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ELECTRIC DIESEL FUEL PUMPS GEHF12M/12A HIGH FLOW (12 volt); GEHF24M/24A HIGH FLOW (24 volts)

INSTRUCTION MANUAL

INTRODUCTION

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

The Macnaught High Flow Electric Diesel Fuel Pump is supplied complete with Manual Fuel Nozzle, 4m x 25mm I/D Fuel Resistant Outlet Hose and 1.7m x 25mm I/D Suction hose.

Macnaught also have a complete range of retractable hose reels, fuel nozzles, electric or manual fuel pumps, 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 electric diesel pump. The information contained will help you ensure many years of dependable trouble free operation.

Please take a few moments to read through this manual before installing and operating your electric fuel pump. If you require further assistance please contact your local Macnaught distributor.

Please read and retain this instruction manual to assist you in the operation and maintenance of this quality product.

DESCRIPTION

The Macnaught Electric Diesel Pump has been designed to reliably transfer diesel and kerosene. The pump has the added feature of a continuous duty cycle.

If you require a filter or a meter for your pump, Macnaught recommends that you use a **Macnaught HA1s fuel filter** or a **Macnaught DM100 mechanical fuel meter**.

CAUTION

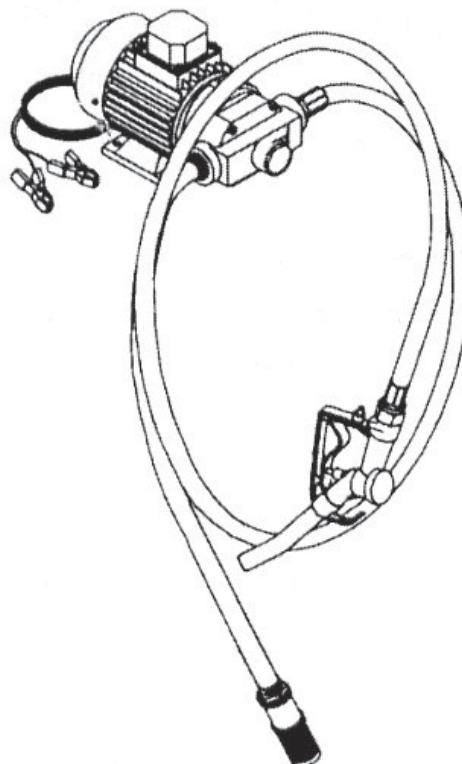
Only use an automatic nozzle recommended by Macnaught, failure to do so may damage the pump and would void the pump warranty.

ASSEMBLY

PUMP INSTALATION

- 1) Securely position the pump to the desired location

Note: Ensure that the suction hose is installed so as the liquid flow is in the same direction as the arrow embossed on the pump body.



- 2) Connect the 1.7metre long suction hose onto the inlet connection of the pump, using a suitable fuel resistant thread sealant.

Note: Do not over tighten connections.

- 3) Fit the Strainer assembly to the remaining end of the suction hose.
- 4) Insert the suction hose into the fuel tank.
- 5) Apply thread sealant to both threads of the delivery hose. Screw one end of the hose to the outlet thread in the pump and tighten.
- 6) Screw the dispensing nozzle to the remaining end of the hose assembly and tighten.
- 7) Make sure the pump switch is in the off position.
- 8) Connect the red wire to the positive (+) battery terminal and the black wire to the negative (-) battery terminal.

WARNING

Ensure that you only connect your pump to a 12/24 volt power supply otherwise you will damage your pump.

PUMP PRIMING

- 1) The pump will prime with no fluid in the chamber to a height of 2.7 metres. If the height from the pump to the lowest fuel level is greater than 2.7 metres or the pump fails to prime, remove the hose from the right angle fitting on the pump outlet and pour 1 cup of motor oil into the pump outlet port. The pump should then prime.
- 2) If the suction height is too great, the pump may lose its prime if the nozzle is opened with the pump turned off.
- 3) On tanks with a suction height over 1.7 metres a check valve (foot valve) may be required on the bottom of the suction tube to hold the fluid in the tube.
- 4) The tank must be vented or the pump may not prime or may lose its prime due to a vacuum in the tank.

OPERATING INSTRUCTIONS

- 1) Place the key (21) into the lock located on the terminal cover (located on top of the pump), then turn the key to switch the pump on.
- 2) Insert the nozzle into the fuel tank and squeeze the nozzle lever to dispense fuel.
- 3) **DO NOT** operate the pump dry. **DO NOT** run the pump for more than five minutes with the nozzle closed.
- 4) Immediately after use. Turn the key (21) to turn the power off and secure the nozzle.



