

HG 20F-012M-01 OIL CONTROL GUN INSTRUCTION MANUAL



INTRODUCTION

Thank you for purchasing a Macnaught oil dispensing gun complete with mechanical meter. The Macnaught metered oil dispensing gun has been designed for use with engine oil, gear oil, automatic transmission fluid, anti-freeze/anti-boil and compatible fluids.

Macnaught also manufacture a complete range of ratio oil pumps and retractable oil hose reels, greasing equipment and accessories to fulfil all your fluid handling and greasing needs requirements.

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

GENERAL INFORMATION

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

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

IMPORTANT INFORMATION



READ THIS INFORMATION CAREFULLY

Your safety is important to us. Please read and follow all safety instructions listed inside.

Some of these instructions alert you to the potential for personal injury. "Cautions" listed throughout this manual advise of potential practices or procedures which may cause damage to your equipment.

Ensure all operators have access to adequate instructions about safe operating and maintenance procedures.

Do not exceed the maximum working pressure of 6900 kPa / 1000 psi / 69 bar.



CAUTION

Do not hit the oil control gun if it fails to operate. Refer to "trouble shooting guide" or return the unit to your nearest authorised service centre.

Never point the nozzle at yourself or anyone else.

Never exceed the pressure rating of any component installed in the System.

Before every use check all hoses for signs of wear, leaks or loose fittings. Tighten all fluid connections regularly and replace weak or damaged hoses.



CAUTION

Before carrying out any maintenance disconnect the air supply to the pump and release the fluid pressure in the system by pressing the lever on the control gun.

ASSEMBLY

Use Teflon tape (or suitable thread sealant) when connecting the oil control gun to an oil hose.

OUTLET NOZZLE OPERATION

When fluid flows through the gun the outlet nozzle will automatically open. When the fluid flow stops the outlet nozzle will automatically shut.

HANDLE OPERATION

To latch the handle, squeeze the lever, push the button and then release lever.

To release the latch in manual mode simply squeeze and release lever.

CONTROL HANDLE DISASSEMBLY

Use a clean bench to carry out maintenance.

A) Remove the oil hose from the control gun inlet swivel (10).

B) Unscrew and remove swivel (10) washer and o'ring from the control gun inlet. (Clean or replace the swivel strainer and o'ring if required).



CAUTION

The swivel is under spring tension

C) Remove valve spring (9), seal/valve body assembly (8) and plunger (7).

D) Remove the screw (15), then unclip and remove the trigger guard (16).

LEVER and VALVE REMOVAL

A) Using a 2.5mm allen key, remove the 2 handle screws (2).

B) Remove lever (11), ease downwards.

C) Remove the washer (5), "O"Ring (3), then push the valve cam (4) from the gun body (6), and remove "O"Ring (3).

Note: If the plunger has not been removed the cam will not release from the body.

CONTROL HANDLE REASSEMBLY

A) Clean and inspect all parts. Replace any suspect, worn or damaged components.

Note: Lightly lubricate the valve cam before assembly.

B) Place "O"Ring (3) onto valve cam (4).

Note: The cut out section in the middle of the valve cam (4) must face the inlet swivel (10).

C) Replace the valve cam (4) into the body (6). Note the orientation shown on the assembly drawing. Fit the second "O"Ring (3) and washer (5).

D) Slide lever assembly (11) into position and replace the two Allen screws (2). (Use Loctite or similar sealant).

E) Replace plunger (7).

Note: The end hole in the plunger must face the gun outlet.

F) Replace the seal/valve body assembly (8), and spring (9) and replace into the gun body (6).

Note: Install the spring, small end first.

G) Re-fit the trigger guard (16) and replace screws (15)

H) Replace washer, o'ring on to the swivel assembly (10), and screw firmly into place (Use Loctite or similar sealant).

Note: After assembly ensure the handle latch is operating correctly.

IM012M METER INSTRUCTIONS

RESET BUTTON

The **RESET** button allows you to reset the Reset Total to zero.



CAUTION

Ensure the fluid supply to the meter is disconnected and the line pressure is released before disassembly.

REGISTER AND GEAR TRAIN REMOVAL

1) Remove the protective shroud (28).

2) Peel off the meter faceplate (27).

3) Remove the 4 x Philips head screws (26).

4) Remove the register assembly (25).

5) Take careful note of the orientation of the gears on the gear train, then carefully remove the gears

Note: Assembly is a reversal of the assembly procedure.

6) Replace the gears (21,22,23,24)

Note: The register (25) is not repairable and will need to be replaced if faulty or damaged.

