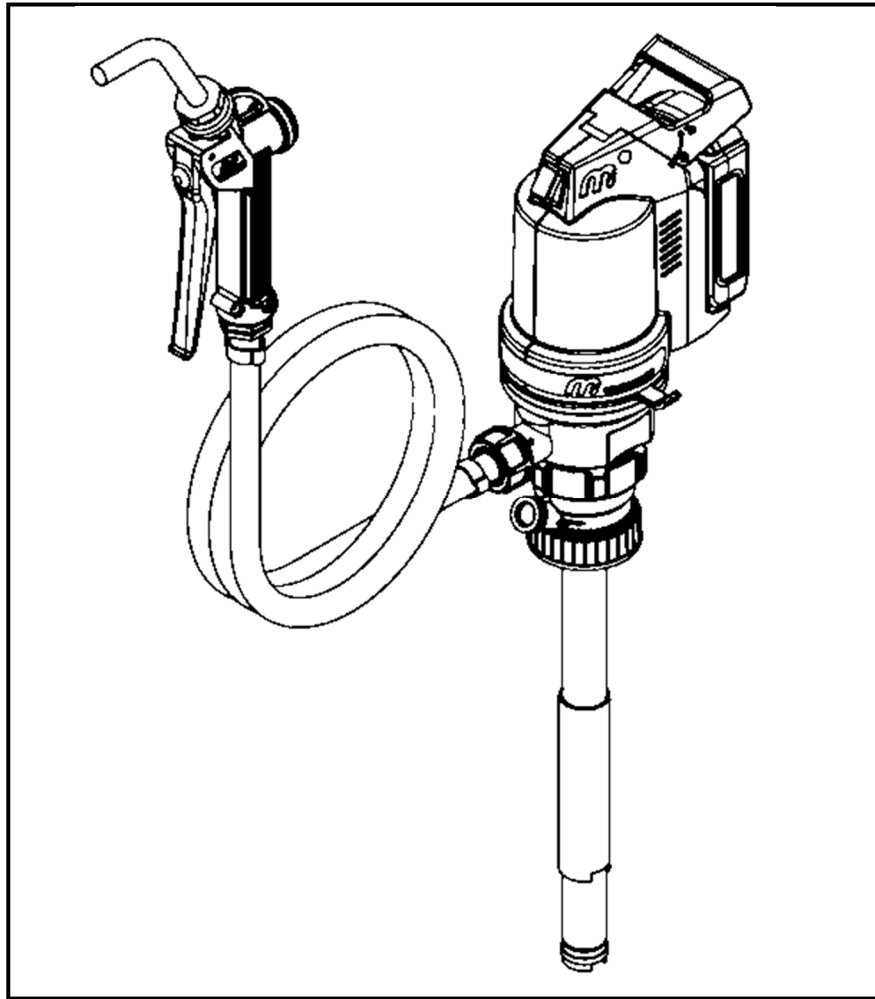


# **BOP BATTERY OPERATED PUMPS**

(20L / 60L /205L model pumps)

## **Instruction Manual**



## INTRODUCTION

Thank you for purchasing the Macnaught BOP battery operated pump.

Macnaught has designed and manufactured this pump to the highest quality standards using premium quality materials and workmanship.

### PLEASE READ THIS SAFETY INFORMATION CAREFULLY BEFORE USE.

Read and retain this instruction manual to assist you in the operation of your new product.



### WARNING

Please read this important information carefully before use.

This product should only be used with automotive oils and lubricants.

- Visually inspect pump, charger and battery prior to use for any signs of damage, loose or missing parts. If equipment is worn or damaged, remove it from service (Replace if required).
- The BOP Battery operated pump must be used strictly in accordance with Macnaught's terms and conditions.
- 'WARNING' listed throughout this manual to advise of actions which may cause damage to your equipment.

Failure to follow all instructions listed below may result in electric shock, fire, serious injury and/or damage to the power tool. The term "power tool" in all of the warnings listed refers to your battery operated (cordless) power tool.

- Make sure all operators have adequate access to the following instructions.



### GENERAL SAFETY

**DO NOT** operate power tools in explosive areas, e.g; close to flammable liquids, gases or dust.



### ELECTRICAL SAFETY

- Never modify electrical connections.
- **DO NOT** expose power tool to rain or wet conditions.
- **DO NOT** use product if the product is damaged or the switch does not turn the pump on.
- **Only use "ORIGINAL" Macnaught replacement parts, battery or charger.**



### BATTERY and CHARGER SAFETY

Please follow instructions from battery and charger owners manual

- If "battery-pack" case is damaged **DO NOT** use - Danger of electric shock or electrocution.
- Battery charger **MUST ONLY** be used for charging the rechargeable batteries supplied with the BOP.
- **DO NOT** operate charger if charger, power cord or plug is damaged - replace immediately.
- **DO NOT** disassemble charger or battery.
- **DO NOT** store battery pack in locations where the temperature may reach or exceed 40°C/104°F.
- **DO NOT** use charger on any other voltage than designated on the charger.

### DISCLAIMER

Your product is designed to use with non-flammable automotive oil/lubricants only, with viscosity grades from 0W-40 to SAE85W-140. Usage with different fluids may cause performance degradation and render the warranty void. Improper use of liquid may lead to machine failure and malfunction.

Use of any flammable fluids can cause sparks to explode and create a fire hazard. Macnaught bears no liability to the consequence of fluid misuse by customers.



## WARNING

- Always place gun on hanger when pump is not in use, as oil spillage can cause a slipping hazard.
- Keep plastic bag away from babies and children.
- Do not lift the power head with locking lever. Handle power head with care. **DO NOT DROP.**
- Make sure the power head is securely connected/attached to the stem.
- Do not leave the power head sitting on top of the stem unlocked.
- Stop operating the battery oil pump if any leakings at the joints are noticed.
- Do not modify the pump in any way.
- Only use a genuine Macnaught dispensing gun. Hand tighten the hose till its firm and check for any signs of leakage before use.
  
- Do not use flammable fluid in this product. Only use fluid specified in this instruction manual.
- Wear appropriate PPE for protection.
- Do not use the product in potentially explosive atmosphere.
- Do not expose the product to fire and source of heat.
- Users should refer to MSDS of the fluid from supplier being used.
- Use product in well ventilated area.
- Never leave your dispensing gun unattended in open position. Do not attempt to use any means to lock the lever. Always ensure the switch is in off position after dispensing the oil.
  
