

FIRMAN

OWNER'S MANUAL REMANUFACTURED











MODEL NUMBER

R-**P03615**

Rev Level:00

IMPORTANT: Read all safety precautions and instructions carefully before operating equipment.



Ensure engine is stopped and level before performing any maintenance or service.



DO NOT RETURN TO STORE!



CALL US FIRST! CUSTOMER HOTLINE 1-844-347-6261

FOR QUESTIONS OR SERVICE INFORMATION

Serial Number: _____

Purchase Date: _____

P/N:336745464 Rev:02

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INTRODUCTION

Thank you for purchasing a **remanufactured** Firman generator. This is a used item that has been professionally restored to working order by a manufacturer or 3rd party vendor. This means the product will show signs of use, (such as scratches, scuffs or dings) but has been inspected and repaired to meet manufacturer specifications and is in the original working condition. This item may or may not be in the original packaging.

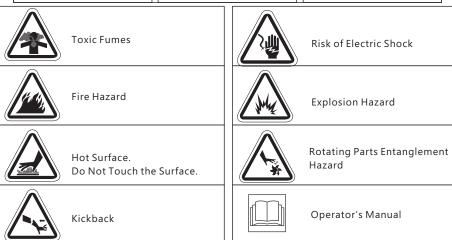
This manual contains safety information to make you aware of the hazards and risks associated with generator products and how to avoid them. This generator is designed and intended only for supplying electrical power for operating compatible electrical lighting, appliances, tools and motor loads, and is not intended for any other purpose. It is important that you read and understand these instructions thoroughly before attempting to start or operate this equipment. **Save these original instructions for future reference.**

This manual covers operation and maintenance of the FIRMAN generators. All information in this publication is based on the latest production information available at the time of approval for printing. The manufacturer reserves the right to change, alter or other wise improve the generator and this documentation at any time without prior change.

Important Safety Information

The manufacturer cannot possibly anticipate every possible circumstance that might involve a hazard. The warnings in this manual and the tags and decals affixed to the unit are therefore not all-inclusive. If you use a procedure, work method or operating technique that the manufacturer does not specifically recommend you must satisfy yourself that it is safe for you and others. You must also make sure that the procedure work method or operating technique that you choose does not render the generator

SAFETY INFORMATION DANGER igtriangle caution ⚠ WARNING CAUTION indicates a DANGER indicates a WARNING indicates a potentially hazardous potentially hazardous potentially hazardous situation which, if not situation which, if not situation which, if not avoided, may result in minor avoided. WILL result in avoided, could result in or moderate personal injury, death or serious injury. death or serious injury. or property damage.



SAFETY PRECAUTIONS

▲ DANGER

Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.







Only use OUTSIDE and far away from windows, doors, and vents.

Avoid other generator hazards. READ MANUAL BEFORE USE.

↑ WARNING

POISONOUS GAS HAZARD.



Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You **CANNOT** smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

- Operate this product ONLY outside far away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot detect carbon monoxide gas.
- DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.
- ALWAYS place this product downwind and point the engine exhaust away from occupied spaces. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

△ 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

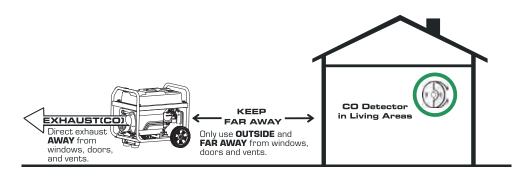
Certain components in this product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.

• If you start to feel sick, dizzy or weak while using the portable generator, you may have carbon monoxide poisoning. Get out side to fresh air immediately and call 911 for emergency medical attention. Very high levels of CO can rapidly cause victims to lose consciousness before they can rescue themselves. DO NOT attempt to shut off the generator before moving to fresh air. Entering an enclosed space where a generator is or has been running may put you at greater risk of CO poisoning.

CORRECT USAGE

Example location to reduce risk of carbon monoxide poisoning

- ONLY use outside and downwind, far away from windows, doors and vents.
- Direct exhaust away from occupied spaces.



INCORRECT USAGE

Do not operate in any of the following locations:

Near any door, window or vent

Garage

Basement

Crawl Space

Living Area



△ WARNING



Starter cord kickback (rapid retraction) will pull hand and arm toward engine faster than you can let go which could cause broken bones, fractures, bruises, or sprains resulting in serious injury.

- When starting engine, pull cord slowly until resistance is felt and then pull rapidly to avoid kickback.
- NEVER start or stop engine with electrical devices plugged in and turned on.

△ WARNING





Fuel and its vapors are extremely flammable and explosive which could cause burns, fire, or explosion resulting in death or serious injury and/or property damage.

WHEN ADDING OR DRAINING FUEL

- Turn generator engine OFF and let it cool at least 2 minutes before removing fuel cap.
 Loosen cap slowly to relieve pressure in tank.
- Fill or drain fuel tank outdoors.
- DO NOT overfill tank. Allow space for fuel expansion.
- If fuel spills, wait until it evaporates before starting engine.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- DO NOT light a cigarette or smoke.

WHEN STARTING EQUIPMENT

- Ensure spark plug, muffler, fuel cap, and air cleaner are in place.
- DO NOT crank engine with spark plug removed.

WHEN OPERATING EQUIPMENT

- DO NOT operate this product inside any building, carport, porch, mobile equipment, marine applications, or enclosure.
- **DO NOT** tip engine or equipment at angle which causes fuel to spill.
- DO NOT stop engine by moving choke control to "Start" position.

WHEN TRANSPORTING, MOVING OR REPAIRING EQUIPMENT

- Transport/move/repair with fuel tank EMPTY or with fuel shutoff valve OFF.
- DO NOT tip engine or equipment at angle which causes fuel to spill.
- Disconnect spark plug wire.

WHEN STORING FUEL OR EQUIPMENT WITH FUEL IN TANK

 Store away from furnaces, stoves, water heaters, clothes dryers, or other appliances that have pilot light or other ignition source because they could ignite fuel vapors.

∧ WARNING

- This generator does not meet U. S. Coast Guard Regulation 33CFR-183 and should not be used on marine applications.
- Failure to use the appropriate U. S. Coast Guard approved generator could result in death or serious injury and/or property damage.

∧ WARNING



Generator voltage could cause electrical shock or burn resulting in death or serious injury.

 Use approved transfer equipment, suitable for the intended use, to prevent backfeed by isolating generator from electric utility workers.

- When using generator for backup power, notify utility company.
- Use a ground fault circuit interrupter (GFCI) in any damp or highly conductive area, such as metal decking or steel work.
- **DO NOT** touch bare wires or receptacles.
- DO NOT use generator with electrical cords which are worn, frayed, bare or otherwise damaged.
- DO NOT operate generator in the rain or wet weather.
- DO NOT handle generator or electrical cords while standing in water, while barefoot, or while hands or feet are wet.
- DO NOT allow unqualified persons or children to operate or service generator.

⚠ WARNING





Exhaust heat/gases could ignite combustibles, structures or damage fuel tank causing a fire, resulting in death or serious injury and/or property damage.

Contact with muffler area could cause burns resulting in serious injury.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.
- It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws. Contact the original equipment manufacturer, retailer, or dealer to obtain a spark arrester designed for the exhaust system installed on this engine.
- Replacement parts must be the same and installed in the same position as the original parts.

△ WARNING





Unintentional sparking could cause fire or electric shock resulting in death or serious injury.

WHEN ADJUSTING OR MAKING REPAIRS TO YOUR GENERATOR

 Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.

WHEN TESTING FOR ENGINE SPARK

- Use approved spark plug tester.
- DO NOT check for spark with spark plug removed.

∧ WARNING



Starter and other rotating parts could entangle hands, hair, clothing, or accessories resulting in serious injury.

- NEVER operate generator without protective housing or covers.
- DO NOT wear loose clothing, jewelry or anything that could be caught in the starter or other rotating parts.
- Tie up long hair and remove jewelry.

$oldsymbol{\Delta}$ caution

Excessively high operating speeds could result in minor injury. Excessively low operating speeds impose a heavy load.

- DO NOT tamper with governor spring, links or other parts to increase engine speed.
 Generator supplies correct rated frequency and voltage when running at governed speed.
- **DO NOT** modify generator in any way.

NOTE:

Exceeding generators wattage/amperage capacity could damage generator and/or electrical devices connected to it.

- DO NOT exceed the generator's wattage amperage capacity.
- Start generator and let engine stabilize before connecting electrical loads.
- Connect electrical loads in OFF position, then turn ON for operation.
- Turn electrical loads OFF and disconnect from generator before stopping generator.

NOTE:

Improper treatment of generator could damage it and shorten its life.

- Use generator only for intended uses.
- If you have questions about intended use, ask dealer or contact local service center.
- Operate generator only on level surfaces.
- DO NOT expose generator to excessive moisture, dust, dirt, or corrosive vapors.
- DO NOT insert any objects through cooling slots.
- If connected devices overheat, turn them off and disconnect them from generator.
- Shut off generator if:
 - -Electrical output is lost.
 - -Equipment sparks, smokes, or emits flames.
 - -Unit vibrates excessively.

△ WARNING

Medical and Life Support Uses.

- In case of emergency, call 911 immediately.
- NEVER use this product to power life support devices or life support appliances.
- NEVER use this product to power medical devices or medical appliances.
- Inform your electricity provider immediately if you or anyone in your household depends on electrical equipment to live.
- Inform your electrical provider immediately if a loss of power would cause you or anyone in your household to experience a medical emergency.

UNPACKING THE GENERATOR

- Open carton and Remove packaging materials.
- Remove generator, any included accessories, and literature from carton. If any items are damaged, contact our product service department at support@arcaugusta.com.

PLEASE NOTE

REMANUFACTURED GENERATORS **DO NOT**SHIP WITH ALL ORIGINAL ACCESSORIES.
IN ALL CASES YOU SHOULD HAVE OIL AND
TOOLS AVAILABLE TO SET-UP YOUR
GENERATOR.