7) Replace the register (25) and screws (26).

8) Fit a new faceplate (27) onto the register face (25).

9) Re-fit the protective shroud (28).

ROTOR REPLACEMENT

1) Remove the 8 x Philips head screws (32) from the underside of the meter.

2) Remove the cover plate (31) and O-ring (30).

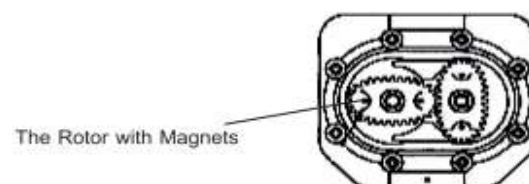
3) Remove both rotors (29) and inspect for any signs of wear or damage. (Replace if worn or damaged).

NOTE: Ensure the rotor with the magnets is assembled on the correct side (Ref fig 2). The magnets in the rotor must face towards the mechanical display.

1) Replace both rotors (29) positioned 90 Deg to each other. (see fig 2). Check rotation by turning the rotors. If the rotors do not rotate freely remove one of the rotors and replace it correctly at 90 Deg to the other rotor. Re-check the operation of the rotors.

2) Lightly grease the O-ring (30) and place it on the meter body.

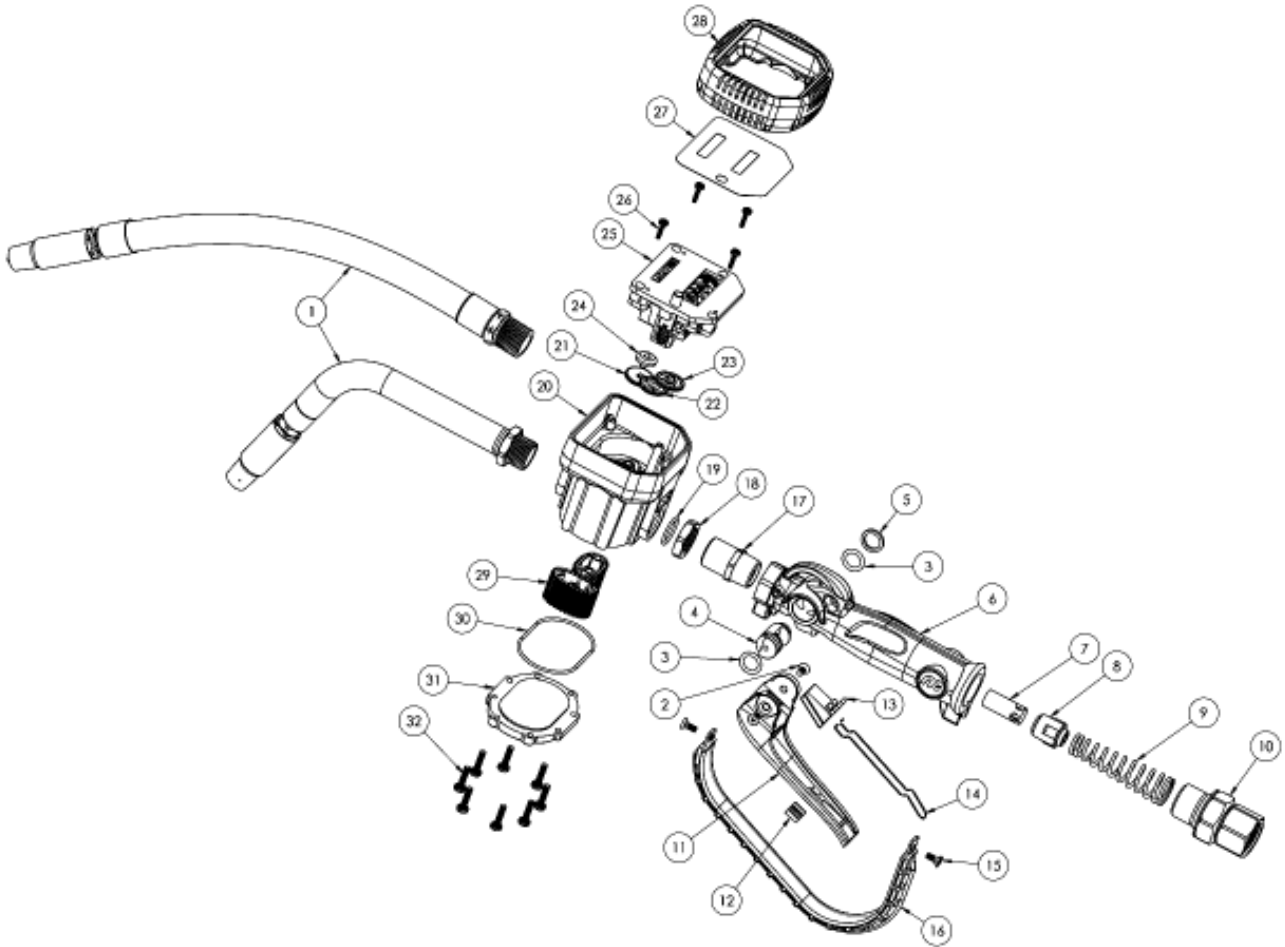
3) Clean the meter cover plate (31) and place it on the body. Take care not to damage the o'ring (30).



