BINKS "TROPHY" SERIES

PRESSURE AND SIPHON FEED HVLP, LVMP & CONVENTIONAL

MANUAL SPRAY GUNS

(2465-XXXX-XXXX)

CE Ex II 2 G X

Binks Trophy Series Spray Gun is the premier spray gun for use in pressure and siphon feed spray applications and sets a new standard in durability, ergonomics, and atomization. The lightweight ergonomic design offers unsurpassed comfort and control. The latest advanced atomization technology has been incorporated for achieving consistent, fine finishes when spraying a wide range of industrial coating applications.

Binks Trophy Series Spray Guns can be used with pumps, pressure pots, pressure cups, or siphon cups.

Binks Trophy Series Spray Guns are offered in three different atomization technologies: HVLP, LVMP and Conventional.

The Trophy HVLP Series of Spray Guns can be used to operate at high transfer efficiencies in compliance with "California South Coast Air Quality Management District" regulations as a High Volume, Low Pressure spray gun.

SPECIFICATIONS

Maximum Air Pressure	140 psi / 9.6 bar (P-1)
Maximum Fluid Pressure	140 psi / 9.6 bar (P-2) (with standard spring)
Maximum Fluid Pressure	300 psi / 20.6 bar (P-2) (with optional spring)
Gun Body	Anodized Aluminum
Fluid Path	Stainless Steel
Fluid Inlet Size	3/8" NPS / BSP(m)
Air Inlet Size	1/4" NPS / BSP(m)
Gun Weight	14 oz. / 410 grams
Wetted Parts	Stainless Steel & PTFE

IMPORTANT! DO NOT DESTROY

It is the customer's responsibility to have all operators and service personnel read and understand this manual. Contact your local Binks representative for additional copies of this manual.

READ ALL INSTRUCTIONS BEFORE OPERATING THIS BINKS PRODUCT.

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

⚠ 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.

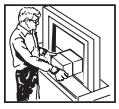
READ THE MANUAL
Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.

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

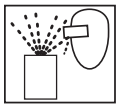
DE-ENERGIZE, DEPRESSURIZE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE
Failure to De-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.

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.

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.

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.

FIRE AND EXPLOSION HAZARD
Never use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in equipment with aluminum wetted parts. Such use could result in a serious chemical reaction, with the possibility of explosion. Consult your fluid suppliers to ensure that the fluids being used are compatible with aluminum parts.

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 BINKS AND DEVILBISS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

EC Declaration of Conformity

CE Ex

Manuf. By: Finishing Brands
195 Internationale Blvd.
Glendale Heights, IL 60139

Type/Series: Handheld Spray Guns

Model: Binks "Trophy" Series

The equipment to which this document relates is in conformance with the following standards or other normative references:

BS EN IS0 12100:2010 and **BS EN 1953:1998 + A1:2009** and thereby conform to the protection requirements of Council Directive 2006/42/EC relating to Machinery Safety Directive, and;

BS EN 13463-1:2009, Council Directive **94/9/EC** relating to **Equipment and Protective Systems for use in Potentially Explosive Atmospheres**, protection level **II 2 G X**.

Approved By: Marvin Burns (Binks) Date: August 1, 2013

Binks reserves the right to modify equipment specification without prior notice.

TYPES OF INSTALLATION

Air pressure for atomization is regulated at the extractor. The flow of the fluid is adjusted by the fluid valve control knob on gun, viscosity of paint and air pressure.

PRESSURE CUP HOOKUP (Figure 1)

For fine finishing with limited spraying. Air pressure for atomization is regulated at extractor; fluid pressure at cup regulator. Pressure cup is also available less regulator.

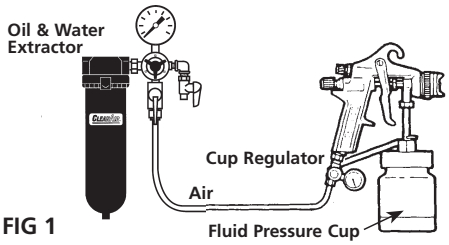


FIG 1

PRESSURE TANK WITH 2 REGULATORS (Figure 2)

The pressure to the tank is regulated by the first regulator. The pressure for atomization is regulated by the second regulator.

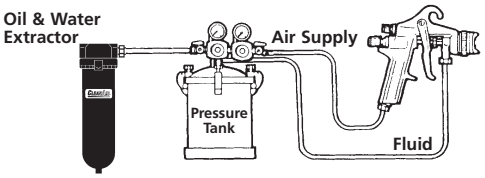


FIG 2

PRESSURE CIRCULATING HOOKUP (Figure 3)

For heavy production spraying. Air pressure atomization regulated at extractor. Fluid pressure regulated at fluid regulator.

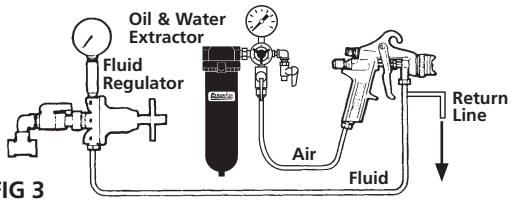


FIG 3

SIPHON FEED HOOKUP (Figure 4)

Air pressure for atomization is regulated at extractor. The amount of fluid is adjusted by fluid control screw on gun, viscosity of paint, and air pressure.

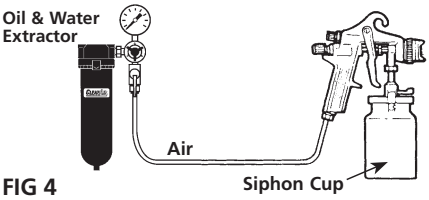


FIG 4

FLUID PUMP HOOKUP (Figure 5)

For medium production spraying (single regulator). Air pressure for atomization is regulated at extractor, fluid pressure at pump regulator.

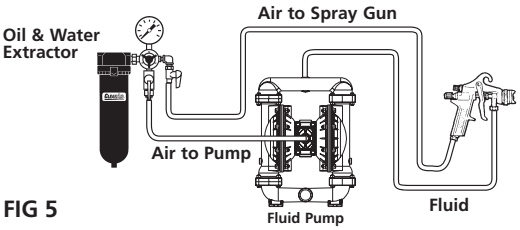


FIG 5

AIR PRESSURE

Atomizing pressure must be set properly to allow for the drop in air pressure between the regulator and the spray gun.

WITH 60 PSI APPLIED AT AIR SUPPLY

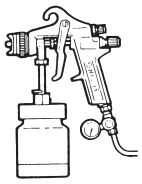

5/16"

Cross section view showing comparison of inside hose diameters (actual size). 60 lbs. regulated pressure


1/4"

RECOMMENDED
48 PSI at gun inlet

25 feet of 5/16" I.D. hose causes a drop of 12 PSI between the air supply and the gun. For this reason Binks recommends the use of 5/16" hose.



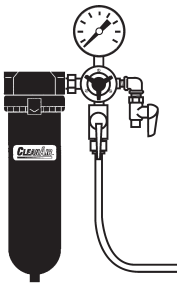
NOT RECOMMENDED
Only 34 PSI at gun inlet

25 feet of 1/4" I.D. hose causes a drop of 26 PSI between the air supply and the gun.

An oil and water extractor is important.

