

# AX140S AIR MOTOR ASSEMBLY



## SPECIFICATIONS

	AX140S-5	AX140S-6	AX140S-7	AX140S
Maximum air inlet pressure:	72.5 psi [5 bar]	87 psi [6 bar]	101.5 psi [7 bar]	116 psi [8 bar]
Maximum recommended continuous cycle rate:	20 cycles/min. [40 strokes]			
Maximum recommended intermittent cycle rate:	40 cycles/min. [60 strokes]			
Air consumption @ 20 cycles/min and 116 psi [8 bar] air inlet pressure:	n/a	n/a	n/a	17.6 SCFM [498 LPM]
Sound level:	n/a	n/a	n/a	97 dB
Air inlet connection:	3/8" NPS / BSPP (female)			
Piston diameter:	5.5 in [140 mm]			
Nominal motor stroke:	3 in [75 mm]			
Maximum operating temperature:	160°F [71° C]			
Weight:	13 lbs [6 Kg]			

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.



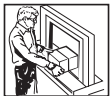
#### **OPERATOR TRAINING**

All personnel must be trained before operating finishing equipment.



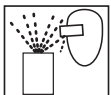
#### **EQUIPMENT MISUSE HAZARD**

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**

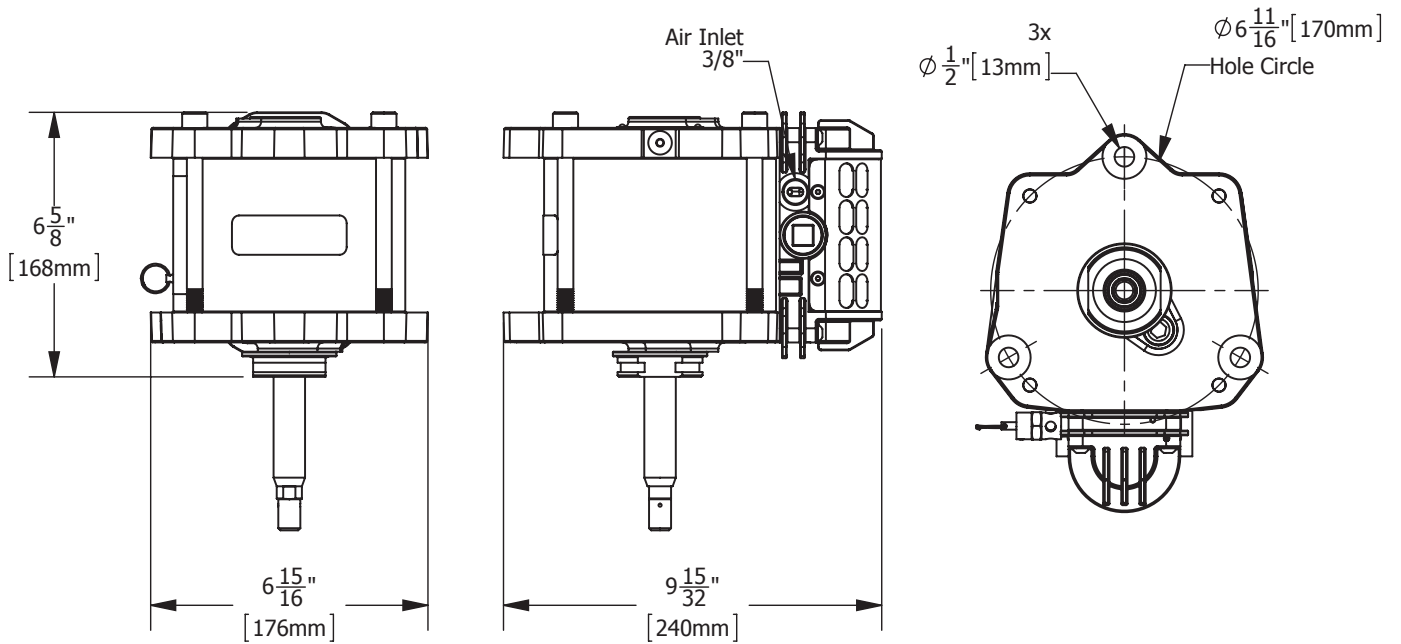
Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock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



