



TSR | ELSITE



ORIGINAL INSTRUCTIONS

TSR-2700i

707010001

INVERTER GENERATING SET

OPERATOR'S MANUAL

Read this manual carefully before operation.
This manual includes important guidance for safety operation.

Introduction

Thank you for purchasing the TSR-2700i Inverter Generator. This manual provides essential instructions for the safe and efficient operation of your generator. Please read it carefully before using the equipment.

For your safety and the safety of others, ensure that you fully understand the contents of this manual. Keep it in a secure place for future reference.

Table of Contents

I	Safety Instructions	3
II	Features and controls	4
III	Operating	8
	1. Operating check list	8
	2. Starting the generating set	10
	3. Connecting electrical devices	11
	4. Stopping the generating set	11
IV	Maintenance	12
	1. Generating set maintenance	12
	2. Maintenance schedule	13
	3. Engine maintenance	13
V	Trouble-shooting	16
VI	Storage and transportation	16
VII	Specifications	17
	1. Specification parameter tables	17
	2. Wiring diagram	18

I. SAFETY INSTRUCTIONS

To ensure your safety and the proper operation of the generator, this manual categorizes warnings into three levels:

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

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

CAUTION: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury or equipment damage.

Please pay close attention to these warnings throughout the manual.

WARNING: READ THIS MANUAL COMPLETELY BEFORE OPERATING
Failure to read and follow all safety instructions in this manual may result in property damage, serious injury, or death.

WARNING: Air-cooled generating sets are not designed for continuous operation. Do not modify any part of the generating set or use it in an unsuitable manner.

DANGER: TOXIC FUMES

Always operate the generator in a well-ventilated area to avoid carbon monoxide poisoning. Never operate the generator indoors or in enclosed spaces, as this can cause serious injury or death.

WARNING: KICKBACK

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, traumatic amputation, or laceration. Broken bones, fractures, bruises, or sprains may occur. Always pull the starter cord firmly and ensure proper handling.

WARNING: FIRE

Operation of the generator may create sparks that can ignite flammable materials. Keep flammable objects at least 1.5 meters away. Use a spark arrestor if required by local laws.

WARNING: HOT SURFACE

The engine and generator generate heat during operation. Avoid contact with high-temperature surfaces and exhaust gases to prevent severe burns.

WARNING: MAINTENANCE-FREE BATTERY

The lithium battery is maintenance-free. If you have any questions, please contact a local authorized dealer.

DANGER: FIRE OR EXPLOSION

Gasoline is highly flammable and extremely explosive. Fire or explosion can cause severe burns or death.

- Keep flammable items away while handling the generator.
- Fill the fuel tank outdoors in a well-ventilated area with the generator turned off.
- Always wipe off spilled fuel and wait for it to dry completely before starting the generator.
- DO NOT operate the generator with known leaks in the fuel system.
- Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.
- Empty the fuel tank before storing or transporting the generator.
- Keep a fire extinguisher handy and be prepared to extinguish a fire if one starts.

Open Flame Alert: Fuel and its vapors are extremely flammable and explosive. Keep fuel away from smoking, open flames, sparks, pilot lights, heat, and other ignition sources.

WARNING: Before each use, carefully check all parts for looseness or damage. Observe the oil or fuel system for leaks or any other conditions that may affect normal operation.

- Repair or replace all damaged or defective parts without delay.
- Familiarize yourself with the location of all controls and safety signs.
- Ensure that all safety indicators are in the correct positions and functioning properly.
- Always run the generator on a level surface.
- DO NOT block the cooling channels with objects.
- DO NOT expose the generator to excessive humidity or large amounts of dust.
- DO NOT allow children or untrained individuals to operate the generator.
- DO NOT leave the generator running unattended; always turn it off before leaving.
- Avoid touching the generator while it is running or immediately after stopping.

DANGER: MOVING PARTS

Moving parts can cause severe injury. Keep hands, hair, and clothing away from all moving parts. Do not operate the generator without protective covers or guards in place.

DANGER: ELECTRICAL SHOCK

This generator produces powerful voltage, and the electricity CAN KILL YOU.

- The generator must be properly connected to an appropriate ground to prevent electric shock. Failure to ground the generator properly can result in electrocution, especially if the generator is equipped with a wheel kit. Consult an electrician for local grounding requirements.

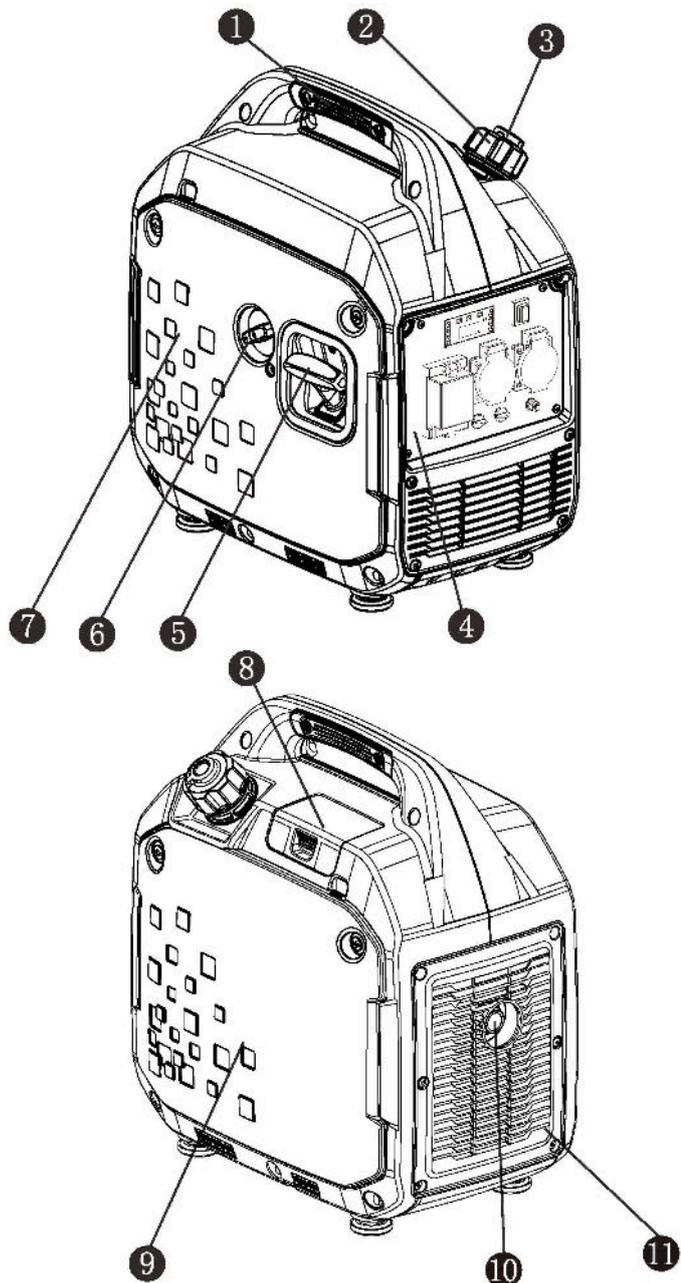
- Installation must be performed by a certified electrician. Improper installation can result in electrical shock and death.
- To reduce the risk of electrical shock:
- DO NOT use electrical cords that are worn, frayed, bare, or otherwise damaged.
- DO NOT touch bare wires or receptacles.
- DO NOT handle the generator or electrical cords while standing in water, barefoot, or with wet hands or feet.
- DO NOT allow unqualified persons or children to operate or service the generator.
- DO NOT connect the generator to a building electrical system without using a properly installed transfer switch by a qualified electrician.
- When using the generator for backup power, notify the utility company. Use an approved transfer switch to isolate the generator from the electric utility.
- Failure to isolate the generator from the power utility can result in death or injury to utility workers due to backfeed of electrical energy.

Wet Conditions Alert:

DO NOT expose the generator to rain or use it in damp locations.

