

Safety	2
GCM Internal Parts	3
400 & 700 Bar GCM Valve Calibration	5
400 & 700 Bar GCM Valve Service	5
GCM Valve Service	6
RM350 General Maintenance	10
HPP General Maintenance	12

Safety

Please read the following information carefully before installing and using the equipment.

Compressed air and gases can be EXTREMELY dangerous and MUST be treated with extreme care. This equipment works at pressures up to 620 Bar (8990 psi) and uses single and 3 phase electrical power.

REMEMBER: Nitrogen gas is an asphyxiant Never breathe in gas escaping from the system. Nitrogen gas is not poisonous, but can overcome a person in a confined space. Always stay alert when venting Nitrogen gas.

REMEMBER: Don't be fooled by the size of the high-pressure receiver. A 50 litre receiver charged to 350 Bar contains the equivalent of 7500 liters of gas at atmospheric pressure.

REMEMBER: Unlike hydraulic oil, gas is compressible, and will continue to expand until the pressures inside and outside the system equalize.

NEVER commence any maintenance or servicing work on the equipment without ensuring that the system is depressurized.

NEVER adjust a pipefitting that is under pressure.

NEVER adjust a safety valve to achieve a lifting pressure higher than that set at the Maximator factory. A safety valve is provided to prevent over pressurisation of the system and

overloading of the compressor. Tampering with a safety valve can cause serious damage or injury.

NEVER run the equipment without the guards it was supplied with.

NEVER re-use damaged fittings, especially if they rely on threads for security (i.e. pipe fittings, nuts, bolts etc).

NEVER attempt to straighten badly bent pipes

NEVER allow any part of your body or any person to be in front of an opening that is venting gas. Particles from inside the system can become embedded in the skin and cause serious injury or death.

ALWAYS take care when opening valves or venting the system, and open the valve slowly.

ALWAYS isolate the electric power supply before commencing work on the system.

ALWAYS entrust electrical work to a qualified electrician.

ALWAYS comply with local, regional and national legislation

HAZARD

HP/HLP Mould Pipes are a trip hazard.

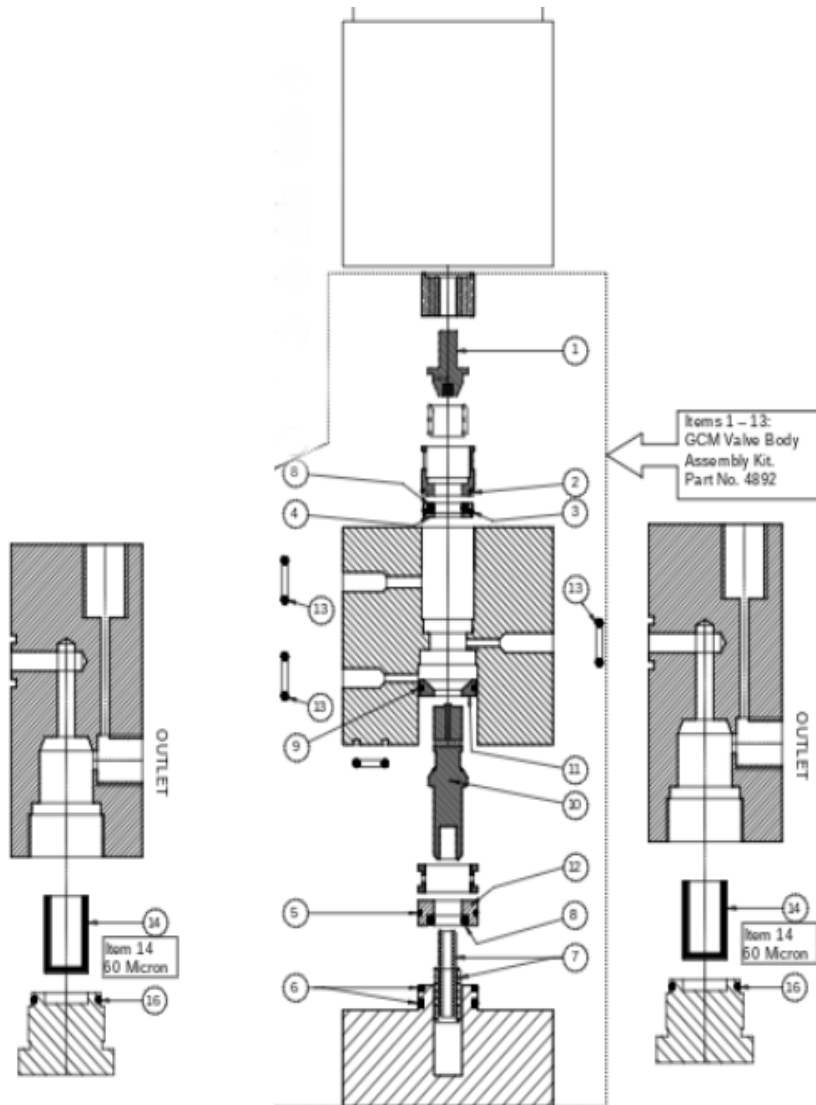
Always place away from routes where traffic is likely to damage them.

