TogoPOWER GG3600 Portable Generator Owner's Manual

GG3600 Portable Generator
Owner's Manual

IMPORTANT

Read the en re instruc on manual carefully and make sure that you fully understand it before you use the equipment.

NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us at:

+1 (855) 801-0798 (M-F 9am-5pm PST)

support@togopower.com

www.togopower.com

SAVE THIS MANUAL FOR FUTURE REFERENCE

Contents

Section 1 Introduction and Safety

Introduction

WARNING

Consult Manual. Read and understand the manual completely before using the product. Failure to completely understand manual and product could result in death or serious injury.

If any section of the manual is not understood, contact your nearest Independent Authorized Service Dealer (IASD), or contact BALDR INTERNATIONAL LLC Customer Service at **+1 (855)801-0798**, or **www.togopower.com** with any questions or concerns.
The owner is responsible for proper maintenance and safe use of the equipment. Before operating, servicing, or storing this generator:

- Study all warnings in this manual and on the product carefully.
- Become familiar with this manual and the unit before use.
- Refer to the Assembly section of the manual for instructions on final assembly procedures. Follow the instructions completely.

Save these instructions for future reference. ALWAYS supply this manual to any individual that will use this machine.
THE INFORMATION CONTAINED HEREIN WAS BASED ON MACHINES IN PRODUCTION AT THE TIME OF PUBLICATION. BALDR INTERNATIONAL LLC RESERVES THE RIGHT TO MODIFY THIS MANUAL AT ANY TIME.

Safety Rules

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all-inclusive. If using a procedure, work method, or operating technique that the manufacturer does not specifically recommend, verify that it is safe for others. Also make sure the procedure, work method, or operating technique utilized does not render the equipment unsafe.
Throughout this publication, and on tags and decals affixed to the generator, DANGER, WARNING, CAUTION, and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

 **DANGER**
Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 **WARNING**
Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 **CAUTION**
Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
NOTE: Notes contain additional information important to a procedure and will be found within the regular text of this manual.
These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

Safety Symbols and Meanings

DANGER	
Using a generator indoors CAN KILL YOU IN MINUTES. The generator exhaust contains carbon monoxide.	
	
NEVER use inside a home or garage, EVEN IF doors and windows are open.	**Only use OUTSIDI**

- The adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect the safe operation of the generator. The generator MUST be operated outdoors.

DANGER

Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury.

DANGER

Electrocution. Water contact with a power source, if not avoided, will result in death or serious injury.

DANGER

Electrocution. Turn utility and emergency power supply OFF before connecting the power source and load lines. Failure to do so will result in death or serious injury.

- It is recommended to obtain parts and services from your local IASD to keep this unit in safe working order.
- Do not operate the unit on uneven surfaces, or in areas where it can be exposed to excessive moisture, dirt, dust, or corrosive vapors.

WARNING

Moving Parts. Keep clothing, hair, and appendages away from moving parts. Failure to do so could result in death or serious injury.

WARNING

 **Hot Surfaces. When operting a machine, do not touch hot surfaces. Keep the machine away from combustibles during use. Hot surfaces could result in severe burns or fire.**

 **WARNING**

Equipment and property damage. Do not alter the construction of, installation, or block ventilation for the generator. Failure to do so could result in unsafe operation or damage to the generator.

 **WARNING**

Do not insert any object through the air cooling slots. The generator can start at any time and could result in death, serious injury, and unit damage.

- When working on this equipment, remain alert at all times.
- Never work on the equipment when physically or mentally fatigued.
- Never use the generator or any of its parts as a step. Stepping on the unit can stress and brake parts, and may result in dangerous operating conditions from leaking
  exhaust gases, fuel leakage, oil leakage, etc.

Exhaust and Location Hazards

 **DANGER**

 **Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury.**

 **DANGER**

 **The exhaust system must be properly maintained. Do not alter or modify the exhaust system to render it unsafe or make it non-compliant with local codes and/or standards. Failure to do so will result in death or serious injury.**

 **WARNING**

 **Asphyxiation. Always use a battery-operated carbon monoxide alarm indoors and installed it according to the manufacturer's instructions. Failure to do so could result in death or serious injury.**

 **WARNING**

Equipment and property damage. Do not alter the construction of, installation, or block ventilation for the generator. Failure to do so could result in unsafe operation or damage to the generator.

- If you start to feel sick, dizzy, or weak after the generator has been running, move to fresh air IMMEDIATELY. See a doctor, as you could have carbon monoxide poisoning.

Electrical Hazards

 **DANGER**

 **Electrocution. Contact with bare wires, terminals, and connections while the generator is running will result in death or serious injury.**

 **DANGER**

 **Electrocution. Water contact with a power source, if not avoided, will result in death or serious injury.**

- National Electric Code (NEC) requires the frame and external electrically conductive parts of the generator to be properly connected to approved earth ground. Local electrical codes may also require proper grounding of the generator. Consult with a local electrician for grounding requirements in the area.
- Use a ground fault circuit interrupter (GFCI) in any damp or highly conductive area (such as metal decking or steelwork).

 **DANGER**

 **Electrocution. In the event of an electrical accident, immediately shut power OFF. Use non-conductive implements to free the victim from live conduction. Apply first aid and get medical help. Failure to do so will result in death or serious injury.**

 **WARNING**
Accidental Start-up. Disconnect the negative battery cable, then the positive battery cable when working on the unit. Failure to do so could result in death or serious injury.

Fire Hazards

 **DANGER**

 **Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Add fuel in a well-ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury.**

 **DANGER**

 **Do not overfill the fuel tank. Fill to 1/2 in. of top of the tank to allow for fuel expansion. Overfilling may cause fuel to spill onto the engine causing fire or explosion, which will result in death or serious injury.**

 **DANGER**

Risk of fire. Allow fuel spills to completely dry before starting the engine. Failure to do so will result in death or serious injury.

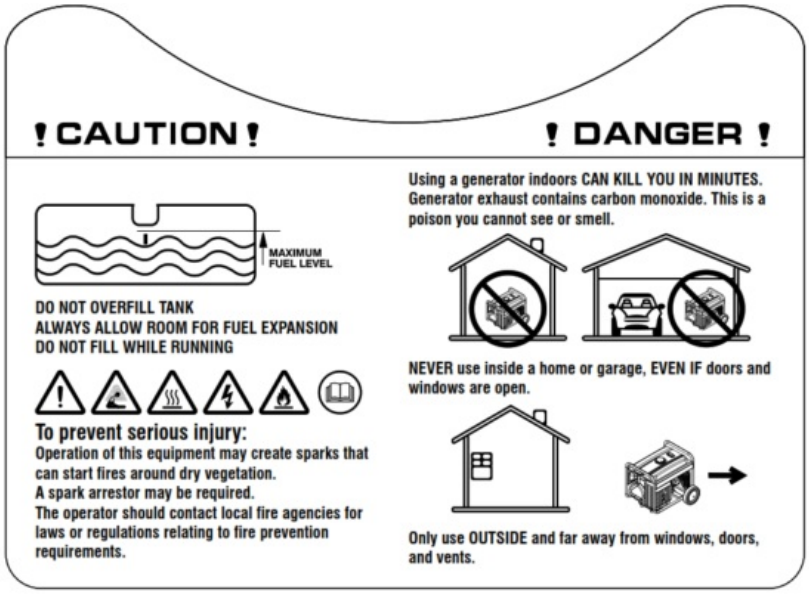
WARNING

Do not insert any object through the air cooling slots. The generator can start at any time and could result in death, serious injury, and unit damage.

- Do not operate the generator if connected electrical devices overheat if the electrical output is lost if the engine or generator sparks, or if flames or smoke are observed while the unit is running.
- Keep a fire extinguisher near the generator at all times.

