



NIU Trailer

Operation Manual

This manual provides you with basic operating information for your trailer. If you have additional questions that cannot be answered after reading through this manual, please don't hesitate to call or email us. 1855-550-0303 info@niutoilet.com

Properly maintaining and operating your trailer will ensure peak performance of the unit for years to come.

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Fresh Water and Pump Operation

(Typical Utility Room layout)

The First valve in the sequence is located inside the utility room door and is to be opened when filling the water tank or running on fresh water (hose hookup). Valve must be closed when running the pump.

2nd valve is only opened when filling the tank. It is left closed all other times.



Third valve is typically located behind pump and must be open to use the pump. Valve must be closed only when filling tank or operating on a fresh water source (hose hookup)

Fresh Water and Pump Operation

(Typical Utility Room layout)

The fresh water hookup is located on the exterior of the trailer, and is used to fill the tank or when operating on a direct water source. This fitting accommodates a standard $\frac{3}{4}$ " garden hose. Flush hose before connecting to remove contaminants.



If equipped with a fresh water tank, emptying the tank can be accomplished by opening this valve.

Your trailer may be equipped with a pressure tank. Each tank is factory set to the recommended pressure for optimum performance. A sticker on the tank identifies what that setting is.



The fresh water tank (if equipped) is located inside the utility room. The tank is filled with a hose hookup on the exterior of the trailer. There is an overflow drain installed on the top of the tank. Marker lines on the tank indicate the volume of water in gallons held inside.

Waste Tank

If equipped, the waste tank(s) is located under the floor in the belly of the trailer. Depending on size, your trailer may have one or more tanks interconnected to maximize storage capacity. Each tank has its own dump valve marked by a sticker on the side of the trailer. If you are unsure of the size of your tank, please contact the manufacturer. Add



The waste water dump valve is typically located underneath trailer close to the edge of the frame. (in some cases, it may be on the side) There is one valve per waste tank. Remove the cap and open the valve to release waste from the tank. A standard valve that all pumping companies are familiar with is used.

Your trailer may have been ordered with a waste tank heating element. If equipped this system can be turned on by plugging the heat tape into the outlet located in the utility room. This system will warm the tank to prevent the liquid inside from freezing.



This is the waste tank sight glass. Located on the side or front of the trailer, underneath a cover. When waste water reaches the top of the sight, the waste tank is 80% full. Monitor your tank level closely to prevent over-filling. **DO NOT TRAVEL WITH WASTE TANKS FULL.**

Electrical

(typical electrical room set-up)

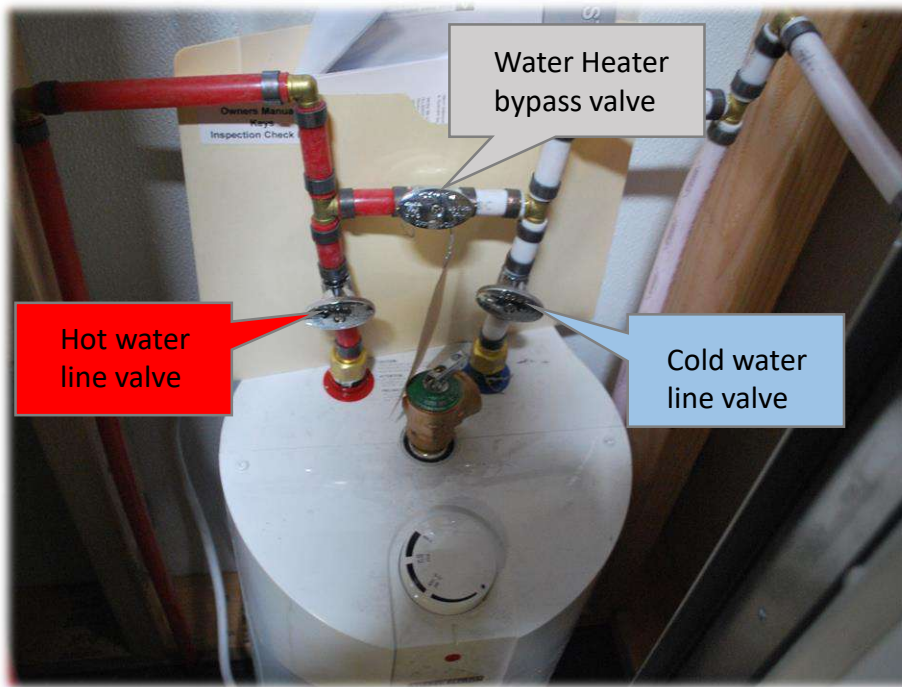


Each trailers electrical system has been designed unique for that trailer. There are however similar aspects of each: Each set up has or may have

- A power supply hookup generally located on the exterior near the utility door
 - Each hook up matches what was ordered, or needed for that particular trailer
 - If multiple 110V plugs, each must be connected to a separate dedicated plug
- A box of outlets used for the various plugs located in the utility room
- Fuses for a 12V LED system (if equipped)
- Switches for the exterior and/or interior lights
- A fuse box labeled for what each fuse controls

If you have questions on your electrical set up, please contact the manufacturer.

Water Heater (if equipped)



If your trailer was ordered with a water heater, the following applies:

The water heater needs to be plugged into an electrical outlet for operation. Once plugged in, the desired temperature is set via the dial on the unit. Do not turn the water heater on unless the unit is filled with water. Operating the water heater without water will damage the unit and void the warranty.

The water heater may have a valve bypass system installed. Valves on either side of the unit control water flow into, and out of the heater. Both must both be open to use the water heater, or closed when not in use. The upper middle valve is the water heater bypass. Open this valve with the other two closed to bypass the water heater. Keep this valve closed to use the water heater.

When winterizing the trailer, open the top bypass valve and close the two side valves. This will allow antifreeze to flow past heater effectively shutting off the water supply to the heater. Once bypassed, unscrew the lines from the top of the heater and remove the heater. After removed from the trailer, empty the water out of the heater and store for the winter in a heated environment.

If equipped with an on demand water heater, drain the hot and cold sides of the unit by either unscrewing the fittings below the unit or unscrewing the drain and filter on the bottom of the unit

Additional Trailer Components



The **A/C unit** of the trailer will be mounted on the roof of the trailer with the controls on the interior portion of the unit. Dials on the unit control the fan speed and temperature. These may be set to your desired setting, then power to unit turned on/off via the breaker on the fuse box of the trailer. Additional operating directions can be found in the AC owners manual provided with your unit.

If equipment, a **battery** is installed to run various 12V components of the trailer. The charge of the battery is maintained by either a transformer, or a separate charger. If the battery is not holding a charge, the connections to the charging device should first be checked.



For trailers with powered vents installed, operate the vents by turning the dial to the desired speed setting (manufacturer recommends leaving it set to #1). The roof vent must be open for the fan motor to run .

For trailers with propane accessories installed, frequently check propane levels in the tanks and fill when necessary. For operating propane fueled accessories, refer to the provided manufacturers manual.

Winterizing

When a trailer is to be subjected to freezing temperatures, it must be winterized or properly heated to prevent damage. Below is the recommended procedure for winterizing the trailer:

1. Drain remaining water from waste and fresh water tanks
2. Disconnect any fresh water hoses currently hooked up to the trailer. Open the valve inside the utility room just behind the fresh water inlet, close tank fill valve, and open the pump valve.
 - i. Run pump until water stops coming out of the unit through the hose hookup.
 - ii. Once water stops, close the valve next to the pump, unhook the water lines going into the pump, and run the pump dry
3. Hook up an antifreeze pump to water hookup on trailer and pump antifreeze into water lines.
4. Go through each room and run each fixture until antifreeze is seen.
5. Pour extra antifreeze into p-traps and shower drains
6. Wipe excess antifreeze from fixtures to avoid staining and residue
7. Vacuum out antifreeze from residential toilets or saniflow pumps if applicable.
 - i. To winterize residential/saniflow toilets, open valve and allow holding tank to fill with antifreeze
 - ii. Once full shut valve then flush toilet
 - a) For saniflow toilets make sure breaker for saniflow is engaged and allow saniflow to run before shutting off
 - iii. Vacuum excess antifreeze left in toilet bowl and holding tank
 - a) For saniflow, open drain by twisting drain cap and pulling
 - b) Use screw driver or other long narrow device, push into drain to let antifreeze flow out of saniflow.
 - c) Replace drain cap and twist close
8. After all fixtures have been winterized, open tank fill valve and run antifreeze into the fresh tank until it passes the tank drain, and flows out
 - i. Open fresh tank dump valve and leave open
9. If trailer is equipped with a water heater, refer to the water heater page provided for details on winterizing

Transporting Your Trailer

To prevent damage to your trailer, and to ensure your safety and that of others on the road, we recommend the following steps be taken prior to transporting your trailer:

1. Empty the water and waste tanks. Do not tow with a full waste tank.
2. Close all toilet lids and vents. Secure all partition and cabinet doors by applying a low-tact “painters” tape to ensure locks stay engaged, doors stay shut, and drawers don’t slide open.
3. Disconnect all electrical and water hook-ups
4. Secure any loose items on the floor in a fashion that will prevent them from sliding and damaging the trailer interior.
5. Lock the entry doors and close. Place handrails in transport position and tighten the nut. If necessary use protection on the handrails to avoid damaging the door frame.
6. Secure the steps by flipping bottom stairs up onto themselves. If slide out steps, push the stairs in and **engage pin latches**
7. If an ADA ramp is installed, raise the ramp and secure using the latches mounted to the trailer.
8. Check and tighten tire lugs to proper torque. Frequently check the pressure in tires is at the manufacturers recommended level. Check for wear and damage to tires, replace as necessary.
9. Raise leveling jacks around trailer.
10. Hook the trailer to the transport vehicle, a 2 - 5/16" ball with properly sized hitch assembly is required; make sure the top of the ball is at the proper height to tow the trailer level. Load leveling hitches are recommended for safely dispersing the load to the front tires of the tow vehicle on heavier trailers. See tow vehicle manual and www.safercar.gov for guides.
11. Attach safety chains, plug in 7 wire trailer cable to receptacle on the vehicle. Check tow vehicle fuses are intact and check to ensure all trailer lighting is functioning properly. Attach emergency break-away cable to the vehicle, leave enough slack to avoid accidental break engagement. Test trailer brakes using tow vehicles brake controller before going on the road.



Trailer Maintenance

Set-up Tips

Make sure trailer is on level ground, an unlevel trailer can cause falls and reduced capacity of the waste tank(s). Lower all leveling jacks (half turn after initial contact with the ground), plywood or another other material may be needed underneath the feet of the jacks if ground is soft. Power up trailer with the required number of power cords heavy enough for the amps it will carry and the distance it runs. See an electrician to be sure the proper cords are used. Usually a 10 gage cord is heavy enough for 20amps for 100 feet. **This is critical that the power supply is dedicated for each cord from the fuse panel as any other load on that breaker will cause the breaker to trip. Long runs may require heavier cables and a larger breaker, consult an electrician for proper sizing. Improper cords will cause the cord to get hot, may cause a fire and may cause the circuit to trip. Flush garden hose to remove contaminates, connect garden hose to trailer. For shower trailers, turn on the gas supply before turning on the power, check for gas leaks each time. Over time or after changing a tank the gas lines may have air in them at which point you will need to flush the line with gas by opening the purge port at the bottom of the heater if equipped or loosen the nut for 20 seconds below the heater.

Trailer Frame

Road use and natural elements will wear away at the protective paint on your frame. Keeping the frame painted and rust free will not only keep your trailer looking nice, but will prevent rust from damaging the steel. A high gloss black Rust-o-leum paint is the best product to use for touch ups.

Exterior Aluminum skin

Keep the exterior clean by frequent washings. Exterior aluminum cleaning products can be purchased at an RV store. Seasonal waxing will keep a high gloss finish on the skin, and will prevent dirt from sticking.

Roof

Frequently inspect the roof. If a hole is found, it can be sealed using an exterior grade silicon caulk

Doors

Keep door hinges lubricated. Frequently inspect door locks and lock catches for proper operation.

Interior Cleaning

Keeping a clean interior not only extends the life of your trailer, but shows users you care about their comfort while using your trailer. Never use pressure a washer inside a trailer. Clean inside of trailer like you would clean your house. If you have a wash down interior, aka rubber floor and/or caulked aluminum trim with linoleum you can use a commercial heavy mop and bucket.

Fixture Cleaning

NEVER DUMP WATER INTO THE URINALS. This will flush the chemical out of the canister, which will intern cause a urine smell to arise in the Men's room. Simply wipe out the urinals with a mild cleaning detergent and follow cleaning instructions included with Falcon Water Free Urinals. Clean toilet flush ball seals. Clean A/C intake screens. Clean water inlet, garden hose intake fitting screen. Clean faucet aerators. Clean faucet screen located in the supply hose where it attaches to the water valve. Put the hose back on hand tight plus just a quarter turn to avoid damaging the filter and seal. Replace Urinal Cartridge and oil after about every 6 months to a year depending on use.

Plumbing and electrical

Frequently inspect water and drain lines in the utility room. Look for any leaks or corrosion on the fittings. Check under sinks and toilets inside the trailer. Make sure supply lines and sink drains are tight.

Trailer Maintenance

Aluminum Trim

Your trailer has a lot of aluminum components on the exterior. Doors, trim, and rims should all be frequently polished to not only keep the trailer looking sharp, but also to prevent corrosion.

Waste Tank

Frequently flushing out the waste tank is a good practice to keep your tank smelling fresh. Filling the tank about $\frac{1}{4}$ full and driving around the block will break up any solids stuck in the tank. RV tank chemicals may be added in accordance with the manufacturers application directions.

Pumping the trailer

The easiest way to pump the trailer is by inserting a standard 2" PVC portable toilet wand down the toilet flushing hole. You will have to pump thru a toilet from each tank to evacuate all tanks, usually the front most and rear most toilets will do. For a trailer larger than 28' you may have 3 tanks so a center toilet will need to be pumped as well. Start from the top of the tank and work your way to the bottom to collect the solids first to insure everything flows towards you. Multiple tanks are connected together towards the top of the tank. If using the onboard sewage pump, hook the 1.5" line coming out of the trailer in front of the passenger side tire to a sewer system. Run the sewer pumps as necessary to empty the waste tanks, there is a switch for each pump which services on tank each. If trailer is equipped with a fresh water tank, start draining the tank ASAP. Tanks shouldn't be hauled with fluid in them

Trailer Brakes

Your trailer brakes should be inspected and / or serviced every few thousand miles. The heavier the trailer and the more you transport it, the quicker the brakes will wear out. The trailer braking system is a very important element of your safety while on the road.

Tires and wheels

Overtime, the lug nuts on your trailer can become loose. Every few hundred miles and before any long road trips, be sure to tighten the lug nuts to 90 foot pounds using a torque wrench. The same frequency is recommended for checking tire pressure. Do Not adjust tire pressure for the load of the trailer. Grease axels joints and bearings every 5,000 miles.

Installing Interior Accessories

Interior accessories such as toilet paper holders, soap dispensers and pictures may be installed in your unit. Remember, once you put a hole in the wall, there is no going back. Follow the "measure twice, drill once" rule. All trailer walls are made of $\frac{1}{2}$ " plywood. For mounting accessories, use no screw LARGER THAN $\frac{3}{4}$ ". Our recommendation is to use the screws provided with your trailer – $\frac{3}{4}$ " drywall screws.

Winter use of trailer

If trailer is to be used in the winter months (with freezing conditions), winter package should have been an option with your trailer. Make sure heat tape is plugged into an outlet to avoid freezing of supply lines and waste tank. Make sure the heat tape and the power is on whenever conditions are or may be below freezing. A skirt or hay is useful in the winter to keep the wind from freezing the bottom of the trailer. Always keep the thermostat fairly high to keep the inside of the trailer warm and thus keep internal plumbing and fixtures from freezing.

Instruct the person in charge of the trailer to make sure power is always supplied to the trailer during freezing conditions. If trailer is to be subjected to freezing temperatures while not in operation winterize the trailer as detailed in the Winterizing page of the manual.

Tire Safety Information

This portion of the User's Manual contains tire safety information as required by 49 CFR 575.6.

Section 2.1 contains "Steps for Determining Correct Load Limit - Trailer".

Section 2.2 contains "Steps for Determining Correct Load Limit - Tow Vehicle".

Section 2.3 contains a Glossary of Tire Terminology, including "cold inflation pressure", "maximum inflation pressure", "recommended inflation pressure", and other non-technical terms.

Section 2.4 contains information from the NHTSA brochure entitled "Tire Safety - Everything Rides On It". This brochure, as well as the preceding subsections, describes the following items:

- Tire labeling, including a description and explanation of each marking on the tires, and information about the DOT Tire Identification Number (TIN).
- Recommended tire inflation pressure, including a description and explanation of:
 - A. Cold inflation pressure.
 - B. Vehicle Placard and location on the vehicle.
 - C. Adverse safety consequences of under inflation (including tire failure).
 - D. Measuring and adjusting air pressure for proper inflation.
- Tire Care, including maintenance and safety practices.
- Vehicle load limits, including a description and explanation of the following items:
 - A. Locating and understanding the load limit information, total load capacity, and cargo capacity.
 - B. Calculating total and cargo capacities with varying seating configurations including quantitative examples showing / illustrating how the vehicles cargo and luggage capacity decreases as combined number and size of occupants increases. This item is also discussed in Section 3.
 - C. Determining compatibility of tire and vehicle load capabilities.
 - D. Adverse safety consequences of overloading on handling and stopping on tires.

1.1. STEPS FOR DETERMINING CORRECT LOAD LIMIT - TRAILER

Determining the load limits of a trailer includes more than understanding the load limits of the tires alone. On all trailers there is a Federal certification/VIN label that is located on the forward half of the left (road) side of the unit. This certification/VIN label will indicate the trailer's Gross Vehicle Weight Rating (GVWR). This is the most weight the fully loaded trailer can weigh. It will also provide the Gross Axle Weight Rating (GAWR). This is the most a particular axle can weigh. If there are multiple axles, the GAWR of each axle will be provided.

If your trailer has a GVWR of 10,000 pounds or less, there is a vehicle placard located in the same location as the certification label described above. This placard provides tire and loading information. In addition, this placard will show a statement regarding maximum cargo capacity. Cargo can be added to the trailer, up to the maximum weight specified on the placard. The combined weight of the cargo is provided as a single number. In any case, remember: the total weight of a fully loaded trailer can not exceed the stated GVWR.

For trailers with living quarters installed, the weight of water and propane also need to be considered. The weight of fully filled propane containers is considered part of the weight of the trailer before it is loaded with cargo, and is not considered part of the disposable cargo load. Water however, is a disposable cargo weight and is treated as such. If there is a fresh water storage tank of 100 gallons, this tank when filled would weigh about 800 pounds. If more cargo is being transported, water can be off-loaded to keep the total amount of cargo added to the vehicle within the limits of the GVWR so as not to overload the vehicle. Understanding this flexibility will allow you, the owner, to make choices that fit your travel needs.

When loading your cargo, be sure it is distributed evenly to prevent overloading front to back and side to side. Heavy items should be placed low and as close to the axle positions as reasonable. Too many items on one side may overload a tire. The best way to know the actual weight of the vehicle is to weigh it at a public scale. Talk to your dealer to discuss the weighing methods needed to capture the various weights related to the trailer. This would include the weight empty or unloaded, weights per axle, wheel, hitch or king-pin, and total weight.

Excessive loads and/or under inflation cause tire overloading and, as a result, abnormal tire flexing occurs. This situation can generate an excessive amount of heat within the tire. Excessive heat may lead to tire failure. It is the air pressure that enables a tire to support the load, so proper inflation is critical. The proper air pressure may be found on the certification/VIN label and/or on the Tire Placard. This value should never exceed the maximum cold inflation pressure stamped on the tire.

1.1.1. TRAILERS 10,000 POUNDS GVWR OR LESS



TIRE AND LOADING INFORMATION

The weight of cargo should never exceed 680 kg or 1,500 lbs

Tire	Size	Cold Pressure	See Owner's Manual for additional Information
Front	ST225/75R15(D)	65psi, 448kpa	
Rear			
Spare	None		

Tire and Loading Information Placard - Figure 1-1

1. Locate the statement, "The weight of cargo should never exceed XXX kg or XXX lbs.," on your vehicle's placard. See figure 1-1.
2. This figure equals the available amount of cargo and luggage load capacity.
3. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity.

The trailer's placard refers to the Tire Information Placard attached adjacent to or near the trailer's VIN (Certification) label at the left front of the trailer.

1.1.2. TRAILERS OVER 10,000 POUNDS GVWR (NOTE: THESE TRAILERS ARE NOT REQUIRED TO HAVE A TIRE INFORMATION PLACARD ON THE VEHICLE)

1. Determine the empty weight of your trailer by weighing the trailer using a public scale or other means. This step does not have to be repeated.
2. Locate the GVWR (Gross Vehicle Weight Rating) of the trailer on your trailer's VIN (Certification) label.
3. Subtract the empty weight of your trailer from the GVWR stated on the VIN label. That weight is the maximum available cargo capacity of the trailer and may not be safely exceeded.

1.2. STEPS FOR DETERMINING CORRECT LOAD LIMIT - TOW VEHICLE

1. Locate the statement, "The combined weight of occupants and cargo should never exceed XXX lbs.," on your vehicle's placard.
2. Determine the combined weight of the driver and passengers who will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage capacity calculated in Step # 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult the tow vehicle's manual to determine how this weight transfer reduces the available cargo/people capacity of your vehicle.

1.3. GLOSSARY OF TIRE TERMINOLOGY:

Accessory weight The combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio and heater, to the extent that these items are available as factory-installed equipment (whether installed or not).

Bead The part of the tire that is made of steel wires, wrapped or reinforced by ply cords and that is shaped to fit the rim.

Bead separation This is the breakdown of the bond between components in the bead.

Bias ply tire A pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tread.

Carcass The tire structure, except tread and sidewall rubber which, when inflated, bears the load.

Chunking The breaking away of pieces of the tread or sidewall.

Cold inflation pressure The pressure in the tire before you drive.

Cord The strands forming the plies in the tire.

Cord separation The parting of cords from adjacent rubber compounds.

Cracking Any parting within the tread, sidewall, or inner liner of the tire extending to cord material.

CT A pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire.

Curb weight The weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine.

Extra load tire A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Groove The space between two adjacent tread ribs.

Gross Axle Weight Rating The maximum weight that any axle can support, as published on the Certification / VIN label on the front left side of the trailer. Actual weight determined by weighing each axle on a public scale, with the trailer attached to the towing vehicle.

Gross Vehicle Weight Rating The maximum weight of the fully loaded trailer, as published on the Certification / VIN label. Actual weight determined by weighing trailer on a public scale, without being attached to the towing vehicle.

Hitch Weight The downward force exerted on the hitch ball by the trailer coupler.

Innerliner The layer(s) forming the inside surface of a tubeless tire that contains the inflating medium within the tire.

Innerliner separation The parting of the innerliner from cord material in the carcass.

Intended outboard sidewall The sidewall that contains a white-wall, bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same molding on the other sidewall of the tire or the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle.

Light truck (LT) tire A tire designated by its manufacturer as primarily intended for use on lightweight trucks or multipurpose passenger vehicles.

Load rating The maximum load that a tire is rated to carry for a given inflation pressure.

Maximum load rating The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum permissible inflation pressure The maximum cold inflation pressure to which a tire may be inflated.

Maximum loaded vehicle weight The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Measuring rim The rim on which a tire is fitted for physical dimension requirements.

Pin Weight The downward force applied to the 5th wheel or gooseneck ball, by the trailer kingpin or gooseneck coupler.

Non-pneumatic rim A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches, either integrally or separately, to the wheel center member and upon which the tire is attached.

Non-pneumatic spare tire assembly A non-pneumatic tire assembly intended for temporary use in place of one of the pneumatic tires and rims that are fitted to a passenger car in compliance with the requirements of this standard.

Non-pneumatic tire A mechanical device which transmits, either directly or through a wheel or wheel center member, the vertical load and tractive forces from the roadway to the vehicle, generates the tractive forces that provide the directional control of the vehicle and does not rely on the containment of any gas or fluid for providing those functions.

Non-pneumatic tire assembly A non-pneumatic tire, alone or in combination with a wheel or wheel center member, which can be mounted on a vehicle.

Normal occupant weight This means 68 kilograms (150 lbs.) times the number of occupants specified in the second column of Table I of 49 CFR 571.110.

Occupant distribution The distribution of occupants in a vehicle as specified in the third column of Table I of 49 CFR 571.110.

Open splice Any parting at any junction of tread, sidewall, or innerliner that extends to cord material.

Outer diameter The overall diameter of an inflated tire.

Overall width The linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.

Ply A layer of rubber-coated parallel cords.

Ply separation A parting of rubber compound between adjacent plies.

Pneumatic tire A mechanical device made of rubber, chemicals, fabric and steel or other materials, that, when mounted on an automotive wheel, provides the traction and contains the gas or fluid that sustains the load.

Production options weight The combined weight of those installed regular production options weighing over 2.3 kilograms (5 lbs.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

Radial ply tire A pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.

Recommended inflation pressure This is the inflation pressure provided by the vehicle manufacturer on the Tire Information label and on the Certification / VIN tag.

Reinforced tire A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Rim A metal support for a tire or a tire and tube assembly upon which the tire beads are seated.

Rim diameter This means the nominal diameter of the bead seat.

Rim size designation This means the rim diameter and width.

Rim type designation This means the industry of manufacturer's designation for a rim by style or code.

Rim width This means the nominal distance between rim flanges.

Section width The linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.

Sidewall That portion of a tire between the tread and bead.

Sidewall separation The parting of the rubber compound from the cord material in the sidewall.

Special Trailer (ST) tire The "ST" is an indication the tire is for trailer use only.

Test rim The rim on which a tire is fitted for testing, and may be any rim listed as appropriate for use with that tire.

Tread That portion of a tire that comes into contact with the road.

Tread rib A tread section running circumferentially around a tire.

Tread separation Pulling away of the tread from the tire carcass.

Treadwear indicators (TWI) The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread.

Vehicle capacity weight The rated cargo and luggage load plus 68 kilograms (150 lbs.) times the vehicle's designated seating capacity.

Vehicle maximum load on the tire The load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.

Vehicle normal load on the tire The load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table I of CFR 49 571.110) and dividing by 2.

Weather side The surface area of the rim not covered by the inflated tire.

Wheel center member In the case of a non-pneumatic tire assembly incorporating a wheel, a mechanical device which attaches, either integrally or separately, to the non-pneumatic rim and provides the connection between the non-pneumatic rim and the vehicle; or, in the case of a non-pneumatic tire assembly not incorporating a wheel, a mechanical device which attaches, either integrally or separately, to the non-pneumatic tire and provides the connection between tire and the vehicle.

Wheel-holding fixture The fixture used to hold the wheel and tire assembly securely during testing.

1.4. TIRE SAFETY - EVERYTHING RIDES ON IT

The National Traffic Safety Administration (NHTSA) has published a brochure (DOT HS 809 381) that discusses all aspects of Tire Safety, as required by CFR 575.6. This brochure is reproduced in part below. It can be obtained and downloaded from NHTSA, free of charge, from the following web site:

http://www.nhtsa.dot.gov/cars/rules/TireSafety/ridesonit/tires_index.html

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicle can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires. These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable breakdowns and accidents
- Improve fuel economy
- Increase the life of your tires.

This booklet presents a comprehensive overview of tire safety, including information on the following topics:

- Basic tire maintenance
- Uniform Tire Quality Grading System
- Fundamental characteristics of tires
- Tire safety tips.

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

1.5. SAFETY FIRST—BASIC TIRE MAINTENANCE

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Underinflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

1.5.1. FINDING YOUR VEHICLE'S RECOMMENDED TIRE PRESSURE AND LOAD LIMITS

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW—the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR—the maximum weight the axle systems are designed to carry).
- Both placards and certification labels are permanently attached to the trailer near the left foot.

1.5.2. UNDERSTANDING TIRE PRESSURE AND LOAD LIMITS

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure—measured in pounds per square inch (psi)—a tire requires to be properly inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kPa), which is the metric measure used internationally).

Manufacturers of passenger vehicles and light trucks determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.)

Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

1.5.3. CHECKING TIRE PRESSURE

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine under inflation by visual inspection.

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

1.5.4. STEPS FOR MAINTAINING PROPER TIRE PRESSURE

- Step 1: Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual.
- Step 2: Record the tire pressure of all tires.
- Step 3: If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
- Step 4: If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.
- Step 5: At a service station, add the missing pounds of air pressure to each tire that is underinflated.
- Step 6: Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

1.5.5. TIRE SIZE

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires or another size recommended by the manufacturer. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

1.5.6. TIRE TREAD

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in treadwear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear 'even' with the outside of the tread, it is time to replace your tires. Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If you can see the top of Lincoln's head, you are ready for new tires.

1.5.7. TIRE BALANCE AND WHEEL ALIGNMENT

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician.

1.5.8. TIRE REPAIR

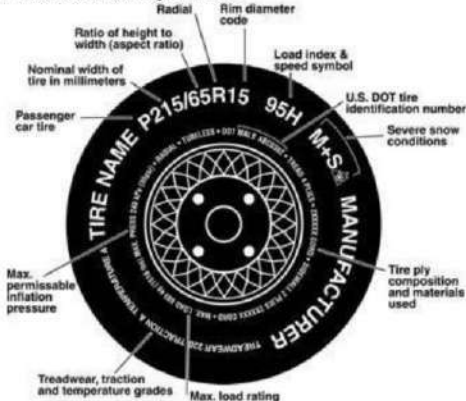
The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

1.5.9. TIRE FUNDAMENTALS

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

1.5.9.1. Information on Passenger Vehicle Tires

Please refer to the diagram below.



P The "P" indicates the tire is for passenger vehicles.

Next number This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next number This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R The "R" stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer. Note: You may not find this information on all tires because it is not required by law.

M+S The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

Speed Rating The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. The ratings range from 99 miles per hour (mph) to 186 mph. These ratings are listed below. Note: You may not find this information on all tires because it is not required by law.

Tire Safety Information

Letter Rating	Speed Rating
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
H	130 mph
V	149 mph
W	168* mph
Y	186* mph

* For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 166 mph, tire manufacturers always use the letters ZR.

U.S. DOT Tire Identification Number This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

Tire Ply Composition and Materials Used The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

1.5.9.2. UTQGS Information

Tread wear Number This number indicates the tire's wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200. **Traction Letter** This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

Temperature Letter This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, underinflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

1.5.9.3. Additional Information on Light Truck Tires

Please refer to the following diagram.



Tires for light trucks have other markings besides those found on the sidewalls of passenger tires.

LT The "LT" indicates the tire is for light trucks or trailers.

ST An "ST" is an indication the tire is for trailer use only.

Max. Load Dual kg (lbs) at kPa (psi) Cold This information indicates the maximum load and tire pressure when the tire is used as a dual, that is, when four tires are put on each rear axle (a total of six or more tires on the vehicle).

Max. Load Single kg (lbs) at kPa (psi) Cold This information indicates the maximum load and tire pressure when the tire is used as a single.

Load Range This information identifies the tire's load-carrying capabilities and its inflation limits.

1.6. TIRE SAFETY TIPS

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the roadway, and try not to strike the curb when parking.

Tire Safety Checklist

- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the Tire Information and loading Placard or User's Manual for the maximum recommended load for the vehicle.

If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Comforts of Home Services Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Comforts of Home Services Inc.

To contact Comforts of Home Services Inc call at 847-856-8002 or 630-906-8002. Or website: www.cohsi.com

To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153), go to <http://www.safercar.gov>; or write to:

Administrator
NHTSA
1200 New Jersey Avenue S.E.
Washington, DC 20590

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

Warranties



NIU Toilet Warranty:

NIU Toilet / Comac Services (warrantor), of Quebec Canadaa hereby provides a 5 year limited warranty on our trailer frame and a 1 year limited warrantee on the trailer as a whole. Sealant, electrical components, hydraulics, hoses, wall coverings, trim and paint are warranted for 1 year. The warrantor guarantees the product against defects in materials and workmanship. The warranty described in this agreement is in lieu of all other warranties, expressed or implied. This warrantee shall apply to the retail consumer (original purchaser), as shown on the sales agreement.

Certain individual components are warranted by their respected manufacturers' warranties and therefore are excluded from the limited warranty provided by the warrantor. These components include, but are not limited to; tires, wheels, axles, couplers, jacks, light fixtures, windows, doors, heaters, air conditioners, toilets, sinks, faucets, pumps, awnings. Warranty claims must be filed with the respective component manufacturers' warranty department. Any installation fees, shipping fees, or other costs associated with the repair of the items not covered by the respected manufactures warranty are the responsibility of the trailer owner.

This limited warranty is void if the product:

1. Is not properly maintained.
2. Is neglected, abused or misused.
3. Is overloaded or made to perform beyond recommended specifications.

The limited warranty is also void if damage results from continued use after a suspected defect is or should have been discovered. The warrantor reserves the right to make the final determination as to whether any of the above exclusions may nullify a warranty claim.

The warranty shall not pay nor make provisions for:

1. Service charges; towing charges; and transportation charges, which are the responsibility of the purchaser.
 2. Loss of time, inconvenience; loss of use; rental substitution equipment; loss of revenue; or other commercial or personal loss.
 3. Loss or damage to any and all contents.
 4. Defacing; scratches; dents; chips; and tears, on any surface, not caused by the warrantor.
- Furthermore the warrantor does not warranty any modification(s) made to either the interior or exterior of the product, even if damage occurs as a result of warranty claim.

Please refer to the products owner's manual, or authorized representative of the warrantor, for instructions on filing a warranty claim. The provisions of the limited warranty shall be interpreted and governed pursuant to the laws of the Province of Quebec.



LIMITED ONE-YEAR WARRANTY COMMERCIAL GRADE AIR CONDITIONER

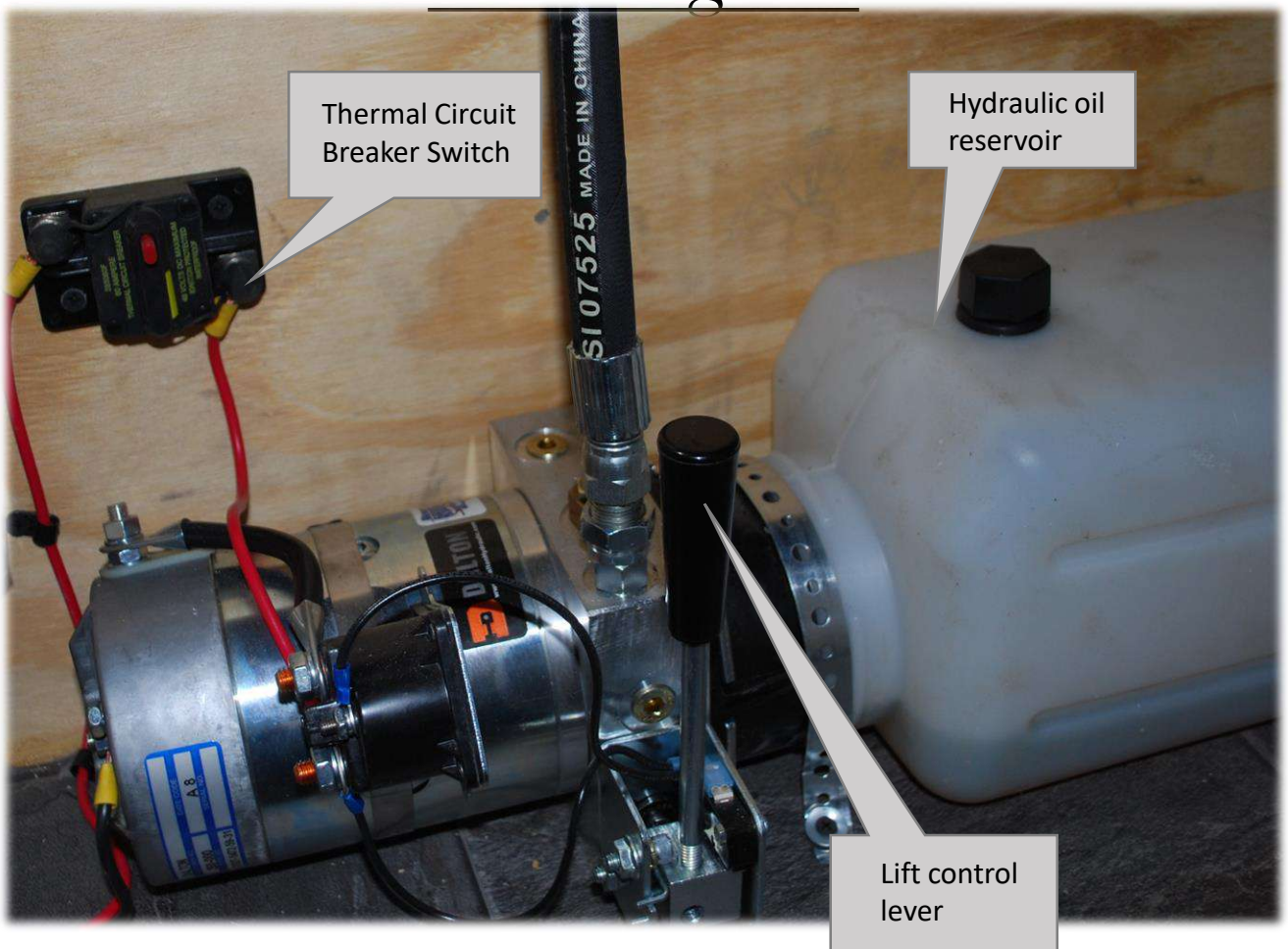
THE SELLER NAMED BELOW MAKES THE FOLLOWING WARRANTY WITH RESPECT TO THE DOMETIC PRODUCT:

1. This warranty is made only to the first purchaser (herein after referred to as the "Original Purchaser") who acquires the product for his own use and is installed and operated within the continental United States and Canada.
2. This warranty will be in effect for one year on parts and freight and one year on labor from the date of purchase by the Original Purchaser. It is suggested that the Original Purchaser retain a copy of the dated bill of sale as evidence of the date of purchase.
3. This warranty covers only specified Dometic parts, which shall be free from defects in material and workmanship under normal use. This warranty does not cover conditions unrelated to the material and workmanship of the product. Such unrelated conditions include, but are not limited to: (a) damage not reported within 7 days; (b) the need for normal maintenance and any damage resulting from the failure to provide such maintenance; (c) failure to follow Sellers instructions for use of this product; (d) any accident to or misuse of any part of this product and any alteration by anyone other than the Seller or its authorized representative; (e) damage or failure caused by installation of accessories or parts not manufactured and marketed by the Seller will void any warranty, implied or written; (f) corrosion, salt water; (g) radio frequency interference (RFI) or electromotive interference (EMI).
4. The specified parts covered by this warranty are as follows: switches, thermostats (excluding infrared remote controls, which are covered for a period of one year, not including batteries), relays, capacitors, motors, electronic module boards, solar panels and the sealed system; compressor, evaporator coil, condenser coil, refrigerant lines, capillary tubes and reversing valve.
5. It is suggested the Original Purchaser provide preventative maintenance on a yearly basis. Suggested preventative maintenance is: (a) check mounting/anchor bolts for proper torque; (b) inspect/clean and comb condenser fins; (c) inspect/clean and comb evaporator fins; (d) inspect/clean evaporator blower wheel and condenser fan blade/blower wheel; (e) clean return air filter. The cost of preventative maintenance is the Original Purchaser's responsibility and should take about one hour.
6. In order to obtain the benefits of this warranty, the Original Purchaser must contact the Seller or contact an Authorized Dometic Mobile Service Center. Dometic will cover up to one service call per warranty issue claim. If more than one service call is needed for the same warranty issue the Original Purchaser will be responsible for those charges. To obtain the location of the nearest Authorized Dometic Mobile Service Center, please call 1-800-544-4881 or in Canada call 1-519-653-4390. Authorized Dometic Mobile Service can also be found at our web site; www.DometicUSA.com. Please note that Dometic will cover the cost of a service call up to \$100.00 per occurrence.
7. Any item returned in the manner described in paragraph 6 will be examined by the Seller or the Authorized Dometic Service Center. If it is found that the returned item was defective in material and workmanship, the Seller or the Authorized Dometic Service Center will repair the product per the terms outlined in paragraph 4. CONFIRM THE SERVICE AGENCY IS AN AUTHORIZED DOMETIC SERVICE CENTER. DO NOT PAY THE SERVICE AGENCY FOR WARRANTY REPAIRS. SUCH PAYMENTS WILL NOT BE REIMBURSED.
8. The Seller does not authorize any person or company to create any warranty obligations or liability on their behalf. This warranty is not extended by the length of time which you are deprived of the use of the product. Repairs and replacement parts provided under the terms of this warranty shall carry only the non-expired portion of this warranty.
9. In no event shall either Seller be liable for incidental or consequential damages. This includes any damage to another product or products resulting from such a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply.
10. Any implied warranty, including the implied warranty of merchantability and fitness for any purpose, is limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied warranty can last, so the above limitation may not apply.
11. THIS WARRANTY GIVES SPECIFIC LEGAL RIGHTS, YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. No action to enforce this warranty shall be commenced later than ninety (90) days after the expiration of the warranty period. Claims must be submitted in writing to the Dometic Warranty Department for arbitration.
12. Warranty does not apply if used or installed on **Marine applications**.
13. Warranty does not apply if used or installed on **Semi-Tractors and/or Trailers** without **Air Ride** suspensions.
14. Warranty does not apply if used on commercial purposes involving off highway travel.
15. The seller reserves the right to change the design of any product without notice and with no obligation to make corresponding changes in products previously manufactured.

Dometic, LLC
Warranty Department
2320 Industrial Parkway
Elkhart, Indiana 46516
Phone: 574-294-2511
Fax: 574-389-3975

Form. No. 3313294.000 12/09
(French 3313299.000)
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LaGrange, IN 46761

Hydraulics and ADA Lowering Pod



Your trailer is equipped with an ADA Lowering Pod. Located in the utility room is the hydraulic control system installed to raise and lower the pod. The pump is operated using the Lift Control Lever located on the front of the pump. The pump is powered by a battery installed in the utility room. This battery is fuse protected with a Thermal Circuit Breaker Switch installed on the wall above the pump. The battery must be fully charged, or the pump will not operate. Once lowered, the ADA pod must be leveled for the door to operate correctly. This will need to be done with shims under the feet. Do not walk on the ramp while the pod is raised. The increased angle of the ramp while the box is raised puts additional stress on the ramp welds.

ADA Lowering Room Transport



On all ADA lowering pod trailers, 2 safety straps are provided for transport.

These straps must be in place whenever the pod is raised and the trailer is in transport.

To operate:

1. While the room is lowered:
 1. Close and lock the entry door
 2. Raise the ramp and secure using latches
2. Raise ADA room to full height
3. Hook straps onto the D-rings welded to ADA room and main trailer
4. Use ratcheting system on safety straps to tighten
5. Cut off power to the hydraulic pump by tripping the thermal fuse located above the pump

Full Lowering Trailer Operation



ADA Frame raised



ADA Frame lowered – note tire position on each



Hitch Pin

Front jack with control switch



Electric side jack



Electric side jack controls

To lower frame:

1. Raise frame to full height by lowering front and side jacks
 - i. Control switch for the front jack is located on jack itself
 - ii. Controls for the side jacks are located in the utility room on the orange wand
2. Once the pressure is off the leaf springs, pull the **Red** handle hitch pins from each mount
 - i. There will be one pin per wheel
3. Lower the frame by raising the jacks
4. Repeat this process in reverse to raise the trailer.
5. **When raising and lowering, level the trailer in stages – middle goes down bit, then the front.**

Before transporting, double check to make sure hitch pin is in place with the cotter pin fully secure in place. Also, check to make sure the ramp is up, and the ramp locking pins are fully engaged.



Hydraulic Frame

General Maintenance and Service Guide



Broadway Welding
1090 Legion Road
Detroit Lakes, MN 56501

218-844-5378



Maintenance

Congratulations on the purchase of your new Ice Castle with a GS Trailers - Gen 4 Hydraulic Series trailer. We have put together a few items to help you maintain and trouble shoot your trailer and its components.

Washing

Due to winter road conditions, it is a good idea to wash your frame often to prevent rust from road salt and other contaminants. This is specifically true for any hydraulic hose ends that are exposed. Even galvanized frames should be washed to prevent spotting and pitting.

Storing

It is recommended to store your house in the "down" position during long periods of time. This will take stress off the axles when not in use. Make sure to store on a flat level surface free of debris.

Hauling Preparations

Trailer must always be raised in the fully up position with the (2) front safety pins installed and the travel locks installed in the cross bar in the wheel wells. Safety chains, emergency brake cable, and wiring plug connected.

It is recommended that you keep the Ice Castle as close to level as possible from front to back of the trailer to keep equal balance across all axles. Adjustments to the height of your ball hitch may be necessary.

It is very important you are using the correct ball size for your trailer. All trailer lengths models use a 2-5/16" size ball. Use of the wrong ball can result in damage to not only your trailer but also your vehicle. Please check the coupler for the correct size you should be using.

Wheels and Tires

Torque specifications for wheels on all models should be 105 ft. lbs.

Wheels should be re-torqued after the first trip to ensure proper tightness.

Torque should be check at least twice per year.

Tire pressure should be maintained at 70-80 psi.

Frame Coating and Repair

Regularly check the frame for any signs of peeling or rust.

Check the frame for any signs of peeling or rust.

If you plan to leave your house on frozen ground for any period it is recommended to "block up" the corners to prevent the frame from freezing down. This helps prevent peeling of the protective rubber coating when moving the house later.

To repair protective coating, it is recommended to use "PlastiKote Bed Liner" for small touch-ups. It is available at most hardware stores.

Hydraulic Fluid

Use ATF Dextron III oil ONLY when filling the pump.

Use of any other type of fluid or oil may void the warranty.

Pump requires 10.2 volts minimum to operate.



Maintenance

Greasing

Your trailer is a greasless model except for the bearings and hubs. The pivot points are supplied with a high load oil impregnated bushing. They do not require greasing.

The axle hubs should be greased at least once a year. We recommend a synthetic grease that is readily available at most auto and hardware stores. During the storage process, it is recommended to spray the exposed hydraulic fittings, connectors and bolts, hitch mechanism, and other rotating and connection points with WD-40 Corrosion Inhibitor. This will help prevent water and moisture from getting into these areas.

Wireless Transmitter

For wireless transmitter troubleshooting please refer to the included specifications sheet. If the wireless transmitter keychain is not working, you can use the wired yellow control that comes mounted to the pump with a 30' cord. Be sure to use the corded remote at a safe distance while raising and lowering your house.

This space left blank for notes.



Instructions for 92/93 Series Standard Transmitter (shown with LoCover removed) 2, 4 and 6 Function (4, 6 and 8 Button)

RESET Button
activates the
Receiver and
the keypad
function buttons

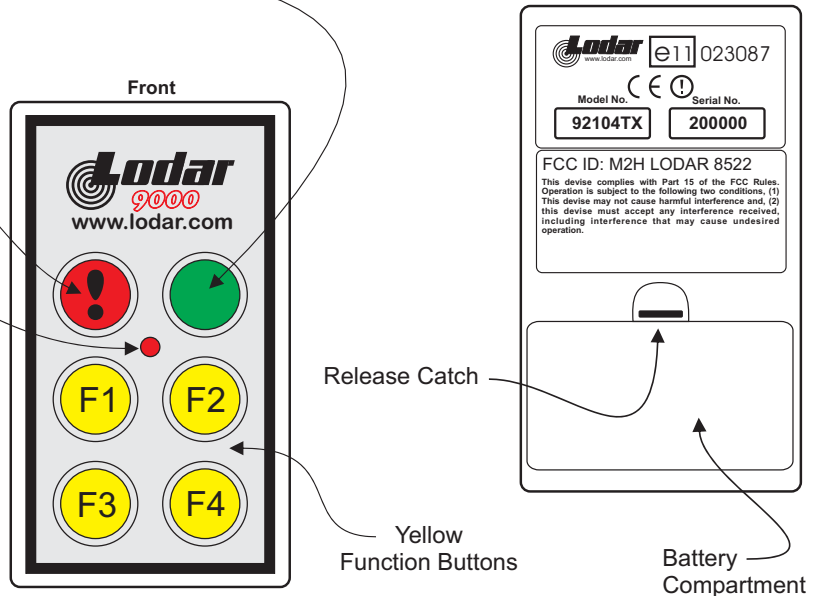
STOP Button switches off
the Receiver and the keypad
function buttons

L.E.D.
Blinks when Transmitter
is active.
ON when a Transmitter
Button is pressed.
Pulses while transmitting
when Battery is low.



SAFETY FEATURE

The Transmitter automatically
transmits a **STOP** signal after
30 minutes; this de-activates
the Receiver and the Transmitter.



To register Transmitters to the Receiver.

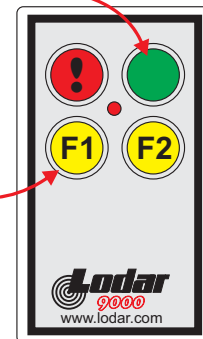
Switch OFF or DISCONNECT the power to the Receiver and briefly PRESS the STOP button on one or both Transmitter(s).

Switch ON or Reconnect the power to the Receiver. This opens a 20 second registration window in the Receiver processor.

If you are looking at the Receiver PCB the Fault LED Flashes. Immediately PRESS and HOLD both the Transmitter RESET Button and F1 Button (indicated). Continue to hold BOTH BUTTONS for a MINIMUM of 5 seconds during this 20 second window.

When the Transmitter is Registered the Fault LED will be illuminated for **3 seconds**. Within this **3 second** period, FIRST release F1 and then the RESET button.

PRESS & HOLD
both RESET and F1
for a MINIMUM of
5 SECONDS



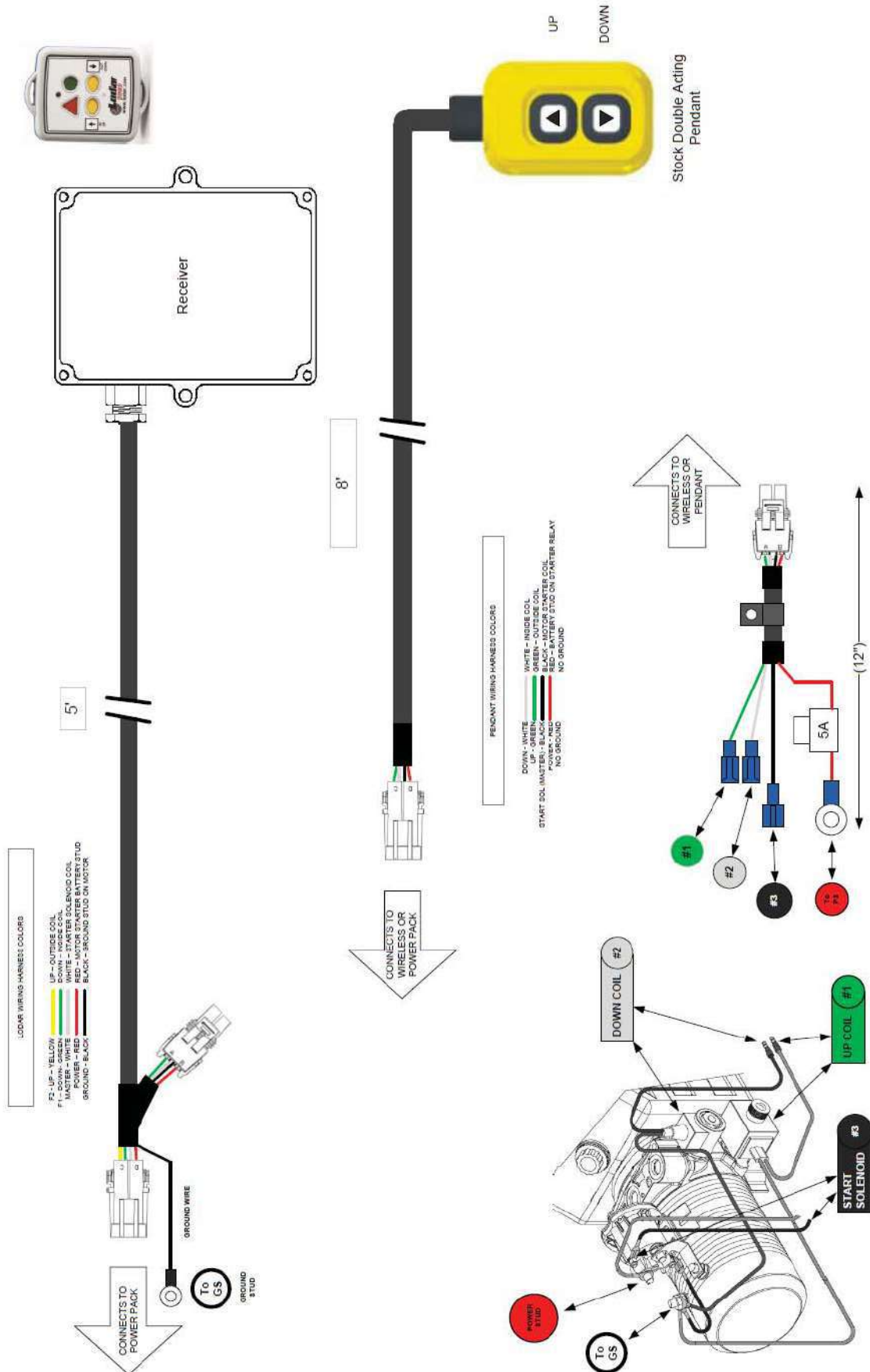
TO REGISTER TWO TRANSMITTERS:

When the fault light starts to flash again, immediately PRESS and HOLD both the Transmitter RESET and F1 Buttons of the second Transmitter. Continue to hold BOTH BUTTONS for a MINIMUM of 5 seconds or until the SET LED comes on. Both your Transmitters will now operate the Receiver.

PRIORITY.

Only one Transmitter can be active at any time. For the second Transmitter to work you have to turn off the first Transmitter. Once the second Transmitter is being used then that has priority and it has to be turned off before the first Transmitter can work again.

If you have any problems please phone either your local Distributor or Lodars directly:-



Mid Mounted Pump

RED

This is the return flow system. Used for lowering your trailer. Port V1 on the cylinder blocks, Port A on the pump.

