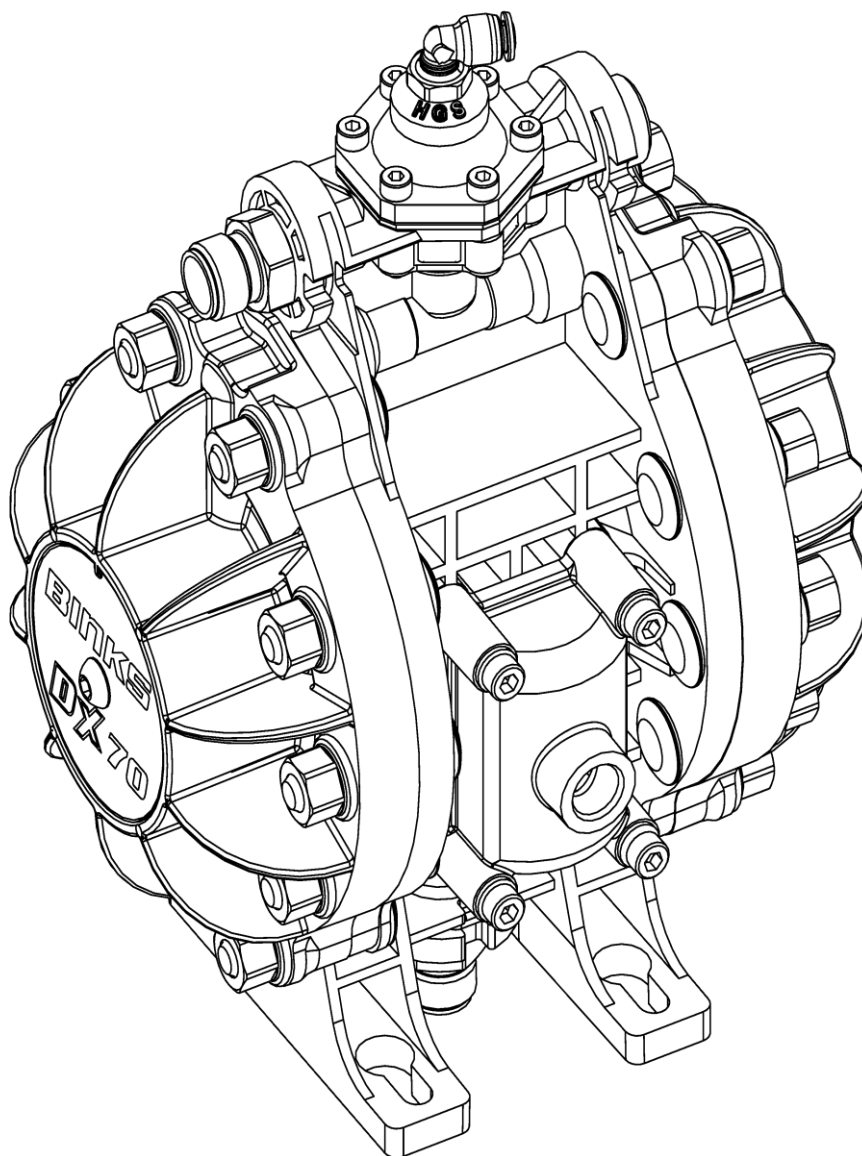


DX70

Diaphragm Pump



Patent US 9447780

CARLISLE
FLUID TECHNOLOGIES

Product Description / Object of Declaration:	Diaphragm Pumps - DX70, DX200, DX200-3 Bare pump and packages	EN
This Product is designed for use with:	Solvent and water based materials	
Suitable for use in hazardous area:	Zone 1	
Protection Level:	II 2 G c X IIB T4	
Notified body details and role:	Element Materials Technology (0891) Lodging of Technical file	
This Declaration of conformity / incorporation is issued under the sole responsibility of the manufacturer:	Carlisle Fluid Technologies UK Ltd, Ringwood Road, Bournemouth, BH11 9LH. UK	

