

OWNER'S MANUAL

Series Q55LP and Q70LP

AIR-COOLED RECREATIONAL VEHICLE GENERATORS

Model Nos. 9735-3 and 9736-3

GENERAC[®]
CORPORATION

GENERAL SAFETY RULES



THE MANUFACTURER SUGGESTS THAT THESE "RULES" FOR SAFE OPERATION BE COPIED AND POSTED IN POTENTIAL HAZARD AREAS OF THE RECREATIONAL VEHICLE. SAFETY SHOULD BE STRESSED TO ALL OPERATORS AND POTENTIAL OPERATORS OF THIS EQUIPMENT.



Study these SAFETY RULES carefully before operating or servicing applicable equipment. Become familiar with this Owner's Manual and with your generator. Safe, efficient and reliable operation can only be achieved if generator is properly installed, operated and maintained. Many accidents are caused by failing to follow simple and fundamental rules or precautions. The manufacturer suggests that these GENERAL SAFETY RULES be copied and posted in potential hazard areas of the recreational vehicle. Safety should be stressed to all operators and potential operators of equipment.


The manufacturer cannot possibly anticipate every 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 you use a procedure, work method or operating technique Generac does not specifically recommend, you must satisfy yourself that it is safe for you and others. You must also make sure the procedure, work method or operating technique that you chose does not render the generator to be unsafe.




WARNING:



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

 For fire safety, the recreational vehicle generator must be properly installed and maintained. Installation must always remain in compliance with applicable codes and standards. In addition, the generator must be installed in conformance to the manufacturer's detailed installation instructions. Following installation, nothing must be done that might render the generator in noncompliance with such codes, standards and instructions.

 The RV generator produces extremely high and dangerous electrical voltages and can cause dangerous, and possibly fatal, electrical shock. Avoid contact with bare wires, terminals, etc. while the unit is running. If you must work around an operating generator, stand on an insulated, dry surface to reduce shock hazard.

- Never work on this equipment or handle any electrical device while standing in water, while barefoot, or while hands or feet are wet. Dangerous electrical shock will result.
- Have the generator properly grounded (bonded) during installation onto the vehicle, either by solid mounting to the vehicle frame or chassis or by means of an approved bonding conductor. DO NOT disconnect the bonding conductor, if so equipped. DO NOT reconnect the bonding conductor to any generator part that might be removed or disassembled during routine maintenance. If the grounding conductor must be replaced, use only a flexible conductor that is of No. 8 AWG copper wire minimum.

- In case of accident caused by electric shock, shut down the source of electrical power down at once. If this cannot be done, free victim from live conductor. AVOID DIRECT CONTACT WITH THE VICTIM. Use a dry board, dry rope, or other non-conducting implement to free the victim from live conductor.
- Inspect fuel system frequently for leaks or damage. Repair or replace any damaged or leaking component immediately. Never attempt to change, alter or modify the generator fuel system in any way that might affect safety or compliance with applicable codes and standards.
- The generator engine gives off DEADLY carbon monoxide gas through its exhaust system. This dangerous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death. This exhaust system must have been properly installed, in strict compliance with applicable codes and standards. Following installation, you must do nothing that might render the system unsafe or in non-compliance with such codes and standards. The generator compartment must be completely vapor sealed from vehicle interior. There must be no possibility of exhaust fumes entering the vehicle interior. Never operate this equipment with a leaking or defective exhaust system.
- 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, fuel leakage, oil leakage, etc.
- Do not smoke around the generator. Wipe up any fuel, and oil immediately. Never leave oily or fuel soaked rags in the generator compartment or on the generator itself. Keep the area around the generator clean and free of debris.
- Adequate ventilation is required to expel toxic fumes and fuel vapors from the generator compartment. Do not alter the installation of this equipment in any manner that might obstruct air and ventilation openings. Such openings must be kept clear and unobstructed.
- Keep hands, feet, clothing, etc., away from drive belts, fans and other moving parts of this equipment. Never remove any drive belt or fan guards while the unit is operating.
- Inspect the generator periodically. Repair or replace all damaged or defective parts immediately.
- These generators use LP gas (propane) as a fuel. Liquid Propane gas is highly EXPLOSIVE. The gas is heavier than air and tends to settle in low areas where even the slightest spark can ignite the gas and cause an explosion.
- Before performing any maintenance on the generator set, 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.

IDENTIFICATION RECORD

Please record the following information from the generator DATA PLATE or information decal.

1. Model Number _____ 2. Serial Number _____
3. kW Rating _____ 4. Rated Voltage _____
5. Phase _____ 6. Hertz _____

MODEL NO. _____
SERIAL NO. _____
GENERATOR RPM _____

FOR SERVICE CENTER LOCATION CALL
800-333-1322 24 HOURS A DAY
GENERAC CORPORATION
WAUKESHA, WISC.

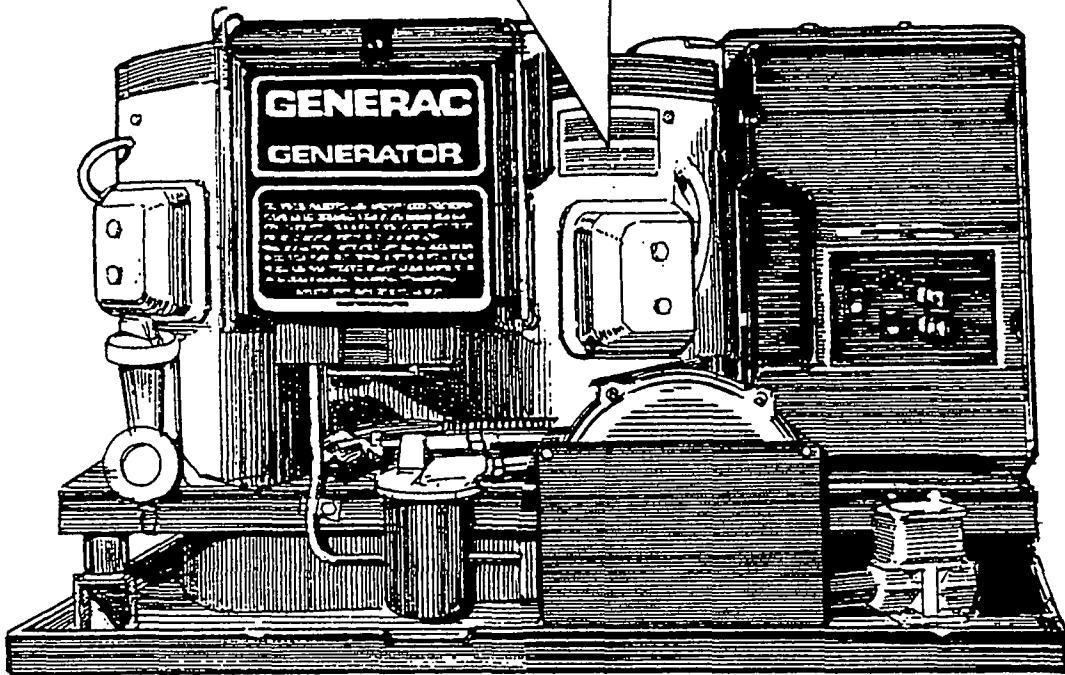


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READ THIS MANUAL THOROUGHLY

If you don't understand any portion of this manual, contact Generac for a demonstration of actual starting, operating and servicing procedures.

Throughout this publication and on tags and decals affixed to the generator, DANGER and CAUTION blocks are used to alert you to special instruction about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully.

These safety warnings cannot eliminate the hazards that they indicate. Strict compliance with the special instructions while performing the service plus "common sense" are major measures to prevent accidents.

The following definitions apply to DANGER, CAUTION and NOTE blocks found throughout the manual.



DANGER: AFTER THIS HEADING YOU CAN READ HANDLING, INSTALLING, OPERATING OR SERVICING INSTRUCTIONS THAT, IF NOT STRICTLY COMPLIED WITH, MAY RESULT IN PERSONAL INJURY.



CAUTION: After this heading you can read instructions for handling, installing, operating or servicing the generator that, if not strictly complied with, may result in damage to equipment and/or property.

NOTE: After this heading you can read explanatory statements that require special emphasis.

These symbols indicate the following:



Points out important safety information and, if not followed, could endanger personal safety and/or property of yourself and others.



Potential explosion hazard



Potential fire hazard



Potential electrical shock hazard

The operator (driver) is responsible for proper and safe use of the vehicle, equipment on the vehicle, and the safety of all vehicle occupants. We strongly recommend that the operator read this Owner's Manual and thoroughly understand all instructions before using this equipment. We also strongly recommend instructing other occupants in the vehicle to properly start and operate the generator. 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 by an Authorized Dealer periodically. *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 your industrial mobile generator assures a minimum number of problems and keeps your operating expenses at a minimum. See your authorized Dealer/Distributor for service aids and accessories.

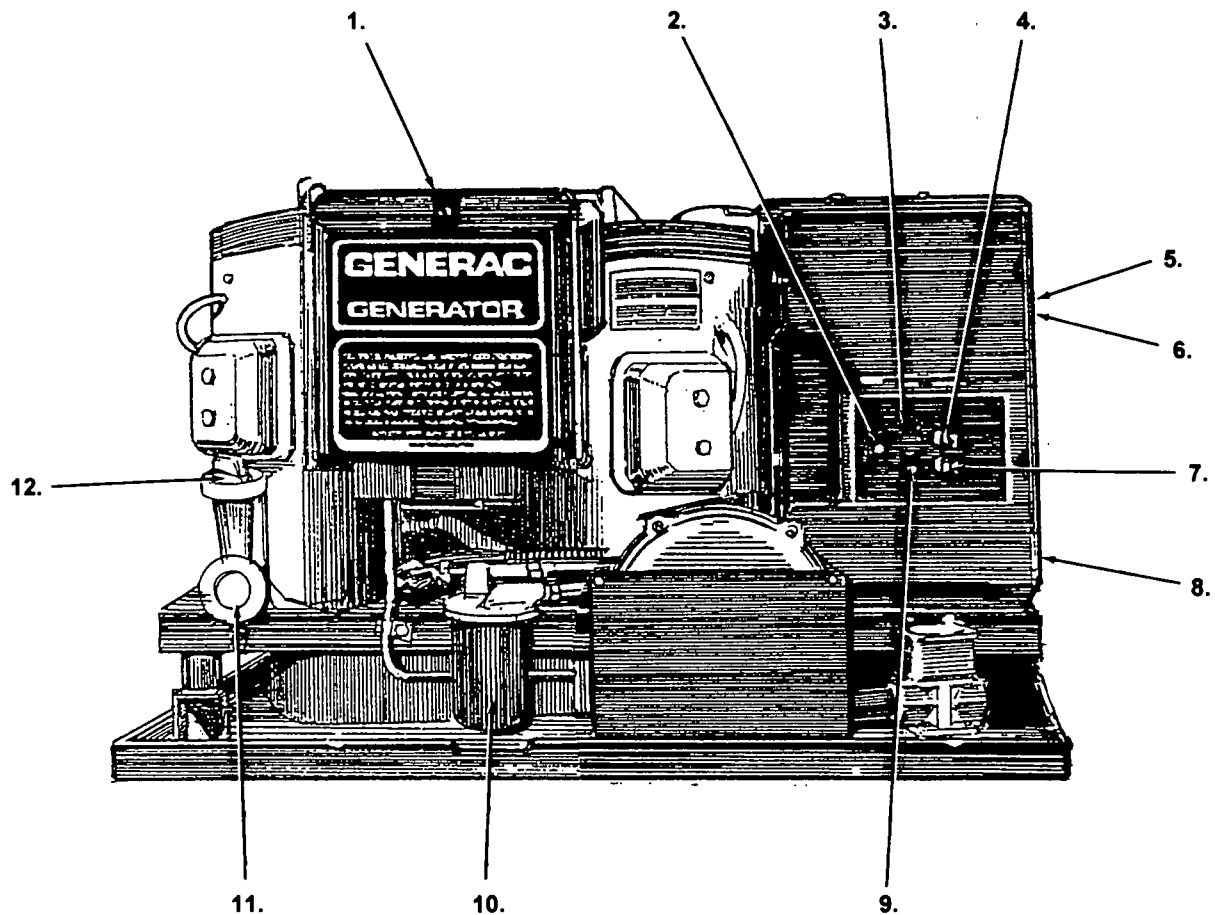
HOW TO OBTAIN SERVICE

When your industrial mobile generator set requires servicing or repairs, simply contact an Authorized Service Facility for assistance. Service technicians are factory-trained and are capable of handling all of your service needs.

When contacting an Authorized Service Facility or the factory about parts and service, always supply the complete model number and serial number of your unit as given on its data plate.

The warranty on your generator is included in this Owner's Manual, as well as listings for repair parts.

GENERATOR FEATURES



REFERENCE NUMBER IDENTIFICATION

- | | |
|-------------------------------------|----------------------------------|
| 1. Generator Air Intake Screen | 7. 30 amp Circuit Breaker |
| 2. Engine Start/Stop Switch | 8. Starter Contactor |
| 3. 15 amp Fuse | 9. Fuel Pump Primer Switch |
| 4. 20 or 30 amp Circuit Breaker | 10. Oil Filter |
| 5. Optional Remote Panel Receptacle | 11. Oil Drain Plug |
| 6. Generator AC Output Leads | 12. Oil dipstick and filler Tube |

GENERATOR FAMILIARIZATION

GENERATOR APPLICABILITY

These generators have been designed and manufactured for supplying electrical power for recreational vehicles. You should not modify the generator or use it for any application other than for what it was designed. If there are questions pertaining to its application, write or call the factory. Do not use the unit until you have been advised by a competent authority.



