

Description

The Alemlube PM40 petrol driven 1-1/2" transfer engine pump is specifically designed and manufactured for the transfer of diesel and water. Mounted in a robust tubular steel roll frame with rubber feet the PM40 is completely portable, suits many industrial, workshop, agricultural, municipal, marine services and on site applications including construction site dewatering and is capable of transferring up to 300 litres of diesel fuel or water per minute.

Driven by a powerful OHV 4 stroke air cooled petrol engine this lightweight die-cast aluminium pump with 1-1/2" diameter inlet & outlet ports operates efficiently with a maximum suction head of 7 metres and a maximum lift head of 22 metres.

Always ready to perform tank filling, diesel fuel or water transfer the PM40 has a 1.5L fuel tank capacity with a manual starting system.

Specifications

Uses	Diesel and water transfer
Engine Type	OHV 4 stroke, Air Cooled
Maximum Flow Rate	300 L/min

IMPORTANT

Please make certain that persons who are to use this equipment thoroughly read and understand these instructions and any additional instructions provided prior to operation.

NOTE

No refund or exchange once petrol is placed into the fuel tank.

Warranty registration must be complete within 30 days of purchase with proof of purchase..



TABLE OF CONTENTS

SAFETY INSTRUCTIONS	3-4
• Warning Labels	4
FEATURES, ASSEMBLY AND ACCESSORIES	5
BEFORE OPERATION	6
OPERATING THE DIESEL & WATER PUMP	7
MAINTENANCE	8
STORAGE	9
TROUBLE SHOOTING	10
SPECIFICATIONS	11
PERFORMANCE CURVE	12
LIMITED WARRANTY	13

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SAFETY INSTRUCTIONS

DANGER

DANGER indicates a potentially hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate personal injury, or property damage.

WARNING

To reduce the risk of serious injury or even death, read the following safety precautions and operating instructions before operating.

DANGER

Using a water pump indoors WILL KILL YOU IN MINUTES



- Engine 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.

DANGER

FUEL IS HIGHLY FLAMMABLE AND EXPLOSIVE



- Always turn off the engine before adding petrol. Hot engine parts, sparks or cigarettes can ignite petrol. Store petrol away from the pump. Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any petrol on the engine or muffler when refuelling.
- Before transporting the pump in a vehicle, drain all petrol to prevent leakage that may occur. Store the pump in a well ventilated area with the petrol tank empty.

WARNING

ENGINE AND MUFFLER MAY BE HOT



- Contact with muffler area can result in serious burns. Exhaust heat/gases can ignite combustibles, structures or damage the fuel tank causing a fire.
- DO NOT touch hot parts and AVOID hot exhaust gases. Allow equipment to cool before touching.

WARNING

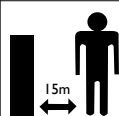


Starter and other rotating parts can entangle hands, hair, clothing, or accessories.

- Do not wear loose clothing, jewellery, or anything that may be caught in the starter or other rotating parts.
- Tie up long hair when operating the pump.

WARNING

KEEP CHILDREN AND PETS AWAY



Keep bystanders, especially children and pets, at least 15m from the pump. Do not let children touch the pump. When not in use, the pump should be stored in a dry, locked location, out of reach of children.

CAUTION

HEAVY LOAD



Use proper lifting techniques when transporting the pump from site to site. Improper lifting techniques may result in personal injury.

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SAFETY INSTRUCTIONS

CAUTION

Improper treatment can damage the unit and shorten its life

Be sure pump chamber is filled with diesel or water before starting the engine. NEVER run the pump without priming.

- Use a non-collapsible hose on the suction side of the pump.
- Use the diesel & water pump only for intended uses.
- Not suitable for pumping sea water, beverages, acids, chemical solutions, or any other liquid, other than diesel or clean water.
- DO NOT obstruct the suction or discharge hose in any way.
- NEVER operate the pump without the strainer basket connected to the end of a suction hose.
- DO NOT exceed suction head (see Specification). Use the shortest suction head possible.
- NEVER allow vehicles to drive over hoses. If a hose must be positioned across a roadway, use planking on each side of hose to allow vehicles to pass over without obstructing or collapsing the hose.
- Position the pump to avoid “walking” or equipment movement, especially if located near a ditch or edge of open ravine. The equipment could fall in.
- Keep equipment away from the edge of a river or lake where it could cause the bank to collapse.
- DO NOT insert any objects through cooling slots.

