

MBC - ZINC SPRAY GUN

IMPORTANT: Before using this equipment, read all safety precautions and instructions. Keep for future reference.

DESCRIPTION

The MBC-ZINC spray gun is intended for use with the new waterborne, zinc rich protective coatings. Solvent borne zinc coatings can also be applied with this gun.

The MBC-ZINC has all the features of the standard MBC-510 and consists of spray gun body and removable sprayhead. MBC-ZINC differs in the following components.

- Leather packings
- Heavy duty needle spring
- Delrin construction air cap
- Delrin construction retaining ring
- Fluid tip with composition insert

These components have proven very effective in handling the unique characteristics of zinc rich coatings. By using these components, the user will insure the longest and most reliable operation before major repair is required.

HANDLING OF ZINC COATING

Some zinc rich formulations can require up to 20 lbs. of dry zinc per gallon of liquid. Care must be taken when adding the zinc to insure complete suspension into the liquid. Mechanical agitation must be used when mixing, and during application, to prevent agglomeration and settling of the zinc particles. These larger clumps will interfere with needle seating and cause premature wear and leakage to the tip or needle.

Zinc rich formulations have limited pot life. Once the zinc is added, the liquid slurry begins to increase in viscosity. Material should be used within 3-4 hours after mixing. If material is applied out-of-doors, viscosity will increase faster as a result of heat buildup caused by environmental conditions.

Zinc solution - Follow manufacturers directions for mixing zinc powder into solution. Make sure adequate mechanical mixing is observed during and after zinc is mixed into liquid.

These instructions are found on both container label and Technical Data Sheets. In addition to specific recommendations on handling the zinc, suppliers also have recommendations concerning operating pressures, air and fluid hose length and size.

GUN OPERATION

The MBC-ZINC is supplied with a D (.086") size fluid tip. Extensive field testing of the various zinc formulations conclude that the use of smaller tip sizes require elevated fluid pressures, which in turn, increase the tendency of needle seat interference. These higher fluid pressures also cause the liquid material to pack out when the gun is triggered off. Lower fluid pressures help minimize both conditions.

After first mixing, a fluid pressure of approximately 15 psi should provide satisfactory flow rates for normal production speeds. A reduction in flow output will be experienced as the viscosity increases and fluid pressures will have to be increased. Under most application conditions, atomizing air in the range of 50 psi will be satisfactory.

Packing operation - The packing set consists of 3, pre-lubricated leather packings. Packing tension on needle is factory set. Lubricate packings twice daily by adding a few drops of *SSL-10 gun lube to the needle shaft. Retain proper packing tension to allow smooth needle travel. This will insure minimal needle shaft and packing wear.

CLEANING

The fluid hose interior and gun fluid passages should be cleaned immediately after each zinc batch is used. Exterior metal surfaces of the gun body and head should be wiped clean before any accumulation is allowed to dry. Waterborne zinc in its dried state will be extremely difficult to remove from any metal surface.

The DeVilbiss air cap AV-1239-64L, is constructed of Delrin. The zinc will not adhere to its surface. If zinc is allowed to dry, the film can be simply removed with a fiber brush or by soaking the cap in water. When the cap is removed, always wipe off the fluid tip exterior surfaces to prevent any zinc build up from drying.

PREVENTIVE MAINTENANCE

The MBC-ZINC spray gun is designed to provide the user trouble free service applying this unique protective coating, with only minimal care and maintenance. There are certain steps the user can take to insure trouble-free service.

Never immerse or soak the entire spray gun in any liquid. These liquids are generally contaminated and can foul interior components and passages. Immersion over long periods can also dilute and remove lubricants necessary for smooth operation. Lubricate gun components daily as indicated.

2. Mix dry zinc into solution using a mechanical agitator. Maintain agitation during application.
3. Mix only the amount to be used in 4 hours or less.
4. Refrain from using excessive fluid pressures. A range of 15-30 psi should be satisfactory during the 4 hour period of application.
5. Avoid longer than 25 ft. lengths of fluid and air supply hoses to the gun. Air hoses should be 5/16" I.D. minimum.
6. Do not allow zinc to dry on any interior, metal fluid passage in the gun or hose fittings. An appropriate cleaning agent should be used to purge the system as soon as a batch is used up.
7. Use a cleaning brush (see Accessories) to clean the air cap. Do not use a wire brush. Also avoid using metal objects such as drill bits to clean air hole jets. This air cap, unlike other DeVilbiss metal air caps, can be damaged if abused. Avoid using it as a chipping hammer, etc.