DANGER: FOR FIRE SAFETY, THE GENERATOR MUST HAVE BEEN PROPERLY INSTALLED IN COMPLIANCE WITH (1) ANSI 119.2-1975/NFPA 501C-1974 "STANDARD FOR RECREATIONAL VEHICLES", PART III, "INSTALLATION OF ELECTRICAL SYSTEMS." THE GENERATOR ALSO MUST HAVE BEEN INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S DETAILED INSTALLATION INSTRUCTIONS. AFTER INSTALLATION, DO NOTHING THAT MIGHT RENDER THE UNIT IN NON-COMPLIANCE WITH SUCH CODES, STANDARDS AND INSTRUCTIONS.

You can use your generator set to supply the following electrical loads:

Q-55LP: 120 and/or 240 volts, single phase, 60 Hz electrical loads. These loads can require up to 5500 watts (5.5 kW) of power, but cannot exceed 45.8 AC amperes of current at 120 volts or exceed 22.9 AC amperes at 240 volts.

Q-70LP: 120 and/or 240 volts, single phase, 60 Hz electrical loads. These loads can require up to 7000 watts (7.0 kW) of power, but cannot exceed 58.3 AC amperes of current at 120 volts or exceed 29.1 AC amperes at 240 volts.



CAUTION: Do not overload the generator. Some installations may require that electrical loads be alternated to avoid overloading. Applying excessively high electrical loads may damage the generator and may shorten its life. Add up the rated watts of all electrical lighting, appliance, tool and motor loads the generator will power at one time. This total should not be greater than the wattage capacity of the generator. If an electrical device nameplate gives only volts and amps, multiply volts times amps to obtain watts (volts x amps = watts). Some electric motors require more watts of power (or amps of current) for starting than for continuous operation.

INSTALLATION

This Owner's Manual has been prepared under the assumption that a competent, qualified technician installed the generator into a recreational vehicle. We also assume the installer complied with all applicable codes, standards and regulations pertaining to installation.

An **INSTALLATION MANUAL** was shipped with the generator. That manual contains manufacturer's instructions and recommendations for installing the unit into a recreational vehicle. After installation, installers should forward the Installation Manual to Owners/Operators for their information.

Owners/Operators have the responsibility to make sure that nothing is done that might render the installation unsafe or in non-compliance with applicable codes, standards and instructions.

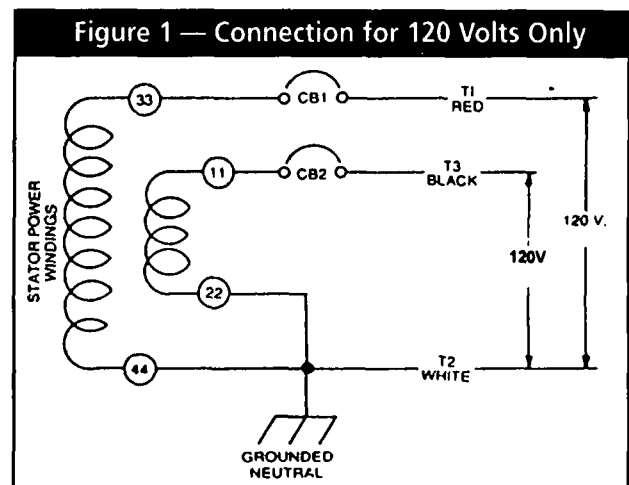
SAFETY

Before using the generator set, carefully read **GENERAL SAFETY RULES** inside the cover. Comply with these **RULES** to prevent accidents and damage to equipment and/or property. Generac suggests copying and posting the **GENERAL SAFETY RULES** in potential hazard areas of the recreational vehicle. Safety should be stressed to all operators of this equipment.

GENERATOR AC CONNECTION SYSTEM

These air-cooled Q Series generator sets are equipped with dual stator AC power windings. These two stator windings supply electrical power to customer electrical loads by means of a dual 2-wire connection system.

The generator may have been installed so that units only power 120 volts AC loads (Figure 1); or you can wire them to connect both 120 and/or 240 volts AC electrical loads. Be sure to remove the jumper between the circuit breakers when connecting for 120/240 volts.



OPERATING INSTRUCTIONS

GENERATOR CONTROL PANEL

Mounted on the generator control panel (Figure 2) are the following features:

■ START/STOP SWITCH

To crank and start the engine, hold this switch at its START position. Release the switch when the engine starts. To stop an operating engine, press and hold the switch in its STOP position until the engine shuts off. The switch center position is the RUN position.

■ FUSE

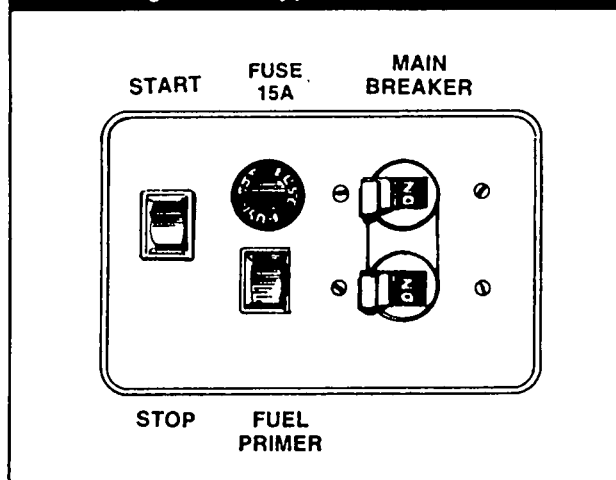
Protects the engine DC control circuit against electrical overload. If the fuse element has melted open due to overloading, the engine cannot be cranked. If you must replace it, use only an identical replacement fuse.

■ MAIN BREAKER

Protects generator's AC output circuit against overload, i.e., prevents unit from exceeding wattage/ampere capacity.

NOTE: If the Series Q-55LP or Q-70LP has been reconnected for dual voltage AC output (120/240 volts), you can install line breakers having an amperage rating that is different than stated previously. The replacement main breakers consist of two separate breakers with a connecting piece between the breaker handles (so that both breakers will operate at the same time). If the unit is reconnected for dual voltage, it is no longer RVIA listed.

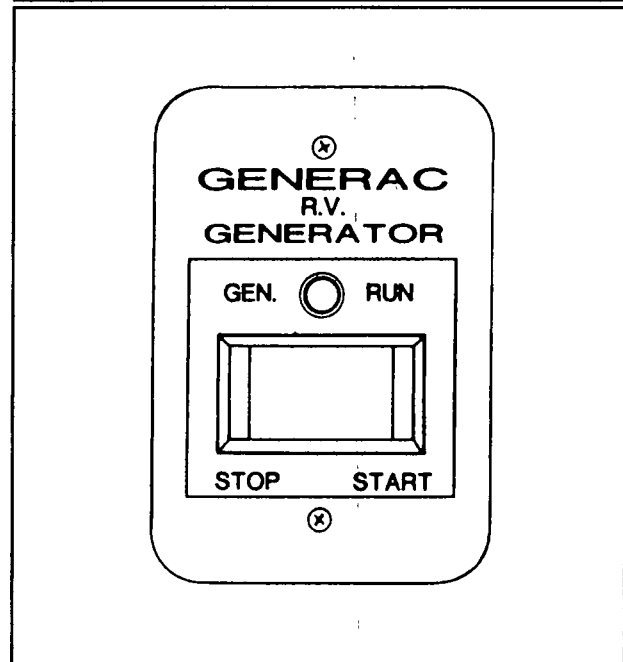
Figure 2 — Typical Control Panel



OPTIONAL REMOTE START/STOP PANEL

Optional remote mounted panels are available which permit you to crank and start the generator from any convenient location in the recreational vehicle. Figure 3 shows the model 9042 remote panel which includes (a) start/stop switch and (b) a generator run lamp.

Figure 3 — Optional Remote Panel (Model 9042)



You can also order Model 9043, a remote panel which includes the (a) start/stop switch, (b) the generator run lamp and (c) an hourmeter. The hourmeter provides a continuous indication of engine-generator operating time. Use the hourmeter for checking of periodic maintenance requirements on the unit.

BEFORE STARTING THE ENGINE

IMPORTANT: INSTRUCTIONS AND INFORMATION IN THIS MANUAL ASSUME THE GENERATOR HAS BEEN PROPERLY INSTALLED, CONNECTED, SERVICED, TESTED AND ADJUSTED BY A QUALIFIED INSTALLATION TECHNICIAN OF INSTALLATION CONTRACTOR.

■ INSTALLATION

Generator installation must have been properly completed so it complies with all applicable codes, standards and regulations and with the manufacturer's recommendations.

■ ENGINE LUBRICATION

Have engine crankcase properly serviced with recommended oil before starting. Refer to "Maintenance" and "Specifications" sections for oil servicing procedures and recommendations.



CAUTION: Any attempt to crank or start the engine before you have properly serviced it with the recommended oil may result in engine failure.

■ FUEL SUPPLY

The engine must have adequate supply of proper fuel to operate. Before starting, check that sufficient fuel is available.

■ COOLING AND VENTILATING AIR

Air inlet and outlet openings in the generator compartment must be open and unobstructed for continued proper operation. Without sufficient cooling and ventilating air flow, the engine-generator quickly overheats, which causes it to quickly shutdown. Overheating could also damage the unit or your vehicle.

ENGINE EXHAUST GAS

Before starting the generator engine, you should be sure there is no way for exhaust gases to enter the vehicle interior and endangering people or animals. Close windows, doors and other openings in the vehicle that, if open, might permit exhaust gases to enter the vehicle.



DANGER: THE GENERATOR ENGINE GIVES OFF DEADLY CARBON MONOXIDE GAS THROUGH ITS EXHAUST SYSTEM. THIS DANGEROUS GAS, IF BREATHED IN SUFFICIENT CONCENTRATIONS, CAN CAUSE UNCONSCIOUSNESS OR EVEN DEATH. DO NOT OPERATE THE GENERATOR IF ITS EXHAUST SYSTEM IS LEAKING OR HAS BEEN DAMAGED. SYMPTOMS OF CARBON MONOXIDE POISONING ARE (A) INABILITY TO THINK COHERENTLY, (B) VOMITING, (C) TWITCHING MUSCLES, (D) THROBING TEMPLES, (E) DIZZINESS, (F) HEADACHE, (G) WEAKNESS AND SLEEPINESS. IF YOU FEEL ANY OF THESE SYMPTOMS, MOVE INTO FRESH AIR IMMEDIATELY. IF SYMPTOMS PERSIST, GET MEDICAL HELP.

STARTING

IMPORTANT: Read the vehicle manufacturer's instructions. The owner/operator should become familiar with the vehicle in which this generator is installed. Differences exist between vehicles. For example, some vehicles may use a transfer switch to isolate dockside power from the generator, while other vehicles may use an isolating receptacle. Some vehicles may be equipped with a DC converter which allows the generator to power certain DC lighting and other DC loads.

To crank and start the generator engine, proceed as follows:

1. Turn OFF electrical loads, using whatever means provided in your vehicle (such as a main line circuit breaker or transfer switch).

NOTE: If you start the engine with the start/stop switch on the generator control panel, turn OFF loads by setting the panel's main breakers to their "OFF" or "OPEN" positions. Electrical load circuits will be turned ON after the generator has started, stabilized and warmed up.

2. To crank and start the engine, hold the start/stop switch at START. Release the switch when the engine starts.



CAUTION: If the engine does not start after it has been cranking for 15 seconds, release the start/stop switch and try again. Holding the switch for longer than 15 seconds may damage the starter motor.

3. Let the engine run at no-load for a few minutes to stabilize and warm up the engine.
4. Turn ON electrical loads, using whatever means provided (such as a main circuit breaker or transfer switch).

NOTE: If you start a warm generator engine, you may press the start switch only slightly to engage the ignition system. However, you should press and hold the starter switch for a minimum of two (2) seconds to energize the field boost system. If you start the engine without energizing the field boost system, the generator produces no AC output.

STOPPING THE GENERATOR

1. Turn OFF all electrical loads, using whatever means provided (such as a main circuit breaker or transfer switch).
2. Let the generator run at no-load for a few minutes, to stabilize internal engine-generator temperatures.
3. Place Start/Stop switch in its STOP position.

APPLYING LOADS TO GENERATOR

When applying electrical loads to the generator, observe these guidelines:

- Before applying electrical loads, let the generator stabilize and warm up for a minute or two.
- DO NOT overload the generator.

■ LETTING ENGINE STABILIZE

The generator supplies correct rated frequency and voltage only at the proper governed speed. Some electrical appliances may be extremely sensitive to voltage and frequency. Incorrect frequencies and/or voltages can damage those appliances.

If electrical loads are applied at reduced operating speeds, such loads imposed on the engine when sufficient power is not available may shorten engine life. Never turn ON electrical loads until after the generator engine has started and stabilized ON-speed.

DO NOT OVERLOAD THE GENERATOR

You can read the rated wattage/amperage capacity of your generator on the generator data plate (see "Identification Record" on Page 1).

Applying electrical loads in excess of the unit's rated capacity will cause the engine-generator to automatically shutdown.

To avoid overloading, add up the wattage of all connected electrical lighting, appliance, tool and motor loads. This total should not be greater than the generator's rated wattage capacity.

- Most lighting, appliance, tool and motor loads indicate their required watts on their nameplate or data plate. For light bulbs, simply note the wattage rating of the bulb.

- If a load does not show its rated wattage, multiply that load's rated VOLTS times AMPS to obtain WATTS.
- Induction type motors (such as those that run the vehicle's furnace fan, refrigerator, air conditioner, etc.) need about 2-1/2 times more watts of power for starting than for running (for a few seconds during motor starting). Be sure to allow for this when connecting electrical loads to the generator. First, figure the watts needed to start electric motors in the system. To that figure, add the running wattages of other items that will be operated by the generator.
- On a new generator do not apply heavy electrical loads for the first two or three hours of operation.