EU Declaration of Conformity



The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Machinery Directive 2006/42/EC

ATEX Directive 2014/34/EU

by complying with the following statutory documents and harmonized standards:

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

EN 12621+A1:2010 Machinery for the supply and circulation of coating materials under pressure - Safety requirements

EN1127-1:2011 Explosive atmospheres - Explosion prevention - Basic concepts

EN 13463-1:2009 Non electrical equipment for use in potentially explosive atmospheres - Basic methods and requirements

EN 13463-5:2011 Non electrical equipment for use in potentially explosive atmospheres - Protection by constructional safety "c"

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 Carlisle Fluid
Technologies UK Ltd:

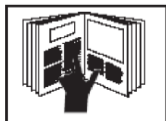
D Smith
3/5/17

Director of Sales (EMEA)
Bournemouth, BH11 9LH, UK

 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.



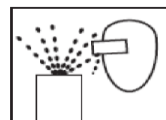
STATIC CHARGE. Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or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



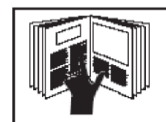
PROJECTILE HAZARD. You may be injured by venting liquids or gases that are released under pressure, or flying debris.



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.



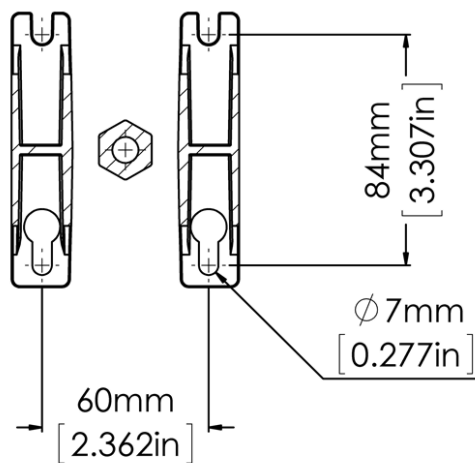
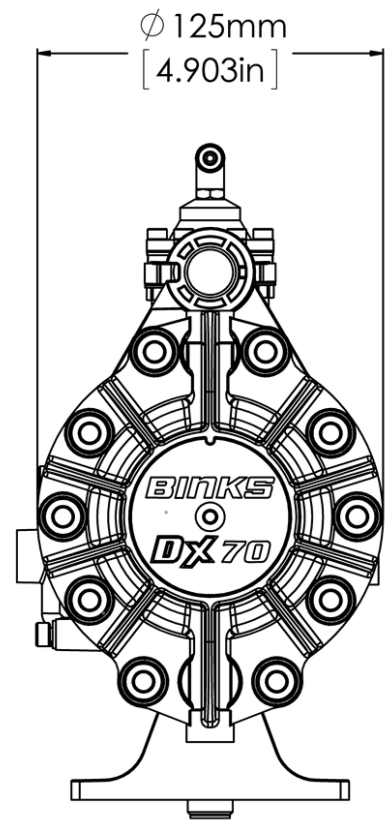
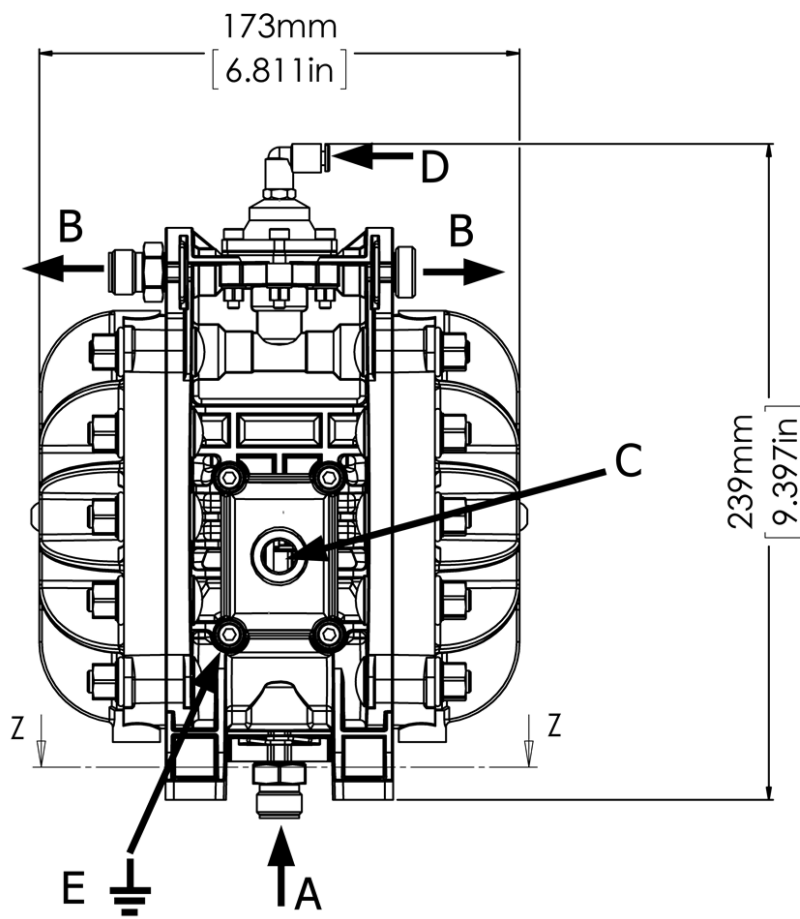
PINCH POINT HAZARD. Moving parts can crush and cut. Pinch points are any areas where there are moving parts.

