, Connector Pipe (J/W Baffle) (Not Shown) |

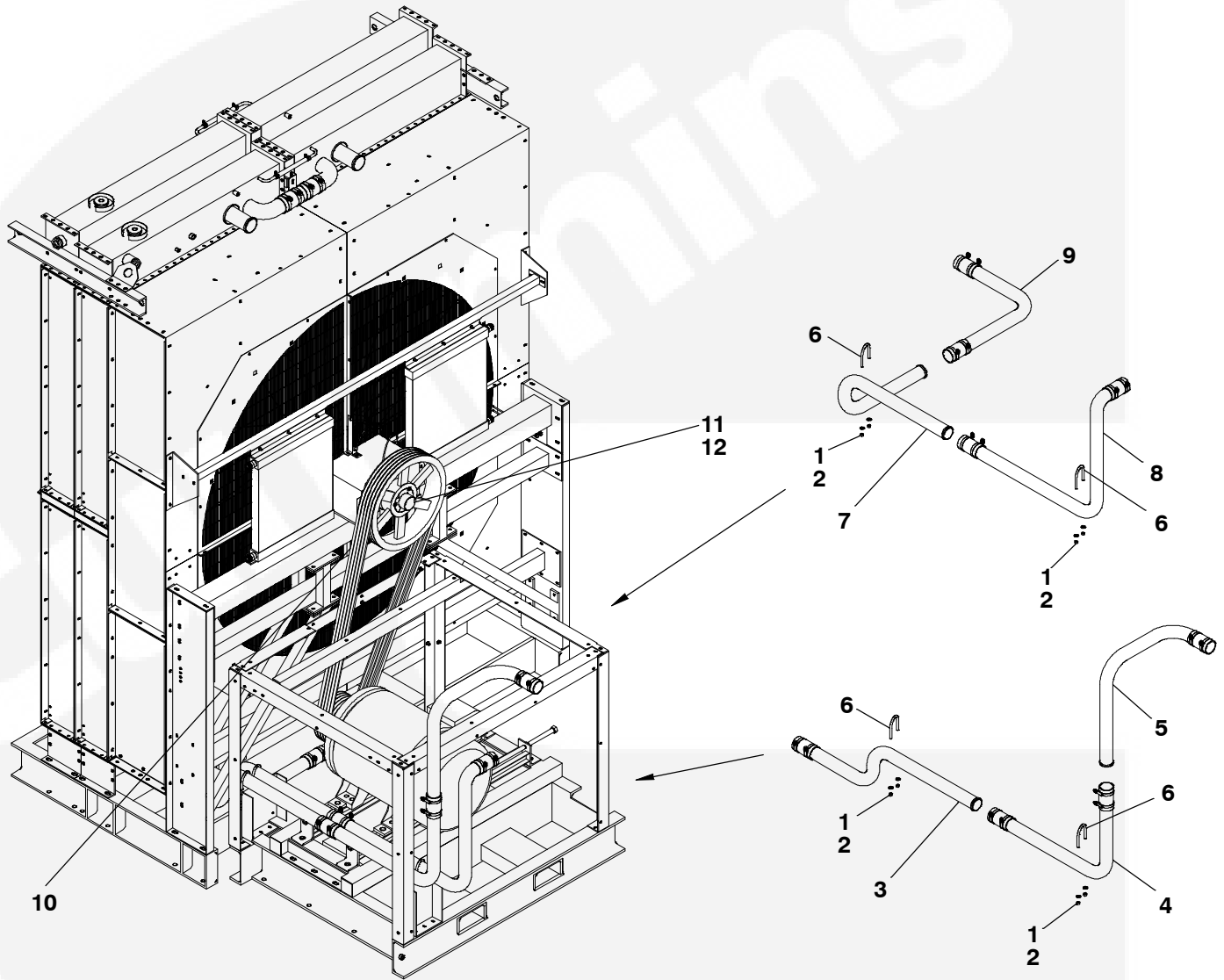
**Radiator  
40°C  
Fuel Lines, Vent Lines, Sensors**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION        |
|---------|----------|----------|-------------------------|
| 1       | A049D315 | 1        | Sensor, J/W Low Coolant |
| 2       | A041E820 | 1        | Line, Fuel              |
| 3       | A041E812 | 1        | Line, LTA Vent – Assy.  |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION           |
|---------|----------|----------|----------------------------|
| 4       | A041E811 | 1        | Line, J/W Vent – Assy.     |
| 5       | A041E818 | 1        | Hose, Interconnecting Fuel |
| 6       | A041E819 | 1        | Hose, Interconnecting Fuel |

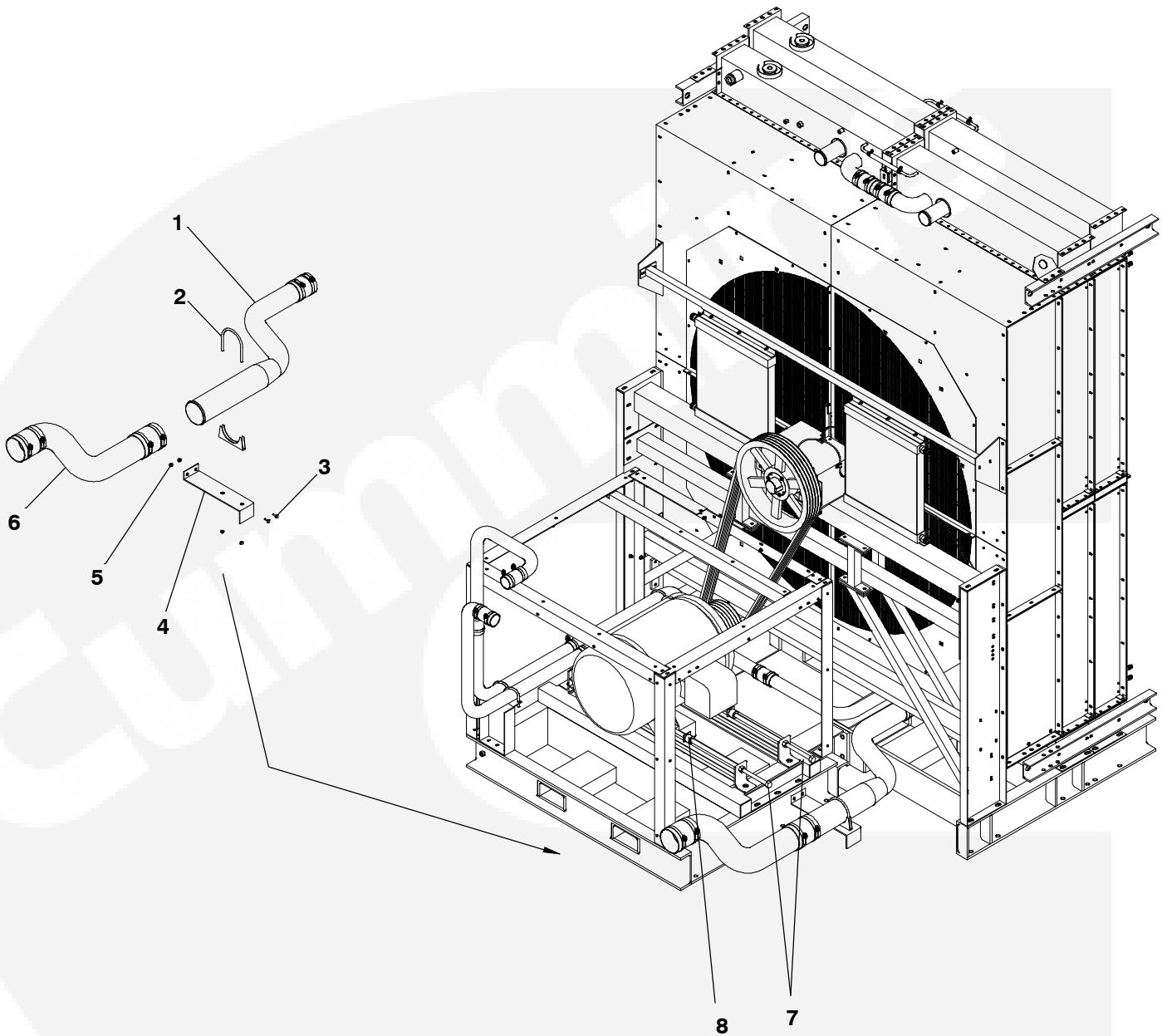
**Radiator  
40°C  
LTA Pipes, Belts**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|
| 1       | A030A823 | A/R      | Nut (M10)        |
| 2       | A049W329 | A/R      | Washer (M10)     |
| 3       | A030W929 | 1        | Pipe, LTA L/H    |
| 4       | A030W930 | 1        | Pipe, LTA L/H    |
| 5       | A030W931 | 1        | Pipe, LTA L/H    |
| 6       | A041E813 | A/R      | U-Bolt           |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION   |
|---------|----------|----------|--------------------|
| 7       | A030W939 | 1        | Pipe, LTA R/H      |
| 8       | A030W940 | 1        | Pipe, LTA R/H      |
| 9       | A030W936 | 1        | Pipe, LTA R/H      |
| 10      | A049E322 | 1        | Belt (Matched Set) |
| 11      | A041E817 | 1        | Pully              |
| 12      | A049D335 | 1        | Bush, Taperlock    |

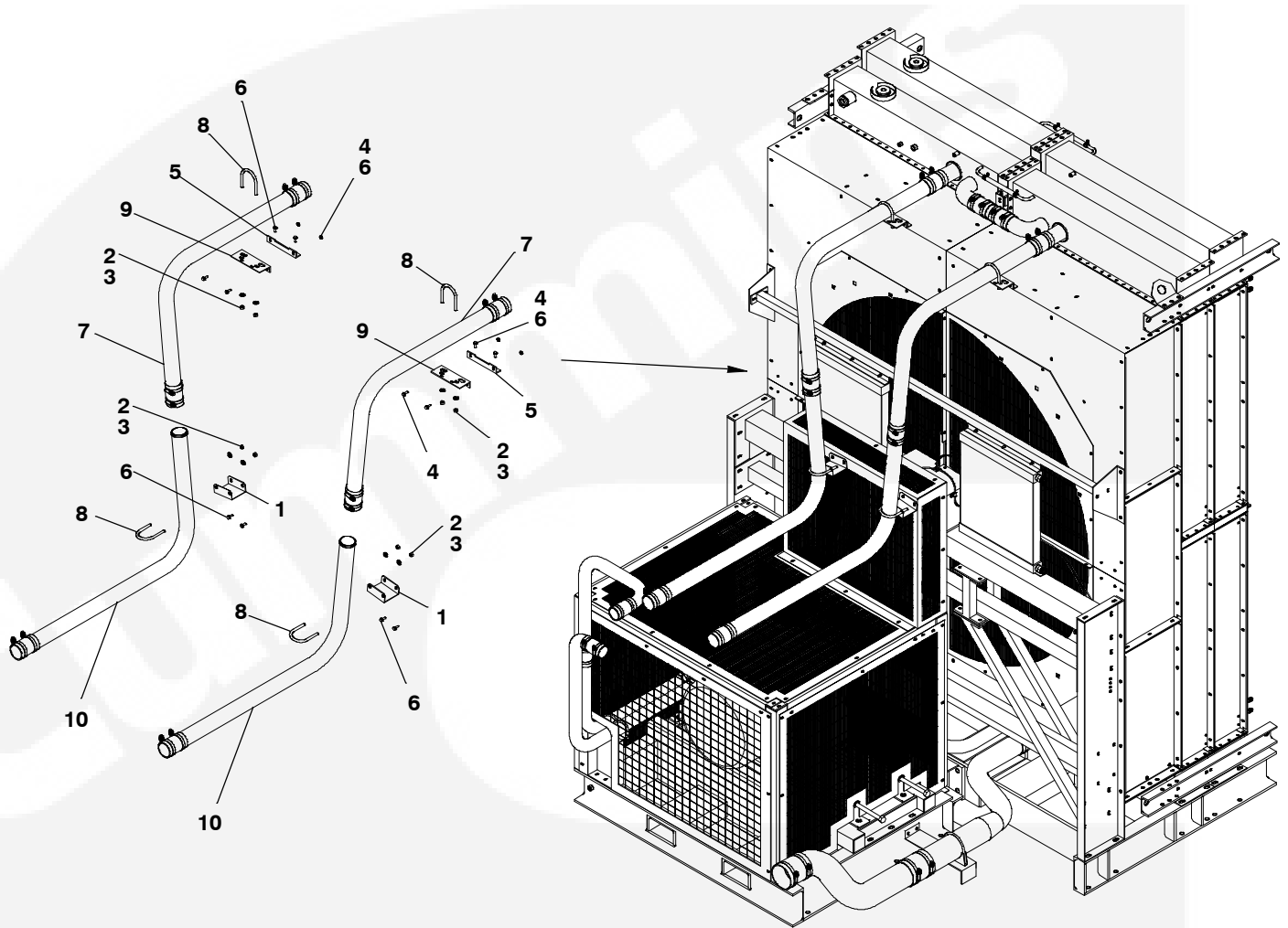
**Radiator  
40°C  
J/W Bottom Pipes**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION         |
|---------|----------|----------|--------------------------|
| 1       | A030W925 | 1        | Pipe, J/W Bottom – Assy. |
| 2       | A049D324 | 1        | Clamp, U-Bolt            |
| 3       | A049D330 | 2        | Screw, Set (M8 x 25)     |
| 4       | A041E815 | 1        | Bracket, Pipe Support    |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION         |
|---------|----------|----------|--------------------------|
| 5       | A029M981 | 2        | Nut, Comby (M8)          |
| 6       | A030W928 | 1        | Pipe, J/W Bottom – Assy. |
| 7       | A049D295 | 2        | Stud, Tensioner          |
| 8       | A049D326 | 2        | Guides, Studding         |

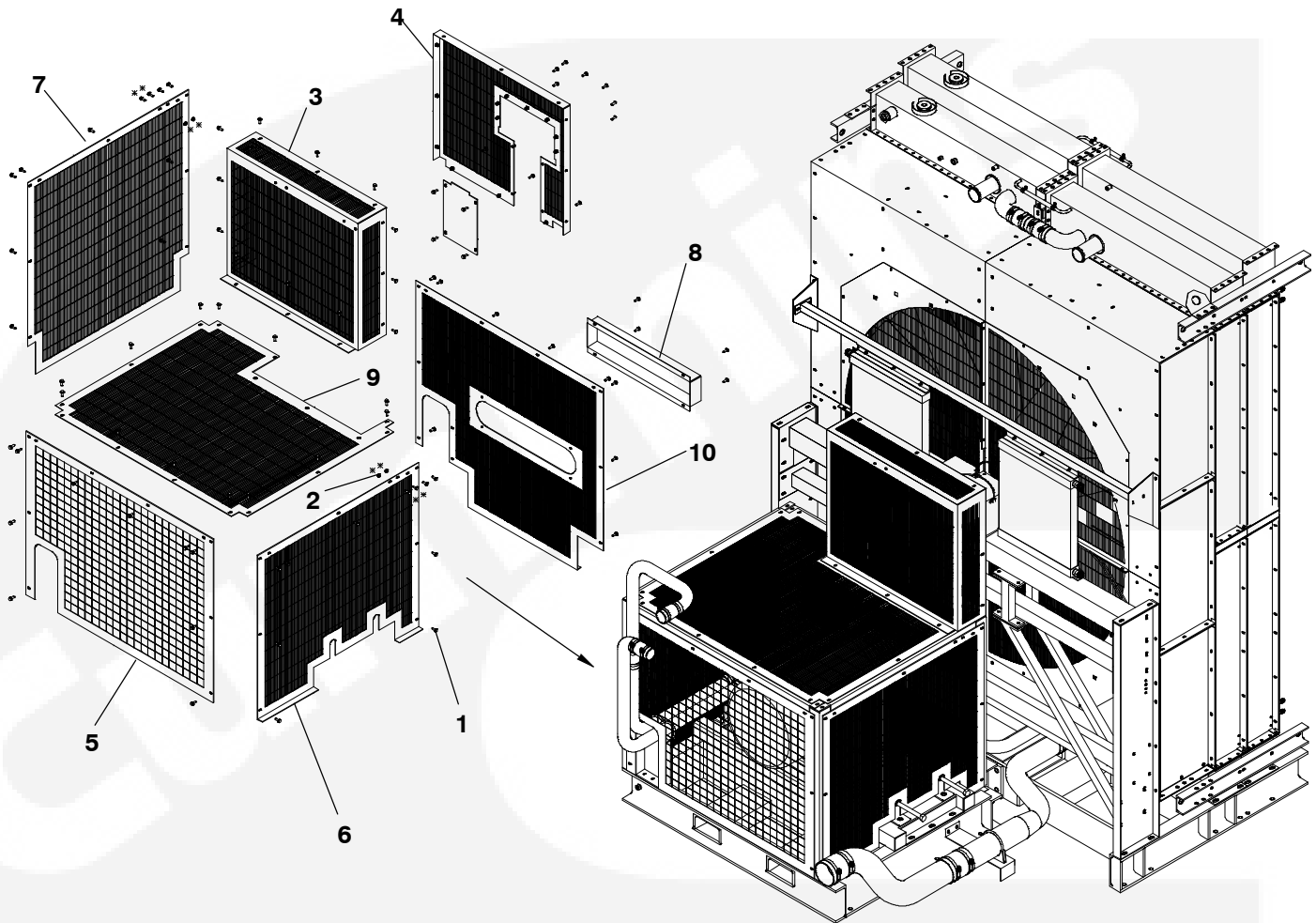
**Radiator  
40°C  
J/W Top Pipes**



| REF NO. | PART NO.  | QTY USED | PART DESCRIPTION      |
|---------|-----------|----------|-----------------------|
| 1       | A041E816  | 1        | Bracket, Pipe Support |
| 2       | 0870-2287 | A/R      | Nut (M12)             |
| 3       | 0526-2342 | A/R      | Washer (M12)          |
| 4       | A029M981  | 2        | Nut (M8)              |
| 5       | A049D318  | 1        | Bracket, Pipe Support |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION      |
|---------|----------|----------|-----------------------|
| 6       | A049D330 | A/R      | Screw, Set (M8 x 25)  |
| 7       | A030W913 | 2        | Pipe, J/W Top - Assy. |
| 8       | A049D323 | A/R      | Clamp, U-Bolt         |
| 9       | A049E317 | 2        | Bracket, Pipe Support |
| 10      | A030W914 | 2        | Pipe, J/W Top - Assy. |

