

INSTRUCTION MANUAL

240V DIESEL MINI BOWSER

AMB60L - AMB100L



AMB60L
AMB100L

240V DIESEL MINI BOWSER

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INTRODUCTION

Thank you for purchasing a Macnaught 240 volt Diesel Mini Bowser.

The Macnaught 240 volt Diesel Mini Bowser has been designed to reliably pump and transfer Diesel from a wide range of containers and tanks.

Macnaught also has a complete range of retractable hose reels, fuel nozzles, fuel meters, air operated or manual oil pumps and a full range of greasing equipment available to suit all of your fluid handling requirements.

GENERAL INFORMATION

This manual assists you in operating and maintaining your 240 volt electric Diesel mini bowser. The information contained will help ensure many years of dependable trouble free operation.

Please read and retain this instruction manual to assist you in the operation and maintenance of this quality product. If you require any further assistance please contact your local Macnaught distributor.

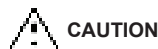
DESCRIPTION

The Macnaught 240V AC Diesel mini bowser is a self priming, positive displacement, rotary vane pump with a built-in bypass valve that automatically opens when the dispensing nozzle is closed. The mechanical meter included in the mini bowser is a nutating disc type meter, complete with a resettable batch total and a non resettable total.

The mini bowser has a built in on/off switch attached to the nozzle holder. When the nozzle is lifted out of the holder the pump will automatically switch on. When the nozzle is returned to the holder the pump will automatically switch off.

The mini bowser is supplied with mini bowser with built in meter, 1"x 4m delivery hose, automatic nozzle and strainer.

Note: The mini bowser has a 30 minute duty cycle



CAUTION

ONLY USE this pump with Diesel, failure to do so may cause personal injury, damage the pump and would also void pump warranty.

ASSEMBLY

Use oil resistant pipe sealant or similar on all pipe threads.

The pump should be fitted as close as possible to the liquid level to be pumped (maximum height of 2m above the level of the liquid).

We recommend that the diesel resistant suction hose should be a spiral wound type with a 1" inside diameter x 2M long.

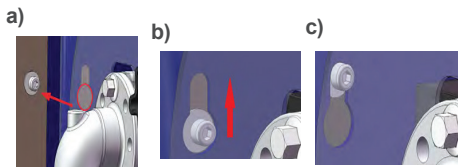
FITTING PUMP TO WALL



1. Carefully measure the mounting hole slot centres on the back of the pump unit

2. Drill 2 x holes in the wall at the correct centres to suit the pump unit. Ensure that the hardware used is strong enough to support the pump weight of 28kg. The head of the fixings should be no larger than 15mm diameter

3. Lift pump and locate it onto the two wall fixings, then carefully slide the unit down to lock the pump into place (Ref to pic a,b,c)



GENERAL INSTALLATION INFORMATION

1. Fit the Pump unit securely to the desired location.
2. Connect the suction hose to the pump inlet located on the underside of the pump.
3. Connect the strainer to the remaining end of the suction hose.

Note: The suction hose should be no longer than 4m.

4. Connect delivery hose to the meter outlet.
5. Connect remaining end of the delivery hose to the automatic diesel nozzle.

NOTE: We recommend that you use a Macnaught HA1S fuel filter (when required).

PUMP OPERATION

NOTE: Avoid sparks that could cause a fire: **DO NOT** use a patch cord to extend the power cables.



IMPORTANT

The pump should be fitted with a 30mA safety minimum Din standard safety device.

After the pump has stopped, wait at least 5 seconds before restarting the pump motor.

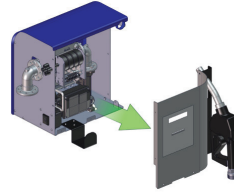
DO NOT let the pump run dry for more than 3 minutes or damage may occur

1. Before use, wipe off any dirt or moisture that may have accumulated on the nozzle or hoses.

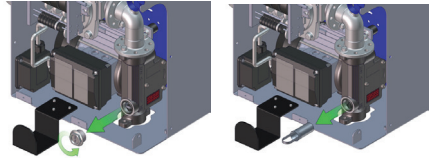
240V DIESEL MINI BOWSER

AMB60L - AMB100L

1. Insert suction hose (if applicable) into the diesel storage tank
2. Insert nozzle into the container to be filled.
3. Switch the motor on.
4. Operate the nozzle lever to dispense fluid.
5. When the desired amount of fluid has been dispensed, release nozzle lever to stop flow.
6. Immediately return the nozzle to the holder on the pump to switch off pump.
7. Nozzle and hoses should be kept clean and dry when not in use.