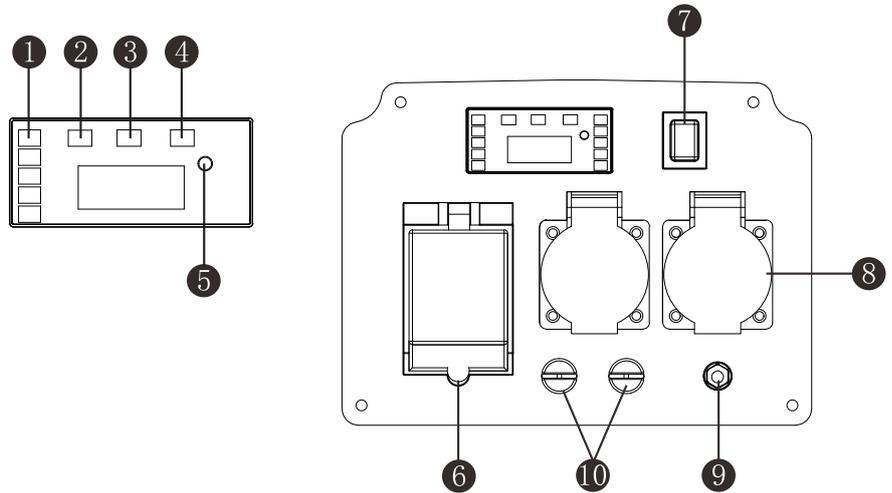
II. FEATURES AND CONTROLS

1. Carrying handle
2. Fuel tank cap
3. Ventilation knob
4. Control Panel
5. Recoil starter
6. Transfer switch: CHOKE & RUN & OFF & STOP
7. Left cover
8. Spark plug maintenance cover
9. Right cover
10. Muffler
11. Muffler blind window



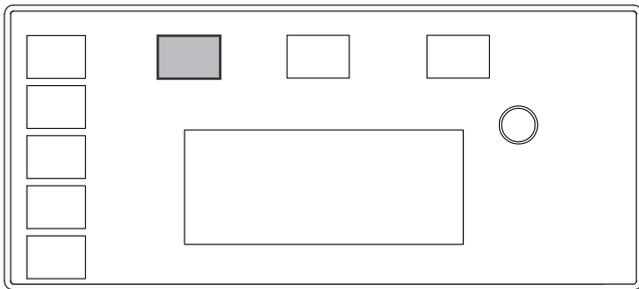
Control panel

1. Power indicator
2. Overload indicator
3. Running indicator
4. Oil level indicator
5. Reset button
6. RCD
7. ECO Mode
8. AC output receptacle
9. Ground terminal
10. Parallel kit terminal



Overload Indicator (Red)

When the overload indicator is on, it indicates that the generating set is overloaded, and the AC protector has been activated. This will stop the generator's output to protect both the connected electrical equipment and the generator itself. At this time, the running indicator (green) will be off, and the overload indicator (red) will remain on. However, the engine will continue running.

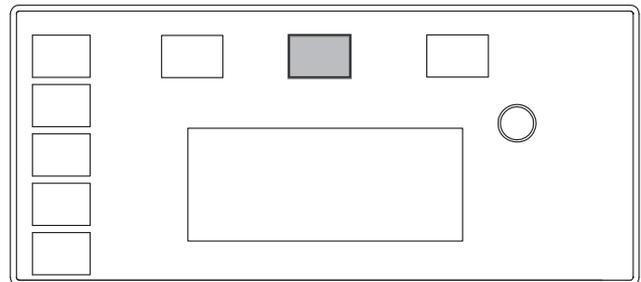


If the generating set has no output and the overload indicator is on, follow these steps:

1. Reduce the total power of the connected electrical devices to within the rated output range of the generating set.
2. Inspect the air intake for blockages or impurities, and check the control parts for any abnormalities. Take immediate action to resolve any issues.
3. Press the reset button to restore normal operation.

Running Indicator (Green)

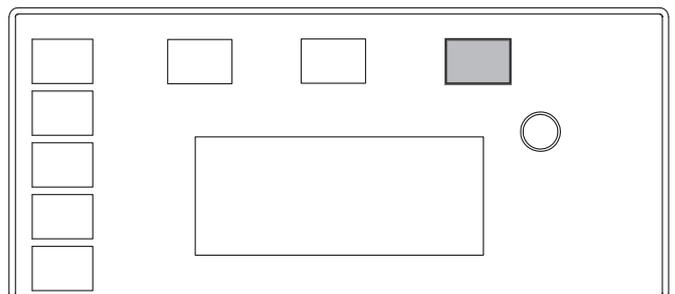
The running indicator lights up when the generating set is operating and producing a normal output.



Oil Level Indicator (Yellow)

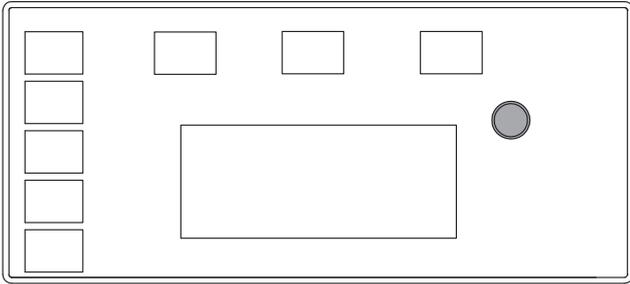
When the oil level drops below the lower limit, the oil protection system will automatically stop the engine, and the oil level indicator will blink when the recoil starter is pulled. The engine will not run until the oil is refilled to the proper level.

Note: If the generator fails to start after the engine is turned off, turn the transfer switch knob to the "RUN" position and then pull the starter handle. If the oil alarm indicator lights up, it indicates insufficient oil capacity. Refill the oil and restart the generator.



Reset Button

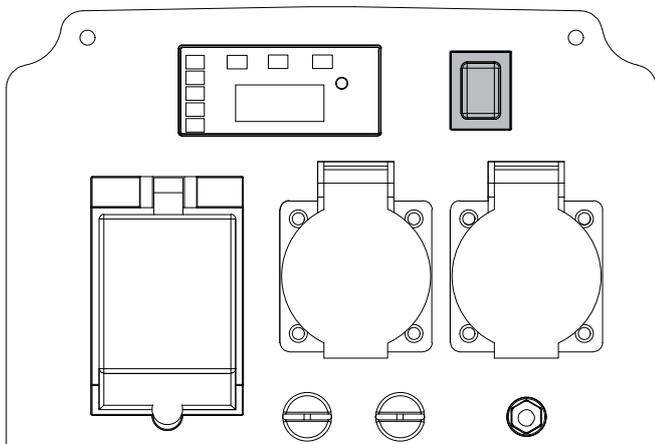
The reset button is used to restore the output if an overload occurs. To reset the generator, first reduce the load to within the rated capacity and then press the reset button.



ECO Mode

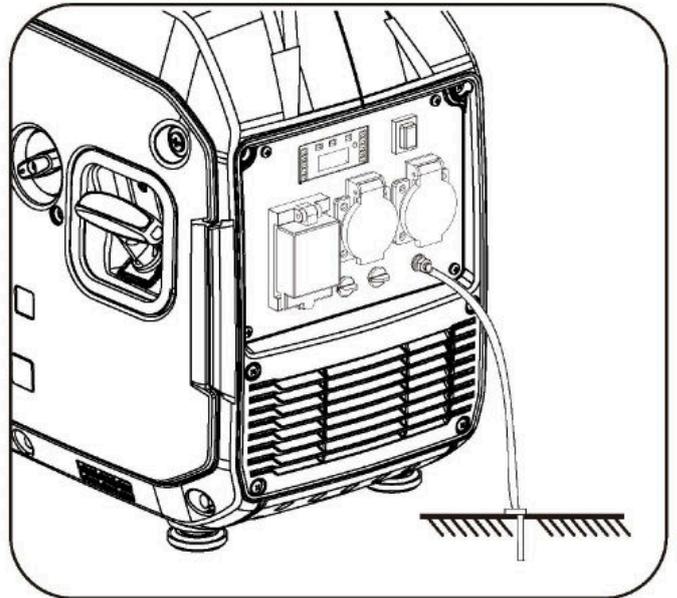
- If the electrical equipment requires a large starting current, set the ECO Mode to the "OFF" position.
- If the electrical equipment requires a small starting current, set the ECO Mode to the "ON" position.

