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SPRING LOADED OIL PUMPS

(20 LITRE and 60 LITRE MODELS)

INSTRUCTION MANUAL



Introduction

Thank you for purchasing a Macnaught Spring loaded Oil Pump. Your spring loaded oil pump has been designed to dispense oil under spring pressure after the oil gun trigger has been pressed.

The materials of construction used in the manufacture of this pump include, Aluminium, Carbon Steel, Zinc, Polypropylene, Nitrile Rubber, Stainless Steel and PVC.

GENERAL INFORMATION

This manual assists you in operating and maintaining your new spring loaded oil pump. The information contained will help you ensure many years of dependable performance and trouble free operation.

Please take a few moments to read through this manual before installing, operating or carrying out any maintenance on your spring loaded oil pump. This instruction manual is applicable to models S20H, S20HA, S60H and S60HA. Models S20HA and S60HA are fitted with an ATF filter. If you experience problems with the product, refer to the procedures contained within this instruction manual.

If you require further assistance please contact your local Macnaught distributor or local Macnaught service centre.

OPERATION



CAUTION

This pump is packed with the spring loaded handle in the energised position. To remove the locking wire, push down firmly on the handle and carefully remove the locking wire then release the handle slowly.

- 1) Screw the pump into the oil drum.
- 2) Push the handle down several times while holding the trigger on the control gun. This will prime the oil through the pump. Once the pump is primed release the gun trigger, the pump handle will stay down when the hose is full of oil.
- 3) To dispense oil, pull the trigger on the control gun. Oil should flow through the gun.

MAINTENANCE

Please refer to the Disassembly and reassembly procedures included in this instruction manual when carrying out any maintenance on your spring loaded oil pump.

DISASSEMBLY



CAUTION

Caution must be taken when removing the foot-valve from the pump tube, or removing the pump tube from the pump body. The large main spring is under tension.



- 1) Unscrew the handle (8) from the piston rod (9).
- 2) Unscrew the foot-valve (7) from the pump tube (4), remove the spring (15) and the piston rod (9). Take care not to damage the seal.
- 3) Unscrew and remove the pump tube (4) from the pump body (2).
- 4) Hold the piston nut (10) with a spanner, using multigrips on the smallest diameter, unscrew the lower piston (14).
- 5) Remove the lower piston (14), piston seal (13), upper piston (12), shake proof washer (11) and the piston rod (9).
- 6) Remove the spacer tube (16).

REASSEMBLY

Before assembly check the pump body o'ring (1) and piston seal (13) for damage. Replace if worn or damaged.

1) Screw the piston nut (10) onto the piston rod (9), followed by the shake proof washer (11), upper piston (12), piston rod seal (13) and lower piston (14). Tighten the piston nut to lock the piston assembly.

Note: The piston seal must be assembled with the seal lip facing up.

2) Fit the spacer tube (16). The swaged end should rest on the piston nut (10).