IMPORTANT

Note: After use, press the trigger on the outlet nozzle to release any built up pressure inside the hose or pump.

MAINTENANCE



WARNING

DO NOT under any circumstances put your fingers inside the pump with the electric power connected. Serious injury can occur.

- 1) Turn off the pump and disconnect the power cables (14) from the power supply before carrying out any maintenance.
- 2) Clean the inlet strainer on the bottom of the suction hose approximately after every 50 hours of use.

POPPET VALVE REPLACEMENT

- 1) Turn off the pump and disconnect the power cables (14) from the power supply .
- 2) Unscrew and remove poppet valve cover screw (12).
- 3) Remove the, spring and poppet valve (9,10).
- 4) Inspect all components for any signs of wear or damage and replace if required.
- 5) Assembly is a reversal of the disassembly procedure.

VANE REPLACEMENT

- 1) Turn off the pump and disconnect the power cables (14) from the power supply .
- 2) Remove the 4 Allen screws (8) from the pump body and remove the pump body (7) and o'ring (4).
- 3) Remove the rotor (5) and vanes (3) from the pump shaft.

Note: Take note of the correct orientation of the vanes before removing the vanes (3) from the rotor (5)

- 4) Inspect the vanes (3) for wear or damage and replace if required.
- 5) Assemble the rotor assembly (5) to the pump shaft and fit the vanes (3) into the slots in the rotor.

Note: Ensure correct orientation of the vanes (3).

- 6) Fit the o'ring (4) carefully into the o'ring groove on the pump body (7) then carefully position the pump body over the rotor assembly (5) and firmly tighten the 4 Allen screws (8).

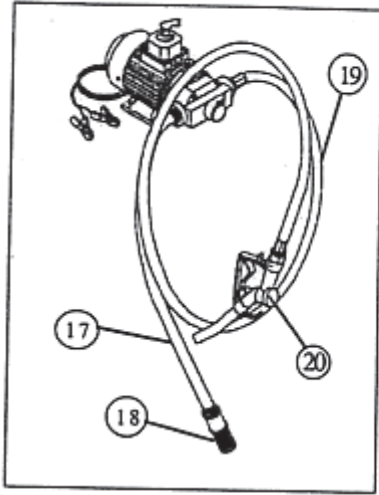
Note: Ensure the vanes (3) remain in position when fitting the pump body (7).

MAIN SEAL REPLACEMENT

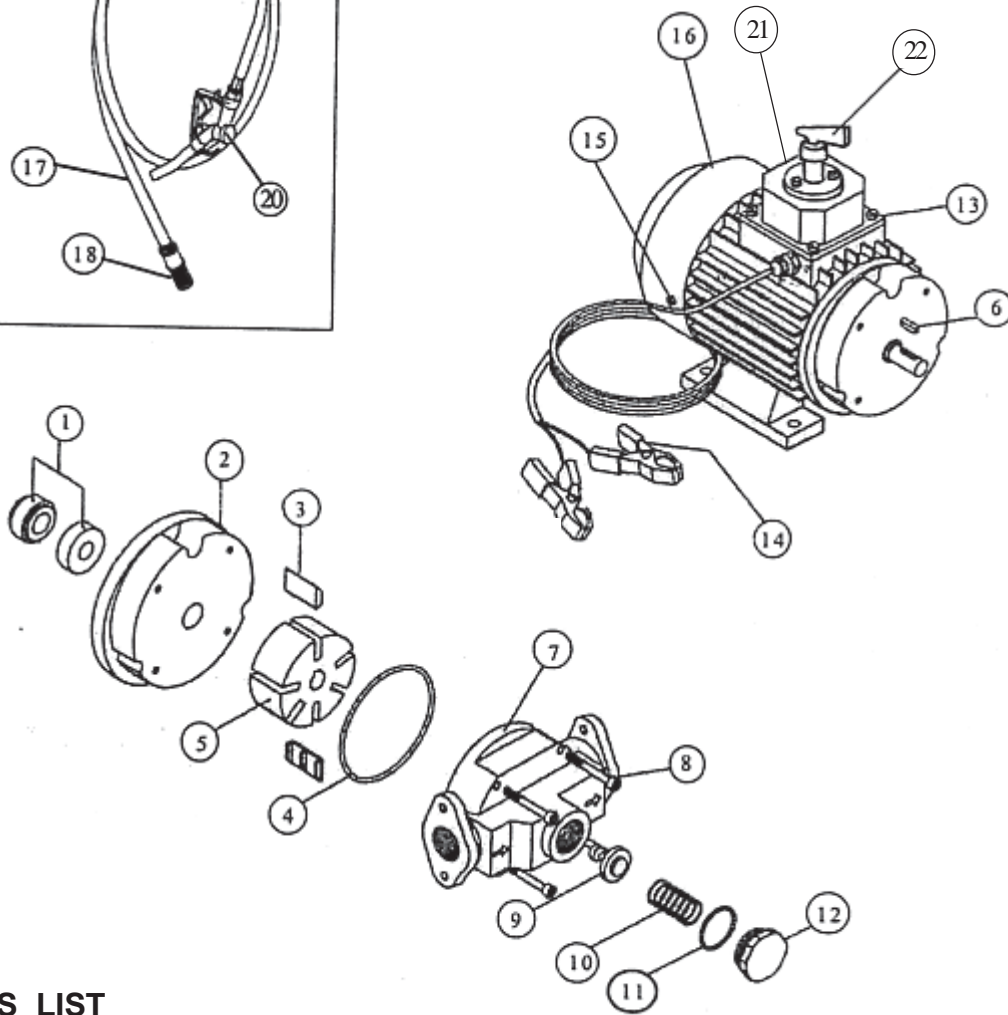
- 1) Turn off the pump and disconnect the power cables (14) from the power supply .
- 2) Remove the 4 Allen screws (8) from the pump body (7), then remove the pump body (7) and o'ring (4).
- 3) Remove the rotor and vanes and drive key (5,3,6)
- 4) Remove the 4 fan cover screws (15), then remove the fan cover (16) from the rear of the motor assembly (13).
- 5) Carefully remove the 4 hex bolts located at the rear of the motor assembly, then carefully remove the front motor cover (2). from the drive shaft.
- 6) Carefully remove the first part of the seal assembly (1) from the front motor cover, then carefully remove the remaining half of the seal assembly by carefully withdrawing the seal from the motor shaft.

