



RansFlex Applicators for Direct
Charge Water Based Applications

Model: 80765/82765 RFXAW



2813



II 2G 0.24 mJ





NOTE: This manual has been changed from revision **AA-18-02-R6** to revision **AA-18-02-R7**. Reasons for this change are noted under “Manual Change Summary” inside the back cover of this manual.



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SAFETY

SAFETY PRECAUTIONS

Before operating, maintaining or servicing any electrostatic coating system, read and understand all of the technical and safety literature for your products. This manual contains information that is important for you to know and understand. This information relates to **USER SAFETY** and **PREVENTING EQUIPMENT PROBLEMS**. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.

Careful study and continued use of this manual will provide a better understanding of the equipment and process, resulting in more efficient operation, longer trouble-free service and faster, easier troubleshooting. If you do not have the manuals and safety literature for your equipment, contact your local Carlisle Fluid Technologies representative or Carlisle Fluid Technologies technical support.

WARNING

A WARNING! states information to alert you to a situation that might cause serious injury if instructions are not followed.

WARNING

- The user **MUST** read and be familiar with the Safety Section in this manual and the safety literature therein identified.
- This equipment is intended to be used by trained personnel **ONLY**.
- This manual **MUST** be read and thoroughly understood by **ALL** personnel who operate, clean or maintain this equipment! Special care should be taken to ensure that the **WARNINGS** and safety requirements for operating and servicing the equipment are followed. The user should 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, prior to installing, operating, and/or servicing this equipment.

CAUTION

A CAUTION! states information that tells how to prevent damage to equipment or how to avoid a situation that might cause minor injury.

NOTE

A NOTE is information relevant to the procedure in progress.


While this manual lists standard specifications and service procedures, some minor deviations may be found between this literature and your equipment. Differences in local codes and plant requirements, material delivery requirements, etc., make such variations inevitable. Compare this manual with your system installation drawings and associated equipment manuals to reconcile such differences.



WARNING

- The hazards shown on the following pages may occur during the normal use of this equipment.

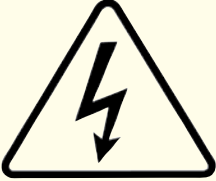
Repairs may only be performed by personnel authorized by Carlisle Fluid Technologies.






<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area</p> 	<p>Fire Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation. Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p>	<p>Fire extinguishing equipment must be present in the spray area and tested periodically.</p> <p>Spray areas must be kept clean to prevent the accumulation of combustible residues.</p> <p>Smoking must never be allowed in the spray area.</p> <p>The high voltage supplied to the atomizer must be turned off prior to cleaning, flushing, or maintenance.</p> <p>Spray booth ventilation must be kept at the rates required by NFPA 33, EN 16985, country, and local codes. In addition, ventilation must be maintained during cleaning operations using flammable or combustible solvents.</p> <p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Test only in areas free of combustible material. Testing may require high voltage to be on, but only as instructed.</p> <p>Non-factory replacement parts or unauthorized equipment modifications may cause fire or injury. If used, the key switch bypass is intended for use only during setup operations. Production should never be done with safety interlocks disabled.</p> <p>The paint process and equipment should be set up and operated in accordance with NFPA 33, NEC, OSHA, local, country, and European Health and Safety Norms.</p>

