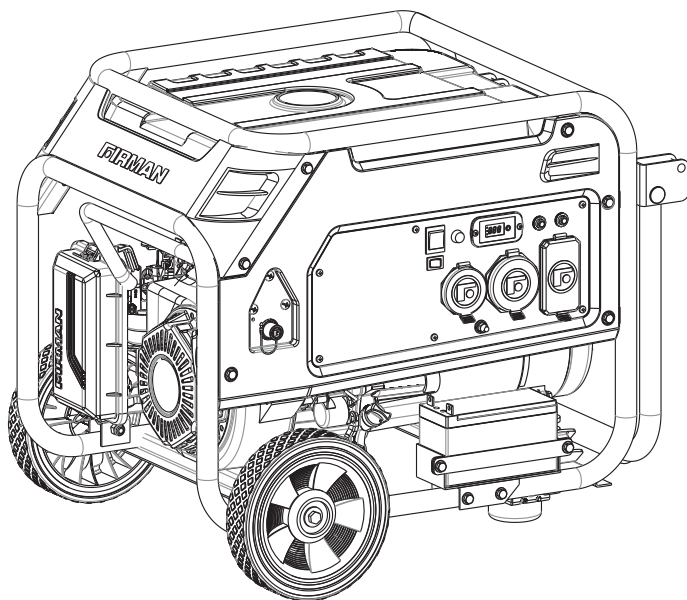


FIRMAN[®]

OPERATOR'S MANUAL LPG PORTABLE GENERATOR



MODEL NUMBER
L03391
Rev Level:01

Record product information to reference when ordering parts or obtaining warranty coverage.



SERIAL NUMBER: _____

PURCHASE DATE: _____

INTRODUCTION

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REGISTER YOUR PRODUCT

Register your FIRMAN generator online at www.firmanpowerequipment.com

INTRODUCTION

Thank you for purchasing a FIRMAN generator. You have selected a high-quality, precision engineered generator set designed and tested to give you years of satisfactory service. This generator is designed to run only on liquid petroleum gas (LPG). This generator is not intended to be run unattended or to supply power to life safety support.

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 portable generator. Save these original instructions for future reference.

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 otherwise improve the generator and this documentation at any time without prior notice.

SIGNAL WORDS

 DANGER	 WARNING	 CAUTION	NOTICE
Indicates a hazard which, if not avoided, will result in death or serious injury.	Indicates a hazard which, if not avoided, could result in death or serious injury.	Indicates a hazard which, if not avoided, could result in minor or moderate injury.	Indicates information considered Important, but not hazard-related.



Safety Alert Symbol- Indicates a potential personal injury hazard.



Operator's Manual- Failure to follow warnings, instructions and operator's manual could result in death or serious injury.



Toxic Fumes- Engine exhaust contains carbon monoxide, a poisonous gas that will kill you in minutes. You cannot smell it or see it.



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



Fire- Fuel and its vapors are extremely flammable which could cause burns or fire resulting in death or serious injury. Engine exhaust could cause fire resulting in death or serious injury.



Hot Surface- Muffler could cause burns resulting in serious injury.

INTRODUCTION



WARNING! This product can expose you to chemicals including LPG engine exhaust, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

This outdoor generator can be used to power outdoor items using extension cords.

NOTICE If you have questions about intended use, contact FIRMAN customer service. This portable generator is designed to be used only with FIRMAN authorized parts.

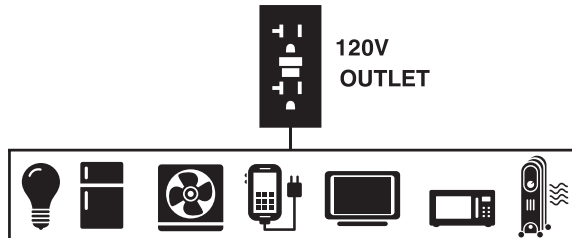
System Ground

The generator neutral is floating, which means that the AC stator winding is isolated from the grounding fastener and the AC receptacle ground pins. On a floating neutral generator the AC receptacle ground pins are not functional. Electrical devices, such as a ground fault circuit interrupter (GFCI), requiring a functioning AC receptacle ground pin will not operate.

Compliance Requirements

There may be Federal or State regulations, local codes, or ordinances that apply to the intended use of the generator. Consult a qualified electrician, electrical inspector, or the local agency having jurisdiction. This generator is not intended to be used at a construction site or similar activity as defined by NFPA 70-2020 (NEC) section 590.6.

To Restore Power Using Extension Cords



1. Only use grounded cords marked for outdoor use rated for your loads.

 To provide power using extension cords	
Total Amperage	Minimum Gauge, Outdoor Rated
	Up to 50 FT (15m)
Up to 13A	16
Up to 15A	14
Up to 20A	12
Up to 30A	10

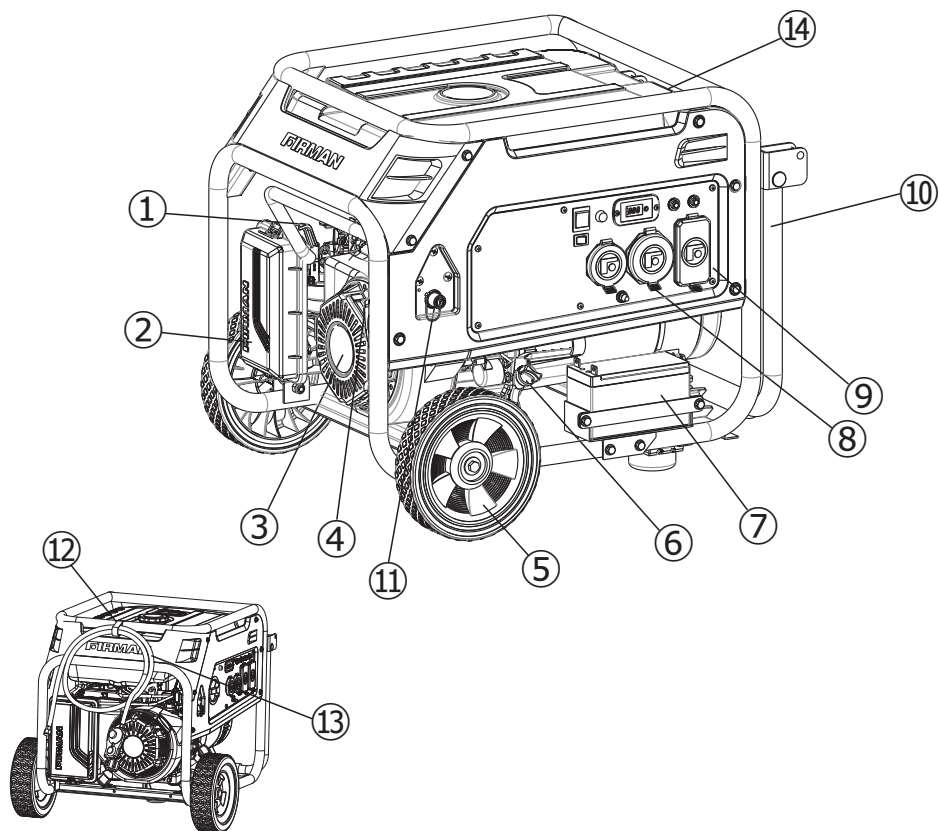
2. Follow cord safety instructions.
3. Install carbon monoxide alarm(s).
4. When operating portable generator with extension cords, make sure portable generator is located in an open, outdoor area, at least 20 ft. (6 m) from occupied spaces with exhaust pointed away.
5. Extension cords running directly into your home, powering indoor items IS NOT RECOMMENDED.



DANGER! Engine exhaust contains carbon monoxide, a poisonous gas that will 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.

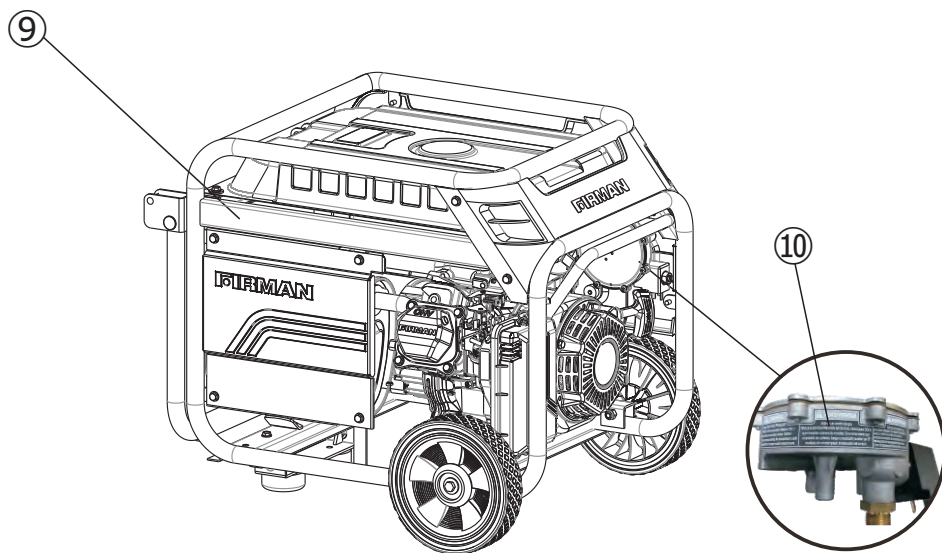
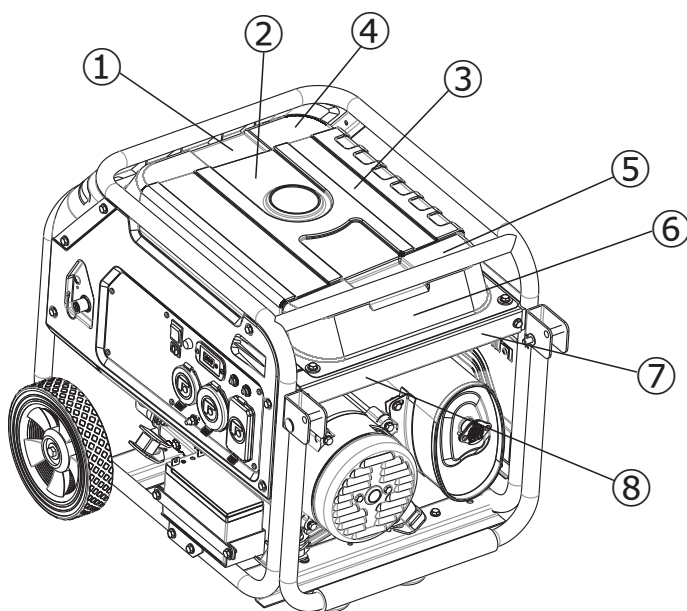
- Extension cords running directly into the home increase your risk of carbon monoxide poisoning through any openings.
- If an extension cord running directly into your home is used to power indoor items, the operator recognizes that this increases the risk of CO poisoning to people inside the home and assumes that risk.

