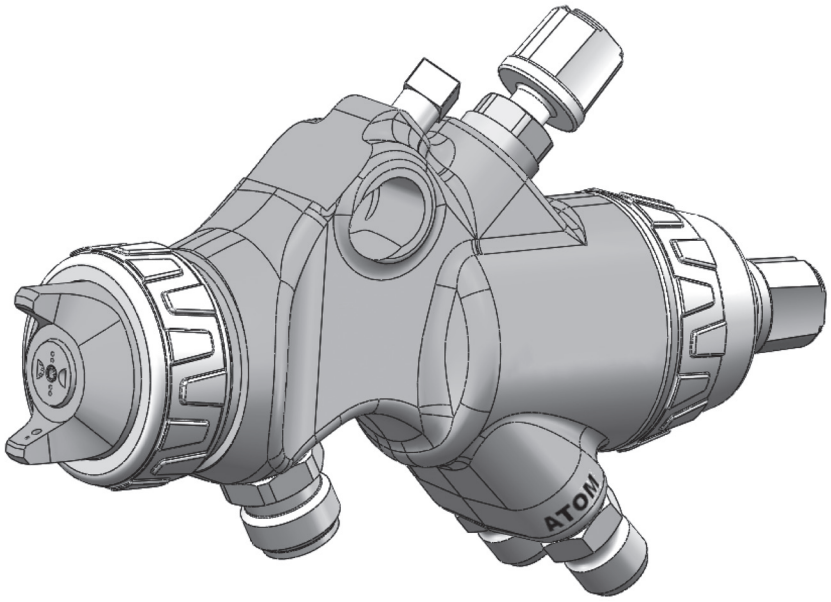
Binks®

SERVICE MANUAL EN

77-3049-R7



Binks

"TROPHY" SERIES AUTOMATIC SPRAY GUNS

For additional information or copies of your service manual, please visit us online at:

binks.com/en/library

Or use this QR code with your mobile device:

“TROPHY” SERIES AUTOMATIC SPRAY GUNS

Obey local or municipal regulations for product recycling and disposal.

02 CONTENTS

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03 SAFETY

03.1 SAFETY PRECAUTIONS

Before the operation, maintenance, or servicing of this Binks system; fully read and understand all technical and safety literature for your product. This manual contains information that is important for you to know and understand.

This information relates to USER SAFETY and the PREVENTION OF EQUIPMENT PROBLEMS.

To help you understand this information, we use recognizable ANSI Z535 and ISO warning boxes and symbols throughout this manual. Please obey these safety sections.

⚠ DANGER

DANGER!: Indicates a hazardous situation that, if not avoided, will result in death or severe injury.

⚠ WARNING

WARNING!: Indicates a hazardous situation that, if not avoided, could result in death or severe injury.

⚠ CAUTION

Caution!: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury, or equipment damage.

NOTICE

Notice: Indicates information considered important but not hazard related.

SAFETY

Safety: Indicates a type of safety instruction, or a separate panel on a safety placard, where specific safety-related instructions or procedures are described.

Careful study and continued use of this manual will provide a better understanding of the equipment functions and procedures.

This understanding will result in improved operation, efficiency, and longer, trouble-free service with faster and easier troubleshooting. If you need the necessary safety literature for your specific system, contact your local Binks representative or Binks directly.

NOTICE

This manual lists standard specifications and service procedures. Differences can occur between this literature and your equipment.

Differences in local or municipal codes, manufacturer or plant requirements, material delivery requirements, and more can make variations unpreventable. To find these differences, compare this manual to your system installation drawings and other applicable Binks equipment manuals.

⚠ WARNING

The user MUST read and be familiar with the Safety Section in this manual and the safety literature therein identified.

Only trained personnel can operate this equipment.

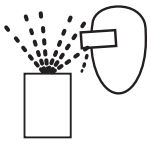
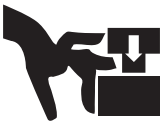
All personnel who operate, clean, or maintain this equipment MUST fully read and understand this manual! To operate and service the equipment, follow all WARNINGS and safety requirements.

The user must be aware of and adhere to ALL local building and fire codes and ordinances, as well as NFPA 33 AND EN 16985 SAFETY STANDARDS, LATEST EDITION, or applicable country safety standards, before the installation, operation, or servicing of this equipment.

⚠ WARNING

The hazards shown on the pages that follow can occur during the normal use of this Binks equipment, but not all listed hazards will be applicable to your product model or equipment.

Repairs may only be performed by personnel authorized by Binks.

AREAS Indicate possible hazard occurrences.	HAZARDS Indicate possible hazards.	SAFEGUARDS Prevention of possible hazards.
	**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.

AREAS Indicate possible hazard occurrences.	**HAZARDS** Indicate possible hazards.	**SAFEGUARDS** Prevention of possible hazards.
	**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.

03.2 ADDITIONAL SAFETY INFORMATION

Observe all local or municipal safety measures and wear approved protective equipment when servicing this equipment. Clean all spilled chemicals and materials and do all work in a clean and organized environment to prevent personal injury and equipment damage.

04 PRODUCT OVERVIEW

“TROPHY” SERIES AUTOMATIC SPRAY GUNS HVLP, LVMP & CONVENTIONAL (3465-XXXX-XXXX)

NOTICE

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.

Binks Trophy Series Automatic Spray Gun is the premier spray gun for use in automatic spray applications, incorporating some of the best features of our Trophy hand spray gun. Trophy Automatic gun offers total control of atomizing air pressure, side port air, fluid flow, and spray patterns in high and low production settings. Latest advancements in atomization technology have been incorporated for achieving consistent, fine finishes when spraying a wide range of industrial coatings.

All product contact surfaces are manufactured from FDA acceptable materials when using a 45-11050-XX, 45-11060-XX series fluid nozzle and a 47-6860, 47-6864, 47-6865, 47-6866 needle.

Binks Trophy Automatic Series Spray Guns can be used with pressure pots and pumps.

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

04.1 SPECIFICATIONS

Maximum Air Pressure	140 psi / 9.6 bar (P-1)
Maximum Fluid Pressure	140 psi / 9.6 bar (P-2)
Gun Body	Anodized Aluminum
Cylinder Air Pressure to Operate the Gun	65 psi / 4.5 bar
Fluid Path	Stainless Steel
Fluid Inlet Size	3/8" NPS / BSP(m)
Air Inlet Size	1/4" NPS / BSP(m)
Gun Weight	20.8 oz. / 590 grams
Wetted Parts	Stainless Steel & UHMWPE
Gun Mounting Hole	1/2” diameter

04.2 SETUP FOR SPRAYING

CONNECTING GUN TO MATERIAL HOSE

Gun should be connected by a suitable length of 3/8” diameter material hose fitted with a connector with a 3/8” NPS(f) nut at gun end. 1/4” diameter hose is recommended for use with low viscosity materials. (Fluid hoses of different composition are available for special fluids. See Binks hose catalog for hose selection.)

