

GENERAC[®]

POWER SYSTEMS, INC.

Owner's Manual

Standby Generator

Models: 005366-4 & 005367-4

This manual should remain with the unit.

INTRODUCTION

Thank you for purchasing this model of the stand-by generator set product line by Generac Power Systems.

Every effort was expended to make sure that the information and instructions in this manual were both accurate and current at the time the manual was written. However, the manufacturer reserves the right to change, alter or otherwise improve this product(s) at any time without prior notice.

◆ READ THIS MANUAL THOROUGHLY

If any portion of this manual is not understood, contact the nearest Authorized Service Dealer for starting, operating and servicing procedures.

Throughout this publication, and on tags and decals affixed to the generator, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular service or operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:



After this heading, read instructions that, if not strictly complied with, will result in personal injury or property damage.



After this heading, read instructions that, if not strictly complied with, may result in personal injury or property damage.




After this heading, read instructions that, if not strictly complied with, could result in damage to equipment and/or property.

NOTE:

After this heading, read explanatory statements that require special emphasis.

These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the service are essential to preventing accidents.

Four commonly used safety symbols accompany the DANGER, WARNING and CAUTION blocks. The type of information each indicates is as follows:

 This symbol points out important safety information that, if not followed, could endanger personal safety and/or property of others.

 This symbol points out potential explosion hazard.

 This symbol points out potential fire hazard.

 This symbol points out potential electrical shock hazard.

The operator is responsible for proper and safe use of the equipment. The manufacturer strongly recommends that the operator read this Owner's Manual and thoroughly understand all instructions before using this equipment. The manufacturer also strongly recommends instructing other users to properly start and operate the unit. This prepares them if they need to operate the equipment in an emergency.

◆ OPERATION AND MAINTENANCE

It is the operator's responsibility to perform all safety checks, to make sure that all maintenance for safe operation is performed promptly, and to have the equipment checked periodically by an Authorized Service Dealer. Normal maintenance service and replacement of parts are the responsibility of the owner/operator and, as such, are not considered defects in materials or workmanship within the terms of the warranty. Individual operating habits and usage contribute to the need for maintenance service.

Proper maintenance and care of the generator ensures a minimum number of problems and keeps operating expenses at a minimum. See an Authorized Service Dealer for service aids and accessories.

Operating instructions presented in this manual assume that the standby electric system has been installed by an Authorized Service Dealer or other competent, qualified contractor. Installation of this equipment is not a "do-it-yourself" project.

◆ HOW TO OBTAIN SERVICE

When the generator requires servicing or repairs, contact an Authorized Service Dealer for assistance. Service technicians are factory-trained and are capable of handling all service needs.

When contacting an Authorized Service Dealer about parts and service, always supply the complete model number of the unit as given on the front cover of this manual or on the DATA LABEL affixed to the unit.

AUTHORIZED SERVICE DEALER LOCATION

To locate the nearest AUTHORIZED SERVICE
DEALER, please call this number:

1-800-333-1322

DEALER LOCATION INFORMATION
CAN BE OBTAINED AT THIS NUMBER,
or visit the website at

www.generac.com

Introduction Inside Front Cover

Read This Manual Thoroughly.....IFC
Operation and Maintenance.....IFC
How to Obtain ServiceIFC
Authorized Service Dealer Locator Number IFC

Safety Rules 2

Section 1 – General Information 4

1.1 IDENTIFICATION RECORD 4
 1.1.1 Data Label 4
1.2 EQUIPMENT DESCRIPTION..... 4
 1.2.1 Standard Generator Features 4
1.3 ENGINE PROTECTIVE DEVICES 4
 1.3.1 Coolant Temperature Sensor 4
 1.3.2 Low Coolant Level Sensor 4
 1.3.3 Oil Pressure Sensor..... 4
 1.3.4 Low Fuel Pressure Switch..... 4
 1.3.5 Overspeed Shutdown..... 4
 1.3.6 Overcrank Shutdown..... 5
 1.3.7 RPM Sensor Loss Shutdown 5
1.4 DC FUSE 5
1.5 FUEL SYSTEM 5
 1.5.1 Fuel Requirements..... 5
 1.5.2 Diesel Fuel System 5
1.6 SPECIFICATIONS 5
 1.6.1 Generator 5
 1.6.2 Engine 5
 1.6.3 Engine Oil Recommendations..... 6
 1.6.4 Coolant..... 6
 1.6.5 Fuel System Requirements and
 Recommendations 6
1.7 GENERATOR AC LEAD CONNECTIONS 6
 1.7.1 Four-lead, Single-phase Stator..... 6
1.8 GENERATOR AND LOAD COMPATIBILITY 6
1.9 STARTING AIDS 7
 1.9.1 Engine Coolant Heaters 7
 1.9.2 Battery Chargers..... 7

Section 2 – Installation 7

2.1 STANDBY GENERATOR INSTALLATION..... 7
 2.1.1 NFPA Standards 7
 2.1.2 Other Published Standards 8
2.2 BASIC STANDBY ELECTRIC SYSTEM 8
2.3 EMERGENCY CIRCUIT ISOLATION METHOD..... 8
2.4 TOTAL CIRCUIT ISOLATION METHOD..... 8
2.5 GROUNDING THE GENERATOR..... 8
2.6 GENERATOR AC NEUTRAL CONNECTIONS 9
2.7 TRANSFER SWITCH START SIGNAL
 CONNECTIONS 9
2.8 BATTERY INSTALLATION 9
 2.8.1 Vented Batteries..... 10
2.9 PREPARATION BEFORE START-UP 10
 2.9.1 Prior to Initial Start-up..... 10
 2.9.2 Start-up Inspection..... 11

Section 3 – Operation 11

3.1 GENERATOR CONTROL AND OPERATION 11
3.2 OPERATING UNIT WITH AUTOMATIC
 TRANSFER SWITCH..... 11

Section 4 – Maintenance..... 12

4.1 SERVICE SCHEDULE 12
 4.1.1 Authorized Operator Maintenance
 Functions..... 12
 4.1.2 Authorized Service Technician
 Maintenance Functions 12
4.2 PERIODIC MAINTENANCE..... 12
 4.2.1 Test Standby Generator System
 Operation and Components..... 13
 4.2.2 Inspect Battery 13
 4.2.3 Battery Replacement..... 13
 4.2.4 Check Fluids 13
 4.2.5 Inspect Exhaust System 13
 4.2.6 Inspect/Test Fuel Supply System 14
4.3 REPAIR PARTS 14
 4.3.1 How to Order Parts 14

Section 5 – Notes 15



Section 6 – Exploded Views and Parts Lists 18



Section 7 – Electrical Data 44

Section 8 – Installation Diagram 62

Section 9 – Warranty..... 64



 **SAVE THESE INSTRUCTIONS** – The manufacturer suggests that these rules for safe operation be copied and posted in potential hazard areas. Safety should be stressed to all operators, potential operators, and service and repair technicians for this equipment. 

 **SAVE THESE INSTRUCTIONS** – This manual contains important instructions that should be followed during installation and maintenance of the generator and batteries. 

**WARNING:**

The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.


**WARNING:**


This product contains or emits chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.


Study these SAFETY RULES carefully before installing, operating or servicing this equipment. Become familiar with this *Owner's Manual* and with the unit. The generator can operate safely, efficiently and reliably only if it is properly installed, operated and maintained. Many accidents are caused by failing to follow simple and fundamental rules or precautions.

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all inclusive. If using a procedure, work method or operating technique that the manufacturer does not specifically recommend, ensure that it is safe for all personnel. Also make sure the procedure, work method or operating technique utilized does not render the generator unsafe.

—  **DANGER**  —

 Despite the safe design of this generator, operating this equipment imprudently, neglecting its maintenance or being careless can cause possible injury or death. Permit only responsible and capable persons to install, operate or maintain this equipment.

 Potentially lethal voltages are generated by these machines. Ensure all steps are taken to render the machine safe before attempting to work on the generator.

 Parts of the generator are rotating and/or hot during operation. Exercise care near running generators.

 **GENERAL HAZARDS** 

- For safety reasons, the manufacturer recommends that this equipment be installed, serviced and repaired by an Authorized Service Dealer or other competent, qualified electrician or installation technician who is familiar with applicable codes, standards and regulations. The operator also must comply with all such codes, standards and regulations.
- Installation, operation, servicing and repair of this (and related) equipment must always comply with applicable codes, standards, laws and regulations. Adhere strictly to local, state and national electrical and building codes. Comply with regulations the Occupational Safety and Health Administration (OSHA) has established. Also, ensure that the generator is installed, operated and serviced in accordance with the manufacturer's instructions and recommendations. Following installation, do nothing that might render the unit unsafe or in noncompliance with the aforementioned codes, standards, laws and regulations.
- The engine exhaust fumes contain carbon monoxide gas, which can be DEADLY. This dangerous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death. For that reason, adequate ventilation must be provided. Exhaust gases must be piped safely away from any building or enclosure that houses the generator to an area where people, animals, etc., will not be harmed. This exhaust system must be installed properly, in strict compliance with applicable codes and standards.
- Keep hands, feet, clothing, etc., away from drive belts, fans, and other moving or hot parts. Never remove any drive belt or fan guard while the unit is operating.
- Adequate, unobstructed flow of cooling and ventilating air is critical in any room or building housing the generator to prevent buildup of explosive gases and to ensure correct generator operation. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect safe operation of the generator.
- Keep the area around the generator clean and uncluttered. Remove any materials that could become hazardous.
- When working on this equipment, remain alert at all times. Never work on the equipment when physically or mentally fatigued.



- Inspect the generator regularly, and promptly repair or replace all worn, damaged or defective parts using only factory-approved parts.
- Before performing any maintenance on the generator, disconnect its battery cables to prevent accidental start-up. Disconnect the cable from the battery post indicated by a NEGATIVE, NEG or (-) first. Reconnect that cable last.
- Never use the generator or any of its parts as a step. Stepping on the unit can stress and break parts, and may result in dangerous operating conditions from leaking exhaust gases, fuel leakage, oil leakage, etc.

 ELECTRICAL HAZARDS 

- All generators covered by this manual produce dangerous electrical voltages and can cause fatal electrical shock. Utility power delivers extremely high and dangerous voltages to the transfer switch, as does the standby generator. Avoid contact with bare wires, terminals, connections, etc., on the generator as well as the transfer switch, if applicable. Ensure all appropriate covers, guards and barriers are in place before operating the generator. If work must be done around an operating unit, stand on an insulated, dry surface to reduce shock hazard.
- Do not handle any kind of electrical device while standing in water, while barefoot, or while hands or feet are wet. **DANGEROUS ELECTRICAL SHOCK MAY RESULT.**
- If people must stand on metal or concrete while installing, operating, servicing, adjusting or repairing this equipment, place insulative mats over a dry wooden platform. Work on the equipment only while standing on such insulative mats.
- The National Electrical Code (NEC), Article 250 requires the frame and external electrically conductive parts of the generator to be connected to an approved earth ground and/or grounding rods. This grounding will help prevent dangerous electrical shock that might be caused by a ground fault condition in the generator set or by static electricity. Never disconnect the ground wire.
- Wire gauge sizes of electrical wiring, cables and cord sets must be adequate to handle the maximum electrical current (ampacity) to which they will be subjected.
- Before installing or servicing this (and related) equipment, make sure that all power voltage supplies are positively turned off at their source. Failure to do so will result in hazardous and possibly fatal electrical shock.
- Connecting this unit to an electrical system normally supplied by an electric utility shall be by means of a transfer switch so as to isolate the generator electric system from the electric utility distribution system when the generator is operating. Failure to isolate the two electric system power sources from each other by such means, will result in damage to the generator and may also result in injury or death to utility power workers due to backfeed of electrical energy.

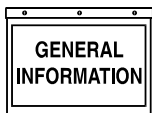
- Generators installed with an automatic transfer switch will crank and start automatically when normal (UTILITY) source voltage is removed or is below an acceptable preset level. To prevent such automatic start-up and possible injury to personnel, disable the generator’s automatic start circuit (battery cables, etc.) before working on or around the unit. Then, place a “Do Not Operate” tag on the generator control panel and on the transfer switch.
- In case of accident caused by electric shock, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. **AVOID DIRECT CONTACT WITH THE VICTIM.** Use a nonconducting implement, such as a dry rope or board, to free the victim from the live conductor. If the victim is unconscious, apply first aid and get immediate medical help.
- Never wear jewelry when working on this equipment. Jewelry can conduct electricity resulting in electric shock, or may get caught in moving components causing injury.

 FIRE HAZARDS 

- Keep a fire extinguisher near the generator at all times. Do NOT use any carbon tetra-chloride type extinguisher. Its fumes are toxic, and the liquid can deteriorate wiring insulation. Keep the extinguisher properly charged and be familiar with its use. If there are any questions pertaining to fire extinguishers, consult the local fire department.

 EXPLOSION HAZARDS 

- Properly ventilate any room or building housing the generator to prevent build-up of explosive gas.
- Do not smoke around the generator. Wipe up any fuel or oil spills immediately. Ensure that no combustible materials are left in the generator compartment, or on or near the generator, as FIRE or EXPLOSION may result. Keep the area surrounding the generator clean and free from debris.
- These generator sets may operate using one of several types of fuels. All fuel types are potentially FLAMMABLE and/or EXPLOSIVE and should be handled with care. Comply with all laws regulating the storage and handling of fuels. Inspect the unit’s fuel system frequently and correct any leaks immediately. Fuel supply lines must be properly installed, purged and leak tested according to applicable fuel-gas codes before placing this equipment into service.
- Diesel fuels are highly FLAMMABLE. Gaseous fluids such as natural gas and liquid propane (LP) gas are extremely EXPLOSIVE. Natural gas is lighter than air, and LP gas is heavier than air; install leak detectors accordingly.



1.1 IDENTIFICATION RECORD

◆ 1.1.1 DATA LABEL

Every generator set has a DATA LABEL that contains important information pertinent to the generator. The data label, attached to the generator's lower connection box, lists the unit's serial number and its rated voltage, amps, wattage capacity, phase, frequency, rpm, power factor, etc.

✦ 1.1.1.1 Generator Model Number

This number is the key to numerous engineering and manufacturing details pertaining to the unit. Always supply this number when requesting service, ordering parts or seeking information.

✦ 1.1.1.2 Groups and Assembly Numbers

The data label lists the groups and corresponding assembly numbers for each unit. The assembly numbers refer to exploded view drawing numbers that are applicable to the specific generator model. These drawings are located in the back of this manual.

1.2 EQUIPMENT DESCRIPTION

This equipment is a revolving field, alternating current generator set. The generator was designed to supply electrical power for the operation of compatible electrical loads-when the UTILITY power supply is not available or has dropped to an unacceptable level.

The generator's revolving field is directly connected to and driven by an engine by means of flexible discs. Generators with a four-pole rotor are driven at rated speeds of 1,800 rpm to supply a frequency of 60 Hertz.

Refer to the data label on the specific generator or to the data label affixed to the unit for rated AC voltage, wattage, amperage, number of phases, etc.

◆ 1.2.1 STANDARD GENERATOR FEATURES

This generator incorporates the following generator features:

- The rotor insulation system is Class "H" rated, and the stator insulation is Class "H" rated as defined by NEMA MG1-22.4 and NEMA MG1-1.65.
- The generator is self-ventilated and drip-proof constructed.
- The voltage waveform deviation, total harmonic content of the AC waveform and "telephone influence factor" have been evaluated and are acceptable according to NEMA MG1-22.
- All prototype tested models have passed three-phase symmetrical short circuit test to ensure system protection and reliability.

1.3 ENGINE PROTECTIVE DEVICES

The standby generator may be required to operate for long periods of time without an operator on hand to monitor such engine conditions as coolant temperature, oil pressure or rpm.-For that reason, the engine has several devices designed to protect it against potentially damaging conditions by automatically shutting down the unit when the oil pressure is too low, the coolant temperature is too high, the coolant level is too low, or the engine is running too fast.

NOTE:

Engine protective switches and sensors are mentioned here for the reader's convenience. Also refer to the applicable control panel manual for additional automatic engine shutdown information.

◆ 1.3.1 COOLANT TEMPERATURE SENSOR

This sensor monitors engine coolant temperature and will shut down the generator if engine coolant temperature rises above a safe level.

◆ 1.3.2 LOW COOLANT LEVEL SENSOR

Should the engine coolant level drop below the level of the high coolant temperature switch, it is possible for the engine to overheat without automatic shutdown. To prevent such overheating, the engine has a low coolant level sensor. If the level of engine coolant drops below the level of the low coolant level sensor, the engine automatically shuts down.

◆ 1.3.3 OIL PRESSURE SENSOR

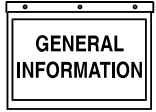
This sensor monitors engine oil pressure. If oil pressure drops below a safe level, the generator will shut down automatically.

◆ 1.3.4 LOW FUEL PRESSURE SWITCH

This normally open (N.O.) switch is held open by fuel pressure during operation. If fuel pressure drops below a safe level, the switch contacts close, automatically shutting down the engine.

◆ 1.3.5 OVERSPEED SHUTDOWN

A speed circuit controls engine cranking, start-up, operation and shutdown. Engine speed signals are delivered to the circuit board whenever the unit is running. Should the engine overspeed above a safe, preset value, the circuit board initiates an automatic engine shutdown.



◆ **1.3.6 OVERCRANK SHUTDOWN**

After a prespecified duration of cranking, this function ends the cranking if the engine has failed to start.

◆ **1.3.7 RPM SENSOR LOSS SHUTDOWN**

If the speed signal to the control panel is lost, engine shutdown will occur.

1.4 DC FUSES

These fuses are located inside the control panel. They protect the panel wiring and components from damaging overload. The unit will not start or crank if a fuse is blown. Replace the fuses with the same size, type, and rating.

1.5 FUEL SYSTEM

◆ **1.5.1 FUEL REQUIREMENTS**

NOTE:

It is the responsibility of the installer to make sure that only the correct recommended fuel is supplied to the generator fuel system. Thereafter, the owner/operator must make certain that only the proper fuel is supplied.

For further information on the various types of fuel systems, refer to Engine-Generator Standby Electric Power Systems Installer’s Guide and Reference Manual (part #046622).

◆ **1.5.2 DIESEL FUEL SYSTEM**

Diesel fuel is supplied to the generator set from a base-mounted fuel tank.

Diesel fuels are less volatile than gaseous fuels, however, careless installation can lead to safety hazards and/or serious problems with engine/generator performance and reliability.

NOTE:

Appropriate care should be taken in applications where extremely low ambient temperatures are possible to ensure the temperature of the diesel fuel is not allowed to fall below levels where “gelling” could occur.

1.6 SPECIFICATIONS

◆ **1.6.1 GENERATOR**

Refer to the data label on the generator for rated watts, amperes, frequency, voltage, phase and other pertinent information.

◆ **1.6.2 ENGINE**

General:

Cylinders and Arrangement.....	5 in-line
Displacement.....	3.0 L (186 in ³)
Bore.....	86 mm (3.4 in.)
Stroke.....	105 mm (4.1 in.)
Compression Ratio.....	18.0-to-1
Number of Main Bearings.....	5
Connecting Rods.....	Drop Forged Steel
Aspiration.....	Turbocharged/Aftercooled
Governed Engine Speed.....	1800 rpm
Type of Valve Lifters.....	Solid
Cylinder Head.....	Cast Iron
Pistons.....	Aluminum Alloy
Crankshaft.....	Forged Steel
Number of Flywheel Teeth.....	127

Engine Lubrication System:

Type of Oil Pump.....	Gear Driven
Oil Filter.....	Full Flow, Cartridge
Crankcase Oil Capacity.....	11 L (11.7 U.S. quarts)

Fuel System:

Type of Fuel.....	#2D Fuel (Min Cetane #40)				
Consumption:*					
	<i>Rated</i>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>
	<i>Freq.</i>	<i>Load</i>	<i>Load</i>	<i>Load</i>	<i>Load</i>
60 Hertz		1.2	2.7	3.9	5.2

*Given in: gal/h

Cooling System:

Type.....	Pressurized, Closed Recovery
Coolant Capacity	
System.....	17 L (4.5 U.S. gals.)
Engine.....	10.4 L (2.75 U.S. gals.)
Coolant Flow Per Minute.....	106 L (28 U.S. gals.)
Heat Rejection to Coolant.....	120,500 Btu/h
Cooling Fan (No. Blades).....	6
Diameter of Fan.....	560 mm (22 in.)
Cooling Airflow Required.....	6,800 cfm
Recommended Coolant.....	See “Coolant” Section
Combustion Airflow Required.....	208 cfm

Exhaust System:

Exhaust Flow at Rated Output.....	533 cfm
Exhaust Outlet Size.....	2.5 in.
Exhaust Temperature at Rated Output.....	(518° C) 964° F

Engine Electrical System:

DC Alternator Output..... 42 amps at 12 volts
 Starter Motor 12-volt DC
 Recommended Battery..... One 12-volt, 90 Ah, 27 F
 Ground Polarity..... Negative (-)

◆ 1.6.3 ENGINE OIL RECOMMENDATIONS

The unit has been filled with 15W-40 engine oil at the factory. Use a high-quality detergent oil classified “For Service CC, SD, SE or SF.” Detergent oils keep the engine cleaner and reduce carbon deposits. Use oil having the following SAE viscosity rating, based on the ambient temperature range anticipated before the next oil change:

Temperature	Oil Grade (Recommended)
Above 80° F (27° C)	SAE 30W or 15W-40
32° to 80° F (-1° to 27° C)	SAE 20W-20 or 15W-40
Below 32° F (0° C)	SAE 10W or 15W-40

◆ 1.6.4 COOLANT

Use a mixture of half Propylene glycol base antifreeze and half de-ionized water. Use only de-ionized water and Propylene glycol antifreeze. When adding coolant, always add the recommended 50-50 mixture.



⚠ Do not remove the radiator pressure cap while the engine is hot or serious burns from boiling liquid or steam could result.

⚠ Propylene glycol base antifreeze is poisonous. Do not use mouth to siphon coolant from the radiator, recovery bottle or any container. Wash hands thoroughly after handling. Never store used antifreeze in an open container because animals are attracted to the smell and taste of antifreeze even though it is poisonous to them.



⚠ Do not use any chromate base rust inhibitor with propylene glycol base antifreeze. Using any high silicate antifreeze boosters or additives also will cause overheating. It is also recommend that any soluble oil inhibitor is NOT USED for this equipment.

◆ 1.6.5 FUEL SYSTEM REQUIREMENTS AND RECOMMENDATIONS

• **Diesel Fuel System:** See Chapter 8 of Engine-Generator Standby Electric Power Systems Installer’s Guide and Reference Manual (part #046622).

1.7 GENERATOR AC LEAD CONNECTIONS

The electrical wires in the unit’s AC connection (lower) panel should be installed according to the number of leads and the voltage/phase required for the application. If there is any question regarding lead connection, refer to the wiring diagrams at the back of this manual.

◆ 1.7.1 FOUR-LEAD, SINGLE-PHASE STATOR

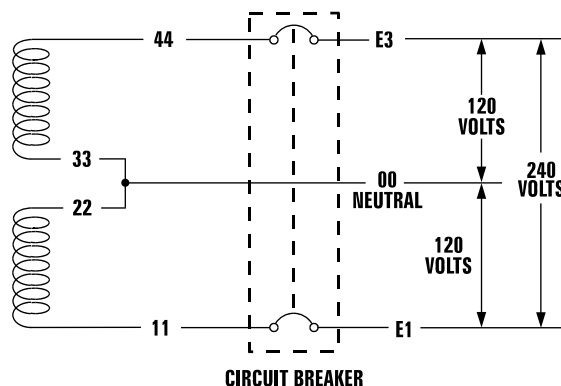
Four-lead generators are dual voltage coils or windings (Figure 1.1). Units may be assigned the following voltage code:

• “A” units are rated 120/240 VAC, single-phase, 60 Hertz.

Each stator winding in this case delivers a 120 VAC output. Connecting the two windings in series results in a 240 VAC output.

The neutral line is formed by a junction of stator leads 22 and 33. Therefore, a 120 VAC load can be connected across leads 11 and neutral, or across leads 44 and neutral.

Figure 1.1 – Four-lead, Single-phase Stator



1.8 GENERATOR AND LOAD COMPATIBILITY

The generator must be fully compatible with the rated voltage, phase and frequency of the connected electrical loads. The generator, connected electrical devices, or both, can be damaged if voltage, phase and frequency are not compatible.

NOTE:

This manual assumes that the standby generator has been properly selected, installed and interconnected by a competent, qualified electrician or installation contractor. Once the installation is complete, do nothing that may result in noncompatibility between the generator and connected electrical loads.



1.9 STARTING AIDS

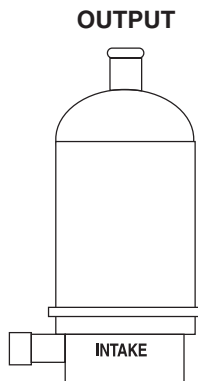
This standby generator is equipped with the following starting aids that serve to provide quicker, easier starts under varying climactic conditions.

This generator has been mounted with an engine coolant heater and a battery charger. These aids are powered by a normal (UTILITY) power source during nonoperating periods.

◆ 1.9.1 ENGINE COOLANT HEATERS

This unit is equipped with an engine coolant (block) heater (Figure 1.2). It is powered by a circuit normally fed by the utility power supply. The heater acts to heat the engine coolant when the unit is not operating. This action keeps the engine warm even in cold weather, helping to ensure quicker starts. Heated coolant in the engine rises continuously drawing cold coolant into the heater, making certain of a constant flow of warm coolant through the engine.

Figure 1.2 – Typical Engine Coolant Heater



◆ 1.9.2 BATTERY CHARGERS

All units are fitted with a 24 VDC, 10 amp charger.

2.1 STANDBY GENERATOR INSTALLATION



⚠ Connecting this generator to an electrical system normally supplied by an electric utility shall be by means of a transfer switch (such as the “GTS” type transfer switch), so as to isolate the electric system from the utility distribution system when the generator is operating. Failure to isolate the electric system by these means will result in damage to the generator and may also result in injury or death to utility workers due to back-feed of electrical energy.



⚠ If an open bottom is used, the engine-generator is to be installed over non-combustible materials and should be located such that combustible materials are not capable of accumulating under the generator set.

Only qualified, competent installation contractors or electricians thoroughly familiar with applicable codes, standards and regulations should install this standby electric power system. The installation must comply strictly with all codes, standards and regulations pertaining to the installation.

This genset must be installed on a level surface. The base frame must be level within 1/2 inch all around.



⚠ After the system has been installed, do nothing that might render the installation in noncompliance with such codes, standards and regulations.

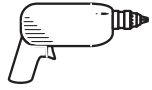
NOTE:

For more information about the installation of a standby system, order *Engine-Generator Standby Electric Power Systems Installer's Guide and Reference Manual (part #046622)* from an Authorized Service Dealer.

◆ 2.1.1 NFPA STANDARDS

The following published standards booklets pertaining to standby electric systems are available from the National Fire Protection Association (NFPA), Batterymarch Park, Quincy, MA 02269:

- NFPA No. 37, STATIONARY COMBUSTION ENGINES AND GAS TURBINES.
- NFPA No. 76A, ESSENTIAL ELECTRICAL SYSTEMS FOR HEALTH CARE FACILITIES.
- NFPA No. 220, STANDARD TYPES OF BUILDING CONSTRUCTION
- NFPA No. 68, GUIDE FOR EXPLOSION VENTING
- NFPA No. 70, NATIONAL ELECTRICAL CODE.
- NFPA No. 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE.
- NFPA No. 10, INSTALLATION, MAINTENANCE AND USE OF PORTABLE FIRE EXTINGUISHERS.



◆ 2.1.2 OTHER PUBLISHED STANDARDS

In addition to NFPA standards, the following information pertaining to the installation and use of standby electric systems is available:

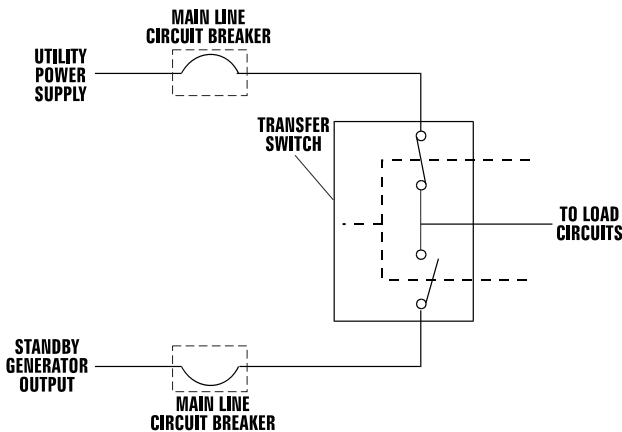
- Article X, NATIONAL BUILDING CODE, available from the American Insurance Association, 85 John Street, New York, N.Y. 10038.
- AGRICULTURAL WIRING HANDBOOK, obtainable from the Food and Energy Council, 909 University Avenue, Columbia, MO, 65201.
- ASAE EP-364.2, INSTALLATION AND MAINTENANCE OF FARM STANDBY ELECTRIC POWER, available from the American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085.
- A52.1, AMERICAN NATIONAL STANDARD FOR CHIMNEYS, FIREPLACES AND VENTING SYSTEMS, available from the American National Standard Institute, 1430 Broadway, New York, N.Y. 10018.

2.2 BASIC STANDBY ELECTRIC SYSTEM

Figure 2.1 shows a schematic diagram of a basic standby electric system. Both the UTILITY power supply and the STANDBY (GENERATOR) output are connected to an approved transfer switch. The transfer switch is required by electrical code and serves the following functions:

- Allows the LOAD circuits to be connected to only one power supply at a time.
- Prevents electrical backfeed between the generator and the UTILITY power circuits.

Figure 2.1 – Basic Standby Electric System



Notice that both the STANDBY and the UTILITY power supplies to the transfer switch are protected against overload by a main line circuit breaker.

NOTE:

The manufacturer recommends the use of a “GTS” type transfer switch in conjunction with this generator.

2.3 EMERGENCY CIRCUIT ISOLATION METHOD

This prevents overloading the generator by keeping electrical loads below the wattage/amperage capacity of the generator. If the generator is powering only critical loads, within the wattage/amperage capacity, during utility power outages, consider using the emergency circuit isolation method.

Critical electrical loads are grouped together and wired into a separate “Emergency Distribution Panel.” Load circuits powered by that panel are within the wattage/amperage capacity of the generator set. When this method is used, it is difficult to overload the generator. The transfer switch must meet the following requirements:

- It must have an ampere rating equal to the total amperage rating of the emergency distribution panel circuit.
- Have it installed between the building’s main distribution panel and the emergency distribution panel.

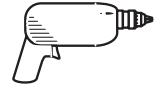
2.4 TOTAL CIRCUIT ISOLATION METHOD

When a generator capable of powering all electrical loads in the circuit is to be installed, use the “Total Circuit Isolation Method.” It is possible for the generator to be overloaded when this isolation method is employed. The following apply to the transfer switch in this type of system.

- Ampere rating of the transfer switch must be equal to, or greater than, the ampere rating of the normal incoming utility service.
- The transfer switch is installed between the utility service entrance and the building distribution panel.

2.5 GROUNDING THE GENERATOR

The National Electrical Code requires the frame and external electrically conductive parts of this equipment to be properly connected to an approved earth ground and/or grounding rods. For that purpose, a GROUND LUG (Figure 2.2) is provided on the generator mounting base. Consult a qualified electrician for grounding requirements in the area. Grounding procedures must meet local regulations.

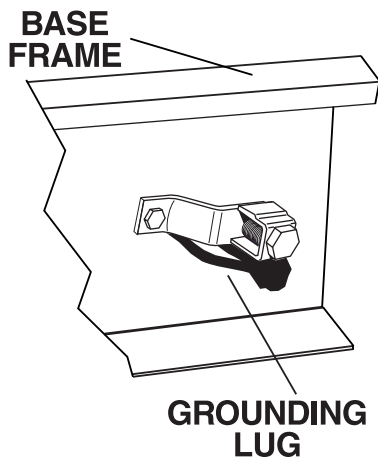


— **⚠ DANGER ⚠** —

- ⚠ Do not connect the ground wire to any pipe that carries a flammable or explosive substance – FIRE or an EXPLOSION may result.

Proper grounding helps protect personnel against electrical shock in the event of a ground fault condition in the generator or in connected electrical devices. In addition, grounding helps dissipate static electricity that often builds up in ungrounded devices.