REMOVAL OF SHIPPING SUPPORTS

Before you can run your new generator, follow these simple instructions:

The following items must be removed before running your new generator. In order to protect your generator these items have been added to ensure safe delivery of your new generator.

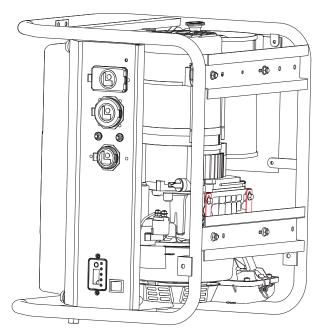
△ CAUTION

Failure to remove these items can result in damage to your generator, possible Personal injury and void your warranty.

Refer to the following instructions and pictures to remove the attached engine support brackets (red) under the engine.

- 1. Before filling the engine oil, tip the generator back onto its recoil frame end as indicated in this picture. Place the generator on the flattened cardboard box or other protective surface.
- 2. If included, remove the indicated bolts and nuts from the red engine support brackets.
- 3. You may discard these brackets, as it is no longer required for normal operation of your generator.

Your generator is now ready for use. Refer to your owner's manual for proper oil fill and startup instructions.



Engine Support Brackets (red color)



Remove these 4 nuts & bolts as indicated.

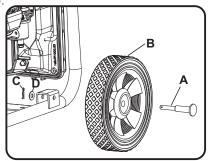
ASSEMBLY

The generator requires some assembly prior to usage. If problem arise when assembling the generator, call 1-844-347-6261.

Install the Wheel Kit

↑ CAUTION

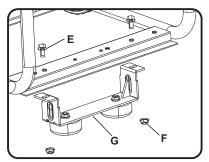
The wheel kit is not intended for over-the-road



- Before adding wheels, tip the generator on its side.
- 2. Slide the axle pin A through the wheel B.
- 3. Slide the axle pin **A** through the mount point on the frame and washer **D** .
- 4. Secure the wheel and axle pin with the cotter pin $\boldsymbol{\mathsf{C}}$.
- 5. Repeat steps 2-4 to attach another wheel.

Install the Support Leg

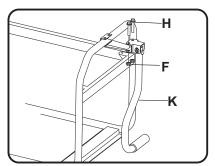
- Attach the support leg G to the generator frame with flange bolts E (M8x16) and flange lock nuts F(M8).
- 2. Tip the generator slowly so that it rests on the wheels and support leg.
- 3. Tighten bolt **E** and nut **F** with provide wrenches



Install the Handle

- 1. Place the handle **K** over the mounting channel on the frame
- 2. Secure the handle to the frame using the two handle flange bolts **H**(M8x45).
- Place a flange nut F (M8) on the end of each bolt and fasten securely with provided wrenches

DO NOT over tighten the flange nuts.



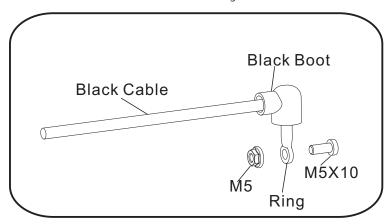
Battery Cable Connection

You will need to use 8mm box wrenches to connect the battery cables to battery.

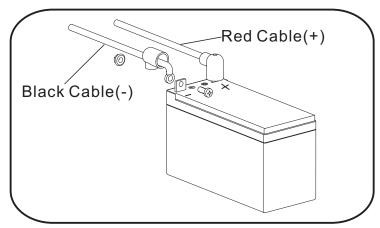
NOTE:

The generator comes equiped with the positive red cable(red cable) already attached.

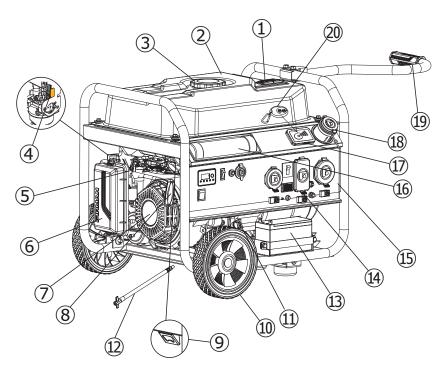
- 1. Verify the positive (+) battery cable (red boot) is securely tightened to the positive (+) battery post. Make sure boot is over battery post.
- 2. Remove bolt M5X10 and M5 nut from black cable ring.



3. Remove vinyl cap from the negative(-) battery post. Locate negative (-) black cable and route to the negative(-) battery post. Tight the cable with bolt M5X10 and M5 nut. Cover the post with black boot.



CONTROLS AND FEATURES Generator



- 1- Fuel Gauge
- 2-5.0 Gallon Capacity Fuel Tank
- 3- Fuel Cap
- 5- Fuel Valve
- 6- Air Filter
- 7-208cc FIRMAN OHV Engine
- 8- Recoil Starter
- 9- Bottle Opener
- 10-8.0" Flat Free Wheel
- 11- Oil Filler Cap
- 12- Easy Oil Drain

- 13- Battery
- 14- Outlet Cover
- 15 Control Panel
- 4- Choke Lever(behind air filter box) 16- Maintenance Canister Includes

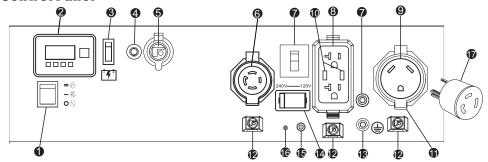
English Manual, Oil Funnel, Double Open Wrench, Wrench for Spark

Plug and Spare Spark Plug

- 17- Remote Holder Includes Remote
- 18- Tethered Adapter TT-30P to L5-30R
- 19- Handle
- 20- Remote Control

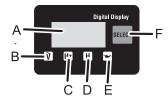
*We are always working to improve our products. Therefore, the enclosed product may differ slightly from the image on this page.

Control Panel



NOTE: Total power drawn from all receptacles must not exceed the name plate rating.

- Engine Start Switch Used to start engine Circuit Breakers The receptacles are from the starter motor(Electric start model only). To start engine, press and hold the switch in the "START"(II) position, the engine will crank and attempt to start. When the engine starts, release the switch to the "RUN"(I) position.
- **4-1 Data-Minder(Multi-Meter)** Push the SELECT button to show the Voltage, Hertz and running hours. If the low oil indicator is lit, check the oil level.



- A Digital display
- D Hour indicator
- B AC voltage indicator E Low oil indicator
- C Frequency indicator F Select button
- **Battery Power Restore Switch** Restore the battery power to the control module. You must press this switch and hold for 3 seconds before start the generator, including recoil, electric and remote start.
- **DC Circuit Breaker-** Protect the DC receptacle.
- **12V DC Outlet Receptacle-** Maximum full load 8.3 Amp current may be drawn from this 12 Volt receptacle.
- **120/240V, 30A Twist-Lock** (NEMA L14-30R) May be used to supply power for the operation of 120/240 Volt, 30Amp.

- protected by an AC circuit protector. If the generator is overloaded or an external short circuit occurs the circuit protector will trip. If this occurs, disconnect all electrical loads and try to determine the cause of problem before attempting to use the generator again. If overloading causes the circuit protector to trip, reduce the load. Note: Continuous tripping of the circuit protector may cause damage to generator or equipment. The circuit protector may be reset by pushing the button of the protector.
- 3 120V, 20A Duplex (NEMA 5-20R) Maximum full load 20 Amp current may be drawn from this 120 Volt receptacle.
- 9 120V, 30A RV (NEMA TT-30R) Maximum full load 30 Amp current may be drawn from this 120 Volt receptacle.
- Two 3.1Amp-5.0 Volt DC USB Ports
- **Outlet Cover -** Protect the receptacles from dust and debris.
- LED Light
- Ground Terminal Consult an electrician for local grounding regulations.
- **♥ Voltage Selector Switch** To select between 120 Volt or 240 Volt
- Remote Start Indicator Light The light will light or flash depending on the status of the remote start system.

- Remote Start Program Button Use this button along with the remote control to program the generator to be started remotely. Your remote control is already programmed in factory for your convenience. You might need programming when using new remote control.
- Tethered Adapter TT-30P(30A/120V) to L5-30R(30A/120V)

Remote Control Programming

Before the generator can be started, an initial start-up procedure must be performed so the generator and the remote control recognize each other.

NOTE:

YOUR REMOTE CONTROL IS ALREADY PROGRAMMED IN FACTORY FOR YOUR CONVENIENCE, AND IT IS READY TO START THE GENERATOR.

If the remote control is replaced then you will need to go through following procedure with new remote control.

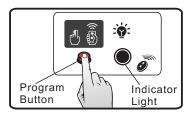
1. Flip the engine switch to the "RUN"(I) position.



3 seconds and then release



3. Push and hold the program button on the control panel for approximately 3 seconds. The remote start indicator light will light.



4. Push and release the "STOP" button on the remote control. The indicator light will flash once to erase the remote program.



5. Push and release the "START" button. The indicator light will flash once to program the remote.



2. Flip the battery power restore switch for about 6. Push and hold the program button approximately 3 seconds until the indicator light turn off. The generator is now programmed to start remotely.