CONNECTING GUN TO ATOMIZING AIR

Gun should be connected by a suitable length of 5/16” or 3/8” diameter air hose fitted with a connector and a 1/4” NPS(f) nut at gun end.

CONNECTING GUN TO CYLINDER AIR

Gun should be connected with 3/16” I.D. or 1/8” I.D. air hose of shortest length possible with 1/4” NPS(f) connector. Cylinder air must be connected to a 3-way manual air valve or 3-way solenoid valve to operate properly.

04.3 OPERATING THE BINKS “TROPHY” SERIES AUTOMATIC SPRAY GUN

CONTROLLING THE MATERIAL FLOW

When fed from a pressure supply, an increase in the material pressure will increase the rate of flow. Correct fluid nozzle size insures correct material flow rate. If necessary, fluid flow can also be adjusted by adjusting the amount of needle travel. This is done by adjusting control knob (24) until the correct needle travel is achieved.

ADJUSTING THE SPRAY PATTERN

The width of the spray pattern is controlled by the side port control assembly (9). (See page 4). Turning this control clockwise until it is closed will give a round spray, turning it counterclockwise will widen the spray into a fan shape. The fan spray can be turned anywhere through 360° by positioning the air cap (5) relative to the gun. To effect this, loosen air cap assembly, position nozzle, then, re-tighten air cap assembly.

04.4 MAINTENANCE

LUBRICATION

Monthly: Remove piston assembly (17) and lubricate the air cylinder chamber and needle valve spring with a coating of Gunners Mate (35). Also, lubricate side port control assembly (9) with oil.

⚠ CAUTION

Never use lubricants containing silicone since these lubricants can cause finish defects. Binks Gunners Mate (35) is recommended.

REMOVAL OF PISTON

To remove the piston, first unscrew the end cap (15), remove two springs (16 & 23) and pull out the material needle (22). Remove the piston by screwing needle adjusting knob (24) into piston (21). See page 13 for details.

TO REPLACE NEEDLE SEAL AND GLAND ADAPTER IN FLUID INLET

See PISTON AND PACKING REMOVAL AND INSTALLATION PROCEDURES.

04.5 CLEANING

In certain states it is now against the law to spray solvents containing Volatile Organic Compounds (VOCs) into the atmosphere when cleaning a spray gun.

In order to comply with these new air quality laws Binks recommends one of the following two methods to clean your spray finishing equipment:

1. Spray solvent through the gun into a closed system. An enclosed unit, or spray gun cleaning station, condenses solvent vapors back into liquid form which prevents escape of VOCs into the atmosphere.

2. Place spray gun in a washer type container. This system must totally enclose the spray gun, cups, nozzles, and other parts during washing, rinsing, and draining cycles. This type of unit must be able to flush solvent through the gun without releasing any VOC vapors into the atmosphere. Additionally, open containers for storage or disposal of solvent, or solvent-containing cloth or paper, used for surface preparation and clean-up may not be used. Containers shall be non-absorbent.

To clean the gun, flush the fluid lines with solvent and blow air through the air lines to make sure all the air passages are dry.

⚠ CAUTION

Never completely submerge the gun in solvent as this will dissolve the lubricating oil and dry out the seals.

04.6 COMMON SPRAY ISSUES

NOTICE

Please review TROUBLESHOOTING for more details.

FAULTY SPRAY

A faulty spray may be caused by improper cleaning, dried materials around the fluid nozzle tip or in the air cap. Soak these parts in thinners that will soften the dried material and remove with a brush or cloth.

⚠ CAUTION

Never use metal instruments to clean the air or fluid nozzles. These parts are carefully machined and any damage to them will cause faulty spray.

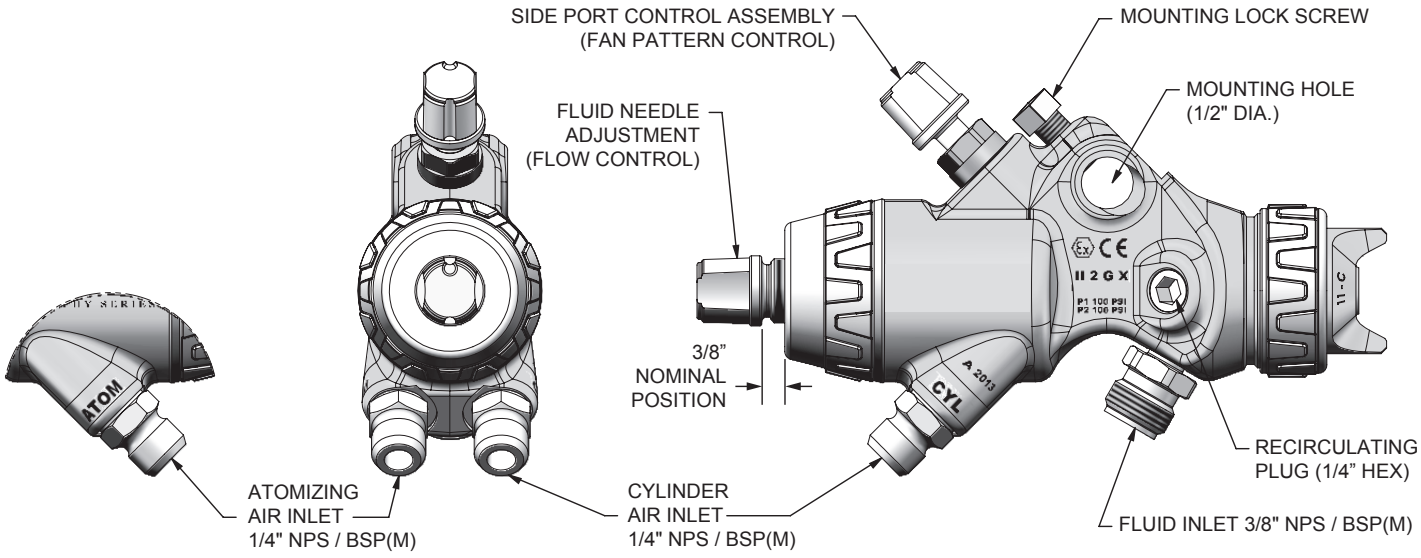
If either the air cap assembly (5) or fluid nozzle (7) are damaged, these parts must be replaced before perfect spray can be obtained.

