FIRMAN®

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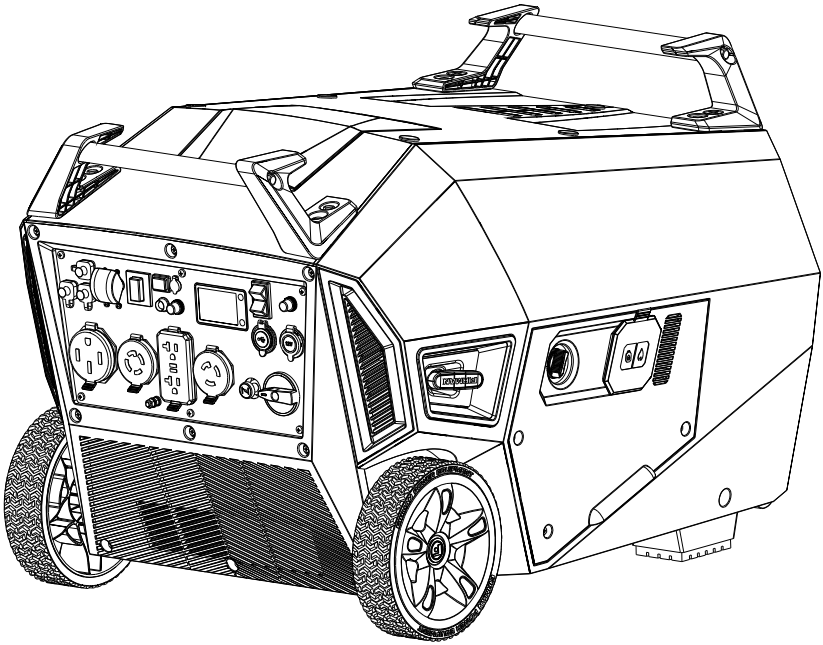
MODEL #WT12579

TRI-FUEL INVERTER GENERATOR

ATTACH YOUR RECEIPT



Serial Number _____

Purchase Date _____

IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY
Thank you for purchasing this **FIRMAN** product.
Questions, problems or missing parts?
Before returning, contact us on:
844-347-6261, 8 a.m. - 8 p.m., EST, Monday - Sunday or
at **www.firmanpowerequipment.com.**

399748302-00

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FCC DECLARATION

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information
FIRMAN WT12579 TRI-FUEL INVERTER GENERATOR

FCC/IC Compliance Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
1a. This device may not cause harmful interference.
1b. This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: The FIRMAN WT12579 inverter generator has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to equipment not expressly approved by FIRMAN could void the user's authority to operate the equipment.

INTRODUCTION

Thank you for purchasing a FIRMAN generator. You have selected a high-quality, precision engine generator set designed and tested to give you years of satisfactory service. This generator is Tri-Fuel and capable of running on gasoline, liquid petroleum gas (LPG), and natural gas (NG). 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.



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



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.



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

WARNING! This product can expose you to chemicals including gasoline 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 or to restore home power using a transfer switch. A transfer switch is a separate device installed by a licensed electrician that allows the portable generator to be cord connected, using a 120/240V receptacle directly into your home's electrical system. Install a listed transfer switch as soon as possible if this generator will be used to restore power to your home.

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

System Ground

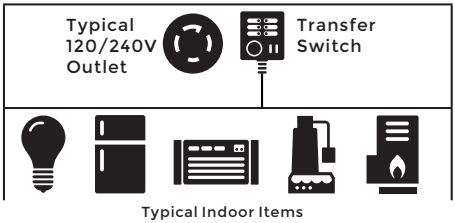
The generator has a system ground that connects the generator frame components to the ground terminals on the AC output receptacles. The system ground is connected to the AC neutral wire. The neutral is bonded to the generator frame.

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 70-2026 (NEC) section 590.6.

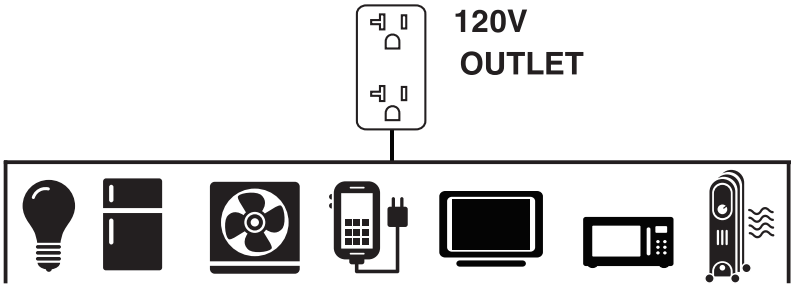
To Restore Home Power Using a Listed Transfer Switch

Connections to your home's electrical system must use a listed* transfer switch installed by a licensed electrician. The connection must isolate the generator power from the utility power and comply with all applicable laws and electrical codes.

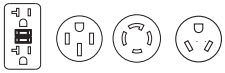


Typical Indoor Items

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
Up to 13A	16
Up to 15A	14
Up to 20A	12
Up to 30A	10
Up to 50A	6

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 downwind from occupied spaces with exhaust pointed away.
5. Extension cords running directly into your home, powering indoor items IS NOT RECOMMENDED.



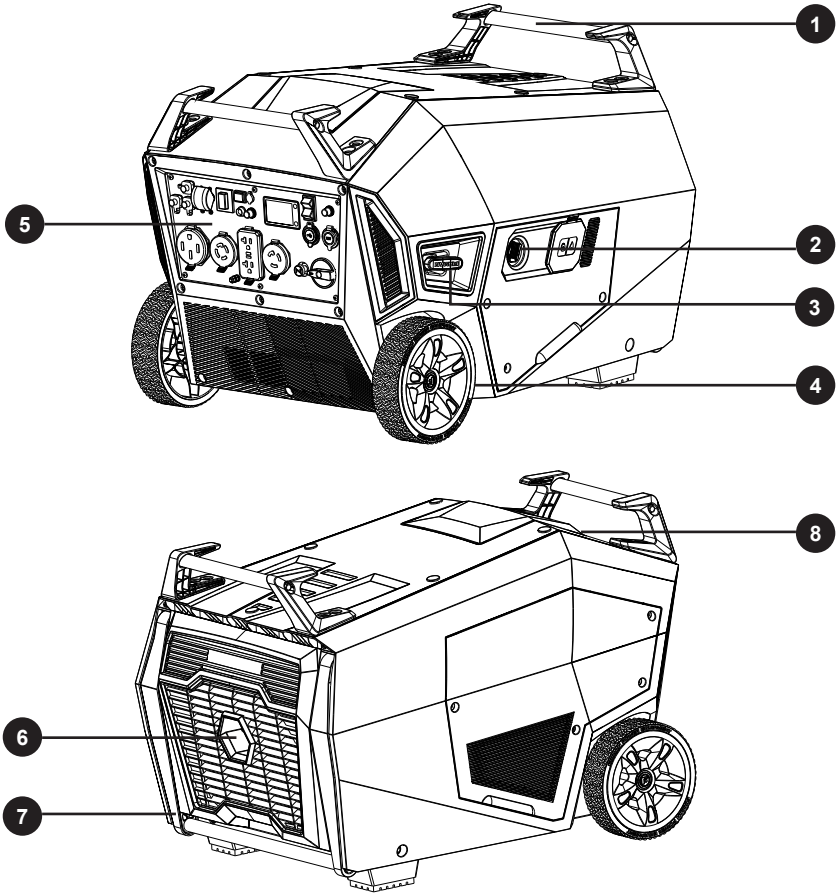
DANGER! Engine exhaust contains carbon monoxide, a poisonous gas that will kill you in minutes. You cannot smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

- 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.

6. Install a listed *transfer switch as soon as possible if this or any generator will be used to restore power to your home.

*Certified by a Nationally Recognized Testing Laboratory that the product complies to appropriate product safety test standards.

FEATURES, CONTROLS AND ON-PRODUCT HAZARD LABELS

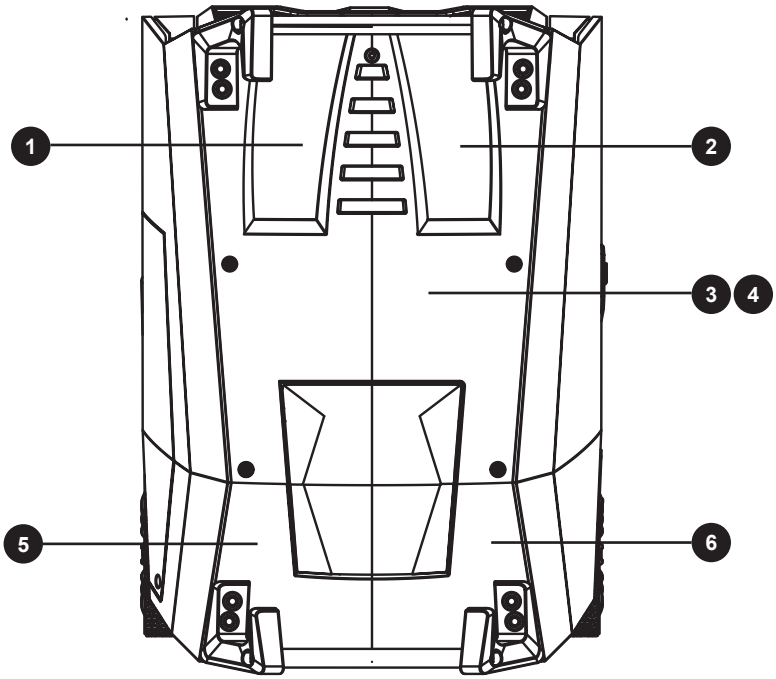


1- Fixed Carrying Handle
2- LPG/NG Select Switch
3- Recoil Starter
4- Never Flat Wheel
5- Control Panel
6- Muffler/Spark Arrester
7- Folding Handle
8- Data Decal / Serial Number

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

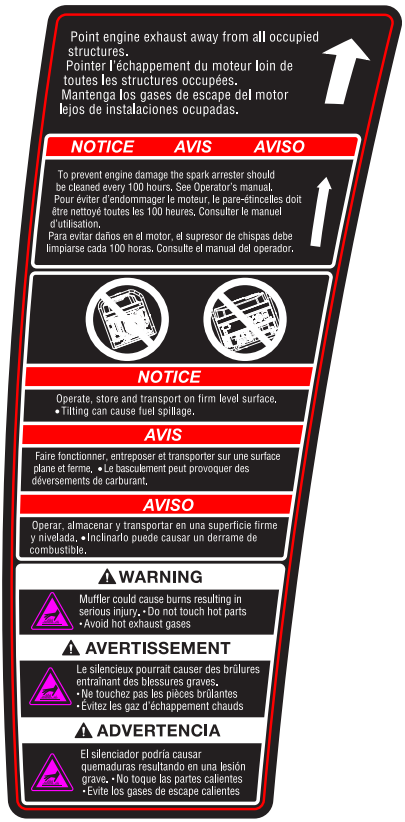
Location and content of on-product hazard labels

FREE WARNING LABEL REPLACEMENT. If hazard labels become illegible or are missing, contact FIRMAN customer service for a free replacement.