Replacement Hazard Labels

Vertical CO Warning Decal



Section 2 General Information and Setup

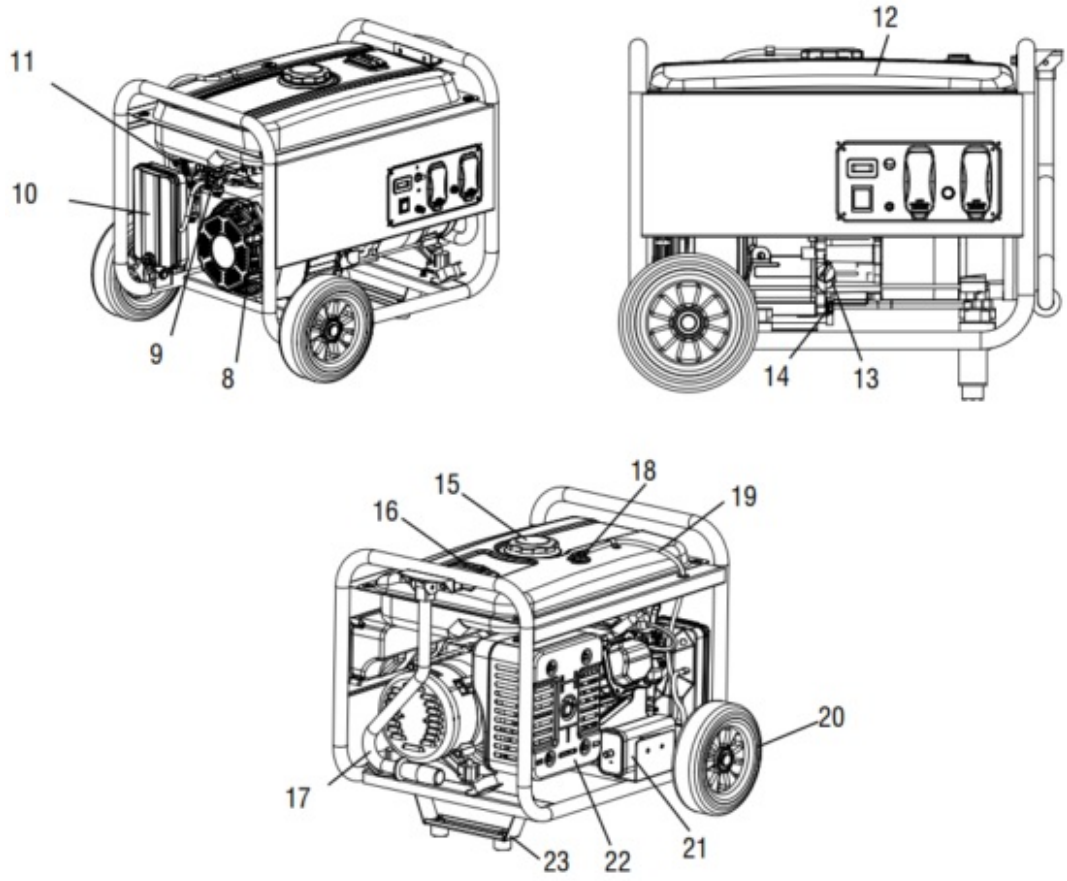


Figure 2-1. Features and Controls

Generator Components

TABLE 1

1 120 Volt AC, 20 Amp, Duplex Receptacle 2 120 Volt AC, 30 Amp Locking Receptacle 3 25 Amp Circuit Breaker (AC) 4 20 Amp Circuit Breaker (AC) 5 ON/OFF Switch 6. Hour Meter 7 Grounding 8 Recoil Starter 9 Fuel Shut Off 10 Air Filter 11 CHOKE Knob 12 Fuel Tank	13 Oil Fill 14 Oil Drain 15 Gas Cap 16 Fuel Gauge 17 Handle 18 Roll Over Valve 19 Recovery Hose 20 Wheel 21 Carbon Canister (CARI 22 Muffler 23 Frame Foot

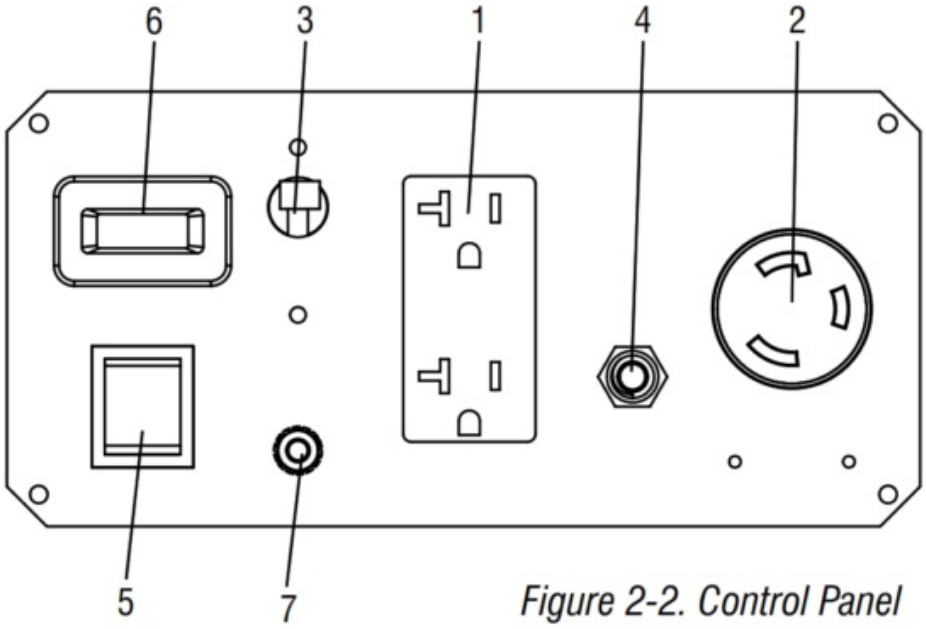


Figure 2-2. Control Panel

Know Your Generator

WARNING

Consult Manual. Read and understand the manual completely before using the product. Failure to completely understand manual and product could result in death or serious injury.
Replacement owner's manuals are available at **www.togopower.com**.

Emissions

The United States Environmental Protection Agency (US EPA) (and California Air Resources Board (CARB), for engines/equipment certified to California standards) requires that this engine/equipment complies with exhaust and evaporative emissions standards. Locate the emissions compliance decal on the engine to determine applicable standards. For emissions warranty information, please reference the included emissions warranty. It is important to follow the maintenance specifications in the manual to ensure that the engine complies with the applicable emissions standards for the duration of the product's life.

Product Specifications

TABLE 2.

Generator Specifications	
Rated Power	3.0 kW
Peak Power	3.6 kW
Rated AC Voltage	120 V
Rated AC Load Current @ 120V	25 Amps
Rated Frequency	60 Hz @ 3600 RPM
Phase	Single Phase
Generator Dry Weight (assembled)	104.7 lbs. (47.5 kg)
** Operating Temperature Range: -18 deg. C (0 deg. F) to 40 Deg. C (104 Deg. F). When operated above 25 deg. C (77 deg. F) there may be a decrease in power. ** Maximum wattage and current are subject to and limited by, such factors as fuel Btu content, ambient temperature, altitude, engine condition, etc. Maximum power decreases about 3.5% for every 1,000 feet above sea level; and will also decrease about 1% for each 6° C (10° F) above 16° C (60° F) ambient temperature.	
Engine Specifications	
Displacement	208 cc
Spark Plug Type	F6TC
Spark Plug Gap	0.7-08 mm (0.028-0.031 inch)
Gasoline Capacity	3.17 gal (12 L)
Oil Type	See Chart in the Add Engine Oil Section
Oil Capacity	0.634 qt (0.6 L)
Run Time at 50% Load	9.5 Hours
* Go to **www.togopower.com** or contact an IASD for replacement parts.	

Hour Meter

The Hour Meter tracks hours of operation for scheduled maintenance. See Figures 2-3.

