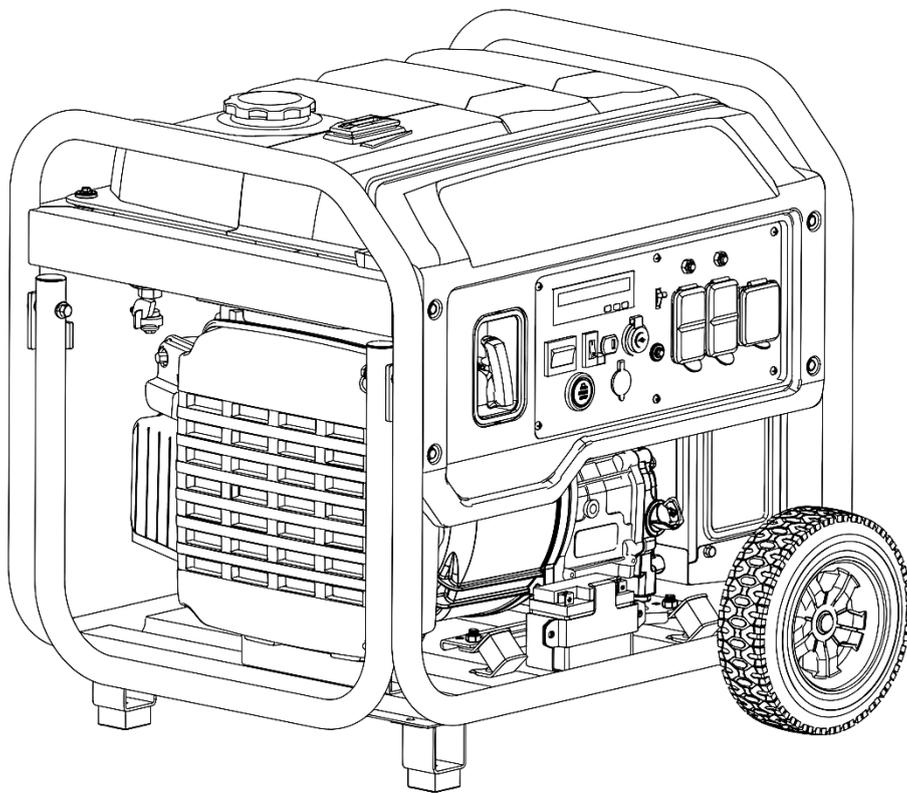


Promate[®]

PM12500io

Operator Manual



PORTABLE INVERTER GASOLINE GENERATOR

IMPORTANT – Please make sure everyone who uses this equipment reads and understands these instructions as well as any additional instructions provided before using it.

Record the model and serial numbers of your generator below:

Model No. _____ Serial No. _____

FOREWORD

Thank you for purchasing Promate PM12500io. This operator manual is for proper handling, minor checking and maintenance of the PM12500io. Before using your generator: Please read these instructions completely and carefully in order to operate it safely and make the best use of it. Due to constant efforts to improve our products, certain procedures and specifications are subject to change without notice. If you have any questions, please contact Promate Service. Latest version is available for download from website.

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1. SAFETY PRECAUTIONS

This manual provides safety information for Promate PM12500io including preparation, operation, and maintenance instructions. Before running this generator, please read and observe all warnings and instructions that are provided both on the generator labels and in this instruction manual. Failure to follow the guidelines below may cause personal injury.

The terms **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** are used throughout this manual to highlight important information. Make sure that everyone who operates, maintains, or is around the generator understands the meaning of this safety information.



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.



⚠ WARNING

EXHAUST PRECAUTIONS

- Never inhale exhaust gasses. They contain carbon monoxide, a colorless, odorless and extremely dangerous gas which can cause unconsciousness or death.
- Never operate the generator indoors or in a poorly ventilated area, such as tunnel, cave, etc. Practice extreme care when operating the generator near people or animals. Keep the exhaust pipe free of unwanted objects.

⚠ WARNING

REFUELING PRECAUTIONS

- Refueling should be done outside or in a well-ventilated area. Before refilling, turn off the generator. DO NOT overfill the tank. If fuel is spilled, wipe it away carefully before starting the engine.

⚠ WARNING

WHEN CHARGING THE BATTERY

- Battery electrolyte contains sulfuric acid which is a harmful chemical. Be careful of your eyes, skin and clothing. In case of any contact especially in the eyes, wash thoroughly with water and get prompt medical attention.
- Charge the battery in a fully ventilated area.
- Check the polarity of the battery

OTHER SAFETY PRECAUTIONS

Be careful of hot parts

The muffler and other engine parts are very hot while the engine is running or just after use. Operate the engine in a safe area and keep children away while the engine is in use.

Where to use the generator

DO NOT use near flammables. Use it at least 1 meter away from buildings or any other facilities.

When using the generator

DO NOT tip or move.

DO NOT cover it with a box or fence it off.

DO NOT unscrew the dipstick; oil splatter can cause scalding. Avoid touching the generator in the rain or touch wet hands.

To prevent electric shock, grounding the generator from the ground terminal.

Avoid using generators on soft ground.

Never connect the generator to the wiring of your provider.

2.CONTROLS AND FEATURES

Read this owner's manual before operating your generator. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