FEATURES, CONTROLS AND ON-PRODUCT HAZARD LABELS

1



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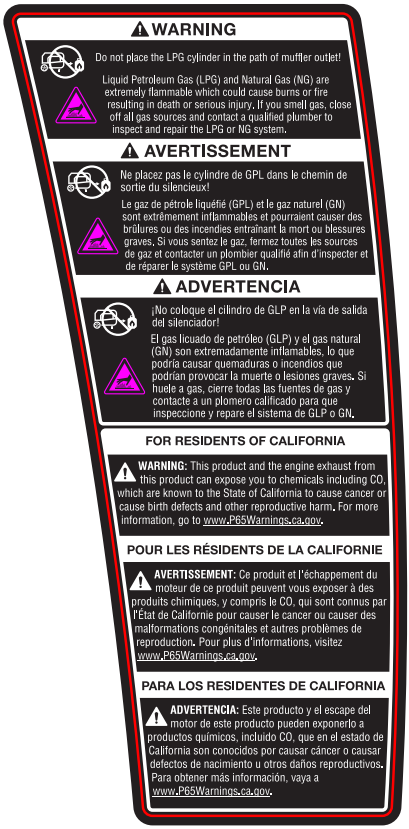

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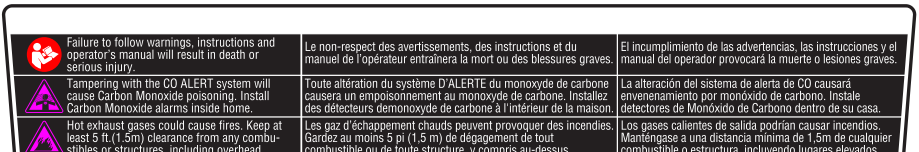

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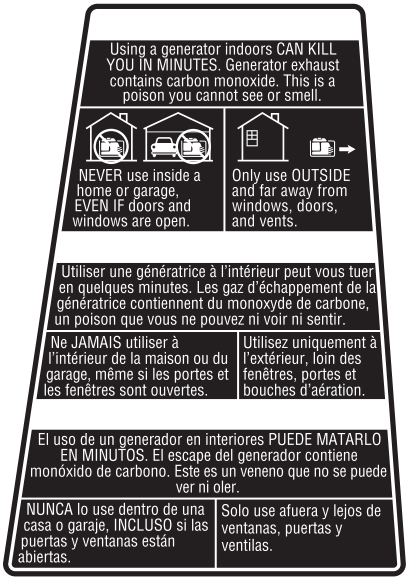
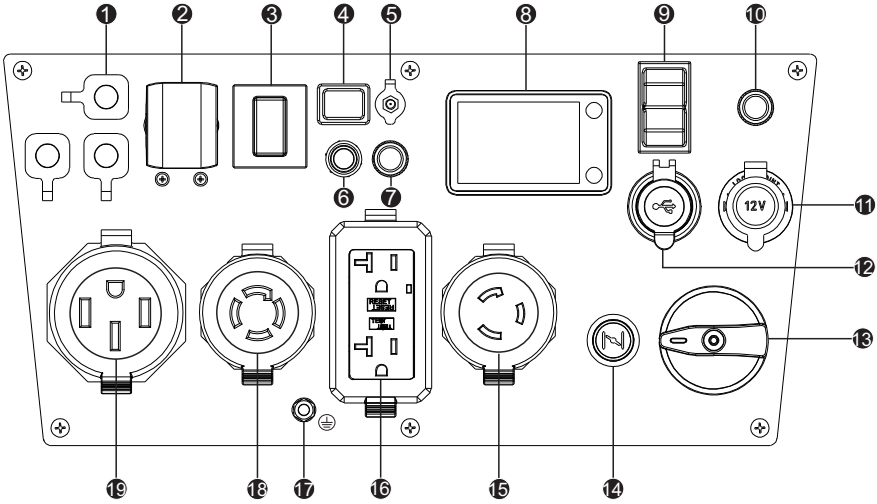

Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.
NEVER use inside a home or garage, EVEN IF doors and windows are open.
Only use OUTSIDE and far away from windows, doors, and vents.
Utiliser une génératrice à l'intérieur peut vous tuer en quelques minutes. Les gaz d'échappement de la génératrice contiennent du monoxyde de carbone, un poison que vous ne pouvez ni voir ni sentir.
Ne JAMAIS utiliser à l'intérieur de la maison ou du garage, même si les portes et les fenêtres sont ouvertes.
Utilisez uniquement à l'extérieur, loin des fenêtres, portes et bouches d'aération.
El uso de un generador en interiores PUEDE MATARLO EN MINUTOS. El escape del generador contiene monóxido de carbono. Este es un veneno que no se puede ver ni oler.
NUNCA lo use dentro de una casa o garaje, INCLUSO si las puertas y ventanas están abiertas.
Solo use afuera y lejos de ventanas, puertas y ventilas.

6


Fuel level indicator
Indicateur de niveau de carburant
Indicador de nivel de combustible
WARNING
Fuel is flammable which could cause burns resulting in death or serious injury. • Turn engine off and let it cool at least 2 minutes before refueling. • Do not fill fuel above fuel level indicator. • Never add fuel to a hot or running generator.
AVERTISSEMENT
Le carburant est inflammable, ce qui peut provoquer des brûlures entraînant la mort ou des blessures graves. • Éteindre le moteur et le laisser refroidir au moins 2 minutes avant le remplissage. • Ne pas remplir au-delà de l'indicateur de niveau maximal de carburant. • Ne jamais ajouter de carburant à une génératrice chaude ou en marche.
ADVERTENCIA
El combustible es inflamable, lo que podría causar quemaduras resultantes en la muerte o lesiones graves. • Apague el motor y déjelo enfriar al menos 2 minutos antes de recargar combustible. • No llene el combustible por encima del indicador de nivel. • No cargue nunca combustible en un generador caliente o en funcionamiento.

Control Panel



NOTICE Total power drawn from all receptacles must not exceed the data decal rating.

1. **Parallel Operation Outlets –** These outlets are used for connecting inverter generators for parallel operation. A FIRMAN parallel kit (optional equipment) is required for parallel operation. For more information see **PARALLEL OPERATION** section.

2. **AC Circuit Breaker** – 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 within the portable generator data decal rating.

3. **30A Circuit Breaker** – The receptacles are protected by AC circuit protectors.

4. **Economy Control Switch -** The Economy Control switch can be activated in order to minimize fuel consumption and noise while operating the unit during times of reduced electrical output,allowing the engine speed to idle during periods of non-use. The engine speed returns to normal when an electrical load is connected. When the economy switch is off, the engine runs at normal speed continuously.

5. **12V DC Battery Charger Port** - Plug the 120 Volt AC charger into this port to charge the generator battery.

6. **CO Alert™ Carbon Monoxide (CO) Shutdown Indicator Light** — Indicates the engine shutdown due to carbon monoxide accumulation around the generator or a CO Alert system fault occurred.

7. **20A Circuit Breaker** – The receptacles are protected by AC circuit protectors.

8. **Intelligauge with LED Screen –** The screen can show the Voltage, Hertz, Power , running hours, Fault alarm, regular maintenance, low oil alarm and remaining running time .

9. **Engine 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. To stop engine, turn the switch to OFF(O) position.

10. **DC Circuit Breaker –** The DC receptacles are protected by a DC circuit protector. If the DC output is overloaded or an external short circuit occurs, the circuit protector will trip.

11. **DC 12V Output -** 8.3 Amps of DC current may be drawn from this receptacle. Use this outlet to charge 12V automotive type batteries ONLY. See 12V DC outlet (Battery Charger) section.

12. **USB-A Output Port+USB-C Output Port**
Charge a wide array of devices such as your iPhone, tablet, GoPro, speakers, or similar products that use a USB-A port.
Charge a wide array of devices such as your MacBook Pro, Android phone, or similar products that use a USB-C port.

13. **Main Fuel Selector Switch –** Use to select and turn on gasoline (GAS) or LPG/NG fuel source. The GAS valve is closed when the switch is in the OFF or LPG/NG positions.

14. **Choke Button –** Used to start a cold engine.

15. **120V, 30A – NEMA L5-30R (not GFCI protected)**
A maximum of 30 Amps current may be drawn from this receptacle.

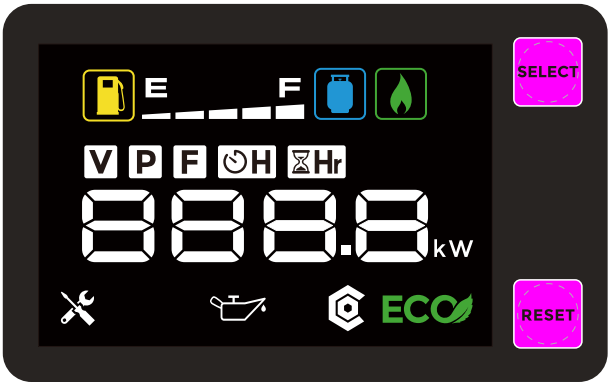
16. **120V, 20A Duplex GFCI** (Ground Fault Circuit Interrupter)- NEMA 5-20R
A maximum of 20 Amps current may be drawn from this duplex receptacle.

17. **Ground Terminal** – Consult an electrician or authority having jurisdiction for local grounding requirements.

18. **120/240V, 30A – NEMA L14-30R** (not GFCI protected)
A maximum of 30 Amps current for 240 Volts or two independent 120 Volt loads at 30 Amps current each can be drawn from this receptacle.
A maximum of 30 Amps current may be drawn from this receptacle (**Parallel Operation**).

19. **120/240V, 50A – NEMA 14-50R** (not GFCI protected)
A maximum of 41.7 Amps current for 240 Volts or two independent 120 Volt loads at 41.7 Amps
A maximum of 50 Amps current may be drawn from this receptacle (**Parallel Operation**).

Intelligauge Display Screen



E F	Remaining fuel
8888.8	Display value
V	Voltage
P	Power
F	Frequency
H	Total run time
Hr	Remaining run time
	Generator maintenance required
	Low oil level
	CO Alert alarm
ECO	ECO mode (no load, low idle speed)
	LPG/NG
SELECT	Change to show the Voltage, Hertz, Power , Running hours and remaining running time.
RESET	Restore output after generator overloaded and clear maintenance icon flashing after the maintenance

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 downwind from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.

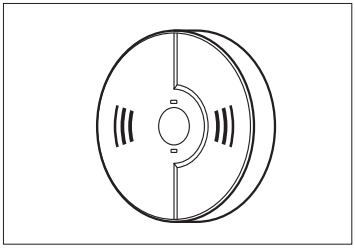
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions.
  Smoke alarms cannot detect carbon monoxide gas.

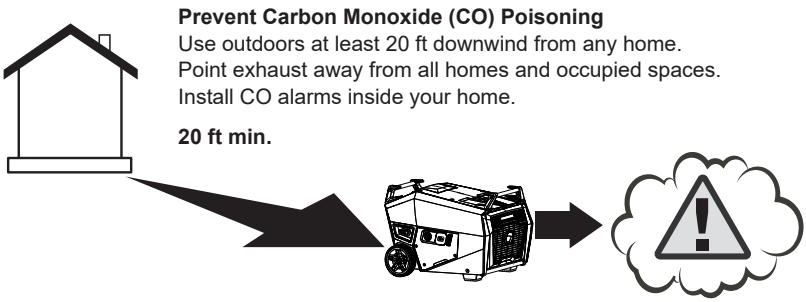
- Do not run this portable generator inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation.
  Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut 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.

A. 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.





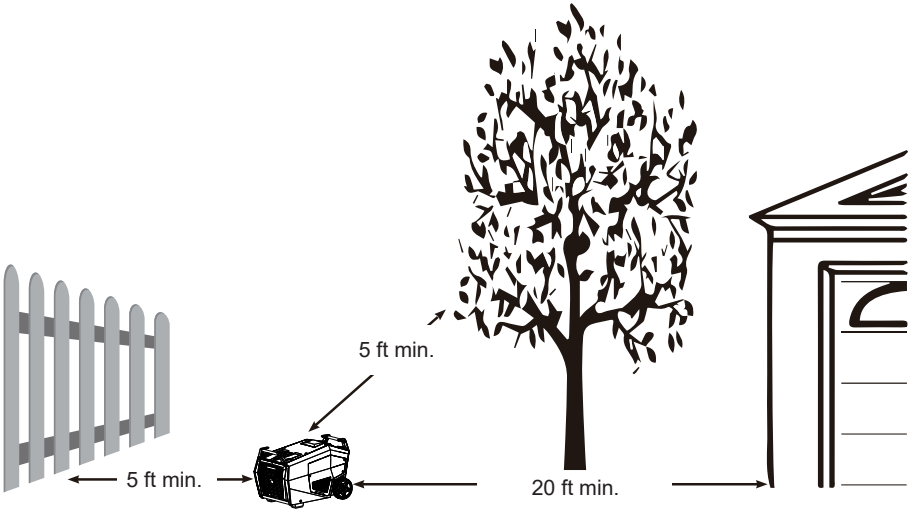
To better educate yourself about all carbon monoxide risks, go to www.takeyourgeneratoroutside.com.

B. Reduce Risk of Fire

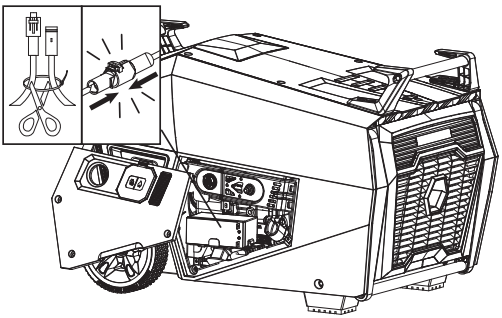


WARNING! Exhaust heat/gases could ignite combustibles, structures or damage fuel tank causing a fire, resulting in death or serious injury.

- Keep portable generator at least 5 ft from any structure, trees or vegetation over 12 in 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.



Battery Cable Connection



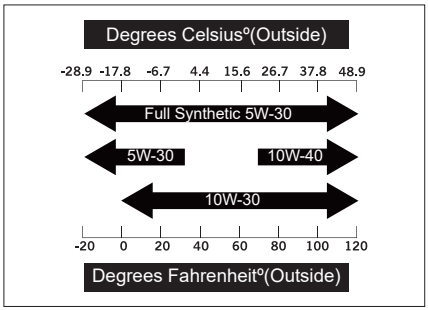
1. Open the battery maintenance cover.
2. Remove the protective cover of the battery cable terminal.
3. Connect the battery terminal.

NOTICE Be sure to connect the battery before attempting to start the generator.