NOTE: The hourglass icon will flash when the engine is running. This signifies the meter is recording hours of operation

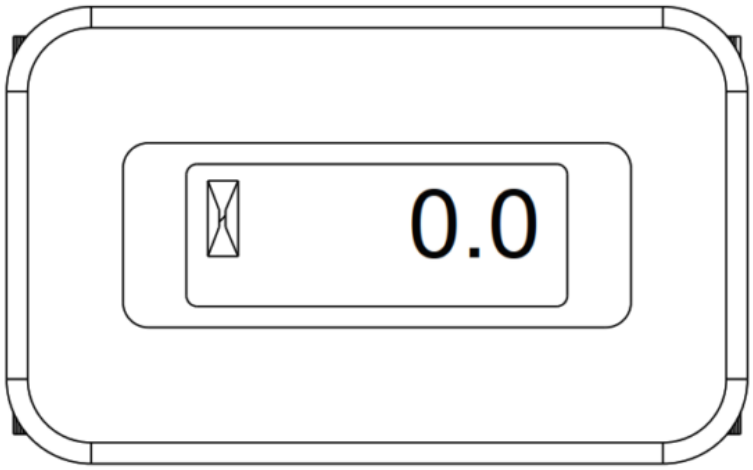


Figure 2-3. Hour Meter

Connection Plugs

120 VAC, 20 Amp, Duplex Receptacle

The 120 Volt outlet is overload protected by a 20 Amp push-to-reset circuit breaker. See Figures 2-4. Each receptacle will power 120 Volt AC, single phase, 60 Hz electrical loads requiring up to 2400 watts (2.4 kW) or 20 Amps of current. Use only high-quality, well-insulated, 3-wire grounded cord saturated for 125 Volts at 20 Amps (or greater).

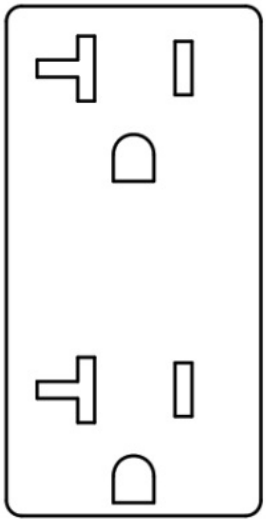


Figure 2-4. 120 VAC, 20 Amp, Duplex Receptacle NEMA 5-20R

120 VAC, 30 Amp Receptacle

Use a NEMA L5-30 plug with this receptacle (rotate to lock/unlock). Connect a suitable 3- wire cord set to the plug and to the desired load. The cord set should be rated for 125 Volts AC at 30 Amps (or greater). See Figures 2-5. Use this receptacle to operate 120 Volt AC, 60Hz, single-phase loads requiring up to 3000 watts (3.0kW) of power at 25 Amps. The outlet is protected by a 25 Amp circuit breaker.

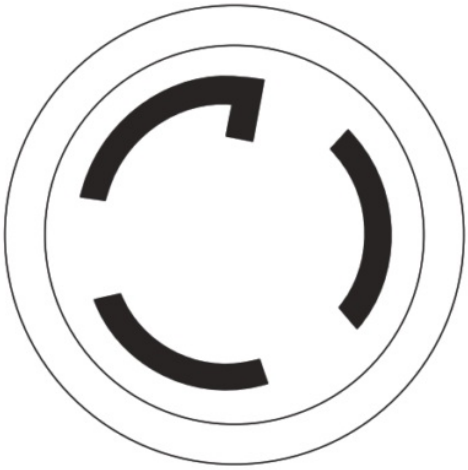


Figure 2-5. 120 VAC, 30 Amp Receptacle

Remove Contents from Carton

1. Open the carton completely by cutting each corner from top to bottom.
2. Remove and verify carton contents prior to assembly. Carton contents should contain the following:

Accessories

TABLE 3.

Item	**Item**
Main Unit	1
Owner’s Manual	1
Liter Oil SAE 30 with Funnel	1
Rain cover	1
Handle Assembly (A)	1
Never-flat Wheel (D)	2

Frame Foot Assembly (G)	1
Quick set-up guide	1
Emissions Warranty	1
Hardware Bag	**Qty.**
M8-1.25 x 40 Bolt (B)	2
Axle Pin (C)	2
Flat Washer (E)	2
Cotter Pin (F)	2
M8-1.25 x 16 Bolt (H)	2

1. Call BALDR INTERNATIONAL LLC Customer Service +1 (855)801-0798 with the unit model and serial number for any missing carton contents.
2. Record model, serial number, and date of purchase on the front cover of this manual.

Assembly

 **WARNING**

 **Consult Manual. Read and understand the manual completely before using the product. Failure to completely understand manual and product could result in death or serious injury**.
Call BALDR INTERNATIONAL LLC Customer Service at +1 (855)801-0798 for any assembly issues or concerns. Please have the model and serial number available.

The following tools are required to install the accessory kit.

- Ratchet
- 12mm socket
- 12mm wrench

NOTE: The wheels are not intended for over-the-road use. Install wheels as follows. See Figures 2-6.

1. Slide axle pin (C) through the wheel (D), wheel bracket on frame, and flat washer (E).
2. Insert cotter pin (F) through-axle pin (C). r

Install frame foot assembly as shown in Figures 2-6.

1. Place frame foot assembly (G) underframe. Secure with M8-1.25 x 16 bolts (H).

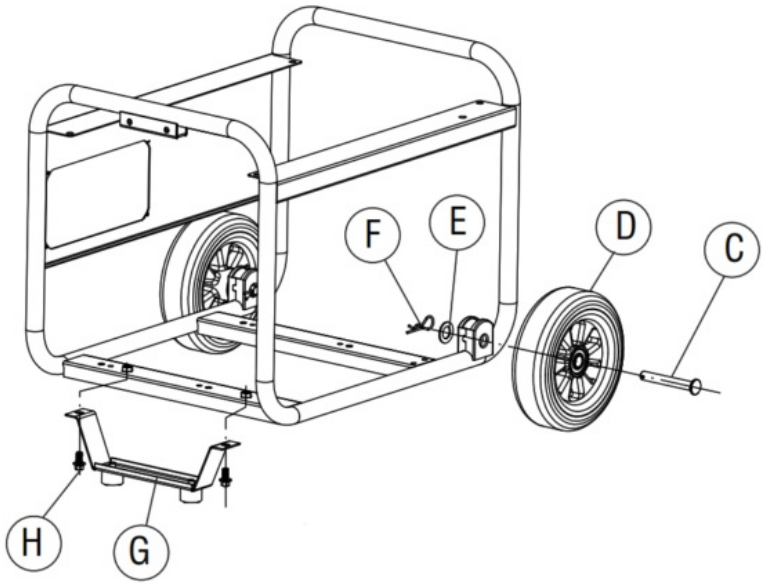


Figure 2-6. Wheel & Frame Foot Assembly

Install Handle assembly(A) as shown in Figures 2-7

- Install the handle assembly(A) to the frame using two M8-1.25 x 40 bolts (B)

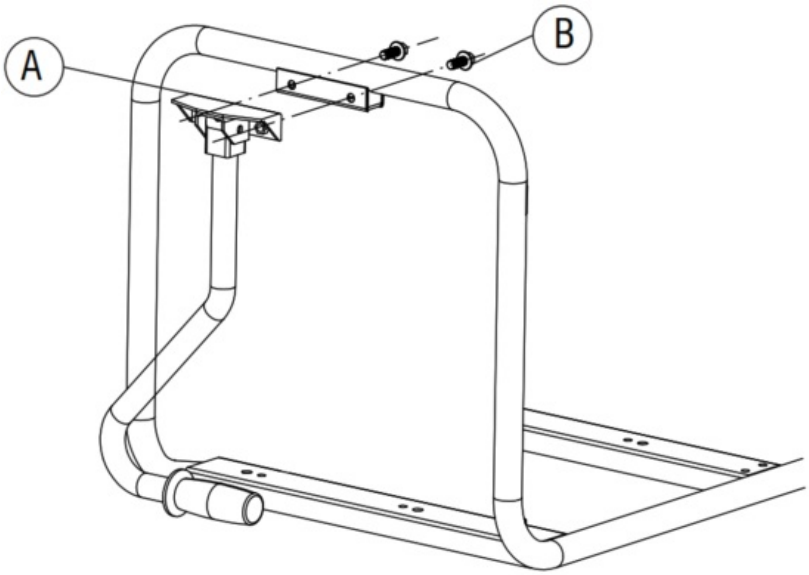


Figure 2-7. Handle Assembly

Add Engine Oil

CAUTION
Engine damage. Verify the proper type and quantity of engine oil prior to starting the engine. Failure to do so could result in engine damage.