PM1250io

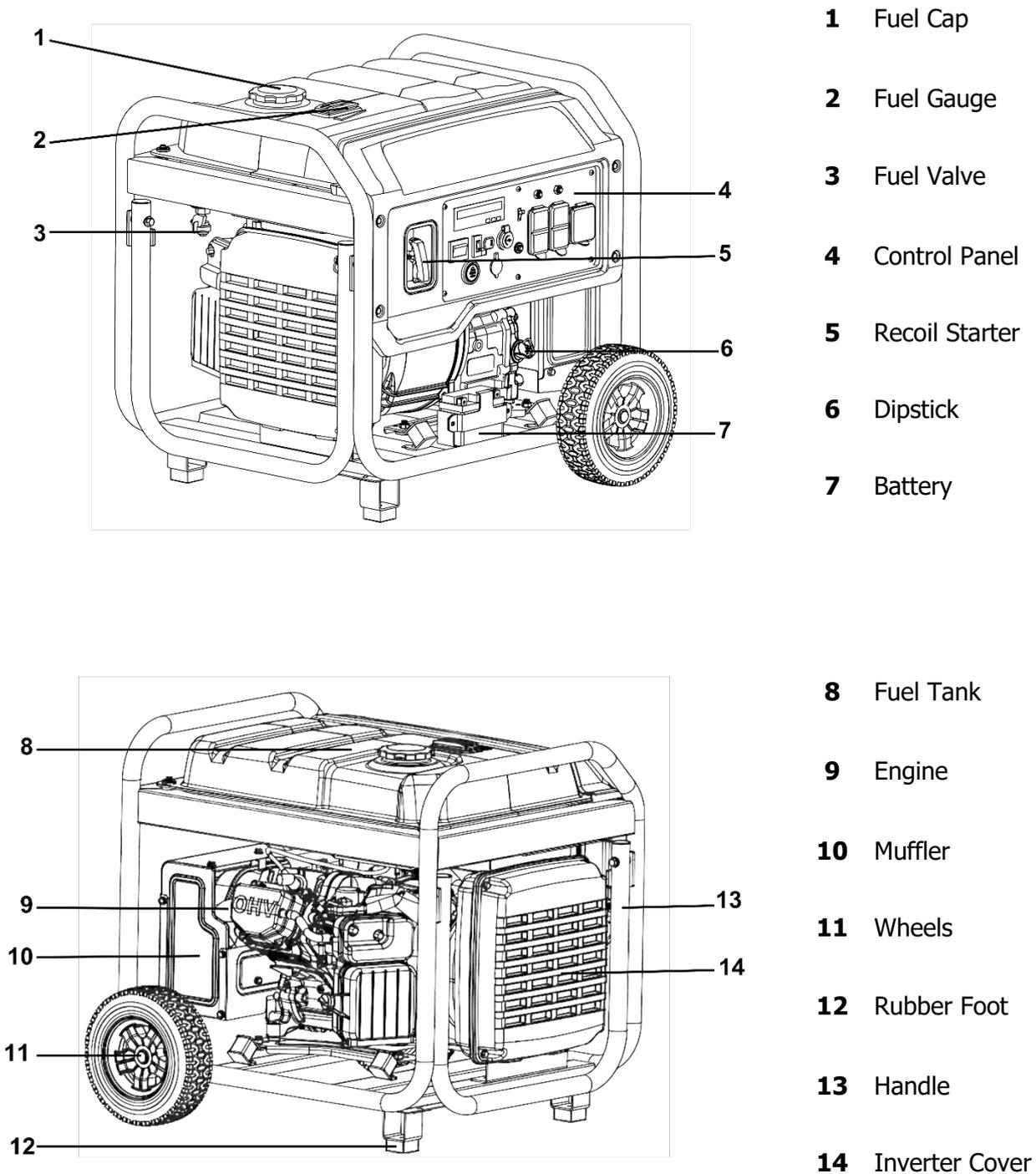


Diagram 1: Generator Parts

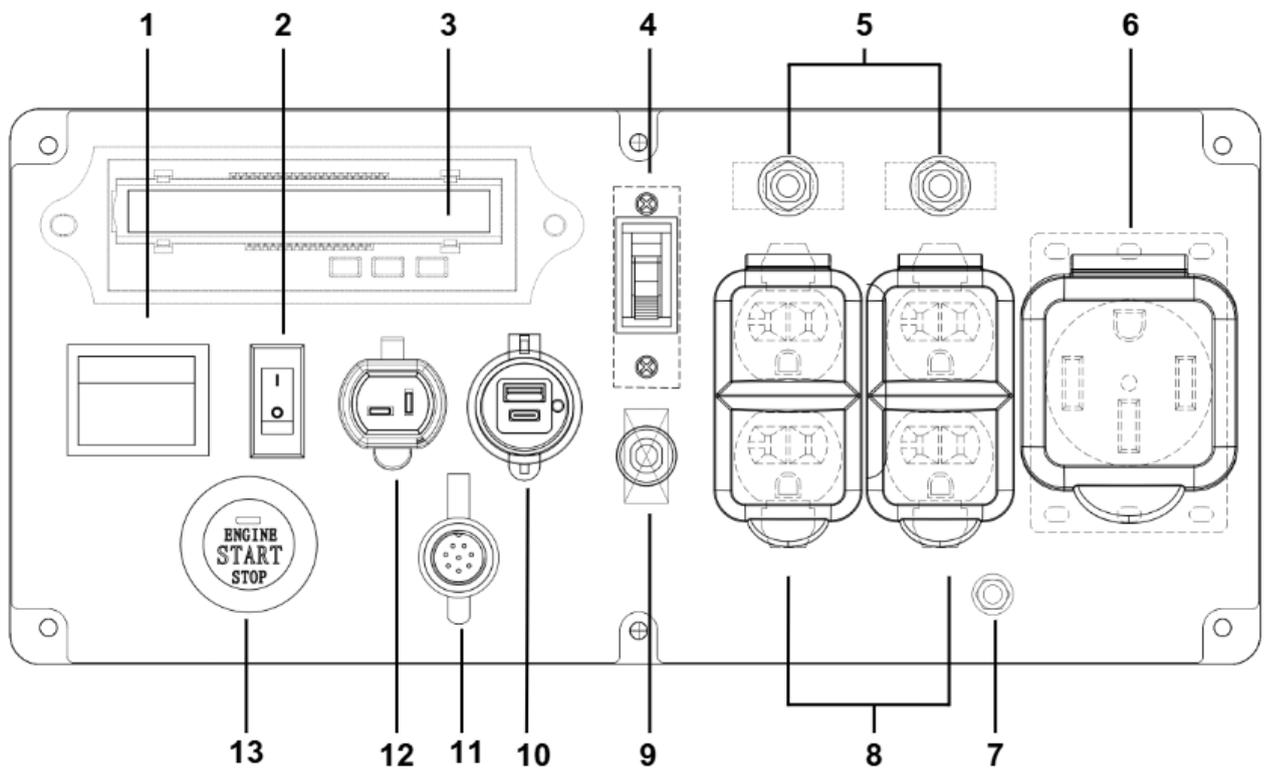


Diagram 2: Control Panel Features

- | | | | |
|----------|---------------------|-----------|---------------------------|
| 1 | Engine Switch | 8 | AC 230V-20A |
| 2 | Eco Mode Switch | 9 | DC 12V 9A |
| 3 | 5 in 1 LED Display | 10 | 5V USB Type- A/C Port |
| 4 | Circuit Breaker 44A | 11 | ATS Port |
| 5 | Circuit Breaker 20A | 12 | DC 12V Receptacle |
| 6 | AC 230V- 44A | 13 | Engine Start/ Stop Button |
| 7 | Grounding Terminal | | |