- Use pump in adequate lighting condition for safe operation. Do not use the product under poor illumination.
- Avoid spillage of oil near water source as it may be harmful to the environment.
- When moving drum, check area for spillage and clean up any liquid on floor as this will cause a slippery hazard
- Only use genuine Macnaught battery and chargers with this product.
- Battery pack, charger and power head should be protected from water.

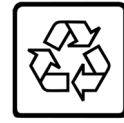


## CAUTION

- \* Do not expose the power head to a nearby magnet as its performance will be adversely affected.
- The battery operated pump should always be used in a vertical position.
- The dispensing gun should always be facing up when dispensing fluid.
- If the noise level changes check the hose to see if there is air present, if air is present stop the pump immediately as this indicates the drum is empty. Switch over to a new drum.

## BATTERY DISPOSAL

**NOTE:** Dispose of old batteries properly. The battery contains rechargeable Lithium-ion and must be recycled or disposed of properly. Please refer to the local authorities for the correct method of battery disposal.



Li-ion

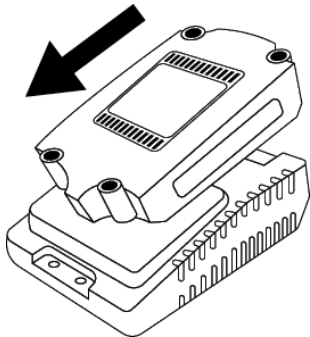


**DO NOT** incinerate the battery pack. The battery can explode in a fire

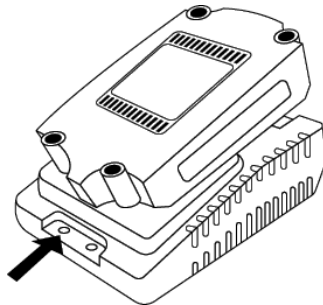
**DO NOT** attempt to disassemble any battery.

## CHARGE BATTERY

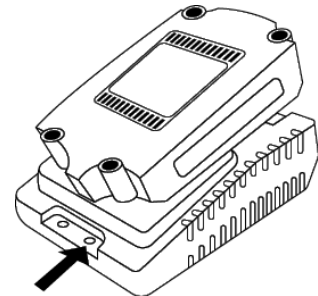
1) Insert battery



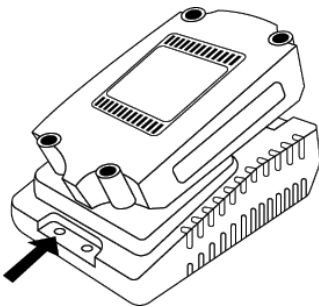
2) Power on  
(green light only)



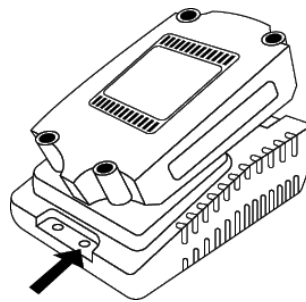
3) Battery charging  
(red light only)



4) Battery charged  
(green light only)

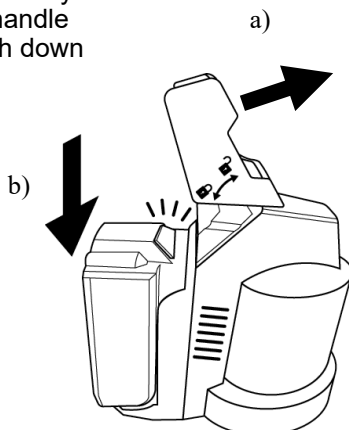


Note: Red light flashes when battery voltage is low  
(trickle charging to prevent battery damage)

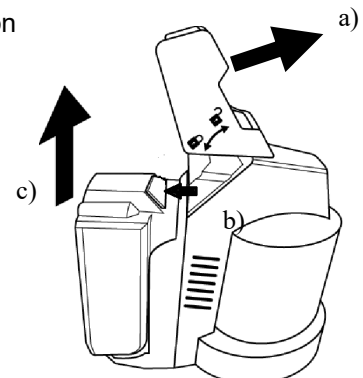


## INSERT / REMOVE BATTERY

1) Insert battery  
a) lift handle  
b) push down



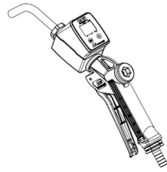
2) Remove battery  
a) lift handle  
b) press button  
c) pull up



# ASSEMBLY

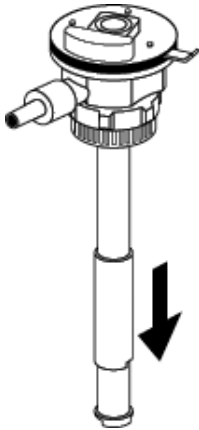


**Note:** For models supplied with a flow meter, refer to meter assembly instructions on page 13

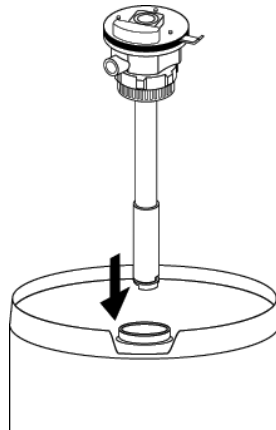


1) Remove both the inlet and outlet plugs from the pump stem before use.

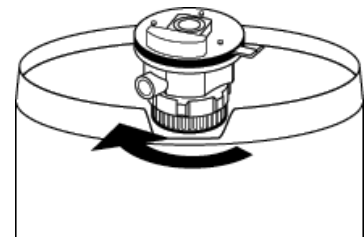
2) Pull down extender tube



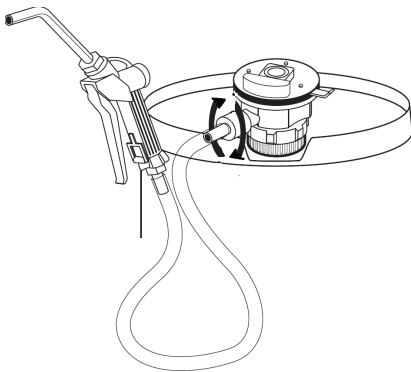
3) Push the pump stem into container



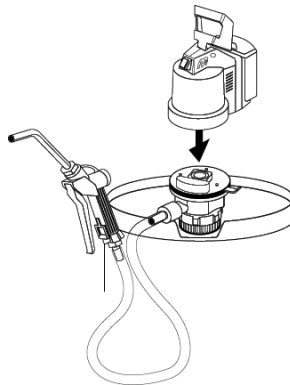
4) Tighten bung adapter to secure pump stem