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

Specification

	Ratio:	1:1
	Maximum air inlet pressure:	7 bar [100 psi]
	Maximum fluid pressure:	7 bar [100 psi]
	Displacement per cycle:	0.07 litres [0.018 US gall]
	Output @ 60 cycles / min:	4.2 litres/min [1.1 US gall/min]
	Maximum Recommended Continuous Cycle Rate [cycles/min]:	10
	Maximum Recommended Intermittent Cycle Rate [cycles / min]:	30
A	Fluid inlet connection:	3/8" Universal (BSPP/NPSM) Male or Female
B	Fluid outlet connection:	3/8" Universal (BSPP/NPSM) Male or Female
C	Air inlet connection:	1/4" Universal (BSPP/ NPSM) Female
D	Fluid regulator pilot connection:	Ø4mm [Ø5/32"]
	Maximum dry/wet Lift:	6.6m [21.8 ft]
	Air volume / cycle @ 6.9 bar/100psi:	0.77L [0.027 SCFM]
	Air flow @ 10 cycles / min 6.9 bar / 100psi:	7.7 l/min [0.27 SCFM/min]
	Air flow @ 30 cycles / min 6.9 bar / 100psi:	23.2 l/min [0.82 SCFM/min]
	Recommended air quality ISO 8573.1 Class 3.3.2 #:	Dirt: 5 µm
		Water: -20°C@7bar [940ppm]
		Oil: 0.1mg/m ³
		Non Lubricated
	Noise Level @ 10 cycles/min & 7 bar [100 psi]:	68 dB LAeq
E	Earth connection resistance:	<1Ω
	Weight:	2.2 Kg [4.9 lbs]
	Temperature range	0 - 40 °C [32 - 104 °F]

Installation



SECTION Z-Z

Prior To Use

Re-torque end cap nuts to 8 Nm prior to use.

Check periodically during use

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 to allow for maintenance.

Attach flexible hoses to all connections.

Connect a regulated air supply to the air connection.

Set the pump speed to a slow cycle rate and prime the pump to remove any air before increasing pressure.

Fluid Regulator Air Pilot

Set the air regulator pressure to give the desired fluid flow.

The pump inlet pressure should nominally be 1 bar [15 psi] higher.