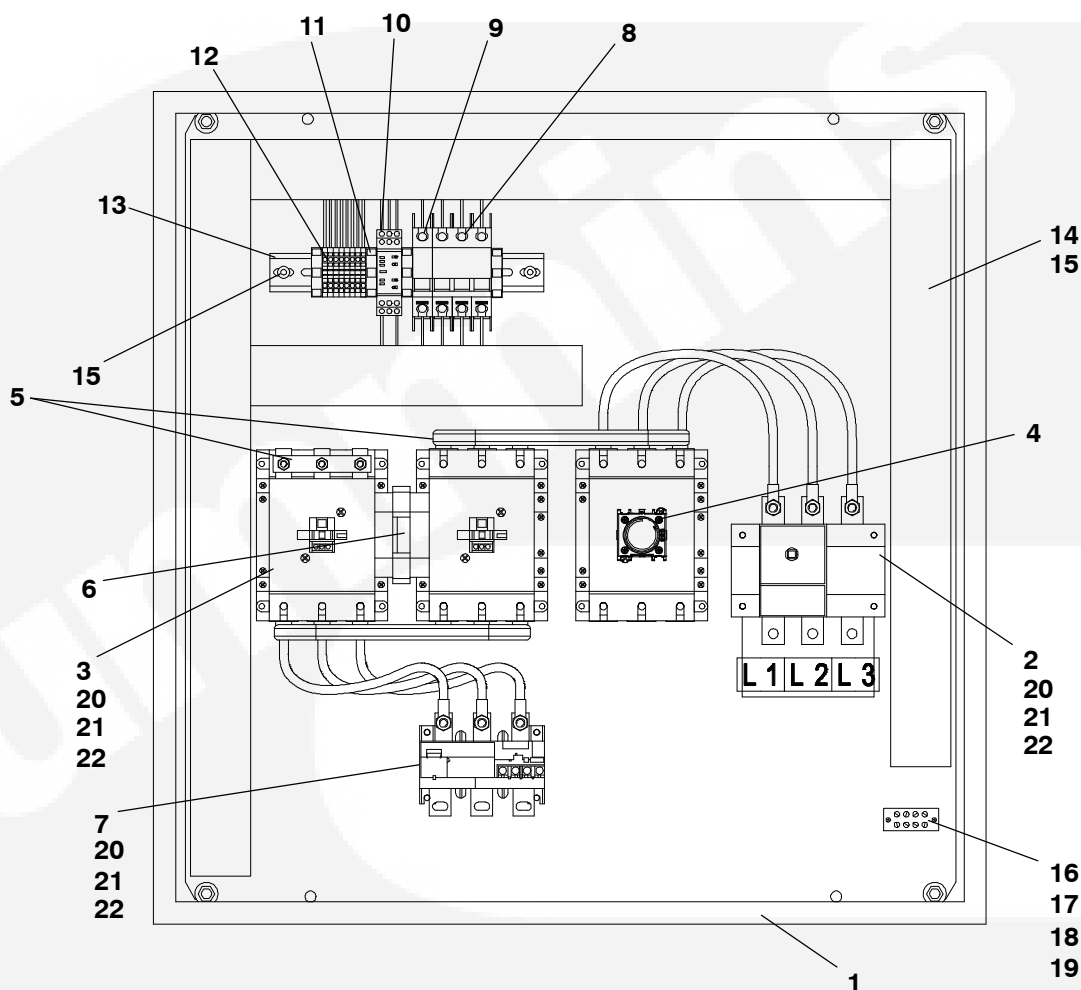
**Radiator  
40°C  
Motor Guarding**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|
| 1       | A049D330 | A/R      | Screw, Set (M8)  |
| 2       | A029W981 | A/R      | Nut, Comby (M8)  |
| 3       | A041E822 | 1        | Guard, Pulley    |
| 4       | A041E821 | 1        | Guard, Pulley    |

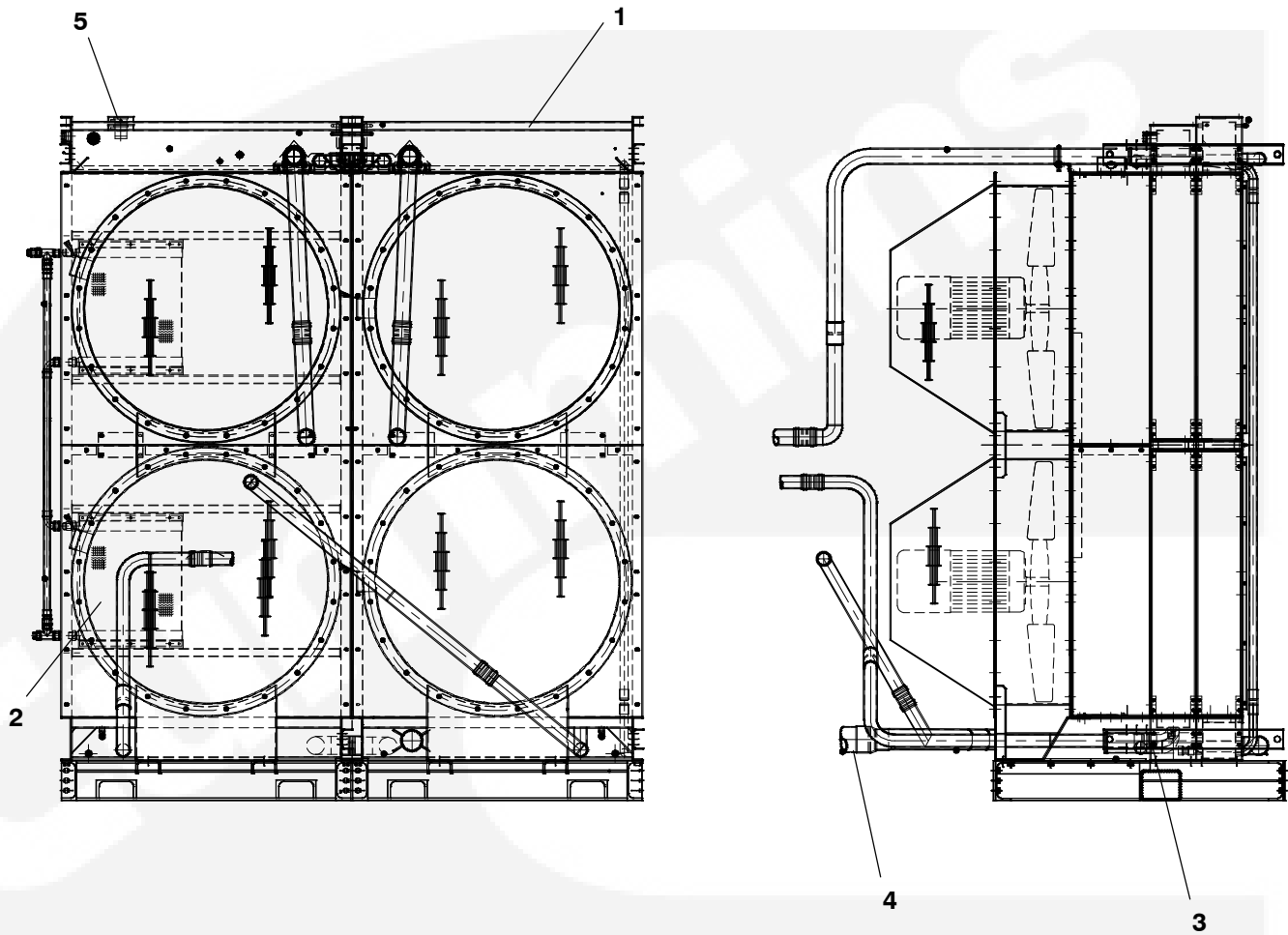
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION     |
|---------|----------|----------|----------------------|
| 5       |          |          | Non-Serviceable Part |
| 6       |          |          | Non-Serviceable Part |
| 7       |          |          | Non-Serviceable Part |
| 8       |          |          | Non-Serviceable Part |
| 9       |          |          | Non-Serviceable Part |
| 10      |          |          | Non-Serviceable Part |

## Control 40°C Cooling System



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION                               | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    |
|---------|----------|----------|------------------------------------------------|---------|-------------|----------|-------------------------------------|
| 1       | 319-5283 | 1        | Panel                                          | 11      | 332-3926    | 4        | Block, Terminal – End Stop          |
| 2       | 320-2216 | 1        | Switch, Disconnect (160 Amp, 3 Pole)           | 12      | 332-3923-01 | 8        | Block, Terminal                     |
| 3       | 306-4790 | 3        | Contactor                                      | 13      | 332-3895    | 1        | Rail, Terminal Block                |
| 4       | 307-3027 | 1        | Relay, Timer                                   | 14      | 331-0593    | 1        | Duct, Wiring                        |
| 5       | 541-1036 | 1        | Kit, Cable                                     | 15      | 818-0231-02 | 20       | Rivet, Pop                          |
| 6       | 306-4791 | 1        | Interlock                                      | 16      | 332-3958    | 1        | Block, Terminal                     |
| 7       | 307-3028 | 1        | Relay, Current                                 | 17      | 850-0114-51 | 2        | Washer, Lock (M4)                   |
| 8       | 320-2217 | 1        | Breaker, Circuit (2 Amp, 3 Pole – UL Approved) | 18      | 526-0399-54 | 2        | Washer, Flat (M4)                   |
| 9       | 320-2218 | 1        | Breaker, Circuit (6 Amp, 1 Pole – UL Approved) | 19      | 800-0309-77 | 2        | Screw, Hex Head (M4 x 20)           |
| 10      | 307-3023 | 1        | Relay, Voltage                                 | 20      | 850-0114-52 | 20       | Washer, Lock (M5)                   |
|         |          |          |                                                | 21      | 526-0399-56 | 20       | Washer, Flat (M5)                   |
|         |          |          |                                                | 22      | 822-3089    | 20       | Screw, Slotted – Pan Head (M5 x 16) |

Radiator  
50°C

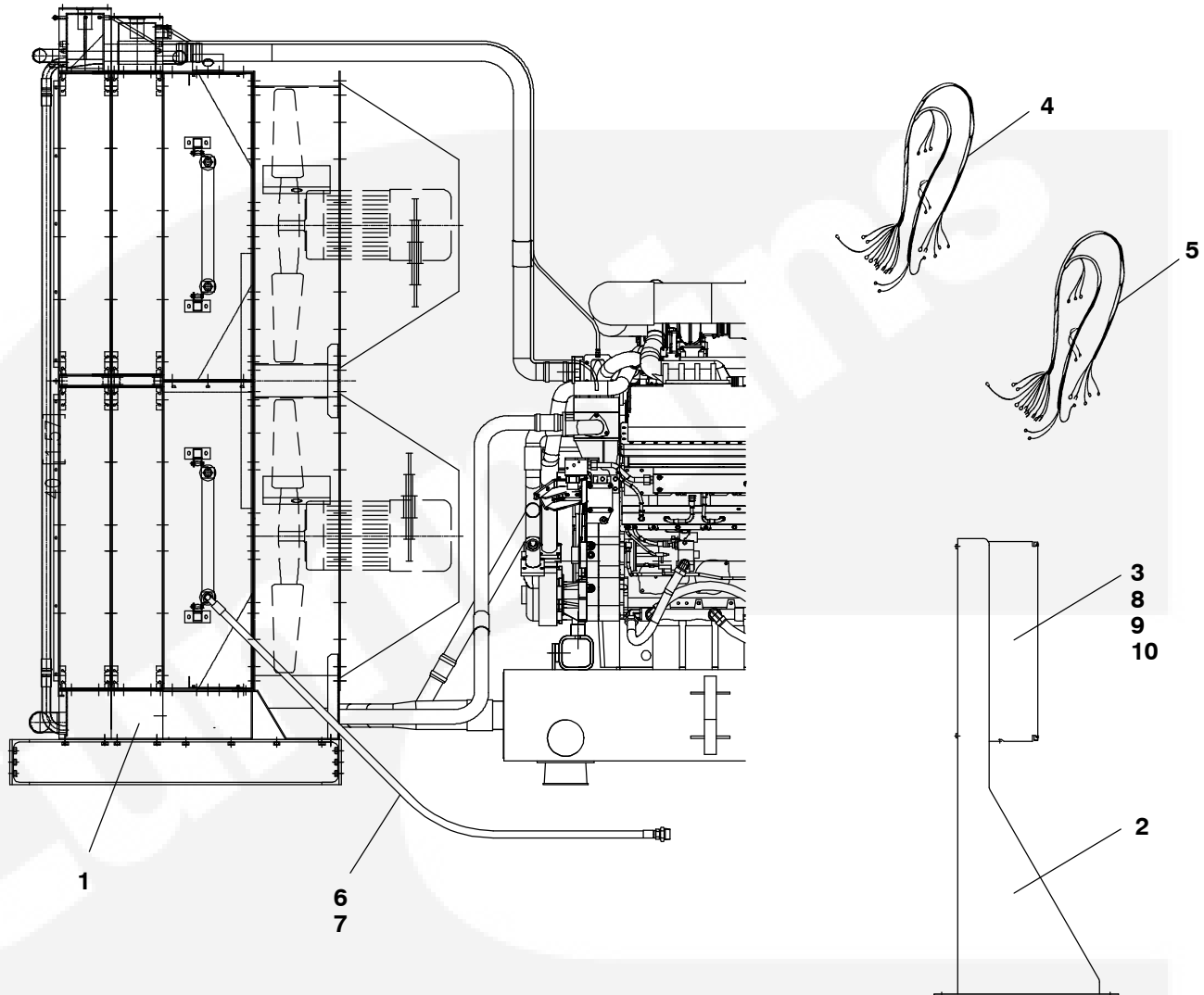


| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                       |
|---------|-------------|----------|----------------------------------------|
| 1       |             |          | Radiator (Includes Parts Listed Below) |
|         | 130-5997-01 | 1        | 380V-440V - 50Hz                       |
|         | 130-5997-02 | 1        | 380V - 60Hz                            |
|         | 130-5997-03 | 1        | 416V-480V - 60Hz                       |
|         | 130-5997-04 | 1        | 380V UL NEMA - 60Hz                    |
|         | 130-5997-05 | 1        | 416V-480V UL NEMA - 60Hz               |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|
| 2       | 130-5339 | 2        | Cooler, Fuel     |
| 3       | 130-5354 | 1        | Hose - 4"        |
| 4       | 130-5359 | 1        | Hose - 3"        |
| 5       | 130-5325 | 2        | Cap, Pressure    |

