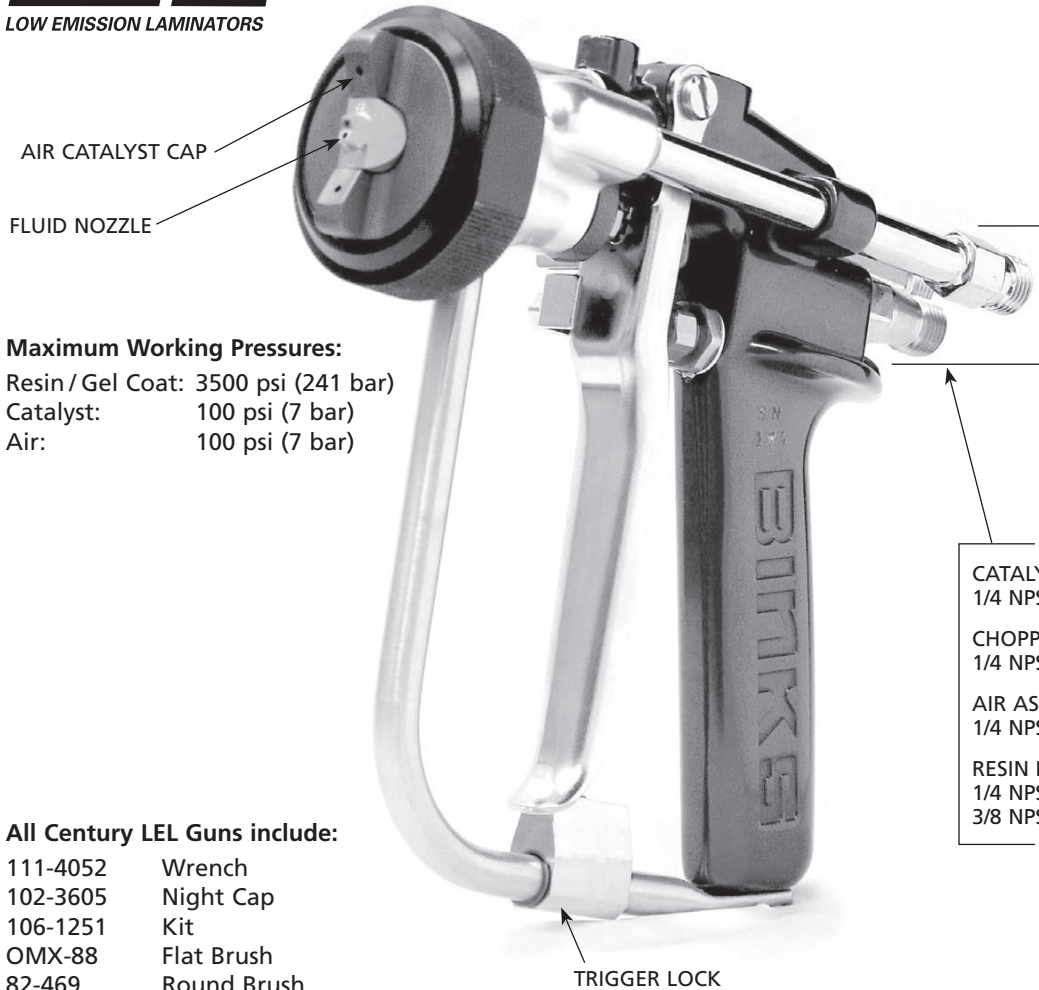




# Binks "CENTURY LEL" GUN ASSEMBLIES

Model 102-3600 FRP  
Model 102-3610 Gel-Coat  
Model 102-3650 Filled Resin

Model 102-3655 FRP Chop  
Model 102-3665 Filled Resin Chop



### Maximum Working Pressures:

Resin / Gel Coat: 3500 psi (241 bar)  
Catalyst: 100 psi (7 bar)  
Air: 100 psi (7 bar)

### All Century LEL Guns include:

111-4052	Wrench
102-3605	Night Cap
106-1251	Kit
OMX-88	Flat Brush
82-469	Round Brush

## **⚠ WARNING**

Before using the Century LEL gun, be sure to read and understand all warnings included in this part sheet.

The Binks Century LEL (Low Emission Laminator) guns are high-performance "nonatomizing" external-mix application devices for the application of polyester and other catalyzed resins. All Binks branded FRP applicators indicated as "LEL" or "LEL technology" utilize impinging fluid streams at low pressure to generate low velocity resin and gel-coat fans and are therefore defined by the EPA (NESHAP 40 CFR part 63) as nonatomizing.

If the Century LEL gun is used according to the instructions listed in this part sheet it will provide the user with higher transfer efficiency, a cleaner work space, and help enable MACT compliance by allowing the use of nonatomized mechanical application UEF factors when calculating plant emissions. All versions of the Century LEL gun have been emissions tested per EPA guidelines and proven to emit monomer at or below predicted UEF levels.

Replaces Part Sheet 77-2772R-1	Part Sheet 77-2772R-2
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In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

**⚠ WARNING**  
 Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

**⚠ CAUTION**  
 Hazards or unsafe practices which could result in minor personal injury, product or property damage.

**NOTE**  
 Important installation, operation or maintenance information.

**⚠ WARNING**

Read the following warnings before using this equipment.



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



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



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



**OPERATOR TRAINING**  
 All personnel must be trained before operating finishing equipment.



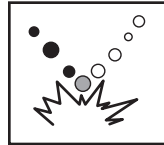
**EQUIPMENT MISUSE HAZARD**  
 Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



**KEEP EQUIPMENT GUARDS IN PLACE**  
 Do not operate the equipment if the safety devices have been removed.



**HIGH PRESSURE CONSIDERATION**  
 High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the spray gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury.



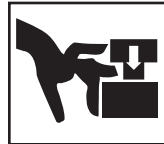
**PLURAL COMPONENT MATERIALS HAZARD**  
 Because of the vast number of chemicals that could be used and their varying chemical reactions, the buyer and user of this equipment must determine all facts relating to the materials used, including any of the potential hazards involved.



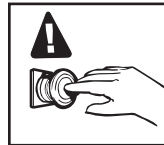
**NOISE HAZARD**  
 You may be injured by loud noise. Hearing protection may be required when using this equipment.



**FIRE AND EXPLOSION HAZARD**  
 Improper equipment grounding, poor ventilation, open flame or sparks can cause hazardous conditions and result in fire or explosion and serious injury.