4) Install the 8 screws (32) and tighten in a diagonal pattern to 1nm (0.73 ft-lb). Visual check the cap has been pulled down evenly.

5) Test the meter by turning the rotors with a finger or by applying low air pressure (No more than a good breath) to the inlet port of the meter. This will confirm the meter is operating correctly.

PARTS DIAGRAM



SPARE PARTS LIST

Item	No Off	Order for Replacement Part or Set	Kit Ref	Description
		HG20-1K (Kit A)		Seal Kit
1	1	IM078As		Flexible Extension with Auto Nozzle
1	1	IM106As		Rigid Extension with Auto Nozzle
2	2		A	Screw (M4 x 8 CSK)
3	2		A	O-ring BS111
4	1		A	Camshaft
5	1		A	Washer
6	1	n/a - order HG20 (gun body complete)		Body Casting
7	1		A	Plunger Cage
8	1		A	Valve Seal
9	1		A	Spring
10	1	HG040As (BSP)		Swivel Assembly (BSP)
10	1	HG043As (NPT)		Swivel Assembly (NPT)
11	1			Handle (Latching)
12	1	HG022s incl item 2	A	Lever Plug
13	1		A	Push Button - Auto
14	1		A	Button Spring
15	2		A	Screw
16	1			Handle guard
17	1			Adaptor
18	2			Lock nut
19	2			O-ring
20	1	n/a - new meter req'd		Meter body
21	1			Litre gear - 33T (L4)
22	1	IM176s (litre)		Litre gear - 33 x 12T (L3)
23	1			Litre / Quart Gear 36 x 12T (QL2)
24	1			Bevel Gear
25	1	IM168As		Register Assembly
26	4			Taptite Screw M3 x 12 Pan Hd
27	1	IM166Ls		Decal - Litres
28	1	IM071BKs		Protective Boot
29	2	IM181s (incl item 32)		Oval Gears
30	1			O-ring
31	1	n/a - new meter req'd		Cover plate
32	8			Taptite Screw M4 x 16 Pan Hd

TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
Meter not accurate	Flow rate not correct	Adjust flow rate to correct rate (1-30 Ltr/min)
No fluid passing through the meter	a) Blocked strainer	a) Clean or replace strainer
	b) Dirt particles jamming the rotors	b) Dismantle meter assembly and clean (refer to meter disassembly)
	c) Damaged plunger seal	c) Replace damaged plunger seal
The meter is not registering fluid output	a) Damaged register assembly	a) Replace register assembly
	b) Damaged gear or gears	b) Replace complete gear set.
Constant oil leak from the nozzle	Damaged plunger seal	Replace plunger seal (check for damage)
Intermittent drip from the nozzle	Dirt in the nozzle	Remove the nozzle and blow out any dirt particles, replace if necessary.
Oil leak from the lever assembly area	Damaged o'rings	Replace damaged o'rings
Low flow rate	Blocked swivel strainer	Replace strainer
Oil leaking from the swivel inlet	Damaged o'ring or swivel	Replace swivel

PRODUCT SPECIFICATIONS:

* Accuracy	+/- 1%
Batch Total	999.9
Accumulative Total	999999.9
Wetted components:	Acetal, aluminium, nitrile (NBR), mild steel
Flow Range:	1-30 litres/minute (0.26-8 US gal/min)
Max. working pressure:	6900 kPa / 1000 psi / 69 Bar
Inlet thread	½" BSPT or NPT (F)
Outlet thread:	½" BSPT or NPT (F)
Operating temperature:	-10°C (14°F) to +55°C (131°F)
Weight (approx):	1.5kg

* When tested with lubrication oil @ 25°C. Allowances should be made for changes to these parameters.



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