

INSTRUCTION MANUAL

ELECTRIC UREA /DEF PUMP KIT

AUP12M (12volt / Manual Nozzle)



"Diesel pump kit shown"

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INTRODUCTION

Thank you for purchasing a Macnaught 12 volt electric Urea/DEF Pump.

The Macnaught electric/DEF Pump kit is supplied, complete with Manual Nozzle, 4m x 3/4" Hose and 4M power cable with fuse holder and alligator clips.

Macnaught also has a complete range of retractable hose reels, electric diesel pumps, 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 electric Urea/DEF 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 Urea/DEF transfer pump is designed to reliably transfer Urea/DEF. The pump is a self priming, positive displacement, rotary vane pump operating on 12 V DC.

The pump delivers up to 40 litres per minute, has a built-in bypass valve that keeps the operating pressure below 1.3 Bar (18 psi) and the motor has a 30 minute duty cycle

If you require a meter for your pump, Macnaught recommends that you use a Macnaught ADTUM turbine meter.



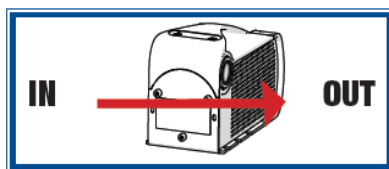
CAUTION

ONLY USE this pump with Urea/DEF and water failure to do so may cause personal injury or damage the pump which voids pump warranty.

ASSEMBLY

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

1. Cut hose as required. Use one length of hose as the delivery hose.
2. Connect the nozzle to the end of the outlet hose.
3. Connect the remaining end of the outlet hose to the outlet on the pump.
4. Connect the inlet fitting (supplied) to the end of the inlet hose.
5. Connect the remaining end of the inlet hose to the inlet on the pump.



PUMP INSTALLATION

1. Position the pump assembly securely.

NOTE: Ensure the pump is positioned to a secure location.

2. Insert the suction hose into the drum/tank



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

3. 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.

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 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.
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 strainer on the suction bottom of the hose / pipe 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)

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PARTS LIST

Item	Description	Qty
1	Pump Body	1
2	Motor	1
3	Base plate	1
4	By pass cap	1
5	By pass spring	1
6	By pass valve	1
7	Pump seal	1
8	O'ring	1
9	Drive key	1
10	Rotor	1
11	Vane Set	5
12	Tie rod screws	2
13	Face plate screws	3
14	Switch	1

