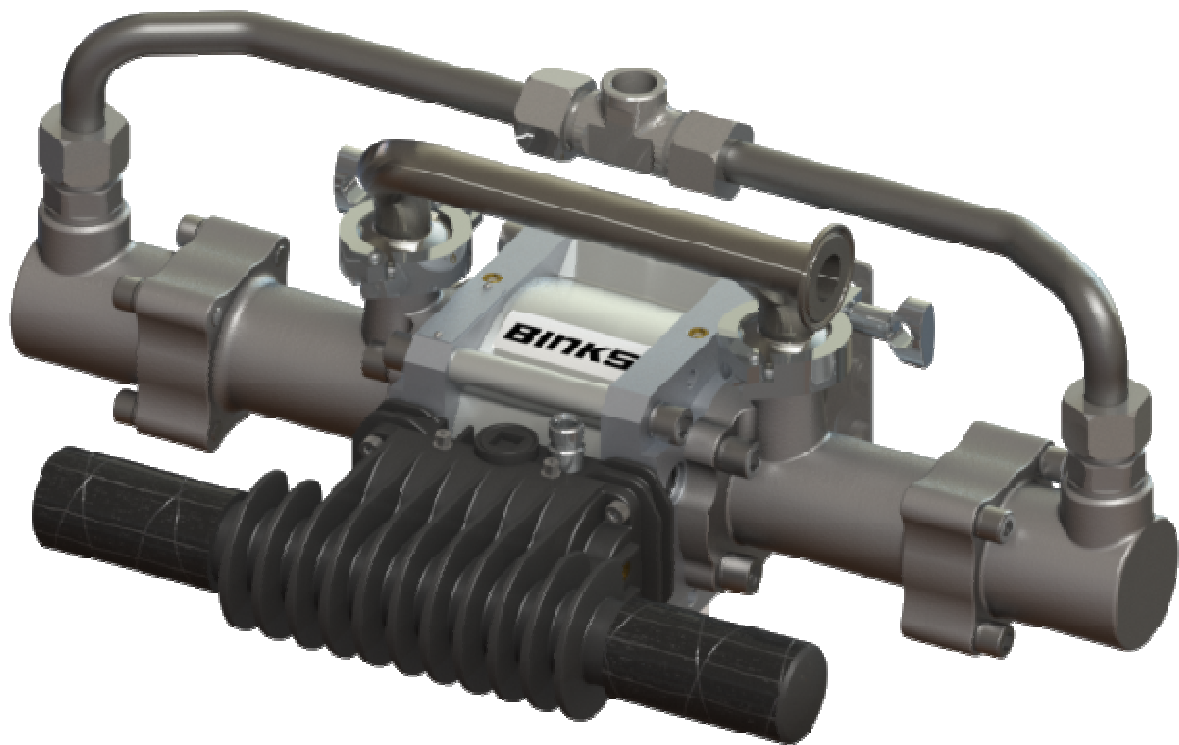


Maple 7/7 Pump



ADDITIONAL RESOURCES

For additional information or copies of your service manual, please visit us online at:

binks.com/en/library

Obey local or municipal regulations for product recycling and disposal.

IMPORTANT! DO NOT DESTROY
It is the Customer's responsibility to have all operators and service personnel read and understand this manual.
Contact your local Binks representative for additional copies of this manual.
READ ALL INSTRUCTIONS BEFORE OPERATING THIS PRODUCT

Product Description / Object of Declaration:	Pumps - Maple, DVP, 104009, 104010/LS, 104016, 104027, 104032, 104040/1/2, 104077, 104020-M2, 104023, 104025, 104028/9, 106933, 104205,104149-52, 104207-15, 104147, 104265/66/67.
This Product is designed for use with:	Solvent & Waterbased Materials
Suitable for use in hazardous area:	Zone 1/Zone 2
Protection Level:	Ex h IIB T4 Gb X
Notified body details and role:	Element Materials Technology Rotterdam B.V. (2812)
	Lodging of ATEX Technical file
This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:	Binks U.K. Limited, Ringwood Road, Bournemouth, BH11 9LH. UK
Representative authorised to compile the technical file	President @. Binks France SAS 5 Place Pierre Semard, 94130 Nogent sur Marne , Paris, France

EU Declaration of Conformity



This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:

Machinery Directive 2006/42/EC

ATEX Directive 2014/34/EU

by complying with the following statutory documents and harmonised standards:

EN ISO 12100:2010 Safety of Machinery - General Principles for Design

EN 12621:2006+2010 Machinery for the supply and circulation of coating materials under pressure - Safety requirements

EN ISO 80079-36:2016 Explosive Atmospheres- Part 36:Non Electrical equipment for explosive atmospheres-Basic methods and requirements.

EN ISO 80079-37:2016 Explosive Atmospheres- Part 37: Non Electrical equipment for explosive atmospheres - protection by methods "c", "b" and "k".

EN 1127-1:2019 Explosive atmospheres - Explosion prevention - Basic concepts

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.

