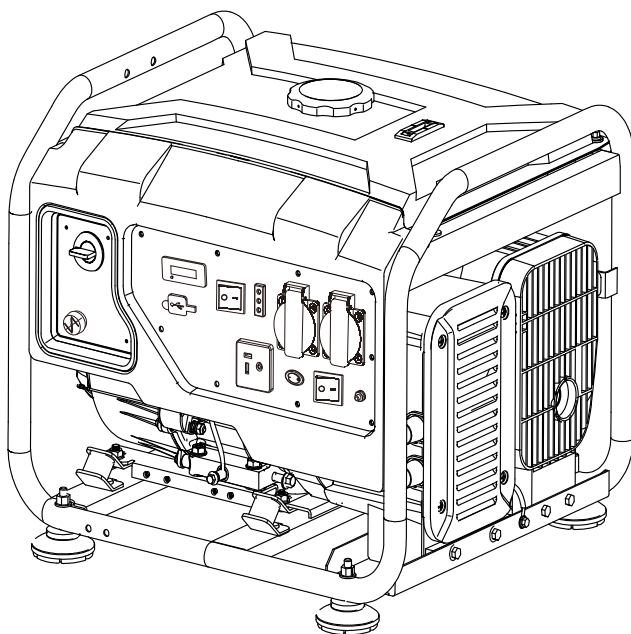




INVERTER GENERATOR



TPE Di4000

Open Frame Digital Inverter
Generator 3500 Running Watts | 4000 Peak Watts

⚠ WARNING

Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to www.P65Warnings.ca.gov.

DISCLAIMERS:

All information, illustrations and specifications in this manual are based on the latest information available at the time of publishing. The illustrations used in this manual are intended as representative reference views only. Moreover, because of our continuous product improvement policy, we may modify information, illustrations and/or specifications to explain and/or exemplify a product, service or maintenance improvement. We reserve the right to make any change at any time without notice. Some images may vary depending upon which model is shown.

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⚠ DANGER



This manual contains important instructions for operating this generator. For your safety and the safety of others, be sure to read this manual thoroughly before operating the generator. Failure to properly follow all instructions and precautions can cause you and others to be seriously hurt or killed.

TPE TECHNICAL SPECIFICATIONS

Model Number	Running Watts	Peak Watts	Gasoline Tank Size (G)	Rated Speed (RPM)	Ignition Type	Spark plug	Engine Disp (cc)	Stroke X Bore	Oil Capacity (L)	Oil Type	Fuel Type
TPE DI4000	3500	4000	10L/2.65G	3600	TCI	F7RTC	212cc	55X70	0.6 L	10W30	< 3%

NOTICE

This generator is NOT equipped with altitude carburetor modification. Even with a carburetor modification, engine horsepower will decrease about 3.5% for each 300 meter (1,000 foot) increase in altitude. The effect of altitude on horsepower will be greater if no carburetor modification is made. A decrease in engine horsepower will decrease the power output of the generator. Contact our service team to order altitude kits.

FOR YOUR RECORDS:

Date of Purchase:	
Inverter Model Number:	
Purchased from Store/Dealer:	
Inverter Serial Number:	

SAFETY

SAFETY DEFINITIONS

The words DANGER, WARNING, CAUTION and NOTICE are used throughout this manual to highlight important information. Be certain that the meanings of these alerts are known to all who work on or near the equipment.



This safety alert symbol appears with most safety statements. It means attention, become alert, your safety is involved! Please read and abide by the message that follows the safety alerts symbol.

⚠ DANGER

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

⚠ WARNING

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

⚠ CAUTION

Indicates a hazardous situation which, if not avoided, *could* result in minor or moderate injury.

NOTICE

Indicates a situation which can cause damage to the generator, personal property and/or the environment, or cause the equipment to operate improperly.

NOTE: Indicates a procedure, practice or condition that should be followed in order for the generator to function in the manner intended.

SAFETY SYMBOL DEFINITIONS

Symbol	Description
	Safety Alert Symbol
	Asphyxiation Hazard
	Burn Hazard
	Burst/Pressure Hazard
	Don't leave tools in the area
	Electrical Shock Hazard
	Explosion Hazard
	Fire Hazard
	Lifting Hazard
	Pinch-Point Hazard
	Read Manufacturer's Instructions
	Read Safety Messages Before Proceeding
	Wear Personal Protective Equipment (PPE)

SAFETY

GENERAL SAFETY RULES

⚠ DANGER



Never use the inverter in a location that is wet or damp. Never expose the inverter to rain, snow, water spray or standing water while in use. Protect the inverter from all hazardous weather conditions. Moisture or ice can cause a short circuit or other malfunction in the electrical circuit.



Never operate the inverter in an enclosed area. Engine exhaust contains carbon monoxide. Only operate the inverter outside and away from windows, doors and vents.

⚠ WARNING



Voltage produced by the inverter could result in death or serious injury.

- Never operate the inverter in rain or a flood plain unless proper precautions are taken to avoid being subject to rain or a flood.
- Never use worn or damaged extension cords.
- Always have a licensed electrician connect the inverter to the utility circuit.
- Never touch an operating inverter if the inverter is wet or if you have wet hands.
- Never operate the inverter in highly conductive areas such as around metal decking or steel works.
- Always use grounded extension cords. Always use three-wire or double-insulated power tools.
- Never touch live terminals or bare wires while the inverter is operating.
- Be sure the inverter is properly grounded before operating.

⚠ WARNING



Gasoline, gasoline vapors & liquid petroleum gas (LPG) are extremely flammable and explosive under certain conditions.