Pump Earthing

The pump must be earthed at all times. A resistance $<1\Omega$ when measuring with an ohm-meter at the earth point

Earth connection, Binks Part No. 0114-011798

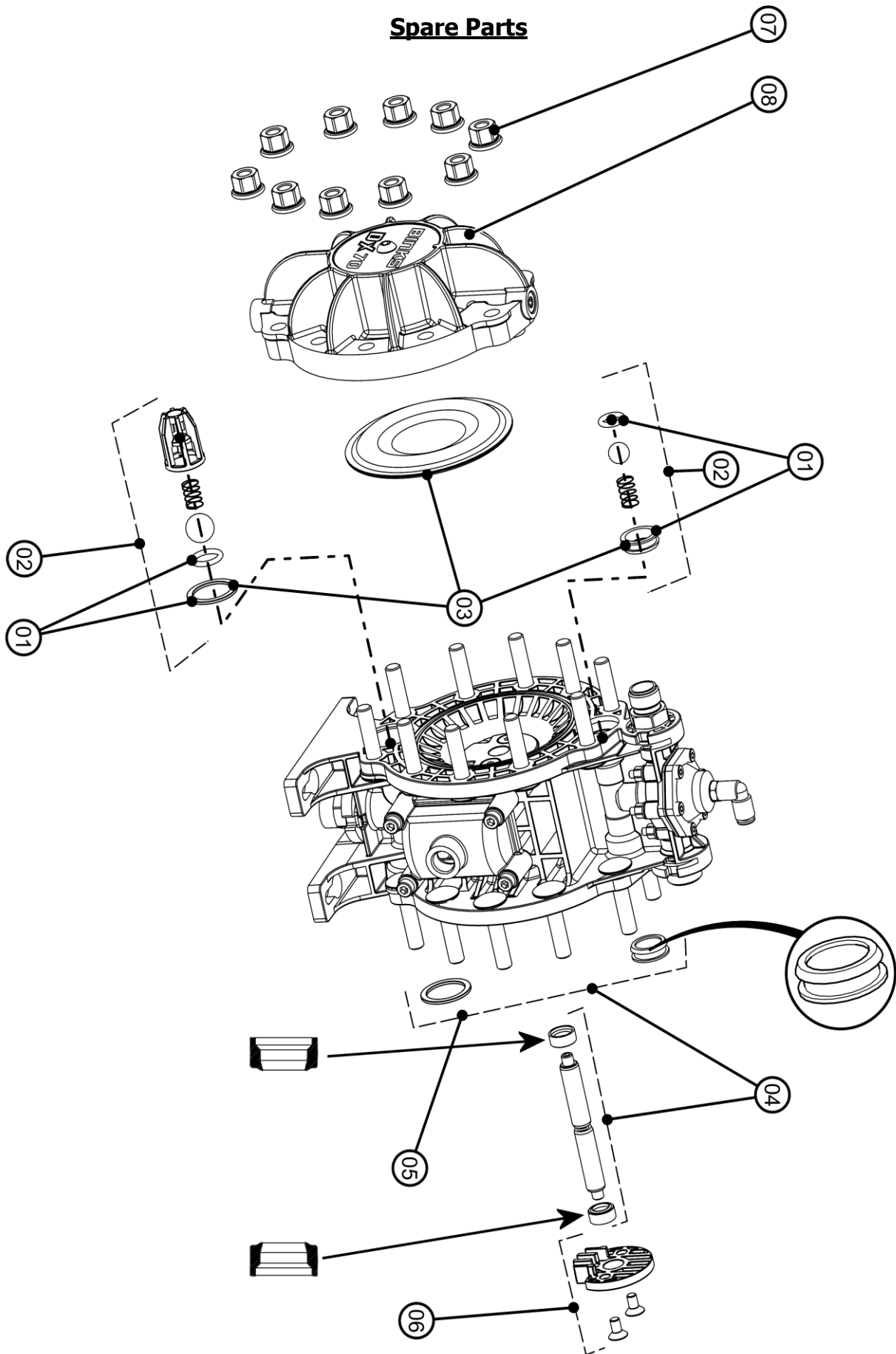
Paint section materials of construction

Item	Material
Pump body	Conductive acetal
End cap	Conductive acetal
Inlet & outlet connectors	Stainless Steel
Diaphragms	PTFE
Seals	FKM/PE
Valve ball & spring	Stainless Steel
End cap plugs	Stainless Steel