FEATURES AND CONTROLS



- | | |
|--|--------------------------------------|
| 1- Choke Lever(behind air filter box) | 8- Outlet Cover |
| 2- Air Filter | 9- Control Panel |
| 3- 208cc FIRMAR OHV Engine | 10- Handle |
| 4- Recoil Starter | 11- LPG Hose Connector(Inlet) |
| 5- 8.0" Flat Free Wheel | 12- Hose Holder |
| 6- Oil Filler Cap | 13- LPG Hose with Regulator |
| 7- Battery | 14- Data Decal/Serial Number |

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



FEATURES AND CONTROLS

1

⚠️ AVERTISSEMENT

Le non-respect des avertissements, des instructions et du manuel de l'utilisateur peut entraîner la mort ou des blessures graves.

La génératrice pourrait provoquer un choc électrique.
• Ne faites pas fonctionner à l'intérieur pour éviter les conditions humides. • Ne faites pas fonctionner sous la pluie ou par temps pluvieux.

Les gaz d'échappement chauds peuvent provoquer des incendies. Gardez un dégagement d'au moins 5 pi (1,5 m) de tout combustible ou structure, y compris le plafond.

2

⚠️ WARNING

Failure to follow warnings, instructions and operator's manual could result in death or serious injury.

Generator could cause electrical shock. •Do not run indoors to avoid wet conditions. •Do not run in rain or wet weather.

Hot exhaust gases could cause fires. Keep at least 5ft. (1.5m) clearance from any combustibles or structures, including overhead.

⚠️ ADVERTENCIA

El incumplimiento de las advertencias, las instrucciones y el manual del operador podría provocar la muerte o lesiones graves.

El generador podría producir una descarga eléctrica. •No utilice en interiores para evitar condiciones de humedad. •No utilice en la lluvia o en condiciones de humedad.

Los gases calientes de salida podrían causar incendios. Manténgase a una distancia mínima de 1,5m de cualquier combustible o estructura, incluyendo lugares elevados.

3

⚠️ DANGER	⚠️ PELIGRO	⚠️ DANGER
Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.	El uso de un generador en interiores PUEDE MATAR A UNA PERSONA EN CUESTIÓN DE MINUTOS. Los gases de escape del generador pueden contener monóxido de carbono. Este es un gas tóxico que no se ve ni se huele.	L'utilisation d'un générateur à l'intérieur présente un danger. IL PEUT VOUS TUER EN QUELQUES MINUTES. L'échappement contient du monoxyde de carbone. Ce gaz est un poison invisible et insaisissable.
NEVER use inside a home or garage, EVEN IF doors and windows are open.	No utilice NUNCA el generador en el interior de su hogar ni en un garaje, NI SIQUIERA con las puertas y ventanas abiertas.	NE JAMAIS utiliser dans un garage ou à l'intérieur, MÊME avec les portes et les fenêtres ouvertes.
Only use OUTSIDE and far away from windows, doors, and vents.	Utilice sólo AL AIRE LIBRE y lejos de ventanas, puertas y orificios de ventilación.	A n'utiliser qu'à l'EXTÉRIEUR et à distance de toutes fenêtres, portes et ouvertures.

4

5

Point engine exhaust away from all occupied structures.
Apunte el escape del motor lejos de todas las estructuras ocupadas.
Diriger l'échappement du moteur loin de toutes les structures occupées.

6

FOR RESIDENTS OF CALIFORNIA	PARA LOS RESIDENTES DE CALIFORNIA	POUR LES RÉSIDENTS DE LA CALIFORNIE
⚠️ WARNING: This product and the engine exhaust from this product can expose you to chemicals including CO, which are known to the State of California to cause cancer or cause birth defects and other reproductive harm. For more information, go to www.P65Warnings.ca.gov .	⚠️ ADVERTENCIA: Este producto y el escape del motor de este producto pueden exponerlo a productos químicos, incluido CO, que en el estado de California son conocidos por causar cáncer o causar defectos de nacimiento u otros daños reproductivos. Para obtener más información, vaya a www.P65Warnings.ca.gov .	⚠️ AVERTISSEMENT: Ce produit et l'échappement du moteur de ce produit peuvent vous exposer à des produits chimiques, y compris le CO, qui sont connus par l'État de Californie pour causer le cancer ou causer des malformations congénitales et autres problèmes de reproduction. Pour plus d'informations, visitez www.P65Warnings.ca.gov .

7

	⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
	Liquid Petroleum gas (LPG) is extremely flammable which could cause burns or fire resulting in death or serious injury. If you smell gas, close tank valve and call qualified plumber. Do not place LPG source in the path of muffler outlet.	El gas licuado de petróleo (GLP) es extremadamente inflamable. lo que puede causar quemaduras o incendios que pueden causar la muerte o lesiones graves. Si huele a gas, cierre la válvula del tanque y llame a un plomero calificado. No coloque la fuente de GLP en la ruta de salida del silenciador.	Le gaz de pétrole liquéfié (GPL) est extrêmement inflammable, ce qui pourrait provoquer des brûlures ou un incendie entraînant la mort ou des blessures graves. Si vous sentez une odeur de gaz, fermez le robinet du réservoir et appelez un plombier qualifié. Ne placez pas de source de GPL sur le chemin de la sortie du silencieux.

8

NOTICE	AVISO	AVIS
To prevent engine damage the spark arrester should be cleaned every 100 hours. See Operator's manual.	Para evitar daños al motor, el parachispas se debe limpiar cada 100 horas. Ver el manual del operador.	Pour éviter d'endommager le moteur, le pare-étincelles doit être nettoyé toutes les 100 heures. Voir le manuel d'utilisation.

9

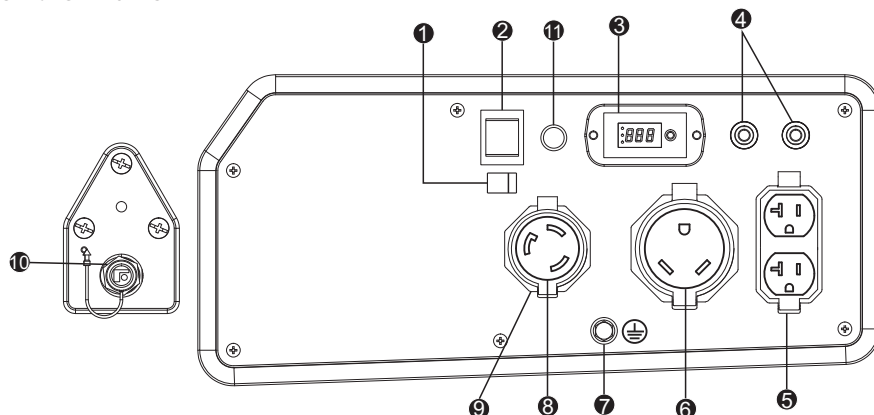
	⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
	Muffler could cause burns resulting in serious injury. •Do not touch hot parts •Avoid hot exhaust gases	El silenciador podría causar quemaduras que ocasionen lesiones graves. •No toque las partes calientes •Evite los gases calientes del escape	Le silencieux peut provoquer des brûlures et entraîner des blessures graves. •Ne touchez pas les pièces chaudes •Évitez les gaz d'échappement chauds

10

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
This is a NEGATIVE PRESSURE REGULATED gas control. Replace ONLY with the same model number. Carbon monoxide poisoning, fire or explosion could result from improper control replacement.	Este es un control de gasolina REGULADO POR PRESIÓN NEGATIVA . Reemplace SÓLO con el mismo número de modelo. Envenenamiento por monóxido de carbono, fuego o explosión pueden ser el resultado de un reemplazo inadecuado del control.	Ceci est un contrôle D'ESSENCE à pression négative. Un empoisonnement au monoxyde de carbone, un incendie ou une explosion PEUVENT résulter d'un remplacement INADEQUAT de la commande DE CONTRÔLE.

FEATURES AND CONTROLS

Control Panel



NOTICE Total power drawn from all receptacles must not exceed the Data Decal rating.

1. Battery Power Restore Switch

2. **Engine Start Switch** - 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.

3. **3-1 Data-Minder (Multi-Meter)** - Push the SELECT button to show the Voltage, Hertz and running hours.