SPECIFICATIONS

Model	P03615
Starting Watts	4550
Running Watts	3650
Rated AC Voltage	120/240V
Rated Fequency	60Hz
Phase	Single
Voltage Regulator	AVR
Power Factor	1
Total Harmonic Distortion(THD)	Standard
Alternator Type	Brushed
Engine	FIRMAN
Engine Type	Single Cylinder, 4-Stroke OHV Air Cooled
Displacement	208сс
Low Oil Shutdown	Yes
Ignition System	Breakless Ignition Type, Flywheel Magneto
Starting System	Recoil/Electric Start/Remote Start
Fuel	Unleaded Automotive Gasoline
Capacity Fuel Tank	5.0 Gallon
Lubricating Oil Capacity	20.3 oz(0.6L)
Carburetor Type	Float
Air Cleaner	Polyurethane Type
P.T.O. Shaft Rotation	Counter Clockwise (Facing P.T.O.)
Oil Type	See "Add Engine Oil" Section
Grounding System	Neutral Bonded To Frame

AN IMPORTANT MESSAGE ABOUT TEMPERATURE:

Your Firman Power Equipment product is designed and rated for continuous operation at ambient temperatures up to 40°C (104°F). When your product is needed, your product may be operated at temperatures ranging from -15°C (5°F) to 50°C (122°F) for short periods. If the product is exposed to temperatures outside this range during storage, it should be brought back within this range before operation. In any event, the product must always be operated outdoors, in a well-ventilated area and away from doors, windows and other vents.

- When operated above 77°F(25°C) there may be a decrease in power.
- Maximum wattage and current are subject to and limited by such factors as fuel BTU content
 ambient temperature, altitude, engine condition and etc. Maximum power decreases about
 3.5% for each 1,000 feet above sea level; and will also decrease about 1% for each 10°F(6°C)
 above 60°F(16°C) ambient temperature.

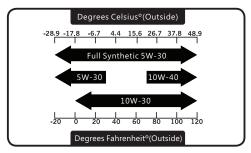
ADD ENGINE OIL

△ CAUTION

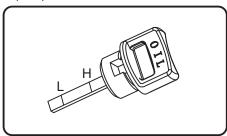
DO NOT attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage to the generator as a result of failure to follow these instructions will void your warranty.

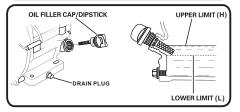
NOTE:

The recommended oil type is 10W-30 automotive oil. However outdoor temperatures determine the space proper oil viscosity for the engine. Use the chart to select the best for the outdoor temperature range expected.

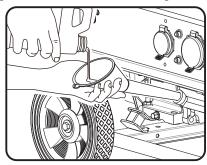


- 1. Place generator on a flat, level surface.
- 2.Clean area around oil fill and remove yellow oil fill cap/dipstick.
- 3. Wipe dipstick clean.





4.Using oil funnel, slowly pour contents of provided oil bottle into oil fill opening to the "H" mark on dipstick. Be careful do not overfill. Overfilling with oil could cause the engine to not start or hard starting.



5.Replace oil fill cap/dipstick and fully tighten. 6.Oil level should be checked prior to each use or at least every 8 hours of operation. Keep oil level maintained.

$oldsymbol{\Delta}$ caution

The engine is equipped with a low oil shut-off and will stop when the oil level in the crankcase falls below the threshold level

NOTE:

We consider the first 5 hours of run time to be the break-in period for the unit. During the break in period stay at or below 50% of the running watt rating and vary the load occasionally to allow stator windings to heat and cool. Adjusting the load will also cause engine speed to vary and help seat piston rings.

Low Oil Shutdown

The unit is equipped with a low oil shutdown. If the oil level becomes lower than required, the sensor will activate a warning device or stop the engine.

If generator shuts off and the oil level is within specifications, check to see if generator is sitting at an angle that forces oil to shift. Place on an even surface to correct this. If engine fails to start, the oil level may not be sufficient to deactivate low oil level switch. Make sure the sump is completely full of oil.

ADD FUEL

1. Gasoline

Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline.
- Use regular UNLEADED gasoline with the generator engine with a minimum 87 octane /87 AKI (91 RON).

For high altitude use, see "Operation at High Altitude".

 Do not use gasoline with more than 10% alcohol such as E85 or ethanol.

NOTE: Avoid generator damage.

Failure to follow Operator's Manual for fuel recommendations voids warranty.

- DO NOT use unapproved gasoline such as E85.
- DO NOT mix oil in gasoline.
- DO NOT modify engine to run on alternate fuels.

⚠ WARNING



Fuel and its vapors are extremely flammable and explosive which could cause burns, fire or explosion resulting in death, serious injury and/or property damage.

Fill fuel tank outdoors.

DO NOT overfill tank. Allow space for fuel expansion. If the tank is overfilled, fuel can overflow onto a hot engine and cause fire or explosion. Wipe up any spilled fuel immediately.

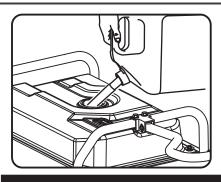
- If fuel spills, wait until it evaporates before starting engine.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap and fittings frequently for cracks or leaks. Replace if necessary.



DO NOT light a cigarette or smoke when filling the fuel tank.

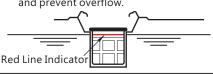
1.Clean area around fuel fill cap, remove cap. 2. Slowly add unleaded fuel to fuel tank. Be careful not to fill above the red fuel level indicator. This allows adequate space for fuel expansion.

3.Install fuel cap and let any spilled fuel evaporate before starting engine or wipe up any spilled gasoline.



△ CAUTION

- Slowly add unleaded gasoline to fuel tank.
- Do not overfill tank.
- Do not fill above the red line indicator. This will allow expansion in hot weather and prevent overflow.



IMPORTANT: It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel hose or tank during storage. Alcohol-blended fuels (called gasohol, ethanol or methanol) can attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. See the "Long Term Storage" section. Never use engine or carburetor cleaner products in the fuel tank as permanent damage may occur.

2-Connecting Liquid Petroleum Gas (LPG/Propane) Cylinder

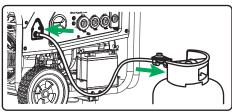
∧ DANGER

- Liquid Petroleum Gas (LPG) is highly flammable and explosive. Fire or explosion can cause severe burns or death.
- Do not place the LPG cylinder in the path of muffler outlet.
- Do not use or store LPG cylinder in a building, garage or enclosed area.

- Do not check for leaks with a lighted match or flame.
- The LPG cylinder valve should be fully closed when the generator is not in use or is running with gasoline.
- If you smell gas: close off the gas supply. Make sure there is no leak before using the generator.

△ WARNING

- Device used for handling LPG must be installed and used in strict conformance with NFPA 58 (Liquefied Petroleum Gas Code) and NFPA 54 (National Fuel Gas) and all other codes, regulations and manufacturer recommendations.
- Never use a gas container, LPG connector hose, LPG cylinder or any other fuel item that is damaged or appears damaged.
- The LPG cylinder valve should be fully closed when the generator is not in use or is running with gasoline.
- The regulator/hose assembly and cylinder valve must be inspected before each use for leaks or sign of damages.
- If you smell gas: close off the gas supply. Spray
 a soapy water solution to check all connections
 for leaks before attempting to use generator.
 Contact a qualified technician to inspect and
 repair the LPG system if a leak found before
 using the generator.
- Use only 20 or 30 lb capacity cylinders with Type 1, right hand Acme threads with this generator. Verify the re-qualification date on the tank has not expired. Do not use rusted or damaged cylinders.
- All new cylinders must be purged of air and moisture prior to filling. Used cylinders that have not been plugged or kept closed must also be purged. The purging process should be done by your propane gas supplier.
- Do not connect or disconnect the LPG cylinder in enclosed area.
- Do not install or replace the LPG cylinder near open flames, pilot lights, or sparking electrical equipment such as power tools, welders and grinders.



- Attach the LPG regulator/hose assembly (included) to the LPG hose connector (inlet) on the control panel of the generator. Tighten the nut with 19 mm or adjustable wrench.
- Remove the safety plug or cap from the cylinder valve.
- Attach the other end of the LPG regulator/hose assembly to the cylinder valve. Tighten the nut by hand clockwise to a positive stop. Do not use a wrench to tighten. Use of wrench may damage quick closing coupling nut and result in a hazardous condition.
- Do not use tape or any type sealant to seal the LPG hose connections.
- You must use the supplied regulator/hose assembly for safe operation.
- Always position the cylinder so the connection between the valve and the regulator won't cause bends or kinks in the hose.
- Spray a soapy water solution (one part liquid detergent and one part water) to check all connections for leaks before attempting to use generator. Slowly open the cylinder valve. A leak exists if bubbles appear or grow larger in size or number. This must be corrected before using the generator. Contact your local Authorized Service Facility for assistance. Do not attempt to make repairs yourself.
- Do not check for leaks with a lighted match or flame.
- Do not light or smoke cigarettes.
- Check the fuel system periodically for leaks or signs of damages.

- LPG under pressure is highly flammable and can cause a fire or explosion if ignited.
- LPG is heavier than air and can accumulate in confined spaces and low places in the event of a leak.
- LPG has a distinctive odor to help detect potential leaks.
- Do not allow children to tamper or play with the LPG cylinder.

- In the event of an LPG fire, flames should not be extinguished unless by doing so the fuel supply valve can be turned off. If the fire is extinguished and a supply of fuel is not turned off, an explosion hazard greater than the fire hazard could be created.
- Keep a fire extinguisher near the generator all the time.
- Always keep the LPG cylinder in an upright position.
- Do not subject LPG cylinder to excessive heat.
- Contact with liquid contents of the cylinder will cause freeze burns to the skin.
- An LPG cylinder not connected for use shall not be stored in the vicinity of the generator.
- When transporting and storing, turn off the cylinder valve and fuel selector switch, and disconnect the cylinder.

3-Permanent Connection to a large Propane supply tank:

In the instance that you would need to connect your generator to a large propane Supply tank, larger than 20 or 30 lb DOT cylinder, it is recommended to contact your Gas Equipment Company. Various equipment for use with LPG, is required for proper conformance to all NFPA regulations. Your Gas Equipment Company can help you select and install the proper regulator, fittings and connections to meet all the Codes and manufacturer regulations. Each installation may be different and will required proper equipment. Contact your Gas Equipment Company to assure that you are meeting all NFPA 58 (Liquefied Petroleum Gas Code) and NFPA 54 (National Fuel Gas) Codes.

Operation at High Altitude

At altitudes over 5,000 feet(1524 meters), a minimum 85 octane / 85 AKI (89 RON) gasoline is acceptable.