Note: Ensure the orientation of the main seal is correct when fitting new seal.

- 7) Assembly is a reversal of disassembly procedure.



PARTS DIAGRAM



PARTS LIST

			Order for Replacement			
Item No	Part No	No Off	Part or Set	Kit Ref.	Discription	
			GE-2K		SEAL KIT	
1	GE031	1		A	SEAL ASSEMBLY	
2	GE032	1			END COVER PLATE	
3	GE035	6	GE035S	A	VANES	
4	BS237	1		A	O'RING	
5	GE036	1			ROTOR	
6	GE033	1		A	DRIVE KEY	
7	GE038	1			PUMP BODY	
8	N18	4			ALLEN SCREWS	
9	GE037	1			POPPET VALVE	
10	GE034	1	GE037S		POPPET SPRING	
11	BS123	1		A	O'RING	
12	GE024	1			POPPET COVER	
13	GE040	1			MOTOR ASSEMBLY 12V	
13	GE070	1			MOTOR ASSEMBLY 24V	
14	GE039	1	GE039S		ELECTRIC CABLE ASSEMBLY	
15	N36	4			FAN COVER SCREWS	
16	GE025	1			FAN COVER	
17	GE026	1	GE026S		SUCTION HOSE ASSY - 1" ID X 1.7M	
18	GE027	1	GE027S		STRAINER ASSEMBLY	
19	GE028	1	GE028S		OUTLET HOSE ASSY - 1" ID X 4M	
20	GE020	1	GE020S		MANUAL NOZZLE	
20		1	MCHP100-01		12M/24M only 12A/24A only	
21	GE043	1	GE043S		AUTOMATIC NOZZLE	
22	GE044	1	GE044S		KEY LOCK ASSEMBLY	
					KEY	

TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
The motor runs but the pump will not prime	a) The motor is rotating in the wrong direction. b) The poppet valve (9) is damaged. c) There is dirt under the poppet valve (9). d) The pump body o'ring (4) is damaged. e) The fuel depth is too great to prime. f) The filter is blocked (18) g) There is an air leak in the suction hose (17) connection. h) There is an air lock in the system. i) The motor does not run at the correct speed.	a) Check for correct wiring instructions in this manual. d) Inspect poppet valve (9) and replace if required. c) Inspect and clean the poppet valve assembly (9). d) Replace the pump body o'ring (4). e) Refer to priming instructions. f) Remove and clean filter (18). g) Inspect the suction hose (17) connection, and re-seal if required h) This may occur if a filter, meter or automatic nozzle is used. If this occurs, fill the pump and meter with fuel through the top of the pump. i) Check the electric connection and supply voltage for correct voltage level.
The pump output is low.	a) The filter is blocked (18). b) There is an air leak in the suction hose (17) connection. c) The tank is not vented. d) The motor is damaged, or dirty terminal connection e) The suction hose, delivery hose, or nozzle is blocked.	a) Clean or replace the filter (18). b) Check suction hose (17) connection. c) The tank must be vented to atmosphere. d) Replace the motor, or clean the terminal connections e) Inspect suction hose and delivery hose for any blockages.
Pump Leaking	a) Faulty main seal assembly (1). b) Faulty pump body o'ring (4). c) Faulty poppet cover screw o'ring (11).	a) Replace the main seal assembly (1). b) Replace pump body o'ring (4) c) Replace poppet cover screw o'ring (11).
Pump motor is overheating.	a) The fluid is too viscous b) Blocked filter (18). c) Blocked suction hose, delivery hose or nozzle. d) Sticking vanes (3).	a) Refer to pump specifications b) Clean filter (18). c) Inspect suction hose, delivery hose or nozzle for any blockages. d) Inspect and clean or replace if required.
The switch will not turn on the pump.	a) Power supply is not connected or switched on at the source b) Blown fuse c) Defective switch d) Damaged or defective motor.	a) Connect power to the pump. b) Replace fuse c) Check switch and replace if faulty. d) Check motor and replace if faulty.

