

# INSTRUCTION MANUAL

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## 12V HIGH FLOW DIESEL PUMP KIT

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AHFP85L-12A



# 12V HIGH FLOW DIESEL PUMP KIT

## AHFP85L-12A (12V / Automatic Nozzle)

### INTRODUCTION

Thank you for purchasing a Macnaught 12 volt High Flow Electric Diesel Fuel Pump.

The Macnaught High Flow Electric Diesel Fuel Pump kit is supplied complete with Automatic Fuel Nozzle, 2m x 1" Suction Hose, 4m x 1" Delivery Hose, 4M power cable with fuse holder, alligator clips and fittings.

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 (only). The pump is a self priming, positive displacement, rotary vane pump operating on 12V DC. The pump will deliver up to 85 litres per minute, has a built-in bypass valve. The motor has a 30 minute duty cycle

If you require a fuel filter or meter for your pump, Macnaught recommends that you use the Macnaught HA1S fuel filter and/or select one of the Macnaught fuel meters.



### CAUTION

**ONLY USE THIS PUMP WITH DIESEL, failure to do so may cause personal injury or damage the pump which voids pump warranty.**

**The motor has IP55 protection but is NOT an explosion proof type motor.**

### ASSEMBLY

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

1. Fit the 1" hose tail to the end of the suction hose and secure with the hose clamp supplied.
2. Connect the suction hose assembly to the pump inlet (refer to direction of flow on pump)
3. Connect the delivery hose to the outlet on the pump.
4. Fit the swivel to the automatic nozzle inlet, then connect the swivel to the delivery hose.

### PUMP INSTALLATION

1. The pump can be installed in horizontal or vertical axes, in position protected from rain and extreme conditions.
2. Position the pump assembly securely to the desired location.
3. Insert the suction hose into the fuel tank

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

4. Connect the battery clips power cord to a suitable battery which is 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.

**NOTE:** It is recommended that if a different suction hose is to be used other than the one supplied, it should be a minimum of 1"(25mm) I/D.

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### CAUTION

If any electrical wiring is required it should be carried out by a licensed electrician.

### 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.

### NOTE:

If the pump fails to prime due to an airlock.

