

# INSTRUCTION MANUAL

## 12V WALL MOUNT DIESEL PUMP KIT

AHFP12A



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### INTRODUCTION

Thank you for purchasing a Macnaught 12 volt Wall Mount Diesel Pump Kit.

The Macnaught Wall Mount Diesel Pump Kit is supplied, complete with Wall Mount plate, Automatic Nozzle, Fuel Meter, 4M power cable with fuse holder and alligator clips.

Macnaught also have 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 high flow electric diesel fuel pump. 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

This diesel transfer pump is designed to reliably transfer diesel. The pump is a self priming, positive displacement, rotary vane pump operating on 12V DC. The pump will deliver up to 60 litres per minute, has a built-in bypass valve that keeps the operating pressure below 2 Bar (29psi) and the motor has a 30 minute duty cycle

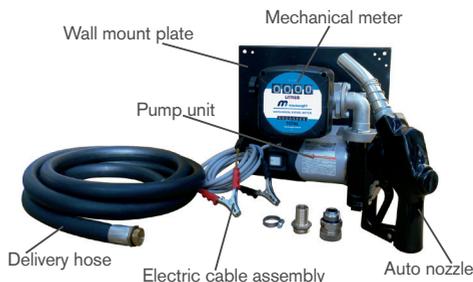
If required Macnaught recommends that you use the Macnaught HA1S Diesel filter.



#### CAUTION

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

**If the inline fuse supplied with this pump is removed warranty will be void.**



### ASSEMBLY

Use oil resistant pipe sealant or Teflon® tape on all pipe threads.

1. Select a 1" I/D suction hose or suction tube which is compatible with Diesel and has a pressure rating above 3.5 bar (50psi).
2. Fit the Pump unit securely to the desired location.
3. Connect the delivery hose to the outlet on the meter body.
4. Connect the remaining end of the delivery hose to the automatic nozzle

### PUMP INSTALLATION

1. Insert the suction hose into to the fuel tank.

**NOTE:** Tanks or barrels should be anchored to prevent tipping in both the full and empty conditions.

2. Connect the alligator clips on the power cord to a battery capable of delivering the necessary voltage and current (see the Technical Data, back page of this manual)
  - a) Attach the RED clip to the positive (+) battery terminal.
  - b) Attach the BLACK clip to the negative (-) battery terminal or to the vehicle frame.

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### OPERATION

**NOTE:** Avoid sparks that could cause a fire:

**DO NOT** use a patch cord to extend the power cables.

**DO NOT** let the pump run dry or run in by-pass mode for more than 2 minutes or damage may occur.

1. Before use, wipe off any dirt or moisture that may have accumulated on the nozzle or hoses.
2. Insert nozzle into the container to be filled. Insert suction hose (if applicable) into the diesel storage tank.
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 switch motor off.
7. Nozzle and hoses should be kept clean and dry when not in use.

### MAINTENANCE

**Important:**

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

1. Inspect and clean the basket strainer located in the pump regularly.
2. Always clean the battery terminals and clips before use to ensure a good connection.
3. Always relieve the line pressure by opening the nozzle, draining hose. Disconnect power before starting any pump maintenance
4. Hoses should be inspected regularly.  
(Replace if found to be cracked or worn)
5. The rotor and vanes will eventually wear. They should be replaced if pump performance degrades.  
(refer to trouble shooting guide)

### METER OPERATION

Both the batch total and accumulative totals turn simultaneously when fluid passes through the meter.

To reset the batch total to zero, rotate the reset knob.

### METER FIELD CALIBRATION

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

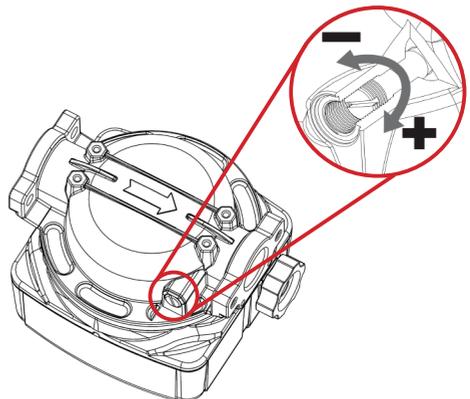
**NOTE:** You will need to use an accurate measuring container with graduations up to at least 19 litre capacity.