#### **PROP 65 WARNING**

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

**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).**



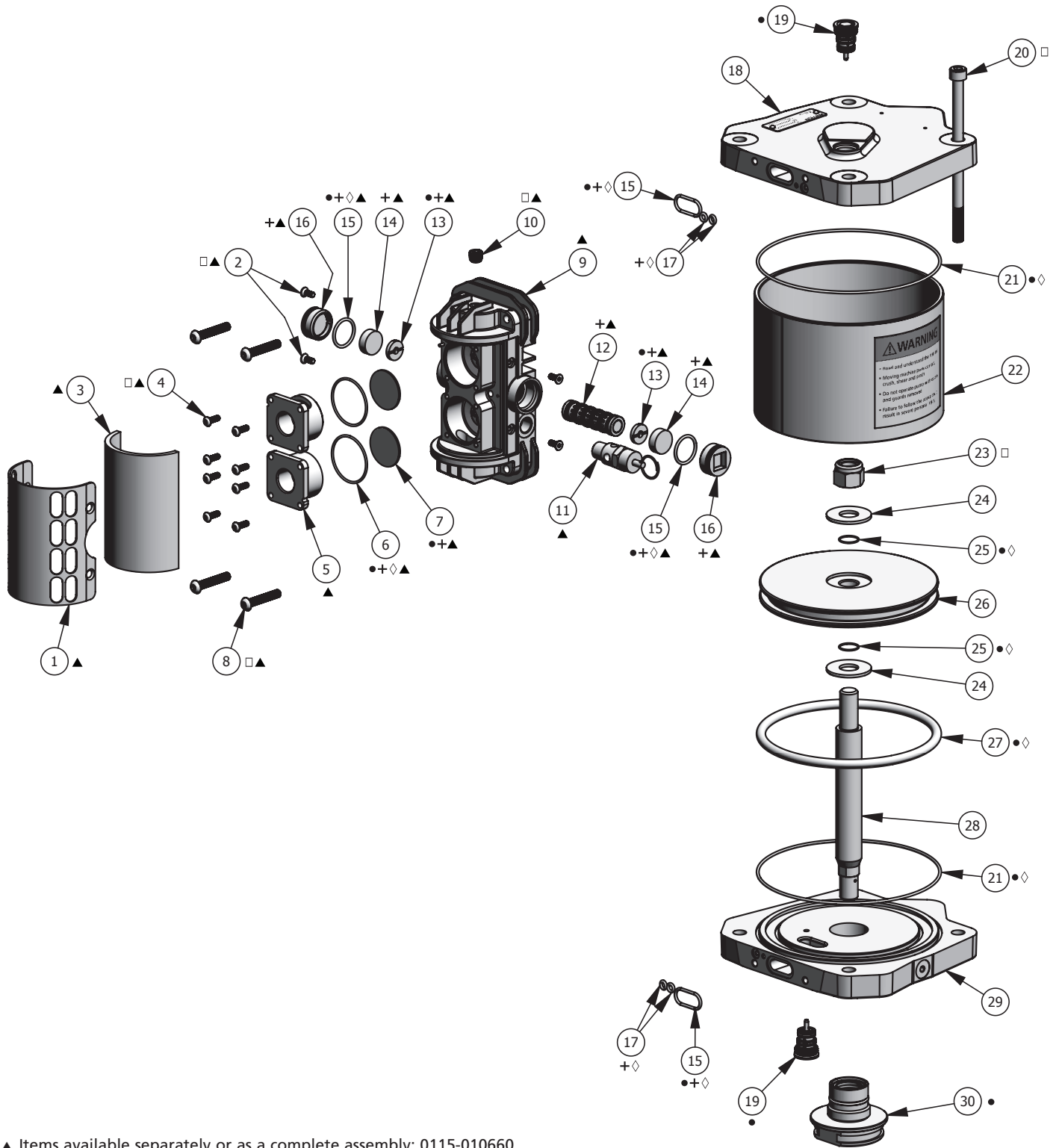
### MAINTENANCE

INSPECTION	OPERATION	
<b>Daily</b>	Check for general air leakage and correct motor operation.	
<b>6 Month Test</b>	Perform a pump stall test to ensure correct operation.	
	Perform a stall test on the pump assembly. If air is escaping through exhaust, check air motor piston seal and QEV piston, replace as required.	
<b>12 to 36 Months</b> <b>(Typically 10 million pump cycles, dependant on air quality)</b>	Replace air piston seal.	Order a 0115-010302 Seal kit.
	Replace motor rod cartridge assembly. Replace poppet assemblies.	
	Inspect and replace if required: Main valve assembly parts	Order a 0115-010226 Valve repair kit.

### TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	REMEDY
<b>Motor will not run</b>	No air supply.	Check air and fluid supply ball valves and supply hoses.
	Air piston seal worn.	Replace piston seal.
	Poppet assemblies are not working.	Switch/interchange poppet assemblies to isolate the faulty poppet, and clean or replace.
	Main valve assembly is not working.	Check the main valve assembly, and clean or replace.
	QEV's are not working.	Check for constant exhaust air when pump is not in a stalled condition. Check the QEV pistons, and clean or replace.
<b>Pump runs but has excessive pulsation</b>	Worn piston seal.	Replace piston seal.
	Worn/failed motor rod seals.	Replace motor rod cartridge assembly.
	Damaged QEV.	Inspect, clean and replace as required.
	Damaged poppet assembly.	Inspect, clean and replace as required.
	Air exhaust restricted	Inspect, clean and replace as required.