Figure 2.2 – Generator Grounding Lug (typical)



2.6 GENERATOR AC NEUTRAL CONNECTIONS

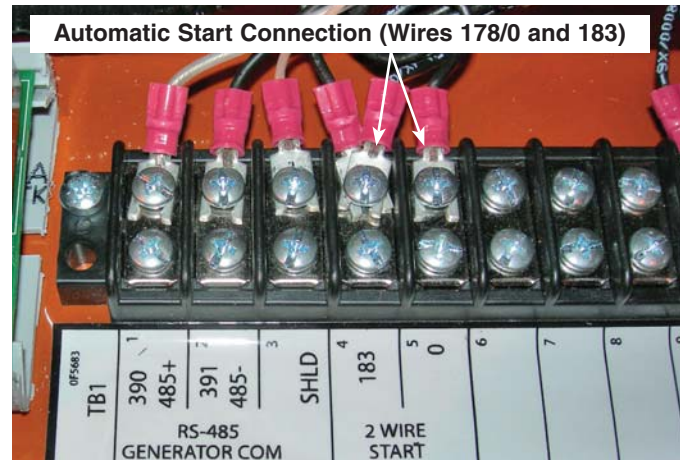
The manufacturer uses an UNGROUNDED AC neutral. Grounding is recommended only at the main service entrance. If the neutral wire is grounded and one of the phase loads becomes grounded, the excessive current opens the load circuit breaker or collapses the generator field. The actual result depends on the electrical characteristics of the particular installed generator.

2.7 TRANSFER SWITCH START SIGNAL CONNECTIONS

If the generator is to be installed with an automatic transfer switch, such as a GTS-type switch, it is necessary to connect the two-wire start control system.

Connect the two-wire start signal from the automatic transfer switch to the automatic start connection, which is located in the lower center of the AC connection panel (see Figure 2.3). Match wires 178/0 and 183 in the transfer switch to 178/0 and 183 on the terminal strip in the connection box. The conductors for the two-wire start circuit must be in their own conduit.

Figure 2.3 – Start Signal Connections



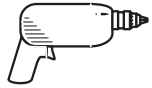
2.8 BATTERY INSTALLATION

— **⚠ DANGER ⚠** —

- ⚠ Standby generators installed with automatic transfer switches will crank and start automatically when NORMAL (UTILITY) source voltage is removed or is below an acceptable preset level. To prevent such automatic start-up and possible injury to personnel, do not connect battery cables until certain that NORMAL source voltage at the transfer switch is correct and the system is ready for operation.
- ⚠ Storage batteries give off explosive hydrogen gas. This gas can form an explosive mixture around the battery for several hours after charging. The slightest spark can ignite the gas and cause an explosion. Such an explosion can shatter the battery and cause blindness or other injury. Any area that houses a storage battery must be properly ventilated. Do not allow smoking, open flame, sparks or any spark producing tools or equipment near the battery.
- ⚠ Battery electrolyte fluid is an extremely caustic sulfuric acid solution that can cause severe burns. Do not permit fluid to contact eyes, skin, clothing, painted surfaces, etc. Wear protective goggles, protective clothing and gloves when handling a battery. If fluid is spilled, flush the affected area immediately with clear water.

— **⚠ WARNING ⚠** —

- ⚠ Do not dispose of the battery in a fire. The battery is capable of exploding.
- ⚠ Do not open or mutilate the battery. Released electrolyte can be toxic and harmful to the skin and eyes.



The battery represents a risk of high short circuit current. When working on the battery, always remove watches, rings or other metal objects, and only use tools that have insulated handles.

◆ 2.8.1 VENTED BATTERIES

— CAUTION —

The electrolyte is a dilute sulfuric acid that is harmful to the skin and eyes. It is electrically conductive and corrosive. The following procedures are to be observed:

- Wear full eye protection and protective clothing,
- Where electrolyte contacts the skin, wash it off immediately with water,
- Where electrolyte contacts the eyes, flush thoroughly and immediately with water and seek medical attention, and
- Spilled electrolyte is to be washed down with an acid-neutralizing agent. A common practice is to use a solution of one pound (500 grams) bicarbonate of soda to one gallon (4 liters) of water. The bicarbonate of soda solution is to be added until the evidence of reaction (foaming) has ceased. The resulting liquid is to be flushed with water and the area dried.

Lead acid batteries present a risk of fire because they generate hydrogen gas. The following procedure are to be followed:

- **DO NOT SMOKE** when near batteries,
- **DO NOT** cause flame or spark in battery area, and
- **Discharge static electricity from body before touching batteries by first touching a grounded metal surface.**

Servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

For recommended batteries, see “Specifications.” All batteries must be at 100 percent state-of-charge before they are installed on the generator.

When using maintenance-free batteries, it is not necessary to check the specific gravity or electrolyte level. Have these procedures performed at the intervals specified in the “Maintenance” section. A negative ground system is used. Battery connections are shown on the wiring diagrams. Make sure all batteries are correctly connected and terminals are tight. Observe battery polarity when connecting batteries to the generator set.

NOTE:

Damage will result if the battery connections are made in reverse.

2.9 PREPARATION BEFORE START-UP

The instructions in this section assume that the standby generator has been properly installed, serviced, tested, adjusted and otherwise prepared for use by a competent, qualified installation contractor. Be sure to read the “Safety Rules” on Pages 2 and 3, as well as all other safety information in this manual, before attempting to operate this (and related) equipment.

◆ 2.9.1 PRIOR TO INITIAL START-UP

— CAUTION —

Prior to initially starting the generator, it must be properly prepared for use. Any attempt to crank or start the engine before it has been properly serviced with the recommended types and quantities of engine fluids (oil, coolant, fuel, etc.) may result in an engine failure.

Before starting the generator for the first time, the installer must complete the following procedures. For follow-up maintenance information and/or service intervals, please refer to the “Maintenance” and “Service Schedule” sections.

✦ 2.9.1.1 Transfer Switch

If this generator is used to supply power to any electrical system normally powered by an electric utility, the National Electrical Code requires that a transfer switch be installed. The transfer switch prevents electrical backfeed between two different electrical systems. (For additional information, see the applicable transfer switch manual for this unit.) The transfer switch, as well as the generator and other standby components, must be properly located and mounted in strict compliance with applicable codes, standards and regulations.

✦ 2.9.1.2 Fuel System

Make sure the fuel supply system to the generator (a) delivers the correct fuel at the correct pressure and (b) is properly purged and leak tested according to code. No fuel leakage is permitted. See “Specifications” for more information.

If the unit has been idle for a long period of time, or if the fuel lines or system components have been removed and reinstalled, the fuel system may require bleeding to remove air from the system. Air in the fuel system causes hard starting and rough operation. All fuel system lines must be installed and must be tight. A loose line may show no sign of leakage, but may draw air into the system.

—▲ CAUTION ▲—

▲ Use a suitable container to catch the fuel that will spill during system bleeding process. Clean up all spilled fuel after bleeding.

✦ 2.9.1.3 Generator Set Lubrication

Check the engine crankcase oil level before operating and add oil to the proper level – the dipstick “FULL” mark. Never operate the engine with the oil level below the dipstick “ADD” mark. See “Specifications” and “Engine Oil Recommendations” sections.

NOTE:

This engine is shipped from the manufacturer with 15W-40 oil. This oil should be changed after 30 hours of operation.

✦ 2.9.1.4 Engine Coolant

Have the engine cooling system properly filled with the recommended coolant mixture. Check the system for leaks and other problems. See the “Specifications” and “Coolant” sections.

✦ 2.9.1.5 Belt Tension

Check-the engine-fan belt tension and condition prior to placing the unit into service and at recommended intervals. Belt tension is correct when a force of approximately 22 pounds (10 kg), applied midway between pulleys, deflects the belt about 3/8- to 5/8-inch (10 to 16 mm).

✦ 2.9.1.6 Electrical System

Make sure the generator is properly connected to an approved earth ground.

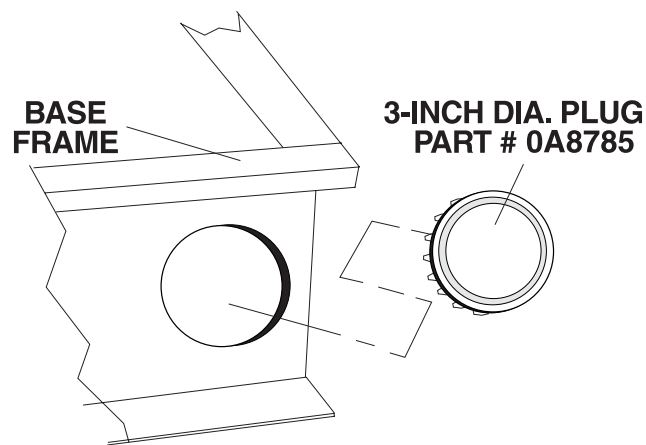
Make sure the generator battery is fully charged, properly installed and interconnected, and ready for use.

Check to ensure that there are no loose electrical connections. Restrain any loose wires to keep them clear of any moving generator set components.

✦ 2.9.1.7 Rodent Protection

Make sure the four, three-inch diameter cap plugs (part # 0A8785) are properly installed in the tie-down holes in the side rails of the unit’s base frame (Figure 2.4). The cap plugs are shipped in a plastic bag located in the lower connection box. These plugs are needed to prevent rodents from accessing the interior of the generator set. On acoustic units, cap plugs also are needed to stay within noise specification limits.

Figure 2.4 – Base Frame Cap Plugs



◆ 2.9.2 START-UP INSPECTION

A standard three-part form titled “Start-up Inspection for Standby Power Systems” (part # 067377) should be completed by an Authorized Service Dealer. As stated on the form, inspections are to be completed only by factory-trained personnel. The installer should complete the form and disperse copies as follows:

- White copy: Mail to Generac Warranty Department, P.O. Box 8, Waukesha, WI 53187.
- Pink Copy: For service file of installing dealer.
- Yellow Copy: For the customer’s records.

3.1 GENERATOR CONTROL AND OPERATION

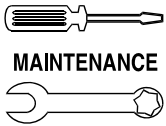
Refer to the appropriate control panel operator’s manual for this unit.

3.2 OPERATING UNIT WITH AUTOMATIC TRANSFER SWITCH

If the generator has been installed along with an automatic transfer switch, such as a GTS-type switch, the engine may be started and stopped automatically or manually.

NOTE:

Refer to the applicable manual for the transfer switch and to “Transfer Switch Start Signal Connections” section. In addition, please note the dangers under “Engine Start-up and Transfer.”



4.1 SERVICE SCHEDULE

◆ 4.1.1 AUTHORIZED OPERATOR MAINTENANCE FUNCTIONS

✦ 4.1.1.1 Every Month or 100 Hours (whichever comes first)

- Test standby generator system.
- Inspect battery (batteries) and cables.
- Check engine oil level.
- Check gearbox oil level (if so equipped).
- Check engine coolant level.
- Check generator ground connections.
- Test/inspect starting aids.

✦ 4.1.1.2 Every Three Months or Every 120 Hours (whichever comes first)

- Inspect and test fuel system and connections.
- Inspect exhaust system.
- Inspect/test fuel supply system.

◆ 4.1.2 AUTHORIZED SERVICE TECHNICIAN MAINTENANCE FUNCTIONS

✦ 4.1.2.1 After First 30 Hours of Operation

- Inspect wiring.
- Change engine crankcase oil and oil filter.
- Inspect engine fan belts.
- Inspect battery (batteries) and cables.

✦ 4.1.2.2 Every Six Months or Every 200 Hours (whichever comes first)

- Change engine oil and filter.
- Lubricate engine controls.
- Service engine air cleaner.
- Service engine fuel filter.
- Inspect AC generator.
- Test engine safety controls.
- Inspect fan belts.
- Check engine coolant level.
- Inspect engine cooling system hoses.
- Check optional starting aids.
- Check battery (batteries).
- Check electrical connections.
- Check/test annunciator panel.
- Perform operational test.

The following **MUST** be performed by an Authorized John Deere Dealer **ONLY**.

- Check engine compression.

✦ 4.1.2.3 Annually or Every 600 Hours (whichever comes first)

- Inspect all wiring.
- Test engine starter operation.
- Drain water from fuel tank.
- Retorque fan bolts.
- Drain and refill gearbox (If so equipped.)

The following **MUST** be performed by an Authorized John Deere Dealer **ONLY**.

- Check engine valve clearance.
- Test fuel injection nozzles.
- Test injection timing.

✦ 4.1.2.4 Every Two Years

- Replace all rubber hoses.
- Replace engine fan belts.
- Inspect the Standby Generator System.
- Drain, flush, refill cooling system.

✦ 4.1.2.5 Every 1,000 Operating Hours

The following **MUST** be performed by an Authorized John Deere Dealer **ONLY**.

- Inspect engine DC alternator.
- Inspect engine starter.
- Remove/test fuel injection pump.
- Remove/test cooling system thermostat.

✦ 4.1.2.6 As Required

- Bleed engine fuel system.

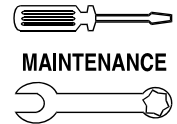
4.2 PERIODIC MAINTENANCE

A periodic program of scheduled maintenance should be established and maintained. Such a program, if adhered to diligently, provides added assurance that the power system functions properly when it is needed.

Keeping a “Maintenance Log” is highly recommended. Such a log should be a continuous record of repairs, parts replacements, gauge and instrument readings during operational tests, etc.

The manufacturer recommends that a “Customer Maintenance Inspection Agreement” be established between the user of this equipment and the installing Authorized Service Dealer. Under this agreement, (Part No. 053263), an Authorized Service Technician performs prestart and engine running tests and checks at six-month and one-year intervals. Ask an Authorized Service Dealer about this agreement.

The tasks listed in the “Service Schedule” section cover the minimum recommended maintenance requirements for this equipment.



Note that many of the tests and checks listed in the schedule are to be performed only by an Authorized Service Technician. Fluid capacities and recommendations, as well as other applicable specifications, are listed in the “Specifications” section.

◆ 4.2.1 TEST STANDBY GENERATOR SYSTEM OPERATION AND COMPONENTS

An authorized operator should test the operation of the standby generator system and inspect its components monthly (or 100 hours). This should include inspecting the transfer switch for evidence of arcing, and pitted or burned contacts. Inspect wiring and grounding connections (see “Grounding the Generator”) and ensure that starting devices are operational. During this operational test, all instrument and gauge readings should be recorded in a “Maintenance Log.” The transfer system also should be tested at this time. The engine should also be ran at least 30 minutes and any discrepancies corrected immediately.

Every six months (or 200 hours), an Authorized Service Technician should perform a system operational test.

◆ 4.2.2 INSPECT BATTERY



⚠ Standby generators installed with automatic transfer switches will crank and start automatically when NORMAL (UTILITY) source voltage is removed or is below an acceptable preset level. To prevent such automatic start-up and possible injury to personnel, do not connect battery cables until certain that NORMAL source voltage at the transfer switch is correct and the system is ready for operation.

⚠ Storage batteries give off explosive hydrogen gas. This gas can form an explosive mixture around the battery for several hours after charging. The slightest spark can ignite the gas and cause an explosion. Such an explosion can shatter the battery and cause blindness or other injury. Any area that houses a storage battery must be properly ventilated. Do not allow smoking, open flame, sparks or any spark producing tools or equipment near the battery.

⚠ Battery electrolyte fluid is an extremely caustic sulfuric acid solution that can cause severe burns. Do not permit fluid to contact eyes, skin, clothing, painted surfaces, etc. Wear protective goggles, protective clothing and gloves when handling a battery. If fluid is spilled, flush the affected area immediately with clear water.



- ⚠ Do not dispose of the battery in a fire. The battery is capable of exploding.
- ⚠ Do not open or mutilate the battery. Released electrolyte can be toxic and harmful to the skin and eyes.
- ⚠ The battery represents a risk of high short circuit current. When working on the battery, always remove watches, rings or other metal objects, and only use tools that have insulated handles.

An authorized operator should inspect the engine battery system monthly (or 100 hours). At this time, the battery fluid level should be checked and distilled water added if needed. Battery cables and connections also should be inspected for cleanliness and corrosion.

Once every six months (or 200 hours), an Authorized Service Technician should inspect the battery system. At this time the battery condition and state of charge should be checked using a battery hydrometer. The battery should be recharge or replaced as required.

◆ 4.2.3 BATTERY REPLACEMENT

When replacing batteries, use the same number and the following type batteries.

Part Number	BCI Group No.	CCA
058665	27F	700 @ 0 deg. F

NOTE:

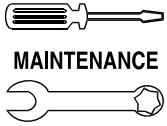
The BCI number should be located directly on the battery. For more information, see “Specifications.”

◆ 4.2.4 CHECK FLUIDS

An authorized operator should check the levels of engine oil, and engine coolant monthly (or 100 hours). The oil level should be maintained between the “FULL” and “ADD” marks on the engine dipstick. Recommended fluids are listed in the “Specifications: section.

◆ 4.2.5 INSPECT EXHAUST SYSTEM

Every three months (or 120 hours), an authorized operator should inspect the entire exhaust system. Abnormal noise levels heard during each operational test may indicate a defective exhaust pipe or muffler. Any defective or leaking component should be repaired or replaced immediately by an Authorized Service Technician.



Section 4 – Maintenance

Standby Generator Set

◆ 4.2.6 INSPECT/TEST FUEL SUPPLY SYSTEM

Every three months (or 120 hours), an authorized operator should inspect and test the fuel supply system, as well as all fuel system connections. All connections must be tight and in good condition. A loose fuel system line may show no signs of leakage, but may draw air into the system causing rough operation and starting difficulties. Any defective or leaking component should be repaired or replaced immediately by an Authorized Service Technician.

4.3 REPAIR PARTS

The latter portion of this manual consist of exploded views, parts lists and electrical data pertaining to this generator set. The parts lists consist of (a) an item number, (b) a part number, (c) the quantity required, and (d) a description of the part. The item number corresponds to an identical number on the exploded view drawing.

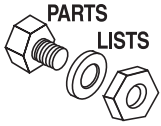
◆ 4.3.1 HOW TO ORDER PARTS

To order a replacement part, locate the part in the applicable exploded view. Contact an Authorized Service Dealer (call 800-333-1322 to locate one in the area) and provide the following information:

- The generator model number.
- The generator identification code, which indicates the specific generator assembly for each unit.
- The part number and corresponding description from the applicable parts list in this manual.
- The applicable exploded view “Group” letter (A-H) and drawing number (five-digit number), which can be found on the exploded view drawing.

NOTE:

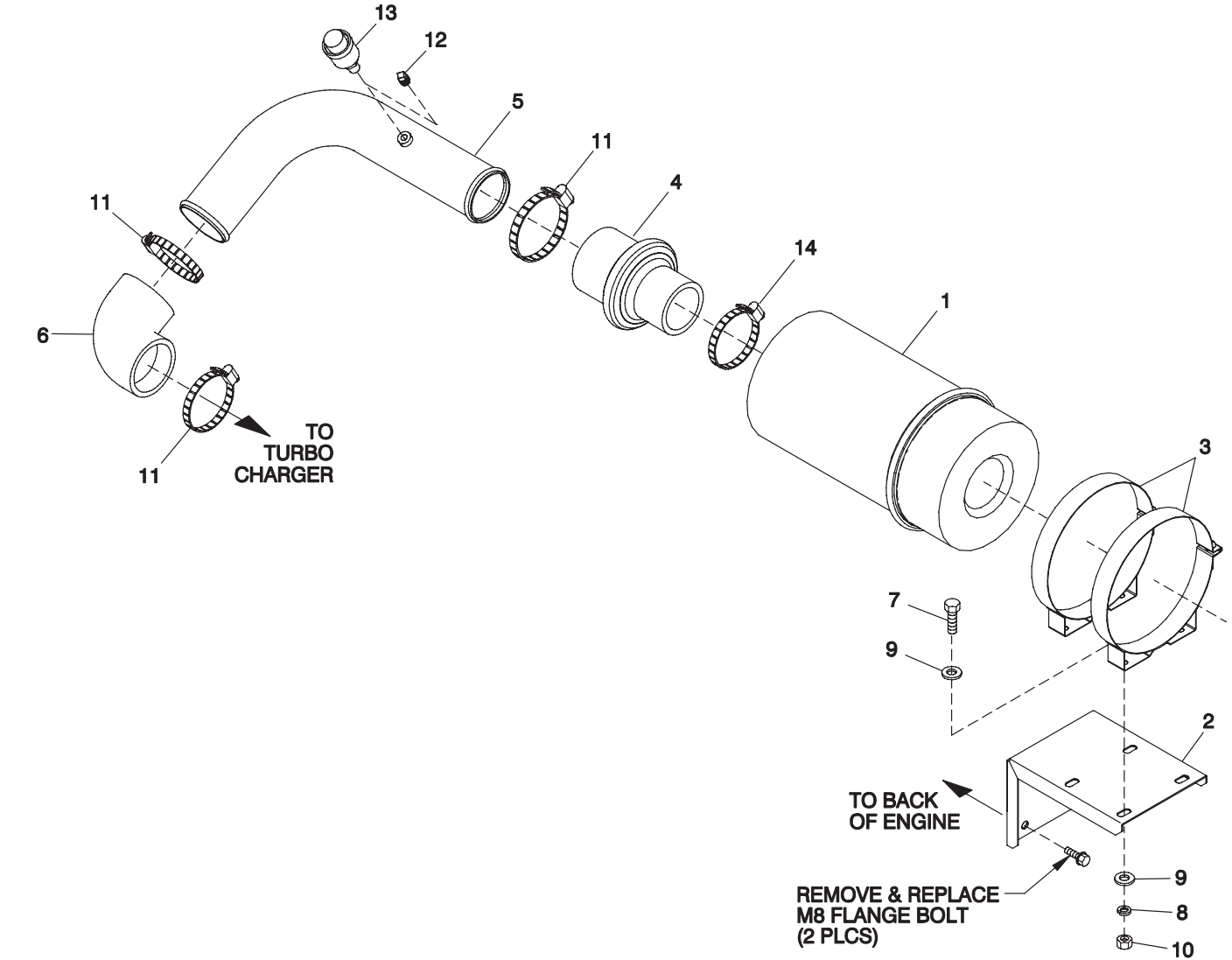
In most cases, obtain repair parts by providing the Authorized Service Dealer with the data label information and a description of the required part. If unable to locate either the data label or the construction document, describe the part needed and provide the unit’s model number. This number can be found on the DATA LABEL attached to the generator’s lower connection box.



Section 6 – Exploded Views and Parts Lists

Standby Generator Set

Fuel Filter – Drawing No. 0G4095-A



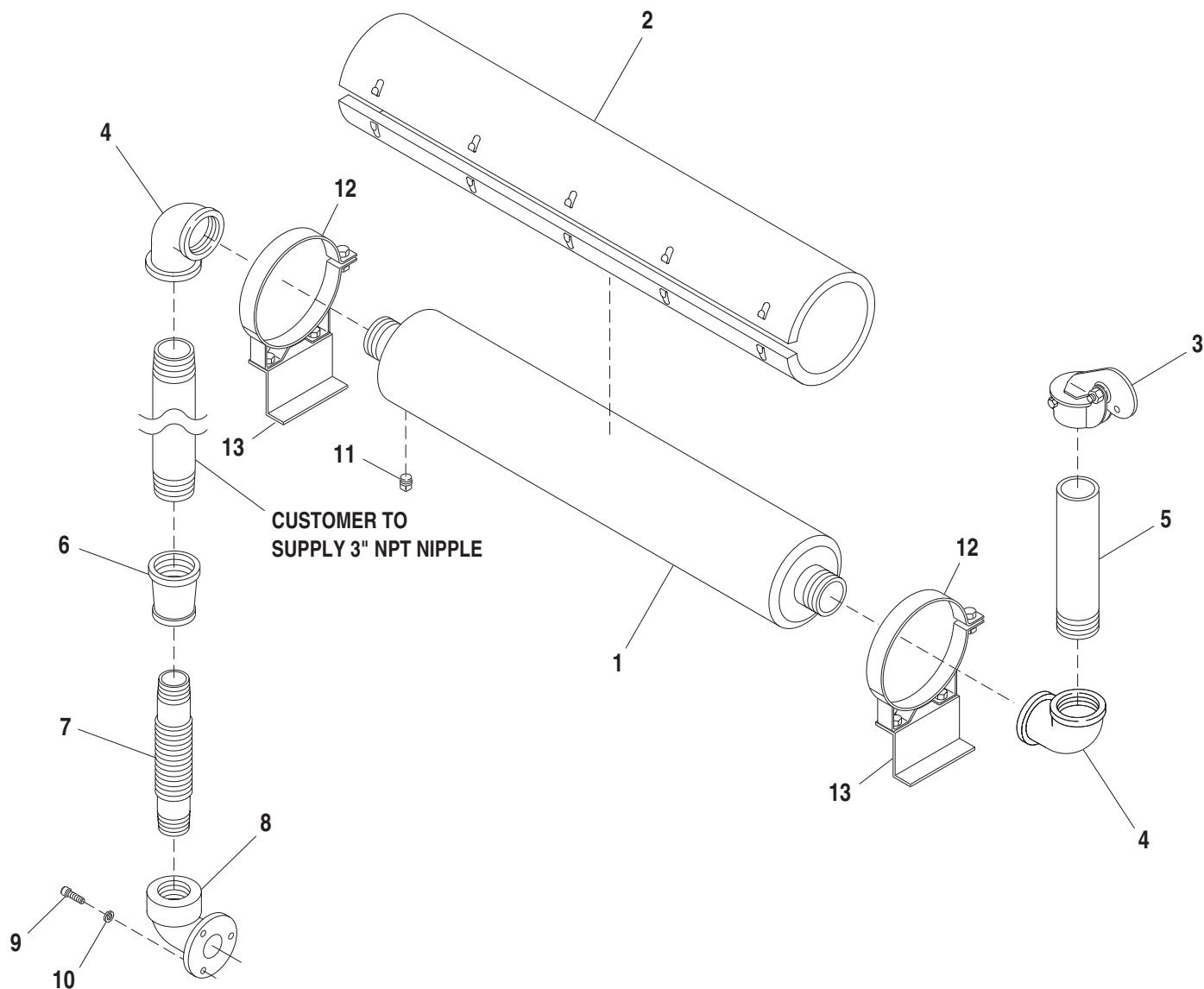
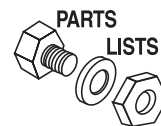
ITEM	PART NO.	QTY.	DESCRIPTION
1	065232	1	AIR CLEANER, 2-STAGE
2	0G40840ST03	1	BRACKET, AIR CLEANER
3	057183	2	BAND A/C MNTG 8.00D
4	057629	1	REDUCER RUBBER HUMP 3.0-2.5
5	0G4089	1	TUBE, AIR INTAKE
6	0F1702	1	ELBOW RUBBER RED 90 2.5-2.36"
7	039253	4	SCREW HHC M8-1.25 X 20 G8.8
8	022129	4	WASHER LOCK M8-5/16
9	022145	8	WASHER FLAT 5/16 ZINC
10	045771	4	NUT HEX M8-1.25 G8 YEL CHR
11	039294	3	CLAMP HOSE #44 2.31 - 3.25
(2) 12	061012	1	PLUG STD PIPE 1/8 SOCKET HEAD
(1) 13	0A4256	1	INDICATOR FILTER MINDER
14	066212	1	CLAMP HOSE #52 2.81-3.75

(1) USED WITH VERIZON UNITS

(2) USED WITH NON-VERIZON UNITS

Section 6 – Exploded Views and Parts Lists

**Standby Generator Set
Exhaust – Drawing No. 0E3755A-A**

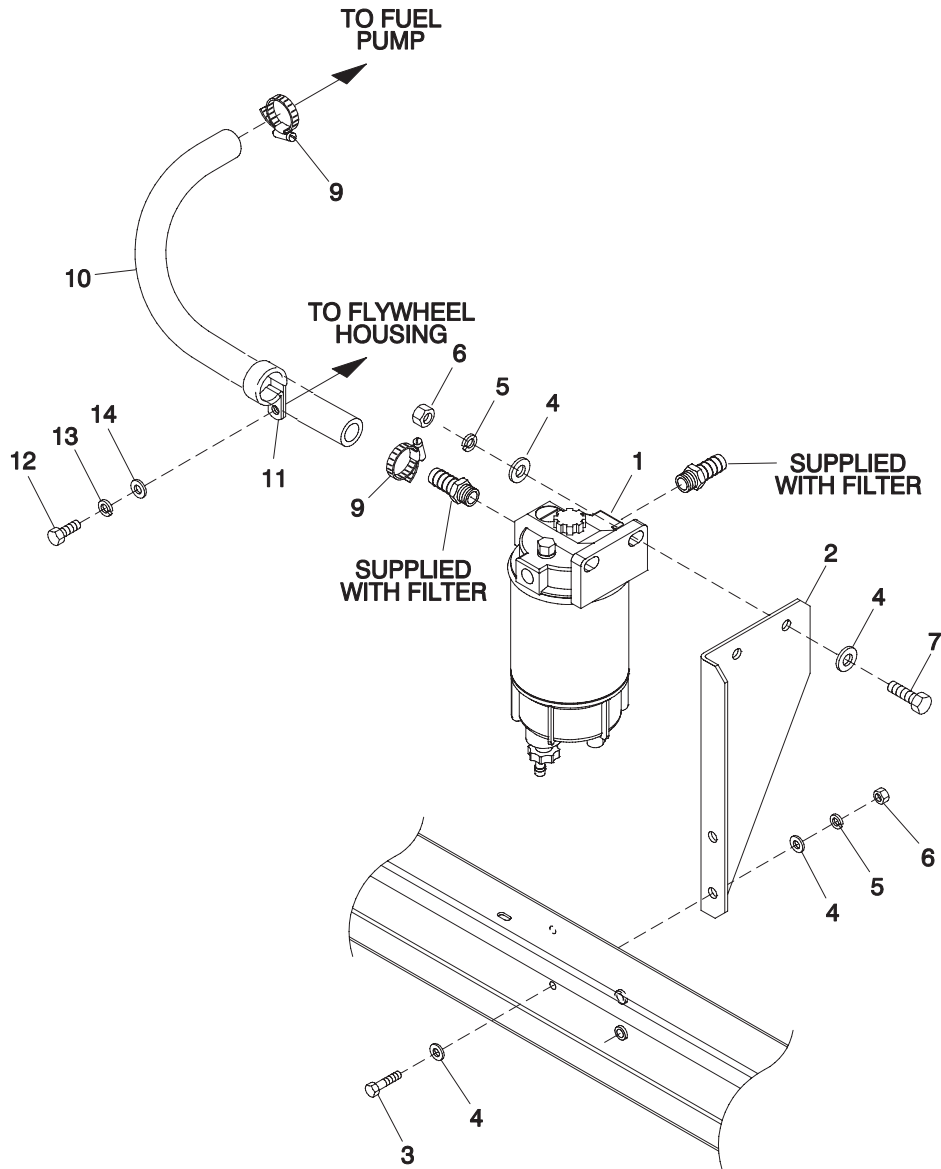


ITEM	PART NO.	QTY.	DESCRIPTION
1	0E7611	1	MUFFLER,OPENSET 60KW VERIZON W
2	0E3603	1	BLANKET MUFFLER WRAP 3.9L LOSE
3	059940	1	RAIN CAP 3.50 / 3.69
4	059936	2	ELBOW 90 D 3 NPT
5	059941	1	NIPPLE TOE 3 NPT X 8
6	0E3298	1	REDUCER 2.5" TO 3" COUPLER
7	057646C	1	FLEX EXH 2.5 X 15.44 LONG
8	0E2668	1	ELBOW EXHAUST TURBO OUTLET
9	0E3495	3	SCREW SHC M10-1.25 X 25 G12.9
10	022237	3	WASHER LOCK 3/8
11	026073	1	PLUG STD PIPE 1/8 STEEL SQ HD
12	059557	2	CLAMP AIR CLEANER MOUNT 9"
13	069599	2	MUFFLER SUPPORT