Signed for and on behalf of Binks
U.K. Ltd:

Document Part No.
. EN

F. A. Sutter

22/04/25

Executive President: Engineering and
Operations, Shoreview, MN, 55126. USA

Product Description / Object of Declaration:	Pumps - Maple, DVP, 104009, 104010/LS, 104016, 104027, 104032, 104040/1/2, 104077, 104020-M2, 104023, 104025, 104028/9, 106933, 104205,104149-52, 104207-15, 104147, 104265/66/67.
This Product is designed for use with:	Solvent & Waterbased Materials
Suitable for use in hazardous area:	Zone 1/Zone 2
Protection Level:	Ex h IIB T4 Gb X
Approved body details and role:	Element Materials Technology Warwick Ltd. UK. (0891)
	Lodging of UKEX Technical file
This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:	Binks U.K. Limited, Ringwood Road, Bournemouth, BH11 9LH. UK

UKCA Declaration of Conformity



This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:

Supply of Machinery (Safety) Regulations 2008
Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016
by complying with the following statutory documents and designated standards:
BS EN ISO 12100:2010 Safety of Machinery - General Principles for Design
BS EN 12621:2006+2010 Machinery for the supply and circulation of coating materials under pressure - Safety requirements
BS EN ISO 80079-36:2016 Explosive Atmospheres- Part 36:Non Electrical equipment for explosive atmospheres-Basic methods and requirements.
BS EN ISO 80079-37:2016 Explosive Atmospheres- Part 37: Non Electrical equipment for explosive atmospheres - protection by methods "c", "b" and "k".
BS EN 1127-1:2019 Explosive atmospheres - Explosion prevention - Basic concepts

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.



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Document Part No.
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F. A. Sutter

22/04/25

Executive President: Engineering and Operations, Shoreview, MN, 55126. USA

 WARNING	 CAUTION	NOTE
Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.	Hazards or unsafe practices which could result in minor personal injury, product or property damage	Important installation, operation or maintenance information.

 **WARNING**

Read the following warnings before using this equipment.



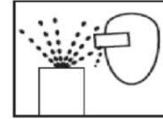
READ THE MANUAL. Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



AUTOMATIC EQUIPMENT. Automatic equipment may start suddenly without warning.



WEAR SAFETY GLASSES. Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



PROJECTILE HAZARD. You may be injured by venting liquids or gases that are released under pressure, or flying debris.



DE-ENERGIZE, DE-PRESSURISE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE. Failure to de-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.



KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY.



NOISE LEVELS. The A-weighted sound level of pumping and spray equipment may exceed 85 dB(A) depending on equipment settings. Actual noise levels are available on request. It is recommended that ear protection is worn at all times while equipment is in use.



PRESSURE RELIEF PROCEDURE. Always follow the pressure relief procedure in the equipment instruction manual.



INSPECT THE EQUIPMENT DAILY. Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



OPERATOR TRAINING. All personnel must be trained before operating finishing equipment.



EQUIPMENT MISUSE HAZARD. Equipment misuse can cause the equipment to rupture, malfunction or start unexpectedly and result in serious injury.



PACEMAKER WARNING. You are in the presence of magnetic fields which may interfere with the operation of certain pacemakers.



HIGH PRESSURE CONSIDERATION. High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the gun, hose leaks or ruptured components can inject fluid into your body and cause extremely serious injury.



KEEP EQUIPMENT GUARDS IN PLACE. Do not operate the equipment if the safety devices have been removed.



STATIC CHARGE. Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



NEVER MODIFY THE EQUIPMENT. Do not modify the equipment unless the manufacturer provides written approval.



PROP 65 WARNING. WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.



PINCH POINT HAZARD. Moving parts can crush and cut. Pinch points are any areas where there are moving parts.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.