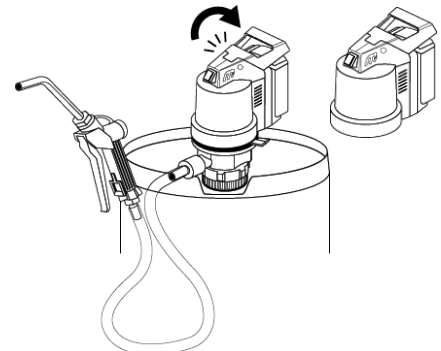
5) Attach hose and gun (ensure end gasket is in place)



6) Ensure switch is off, then place power head onto pump stem

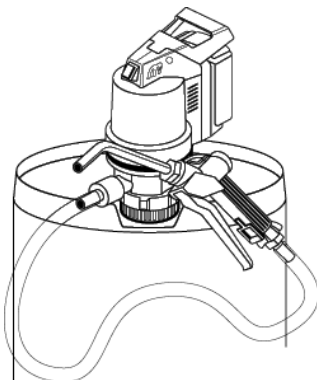


**Note:** Power head will not operate unless locked correctly into position.

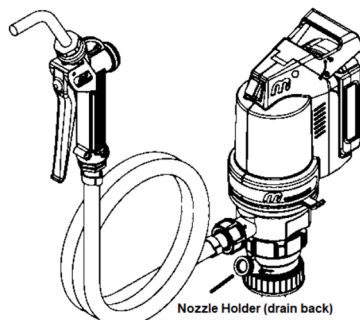


8) Place gun onto hanger when finished

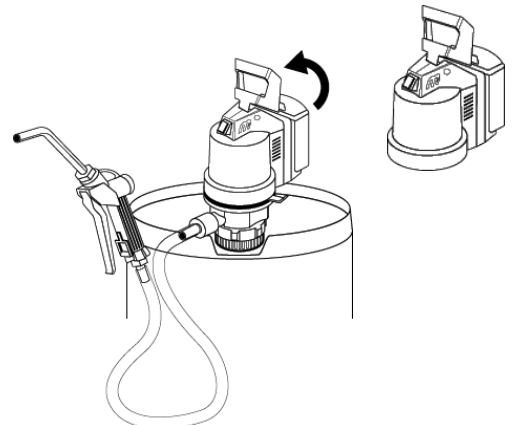
**Note:** If nozzle holder is fitted, place nozzle into holder when finished.



9) To remove power head, lift handle.



Nozzle Holder (drain back)



# OPERATING INSTRUCTIONS

## OPERATION



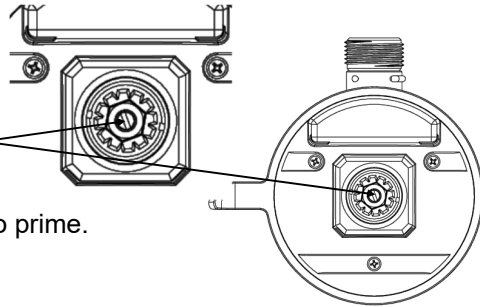
### CAUTION

**NOTE: Do not allow the pump to run dry or pump damage can occur**

#### IMPORTANT:

For initial operation

- 1) Turn slot in shaft clockwise one complete turn with a flat head screwdriver.
- 2) First press the trigger on gun and then turn on the pump to prime.
- 3) Release trigger when primed (fluid flows from gun).
- 4) Power head can be moved from pump assembly to pump assembly.
- 5) Long storage periods :
  - a) Turn slot shaft 2 full turns counter clockwise using a flat head screwdriver.
  - b) When starting pump after a long storage period, turn slot shaft clockwise with a flat head screwdriver.



#### Note:

Pump will not run when power head is not attached to pump stem correctly.

Pressure sensor will turn motor off when trigger is released and stall pressure is reached.

For low viscosity oils you may need to manually prime the system before use

**Note: There may be a delay in the pump turning off when the trigger on the gun is released, this is normal as the pump is priming to stall pressure.**

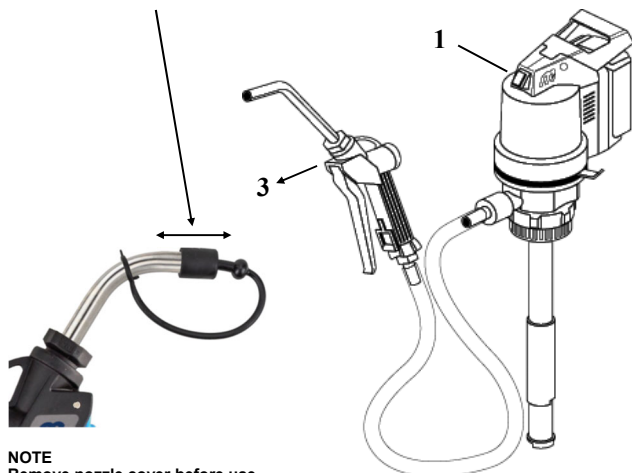
#### GENERAL OPERATION

- 1) Attach power head to stem



### CAUTION

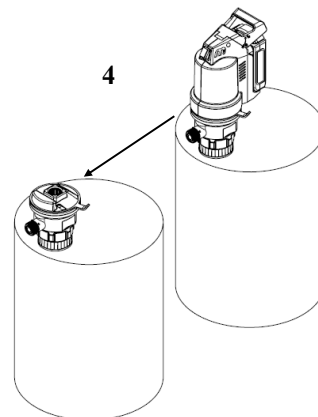
- 2) Remove nozzle cover before use



**NOTE**  
Remove nozzle cover before use  
Replace nozzle cover after use

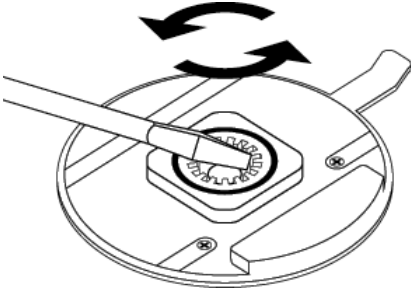
- 3) Press or Release trigger to adjust flow

- 4) Lift handle to transfer power head from stem to stem

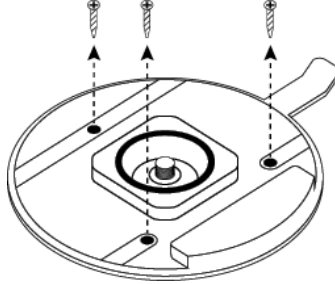


## DIAPHRAGM AND SPRING REPLACEMENT

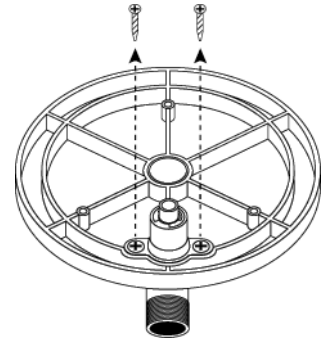
1) Turn anti-clockwise, remove drive gear



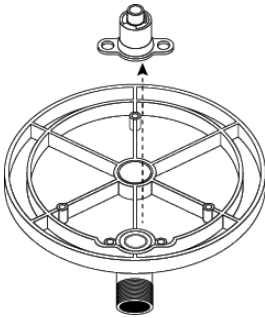
2) Remove 3 screws, pump cover and dispensing gun hanger



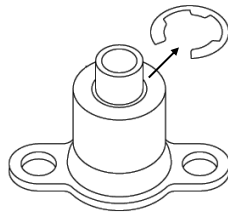
3) Remove 2 screws.



