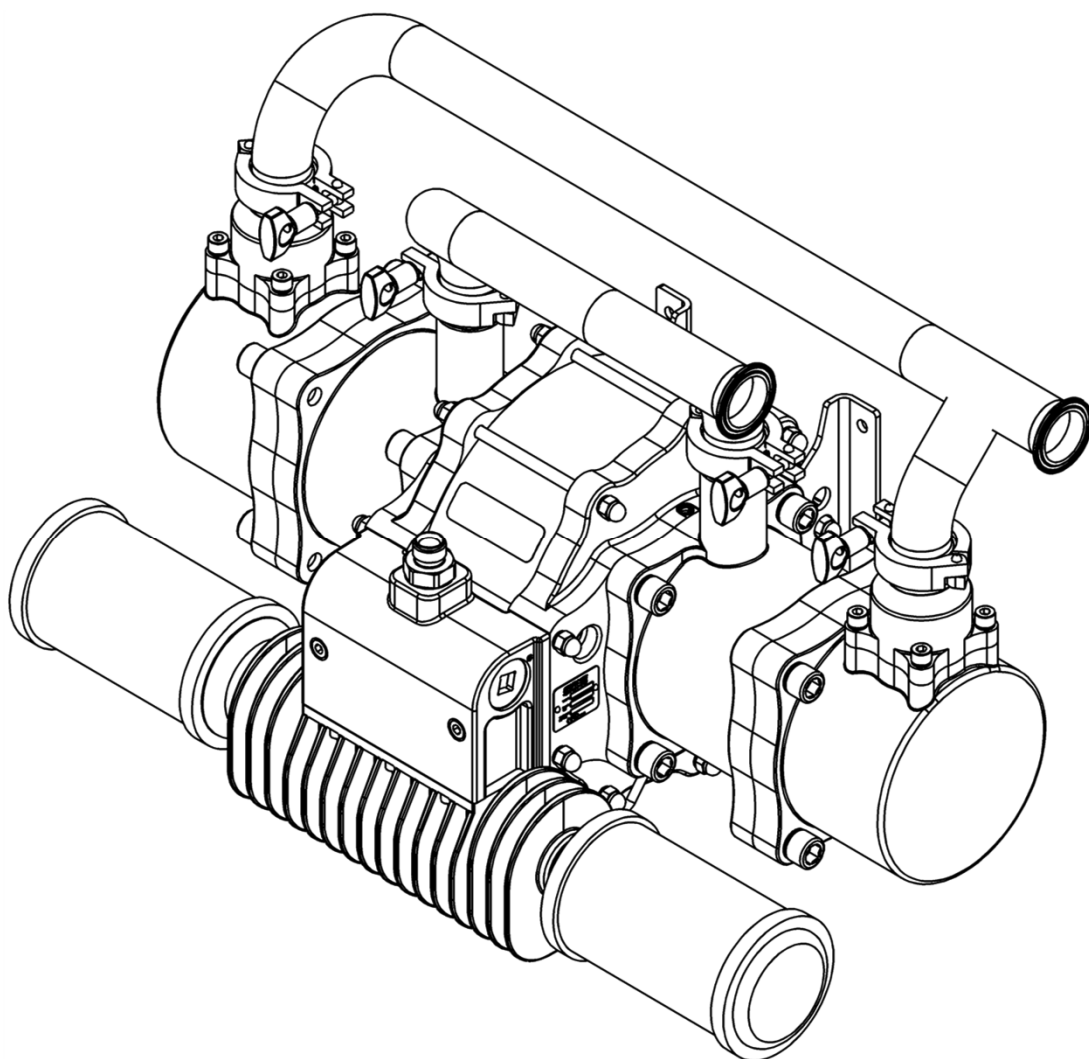


Maple 60/3 Pump



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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22/04/25

Executive President: Engineering and
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 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.



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



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.



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.



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.



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



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.



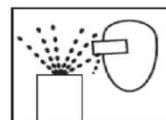
STATIC CHARGE. Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or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



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



AUTOMATIC EQUIPMENT. Automatic equipment may start suddenly without warning.



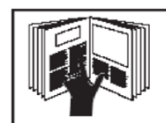
PROJECTILE HAZARD. You may be injured by venting liquids or gases that are released under pressure, or flying debris.



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



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



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



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



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



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



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.