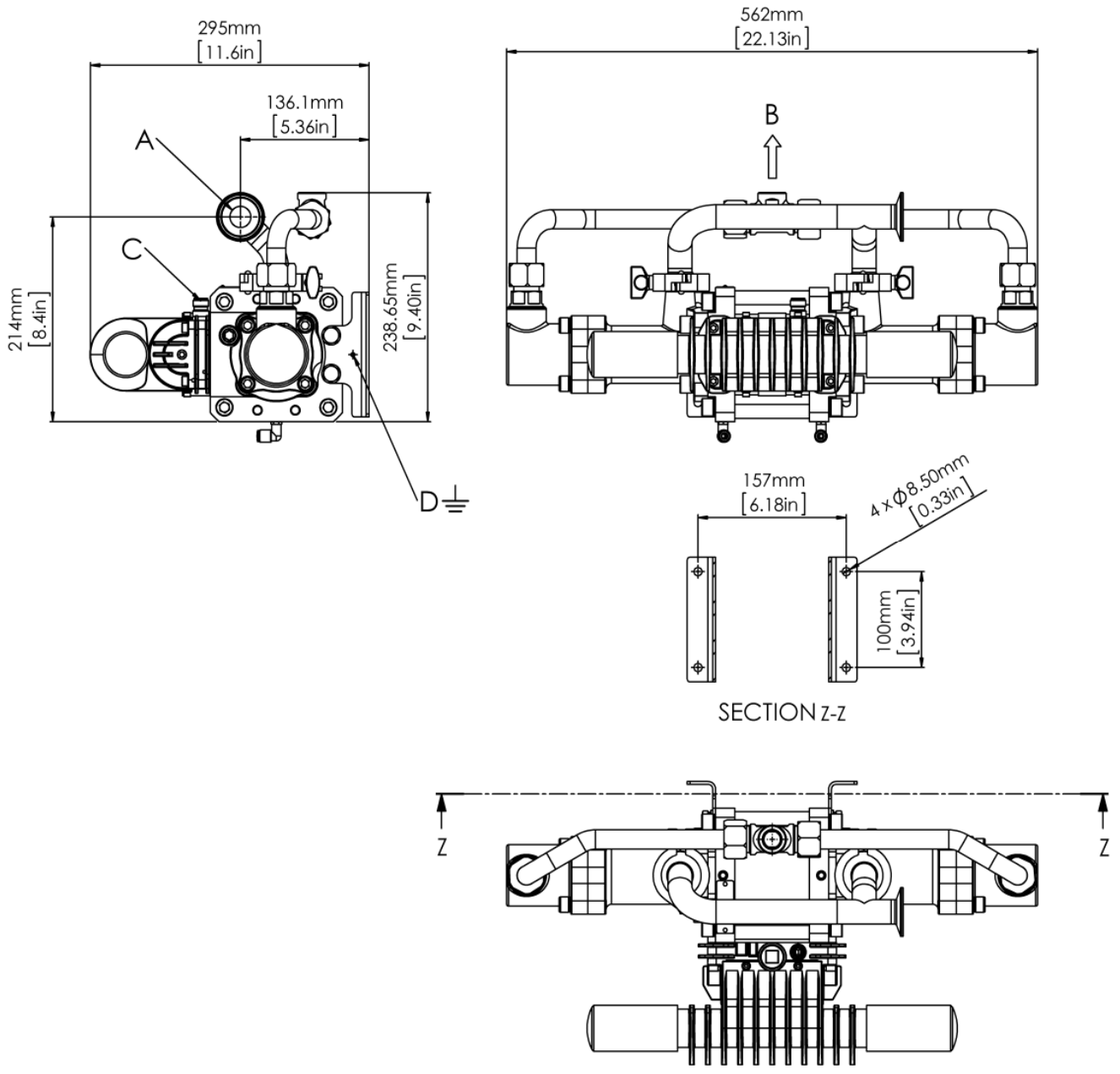
Specification

Pump Ratio	7:1
Max. Air Pressure Inlet	7 Bar
Max. Fluid Pressure	49 Bar
Nominal Flow Volume / Cycle	0.166 Litres 0.044 US Gall
Fluid Output @ 60 cycles/min	10.0 Litres / min 2.6 US Gall / min
Maximum Recommended Continuous Cycle Rate	20 Cycles /min
Maximum Recommended Intermittent Cycle Rate	40 Cycles /min
Fluid inlet connection	1" Sanitary
Fluid outlet connection	½" NPT Female
Compressed Air Inlet	3/8" BSPP / NPSM
Air Volume / cycle	0.17 SCFM (4.8 L/m) @ 45PSI (3.1 Bar) 0.33 SCFM (9.3 L/m) @ 90 PSI (6.2 Bar)
Air Flow @ 15 cycles/min 6 bar	5 CFM (142 L/min)
Air Flow @ 30 cycles/min 6 bar	10 CFM (283 L/min)
Max. Pump Inlet Pressure	2 Bar (30 PSI)
Air Quality ISO 8573.1 Class 3.3.2 # See Note	Dirt 5 microns Water -20°C @ 7 bar (940ppm) Oil 0.1mg/m ³
Total Weight of Pump	20 Kg / 44 lbs

Note:

Class 3.4.2 Air Quality (Refrigerant dried - water +3°C@7bar) may be used, however, above 15 cycles/min optional heavy duty mufflers 192821 or piped exhaust system should be used, if used continuously.

Dimensions and Mounting Details



KEY

- A: 1" SANITARY INLET
- B: 1/2" NPT (FEMALE) OUTLET
- C: 3/8" UNIVERSAL AIR INLET
- D: EARTH

Installation

This product should be flushed with a suitable compatible solvent prior to use.

Mount the pump securely and position the pump at a convenient height (below the lid height of the paint container), to allow for maintenance, visual observation, and periodic inspection. The wall mount bracket is included with all pumps.

The Pump Mounting bracket must be connected to a suitable earth ground to ensure that there is no possibility of static build up.

Attach suitable flexible hoses to the inlet and outlet connections. Connect a suitable 3/8 NB air hose and 1/2" Pressure Filter Regulator to the air motor. (Filter rated at minimum 1000 L/min)

No additional air lubrication is required as piston ring lubricant is applied during assembly or repair. If an air lubricator is used then this must be maintained.