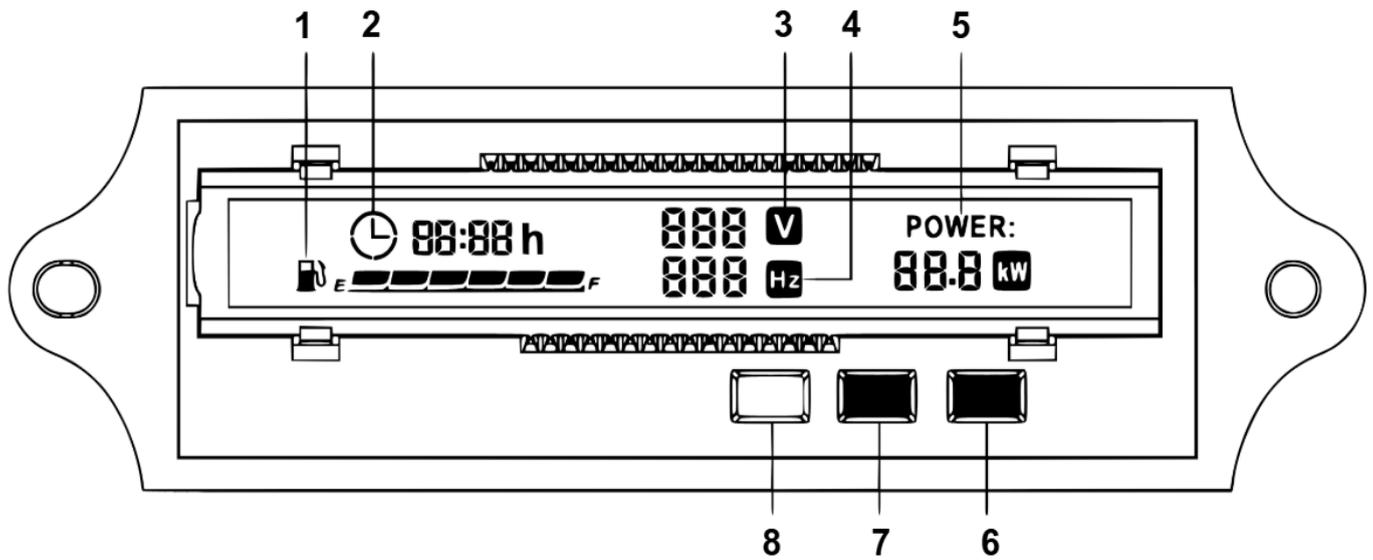


Diagram 3: LCD Multi-meter Functions

- | | | |
|---|--|---|
| 1 | <p>Gasoline Fuel Meter
This icon indicates the amount of fuel in the fuel tank.</p> |  |
| 2 | <p>Running Time (Hours)
This icon shows the running time.</p> |  |
| 3 | <p>Voltage
This icon shows the voltage.</p> |  |
| 4 | <p>Frequency (Hertz)
This icon shows frequency.</p> |  |
| 5 | <p>Power (Load)
This icon shows the current output load</p> |  |
| 6 | <p>Low Oil Alert (Red)
When the engine oil level is lower than the alarm value, the generator will not start and the alarm light will flash if an attempt is made to start. If the generator runs low on oil, the indicator will blink red.</p> | |
| 7 | <p>Overload Alarm (Red)
When the connected load exceeds the generator's rated capacity, the overload indicator will flash, and the power output will shut off automatically. The indicator will then remain solid red.
To restore power, disconnect the load and press the overload reset button. Once reset, reconnect a load that is within the generator's rated capacity.</p> | |
| 8 | <p>Output Indicator (Green)
The green light indicates that the generator is turned on.</p> | |

3.SPECIFICATIONS

Table 1. General Specifications

Model	PM12500io
Surge Power	12500W
Rated Power	10000W
Rated AC Voltage	230V
Rated AC Current	43.5A
Rated Frequency	60Hz
Phase	Single
Engine Displacement	550 CC OHV
Starting System	Recoil Start, Electric Start
Low Oil Shutdown	Yes
Oil Type	10W-30
Spark Plug OEM Type	F7RTC
Valve Exhaust Clearance	(0.1~0.15 mm)
Battery Specification	12V,10Ah
Oil Capacity	1.3L
Fuel Tank Capacity	34L
Fuel Type	Unleaded Gasoline
Maximum Ambient Temperature	104°F (40°C)
Unit Dimensions	715*750*700mm
Unit Dimension with Box	755*640*650mm
Net Weight	85kgs
Gross Weight	88kgs

4. BEFORE OPERATION

4.1 Unpacking

- Set the carton on a rigid flat surface.
- Remove everything from carton except generator.
- Open carton completely by cutting each corner from top to bottom.
- Carefully lift the generator out of the box using its frame (two-person lift recommended).

4.2 Assembly

Promate PM12500io require some assembly prior to usage.

Assembling the Accessory Kit

The wheels included with this generator are specifically designed to enhance mobility and ease of transport on flat, stable surfaces such as driveways, patios, or job sites. However, they are not engineered for over-the-road use or towing behind vehicles.

1. Refer to **Diagram 5** to install the wheels.
 - Slide the axle through the frame brackets.
 - Slide on the hub, wheel and flat washer, then insert the cotter pin through the wheel axle hole.
 - Bend the cotter pin tabs outward to lock the pin in place.
2. Refer to **Diagram 5** to install the wheel bumpers.
 - Insert an M6 bolt through the rubber bumper and insert an M8 bolt through the bottom of the bumper bracket. Secure the bolt with an M8 flange nut.
3. Refer to **Diagram 5** to install the handle assembly.
 - Insert the handle bracket onto the generator frame and secure with two M8 bolts and two M8 flange nuts.
 - Align the handle assembly holes with the handle bracket holes and secure with one M8 bolt and a M8 flange nut.

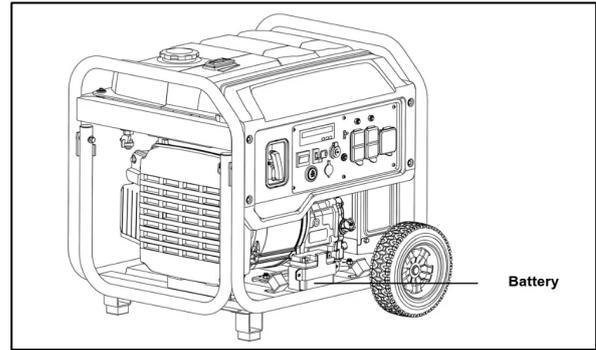


Diagram 4. Battery Location

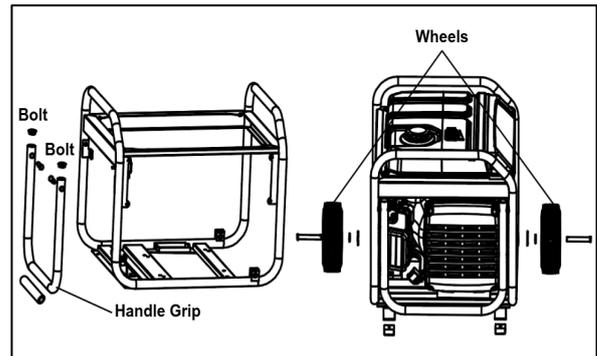


Diagram 5. Wheels & Handle Assembly

4.3 Adding the Engine Oil

Please ensure the generator is filled with the appropriate oil before starting. Avoid using specialized additives. Choose the oil viscosity grade based on the expected operating temperature (**Diagram 6**).

Above 40F	SAE 30
Below 40 F and down to 10 F	10W-30
Below 10 F	Synthetic 5W-30

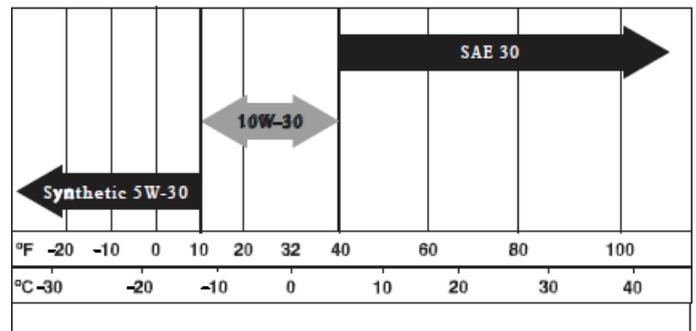


Diagram 6. Expected Operating Temperature

Notice: Incorrect handling of the generator can cause damage and shorten its lifespan. Do not attempt to crank or start the engine until it has been properly filled with the recommended oil, as this can result in engine failure

To add the engine oil:

CAUTION

- Place generator on a flat, level surface.
- Clean area around oil fill and remove oil fill cap /dipstick (Diagram 1 No. 6).
- Slowly fill engine with oil through the oil fill opening until it reaches the full mark on the dipstick. Stop filling occasionally to check oil level. Be careful not to overfill.
- Install oil fill cap and tighten securely.
- Check oil level before starting each time.