2. Remove the filter plug, then remove and clean the filter



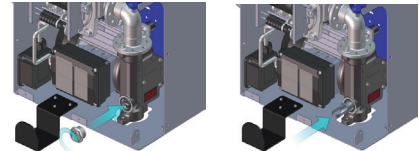
MAINTENANCE

IMPORTANT:

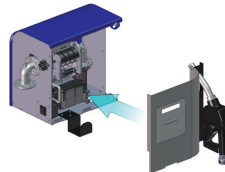
Do not modify any part of the pump or your warranty on this product will be automatically void.

1. Inspect and clean the strainer on the suction hose/pipe and pump regularly.
2. Always relieve the line pressure by opening the nozzle, draining hose, and disconnect power before starting any pump maintenance
3. Hoses should be inspected regularly. (Replace if found to be cracked or worn)
4. The rotor and vanes will eventually wear, and should be replaced if pump performance degrades. (Refer to trouble shooting guide)

3. Slide the filter back into place and re-fit plug



4. Refit the front cover

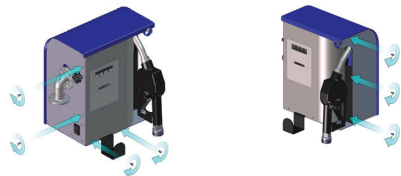
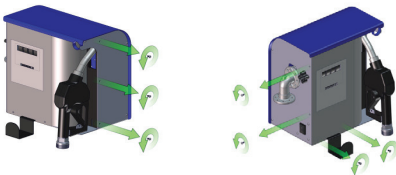


NOTE: Please refer to the information as listed on the identification plate on the pump. This information may be required when you contact Macnaught for any assistance.

CLEAN PUMP FILTER

1. Remove the screws securing the front panel to the Mini Bowser and then remove the panel.

5. Refit the front cover screws to secure the front cover



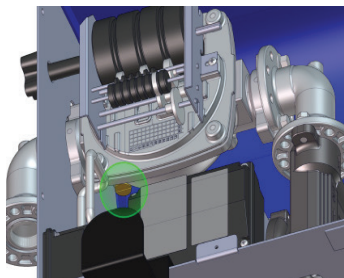
240V DIESEL MINI BOWSER

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METER CALIBRATION PROCEDURE

Calibration may be required depending on installation or after disassembly, metering different fluids or where meter wear has occurred.

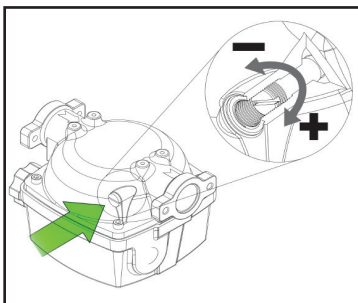
NOTE: You will need to use an accurate measuring container with graduations up to at least 19 litre capacity.



1. Remove the front cover on the mini bowser to access the meter calibration screw (ref to Clean Filter for details).
2. Set the batch total to Zero
3. Dispense 19 litres into your accurate measuring container
4. Check the total shown on the meter and compare with the actual total dispensed as shown in the container.
5. Adjust the calibration screw as required
 - a) Turn the screw clockwise to increase the indicated amount
 - b) Turn the screw anti-clockwise to decrease the indicated amount

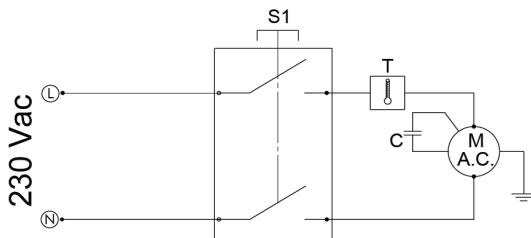
Note: One full turn of the screw will change the indicated amount approximately 2 litres