Note

When replacing the fluid tip or fluid needle, replace both at the same time. Using worn parts can cause fluid leakage. Also, replace the needle packings at this time. Lightly lubricate the threads of the fluid tip before reassembling. Torque to 20 - 25 ft. lbs.

CAUTION

To prevent damage to the fluid tip (3) or fluid needle (3B), be sure to either 1) pull the trigger and hold while tightening or loosening the fluid tip or 2) remove fluid needle adjusting screw (27) to relieve spring pressure against needle collar.

TROUBLESHOOTING

Leakage from the tip can be caused by sluggish needle travel, improperly mixed zinc solution, or worn tip and/or needle.

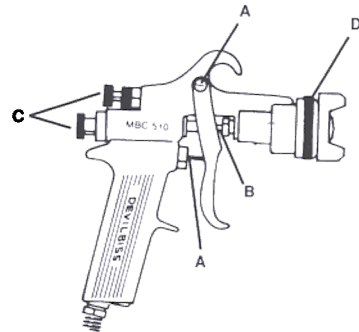
If leakage occurs during application, clean the gun and hoses out and remove fluid tip. Inspect the interior seating surfaces. If large particles appear to be imbedded into the tip seat, scrape the surfaces with a blunt object. Then, attempt to remove agglomerates from the balance of solution by straining.

Fluid Tip - If large imbedded clumps cannot be removed, or if the tip seating surface is worn, it will be necessary to replace the tip and needle. Satisfactory operation depends on the unique DeVilbiss tip design, smooth needle shaft, and lubricated and properly adjusted packings. DeVilbiss Kit No. MBC-4396-D-ZN consists of an AV-4915-D tip, AV-1 gasket, MBX-496-DEX needle and three pre-lubricated MB-135 leather packings. **In order to insure proper operation, replace all three components when tip leakage occurs due to wear.**

SPRAY GUN LUBRICATION

Daily, apply two drops of •SSL-10 spray gun lube (see Accessories) at trigger bearing stud (29) and the stem of the air valve (19) where it enters the air valve assembly. The shank of the fluid needle (3B) where it enters the packing nut (7) should also be oiled. The fluid needle packing (3A) should be kept soft and pliable by periodic lubrication. Make sure the sprayhead (6) and retaining ring (1) threads are clean and free of foreign material. Before assembling retaining ring to sprayhead, clean the threads thoroughly, then add two drops of SSL-10 spray gun lube to threads. The fluid needle spring (26) and air valve spring (20) should be coated with a very light grease, making sure that any excess grease will not clog the air passages. For best results, lubricate the points indicated, daily.