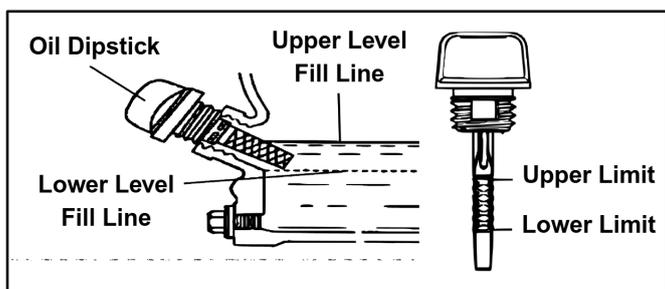


Diagram 7: Adding Engine Oil Procedure

4.4 Adding the Fuel

WARNING

- Never refuel the tank indoors.
- Avoid filling the fuel tank while the engine is running or hot.
- Always **TURN OFF** the generator and let the engine cool completely before refueling.
- Take care not to spill gasoline on a hot engine.
- Keep fuel away from sparks, open flames, pilot lights, heat sources, and other potential ignition points.
- **DO NOT** smoke or light a cigarette while refueling. Fuel is highly flammable, and its vapors are explosive.
- Use regular unleaded gasoline for the generator engine. Avoid fuel with more

than 10% ethanol and never use E85 fuel.

- Do not mix oil with gasoline.
- Secure the fuel cap and clean up any spilled gasoline promptly.

CAUTION

- Ensure there is enough space for fuel expansion.
- Overfilling the fuel tank may cause fuel to spill onto a hot engine, potentially resulting in a fire or explosion. If fuel spills, wait for it to evaporate before starting the engine.
- Regularly inspect the fuel lines, tank, cap, and fittings for cracks or leaks, and replace them if needed.

Notice: It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel hose or tank during storage.

Alcohol-blended fuels (called gasohol), ethanol or methanol can attract moisture, which leads to separation and formation of acids during storage.

Acidic gas can damage the fuel system. The fuel should be emptied before storage of 30 days or longer. See the "**Storage**" section. Never use engine or carburetor cleaner products in the fuel tank as permanent damage may occur.

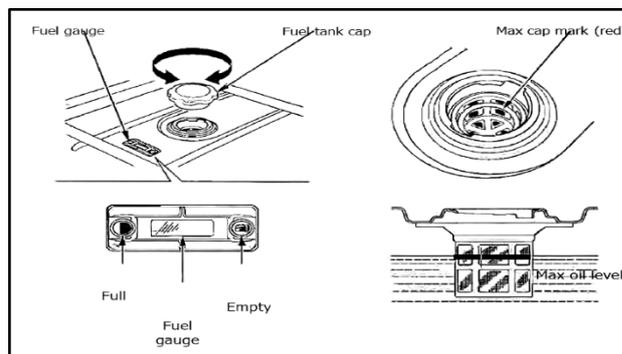


Diagram 8. Fuel Fill location

1. Remove the fuel tank cap.
2. Slowly pour fuel into receptacle while minding the fuel gauge. Stop when full.
3. Wipe any fuel spills and screw fuel tank cap

back on.

4.5 Grounding the Generator

The National Electrical Code mandates that the frame and any external electrically conductive parts of this generator be properly connected to a suitable earth ground. Proper grounding helps prevent electric shocks in the event of a ground fault in the generator or connected devices. It also assists in dissipating static electricity, which can accumulate in ungrounded equipment.

5. OPERATION

Generator Location

Never use the generator in wet or damp locations. Never expose the generator to rain, snow, water spray, or standing water while in use. Protect the generator from all hazardous weather conditions. Moisture or ice can cause a short circuit or other malfunction in the electric circuit. Water contact with a power source, if not avoided, will result in death or serious injury.

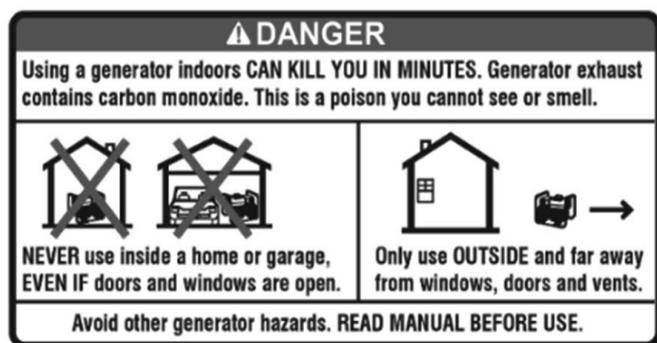


Diagram 9. Outside Operation Guide

- Remove any flammables or other hazardous materials.
- Choose a dry, well-ventilated, weather-protected area.
- Keep the exhaust pipe clear of foreign objects.
- Keep the generator away from open flame.
- Keep the generator on a stable and leveled surface.
- DO NOT block the air vents with paper or other material.

Surge Protection

Electronic devices, such as computers and many programmable appliances, rely on components that are designed to work within a specific voltage range and are susceptible to brief voltage changes. While there is no way to avoid voltage fluctuations, you can take precautions to protect sensitive electronics.

5.1 Starting the Generator

1. Before starting the generator, check for any loose or missing parts, as well as any damage that happened during shipping and handling damage.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on (Diagram 10).

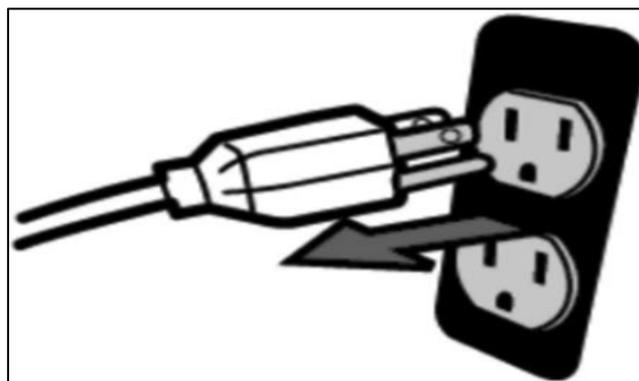


Diagram 10. Disconnecting Electrical Loads

3. Turn "OFF" the Eco Mode switch.

ECO MODE

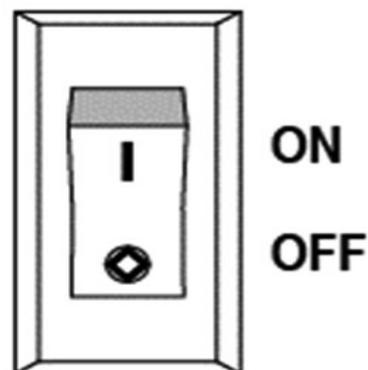


Diagram 11. Eco Mode OFF Position

- Turn the Engine Switch to "ON" position.

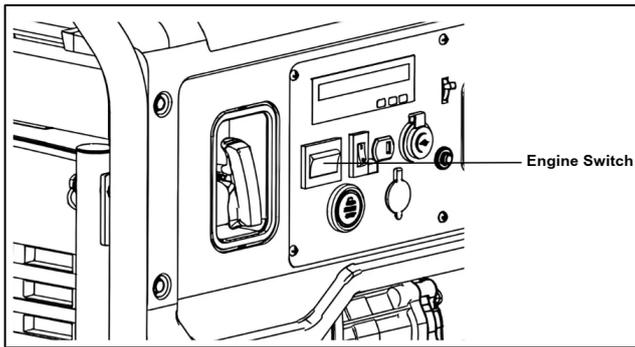


Diagram 12. Engine Switch Location

Manual/Recoil Start

- Pull the recoil starter slowly until resistance is felt, then pull rapidly

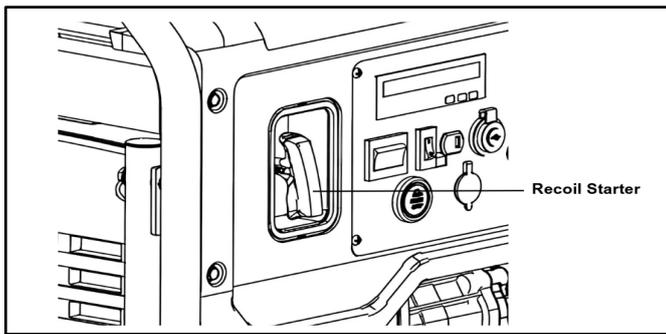


Diagram 13: Recoil Starter Location

Electric Start

- Press the Engine Start/Stop Button for 5 seconds to START. (Diagram 14)



Diagram 14. Engine Start/ Stop Button

- Turn ON the Eco Mode Button (optional).