WATTAGE REFERENCE GUIDE

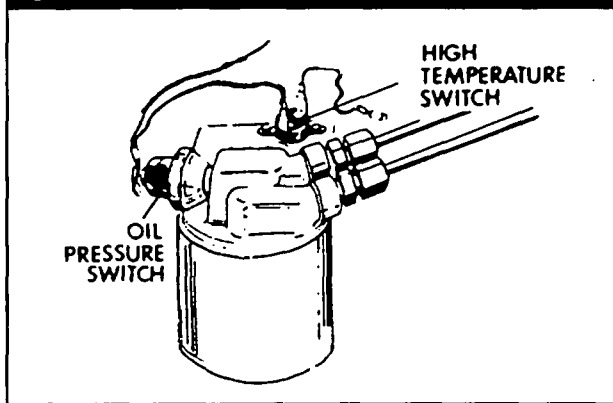
	RUNNING WATTS		RUNNING WATTS
*Air Conditioner (12,000 Btu)	1700	*Jet Pump	800
Battery Charger (20 amp)	500	Lawn Mower	1200
Belt Sander (3")	1000	Light Bulb	100
Chain Saw	1200	Microwave Oven	700
Circular Saw (6-12")	800 to 1000	*Milk Cooler	1100
Coffee Maker	1000	Oil Burner on Furnace	300
*Compressor (1 HP)	2000	Oil Fired Space Heater (140,000 Btu)	400
*Compressor (3/4 HP)	1800	Oil Fired Space Heater (85,000 Btu)	225
*Compressor (1/2 HP)	1400	Oil Fired Space Heater (30,000 Btu)	150
Curling Iron	700	*Paint Sprayer, Airless (1/3 HP)	600
*Deep Freeze	500	Paint Sprayer, Airless (handheld)	150
Disc Sander (9")	1200	Radio	50 to 200
Edge Trimmer	500	*Refrigerator	600
Electric Nail Gun	1200	Slow Cooker	200
Electric Range (one element)	1500	*Submersible Pump (1-1/2 HP)	2800
Electric Skillet	1250	*Submersible Pump (1 HP)	2000
*Furnace Fan (1/3 HP)	1200	*Submersible Pump (1/2 HP)	1500
Hair Dryer	1200	Sump Pump	600
Hand Drill (1")	1100	*Table Saw (10")	1750 to 2000
Hand Drill (1/2")	750 to 1000	Television	200 to 500
Hand Drill (3/8")	500	Weed Trimmer	500
Hand Drill (1/4")	250		
Hedge Trimmer	450		
Impact Wrench	500		

* Allow 2-1/2 times the listed watts for starting these devices.

AUTOMATIC LOW OIL PRESSURE SHUTDOWN

The engine is equipped with a normally-open (N.O.) oil pressure switch (Figure 4). Engine oil pressure holds the switch open during cranking and operation. Should oil pressure drop below about 8-10 PSI, the switch contacts close and the engine automatically shuts down.

Figure 4 — Switches for Engine Safety Shutdown



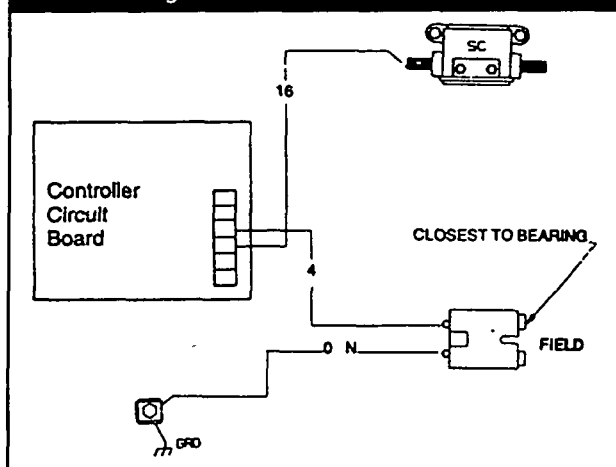
HIGH TEMPERATURE SHUTDOWN

An oil temperature switch (Figure 4) with normally-open (N.O.) contacts is mounted near the oil filter. If oil temperature were to exceed a preset temperature, the switch contacts close and the engine shuts down.

FIELD BOOST

The Controller Circuit Board Houses a field boost diode and resistor which are not part of the automatic choke circuit. These two components are part of a "field Boost" circuit (Figure 5). During engine cranking only, a positive DC (battery) voltage is delivered through the diode, resistor, brushes and slip rings, and to the generator rotor. Application of this voltage to the rotor "flashes the field" whenever it is started. Flashing of the field each time the generator starts makes sure that a sufficiently strong magnetic field is available to produce the required "pick up" voltage in the stator windings.

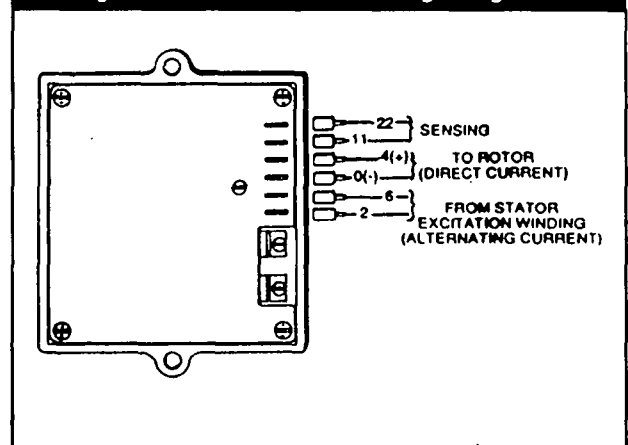
Figure 5 — Field Boost Circuit



OVER VOLTAGE PROTECTION

A solid state voltage regulator (Figure 6) controls the generator's AC output voltage. This regulator supplies an excitation current to the rotor. By regulating the rotor's excitation current, the strength of its magnetic field is regulated and, in turn, the voltage delivered to connected electrical loads is controlled. When the AC frequency is 60 Hz, voltage is regulated at 120 volts (voltage-to-frequency ratio is 2-to-1).

Figure 6 — Solid State Voltage Regulator



The voltage regulator also incorporates a "voltage surge protection circuit." This circuit prevents troublesome surges in the generator AC output voltage. Voltage surge is a common cause of damage to electronic equipment.

25-HOUR BREAK IN PERIOD

The first 25 hours of operation are for "breaking in" the new generator. Correctly breaking in the generator is essential to minimize fuel consumption and provide maximum engine performance. During this 25-hour break in period, comply with the following:

- Run the unit at varying electrical loads, to help seat the engine piston rings properly.
- For the 75 hours of operation after the "break in" period, avoid light electrical loads. Load the generator at 50% (or more) of its rated wattage capacity. Repeated light loads during the break in period can cause improper seating of engine piston rings, which could cause blowby and high oil consumption.
- During the break in period, check engine oil level frequently. It is normal for oil consumption to be high during the breaking in period.
- After the 25-hour break in period, complete the tasks recommended under "25-Hour Check Up."

SPECIFICATIONS

25-HOUR CHECK UP

After the 25-hour break in period, contact an authorized service facility for the following maintenance. The vehicle owner is responsible for any charges:

- Change engine crankcase oil and oil filter.
- Check all fluid levels.
- Inspect cooling and ventilation openings on the vehicle.
- Check engine carburetor adjustments.
- Check engine ignitions system.
- Inspect entire electrical system.
- Inspect the engine exhaust system.

OPERATION IN HIGH GRASS OR BRUSH

Never operate the generator while the vehicle is parked in high grass, weeds, brush or leaves. Such materials can ignite and burn from the heat of the exhaust system. The generator exhaust system becomes extremely hot during operation and remains hot for a long time after it has shut down.

FUEL REQUIREMENTS

These generators are equipped with a LP-vapour withdrawal fuel system as standard equipment.

To operate normally the generator requires an inlet pressure of 11° WC (0.39 PSI).

ENGINE OIL REQUIREMENTS

Use a high quality detergent oil classified "For Service SF" and with an oil viscosity rating of SAE 10W-30 oil. Do not pour in any additives to the recommended oil. Engine crankcase capacity is 1.5 U.S. quarts. See MAINTENANCE section for oil level check and filling procedures.

ENGINE SPECIFICATIONS

Type of Engine	
Q-55LP	GN-480
Q-70LP	GN-570
Cooling Method	Air-cooled
Rated Horsepower	
Q-55LP	16 at 3600
Q-70LP	19 at 3600rpm
Displacement	
Q-55LP	480cc
Q-70LP	570cc
Compression Ratio	8.6 to 1
Cylinder Block	Aluminum with cast iron sleeve
Type of Governor	Mechanical, fixed speed
Engine Governed Speed	2500 rpm
Air Cleaner	Paper element
Starter	12 volts DC electric
Ignition System	Solid state
Recommended Spark Plugs	
Champion	RC12YC
AC	R45S
Fram Autolite	65
Spark Plug Gap	0.030 inch (0.8mm)

GENERATOR SPECIFICATIONS

SERIES	Q-55LP	Q-70LP
Rotor RPM	3600	3600
Rotor Poles	2	2
Engine RPM	2500	2500
Rated Max. Continuous AC Output*	5500 watts (5.5 kW)	7000 watts (7.0 kW)
Voltage	120	120
Rated Max. Continuous Current*	45.8 AC amps†	58.3 AC amps*
Phase	1	1
Frequency	60 Hertz	60 Hertz
Weight	215 pounds	222 pounds
Length	25 inches	25 inches
Width	18.5 inches	18.5 inches
Height	15.75 inches	15.75 inches

* All units are reconnectable to 120 and/or 240 volts, dual voltage output. Units are not listed per RVIA/ANSI when reconnected for dual voltage output.

† Rated maximum continuous current at 240 volts is 22.9 amps.

* Rated maximum continuous current at 240 volts is 29.1 amps.

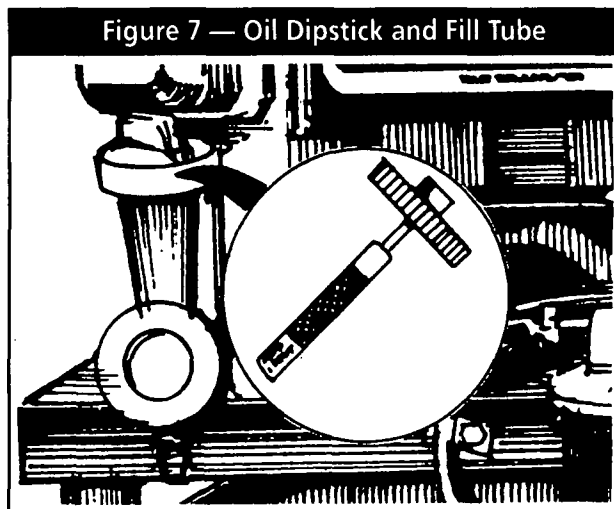
MAINTENANCE

This section includes information about simple maintenance which includes the following tasks:

- Checking engine oil level.
- Changing engine oil.
- Changing oil filter.
- Changing the air cleaner.
- Cleaning the air intake screen.
- Cleaning spark plugs.

CHECKING ENGINE OIL LEVEL

Check engine crankcase oil level at least every eight hours of operation, or before each use (Figure 7).



- Be sure the generator is as level as possible.
- Remove oil dipstick and wipe dry with clean, lint-free cloth.
- Install and tighten oil dipstick, then remove again.
- Oil should be at dipstick FULL mark. If necessary, add the recommended oil to the FULL mark only. DO NOT FILL ABOVE "FULL" MARK.
- Install and tighten oil dipstick cap before operating the engine.

NOTE: See "Engine Oil Requirements" on Page 10 for recommended oils.

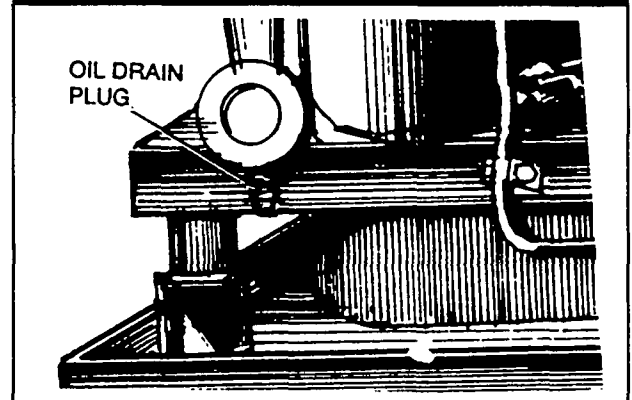
CHANGE ENGINE OIL

Change engine oil after the first 25 hours of operation (after the 25-hour break in period, Page 9). Thereafter, change oil every 50 operating hours. Change oil more frequently if operating consistently under heavy load or at high ambient temperatures.

- Warm up engine for at least five minutes, then shut down.

- With engine still warm from running, clean area around oil drain plug and remove oil drain plug (Figure 8). Drain oil completely into a suitable container.

Figure 8 — Location of Oil Drain Plug



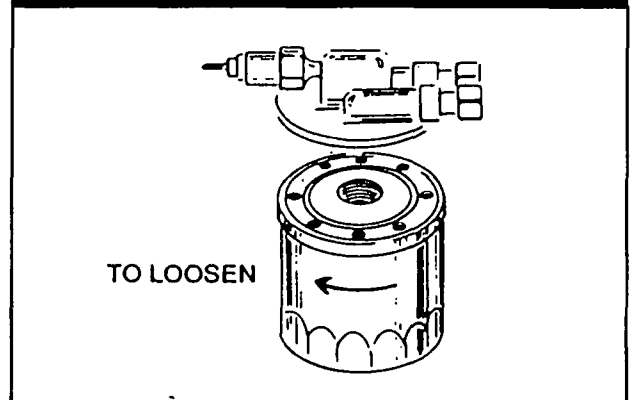
- When oil has drained, install and tighten drain plug.
- Remove oil dipstick and fill crankcase with the recommended oil (See Page 10). The engine crankcase can hold about 1 quart (950ml). DO NOT FILL ABOVE "FULL" MARK.
- Install and tighten dipstick cap before operating engine.