4. **Circuit Breakers** - The receptacles are protected by AC circuit protectors. If the generator is overloaded or an external short circuit occurs, a circuit protector may trip. If tripping occurs, disconnect all electrical loads and determine the cause before attempting to continue using the generator. Reset any tripped circuit protectors.

If multiple receptacles are used at the same time, the total current must be kept with-in the portable generator Data Decal rating.

5. **120V, 20A Duplex** - NEMA 5-20R (Not GFCI protected)

A maximum of 20 Amps current may be drawn from this duplex receptacle.

6. **120V, 30A RV** - NEMA TT-30R

A maximum of 27.5 Amps current may be drawn from this receptacle.

7. **Ground Terminal** - Consult an electrician or authority having jurisdiction for local grounding requirements.

8. **120V, 30A Twist Lock** - NEMA L5-30R

A maximum of 27.5 Amps current may be drawn from this receptacle.

9. **Outlet Cover** - Protects the receptacles from dust and debris.

10. **LPG Hose Connector** (Inlet: 3/8" Flare Male) - Used to connect LPG hose to generator.

11. **Indicator Light** - When the engine switch is turned to the "RUN" position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN. See Indicator light-Battery Power Saving Mode section for more information.

1. Location

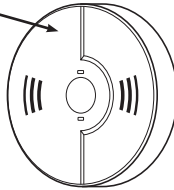


DANGER! Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You **CANNOT** smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

- Operate portable generator only outdoors, at least 20 ft. (6 m) from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
- 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 portable generator 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.
- If you start to feel sick, dizzy, weak or your home's carbon monoxide alarm sounds, get to fresh air right away. Call emergency services. You may have carbon monoxide poisoning.

Carbon Monoxide Alarm(s)

Install carbon monoxide alarms inside your home. Without working carbon monoxide alarms, you will not realize you are getting sick and dying from carbon monoxide poisoning.

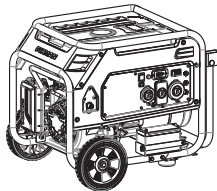


Prevent Carbon Monoxide (CO) Poisoning

Use outdoors at least 20 ft. (6 m) from any home.
Point exhaust away from all homes and occupied spaces.
Install CO alarms inside your home.



20 ft. (6 m) min.



To better educate yourself about all carbon monoxide risks, go to www.takeyourgeneratoroutside.com.

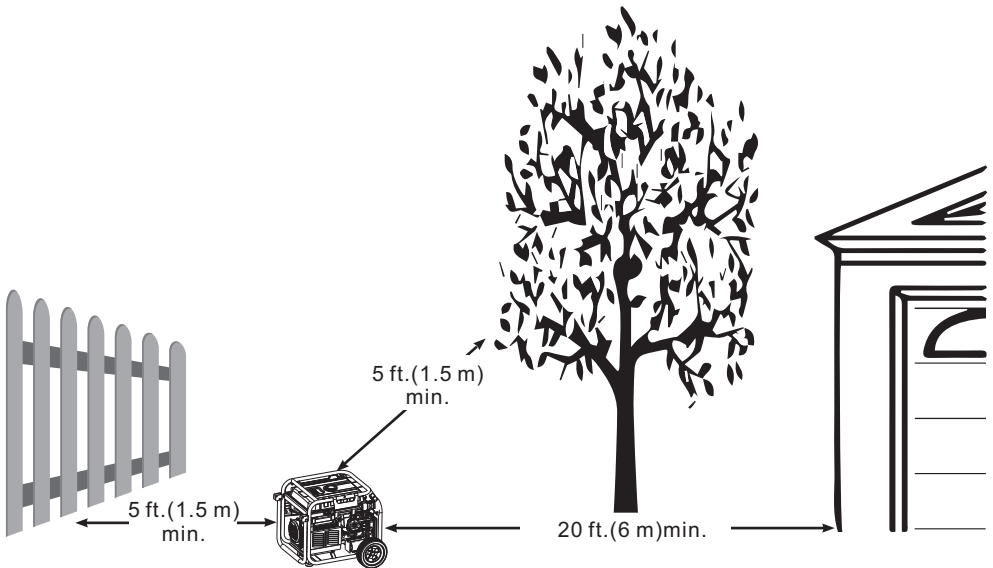
OPERATION

Reduce Risk of Fire



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

- Keep portable generator at least 5 ft. (1.5m) from any structure, trees or vegetation over 12 in. (30 cm) in height.
- Select an outdoor site that is dry and protected from the weather. Do not move portable generator indoors to protect it from the weather.
- Do not locate the portable generator under a deck or other similar structure that may confine heat and airflow.

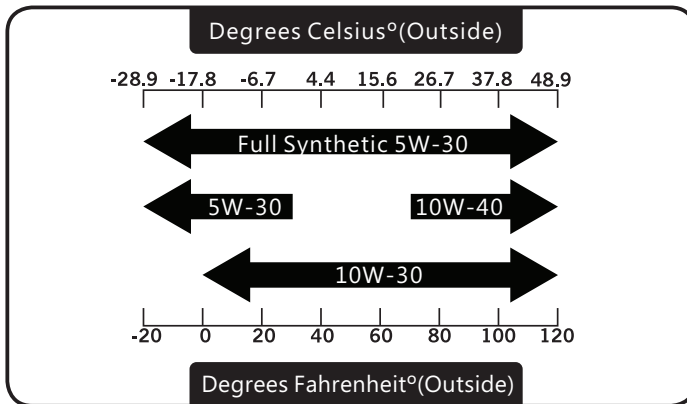


2, Oil and LPG

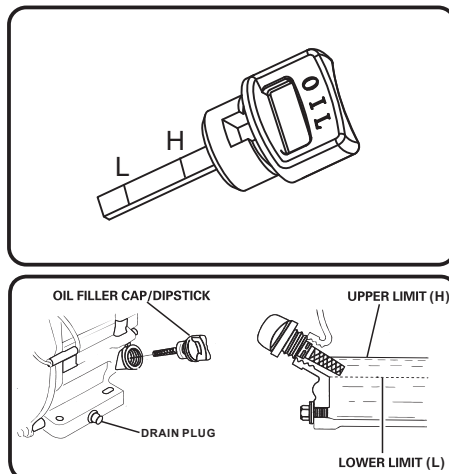
Add Engine Oil

We recommend using FIRMAN SAE 10W-30 API SJ oil for best performance. Other high-quality detergent oils (API SJ or higher) are acceptable. Do not use special additives. Ambient temperature determines the proper oil viscosity for the engine. Use the chart to select the proper oil for the outdoor temperature range expected.

NOTICE Do not attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage due to operation with no oil will void your warranty.

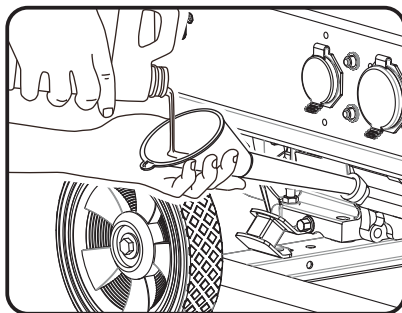


1. Place generator on a flat, level surface.
2. Clean area around oil fill and remove yellow oil fill cap/dipstick.
3. Wipe dipstick clean.



OPERATION

4. Using oil funnel, slowly pour contents of provided oil bottle into oil fill opening until oil reaches upper limit "H" mark on the dipstick. Be careful not to overfill. Overfilling could cause engine starting problems or engine damage.



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.

Low Oil Shutdown

The portable generator is equipped with a low oil shutdown. If the oil level drops below the minimum required level, a sensor will activate an internal switch stopping the engine. If the engine shuts off and the oil level is within specifications, check to see if generator is sitting at an angle. Place portable generator on an even surface to correct this. If engine fails to start, the oil level may not be high enough to deactivate the internal low oil level switch. Make sure the sump is completely full of oil to the upper limit (H). Do not operate engine until oil level issue is corrected. Contact FIRMAN customer service.

Operation at High Altitude

At altitudes over 5,000 feet (1524 meters), engine power and generator output will be reduced approximately 3.5% for every 1000 feet (305 m) of elevation above sea level. High altitude may cause hard starting, increased fuel consumption and sparkplug fouling.

Operation at High Ambient conditions

Your Firman Power Equipment product is designed and rated for continuous operation at ambient temperatures up to 104°F (40°C). The generator may be operated at temperatures ranging from 5°F (-15°C) to 122°F (50°C) for short periods. If the generator is exposed to temperatures outside this range during storage, the generator should be brought back within this range before operation. 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 ambient temperature, altitude, engine conditions etc.

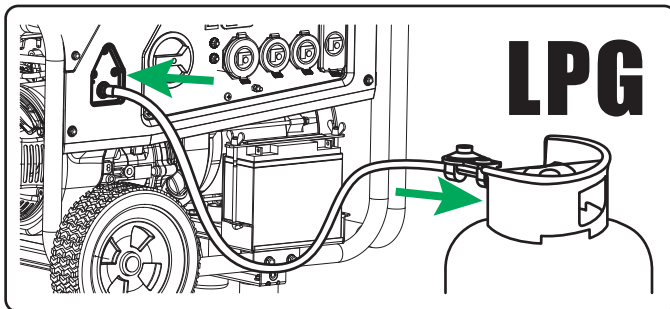
Connecting LPG Fuel



WARNING! Liquid Petroleum gas (LPG) is extremely flammable which could cause burns or fire resulting in death or serious injury.