1. Place the generator on a level surface.
2. Verify oil fill area is clean.
3. Remove oil fill cap and wipe dipstick clean. See Figures 2-8.

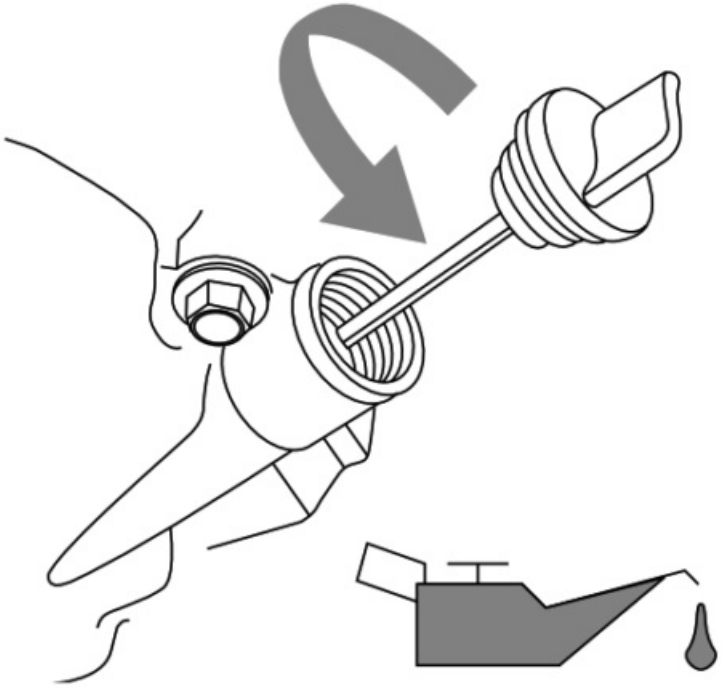
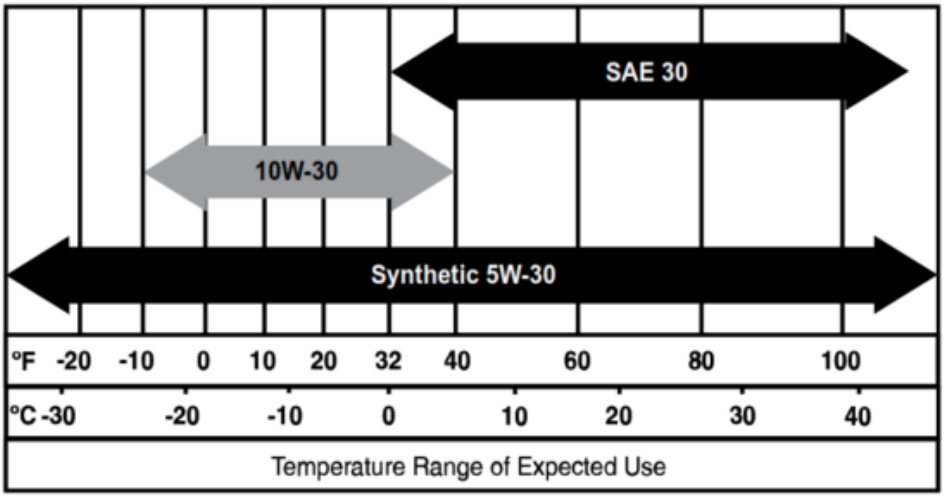


Figure 2-8. Remove Dipstick

4. Add recommended engine oil as shown in the following chart.

   NOTE: Use petroleum-based oil (supplied) for engine break-in before using synthetic **oil.**



   NOTE: Some units have more than one oil fill location. It is only necessary to use one oil fill point.

5. Thread dipstick into the oil filler neck. The oil level is checked with a dipstick fully installed.
6. See Figures 2-9. Remove the dipstick and verify the oil level is within safe operating range.

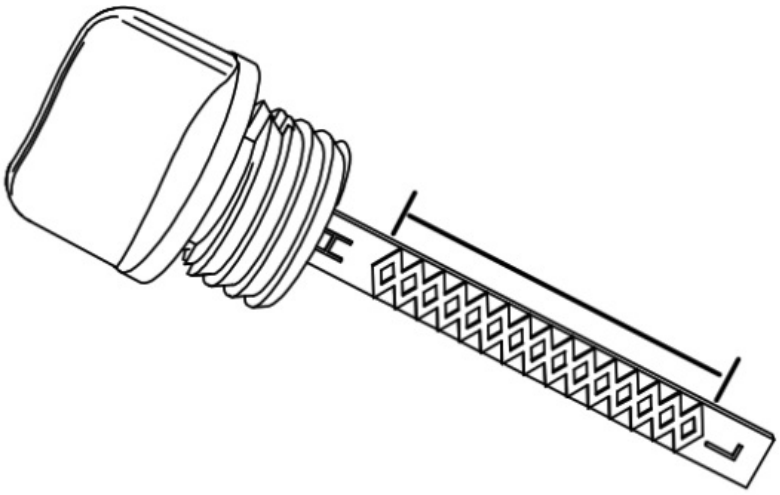


Figure 2-9. Safe Operating Range

7. Install oil fill cap/dipstick and hand-tighten.

Fuel

DANGER

Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Add fuel in a well-ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury.

DANGER

Explosion and Fire. Do not overfill the fuel tank. Fill to 1/2 inch from the top of the tank to allow for fuel expansion. Overfilling may cause fuel to spill onto the engine causing fire or explosion, which will result in death or serious injury.

Fuel requirements are as follows:

- Clean, fresh, unleaded gasoline.
- Minimum rating of 87 octane/87 AKI (91 RON).
- Up to 10% ethanol (gasohol) is acceptable (where available; non-ethanol-premium fuel is recommended).
- DO NOT use E85.
- DO NOT use a gas oil mix.
- DO NOT modify the engine to run on alternate fuels. Stabilize fuel prior to storage.

1. Verify unit is OFF and cooled for a minimum of two minutes prior to fueling.
2. Place the unit on level ground in a well-ventilated area.
3. Clean the area around the fuel cap and remove the cap slowly.
4. Slowly add recommended fuel (A). Do not overfill (B). See Figure 2-10.
5. Install fuel cap.

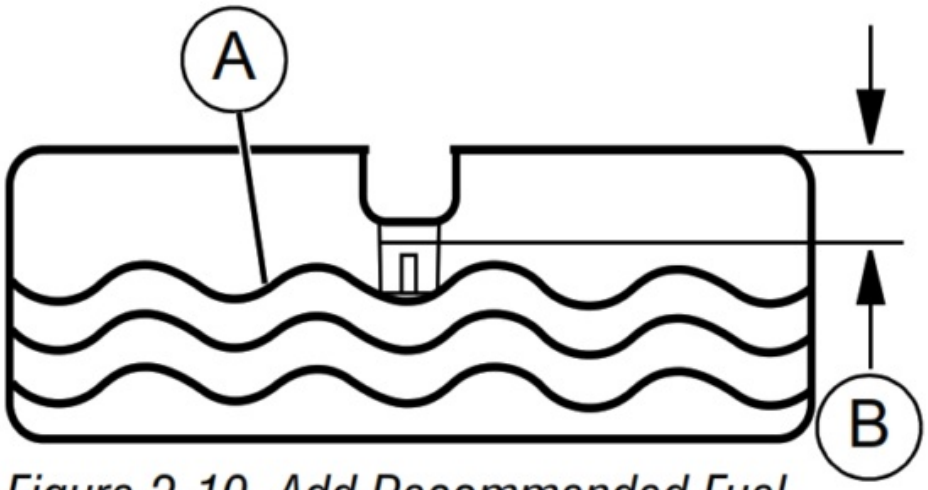


Figure 2-10. Add Recommended Fuel

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

Section 3 Operation

Operation and Use Questions

Call BALDR INTERNATIONAL LLC customer service at +1 (855)801-0798 with questions or concerns about equipment operation and maintenance.