- Always refuel the generator outdoors, in a well-ventilated area.
- Never remove the fuel cap with the engine running.
- Never refuel the inverter while the engine is running. Always turn engine off and allow the generator to cool before refueling.
- Only fill fuel tank with gasoline.
- Keep sparks, open flames or other forms of ignition (such as match, cigarette, static electric source) away when refueling.
- Never overfill the fuel tank. Leave room for fuel to expand. Overfilling the fuel tank can result in a sudden overflow of gasoline and result in spilled gasoline coming in contact with HOT surfaces. Spilled fuel can ignite. If fuel is spilled on the inverter, wipe up any spills immediately. Dispose of rag properly. Allow area of spilled fuel to dry before operating the inverter.
- Wear eye protection while refueling.
- Never use gasoline as a cleaning agent.
- Store any containers containing gasoline in a well-ventilated area, away from any combustibles or source of ignition.
- Check for fuel leaks after refueling. Never operate the engine if a fuel leak is discovered.

⚠ WARNING



Never operate the inverter if powered items overheat, electrical output drops, there is sparking, flames or smoke coming from the inverter, or if the receptacles are damaged.



Never use the inverter to power medical support equipment.



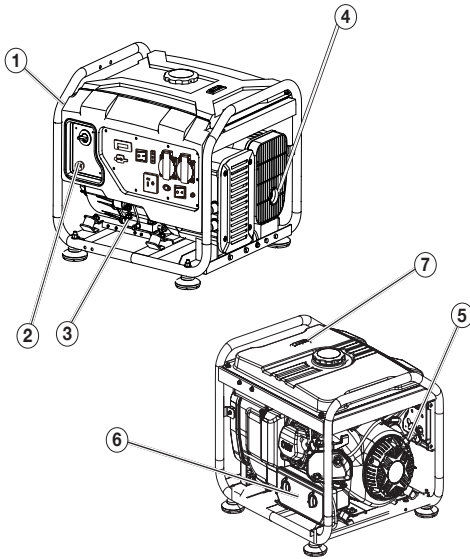
Always remove any tools or other service equipment used during maintenance from the inverter before operating.

NOTICE

Never modify the inverter. Never operate the inverter if it vibrates at high levels, if engine speed changes greatly or if the engine misfires often. Always disconnect tools or appliances from the inverter before starting.

FEATURES

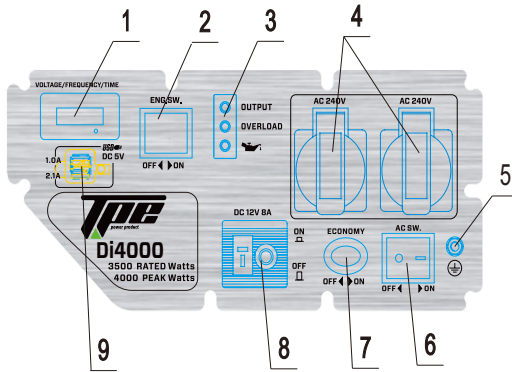
TPE Di4000 FEATURES



- ① **Open frame inverter design:** Quiet, fuel efficient power provided by a digital inverter built in a rugged open frame design.
- ② **Choke lever:** Pull to choke and push in to run once the engine has started.
- ③ **Oil Fill Plug/Dipstick:** Must be removed to add and check oil.
- ④ **Muffler and Spark Arrestor:** Avoid contact until the engine is cooled down. The spark arrestor prevents sparks from exiting the muffler. It must be removed for servicing.
- ⑤ **Recoil Handle:** Pull to start the engine.
- ⑥ **Air-filter Access Cover:** Gain access to air-filter for maintenance.
- ⑦ **Fuel Gauge:** Indicates fuel level.

FEATURES

CONTROL PANEL FEATURES



- ① **VFT Data Center:** Press and release the mode button to toggle between Voltage, Frequency, Total Hour Meter and Run/Maintenance Timer.

U250	Voltage
F-60	Frequency in hertz
00:07	Lifetime run hours
0000	Run/Maintenance

The Run/Maintenance Timer displays the time in hours and minutes each time the generator is ran. The run timer resets to 00:00 when the generator is shut off. Built into this run timer is a maintenance reminder. When the new generator is ran for 25 hours, the meter will display P25. This is to remind you to change the oil after the initial 25 hours of run time. When it displays P50, it is time to clean the air filter. When it displays P100 it is time change/clean the fuel filter, clean the air filter, and change the oil.
- ② **Engine Control Switch:** Switch to “Stop” to stop the engine. Switch to “Run” before starting engine.
- ③ **Indicator Lights:**
 - Low Oil LED:** Indicates low oil level.
 - Overload LED:** Indicates that the inverter is overloaded.
 - Output Ready LED:** Indicates the inverter is ready to be used.
- ④ **2 x 240-Volt 15 Amp Outlet**
- ⑤ **Ground Terminal:** The ground terminal is used to externally ground the inverter.
- ⑥ **AC Switch:** High standard switch to control the AC output.
- ⑦ **Efficiency Mode Switch:** Move the switch to the ON position when powering small resistive loads such as a computer or electric light; the engine speed will automatically be kept to a minimum, thereby reducing fuel consumption and noise. Select the OFF position when powering large inductive loads such as an air conditioner or electric pump; the engine speed will be kept higher for maximum electrical starting power.
- ⑧ **DC 12V 8A outlet:** T plug for charging The Battery (Cable need purchase from dealer).
- ⑨ **USB Duplex:** 5V DC USB outlets that come with 1 and 2.1 amp rating. 5-Volt DC USB devices or extension cords must be fitted with a standard Type “A” USB male plug for connection to the generator.

OPERATION

BEFORE STARTING THE INVERTER



BEFORE STARTING THE INVERTER, REVIEW SAFETY SECTION.

Location Selection – Before starting the inverter, avoid exhaust and location hazards by verifying:

- You have selected a location to operate the inverter that is outdoors and well ventilated.
- You have selected a location with a level and solid surface on which to place the inverter.
- You have selected a location that is at least 15 feet (4.5 m) away from any building, other equipment or combustible material.
- If the inverter is located close to a building, make sure it is not located near any windows, doors and/or vents.

