Generator 2.8KVA

TSG7

www.thetoolshed.co.nz

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PRODUCT DETAILS

Product Model	ToolShed Generator 2.8KVA
Product Code	TSG7

Distributed By

Note:

This manual is only for your reference. Due to the continuous improvement of the ToolShed products, changes may be made at any time without obligation or notice.

Warranty

This product may be covered under The ToolShed warranty. For more information, see our Terms & Conditions at www.thetoolshed.co.nz

SPECIFICATIONS

Output	2.5Kva running / 2.8Kva peak
Decibels	68 at a distance of 8m
Weight	40kg (dry)
Dimensions	600mm x 440mm x 440mm

SAFETY GUIDELINES

⚠ WARNING

READ ALL SAFETY WARNINGS & INSTRUCTIONS. Failure to follow instructions and warnings could lead to serious injury, electric shock, or fire.

Work Area Safety

- **Ensure that your work area is kept well lit and clean.** Lack of visibility and clutter greatly increase the risk of accident.
- **Keep bystanders and children clear when operating a power tool or machine.** They can cause distraction or risk injury themselves.
- **Ensure you are not operating the power tool or machinery in the presence of flammable gases, dust, liquids, or anything that creates an explosive atmosphere.** Power tools and machinery can create sparks which can lead to ignition in these environments.

Personal Safety

- **Always wear personal protective equipment.** Eye protection, ear protection, dust masks, and other protective equipment will help to reduce the risk of personal injury.
- **Dress appropriately. DO NOT wear or loose clothing that can get caught in moving parts.** Keep hair, loose clothing, jewelery, and anything else that could be of risk away from moving parts or they could be caught.
- **Always remain alert and DO NOT operate the power tool or machinery under the influence of any substances (drugs, medications, alcohol).** Losing focus could lead to injury while operating power tools and machinery.
- **Always keep proper footing and balance.** Overreaching can lead to slipping and falling which can result in injury.
- **Ensure the power switch is in the off position before connecting any batter or power source to the power tool or machinery.** This can lead to accidents as tools and machinery can suddenly fire when it is not expected, leading to accident.
- **Use all provided dust collection and extraction attachments if included.** This, with the use of dust masks, can help keep you safe from dust and keep your work site clear while working.
- **Ensure loose parts such as a wrench or adjusting key are removed before starting the power tool or machinery.** Failure to remove these can result in serious injury.

Electrical Safety

- DO NOT use the power tool or machinery in raining conditions or wet areas where the power tool or machinery could get wet. Water in the power tool or machinery can lead to electric shock.

- Only use the power tool or machinery when the plug correctly matches the power outlet. Modifying plugs greatly increases the risk of electric shock.

- **Keep the power cord away from anything that could damage it such as sharp edges, moving parts or heat.** A damaged power cord increases the risk of electric shock.

- **Only operate outdoors with the use of an outdoor extension lead.** Not all extension leads are suited to outdoor use and using one which is not can greatly increase the risk of electric shock.

- **Avoid body contact with grounded or earthed surfaces.** Surfaces such as radiators, ranges, pipes, and refrigerators can increase the risk of electric shock due to your body being earthed or grounded.

WARNING

Electric shock can cause serious injury or, in some cases be fatal.

Fuel & Engine Safety

Engine exhaust contains carbon monoxide, a colorless, odorless, poison gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death. If you start to feel dizzy or weak, get fresh air immediately.

WARNING

Operate the machinery outdoors only in a well-ventilated area and point the exhaust away from you.

- DO NOT operate the machine inside any building, including garages, basements, crawlspaces and sheds, enclosure, or compartment, including the storage compartment of a recreational vehicle.
- DO NOT allow exhaust fumes to enter a confined area through windows, doors, vents, or other openings.
- 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.

WARNING

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

Gasoline & Vapors

DANGER

GASOLINE AND GASOLINE VAPORS ARE HIGHLY FLAMMABLE AND EXPLOSIVE. Fire or explosion can cause severe burns or death.