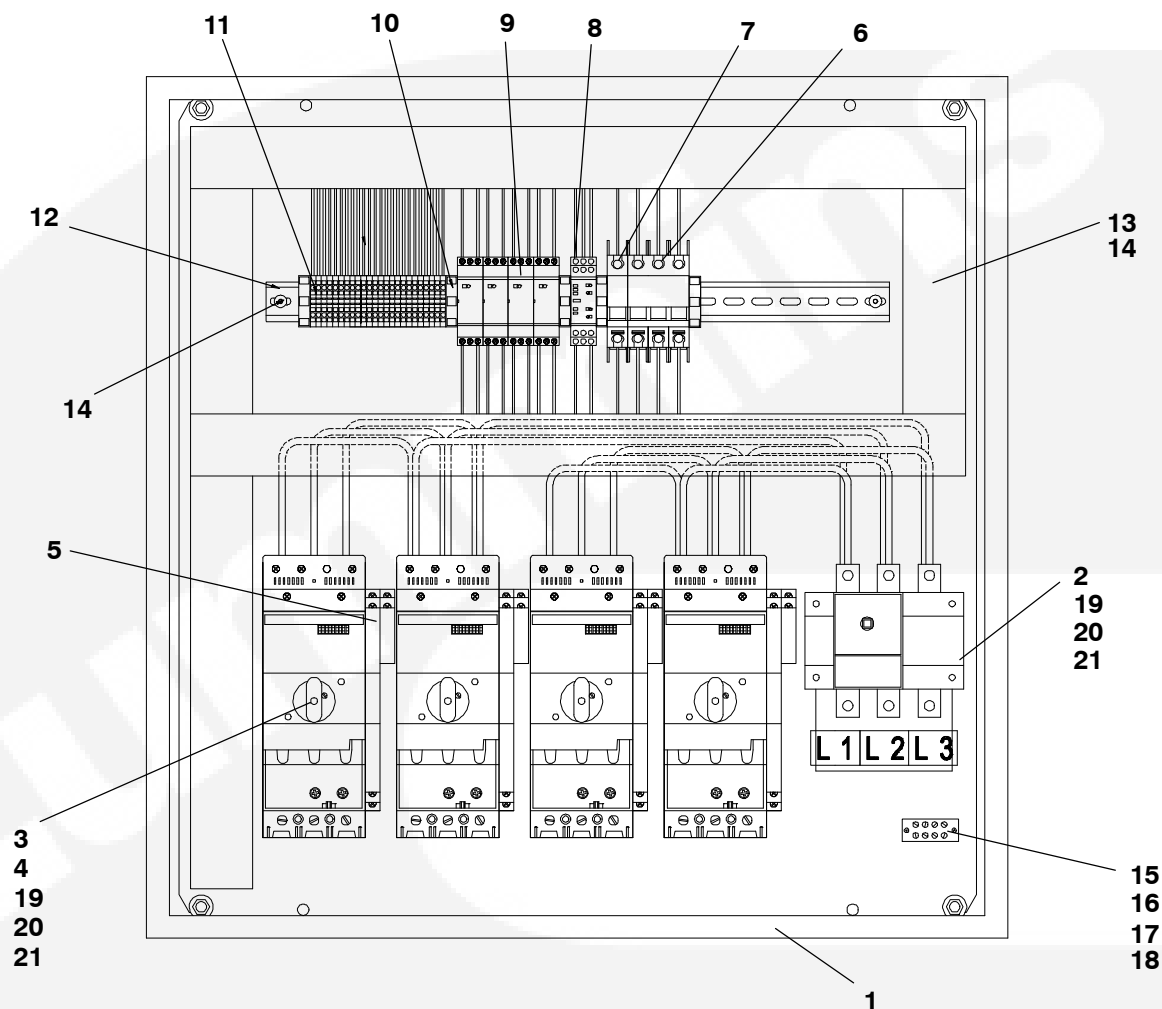


## Cooling System 50°C



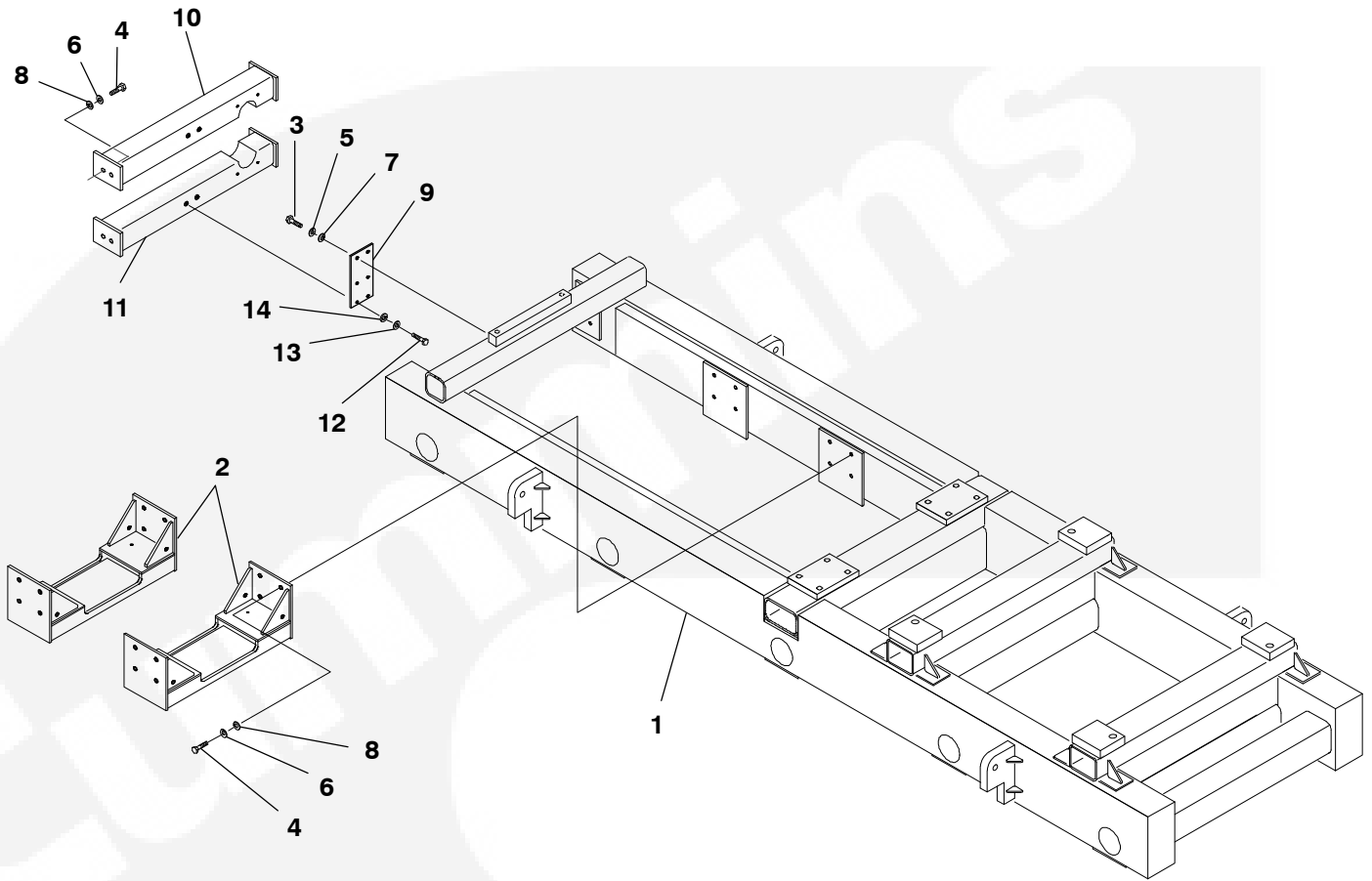
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                            | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                        |
|---------|-------------|----------|---------------------------------------------|---------|-------------|----------|-------------------------------------------------------------------------|
| 1       |             |          | Radiator (See Separate Page for Components) | 4       |             |          | Harness, Power – Fans<br>(Looking at the Radiator From the Engine Side) |
|         | 130-5997-01 | 1        | 380V-440V – 50Hz                            |         | 338-4403-01 | 1        | Top Left                                                                |
|         | 130-5997-02 | 1        | 380V – 60Hz                                 |         | 338-4403-02 | 1        | Top Right                                                               |
|         | 130-5997-03 | 1        | 416V-480V – 60Hz                            |         | 338-4403-03 | 1        | Bottom Left                                                             |
|         | 130-5997-04 | 1        | 380V UL NEMA – 60Hz                         |         | 338-4403-04 | 1        | Bottom Right                                                            |
|         | 130-5997-05 | 1        | 416V-480V UL NEMA – 60Hz                    | 5       | 338-4407    | 1        | Harness, Control                                                        |
| 2       | 319-5235-02 | 1        | Frame, Cabinet                              | 6       | 501-0811    | 1        | Hose Assembly                                                           |
| 3       | 300-5812    | 1        | Control (See Separate Page for Components)  | 7       | 505-2161-02 | 1        | Adapter, Pipe (1" x 1-1/2")                                             |
|         |             |          |                                             | 8       | 800-3017-20 | 4        | Screw, Hex Head (M8 x 1.25 x 25)                                        |
|         |             |          |                                             | 9       | 862-0026-55 | 4        | Nut, Hex (M8 x 1.25)                                                    |
|         |             |          |                                             | 10      | 526-0399-60 | 8        | Washer, Flat (M8)                                                       |
|         |             |          |                                             | 11      | 850-0114-54 | 4        | Washer, Lock – Spring (M8)                                              |

## Control 50°C Cooling System



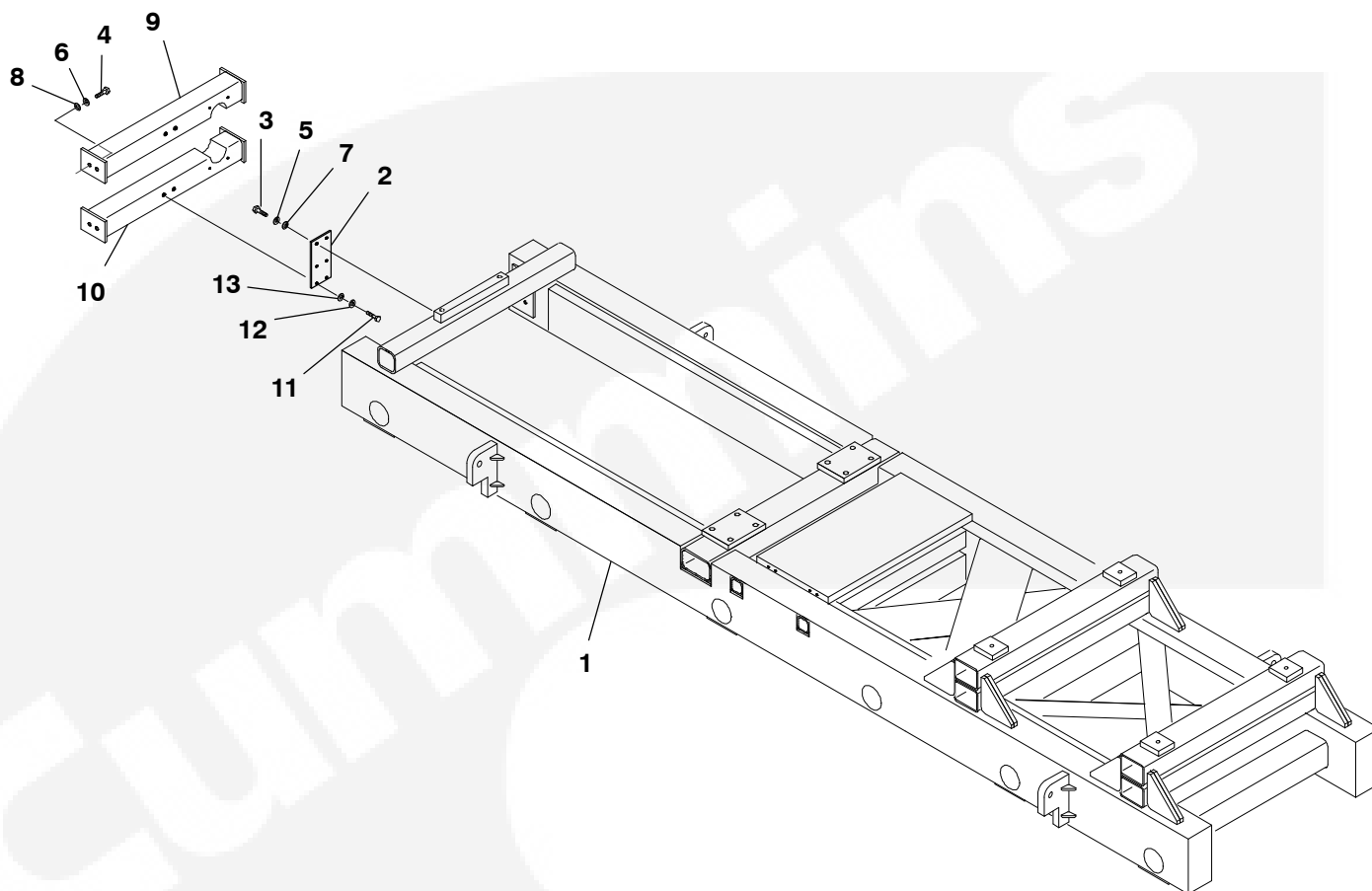
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION                               | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    |
|---------|----------|----------|------------------------------------------------|---------|-------------|----------|-------------------------------------|
| 1       | 319-5205 | 1        | Panel                                          | 11      | 332-3923-01 | 22       | Block, Terminal                     |
| 2       | 320-2216 | 1        | Switch, Disconnect (160 Amp, 3 Pole)           | 12      | 332-3895    | 1        | Rail, Terminal Block                |
| 3       | 320-2220 | 4        | Breaker, Circuit (63 Amp)                      | 13      | 331-0593    | 1        | Duct, Wiring                        |
| 4       | 307-3024 | 4        | Switch, Magnetic                               | 14      | 818-0231-02 | 18       | Rivet, Pop                          |
| 5       | 306-4788 | 4        | Contact, Auxiliary                             | 15      | 332-3958    | 1        | Block, Terminal                     |
| 6       | 320-2217 | 1        | Breaker, Circuit (2 Amp, 3 Pole - UL Approved) | 16      | 850-0114-51 | 2        | Washer, Lock (M4)                   |
| 7       | 320-2218 | 1        | Breaker, Circuit (6 Amp, 1 Pole - UL Approved) | 17      | 526-0399-54 | 2        | Washer, Flat (M4)                   |
| 8       | 307-3023 | 1        | Relay, Voltage                                 | 18      | 800-0309-77 | 2        | Screw, Hex Head (M4 x 20)           |
| 9       | 307-3025 | 4        | Relay, Timer                                   | 19      | 850-0114-52 | 20       | Washer, Lock (M5)                   |
| 10      | 332-3926 | 5        | Block, Terminal - End Stop                     | 20      | 526-0399-56 | 20       | Washer, Flat (M5)                   |
|         |          |          |                                                | 21      | 822-3089    | 20       | Screw, Slotted - Pan Head (M5 x 16) |

# Skid DQLA



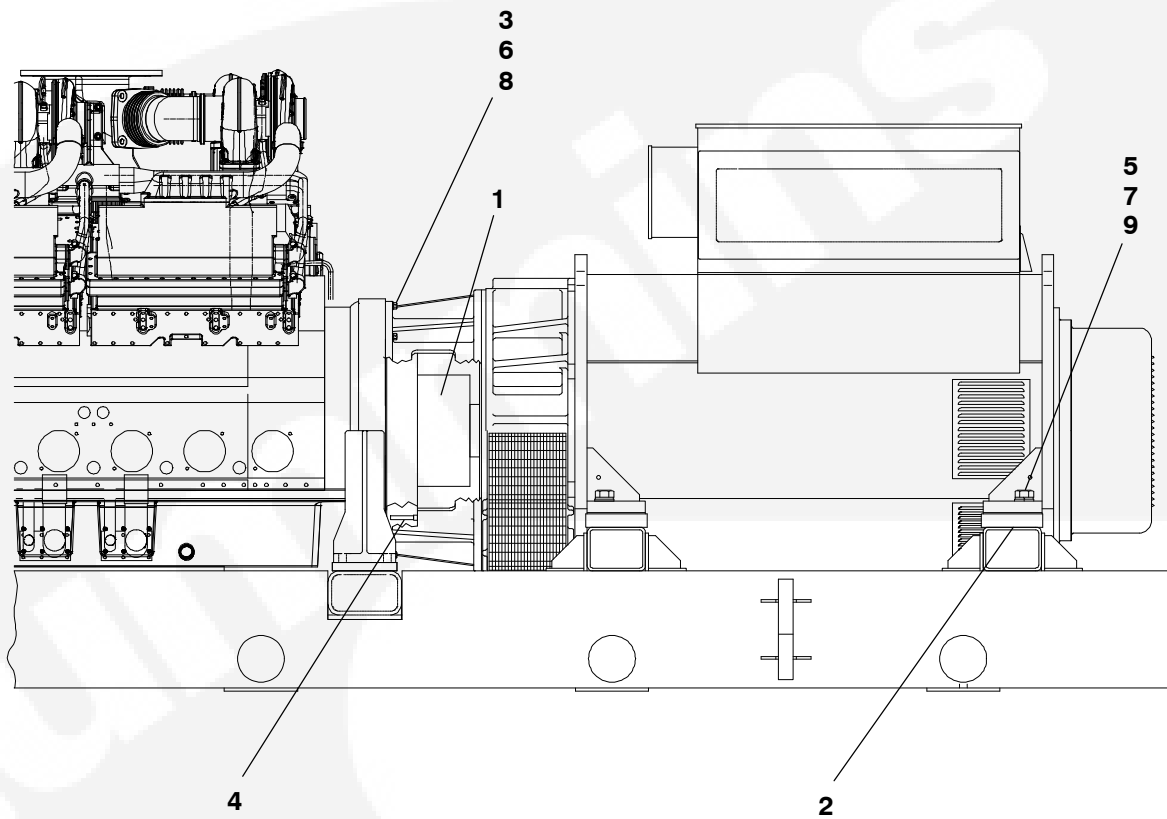
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                  |
|---------|-------------|----------|----------------------------------|---------|-------------|----------|-----------------------------------|
| 1       |             |          | Skid                             | 7       | 850-0114-57 | 2        | Washer, Lock – Spring (M16)       |
|         | 403-4918-02 | 1        | “C”, “D” and “E” Alternators     | 8       | 850-0114-58 | 24       | Washer, Lock – Spring (M20)       |
|         | 403-4919-02 | 1        | “F” and “G” Alternators          | 9       | 403-5132-02 | 1        | Plate, Skid                       |
| 2       | 403-5133-02 | 2        | Crossmember, Skid – Stiffener    | 10      | 403-5130-02 | 1        | Crossmember, Skid – Upper         |
| 3       | 800-3017-73 | 2        | Screw, Hex Head (M16 x 2.0 x 45) | 11      | 403-5131-02 | 1        | Crossmember, Skid – Lower         |
| 4       | 800-3017-88 | 24       | Screw, Hex Head (M20 x 2.5 x 45) | 12      | 800-3017-56 | 4        | Screw, Hex Head (M12 x 1.75 x 40) |
| 5       | 526-0399-66 | 2        | Washer, Flat (M16)               | 13      | 526-0399-64 | 4        | Washer, Flat (M12)                |
| 6       | 526-0399-70 | 24       | Washer, Flat (M20)               | 14      | 850-0114-56 | 4        | Washer, Lock – Spring (M12)       |