CHANGE OIL FILTER

Replace the engine oil filter after the first 25 hours of operation, every 100 operating hours thereafter.

- Turn oil filter counterclockwise to remove (Figure 9).

Figure 9 — Replacing Engine Oil Filter



- Coat gasket of new filter with engine oil.
- Turn new filter clockwise until its gasket contacts tightly with the filter adapter. Then tighten with an additional 3/4 to one turn by hand.
- Run engine and check for leaks.

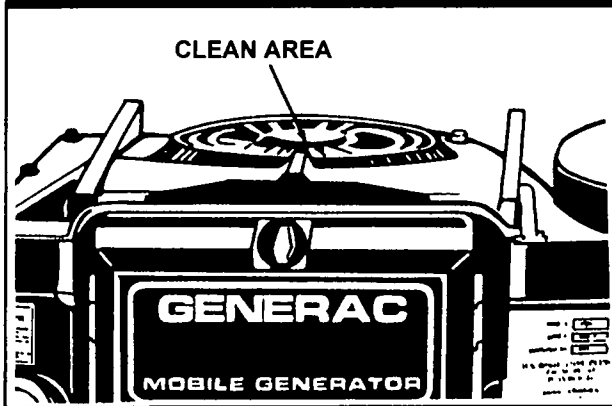
NOTE: Check oil level and fill to full mark after checking for leaks. Filter will retain some oil.

CLEAN AIR INTAKE SCREEN

Clean all foreign material from the air intake screen (Figure 10) at least once every 100 hours of operation. Clean more often if necessary.

Inspect the area around the generator exhaust muffler periodically and remove all grass, leaves, dirt, etc. from this area.

Figure 10 — Areas to Clean on Air Intake Screen

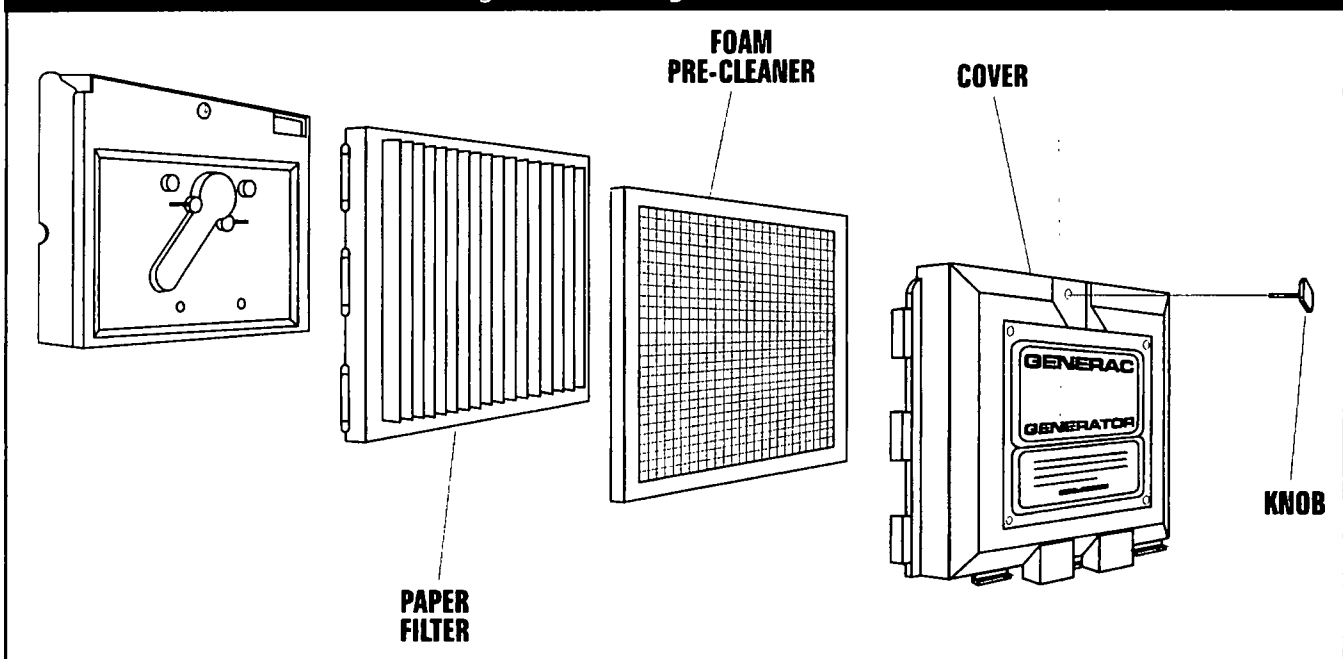


ENGINE AIR CLEANER

Clean and re-oil the foam pre-cleaner every three months or every 25 hours of operation, whichever occurs first. Service the foam pre-cleaner more frequently if you operate the generator in extremely dusty or dirty conditions (Figure 11).

- Turn KNOB counterclockwise to loosen.
- Remove COVER, FOAM PRE-CLEANER AND PAPER FILTER.
- Remove foam pre-cleaner from cover.
- Wash foam pre-cleaner in liquid detergent and water.

Figure 11 — Engine Air Cleaner



- Wrap foam pre-cleaner in a cloth and squeeze dry.
- Saturate foam pre-cleaner in engine oil. Squeeze to remove excess oil and to distribute oil.
- Install foam pre-cleaner into cover, followed by paper filter. Tabs at edges of paper filter must lock into slots on cover.
- Insert bottom locking tab of cover into slot. Install cover, foam pre-cleaner and paper filter.

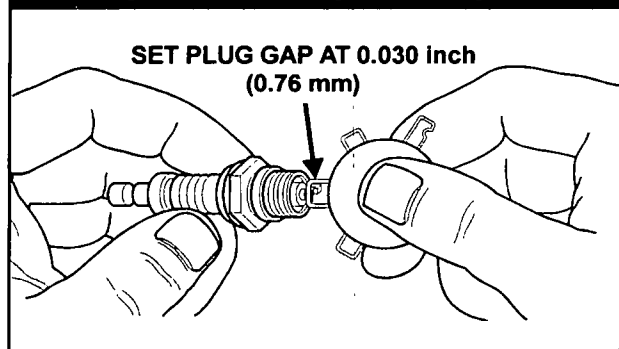
ENGINE SPARK PLUG

Clean engine spark plug and set gap to 0.030 inch (0.76mm) every 100 hours of operation (Figure 12). Clean by scraping or wire brushing and washing with commercial solvent. DO NOT BLAST CLEAN SPARK PLUG.



CAUTION: Sparking can occur if wire terminal does not fit firmly over spark plug terminal end. If necessary, reform wire terminal to obtain a tight fit.

Figure 12 — Setting Spark Plug Gap



SPARK ARRESTOR MUFFLER

If the generator is not equipped with a spark arrestor exhaust muffler and is to be used on any forest covered, brush covered or grass covered unimproved land, you may have to install a spark arrestor. The spark arrestor must be maintained in effective working order by the vehicle owner/operator.

For assistance in ordering, installing and maintaining spark arrestor exhaust mufflers, contact your nearest authorized service facility.

Exhaust mufflers supplied by Generac are spark arrestor types. Generac exhaust mufflers for RV generators do not have a spark arrestor screen, but are the more efficient "toroid" or "swirl" type. To remove carbon and combustion deposits from such mufflers, remove the PLUG from the muffler and run the engine for about 15 minutes. Shut engine down, let the muffler cool and install the plug.



WARNING: BE SURE TO RE-INSTALL THE PLUG FROM THE MUFFLER TIGHTLY. ENGINE VIBRATION COULD CAUSE A LOOSE PLUG TO FALL OUT. WITHOUT THE PLUG IN PLACE, HOT ENGINE EXHAUST IS DIRECTED OUT THE OPENING. THIS HOT EXHAUST, DEPENDING ON THE INSTALLATION, COULD BE DIRECTED TO AREAS NOT ABLE TO WITHSTAND THE EXTREME HEAT SUCH AS WOODEN FLOOR BOARDS OR OTHER FLAMMABLE MATERIALS. THIS COULD RESULT IN A FIRE.

CLEANING THE GENERATOR

Keep your generator set as clean and dry as possible. Dirt and moisture that are permitted to accumulate on electrical windings have an adverse affect on the insulation resistance of those windings.

Moisture that is allowed to remain in contact with windings will be retained in voids and cracks of the windings. Dirt makes the problem worse, since it tends to hold the moisture into contact with the windings. Salt, as from sea air, worsens the problem since it tends to absorb moisture from the air. The combination of salt and moisture makes a good electrical conductor.



CAUTION! Do NOT use a forceful spray of water to clean the generator. Water will enter the generator interior and cause problems, and may also contaminate the generator fuel system.

BATTERY

All lead-acid storage batteries will discharge when not in use. Inspect the generator battery as follows:

■ ONCE WEEKLY

Inspect battery posts and cables for tightness, corrosion. Clean and/or tighten as necessary.

Also check battery fluid level, and, if necessary, fill with **DISTILLED WATER ONLY. DO NOT USE TAP WATER IN BATTERY.**

■ EVERY SIX MONTHS

Have the battery state of charge and condition checked by an automotive service facility. This should be done with an automotive type battery hydrometer.



DANGER: 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.



DANGER: 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 YOU SPILL THE FLUID, FLUSH THE AFFECTED AREA IMMEDIATELY WITH CLEAR WATER.



DANGER: DO NOT USE ANY JUMPER CABLES OR BOOSTER BATTERY TO CRANK AND START THE GENERATOR ENGINE. IF ANY BATTERY HAS DISCHARGED, REMOVE IT FROM THE VEHICLE FOR RECHARGING.

MAJOR SERVICE MANUAL

To obtain a service manual for your generator, order it from your dealer/distributor or contact the factory. Be sure to identify your unit's MODEL NUMBER and SERIAL NUMBER.

DRIVE BELTS

The engine drives the generator rotor by means of a pulley and drive belt arrangement. The drive train, drive belt and pulleys are warranted for the life of the generator. Drive belt tension was properly adjusted before the unit was shipped from the factory. If you suspect that drive belt tension is incorrect, contact an authorized service facility.

EXERCISING THE GENERATOR

Generac recommends that you start and operate the generator at least once every seven days. Let the unit run for at least 30 minutes to "exercise" the engine.

OUT OF SERVICE PROTECTION

If you cannot exercise the generator every seven days and it is to be out of service longer than 30 days, prepare the generator for storage as follows:

- Start the engine and let it warm up.
- While the engine is still warm from running, drain the oil completely. Refill crankcase with recommended oil. See "Specifications."
- Attach a tag to the engine indicating the viscosity and classification of the oil in the crankcase.
- Remove spark plug(s) and add about two or three tablespoons of clean, fresh engine oil into spark plug(s) threaded opening(s). Crank engine several times to distribute oil, then install and tighten spark plug(s).
- Remove the battery and store in a cool, dry room on a wooden board. Never store the battery on any concrete or dirt floor.
- Clean and wipe the entire generator.
- Shut off fuel supply.

RETURN UNIT TO SERVICE AFTER STORAGE

To return the unit to service after storage, proceed as follows:

- Check tag on engine for oil viscosity and classification. Verify that the correct recommended oil is used in engine. If necessary, drain and refill with proper oil.
- Check battery. Fill all cells to the proper level with distilled water. **DO NOT USE TAP WATER IN THE BATTERY.** Recharge battery to 100% state of charge, or, if defective, replace the battery.
- Turn OFF all electrical loads, turn on fuel supply, then start the engine.
- Let engine warm up.
- Apply electrical loads to at least 50% of the unit's rated wattage capacity.
- When engine is thoroughly warmed up, turn off electrical loads and, shut it down.

THE GENERATOR IS NOW READY FOR SERVICE.

SERVICE DEALER LOCATION

TO LOCATE THE NEAREST GENERAC SERVICING DEALER, PLEASE CALL OUR 800 NUMBER.

ONLY DEALER LOCATION INFORMATION CAN BE OBTAINED AT THIS NUMBER.