Before Starting Engine

1. Verify engine oil level is correct.
2. Verify fuel level is correct.
3. Verify unit is secure on level ground, with proper clearance, and is in a well-ventilated area.

Prepare Generator for Use

DANGER

Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury.

DANGER

Asphyxiation. The exhaust system must be properly maintained. Do not alter or modify the exhaust system to render it unsafe or make it non-compliant with local codes and/or standards. Failure to do so will result in death or serious injury.

 **DANGER**

 **Risk of fire. Do not use the generator without a spark arrestor installed. Failure to do so could result in death or serious injury.**

 **DANGER**

 **Asphyxiation. Always use a battery-operated carbon monoxide alarm indoors and installed it according to the manufacturer's instructions. Failure to do so could result in death or serious injury.**

 **WARNING**

 **Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury.**

 **WARNING**

 **Hot Surfaces. When operating a machine, do not touch hot surfaces. Keep the machine away from combustibles during use. Hot surfaces could result in severe burns or fire.**

 **CAUTION**

Equipment and property damage. Disconnect electrical loads prior to starting or stopping the unit. Failure to do so could result in equipment and property damage.

Grounding the Generator When Used as a Portable

This generator has an equipment ground that connects the generator frame components to the ground terminals on the AC output receptacles (see NEC 250.34 (A) for explanation). This allows the generator to be used as a portable without grounding the frame of the generator as specified in NEC 250.34.

Special Requirements

There may be federal or State Occupational Safety and Health Administration (OSHA) regulations, local codes, or ordinances that apply to the intended use of the generator. Please consult a qualified electrician, electrical inspector, or the local agency having jurisdiction:

- In some areas, generators are required to be registered with local utility companies.
- If the generator is used at a construction site, there may be additional regulations that must be observed.

Connecting the Generator to a Building Electrical System

When connecting directly to a building's electrical system, it is recommended that a manual transfer switch is used. Connections for a portable generator to a building's electrical system must be made by a qualified electrician and in strict compliance with all national and local electrical codes and laws.

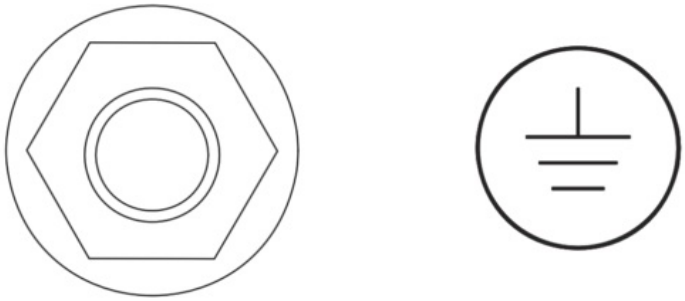


Figure 8 - Grounding the Generator

Know Generator Limits

Overloading a generator can result in damage to the generator and connected electrical devices. Observe the following to prevent overload:

- Add up the total wattage of all electrical devices to be connected at one time. This total should NOT be greater than the generator's wattage capacity.
- The rated wattage of lights can be taken from light bulbs. The rated wattage of tools, appliances, and motors can be found on a data label or decal affixed to the device.
- If the appliance, tool, or motor does not give wattage, multiply volts times ampere rating to determine watts (volts x amps = watts).
- Some electric motors, such as induction types, require about three times more watts of power for starting than for running. This surge of power lasts only a few seconds when starting such motors. Make sure to allow for high starting wattage when selecting electrical devices to connect to the generator:

1. Figure the watts needed to start the largest motor.
2. Add to that figure the running watts of all other connected loads.

The Wattage Reference Guide is provided to assist in determining how many items the generator can operate at one time.
NOTE: All figures are approximate. See the data label on the appliance for wattage requirements.

Wattage Reference Guide

Table 4.

Device	Running Watts	Device	Running Watts
		Hand Drill	600
Air Conditioner (12,000 Btu)	1700	Hedge Trimmer	450

Air Conditioner (24,000 Btu)	3800	Impact Wrench	500
Air Conditioner (40,000 Btu)	6000	Iron	1200
Battery Charger (20 Amp)	500	Jet Pump	800
Belt Sander (3″)	1000	Lawn Mower	1200
Chain Saw	1200	Light Bulb	100
Circular Saw (6-1/2″)	800 to 1000	Microwave Oven	1000
Clothes Dryer (Electric)	5750	Milk Cooler	1100
Clothes Dryer (Gas)	700	Oil Burner on Furnace	300
Clothes Washer	1150	Oil Fired Space Heater (140,000 Btu)	400
Coffee Maker	1500	Oil Fired Space Heater (85,000 Btu)	225
Compressor (1 HP)	2000	Oil Fired Space Heater (30,000 Btu)	150
Compressor (3/4 HP)	1800	Paint Sprayer, Airless (1/3 HP)	600
Compressor (1/2 HP)	1400	Paint Sprayer, Airless (hand-held)	150
Curling Iron	700	Radio	50 to 200
Dehumidifier	650	Refrigerator	700

Disc Sander (9″)	1200	Slow Cooker	250
Edge Trimmer	500	Submersible Pump (1-1/2 HP)	2800
Electric Blanket	400	Submersible Pump (1 HP)	2000
Electric Nail Gun	1200	Submersible Pump (1/2 HP)	1500
Electric Range (per element)	1500	Sump Pump	800 to 1050
Electric Skillet	1250	Table Saw (10″)	2000
Freezer	700	Television	200 to 500
Furnace Fan (3/5 HP)	875	Toaster	1000 to 1650
Garage Door Opener	500 to 750	Weed Trimmer	500
Hair Dryer	1200		
Allow 3 times the listed watts for starting these devices.			

Transporting/Tipping of the Unit

Do not operate, store or transport the unit at an angle greater than 15 degrees.

Starting Pull Start Engines

WARNING

Recoil Hazard. Recoil could retract unexpectedly. Kickback could result in death or serious injury.

CAUTION

Equipment and property damage. Disconnect electrical loads prior to starting or stopping the unit. Failure to do so could result in equipment and property damage.

1. Unplug all electrical loads from the unit's receptacles before starting the engine.
2. Place generator on a level surface.
3. See Figures 3-2. Open the fuel shut-off valve (A).
4. Turn engine ON/OFF switch (B) to ON. See Figures 3-2.