**PINCH POINT HAZARD**  
 Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



**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.



**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).

## **WARNING**



When using Binks equipment with Methyl Ethyl Ketone Peroxide in Plasticizer **OBSERVE** the following precautions

**CORROSIVE TO THE EYES – MAY CAUSE BLINDNESS. MAY BE FATAL IF SWALLOWED. STRONG IRRITANT. CONTAMINATION OR HEAT MAY LEAD TO FIRE OR EXPLOSIVE DECOMPOSITION. COMBUSTIBLE.**



Do not handle or use until safety precautions concerning Methyl Ethyl Ketone Peroxides in the Manufacturer's literature have been read and understood.

Contact with foreign materials, especially strong mineral acids, metals (including certain equipment and containers) or metal salts, or exposure to heat above 135° F (57° C) may lead to violent decomposition, releasing flammable vapors which may self-ignite.

Do not get into eyes or on skin or clothing. Wear eye and skin protection when handling. Avoid breathing mist. Use with adequate ventilation. Store only it in the original closed container. Wash hands thoroughly after handling. Protect from direct sunlight, heat, sparks and other sources of ignition. Prevent contamination with foreign materials. Do not add to hot materials.

### FIRST AID

#### EYES

Wash immediately (seconds count) with water and continue washing for at least 15 minutes. Obtain medical attention.

#### SKIN

Wash with soap and water. Remove contaminated clothes and shoes and again wash thoroughly with soap and water.

#### SWALLOWING

Administer large quantities of milk or water. Obtain immediate medical attention for lavage.

To maintain the chemical activity store below 100° F (38° C).

In case of fire, use water spray, foam or dry chemical.

In case of spill or leak, absorb or blend with inert, non-combustible material. Put in suitable container. Dispose of immediately in accordance with federal, state and local regulations.

Do not reuse container as some of the original hazardous contents may still be present.

Follow the above precautions in handling.

## READ & UNDERSTAND THE MATERIAL SAFETY DATA SHEET FROM MATERIAL SUPPLIER

## **WARNING**



**Models 102-3600, 102-3610 & 102-3650 Century LEL GUNS are constructed with components of aluminum alloy and SHOULD NOT be used with any Halogenated Hydrocarbon solvents.**

HALOGENATED HYDROCARBON SOLVENTS CAN CAUSE AN EXPLOSION WHEN IN CONTACT WITH ALUMINUM COMPONENTS OF A PRESSURIZED OR CLOSED FLUID SYSTEM (PUMPS, HEATERS, FILTERS, etc.)

The same possibility of an explosion is possible with the galvanized coatings in pressure tanks. The possibility of a non-flammable explosion increases greatly at high operating temperatures.

The explosion could be of sufficient strength to cause bodily injury, death, and substantial property damage.

Cleaning agents, coatings, or adhesives may contain HALOGENATED HYDROCARBON SOLVENTS. CHECK WITH YOUR SOLVENT AND PAINT SUPPLIER.

If you are now using a Halogenated Hydrocarbon Solvent in a pressurized fluid system with aluminum components or galvanized wetted parts, the following steps should be taken immediately:

1. Remove all pressure; drain and disconnect the entire system.
2. Inspect and replace all corroded parts.
3. Contact your solvent supplier for a NON-HALOGENATED SOLVENT to flush and clean the system of all residues.

HALOGENATED Solvents are defined as any hydrocarbon solvent containing any of the following elements:

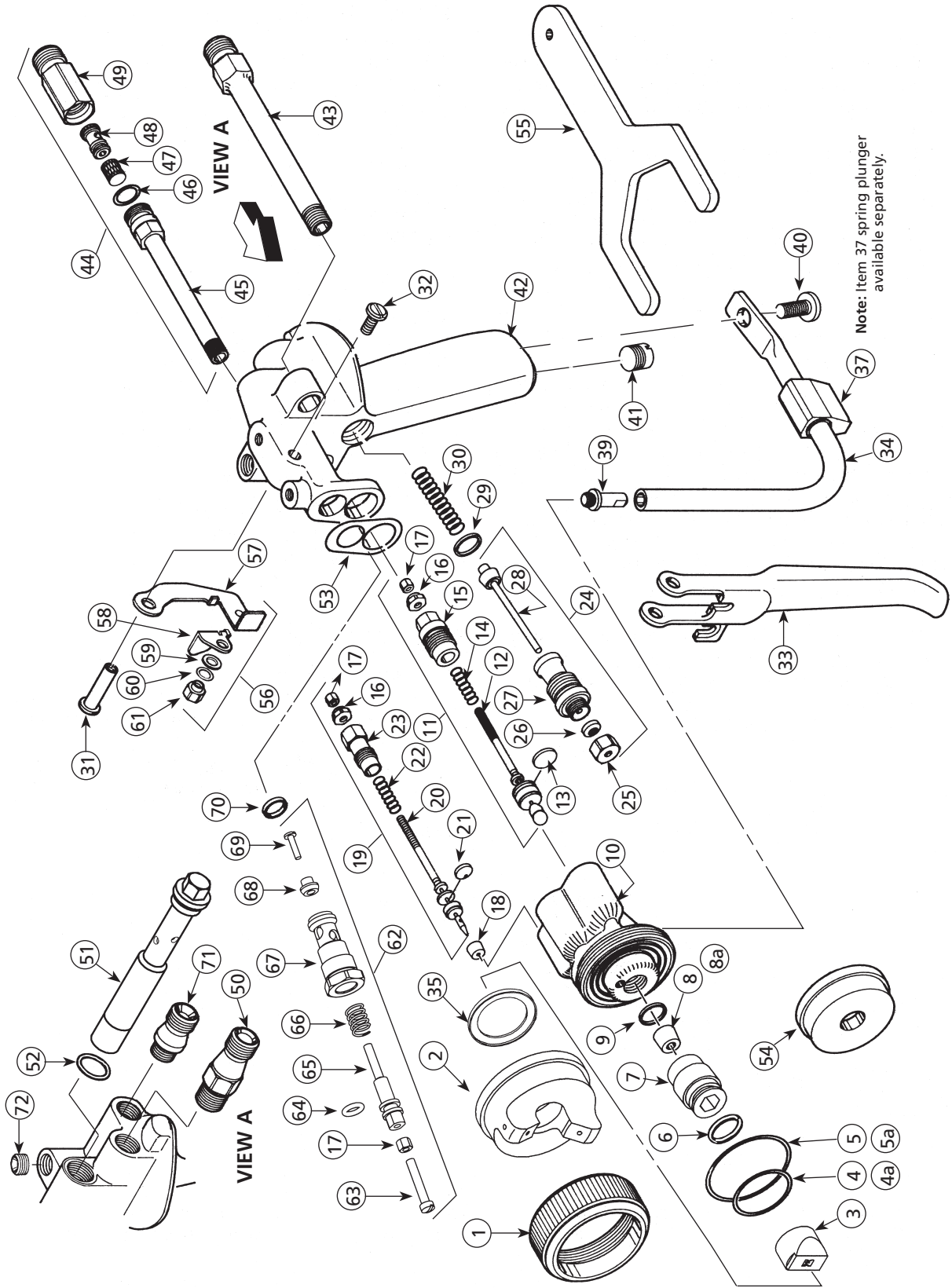
CHLORINE	"CHLORO" (Cl)
BROMINE	"BROMO" (Br)
FLUORINE	"FLUORO" (F)
IODINE	"IODO" (I)