Promate PM12500io is equipped with an ECO

MODE Button (Diagram 11). Engaging this switch allows the system to regulate the engine speed and automatically adjust its fuel consumption to match the required load. When the electrical load changes, the generator engine will automatically speed up and slow down as needed. This reduces fuel consumption and noise levels while extending the runtime and engine's lifespan.

⚠ WARNING

Starter cord kickback (rapid retraction) will drag your hand and arm toward the engine faster than you can let go, causing broken bones, fractures, bruising, or sprains that can lead to serious injury. When starting the engine, pull the cord slowly until resistance is felt and then pull rapidly to avoid kickback, let go after it naturally returns to the original position.

5.2 Connecting Electrical Loads

- Do not apply heavy electrical load during the break-in period (the first five hours of operations). Let the engine stabilize and warm up for a few minutes after starting.
- Ensure that the circuit breaker on the control panel is in position.
- Plug in and turn on the desired 230V AC, single phase, 60Hz electrical loads. It is better to plug the item with the largest load first. (Diagram 19)

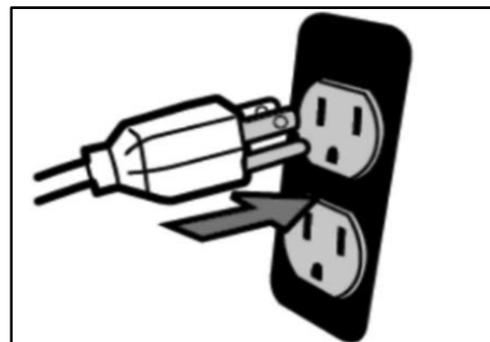


Diagram 15. Connecting Electrical Loads

⚠ CAUTION

When applying load, do not exceed the maximum wattage rating of the generator

especially when using one or more receptacles. Also, do not exceed the amperage rating of any one receptacle.

You can monitor your plugged-in load by checking the wattmeter on the LCD display.

- The Promate 12500io features an overload alarm and control system. The indicator will blink when the power load is nearing overload and will automatically shut off the power supply if an overload occurs.
- If this happens, unplug your devices, reset the unit, and reconnect the load as instructed in Part 1 of this section.

DO NOT overload the generator.

Overloading a generator above its rated wattage capacity may result in damage to the generator and other attached electrical devices.

To extend the life of your generator and connected devices, perform the following steps on adding electrical load:

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

5.3 Stopping the Generator

1. Turn off and remove any electrical loads. Never start or stop the generator while any electrical equipment is connected or turned on.
2. Let the generator run at no load for two minutes to stabilize the internal temperatures of both the engine and the generator.

3. Press the Engine Switch to the OFF position. (Diagram 16)

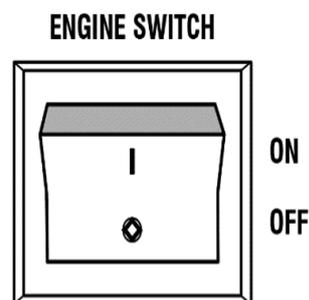


Diagram 16. Engine Switch Turned OFF

4. Press the Engine Start/Stop Button for 2 seconds to STOP. (Diagram 14)

⚠ WARNING

The fuel and its vapors are extremely flammable and explosive which could cause burns, fire, or explosion resulting in death or serious injury.

When the engine is not in use, ensure that the fuel valve is in the "OFF" position.

If the engine will not be used for two weeks or longer, please see the Storage section for proper engine and fuel storage.

5.4 Low Oil Shutdown

Promate PM12500io is equipped with low oil shutdown. If the oil level becomes lower than the minimum, the sensor will activate a warning device or stop the engine. If the generator shuts off and the oil level is within specifications, check to see if the unit is placed at an angle that forces oil to shift. Place it on an even surface to correct this. If the engine fails to start, there may not be enough oil to activate the low oil level switch. Make sure the sump is completely filled with oil. If the engine oil level drops below the threshold level, an oil switch will shut down the engine. You need to check the oil level with a dipstick.

If the oil level is between the low and high mark on the dipstick:

1. **DO NOT** try to restart the engine.
2. Contact an Authorized Promate Service Center.
3. **DO NOT** operate the engine until the oil level is corrected.

If the oil level is below the low mark on the dipstick:

1. Add the oil to bring the level to a HIGH mark.
2. Restart the engine and if the engine stops again a low oil condition may still exist. **DO NOT** try to restart the engine.
3. Contact Promate Service.
4. **DO NOT** operate the engine until the oil is at the right level.

5.5 Automatic Transfer Switch (ATS)

The Promate PM12500io is equipped with an ATS input connector port. Only use a Promate-approved ATS (sold separately). Follow the ATS maintenance guidelines installation.

6. MAINTENANCE

6.1 Maintenance Schedule

Follow the calendar intervals shown below. More frequent service is required when operating in adverse conditions.

Table 2. Maintenance Schedule

First 8 Hours
• Change the engine oil
Every 8 Hours or Daily
• Clean debris
• Check the engine oil level
Every 25 Hours or Yearly
• Clean the engine air filter
Every 50 Hours or Yearly
• Change the engine Oil
Yearly
• Replace the engine air filter
• Service the fuel valve
• Service the spark plug
• Inspect the muffler and spark arrester
• Clean the cooling system

6.2 General Recommendations

The warranty of the generator does not cover items that have been subjected to owner's abuse or negligence. Make periodic maintenance as specified in the "**Maintenance Schedule**".

Notice: Replace the spark plug and air filter once a year. A new spark plug and a clean air filter ensure the proper fuel-air mixture, improving engine performance and longevity.

6.2.1 Generator Maintenance

Generator maintenance involves keeping the unit clean and dry. Operate and store the generator in a clean, environment, avoiding exposure to excessive dust, dirt, moisture, or corrosive vapors.

Ensure that the cooling air slots are not obstructed by any foreign materials. Regularly inspect the generator for cleanliness, and clean it when dust, dirt, oil, moisture, or other substances are visible on its exterior.

CAUTION

Never insert any object or tool into the air cooling slots, even if the engine is not running.

DO NOT use a garden hose to clean the generator, as water can enter the engine's fuel system and cause issues. Additionally, if water enters through the cooling air slots, it may be trapped in the rotor and stator winding insulation's voids and crevices. Over time, this buildup of water and dirt can reduce the insulation resistance of the generator's internal windings.

6.2.2 Cleaning the Generator

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

slots and openings on the generator. These openings must be kept clean and unobstructed.

6.2.3 Changing the Oil

Change the oil after the first 8 hours of operation, then every 50 hours thereafter. If running this unit under dirty or dusty conditions, or in extremely hot weather, to change the oil more often.

⚠ CAUTION

Hot oil can cause burns. Allow the generator to cool before draining the oil, and avoid prolonged or repeated skin contact with the used oil. Wash any exposed areas thoroughly with soap.