INTERMITTENT SPRAY

If the spray flutters, it is caused by one of the following faults:

1. Insufficient material available. Check supply and replenish if necessary.
2. Loose fluid nozzle (2). Tighten, but without using undue force.
3. Leakage at gland adapter (35) and needle seal (36). Tighten packing nut (39) if loose, and replace gland adapter and needle seal if necessary.
4. Fluid connection insufficiently tight or dirt on cone faces of connection. Correct as necessary.
5. Leaking cylinder air and/or inadequate pressure.

04.7 SPRAY GUN FEATURES



04.8 BINKS "TROPHY" SERIES AUTOMATIC SPRAY GUN NUMBERING SYSTEM

3465 – 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
V	VITREOUS (TUNGSTEN CARBIDE NEEDLE & NOZZLE)
P	PLASTIC TIP

0 FOR FUTURE USE

See charts on the following pages for complete gun assemblies.

04.9 PARTS LIST

PARTS LIST

ITEM NO.	PART NUMBER		DESCRIPTION	QTY.
1	54-6120		AIR CAP RING ASSEMBLY	1
5	SEE CHARTS		AIR CAP	1
6	JGA-156-K10		SPRING-CLIP (KIT OF 10)	1
7	SEE CHARTS		FLUID NOZZLE	1
8	54-6102-K3		SEPARATOR / BAFFLE (KIT OF 3)	1
9	54-6313		SIDE PORT ASSEMBLY	1
10	—	Δ	SIDE PORT RETAINING CLIP	1
11	—		SIDE PORT VALVE BODY	1
12	—	Δ	SIDE PORT O-RING, Ø 4.8 x 1.6	1
13	—		SIDE PORT KNOB & STEM	1
14	—	Δ	SIDE PORT PIN	1
15	54-6312		PISTON CAP	1
16	54-6311		PISTON SPRING	1
17	54-6322		PISTON ASSEMBLY	1
18	—	•	O-RING, INSIDE PISTON	1
19	—	•	O-RING, OUTSIDE PISTON	1
20	—	•	O-RING, INSIDE PISTON	1
21	—		PISTON	1
22	47-6860		NEEDLE, STAINLESS, MARKING: I (STANDARD)	1
	47-6861		NEEDLE, TUNGSTEN CARBIDE, MARKING: II	1
	47-6862		NEEDLE, PLASTIC, MARKING: III	1
	SEE CHART 1		NEEDLE, FEATHERING	1
23	54-6320-K3	■	SPRING / PAD NEEDLE ASSEMBLY (KIT OF 3)	1
24	54-6309		NEEDLE ADJUSTING KNOB	1
25	54-6319		PACKING CARTRIDGE ASSEMBLY	1
26	54-6318-K3		NEEDLE PACKING, GREEN (KIT OF 3)	1
27	—	§	O-RING, OUTSIDE CARTRIDGE	1
28	—		PACKING BODY	1
29	—	§	O-RING, INSIDE CARTRIDGE	1
30	54-6315-K3		PACKING SCREW (KIT OF 3)	1
31	20-1359-1		SET SCREW, MOUNTING	1
32	—		GUN BODY ASSEMBLY WITH INSERT	1
33	54-308		FITTING, AIR CONNECTION, 1/4” NPS	2
34	54-6317-K3		PLUG, RECIRCULATING FLUID INLET, 1/4” HEX (KIT OF 3)	1
35	—		GUNNER’S MATE (3 CC BAG)	1
36	82-469		GUN BRUSH	1
37	54-6316	◊	RECIRCULATING FITTING, 3/8” NPS(F)	1
38	54-6158	◊	REMOTE FAN CONTROL FITTING ASSEMBLY, 1/4” NPS/BSPP(M)	1

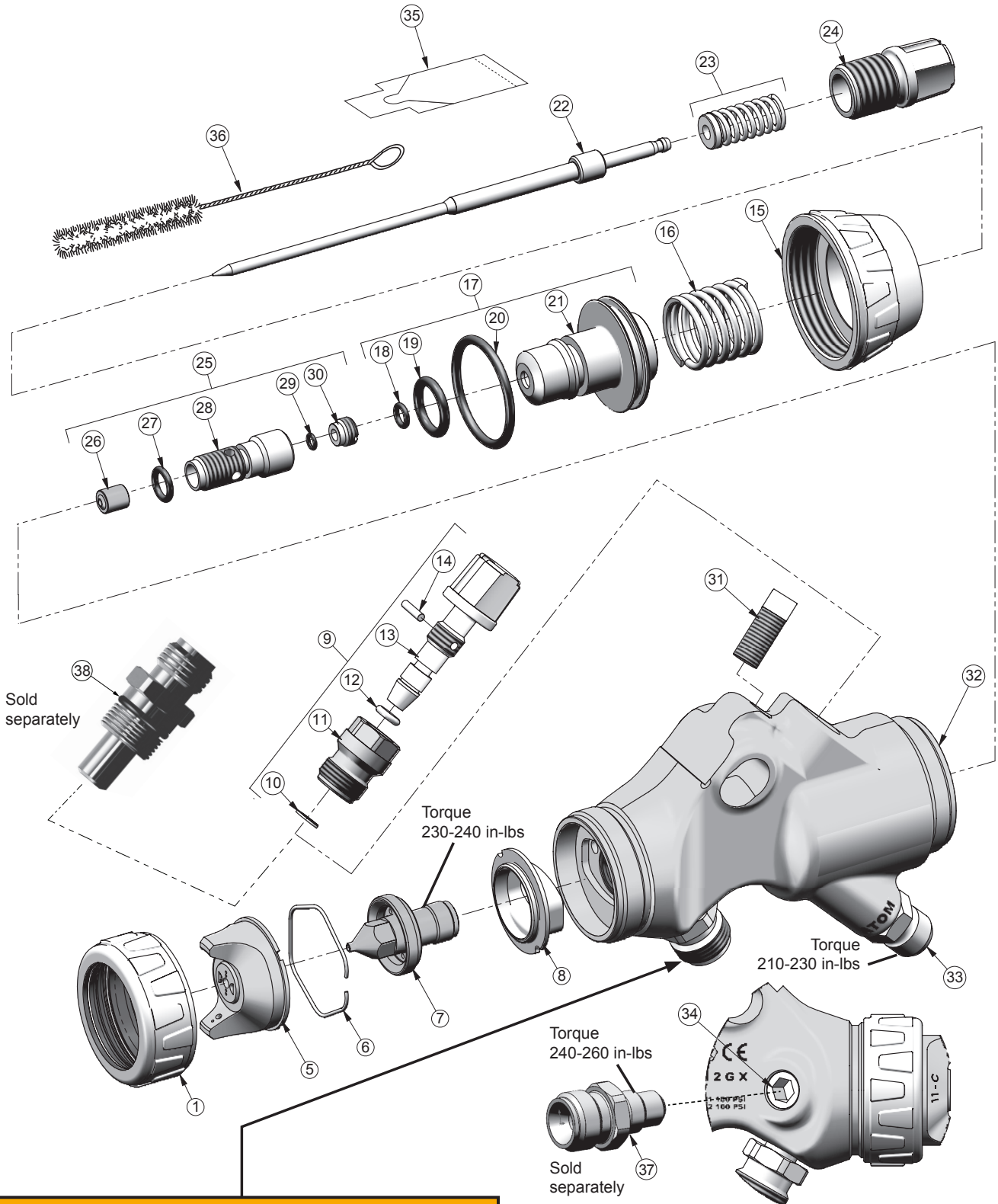
Δ PARTS INCLUDED IN SIDEPORT KIT GTI-428-K5