- Do not place the LPG sources in the path of muffler outlet or near any ignition source.
- Keep a fire extinguisher near the generator all the time.
- Do not use or store LPG portable sources not in use near generator or in a building, garage or enclosed area.
- All LPG supply/ piping lines must be installed by a qualified plumber.
- If you smell gas, close off all gas sources and contact a qualified plumber to inspect and repair the LPG system.
- Prior to each days first use spray a soapy water solution on LPG fuel connections to check for leaks.
- Never use a LPG cylinder or LPG connector hose that appears to be damaged.
- Do not connect or disconnect the LPG source in an enclosed area.
- LPG is heavier than air and can accumulate in confined / low spaces if there is a leak.

NOTICE If a fuel supply connection is necessary it must be installed in accordance with all local codes or regulations, or in the absence of local codes or regulations, in accordance with the National Fuel Gas Code (NFPA 54/ANSI Z223.1) and CSA B149.1 (Natural Gas and Propane Installation Code), as applicable. If possible the fuel supply connection should be close to the outdoor operating location, this will reduce the cost of the flexible fuel run. An approved flexible fuel line must be installed between the generator LPG Hose Connector (Inlet) and the fuel supply connection. In no case should this information be interpreted to conflict with any local, state, or national code. If in doubt, always follow local codes.



- Always keep the LPG cylinder in an upright position.
- Use only DOT LPG cylinders in vapor service with type 1, right hand ACME threads. Verify the re-qualification date on the cylinder has not expired.
- All new cylinders must be purged of air and moisture prior to filling. The purging process should be done by your propane gas supplier.

OPERATION

Attach the LPG regulator hose assembly (included) to the LPG hose connector (inlet) on the control panel of the generator. Tighten the nut with a 19 mm or adjustable wrench. Remove the safety plug or cap from the LPG cylinder valve. Attach the LPG regulator to the cylinder valve. Do not use a wrench to tighten LPG cylinder nut. Tighten the nut by hand clockwise to a positive stop. Using a wrench may damage LPG cylinder components.

Indicator light - Battery Power Saving Mode

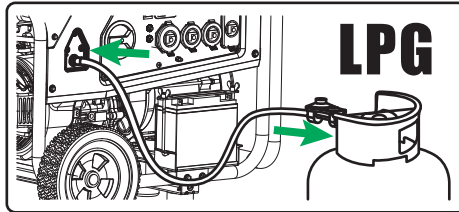
This generator is equipped with an electronic module which consumes battery power. When the engine switch is turned to the "RUN" position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN. If portable generator is not started during this 4-minute period the portable generator will switch to Battery Power Saving Mode to conserve battery life.

NOTICE Your portable generator is equipped with an internal battery charger that will properly charge the battery only when the engine is running.

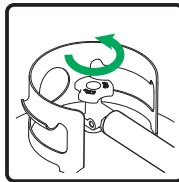
The generator cannot be started in Battery Power Saving Mode. Turn engine switch to the off position and back to the RUN position to reset the RED indicator 4-minute electronic module.

3.Starting the Generator

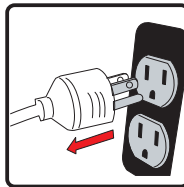
1. Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment. Ensure spark plug, muffler, fuel cap, and air cleaner are all in place.
2. Move portable generator outdoors to safe operating location at least 20 ft.(6 m) from any occupied spaces.
3. Connect the LPG hose with regulator to both LPG cylinder and portable generator LPG Hose Connector (inlet).



4. Fully open the LPG cylinder knob.



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



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



OPERATION

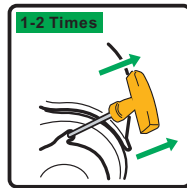
7. Flip the battery power restore switch to the "I" position for few seconds and then release.



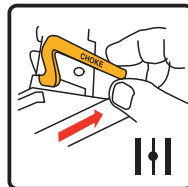
8. Move choke lever located on engine to "START" position. (For electric start move to step (12))



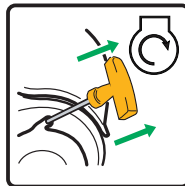
9. For recoil start only - PULL-TO-PRIME Pull the starter cord 1-2 times. Pull slowly until resistance is felt and then pull rapidly.



10. For recoil start only - Move the choke lever to the "RUN" position.



11. For recoil start only - PULL-TO-RUN Pull the starter cord slowly until resistance is felt and pull rapidly to run the portable generator.

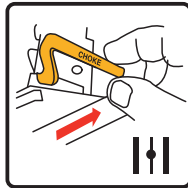


If the engine fails to start in 1-2 pulls with choke in the RUN position, move choke lever to START position and repeat the PULL-TO-PRIME step (9).

12. For electric start only - Flip the engine switch to the START (II) position for a few seconds and then release.



13. For electric start only - Move the choke lever to the RUN position.

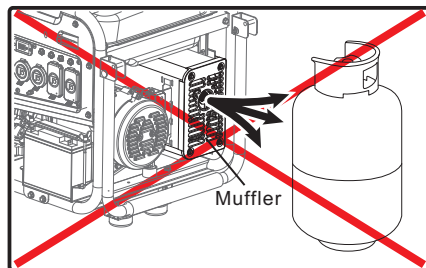


14. Allow portable generator to run at no load for a few minutes to stabilize before plugging in any electrical devices.

NOTICE If engine starts but fails to run, or if portable generator shuts down during operation, check oil level. See **Low Oil Shutdown** section for more information.

NOTICE Observing frost on LPG cylinder and regulator is common during operation and normally is not an indication of a problem. In unusual situations this frost may eventually restrict the flow of LPG gas to the generator resulting in deteriorating performance. In these rare situations it can be helpful to:

- Exchanging fuel cylinders to allow the first cylinder 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 air flowing over the engine. Do not place the LPG cylinder in the path of the muffler exhaust outlet.



- The LPG cylinder and components can be temporarily warmed by pouring warm water over them.

OPERATION

4. Connecting Electrical Loads

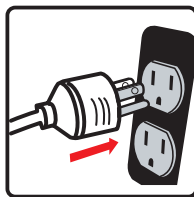
This portable generator has been pretested and adjusted to handle its full capacity. The voltage is regulated using an automatic voltage regulator (AVR) . Readjusting the AVR will void warranty.



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

- Damaged or overloaded extension cords could overheat, arc, and burn resulting death or serious injury.
- Use a ground fault circuit interrupter (GFCI) in any damp or highly conductive area, such as metal decking.
- 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 run indoors to avoid wet conditions.
- Do not handle generator or electrical cords while standing in water, while barefoot, or while hands or feet are wet.

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



Surge Protection

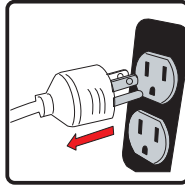
There is a remote chance that voltage fluctuations may impair the proper functioning of some sensitive electronic equipment. Electronic devices, including computers and many programmable appliances may use components that are designed to operate within a narrow voltage range and may be affected by the portable generator's momentary voltage fluctuations. While there is no way to prevent all voltage fluctuations, you can take steps to protect your sensitive electronic equipment. Install a plug-in surge suppressor on the receptacles feeding your sensitive equipment. Surge suppressors come in single or multi-outlet styles. They are designed to protect against short duration voltage fluctuations.

5. Stopping the generator

1. Turn off and remove all electrical loads.

Never stop the generator with electrical devices plugged in and turned on.

Never stop the engine by moving the choke to the start position.

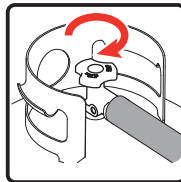


Let the generator run at no-load for one minute to stabilize internal temperatures of the engine and generator.

2. Flip the engine switch to the "OFF"(O) position.



3. Fully close the LPG cylinder knob .



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

NOTICE Disconnect the LPG cylinder from the generator during transportation.

Maintenance - Storage

MAINTENANCE SCHEDULE

ITEM	NOTES	Daily(Before operation)	Initial 25 hours	Every 50 hours	Every 100 hours (or annual)	Every 250 hours
Spark Plug	Check condition. Adjust gap and clean. Replace if necessary.				✓	
Engine Oil	Check oil level.	✓				
	Replace.		✓		✓	
Air Filter	Clean, replace if necessary.			✓		
LPG Regulator /Hose Assy.	Check for damage and leaks. Replace if necessary.	✓				
Exhaust System	Check for leakage. Retighten or replace gasket if necessary.	✓				
	Check spark arrester screen. Clean/Replace if necessary.				✓	
Engine	Check adjust valve clearance. *					✓
	Clean combustion chamber. *					✓
Fittings/ Fasteners	Check. Replace if necessary.				✓	

* To be performed by knowledgeable/experienced owner or by authorized service center.

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 maintenance schedule 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 at peak performance and last longer.

When Transporting Generator

Disconnect LPG fuel hose and securely stow away.

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.)

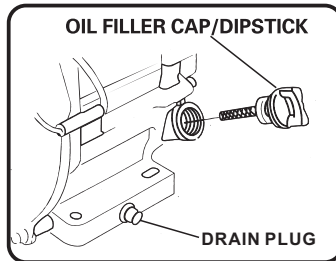
If you are using your generator under extremely dirty or dusty conditions, or in extremely hot weather change the oil more often.

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.