To change the oil while the engine is still warm, follow these steps:

- Clean the area around the oil drain plug.
- Remove the oil drain plug and the oil fill plug to allow the oil to drain completely into a suitable container.
- Once the oil has fully drained, reinstall and securely tighten the oil drain plug.
- Fill the engine with the recommended oil (refer to "**Before Operation**" for oil recommendations).
- Clean up any spilled oil.
- Dispose of used oil at a proper collection center.

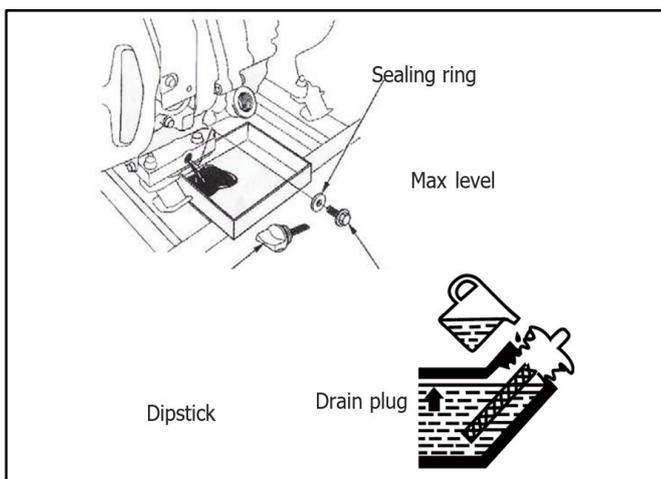


Diagram 17. Change Oil Guidelines

6.3 Air Filter Maintenance

A dirty air filter can cause the engine to run improperly and may lead to damage. Replace the air filter once a year, or clean/replace it more frequently if operating in dusty conditions.

- Remove the air filter cover.
- Wash the filter in soapy water and squeeze it dry with a clean cloth (DO NOT TWIST). Clean the air filter cover before reinstalling it.

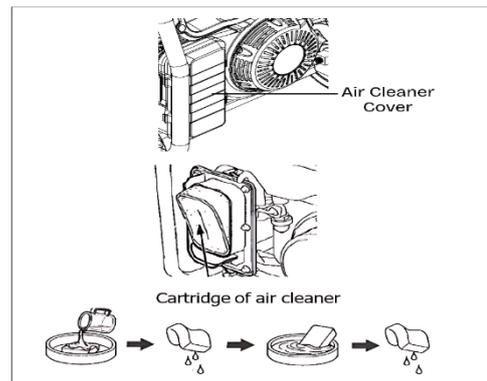


Diagram 18. Air Filter Maintenance Guidelines

6.4 General Maintenance

The generator should be started at least once every seven days and allowed to run for at least 30 minutes. If this is not possible and the unit must be stored for more than 30 days, follow the guidelines below to prepare it for storage.

7. STORAGE

⚠ WARNING

Never store the engine with fuel in the tank indoors or in enclosed, poorly ventilated areas where fumes may come into contact with an open flame, spark, or pilot light, such as on a furnace, water heater, clothes dryer, or other gas appliance.

To prevent engine issues, the fuel system should be emptied before storing the generator

for 30 days or more, following these steps:

- Drain all gasoline from the fuel tank.
- Start and run the engine until it stops due to lack of fuel.
- While the engine is still warm, drain the oil from the crankcase and refill with the recommended oil grade.
- Remove the spark plugs and pour about 1/2 ounce (15 ml) of engine oil into each cylinder. Cover the spark plug holes with a rag. Pull the recoil starter a few times to lubricate the piston rings and cylinder bore.

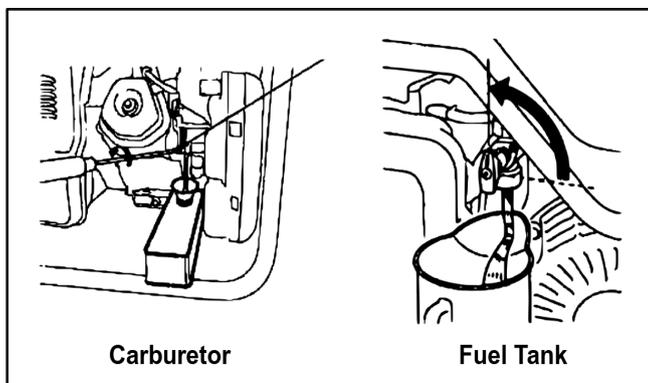


Diagram 19. Draining Guidelines

- Install and tighten the spark plugs, but do not connect the spark plug wires.
- Clean the outer surfaces of the generator and ensure that the cooling air slots and openings are clear and unobstructed.
- Store the generator in a clean, dry location.
- Do not store gasoline from one season to the next.
- Replace the gasoline can if it starts to rust. Rust and dirt in the gasoline can cause issues with the carburetor and fuel system.
- If possible, store the generator indoors and cover it to protect it from dust and dirt.
BE SURE TO EMPTY THE FUEL TANK.
- Cover the unit with a suitable protective cover that does not retain moisture.

8. SERVICE INFORMATION

HOW TO ORDER REPLACEMENT PARTS

Even quality-built equipment such as the generator you have purchased will need occasional replacement parts to maintain its good condition over the years.

To order replacement parts and consumable parts, please contact Promate Service and be ready with the following information:

1. Model No., Serial No. and all specifications that are shown on the Model No./Serial No. plate.
2. Part number or numbers as shown in the Parts List section.
3. A brief description of the trouble with the generator.

LIMITED WARRANTY

Warranty Coverage:

Powertech Asia Pacific Inc., (the Company) warrants to the original retail customer that it will repair or replace, free of charge, any parts found by the Company or its authorized service representative to be defective in material or workmanship. This warranty covers the cost of replacement parts and labor for defects in material or workmanship.

Not Covered:

- a. Shipping/Handling charges for sending the product to the Company or its authorized service representative for warranty service. Shipping/Handling repaired or replaced products back to the customer; these charges must be borne by the customer.
If a separate operator's manual and engine warranty from the engine manufacturer is included with this product, only that warranty will apply to the engine.

- b. Damage caused by abuse, accident, the effects of corrosion, erosion and normal wear and tear.
- c. Warranty is void if the customer fails to install, maintain and operate the product in accordance with the instructions and recommendations of the Company set forth in the owner's manual, or if the product is used as rental equipment.
- d. The Company will not pay for repairs or adjustments to the product, or for any costs of labor performed without the Company's prior authorization.
- e. Consumable parts such as battery, spark plugs, and air cleaner

Warranty Period: One (1) year from the date of purchase on products used solely for consumer applications; if a product is used for business or commercial applications, the warranty period will be limited to ninety (90) days from the date of purchase. For warranty service, the customer must provide dated proof of purchase and must notify the company within the warranty period.

EXCLUSIONS AND LIMITATIONS: THE COMPANY MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. THE WARRANTY SERVICE DESCRIBED ABOVE IS THE EXCLUSIVE REMEDY UNDER THIS WARRANTY; LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES IS EXCLUDED TO THE EXTENT PERMITTED BY LAW. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow a disclaimer of implied warranties or the exclusion or limitation of incidental and consequential damages, so the above disclaimers and exclusions may not apply.

