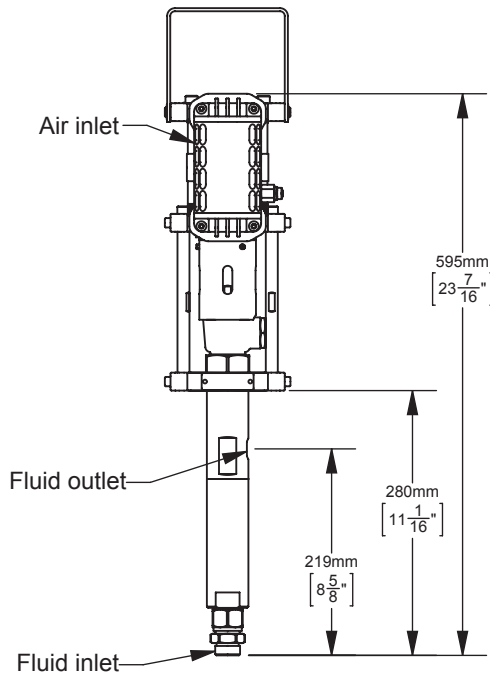
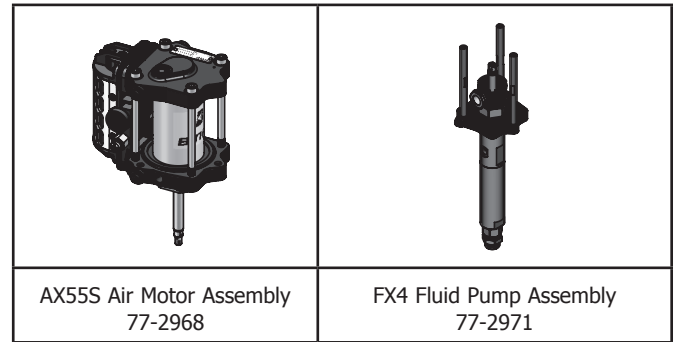


BINKS® MX412 BARE PUMP ASSEMBLIES

MODELS: MX412PL (PTFE / LEATHER), MX412PP (PTFE), MX412PU (PTFE / UHMW), MX412UC (U-CUPS)

Patent 7,603,855



SPECIFICATIONS	
Ratio:	12:1
Maximum air inlet pressure:	8 bar [116 psi]
Maximum fluid pressure:	96 bar [1390 psi]
Displacement per cycle:	24 cc [0.8 oz]
Output @ 60 cycles/min:	1.4 L/m [0.4 gal/m]
Air consumption @ 20 cycles/min and 8 bar [116 psi] air inlet pressure:	62.5 LPM [2.2 SCFM]
Maximum recommended continuous cycle rate:	20 cycles/min
Air inlet connection:	3/8" BSP(f)
Fluid inlet connection:	3/4" NPS(m)
Fluid outlet connection:	3/8" BSP(m) and 3/8" NPS(m)
Sound level:	88 dB
Weight:	7.5 kg [16.5 lbs]

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

WARNING

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

CAUTION

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE

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, DEPRESSURIZE, 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.



OPERATOR TRAINING

All personnel must be trained before operating finishing equipment.



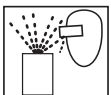
EQUIPMENT MISUSE HAZARD

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



KEEP EQUIPMENT GUARDS IN PLACE

Do not operate the equipment if the safety devices have been removed.



PROJECTILE HAZARD

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



PINCH POINT HAZARD

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



PACEMAKER WARNING

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



AUTOMATIC EQUIPMENT

Automatic equipment may start suddenly without warning.



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.



NEVER MODIFY THE EQUIPMENT

Do not modify the equipment unless the manufacturer provides written approval.



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.



NOISE HAZARD

You may be injured by loud noise. Hearing protection may be required when using this equipment.



HIGH PRESSURE CONSIDERATION

High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the spray 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.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT. FOR FURTHER SAFETY INFORMATION REGARDING THIS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

⚠ WARNING

HIGH PRESSURE CAN CAUSE SERIOUS INJURY IF EQUIPMENT IS INSTALLED OR USED INCORRECTLY—READ, UNDERSTAND, AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL.

INSTALL, OPERATE OR SERVICE THIS EQUIPMENT ONLY AFTER ALL INSTRUCTIONS ARE CLEARLY UNDERSTOOD.

It is the responsibility of the employer to place this information into the hands of the operator.

⚠ WARNING

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

⚠ CAUTION

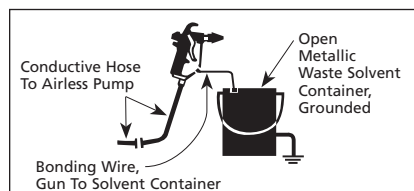
Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE

Important installation, operation or maintenance information.