6. Repeat steps 1 - 4 until meter calibration is acceptable



WIRING DIAGRAM

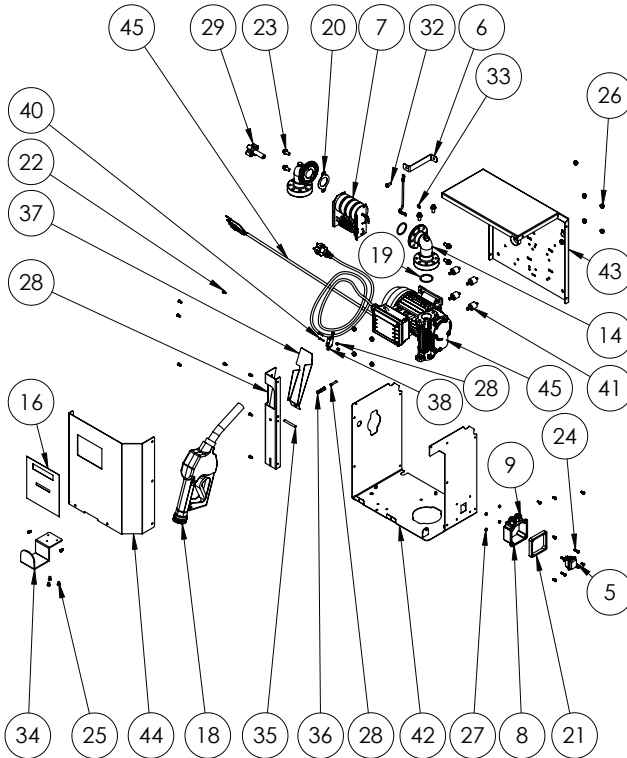
S: switch ON-OFF
 M: motor
 T: thermal protection
 C: capacitor



240V DIESEL MINI BOWSER

AMB60L - AMB100L

MINI BOWSER DIAGRAM



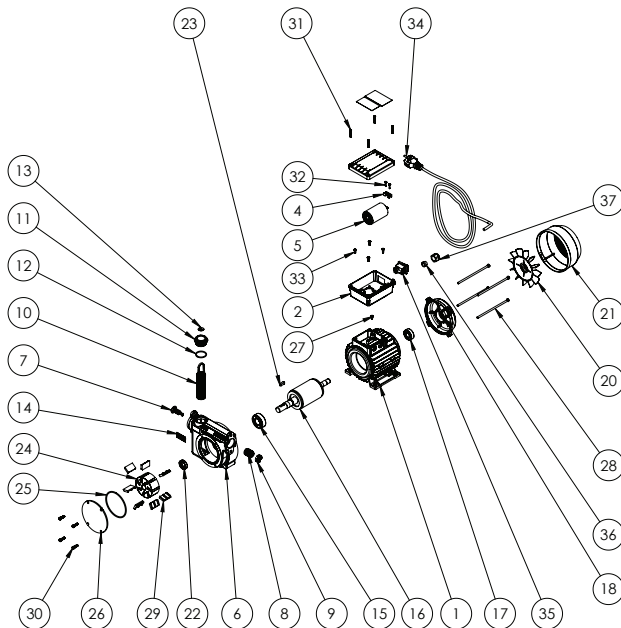
Item	Description	Q.ty	Item	Description	Q.ty	Item	Description	Q.ty
6	meter support	1	22	screw tc m4x10	16	34	hose holder	1
7	mechanical meter	1	23	screw te fr m8x16	6	35	plug	1
8	terminal cover	1	24	screw tc m4x16	4	37	gun paddle switch	1
9	plate with cable gland	1	25	screw tc m5x8	3	38	microswitch 16a/250v	1
11	cable gland rubber	1	26	flanged nut m6	9	39	2x1 micro fms cable	1
12	cable gland ring nut	1	27	nut m4	4	40	screw toce m3x16	2
14	fitting 1" bsp-g	2	28	nozzle holder	1	41	cylindric damper	4
15	screw toce m5x8	1	29	meter pommel	1	42	lower sheet	1
16	meter label	1	30	thread protection cap	2	43	panel	1
18	nozzle	1	32	screw te m6x14	1	44	frontal closing sheet	1
19	o-ring 37 x 3 nbr	2	33	washer 6x12x1.6	1	45	pump	1
20	pipe rubber seal	1						
21	terminal cover	1						