• PARTS INCLUDED IN KIT 54-6327-K3

■ OPTIONAL, HEAVY DUTY SPRING 54-839 (NO SPRING PAD REQUIRED)

§ PARTS INCLUDED IN KIT 54-6328-K3

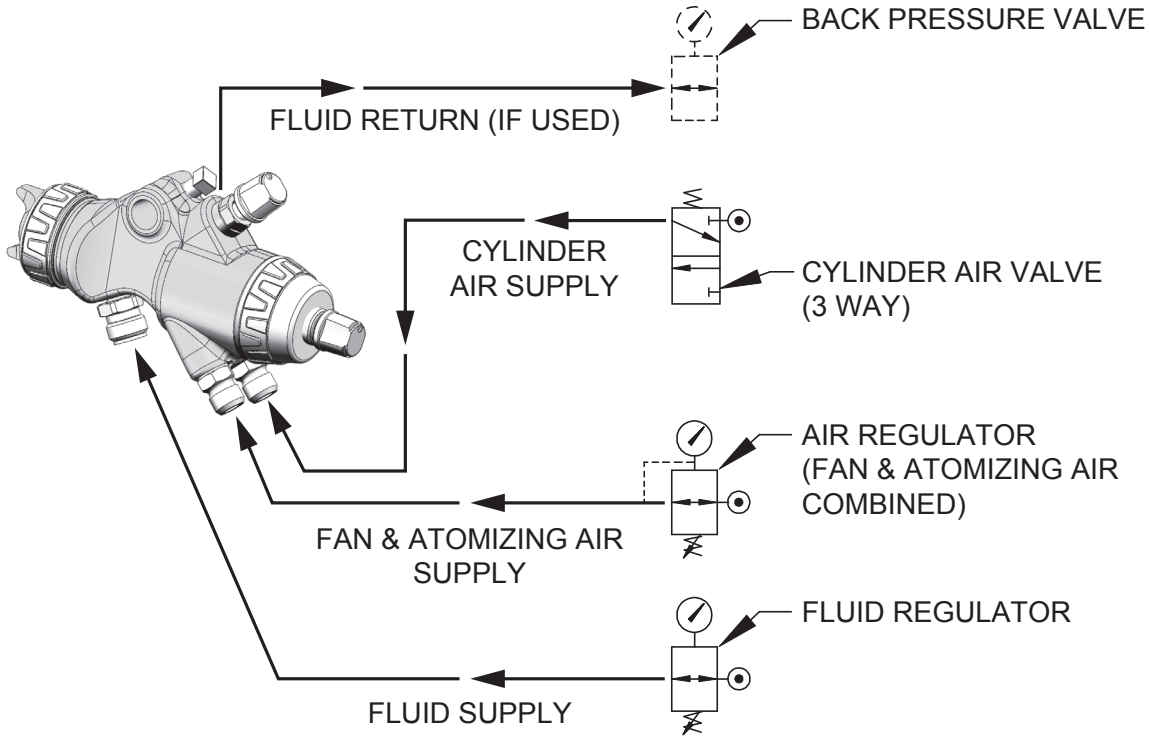
◊ OPTIONAL ITEM, PURCHASE SEPARATELY



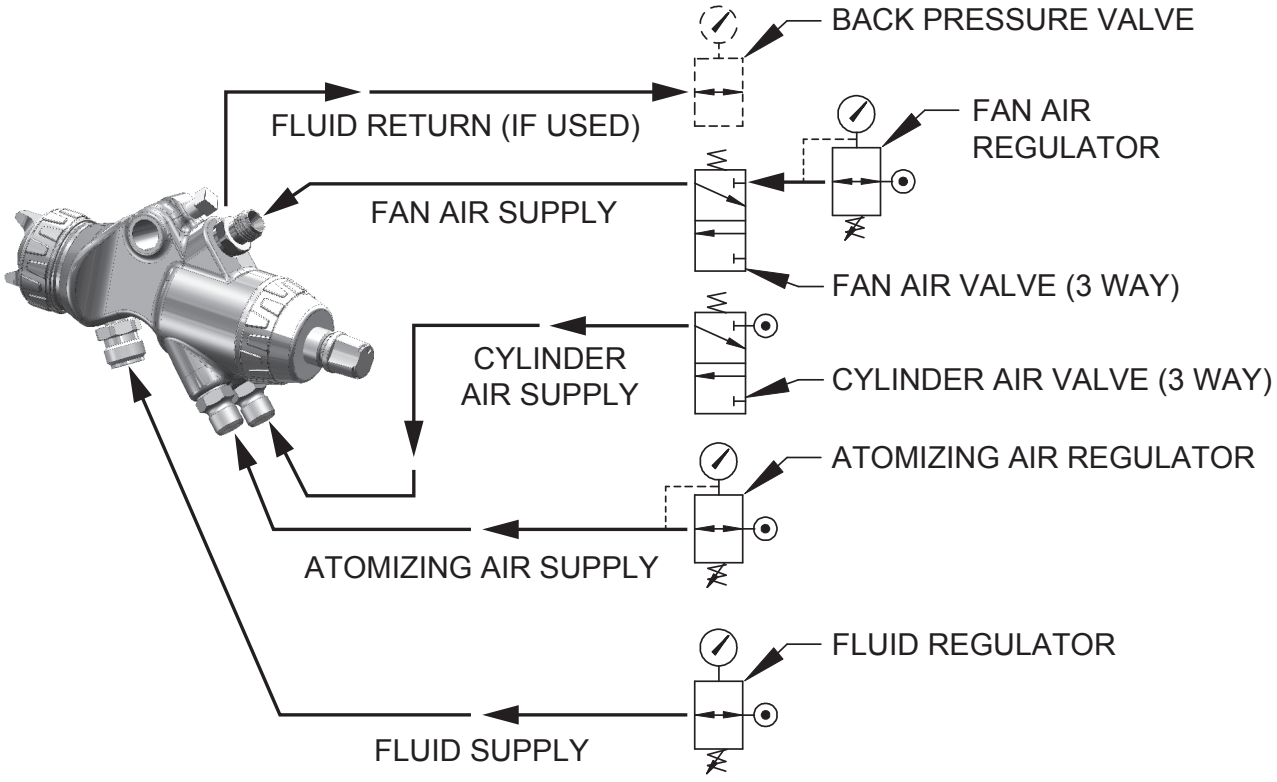
⚠ CAUTION

The fluid inlet fitting is not meant to be removed or replaced. Permanent damage may occur to the gun body, if removed.

04.10 STANDARD SPRAY GUN HOOK-UP – COMBINED FAN & ATOMIZING AIR



04.11 OPTIONAL SPRAY GUN HOOK-UP – SEPARATE FAN & ATOMIZING AIR



04.12 PISTON AND PACKING REMOVAL AND INSTALLATION PROCEDURES

NOTICE

Disassembly shown – reverse sequence to assemble.