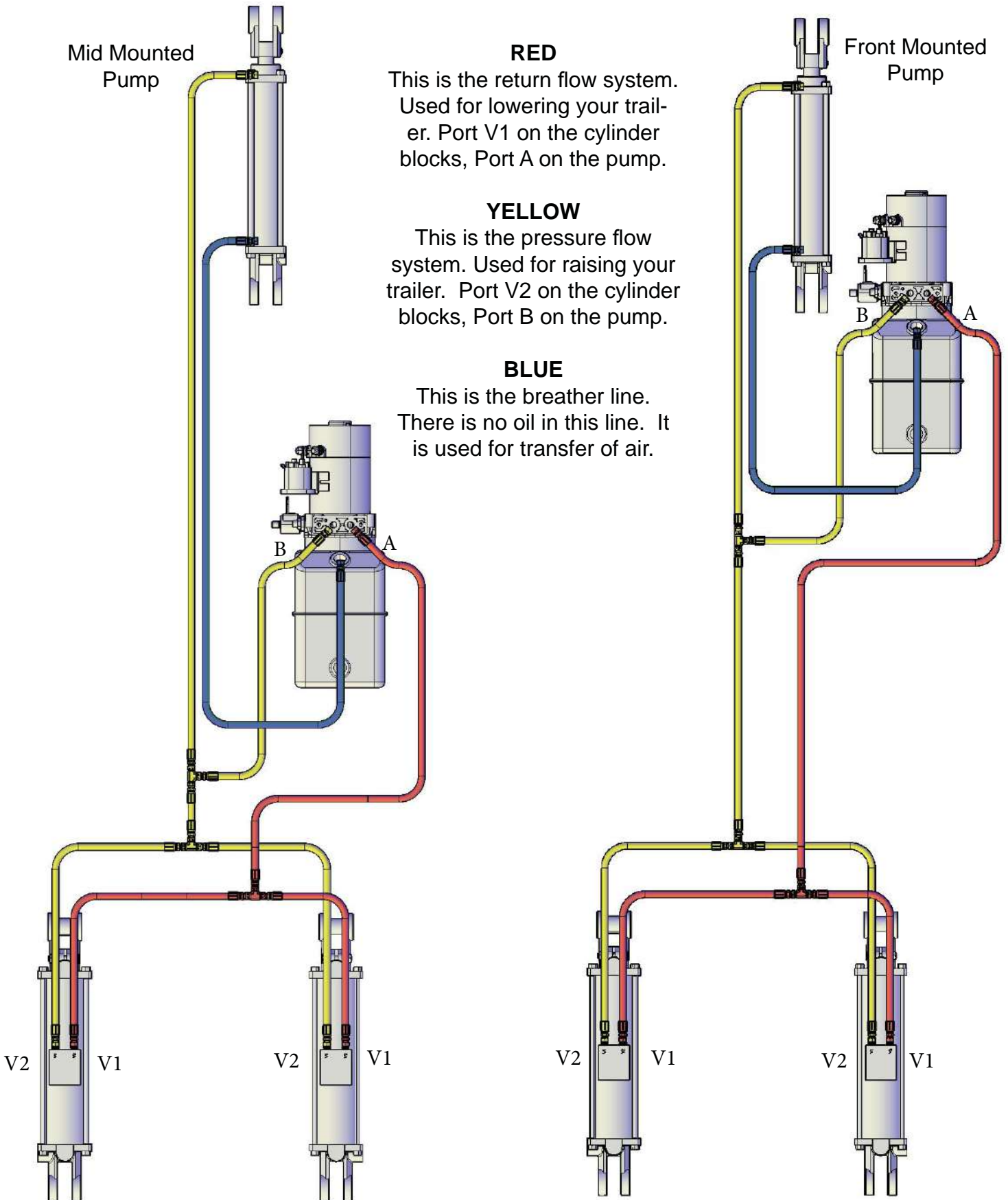
YELLOW

This is the pressure flow system. Used for raising your trailer. Port V2 on the cylinder blocks, Port B on the pump.

BLUE

This is the breather line. There is no oil in this line. It is used for transfer of air.

Front Mounted Pump



V2 V1

V2 V1

V2 V1

V2 V1



Limited Warranty

LIMITED WARRANTY

NOTICE: This agreement is between the ORIGINAL PURCHASER and GS TRAILERS. GS Trailers, Inc, will warrant their products to be free from defective workmanship and materials in normal use and service for a period of TWO (2) years from the date of delivery to the purchaser. The warranty hereby covers any defects of workmanship and materials used in the structure of the trailer: i.e. the frame, side rails, cross members, welds, and sub frame assemblies.

LIMITATIONS OF GS TRAILERS WARRANTY

GS Trailers does NOT warrant components not manufactured by GS Trailers. Therefore, this warranty does NOT cover axles and axle components, tires, wheels, couplers, jacks, suspension components, springs, wiring, lights, paint (including chipping, fading, and aging), accessories, or any other component not manufactured by GS Trailers. If these items are warranted by the manufacture or supplier thereof and warranty may be extended to the purchaser, GS Trailers will make such warranties available.

EXCLUSIONS OF GS TRAILERS WARRANTY

- 1) Normal wear on any item will not be subject to warranty. Normal wear items, include, brakes, tires, bearings, axle seals, light bulbs, and fading or cracking of flooring; but are not limited exclusively to these items.
- 2) Any damage done due to lack of good industry maintenance such as improper bearing adjustment, incorrect air pressure, lug nut torque, etc. will also not be covered by GS Trailers Warranty.
- 3) Any damage to the frame, axles, tires, or any other component due to overloading or abuse is not covered under warranty
- 4) Coatings offered by GS Trailers are for aiding to the longevity of the trailer. Coatings in high rub / pivot areas are not covered under the warranty. This includes the front pinning area and axle pivot areas. Coatings that have been cut, scraped, peeled, or not maintained, are not covered under the warranty.
- 5) Trailers used for rental are not covered under this limited warranty.

In the event of a defect in material or workmanship covered by this warranty, GS Trailers will:

- 1) Correct the defective work or replace the defective parts on a no-charge basis at our plant location, or
- 2) Reimburse the purchaser by paying a sum not exceeding the price charged by GS Trailers for such work, or
- 3) Provide for repair of the defect or replacement of the defective parts by an authorized shop.

All Warranty repairs must be pre-authorized by GS Trailers before any reimbursements shall be made. GS Trailers will likely require photographs of items that are thought to be defective in order to approve reimbursements. All freight charges to or from the factory or pre-authorized repair facility is the responsibility of the purchaser. ALL FREIGHT IS EXEMPT FROM WARRANTY. In addition, this warranty does NOT cover any economic loss including but not limited to; payment for the loss of time or pay, inconvenience, loss of trailer use, lodging bills, trailer rental expense, meals, storage charges, and other incidental or consequential loss or damage of similar nature. This warranty will be void if the trailer is damaged due to overloading, negligence, or misuse. Without prior approval, any modifications or alterations to any product or part manufactured by GS Trailers will void the warranty IN ITS ENTIRETY. Weights, dimensions, capacities and other measures stated in connection with the new trailer are only estimates and are not covered by this warranty.

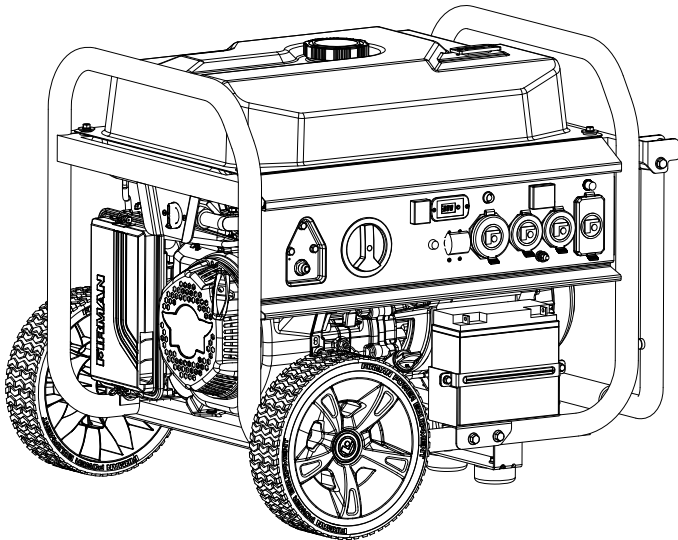
DISCLAIMERS

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND REPRESENTATIONS. GS TRAILERS MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO GS TRAILERS. NO ONE BESIDES AN AUTHORIZED GS TRAILER REPRESENTATIVE IS AUTHORIZED TO MAKE FURTHER OR ADDITIONAL WARRANTIES ON BEHALF OF GS TRAILERS.

THIS WARRANTY IS NON-TRANSFERABLE.

FIRMAN[®]

OPERATOR'S MANUAL TRI-FUEL PORTABLE GENERATOR



MODEL NUMBER
T09371

Rev:01

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

SERIAL NUMBER: _____

PURCHASE DATE: _____

STOP DO NOT RETURN TO STORE!

CALL US FIRST
1-844-347-6261

FOR QUESTIONS OR SERVICE INFORMATION



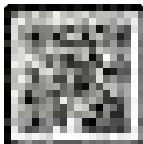
INTRODUCTION

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REGISTER YOUR PRODUCT

Register your product using the QR code provided or at www.firmanpowerequipment.com.






INTRODUCTION

Thank you for purchasing a FIRMAN generator. You have selected a high-quality, precision engineered generator set designed and tested to give you years of satisfactory service. This generator is 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.



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



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



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



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

INTRODUCTION



WARNING! This product can expose you to chemicals including 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 either of the 120/240V receptacles, 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 portable generator is designed to be used only with FIRMAN authorized parts.

System Ground

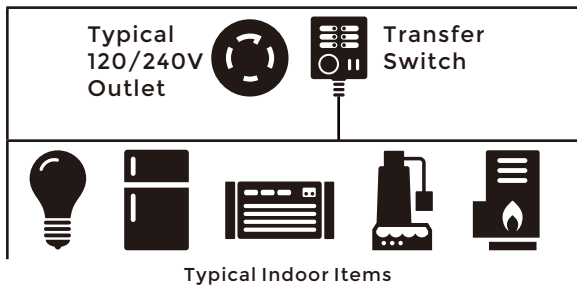
The generator has a system ground that connects the generator frame components to the ground terminals on the AC output receptacles. The system ground is connected to the AC neutral wire. The neutral is bonded to the generator frame.

Compliance Requirements

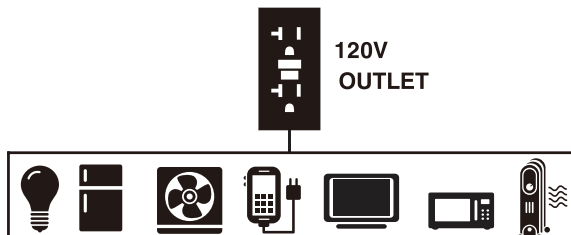
There may be Federal or State regulations, local codes, or ordinances that apply to the intended use of the generator. Consult a qualified electrician, electrical inspector, or the local agency having jurisdiction. This generator is not intended to be used at a construction site or similar activity as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

To Restore Home Power Using a Listed Transfer Switch

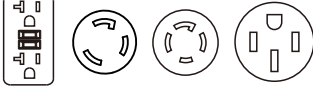
Connections to your home's electrical system must use a listed* transfer switch installed by a licensed electrician. The connection must isolate the generator power from the utility power and comply with all applicable laws and electrical codes.



To Restore Power Using Extension Cords



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

 To provide power using extension cords	
Total Amperage	Minimum Gauge, Outdoor Rated
	Up to 50 FT (15m)
Up to 13A	16
Up to 15A	14
Up to 20A	12
Up to 30A	10
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 downwind in an open, outdoor area, at least 20 ft. (6 m.) from occupied spaces with exhaust pointed away.

5. Extension cords running directly into your home, powering indoor items IS NOT RECOMMENDED.

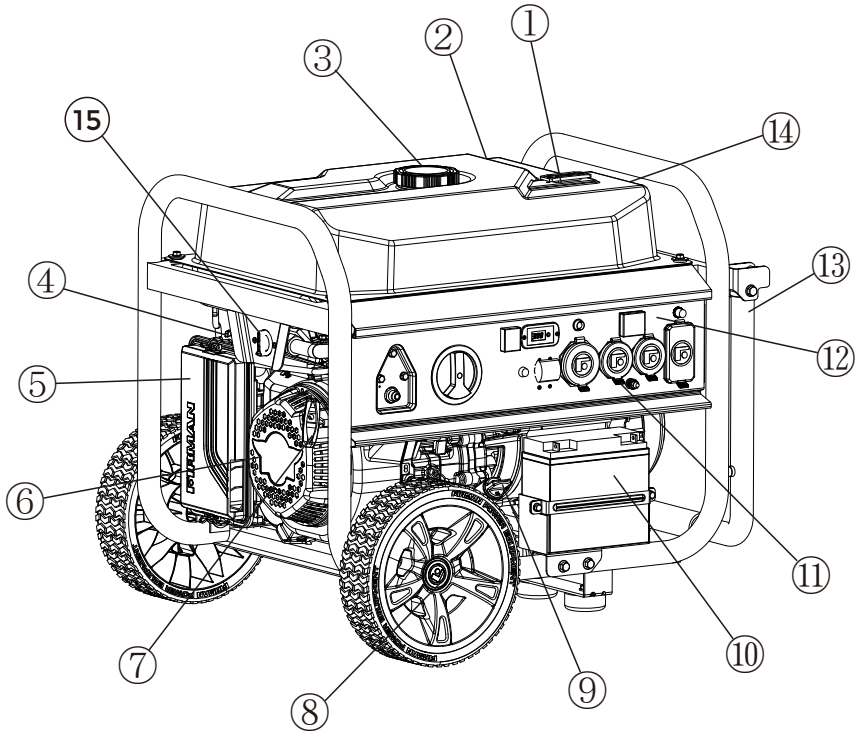


DANGER! Engine exhaust contains carbon monoxide, a poisonous gas that will kill you in minutes. You cannot smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

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

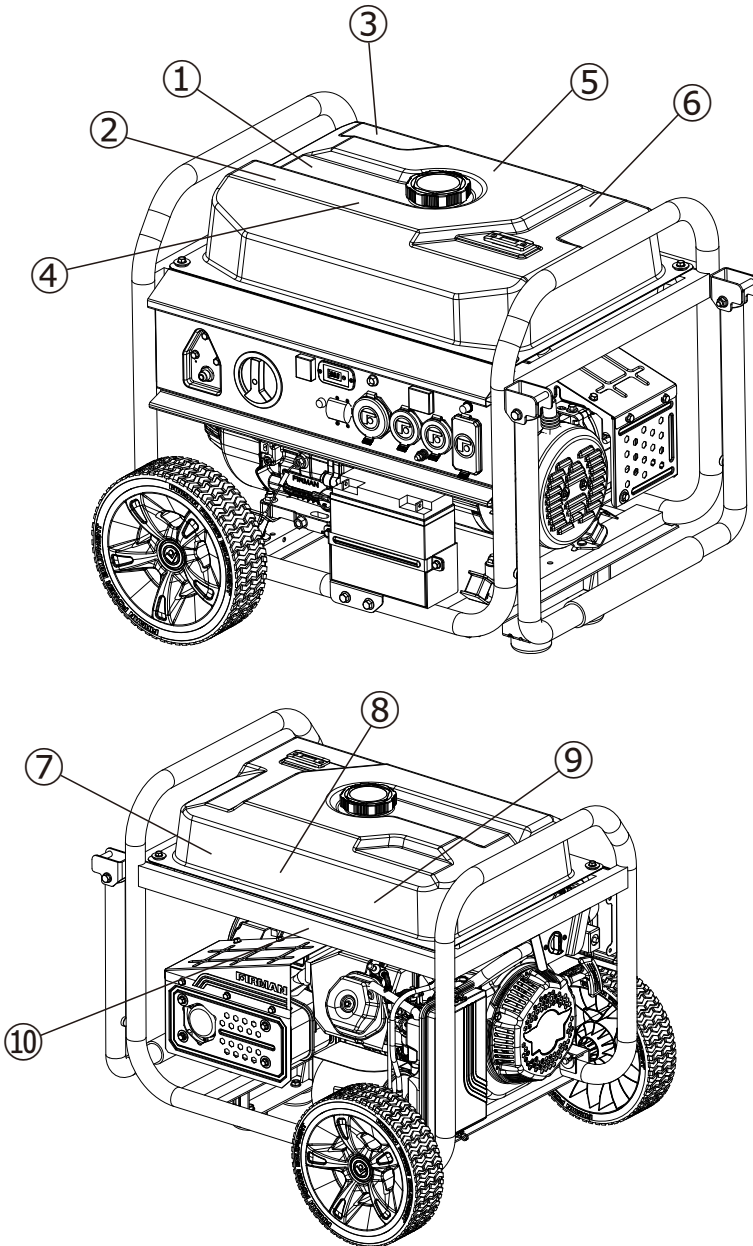
FEATURES AND CONTROLS



- | | |
|---------------------------------------|--------------------------------|
| 1- Fuel Gauge | 11- Outlet Cover |
| 2- 9.0 Gallon(34L) Capacity Fuel Tank | 12- Control Panel |
| 3- Fuel Cap | 13- Handle |
| 4- Choke Lever(behind air filter box) | 14- Data Decal / Serial Number |
| 5- Air Filter | 15- LPG/NG Selector Switch |
| 6- 459cc FIRMAN OHV Engine | |
| 7- Recoil Starter | |
| 8- 11.0" Flat Free Wheel | |
| 9- Oil Filler Cap | |
| 10- Battery | |

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

FEATURES AND CONTROLS



FEATURES AND CONTROLS

①

⚠ DANGER	
	Failure to follow warnings, instructions and operator's manual will result in death or serious injury.
	Tampering with the CO ALERT system will cause Carbon Monoxide poisoning. Install Carbon Monoxide alarms inside home.
	Generator could cause electrical shock. •Do not run indoors to avoid wet conditions. •Do not run in rain or wet weather. •Transfer switch must be used when connecting to a home's electrical system.
	Hot exhaust gases could cause fires. Keep at least 5 ft.(1.5m) clearance from any combustibles or structures, including overhead.
⚠ PELIGRO	
	El incumplimiento de las advertencias, las instrucciones y el manual del operador provocará la muerte o lesiones graves.
	La alteración del sistema de alerta de CO causará envenenamiento por monóxido de carbono. Instale detectores de Monóxido de Carbono dentro de su casa.
	El generador podría producir una descarga eléctrica. •No utilice en interiores para evitar condiciones de humedad. •No utilice en la lluvia o en condiciones de humedad. •Es necesario usar un interruptor de transferencia cuando se conecta al sistema eléctrico de una casa.
	Los gases calientes de salida podrían causar incendios. Manténgase a una distancia mínima de 1.5m de cualquier combustible o estructura, incluyendo lugares elevados.

②



③

Fuel level indicator
Indicador de nivel de combustible
Indicateur de niveau de carburant

⚠ 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.

⚠ 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.

⚠ AVERTISSEMENT

Le carburant est inflammable et pourrait causer des brûlures entraînant la mort ou des blessures graves. • Coupez le moteur et laissez-le refroidir au moins 2 minutes avant de faire le plein. • Ne remplissez pas le réservoir de carburant au-dessus de l'indicateur de niveau de carburant. • N'ajoutez jamais de carburant dans une génératrice chaude ou en marche.


④

	AUTOMATIC SHUTOFF - YOU MUST:		CORTE AUTOMÁTICO-DEBE REALIZAR LO SIGUIENTE:		ARRÊT AUTOMATIQUE - VOUS DEVEZ:
<p>20 FT. (6m) MIN.</p>	<p>MOVE GENERATOR TO AN OPEN OUTDOOR AREA. POINT EXHAUST AWAY FROM HOMES. DON'T RUN GENERATOR IN ENCLOSED AREAS (e.g. NOT IN HOUSE OR GARAGE). AIR OUT PREMISES (OPEN WINDOWS AND DOORS) BEFORE REOCCUPYING PROPERTY.</p>		<p>MUEVA EL GENERADOR A UN ÁREA ABIERTA AL AIRE LIBRE. APUNTE EL ESCAPE LEJOS DE LAS CASAS. NO UTILICE EL GENERADOR EN ÁREAS CERRADAS (EN CASA O EL GARAJE). VENTILE LAS INSTALACIONES (VENTANAS Y PUERTAS ABIERTAS) ANTES DE VOLVER A OCUPAR LA PROPIEDAD.</p>		<p>DÉPLACEZ LA GÉNÉRATRICE DANS UN ESPACE EXTÉRIEUR OUVERT. ÉLOIGNEZ L'ÉCHAPPEMENT DES MAISONS. NE FAITES PAS FONCTIONNER LA GÉNÉRATRICE DANS DES ZONES FERMÉES (P. EX. PAS DANS LA MAISON NI DANS LE GARAGE). AÉRIEZ LES LIEUX (FENÊTRES ET PORTES OUVERTES) AVANT DE REINTEGRER LA PROPRIÉTÉ.</p>
	<p>MOVE TO FRESH AIR AND GET MEDICAL HELP IF SICK, DIZZY OR WEAK.</p>		<p>UBÍQUESE EN UN LUGAR DONDE CORRA AIRE FRESCO Y BUSQUE AYUDA MÉDICA SI SE SIENTE MAL, MAREADO O DÉBIL.</p>		<p>ALLEZ A L'AIR FRAIS ET OBTENEZ DE L'AIDE MÉDICALE EN CAS DE MALADIE D'ÉTOURDISSEMENT OU DE FAIBLESSE.</p>

⑤

⚠ DANGER		⚠ PELIGRO		⚠ DANGER	
Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.		Utilizar un generador en interiores PUEDE PROVOCARLA MUERTE EN CUESTIÓN DE MINUTOS. Los gases del generador contienen monóxido de carbono, el cual es una sustancia venenosa que no puede verse ni olerse.		Utiliser un générateur à l'intérieur PEUT VOUS TUER EN QUELQUES MINUTES. Les gaz d'échappement du générateur contiennent du monoxyde de carbone. Ceci est un poison que vous ne pouvez ni voir ni sentir.	
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.	No utilice NUNCA el generador en el interior de su hogar ni en un garaje, NI SIQUERA con las puertas y ventanas abiertas.	Utilice sólo AL AIRE LIBRE y lejos de ventanas, puertas y oficinas de ventilación.	NE JAMAIS utiliser dans un garage ou à l'intérieur, MÊME avec les portes et les fenêtres ouvertes.	A n'utiliser qu'à L'EXTÉRIEUR et à distance de toutes fenêtres, portes et ouvertures.


6

	NOTICE	AVISO	AVIS
	<p>Operate, store and transport on firm level surface.</p> <ul style="list-style-type: none"> • Tilting can cause fuel spillage. 	<p>Operar, almacenar y transportar en una superficie firme y nivelada.</p> <ul style="list-style-type: none"> • Inclinarlo puede causar un derrame de combustible. 	<p>Faire fonctionner, entreposer et transporter sur une surface plane et ferme.</p> <ul style="list-style-type: none"> • Le basculement peut provoquer des déversements de carburant.

7

	⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
	<p>Do not place the LPG cylinder in the path of muffler outlet!</p>	<p>¡No coloque el cilindro de GLP en la vía de salida del silenciador!</p>	<p>Ne placez pas le cylindre de GPL dans le chemin de sortie du silencieux !</p>


8

	⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
	<p>Liquid Petroleum Gas (LPG) and Natural Gas (NG) are extremely flammable which could cause burns or fire resulting in death or serious injury. If you smell gas, close off all gas sources and contact a qualified plumber to inspect and repair the LPG or NG system.</p>	<p>El gas licuado de petróleo (GLP) y el gas natural (GN) son extremadamente inflamables, lo que podría causar quemaduras o incendios que podrían provocar la muerte o lesiones graves. Si huele a gas, cierre todas las fuentes de gas y contacte a un plomero calificado para que inspeccione y repare el sistema de GLP o GN.</p>	<p>Le gaz de pétrole liquéfié (GPL) et le gaz naturel (GN) sont extrêmement inflammables et pourraient causer des brûlures ou des incendies entraînant la mort ou blessures graves. Si vous sentez le gaz, fermez toutes les sources de gaz et contactez un plombier qualifié afin d'inspecter et de réparer le système GPL ou GN.</p>

9

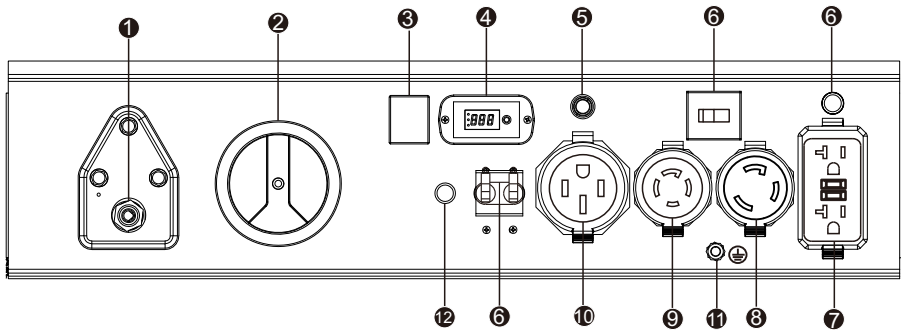
FOR RESIDENTS OF CALIFORNIA	PARA LOS RESIDENTES DE CALIFORNIA	POUR LES RÉSIDENTS DE LA CALIFORNIE
<p>⚠ WARNING: This product and the engine exhaust from this product can expose you to chemicals including CO, which are known to the State of California to cause cancer or cause birth defects and other reproductive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

10

	⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
	<p>Muffler could cause burns resulting in serious injury.</p> <ul style="list-style-type: none"> • Do not touch hot parts • Avoid hot exhaust gases 	<p>El silenciador podría causar quemaduras resultando en una lesión grave.</p> <ul style="list-style-type: none"> • No toque las partes calientes • Evite los gases de escape calientes 	<p>Le silencieux pourrait causer des brûlures entraînant des blessures graves.</p> <ul style="list-style-type: none"> • Ne touchez pas les pièces brûlantes. • Évitez les gaz d'échappement chauds

FEATURES AND CONTROLS

Control Panel



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

- 1. LPG/NG Hose Connector (Inlet: 3/8" Flare Male)** - Used to connect LPG/NG hose to generator.
- 2. Main Fuel Selector Switch/Engine 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. Engine switch is on when the switch is in GAS or LPG/NG positions.
- 3. Engine Start Switch** - To start engine, press and hold the switch in the START (II) position, the engine will crank and attempt to start. When the engine starts, release the switch to the RUN (I) position.
- 4. 3-1 Data-Minder (Multi-Meter)** - Push the SELECT button to show the Voltage, Hertz and running hours.
- 5. Indicator Light** - When the main fuel selector switch is turned to the GAS or LPG/NG position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN. See Indicator light-Battery Power Saving Mode section for more information.
- 6. Circuit Breakers** - The receptacles are protected by AC circuit protectors. If the generator is overloaded or an external short circuit occurs, a circuit protector may trip. If tripping occurs, disconnect all electrical loads and determine the cause before attempting to continue using the generator. Reset any tripped circuit protectors.
If multiple receptacles are used at the same time, the total current must be kept with-in the portable generator data decal rating.
- 7. 120V, 20A Duplex GFCI (Ground Fault Circuit Interrupter)- NEMA 5-20R**
A maximum of 20 Amps current may be drawn from this duplex receptacle.
- 8. 120V, 30A Twist Lock - NEMA L5-30R(Not GFCI protected)**
A maximum of 30 Amps current may be drawn from this receptacle.
- 9.120/240V, 30A Twist Lock - 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.
- 10. 120/240V, 50A - (NEMA 14-50R) (Not GFCI protected)**
A maximum of 38.75 Amps current for 240 Volts or two independent 120 Volt loads at 38.75 Amps current each.
- 11.Ground Terminal** - Consult an electrician or authority having jurisdiction for local grounding requirements.
- 12. 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.

1. Location

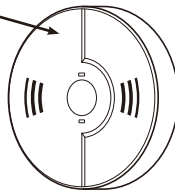


DANGER! Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You **CANNOT** smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

- Operate portable generator only outdoors and downwind at least 20 ft. (6 m) from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot detect carbon monoxide gas.
- Do not run this portable generator inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.
- If you start to feel sick, dizzy, weak or your home's carbon monoxide alarm sounds, get to fresh air right away. Call emergency services. You may have carbon monoxide poisoning.

Carbon Monoxide Alarm(s)

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

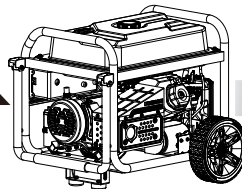


Prevent Carbon Monoxide (CO) Poisoning

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



20 ft. (6 m) min.



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

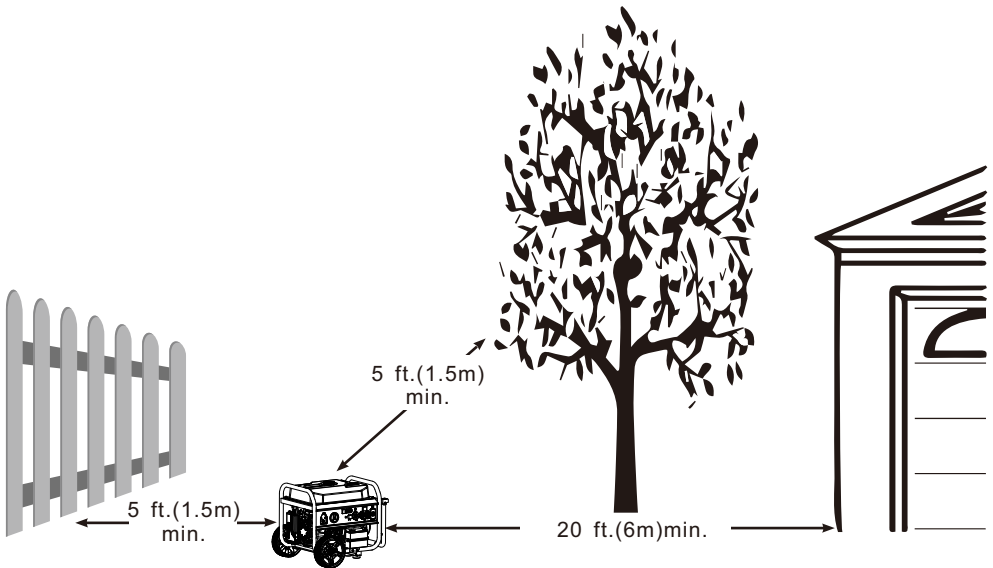
OPERATION

Reduce Risk of Fire

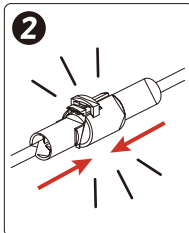
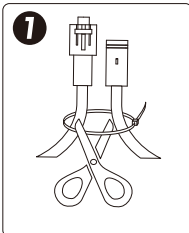


WARNING! Exhaust heat/gases could ignite combustibles, structures or damage fuel tank causing a fire, resulting in death or serious injury.

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



Connect the Battery



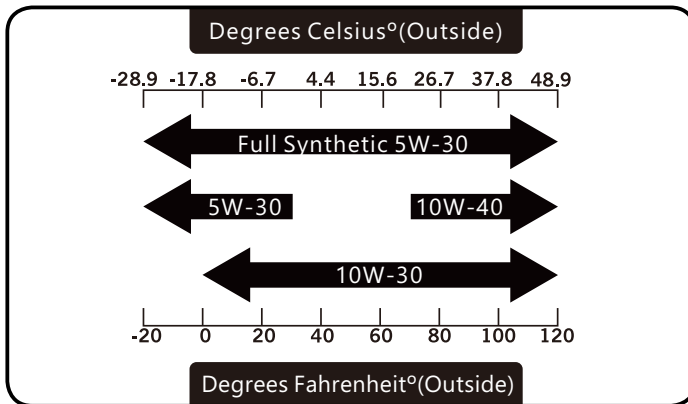
NOTICE Be sure to connect the battery before attempting to start the generator.

2, Oil and Gasoline / LPG/ NG

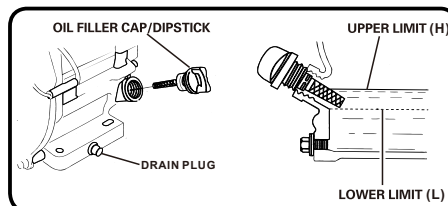
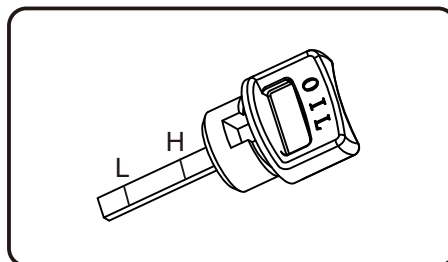
Add Engine Oil

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.

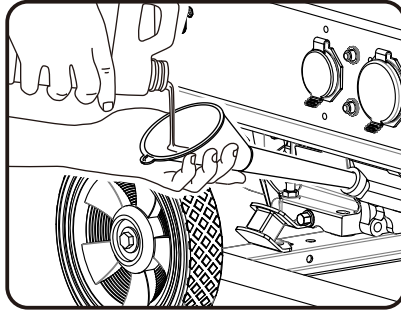


1. Place generator on a flat, level surface.
2. Clean area around oil fill and remove yellow oil fill cap/dipstick.
3. Wipe dipstick clean.



OPERATION

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



5. Replace oil fill cap/dipstick and fully tighten.

6. Oil level should be checked prior to each use or at least every 8 hours of operation. Keep oil level maintained.

Low Oil Shutdown

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

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:

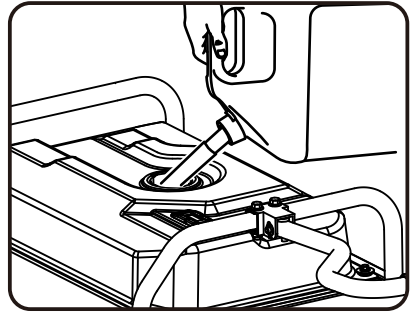
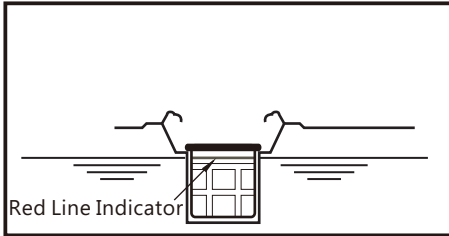
- Clean, fresh, unleaded gasoline with a minimum of 87 octane.
- For high altitude use, see Operation at High Altitude.
- Gasoline with no more than 10% ethanol is acceptable.

E10

E15

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 feet(1524 meters), a minimum 85 octane gasoline is acceptable. Engine power and generator output will be reduced approximately 3.5% for every 1000 feet (305 m) of elevation above sea level. High altitude may cause hard starting, increased fuel consumption and sparkplug fouling. 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.

	459cc	Altitude
Altitude main jet 1	393717004	3000-6000Feet
Altitude main jet 2	393717005	6000-8000Feet

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.

Operation at High Ambient conditions

Your Firman Power Equipment product is designed and rated for continuous operation at ambient temperatures up to 104°F (40°C). The generator may be operated at temperatures ranging from 5°F(-15°C) to 122°F(50°C) for short periods. If the generator is exposed to temperatures outside this range during storage, the generator should be brought back within this range before operation. When operated above 77°F(25°C) there may be a decrease in power. Maximum wattage and current are subject to and limited by such factors as ambient temperature, altitude, engine conditions etc.

OPERATION

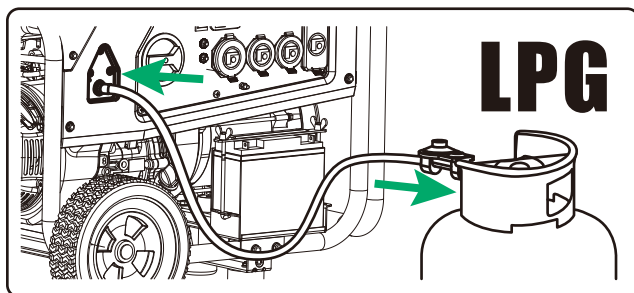
Connecting LPG/ NG Fuel



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

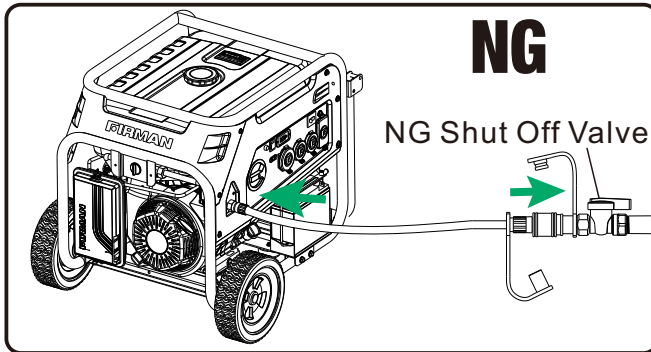
- The fuel supply line must always be shut off when the engine is not running. Failure to shut off fuel may allow fuel to leak at the generator.
 - Do not place the LPG/NG sources in the path of muffler outlet or near any ignition source.
 - Keep a fire extinguisher near the generator all the time.
 - 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 25ft (7.62m) Quick Connect Hose Kit (Model 1815) or 10ft (3m) 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 20ft (6m) from any occupied spaces.

Indicator light - Battery Power Saving Mode

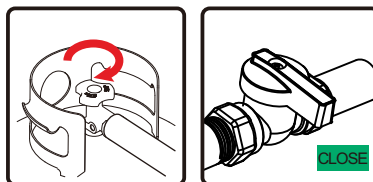
This generator is equipped with an electronic module which consumes battery power. When the main fuel selector switch is turned to the GAS or LPG/NG position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn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

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

The generator cannot be started in Battery Power Saving Mode. Turn 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.

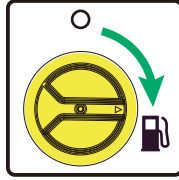
3.Starting the Generator on Gasoline

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. (6 m) 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.



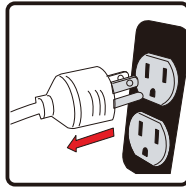
OPERATION

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

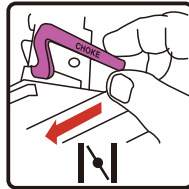


NOTICE When the main fuel selector switch is turned to the GAS position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN. See Indicator light-Battery Power Saving Mode section for more information.

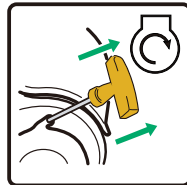
5. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



6. Move choke lever located on engine to "START" position. You do not need to choke a warm engine. (For electric start move to step (8))



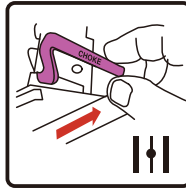
7. For recoil start only - Pull the starter cord slowly until resistance is felt and then pull rapidly to start engine.



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



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

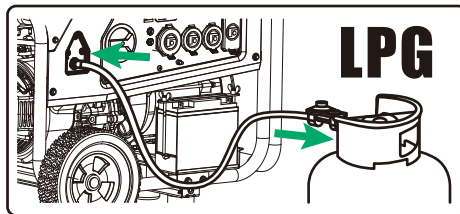


10. Allow portable generator to run at no load for a few minutes to stabilize before plugging in any electrical devices.

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. (6 m) 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 Connector (inlet).

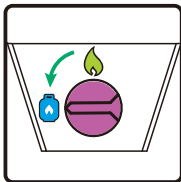


4. Fully open the LPG cylinder knob.

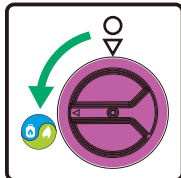


OPERATION

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



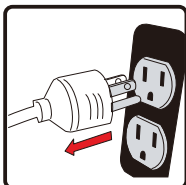
6. Turn the main fuel selector switch to LPG/NG position.



NOTICE When the main fuel selector switch is turned to the LPG/NG position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN.

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

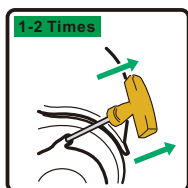
7. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



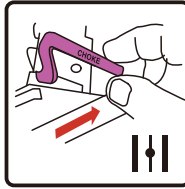
8. Move choke lever located on engine to "START" position.
(For electric start move to step (12))



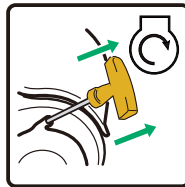
9. For recoil start only - PULL-TO-PRIME Pull the starter cord 1-2 times. Pull slowly until resistance is felt and then pull rapidly.



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

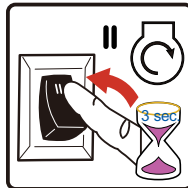


11. For recoil start only - PULL-TO-RUN Pull the starter cord slowly until resistance is felt and pull rapidly to run the portable generator.

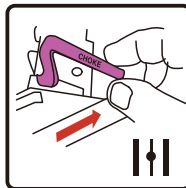


If the engine fails to start in 1-2 pulls with choke in the RUN position, move choke lever to START position and repeat the PULL-TO-PRIME step (9).

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



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



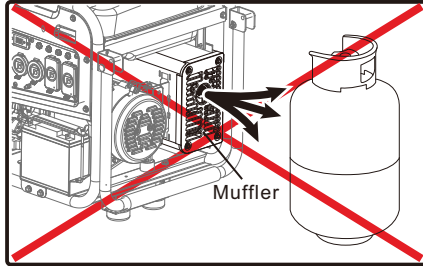
14. Allow portable generator to run at no load for a few minutes to stabilize before plugging in any electrical devices.

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

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

OPERATION

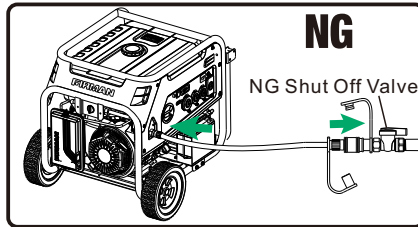
- Exchanging fuel cylinders to allow the first cylinder to warm up, repeating as necessary.
- Placing the LPG cylinder at the end of the generator near the handle, where engine fan air flows out from the generator. This air is slightly heated by air flowing over the engine.
- Do not place the LPG cylinder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



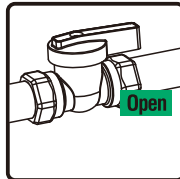
- The LPG cylinder and components can be temporarily warmed by pouring warm water over them.

5. Starting the Generator on NG

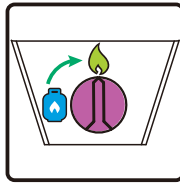
1. Before starting the generator, check for loose or missing parts and for any damage which may have occurred during shipment. Ensure spark plug, muffler, fuel cap, and air cleaner are all in place.
2. Operate portable generator only outdoors and downwind at least 20 ft. (6 m) from occupied spaces with exhaust pointed away to reduce the risk of carbon monoxide accumulating.
3. Connect the NG hose to both the NG source and portable generator LPG/NG Hose Connector (inlet).



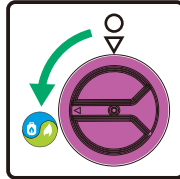
4. Fully open the NG source valve.



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

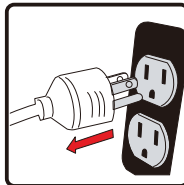


6. Turn the main fuel selector switch to LPG/NG position.



NOTICE When the main fuel selector switch is turned to the LPG/NG position, the indicator light will turn RED for up to 4 minutes (before going off). Starting the engine successfully anytime during the 4 minutes will turn the indicator light GREEN. See Indicator light-Battery Power Saving Mode section for more information.

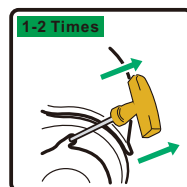
7. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in.



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

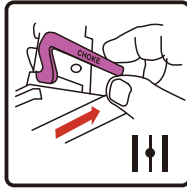


9. For recoil start only - PULL-TO-PRIME Pull the starter cord 1-2 times. Pull slowly until resistance is felt and then pull rapidly.

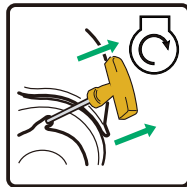


OPERATION

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



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

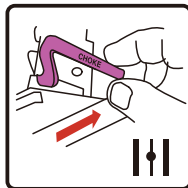


If the engine fails to start in 1-2 pulls with choke in the RUN position, move choke lever to START position and repeat the PULL-TO-PRIME step (9).

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



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



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

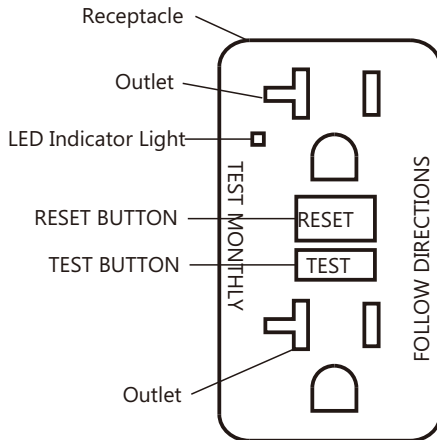
NOTICE If engine starts but fails to run, or if portable generator shuts down during operation, check oil level. See *Low Oil Shutdown* section for more information.

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 laying 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.



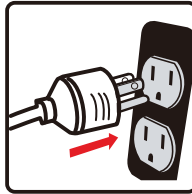
WARNING! Generator voltage could cause electrical shock or burn resulting in death or serious injury.

- 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.

OPERATION

- 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 5-6 for each additional item.



Surge Protection

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

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
<p>Red</p> <p>●●●●●</p>	<p>Carbon monoxide accumulated around generator. Prior to restart move generator to an open, outdoor area downwind and at least 20 ft. (6 m) 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.</p> <p>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.</p>
<p>Yellow</p> <p>●● ●●</p>	<p>CO Alert fault occurred*. See FIRMAN authorized service dealer.</p>

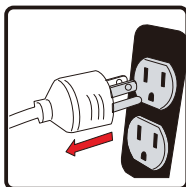
*Yellow light will blink for five seconds at the startup of generator to show CO ALERT is functioning properly.

7. Stopping the generator

1. Turn off and remove all electrical loads.

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

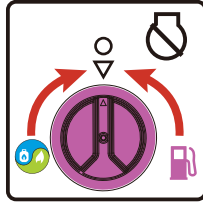
Never stop the engine by moving the choke to the start position.



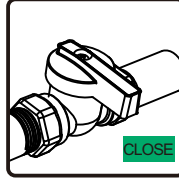
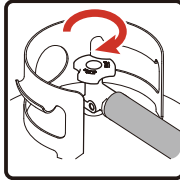
Let the generator run at no-load for one minute to stabilize internal temperatures of the engine and generator.

OPERATION

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



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



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 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 shedule chart above.

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

Maintenance - Storage

When Transporting Generator

Transport with fuel tank EMPTY or with main 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

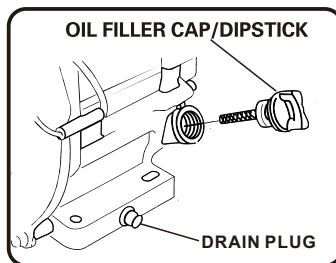
Change engine oil every 100 hours. (for a new engine, change oil after 25 hours.)
If you are using your generator under extremely dirty or dusty conditions, or in extremely hot weather change the oil more often.

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.

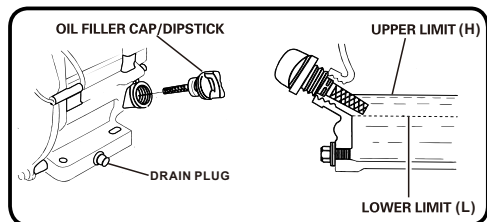
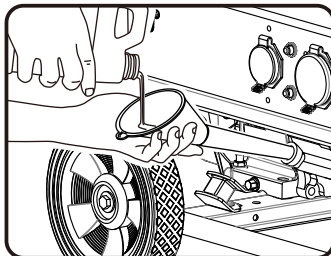


KEEP OUT OF REACH OF CHILDREN. DON'T POLLUTE. CONSERVE RESOURCES. RETURN USED OIL TO COLLECTION CENTERS.

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



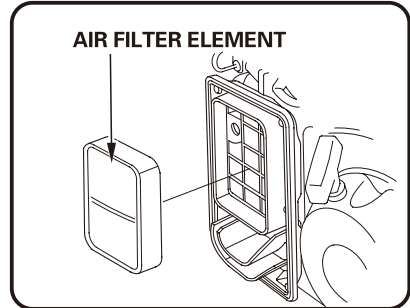
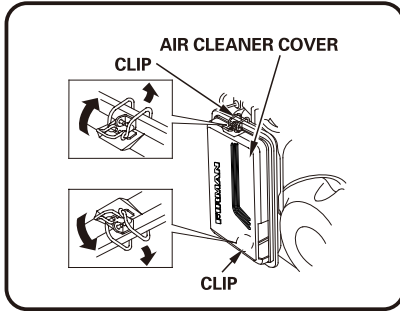
(b) Reinstall the drain plug and fill the engine with oil until it reaches the HIGH(H) level on the oil filler dipstick.



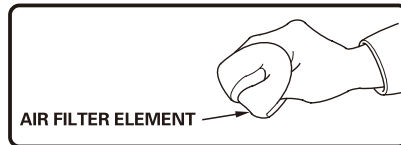
NOTICE We recommend using SAE 10W-30 API SL or higher oil for best performance. Do not use special additives. See **Oil and Gasoline / LPG/ NG**

Air Filter Maintenance

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



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



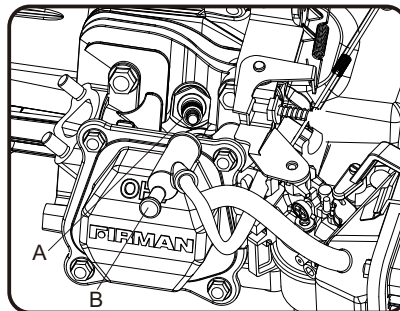
(c) Reinstall clean or new air filter element.

Spark Plug Maintenance

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

(a) Remove the spark plug boot.

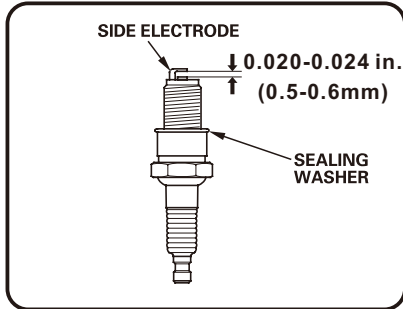
(b) Remove spark plug using provided wrench.



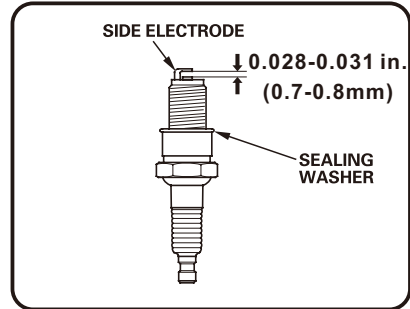
A- Spark plug
B- Spark plug boot

Maintenance - Storage

- (c) Inspect spark plug for damage and clean with a wire brush before reinstalling. Replace if damaged.
- (d-1) For spark plug FIRMAN P/N 330723001 - Adjust the electrode gap to 0.020 - 0.024 in. (0.5 - 0.6 mm).
- (d-2) For spark plug CHAMPION N9YC - Adjust the electrode gap to 0.028 - 0.031 in. (0.7 - 0.8 mm).
- (e) Seat spark plug in position and thread by hand to prevent cross threading.
- (f) Tighten plug with provided wrench and put the spark plug boot back on spark plug.



SPARK PLUG: FIRMAN P/N 330723001



SPARK PLUG: CHAMPION N9YC

SPARK PLUG: FIRMAN P/N 330723001 or CHAMPION N9YC

Maintenance Valve Clearance

Intake: 0.005 - 0.007 in. (0.13 - 0.17 mm)

Exhaust: 0.007 - 0.009 in. (0.18 - 0.22 mm)

Muffler and Spark Arrester

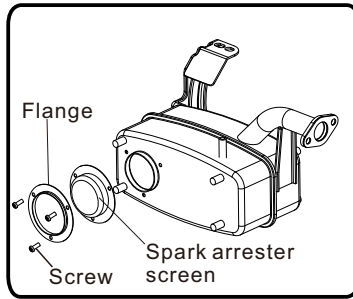


WARNING! Contact with muffler area could cause burns resulting in serious injury.

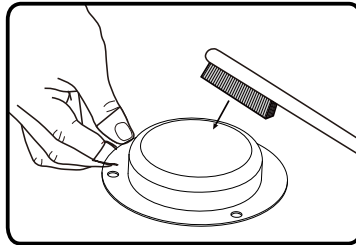
- Do not touch hot parts.
- It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws, reference Federal Regulation 36 CFR Part 261.52.

Inspect Muffler and Spark Arrester

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



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



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 on the muffler and attach with the screws.
- NOTICE** Failure to clean or replace spark arrester may result in decreased engine performance.

GENERATOR MAINTENANCE

Run the generator at least 30 minutes every month.

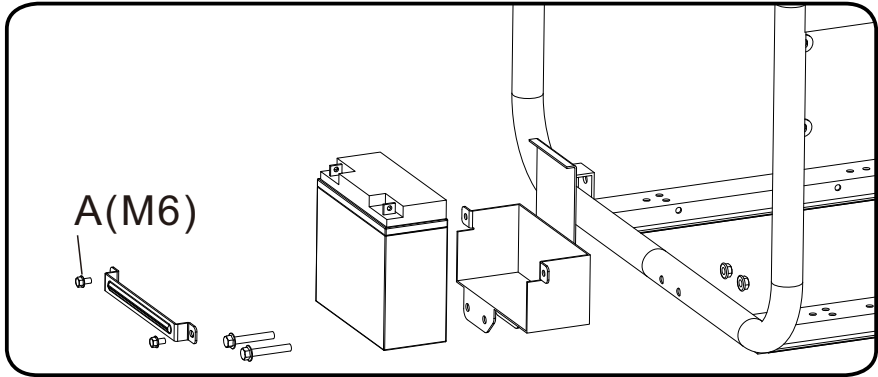
Make certain that the portable generator is kept clean and dry.

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

Do not insert any objects through cooling slots.

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

Battery Replacement



1. Remove the spark plug boot from spark plug.
2. Remove the nut and bolt from the negative(-) post first, then the positive(+) post.
3. Loosen and remove the fasteners(A) on the battery holding bracket.
4. Remove the battery and recycle.
5. Install the new battery with the following specification:
 - 12V sealed lead acid 15AH
 - LXWXH:7.09X2.95X6.5inch(180X75X165mm)
6. Connect the red positive (+) battery cable to the battery first.
7. Connect the black negative (-) battery cable to the battery second.
8. Cover the posts with boots provided.
9. Install the spark plug boot onto spark plug.

Battery Charging

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

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. Alcohol-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.

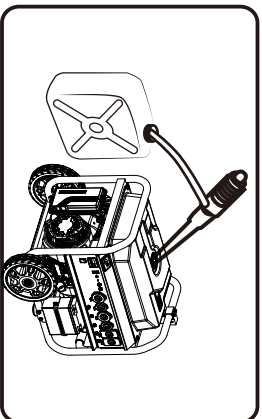
When the generator set is being stored for more than one month, follow these instructions to avoid engine problems:



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-Treat any stored fuel with fuel stabilizer.
 - 2-When storing generator with gasoline in fuel tank, operate the engine for 5-10 minutes to circulate treated fuel into fuel lines and carburetor before shutdown.
 - 3- There is no need to drain gasoline from the generator fuel tank if fuel stabilizer is added.
 - 4-FUEL STARVATION: If you elect to drain fuel tank move generator outdoors. Once fuel tank is drained turn main fuel selector switch to GAS position. Start and run the portable generator outdoors until engine stops from lack of gasoline. This will drain remaining gasoline from tank, fuel lines, and carburetor.
 - 5-Always turn main fuel selector switch to OFF position prior to storage.
 - 6-Allow the portable generator to cool before cleaning and storage.
 - 7-Change oil.
 - 8-Remove spark plug boot and spark plug. Pour about one teaspoon of engine oil through the spark plug hole, then slowly pull the recoil starter several times to distribute the oil in the cylinder. Reinstall the spark plug and attach the spark plug boot. Pull recoil slowly until resistance is felt. This will close the valves so no moisture enters the engine cylinder.
 - 9-Cover the portable generator and store in a clean, dry place out of direct sunlight and away from any ignition sources.
- 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.