Section 6 – Exploded Views and Parts Lists

Standby Generator Set

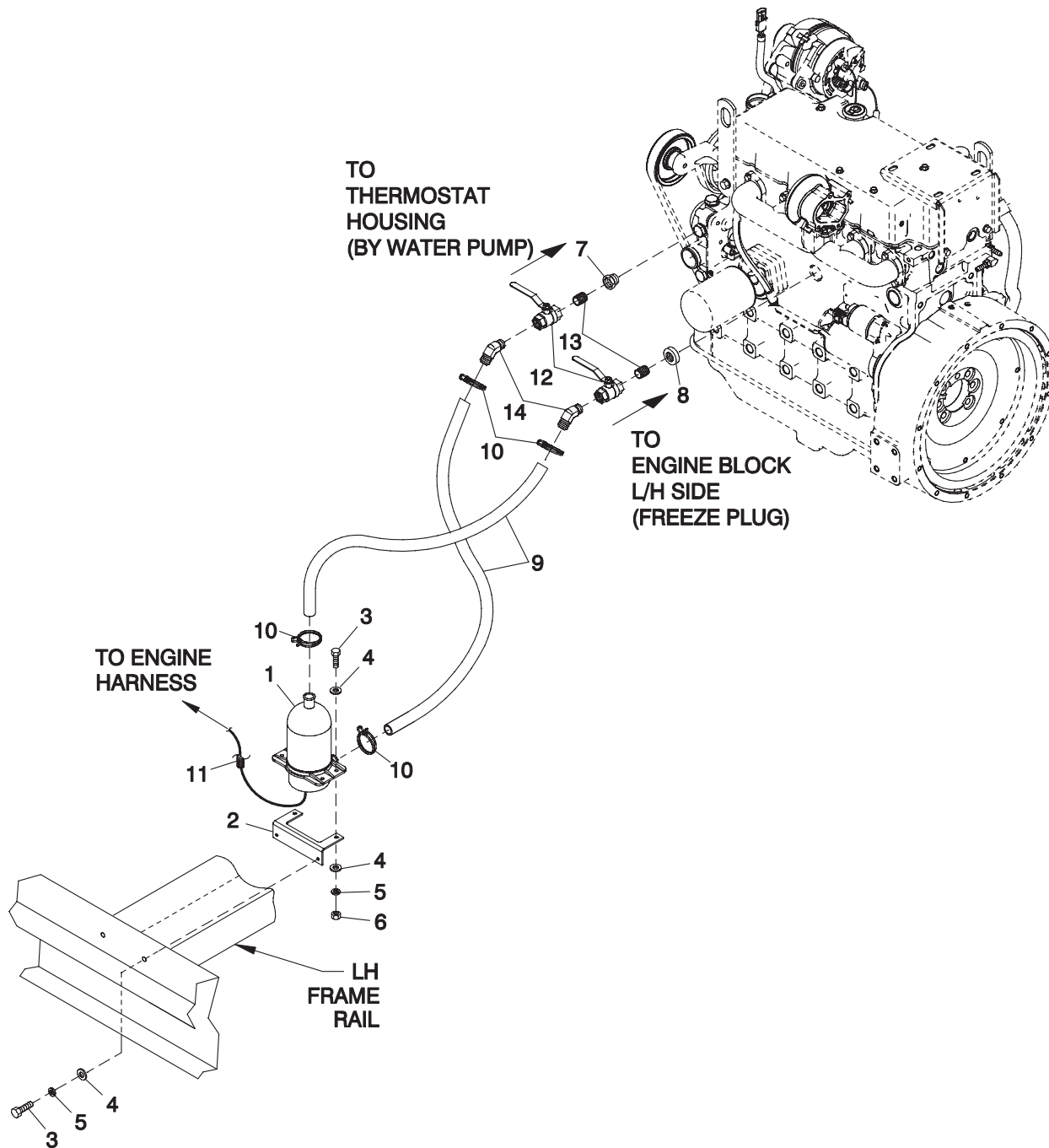
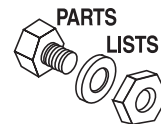
Fuel Filter – Drawing No. 0F1173-B



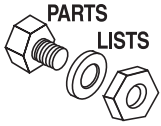
ITEM	PART NO.	QTY.	DESCRIPTION
1	076847B	1	FILTER/WATER SEP. W/24VHTR
2	0C7365	1	BRACKET RACOR 3LHA
3	039253	2	SCREW HHC M8-1.25 X 20 G8.8
4	022145	8	WASHER FLAT 5/16-M8 ZINC
5	022129	4	WASHER LOCK M8-5/16
6	045771	4	NUT HEX M8-1.25 G8 YEL CHR
7	043107	2	SCREW HHC M8-1.25 X 25 G8.8
8	0C7649	2	CLAMP HOSE .38-.87 (NOT SHOWN)
9	035472	2	CLAMP HOSE #6 .43-.78
10	030340	1	HOSE 1/4 ID SAE 30R7 (24" LG)
11	055934AA	1	CLAMP VINYL .812 X .531 Z
12	063837	1	SCREW HHC M12-1.75 X 30 G10.9
13	051769	1	WASHER LOCK M12
14	049808	1	WASHER FLAT M12

Section 6 – Exploded Views and Parts Lists

Standby Generator Set
Block Heater – Drawing No. 0F1379-E



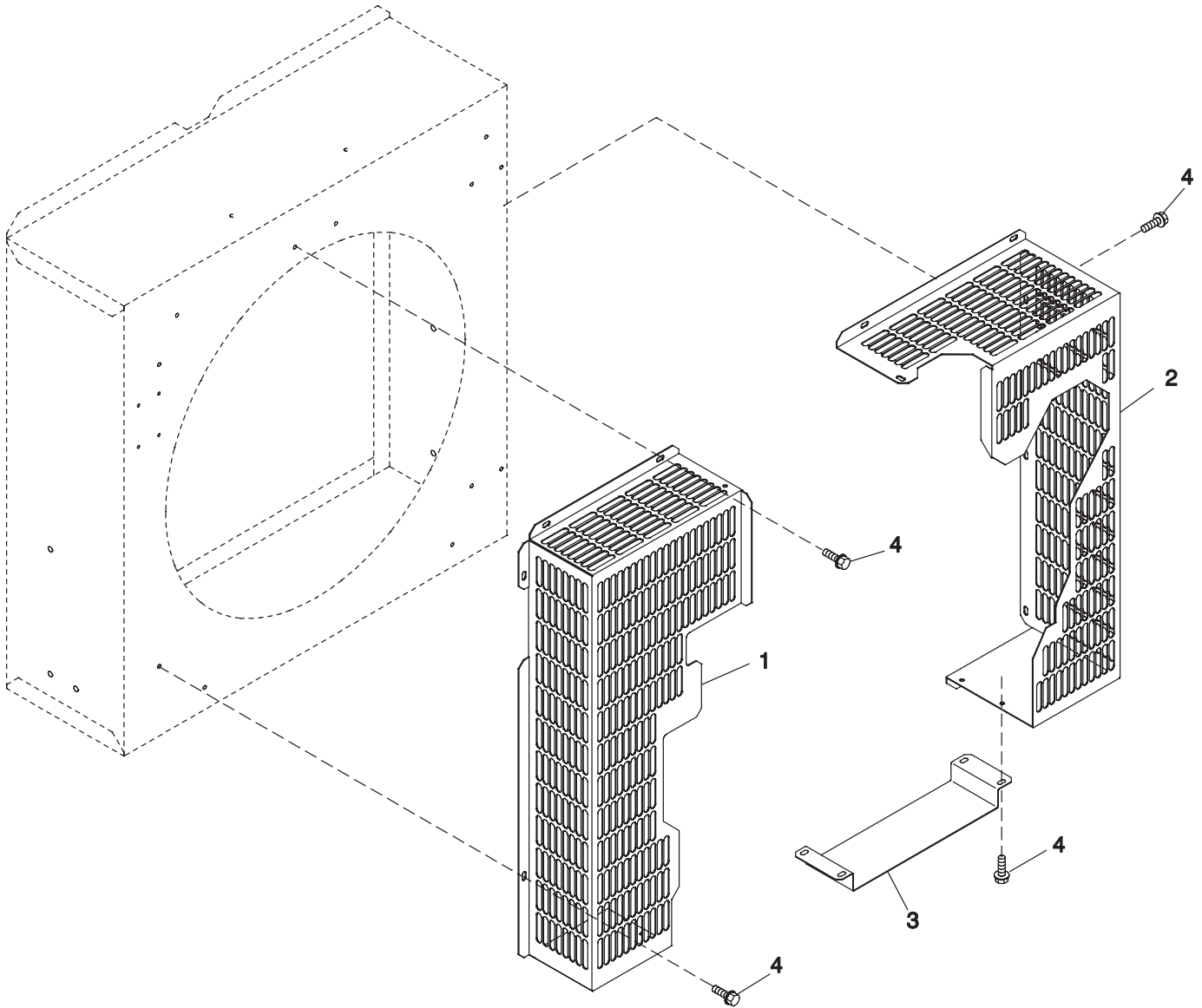
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	084918A	1	HEATER BLOCK 1000W 120V	8	0F1449	1	CORE PLUG ADAPT. 1-1/4" X 3/8 NPT
	084918G	1	HEATER BLOCK 1500W 120V	9	050967	2	HOSE COOL 5/8 ID 20R3 (20" LG)
2	084427	1	BRACKET HEATER W/WELDNUTS	10	0G0015	4	CLAMP, HOSE 5/8" DOUBLE WIRE
3	047411	4	SCREW HHC M6-1.0 X 16 G8.8	11	077043A	1	CONDUIT FLEX .38 ID (21")
4	022473	6	WASHER FLAT 1/4-M6 ZINC	12	0G5212B	2	VALVE 3/8"
5	022097	4	WASHER LOCK M6-1/4	13	035467	2	NIPPLE CLOSE 3/8 NPT X 1 VIBRA
6	049813	2	NUT HEX M6 X 1.0 G8 YEL CHR	14	0C4905	2	BARBED EL 45 3/8 NPT X 5/8 OD
7	0A4707E	1	ADAPTER 3/8 NPT M18 X 1.5				



Section 6 – Exploded Views and Parts Lists

Standby Generator Set

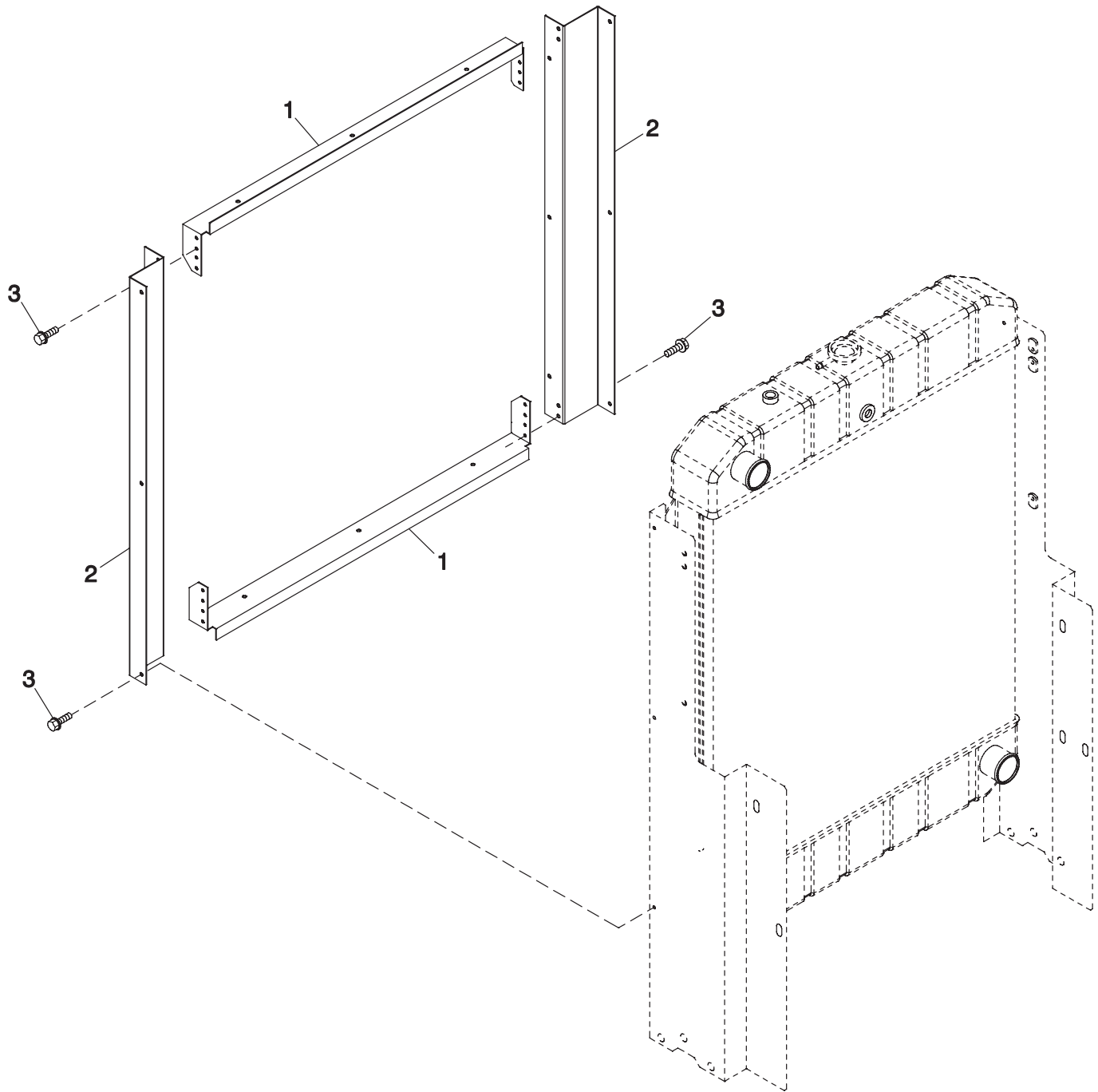
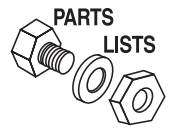
Level One – Drawing No. 0F1103-A



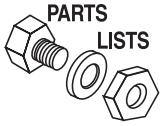
ITEM	PART NO.	QTY.	DESCRIPTION
1	0F1104	1	LEVEL 1 GUARD LH 3.0L JD
2	0F1114	1	LEVEL 1 GUARD RH 3.0L JD
3	0F1115	1	LEVEL 1 GUARD BOTTOM 3.0L JD
4	090388	14	SCREW HHTT M6-1.0 X 12 ZINC

Section 6 – Exploded Views and Parts Lists

Standby Generator Set
Air Duct Kit – Drawing No. 0G0519-B



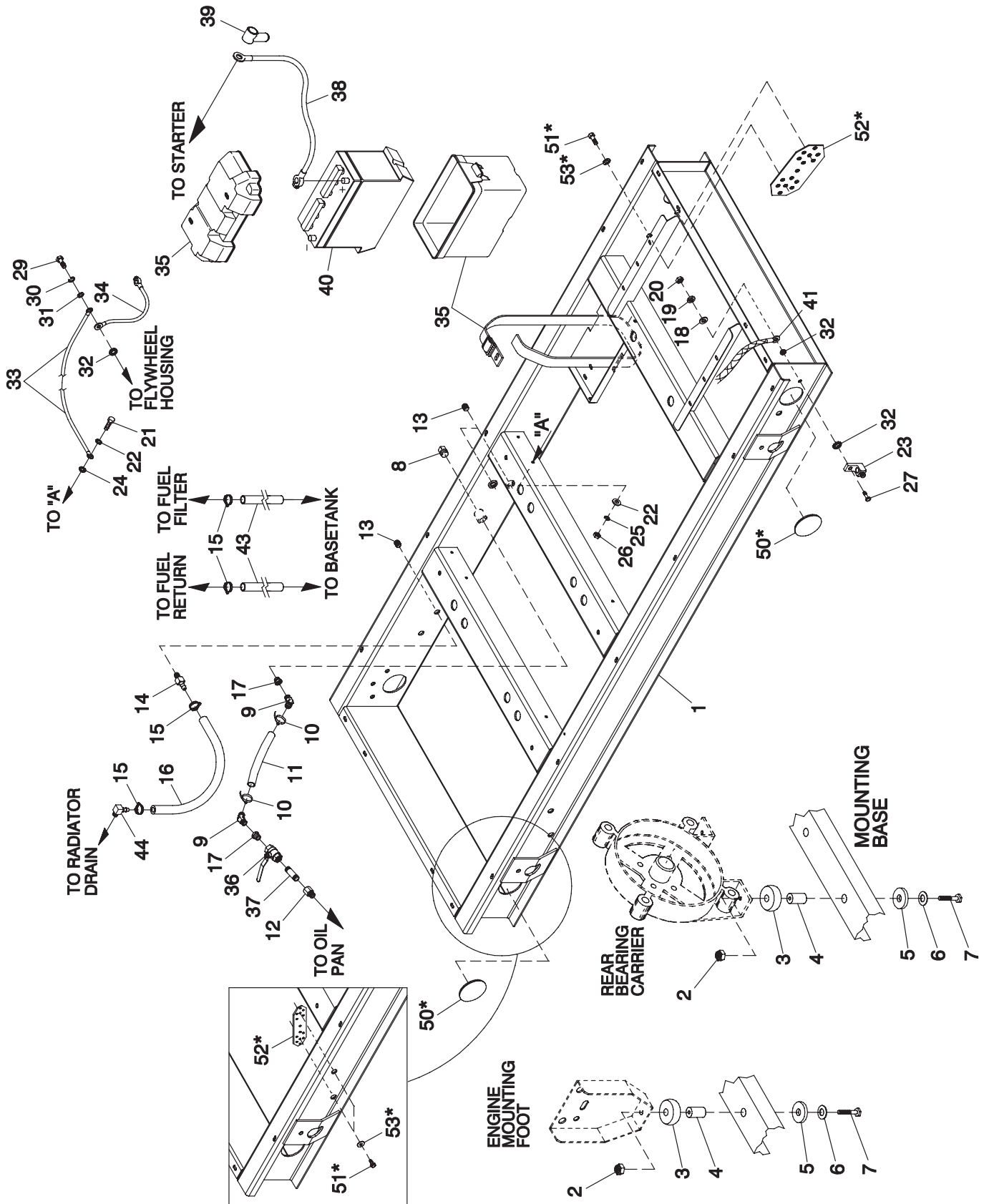
ITEM	PART NO.	QTY.	DESCRIPTION
1	0G36660ST03	2	TOP/BOT AIR DUCT
2	0E2671	2	RH/LH AIR DUCT(RAD 0E1411)
3	0C2454	14	SCREW THF M6-1 X 16 N WA Z/JS



Section 6 – Exploded Views and Parts Lists

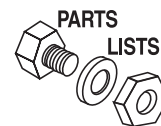
Standby Generator Set

Mounting Base – Drawing No. 0G3967-A



Section 6 – Exploded Views and Parts Lists

Standby Generator Set Mounting Base – Drawing No. 0G3967-A



ITEM	PART NO.	QTY.	DESCRIPTION
1	0F9140	1	WELDMENT FRAME 3.0L JD C-CAN
2	052860	6	NUT FLANGED HEX M12-1.75
3	052251	6	DAMPENER VIBRATION 40 BLUE
4	052257	6	SPACER .49 X .62 X 1.87 PWDR/ZNC
5	052252	6	DAMPENER VIBRATION
6	052259	6	WASHER FLAT M12
7	052891	6	SCREW HHC M12-1.75 X 80 G8.8
8	024310	1	PLUG STD PIPE 1/2 STEEL SQ HD
9	0C4905	2	BARBED EL 45 3/8 NPT X 5/8 OD
10	057822	2	CLAMP HOSE #8 .53-1.00
11	065386	1	HOSE COOL 5/8 ID 100R6 (8" LG)
12	0A4707H	1	ADAPTER 1/2 NPT M22 X 1.5
13	026073A	3	PLUG STD PIPE 1/4 STEEL SQ HD
14	035461	1	BARBED STR 1/4 NPT X 3/8
15	0C7649	4	CLAMP HOSE .38-.87
16	047290	1	HOSE RES 3/8 SINGLE BRAID (21" LG)
17	030418	2	BUSHING REDUCER 1/2 TO 3/8
18	022131	1	WASHER FLAT 3/8-M10 ZINC
19	046526	1	WASHER LOCK M10
20	045772	1	NUT HEX M10-1.5 G8 YEL CHR
21	045757	1	SCREW HHC M6-1.0 X 25 G8.8
22	022473	2	WASHER FLAT M6-1/4 ZINC
23	061383	1	LUG SLDLSS 3/0-#4 X 13/32 CU
24	026850	1	WASHER SHAKEPROOF EXT 1/4 STL
25	022097	1	WASHER LOCK M6-1/4
26	049813	1	NUT HEX M6 -1.0 G8 YEL CHR
27	049814	1	SCREW HHC M10-1.5 X 25 G8.8
29	068485	1	SCREW HHC M12-1.25 X 20 G8.8
30	022195	1	WASHER LOCK 1/2
31	049808	1	WASHER FLAT M12
32	070022	3	WASHER LOCK M12 EXT
33	0536210147	1	ASSY WIRE #0 10.0"
34	038805J	1	CABLE BATT BLK #1 X 30.00
35	0E2471	1	BATTERY BOX GROUP 27 W/COVER
36	0G5212A	1	VALVE 1/2"
37	030985	1	NIPPLE CLOSE 1/2 X 1.125
38	038804S	1	CABLE BATT RED #1 X 60-DPNI
39	0F3976	1	BOOT, CONTACTOR CABLES
40	061119	1	BATTERY BCI GRP 31 925 CCA
(3) 41	0E5649	1	CABLE BRAIDED 51" LG 1/2" TO #10
(2) 42	077043A	1	CONDUIT FLEX .38" ID (46" LG) (PUT ON I/N 41)
43	052221	2	HOSE 5/16 ID TYP1 SNGL HTR (48" LG)
44	049340	1	BARBED EL 90 1/4 NPT X 3/8
(1) 50	0A8785	4	PLUG BUTTON 3" DIA
(1) 51	0C2454	8	SCREW TH-FRM M6-1 X 16 N WA Z/JS
(1) 52	0C4360	5	PLATE VARMINT
(1) 53	071693	8	WASHER FLAT .281 ID X 1.0 OD

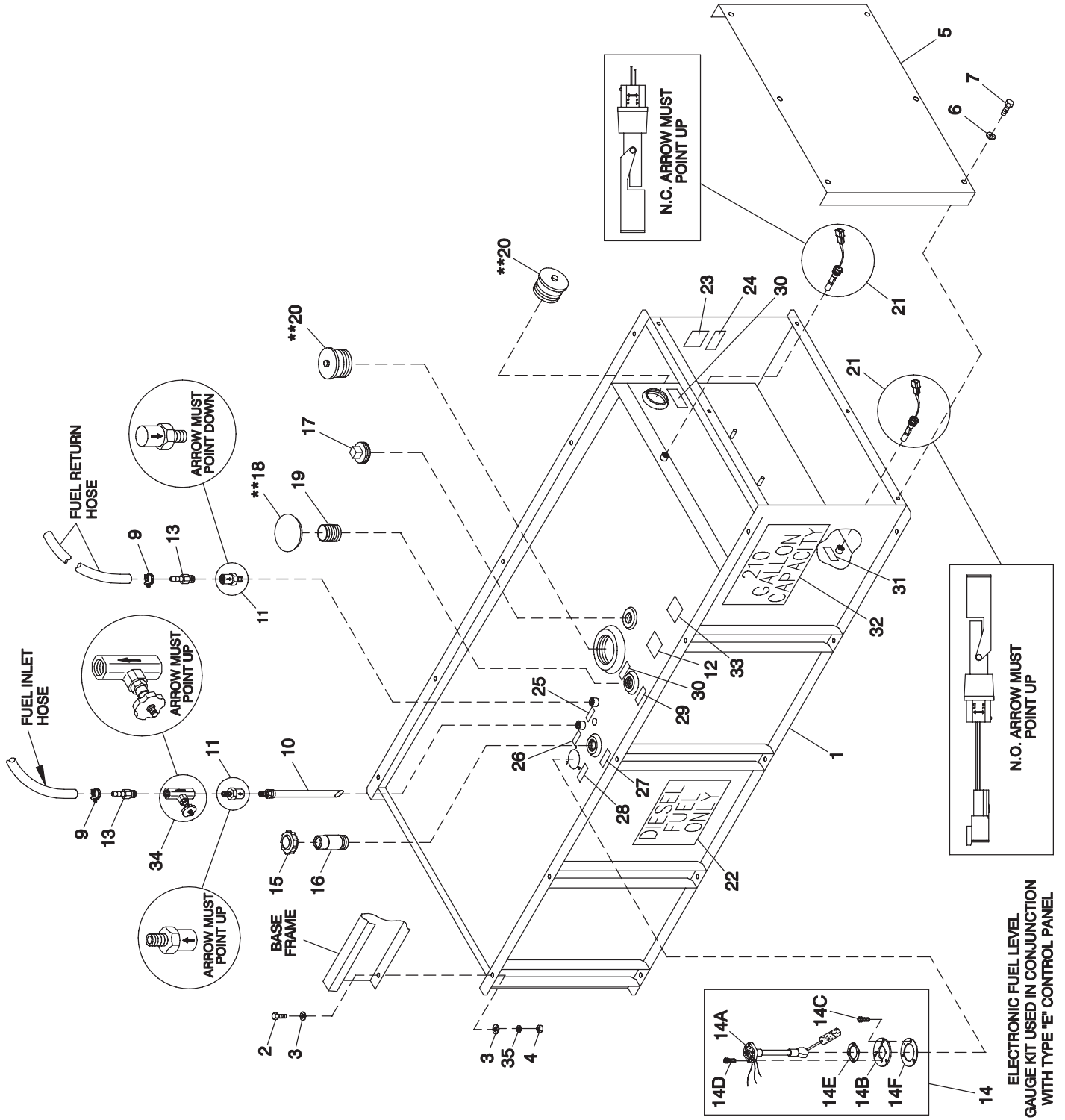
(1) ITEMS 50-53 ARE PART OF KIT 0C8560 (VARMINT GUARDING)

(2) NOT SHOWN

(3) ITEM 41 PART OF KIT 0E5841C.

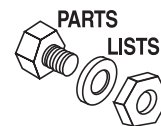
Section 6 – Exploded Views and Parts Lists

Standby Generator Set
Base Tank – Drawing No. 0D5400V-G



Section 6 – Exploded Views and Parts Lists

Standby Generator Set Base Tank – Drawing No. 0D5400V-G



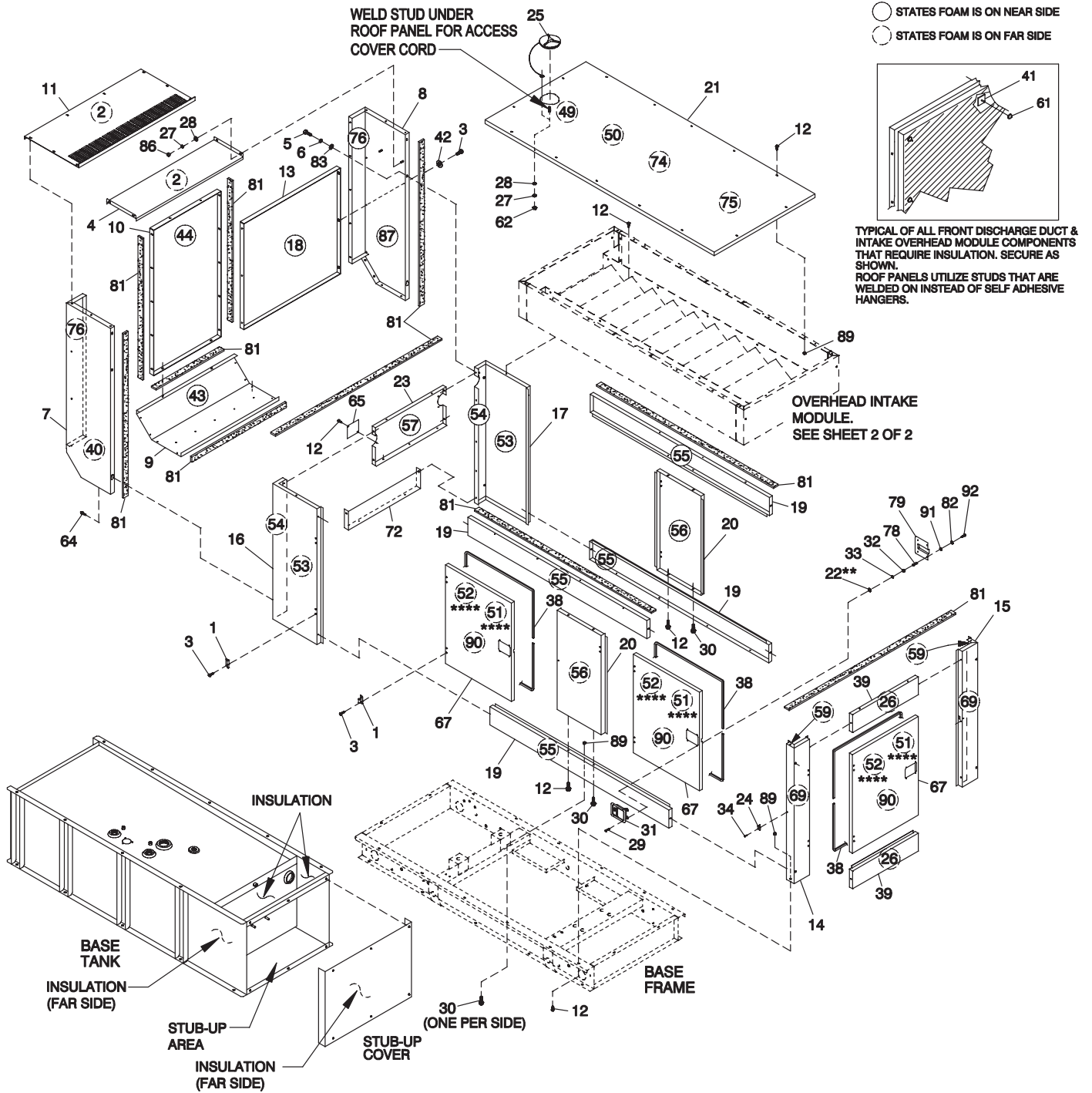
ITEM	PART NO.	QTY.	DESCRIPTION
1	021075V	1	TANK B GRP DW 210 GAL VERIZON
2	0C6789	10	SCREW HHC M12-1.75 X 30 SS FT
3	087171	20	WASHER FLAT 1/2 SS
4	051548	10	NUT HEX M12-1.75 G8 SS
5	0D3747V	1	COVER STUB-UP BGRP VERIZON
6	050190	6	WASHER FLAT .344 ID X 1.0 OD
7	051754	6	SCREW HHC M8-1.25 X 12 G8.8
9	035472	2	CLAMP HOSE #6 .43 - .78
10	021623V	1	FUEL DIP PIPE 608MM
11	070327	2	VALVE CHECK 3/8 NPT
12 *	021825V	1	LABEL EMERGENCY RELIEF VENTING
13	067982	2	BARBED STR 3/8 NPT X 5/16
14	0D2734V	1	FUEL LEVEL GAUGE KIT ELECTRICAL (TO INCLUDE ITEMS 14A, 14B, 14C & 14D)
14A	0D2712D	1	ELECTRICAL FUEL GAUGE VERIZON 60KW (IN KIT 0D2734V)
14B	0D2668	1	PLATE ADAPTOR (IN KIT 0D2734V)
14C	052829	3	SCREW SHC M8-1.25 X 14 G12.9 (IN KIT 0D2734V)
14D	097962	4	SCREW SHC M6-1.0 X 25 G12.9 (IN KIT 0D2734V)
14E	0E4351	1	GASKET ROCHESTER FUEL LEVEL GAUGE
14F	0E4352	1	GASKET ADAPTER PLATE
15	0A1492	1	CAP FUEL FILL
16	0D2670	1	NECK FUEL FILL (STANDARD-4")
17	063831	1	PLUG STD PIPE 1.25" NPT STEEL SQ HD
18 **	021178	1	VENT OEM 2" NPT
19	0A7238	1	NIPPLE PIPE 2 NPT X 3.5 BL IRON
20 **	072989J	2	3" NPT EMRG. PRES. VENT
21	096500V	2	DETECTOR ALARM FUEL LEAK W/CON
22	0E3676	1	LABEL DIESEL FUEL ONLY
23	021821	1	LABEL DATA GENERAC
24	021823	1	LABEL DATA UL (DOUBLE WALL)
25 *	0A1478	1	LABEL FUEL RETURN
26 *	0A1477	1	LABEL FUEL SUPPLY
27 *	0A1476	1	LABEL FUEL FILL
28 *	0A1546	1	LABEL FUEL LEVEL
29 *	0A1479	1	LABEL VENT
30 *	021826	2	LABEL EMERG. VENTING
31 *	0A1481	1	LABEL LEAK DETECTOR
32	0E3675	1	LABEL 210 GALLON CAPACITY
33 *	021824V	1	LABEL STICKER WARNING
34	0E2472	1	VALVE FUSIBLE LINK SHUT-OFF 3/8
35	083215	10	WASHER LOCK 1/2 SS

* UL LABEL KIT P/N 0A1493V

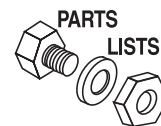
** PARTS ARE LOCATED IN LOOSE VENTS KIT P/N 0E5019