### AX140S AIR MOTOR ASSEMBLY



- ▲ Items available separately or as a complete assembly: 0115-010660.
- Parts are included in 0115-010301 Air Motor Repair Kit.
- + Parts are included in 0115-010226 Air Motor Valve Repair Kit.
- ◇ Parts are included in 0115-010302 Air Motor Seal Kit.
- Parts are included in 0115-010300 AX140 Hardware Kit.

## AX140S AIR MOTOR ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	0115-010023 ▲	EXHAUST COVER SCREEN	1
2	0115-010024 ▲ □	FLAT HEAD COUNTER SUNK CAP SCREW	4
3	0115-010022 ▲	EXHAUST COVER	1
4	0115-010073 ▲ □	BUTTON HEAD CAP SCREW	8
5	0115-010019 ▲	QUICK EXHAUST VALVE CAGE	2
6	0115-010021 ▲•+◇	O-RING	2
7	0115-010020 ▲•+	DIAPHRAGM	2
8	0115-010026 ▲ □	BUTTON HEAD CAP SCREW	4
9	0115-010097 ▲	VALVE BLOCK	1
10	0115-010107 ▲ □	PIPE PLUG	1
11	0114-014774 ▲	SAFETY VALVE (8 BAR) AX140S	1
	193539 ▲	SAFETY VALVE (7 BAR) AX140S-7	
	193538 ▲	SAFETY VALVE (6 BAR) AX140S-6	
	0114-014716 ▲	SAFETY VALVE (5 BAR) AX140S-5	
12	0115-010015 ▲ +	SPOOL AND SLEEVE ASSEMBLY	1
13	0115-010016 ▲•+	BUMPER	2
14	0115-010017 ▲ +	MAGNET	2
15	0115-010049 ▲•+◇	O-RING	4
16	0115-010018 ▲ +	VALVE BLOCK END CAP	2
17	0115-010051 •+◇	O-RING	4
18	0115-010117	UPPER END CAP MACHINING	1
19	0115-010037 •	POPPET ASSEMBLY	2
20	0115-010124 □	SOCKET HEAD CAP SCREW	4
21	0115-010133 •◇	O-RING	2
22	0115-010116	AX140 CYLINDER	1
23	0115-010127 □	LOCKNUT	1
24	0115-010131	WASHER	2
25	0115-010132 •◇	O-RING	2
26	0115-010128	AX140 PISTON	1
27	0115-010129 •◇	O-RING	1
28	0115-010130	AX140 MOTOR ROD	1
29	0115-010119	LOWER END CAP MACHINING	2
30	0115-010658 •	AX140 MOTOR ROD CARTRIDGE ASSEMBLY	1

▲ Items available separately or as a complete assembly: 0115-010660.