Spare Parts

Item	Part No.	Description
1	DXK-1	Check valve seal kit x 4
2	DXK-2	Check valve kit x 4
3	DXK-3	Diaphragm kit x 2
4	DXK-4	Shaft & seal kit
5	DXK-5	End cap seal kit x 2
6	DXK-6	Caps & screws x 2
7	DXK-7	End cap nuts x 10
8	DXK-8	End cap

Spare Parts

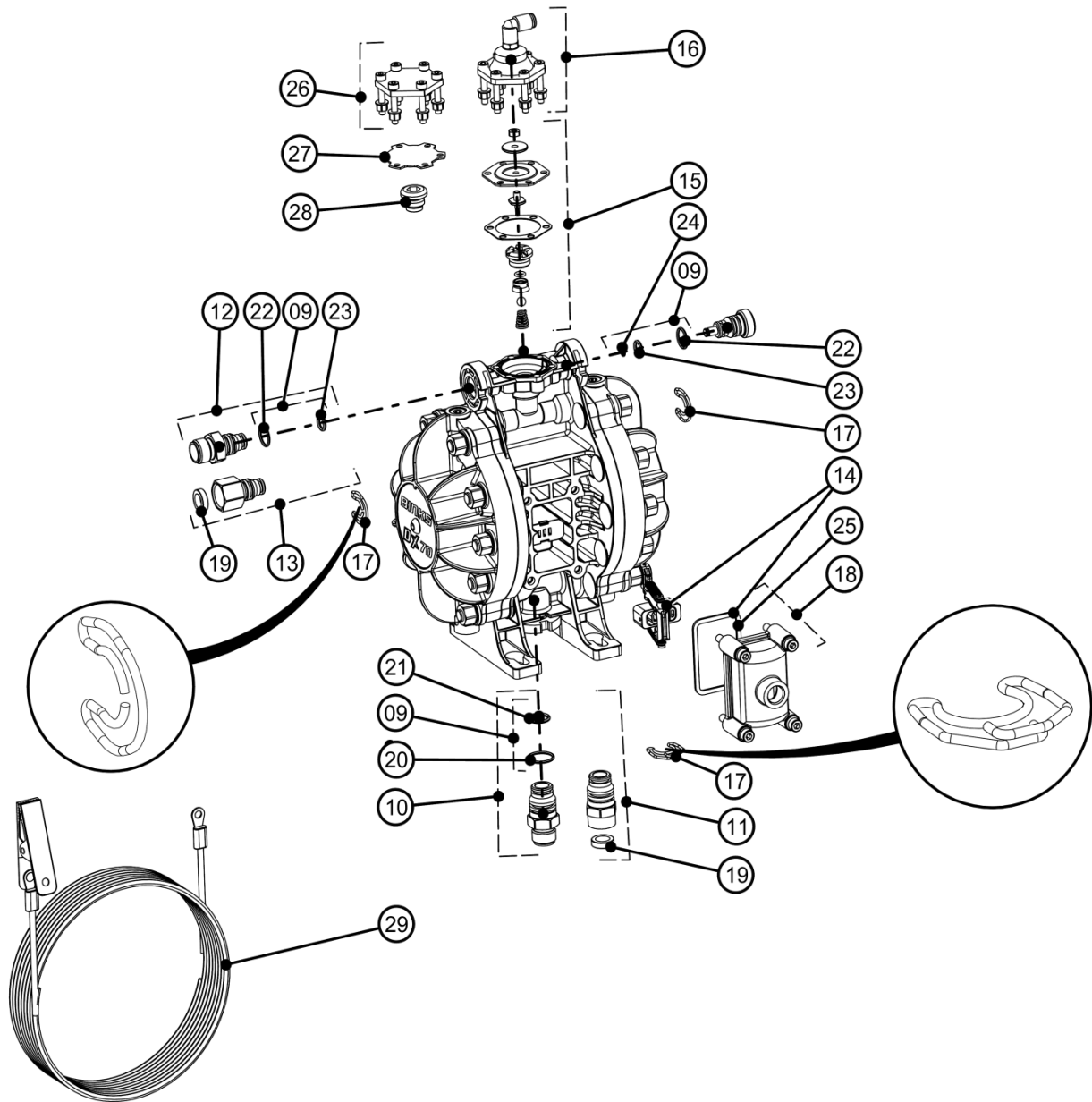


Spare Parts

Item	Part No.	Description
9	DXK-9	Inlet, outlet & plug connector seal kit
10	DXK-10	Male inlet connector kit
11	DXK-11	Female inlet connector kit
12	DXK-12	Male outlet connector kit
13	DXK-13	Female outlet connector kit
14	DXK-14	Air valve kit
15	DXK-15	Fluid regulator kit
16	DXK-16	Regulator cap & screws
17	DXK-17	Inlet (x2) & outlet (x2) clips
18	DXK-18	Cover, seal & screws
19	DXK-19	Female inlet / outlet thread seal x 4
20	DXK-20	O-ring x 5
21	DXK-21	O-ring x 5
22	DXK-22	O-ring x 5
23	DXK-23	O-ring x 5
24	DXK-24	O-ring x 5
25	DXK-25	Gasket x 4
26	DXK-26	Blanking plate & screws ‡
27	DXK-27	Blanking gasket x 4 ‡
28	DXK-28	Insert ‡
29	0114-011798	Grounding cable 4m