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area</p> 	<p>Explosion Hazard</p> <p>Improper or inadequate operation and maintenance procedures will cause a fire hazard.</p> <p>Protection against inadvertent arcing that is capable of causing fire or explosion is lost if any safety interlocks are disabled during operation.</p> <p>Frequent Power Supply or Controller shutdown indicates a problem in the system requiring correction.</p>	<p>Electrostatic arcing must be prevented. Safe sparking distance must be maintained between the parts being coated and the applicator. A distance of 1 inch for every 10KV of output voltage is required at all times.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside or applicable county code hazardous areas, in accordance with NFPA 33.</p> <p>Test only in areas free of flammable or combustible materials.</p> <p>The current overload sensitivity (if equipped) MUST be set as described in the corresponding section of the equipment manual. Protection against inadvertent arcing that is capable of causing fire or explosion is lost if the current overload sensitivity is not properly set. Frequent power supply shutdown indicates a problem in the system which requires correction.</p> <p>Always turn the control panel power off prior to flushing, cleaning, or working on spray system equipment.</p> <p>Before turning high voltage on, make sure no objects are within the safe sparking distance.</p> <p>Ensure that the control panel is interlocked with the ventilation system and conveyor in accordance with NFPA-33, EN 16985.</p> <p>Have fire extinguishing equipment readily available and tested periodically.</p>
<p>General Use and Maintenance</p> 	<p>Improper operation or maintenance may create a hazard.</p> <p>Personnel must be properly trained in the use of this equipment.</p>	<p>Personnel must be given training in accordance with the requirements of NFPA 33.</p> <p>Instructions and safety precautions must be read and understood prior to using this equipment.</p> <p>Comply with appropriate local, state, and national codes governing ventilation, fire protection, operation maintenance, and housekeeping. Reference OSHA, NFPA 33, EN Norms and your insurance company requirements.</p>



<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Spray Area / High Voltage Equipment</p> 	<p>Electrical Discharge</p> <p>There is a high voltage device that can induce an electrical charge on ungrounded objects which is capable of igniting coating materials.</p> <p>Inadequate grounding will cause a spark hazard. A spark can ignite many coating materials and cause a fire or explosion.</p>	<p>Parts being sprayed and operators in the spray area must be properly grounded.</p> <p>Parts being sprayed must be supported on conveyors or hangers that are properly grounded. The resistance between the part and earth ground must not exceed 1 Meg Ohm. (Refer to NFPA 33, EN 16985.)</p> <p>Operators must be grounded. Grounding straps on wrists or legs may be used to assure adequate ground contact.</p> <p>Footware to be used by operator shall comply with EN ISO 20344, resistance not to exceed 100 Meg Ohm. Protective clothing including gloves should comply with RN 1149-5, resistance not to exceed 100 Meg Ohm.</p> <p>Operators must not be wearing or carrying any ungrounded metal objects.</p> <p>When using an electrostatic handgun, operators must assure contact with the handle of the applicator via conductive gloves or gloves with the palm section cut out.</p> <p>NOTE: REFER TO NFPA 33, EN 16985 OR SPECIFIC COUNTRY SAFETY CODES REGARDING PROPER OPERATOR GROUNDING.</p> <p>All electrically conductive objects in the spray area, with the exception of those objects required by the process to be at high voltage, must be grounded. Grounded conductive flooring must be provided in the spray area.</p> <p>Always turn off the power supply prior to flushing, cleaning, or working on spray system equipment or applicable county code.</p> <p>Unless specifically approved for use in hazardous locations, all electrical equipment must be located outside Class I or II, Division 1 or 2 hazardous areas, in accordance with NFPA 33.</p> <p>Avoid installing an applicator into a fluid system where the solvent supply is ungrounded.</p> <p>Do not touch the applicator electrode while it is energized.</p>