1. Remove the automatic nozzle,
2. Turn on the pump to prime
3. Re-attach the automatic nozzle

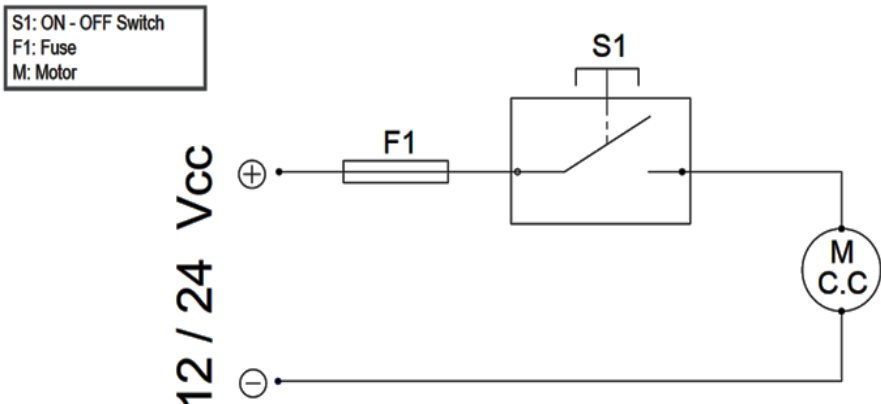
### MAINTENANCE

#### 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)

### ELECTRIC DIAGRAM



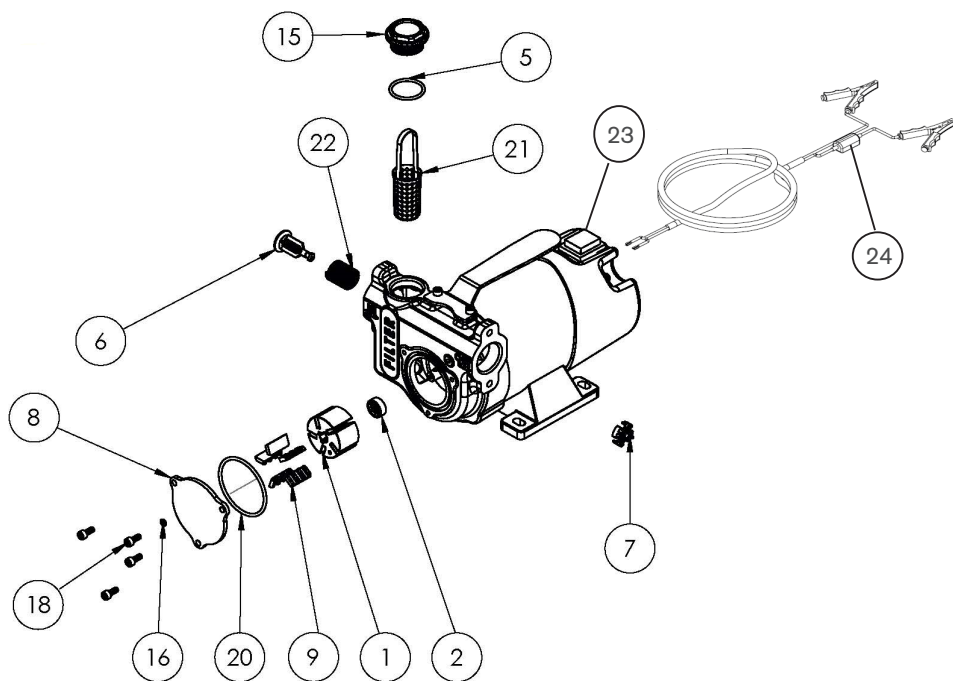
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### PARTS LIST

Item	Description	Qty
1	Rotor	1
2	Seal	1
5	O'ring	1
6	By Pass Valve	1
7	Disc	1
8	Cover Plate	1
9	Vanes	5
15	Strainer Cap	1

Item	Description	Qty
16	O'ring	1
18	Cover screws	6
20	O'ring	1
21	Strainer basket	1
22	Bypass poppet spring	1
23	Switch	1
24	40 Amp fuse holder	1



### RECOMMENDED FOR USE WITH PUMP

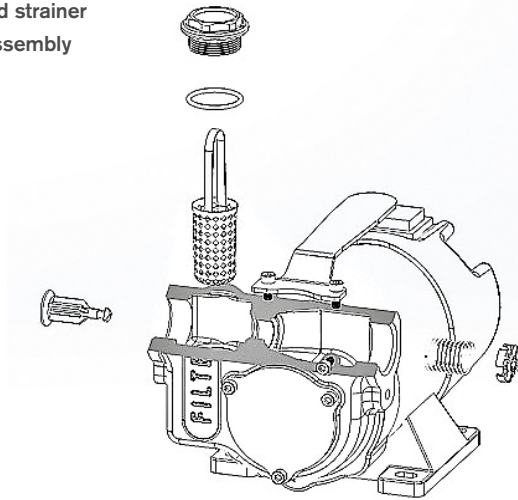
DM100-01 Positive Displacement Meter  
 AMFM Nutating Disc Meter  
 ADTUM Turbine Meter

For repair kit order AHFP85L-1K

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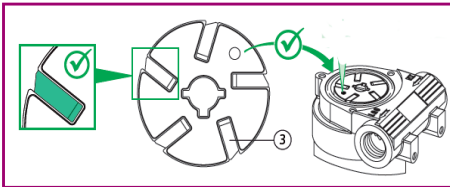
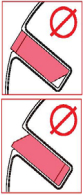
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Poppet valve and strainer  
assembly/disassembly

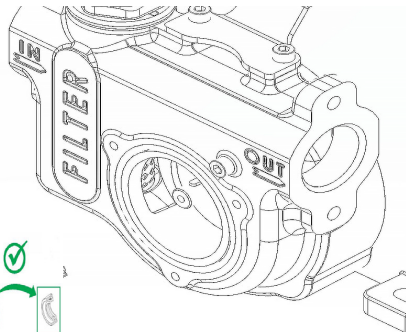
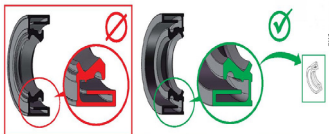