• Parts are included in 0115-010301 Air Motor Repair Kit.

+ Parts are included in 0115-010226 Air Motor Valve Repair Kit.

◇ Parts are included in 0115-010302 Air Motor Seal Kit.

□ Parts are included in 0115-010300 AX140 Hardware Kit.

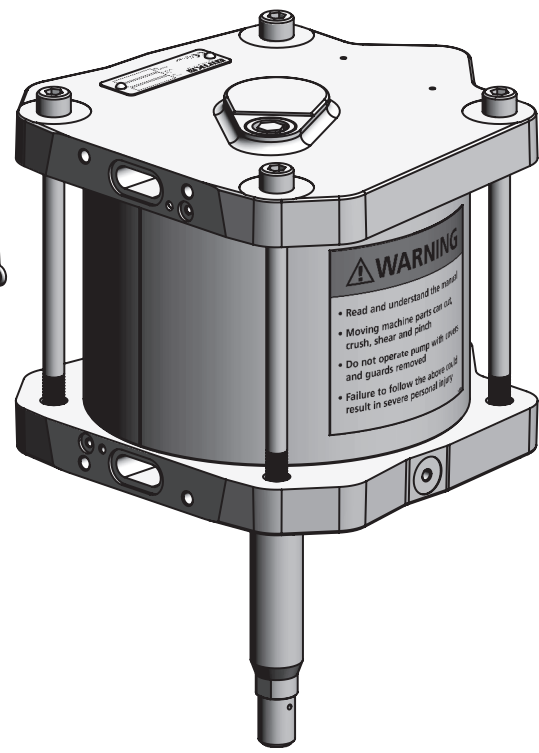
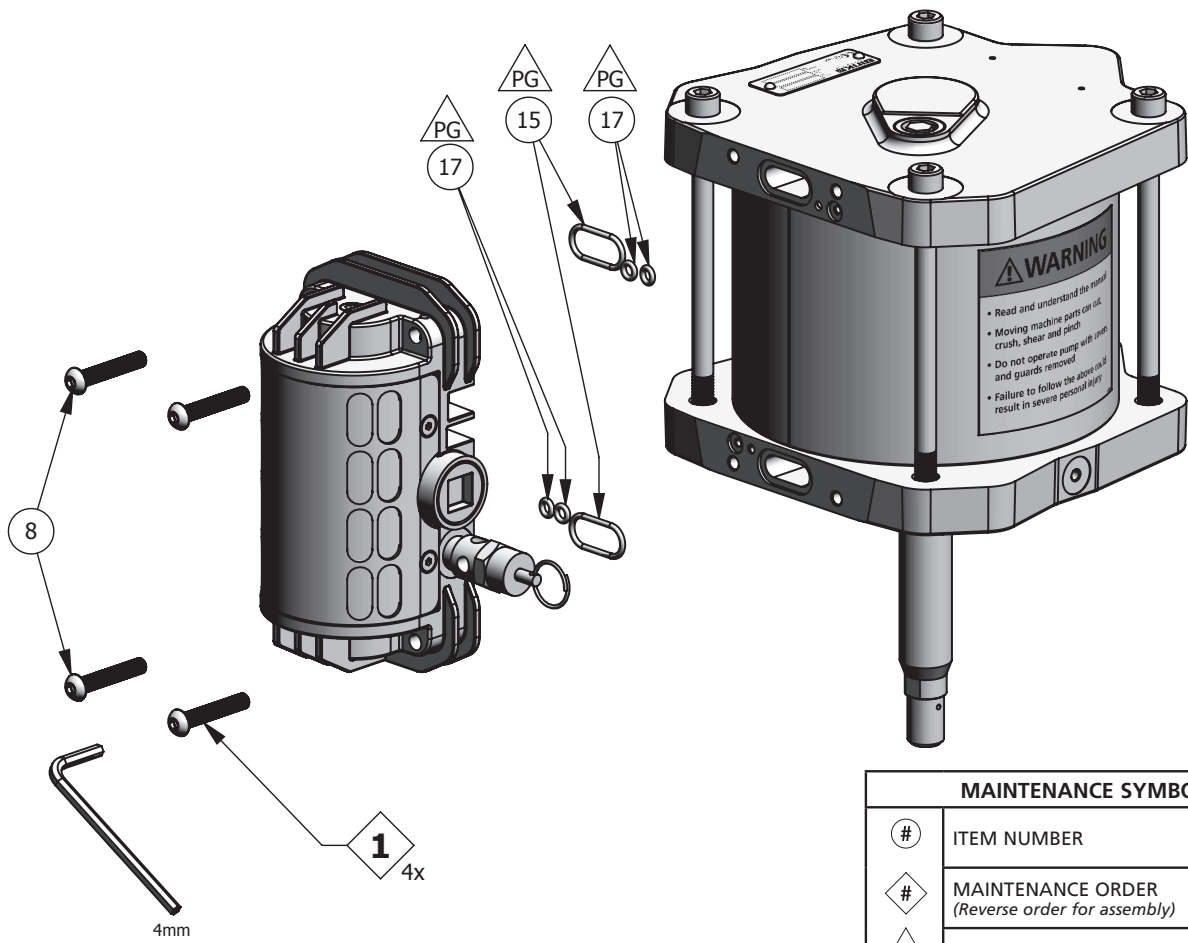
**NOTE**