Set the pump speed to a slow cycle rate and start the pump to remove any air from the fluid circuit before increasing pressure. Inspect for any air or fluid leaks.

If an air blow out system is used, never exceed 2 Bar on the inlet of the pump.

Exhaust kits are available for these pumps if the air exhaust is required to be piped away from the pump rather than exhausting locally through the mufflers.

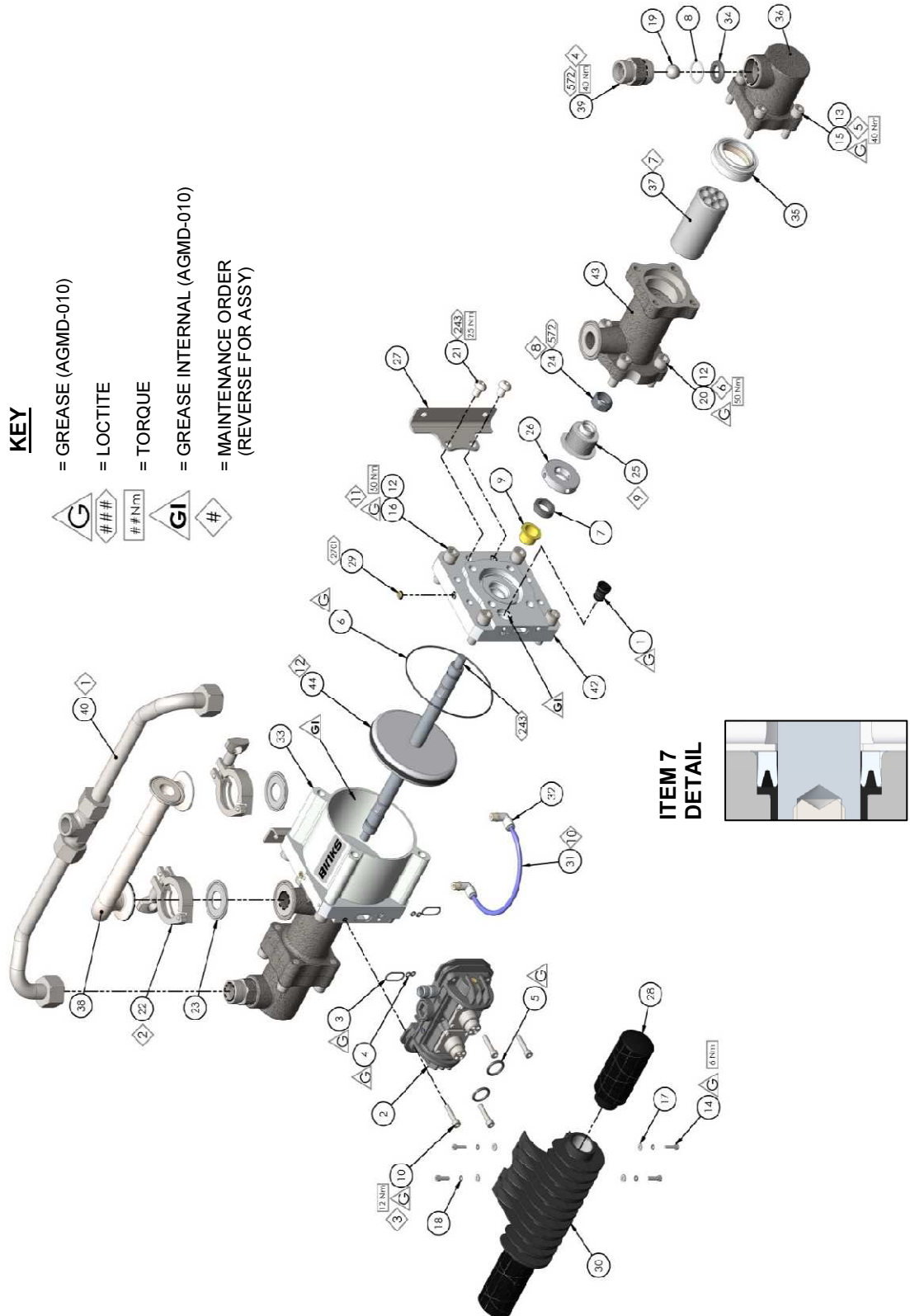
NOTES

Parts List - Pump Assembly 104040

ITEM	PART No	DESCRIPTION	QTY	REMARKS
1	0115-010037	POPPET ASSEMBLY	2	④ #
2	0115-010102	AIR VALVE ASSEMBLY	1	
3	161993	Ø20.35 x 1.78 VITON O-RING	2	③
4	161994	Ø4.47 x 1.78 O-RING	4	③
5	161995	Ø19.5 x 3.00 O-RING	2	③
6	161998	Ø125 x 2 O-RING	2	③
7	162703	SHAFT SEAL	2	③
8	162746	Ø25 X 1.6 O'RING PTFE	2	① ②
9	162833	SHAFT BEARING	2	③
10	163920	M6 x 30 CAP HD SCREW (ST ST)	4	
11	164838	No 2 x 4.75 RIVET	2	
12	165044	M12 SPRING WASHER STST	16	
13	165123	M10 SPRING WASHER (STST)	8	
14	165528	M4 x 16 CAP HD SCREW (STST)	4	
15	165948	M10 x 40 CAP HD SCREW (ST ST)	8	
16	165960	M12 x 40 CAP HD SCREW (ST ST)	8	
17	165970	M4 PLAIN WASHER (STST)	4	
18	165971	M4 SPRING WASHER (STST)	4	
19	171714	3/4 BALL 440C	2	②
20	177009	M12 X 35 CAPHEAD SCREW	8	
21	177038	M10 x 12 BUTTON HD CAP SCREW	4	
22	192009	1 & 1 1/2 SANITARY CLAMP	2	
23	192206	1 SANITARY GASKET PTFE	2	① ②
24	192374	RETAINING NUT	2	
25	192579	KNIFED BELLOWS	2	② #
26	192763	BELLOWS SPACER	2	
27	192764	PUMP BRACKET	2	
28	192777	1" MUFFLER	2	
29	192799	VENT PLUG	2	
30	192812	EXHAUST ADAPTER	1	
31	192814	BELLOWS LEAK HOSE	1	② ③
32	192815	1/8R - 6MM PUSH IN ELBOW	2	②
33	192831	AIR CYLINDER	1	
34	193190	OUTLET SEAT	2	
35	193195	FLUID PISTON SEAL	2	① ② #
36	193225	OUTLET CYLINDER	2	
37	193357	PISTON ASSEMBLY	2	
38	193360	INLET MANIFOLD	1	
39	193367	OUTLET CHECK	2	
40	193419	OUTLET MANIFOLD ASSEMBLY	1	
41	193775	NAMEPLATE	1	