### CALIBRATION PROCEDURE

1. Set the batch total to Zero
2. Dispense 19 liters into your accurate measuring container
3. Check the total shown on the meter and compare with the actual total dispensed as shown in the container.
4. Adjust the calibration screw as required
  - a) Turn the screw anti-clockwise to reduce the indicated amount
  - b) Turn the screw clockwise to increase the indicated amount

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

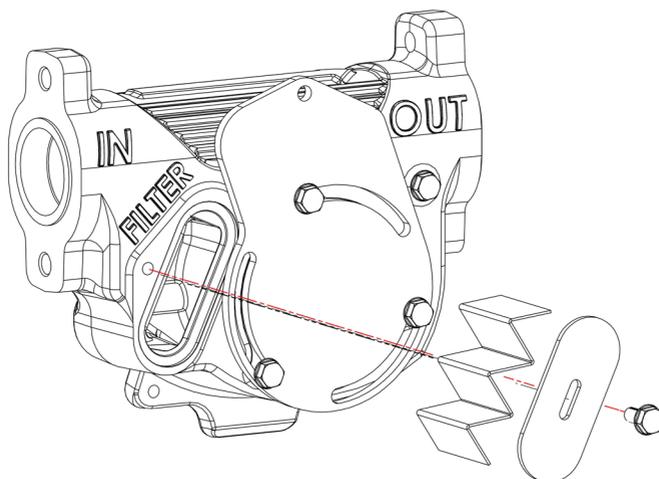
5. Repeat steps 1 - 4 until meter calibration is acceptable.



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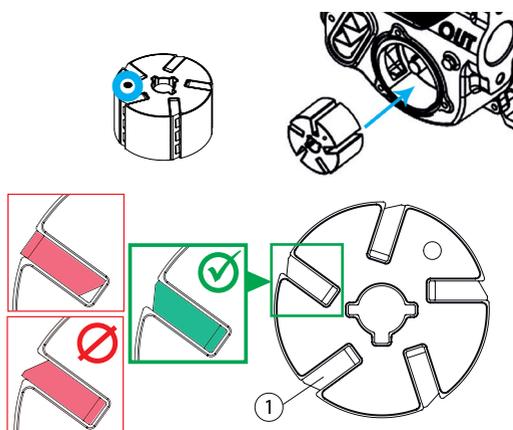
(Strainer removal or replace)



(Correct vane and rotor orientation)

**NOTE:**

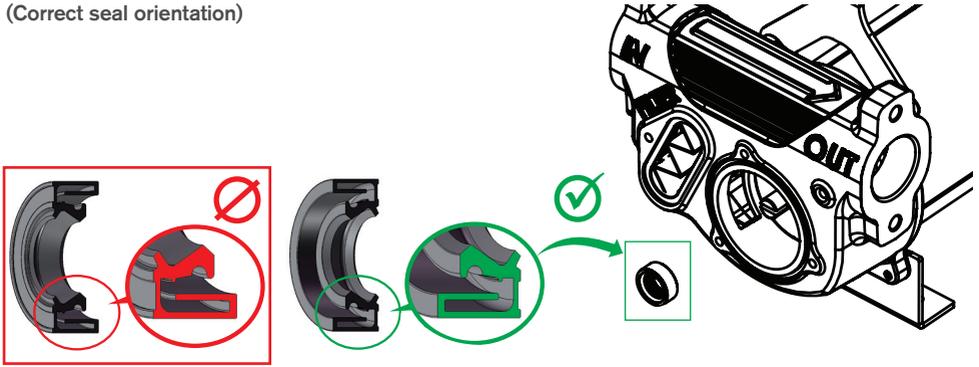
Assemble with dimple up and fit vanes in the correct orientation as shown.



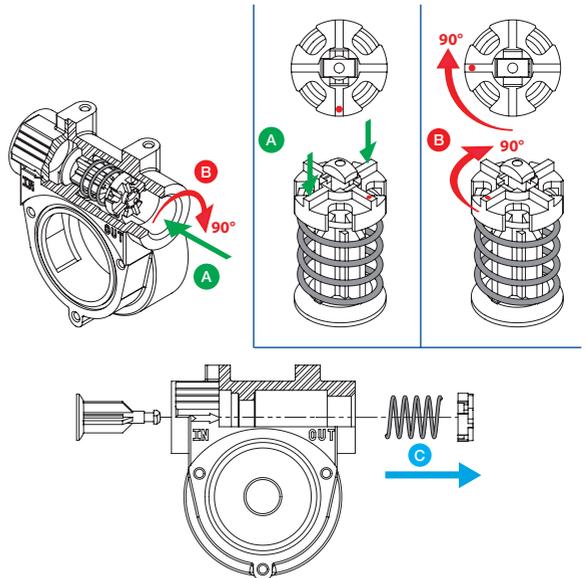
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(Correct seal orientation)