⚠ DANGER

Using a generator indoors
CAN KILL YOU IN MINUTES.

Generator exhaust contains carbon monoxide.
This is a poison you cannot see or smell.



NEVER use inside a home or garage, **EVEN IF** doors and windows are open.



Only use **OUTSIDE** and far away from windows, doors, and vents.

Avoid other generator hazards.
READ MANUAL BEFORE USE.

⚠ WARNING



Always operate the inverter on a level surface. Placing the inverter on non level surfaces can cause the inverter to tip over, causing fuel and oil to spill. Spilled fuel can ignite if it comes in contact with an ignition source such as a very hot surface.

NOTICE

Only operate the inverter on a solid, level surface. Operating the inverter on a surface with loose material such as sand or grass clippings can cause debris to be ingested by the inverter that could:

- Block cooling vents
- Block air intake system

Weather – Never operate your inverter outdoors during rain, snow or any combination of weather conditions that could lead to moisture collecting on, in or around the generator.

Dry Surface – Always operate the inverter on a dry surface free of any moisture.

No Connected Loads – Make sure the inverter has no connected loads before starting it. To ensure there are no connected loads, unplug any electrical extension cords that are plugged into the control panel receptacles.

NOTICE

Starting the inverter with loads already applied to it could result in damage to any appliance being powered off the inverter during the brief start-up period.

Grounding the Generator – The National Electric Code (NEC), as well as many local electrical codes, may require the generator to be connected to earth ground. As the generator application has many variables that cannot be determined by the manufacturer of the generator, a licensed electrician will need to determine if a grounding rod is needed.

If a licensed electrician has determine the application requires a ground rod, make sure it is connected to earth ground by connecting the ground terminal on the control panel to earth ground using copper wire (minimum 10 AWG). Consult a qualified electrician for local grounding requirements.

Neutral Floating: The generator (stator winding) is isolated from the frame and from the AC receptacle ground pin.

Consult with your local municipalities for your grounding codes.

⚠ WARNING



Be sure the inverter is properly connected to earth ground before operating.

OPERATION

POWERCORD

Using Extension Cords

Full Boar Portable Power assumes no responsibility for the content within this table. The use of this table is the responsibility of the user only. This table is intended for reference only. The results produced by using this table are not guaranteed to be correct or applicable in all situations as the type and construction of cords are highly variable. Always check with local regulations and a licensed electrician prior to installing or connecting an electrical appliance

Extension Cord Wire Gauge Size (AWG)

AMPS	LENGTH OF EXTENSION CORD (m)								
	3	6	9	12	15	18	24	30	36
5	20	18	16	14	12	12	10	10	8
10	18	16	14	12	12	10	10	8	8
15	16	14	12	12	10	10	8	8	6
20	14	12	12	10	10	8	8	6	6
25	12	12	10	10	8	8	6	6	6
30	12	10	10	8	8	6	6	6	6
35	10	10	8	8	6	6	6	6	6

TRANSPORTING THE GENERATOR

The generator should be stopped and both the fuel control switch and fuel cap should be tight before transporting the generator. Keep the unit level during transport to minimize the possibility of fuel leakage or, if possible, drain out the fuel prior to transport.

If the generator has been operating, allow the unit to cool down before loading it onto the transport vehicle.

Use only the generator's fixed frame for lifting the unit or attaching any load restraints such as ropes or tie-down straps. Do not attempt to lift or secure the generator by holding onto any of its other components.

OPERATION

ADDING/CHECKING ENGINE FLUIDS AND FUEL



BEFORE ADDING/CHECKING ENGINE FLUIDS AND FUEL, REVIEW SAFETY SECTION.

DANGER



Filling the fuel tank with gasoline while the inverter is running can cause gasoline to leak and come in contact with hot surfaces that can ignite the gasoline.

Before starting the inverter, always check the level of:

- Engine oil
- Gasoline in the fuel tank

Once the inverter is started and the engine gets warm, it is not safe to add gasoline to the fuel tank or engine oil to the engine while the engine is running or the engine and muffler are hot.

CHECKING AND / OR ADDING ENGINE OIL

WARNING



Internal pressure can build in the engine crankcase while the engine is running. Removing the oil fill plug/dipstick while the engine is hot can cause extremely hot oil to spray out of the crankcase and can severely burn skin. Allow engine oil to cool for several minutes before removing the oil fill plug/dipstick.

The unit as shipped does not contain oil in the engine. You must add engine oil before starting the inverter for the first time. See *Checking Engine Oil* and *Adding Engine Oil* for instructions on checking engine oil level and the procedure for adding engine oil.

NOTICE

The engine does not contain engine oil as shipped. Attempting to start the engine without adding engine oil will permanently damage internal engine components.

The engine is equipped with a low oil shutdown switch. If the oil level becomes low, the engine may shut down and not start until the oil is filled to the proper level.

The owner of the inverter is responsible to ensure the proper oil level is maintained during the operation of the generator. Failure to maintain the proper oil level can result in engine damage.

ADDING GASOLINE TO THE FUEL TANK

WARNING



Never refuel the inverter while the engine is running.



Always turn the engine off and allow the inverter to cool before refueling.

CAUTION



Avoid prolonged skin contact with gasoline. Avoid prolonged breathing of gasoline vapors.

Required Gasoline – Only use gasoline that meets the following requirements:

- Unleaded gasoline only
- Gasoline with maximum 10% ethanol added
- Gasoline with an 87 octane rating or higher

Filling the Fuel Tank – Follow the steps below to fill the fuel tank:

1. Shut off the inverter.
2. Allow the inverter to cool down so all surface areas of the muffler and engine are cool to the touch.
3. Move the inverter to a flat surface.
4. Clean area around the fuel cap.
5. Remove the fuel cap by rotating counterclockwise.