Troubleshooting - Specifications

Problem	Cause	Correction
Engine is running, but no AC output is available.	<ol style="list-style-type: none"> 1. Circuit breaker is open. 2. Fault in generator. 3. Poor connection or defective cord set. 4. Connected device is bad. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Short circuit in a connected load. 2. Engine speed is too slow. 3. Shorted generator circuit. 4. Clogged or dirty fuel filter. 	<ol style="list-style-type: none"> 1. Disconnect shorted electrical load. 2. Contact authorized service facility 3. Contact authorized service facility 4. Clean or replace fuel filter.
Engine will not start; starts and runs rough or shuts down when running.	<ol style="list-style-type: none"> 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 gasoline. 6. Stale gasoline. 7. Spark plug wire not connected to spark plug. 8. Bad spark plug. 9. Water in gasoline. 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. 	<ol style="list-style-type: none"> 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 with gasoline. 6. Drain fuel tank and carburetor; fill with fresh gasoline. 7. Connect wire to spark plug. 8. Replace spark plug. 9. Drain gas tank and carburetor; fill with fresh gasoline. 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.	<ol style="list-style-type: none"> 1. Load is too high. 2. Dirty air filter. 3. Clogged or dirty fuel filter. 4. Clogged spark arrester. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Carburetor is running too rich or too lean. 2. Clogged or dirty fuel filter. 	<ol style="list-style-type: none"> 1. Contact authorized service facility. 2. Clean or replace fuel filter.
Engine shuts down when running.	<ol style="list-style-type: none"> 1. Out of gasoline or LPG/NG. 2. Dirty air cleaner. 3. Low oil level. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. CO system fault 	<ol style="list-style-type: none"> 1. Contact authorized FIRMAN service facility.

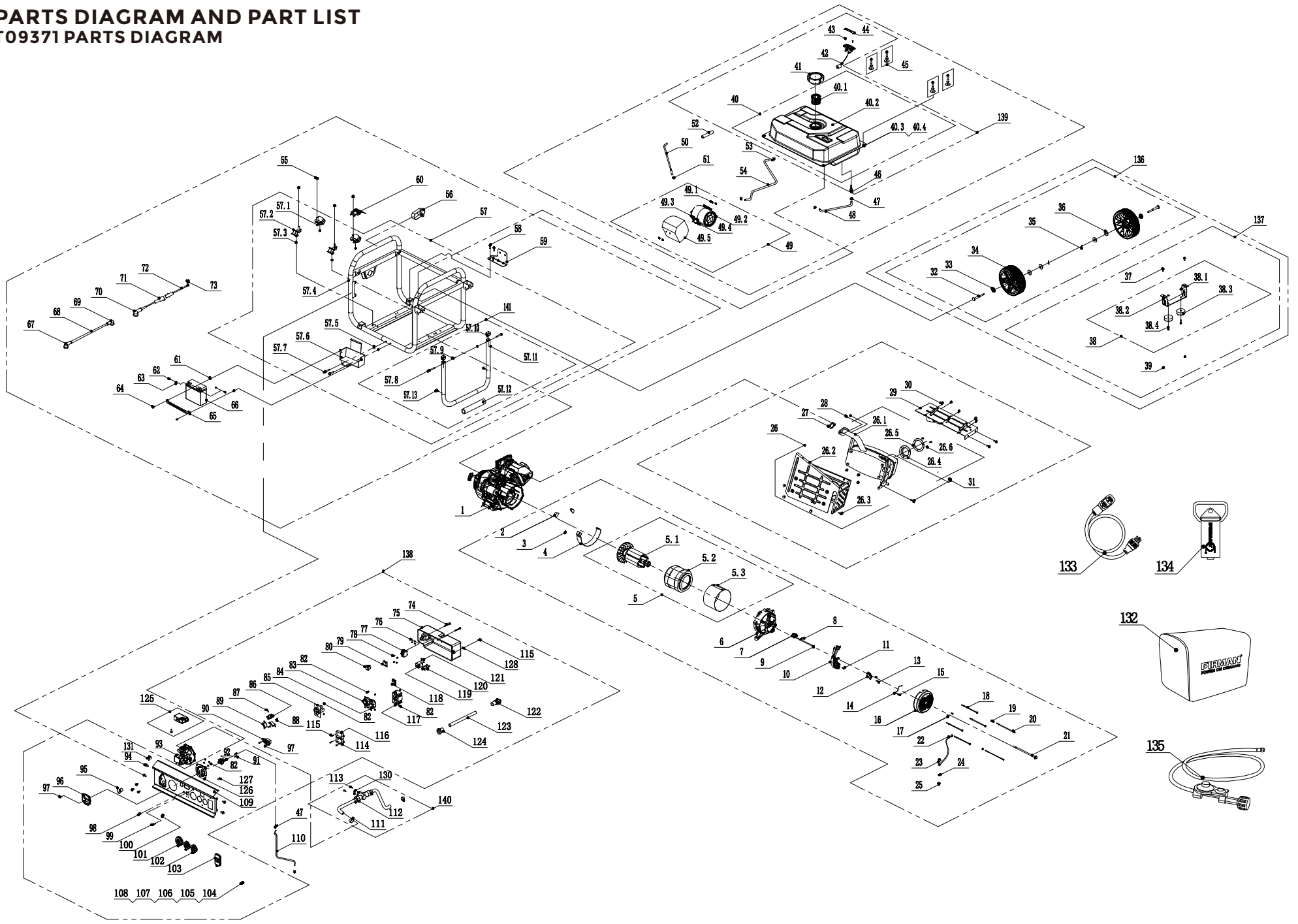
For all other issues, contact authorized dealer or Firman customer service.

SPECIFICATIONS

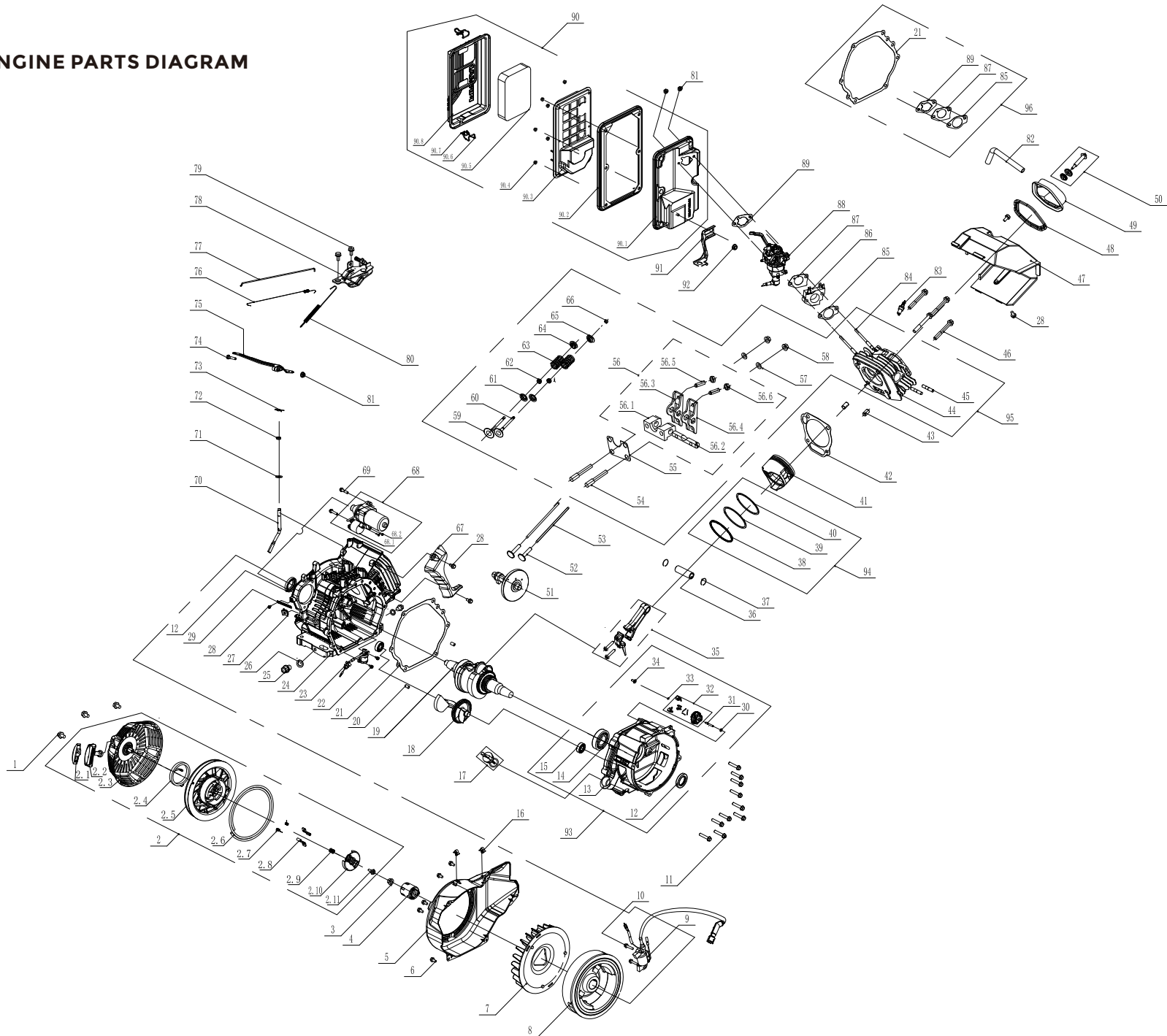
Model	T09371		
Starting Watts	11600(GASOLINE)/10400(LPG)/8650(NG)		
Running Watts*	9300(GASOLINE)/8300(LPG)/6900(NG)		
Rated AC Voltage	120/240V		
Rated Frequency	60Hz		
Phase	Single		
Voltage Regulator	AVR		
Power Factor	1		
Alternator Type	Brushed		
Engine	FIRMAN		
Engine Type	Single Cylinder, 4-Stroke OHV Air Cooled		
Displacement	459cc		
Low Oil Shutdown	Yes		
Ignition System	Breakless Ignition Type, Flywheel Magneto		
Starting System	Recoil/Electric Start		
Fuel	Unleaded Automotive Gasoline/LPG/NG		
Capacity Fuel Tank	9.0 U.S. Gallons (34L)		
Lubricating Oil Capacity	40.6 oz (1.2L)		
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	7-11 inches water column (0.25-0.40 psi)(13-20mm mercury)(1.7-2.7 kpa)		
Natural gas fuel consumption	No Load	Half Load	Full Load
	72ft ³ /hr(2m ³ /hr) 72,000 BTU/h (21,101 W)	86ft ³ /hr(2.4m ³ /hr) 86,000 BTU/h (25,204 W)	126.7ft ³ /hr(3.5m ³ /hr) 126,700 BTU/h (37,126 W)
LPG fuel consumption	15.6ft ³ /hr(1.6L/hr) 39,000 BTU/h (11,429 W)	31ft ³ /hr(3.2L/hr) 77,500 BTU/h (22,713 W)	62.7ft ³ /hr(6.5L/hr) 156,163 BTU/h (45,757 W)

*Generator certified in accordance with CSA (Canadian Standards Association) standard C22.2No. 100-14, Motors and Generators and complies with PGMA (Portable Generator Manufacturers' Association) standard ANSI/PGMA G300-2018, Safety and Performance of Portable Generators.

PARTS DIAGRAM AND PART LIST
T09371 PARTS DIAGRAM



459cc TRI-FUEL ENGINE PARTS DIAGRAM



Parts Diagrams - Parts Lists - Wiring Diagram

T09371 Portable Generator

NO.	Part Number	Description	Qty.	NO.	Part Number	Description	Qty.
1	392465500	Engine Subassembly	1	38.4	336713561	Flange Bolt M6×25	2
2	357713501	Rubber Cap B	2	39	336713558	Nut M8	2
3	336718308	Bolt M6×8	1	40	392415502	Fuel Tank Assy	1
4	357713573	Generator Wind Shield	1	40.1	336713548	Fuel Filter, Wire Mesh	1
5	392455504	Rotor And Stator Set	1	40.2	392715513	Fuel Tank Assy	1
5.1	392755502	Rotor Comp	1	40.3	336713542	Grommet, Fuel Tank	4
5.2	392755504	Stator Assy	1	40.4	357713600	Bushing	4
5.3	380713557	Stator Cover	1	41	340413002	Fuel Tank Cover Assembly	1
6	357713506	Generator End Cover	1	42	317713580	Fuel Gauge Assy.	1
7	357713507	Carbon Brush Assembly	1	43	336718383	Screw M5×16	2
8	336713525	Carbon Brush Holder	1	44	357713597	Fuel Gauge Display	1
9	357713563	Bolt &washer Assemblies	1	45	310715064	Bolt M6×20	4
10	392755500	AVR	1	46	336713807	Tank Fitting With Filter	1
11	336713519	Flange Bolt M5×16	2	47	330713508	Clip (φ10.5×8)	4
12	336713523	Terminal Block	1	48	392725502	Hose,fuel	1
13	336713520	Bolt &washer Assemblies	2	49	393428300	Carbon Canister(p08005)	1
14	357713599	Ground Wire	1	49.1	336718314	Nut M6	4
15	336713519	Flange Bolt M5×16	1	49.2	393723014	Carbon Canister	1
16	392715509	Generator End Cover Cap	1	49.3	393718300	Carbon Canister Holder	2
17	336713507	Flange Bolt M5×12	2	49.4	393718301	Carbon Canister Shield	2
18	380713506	Flange Bolt M6×200	4	49.5	393713020	Carbon Tank Cover	1
19	336713577	Nut M5(ground)	2	50	393723008	Hose	1
20	380713507	Side Cover Bolt M5×229	2	51	393713040	Clamping	2
21	380713508	Flange Bolt M10×285	1	52	357713546	Sleeve	1
22	336713514	Ground Wire	1	53	317713553	Clamp I	1
23	336718301	Bolt M6×12	1	54	393723002	Hose	1
24	336713516	External Teeth Lock Washer Ø6	1	55	357713531	Nut M10	4
25	336713517	Nut M6	1	56	336713691	Hose Holder	1
26	393418300	Muffler Assembly	1	57	392415503	Frame Assy	1
26.1	393413001	Muff Comp	1	57.1	357713532	Isolator II	2
26.2	393713002	Muffler Front Cover	1	57.2	357713533	Isolator I	2
26.3	336718352	Flange Bolt M6×12	9	57.3	336713558	Nut M8	4
26.4	393713025	Arrester,spark	1	57.4	392715514	Frame	1
26.5	393713026	Holder,spark Arrester	1	57.5	336713558	Nut M8	2
26.6	380713549	Screw&washer Assy M5×14	3	57.6	393413002	Supporter Battery	1
27	357713520	Gskt.,ext.	1	57.7	336718354	Flange Bolt M8×60	2
28	336713558	Nut M8	2	57.8	336718335	Flange Bolt M8×55	2
29	393713003	Muffler Cover	1	57.9	336713558	Nut M8	2
30	336718352	Bolt&washer Assy M6×12	8	57.10	392725508	Plug Handle	2
31	336713531	Bolt M8x20	2	57.11	392715515	Handle	1
32	392715512	Axle Comp	2	57.12	392725503	Cover, Handle	1
33	392725500	Plug, Wheel	2	57.13	340725508	Crash Pad	2
34	392725501	Wheel	2	58	375718302	Flange Bolt M8×12	2
35	357713536	Cotter Pin	2	59	393718302	Carbon Canister Holder	1
36	357713514	Flat Washer Ø10	4	60	392718304	Board, Isolator	1
37	336713559	Flange Bolt M8×16	2	61	336718314	Nut M6	2
38	393413016	Support Leg Assy	1	62	336713578	Nut M5	2
38.1	336718314	Nut M6	2	63	357713569	Screw&washer Assy M5×10	2
38.2	393713036	Support Leg	1	64	336718329	Flange Bolt M6×15	2
38.3	336713557	Rubber, Support	2	65	393713035	Pintch,battery	1

Parts Diagrams - Parts Lists - Wiring Diagram

NO.	Part Number	Description	Qty.	NO.	Part Number	Description	Qty.
66	357713553	Battery 12V 15AH	1	117	357713588	Receptacle GFCI	1
67	357713570	Sheath,connector Red	1	118	393725501	Breaker Cover	1
68	392715520	Red Wire	1	119	380713526	Double-pole Circuit Breaker 30A	1
69	336713611	Sheath	1	120	336713585	AC 20A Breaker,Push Button	1
70	357713571	Sheath,connector Black	1	121	336713569	Screw&washer Assy M4×8	6
71	336713693	Battery Cable(female 180mm)	1	122	357713548	Grommet	1
72	336713692	Battery Cable(male 120mm)	1	123	357713546	Sleeve	1
73	336713528	Flange Bolt M6×8	1	124	357713545	Grommet	1
74	336713589	Screw&washer Assy M5×38	2	125	375715008	CO Module	1
75	392725504	Control Box	1	126	399725534	Base, Regulator	1
76	380713562	Screw&washer Assy M5×8	4	127	336718357	Screw&washer Assy M4×14	1
77	393455001	Circuit Breaker Amp 38.8A	1	128	329713608	Washer Ø5	1
78	336718355	Screw&washer Assy M3×6	4	130	392725506	Selector Switch Cover	1
79	392758302	Breaker Cover	1	131	336723606	Clamp	1
80	340715046	Switch	1	132	380727001	Cover	1
82	336718324	Flange Bolt M4	12	133	350457023	Power Cord 1195	1
83	336713601	Receptacle L14-30R	1	134	336427003	Power Cable bundling	1
84	336713583	Socket L5-30R	1	135	336713834	LPG regulator	1
85	380713518	Receptacle 14-50R	1	136	393417001	Wheel Assy.	1
86	336713821	Micro Switch 1	1	137	393417003	Foot Kit Assy.	1
87	392715516	Tapping Screw St2.9×28	2	138	393417006	Control Panel Assy.	1
88	399715591	Tapping Screw St2.9×16	4	139	393417003	Fuel Tank Sub Assy.	1
89	336713822	Micro Switch 2	2	140	393417004	LPG-NG Selector Switch Sub Assy.	1
90	357713586	Multi Meter	1	141	393417005	Handle Sub Assy.	1
91	375718320	Screw&washer Assy M4×20	2				
92	336713824	Fuel Valve Assy.	1				
93	375413002	Main Ragulator Assy.	1				
94	336718302	Bolt M6×12	7				
95	336713826	LPG Inlet Cover	1				
96	399725533	Fuel Selector Switch	1				
97	330713582	Screw&washer Assy M4×14	3				
98	336755002	CO Shutdown Indicator Light	1				
99	336713828	Indicator Light	1				
100	336755005	Breaker Cover	1				
101	336713574	Outlet Cover TT-30R	1				
102	336713573	Outlet Cover L5-30R	2				
103	357713541	Outlet Cover 5-20R GFCI	1				
104	357713542	Flange Bolt M6×22	1				
105	357713543	Nut M6	2				
106	336713512	Lock Washer Ø6	2				
107	336713513	Flat Washer Ø6	2				
108	336713516	External Teeth Lock Washer Ø6	1				
109	393715001	Control Panel	1				
110	393755001	Hose,Fuel	1				
111	380713547	Clamp Ø25	2				
112	392715519	LPG-NG Selector Switch Assembly	1				
113	380713549	Screw&washer Assy M5×10	2				
114	336713818	Charger	1				
115	336713565	Screw M5×14	5				
116	336718319	Control Module & VF Module	1				

Parts Diagrams - Parts Lists - Wiring Diagram

FIRMAN 459cc Tri-fuel Engine

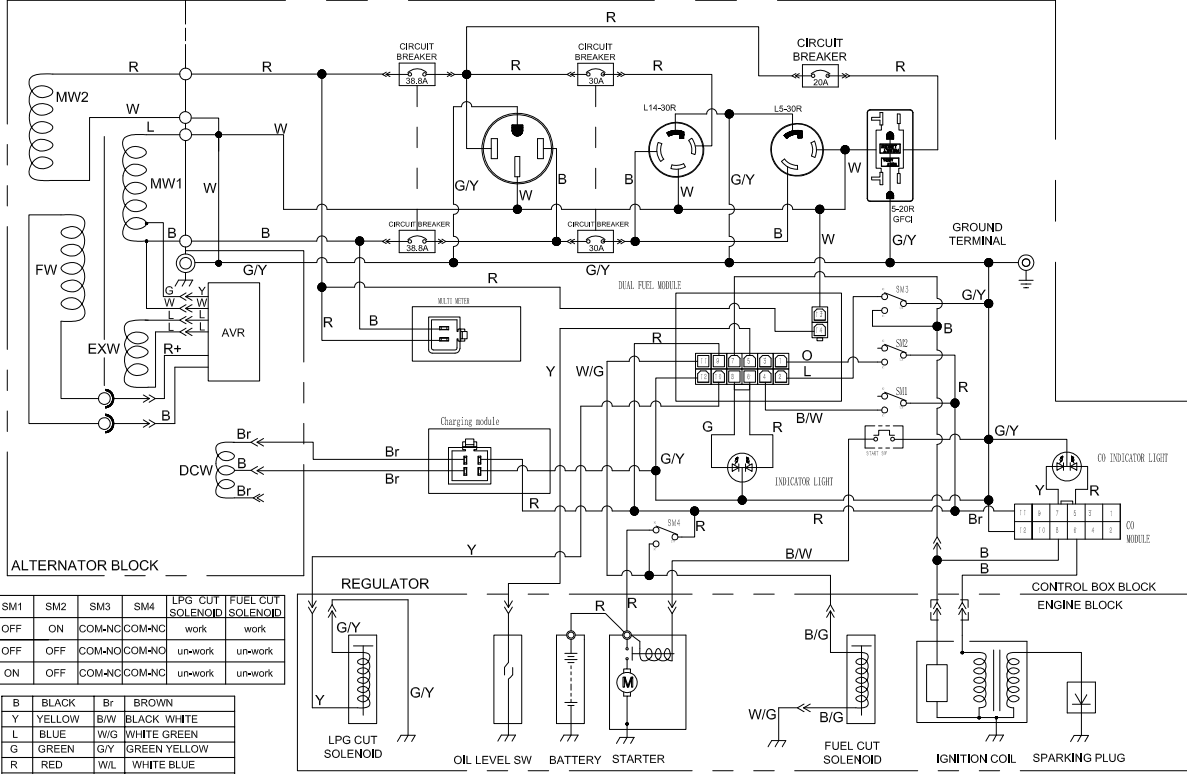
NO.	Part Number	Description	Qty.
1	336718308	Flange Bolt M6×8	3
2	357423500	Starting Cover Assy	1
2.1	336728300	Handle Core	1
2.2	336728301	Recoil Starter Knob	1
2.3	357723579	Starting Cover	1
2.4	357723580	Starter Return Spring	1
2.5	357723582	Recoil Starter Pulley	1
2.6	393723006	Recoil Starter Rope	1
2.7	336723589	Ratchet Spring	2
2.8	336723590	Ratchet Starter	2
2.9	336723592	Ratchet Guide Spring	1
2.1	336723591	Ratchet Guide	1
2.11	336723593	Ratchet Guide Bolt	1
3	357723571	Special Nut	1
4	357723572	Starter Pulley Comp	1
5	392715500	Fan Corer Comp	1
6	336718302	Flange Bolt M6×12	5
7	392718301	Cooling Fan	1
8	380418300	Flywheel Comp	1
9	380418301	Ignition	1
10	357723569	Bolt	2
11	357723516	Flange Boltm8*40	10
12	357723515	Oil Seal	2
13	393713011	Crankcase Cover	1
14	357723506	Radial Ball Bearing	1
15	357723505	Radial Ball Bearing	2
16	375718321	Wire Clip	2
17	393723009	Oil Filler Cap Assembly	1
18	357723507	Balance Gear	1
19	392715501	Crankshaft Comp	1
20	336723501	Dowel Pin 9*14	2
21	393723008	Case Cover Packing	1
22	336723526	Flange Bolt M6×15	2
23	357723503	Oil Level Switch Assy	1
24	393713010	Crankcase Assy	1
25	357723501	Drain Plug Bolt	2
26	357723502	Drain Plug Washer	2
27	393723007	Packing	1
28	336718301	Flange Bolt M6×12	5
29	393713009	Wire Clip	1
30	392715502	Washer	1
31	392715503	Governor Shaft	1
32	392715504	Governor Weight Holder	1
33	392715505	Governor Shaft Clip	1
34	392715506	Governor Slider	1
35	357723517	Connecting Rod Assembly	1
36	393713039	Piston Pin	1
37	380723502	Piston Pin Clip	2
38	393713012	Oil Seal Set Comp	1
39	393713013	Second Ring Set	1
40	393713014	First Ring Set	1
41	393713038	Piston	1
42	393723010	Cylinder Head Casket	1
43	357723544	Dowel Pin	2
44	392715507	Head Comp	1
45	392718300	Bolt	2
46	357723530	Bolt	4
47	393723011	Upper Hood Assembly	1
48	357723525	Head Over Packing	1
49	393413023	Head Cover Comp	1
50	393413024	Head Cover Bolt Comp	1
51	393413005	Camshaft Comp	1

NO.	Part Number	Description	Qty.
52	393713015	Valve Lifter	2
53	357723542	Push Rod	2
54	336723537	Push Rod Guide Plate	2
55	357723538	Pivot Bolt	1
56	393413006	Rocker Components	2
56.1	393718303	Rocker Seat	1
56.2	393718304	Rocker Shaft	1
56.3	393718305	Inlet Valve Rocker	1
56.4	393718306	Outlet Valve Rocker	1
56.5	393718307	Adjusting Stud	2
56.6	393718308	Fasten The Screw Nut	2
57	380713513	Flat Washers	2
58	336713517	Nut M6	2
59	380723507	Inlet, Valve	1
60	380723508	Outlet, Valve	1
61	357723537	Valve Spring Washer	2
62	357723536	Valve Oil	2
63	357723535	Valve Spring	2
64	357723533	In , Valve Spring Retainer	1
65	357723534	Ex , Valve Spring Retainer	1
66	357723531	Valve Rotator	1
67	393723012	Low Hood Assembly	1
68	380723512	Start Motor	1
68.1	375418302	Relay Components	1
68.2	336713519	Bolt M5×16	2
69	357713584	Flange Boltm8×35	2
70	357723567	Cover Arm Shaft	1
71	336723564	Washer8.2×17×0.8	1
72	392718302	Oil Seal	1
73	357723565	Pin Clip	1
74	336723567	Governor Arm Bolt	1
75	393728303	Governor Arm	1
76	357723562	Throttle Return Spring	1
77	357723563	Governor Rod	1
78	393413009	Control Set Assembly	1
79	336723526	Bolt M6×15	2
80	393713017	Governor Spring	1
81	336713517	Nut M6	3
82	357723529	Tube	1
83	330723001	Spark Plug	1
84	357723548	Bolt	2
85	357723549	Carburetor Insulator Packing	1
86	357723550	Carburetor Insulator	1
87	357723551	Carburetor Packing	1
88	392715508	Carburetor Assy	1
89	357723554	Air Cleaner Packing	1
90	375413003	Air Cleaner Case Assy	1
90.1	393728304	Air Cleaner Base	1
90.2	393718310	Seal	1
90.3	393718311	Clapboard	1
90.4	393728308	Nut M5	6
90.5	393718312	Filter	1
90.6	393728305	Lock I	1
90.7	393728306	Lock II	1
90.8	393728307	Air Cleaner Cover	1
91	357723546	Air Cleaner Holder	1
92	336718314	Nut M6	1
93	392418300	Crankcase Assy	1
94	392418301	Ring Set Assy	1
95	392415500	Cylinder Head Assy	1
96	392415501	Gasket Assy	1

Wiring Diagram

	SM1	SM2	SM3	SM4	LPG CUT SOLENOID	FUEL CUT SOLENOID
LPG	OFF	ON	COM-NC	COM-NC	work	work
OFF	OFF	OFF	COM-NO	COM-NC	un-work	un-work
GASOLINE	ON	OFF	COM-NC	COM-NC	un-work	un-work

B	BLACK	Br	BROWN
Y	YELLOW	B/W	BLACK WHITE
L	BLUE	W/G	WHITE GREEN
G	GREEN	G/Y	GREEN YELLOW
R	RED	W/L	WHITE BLUE
W	WHITE	OR	ORANGE



Service - Warranty

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

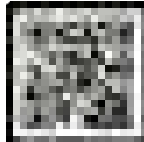
Even quality-built equipment such as this electric generator may need occasional replacement parts to maintain it in good condition over the years. To order replacement parts, please give the following information:

- 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 4 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 4 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:

Address

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.

Service - Warranty

FIRMAN POWER EQUIPMENT INC. Emission Control System Warranty

CALIFORNIA AND FEDERAL EXHAUST AND EVAPORATIVE EMISSIONS CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board, US Environmental Protection Agency ("US EPA") and FIRMAN POWER EQUIPMENT INC.(FIRMAN) are pleased to explain the emissions control systems warranty on your 2024-2025 or later Small Off-Road Engine ("SORE") and engine powered equipment. In California, new equipment that use small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. FIRMAN must warrant the emissions control systems on your SORE and engine powered equipment for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine or equipment leading to the failure of the emissions control system. Your emissions control system may include parts such as the carburetor or fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines (for liquid fuel and fuel vapors), fuel caps, valves, canisters, filters, clamps and other associated components. Also included may be hoses, belts, connectors, and other emission-related assemblies.

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

MANUFACTURER'S WARRANTY COVERAGE:

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

OWNER'S WARRANTY RESPONSIBILITIES:

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

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

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

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

FIRMAN Emission Control Defects Warranty Provisions

The warranty period begins on the date the engine/equipment is delivered to an ultimate purchaser. FIRMAN warrants to the ultimate purchaser and each subsequent purchaser that the engine is:

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

The warranty on emissions-related parts is as follows:

- (1) Any warranted part that is not scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, the part will be repaired or replaced by FIRMAN at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- (2) Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- (3) Any warranted part that is scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced by FIRMAN at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- (4) Repair or replacement of any warranted part under the warranty must be performed at no charge to the owner at a warranty station.
- (5) Notwithstanding the provisions of Subsection (4) above, warranty services or repairs must be provided by FIRMAN that are franchised to service the subject engines.
- (6) The owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.
- (7) FIRMAN is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part.

(8) Throughout the emissions warranty period defined in Subsection (b)(2), FIRMAN will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of the manufacturer.

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claim.

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

PARTS COVERED BY WARRANTY

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

1. Ignition system including: <ul style="list-style-type: none">- Spark plug- Ignition coil	4. Air induction system including: <ul style="list-style-type: none">- Intake pipe/manifold- Air cleaner
2. Fuel metering system: <ul style="list-style-type: none">- Fuel tank- Fuel cap- Fuel lines (for liquid fuel and fuel vapors) and related fittings/clamps- Fuel regulator, carburetor and internal parts.	5. Crankcase breather assembly including: <ul style="list-style-type: none">- Breather connection tube
3. Catalytic muffler assembly including: <ul style="list-style-type: none">- Exhaust manifold- Catalytic converter- Muffler gasket-pulse valve	6. Fuel tank evaporative emission control system including: <ul style="list-style-type: none">- Purge valves- Carbon canister- Vapor hoses and fitting/clamps

Limitations

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

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

FIRMAN POWER EQUIPMENT INC.
www.firmanpowerequipment.com

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P/N:393745471 Rev:06



Safety Data Sheet

1. IDENTIFICATION

Product Name: Lead Acid Battery Synonyms: SLI Battery	Product Use: Vehicle Electrical System Manufacturer/Supplier: Canadian Energy Address: 107-10550 42 St SE Calgary, AB, T2C 5C7
General Information Number: 1-800-236-7472 Contact Person: Canadian Energy H&S Department	Emergency number: CANUTEC 613-996-6666

2. HAZARD(S) IDENTIFICATION

Health		Environmental	Physical
Acute Toxicity (Oral, dermal, inhalation)	Category 4	Aquatic Chronic 1 Aquatic Acute 1	Explosive Chemical, Division 1.3
Skin corrosion/irritation	Category 1A		
Eye Damage	Category 1		
Reproductive	Category 1A		
Carcinogenicity (lead)	Category 1B		
Carcinogenicity (acid mist)	Category 1A		
Specific target organ toxicity (repeated exposure)	Category 2		

Label Elements:

Health	Environmental	Physical
Hazard Statements DANGER! Causes severe skin burns and eye damage. Causes serious eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure.	Precautionary Statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Irritating to eyes, respiratory system, and skin.	

May form explosive air/gas mixture during charging.
Extremely flammable gas (hydrogen).
Explosive, fire, blast or projection hazard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical/Common Names):	CAS No.:	% by Wt:
Lead	7439-92-1	34
Lead Oxide	1309-60-0	31
Sulfuric Acid	7664-93-9	34
Lead Sulfate	7446-14-2	<1

Composition Comments

All concentrations are in percent by weight.

4. FIRST AID MEASURES

Note: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) and lead for exposures that may occur during battery production or container breakage or under extreme heat conditions such as fire.

Inhalation Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.
Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

Skin contact Sulfuric Acid: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes.
Lead: Wash immediately with soap and water.

Eye contact Sulfuric Acid and Lead: Flush immediately with large amounts of water for at least 15 minutes while lifting lids; Seek immediate medical attention if eyes have been exposed directly to acid.

Ingestion Sulfuric Acid: Give large quantities of water; Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death; consult physician.
Lead: Consult physician immediately.

5. FIRE FIGHTING MEASURES

Flash Point Not applicable unless individual components exposed.

Auto ignition No data available.

Temperature

Flammable Limits LEL = 4.1% (Hydrogen Gas in air) ; UEL = 74.2%

Extinguishing CO₂; foam; dry chemical. Do not use carbon dioxide directly on cells. Avoid breathing vapors. Use appropriate media for surrounding fire.

Media

Special Fire Fighting Procedures Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection. If batteries are on charge, shut off power to the charging equipment, but note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.

Unusual Fire and Explosion Hazard Highly flammable hydrogen gas is generated during charging and operation of batteries. If ignited by burning cigarette, naked flame or spark, may cause battery explosion with dispersion of casing fragments and corrosive liquid electrolyte. Carefully follow manufacturer's instructions for installation and service. Keep away all sources of gas ignition and do not allow metallic articles to simultaneously contact the negative and positive terminals of a battery. Follow manufacturer's instructions for installation and service.

6: ACCIDENTAL RELEASE MEASURES

Protective Measures to be Taken if Material is Released or Spilled	Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of un-neutralized acid to sewer. Acid must be managed in accordance with approved local, provincial, and federal requirements.
Waste Disposal Method	Dispose of as a hazardous waste. Dispose of in accordance with applicable local, provincial and federal regulations.

7. HANDLING AND STORAGE

Handling	Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. Handle carefully and avoid tipping, which may allow electrolyte leakage. There may be increasing risk of electric shock from strings of connected batteries. Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Keep vent caps on and cover terminals to prevent short circuits. Place cardboard between layers of stacked automotive batteries to avoid damage and short circuits. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.
Storage	Store batteries under roof in cool, dry, well-ventilated areas separated from incompatible materials and from activities that may create flames, spark, or heat. Store on smooth, impervious surfaces provided with measures for liquid containment in the event of electrolyte spills. Keep away from metallic objects that could bridge the terminals on a battery and create a dangerous short-circuit. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.
Charging:	There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.
Other	Follow Manufacturers Recommendations regarding maximum recommended currents and operating temperature range. Do not overcharge beyond the recommended upper charging voltage limit. Applying pressure or deforming the battery may lead to disassembly followed by eye, skin and throat irritation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits	Type	Value	Form
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m ³	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	0.2 mg/m ³	Thoracic fraction.
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m ³	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m ³
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	STEL	3 mg/m ³
	TWA	1 mg/m ³
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m ³

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	0.2 mg/m3	Mist.
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m3	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m3	

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3
Electrolyte (Sulfuric acid)(CAS 7664-93-9)	STEL	3 mg/m3
Lead and lead compounds (inorganic) (CAS7439-92-1)	TWA	1 mg/m3
	TWA	0.05 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Lead and lead compounds (inorganic) (CAS 7439-92-1)	300 µg/l	Lead	Blood	*

* - For sampling details, please see the source document

Appropriate engineering controls Provide adequate ventilation. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection None under normal conditions. Leak from a damaged or opened battery: Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection None under normal conditions. Leak from a damaged or opened battery: Wear appropriate chemical resistant gloves.

Other None under normal conditions. Leak from a damaged or opened battery: Wear suitable protective clothing. Use of an impervious apron is recommended.

Respiratory protection None under normal conditions.

Thermal hazards When material is heated, wear gloves to protect against thermal burns.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Manufactured article; no apparent odor. Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.
Odor Threshold	Not applicable.
pH	Not applicable
Boiling Point	Not applicable unless individual components exposed. Battery Electrolyte (Acid) - 230 - 233.6 °F (110 - 112 °C) Lead - 3191 °F (1755 °C)
Melting Point	Lead - 621.32 °F (327.4 °C)
Specific Gravity (H₂O = 1)	1.215 to 1.350
Flash Point	498.2 °F (259.0 °C) Hydrogen
Evaporation Rate (Butyl Acetate = 1)	< 1
Vapor Pressure (mm Hg @ 20 ° C)	Battery Electrolyte (Acid) 11.7
Flammability	Hydrogen Flammability Limit Lower- 4.1 %
Upper/lower flammability or explosive limits	Flammability Limit Upper – 74.2 %
Vapor Pressure	Not applicable.
Vapor Density	3.4 (Air = 1) Battery Electrolyte (Acid)
Relative Density	1.21 - 1.3 Battery Electrolyte (Acid)
Solubility	Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).
% Volatile by Weight	Not applicable unless individual components exposed.
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	1076 °F (580 °C) Hydrogen.
Decomposition temperature	Not applicable
Viscosity	Not applicable

10. STABILITY AND REACTIVITY

Stability	The sealed battery is considered stable.
Conditions to Avoid	Sparks and other sources of ignition; high temperature; over charging.
Incompatibility (materials to avoid)	Electrolyte: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. Lead compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents. Arsenic compounds: strong oxidizers; bromine azide. NOTE: hydrogen gas can react with inorganic arsenic to form the highly toxic gas – arsine
Hazardous Decomposition Products	Electrolyte: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide.
Hazardous Polymerization	Lead compounds: Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas. Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Exposure to contents of an open or damaged battery: Dust/mist may irritate respiratory system. Difficulty in breathing. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Skin contact	Exposure to contents of an open or damaged battery: Dust/mist may irritate skin.
Eye contact	Exposure to contents of an open or damaged battery: Dust/mist may irritate the eyes.
Ingestion	Exposure to contents of an open or damaged battery: May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to contents of an open or damaged battery: Dust may irritate the eyes and the respiratory system.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Electrolyte (Sulfuric acid) (CAS 7664-93-9)		
Acute		
<i>Oral</i>		
LD50	Rat	2140 mg/kg
Skin corrosion/irritation	Exposure to contents of an open or damaged battery: Causes skin burns.	
Serious eye damage/eye irritation	Exposure to contents of an open or damaged battery: Causes serious eye damage.	
Respiratory or skin sensitization		
Canada - Alberta OELs: Irritant		
Antimony (CAS 7440-36-0)		Irritant
Respiratory sensitization	No data available.	
Skin sensitization	No data available.	
Germ cell mutagenicity	No data available.	
Carcinogenicity	The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.	
ACGIH Carcinogens		
Electrolyte (Sulfuric acid) (CAS 7664-93-9)		A2 Suspected human carcinogen.
Lead and lead compounds (inorganic) (CAS 7439-92-1)		A3 Confirmed animal carcinogen with unknown relevance to humans.
Canada - Alberta OELs: Carcinogen category		
Electrolyte (Sulfuric acid) (CAS 7664-93-9)		Suspected human carcinogen.
Canada - Manitoba OELs: carcinogenicity		
LEAD AND INORGANIC COMPOUNDS, AS PB (CAS 7439-92-1)		Confirmed animal carcinogen with unknown relevance to humans.
SULFURIC ACID, WHEN CONTAINED IN STRONG INORGANIC ACID MISTS (CAS 7664-93-9)		Suspected human carcinogen.
Canada - Quebec OELs: Carcinogen category		
Lead and lead compounds (inorganic) (CAS 7439-92-1)		Detected carcinogenic effect in animals.
IARC Monographs. Overall Evaluation of Carcinogenicity		
Electrolyte (Sulfuric acid) (CAS 7664-93-9)		1 Carcinogenic to humans.
Lead and lead compounds (inorganic) (CAS 7439-92-1)		2B Possibly carcinogenic to humans.

Reproductive toxicity	None under normal conditions. Exposure to contents of an open or damaged battery: May damage fertility or the unborn child.
Specific target organ toxicity - single exposure	None under normal conditions. Exposure to contents of an open or damaged battery: Causes damage to organs (Respiratory system).
Specific target organ toxicity - repeated exposure	None under normal conditions. Exposure to contents of an open or damaged battery: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Exposure to contents of an open or damaged battery: Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues. Chronic inhalation of sulfuric acid mist may increase the risk of lung cancer.

12. ECOLOGICAL INFORMATION

Environmental Fate	Lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead
Environmental toxicity	Aquatic Toxicity:
Sulfuric Acid	24-hr LC50, freshwater fish (Brachydanio rerio): 82 mg/L 96 hr- LOEC, freshwater fish (Cyprinus carpio): 22 mg/L
Lead	48 hr LC50 (modeled for aquatic invertebrates): <1 mg/L, based on lead bullion
Additional Information	No known effects on stratospheric ozone depletion Volatile organic compounds: 0% (by Volume) Water Endangering Class (WGK): NA

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Recycle the batteries, as the primary disposal method. Avoid discharge into water courses or onto the ground. Dispose of this material and its container to hazardous or special waste collection point.
Local disposal regulations	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Avoid discharge into water courses or onto the ground.
Contaminated packaging	Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

TDG

UN number UN2794
UN proper shipping name BATTERIES, WET, FILLED WITH ACID, electric storage
Transport hazard class(es)
 Class 8
 Subsidiary risk -
Packing group III
Environmental hazards Not available.
Special precautions for user Not available.

IATA

UN number UN2794
UN proper shipping name Batteries, wet, filled with acid electric storage
Transport hazard class(es)
 Class 8
 Subsidiary risk -
Packing group -
Environmental hazards Yes
ERG Code 8L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN2794
UN proper shipping name BATTERIES, WET, FILLED WITH ACID electric storage
Transport hazard class(es)
 Class 8
 Subsidiary risk -
Packing group -
Environmental hazards
 Marine pollutant Yes
EmS F-A, S-B
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. REGULATORY INFORMATION

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Class B

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION

Issue Date: 05/01/2017

Further information: NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3=Serious 4 = Severe

Disclaimer

The information in this SDS was obtained from sources which we believe are reliable, but no warranty or representation as to its accuracy or completeness is hereby given. Users should consider the information herein only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal, the safety and health of employees and customers and the protection of the environment.



Automotive Battery Care & Maintenance



1. SAFETY PRECAUTIONS

 <ul style="list-style-type: none"> Keep Out of the Reach of Children <i>Garder hors de la portée des enfants</i> Do Not Tip <i>Ne pas pencher</i> Do Not Open Battery <i>Ne pas ouvrir la batterie</i> 	 <ul style="list-style-type: none"> Shield Eyes <i>Se protéger les yeux</i> Explosive Gases <i>Gaz explosifs</i> Can Cause Blindness or Injury <i>Peut causer la cécité ou des blessures</i> 	 <ul style="list-style-type: none"> Flush Eyes Immediately with Water <i>Rincer les yeux à l'eau immédiatement</i> Get Medical Help Fast <i>Consulter immédiatement un médecin</i> 	 <ul style="list-style-type: none"> Sulfuric Acid Can Cause Blindness or Severe Burns <i>L'acide sulfurique peut causer la cécité ou des brûlures graves</i> 	 <ul style="list-style-type: none"> No Sparks, Flame or Smoking <i>Tenir à l'écart des étincelles et des flammes. Ne pas fumer.</i>
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KEEP OUR OF REACH OF CHILDREN. READ ALL INSTRUCTIONS. DO NOT TIP KEEP VENT CAPS TIGHT & LEVEL.

WARNING:

RISK OF FIRE, EXPLOSION OR BURN. DO NOT DISASSEMBLE OR INCINERATE. NOT RECOMMENDED FOR INVERTED USE. FOLLOW PROPER CHARGING INSTRUCTIONS.

FOLLOW ALL SAFETY INSTRUCTIONS WHEN HANDLING BATTERIES! ALWAYS WEAR

Safety glasses and a face shield when working on or near batteries. All batteries generate explosive hydrogen gas. Keep sparks, flames and cigarettes away from batteries at all times. Do not connect or disconnect "live" circuits. To avoid creating sparks, always turn charging and testing equipment off before attaching or removing clamps.

Always disconnect ground cables first and connect it last to prevent dangerous sparks. Batteries contain corrosive sulfuric acid that can destroy clothing and burn the skin. Neutralize acid spills with a paste made of baking soda and water or large quantities of water, baking soda, soda ash or lime. Be careful!

2. IN-VEHICLE SERVICE & TESTING



FOLLOW SAFETY PRECAUTIONS - WEAR PROPER EYE PROTECTION!

Prior to any testing, visually inspect the battery. Look for:

- Cracked or broken case or cover
- Loose cable connections
- Leaking case-to-cover seal
- Corrosion
- Damaged or leaking terminals

Neutralize any corrosion with a baking soda/water paste or battery cleaner spray. Scrape or brush off the residue and wash the area with clean water. Following your visual inspection, check the battery's state of charge with a voltmeter.

You must boost charge a weak battery before load testing. (See charging chart under "Charging Tips" section.) If fully charged, perform a load test.

PROTECT YOUR EYES!

3. CONDUCTANCE TESTING

Conductance uses the battery's response to a very small signal in an attempt to predict the effects of a much larger current. Conductance testing is ineffective on a discharged battery. If the battery is known to be discharged or if the tester tells the operator to charge before testing again, the battery must be completely recharged.

- 1 It may not be required to turn a conductance tester off or on. If off, you must turn on immediately when connected to a battery. Most will turn off automatically if ignored long enough. Some have no battery of their own and get all their power from the battery being tested.
- 2 Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. If the battery has more than one pair of terminals (e.g. top posts and side terminals) always perform the testing on the terminals that are used in the vehicle. Use the proper charging adapters for stud or side terminal batteries. Never connect tester to a bolt or stud.
- 3 Turn on if needed. Enter the requested information. Be sure to distinguish between a CCA rating and a CA or MCA rating. If no rating is available, use the minimum O.E. battery CCA requirement of the vehicle.
- 4 If the tester says to replace a battery that was tested in the vehicle, repeat the testing after removing the cables and cleaning the posts.



FOLLOW SAFETY PRECAUTIONS- WEAR PROPER EYE PROTECTION!

4. LOAD TESTING

First perform an open circuit voltage test, then an adjustable load test. A load test is the best way to determine if the battery is delivering adequate electrical performance. Make sure your variable load tester is working properly. When testing AGM batteries, make sure the tester has an AGM setting.



FOLLOW SAFETY PRECAUTIONS- WEAR PROPER EYE PROTECTION!

- 1 You can't load test a discharged battery. If the voltage is below 12.4, be sure to completely charge it before continuing. Refer to the charging chart under "Charging Tips" section for important information.
- 2 To avoid sparking and explosive gasses, be sure load tester is OFF and battery is disconnected before hook-up. Use computer memory saver to retain the vehicle's electronic memory while the battery is disconnected.
- 3 Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. Always protect your eyes.
- 4 Set the tester for one-half the battery's 0°F cold crank rating and apply the load for 15 seconds. (If the CCA rating is unknown, use 1/2 of the minimum O.E. battery CCA requirement of the vehicle.)
- 5 Estimate the internal temperature of the battery to the nearest 10°F. Apply the load for 15 seconds. Note the voltage at 15 seconds with the load on and immediately shut the load off. A reading at least equal to the value from the chart above indicates a good battery.
- 6 If the battery did not meet the required voltage and if it was not charged in Step 1, completely recharge the battery and repeat the test. If it still fails to meet requirements, replace the battery.

BATTERY TEMPERATURE	12-VOLT BATTERY	6-VOLT BATTERY
70°F (21°C) or +	9.60	4.80
60°F (16°C)	9.50	4.75
50°F (10°C)	9.40	4.70
40°F (4°C)	9.30	4.65
30°F (-1°C)	9.10	4.55
20°F (-6°C)	8.90	4.45
10°F (-12°C)	8.70	4.35
0°F (-18°C)	8.50	4.25

5. CHARGING TIPS

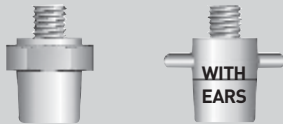
FOLLOW SAFETY PRECAUTIONS- WEAR PROPER EYE PROTECTION!

1 To avoid a battery explosion, never attempt to charge a frozen battery. Allow it to warm up and thaw out at room temperature before placing on charge.

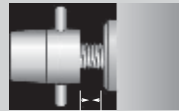
2 Warning: Gel and AGM (Absorbed Glass Mat) batteries require a voltage-limited charger. Charging a Gel or AGM battery on a typical shop charger that exceeds 15.4 volts – even one time – may greatly shorten its life.

3 Important: Never overcharge batteries. Excessive charging will shorten battery life.

SIDE TERMINAL CHARGING POST



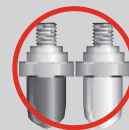
FULLY TIGHTEN FOR COMPLETE LEAD-TO-LEAD CONTACT



BATTERY BOLTS



BOLT EXTENDERS



Group 31 stud post adapters and Side Terminal Charging Posts should be used to ensure the best testing and charging results for stud terminal and side terminal batteries. The charging posts will provide a flush lead-to-lead contact. Be sure to tighten the charging post until it is snug and secure. This will allow a strong current to pass from the charging post to the battery terminal.

DO NOT USE Battery bolt extenders, battery bolts or the threaded stud terminal for testing or charging batteries. They do not provide the necessary lead-to-lead contact, and can reduce your cold cranking amperage (CCA) and state of charge readings. Batteries should be boost charged if the open circuit voltage (voltmeter) reading is below 12.4 volts. See charging chart below.

4 Prior to charging, read the manufacturer's instructions for proper charger hook-up and use.

5 Turn charger off prior to hook-up to avoid dangerous sparks. PROTECT YOUR EYES!

6 WARNING: If the electrolyte is accessible, verify that plates are covered before beginning to charge. At the end of charge, add distilled water as needed to bring levels to the proper height. If water is added, charge for an additional 30 minutes to mix. If electrolyte levels are low, but battery is not accessible, remove battery from service.

7 The maximum charge rate in amperes should be no more than 1/3 of the battery's reserve capacity minute rating. If the terminal voltage exceeds 16.0 volts while charging, reduce the charge rate.

8 Continue charging and reduce the rate as needed until a two-hour period results in no increase in voltage or decrease in current.

9 If violent gassing or spewing of electrolyte occurs, or the battery case feels hot to the touch, temporarily reduce or halt charging.

VOLTAGE			STATE OF CHARGE	APPROX. BATTERY CHARGING TIME * TO FULL CHARGE AT 80°F/27°C				
FLOODED		AGM		CHARGER MAXIMUM RATE				
6 Volt	12 Volt	12 Volt		50 Amps	30 Amps	20 Amps	10 Amps	2 Amps
6.3	12.6	12.8 V	100%	FULLCHARGE (MINUTES/HOURS)				
6.2	12.4	12.6 V	75%	20 M	35 M	48 M	90 M	7.5 H
6.1	12.2	12.3 V	50%	45 M	75 M	95 M	180 M	15 H
6.0	12.0	12.0 V	25%	65 M	115 M	145 M	280 M	22.5 H
5.9	11.8	11.8 V	0%	85 M	150 M	195 M	370 M	30 H

* Charging time depends upon battery age, temperature, capacity, and efficiency of charger.

Agm 12-volt battery charging considerations:

Ideal charging varies by application. Many common battery chargers are not fully compatible with AGM batteries, however; they will not ruin the battery if used a few times over the battery's lifetime in a vehicle.

Adversely, not all chargers are really AGM compatible and can do significant damage to an AGM battery. Large "wheeled chargers," found in many shops, which exceed 15.4 volts must be avoided. In the rare occurrence that an AGM battery needs to be charged outside of the vehicles charging system, charging voltage should be 13.8 – 14.8 @ 77°F (25°C). Not to exceed 30 AMPS.



IMPORTANT:
Never over charge batteries! Excessive charging will shorten battery life.

6. ROTATE BATTERY STOCK

Use oldest batteries first.

Batteries require periodic stock rotation and routine charging. Always rotate stock using the **FIFO** (First In, First Out) method...NOT FISH (First In, Still Here).

Date Code Example: [refer to chart]
L2 – Battery shipped November 2012
Always use oldest batteries first.

REMEMBER...WET OR DRY, ALWAYS ROTATE YOUR STOCK!

SHIPPING DATE CODE

MONTH	
A	January
B	February
C	March
D	April
E	May
F	June
G	July
H	August
J	September
K	October
L	November
M	December
YEAR	
5	2015
6	2016
7	2017
8	2018

PART NO / NO DE PIECE	CA / AD	900
G2472	CCA / ADF	700
GROUP / FORMAT	RC / CR	110
24		
FREE REPLACEMENT (MONTHS) / REPLACEMENT SANS FRAIS (MOIS)	PERSONAL / PARTICULIER	42
	COMMERCIAL / COMMERCIALE	18
		L6

Month ←
Year ←
= November 2016

7. BATTERY STORAGE TIPS

- Batteries should be stored in a cool, dry area in an upright position.
- Never stack batteries directly on top of each other unless they're in cartons.
- Do not stack more than 3 high (2 high if battery type is heavy commercial).
- Test wet batteries every 4–6 months and recharge if necessary.
- Always test and charge if necessary before installation. (See "Charging Tips" section)



CDNRG.COM

12V | 2A

GENIUS2D



CHARGE DEAD BATTERIES. BATTERY CHARGER AND MAINTAINER.

12V

DO MORE WITH GENIUS.

Designed for 12-volt lead-acid batteries, including most flooded, gel, AGM, and maintenance-free, as well as automotive, marine, RV, and deep-cycle batteries.

DIRECT
MOUNT

ON-BOARD CHARGING SOLUTION.

The GENIUS2D is the ultimate mountable on-board battery charger and battery maintainer for any car, boat, truck, RV, or equipment, and is designed to be located in close proximity to the battery.

2A

2-AMP CHARGER AND MAINTAINER.

Includes a 2-amp direct-mount battery charger and battery maintainer with a 24-inch Type-A A/C cable and 24-inch D/C cable with eyelets.

24/7

WORRY-FREE CHARGING.

Provides all-season, all-weather charging for a healthy battery, leave plugged in 24/7 with no worries of overcharging. Automatically returns to its last selected mode.