<p>AREA Tells where hazards may occur.</p>	<p>HAZARD Tells what the hazard is.</p>	<p>SAFEGUARDS Tells how to avoid the hazard.</p>
<p>Electrical Equipment</p> 	<p>Electrical Discharge</p> <p>High voltage equipment is utilized in the process. Arcing in the vicinity of flammable or combustible materials may occur. Personnel are exposed to high voltage during operation and maintenance.</p> <p>Protection against inadvertent arcing that may cause a fire or explosion is lost if safety circuits are disabled during operation.</p> <p>Frequent power supply shut-down indicates a problem in the system which requires correction.</p> <p>An electrical arc can ignite coating materials and cause a fire or explosion.</p>	<p>Unless specifically approved for use in hazardous locations, the power supply, control cabinet, and all other electrical equipment must be located outside Class I or II, Division 1 and 2 hazardous areas in accordance with NFPA 33 and EN 16985.</p> <p>Turn the power supply OFF before working on the equipment.</p> <p>Test only in areas free of flammable or combustible material.</p> <p>Testing may require high voltage to be on, but only as instructed.</p> <p>Production should never be done with the safety circuits disabled.</p> <p>Before turning the high voltage on, make sure no objects are within the sparking distance.</p>
<p>Toxic Substances</p> 	<p>Chemical Hazard</p> <p>Certain materials may be harmful if inhaled, or if there is contact with the skin.</p>	<p>Follow the requirements of the Safety Data Sheet supplied by coating material manufacturer.</p> <p>Adequate exhaust must be provided to keep the air free of accumulations of toxic materials. Reference EN 12215 or applicable code.</p> <p>Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.</p>
<p>Spray Area</p> 	<p>Explosion Hazard — Incompatible Materials</p> <p>Halogenated hydrocarbon solvents for example: methylene chloride and 1,1,1, - Trichloroethane are not chemically compatible with the aluminum that might be used in many system components. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.</p>	<p>Spray applicators require that aluminum inlet fittings be replaced with stainless steel.</p> <p>Aluminum is widely used in other spray application equipment - such as material pumps, regulators, triggering valves, etc. Halogenated hydrocarbon solvents must never be used with aluminum equipment during spraying, flushing, or cleaning. Read the label or data sheet for the material you intend to spray. If in doubt as to whether or not a coating or cleaning material is compatible, contact your coating supplier. Any other type of solvent may be used with aluminum equipment.</p>



ATEX/FM

EUROPEAN ATEX DIRECTIVE 2014/34/EU

The following instructions apply to equipment covered by certificate number FM22UKEX0062 and FM18ATEX0025:

1. The equipment may be used with flammable gases and vapors with apparatus groups II and with temperature class.
 2. The equipment is only certified for use in ambient temperatures in the range 5°C to 40°C (41°F to 104°F) and should not be used outside this range.
 3. Installation shall be carried out by suitably trained personnel in accordance with the applicable code of practice e.g. EN 60079-14.
 4. Inspection and maintenance of this equipment shall be carried out by suitably trained personnel in accordance with the applicable code of practice e.g. EN 60079-17.
 5. Repair of this equipment shall be carried out by suitable trained personnel in accordance with the applicable code of practice e.g. EN 60079-19.
 6. Putting into service, use, assembling, and adjustment of the equipment shall be fitted by suitably trained personnel in accordance with the manufacturer's documentation.
- Refer to the "Table of Contents" of this service manual:
- a. Installation
 - b. Operation
 - c. Maintenance
 - d. Parts Identification
7. Components to be incorporated into or used as replacement parts of the equipment shall be fitted by suitably trained personnel in accordance with the manufacturer's documentation.
 8. The certification of this equipment relies upon the following materials used in its construction:

If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection provided by the equipment is not compromised.

Aggressive substances: e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

Suitable precautions: e.g. regular checks as part of routine inspections or establishing from the material's data sheets that it is resistant to specific chemicals.

Refer to "Specifications" in the "Introduction" section:

 - a. All fluid passages contain stainless steel or nylon fittings.
 - b. High voltage cascade is encapsulated with a solvent resistant epoxy.
 9. A recapitulation of the certification marking is detailed in the "ATEX" section, on the next pages, drawing number: 80613-01 and 80613-02.
 10. The characteristics of the equipment shall be detailed e.g. electrical, pressure, and voltage parameters.
- The manufacturer should note that, on being put into service, the equipment must be accompanied by a translation of the instructions in the language or languages of the country in which the equipment is to be used and by the instructions in the original language.**



ATEX REQUIREMENTS

Atex Requirements

This product provides a direct charge to water based materials that will improve the transfer efficiency over non-electrostatic products. Because this product uses water based materials only, may be no requirement for an ATEX approval. As long as the material being used meets the flammability definition as stated in EN 50059: 2018, there is no hazardous area that must be zoned around the applicator. No Atex approval is required. It is the end users responsibility to insure all of these conditions are met.

