

BINKS® **FRX20 FLUID SECTION**
MODEL: FRX20HC



SPECIFICATIONS

Output @ 60 cycles/min:	2.0 gal/m (7.6 l/m)
Maximum fluid pressure:	2000 psi (138 bar)
Maximum operating temperature:	160°F (71°C)
Displacement per cycle:	4.3 oz (127 cc)
Stroke length:	3 in (76 mm)
Fluid inlet size:	1-1/4 NPT (M)
Fluid outlet size:	1/2 NPT (F)
Weight:	10.4 lbs (4.7 kg)
Wetted parts materials of construction:	Stainless Steel, Tungsten Carbide, Hard Chrome, PTFE, Polyethylene

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.



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.



LOCK OUT / TAG-OUT

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



AUTOMATIC EQUIPMENT

Automatic equipment may start suddenly without warning.



PRESSURE RELIEF PROCEDURE

Always follow the pressure relief procedure in the equipment instruction manual.



KEEP EQUIPMENT GUARDS IN PLACE

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



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



WEAR SAFETY GLASSES

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



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.



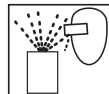
NEVER MODIFY THE EQUIPMENT

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



NOISE HAZARD

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



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.



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.



WEAR RESPIRATOR

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



TOXIC FLUID & FUMES

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



FIRE AND EXPLOSION HAZARD

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



MEDICAL ALERT

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.



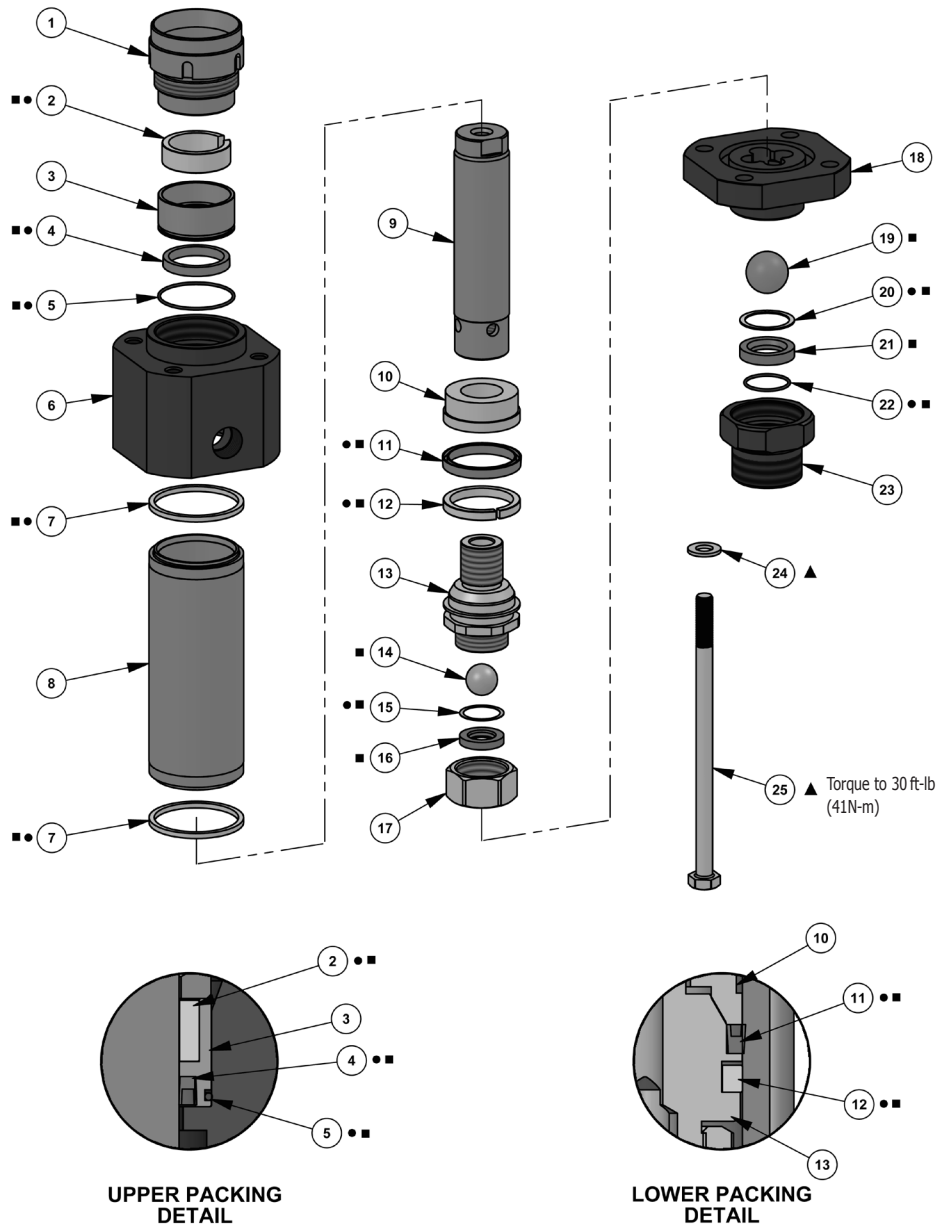
GET IMMEDIATE MEDICAL ATTENTION

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.

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).