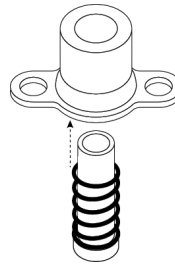
4) Remove assembly.



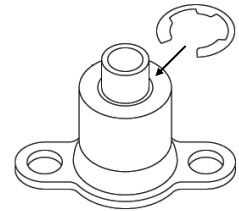
5) Remove circlip.



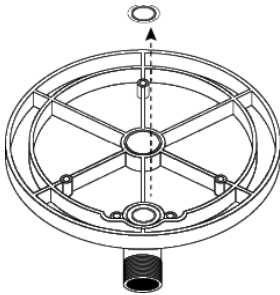
6) Replace spring.



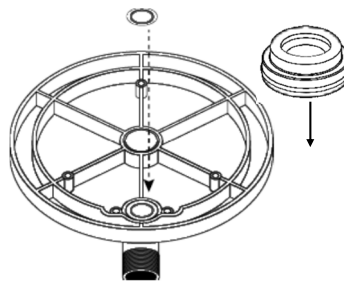
7) Re-fit circlip.



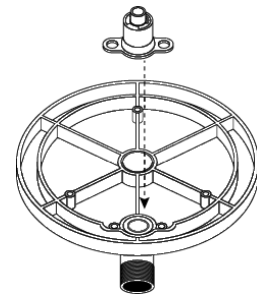
8) Remove old diaphragm.



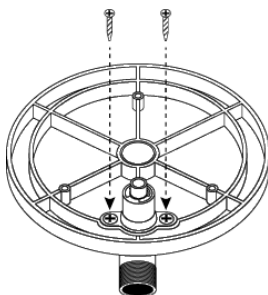
9) Fit new diaphragm. (ensure correct orientation)



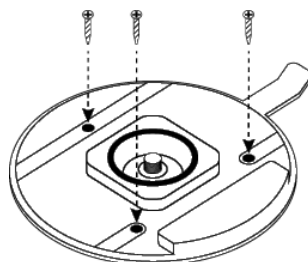
10) Fit valve switch assembly.



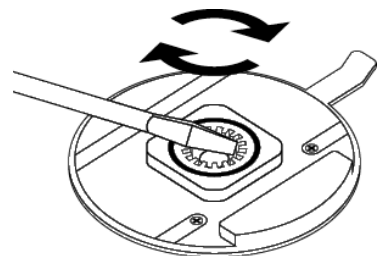
11) Fit 2 screws.



12) Fit pump cover and dispensing gun hanger, using 3 screws.

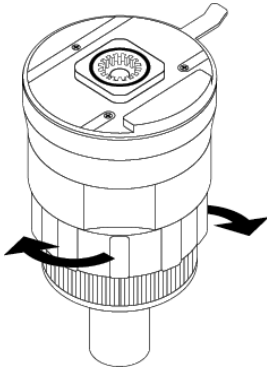


13) Fit drive gear, turn clockwise to secure.

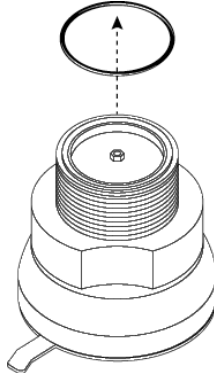


## IMPELLER AND O’RING REPLACEMENT

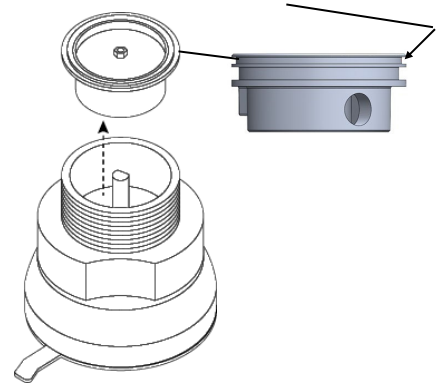
1) Unscrew adapter



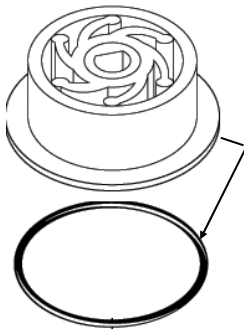
2) Remove o’ring.



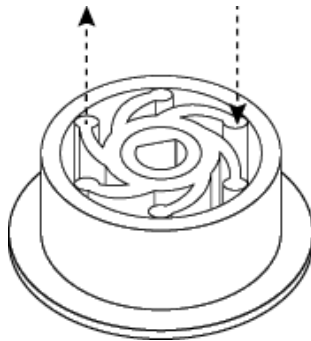
3) To assist in the removal of the impeller carefully use a small flat edged screwdriver in the small groove



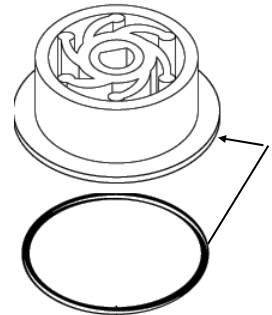
4) Remove o’ring.



5) Carefully remove and replace impeller.

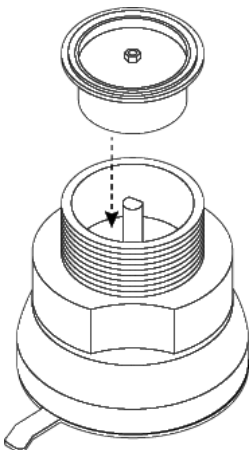


6) Replace o’ring.