NOCO

30339 Diamond Parkway, #102
Glenwillow, OH 44139 | USA
1.800.456.6626

no.co

LEAD-ACID

WET

GEL

MF

EFB

AGM

AUTO | MARINE | RV | POWERSPORT | LAWN & GARDEN



ADVANCED DIAGNOSTICS

CHARGE LED

When the battery is 100% charged, the Charge LED will be solid green.



STANDBY

The charger is in standby or the battery voltage is too low for the charger to detect.



TEMPERATURE

Hot LED will flash. Internal / external temperature is too high. charger will resume once the temperature is back within operating limits

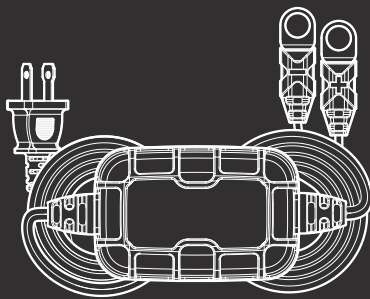
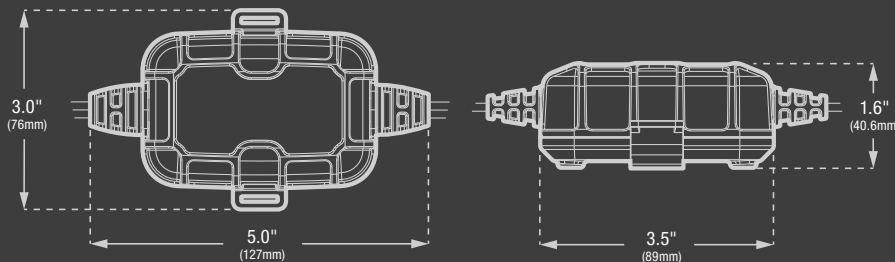


REVERSE POLARITY

Error LED will flash. Charger is connected to the battery in reverse / or battery voltage is too low to detect. Reverse the connection.



WHAT'S IN THE BOX



GENIUS2D Battery Charger + Maintainer

Mounting Bracket and Strap.



(2) #8x1" Self tapping Screws



Userguide and warranty

THERMAL COMPENSATION.

The new integrated thermal sensor automatically monitors and adjusts the charging cycle based on fluctuations of ambient temperature, limiting the chance of under-charging or over-charging, providing a more accurate and fully charged battery.

Battery Size CHARGING TIMES



TECHNICAL SPECIFICATIONS

INPUT VOLTAGE AC:	100-240 VAC, 50-60Hz	
POWER:	28W MAX	
LOW-VOLTAGE DETECTION:	1V	
BACK CURRENT DRAIN:	<0.5mA	
AMBIENT TEMPERATURE:	-4°F to +140°F (-20°C to +60°C)	
COOLING:	Natural Convection	
CHEMISTRY:	Wet, Gel, MF, CA, EFB, AGM	
CHARGING CURRENT:	2000mA (12V)	
CHARGING VOLTAGE:	Various	
BATTERY CAPACITY:	Up to 40Ah, Maintains All Battery Sizes	
HOUSING PROTECTION:	IP65	
UNIT WEIGHT:	0.50 lbs (0.23 kg)	
VOLUMETRICS:	Retail Packaging: Dimensions: 3.43"x3.47"x6.50" Weight: 0.73lbs UPC: 0-46221-18013-8	Master Carton: Dimensions: 14.17"x11.93"x4.73" Weight: 5.76lbs Quantity: 6 UCC: 20046221180132
	Inner Carton: Dimensions: 6.73"x3.70"x3.70" Weight: 0.84lbs	Units Per Pallet: NA - 480 Units International - 378 Units

NOCO

30339 Diamond Parkway, #102
Glenwillow, OH 44139 | USA
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DANGER



READ AND UNDERSTAND ALL SAFETY INFORMATION BEFORE USING THIS PRODUCT. Failure to follow these safety instructions may result in ELECTRICAL SHOCK, EXPLOSION, FIRE, which may result in a SERIOUS INJURY, DEATH, or PROPERTY DAMAGE.



Electrical Shock. Product is an electrical device that can shock and cause serious injury. Do not cut power cords. Do not submerge in water or get wet.



Explosion. Unmonitored, incompatible, or damaged batteries can explode if used with product. Do not leave product unattended while in use. Do not attempt to charge a damaged or frozen battery. Use product only with batteries of recommended voltage. Operate product in well ventilated areas.



Fire. Product is an electrical device that emits heat and is capable of causing burns. Do not cover product. Do not smoke or use any source of electrical spark or fire when operating product. Keep product away from combustible materials.



Eye Injury. Wear eye protection when operating product. Batteries can explode and cause flying debris. Battery acid can cause eye and skin irritation. In the case of contamination of eyes or skin, flush affected area with running clean water and contact poison control immediately.



Explosive Gases. Working in the vicinity of a lead-acid is dangerous. Batteries generate explosive gases during normal battery operation. To reduce risk of battery explosion, follow all safety information instructions and those published by the battery manufacturer and manufacturer of any equipment intended to be used in the vicinity of battery. Review cautionary markings on these products and on engine.



**For more information
and support visit:**

www.no.co/support

Important Safety Warnings

About Genius 2D. The Genius 2D is designed for charging the types of 12V lead-acid batteries, including Wet (Flooded), Gel, MF (Maintenance-Free) CA (Calcium), EFB (Enhanced Flooded Battery), and AGM (Absorption Glass Mat) batteries. It is suitable for charging battery capacities up to 40 Amp-hours and maintaining all battery sizes. **Getting Started.** Before using the charger, carefully read the battery manufacturer's specific precautions and recommended rates of charge for the battery. Make sure to determine the voltage and chemistry of the battery by referring to your battery owner's manual prior to charging. **Location & Mounting.** The Genius 2D is designed to remain directly connected to a battery. Prevent battery acid from coming in contact with the product. Do not operate the product in a closed-in area or an area with restricted ventilation. Never mount directly to the battery. Do not set a battery on top of product. Mount the charger near the battery, ensuring the cables and charger are secure and away from any moving parts (eg. fan blades, belts, pulleys). Do not allow cords to be pinched, cut, or damaged by hood or other moving parts, as it may cause a short circuit, which may result in property damage, injury, and/or death. **Proposition 65.** ⚠ **WARNING:** This product can expose you to chemicals including lead and exhaust fumes, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. **Personal Precaution.** Only use product as intended. Someone should be within range of your voice or close enough to come to your aid in case of emergency. Have a supply of clean water and soap nearby in the case of battery acid contamination. Wear complete eye protection and protective clothing while working near a battery. Always wash hands after handling batteries and related materials. Do not handle or wear any metal objects when working with batteries including; tools, watches or jewelry. If metal is dropped onto battery, it may spark or create a short circuit resulting in electrical shock, fire, explosion which may result in injury, death or property damage. **Minors.** If the product is intended by "Purchaser" to be used by a minor, purchasing adult agrees to provide detailed instructions and warnings to any minor prior to use. Failure to do so is the sole responsibility of the "Purchaser," who agrees to indemnify NOCO for any unintended use or misuse by a minor. **Choking Hazard.** Accessories may present a choking hazard to children. Do not leave children unattended with product or any accessory. The product is not a toy. **Handling.** Handle product with care. The product can become damaged if impacted. Do not use a damaged product, including, but not limited to, cracks to the casing or damaged cables. Do not use product with a damaged power cord. Humidity and liquids may damage product. Do not handle product or any electrical components near any liquid. Store and operate product in dry locations. Do not operate product if it becomes wet. If product is already operating and becomes wet, disconnect it from the battery and discontinue use immediately. Do not disconnect the product by pulling on the cables. **Modifications.** Do not attempt to alter, modify or repair any part of the product. Disassembling product may cause injury, death or damage to property. If product becomes damaged, malfunctions or comes in contact with any liquid, discontinue use, and contact NOCO. Any modifications to the product will void your warranty. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device. **Accessories.** This product is only approved for use with NOCO accessories. NOCO is not responsible for user safety or damage when using accessories not approved by NOCO. **Operating Temperature.** This product is designed to work in ambient temperatures between -4°F to 140°F (-20°C to +60°C). Do not operate outside of temperature ranges. Do not charge a frozen battery. Discontinue use of product immediately if the battery becomes excessively warm. **Storage.** Do not use or store your product in areas with high concentrations of dust or airborne materials. Store your product on flat; secure surfaces so it's not prone to falling. Store your product in a dry location. The storage temperature is -40°F to 212°F (-40°C to 100°C) (average under-hood temperature). **Compatibility.** The product is only compatible with 12-volt lead-acid batteries only. Do not attempt to use product with any other type of battery. Charging other battery chemistries may result in injury, death or property damage. Contact the battery manufacturer prior to attempting to charge the battery. **Medical Devices.** Do not charge pacemakers or other medical devices.

Product contains magnetic components that may emit electromagnetic fields, which may interfere with pacemakers, defibrillators, or other medical devices. Consult with your physician prior to use if you have any medical device including pacemakers. If you suspect the product is interfering with a medical device, stop using the product immediately and consult your physician. **Medical Conditions.** If you have any medical condition that you believe could be affected by product, including but not limited to; seizures, blackouts, eyestrain or headaches, consult your physician prior to use of product. **Cleaning.** Power off the product before attempting any maintenance or cleaning. Clean and dry product immediately if it comes in contact with liquid or any type of contaminant. Use a soft, lint-free (microfiber) cloth. Avoid getting moisture in openings. **Explosive Atmospheres.** Obey all signs and instructions. Do not operate product in any area with a potentially explosive atmosphere, including fueling areas or areas which contain chemicals or particles such as grain, dust or metal powders. **High-Consequence Activities.** This product is not intended for use where the failure of the product could lead to injury, death or severe environmental damage. **Radio Frequency Interference.** Product is designed, tested, and manufactured to comply with regulations governing radio frequency emissions. Such emissions from the product can negatively affect the operation of other electronic equipment, causing them to malfunction. **Model Number: Genius 2D** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

How To Use

Charging Modes.

The Genius 2D has two (2) automatic modes, and will begin charging when both the battery and power are connected. Do not operate the charger until you confirm the Genius 2D charger is compatible with your battery type and voltage. Below is a brief description:

Mode	Explanation
Standby	The charger is connected to AC power but no battery is detected, and the charger is not charging. Energy Save is activated during this mode, drawing microscopic power from the electrical outlet.
	No Power
12V NORM	For charging 12-volt Wet Cell, Gel Cell, Enhanced Flooded, Maintenance-Free, Calcium batteries and AGM.
	14.5V 2000mA Up To 40Ah Batteries Maintain all sizes

On-Board Mounting.

Mount the charger near the battery, ensuring the cables and charger are secure and away from any moving parts (eg. fan blades, belts, pulleys). Secure the provided mounting bracket to the vehicle's chassis using the two included self-tapping screws. For best results, mark the position using the bracket, and pre-drill two small pilot holes. Once the bracket is secured, use the velcro strap to secure the Genius 2D in place.

Connecting to the Battery.

Do not connect the AC power plug until all other connections are made. Identify the correct polarity of the battery terminals on the battery. The positive battery terminal is typically marked by these letters or symbol (POS, P, +). The negative battery terminal is typically marked by these letters or symbol (NEG, N, -). Do not make any connections to the carburetor, fuel lines, or thin, sheet metal parts.

FOLLOW THESE STEPS WHEN BATTERY IS INSTALLED IN VEHICLE. WARNING: A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE THE RISK OF A SPARK NEAR THE BATTERY:

- 1.) Position AC and DC cords to reduce risk of damage by hood, door, or moving engine part.
- 2.) Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
- 3.) Check polarity of battery terminals. The POSITIVE (POS, P, +) battery terminal usually has a larger diameter than the NEGATIVE (NEG, N, -) battery terminal.
- 4.) Determine which battery terminal is grounded (connected) to the chassis. If negative battery terminal is grounded to chassis (as in most vehicles), see Step 5. If positive battery terminal is grounded to the chassis, see Step 6.
- 5.) For negative-grounded vehicle only, connect POSITIVE (RED) battery clamp or eyelet terminal connector from battery charger to POSITIVE (POS, P, +) ungrounded battery terminal. Connect NEGATIVE (BLACK) battery clamp or eyelet terminal connector to vehicle chassis or engine block away from battery. Connect to a heavy gauge metal part of the frame or engine block.
- 6.) For positive-grounded vehicle only, connect NEGATIVE (BLACK) battery clamp or eyelet terminal connector from battery charger to NEGATIVE (NEG, N, -) ungrounded battery terminal. Connect POSITIVE (RED) battery clamp or eyelet terminal connector to vehicle chassis or engine block away from battery. Connect to a heavy gauge metal part of the frame or engine block.
- 7.) Connect the battery charger into a suitable electrical outlet. Do not face the battery when making this connection.
- 8.) When disconnecting the battery charger, disconnect in the reverse sequence, removing the negative first (or positive first for positive ground systems).

FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE. WARNING: A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE THE RISK OF A SPARK NEAR THE BATTERY:

- 1.) Check polarity of battery terminals. The POSITIVE (POS, P, +) battery terminal usually has a larger diameter than the NEGATIVE (NEG, N, -) battery terminal.

- 2.) Attach at least a 24-inch-long 6-gauge (AWG) insulated battery cable to NEGATIVE (NEG, N, -) battery terminal.
- 3.) Connect POSITIVE (RED) battery clamp or eyelet terminal connector from battery charger to POSITIVE (POS, P, +) battery terminal.
- 4.) Position yourself and free end of cable as far away from battery as possible - then connect NEGATIVE (BLACK) battery clamp or eyelet terminal connector to free end of cable.
- 5.) Connect the battery charger into a suitable electrical outlet. Do not face the battery when making this connection.
- 6.) When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.
- 7.) A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.

Begin Charging.

- 1.) Verify the voltage and chemistry of the battery.
- 2.) Confirm that you have connected the eyelet terminal connectors properly and the AC power plug is plugged into an electrical outlet.
- 3.) All LEDs will flash momentarily, then the charger will begin charging without user intervention.
- 4.) The charger can now be left connected to the battery at all times to provide maintenance charging.

Understanding Charge LEDs.

The charger has one (1) Charge LED. This Charge LED indicates the connected battery(s) state-of-charge (SOC). See the explanation below:

LED	Explanation
Pulsing Red LED	The Red Charge LED will slowly pulse "on" and "off" when the battery is less than 75% fully charged.
Solid Green LED	When the battery is 100% charged, the Charge LED will be solid green.
Pulsing Green LED	The Green Charge LED will slowly pulse "on" and "off" when the battery is between 75% and 100% charged and during battery optimization charging. It is normal for optimization charging to occur on a regular basis after the battery is fully charged.

Understanding Advanced Diagnostics.

The Error, Hot, and Standby LEDs together shall indicate error conditions shown in the table below:

Error	Reason/Solution
Error LED	Reverse polarity. Reverse the battery connections. Or battery voltage is too low for charger to detect.
Hot LED	Charger is outside of its safe operating temperature and is not charging. Allow charger to cool down.
Single alternating flash - Error and Standby	Battery will not hold a charge. Have battery checked by a professional.
Double alternating flash - Error and Standby	Possible battery short. Have battery checked by a professional.
Triple alternating flash - Error and Standby	Battery voltage is too high for the selected charge mode. Check the battery.

Charging Times.

The estimated time to charge a battery is shown below. The size of the battery (Ah) and its depth of discharge (DOD) greatly affect its charging time. The charge time is based on an average depth of discharge to a fully charged battery and is for reference purposes only. Actual data may differ due to battery conditions. The time to charge a normally discharged battery is based on a 50% DOD.

Battery Size Ah (Amp hour)	Approximate Time to Charge In Hours 12V
8	2
12	3
24	6
40	10

Technical Specifications

Input Voltage AC: 100-240 VAC, 50-60Hz

Efficiency: 87% Approximately

Power: 28 W Max

Charging Voltage: Various

Charging Current: 2000mA (12V)

Low-Voltage Detection: 1V

Back Current Drain: <0.5mA

Ambient Temperature: -4°F to 140°F (-20°C to +60°C)

Type of Batteries: 12V

Battery Chemistries: Wet, Gel, MF, CA, EFB, AGM, Calcium

Battery Capacity: Up to 40Ah, Maintains All Battery Sizes

Housing Protection: IP65

Cooling: Natural Convection

Dimensions (L x W x H): 5 x 2.3 x 1.5 inches

Weight: 0.5 Pounds

NOCO Three (3) Year Limited Warranty

IMPORTANT: BY USING THIS PRODUCT, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THE NOCO THREE (3) YEAR LIMITED WARRANTY (<WARRANTY>) AS SET OUT BELOW. DO NOT USE THE PRODUCT UNTIL YOU HAVE READ THE TERMS OF THE WARRANTY. IF YOU DO NOT AGREE TO THE TERMS OF THE WARRANTY, DO NOT USE THE PRODUCT AND RETURN IT.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE, COUNTRY, OR PROVINCE. OTHER THAN AS PERMITTED BY LAW, NOCO DOES NOT EXCLUDE, LIMIT OR SUSPEND OTHER RIGHTS YOU MAY HAVE, INCLUDING THOSE THAT MAY ARISE FROM THE NONCONFORMITY OF A SALES CONTRACT. FOR A FULL UNDERSTANDING OF YOUR RIGHTS, YOU SHOULD CONSULT THE LAWS OF YOUR STATE, COUNTRY, OR PROVINCE.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES, AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS, OR IMPLIED. NOCO DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS, TO THE EXTENT PERMITTED BY LAW. IN SO FAR AS SUCH WARRANTIES CANNOT BE DISCLAIMED, NOCO LIMITS THE DURATION AND REMEDIES OF SUCH WARRANTIES TO THE DURATION OF THIS EXPRESS WARRANTY AND, AT NOCO'S OPTION, THE REPAIR OR REPLACEMENT OF PRODUCTS DESCRIBED BELOW. SOME STATES, COUNTRIES, AND PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY - OR CONDITION - MAY LAST, SO THE LIMITATION DESCRIBED ABOVE MAY NOT APPLY TO YOU.

NOCO warrants the NOCO-branded Products contained in the original packaging ("NOCO Product") against defects in materials and workmanship when used normally in accordance with NOCO's published guidelines for a period of THREE (3) YEARS from the date of original retail purchase or delivery date by the end-user purchaser ("Warranty Period"). NOCO's published guidelines include but are not limited to, the information contained in this Warranty, technical specifications, and user manuals. IN SOME STATES, COUNTRIES, OR PROVINCES, NATIONAL LAW MAY PROVIDE MORE EXTENDED WARRANTY PERIODS. As such, the benefits of the Limited Warranty are intended to supplement, and not replace, the rights provided by consumer protection laws.

NOCO'S LIABILITY IS LIMITED TO REPLACEMENT OR REPAIR. NOCO SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION OR UNDER ANY OTHER LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST REVENUE, LOST BUSINESS, PROPERTY DAMAGE, PERSONAL INJURY, OR ANY INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE HOWSOEVER.

This Warranty is non-transferable and does not cover return packaging and transportation costs. This Warranty does not apply: (a) to damage caused by accident, abuse, misuse, fire, liquid contact, or other external cause, (b) mishandling, improper installation, modifications, disassembly, or attempted unauthorized repair, (c) cosmetic damage - such as dents or scratches - that doesn't affect the functionality of the Product, (d) to damage caused by operating the Product outside NOCO's published guidelines, (e) to defects caused by normal wear and tear or otherwise due to the normal aging of the Product, or (f) if any serial number has been removed or defaced from the Product.

If, during the Warranty Period, you submit a claim, NOCO will, at its option: (a) repair the Product that has been tested and passed our functional requirements, (b) replace the Product with a replacement product of the same model (or with your consent a product that has the same or substantially similar features as the original Product - e.g., a different model with the same features), that is new or like-new and has been tested and passed our functional requirements, or (c) exchange the Product for a refund of your purchase price. We require certain information, including proof of purchase, to process Limited Warranty claims. To make a claim under the Limited Warranty, please get in touch with NOCO Support at:

(Web) <https://no.co/support>
(Email) support@no.co
(US/CA/MX) +1.800.456.6626

(UK) +44 20 4520 7738
(EU) +31 20 214 0047

(AU) +61 2 4062 0068
(JP) +81 3 6893 3017



DANGER



LISEZ ATTENTIVEMENT TOUTES LES CONSIGNES DE SÉCURITÉ AVANT D'UTILISER CE PRODUIT. La non-application des consignes de sécurité peut résulter en **UN CHOC ÉLECTRIQUE, UNE EXPLOSION, DU FEU, ce qui peut conduire à de GRAVES BLESSURES, LA MORT ou des DÉGÂTS MATÉRIELS.**



Choc électrique. Le produit est un appareil électrique qui peut causer des chocs et des blessures graves. Ne coupez pas les cordons d'alimentation. Ne pas immerger ni mouiller.



Explosion. Des batteries non-surveillées, incompatibles ou endommagées peuvent exploser si elles sont utilisées avec ce produit. N'utilisez pas ce produit sans le surveiller. Ne tentez pas de démarrer une batterie endommagée ou gelée. N'utilisez ce produit qu'avec les batteries recommandées. Utilisez ce produit dans des lieux bien aérés.



Feu. Le produit est un appareil électrique émettant de la chaleur et capable de causer des brûlures. Ne couvrez pas le produit. Ne fumez pas et n'utilisez aucune source d'étincelles ou de feu quand vous utilisez ce produit. Tenez le produit à l'écart de matériaux combustibles.



Blessures aux yeux. Utilisez des lunettes de protection lors de l'utilisation du produit. Les batteries peuvent exploser et projeter des débris. L'acide des batteries peut causer des irritations de la peau et des yeux. Dans la cas de contact avec les yeux ou la peau, rincez abondamment le point de contact avec de l'eau courante propre et contactez immédiatement le centre anti-poison.



Gaz explosifs. Travailler à proximité de l'acide de plomb est dangereux. Les batteries produisent un gaz explosif durant leur utilisation normale. Pour réduire le risque d'explosion de batteries, conformez-vous à toutes les consignes de sécurité indiquées ici et celles indiquées par le fabricant de la batterie, ainsi que de celles de tout équipement utilisé dans les environs de la batterie. Prenez connaissance des indications de sécurité sur ces produits et sur le moteur.

Français

Pour plus d'informations,
rendez-vous sur le site:

www.no.co/support

Indications de sécurité importantes

À propos de Genius 2D. Le Genius 2D est conçu pour charger les batteries plomb-acide 12V, y compris les batteries humides (inondées), les batteries au gel (MF) sans entretien (CA) (Calcium), les batteries EFB (Enhanced Flooded Battery) et les batteries AGM (Absorption Glass Mat). Il est adapté pour charger des capacités de batterie jusqu'à 40 ampères-heures et maintenir toutes les tailles de batterie. **Premiers pas.** Avant d'utiliser le chargeur, veuillez lire attentivement les indications du fabricant et les taux de chargement recommandés pour la batterie. Soyez certains de déterminer le voltage et la composition chimique de la batterie en consultant le guide d'utilisation avant tout chargement. **Emplacement et installation.** Le Genius 2D est conçu pour rester directement connecté à la batterie. Évitez que l'acide de la batterie entre en contact avec le produit. Ne faites pas fonctionner ce produit dans un endroit fermé ou peu aéré. Ne l'installez jamais directement sur la batterie. Ne placez pas de batterie sur le dessus du produit. Installez le chargeur près de la batterie en vous assurant que les câbles et le chargeur soient fixés et éloignés de toute pièce mobile (c.-à-d. les pales de ventilateur, ceintures, poulies). Ne laissez pas des cordons se faire coincer, couper ou endommager par le capot ou par d'autres pièces mobiles, car cela pourrait causer un court-circuit qui pourrait provoquer des bris matériels, des blessures et/ou la mort. **Proposition 65.**

⚠️ AVERTISSEMENT: Ce produit peut vous exposer à des agents chimiques, y compris plomb et gaz d'échappement, identifiés par l'État de Californie comme pouvant causer le cancer et des malformations congénitales ou autres effets nocifs sur la reproduction. Pour de plus amples informations, prière de consulter www.P65Warnings.ca.gov. **Précaution personnelle.** N'utilisez le produit que pour les applications recommandées. Veillez à ce qu'il y ait toujours une personne à portée de voix pour pouvant vous venir en aide en cas d'urgence. Gardez suffisamment d'eau propre avec du savon près de vous en cas de contact avec l'acide de la batterie. Portez une protection des yeux et des vêtements de protection quand vous travaillez près d'une batterie. Lavez-vous toujours les mains après avoir manipulé des batteries et des matériaux correspondants. Ne manipulez pas ou ne portez pas d'objets en métal quand vous utilisez des batteries y compris des outils, des montres ou de bijoux. Si du métal tombe sur une batterie, cela peut causer une étincelle ou un court circuit résultant en un choc électrique, du feu, une explosion pouvant résulter en des blessures, la mort ou des dommages matériels. **Mineurs.** Si le produit doit être utilisé par un mineur, l'adulte achetant le produit s'engage à expliquer au mineur les instructions de sécurité détaillées et toutes les mises en garde nécessaires avant la première utilisation. Ne pas suivre cette recommandation relève entièrement de la responsabilité de l'acheteur qui accepte d'indemniser NOCO pour toute utilisation non-intentionnelle, bonne ou mauvaise, par un mineur. **Risque d'étouffement.** Les produits risquent d'étouffer les enfants si ils sont avalés ou mis dans leur bouche. Ne laissez pas des enfants avec le produit sans surveillance. Le produit n'est pas un jouet. **Manipulation.** Manipulez le produit avec soin. Le produit peut être endommagé s'il subit un choc. N'utilisez pas un produit endommagé, même s'il ne présente que des traces de dommages que vous jugez minimes, comme des fêlures sur le boîtier ou des câbles endommagés, ou d'autres signes. N'utilisez pas le produit avec un cordon d'alimentation abîmé. L'humidité et les liquides peuvent endommager le produit. Ne manipulez pas le produit ou n'importe quel composant électrique près d'une source eau. Entreposez et utilisez le produit dans des endroits secs. N'utilisez pas le produit s'il est mouillé. Si le produit est en fonctionnement et est mouillé, déconnectez-le de la batterie et cessez l'utilisation immédiatement. Ne déconnectez pas le produit en tirant sur les cordons d'alimentation. **Modifications.** Ne tentez pas de modifier, de changer ou de réparer le produit. Démontez le produit peut causer des blessures, la mort ou des dommages matériels. Si le produit est endommagé, fonctionne mal ou entre en contact avec du liquide, cessez son utilisation et contactez NOCO. Toute modification au produit annule votre garantie. Tout changement ou modification n'ayant pas fait l'objet d'une autorisation expresse de la partie responsable peut entraîner la nullité du droit d'utilisation de cet équipement. **Accessoires.** Ce produit est utilisable avec accessoires NOCO seulement. NOCO n'est pas responsable pour tout dommage ou incident en cas d'utilisation avec des accessoires qui ne sont pas recommandés par NOCO. **Température de fonctionnement.** Ce produit est conçu pour fonctionner à des

températures ambiantes entre -20 et 60 °C. Ne faites pas fonctionner hors de cette plage de température. Cessez immédiatement l'utilisation du produit si la batterie devient excessivement chaude. **Stockage.** N'utilisez ni ne rangez le produit dans des endroits où il y a de grandes concentrations de poussières ou de matériaux dans l'air. Rangez votre produit sur une surface plane et solide pour qu'elle ne soit pas sujette à tomber. Rangez votre produit dans un endroit sec. La température de rangement est de -20 ° à 100 °C (température moyenne sous le capot). **Compatibilité.** Le produit est uniquement compatible avec les batteries plomb-acide 12 volts. N'essayez pas d'utiliser le produit avec un autre type de batterie. Le chargement d'autres produits chimiques de la batterie peut entraîner des blessures, la mort ou des dommages matériels. Contactez le fabricant de la batterie avant d'essayer de charger la batterie. Ne chargez pas une batterie si vous n'êtes pas sûr de la chimie ou de la tension spécifique de la batterie. **Appareils médicaux.** Le produit peut émettre des champs électro-magnétiques. Le produit comprend certains composants magnétiques pouvant interagir avec des pacemakers, des défibrillateurs ou d'autres appareils médicaux. Ces champs électro-magnétiques peuvent interférer avec des pacemakers et d'autres appareils médicaux. Consultez votre médecin avant toute utilisation si vous avez un pacemaker ou tout autre appareil médical. Si vous pensez que votre appareil interfère avec un appareil médical, arrêtez immédiatement d'utiliser le produit et consultez un médecin. **Maladies.** Si vous êtes malade et pensez que le produit pourrait avoir un effet sur votre santé, y compris, mais sans s'y limiter: convulsions, perte de conscience, douleurs oculaires ou maux de tête, consultez votre médecin avant d'utiliser le produit. **Nettoyage.** Déconnectez le produit avant de tenter son entretien ou nettoyage. Nettoyez le produit immédiatement s'il entre en contact avec un liquide ou tout autre type de contaminant. Utilisez un tissu doux et ne peluchant pas (micro-fibres). Évitez que de l'humidité pénètre dans les trous. **Atmosphères explosives.** Obéissez à tous les signes et instructions. N'utilisez aucun produit dans une zone à atmosphère potentiellement explosive, y compris des stations essence, des endroits avec des produits chimiques, de la poussière, des poudres métalliques ou des stockages à grain. **Activités à risque.** Ce produit n'est pas destiné à une utilisation dont la défaillance pourrait conduire à des blessures, la mort ou de sérieux dégâts à l'environnement. **Interférences avec des fréquences radio.** Le produit est conçu, testé et fabriqué pour être conforme aux réglementations des fréquences radio. Les rayonnements du produit peuvent avoir un effet négatif sur le fonctionnement d'autres appareils électriques, provoquant un dysfonctionnement. **Numéro du modèle : Genius 2D.** Cet appareil est conforme à la partie 15 de la réglementation FCC. L'utilisation est soumise aux deux conditions suivantes : (1) l'appareil ne devra pas causer d'interférences dommageables et (2) l'appareil doit pouvoir subir des interférences y compris des interférences pouvant causer un fonctionnement non-souhaité. NOTE : Cet équipement a été testé et est certifié conforme aux valeurs des appareils numériques de classe A, faisant suite à la partie 15 de la réglementation FCC. Ces valeurs-limite sont fixées pour fournir un degré de protection raisonnable en cas d'interférence dommageable si l'équipement est utilisé dans un contexte commercial. Cet équipement génère, utilise et peut émettre des rayonnements sur des fréquences radio et s'il n'est pas utilisé en conformément au manuel d'utilisation, peut causer des interférences dommageables aux communications radio. L'utilisation de cet équipement dans une zone d'habitation peut potentiellement conduire à des interférences dommageables, dans quel cas l'utilisateur sera prié de corriger les effets de l'interférence à ses frais.

L'utilisation

Modes de chargement.

Le Genius 2D dispose de deux (2) modes automatiques et se charge dès que la batterie et l'alimentation sont connectées. N'utilisez pas le chargeur tant que vous n'avez pas confirmé que le chargeur Genius 2D est compatible avec le type et la tension de votre batterie. Ci-dessous se trouve une brève description:

Modo	Explication
Standby	Le chargeur est connecté au courant CA, mais aucune batterie n'est détectée et le chargeur ne charge pas. L'économie d'énergie est activée pendant ce mode, puisant un courant microscopique de la prise électrique.
	No Power
12V NORM	Pour charger un gel humide, EFB (Enhanced flooded battery), sans entretien, batterie de calcium et AGM. Lorsqu'elle est choisie, une LED blanche s'allume.
	14.5V 2000mA Jusqu'à 40Ah Batterie Maintenir toutes les tailles

Installation à bord.

Installez le chargeur près de la batterie en vous assurant que les câbles et le chargeur soient bien fixés et éloignés de toute pièce mobile (exemple : pales de ventilateur, ceintures, poulies). Fixez le support de montage fourni au châssis du véhicule en utilisant les deux vis taraudeuses incluses. Pour obtenir de meilleurs résultats, marquez la position en utilisant le support et prépercez deux petits trous guides. Une fois le support fixé, utilisez la sangle en velcro pour fixer le Genius 2D.

Connexion à la batterie.

Ne branchez pas la fiche d'alimentation secteur avant d'avoir procédé à toutes les autres connexions. Identifiez la polarité des bornes de la batterie sur la batterie. La borne positive est généralement indiquée par ces lettres ou symboles (POS, P, +). La borne négative est généralement indiquée par ces lettres ou symboles (NEG, N, -). N'effectuez aucun raccordement au carburateur, aux conduites de carburant ou aux pièces en tôle fine.

SUIVEZ CES ÉTAPES QUAND LA BATTERIE EST INSTALLÉE DANS LE VÉHICULE. AVERTISSEMENT : UNE ÉTINCELLE À PROXIMITÉ DE LA BATTERIE PEUT PROVOQUER SON EXPLOSION. POUR RÉDUIRE LE RISQUE D'UNE ÉTINCELLE À PROXIMITÉ DE LA BATTERIE :

1.) Positionnez les câbles CA et CC de manière à réduire les risques de dommages par le capot, la porte ou les pièces mobiles du moteur.

- 2.) Tenez-vous à l'écart des ailettes du ventilateur, des courroies, poulies et autres pièces susceptibles de causer des blessures.
- 3.) Vérifiez la polarité des bornes de la batterie. Le diamètre de la borne POSITIVE (POS, P, +) est généralement plus grand que celui de la borne NÉGATIVE (NEG, N, -).
- 4.) Déterminez quelle borne de batterie est mise à la terre (reliée) au châssis. Si la borne négative est reliée au châssis (comme dans la plupart des véhicules), reportez-vous à l'étape 5. Si la borne positive est reliée au châssis, reportez-vous à l'étape 6.
- 5.) Pour les véhicules à masse négative uniquement, reliez la pince de batterie POSITIVE (ROUGE) ou le connecteur de borne à œillet du chargeur de batterie à la borne de batterie POSITIVE (POS, P, +) non mise à la terre. Reliez la pince de batterie NÉGATIVE (NOIRE) ou le connecteur de borne à œillet au châssis du véhicule ou au bloc moteur loin de la batterie. Reliez à une partie métallique de forte épaisseur du châssis ou du bloc moteur.
- 6.) Pour les véhicules à masse positive uniquement, reliez la pince de batterie NÉGATIVE (NOIRE) ou le connecteur de borne à œillet du chargeur de batterie à la borne de batterie NÉGATIVE (NEG, N, -) non mise à la terre. Reliez la pince de batterie POSITIVE (ROUGE) ou le connecteur de borne à œillet au châssis du véhicule ou au bloc moteur loin de la batterie. Reliez à une partie métallique de forte épaisseur du châssis ou du bloc moteur.
- 7.) Branchez le chargeur de batterie dans une prise électrique appropriée. Ne faites pas face à la batterie lorsque vous effectuez ce branchement.
- 8.) Lorsque vous débranchez le chargeur de batterie, procédez dans l'ordre inverse, en retirant d'abord le négatif (ou le positif pour les systèmes à masse positive).

SUIVEZ CES ÉTAPES LORSQUE LA BATTERIE SE TROUVE À L'EXTÉRIEUR DU VÉHICULE. AVERTISSEMENT : UNE ÉTINCELLE À PROXIMITÉ DE LA BATTERIE PEUT PROVOQUER SON EXPLOSION. POUR RÉDUIRE LE RISQUE D'UNE ÉTINCELLE À PROXIMITÉ DE LA BATTERIE :

- 1.) Vérifiez la polarité des bornes de la batterie. Le diamètre de la borne POSITIVE (POS, P, +) est généralement plus grand que celui de la borne NÉGATIVE (NEG, N, -).
- 2.) Fixez au moins un câble de batterie isolé de calibre 6 (AWG) d'une longueur d'au moins 24 pouces (61 cm) à la borne NÉGATIVE (NEG, N, -) de la batterie.
- 3.) Reliez la pince de batterie POSITIVE (ROUGE) ou le connecteur de borne à œillet du chargeur de batterie à la borne de batterie POSITIVE (POS, P, +).
- 4.) Placez-vous, ainsi que l'extrémité libre du câble, aussi loin que possible de la batterie, puis reliez la pince NÉGATIVE (NOIRE) de la batterie ou le connecteur de la borne à œillet à l'extrémité libre du câble.

- 5.) Branchez le chargeur de batterie dans une prise électrique appropriée. Ne faites pas face à la batterie lorsque vous effectuez ce branchement.
- 6.) Lorsque vous débranchez le chargeur, procédez toujours dans l'ordre inverse des étapes de connexion et coupez la première connexion en vous tenant aussi éloigné que possible de la batterie.
- 7.) Une batterie marine (bateau) doit être retirée et chargée à terre. Sa recharge à bord nécessite un équipement spécialement conçu pour une utilisation marine.

Commencez le chargement.

- 1.) Vérifiez la tension et la chimie de la batterie.
- 2.) Vérifiez que vous avez connecté l'oeillet de la borne d'extrémité correctement et que la fiche CA est connectée dans une prise électrique.
- 3.) TOUTES LES DEL clignoteront temporairement puis le chargeur commencera à charger sans l'intervention de l'utilisateur.
- 4.) Le chargeur peut maintenant rester connecté à la batterie en tout temps pour fournir une charge de maintenance.

Comprendre les LEDs de chargement.

Le chargeur a un (1) LED de chargement. Ce LED de chargement indique l'état de chargement (state of charge SOC) de la ou des batteries connectées. Voyez l'explication ci-dessous :

LED	Explication
DEL rouge clignotante	La LED rouge de charge clignotera lentement Allumée et Éteinte lorsque la batterie sera chargée à moins de 75 %.
DEL verte constante	Lorsque la batterie est chargée à 100 %, la DEL verte de charge sera constamment verte.
DEL verte clignotante	Le témoin de charge vert DEL clignotera lentement lorsque la batterie sera chargée entre 75 % et 100 % et pendant l'optimisation de la charge de la batterie. Il est normal que se fasse l'optimisation de la charge après que la batterie soit complètement chargée.

Comprendre les diagnostics avancés.

Les DEL Erreur, Chaud et Veille ensemble indiquent les erreurs montrées dans le tableau ci-dessus :

Erreur	Raison/Solution
DEL Erreur	Polarité inversée. Connexions de la batterie inversées ou tension de la batterie trop basse pour être détectée par la batterie.
DEL Chaud	Le chargeur est hors de la température d'opération et il ne charge pas. Laissez-le refroidir.
Clignotement alternatif unique - Erreur et Veille	La batterie ne tiendra pas la charge. Faites vérifier la batterie par un professionnel.
Clignotement alternatif double - Erreur et Veille	Court-circuit possible de la batterie. Faites vérifier votre batterie par un professionnel.
Clignotement alternatif triple - Erreur et Veille	La tension de la batterie est trop haute pour le mode de charge sélectionné. Vérifiez la batterie.

Durées de chargement.

Le temps estimé pour charger une batterie est indiqué ci-dessous. La taille de la batterie (Ah) et sa profondeur de décharge (DOD) affectent grandement son temps de charge. Le temps de charge est basé sur la profondeur moyenne de décharge d'une batterie complètement chargée et sert uniquement de référence. Les données réelles peuvent différer en raison de l'état de la batterie. Le temps nécessaire pour charger une batterie normalement déchargée est basé sur un DOD de 50%.

Capacité de la Batterie Ah (Heure Ampère)	Environ Temps de charge en heures 12V
8	2
12	3
24	6
40	10

Spécifications Techniques

Tension d'entrée AC: 100-240, 50-60Hz

Efficacité: 87% Environ

Puissance: 28 W Max

Tension de chargement: Divers

Courant de chargement: 2000mA (12V)

Détection de tension basse: 1V

Courant de fuite: <0.5mA

Température ambiante: -20°C to +60°C (-4°F to 140°F)

Type de batteries: 12V

Composition chimique des batteries: Wet, Gel, MF, CA, EFB, AGM, Calcium

Capacité de la batterie: Jusqu'à 40Ah (12V), Maintient toutes les tailles de batterie

Boîtier protecteur: IP65

Refroidissement : Convection naturelles

Dimensions (L x P x H): 5 x 2,3 x 1,5 pouces (127 x 58 x 38 mm)

Poids: 0,5lb (0,2 kg)

Garantie limitée NOCO de trois (3) ans

IMPORTANT : EN UTILISANT CE PRODUIT, VOUS ACCEPTEZ D'ÊTRE LIÉ(E) AUX CONDITIONS DE LA GARANTIE LIMITÉE DE TROIS (3) ANS (« LA GARANTIE ») DE NOCO, TELLE QUE DÉFINIE CI-DESSOUS. N'UTILISEZ PAS LE PRODUIT AVANT D'AVOIR LU LES CONDITIONS DE GARANTIE. SI VOUS N'ÊTES PAS D'ACCORD AVEC LES CONDITIONS DE GARANTIE, N'UTILISEZ PAS LE PRODUIT ET RENVOYEZ-LE.

LA PRÉSENTE GARANTIE VOUS ACCORDE DES DROITS SPÉCIFIQUES LÉGAUX, MAIS VOUS POUVEZ BÉNÉFICIER D'AUTRES DROITS QUI VARIENT SELON LES PROVINCES, LES ÉTATS OU LES PAYS. SAUF EXCEPTION PRÉVUE PAR LA LOI, NOCO N'EXCLUT PAS, NE LIMITE PAS ET NE SUSPEND PAS LES AUTRES DROITS DONT VOUS POUVEZ BÉNÉFICIER, NOTAMMENT CEUX RELATIFS À LA NON-CONFORMITÉ D'UN CONTRAT DE VENTE. POUR COMPRENDRE L'ENSEMBLE DE VOS DROITS, CONSULTEZ LES LOIS DE VOTRE RÉGION, ÉTAT ET PAYS.

DANS LES LIMITES AUTORISÉES PAR LA LOI, LA PRÉSENTE GARANTIE ET LES RECOURS QU'ELLE CONTIENT SONT EXCLUSIFS ET REMPLACENT TOUTE AUTRE GARANTIE, RECOURS OU CONDITION, VERBALE OU ÉCRITE, LÉGALE, EXPRESSE OU IMPLICITE, NOCO DÉCLINE TOUTE GARANTIE STATUTAIRE ET IMPLICITE, INCLUANT SANS S'Y LIMITER, LES GARANTIES DE COMMERCIALISATION ET DE COMPATIBILITÉ D'UTILISATION ET LES GARANTIES CONTRE LES VICÉS CACHÉS, DANS LES LIMITES AUTORISÉES PAR LA LOI. DANS LA MESURE OÙ DE TELLES GARANTIES NE PEUVENT PAS ÊTRE DÉCLINÉES, NOCO LIMITE LA DURÉE ET LES RECOURS DE TELLES GARANTIES À LA DURÉE DE LA PRÉSENTE GARANTIE EXPRESSE ET, AU GRÉ DE NOCO, À LA RÉPARATION OU AU REMPLACEMENT DES PRODUITS DÉCRITS CI-DESSOUS. CERTAINES RÉGIONS, ET CERTAINS ÉTATS ET PAYS N'AUTORISENT PAS LA LIMITATION DE LA DURÉE D'UNE GARANTIE OU DE CONDITIONS IMPLICITES. LES LIMITES DÉCRITES CI-DESSUS PEUVENT DONC NE PAS S'APPLIQUER À VOUS.

NOCO garantit les produits de marque NOCO contenus dans leur emballage d'origine (« le produit NOCO ») contre les défauts matériels et de fabrication lors d'une utilisation normale conforme aux directives publiées par NOCO pendant une durée de TROIS (3) ANS à partir de la date d'achat d'origine par l'utilisateur final ou de la date de livraison (« la période de garantie »). Les directives publiées par NOCO incluent, sans s'y limiter, les informations contenues dans la présente garantie, les spécifications

techniques et les manuels d'utilisation. DANS CERTAINES RÉGIONS ET CERTAINS ÉTATS OU PAYS, LES LOIS NATIONALES PEUVENT PRÉVOIR UNE PÉRIODE DE GARANTIE PLUS LONGUE. Ainsi, les avantages de la présente garantie ont pour effet de compléter, et non de remplacer, les droits prévus par les lois de protection des consommateurs.

LA RESPONSABILITÉ DE NOCO EST LIMITÉE AU REMPLACEMENT OU À LA RÉPARATION. NOCO NE POURRA ÊTRE TENUE RESPONSABLE POUR DES DOMMAGES SPÉCIAUX, ACCIDENTELS, INDIRECTS OU EXEMPLAIRES RÉSULTANTS D'UNE VIOLATION DE LA GARANTIE OU DES CONDITIONS, OU EN VERTU DE TOUTE AUTRE THÉORIE JURIDIQUE, INCLUANT SANS S'Y LIMITER, LA PERTE DE PROFITS, LA PERTE DE CHIFFRE D'AFFAIRES, LA PERTE DE CLIENTÈLE, LES DOMMAGES MATÉRIELS, LES PRÉJUDICES CORPORELS, OU TOUTE PERTE OU TOUT DOMMAGE PARTICULIER OU INDIRECT, QUELLE QU'EN SOIT LA CAUSE.

La présente garantie n'est pas transférable, et ne couvre pas les frais liés à l'emballage et au transport de retour. La présente garantie ne s'applique pas en cas : (a) de dégâts causés par un accident, d'abus, de mauvaise utilisation, d'incendie, de contact avec un liquide, ou de toute autre cause externe, (b) de mauvaise manipulation, de mauvaise installation, de modifications, de désassemblage ou de tentative de réparation non autorisée, (c) de dégâts cosmétiques – comme les bosses et les éraflures – n'affectant pas la fonctionnalité du produit, (d) de dégâts causés par une utilisation du produit en dehors des directives publiées par NOCO, (e) de défauts causés par une usure normale ou un vieillissement normal du produit, ou (f) d'élimination ou de dégradation du numéro de série du produit.

Si, pendant la période de garantie, vous faites une réclamation, NOCO aura le choix entre les options suivantes : (a) réparer le produit ayant été testé et répondant à nos exigences en matière de fonctionnalités, (b) remplacer le produit par un produit de remplacement du même modèle (ou, avec votre consentement, par un produit possédant les mêmes caractéristiques ou des caractéristiques similaires pour l'essentiel) neuf ou comme neuf, ayant été testé et répondant à nos exigences en matière de fonctionnalités, ou (c) échanger le produit contre un remboursement du montant de votre achat. Afin de traiter les réclamations faites en vertu de la garantie limitée, nous avons besoin de certaines informations. Pour faire une réclamation en vertu de la présente garantie limitée, contactez l'assistance NOCO aux coordonnées suivantes :

(Web)	https://no.co/support	(Royaume-Uni)	+44 20 4520 7738	(Australie)	+61 2 4062 0068
(Adresse e-mail)	support@no.co				
(USA/Canada/Mexique)	+1.800.456.6626	(UE)	+31 20 214 0047	(Japon)	+81 3 6893 3017



PELIGRO

Guía de usuario y garantía



ASEGÚRESE DE QUE LEE Y ENTIENDE TODA LA INFORMACIÓN DE SEGURIDAD ANTES DE USAR ESTE PRODUCTO. El incumplimiento de estas instrucciones de seguridad podría resultar en DESCARGA ELÉCTRICA, EXPLOSIÓN o INCENDIO, que podrían causar LESIONES GRAVES, MUERTE o DAÑOS MATERIALES.



Descarga eléctrica. Este producto es un dispositivo eléctrico que puede producir descarga y causar lesiones graves. No corte los cables de alimentación. No lo sumerja en agua ni deje que se moje.



Explosión. Baterías sin supervisar, incompatibles o dañadas pueden explotar si se utilizan con este producto. No lo deje desatendido mientras está en uso. No intente cargar una batería dañada o congelada. Utilice este producto solo con baterías del voltaje recomendado. Úselo solo en áreas bien ventiladas.



Incendio. Este producto es un dispositivo eléctrico que emite calor y puede causar quemaduras. No cubra este producto. No fume ni utilice nada que pueda causar chispas o fuego mientras usa este producto. Manténgalo alejado de materiales combustibles.



Lesión ocular. Use protección ocular cuando utilice este producto. Las baterías pueden explotar y hacer que salgan disparadas pequeñas partículas. El ácido de la batería puede causar irritación en los ojos y la piel. En el caso de contaminación de los ojos o la piel, aclare el área afectada con abundante agua corriente y póngase en contacto inmediatamente con el servicio de control de intoxicación y envenenamiento.



Gases explosivos. Es peligroso trabajar cerca de baterías de ácido-plomo. Las baterías generan gases explosivos durante su funcionamiento normal. Para reducir el riesgo de explosión de la batería, siga todas las instrucciones de seguridad publicadas por el fabricante de la batería y el fabricante de cualquier equipo destinado a ser utilizado cerca de esta. Revise las señales de precaución en estos productos y en el motor.

Español

**Para obtener más información
y asistencia técnica consulte:**

www.no.co/support

Advertencias importantes de seguridad

Acerca de Genius 2D. El Genius 2D está diseñado para cargar los tipos de baterías de plomo de 12V, incluidas las baterías húmedas (inundadas), de gel, MF (sin mantenimiento) CA (calcio), EFB (batería inundada mejorada) y AGM (alfombrilla de absorción de vidrio). Es adecuado para cargar capacidades de baterías hasta 40 Amp-hours y para mantener todos los tamaños de batería. **Empezando.** Antes de usar el cargador, lea detenidamente las precauciones específicas del fabricante de la batería y las tasas de carga recomendadas para la batería. Asegúrese de determinar el voltaje y la química de la batería consultando el manual del propietario de la batería antes de cargarla. **Ubicación y montaje.** El Genius 2D está diseñado para permanecer conectado directamente a una batería. Evite que el ácido de la batería entre en contacto con el producto. No utilice el producto en un área cerrada o en un área con ventilación restringida. Nunca lo monte directamente sobre la batería. No coloque una batería encima del producto. Monte el cargador cerca de la batería, asegurándose de que los cables y el cargador estén seguros y alejados de cualquier pieza móvil (por ejemplo, paletas de ventilador, correas o poleas). No permita que el capó u otras partes móviles pellizquen, corten o dañen los cables, ya que esto puede causar un cortocircuito, lo que puede ocasionar daños materiales, lesiones y/o la muerte. **Proposición 65.** ⚠ **ADVERTENCIA:** Este producto puede exponerle a químicos incluyendo plomo y gases de escape, que son conocidos por el Estado de California como causante (s) de cáncer y defectos de nacimiento u otros daños reproductivos. Para mayor información, visite www.P65Warnings.ca.gov. **Precaución.** Utilice este producto solo para el propósito para el que fue diseñado. Debería haber una persona lo suficientemente cerca como para oír su voz o acudir en su ayuda en caso de emergencia. Ponga agua limpia y jabón a su alcance por si tuviera que usarlos en caso de contaminación con el ácido de la batería. Use protección ocular completa y ropa protectora cuando trabaje cerca de una batería. Lávese siempre las manos después de manipular baterías y materiales relacionados. No use objetos metálicos cuando trabaje con baterías, incluidas herramientas, relojes o joyas. Si cae metal sobre la batería, pueden saltar chispas o producirse un cortocircuito que podría provocar descarga eléctrica, incendio, explosión y causar lesiones, muerte o daños materiales. **Menores de edad.** Si el Comprador ha adquirido este producto para que lo use un menor de edad, el adulto que lo ha comprado se compromete a proporcionar instrucciones y advertencias detalladas al menor de edad antes de que este lo use. De no hacerlo, la responsabilidad recaerá únicamente sobre el Comprador, que se compromete a indemnizar a NOCO por el uso no intencionado o mal uso por parte de un menor de edad. **Peligro de asfixia.** Los accesorios pueden suponer riesgo de asfixia para niños pequeños. No deje que un niño utilice este producto o cualquier otro accesorio sin la supervisión de un adulto. Este producto no es un juguete. **Manipulación.** Manipule este producto con cuidado. Este producto puede dañarse si recibe golpes. No utilice un producto dañado. Posibles daños incluyen, pero no se limitan a, grietas en el revestimiento o cables dañados. No utilice un producto que tenga un cable de alimentación dañado. La humedad y los líquidos pueden dañar este producto. No utilice este producto ni ningún componente eléctrico cerca de líquidos. Guarde y utilice este producto en un lugar seco. No lo utilice si se moja. Si este producto se moja estando en funcionamiento, desconéctelo de la batería y deje de usarlo inmediatamente. No desconecte este producto de la corriente tirando del cable de alimentación. **Modificaciones.** No intente alterar, modificar ni reparar ninguna de las partes de este producto. Desarmar este producto puede provocar lesiones, muerte o daños materiales. Si este producto se daña, funciona incorrectamente o entra en contacto con líquidos, deje de usarlo y contacte con NOCO. Cualquier modificación a este producto anulará su garantía. Los cambios o modificaciones no aprobados expresamente por el responsable del cumplimiento podrían anular la autoridad del usuario para utilizar este dispositivo. **Accesorios.** Este producto solo está aprobado para ser utilizado con accesorios de NOCO. NOCO no se responsabiliza de la seguridad del usuario u otros daños que pudieran producirse al utilizar accesorios no aprobados por NOCO. **Temperatura de funcionamiento.** Este producto está diseñado para trabajar a temperaturas ambientales de entre -20 a +60 °C. No lo opere fuera de estos rangos de temperatura. No cargue una batería congelada. Deje de utilizar el producto inmediatamente si la batería se calienta en exceso. **Almacenamiento.** No utilice ni guarde su producto en áreas con altas concentraciones de polvo o materiales en suspensión. Guarde su producto sobre

superficies planas y seguras para que no se caiga. Guarde su producto en un lugar seco. La temperatura de almacenamiento es de -20 a 100 °C (temperatura media bajo el capó). **Compatibilidad.** El producto solo es compatible con baterías de plomo de 12 voltios. No intente utilizar el producto con ningún otro tipo de batería. La carga de otras sustancias químicas de la batería puede provocar lesiones, la muerte o daños a la propiedad. Póngase en contacto con el fabricante de la batería antes de intentar cargar la batería. No cargue una batería si no está seguro de la química o voltaje específico de la batería. **Dispositivos médicos.** Este producto puede emitir campos electromagnéticos. Contiene componentes magnéticos que pueden interferir con marcapasos, desfibriladores u otros dispositivos médicos. Estos campos electromagnéticos pueden interferir con marcapasos u otros dispositivos médicos. Consulte con su médico antes de usar este producto si tiene un dispositivo médico, incluidos marcapasos. Si sospecha que este producto está interfiriendo con un dispositivo médico, deje de usarlo inmediatamente y consulte con su médico. **Enfermedades.** Si padece cualquier enfermedad que crea que pudiera verse afectada por este producto, consulte con su médico antes de usarlo. Dichas enfermedades incluyen, pero no se limitan a, ataques, desmayos, fatiga visual o dolores de cabeza. **Limpieza.** Apague y desconecte este producto de la corriente antes de limpiarlo o llevar a cabo mantenimiento. Limpie y seque este producto inmediatamente si entra en contacto con líquidos o cualquier otro tipo de contaminante. Utilice un trapo suave sin pelusa (microfibra). Evite que los puertos o aberturas se mojen. **Atmósferas explosivas.** Obedezca todas las señales e instrucciones. No cargue ni utilice este producto en áreas con una atmósfera potencialmente explosiva, incluidas áreas de repostar o áreas en las que el aire contiene sustancias químicas o partículas como grano, polvo o polvo metálico. **Actividades de alto riesgo.** Este producto no está destinado para ser utilizado en casos en los que su mal funcionamiento pudiera causar la muerte, lesiones o daños medioambientales graves. **Interferencia de radiofrecuencia.** Este producto ha sido diseñado, probado y fabricado para cumplir con las normas que regulan las emisiones de radiofrecuencia. Tales emisiones del producto pueden afectar al funcionamiento de otros aparatos electrónicos y hacer que funcionen incorrectamente. **Modelos: Genius 2D.** Este dispositivo cumple con el artículo 15 de las normas de la Comisión Federal de Comunicaciones (FCC). La operación está sujeta a las dos condiciones siguientes: (1) Este dispositivo puede que no cause interferencias dañinas y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluidas aquellas que puedan causar un funcionamiento no deseado. **NOTA:** Este equipo ha sido probado y se ha demostrado que cumple con los límites para un dispositivo digital de clase A, conforme al artículo 15 de las normas de la FCC. Estos límites están diseñados para proporcionar protección razonable contra interferencias dañinas en una instalación comercial. Este equipo genera, utiliza y puede irradiar energía de radiofrecuencia y, si no se instala o utiliza de acuerdo con las instrucciones, puede causar interferencias perjudiciales a las comunicaciones por radio. Puede que este equipo cause interferencias perjudiciales en un área residencial, en cuyo caso es posible que el usuario tenga que corregir la interferencia por su propia cuenta y riesgo.