NOTICE

Do not overfill the fuel tank. Spilled fuel will damage some plastic parts.

6. Slowly add gasoline into the fuel tank. Be very careful not to overfill the tank. The gasoline level should NOT be higher than the red ring (see Figure 1).
7. Install the fuel cap by rotating clockwise.

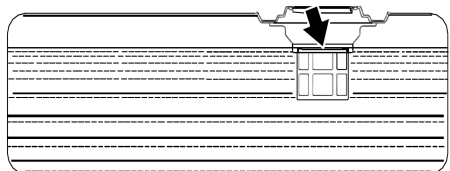


Figure 1: Maximum gasoline fill level

OPERATION

STARTING THE INVERTER





BEFORE STARTING THE INVERTER, REVIEW SAFETY SECTION.

For proper starting and operation of the inverter, make sure you review the inverter control panel features and their descriptions.

Before attempting to start the inverter, verify the following:

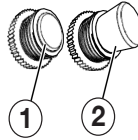
- The engine is filled with engine oil (see *Engine Oil Correct Level*).
- The inverter is situated in a proper location (see *Location Selection*).
- The inverter is on a dry surface (see *Weather and Dry Surface*).
- All loads are disconnected from the inverter (see *No Connected Loads*).
- The inverter is properly grounded (see *Grounding the Inverter*)

⚠ DANGER	
	Never use the inverter in a location that is wet or damp. Never expose the inverter to rain, snow, water spray or standing water while in use. Protect the inverter from all hazardous weather conditions. Moisture or ice can cause a short circuit or other malfunction in the electrical circuit.
	Never operate the inverter in an enclosed area. Engine exhaust contains carbon monoxide. Only operate the inverter outside and away from windows, doors and vents.

Starting TPE Di4000

1. Move inverter to a flat surface outside in a well ventilated area away from open doors or windows.
2. Check oil levels. If it is the first time starting make sure to add oil (see *Adding Engine Oil*).
3. Disconnect all electrical loads from the generator.

4. Make sure the circuit breakers are properly set (see Figure 2 below).



- ① 240V Breaker Operating Position
- ② 240V Breaker Tripped Position

Figure 2: Breaker position

5. Turn the fuel valve switch to **ON** position (see Figure 3).

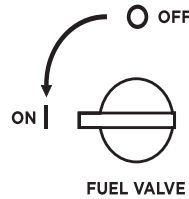


Figure 3: Fuel valve - ON

6. Push the engine control switch into the **RUN** position (see Figure 4).



Figure 4: Engine control switch - RUN

7. For cold starting, pull out the choke lever on the control panel (see Figure 5).

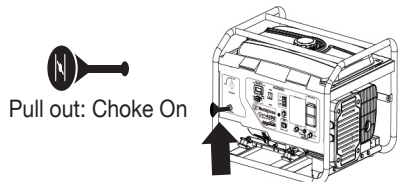


Figure 5: Pull choke lever

8. Firmly grasp and pull the recoil handle slowly until you feel increased resistance. At this point, apply a rapid pull while pulling up and slightly away from the generator.
9. As the engine starts and stabilizes, push the choke lever in.
10. Plug in devices.

OPERATION

STOPPING THE INVERTER

Normal Operation

During normal operation, use the following steps to stop your inverter:

1. Remove any connected loads from the control panel receptacles.
2. Allow the inverter to run at “no load” to reduce and stabilize engine and alternator temperatures.
3. Push the engine control switch to the **STOP** position (see Figure 6) .

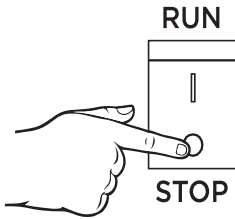


Figure 6: Push engine control switch to STOP position

During an Emergency

If there is an emergency and the inverter must be stopped quickly, move the engine control switch to the **STOP** position immediately (see Figure 6).

USING EFFICIENCY MODE

The inverter is equipped with an efficiency mode switch to minimize fuel consumption. In efficiency mode, the inverter will sense the load and adjust the engine RPM to the current load requirements. Efficiency mode should be used only after the inverter has been warmed up to operating temperature.

1. To turn on the efficiency mode, press the switch to the ON position).
2. If no load is present, the inverter RPM will drop down to an idle speed.
3. As a load is applied, the inverter will sense the load and engine RPM will increase according to the load applied.
4. To run the inverter at maximum power and RPM, press the efficiency mode switch to the OFF position.

RESETTING THE RESET BREAKER

The inverter will trip the breaker and automatically disconnect from the load when the controls sense a predetermined overload condition. The inverter engine will continue to run, but there will not be any electrical output.

1. Turn off all devices and unplug them from the inverter.
2. Determine the wattage required from the devices being powered by the inverter (see *Power Output and Demand*). Make sure the wattage required does not exceed the maximum output of the inverter.
3. Press in the reset breaker to reset it (see Figure 7).

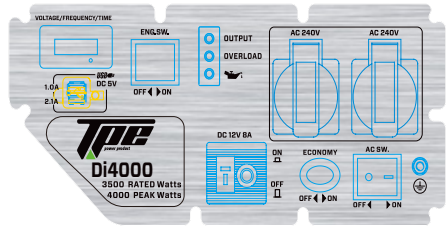


Figure 7: Press in reset breaker

4. Plug the devices in to the inverter.
5. Turn on the devices as needed.

MAINTENANCE



BEFORE PERFORMING MAINTENANCE ON THE INVERTER, REVIEW THE SAFETY SECTION, AS WELL AS THE FOLLOWING SAFETY MESSAGES.