# Skid DQLB



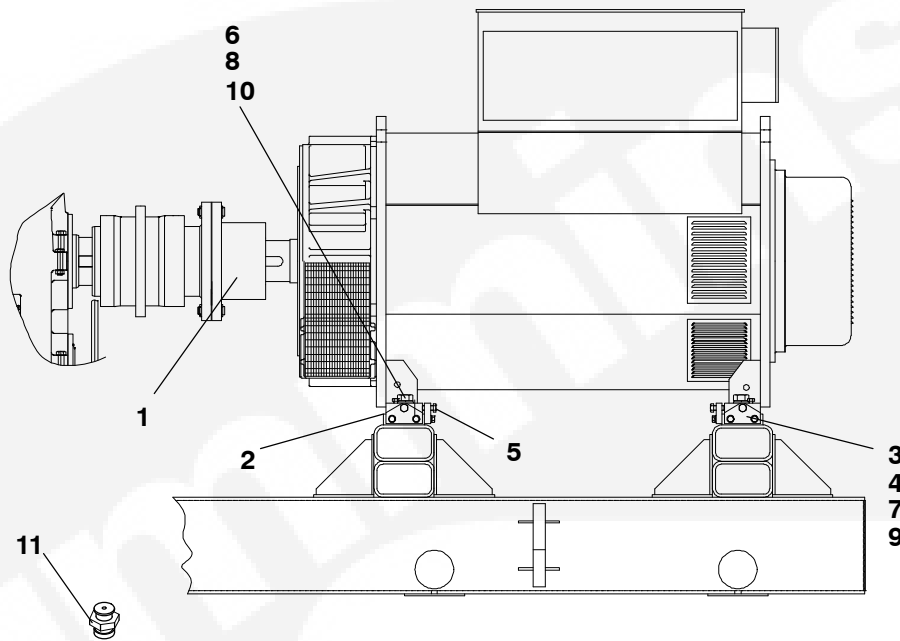
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                  |
|---------|-------------|----------|----------------------------------|---------|-------------|----------|-----------------------------------|
| 1       | 403-5083-02 | 1        | Skid                             | 6       | 526-0399-70 | 8        | Washer, Flat (M20)                |
|         | 403-4917-02 | 1        | "C", "D" and "E" Alternators     | 7       | 850-0114-57 | 2        | Washer, Lock - Spring (M16)       |
| 2       | 403-5132-02 | 1        | "F" and "G" Alternators          | 8       | 850-0114-58 | 8        | Washer, Lock - Spring (M20)       |
| 3       | 800-3017-73 | 2        | Plate, Skid                      | 9       | 403-5130-02 | 1        | Crossmember, Skid - Upper         |
| 4       | 800-3017-88 | 8        | Screw, Hex Head (M16 x 2.0 x 45) | 10      | 403-5131-02 | 1        | Crossmember, Skid - Lower         |
| 5       | 526-0399-66 | 2        | Screw, Hex Head (M20 x 2.5 x 45) | 11      | 800-3017-56 | 4        | Screw, Hex Head (M12 x 1.75 x 40) |
|         |             |          | Washer, Flat (M16)               | 12      | 526-0399-64 | 4        | Washer, Flat (M12)                |
|         |             |          |                                  | 13      | 850-0114-56 | 4        | Washer, Lock - Spring (M12)       |

## Generator Mounting DQLA



| REF NO. | PART NO.        | QTY USED | PART DESCRIPTION                                                                            | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                            |
|---------|-----------------|----------|---------------------------------------------------------------------------------------------|---------|-------------|----------|---------------------------------------------|
| 1       | 512-0259        | 1        | Coupling, Flexible<br>"C", "D" and "E" Alternators<br>"F" and "G" Alternators               | 4       | 725-1167    | 12       | Screw, Cap – Socket Head<br>(M16 x 2 x 110) |
|         | 512-0272        | 1        |                                                                                             | 5       | 800-6308    | 4        |                                             |
| 2       | 232-4121-01 A/R |          | Shim, Generator<br>0.1mm Thick<br>0.25mm Thick<br>0.5mm Thick<br>1.0mm Thick<br>2.0mm Thick | 6       | 526-0399-64 | 16       | Washer, Flat (M12)                          |
|         | 232-4121-02 A/R |          |                                                                                             | 7       | 526-2250    | 4        | Washer, Flat (M36)                          |
|         | 232-4121-03 A/R |          |                                                                                             | 8       | 850-0114-56 | 16       | Washer, Lock – Spring (M12)                 |
|         | 232-4121-04 A/R |          |                                                                                             | 9       | 850-2028    | 4        | Washer, Lock – Spring (M36)                 |
|         | 232-4121-05 A/R |          |                                                                                             |         |             |          |                                             |
| 3       | 800-3017-59     | 16       | Screw, Hex Head (M12 x 1.75 x 55)                                                           |         |             |          |                                             |

## Generator Mounting DQLB



| REF NO. | PART NO.        | QTY USED | PART DESCRIPTION                                   | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                 |
|---------|-----------------|----------|----------------------------------------------------|---------|-------------|----------|----------------------------------|
| 1       | 512-0270        | 1        | Coupling, Flexible<br>"C", "D" and "E" Alternators | 4       | 800-3017-75 | 20       | Screw, Hex Head (M16 x 2 x 55)   |
|         | 512-0271        | 1        | "F" and "G" Alternators                            | 5       | 800-6311    | 8        | Screw, Hex Head (M20 x 1.5 x 45) |
| 2       | 232-4126-01 A/R |          | Shim, Generator<br>0.1mm Thick                     | 6       | 800-6308    | 4        | Screw, Hex Head (M36 x 4 x 100)  |
|         | 232-4126-02 A/R |          | 0.25mm Thick                                       | 7       | 526-0399-66 | 16       | Washer, Flat (M16)               |
|         | 232-4126-03 A/R |          | 0.5mm Thick                                        | 8       | 526-2250    | 4        | Washer, Flat (M36)               |
|         | 232-4126-04 A/R |          | 1.0mm Thick                                        | 9       | 850-0114-57 | 16       | Washer, Lock - Spring (M16)      |
|         | 232-4126-05 A/R |          | 2.0mm Thick                                        | 10      | 850-2028    | 4        | Washer, Lock - Spring (M36)      |
| 3       | 403-4933-02     | 8        | Pad, Jacking - "E", "F" and "G"<br>Generators      | 11      | 518-0716    | 2        | Fitting, Grease - Nipple         |

## Generator

Generator component parts cannot be ordered from Cummins Power Generation. Refer to the Newage nameplate and supply all available information. Contact your nearest Newage distributor for assistance in order-

ing component parts. For COMPLETE generator replacement use the 200-XXXX-XX Cummins Power Generation identification number listed below.

| <b>Cummins Power Generation Identification Number</b> | <b>Generator Model Number</b> |
|-------------------------------------------------------|-------------------------------|
| 200-3080-01                                           | LVSI824C2                     |
| 200-3080-02                                           | LVSI824D2                     |
| 200-3080-03                                           | LVSI824E2                     |
| 200-3080-04                                           | LVSI824F2                     |
| 200-3080-06                                           | LVSI824C2                     |
| 200-3080-07                                           | LVSI824D2                     |
| 200-3080-08                                           | LVSI824E2                     |
| 200-3080-09                                           | LVSI824F2                     |
| 200-3080-11                                           | LVSI824C2                     |
| 200-3080-12                                           | LVSI824D2                     |
| 200-3080-13                                           | LVSI824E2                     |
| 200-3080-14                                           | LVSI824F2                     |
| 200-3080-27                                           | MVSI824D2                     |
| 200-3080-28                                           | MVSI824E2                     |
| 200-3080-29                                           | MVSI824F2                     |
| 200-3080-47                                           | HVSI824D2                     |
| 200-3080-48                                           | HVSI824E2                     |
| 200-3080-49                                           | HVSI824F2                     |
| 200-3080-52                                           | HVSI824D2                     |
| 200-3080-53                                           | HVSI824E2                     |
| 200-3080-54                                           | HVSI824F2                     |
| 200-3080-55                                           | HVSI824G2                     |
| 200-3081-01                                           | LVSI824C2                     |
| 200-3081-02                                           | LVSI824D2                     |
| 200-3081-03                                           | LVSI824E2                     |
| 200-3081-04                                           | LVSI824F2                     |
| 200-3081-06                                           | LVSI824C2                     |
| 200-3081-07                                           | LVSI824D2                     |
| 200-3081-08                                           | LVSI824E2                     |
| <b>Continued...</b>                                   |                               |

## Generator

| Cummins Power Generation Identification Number | Generator Model Number |
|------------------------------------------------|------------------------|
| <b>Continued...</b>                            |                        |
| 200-3081-09                                    | LVSI824F2              |
| 200-3081-11                                    | LVSI824C2              |
| 200-3081-12                                    | LVSI824D2              |
| 200-3081-13                                    | LVSI824E2              |
| 200-3081-14                                    | LVSI824F2              |
| 200-3081-27                                    | MVSI824D2              |
| 200-3081-28                                    | MVSI824E2              |
| 200-3081-29                                    | MVSI824F2              |
| 200-3081-47                                    | HVSI824D2              |
| 200-3081-48                                    | HVSI824E2              |
| 200-3081-49                                    | HVSI824F2              |
| 200-3081-52                                    | HVSI824D2              |
| 200-3081-53                                    | HVSI824E2              |
| 200-3081-54                                    | HVSI824F2              |
| 200-3081-55                                    | HVSI824G2              |
| 200-3082-03                                    | LVSI824E2              |
| 200-3082-04                                    | LVSI824F2              |
| 200-3082-05                                    | LVSI824G2              |
| 200-3082-13                                    | MVSI824E2              |
| 200-3082-14                                    | MVSI824F2              |
| 200-3082-15                                    | MVSI824G2              |
| 200-3082-28                                    | HVSI824E2              |
| 200-3082-29                                    | HVSI824F2              |
| 200-3082-30                                    | HVSI824G2              |
| 200-3082-38                                    | HVSI824E2              |
| 200-3082-39                                    | HVSI824F2              |
| 200-3082-40                                    | HVSI824G2              |
| 200-3083-03                                    | LVSI824E2              |
| 200-3083-04                                    | LVSI824F2              |
| 200-3083-05                                    | LVSI824G2              |
| <b>Continued...</b>                            |                        |

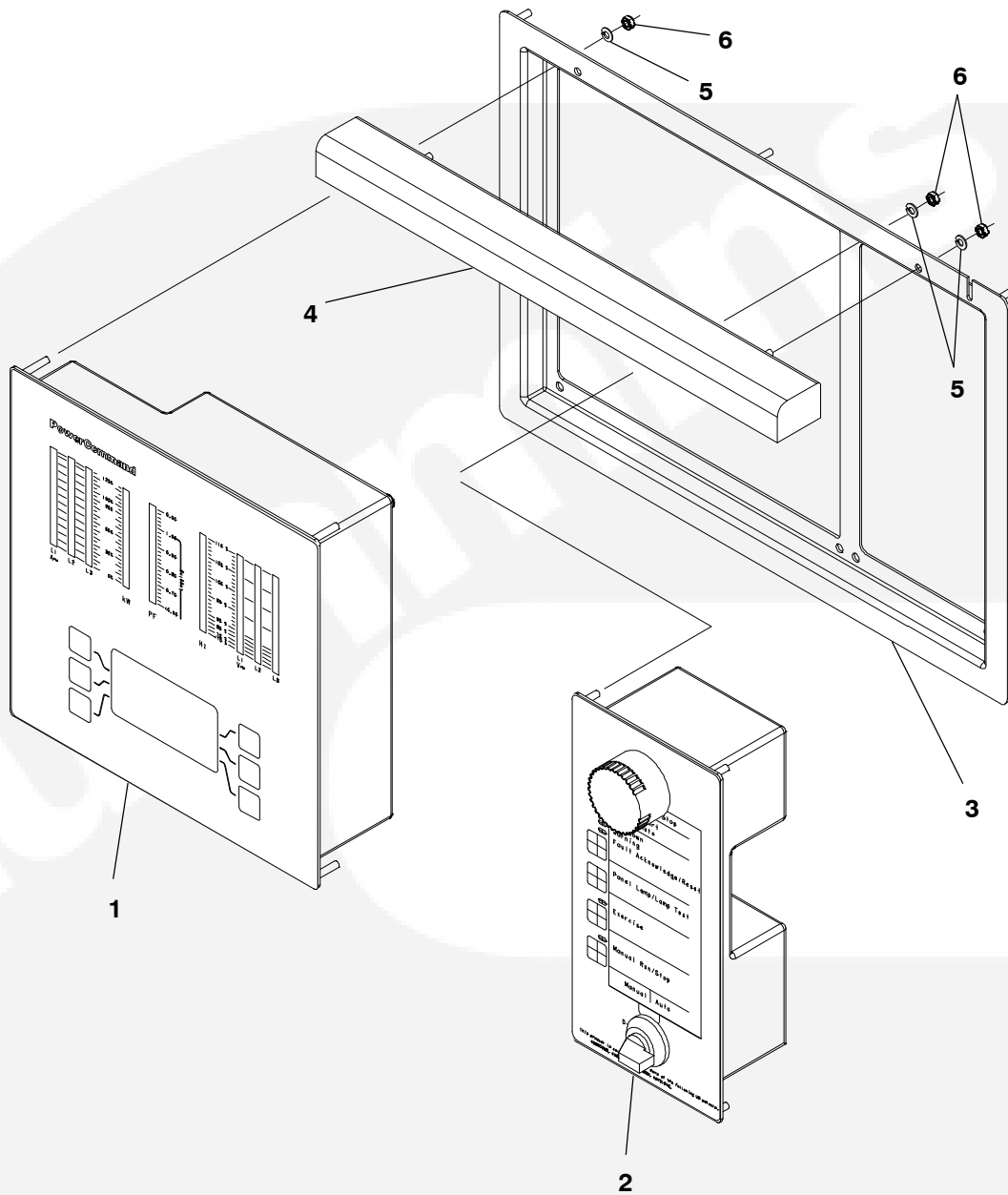


## Generator

| Cummins Power<br>Generation<br>Identification<br>Number | Generator<br>Model<br>Number |
|---------------------------------------------------------|------------------------------|
| Continued...                                            |                              |
| 200-3083-13                                             | MVSI824E2                    |
| 200-3083-14                                             | MVSI824F2                    |
| 200-3083-15                                             | MVSI824G2                    |
| 200-3083-28                                             | HVSI824E2                    |
| 200-3083-29                                             | HVSI824F2                    |
| 200-3083-30                                             | HVSI824G2                    |
| 200-3083-38                                             | HVSI824E2                    |
| 200-3083-39                                             | HVSI824F2                    |
| 200-3083-40                                             | HVSI824G2                    |



## PowerCommand Control Panel

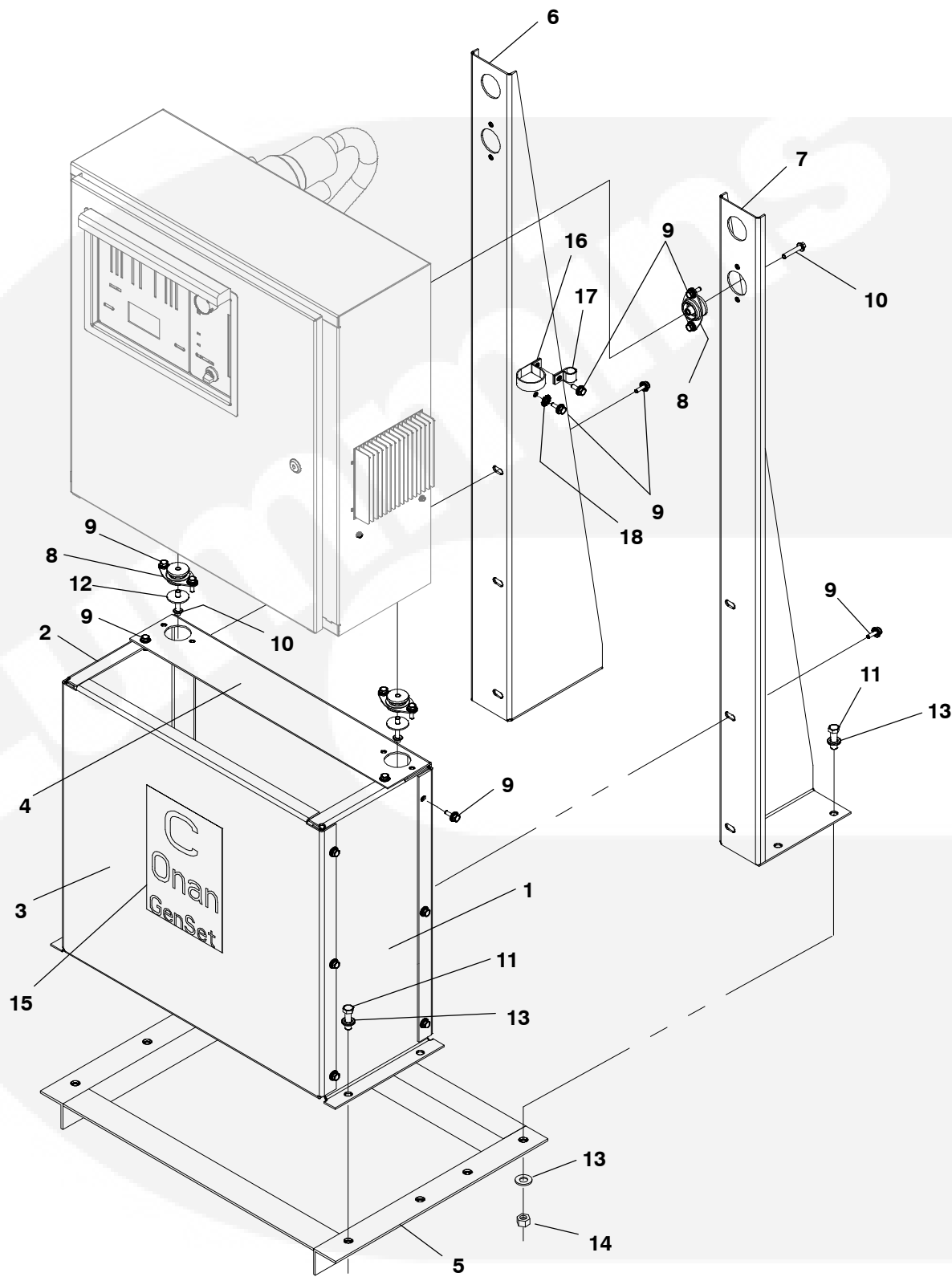


| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION           |
|---------|-------------|----------|------------------|---------|-------------|----------|----------------------------|
| 1       | 300-5312    | 1        | Display Assembly | 3       | 300-5280-02 | 1        | Frame, Control Panel       |
| 2       | 300-5311    | 1        | Panel Assembly   | 4       | 300-5291    | 1        | Rail, Operator Panel Light |
|         | 300-5311-01 | 1        | Without Key      | 5       | 850-2004    | 16       | Washer, Lock (M4)          |
|         |             |          | With Key         | 6       | 860-2005    | 16       | Nut, Hex (M4 x .7)         |