**NOTE:**

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



(Correct seal orientation)



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### TROUBLE SHOOTING GUIDE

Problem	Cause	Solution
<b>Pump fails to start</b>	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
<b>Pump vibrates but does not turn on</b>	1) Dirt jammed inside the pump	1) Clean pump chamber
	2) Faulty motor	2) Replace pump
	3) Broken drive key	3) Replace drive key
<b>Low Flow</b>	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
<b>Motor overheating</b>	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
<b>Motor not turning on</b>	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
<b>Pump leaking out of weep hole</b>	1) Worn or damaged shaft seal	1) Replace seal
	2) Fluid compatibility	2) Only use compatible fluid



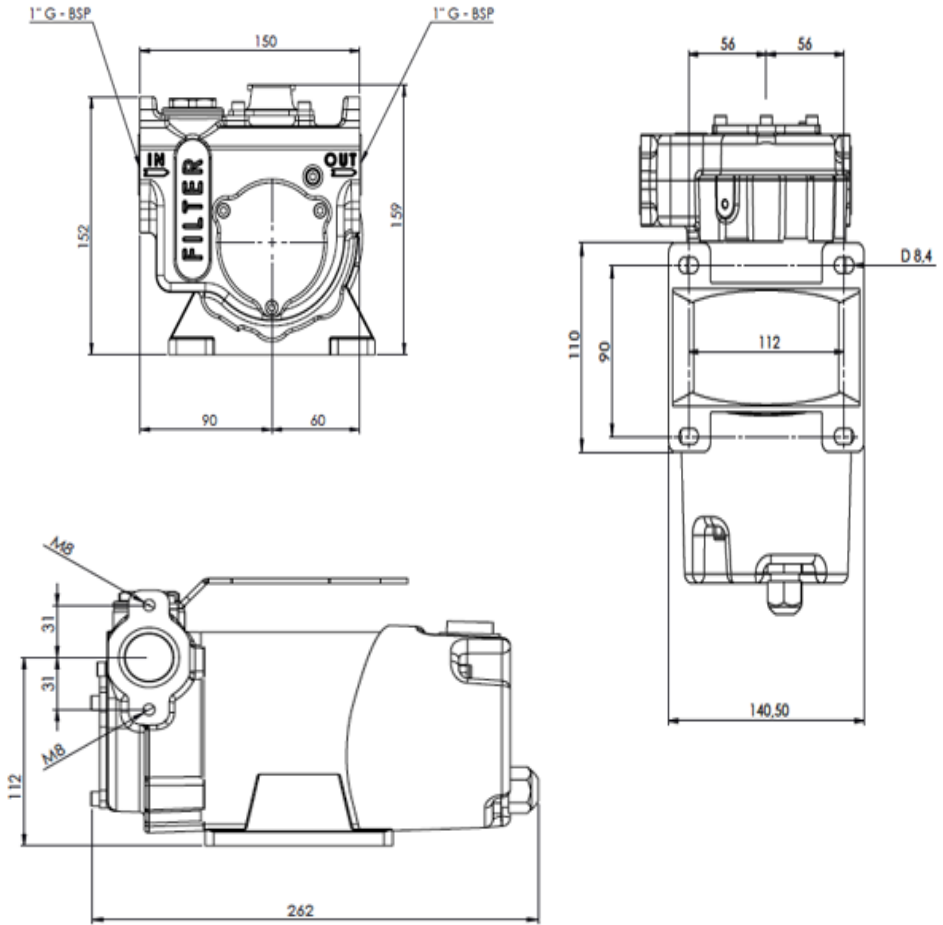
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### SPECIFICATIONS

	AHFP85L-12V
Maximum Flow	85ltr/min
Nominal pressure	10bar
Voltage	12 Volt
Maximum Current	40 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, AISI304
Maximum prime height	2m
Motor protection rating	IP55

## DIMENSIONS



**macnaught**

Built to last since 1948.

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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)