NOTICE

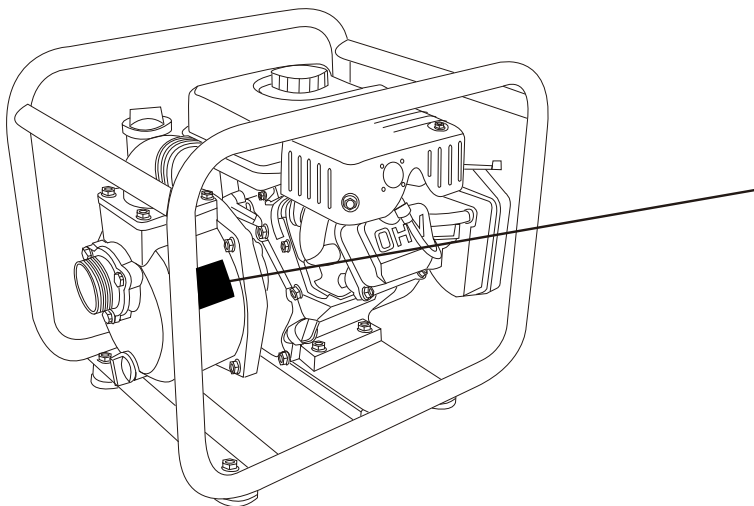
Engine oil is hazardous to the environment

Be very careful when changing the oil to prevent spilling onto the ground. Even if it is washed away, it will not mix with water and will pollute the watershed—having a negative impact on the plants and animals that it comes in contact with.

When disposing of engine oil:

1. While changing the engine oil, place a drip pan under the oil plug to collect the waste.
2. Soak up any spills with sawdust, kitty litter, or sand. NEVER dump down the drain or sewer.
3. Take the oil and filter to an oil recycling centre.

Warning Labels



CAUTION

- Fully prime the pump and check all connections for leakage before starting the engine

WARNING

- Petrol is flammable and explosive
- NEVER refuel a running or hot engine
- Ensure there are no fuel leaks before starting
- Keep sources of sparks and flames away
- Clean up fuel spills immediately
- Always keep a fire extinguisher nearby

DANGER

Do not use the diesel & water pump in an enclosed area, exhaust fumes can KILL.

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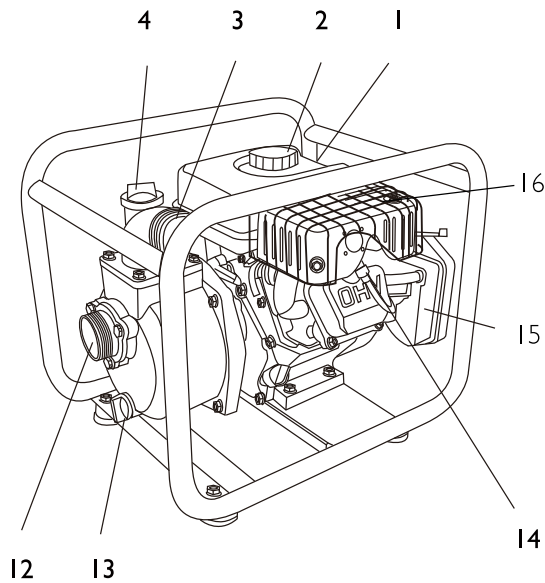
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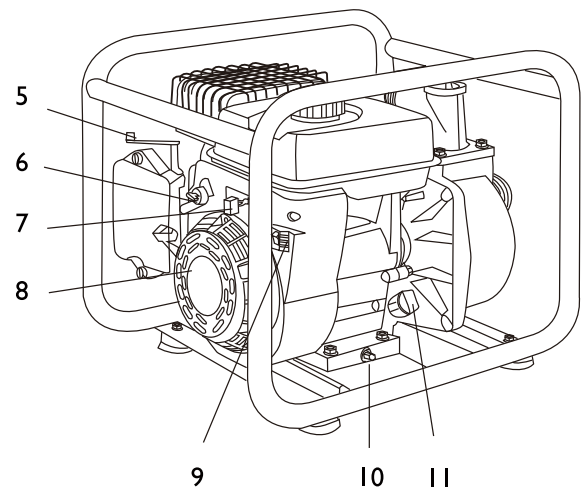
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FEATURES, ASSEMBLY AND ACCESSORIES