AVOID STATIC SPARKING

1. Use Binks **NO-WIRE** conductive hose in all airless spraying operations. Be sure the gun and hose have continuity.
2. Make sure the pump is grounded. **NEVER** operate the unit when it is on a non-grounded platform.
3. When flushing or cleaning with a combustible solvent, always use an open metallic container for receiving the waste solvent. Ground the solvent receptacle.
4. **ALWAYS** remove spray tip when flushing the system. Operate the pump at the lowest possible pressure.

**GENERAL WARNINGS**

1. **NEVER** leave a pressurized sprayer unattended.
2. Periodically inspect all hoses for leaks and/or abrasions and tighten all connections before use. **DO NOT ATTEMPT TO REPAIR** a defective hose. **REPLACE** it with another conductive hose.
3. **ALWAYS** relieve pressure in the system by turning bypass valve to **BYPASS** or triggering spray gun before disassembly of any component parts.

CAUTION

Never store de-ionized, distilled, reverse osmosis or any pure grade of water in the pump. These fluids may cause corrosion.

NOTE

BINKS is not responsible for misapplication of pumps. Consult your BINKS representative for application assistance.

NOTE


Be sure that all fluids, solvents and fillers to be used are chemically and physically compatible with wetted parts in the pump. Consult your BINKS representative for pump materials of constructions and compatibility information. Consult the fluid manufacturer for information regarding the fluids to be used.

REPLACEMENT PARTS

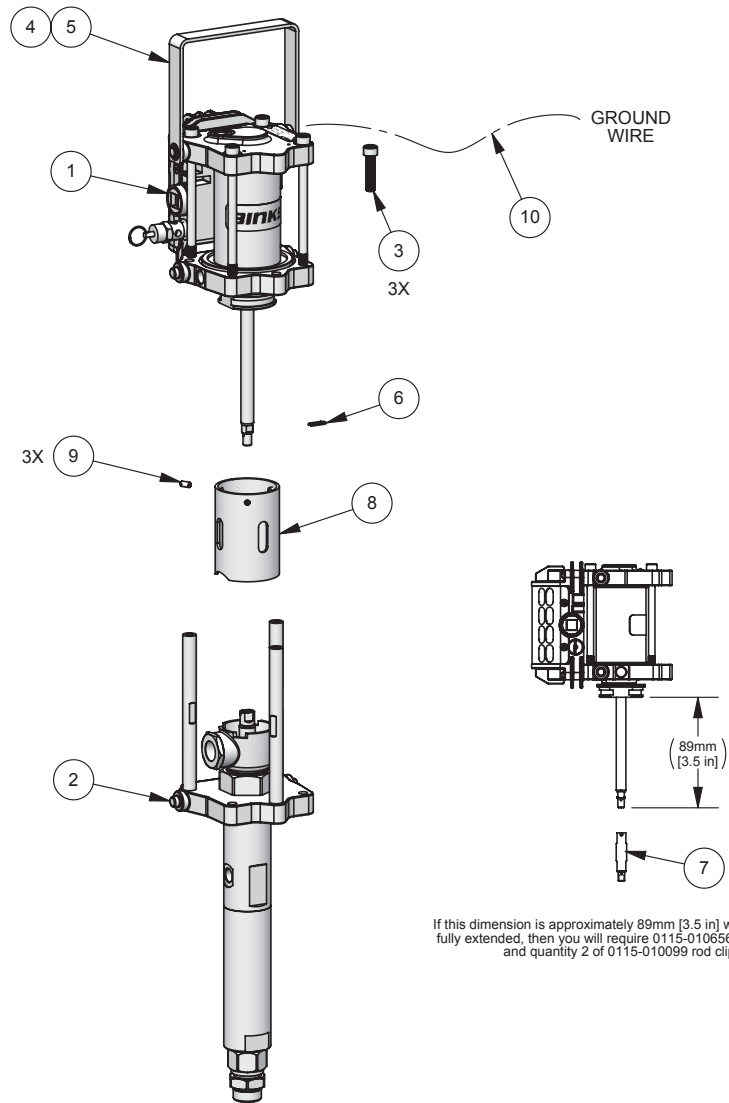
The pump is designed to use authorized parts only. When using this pump with parts that do not comply with the minimum specifications and safety devices of Binks, the user assumes all risks and liabilities.

⚠ WARNING**EXCESSIVE AIR PRESSURE**

Can cause personal injury, pump damage or property damage. Do not exceed maximum inlet air pressure as stated on motor model plate.