FRX20HC FLUID SECTION



PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	101-1619	PACKING NUT	1
2	149-1734 ●■	UPPER GUIDE	1
3	101-9436	UPPER SEAL HOUSING	1
4	41-15908 ●■	UPPER U-CUP SEAL	1
5	20-6876 ●■	O-RING	1
6	101-9417	OUTLET	1
7	41-2168 ●■	SEAL	2
8	101-9432	CYLINDER	1
9	101-9431	SHAFT	1
10	101-9462	SEAL RETAINER	1
11	41-15909 ●■	PISTON SEAL	1
12	149-1739 ●■	LOWER GUIDE	1
13	101-9463	U-CUP PISTON	1
14	20-3250 ■	BALL	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
15	101-1147 ●■	GASKET	1
16	101-1940 ■	SEAT	1
17	101-9461	RETAINER NUT	1
18	101-9418	FOOT VALVE BODY	1
19	20-4963 ■	BALL	1
20	41-1524 ●■	SEAT GASKET	1
21	101-1939 ■	SEAT	1
22	20-4173 ●■	O-RING	1
23	101-9413	FOOT VALVE	1
24	20-6870 ▲	FLAT WASHER	4
25	20-6868 ▲	CAP SCREW	4

● Parts are included in FRX Seal Kit 106-1270.
 ▲ Parts are included in FRX Hardware Kit 106-1277.
 ■ Parts are included in FRX Repair Kit 106-1276.

BINKS FRX20 FLUID SECTION – OPERATION AND MAINTENANCE INSTRUCTIONS

Your new Binks "FRX" Fluid Section has been thoroughly tested before leaving the factory. The "FRX" Fluid Section may only be used with 3in [75mm] stroke AX Air Motors.

CAUTION

1. Do not use fluid pressures above what is required for proper atomization. Excessive fluid pressures may cause premature wear and/or damage to the fluid section. Maximum allowable fluid pressure is 2000 psi [138 bar].
2. Handle pump shaft and cylinder with care to avoid scoring and scratches that will cause the packings to wear rapidly.

MAINTENANCE NOTE

The recess in the top of the Packing Nut (1), around the Pump Shaft, should be filled with a lubrication for the packings (p/n: 0114-009433).

NOTE

Your "FRX" Fluid Section is assembled with U-Cup Seals, **THEY ARE NOT ADJUSTABLE**. They never need to be tightened. If the U-Cup Seals begin to leak profusely, then they must be replaced.

TO STORE PUMP

Pump should be kept wet when not in use. This prevents formation of a gummy film on the inside surfaces. For overnight storage, leave material in the Fluid Section under pressure. For longer storage, flush with an appropriate solvent to clean unit and fill Fluid Section with D.O.P. and store under pressure with Pump in "down" position. Drain out D.O.P. when ready to use unit.

TO CLEAN FLUID SECTION

For cleaning or material changing, circulate an approved solvent through the Fluid Section. Several short flushings using clean solvent are better than circulating for long periods of time. For a thorough cleaning, the Fluid Section should be disassembled and all parts inspected for wear or damage. A thorough cleaning should be performed as required.

DISASSEMBLY

1. Relieve pressure. See System Operations Manual (77-2941 or 77-2942) for details.
2. Disconnect the fluid section from the AX air motor. See part sheet 77-2940 for details.
3. Place the Fluid Section upside down into a bench vise, clamping jaws onto the Outlet (6). Ensure that the Pump Rod is supported adequately.
4. Carefully remove the Foot Valve (23), Ball Seat (21), Seat Gasket (20) and Ball (19). Inspect the O-ring (22) in the Foot Valve, replace if necessary.
5. Remove the cap screws (25) and flat washers (24). This will allow the Foot Valve Body (18), Pump Cylinder (8) and Seals (7) to be removed.

CAUTION

Remove Pump Cylinder carefully so as not to score or damage the inside surface.

6. Remove the Outlet (6) and Pump Shaft (9) assembly from the bench vise and re-clamp with Packing Nut (1) side up. Ensure that the Pump Shaft is prevented from falling out of the Outlet.

CAUTION

Handle the Pump Shaft carefully to prevent damage to external surfaces.

8. Remove the Outlet from the bench vise. Ensure that the Pump Shaft Assembly does not fall out.
9. Over a flat work surface, remove the Pump Shaft from the Outlet.
10. Remove the Upper Guide (2), Seal Housing (3), U-Cup Seal (4), and O-ring (5).
11. Place the Pump Shaft (9), wrench flat end, into the bench vise. Using a wrench on the Fluid Piston (13) to secure it, remove the Retainer Nut (17). Then remove the Ball Seat (16), Gasket (15), and Ball (14).
12. Remove the Fluid Piston (13) from the Pump Shaft (9).
13. Remove the Seal Retainer (10), Piston Seal (11), and Lower Guide (12).
14. Clean all parts with an approved solvent and inspect for wear or damage.
15. Replace worn or damaged parts and reassemble in reverse order. Lubricate O-Rings with a petroleum jelly, and packing/seals with Gun Lube (p/n: SSL-10).

NOTE

1. Tungsten carbide Seats in Foot Valve and Piston are reversible for longer wear.
2. An approved solvent is one compatible with the material being pumped.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Pump doesn't operate on either stroke; no fluid delivery; no siphoning.	Siphon leak.	Check all siphon hose and inlet connections; tighten if necessary.
Pressure builds on up stroke but no pressure on down stroke.	Lower ball/seat not seating.	Check for worn, dirty, chipped or cracked ball or seat; replace if necessary.
Pressure builds on down stroke but not on up stroke.	Upper ball/seat not seating.	Check for worn, dirty, chipped or cracked ball or seat; replace if necessary.

NOTES

NOTES

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.

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