See page 6 for kit details.

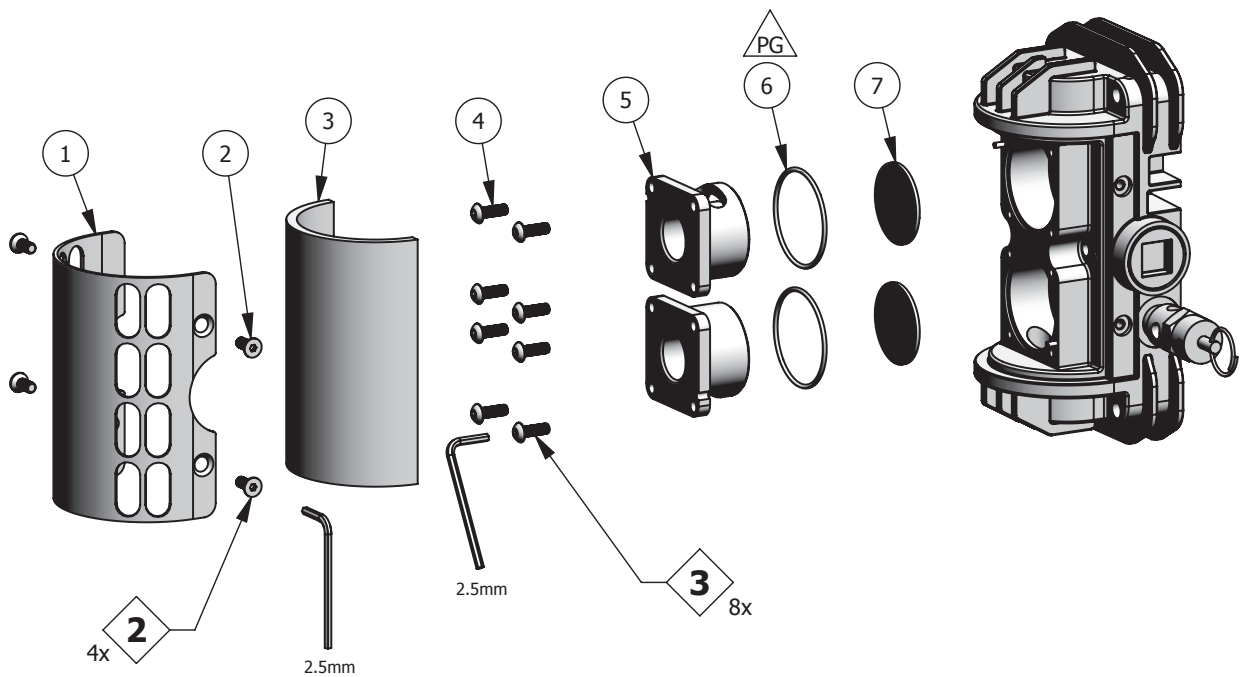
## AX140S SERVICE KITS

ITEM NO.	PART NO.	DESCRIPTION	0115-010226	0115-010300	0115-010301	0115-010302
			VALVE REPAIR KIT	HARDWARE KIT	REPAIR KIT	SEAL KIT
2	0115-010024	FLAT HEAD COUNTER SUNK CAP SCREW		4		
4	0115-010073	BUTTON HEAD CAP SCREW		8		
6	0115-010021	O-RING	2		2	2
7	0115-010020	DIAPHRAGM	2		2	
8	0115-010026	BUTTON HEAD CAP SCREW		4		
10	0115-010107	PIPE PLUG		1		
12	0115-010015	SPOOL AND SLEEVE ASSEMBLY	1			
13	0115-010016	BUMPER	2		2	
14	0115-010017	MAGNET	2			
15	0115-010049	O-RING	4		4	4
16	0115-010018	VALVE BLOCK END CAP	2			
17	0115-010051	O-RING	4		4	4
19	0115-010037	POPPET ASSEMBLY			2	
20	0115-010124	SOCKET HEAD CAP SCREW		4		
21	0115-010133	O-RING			2	2
23	0115-010127	LOCKNUT		1		
25	0115-010132	O-RING			2	2
27	0115-010129	O-RING			1	1
30	0115-010658	MOTOR ROD CARTRIDGE ASSEMBLY			1	
	0115-010120	MOTOR ROD CARTRIDGE ASSEMBLY			1	
	0115-010114	SOCKET HEAD CAP SCREW		3		