2 OIL AND GASOLINE

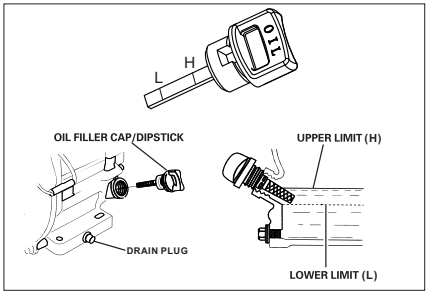
2A. Add Engine Oil

We recommend using SAE 10W-30 API SL or higher oil for best performance. 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.



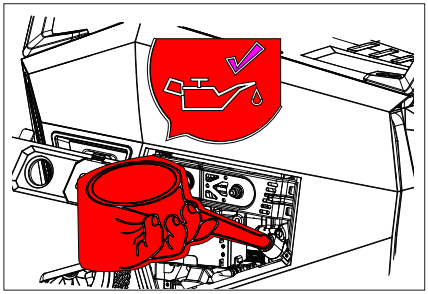
NOTICE Do not attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage due to operation with no oil will void your warranty.

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



NOTICE Do not screw in cap/dipstick when checking oil level.

5. 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.
6. Replace oil fill cap/dipstick and fully tighten.
7. Reinstall maintenance cover and tighten screws.
8. 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.

2B. Add Gasoline



WARNING! Fuel and its vapors are extremely flammable which could cause burns or fire resulting in death or serious injury.

- Turn generator engine OFF and let it cool at least 2 minutes before removing fuel cap.
- Do Not refuel or move generator when engine is running.
- Move generator outdoors prior to adding or draining fuel.
- Keep fuel away from any ignition sources.
- Do not overfill tank, allow space for fuel expansion.
- If any fuel spills, wait until it evaporates before starting engine.
- Check and replace fuel lines, tank, cap, and fittings prior to each use if any damage or leaks are found.

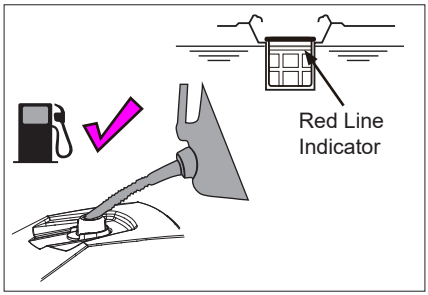
Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline with a minimum of 87 octane.
- Gasoline with no more than 10% ethanol is acceptable.

NOTICE Do not mix oil in gasoline or modify engine to run on alternate fuels not described in this manual. Use of unapproved fuels could damage engine and will not be covered under warranty.

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.





Operation at High Altitude

At altitudes over 5,000 ft, a minimum 85 octane gasoline is acceptable.
Engine power and generator output will be reduced approximately 3.5% for every 1000 ft of elevation above sea level. High altitude may cause hard starting, increased fuel consumption and spark plug fouling. To operate at high altitudes FIRMAN can provide a high altitude carburetor main jet. The alternative main jet and installation instructions can be obtained by contacting Customer Support.

NOTICE Operation using an alternative main jet at elevations lower than the recommended minimum altitude can damage the engine. For operation at lower elevations, the standard main jet supplied must be used. Operating the engine with the wrong main jet may increase exhaust emissions, fuel consumption and reduce performance.

	459 cc	Altitude
Altitude main jet 1	390418301	3000-6000 ft
Altitude main jet 2	390418302	6000-8000 ft

Operation at High Ambient conditions

Your FIRMAN Power Equipment product is designed and rated for continuous operation at ambient temperatures up to 104°F. The generator may be operated at temperatures ranging from 5°F to 122°F 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 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.

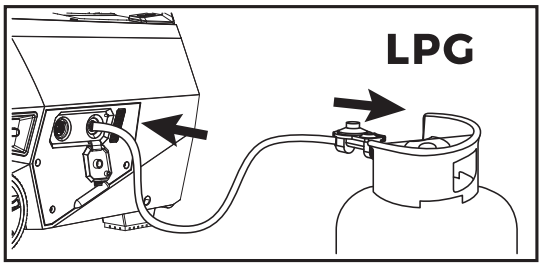
Connecting LPG/ NG Fuel



WARNING! Liquid Petroleum gas (LPG) and Natural Gas (NG) are extremely flammable which could cause burns or fire resulting in death or serious injury.

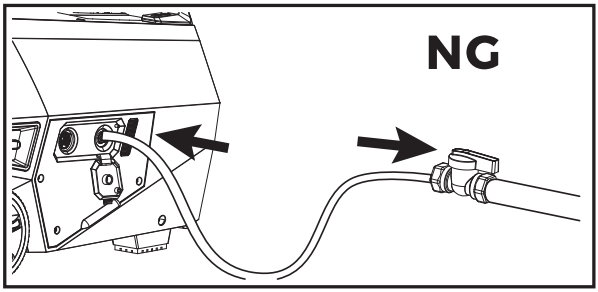
- The fuel supply line must always be shut off when the engine is not running. Failure to shut off fuel may allow fuel to leak at the generator.
- Do not place the LPG/NG sources in the path of muffler outlet or near any ignition source.
- Keep a fire extinguisher near the generator all the time.
- Do not use or store LPG/NG portable sources not in use near generator or in a building, garage or enclosed area.
- All LPG/NG 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 or NG system.
- Prior to each days first use spray a soapy water solution on LPG/NG fuel connections to check for leaks.
- Never use a gas container, LPG/ NG connector hose, LPG cylinder or NG source that appears to be damaged.
- Do not connect or disconnect the LPG/ NG 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/NG 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.

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.



Connect the locally approved flexible fuel supply line (not included) to the LPG/NG connector (inlet) on the control panel and the fuel Source. We recommend you use FIRMAN 25 ft Quick Connect Hose Kit (Model 1815) or 10 ft Quick Connect Hose Kit (Model 1805) for Natural Gas (NG) connection (This item is not included). Hose requirements may vary in different regions depending on local codes. Contact your local licensed plumber to ensure complete compliance with all codes. Make sure the NG source location and hose used allows the portable generator to be located at least 20 ft from any occupied spaces.

Intelligauge Display Screen - Battery Power Saving

This generator is equipped with an electronic module which consumes battery power. When the main fuel selector switch is turned to the GAS or LPG/NG position, the intelligauge display screen will light for up to 4 minutes (before going off). Start the engine successfully anytime during the 4 minutes. 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.

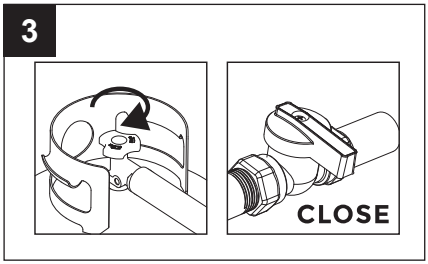
NOTICE Your portable generator is equipped with an internal battery charger that will properly charge the battery only when the engine is running.

The generator cannot be started in Battery Power Saving Mode. Turn main fuel selector switch to the off position and back to the GAS or LPG/NG position to reset the RED indicator 4-minute electronic module.

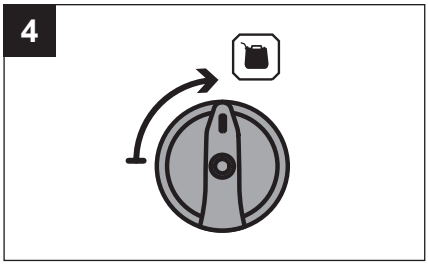
WARNING! Failure to read and follow all warnings and instructions in this manual and on-product labels before attempting to start or operate this portable generator could result in death or serious injury.

3 Starting the Generator on Gasoline

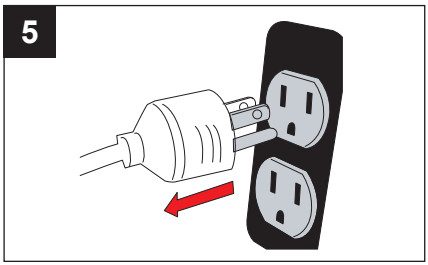
1. Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment.
   Ensure spark plug, muffler, fuel cap, and air cleaner are all in place.
2. Operate portable generator only outdoors and downwind at least 20 ft from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
3. If connected make sure the LPG cylinder knob or the NG source valve are fully closed or disconnected.



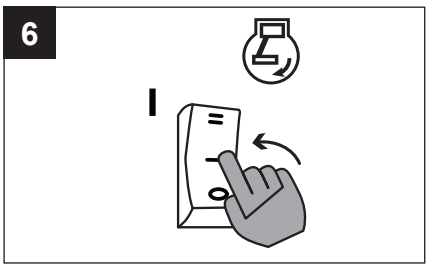
4. Turn the main fuel selector switch to “GAS” position.
NOTICE When the main fuel selector switch is turned to the GAS position, the intelligauge display screen will light for up to 4 minutes (before going off)



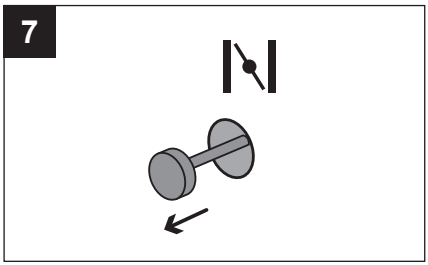
5. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



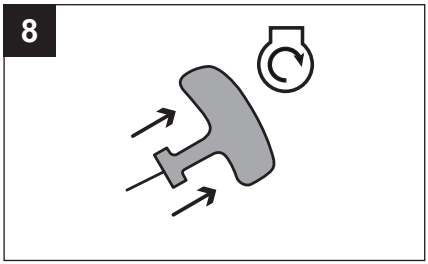
6. Flip the engine switch to the RUN (I) position.



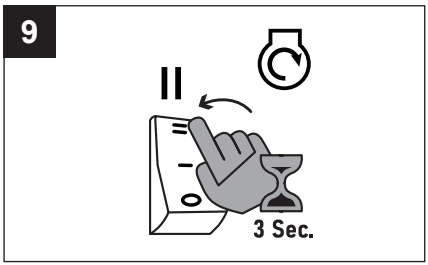
7. Pull the choke button to the “CHOKE” position. You do not need to choke a warm engine. (For electric start move to step (9))



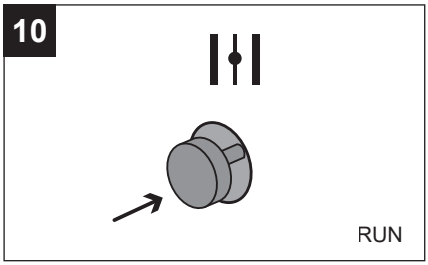
8. For recoil start only - Pull the starter cord slowly until resistance is felt and then pull rapidly to start engine.



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



10. Do not over-choke. As soon as engine starts and warms up, press the choke button to return to the run position.

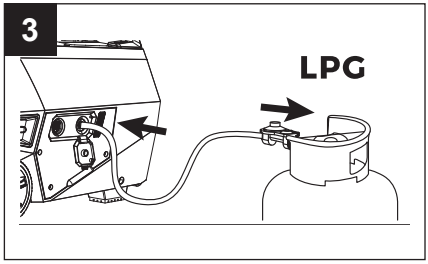


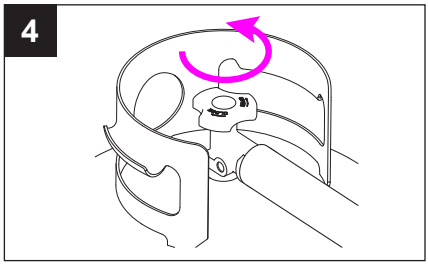
11. Allow portable generator to run at no load for a few minutes to stabilize before plugging in any electrical devices.

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.

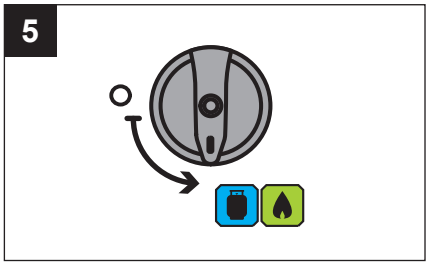
4 Starting the Generator on LPG

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. Operate portable generator only outdoors and downwind at least 20 ft from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
3. Connect the LPG hose with regulator to both LPG cylinder and portable generator LPG/NG Hose
4. Fully open the LPG cylinder knob.

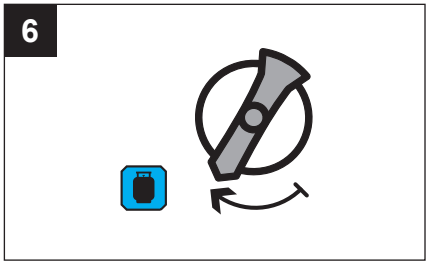




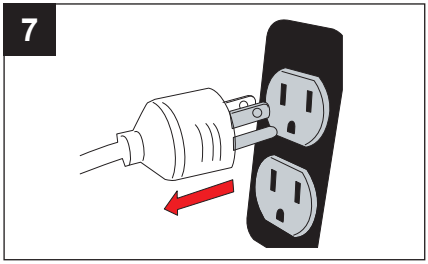
5. Turn the main fuel selector switch to LPG/NG position.