Note: When using equipment with a large starting current, such as air compressors or submerged water pumps, always set the ECO Mode to the "OFF" position.



Grounding Terminal

The grounding terminal is designed to prevent electric shock by connecting the generator to a grounding wire. The generating set must be properly grounded before operation to ensure safe use.



Transfer Switch (CHOKE, RUN, OFF, STOP)

CHOKE: Closes the choke.

Note: Turn to the choke position to start the engine when it is cold.

For a hot engine, turn to the RUN position to start.

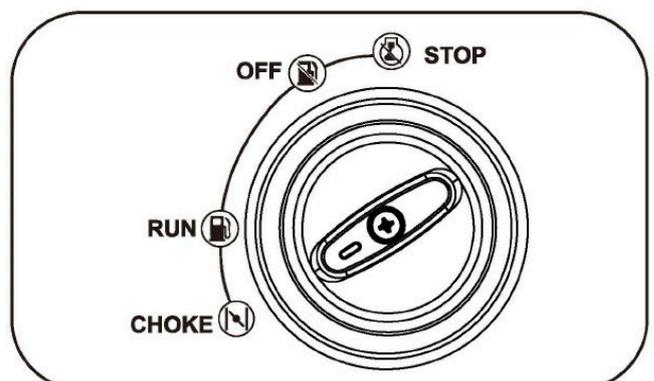
RUN: The generating set operates normally.

OFF: Shuts off fuel without stopping the generator immediately. This position allows the remaining fuel to be used up, improving the reliability of the generating set.

Note: If the generator will not be used in the near future, use this function or drain the fuel from the carburetor using the carburetor drain bolt.

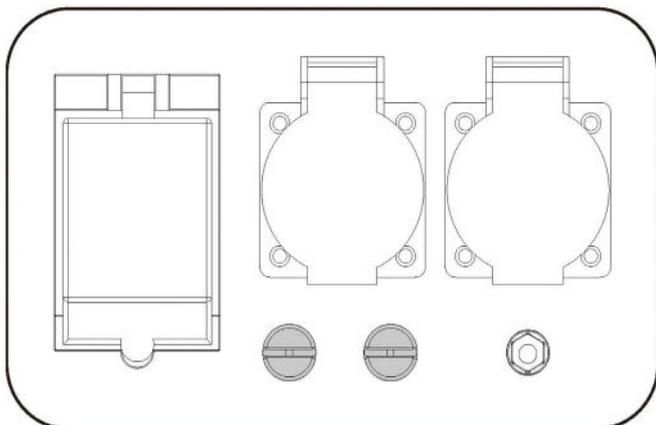
STOP: Turns off the generator.

Note: After unloading the generating set, let it run for 3 minutes without a load to stabilize the temperature before turning it off.

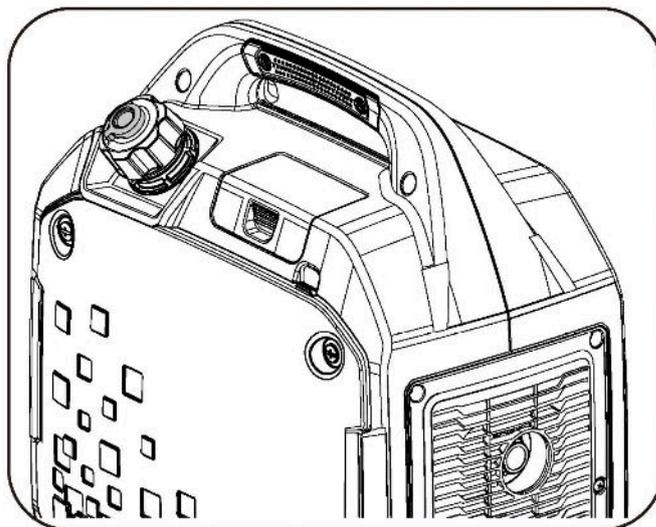


Parallel Kit Terminal

The parallel kit terminal is used for parallel operation with another inverter generator. (The parallel kit is sold separately.)



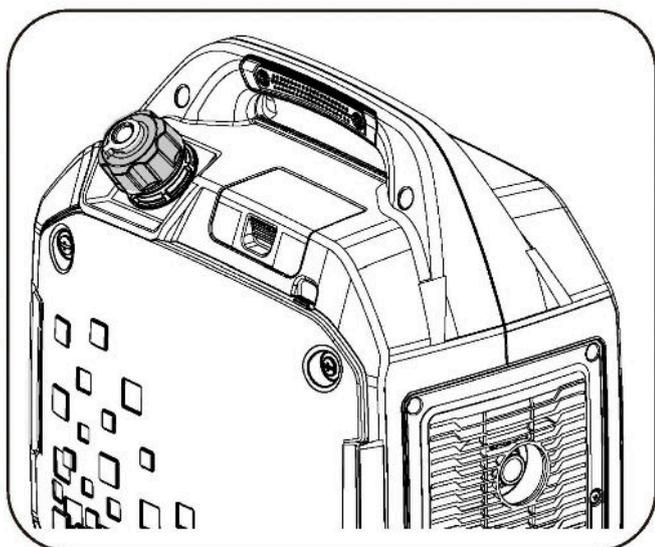
Ventilation Knob



The fuel cap is equipped with a ventilation knob to prevent fuel leakage.

Fuel Tank Cap

Remove the fuel tank cap by turning it counterclockwise.



During operation, the ventilation knob must be set to the "ON" position for the generator to function properly.

When the generator will not be used for an extended period or needs to be transported, turn the ventilation knob to the "OFF" position to prevent fuel leakage.

III OPERATING

1. Operating Checklist

1.1 Operating Location

- Only operate the generating set OUTSIDE in a well-ventilated area.
- Use the generating set on a flat, level surface in a clean, dry operating environment.
- Maintain at least 60 cm of clearance on all sides of the generating set while operating it outdoors.
- Operate in the specified area. If any issues arise under specific conditions, consult your authorized local dealer.
- In some areas, the generating set must be registered with the local utility.
- When used on construction sites, the generating set may be subject to additional rules and regulations.

DANGER: TOXIC FUMES

The exhaust from the generating set contains carbon monoxide, an odorless and deadly gas. Using the engine indoors CAN KILL YOU!

NEVER operate the generator inside any building or enclosure, **EVEN IF** doors and windows are open.

Place the generating set in a well-ventilated, clean area. Consider wind direction and air currents when positioning the generator to ensure safe ventilation.

High Altitude

This generating set may require a high-altitude carburetor kit to ensure proper operation at high altitudes. Consult an authorized local dealer for information on high-altitude kits if you frequently operate the generator at altitudes above 1,500 meters.

CAUTION: Even with a carburetor modification, the generating set's horsepower will decrease by approximately 3.5% for every 300 meters increase in altitude. The effect on horsepower will be even greater if no carburetor modification is made.

CAUTION: Operating the engine at altitudes below 1,500 meters with a modified carburetor may cause the generating set to overheat and result in severe engine damage. Restore the carburetor to factory specifications at an authorized dealer when using the generator in low-altitude areas.

1.2 Operating Condition

- Inspect the generating set for loose or damaged parts, signs of oil or fuel leaks, or any other conditions that may affect proper operation.
- Repair or replace all damaged or defective parts immediately.

WARNING: Failing to address identified problems before operation could result in property damage, serious injury, or DEATH.

- Remove dirt or foreign objects from the surface around the exhaust and air intake of the generator.
- DO NOT move or tip the generating set while it is in operation.
- Use the generating set only for its intended purposes. If you have questions about its intended use, consult your local dealer.