The density of air at high altitude is lower than at sea level. Engine power is reduced as the air mass and air-fuel ratio decrease. Engine power and generator output will be reduced approximately 3.5% for every 1000 feet of elevation above sea level. This is a natural trend and cannot be changed by adjusting the engine. At high altitudes increased exhaust emissions can also result due to the increased enrichment of the air fuel ratio.

Other high altitude issues can include hard starting, increased fuel consumption and spark plug fouling. To alleviate high altitude issues other than the natural power loss, **FIRMAN** can provide a high altitude carburetor main jet. The alternative main jet and installation instructions can be obtained by contacting Customer Support. Installation instructions are also available in the Technical Bulletin area of the FIRMAN internet site. The part number and recommended minimum altitude for the application of the high altitude carburetor main jet is listed in the table below.

	208cc	Altitude
Altitude main jet 1	335717004	3000-6000Feet
Altitude main jet 2	335717005	6000-8000Feet

∧ WARNING

Operation using the alternative main jet at elevations lower than the recommended minimum altitude can damage the engine. For operation at lower elevations, the standard main jet must be used. Operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance.

Grounding

The National Electric Code requires your generator must be properly connected to an appropriate ground to help prevent electric shock.

△ WARNING



Failure to properly ground the generator can result in electric shock.

A ground terminal connected to the frame of the generator has been provided on the control panel. For remote grounding, connect of a length of heavy gauge (12 AWG minimum) copper wire between the generator ground terminal and a copper rod driven into the ground. We strongly recommend that you consult with a qualified electrician to ensure compliance with local electrical codes.

THERE IS A PERMANENT CONDUCTOR BETWEEN THE GENERATOR (STATOR WINDING) AND THE FRAME.

Connecting to a Building's Electrical System

Connections for standby power to a building's electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power or other alternative power sources and must comply with all applicable laws and electrical codes.

△ WARNING



Generator voltage could cause electrical shock or burn resulting in death or serious injury.

- Use approved transfer equipment to prevent backfeed by isolating generator from electric utility workers.
- When using generator for backup power, notify utility company.
- Use a ground fault circuit interrupter (GFCI) in any damp or highly conductive area, such as metal decking or steel work.
- DO NOT touch bare wires or receptacles.
- DO NOT use generator with electrical cords which are worn,frayed, bare or otherwise damaged.
- DO NOT operate generator in the rain or wet weather.
- DO NOT handle generator or electrical cords while standing in water, while barefoot, or while hands or feet are wet.
- DO NOT allow unqualified persons or children to operate or service generator.

5. OPERATION

Generator Location

△ WARNING

Make sure you review each warning in order to prevent fire hazard.

- Keep area clear of inflammables or other hazardous materials.
- Select a site that is dry, well ventilated and protected from the weather.
- Keep exhaust pipe clear of foreign objects.
- Keep generator away from open flame.
- Keep generator on a stable and level surface.

CAUTION

Tilting can cause fuel spillage.





Do not block generator air vents with paper or other material.

A DANGER

Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is

a poison you cannot see or smell.









or garage, EVEN IF doors and windows are open.

far away from windows, doors, and vents.

Avoid other generator hazards. READ MANUAL BEFORE USE.

WARNING

POISONOUS GAS HAZARD.



Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You CANNOT smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

- Operate this product **ONLY** outside far away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot detect carbon monoxide gas.
- DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.
- ALWAYS place this product downwind and point the engine exhaust away from occupied spaces. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

Surge Protection

△ CAUTION

Voltage fluctuation may impair the proper functioning of sensitive electronic equipment.

Electronic devices, including computers and many programmable appliances use components that are designed to operate within a narrow voltage range and may be affected by momentary voltage fluctuations. While there is no way to prevent voltage fluctuations, you can take steps to protect sensitive electronic equipment.

Install UL1449, CSA-listed, plug-in surge suppressors on the outlets feeding your sensitive equipment. Surge suppressors come in single- or multi-outlet styles. They're designed to protect against virtually all short-duration voltage fluctuations.

Starting the Generator (Recoil Start-Gasoline)

- Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment.
- 2. Check oil level and fuel(Gasoline).





3. Make sure the LPG cylinder knob is fully closed.



4. Turn the fuel selector switch to "GAS" position.



NOTE: When the fuel selector switch is turned to the "GAS" position, the indicator light will become RED up to 4 minutes (before goes off). Starting the engine successfully during these 4 minutes will turn the indicator light GREEN.

 Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.



Move choke lever located on engine to "START" position.



7. Pull the starter cord slowly until resistance is felt and then pull rapidly.



REMINDER: MUST HAVE SOLID RED INDICATOR LIGHT TO BE ABLE TO START THE GENERATOR. THE GENERATOR CANNOT BE STARTED DURING BATTERY POWER SAVING MODE UNLESS THE FUEL SELECTOR SWITCH IS TURNED TO THE "OFF" POSITION AND THEN TURNED BACK TO THE "GAS" POSITION.

See **Indicator light-Battery power Saving Mode** section for more information.

Do not over-choke. As soon as engine starts and warms up, move the choke lever to the "RUN" position.



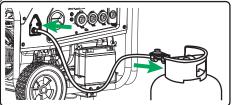
 Allow generator to run at no load for few minutes upon each initial start-up to permit engine and generator to stablize.

Starting the Generator (Recoil Start-LPG)

- Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment.
- 2. Check oil level.



Connect the regulator to both LPG cylinder and generator.



NOTE: Do not place the LPG cylinder in the path of muffler outlet. 4. Fully open the LPG cylinder knob.



5. Turn the fuel selector switch to "LPG" position.



NOTE: When the fuel selector switch is turned to the "**LPG"** position, the indicator light will become **RED** up to **4 minutes**(before goes off). Starting the engine successfully during these **4 minutes** will turn the indicator light **GREEN**.

 Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.



7. Move choke lever located on engine to "**START**" position.



8. PULL-TO-PRIME:

Pull the starter cord 1-2 times. Pull slowly until resistance if felt and then pull rapidly.



9. Move the choke lever to the "RUN" position.



10. PULL-TO-RUN:

Pull the starter cord slowly until resistance if felt and pull rapidly to run the unit.



If the engine fails to start in 1-2 pulls with choke in the "RUN" position, then move choke lever to "START" position and repeat the "PULL-TO-PRIME" step.

11. Allow generator to run at no load for few minutes upon each initial start-up to permit engine and generator to stablize.

REMINDER: MUST HAVE SOLID RED INDICATOR LIGHT TO BE ABLE TO START THE GENERATOR. THE GENERATOR CANNOT BE STARTED DURING BATTERY POWER SAVING MODE UNLESS

THE FUEL SELECTOR SWITCH IS TURNED TO THE "**OFF**" POSITION AND THEN TURNED BACK TO THE "**LPG**" POSITION.

See **Indicator light-Battery power Saving Mode** section for more information.

△ WARNING



Starter cord kickback(rapid retraction) will pull hand and arm toward engine faster than you can let go which could cause broken bones, fractures, bruises, or sprains resulting in serious injury.

When starting engine, pull cord slowly until resistance is felt and then pull rapidly to avoid kickback.

NOTE:

Keep choke lever in "START" position for only 1 pull of the recoil starter. After first pull, move choke lever to the "RUN" position for up to the next 3 pulls of the recoil starter. Too much choke leads to sparkplug fouling/engine flooding due to the lack of incoming air. This will cause the engine not to start.

NOTE:

If engine starts after 3 pulls but fails to run, or if unit shuts down during operation, make sure unit is on a level surface and check for proper oil level in crankcase. This unit may be equipped with a low oil protection device. If so, oil must be at proper level for engine to start.

Starting the Generator (Electric Start-Gasoline)

- Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment.
- 2. Check oil level and fuel(Gasoline).





3. Make sure the LPG cylinder knob is fully closed.



4. Turn the fuel selector switch to "GAS" position.



NOTE: When the fuel selector switch is turned to the "GAS" position, the indicator light will become **RED** up to **4 minutes**(before goes off). Starting the engine successfully during these **4 minutes** will turn the indicator light **GREEN**. 5. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.



6. Move choke lever located on engine to "**START**" position.



7. Flip the engine switch to the "**START**"(**II**) position for few seconds and then release.



REMINDER: MUST HAVE SOLID RED INDICATOR LIGHT TO BE ABLE TO START THE GENERATOR. THE GENERATOR CANNOT BE STARTED DURING BATTERY POWER SAVING MODE UNLESS THE FUEL SELECTOR SWITCH IS TURNED TO THE "OFF" POSITION AND THEN TURNED BACK TO THE "GAS" POSITION.

See Indicator light-Battery power Saving Mode section for more information.

8. Move the choke lever to the "RUN" position.



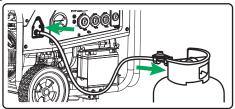
 Allow generator to run at no load for few minutes upon each initial start-up to permit engine and generator to stablize.

Starting the Generator (Electric Start-LPG)

- Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment.
- 2. Check oil level.



Connect the regulator to both LPG cylinder and generator.



NOTE: Do not place LPG cylinder in the path of muffler outlet. 4. Fully open the LPG cylinder knob.



5. Turn the fuel selector switch to "LPG" position.



NOTE: When the fuel selector switch is turned to the "LPG" position, the indicator light will become **RED** up to **4 minutes**(before goes off). Starting the engine successfully during these **4 minutes** will turn the indicator light **GREEN**.

 Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.



7. Move choke lever located on engine to "**START**" position.



8. Flip the engine switch to the "START"(II) position for few seconds and then release.



REMINDER: MUST HAVE SOLID RED INDICATOR LIGHT TO BE ABLE TO START THE GENERATOR. THE GENERATOR CANNOT BE STARTED DURING BATTERY POWER SAVING MODE UNLESS THE FUEL SELECTOR SWITCH IS TURNED TO THE "OFF" POSITION AND THEN TURNED BACK TO THE "LPG" POSITION.