- Gasoline is highly flammable and explosive.
- Gasoline can cause a fire or explosion if ignited.
- Gasoline is a liquid fuel, but its vapors can ignite.
- Gasoline is a skin irritant and needs to be cleaned up immediately if spilled on skin or clothes.
- Gasoline has a distinctive odor; this will help detect potential leaks quickly.
- In any petroleum gas fire, flames should not be extinguished unless by doing so the fuel supply valve can be turned OFF. This is because if a fire is extinguished and a supply of fuel is not turned OFF, then an explosion hazard could be created.
- Never fill gas tank to capacity as gasoline needs room to expand if temperature rises.

When Adding or Removing Gasoline

- DO NOT light or smoke cigarettes.
- Turn the engine off and let it cool for at least two minutes before removing the gasoline cap. Loosen the cap slowly to relieve pressure in the tank.
- Only fill or drain gasoline outdoors in a well-ventilated area.
- DO NOT pump gasoline directly into the engine at the gas station. Use an approved container to transfer fuel to the engine.
- DO NOT overfill the gasoline tank.
- Always keep gasoline away from sparks, open flames, pilot lights, heat, and other sources of ignition.

When Starting the Engine

- DO NOT attempt to start a damaged engine.
- Make certain that the gasoline cap, air filter, spark plug, fuel lines, and exhaust system are properly in place.
- Allow spilled gasoline to evaporate fully before attempting to start the engine.
- Make certain that the water pump is resting firmly on level ground.

Spark from a removed spark plug wire can result in fire or electrical shock.

Generator Safety

WARNING

Generator exhaust contains carbon monoxide, a colourless, odorless, poison gas. Breathing carbon monoxide will cause nausea, dizziness, fainting, or death. If you start to feel dizzy or weak, get to fresh air immediately.

WARNING

Running engines produce heat. Severe burns can occur on contact. Combustible material can catch fire on contact.

- DO NOT touch hot surfaces.
- Avoid contact with hot exhaust gases.
- Allow equipment to cool before touching it.
- Maintain at least three feet of clearance on all sides to ensure adequate cooling.
- Maintain at least five feet of clearance from combustible materials.

DANGER

Generator produces powerful voltage.

- DO NOT touch bare wires or receptacles.
- DO NOT use electrical cords that are worn, damaged, or frayed.
- DO NOT operate the generator in wet weather.
- DO NOT allow children or unqualified users to operate or service the generator.
- Use an RCD (Residual Current Device) in damp areas and areas containing conductive material such as metal decking.
- Use approved transfer equipment to isolate your generator from your electric utility and notify your utility company before connecting your generator to your power system.

DANGER

Fuel and fuel vapors are highly flammable and extremely explosive. Fire or explosion can cause sever burns or death. Unintentional startup can result in entanglement, amputation, or laceration.

When Starting the Generator

- DO NOT attempt to start a damaged generator.
- Make certain that the gas cap, air filter, spark plug, fuel lines, and exhaust system are properly in place.
- Allow spilled fuel to evaporate fully before attempting to start the engine.
- Make certain that the generator is resting firmly on level ground.

When Operating the Generator

- DO NOT move or tip the generator during operation.
- DO NOT tip the generator or allow fuel or oil to spill.

When Transporting or Servicing the Generator

- Make certain that the fuel shut off valve is in the off position and the fuel tank is empty.
- Disconnect the spark plug wire.

When storing the generator:
Store away from sparks, open flames, pilot lights, heat, and other sources of ignition.

WARNING

Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go. Unintentional startup can result in entanglement, amputation, or laceration. Broken bones, fractures, bruises, or sprains could result.

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

DO NOT start or stop the engine with electrical devices plugged in.

WARNING

Operation of this equipment may create sparks that can start fires around dry vegetation.

A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

SAFETY GUIDELINES

⚠ CAUTION

Exceeding the generators running capacity can damage the generator and / or electrical devices connected to it.

- DO NOT overload the generator.
- Start the generator and allow the engine to stabilize before connecting electrical loads.
- Connect electrical equipment in the off position, and then turn them on for operation.
- Turn electrical equipment off and disconnect before stopping the generator.
- DO NOT tamper with the governed speed.
- DO NOT modify the generator in any way.

⚠ CAUTION

Improper treatment or use of the generator can damage it, shorten its life, and void our warranty.

- Use the generator for its intended purpose only.
- Only operate on level surfaces.
- DO NOT expose the generator to excessive moisture, dust, or dirt.
- DO NOT allow any material to block the cooling slots.
- If connected devices overheat, turn them off and disconnect them from the generator.