1.3 Engine Oil Check

- Place the engine on a level surface and ensure it is stopped.
- Check the engine oil level by following these steps:
 1. Remove the oil maintenance cover.
 2. Remove the dipstick and wipe it clean.
 3. Reinsert the dipstick into the hole, resting it on the oil fill neck. DO NOT thread the cap into the hole.
 4. Remove the dipstick again and check the oil level. It should be between the upper and lower limits.
 5. If the oil level is too low, fill it to the upper limit with the recommended oil.
- Reinstall and fully tighten the dipstick.

Note: For detailed instructions on adding oil, refer to the MAINTENANCE section of this manual.

WARNING: Oil is a critical factor affecting the generator's performance and service life. Use a 4-stroke automotive detergent oil as recommended in the MAINTENANCE section of this manual.

CAUTION: Operate the generating set only on a level surface. The engine is equipped with a low-oil sensor (on applicable models) that will automatically stop the engine if the oil level falls below the safe limit. To avoid the inconvenience of unexpected shutdowns, always fill the oil to the upper limit and check the oil level regularly.

WARNING: This engine is not filled with oil before leaving the factory. Attempting to crank or start the engine without properly filling it with the recommended type and amount of oil may result in engine damage and will void your warranty.

1.4 Generating Set Fuel Check

- Ensure the engine is stopped before checking the fuel level. Refill the fuel tank if necessary.
- Use clean, fresh, regular unleaded gasoline.
- DO NOT mix oil with gasoline. Always clean up any spilled fuel immediately.

CAUTION: Pressure may build up in the fuel tank. Allow the generating set to cool for at least two minutes before removing the fuel

cap. Loosen the fuel cap slowly to relieve any built-up pressure.

Do not fill the tank above the upper limit mark. Always leave room for fuel expansion.

DANGER: FIRE OR EXPLOSION

Gasoline is highly flammable and extremely explosive. Follow these precautions when handling gasoline:

- **Keep flammable items away while handling gasoline.**
- **Fill the fuel tank outdoors in a well-ventilated area with the generating set turned off.**
- **Always wipe off any spilled fuel and wait until it has dried before starting the generating set.**
- **DO NOT operate the generating set if there are known leaks in the fuel system. Regularly inspect the fuel system for leaks.**
- **Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.**
- **Keep a fire extinguisher handy and be prepared to respond if a fire starts.**

DANGER:

- **Do not fill the fuel tank above the upper limit. Overfilling can cause the engine to fail or damage the carbon canister (if equipped), voiding your warranty.**
- **NEVER use engine or carburetor cleaner products in the fuel tank as they may cause permanent damage.**

Prevent gum deposits and damage to the fuel system during storage:

- Gum deposits can form in essential fuel system parts, such as the carburetor, fuel filter, fuel hose, or tank.
- Alcohol-blended fuels (e.g., gasohol, ethanol, or methanol) can attract moisture, leading to separation and acid formation during storage. Acidic fuel can damage the generating set's fuel system.
- Only use gasoline containing up to 10% alcohol by volume. Other gasoline/alcohol blends are not approved.

CAUTION:

- **Effects of old, stale, or contaminated fuel are not covered under warranty.**
- **To minimize gum deposits and ensure easy starting, do not use gasoline left over from the previous season.**

CAUTION:

Allow the generating set to cool for at least two minutes before removing the fuel cap when adding fuel. Loosen the fuel cap slowly to relieve any pressure in the tank.

1.5 Electrical Devices

- Disconnect all electrical devices from the generating set and switch off the AC circuit breaker before starting the engine. The generating set may be difficult to start if electrical devices are connected.
- Ensure that the total power of connected electrical devices does not exceed the generating set's maximum power. Refer to the parameter sheet for specific power ratings.

1.6 Generating Set Grounding

The generating set must be properly grounded to prevent electrical shock in the event of a ground fault in the generating set or connected devices, particularly when the unit is equipped with a wheel kit.

- Proper grounding also helps dissipate static electricity, which can accumulate in ungrounded devices.

DANGER: ELECTRICAL SHOCK

- **Consult a local electrician to determine the grounding requirements before operation.**
- **Failure to properly ground the generator can result in electrical shock.**

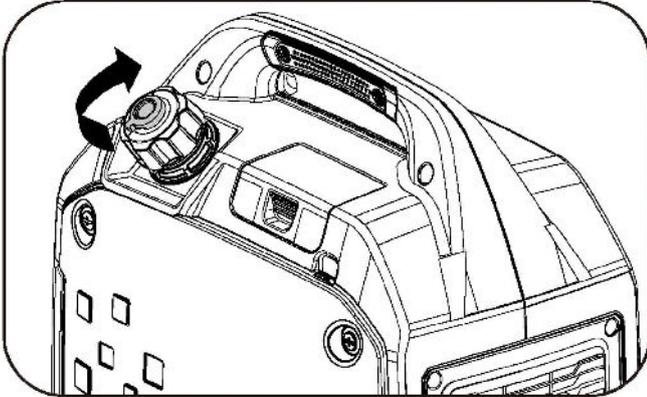
A ground terminal is provided on the generating set for remote grounding.

- Use a copper wire no smaller than 4mm² to connect the generator's ground terminal to an appropriate ground.
- Grounding requirements vary by region. Consult a qualified dealer or electrician in your area to ensure compliance with local regulations.

2. Starting the Generating Set

2.1 Perform the operating checklist and ensure all loads are disconnected.

2.2 Turn the ventilation knob on the fuel cap to the "ON" position to allow fuel flow.



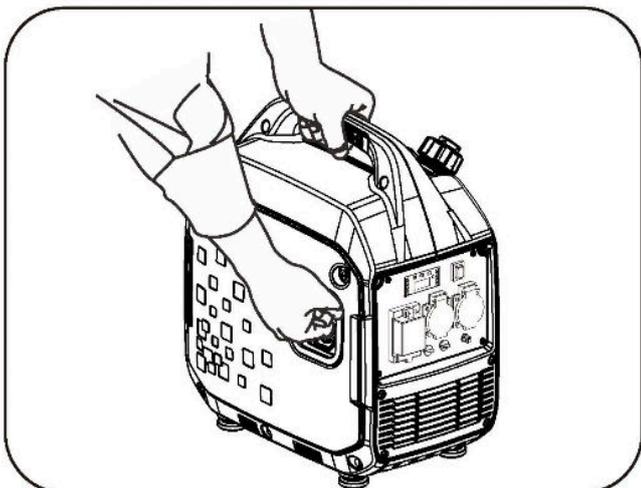
- Note: This step is not required if your generator is not equipped with a carbon canister.

2.3

- Cold Start: Turn the combination switch to the "CHOKE" position to close the choke.
- Warm Start: Turn the combination switch to the "RUN" position. If the engine does not start, turn the combination switch to the "CHOKE" position before retrying.

WARNING: Check the condition of the starter cord before operating. If the cord is frayed or damaged, have it replaced immediately by a local authorized dealer.

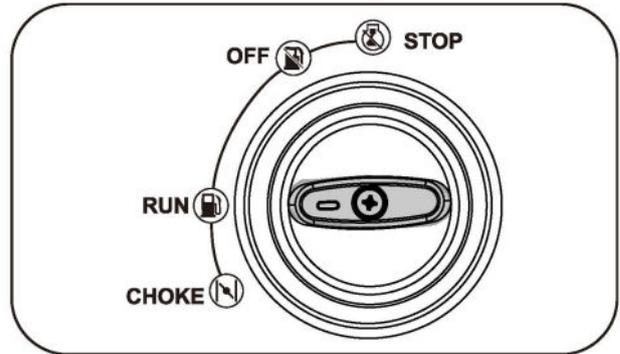
- Grasp the recoil starter handle and pull slowly until resistance is felt.
- Then, pull rapidly to avoid kickback.
- Firmly grasp the generator to prevent it from tipping over, which could cause personal injury or damage to the generator.



WARNING: KICKBACK

- Rapid retraction of the starter cord can pull your hand and arm toward the engine faster than you can let go.
- Unintentional startup can result in entanglement, traumatic amputation, or laceration. Injuries such as broken bones, fractures, bruises, or sprains may occur.