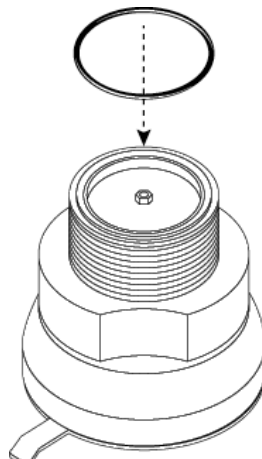


**Note:**  
Impellers must be lubricated with oil or grease during assembly.  
**Note:**  
20L and 60L pumps use a 6 vane impeller.  
205L pump uses a 8 vane Impeller

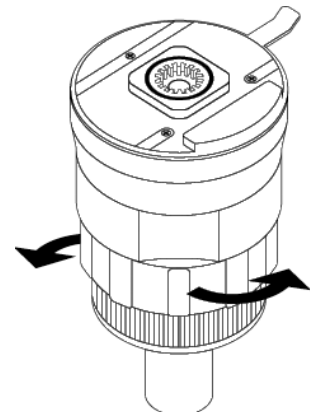
7) Carefully insert impeller housing.  
(Note correct orientation of grooves)



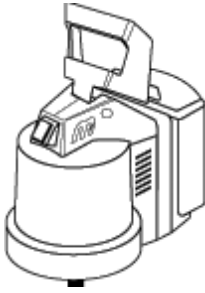
8) Replace o’ring.



9) Firmly hand tighten pump tube.







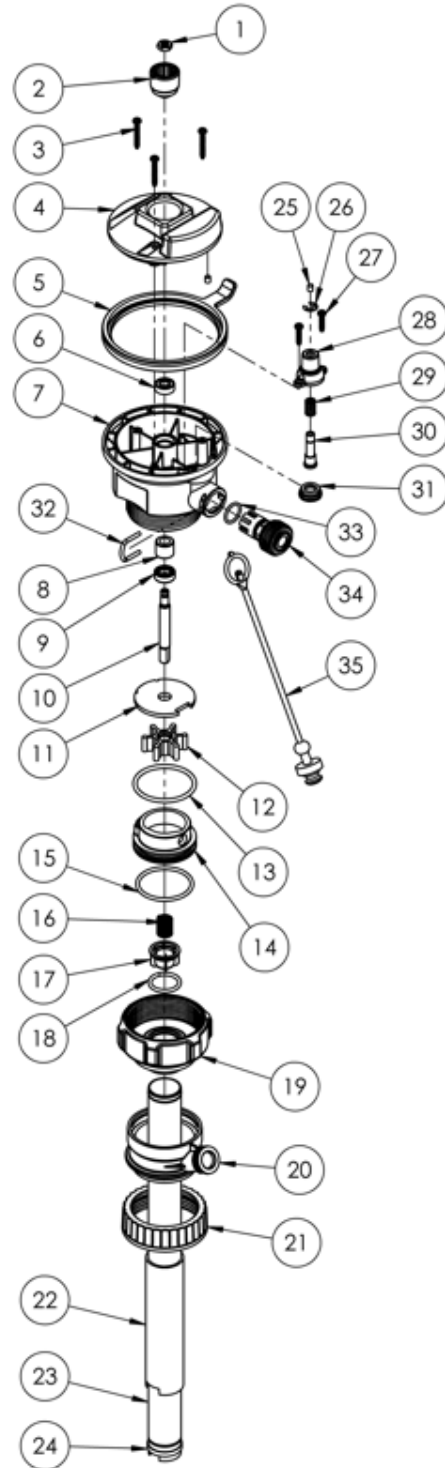
# 

## EXPLODED DIAGRAM

**Note:** Power head is factory sealed and would need to be replaced if found to be damaged internally or externally.

### Spare parts list

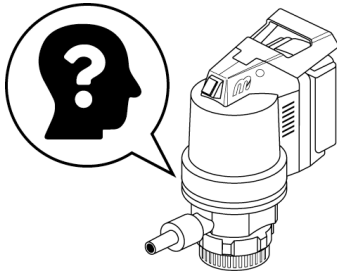
Item no	Pump Kit Ref (A)	No off	Description
	<b>BP-1K</b>		<b>Pump Seal Kit</b>
1		1	Nut (M6)
2		1	Connector
3		3	Screws (3.5 x 25)
4		1	Pump Stem Top Cover
5		1	Hook - Dispensing Gun
6		1	Ball Bearing
7		1	Housing - Pump Stem
8		1	Roller Bearing
9		1	Oil Seal
10		1	Drive Shaft
11	A	1	Cover Impeller Chamber
12	A	1	Flexible Impeller
13	A	1	O'Ring
14	A	1	Housing - Impeller Chamber
15	A	1	O'Ring
16		1	Spring
17		1	Check Valve
18	A	1	O.Ring
19		1	Nut - Pump Stem
20		1	Drain Back Adaptor
21		1	Bung adapter (type C)
22		1	Tube Cover
23		1	Outer Tube
24		1	Base
25	A	2	Magnet
26	A	1	Circlip E-Clip
27		2	Screw - 3.5x16
28		1	Housing - Pressure Switch
29	A	1	Spring
30	A	1	Plunger
31	A	1	Diaphragm
32		1	U-Clip
33	A	1	O.Ring
34		1	Connector
35		1	Dust Cover

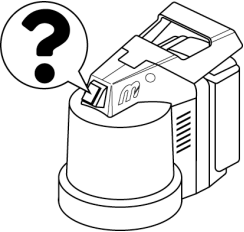
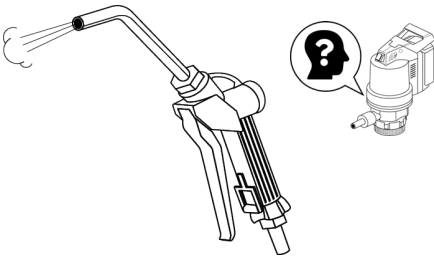
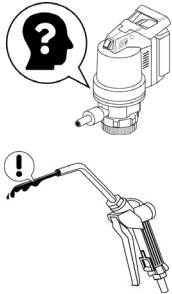