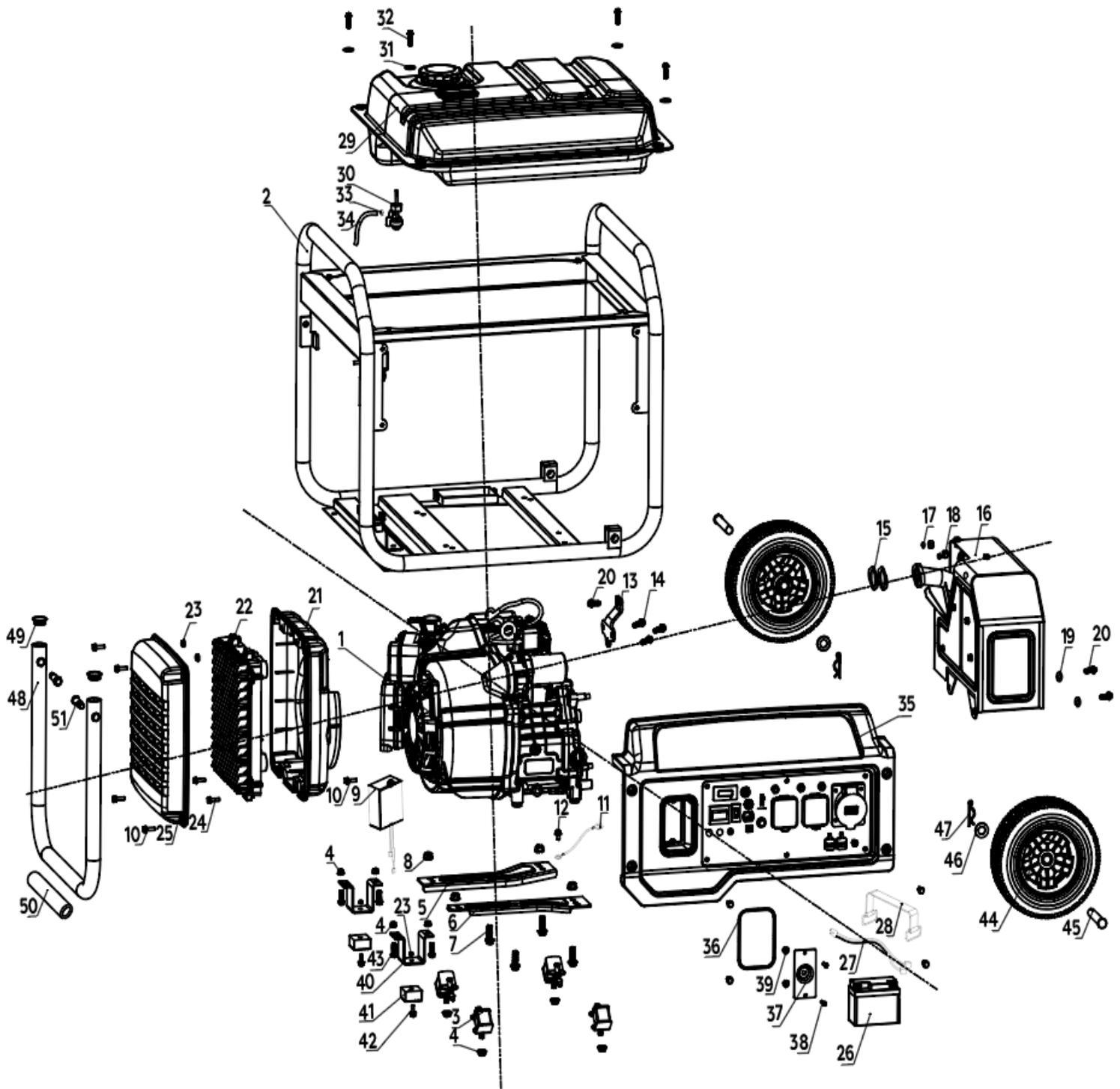
CONTACT POWERTECH ASIA PACIFIC, INC. SERVICE DEPARTMENT AT:



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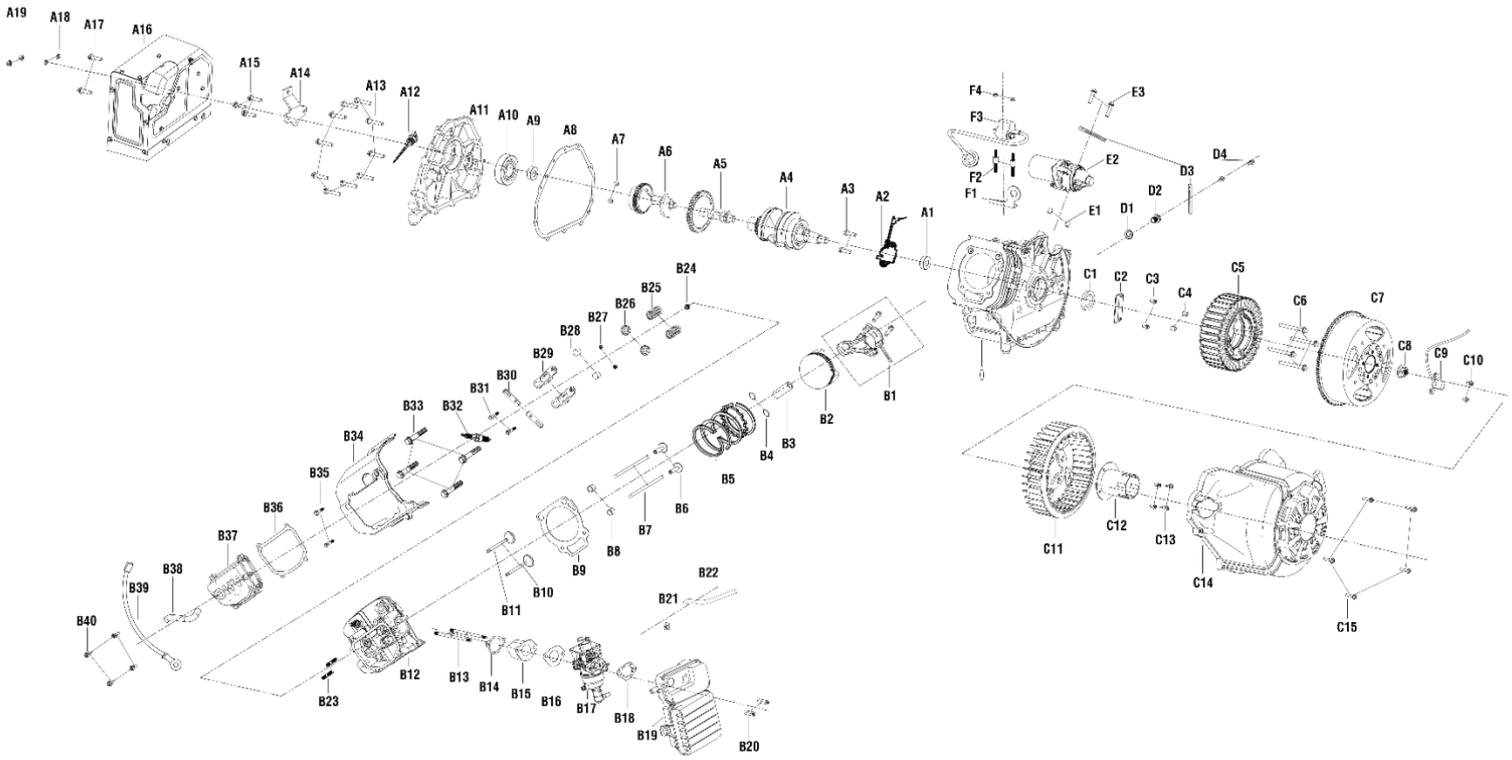
(MAIN) #420 Diamond Warehouse Compound, F Legaspi St., Maybunga Pasig City 1607
(DAVAO) Space 10 & 11 Jin-Long Complex R. Castillo St. Agdao District, Davao City 800