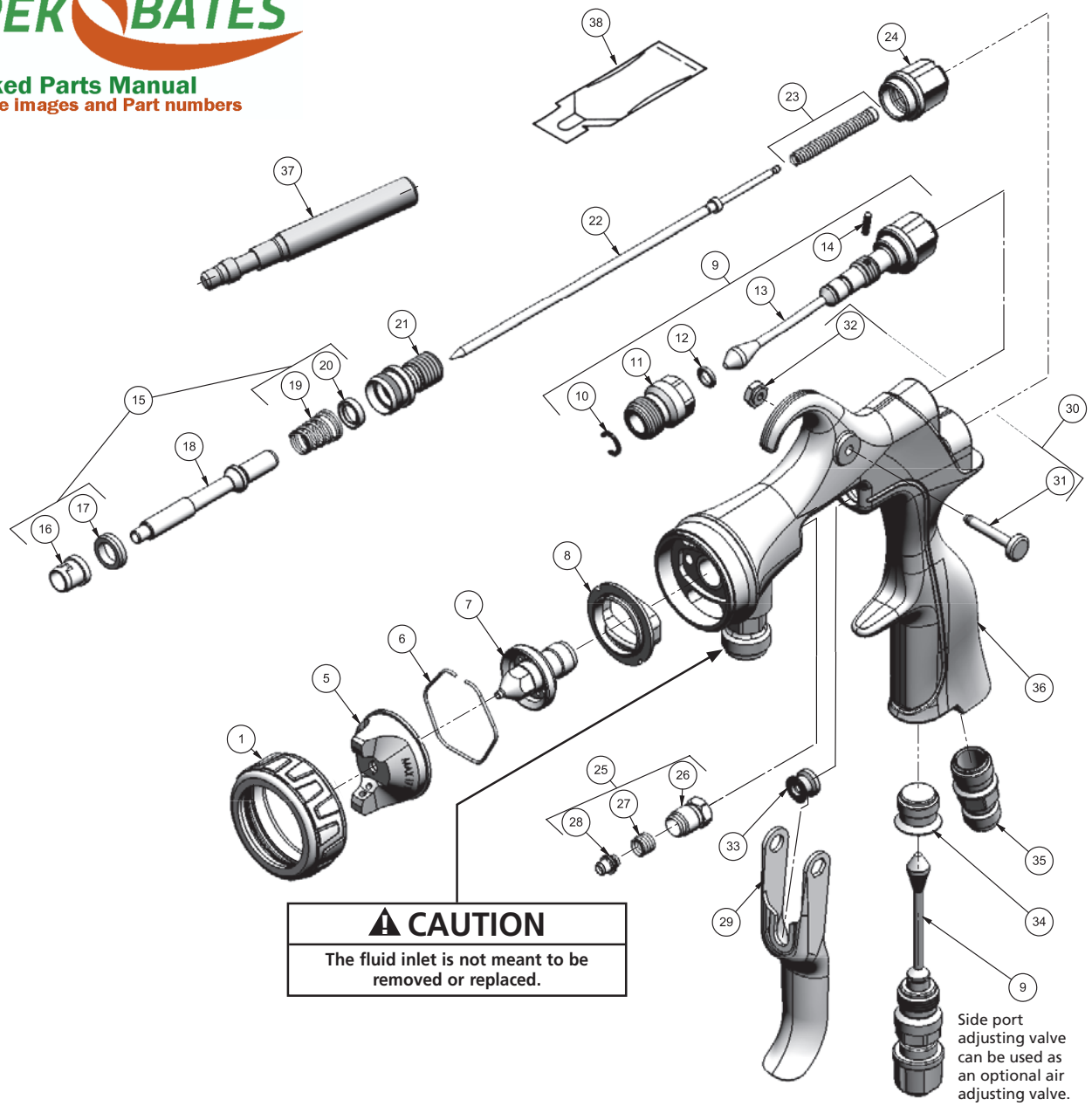
Achieving a fine spray finish without the use of a good oil and water extractor is virtually impossible.

A regulator/extractor serves a double purpose. It eliminates blistering and spotting by keeping air free of oil and water, and it gives precise air pressure control at the gun.



Use DeVilbiss oil and water extractors and regulators. See your local distributor for models.

BINKS "TROPHY" SERIES SPRAY GUN



⚠ CAUTION

The fluid inlet is not meant to be removed or replaced.

Side port adjusting valve can be used as an optional air adjusting valve.

NUMBERING SYSTEM FOR FULL SIZE BINKS "TROPHY" SERIES SPRAY GUNS

2465 – XXXX – XXXX

PRESSURE AND SIPHON GUN

ORIFICE SIZES
50 0.50 MM
85 0.85 MM
10 1.0 MM
12 1.2 MM
14 1.4 MM
16 1.6 MM
18 1.8 MM
20 2.0 MM
22 2.2 MM
24 2.4 MM
26 2.6 MM

ATOMIZATION TECHNOLOGY
CN CONVENTIONAL
LV LVMP
HV HVLP

AIR CAP DESIGNATION
10 Series CONVENTIONAL
20 Series LVMP
30 Series HVLP

NEEDLE MATERIAL
S STAINLESS (HARDENED)
V VITREOUS (TUNGSTEN CARBIDE NEEDLE & NOZZLE)
P PLASTIC TIP

CUP DESIGNATION
0 NO CUP
S SIPHON CUP

See charts on page 6 for complete gun assemblies.

CHART 1: BINKS "TROPHY" SERIES SPRAY GUN PARTS LIST

ITEM NO.	PART NUMBER		DESCRIPTION	QTY.
1	54-6120		AIR CAP RETAINING RING ASSEMBLY	1
5	SEE CHARTS ON PAGE 7		AIR CAP	1
6	JGA-156-K10		SPRING-CLIP (KIT OF 10)	1
7	SEE CHARTS BELOW		FLUID NOZZLE	1
8	54-6102-K3		BAFFLE/SEPARATOR (KIT OF 3)	1
9	54-6122		SIDE PORT VALVE ASSEMBLY	1
10	------	+ Δ	RETAINING CLIP	1
11	------	+	BODY BUSHING	1
12	------	+ Δ	O-RING	1
13	------	+	SIDE PORT STEM	1
14	------	+ Δ	PIN	1
15	54-6131-K		AIR VALVE SERVICE KIT	1
16	------	•	FRONT SEAL – AIR VALVE	1
17	------	•	FRONT AIR VALVE SEAL	1
18	54-6109		AIR VALVE SPINDLE	1
19	------	•	AIR VALVE SPRING	1
20	------	•	REAR SEAL – AIR VALVE	1
21	SN-66		HOUSING	1
22	47-6825		NEEDLE – STAINLESS STEEL (STD.)	1
	SEE CHART #2		NEEDLE – FEATHERING	1
	47-6830		NEEDLE – TUNGSTEN CARBIDE	1
	47-6826		NEEDLE – PLASTIC TIP	1
23	54-6133-K3		SPRING/PAD ASSEMBLY (STANDARD) (KIT OF 3)	1
	54-6134-K		SPRING/PAD ASSEMBLY KIT – HEAVY DUTY (OPTIONAL)	1

ITEM NO.	PART NUMBER		DESCRIPTION	QTY.
24	54-6111		KNOB – NEEDLE ADJUSTING	1
25	54-6130-K		NEEDLE PACKING KIT (STANDARD)	1
	54-6129-K		NEEDLE PACKING KIT (VITREOUS)	1
26	------	✳ ■	NUT – PACKING	1
27	------	✳ ■	SPRING FOR PACKING	1
28	------	■ ▼	NEEDLE PACKING (STANDARD)	1
	------	✳ ❖	NEEDLE PACKING (VITREOUS KIT OF 3)	1
29	54-4360		TRIGGER	1
30	54-6132-K		TRIGGER SCREW NUT KIT	1
31	------	○	TRIGGER SCREW	1
32	------	○	TRIGGER NUT	1
33	54-3513		SPINDLE CAP	1
34	SN-11		PLUG	1
35	54-6112		FITTING – AIR INLET	1
36	------		GUN BODY WITH FLUID INLET	1
37	SPN-7		TOOL – SEAL INSERTION	1
38	------		GUNNER'S MATE (3 CC BAG)	1