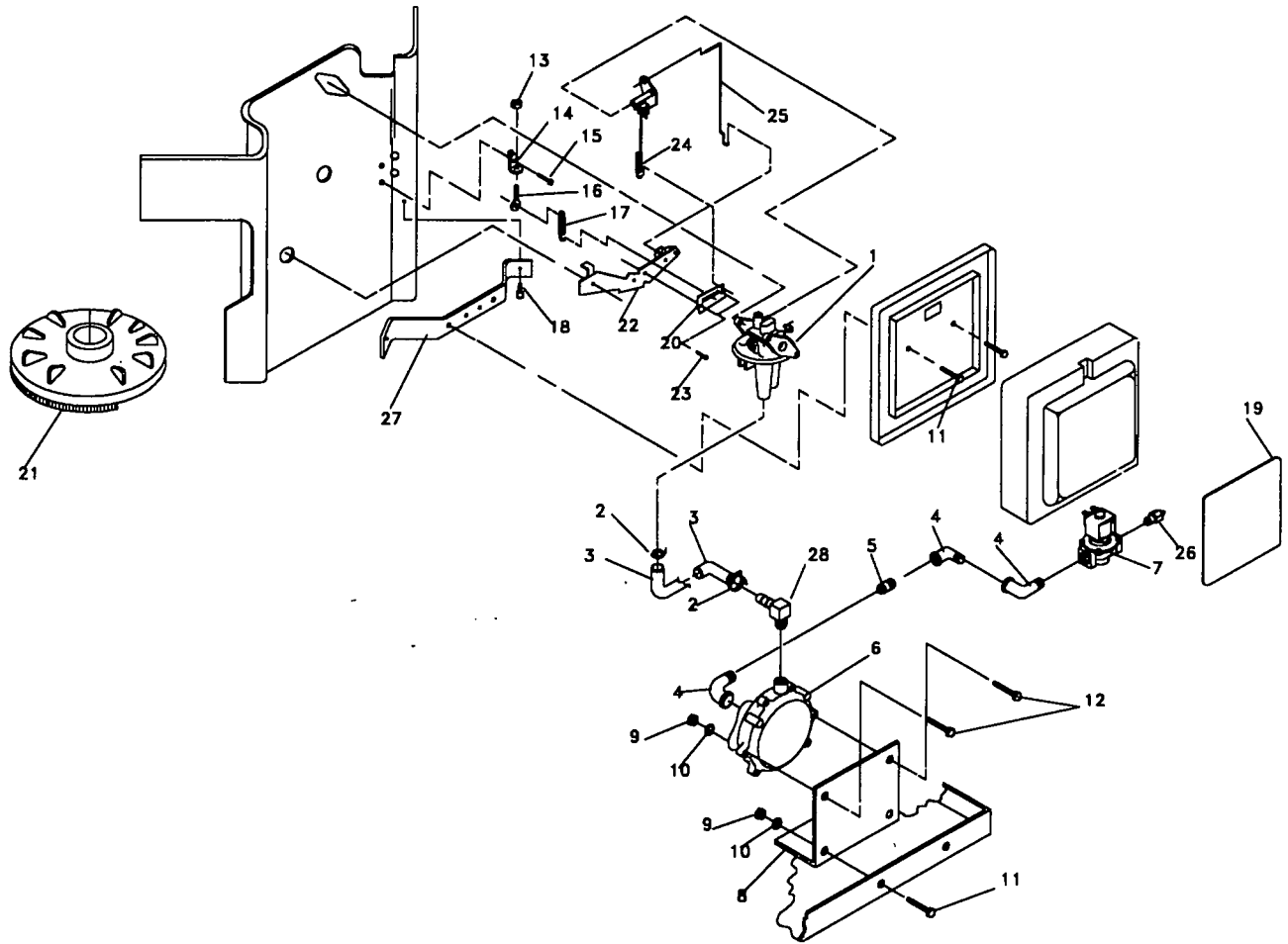
1-800-333-1322

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	REMEDY
Engine won't crank.	<ol style="list-style-type: none"> 15 amp fuse is blown Loose corroded or defective battery cables. Defective engine Start/Stop switch. Defective starter contactor. Defective starter motor. Low Battery Voltage. 	<ol style="list-style-type: none"> Replace 15 amp fuse Tighten, clean or replace as necessary. Replace Start/Stop switch. Replace contactor. Replace starter motor. Charge or replace battery.
Engine cranks but won't start.	<ol style="list-style-type: none"> Out of fuel. Fuel pump is defective. Open Wire #14 from Eng. Control Bd. Engine is flooded. Spark plug defective. 	<ol style="list-style-type: none"> Replenish fuel. Replace fuel pump. Reconnect wire. Wait 5-10 min. before trying. Clean, regap or replace plug.
Engine starts hard, runs rough.	<ol style="list-style-type: none"> Air cleaner plugged or damaged Defective spark plug. 	<ol style="list-style-type: none"> Clean or replace as needed. Clean, regap or replace plug.
Engine starts, shuts down when Start/Stop switch is released.	<ol style="list-style-type: none"> Engine oil is low. Engine is overheated. Defective Low Oil Pressure System Defective Engine Control Board Defective Computer Control Board 	<ol style="list-style-type: none"> Check oil; add as needed. Check adequate ventilation. Have serviced/replaced. Have board serviced/replaced. Have board serviced/replaced.
Start/Stop switch at Stop, engine continues to run.	<ol style="list-style-type: none"> Defective Start/Stop switch Open/disconnected wire #18 between Start/Stop switch and Engine Control Open/disconnected wire #0 between Start/Stop switch & Engine Control Bd. Defective Engine Control Board 	<ol style="list-style-type: none"> Replace switch. Reconnect or close wire. Reconnect or close wire. Replace board.
No AC output from generator.	<ol style="list-style-type: none"> Check circuit breaker. Check vehicle circuit breaker & fuses. Transfer sw. set to NORMAL position. Generator internal failure 	<ol style="list-style-type: none"> Reset to ON or CLOSED. Reset and replace if necessary. Set to GENERATOR position. Take generator to an Authorized Generac facility.

REPAIR PARTS — CARBURETOR

Drawing No. A4029

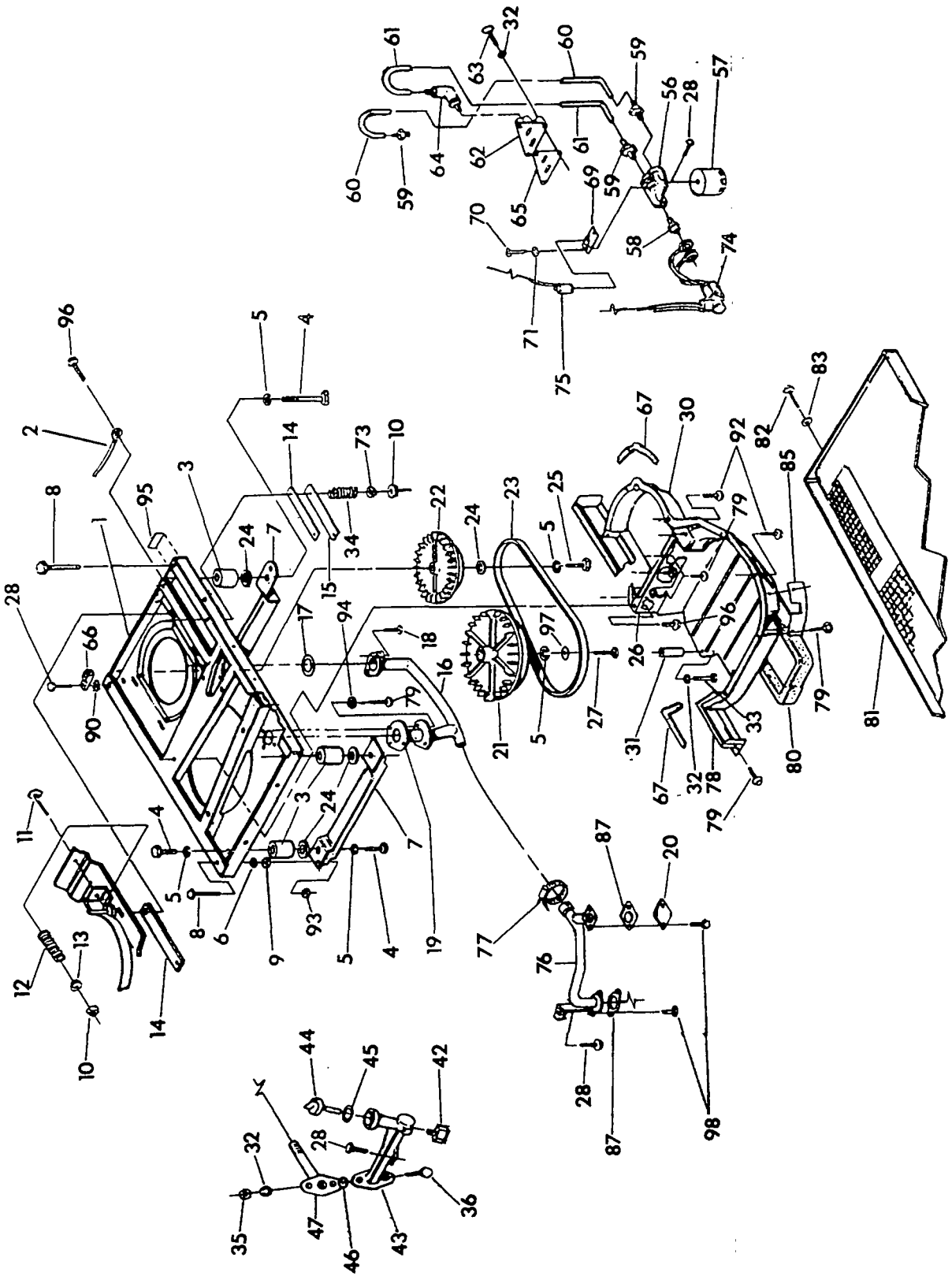


ITEM	PART NO.	QTY.	DESCRIPTION
1	A1662A	1	CARB. V-TWIN L/P
2	57822	2	HOSE CLAMP
3	74994	1	1/2" I.D. x 10" LONG HOSE
4	26307	3	STREET ELBOWS
5	26915	1	3/4" PIPE NIPPLE
6	75211	1	GASEOUS FUEL REGULATOR
7	A2666	1	GASEOUS FUEL SOLENOID
8	78864	1	REG. MOUNTING BRACKET
9	49813	4	M6 HEX NUT
10	22097	4	M6 LOCK WASHER
11	47411	2	M6-1.00 x 16MM HEX HD. CAPSCR.
12	38750	2	M6-1.00 x 30MM HEX HD. CAPSCR.
13	37398	1	HEX LOCK NUT (NYLON)
14	74961	1	GOV. ADJUSTER BRACKET
15	56893	5	NO. 10-24 x 1/2" SCREW
16	47227	1	GOV. ADJUSTER SCREW
17	74962-C	1	GOVERNOR SPRING
18	66476	2	M6-1.0 x 12MM HEX SCREW W/LOCKWASHER

ITEM	PART NO.	QTY.	DESCRIPTION
19	81378-B	1	AIR CLEANER DECAL IM-72-LPG
	91351	1	AIR CLEANER DECAL NP-66-LPG
	91352	1	AIR CLEANER DECAL-Q-55
	91352-A	1	AIR CLEANER DECAL-Q-70
20	75944	1	GOV. SPRING BRACKET
21	73130	1	FLYWHEEL ASSEMBLY
22	70155	1	GOVERNOR LEVER
23	76242	2	1/8" I.D. x 1/8" RIVET
24	70125	1	ANTI-LASH SPRING
25	70108	1	GOV.-TO-CARB. ROD
+	28739	4	4" LONG TIE WRAP
+	55162	9cc	PIPE SEALANT
26	81190	1	LP HOOK-UP FITTING
27	70103	1	AIR CLEANER SUPPORT BRACKET
28	61695	1	BARBED 90 DEG. 3/8" x 1/2"
			+NOT SHOWN