- A. Trigger Points
- B. Packing
- C. Adjusting Valves
- D. Threads

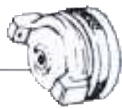


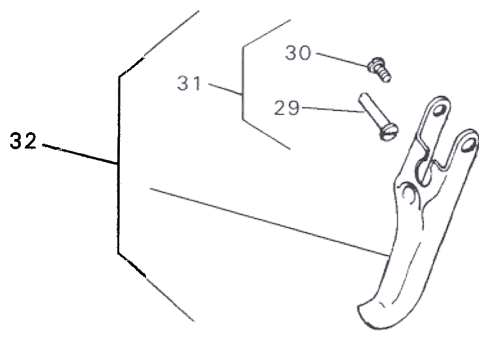
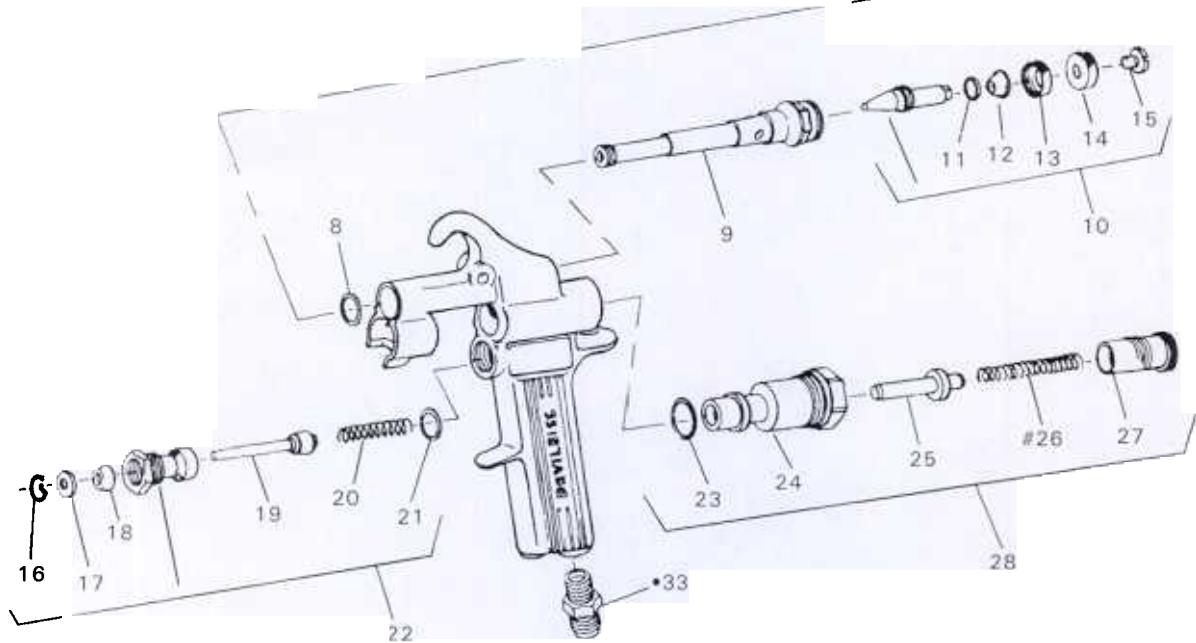
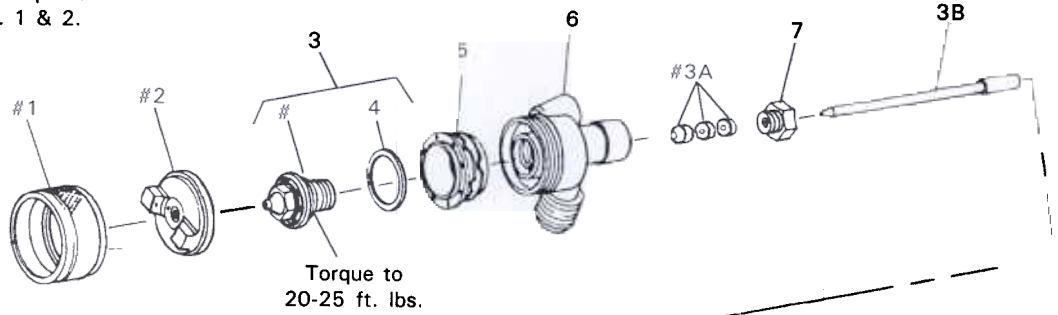
• Material Safety Data Sheet available from DeVilbiss upon request.