240V DIESEL MINI BOWSER

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AHFP100LPM

part list



Item	Description	Q.ty	Item	Description	Q.ty
1	Wrapped stator MEC 71 230V	1	20	fan MEC 71 with ring Ø14	1
2	capacitor holder + cap	1	21	fan holder MEC 71	1
4	Cable lock	1	22	Sealing ring 20x30x7 SNBR	1
5	Capacitor 25 µF	1	23	pin 6X6X20 UNI 6604-A	1
6	body pump 100 L 1"BSPG	1	24	Rotor Ø72	1
7	bypass valve	1	25	O-Ring 85X3 NBR	1
8	by pass spring	1	26	pump holder 80-100 Lt.	1
9	plate	1	27	screw TC Cross M4 x 8	1
10	inox filter	1	28	Tie M5X135 ZnB	4
11	cap 1 "	1	29	big vane	7
12	O-Ring 3118 NBR	1	30	screw TCCE M5x16	4
13	label "FILTER"	1	31	screw TC 4X25 UNI 9707	4
14	label "clear filter"	1	32	screw TC cross Ø3,5x16	2
15	Radial ball bearing	1	33	screw TC cross M4x6	4
16	crankshaft MEC71	1	34	cabl e + schuko plug 230V	1
17	Radial ball bearing	1	35	switch 22X30	1
18	worked shield MEC 71	1	36	grommet gland	1
19	Compensation ring Ø35	1	37	Cable gland nut	1

AVAILABLE ACCESSORIES

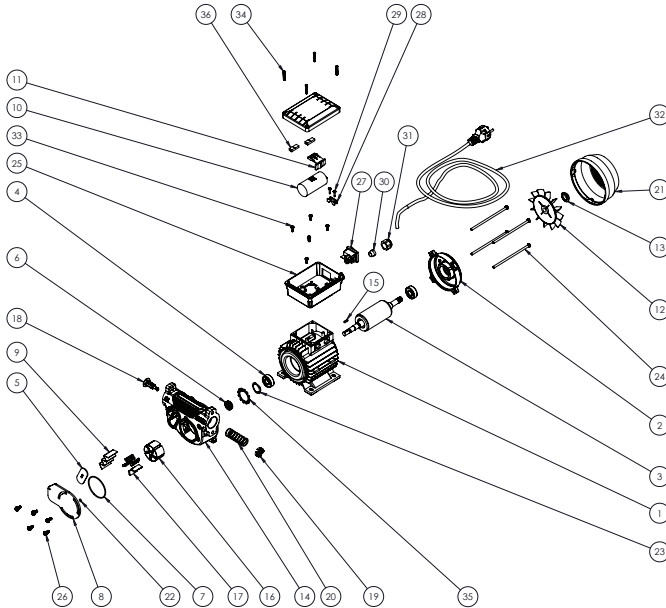
Manual nozzle
Automatic nozzle
For seal kit and Rotor set order AHFP100LPM-1K

240V DIESEL MINI BOWSER

AMB60L - AMB100L

AHFP60LPM

part list



Item	Description	Q.ty
1	wound stator p80	1
2	machined shield p.80	1
3	motor shaft p.80	1
4	bearing 6201 2rs	2
5	filter seal	1
6	motor shaft seal	1
7	o-ring nbr70 57x2 body pump	1
8	swivel locking plate	1
9	inox filter 16x49	1
10	capacitor 14µf	1
11	capacitor lock	1
12	fan fb63 d11 black w/ring	1
13	ring d11 for fan fb63 black	1
14	pump body pa 70l x-treme	1
15	pin 3x3x12 uni 6604-a	1
16	rotor ø45	1
17	small vane	5
18	by-pass valve	1