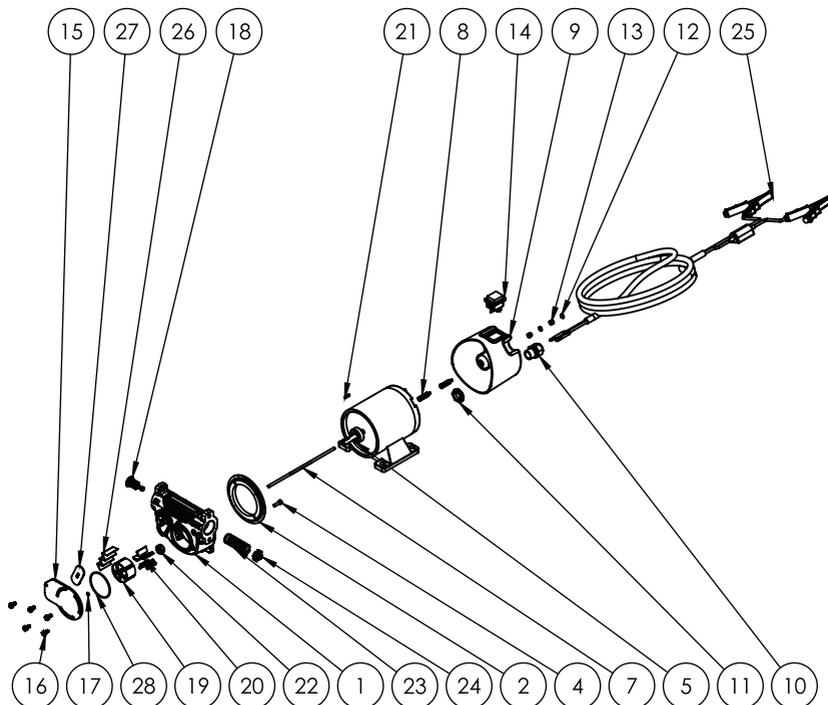


(Poppet valve assembly / disassembly)



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### PUMP PART LIST

Item	Description	Qty
1	pump body pb 60 ltd	1
2	coupling motor flange pb ltd	1
4	screw tccc m5x16	2
5	12v motor for pb 60/85	1
8	hex spacer m5x25	2
9	motor cover ip55 pb1 60l	1
10	cable gland pg 13.5	1
11	cable gland nut gmp-gl 13.5	1
12	plate washer 5x10x1	2

Item	Description	Qty
13	self-locking nut m5	2
14	switch 22x30 + cover	1
15	swivel locking plate	1
16	screw te m5x12 flanged	5
17	o-ring 2015 nbr	1
18	by-pass valve	1
19	rotor ø45	1
20	small vane	5
21	pin 3x3x15 uni 6604-b	1

Item	Description	Qty
22	shaft seal ø19	1
23	by-pass spring	1
24	black reinforced bypass cap	1
25	cable with clamps + fuse	1
26	inox filter 16x49	1
27	filter seal	1
28	o-ring nbr70 body pump	1