****EN 50059: 2018 this is a type A-L system with discharge energy below 350 mJ Definition of non-flammable spraying material**

This product may only be used with hard to ignite or non-ignitable materials as defined in EN 50348: 2010 Annex A. It is the end users responsibility to insure these requirements are met.

FM Configuration

These applicators are FM approved for safe use when the setup is configured to drawing 80766.



FM REQUIREMENTS

Requirements

These applicators are FM approved when the product setup is configured to drawings shown on page 11. This product is approved for use only with non-flammable water based materials when the materials meet the FM definition for a water based spray material*. It is the end users' responsibility to insure the material that is sprayed meets this requirement.

* FM 7260 water based spray material - a material that does not sustain burning when tested in accordance with ASTM D 4206.

Ransburg BRAND OF CARLISLE FLUID TECHNOLOGIES INC. SCOTTSDALE, AZ.

CONTROL UNIT/POWER SUPPLY
FOR ELECTROSTATIC PAINT FINISHING APPLICATIONS

WARNING
FAILURE TO OBSERVE THE FOLLOWING PRECAUTIONS MAY RESULT IN AN ELECTRICAL DISCHARGE CAPABLE OF STARTING A FIRE.

1. THE ARTICLE BEING COATED MUST BE GROUNDING
2. ALL OTHER ELECTRICALLY CONDUCTING OBJECTS WITH SPRAY BOOTH WITH THE SPRAY
3. THE CONTROL UNIT/POWER SUPPLY MUST BE INTERLOCKED WITH THE SPRAY BOOTH VENTILATORS SO AS TO PREVENT OPERATION OF THE POWER SUPPLY UNLESS VENTILATING FANS ARE IN OPERATION
4. SERVICE WARNING ENCLOSURE PROTECTS AGAINST SHOCK AND INJURY. SERVICE TRAINING REQUIRED
5. KEEP POWER SUPPLY OUTSIDE THE HAZARDOUS AREA.
6. DO NOT ATTEMPT OPERATION OR REPAIR WITHOUT READING SERVICE MANUAL.
7. FOR ELECTROSTATIC PAINT FINISHING APPLICATIONS

PART No.		INPUT RISE CURRENT	
SERIAL No.		PHASES	
VOLTAGE	100-240 VAC	°C° A MAX.	
FREQUENCY	50 / 60 Hz	1	
VOLTAMPS	D° VA MAX.	°A°	MAX OUTPUT VOLTAGE
HUMIDITY	85% NON-CONDENSING	°F°	MAX OUTPUT CURRENT
INPUT PRESSURE	100 PSI MAX.	0 - 40°C	TEMPERATURE
		KA	SCOR

Label 80108-03

UKCA0518
EN50050-1
FM 18 ATEX0025
FM 22 UKEX0062

Label 80694 for power supply

Label 80081-00

RANS FLEX RFXAW

BRAND OF CARLISLE FLUID TECHNOLOGIES, INC. Scottsdale, AZ USA

By Ransburg

Label 80613-02

MWP-AIR 100 PSIG (6.9 bar)
MWP-FLUID 100 PSIG (6.9 bar) MOD-80765
FOR WATERBORNE ELECTRO. FINISH. APPL. U_{max} 65kV
WHEN CONFIGURED PER DWG. 80766