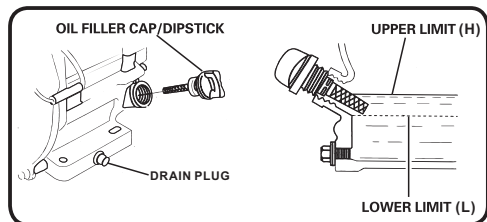
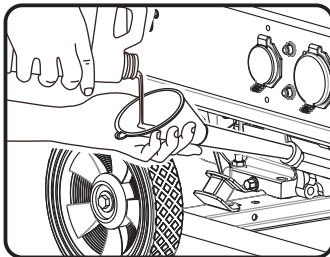


KEEP OUT OF REACH OF CHILDREN. DON'T POLLUTE. CONSERVE RESOURCES. RETURN USED OIL TO COLLECTION CENTERS.

(a) On a level surface drain oil into a suitable container by removing the drain plug and the oil filler cap while the engine is warm.



(b) Reinstall the drain plug and fill the engine with oil until it reaches the HIGH(H) level on the oil filler dipstick.

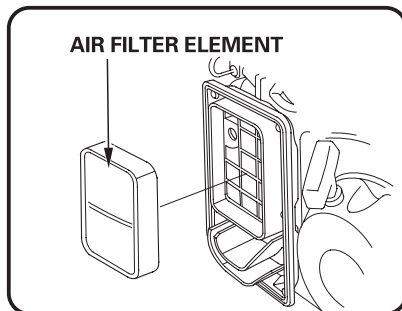
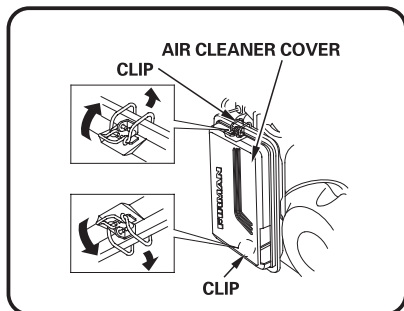


NOTICE We recommend using FIRMAN SAE 10W-30 API SJ oil for best performance. Other high-quality detergent oils (API SJ or higher) are acceptable. See *Oil and LPG*

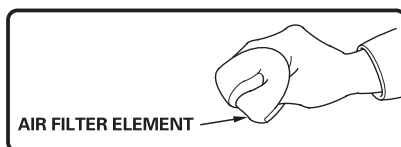
Maintenance - Storage

Air Filter Maintenance

(a) Carefully remove foam air filter element and wash it with liquid detergent and water only. Squeeze dry in a clean cloth.



(b) Saturate foam air filter element with clean engine oil and squeeze in a clean cloth to remove excess oil.



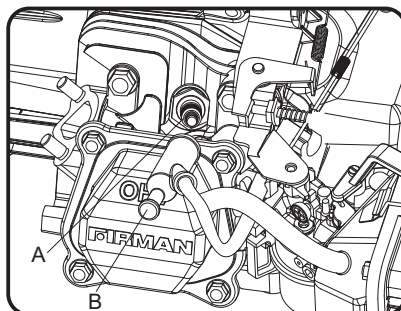
(c) Reinstall clean or new air filter element.

Spark Plug Maintenance

Changing the spark plug will help your engine start easier and run at peak performance.

(a) Remove the spark plug boot.

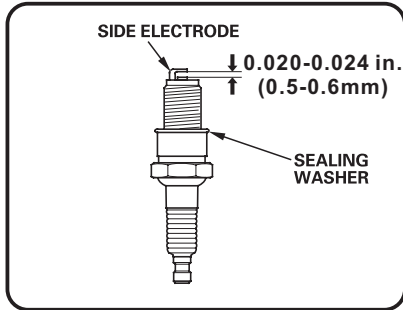
(b) Remove spark plug using provided wrench.



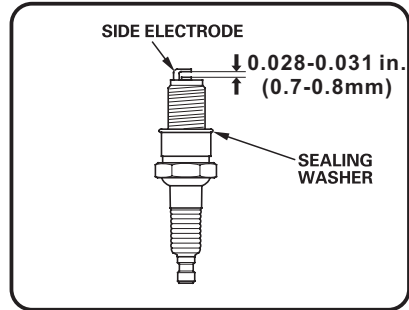
A- Spark plug

B- Spark plug boot

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



SPARK PLUG: FIRMAN P/N 330723001



SPARK PLUG: CHAMPION N9YC

SPARK PLUG: FIRMAN P/N 330723001 or CHAMPION N9YC

Maintenance Valve Clearance

Intake: 0.004 - 0.006 in. (0.10 - 0.15 mm)

Exhaust: 0.004 - 0.006 in. (0.10 - 0.15 mm)

Muffler and Spark Arrester



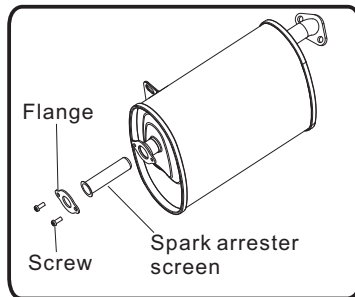
WARNING! Contact with muffler area could cause burns resulting in serious injury.

- Do not touch hot parts.
- 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, reference Federal Regulation 36 CFR Part 261.52.

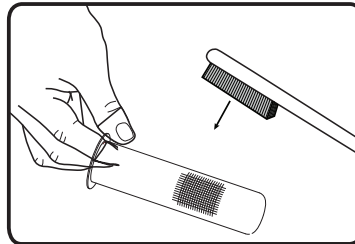
Maintenance - Storage

Inspect Muffler and Spark Arrester

1. Inspect the muffler for cracks, corrosion, or other damage.
2. Remove the screws securing the spark arrester in place and then remove it from the muffler.



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



3. Replace the spark arrester if it is damaged. If replacement parts are required, make sure to use only FIRMEN original equipment replacement parts.
4. Position the spark arrester in the muffler and attach with the screws.

NOTICE Failure to clean or replace spark arrester may result in decreased engine performance.

GENERATOR MAINTENANCE

Run the generator at least 30 minutes every month.

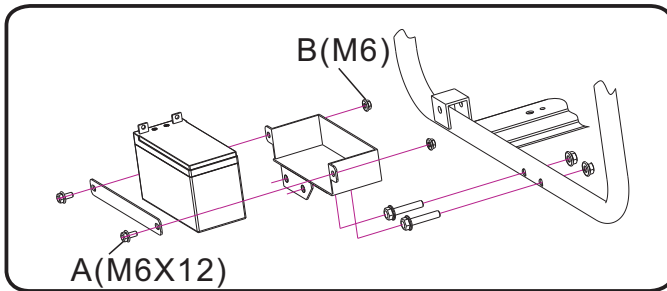
Make certain that the portable generator is kept clean and dry.

Do not expose the unit to excessive dust, dirt, moisture or corrosive vapors.

Do not insert any objects through cooling slots.

Before each use inspect underneath the generator for signs of oil or fuel. Clean any accumulated debris. Keep area around muffler free from any debris. Use a soft bristle brush to remove dirt or caked on oil. Use a damp cloth to clean all exterior surfaces.

Battery Replacement



1. Remove the spark plug boot from spark plug.
2. Remove the nut and bolt from the negative(-) post first, then the positive(+) post.
3. Loosen and remove the flange bolts (A) on the battery holding bracket.
4. Remove the battery and recycle.
5. Install the new battery with the following specification:
12V sealed lead acid 7.5AH
LXWXH:5.95X2.55X3.82inch (151X65X97mm)
6. Connect the red positive (+) battery cable to the battery first.
7. Connect the black negative (-) battery cable to the battery second.
8. Cover the posts with boots provided.
9. Install the spark plug boot onto spark plug.

Battery Charging

The battery powers the starter motor and control module. This portable generator is equipped with an automatic battery charging circuit. The battery will receive charging voltage only when the engine is running. The battery will maintain a proper charge if the portable generator 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. 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.

Long Term Storage

When the generator set is being stored for more than one month, follow these instructions to avoid engine problems:



WARNING! Fuel and its vapors are extremely flammable which could cause burns or fire resulting in death or serious injury.
Do not store fuel near any ignition sources.

1. Run the generator at least 30 minutes every month.
2. Turn engine switch to "OFF" position.
3. Fully close the LPG cylinder knob if it is open and disconnect LPG cylinder from the generator.
4. Allow the unit to cool entirely before cleaning and storage.
5. Change oil with recommended grade oil.
6. 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.
7. Pull recoil slowly until resistance is felt. This will close the valves so moisture cannot enter engine cylinder. Gently release recoil starter.
8. Cover the unit and store in a clean, dry place out of direct sunlight. **NEVER USE WATER TO CLEAN GENERATOR.**

Troubleshooting - Specifications

Problem	Cause	Correction
Engine is running, but no AC output is available.	1. Circuit breaker is open. 2. Fault in generator. 3. Poor connection or defective cord set. 4. Connected device is bad.	1. Reset circuit breaker. 2. Contact authorized service facility. 3. Check and repair. 4. Connect another device that is in good condition.
Engine runs good at no-load but "bogs down" when loads are connected.	1. Short circuit in a connected load 2. Engine speed is too slow. 3. Generator is overloaded. 4. Shorted generator circuit.	1. Disconnect shorted electrical load. 2. Contact authorized service facility. 3. See Don't Overload Generator 4. Contact authorized service facility.
Engine will not start; starts and runs rough or shuts down when running.	1. The indicator light is OFF or flashing red. 2. Low oil level. 3. Dirty air cleaner. 4. Spark plug wire not connected to spark plug. 5. Bad spark plug. 6. Starting battery may have insufficient charge. 7. Out of LPG. 8. LPG cylinder knob is not open. 9. Out of battery Power.	1. Must have solid red indicator light to be able to start the engine. 2. Fill crankcase to proper level or place generator on level surface. 3. Clean or replace air cleaner. 4. Connect wire to spark plug. 5. Replace spark plug. 6. Check battery output and charge battery as necessary. 7. Replace LPG tank. 8. Fully open LPG cylinder knob. 9. Charge or replace battery.
Engine lacks power.	1. Load is too high. 2. Dirty air filter. 3. Clogged spark arrester.	1. Don't Overload Generator 2. Replace air filter. 3. Clean or replace spark arrester.
Engine shuts down when running.	1. Out of LPG. 2. Dirty air cleaner. 3. Low oil level.	1. Replace LPG cylinder. 2. Clean or replace air cleaner. 3. Fill crankcase to proper level or place generator on level surface.