FOR SIPHON GUNS ORDER CUP PART NUMBER 81-800

+	PARTS INCLUDED IN 54-6122
✳	PARTS INCLUDED IN 54-6129-K
■	PARTS INCLUDED IN 54-6130-K
▼	ALSO AVAILABLE IN KIT OF 3 SN-2-K3
•	PARTS INCLUDED IN 54-6131-K

○	PARTS INCLUDED IN 54-6132-K
Δ	GTI-428-K5 SIDE PORT REPAIR KIT
❖	ALSO AVAILABLE IN KIT OF 3 54-6119-K3

CHART 2: STAINLESS STEEL FEATHERING NEEDLES AND NOZZLES – OPTIONAL

FEATHERING NEEDLE PART NO.	MARKING ON THE NEEDLE	MATCHING NOZZLE P/N (ORIFICE SIZE)
47-6833	I IIII	45-11050-12 1.2MM (.047")
47-6834	II IIII	45-11050-14 1.4MM (.055")
47-6835	III IIII	45-11050-18 1.8MM (.071")

CHART 3: TUNGSTEN CARBIDE NOZZLES AND NEEDLES

NOZZLE SIZE	TC NOZZLE P.N.	TC NEEDLE P.N.
1.4 MM (.055")	45-11080-14	47-6830
1.8 MM (.071")	45-11080-18	47-6830
2.2 MM (.086")	45-11080-22	47-6830
2.6 MM (.102")	45-11080-26	47-6830

CHART 4: STAINLESS STEEL (HARDENED) FLUID NOZZLES – STD.

STAINLESS FLUID NOZZLE ORIFICE SIZE		FUID NOZZLE PART NUMBER
.020"	.50 mm	45-11050-50
.035"	.85 mm	45-11050-85
.039"	1.0 mm	45-11050-10
.047"	1.2 mm	45-11050-12
.055"	1.4 mm	45-11050-14
.063"	1.6 mm	45-11050-16
.071"	1.8 mm	45-11050-18
.079"	2.0 mm	45-11060-20
.087"	2.2 mm	45-11060-22
.102"	2.6 mm	45-11060-26

CHART 5: TEST AIR CAP KITS – OPTIONAL

CONVENTIONAL	
54-6140-K	11-C KIT
54-6141-K	12-C KIT
54-6142-K	14-C KIT
LVMP	
54-6146-K	22-L KIT
54-6147-K	23-L KIT
HVLP	
54-6151-K	31-H KIT – HVLP
54-6152-K	32-H KIT – HVLP
54-6153-K	33-H KIT – HVLP

BINKS "TROPHY" SERIES SPRAY GUN
PRESSURE FEED SPRAY GUN NEEDLE AND NOZZLE SELECTION GUIDE

CHART 6: CONVENTIONAL GUN SET-UPS

TYPE OF FLUID TO BE SPRAYED	COMPLETE GUN ASSEMBLY PART NUMBER	FLUID NOZZLE AND AIR CAP
THIN 5-25 CENTIPOISE **15-19 sec. Zahn 2 cup** wash primers, dyes, stains, solvents, water, inks, sealers, laquers, lubricants, zinc chromates, acrylics	2465-10CN-11S0	1.0 mm (.039") X 11C
	2465-12CN-11S0	1.2 mm (.047") X 11C
	2465-14CN-11S0	1.4 mm (.055") X 11C
	2465-16CN-11S0	1.6 mm (.063") X 11C
	2465-16CN-12S0	1.6 mm (.063") X 12C
	2465-16CN-12SS	1.6 mm (.063") X 12C ▲
	2465-18CN-12SS	1.8 mm (.070") X 12C ▲
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup** synthetic enamels, varnishes, shellacs, fillers, primers, epoxies, urethanes, lubricants, wax emulsions, enamels	2465-12CN-11S0	1.2 mm (.047") X 11C
	2465-14CN-11S0	1.4 mm (.055") X 11C
	2465-16CN-11S0	1.6 mm (.063") X 11C
	2465-16CN-12S0	1.6 mm (.063") X 12C
	2465-18CN-11S0	1.8 mm (.070") X 11C
	2465-16CN-12SS	1.6 mm (.063") X 12C ▲
	2465-18CN-12SS	1.8 mm (.070") X 12C ▲
	2465-20CN-14S0	2.0 mm (.079") X 14C
	2465-22CN-14S0	2.2 mm (.087") X 14C
HEAVY 70-160 CENTIPOISE **31-66 sec. Zahn 2 cup**	2465-16CN-11S0	1.6 mm (.063") X 11C
	2465-16CN-12S0	1.6 mm (.063") X 12C
	2465-18CN-11S0	1.8 mm (.070") X 11C
	2465-20CN-14S0	2.0 mm (.079") X 14C
	2465-22CN-14S0	2.2 mm (.087") X 14C
ADHESIVES water based vinyl glues, solvent based neoprenes, contact cements	2465-18CN-12SS	1.8 mm (.070") X 12C ▲
	2465-20CN-14S0	2.0 mm (.079") X 14C
	2465-22CN-14S0	2.2 mm (.087") X 14C
MOLD RELEASE	2465-12CN-11S0	1.2 mm (.047") X 11C
CERAMICS abrasive materials, glazes, engobes, porcelain enamel	2465-14CN-14V0	1.4 mm (.055") X 14C ■
	2465-18CN-14V0	1.8 mm (.070") X 14C ■
	2465-22CN-14V0	2.2 mm (.087") X 14C ■
	2465-26CN-14V0	2.6 mm (.102") X 14C ■
NON-STICK COATINGS	2465-10CN-11S0	1.0 mm (.039") X 11C
	2465-12CN-11S0	1.2 mm (.047") X 11C
	2465-18CN-12SS	1.8 mm (.070") X 12C ▲
HAMMERS	2465-14CN-11S0	1.4 mm (.055") X 11C
	2465-16CN-11S0	1.6 mm (.063") X 11C
	2465-16CN-12S0	1.6 mm (.063") X 12C
WRINKLE ENAMELS	2465-14CN-11S0	1.4 mm (.055") X 11C
	2465-16CN-11S0	1.6 mm (.063") X 11C
ZINC RICH COATINGS	2465-22CN-14V0	2.2 mm (.087") X 14C ■

CHART 7: LVMP GUN SET-UPS

TYPE OF FLUID TO BE SPRAYED	COMPLETE GUN ASSEMBLY PART NUMBER	FLUID NOZZLE AND AIR CAP
THIN 5-25 CENTIPOISE **15-19 sec. Zahn 2 cup**	2465-85LV-22S0	0.85 mm (.034") X 22L
	2465-10LV-22S0	1.0 mm (.039") X 22L
	2465-12LV-23S0	1.2 mm (.047") X 23L
	2465-14LV-23S0	1.4 mm (.055") X 23L
	2465-18LV-23SS	1.8 mm (.070") X 23L ▲
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup**	2465-12LV-23S0	1.2 mm (.047") X 23L
	2465-14LV-23S0	1.4 mm (.055") X 23L
	2465-14LV-24S0	1.4 mm (.055") X 23L
	2465-18LV-23SS	1.8 mm (.070") X 23L ▲