**“Intentionally Left Blank”**



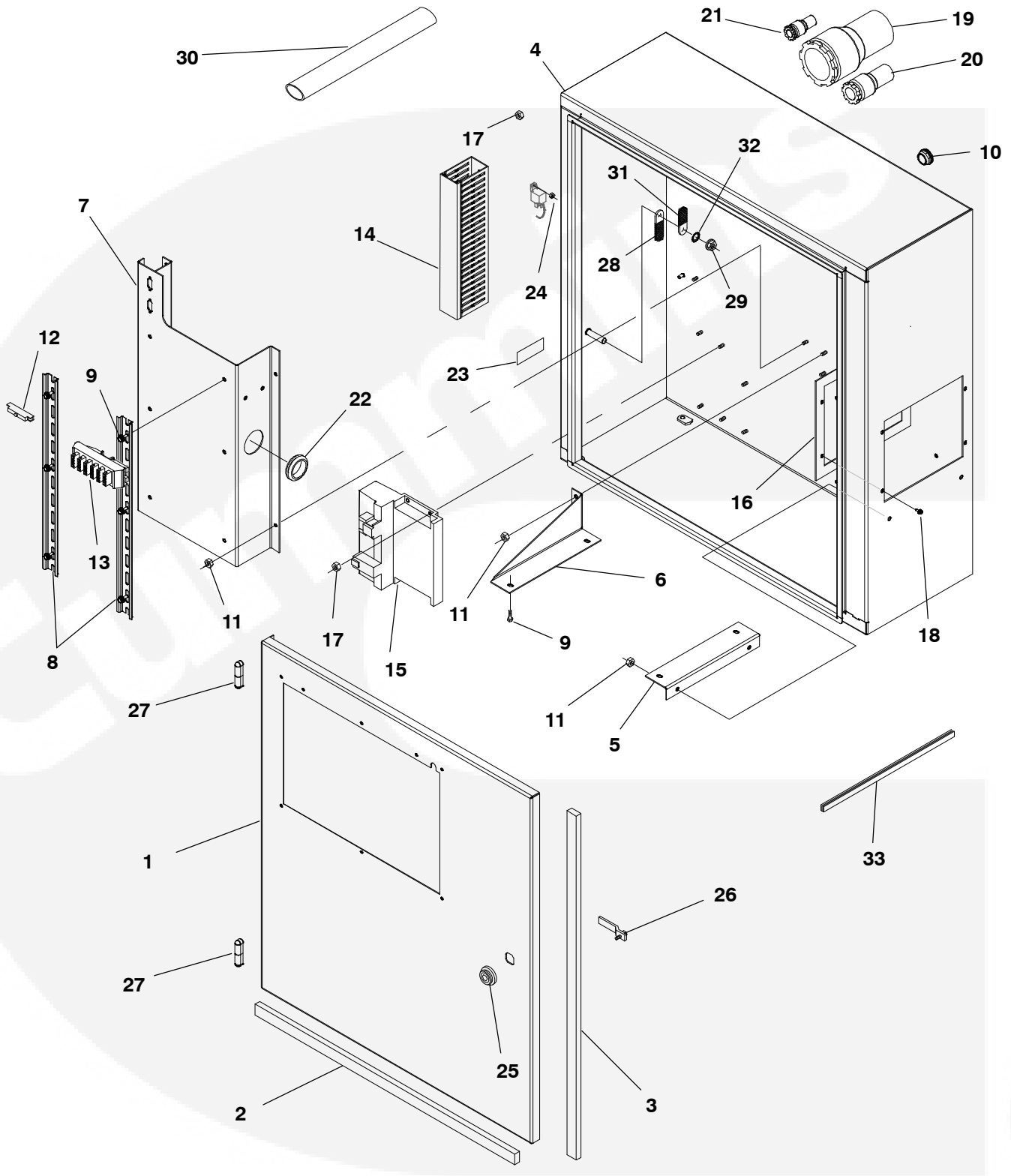
Control Panel Installation



## Control Panel Installation

| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                          | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                        |
|---------|-------------|----------|-------------------------------------------|---------|-------------|----------|-----------------------------------------|
| 1       | 319-4344-02 | 1        | Panel, Control Cabinet – Right            | 11      | 800-3017-56 | 8        | Screw, Cap – Hex Head (M12 x 1.75 x 40) |
| 2       | 319-4343-02 | 1        | Panel, Control Cabinet – Left             | 12      | 402-0749    | 2        | Washer, Vibration Isolator              |
| 3       | 319-4345-02 | 1        | Panel, Control Cabinet – Front            | 13      | 526-0399-64 | 16       | Washer, Flat (M12)                      |
| 4       | 319-4346-02 | 1        | Panel, Control Cabinet – Rear             | 14      | 862-0026-57 | 8        | Nut, Hex (M12 x 1.75)                   |
| 5       | 403-5148-02 | 1        | Frame, Carrying                           | 15      | 098-6139-04 | 1        | Label, Model Identification             |
| 6       | 319-4347-02 | 1        | Support, Cabinet – Left                   | 16      | 518-0548-24 | 2        | Clamp, Hose                             |
| 7       | 319-4348-02 | 1        | Support, Cabinet – Right                  | 17      | 518-0548-15 | 2        | Clamp, Hose                             |
| 8       | 402-0751    | 4        | Isolator, Vibration                       | 18      | 856-0008    | 1        | Washer, Lock – W/EIT (5/16)             |
| 9       | 821-6003-02 | 31       | Screw, Hex Head (M8 x 1.25 x 20)          |         |             |          |                                         |
| 10      | 815-0776    | 4        | Screw, Hex Head – Flange (M8 x 1.25 x 45) |         |             |          |                                         |

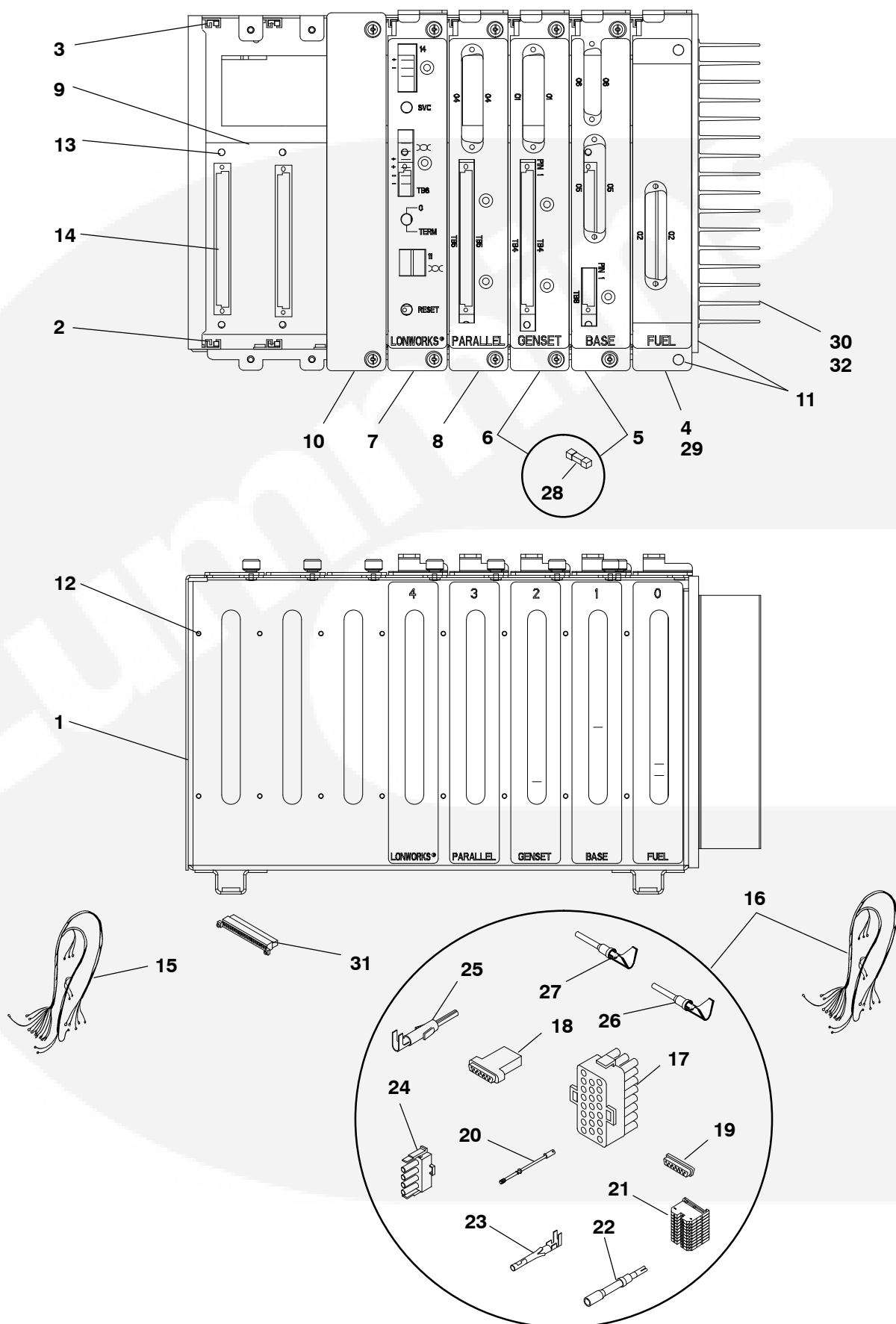
# PowerCommand Control



## PowerCommand Control

| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                            | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                          |
|---------|-------------|----------|---------------------------------------------|---------|-------------|----------|-----------------------------------------------------------|
| 1       | 319-3973-02 | 1        | Door, Control                               | 19      | 502-1334-05 | 1        | Connector, Cable Entry (103.4 mm OD Nut)                  |
| 2       | 895-0293-12 | 2        | Gasket, Door                                | 20      | 502-1334-03 | 1        | Connector, Cable Entry (48.3 mm OD Nut)                   |
| 3       | 895-0293-13 | 2        | Gasket, Door                                | 21      | 502-1334-02 | 1        | Connector, Cable Entry (35.8 mm OD Nut)                   |
| 4       | 319-4204-02 | 1        | Box, Control                                | 22      | 508-0183    | 1        | Grommet                                                   |
| 5       | 319-4208-02 | 1        | Bracket, Housing                            | 23      | 098-6635    | 1        | Label, Ground                                             |
| 6       | 319-4209-02 | 1        | Bracket, Housing                            | 24      | 166-0770    | 1        | Nut, Hex – Flange (M4)                                    |
| 7       | 319-3965-02 | 1        | Divider, Control                            | 25      | 406-0930    | 1        | Latch, Door                                               |
| 8       | 332-2879-08 | 2        | Rail, Terminal                              | 26      | 406-0932-02 | 1        | Latch, Cam – Single Point                                 |
| 9       | 821-6001-01 | 18       | Screw, Hex Head (M5 x 0.8 x 10)             | 27      | 406-0810    | 2        | Hinge, Block                                              |
| 10      | 517-0266    | 4        | Plug, Hole                                  | 28      | 337-3466-01 | 1        | Strap, Ground                                             |
| 11      | 870-2208    | 8        | Nut, Hex – Flange (M5)                      | 29      | 870-0550-09 | 2        | Nut, Hex – Flange (3/8-16)                                |
| 12      | 323-1411-01 | 4        | Clip, Socket Mounting                       | 30      | 898-1346-05 | 1        | Sleeving – 15 in.                                         |
| 13      | 300-5345    | 1        | Board, Printed Circuit – Power Distribution | 31      | 337-3466-02 | 1        | Strap, Ground                                             |
| 14      | 331-0195    | .60      | Duct, Wiring                                | 32      | 853-0040-07 | 1        | Washer, Star                                              |
| 15      | 300-4306    | 1        | Regulator, Voltage                          | 33      | 508-0139    | –        | Channel, Guard – Bulk (Order by the Foot 1 Foot Required) |
| 16      | 363-0189    | 1        | Gasket, Heatsink                            |         |             |          |                                                           |
| 17      | 166-0771    | 13       | Nut, Hex – Flange (M5)                      |         |             |          |                                                           |
| 18      | 815-0828-04 | 4        | Screw, Hex Head (M4 x 16)                   |         |             |          |                                                           |

## Card Cage



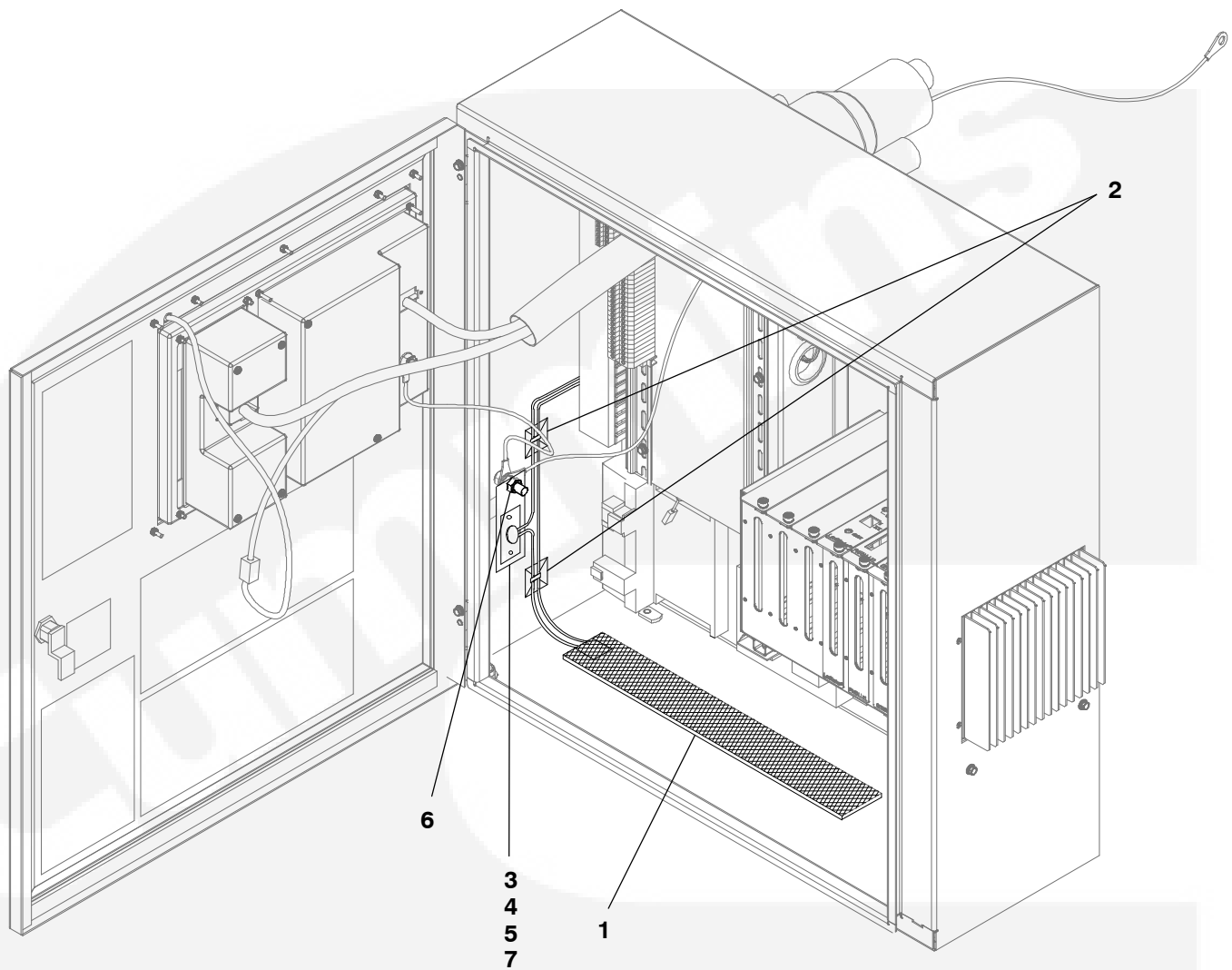


## Card Cage

| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                             | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                                 |
|---------|-------------|----------|------------------------------------------------------------------------------|---------|-------------|----------|----------------------------------------------------------------------------------|
| 1       | 319-3606-02 | 1        | Cage, Card – Genset                                                          | 17      | 323-1605-03 | 1        | # Plug (23 Pin) (Station 8)                                                      |
| 2       | 406-0916    | 8        | Guide, Metal Card – Left                                                     | 18      | 323-1837    | 1        | # Connector, Contact (50 Pin) (Station 4)                                        |
| 3       | 406-0917    | 8        | Guide, Metal Card – Right                                                    | 19      | 323-1843    | 1        | # Grommet (50 Place)                                                             |
| 4       | 300-4970    | 1        | Board, Printed Circuit – PT Fuel                                             | 20      | 323-1844    | 2        | # Jackscrew                                                                      |
| 5       | 300-4969    | 1        | Board, Printed Circuit – Base (Includes Fuse)                                | 21      | 332-3125-02 | 1        | # Block, Terminal (10 Pole) (TB3)                                                |
| 6       | 300-5187    | 1        | Board, Printed Circuit – Generator Interface (Includes Fuses)                | 22      | 323-1835-01 | 38       | # Socket, Contact (Used With Station 4)                                          |
| 7       | 327-1387    | 1        | Board, Printed Circuit – Lonworks                                            | 23      | 323-1614-01 | 12       | # Pin, Contact                                                                   |
| 8       | 300-5270    | 1        | Board, Printed Circuit – Parallel                                            | 24      | 323-1292    | 1        | # Plug (4 Pin)                                                                   |
| 9       | 300-4968    | 1        | Board, Printed Circuit – Backplane                                           | 25      | 323-1199    | 3        | # Pin, Contact                                                                   |
| 10      |             |          | Cover, Card Cage – Blank                                                     | 26      | 323-1491    | A/R      | # Socket                                                                         |
|         | 319-3605-02 | 5        | With Base Board                                                              | 27      | 323-1492    | A/R      | # Pin                                                                            |
|         | 319-3605-02 | 4        | With Base and Lonworks Boards                                                | 28      | 340-0475-14 | 7        | Fuse (5 Amp) (Five Used On Generator Interface Board and Two Used On Base Board) |
|         | 319-3605-02 | 3        | With Base, Lonworks and Parallel Boards                                      | 29      | 300-5126    | 1        | Board, Printed Circuit – TP Fuel                                                 |
| 11      | 815-0947    | 6        | Screw, Hex Head (Used to Mount Fuel Board W/Heatsink to Card Cage) (M3 x 10) | 30      | 363-0183    | 1        | Heatsink                                                                         |
| 12      | 815-0949    | 32       | Screw, Hex Head (4-40 x 1/4)                                                 | 31      | 323-1846-01 | A/R      | Connector, Plug                                                                  |
| 13      | 815-0948    | 16       | Screw, Hex Head (M4 x 6)                                                     |         | 323-1846-02 | A/R      | 5 Positions – Coding Key Positions 2, 4                                          |
| 14      |             |          | Cover, Header – 96 Pin                                                       |         | 323-1846-03 | A/R      | 6 Positions – Coding Key Positions 1, 6                                          |
|         | 323-1848    | 5        | With Base Board                                                              |         | 323-1846-04 | A/R      | 18 Positions – Coding Key Positions 3, 16                                        |
|         | 323-1848    | 4        | With Base and Lonworks Boards                                                |         |             |          | 18 Positions – Coding Key Positions 1, 18                                        |
|         | 323-1848    | 3        | With Base, Lonworks and Parallel Boards                                      | 32      | 823-0002-04 | 8        | Screw, Hex – Thread Forming (M4 x 12)                                            |
| 15      | 338-4257    | 1        | Harness, Wiring – Lonworks                                                   |         |             |          |                                                                                  |
| 16      | 338-3906    | 1        | Harness, Wiring – Parallel (Includes Parts Marked #)                         |         |             |          |                                                                                  |