⚠ WARNING	
	Avoid accidentally starting the inverter during maintenance by removing the spark plug boot from the spark plug. For electric start inverters, also disconnect the battery cables from the battery (disconnect the black negative (-) cable first) and place the cables away from the battery posts to avoid arcing.
	Allow hot components to cool to the touch prior to performing any maintenance procedure.
	Internal pressure can build in the engine crankcase while the engine is running. Removing the oil fill plug/dipstick while the engine is hot can cause extremely hot oil to spray out of the crankcase and can severely burn skin. Allow engine oil to cool for several minutes before removing the oil fill plug/dipstick.
	Always perform maintenance in a well-ventilated area. Gasoline fuel and fuel vapors are extremely flammable and can ignite under certain conditions.

⚠ CAUTION	
	Avoid skin contact with engine oil or gasoline. Prolonged skin contact with engine oil or gasoline can be harmful. Frequent and prolonged contact with engine oil may cause skin cancer. Take protective measures and wear protective clothing and equipment. Wash all exposed skin with soap and water.

⚠ WARNING	
	Failure to perform periodic maintenance or not following maintenance procedures can cause the inverter to malfunction and could result in death or serious injury.

NOTICE	
Periodic maintenance intervals vary depending on inverter operating conditions. Operating the inverter under severe conditions, such as sustained high-load, high-temperature, or unusually wet or dusty environments, will require more frequent periodic maintenance. The intervals listed in the maintenance schedule should be treated only as a general guideline.	

Following the maintenance schedule is important to keep the inverter in good operating condition. The following is a summary of maintenance items by periodic maintenance intervals.

TABLE 1: MAINTENANCE SCHEDULE - OWNER PERFORMED

Maintenance Item	Before Every Use	After First 20 Hours or First Month of Use	After 50 Hours of Use or Every 6 Months	After 100 Hour of Use or Every 6 Months	After 300 Hours of Use or Every Year
Engine Oil	Check Level	Change	Change	-	-
Cooling Features	Check/Clean	-	-	-	-
Air Filter	Check	-	Clean*	-	Replace
Spark Plug	-	-	-	Check/Clean	Replace
Spark Arrestor	-	-	-	Check/Clean	-
Valve Clearance**	-	-	-	Check/Adjust	-

*Service more frequently if operating in dry and dusty conditions

**Recommend to have service done by authorized Westinghouse service dealer

MAINTENANCE

ENGINE OIL MAINTENANCE

Engine Oil Specification

1. Only use the engine oil specified in Figure 8.
2. Only use 4-stroke/cycle engine oil. **NEVER USE 2-STROKE/CYCLE OIL.** Synthetic oil is an acceptable substitute for conventional oil.

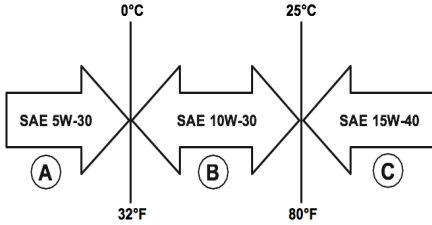


Figure 8: Recommended oil

CHECKING ENGINE OIL

NOTICE

Always maintain proper engine oil level. Failure to maintain proper engine oil level could result in severe damage to the engine and/or shorten the life of the engine.
Always use the specified engine oil. Failure to use the specified engine oil can cause accelerated wear and/or shorten the life of the engine.

Engine oil level should be checked before every use.

1. Always operate or maintain the inverter on a flat surface.
2. Stop engine if running.
3. Let engine sit and cool for several minutes (allow crankcase pressure to equalize).
4. With a damp rag, clean around the oil fill plug.
5. Remove the oil fill plug/dipstick (see Figure 9).

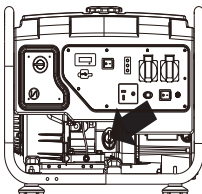


Figure 9: Oil fill plug/dipstick location

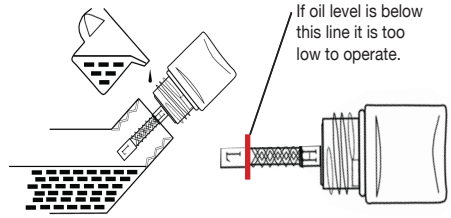


Figure 10: Oil level

6. Check oil level: When checking the engine oil, remove the oil fill plug/dipstick and wipe it clean. Thread the oil fill plug/dipstick all the way back in and then remove and check the oil level on the oil fill plug/dipstick.
 - **Acceptable Oil Level** – Oil is visible on the crosshatches between the H and L lines on the oil fill plug/dipstick (see Figure 10).
 - **Low Oil** – Oil is below the L line on the oil fill plug/dipstick.

NOTICE

Engine oil must always be checked and added when the inverter is on a flat, level surface, or an inaccurate reading may result, causing serious engine damage.

ADDING ENGINE OIL

1. Always operate or maintain the inverter on a flat surface.
2. Stop engine if running.
3. Let engine sit and cool for several minutes (allow crankcase pressure to equalize).
4. Thoroughly clean around the oil fill plug/dipstick.
5. Remove the oil fill plug/dipstick (see Figure 9).
6. Select the proper engine oil as specified in Figure 8.
7. Using the supplied oil funnel, slowly add engine oil to the engine. Stop frequently to check the oil level and avoid overfilling.
8. Continue to add oil until the oil is at the correct level then replace oil fill plug/dipstick.

MAINTENANCE

CHANGING ENGINE OIL

1. Always operate or maintain the generator on a flat surface.
2. Stop the engine.
3. Let engine sit and cool for several minutes (allow crankcase pressure to equalize).
4. Place oil pan (or suitable container) under the oil drain bolt (see Figure 11).
5. With a damp rag, thoroughly clean around the oil drain bolt.
6. Remove the oil drain bolt (see Figure 11). Once removed, place the oil drain bolt on a clean surface.

