

# HG 20F-012KMM-01 OIL CONTROL GUN

## INSTRUCTION MANUAL



### INTRODUCTION

Thank you for purchasing a Macnaught oil dispensing gun. The Macnaught metered oil dispensing gun has been designed for use with engine and gearbox oils up to SAE140.

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  
CAREFULLY BEFORE USE.**

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

“Cautions” listed throughout this manual advise of potential practices or procedures which may cause damage to your equipment.

Ensure all operators have access to the 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.

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

\* Continual use of this product can potentially cause RSI injury (especially hand or arm injury)

\* Do not modify or alter this product any way

\* Only physically fit people should be authorised to use this product

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



## CAUTION

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.

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

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.

## IM012KMM 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.

## DISSASSEMBLY and REASSEMBLY

The IM012KMM flow meter can be easily disassembled without having to separate the body from the installation.

### MEASURING CHAMBER

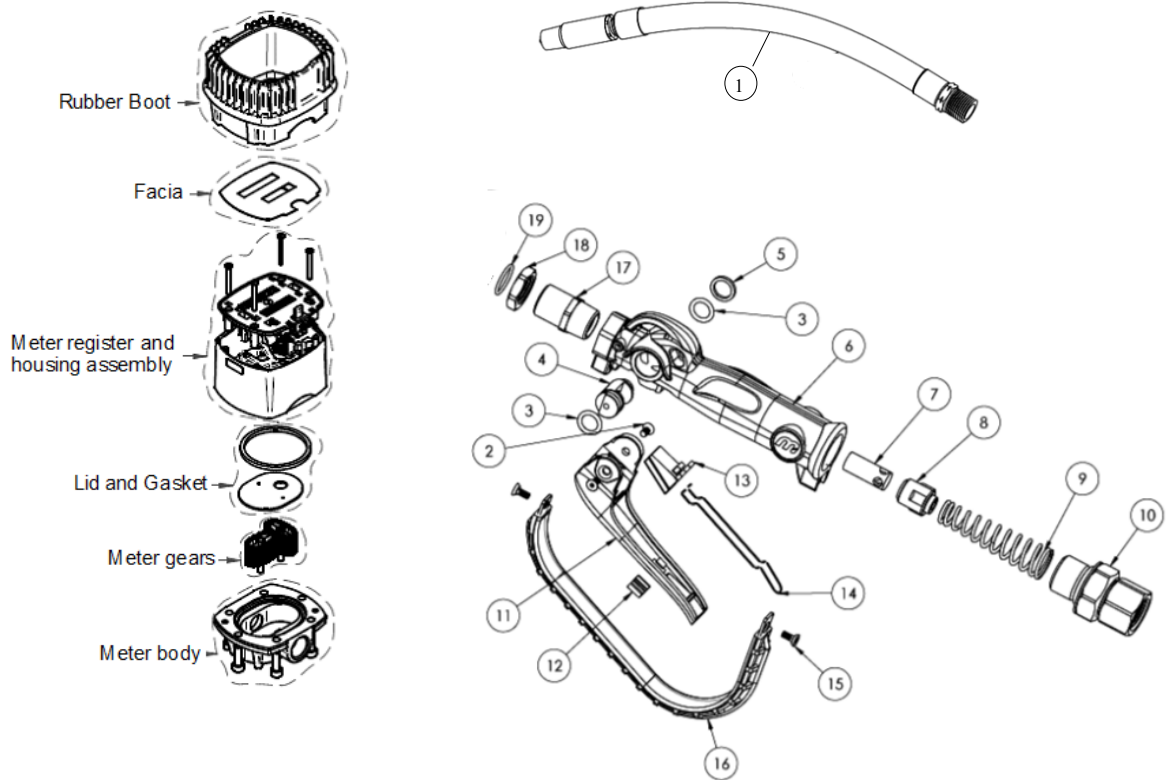
To access the measuring chamber:

- A) Remove the rubber shroud
- B) Unscrew the 6 screws located under the meter body
- C) Remove the lid
- D) Remove the gasket and oval disk
- E) Remove the gears

**Note:** Reassembly is the reversal of disassembly taking particular care to:

- 1) Check gasket seals for damage and replace if required.
- 2) Lubricate and carefully install the gasket seal
- 3) Replace and tighten screws correctly
- 4) Hold the meter with the inlet facing down, and place the outlet gear on the right hand side of the meter.
- 5) Check that the gears are turning correctly
- 6) Fit the lid to the top of the chamber ensure that the gears on lid correspond with that on the chamber outlet.

# PARTS DIAGRAM



## SPARE PARTS LIST

### HG20F-012KMM

ITEM	NO OFF	ORDER FOR REPLACEMENT		KIT. REF	DESCRIPTION
		PART/SET No			
		HG20-1K	(Kit A)		Seal Kit
1	1	IM078As			Flexible 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

Replacement meter order - IM012KMM-01

## TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
Inaccurate	a) Measuring chamber dirty or clogged	a) Clean measuring chamber (ref disassembly and reassembly section)
	b) Air in system	b) Eliminate any leaks and purge air from the system
Low flowrate	a) Measuring chamber is dirty or clogged	a) Clean measuring chamber (ref disassembly and reassembly section)
	b) Measuring chamber is dirty or clogged	b) Clean measuring chamber (ref disassembly and reassembly section)
	c) Damaged plunger seal	c) Replace damaged plunger seal
Constant oil leak from the nozzle	a) Damaged plunger seal	a) Replace plunger seal ( check for damage )
Intermittent drip from the nozzle	b) Dirt in the nozzle	b) Remove the nozzle and blow out any dirt particles, replace if necessary.
Oil leak from the lever assembly area	a) Damaged o'rings	a) Replace damaged o'rings
Oil leaking from the swivel inlet	a) Damaged o'ring or swivel	a) 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 - Gun	½" BSPT
Outlet thread: -Meter	½" BSPP
Operating temperature:	-10°C (14°F) to +55°C (131°F)
Weight (approx):	1.75kg

\* 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.



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