DO NOT use the generator if:
- Electrical output is lost
- Equipment sparks, smokes, or emits flames
- Equipment vibrates excessively

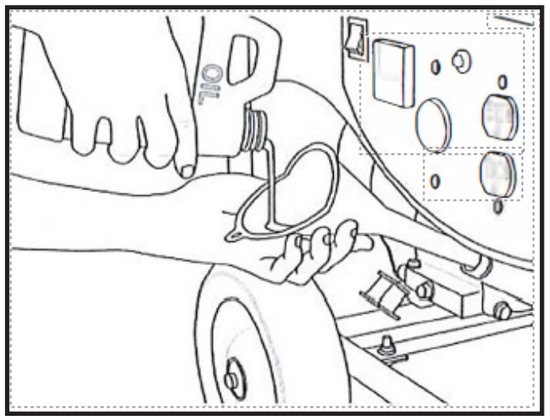
ASSEMBLY

⚠ CAUTION

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

Add Engine Oil

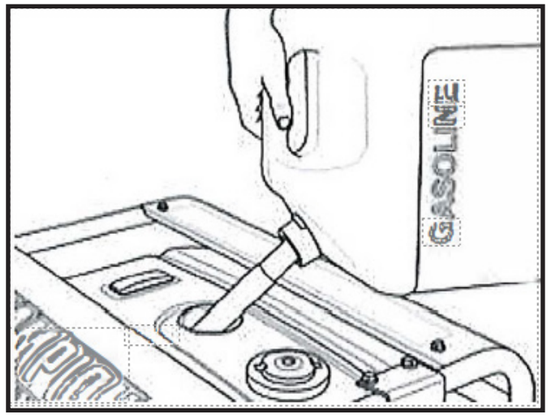
1. Place the generator on a flat, level surface.
2. Remove oil fill cap/dipstick to add oil.



3. Add 1.1L of oil and replace the oil fill cap/dipstick.
4. Check engine oil level daily and add as needed.

Add Fuel

1. Use clean, fresh, regular unleaded fuel with a minimum octane rating of 85.
2. DO NOT mix oil with fuel.
3. Clean the area around the fuel cap.
4. Remove the fuel cap.
5. Slowly add fuel to the tank. DO NOT overfill. Allow approximately 1/4 inch of space for fuel expansion.



6. Screw on the fuel cap and wipe away any spilled fuel.

? NOTE

The generator rotor has a sealed, pre-lubricated ball bearing that requires no additional lubrication for the life of the bearing.

Operation

Generator Location

Please consult your local authority. In some areas, generators must be registered with the local utility.

Generators used at construction sites may be subject to additional rules and regulations.

This generator must have at least five feet of clearance from combustible material. Leave at least three feet of clearance on all sides of the generator to allow for adequate cooling, maintenance, and servicing.

Place the generator in a well-ventilated area.

DO NOT place the generator near vents or intakes where exhaust fumes could be drawn into occupied or confined spaces.

Carefully consider wind and air currents when positioning the generator.

WARNING

This is not an inverter generator and is therefore not suited for use with sensitive electronic equipment.

Starting the Engine

1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
3. Turn the fuel valve to the “ON” position.
4. Move the choke lever to the “CHOKE” position.
5. Pull the starter cord slowly until resistance is felt and then pull rapidly.
6. As the engine warms up, move the choke lever to “RUN”.

NOTE

If the engine starts but does not run, make certain that the generator is on a flat, level surface.

Connecting Electrical Loads

1. Let the engine stabilize and warm up for a few minutes after starting.
2. Plug in and turn on the desired 220v, AC single phase, 50Hz electrical loads.

DO NOT connect 3-phase loads to the generator.

DO NOT connect 60Hz loads to the generator.

DO NOT overload the generator.

NOTE

Connecting a generator to your electric utility company’s power lines or to another power source may be against the law. In addition this action, if done incorrectly, could damage your generator and appliances and could cause serious injury or even death to you or a utility worker who may be working on nearby power lines. If you plan to run a portable electric generator during an outage, please notify your electric utility company immediately and remember to plug your appliances directly into the generator. Do not plug the generator into any electrical outlet in your home. Doing so could create a connection to the utility company power lines. You are responsible for ensuring that your generator’s electricity does not feed back into the electric utility’s power lines.