2.4 Turn the transfer switch to the "RUN" position.



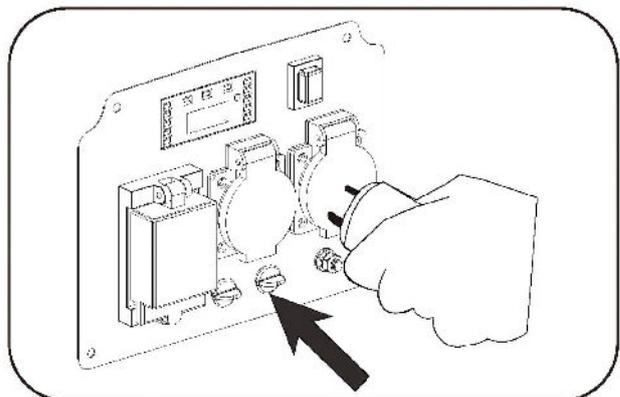
WARNING: If you attempt to start the generator three times and it still fails to start or shuts down after starting, identify the cause and troubleshoot the issue.

- If the generator is equipped with an oil alarm, it will not start if the oil level in the crankcase is below the minimum required level.
- During the break-in period, perform regular oil inspections and follow the recommended maintenance intervals. Refer to the Maintenance chapter for details.

WARNING: Do not exceed 15 seconds for each continuous start attempt. If the generator fails to start, allow it to cool for at least 1 minute before making another attempt. Failure to follow this procedure may result in damage to the starter motor.

2.5 Connecting Electrical Devices

After completing the steps above, the generator can be connected to electrical devices.



WARNING: Do not start or stop the generating set while the output terminal is connected to an electrical device that is in the "ON" state.

3. Connecting Electrical Devices

1. Inspect the power cord for damage before use. Damaged cords pose a risk of electrical shock from crushing, cutting, or heat damage.
2. Ensure the generating set has been properly grounded. If the connected electric devices require grounding, the generating set must also be grounded.
3. Verify that all electrical devices are in the "OFF" position before connecting them.
4. Allow the engine to stabilize and warm up for a few minutes after starting.
5. Connect and turn on the electrical devices.
6. Turn off all electrical devices and disconnect them from the generating set when finished.
7. If supplying power to multiple loads or devices, start with the smallest load and add larger loads incrementally.

DANGER: OVERHEATING

If connected devices overheat, turn them off and disconnect them from the generating set immediately.

DANGER: ELECTRICAL SHOCK

- To reduce the risk of electrical shock, **DO NOT** use electrical cords that are worn, frayed, bare, or otherwise damaged.
- **DO NOT** touch bare wires or receptacles.
- **DO NOT** handle the generating set or electrical cords while standing in water, barefoot, or with wet hands or feet.

Loading Capacity

WARNING: DO NOT overload the generating set.

Exceeding the generating set's capacity can cause damage to the generator and/or the connected electrical devices.

To ensure proper operation, your generating set must be able to supply sufficient rated (running) and starting (surge) watts for all connected electrical devices. Follow these steps to calculate the required power:

1. Count the electrical devices you will operate simultaneously.
2. Determine the total rated (running) watts by adding the power requirements of all devices that will run continuously.
3. Calculate the starting power required for devices with high initial power demands (e.g., motors). Starting power can be estimated by adding the maximum power of all devices with surge requirements to the total running power calculated in step 2.

WARNING: When using the generating set for backup power, ensure that it is equipped with a circuit protector or switch to isolate it from the electric utility.

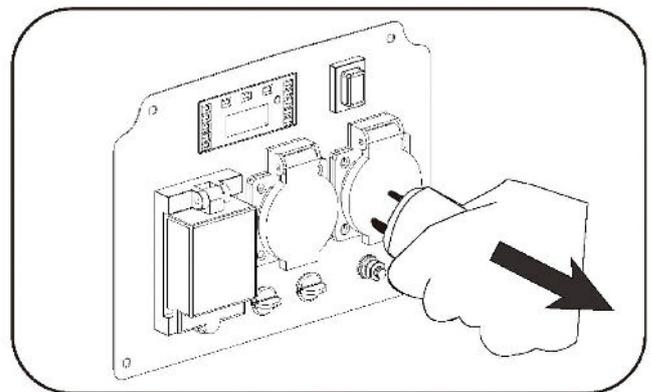
- **Failure to isolate the generating set from the power utility may result in injury or death to utility workers and damage to the generating set due to backfeed of electrical energy.**

Wattage Reference Chart

Electric equipment	Running power (W)	Starting power (W)
Energy saving lamp	5-50	5-50
Computer	250	250
Electric fan	50	100
Refridgerator	50	300
Air-conditioner	1600	3200
Electric hammer	1000	1500
Impact hammer	3000	6000
Water pump	2200	5000
Electric welding machine	5000	7500
Air compressor	5000	10000

4. Stopping the Generating Set

4.1 Remove all electrical device connectors from the generating set panel.



WARNING: NEVER stop the engine while electrical devices are connected and running.

4.2 Turn the combination switch to the "STOP" position to shut down the generator. After the generator stops and cools down, turn the fuel tank cap ventilation knob to "OFF" position.

4.3 Parallel Operation (If applicable)

Ensure that the generating set is in good operating condition before connecting it to other generating sets. The total power of connected electrical devices must not exceed the rated power of the generating set.

- When an electric motor starts, the overload indicator (red) may light up. Normally, it will turn off within 4 seconds. If it does not, consult your local dealer.
- During parallel operation, ensure the energy-saving switches of all generating sets are in the same position.

Steps for Parallel Operation:

1. Connect one generating set to other generating set(s) in parallel. Use a parallel kit to make the connection (the parallel kit must be purchased separately).
2. Start the engine(s) in the proper order and confirm that the running indicator (green) is functioning normally.
3. Connect the plugs of electrical devices to the AC receptacles of the parallel kit.
4. Turn on and operate the electrical devices.

CAUTION:

- **If the generating set is overloaded significantly, the overload indicator (red) will blink continuously, indicating potential damage.**
- **If the overload is minor, the overload indicator (red) will remain on, which may shorten the service life of the generating set.**
- **When continuously operating the generating set, the total power of all connected devices must not exceed the rated power of the generating set.**
- **Always refer to the rated power listed by the manufacturers of your electric devices or tools to avoid exceeding the generating set's capacity.**

IV MAINTENANCE

It is the operator's responsibility to perform all scheduled maintenance on time. Address any issues before operating the generating set. Always adhere to the inspection and maintenance recommendations and schedules provided in this manual.

WARNING:

- **Improper maintenance or failure to address a problem before operation can cause malfunctions, resulting in property damage, serious injury, or DEATH.**
- **Improper maintenance will void your warranty.**

DANGER:

- **Accidental starts can cause severe injury or death. Remove the spark plug cap and ground the generating set before performing any maintenance or service.**

CAUTION:

- **The air filter element may contain PAHs (Polycyclic Aromatic Hydrocarbons), which are harmful to your health. Wear protective gloves during air filter maintenance to minimize exposure.**

1. Generating set maintenance

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

WARNING:

- **DO NOT use water to clean the generating set. Water can enter the generating set through the cooling slots and damage the generating set windings.**
- **DO NOT tamper with the generator in any way.**

IMPORTANT:

- Do not alter the inverter speed. The generator is calibrated to the correct rated frequency and voltage before leaving the factory.
- Unauthorized tampering with the factory settings of the inverter will void the product warranty.

2. Maintenance Schedule

Maintenance Schedule for Engines >80 cc and <225 cc

Follow the service intervals outlined in the chart 1. Perform maintenance more frequently when operating the engine in adverse conditions.

For assistance with engine maintenance, contact your local authorized service dealer.