Section 6 – Exploded Views and Parts Lists

Standby Generator Set
Enclosure – Drawing No. 0F1261-C Part 1



Section 6 – Exploded Views and Parts Lists

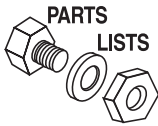


Standby Generator Set

Enclosure – Drawing No. 0F1261-C Part 1

ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	0C3594	10	ASSEMBLY M6 HINGE	55	0C3157P	4	INSULATION TOP & BOTTOM SIDE BRACE
2	0F0548A	2	INSULATION DISCHARGE ATTNTR Baffle	56	0C3157Q	2	INSULATION SIDE SUPPORT
3	0A3359	46	SCREW BHSC M6-1.0 X 16 SS	57	0C3157R	1	INSULATION FRONT BRACE TOP
4	0F0425(A)	1	BAFFLE DISCHARGE ATTENUATOR	58 *	0F1253 (A)	2	INTAKE, OVER HEAD MODULE SIDE
5	042907	4	SCREW HHC M8-1.25 X 16 G8.8	59	0C3157T	2	INSULATION REAR CORNER POSTS #1
6	022129	4	WASHER LOCK M8-5/16	60 *	0F0130F	4	INSULATION OVERHEAD MODULE SIDE
7	0F0706 (A)	1	DUCT FRONT LH	61 *	078115	131	WASHER SELF LOCKING DOME
8	0F0707 (A)	1	DUCT FRONT RH	62	022127	2	NUT HEX 1/4-20 STEEL
9	0C3335 (A)	1	DUCT BOTTOM	64	0C3393	2	SHOULDER SCREW
10	0F0708 (A)	1	DUCT FRONT PANEL	65	0C3400 (A)	1	COVER EXHAUST HOLE
11	0F0249	1	DUCT FRONT TOP	66 *	0F1254 (A)	4	END CAP OVER HEAD MODULE SIDE
12 *	0C2454	177	SCREW TH-FRM M6-1 X 16 N WA Z/JS	67	0F7323 *****	5	DOOR SMALL, ACO
13	0F0477 (A)	1	DUCT FRONT INSIDE BARRIER		0C2521A *****	5	DOOR, SM ACO WELD AL
14	0F0561 (A)	1	CORNER POST LH REAR	68 *	0C3397	2	FASTENER RATCHET
15	0F0562 (A)	1	CORNER POST RH REAR	69	0F0130L	2	INSULATION REAR CORNER POSTS
16	0C2537 (A)	1	CORNER POST LH FRONT	70 *	0F0153 (A)	9	SPLITTER
17	0C2538 (A)	1	CORNER POST RH FRONT	(1) 72	0G5810	1	LOWER RADIATOR BLOCK OFF
18	0F0548	1	INSULATION FRONT DUCT INSIDE BARRIER	73 *	0F0774 (A)	1	BLOCK OFF OVERHEAD MODULE FRONT
19	0F1255 (A)	4	BRACE SIDE TOP AND BOTTOM	74	0C3157W	1	INSULATION REAR ROOF TOP #1
20	0C2556 (A)	2	SIDE SUPPORT	75	0C3157X	1	INSULATION REAR ROOF TOP #2
21	0F1229	1	ROOF WELDMENT	76	0F0548D	2	INSULATION DUCT FRONT/SIDE
22 **	022769	5	WASHER SHAKEPROOF INT #10	77 *	0F0775(A)	1	BLOCK OFF OVERHEAD MODULE REAR
23	0C2590 (A)	1	BRACE FRONT TOP	78 ****	0C6747	20	STANDOFF M4 X 19.1 AL
24	0C2633	5	STRIKER PLATE	79 ****	0C2635	5	COVER LATCH ACOUSTIC
25	0C2634A	2	ACCESS COVER ASSEMBLY	80 *	0F1275A	1	INSULATION BLOCKOFF OVERHEAD FRONT
26	0F0130D	2	INSULATION REAR BRACE TOP & BOTTOM	81 *	066760	1	SEALANT STRIP 1/8 X 1 (578.5")
27	022097	6	WASHER LOCK M6-1/4	82 ****	078437	20	WASHER LOCK #8-M4 SS
28	022473	5	WASHER FLAT M6-1/4 ZINC	83	022145	4	WASHER FLAT M8-5/16 ZINC
29	0C6749	20	SCREW PPHM M4-0.7 X 12 SS	84 *	0F0130K	1	INSULATION BLOCKOFF OVERHD REAR
30	0E3257	4	SCREW TH-FRM M6 W/CAP SHKPRF W	85 *	0F0762(A)	2	ANGLE WATER DEFLECTOR
31	060069	5	PADDLE HANDLE LOCK	86	049813	4	NUT HEX M6 X 1.0 G8 YEL CHR
32	0C6748	20	NUT LOCK HEX M4-0.7 SS NYL INS	87	0F0548F	1	INSULATION FRONT DUCT RH SIDE
33	080490	20	WASHER FLAT #8 SS	88 *	0C9724	A/R	CAULK CLIMACEL CLEAR
34	087233	5	RIVET POP .1875 X .192-.196/#11	89 ***	077992	28	NUT HEX LOCK M6-1.0 SS NY INS
38	0A9881	1	GASKET DOOR RUBBER (590")	90 *****	0C3157AD	5	INSULATION, SMALL DOOR
39	0C2548 (A)	2	REAR BRACE TOP & BOTTOM	91 ****	080490	20	WASHER FLAT #8 SS
40	0F0548B	1	INSULATION, FRONT DUCT LH SIDE	92 ****	0C6749	20	SCREW PPHM M4-0.7 X 12 SS
41 *	0A5035A	119	HANGER SELF ADHESIVE 3/4				
42	027958	6	WASHER NYLON .260				
43	0F0548C	1	INSULATION FRONT DUCT BOTTOM				
44	0F0548E	1	INSULATION DUCT FRONT				
45 *	0F0130B	2	INSULATION OVERHD MODULE FRT/ REAR				
46 *	0F0130	18	INSULATION SPLITTER				
47 *	0F0130A	8	INSULATION OVERHD MODLE SIDE/ BOTTOM				
48 *	0F0048 (A)	2	INTAKE OVERHEAD MODULE FRONT/ RR				
49	0F1275	1	INSUL FRONT ROOF				
50	0C3157J	1	INSULATION FRONT ROOF TOP				
51 ****	0C3157K	5	INSUL, DOOR SECTION#1				
52 ****	0C3157L	5	INSUL, DOOR SECTION#2				
53	0C3157M	2	INSULATION FRONT CORNER POST #1				
54	0C3157N	2	INSULATION FRONT CORNER POST #2				

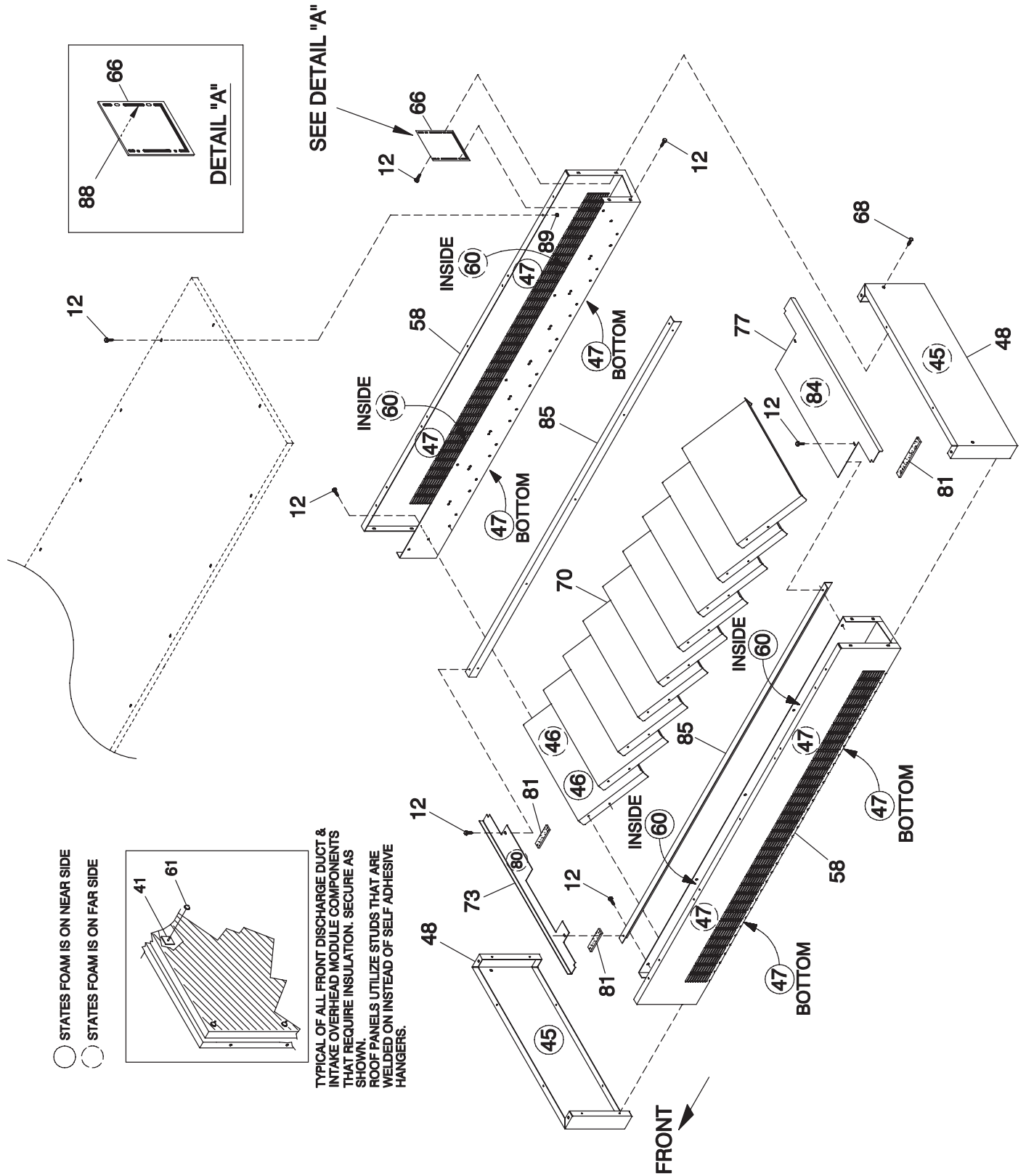
OPTIONAL COMPARTMENT MATERIALS:
 ALL P/N'S WITH AN (A) SUFFIX INDICATE ALUMINUM MATERIAL OPTION.
 * ILLUSTRATED ON SHEET 2.
 ** ONE PER PADDLE HANDLE.
 *** ALUMINUM ENCLOSURE NOTE: ALL ENCLOSURE PANELS THAT FASTEN TO THE BASE FRAME MUST BE SECURED USING ITEM 12 THREAD FORMING FASTENER AND ITEM 89 LOCK NUT. LOCK NUT IS TO BE INSTALLED AFTER THREAD-FORMING FASTENER HAS PENETRATED THROUGH EXTRUSIONS IN ENCLOSURE PANELS. ALL ROOF PANELS ARE TO BE SECURED IN THE SAME MANNER.
 **** USED FOR ALUMINUM ENCLOSURES ONLY.
 ***** USED FOR STEEL ENCLOSURES ONLY.
 (1) REFER TO CHART BELOW FOR COLOR AND MATERIAL:



Section 6 – Exploded Views and Parts Lists

Standby Generator Set

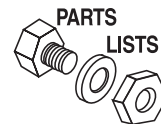
Enclosure – Drawing No. 0F1261-C Part 2



Section 6 – Exploded Views and Parts Lists

Standby Generator Set

Enclosure – Drawing No. 0F1261-C Part 2



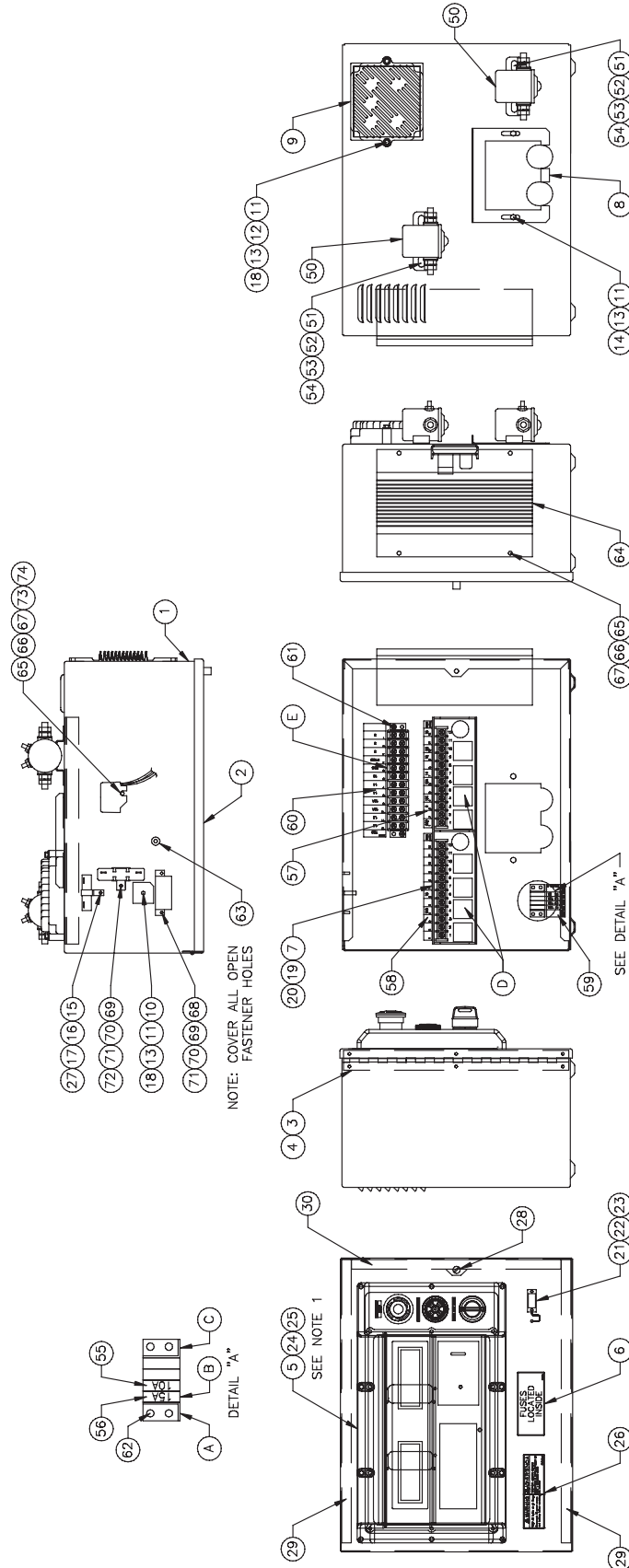
ITEM	PART NO.	QTY.	DESCRIPTION
12	0C2454	177	SCREW THF M6-1 X 16 N WA Z/JS
41	0A5035A	119	HANGER SELF ADHESIVE 3/4"
45	0F0130B	2	INSULATION OVERHD MODULE FRONT/REAR
46	0F0130	18	INSULATION SPLITTER
47	0F0130A	8	INSULATION OVERHD MODLE SIDE/BOTTOM
48	0F0048 (A)	2	INTAKE OVERHEAD MODULE FRONT/REAR
58	0F1253 (A)	2	INTAKE OVER HEAD MODULE SIDE
60	0F0130F	4	INSULATION OVERHEAD MODULE SIDE
61	078115	131	WASHER SELF LOCKING DOME
66	0F1254 (A)	4	END CAP OVER HEAD MODULE SIDE
68	0C3397	2	FASTENER RATCHET
70	0F0153 (A)	9	SPLITTER
73	0F0774 (A)	1	BLOCK OFF OVERHEAD MODULE FRONT
77	0F0775 (A)	1	BLOCK OFF OVERHEAD MODULE REAR
80	0F1275A	1	INSULATION BLOCKOFF OVERHD FRONT
81	066760	1	STRIP SEALANT 1/8 X 1 (578.5")
84	0F0130K	1	INSULATION BLOCKOFF OVERHD REAR
85	0F0762 (A)	2	ANGLE WATER DEFLECTOR
88	0C9724	A/R	CAULK CLIMACEL CLEAR
89	077992	28	NUT HEX LOCK M6-1.0 SS NY INS

OPTIONAL COMPARTMENT MATERIALS:

ALL P/N'S WITH AN (A) SUFFIX INDICATE ALUMINUM MATERIAL OPTION

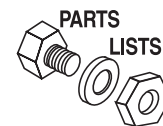
Section 6 – Exploded Views and Parts Lists

**Standby Generator Set
H-panel – Drawing No. 0G5375D-A**



Section 6 – Exploded Views and Parts Lists

Standby Generator Set H-panel – Drawing No. 0G5375D-A

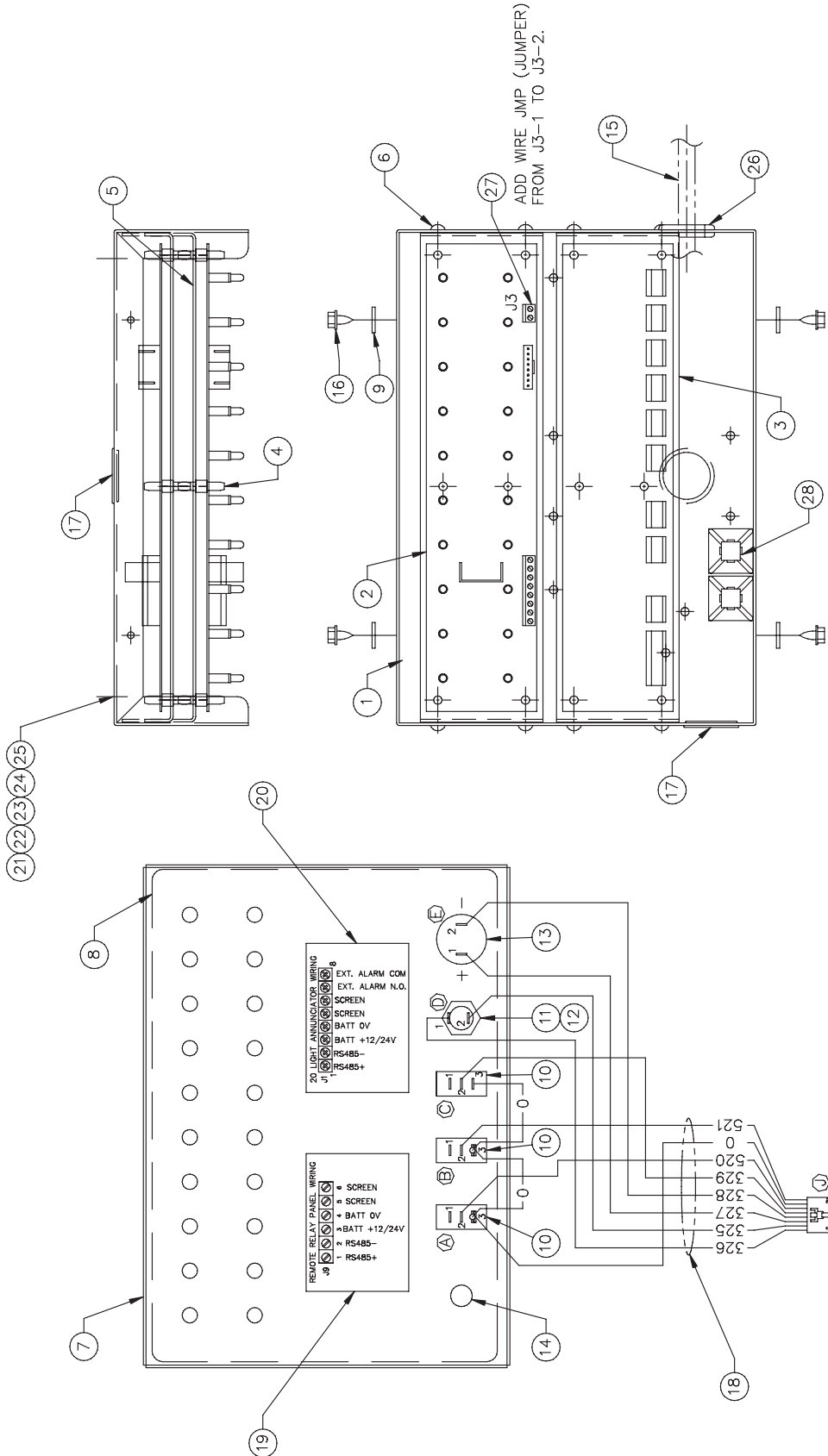


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
COMPONENTS INCLUDED IN 0G4141E				COMPONENTS INCLUDED IN WIRE HARNESS			
1	0F1823CST06	1	ENCL H/G CONTROL PANEL	A	0F1263	1	ADPTR RH SIDE WICKMANN 178.6191
2	0F1824AST06	1	COVER CONTROL PANEL H	B	0F1262	4	HOLDER FUSE WICKMANN 178.6150
3	0F2606	1	HINGE CONTINUOUS H PANEL	C	0F1264	1	ADPTR LH SIDE WICKMANN 178.6192
4	036261	6	RIVET POP .125 X .275 SS	D	0E9049A	2	ASSY PCB G-PANEL RELAY 24VDC
5	0F5763	1	ASSY PROGRAMMED H-100	E	055911	1	BLOCK TERM 20A 12 X 6 X 1100V
6	0F1732	1	DECAL FUSES LOCATED INSIDE	COMPONENTS NOT INCLUDED IN 0G4141E OR WIRE HARNESS			
7	0E9764	1 FT.	RAIL SNAPTRACK PCB HOLDER BULK	50	056739	REF.	RELAY CONTACTOR 12VDC
8	0F1958	1	PLATE HARNESS CLAMP	51	022287	REF.	SCREW HHC 1/4-20 X 3/4 G5
9	0F2256	1	ASSY PCB PWR AVR W/AMP HEADER	52	022473	REF.	WASHER FLAT 1/4-M6 ZINC
10	029673	1	DIO BRIDGE 25A 600V	53	022097	REF.	WASHER LOCK M6-1/4
11	049226	5	WASHER LOCK M5	54	022127	REF.	NUT HEX 1/4-20 STEEL
12	079224	2	SCREW PPHM M5-0.8 X 30 SS	55	0E7403B	1	FUSE ATO TYPE 10 AMP (RED)
13	051713	5	WASHER FLAT M5	56	0E7403C	1	FUSE ATO TYPE 15 AMP (BLUE)
14	0F5886	2	SCREW HHPM M5-0.8 X 12	57	0F7473	1	DECAL H-100 RELAY BD 12V RB1
15	043182	1	WASHER LOCK M3	58	0F7474	1	DECAL H-100 RELAY BD 12V RB2
16	051714	1	NUT HEX M3-0.5 G8 YEL CHR	59	0F5459	1	DECAL CPL CONTROL PANEL FUSES
17	052777	1	WASHER FLAT M3	60	0F5461	1	DECAL CPL 5.4/6.8L TB3
18	051716	3	NUT HEX M5-0.8 G8 CLEAR ZINC	61	0C2323	2	SCREW PHTT #6-32 X 5/8 ZYC
19	043180	3	WASHER FLAT M4	62	0C2699	2	SCREW PHTT #6-32 X 3/8 ZYC
20	0C3990	3	SCREW PHTT M4-0.7 X 10 ZYC	63	0F6145	A/R	SEAL WEATHER .45" DIA
21	0F4333	1	CONN DUST CAP W/CHAIN DB9	64	0F1740C	1	ASSY PCB 10A UL BATT CHRGR 12V
22	0F5883	1	WASHER FLAT M3.5	65	049226	5	WASHER LOCK M5
23	0F5884	1	SCREW PHTT M3.5-0.6 X 10	66	051713	5	WASHER FLAT M5
24	055014	10	SCREW PPHM M4-0.7 X 8 BLX OX	67	091526	5	SCREW PPHM M5-0.8 X 12 ZNC
25	022264	10	WASHER LOCK #8-M4	68	-	REF.	DPE BREAKER SEE DRAWING 0F9280
26	0G3546	1	DECAL WRN BATT CHRGR 12/24V BI	69	043182	REF.	WASHER LOCK M3
27	0F5752A	1	RES WW 10R 5% 15W QK CONN	70	051714	REF.	NUT HEX M3-0.5 G8 YEL CHR
28	0G3648	1	M5-0.8 CAPTIVE PANEL KNLD HD	71	052777	REF.	WASHER FLAT M3
29	0F6305	2	SEAL COVER 3.18 X 12.7 X 382	72	-	REF.	BOOST RESISTOR SEE DRAWING 0F9280
30	0F6305A	1	SEAL COVER 3.18 X 12.7 X 283	73	051716	1	NUT HEX M5-0.8 G8 CLEAR ZINC
31	0G4329	1	HARNESS H-PNL INTEGRATED SW (NOT SHOWN)	74	0F5191	1	ASSY PCB FUEL PRES/FLUID BASIN

Section 6 – Exploded Views and Parts Lists

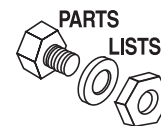
Standby Generator Set

20-light Remote Annunciator – Drawing No. 0G0948D-B



Section 6 – Exploded Views and Parts Lists

Standby Generator Set 20-light Remote Annunciator – Drawing No. 0G0948D-B



ITEM	PART NO.	QTY.	DESCRIPTION
1	0A6985	1	PANEL, ANNUNCIATOR REAR
2	0A6388D	1	PC BOARD, 20 LT ANNUNCIATOR
3	0A9036B	1	PC BOARD, REMOTE RELAY
4	040213	12	PCB STAND OFF
5	0A6990	2	SUPPORT, PC BOARD
6	036261	8	RIVET POP .125 X .275 SS
7	0A6988	1	PANEL, ANNUNCIATOR FRONT
8	0A6733	1	DECAL, ANNUNCIATOR
9	052621	4	WASHER NYLON .200
10	061284	3	SWITCH, MOMENTARY SPST
11	032300	1	FUSE HOLDER
12	044299	1	FUSE, 1 AMP
13	061286	1	SOUNALERT BUZZER
14	065511	1	PLUG, SHEET METAL
15	0G0807	1	HARN REMOTE ANNC.TO GEN
16	056892	4	CRIMPTITE
17	025034	2	KNOCK-OUT PLUG
18	0E5620	1	HARNESS 10 WIRE
19	0D4461	1	DECAL,WIRING,REMOTE RLY PNL
20	0D4462	1	DECAL,WIRING,REMOTE ANNUC
21	040479	4	VIB MNT 1.0 X 1.0 X 1/4-20
22	022097	8	WASHER LOCK M6-1/4
23	022473	4	WASHER FLAT 1/4-M6 ZINC
24	022127	4	NUT HEX 1/4-20 STEEL
25	022507	4	SCREW HHC 1/4-20 X 1/2 G5
26	090576	1	GROMMET .93 X .06 X .81
27	0441140995	1	WIRE ASSY #JMP 18GA 4"LG
28	057593	2	CABLE TIE MOUNT BLACK
29	028739A	2	TIE WRAP UL 3.9" X .10" BLK



Section 6 – Exploded Views and Parts Lists

Standby Generator Set

Alternator Compartment – Drawing No. 0F6994-B

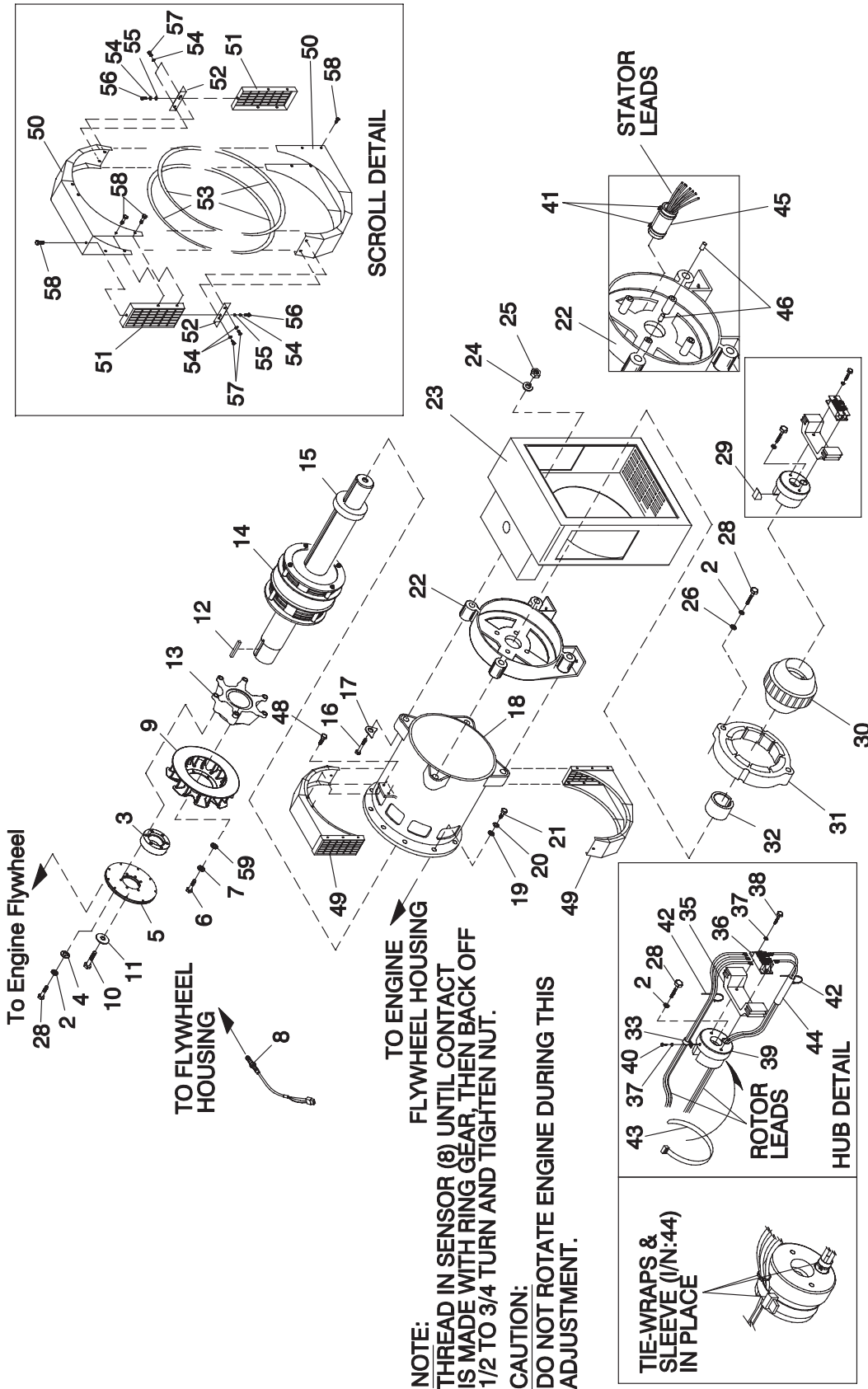
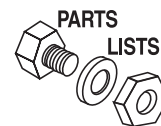


TABLE A

VOLTAGE CODE	BRUSHLESS EXCITATION (BRS) ROTOR & STATOR COMBINATIONS			
	35kW 390 ALT ROTOR I/N:14	40kW 390 ALT ROTOR I/N:14	50kW 390 ALT ROTOR I/N:18	60kW 390 ALT ROTOR I/N:18
A	020811B	020717B	020812B	020718B
D	020811B	020717G	020812B	020718B
G	020811D	020717D	020812D	020718D
J	020811D	020717D	020812D	020718D
K	020811D	020717D	020812D	020718D
L	020812D	020718J	020812D	020718J
M	020811B	020717B	020812B	020718B
N	020811D	020717D	020812D	020718D
P	020811D	020717D	020812D	020718D
R	020811D	020717D	020812D	020718D