HAZARD	CAUSE	SAFEGUARDS
<p>EXPLOSION</p> 	<p>STATIC ELECTRICITY Use of this equipment in a potentially explosive atmosphere. Vapors from flammable liquids can catch fire or explode from static electricity discharges.</p>	<ol style="list-style-type: none"> 1. If installing this equipment in a potentially explosive atmosphere, check the ATEX equipment category and temperature ratings meet the requirements for the zoned area. 2. Check electrical continuity of the air supply to earth — should be no greater than $10^6 \Omega$. 3. Electrically bond all metallic equipment to earth. Should be no greater than 1Ω.
<p>SPECIAL CONDITIONS FOR SAFE USE REQUIRED BY ATEX CERTIFICATION</p>	<p>Over pressurization of equipment can cause equipment failure or injury. Use lubricating medium resistant to carburisation. Improper operation or maintenance may create a hazard.</p>	<ol style="list-style-type: none"> 1. Do not exceed the stated maximum working pressures and motor speed as specified in this manual. 2. Only a suitably approved static dissipating or conductive air supply hoses shall be attached to the equipment and terminated to the air supply. 3. Air supplies (compressors, etc.) shall be sited in a non-hazardous area with a filter on the air intake system to prevent the ingress of dust or similar foreign material into the parts where compression takes place. 4. Use lubricating medium resistant to carburisation and has an auto ignition temperature of more than 185°C for T4 equipment. 5. User shall ensure all metallic parts of the equipment are suitably bonded to earth. Should be no greater than 1Ω.

MX412 BARE PUMP ASSEMBLIES



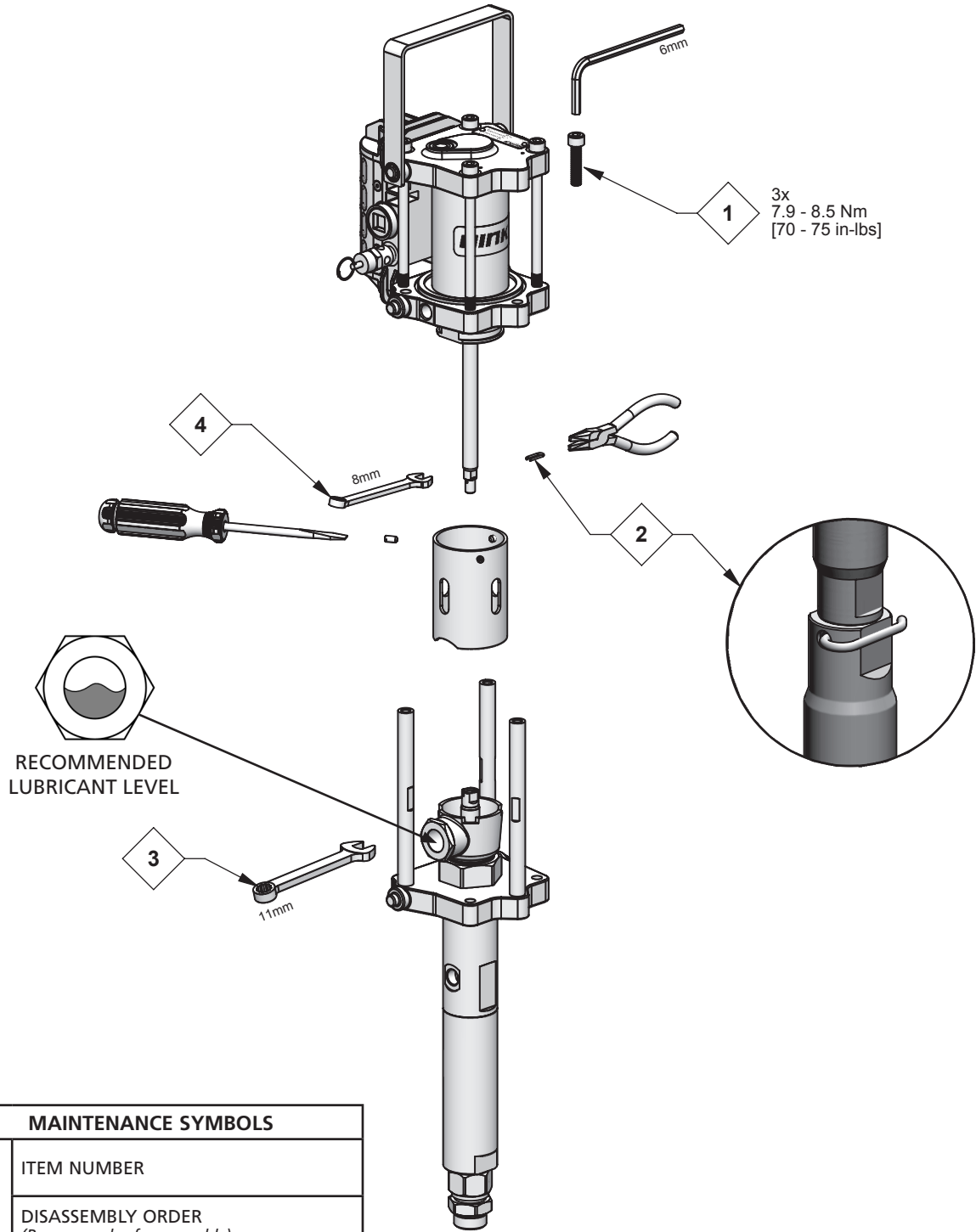
If this dimension is approximately 89mm [3.5 in] with motor rod fully extended, then you will require 0115-010656 rod adapter and quantity 2 of 0115-010099 rod clip.