CHART 8: HVLP GUN SET-UPS

TYPE OF FLUID TO BE SPRAYED	COMPLETE GUN ASSEMBLY PART NUMBER	FLUID NOZZLE AND AIR CAP
THIN 5-25 CENTIPOISE **15-19 sec. Zahn 2 cup** wash primers, dyes, stains, solvents, water, inks, sealers, laquers, lubricants, zinc chromates, acrylics	2465-85HV-33S0	0.85 mm (.034") X 33H
	2465-85HV-31P0	0.85 mm (.034") X 31H ●
	2465-10HV-33S0	1.0 mm (.039") X 33H
	2465-10HV-31P0	1.0 mm (.039") X 31H ●
	2465-12HV-32S0	1.2 mm (.047") X 32H
	2465-12HV-31P0	1.2 mm (.047") X 31H ●
	2465-18HV-32SS	1.8 mm (.070") X 32H ▲
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup** synthetic enamels, varnishes, shellacs, fillers, primers, epoxies, urethanes, lubricants, wax emulsions, enamels	2465-12HV-32S0	1.2 mm (.047") X 32H
	2465-12HV-31P0	1.2 mm (.047") X 31H
	2465-14HV-32S0	1.4 mm (.055") X 32H
	2465-14HV-31P0	1.4 mm (.055") X 31H ●
	2465-16HV-32S0	1.6 mm (.063") X 32H
	2465-18HV-32S0	1.8 mm (.070") X 32H
	2465-18HV-32SS	1.8 mm (.070") X 32H ▲
HEAVY 70-160 CENTIPOISE **31-66 sec. Zahn 2 cup**	2465-14HV-32S0	1.4 mm (.055") X 32H
	2465-14HV-31P0	1.4 mm (.055") X 31H ●
	2465-16HV-32S0	1.6 mm (.063") X 32H
	2465-18HV-32S0	1.8 mm (.070") X 32H

CHART 9: ROUND SPRAY GUN SET-UPS

TYPE OF FLUID TO BE SPRAYED	COMPLETE GUN ASSEMBLY PART NUMBER	FLUID NOZZLE AND AIR CAP
THIN 5-25 CENTIPOISE **15-19 sec. Zahn 2 cup**	2465-12CN-16S0	1.2 mm (.047") X 16
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup**	2465-12CN-16S0	1.2 mm (.047") X 16

▲ Siphon set-up: includes Binks cup 81-800 ■ Tungsten carbide needle and nozzle set-ups ● Plastic needle tip set-ups

BINKS "TROPHY" SERIES SPRAY GUN
AIR CAP AND FLUID NOZZLE SELECTION CHARTS

CHART 10: CONVENTIONAL AIR CAP AND FLUID NOZZLE SELECTION CHART								
Air Cap	Air Cap Part No.	Spray Pattern Range	CFM @ 30 PSI	CFM @ 50 PSI	CFM @ 70 PSI	Fluid Nozzle	Siphon or Pressure	Typical Coatings
11-C	46-6500	8 – 12"	9.8	14.2	18.7	45-11050 series, 1.0 mm – 1.8 mm	P	Stains, Primers, Lacquers, Enamels, Acrylics, Reduced Latex
12-C	46-6501	4 – 12"	8.3	12.1	14.2	45-11050 series, 1.0 mm – 1.8 mm	P, S	Lacquers, Enamels, Top Coats, Low Viscosity Adhesives
14-C	46-6503	8 – 14"	17.0	24.4	31.2	45-11060 series, 1.4 mm – 2.6 mm or 45-11080 Tungsten Carbide Series (VT), 1.4 mm – 2.6 mm	P	Zinc Rich, Adhesives, Glazes, Engobies, Ceramics, Porcelain Enamels

CHART 11: LVMP – LOW VOLUME MEDIUM PRESSURE AIR CAP AND FLUID NOZZLE SELECTION CHART						
Air Cap	Air Cap Part No.	Spray Pattern Range	CFM @30 PSI Gun Inlet (Dynamic)	Fluid Nozzle	Siphon or Pressure	Typical Coatings
22-L	46-6510	4 – 12"	11.2	45-11050 series, .5 mm – 1.6 mm	P, S	Stains, Primers, Lacquers, Enamels, Acrylics, Reduced Latex
23-L	46-6511	4 – 12"	10.6	45-11050 series, 1.0 mm – 1.8 mm	P	Lacquers, Enamels, Top Coats, Low Viscosity Adhesives

CHART 12: HVLP – HIGH VOLUME LOW PRESSURE AIR CAP AND FLUID NOZZLE SELECTION CHART							
Air Cap	Air Cap Part No.	Spray Pattern Range	SCFM @ 10 PSI Cap Pressure (Dynamic)	Gun Inlet PSI @ 10 PSI at Air Cap (Dynamic)	Fluid Nozzle	Siphon or Pressure	Typical Coatings
31-H	46-6517	8 – 12"	10.5	17	45-11050 series, .85 mm – 1.8 mm	P, S	Stains, Low Viscous Enamels
32-H	46-6518	8 – 14"	15.5	24	45-11050 series, 1.2 mm – 1.8 mm	P, S	Lacquers, Enamels, Multi-Colors, Multi-Spec, Nonstick Coatings, Cut-Latex
33-H	46-6519	8 – 12"	11.0	16	45-11050 series, .85 mm – 1.6 mm	P	Stains, Lacquers, Enamel, Multi-Color, Multi-Spec, Nonstick Coatings

CHART 13: ROUND SPRAY AIR CAP AND FLUID NOZZLE SELECTION CHART								
Air Cap	Air Cap Part No.	Spray Pattern Range	CFM @ 30 PSI	CFM @ 50 PSI	CFM @ 70 PSI	Fluid Nozzle	Siphon or Pressure	Typical Coatings
16	46-6505	2 – 4"	5.6	7.8	10.5	45-11050 series, 1.0 mm – 1.8 mm	P, S	Lacquers, Enamels

INSTALLATION INSTRUCTIONS

For maximum transfer efficiency, do not use more pressure than is necessary to atomize the material being applied.

NOTE

When using HVLP do not exceed inlet pressures listed on page 7.

1. Connect the gun to a clean, moisture and oil free air supply using a conductive hose of at least 5/16 in I.D.

NOTE

Depending on hose length, larger I.D. hose may be required. Install an air gauge at the gun handle. See page 7 for operating pressures. Do not use more pressure than is necessary to atomize the material being applied. Excess pressure will create additional overspray and reduce transfer efficiency.

NOTE

If quick connect couplings are required, use only high flow quick connects approved for HVLP use. Other types will not flow enough air for correct gun operation.

NOTE

If an air adjusting valve is used at the gun inlet, use HAV-501 adjusting valve.

2. **SIPHON MODELS ONLY.** Attach the cup lid assembly to the fluid inlet connector. Position cup yoke at right angles to the gun.
3. **PRESSURE FEED MODELS.** Connect the fluid supply hose to fluid inlet connector.

NOTE

Before using the spray gun, flush it with solvent to ensure that the fluid passages are clean.

OPERATION

SIPHON MODELS

1. Mix coating material to manufacturer's instructions and strain material.
2. Fill the cup to no more than 3/4 inch from the top of the cup. DO NOT OVERFILL.
3. Attach to cup lid.

ALL MODELS

4. Turn fluid adjusting knob (24) clockwise to prevent fluid needle movement.
5. Turn sideport control (9) counter clockwise to fully open.
6. Adjust inlet air pressure if required.
7. Turn fluid adjusting knob counter clockwise until first thread shows.
8. Test spray. If the finish is too dry, reduce airflow by reducing air inlet pressure.
9. If finish is too wet, reduce fluid flow by turning fluid adjusting knob (24) clockwise. If atomization is too coarse, increase inlet air pressure. If too fine, reduce inlet pressure.
10. The pattern size can be reduced by turning sideport control (9) clockwise.
11. Hold gun perpendicular to surface being sprayed. Arcing or tilting may result in uneven coating.
12. The recommended spray distance is 8 inches.
13. Spray edges first. Overlap each stroke a minimum of 75%. Move gun at a constant speed.
14. Always turn off air supply and relieve pressure when gun is not in use.