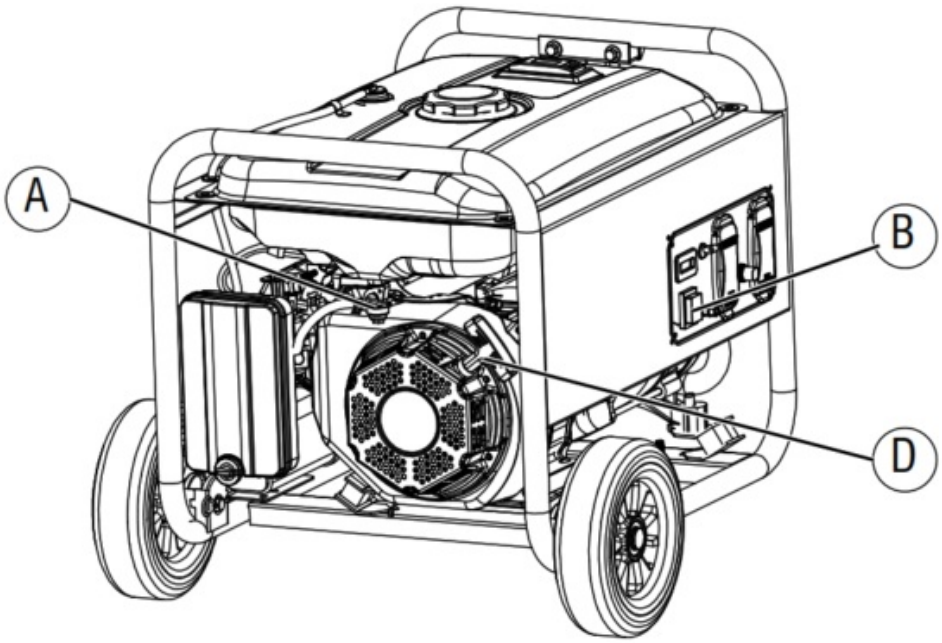
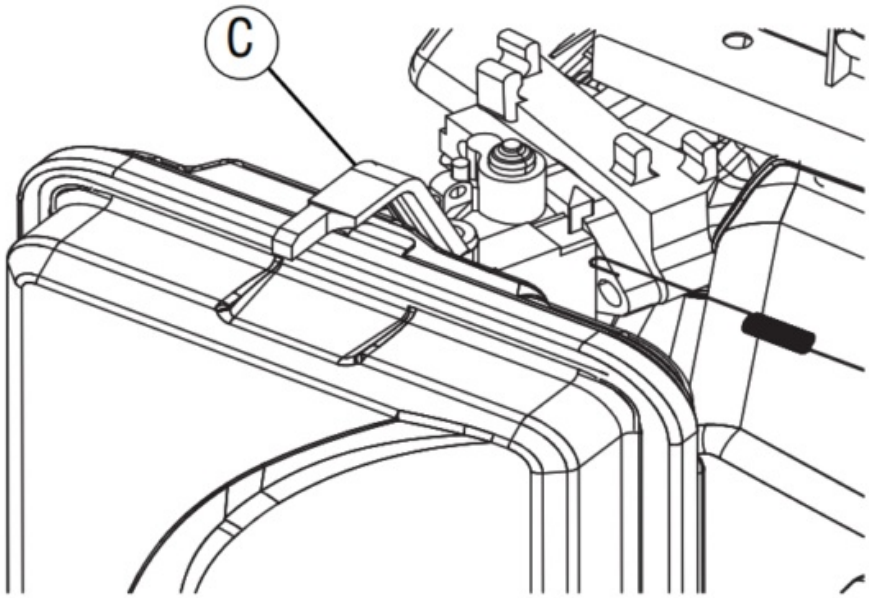


Figure 3-2.Engine Controls

5. Slide engine choke (C) to Full CHOKE position (left). See Figure 3-3.



6. See Figures 3-2. Firmly grasp recoil handle (D) and pull slowly until increased resistance is felt. Pull rapidly up and away.
7. When the engine starts, move the choke knob to the RUN position. If engine falters, move to choke back to 1/2- CHOKE position until engine runs smoothly, then to RUN position.

NOTE: If the engine fires, but does not continue to run, move the choke lever to Full CHOKE and repeat starting instructions.

IMPORTANT NOTE: Do not overload the generator or individual panel receptacles. These outlets are overload protected with push to- reset circuit breakers. If the amperage rating of any circuit breaker is exceeded, that breaker opens and electrical output to that receptacle is lost. Read Know Generator Limits carefully.

Generator Shut Down

CAUTION

Equipment and property damage. Disconnect electrical loads prior to starting or stopping the unit. Failure to do so could result in equipment and property damage.

1. Shut off all loads and unplug electrical loads from generator panel receptacles.
2. Let the engine run at no-load for several minutes to stabilize the internal temperatures of the engine and generator.
3. Move ON/OFF switch to OFF.
4. Close the fuel valve.

NOTE: Under normal conditions, close the fuel valve and allow the generator to run the carburetor bowl out of fuel. For emergencies, switch to OFF.

Low Oil Level Shutdown System

The engine is equipped with a low oil level sensor that shuts down the engine automatically when the oil level drops below a specified level. The engine will not run until the oil has been filled to the proper level. If the engine shuts down and there is sufficient fuel, check the engine oil level.

Section 4 Maintenance and Troubleshooting

Maintenance

Regular maintenance will improve performance and extend engine/equipment life. BALDR INTERNATIONAL LLC. recommends that all maintenance work be performed by an Independent Authorized Service Dealer (IASD). Regular maintenance, replacement, or repair of the emissions control devices and systems may be performed by any repair shop or a person of the owner's choosing. However, to obtain an emissions control warranty service free of charge, the work must be performed by an IASD. See the emissions warranty.
NOTE: Call BALDR INTERNATIONAL LLC customer service at +1 (855)801-0798 with questions about component replacement.

Maintenance Schedule

Follow maintenance schedule intervals, whichever occurs first according to use.
NOTE: Adverse conditions will require more frequent service.
NOTE: All required services and adjustments should be each season as detailed in the following chart.

At Each Use
Check engine oil level
Every 50 Hours
Clean Air Filter
Every 100 Hours or Every Season
Change Oil ǂ
Clean/Gap Spark Plug
Every 200 Hours or Every Season
Replace Air Filter
Replace Spark Plug
Check/Adjust Valve Clearance
ǂ Change oil after the first 30 hours of operation, then every season. 1. Change oil and oil filters every month when operating under heavy load or in high temperatures. 2. Clean more often under dirty or dusty operating conditions. Replace air filter parts if they cannot be adequately cleaned. 3. Check valve clearance and adjust if necessary after the first 50 hours of operation and every 300 hours there after.

Preventive Maintenance

Dirt or debris can cause improper operation and equipment damage. Clean generator daily or before each use. Keep the area around and behind the muffler free from combustible debris. Inspect all cooling air openings on the generator.

 **WARNING**

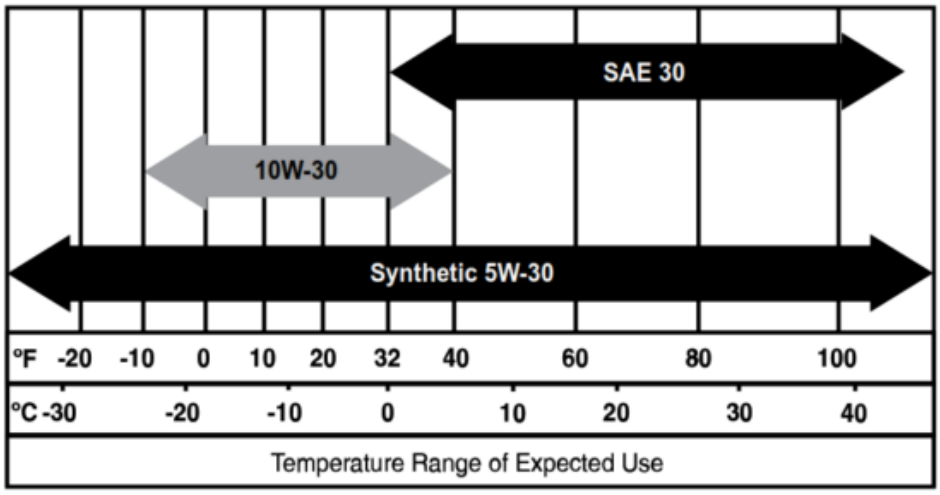
Do not insert any object through the air cooling slots. The generator can start at any time and could result in death, serious injury, and unit damage.

- Use a damp cloth to wipe exterior surfaces clean.
- Use a soft bristle brush to loosen caked-on dirt, oil, etc.
- Use a vacuum to pick up loose dirt and debris.
- Low-pressure air (not to exceed 25 psi) may be used to blow away dirt. Inspect cooling air slots and openings on the generator. These openings must be kept clean and unobstructed.

NOTE: DO NOT use a garden hose to clean the generator. Water can enter the engine's fuel system and cause problems. If water enters the generator through cooling air slots, some water will be retained in voids and crevices of rotor and stator winding insulation. Water and dirt buildup on generator internal windings will decrease the insulation resistance of windings.

Engine Maintenance

WARNING
Accidental start-up. Disconnect spark plug wires when working on the unit. Failure to do so could result in death or serious injury.
Engine Oil Recommendations
To maintain the product warranty, the engine oil should be serviced in accordance with the recommendations of this manual. For your convenience, BALDR INTERNATIONAL LLC Maintenance Kits are available that include engine oil, oil filter, air filter, spark plug(s), a shop towel, and funnel. These kits can be obtained from an Independent Authorized Service Dealer (IASD). Only high-quality detergent oils classified for service SF, SG, SH, SJ, or higher are recommended. DO NOT use special additives. Climate determines proper engine oil viscosity. See chart to select correct viscosity.