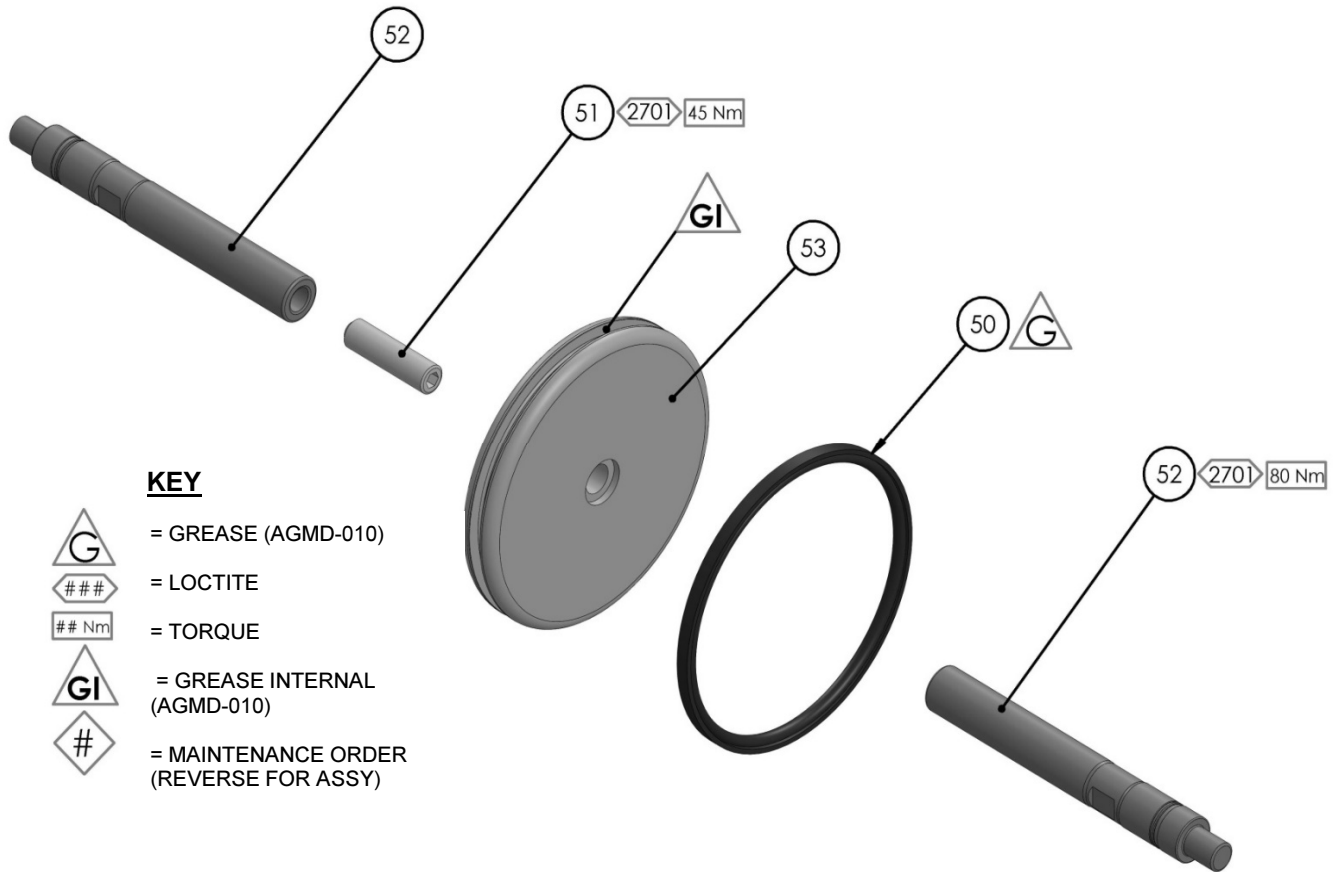
Parts List - Pump Assembly 104040

ITEM	PART No	DESCRIPTION	QTY	REMARKS
42	193861	ENDCAP	2	
43	193862	INLET CYLINDER	1	
44	Detail A	AIR MOTOR PISTON ASSEMBLY	2	