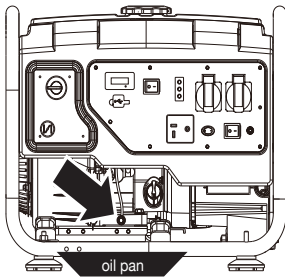


Figure 11: Remove oil drain bolt

7. Allow oil to completely drain.
8. Replace oil drain bolt.
9. Dispose of used engine oil properly.
10. Fill crankcase with oil following the steps outlined in *Adding Engine Oil*.

NOTICE

Never dispose of used engine oil by dumping the oil into a sewer, on the ground, or into groundwater or waterways. Always be environmentally responsible. Follow the guidelines of the EPA or other governmental agencies for proper disposal of hazardous materials. Consult local authorities or reclamation facility.

AIR FILTER MAINTENANCE

WARNING



Never use gasoline or other flammable solvents to clean the air filter. Use only household detergent soap to clean the air filter.

Cleaning the Air Filter

The air filter must be cleaned after every 50 hours of use or 3 months (frequency should be increased if inverter is operated in a dusty environment).

1. Turn off the inverter and let it cool for several minutes if running.
2. Unscrew the two bolts on air filter cover and set aside (see Figure 12).

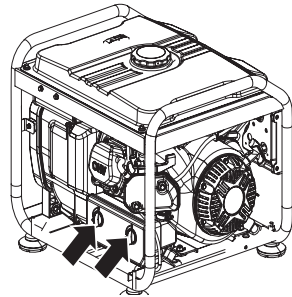


Figure 12: Remove air filter

3. Remove the foam element from the air cleaner housing.
4. Wash the foam air filter element by submerging the element in a solution of household detergent soap and warm water. Slowly squeeze the foam to thoroughly clean.

NOTICE

NEVER twist or tear the foam air filter element during cleaning or drying. Only apply slow but firm squeezing action.

5. Rinse in clean water by submerging the air filter element in fresh water and applying a slow squeezing action (see Figure 13).



Figure 13

MAINTENANCE

Cleaning the Air Filter - *Continued*

NOTICE

Never dispose of soap cleaning solution used to clean the air filter by dumping the solution into a sewer, on the ground, or into ground water or waterways. Always be environmentally responsible. Follow the guidelines of the EPA or other governmental agencies for proper disposal of hazardous materials. Consult local authorities or reclamation facility.

6. Dispose of used soap cleaning solution properly.
7. Dry the air filter elements by again applying a slow firm squeezing action.
8. Once the air filters are dry, coat the air filters with clean engine oil (see Figure 14 below).

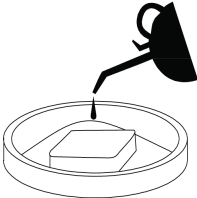


Figure 14

9. Squeeze the filters to remove any excess oil.
10. Install the filters back into the unit.
11. Install the air filter cover and secure the bolts you removed.

DRAINING THE FLOAT BOWL

1. Locate carburetor float bowl above air filter (see Figure 15).

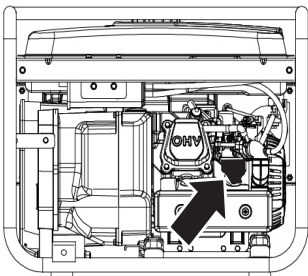


Figure 15: Carburetor float bowl

2. Locate the clear plastic hose from the float that is exiting out the bottom of the inverter, and place a suitable container under it to catch the drained fuel (see Figure 16).

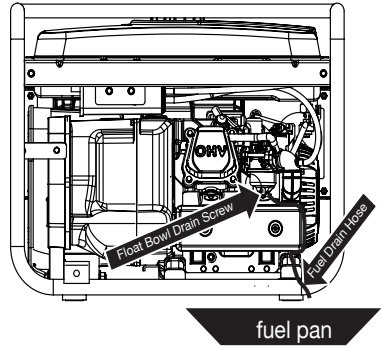


Figure 16: Fuel drain hose

3. Loosen the float bowl drain screw (see Figure 17) until fuel is seen draining from the float bowl.

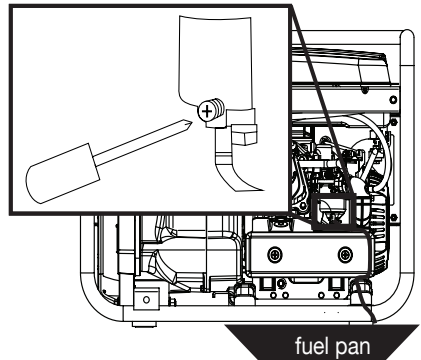


Figure 17: Loosen float bowl screw

4. Allow fuel to drain into the container, and then tighten the float bowl drain screw.

NOTICE

Never dispose of fuel by dumping fuel into a sewer, on the ground, or into groundwater or waterways. Always be environmentally responsible. Follow the guidelines of the EPA or other governmental agencies for proper disposal of hazardous materials. Consult local authorities or reclamation facility.

MAINTENANCE

SPARK PLUG MAINTENANCE

The spark plug must be checked and cleaned after every 100 hours of use or 6 months and must be replaced after 300 hours of use or every year.

1. Stop the inverter and let it cool for several minutes if running.
2. Remove the spark plug boot by firmly pulling the plastic spark plug boot handle directly away from the engine (see Figure 18).

NOTICE

Never apply any side load or move the spark plug laterally when removing the spark plug. Applying a side load or moving the spark plug laterally may crack and damage the spark plug boot.

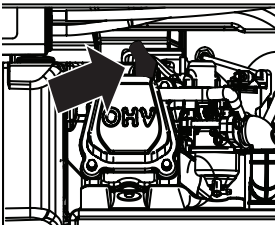
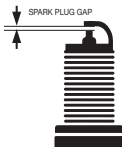


Figure 18 - Remove spark plug boot

3. Clean area around the spark plug.
4. Using the spark plug socket wrench provided, remove the spark plug from the cylinder head.
5. Place a clean rag over the opening created by the removal of the spark plug to make sure no dirt can get into the combustion chamber.
6. Inspect the spark plug for:
 - Cracked or chipped insulator
 - Excessive wear
 - Spark plug gap (the acceptable limit of 0.027–0.032 in. [0.70 – 0.80 mm]).
7. If the spark plug fails any one of the conditions listed above, replace the plug.