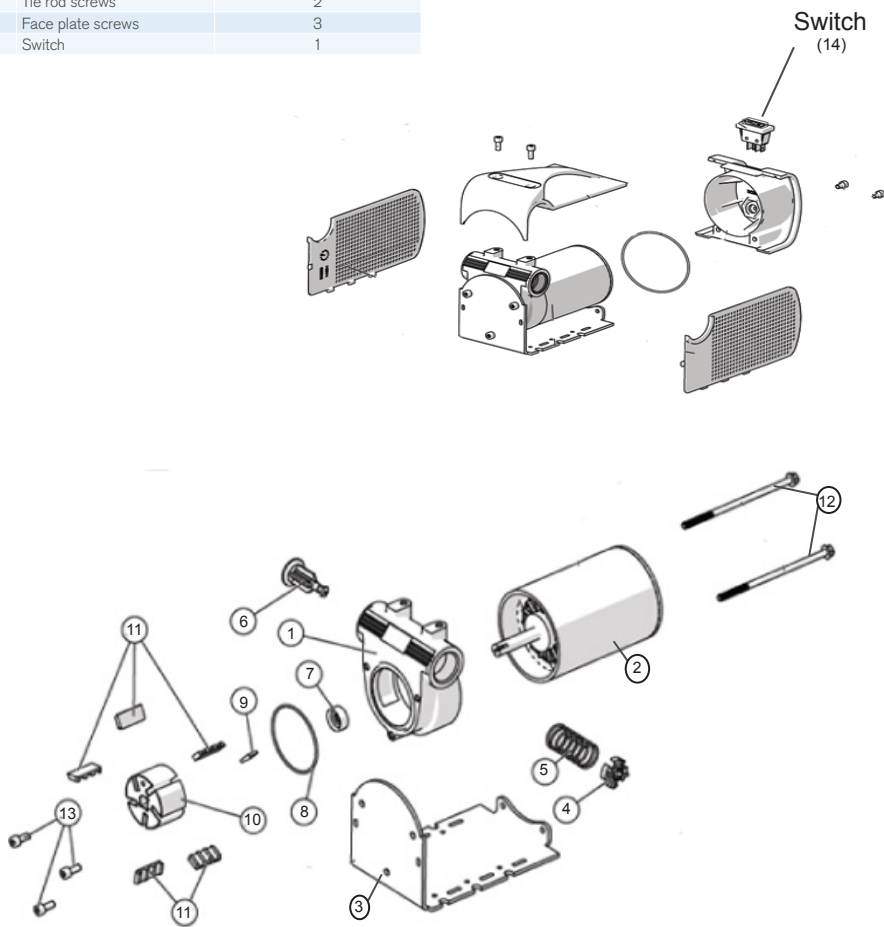
AVAILABLE ACCESSORIES

Manual nozzle

Turbine meter - ADTUM

For wet seal kit order AUP240-1K

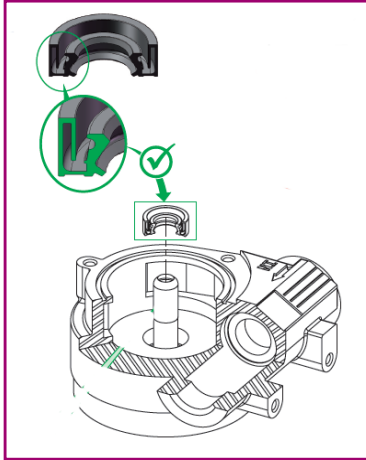
For poppet valve set order AUP240-2K



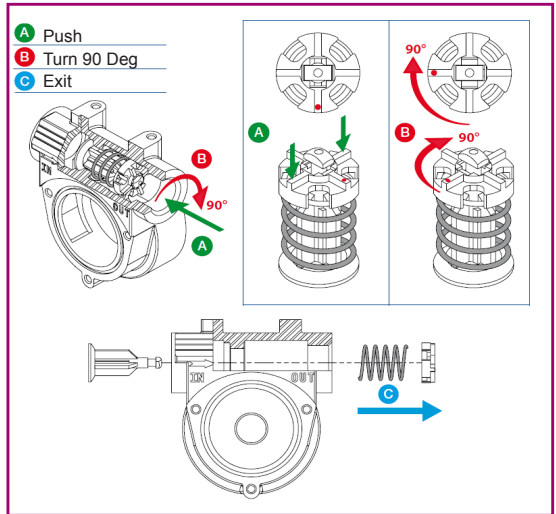
ELECTRIC UREA/DEF PUMP KIT

AUP12M (12volt / Manual Nozzle)

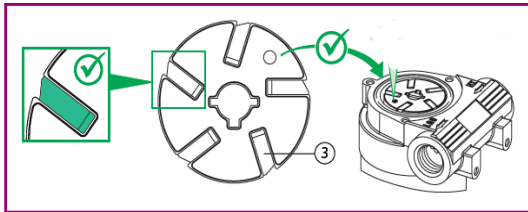
(Correct seal orientation)



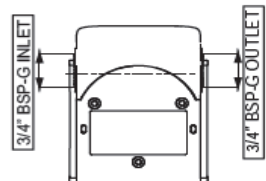
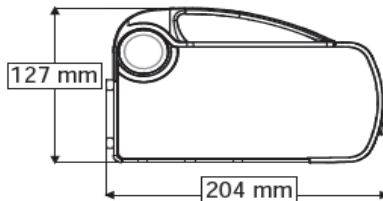
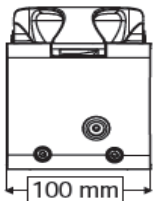
(Poppet valve assembly / disassembly)



(Correct vane and rotor orientation)



PUMP DIMENSIONS



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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



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SPECIFICATIONS

	AUP12
Maximum Flow	40ltr/min
Maximum pressure	1.3bar
Voltage	12 Volt
Current	18 amp
Duty cycle	30 min
Fuse	30 amp
Inlet / Outlet	3/4" BSP (F)
Temperature	-20 deg C / +50 deg C
Wetted materials	INOXAIS1302, POM, HNBR
Maximum prime height	2m
Motor protection rating	IP55



Built to last since 1948.

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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