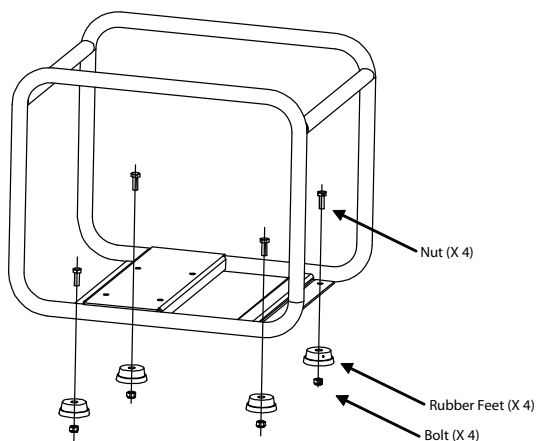


1. FUEL TANK
2. FUEL TANK CAP
3. DISCHARGE OUTLET
4. PRIMING PLUG
5. CHOKE LEVER
6. FUEL COCK
7. SPEED LEVER
8. RECOIL STARTER

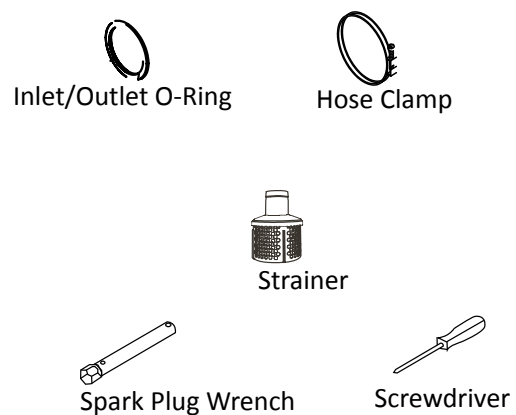


9. STOP SWITCH
10. OIL DRAIN PLUG
11. OIL GAUGE
12. SUCTION INLET
13. WATER DRAIN PLUG
14. SPARK PLUG
15. AIR FILTER
16. MUFFLER

Assembly



Main Accessories



CAUTION: Running the diesel & water pump without rubber feet will shorten engine life.

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BEFORE OPERATION

Check Engine Oil

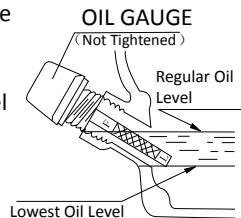
WARNING

DO NOT attempt to start this engine without filling the crank case with the proper amount and type of oil. Your diesel & water pump has been shipped from the factory without oil in the crankcase. Operating the unit without oil can damage the engine.

Use class SE oil or a higher grade according to the table below. SAE 10W-30 or 10W-40 is recommended for general, all temperature use.

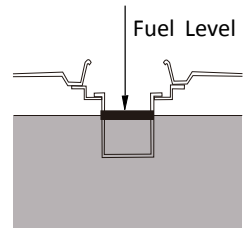
Single Grade Oil	10W							
	20W							
	20#							
	30#							
	40#							
Multiple Grade Oil	10W-40							
	10W-30							
	5W-20							
Temperature °C	-30	-20	-10	0	10	20	30	40
°F	-22	-4	14	32	50	68	86	104

- Inspect the oil level by using the oil gauge before starting the engine each time
- Top up the oil level to the maximum level mark and/or until oil flows from the opening
- Ensure both Oil Gauges are secure.



Fill the tank with clean, fresh unleaded automotive petrol

- Check fuel level.
- If fuel level is low, refill with unleaded automotive petrol.
- Be sure to use the fuel filter screen on the fuel filter neck.



Check Air Cleaner to Make Sure It Is Clean

If not, please refer to "HOW-TO" MAINTENANCE.

Check Loose and Missing Parts

Before starting the water pump, check for loose or missing parts and for any damage which may have occurred during shipment.

NOTICE

Low oil sensor

The unit is equipped with a low oil sensor. If the oil level becomes lower than required, the sensor will activate a warning device or stop the engine.

If the diesel & water pump shuts off and the oil level is within specifications, check to see if the pump is sitting at an angle that forces oil to shift. Place on an even surface to correct this.

If the engine fails to start, the oil level may not be sufficient to deactivate low oil level switch. Make sure the sump is completely full of oil.

Check Engine Fuel

WARNING

DO NOT refuel while smoking or near open flame or other such potential fire hazards. Otherwise a fire accident may occur.