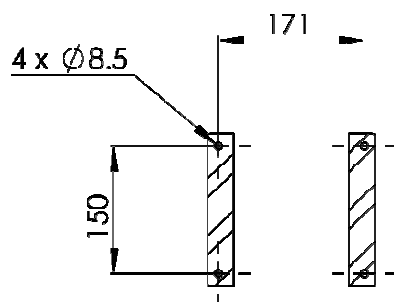
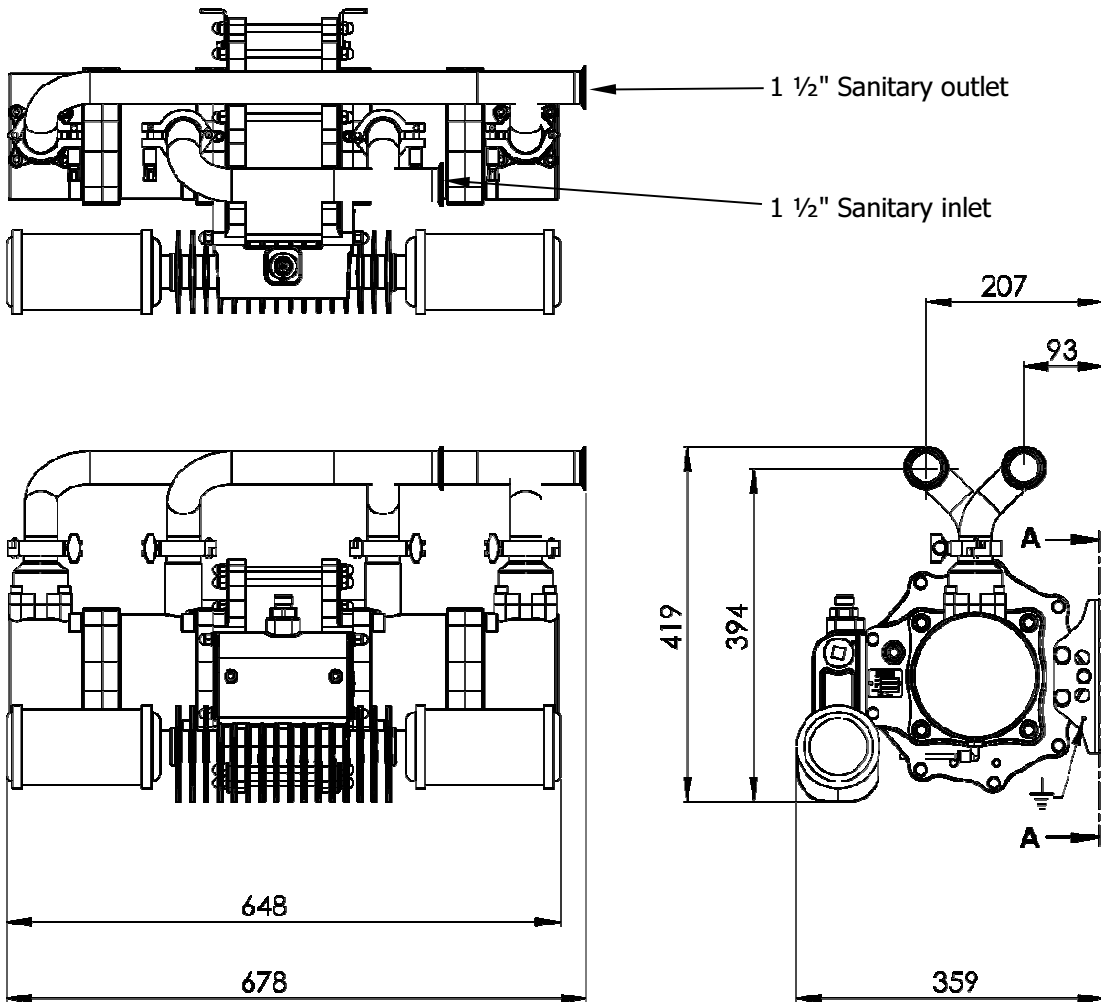
Specification

Ratio:	3:1
Maximum air inlet pressure:	7 bar [101.5 psi]
Maximum fluid pressure:	21 bar [304.5 psi]
Nominal Flow Volume / Cycle:	1.5 l [0.4 US gal]
Fluid Output @ 60 cycles/min:	90 l/m [24 US gal/m]
Maximum Recommended Continuous Cycle Rate:	20 Cycles / min
Maximum Recommended Intermittent Cycle Rate:	40 Cycles / min
Fluid inlet connection:	1 ½" Sanitary
Fluid outlet connection:	1 ½" Sanitary
Compressed Air Inlet:	1/2" BSPP / NPSM
Air volume / cycle:	19 l/m [0.67 SCFM] @ 3 bar [43.5 psi] 40 l/m [1.41 SCFM] @ 6 bar [87 psi]
Air flow @ 15 cycles / min 6 bar / 87psi:	595 l/m [21 CFM]
Air flow @ 30 cycles / min 6 bar / 87psi:	1190 l/m [42 CFM]
Max. Pump Fluid Inlet Pressure:	2 bar [30 psi]
Air Quality ISO 8573.1 Class 3.3.2 :	Dirt: 5 microns Water: -20°C @ 7bar [940ppm] Oil: 0.1mg/m ³
Total Weight of Pump:	65 kg / 143 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



MOUNTING LOCATIONS
SECTION A-A

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 prime the pump to remove any air before increasing pressure.
- Inspect for any system leaks.
- Set the pump cycle rate to achieve the required paint volume and then adjust the system back pressure regulator and pump air pressure to achieve the desired system fluid pressure.
- If an air blow out system is used, never exceed 2 bar [29 psi] on the inlet of the pump. Inlet pressure greater than 2 Bar will result in damage to the bellows.
- 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.