PREVENTIVE MAINTENANCE AND CLEANING

To clean air cap and fluid nozzle, brush exterior with a stiff bristle brush. If necessary to clean cap holes, use a broom straw or toothpick if possible. If a wire or hard instrument is used, extreme care must be used to prevent scratching or burring of the holes which will cause a distorted spray pattern.

To clean fluid passages, remove excess material from gun, then flush with gun wash solution. Wipe the gun exterior with a dampened cloth. Never completely immerse in any solvent or cleaning solutions as this is detrimental to the lubricants and life of the spray gun.

NOTE

When replacing the fluid nozzle (7) or fluid needle (22), replace both at the same time. Using worn parts can cause fluid leakage. See page 4. Also, replace the needle packing at this time. Torque the fluid nozzle to 230–240 inch-lbs. Do not over tighten.

⚠ CAUTION

To prevent damage to fluid nozzle (7) or fluid needle (22), be sure to either 1) pull the trigger and hold while tightening or loosening the fluid nozzle, or 2) remove fluid adjusting knob (24) to relieve spring pressure against needle collar.

SIPHON CUP. Empty excess material and clean the cup. Make sure the vent hole in the lid is clear.

REMOVAL AND INSTALLATION PROCEDURES

NEEDLE AND VALVE DISASSEMBLY AND ASSEMBLY

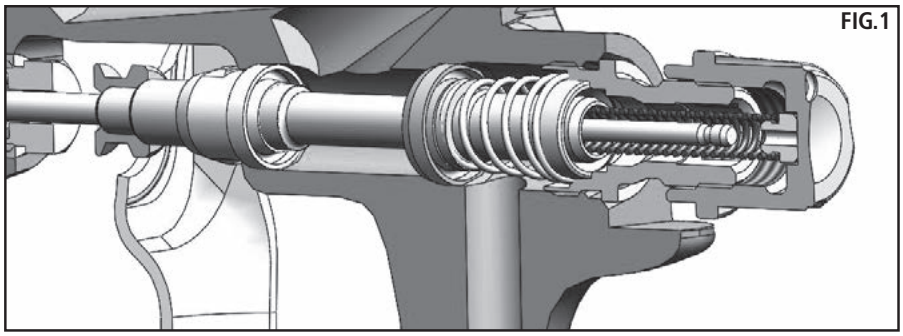


FIG.1

DISASSEMBLY

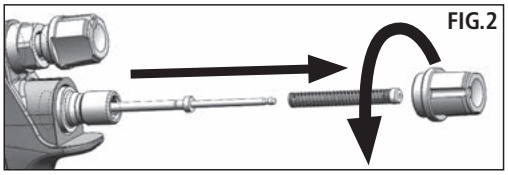


FIG.2