- Do not refill tank while engine is running or hot
- Close fuel cock before refuelling with petrol
- Be careful not to admit dust, dirt, water or other foreign objects into fuel
- Wipe off spilt fuel thoroughly before starting the engine.
- Keep open flames away

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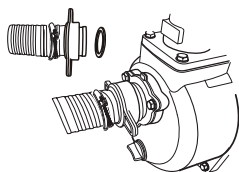
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OPERATING THE DIESEL & WATER PUMP

Attach Suction Hose

Use a commercially available hose with hose connector and fixtures. The suction hose must be reinforced with a non-collapsible wall or braided material.

- Insert O-ring into end of hose fixture
- Screw hose fixture assembly onto the pump in clockwise rotation until hose fixture assembly is tightened securely



CAUTION

The pump will fail to lift fluid if the suction process has an air leak.

- Attach suction Hose to the strainer. Slide hose clamp over hose. Attach open end of suction hose to strainer hose connector. Tighten hose clamp securely.



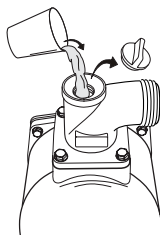
Connect Discharge Hose

Use a commercially available hose with hose connector and fixture.

Prime the Diesel & Water Pump

To enable the pump to prime, the pump chamber must be full of water.

- Remove drain plug from top of the pump
- Fill the pump with diesel or clean, clear water up to the top of the discharge outlet. Make sure that the drain plug is always replaced after filling.



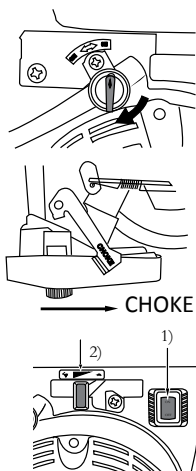
- **BE SURE** pump chamber is filled with diesel or water before starting the engine
- **DO NOT** let the pump run dry or damage to mechanical seals may result

WARNING

Running the diesel & water pump without priming will severely damage the pump seal system.

Starting the Water Pump

- Make sure the unit is on a flat, level surface and pump chamber is primed.
- Turn fuel cock to "On" position
- Set the choke lever to the "Choke" (Right) position. This is not necessary if the engine is warm
- Move the engine speed lever to half way to "Fast" (Left) position. Pump output is controlled by adjusting engine speed. Moving the engine speed lever in the "Fast" direction will increase

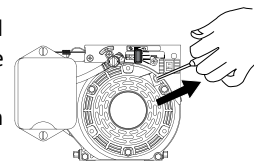


the pump output, and moving the engine speed lever in the "Slow" direction will decrease the pump output.

- Turn the engine stop switch "On"

- Pull the starter handle slowly until resistance is felt. This is the "compression" point.

Return the handle to its original position and pull swiftly until engine starts



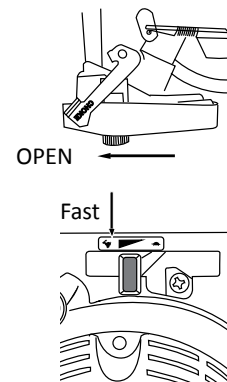
WARNING

To avoid accidentally hurting people nearby when pulling the starter handle, Please keep bystanders, especially children and pets, away.

CAUTION

Do not allow the starter handle to snap back against the engine. Return it gently to its starting position to prevent damage to the starter or the housing.

- After the engine starts, return the choke lever gradually to "Open" (Left) position and move engine speed lever to "Fast" (Left) position.

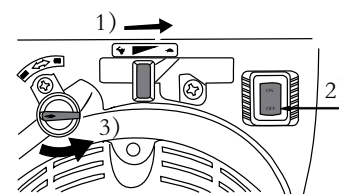


Note

- Position the pump as close as possible to the source and run the engine at full speed. Expect to wait for approximately one minute for the pump to prime and start pumping. This time will increase if the pump is further from the source – particularly if there is a deep suction lift.
- If the pump fails to prime, check TROUBLESHOOTING

Stopping the Pump

- Move engine speed lever to "Slow" (Right) position
- Push stop switch to "Off" position
- Turn fuel cock to "Off" position



CAUTION

Move the engine stop switch to the "OFF" position to stop the engine directly in an emergency situation.