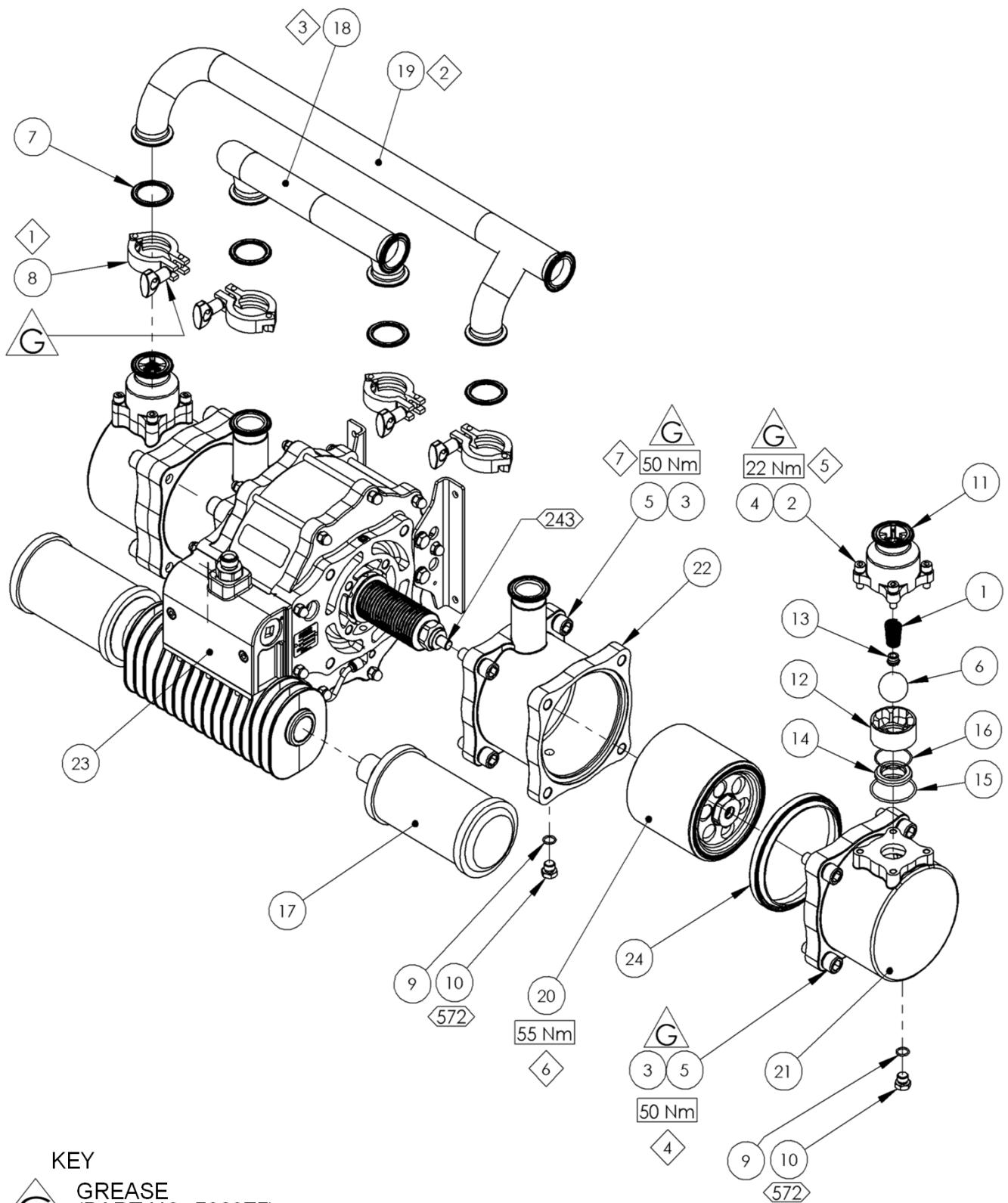
NOTES

Parts list - Pump Assembly 104020-M2

ITEM	PART NO.	DESCRIPTION	QTY	SPARES KIT
1	160513	SPRING	2	1 2
2	164472	M8 x 25 SOCKET HEAD CAP SCREW	8	1 2
3	165077	M14 SPRING WASHER	16	
4	165108	M8 SPRING WASHER	8	
5	165978	M14 x 40 SOCKET HEAD CAP SCREW	16	
6	171788	Ø1 3/8" BALL	2	2
7	192008	1 1/2" SANITARY GASKET	4	1 2
8	192009	1 1/2" SANITARY CLAMP	4	
9	192505	Ø12.42 x 1.79 O-RING	4	1 2
10	192551	1/4" BSP HEXAGON PLUG	4	
11	192595	OUTLET CHECK	2	
12	192626	OUTLET CAGE	2	
13	192629	INLET SPRING KEEP	2	1 2