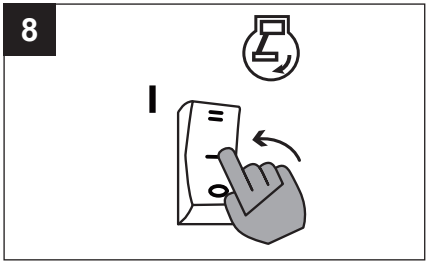
6. Turn the LPG/NG selector switch to LPG position.



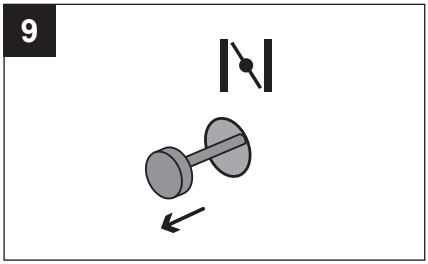
7. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



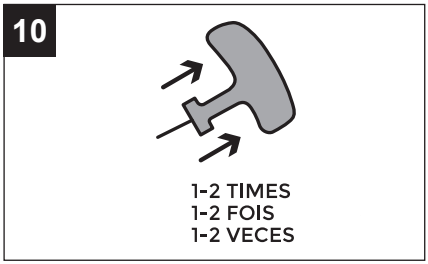
8. Flip the engine switch to the RUN (I) position. ***NOTICE*** When the engine switch is turned to the RUN position, the intelligauge display screen will light for up to 4 minutes (before going off).



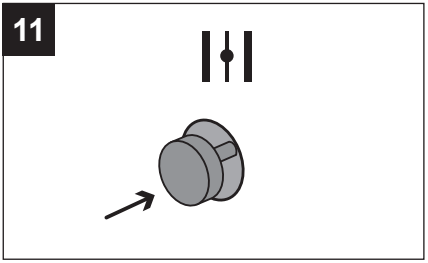
9. Pull the choke button to the “CHOKE” position. You do not need to choke a warm engine. (For electric start move to step (13))



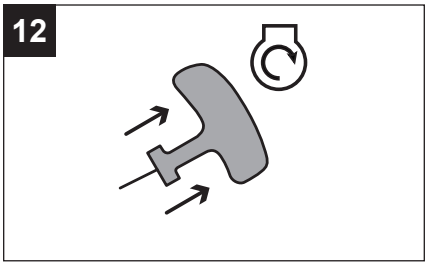
10. For recoil start only - PULL-TO-PRIME Pull the starter cord 1-2 times. Pull slowly until resistance is felt and then pull rapidly.



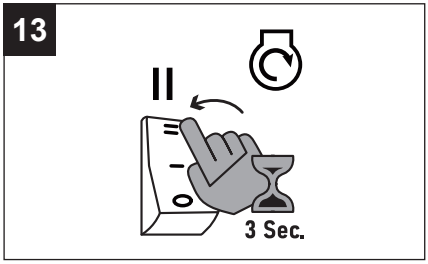
11.For recoil start only - Press the choke button to the run position.



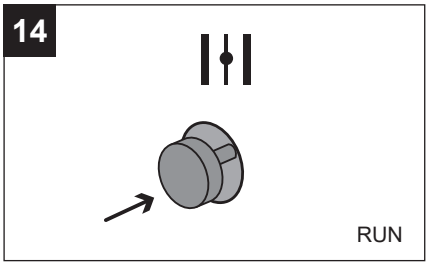
12. For recoil start only - PULL-TO-RUN Pull the starter cord slowly until resistance is felt and pull rapidly to run the portable generator.
If the engine fails to start in 1-2 pulls with choke in the RUN position, move choke lever to START position and repeat the PULL-TO-PRIME step (10).



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

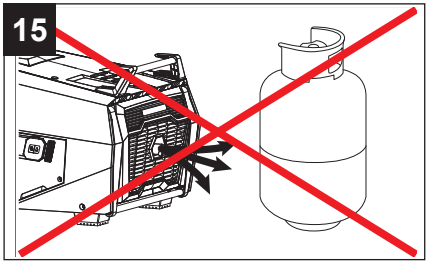


14. For electric start only - Press the choke button to the run position.



15. Allow portable inverter 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.



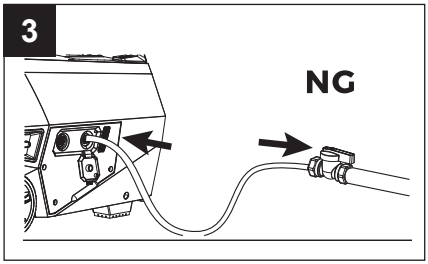
NOTICE Observing frost on LPG cylinder and regulator is common during operation and normally is not an indication of a problem. In unusual situations this frost may eventually restrict the flow of LPG gas to the generator resulting in deteriorating performance. In these rare situations it can be helpful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

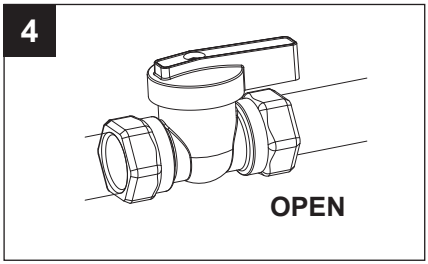
● Exchange fuel cylinders to allow the first cylinder to warm up, repeating as necessary. Placing the LPG cylinder at the end of the generator near the handle, where engine fan air flows out from the generator. This air is slightly heated by air flowing over the engine. Do not place the LPG cylinder in the path of the muffler exhaust outlet.

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

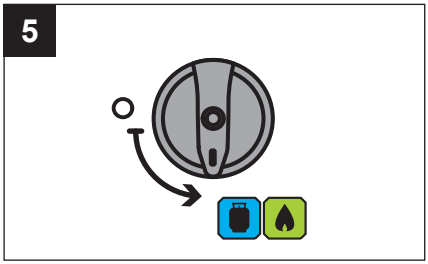
5 Starting the Generator on NG

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. Operate portable generator only outdoors and downwind at least 20 ft from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
3. Connect the LPG hose with regulator to both LPG cylinder and portable generator LPG/NG Hose.
4. Fully open the LPG cylinder knob.

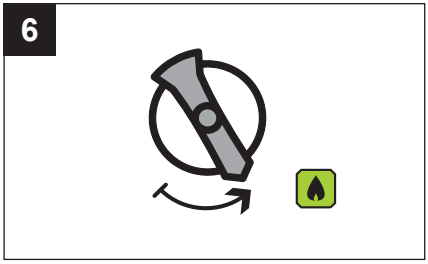




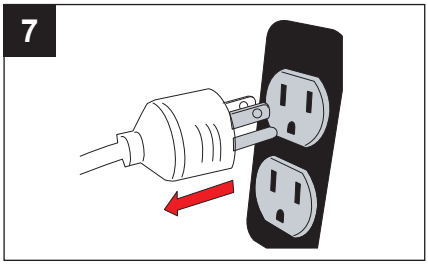
5. Turn the main fuel selector switch to LPG/NG position.



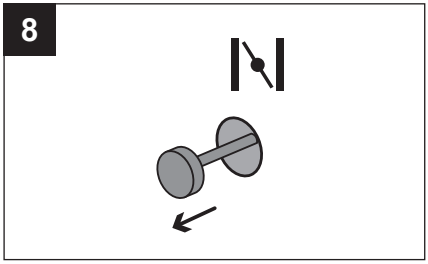
6.Turn the LPG/NG selector switch to NG position.



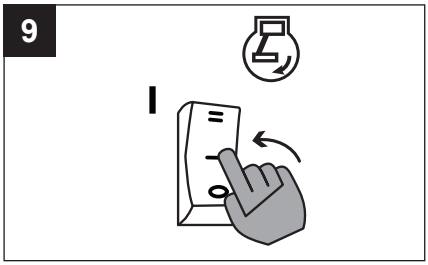
7. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



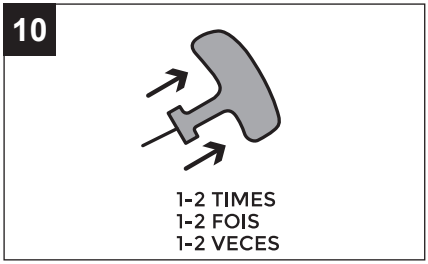
8. Pull the choke button to the “CHOKE” position. You do not need to choke a warm engine. (For electric start move to step (13))



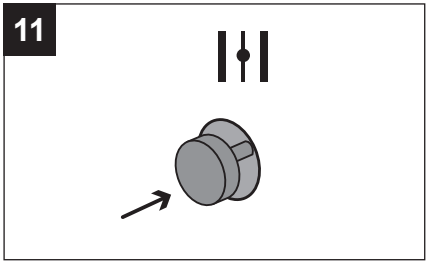
9. Flip the engine switch to the RUN (I) position. ***NOTICE*** When the engine switch is turned to the RUN position, the intelligauge display screen will light for up to 4 minutes (before going off).



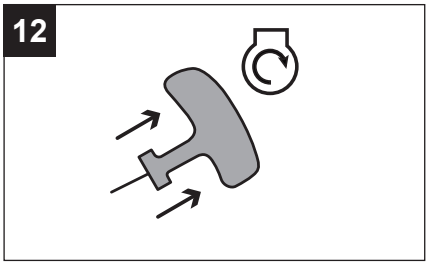
10. For recoil start only - PULL-TO-PRIME Pull the starter cord 1-2 times. Pull slowly until resistance is felt and then pull rapidly.



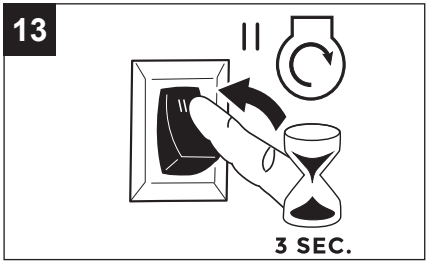
11.For recoil start only - Press the choke button to the run position.



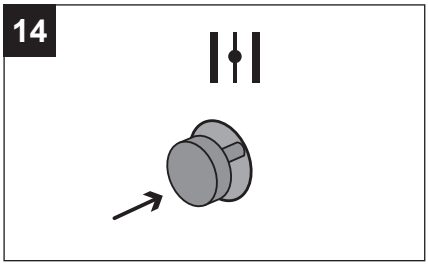
12. For recoil start only - PULL-TO-RUN Pull the starter cord slowly until resistance is felt and pull rapidly to run the portable generator.
If the engine fails to start in 1-2 pulls with choke in the RUN position, move choke lever to START position and repeat the PULL-TO-PRIME step (9).



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



14. For electric start only - Press the choke button to the run position.

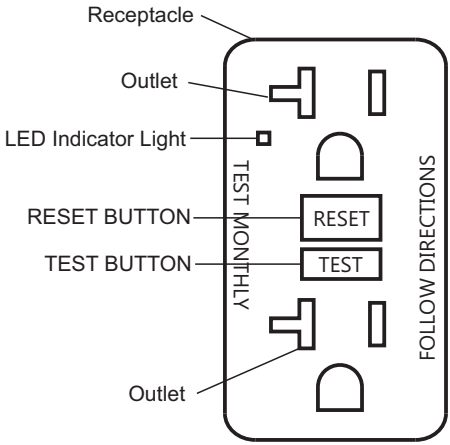


15. Allow portable inverter generator to run at no load for a few minutes to stabilize before plugging in any electrical devices.

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.

6 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.
The duplex receptacle is equipped with GFCI protection. The GFCI protects against electric shock that may be caused if you become a path which electricity travels to reach earth. Even with a GFCI you may feel a shock, but the GFCI cuts power quickly so an average person should not suffer any injury. Manual test GFCI while generator is running to verify internal contacts will function.
● Push the test button. The reset button will pop out, which should cut power to outlet.
● Press the reset button until it locks in the depressed position. If the GFCI does not reset as described do not use the receptacles. Call Firman customer service.
● If GFCI trips while in use, reset and test the outlet. Electric cords lying on the ground with worn insulation may trip the GFCI, only use cords in good condition.



SELF-TEST OPERATION

In addition to the manual test / reset feature the GFCI receptacle tests itself periodically to confirm the GFCI electronics are functional. The indicator light will be solid green when the GFCI is powered from the generator and working correctly.
Self-test indications: If the indicator light is solid orange or flashing red a problem may exist.
Press the TEST button to trip the GFCI. If unable to reset, replace the GFCI

CONNECTING ELECTRICAL LOADS



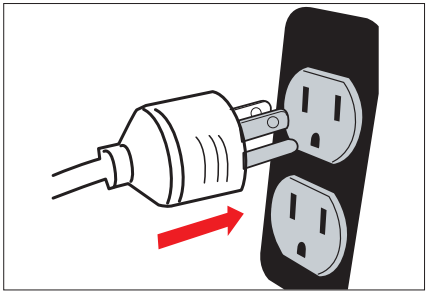
WARNING! Generator voltage could cause electrical shock or burn resulting in death or serious injury.

- 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.

OPERATING INSTRUCTIONS

- 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.
- Use listed transfer switch to prevent backfeed by isolating generator from electric utility workers.