REMEMBER:

COMPRESSED GAS AND ELECTRICITY CAN KILL.

TREAT THEM WITH RESPECT.

GCM Internal Parts



GCM Internal Valve Parts List

REF	DESCRIPTION	PART NO	QTY
1	POPPET, RECOVERY, GCM VALVE*	4106	1*
2	O' RING, VITON 75*	4098	1*
3	O' RING, VITON 75* SHORE*	3977	1*
4	MIDDLE GUIDE BUSH, GCM MODULE*	4104	1*
5	O' RING, VITON 75* SHORE*	3975	1*
6	O' RING VITON 90* SHORE*	3973	2*
7	SPRING ASSY*	4107	1*
8	SEAL, SHAFT TEFLON, GCM MODULE*	4102	2*
9	O' RING, VITON 75* SHORE*	3976	1*
10	POPPET ASSY, GCM MODULE*	4105	1*
11	VALVE SEAT, GCM MODULE*	4103	1*
12	LOWER GUIDE BUSH, GCM VALVE*	4101	1*
13	O' RING, VITON 75* *	2592	3*
1-13	GCM VALVE BODY ASSEMBLY KIT	4892	1
14	FILTER ELEMENT, 60 MICRON*	4109	1*
15	FILTER ELEMENT, 7 MICRON*	4108	1*
16	O' RING, VITON 75**	4100	2*
17	O' RING, VITON	3730	1
18	O' RING, VITON	3731	1
19	SPRING, COMPRESSION	3154	1
20	RECOVERY POPPET, GCM	3919	1
21	WEAR WASHER, RECOVERY VALVE	3993	1
22	BACK UP RING, PTFE	3986	1
23	O' RING VITON 90* SHORE	3964	1
24	RECOVERY BLOCK	3917	1
	GREASE, SILICON 85G	1348	

*INCLUDED IN SEAL KIT ITEM 4112

400 & 700 Bar GCM Valve Calibration

GCM valves should be calibrated monthly. Refer to the model's Operating Manual for further information.

400 & 700 Bar GCM Valve Service

GCM Valve Filter Service

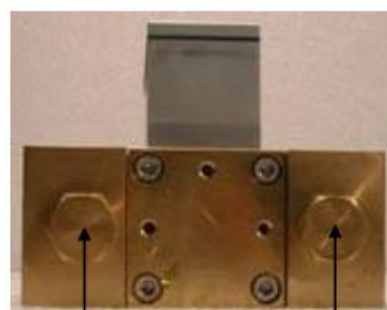
The GCM valve incorporates two sintered metal filters. These filters remove particles from the HP inlet gas and from gas vented from the mould. Particles in the gas can cause the valve to leak and so it is important that these filter are in place. The inlet filter has a 7 micron particle size; the outlet filter has a 60 micron particle size.

Note:

Generally, it is advised to check and clean the filter at least every three months. However, for situation where contaminants can be returned in the pipe from the mould, it is recommended that more frequent cleaned in carried out.

Generally, due to contamination in the gas returned from molding, the outlet filter will become dirty quicker than the inlet filter.