For all other issues, contact authorized dealer or FIRMAN customer service.

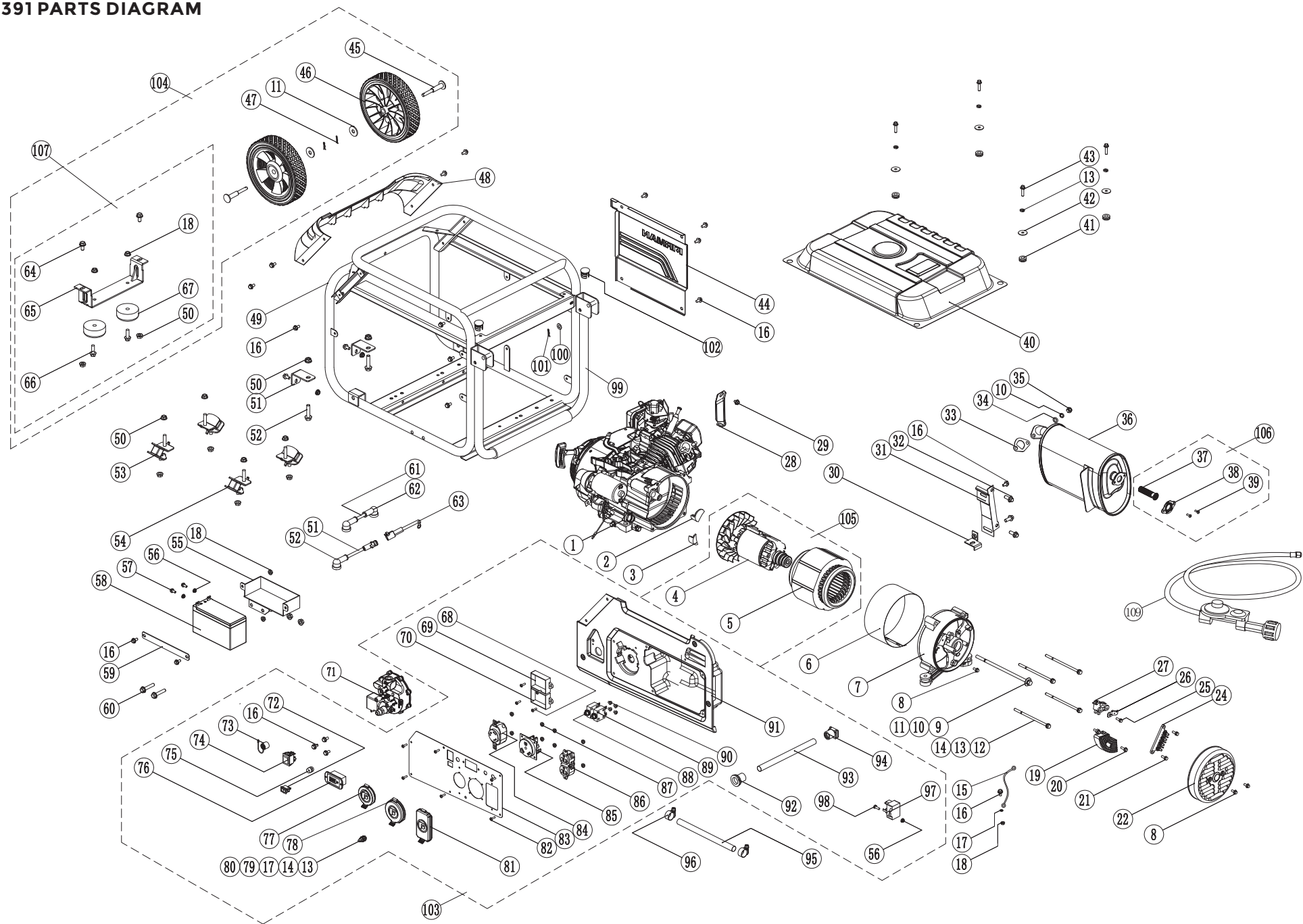
Troubleshooting - Specifications

SPECIFICATIONS

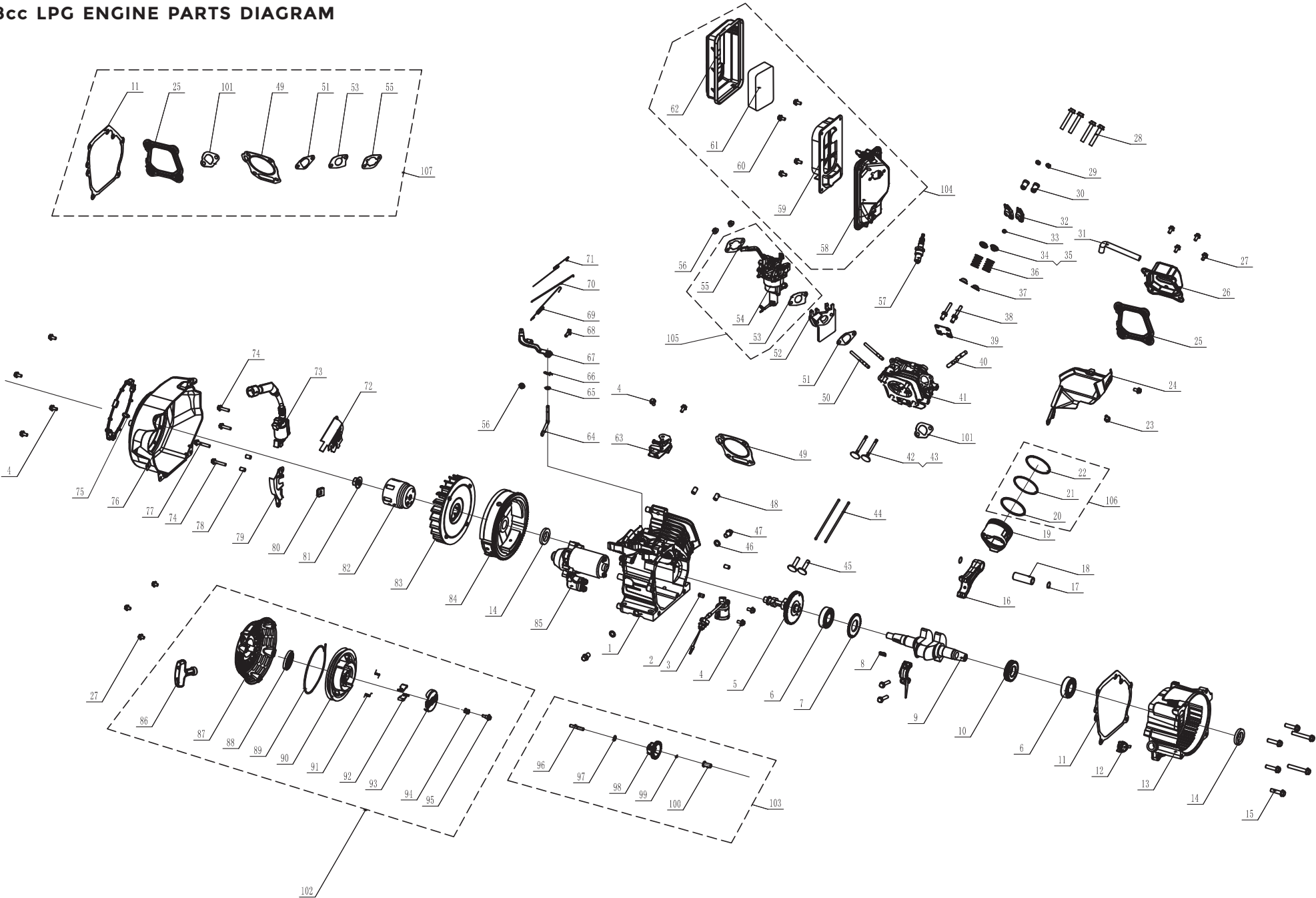
Model	L03391
Starting Watts	4100W
Running Watts*	3300W
Rated AC Voltage	120V
Rated Frequency	60Hz
Phase	Single
Voltage Regulator	AVR
Power Factor	1
Alternator Type	Brushed
Engine	FIRMAN
Engine Type	Single Cylinder, 4-Stroke OHV Air Cooled
Displacement	208cc
Low Oil Shutdown	Yes
Ignition System	Breakless Ignition Type, Flywheel Magneto
Starting System	Recoil/Electric Start
Fuel	LPG
Lubricating Oil Capacity	20.3 oz(0.6L)
Air Cleaner	Polyurethane Type
P.T.O. Shaft Rotation	Counter Clockwise (Facing P.T.O.)
Oil Type	See "Add Engine Oil" Section
AC Grounding System	Neutral Floating

*Generator certified in accordance with CSA (Canadian Standards Association) standard C22.2 No. 100-14, Motors and Generators.