FIG.1

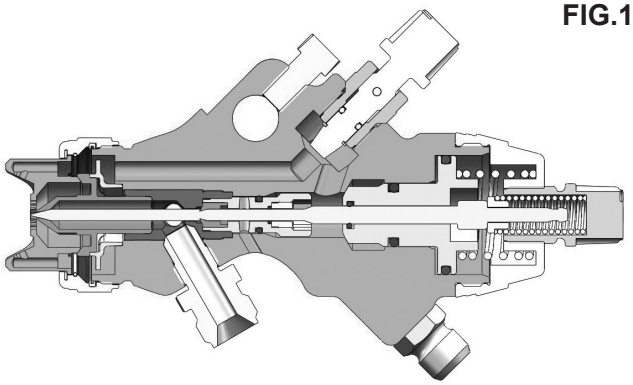


FIG.2

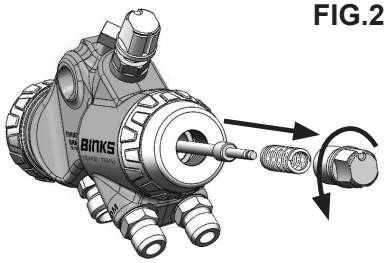


FIG.3

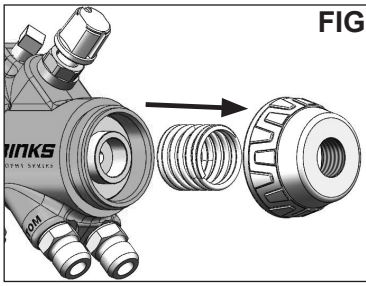


FIG.4

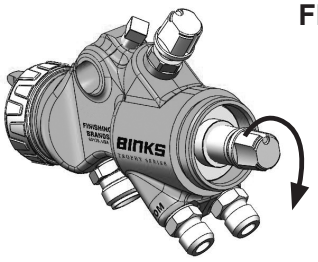


FIG.5

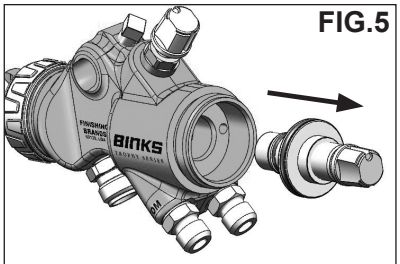


FIG.6

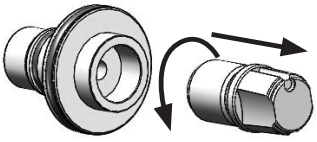


FIG.7

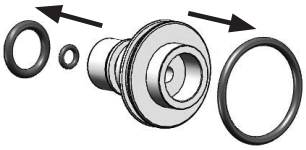


FIG.8

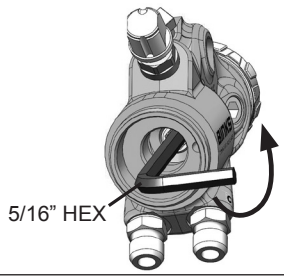


FIG.9

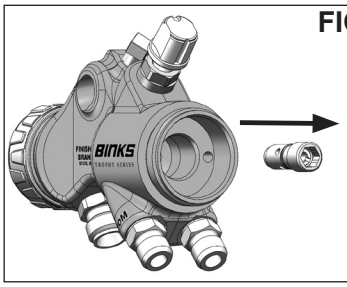


FIG.10

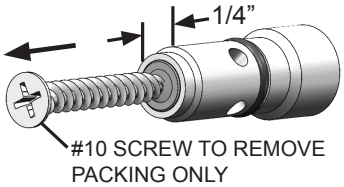


FIG.11

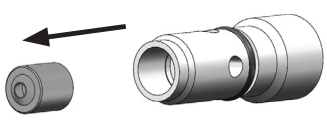


FIG.12

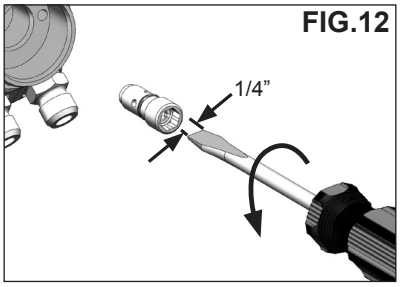
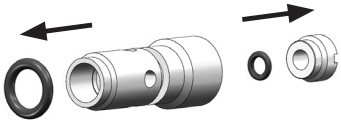