‡ = parts for non-fluid regulator model

Spare Parts



Maintenance

Key - Maintenance symbols

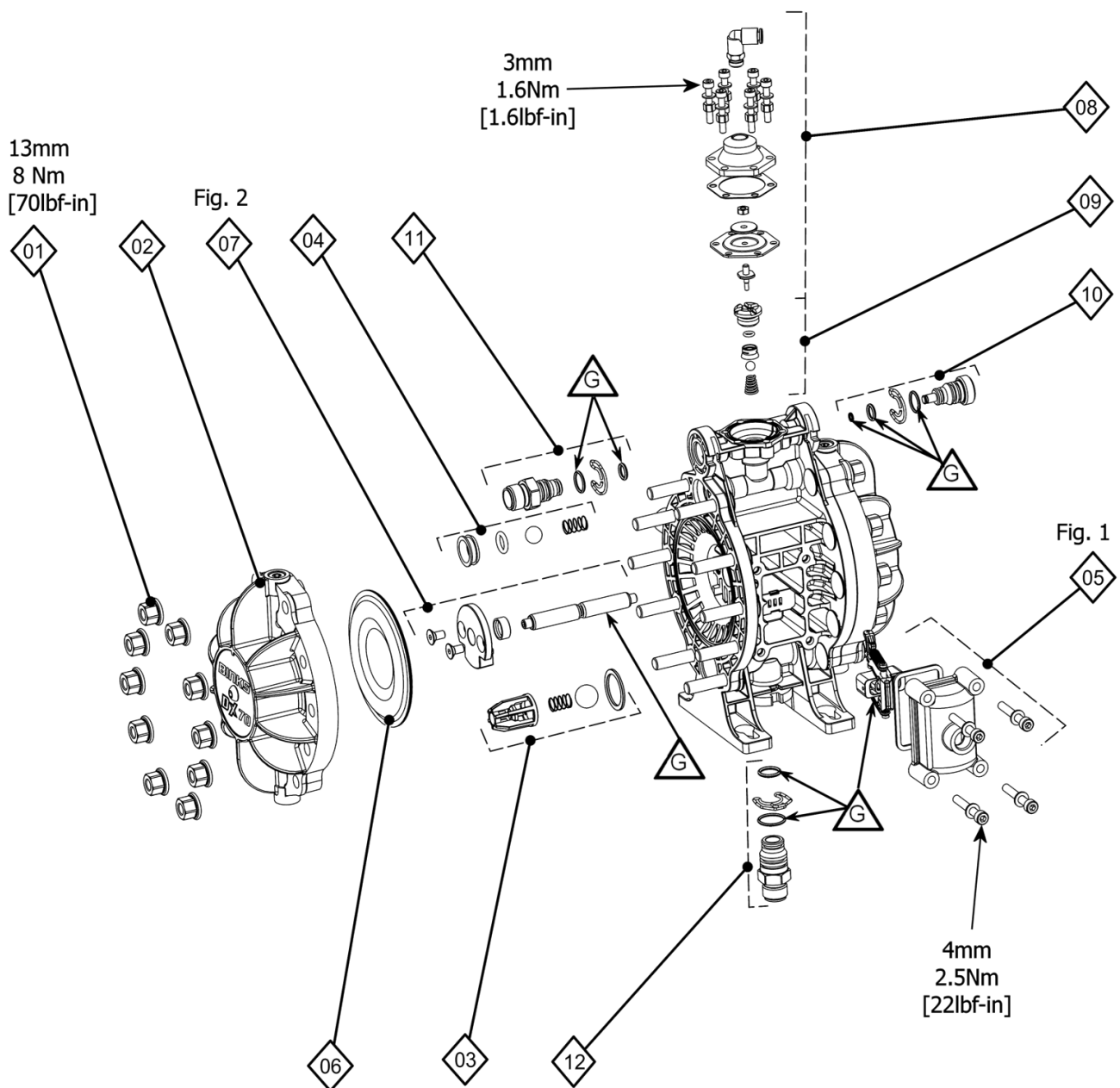
 = Order for dis-assembly
(reverse for assembly)

 = Grease (AGMD-010)