See **Indicator light-Battery power Saving Mode** section for more information.

9. Move the choke lever to the "RUN" position.



10. Allow generator to run at no load for few minutes upon each initial start-up to permit engine and generator to stablize.

Connecting Electrical Loads

This unit has been pretested and adjusted to handle its full capacity. Before starting the generator, disconnect all load. Apply load only after generator is running. Voltage is regulated via the engine speed adjusted at the factory for correct output. Readjusting will void warranty.

△ CAUTION

When applying a load, do not exceed the maximum wattage rating of the generator when using one or more receptacles. Also, do not exceed the amperage rating of any one receptacle.

Do not apply heavy electrical load during break-in period (the first five hours of operations).

- 1.Let engine stabilize and warm up for a few minutes after starting.
- 2.Ensure circuit breaker on control panel is in on position.
- 3.Plug in and turn on the desired 120 Volt AC, single phase, 60Hz electrical loads. It is better to attach the item with largest load first.



NOTE:

Connecting a generator to your electric utility company's power lines or to another power source may be against the law. In addition this action, if done incorrectly, could damage your generator and appliances and could cause serious injury or even death to you or a utility worker who may be

working on nearby power lines. If you plan to run a portable electric generator during an outage, please notify your electric utility company immediately and remember to plug your appliances directly into the generator. Do not plug the generator into any electric outlet in your home. Doing so could create a connection to the utility company power lines. You are responsible for ensuring that your generator's electricity does not feed back into the electric utility power lines. If the generator will be connected to a building electrical system, consult your local utility company or a qualified electrician. Connections must isolate generator power from utility power and must comply with all applicable laws and codes.

Stopping the Engine

 Turn off and remove entire electrical loads. Never start or stop the generator with electrical devices plugged in or turned on.



Let the generator run at no-load for two minutes to stabilize internal temperatures of the engine and generator.

2. Turn the fuel selector switch to **OFF** (**O**)position.





3. Fully close the LPG cylinder knob.



If a cover is used, do not install until unit has cooled.

NOTE: Disconnect the LPG cylinder from the generator during transportation.



Fuel and its vapors are extremely flammable and explosive which could cause burns, fire or explosion resulting in death, serious injury and/or property damage.

DO NOT stop engine by moving choke control to "**START**" position.

Important: Always ensure that the fuel selector switch is in the "**OFF**" position when the engine is not in use.

NOTE:

If the engine will not be used for a period of two weeks or longer, please see the Storage section for proper engine and fuel storage.

Indicator light - Battery Power Saving Mode

This generator is equipped with an electronic module which consumes battery power. When the fuel selector switch is turned to the "GAS" or "LPG" position, the indicator light will become RED up to 4 minutes(before goes off).

Starting the engine successfully during these 4 minutes will turn the indicator light **GREEN**.

Starting the engine unsuccessfully or not attempting to start the engine at all during these **4 minutes** will switch generator to **Battery Power Saving Mode** in order to conserve and increase the life of battery. MUST HAVE **SOLID RED INDICATOR LIGHT** TO BE ABLE TO START THE GENERATOR. THE GENERATOR CANNOT BE STARTED DURING **BATTERY POWER SAVING MODE** UNLESS THE FUEL SELECTOR SWITCH IS TURNED TO THE "**OFF**" POSITION AND THEN TURNED BACK TO THE "**GAS**" OR "**LPG**" POSITION.

Unwanted Shutdown:

The indicator light will start **FLASHING** for **4 minutes** in the event of any unwanted shutdown such as low oil, running out of fuel(gasoline or LPG), or any other unwanted shutdown. This is a reminder that the generator is switching to **Battery Power Saving Mode.** The generator should be checked

for any unwanted shutdown.

The generator cannot be started during or after the **4 minutes** of **FLASHING** mode unless the fuel selector switch is turned to the "**OFF**" position and then turned back to the "**GAS**" or "**LPG**" position.

NOTE:

This generator is equipped with an automatic battery charging circuit and the battery will receive a proper charge when the engine is running to keep the battery charged.

Low Oil Shutdown

If the engine oil drops below a preset level, an oil switch will stop the engine. Check oil level with dipstick.

If oil level is between LOW and HIGH mark on dipstick:

1.DO NOT try to restart the engine.

2.Contact an Authorized FIRMAN Service Dealer.

3.DO NOT operate engine until oil level is corrected.

If oil level is below LOW mark on dipstick:

1.Add oil to bring level to HIGH mark.

 Restart engine and if the engine stops again a low oil condition may still exist. DO NOT try to restart the engine.

 Contact an Authorized FIRMAN Service Dealer.
 DO NOT operate engine until oil level is corrected.

Do Not Overload Generator

Overloading a generator in excess of its rated wattage capacity can result in damage to the generator and to connected electrical devices.

To prolong the life of your generator and attached devices, follow these steps to add electrical load:

- 1. Start the generator with no electrical load attached.
- 2. Allow the engine to run for several minutes to stabilize.
- 3. Plug in and turn on the first item. It is best to attach the item with the largest load first.
- 4. Allow the engine to stabilize.
- 5. Plug in and turn on the next item.
- 6. Allow the engine to stabilize.
- 7. Repeat steps 5-6 for each additional item.

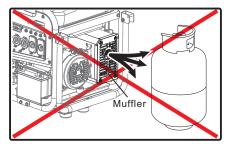
NOTE:

Observing frost on LPG cylinders and regulators is common during operation and normally is not an indication of a problem. As LPG vaporizes and travels from the tank to the generator engine it expands. The amount of frost that forms can be affected by the size of the cylinder, the amount of fuel being used, the humidity of the air and other operating conditions. In unusual situations this frost may eventually restrict the flow of LPG gas to the generator resulting in deteriorating performance. For example, if the tank temperature is reduced to a very low level then the rate at which the LPG vaporizes is also reduced and may not provide sufficient fuel flow to the engine. This is not an indication of a problem with the generator but only a problem with the flow of gas from the LPG cylinder. If generator performance seems to be deteriorating at the same time that ice formation is observed on tank valve, hose or regulator then some actions may be taken to eliminate this symptom. In these rare situations it can be helpful to reduce or eliminate the cold fuel system effects by doing one of the following:

- Exchanging fuel tanks to allow the first tank to warm up, repeating as necessary
- Placing the LPG cylinder at the end of the generator near the handle, where engine fan air flows out from the generator. This air is slightly heated by flowing over the engine.

△ DANGER

DO NOT PLACE THE LPG CYLINDER IN THE PATH OF MUFFLER OUTLET



The LPG cylinder can be temporarily warmed by pouring warm water over the top of the cylinder.

MAINTENANCE AND STORAGE

MAINTENANCE SCHEDULE

ITEM	NOTES	Daily(Before operation)	Initial 25 hours	Every 50 hours	Every 100 hours (or annual)
Spark Plug	Check condition. Adjust gap and clean. Replace if necessary.				√
Engine Oil	Check oil level.	√			
Engine Oil	Replace.		√		√
Air Filter	Clean, replace if necessary.			√	
Fuel Filter	Clean fuel filter and fuel tank strainer. Replace if necessary.				√
Fuel Line	Check fuel hose for cracks or other damage. Replace if necessary.	√			
LPG Regulator /Hose Assy.	Check for damage and leaks. Replace if necessary.	√			
Exhaust	Check for leakage. Retighten or replace gasket if necessary.	√			
System	Check spark arrester screen. Clean/Replace if necessary.				√
Carburetor	Check choke operation.	√			
Starting System	Check recoil starter operation.	√			
Fittings/ Fasteners	Check. Replace if necessary.				√

General Recommendations

Regular maintenance will improve the performance and extend the life of the generator. See any authorized dealer for service.

The generator's warranty does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the generator as instructed in this manual.

Some adjustments will need to be made periodically to properly maintain your generator. All service and adjustments should be made at least once each season. Follow the requirements in the Maintenanc Shedule chart above.

Notice Once a year you should clean or replace the spark plug and replace the air filter. New spark plugs and clean air filter assure proper fuel-air mixture and help your engine run better and last longer.

ENGINE MAINTENANCE

To prevent accidental starting, remove and ground spark plug wire before performing any service.

Change Engine Oil

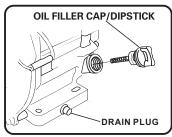
Change engine oil every 100 hours. (for a new engine, change oil after 25 hours.)

If you are using your generator under extremely dirty or dusty conditions, or in extremely hot weather, change the oil more often.

△ CAUTION

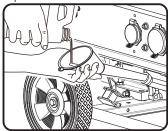
Avoid prolonged or repeated skin contact with used motor oil.

- Used motor oil has been shown to cause skin cancer in certain laboratory animals.
- Thoroughly wash exposed areas with soap and water.
- (a) Drain oil by removing the drain plug and the oil filler cap while the engine is warm.



NOTE:

Please use a container to dump the used oil for protecting the environment. (b) Reinstall the drain plug and fill the engine with oil until it reaches the HIGH(H) level on the oil filler cap.



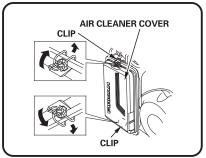
 Use fresh and high quality lubricating oil to the specified quantity.

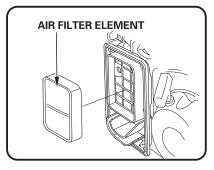
If contaminated or deteriorated oil is used or the quantity of the engine oil is not sufficient, the engine damage will result and its life will be greatly shortened.

Air Filter Maintenance

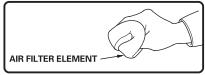
Maintaining an air filter in proper condition is very important. Dirt induced through improperly installed, improperly serviced, or inadequate elements damages and wears out engines. Always keep the element clean.

(a) Take out the air cleaner, clean it well in kerosene and dry it.