Drain the Pump

- Disconnect suction and discharge hoses
- Remove the drain plug
- Replace drain plug after draining

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MAINTENANCE

1. Maintenance Schedule

ITEM	REMARKS	(daily) PRE OPERATION	INITIAL 25HR	EVERY 50HR	EVERY 100HR	EVERY 300HR
Spark Plug	Check condition adjust gap and clean. Replace if necessary			•		
Engine Oil	Check oil level	•				
	replace		•	•		
Air Filter	Clean, replace if necessary		•	•		
Fuel Filter	Clean and adjust. Replace if necessary				•	
Fuel Line	Check fuel hose for crack or damage. Replace if necessary				•	
Exhaust System	Check for leakage. Retighten or replace gasket if necessary					•
	Check muffler screen Clean/replace if necessary					•
Carburetor	Check choke operation					•
Cooling System	Check fan damage					•
Starting System	Check recoil starter operation					•
Filling/Fast eners	Check all fittings and fasteners, correct if necessary					•



CAUTION

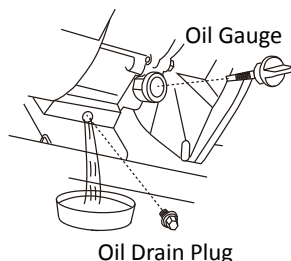
To prevent accidental starting, always remove the spark plug or cable from the spark plug before maintaining the pump or engine.

MAINTENANCE

2. "How-To" Maintenance

Engine Oil Change

1. Drain oil by removing the drain plug and the oil gauge while engine is warm
2. Reinstall the drain plug and fill the engine with oil until it reaches the upper level on the oil filler cap
3. Clean the oil on the panel. Dispose of used oil in local authority disposal site.

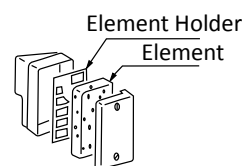


WARNING

Engine oil may be hot.
Let engine cool at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.

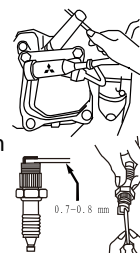
Clean Air Filter

1. Unscrew the air filter cover
2. Remove the filter element and wash well in solvent
3. Pour a small amount of oil onto the filter element and gently squeeze out any excess oil
4. Replace the filter element and air filter cover
5. Be sure the filter cover seals properly all around



Clean Spark Plug

1. If the plug is contaminated with carbon, remove it & clean using a plug cleaner and wire brush
2. Adjust the electrode gap to 0.7 to 0.8 mm

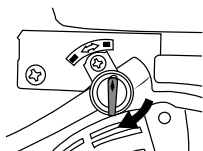


Engine	GT241/400/600		GT1000/GT1300			
Manufacturer	NGK	Bosch	NGK	Denso	Champion	Bosch
Product No.	BP6RSH	E6RTC	BPR5ES	W16EPR	RN11YC	WR8DC+

STORAGE

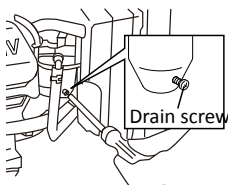
Besides draining fuel from the fuel tank, the following procedures should be followed prior to storage of your pump for periods of 3 months or longer.

1. Turn fuel cock to "OPEN" position
2. Loosen the drain screw on the side of the carburettor float chamber, and drain the fuel completely.



NOTE

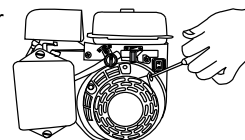
1. There are two screws on carburettor. The vertical one is the screw to hold the carburettor float chamber; the other one on the side of the carburettor float chamber is the drain screw
- 2) Tighten the drain screw very carefully to avoid damaging the fuel cup