Item	Description	Q.ty
19	black reinforced bypass cap	1
20	by-pass spring	1
21	mec 63 fan cover	1
22	o-ring 2015 nbr	1
23	compensation ring	1
24	tie rod m5 x 125	4
25	capacitor box	1
26	screw te m5x12 flanged	5
27	blue switch 22x30	1
28	cabl lock	1
29	screw tc ø3,5x16	2
30	cabl gland rubber	1
31	cabl gland ring nut	1
32	shuko cabl 230v	1
33	screw tc 3,5x12	5
34	screw tc 4x25	4
35	security washer	1
36	faston cover	2

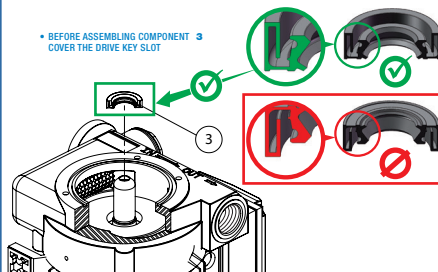
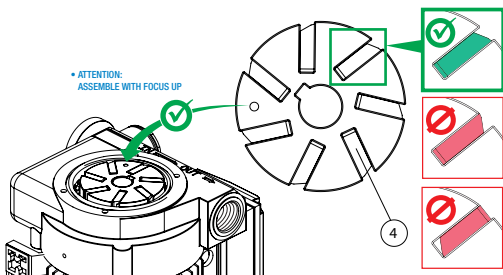
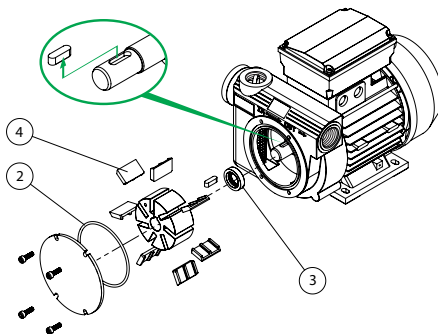
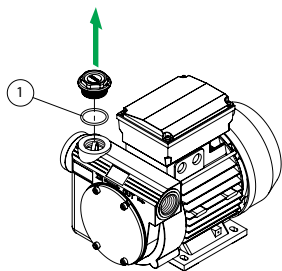
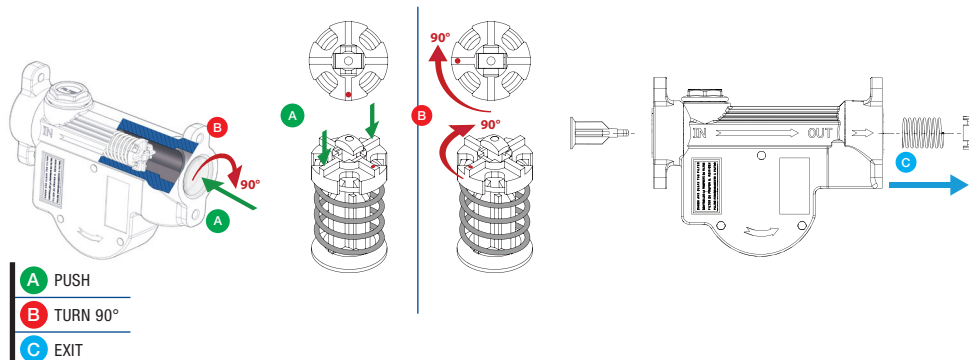
AVAILABLE ACCESSORIES

Manual nozzle
Automatic nozzle
For seal kit and Rotor set order AHFP70LPM-1K

240V DIESEL MINI BOWSER

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AHFP100LPM-1K

Item	Description AHFP100LPM-1K	Qty
1	O-RING 3118	5
2	O-RING 85 X 3 NBR 70	1
3	ROTARY SEAL 20 X 30 X 7 HNBR	1
4	VANE	1