SPECIFICATIONS

Pump Type:	Self priming vane pump
Fluids:	Diesel Fuel, Kerosene
Voltage:	12 Volt/24 Volts
Typical Current Draw	35-53 Amps @ 12 Volts 24-32 Amps @ 24 Volts
Flowrate:	80ltr / min (Free Flow)
Maximum Pressure:	22 psi (1.5 Bar)
Max Suction Lift:	2.7 meters
Wetted Materials:	Cast Iron, Mild Steel, PPS, NBR
Inlet Port:	1" BSP
Outlet Port:	1" BSP
Pump Weight Only	11.9kg

macnaught warranty

- Macnaught Pty Ltd ("Macnaught") warrants that all products manufactured by Macnaught and/or supplied by Macnaught under the "Macnaught" brand, excluding M-Series positive displacement meters ("Meters") and components subject to wear, will be free from any defects caused by faulty materials or workmanship ("Warranty") for a period of 5 years from the date of purchase of the product.
 - For products (excluding Meters) which carry the "Macnaught design" endorsement, an additional Warranty period of 5 years applies to all mechanical components (excluding electronic and electrical components), giving a total Warranty period of 10 years.
 - For Meters, the Warranty period is 12 months from the date of purchase of the product.
 - For components contained in all products which are usually subject to wear from normal operation of the products (such as o-rings, seals, springs, hoses and batteries), the Warranty period is 12 months from the date of purchase of the relevant product.
 - For products and components which are not manufactured by Macnaught and are supplied by Macnaught under a brand name other than "Macnaught", the Warranty period is the longer of 12 months from the date of purchase of the relevant product and the period of the manufacturer's warranty.
 - The warranties contained in clauses 1, 2, 3, 4 and 5 above are conditional on the purchaser, during the relevant Warranty period:
 - delivering to Macnaught a detailed notice setting out full details of any defect in any product and details of the date and place of purchase (together with copies of purchase receipts and/or other supporting documents), and
 - at the purchaser's own cost, returning the defective product to the nearest authorised Macnaught service centre.
 - Subject to compliance by the purchaser with clause 6, Macnaught shall, at its option, repair or replace any product or component found defective by its inspection by reason of faulty materials or workmanship of Macnaught.
 - This Warranty does not cover the failure of products, parts or components which, in the sole judgment of the Macnaught, arises other than from faulty materials or workmanship of Macnaught, including misuse, abrasion, corrosion, negligence, accident, substitution of non-Macnaught parts, unauthorised modification, improper use, storage or handling, faulty installation or tampering by the purchaser or any third party.
 - If Macnaught's inspection discloses no defect in material or workmanship, repair or replacement and return (at Macnaught's sole option) will be made at customary charges, which will be advised to the purchaser.
 - Macnaught's liability and the purchaser's rights under this Warranty shall be limited to the repair or replacement of defective products or components and particular, shall not extend to any direct, special, indirect or consequential damage or losses of any other warranties.
 - The foregoing Warranty supersedes, voids and is in lieu of any other warranties.
- This Warranty does not form part of, nor does it constitute, a contract between Macnaught and the end-user or purchaser. It is additional to any warranty given by the seller of the products. This Warranty does not exclude, limit, restrict or modify the non-excludable rights or remedies conferred upon the end-user or purchaser, or the non-excludable duties or liabilities imposed on the seller or Macnaught, by Part V, Division 2, 2A, and Part VA of the Trade Act 1974 (Commonwealth) or other rights conferred on the end-user or purchaser or duties or liabilities imposed upon Macnaught.



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