Fig. 1 = refer to figure

13MM = Spanner or socket size

8 Nm = Torque required



Maintenance

Figure 1

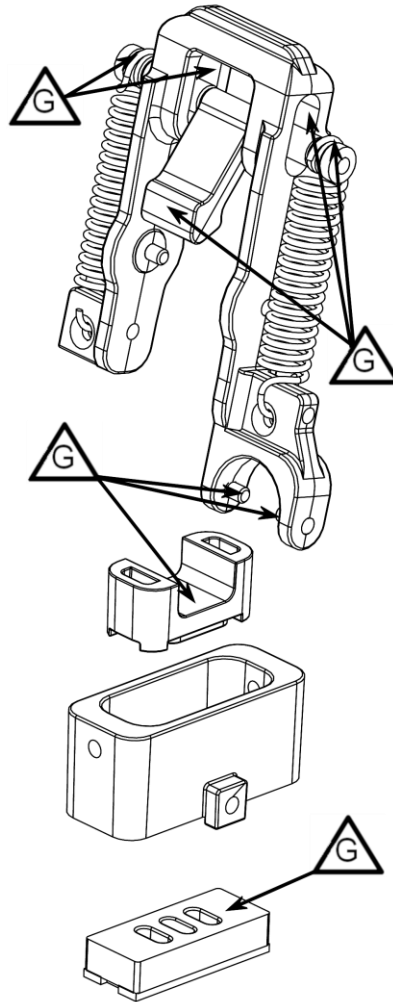
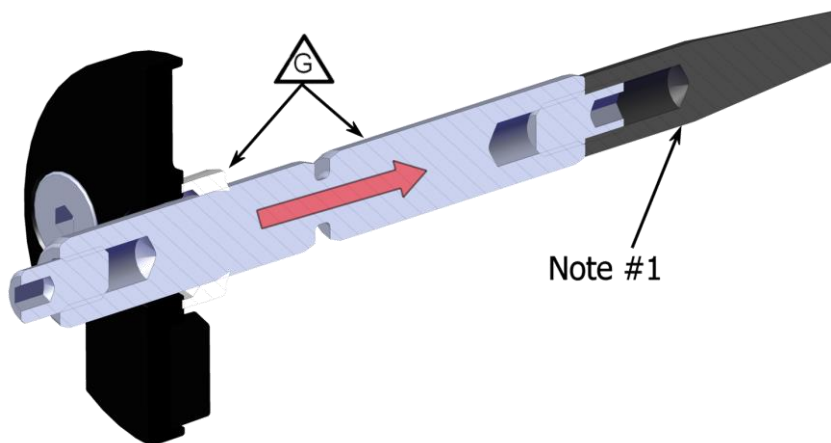