Of those listed, the Chlorinated Solvents will most likely be the type used as a cleaning agent or solvent in an adhesive or coating. The most common are:

METHYLENE CHLORIDE  
1,1,1, TRICHLOROETHANE  
PERCHLOROETHYLENE

Although stabilizers have been added to some of the solvents to reduce their corrosive effect, **we are aware of none that will prevent these solvents from reacting under all conditions with aluminum components or galvanized coatings.**

Previous use of the solvents under pressurized conditions, without incident, does not necessarily indicate that it can be considered safe.

**102-3600 & 102-3650 CENTURY LEL GUN**


## Binks Model 102-3600 GUN

### PARTS LIST

(When ordering, please specify Part No.)

ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	102-2434	AIR/CATALYST CAP RETAINER RING.....	1	35	102-3609	BAFFLE.....	1
2	102-3602	AIR/CATALYST CAP ASSEMBLY.....	1	37	237-752	PLUNGER (Not Shown) .....	1
3	SEE CHART	FLUID NOZZLE.....	REF	39	102-2404	GUARD STUD .....	1
4	20-4542■□◆†	O-RING (Silicone) Red.....	1	40	20-6295	SCREW .....	1
4a	20-6473□◆	O-RING (EPR) Purple .....	-	41	54-714	AIR PLUG .....	1
5	20-6296■□◆†	O-RING (Silicone) Red.....	1	42	102-2402	HANDLE.....	1
5a	20-6474□◆	O-RING (EPR) Purple .....	-	43	102-2435	RESIN INLET.....	1
6	20-5919□◆	O-RING (EPR).....	1	44	102-2440	CATALYST INLET/FILTER ASS'Y.....	1
7	102-3604	HEAD INSERT .....	1	45	102-2442	CATALYST INLET TUBE.....	1
8	102-2447●◆†	RESIN SEAT Plastic.....	1	46	20-4858▼◆†	O-RING (Silicone).....	1
9	102-2505◆	SEAL.....	1	47	102-2181▼◆†	FILTER SCREEN .....	1
10	102-2504	HEAD MACHINING .....	1	48	54-1263	FILTER SUPPORT.....	1
11	102-2410◆	RESIN NEEDLE ASSEMBLY .....	1	49	102-2441	CATALYST INLET.....	1
12	102-2412	RESIN NEEDLE SUB-ASSEMBLY.....	1	50	102-2403	AIR ASSIST INLET .....	1
13	102-2411□◆†	RESIN NEEDLE PACKING.....	1	51	102-3608	HEAD RETAINER .....	1
14	102-2613	SPRING.....	1	52	102-2408◆	GASKET .....	1
15	102-2419	RESIN PACKING NUT.....	1	53	102-2427▲†	GASKET .....	1
16	102-2428	CONVEX NUT .....	2	54	102-3605	NIGHT CAP .....	1
17	52-487	LOCKNUT .....	3	55	111-4052	WRENCH.....	1
18	102-2448●◆†	CATALYST SEAT .....	1	56	102-2470	CHOPPER TRIGGER ASSEMBLY.....	1
19	102-2420◆	CATALYST NEEDLE ASSEMBLY .....	1	57	102-2471	CHOPPER TRIGGER .....	1
20	102-2422	CATALYST NEEDLE SUB-ASSEMBLY .....	1	58	102-2472	ON/OFF SELECTOR .....	1
21	102-2421□◆†	CATALYST NEEDLE PACKING.....	1	59	102-2474	LOW FRICTION WASHER.....	1
22	102-2612	SPRING.....	1	60	102-2475	WAVE SPRING WASHER .....	1
23	102-2429	CATALYST PACKING NUT.....	1	61	102-2473	RETAINER NUT .....	1
24	102-2615	AIR ASSIST VALVE ASSEMBLY .....	1	62	102-2621	CHOPPER VALVE ASSEMBLY .....	1
25	54-2417	PACKING NUT .....	1	63	20-6631	SCREW .....	1
26	54-2419▲	PACKING.....	1	64	20-6663▲	O-RING (Buna).....	1
27	54-751	VALVE BODY.....	1	65	102-2652	STEM.....	1
28	54-744▲†	VALVE ASSEMBLY .....	1	66	102-2649▲	SPRING.....	1
29	54-749▲†	AIR ASSIST VALVE SEAL.....	1	67	102-2651	AIR VALVE BODY .....	1
30	54-1964▲†	SPRING.....	1	68	102-2464▲	VALVE .....	1
31	54-1020	TRIGGER STUD .....	1	69	20-6502	SCREW .....	1
32	82-126	TRIGGER SCREW .....	1	70	102-3335▲	SEAL.....	1
33	102-2489	TRIGGER .....	1	71	102-2467	CHOPPER AIR INLET.....	1
34	102-3845	GUARD ASSEMBLY .....	1	72	20-3111	PLUG 1/8 NPT.....	1

- ▲ In 106-1172 Air Valve Repair Kit.
- In 106-1173 O-Ring Kit (15 of Each).
- In 106-1174 Soft Seat Kit.
- ▼ In 106-1175 Catalyst Filter Repair Kit.
- In 106-1251 Soft Seal Kit.
- ◆ In 106-1252 Fluid Repair Kit.

**Additional Items Not Shown,  
Only Available in 106-1252 Fluid Repair Kit:**  
 102-2510◆ 3/8" Dowel Pin.  
 102-2511◆ 1/4" Dowel Pin.  
 102-2438◆ 5/64" Dowel Pin.