3. Remove the spark plug, pour 2 to 3cc of engine oil into the cylinder, and turn the crank shaft several times.



4. Replace the spark plug and pull starter handle until resistance is felt.



5. Store the pump in a well ventilated, low humidity area.

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TROUBLE SHOOTING

Problem	Cause	Correction
No pump output or low pump output when the pump is running.	<ol style="list-style-type: none"> 1. Pump not primed. 2. Suction hose restricted, collapsed, damaged, too long, or diameter too small. 3. Strainer not completely under diesel or water. 4. Air leak at suction hose connector. 5. Strainer clogged. 6. Discharge hose restricted, damaged, too long, or diameter too small. 7. Excessive or marginal head. 8. Engine speed lever is in "Slow " position. 	<ol style="list-style-type: none"> 1. Fill pump chamber with diesel or water and prime pump. 2. Replace suction hose. 3. Sink the strainer and the end of suction hose completely under diesel or water. 4. Replace sealing washer if missing or damaged. Tighten hose connector and clamp. 5. Clean debris from strainer. 6. Replace discharge hose. 7. Relocate pump and/or hoses to reduce head. 8. Move engine speed lever to " Fast " position.
Engine will not start; lacks power; starts and runs rough; or "hunts" or falters.	<ol style="list-style-type: none"> 1. Stop switch set to " Off ". 2. Fuel valve is in "Off " position. 3. Dirty air cleaner. 4. Out of petrol. 5. Stale or contaminated fuel or water in fuel. 6. Spark plug wire not connected to spark plug. 7. Bad spark plug. 8. Excessive fuel is present in the air/fuel mixture causing a "flooded" condition. 9. Excessively rich fuel mixture. 10. Intake valve stuck open or closed. 11. Engine has lost compression. 12. Carburetor is running too rich or too lean. 	<ol style="list-style-type: none"> 1. Set switch to "On". 2. Turn fuel valve to "On" position. 3. Clean or replace air cleaner. 4. Wait two minutes and fill fuel tank. 5. Drain fuel tank and carburetor; fill with fresh petrol. 6. Connect wire to spark plug. 7. Replace spark plug. 8. Wait 5 minutes and re-crank engine. 9. Contact service facility. 10. Contact service facility. 11. Contact service facility. 12. Contact service facility.

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SPECIFICATION

MODEL NO.	PM40
Engine	
Brand:	mitsubishi
Engine Model NO.:	GT241
Type:	OHV, 4 Stroke, Air cooled
Displacement:	79.6 cc
Fuel Tank Size:	1.6 Litre/Unleaded Gasoline
Lubricating oil:	0.3 Litres/Engine oil SD or Higher
Starting System:	Manual Start
Oil Alert:	Equipped
Pump	
Max. Flow:	249 L/min
Inlet Diameter:	3.8 BSPT
Outlet Diameter:	3.8 BSPT
Self Priming:	Yes
Pump Head Material:	Aluminum
Mechanical Seal Material:	Ceramic Carbon
Max. Suction:	7 metres
Max. Lift:	21.9 metres
Accessories	
Strainer:	Equipped
Hose Bands:	Equipped
Spark Plug Driver Kit	Equipped
Overview	
Weight:	22 kilograms
Dimensions:	44.45 Lx35.56Wx37.084H cm

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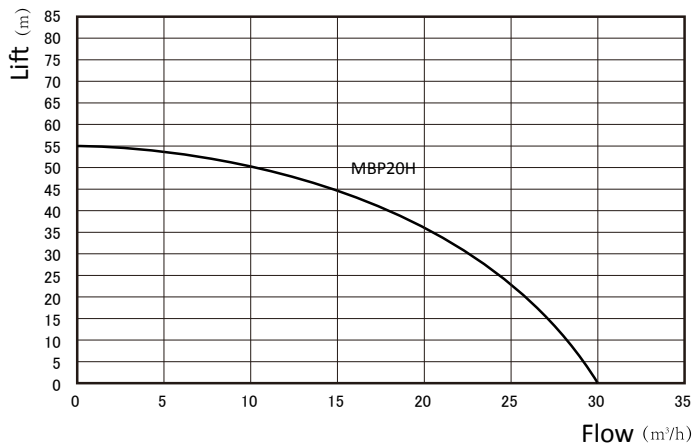
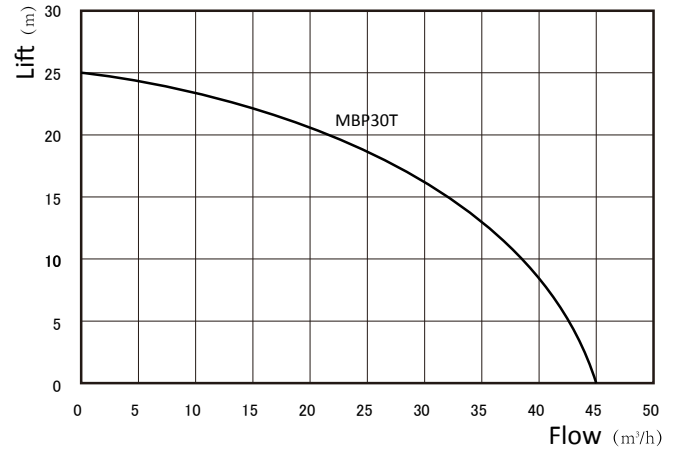
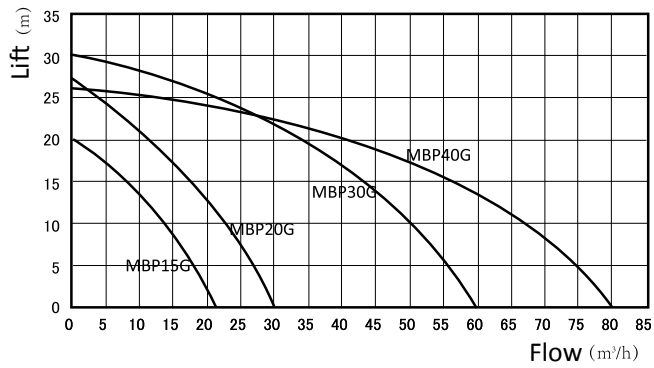
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PERFORMANCE CURVE