(b) After wetting the element by clean engine oil squeeze it tight by hand.

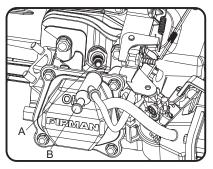


(c)Lastly, put the element in the case and install it securely.

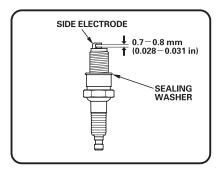
Spark Plug Maintenance

Changing the spark plug will help your engine to start easier and run better.

- (a) Remove the spark plug cap.
- (b) Remove spark plug using provided wrench.



- A- Spark plug
- B- Spark plug cap
- (c) Inspect spark plug for damage and clean with a wire brush before reinstalling
- (d) Adjust the electrode gap to 0.7 to 0.8 mm (0.028" to 0.031").
- (e) Seat spark plug in position and thread by hand to prevent cross threading.
- (f) Tighten plug with provided wrench and put the cap back on spark plug.



SPARK PLUG: TORCH F6RTC

NGK BPR6ES

CHAMPION RN9YC or equivalent.

Inspect Muffler and Spark Arrester

Inspect the muffler for cracks, corrosion, or other damage. Remove the spark arrester, if equipped, and inspect for damage or carbon blockage. If replacement parts are required, make sure to use only original equipment replacement parts.

△ WARNING





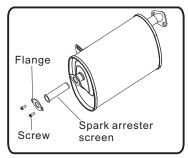
Exhaust heat/gases could ignite combustibles, structures or damage fuel tank causing a fire, resulting in death or serious injury and/or property. Contact with muffler area could cause burns resulting in serious injury.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.
- Keep at least 5 feet (1.5 m) of clearance on all sides of generator including overhead.
- Replacement parts must be the same and installed in the same position as the original parts.

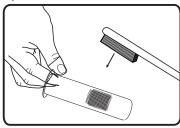
Clean or replace spark arrester as follows:

Depending on the type fuel used ,the type and amount of lubricant used, and/or your operating conditions, the exhaust part and muffler may become blocked with carbon deposits. If you notice power loss, you may need to remove these deposits to restore performance.

- 1. Allow the engine to cool completely before servicing the spark arrester.
- 2. Remove the screws securing the spark arrester in place and the remove it from muffler.



3. Carefully remove the carbon deposits from the spark arrester screen with a wire brush.



- 4. Replace the spark arrester if it is damaged.
- 5. Position the spark arrester in the muffler and attach with the screws.

△ CAUTION

Failure to clean the spark arrester will result in degraded engine performance.

GENERATOR MAINTENANCE

Make certain that the generator is kept clean and stored properly. Only operate the unit on a flat, level surface in a clean, dry operating environment. **DO NOT** expose the unit to extreme conditions, excessive dust, dirt, moisture or corrosive vapours.

△ CAUTION

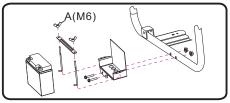
DO NOT use a garden hose to clean the generator. Water can enter the generator through the cooling slots and damage the generator windings.

Use a damp cloth to clean exterior surfaces of the generator.

Use a soft bristle brush to remove dirt and oil. Use an air compressor (25 PSI) to clear dirt and debris from the generator.

Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Battery Replacement



- 1. Remove the spark plug wire from spark plug.
- 2. Remove the nut and bolt from the negative(-) and positive(+) posts.
- 3. Loosen and remove the screw A on the battery holding bracket.
- 4. Remove the battery and recycle and dispose of properly.
- 5. Install the new battery with follwoing specification: 12V sealed lead acid 15AH

LXWXH:180X75X165mm(7.09X2.95X6.5inch)

- 6. Connect the red positive(+) battery cable to the battery first.
- 7. Connect the black positive(-) battery cable to the battery second.
- 8. Cover the post with boots.
- 9. Install the spark plug wire onto spark plug.

△ WARNING



To avoid electric shock:

ALWAYS connect the positive (+) battery cable (red boot) first when connecting battery cables. **ALWAYS** disconnect the negative (-) battery cable (black boot) first when disconnecting

battery cables. **NEVER** connect the negative (-) battery cable (black boot) to the positive (+) post on the

(black boot) to the positive (+) post on the battery. **NEVER** connect the positive (+) battery cable

(red boot) to the negative (-) post on the battery. **NEVER** touch both battery posts simultaneously. **NEVER** place a metal tool across both battery posts.

ALWAYS use insulated or nonconducting tools when installing the battery.

SERVICE AND STORAGE

Infrequent Service

If the unit is used infrequently, difficult starting may result. To eliminate hard starting, follow these instructions:

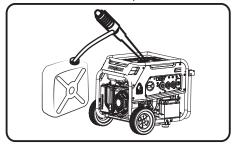
- 1. Run the generator at least 30 minutes every month.
- Run the generator, then close the fuel shut-off valve and allow the unit to run until the engine stops.
- 3. Move the fuel selector to the "OFF" position.

Long Term Storage

It is important to prevent gum deposits from forming in essential fuel system parts such as the carburetor, fuel hoses or tank during storage. Also, experience indicates that alcohol-blended fuels (called gasohol, ethanol or methanol) can attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

When the generator set is not being operated, or is being stored for more than one month, follow these instructions to avoid engine problems:

- 1-ADD a properly formulated commercially **FUEL STABILIZER** to the tank if it is not already added.
- 2-Operate the engine for 5-10 minutes to circulate treated fuel into fuel lines and carburetor before shutdown.
- 3- After engine cools down, remove all gasoline from the fuel tank. Use a commercially available, non-conductive vacuum siphon.



△ DANGER

Drain fuel into approved container outdoors, away from open flame. Be sure engine is cool. Do not smoke.

4-FUEL STARVATION: Turn fuel selector switch to "GAS" position. Start and run the generator until it stops from lack of gasoline. This will dry out all remaining gasoline in tank, fuel lines and carburetor. 5-Turn fuel selector switch to "OFF" position. Fully close the LPG cylinder knob if it is open and disconnect LPG cylinder from the generator. 6-Allow the unit to cool entirely before cleaning and storage.

7-Change oil with recommended grade oil. 8-Remove spark plug and pour about one teaspoon of engine oil through the spark plug hole, then pull the recoil starter several times to distribute the oil for lubricating the cylinder. Reattach the spark plug. Pull recoil slowly until resistance is felt. This will close the valves so moisture cannot enter engine cylinder. Gently release recoil starter.

9-Cover the unit and store in a clean, dry place out of direct sunlight. **NEVER USE WATER TO CLEAN GENERATOR.**

Note:

- We recommend always using a fuel stabilizer.
 A FUEL STABLIZER will minimize the formulation of fuel gum deposits during storage, the fuel stabilizer can be added to the gasoline in the fuel tank, or into the gasoline in a storage container.
- If it is not practical to empty the fuel tank and the unit is to be stored for some time, use a commercially available FUEL STABILIZER added to the gasoline to increase the life of the gasoline. Run the unit for 5-10 minutes to circulate treated gasoline into the fuel lines abs carburetor before shutdown. DO NOT STORE GENERATOR WITHOUT FUEL STABILIZER IN FUEL SYSTEM INCLUDING TANK, FUEL LINES AND CARBURETOR.
- Any damages or hazards caused by using improper fuel, improperly stored fuel, and/ or improperly formulated stabilizers, are not covered by manufacturer's warranty.
- Do not store gasoline from one season to another season.

Battery Charging & Maintenance

The battery powers up the starter motor and the control module in this generator. This product is equipped with an automatic battery charging circuit. The battery will receive charging voltage when the engine is running. The battery will maintain a proper charge if the unit is used on a regular basis (about once every two weeks). If it is used less frequently, the battery should be connected to a trickle charger (not included) or battery maintainer (not included) to keep the battery properly charged. If the battery is not able to start the engine, it can be started manually only on "GAS" position by pulling the engine recoil cord. If the battery voltage is extremely low, the charging circuit may not be able to re-charge the battery. In this case, the battery must be connected to a standard automotive style battery charger for re-charging before it can be used

↑ WARNING

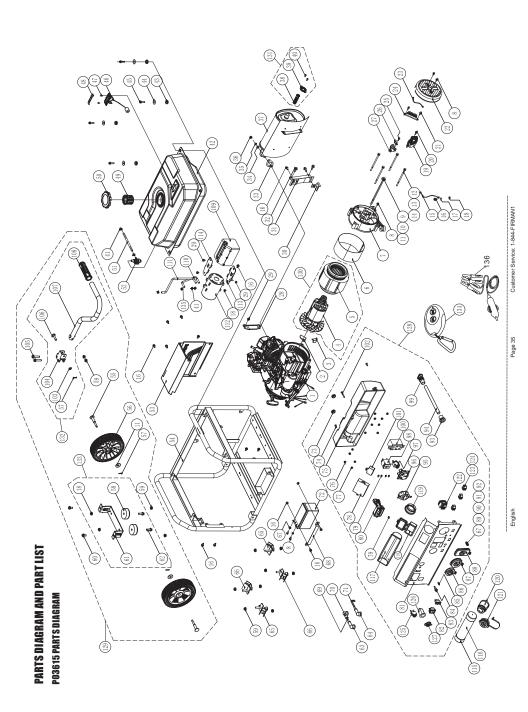
Generator exhaust contains odorless and colorless carbon monoxide gas.

To avoid accidental or unintended ignition of your generator during periods of storage, the following precautions should be followed: When storing the generator for short or extended periods of time make sure that the fuel selector switch is in the "OFF" position and the battery leads have been disconnected from the battery.