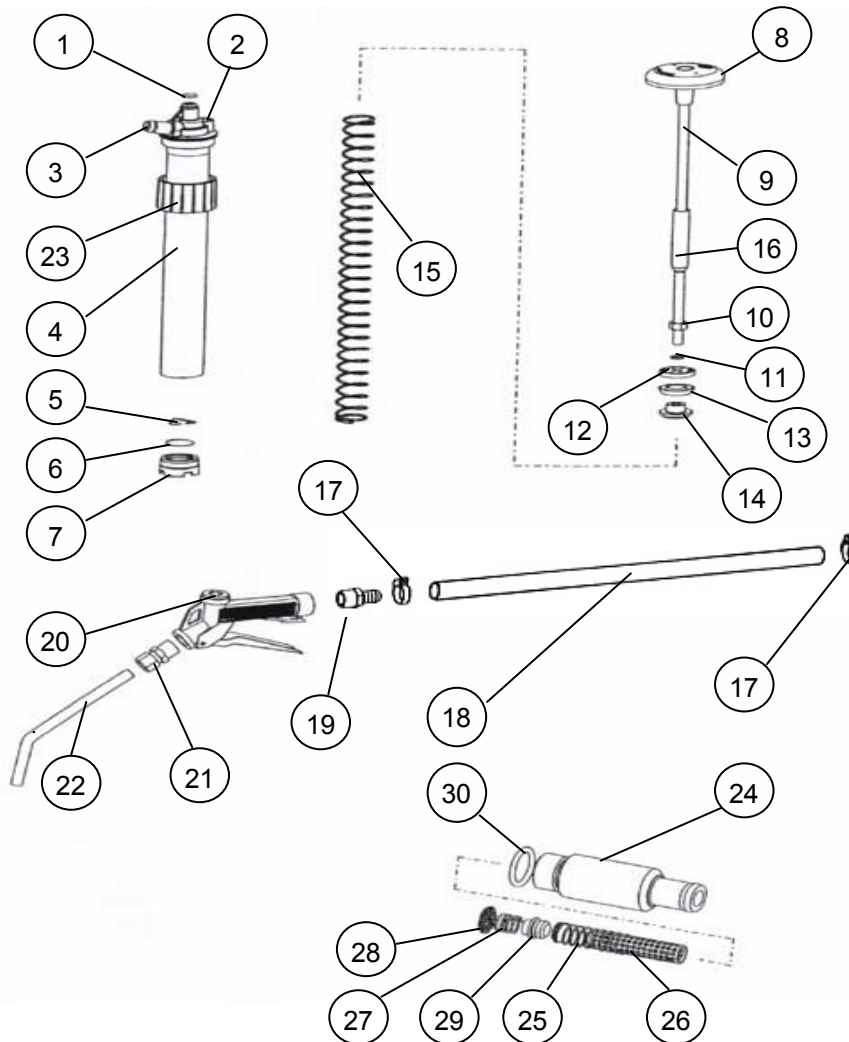
3) If required, replace the pump body o'ring (1), insert the piston rod assembly (9-14) upwards into the pump body (2).

4) Add thread sealant (Loctite 567 or similar) to the pump body (2) then fit the pump tube (4) over the piston seal (13), with the short thread end leading (take care not to damage the piston seal). Screw the pump tube (4) firmly to the pump body.

5) Insert the main spring (15) into the open end of the pump tube (4).

6) Check the foot valve assembly (5, 6, 7) for damage, replace if necessary. Place the foot valve assembly on the end of the spring (15), press down to compress the spring and screw the foot valve assembly firmly into the pump tube (4). Tighten the pump assembly and test.

PARTS DIAGRAM



PARTS LISTS

S20H / S20HA PARTS LIST

SA60H / S60HA PARTS

| ITEM | DESCRIPTION | QTY | OVERHAUL KIT | SPARE PARTS KIT |
|-------------------------------------|----------------------|-----|----------------|------------------|
| 1 | O-RING | 1 | SA20-1K | |
| 2 | PUMP BODY | 1 | | |
| 3 | PUMP OUTLET TUBE | 1 | | |
| 4 | PUMP TUBE | 1 | | |
| 5 | VALVE PLATE RETAINER | 1 | SA20-1K | SA006S |
| 6 | VALVE PLATE | 1 | SA20-1K | SA006S |
| 7 | FOOT VALVE | 1 | SA20-1K | SA006S |
| 8 | HANDLE | 1 | BLUE/ GREEN | SA001S/SA001GS |
| 9 | PISTON ROD | 1 | | |
| 10 | PISTON NUT | 1 | | SA003S |
| 11 | SHAKEPROOF WASHER | 1 | | SA003S |
| 12 | UPPER PISTON | 1 | | SA003S |
| 13 | PISTON SEAL | 1 | SA20-1K | SA003S |
| 14 | LOWER PISTON | 1 | | SA003S |
| 15 | MAIN SPRING | 1 | | SA016S |
| 16 | N/A | 1 | | |
| 17 | HOSE CLAMP | 2 | | SA026S |
| 18 | HOSE | 1 | | SA026S |
| 19 | HOSETAIL | 1 | | |
| 20 | CONTROL GUN | 1 | BLUE/RED | SA11B-1K/SA11-1K |
| 21 | NOZZLE ADAPTOR | 1 | | SA11B-1K/SA11-1K |
| 22 | DELIVERY TUBE | 1 | | SA11B-1K/SA11-1K |
| 23 | BUNG ADAPTOR | 1 | BLUE/ GREEN | SA012S/SA012GS |
| ATF FILTER (MODEL SA045) PARTS LIST | | | | |
| 24 | FILTER HOUSING | 1 | | SA40S |
| 25 | MESH SPRING | 1 | | SA44S |
| 26 | FILTER MESH | 1 | | SA44S |
| 27 | TENSION SPRING | 1 | | SA44S |
| 28 | FILTER SCREEN | 1 | | SA44S |
| 29 | FILTER SEAT | 1 | | SA44S |
| 30 | O-RING | 1 | | SA44S |