Poppet valve and strainer assembly/disassembly: part no. AHFP100LPM-2K


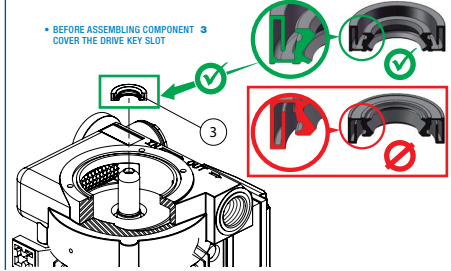
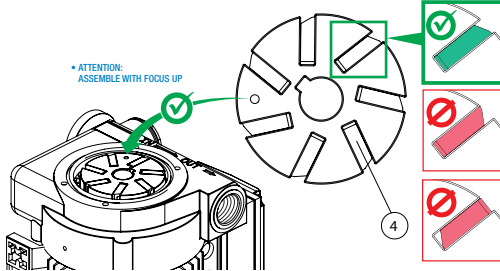
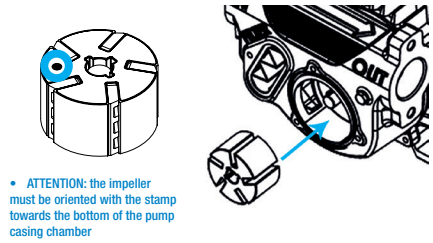
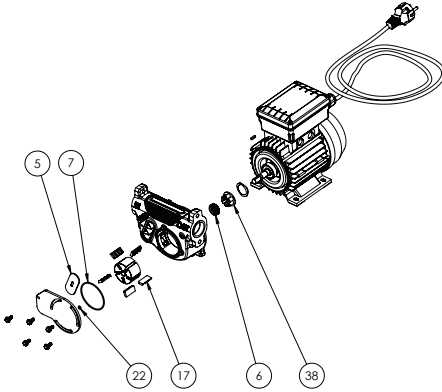
240V DIESEL MINI BOWSER

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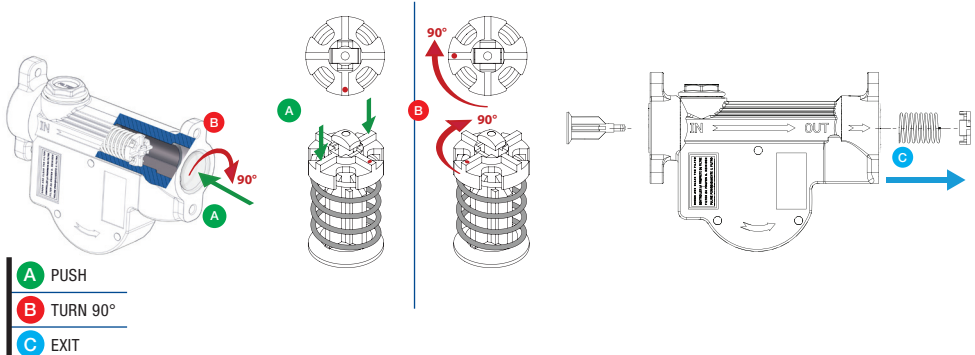
AHFP70LPM-1K

Item	Description AHFP70LPM-1K	Qty
5	FILTER SEAL	1
6	MOTOR SHAFT SEAL	1
7	O-RING NBR70 57X2 BODY PUMP	1

Item	Description AHFP70LPM-1K	Qty
17	SMALL VANE	5
22	O-RING 3118 NBR	1
38	BUSHING FOR PA1 70 SHAFT SEAL	1



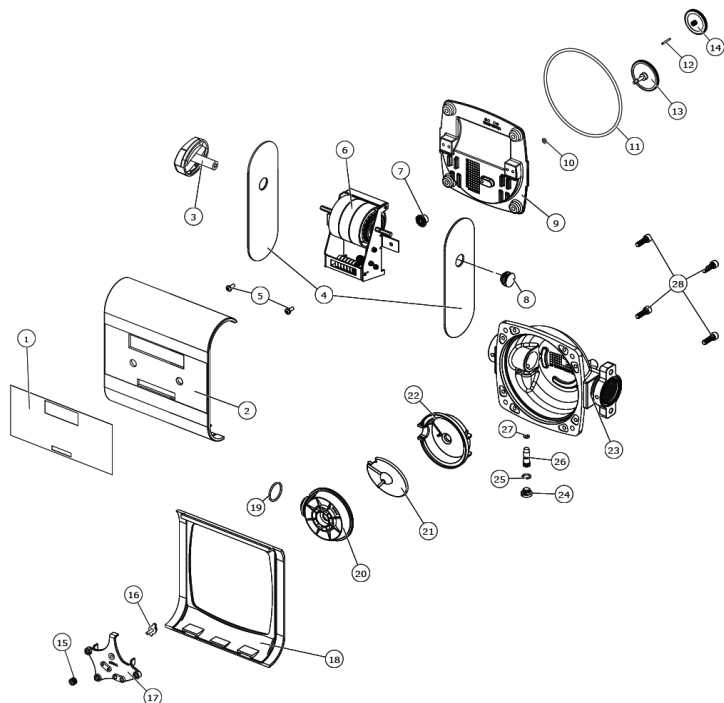
Poppet valve and strainer assembly/disassembly: part no. AHFP100LPM-2K