CE 2813
UK 0518
EN50050-1
FM 22UKEX 0062
FM 18 ATEX 0025

II2G 0.24 mJ

FM C US APPROVED

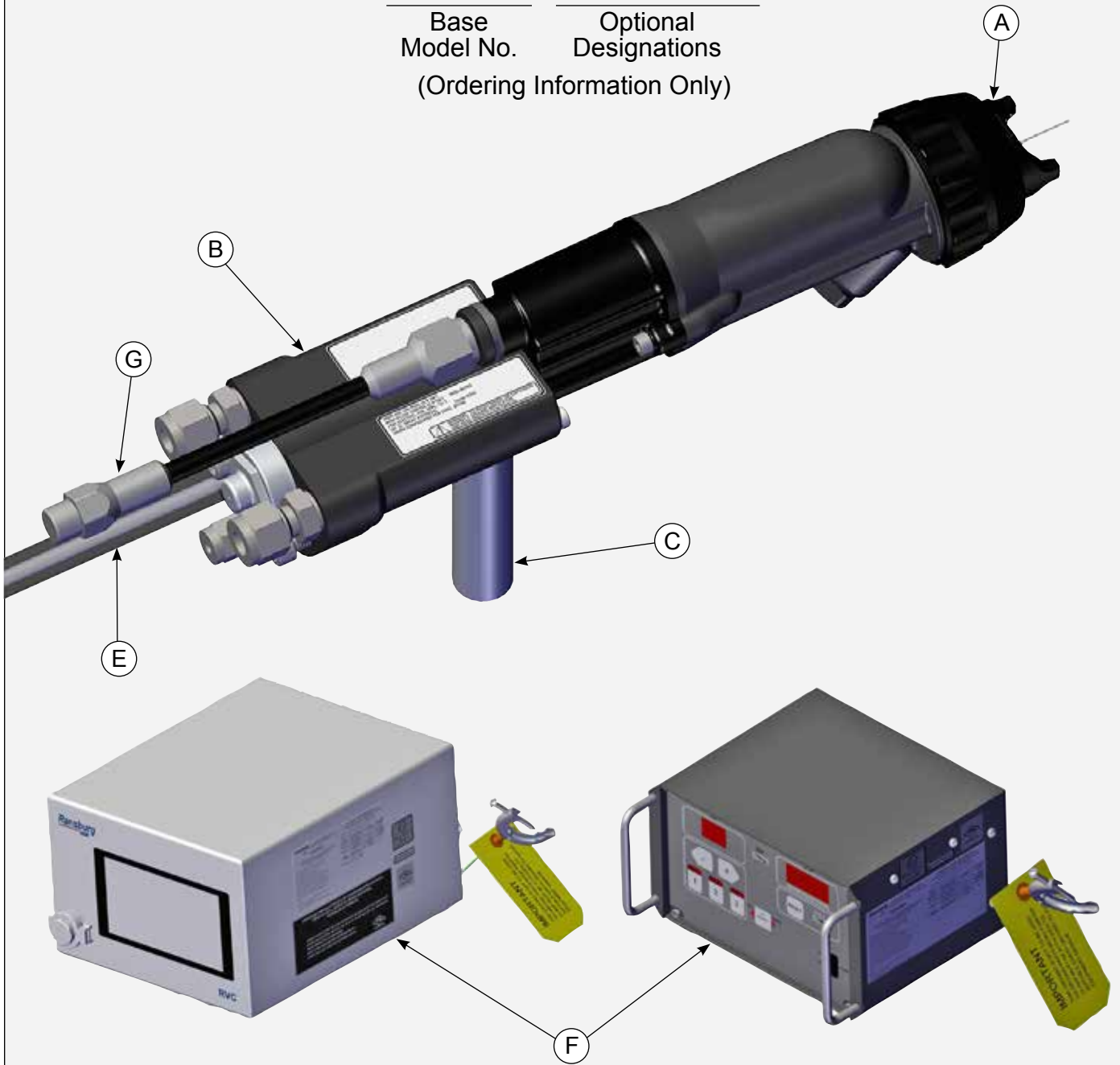
WARNING: TO AVOID SHOCK OR EXPLOSION PROPERLY GROUND APPLICATOR AND READ INSTRUCTION MANUAL

Label 80613-01 for applicator

RANSFLEX RFXA - WATER BASE - (SINGLE GUN)