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 6-7 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.

CO Alert

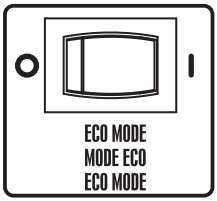
Carbon Monoxide (CO) Shutdown System
CO Alert automatically shuts down the engine when harmful levels of carbon monoxide accumulate around the generator or a CO Alert fault occurs. After shutdown, the CO Alert indicator light will blink for at least five minutes per the chart below. CO Alert DOES NOT replace carbon monoxide alarms. Install battery-powered carbon monoxide alarm(s) in your home. Don't run generator in enclosed areas.

Color	Description
RED ● ● ● ● ●	Carbon monoxide accumulated around generator. Prior to restart move generator to an open, outdoor area 20 ft downwind from occupied spaces with exhaust pointed away. Air out premises (open windows and doors) before reoccupying property. Automatic shutoff is an indication generator was improperly located. If you start to feel sick, dizzy, weak, or your homes carbon monoxide alarm sounds while using this product, get to fresh air right away. Call emergency services. You may have carbon monoxide poisoning.
Yellow ● ● ● ●	CO Alert fault occured*. See FIRMAN authorized service dealer.

*Yellow light will blink for five seconds at the startup of generator to show CO ALERT is functioning properly.

Economy Control Switch

The Economy Control switch can be activated in order to minimize fuel consumption and noise while operating the unit during times of reduced electrical output, allowing the engine speed to idle during periods of non-use. The engine speed returns to normal when an electrical load is connected. When the economy switch is off, the engine runs at normal speed continuously.



NOTICE For periods of high electrical load or momentary fluctuations, the Economy Control Switch should be turned OFF.

12V DC Outlet (Battery Charger)

The amount of current flowing will depend on the charging voltage and the battery's state of charge. As the battery becomes more fully charged, the output current to the battery decreases and nearly becomes constant. Taper chargers are intended to be used with the provision that they will be disconnected from the battery after a maximum time on charge. Normally a period of 30 to 120 minutes is sufficient to recharge a weak battery. The charge level of the battery should be checked periodically.

NOTICE

- For use with 12V direct current outlet, always keep the ECO mode deactivated (OFF Position).
- You can use the 12V direct current outlet and the 120V current at the same time, but keep the ECO mode deactivated (OFF Position) at all times.

Do not start the vehicle while the battery charging Cable is connected and the generator is running. It will not give the battery a boost of power. The Vehicle or the generator may be damaged. Charge only vented wet lead acid batteries. Other types of batteries may burst, causing personal injury or damage.

WARNING!

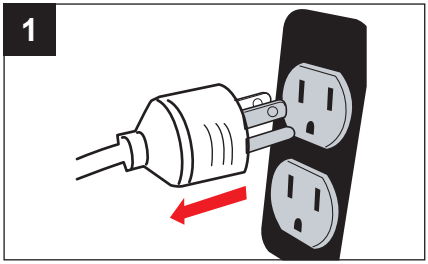
- Storage batteries give off EXPLOSIVE hydrogen gas while charging. Do not allow smoking, open flames, sparks, or spark producing equipment in the area while charging.
- Battery electrolyte fluid is comprised of sulfuric acid that can be very dangerous and cause severe burns. Do not allow this fluid to contact eyes, skin, clothing, etc. If contact or spillage does occur, flush the area with water immediately.
- Do not continue to charge a battery that becomes hot or is fully charged.

1. Before connecting the battery charging cable to a battery that is installed in a vehicle, disconnect the vehicle battery ground cable from the negative (–) battery terminal.
2. Plug the battery charging cable into the DC receptacle of the generator.
3. Connect the red (+) battery charger lead to the red (+) battery terminal.
4. Connect the black (–) battery charger lead to the black (–) battery terminal.
5. Start the generator.

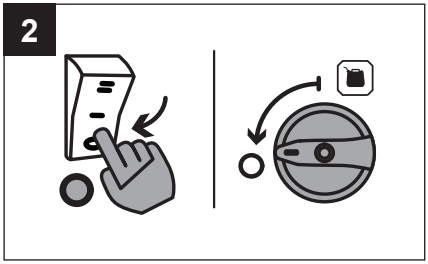
7 STOPPING THE GENERATOR

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 button to the start position.

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

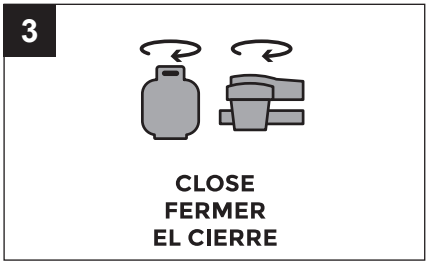


2. Turn the engine switch and main fuel selector switch to OFF (O) position.



3. Fully close the LPG cylinder knob and NG source valve.

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



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 the 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 the LOW mark on dipstick:
1.Add oil to bring level to HIGH mark.
2.Restart engine and if the engine stops again a low oil condition may still exist. DO NOT try to restart the engine.
3.Contact an Authorized FIRMAN Service Dealer.
4.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.

Overload Operation

When an overload or short circuit occurs, the AC output will shut off, and a red "P" light will appear on the display. To resume AC output, first clear the overload or short-circuit fault, then either press and hold the RESET button on the display or turn off the power and restart the device.

NOTICE

When the engine shuts down due to overload and stall or fuel exhaustion, the "P" light will stay on and glow red.

How to Correct

1. Disconnect any electrical devices, and then stop the engine.
2. Reduce the total wattage of connected electrical devices until it is within the generator's rated output.
3. Inspect the Air Inlet and Control Panel for any blockage. Remove blockage if found.
4. Restart Engine.

Parallel Operation

Any two FIRMAN 120/240V inverter generators with parallel ports, including two FIRMAN inverters model WT12579 can be paralleled to increase the total available electrical power to 19000 Watts.

NOTICE

- Only two compatible FIRMAN 240V inverters can be operated in parallel.
- DO NOT attempt to parallel other models or brands.
- DO NOT connect parallel cable while generators are running.
- DO NOT disconnect the parallel connection cable during the parallel operation of generator sets.

1. Ensure both inverters are on level ground, disconnected from all loads, and turned OFF.
2. Set both inverters' voltage selector switches to the 240V position.
3. Firmly connect the FIRMAN parallel cable to the parallel operation ports on both inverters.
4. Start the first inverter, then start the second inverter.
5. Wait a few seconds for both units to synchronize.
6. Once synchronized, the 14-50R and L14-30R outlets on both inverters can be used.

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.			√		
Fuel	Clean 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 System	Check for leakage. Retighten or replace gasket if necessary.	√				
	Check spark arrester screen. Clean/Replace if necessary.				√	
Engine	Check and 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. A new spark plug and clean air filter assure proper fuel-air mixture and help your engine run at peak performance and last longer.

When Transporting Generator

Transport with fuel tank EMPTY or with fuel valve in OFF position.
Do not tip generator at an angle which causes fuel to spill.
Disconnect LPG/ NG 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

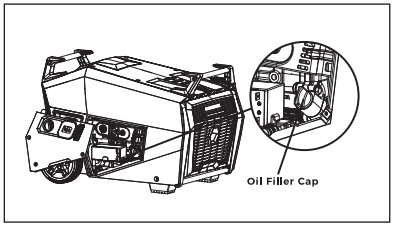
Change engine oil every 100 hours (for a new engine, change oil after 25 hours). If you are using your generator under extremely dirty or dusty conditions, or in extremely hot weather change the oil more often.

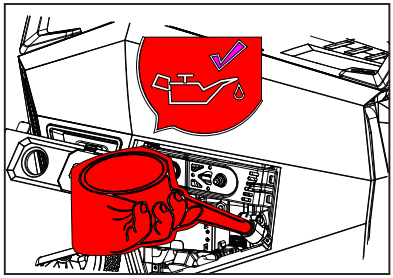
CAUTION! Avoid prolonged or repeated skin contact with used motor oil. Used motor oil has been shown to cause skin cancer in certain laboratory animals. Thoroughly wash exposed areas with soap and water.

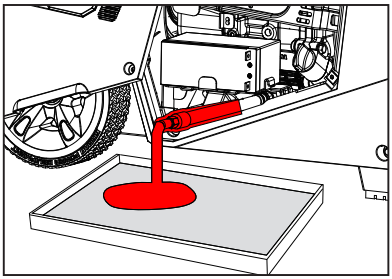


Keep Out Of Reach Of Children. Don't Pollute. Conserve Resources. Return Used Oil To Collection Centers.

(a) Loosen the cover screws and remove the maintenance cover.
(b) Pop up the plug from below yellow draining bolt.
(c) Remove yellow drain bolt.
(d) Tilt the generator on its side and allow the oil to drain completely.
(e) Replace yellow drain bolt.
(f) On a level surface fill the engine with oil until it reaches the HIGH (H) level on the oil filler cap. DO NOT OVERFILL.
NOTICE We recommend using SAE 10W-30 API SL or higher oil for best performance. Do not use special additives. See Oil and Gasoline section (page 16).

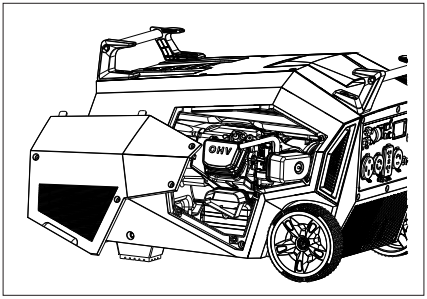




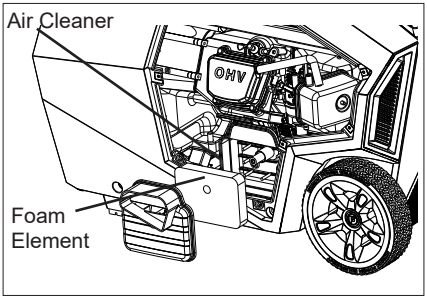


Air Filter Maintenance

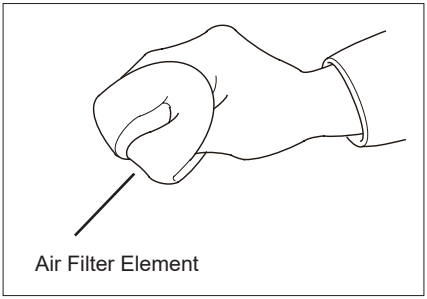
(a) Remove the air cleaner cover and locate the air filter plastic cover.



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

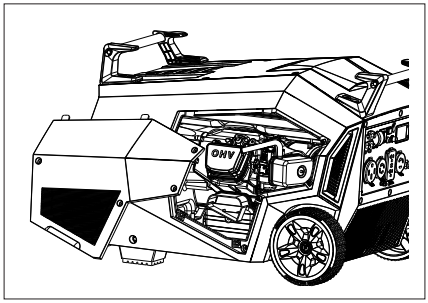


(c) Saturate foam air filter element with clean engine oil and squeeze in a clean cloth to remove excess oil.



(d) Reinstall clean or new air filter element.
(e) Reattach the air filter cover.
(f) Reinstall the air cleaner cover and tighten the cover screw securely.

Spark Plug Maintenance

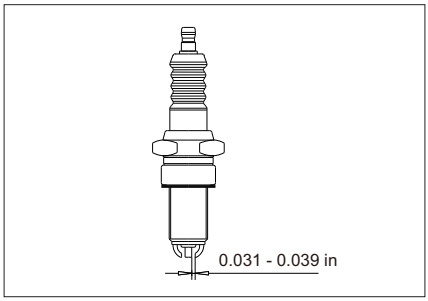


Changing the spark plug will help your engine start easier and run at peak performance.
(a) Remove the maintenance cover.
(b) Remove the spark plug boot.
(c) Remove spark plug using provided wrench.

(d) Inspect spark plug for damage and clean with a wire brush before reinstalling. Replace if damaged.
(e) Adjust the electrode gap to 0.031 - 0.039 in.
(f) Seat spark plug in position and thread by hand to prevent cross threading.
(g) Tighten plug with provided wrench and put the spark plug boot back on spark plug. Do not overtighten.

Spark Plug: F7RTJC

Maintenance Valve Clearance
Intake: 0.004 – 0.006 in
Exhaust: 0.004 – 0.006 in



Muffler and Spark Arrester Maintenance

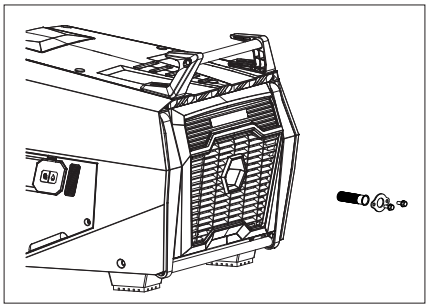


WARNING! Contact with muffler area could cause burns resulting in serious injury.

- 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.