PARTS DIAGRAM AND PART LIST
L03391 PARTS DIAGRAM



208cc LPG ENGINE PARTS DIAGRAM



Parts Diagrams - Parts Lists - Wiring Diagram

L03391 Portable Generator

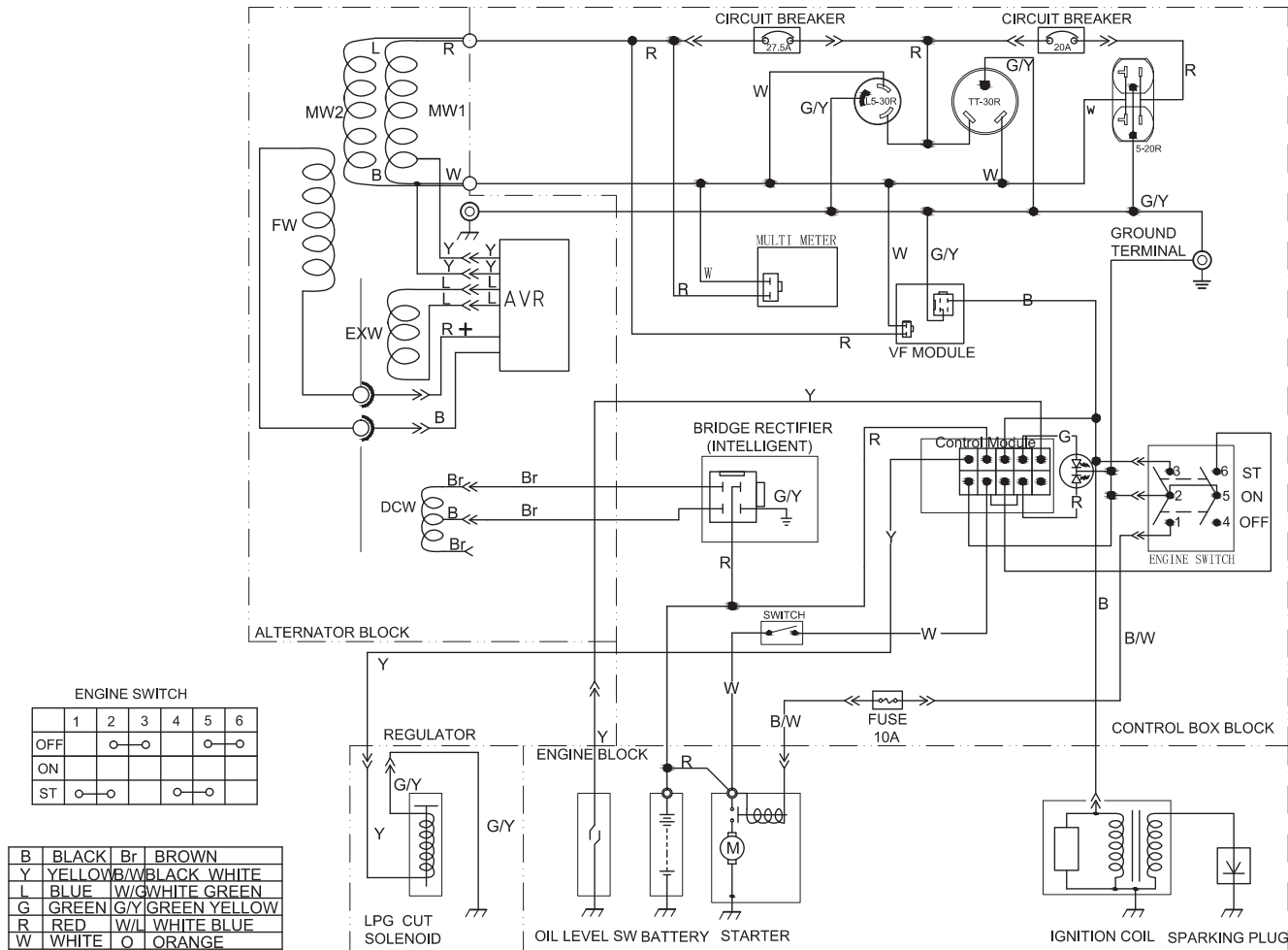
NO.	Part Number	Description	Qty.	NO.	Part Number	Description	Qty.
1	333463001	FIRMAN 208cc LPG Engine	1	60	336713621	Flange Bolt M8×40	2
2	336713501	Rubber Cap 2	1	61	336713610	Red Cable	1
3	336713502	Rubber Cap1	1	62	336713841	Red Boot	1
4	336713604	Rotor Assy	1	63	336713693	Battery Cable(Female 180mm)	1
5	336713605	Stator Assy	1	64	336713559	Flange Bolt M8×16	2
6	336713801	Stator Cover	1	65	336713560	Support Leg	1
7	336713506	Generator End Cover	1	66	336713561	Flange Bolt M6×25	2
8	336713507	Flange Bolt M5×12	3	67	336713557	Rubber, Support	2
9	336713508	Flange Bolt M8×252	1	68	336713565	Screw M5×14	4
10	336713509	Lock Washer Ø8	3	69	333453001	Control Module 1	1
11	336713510	Flat Washer Ø8	3	70	336713818	Charger	1
12	336713511	Flange Bolt M6×179	4	71	336713823	Main Regulator Assy.	1
13	336713512	Lock Washer Ø6	10	72	329713616	Battery Power Restore Switch	1
14	336713513	Flat Washer Ø6	6	73	336713826	LPG Inlet Cover	1
15	336713514	Ground Wire	1	74	329713600	Switch	1
16	336713515	Flange Bolt M6×12	22	75	336713828	Indicator Light	1
17	336713516	External Star Washer Ø6	2	76	336713829	Multi Meter	1
18	336713517	Nut M6	6	77	336713573	Outlet Cover L5-30R	1
19	336713518	AVR	1	78	336713574	Outlet Cover TT-30R	1
20	336713519	Flange Bolt M5×16	1	79	357713542	Flange Bolt M6×22	1
21	336713520	Bolt & washer Assemblies	2	80	357713543	Nut M6	2
22	336713521	Generator End Cover Cap	1	81	336713575	Outlet Cover 5-20R	1
24	336713523	Terminal Block	1	82	330713582	Screw&washer Assy M4×14	6
25	336713524	Bolt & washer Assemblies	2	83	333713003	Control Panel	1
26	336713525	Carbon Brush Holder	1	84	336713832	Receptacle L5-30R	1
27	336713526	Carbon Brush Assembly	1	85	336713584	Receptacle TT-30R	1
28	336713527	Air Filter Bracket	1	86	336713588	Receptacle 5-20R Duplex	1
29	336713528	Flange Bolt M6×8	4	87	336713568	Nut M4	8
30	336713529	Muffler Fixed Plate A (Small)	1	88	336713585	Circuit Breaker 20A	1
31	336713530	Muffler Fixed Plate B (Big)	1	89	336713586	Circuit Breaker 30A	1
32	336713531	Flange Bolt M8×20	3	90	336713569	Screw&washer Assy M4×8	4
33	336713532	Muffler Gasket	1	91	336713833	Control Box	1
34	336713533	Flat Washer Ø8	2	92	336713581	Grommet	1
35	336713534	Nut M8	2	93	336713582	Sleeve	1
36	336713535	Muffler Assembly	1	94	336713587	Grommet	1
37	336713536	Arrester, Spark	1	95	336713834	Liquefied Petroleum Gas Pipe	1
38	336713537	Holder, Spark Arrester	1	96	336713835	Clamp (ø8-ø14)×b8	1
39	336713538	Screw&washer Assy M5×14	2	97	336713643	VF Protection Module	1
40	333713001	Cover Assy.	1	98	330713502	Screw M5×20	1
41	336713542	Grommet, Fuel Tank	4	99	336713594	Pin, Handle	2
42	336713543	Washer Tank Buffer	4	100	336713590	Pin, Shaft	2
43	336713544	Flange Bolt M6×20	4	101	336713844	Pin, Shaft	2
44	336713808	Protector, Muff.	1	102	336713846	The Hard	2
45	336713554	Axle Comp	2	103	333453002	Control Panel Assy.	1
46	336713836	Wheel	2	104	336413514	Wheel Kit	1
47	336713590	Pin, Shaft	2	105	336413507	Rotor And Stator Set	1
48	336713810	Plastic Front Cover	1	106	336413503	Spark Arrestor Kit	1
49	336713811	Frame	1	107	336413509	Support Leg Assembly	1
50	336713558	Nut M8	12	108	336713691	Hose Holder	1
51	336713692	Battery Cable(male 120mm)	1	109	336713836	Regulator / Hose Assy.	1
52	336713842	Black Boot	1				
53	336713562	Isolator 1	2				
54	336713563	Isolator 2	2				
55	336713608	Battery Holder	1				
56	336713578	Nut M5	3				
57	357713569	Screw&washer Assy M5×10	2				
58	336713814	Battery	1				
59	336713609	Battery Pressing Plate	1				