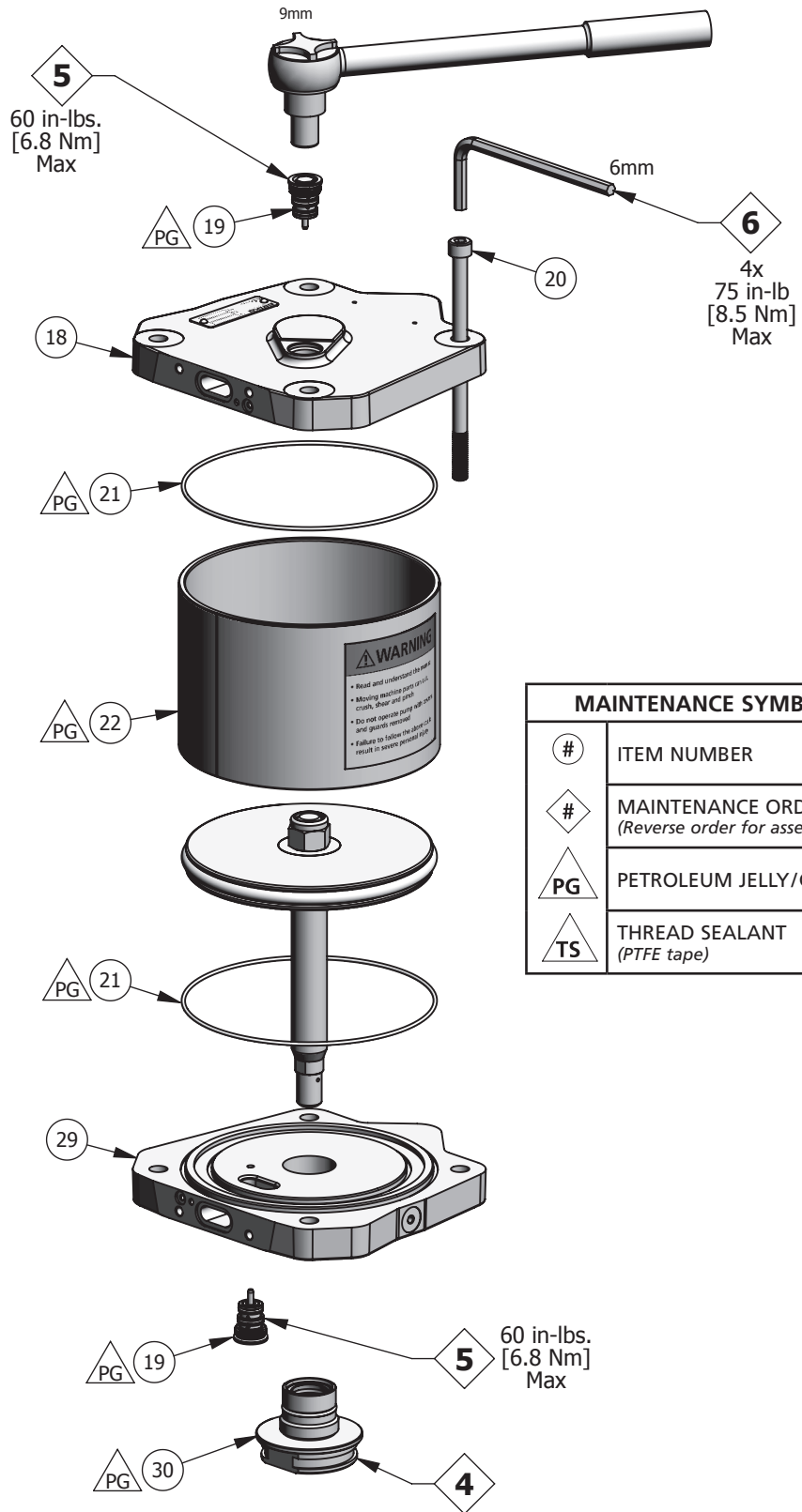
## AX140S AIR MOTOR ASSEMBLY – MAINTENANCE