NOTICE

Only use the recommended spark plug. Using a non-recommended spark plug could result in damage to the engine.

8. Install the spark plug by carefully following the steps outlined below:
 - a. Carefully insert the spark plug back into the cylinder head. Hand-thread the spark plug until it bottoms out.
 - b. Using the spark plug socket wrench provided, turn the spark plug to ensure it is fully seated.
 - c. Replace the spark plug boot, making sure the boot fully engages the spark plug's tip.

Recommended Spark Plug Replacement:

NGK: BPR7ES (Replacement)

Torch: F7RTC (OE Spark Plug)

Westinghouse Part Number: 180526

CLEANING THE SPARK ARRESTOR

Check and clean the spark arrestor after every 100 hours of use or 6 months.

1. Stop the inverter and let it cool for several minutes if running.
2. Move the inverter to a flat, level surface.
3. Remove the screws holding the inverter cover as well as the bolts and screw holding the inverter cover (see Figure 19).

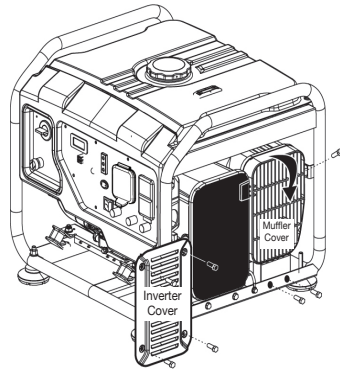


Figure 19: Remove screws holding inverter and muffler cover

4. Once the inverter cover is removed, tilt the top of the muffler cover downward and pull out to remove it.
5. Loosen the clamp holding the spark arrestor onto the muffler with a screw driver (see Figure 20).
6. Slide the spark arrestor band clamp off the spark arrestor screen.
7. Pull the spark arrestor screen off the muffler exhaust pipe.

MAINTENANCE

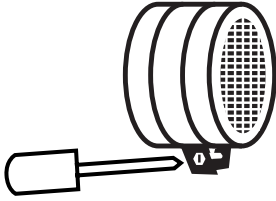


Figure 20: Remove spark arrester

8. Using a wire brush, remove any dirt and debris that may have collected on the spark arrester screen.
9. If the spark arrester screen shows signs of wear (rips, tears or large openings in the screen), replace the spark arrester screen.
10. Install the spark arrester components in the following order:
 - a. Place spark arrester screen over the muffler exhaust pipe. Push on the screen until it fully bottoms out.
 - b. Place the spark arrester band clamp over the screen and tighten with a screwdriver
11. Replace the muffler cover and the inverter cover that you removed in step 4.

CHECKING AND ADJUSTING VALVE LASH

⚠ CAUTION



Checking and adjusting valve lash must be done when the engine is cold.

1. Remove the rocker arm cover and carefully remove the gasket. If the gasket is torn or damaged, it must be replaced.
2. Remove the spark plug so the engine can be rotated more easily.
3. Rotate the engine to top dead center (TDC) of the compression stroke. Looking through the spark plug hole, the piston should be at the top.
4. Both the rocker arms should be loose at TDC on the compression stroke. If they are not, rotate the engine 360°.
5. Insert a feeler gauge between the rocker arm and the push rod and check for clearance (see Figure 21). See table below for valve lash specifications

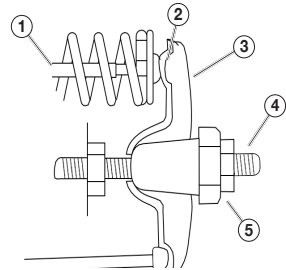


Figure 21

(1) valve, (2) Feeler Gauge Area
(3) Rocker Arm, (4) Jam Nut, (5) Adjusting Nut

Standard Valve Lash

	Intake Valve	Exhaust Valve
Valve Lash	0.0035 ± 0.0043 in (0.09 ± 0.11 mm)	0.0043 ± 0.0051 in (0.11 ± 0.13 mm)
Bolt Torque	8-12N.m	8-12N.m

6. If an adjustment is required, hold the adjusting nut and loosen the jam nut.
7. Turn the adjusting nut to obtain the correct valve lash. When the valve lash is correct, hold the adjusting nut and tighten the jam nut to 106 in-lb (12 N·m).
8. Recheck the valve lash after tightening the jam nut.
9. Perform this procedure for both the intake and exhaust valves.
10. Install the rocker arm cover, gasket and spark plug.

CLEANING THE INVERTER

It is important to inspect and clean the inverter before every use.

Clean All Engine Air Inlet and Outlet Ports – Make sure all engine air inlet and outlet ports are clean of any dirt and debris to ensure the engine does not run hot.

STORAGE

⚠ WARNING



Never store an inverter with fuel in the tank indoors or in a poorly ventilated area where the fumes can come in contact with an ignition source such as a: 1) pilot light of a stove, water heater, clothes dryer or any other gas appliance; or 2) spark from an electric appliance.

MAINTENANCE

NOTICE

Gasoline stored for as little as 60 days can go bad, causing gum, varnish and corrosive buildup in fuel lines, fuel passages and the engine. This corrosive buildup restricts the flow of fuel, preventing an engine from starting after a prolonged storage period.