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VIC/TAS

TEL: (03) 8787 8288
FAX: (03) 8787 8266

WA

TEL: (08) 9302 4199
FAX: (08) 9303 2095

SA/NT

TEL: (08) 8241 7111
FAX: (08) 8241 7011

NZ

TEL: (64) 9 447 1007
FAX: (64) 9 447 1008

LIMITED WARRANTY

This Mitsubishi engine product carries a guarantee of 24 months. If your product develops a fault within this period, DO NOT return to store, you should, in the first instance contact our customer service.

We welcome warranty repairs and apologize to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. To avoid misunderstanding which might occur between the customer and the dealer, listed below are some of the causes of engine failure that the warranty does not cover.

Normal wear: Engines, like all mechanical parts, need periodic parts service and replacement to perform well. Your warranty will not cover repairs when wear has occurred because of misuse, lack of routine maintenance, shipping, handling, has exhausted the life of a part or an engine. Warranty would not apply if engine damage occurred because of misuse, lack of routine maintenance, shipping, handling, warehousing or improper installation. Similarly, warranty is void if the serial number of the engine has been removed or the engine has been altered or modified.

Improper maintenance: The life of an engine depends upon the conditions under which it operates, and the care it receives. Often used in dusty or dirty conditions, which can cause what appears to be premature wear. Such wear, when caused by dirt, dust, spark plug cleaning grit, or other abrasive material that has entered the engine because of improper maintenance, is not covered by warranty.

This warranty covers engine related defective material and/or workmanship only, nor does the warranty extend to repairs required because of:

1. Problems caused by parts that are not original parts.
2. Leaking carburetors, clogged fuel pipes, sticking valves, or other damage, caused by using contaminated or stale fuel.
3. Parts which are scored or broken because an engine was operated with insufficient or contaminated lubricating oil, or an incorrect grade of lubricating oil (check and refill when necessary, and change at recommended intervals). OIL GARD may not shut down running engine. Engine damage may occur if oil level is not properly maintained.
4. Damage or wear to parts caused by dirt, which entered the engine because of improper air cleaner maintenance, re-assembly, or use of a non-original air cleaner element or cartridge. At recommended intervals, clean and/or replace the filter as stated in the Operator's Manual.
5. Parts damaged by over-speeding, or overheating caused by grass, debris, or dirt, which plugs or clogs the cooling fins, or flywheel area, or damage caused by operating the engine in a confined area without sufficient ventilation. Clean engine debris at recommended intervals as stated in the Operator's Manual.
6. Engine or equipment parts broken by excessive vibration caused by a loose engine mounting, or unbalanced impellers, improper attachment of equipment to engine, over-speeding or other abuse in operation.
7. Routine tune-up or adjustment of the engine.
8. Engine or engine component failure, i.e., combustion chamber, valves, valve seats, valve guides, or burned starter, caused by the use of gasoline formulated with ethanol greater than 10%.

HOW TO ORDER REPLACEMENT PARTS

To order replacement parts, please give the following information:

1. Model No. and Serial No. and all specifications 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 product.

NSW/ACT

TEL: (02) 9677 1555
FAX: (02) 9675 1155

QLD/PNG

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FAX: (07) 3204 1224

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