**NOTE:** Parts marked with (†) are only available from Binks in quantity packs or Repair Kits.  
 Refer to the Repair Kits for order numbers. See Price List for minimum quantities.

#### ACCESSORIES

- 102-2478 3/8" NPS Resin Inlet Assembly
- 102-2446 Hard Resin Seat

#### Model 102-3650 Gun

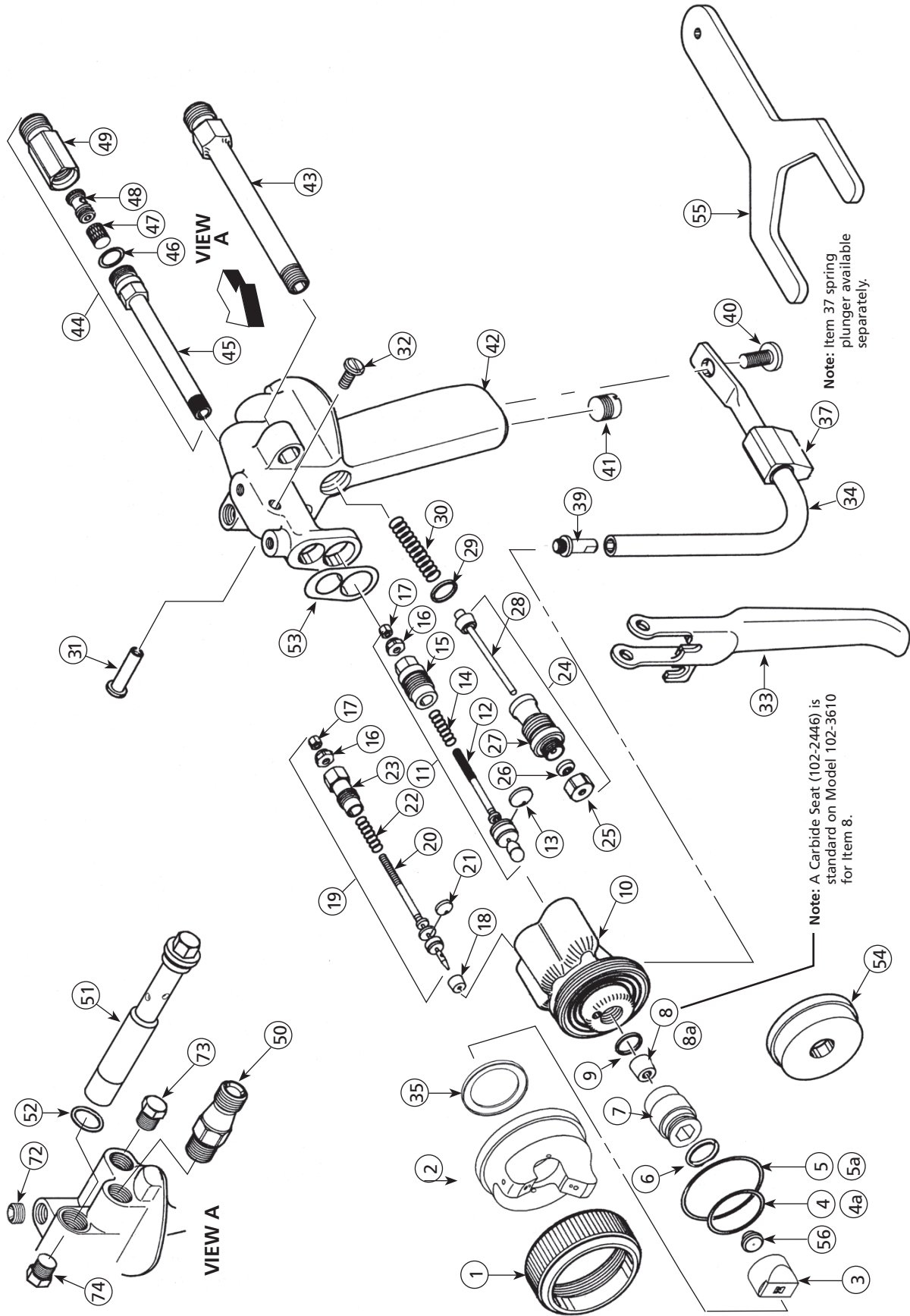
Parts List is identical to the above with the following exceptions:

ITEM NO.	PART NO.	DESCRIPTION	QTY.
8	102-2446	HARD RESIN SEAT .....	1
43	102-2478	3/8 RESIN INLET TUBE .....	1

#### TOOLS LIST

- 3/16" IGNITION WRENCH
- 5/16" IGNITION WRENCH
- 3/8" WRENCH
- 7/16" WRENCH
- 9/16" WRENCH
- 3/16" ALLEN WRENCH
- 2 FLAT SCREWDRIVERS
- 7/32" IGNITION WRENCH
- 1/4" ALLEN WRENCH

# 102-3610 GEL-COAT CENTURY LEL GUN



## Binks Model 102-3610 GEL-COAT CENTURY LEL GUN

### PARTS LIST

(When ordering, please specify Part No.)

ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	102-2434	AIR/CATALYST CAP RETAINER RING.....	1	29	54-749▲†	AIR ASSIST VALVE SEAL.....	1
2	102-3607	AIR/CATALYST CAP ASSEMBLY.....	1	30	54-1964▲†	SPRING.....	1
3	SEE CHART	FLUID NOZZLE.....	REF	31	102-2465	TRIGGER STUD.....	1
4	20-4542■□◆†	O-RING (Silicone) Red.....	1	32	82-126	TRIGGER SCREW.....	1
4a	20-6473□◆	O-RING (EPR) Purple.....	-	33	102-2489	TRIGGER.....	1
5	20-6296■□◆†	O-RING (Silicone) Red.....	1	34	102-3845	GUARD ASSEMBLY.....	1
5a	20-6474□◆	O-RING (EPR) Purple.....	-	35	102-3609	BAFFLE.....	1
6	20-5919□◆	O-RING (EPR).....	1	37	237-752	PLUNGER (Not Shown).....	1
7	102-3604	HEAD INSERT.....	1	39	102-2404	GUARD STUD.....	1
8	102-2446◆	RESIN SEAT Carbide.....	1	40	20-6295	SCREW.....	1
9	102-2505◆	SEAL.....	1	41	54-714	AIR PLUG.....	1
10	102-2504	HEAD MACHINING.....	1	42	102-2402	HANDLE.....	1
11	102-2410◆	RESIN NEEDLE ASSEMBLY.....	1	43	102-2435	RESIN INLET.....	1
12	102-2412	RESIN NEEDLE SUB-ASSEMBLY.....	1	44	102-2440	CATALYST INLET/FILTER ASS'Y.....	1
13	102-2411□◆†	RESIN NEEDLE PACKING.....	1	45	102-2442	CATALYST INLET TUBE.....	1
14	102-2613	SPRING.....	1	46	20-4858▼◆†	O-RING (Silicone).....	1
15	102-2419	RESIN PACKING NUT.....	1	47	102-2181▼◆†	FILTER SCREEN.....	1
16	102-2428	CONVEX NUT.....	2	48	54-1263	FILTER SUPPORT.....	1
17	52-487	LOCKNUT.....	3	49	102-2441	CATALYST INLET.....	1
18	102-2448◆†	CATALYST SEAT.....	1	50	102-2403	AIR ASSIST INLET.....	1
19	102-2420◆	CATALYST NEEDLE ASSEMBLY.....	1	51	102-3608	HEAD RETAINER.....	1
20	102-2422	CATALYST NEEDLE SUB-ASSEMBLY..	1	52	102-2408◆	GASKET.....	1
21	102-2421□◆†	CATALYST NEEDLE PACKING.....	1	53	102-2427▲†	GASKET.....	1
22	102-2612	SPRING.....	1	54	102-3605	NIGHT CAP.....	1
23	102-2429	CATALYST PACKING NUT.....	1	55	111-4052	WRENCH.....	1
24	102-2615	AIR ASSIST VALVE ASSEMBLY.....	1	56	102-3611-30	PRE-ORIFICE.....	2
25	54-2417	PACKING NUT.....	1		102-3611-40	PRE-ORIFICE.....	2
26	54-2419▲	PACKING.....	1	72	20-3111	PLUG 1/8 NPT.....	1
27	54-751	VALVE BODY.....	1	73	102-3834	PLUG.....	1
28	54-744▲†	VALVE ASSEMBLY.....	1	74	102-3833	PLUG.....	1

▲ In 106-1172 Air Valve Repair Kit.

■ In 106-1173 O-Ring Kit (15 of Each).

▼ In 106-1175 Catalyst Filter Repair Kit.

□ In 106-1251 Soft Seal Kit.

◆ In 106-1252 Fluid Repair Kit.

#### Additional Items Not Shown,

Only Available in 106-1252 Fluid Repair Kit:

102-2510◆ 3/8" Dowel Pin.

102-2511◆ 1/4" Dowel Pin.

102-2438◆ 5/64" Dowel Pin.

**NOTE:** Parts marked with (†) are only available from Binks in quantity packs or Repair Kits. Refer to the Repair Kits for order numbers. See Price List for minimum quantities.

#### ACCESSORIES

102-2478 3/8" NPS Resin Inlet Assembly  
(Optional for Item 43)

102-2447 Soft Resin Seat

#### TOOLS LIST

3/16" IGNITION WRENCH

5/16" IGNITION WRENCH

3/8" WRENCH

7/16" WRENCH

9/16" WRENCH

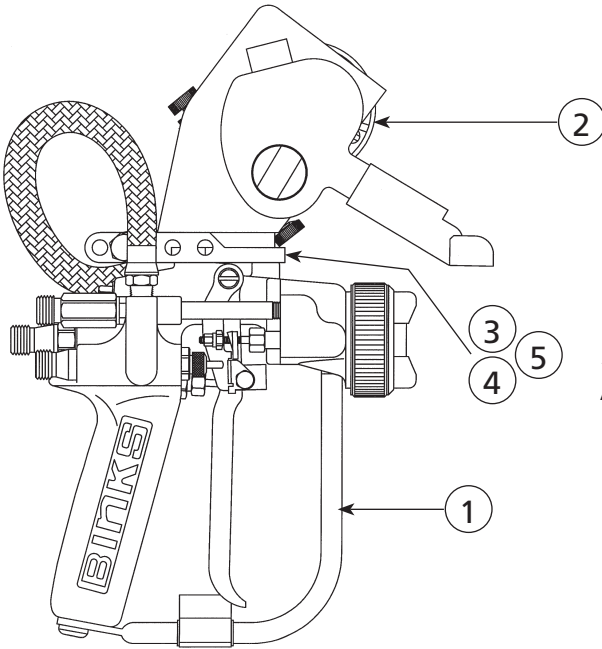
7/32" IGNITION WRENCH

3/16" ALLEN WRENCH

2 FLAT SCREWDRIVERS

1/4" ALLEN WRENCH

## CENTURY LEL GUNS WITH CHOPPER ASSEMBLY



### 102-3655 & 102-3665 CENTURY LEL GUNS AND CHOPPER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	102-3655	102-3665
1A	102-3600	CENTURY LEL GUN.....	1	-
1B	102-3650	CENTURY LEL GUN.....	-	1
2	201-510	CUTTER ASSEMBLY.....	1	1
3	102-2661	CUTTER MOUNT BRACKET.....	1	1
4	20-6154	FLAT HEAD SLOTTED SCREW...	1	1
5	20-1374	FLAT HEAD SLOTTED SCREW...	1	1

Refer to Part Sheet 77-2475 for 201-510 Chopper Assembly.

## SET-UP INSTRUCTIONS

### For 102-3600 & 102-3650 Guns

1. Connect air hose to assist air inlet (50) and tighten securely. Set air pressure at regulator to provide sufficient atomizing air to air/catalyst cap (10-25 psi).
2. Connect fluid hose from the resin pump to the resin inlet (43) and tighten securely. Set pumping source to deliver resin at 125-400 psi, depending on length of hose, use of fillers, etc.
3. Connect the catalyst hose to the catalyst inlet/filter assembly (44) and tighten securely.
4. If using chopper (102-3655 & 102-3665 guns), connect the chopper air hose to the chopper air inlet (71) and tighten securely.
5. Loosen the two nuts on the catalyst needle (16 & 17) and move them so that the trigger actuates them simultaneously with engagement of the resin needle. Tighten the nuts.
6. Install the resin nozzle and air/catalyst cap on the front of the gun and tighten the air/catalyst cap retainer ring. It is not necessary to tighten the retainer ring with much force; use just enough force to compress the o-rings on the front face of the gun head.