		Each time before use	After 20 hours of first use	Every 50 hours or annually	Every 100 hours or annually	125 hours after use or annually	250 hours after use or annually	375 hours after use or annually	500 hours after use or annually	Long storage or necessary
Oil	Check	X ^{Note 1}								
	Replace		X ^{Note 2}			X	X	X	X	
Air filter	Inspect			X ^{Note 3}						
	Replace					X	X	X	X	
Spark plug	Inspect					X ^{Note 4}		X ^{Note 4}		
	Replace						X		X	
Spark ar- restor (if equipped)	Clean/ Replace				X ^{Note 5}					
Com- bustion chamber	Clean						X ^{Note 6}		X ^{Note 6}	
Fuel/Oil	Drain									X

Chart 1: Maintenance schedule

Note 1: Check the engine oil level every time before use and add oil as needed to maintain the specified range. Failure to do so may result in engine damage.

Note 2: A break-in period is required when the engine is first used. During this time, oil consumption and deterioration will accelerate. It is essential to change the oil after the first 20 hours of use to prevent engine damage.

Note 3: If the engine is operated under heavy-duty or dirty conditions, inspect and clean the air filter as needed when it becomes dirty.

Note 4: If the engine is operated under heavy-duty or dirty conditions, inspect, clean, adjust, or replace the spark plug as necessary if it is dirty or defective.

Note 5: A dirty spark arrestor increases exhaust back-pressure and can negatively impact engine performance. Clean or replace the spark arrestor when it becomes dirty or damaged.

Note 6: Cleaning the combustion chamber should be performed by knowledgeable, experienced owners or certified service centers. This procedure is not required for emissions compliance or performance during the engine's service life unless the engine has been operating long-term under heavy-duty and dirty conditions.

3. Engine Maintenance

3.1 Engine Oil

WARNING:

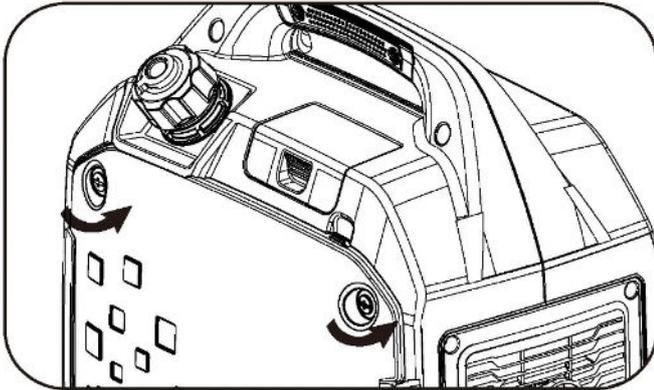
- **The engine is not filled with oil at the factory. Operating the engine before it has been properly filled with the recommended type and amount of oil may cause engine damage and void your warranty.**

Recommendations for Engine Oil:

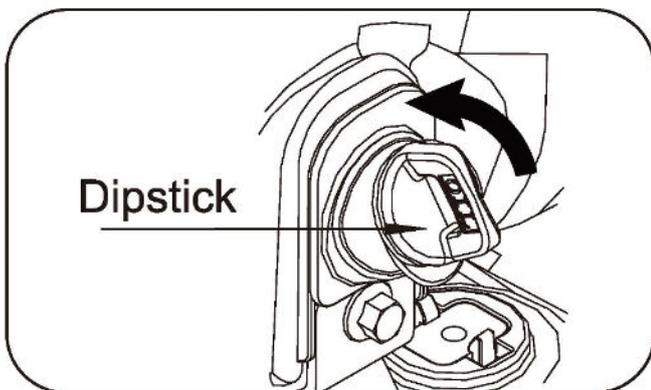
- Only use four-stroke engine oil with a performance level of SJ, SL, or equivalent, which meets or exceeds API standards.
- Check the API label on the oil container to ensure it includes the designation "SJ, SL," or an equivalent level.
- SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the provided chart may be used if the average temperature in your area falls within the specified range.

3.2 Add Oil

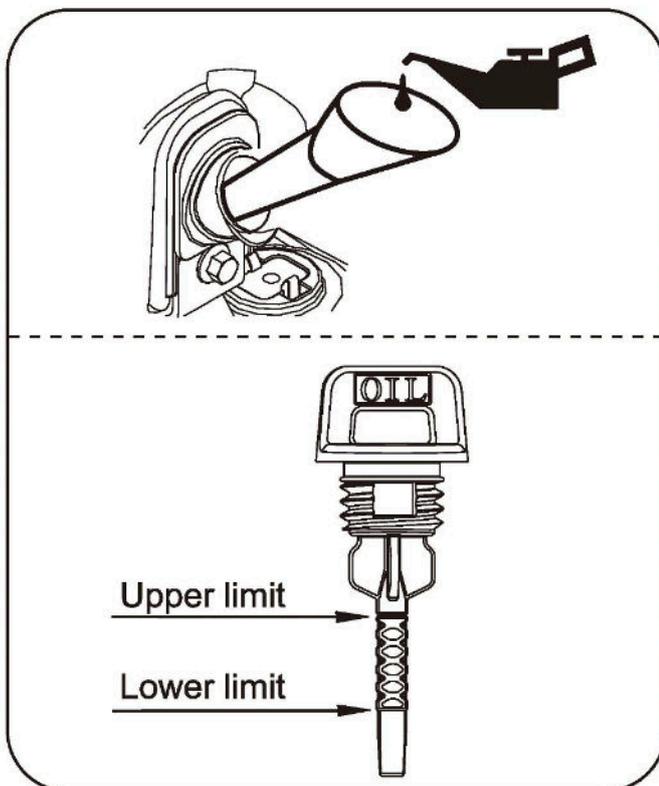
1. Place the engine on a level surface.
2. Remove the right cover.



3. Remove the dipstick and wipe it clean.



4. Add the recommended oil until it reaches the upper limit.



5. Fully tighten the dipstick.

CAUTION: Oil Level Check

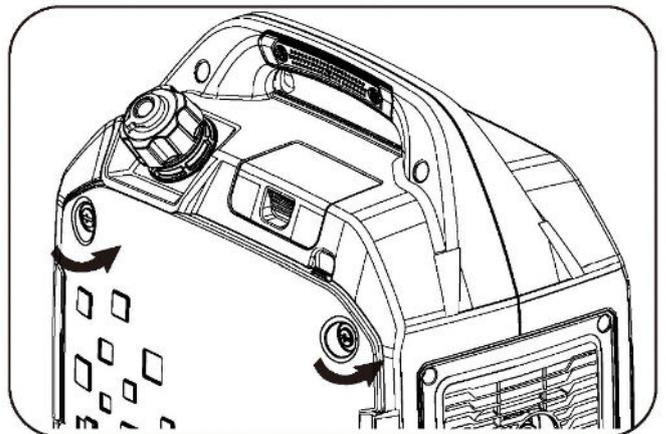
Insert the dipstick into the filler port, allowing it to rest on the filler neck without screwing it in. Then remove the dipstick and check the oil level.

6. Dispose of used oil at an approved waste management facility.

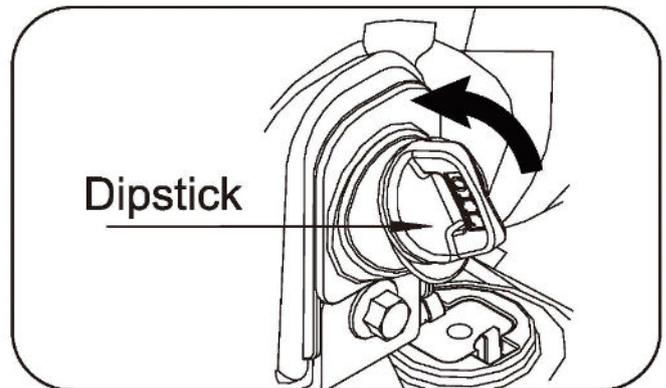
3.3 Change Oil

CAUTION: Change the oil when the engine is warm from operation. The oil temperature can reach up to 140°C when warm. Take care during this process to avoid burns.