| ITEM | DESCRIPTION | QTY | OVERHAUL KIT | SPARE PARTS KIT |
|------|----------------------|-----|----------------|------------------|
| 1 | O-RING | 1 | SA60-1K | |
| 2 | PUMP BODY | 1 | | SA30S |
| 3 | PUMP OUTLET TUBE | 1 | | SA030S |
| 4 | PUMP TUBE | 1 | | SA019S |
| 5 | VALVE PLATE RETAINER | 1 | SA60-1K | SA015S |
| 6 | VALVE PLATE | 1 | SA60-1K | SA015S |
| 7 | FOOT VALVE | 1 | SA60-1K | SA015S |
| 8 | HANDLE | 1 | BLUE/ GREEN | SA001S/SA001GS |
| 9 | PISTON ROD | 1 | | SA018S |
| 10 | PISTON NUT | 1 | | SA013S |
| 11 | SHAKEPROOF WASHER | 1 | | SA013S |
| 12 | UPPER PISTON | 1 | | SA013S |
| 13 | PISTON SEAL | 1 | SA60-1K | SA001S |
| 14 | LOWER PISTON | 1 | | SA013S |
| 15 | MAIN SPRING | 1 | | SA017S |
| 16 | SPACER TUBE | | | SA024S |
| 17 | HOSE CLAMP | 2 | | SA024S |
| 18 | HOSE | 1 | | SA026S |
| 19 | HOSETAIL | 1 | | N367S |
| 20 | CONTROL GUN | 1 | BLUE/ RED | SA11B-1K/SA11-1K |
| 21 | NOZZLE ADAPTOR | 1 | | SA11B-1K/SA11-1K |
| 22 | DELIVERY TUBE | 1 | | SA11B-1K/SA11-1K |
| 23 | N/A | | | |

TROUBLE SHOOTING GUIDE

| TROUBLE | CAUSE | REMEDY |
|--|--|--|
| The pump will not deliver oil | Dirty or damaged foot assembly (5, 6, 7) | Clean footvalve (replace if damaged) |
| | Foot valve plate sticking | Lift plate on footvalve to check for correct operation |
| | The piston seal (13) is damaged | Replace piston seal (13) |
| Oil leaks out of the top the pump body | Damaged o'ring (1) | Replace o'ring (1) |
| The pump handle rises slowly when not in use | The piston seal (13) is damaged | Replace the piston seal (13) |
| | The pump body o'ring (1) is damaged | Replace the o'ring (1) |
| | The control gun (22) is leaking | Replace the oil control gun (22) |
| The oil delivery is slow | The oil viscosity is too high | Maximum recommended oil viscosity is SAE30 |

ATF Filter Models only

| TROUBLE | CAUSE | REMEDY |
|---|-------------------------------|--|
| The pump handle stays down but does not deliver oil | Blocked filter mesh (28) | Clean filter mesh (28) |
| The oil delivery is slow | The oil viscosity is too high | Maximum recommended oil viscosity is SAE30 |



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For a list of Australian Service Centres see macnaught.com.au**