14	192632	SEAT	2	2
15	192647	Ø50.5 x 2.62 O-RING	2	1 2
16	192648	Ø41.0 x 1.78 O-RING	2	1 2
17	192821	MUFFLER	2	
18	192895	INLET MANIFOLD	1	
19	192896	OUTLET MANIFOLD	1	
20	193651	PISTON ASSEMBLY	2	
21	193690	OUTLET CYLINDER	2	
22	193691	INLET CYLINDER	2	
23	193706	AIR MOTOR ASSEMBLY	1	
24	194239	PISTON SEAL	2	1 2 #

Recommended spare parts for continually running pumps

Pump Assembly 104020-M2



KEY



GREASE
(PART NO. 502375)



LOCTITE



TORQUE

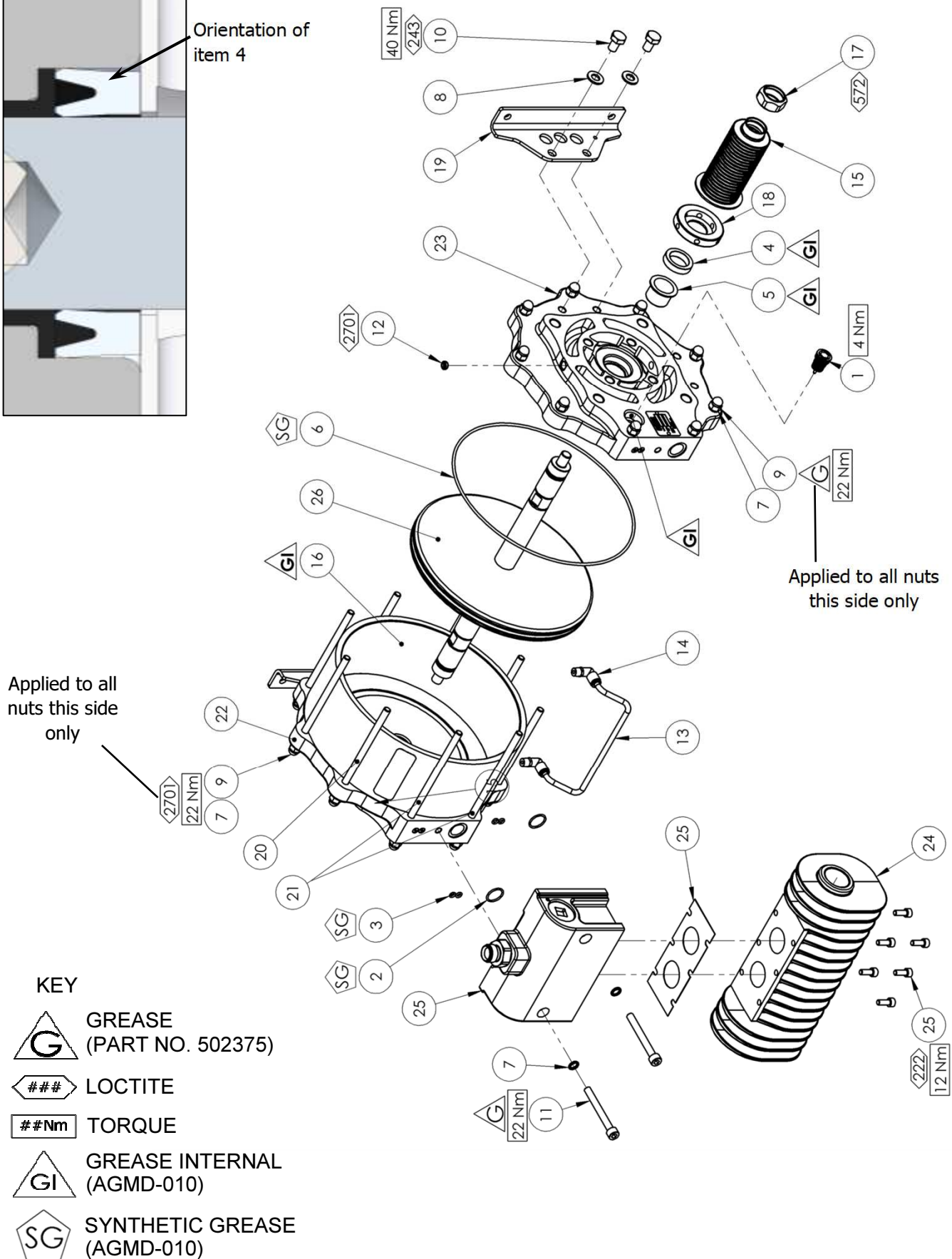


MAINTENANCE ORDER
(Reverse for assembly)