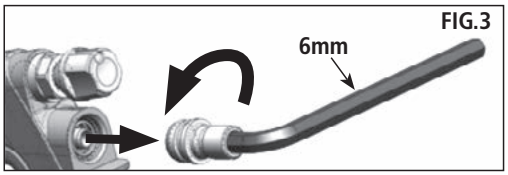


FIG.3

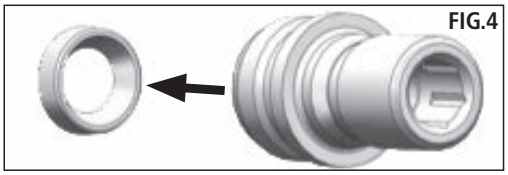


FIG.4

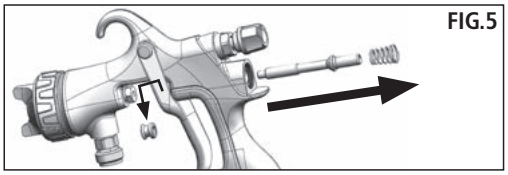


FIG.5

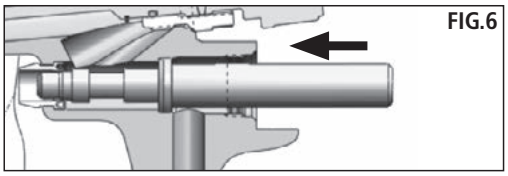


FIG.6

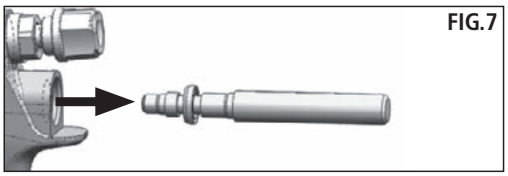


FIG.7

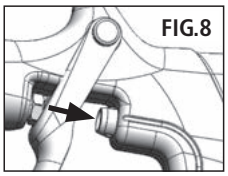


FIG.8

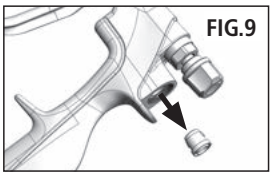


FIG.9

ASSEMBLY

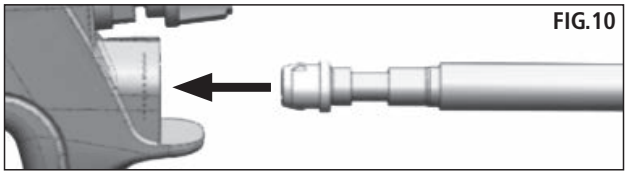


FIG.10

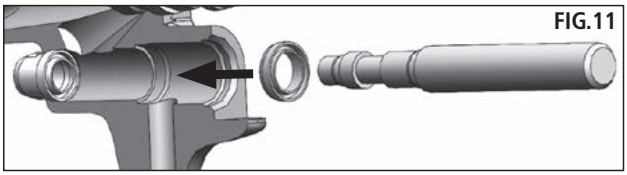


FIG.11

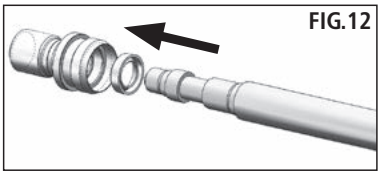


FIG.12

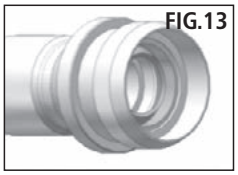


FIG.13

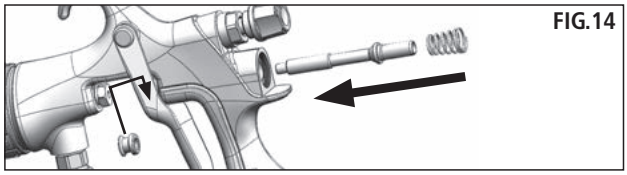


FIG.14

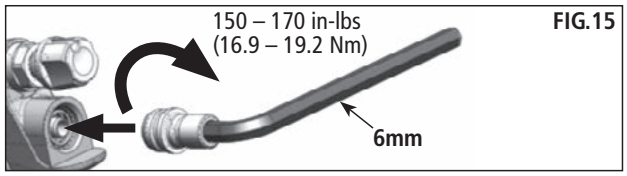


FIG.15

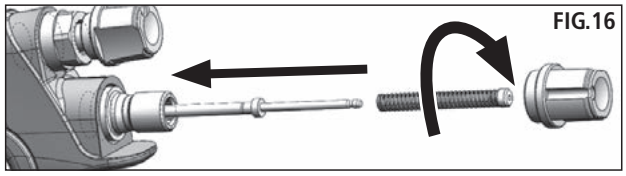


FIG.16

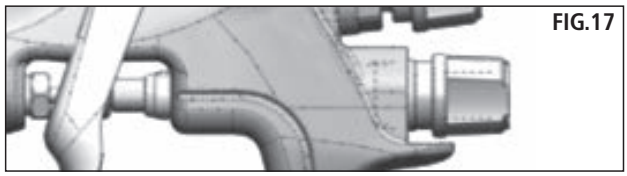


FIG.17

MAINTENANCE – FLUID NOZZLE AND BAFFLE REMOVAL AND INSTALLATION

FIG.1

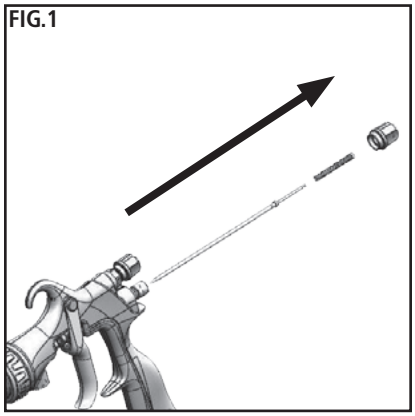


FIG.2

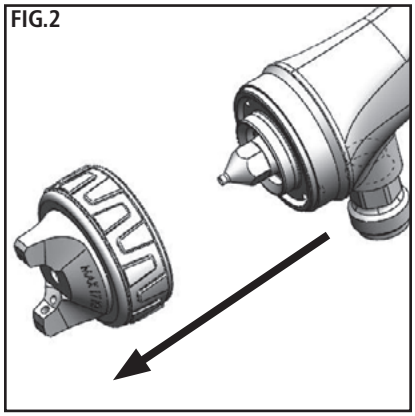


FIG.3

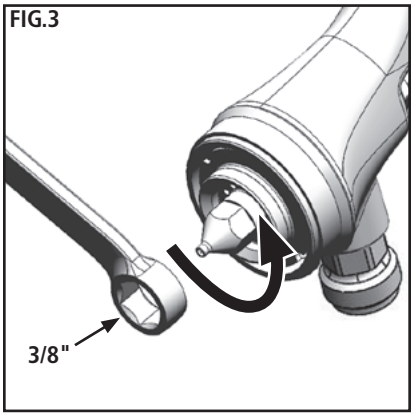


FIG.4

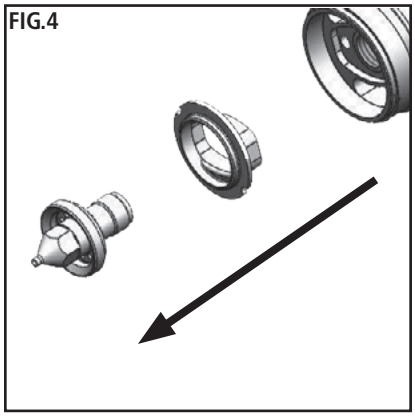


FIG.5

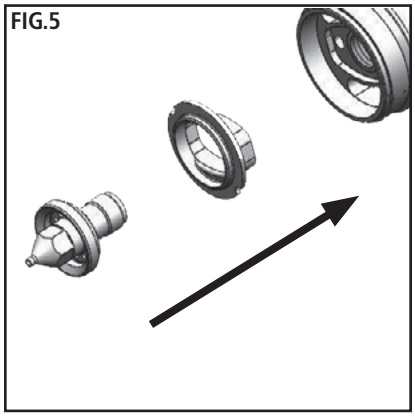


FIG.6

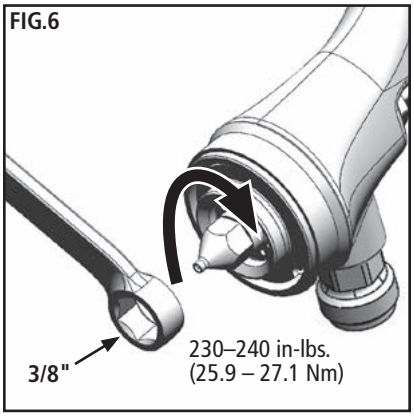


FIG.7

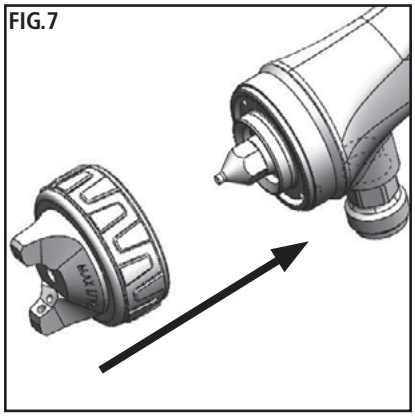
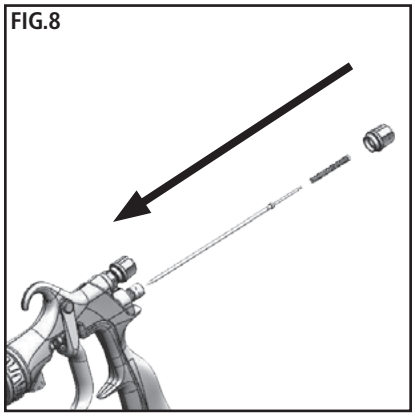


FIG.8



AIR CAP INDEX PIN (54-6184) INSTALLATION (OPTIONAL – 90° INCREMENTS INDEXING FEATURE)

FIG.1

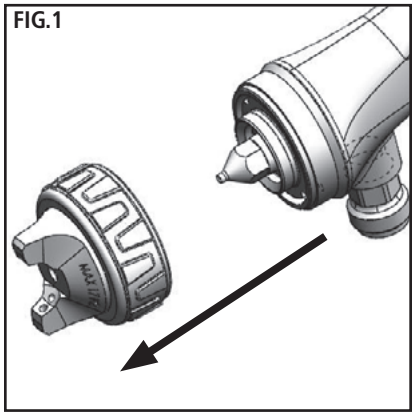


FIG.2

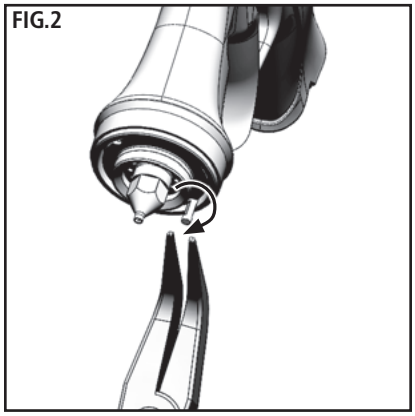
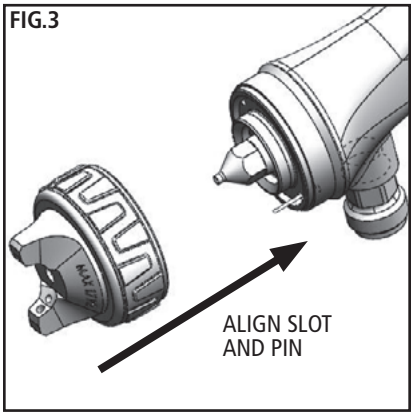