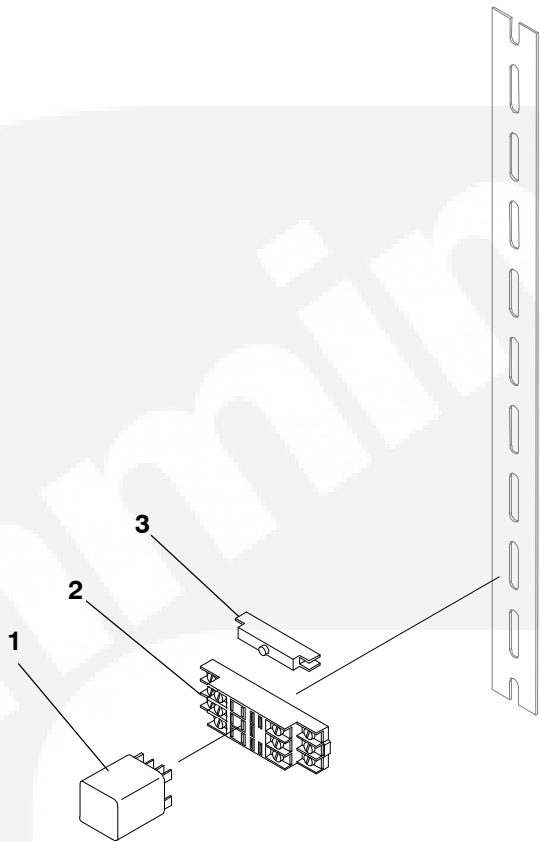
# – Parts Included in 338-3906 Wiring Harness

## Control Heater



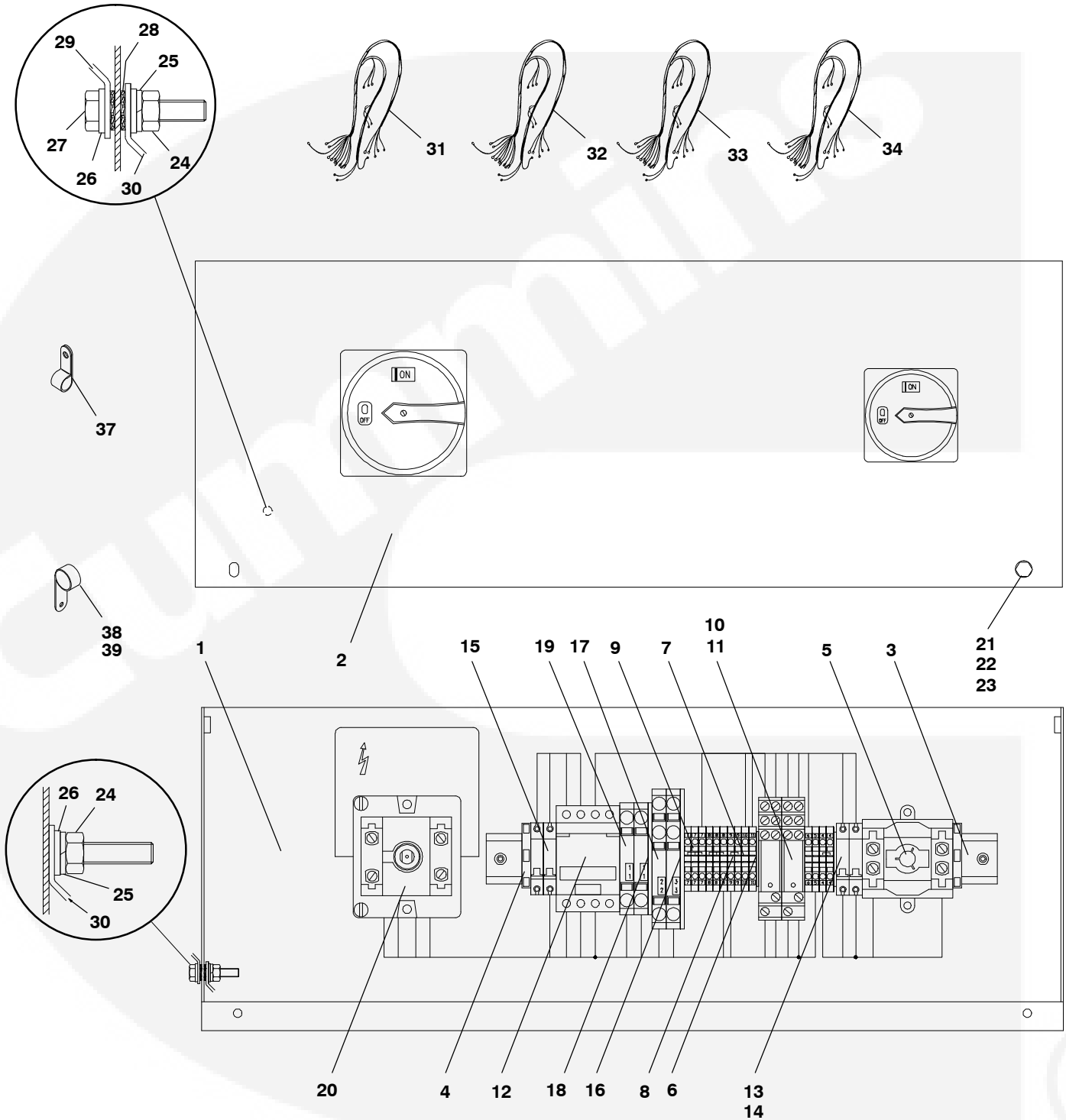
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION              |
|---------|-------------|----------|-------------------------------------|---------|-------------|----------|-------------------------------|
| 1       |             |          | Heater Assembly, Control – 150 Watt | 3       | 813-0098    | 2        | Screw, Machine (#10-32 x 3/8) |
|         | 333-0645-01 | 1        | 120 Volt                            | 4       | 850-0030    | 2        | Washer, Split (#10)           |
|         | 333-0645-02 | 1        | 240 Volt                            | 5       | 860-2006    | 2        | Nut, Hex (M5 x .8)            |
|         |             |          |                                     | 6       | 860-2009    | 1        | Nut, Hex (M10 x 1.5)          |
| 2       | 332-2420    | 2        | Mount, Cable                        | 7       | 319-4309-02 | 1        | Bracket, Thermostat           |

Customer Relays



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION      | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION      |
|---------|-------------|----------|-----------------------|---------|-------------|----------|-----------------------|
| 1       |             |          | Relay (24 Volt)       | 2       |             |          | Socket, Relay         |
|         | 307-1056-01 | 1        | Alarm Relay (K16)     |         | 323-1410-01 | 1        | Alarm Relay           |
|         | 307-1056-01 | 3        | Run Relay (K11,12,13) |         | 323-1410-01 | 3        | Run Relay             |
|         |             |          |                       | 3       | 323-1411-01 | 2        | Clip, Socket Mounting |

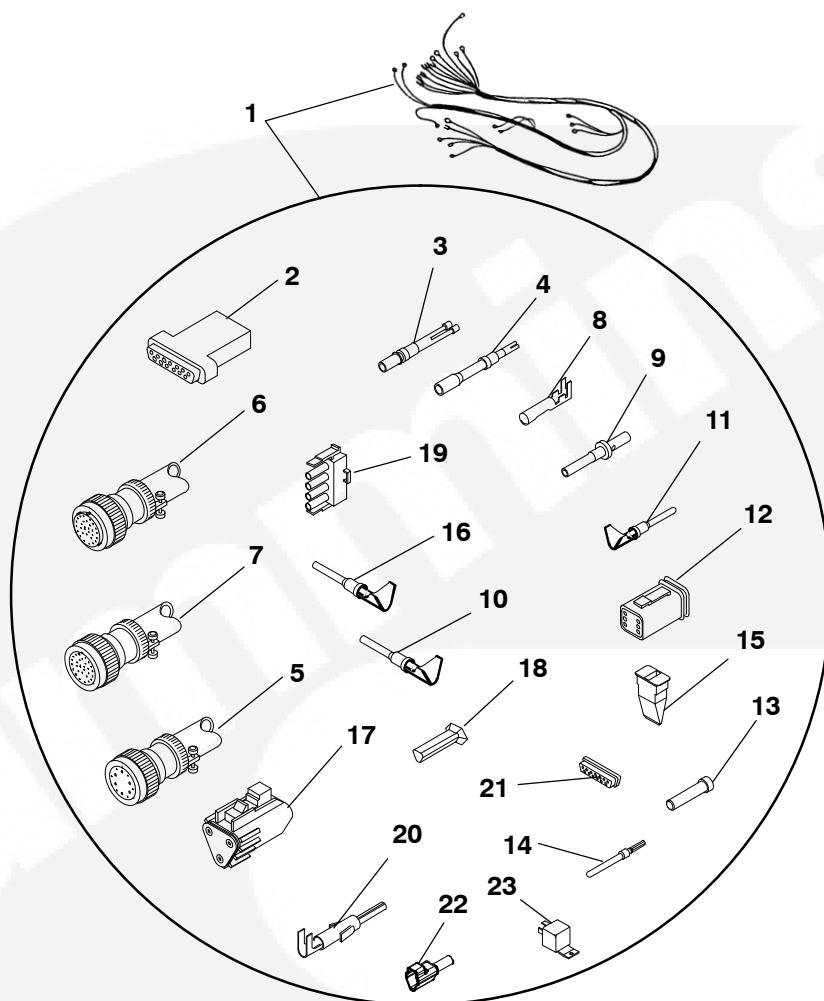
# Heater Control



## Heater Control

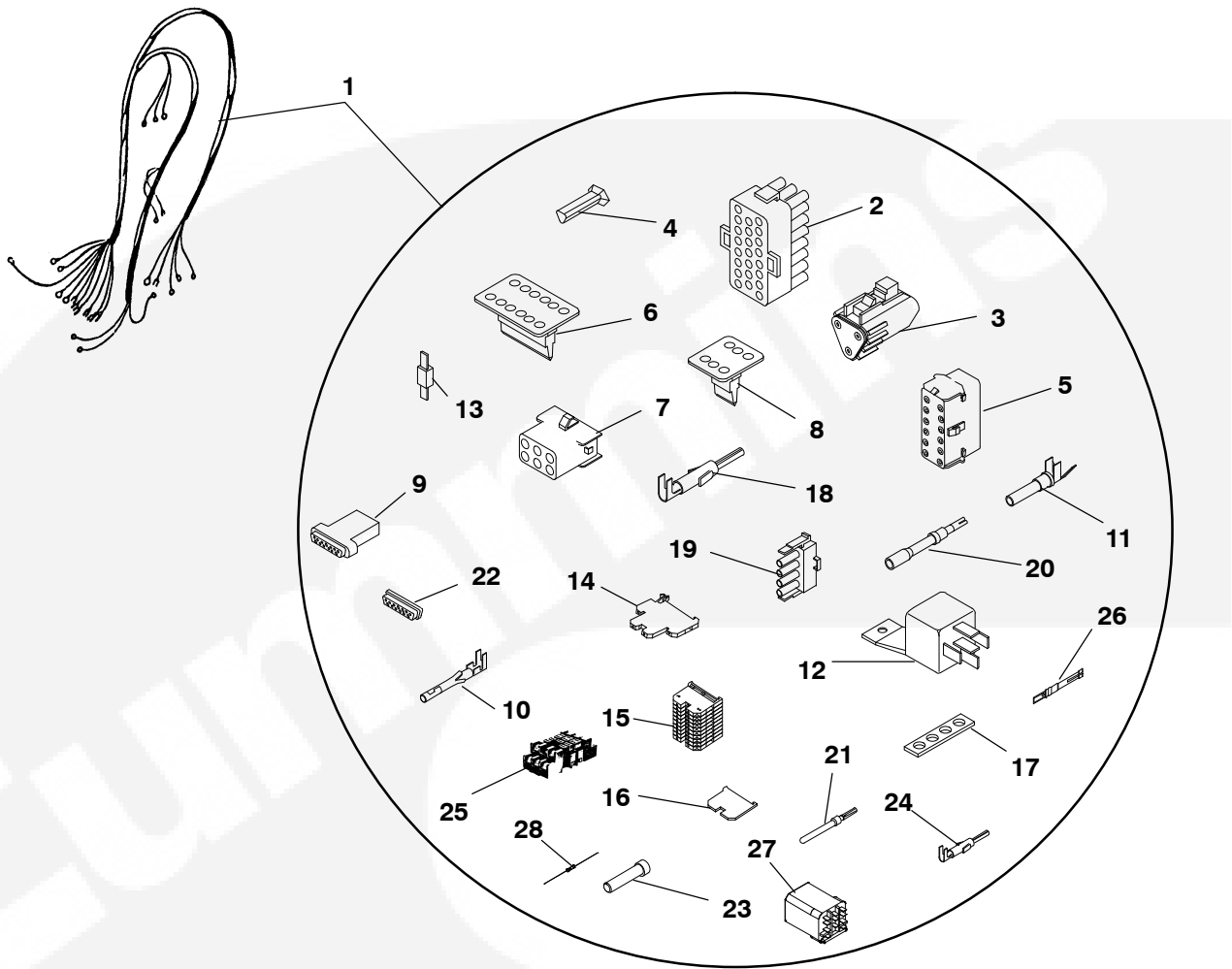
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                     | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                                                                                                  |
|---------|-------------|----------|--------------------------------------|---------|-------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | 319-5028-02 | 1        | Box, Control – Heater                | 29      | 337-3582-07 | 1        | Strap, Ground (200mm, M6/M8)                                                                                                                      |
| 2       | 319-5029-02 | 1        | Cover, Box – Heater                  | 30      | 337-3582-06 | 1        | Strap, Ground (240mm, M6/M6)                                                                                                                      |
| 3       | 332-3895    | A/R      | Rail, Terminal Block                 | 31      | 338-4259    | 1        | Harness, Heater – Power – Generator Sets With Engine Heater Only or Engine and Generator Heaters Only or Engine, Generator and Control Heaters    |
| 4       | 332-3926    | 2        | Block, Terminal – End Stop           |         |             |          |                                                                                                                                                   |
| 5       | 308-1161    | 1        | Switch, Rotary (20A, 2P, 2 Position) |         |             |          |                                                                                                                                                   |
| 6       | 332-3927-01 | 2        | Block, Terminal – End Plate          |         |             |          |                                                                                                                                                   |
| 7       | 332-3923-01 | 14       | Block, Terminal – WAGO               | 32      | 338-4263    | 1        | Harness, Control – Heaters – Generator Sets With Engine Heater Only or Engine and Generator Heaters Only or Engine, Generator and Control Heaters |
| 8       | 332-3925-01 | 2        | Jumper, Terminal – WAGO              |         |             |          |                                                                                                                                                   |
| 9       | 332-3925-02 | 2        | Jumper, Terminal – WAGO              |         |             |          |                                                                                                                                                   |
| 10      | 249-0814    | 2        | Relay – 2P Base                      |         |             |          |                                                                                                                                                   |
| 11      | 249-0813    | 2        | Relay – 2P, 24V, 5A – W/Diode        |         |             |          |                                                                                                                                                   |
| 12      | 307-3000    | 1        | Relay – 32A                          |         |             |          |                                                                                                                                                   |
| 13      | 320-2155-01 | 1        | Breaker, Circuit (Miniature, 2A)     | 33      |             |          | Harness, Control – Power – All Generator Sets Except With Engine Heater Only                                                                      |
| 14      | 320-2155-02 | 1        | Breaker, Circuit (Miniature, 16A)    |         |             |          |                                                                                                                                                   |
| 15      | 320-2155-03 | 2        | Breaker, Circuit (Miniature, 32A)    |         | 338-4260    | 1        | DQLA                                                                                                                                              |
| 16      | 332-3928    | 1        | Block, Terminal (End Plate)          |         | 338-4261    | 1        | DQLB                                                                                                                                              |
| 17      | 332-3924    | 2        | Block, Terminal (WAGO)               | 34      | 338-4262    | 1        | Harness, Control – Heaters – Generator Sets With Generator Heater Only or Control Heater Only or Generator and Control Heaters Only               |
| 18      | 332-3932    | 1        | Block, Terminal (End Plate)          |         |             |          |                                                                                                                                                   |
| 19      | 332-3931    | 2        | Block, Terminal (WAGO)               |         |             |          |                                                                                                                                                   |
| 20      | 308-1160    | 1        | Switch, Rotary (63A, 4P, 2 Position) |         |             |          |                                                                                                                                                   |
| 21      | 800-0309-89 | 6        | Screw, Hex Head (M5 x 16)            |         |             |          |                                                                                                                                                   |
| 22      | 850-0114-52 | 6        | Washer, Lock (M5)                    | 35      | 130-5391-02 | 2        | Cover, Water Heater (Not Illustrated)                                                                                                             |
| 23      | 526-0399-56 | 6        | Washer, Flat (M5)                    |         |             |          |                                                                                                                                                   |
| 24      | 862-0026-54 | 2        | Nut, Hex (M6)                        | 36      | 331-0577    | 5        | Clamp, Conduit – DQLA (Not Illustrated)                                                                                                           |
| 25      | 850-0114-53 | 2        | Washer, Lock (M6)                    |         |             |          |                                                                                                                                                   |
| 26      | 526-0399-58 | 3        | Washer, Flat (M6)                    | 37      | 332-3196    | A/R      | Clamp, J – DQLA                                                                                                                                   |
| 27      | 800-3017-06 | 1        | Screw, Hex Head (M6 x 30)            | 38      | 518-0548-38 | A/R      | Clamp, Hose (.812)– DQLB                                                                                                                          |
| 28      | 853-2006    | 2        | Washer, Lock – W/ET (M6)             | 39      | 518-0548-35 | A/R      | Clamp, Hose (1.00)– DQLB                                                                                                                          |