Parts list - Air Motor Assembly 193706

ITEM	PART NO.	DESCRIPTION	QTY	SPARES KIT
1	0115-010037	POPPET ASSEMBLY	2	#
2	161993	Ø20.35 x 1.78 O-RING	2	③
3	161994	Ø4.47 x 1.78 O-RING	4	③
4	162729	SHAFT SEAL	2	② ③
5	162730	SHAFT BEARING	2	③
6	162731	Ø229.5 x 3.0 O-RING	2	③
7	165108	M8 SPRING WASHER	20	
8	165135	M10 PLAIN WASHER	4	
9	165963	M8 DOME NUT	18	
10	165965	M10 x 16 HEX HEAD CAP SCREW	4	
11	177010	M8 x 70 SOCKET HEAD CAP SCREW	2	
12	192799	VENT PLUG	2	
13	192814	BELLOWS LEAK DETECTION HOSE	1	②
14	192815	1/8R - 6mm PUSH IN ELBOW	2	
15	192881	KNIFED BELLOWS	2	② #
16	192883	CYLINDER	1	
17	192887	RETAINING NUT	2	
18	192888	BELLOWS SPACER	2	
19	192906	PUMP BRACKET	2	
20	193094	CYLINDER STUD (SHORT)	7	
21	193095	CYLINDER STUD (LONG)	2	
22	193237	LH END PLATE MACHINING	1	
23	193238	RH END PLATE MACHINING	1	
24	193240	EXHAUST ADAPTER	1	
25	193605	AIR VALVE ASSEMBLY	1	
26	194983	AIR MOTOR PISTON ASSY	1	