FIG.13



04.13 FLUID NEEDLE, NOZZLE AND BAFFLE REMOVAL AND INSTALLATION

FIG.1

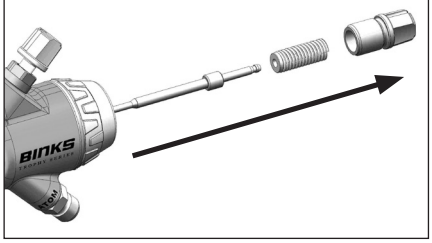


FIG.2

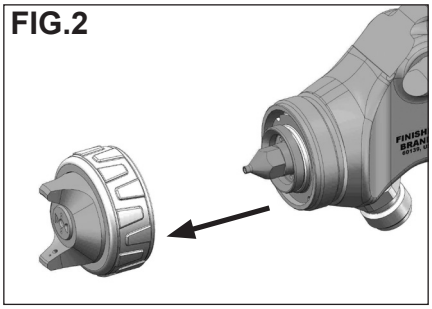


FIG.3

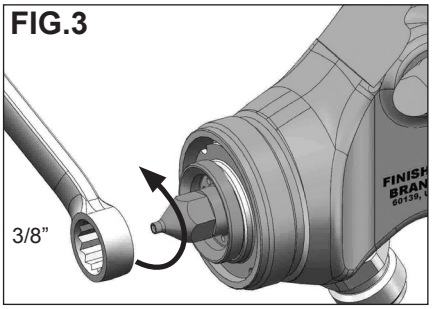


FIG.4

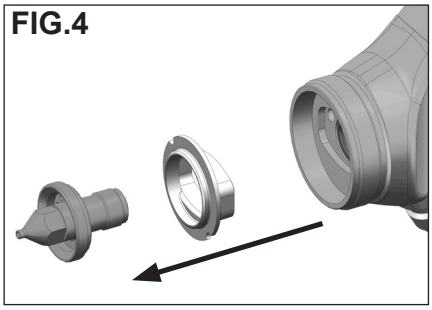


FIG.5

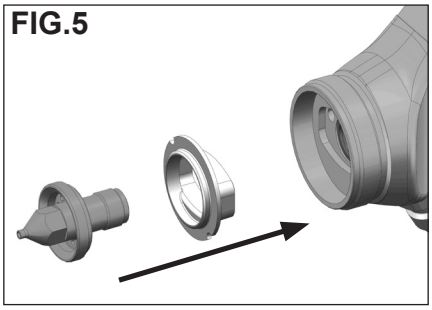


FIG.6

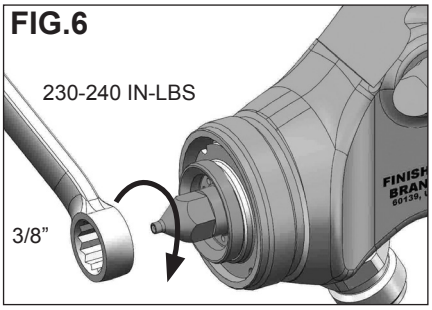


FIG.7

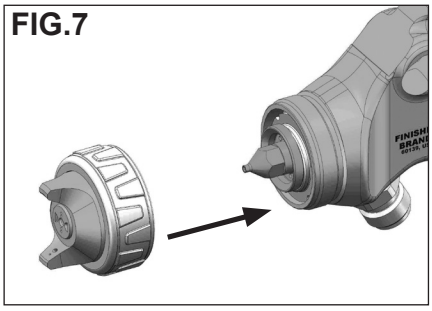
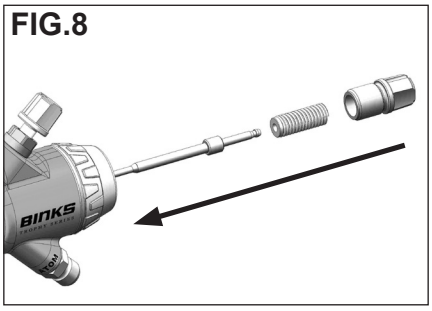


FIG.8



04.14 AIR CAP INDEX PIN (54-6184) INSTALLATION

NOTICE

Optional – 90° increments indexing feature.

FIG.1

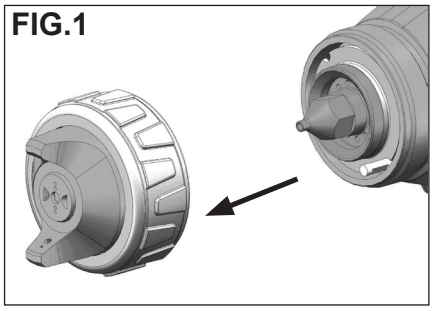


FIG.2

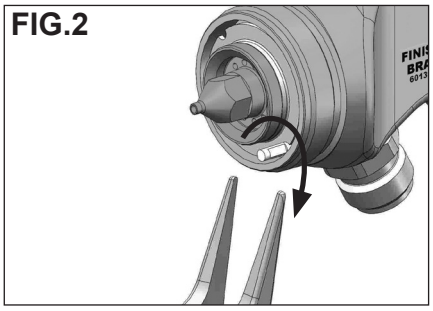
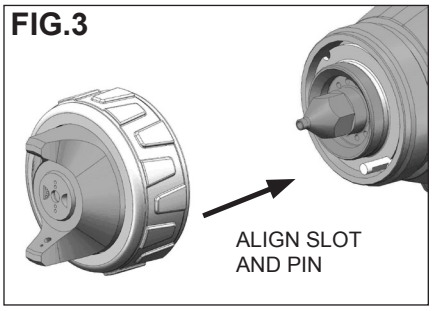
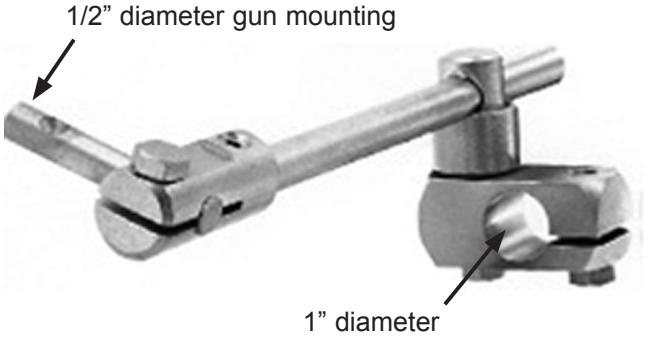


FIG.3

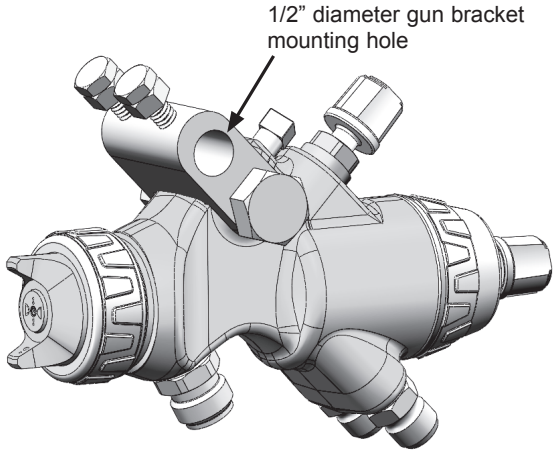


04.15 ACCESSORIES



54-380 MOUNTING BRACKET FOR AUTOMATIC SPRAY GUNS

- Steel bracket
- Adjustable to any position
- 18” bracket arm
- 1” diameter bracket clamp hole for attachment to facility hardware
- Shipping weight: 5 lbs.
- Part Sheet: 77-1185