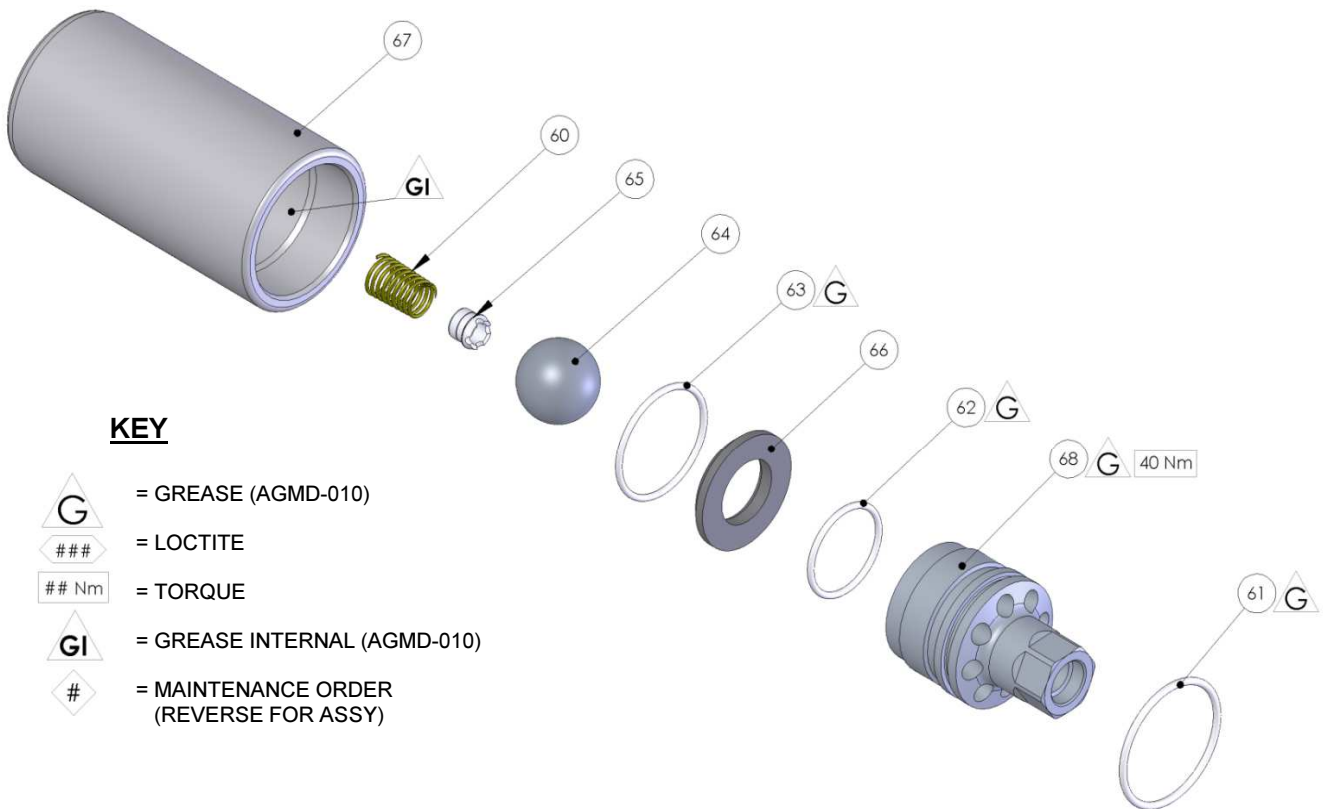
Air Motor Piston Assembly - Detail A

ITEM	PART No	DESCRIPTION	QTY	REMARKS
50	162707	PISTON SEAL	1	⊕
51	165973	M12 x 45 GRUBSCREW (ST ST)	1	
52	192759	PISTON SHAFT	2	
53	192832	PISTON	1	