240V DIESEL MINI BOWSER

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METER PARTS LIST



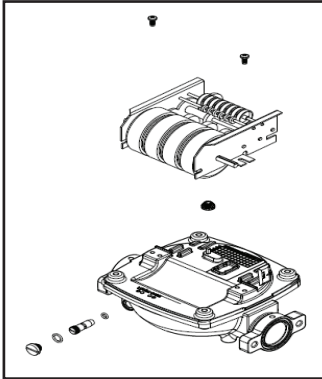
Item	Description	Qty
1	3 Digit Cover	1
2	Front Cover Plate	1
3	Reset Knob	1
4	Side Cover	2
5	M4 x 8 Screw	2
6	Mechanical Register	1
7	Bevel Gear	1
8	Reset Button Hole Cover	1
9	Register Base	1
10	O'ring	1
11	O'ring	1
12	Roll Pin	1
13	Gear (45 dia)	1
14	Double Gear (36 dia)	1

Item	Description	Qty
15	Cylindrical Gear	1
16	Lever & Pin Assy	1
17	Gear Support Plate	1
18	Lower Cover	1
19	O'ring	1
20	Lower Nutator Housing	1
21	Nutator Disc	1
22	Upper Nutator Housing	1
23	Meter Body	1
24	Calibration Cap	1
25	O'ring	1
26	Calibration Screw	1
27	O'ring	1
28	M6 x 20 Socket Head Screw	4

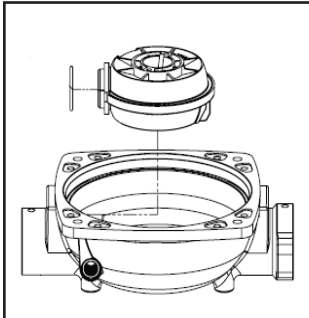
240V DIESEL MINI BOWSER

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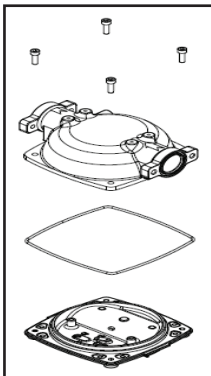
A) Register assembly and calibration screw
(removal / replacement)



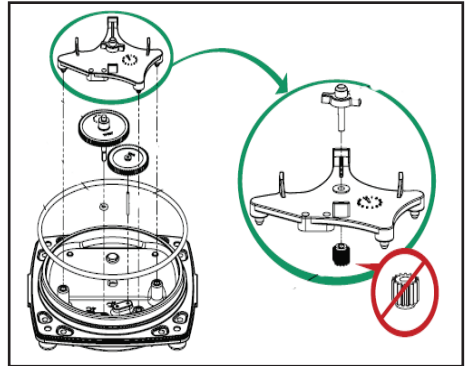
B) Nutating disc
(removal / replacement)



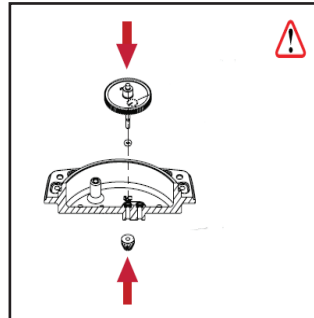
C) Meter body and cover-plate
(removal / replacement)



D) Gear train
(removal / replacement guide)