### AVAILABLE ACCESSORIES

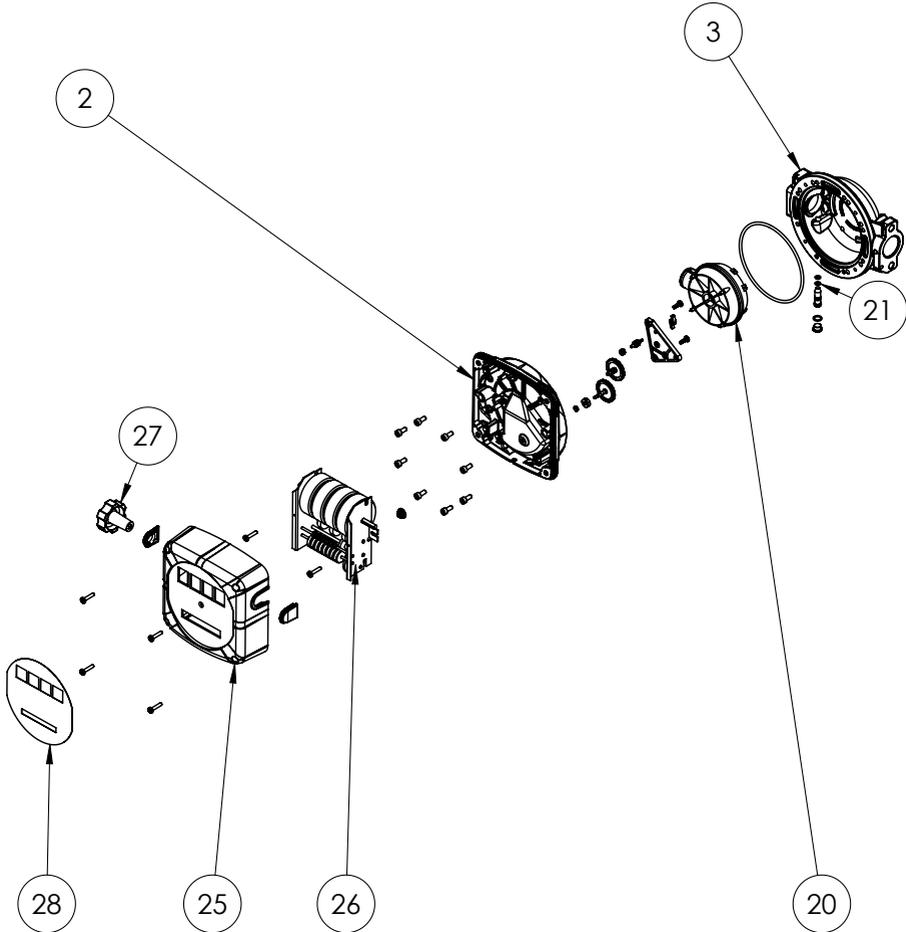
Automatic nozzle / Manual nozzle

Telescopic suction tube with strainer - AT5205

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### METER PART LIST



Item	Description	Qty
2	chamber lid	1
3	meter body	1
20	measure chamber	1
21	adjustment bypass screw	1
27	reset knob	1
28	meter label	1

### AVAILABLE ACCESSORIES

For seal kits:	Order AMFM-1K (for pumps manufactured before Sep 2022)
	Order AMFM-1K-N (for pumps manufactured after Sep 2022)
For fascia and reset button set:	Order AMFM-2K (for pumps manufactured before Sep 2022)
	Order AMFM-2K-N (for pumps manufactured after Sep 2022)

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### TROUBLE SHOOTING GUIDE

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 drive key	3) Replace drive 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)	1) Fluid to be no thicker than Diesel
	2) Motor running longer than 30 minutes	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) Clean terminals and battery clamps
	2) Battery low or faulty	2) Check battery
	3) Blown or faulty fuse	3) Check pump and/or replace fuse
	4) Faulty switch	4) Replace switch
Pump leaking out of weep hole	1) Worn or damaged shaft seal	1) Replace seal
	2) Fluid compatibility	2) Only use compatible fluid

### METER TROUBLE SHOOTING GUIDE

Problem	Cause	Solution
Meter not reading	1) Blockage in the fluid chamber	1) Clear blockage from fluid chamber
	2) Meter installed incorrectly	2) Check the meter orientation (flow must be in direction of the arrow)
Batch total does not reset	1) Reset knob not correctly engaged	1) Fit reset knob correctly
	2) Register is broken	2) Replace meter
Meter leaking	1) Damaged o'ring seal	1) Replace o'ring



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### PUMP SPECIFICATIONS

	AHFP12A
Maximum Flow	60ltr/min
Nominal pressure	2 bar
Voltage	12 Volt
Maximum Current	26 amp
Duty cycle	30 min
Fuse	40 amp
Inlet / Outlet	1" BSP (F)
Temperature	-20 deg C / +50 deg C
Wetted materials	Zinc plated steel, Cast iron, Sintered steel, POM-C, NBR
Maximum prime height	2m
Motor protection rating	IP55