9. EXPLODED VIEW DIAGRAM & PART LIST



No	Part code	Part Name	QTY
1	20260-11869-00	Engine component	1
2	20090-03009-00	Frame assembly	1
3	34030-00291-00	Vibration damping mount	4
4	30125-00023-00	Hex flange nut	8
5	33089-01048-00	Left power mounting plate	1
6	33089-01049-00	Right power mounting plate	1
7	30101-00492-00	Hex flange bolt	4
8	30125-00026-00	Hex flange nut	4
9	31023-00034-00	DC voltage regulator	1
10	30101-00341-00	Hex flange bolt	9
11	20196-00122-00	Wire harness	1
12	30101-00339-00	Hex flange bolt	1
13	33004-02525-00	Muffler mounting bracket	1
14	30101-00355-00	Hex flange bolt	3
15	33048-00882-00	Muffler gasket	2
16	20202-01665-00	Muffler component	1
17	30139-00036-00	Spring washer	2
18	30121-00007-00	Hex nut	2
19	30136-00015-00	Flat washer	2
20	30101-00489-00	Hex flange bolt	3
21	33014-02716-00	Inverter inner cover	1
22	20136-01518-00	Inverter component	1
23	30125-00019-00	Hex flange nut	4
24	30101-00347-00	Hex flange bolt	2
25	33014-00548-00	Inverter outer cover	1
26	31002-00180-01	Battery	1
27	20196-06355-00	Battery quick-connect cable	1
28	33015-00281-00	Battery strap	1

No.	Part Code	Part Name	QTY
29	20130-00425-13	Fuel tank assembly	1
30	20133-00020-01	Fuel tank valve	1
31	30136-00074-00	Fuel tank gasket	4
32	30101-00407-00	Hex flange bolt	4
33	34024-00002-00	Clamp	1
34	33015-00100-00	Protective sleeve	1
35	20114-10503-00	Control panel assembly	1
36	33014-00082-02	Start protection ring	1
37	33014-00966-00	Handle guard	1
38	30111-00088-00	Cross recessed pan head screw	2
39	30125-00008-00	Hex flange nut	2
40	20014-00079-01	Bracket component	2
41	34030-00081-00	Vibration rubber pad	2
42	30101-00405-00	Hex flange bolt	2
43	30101-00359-00	Hex flange bolt	4
44	20134-00083-00	Wheel assembly	2
45	34031-00027-00	Wheel axle	2
46	30136-00086-00	Flat washer	2
47	34006-00021-00	Locating pin lock clip	2
48	20135-00842-00	Handle tube	1
49	33126-00008-00	Plug	2
50	33015-00012-00	Handle rubber sleeve	1
51	33580-00035-00	Handle fixing pin	2



No	Part code	Part Name	QTY
0	34011-00616-00	Crankcase	1
A1	30141-00112-00	Deep groove ball bearing	1
A2	33247-00027-00	Oil sensor	1
A3	30101-00342-00	Hex flange bolt	2
A4	20011-00538-00	Crankshaft assembly	1
A5	20012-00125-00	Camshaft assembly	1
A6	34033-00308-00	Balance shaft	1
A7	34006-00001-00	Locating pin	2
A8	33048-00966-00	Crankcase cover gasket	1
A9	30141-00112-00	Deep groove ball bearing	1
A10	30141-00249-00	Deep groove ball bearing	1
A11	33129-00406-00	Crankcase cover	1
A12	20026-00107-00	Oil dipstick assembly	1
A13	30101-00370-00	Hex flange bolt	10
A14	33004-02525-00	Muffler mounting bracket	1
A15	30101-00676-00	Hex flange bolt	3
A16	20202-01457-00	Muffler assembly	1
A17	30101-00676-00	Hex flange bolt	2
A18	30139-00037-00	Spring washer	2
A19	30121-00040-00	Hex nut	2

No	Part code	Part Name	QTY
B21	34024-00022-00	Clamp	0
B22	34023-00004-00	Fuel pipe	0.25
B23	30110-00027-00	Exhaust stud bolt	2
B24	34007-00001-00	Oil seal	1
B25	34015-00004-00	Valve spring	2
B26	34016-00005-00	Valve spring seat	2
B27	34016-00009-00	Valve lock	4
B28	33141-00022-00	Exhaust valve rotor	2
B29	34019-00078-00	Rocker arm assembly	2
B30	30134-00039-00	Rocker arm shaft	2
B31	30101-00530-00	Hex flange bolt	2
B32	20027-00013-00	Spark plug component	1
B33	30101-00933-00	Hex flange bolt	4
B34	34021-00599-00	Cylinder head air guide cover	1
B35	30101-00662-00	Hex flange bolt	2
B36	33048-00762-00	Cylinder head cover gasket	1
B37	20021-00114-00	Cylinder head cover assembly	1
B38	34023-00074-00	Breather pipe	1
B39	31018-00029-00	Sensor	1
B40	30101-00530-00	Hex flange bolt	4
C1	34007-00112-00	Oil seal	1
C2	33593-00916-00	Wire clamp plate	1
C3	30101-00070-00	Hex flange bolt	2
C4	34006-00006-00	Locating pin	2
C5	20005-00550-00	Variable frequency motor stator	1
C6	30101-01195-00	Hex flange bolt	4
C7	20006-00297-00	Variable frequency motor rotor	1
C8	30125-00035-00	Hex flange nut	1
C9	20028-00185-00	Trigger	1
C10	30101-00070-00	Hex flange bolt	2
C11	33155-00266-00	Fan	1
C12	34022-00052-00	Starter cup	1
C13	30101-00342-00	Hex flange bolt	4
C14	20010-00555-01	Recoil starter assembly	1
C15	30101-00408-00	Hex flange bolt	5

No	Part code	Part Name	QTY
B1	20008-00083-00	Connecting rod assembly	1
B2	34004-00147-00	Piston	1
B3	34006-00274-00	Piston pin	1
B4	30150-00023-00	Piston pin circlip	2
B5	20084-00193-00	Piston ring set	1
B6	34008-00006-00	Valve tappet	2
B7	34020-00056-00	Valve push rod	2
B8	34006-00275-00	Locating pin	2
B9	33048-00761-00	Cylinder head gasket	1
B10	34013-00167-01	Intake valve	1
B11	34013-00168-01	Exhaust valve	1
B12	20023-00231-01	Cylinder head assembly	1
B13	30110-00277-00	Intake stud bolt	2
B14	33048-00763-00	Intake port gasket	1
B15	34012-00063-00	Carburetor adapter	1
B16	33048-00078-00	Carburetor gasket	1
B17	20024-00751-01	Carburetor assembly	1
B18	33048-01059-00	Air filter gasket	1
B19	20025-00315-00	Air filter assembly	1
B20	70002-06778-00	Air filter mounting nut	2

No	Part code	Part Name	QTY
D1	30136-00080-00	Aluminum gasket	1
D2	30101-00514-00	Hex flange bolt	1
D3	34024-00077-00	Metal wire clamp	2
D4	30101-00070-00	Hex flange bolt	2
E1	34006-00006-00	Locating pin	2
E2	20149-00224-02	Starting motor component	1
E3	30101-00461-00	Hex flange bolt	2
F1	33104-00045-00	Lifting lug	1
F2	30110-00278-00	Stud bolt	2
F3	20028-00218-00	Ignition controller	1
F4	30125-00002-00	Hex flange nut	2