Instrucciones de Uso

Modos de carga.

El Genius 2D tiene dos (2) modos automáticos, y comenzará a cargarse cuando tanto la batería como la alimentación estén conectadas. No opere el cargador hasta que confirme que el cargador Genius 2D es compatible con el tipo y voltaje de su batería. A continuación hay una breve descripción:

Modo	Explicación
Standby	El cargador está conectado a la corriente alterna (CA) pero no se detecta ninguna batería. El cargador no está cargando. En este modo se activa el ahorro de energía (Energy Save), consumiéndose de la toma de corriente una potencia casi despreciable.
	No Power
12V NORM	Para cargar baterías de 12 V húmedas, de gel, con tecnología EFB, de libre mantenimiento, de calcio y AGM.
	14.5V 2000mA Hasta 40Ah Batería Mantiene todos los tamaños

Montaje a bordo

Monte el cargador cerca de la batería, asegurándose de que los cables y el cargador estén seguros y lejos de cualquier parte móvil (por ejemplo, paletas de ventilador, correas o poleas). Asegure el soporte de montaje que se proporciona al chasis del vehículo usando los dos tornillos autorroscantes incluidos. Para obtener los mejores resultados, marque la posición con el soporte y taladre previamente dos pequeños orificios de guiado. Una vez que el soporte esté asegurado, use la correa de velcro para asegurar el Genius 2D en su lugar.

Conectar la batería

No conecte el enchufe de alimentación de CA hasta que se hayan realizado todas las demás conexiones. Identifique la polaridad correcta de los terminales de la batería. El terminal positivo de la batería se suele identificar mediante los siguientes símbolos o letras: POS, P, +. El terminal negativo de la batería se suele identificar mediante los siguientes símbolos o letras: NEG, N, -. No realice ninguna conexión al carburador, las líneas de combustible o las piezas delgadas de chapa.

SIGA ESTOS PASOS CUANDO LA BATERÍA ESTÉ INSTALADA EN EL VEHÍCULO. ADVERTENCIA: UNA CHISPA CERCA DE LA BATERÍA PUEDE HACER QUE EXPLOTE. PARA REDUCIR EL RIESGO DE QUE SE PRODUZCA UNA CHISPA CERCA DE LA BATERÍA:

- 1.) Coloque los cables de CA y CC de forma que se reduzca el riesgo de daños causados por el capó, la puerta o cualquier parte móvil del motor.
- 2.) Manténgase alejado de las aspas del ventilador, cintas de transmisión, poleas y otras partes que puedan causar lesiones a las personas.

- 3.) Compruebe la polaridad de los terminales de la batería. El terminal POSITIVO (POS, P, +) de la batería generalmente tiene un diámetro mayor que el terminal NEGATIVO (NEG, N, -) de la misma.
- 4.) Determine qué terminal de la batería está tirado a tierra (conectado) a través del chasis. Si el terminal negativo de la batería está conectado a tierra a través del chasis (como en la mayoría de vehículos), consulte el paso 5. Si el terminal positivo de la batería está conectado a tierra a través del chasis, consulte el paso 6.
- 5.) Solo para vehículos conectados a tierra a través del terminal negativo: Conecte la abrazadera POSITIVA (ROJA) para batería o el conector de terminal redondo desde el cargador de batería al terminal POSITIVO (POS, P, +) de la batería que no esté conectado a tierra. Conecte la abrazadera NEGATIVA (NEGRA) para batería o el conector de terminal redondo al chasis del vehículo o al bloque del motor lejos de la batería. Conéctese a una parte metálica gruesa del bastidor o del bloque del motor.
- 6.) Solo para vehículos conectados a tierra a través del terminal positivo: Conecte la abrazadera NEGATIVA (NEGRA) para batería o el conector de terminal redondo desde el cargador de batería al terminal NEGATIVO (NEG, N, -) de la batería que no esté conectado a tierra. Conecte la abrazadera POSITIVA (ROJA) para batería o el conector de terminal redondo al chasis del vehículo o al bloque del motor lejos de la batería. Conéctese a una parte metálica gruesa del bastidor o del bloque del motor.
- 7.) Conecte el cargador de batería a una toma de corriente adecuada. No se coloque de frente a la batería cuando realice esta conexión.
- 8.) Cuando desconecte el cargador de batería, hágalo en la secuencia inversa, retirando primero el negativo (o primero el positivo en el caso de los sistemas conectados a tierra a través del terminal positivo).

SIGA ESTOS PASOS CUANDO LA BATERÍA ESTÉ FUERA DEL VEHÍCULO. ADVERTENCIA: UNA CHISPA CERCA DE LA BATERÍA PUEDE HACER QUE EXPLOTE. PARA REDUCIR EL RIESGO DE QUE SE PRODUZCA UNA CHISPA CERCA DE LA BATERÍA:

- 1.) Compruebe la polaridad de los terminales de la batería. El terminal POSITIVO (POS, P, +) de la batería generalmente tiene un diámetro mayor que el terminal NEGATIVO (NEG, N, -) de la misma.
- 2.) Conecte un cable aislado para batería de al menos calibre 6 (AWG) y 60 cm (24 pulgadas) de largo al terminal NEGATIVO (NEG, N, -) de la batería.
- 3.) Conecte la abrazadera POSITIVA (ROJA) para batería o el conector de terminal redondo desde el cargador de batería al terminal POSITIVO (POS, P, +) de la batería.
- 4.) Tanto usted como los extremos libres del cable deben encontrarse lo más lejos posible de la batería. A continuación, conecte la abrazadera NEGATIVA (NEGRA) para batería o el conector de terminal redondo al extremo libre del cable.
- 5.) Conecte el cargador de batería a una toma de corriente adecuada. No se coloque de frente a la batería cuando realice esta conexión.
- 6.) Cuando desconecte el cargador de batería, hágalo siempre en la secuencia inversa de conexión y retire la primera conexión estando lo más lejos posible de la batería.
- 7.) Las baterías náuticas (para embarcaciones) se deben desmontar y cargar en tierra. Para cargarlas a bordo se necesitan equipos especialmente diseñados para uso náutico.

Inicio de la carga.

- 1.) Verifique el voltaje y la química de la batería.
- 2.) Confirme que ha conectado los conectores del terminal adecuadamente y que el enchufe eléctrico AC está enchufado a una toma eléctrica.
- 3.) Todas las luces LED parpadearán momentáneamente y el cargador comenzará a cargar sin intervención del usuario.
- 4.) Ahora el cargador se puede dejar conectado a la batería en todo momento para proporcionar carga de mantenimiento.

Significado de los ledes de carga.

El cargador tiene un (1) LED de carga. Este LED de carga indica el estado de carga de la (s) batería (s) conectada (s). Vea la explicación a continuación:

LED	Explicación
LED rojo pulsante	El LED Rojo de carga parpadeará lentamente cuando la batería tenga menos del 75 % de carga.
LED verde sólido	Cuando la batería esté 100 % cargada, el LED verde de carga será verde sólido.
LED verde pulsante	El LED de carga verde mostrará lentamente pulsos de «encendido» y «apagado» cuando la batería esté cargada entre un 75 % y un 100 % y durante la carga de optimización de la batería. Es normal que se produzca la carga de optimización de forma regular después de que la batería esté completamente cargada.

Diagnóstico avanzado.

Las luces LED de Error, Caliente y Standby juntas indican errores que se muestran en la tabla de abajo:

Error	Razón / Solución
Luz LED de error	Polaridad inversa. Invierta las conexiones de la batería. O el voltaje de la batería es demasiado bajo para que lo detecte el cargador.
Luz LED de Caliente	El cargador está fuera de su rango de temperatura seguro y no está cargando. Deje que el cargador se enfríe.
Un solo parpadeo que se alterna - Error y Standby	La batería no mantiene la carga. Haga que un profesional compruebe la batería.
Parpadeo doble que se alterna - Error y Standby	Posible cortocircuito de la batería. Haga que un profesional compruebe la batería.
Parpadeo triple que se alterna - Error y Standby	El voltaje de la batería es demasiado alto para el modo de carga seleccionado. Compruebe la batería.

Tiempos de carga.

A continuación se muestra el tiempo estimado de carga de una batería. El tiempo de carga se basa en una profundidad media de descarga de una batería completamente cargada y debe usarse solo como referencia. Los datos reales pueden discrepar en función del estado de la batería. El tiempo requerido para cargar una batería descargada normalmente se basa en una profundidad de descarga del 50%.

Tamaño de la Batería Ah (amp hora)	Aproximado Tiempo de carga en Horas 12V
8	2
12	3
24	6
40	10

Especificaciones técnicas

Voltaje de entrada CA: 100-240 VAC, 50-60Hz

Eficacia: 87% Aproximadamente

Energía: 28 W Max

Voltaje de carga: Vario

Drenaje de corriente: 2000mA (12V)

Detección de bajo voltaje: 1V

Corriente de carga: <0.5mA

Temperatura ambiente: -20°C to +60°C (-4°F to 140°F)

Tipo de baterías: 12V

Química de la batería: Wet, Gel, MF, CA, EFB, AGM, Calcio

Capacidad de la batería: Hasta 40Ah (12V), Mantiene todos los tamaños de baterías

Protección de la cubierta: IP65

Enfriamiento: Convección natural

Dimensiones (largo x ancho x alto): 12 x 5.8 x 3.8 cm (5 x 2.3 x 1.5 Pulgadas)

Peso: 0.2 kg (0.5lb)

NOCO Tres (3) años de garantía limitada

IMPORTANTE: AL UTILIZAR ESTE PRODUCTO, USTED ACEPTA ESTAR OBLIGADO POR LOS TÉRMINOS DE LA GARANTÍA LIMITADA DE TRES (3) AÑOS DE NOCO («GARANTÍA») COMO SE ESTABLECE A CONTINUACIÓN. NO UTILICE EL PRODUCTO HASTA HABER LEÍDO LOS TÉRMINOS DE LA GARANTÍA. SI NO ACEPTA LOS TÉRMINOS DE LA GARANTÍA, NO UTILICE EL PRODUCTO Y DEVUÉLVALO.

ESTA GARANTÍA LE OTORGA DERECHOS LEGALES ESPECÍFICOS Y USTED PUEDE TENER OTROS DERECHOS QUE VARÍAN SEGÚN EL ESTADO, EL PAÍS O LA PROVINCIA. SALVO LO PERMITIDO POR LA LEY, NOCO NO EXCLUYE, LIMITA NI SUSPENDE OTROS DERECHOS QUE USTED PUEDA TENER, INCLUIDOS LOS QUE PUEDAN DERIVARSE DE LA NO CONFORMIDAD DE UN CONTRATO DE VENTA. PARA UNA COMPRESIÓN COMPLETA DE SUS DERECHOS, DEBE CONSULTAR LAS LEYES DE SU ESTADO, PAÍS O PROVINCIA.

EN LA MEDIDA EN QUE LO PERMITA LA LEY, ESTA GARANTÍA Y LOS RECURSOS ESTABLECIDOS SON EXCLUSIVOS Y EN LUGAR DE TODAS LAS DEMÁS GARANTÍAS, RECURSOS Y CONDICIONES, YA SEAN ORALES, ESCRITOS, LEGALES, EXPRESOS O IMPLÍCITOS. NOCO RENUNCIA A TODAS LAS GARANTÍAS LEGALES E IMPLÍCITAS, INCLUYENDO, SIN LIMITACIÓN, GARANTÍAS DE COMERCIABILIDAD E IDONEIDAD PARA UN FIN DETERMINADO Y GARANTÍAS CONTRA DEFECTOS OCULTOS O LATENTES, EN LA MEDIDA EN QUE LO PERMITA LA LEY, EN LA MEDIDA EN QUE DICHAS GARANTÍAS NO PUEDAN RENUNCIARSE, NOCO LIMITA LA DURACIÓN Y LOS RECURSOS DE DICHAS GARANTÍAS A LA DURACIÓN DE ESTA GARANTÍA EXPRESA Y, A OPCIÓN DE NOCO, LA REPARACIÓN O REEMPLAZO DE LOS PRODUCTOS DESCRITOS A CONTINUACIÓN. ALGUNOS ESTADOS, PAÍSES Y PROVINCIAS NO PERMITEN LIMITACIONES SOBRE LA DURACIÓN DE UNA GARANTÍA O CONDICIÓN IMPLÍCITA, POR LO QUE LA LIMITACIÓN DESCRITA ANTERIORMENTE PUEDE NO APLICAR EN SU CASO.

NOCO garantiza los Productos de la marca NOCO contenidos en el embalaje original ("Producto NOCO") contra defectos en materiales y mano de obra cuando se usan normalmente de acuerdo con las pautas publicadas de NOCO por un período de TRES (3) AÑOS a partir de la fecha de compra minorista original o fecha de entrega por parte del comprador usuario final ("Período de garantía"). Las pautas publicadas de NOCO incluyen, entre otros, la información contenida en esta Garantía, las especificaciones técnicas y los manuales de usuario. EN ALGUNOS ESTADOS, PAÍSES O PROVINCIAS, LA LEY NACIONAL PUEDE PROPORCIONAR PERÍODOS DE GARANTÍA MÁS EXTENDIDOS. Como tal, los beneficios de la Garantía limitada pretenden complementar, y no reemplazar, los derechos proporcionados por las leyes de protección al consumidor.

LA RESPONSABILIDAD DE NOCO SE LIMITA AL REEMPLAZO O LA REPARACIÓN. NOCO NO SERÁ RESPONSABLE DE NINGÚN DAÑO ESPECIAL, INCIDENTAL, CONSECUENTE O EJEMPLAR RESULTANTE DE CUALQUIER INCUMPLIMIENTO DE LA GARANTÍA O CONDICIÓN O BAJO CUALQUIER OTRA TEORÍA LEGAL, INCLUYENDO, ENTRE OTROS, LUCRO CESANTE, INGRESO CESANTE, NEGOCIO CESANTE, DAÑO A LA PROPIEDAD, LESIONES PERSONALES O CUALQUIER PÉRDIDA O DAÑO INDIRECTO O CONSECUENTE DE CUALQUIER FORMA.

Esta Garantía no es transferible y no cubre los costes de embalaje y transporte de devolución. Esta Garantía no se aplica: (a) a daños causados por accidente, abuso, mal uso, fuego, contacto con líquidos u otra causa externa, (b) mal manejo, instalación incorrecta, modificaciones, desmontaje o intento de reparación no autorizada, (c) daños, como abolladuras o rasguños, que no afecten la funcionalidad del Producto, (d) daños causados por operar el Producto fuera de las pautas publicadas por NOCO, (e) defectos causados por el uso y desgaste normal o debido a la envejecimiento normal del Producto, o (f) si algún número de serie ha sido eliminado o desfigurado del Producto.

Si, durante el Período de garantía, presenta una reclamación, NOCO, a su elección: (a) reparará el Producto que haya sido probado y haya superado nuestros requisitos funcionales, (b) reemplazará el Producto con un producto de reemplazo del mismo modelo (o con su consentimiento, un producto que tenga las mismas o sustancialmente similares características que el Producto original, por ejemplo, un modelo diferente con las mismas características), que sea nuevo o como nuevo y haya sido probado y superado nuestros requisitos funcionales, o (c) cambiará el Producto por un reembolso del precio de compra. Requerimos cierta información, incluida la prueba de compra, para procesar las reclamaciones de garantía limitada. Para realizar una reclamación bajo la Garantía limitada, comuníquese con el Soporte de NOCO en:

(Web) <https://no.co/support>
(Correo electrónico) support@no.co
(EE. UU./CA/MX) +1.800.456.6626

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(UE) +31 20 214 0047

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NOCO[®]

GENIUS2D.04092024A



ノコ・ジャパン合同会社

ECO-WORTHY Industrial Water Pressure Diaphragm Pump 110Volt 5.5GPM 55PSI, 110V AC Self Priming Water Booster Transfer Pump On Demand for RV

Brand	ECO-WORTHY
Colour	Black
Material	Stainless Steel
Style	Diaphragm pump
Product Dimensions	24L x 11.5W x 12H Centimetres
Power source	110V AC
Maximum flow rate	5.5 Gallons Per Minute
Maximum lifting height	131 Feet
Voltage	110 Volts (AC)
Manufacturer	ECO-WORTHY

About this item

- **Reliable Performance:** 110V High Pressure Diaphragm Pump provides 5.5 gallons per minute water flow. Self-Priming up to 9.8 vertical feet, lift up to 131 feet. 1.5 Max amps; the power is about 165W
- **On Demand Pressure Switch:** Built-in automatic pressure switch, the factory default setting to 55PSI. Which turns it on immediately when the faucet on; Pressure enough for daily use, it also can adjust according to your needs
- **Security Protection:** Overload and ignition protected, also can run dry without damage. Temperatures above 70°C/ 158°F temporarily stop working. Support water pressure pump running for about 1 hour
- **Installation Easy & Convenient:** The pump supports multiple liquids, such as fresh water, drinking water, low-salinity solution, and weak acidic liquid. It is also a great partner of rain barrel, tankless water heater, sprayer, agricultural irrigation

- **ECO-WORTHY Industrial Water Pressure Diaphragm Pump**

- Our pump is built for high pressure on demand, low noise and no rapid cycling. It offers a soft and smooth operation that allows you to expel water quickly without making a scene! We stand behind our products.
- 110V AC water pressure pump, 5.5GPM, 55PSI.
- Self Priming up to 9.8 vertical feet, lift up to 131ft.
- Built in on demand pressure switch.
- Internal bypass switch to reduce circulation.
- Stable and silent operation, thermal overload.





Giant[®]

Enhancing everyday living

RESIDENTIAL ELECTRIC WATER HEATERS

POINT-OF-USE

| 2 | 5 | 10 | 16 | 22 | IMP. GALLONS

BENEFITS

1 - HIGH DENSITY FIBERGLASS INSULATION

Provides superior heat retention and efficiency while being environmentally friendly.

2 - FACTORY INSTALLED 3/4" NPT DI-ELECTRIC NIPPLES

Extend the life of the water heater by providing excellent corrosion protection.

3 - HIGH QUALITY MAGNESIUM ANODE

Provides excellent protection against the corrosive effects of water and extends tank life.

4 - ELECTRIC ELEMENTS

All models are equipped with CSA approved screw-in type immersion elements made by Giant. These elements can be easily replaced with no special tools, resulting in low maintenance costs.

5 - GLASS-LINED INNER TANK

A uniquely formulated blue cobalt glass enriched with zircon is fused to specially treated steel at 1,600°F (871°C) to provide the best coating available against corrosion for many years. The tank is certified at a test pressure of 300 PSI (2,068 kPa) and a working pressure of 150 PSI (1,035 kPa).

6 - AUTOMATIC TEMPERATURE CONTROL

Adjustable thermostat will provide years of reliable trouble-free service at the desired water temperature and a safety cut-off is provided for abnormal conditions.

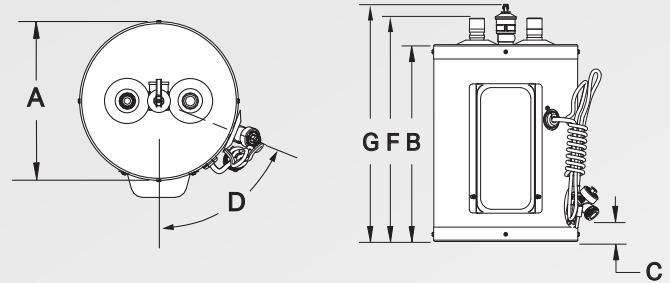
7 - FACTORY INSTALLED TEMPERATURE AND PRESSURE-RELIEF VALVE†

Protects the tank from the damaging effects of excessive temperature and pressure.

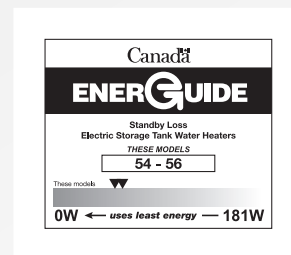
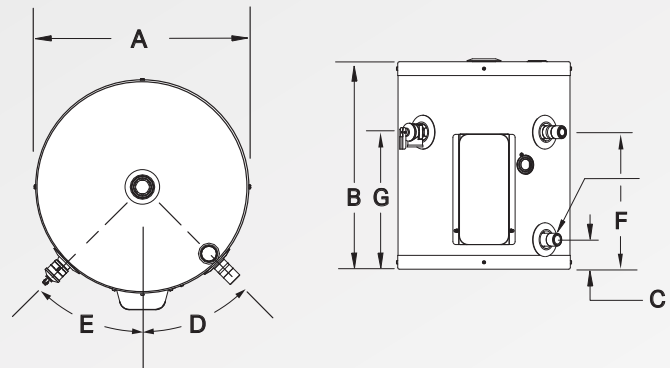
†Supplied but not installed for 130E model.



103ETE Model



106SEO, 112SEO & 119SEO1 Models



SPECIFICATIONS & DIMENSIONS

Models	Storage capacity			Factory installed wattages						Standby Loss Watts	Diameter (A)		Height (B)		C		D	E	F		G	Estimated ship. weight		
				120V		208V		240V			inches	(cm)	inches	(cm)	inches	(cm)			inches	(cm)		inches	(cm)	lb
	US gal.	Liters	IMP gal.	Watts	Amp.	Watts	Amp.	Watts	Amp.															
103ETE	2.5	10	2	1,500	12.50	-	-	-	-	-	10	(25)	13 3/4	(35)	2	(5)	68.4°	-	15 5/8	(40)	16 1/2	(42)	22	(10)
106SEO	6	23	5	1,500	12.50	2,250	10.8	3,000	12.50	-	14	(36)	16 7/8	(43)	2 5/8	(7)	45°	45°	11 3/8	(29)	10 1/8	(26)	35	(14)
112SEO	12	45	10	1,500	12.50	2,250	10.8	3,000	12.50	-	16	(41)	22 3/8	(57)	2 5/8	(7)	45°	45°	16 5/8	(42)	15 1/4	(39)	52	(24)
119SEO	19	72	16	1,500	12.50	2,250	10.8	3,000	12.50	54	18 1/4	(46)	26 1/2	(67)	2 5/8	(7)	45°	45°	20 5/8	(52)	19 3/8	(49)	65	(30)
130E†	26	100	22	1,500	12.50	2,250	10.8	3,000	12.50	56	18 1/4	(46)	42 1/2	(108)	2 1/4	(6)	58°	-	43 3/4	(111)	-	-	90	(41)

† Model not illustrated

WARRANTY

6 years

against inner tank leakage

1 year

on component parts

Giant offers a SIX (6)* year limited warranty against inner tank leakage from the date of installation ONE (1)* year limited warranty on component parts. For more specific warranty details including exceptions, consult the owner's manual that comes with each water heater.

*When installed by a professional.

Giant®

11021, Notre-Dame Street East, Montreal-East, Quebec, Canada, H1B 5H3

Telephone : 514-645-8893 • Toll free : 1-800-363-9354

General fax : 514-640-0969

Customer Service fax : 514-645-8413

giantinc.com

Point-of-Use Models

Standards

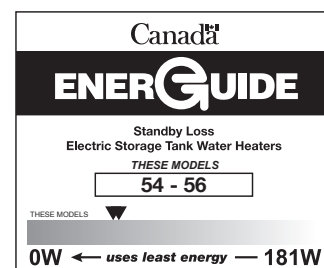
- Meet CSA 22.2 construction standards
- Meet or exceed NRCan energy efficiency standards

Benefits

- Uniform thickness of insulating foam or fiberglass keeps water warmer for longer periods
- Safety valve protects the tank against the damaging effects of excess temperature and pressure (*provided, not installed on 130E model*)
- Factory-installed 3/4" NPT dielectric connections
- Automatic temperature control with adjustable thermostat
- Easy-to-replace CSA approved screw-in type immersion elements
- Tank is glass-lined with a blue cobalt enamel enriched with zircon fused to special steel at 1,600°F (871°C).
- High-quality magnesium anode
- Secure drain valve for easy drainage (on certain models only)

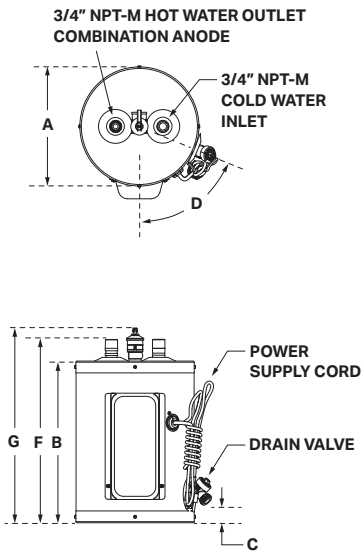
Warranty

- 6-year warranty against inner tank leakage
- 1-year warranty on parts

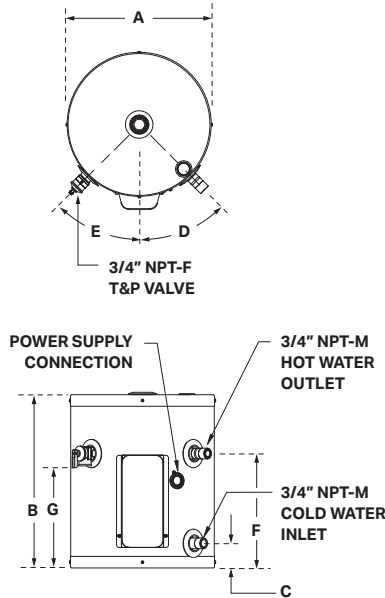


Point-of-Use Models

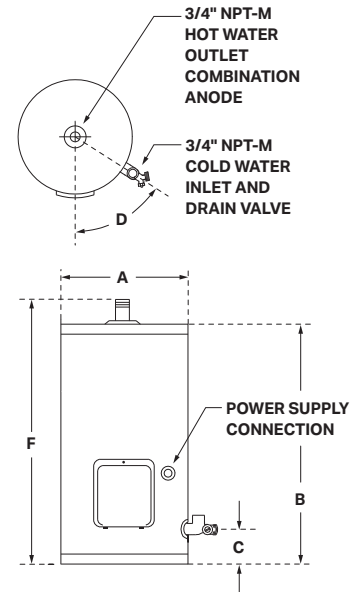
103ETE Model



106SEO | 112SEO | 119SEO1 Models



130E Model



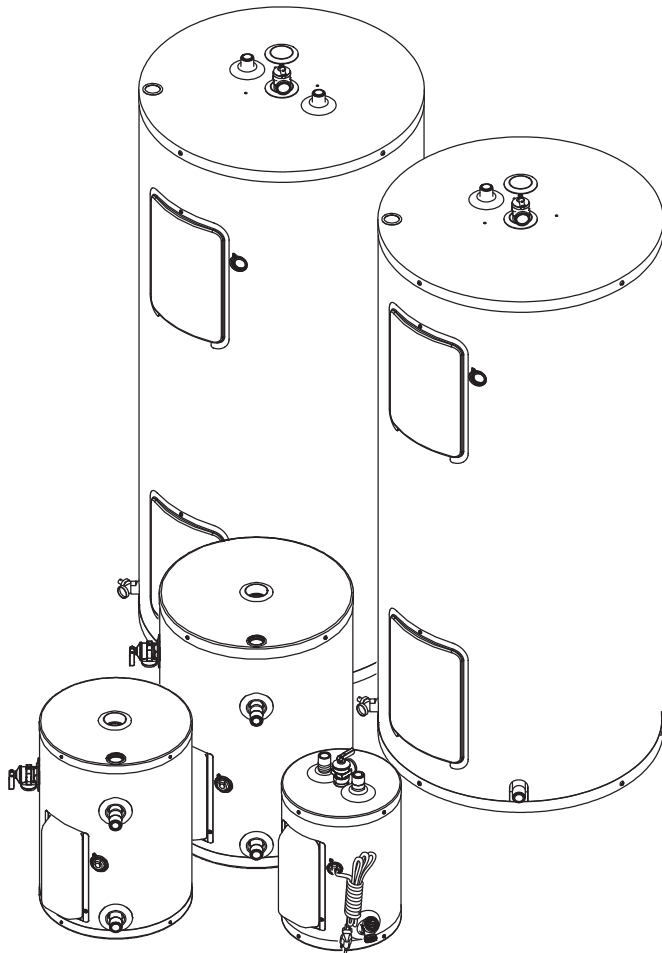
SPECIFICATIONS

Model	Storage Capacity			Input watts	Voltage volts	Standby Loss watts	Plumbing Connections	Warranty Tank / Parts years
	US gal.	Liters	IMP gal.					
103ETE-1R3N	2,5	10	2	1,500	120	-	3/4" NPT	6 / 1
106SEO-1R5M	6	23	5	1,500	120	-	3/4" NPT	6 / 1
106SEO-3R5M	6	23	5	3,000 / 2,250	240 / 208	-	3/4" NPT	6 / 1
112SEO-1R5M	12	45	10	1,500	120	-	3/4" NPT	6 / 1
112SEO-3R5M	12	45	10	3,000 / 2,250	240 / 208	-	3/4" NPT	6 / 1
119SEO1-1R5M	19	72	16	1,500	120	54	3/4" NPT	6 / 1
119SEO1-3R5M	19	72	16	3,000 / 2,250	240 / 208	54	3/4" NPT	6 / 1
130E-1R7N	26	100	22	1,500	120	56	3/4" NPT	6 / 1
130E-3R7N	26	100	22	3,000 / 2,250	240 / 208	56	3/4" NPT	6 / 1

DIMENSIONS

Model	A	B	C	D	E	F	G	Estimated Shipping Weight lb (kg)
	in (cm)	in (cm)	in (cm)			in (cm)	in (cm)	
103ETE	10 (25)	13 3/4 (35)	2 (5)	68,4°	-	15 5/8 (40)	16 1/2 (42)	22 (10)
106SEO	14 (36)	16 7/8 (43)	2 5/8 (7)	45°	45°	11 3/8 (20)	10 1/8 (26)	35 (16)
112SEO	16 (41)	22 3/8 (57)	2 5/8 (7)	45°	45°	16 3/8 (42)	15 1/4 (39)	52 (24)
119SEO1	18 1/4 (46)	27 3/4 (70)	2 5/8 (7)	45°	45°	20 5/8 (52)	19 3/8 (49)	70 (32)
130E	18 1/4 (46)	42 1/2 (108)	2 1/4 (6)	58°	-	43 3/4 (111)	-	90 (41)

RESIDENTIAL ELECTRIC WATER HEATER OWNER'S MANUAL INSTALLATION AND OPERATING INSTRUCTIONS



DANGER

If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.

- **DO NOT REMOVE** the element and thermostat access door before the power to the water heater is turned “OFF”.
- **DO NOT ATTEMPT** to repair or replace any of the electrical components installed on the water heater before the power to the water heater is turned “OFF”.
- **DO NOT USE** the water heater on a voltage other than that specified on the water heater rating plate.
- **DO NOT CONNECT** the power supply wiring to anywhere other than the main power connection on the water heater.
- **DO NOT TURN ON** the power to the water heater unless it is completely filled with water.
- **DO NOT DRAIN** the water heater unless the power to the water heater has been turned “OFF”.
- **DO NOT STORE** or use gasoline or other flammable vapours and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL SMOKE

- Immediately turn “OFF” the power to the water heater.
- If after turning “OFF” the power the smoke continues, call your local fire department.
- When the smoke has stopped, call a qualified service technician to identify and repair the problem.

IMPORTANT

READ THESE INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION. PROPER INSTALLATION WILL PROVIDE SAFE AND EFFICIENT SERVICE, AND AVOID NEEDLESS EXPENSE NOT COVERED BY THE WARRANTY. READ THE PRODUCT WARRANTY CONTAINED IN THIS MANUAL AND REMEMBER TO FILL OUT AND RETURN TO THE MANUFACTURER ALL RELEVANT WARRANTY CARDS AND CERTIFICATES. SHOULD YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR LOCAL DEALER OR REFER TO THE **GETTING SERVICE FOR YOUR WATER HEATER** SECTION OF THIS MANUAL.

SAVE THIS MANUAL FOR FUTURE REFERENCES.

For your records, write the model and serial number here:

Model # _____

Serial # _____



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SAFETY INFORMATION

Your safety and the safety of others is extremely important during the installation, operation, and servicing of this water heater. Many safety-related messages have been provided in this manual and on your water heater. Always read and obey all safety messages. These messages will point out the potential hazard, tell you how to reduce the risk of injury, and tell you what will happen if the instructions are not followed.



This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hurt you and others. All safety messages will follow the safety alert symbol and either the word “DANGER” or “WARNING”.

 DANGER	Serious injury or death can occur if you do not follow the instructions immediately.
---	--

 WARNING	Serious injury or death can occur if you do not follow the instructions.
--	--

 WARNING
DO NOT use this water heater if any part has been under water. Immediately call a qualified service technician to inspect the water heater and to replace any part of the control system which has been under water. Failure to follow this instruction can result in property damage, personal injury, or death.

IMPORTANT

These instructions have been written as a guide for the proper installation and operation of your water heater, and the manufacturer of this water heater will not accept any liability where these instructions have not been followed. However, for your safety and to avoid damage caused by improper installation, this water heater must be installed by a Certified Licensed Professional, and meet all local codes or, in the absence of local codes, CSA C22.1 Canadian Electrical Code, in Canada, and/or the National Electrical Code, ANSI/NFPA 70, in the United States.

Before proceeding with the installation instructions:

- 1) Inspect the water heater and its component parts for possible damage. **DO NOT** install or attempt to repair any damaged component parts. If you detect any damage, contact the dealer where the water heater was purchased or the manufacturer listed on the warranty card.
- 2) Verify that the voltage being supplied corresponds to that which is marked on the water heater rating plate.

INSTALLATION INSTRUCTIONS

Location

This water heater should be located as close as possible to a power supply and to the main use of hot water. This location must not be subject to freezing temperatures. The water heater should be positioned so that the element and thermostat access doors can be removed for inspection, adjustment, and servicing of the elements and thermostats. The drain valve must also be accessible. The water heater must be located close to a suitable free-flowing floor drain. Where a floor drain is not adjacent to the water heater, a suitable drain pan must be installed under the water heater (see Figure 1A or 1B). This drain pan should be at least two (2) inches (5.0 cm) larger than the diameter of the water heater, and at least three (3) inches (7.5 cm) deep providing access to the drain valve. This pan must be piped to a suitable drain to prevent damage to property in the event of a water leak from the piping, the relief valve, or the water heater.

Sooner or later, all water heaters leak. The manufacturer, based on national building codes has given the necessary advice to prevent damage to the building. Under no circumstances is the manufacturer to be held liable for any water damage in connection with this water heater.

Should this water heater be installed on carpeting, the carpeting must be protected by a wood or metal panel beneath the water heater. This panel must extend at least three (3) inches (7.6 cm) beyond the width and depth of the water heater. Should the water heater be installed in an alcove or closet, the entire floor area must be covered by the panel.

Water Piping

Refer to Figure 1A or 1B for a typical installation. Use of this layout should provide a trouble-free installation for the life of the water heater. Before making the plumbing connections, locate the **COLD** water inlet and the **HOT** water outlet. These fittings are both 3/4" NPT male thread. Female NPT fittings must be used during the installation. Make sure that the dip-tube is installed in the cold water inlet (**Top entry Models**). Install a shut-off valve close to the water heater in the cold water line. It is recommended that unions be installed in the cold and hot water lines so that the water heater can be easily disconnected, if servicing is required.

When assembling the hot and cold piping to the water heater, use Teflon™ tape and wrap it clockwise around all the threads or a good food grade of pipe joint compound, and ensure all fittings are tight. It is imperative that open flame is not applied to the inlet and outlet fittings, as heat will damage or destroy the plastic lined fittings. **This will result in premature failure of the fittings, which is not covered by the warranty.**

Temperature and Pressure-Relief Valve

WARNING

DO NOT plug the temperature and pressure-relief valve or its discharge line. **DO NOT** remove the relief valve. Make sure the relief valve is properly sized for the water heater. If the relief valve continuously discharges water, call a qualified service technician to correct the problem. Failure to follow these instructions can result in property damage, personal injury, or death.

To protect from excessive pressure and/or temperature, a temperature and pressure-relief valve that meets the requirements of the Standard for Relief Valves and Automatic Gas Shut-Off Devices for Hot Water Supply Systems, CSA 4.4, in Canada, and ANSI Z21.22, in the United States **MUST BE** installed by the installer when it has not been factory installed. The relief valve should have a maximum set pressure that does not exceed the hydrostatic working pressure of the water heater (150 psi = 1,035 kPa) and a BTU/h rating equal to or greater than the

input rating, as shown on the water heater rating plate. It should never be plugged or removed from the opening marked for it on the water heater.

If this relief valve should need to be replaced, use only a new temperature and pressure-relief valve. Never install an old or existing relief valve, as it may be damaged or inadequate for the working requirements of the new water heater. This new relief valve must meet all local codes or, at a minimum, the requirements listed above. Never install another type of valve between the relief valve and the water heater.

A discharge line must be installed into the relief valve. The discharge line:

- Must not be smaller than the outlet pipe size of the relief valve.
- Must not terminate less than six (6) inches (15.2 cm) and not more than twelve (12) inches (30.5 cm) above a floor drain.
- Must not be restricted in any way. Do not thread, cap, or in any way restrict the end of this outlet.
- Must be of a material capable of withstanding 210°F (99°C) without distortion.
- Must be installed to allow complete drainage of the relief valve and discharge line.
- Must terminate over an adequate free-flowing drain.

Pressure Build-up in a Water System


When the water heater operates, the heated water expands creating a pressure build-up. This is a natural function and is one of the reasons for installing a temperature and pressure-relief valve. If the cold water supply line has a built-in water meter, check valve, or pressure reducing valve, a suitable expansion tank must be installed to prevent pressure build-up or water hammer effect, otherwise the warranty is void (see Figure 1A or 1B). An indication of pressure build-up is frequent discharges of water from the relief valve. If the relief valve discharges water on a continuous basis, it may indicate a malfunction of the relief valve, and a qualified service technician must be called to have the system checked, and the problem corrected.

Filling the Water Heater

WARNING

NEVER operate the water heater unless it is completely filled with water. Failure to follow this instruction can result in premature failure of the water heater and its component parts that is not covered by the warranty.

Check that all of the water piping connections have been made. To fill the water heater:

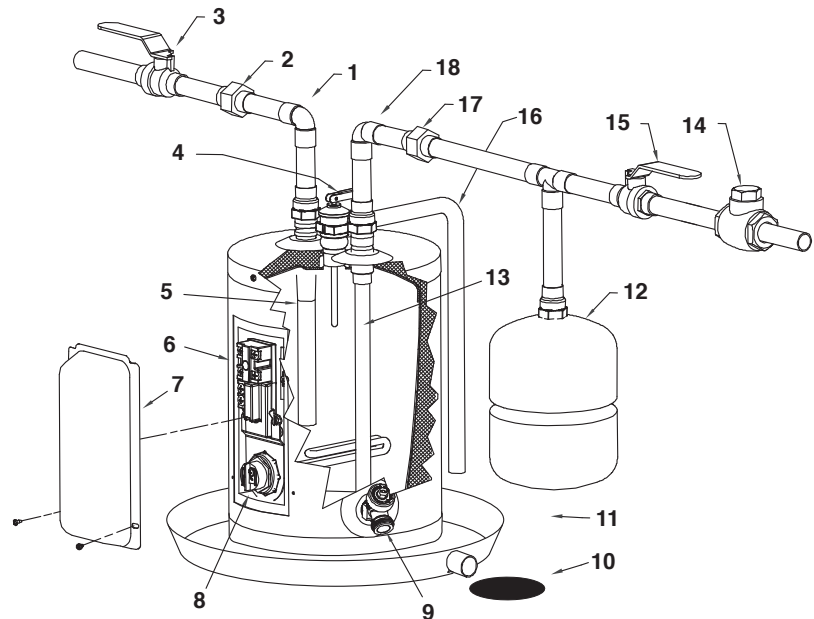
- 1) Make sure that the water heater drain valve is closed by inserting a flat head screwdriver into the slot on the head of the drain valve and turning the knob clockwise .
- 2) Open the cold water supply manual shut-off valve. This valve must remain open, as long as the water heater is in use. **NEVER** operate the water heater with the cold water supply manual shut-off valve closed.
- 3) To make sure the water heater is completely filled with water, open all of the hot water faucets in the house to let the air out of the water heater and plumbing system. Leave the faucets open until a constant flow of water is obtained.
- 4) Check all of the plumbing connections to make sure there are no leaks.

INSTALLATION INSTRUCTIONS

Figure 1A

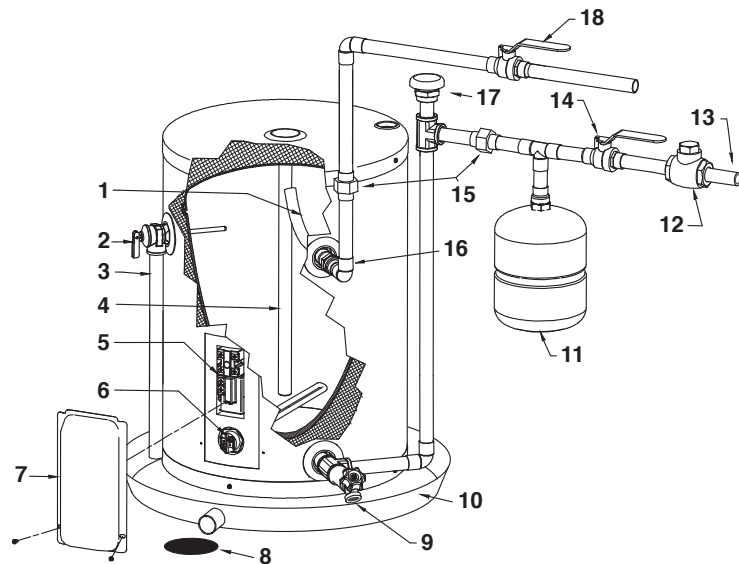
Models with one (1) element, top entry

ID No.	Description
1	Hot water outlet
2	Union
3	Hot water manual shut-off valve
4	Temperature & pressure-relief valve
5	Combination outlet nipple / magnesium anode
6	Thermostat / high limit assembly
7	Element and thermostat access door
8	Screw-in element
9	Drain valve
10	Free-flowing floor drain
11	Drain pan
12	Expansion tank
13	Dip-tube
14	Check valve, water meter or pressure reducing valve
15	Cold water manual shut-off valve
16	Overflow tube
17	Union
18	Cold water inlet



Models with one (1) element, side entry

ID No.	Description
1	Outlet tube
2	Temperature & pressure-relief valve
3	Overflow tube
4	Magnesium anode
5	Thermostat / high limit assembly
6	Screw-in element
7	Element and thermostat access door
8	Free-flowing floor drain
9	Drain valve
10	Drain pan
11	Expansion tank
12	Check valve, water meter or pressure reducing valve
13	Cold water inlet
14	Cold water manual shut-off valve
15	Unions
16	Hot water outlet
17	Vacuum breaker
18	Hot water manual shut-off valve

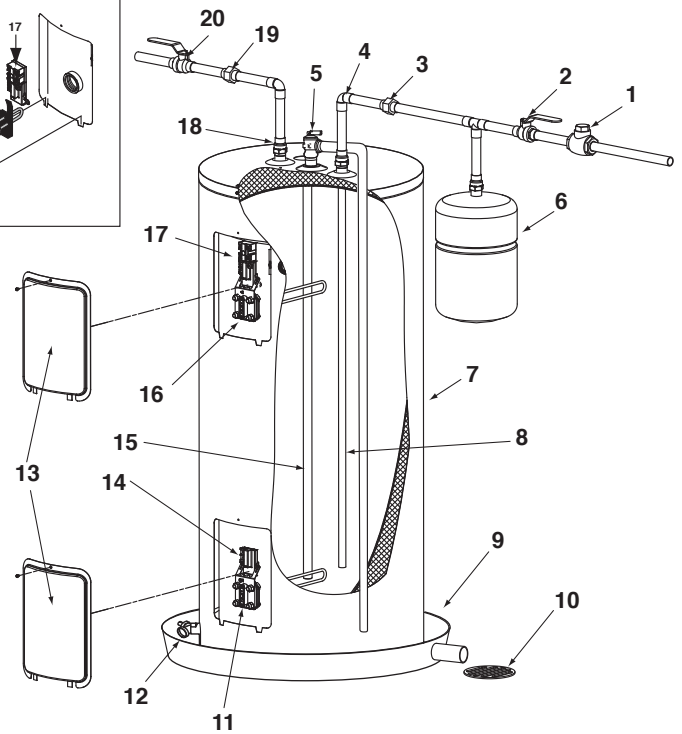
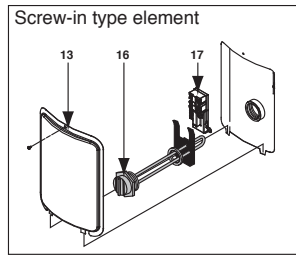


INSTALLATION INSTRUCTIONS

Figure 1B

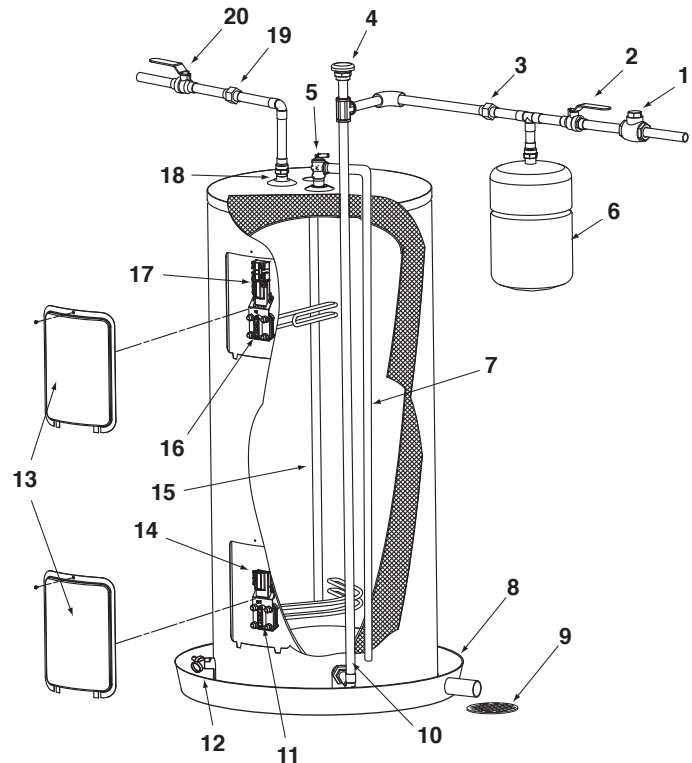
Models with two (2) elements, top entry

ID No.	Description
1	Check valve, water meter or pressure reducing valve
2	Cold water manual shut-off valve
3	Union
4	Cold water inlet
5	Temperature & pressure-relief valve
6	Expansion tank
7	Overflow tube
8	Dip-tube
9	Drain pan
10	Free-flowing floor drain
11	Lower element
12	Drain valve
13	Element and thermostat access doors
14	Lower thermostat
15	Magnesium anode
16	Upper element
17	Thermostat / high limit assembly
18	Hot water outlet
19	Union
20	Hot water manual shut-off valve



Models with two (2) elements, bottom entry

ID No.	Description
1	Check valve, water meter or pressure reducing valve
2	Cold water manual shut-off valve
3	Union
4	Vacuum breaker
5	Temperature & pressure-relief valve
6	Expansion tank
7	Overflow tube
8	Drain pan
9	Free-flowing floor drain
10	Cold water inlet
11	Lower element
12	Drain valve
13	Element and thermostat access doors
14	Lower thermostat
15	Magnesium anode
16	Upper element
17	Thermostat / high limit assembly
18	Hot water outlet
19	Union
20	Hot water manual shut-off valve



INSTALLATION INSTRUCTIONS

Electrical Connections

⚠ WARNING

This water heater uses an external electrical source for power. It must be electrically grounded in accordance with all local codes or, in the absence of local codes, CSA C22.1 Canadian Electrical Code, in Canada, and/or the National Electrical Code, ANSI/NFPA 70, in the United States. Failure to properly ground this water heater can result in property damage, personal injury, or death.

This water heater must be connected on a separate fuse branch circuit. Check the water heater rating plate for the element wattage and voltage and make sure that the power supply wiring and the fusing or circuit breaker are the correct size for this water heater (see Table 1). Verify that all of the wire connections on the element and thermostat have been installed correctly, are secure, and that none of the wires are grounded, have split, or are broken (see Figure 2A, 2B or 2C). If any of the original wiring needs replacing, use only 14AWG-type, or greater wire that is approved for 221°F (105°C).

To hook-up the water heater to the power supply, connect the power supply wiring to the red and black wires attached to the top thermostat (see Figure 2A, 2B or 2C). **NEVER CONNECT THE POWER SUPPLY DIRECTLY ONTO THE THERMOSTAT.**

Insulation Blankets

⚠ WARNING

The manufacturer's warranty does not cover any damage or defect caused by installation, attachment, or use of any type of energy saving or other unapproved devices (other than those authorized by the manufacturer) into, onto or in conjunction with the water heater. The manufacturer will not accept any liability for loss or injury resulting from the use of such unauthorized devices. The use of unauthorized energy saving devices may shorten the life of the water heater and may result in property damage, personal injury, or death.

Insulation blankets for external use on electric water heaters are not necessary. The purpose of an insulation blanket is to reduce the standby heat loss associated with the operation of storage tank water heaters. This water heater meets or exceeds the NRCAN standards with respect to insulation and standby loss requirements making an insulation blanket unnecessary.

If local codes require the application of an external insulation blanket to this water heater, pay careful attention to the following so as not to restrict the proper function and operation of the water heater:

DO NOT cover the operating or warning labels attached to the water heater or attempt to relocate them on the exterior of insulation blanket.

DO NOT cover the element and thermostat access door or temperature and pressure-relief valve.

Inspect the insulation blanket frequently.

Table 1

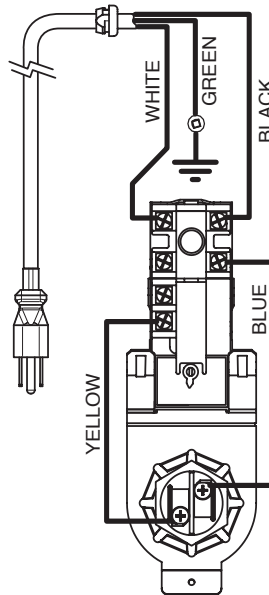
Element Wattage	Recommended Wire Size*			Recommended Breaker Size		
	120V	208V	240V	120V	208V	240V
1,500 W	#12	#14	#14	20A	15A	15A
3,000 W	#10	#12	#12	30A	20A	20A
3,800 W	---	#10	#12	---	25A	20A
4,500 W	---	#10	#10	---	30A	25A
6,000 W	---	---	#8	---	---	40A

* Should conform to Local Codes.

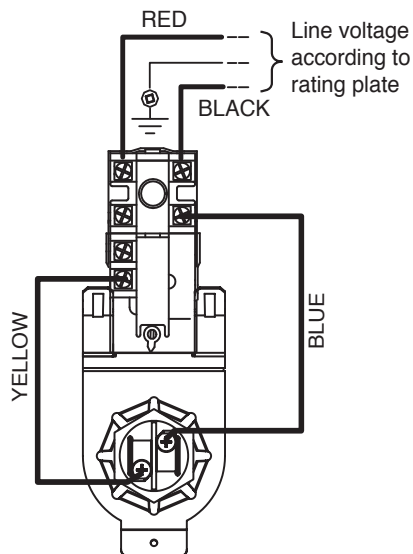
The water heater must be grounded.

Figure 2A

Models with one (1) element, top entry



Models with one (1) element, side entry



INSTALLATION INSTRUCTIONS

Figure 2B

Models with two (2) elements - square flange and TWIST-LOCK type

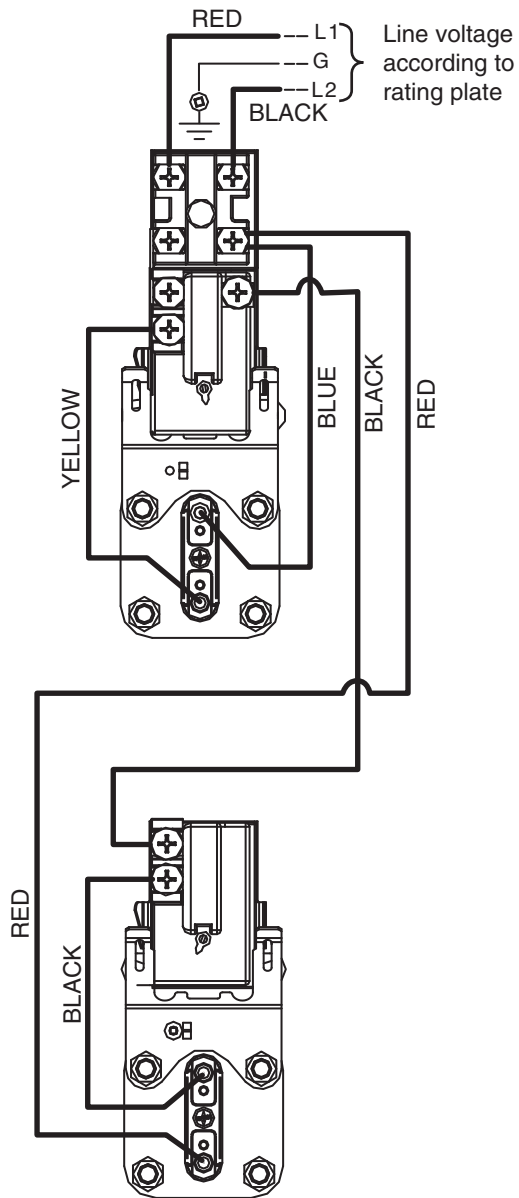
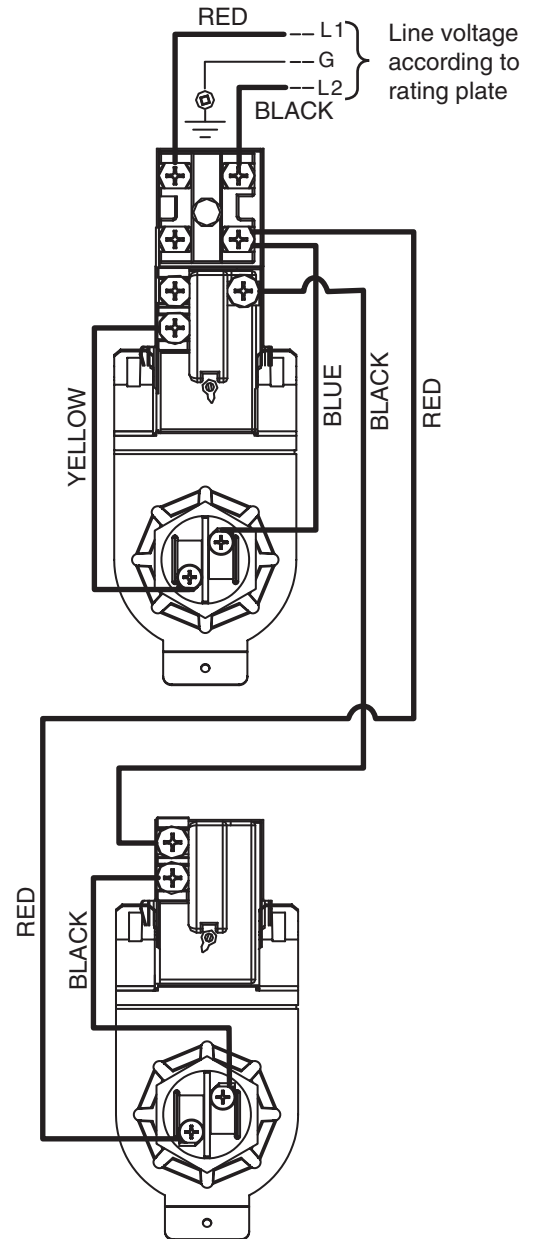


Figure 2C

Models with two (2) elements - screw-in type



OPERATING INSTRUCTIONS

Installation Checklist

Location

- Is the water heater located close to a power supply and the main use of hot water?.....
- Is the water heater protected from freezing temperatures?.....
- Has a drain pan been installed and piped to a free-flowing drain?.....
- Can the element and thermostat access doors be removed for inspection, adjustment and servicing of the elements and thermostats?
- Is the area where the water heater is located free of flammable vapours?.....