Inspect Muffler and Spark Arrester

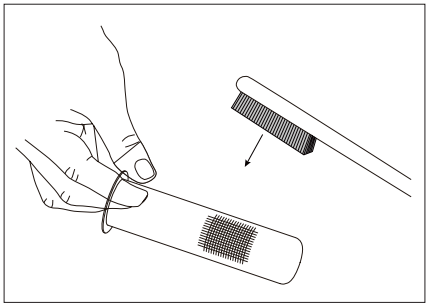
1.Inspect the muffler for cracks, corrosion, or other damage.
2. Loosen the spark arrester clamp, remove the spark arrester cover, and remove the spark arrester with a thin blade screwdriver .



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

4. Replace the spark arrester if it is damaged. If replacement parts are required, make sure to use only FIRMAN original equipment replacement parts.

5. Position the spark arrester in the muffler and attach spark arrester cover with the screws.
NOTICE Failure to clean or replace spark arrester may result in decreased engine performance.

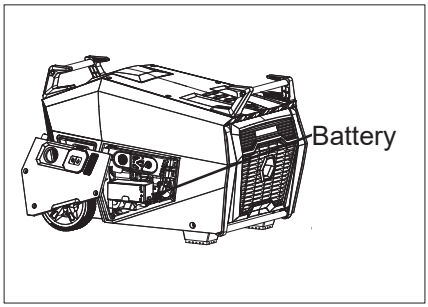


GENERATOR MAINTENANCE

● 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.Unscrew the air cleaner cover by provided screwdriver.
2. Release the battery retaining rubber belt.
3. Disconnect the black(-) cable from black(-) terminal on the battery. Disconnect the red(+) cable from red(+) terminal on the battery.
4. Remove the battery and recycle and dispose of properly.
5. Install the new battery with following specification:
12V sealed lead battery 9AH
LXWXH: 150X65X107mm
6.Connect the red(+)batterycable to the positive terminal of battery first and then connect the black(-) battery cable to the negative terminal of battery.
7. Reattach the air cleaner cover.



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, you can use the supplied charger plugged into the generator 12V DC Battery Charge Port to charge the battery.
1. Plug the cord from the charger into the charging port on the generator control panel.
2. Plug the charger into a 120 volt AC wall outlet.
3. There is a light on the charger that remains red until the battery is fully charged at which point the light will turn green.

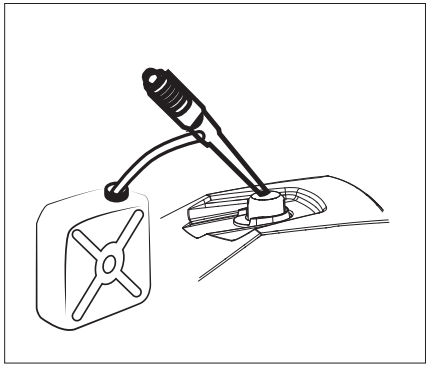
Long Term Storage

It is important to prevent gum deposits from forming in essential fuel system components such as the carburetor, fuel hoses or tank during storage. Ethanol-blended fuels (called gasohol, ethanol or methanol) 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 being stored for more than one month, follow these instructions to avoid engine problems:

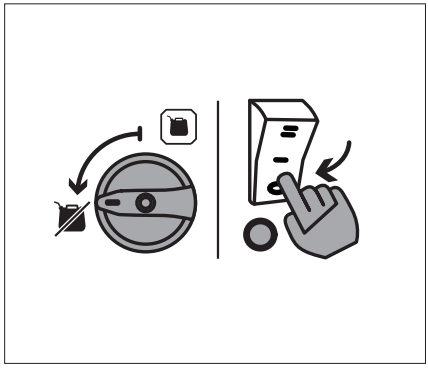


WARNING!
Fuel and its vapors are extremely flammable which could cause burns or fire resulting in death or serious injury.



Do not store fuel near any ignition sources.
When draining fuel move generator outdoors and use a commercially available non-conductive vacuum siphon. Fuel must be drained into an approved container.

1.Add a properly formulated fuel stabilizer to the gasoline tank.
2.Start the generator as instructed in Starting the Generator section.
3.Run the generator for 5-10 minutes so the treated gasoline cycles through the fuel system.
4.Turn the main fuel selector switch to the “STORAGE OFF” position until the engine stops. This may take 3-5 minutes. Then turn the fuel selector switch to “OFF (O)” position.
5.Change oil after the engine cools down entirely.
6.Remove spark plug and pour about one teaspoon of engine oil into the cylinder.
7.Pull the starter cord a few times to lubricate the cylinder and then reinstall the spark plug.
8.Cover and store the unit in a clean, dry place out of direct sunlight.



NOTICE Any damage 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.

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. 5. Clogged or dirty fuel filter.	1. Disconnect shorted electrical load. 2. Contact authorized service facility. 3. See Don’t Overload Generator. 4. Contact authorized service facility. 5. Clean or replace fuel filter.
Engine will not start; starts and runs rough or shuts down when running.	1. Fuel selector switch set to OFF (O)position. 2. The indicator light is OFF or flashing red. 3. Low oil level. 4. Dirty air cleaner. 5. Out of fuel. 6. Stale fuel. 7. Spark plug wire not connected to spark plug. 8. Bad spark plug. 9. Water in fuel. 10. Flooded. 11. Excessively rich fuel mixture. 12. Clogged or dirty fuel filter. 13. Starting battery may have insufficient charge. 14. Out of LPG/NG. 15. LPG cylinder knob / NG supply valve is not open. 16. Out of battery power.	1. Set fuel selector switch to “GAS” or “LPG/NG” position. 2. Must have solid red indicator light to be able to start the engine. 3. Fill crankcase to proper level or place generator on level surface. 4. Clean or replace air cleaner. 5. Fill fuel tank. 6. Drain fuel tank and carburetor; fill with fresh fuel. 7. Connect wire to spark plug. 8. Replace spark plug. 9. Drain fuel tank and carburetor; fill with fresh fuel. 10. Wait 5 minutes and re-crank engine. 11. Contact authorized service facility. 12. Clean or replace fuel filter. 13. Check battery output and charge battery as necessary. 14. Replace LPG cylinder/ check NG supply. 15. Fully open LPG cylinder knob / NG supply valve. 16. Start Engine in “GAS” position. Charge or replace battery.
Engine lacks power.	1. Load is too high. 2. Dirty air filter. 3. Clogged or dirty fuel filter. 4. Clogged spark arrester.	1. Don’t Overload Generator 2. Replace air filter. 3. Clean or replace fuel filter. 4. Clean or replace spark arrester.
Engine “hunts” or falters.	1. Carburetor is running too rich or too lean. 2. Clogged or dirty fuel filter.	1. Contact authorized service facility. 2. Clean or replace fuel filter.
Engine shuts down when running.	1. Out of gasoline or LPG/NG 2. Dirty air cleaner. 3. Low oil level.	1. Fill fuel tank with gasoline or replace LPG cylinder / check NG supply. 2. Clean or replace air cleaner. 3. Fill crankcase to proper level or place generator on level surface.
Engine shuts down and yellow CO fault light blinking.	1. CO system fault	1. Contact authorized FIRMAN service facility.

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

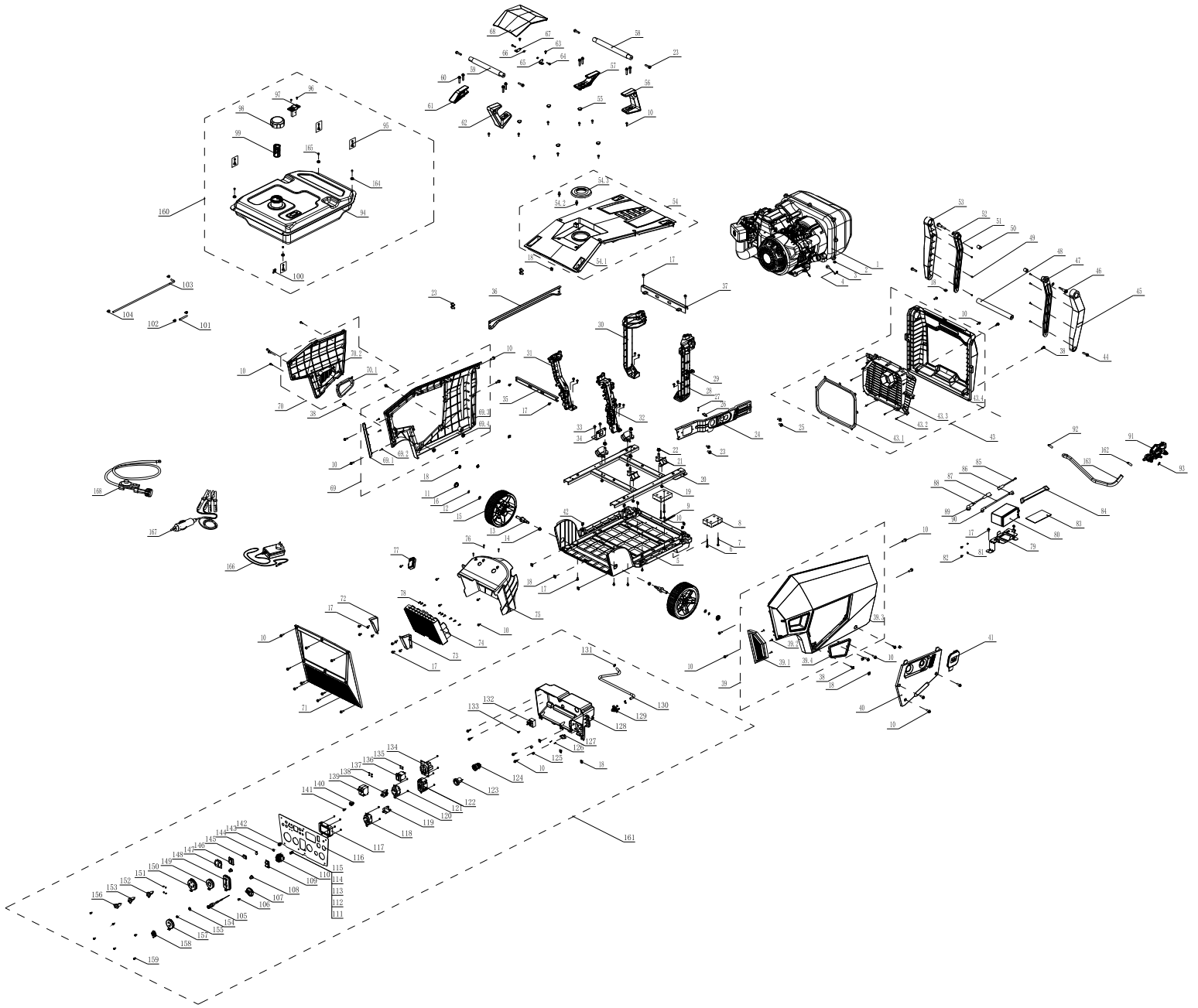
Specifications

Model	WT12579		
Starting Watts	12500(GASOLINE)/11200(LPG)/9400(NG)		
Running Watts*	10000(GASOLINE)/9000(LPG)/7500(NG)		
Rated AC Voltage	120/240V		
Rated Frequency	60Hz		
Phase	Single		
Voltage Regulator	Digital		
Power Factor	1		
Alternator Type	Magneto Inductor		
Engine	FIRMAN		
Engine Type	Single Cylinder, 4-Stroke OHV Air Cooled		
Displacement	459cc		
Low Oil Shutdown	Yes		
Ignition System	Breakerless Ignition Type, Flywheel Magneto		
Starting System	Recoil/Electric		
Fuel	Unleaded Automotive Gasoline		
Capacity Fuel Tank	27 L / 7.1 gallons		
Lubricating Oil Capacity	1200 ml / 40.6 fl oz		
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		
AC Grounding System	Neutral Bonded To Frame		
Natural Gas Fuel Pressure Range	1.7-2.7 kpa / 13- 20mm mercury 7-11 inches water column / 0.25-0.40 psi		
	Quarter load (25%)	Half Load	Full Load
Natural Gas Fuel Consumption	1.6 m^3/h 56.65 ft^3/h 56,710 BTU/h 16,620 W	2.2 m^3/h 78.26 ft^3/h 78,345 BTU/h 22,960 W	3 m^3/hr 105.1 ft^3/hr 105,210 BTU/h 30,835 W
LPG fuel consumption	78.2 MJ/h 74,130 BTU/h 21,725 W	116.0 MJ/h 109,910 BTU/h 32,210 W	154.3 MJ/h 146,255 BTU/h 42,865 W