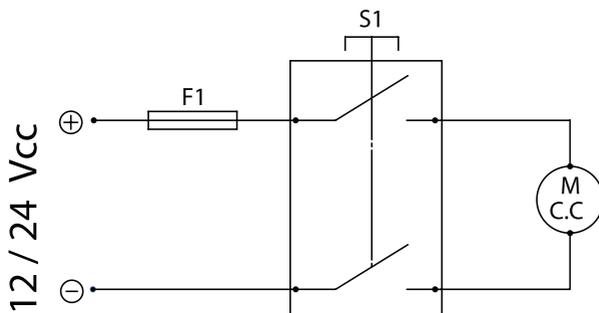
### METER SPECIFICATIONS

Meter Type	Rotating disc
Flow rate	20 - 120 ltr/min
Maximum pressure	3.5bar (50psi)
Accuracy	+/- 1%
Inlet / Outlet	1" BSP (F)
Temperature	-20 deg C / +50 deg C
Display	4 digit
Weight	1.8 kg
Fluid Compatibility	Diesel
Materials of construction	NBR, PBT, Brass, Steel

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### ELECTRIC DIAGRAM



S1 : switch ON-OFF  
 F1 : fuse  
 M : motor

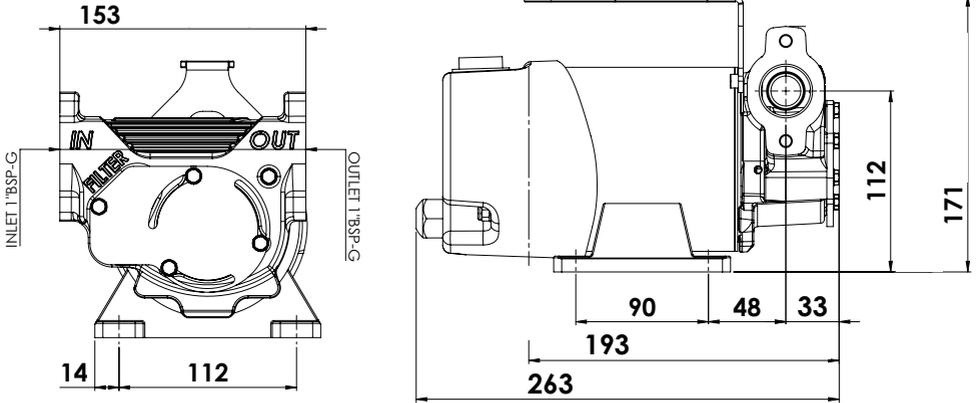
#### Electric cable selection table (minimum requirement):

Pump Model	Fluid	Flow Rate	Power Supply	Fuse	Total Cable Length	Minimum Wire Section	
AFP24A	diesel	40LPM	12VDC	15A	0-4 m	2.5 mm <sup>2</sup>	11AWG
					4-6m	4 mm <sup>2</sup>	9AWG
AFP12A	diesel	40LPM	12VDC	30A	0-4 m	2.5 mm <sup>2</sup>	13AWG
					4-6m	4 mm <sup>2</sup>	11AWG
					4-8m	6 mm <sup>2</sup>	9AWG
AHFP12A	diesel	60LPM	12VDC	40A	0-4 m	6 mm <sup>2</sup>	9AWG
					4-6m	10 mm <sup>2</sup>	7AWG
					6-10m	16 mm <sup>2</sup>	5AWG
AHFP85L-12V	diesel	85LPM	12VDC	40A	0-4 m	6 mm <sup>2</sup>	9AWG
					4-6m	10 mm <sup>2</sup>	7AWG
					6-10m	16 mm <sup>2</sup>	5AWG

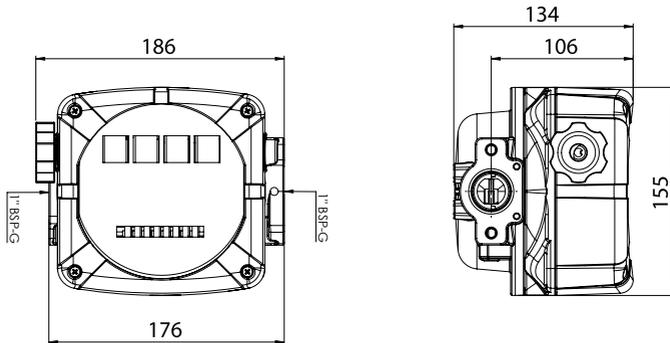
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### PUMP DIMENSIONS



### METER DIMENSIONS



## NOTES



**macnaught**  
Built to last since 1948

Macnaught Pty Ltd  
41-49 Henderson Street  
Turrella NSW 2205

Ph: 1800 185 102  
Fax: 1800 186 402  
E-mail: [info@macnaught.com.au](mailto: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](http://www.macnaught.com.au)  
For a list of Australian Service Centres see [www.macnaught.com.au](http://www.macnaught.com.au)