Water Piping

- Is the dip-tube installed in the cold water inlet for models with top inlet connection?
- Has a temperature and pressure-relief valve been installed?
- Does this valve have a discharge line installed, and is it piped to a free-flowing drain?.....
- Have all the plumbing connections been properly installed, and are they leak free?.....
- Is the water heater completely filled with water?

Wiring

- Does the power supply voltage match the voltage indicated on the water heater rating plate?
- Has the correct size of wire and fusing or circuit breaker been used to supply the water heater with power?.....
- Is the water heater electrically grounded?
- Have the electrical connections been checked, and are they secure?.....



Starting the Water Heater

Before turning on the power to your water heater, make sure that you have read and understood all of the instructions and warnings in this manual and on your water heater. If you have any questions about turning on your water heater, immediately contact a qualified installer, service agency, or the local electric utility.

WARNING

DO NOT turn “ON” the power to this water heater if:

- It is not completely filled with water.
- The power supply voltage does not match the voltage listed on the rating plate.
- Gasoline or other flammable vapours and liquids have been stored in the vicinity of the water heater.

Failure to follow these instructions can result in property damage, personal injury, or death.

DANGER

If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.

- **DO NOT REMOVE** the element and thermostat access door before the power to the water heater is turned “OFF”.
- **DO NOT ATTEMPT** to repair or replace any of the electrical components installed on the water heater before the power to the water heater is turned “OFF”.
- **DO NOT USE** the water heater on a voltage other than that specified on the water heater rating plate.
- **DO NOT CONNECT** the power supply wiring to anywhere other than the main power connection on the water heater.
- **DO NOT TURN ON** the power to the water heater unless it is completely filled with water.
- **DO NOT DRAIN** the water heater unless the power to the water heater has been turned “OFF”.
- **DO NOT STORE** or use gasoline or other flammable vapours and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL SMOKE

- Immediately turn “OFF” the power to the water heater.
- If after turning “OFF” the power the smoke continues, call your local fire department.
- When the smoke has stopped, call a qualified service technician to identify and repair the problem.



GENERAL MAINTENANCE

Start-up Procedure

- 1) Turn on the circuit breaker at the main service panel.
- 2) Make sure the fuse box or power switch (if one exists) next to the water heater is pushed to "ON".
- 3) If you smell smoke, refer to **What to do if you smell smoke**.
- 4) Wait one (1) hour. At this time, hot water should be available at the faucet.
- 5) If after one (1) hour you do not have any hot water, check that the fuse or circuit breaker is in working condition.
- 6) Wait another hour. If at this time you still do not have any hot water, call a qualified service technician.

Note: If after one (1) hour you receive only a small amount of hot water, check that the plumbing connections are not reversed.

Safety Controls

This water heater is equipped with a thermostat and high limit assembly (ECO) that is located above the upper heating element. If for any reason the temperature of the water becomes excessively high, the ECO will break the power circuit to the heating element. Once the control opens, it must be reset manually.

To reset the ECO:

- 1) Turn "OFF" the power to the water heater.
- 2) Remove the upper element and thermostat access door and the insulation.
- 3) Press the red **RESET** button.
- 4) Replace the insulation and the element and thermostat access door before turning "ON" the power to the water heater.

Water Temperature Regulation

WARNING

The higher the setting, the greater the risk of scalding. Hot water can cause third degree burns in under one (1) second at 160°F (71°C), in six (6) seconds at 140°F (60°C), and in thirty (30) seconds at 130°F (54°C). In households where there are children, physically challenged individuals, or elderly persons, mixing valves for point of use are necessary as means of reducing the scalding potential of hot water.

The thermostat is factory set at 140°F (60°C) for Canadian models and 125°F (52°C) for U.S. models.

To adjust the temperature on the thermostat:

- 1) Turn "OFF" the power to the water heater.
- 2) Remove the element and thermostat access door and the insulation. On U.S. models **DO NOT** remove the thermostat protective cover.
- 3) Using a small flathead screwdriver, turn the thermostat dial to the desired temperature.
- 4) Replace the insulation and the element and thermostat access door before turning "ON" the power to the water heater.

Condensation

Condensation can form on the surface of the water heater:

- 1) When the water heater is filled with cold water for the first time.
- 2) If the water heater has been undersized.
- 3) When large amounts of hot water are drawn from the water heater in a short period of time, and the refill water is very cold.

This condition is not uncommon and must never be misinterpreted as a leaking tank. It will disappear once the water becomes heated.


Because the water can condense, it is very important that a drain pan be installed under the water heater (**refer to Figure 1A or 1B**). **Under no circumstances is the manufacturer to be held liable for any water damage, in connection with this water heater.** If the problem does not go away and water continues to drip after the water heater has heated up, check all of the plumbing connections to make sure they are not leaking.

Element or Thermostat Replacement

WARNING

Before attempting to repair or replace any of the electrical components on this water heater, turn "OFF" the power to the water heater. Failure to do so could result in electrical shock and/or property damage, personal injury, or death.

Replacing an Element (See Figure 3)

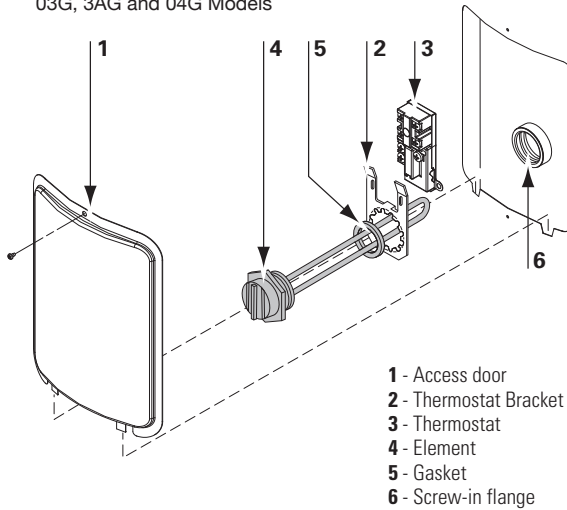
- 1) Turn "OFF" the power to the water heater and drain all of the water from the water heater (**see Draining the Water Heater, page 11**).
- 2) Remove the element and thermostat access door and the insulation.
- 3) Disconnect the wires from the element terminals.
- 4) For a square flange element, undo the four (4) bolts securing the element to the water heater.
For a screw-in element, with the help of a 1.5 inch socket wrench, remove the element by unscrewing it from the water heater in a counterclockwise  motion.
For TWIST-LOCK system, unscrew the four (4) bolts securing the element to the water heater and pull element out of the tank. Make sure the TWIST-LOCK flange is in the right position (**See Figure 4**).
- 5) Replace the element with a new element of the same wattage and voltage. Make sure that the gasket surface is clean and that the element has been re-installed water-tight with a new gasket.
- 6) Re-connect the wiring and tighten securely.
- 7) Re-fill the water heater (**see Filling the Water Heater, page 3**). **DO NOT TURN THE POWER ON TO THE WATER HEATER UNLESS YOU ARE SURE IT IS COMPLETELY FILLED WITH WATER.**
- 8) Inspect for any leaks and repair, if necessary
- 9) Replace the insulation and element and thermostat access door before turning "ON" the power to the water heater.

GENERAL MAINTENANCE

Figure 3

Screw-in element

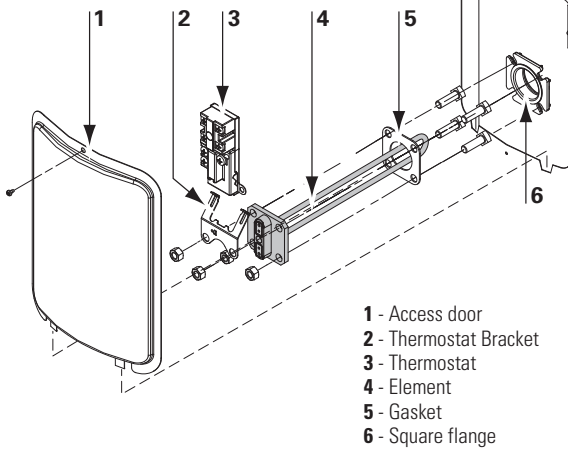
03G, 3AG and 04G Models



- 1 - Access door
- 2 - Thermostat Bracket
- 3 - Thermostat
- 4 - Element
- 5 - Gasket
- 6 - Screw-in flange

Square flange element

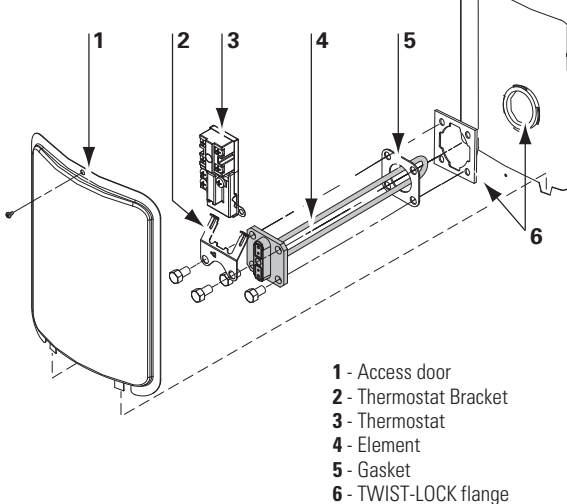
09G, 9AG, 10G, 11G, 12G and 13G Models
(Until December 2012)



- 1 - Access door
- 2 - Thermostat Bracket
- 3 - Thermostat
- 4 - Element
- 5 - Gasket
- 6 - Square flange

TWIST-LOCK flange element

09G, 9AG, 10G, 11G, 12G and 13G Models



- 1 - Access door
- 2 - Thermostat Bracket
- 3 - Thermostat
- 4 - Element
- 5 - Gasket
- 6 - TWIST-LOCK flange

Figure 4



Replacing a Thermostat (See Figure 3)

- 1) Turn "**OFF**" the power to the water heater.
- 2) Remove the element and thermostat access door and the insulation.
- 3) Disconnect the wires from the thermostat terminals.
- 4) Lift the thermostat bracket arms and slide the thermostat up to remove it.
- 5) Replace the thermostat with a new thermostat of the same manufacturer and type.
- 6) Reconnect the wires on the thermostat terminals referring to the corresponding wiring diagram in **Figure 2**.
- 7) Set the thermostat to the desired temperature (**see Water Temperature Regulation, page 9**).
- 8) Replace the insulation and element and the thermostat access door before turning "**ON**" the power to the water heater.

Temperature and Pressure-Relief Valve

Manually operate the temperature and pressure-relief valve at least once a year, standing clear of the outlet to avoid being burned. Lift and release the operating lever on the valve to make it operate freely. If, after manually operating the valve, it fails to completely reset itself and continues to discharge water, replace it with a new one.

Anode

This water heater is equipped with an anode that is designed to prolong the life of the glass-lined tank. The anode is slowly consumed, protecting the glass-lined tank from corrosion. The anode should be inspected every two (2) years. If more than half of the anode has been consumed, it should be replaced. Instructions on how to change the anode can be obtained from the manufacturer.

The life expectancy of the water heater is reduced where a water softener is introduced to fight hard water. The sodium salts added by a softener make the water extremely conductive, therefore, the anode are consumed more rapidly. Under these conditions, the magnesium anode must be replaced by an aluminum anode approved by Giant, along with the addition of zinc pellets.

In certain water conditions, the anode will react with the water, producing discoloured or smelly water. The most common complaint is hot water that smells like rotten eggs. This phenomenon is the result of the reaction between the magnesium of the anode and hydrogen sulfide gas dissolved in the water, which occurs frequently in well systems. This problem can usually be eliminated or reduced

GENERAL MAINTENANCE

by changing the magnesium anode to a type more suitable for these conditions (aluminum anode) and by chlorinating the water heater and plumbing system. If the problem persists, special filtration equipment may be required. Under no circumstances is the anode to be removed from the water heater on a permanent basis. **Removal of the anode will lead to premature failure of the water heater and void the warranty.**


WARNING

Hydrogen gas can be produced in a hot water system that has not been used for a long period of time (generally two [2] weeks or more). **HYDROGEN GAS IS EXTREMELY FLAMMABLE.** It is highly recommended to open the hot water faucet in the kitchen for several minutes before you use any electrical appliances connected to the hot water system, such as a dishwasher or washing machine. If hydrogen gas is present, there will be an unusual sound, such as air escaping through the pipe, as the hot water faucet is opened. **DO NOT** smoke or introduce an open flame near the faucet when it is opened.

Draining the Water Heater

Drain a pail of water through the drain valve at least once a year. This will remove excess sediment from the bottom of the tank. This sediment, if allowed to accumulate, will reduce the efficiency and the life of the tank.

To completely drain the water heater:

- 1) Turn "**OFF**" the power to the water heater.
- 2) Close the cold water supply manual shut-off valve.
- 3) Connect one end of a garden hose to the water heater drain valve and put the other end next to a free-flowing drain.
- 4) Open the drain valve by inserting a flat head screwdriver into the slot on the head of the drain valve and turning the knob counterclockwise .
- 5) Open a hot water faucet to allow air into the system.

Vacation

If you are planning a vacation or other prolonged absence, it is essential to turn "**OFF**" the power to the water heater and the cold water supply to the water heater. This preventive action will save energy, protect against property damage in the event the water heater leaks, and prevent the build-up of hydrogen gas. If the water heater and piping are exposed to freezing temperatures, they should both be drained. Remember to check the water heater thoroughly after it has been shut off for an extended period of time before putting it back in operation. Make sure that the water heater is completely full of water, and that the cold water supply manual shut-off valve is open, before turning "**ON**" the power to the water heater.

Getting Service for your Water Heater

If you are having problems with your water heater, follow these three easy steps:

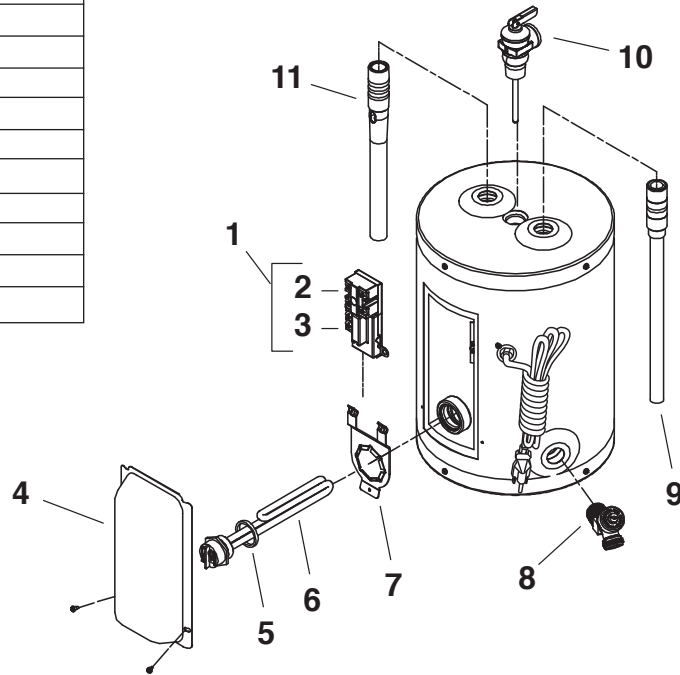
- 1) Read the **Troubleshooting Guide** contained in this manual (see **Page 14**). It lists the most common problems experienced with your electric water heater. The solutions you find listed may provide a quick and simple solution to your problem and save you time and money.
- 2) If the solution listed in the **Troubleshooting Guide** does not solve the problem or if your particular problem is not listed in the guide, contact the installer of the water heater, or the local electric utility.
- 3) **If you still cannot solve the problem, contact the manufacturer's Customer Service Department by e-mail at service@giantinc.com or by telephone at 1-800-363-9354, option 1. To help serve you in a quick and efficient manner, always have the following information ready:**
 - a) **Model number.**
 - b) **Serial number.**
 - c) **Date of installation.**
 - d) **Where the water heater was purchased.**
 - e) **Complete address where the water heater is installed.**
 - f) **A description of the problem.**

REPLACEMENT PARTS

Figure 5A

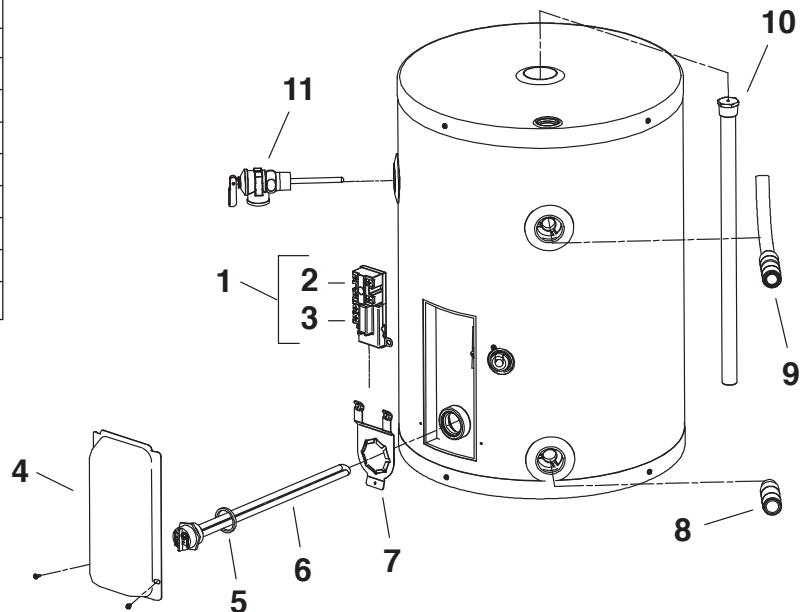
Model with one (1) element, top entry

ID No.	Description
1	Thermostat / high limit assembly
2	High limit with manual reset
3	Thermostat
4	Element and thermostat access door
5	Screw-in element gasket
6	Screw-in element
7	Thermostat bracket for screw-in element
8	Drain valve
9	Dip-tube
10	Temperature & pressure-relief valve
11	Combination outlet nipple/magnesium anode



Models with one (1) element, side entry

ID No.	Description
1	Thermostat / high limit assembly
2	High limit with manual reset
3	Thermostat
4	Element and thermostat access door
5	Screw-in element gasket
6	Screw-in element
7	Thermostat bracket for screw-in element
8	Inlet nipple
9	Outlet nipple with tube
10	Magnesium anode
11	Temperature & pressure-relief valve

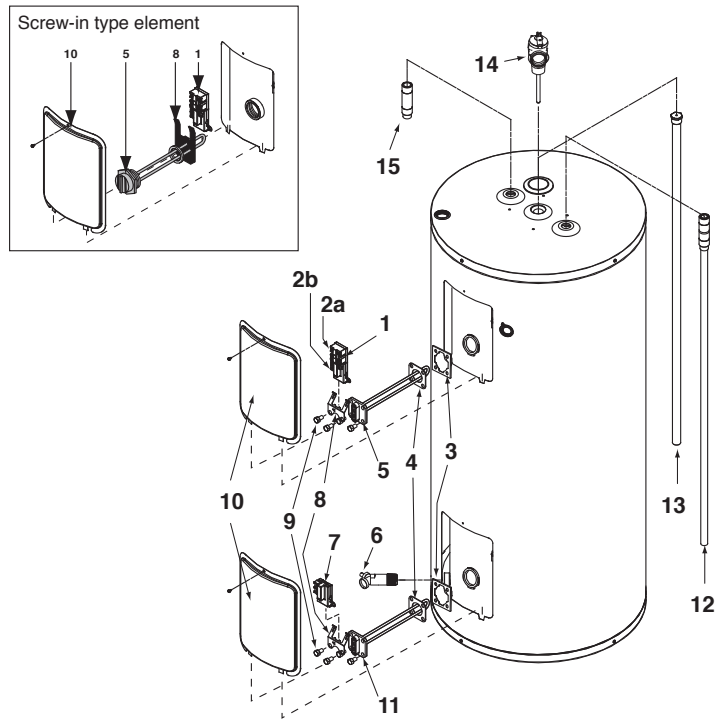


REPLACEMENT PARTS

Figure 5B

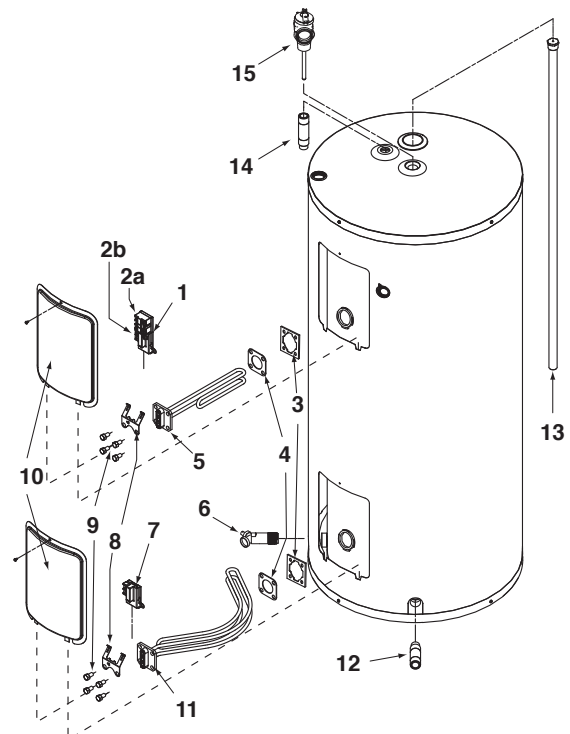
Models with two (2) elements, top entry

ID No.	Description
1	Thermostat / High limit assembly
2a	High limit with manual reset
2b	Thermostat
3	TWIST-LOCK Flanges
4	Element gaskets
5	Upper element
6	Drain valve
7	Lower Thermostat
8	Thermostat brackets
9	Machine bolts
10	Element and thermostat access doors
11	Lower element
12	Dip tube
13	Magnesium anode
15	Temperature & pressure-relief valve
16	Outlet nipple



Models with two (2) elements, bottom entry

ID No.	Description
1	Thermostat / High limit assembly
2a	High limit with manual reset
2b	Thermostat
3	TWIST-LOCK Flanges
4	Element gaskets
5	Upper element
6	Drain valve
7	Lower Thermostat
8	Thermostat brackets
9	Machine bolts
10	Element and thermostat access doors
11	Lower element
12	Inlet nipple
13	Magnesium anode
14	Outlet nipple
15	Temperature & pressure-relief valve



TROUBLESHOOTING GUIDE

CONDITION	CAUSE	REMEDY
No hot water.	Dry-fired element.	Replace with new element.
	Main power supply is "OFF".	Turn "ON" main power supply.
	Burnt fuse.	Replace with new fuse.
	Circuit breaker has tripped.	Reset circuit breaker.
	High limit with manual reset has tripped.	Reset high limit control by pushing the red reset button.
	Circuit breaker is defective.	Replace with new circuit breaker.
	Defective thermostat.	Replace with new thermostat.
Not enough hot water.	Defective element.	Replace with new element.
	Water heater is undersized.	Install size of water heater that meets demand.
	High hot water demand.	Increase the temperature of the thermostat.
	Very cold water supply.	Increase the temperature of the thermostat.
	Wrong piping connections.	Correct piping.
	Sediment or lime accumulation at bottom of water heater.	Drain water heater. Check to see if water treatment is necessary.
	Hot water plumbing system leaks.	Check hot water plumbing system for leaks and repair.
	Thermostat adjusted too low.	Increase the temperature of the thermostat.
	Defective thermostat.	Replace with new thermostat.
	Defective element.	Replace with new element. In 90% of all cases it is the bottom element.
	Long runs or exposed piping.	Insulate piping.
Hot water piping on outside wall.	Insulate piping.	
Defective dip-tube.	Replace with new dip-tube.	
Boiling hot water.	Thermostat temperature set too high.	Lower the temperature on the thermostat.
	Thermostat not in contact with water heater.	Position properly. Be sure insulation is not interfering with thermostat.
	Element attacked by CO ₂ .	Replace with new element.
	Defective thermostat.	Replace with new thermostat.
Continuous operation.	Water heater is undersized.	Install size of water heater that meets demand.
	Element wattage too small.	Replace with higher element wattage.
	Thermostat not in contact with water heater.	Position properly. Be sure insulation is not interfering with thermostat.
	Thermostat temperature set too low.	Increase the temperature of the thermostat.
	Defective thermostat.	Replace with new thermostat.
	Defective high limit with manual reset.	Replace with new high limit with manual reset.
Element failure.	Wiring connections are wrong.	See Figure 2 for correct wiring.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Thermostat failure.	No power.	Inspect fuse/circuit breaker, replace/reset.
	Loose wiring connection.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	Low/High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Blown fuse/circuit breaker.	Wiring connections are wrong.	See Figure 2 for correct wiring.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
Fuse burns instantly.	Power supply wiring undersized.	See Table 1 for correct wiring size.
	Short-circuit.	Locate short circuit and repair.

TROUBLESHOOTING GUIDE

CONDITION	CAUSE	REMEDY
Fuse burns often.	Fuse contacts oxidized or fuse not screwed in tight enough.	Clean contacts and tighten fuse.
	Power supply wiring is undersized.	See Table 1 for correct wiring size.
Smoking wiring.	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	Low/High voltage.	Check with electrical utility and correct.
	Power supply wiring undersized.	See Table 1 for correct wiring size.
Service wires charred or hot.	Wiring connections are wrong.	See Figure 2 for correct wiring.
	Water heater not properly grounded.	Properly ground the water heater.
	Lightning/Power surge.	Inspect/replace fuse, element, and thermostat.
	High voltage.	Check with electrical utility and correct.
	Short circuit.	Locate short circuit and repair.
	Power supply wiring undersized.	See Table 1 for correct wiring size.
Drain valve leaks.	Drain valve is open.	Close the drain valve.
	Defective drain valve.	Replace with new drain valve.
Water drips from the relief valve.	Excessive water pressure.	Install a pressure reducing valve.
	Thermal expansion in a closed water system.	Install a suitable expansion tank on the cold water supply line.
	Improperly seated relief valve.	Check relief valve works properly and replace, if necessary.
	Defective thermostat.	Replace with new thermostat.
	Defective relief valve.	Replace with new relief valve.
Water on the floor/drain pan.	Water discharge from the relief valve.	See Pressure build-up in a water system (page 3).
	Element leaks.	Replace with new element.
	Water heater leaks.	Replace with new water heater
Condensation.	Water heater filled for the first time.	Let water heater warm up. Problem should go away. If it persists, check all plumbing connections for leaks.
	Heavy draws of hot water with very cold refill water.	Let water heater warm up. Problem should go away. If it persists, check all plumbing connections for leaks.
	Water heater is undersized.	Install size of water heater that meets demand.
Wet insulation.	Leaking plumbing connections.	Locate leak and repair.
	Leaking around heating element.	Tighten, clean, and smooth face of tank flange and element gasket.
	Water discharge from the relief valve.	See Pressure build-up in a water system (page 3).
Singing element.	Build up of mineral deposits on element.	Clean element, replace with new element if necessary.
Singing thermostat.	Thermostat not flush with tank.	Install thermostat properly.
	Wiring connections are loose.	Locate, clean carefully, reconnect properly.
Traces of rust in the hot water.	Anode has been eaten away.	Replace new anode.
Rusty water.	Water corrosion.	Replace with new water heater.
Rotten egg smell.	High sulfate or mineral content in water.	Change magnesium anode to an aluminum anode and bleach water heater.
Tank bulged.	No relief valve installed.	Install proper relief valve.
	Excessive water pressure.	Install a pressure reducing valve.
	Thermal expansion in a closed water system.	Install a suitable expansion tank on the cold water supply line.

STANDARD BASIC LIMITED WARRANTY

ON RESIDENTIAL ELECTRIC, GAS-FIRED WATER HEATERS AND STORAGE TANKS
(Hereunder referred to as "Unit" or "Equipment")

GENERAL

The manufacturer warrants that, subject to verification of your warranty claim within the warranty period described below, the necessary corrective actions will be taken to either repair or replace the defective unit or component part subject to the terms and conditions outlined in this document. Furthermore, any replacement unit or component part supplied under warranty will carry only the warranty remaining portion, based on the original unit installation date. However, the warranty is limited to one (1) replacement unit. If due to some unusual circumstance, a replacement unit or component part is found to be defective by our inspection department, another unit or component part will be provided in order to fulfill the obligation of the original warranty. This warranty applies only to the original owner that purchased the unit, to the unit original installation location, and it is not transferable. In order to benefit from this warranty, the warranty reply card must be completed and sent back to GIANT within forty-five (45) days of the unit purchase date, otherwise the warranty will be as follows: SIX (6) years (for a residential water heater in a family dwelling), FIVE (5) years (for a storage tank in a family dwelling) and ONE (1) year (for any installation other than a family dwelling) from the manufacturing date, without exception.

THE INNER TANK

If the warranty card is returned within the applicable time frame and the inner tank leaks within the shorter of the two following periods: SIX (6) years after the original installation date or NINETY (90) months after the manufacturing date, whichever comes first, a replacement unit will be provided to the original unit owner. Use of the equipment for purposes other than for a family dwelling limits the warranty to ONE (1) year.

Exceptions:

- 1 : Or FIVE (5) years for storage tanks
- 2 : Or SEVENTY-EIGHT (78) months for storage tanks

COMPONENT PARTS

If any component part is found to be defective within ONE (1) year from the original installation date, provided said defective part is an in-house factory made piece or an original factory approved OEM piece, the manufacturer will provide a replacement part after the receipt and testing of such part.

THIS WARRANTY DOES NOT APPLY IN THE FOLLOWING CASES:

- 1) To defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with the Owner's Manual.
- 2) If the installation does not comply with CSA Standards, in particular, but not limited to, the existing CSA-C652 Standard (*Installation of Electric Storage Tank and Heat Pump Water Heaters for Residential Use*), CSA-B149.1 (*Natural gas and propane installation code*) as well as any other existing codes or standards, local regulations CSA-C22.1 (*Canadian Electrical Code*), and good practices.
- 3) To any damage or failure caused by abuse, fire, floods, freezing, or other acts of God.
- 4) To any damage or failure caused by operating the unit without an approved temperature & pressure-relief valve having been installed.
- 5) To any damage or failure caused by powering any energy source while the equipment is empty or partially empty or contains sediment build-up resulting in dry firing of the heating elements.

- 6) To any damage or failure caused by connecting the unit to any other source of energy not approved by GIANT or by operating the equipment for other use than with potable water without any additives such as salt, chlorine, or chemicals other than those added for the purpose of rendering the water fit to drink.
- 7) To any damage or failure caused by the removal of the anode and/or by not assuming that there is a working anode in the unit at all times. **"All anodes must be checked at least once every two (2) years & replaced, if necessary"**. The installation of an anode that does not comply with the requirements of the existing CSA-C309 Standard (*Performance Requirements for Glass-Lined Storage Tanks for Household Hot Water Service*), particularly in regards to the manufacturing, installation, and composition of the replacement anode, will instantly void the warranty. The same applies, but is not limited to, the non-compliance of the CSA-C191, CSA-C22.2, and CSA-B149.1 Standards.
- 8) To any damage or failure caused by the use of the unit with a water softener if the magnesium anode has not been replaced by an aluminum anode approved by GIANT, as well as the addition of zinc pellets.
- 9) To any damage or failure caused by having affixed to the unit any non-factory made or factory approved replacement part(s), such as elements, controls, dip-tubes, anode, induced-current anode, relief valves, etc.
- 10) To any damage caused by not having the unit installed adjacent to a free-flowing drain or in a pan or basin connected to such free-flowing drain.
- 11) For all equipment operated at water temperatures exceeding the maximum operating setting of the thermostat and/or the high limit control, at a pressure exceeding the one listed on the rating plate, for equipment subject to a water-hammer effect that reverses the bottom of the tank, units that are installed in a closed-looped system without any adequate expansion tank³ being installed as well as equipment installed in a system equipped with a backflow preventer, a pressure-reducing valve, or any other device, such as a check valve, without an adequate expansion tank³ being installed.
- 12) To any unit drained for wintering purposes.
- 13) To any performance issue caused by the poor selection of equipment, power supply, wiring, or fuse / breaker.
- 14) To any unit from which the rating plate has been removed or altered.
- 15) To any break or damage caused by a water-hammer effect coming from, but not limited to, a quick-closing valve, a solenoid valve, or any other valves without an adequate pre-fabricated expansion tank being installed in compliance with existing codes, standards, and good practices.
- 16) To any issue caused by the installation of water connections not compatible with the equipment inlet and outlet "NPT" connections.
- 17) To any unit installed outside of Canada or the United States.

SERVICE LABOUR RESPONSIBILITY

This warranty does not cover any labour expense for diagnostic, service, removal, or re-installation of a replacement unit. All such expenses are the responsibility of the unit owner.

SHIPPING COSTS

If a unit or component part is deemed to be replaced, the manufacturer will pay the transportation costs to ship said replacement unit or part to a convenient authorized distributor or retailer of our choice. The unit owner must pay for any local cartage including the cost of returning the replaced unit or component part to the authorized distributor or retailer.

CLAIM PROCEDURE

Any claim covered by the warranty must be made to GIANT within a maximum of thirty (30) days from the date the defect is first discovered. Failure to provide a written notice for such defect to the manufacturer within the allocated time frame will void the warranty. Any claim for warranty service should be made with your contractor, wholesaler, or retailer from whom the unit was purchased. In turn, said contractor, wholesaler, or retailer will contact the manufacturer. If this procedure cannot be followed, please contact a local contractor, wholesaler, or retailer distributing our products. For further warranty information, please call our customer service department at (514) 645-8893 or 1-800-363-9354, option 1. In order to answer your call promptly, prior to calling the factory, please make sure to have handy the unit model and serial number that is found on the rating plate, on the side of the unit. Proof of purchase showing the date and name of the business from whom the unit was purchased is mandatory if the manufacturing date goes beyond the warranty period offered by the manufacturer.

If an exact replacement unit is unavailable for whatever reason such as, but not limited to, changes in government standards, the manufacturer agrees to provide a unit or component part with comparable features. If government regulations or industry standards require the replacement unit or component part to have features not found on the defective unit or component part, the unit owner will be charged the difference in price associated with these required features. If such owner pays the difference in price for these required features, they will benefit from a complete new Standard Basic Limited Warranty for the replacement unit.

MISCELLANEOUS

No one is authorized to modify any conditions of this actual warranty. The manufacturer will not honour any other warranty of any kind other than what is offered. No claims for incidental or consequential damage (including damage from leakage) will be accepted. If the warranty card is not returned to us, a proof of purchase showing the name, date, and location of the original point of purchase is mandatory to process any warranty claim. Failure to provide such documentation will result in the lesser of the warranty periods being offered as stated in the "GENERAL" section. **In order to avoid any confusion and/or disputes, we suggest that the warranty card be completed and returned to us no later than forty-five (45) days after installation.**

EXTENDED WARRANTY

For information concerning options for additional warranties on our residential electric, gas-fired water heaters and storage tanks, contact your local licensed plumber, an authorized retailer, or GIANT.

5000 W 500-ft² White Ceiling-Mounted Garage Heater

Description

Heats up to 500 sq.ft. and has thermal-cut off safety protection. Heavy-duty metal housing. Space saving ceiling mount design Hardwire. 1-year limited warranty.

- Thermal-cut off safety protection
- Heats up to 500 sq.ft.
- Space saving ceiling mount design Hardwire
- Heavy-duty metal housing

Amperage: 41.67

BTU Rating: 17050

Depth(in): 16.02

Height(in): 5.12

Length(in): 16.02

Material: Steel

Paintable: No

Square Footage Heated(ft²): 500

Type: Standard

Voltage(Volts): 120

Wattage: 5000



SWT

MECHANICAL THERMOSTAT – LINE VOLTAGE



With its rectangular housing, this wall thermostat blends well with any decor. Its great versatility makes it suitable for most heating products, including electric baseboards, fan heaters or commercial unit heaters. This easy-to-use thermostat is available in one- and two-pole versions.

- **EASY TEMPERATURE SETTING ADJUSTMENT**
- **EASY TO INSTALL AND USE**
- **SLEEK LOOK**
- **AVAILABLE IN 120 V TO 277 V**

COLOR

- white

FINISH

- molded plastic

VOLTAGE

- 22 A @ 120-277 Vac
- 1/2 hp

CONTROL

- two-wire connection (single pole model) or four-wire connection (double pole model)
- temperature in degrees Fahrenheit
- off position (double pole model)

TEMPERATURE RANGE

- 50 to 90 °F

WARRANTY

- one year

TECHNICAL SPECIFICATIONS

PRODUCT	DESCRIPTION
SWT1F	Single pole thermostat (Fahrenheit)
SWT2F	Double pole thermostat (Fahrenheit)

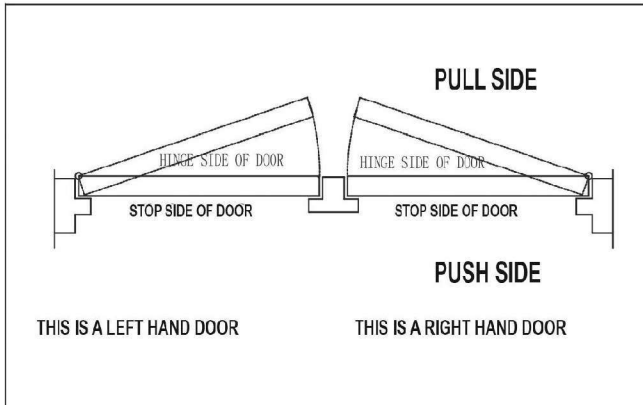
Dimensions: 2 29/32 in. wide, 4 37/64 in. high and 1 9/64 in. deep



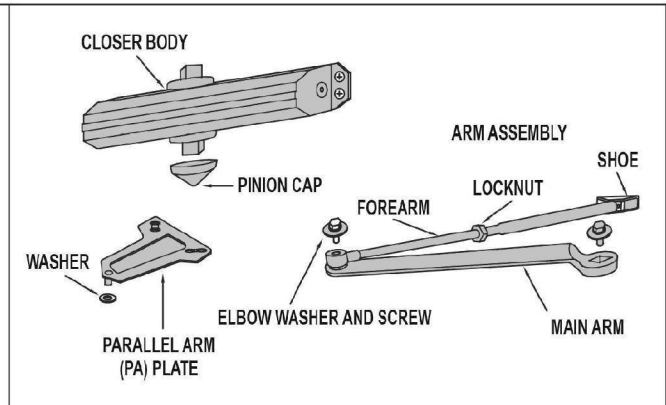
Stelpro reserves the right to modify at any time the description, manufacturing, or price of its products. Additionally, Stelpro may apply restocking fees or refuse a refund based on one or more of the following criteria: optional color, custom product, assembly with low-demand options. For the latest product information and prices regarding the products, please visit the website www.stelpro.com.

Commercial Door Closer Installation Instructions

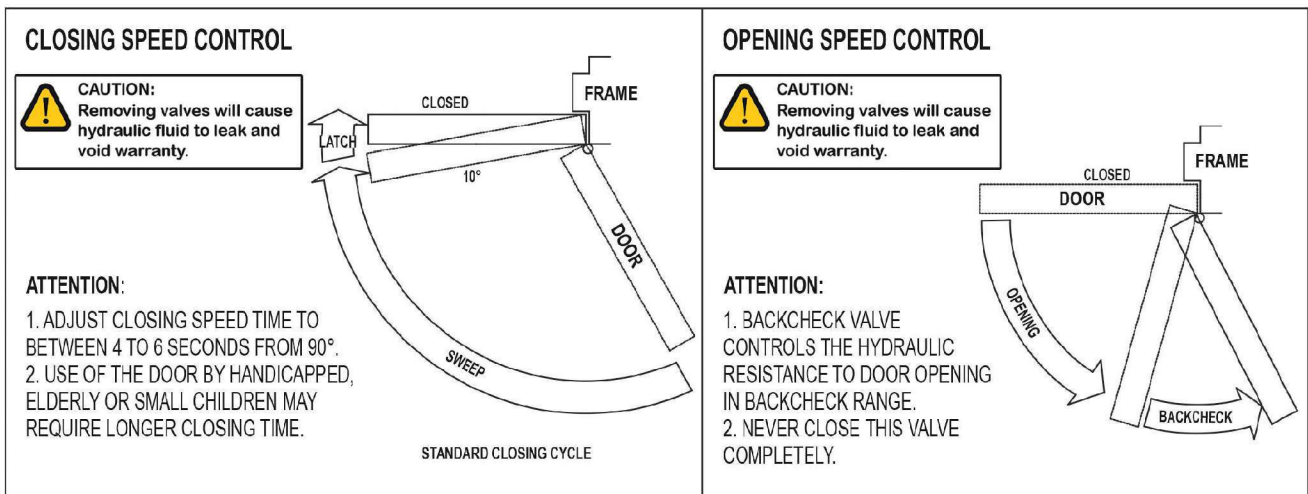
•CHART TO DETERMINE DOOR HAND



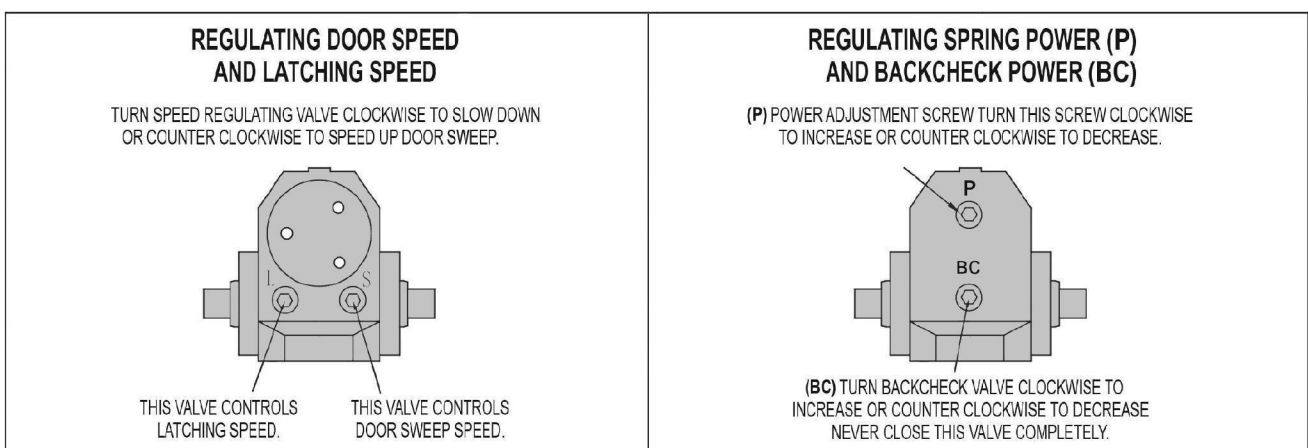
•COMPONENTS



•CONTROL FUNCTION

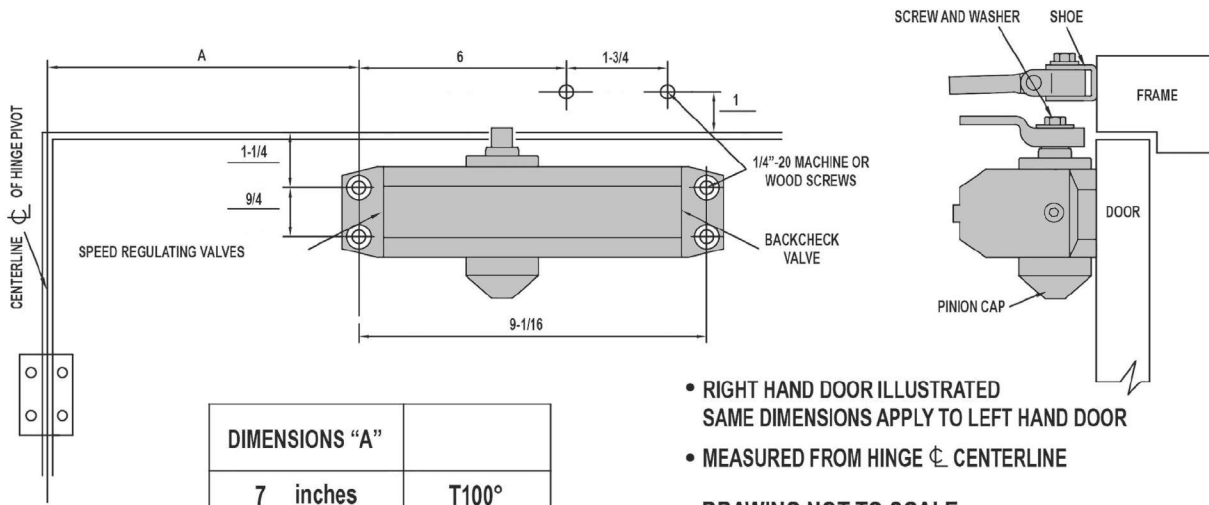


•FINAL VALVE ADJUSTMENT AND REGULATING PROCEDURES



**Commercial Door Closer
Installation Instructions**

Regular Arm Installation

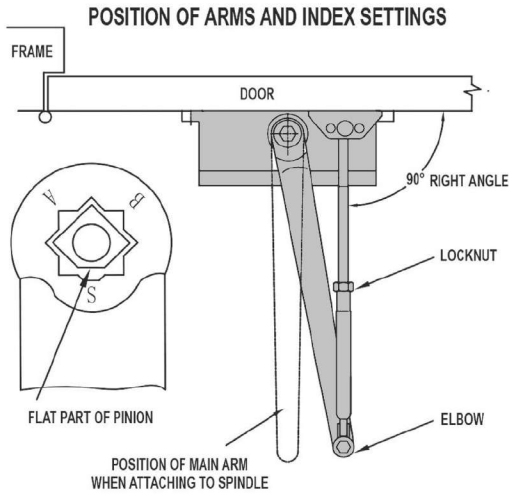


DIMENSIONS "A"	
7 inches	T100°
6 inches	101° TO 120°
3-1/2 inches	*121° TO 180°

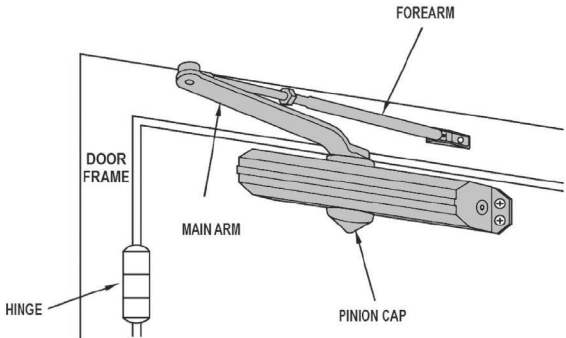
- RIGHT HAND DOOR ILLUSTRATED
SAME DIMENSIONS APPLY TO LEFT HAND DOOR
- MEASURED FROM HINGE CENTERLINE
- DRAWING NOT TO SCALE

INSTALLATION INSTRUCTIONS

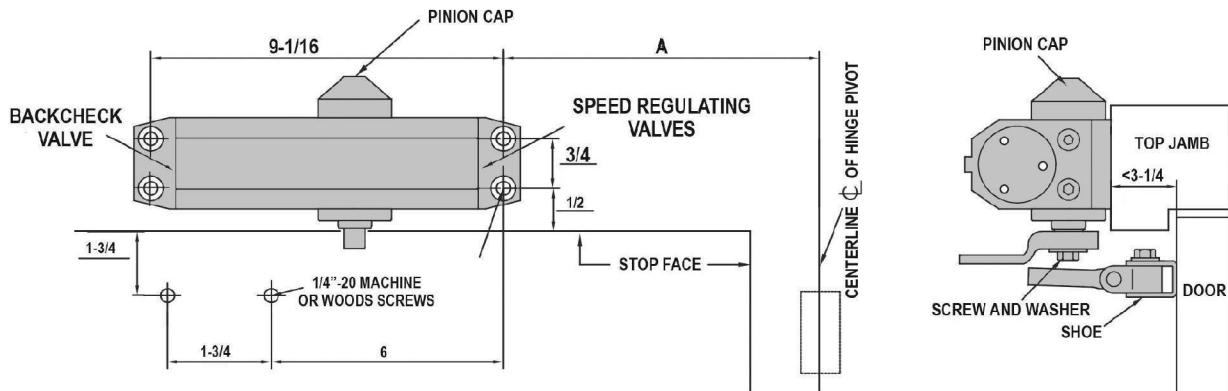
1. SELECT DEGREE OF DOOR OPENING USE DIMENSIONS SHOWN IN CHART AND ILLUSTRATION ABOVE TO MARK LOCATION OF ATTACHING SCREWS ON DOOR AND FRAME.
2. ATTACH MAIN ARM TO CLOSER.
3. ATTACH CLOSER TO DOOR WITH SPEED REGULATING VALVES FACING TOWARD HINGE.
4. ATTACH THE SHOE OF THE FOREARM TO FRAME.
5. ADJUST LENGTH OF FOREARM TO POSITION FOREARM AT RIGHT ANGLE (See drawing) TO FRAME.
6. TIGHTEN LOCKNUT ON FOREARM.
7. SNAP PINION CAP OVER SPINDLE AT BOTTOM OF CLOSER.
8. ADJUST CLOSER VALVES AS REQUIRED.



CAUTION:
Removing valves will cause hydraulic fluid to leak and void warranty.



MAXIMUM DOOR WIDTH		FULL TURNS REQUIRED
EXTERIOR DOORS	INTERIOR DOORS	
————	5 lb-ft	13 TURNS C.C.W.
8.5 lb-ft	34"	9 TURNS C.C.W.
30"	38"	5 TURNS
36"	48"	0 TURNS C.W.
42"	54"	5 TURNS C.W.
48"	60"	10 TURNS C.W.

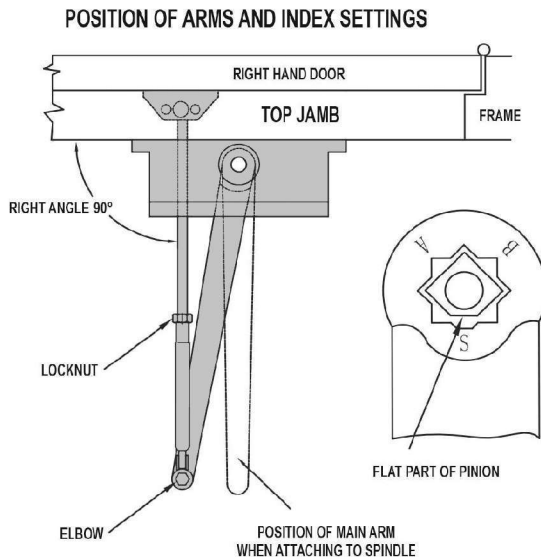


DIMENSIONS "A"	OPENING
7-1/2 inches	T100°
6 inches	101° TO 120°
3-1/2 inches	*121° TO 180°

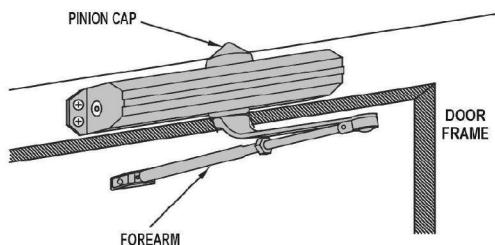
- RIGHT HAND DOOR ILLUSTRATED
SAME DIMENSIONS APPLY TO LEFT HAND DOOR
- MEASURED FROM HINGE ϕ CENTERLINE
- DRAWING NOT TO SCALE

INSTALLATION INSTRUCTIONS

1. SELECT DEGREE OF DOOR OPENING USE DIMENSIONS SHOWN IN CHART AND ILLUSTRATION ABOVE TO MARK LOCATION OF ATTACHING SCREWS ON DOOR AND FRAME.
2. ATTACH MAIN ARM TO CLOSER.
3. ATTACH CLOSER TO FRAME WITH SPEED REGULATING VALVES FACING TOWARD HINGE.
4. ATTACH THE SHOE OF THE FOREARM TO DOOR.
5. ADJUST LENGTH OF FOREARM TO POSITION FOREARM AT RIGHT ANGLE (See drawing) TO FRAME.
6. TIGHTEN LOCKNUT ON FOREARM.
7. SNAP PINION CAP OVER SPINDLE AT BOTTOM OF CLOSER.
8. ADJUST CLOSER VALVES AS REQUIRED.