54-6004 MOUNTING BRACKET FOR AUTOMATIC SPRAY GUNS

- Allows for quick gun removal without changing the gun’s original spraying position

54-6198 NEEDLE ADJUSTMENT STOP FOR AUTOMATIC SPRAY GUNS

04.16 OPTIONAL NEEDLES, NOZZLES AND AIR CAPS

CHART 1: STAINLESS STEEL FEATHERING NEEDLES AND NOZZLES – OPTIONAL		
FEATHERING NEEDLE PART NO.	MARKING ON THE NEEDLE	MATCHING NOZZLE P/N (ORIFICE SIZE)
47-6864	I IIII	45-11050-12 1.2MM (.047")
47-6865	II IIII	45-11050-14 1.4MM (.055")
47-6866	III IIII	45-11050-18 1.8MM (.071")

CHART 2: TUNGSTEN CARBIDE NOZZLES AND NEEDLES		
NOZZLE SIZE	TC NOZZLE P.N.	TC NEEDLE P.N.
1.4 MM (.055")	45-11080-14	47-6861
1.8 MM (.071")	45-11080-18	47-6861
2.2 MM (.086")	45-11080-22	47-6861
2.6 MM (.102")	45-11080-26	47-6861

CHART 3: STAINLESS STEEL (HARDENED) FLUID NOZZLES – STD.		
STAINLESS FLUID NOZZLE ORIFICE SIZE		FLUID 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 4: 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
54-6148-K	24-L KIT
54-6149-K	25-L KIT
HVLP	
54-6151-K	31-H KIT – HVLP
54-6152-K	32-H KIT – HVLP
54-6153-K	33-H KIT – HVLP
54-6154-K	39-H KIT – HVLP

04.17 "TROPHY" SPRAY GUN SETUPS

CHART 5: CONVENTIONAL 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** wash primers, dyes, stains, solvents, water, inks, sealers, laquers, lubricants, zinc chromates, acrylics	3465-10CN-11S0	1.0 mm (.039") X 11C
	3465-12CN-11S0	1.2 mm (.047") X 11C
	3465-14CN-11S0	1.4 mm (.055") X 11C
	3465-16CN-11S0	1.6 mm (.063") X 11C
	3465-16CN-12S0	1.6 mm (.063") X 12C
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup** synthetic enamels, varnishes, shellacs, fillers, primers, epoxies, urethanes, lubricants, wax emulsions, enamels	3465-12CN-11S0	1.2 mm (.047") X 11C
	3465-14CN-11S0	1.4 mm (.055") X 11C
	3465-16CN-11S0	1.6 mm (.063") X 11C
	3465-16CN-12S0	1.6 mm (.063") X 12C
	3465-18CN-11S0	1.8 mm (.070") X 11C
	3465-20CN-14S0	2.0 mm (.079") X 14C
	3465-22CN-14S0	2.2 mm (.087") X 14C
HEAVY 70-160 CENTIPOISE **31-66 sec. Zahn 2 cup**	3465-16CN-11S0	1.6 mm (.063") X 11C
	3465-16CN-12S0	1.6 mm (.063") X 12C
	3465-18CN-11S0	1.8 mm (.070") X 11C
	3465-20CN-14S0	2.0 mm (.079") X 14C
	3465-22CN-14S0	2.2 mm (.087") X 14C
ADHESIVES water based vinyl glues, solvent based neoprenes, contact cements	3465-20CN-14S0	2.0 mm (.079") X 14C
	3465-22CN-14S0	2.2 mm (.087") X 14C
MOLD RELEASE	3465-12CN-11S0	1.2 mm (.047") X 11C
CERAMICS abrasive materials, glazes, engobes, porcelain enamel	3465-14CN-14V0	1.4 mm (.055") X 14C ■
	3465-18CN-14V0	1.8 mm (.070") X 14C ■
	3465-22CN-14V0	2.2 mm (.087") X 14C ■
	3465-26CN-14V0	2.6 mm (.102") X 14C ■
NON-STICK COATINGS	3465-10CN-11S0	1.0 mm (.039") X 11C
	3465-12CN-11S0	1.2 mm (.047") X 11C
HAMMERS	3465-14CN-11S0	1.4 mm (.055") X 11C
	3465-16CN-11S0	1.6 mm (.063") X 11C
	3465-16CN-12S0	1.6 mm (.063") X 12C
WRINKLE ENAMELS	3465-14CN-11S0	1.4 mm (.055") X 11C
	3465-16CN-11S0	1.6 mm (.063") X 11C
ZINC RICH COATINGS	3465-22CN-14V0	2.2 mm (.087") X 14C ■

■ Tungsten carbide needle and nozzle set-ups

CHART 6: LVMP 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**	3465-85LV-22S0	0.85 mm (.034") X 22L
	3465-10LV-22S0	1.0 mm (.039") X 22L
	3465-12LV-23S0	1.2 mm (.047") X 23L
	3465-14LV-23S0	1.4 mm (.055") X 23L
	3465-14LV-24S0	1.4 mm (.055”) X 24L
	3465-85LV-25S0	0.85 mm (.034”) X 25L
	3465-10LV-25S0	1.0 mm (.039”) X 25L
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup**	3465-12LV-23S0	1.2 mm (.047") X 23L
	3465-14LV-23S0	1.4 mm (.055") X 23L
	3465-14LV-24S0	1.4 mm (.055”) X 24L
	3465-16LV-23S0	1.6 mm (.063”) X 23L
	3465-14LV-25S0	1.4 mm (.055”) X 25L
	3465-18LV-25S0	1.8 mm (.070”) X 25L

CHART 8: 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**	3465-12CN-16S0	1.2 mm (.047") X 16
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup**	3465-12CN-16S0	1.2 mm (.047") X 16