**BP-HG - Hose kit with 1.5m length**  
**BP-HG2 - Hose kit with 2m length**

**Bung Adapter Set 20ltr - order BP20-AK**  
**60ltr - order BP60-AK**

Bung Adapter for 20ltr drum with pull out spout - order BP037s



TROUBLE	CAUSE	REMEDY
<p><b>Pump does not turn on</b></p> 	<ul style="list-style-type: none"> <li>a) Flat battery</li> <li>b) Power head not attached correctly to pump</li> <li>c) Faulty switch</li> <li>d) Pump stem failure</li> </ul>	<ul style="list-style-type: none"> <li>a) Recharge battery</li> <li>b) Re-fit power head correctly</li> <li>c) Contact supplier</li> <li>d) Contact supplier</li> </ul>
<p><b>Pump will not prime</b></p> 	<ul style="list-style-type: none"> <li>a) Pump tube plug has not been removed before use.</li> <li>b) Damaged or worn impeller</li> <li>c) No oil in container</li> <li>d) Damaged gun or hose</li> <li>e) Damaged diaphragm</li> </ul>	<ul style="list-style-type: none"> <li>a) Remove tube plug</li> <li>b) Fit new impeller <b>Note: Do not let the impeller run dry</b></li> <li>c) Check oil level in container</li> <li>d) Replace gun</li> <li>e) Replace diaphragm</li> </ul>
<p><b>Power head does not stop when gun trigger is released</b></p> 	<ul style="list-style-type: none"> <li>a) Damaged diaphragm or spring</li> <li>b) Damaged or worn impeller</li> <li>c) Gun leaking</li> <li>d) Damaged hose</li> </ul>	<ul style="list-style-type: none"> <li>a) Replace damaged diaphragm or spring</li> <li>b) Replace impeller</li> <li>c) Replace gun</li> <li>d) Replace hose</li> </ul>

## PUMP SPECIFICATIONS

	<b>BOP20L with 6 vane impeller</b>	<b>BOP60L/205L with 8 vane impeller</b>
Flowrate - Low to Medium Viscosity Oil	* 3.5 l/min (0W-40 @ 20 deg C)	* 4.5 l/min (0W-40 @ 20 deg C)
Flowrate - High Viscosity Oil	* 2 l/min (85W-140 @ 20 deg C)	* 2.4 l/min (85W-140 @ 20 deg C)
Flowrate - ATF	* 4.5 l/min (ATF @ 20 deg C)	* 6 l/min (ATF @ 20 deg C)
Flowrate - Coolant	* 5.8 l/min @ 20 deg C	* 6.2 l/min @ 20 deg C
Operating Temperature	0°C - 40°C (32°F - 104°F)	
Container Size	Models available to suit 20ltr - 60ltr - 205ltr containers	
Fluid compatibility	Automotive oils / Lubricants / ATF / Coolant	
Max Viscosity	From SAE 0W40 up to SAE 85W-140	
Self Priming	Yes	
Hose	20L - (19mm x 1.5m) 5ft wire reinforced PVC	205L - (19mm x 2m) 6.5ft wire reinforced PVC
Warranty - Pump and Power Head	2 Years	
Warranty - Battery	12 Months	
Wetted components	Nitrile rubber, Mild steel, Stainless steel, Aluminium, Nylon, Brass, Polypropylene, PPS, Zinc plated steel	
Relative humidity	50% - 90%	
Hook Colour	Black	

\* Flowrates are a guide only and any variations can depend on temperature and fluid viscosity

## Available Kits and Packs

20L		60L/205L	
BP20S-UNA	BOP20 UN STARTER KIT AU	BP205S-UNA	BOP60/205 UN STARTER KIT AU
BP20S-UNB	BOP20 UN STARTER KIT UK	BP205S-UNB	BOP60/205 UN STARTER KIT UK
BP20S-UNE	BOP20 UN STARTER KIT EU	BP205S-UNE	BOP60/205 UN STARTER KIT EU
BP20S-UNJ	BOP20 UN STARTER KIT JP	BP205S-UNJ	BOP260/205 UN STARTER KIT JP
BP20S-UNU	BOP20 UN STARTER KIT US	BP205S-UNU	BOP260/205 UN STARTER KIT US

### BOP Universal Stem Kits

20L		60/205L	
BP20X-UNA	BOP20 UN STEM KIT AU	BP205X-UNA	BOP60/205 UN STEM KIT AU
BP20X-UNE	BOP20 UN STEM KIT EU/UK		
BP20X-UNJ	BOP20 UN STEM KIT JP		

BOP SEAL KIT	
BP-1K	

	Australia	US	JAP	UK	EU
<b>Battery Charger</b>	BPC-A	BPC-U	BPC-J	BPC-B	BPC-E

<b>Meter</b>	IM012EB-01
<b>Battery</b>	BPB-20AH
<b>Power Head</b>	BP20-PH

# BOP

BATTERY OPERATED PUMP

## IM012EB-01 ELECTRONIC METER

### INSTRUCTION MANUAL



**This meter is designed specifically for the Macnaught BOP Battery Operated Pump Series**

## INTRODUCTION

**PLEASE READ THIS INFORMATION CAREFULLY BEFORE USE.**

Read and retain this instruction manual to assist you in the operation of this product.

If you have any problems with the meter, refer to the maintenance and trouble shooting sections of this manual.

If you need further assistance, please contact your local representative or distributor for advice.

This Flow Meter has incorporated the oval rotor principal into its design. This has proven to be a reliable and accurate method of measuring flow.

Exceptional repeatability is the feature of the oval rotor design.



### CAUTION

\* **Macnaught recommends the use of PPE equipment such as safety glasses, protective gloves, safety shoes etc before handling or using this product.**

\* **Do not modify or alter this product any way**

\* **Ensure that any fluid spillage is cleaned up immediately to prevent slipping or injury.**

\* **Firmly tighten all connections and check for any sign of leakage before use.**

## IMPORTANT INFORMATION



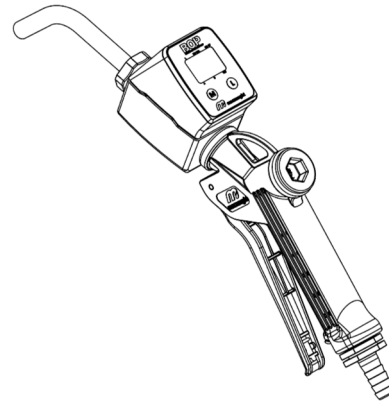
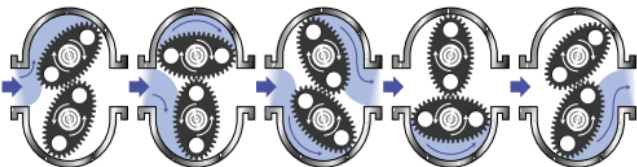
### WARNING

***This product should only be used with automotive oils and lubricants***

## OPERATING PRINCIPAL

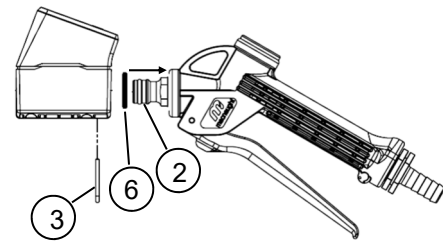
When fluid passes through the meter the rotors turn, as shown below. The magnets which are located in the rotors will pass across the PCB sensors.