To remove the filters, unscrew and remove the plug



Inlet Filter
(7 Micron)

Outlet Filter
(60 Micron)

Remove and Clean Filter



Correct filter location

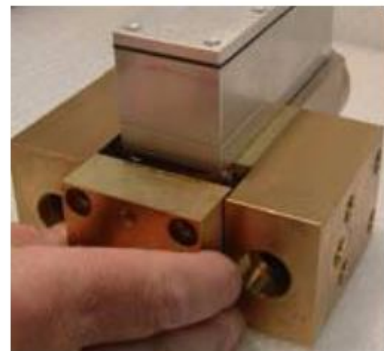
This picture shows the correct orientation of the filter



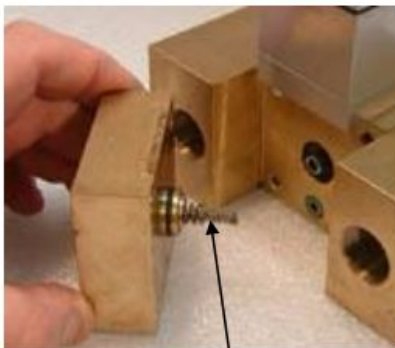
GCM Valve Service

GCM Valve Servicing should be carried out at least every year. The valve will require more frequent servicing if the inlet and outlet filter are not kept clean, or if gas returned from the molding contains large quantities of contamination or aggressive substances. To service the valve, a valve service kit (part number 4112 see page 22 for a list of parts included) is required. To service the valve, proceed as follows:

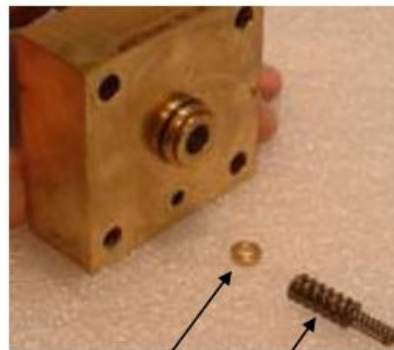
Unscrew and remove the four caphead screws retaining the cover plate.



Remove cover plate and remove the springs from the cover plate.



Springs



Washer

Springs

Note:

A washer fitted behind the springs within the cover plate.

Remove the inlet poppet and seal from the valve block.

NEVER USE PLIERS TO PULL THE POPPET FROM THE VALVE BLOCK ...



...UNLESS THE JAWS OF THE PLIERS ARE PROTECTED.



Use protection when removing

The poppet and seal can be withdrawn from the block together.



Remove the four caphead screws retaining the coil to the top of the valve block.



The relief poppet guide can be seen on top of the valve block.



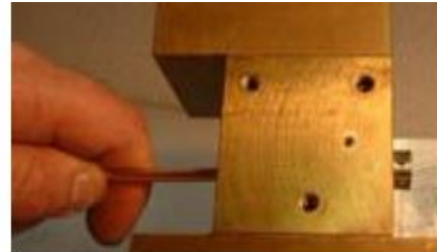
Remove the relief poppet guide from the valve block.



Then remove the relief poppet and spring.



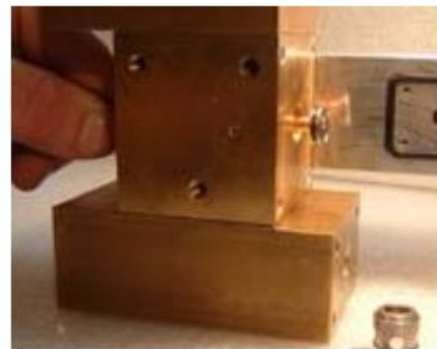
Use an 8mm diameter copper rod to push the relief poppet cage from the valve body.



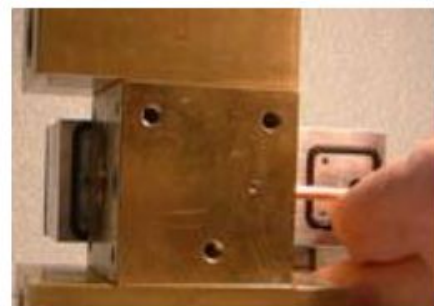
Remove the relief poppet cage.



Then remove the seal.



From the coil end, using the same 8mm diameter copper rod, push out the inlet poppet seat and spacer from the valve block



Remove the seat and spacer from the block.



IMPORTANT

When reassembling the GCM valve, it is important that new seals are fitted. It is recommended that a complete service kit is fitted together since fitting worn and new Components in the same valve will cause the new components to wear more quickly. When assembling the valve it is essential that all parts are clean with no traces of dirt

RM350 General Maintenance

Maximator recommend that all customers should carry out the following maintenance schedule.