Section 6 – Exploded Views and Parts Lists

Standby Generator Set Alternator Compartment – Drawing No. 0F6994-B

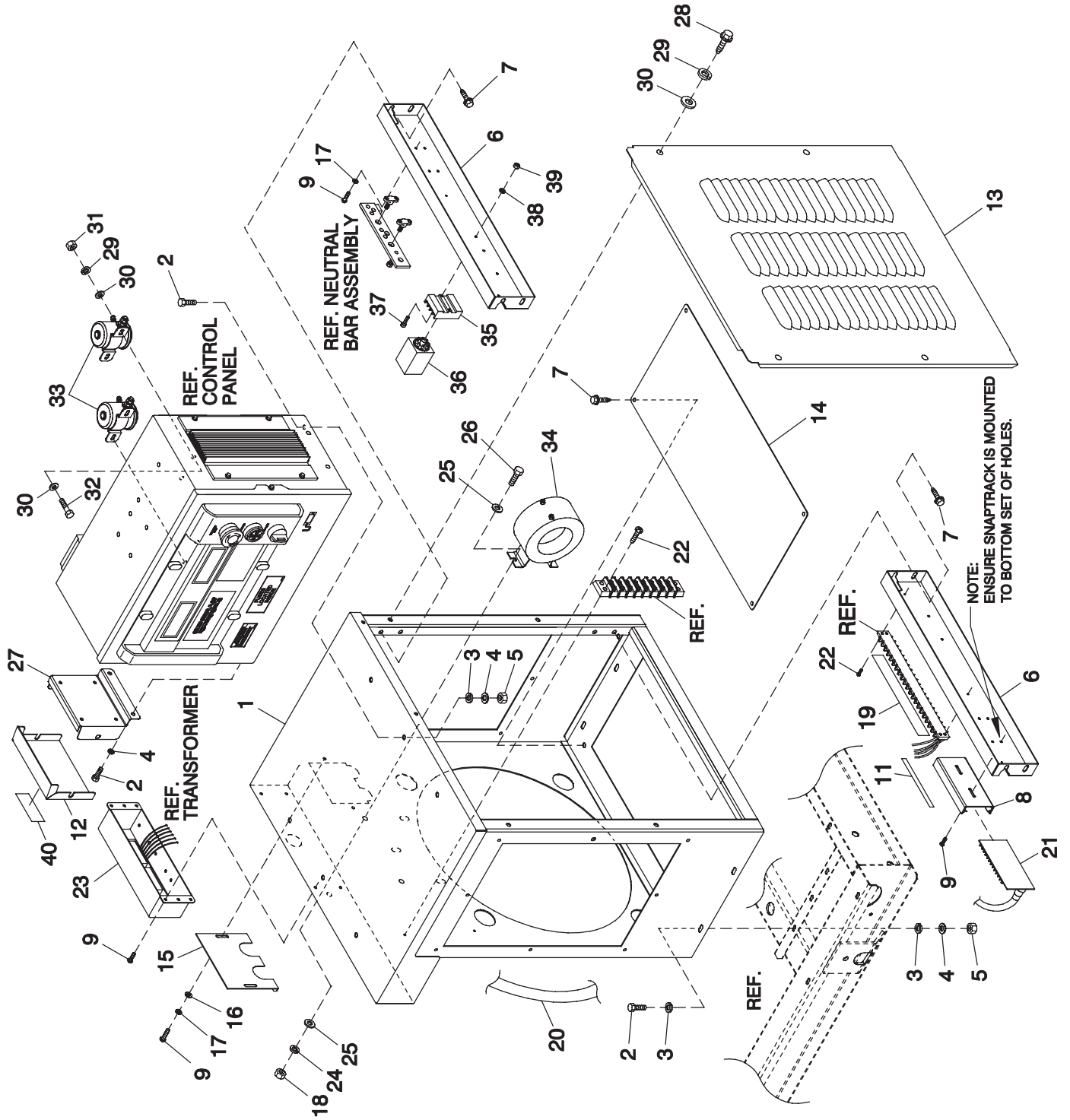


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
2	051769	9	WASHER LOCK M12	31	068404	1	EXCITER FIELD 1.25 STK
3	0C1473	1	SPACER 390 ALT-SAE 10 X 11-1/2		068405	1	EXCITER FIELD 15" 2" LG
4	049808	6	WASHER FLAT M12	32	092950	1	COLLAR SLIP FIT 390 MM
5	0A8240	REF	FLEX PLATE SAE10	33	020151	1	CLAMP VINYL .312 X .203 Z
6	055173	6	SCREW HHC M8-1.25 X 20 G10.9	35	090063	1	BRIDGE SUPPORT DIODE 15"
7	022129	6	WASHER LOCK M8-5/16	36	090152	1	ASSY BRIDGE RECTIFIER
8	0D2244M	REF	ASSY MAGPICKUP(3/8-24 MALE)	37	023365	3	WASHER SHAKEPROOF INT #8
9	0G0724	1	FAN MACHINED 390 SAE ALTERATOR	38	033143	2	SCREW HHM #8-32 X 7/8
10 *	0A2601	1	SCREW HHC M16-2.0 X 45 G8.8	39	090064	1	CAP END ROTOR 390MM
11 *	0A2602	1	WASHER FLAT .688ID X 3.25OD	40	033133	1	SCREW HHM #8-32 X 3/8
12 *	0A1138	1	KEY SQ 3/8 X 2-1/2 STEEL	41	031980	2	TIE WRAP UL 14.6 X .14 NATL
13 *	021941	1	COUPLER 390 SAE	42	028739A	2	TIE WRAP 3.9" X .10" BLK UL
14	-----	--	SEE TABLE A	43	085662D	1	TIE WRAP UL 17.7 X .35 BLK HT
15 *	052624	1	BEARING BALL 6212 SEALED	44	022661L	1	SLEEVING UL #0 .330 ID
16	0A5580	4	SCREW HHC M14-2.0 X 140 G8.8	45	083549	1	SLEEVE RUBBER
17	0A1633	4	WASHER,390 SAE ALT.	46	022392	2	PIN DOWEL 1/2 X 1-1/4
18	-----	--	SEE TABLE A	48	0A2110	2	SCREW SWAGE 1/4-20 X 1/2 Z/YC
19	022131	REF	WASHER FLAT 3/8-M10 ZINC	49	0A4089	1	ASSY SCROLL 390 SAE
20	046526	REF	WASHER LOCK M10				
21	057642	REF	SCREW HHC M10-1.5 X 40 G8.8		KIT 0A4089 PARTS		
22	068113	1	CARRIER REAR BRG 15"	50	0A2491	2	SHROUD ALT SHEET METAL
23	0E6353	REF	LOWER PANEL 390MM SHORT	51	0A2497	2	SCREEN SHROUD SAE
	0E6341	REF	LOWER PANEL 390MM LONG	52	0A2496	2	BRKT TENSIONER SAE SCROLL
	0F4430	REF	CONN BOX 390 SHORT H	53	056326	8.4 FT.	TRIM VINYL BLACK 1/8GP
	0F1855	REF	CONNECTION BOX 390 H	54	022097	6	WASHER LOCK M6-1/4
24	043123	4	WASHER LOCK M14	55	022473	6	WASHER FLAT 1/4-M6 ZINC
25	051779	4	NUT HEX M14-2.0 G8 YEL CHR	56	045757	2	SCREW HHC M6-1.0 X 25 G8.8
26	052259	2	WASHER FLAT M12	57	047411	4	SCREW HHC M6-1.0 X 16 G8.8
28	068406	9	SCREW HHC M12-1.75 X 60 G10.9	58	0A2110	12	SCREW SWAGE 1/4-20 X 1/2 Z/YC
29	070274	1	KEY SQ 3/8 X 2-3/4 STEEL	59	022145	6	WASHER FLAT 5/16-M8 ZINC
30	087271	1	ASSY EXCITER 1.25"STK				
	087272	1	ASSY EXCITER 2.00" STK				
							* ROTOR REPLACEMENT PARTS

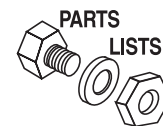
Section 6 – Exploded Views and Parts Lists

Standby Generator Set

Alternator Connection Box – Drawing No. 0G0297-B



Section 6 – Exploded Views and Parts Lists
Standby Generator Set
Alternator Connection Box – Drawing No. 0G0297-B

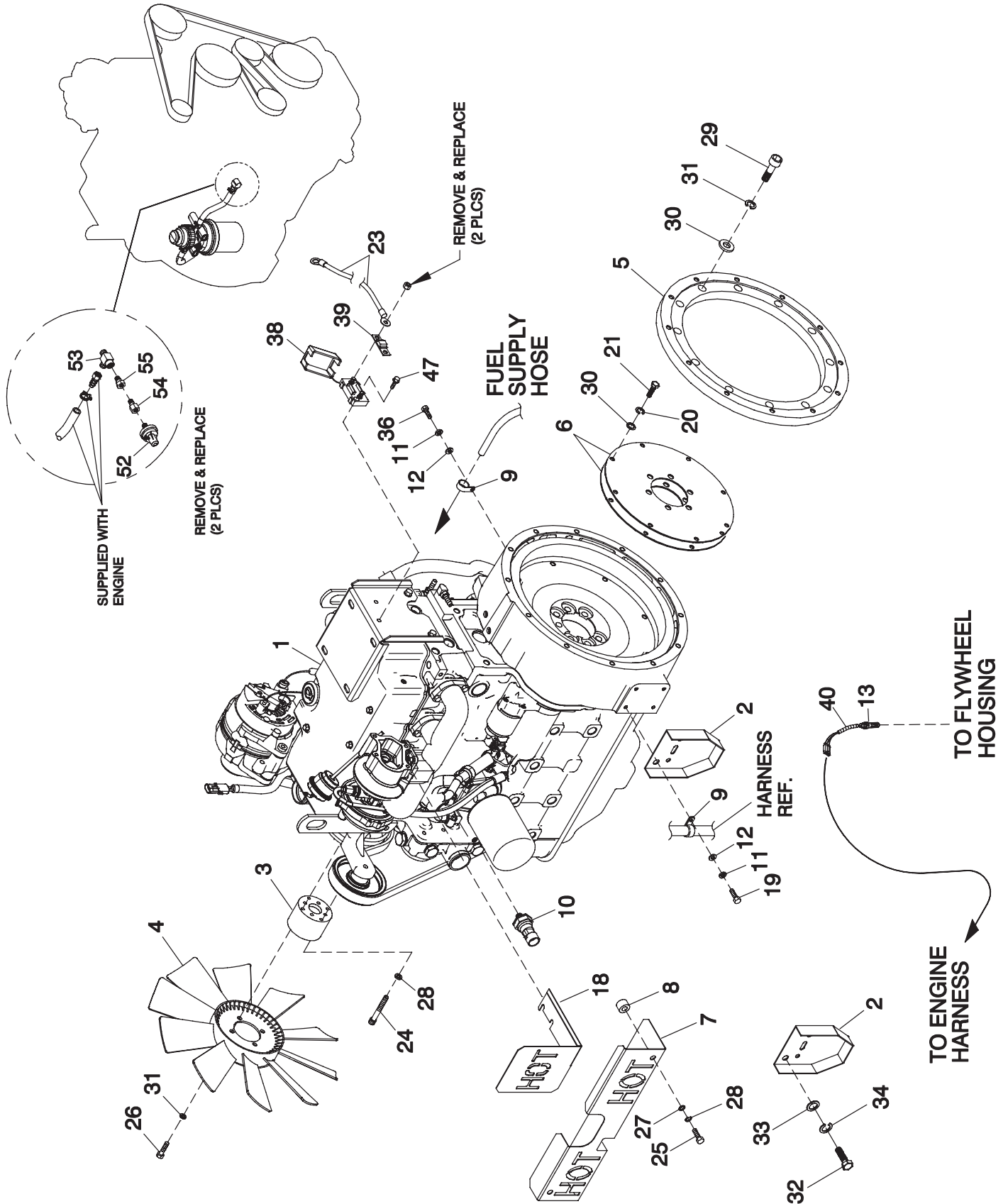


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	0F1855	1	CONNECTION BOX 390 H	(2) 25	022145	12/8	WASHER FLAT 5/16-M8 ZINC
	0F4430	1	CONNECTION BOX 390 SHORT H	(2) 26	042907	6/4	SCREW HHC M8-1.25 X 16 G8.8
2	042568	10	SCREW HHC M6-1.0 X 20 G8.8	(4) 27	0F7185	REF	MOUNT GOV CONTROL H-100
3	022473	12	WASHER FLAT 1/4-M6 ZINC	28	047411	4	SCREW HHC M6-1.0 X 16 G8.8
4	022097	10	WASHER LOCK M6-1/4	29	022097	4/REF.	WASHER LOCK M6-1/4
5	049813	8	NUT HEX M6 X 1.0 G8 YEL CHR	30	022473	4/REF.	WASHER FLAT 1/4-M6 ZINC
6	0F2124	2	BRACKET NEUTRAL	31	022127	REF.	NUT HEX 1/4-20 STEEL
7	0C2454	14	SCREW THF M6-1 X 16 N WA Z/JS	32	022287	REF.	SCREW HHC 1/4-20 X 3/4 G5
8	0E9764	1	RAIL SNAPTRACK PCB HOLDER BULK (6" LG)	33	082982	REF.	RELAY CONTACTOR 24VDC
					056739	REF.	RELAY SOLENOID 12VDC PNL MNT
9	0C2266	8	SCREW PHTT M5-0.8 X 16 ZYC	(2) 34	0F4281A	3/2	XFMR CURRENT 100A W/BRKT
(1) 10	0F4421	1	HARN ALT CONBOX 3PH H-100		0F4281B	3/2	XFMR CURRENT 150A W/BRKT
	0F4422	1	HARN ALT CONBOX 1PH H-100		0F4281C	3/2	XFMR CURRENT 200A W/BRKT
11	0F8565	1	DECAL H-100 RB3 CUST CONN		0F4281D	3/2	XFMR CURRENT 300A W/BRKT
(4) 12	0F7186	REF	COVER GOV CONTROL		0F4281E	3/2	XFMR CURRENT 400A W/BRKT
13	0F2488	1	COVER REAR 390 CONN BOX		0F4281F	3/2	XFMR CURRENT 500A W/BRKT
14	0F5614	1	PLATE GLAND 390L		0F4281G	3/2	XFMR CURRENT 600A W/BRKT
	0F5684	1	PLATE GLAND 390S		0F4281H	3	XFMR CURRENT 800A W/BRKT
15	0F1958	1	PLATE HARNESS CLAMP	(3) 35	0C3211G	1	SOCKET RELAY 8 PIN
16	051713	2	WASHER FLAT M5	(3) 36	0C3211E	1	RELAY PNL 12VDC DPDT 8PIN
17	049226	6	WASHER LOCK M5		0C3211F	1	RELAY 24VDC DPDT 8 PIN
(2) 18	045771	6/4	NUT HEX M8-1.25 G8 CLEAR ZINC	(3) 37	033503	2	SCREW PHM #6-32 X 7/8 ZINC
19	0F5683	1	DECAL H-100 CUST CONNECTIONS	(3) 38	022155	2	WASHER LOCK #6
20	052250	1	TAPE FOAM 1 X 1 (55" LG)	(3) 39	022188	2	NUT HEX #6-32 STEEL
21	0E9049A	REF.	ASSY PCB G-PANEL RELAY 24VDC	(4) 40	0A3394	1	DECAL ELEC GOVERNOR
	0E9049B	REF.	ASSY PCB G-PANEL RELAY 12VDC				
22	0C2212	4	SCREW PHTT M4-0.7 X 16 ZYC				(1) NOT SHOWN
23	0F5103	REF.	INTERFACE 3PH 416/480V				(2) SINGLE PHASE ONLY USES 2 CURRENT TRANSFORMERS. 3 PHASE USES 3 CURRENT TRANSFORMERS.
	0F5104	REF.	INTERFACE 3PH 208/240V				(3) OPTIONAL EQUIPMENT
	0F5105	REF.	INTERFACE 1PH 120/240V				(4) D2.4 ONLY
(2) 24	022129	6/4	WASHER LOCK M8-5/16				

Section 6 – Exploded Views and Parts Lists

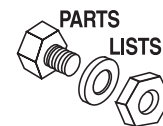
Standby Generator Set

Engine – Drawing No. 0G0300-A



Section 6 – Exploded Views and Parts Lists

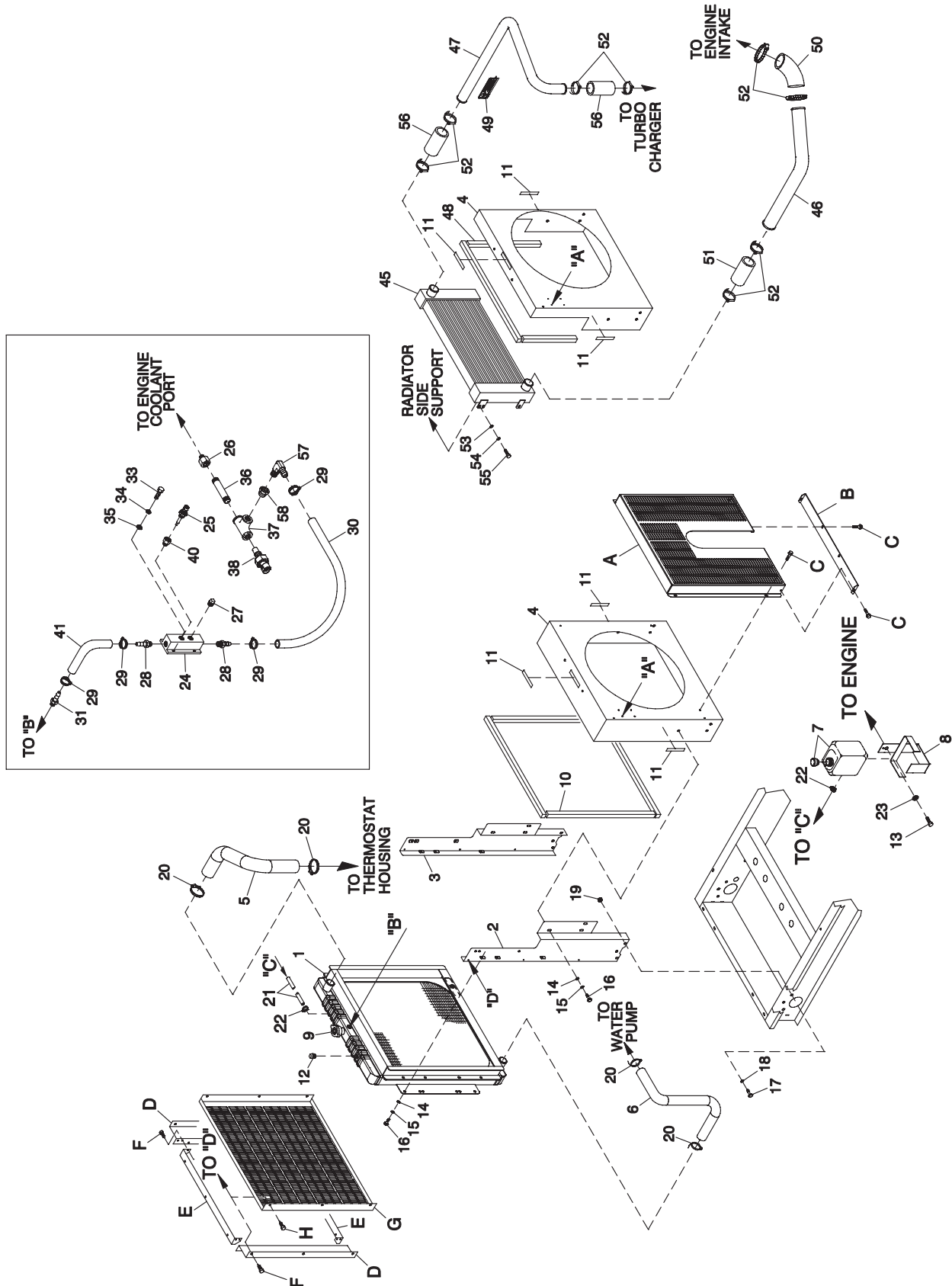
Standby Generator Set Engine – Drawing No. 0G0300-A



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	0E9895	1	ENGINE 3.0L JD TURBO/WASTEGATE	29	052647	12	SCREW SHC M10-1.5 X 25 G12.9
	0E9896	1	ENGINE 3.0L JD TURBO/AFTERCOOL	30	022131	20	WASHER FLAT M10-3/8 ZINC (12 USED TO MOUNT TO STATOR **)
2	0F0683	4	ENGINE FOOT 2.4L JD STAMPING				
3	0F0726	1	FAN SPACER 2.4L JD 22" PLASTIC	31	046526	28	WASHER LOCK M10 (12 USED TO MOUNT TO STATOR **)
4	0E7754	1	COOLING FAN 10-BLADE (KYSAIR)				
5	0A8241	1	ADAPTOR SAE4 TO SAE3	32	070263	5	SCREW HHC M16-2.0 X 35 G10.9
6	0A8240	2	FLEX PLATE SAE10	33	0A1646	5	WASHER FLAT M16
7	0F1242	1	LABEL HEAT SHIELD 3.0L JD	34	070265	5	WASHER LOCK M16
8	0G5589	2	SPACER .49 X .75 X 2.375	35	052858	1	NUT TOP LOCK FL M8-1.25 (FOR ALT. WIRE NOT SHOWN)
9	055934AA	2	CLAMP VINYL .812 X .531 Z				
10	0F4612	1	SENDER OIL PRESSURE 1/8" NPT	36	063837	1	SCREW HHC M12-1.75 X 30 G10.9
11	051769	2	WASHER LOCK M12	(2) 37	057642	12	SCREW HHC M10-1.5 X 40 G8.8
12	049808	2	WASHER FLAT M12	38	0F1156	1	FUSE HOLDER BOLT-ON
13	0D2244M	2	ASSY MAGPICKUP(3/8-24 MALE)	39	0F1371	1	FUSE 60A BOLT-ON
(1) 14	055934D	1	CLAMP VINYL 1.06 X .406 Z	40	077043A	1	CONDUIT FLEX .38" ID (18" LG)
(1) 15	0F2776C	1	BRACKET, SIGNAL COND. 2 PLACE (NOT SHOWN)	(1) 41	081008B	2	GROMMET 1.25 X .25 X 1.00
(1) 16	0F5426	1	HARNESS ENGINE D 2.4L H-100 (NOT SHOWN)	(1) 42	0F7185	1	MOUNT GOV CONTROL H-100
	0F6882	1	HARN ENG D2.4/3.0L H-100 VZW	(1) 43	0F7186	1	COVER GOV CONTROL
(1) 17	056739	2	RELAY SOLENOID 12VDC PNL MNT (NOT SHOWN)	(1) 44	0E9049B	1	ASSY PCB G-PANEL RELAY 12VDC
18	0G51570SS0R	1	HEAT SHIELD, TURBO 2.4L & 3.0L	(1) 45	0E2507	1	PROBE, COOLANT LEVEL 3/8 NPTF
19	052617	1	SCREW HHC M12-1.75 X 20 G8.8	(1) 46	0E0502	1	TEMPERATURE SENDER, DELPHI
20	022237	8	WASHER LOCK 3/8	(1) 47	0F6749	1	ADAPTER 3/8 TO 3/8 BRASS
21	043097	8	SCREW SHC 3/8-16 X 1 G8.8NZ	(1) 48	030150	1	NIPPLE PIPE 3/8 NPT X 3
22	0C2428	2	SCREW PHTT #6-32 X 1/2 ZYC	(1) 49	027738	1	PIPE TEE 3/8 NPT
23	0F1158A	1	ASSY WIRE GLOW PLUG JD W/PLUG	(1) 50	022152	2	WASHER LOCK #10
24	046579	4	SCREW SHC M8-1.25 X 60 G12.9	(1) 51	033120	2	SCREW HHC #10-32 X 3/8
25	060593	2	SCREW HHC M8-1.25 X 95 G8.8	52	076466	1	SWITCH OIL PRESSURE N/O 4PSI
26	051756	4	SCREW HHC M10-1.5 X 20 G8.8	53	0F0805A	1	TEE STREET F1/4-F1/4-M1/4 W/VS
27	022145	2	WASHER FLAT M8-5/16 ZINC	54	0E5029	1	SNUBBER BRASS 1/8" NPT
28	022129	6	WASHER LOCK M8-5/16	55	035579	1	BSHG RDCR HEX 1/4 TO 1/8
				(1) NOT SHOWN			
				(2) TO MOUNT STATOR TO ADAPTOR (NOT SHOWN)			

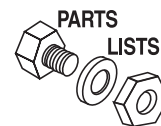
Section 6 – Exploded Views and Parts Lists

**Standby Generator Set
Radiator – Drawing No. 0G3946-C**

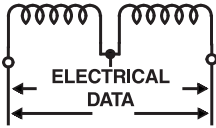


Section 6 – Exploded Views and Parts Lists

Standby Generator Set Radiator – Drawing No. 0G3946-C



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	0G1286C	1	RAD W/EXT FRAME R/H-IN L/H-OUT	38	0E0502	REF	TEMPERATURE SENDER DELPHI
2	0F1066	1	RAD SIDE SUPPORT 3.0L JD LH	40	0F6749	1	ADAPTER 3/8 TO 3/8 BRASS
3	0F1067	1	RAD SIDE SUPPORT 3.0L JD RH	41	030340	1	HOSE 1/4 ID SAE 30R7 (10" LG)
4	0F1054	1	VENTURI-CAC 3.0L JD W/22"FAN				
	0F1055	1	VENTURI-NONCAC 3.0L JD W/22"FAN	42 *	0F0381	REF.	KIT STANDARD FAN GUARD
5	0F1048	1	HOSE UPPER RAD 3.0L JD	A	0E9241	1	FAN GUARD 2.4L JD
6	0F1049	1	HOSE LOWER RAD 3.0L JD	B	0F0686	1	FAN GUARD BOTTOM 2.4L JD
7	076749	1	TANK COOLANT RECOVERY	C	090388	10	SCREW HHTT M6-1.0 X 12 ZINC
8	080712	1	BRACKET COOLANT RECOVERY TANK				
9	0G0427	REF	CAP RAD 12.8 PSI(1.6L/14140V)	43 *	0G3935	REF.	KIT AIR DUCT
10	052250	1	TAPE FOAM 1" X 1" (120")	D	0E2671	2	RH/LH AIR DUCT
11	050275	3	DECAL CAUTION FAN	E	0G36660ST03	2	TOP/BOT AIR DUCT
12	026073A	1	PLUG STD PIPE 1/4 STEEL SQ HD	F	0C2454	14	SCREW THF M6-1 X 16 N WA Z/JS
13	088345	1	SCREW HHC M16-2.0 X 30 G8.8				
14	022131	12	WASHER FLAT 3/8-M10 ZINC	44 *	0G3936	REF.	KIT STONEGUARD 4.8L DEUTZ
15	046526	12	WASHER LOCK M10	G	0G36690ST03	1	STONE GUARD
16	051756	12	SCREW HHC M10-1.5 X 20 G8.8	H	090388	6	SCREW HHTT M6-1.0 X 12 ZINC
17	049808	6	WASHER FLAT M12				
18	052617	6	SCREW HHC M12-1.75 X 20 G8.8	CHARGED AIR COOLER PARTS			
19	052860	6	NUT LOCK FL M12-1.75	45 **	0F1301	1	WELDMENT CAC 19 TUBE X 2" IN/OUT
20	042561	4	CLAMP HOSE #36 1.88-2.75	46 **	0F1171	1	TUBE, CAC TO INTAKE 3.0L JD
21	029032	1	HOSE 9/32 ID (80" LONG)	47 **	0F1172	1	TUBE TURBO TO CAC 3.0L JD
22	048031C	REF	CLAMP HOSE BAND 1/4	48 **	052250	1	TAPE FOAM 1" X 1" (66" LG)
23	070265	1	WASHER LOCK M16	49 **	0D3397	1	DECAL CAUTION HOT SURFACES
24	0F0681	1	MANIFOLD COOLANT SENSORS	50 **	0F1372	1	ELBOW TURBO 45 DEG X 2" ID
25	0E2507	REF	PROBE COOLANT LEVEL 3/8 NPTF	51 **	0A5259B	1	HOSE 2" ID X 4.0" LG
26	0A4707L	1	ADAPTER 3/8NPT X M14-1.5	52 **	086133C	8	CLAMP HI TORQUE 1.75 - 2.625
27	031919	1	PLUG STD PIPE 3/8 COUNTERSUNK	53 **	022145	6	WASHER FLAT 5/16-M8 ZINC
28	0F0971A	2	BARBED STR 1/2 NPT X 1/4 W/VS	54 **	022129	6	WASHER LOCK M8-5/16
29	040173	4	CLAMP HOSE #5.5 .62-.62	55 **	039253	6	SCREW HHC M8-1.25 X 20 G8.8
30	030340	1	HOSE 1/4 ID SAE 30R7 (18" LG)	56 **	071296A	2	HOSE 2" ID X 3.0" LG
31	0D5614	1	BARBED STR MA 3/8" NPT X 1/4"	57	028740	1	BARBED EL 90 1/8NPT X 1/4
33	0C2267	3	SCREW HHTT M5-0.8 X 12 BP	58	055476	1	BSHG RDCR HEX 3/8 TO 1/8 GALV
34	022152	2	WASHER LOCK #10				
35	023762	2	WASHER SHAKEPROOF EXT #10 STL	* OPTIONAL EQUIPMENT			
36	030150	REF	NIPPLE PIPE 3/8 NPT X 3	** TURBO UNITS ONLY.			
37	027738A	REF	PIPE TEE 3/8 NPT				

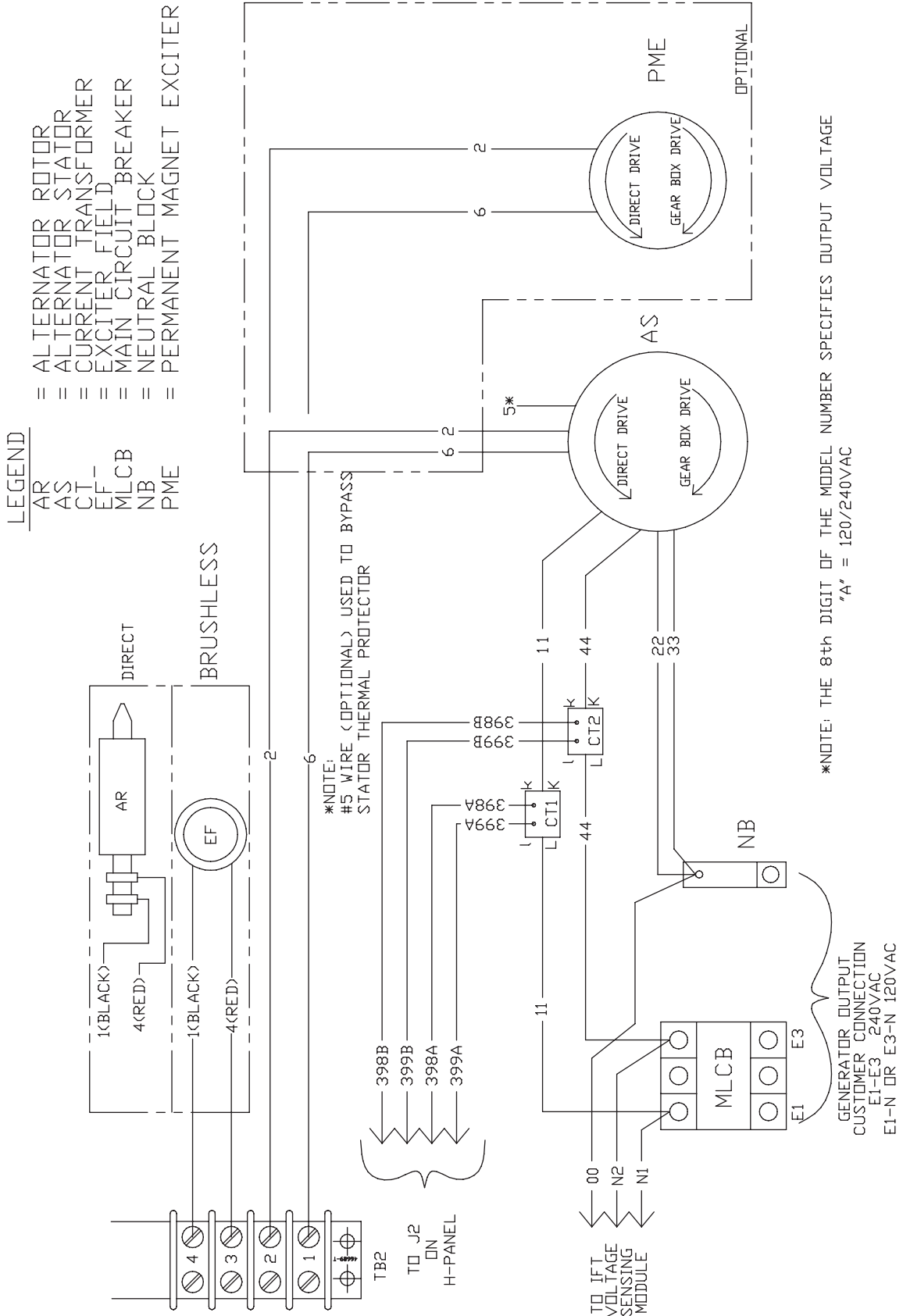


Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 1

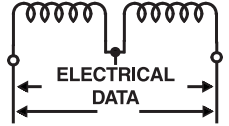
OPTION 1 - SINGLE PHASE, H-100 CONTROL PANEL



Section 7 – Electrical Data

Standby Generator Set

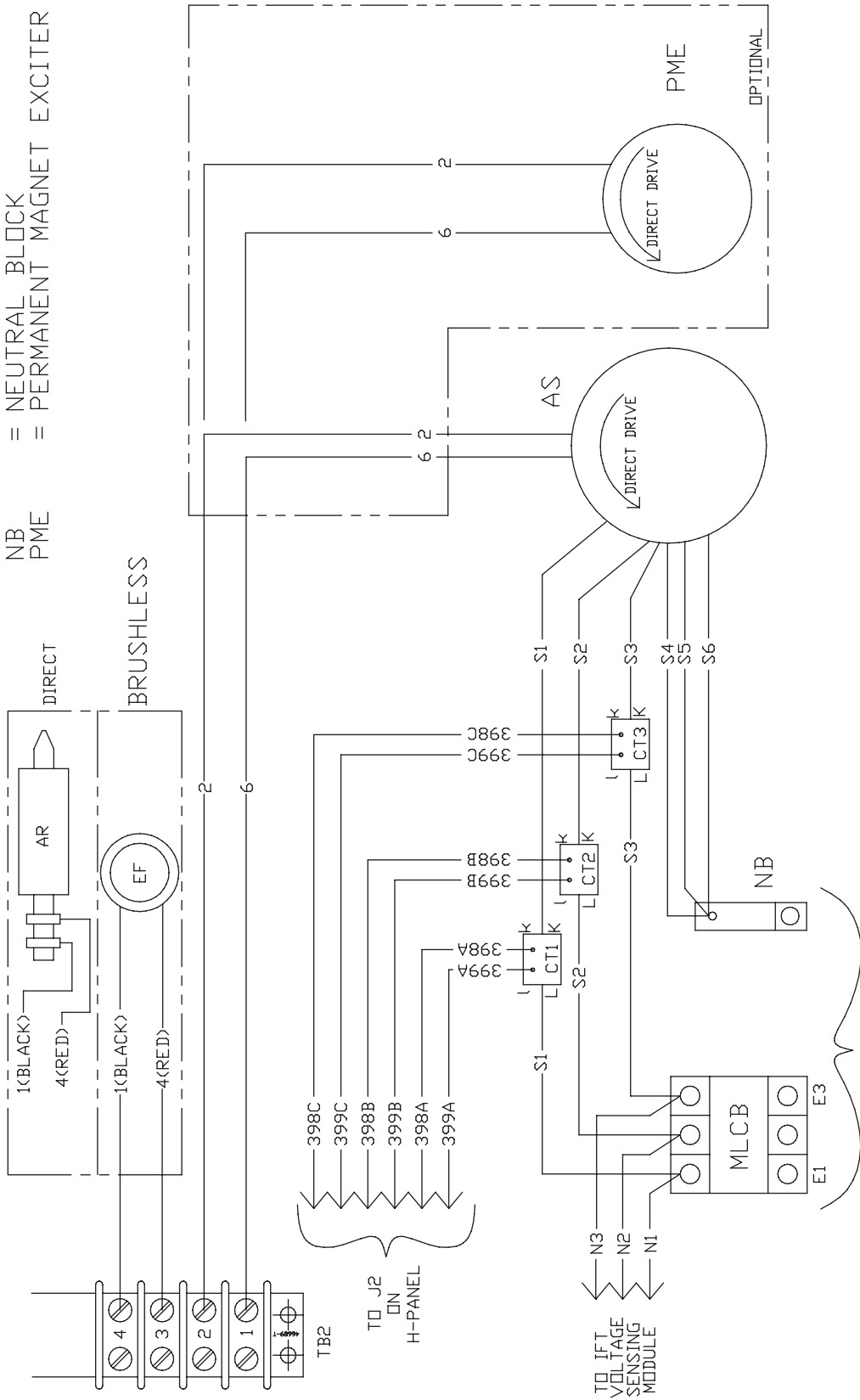
Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 2