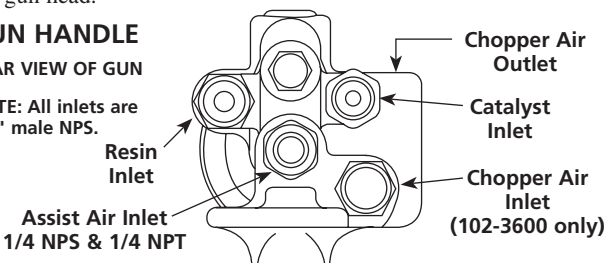
### For 102-3610 Gun

1. Connect air hose to assist air inlet (50) and tighten securely. Set air pressure at regulator to provide sufficient atomizing and shaping air to air/catalyst cap (25-75 psi).
2. Connect fluid hose from the resin pump to the resin inlet (43) and tighten securely. Set pumping source to deliver gel-coat at 400-900 psi, depending on thickness of gel-coat, length of hoses, etc.
3. Connect the catalyst hose to the catalyst inlet/filter assembly (44) and tighten securely.
4. Loosen the two nuts on the catalyst needle (16 & 17) and move them so that the trigger actuates them simultaneously with engagement of the resin needle. Tighten the nuts.
5. Install the resin nozzle and air/catalyst cap on the front of the gun and tighten the air/catalyst cap retainer ring. It is not necessary to tighten the retainer ring with much force; use just enough force to compress the o-rings on the front face of the gun head.

### GUN HANDLE

#### REAR VIEW OF GUN

NOTE: All inlets are 1/4" male NPS.



## NOTE

Make sure the flats on the fluid nozzle and air/catalyst cap are properly aligned before tightening the retaining ring. When properly installed, the front face of the fluid nozzle will be in-line with the air/catalyst cap "ears", and the back of the air/catalyst cap will contact the gun head o-rings.



## OPERATING INSTRUCTIONS

Your new Binks Century LEL Gun will give you excellent performance as long as it is handled properly. Read over these sections before operating the gun.

### NOTE

Whenever the gun is not in operation set the trigger lock by rotating the trigger (33) as far forward as it will go and then rotating the locking block (38) in its upward orientation.

### FLUID/AIR PRESSURE FOR RESIN/GEL-COAT

To obtain maximum efficiency and optimum particle size with the Century LEL gun, the fluid and air pressures should be reduced to their lowest possible pressures that produce acceptable spray pattern size and shape. Some experimentation may be necessary to find the fluid nozzle that delivers the right pattern width and volume of material needed for a given operation.

Typically, for unfilled resins the fluid pressure needed for proper pattern development will be 125-225 psi. The fluid pressure needed for filled resins will be higher, usually 225-400 psi. Since the orifice sizes for the gel-coat tips are much smaller than for resin tips, higher pressures are necessary to provide an adequate pattern. Typically, 400-600 psi will be necessary for standard gel-coats, while pressures up to 700-900 psi will be needed for low-HAP gel-coats.

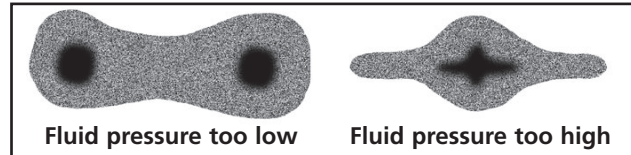
With the 102-3600 and 102-3650 guns, the air is used only to atomize catalyst and add it to the resin sheet outside the nozzle. As such, the air pressure needed to accomplish this is low, typically 10-25 psi at the regulator. Only use enough air to produce adequate catalyst atomization. Using too much air will disturb the resin sheet and increase styrene emissions. With the 102-3610 gel-coat gun, the air is used to atomize catalyst *and* shape the gel-coat pattern exiting the fluid nozzle, so higher pressures are needed. To make the shaping air effective, the pressures used will range from 15-75 psi at the regulator.

### OPTIMIZING THE SPRAY PATTERN

**102-3600 & 102-3650 guns:** Disengage the trigger lock. Pull trigger to observe spray pattern. A very narrow pattern or heavy tails (see illustration) normally indicate too low fluid pressure for the tip being used. Gradually increase fluid pressure until tails diminish. If increasing the fluid pressure results in too high flow, try a smaller tip. The air pressure used should only be enough to atomize the catalyst into fine droplets. Too high fluid pressure (see illustration) will result in overspray, misting of the resin and increased emissions, possibly resulting in non-compliant operation. Decrease fluid pressure until correct pattern is observed.

**102-3610 gun:** First turn the shaping air pressure down very low, then trigger the gun to observe the spray pattern. A very narrow pattern or heavy tails (see illustration) normally indicate too low fluid pressure for the tip being used. Gradually increase fluid pressure until the pattern is wider and the edges are

reduced. If increasing the fluid pressure results in too high flow, try a smaller tip. Too high fluid pressure (see illustration) will result in overspray, misting of the gel coat, and increased emissions, possibly resulting in non-compliant operation. Once the pattern is fairly even but has slight "tails", begin to increase shaping air pressure until tails are eliminated and shifted toward the center of the spray pattern. The spray pattern is now optimized for the tip and gel coat being used. Write down these pressures for future reference.



### OPERATION NOTES

1. Proper distance between gun and mold is 12-18 inches. Longer distances result in uncontrolled spray and higher emissions.
2. LEL guns are either on or off. You cannot feather with LEL guns as you can with air atomization.
3. The material deposited on the mold should always be even, and each stroke should overlap the previous stroke by half or less. Uniform coverage is best accomplished by "cross-hatching" strokes.

### VERIFICATION OF FLOW FOR SUPER SLAVE

1. To set catalyst and resin ratio move bearing on catalyst pump to desired percentage of catalyst labeled on slave arm assembly.
2. With assist air off, place air/catalyst cap on the gun.

### CHOPPER TRIGGER OPERATION (102-3600 & 102-3650)

The Century LEL gun is equipped with a special chopper trigger (56). This device allows simple on/off capabilities plus the ability to run/load the chopper without triggering the gun at all. To set the chopper trigger to its "on" position rotate the on/off selector (58) as far clockwise as it will go. To set the chopper trigger to its "off" position simply rotate the on/off selector as far counterclockwise as it will go. To run the chopper without triggering the gun and, with the gun in your right hand, set the on/off selector to "on", place your right index finger on the trigger pad of the chopper trigger sub-assembly (57) and pull back on the chopper trigger until the chopper air valve (62) is engaged.