## Wiring Harness Engine Extension



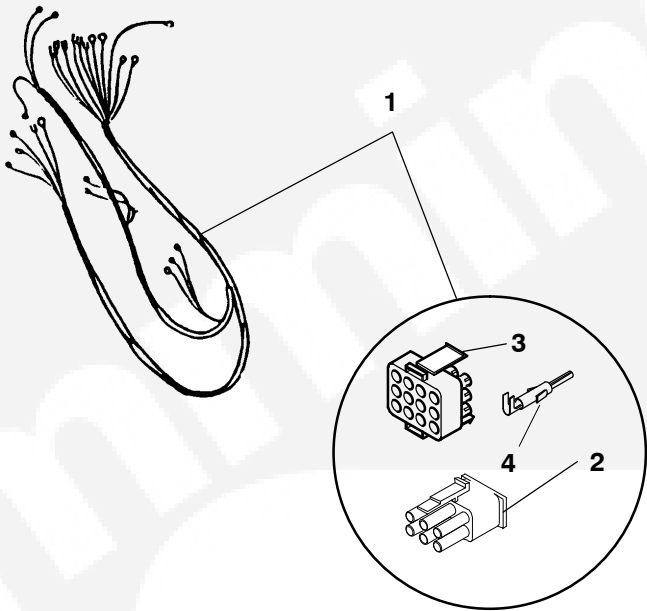
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                                     | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION             |
|---------|-------------|----------|----------------------------------------------------------------------|---------|-------------|----------|------------------------------|
| 1       | 338-4367    | 1        | Harness, Wiring – Engine Extension (Includes All Parts Listed Below) | 9       | 323-1838    | 5        | Pin, Contact                 |
| 2       |             |          | Connector, Contact                                                   | 10      | 323-1491    | 81       | Pin, Contact                 |
|         | 323-1841    | 1        | 9 Place (Includes Screws and Locknuts) (Connector 13)                | 11      | 323-1834    | 33       | Pin, Contact                 |
|         | 323-1837    | 2        | 50 Place (Includes Backshell and Hardware) (Connector 2 and 5)       | 12      | 323-1625    | 1        | Housing, Connector (6 Place) |
| 3       | 323-1835-01 | 53       | Socket, Contact (5/8" Long)                                          | 13      | 323-1591    | 1        | Plug, Seal                   |
| 4       | 323-1835-02 | 25       | Socket, Contact (7/8" Long)                                          | 14      | 323-1847-01 | 9        | Pin, Connector               |
| 5       | 323-2052    | 1        | Plug, Connector (19 Pin)                                             | 15      | 323-1626    | 1        | Wedge (6 Place)              |
| 6       | 323-2051    | 1        | Plug, Connector (33 Socket)                                          | 16      | 323-1492    | 65       | Socket, Contact              |
| 7       | 323-2050    | 1        | Plug, Connector (33 Pin)                                             | 17      | 323-1493    | 1        | Plug, Connector (3 Place)    |
| 8       | 323-1752    | 28       | Socket, Contact                                                      | 18      | 323-1503    | 1        | Wedge (3 Place)              |
|         |             |          |                                                                      | 19      | 323-1292    | 1        | Plug (4 Place)               |
|         |             |          |                                                                      | 20      | 323-1199    | 4        | Pin, Contact                 |
|         |             |          |                                                                      | 21      | 323-1843    | 2        | Grommet                      |
|         |             |          |                                                                      | 22      | 323-1888    | 1        | Connector, Boot              |
|         |             |          |                                                                      | 23      | 307-2817-02 | 1        | Relay – 24V (K21)            |

## Wiring Harness Control



| REF NO. | PART NO.        | QTY USED | PART DESCRIPTION                                        | REF NO. | PART NO.        | QTY USED | PART DESCRIPTION             |
|---------|-----------------|----------|---------------------------------------------------------|---------|-----------------|----------|------------------------------|
| 1       | 338-3905        | 1        | Harness, Control (Includes Parts Listed Below)          | 12      | 307-2817-02     | 4        | Relay (24 Volt) (K14, K15)   |
| 2       |                 |          | Plug, Connector (23 Place)                              | 13      | 357-0030        | 1        | Rectifier, Silicon           |
|         | 323-1605-01     | 1        | Colored Black (Station 23)                              | 14      | 332-3125-04     | 10       | Block, Terminal (Single)     |
|         | 323-1605-03     | 1        | Colored Grey (Station 8)                                | 15      | 332-3125-02     | 1        | Block, Terminal (10 Terms)   |
| 3       | 323-1493        | 1        | Plug, Connector (3 Place) (Station 22)                  | 16      | 332-3126-02     | 3        | Spacer                       |
| 4       | 323-1503        | 1        | Wedge (3 Place)                                         | 17      | 332-2843-07     | 2        | Jumper, Terminal (4 Pole)    |
| 5       | 323-1582        | 1        | Plug, Connector (12 Place)                              | 18      | 323-1199        | 4        | Pin, Contact                 |
| 6       | 323-1583        | 1        | Wedge (12 Place)                                        | 19      | 323-1292        | 2        | Plug (4 Place)               |
| 7       | 323-1623        | 2        | Plug, Connector (6 Place) (Station 7, Station Inline D) | 20      | 323-1835-02 A/R |          | Socket, Contact              |
| 8       | 323-1624        | 2        | Wedge (6 Place)                                         | 21      | 323-1847-01     | 4        | Pin, Contact                 |
| 9       |                 |          | Contact, Connector                                      | 22      |                 |          | Grommet                      |
|         | 323-1841        | 1        | 9 Place (Station RS232)                                 |         | 323-1843        | 1        | 50 Place                     |
|         | 323-1836        | 1        | 25 Place (Station 6)                                    |         | 323-1845        | 1        | 25 Place                     |
|         | 323-1837        | 1        | 50 Place (Station 1)                                    | 23      | 323-1591        | A/R      | Plug, Seal                   |
| 10      | 323-1614-01 A/R |          | Pin, Contact                                            | 24      | 323-1491        | A/R      | Terminal, Pin                |
| 11      | 323-1492        | A/R      | Socket, Contact                                         | 25      | 323-1410-01     | 1        | Socket, Relay                |
|         |                 |          |                                                         | 26      | 323-1835-01 A/R |          | Contact, Pin                 |
|         |                 |          |                                                         | 27      | 307-2952        | 1        | Relay, Time Delay            |
|         |                 |          |                                                         | 28      | 351-0450        | 1        | Resistor, Fixed (475K, 1/4W) |

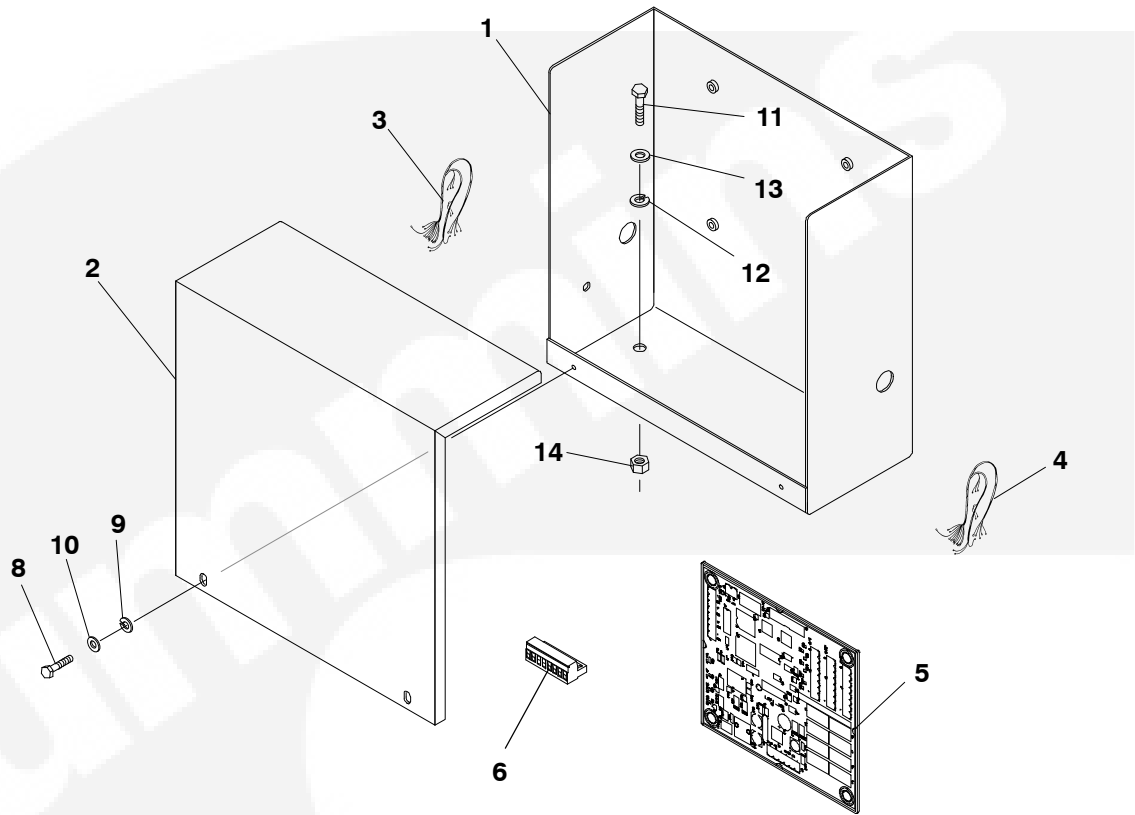
Wiring Harness  
AC



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                                   | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                   |
|---------|-------------|----------|----------------------------------------------------|---------|-------------|----------|------------------------------------|
| 1       | 338-3998    |          | Harness, Wiring – AC (Includes Parts Listed Below) | 3       | 323-1644-03 | 1        | Housing, Connector (12 Place) (P9) |
| 2       | 323-1643-01 | 1        | Plug, Connector (6 Place) (P10)                    | 4       | 323-1648    | A/R      | Socket, Contact                    |

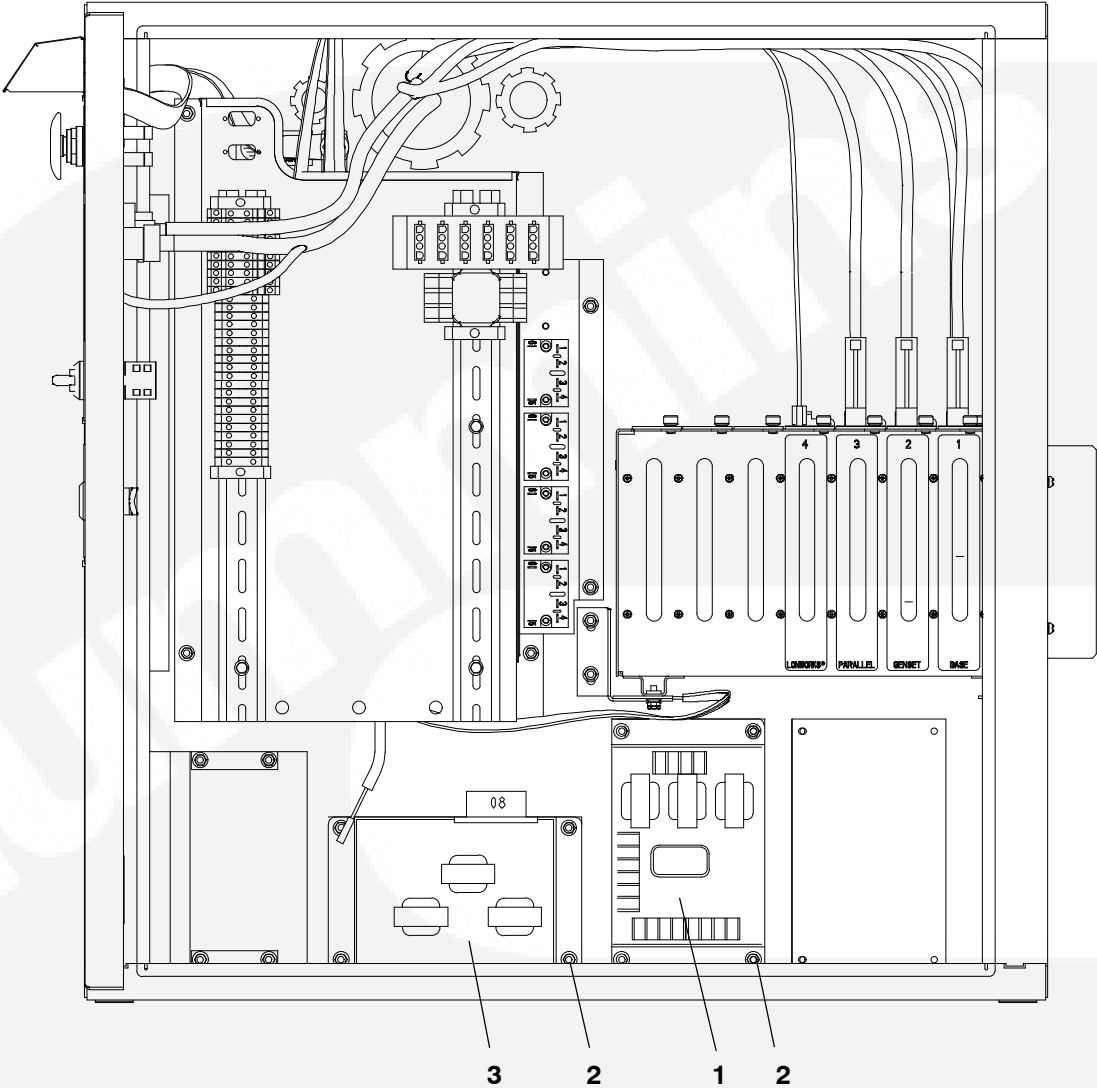


## Digital Input Module DQLB



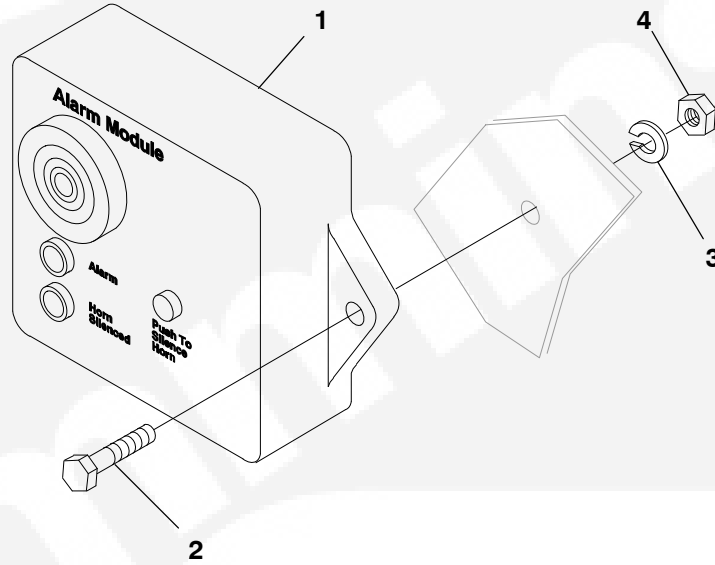
| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                              | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                     |
|---------|-------------|----------|-----------------------------------------------|---------|-------------|----------|--------------------------------------|
| 1       | 319-4940-01 | 1        | Box, Control – Digital Input Module           | 7       | 331-0586-01 | 2        | Connector, Conduit (Not Illustrated) |
| 2       | 319-4941-02 | 1        | Cover, Control Box                            | 8       | 800-3017-03 | 2        | Screw, Cap – Hex Head (M6)           |
| 3       | 338-4283    | 1        | Harness, Wiring                               | 9       | 850-0114-53 | 2        | Washer, Lock (M6)                    |
| 4       | 338-4284    | 1        | Harness, Wiring                               | 10      | 526-0399-58 | 2        | Washer, Flat (M6)                    |
| 5       | 327-1262    | 1        | Board, Printed Circuit – Digital Input Module | 11      | 800-3017-20 | 2        | Screw, Cap – Hex Head (M8)           |
| 6       |             |          | Connector, Plug                               | 12      | 850-0114-54 | 2        | Washer, Lock (M8)                    |
|         | 323-1678-05 | 1        | 6 Pin – Black                                 | 13      | 526-0399-61 | 4        | Washer, Flat (M8)                    |
|         | 323-1678-08 | 1        | 8 Pin – Grey or Black                         | 14      | 862-0026-55 | 2        | Nut, Hex (M8)                        |