INTERVAL	COMMENTS
Daily	All gas fittings should be checked for leaks and leak rectified where necessary. All connecting hoses should be checked for damage/wear and replaced if found faulty. Power cable to be checked for damage/wear and replaced if found faulty.
Monthly	Valves to be calibrated and checked for accuracy. Fan filter element to be cleaned using compressed air.
6 Monthly	Fan filter element to be replaced.
Annually	All GCM valves to be fully serviced.



REF	DESCRIPTION	PART NO
1	EMERGENCY STOP PUSH BUTTON	5595
2*	CONTACT BLOCK – NORMALLY CLOSED	5596
3*	RETAINING CLIP	5601
4	BLUE PUSHBUTTON	5752
5*	CONTACT BLOCK – NORMALLY OPEN	5598
6	LED ELEMENT 24V	5600
7*	GREEN LENS	5753
8	GAUGE, 0-600BAR,1/4" BSP BACK CONN PANEL	1434
9	NEEDLE VLV, 6MM OD, ISOLATING STEM	2456
10	BULK HEAD, 1/4" BSPPF	2013
11	BULK HEAD FITTING 1/2" BSPPF	2394
12	RECEIVER, HP, 4 LITRE (350 Bar Units Only)	1327
13	VLV, BALL, HP, 400BAR, 1/4" BSPPF	2346
14	PRESSURE RELIEF VALVE	2809
15	PRESS. TRANSDUCER, 0-400BAR, 4-20MA	1279
16	PRESS. TRANSDUCER, 0-620BAR,4-20MA (620 Bar Units Only)	2852
17	MSC, 1/4" BSPP X 6MM OD, SLOK	2441
18	GAS CONTROL MODULE 400bar	3535
19	PRESS. CONTROL MODULE, 700BAR	3897
20	AIR DRIVEN INTENSIFIERS:	
	AIR DRIVEN INTENSIFIER, AG-62 (A5)	2385
	AIR DRIVEN INTENSIFIER, AGD-62 (A8)	1666
	AIR DRIVEN INTENSIFIER, AGT-14/62 (A9)	Has090
	AIR DRIVEN INTENSIFIER, AGT-62/152(H) (AHP 2)	4300
	AIR DRIVEN INTENSIFIER, AGD-62/152(H) (AHP 3)	4549
21	AIR FILTER ASSEMBLY	5614
22	GAUGE ADAPT., 1/4" BSPP X 6MM SLOK	2479
23	FILTER MANIFOLD	5342
24	FILTER ELEMENT, 15 MICRON	3764
25	INLET REG.-PRESET TO 150PSI (A9 only)	Tea005
26	UNION TEE, 6MM SLOK	2457
27	BLANKING PLUG, 6MM	4380
28	POWER SUPPLY, 240W (OUTPUT 24V, 10A)	3559
29	PCB, PPC/CPC 3000 CONTROL	5055

HPP General Maintenance

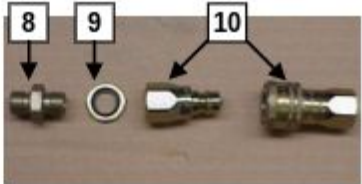
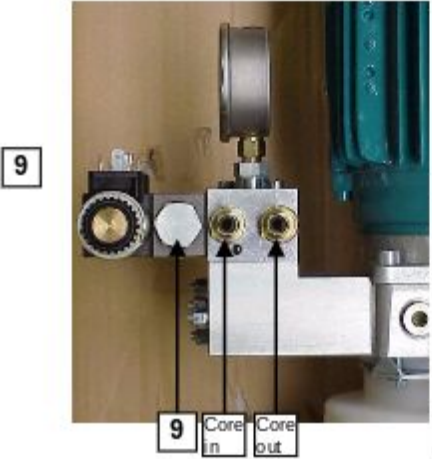
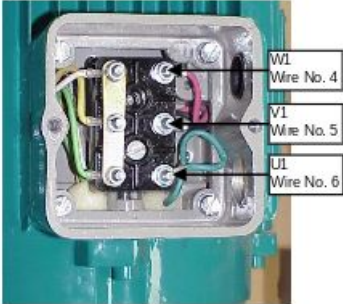
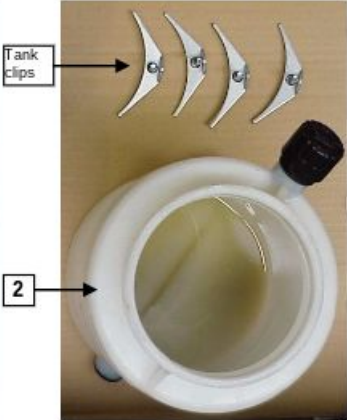
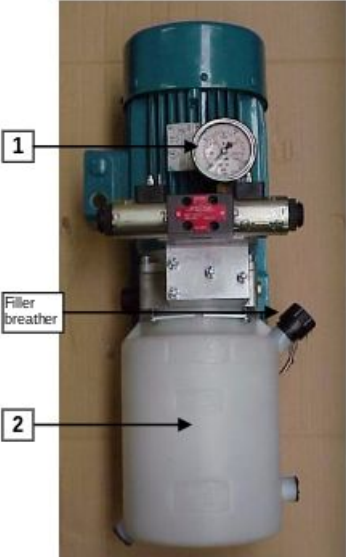
Maximator recommend that customer should carry out the following maintenance schedule.