## BINKS CENTURY LEL GUN SUGGESTED SPARE PARTS

PART NO.	QTY. PER PKG.	DESCRIPTION
118-8XXYY	1	Fluid Tip (size determined by application) XX = Orifice size in thousandths YY = Orifice angle
106-1251	See Description	Spare Parts Kits (2 sets of O-Rings, 1 set of Packings)
106-1252	1	Repair Kit, Fluid Valves/Seats
106-1172	1	Repair Kit, Air Valve
106-1173	15 sets	Kit, Nozzle O-Rings (20-4542, 20-6296)
106-1174	See Description	Soft Seat Kit (10 Resin, 5 Catalyst)
106-1175	5 sets	Catalyst Filter Repair Kit
102-3602	1	Air/Catalyst Cap Assembly, FRP
102-3607	1	Air/Catalyst Cap Assembly, Gel-Coat
102-3605	1	Night Cap

## GENERAL MAINTENANCE

### DAILY INSPECTION

1. Inspect the gun head o-rings (4 & 5) for cuts or tears and replace if necessary.
2. Check the fluid needles (11 & 19) for signs of material leakage. Tighten fluid packing nuts if leaks are present until leakage stops. If leak does not stop replace the needle packing or needle.
3. Inspect the head insert o-ring(6) for wear or damage and replace if necessary.
4. Inspect filters of system for build-up and clean if necessary.

### NOTE

Do not soak o-rings in solvents (swelling will occur).

### CLEANING THE FLUID NOZZLE

1. Lock the trigger (33) by rotating the locking block (38) in its upward position.
2. Shut off pumps and air supply.
3. Release fluid pressure in entire system.
4. Unscrew air/catalyst cap retainer ring (1) and remove the air/catalyst cap (2) and the fluid nozzle (3).

### NOTE

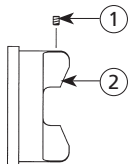
Use care when cleaning the tip with a sharp tool. Damage to holes in nozzle may cause faulty spray pattern.

5. Submerge tip in solvent to remove dry or hardened material.
6. Blow air through tip from front to back to remove stuck particles. Hold tip to light to inspect orifice to assure it is clear.

### CLEANING THE AIR/CATALYST CAP ASSEMBLY

If the catalyst port within the air/catalyst cap assembly should become plugged, it can be cleaned as follows:

1. Use a .035 Allen wrench (P/N: 20-6763) to unscrew the set screw (20-6724) from the rear of the air/catalyst cap.
2. Remove the obstruction.
3. Clean the set screw and threads of the air/catalyst cap thoroughly.
4. Dab a small amount of medium strength (blue) Loctite™ on the set screw threads and thread the set screw into the air/catalyst



- cap until the top of the set screw is flush with the outside of the air/catalyst cap. Wipe away any excess Loctite™.
5. Allow 24 hours for the Loctite™ to cure. Cure may be accelerated by heating the assembly.

### CATALYST INLET/FILTER ASSEMBLY

1. Shut off pumps and air supply.
2. Bleed pressure from entire system.
3. Remove catalyst hose from gun.
4. Using a 9/16" wrench and a 7/16" wrench unscrew the material inlet (49) from the tube assembly (45), revealing the filter screen (47).
5. Inspect the filter screen for build-up or damage.
6. If the filter screen needs to be cleaned or replaced, unscrew the filter support (48) with your fingers and slide the filter screen off of it, clean or replace.
7. Inspect o-ring (46) on the tube assembly for cuts or tears and replace if necessary.
8. Reassemble in reverse order.

### OVERNIGHT SHUT-DOWN

1. Shut off pumps (in down position) and air supply.
2. Bleed pressure from entire system.
3. Remove the air/catalyst cap retainer ring (1) and remove the air/catalyst cap (2), and the fluid nozzle (3).
4. Remove the two o-rings (4 & 5) from the grooves of the gun head (10). Inspect o-rings for cuts or tears and replace if necessary. Flush out inside of head insert with solvent.
5. Wipe off face of the gun head with a solvent-dampened rag.
6. Replace o-rings onto the front of the gun head and place the night cap (54) onto the gun head so that the larger face of the night cap traps the o-rings against the gun head in the same way as the air/catalyst cap does. In many cases, lubricant will provide protection for o-rings and head during shutdown. Petroleum jelly placed in the head insert helps keep residual gel-coat from drying out.
7. Screw the air/catalyst cap retainer ring back onto the gun head snugly against the night cap. Do not over-tighten.
8. Clean the air/catalyst cap with solvent-dampened rag or place in solvent. Be very careful to not scratch the bottom surface of the air/catalyst cap as this will cause it to leak catalyst when in service.

## REPLACEMENT OF WORN PARTS

### PRECAUTIONARY NOTE

Do not disassemble or work on the Binks Century LEL gun without first doing the following:

1. Shut off the fluid pumps and air supply.
2. Release the fluid pressure in the gun and the entire system.
3. Remove the gun from fluid hoses.

If you do not follow these steps you may injure yourself and/or nearby personnel.

### REPLACING THE CATALYST NEEDLE PACKING

1. Using two standard screwdrivers, remove the trigger stud (31), the trigger screw (32), the trigger (33), and the chopper trigger assembly (56).
2. Unscrew the catalyst packing nut (23) with a 3/8" wrench and pull the catalyst needle assembly (19) straight back until it comes out of the gun head. Be sure to pull the needle out without bending it up or down or side to side as this will cause the needle to bend, thus ruining the needle.
3. Clean the needle assembly so that you may be able to clearly identify the packing (21).
4. The packing is the only non-metal piece of the needle assembly and is white in color. Note its location and orientation on the wire of the needle. Cut the worn packing away with a sharp knife being sure not to scratch or deform any nearby parts.
5. Carefully spread the new packing apart, about 3/64" at the edge (this can be done easily with an X-acto type knife) and press the packing onto the wire of the needle assembly in the same location and orientation as noted in step 4. Gently squeeze the packing closed with fingers.

### NOTE

The cone face of the packing should point towards the needle point of the needle assembly.

6. Slide the packing forward and back with your fingers to assure a proper fit onto the wire.
7. Reassemble in reverse order.