PARTS LIST

Ref. No.	Replacement Part No.	Description	Individual Parts Required
1	MSA-1	Retaining Ring, Delrin	1
2	AV-1239-64L	Air Cap, Delrin	1
3	MBC-4396-D-ZN	Fluid Tip, Needle, Gasket Kit (Includes 3, 3A & 3B)	1
* 3A	MB-135-K9	Leather Packings (Kit of 9)	3
3B	---	Needle	1
* 4	AV-1-K5	Gasket Kit (Kit of 5)	1
5	MBC-1225	Baffle	1
6	P-MBC-402	Sprayhead Body	1
7	MB-19-K5	Packing Nut (Kit of 5)	1
* 8	MBC-1226-K10	Gasket Kit (Kit of 10)	1
9	MBC-67	Locking Bolt	1
10	MBC-498-1	Fan Adjustment Valve	1
* 11	---	Washer	1
* 12	---	Packing	1
13	---	Packing Nut	1
14	---	Knob	1
* 15	---	Screw	1
* 16	JGA-14-K25	Snap Ring Kit (Kit of 25)	1
* 17	JGA-15-K25	Washer Kit (Kit of 25)	1
* 18	JGS-26-K25	U-cup Kit (Kit of 25)	1
* 19	JGS-431-K25	Air Valve Kit (Kit of 25)	1
* 20	MBD-12-K25	Spring Kit (Kit of 25)	1
* 21	JGS-72-K10	Gasket Kit (Kit of 10)	1
22	JGS-449-1	Valve Assembly	1
* 23	CV-5-K5	Gasket Kit (Kit of 5)	1
24	---	Cylinder	1
25	MBC-33	Plunger	1
26	MBC-70-K2	Spring (Kit of 2)	1
27	MBC-39	Screw	1
28	MBC-415-ZN	Cylinder Assy.	1
29	---	Trigger Bearing Stud	1
* 30	---	Screw	1
31	JGS-478	Stud & Screw Kit (3 studs, 5 screws in kit)	1
32	JGS-477-1	Trigger, Stud & Screw Kit (kit includes 1 each)	1
33	P-MB-51	Air Inlet Adapter 1/4" NPS	1

*A quantity of necessary parts is included in Repair Kit KK-4058-1 for complete gun repair and should be kept on hand for service convenience


(Optional) 
 MB-4039-64HD air
 cap with retaining ring
 can be used in place
 of Ref. Nos. 1 & 2.



- Use medium strength thread sealant (i.e. Loctite 242 value, or equal).
- # These components have proven very effective in handling characteristics of zinc rich coatings.

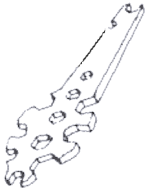
ACCESSORIES

Spray Gun Lube
SSL-10 (2 oz. bottle)




Compatible with all paint materials: contains no silicone or petroleum distillates to contaminate paint. MSDA sheet available upon request.

WR-103 Wrench




Contains all necessary tip, hose and nut sizes used on or with gun.

42884-214-K5 3/8"
42884-215-K10 5/8"
Cleaning Brushes



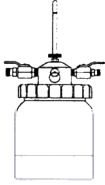
These brushes are helpful in cleaning threads and recesses of gun body.

HAV-500 OR
HAV-501
Adjusting Valve
(HAV-501 SHOWN)



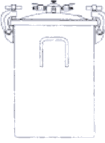
Used to control pressure at gun. HAV-500 less gauge.

HD-503 SolventSaver™ Hose/
Gun Cleaner



2 qt. hose/gun cleaner used to clean the inside of hose, fluid passageways of gun and other paint equipment.

QMGZ SolventSaver™
Hose/Gun Cleaner



2 gallon galvanized tank used to clean the inside of hose and material passages of the gun.

KK-5026 MBC Conversion Kit - This conversion kit contains the components required to convert a standard MBC-510 to an MBC-ZINC gun. Used to apply organic and inorganic zinc materials.

KK-5027 JGA & JGV Conversion Kit - Same as KK-5026 above except used for JGA-510 and JGV guns.

Service Bulletin Revisions

Refer to the following chart for Part No./Literature changes.

Part No. Changes			
Old Part No.	New Part No.	Interchangeability	Literature Changes
JGS-477 Trigger Kit	JGA-14-K25 Snap Ring Kit JGA-15-K25 Washer Kit JGS-26-K25 U-cup Kit JGS-431-K25 Air Valve MBD-12-K25 Spring Kit JGS-477-1 Trigger, Stud, Screw Kit	Directly	1. Revised Accessories.

Worldwide Sales and Service - www.devilbiss.com

DeVilbiss Industrial Spray Equipment

DeVilbiss has authorized distributors throughout the world. For technical assistance or the distributor nearest you, call Toll Free 1-800-338-4448 (U.S. and Canada Only). For local calls, see listing below.

U.S./Canada Sales & Customer Service Office
Maumee, OH 43537

Address
1724 Indian Wood Circle

Telephone No.
(419) 891-8200
Toll Free Fax 1-800-338-0131



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