TROUBLE SHOOTING

Problem	Cause	Correction
Engine is running, but no AC output is available.	1. Circuit breaker is open. 2. Overload light is on. 3. Poor connection or defective cord set. 4. Connected device is bad.	Reset circuit breaker. Review the load and restart the unit. Check all connections and cord set. Replace defective device.
Engine runs good at no-load but "bogs down" when loads are connected.	Clogged or dirty fuel filter. Clogged fuel line. Generator is overloaded. Clogged spark arrester.	Clean or replace fuel filter. Clean the fuel line. Check the load and adjust. Clean or replace spark arrester.
Engine will not start; starts and runs rough or shuts down when running.	1. Low oil level sensor. 2. Out of fuel. 3. Bad Spark plug. 4. Spark plug wire not connected to spark plug. 5. Clogged or dirty fuel filter. 6. Out of battery power. 7. Choke in the wrong position. 8. Clogged spark arrester.	1. Fill crankcase to proper level/ Place generator on level surface. 2. Fill fuel tank with gasoline . 3. Replace spark plug. 4. Connect wire to spark plug. 5. Clean or replace the fuel filter. 6. Charge or replace battery. 7. Adjust the choke position. 8. clean or replace spark arrester.
Engine lacks power.	1. Load is too high 2. Dirty air filter 3. Clogged or dirty fuel filter 4. Clogged spark arrester 5. Overheating 6. Choke in the wrong position	1. Check the load and adjust 2. Clean or replace the air filter 3. Clean or replace fuel filter 4. Clean or replace spark arrester 5. Check for air restriction, Move to a well ventilated area 6. Adjust the choke position
Engine "hunts" or falters.	1. Clogged or dirty fuel filter 2. Fuel tank low (gasoline)	Clean or replace fuel filter Add fuel.

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P03615 PARTS LIST

	I I		<u> </u>				1
NO.			Qty.	NO.	Part Number	Description	Qty.
1	336713679	FIRMAN 208cc Engine	1	71	336713612	Black Wire	1
2	336713501	Rubber Cap 2	1	72	336713613	Battery	1 1
3		Rubber Cap1	1	73	336713564	Grommet	2 2
	336713681	Deter Assu	1	74	336713565	Screw M5×14	15
4	336713681	Rotor Assy		74	330713303		1
5	336713682	Stator Assy Stator Cover	1	75	336713658	Control Box	1
6	336713606	Stator Cover	1	76	336713568 336713567 336713677	Nut M4	11
7	336713506	Generator End Cover	1	77	336713567	Nut M3	2 1 5 1
	226742507	Claras Dalt MEV 10		78	336713677	Control Module	1
8	336713507	Flange Bolt M5×12	7	70	000740500	Control Module	+
9		Flange Bolt M8×252	1	79	336713569	Screw&washer Assy M4×8	5
10	336713509	Lock Washer Ø8	2	80	336713570	Multi Meter	1
11		Flat Washer Ø8	3	81	336713688	Control Panel	1
	200713310	Flance Dalt Mov 170		82	336713616	Engine Switch	1
12	336/13511	Flange Bolt M6×179	4		000740070	Davias Dantona Civitale	+
		Lock Washer Ø6	2	83	336713678	Power Restore Switch	1
14	336713513	Flat Washer Ø6	2	84	336713618	Indicator Light	1
15	336713514	Ground Wire 1	1	85	336713619	Program Switch	1
16	226742545	Ground Wire 1 Flange Bolt M6×12		86		Outlet Cover L5-30R	1
16	336/13515	Flange Bolt M6×12	18	87	336713574	Outlet Cover TT-30R	1
17	336713516	External Teeth Lock Washer Ø6	1				++
18	336713517	Nut M6	4	88			1
19	336713607	AVR	1	89	336713576	Flange Bolt M5×16(ground)	1
20	226742540	Flongo Polt MEV16		90	336713577	Nut M5(ground)	1
20	330/13519	Flange DUILIVID* 10	3	91		Flat Washer Ø5	12
21	336/13520	Nut M6 AVR Flange Bolt M5×16 Bolt &washer Assemblies Generator End Cover Cap	2				1 2 1
22	336713627	Generator End Cover Cap	1	92	330/13580	Star Washer Ø5	+
23	336713522	Ground Wire 2	1	93	336713581	Grommet	
24	226712522	Terminal Block	1	94	336713582	Sleeve	1
24	000740504	Delt Organia Diook		95		Receptacle L14-30R	1
25	336/13524	Bolt &washer Assemblies	2	96	336713584	Receptacle TT-30R	1
26	336713525	Carbon Brush Holder	1 l		330713304	Neceptacie i i-suk	
27	336713526	Carbon Brush Assembly	1	97	336713585	Circuit Breaker Amp 20A	1
		Air Cleaner Bracket	1	98	336713624	Double-pole Circuit Breaker 15A	1
20	330713327			99	336713660	Grommet	1
		Flange. Bolt M6×8	4		336713661	Receptacle 5-20R Duplex with 2 X USB	
30	336713529	Muffler Fixed Plate A(small)	1	100	000740000		
31	336713530	Muffler Fixed Plate B (big)	1	101	336713620	Control Module	1
33	226712521		3	102	336713662	Screw&washer Assy M5×60	1
32	336713531 336713532	Flg. Bolt M8×20	3	103	336713662 336713591	Screw&washer Assy M5×60 Flat Washer(ø8.2×ø17×0.8)	1
33	336713532	Muffler Gasket	1	104	336713680	Bracket Handle	1
34	336713533	Flat Washer Ø8	2	104	336713689 336713593	Bracket, Handle Flange Bolt M8×45	+
35	336713509	Flat Washer Ø8 Lock Washer Ø8	2	105	330713593	Flange Boil Mo^45	1 2 1 1
36	226712524	NI. 4 MO	2	106	336713594 336713690	Pin, Handle	1
30	336713534 336713535	NULIVIO		107	336713690	Handle	1
37	336/13535	Muffler Assembly	_1_	108	336713596	Handle Grip	1
38	336713536	Arrester.Spark	1	100	336713596 336713636	Carbon Canister Shield	1
39	336713537	Holder, Spark Arrester	1	109	330713030	Carbon Carrister Silieru	+
40	226712520	Caravi Swaahar Asav MEv 14	2	110	336713680	Vapor Hose 2	1
40	3307 13330	Screw&washer Assy M5×14		1111	336713663	Vapor Hose 1	1
41	336713540	Clamp Ø8×6	5	112	336713637	Carbon Canister(650cc)	1
42	336713628	Fuel Tank Assy.	1	113	336713650	Carbon Canister Holder	1
43	336713542	Grommet, Fuel Tank	4	1113	336713639	Carbon Canister Bracket	1
11	3367135/3	Washer Tank Buffer	4				-
4.5	000710040	Washer fally bullet		115	336713664	Plug	2
45	336713544	Flange Bolt M6×20	4	1116	336713665	Maintenance Canister	1
46	33671354 <u>5</u>	Fuel Gauge Assy.	1		336713666	Maintenance Canister Holder	1
47	336713546	Screw M5×10	2		336713644	Remote Holder	1
48	336713547	Fuel Gauge Display Fuel Filter, Wire Mesh Fuel Cap	1				
40	226712540	Fuel Filter Wire Mach		1119	336713667	Adapter Holder	1
49	000740540	Fuel Filter, Wire Westi	1		336713668		1
50	336/13549	ruei Cap	1	121	336713669	Adapter Outlet Cover	1
D I	1330/133301	Hose, Fuel	1	122	336713600	Volt Selector Switch	1
52	336713551	Fuel Valve	1		336713670	LED Cover	3
53	336713552	Guard, Muff.	1	123	226742674		1
	220742005	Cuaru, Mull.		124	336713671	LED	6
	336713685		1	125	336713672	Circuit Breaker 8A	1
55		Axle Pin	2	126	336713673	Receptacle DC Lighter Style	1
56		Wheel	2	1127	336713674	IDC Outlet Cover	1
57			3	120	226/12510	Control Panel Accy	1
				128	000440500	Control Panel Assy.	H-
58	330/1355/	Rubber, Support	2	129	<u> 336413520</u>	Control Panel Assy. Portablity Kit	<u> </u>
59	336713558		8	1130	1336413521	Rotor And Stator Assy.	<u> </u>
60	336713559	Flange Bolt M8×16	2	131	336413503	Spark Arrestor Kit	1
61	336713686	Support Leg	1	132	336413522	Handla Assambly	1 1 1 1 1
62	336713561	Flange Bolt M6×25		132	336413522 336413523	Support Leg Assembly	+
	050710001		2	133	000710023	Depose Control	+
63	357713570 357713571	ROOI KEG	_1	134	336713642 330713509	Remote Control	1
64	<u> 3577</u> 13571	Boot Black	1	135	330713509	Clip(Ø8.7×8)	1
	336713656	Isolator 1	2	136	330713633	DC Charge Cable	1
66	336713657	Isolator 2	2	1.00	1 200. 70000		Γ.
	220712037	M. 4 ME		_		 	\vdash
67	336713578	CIVI JUIVI	_1	-			—
		Battery Pressing Plate	1				
69	336713610	Red Wire	1	L_			L_
	336713611		1				
	1000110011	Door				l	