Figure 2



Note #1 - Shaft fitting tool included in spares kit DXK-4
This must be used when re-fitting centre shaft

Typical period	Recommended operation
Monthly	- Check for fluid or air leaks - Inspect Pump for Correct operation - Check for any excessive mechanical noise - Check for excessive fluid pressure pulsation
6 Months	Perform a pump stop test to ensure correct operation, by ensuring pump stops when the spraygun trigger is closed and there is no fluid flow. - If pump does not stop inspect ball check valves, replace as required. Check fluid regulator adjusts fluid pressure correctly. - Replace if faulty
12 Months	- Replace Diaphragms - Replace fluid regulator seat and diaphragm - Replace centre shaft and seals - Replace Check Valves - Inspect and replace if required:- Air Valve module

Fault finding

Symptom	Possible Cause	Remedy
Pump will not 'Prime'	a. Air getting into the suction hose/manifold b. Check valve ball/seal damaged	a. Check hose connections b. Inspect, clean/replace balls/seats
Pump will not run	a. No Air or Fluid supply b. Air valve worn or defective	a. Check air and fluid supply ball valves and supply hoses. b. Replace valve module.
Pump runs but has excessive pulsation	a. Air getting into fluid line, air supply restricted. b. Fluid check valves damaged c. Worn centre shaft/seals d. Worn air valve	a. Check seals and hose connections. - Check air supply b. Remove, clean, and inspect seat, ball, and ball cage. - Replace if suspect or worn. c. Replace shaft and seals. d. Replace air valve module

Bare pump selection

DX70 **R** - **M F** - **3**

Fluid regulator

R	Regulator
N	No regulator

Air regulators

For use with

-	No regulator	-
1	1 Regulator	DX70N
2	2 Regulators	DX70N
3	3 Regulators	DX70R

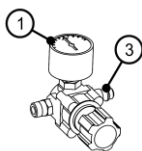
Inlet type

M	Male
F	Female

Outlet type

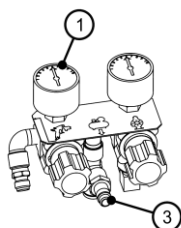
M	Male
F	Female

Air regulators



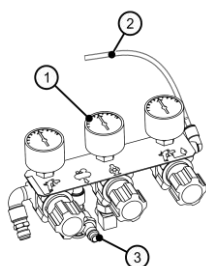
DXA-AC1

1 Regulator
- Pump



DXA-AC2

2 Regulators
- Pump
- Spraygun



DXA-AC3

3 Regulators
- Pump
- Spraygun
- Fluid regulator

Item	Part No.	Description
1	GA-382-P	Gauge
2	S-1817	Ø4mm Hose
3	ZZ-2417	QD stem 1/4" female

WARRANTY POLICY

Binks products are covered by Carlisle Fluid Technologies five year materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. For specific warranty information please contact the closest Carlisle Fluid Technologies location listed below.

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