E) Gear replacement guide



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Problem	Cause	Solution
Pump fails to start	1) Suction hose/tube has a blockage	1) Clear blockage from suction hose/tube
	2) Outlet is blocked	2) Check outlet hose and nozzle for blockage and correct operation
	3) Bypass poppet not closing	3) Check bypass valve is closing correctly
	4) Vanes sticking	4) Check vanes are sliding freely in the slots (remove burrs or replace vanes if required)
	5) Excessive vane or rotor wear	5) Replace rotor and/or vanes
	6) Leak from front o'ring	6) Check o'ring for correct sealing, replace if required
Pump vibrates but does not turn on	1) Dirt jammed inside the pump	1) Clean pump chamber
	2) Faulty motor	2) Replace pump
	3) Broken rotor key	3) Replace rotor key
Low Flow	1) Blocked strainer	1) Clean or replace strainer
	2) Restriction on the inlet or outlet	2) Incorrect size hoses used on inlet or outlet
	3) Excessive rotor or vane wear	3) Replace worn or damaged components
	4) By pass poppet blocked	4) Check poppet valve for correct operation
	5) Low fluid level in tank	5) Fill tank
Motor overheating	1) Fluid too thick (viscous) [NOTE: Not applicable to AHFP70LPM]	1) Fluid to be no thicker than Diesel
	2) Motor running longer than 30 minutes [NOTE: Not applicable to AHFP70LPM]	2) Pump must only run for 30 minutes before cooling
	3) Blocked suction hose	3) Clean blockage from suction hose
	4) Blocked strainer	4) Clean strainer
Motor not turning on	1) Poor electrical connection	1) Check for any signs of damage on electrical connection
	3) Faulty switch or power point	3) Replace switch or power point
Pump leaking out of weep hole	1) Worn or damaged shaft seal	1) Replace seal
	2) Fluid compatibility	2) Only use compatible fluid

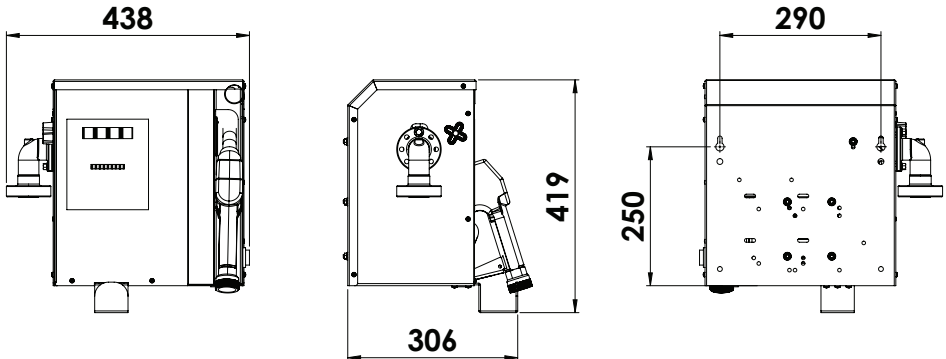
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SPECIFICATIONS

	AMB100L	AMB60L
Maximum Flow	100LPM	60LPM
Voltage	240 volt	240 volt
Max Current	4.6 amp	2.9 amp
Duty cycle	30 minutes	30 minutes
Inlet / Outlet	1" BSP (F)	1" BSP (F)
Motor protection rating	IP55	IP55
Maximum prime height	2m	2m
Maximum pressure	36 PSI	30 PSI
Wetted materials	Cast Iron, Sintered Steel, HNBR, NBR	Cast Iron, Sintered Steel, HNBR, NBR
Filter included	Yes	Yes
Suitable Fluid	Diesel Only	Diesel Only
Net weight	28kg	20.5kg
Maximum Operating Temp	-20 / +50 Deg C	-20 / +50 Deg C
Electric cable length	2m	2m

DIMENSIONS





240V DIESEL MINI BOWSER

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A series of horizontal grey lines for writing, starting from the pencil icon and extending across the width of the page.



Built to last since 1948.

Macnaught Pty Ltd
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Turrella NSW 2205

Ph: 1800 185 102
Fax: 1800 186 402
E-mail: info@macnaught.com.au

Note:

This product should be disposed of according to all applicable local and national government environment regulations and guidelines.



For Warranty Terms and Conditions see www.macnaught.com.au

For a list of Australian Service Centres see www.macnaught.com.au