Recommended spare parts for continually running pumps

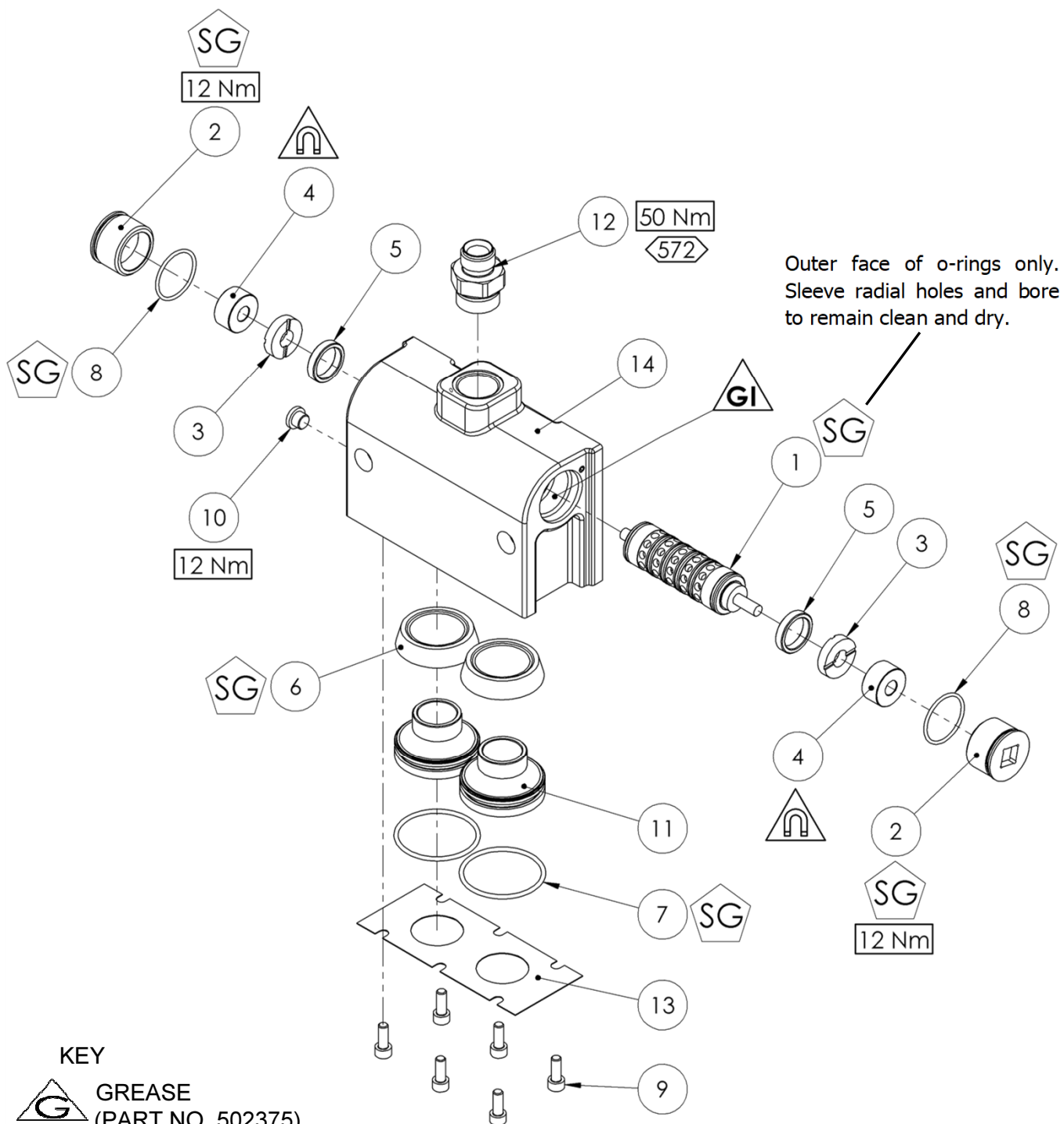


Parts list - Air Valve Assembly 193605

ITEM	PART NO.	DESCRIPTION	QTY	SPARES KIT
1	0115-010424	SPOOL AND SLEEVE ASSEMBLY	1	3 - o-rings # ONLY
2	0115-010425	VALVE BLOCK END CAP	2	
3	0115-010427	BUMPER	2	3
4	0115-010428	MAGNET	2	
5	0115-010431	SPACER	2	
6	0115-010463	QEV PISTON	2	3
7	162719	Ø47.29 x 2.62 O-RING	2	3
8	162767	Ø30 x 2.2 O-RING	2	3
9	163951	M6 x 16 SOCKET HEAD CAP SCREW	6	
10	192651	1/8" BSPP PLUG	1	
11	193241	QEV CARTRIDGE	2	
12	193243	AIR INLET	1	
13	193244	AIR EXHAUST GASKET	1	3
14	193606	MAIN VALVE BODY ASSY.	1	

Recommended spare parts for continually running pumps

Air Valve Assembly 193605



KEY



GREASE
(PART NO. 502375)



LOCTITE



TORQUE



GREASE INTERNAL
(AGMD-010)