FIG.3



MAINTENANCE – NEEDLE PACKING REMOVAL AND INSTALLATION

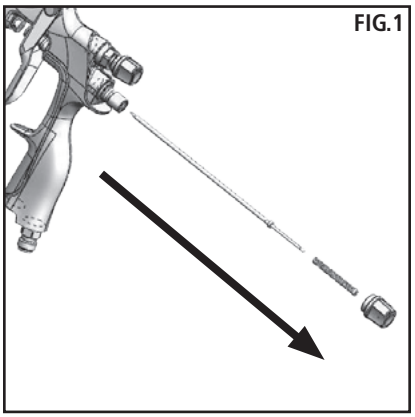


FIG.1

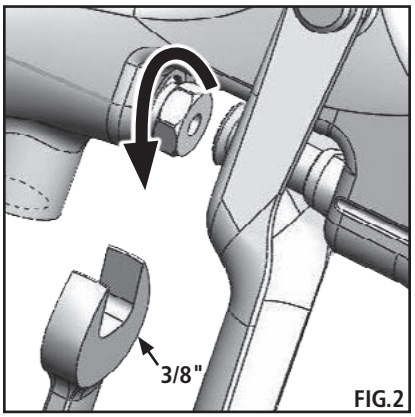


FIG.2

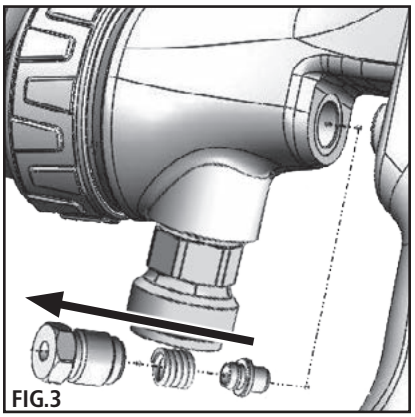


FIG.3

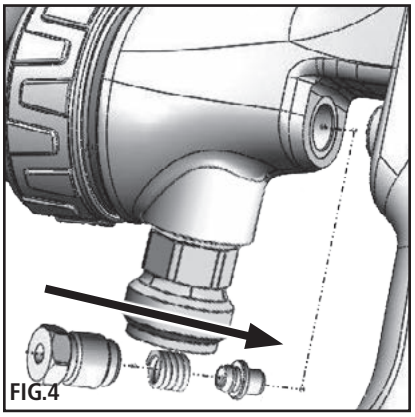


FIG.4

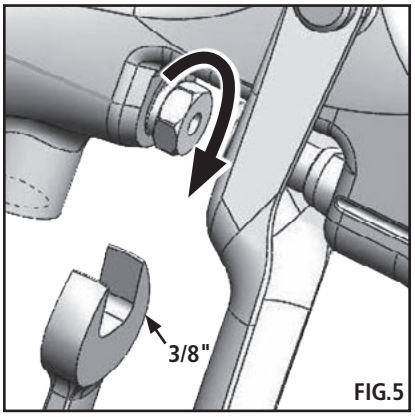


FIG.5

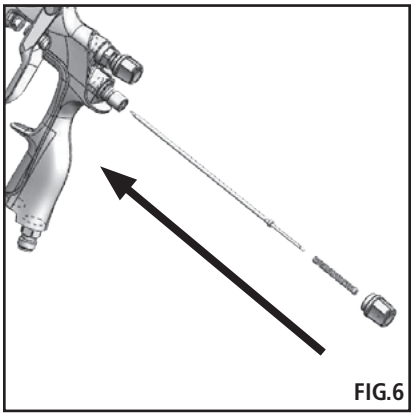


FIG.6

MAINTENANCE – SIDEPORT REMOVAL AND INSTALLATION

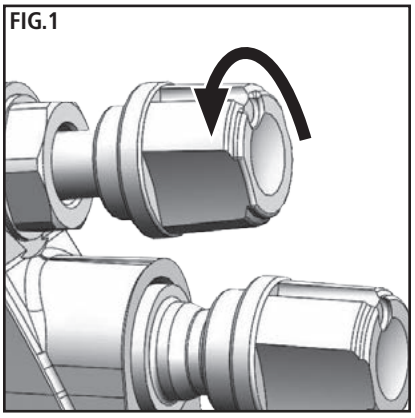


FIG.1

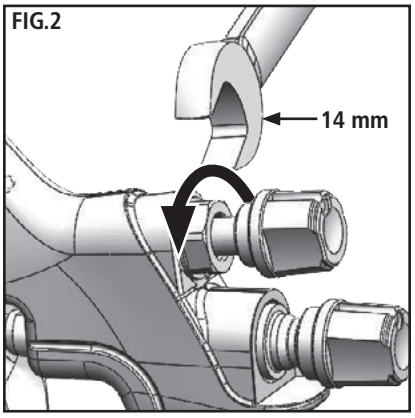
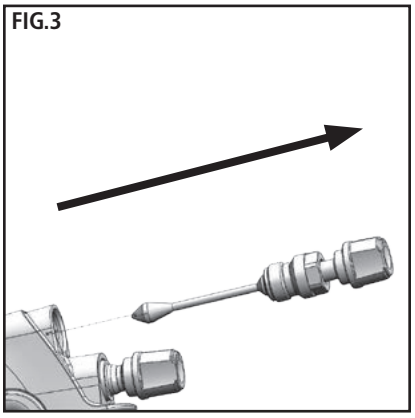


FIG.2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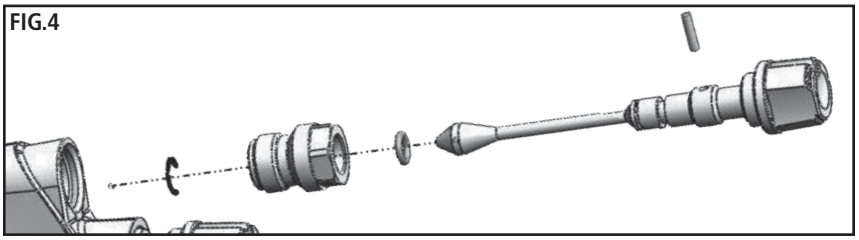