EXPLODED VIEW — BASE & PULLEYS

Drawing No. 95955



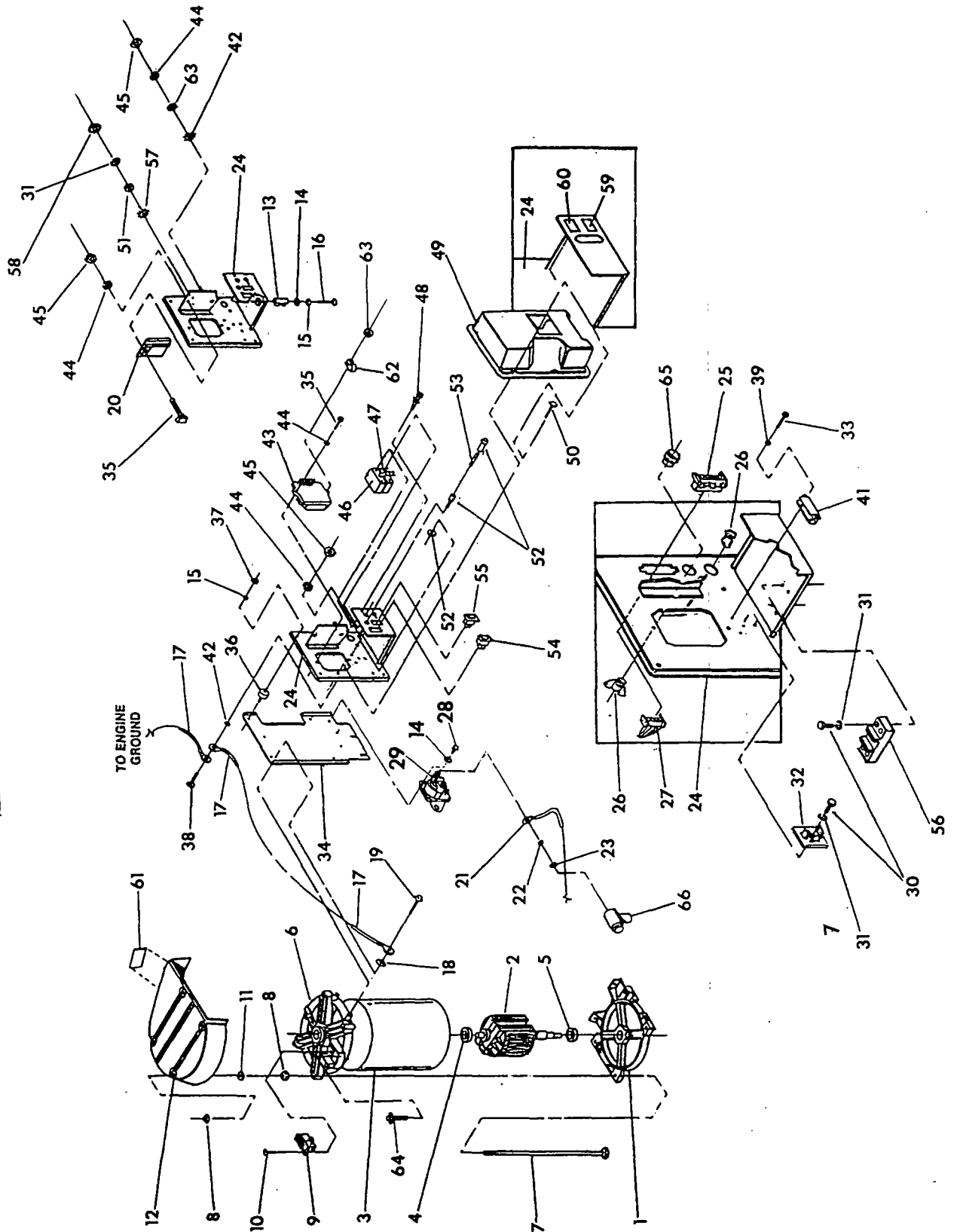
REPAIR PARTS — BASE & PULLEYS

Drawing No. 95955

ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	86318	1	BASE, MOUNTING	34	75242	4	SPRING, GEN. SET MT
2	90141	1	GROUND CABLE	35	49813	2	NUT, HEX M6 X 1.0
3	46911	4	MOUNT, (RUBBER)	36	45757	2	CAPSCR., HEX HD. M6-1.0 X 25 LONG
4	25017	4	CAPSCREW, HEX HD. 3/8"-16 x 1/2"	42	26925	1	3/8 NPT OIL DRAIN
5	22237	10	LOCKWASHER, 3/8	43	75710A	1	TUBE, OIL FILL AND DRAIN
6	22129	2	LOCKWASHER-M8	44	74958	1	CAP & DIPSTICK ASSEM.
7	72391	2	SKID, RUBBER MOUNT	45	67871	1	O-RING, CAP
8	77603	2	SAFETY BOLT 5/16-18 x 3 1/2	46	75712	1	O-RING, DRAIN
9	22259	2	NUT, HEX-5/16-18	47	75711	1	PIPE, OIL DRAIN ADAPTOR
10	52858	6	NUT, FLANGED LOCK M8-1.25	56	73179	1	OIL FILTER SUPPORT
11	51730	2	CAPSCR. HEX HD. M8-1.25 x 60MM	57	70185	1	FILTER, OIL (FRAM#PH3614)
12	29459	2	SPRING, BELT TENSION	58	60108	1	10 PSI-SWITCH, OIL PRES.
13	75215	2	WASHER, SPRING CNTR	59	74948	3	FITTING-5/16"
14	73146	4	SLIDE (NYLON)	60	74950	1	TUBE, OUTER OIL
15	75209	2	SUPPORT, NYLON SLIDE	61	74951	1	TUBE, INNER OIL
16	73174	1	MANIFOLD, EXHAUST	62	73134	1	ADAPTOR, OIL PAD
17	79678	2	GASKET, EXHAUST MANIFOLD	63	38750	3	CAPSCREW, HEX HEAD M6-1.00 x 30MM
18	55173	4	CAPSCR., HEX HD. M8-1.25x20MM (GRADE 10.9)	64	74949	1	FITTING, BARBED 90°-5/16"
19	72383	2	GASKET, COLLECTOR PAN	65	68548	1	GASKET, OIL PAD
20	90859	1	COVER PLATE -EXTERNAL	66	62684	1	LUG, GROUNDING
21	75224B	1	PULLEY, ENGINE	67	29289	-	TAPE, FOAM-1/16" x 1/2"
22	73106B	1	PULLEY, ALT.	69	75281	1	SWITCH, HIGH TEMP.
23	75216	1	BELT (POLY V 4L)-40"	70	74027	2	SCREW, PAN HEAD-M3-0.50
24	49451	5	WASHER, PULLEY RETAINER	71	43182	2	LOCKWASHER-M3
25	42633	1	CAPSCR., HEX HD. 3/8"-24 x 1" (GRADE 5)	73	75237	4	WASHER, SPRING RETAINER
26	77017	1	GUIDE, BLOWER HOUSING	74	77681	1	CAP, VINYL-LOS-2 WIRE
27	73118	1	CAPSCR., HEX HD. 3/8"-24 X 2-1/4"	75	75474	1	CAP, VINYL-17D x 42L x 2H
28	74906	5	SCREW (TAPTITE) M6-1.00 X 20	76	90800	1	ELBOW, EXHAUST
29	23152	4	CAPSCR.,HEX HD. 3/8"-16 X 3/4"	77	94670	1	CLAMP-EXHAUST 1-1/8
30	72375	1	HOUSING, BLOWER	78	75226	1	COVER, AIR
31	73185	1	SPACER, BLOWER HOUSING	79	56893	14	SCREW (CRIMPTITE) #10-24 x 1/2" LONG
32	22097	6	LOCKWASHER, M6	80	75229	1	SLIDE PAN, GASKET
33	77682	1	CAPSCR., HEX HD. M5-0.80 X 80MM	81	75227	1	SLIDE PAN
				82	79246	4	CAPSCREW, HEX HEAD M6-1.00 x 16MM W/LOCK WASHER
				83	22473	4	FLATWASHER, M6
				85	72384C	1	COVER, EXHAUS

EXPLODED VIEW — ALTERNATOR

Drawing No. 92118



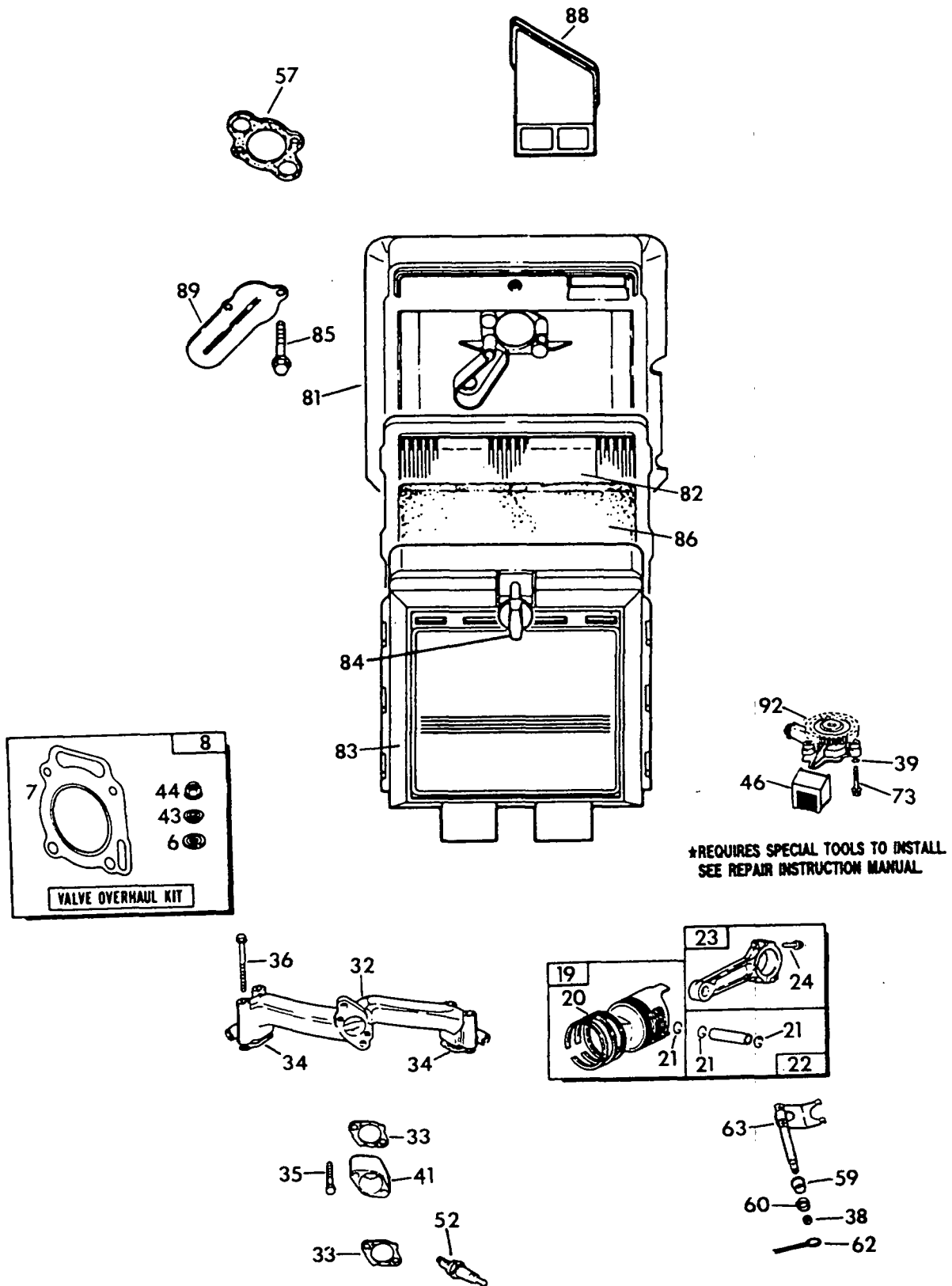
REPAIR PARTS — ALTERNATOR

Drawing No. 92118

ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	75995	1	LOWER BEARING CARRIER	34	86317	1	PANEL SUPPORT BRACKET
2	92605G	1	ROTOR ASSEM. 50	35	75235	4	M5-0.8 x 30 LG. CAPSCREW
	77005G	1	ROTOR ASSEM. 52	36	82737	4	VIBRATION MOUNT
	77005G	1	ROTOR ASSEM. 55	37	49813	4	M6-1.0 HEX NUT
	77004G	1	ROTOR ASSEM. 66	38	49815	1	M5-08 x 16 LG. HEX HD CAPSCR.
	80095G	1	ROTOR ASSEM. 72 & 70	39	43182	2	M3-LOCK WASHER
3	92604	1	STATOR ASSEM. 50	41	53623	1	C/BREAKER 2.5A. ON 50, 52, & 55
	87844G	1	STATOR ASSEM. 52		54502	1	C/BREAKER 3.0A. ON 66, 70, & 72
	87844G	1	STATOR ASSEM. 55				
	87845G	1	STATOR ASSEM. 66				
	87846G	1	STATOR ASSEM. 72 & 70	42	67444	2	M5 SHAKEPROOF WASHER
4	73159	1	BALL BEARING	43	83049	1	REGULATOR VOLTAGE
5	31971	1	BALL BEARING	44	49226	6	M5-LOCK WASHER
6	72379	1	UPPER BEARING CARRIER	45	51716	4	M5-0.8 HEX NUT
7	77006	4	STUD-STATOR	46	90144	1	C BREAKER 20A 50, 52, & 55
8	52858	8	M8-1.25 FLANGE LOCK NUT		90145	1	C/BREAKER 30A 66, 70, & 72
9	66386	1	BRUSH HOLDER	47	90145	1	C/BREAKER 30A. ALL UNITS
10	66849	2	M5-0.8 x 16 LG. TAPTITE	48	25105	4	#6-32 W/LOCK WASHER SCREW
11	27756	4	NYLON WASHER	49	86315	1	PANEL COVER
12	86314	1	GENERATOR TOP HOUSING	50	90734	4	M4-0.7 x 16 LG. CAPSCR. W/LOCKWASHER & FLAT WASHER
13	75234	1	RESISTOR				
14	22473	3	M6-FLAT WASHER	51	22985	1	M4 FLAT WASHER
15	22097	5	M6-LOCK WASHER	52	32300	1	FUSE HOLDER
16	74095	1	M6-1.0 x 60LG. CAPSCREW	53	22676	1	FUSE AGC-15A.
17	90141	2	GROUND CABLE	54	87798	1	SWITCH S.P.D.T. 6A (START-STOP).
18	22447	1	SHAKEPROOF LOCK WASHER	55	92113	1	SWITCH S.P.D.T.-(FUEL PUMP)
19	74906	4	M6-1.0 x 20 LG. TAPTITE	56	75210A	1	TERMINAL BLOCK
20	92234	1	CONTROLLER P.C.B.	57	23365	1	M4 SHAKEPROOF WASHER
21	10-74260	1	STARTER CABLE	58	51715	1	M4-0.7 HEX NUT
22	22129	2	5/16 LOCK WASHER	59	90157	1	DECAL, CB RATING 30A.
23	22259	2	5/16-18 HEX NUT	60	90156	1	DECAL, CB RATING 20A.
24	86316	1	PANEL SHEET METAL	61	89438A	1	DECAL, CUSTOMER CONNECTION-50, 52, & 55
25	53650	1	4-PIN CONNECTOR		89438B	1	DECAL, CUSTOMER CONNECTION-66, 70, & 72
26	20575	1	CONNECTOR				
27	75244	1	REMOTE HARNESS				
28	66476	2	M6-1.0 x 12MM CAPSCREW-W/LOCKWASHER	62	31791	1	CLAMP, HOSE
29	86729	1	STARTER CONTACTOR	63	23897	2	M5 FLAT WASHER
30	75476	3	M4-0.7 x 16 LG. CAPSCREW	64	74908	1	M5 x 10 LONG TAPTITE
31	22264	4	M4 LOCK WASHER	65	23484S	1	BUSHING
32	65795	1	BATTERY CHARGE RECTIFIER	66	75763-A	1	BOOT, BATTERY CABLE
33	90987	2	M3-0.5 x 12 LG. CAPSCREW				