MAGNET HAZARD

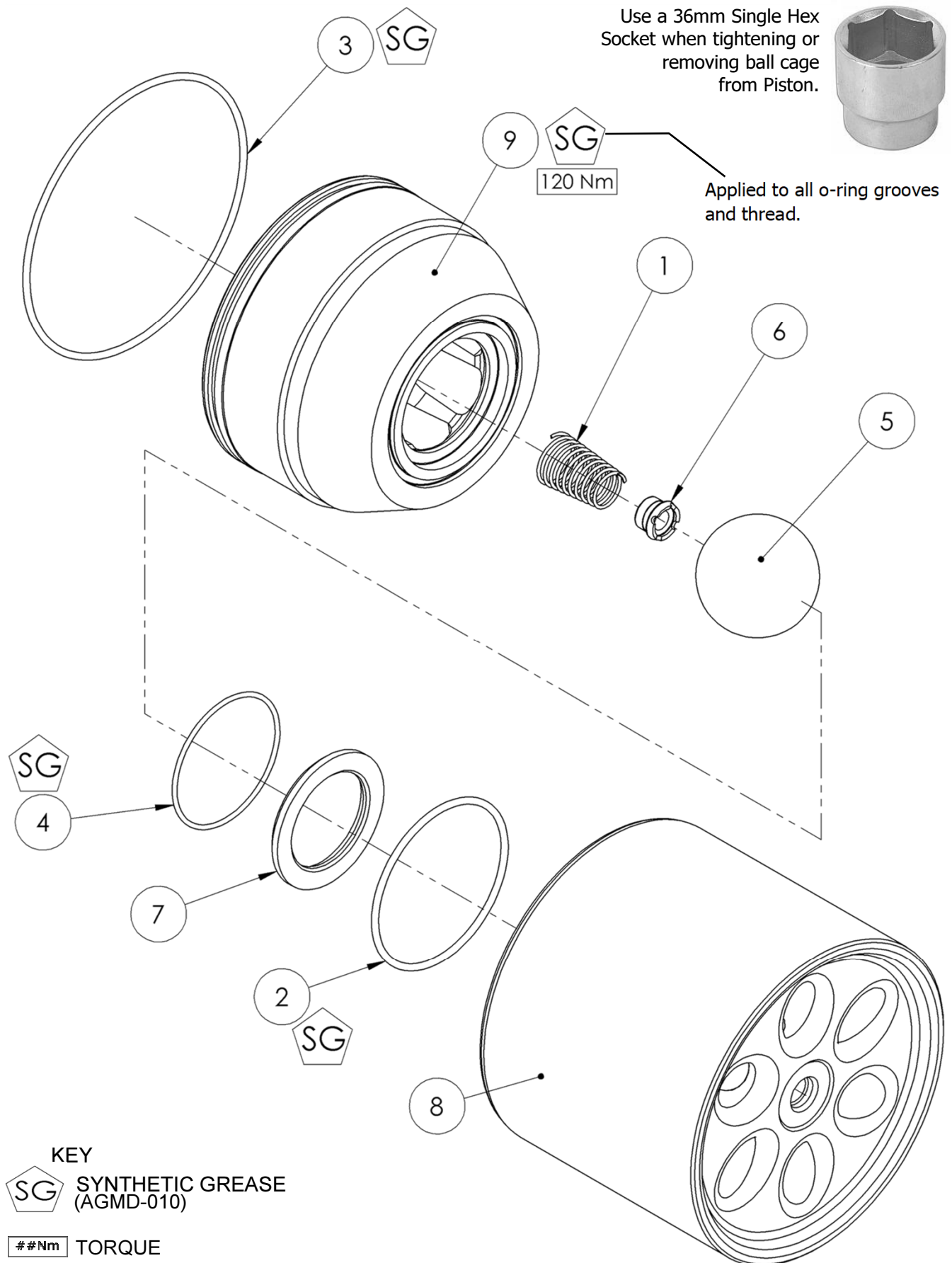


SYNTHETIC GREASE
(AGMD-010)

Parts list - Piston Assembly 193651

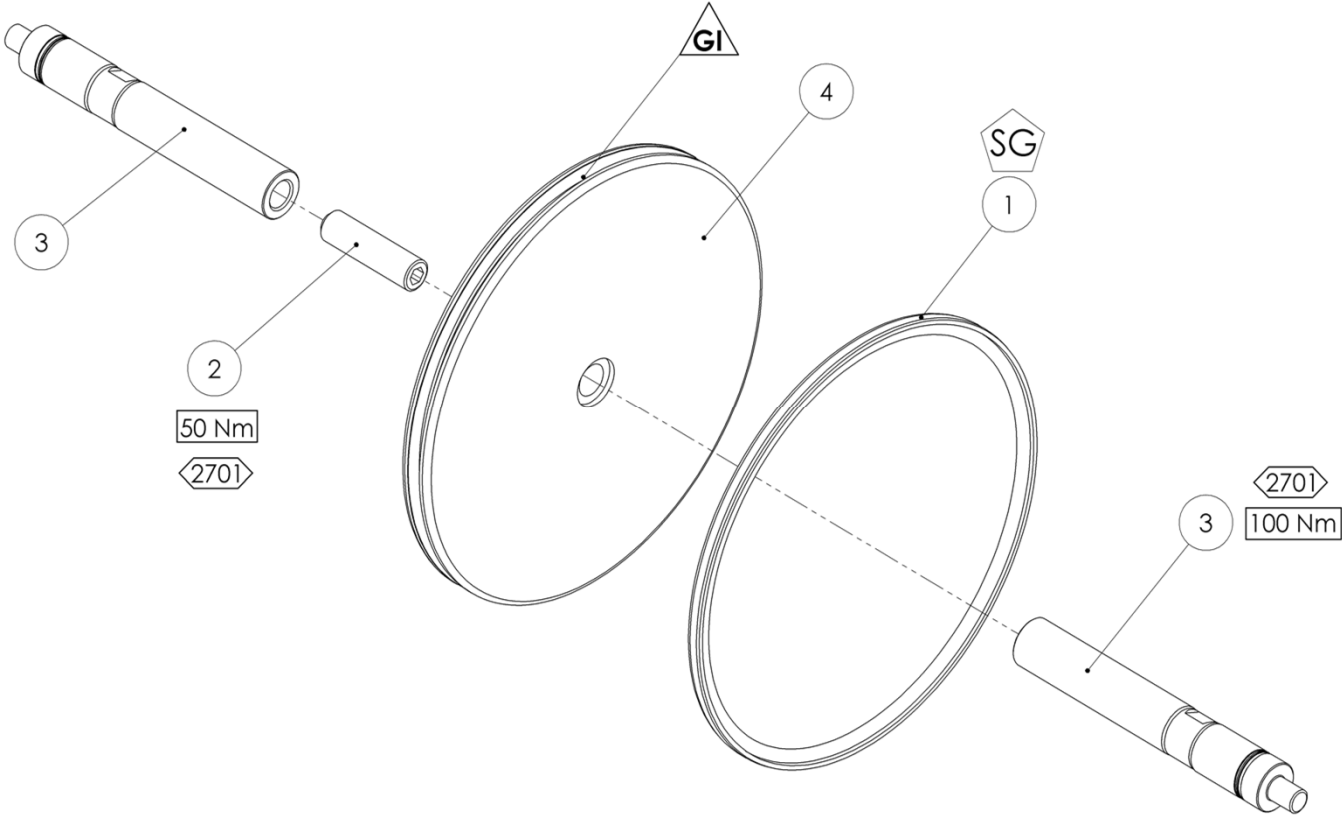
ITEM	PART NO.	DESCRIPTION	QTY	SPARES KIT
1	160513	PISTON BALL CHECK SPRING	1	① ②
2	162805	Ø63.17 x 2.62 O-RING	1	① ②
3	162806	Ø107.62 x 2.62 O-RING	1	① ②
4	162807	Ø50.52 x 1.78 O-RING	1	① ②
5	171784	Ø1 3/4" BALL	1	②
6	192629	INLET SPRING KEEP	1	① ②
7	192631	SEAT	1	②
8	193652	FLUID PISTON	1	
9	193653	BALL CAGE	1	① ②