OPTION 2 – THREE PHASE, H-100 CONTROL PANEL DIRECT DRIVE, 6 LEAD

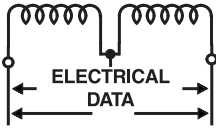
LEGEND

- AR = ALTERNATOR ROTOR
- AS = ALTERNATOR STATOR
- CT = CURRENT TRANSFORMER
- EF = EXCITER FIELD
- MLCB = MAIN CIRCUIT BREAKER
- NB = NEUTRAL BLOCK
- PME = PERMANENT MAGNET EXCITER



*NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE
 "G" = 120/208VAC
 "K" = 277/480VAC

GENERATOR OUTPUT CUSTOMER CONNECTION
 E1 TO E2 *208 OR 480VAC
 E2 TO E3 *208 OR 480VAC
 E1 TO E3 *120 OR 277VAC

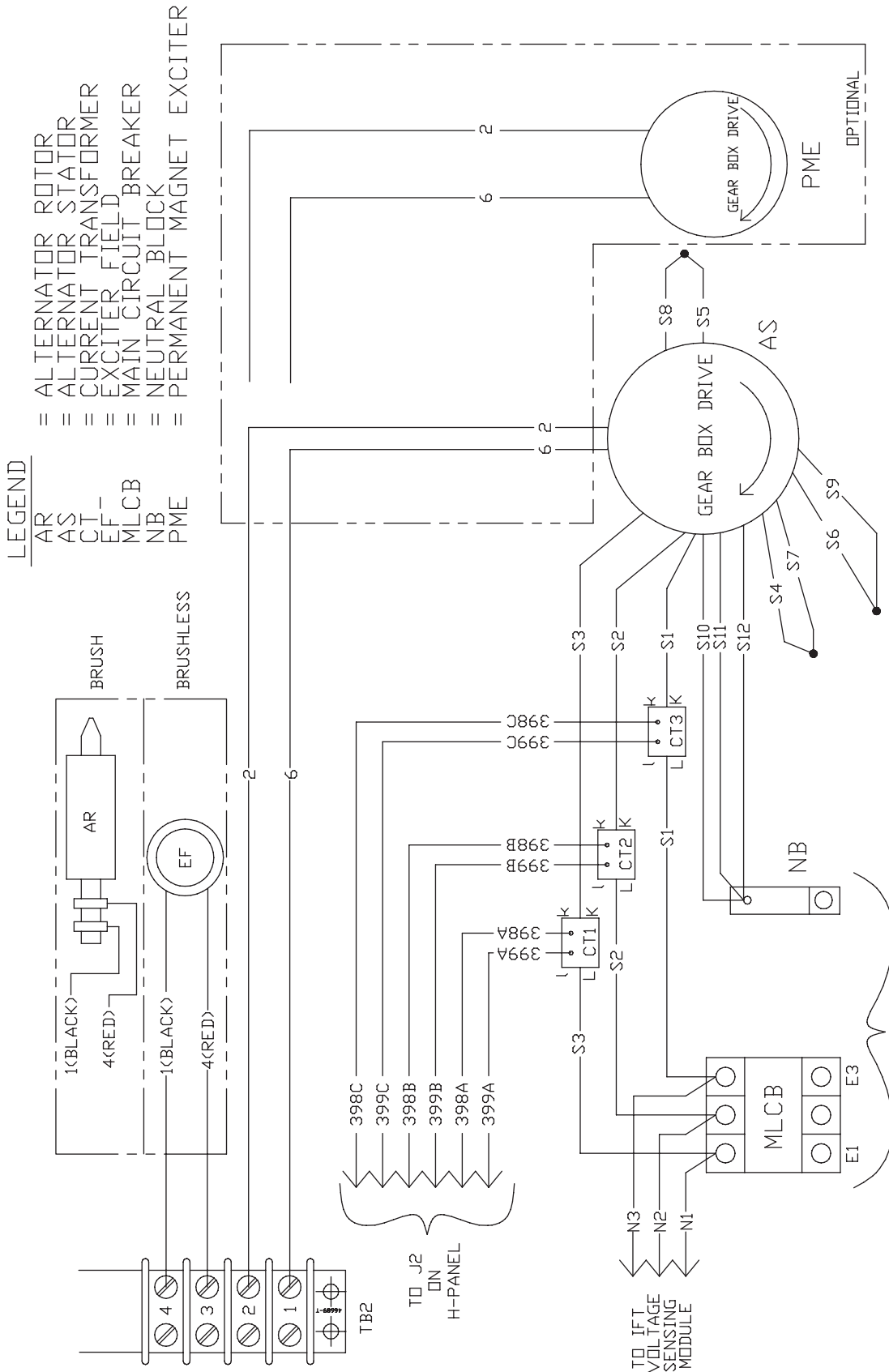


Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 3

OPTION 3 – THREE PHASE, H-100 CONTROL PANEL GEAR BOX (REVERSE ROTATION)



LEGEND

- = ALTERNATOR ROTOR
- = ALTERNATOR STATOR
- = CURRENT TRANSFORMER
- = EXCITER FIELD
- = MLCB
- = NEUTRAL BLOCK
- = PERMANENT MAGNET EXCITER

- AR
- AS
- CT
- EF
- MLCB
- NB
- PME

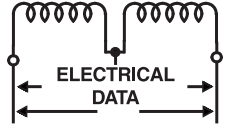
GENERATOR OUTPUT CUSTOMER CONNECTION

- E1 TO E2
- E2 TO E3
- E1 TO E3
- E1 TO NB = * 120 DR 277VAC
- E1, E2, OR E3 TO NB = * 120 DR 277VAC
- * 208 DR 480VAC
- * 277 DR 480VAC
- * NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE
- "G" = 120/208VAC
- "K" = 277/480VAC

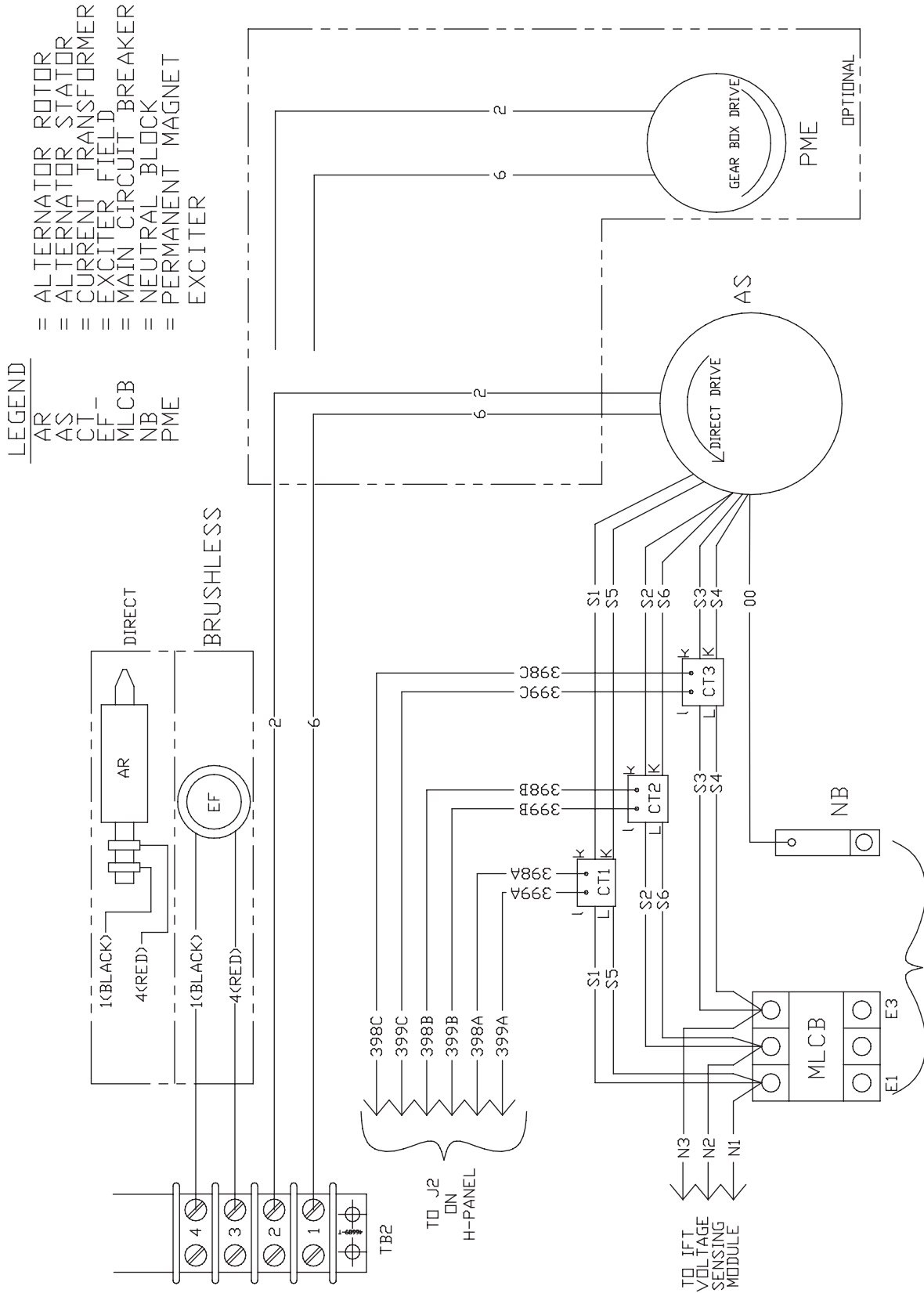
Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 4



OPTION 4 – THREE PHASE DELTA, H-100 CONTROL PANEL DIRECT DRIVE, 7 LEAD



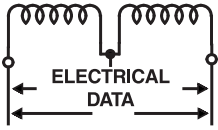
LEGEND

- AR = ALTERNATOR ROTOR
- AS = ALTERNATOR STATOR
- CT = CURRENT TRANSFORMER
- EF = EXCITER FIELD
- MLCB = MAIN CIRCUIT BREAKER
- NB = NEUTRAL BLOCK
- PME = PERMANENT MAGNET EXCITER

GENERATOR OUTPUT CUSTOMER CONNECTION
 E1 TO E2 } 240VAC
 E2 TO E3 }
 E1 TO E3 }
 E1-N OR E3-N = 120VAC

*NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE
 'J' = 120/240VAC

OPTION 5 - THREE PHASE SERIES WYE, H-100 CONTROL PANEL DIRECT DRIVE, 12 LEAD

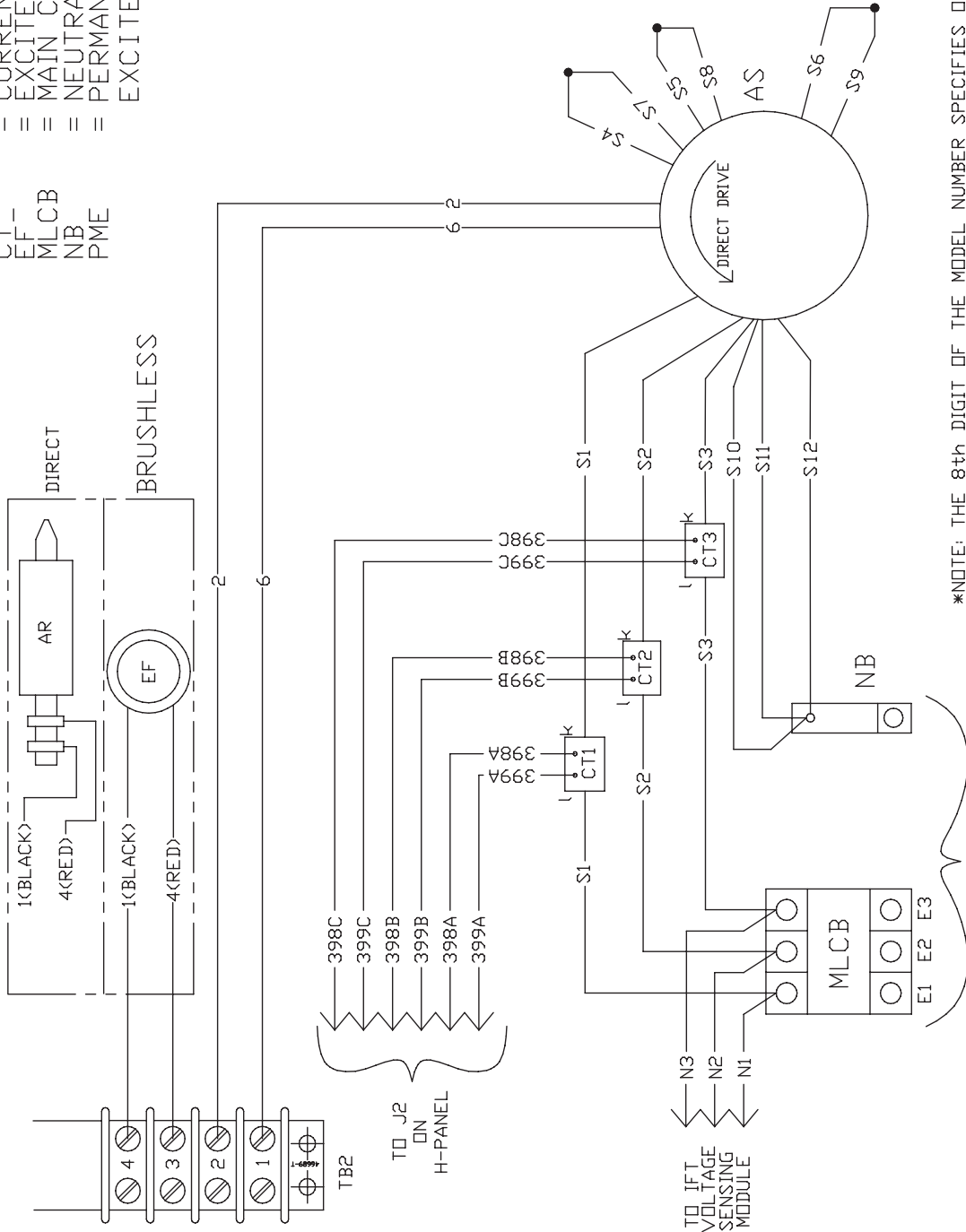


Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 5

- LEGEND**
- AR = ALTERNATOR ROTOR
 - AS = ALTERNATOR STATOR
 - CT = CURRENT TRANSFORMER
 - EF = EXCITER FIELD
 - MLCB = MAIN CIRCUIT BREAKER
 - NB = NEUTRAL BLOCK
 - PME = PERMANENT MAGNET EXCITER



*NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE
 "K" = 277/480VAC 60HZ
 "R" = 240/415VAC 50/60HZ

GENERATOR OUTPUT CUSTOMER CONNECTION

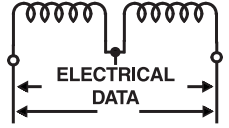
E1 TO E2 } 480VAC
 E2 TO E3 }
 E1 TO E3 }
 E1-N OR E2-N OR E3-N = 277VAC E1-N OR E2-N OR E3-N = 240VAC

E1 TO E2 } 415VAC
 E2 TO E3 }
 E1 TO E3 }
 E1-N OR E2-N OR E3-N = 240VAC

Section 7 – Electrical Data

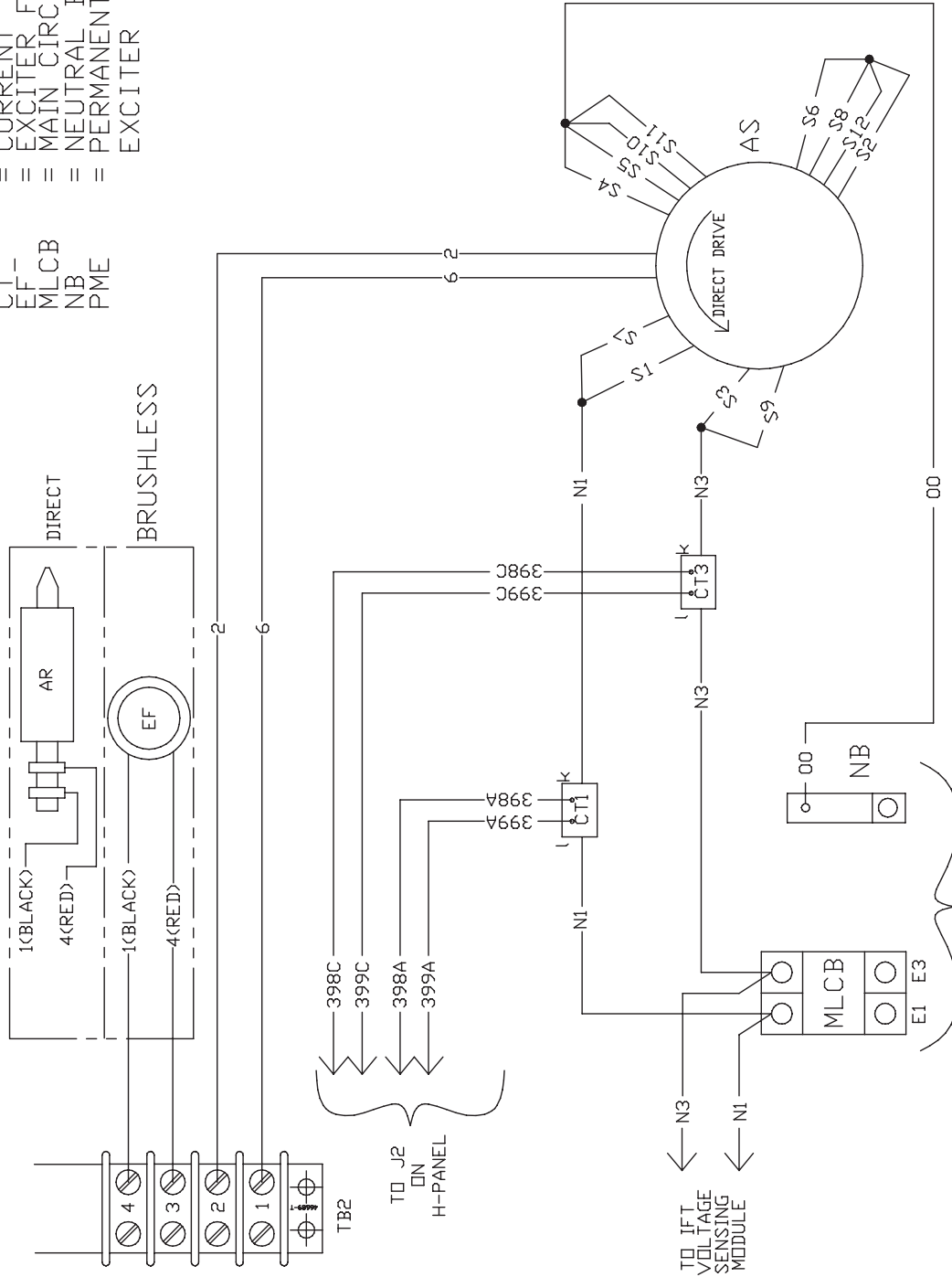
Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 6



OPTION 6 – THREE PARALLEL ZIG ZAG, H-100 CONTROL PANEL DIRECT DRIVE, 12 LEAD

- LEGEND**
- AR = ALTERNATOR ROTOR
 - AS = ALTERNATOR STATOR
 - CT- = CURRENT TRANSFORMER
 - EF- = EXCITER FIELD
 - MLCB = MAIN CIRCUIT BREAKER
 - NB = NEUTRAL BLOCK
 - PME = PERMANENT MAGNET EXCITER



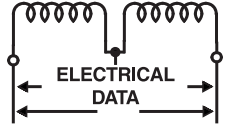
*NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE
 "A" = 120/240VAC 60HZ
 "M" = 110/220VAC 60HZ

GENERATOR OUTPUT CUSTOMER CONNECTION
 E1 TO E3 } 220 OR 240V
 E1 TO 00 } 110 OR 120V
 E3 TO 00 }

Section 7 – Electrical Data

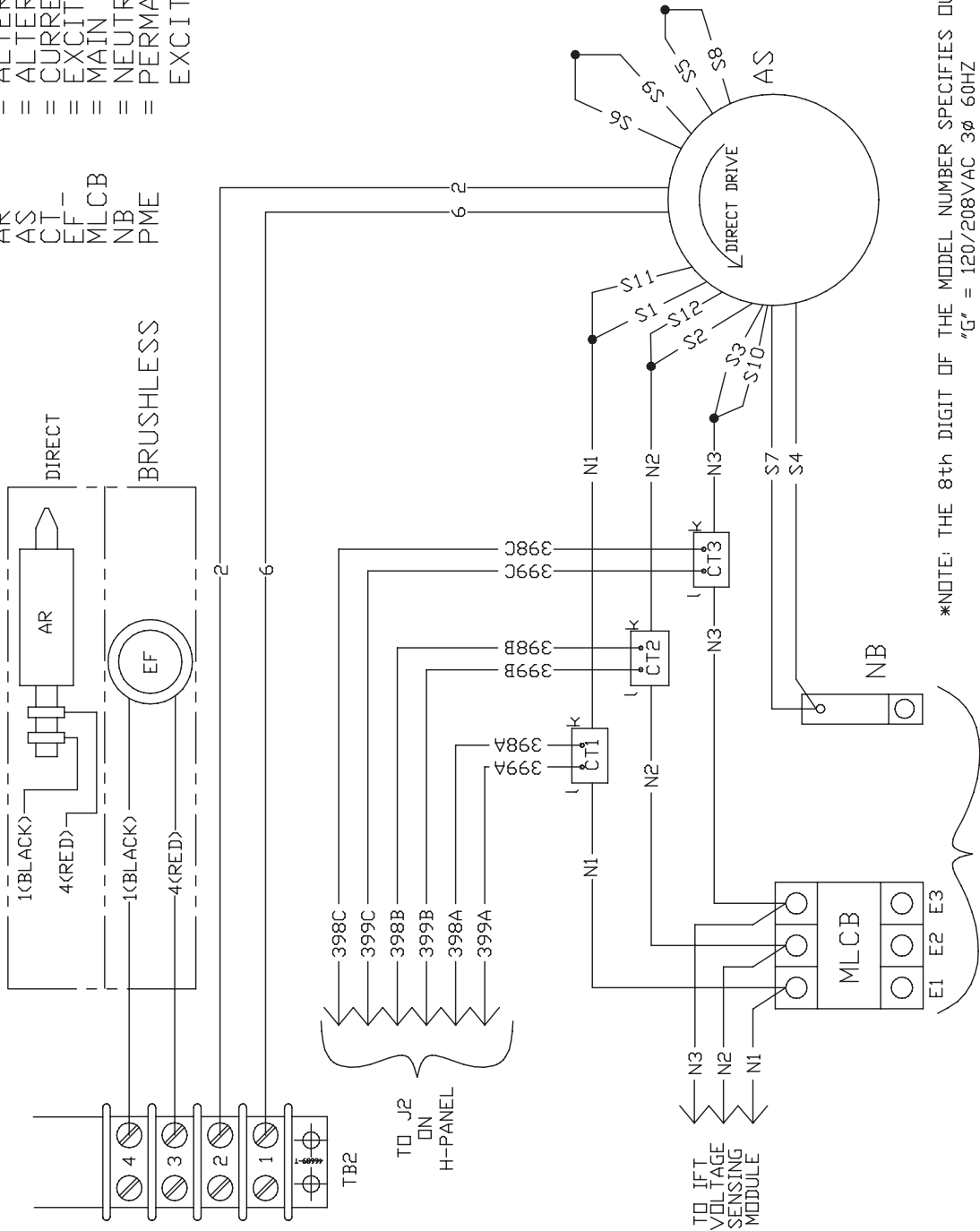
Standby Generator Set

Wiring Diagram - H-100 Alternator – Drawing No. 0F8214-B Part 8



OPTION 8 – THREE PHASE PARALLEL WYE, H-100 CONTROL PANEL DIRECT DRIVE, 12 LEAD

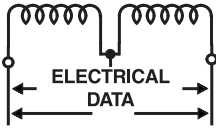
- LEGEND**
- AR = ALTERNATOR ROTOR
 - AS = ALTERNATOR STATOR
 - CT = CURRENT TRANSFORMER
 - EF = EXCITER FIELD
 - MLCB = MAIN CIRCUIT BREAKER
 - NB = NEUTRAL BLOCK
 - PME = PERMANENT MAGNET EXCITER



*NOTE: THE 8th DIGIT OF THE MODEL NUMBER SPECIFIES OUTPUT VOLTAGE

- "G" = 120/208VAC 3 ϕ 60HZ
- "N" = 139/240VAC 3 ϕ 60HZ
- "N" = 115/200VAC 3 ϕ 50HZ





Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - H-200 Alternator – Drawing No. 0G0904-B Part 1

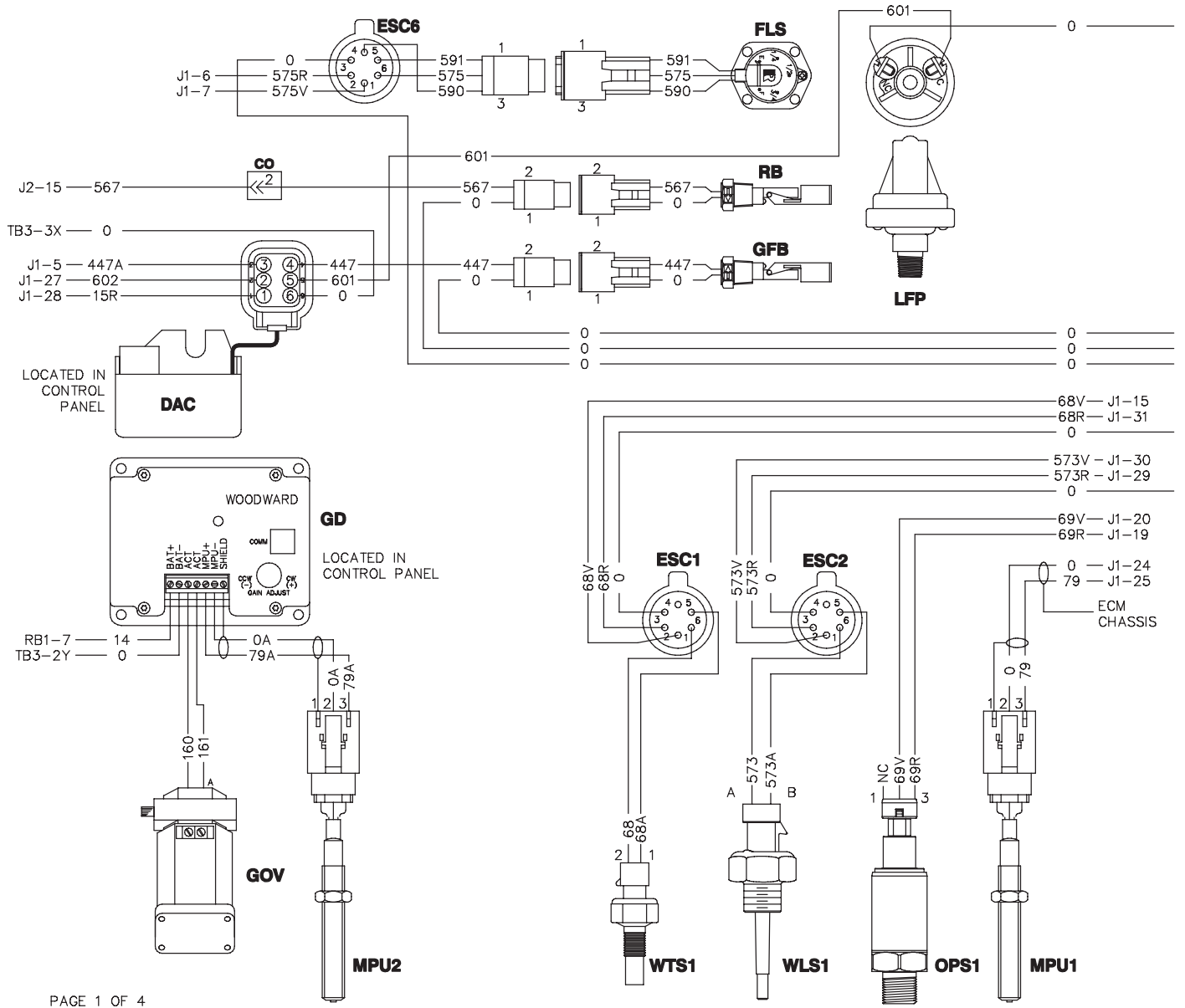
NOTE: ALL WIRES 18 AWG
300V UL LISTED UNLESS
SHOWN OTHERWISE

AWG SIZE

S1,S2 & S3 ARE 600V UL
LISTED

LEGEND	
AH1 – ALARM HORN	J_ – ELECTRONIC CONTROL MODULE CONN.
ALT – DC CHARGE ALTERNATOR	LFP – LOW FUEL PRESSURE SWITCH
AVR – AUTO VOLTAGE REGULATOR DRIVER	MLCB – MAIN LINE CIRCUIT BREAKER
BCC – BATTERY CHARGER CONNECTOR	MOD – MODEM CONNECTOR
BCH – BATTERY CHARGER	MPU_ – MAG. PICK UP
CB – CIRCUIT BREAKER, DPE	OPS1 – OIL PRESSURE SENDER
CO – CROSS OVER CONNECTOR	PHC – PREHEAT CONTACTOR
COM – COMMUNICATIONS PORT (9 PIN D-SUB)	PME – PERMANENT MAGNET EXCITER
CT – CURRENT TRANSFORMER	R_ – RESISTOR
DAC – DIGITAL TO ANALOG CONVERTER	RA – REMOTE ANNUNCIATOR
DB – DIODE BRIDGE	RAB – REMOTE ANNUNCIATOR BOARD
ECM – ELECTRONIC CONTROL MODULE	RB – RUPTURE BASIN
ES1 – EMERGENCY STOP SWITCH	RB_ – RELAY BOARD
ESC_ – ELECTRONIC SIGNAL CONDITIONER	RB_A – RELAY BOARD CONNECTOR
F_ – FUSE	RRB – REMOTE RELAY BOARD
FLS – FUEL LEVEL SENDER	SC – START CONTACTOR
GOV – GOVERNOR ACTUATOR	SM – STARTER MOTOR CONNECTIONS
GD – GOVERNOR DRIVER	SW1 – OFF/AUTO/MANUAL SELECT SWITCH
GFB – GENERATOR FLUID BASIN	SWC – SWITCH CONNECTOR
GND – GROUND STUD CONNECTION	TB_ – TERMINAL BLOCKS
GP – GLOW PLUG	WLS1 – COOLANT LEVEL SENDER
IFT – INTERFACE TRANSFORMER	WTS1 – COOLANT TEMP. SENDER