Parts Diagrams - Parts Lists - Wiring Diagram

FIRMAN 208cc LPG Engine Parts List

NO.	Part Number	Description	Qty.	NO.	Part Number	Description	Qty.
1	336723500	Crankcase Comp.	1	59	336723558	Clapboard	1
2	336723501	Locating Pins	2	60	336723559	Mounting Bolt, Air Cleaner	4
3	336723502	Oil Level Sensor	1	61	336723560	Element, Air Cleaner	1
4	336723503	Flg. Bolt M6×12	8	62	336723561	Cover, Air Cleaner	1
5	336723504	Camschaft Comp	1	63	336723562	Control Assembly	1
6	336723505	Bearing	2	64	336723563	Shaft, Governor Arm	1
7	336723506	Gear, Crankshaft	1	65	336723564	Rocker Shim	1
8	336723507	Woodruff Key	1	66	336723565	Pin, Shaft	1
9	336723508	Crankshaft	1	67	336723566	Arm, Governor	1
10	336723509	Gear, Drive	1	68	336723567	Bolt, Governor Arm	1
11	336723510	Gskt., Crankcase Cover	1	69	336723568	Spring, Governor	1
12	336723511	Oil Dipstick Assy	1	70	336723569	Rod, Governor	1
13	336723512	Cover, Crankcase	1	71	336723570	Spring, Throttle Return	1
14	336723513	Oil Seal	2	72	336723572	Wind Deflectors	1
15	336723514	Flange Bolt M8×32	6	73	336723573	Ignition Coil	1
16	336723515	Conn, Rod Comp	1	74	336723574	Flange Bolt M6×25	3
17	336723516	Piston Pin Retainer Ring	2	75	336723575	Protect Circle	1
18	336723517	Wrist Pin	1	76	336723608	Fan Cover Comp	1
19	336723518	Piston	1	77	336723609	Flange Bolt M6×29	1
20	336723519	Ring, Oil	1	78	336723610	Locating Pins	2
21	336723520	Ring, Second Piston	1	79	336723620	Air Guide, Right Side	1
22	336723521	Ring, First Piston	1	80	336723612	Sheath, Wire	1
23	336723522	Flange Bolt M6×8	2	81	336723580	Locknut	1
24	336723523	Air Guide Lower	1	82	336723581	Pulley, Starter	1
25	336723524	Gasket, Valve Cover	1	83	336723582	Cooling Fan	1
26	336723525	Valve Cover Assy	1	84	336723613	Flywheel Comp	1
27	336723526	Flange Bolt M6×15	7	85	336723614	Starter Motor Assembly	1
28	336723527	Flange Bolt M8×55	4	86	336723584	Grip, Starter	1
29	336723528	Locknut	2	87	336723585	Case Comp., Recoil Starter	1
30	336723529	Adjusting Nut, Valve	2	88	336723586	Spring, Starter Return	1
31	336723530	Breather Tube	1	89	336723587	Cord	1
32	336723531	Valve Rocker	2	90	336723588	Pulley, Recoil Starter	1
33	336723532	Rotator, Exhaust Valve	1	91	336723589	Spring, Patchet	2
34	336723533	Retainer, Intake Valve	1	92	336723590	Patchet, Starter	2
35	336723534	Retainer, Exhaust Valve	1	93	336723591	Pawl Guide	1
36	336723535	Spring, Valve	2	94	336723592	Clip Sprg., pawl Guide	1
37	336723536	Oil Seal, Valve	2	95	336723593	Screw, pawl Guide	1
38	336723537	Bolt, Rocker Arm	2	96	336723594	Gov., Gear Shaft	1
39	336723538	Guide Plate, Push Rod	1	97	336723595	Inner Washer, Gear	2
40	336723539	Exhaust Valves Stud Bolt	2	98	336723596	Gear, Governor	1
41	336723540	Cylinder Head	1	99	336723597	Clip, Governor Gear	1
42	336723541	Valve, Intake	1	100	336723598	Bushing, Governor Gear	1
43	336723542	Valve, Exhaust	1	101	336713532	Auspuffdichtung	1
44	336723543	Push Rod	2	102	336423500	Recoil Starter Set	1
45	336723544	Lifter, Valve	2	103	336423501	Governing Gear Set	1
46	336723545	Washer, Drain Bolt	2	104	336423509	Air Cleaner Set	1
47	336723546	Bolt, Drain Plug	2	105	336423510	Carburetor Set	1
48	336723547	Locating Pins	2	106	336423504	Piston Rings Set	1
49	336723548	Gasket, Cyl. Head	1	107	336423511	Gasket Set	1
50	336723549	Air Intake Stud Bolt	2				
51	336723550	Gskt., Insulator	1				
52	336723551	Insulator, Carburetor	1				
53	336723552	Gasket, Carburetor	1				
54	333713004	Carburetor	1				
55	336723554	Gasket, Air Cleaner	1				
56	336723555	Nut M6	3				
57	330723001	Spark Plug	1				
58	336723557	Elbow, Air Cleaner	1				

Parts Diagrams - Parts Lists - Wiring Diagram



Service - Warranty

FOR SERVICE INFORMATION CONTACT FIRMAN PRODUCT SERVICE DEPARTMENT AT 1-844-347-6261 or at www.firmanpowerequipment.com to obtain warranty service information or to order replacement parts or accessories.

HOW TO ORDER REPLACEMENT PARTS

Even quality-built equipment such as this electric generator may need occasional replacement parts to maintain it in good condition over the years. To order replacement parts, please give the following information:

- Model No. Rev. Level and Serial No. found on the Data Decal.
- Parts number or numbers as shown in the Parts List section.
- A brief description of the trouble with the generator.

FIRMAN Three (3) Year Limited Warranty

Warranty Qualifications

FIRMAN GENERATOR will register the warranty upon receipt of your Warranty Registration Card and a copy of your sales receipt from one of FIRMAN's retail locations as proof of purchase. Please submit your warranty registration and your proof of purchase within ten(10) days of the date of purchase.

Repair/Replacement Warranty

FIRMAN warrants to the original purchaser that the mechanical and electrical components will be free of defects in material and workmanship for a period of one(1) year(parts and labor) and three(3) years (parts and technical support) from the original date of purchase 90 days [parts and labor] and 180 days [parts] for commercial & industrial use. Transportation charges on product submitted for repair or replacement under this warranty are the sole responsibility of the purchaser . This warranty only applies to the original purchaser and is not transferable.

Do Not Return the Unit to the Place of Purchase

Contact the FIRMAN Service Center and FIRMAN will troubleshoot any issue via phone or e-mail. If the problem is not corrected by this method, FIRMAN will, at its option, authorize evaluation, repair or replacement of the defective part or component at a FIRMAN Service Center. FIRMAN will provide you with a case number for warranty service. Please keep it for future reference. Repairs or replacements without prior authorization, or at an unauthorized repair facility, will not be covered by this warranty.

Warranty Exclusions

This warranty does not cover the following repairs and equipment.

Normal Wear

Your product needs periodic parts and service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment as a whole.

Installation, Use and Maintenance

This warranty will not apply to parts and/or labor if your product is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond the generator's limits, modified, installed improperly or connected incorrectly to any electrical component. Normal maintenance is not covered by this warranty.

Other Exclusions

This warranty excludes:

- cosmetic defects such as paint, decals, etc.
- wear items
- accessory parts
- failures due to acts of God and other force majeure events beyond the manufacturer's control
- problems caused by parts that are not original FIRMAN parts
- units used for prime power in place of existing utility power where utility is present or in place of utility power where utility power service does not normally exist.

Limits of Implied Warranty and Consequential Damage

FIRMAN disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by reference to the purchase date of the original unit.

This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

Contact Information

You may contact FIRMAN at:

Address

FIRMAN Power Equipment Inc.

Attn: Customer Service

8716 W. Ludlow Dr. Suite #6

Peoria, AZ 85381

www.firmanpowerequipment.com

We are FIRMAN POWER - And we are here for you.

Service - Warranty

FIRMAN POWER EQUIPMENT INC. Emission Control System Warranty

CALIFORNIA AND FEDERAL EXHAUST AND EVAPORATIVE EMISSIONS CONTROL WARRANTY STATEMENT

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 emissions control systems warranty on your 2020-2021 or later Small Off-Road Engine ("SORE") and engine powered equipment. In California, new equipment that use small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. FIRMAN must warrant the emissions control systems on your SORE and engine powered equipment for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine or equipment leading to the failure of the emissions control system. Your emissions control system may include parts such as the carburetor or fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines (for liquid fuel and fuel vapors), fuel caps, valves, canisters, filters, clamps and other associated components. Also included may be hoses, belts, connectors, and other emission-related assemblies.

Where a warrantable condition exists, FIRMAN will repair your SORE and engine powered equipment at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

The exhaust and evaporative emissions control system on your small off-road engine and engine powered equipment is warranted for two years. If any emissions-related part on your small off-road engine and engine powered equipment is defective, the part will be repaired or replaced by FIRMAN.

OWNER'S WARRANTY RESPONSIBILITIES:

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

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

You are responsible for presenting your small off-road engine and engine powered equipment to a FIRMAN distribution center or service center as soon as the problem exists. The warranty repairs shall be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact FIRMAN at 1-844-347-6261.

FIRMAN Emission Control Defects Warranty Provisions

The warranty period begins on the date the engine/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.

PARTS COVERED BY WARRANTY

Listed below are the parts (if equipped) covered by the Federal and California Emission Control System Warranty.

- | | |
|--|---|
| 1. Ignition system including: <ul style="list-style-type: none">- Spark plug- Ignition coil | 4. Air induction system including: <ul style="list-style-type: none">- Intake pipe/manifold- Air cleaner |
| 2. Fuel metering system: <ul style="list-style-type: none">- Fuel regulator, carburetor and internal parts. | 5. Crankcase breather assembly including: <ul style="list-style-type: none">- Breather connection tube |
| 3. Catalytic muffler assembly including: <ul style="list-style-type: none">- Exhaust manifold- Catalytic converter- Muffler gasket- Pulse valve | |

Limitations

- This Emission Control System 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.

FIRMAN POWER EQUIPMENT INC.
www.firmanpowerequipment.com

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FOR YOUR CHANCE TO WIN FIRMAN SWAG



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