CHART 7: HVLP 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**	3465-85HV-33S0	0.85 mm (.034") X 33H
	3465-85HV-31P0	0.85 mm (.034") X 31H ●
	3465-10HV-33S0	1.0 mm (.039") X 33H
	3465-10HV-31P0	1.0 mm (.039") X 31H ●
	3465-10HV-32S0	1.0 mm (.039") X 32H
	3465-12HV-32S0	1.2 mm (.047") X 32H
	3465-12HV-31P0	1.2 mm (.047”) X 31H ●
	3465-85HV-39S0	0.85 mm (.034”) X 39H
	3465-10HV-39S0	1.0 mm (.039”) X 39H
	3465-12HV-39S0	1.2 mm (.047”) X 39H
MEDIUM 25-70 CENTIPOISE **20-30 sec. Zahn 2 cup**	3465-10HV-32S0	1.0 mm (.039”) X 32H
	3465-12HV-32S0	1.2 mm (.047”) X 32H
	3465-12HV-31P0	1.2 mm (.047") X 31H ●
	3465-14HV-32S0	1.4 mm (.055") X 32H
	3465-14HV-31P0	1.4 mm (.055") X 31H ●
	3465-16HV-32S0	1.6 mm (.063") X 32H
	3465-18HV-32S0	1.8 mm (.070”) X 32H
	3465-12HV-39S0	1.2 mm (.047”) X 39H
	3465-14HV-39S0	1.4 mm (.055”) X 39H
HEAVY 70-160 CENTIPOISE **31-66 sec. Zahn 2 cup**	3465-14HV-32S0	1.4 mm (.055") X 32H
	3465-14HV-31P0	1.4 mm (.055") X 31H ●
	3465-16HV-32S0	1.6 mm (.063") X 32H
	3465-18HV-32S0	1.8 mm (.070") X 32H

● Plastic needle tip set-ups

04.18 "TROPHY" SPRAY GUN AIR CAP AND FLUID NOZZLES

CHART 9: CONVENTIONAL AIR CAP AND FLUID NOZZLES							
AIR CAP	AIR CAP PART NO.	SPRAY PATTERN RANGE	CFM @ 30 PSI	CFM @ 50 PSI	CFM @ 70 PSI	FLUID NOZZLE	TYPICAL COATINGS
11-C	46-6500	8 – 12"	9.8	14.2	18.7	45-11050 series, 1.0 mm – 1.8 mm	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	Lacquers, Enamels, Top Coats, Low Viscosity Adhesives
14-C	46-6503	8 – 14"	17.0	24.4	31.2	45-11060 series, 2.0 mm – 2.6 mm or 45-11080 Tungsten Carbide Series (VT), 1.4 mm – 2.6 mm	Zinc Rich, Adhesives, Glazes, Engobes, Ceramics, Porcelain Enamels

CHART 10: LVMP – LOW VOLUME MEDIUM PRESSURE AIR CAP AND FLUID NOZZLES					
AIR CAP	AIR CAP PART NO.	SPRAY PATTERN RANGE	CFM @30 PSI GUN INLET (DYNAMIC)	FLUID NOZZLE	TYPICAL COATINGS
22-L	46-6510	4 – 12"	11.2	45-11050 series, 0.5 mm – 1.6 mm	Stains, Primers, Lacquers, Enamels, Acrylics, Reduced Latex
23-L	46-6511	4 – 12"	10.6	45-11050 series, 1.0 mm – 1.8 mm	Lacquers, Enamels, Top Coats, Low Viscosity Adhesives
24-L	46-6512	2 – 6”	14.3	45-11050 series, 0.5 mm – 1.8 mm	Small Pattern Applications of Stains, Enamels, Lacquers, Acrylics
25-L	46-6513	4 – 15”	14.7	45-11050 series, 0.85 mm – 1.8 mm	Dyes, Stains, Toners, Enamels, Lacquers, Primers, Urethanes, Solvent Coatings, Waterborne Coatings

CHART 11: HVLP – HIGH VOLUME LOW PRESSURE AIR CAP AND FLUID NOZZLES						
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	TYPICAL COATINGS
31-H	46-6517	8 – 12"	10.5	17	45-11050 series, .85 mm – 1.8 mm	Stains, Low Viscous Enamels
32-H	46-6518	8 – 18"	15.5	24	45-11050 series, .85 mm – 1.8 mm	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	Stains, Lacquers, Enamel, Multi-Color, Multi-Spec, Nonstick Coatings
39-H	46-6525	4 – 12"	8.7	14	45-11050 series, .85 mm – 1.6 mm	Dyes, Stains, Toners, Enamels, Lacquers, Primers, Urethanes, Solvent Coatings, Waterborne Coatings

CHART 12: ROUND SPRAY AIR CAP AND FLUID NOZZLES							
AIR CAP	AIR CAP PART NO.	SPRAY PATTERN RANGE	CFM @ 30 PSI	CFM @ 50 PSI	CFM @ 70 PSI	FLUID NOZZLE	TYPICAL COATINGS
16	46-6505	2 – 4"	5.6	7.8	10.5	45-11050 series, 1.0 mm – 1.8 mm	Lacquers, Enamels

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 nonmetallic 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 nonmetallic 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 paint by washing with solvent.	
Heavy center pattern 	Fluid flow too high for atomization air (pressure feed). Material flow exceeds air cap's capacity. Spreader adjustment valve set too low. Atomizing pressure too low. Material too thick.	Balance air and fluid pressure. 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 pressure too low (pressure feed only). Spreader adjusting valve set too high.	Reduce at transformer or gun. Increase fluid pressure (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. Loose or broken fluid tube or fluid inlet nipple. Dry or loose fluid needle packing nut.	Tighten or replace. Refill. Hold more upright. Backflush with solvent. Tighten or replace. 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.	Check air supply and air lines, blow out gun air passages. Open fluid needle adjusting screw.
Paint bubbles in cup.	Fluid tip not tight.	Tighten tip to 15-20 ft. lbs.
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.
Starved spray pattern	Inadequate material flow. Low atomization air pressure (suction feed)	Back fluid adjusting screw out to first thread or increase fluid pressure at tank. 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 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.

*Most common problem.

CONDITION	CAUSE	CORRECTION
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.
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 pressure. 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 approx. 6-8". Reduce air pressure and check spray pattern. Follow paint manufacturer'smixing instructions.
Thick, dimpled finish "orange peel".	Gun too close to surface. Too much material coarsely atomized. Improper thinner being used. Material not properly mixed. Surface rough, oily, dirty.	Check distance. Normally approx. 6-8". Air pressure too low. Increase air pressure or reduce fluid pressure. Follow paint manufacturer's mixing instructions. Properly clean and prepare.

MANUAL CHANGE SUMMARY		
Date	Description	Version
08/05/2025	Rebranded to Binks	R7

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WARRANTY POLICY

This product is covered by Binks' materials and workmanship limited warranty.

The use of parts or accessories from sources other than Binks will void all warranties. Failure to follow reasonable maintenance guidance provided can invalidate the warranty.

For specific warranty information, please contact Binks.

For technical assistance or to locate an authorized distributor, contact one of our international sales and customer support locations listed below.

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