Inspect Engine Oil Level

WARNING

Risk of burns. Allow the engine to cool before draining oil or coolant. Failure to do so could result in death or serious injury.
Inspect engine oil level prior to each use, or every 8 hours of operation.

1. Place generator on a level surface.
2. Clean area around oil fill.
3. See Figure 4-1. Remove oil fill cap and wipe dipstick clean.

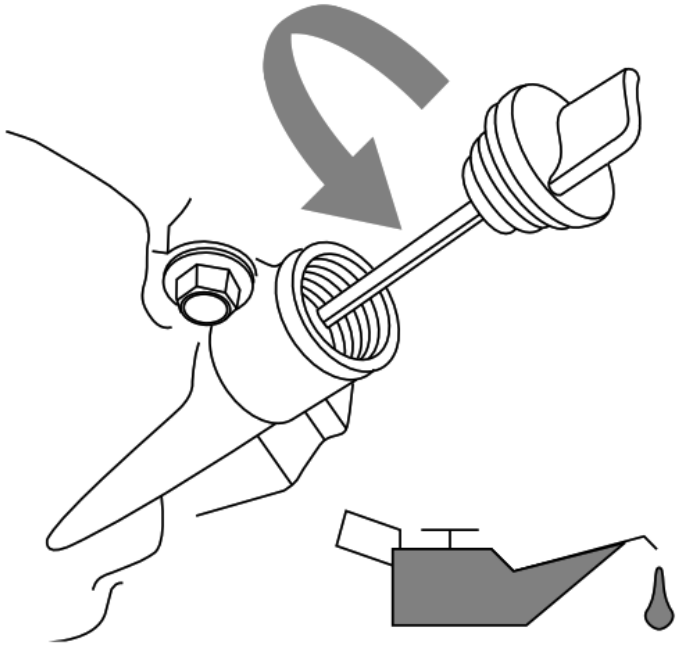


Figure 4-1. Engine Oil Fill

4. Screw dipstick into the filler neck. Remove the dipstick and verify the oil level is within safe operating range. See Figure 4-2.

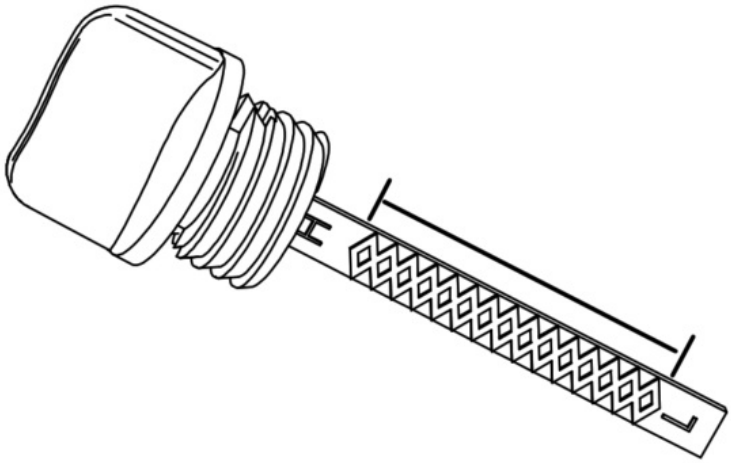


Figure 4-2. Safe Operating Range

5. Add recommended engine oil as necessary.
6. Replace oil fill cap and hand-tighten.

NOTE: Some units have more than one oil fill location. It is only necessary to use one oil fill point.

Change Engine Oil

WARNING

Accidental start-up. Disconnect spark plug wires when working on the unit. Failure to do so could result in death or serious injury.

When using a generator under extreme, dirty, dusty conditions, or in extremely hot weather, change the oil more frequently.

NOTE: Don't pollute. Conserve resources. Return used oil to collection centers. Change oil while the engine is still warm from running, as follows:

1. Place the generator on a level surface.
2. Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact the spark plug.

3. Clean area around oil fill, and oil drain plug.
4. Remove oil fill cap.
5. Remove the oil drain plug and drain oil completely into a suitable container.
6. Install the oil drain plug and tighten it securely.
7. Slowly pour oil into the oil fill opening until the oil level is between L and H marks on the dipstick. DO NOT overfill.
8. Install oil fill cap, and finger tighten.
9. Wipe up any spilled oil.
10. Properly dispose of oil in accordance with all applicable regulations.

Air Filter
The engine will not run properly and may be damaged if run with a dirty air filter. Service air filters more frequently in dirty or dusty conditions.
To service air filter:

1. See Figures 4-3. Turn knob (A) and remove air filter cover (B).
2. Wash in soapy water. Squeeze filter (C) and dry in a clean cloth (DO NOT TWIST).
3. Clean air filter cover before re-installing it.

NOTE: To order a new air filter, contact the nearest authorized service center at +1 (855) 801-0798.

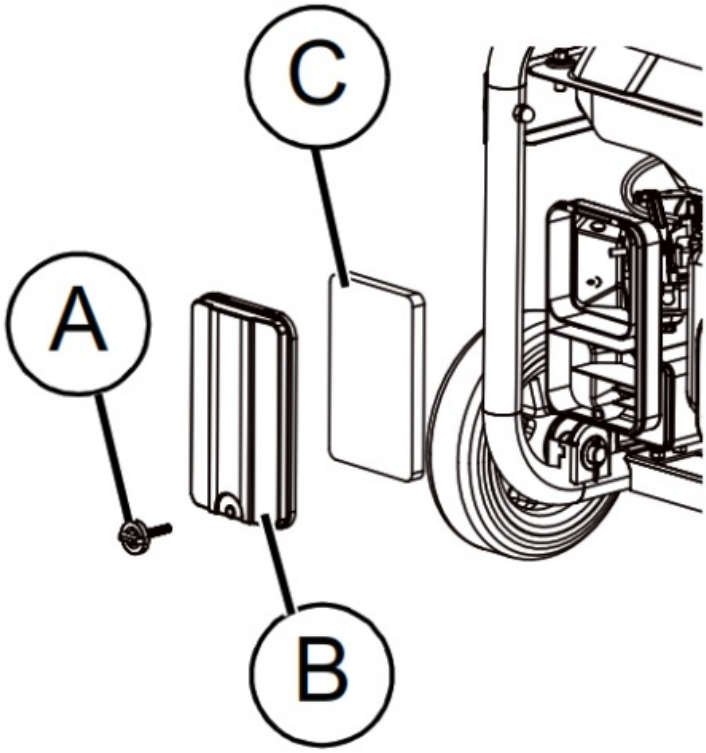


Figure 4-3. Air Filter Assembly

Service Spark Plug
To service spark plug:

1. Clean area around the spark plug.
2. Remove and inspect the spark plug.
3. Inspect the electrode gap with the wire feeler gauge and reset the spark plug gap to 0.028 – 0.031 in (0.70 – 0.80 mm). See Figure 4-4.

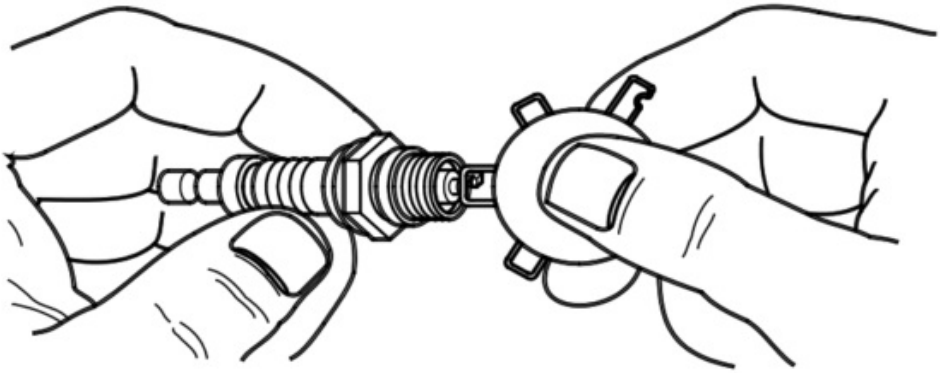


Figure 4-4. Spark Plug

NOTE: Replace the spark plug if electrodes are pitted, burned or porcelain is cracked. Use ONLY recommended replacement plug. See Specifications.