1. Place the machine on a level surface, ensuring it is elevated 300mm above the ground.
2. Remove the right cover.



3. Position a waste oil container beneath the machine.
4. Remove the oil dipstick and tilt the machine to drain the oil.

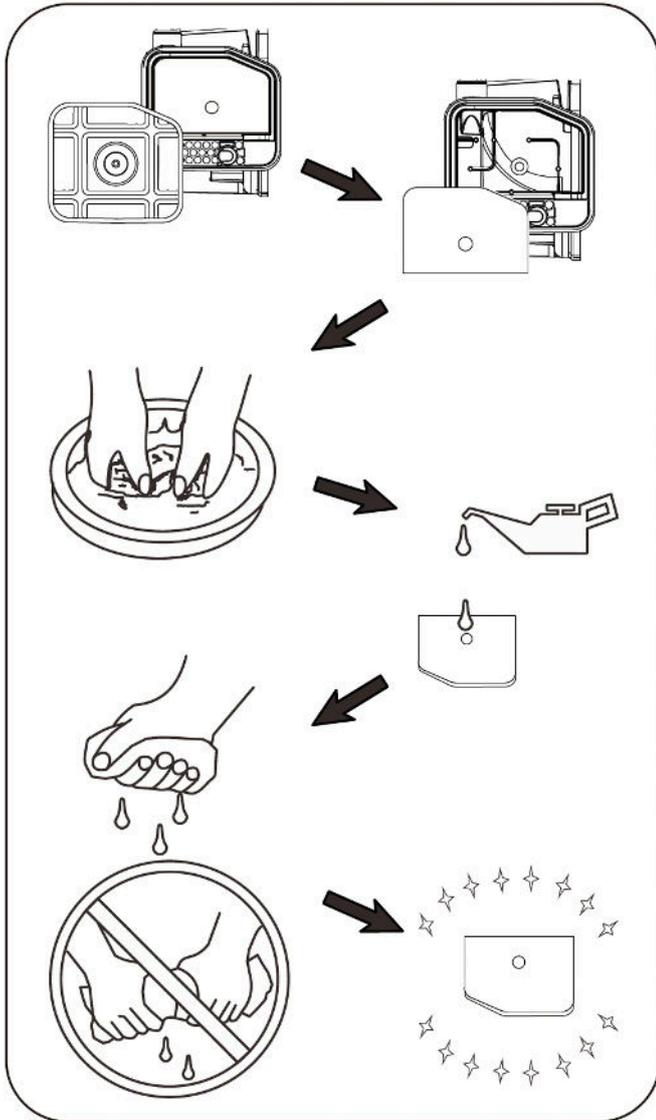


5. Add the recommended oil to the upper limit.
6. Fully tighten the dipstick.
7. Dispose of used oil at an approved waste management facility.
8. Reinstall the oil maintenance cover.

3.4 Air Filter

1. Remove the appearance cover.
2. Loosen the filter fix clamp and remove the air filter cover.
3. Remove the foam filter element.
4. Wash the filter element in liquid detergent and warm water.

5. Thoroughly squeeze the filter element dry using a clean cloth.
6. Saturate the filter element with clean engine oil.
7. Squeeze the filter element in a clean absorbent cloth to remove all excess oil.
8. Reassemble the filter element onto the filter unit.
9. Secure the filter fix clamp.
10. Reinstall the appearance cover.

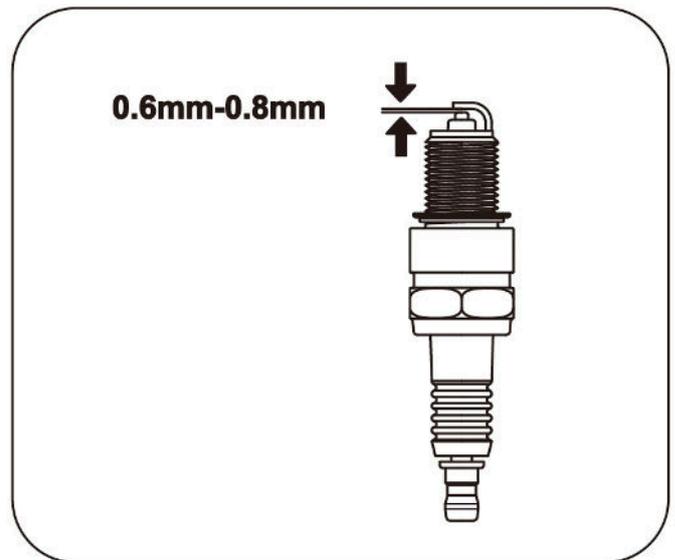


WARNING:
DO NOT run the engine without the air filter in place. Doing so can result in serious damage or danger.

3.5 Spark Plug

1. Clean any dirt from the spark plug cap and the spark plug base.
2. Remove the spark plug cap.
3. Use a socket wrench to loosen and remove the spark plug.
4. Inspect the spark plug and washer. If damaged or worn, replace it with a new one. If reusing the spark plug, clean it with a wire brush.
5. Check the spark plug gap and adjust it if necessary by carefully bending the side electrode.

Spark Plug Gap: 0.6mm-0.8mm

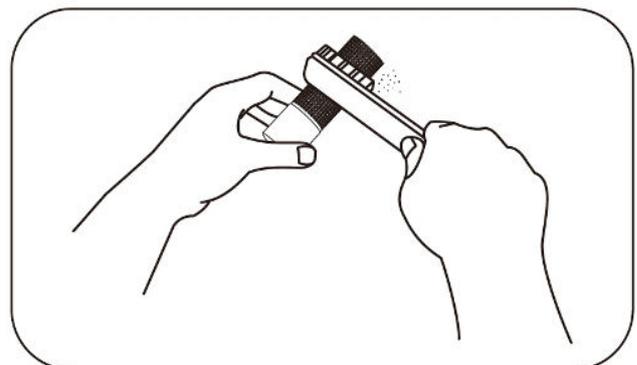


6. Carefully thread the spark plug into the engine by hand to prevent cross-threading.
7. Once seated, use a spark plug wrench to tighten the spark plug.
 Spark Plug Tightening Torque: 15-20 N·m
8. Attach the spark plug cap and connect the spark plug wire to the plug.

WARNING:
Only use the recommended spark plug or an equivalent. DO NOT use spark plugs with an improper heat range as it may damage the engine.

3.6 Spark Arrester (Applicable Types)

1. Allow the generating set to cool completely before servicing the spark arrester.
2. Remove the muffler blind window.
3. Remove the spark arrester screen.
4. Carefully clean the carbon deposits from the spark arrester screen using a wire brush.
5. Replace the spark arrester if it is damaged.
6. Reinstall the spark arrester in the muffler and then reinstall the muffler blind window.



Clean carbon deposit

V TROUBLE-SHOOTING

Failure	Trouble	Solution
Generating set fails to start	Transfer switch is in "OFF" or "STOP" position.	<ul style="list-style-type: none"> • If the engine is cold: Set the transfer switch to "CHOKE" and follow the starting procedure. • If the engine is hot: Set the transfer switch to "RUN" and follow the starting procedure.
	Lack of fuel.	<ul style="list-style-type: none"> • Fill the fuel tank according to the instructions in this manual.
	Lack of engine oil.	<ul style="list-style-type: none"> • Check the oil level. This engine is equipped with a low-oil sensor and will not start if the oil level is below the prescribed lower limit.
	No ignition.	<ul style="list-style-type: none"> • Remove the spark plug cap and clean any dirt around the spark plug base. • Remove the spark plug and install it in the plug cap. • Turn the transfer switch to "RUN." Ground the electrode to any engine ground and pull the recoil starter to check if sparks jump across the gap. • If there is no spark, replace the spark plug. Reinstall the spark plug and restart the engine according to the instructions in this manual.
	Spark plug is splashed by fuel.	<ul style="list-style-type: none"> • Remove the spark plug and wipe off any fuel before reinstalling.
Generating set has no output	The generating set flames out after running for a certain time.	<ul style="list-style-type: none"> • Ensure the ventilation knob on the fuel tank cap is in the "ON" position. • Check the fuel and oil levels, and refill if necessary.
	Breaker trip	<ul style="list-style-type: none"> • Reset circuit breakers.
	Inadequate cord sets or extension cords.	<ul style="list-style-type: none"> • Verify that the cord sets or extension cords meet the requirements outlined in the Controls section of this manual, including proper cable size. • Consult Customer Service if further assistance is needed.