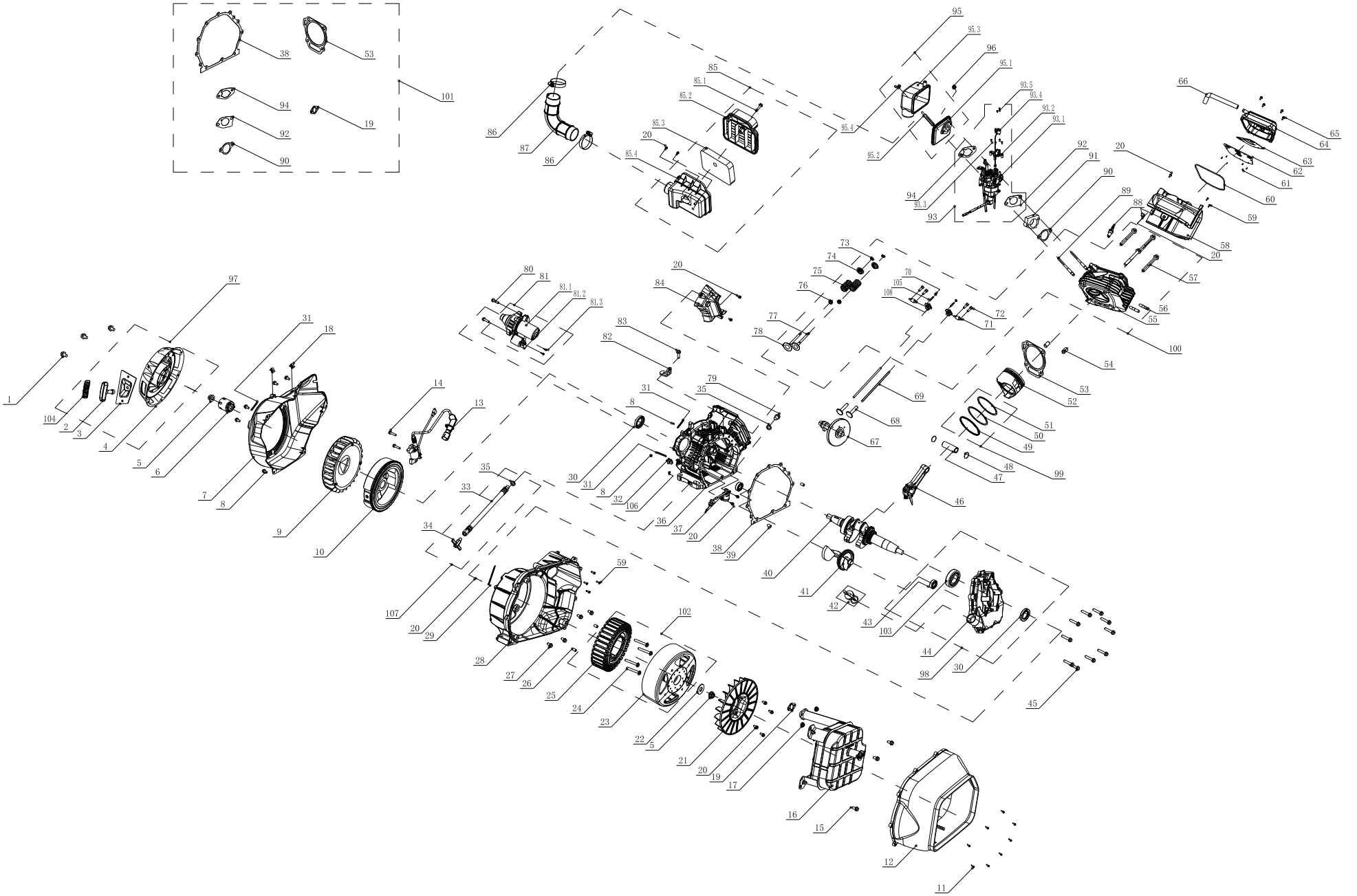
*Generator certified in accordance with CSA (Canadian Standards Association) standard C22.2 No. 100-14, Motors and Generators and complies with PGMA (Portable Generator Manufacturers’ Association) standard ANSI/PGMA G300-2023, Safety and Performance of Portable Generators.

For replacement parts, call our customer service department at **844-347-6261**, 8 a.m. - 8 p.m., EST, Monday - Sunday.

WT12579 Parts Diagram



459cc Engine Parts Diagram



REPLACEMENT PARTS LIST

WT12579 Portable Generator

All replacement parts are covered under warranty.

NO.	Part Number	Description	Qty.
1	399468300	Engine Assy.	1
2	336718326	Nut M6	1
3	336713516	External Teeth Lock Washer Ø6	1
4	355718300	Ground Wire	1
5	399728319	Base Assy.	1
6	399718323	Flange Bolt M6 x 70	2
7	355718301	Flange Bolt M6 x 55	2
8	399728320	Isolator	2
9	317713577	Clip	1
10	399718324	Screw M5 x 14	46
11	399728321	Plug, Wheel	2
12	330713585	Washer Ø12	2
13	399718325	Axle	2
14	355718424	Nut M10 x 1.25	2
15	399728322	Wheel	2
16	330713584	Retaining Ring Ø12	2
17	336718301	Flange Bolt M6 x 12	18
18	317713524	Nut M5	15
19	336718318	Nut M8	4
20	399728323	Bearing Plate	1
21	357713532	Isolator II	4
22	357713531	Nut M10	4
23	336713531	Flange Bolt M8 x 20	11
24	399718326	Right Support Plate	1
25	375718302	Flange Bolt M8 x 12	1
26	336713822	Micro Switch 2	1
27	336718322	Nut M3	2
28	336713531	Flange Bolt M8 x 20	8
29	399718327	Left Rear Support Post	1
30	399718328	Right Rear Support Post	1
31	399718329	Left Front Support Post	1
32	399718330	Right Front Support Post	1
33	336718301	Flange Bolt M6 x 12	2
34	399718331	Air Cleaner Bracket	1
35	399718332	Rear Support Plate	1
36	399718333	Left Support Plate	1
37	399718334	Front Support Plate	1
38	355718417	Bolt M6 x 20	6
39	399428302	Right Cover Assy.	1
39.1	399728324	Trim, Right Cover	1
39.2	336718359	Screw ST4.2 x 9.5	3
39.3	399728325	Right Cover	1
39.4	399718335	Trim, Recoil Guide	1
40	399728326	Right Access Cover	1
41	399728327	Main Regulator Cover	1
42	333717014	Nut M6	6
43	399428303	Rear Cover Assy.	1
43.1	399728328	Rubber Seal	1
43.2	336718359	Screw ST4.2 x 9.5	10
43.3	399728329	Exhaust Port	1
43.4	399728330	Rear Cover	1
44	336713006	Flange Bolt M8 x 20	2
45	399728331	Left Handle Cover	1
46	355718311	Handle Bolt	2
47	399718336	Left Handle	1
48	399718337	Lower Handle	1
49	355718318	Screw M5 x 14	8
50	355728314	Bushing	2
51	399718338	Right Handle	1
52	355718312	Washer Ø23.4 x Ø13.1 x 1	2
53	399728332	Right Handle Cover	1
54	399428304	Top Cover Assy.	1
54.1	399728333	Top Cover	1
54.2	399718339	Ball Stud	2
54.3	399728334	Fuel Guide Plate	1
55	399728335	Plug	5
56	399718340	Rear Handle Support, Left	1
57	399718341	Rear Handle Support, Right	1
58	399718342	Rear Handle	1
59	399718343	Front Handle	1
60	399718344	Flange Bolt M8 x 35	8
61	399718345	Front Handle Support, Left	1
62	399718346	Front Handle Support, Right	1
63	336713538	Screw & Washer Assy. M5 x 14	2
64	375718320	Screw & Washer Assy. M4 x 20	2
65	399718347	Bracket	1
66	399718348	Nut M4	2
67	399718349	Bracket, Left	1
68	399728336	Fuel Tank Cap Trim Panel	1
69	399428305	Left Cover Assy.	1
69.1	399728337	Left Decorative Trim	1
69.2	336718359	Screw ST4.2 x 9.5	3
69.3	399728338	Left Cover	1
69.4	399728339	Rubber Damper	2
70	399728340	Left Access Cover Assy.	1
70.1	399728341	Rubber Seal	1
70.2	399728342	Left Access Cover	1
71	399428306	Front Cover	1
72	399718350	Left Bracket, ECM	1
73	399718351	Right Bracket, ECM	1
74	399458305	ECM	1
75	399728343	Air Guide Cover, ECM	1
76	330713523	Screw ST4.2 x 16	3
77	332753001	CO Module	1
78	336718383	Screw & Washer Assy. M4 x 14	9
79	399718352	Bracket, Battery	1

REPLACEMENT PARTS LIST

NO.	Part Number	Description	Qty.
80	399458306	Battery	1
81	393728308	Flange Nut M5	2
82	357713569	Screw & Washer Assy. M5 x 10	2
83	399728344	Pad, Battery	1
84	330713623	Pinch, Rubber	1
85	336713692	Battery Cable, Negative, Male,	1
86	336713611	Boot, Rubber Battery	1
87	333755502	Battery Wire	1
88	336713693	Battery Cable, Negative, Female,	1
89	357713571	Boot, Black Battery	1
90	357713570	Boot, Red Battery	1
91	399718353	Main Regulator	1
92	380713547	Clamp	1
93	399728345	Regulator Switch Insert	1
94	399718355	Fuel Tank	1
95	310715064	Bolt M6 x 20	4
96	336417031	Screw M5 x 16	2
97	399428307	Fuel Gauge	1
98	330713500	Fuel Tank Cap	1
99	399428308	Fuel Filter, Wire Mesh	1
100	336713807	Tank Fitting With Filter	1
101	399728346	Fuel Hose	1
102	330713508	Clip Ø10.5 x 8	2
103	399728347	Hose	1
104	317713553	Clamp Ø8 x 6	2
105	355418318	Choke Knob Assy.	1
106	336718383	Screw & Washer Assy. M4 x 14	1
107	399728348	Fuel Knob	1
108	336755005	Cover, Push Button Circuit Breaker	2
109	340725503	Switch Cover	1
110	399458307	Engine Switch	1
111	357713542	Flange Bolt M6 x 22	1
112	380713515	Nut M6	2
113	336713512	Lock Washer Ø6	2
114	336713513	Flat Washer Ø6	2
115	336713516	External Teeth Lock Washer Ø6	1
116	399718358	Control Panel	1
117	399458309	Multimeter	1
118	317713580	Receptacle, L5-30R	1
119	329753003	D.C 10A Breaker, Push Button	1
120	336713601	Receptacle, L14-30R	1
121	336718324	Nut M4	12
122	357713588	Receptacle, 5-20R 120V 20A	1
123	317713565	Receptacle, 12V DC	1
124	320753005	Receptacle, USB	1
125	336713538	Screw & Washer Assy. M5 x 14	2
126	355718401	Screw ST2.9 x 18	2
127	336713822	Micro Switch 2	1

NO.	Part Number	Description	Qty.
128	399728349	Control Box	1
129	355418316	Fuel Valve	1
130	399728350	Fuel Hose	1
131	330713508	Clip Ø10.5 x 8	2
132	399458310	Speed Limiter	1
133	336713538	Screw & Washer Assy. M5 x 14	1
134	380713518	Receptacle, 14-50R	1
135	336713569	Screw & Washer Assy. M4 x 8	4
136	380713526	Circuit Breaker, 30A, Double-Pole	1
137	330723586	Screw/Washer Assy. M5 x 8	4
138	336713585	Circuit Breaker, Push Button, 20A	1
139	399755668	Circuit Breaker, Double-Pole, 50A	1
140	317718305	Switch, ECO	1
141	330713618	Receptacle, Battery Charging	1
142	336755002	CO Indicator Light	1
143	336457020	Nut M11 x 1	1
144	393727003	Receptacle Cover, TT-30R/14-50R	1
145	316735503	Cover, Engine Switch	1
146	393725501	Cover, 30A, Circuit Breaker	1
147	392758302	Cover, Double-Pole Circuit	1
148	360725502	Receptacle Cover, 5-20R GFCI	1
149	360725501	Receptacle Cover, L14-30R	1
150	399427010	Receptacle Cover, 14-50R	1
151	336718368	Screw & Washer Assy. M3 x 6	4
152	399458311	Parallel Terminal, Red	1
153	399458312	Parallel Terminal, White	1
154	333718301	External Tooth Washer	2
155	333728300	Circuit Breaker Nut	1
156	399458313	Parallel Terminal, Black	1
157	336725506	Receptacle Cover, L5-30R	1
158	320723011	Cover, 12V DC Receptacle	1
159	336713538	Screw & Washer Assy. M5 x 14	6
160	399418318	Fuel Tank Assy.	1
161	399418319	Control Panel Assy.	1
162	380713547	Clamp	1
163	399725527	LPG Hose	1
164	336713542	Grommet, Fuel Tank	4
165	357713600	Bushing	4
166	330713634	12V DC, Battery Float Charger	1
167	320755504	12V DC Charging Cable	1
168	336713834	LPG Regulator/Hose Assy.	1