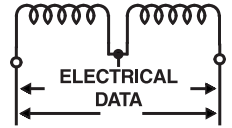
COMPONENTS LOCATED ON ENGINE



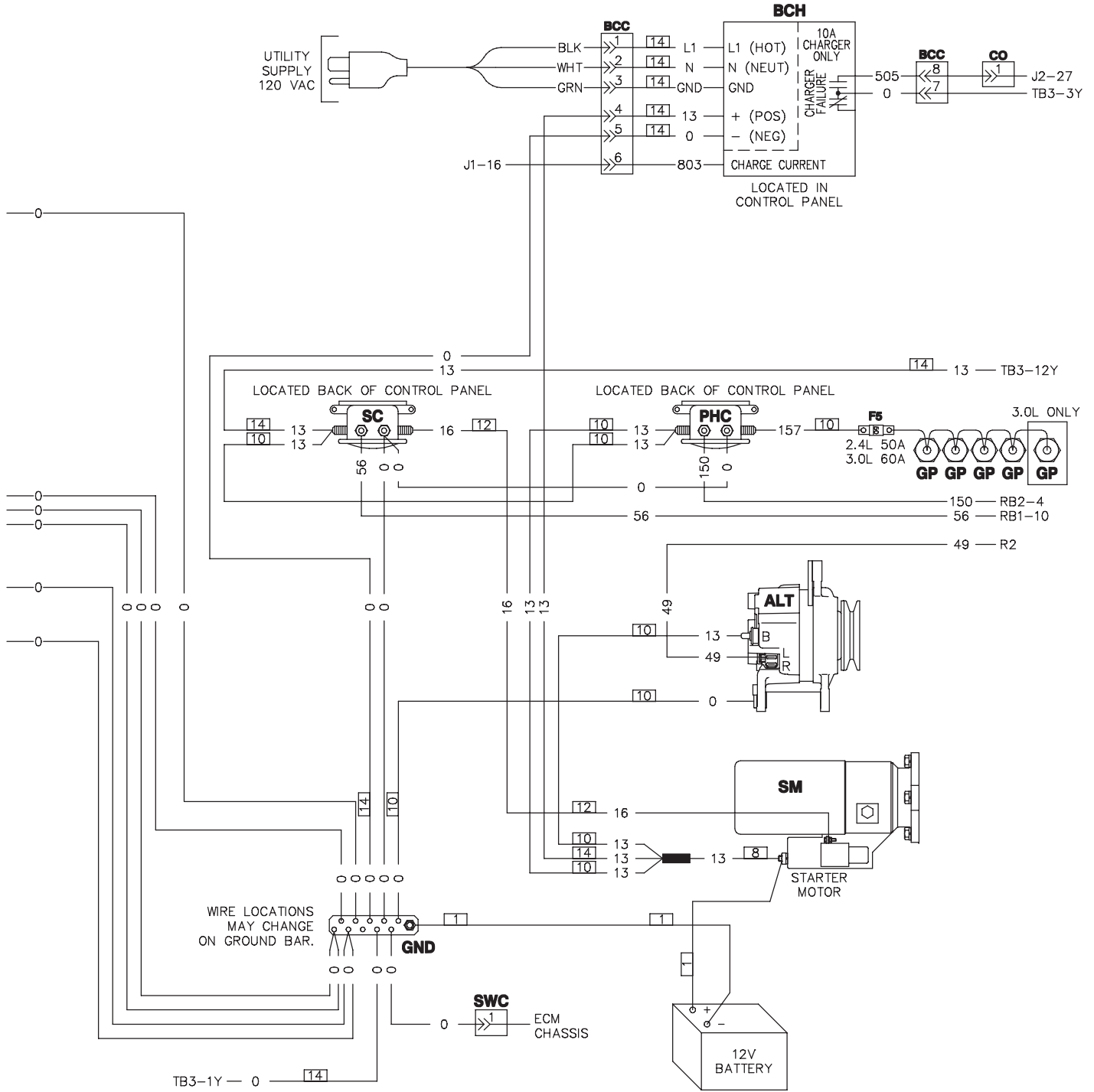
Section 7 – Electrical Data

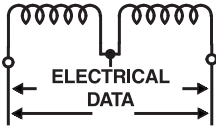
Standby Generator Set

Wiring Diagram - H-200 Alternator – Drawing No. 0G0904-B Part 2



COMPONENTS LOCATED ON ENGINE



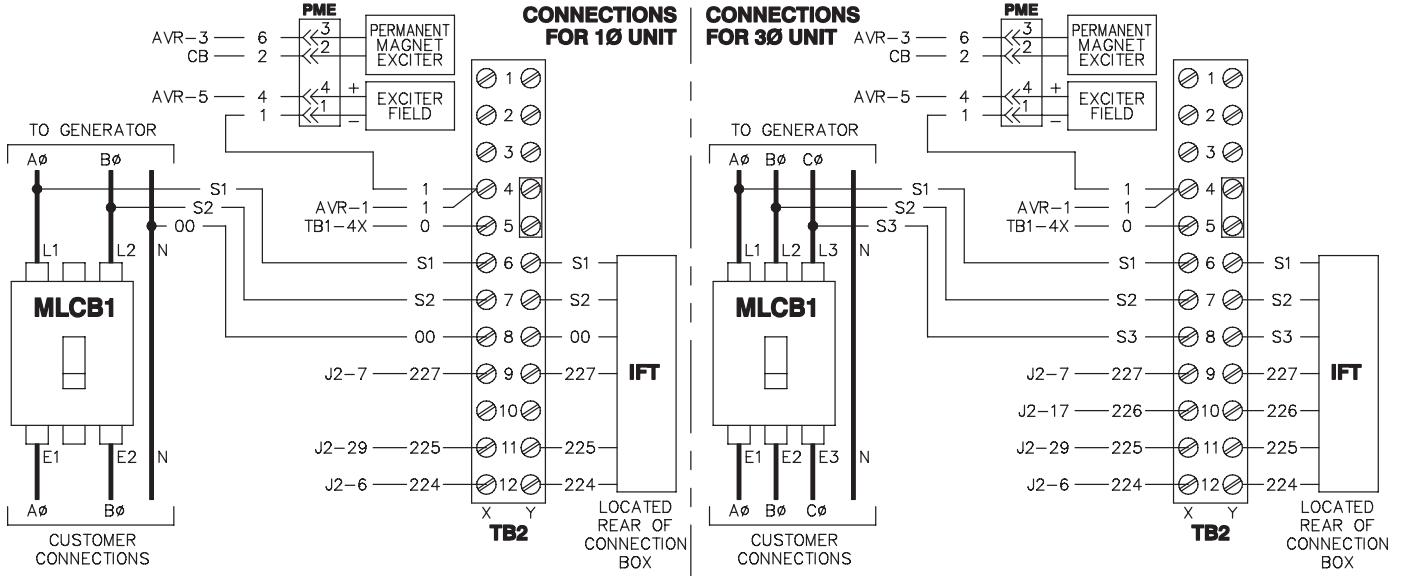


Section 7 – Electrical Data

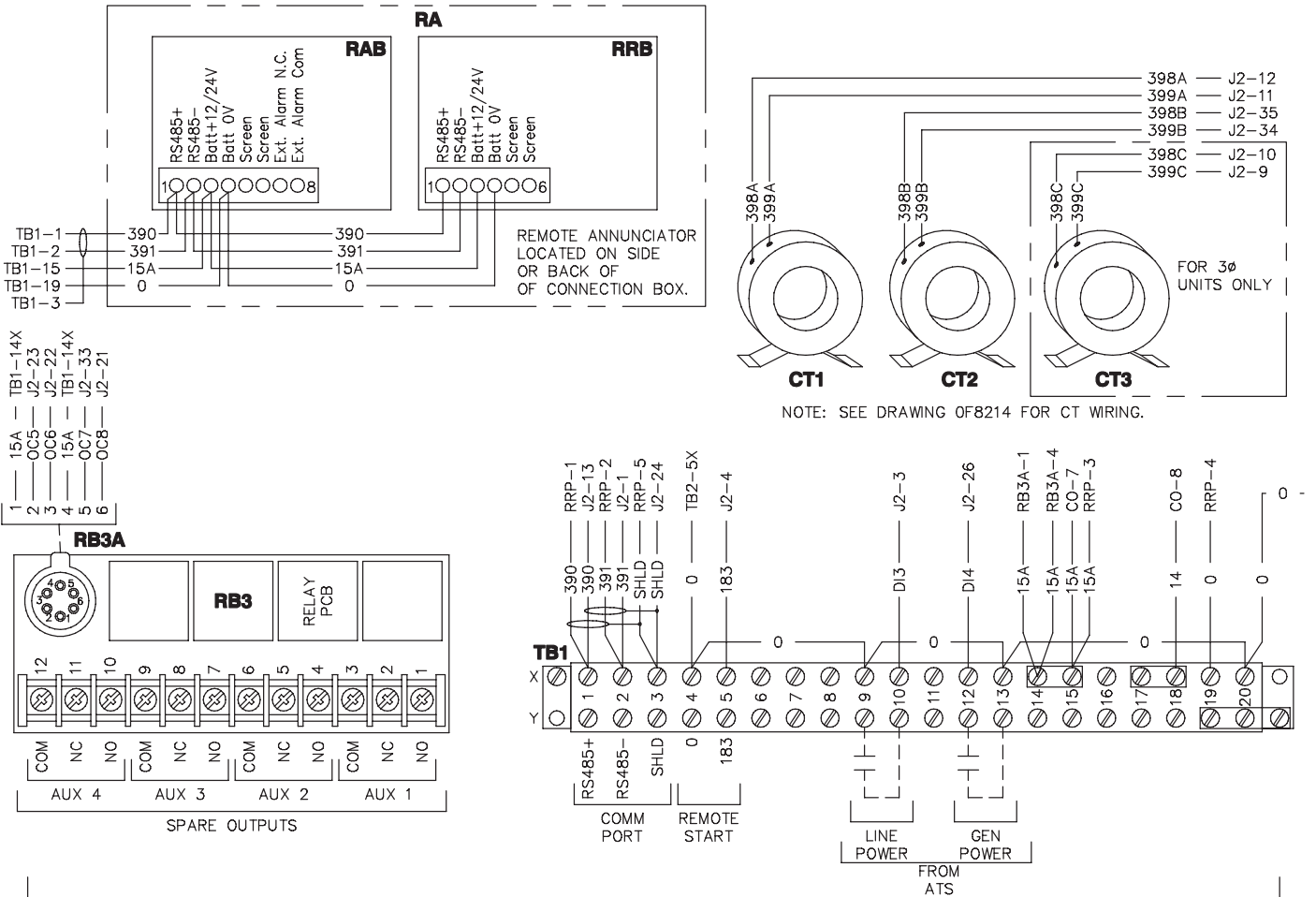
Standby Generator Set

Wiring Diagram - H-200 Alternator – Drawing No. 0G0904-B Part 3

COMPONENTS LOCATED IN ALTERNATOR CONNECTION BOX



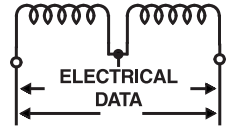
COMPONENTS LOCATED IN ALTERNATOR CONNECTION BOX



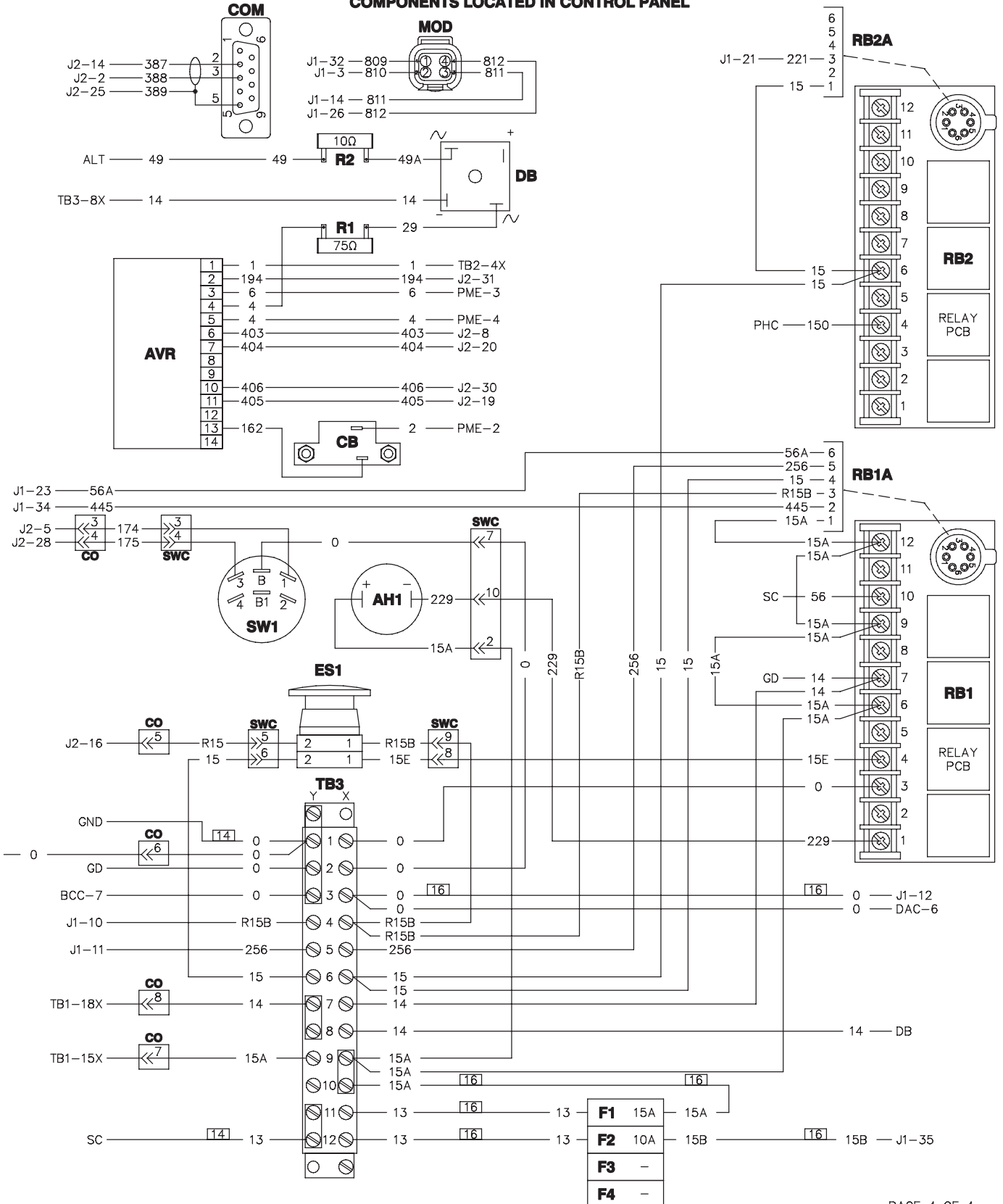
Section 7 – Electrical Data

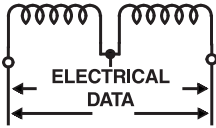
Standby Generator Set

Wiring Diagram - H-200 Alternator – Drawing No. 0G0904-B Part 4



COMPONENTS LOCATED IN CONTROL PANEL

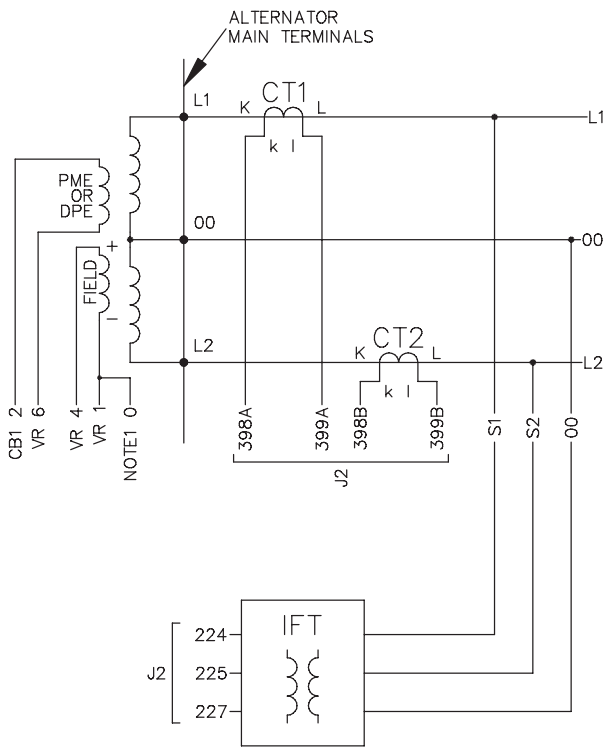




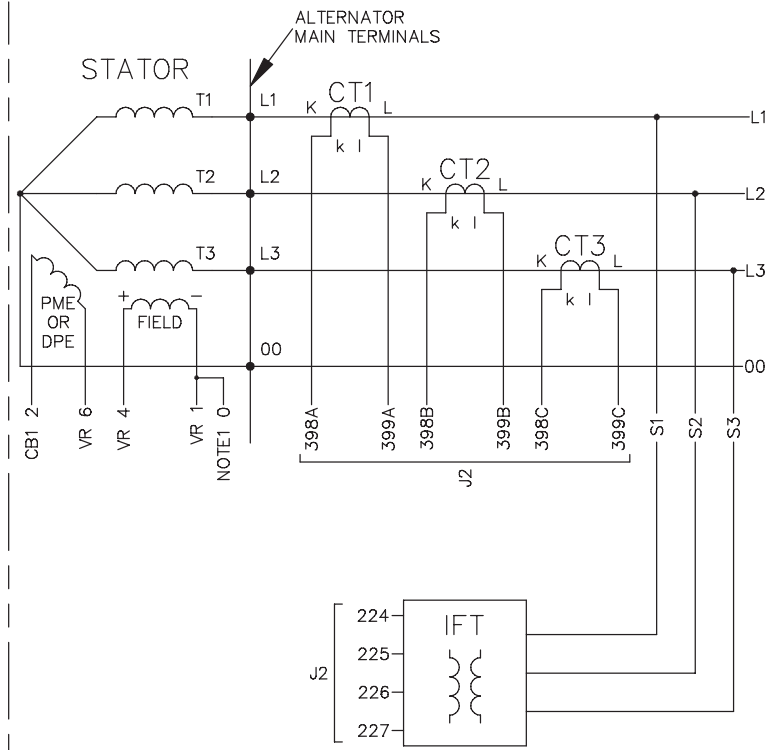
Section 7 – Electrical Data

Standby Generator Set

Electrical Schematic - H-200 Alternator – Drawing No. 0G0903-B Part 1



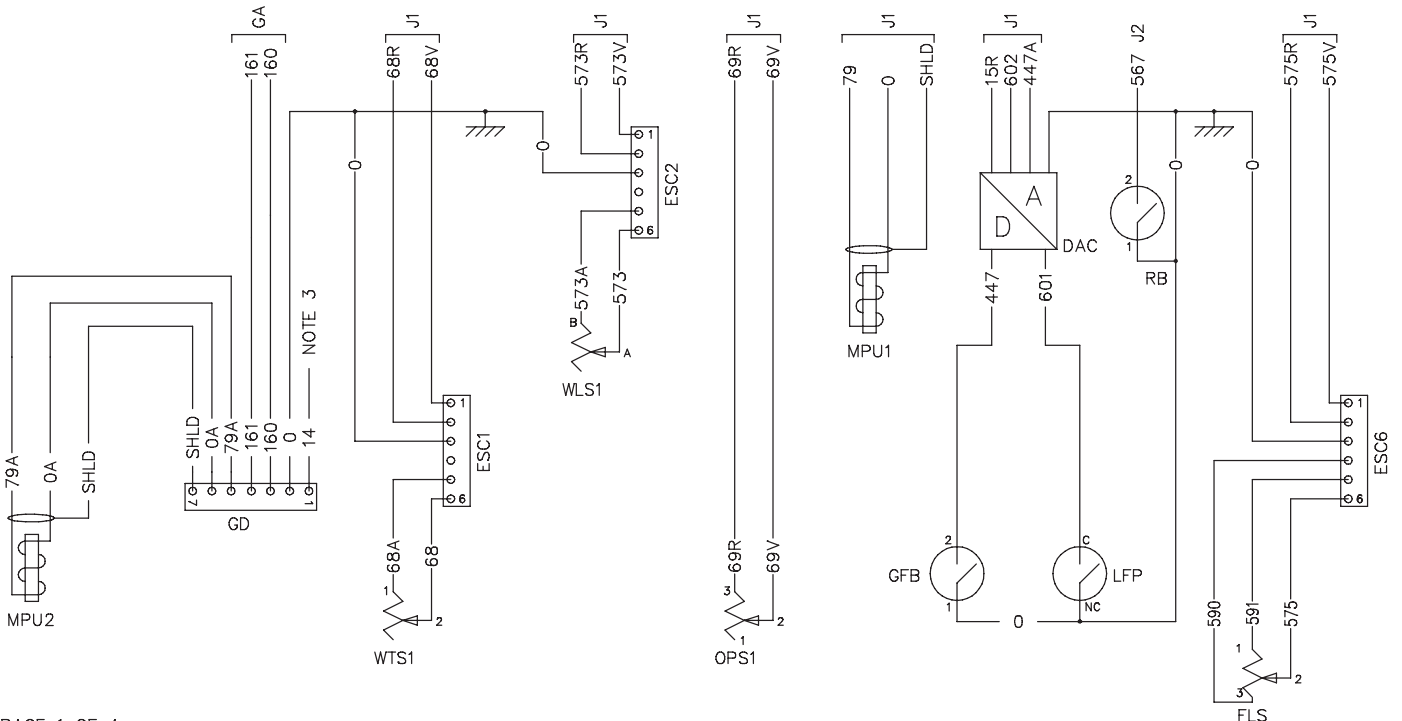
ALTERNATOR CONNECTIONS FOR 1Ø UNITS



ALTERNATOR CONNECTIONS FOR 3Ø UNITS

ALTERNATOR CONNECTION BOX

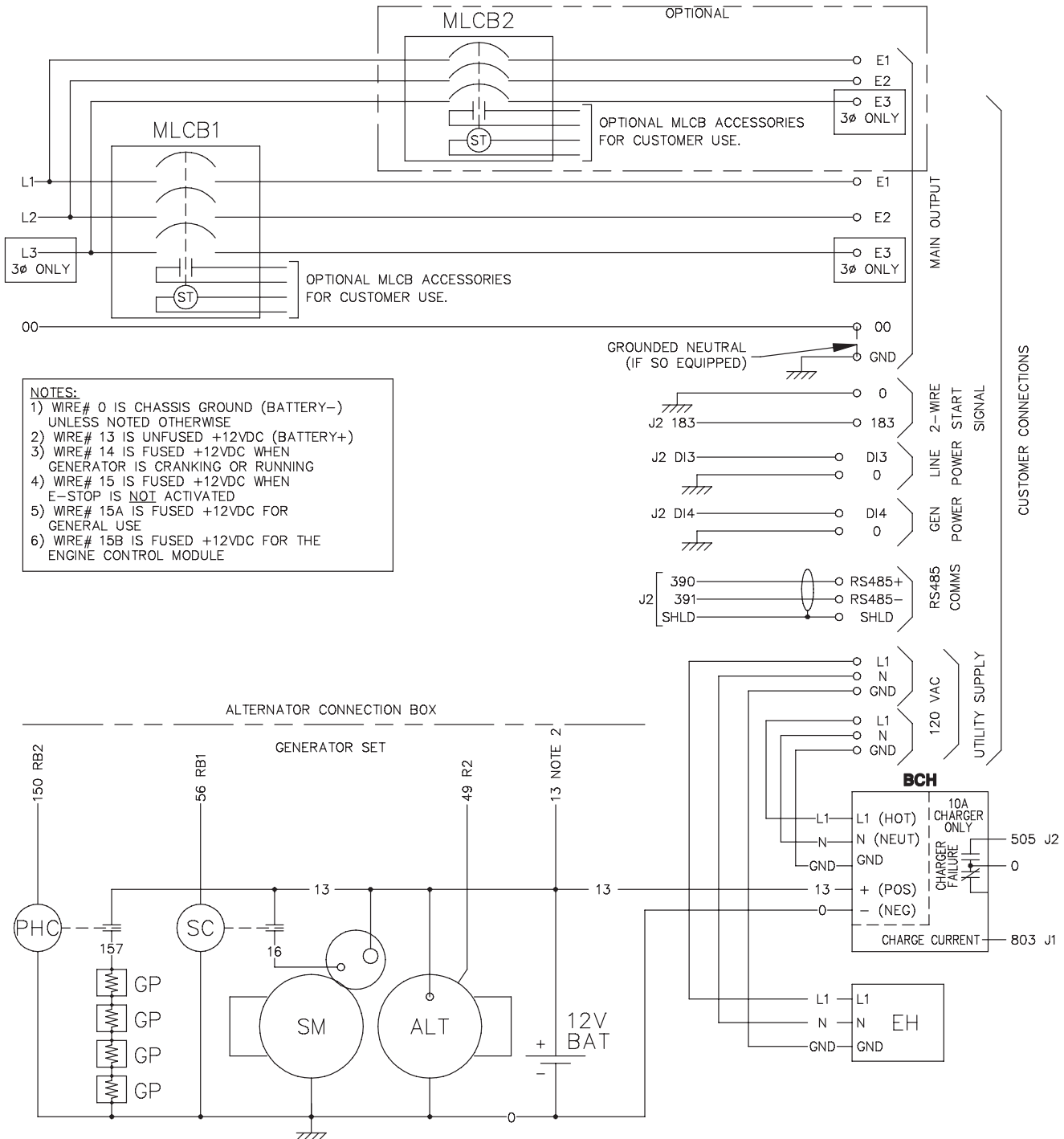
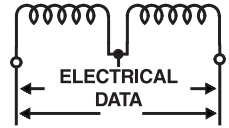
GENERATOR SET



Section 7 – Electrical Data

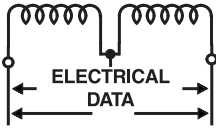
Standby Generator Set

Electrical Schematic - H-200 Alternator – Drawing No. 0G0903-B Part 2



- NOTES:**
- 1) WIRE# 0 IS CHASSIS GROUND (BATTERY-) UNLESS NOTED OTHERWISE
 - 2) WIRE# 13 IS UNFUSED +12VDC (BATTERY+)
 - 3) WIRE# 14 IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING
 - 4) WIRE# 15 IS FUSED +12VDC WHEN E-STOP IS NOT ACTIVATED
 - 5) WIRE# 15A IS FUSED +12VDC FOR GENERAL USE
 - 6) WIRE# 15B IS FUSED +12VDC FOR THE ENGINE CONTROL MODULE

LEGEND		
00 - NEUTRAL	DI_ - DIGITAL INPUT	IFT - INTERFACE TRANSFORMER
AH1 - ALARM HORN	DO_ - DIGITAL OUTPUT	J_ - ENGINE CONTROLLER CONNECTORS
ALT - CHARGE ALTERNATOR	EH - ENGINE HEATER	LFP - LOW FUEL PRESSURE
BAT - BATTERY (2 X 12VDC, SERIES)	ES1 - EMERGENCY STOP SWITCH	MLCB - MAIN LINE CIRCUIT BREAKER
BCH - BATTERY CHARGER	ESC_ - ELECTRONIC SIGNAL CONDITIONER	MPU_ - MAGNETIC PICK-UP (SPEED SENSOR)
CB_ - CIRCUIT BREAKER	F_ - FUSE	OPS_ - OIL PRESSURE SENDER
COM - RS232 COMMS CONNECTOR	FLS - FUEL LEVEL SENDER	PHC - PRE-HEAT CONTACTOR
CT_ - CURRENT TRANSFORMER	FS - FUEL SOLENOID	PME - PERMANENT MAGNET EXCITER
DAC - DIGITAL TO ANALOG CONVERTER	GA - GOVERNOR ACTUATOR	R_ - RESISTOR
DB - DIODE BRIDGE	GD - GOVERNOR DRIVER	RA - REMOTE ANNUNCIATOR
	GFB - GENERATOR FLUID BASIN	RAB - REMOTE ANNUNCIATOR BOARD
	GP - GLOW PLUG	RB - RUPTURE BASIN
		RB_ - RELAY BOARD
		RRB - REMOTE RELAY BOARD
		SC - STARTER CONTACTOR
		SHLD - SHIELD
		SM - STARTER MOTOR
		ST - SHUNT TRIP
		SW1 - ON-MAN-AUTO SWITCH
		VR - VOLTAGE REGULATOR DRIVER
		WLS_ - WATER LEVEL SENSOR
		WTS_ - WATER TEMPERATURE SENDER



Section 7 – Electrical Data

Standby Generator Set

Electrical Schematic - H-200 Alternator – Drawing No. 0G0903-B Part 3

GD CONNECTOR

PIN	WIRE	TO	FUNCTION
1	14	–	NOTE 3
2	0	–	NOTE 1
3	160	GA	GOVERNOR ACTUATOR POWER
4	161	GA	GOVERNOR ACTUATOR POWER
5	79A	MPU2	MPU2 SIGNAL (+)
6	0A	MPU2	MPU2 SIGNAL (-)
7	SHLD	MPU2	MPU2 SHIELD

VR CONNECTOR

PIN	WIRE	TO	FUNCTION
1	1	FIELD	– FIELD
2	194	J2-31	+12VDC
3	6	PMG	PME OUTPUT
4	4	R1/FIELD	+ FIELD
5	4	R1/FIELD	+ FIELD
6	403	J2-8	GATE TRIGGER B
7	404	J2-20	GATE TRIGGER A
10	406	J2-30	ZERO CROSSING I/P
11	405	J2-19	GROUND (ISO)
13	162	CB1	PME OUTPUT (AFTER CB)

ENGINE CONTROL MODULE CONNECTIONS

J1

PIN	WIRE	TO	FUNCTION
3	810	MOD	MODEM SIGNAL RETURN
5	447A	DAC	GEN FLUID BASIN
6	575R	ESC6-2	FUEL LEVEL RTN
7	575V	ESC6-1	FUEL LEVEL +
10	R15B	RB1A-3/ES1	OVERSPEED/WATCHDOG
11	256	RB1A-5	FUEL RELAY
12	0	GND	NOTE 1
14	811	MOD	MODEM DATA CARRIER DETECT
15	68V	ESC1-1	COOLANT TEMP +
16	803	BCH	BAT CHARGER CURRENT
19	69R	OPS-3	OIL PRESS RTN
20	69V	OPS-2	OIL PRESS +
21	221	RB2A-3	PREHEAT
23	56A	RB1A-6	STARTER RELAY
24	0	MPU1-2	MPU1 SIGNAL (-)
25	79	MPU1-3	MPU1 SIGNAL (+)
26	812	MOD	MODEM ENABLE
27	602	DAC	LOW FUEL PRESS
28	15R	DAC	ANALOG +
29	573R	ESC2-2	COOLANT LVL RTN
30	573V	ESC2-1	COOLANT LVL +
31	68R	ESC1-2	COOLANT TEMP RTN
32	809	MOD	MODEM 12V POWER
34	445	RB1A-2	ALARM RELAY
35	15B	F2	NOTE 6

J2

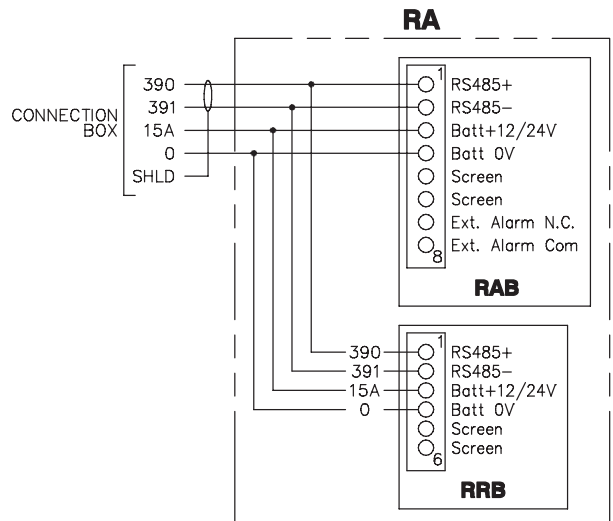
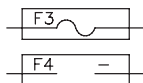
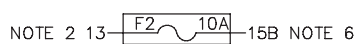
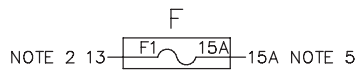
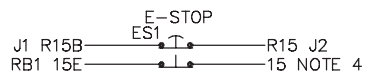
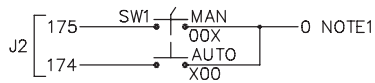
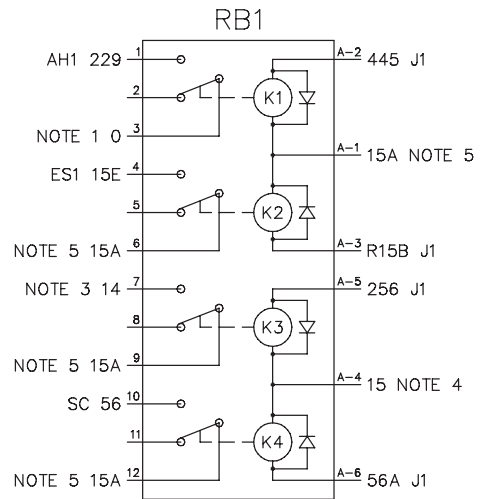
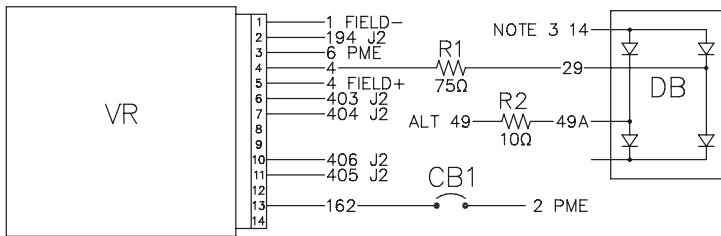
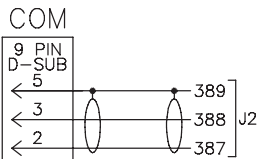
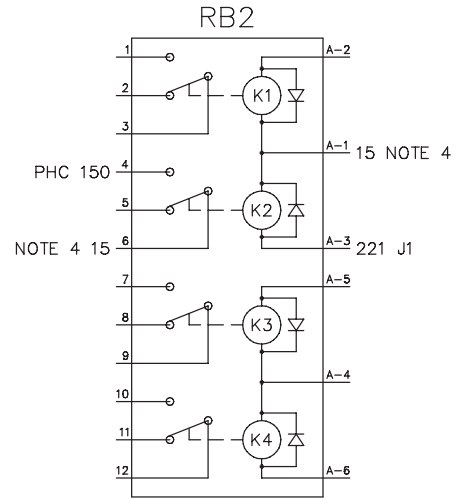
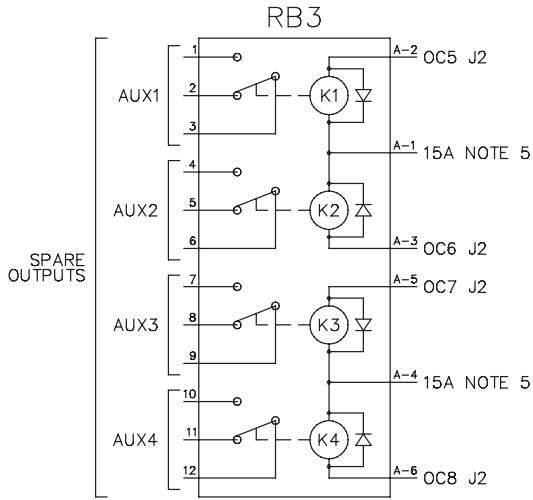
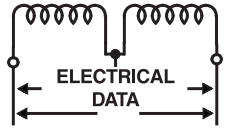
PIN	WIRE	TO	FUNCTION
1	391	CUST CON	RS485- (XFER SW)
2	388	COM-3	RS232 TX (GENLINK)
3	DI3	CUST CON	LINE POWER SIGNAL
4	183	CUST CON	REMOTE START
5	174	SW1	"AUTO" START
6	224	IFT	V SENSE GEN A PH
7	227	IFT	V SENSE RTN
8	403	AVR-6	AVR GATE TRIGGER B
9	399C	CT3	GEN C PH CURRENT -
10	398C	CT3	GEN C PH CURRENT +
11	399A	CT1	GEN A PH CURRENT -
12	398A	CT1	GEN A PH CURRENT +
13	390	CUST CON	RS485+ (XFER SW)
14	387	COM-2	RS232 RX (GENLINK)
15	567	RB	RUPTURE BASIN
16	R15	ES1	EMERGENCY STOP
17	226	IFT	V SENSE GEN C PH
19	405	AVR-11	AVR GROUND
20	404	AVR-7	AVR GATE TRIGGER A
21	OC8	RB3A-6	SPARE OUTPUT 4
22	OC6	RB3A-3	SPARE OUTPUT 2
23	OC5	RB3A-2	SPARE OUTPUT 1
24	SHLD	CUST CON	RS485 DRAIN (XFER SW)
25	389	COM-5	RS232 COM (GENLINK)
26	DI4	CUST CON	GEN POWER SIGNAL
27	505	BCH	BAT CHARGER FAIL
28	175	SW1	"MANUAL" START
29	225	IFT	V SENSE GEN B PH
30	406	AVR-10	AVR ZERO CROSSING I/P
31	194	AVR-2	AVR +12VDC
33	OC7	RB3A-5	SPARE OUTPUT 3
34	399B	CT2	GEN B PH CURRENT-
35	398B	CT2	GEN B PH CURRENT+

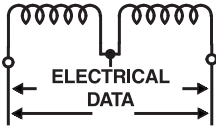
* - CONNECTIONS NOT USED IN 1Ø UNITS.