Piston Assembly 193651



Air Motor Piston Assembly 194983

ITEM	PART NO.	DESCRIPTION	QTY	SPARES KIT
1	162728	AIR MOTOR PISTON SEAL	1	③
2	165975	M16 x 60 GRUB SCREW	1	
3	192882	PISTON SHAFT	2	
4	192886	PISTON	1	



KEY

- SG

SYNTHETIC GREASE
(AGMD-010)
- ###

LOCTITE
- ##Nm

TORQUE
- GI

GREASE INTERNAL
(AGMD-010)

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.
	Main air valve inoperable.	Check clean/replace Air valve.
	QE cup defective.	Check for constant exhaust air when pump is not running. Check/replace QE cups.
	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 cups 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 60/3 Pump

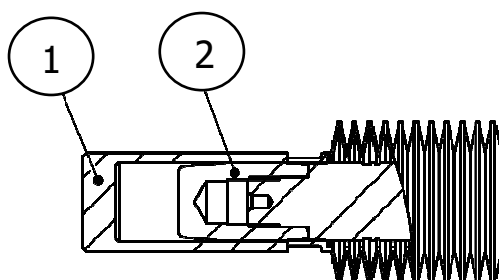
KIT No.	PART No.	DESCRIPTION	QTY	REMARKS
①	250632	Fluid section seal kit **	1	Check main parts list for details of individual kit contents
②	250687	Fluid overhaul kit **	1	
③	250656	Air Motor Seal Kit	1	
#	0115-010037	Poppet Assembly	1	2 off per pump
#	0115-010424	Main Spool & Sleeve Valve Assembly	1	1 off per pump
#	194239	Piston seal	1	2 off per pump
#	192881	Knifed Bellows	1	2 off per pump
# Recommended spare parts for continually running pumps				
** These kits may contain components for multiple variants - discard unused items.				

Maintenance schedule

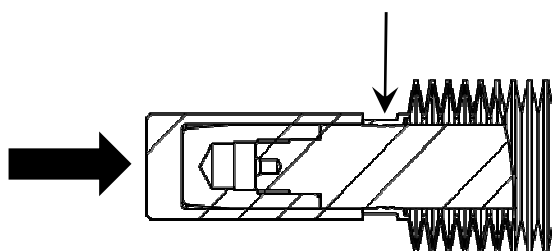
Inspection	Operation
Daily	Check for any general fluid or air leakage.
Weekly	Inspect pump for correct operation. Check for any excessive mechanical noise. Check for excessive fluid pressure pulsation.
6 Month Test	Perform a pump stall test to ensure correct operation. If pump does not stall, check fluid 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 dependent 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.

Bellows Replacement

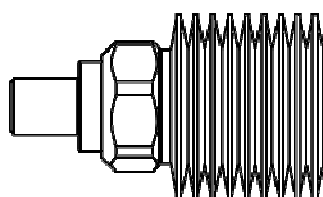
ITEM	PART NO.	DESCRIPTION	QTY	REMARKS
1	502682	Bellows positioning tool	1	
2	502681	Bellows assembly spigot	1	



Screw Item No. 2 (assembly spigot) onto the piston shaft



Using Item No. 1, push bellows over spigot until located in groove.



Smear loctite 572 over nose of bellows, thread nut onto bellows ensuring the thread starts squarely. Grip bellows lightly by hand and tighten the nut with a 32mm A/F spanner until the nut contacts the bellows shoulder.

Accessories

PART NO.	DESCRIPTION	REMARKS
192008	1 ½" Sanitary Gasket	
192009	1 ½" Sanitary Clamp	
192779	Exhaust Tube Adapter (1" NB hose)	For piped exhaust
192803	1" Manifold Plug	For piped exhaust
192820	Exhaust Tube Adapter (1.25" Nominal Bore hose)	For piped exhaust
192821	1" BSP Heavy Duty Mufflers	
502375	SKF LGWA2 Bearing grease	420ml Cartridge
502679	Seal Insertion Tool	For Shaft seal (162729)
502680	Seal Thread Protection Sleeve	For Shaft seal (162729)
502681	Bellows Assembly Spigot	
502682	Bellows Positioning Tool	
502883	Bearing Press Tool	For shaft bearing (162730)
502935	Piston Assembly Tool	For screwing and unscrewing fluid piston assembly (193651). 2 off required.
AGMD-010	Kluber Isoflex Topas NB 52 Grease	50ml Tube

NOTES

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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