VI STORAGE AND TRANSPORTATION

Storage

The generating set should be started at least once every two weeks and allowed to run for at least 20 minutes. For longer-term storage (2 months or more), follow the instructions below:

DANGER: Fire or explosion

Gasoline is highly flammable and extremely explosive. Empty the fuel tank and shut off the valve before storing or transporting the generating set.

1. Allow the generating set to cool completely before storage.
2. Clean the generating set following the instructions in the Maintenance section.
3. Drain all fuel completely from the fuel tank, fuel hose, and carburetor to prevent gum formation.
4. Turn the transfer switch to the "STOP" position to cut off the fuel supply.

5. Remove the oil drain plug and drain the oil (refer to the Engine Oil section).
6. Remove the spark plug and pour approximately 15 ml of fresh oil into the cylinder. Pull the recoil starter gently to distribute the oil and lubricate the cylinder, then reinstall the spark plug.
7. Store the unit in a clean, dry area away from direct sunlight.

Transportation

For transportation or short-term storage:

1. Ensure the generator is in its normal operating position and secured vertically to prevent fuel leakage.
2. Turn the combination switch to the "STOP" position.
3. Set the fuel cap ventilation knob to the "OFF" position.

WARNING: Transportation Precautions

- **Do not overfill the fuel tank.**
- **Do not operate the generating set while it is on a vehicle.**
- **Always remove the generating set from the vehicle and use it in a well-ventilated area.**

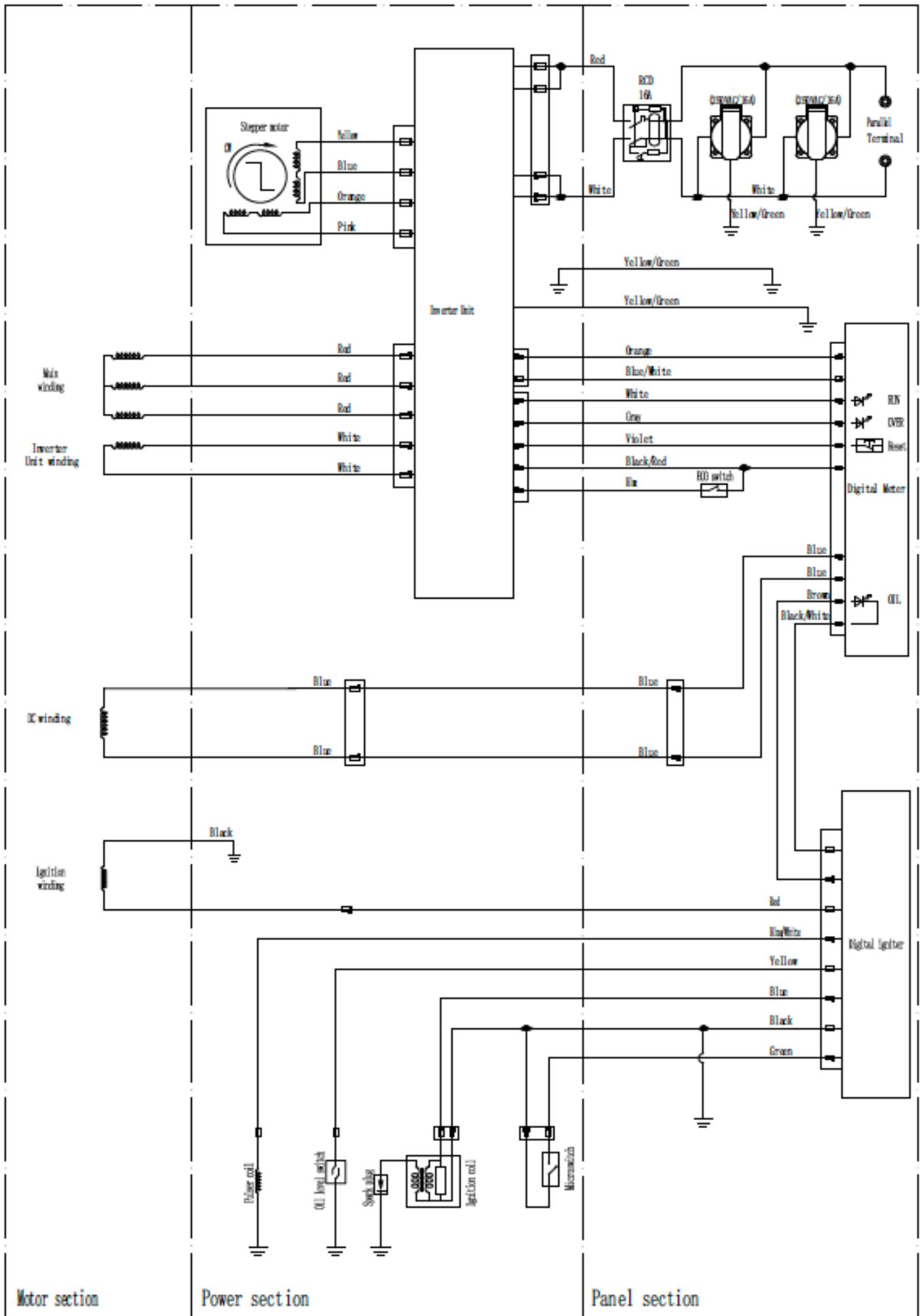
- Avoid placing the generating set in direct sunlight when storing it on a vehicle.
- Prolonged storage in an enclosed vehicle can lead to high temperatures, causing fuel to vaporize and potentially resulting in an explosion.
- Avoid driving on rough roads for an extended period with the generating set on board. If transporting on rough roads is unavoidable, drain the fuel from the generating set beforehand.

VII SPECIFICATION

1. Specification parameter table

Engine parameter	Engine model	165FED/P
	Style	OHV
	Displacement (cm ³)	149
	Ignition style	CDI
	Start style	Recoil starter
	Oil capacity (L)	0,5
Generator parameter	Generator model	TSR-2700i
	Frequency (Hz)	50
	Voltage (V)	230
	Rated power (kW)	2,7
	Maximum power (kW)	2,9
	Power factor	1
	Insulation grade	F
	Fuel capacity (L)	5,8
	Operating temperature (°C)	-10 ~ 40
	Max. site altitude of installation (m)	1500
	Measured sound pressure level [dB(A)]	≤72
	Measurement uncertainty [dB(A)]	≤1,5
	Guaranteed sound power level [dB(A)]	≤93
	Net weight (kg)	21

Note: The generating set with different specification and configurations may have different parameters and may change at any time without notice.





DECLARATION OF CONFORMITY

We: TSR-ELSITE Oy
Orikedonkatu 17, 20380 Turku, Finland

Hereby declare that the following appliances comply with the relevant basic safety and health requirements of the EC Directives based on their design and type, as brought into circulation by us.

This declaration applies exclusively to the machinery in the condition in which it was placed on the market and excludes any components added or modifications made by the end user after delivery.

1. Type: Gasoline generating set TSR-2700i Product code: 707010001
2. Serial number: xxxxx-xxxxx (on cylinder head cover or on air filter cover)

3. Used harmonized standards: ISO 8528-13:2016

4. Applicable EC Directives:

Machinery Directive 2006/42/EC
Directive (EU) 2016/1628
Noise Directive 2000/14/EC (Amended by 2005/88/EC)
Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
Reach Regulations (EC) NO.1907/2006

Guaranteed sound power level: 93 dB(A) for TSR-2700i

5. Responsible for documentation: TSR-ELSITE Oy, Orikedonkatu 17, 20380 Turku, Finland

6. Person responsible for compiling the technical files established within the EU: Toni Raivo

Turku 30.12.2024

CEO
TSR-ELSITE Oy