Piston Assembly - 193357

ITEM	PART No	DESCRIPTION	QTY	REMARKS
60	160526	CONICAL SPRING	1	②
61	162743	Ø33 X 2 O-RING PTFE	1	①②
62	162744	Ø23.52 X 1.78 O-RING PTFE	1	①②
63	162745	Ø29.9 X 1.78 O-RING PTFE	1	①②
64	193181	0.875 BALL	1	②
65	193188	INLET SPRING KEEP	1	②
66	193189	PISTON SEAT	1	
67	193358	Ø46 PISTON	1	
68	193359	PISTON KEEP	1	



Valve Assembly - 0115-010102

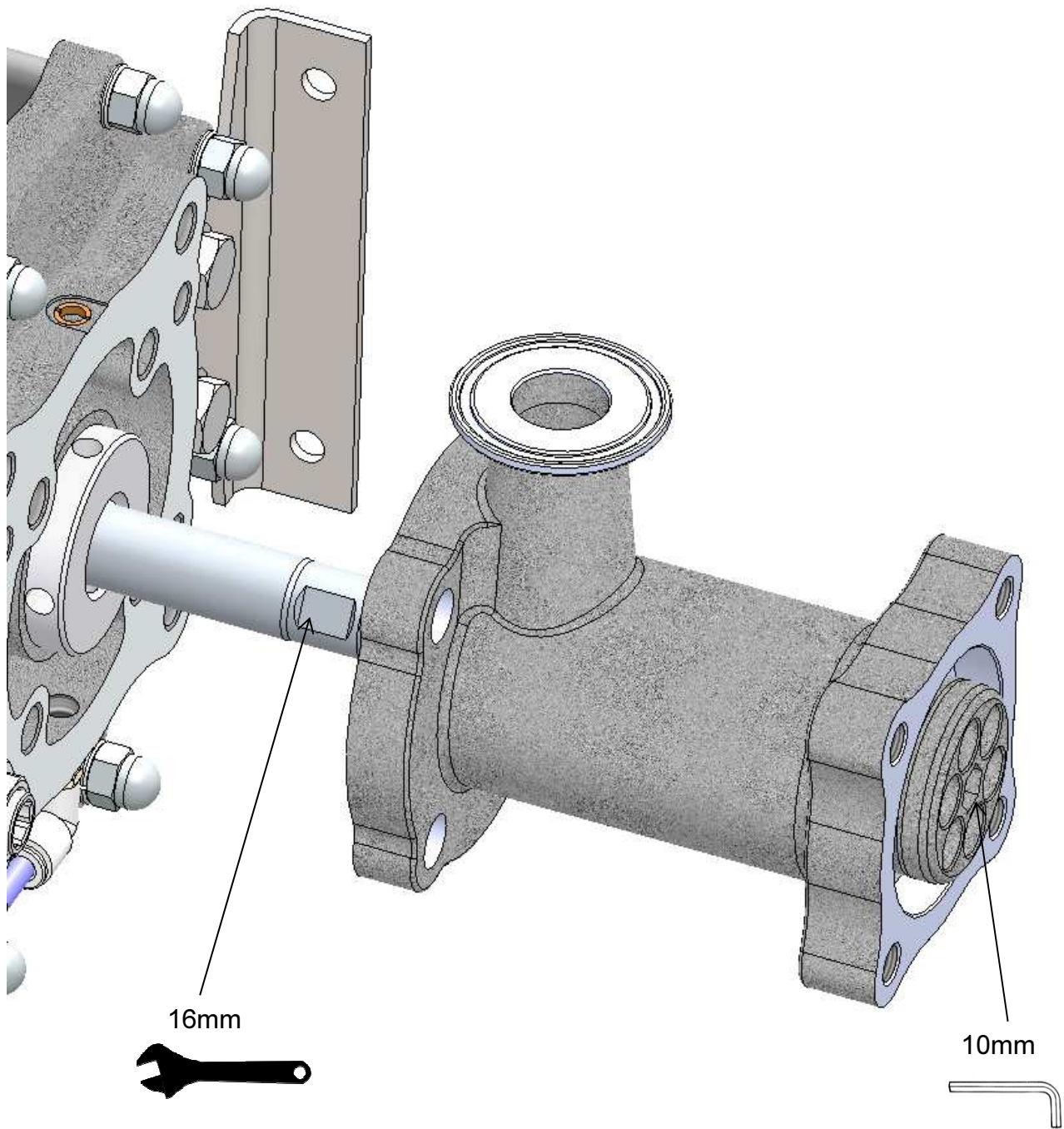
ITEM	PART No	DESCRIPTION	QTY	REMARKS
80	0115-010015	SPOOL AND SLEEVE ASSEMBLY	1	④#
	162789	SPOOL AND SLEEVE O’RING	6	Not Shown
81	0115-010016	BUMPER	2	④
82	0115-010017	MAGNET	2	④
83	0115-010018	VALVE BLOCK END CAP	2	
84	0115-010020	DIAPHRAGM	2	③
85	0115-010021	O-RING 1.5 X 36	2	③
86	0115-010049	O-RING 2 x 20	2	④
87	0115-010073	M4 x 12 SHCS	8	
88	0115-010097	VALVE BLOCK	1	
89	0115-010103	1/4 BSPT PIPE PLUG	1	
90	0115-010107	1/8 BSPT PIPE PLUG	1	
91	180584	3/8 UNIVERSAL FITTING	1	
92	192813	QUICK EXHAUST VALVE CAGE	2	