ITEM NO.	PART NUMBER	DESCRIPTION	MX412PL QTY.	MX412PP QTY.	MX412PU QTY.	MX412UC QTY.	SERVICE MANUAL
1	AX55S	AX55S AIR MOTOR ASSEMBLY	1	1	1	1	77-2968
2	FX4PL	FX4 FLUID SECTION ASSEMBLY (PTFE/LEATHER)	1	–	–	–	77-2971
	FX4PP	FX4 FLUID SECTION ASSEMBLY (PTFE)	–	1	–	–	
	FX4PU	FX4 FLUID SECTION ASSEMBLY (PTFE/UHMW)	–	–	1	–	
	FX4UC	FX4 FLUID SECTION ASSEMBLY (U-CUPS)	–	–	–	1	
3	0115-010001 ▲	SOCKET HEAD CAP SCREW	3	3	3	3	
4	0114-014351	HANDLE	1	1	1	1	
5	0115-010272	RETAINING RING	2	2	2	2	
6	0115-010099 •	ROD CLIP	1	1	1	1	
7	0115-010656	MX4 MOTOR ROD ADAPTER	REF.	REF.	REF.	REF.	
8	0115-010655	GUARD	1	1	1	1	
9	166001	SLOTTED SET SCREW	3	3	3	3	
10	0114-016243	GROUND WIRE KIT	1	1	1	1	

• Part not sold separately. Available in repair kits: 0115-010220, 0115-010222, and 0115-010224.

▲ Part not sold separately. Available in AX55 Hardware kit: 0115-010213.

MX412 BARE PUMP ASSEMBLIES – MAINTENANCE



MAINTENANCE SYMBOLS	
#	ITEM NUMBER
#	DISASSEMBLY ORDER (Reverse order for assembly)
PG	PETROLEUM JELLY/GREASE
TS	THREAD SEALANT (PTFE tape)

MX412 BARE PUMP ASSEMBLIES – TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Pump will not start	No compressed air. Spray tip is blocked.	Check compressed air supply. Clean or replace the spray tip.
Erratic operation of air motor, air motor stops	Worn poppet assemblies. Worn or dirty spool and sleeve assembly.	Replace the poppet assemblies. Clean or replace the spool and sleeve assembly, as necessary.
Continuous air leak from the exhaust	Worn poppet assemblies. Worn piston seal. Worn diaphragm.	Replace poppet assemblies. Replace piston seal. Replace diaphragm.
Material in solvent cup	Worn or dirty upper packings.	Replace or clean upper packings as necessary.
Pump does not stop on the down stroke	Worn or dirty lower ball check.	Replace or clean the parts as necessary.
Pump does not stop on the up stroke	Worn or dirty upper ball check. Worn or dirty lower packings.	Replace or clean the parts as necessary.
Pump runs erratically	Blocked siphon kit. Blocked inlet filter or strainer. Low material level.	Replace or clean the siphon kit. Replace or clean the inlet filter or strainer. Replace or refill material container.
Pump runs, with no output	Loose connection in between pump and siphon kit. Stuck lower ball.	Check that all connections are tight. Replace or clean the parts as necessary.

WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

Carlisle Fluid Technologies is a global leader in innovative finishing technologies. Carlisle Fluid Technologies reserves the right to modify equipment specifications without prior notice.

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contact one of our international sales and customer support locations.

Region	Industrial / Automotive	Automotive Refinishing
Americas	Tel: 1-800-992-4657 Fax: 1-888-246-5732	Tel: 1-800-445-3988 Fax: 1-800-445-6643
Europe, Africa, Middle East, India	Tel: +44 (0)1202 571 111 Fax: +44 (0)1202 573 488	
China	Tel: +8621-3373 0108 Fax: +8621-3373 0308	
Japan	Tel: +81 45 785 6421 Fax: +81 45 785 6517	
Australia	Tel: +61 (0) 2 8525 7555 Fax: +61 (0) 2 8525 7575	

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