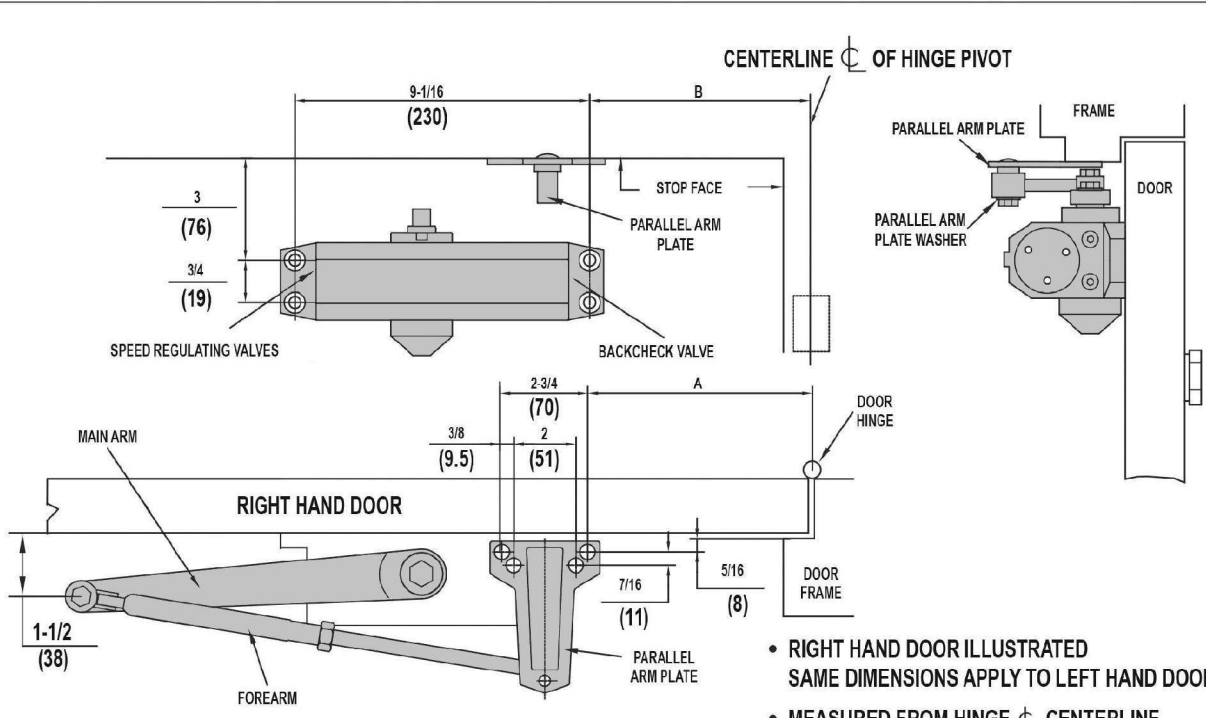


CAUTION:
Removing valves will cause hydraulic fluid to leak and void warranty.



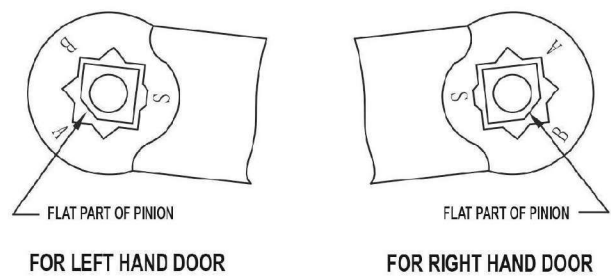
ABOUT POWER ADJUSTMENT

1. Before installation, adjust the spring power as shown on chart on page 2.
2. DO NOT exceed the maximum number of turns.
3. The spring power has been preset at 0 turns in factory.



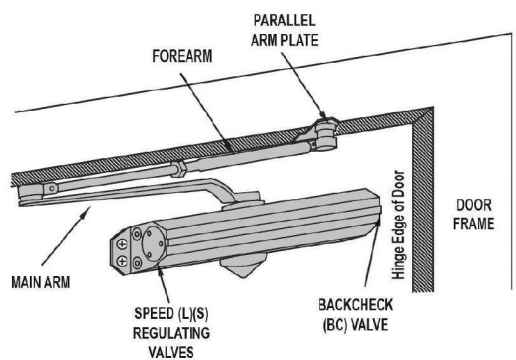
- RIGHT HAND DOOR ILLUSTRATED
SAME DIMENSIONS APPLY TO LEFT HAND DOOR
- MEASURED FROM HINGE CENTERLINE
- DRAWING NOT TO SCALE

DIMENSIONS "A"	DIMENSIONS "B"	OPENING
9-1/4 inches	7-5/8 inches	TO 100°
7-3/4 inches	6-1/8 inches	101° TO 150°
5-3/4 inches	4-1/8 inches	OVER 151°



FOR LEFT HAND DOOR

FOR RIGHT HAND DOOR



INSTALLATION INSTRUCTIONS

1. SELECT DEGREE OF DOOR, USE DIMENSIONS SHOWN IN CHART AND ILLUSTRATION ABOVE TO MARK LOCATION OF ATTACHING SCREWS ON DOOR AND FRAME.
2. ATTACH CLOSER TO DOOR WITH BACKCHECK (BC) REGULATING VALVE FACING HINGE.
3. ATTACH PARALLEL ARM PLATE TO TOP FRAME AS SHOWN.
4. REMOVE SHOE FROM FOREARM
5. INSTALL MAIN ARM ON PINION SHAFT.
6. ROTATE PINION 45° TOWARD HINGE EDGE OF DOOR TO ALIGN MAIN ARM LETTER "B" (RIGHT HAND DOOR) OR "A" (LEFT HAND DOOR) WITH FLAT PART OF PINION.
7. ATTACH WITH ARM SCREW.
8. FASTEN FOREARM TO PARALLEL ARM PLATE USING SCREW REMOVED FROM SHOE IN STEP 4 AND PARALLEL ARM SHOE WASHER INCLUDED IN SCREW PACK.
9. ADJUST FOREARM LENGTH TO SET ARM ELBOW ABOUT 1-1/2" (38mm) FROM DOOR WHEN CONNECTED TO MAIN ARM (See drawing) USE WASHER AND SCREW PROVIDED TO SECURE PIVOT CONNECTION. TIGHTEN LOCKNUT.
10. SNAP PINION CAP OVER SPINDLE AT BOTTOM.
11. ADJUST CLOSER VALVES.

CAUTION:
Removing valves will cause hydraulic fluid to leak and void warranty.

VISSANI™

Item #1001694903

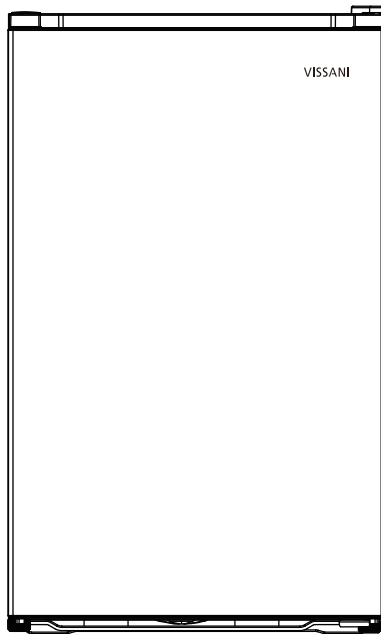
1001726671

Model #HVR43GBEF

HVR43GSEF

USE AND CARE GUIDE

4.3 CU FT COMPACT REFRIGERATOR



Questions, problems, missing parts? Before returning to the store,
call Vissani Customer Service

8 a.m. – 8 p.m., EST, Monday-Friday, 8 a.m. – 6 p.m., EST, Saturday

1-855-847-7264 (1-855-VISSANI)

HOMEDEPOT.CA

THANK YOU

We appreciate the trust and confidence you have placed in Vissani through the purchase of this refrigerator. We strive to continually create quality products designed to enhance your home. Visit us online to see our full line of products available for your home improvement needs. Thank you for choosing Vissani!

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Safety Information



WARNING: When using electrical appliances, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and/or injury to persons, including the following:

Read all instructions before using the appliance.

- This appliance must be grounded. Connect only to properly grounded outlet. See Important Grounding Instructions on page 3.
- Install or locate this refrigerator only in accordance with the provided Installation Instructions.
- To protect against electric shock, do not place cord, plug, or refrigerator in water or other liquid.
- Close supervision is necessary when any appliance is used by or near children.
- Do not operate this appliance if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This appliance should be serviced only by qualified service personnel. Contact your nearest authorized service facility or call our toll-free customer service number for information on examination, repair, or adjustment.
- Do not cover or block any openings or air vents on this appliance.
- Do not store this appliance outdoors. Do not use this appliance near water. For example, do not use near a kitchen sink, in a wet basement, near a swimming pool, or similar locations.
- Do not locate this appliance near heat sources or open flames.

- Do not use or store gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. The fumes can create a fire hazard or explosion.
- Do not place heavy objects or magnet items on top of the refrigerator.
- The refrigerant of this product is R600a, which is flammable. Make sure not to damage the cooling system during the transportation and installation.
- To minimize the risk of possible ignition due to improper service or the use of incorrect parts, this unit must be serviced by factory authorized personnel only.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.
- Do not damage the refrigerant circuit.

!! SAVE THESE INSTRUCTIONS!!

Safety Information (continued)



DANGER: RISK OF CHILD ENTRAPMENT

BEFORE YOU THROW AWAY YOUR OLD REFRIGERATOR OR FREEZER

- Take off the doors.
- Leave the shelves in place so that children may not easily climb inside.

REFRIGERANTS

All refrigeration products contain refrigerants, which under federal law must be removed prior to product disposal. If you are getting rid of an old refrigeration product, check with a qualified disposal company for instructions.

IMPORTANT GROUNDING INSTRUCTIONS

- This appliance must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.



WARNING: Improper use of grounding can result in a risk of electric shock.

- Consult a qualified electrician or serviceman if the grounding instructions are not completely understood or if doubt exists as to whether the appliance is properly grounded.
- Do not use extension cords or ungrounded (two prong) adapters.

Three-pronged (grounding) plug



Properly polarized and grounded outlet

Warranty

Vissani warrants this refrigerator to be free from defects in material and workmanship, and agrees to remedy any such defect or to furnish a new part(s), at the company's option, for any part(s) of the unit that have failed during the warranty period. Parts and labor expenses are covered on this unit for a period of two years from the date of purchase. A copy of the dated sales receipt or invoice is required to receive warranty service by an authorized service agent.

Product repair accordance with the terms herein, is your sole and exclusive remedy under this limited warranty. Any and all implied warranties including merchantability and fitness for a particular purpose are hereby limited to two years or the shortest period allowed by law. Vissani is not liable for incidental or consequential damages and no representative or person is authorized to assume for us any other liability in connection with the sale of this product. Under no circumstances is the consumer permitted to return this unit to the factory without the prior written consent of Vissani. Some states prohibit the exclusion or limitation of incidental or consequential damages, or limitations on implied warranties. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

- Damages due to shipping or improper installation.
- Damages due to misuse or abuse.
- Content losses due to failure of the unit.
- Repairs performed by unauthorized service agents.
- Service calls that do not involve defects in material and workmanship such as instructions on proper use of the product or improper installation.
- Replacement or resetting of house fuses or circuit breakers.
- Failure of this product if used for other purposes than its intended purpose.
- Disposal costs for any failed unit not returned to our factory.
- Any delivery/installation costs incurred as the result of a unit that fails to perform as specified.
- Expenses for travel and transportation for product service if your appliance is located in a remote area where service by an authorized service technician is not available.
- The removal and reinstallation of your appliance if it is installed in an inaccessible location or is not installed in accordance with published installation instructions.
- Refunds for non repairable products are limited to the price paid for the unit per the sales receipt.

Model	Parts & Labor	Compressor (Parts Only)	Type of Service
HVR43GBEF	Two Years	Five Years	Carry-In
HVR43GSEF	Two Years	Five Years	Carry-In

Contact the Customer Service Team at 1-855-847-7264 or visit www.homedepot.ca.

Pre-installation

This appliance is intended to be used in household and similar applications such as:

1. Staff kitchen areas in shops, offices and other working environments;
2. Farm houses and by clients in hotels, motels and other residential type environments;
3. Bed and breakfast type environments;
4. Catering and similar non-retail applications.

PLANNING INSTALLATION



WARNING: Explosion Hazard. Keep flammable materials and vapors, such as gasoline, away from refrigerator. Failure to do so can result in death, explosion, or fire.

- The refrigerator should be located on a completely flat surface.
- Leave about 2 to 4 inches (5-10 cm) between each side of the appliance and the wall.
- Leave 12 inches (30 cm) between the top of the appliance and the ceiling.
- Choose a location which is not exposed to sunlight, high temperature or humid, as humidity may cause stain.
- The appliance can be adjusted by turning its two legs in the front of the bottom panel when it is unstable. Turning them in the clockwise direction can raise the refrigerator.
- The location should be firm and flat. An unsecure position may cause noise and vibration. The noise may be increased if the floor is not firm. Put a sheet under the appliance to solve the heat emission if you need to locate it onto a carpet.
- Make sure the adjustable legs are firm on the floor, and set the appliance slope backward slightly to keep the doors closed tightly.
- Make note of the position of the contents and retain packaging for future packing and moving.
- Do not lift by the door handle when moving the appliance.
- Do not tilt the appliance more than 45 degrees.
- Avoid strong vibration and collision.

TOOLS REQUIRED



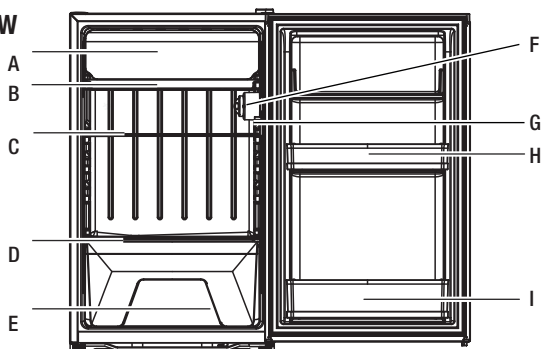
#2 Phillips screwdriver



Flat head screwdriver

Pre-installation (continued)

PRODUCT OVERVIEW



Part	Description	Quantity
A	Chiller compartment	1
B	Drip tray	1
C	Removable glass shelf	1
D	Crisper glass cover	1
E	Vegetable crisper	1
F	Lamp and temperature control knob	1
G	Lamp switch	1
H	Door bin	1
I	Bottle rack	1

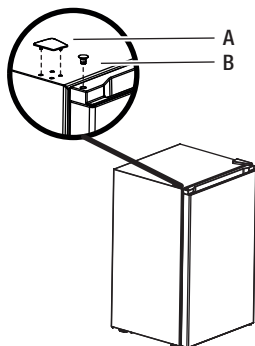


WARNING: Never touch the interior of the Freezer Chamber or frozen foods in the compartment with wet hands as this could result in frost bite.

Reversing the Door

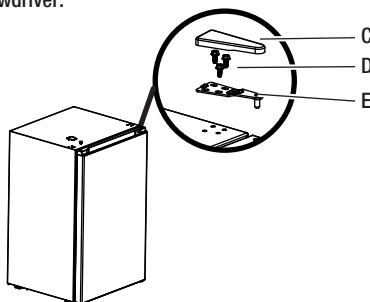
1 Removing Top Hinge Hole Cover and End Cap Screw Cover

- Remove one top hinge hole cover (A) and one end cap screw cover (B) with a flat head screwdriver.



2 Removing Top Hinge Cover and Top Hinge

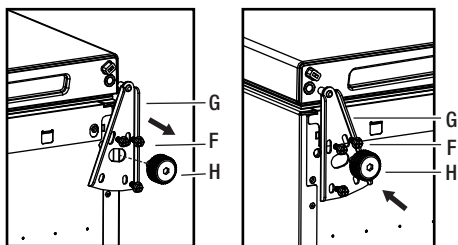
- Remove top hinge cover (C) with a flat head screwdriver.
- Remove three top hinge screws (D) with a Phillips screwdriver.
- Remove top hinge (E) with a flat head screwdriver.



Reversing the Door (continued)

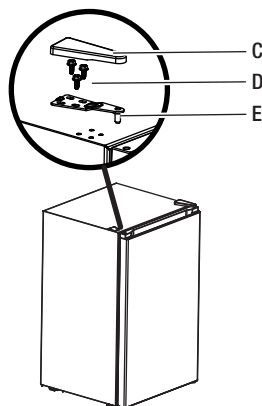
3 Switching Bottom Hinge

- Remove the leveling legs (H) by turning counterclockwise.
- Remove three bottom hinge screws (F) with a Phillips screwdriver and then remove the bottom hinge (G) with a flat head screwdriver.
- Install the bottom hinge (G) on the other side of the leveling legs (H) with three bottom hinge screws (F) by a Phillips screwdriver.
- Install right and left leveling legs (H) by turning clockwise. There are two holes below the refrigerator to fit the two leveling legs (H).



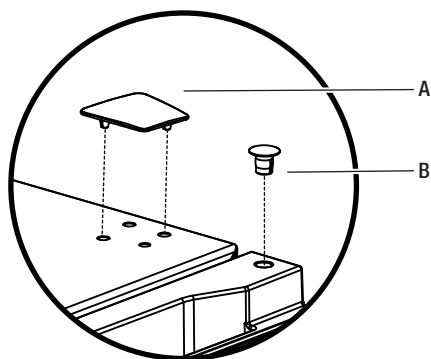
4 Installing Door and Top Hinge

- Install the door by gently pushing to the cabinet.
- Install the top hinge (E) on the other side with three top hinge screws (D) by a Phillips screwdriver.
- Install top hinge cover (C) above the top hinge (E) by pressing it.



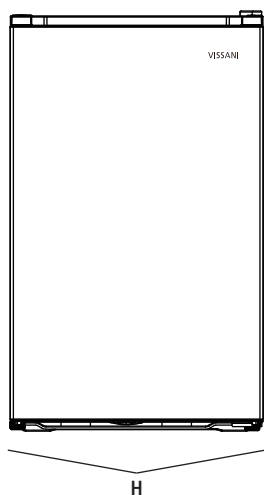
5 Installing Top Hinge Hole Cover and End Cap Screw Cover

- Install one top hinge hole cover (A) and one end cap screw cover (B) on the other side by pressing it.



6 Adjusting Leveling Legs

- Adjust the leveling legs (H) by turning clockwise or counterclockwise.



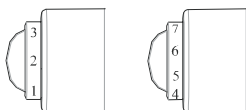
Operation

- Leave some space between items inside for air circulation.
- Food should be kept in sealed packages to prevent drying or odor.
- Hot food should be cooled down before placing into the appliance. Otherwise, interior temperature and electric consumption will increase.
- Reducing the frequency of door opening can lower the electric consumption.



WARNING: Do not use any electronic equipment inside the appliance.

- Allow refrigerator to stand upright for 4 hours before using.
- Plug into a grounded outlet (see Important Grounding Instructions on page 3).
- The temperature of refrigerator can be controlled manually by the knob. However, the number shown on the knob does not directly represent the temperature. Instead, the larger the number is, the lower the interior temperature will be. 0 stands for off. Turn the knob to state 4 when it is normal used, turn it to the state during 4-7 if a lower interior temperature is required; contrarily, to the state during 4-1, when a higher one is needed.



- There should always be some space between food items inside for air circulation.
- Food should be kept in sealed containers to prevent odors or drying.
- Hot food should be cooled down before placing into the appliance to prevent increase in interior temperature and power consumption. Placing food inside too soon will impact the performance.
- Reducing the frequency of door opening can lower power consumption.

VACATION

Before leaving on any vacation, remove food that could spoil while you are gone. If you plan to be gone for an extended period of time, we recommend that all of the food should be removed from the appliance and it should be turned off and unplugged from the outlet. Clean the interior according to the directions provided in the Cleaning section of this manual, and leave the door open.

MOVING THE REFRIGERATOR

- Turn off the refrigerator and unplug from the outlet.
- Remove all food and securely tape down all loose items inside.
- Tape the door shut.
- Do not lift or pull the door or door handle during transportation.
- When moving, the appliance can not be tilted over 45 degrees as possible damage to the sealed system could occur.
- Take care to avoid strong vibration or impact to the appliance.



WARNING: Excessive Weight Hazard! Use two or more people to move and install refrigerator. Failure to do so can result in back or other injury.

CHILLER COMPARTMENT INSTRUCTIONS

- The chiller compartment is designed for very short term storage of previously frozen foods.
- By design, the chiller compartment is not a freezer and may not keep frozen items or ice cream frozen for a long time.
- A colder setting for the unit may help slightly but can also effect the food in the main section of the refrigerator.

Cleaning and Maintenance

CLEANING

- Interior
 - Clean the interior of the appliance with a mixture of warm water and baking soda, using about 1-2 tablespoons per quart of water.
 - Use a sponge or soft cloth and be sure to wring excess moisture out before cleaning around the controls.
 - Rinse thoroughly with warm water and dry with a clean, soft cloth.
- Exterior
 - The exterior surface can be cleaned using warm water and a mild detergent. Rinse thoroughly and dry with a clean, soft cloth.
- Door Gasket
 - The door gasket must be kept clean to ensure a proper seal. Be sure to clean the gasket frequently, using the method described above.

DEFROSTING

Frost build-up on the walls of the freezer section will increase energy consumption and reduce the efficiency of the appliance. Defrost the freezer section whenever the frost reaches a thickness of ¼".

- Remove food from the refrigerator and freezer compartment.
- If your model has a drip tray, be sure to place it under the freezer compartment to collect water. It may be necessary to empty the drip tray during the defrosting process.
- Turn the unit off and unplug it from the outlet.
- The defrosting process can take several hours. Open the door to speed up the process.
- When defrosting is completed, wipe the compartment with a soft cloth to remove any remaining water.
- Reset the refrigerator temperature, following the operating instructions on page 8.



WARNING: Do not use sharp or pointed objects to remove frost or ice from the surfaces of the freezer compartment. This can cause damage to the compartment walls and cooling coils, and will void the warranty.

POWER FAILURE

When a power failure occurs, the refrigerator can normally store food for several hours. Do not put additional food into the appliance during a power failure, and do not open door. Disconnect the plug from the outlet, and reconnect when the power has been restored. Always inspect for, and discard, any spoiled or thawed food in the refrigerator or freezer before resuming use of the appliance.

REPLACEMENT OF THE LED LAMP

- If the LED lamp is abnormal, consult a qualified electrician or serviceman, it should be replaced only by qualified service personnel.
- Do not dismantle and replace it privately in order to avoid damage.



WARNING: LED used a special specification of E14, can only be replaced by qualified personnel, prohibited to replace by user or replace other specifications.

Specifications

Model	HVR43GBEF/HVR43GSEF	
Electrical shock protection type	I	
Capacity (cu.ft.)	4.3	
Voltage (VAC)	120	
Frequency (Hz)	60	
Current (A)	0.8	
Noise (dB)	≤42	
Refrigerant	R600a/0.95oz	
Interior temperature (F)	32~46	
Net Weight (lbs)	51.01	
Unit Dimension (inches)	Width	19.75
	Depth	22.00
	Height	32.75

Troubleshooting

Problem	Possible Cause	What to do
Refrigerator doesn't work	<input type="checkbox"/> Not plugged in tightly	<input type="checkbox"/> Unplug, wait 10 seconds, then plug in again
	<input type="checkbox"/> Tripped circuit breaker or blown fuse	<input type="checkbox"/> Replace fuse or reset circuit breaker
	<input type="checkbox"/> Problem with electrical outlet	<input type="checkbox"/> Consult with a qualified electrician
Refrigerator seems too warm/ refrigerator does not seem to cool	<input type="checkbox"/> Temperature setting may be too warm	<input type="checkbox"/> Lower the temperature setting
	<input type="checkbox"/> Door opened too frequently	<input type="checkbox"/> This is normal
	<input type="checkbox"/> Door not closed tightly	<input type="checkbox"/> Check to make sure that nothing inside the refrigerator is causing the door to not close
	<input type="checkbox"/> Warm weather	<input type="checkbox"/> This is normal
Compressor runs too long, or cycles on and off frequently	<input type="checkbox"/> Hot weather	<input type="checkbox"/> This is normal
	<input type="checkbox"/> Door opened too frequently	<input type="checkbox"/> This is normal
	<input type="checkbox"/> Door not closed tightly	<input type="checkbox"/> Make sure that nothing inside the refrigerator is causing the door to not close
	<input type="checkbox"/> Temperature control set at coldest setting	<input type="checkbox"/> Adjust temperature to a warmer setting
	<input type="checkbox"/> Large amounts of food placed in refrigerator	<input type="checkbox"/> This is normal
Moisture forms on the outside of the appliance	<input type="checkbox"/> This is normal during periods of high humidity	<input type="checkbox"/> Wipe the surface dry using a soft cloth
	<input type="checkbox"/> The door is slightly open	<input type="checkbox"/> Close the door tightly
Moisture forms on the inside of the appliance	<input type="checkbox"/> This is normal during periods of high humidity	<input type="checkbox"/> This is normal
	<input type="checkbox"/> Door is opened too long or too frequently	<input type="checkbox"/> Do not open the door too long or too frequently
Vibration noise	<input type="checkbox"/> Refrigerator is on an uneven surface	<input type="checkbox"/> Adjust the leveling legs
	<input type="checkbox"/> Refrigerator is touching the wall	<input type="checkbox"/> Move the refrigerator away from the wall

The following are normal conditions that can be encountered during the operation of this appliance:

- The flow of refrigerant through the coils can cause a noise.
- The sides of the appliance may become warm as a result of the cooling function.

VISSANI™

Questions, problems, missing parts? Before returning to the store,
call Vissani Customer Service
8 a.m. – 8 p.m., EST, Monday-Friday, 8 a.m. – 6 p.m., EST, Saturday

1-855-847-7264 (1-855-VISSANI)

HOMEDEPOT.CA

Retain this manual for future use.

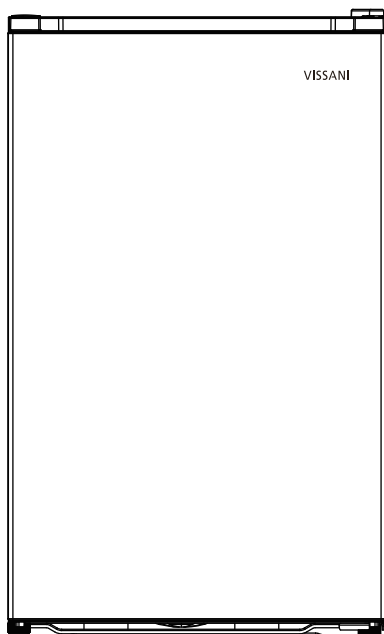
VISSANI™

Article # 1001694903
1001726671

Modèle # HVR43GBEF
HVR43GSEF

GUIDE D'UTILISATION ET D'ENTRETIEN

RÉFRIGÉRATEUR COMPACT DE 4,3 PIEDS CUBES



Questions, problèmes, pièces manquantes ? Appelez le Service à la Clientèle de,
Vissani avant de retourner au magasin
Du lundi au vendredi de 8 h à 20 h HNE et le samedi de 8 h à 18 h HNE

1-855-847-7264 (1-855-VISSANI)

HOMEDEPOT.CA

MERCI

Nous vous remercions de la confiance que vous avez accordée à Vissani en achetant ce refroidisseur à boissons . Nous nous engageons à créer constamment des produits de haute qualité pour améliorer votre maison. Visitez notre site web pour voir notre gamme complète de produits disponibles que vous pouvez utiliser pour rénover votre maison. Merci d'avoir choisi Vissani.

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Informations de sécurité



AVERTISSEMENT: Lorsque vous utilisez un appareil électrique, vous devez toujours respecter les mesures de sécurité élémentaires suivantes afin de réduire les risques d'explosion, d'incendie, d'électrocution et de blessure.

Lire toutes les consignes avant d'utiliser l'appareil.

- Cet appareil doit être relié à la terre. Brancher seulement à une prise mise à la terre. Consulter Consignes de mise à la terre importantes à la page 3.
- Installer cet appareil dans un endroit qui respecte les instructions d'installation de ce manuel.
- Pour éviter les risques d'électrocution, ne jamais placer le cordon, la fiche ou l'appareil dans l'eau ou un autre liquide.
- Une surveillance étroite est nécessaire lorsque les enfants utilisent des ustensiles ou utilisent des ustensiles près des enfants.
- N'utilisez pas cet appareil si le cordon d'alimentation ou la fiche est endommagé, ne fonctionne pas correctement ou a été endommagé ou laissé tomber.
- Cet appareil ne peut être réparé que par un réparateur qualifié. Contactez l'Agence de service autorisée la plus proche de chez vous ou appelez notre service clientèle sans frais pour obtenir des informations sur les inspections, les réparations ou les ajustements.
- Ne couvrez pas ou ne bloquez pas les ouvertures ou les événements de cet appareil.
- Ne rangez pas cet appareil à l'extérieur. N'utilisez pas cet appareil au bord de l'eau. Par exemple, ne l'utilisez pas près de l'évier de la cuisine, dans un sous-sol humide, près d'une piscine ou dans un endroit similaire.

- Ne placez pas cet appareil près d'une source de chaleur ou d'une flamme nue.
- Ne pas utiliser ou stocker de l'essence ou d'autres vapeurs et liquides inflammables à proximité de cet appareil ou de tout autre appareil. La fumée peut provoquer un incendie ou une explosion.
- Ne placez pas d'objets lourds ou d'aimants sur le dessus du réfrigérateur.
- Le réfrigérant de ce produit est le R600a et il est inflammable. S'assurer de ne pas endommager le système de refroidissement durant le transport et l'installation.
- Afin de minimiser le risque d'incendie causé par l'usage de pièces inappropriées ou un service inadéquat, veuillez prendre note que l'entretien doit être fait par du personnel autorisé par le fabricant.
- Cet appareil n'est pas destiné à être utilisé par des personnes (y compris des enfants) dont les capacités physiques, sensorielles ou mentales sont réduites ou qui manquent d'expérience et de connaissances, à moins qu'une personne responsable de sa sécurité n'ait supervisé ou dirigé son utilisation.
- N'utilisez pas l'appareil dans le garde-manger de l'appareil à moins qu'il ne soit du type recommandé par le fabricant.
- Ne pas endommager le circuit de réfrigérant.

!! ENREGISTRER CES INSTRUCTIONS !!

Informations de sécurité (suite)



DANGER: RISQUE QUE LES ENFANTS SOIENT PRIS AU PIÈGE

AVANT DE DISPOSER DE VOTRE ANCIEN RÉFRIGÉRATEUR OU CONGÉLATEUR

- Enlever les portes.
- Laisser les tablettes de sorte que les enfants ne puissent entrer facilement.

RÉFRIGÉRANTES

Tous les produits de réfrigération contiennent des réfrigérants et, selon les dispositions des lois fédérales, ils doivent être enlevés avant de disposer du produit. Si vous disposez d'un ancien produit de réfrigération, obtenir des conseils auprès d'une compagnie de traitement de rebuts.

CONSIGNES DE MISE À LA TERRE IMPORTANTES

- Pour prévenir un court-circuit, cet appareil doit être mis à la terre. Le cordon de l'appareil est muni d'un fil de mise à la terre et d'une fiche de mise à la terre. La fiche doit être branchée dans une prise correctement installée et correctement mise à la terre.



AVERTISSEMENT: Une mauvaise utilisation du fil de terre peut entraîner un risque d'électrocution.

- Consulter un électricien qualifié si vous ne comprenez pas bien les instructions de mise à la terre ou si vous doutez que l'appareil ne soit pas correctement mis à la terre.
- N'utilisez pas de rallonge ou d'adaptateur sans terre (double fourche).

Fiche à 3 broches (mise à la terre)



Prise correctement polarisée et correctement mise à la terre

Garantie

Vissani garantit que ce réfrigérateur est exempt de défauts de matériaux et de fabrication et accepte de remédier à de tels défauts ou de fournir de nouvelles pièces, au choix de la société, pour toute pièce défectueuse pendant la période de garantie. Les pièces et la main - d'œuvre sont à la charge de l'unité pendant deux ans à compter de la date d'achat. Une copie datée du reçu de vente ou de la facture est requise lorsque le Service de garantie est fourni par un agent de service autorisé.

Les pièces et la main - d'œuvre sont à la charge de l'unité pendant deux ans à compter de la date d'achat. Une copie datée du reçu de vente ou de la facture est requise lorsque le Service de garantie est fourni par un agent de service autorisé. La réparation du produit effectuée conformément aux termes du présent contrat est votre seul recours en vertu de la présente garantie limitée. Toutes les garanties implicites, y compris la capacité du commerçant et l'adéquation à un but particulier, sont limitées par les présentes à un an ou à la période minimale permise par la loi. Vissani n'est pas responsable des dommages accessoires ou indirects et aucun représentant ou personne n'est autorisé à assumer toute autre responsabilité pour nous en ce qui concerne la vente de ce produit. En aucun cas, le consommateur ne peut retourner ce produit à l'usine sans le consentement écrit préalable de Vissani. Certains États interdisent l'exclusion ou la limitation des dommages accessoires ou indirects, ou la limitation des garanties implicites. Cette garantie vous donne des droits légaux spécifiques et vous pouvez également avoir d'autres droits qui diffèrent d'un État à l'autre.

- Les dommages dus à l'expédition ou à une mauvaise installation.
- Les dommages dus à une mauvaise utilisation ou à un mauvais traitement.
- Les pertes de contenu dues à une défaillance de l'appareil.
- Les réparations réalisées par des intermédiaires de service non autorisés.
- Les appels de service qui n'impliquent pas de défaut de matériau ni de main-d'œuvre, tel que les instructions pour une utilisation correcte du produit ou une mauvaise installation.
- Le remplacement ou le réajustement des installations électriques ou des disjoncteurs.
- Les défaillances de ce produit s'il est utilisé à des fins autres que son utilisation prévue.
- Les frais de mise au rebut pour tout appareil défaillant qui n'a pas été renvoyé à notre usine.
- Tous frais de livraison/installation afférents comme le résultat d'un non-respect des exigences spécifiées lors de l'utilisation d'un appareil.
- Les dépenses liées au voyage et au transport pour l'entretien du produit si votre appareil est situé dans une région éloignée où l'entretien par un technicien de service autorisé n'est pas disponible.
- Le retrait et la réinstallation de votre appareil si ce dernier est installé à un emplacement inaccessible ou s'il n'est pas installé conformément aux instructions d'installation publiées.
- Les remboursements pour les produits irréparables sont limités au tarif payé pour l'appareil selon le reçu de vente.

Modèle	Pièces et main d'œuvre	Compresseur (pièces seulement)	Type de service
HVR43GBEF	Deux Ans	Cinq Ans	Prenez-Dans
HVR43GSEF	Deux Ans	Cinq Ans	Prenez-Dans

Communiquez avec l'équipe du service à la clientèle au 1-855-847-7264 ou visitez le www.homedepot.ca.

Pré - installation

L'appareil est destiné à des applications domestiques et similaires telles que:

1. Les cuisines des employés dans les magasins, ces et autres environnements de travail;
2. Les fermes et les clients dans des hôtels, des motels et d'autres types d'environnements résidentiels;
3. Environnement de type bed and breakfast;
4. Restauration et applications similaires non commerciales.

PLANIFICATION DE L'INSTALLATION



AVERTISSEMENT: Danger d'Explosion Gardez les matériaux et les vapeurs inflammables, à l'instar de l'essence, à l'écart du réfrigérateur. Le non-respect de cette consigne peut entraîner la mort, une explosion ou un incendie.

- Le réfrigérateur doit être installé sur une surface complètement plane.
- Laissez environ 2 à 4 pouces (5 à 10 cm) entre chaque côté de l'appareil et le mur.
- Laissez 12 pouces (30 cm) entre le haut de l'appareil et le plafond.
- Choisissez un emplacement qui n'est pas exposé à la lumière du soleil, aux températures élevées ou à l'humidité, car cette dernière peut entraîner une décoloration.
- L'appareil peut être réglé en tournant ses deux pieds de devant sous le panneau inférieur s'il est instable. Tournez-les dans le sens horaire pour élever le réfrigérateur.
- L'emplacement doit être robuste et plan. Un positionnement non sécurisé peut entraîner du bruit et des vibrations. Le bruit peut augmenter si le sol n'est pas robuste. Placez une feuille sous l'appareil pour résorber l'émission de chaleur si vous souhaitez positionner l'appareil sur un tapis.
- Assurez-vous que les pieds réglables sont fermement posés au sol, et réglez la pente de l'appareil légèrement vers l'arrière pour que les portes restent bien fermées.
- Prenez note de la position du contenu et conservez l'emballage pour un conditionnement et un déplacement futurs.
- Ne déplacez pas l'appareil en le soulevant par la poignée de la porte.
- N'inclinez pas l'appareil à plus de 45 degrés.
- Évitez les fortes vibrations et collisions.

OUTILS NÉCESSAIRES



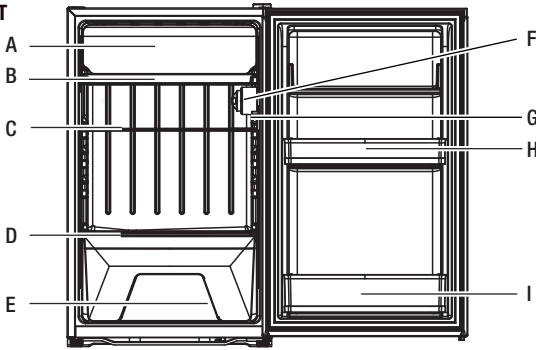
#2 Phillips Tournevis



Tête plate Tournevis

Pré - installation (suite)

DESCRIPTION DU PRODUIT



Partie	Description	Quantité
A	Compartiment congélateur	1
B	Bac goutte à goutte	1
C	Étagère en verre amovible	1
D	Protection du bac à légumes en verre	1
E	Bac à légumes	1
F	Luz indicadora y Perilla de control de temperatura	1
G	Interruptor de lámpara	1
H	Boîte de rangement de porte	1
I	Porte - bouteilles	1

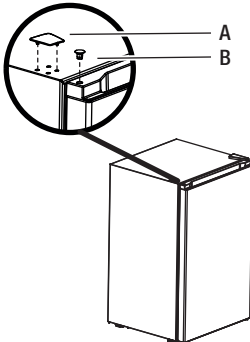


AVERTISSEMENT: Ne touchez jamais les aliments congelés à l'intérieur ou dans le compartiment congélateur avec les mains mouillées, car cela pourrait causer des engelures.

Inverser les portes

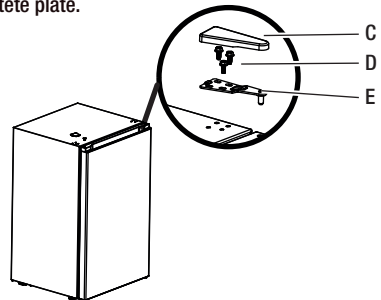
1 Démontage du couvercle du trou de charnière supérieur et du couvercle de vis du couvercle d'extrémité

- Retirez un couvercle de trou de charnière supérieur (A) et un couvercle de vis de bouchon d'extrémité (B) à l'aide d'un tournevis à tête plate.



2 Démontage du couvercle de charnière supérieure et de la charnière supérieure

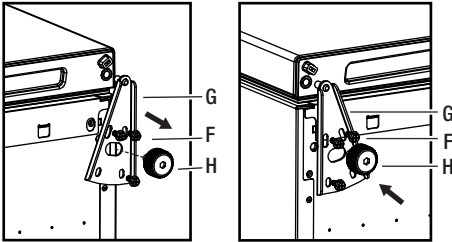
- Retirez le couvercle de charnière supérieur (C) avec un tournevis à tête plate.
- Retirez les trois vis à charnière supérieure (D) avec un tournevis cruciforme.
- Retirez la charnière supérieure (E) avec un tournevis à tête plate.



Inverser les portes (suite)

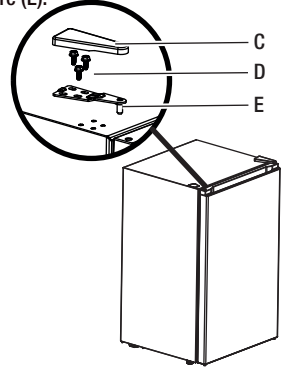
3 Changement de la charnière inférieure

- Tournez dans le sens inverse des aiguilles d'une montre et retirez la jambe plate abaissée (H).
- Retirez les trois vis de charnière inférieure (F) avec un tournevis cruciforme, puis retirez la charnière inférieure (G) avec un tournevis à tête plate.
- Montez la charnière inférieure (G) de l'autre côté de la jambe de nivellement (H) avec trois vis de charnière inférieure (F) à l'aide d'un tournevis cruciforme.
- Tournez dans le sens des aiguilles d'une montre et installez les jambes de nivellement gauche et droite (H). Il y a deux trous sous le réfrigérateur pour installer deux pieds de nivellement (H).



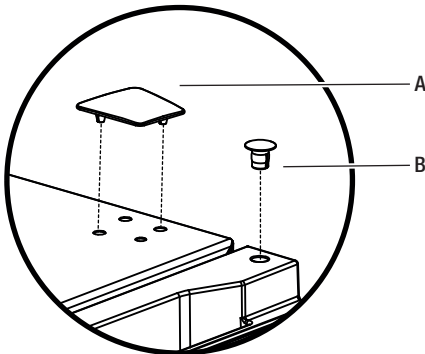
4 Installation de la porte et de la charnière supérieure

- Installer la porte en la poussant doucement sur le meuble.
- Installer la charnière supérieure (E) de l'autre côté avec les 3 vis de la charnière supérieure (D) à l'aide d'un tournevis cruciforme.
- Appuyez sur le couvercle de charnière supérieure (C) pour le monter au - dessus de la charnière supérieure (E).



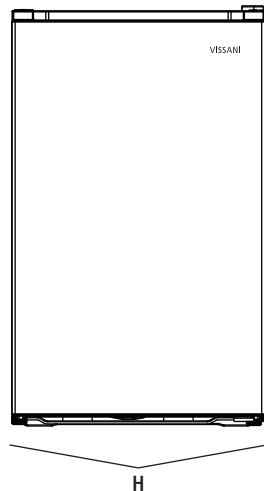
5 Installation du couvercle de trou de charnière supérieur et du couvercle de vis de bouchon d'extrémité

- Installez un couvercle de trou de charnière supérieur (A) et un couvercle de vis de bouchon d'extrémité (B) de l'autre côté par pression.



6 Réglage des pieds de nivellement

- Régler les pieds de nivellement (H) en les tournant dans le sens horaire ou anti-horaire.



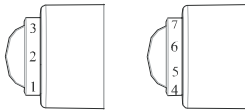
Instructions d'utilisation

- Laissez de l'espace entre les éléments à l'intérieur pour une meilleure circulation de l'air.
- La nourriture doit être conservée dans des emballages fermés pour éviter l'assèchement ou les odeurs.
- La nourriture chaude doit être refroidie avant d'être mise dans l'appareil. Sinon, la température intérieure et la consommation d'électricité augmenteront.
- Une réduction de la fréquence d'ouverture de la porte peut diminuer la consommation électrique.



AVERTISSEMENT: N'utilisez pas d'équipements électroniques à l'intérieur de l'appareil.

- Garder le réfrigérateur debout au moins 4 heures avant de l'utiliser.
- Brancher dans une prise mise à la terre (voir Consignes de mise à la terre importantes à la page 3).
- La température du congélateur peut être contrôlée manuellement par une commande de température. Cependant, les chiffres sur le sélecteur n'indiquent pas la température. Au contraire, plus le chiffre est élevé, plus froide est la température. Le réglage à "0" arrête la réfrigération, mais ne met pas l'appareil hors tension. Régler l'appareil à 4 pour un usage normal; le régler à 4-7 si une température plus froide est requise et à 4-1 pour une température plus chaude.



- Il devrait y avoir un certain espace entre les aliments à l'intérieur pour que l'air puisse circuler.
- Les aliments devraient être conservés dans des contenants scellés pour prévenir les odeurs et qu'ils sèchent.
- Il est conseillé de laisser refroidir les aliments avant de les placer dans l'appareil pour éviter l'augmentation de la température dans l'appareil et la consommation inutile d'électricité. Placer les aliments à l'intérieur trop rapi.
- Il est recommandé de ne pas ouvrir fréquemment la porte pour réduire la consommation d'électricité.

LORS DE VACANCES

Avant de quitter pour des vacances, retirer les aliments qui pourraient se gâter pendant votre absence. Pour des vacances d'une bonne durée, il est recommandé que tous les aliments soient retirés de l'appareil et que ce dernier soit éteint et débranché. Nettoyer l'intérieur en respectant les instructions de la section nettoyage de ce manuel et laisser la porte ouverte.

DÉPLACER LE RÉFRIGÉRATEUR

- Éteindre le réfrigérateur et débrancher de la prise de courant.
- Retirer tous les aliments et fixer de façon sécuritaire à l'aide de rubans tous les articles mobiles à l'intérieur.
- Fermer la porte à l'aide de ruban adhésif.
- Ne pas soulever ou tirer la porte ou la poignée de porte pendant le transport.
- Pendant le déplacement, l'appareil ne doit pas être incliné de plus de 45°, cela pourrait endommager le système scellé.
- Prendre soin d'éviter les vibrations intenses ou les impacts avec l'appareil.



AVERTISSEMENT: Risque de poids excessif Utiliser au moins deux personnes pour déplacer et installer le réfrigérateur. Le non-respect de cette instruction peut causer une blessure au dos ou d'autres blessures..

INSTRUCTIONS POUR LE CONGÉLATEUR

- Le compartiment refroidisseur est conçu pour le stockage à très court terme d'aliments préalablement congelés.
- De par sa conception, le compartiment refroidisseur n'est pas un congélateur et peut ne pas conserver les produits congelés ou la crème glacée congelés.
- Un réglage plus froid peut aider légèrement, mais peut également affecter les aliments dans la partie principale du réfrigérateur.

Nettoyage et entretien

NETTOYAGE

- Intérieur
 - Nettoyer l'intérieur de l'appareil à l'aide d'eau chaude et de bicarbonate de sodium, ajouter 1 à 2 cuillères à table par pinte d'eau.
 - Utiliser une éponge ou un chiffon doux et peu humide pour nettoyer autour des commandes.
 - Bien rincer à l'eau tiède et sécher avec un chiffon doux et propre.
- Extérieur
 - Nettoyer les surfaces extérieures avec de l'eau chaude et un savon doux. Bien rincer et essuyer avec un chiffon propre et doux.
- Joint d'étanchéité de la porte
 - Le joint d'étanchéité de la porte doit être maintenu propre pour assurer une bonne étanchéité. S'assurer de nettoyer fréquemment le joint en utilisant la méthode de nettoyage de l'intérieur mentionnée plus haut.

DÉCONGÉLATION

L'accumulation de givre sur les parois du compartiment de congélation augmente la consommation d'énergie et réduit le rendement de l'appareil. Dégivrer le compartiment de congélation chaque fois que le givre atteint une épaisseur de 0,65 cm ($\frac{1}{4}$ ").

- Enlever les aliments du réfrigérateur et du compartiment de congélation.
- Si votre modèle est muni d'un bac d'égouttement, s'assurer de le placer sous le compartiment de congélation pour recueillir l'eau. Il sera peut-être nécessaire de le vider durant la décongélation.
- Éteindre le réfrigérateur et le débrancher.
- La décongélation peut prendre plusieurs heures. Ouvrir la porte pour accélérer le processus.
- Quand la décongélation est terminée, essuyer le compartiment à l'aide d'un chiffon doux pour enlever l'eau qui reste.
- Régler à nouveau la température en suivant les instructions de fonctionnement à la page 8.



AVERTISSEMENT: Ne pas utiliser d'objets aiguisés ou pointus pour enlever le givre ou la glace des surfaces du compartiment de congélation. Cette action pourrait endommager les parois du compartiment et les serpentins de refroidissement et entraînera l'annulation de la garantie.

PANNE DE COURANT

Lorsqu'une panne de courant se produit, le réfrigérateur peut normalement conserver les aliments froids pendant plusieurs heures. Ne pas ajouter d'aliments dans l'appareil pendant une panne de courant et éviter d'ouvrir la porte. Débrancher la prise du mur et la rebrancher au retour de l'électricité. Toujours vérifier et jeter tout aliment gâté ou complètement décongelé se trouvant dans le réfrigérateur ou le congélateur avant d'utiliser de nouveau l'appareil.

REPLACEMENT DES LAMPES LED

- En cas d'anomalie de la lumière LED, consultez un électricien ou un réparateur qualifié, seul un réparateur qualifié peut la remplacer.
- Ne pas démonter et remplacer en privé pour éviter tout dommage.



AVERTISSEMENT: Les LED utilisent les spécifications spéciales de l'E14 et ne peuvent être remplacées que par du personnel qualifié, il est interdit à l'utilisateur de les remplacer ou de les remplacer par d'autres spécifications.

SPÉCIFICATIONS

Modèle	HVR43GBEF/HVR43GSEF	
Type de protection contre l'électrocution	I	
Capacité (pi.cu.)	4.3	
Tension (V)	120	
Fréquence (Hz)	60	
Courant (A)	0.8	
Le bruit (dB)	≤42	
Réfrigérant	R600a/0.95oz	
Température intérieure du réfrigérateur (F)	32~46	
Poids net(lbs)	51.01	
Dimensions (en pouces)	Largeur	19.75
	Profondeur	22.00
	Hauteur	32.75

Conseils de dépannage

Problème	Cause possible	Que faire
Le réfrigérateur ne fonctionne pas	<input type="checkbox"/> Pas bien branché	<input type="checkbox"/> Débrancher, attendre 10 secondes, puis rebrancher
	<input type="checkbox"/> Disjoncteur déclenché ou fusible grillé	<input type="checkbox"/> Remplacer le fusible ou réenclencher le disjoncteur
	<input type="checkbox"/> Problème avec la prise électrique	<input type="checkbox"/> Consulte un électricien qualifié
Le réfrigérateur semble trop chaud/les aliments ne semblent pas refroidir	<input type="checkbox"/> Le réglage de température peut être trop chaud	<input type="checkbox"/> Abaisser la température
	<input type="checkbox"/> La porte est ouverte trop souvent	<input type="checkbox"/> Ceci est normal
	<input type="checkbox"/> La porte n'est pas bien fermée	<input type="checkbox"/> Vérifier pour s'assurer qu'il n'y a rien dans le réfrigérateur qui empêche la porte de fermer
	<input type="checkbox"/> Le climat est chaud	<input type="checkbox"/> Ceci est normal
Le compresseur fonctionne trop longtemps ou se met en marche et s'arrête fréquemment	<input type="checkbox"/> Le climat est très chaud	<input type="checkbox"/> Ceci est normal
	<input type="checkbox"/> La porte est ouverte trop souvent	<input type="checkbox"/> Ceci est normal
	<input type="checkbox"/> La porte n'est pas bien fermée	<input type="checkbox"/> Vérifier pour s'assurer qu'il n'y a rien dans le réfrigérateur qui empêche la porte de fermer
	<input type="checkbox"/> La commande de température est réglée au plus froid	<input type="checkbox"/> Placer la commande à un réglage de température plus chaud
	<input type="checkbox"/> Une grande quantité d'aliments a été placée dans le réfrigérateur	<input type="checkbox"/> Ceci est normal
De l'humidité se forme sur l'extérieur de l'appareil	<input type="checkbox"/> Ceci est normal pendant les périodes de grande humidité	<input type="checkbox"/> Essuyer la surface au moyen d'un chiffon doux
	<input type="checkbox"/> La porte est légèrement ouverte	<input type="checkbox"/> Bien fermer la porte
De l'humidité se forme sur l'intérieur de l'appareil	<input type="checkbox"/> Ceci est normal pendant les périodes de grande humidité	<input type="checkbox"/> Ceci est normal
	<input type="checkbox"/> La porte est ouverte trop longtemps ou trop fréquemment	<input type="checkbox"/> S'assurer que la porte est bien fermée et ne pas l'ouvrir trop souvent
Bruits de vibration	<input type="checkbox"/> Le réfrigérateur se trouve sur une surface inégale	<input type="checkbox"/> Ajuster les pieds de nivellement
	<input type="checkbox"/> Le réfrigérateur se trouve sur une surface inégale	<input type="checkbox"/> Éloigner le réfrigérateur du mur

Les conditions suivantes sont normales et peuvent se produire pendant l'utilisation de cet appareil:

- La circulation du fluide dans les serpentins peut causer du bruit.
- Les côtés de l'appareil peuvent devenir tièdes en raison de la fonction de refroidissement.

VISSANI™

Questions, problèmes, pièces manquantes ? Appelez le Service à la Clientèle de
Vissani avant de retourner au magasin
Du lundi au vendredi de 8 h à 20 h HNE et le samedi de 8 h à 18 h HNE

1-855-847-7264 (1-855-VISSANI)

HOMEDEPOT.CA

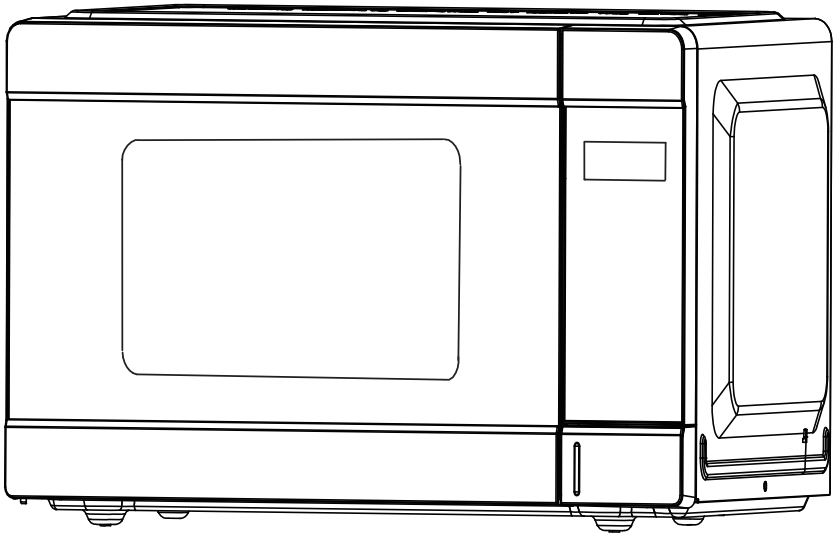
Conservez ce manuel pour référence ultérieure.

VISSANI™

Item #1001652428
Model #VSCMWP09S2B-09

USE AND CARE GUIDE

Microwave Oven



Questions, problems, missing parts? Before returning to the store,
call Vissani Customer Service.

8 a.m - 7 p.m., EST, Monday-Friday, 9 a.m. - 6 p.m., EST, Saturday

1-855-847-7264

HOMEDEPOT.COM

THANK YOU

We appreciate the trust and confidence you have placed in Vissani through the purchase of this microwave. We strive to continually create quality products designed to enhance your home. Visit us online to see our full line of products available for your home improvement needs.

Thank you for choosing Vissani.

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Safety Information



WARNING: Precautions to Avoid Possible Exposure to Excessive Microwave Energy

- Do not attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to tamper with the interlocks.
- Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
- Do not operate the oven if it is damaged. It is very important that the oven door close properly and that there is no damage to the
 - a) Door (including any dents).
 - b) Hinges and latches (broken or loosened).
 - c) Door seals and sealing surfaces.
- The microwave oven should not be adjusted or repaired by anyone except qualified service personnel.



WARNING: Cancer and Reproductive Harm.
www.P65Warnings.ca.gov.



Warning

- To reduce the risk of burns, electric shock, fire, injury to persons or exposure to excessive microwave energy, basic safety precautions should be followed, including the following:
 - Read all instructions before using the microwave.
 - Read and follow the specific "PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY".
 - This microwave must be grounded. Connect only to properly grounded outlet.
 - See page 3 for grounding instructions.
- Install or place this microwave only in accordance with the installation instructions.
- Some products such as whole eggs and sealed containers -for example, closed glass jars- are able to explode and should not be heated in this oven.
- This microwave is intended for use only as described in this manual.
- Do not use corrosive chemicals or vapors in this microwave.
- This type of oven is specifically designed to heat, cook, or dry food. It is not designed for industrial or laboratory use.
- As with any appliance, close supervision is necessary when used by children.