A signal is generated which is then sent by the PCB to the LCD as a Pulse Output.

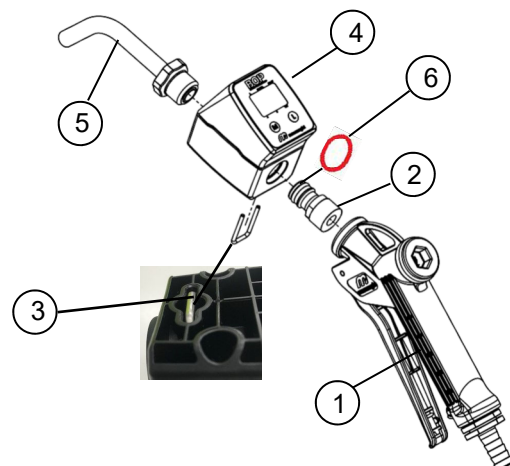


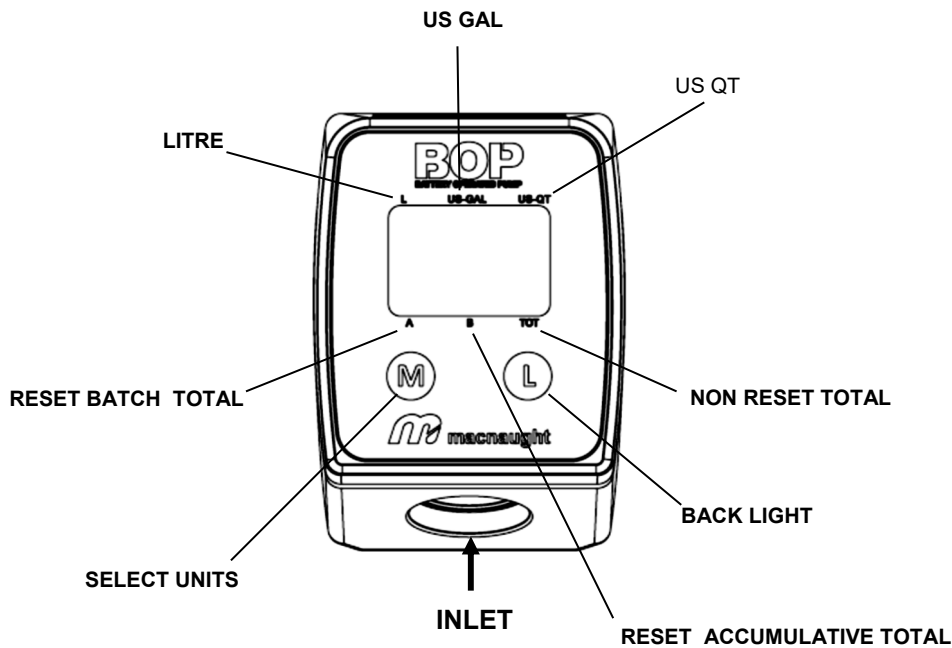
## METER TO GUN ASSEMBLY

- 1) Prior to assembling connector (2) to the gun (1) remove item (5) from the gun (1).
- 2) Screw item (2) to the gun outlet (1) - Do not over tighten.
- 3) Slide O'ring (6) all the way onto screw (2)



- 4) Remove the 'U'clip (3) from the meter (4)
- 5) Insert the meter inlet (4) onto the connector (2) apply light pressure to the meter, this will slightly compress the O'ring (6) then firmly press in the 'U' clip until flush with the body (3) as shown
- 6) Carefully screw the outlet tube (5) onto the meter outlet (4) - Do not over tighten





## OPERATING INSTRUCTIONS

The display wakens when fluid passes through the meter or either the “M” or “L” button is pressed.

Note: The display will go to sleep after 3 seconds if no flow is detected

### BACK LIGHT

To turn on the backlight press “L” button

### Change Units Setting

- 1) Waken display by pressing either the ‘M’ or ‘L’ button
- 2) Press and hold down the “L” button until the arrow moves to the next unit setting
  - a) Press and hold down button to change from L to US-GAL
  - b) Press and hold down button to change from US-GAL to US-Qt
  - c) Press and hold down button to change from US-Qt to L

### Change Batch and Total Setting

- 1) Waken display by pressing either the ‘M’ or ‘L’ button
- 2) Press and release “M” button to move arrow to desired batch or total setting
  - A = Resettable batch total
  - B = Resettable accumulative total
  - C = Non resettable accumulative total

### Reset batch or accumulative totals to zero

- 1) Waken display by pressing either the ‘M’ or ‘L’ Button
- 2) Press and release “M” button to move arrow to desired batch (A) or total (B) setting
- 3) Simultaneously press and release the “M” and “L” buttons to reset the numbers to zero.

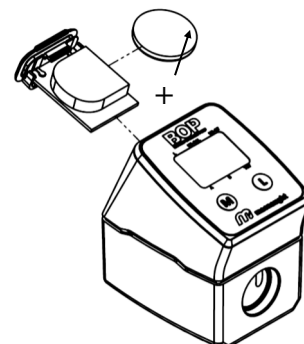
### REPLACE BATTERY

- 1) Carefully pull open the battery drawer as shown
- 2) Carefully slide the old battery from the PCB
- 3) Carefully insert the new CR2450 Lithium Coin battery.

Note:

Ensure the battery is fitted with the + on the battery pointing up as shown below.

- 4) Slide the battery drawer shut firmly to ensure the O’ring seals the drawer opening correctly,



## METER TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Meter not reading	a) Damaged or faulty PCB b) Damaged or jammed rotors	a) Replace meter b) Replace meter
No display	a) Flat battery b) Damaged or faulty PCB	a) Replace battery (Lithium CR2450) b) Replace meter
Meter not accurate	a) Air in the oil b) Leakage c) Flowrate too high	a) Ensure the system is fully primed and air free b) Check and ensure all connections are properly assembled and sealed, otherwise replace meter as required. c) See specification for maximum flowrate

## METER SPECIFICATIONS

FLOW RATE	Up to 10LPM
OPERATING TEMPERATURE	-20 deg C to +70 deg C
OPERATING PRESSURE	20psi (Max 60psi)
ACCURACY	+/- 2% of reading
IP RATING	IP65
INLET CONNECTION	½" inlet connector supplied
OUTLET CONNECTION	1/2" BSPP (F)
POWER	1 x CR2450 - 3V Lithium Coin Battery





## UK Declaration of Conformity

We: Macnaught Pty. Ltd. Of: 41-49 Henderson Street, Turrella NSW 2205, Australia.