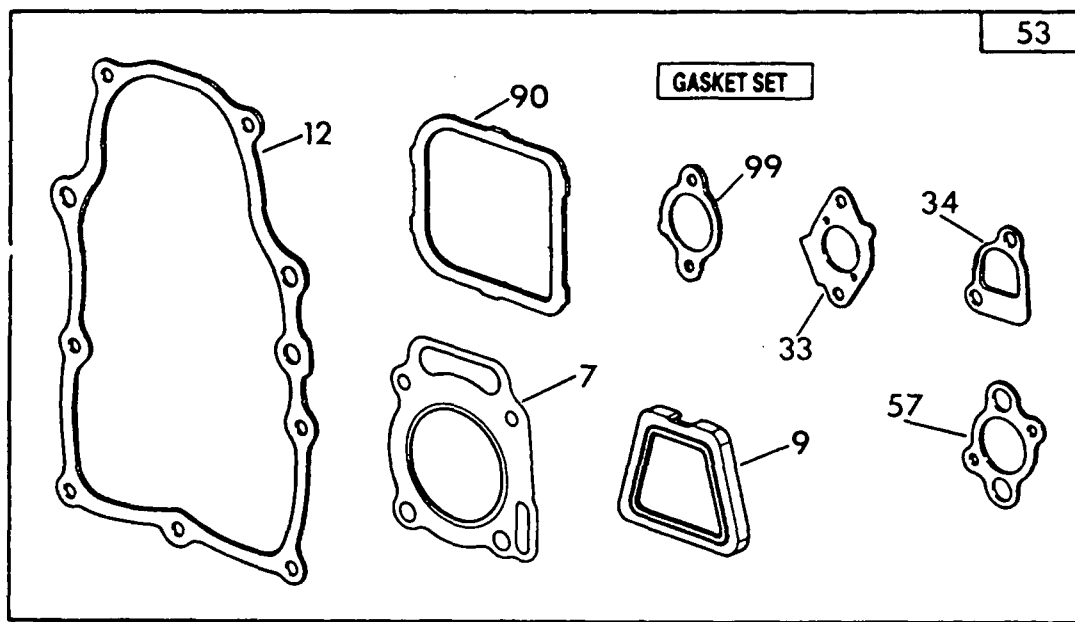
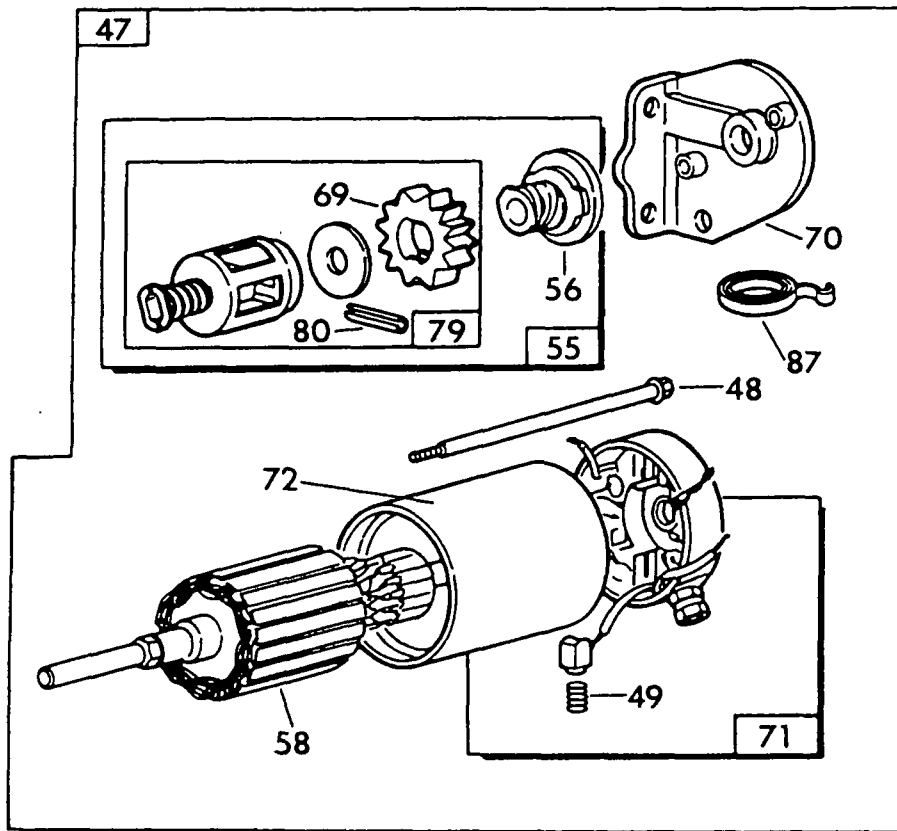
EXPLODED VIEW — ENGINE