FIRMAN 208cc Engine Parts List

NO.	Part Number	Description	Qty.	NO.	Part Number	Description	Qty.
1	336723500	Crankcase Subassembly.	1	61	336723561	Cover, Air Cleaner	1
2	336723501	Locating Pins	2	62	336723556	Spark Plug	1
3	336723502	Sensor, Engine Oil	1	63	336723600	Choke Connector	1
4	336723503	Flange Bolt M6×12	8	64	336723601	Spring	1
5	336723504	Camshaft Assy.	1	65	336723602	Step Moter Holder	1
6	336723505	Bearing	2	66	336723603	Step Moter	1
7	336723506	Gear,crankshaft	1	67	336723604	Bolt M4×8	2
8	336723507	Woodruff Key	1	68	336723605	Step Moter Cover	1
9	336723508	Crankshaft	1	69	336723562	Control Assembly	
10	336723509	Gear,drive	1	70	336723563	Shaft, Governor Arm	1
11	336723510	Gasket, Crankcase	1	71	336723564	Rocker Shim	
12	336723511	Oil Dipstick Assy	1	72	336723565	Pin, Shaft	1
13	336723511	Cover, Crankcase	1	73	336723566	Arm, Governor	1
14		Seal. Oil	2	74	336723567		++
15	336723513		6	75		Bolt,governor Arm	1
	336723514	Flg. Bolt M8×32	1	76	336723568	Spring,governor	1
16	336723515	Rod, Connecting			336723569	Rod, Governor	
17	336723516	Clip, Piston Pin	2	77	336723570	Spring, Throttle Valve Returning	1
18	336723517	Pin, Piston	1	78	336723572	Wind Deflectors	1
19	336723518	Piston	1	79	336723573	Ignition Coil	1
20	336723519	Ring Set, Oil	1	80	336723574	Flg. Bolt M6×25	3
21	336723520	Ring, The Second	1	81	336723606	Wire Clip	2
22	336723521	Ring, The First	1	82	336723615	Lock Washer	2
23	336723522	Flg. Bolt M6×8	2	83	336723575	Protect Circle	1
24	336723523	Air Guide Lower	1	84	336723621	Fan Cover Comp	1
25	336723524	Gasket, Cylinder Head Cover	1	85	336723609	Flg. Bolt M6×29	1
26	336723525	Cover Subassembly, Cylinder Head	1	86	336723610	Locating Pins	2
27	336723526	Flange Bolt M6×15	7	87	336723611	Air Guide, Right Side	1
28	336723527	Flange Bolt M8×55	4	88	336723612	Sheath,wire	1
29	336723528	Nut, Valve Lock	2	89	336723580	Locknut	1
30	336723529	Nut Valve Adjusting	2	90	336723581	Pulley,starter	1
31	336723530	Breather Tube	1	91	336723582	Cooling Fan	1
32	336723531	Rocker, Valve	2	92	336723613	Flywheel Comp	1
33	336723532	Rotator, Valve	1	93	336723614	Starter Motor Assembly	1
34	336723533	Retainer, Intake Valve	1	94	336723584	Grip,starter	1
35	336723534	Retainer, Exhaust Valve	1	95	336723585	Case Comp., recoil Starter	1
36	336723535	Spring, Valve	2	96	336723586	Spring, starter Return	1
37	336723536	Oil Seal, Valve	2	97	336723587	Cord	1
38	336723537	Bolt, Valve Adjusting	2	98	336723588	Pulley, recoil Starter	1
39	336723538	Plate Subassembly, Lifter Stopper	1	99	336723589	Spring,patchet	2
40	336723539	Exhaust Valves Stud Bolt	2	100	336723590	Patchet, starter	2
41	336723540	Head Subassembly, Cylinder	1	101		Pawl Guide	1
42	336723541	Valve,in.take	1	102	336723592	Clip Sprg.,pawl Guide	1
43	336723542	Valve, Exhaust	1	103		Screw,pawl Guide	1
44	336723543	Push Rod	2		336723594	Gov.,gear Shaft	1
45	336723544	Tappet, Valve	2		336723595	Inner Washer, gear	2
46	336723545	Washer,drain Bolt	2		336723596	Gear, Governor	1
47	336723546	Bolt, Drain Plug	1		336723597	Clip, Govorner Gear	1
48	336723547	Locating Pins	2		336723598	Bushing, Govorner Gear	1
49	336723548	Gasket, Cylinder Head	1		336713532	Auspuffdichtung	1
50	336723549	Stud, Intake	2		336423500	Recoil Starter Set	1
51	336723550	Gasket, Inlet	1	111		Governing Gear Set	1
52	336723551	Plate, Carburetor Insulator	1		336423502	Air Cleaner Set	
53	336723552	Gasket, Carburetor	1		336423506	Carburetor Set	1
54	336723599	Carburetor	1		336423504	Piston Rings Set	
55	336723554	Gasket, Air Cleaner	2		336423507	Gasket Set	+ †
56	336723555	Nut M6	3		336713648	Easy Oil Drain	1
57		Elbow, Air Cleaner	1		336723604		1
58	336723557		1	118		Oil - Tight Bolt Seal Assy.	
59	336723558 336723559	Clapboard	4	119		Flange Bolt M6×12	++
60		Mounting Bolt, Air Cleaner	1			Clip for Holding Oil Hose	1
טט	336723560	Element, Air Cleaner	I	120	336423512	Oil drain Assembly	

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AMERICA'S REMANUFACTURING COMPANY 30-DAY LIMITED WARRANTY

Return the product to the retail location where it was purchased. A replacement unit will be provided, if available. The exchange unit is warranted for the remainder of your product's original warranty period.

If you have problems returning the product to the store from which it was purchased, contact ARC Customer Service via email at warranty@arcaugusta.com. You should attempt to return the unit prior to emailing the email address above.

Products remanufactured by America's Remanufacturing Company have a thirty-day limited "return to vendor" (RTV) warranty. This product is warranted against failure due to a defect in materials or workmanship for a period of thirty days from the date of original purchase. Proof of the original purchased date is needed to make a warranty claim. warranty does not cover the cost of transportation to America's Remanufacturing Company or its designated return center.

Returning Your Unit to ARC:

- Properly pack your unit. We recommend using the original carton and packing materials.
- Include in the package a copy of the sales receipt or other evidence of date of original purchase. Print your name and address and a description of the defect.
- Ship to the address provided by ARC 3
- Write the RMA number provided on the outside of the package. 4.

What Your Warranty Does Not Cover:

- Improper installation. Failures due to improper maintenance or oil levels.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.

 • Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage to personal property caused by possible defects with this appliance.
 - Cosmetic defects.

This warranty is extended to the original purchaser owner only for products purchased for home use within the USA.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

Exclusion of implied warranties: Except where prohibited or restricted by law, there are no warranties, whether express, oral or statutory which extend beyond the description on the face hereof, including specifically the implied warranties of merchantability or fitness for a particular purpose.

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FIRMAN POWER EQUIPMENT INC. Emission Control System Warranty

CALIFORNIA AND FEDERAL EXHAUST AND EVAPORATIVE EMISSIONS CONTROL WARRANTY STATEMENT GASOLINE ENGINES

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board, US Environmental Protection Agency ("US EPA") and FIRMAN POWER EQUIPMENT INC.(FIRMAN) are pleased to explain the exhaust and evaporative emissions control systems warranty on your 2016-2017 or later Small Off-Road Engine ("SORE") and engine powered equipment as applicable. In California and the USA, SORE and engine powered equipment must be designed, built and equipped to meet California as applicable. In California and the USA, SORE and engine powered equipment must be designed, built and equipped to meet California and US EPA stringent anti-smog standards. FIRMAN must warrant the emissions control systems on your SORE and engine powered equipment for the period listed below provided there has been no abuse, neglect or improper maintenance of your SORE or engine powered equipment. Your exhaust emission control systems may include parts such as carburetors, fuel-injection systems, the ignition system, and catalytic converters. Also included may be an evaporative emission control system which may include thanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, belts and other associated components. For engines less than or equal to 80 cc, only the fuel tank is subject to the evaporative emission control warranty requirements of this section (California only).

OWNER'S WARRANTY RESPONSIBILITIES:

As the SORE or engine powered equipment owner, you are responsible for the performance of the required maintenance listed in your owner's manual. FIRMAN recommends that you retain all receipts covering maintenance on your SORE or engine powered equipment, but FIRMAN cannot deny warranty solely for the lack of receipts.

As the SORE or engine powered equipment owner, you should however be aware that FIRMAN may deny you warranty coverage if your SORE or engine powered equipment or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your SORE or engine powered equipment to a FIRMAN distribution or service center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact FIRMAN at 1-844-347-6261 or firmangenerators@sumec-na.com.

GENERAL EMISSIONS WARRANTY COVERAGE

This emission control system is warranted for three years. The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser. FIRMAN warrants to the ultimate purchaser and each subsequent purchaser that the engine is:

Designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board and US EPA; and Free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to the part as described in the engine manufacturers application for certification.

- The warranty on emissions-related parts is as follows:
- (1) Any warranted part that is not scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, the part will be repaired or replaced by FIRMAN at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- (2) Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- (3) Any warranted part that is scheduled for replacement as required maintenance in the owner's manual supplied, is 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 will be repaired or replaced by FIRMAN at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- (4) Repair or replacement of any warranted part under the warranty must be performed at no charge to the owner at a warranty station.
- (5) Notwithstanding the provisions of Subsection (4) above, warranty services or repairs must be provided by FIRMAN that are franchised to service the subject engines.
- (6) The owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.
- (7) FIRMAN is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part.
- (8) Throughout the emissions warranty period defined in Subsection (b)(2), FIRMAN will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
- (9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of the manufacturer.
- (10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claim.

The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

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FIRMAN EMISSION CONTROL SYSTEM WARRANTY

Listed below are the parts (if equipped) covered by the Federal and California Emission Control Systems Warranty. Some parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part.

- 1. Ignition system including:
- Spark plug
- Ianition coil
- 2. Fuel metering system:
- Fuel tank
- Fuel cap
- Fuel line and related fittings/clamps
- Carburator assembly including internal parts and gaskets
- 3. Catalytic muffler assembly including:
- Exhaust manifold
- Catalytic converter
- Muffler gasket
- -pulse valve

- 4. Air induction system including:
- Intake pipe/manifold
- Air cleaner
- 5. Crankcase breather assembly including:
- Breather connection tube
- 6. Fuel tank evaporative emission control system including:
- Purge valves
- Carbon canister
- Vapor hoses and fitting/clamps

Limitations

This Emission Control Systems Warranty shall not cover any of the following:

- (a) Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.
- (b) Diagnosis and inspection fees that do not result in eligible warranty service being performed.

FOR EMISSION CONTROL SYSTEM WARRANTY INFORMATION Email: firmangenerators@sumec-na.com www.firmangenerators.com

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