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



AX140S AIR MOTOR ASSEMBLY – MAINTENANCE

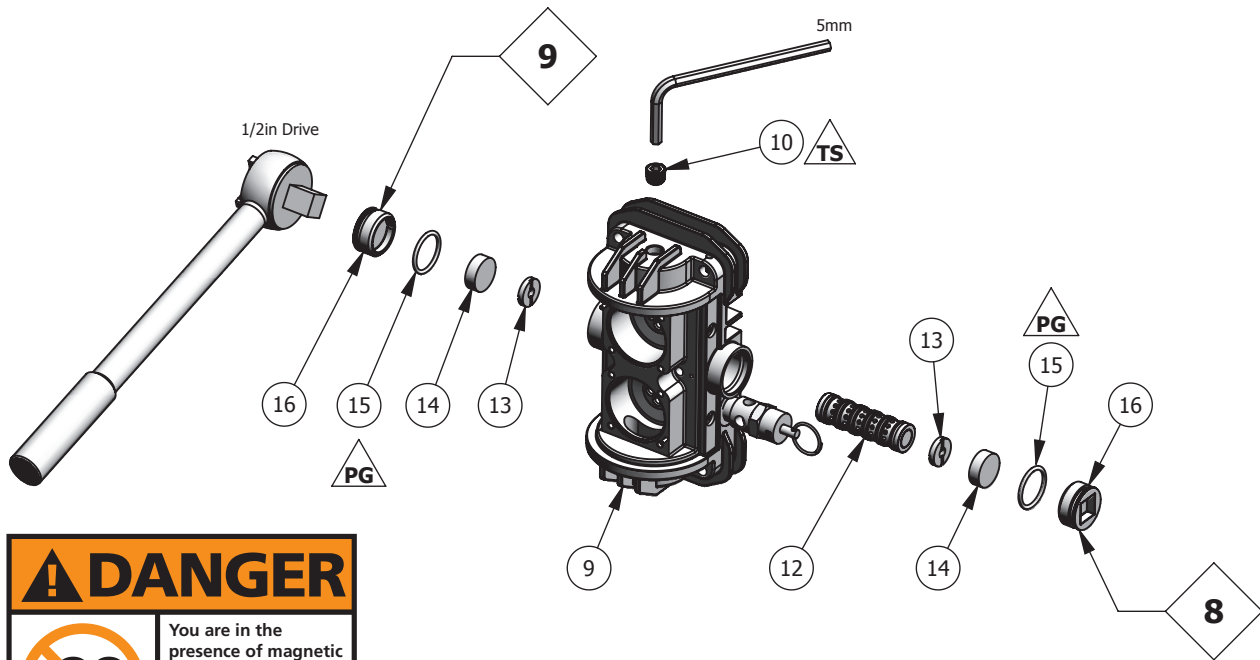
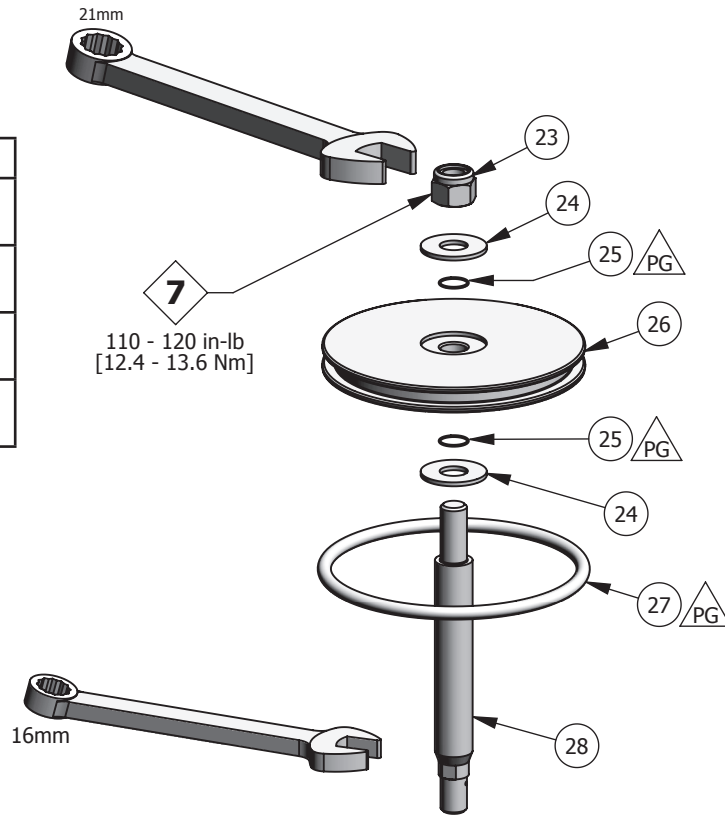


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MAINTENANCE SYMBOLS	
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◆	MAINTENANCE ORDER <i>(Reverse order for assembly)</i>
PG	PETROLEUM JELLY/GREASE
TS	THREAD SEALANT <i>(PTFE tape)</i>



**⚠ DANGER**

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

**NOTE**  
Spool and sleeve assembly (12) is a matched set and cannot be interchanged with other spool and sleeve assemblies.

**⚠ CAUTION**  
Take care when handling the magnets (14). Avoid getting magnets in close proximity to each other. Injury or damage to magnets may result.

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## WARRANTY POLICY

Binks products are covered by Carlisle Fluid Technologies one 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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