FIG.4

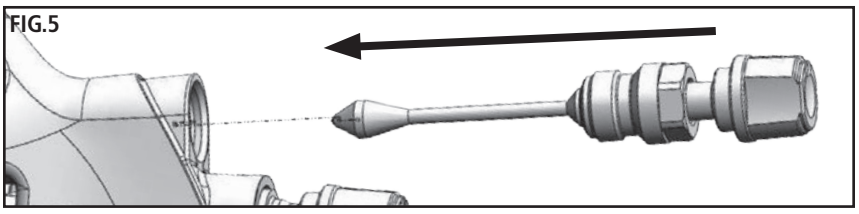


FIG.5

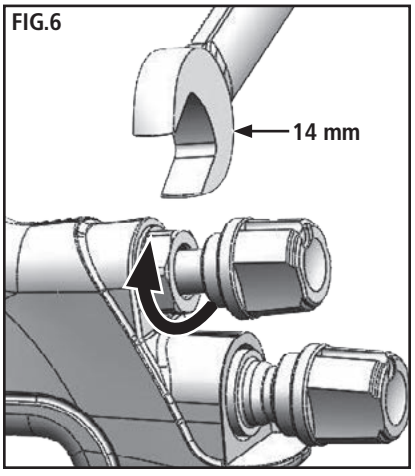


FIG.6

TROUBLESHOOTING

CONDITION	CAUSE	CORRECTION
Heavy top or bottom pattern 	Horn holes plugged. Obstruction on top or bottom of fluid tip. Cap and/or tip seat dirty.	Clean. Ream with non-metallic point. Clean. Clean.
Heavy right or left side pattern 	Left or right side horn holes plugged. Dirt on left or right side of fluid tip.	Clean. Ream with non-metallic point. Clean.
	Remedies for the top-heavy, bottom-heavy, right-heavy, and left-heavy patterns: 1. Determine if the obstruction is on the air cap or the fluid tip. Do this by making a test spray pattern. Then, rotate the cap one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. 2. If the defect is not inverted, it is on the fluid tip. Check for a fine burr on the edge of the fluid tip. Remove with #600 wet or dry sand paper. 3. Check for dried paint just inside the opening; remove by washing with solvent.	
Heavy center pattern 	Fluid flow too high for atomization air. Material flow exceeds air cap's capacity. Spreader adjustment valve set too low. Atomizing pressure too low. Material too thick.	Balance air pressure and fluid flow. Increase spray pattern width with spreader adjustment valve. Thin or lower fluid flow. Adjust. Increase pressure. Thin to proper consistency.
Split spray pattern 	Atomization air pressure too high. Fluid flow too low. Spreader adjusting valve set too high.	Reduce at transformer or gun. Increase fluid flow (increases gun handling speed). Adjust.
Jerky or fluttering spray 	*Loose or damaged fluid tip/seat. Material level too low. Container tipped too far. Obstruction in fluid passage. Dry or loose fluid needle packing nut.	Tighten or replace. Refill. Hold more upright. Backflush with solvent. Lubricate or tighten.
Unable to get round spray	Spreader adjustment screw not seating properly. Air cap retaining ring loose.	Clean or replace. Tighten.
Will not spray	No air pressure at gun. Fluid needle adjusting screw not open enough. Fluid too heavy for gravity feed.	Check air supply and air lines, blow out gun air passages. Open fluid needle adjusting screw. Thin material and/or change to larger tip size.
Paint bubbles in cup	Fluid tip not tight.	Tighten tip.
Fluid leaking or dripping from cup lid	Cup lid loose. Dirty threads on cup or lid. Cracked cup or lid.	Tighten lid. Clean. Replace cup and lid.

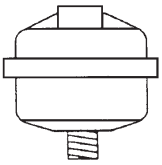
*Most common problem.

TROUBLESHOOTING

CONDITION	CAUSE	CORRECTION
Starved spray pattern	Inadequate material flow. Low atomization air pressure.	Back fluid adjusting screw out to first thread, or change to larger tip size. Increase air pressure and rebalance gun.
Excessive overspray	Too much atomization air pressure. Gun too far from work surface. Improper stroking (arcing, gun motion too fast).	Reduce pressure. Adjust to proper distance. Move at moderate pace, parallel to work surface.
Excessive fog	Too much or too fast-drying thinner. Too much atomization (air pressure.)	Remix properly. Reduce air pressure.
Dry spray	Air pressure too high. Gun tip too far from work surface. Gun motion too fast. Gun out of adjustment.	Reduce air pressure. Adjust to proper distance. Slow down. Adjust.
Fluid leaking from packing nut	Packing nut loose. Packing worn or dry.	Tighten, do not bind needle. Replace or lubricate.
Fluid leaking or dripping from front of gun	Packing nut too tight. Dry packing. Fluid tip or needle worn or damaged. Foreign matter in tip. Fluid needle spring broken. Wrong size needle or tip.	Adjust. Lubricate. Replace tip and needle. Clean. Replace. Replace.
Fluid dripping or leaking from bottom of cup	Cup loose on gun. Cup gasket worn or missing below cup. Cup threads dirty.	Tighten. Replace cup gasket. Clean.
Runs and sags	Too much material flow. Material too thin. Gun tilted on an angle, or gun motion too slow.	Adjust gun or reduce fluid flow. Mix properly or apply light coats. Hold gun at right angle to work and adapt to proper gun technique.
Thin, sandy coarse finish drying before it flows out	Gun too far from surface. Too much air pressure. Improper thinner being used.	Check distance. Normally approximately 8". Reduce air pressure and check spray pattern. Follow paint manufacturer's mixing instructions.
Thick, dimpled finish "orange peel"	Gun too close to surface. Too much material coarsely atomized. Air pressure too low. Improper thinner being used. Material not properly mixed. Surface rough, oily, dirty.	Check distance. Normally approximately 8". Follow paint manufacturer's mixing instructions. Increase air pressure or reduce fluid flow. Follow paint manufacturer's mixing instructions. Follow paint manufacturer's mixing instructions. Properly clean and prepare.

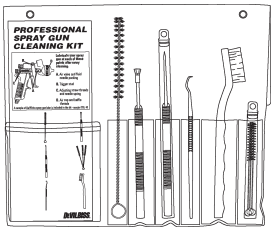
ACCESSORIES

HAF-507-K12
Whirlwind™
In-Line Air Filter
Kit of 12



Removes water, oil, and debris from the air line.

192212 Professional Spray Gun Cleaning Kit

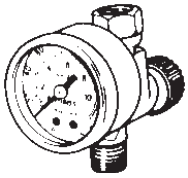


Contains six precision tools designed to effectively clean all DeVilbiss, Binks, Finishline and other brand spray guns.

6-429 Binks Gunners Mate Lube (Twenty 2 oz. bottles)

Compatible with all paint materials; contains no silicone or petroleum distillates to contaminate paint. MSDS available upon request.

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



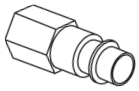
HAV-500 does not have pressure gauge. Use to control air usage at gun.

Millennium 3000
Twin Cartridge
Paint Spray Respirator

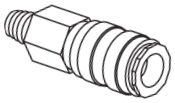
NIOSH-Certified, for respiratory protection in atmospheres not immediately dangerous to life.

Small	Medium	Large
40-141	40-128	40-143

Quick Connects for
HVLP Guns (Air)
High Flow Type



HC-4419 Stem
1/4" NPT(F)
Gun End

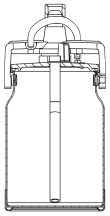


HC-4719 Coupler
1/4" NPT(M)
Hose End

29-3100 Scrubs® Hand Cleaner Towels

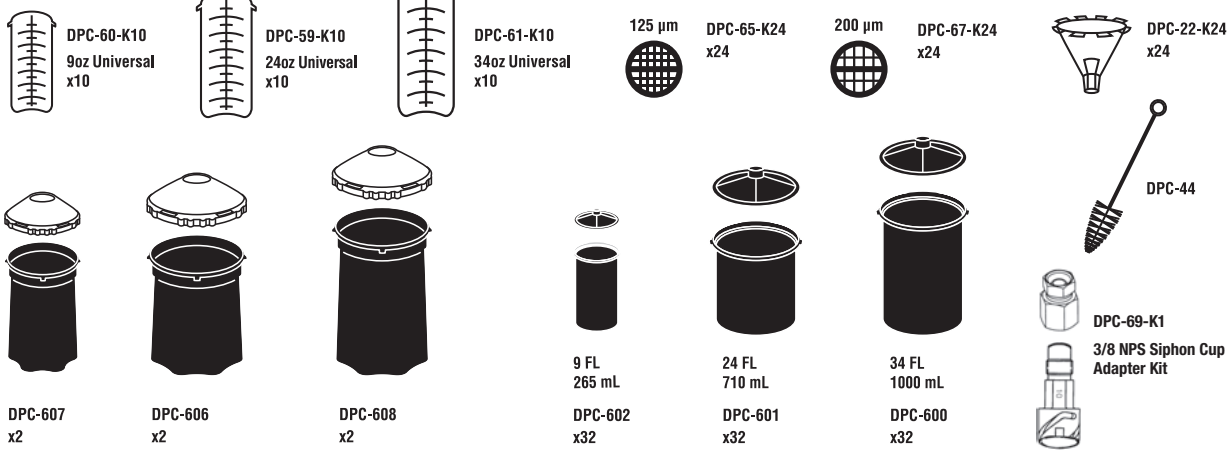
Scrubs® are a premoistened hand cleaner towel for painters, body men and mechanics that go where you go and no water is needed.

81-800
1 Qt. Siphon Cup
(Aluminum)



3/8" nps thread for full size guns.

DeKups® Accessories for siphon feed cups



NOTES

WARRANTY POLICY

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

Binks is part of Finishing Brands, a global leader in innovative spray finishing technologies. For technical assistance or to locate an authorized distributer, contact one of our international sales and customer support locations below.

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Fax: 1-888-246-5732

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