459cc Engine

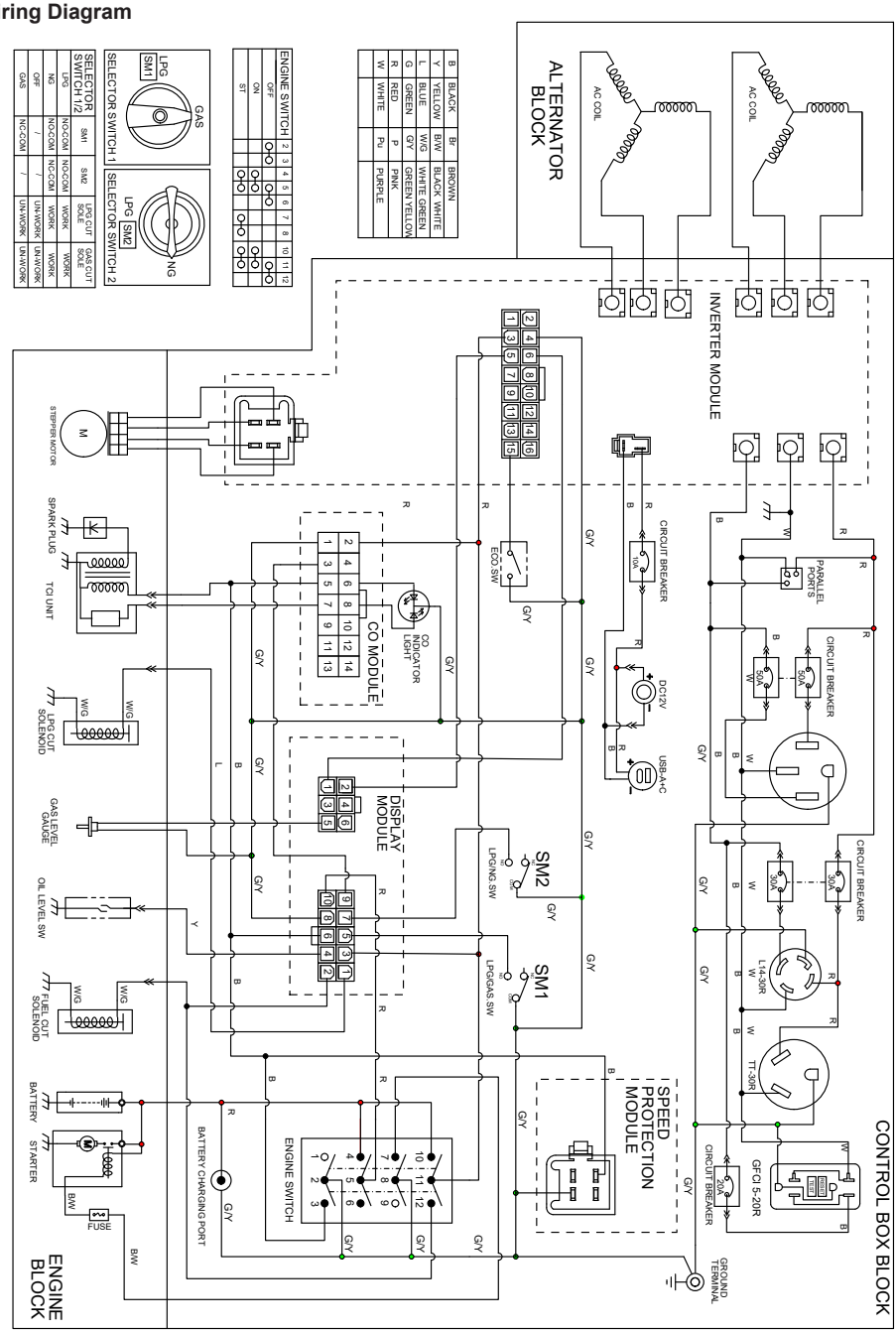
NO.	Part Number	Description	Qty.
1	336718308	Flange Bolt M6 x 8	3
2	355428307	Handle, Recoil	1
3	399728300	Guide, Rope	1
4	399418300	Starter Assy.	1
5	357723571	Nut M16	2
6	357723572	Pulley, Starter	1
7	392715500	Engine Cover	1
8	336718302	Flange Bolt M6 x 12	5
9	399728301	Cooling Fan	1
10	380418300	Flywheel	1
11	399718300	Bolt M5 x 20	8
12	399728302	Rear Cover, Muffler	1
13	399458300	Ignition Coil	1
14	336718311	Flange Bolt M6 x 29	2
15	399715636	Flange Bolt M8 x 20	3
16	399418301	Muffler Assy.	1
17	336718318	Nut M8	2
18	375718321	Wire Clip	2
19	399728304	Gasket, Muffler	1
20	336723526	Flange Bolt M6 x 15	13
21	399728305	Alternator Fan	1
22	399718302	Washer	1
23	399458301	Rotor Assy.	1
24	399718303	Flange Bolt M8 x 70	4
25	399458302	Stator Assy.	1
26	399715765	Position Pin Ø10 x 12	2
27	399718305	Flange Bolt M10 x 20	4
28	399728306	Front Cover, Muffler	1
29	360728307	Nylon Cord	1
30	357723515	Seal, Oil	2
31	317713577	Clip	2
32	336728303	Sheath, Wire	1
33	355428308	Quick Oil Drain Hose	1
34	330723604	Bolt, Drain	1
35	357723502	Oil Drainbolt Washer 12 x	2
36	399418302	Crankcase	1
37	357723503	Sensor, Engine Oil	1
38	393723008	Gasket, Crankcase	1
39	317723516	Dowel Pin 8 x 14	2
40	399418303	Crankshaft	1
41	357723507	Balance Shaft	1
42	393723009	Dipstick, Oil	1
43	357723505	Radial Ball Bearing 6202/	2
44	393713011	Crankcase Cover	1
45	357723516	Flange Bolt M8 x 40	10
46	357723517	Rod, Connecting	1
47	393713039	Piston Pin	1
48	357723518	Piston Pin Retainer Ring	2

NO.	Part Number	Description	Qty.
49	392467006	Ring,Oil	1
50	392467007	Ring, Second Piston	1
51	392467008	Ring, First Piston	1
52	392467009	Piston	1
53	399718309	Gasket, Cylinder Head	1
54	357723544	Dowel Pins Ø12 x 20	2
55	399418304	Cylinder Head	1
56	336723539	Exhaust Valve Stud Bolt	2
57	355718346	Bolt M10 x 1.25 x 80	4
58	399728307	Cylinder Head Shroud	1
59	330713523	Screw ST4.2 x 16	2
60	370728300	Gasket, OHV	1
61	330713548	Screw ST3.5 x 9.5	6
62	399418305	PCV	1
63	368728300	Gasket, PCV	1
64	370728302	OHV Cover	1
65	336723577	Flange Bolt M6 x 20	4
66	357723529	Breather Tube	1
67	393413005	Camshaft	1
68	399718311	Valve Lifter	2
69	399718312	Push Rod	2
70	317723574	Nut, Valve Adjusting	2
71	399718314	Rocker Arm Shaft	2
72	399718315	Bolt M6 x 16	4
73	355718338	Valve, Locking Clip	4
74	399718316	Retainer, Intake Valve	2
75	399718317	Valve Spring	2
76	355728333	Oil Seal, Valve	2
77	399718318	Crankcase	1
78	399718319	Intake Valve	1
79	380717007	Drain Plug M12 x 1.25 x 15	1
80	357713584	Flange Bolt M8 x 35	2
81	399418307	Starter Motor Assy.	1
81.1	399718320	Starter Motor	1
81.2	399458303	Relay, Starter	1
81.3	336713519	Flange Bolt M5 x 16	2
82	399718321	Lifting Lugs	1
83	399715634	Flange Bolt M8 x 25	1
84	399728308	Crankcase Air Guide	1
85	399428300	Air Cleaner	1
85.1	336723609	Flange Bolt M6 x 29	1
85.2	399728309	Air Cleaner Cover	1
85.3	399728310	Air Cleaner Element	1
85.4	399728311	Air Cleaner Base	1
86	355718320	Clamp 33-57	2
87	399728312	Hose, Air Cleaner	1

NO.	Part Number	Description	Qty.
88	375467022	Spark Plug	1
89	355718345	Stud Bolt M6 x M8 x 110	2
90	399728313	Gasket, Carburetor	1
91	399728314	Carburetor Connector	1
92	357723551	Gasket, Carburetor	1
93	399418308	Carburetor Assy.	1
93.1	399418309	Carburetor	1
93.2	355728354	Stepper Motor Bracket	1
93.3	355718397	Screw M4 x 10	4
93.4	399418310	Stepper Motor, Throttle	1
93.5	336718351	Bolt M4 x 8	2
94	399728315	Gasket, Air Cleaner	1
95	399428301	Intake Manifold Assy.	1
95.1	399728316	Intake Chamber Base	1
95.2	399718322	Manifold Screw	1
95.3	399728317	Intake Manifold Cover	1
95.4	357713550	Wing Nut M6	1
96	336723555	Nut M6	1
97	399418311	Recoil Assy.	1
98	399418312	Crankcase Assy.	1
99	399418313	Piston Rings Assy.	1
100	399418314	Cylinder Head Assy.	1
101	399418315	Gasket Assy.	1
102	399458304	Alternator Assy.	1
103	392467003	Bearing	1
104	330723526	Recoil, Rope Handle	1
105	317723575	Screw, Valve Adjusting	2
106	336718301	Flange Bolt M6 x 12	2
107	355428317	Quick Oil Drain Assy.	1
108	399718313	Rocker Arm	2

NO.	Part Number	Description	Qty.

Wiring Diagram



For service information contact FIRMAN customer service 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 3 YEARS LIMITED WARRANTY

Warranty Qualifications

Register your product using the QR code provided or at www.firmanpowerequipment.com. FIRMAN will also 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 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 customer service 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:
Firman Power Equipment Inc.
Attn: Customer Service
8644 W. Ludlow Dr.
Peoria, AZ 85381
www.firmanpowerequipment.com
We are FIRMAN POWER - And we are here for you.

FIRMAN POWER EQUIPMENT INC.
EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The United States Environmental Protection Agency (EPA) and FIRMAN POWER EQUIPMENT INC. (FIRMAN) are pleased to explain the emission control system warranty on your [2026-2027] model year small off-road engine/equipment. In the United States, new small off-road engine/equipment must be designed, built and equipped to meet the State's stringent anti smog standards. FIRMAN must warrant the emission control system on your small off-road engine/equipment for the period listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine/equipment leading to the failure of the emission 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 small off-road engine/equipment at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

This emission Control System is warranted for two years. If any emission-related part on your engine/equipment is defective, the part will be repaired or replaced by FIRMAN.

OWNER'S WARRANTY RESPONSIBILITIES:

As the small off-road engine/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 small off-road engine/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 small off-road engine/equipment owner, you should however be aware that FIRMAN may deny you warranty coverage if your small off-road engine/equipment or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications. You are responsible for presenting your small off-road engine/equipment to FIRMAN distribution center as soon as a 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 or www.firmanpowerequipment.com .

DEFECTS WARRANTY REQUIREMENTS:

(a) The warranty period begins on the date the engine/equipment is delivered to an ultimate purchaser.

(b) General Emissions Warranty Coverage. FIRMAN warrants to the ultimate purchaser and each subsequent owner that the engine/equipment is:

(1) Designed, built, and equipped so as to conform with all applicable regulations adopted by the Environmental Protection Agency; and

(2) Free from defects in materials and workmanship that causes the failure of a warranted part for a period of two years.

(c) The warranty on emissions-related parts will be interpreted as follows:

(1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions required by subsection (d) must be warranted for the warranty period defined in Subsection (b)(2). If any such part fails during the period of warranty coverage, it must be repaired or replaced by FIRMAN according to Subsection (4) below. Any such part repaired or replaced under the warranty must be warranted for the remaining warranty period.

(2) Any warranted part that is scheduled only for regular inspection in the written instructions required by subsection (d) must be warranted for the warranty period defined in Subsection (b)(2). A statement in such written instructions to the effect of “repair or replace as necessary” will not reduce the period of warranty coverage. Any such part repaired or replaced under warranty must be warranted for the remaining warranty period.

(3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions required by subsection (d) must be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part must be repaired or replaced by FIRMAN according to Subsection (4) below. Any such part repaired or replaced under warranty must 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 at all FIRMAN distribution centers that are franchised to service the subject engine/equipment.

(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/equipment components proximately caused by a failure under warranty of any warranted part.
(8) Throughout the emissions warranty period defined in Subsection (b)(2), FIRMAN must 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 FIRMAN.
(10) Add-on or modified parts that are not exempted by the Environmental Protection Agency may not be used. The use of any non-exempted add-on or modified parts will be grounds for disallowing a warranty claim. FIRMAN will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.
(11) FIRMAN issuing the warranty shall provide any documents that describe that manufacturer's warranty procedures or policies within five working days of request by the Environmental Protection Agency.

(d) Emission Warranty Parts List for exhaust (for all displacements).

1. Ignition system including:
 - Spark plug
 - Ignition coil
2. Fuel metering system:
 - Fuel tank
 - Fuel cap
 - Fuel lines (for liquid fuel and fuel vapors) and related fittings/clamps
 - Fuel regulator, carburetor and internal parts.
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

FIRMAN will furnish with each new engine/equipment written instructions for the maintenance and use of the engine/equipment by the owner.

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.

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FOR YOUR CHANCE TO WIN FIRMAN SWAG

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