Declare that: BOP Electronic Meter IM012EB-01

In accordance with: Supply of Machinery (Safety) Regulations 2008  
Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment  
The Waste Electrical and Electronic Equipment Regulations 2013

have been designed and manufactured to the applicable harmonised standards below:

(IM012EB-01) BS EN ISO 12100: 2010  
EN60204-1: 2018

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specification. The product complies with all essential requirements of the Directives.

Signature

Name: Marco Uccellani Position: Engineering Manager

Done at: 41-49 Henderson Street, Turrella NSW 2205, Australia. Date: 18/Oct/2021

COM-D/MG/PIM/UKCA-BOP.EM\_R1  
QA-CN7444  
Issued by: R.Khan

## WEEE Directive - Waste Electrical and Electronic Equipment



The WEEE Directive requires the recycling of waste electrical and electronic equipment in the European Union.

Whilst the WEEE Directive does not apply to some of Macnaught's products, we support its policy and ask you to be aware of how to dispose of this product.

The crossed out wheellie bin symbol illustrated and found on our products signifies that this product should not be disposed of in general waste or landfill.

Please contact your local dealer national distributor or Macnaught Technical Services for information on product disposal.



## EU Declaration of Conformity

We: Macnaught Pty. Ltd.

Of: 41-49 Henderson Street, Turrella NSW 2205, Australia.

Declare that: BOP Electronic Meter IM012EB-01

In accordance with: Machinery Directive 2006/42/EC  
Electromagnetic Compatibility Directive 2014/30/EU  
Restriction of Hazardous Substance Directive 2011/65/EU as amended by 2015/863/EU  
Waste Electrical and Electronic Equipment Directive 2012/19/EU

have been designed and manufactured to the applicable harmonised standards below:

(IM012EB-01) EN ISO 12100: 2010  
EN60204-1: 2018  
EN 61326-1:2013 ; EN 61326-2-2:2013  
EN IEC 61000-3-2:2019 ; EN 61000-3-3:2013+A1:2019  
EN 61000-4-2:2009 ; EN 61000-4-3:2006+A1:2008+A2:2010  
EN 61000-4-4:2012 ; EN 61000-4-5:2014+A1:2017  
EN 61000-4-6:2014 + AC:2015  
EN 61000-4-8:2010 ; EN 61000-4-11:2004+A1:2017

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specification. The product complies with all essential requirements of the Directives.

Signature

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Position:

Engineering Manager

Done at: 41-49 Henderson Street, Turrella NSW 2205, Australia.

Date: 18/Oct/2021

COM-D/MG/PIM/CE-BOP.EM\_R1  
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Please contact your local dealer national distributor or Macnaught Technical Services for information on product disposal.

### **MBC-US – US Battery Charger**

This battery charger has been tested & verified by ETL Intertek to meet OSHA required safety standard.



### **FCC:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.



## UK Declaration of Conformity

We: Macnaught Pty. Ltd. Of: 41-49 Henderson Street, Turrella NSW 2205, Australia.

Declare that: Battery operated oil pump BP20S & BP60S  
which consists the following assemblies/components:  
Power Head BP20-PH  
Stem Assemblies & Hose Set EP20X & BP60X  
Li-Ion Battery Charger MBC  
Li-Ion Battery MBP2000MAH

In accordance with:	Machinery Directive	2006/42/EC
	Low Voltage Directive	2014/35/EU
	Electromagnetic Compatibility Directive	2014/30/EU
	Restriction of Hazardous Substance Directive	2011/65/EU as amended by 2015/863/EU
	Waste Electrical and Electronic Equipment Directive	2012/19/EU
	Battery Directive	2006/66/EC as amended by 2013/56/EU

have been designed and manufactured to the applicable harmonised standards below:

	EN ISO 12100: 2010
(BP20S & BP60S)	EN 809: 1999+A1: 2009/AC: 2010
(BP20-PH)	EN55014-1: 2017
(BP20X & BP60X)	EN55014-2: 2015
	EN60204-1: 2006+A1: 2009/AC: 2010
	EN60335-1: 2012+A11: 2014
	EN60335-2-29: 2004+A2: 2010
	EN62233: 2008
(MBC)	EN55014-1: 2006+A1: 2009+A2: 2011
	EN55014-2: 2015
	EN61000-3-2: 2014
	EN61000-3-3: 2013
	EN62133-2: 2017
(MBP2000MAH)	EN55032: 2015
	EN55035: 2017

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specification. The product complies with all essential requirements of the Directives.

Signature



Name: Marco Uccellani Position: Engineering Manager

Done at: 41-49 Henderson Street, Turrella NSW 2205, Australia. Date: 23/Jun/2021

COM-DVMG/PIM/UKCA-BOF\_R1  
QA-CN7444  
Issued by: R.Khan



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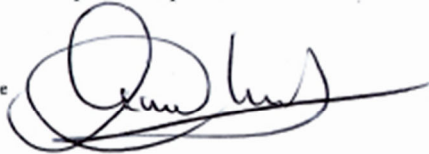
In accordance with:	Machinery Directive	2006/42/EC
	Low Voltage Directive	2014/35/EU
	Electromagnetic Compatibility Directive	2014/30/EU
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(MBP2000MAH)	EN62133-2: 2017
	EN55032: 2015
	EN55035: 2017

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Signature

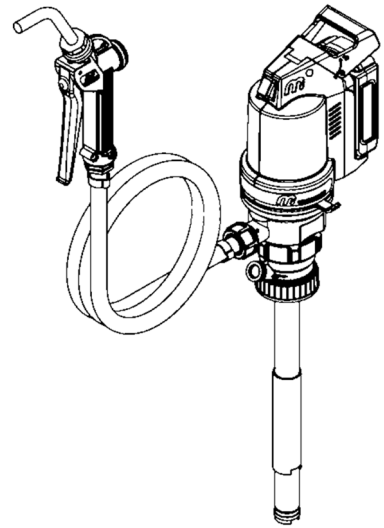


Name: Marco Uccellani Position: Engineering Manager

Done at: 41-49 Henderson Street, Turrella NSW 2205, Australia. Date: 23/Jun/2021

**NOTES:**

**NOTES:**



**macnaught**

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ABN 66 000 075 785

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Florida, 33619 United States.

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**E:** [info@macnaught.com](mailto:info@macnaught.com)  
**W:** [www.macnaughtusa.com](http://www.macnaughtusa.com)

**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 [macnaught.com.au](http://macnaught.com.au)  
For a list of Australian Service Centres see [macnaught.com.au](http://macnaught.com.au)**