Safety Information (continued)

To reduce the risk of fire in the oven cavity:

- Do not overcook food.
- Carefully attend to the appliance when paper, plastic, or other combustible materials are placed inside the oven to facilitate cooking.
- Remove wire twist-ties from paper or plastic bags before placing bag in microwave.
- If materials inside the oven should ignite, keep oven door closed, turn oven off using the circuit breaker panel.
- Do not use the microwave cavity for storage purposes. Do not leave paper products, cooking utensils or food in the cavity when not in use.
- Liquids, such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing to be boiling due to surface tension of the liquid. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. This could result in very hot liquids suddenly boiling over when a spoon or other utensil is inserted into the liquid.
- To reduce the risk of injury:
 1. Do not overheat the liquid.
 2. Stir the liquid both before and halfway through heating.
 3. Do not use straight-sided containers with narrow necks.
 4. After heating, allow the container to stand in the microwave oven for a short time before removing.
 5. Use extreme care when inserting a spoon or other utensil into the container.
- Do not heat oil or fat for deep-frying. It is difficult to control the temperature of oil in the microwave.
- Pierce foods with heavy skins, such as potatoes, before cooking.
- The contents of feeding bottles and baby jars should be stirred or shaken and the temperature should be checked before serving to avoid burns.
- Cooking utensils may become hot from heat transferred from the heated food. Pot holders may be needed to handle these utensils.
- Do not cover or block any openings on the microwave.
- Do not operate this microwave if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.

- Do not store or use this appliance outdoors. Do not use this product near water, for example, near a kitchen sink, in a wet basement, near a swimming pool, or similar locations.

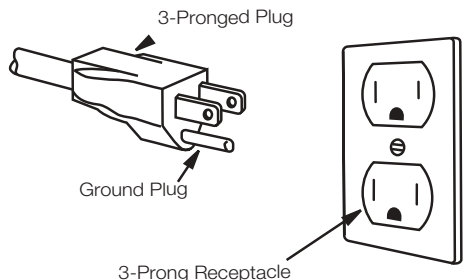


IMPORTANT: Grounding Instructions


- This microwave must be grounded. In the event of an electrical short circuit, grounding reduces risk of electric shock by providing an escape wire for the electric current.
- Consult a qualified electrician or serviceman if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly grounded. If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade grounding plug and a 3-slot receptacle that will accept the plug on the appliance.
- The marked rating of the extension cord shall be equal to or greater than the electrical rating of the appliance, or do not use an extension cord. If the power supply cord is too short, have a qualified electrician or serviceman install an outlet near the appliance. For questions regarding the grounding instructions, please contact our Customer Support Center at 1-855-847-7264.



WARNING: Improper use of the grounding plug can result in risk of electric shock



Safety Information (continued)

 **CAUTION:** Changes or modifications not approved by the party responsible for compliance could void the user's authority to operate the product.

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.

Electrical Requirements

- The electrical requirements are a 120 volt 60 Hz, AC only, 15 amp.
- It is recommended that a separate circuit serving only the oven be provided.
- The oven is equipped with a 3-prong grounding plug. It must be plugged into a wall outlet properly installed and grounded.

Power Cord

- A short power supply cord is provided to reduce the risks resulting from becoming entangled in or tripping over a longer cord.
- Longer cord or extension cords are available and may be used if care is exercised in their use.
- If a long cord or an extension cord is used:
 - a) The marked electrical rating of the cord set or extension cord should be at least as great as the electrical rating of the appliance.
 - b) The extension cord must be a grounding-type 3-wire cord, and the longer cord should be arranged so that it will not drape over the countertop or tabletop.

Radio or Interference

- Should there be any interference caused by the microwave oven to your radio or TV, check that the microwave oven is on a different circuit, relocated the radio or TV as far away from the oven as feasible or check position and signal of receiving antenna.

Warranty

This warranty is in lieu of any other warranty and expressly applies to the individual product only. This product is warranted for one year following purchase for defects in material and workmanship. Please save your receipt as proof of purchase is required to make a warranty claim. During this period, we will provide the purchase price of this product, a replacement or the equivalent, or repair per our discretion.

The warranty cannot be transferred through resale, including the resale through a 3rd party unauthorized retailer and is only bestowed up on the original consumer purchaser upon purchase from an authorized retailer.

This warranty does not cover and excludes damage or defects caused by:

- Consumer misuse
- Abuse
- Neglect including the failure to clean and/or provide adequate regular maintenance as outlined in the user manual.
- Commercial use
- Subjecting the product to any voltage outside the specified range
- Loss of parts
- The affixing of any attachments not provided with the product
- Accident
- Use in a manner not intended and outlined in the user manual.

Any subsequent damages caused by the above listed exclusions will not be covered and any claims determined to meet the above exclusions will be denied. All liability is limited to the purchase price and does not include any:

- Retail offered extended warranties
- Tax
- Other charges (including postage to send required materials)
- Incidental and/or consequential damages associated with the product in question.

Every implied warranty, including any statutory warranty of merchantability or fitness for a particular purpose is disclaimed except to the extent prohibited by law, in which case such warranty is limited to the duration of this written warranty. This warranty gives you specific legal rights. You may have other legal rights that vary depending on where you live. Some states do not allow limitations on implied warranties or special, incidental, or consequential damaged, so the above limitations may not apply to you. If you have a claim under this warranty, please call our Customer Service number: 1-855-847-7264. For faster service, please have the model number, serial number, and receipt ready for the operator to assist you.

Installation

Make sure that all the packing materials are removed from inside the microwave door.

Check the microwave for damage, such as misaligned or bent door, damaged door seals and sealing surface, broken or loose door hinges and latches, and dents inside the cavity or on the door. If there are any damages, do not operate the microwave and contact Customer Service at 1-855-847-7264.

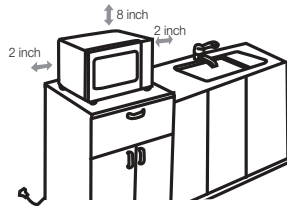
This microwave oven must be placed on a flat, stable surface to hold its weight and the heaviest food likely to be cooked inside.

Do not place the oven where heat, moisture, or high humidity is generated, or near combustible materials.

For correct operation, the oven must have sufficient airflow. Allow 8 inches of space above the microwave, 4 inches at back and 2 inches on each side of the unit.

The appliance should only be used on a countertop over 3 feet above the floor.

Do not cover or block any openings on the microwave. Do not remove microwave feet. Do not operate the oven without glass tray, roller support, and shaft in their proper positions.



This appliance should be serviced only by qualified service personnel. Contact nearest authorized service facility for examination, repair, or adjustment.

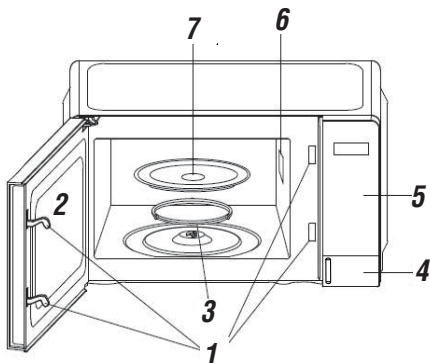
Make sure that the power cord is undamaged and does not run under the oven or over any hot or sharp surfaces.

The socket must be readily accessible so the microwave oven can be easily unplugged in an emergency.

Installing The Turntable:

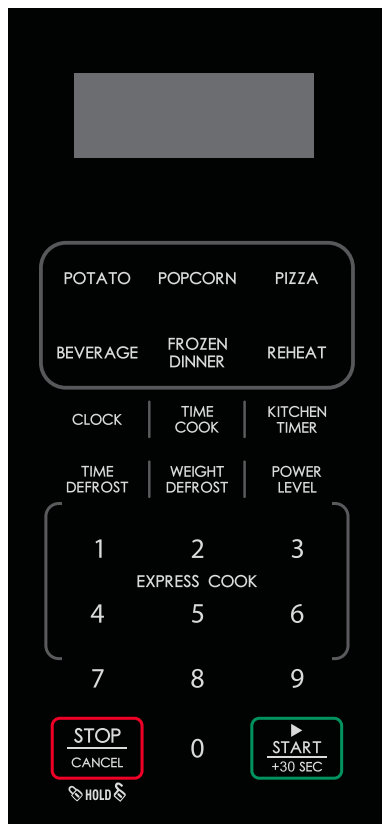
Never place the glass tray upside down. The glass tray should never be restricted. Both the glass tray and roller ring assembly must always be used during cooking. All food and containers of food should always be placed on the glass tray for cooking. If the glass tray or roller ring assembly cracks or breaks, call customer service at 1-855-847-7264.

Package Contents



Part No.	Description	Quantity
1	Door Lock System	1
2	Oven Window	1
3	Roller Ring	1
4	Door Release Button	1
5	Control Panel	1
6	Wave Guide	1
7	Glass Turntable	1

Control Panel Operation



AUTO COOK MENUS

The auto cook settings allow you to cook or reheat food automatically without entering power level or time.

CLOCK

Press to set the Clock function.

TIME COOK

Use for multi-stage cooking. It enables cooking at multiple power/time settings.

KITCHEN TIMER

The KITCHEN TIMER function can be used alone, even in the process of cooking.

TIME DEFROST

Press to set defrosting time.

WEIGHT DEFROST

Press to set the weight of the food to be defrosted.

POWER LEVEL

Use to set microwave power levels.

Number Pad 0-9

Press to set microwave cooking program.

STOP/CANCEL/LOCK

Press to clear all previous settings before cooking starts.
Press once to pause the current cooking program or press twice to cancel the program.
Press and hold 3 seconds for child lock.

START/+30 SEC

Press to start a cooking program. It is also used to set quick start function or to the increase cooking time during cooking.

Operation

1 Setting The Clock

This is a 12 and 24 hour clock, and you can select which by pressing CLOCK pad. During cooking, the current time can be seen by touching CLOCK pad. Example: To set the oven clock time to 8:30:

- 1) In standby mode, touch CLOCK pad once to select 12 hour clock.
- 2) Use the number pads to enter the time (touch number pads 8,3,0 in order to enter 8:30).
- 3) Press START/+30 SEC or CLOCK to confirm.



NOTE: During the cooking program, the current time can be seen by pressing Clock pad.

2 Setting The Kitchen Timer

In standby state or during cooking, touch KITCHEN TIMER pad to set kitchen timer.

Example: How to set the timer to 30 minutes.

1. Press KITCHEN TIMER pad once.
2. Use the number pads to enter time. The longest time is 99 minutes 99 seconds.
3. Press START/+30 SEC pad to start.



NOTE: The KITCHEN TIMER function can be used in any cooking process. You can check the countdown time by pressing KITCHEN TIMER pad, but if STOP/CANCEL pad is pressed when the display shows the time, the function is cancelled.

3 Express Cooking

In standby mode, press a number (1-6) key once, to start cooking time respectively 1 min., 2 mins., 3 mins., 4 mins., 5 mins. and 6 mins. The oven will start to cook at full power.

4 Start/Add 30 SEC

- 1) Press START/+30 SEC once and cooking will start at full power level immediately for 30 seconds. Touching this button repeatedly will add 30 seconds each time.
- 2) During the time cook, you can add 30 seconds for each push.

This function will not work for auto cooking menus and defrost programs.

5 Cooking Program

- 1) Press the TIME COOK pad.
- 2) Use the number pad to enter desired cooking time. The maximum number that can be entered is 99 min. 99 sec.
- 3) Press the POWER LEVEL pad.
- 4) Use the number pads to enter the power level as shown in the table below.

Power Level Chart:

Press number	Power (Display)	Press number	Power (Display)
1,0	100%(P10)	4	40%(P-4)
9	90%(P-9)	3	30%(P-3)
8	80%(P-8)	2	20%(P-2)
7	70%(P-7)	1	10%(P-1)
6	60%(P-6)	0	0%(P-0)
5	50%(P-5)		

- 5) Press START/+30 SEC pad to start



NOTE: During cooking, press Power pad to check the cooking power level for 5 seconds, and you can adjust the cooking power level by touching number pad within 5 seconds.

Operation (continued)

6 Setting Time Defrost

- 1) Press the TIME DEFROST pad.
- 2) Enter desired defrosting time by pressing the correct number pads. The longest time you can set is 99 min. 99 sec.
- 3) Press the START/+30 SEC pad to start.



NOTE: During defrosting program, the system will pause and sound beeps to remind user to turn food over. Touch START/+30 SEC pad to resume.

7 Multi-stage Cooking

Your oven can be programmed for up to 2 automatic cooking sequences.

Suppose you want to set the following cooking program.

1. In standby mode, press TIME COOK pad once and enter the cooking time by number pads.
2. Press POWER LEVEL pad to set the power level. Do not touch START/+30 SEC.
3. Repeat the steps above to input the second cooking program.
4. Press START/+30 SEC. to start.



NOTE: Only microwave functions for multi-cooking stage settings, you can set a maximum of two microwave cooking programs.

8 Setting Weight Defrost

- 1) In standby mode, press the WEIGHT DEFROST pad to choose food type. The weight range is 4 oz to 64 oz. Maximum weight: 64 oz.
- 2) Enter food weight using the number pad, and touch the START/+30 SEC pad to start.



NOTE: During defrosting program, the system will pause and sound beeps to remind user to turn food over. Touch START/+30 SEC pad to resume.

9 Setting Door Lock

The child lock prevents unsupervised operation by children.

1. To set, in standby mode, press and hold STOP/CANCEL for 3 seconds. 'Loc' is indicated on the display.
2. To cancel, press and hold STOP/CANCEL for 3 seconds. 'Loc' indication disappears.

Operation (continued)

10 Auto Cook Menus

The auto cook settings allow you to cook or reheat food automatically without entering power level or time.

Potato

1. Press POTATO once to set 1 portion, or press twice to set 2 portions.
2. Press START/+30 SEC. to start.

Popcorn

For a 3.2 oz. bag of microwave popcorn:

1. Press POPCORN once.
2. Press START/+30 SEC. to start.

Pizza

1. Press PIZZA to switch between 6, 11 or 16 oz.
2. Press START/+30 SEC. to start.

Beverage

1. Press BEVERAGE to switch between 8, 12, or 16 oz.
2. Press START/+30 SEC. to start.

Frozen Dinner

1. Press FROZEN DINNER to switch between 9 or 18 oz.
2. Press START/+30 SEC. to start.

Reheat

For a plate of cool food (7-28 oz.):

1. Press REHEAT to switch between 7 to 28 oz.
2. Press START/+30 SEC. to start.

Auto Menu	Weight / Portion	Time	Auto Menu	Weight / Portion	Time
Potato	1-PC (8 oz)	5:00	Frozen Dinner	9 oz	6:00
	2-PC (16 oz)	8:00		18 oz	10:00
Popcorn	3.2 oz	2:30	Reheat	7 oz	1:30
Pizza	6 oz	0:50		11 oz	2:00
	11 oz	1:20		14 oz	2:30
	16 oz	1:50		18 oz	3:00
Beverage	8 oz	1:30		21 oz	3:30
	12 oz	2:40		25 oz	4:00
	16 oz	3:50		28 oz	4:30

Cooking Utensils Guide

This section lists which utensils can be used in this microwave, which have limited use for short periods, and which should not be used in this microwave.

RECOMMENDED

Microwave browning dish -- Use to brown the exterior of small items such as steaks, chops, or pancakes. Follow the directions provided with your browning dish.

Microwaveable plastic wrap -- Use to retain steam. Leave a small opening for some steam to escape and avoid placing it directly on the food.

Paper towels and napkins -- Use for short-term heating and covering; these absorb excess moisture and prevent splattering. Do not use recycled paper towels which may contain metal and could ignite.

Glass and glass-ceramic bowls and dishes -- Use for heating and cooking.

Paper plates and cups -- Use for short-term heating at low temperatures. Do not use recycled paper which may contain metal and could ignite.

Wax paper -- Use as a cover to prevent splattering.

Thermometers -- Use only those labeled "Microwave Safe" and follow all directions. Check the food in several places. Conventional thermometers may be used on microwave food once the food has been removed from the microwave.

LIMITED USE

Ceramic, porcelain, and stoneware -- Use these if they are labeled "Microwave Safe." If they are not labeled, test them to make sure they can be used safely.

Plastic -- Only use if labeled "Microwave Safe." Other plastics may melt.

NOT RECOMMENDED

Glass jars and bottles -- Regular glass is too thin to be used in a microwave. It can shatter and cause damage and injury.

Paper bags -- These are a fire hazard, except for popcorn bags that are designed for microwave use.

Styrofoam plates and cups -- These can melt and leave an unhealthy residue on food.

Plastic storage and food containers -- Containers such as margarine tubs can melt in the microwave.

Metal utensils -- These can damage your oven. Remove all metal before cooking.



NOTE: Should you wish to check if a dish is safe for microwaving, place the empty dish in the oven and microwave on HIGH for 30 seconds. A dish which becomes very hot should not be used.

Cooking Techniques

Your microwave makes cooking easier than conventional cooking, provided you keep these considerations in mind:

STIRRING

Stir foods such as casseroles and vegetables while cooking to distribute heat evenly.

- Food at the outside of the dish absorbs more energy and heats quicker, so stir from the outside to the center.
- The microwave will turn off when you open the door to stir your food.

ARRANGEMENT

- Arrange evenly shaped foods, such as chicken pieces or chops, with the thicker, meatier parts towards the outside of the turntable where they receive more microwave energy.
- To prevent overcooking, place delicate areas, such as asparagus tips, towards the center of the turntable.

SHIELDING

- Areas that need shielding include poultry wing tips, the ends of poultry legs, and corners of square baking dishes.
- Use only small amounts of aluminum foil, as larger amounts may damage your microwave.

TURNING

- Turn foods over midway through cooking to expose all parts to microwave energy.
- This is especially important when cooking large foods such as roasts.

STANDING

- Foods cooked in a microwave build up internal heat and continue to cook for a few minutes after heating stops.
- Let foods stand to complete cooking, especially for foods such as cakes and whole vegetables.
- Roasts need this time to complete cooking in the center without overcooking the outer areas.
- All liquids such as soup or hot chocolate, should be shaken or stirred when cooking is complete.
- When heating baby food, stir well after removing from microwave and test temperature before serving.

ADDING MOISTURE

- Microwave energy is attracted to water molecules. Food that is uneven in moisture content should be covered or allowed to stand so that the heat disperses evenly.
- Add a small amount of water to dry food to help it cook.

Care and Cleaning

- Turn off the oven and unplug the power cord from the wall when cleaning.
- Keep the inside of the oven clean. When food splatters or spilled liquids adhere to oven walls, wipe with a damp cloth. Mild detergents may be used if the oven gets very dirty. Avoid using spray or other harsh cleaners. They may stain, streak or dull the door surface.
- The outside of the oven should be cleaned with a damp cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
- Wipe the door and window on both sides and wipe the door seals and adjacent parts frequently with a damp cloth to remove any spills or splatters. Do not use abrasive cleaners.
- Do not allow the control panel to become wet. Clean with a soft, damp cloth. When cleaning the control panel, leave oven door open to prevent oven from accidentally turning on.
- If steam accumulates inside or around the outside of the oven door, wipe with a soft cloth. This may occur when the microwave oven is operated under high humidity conditions. This is normal.
- It is occasionally necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.
- The roller ring and oven floor should be cleaned regularly to avoid excessive noise. Simply wipe the bottom surface of the oven with mild detergent. The roller ring may be washed in mild, soapy water or in a dishwasher. When removing the roller ring, be sure to replace it in the proper position.
- Remove odors from your oven by combining a cup of water with the juice and skin of one lemon in a microwaveable bowl. Microwave for 5 minutes. Wipe thoroughly and dry with a soft cloth.
- If the light bulb burns out, please contact customer service to have it replaced.
- The oven should be cleaned regularly and any food deposits should be removed. Failure to maintain the oven in a clean condition could lead to deterioration of surface that could adversely affect the life of the unit and could possibly result in a hazardous situation.
- Please do not dispose of this appliance into the municipal waste bin; it should be disposed in the particular disposal center provided by the municipalities.

Specifications

Power Consumption	120V, 60Hz, 1400W (microwave)
Output	900W
Operation Frequency	2450 MHz
Outside Dimensions (H × W × D)	10 ³ / ₄ × 19 × 13 ⁹ / ₁₆ inch
Oven Capacity	0.9 cu. ft.
Net Weight	Approx. 24.3 lb

VISSANI™

Questions, problems, missing parts? Before returning to the store,
call Vissani Customer Service
8 a.m. - 7 p.m., EST, Monday-Friday, 9 a.m. - 6 p.m., EST, Saturday

1-855-847-7264

HOMEDEPOT.COM

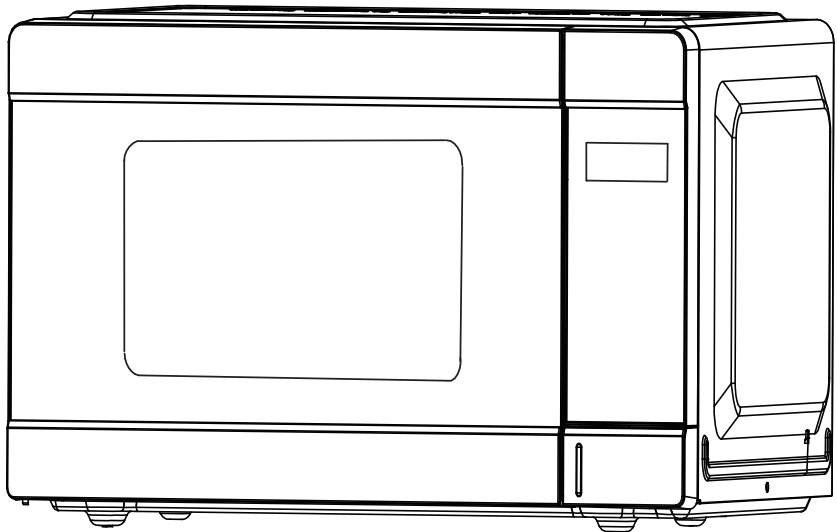
Retain this manual for future use.

VISSANI™

Article #1001652428
Modèle #VSCMWP09S2B-09

GUIDE D'UTILISATION ET D'ENTRETIEN

Four à Micro-ondes



Questions, problèmes, pièces manquantes ? Appelez le Service à la Clientèle
de Vissani avant de retourner au magasin.

Du lundi au vendredi de 8 h à 19 h HNE et le samedi de 9 h à 18 h HNE

1-855-847-7264

HOMEDEPOT.COM

MERCI.

Nous vous remercions de la confiance que vous avez accordée à Vissani en achetant ce four à micro-ondes. Nous nous engageons à créer constamment des produits de haute qualité pour améliorer votre maison. Visitez notre site web pour voir notre gamme complète de produits disponibles que vous pouvez utiliser pour rénover votre maison.

Merci d'avoir choisi Vissani.

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Informations de sécurité



ATTENTION: Précautions à prendre pour éviter une exposition possible à une énergie à micro-ondes excessive

- N'essayez pas de faire fonctionner ce four avec la porte ouverte puisqu'il exposera l'utilisateur à de la énergie à micro-ondes qui est d'ailleurs dangereux pour la santé. Il est important de ne pas altérer les dispositifs de verrouillage.
- Ne placez aucun objet entre la face avant du four et la porte et ne laissez pas de la saleté ou des résidus de nettoyage s'accumuler sur les surfaces d'étanchéité.
- Ne pas faire fonctionner le four s'il est endommagé. Il est très important que la porte du four se ferme correctement et qu'il n'y ait aucun dommage à
 - a) La porte (y compris des dépressions).
 - b) Les charnières et loquets (brisés ou desserrés).
 - c) Les joints de porte et les surfaces d'étanchéité.
- Le four à micro-ondes ne doit être réglé ni réparé que par un personnel de maintenance qualifié.



ATTENTION:
Le cancer et les troubles de reproduction.
www.P65Warnings.ca.gov.



Avertissement

- Pour réduire les risques de brûlures, de choc électrique, d'incendie, de blessures ou d'exposition à une énergie excessive, des précautions de sécurité de base doivent être suivies, notamment les suivantes :
 - Lisez toutes les instructions avant d'utiliser le micro-ondes.
 - Lisez et suivez les « PRÉCAUTIONS POUR ÉVITER L'EXPOSITION POSSIBLE À UNE ÉNERGIE À MICRO-ONDES EXCESSIVE » .
 - Ce micro-ondes doit être mis à la terre. Branchez-le seulement à une prise mise à la terre.
 - Voir la page 3 pour les instructions de mise à la terre.
- Installez ou placez ce micro-ondes conformément aux instructions d'installation.
- Certains produits comme les oeufs entiers et les contenants scellés - par exemple, les bocaux de verre fermés - peuvent exploser et ne doivent pas être chauffés dans ce four.
- Ce micro-ondes doit être utilisé uniquement comme décrit dans ce manuel.
- N'utilisez pas de produits chimiques ou de vapeurs corrosives dans ce micro-ondes.
- Ce type de four est spécifiquement conçu pour réchauffer, cuire ou faire sécher des aliments. Il n'est pas conçu pour usage industriel ou de laboratoire.
- Comme tout autre appareil, une surveillance stricte est nécessaire lorsqu'il est utilisé par des enfants.

Informations de sécurité (suite)

Pour réduire le risque d'incendie dans la cavité du four:

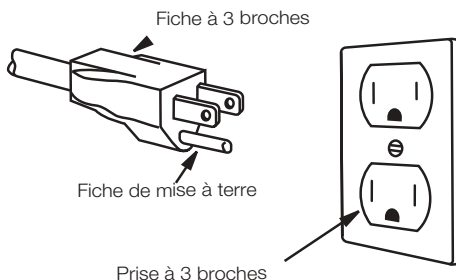
- ❑ Ne pas trop cuire les aliments.
- ❑ Faites attention à l'appareil lorsque du papier, du plastique ou d'autres matériaux combustibles sont placés dans le four pour faciliter la cuisson.
- ❑ Retirez les attaches métalliques des sacs en papier ou en plastique avant de les placer dans le microondes.
- ❑ Si des matériaux à l'intérieur du fours'enflamment, gardez la porte du four fermée, éteignez le four à l'aide du panneau de disjoncteurs.
- ❑ N'utilisez pas la cavité du micro-ondes à des fins de stockage. Ne laissez pas de produits en papier, d'ustensiles de cuisson ou d'aliments dans la cavité lorsqu'elle n'est pas utilisée.
- ❑ Des liquides tels que de l'eau, du café ou du thé peuvent être surchauffés au-delà du point d'ébullition sans bouillir visiblement en raison de la tension superficielle du liquide. Il n'y a pas toujours de bouillonnement ou d'ébullition visible lorsque le contenant est retiré du four à micro-ondes. Cela peut entraîner l'ébullition soudaine de liquides très chauds lorsqu'une cuillère ou un autre ustensile est inséré dans le liquide.
- ❑ Pour réduire le risque de blessure :
 1. Ne pas surchauffer le liquide.
 2. Remuez le liquide avant et à mi-chemin de son chauffage.
 3. Ne pas utiliser de récipients à bords droits et à goulot étroit.
 4. Après le chauffage, laissez le contenant rester dans le four à micro-ondes pour un instant avant de le retirer.
 5. Faites preuve de diligence lorsque vous insérez une cuillère ou un autre ustensile dans le récipient.
- ❑ Ne pas chauffer l'huile ou la graisse pour la friture. Il est difficile de contrôler la température de l'huile dans le micro-ondes.
- ❑ Percez les aliments avec un peau épaisse, comme les pompes de terre, avant de les cuire.
- ❑ Le contenu des biberons et des petits pots pour bébé doit être remué ou secoué et la température doit être vérifiée avant de servir pour éviter les brûlures.
- ❑ Les ustensiles de cuisson peuvent devenir chauds à cause de la chaleur transférée par les aliments chauffés. Des portes-pots peuvent être nécessaires pour manipuler ces ustensiles.
- ❑ Ne couvrez ni ne bloquez les ouvertures du microondes.
- ❑ N'utilisez pas ce micro-ondes si son câble d'alimentation ou sa fiche est endommagé(e), qu'il ne fonctionne pas correctement ou qu'il a été endommagé ou est tombé.

- ❑ Ne pas entreposer ou utiliser cet appareil à l'extérieur. N'utilisez pas ce produit près de l'eau, parexemple, près d'un évier de cuisine, dans un sous-sol humide, près d'une piscine, ou des endroits similaires.

! **IMPORTANT:**
Instructions De Mise à La Terre

- ❑ Ce micro-ondes doit être mis à la terre. En cas de court-circuit électrique, la mise à la terre réduit le risque de choc électrique en fournissant un fil d'échappement pour le courant électrique.
- ❑ Consultez un électricien qualifié si les instructions de mise à la terre ne sont pas bien comprises ou en cas de doute si l'appareil est correctement mis à la terre. S'il est nécessaire d'utiliser une rallonge, n'utilisez qu'une rallonge à 3 fils avec une fiche de mise à la terre à 3 lames et un réceptacle à 3 broches permettant d'accepter la fiche de l'appareil.
- ❑ La puissance nominale de la rallonge doit être égale ou supérieure à celle de l'appareil, sinon n'utilisez pas de rallonge. Si le cordon d'alimentation est trop court, demandez à un électricien ou à un personnel de maintenance qualifié d'installer une sortie à proximité de l'appareil. Pour toute question concernant les instructions de mise à la terre, veuillez contacter notre Centre de Support à la Clientèle au 1-855-847-7264.

! **ATTENTION:** L'utilisation inappropriée de la fiche de mise à la terre peut entraîner un risque de choc électrique.



Informations de sécurité (suite)



MISE EN GARDE: Les changements ou modifications non approuvés par la partie responsable de la conformité peuvent invalider le droit de l'utilisateur d'utiliser le produit.

Cet appareil génère, utilise et peut émettre de l'énergie de fréquence radio. S'il n'est pas installé et utilisé conformément aux instructions, il peut causer des interférences nuisibles aux communications radio.

Cependant, il n'y a aucune garantie que des interférences ne se produiront pas dans une installation particulière.

Exigences Électriques

- Les exigences électriques sont de 120 V 60 Hz, CA uniquement, 15 A.
- Il est recommandé de prévoir un circuit séparé pour le four.
- Le four est équipé d'une fiche de mise à terre à 3 broches. Elle doit être branchée dans une prise murale correctement installée et mise à la terre.

Cordon d'alimentation

- Un cordon d'alimentation court est fourni pour réduire les risques résultant d'un enchevêtrement ou d'un trébuchement sur un cordon plus long.
- Des cordons plus longs ou des rallonges sont disponibles et peuvent être utilisés si une attention est accordée lors de leur utilisation.
- Si vous utilisez un long cordon ou une rallonge :
 - a) La puissance électrique indiquée pour le jeu de câbles ou la rallonge doit être au moins aussi élevée que la puissance électrique de l'appareil.
 - b) La rallonge doit être un cordon à 3 fils de type mise à la terre, et le cordon plus long doit être disposé de manière à ne pas tomber du comptoir ou de la table.

Radio ou Interférences

- Si le four à micro-ondes provoque des interférences sur votre radio ou TV, vérifiez que le four à micro-ondes est sur un circuit séparé, déplacez la radio ou le TV aussi loin que possible du four ou vérifiez la position et le signal de l'antenne de réception.

Garantie

Cette garantie remplace toute autre garantie et ne s'applique expressément qu'à des produits individuels.

Ce produit est garanti pendant un an à compter de l'achat contre les défauts de matériaux et de fabrication. Veuillez bien garder votre reçu, car une preuve d'achat est exigée pour toute réclamation au titre de la garantie. Pendant cette période, nous fournirons, à notre discrétion, le coût d'achat de ce produit, un remplacement ou un équivalent, ou une réparation.

La garantie ne pourra être transférée en cas de revente, y compris par un détaillant tiers non autorisé, et ne sera accordée qu'à l'acheteur d'origine après achat auprès d'un détaillant autorisé.

Cette garantie ne couvrira pas et exclura les dommages ou défauts causés par :

- Utilisation abusive par le consommateur
- Maltraitance
- Négligence, y compris l'absence de nettoyage et/ou d'entretien régulier adéquat comme indiqué dans le guide de l'utilisateur
- Utilisation commerciale
- Exposition du produit à une tension en dehors de la plage spécifiée
- Absence de pièces
- Fixation de toute pièce jointe non fournie avec le produit
- Accident
- Utilisation non prévue ni indiquée dans le guide de l'utilisateur.

Tout dommage éventuel causé par les exclusions énumérées ci-dessus ne sera pas couvert et toute réclamation déterminée comme satisfaisant aux exclusions ci-dessus sera refusée. Toute responsabilité est limitée au prix d'achat et n'en inclut aucune :

- Extensions de garantie offertes par les détaillants
- Fiscalité
- Autres frais (y compris les frais de port lors de l'envoi du matériel nécessaire)
- Dommages accessoires et/ou indirects liés au produit en question.

Toute garantie implicite, y compris toute garantie légale de qualité marchande ou d'adéquation à un usage particulier, est rejetée, sauf dans la mesure interdite par la loi, auquel cas cette garantie est limitée à la durée de la présente garantie écrite. Cette garantie vous donne des droits légaux spécifiques. Vous pouvez avoir d'autres droits légaux qui varient selon votre lieu de résidence. Certains états ne permettent pas de limiter les garanties implicites ou les dommages spéciaux, accessoires ou consécutifs, de sorte que les limitations ci-dessus peuvent ne pas s'appliquer à vous. Si vous avez une réclamation à propos de cette garantie, veuillez appeler notre numéro de service clientèle : 1-855-847-7264. Pour un service plus rapide, veuillez avoir le numéro de modèle, le numéro de série et le reçu à porter de main pour que l'opérateur puisse vous aider.

Installation

Assurez-vous que tous les matériaux d'emballage sont retirés de l'intérieur de la porte du micro-ondes. Vérifiez que le four à micro-onde n'est pas endommagé, tel que la porte mal alignée ou pliée, les joints d'étanchéité et la surface d'étanchéité de la porte endommagés, les charnières et les loquets de la porte cassés et desserrés ainsi que les bosses dans la cavité ou sur la porte. En cas de dommage, ne faites pas fonctionner le four à micro-ondes et contactez le Service à la clientèle au 1-855-847-7264.

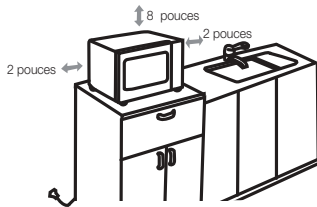
Ce four à micro-ondes doit être placé sur une surface plane et stable pour supporter son poids et les aliments les plus lourds pouvant être cuits à l'intérieur.

Ne pas placer le four à un endroit où de la chaleur, de l'humidité ou une humidité élevée est générée, ni à proximité de matières combustibles.

Pour un fonctionnement correct, le four doit avoir une circulation d'air suffisante. Laissez un espace de 8 pieds au-dessus du micro-ondes, de 4 pieds à l'arrière et de 2 pieds de chaque côté de l'appareil.

L'appareil ne doit être utilisé que sur un comptoir situé à plus de 3 pieds au-dessus du sol.

Ne couvrez ni ne bloquez les ouvertures du micro-ondes. Ne retirez pas les pieds du micro-ondes. Ne faites pas fonctionner le four faites pas fonctionner le four si le plateau en verre, le plateau en verre, le support à rouleau et l'arbre ne sont pas dans leurs positions correctes.



Cet équipement ne peut être réparé que par un personnel de maintenance qualifié. Contactez le centre de service agréé le plus proche pour inspection, réparation ou réglage.

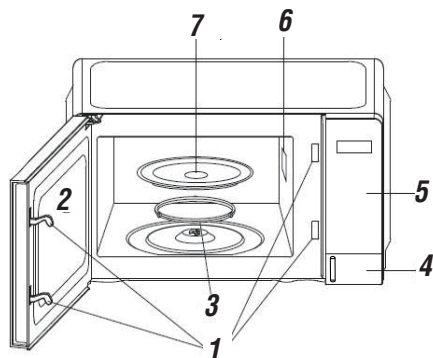
Rassurez-vous que le cordon d'alimentation n'est pas endommagé et qu'il ne passe pas sous le four ou sur une surface chaude ou pointue.

La prise de courant doit être facilement accessible pour que le four à micro-ondes puisse être débranché en cas d'urgence.

Installation du Plateau Tournant :

Ne placez jamais le plateau en verre à l'envers. Le plateau en verre ne doit jamais être restreint. Le plateau en verre et l'assemblage de l'anneau de rouleau doivent toujours être utilisés au cours de la cuisson. Tous les aliments et les contenants d'aliments doivent toujours être placés sur le plateau en verre pour la cuisson. Si le plateau en verre ou l'anneau de rouleau se fissure ou se brise, contactez le Service à la Clientèle au 1-855-847-7264.

Liste de Colisage



No.	Description	Nombre
1	Système de Verrouillage de la Porte	1
2	Fenêtre du four	1
3	Bague de rouleau	1
4	Bouton de relâchement de la porte	1
5	Panneau de commande	1
6	Guide du micro-ondes	1
7	Plaque tournante en verre	1

Opérations du Panneau de Commande



MENUS DE CUISSON AUTOMATIQUE

Les réglages de cuisson automatique vous permettent de cuire ou de réchauffer des aliments automatiquement sans entrer le niveau de puissance ou la durée.

HORLOGE

Appuyez sur cette touche pour régler la fonction Horloge.

DURÉE DE CUISSON

Utilisé pour la cuisson en plusieurs étapes. Il permet de cuisiner à plusieurs réglages de puissance/durée.

MINUTERIE DE CUISINE

La fonction MINUTERIE DE CUISINE peut être utilisée séparément, même pendant la cuisson.

DURÉE DÉCONG

Appuyez sur cette touche pour régler la durée de décongélation.

POIDS DÉCONG

Touchez ici pour régler le poids des aliments à décongeler.

NIVEAU DE PUISSANCE

Utilisé pour régler le niveau de puissance du micro-ondes.

Pavé numérique 0-9

Appuyez sur cette touche pour régler la durée et le poids.

ARRÊT/ANNULER/VERROU

Appuyez sur cette touche pour effacer tous les réglages précédents avant de commencer la cuisson. Appuyez une fois sur cette touche pour mettre en pause le programme de cuisson en cours ou deux fois pour annuler le programme. Appuyez sur la touche pendant 3 secondes pour activer le verrouillage enfants.

MARCHE/+30 SEC

Appuyez sur cette touche pour démarrer un programme de cuisson. Elle est également utilisée pour régler la fonction de démarrage rapide pendant la cuisson ou pour augmenter la durée de cuisson pendant la cuisson.

Opération

1 Réglage de l'Horloge

C'est une horloge de 12 heures et 24 heures, et vous pouvez choisir n'importe quelle en appuyant sur la touche HORLOGE. L'heure actuelle peut être visualisée en appuyant sur la touche HORLOGE pendant la cuisson. Exemple : Pour régler l'heure de l'horloge du four sur 8:30 :

- 1) En mode veille, appuyez une fois sur la touche HORLOGE pour sélectionner l'horloge de 12 heures.
- 2) Utilisez les touches numériques pour entrer l'heure (touchez les touches numériques 8, 3, 0 pour entrer 8:30).
- 3) Appuyez sur la touche MARCHÉ/+30 SEC. ou HORLOGE pour confirmer.



REMARQUE : Pendant le programme de cuisson, vous pouvez visualiser l'heure actuelle en appuyant sur la touche Horloge.

2 Réglage de la Minuterie de Cuisine

En mode veille ou pendant la cuisson, appuyez sur la touche MINUTERIE DE CUISINE pour régler la minuterie de cuisine.

Exemple: Comment régler la minuterie sur 30 minutes.

1. Appuyez une fois sur la touche MINUTERIE DE CUISINE.
2. Utilisez les touches numériques pour entrer le temps. La durée maximale est de 99 minutes et 99 secondes.
3. Appuyez sur la touche MARCHÉ/+30 SEC. Pour commencer.



REMARQUE : La fonction MINUTERIE DE CUISINE peut être utilisée pendant n'importe quel processus de cuisson. Vous pouvez vérifier le compte à rebours en appuyant sur la touche MINUTERIE DE CUISINE, mais si la touche ARRÊT/ANNULER est enfoncée lorsque l'écran affiche l'heure, la fonction sera annulée.

3 Cuisine Rapide

En mode veille, appuyez une fois sur une touche numérique (1-6) pour régler la durée de cuisson, respectivement sur 1, 2, 3, 4, 5 et 6 minutes. Le four commence à cuire à pleine puissance.

4 Marche / Ajout. 30 SEC.

- 1) En appuyant une fois sur MARCHÉ/+30 SEC. la cuisson démarra immédiatement à pleine puissance pendant 30 secondes. 30 secondes seront ajoutées à chaque fois si vous appuyez sur cette touche à plusieurs reprises.
- 2) Pendant la cuisson par temps, vous pouvez ajouter 30 secondes à chaque touche. Cette fonction ne fonctionnera pas avec les menus de cuisson par capteur et les programmes de décongélation.

5 Programme de Cuisson

- 1) Appuyez sur la touche CUISSON PAR TEMPS.
- 2) Utilisez le pavé numérique pour entrer la durée de cuisson souhaitée. La durée maximale qui vous pouvez définir est de 99 minutes et 99 secondes.
- 3) Appuyez sur la touche NIVEAU DE PUISSANCE.
- 4) Utilisez les touches numériques pour entrer le niveau de puissance comme indiqué dans le tableau ci-dessous.

Tableau des niveaux de puissance :

Appuyez sur le numéro	Puissance (Affichage)	Appuyez sur le numéro	Puissance (Affichage)
1,0	100%(P10)	4	40%(P-4)
9	90%(P-9)	3	30%(P-3)
8	80%(P-8)	2	20%(P-2)
7	70%(P-7)	1	10%(P-1)
6	60%(P-6)	0	0%(P-0)
5	50%(P-5)		

- 5) Appuyez sur la touche MARCHÉ/+30 SEC. pour commencer.



REMARQUE : Pendant la cuisson, appuyez sur la touche Puissance pour vérifier le niveau de puissance de cuisson pendant 5 secondes, et vous pouvez régler le niveau de puissance de cuisson en appuyant sur la touche numérique correspondante dans les 5 secondes.

Opérations (suite)

6 Réglage de la Durée Décong

- 1) Appuyez sur la touche DURÉE DÉCONG temps.
- 2) Entrez la durée de décongélation souhaitée en appuyant sur la touche numérique correcte. La durée maximale que vous pouvez définir est de 99 minutes et 99 secondes.
- 3) Appuyez sur la touche MARCHÉ/+30 SEC. pour commencer.



REMARQUE: Pendant le programme de décongélation, le système se mettra en pause et émettra un bip pour rappeler à l'utilisateur de retourner les aliments. Appuyez sur la touche MARCHÉ/+30 SEC. pour continuer.

8 Réglage de la Poids Décong

- 1) En mode veille, appuyez sur la touche POIDS DÉCONG pour sélectionner le type d'aliment. Le poids est compris entre 4 oz et 64 oz. Poids Maximal : 64 oz.
- 2) Entrez le poids d'aliments avec la touche numérique, et appuyez sur la touche MARCHÉ/+30 SEC. pour commencer.



REMARQUE: Pendant le programme de décongélation, le système se mettra en pause et émettra un bip pour rappeler à l'utilisateur de retourner les aliments. Appuyez sur la touche MARCHÉ/+30 SEC. pour continuer.

7 Cuisson en Plusieurs étapes

Votre four peut être programmé pour un maximum de 2 séquences de cuisson automatiques.

Supposons que vous souhaitez définir le programme de cuisson suivant.

1. En mode veille, appuyez une fois sur la touche CUISSON PAR TEMPS et entrez la durée de cuisson à l'aide des touches numériques.
2. Appuyez sur la touche NIVEAU DE PUISSANCE pour régler le niveau de puissance. Ne touchez pas la touche MARCHÉ/+30 SEC.
3. Répétez les étapes ci-dessus pour entrer le deuxième programme de cuisson.
4. Appuyez sur la touche MARCHÉ/+30 SEC. pour commencer.



REMARQUE: Uniquement pour les fonctions micro-ondes des réglages de cuisson en étapes multiples, vous pouvez définir un maximum de deux programmes de cuisson pour le micro-ondes.

9 Réglage du Verrouillage de la

Le verrouillage enfants empêche l'utilisation sans surveillance par des enfants.

1. Pour le régler, en mode veille, appuyez sur la touche ARRÊT/ANNULER pendant 3 secondes. « VERROU » s'affiche sur l'écran.
2. Pour la désactiver, appuyez sur la touche ARRÊT/ANNULER pendant 3 secondes. L'indication « VERROU » disparaît.

Opérations (suite)

10 Menus de Cuisson Automatique

Les réglages de cuisson automatique vous permettent de cuire ou de réchauffer des aliments automatiquement sans entrer le niveau de puissance ou la durée.

Pomme

1. Appuyez une fois sur POMME DE TERRE pour régler 1 portion, ou deux fois pour régler 2 portions.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Mais soufflé

Pour un sac de 3,2 onces de pop-corn au micro-ondes :

1. Appuyer une fois sur POP-CORN.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Pizza

1. Appuyer sur PIZZA pour basculer entre 6, 11 ou 16 onces.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Boissons

1. Appuyez sur BOISSON pour basculer entre 8, 12 ou 16 onces.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Dîner Congelé

1. Appuyez sur DÎNER CONGELÉ pour basculer entre 9 ou 18 onces.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Réchauffage

Pour une assiette d'aliments frais (7-28 onces) :

1. Appuyez sur RÉCHAUFFAGE pour basculer entre 7 et 28 onces.
2. Appuyez sur MARCHE/+30 SEC. pour commencer.

Menu Automatique	Poids / Portion	Durée	Menu Automatique	Poids / Portion	Durée
Pomme	1-PC (8 onces)	5:00	Dîner Congelé	9 onces	6:00
	2-PC (16 onces)	8:00		18 onces	10:00
Mais soufflé	3.2 onces	2:30	Réchauffage	7 onces	1:30
Pizza	6 onces	0:50		11 onces	2:00
	11 onces	1:20		14 onces	2:30
	16 onces	1:50		18 onces	3:00
Boissons	8 onces	1:30		21 onces	3:30
	12 onces	2:40		25 onces	4:00
	16 onces	3:50		28 onces	4:30

Guide des ustensiles de

Cette section énumère les ustensiles qui peuvent être utilisés dans ce four à micro-ondes, ceux dont l'utilisation est limitée à de courtes durées et ceux dont l'utilisation est interdite dans ce four à micro-ondes.

RECOMMANDÉ

Plat brunisseur cuit au four à micro-ondes— Utiliser pour brunir l'extérieur de petits articles tels que les steaks, les côtelettes ou les crêpes. Suivez les instructions fournies avec votre plat brunisseur.

Film en plastique étirable pour four à micro-ondes — Sert à retenir la vapeur. Laissez une petite ouverture pour que la vapeur puisse s'échapper et évitez de la placer directement sur les aliments.

Serviettes en papier et serviettes de table — Utilisez-les pour chauffer et couvrir pendant un bref moment ; elles absorbent l'excès d'humidité et empêchent les éclaboussures. N'utilisez pas d'essuie-tout recyclés, qui pourraient contenir du métal et s'enflammer.

Bols et plats en verre et en vitrocéramique — Utilisez-les pour chauffer ou faire cuire.

Assiettes et tasses en papier – Utilisez-les pour le chauffage à court terme et à température basse. N'utilisez pas de papier recyclé qui peut contenir du métal et s'enflammer.

Papier paraffiné – Utilisez-le comme couvercle pour éviter les éclaboussures.

Thermomètres — N'utilisez que ceux qui portent l'étiquette « adapté au four à microondes » et suivez toutes les instructions. Vérifiez les aliments à plusieurs endroits. Les thermomètres conventionnels peuvent être utilisés sur les aliments au micro-ondes une fois qu'ils sont retirés du micro-ondes.

UTILISATION LIMITÉE

Céramique, porcelaine et grès — Utilisez ces produits s'ils portent la mention « adapté au four à micro-ondes ». Si cela n'est pas le cas, testez-les pour vous rassurer qu'ils peuvent être utilisés en toute sécurité.

Plastique -- N'utilisez que ce qui est étiqueté « Sécurité au micro-ondes ». Les autres plastiques peuvent fondre.

NON RECOMMANDÉ

Bocaux et bouteilles en verre — Le verre ordinaire est trop mince pour être utilisé dans un four à micro-ondes. Il peut se briser et causer des dommages et des blessures.

Sacs en papier -- Ils risquent de s'enflammer, à l'exception des sacs de pop-corn conçus pour être utilisés au micro-ondes.

Assiettes et tasses en styromousse — Elles peuvent fondre et laisser un résidu malsain sur les aliments.

Contenants de plastique et de nourriture — Les récipients tels que les boîtes de margarine peuvent fondre dans le four à micro-ondes.

Ustensiles en métal — Ils peuvent endommager votre four. Retirez tout élément métallique avant la cuisson.



REMARQUE: Si vous souhaitez vérifier si un plat est sans danger pour le micro-ondes, placez le plat vide dans le four et activez le micro-ondes à HAUTE température pendant 30 secondes. Un récipient qui absorbe trop la chaleur ne doit pas être utilisé.

Techniques de Cuisson

Votre four à micro-ondes rend la cuisson plus facile que la cuisson traditionnelle, à condition de tenir compte de ces considérations :

REMUEMENT

Remuez les aliments tels que les casseroles et les légumes pendant la cuisson pour répartir la chaleur de façon uniforme.

- Les aliments situés à l'extérieur du plat absorbent plus d'énergie et se réchauffent plus rapidement, remuez donc de l'extérieur vers le centre.
- Le micro-ondes s'éteindra lorsque vous ouvrez la porte pour remuer les aliments.

ARRANGEMENT

- Disposez les aliments de forme régulière, comme les morceaux de poulet ou les côtelettes, en plaçant les parties les plus épaisses et les plus charnues vers l'extérieur du plateau tournant, où elles reçoivent plus d'énergie des micro-ondes.
- Pour éviter une cuisson excessive, placez les parties délicates, comme les pointes d'asperges, vers le centre du plateau tournant.

COUVERTURE

- Les zones à protéger comprennent les extrémités des ailes de volaille, les extrémités des cuisses de volaille et les coins des plats de cuisson carrés.
- N'utilisez que de petites quantités de papier d'aluminium, car de plus grandes quantités pourraient endommager votre micro-ondes.

TOURNER

- Retournez les aliments à mi-cuisson pour exposer toutes les parties à l'énergie des microondes.
- Ceci est particulièrement important lors de la cuisson de gros aliments comme les rôtis.

MISE AU REPOS

- Les aliments cuits dans un four à micro-ondes accumulent de la chaleur interne et continuent de cuire pendant quelques minutes après l'arrêt du chauffage.
- Laissez les aliments reposer pour terminer la cuisson, particulièrement pour les aliments tels que les gâteaux et les légumes entiers.
- Les rôtis ont besoin de ce temps pour terminer la cuisson du centre sans trop cuire les parties extérieures.
- Tous les liquides, comme la soupe ou le chocolat chaud, doivent être secoués ou remués à la fin de la cuisson.
- Lors du chauffage des aliments pour bébés, remuez-les bien après les avoir retirés du microondes et vérifiez la température avant de les servir.

AJOUT D'HUMIDITÉ

- L'énergie des micro-ondes pourrait être attirée par les molécules d'eau. Les aliments dont la teneur en humidité est inégale doivent être couverts ou mis au repos pour que la chaleur se disperse uniformément.
- Ajoutez une petite quantité d'eau aux aliments secs pour faciliter leur cuisson.

Entretien et Nettoyage

- Éteignez le four et débranchez le cordon d'alimentation du mur lors du nettoyage.
- Gardez l'intérieur du four propre. Lorsque des éclaboussures d'aliments ou des liquides renversés adhèrent aux parois du four, essuyez-les avec un chiffon humide. Des détergents doux peuvent être utilisés si le four devient très sale. Évitez d'utiliser des nettoyants en aérosol ou d'autres nettoyants forts. Ils pourraient tacher, traîner ou ternir la surface de la porte..
- L'extérieur du four doit être nettoyé avec un chiffon humide. Pour éviter d'endommager les pièces de fonctionnement à l'intérieur du four, il faut éviter que de l'eau ne s'infilte dans les ouvertures de ventilation.
- Essuyez les côtés de la porte et de la fenêtre et essuyez fréquemment les joints de la porte et les parties adjacentes avec un chiffon humide pour éliminer les déversements ou éclaboussures. Ne pas utiliser de détergents abrasifs.
- Ne laissez pas le panneau de commande se mouiller. Nettoyer avec un chiffon doux et humide. Lorsque vous nettoyez le panneau de commande, laissez la porte du four ouverte pour éviter que le four ne se mette en marche accidentellement.
- Si de la vapeur s'accumule à l'intérieur ou autour de l'extérieur de la porte du four, essuyez-la avec un chiffon doux. Cela peut se produire lorsque le four à micro-ondes fonctionne dans des conditions d'humidité élevée. C'est normal.
- Il est parfois nécessaire de retirer le plateau en verre pour le nettoyage. Lavez le plateau à l'eau tiède ou au lave-vaisselle.
- L'anneau de rouleau et la sole du four doivent être nettoyés régulièrement pour éviter les bruits excessifs. Il suffit d'essuyer le fond du four avec un détergent doux. L'anneau de rouleau peut être lavé à l'eau savonneuse douce ou au lave-vaisselle. Lors du retrait de l'anneau de rouleau, assurez-vous de le remettre dans une position appropriée.
- Éliminez les odeurs de votre four en mélangeant un verre d'eau avec le jus et la peau d'un citron dans un bol à micro-ondes. Faire fonctionner le micro-ondes pendant 5 minutes. Essuyez-le soigneusement et séchez-le avec un chiffon doux.
- Si l'ampoule est grillée, veuillez contacter le service client pour la faire remplacer.
- Le four doit être nettoyé régulièrement et tout dépôt d'aliments doit être enlevé. Le fait de ne pas maintenir le four dans un état propre peut entraîner la détérioration de la surface, ce qui pourrait réduire la durée de vie de l'appareil et éventuellement créer une situation dangereuse.
- Veuillez ne pas jeter cet appareil dans une poubelle municipale ; il doit être éliminé dans un centre d'élimination spécifique désigné par la municipalité.

Specifications

Consommation Électrique	120 V, 60 Hz, 1400 W (micro-ondes)
Sortie	900W
Fréquence de fonctionnement	2450 MHz
Dimensions extérieures (H x L x P)	10 ³ / ₄ x 19 x 13 ⁹ / ₁₆ pouce
Capacité du four	0,9 cu. ft.
Poids net	Approx. 24,3 livres

VISSANI™

Questions, problèmes, pièces manquantes ? Appelez le Service à la
Clientèle de Vissani avant de retourner au magasin
Du lundi au vendredi de 8 h à 19 h HNE et le samedi de 9 h à 18 h HNE

1-855-847-7264

HOMEDEPOT.COM

Conservez ce manuel pour référence ultérieure.