Power Transformer Module



| REF NO.     | PART NO. | QTY USED | PART DESCRIPTION                       | REF NO.     | PART NO. | QTY USED | PART DESCRIPTION                      |
|-------------|----------|----------|----------------------------------------|-------------|----------|----------|---------------------------------------|
| 1           |          |          | Board, Printed Circuit – PT Bus Module | 2           |          |          | Fastener                              |
| 300-4985-01 | 1        |          | 120 Volt                               | 821-6001-02 | 8        |          | Screw, Hex Head (M5 x 12)             |
| 300-4985-02 | 1        |          | 240 Volt                               | 870-2065-01 | 8        |          | Nut, Hex (M5)                         |
| 300-4985-03 | 1        |          | 349 Volt                               | 3           |          |          | Board, Printed Circuit – PT/CT Module |
| 300-4985-04 | 1        |          | 69 Volt                                | 300-4308-01 | 1        |          | 120 Volt                              |
|             |          |          |                                        | 300-4308-02 | 1        |          | 240 Volt                              |
|             |          |          |                                        | 300-4308-03 | 1        |          | 346 Volt                              |

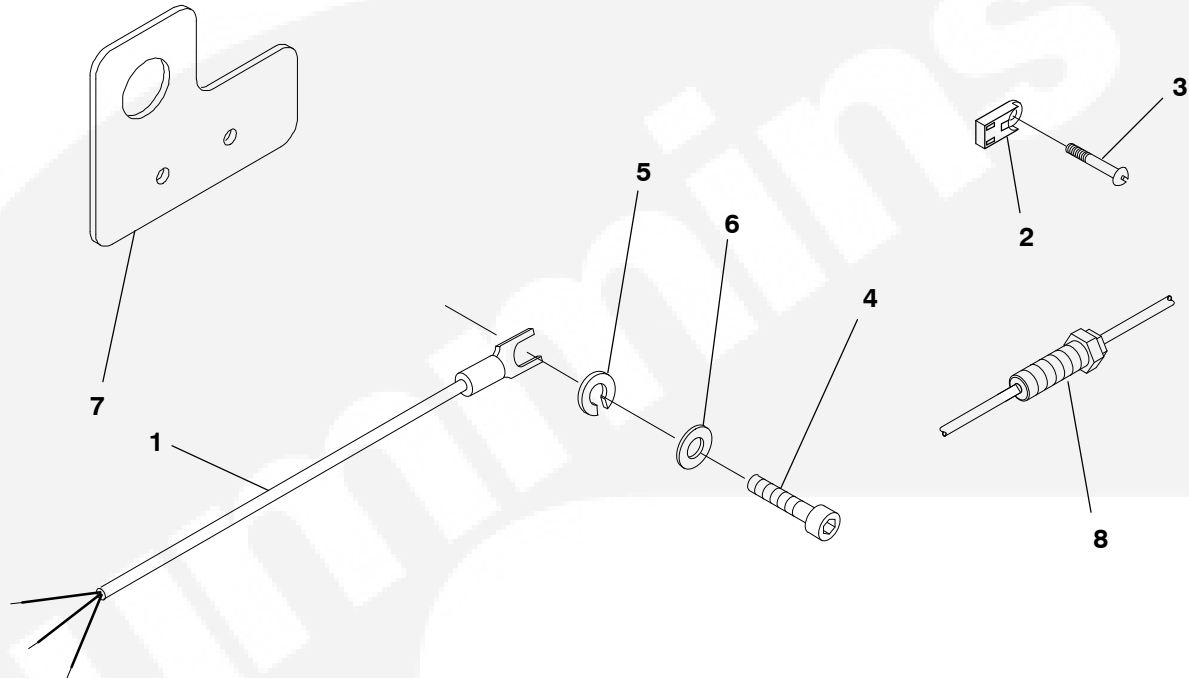
## Audible Alarm Module



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                         |
|---------|-------------|----------|------------------------------------------|
| 1       | 300-3998-01 | 1        | Module, Audible Alarm                    |
| 2       | 800-0006    | 2        | Screw, Cap – Hex Head<br>(1/4–20 x 7/8") |
| 3       | 850-0040    | 2        | Washer, Lock – Spring (1/4")             |

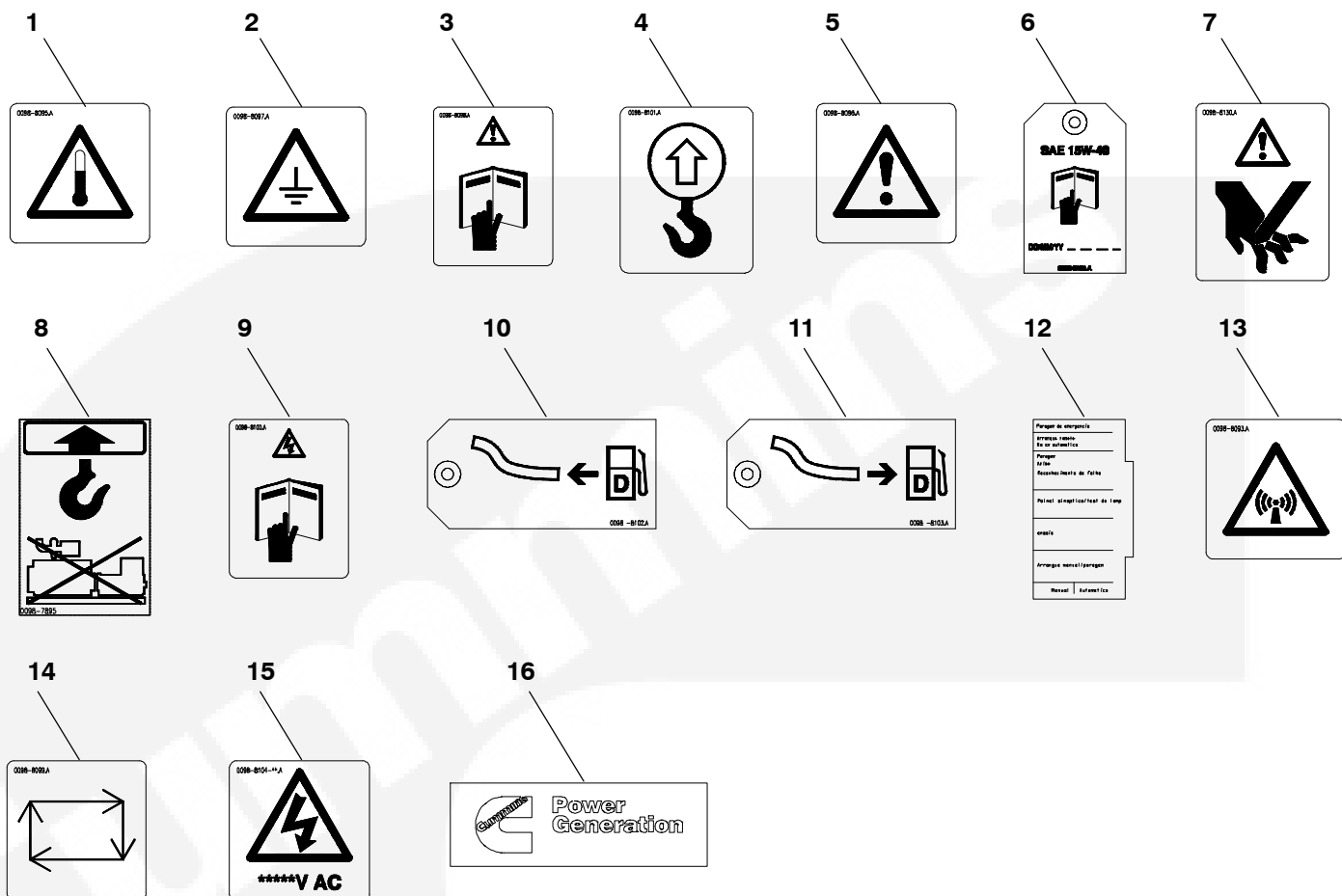
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|
| 4       | 862-0001 | 2        | Nut, Hex (1/4")  |

## Resistive Temperature Detectors



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                          | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION    |
|---------|-------------|----------|-------------------------------------------|---------|-------------|----------|---------------------|
| 1       | 193-0554    | 2        | Sensor, Temperature                       | 5       | 850-0114-53 | 2        | Washer, Lock (M6)   |
| 2       | 332-3973    | 25       | Mount, Cable Tie                          | 6       | 526-0399-58 | 2        | Washer, Flat (M6)   |
| 3       | 822-3074    | 25       | Screw, Slotted – Pan Head (M4 x 0.7 x 14) | 7       | 191-2345-02 | 2        | Bracket, Alternator |
| 4       | 800-3017-03 | 2        | Screw, Cap – Hex Head (M6 x 1.0 x 16)     | 8       | 331-0612    | 1        | Connector, Conduit  |

## Labels



| REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    | REF NO. | PART NO.    | QTY USED | PART DESCRIPTION                    |
|---------|-------------|----------|-------------------------------------|---------|-------------|----------|-------------------------------------|
| 1       | 098-8095    | A/R      | Label, Warning – Hot Surface        | 13      | 098-8093    | A/R      | Label, Caution – Radio Interference |
| 2       | 098-8097    | A/R      | Label, Information – Earth/Ground   | 14      | 098-8099    | A/R      | Label, Danger – Auto Start          |
| 3       | 098-8098    | A/R      | Label, Instruction                  | 15      |             |          | Label, Warning                      |
| 4       | 098-8101    | A/R      | Label, Information – Lifting Eye    |         | 098-8104-20 | 1        | 240V                                |
| 5       | 098-8096    | A/R      | Label, Warning – General            |         | 098-8104-21 | 1        | 110V                                |
| 6       | 098-8105    | A/R      | Label, Information – Tag – Oil Fill |         | 098-8104-01 | 1        | 380V                                |
| 7       | 098-8130    | A/R      | Label, Caution – Rotating Parts     |         | 098-8104-02 | 1        | 480V                                |
| 8       | 098-7895    | A/R      | Label, Warning – Do Not Lift        |         | 098-8104-03 | 1        | 415V                                |
| 9       | 098-8100    | A/R      | Label, Warning – Service Manual     |         | 098-8104-04 | 1        | 440V                                |
| 10      | 098-8102    | A/R      | Label, Information – Tag – Fuel In  |         | 098-8104-05 | 1        | 480V                                |
| 11      | 098-8103    | A/R      | Label, Information – Tag – Fuel Out |         | 098-8104-06 | 1        | 600V                                |
| 12      |             |          | Label, Insert                       |         | 098-8104-07 | 1        | 3300V                               |
|         | 098-7883-01 | 1        | Portuguese                          |         | 098-8104-08 | 1        | 4160V                               |
|         | 098-7883-02 | 1        | French                              |         | 098-8104-09 | 1        | 6000V                               |
|         | 098-7883-03 | 1        | Spanish                             |         | 098-8104-10 | 1        | 6300V                               |
|         | 098-7883-04 | 1        | Dutch                               |         | 098-8104-11 | 1        | 6600V                               |
|         | 098-7883-05 | 1        | German                              |         | 098-8104-12 | 1        | 7200V                               |
|         | 098-7883-06 | 1        | Danish                              |         | 098-8104-13 | 1        | 10000V                              |
|         | 098-7883-07 | 1        | Swedish                             |         | 098-8104-14 | 1        | 10500V                              |
|         | 098-7883-08 | 1        | Italian                             |         | 098-8104-15 | 1        | 11000V                              |
|         | 098-7883-09 | 1        | Czech                               |         | 098-8104-16 | 1        | 11400V                              |
|         | 098-7883-10 | 1        | Finnish                             |         | 098-8104-17 | 1        | 12470V                              |
|         |             |          |                                     |         | 098-8104-18 | 1        | 13200V                              |
|         |             |          |                                     |         | 098-8104-19 | 1        | 13800V                              |
|         |             |          |                                     | 16      | 098-7902-03 | A/R      | Label, Logo                         |

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| 098-8095, <b>59</b>         |             | 130-5345, <b>23</b>         |             | 166-0771, <b>45</b>         |             | 200-3081-03, <b>37</b> |             |
| 098-8096, <b>59</b>         |             | 130-5346, <b>23</b>         |             | 190-0794-02, <b>16</b>      |             | 200-3081-04, <b>37</b> |             |
| 098-8097, <b>59</b>         |             | 130-5347, <b>23</b>         |             | 190-0795-02, <b>16</b>      |             | 200-3081-06, <b>37</b> |             |
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| 098-8100, <b>59</b>         |             | 130-5359, <b>30</b>         |             | 190-0798-02, <b>19</b>      |             | 200-3081-09, <b>38</b> |             |
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| 800-3017-06, <b>51</b>                                                    |             | 850-0114-55, <b>9</b> , <b>12</b> , <b>13</b> , <b>17</b><br><b>21</b>                                     |             | A030W936, <b>25</b>                         |             |                 |             |
| 800-3017-19, <b>9</b> , <b>16</b>                                         |             | 850-0114-56, <b>15</b> , <b>16</b> , <b>33</b> ,<br><b>34</b> , <b>35</b>                                  |             | A030W939, <b>25</b>                         |             |                 |             |
| 800-3017-20, <b>10</b> , <b>12</b> , <b>22</b> ,<br><b>31</b> , <b>55</b> |             | 850-0114-57, <b>18</b> , <b>19</b> , <b>33</b> ,<br><b>34</b> , <b>36</b>                                  |             | A030W940, <b>25</b>                         |             |                 |             |
| 800-3017-36, <b>12</b> , <b>21</b>                                        |             | 850-0114-58, <b>8</b> , <b>9</b> , <b>33</b> , <b>34</b>                                                   |             | A041E811, <b>24</b>                         |             |                 |             |
| 800-3017-38, <b>9</b> , <b>17</b> , <b>21</b>                             |             | 850-0114-59, <b>8</b>                                                                                      |             | A041E812, <b>24</b>                         |             |                 |             |
| 800-3017-40, <b>17</b> , <b>21</b>                                        |             | 850-2004, <b>40</b>                                                                                        |             | A041E813, <b>25</b>                         |             |                 |             |
| 800-3017-54, <b>16</b>                                                    |             | 850-2012, <b>7</b>                                                                                         |             | A041E815, <b>26</b>                         |             |                 |             |
| 800-3017-56, <b>33</b> , <b>34</b> , <b>43</b>                            |             | 850-2026, <b>15</b>                                                                                        |             | A041E816, <b>27</b>                         |             |                 |             |
| 800-3017-58, <b>15</b>                                                    |             | 850-2028, <b>35</b> , <b>36</b>                                                                            |             | A041E817, <b>25</b>                         |             |                 |             |
| 800-3017-59, <b>35</b>                                                    |             | 853-0040-07, <b>45</b>                                                                                     |             | A041E818, <b>24</b>                         |             |                 |             |
| 800-3017-63, <b>15</b>                                                    |             | 853-2006, <b>51</b>                                                                                        |             | A041E819, <b>24</b>                         |             |                 |             |
| 800-3017-70, <b>18</b> , <b>19</b>                                        |             | 856-0008, <b>43</b>                                                                                        |             | A041E820, <b>24</b>                         |             |                 |             |
| 800-3017-73, <b>33</b> , <b>34</b>                                        |             | 856-0013, <b>7</b>                                                                                         |             | A041E821, <b>28</b>                         |             |                 |             |
| 800-3017-75, <b>36</b>                                                    |             | 860-2005, <b>40</b>                                                                                        |             | A041E822, <b>28</b>                         |             |                 |             |
| 800-3017-86, <b>9</b>                                                     |             | 860-2006, <b>48</b>                                                                                        |             | A049D295, <b>26</b>                         |             |                 |             |
| 800-3017-88, <b>33</b> , <b>34</b>                                        |             | 860-2009, <b>48</b>                                                                                        |             | A049D315, <b>24</b>                         |             |                 |             |
| 800-3017-99, <b>8</b>                                                     |             | 862-0001, <b>57</b>                                                                                        |             | A049D318, <b>27</b>                         |             |                 |             |
| 800-6308, <b>35</b> , <b>36</b>                                           |             | 862-0026-54, <b>11</b> , <b>51</b>                                                                         |             | A049D323, <b>27</b>                         |             |                 |             |
| 800-6309, <b>15</b>                                                       |             | 862-0026-55, <b>9</b> , <b>12</b> , <b>21</b> ,<br><b>22</b> , <b>31</b> , <b>55</b>                       |             | A049D324, <b>26</b>                         |             |                 |             |
| 800-6310, <b>15</b>                                                       |             | 862-0026-56, <b>9</b> , <b>13</b> , <b>21</b>                                                              |             | A049D326, <b>26</b>                         |             |                 |             |
| 800-6311, <b>36</b>                                                       |             | 862-0026-57, <b>43</b>                                                                                     |             | A049D330, <b>26</b> , <b>27</b> , <b>28</b> |             |                 |             |
| 813-0098, <b>48</b>                                                       |             | 870-0550-09, <b>45</b>                                                                                     |             | A049D335, <b>25</b>                         |             |                 |             |
| 815-0776, <b>43</b>                                                       |             | 870-2065-01, <b>56</b>                                                                                     |             | A049E317, <b>27</b>                         |             |                 |             |
| 815-0828-04, <b>45</b>                                                    |             |                                                                                                            |             | A049E322, <b>25</b>                         |             |                 |             |
| 815-0947, <b>47</b>                                                       |             |                                                                                                            |             | A049W329, <b>25</b>                         |             |                 |             |



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