Proper care should be taken to prepare the inverter for any storage

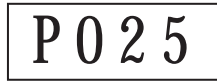
1. Clean the inverter as outlined in *Cleaning the Inverter*.
2. Siphon all gasoline from the fuel tank as best as possible.
3. Start the engine and allow the inverter to run until all the remaining gasoline in the fuel lines and carburetor is consumed and the engine shuts off.
4. Drain any remaining fuel from the float bowl. See *Draining the Float Bowl*.
5. Change the oil (see *Changing Engine Oil*).
6. Remove the spark plug (see *Spark Plug Maintenance*) and place about 1 tablespoon of oil in the spark plug opening. While placing a clean rag over the spark plug opening, slowly pull the recoil handle to allow the engine to turn over several times. This will distribute the oil and protect the cylinder wall from corroding during storage.
7. Replace the spark plug (see *Spark Plug Maintenance*).
8. Move the inverter to a clean, dry place for storage.

DATA CENTER VOLTS | FREQUENCY | HOURS



MAINTENANCE REMINDERS

The VFT meter on this unit has programmed maintenance reminders. When the VFT meter shows:



P25: This is to remind you to change the oil after the initial 25 hours of run time.



P50: It is time to clean the air filter.



P100: It is time change/clean the fuel filter, clean the air filter, and change the oil.

TROUBLESHOOTING

⚠ WARNING



Before attempting to service or troubleshoot the generator, the owner or service technician must first read the owner's manual and understand and follow all safety instructions. Failure to follow all instructions may result in conditions that can lead to voiding of the EPA certification or product warranty, serious personal injury, property damage or even death.

PROBLEM	POTENTIAL CAUSE	SOLUTION
Engine is running, but no electrical output.	1. Reset breaker or thermal breakers are tripped.	1. Reset the reset breaker and thermal breakers.
	2. The power cord's plug connector is not fully engaged in the inverter's outlet.	2. Verify plug connector is firmly engaged in the inverter's outlet.
	3. Faulty or defective power cord.	3. Replace power cord.
	4. Faulty or defective electrical appliance.	4. Try connecting a known good appliance to verify the inverter is producing electrical power.
	5. If trying 1-4 above does not solve the problem, the cause might be the inverter has a fault.	5. Take the generator to your nearest authorized service dealer.
Engine will not start or remain running while trying to start.	1. Inverter is out of gasoline.	1. Add gasoline to the inverter.
	2. Fuel flow is obstructed or fuel shutoff valve is in the OFF position.	2. Inspect and clean fuel delivery passages and make sure fuel shut off is ON.
	3. Dirty air filter.	3. Check and clean the air filter.
	4. Low oil level shutdown switch is preventing the unit from starting.	4. Check oil level and add oil if necessary.
	5. Spark plug boot is not fully engaged with the spark plug tip.	5. Firmly push down on the spark plug boot to ensure the boot is fully engaged.
	6. Spark plug is faulty.	6. Remove and check the spark plug. Replace if faulty.
	7. Dirty/plugged spark arrestor.	7. Check and clean the spark arrestor.
	8. Stale fuel.	8. Drain fuel and replace with fresh fuel.
	9. Bad ignition coil, primary or secondary.	9. Take the generator to your nearest authorized service dealer.
	10. Bad start switch or switch ground.	10. Take the generator to your nearest authorized service dealer.
Inverter suddenly stops running.	1. Inverter is out of fuel.	1. Check fuel level. Add fuel if necessary.
	2. The low oil shut down switch has stopped the engine.	2. Check oil level and add oil if necessary.
	3. Too much load.	3. Restart the inverter and reduce the load.
Engine runs erratic; does not hold a steady RPM.	1. Choke was left in the CHOKE position.	1. Move choke to the RUN position.
	2. Dirty air filter.	2. Clean the air filter.
	3. Applied loads maybe cycling on and off.	3. As applied loads cycle, changes in engine speed may occur; this is a normal condition.
The VFT meter is showing "P"	The meter shows "P25"	Change oil
	The meter shows "P50"	Clean air filter
	The meter shows "P100"	Change/clean the fuel filter, clean the air filter, and change the oil

WARRANTY

YOUR WARRANTY FORM SHOULD BE RETAINED BY YOU AT ALL TIMES. IN ORDER TO MAKE A CLAIM UNDER THIS WARRANTY YOU MUST RETURN THE PRODUCT TO YOUR NEAREST BUNNINGS WAREHOUSE (see www.bunnings.com.au for store locations) WITH YOUR BUNNINGS REGISTER RECEIPT. PRIOR TO RETURNING YOUR PRODUCT FOR WARRANTY PLEASE TELEPHONE OUR CUSTOMER SERVICE HELPLINE:

Australia +61456422515

TO ENSURE A SPEEDY RESPONSE PLEASE HAVE THE MODEL NUMBER AND DATE OF PURCHASE AVAILABLE. A CUSTOMER SERVICE REPRESENTATIVE WILL TAKE YOUR CALL AND ANSWER ANY QUESTIONS YOU MAY HAVE RELATING TO THE WARRANTY POLICY OR PROCEDURE.

WARRANTY 1 year or 100 Hours whichever comes first

Your product is guaranteed for a period of **12 months from the original date of purchase**.

If a product is defective it will be repaired in accordance with the terms of this warranty.

Warranty excludes consumable parts, for example: wheels, bearings.

The benefits provided under this warranty are in addition to other rights and remedies which are available to you under law. The warranty covers manufacturer defects in materials, workmanship and finish under normal use.

Our goods come with guarantees that cannot be excluded under Australian Consumer law . You are entitled to a replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired and replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

WARRANTY EXCLUSIONS

The following actions will result in the warranty being void.

- If the tool has been operated on a supply voltage other than that specified on the tool.
- If the tool shows signs of damage or defects caused by or resulting from abuse, accidents or alterations.
- Failure to perform maintenance as set out within the instruction manual.
- If the tool is disassembled or tampered with in any way.
- The warranty excludes damage resulting from product misuse or product neglect.

This warranty is given by TPE Australia Pty Ltd

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