Section 7 – Electrical Data

Standby Generator Set

Electrical Schematic - H-200 Alternator – Drawing No. 0G0903-B Part 4

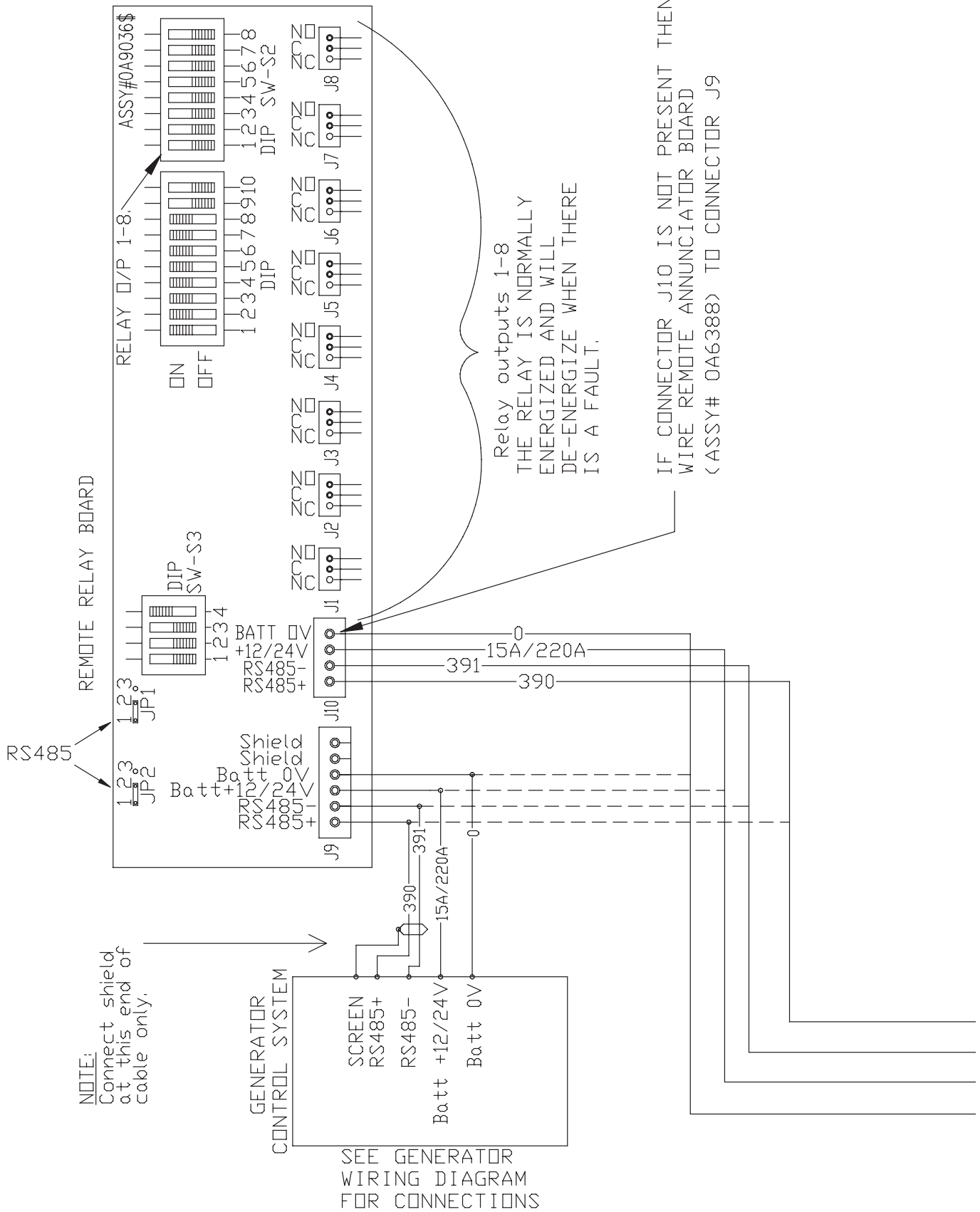




Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - Remot Annunciator – Drawing No. 0G1395-A



NOTE:
Connect shield at this end of cable only.

Relay outputs 1-8
THE RELAY IS NORMALLY
ENERGIZED AND WILL
DE-ENERGIZE WHEN THERE
IS A FAULT.

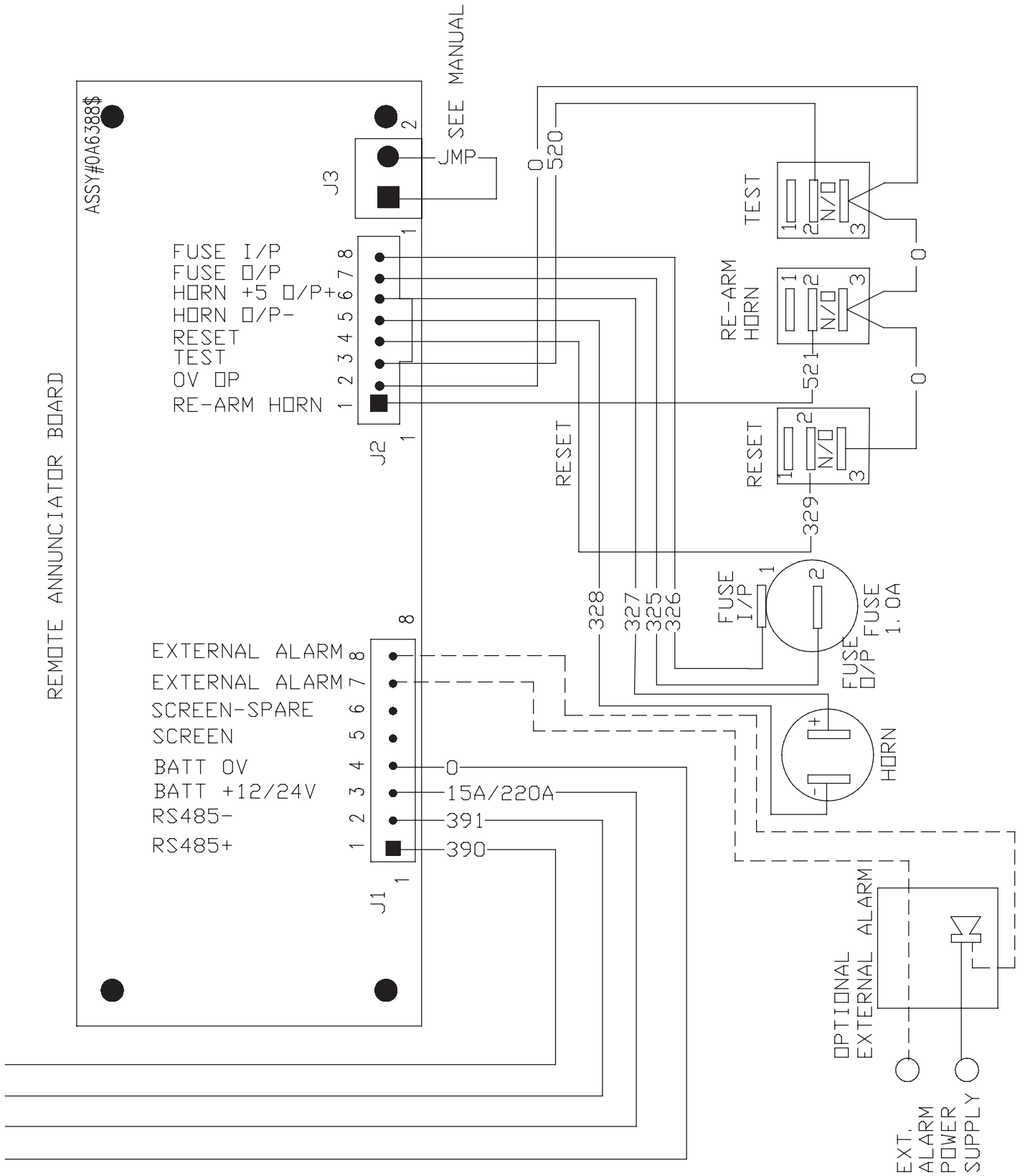
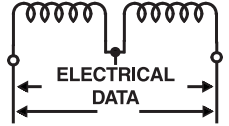
IF CONNECTOR J10 IS NOT PRESENT THEN
WIRE REMOTE ANNUNCIATOR BOARD
(ASSY# 0A6388) TO CONNECTOR J9

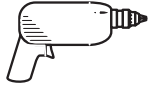
SEE GENERATOR
WIRING DIAGRAM
FOR CONNECTIONS

Section 7 – Electrical Data

Standby Generator Set

Wiring Diagram - Remot Annunciator – Drawing No. 0G1395-A

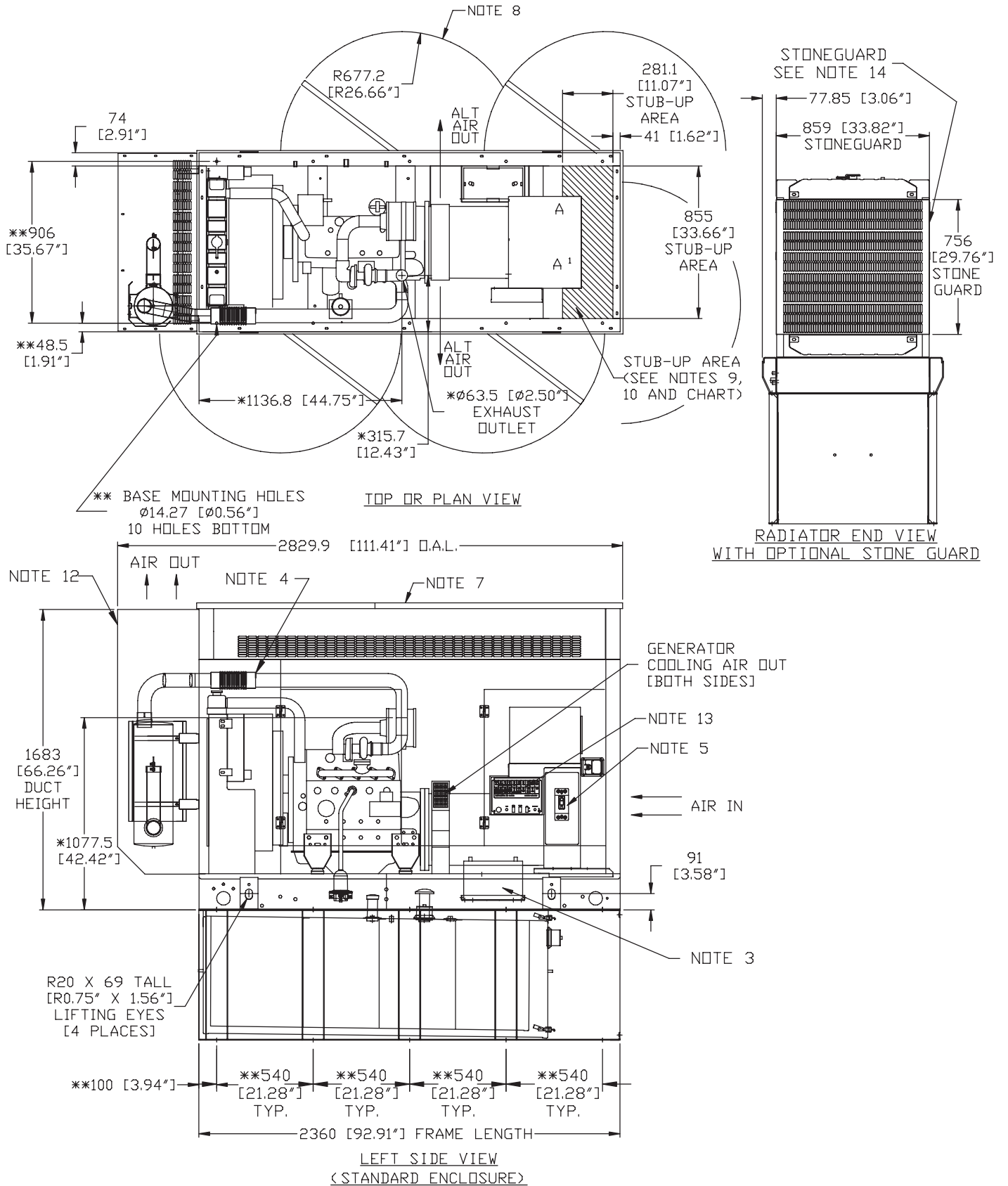


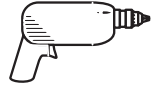


Section 8 – Installation Diagram

Standby Generator Set

Drawing No. 0G0610-A





NOTES:

1. CONTROL PANEL MAY BE ROTATED 180° IN EITHER DIRECTION. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN AC CONNECTION PANEL.
3. 12 VOLT NEGATIVE GROUND SYSTEM
4. 3" I.D. FLEX EXHAUST, STANDARD WITH ENCLOSURE UNITS. OPTIONAL WITHOUT.
5. MAIN LINE CIRCUIT BREAKER (MLCB) 200A
6. 2ND MAIN LINE CIRCUIT BREAKER (MLCB) 100A
7. LEVEL 2A SOUND ATTENUATED ENCLOSURE.
8. DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED.
9. STUB-UPS: BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
10. A IS THE STUB UP AREA UNDER THE 100A MLCB.
11. AIR DUCT ADAPTER STANDARD WITH OPEN SET ONLY.
12. SEE DRAWING OF 0755 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.
13. 20 LIGHT ANNUNCIATOR (LOCATION DEPENDENT ON OPEN SET OR ACOUSTIC ENCLOSURE CONFIGURATION).
14. OPTIONAL STONE GUARD CAN BE ORDERED FOR UNITS WITHOUT ENCLOSURES. AIR DUCT IS STANDARD ON OPEN SETS.

*NOTE: DIMENSIONS TO THE CENTER OF EXHAUST FLANGE SHOULD BE USED AS A REFERENCE FOR OPEN SET ONLY.

**DIMENSIONS ARE FOR BASE MOUNTING LOCATIONS.

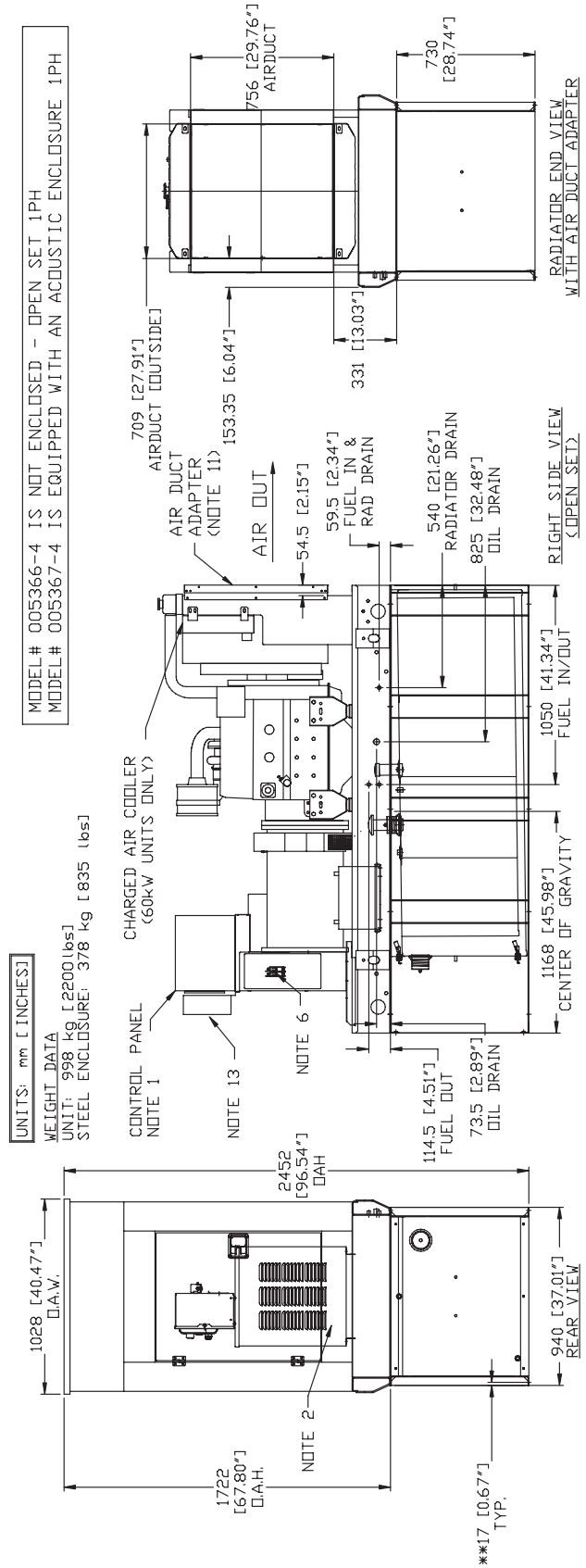
RECOMMENDED ELECTRICAL STUB-UPS (SEE TOP VIEW)	
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT (100A)	A
AC LOAD LEAD CONDUIT (200A)	A'
AC LOAD LEAD CONDUIT HOOKUP	

ENGINE SERVICE CONNECTIONS

- OIL DRAIN = 1/2" NPT COUPLING
- EXHAUST OUTLET - FLANGE AS SHOWN ON OPEN SET.
- RADIATOR DRAIN = 3" OD MUFFLER WITH ENCLOSURE
- RADIATOR DRAIN = 1/4" NPT COUPLING

NOTE:

UNIT IS SHIPPED WITH FUEL SUPPLY AND RETURN LINES DISCONNECTED AND PLUGGED BETWEEN ENGINE AND FUEL TANK. THIS HAS BEEN DONE TO FACILITATE PRESSURE TESTING OF THE TANK IN THE FIELD. FOR INFORMATION REGARDING CONNECTING THE FUEL SUPPLY AND RETURN LINES PRIOR TO START UP, SEE THE FUEL TANK FIELD TESTING PROCEDURE SUPPLIED WITH THE PNEUMATIC FUEL TANK TEST KIT.





Section 9 – Warranty

Standby Generator Set

NOTE: This Emission Control Warranty Statement applies only to mobile (trailerized) non-road diesel engine powered generators (model year 2000) as follows: The EPA portion of this statement pertains to this product; The CARB portion of this statement pertains to this product only IF the generator size is (1) 15 kW or below OR (2) 130 kW or greater.

CALIFORNIA AND FEDERAL EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA), together with Generac Power Systems, Inc. (Generac), are pleased to explain the Emission Control System Warranty on your new non-road diesel engine.* New non-road diesel engines must be designed, built and equipped to meet stringent anti-smog standards for the state of California and the federal government. Generac will warrant the emission control system on your non-road diesel engine for the periods of time listed below provided there has been no abuse, neglect, unapproved modification or improper maintenance of your non-road diesel engine.

Your emission control system may include such parts as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies. Generac will repair your non-road diesel engine at no cost to you for diagnosis, replacement parts and labor, should a warrantable condition occur.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

Emission control systems on 1996 and later model year non-road diesel engines are warranted for five years, or 3,000 hours of use, whichever occurs first. In the absence of an hourmeter, the said coverage is five years. If, during said warranty period, any emission-related component or system on your engine is found to be defective in materials or workmanship, repairs or replacement will be performed by a Generac Authorized Warranty Service Facility.

PURCHASER'S/OWNER'S WARRANTY RESPONSIBILITIES:

As the non-road diesel engine purchaser/owner, you are responsible for the completion of all required maintenance as listed in your factory supplied Owner's Manual. For warranty purposes, Generac recommends that you retain all receipts covering maintenance of your non-road diesel engine. However, Generac cannot deny warranty solely due to lack of receipts or for your failure to ensure the completion of all scheduled maintenance.

As the non-road diesel engine purchaser/owner, you should, however, be aware that Generac may deny any and/or all warranty coverage or responsibility if your non-road diesel engine, or a part/component thereof, has failed due to abuse, neglect, improper maintenance or unapproved modifications., or the use of counterfeit and/or "grey market" parts not made, supplied or approved by Generac.

Your engine is designed to operate on diesel fuel only. Use of any other fuel may result in your engine no longer operating in compliance with federal or California emission requirements.

You are responsible for contacting a Generac Authorized Warranty Service Facility as soon as a problem occurs. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

Warranty service can be arranged by contacting either your selling dealer or a Generac Authorized Warranty Service Facility. To locate the Generac Authorized Warranty Service Facility nearest you, call our toll-free number:

1-800-333-1322

IMPORTANT NOTE: This Warranty statement explains your rights and obligations under the Emission Control System Warranty (ECS Warranty), which is provided to you by Generac pursuant to federal and California law. See also the "Generac Limited Warranties for Generac Power Systems, Inc.," which is enclosed herewith on a separate sheet, also provided to you by Generac. The ECS Warranty applies **only** to the emission control system of your new non-road diesel engine. If there is any conflict in terms between the ECS Warranty and the Generac Warranty, the ECS Warranty shall apply except in circumstances where the Generac Warranty may provide a longer warranty period. Both the ECS Warranty and the Generac describe important rights and obligations with respect to your new non-road diesel engine.

Warranty service can be performed only by a Generac Authorized Warranty Service Facility. When requesting warranty service, evidence must be presented showing the date of sale to the original purchaser/owner.

If you have any questions regarding your warranty rights and responsibilities, you should contact Generac at the following address:

**ATTENTION WARRANTY DEPARTMENT
GENERAC POWER SYSTEMS, INC.
211 MURPHY DRIVE
EAGLE, WI 53119**



EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty (ECS Warranty) for 1996 and later model year non-road diesel engines:

- (a) **Applicability:** This warranty shall apply to 1996 and later model year non-road diesel engines. The ECS Warranty shall begin on the date the new engine or equipment is purchased by/delivered to its original, end-use purchaser/owner and shall continue for 60 months, or 3,000 hours of use, thereafter, whichever occurs first.
- (b) **General Emissions Warranty Coverage:** Generac warrants to the original, end-use purchaser/owner of the new non-road diesel engine or equipment, and to each subsequent purchaser/owner, that each non-road diesel engine is ...
- (1) Designed, built and equipped so as to conform with all applicable regulations adopted by the EPA and CARB pursuant to their respective authority, and
 - (2) Free from defects in materials and workmanship, which, at any time during the ECS Warranty Period, may cause a warranted emission-related part to fail to be identical in all material respects to the part as described in the engine manufacturer's application for certification.
- (c) The ECS Warranty pertains only to emissions-related parts on your non-road diesel engine, as follows:
- (1) Any warranted, emissions-related parts that are not scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by Generac according to Subsection (4) below. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
 - (2) Any warranted, emissions-related part that is scheduled only for regular inspection as specified in the Owner's Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary" shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
 - (3) Any warranted, emissions-related part that is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by Generac according to Subsection (4) below. Any such emissions-related part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.
 - (4) Repair and replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner by a Generac Authorized Warranty Service Facility.
 - (5) When the engine is inspected by a Generac Authorized Warranty Service Facility, the owner shall not be held responsible for diagnostic costs if the repair is deemed warrantable.
 - (6) Generac shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of any emissions-related part covered by the ECS Warranty.
 - (7) Throughout the ECS Warranty Period, Generac shall maintain a supply of warranted emissions-related parts sufficient to meet the expected demand for such emission-related parts.
 - (8) Any Generac authorized and approved emission-related replacement part may be used in the performance of any ECS warranty maintenance or repairs and will be provided without charge to the owner. Such use will not reduce Generac's ECS Warranty obligations.
 - (9) Unapproved, add-on, modified, counterfeit and/or "grey market" parts may not be used to modify or repair a Generac non-road diesel engine. Such use voids this ECS warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. Generac shall not be held liable hereunder for failures of any warranted parts of a Generac non-road diesel engine caused by the use of such an unapproved, add-on, modified, counterfeit and/or "grey market" part.

EMISSION RELATED PARTS INCLUDE THE FOLLOWING:

- | | |
|---|--|
| 1) Fuel Metering System:
a) Fuel injection system | 3) Exhaust System:
a) Exhaust manifold and gasket (turbocharged engines only)
b) Catalytic converter (if so equipped) |
| 2) Air Induction System:
a) Intake manifold and gasket
b) Turbocharger systems (if so equipped)
c) Charge air cooling systems (if so equipped) | 4) Miscellaneous Items used in above systems:
a) Hoses, connectors, assemblies, clamps, fittings, tubing, sealing gaskets or devices, and mounting hardware |

*Generac non-road diesel engine types covered by this warranty statement include the following:

- 1) Standby Generator



Section 9 – Warranty

Standby Generator Set

GENERAC POWER SYSTEMS STANDARD TWO-YEAR LIMITED WARRANTY FOR STANDBY POWER SYSTEMS

NOTE: ALL UNITS MUST HAVE A START-UP INSPECTION PERFORMED BY AN AUTHORIZED GENERAC DEALER.

For a period of two (2) years or two thousand (2,000) hours of operation from the date of sale, which ever occurs first, Generac Power Systems, Inc. will, at its option, repair or replace any part(s) which, upon examination, inspection, and testing by Generac Power Systems or an Authorized/Certified Generac Power Systems Dealer, or branch thereof, is found to be defective under normal use and service, in accordance with the warranty schedule set forth below. Any equipment that the purchaser/owner claims to be defective must be examined by the nearest Authorized/Certified Generac Power Systems Dealer, or branch thereof. This warranty applies only to Generac Power Systems Generators used in "Standby" applications, as Generac Power Systems, Inc. has defined Standby, provided said generator has been initially installed and/or inspected on-site by an Authorized/Certified Generac Power Systems Dealer, or branch thereof. Scheduled maintenance, as outlined by the generator owner's manual, must be performed by an Authorized/Certified Generac Power Systems Dealer, or branch thereof. This will verify service has been performed on the unit throughout the warranty period. This warranty is limited to and available only on Liquid-cooled units.

WARRANTY SCHEDULE

YEAR ONE — One hundred percent (100%) coverage on mileage, labor, and parts listed.

• ALL COMPONENTS — ENGINE, ALTERNATOR, AND TRANSFER SWITCH

YEAR TWO — One hundred percent (100%) coverage on parts listed.

• ALL COMPONENTS — ENGINE, ALTERNATOR, AND TRANSFER SWITCH PARTS ONLY

Gearbox Equipped Units - Limited Gearbox Coverage

YEARS ONE THROUGH FIVE — Parts and labor coverage on gearbox and components.

YEARS SIX THROUGH TEN — Parts only coverage on gearbox and components.

Guidelines:

Travel allowance is limited to 300 miles maximum, and 7.5 hours maximum (per occurrence), round trip, to the nearest authorized Generac Service Facility, and only applies to permanently wired and mounted units.

- Any and all warranty repairs and/or concerns, must be performed and/or addressed by an Authorized/Certified Generac Power Systems Dealer, or branch thereof.
- A Generac Power Systems, Inc. Transfer Switch is highly recommended to be used in conjunction with the generator set. If a Non-Generac Power Systems, Inc. Transfer Switch is substituted for use and directly causes damage to the generator set, no warranty coverage shall apply.
- All warranty expense allowances are subject to the conditions defined in Generac Power Systems Warranty, Policies, Procedures and Flat Rate Manual.
- Units that have been resold are not covered under the Generac Power Systems Warranty, as this Warranty is not transferable.
- Unit enclosure is only covered during the first year of the warranty provision.
- Use of Non-Generac replacement part(s) will void the warranty in its entirety.
- Engine coolant heaters (block-heaters), heater controls and circulating pumps are only covered during the first year of the warranty provision.

THIS WARRANTY SHALL NOT APPLY TO THE FOLLOWING:

1. Any unit built/manufactured prior to July 1, 2004.
2. Costs of normal maintenance (i.e. tune-ups, associated part(s), adjustments, loose/leaking clamps, installation and start-up).
3. Any failure caused by contaminated fuels, oils, coolants/antifreeze or lack of proper fuels, oils or coolants/antifreeze.
4. Units sold, rated or used for "Prime Power", "Trailer Mounted" or "Rental Unit" applications as Generac Power Systems has defined Prime Power, Trailer Mounted or Rental Unit. Contact a Generac Power Systems Distributor for Prime Power, Trailer Mounted or Rental Unit definition and warranty.
5. Failures caused by any external cause or act of God such as, but not limited to, collision, fire, theft, freezing, vandalism, riot or wars, lightning, earthquake, windstorm, hail, volcanic eruption, water or flood, tornado, hurricane, terrorist acts or nuclear holocaust.
6. Products that are modified or altered in a manner not authorized by Generac Power Systems in writing.
7. Failures due, but not limited to, normal wear and tear, accident, misuse, abuse, negligence, or improper installation or sizing.
8. Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
9. Damage related to rodent and/or insect infestation.
10. Failure due to misapplication, misrepresentation, or bi-fuel conversion.
11. Telephone, facsimile, cellular phone, satellite, Internet, or any other communication expenses.
12. Rental equipment used while warranty repairs are being performed (i.e. rental generators, cranes, etc.).
13. Overtime, holiday, or emergency labor.
14. Modes of transportation deemed abnormal (refer to Generac Power Systems Warranty, Policies, Procedures and Flat Rate Manual).
15. Steel enclosures that are rusting due to improper installation, location in a harsh or saltwater environment or scratched where integrity of paint applied is compromised.
16. Any and all expenses incurred investigating performance complaints unless defective Generac materials and/or workmanship were the direct cause of the problem.
17. Starting batteries, fuses, light bulbs, engine fluids, and overnight freight cost for replacement part(s).

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, GENERAC POWER SYSTEMS MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to purchaser/owner.

GENERAC POWER SYSTEMS ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC POWER SYSTEMS BE LIABLE FOR ANY INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC POWER SYSTEMS, INC. NEGLIGENCE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to purchaser/owner. Purchaser/owner agrees to make no claims against Generac Power Systems, Inc. based on negligence. This warranty gives purchaser/owner specific legal rights. Purchaser/owner also may have other rights that vary from state to state.

Generac Power Systems, Inc. • P.O. Box 8 • Waukesha, WI 53187

Ph: [262] 544-4811 • Fax: [262] 544-4851

Bulletin 0166290SBY / Printed in U.S.A. 6.04