KEY

- = GREASE (AGMD-010)
- = LOCTITE
- = TORQUE
- = GREASE INTERNAL (AGMD-010)
- = MAINTENANCE ORDER (REVERSE FOR ASSY)
- = MAGNET HAZARD



Removal of a single fluid piston



Fault Finding

Symptom	Possible Cause	Remedy
Pump will not 'Prime'	Air getting into the suction hose/manifold	Check seals and hose connections.
	Worn piston seal.	Replace piston seals.
	Ball checks not seating correctly.	Inspect, clean and/or replace balls and seats.
Pump will not run	No Air or Fluid supply	Check air and fluid supply ball valves and supply hoses.
	Air piston seal worn.	Replace piston seal.
	Pilot valve assemblies inoperable.	Switch/interchange pilot valves to isolate faulty pilot valve and clean/replace.
	Pilot valve assemblies inoperable.	Check clean/replace Air valve.
	QE diaphragm defective.	Check for constant exhaust air when pump is not running. Check/replace QE diaphragms.
	Ball checks not seating correctly.	Inspect, clean and/or replace balls and seats.

Fault Finding

Symptom	Possible Cause	Remedy
Pump runs but has excessive pulsation.	Air getting into fluid line, air supply restricted.	Check seals and hose connections. Check air supply
	Obstructed fluid ball checks.	Remove, clean, and inspect seat, ball, and ball cage. Replace if suspect or worn.
	Worn air motor piston seals.	Replace air motor piston seal.
	Worn/failed air motor shaft seals.	Disassemble pump as required to replace air motor shaft seals.
	Worn fluid piston seal.	Replace fluid piston seal.
	Air exhaust restricted.	Check QE diaphragms and exhaust outlets.
Paint leaking into detection hose, Air bleeding from vent plug	Bellows seal failure	Replace bellows seal
	Air motor shaft seal leaking	Check air motor shaft seal replace as necessary

Spares Kits for Maple 7/7 Pump

KIT No.	PART NO.	DESCRIPTION	QTY	REMARKS
①	250653	Fluid section seal kit	1	Check main parts list for details of individual kit contents
②	250655	Fluid overhaul kit	1	
③	250695	Air Motor Seal Kit	1	
④	250628	Control Valve Kit	1	
#	0115-010037	Poppet Assembly	1	2 off per pump
#	0115-010015	Main Spool & Sleeve Valve Assembly	1	1 off per pump
#	193195	Piston seal	1	2 off per pump
#	192579	Knifed Bellows	1	2 off per pump

- Recommended spare parts for continually running pumps

Maintenance schedule

Inspection	Operation
Daily	Check for any general fluid or air leakage.
Weekly	Inspect Pump for Correct operation Check for any excessive mechanical noise Check for excessive fluid pressure pulsation
6 Month Test	Perform a pump stall test to ensure correct operation.
	If pump does not stall check fluid piston seals and ball checks, replace as required.
	If air is escaping through exhaust check air motor piston seal and quick exhaust diaphragm, replace as required.
12 to 36 Months (Typically 10 million pump cycles dependant on air quality and abrasiveness of the paint used)	Replace air piston seal,
	Replace shaft seals & bearings.
	Inspect and replace if required: Pilot Air Valves & Main Air Valve Parts.
	Replace fluid piston seal, Replace Balls,Seats and Bellows.

Accessories

PART NO.	DESCRIPTION	REMARKS
192206	1" Sanitary Gasket	
192009	1" & 1 1/2" Heavy duty Sanitary Clamp	
502608	Seal Insertion Tool	For Shaft seal (162703)
502769	Bellows Positioning Tool	
502382	Bellows assembly spigot	
AGMD-010	Kluber Isoflex Topas NB 52 Grease	50ml
192779	Exhaust Tube Adapter (1" NB hose)	For piped exhaust
192803	1" Manifold Plug	For piped exhaust
192820	Exhaust Tube Adapter (1.5" NB hose)	For piped exhaust
192821	1" BSP Heavy Duty Mufflers	Recommended for high pump pressures and cycle rates

NOTES

WARRANTY POLICY

This product is covered by Binks materials and workmanship limited warranty.

The use of any parts or accessories, from a source other than Binks, will void all warranties. Failure to reasonably follow any maintenance guidance provided, may invalidate any warranty.

For specific warranty information please contact Binks.

For technical assistance or to locate an authorised distributor, contact one of our international sales and customer support locations below.

REGION	BINKS CONTACT
Americas	Tel: 1-888-992-4657
Europe, Africa, Middle East	Tel: +44 (0)1202 571 111
India	marketingroa@binks.com
China	Tel: +8621-3373 0108
Korea	Tel: +82313663303
Japan	Tel: +81 45 785 6421
Australia	Tel: +61 (0) 2 8525 7555

WARRANTY PAGE



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