If the generator will be connected to a building electrical system, consult your local utility company or a qualified electrician.

Stopping the Engine

1. Turn off and unplug all electrical loads. Never start or stop the generator with electrical devices plugged in or turned on.
2. Let the generator run at no-load for several minutes to stabilize the internal temperatures of the engine and generator.
3. Turn the ignition switch to the “OFF” position.
4. Turn the fuel valve to the “OFF” position.

Avoiding Generator Overload

Follow these simple steps to calculate the running and starting watts necessary for your purposes.

1. Select the electrical devices you plan on running at the same time.
2. Total the running watts of these items. This is the amount of power you need to keep your items running.
3. Identify the highest starting wattage of all devices identified in step 1. Add this number to the number calculated in step 2. Surge wattage is the extra burst of power needed to start some electric driven equipment. Following the steps listed under “Power Management” will guarantee that only one device will be starting at a time.

Power Management

Use the following formula to convert voltage and amperage to watts:

Volt x Amps = Watts

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

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

? NOTE

Never exceed the generator capacity when adding loads.

Wattage Reference Chart

Use the chart to determine approximate wattage requirements for your equipment.

ITEM	Running Watts	Starting Watts
Essentials		
Light Bulb 100w	100	
Refrigerator/Freezer	1200	2400
Freezer	500	500
Sump Pump	600	1800
Well Pump 1hp	2000	4000
Water Heater	4000	
Garage Door Opener 1/2hp	500	600
Security System	180	
AM/FM Radio	300	
Battery Charger 12v DC	110	
Heating / Cooling		
Air Conditioner 12000 BTU	1700	2500
Fan	300	600
Furnace Fan 1/3hp	1200	2000
Home Appliances		
Microwave 1000w	1000	
Electric Range - One Element	1500	
Electric Frying Pan	1250	
Coffee Maker	1500	
Clothes Washer	12000	

ITEM	Running Watts	Starting Watts
Entertainment		
CD/DVD Player	100	
VCR	100	
Stereo Receiver	450	
Television 27”	500	
PC with 15” Monitor	800	
Job Site		
Belt Sander 3”	1000	1500
Bench Grinder 6”	700	1500
Circular Saw	1500	1500
Compressor 1/12hp	2500	2500
Edge Trimmer	500	500
Hand Drill 1/2”	1000	1000
Lawn Mower	1200	1800
Paint Sprayer	600	1200
Table Saw	2000	2000

Cleaning

⚠ CAUTION

DO NOT spray engine with water. Water can contaminate the fuel system.

- Use a damp cloth to clean exterior surfaces of the engine.
- Use a soft bristle brush to remove dirt and oil.
- Use an air compressor (25PSI) to clear dirt and debris from the engine.

Adjustments

The air-fuel mixture is not adjustable. Tampering with the governor can damage your generator and your electrical devices and will void your warranty.

Generator Maintenance

- Use a damp cloth to clean exterior surfaces of the generator.
- Use a soft bristle brush to remove dirt and oil.
- Use an air compressor (25PSI) to clean dirt and debris from the generator.
- Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Maintenance Schedule

Service your generator more frequently when operating in adverse conditions.

Every 8 hours or daily
Check oil level
Clean around air intake and muffler

First 5 hours
Change oil

Every 50 hours or every season
Clean air filter
Change oil if operating under heavy load or in hot environments

Every 100 hours or every season
Change oil
Clean / adjust spark plug
Check / adjust valve clearance
Clean spark arrester
Clean fuel tank and filter

Every 3 years
Replace fuel line

Storage

The generator should be started at least once every 14 days and allowed to run for at least 20 minutes. For longer term storage, please follow these guidelines.

Engine Storage

1. Allow the engine to cool completely before storage.
2. Clean the engine according to the instructions in the Maintenance section.
3. Drain all fuel completely from the fuel line and carburetor to prevent gum from forming.
4. Add a fuel stabilizer into the fuel tank.
5. Change the oil.
6. Remove the spark plug and pour about 14ml of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
7. Reattach the spark plug.

Generator Storage

1. Allow the generator to cool completely before storage.
2. Turn off the fuel supply at the fuel valve.
3. Clean the generator according to the instructions in the Maintenance section.
4. Store the unit in a clean, dry area out of direct sunlight.