Drawing No. 79216



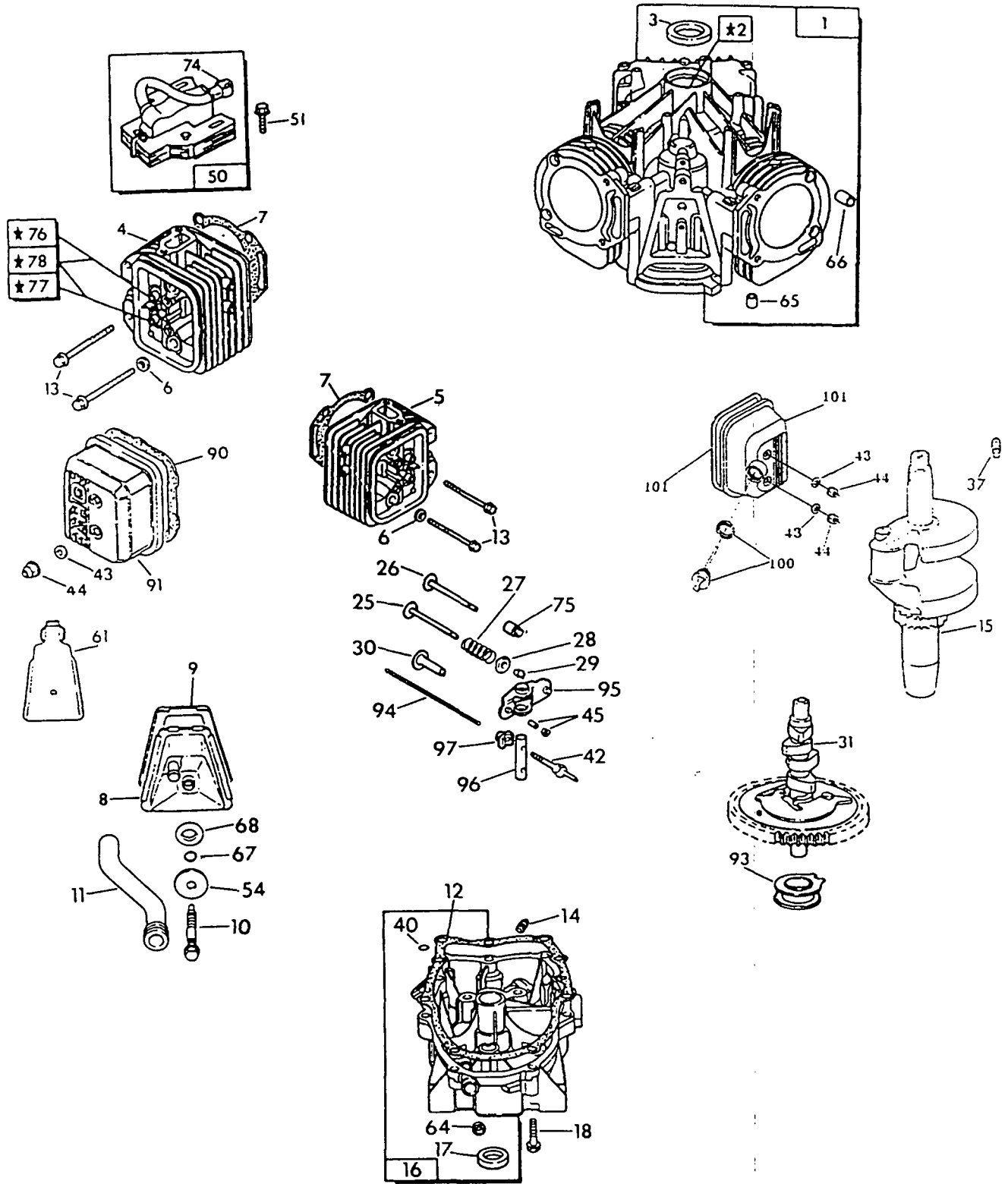
EXPLODED VIEW — ENGINE

Drawing No. 79216



EXPLODED VIEW — ENGINE

Drawing No. 79216



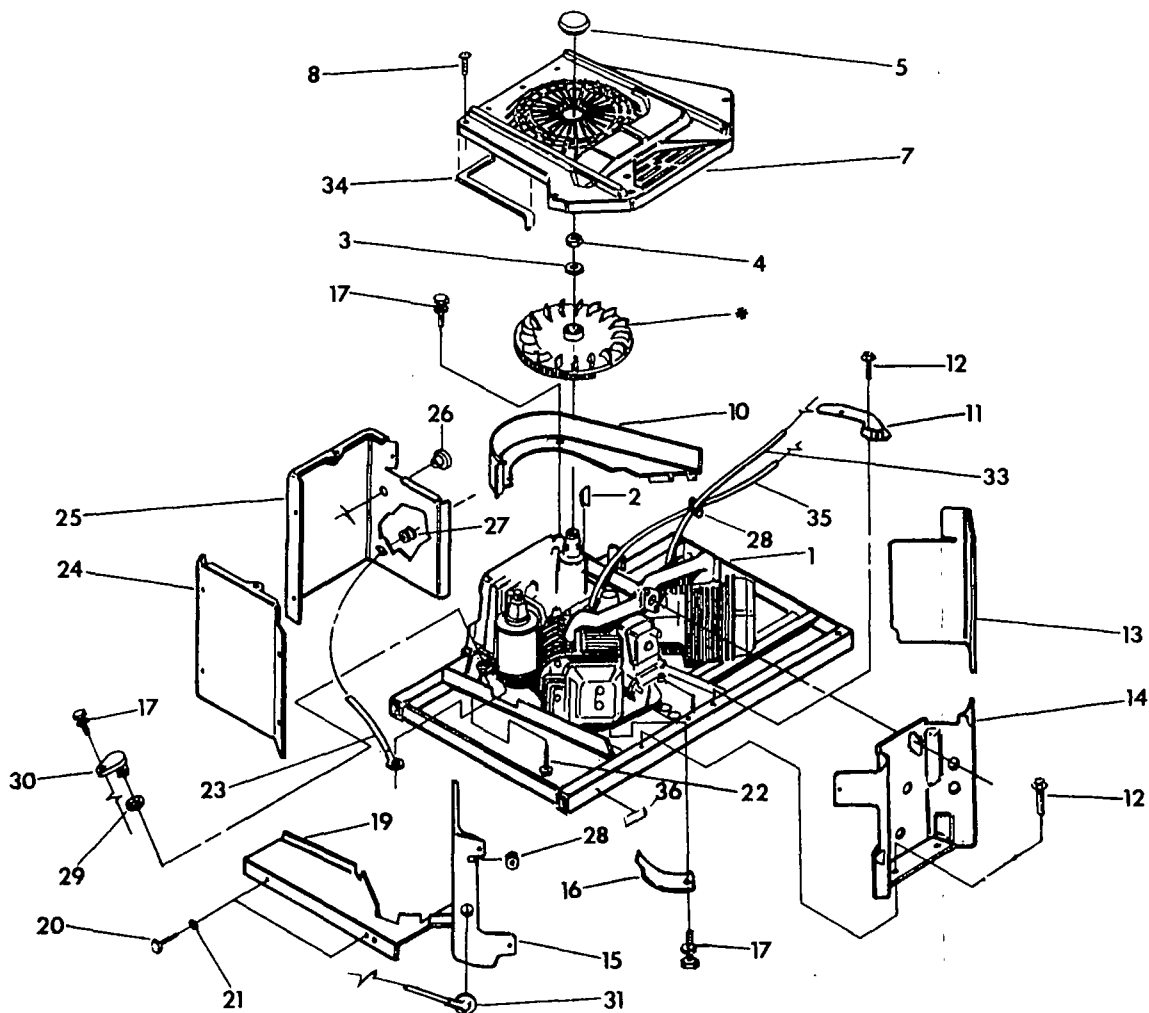
REPAIR PARTS — ENGINE

Drawing No. 79216

ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	69331	1	CYLINDER ASSEMBLY	52	72347	2	SPARK PLUG-CHAMPION R12YC
2	69333	1	SLEEVE BEARING-30 DIA.	53	75258	1	GASKET KIT-ENGINE
3	67805	1	OIL SEAL-30 DIAMETER	54	75259	1	WASHER, BREATHER SCREW
4	79234	1	CYLINDER HEAD ASSEM.-NO. 1	55	75260	1	STARTER DRIVE ASSEMBLY
5	79235	1	CYLINDER HEAD ASSEM.-NO. 2	56	75261	1	CLUTCH ASSEMBLY
6	70169	4	SEALING WASHER	57	66480	1	GASKET, AIR CLEANER
7	69332	2	GASKET-CYLINDER HEAD	58	75269	1	ARMATURE ASSEMBLY
8	72301	1	BREATHER ASSEMBLY	59	72361	1	BUSHING, GOVERNOR SHAFT
9	72315	1	GASKET, BREATHER	60	72362	1	BUSHING, GOVERNOR SHAFT
10	70190	1	SCREW, BREATHER	61	70199	1	BAFFLE, BREATHER
11	70596	1	TUBE, BREATHER	62	72366	1	COTTER PIN
12	69336	1	GASKET, OIL SUMP	63	72367	1	GOVERNOR FORK
13	69325	8	BOLT, CYLINDER HEAD	64	72365	1	WASHER, GOVERNOR SHAFT
14	67888	2	PLUG, OIL DRAIN-3/8" NPT	65	68555	2	DOWEL, CRANKCASE
15	72334	1	CRANK SHAFT ASSEMBLY	66	67806	4	DOWEL, CYLINDER HEAD
16	75247	1	OIL SUMP ASSEMBLY	67	75262	1	SEAL, BREATHER SCREW
17	67924	1	OIL SEAL-35 DIAMETER	68	75263	1	SEAL, BREATHER SCREW
18	67878	9	BOLT, OIL SUMP	69	75264	1	STARTER GEAR
19	75248	2	PISTON ASSEMBLY-STANDARD	70	75265	1	STARTER END CAP ASSEMBLY
20	75249	2	RING SET- PISTON-STANDARD	71	75266	1	COMMUTATOR CAP ASSEMBLY
21	69327	4	LOCKING RING, PISTON	72	75267	1	STARTER HOUSING ASSEM.
22	75250	2	PISTON PIN-STANDARD	73	68572	2	SCREW, OIL PUMP
23	75251	2	CONNECTING ROD ASSEMBLY	74	75272	2	TERMINAL, SPARK PLUG
24	72346	4	BOLT, CONNECTING ROD	75	70122	2	SEAL, VALVE STEM
25	69316	2	EXHAUST VALVE	76	67910	2	SEAT, INTAKE VALVE
26	69317	2	INTAKE VALVE	77	67911	2	SEAT, EXHAUST VALVE
27	67816	4	VALVE SPRING	78	67813	4	VALVE, GUIDE
28	69320	4	RETAINER, VALVE SPRING	79	75268	1	RETAINER AND PIN
29	70513	4	KEEPER, VALVE	80	75270	1	ROLL PIN
30	70584	4	TAPPET, VALVE	81	70592	1	AIR CLEANER BASE
31	70530	1	CAMSHAFT ASSEMBLY	82	73123	1	AIR FILTER (FLAME RETARDENT)
32	72358	1	INTAKE MANIFOLD	83	70593	1	COVER, AIR CLEANER
33	69379	2	GASKET, CARBURETOR MNTG.	84	72300	1	SCREW, AIR CLEANER COVER
34	67895	2	GASKET, INTAKE MANIFOLD	85	67156	2	SCREW, AIR CLEANER BASE
35	70594	2	BOLT, CARBURETOR MNTG.	86	69341	1	PRE-FILTER
36	67158	4	BOLT, INTAKE MANIFOLD MNT.	87	80011	1	SPRING, BRUSH SET
37	68574	1	PIPE-PLUG, 1/8" NPT	88	70597	1	TUBE, AIR INLET
38	68554	1	SEAL, GOVERNOR SHAFT	89	69358	1	DEFLECTOR-BREATHER
39	68573	1	O-RING, OIL PUMP	90	67920	2	GASKET, VALVE COVER
40	70506	1	O-RING, OIL GALLEY	91	69328	1	ROCKER ARM COVER
41	70554	1	SPACER, CARBURETOR	92	70547	1	OIL PUMP ASSEMBLY
42	70568	4	STUD, ROCKER ARM	93	70536	1	GOVERNOR SLIDER
43	75253	4	SEAL, WASHER-VALVE COVER	94	70577	4	PUSH ROD
44	67885	4	NUT, NYLOK-M6	95	70599	4	ROCKER ARM ASSEMBLY
45	75254	4	SCREW, VALVE ADJUST	96	70567	2	SHAFT-ROCKER ARM
46	70535	1	SCREEN, OIL	97	70566	4	SUPPORT, ROCKER ARM
47	75255	1	STARTER MOTOR	98	75271	1	KIT-VALVE OVERHAUL
48	75256	2	BOLT, STARTER MOTOR	99	67897	2	GASKET, EXHAUST
49	75257	4	BRUSH ASSEMBLY	100	91481	1	GASKET & CAP ASSEMBLY
50	67891	1	IGNITION ARMATURE ASSEM.	101	91480	1	ROCKER ARM COVER
51	72356	2	SCREW, IGNITION ARMATURE				

REPAIR PARTS — ENGINE SHEET METAL

Drawing No. 89403



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	-----	1	SEE ENGINE EXPLODED VIEW OF ENGINE	20	42907	2	CAPSCREW, HEX HEAD M8-1.25 x 16MM
2	99258	1	KEY, WOODRUFF-6 x 22MM	21	22129	2	LOCKWASHER-M8
3	67198-N	1	WASHER, BELLEVILLE	22	75246	4	SCREW(TAPTITE) 3/8"-16 x 1-1/4"
4	67890	1	NUT, HEX-M20-1.50	23	10-74260	1	WIRE ASSEMBLY-NO. 16
5	87865	1	PLUG, FLYWHEEL ACCESS	24	74900	1	COVER, STARTER
7	86313	1	HOUSING, ENGINE TOP	25	73186	1	WRAPPER, CRANKCASE
8	56893	23	SCREW (CRIMPTITE) NO. 10-24 x 1/2"	26	81108	1	BUSHING, SNAP
10	87750	1	SCROLL, FLYWHEEL	27	22717-B	1	GROMMET-RUBBER
11	74916	1	COVER-BASE #2	28	22717-A	3	GROMMET-RUBBER
12	74908	9	SCREW (TAPTITE)-M5 x 10MM	29	67866	1	O-RING
13	73190	1	WRAPPER-NO. 2 CYLINDER	30	77001	1	PLUG, OIL FILL
14	78858	1	COVER, VALLEY	31	73132	2	BOOT, SPARK PLUG
15	78859	1	WRAPPER-NO. 1 CYLINDER	33	87858A	1	GROUND WIRE ASSEMBLY CYL. #1
16	74902	2	WRAPPER-BARREL	34	29289	2FT.	FOAM TAPE
17	66476	5	CAPSCREW, HEX HEAD M6-1.00 x 12MM W/LOCKWASHER	35	87858B	1	GROUND WIRE ASSEMBLY CYL. #2
19	73191	1	COVER, BASE #1 CYLINDER	36	50277	1	DECAL, OIL DRAIN

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board ("CARB") and Generac Corporation are pleased to explain the Emission Control System Warranty on your new recreational vehicle generator engine. In California, new utility and lawn and garden equipment engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Generac Corporation will warrant the emission control system on your recreational vehicle generator for the periods of time listed below provided there has been no abuse, neglect, unapproved modification, or improper maintenance of your recreational vehicle generator engine.

Your emission control system may include parts such as the carburetor, ignition system and exhaust system. Also included may be the compression release system and other emission-related assemblies.

Where a warrantable condition exists, Generac Corporation will repair your recreational vehicle generator engine at no cost to you for diagnosis, parts and labor.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

Emissions control systems on 1995 and later model year utility and lawn and garden equipment engines are warranted for two years as hereinafter noted. If, during such warranty period, any emission-related part on your engine is defective in materials or workmanship, the part will be repaired or replaced by Generac Corporation.

OWNER'S WARRANTY RESPONSIBILITIES:

As the recreational vehicle generator engine owner, you are responsible for the performance of the required maintenance listed in your owners manual. Generac Corporation recommends that you retain all receipts covering maintenance on your recreational vehicle generator engine, but Generac Corporation will not deny warranty solely due to the lack of receipts or for your failure to provide written evidence of the performance of all scheduled maintenance.

As the recreational vehicle generator engine owner, you should, however, be aware that Generac Corporation may deny you warranty coverage if your recreational vehicle generator engine or a part thereof has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your recreational vehicle generator engine to a Generac Corporation Authorized Service Outlet as soon as a problem exists. 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 a Generac Corporation Authorized Service Outlet or by contacting Generac Corporation at:

GENERAC CORPORATION PH: (414) 544-4811
P.O. BOX 8 FX: (414) 544-0179
WAUKESHA, WI 53187

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 Corporation pursuant to California law. See also the Generac Corporation Limited Warranties for Generac Corporation which is enclosed herewith on a separate sheet and also is provided to you by Generac Corporation. The ECS Warranty applies only to the emission control system of your new engine. To the extent that there is any conflict in terms between the ECS Warranty and the Generac Corporation Warranty, the ECS Warranty shall apply except in any circumstances in which the Generac Corporation Warranty may provide a longer warranty period. Both the ECS Warranty and the Generac Corporation Warranty describe important rights and obligations with respect to your new engine.

Warranty service can only be performed by a Generac Corporation Authorized Service Outlet. At the time of requesting warranty service, evidence must be presented of the date of the sale to the original purchaser. The purchaser shall pay any charges for making service calls and/or for transporting the products to and from the place where the inspection and/or warranty work is performed. The purchaser shall be responsible for any damage or loss incurred in connection with the transportation of any engine or any part(s) thereof submitted for inspection and/or warranty work.

IF YOU HAVE ANY QUESTIONS REGARDING YOUR WARRANTY RIGHTS AND RESPONSIBILITIES, YOU SHOULD CONTACT GENERAC CORPORATION AT 1-800-222-3136

EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty ("ECS Warranty") for 1995 and Later Model Year Utility and Lawn and Garden Equipment Engines:

- A. **Applicability:** This warranty shall apply to 1995 and later model year utility and lawn and garden equipment engines. The ECS Warranty Period ("ECS Warranty Period") shall begin on the date the new engine or equipment is delivered to its original, end-use purchaser and shall continue for 24 consecutive months thereafter.
- B. **General Emissions Warranty Coverage:** Generac Corporation warrants to the original, end-use purchaser of the new engine or equipment and to each subsequent purchaser that each of its utility and lawn and garden equipment engines is:
1. Designed, built and equipped so as to conform with all applicable regulations adopted by the Air Resources Board pursuant to its authority, and
 2. Free from defects in materials and workmanship which, at any time during the ECS Warranty Period, will cause a warranted emissions - 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 only pertains to emissions-related parts on your engine, as follows:
1. Any warranted, emissions-related parts which 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 Corporation according to Subsection (4) below. Any such part repaired or replaced under the ECS Warranty shall be warranted for any remainder of the ECS Warranty Period.
 2. Any warranted, emissions-related part which 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 any remainder of the ECS Warranty Period.
 3. Any warranted, emissions-related part which is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to 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 Corporation 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 or Replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a Generac Corporation Authorized Service Outlet.
 5. The owner shall not be charged for diagnostic labor which leads to the determination that a part covered by the ECS Warranty is in fact defective, provided that such diagnostic work is performed at a Generac Corporation Authorized Service Outlet.
 6. Generac Corporation shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of any emission-related part covered by the ECS Warranty.
 7. Throughout the ECS Warranty Period, Generac shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.
 8. Any Generac Corporation 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 shall not reduce Generac Corporation ECS warranty obligations.
 9. Unapproved add-on modified parts may not be used to modify or repair a Generac Corporation engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. Generac Corporation shall not be liable hereunder for failures of any warranted parts of a Generac Corporation engine caused by the use of such an unapproved add-on or modified part.

EMISSION RELATED PARTS INCLUDE THE FOLLOWING:

1. Carburetor assembly and its internal components.
 - a. Fuel filter
 - b. Carburetor gaskets
 - c. Fuel pump (if so equipped)
2. Air cleaner assembly
 - a. Air filter element
 - b. Intake pipe/manifold
3. Ignition system including:
 - a. Spark plug
 - b. Ignition module
4. Catalytic muffler (if so equipped)
 - a. Muffler gasket (if so equipped)
 - b. Exhaust manifold (if so equipped)
5. Crankcase breather assembly and its components.
 - a. Breather connection tube

GENERAC'S THREE-YEAR LIMITED WARRANTY FOR RECREATIONAL VEHICLE "Q" GENERATORS

Generac warrants to the original purchaser that its generators will be free from defects in materials or workmanship for the period set forth below from date of original purchase. During said warranty period, Generac will, at its option, repair or replace any part which, upon examination by Generac or Generac Authorized Distributors and/or Dealers, is found to be defective under normal use and service.

THREE-YEAR WARRANTY SCHEDULE

1. All Q-Series generators used in a recreational vehicle shall be warranted for a period of three (3) years or 2,000 hours of operation, whichever occurs first. All parts, labor, removal and reinstallation shall be covered for the first two years. Parts and labor on selected generator and engine parts shall be covered during the third year or 2,000 hours, whichever occurs first. These selected parts are limited to: the main Rotor and Stator with regard to the generator; the Cylinder Block, Cylinder Head, Crankshaft, Piston, Valve, Valve Lifter, and Manifolds with regard to the engine.
2. The drive train belt and pulleys (if so equipped) on Q-Series air-cooled generators used in recreational vehicles shall be warranted against failure due to defective materials or normal usage for the life of the generator. For the original owner, this drive train warranty shall include parts and labor plus \$50.00 payment upon return of the failed belt or pulley by the original owner. For succeeding owners, this power train warranty shall cover belt or pulley parts only.
3. Rental units, demonstrators, prime power, or commercial applications, such as construction or utility, are warranted for (1) one year or 2,000 hour, whichever comes first.

All warranty expense allowances are subject to the conditions defined in the published "GENERAC POLICIES AND PROCEDURES" manual.

THIS WARRANTY DOES NOT COVER:

- Costs of maintenance, installation and startup.
- Failures due to (a) normal wear and tear from GN engine, or (b) accident, misuse, abuse, negligence or improper installation.
- Products which are modified or altered in a manner not authorized by Generac in writing.
- Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of defective parts.
- Failure due to misapplication.
- Telephone, telegraph, teletype or other communication expenses.
- Living or travel expenses of persons performing service.
- Any and all transportation/travel expenses.
- Rental equipment used while warranty repairs are being performed.
- Overtime labor.
- Starting batteries, fuses, light bulbs, and engine fluids.

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO 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 you. GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PARTS AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A RESULT OF GENERAC'S NEGLIGENCE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. Buyer agrees to make no claims against Generac based on negligence.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

generac corporation, p.o. Box 8, hwy. 59 and hillside road, Waukesha, WI 53187

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