4. Install spark plug finger tight, and tighten an additional 3/8 to 1/2 turn using spark plug wrench.

Inspect Muffler and Spark Arrestor

NOTE: Use ONLY original equipment replacement parts.
Inspect muffler for cracks, corrosion, or other damage. Remove spark arrestor, if equipped, inspect for damage or carbon blockage. Replace parts as required.

Inspect Spark Arrestor Screen

WARNING

Hot Surfaces. When operating a machine, do not touch hot surfaces. Keep the machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

1. Loosen clamp (A) and remove the screw. See Figures 4-5.
2. Inspect screen (B) and replace if torn, perforated, or otherwise damaged. If the screen is not damaged, clean it with a commercial solvent.
3. Replace spark arrestor cone (C) and screen (B). Secure with clamp (A) and screw.

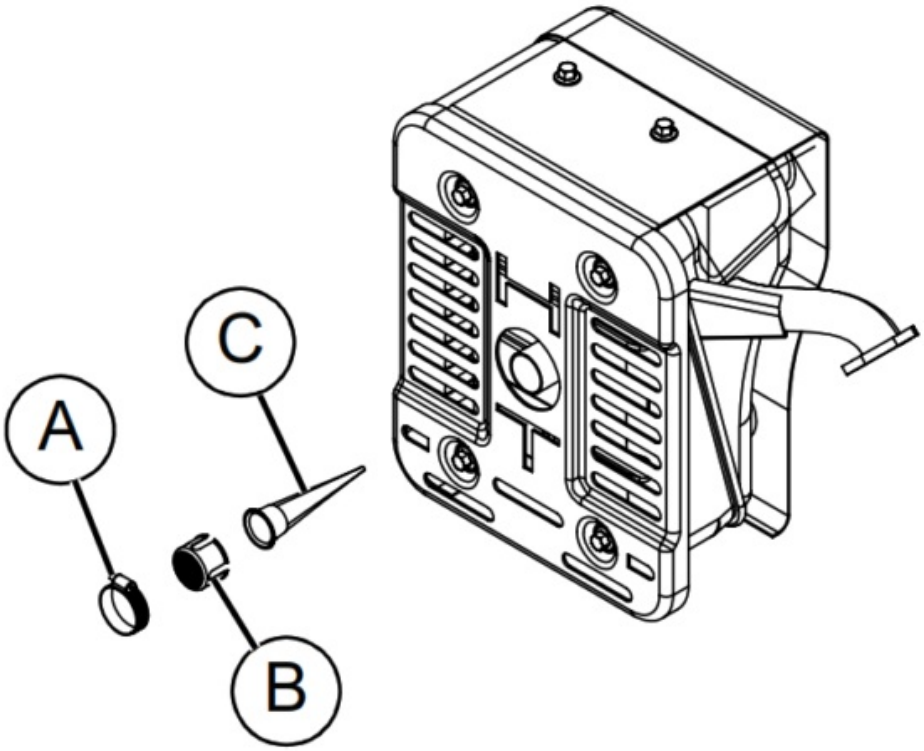


Figure 4-5. Spark Arrestor Screen

Valve Clearance

IMPORTANT NOTE: If uncomfortable about doing this procedure, or the proper tools are not available, take the generator to the nearest service center to have valve clearance adjusted.
Check valve clearance after the first fifty hours of operation. Adjust as necessary.

- Intake — 0.15 ± 0.02mm (cold), (0.006 ± 0.0008 in)
- Exhaust — 0.20 ± 0.02mm (cold) (0.008 ± 0.0008 in)

Storage

General

DANGER

Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury.

DANGER

Risk of Fire. Verify the machine has properly cooled before installing the cover and storing the machine. Hot surfaces could result in fire.
It is recommended to start and run the generator for 30 minutes, every 30 days. If this is not possible, refer to the following list to prepare the unit for storage.

- DO NOT place a storage cover on a hot generator. Allow unit to cool to room temperature before storage.

- DO NOT store fuel from one season to another unless properly treated.
- Replace the fuel container if rust is present. Rust in fuel will cause fuel system problems.
- Cover the unit with a suitable protective, moisture-resistant cover.
- Store unit in a clean and dry area.
- Always store generator and fuel away from heat and ignition sources.

Prepare Fuel System for Storage

Fuel stored over 30 days can go bad and damage fuel system components. Keep fuel fresh, use a fuel stabilizer. If a fuel stabilizer is added to the fuel system, prepare and run the engine for long-term storage. Run the engine for 10-15 minutes to circulate the stabilizer throughout the fuel system. Adequately prepared fuel can be stored for up to 24 months.

NOTE: If fuel has not been treated with a fuel stabilizer, it must be drained into an approved container. Run engine until it stops from lack of fuel. The use of a fuel stabilizer in the fuel storage container is recommended to keep fuel fresh.

1. Change engine oil.
2. Remove spark plug.
3. Pour a tablespoon (5-10cc) of clean engine oil or spray a suitable fogging agent into the cylinder.

   WARNING

   Vision Loss. Eye protection is required to avoid the spray from spark plug holes when cranking the engine. Failure to do so could result in vision loss.
4. Pull starter recoil several times to distribute oil in the cylinder.
5. Install spark plug.
6. Pull recoil slowly until resistance is felt. This will close valves so moisture cannot enter the engine cylinder. Gently release recoil.

Change Oil

Change engine oil before storage. See Change Engine Oil.

Troubleshooting

PROBLEM	CAUSE	CORRECTION
The engine is running, but AC output is not available.	1. Circuit breaker OPEN. 2. Poor connection or defective cord set. 3. Connected device is bad. 4. Fault in the generator. 5. GFCI receptacle is OPEN (if equipped).	1. Reset circuit breaker. 2. Check and repair. 3. Connect another device that is in good condition. 4. Contact IASD. 5. Correct ground fault and press the reset button on the GFCI receptacle (if equipped).

The engine runs well at no-l oad, but bogs when the load is applied.	1. Short circuit in a connected load. 2. Generator is overloaded. 3. Engine speed is too slow. 4. Shorted generator circuit.	1. Disconnect shorted electrical load. 2. See Know Generator Limits. 3. Contact IASD. 4. Contact IASD.
The engine will not start; or starts and runs rough.	1. Fuel shut-off is OFF. 2. Dirty air filter. 3. Out of fuel. 4. Stale fuel. 5. Spark plug wire not connected to sp ark plug. 6. Bad spark plug. 7. Water in fuel. 8. Overchoking. 9. Low oil level. 10. Excessive rich fuel mixture. 11. Intake valve stuck open or closed. 12. Engine lost compression.	1. Turn fuel shut-off ON. 2. Clean or replace the air filter. 3. Fill fuel tank. 4. Drain the fuel tank and fill it with fres h fuel. 5. Connect a wire to the spark plug. 6. Replace the spark plug. 7. Drain fuel tank; fill with fresh fuel. 8. Set choke to no choke position. 9. Fill crankcase to correct level. 10. Contact IASD. 11. Contact IASD. 12. Contact IASD.
The engine shuts down duri ng operation.	1. Out of fuel. 2. Low oil level. 3. Fault in the engine.	1. Fill fuel tank. 2. Fill crankcase to correct level. 3. Contact IASD.
The engine lacks power.	1. Load is too high. 2. Dirty air filter. 3. Engine needs to be serviced.	1. Reduce load (see Know Generator L imits). 2. Clean or replace the air filter. 3. Contact IASD.
Engine surges or stumbles.	1. Choke is opened too soon. 2. Carburetor is running too rich or too lean.	1. Set choke to 1/2 CHOKE until the engine runs smoothly. 2. Contact IASD.

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Documents / Resources

	TogoPOWER GG3600 Portable Generator [pdf] Owner's Manual GG3600, Portable Generator, GG3600 Portable Generator

References

- Shop Portable Power Station, Solar Panel and Gas Generator - Togopower