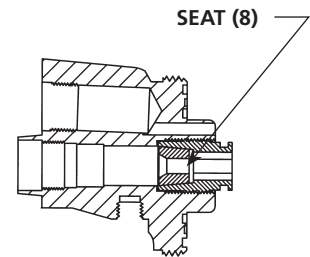
### REPLACING THE CATALYST SEAT

1. Repeat steps 1 thru 4 from section "Replacing the Resin Needle Packing".
2. Unscrew the catalyst packing nut (23) with a 3/8" wrench and pull the catalyst needle assembly (19) straight back until it comes out of the gun head. Be sure to pull the needle out without bending it up or down or side to side as this will cause the needle to bend, thus ruining the needle.
3. Place gun head on a flat clean surface with the back of the gun head against the surface. This will require a hole or recess in the surface such that the alignment cone on the back of the gun head does not rest against anything.
4. Align a 5/64" dowel pin (available in Repair Kit 106-1252) with the hole in the center groove of the gun head. Move the dowel pin straight down into the hole until it seats against the catalyst seat (18), this will be about 3/16" from the surface of the gun head with the three large grooves. Press the seat out. This is most easily done on a drill press or arbor press.
5. Now place the front of the gun head against a flat clean surface such that the surface of the gun head that has the three large grooves seats against the flat surface. This will require a hole or recess such that the front boss of the gun head doesn't rest against anything. A 1" diameter by 1" deep hole will suffice.

6. Put the new catalyst seat into the hole of the gun head that the catalyst needle assembly came out of. The small end of the catalyst seat must go in first. The seat should drop down into the gun head.
7. The seat now needs to be pressed into place such that a tight fit is created between the resin seat and the walls of the gun head that retain it. Use a 1/4" diameter dowel to press the seat tight. Be careful not to scratch the walls of the gun head. A drill press or arbor press is best for this operation.
8. Reassemble in reverse order.

### REPLACING THE RESIN SEAT

1. Remove air/catalyst cap retainer ring (1), air/catalyst cap (2), the fluid nozzle (3), and the two o-rings (4 & 5) from the gun head.
2. Pull the trigger (33) to unseat the needle from the seat (8) and lock the trigger open with the locking block (38). Using a 1/4" Allen wrench, loosen the head insert about 3 turns, leaving about 3 or so turns engagement in the gun head.
3. Insert a 1/4" dowel pin in the front of the head insert and use it to press the seat out of the head insert. Finish removing the head insert with the 1/4" Allen wrench, allowing the seat to fall out. Remove the seal (9) and replace with a new seal. Alternate method: remove the head insert completely before pressing the seat out. The head insert will have to rest on a flat surface centered over a hole between 0.410" and 0.490" diameter to give the seat clearance to fall out.
4. Now place the front of the head insert against a flat clean surface.
5. Put the new resin seat into the tapered hole of the head insert. The small end of the resin seat must go in first. The seat now needs to be pressed in place such that a tight fit is created between the resin seat and the walls of the head insert that retain it. Use 3/8" diameter dowel pin (available in Repair Kit 106-1252) to press the seat tight. A drill press or arbor press is best for this operation.
6. Reassemble in reverse order.



### REPLACING THE RESIN NEEDLE PACKING

1. Remove the button head screw (40) that retains the guard assembly (34) by using a 3/16" Allen wrench; remove the guard assembly.
2. Using two standard screwdrivers, remove the trigger stud (31), the trigger screw (32), the trigger (33), and the chopper trigger assembly (56).
3. Using 3/8" wrench or socket, remove the head retainer (51).
4. Slide the gun head (10) as far forward as it will go with your hands. Do not use excessive force.
5. Unscrew the resin packing nut (15) with a 3/8" wrench and pull the resin needle assembly (11) straight back until it comes out of the gun head. Be sure to pull the needle out without bending it up or down or side to side as this will cause the needle to bend, thus ruining the needle.
6. Clean the needle assembly so that you may be able to clearly identify the packing (13).

(Continued)

## REPLACEMENT OF WORN PARTS (continued)

- Clean the needle assembly so that you may be able to clearly identify the packing (13).
- The packing is the only non-metal piece of the needle assembly and is white in color. Note its location and orientation on the wire of the needle. Cut the worn packing away with a sharp knife being sure not to scratch or deform any nearby parts.
- Carefully spread the new packing apart, about 3/64" at the edge (this can be done easily with an X-acto type knife) and press the packing onto the wire of the needle assembly in the same location and orientation as noted in step 7. Gently squeeze the packing closed with fingers.

### NOTE

The cone face of the packing should point towards the ball of the needle assembly.

- Slide the packing forward and back with your fingers to assure a proper fit onto the wire.
- Reassemble in reverse order.

### REPLACING THE RESIN NEEDLE ASSEMBLY

- Repeat steps 1 thru 5 from section "Replacing the Resin Needle Packing" above.
- Replace worn needle assembly with new needle assembly.
- Reassemble in reverse order.

### REPLACING THE CATALYST NEEDLE ASSEMBLY

- Repeat steps 1 and 2 from the section "Replacing the Catalyst Needle Packing" above.
- Replace worn needle assembly with new needle assembly.
- Reassemble in reverse order.

### REPAIRING THE AIR ASSIST VALVE ASSEMBLY

- Repeat steps 1 and 2 from section "Replacing the Resin Needle Packing."
- Using a 9/16" wrench remove the air assist valve assembly (24), seal (29), and spring (30).
- Remove the nut (25) from the body (27); the packing (26) can be replaced if necessary.
- Remove and inspect the valve assembly (28) from the body and replace if necessary.
- Replace the spring if necessary. Replace the seal and reassemble in reverse order.

### REPAIRING THE CHOPPER AIR VALVE ASSEMBLY

- Repeat step 2 from section "Replacing the Resin Needle Packing".
- Using a 9/16" wrench, remove the chopper valve assembly (62), from the handle (42).
- Using a small screwdriver, remove the screw (69) from the chopper valve stem (65).
- Manually pull and remove the screw (63), with attached components from the air valve body (67).
- Remove and replace the o-ring, (64), from the stem (65).
- Lubricate the o-ring and inside surface of the air valve body with petroleum jelly.
- Re-assemble the chopper air valve in the reverse order.

### NOTE

Periodic lubrication of the chopper air valve assembly is necessary to ensure smooth operation.

### WARRANTY

This product is covered by Binks' 1 Year Limited Warranty.

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U.S.A./Canada Customer Service  
195 Internationale Blvd.  
Glendale Heights, IL 60139  
630-237-5000

Toll Free Customer Service  
and Technical Support  
800-992-4657

Toll Free Fax  
888-246-5732

77-2772R-2 Revisions: (P1) Revised text; (P2) Added Prop 65 warning; (PP4-7) Revised exploded views and Parts Lists; (P8) Removed Fluid Nozzle Chart; (P10) Revised Spare Parts chart, deleted Super Slave Unit and Unison references; (P12) Updated contact information.