INTERVAL	COMMENTS
Daily	Oil level should be checked and topped up if required. Oil grade recommended ISO32 (4493). Unit should be checked for oil leaks and repaired where necessary. All hoses used to connect to mould must be checked for damage and wear. Filter to be checked for blockages (this can be confirmed by checking the filter condition indicator).
Monthly	Quality of the oil should be checked and oil replaced if necessary. All fitting should be checked for tightness.
6 Monthly	Oil should be changed in the tank and all hoses flushed clean. Filter should be replaced and filter cradle cleaned. Oil sight glass should be removed and cleaned.
Annually	Oil pump & coupling should be inspected for excessive wear and damage (to gain access to pump & coupling the tank lid will need to be removed). All hydraulic cores need to be checked for correct operation. Level switch to be checked for correct operation. Overload to be checked for correct operation.

External HPP Parts List

REF	DESCRIPTION	PART NO
1	EMERGENCY STOP BUSH BUTTON	5595
2*	CLIP, CONTACT BLOCK	5601
3*	CONTACT BLOCK, NC	5596
4	ISOLA TOR 25A P/MOUNT	3831
5	PRESSURE GAUGE 0-160 BAR,1/4 BSPP BOTTOM ENTRY	N/A
6	HPP MOTOR 1.1KW 230/400 50HZ 275/480 60HZ (STANDARD BUILD)	N/A
7	FLOAT SWITCH T/LL 122	N/A
8	METAL OIL TANK	N/A
9*	FILTER, BANJO TYPE	G&G/208
10	GASKET	G&G/tba
11	FILTER CARTRIDGE	G&G/209
12	CHECK VALVE BLOCK VJR1-04/MC	N/A
13	BYPASS SOLENOID VALVE RPE3-043H11 (2&4 CIRCUIT HPP ONLY)	N/A
	BYPASS SOLENOID VALVE RPE3-043Y11 (SINGLE CIRCUIT HPP ONLY)	N/A
14	HYDRAULIC PUMP	G&G/162
15	DRIVE COUPLING	G&G/202
16	QUICK RELEASE COUPLING (PAIR)	G&G/041
17	¼ SELF CENTERING BONDED SEAL	1082
18	¼ BSPP NIPPLE	1073
19	MCB/MOTOR STARTER 4-6.3 A	3786
20	AUX CONTACT	4922
21	CONTACTOR 4kw (9A) 24V dc	3785

Internal HPP parts



Internal HPP Parts List

REF	DESCRIPTION	PART NO
1	PRESSURE GAUGE 0-160 BAR, 1/4 BSPP BOTTOM ENTRY	N/A
2	PLASTIC TANK	G&G/204
3	BYPASS SOLENOID VALVE RPE3-043H11 (2&4 CIRCUIT HPP ONLY)	N/A
	BYPASS SOLENOID VALVE RPE3-043Y11 (SINGLE CIRCUIT HPP ONLY)	N/A
4	CHECK VALVE BLOCK VJR1-04/MC	N/A
5	HYDRAULIC PUMP	G&G/162
6	DRME COUPLING	G&G/202
7	FILTER, BANJO TYPE	G&G/208
8	1/4 BSPP NIPPLE	1073
9	1/4 SELF CENTERING BONDED SEAL	1082
10	QUICK RELEASE COUPLING (PAIR)	G&G/041