80765 - ABC0EFFG

Base Model No.	Optional Designations
(Ordering Information Only)	





"R" (Air Cap)



"S" (Fluid Nozzle)



"T" (Pressure Reducer)

ATOMIZATION - TABLE OF "A" DASHES

"A" Dash No.	"A" Description	"R"	"S"	"T"
0	V SERIES 1.2mm	80265-00	80264-12	79809-00
1	V SERIES 1.4mm	80265-00	80264-14	79809-00
2	V SERIES 1.8mm	80265-00	80264-18	79809-00
3	C SERIES 1.2mm	80231-00	80230-12	79809-03
4	C SERIES 1.4mm	80231-00	80230-14	79809-03
5	C SERIES 1.8mm	80231-00	80230-18	79809-03
6	T SERIES 1.2mm	80240-00	80239-12	74963-05
7	T SERIES 1.4mm	80240-00	80239-14	74963-05
8	T SERIES 1.8mm	80240-00	80239-18	74963-05
9	ROUND SPRAY	79962-00	80400-00	74963-05

FLUID CONTROL - TABLE OF "B" DASHES

"B" Dash No.	"B" Description	"R"
1	NON-BLEEDER	80614-01
2	BLEEDER	80614-02

MOUNTING POST - TABLE OF "C" DASHES

"C" Dash No.	"C" Description	"S"	"T"	"U"
1	19mm (0.75 in) POST	80583-19	1	4
2	12mm (0.48 in) POST	80583-12	1	4
3	NO POST	---	0	0

FLUID HOSE - TABLE OF "E" DASHES

"E" Dash No.	"E" Description	"W"
0	NO FLUID HOSE	---
1	FLUID HOSE 3/16", 10m (32.8 ft)	80500-10
2	FLUID HOSE 3/16", 15m (49.2 ft)	80500-15
3	FLUID HOSE 1/4", 10m (32.8 ft)	80501-10
4	FLUID HOSE 1/4", 15m (49.2 ft)	80501-15



POWER SUPPLY - TABLE OF “FF” DASHES

“FF” Dash No.	Trigger Type	“FF” Description	“Y”
0		NO POWER SUPPLY	---
11	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81000-02011
12	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02012
13	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81000-02013
14	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02014
21	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81000-02021
22	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02022
23	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81000-02023
24	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02024
31	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81000-02031
32	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02032
33	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81000-02033
34	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02034
41	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81000-02041
42	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02042
43	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81000-02043
44	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02044
51	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81000-02111
52	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02112



POWER SUPPLY - TABLE OF "FF" DASHES (Cont.)

"FF" Dash No.	Trigger Type	"FF" Description	"Y"
53	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81000-02113
54	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02114
61	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81000-02121
62	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02122
63	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81000-02123
64	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02124
71	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81000-02131
72	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02132
73	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81000-02133
74	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02134
81	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81000-02141
82	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02142
83	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81000-02143
84	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02144



POWER SUPPLY - TABLE OF "FF" DASHES (9060 OPTION)

"FF" Dash No.	Trigger Type	"FF" Description	"Y"
91	REMOTE I/O	9060 POWER SUPPLY DOMESTIC	80120-711
92	REMOTE I/O	9060 POWER SUPPLY EUROPEAN	80120-712
93	REMOTE I/O	9060 POWER SUPPLY CHINA	80120-713



LOW VOLTAGE CABLE - TABLE OF "G" DASHES

"G" Dash No.	"G" Description	"Z"	Qty
0	NO LOW VOLTAGE CABLE	---	---
1	10m (32.8 ft) LOW VOLTAGE CABLE	79338-10	1
2	15m (49.2 ft) LOW VOLTAGE CABLE	79338-15	1
3	20m (65.6 ft) LOW VOLTAGE CABLE	79338-20	1
4	30m (98.4 ft) LOW VOLTAGE CABLE	79338-15	2



AVAILABLE ACCESSORIES

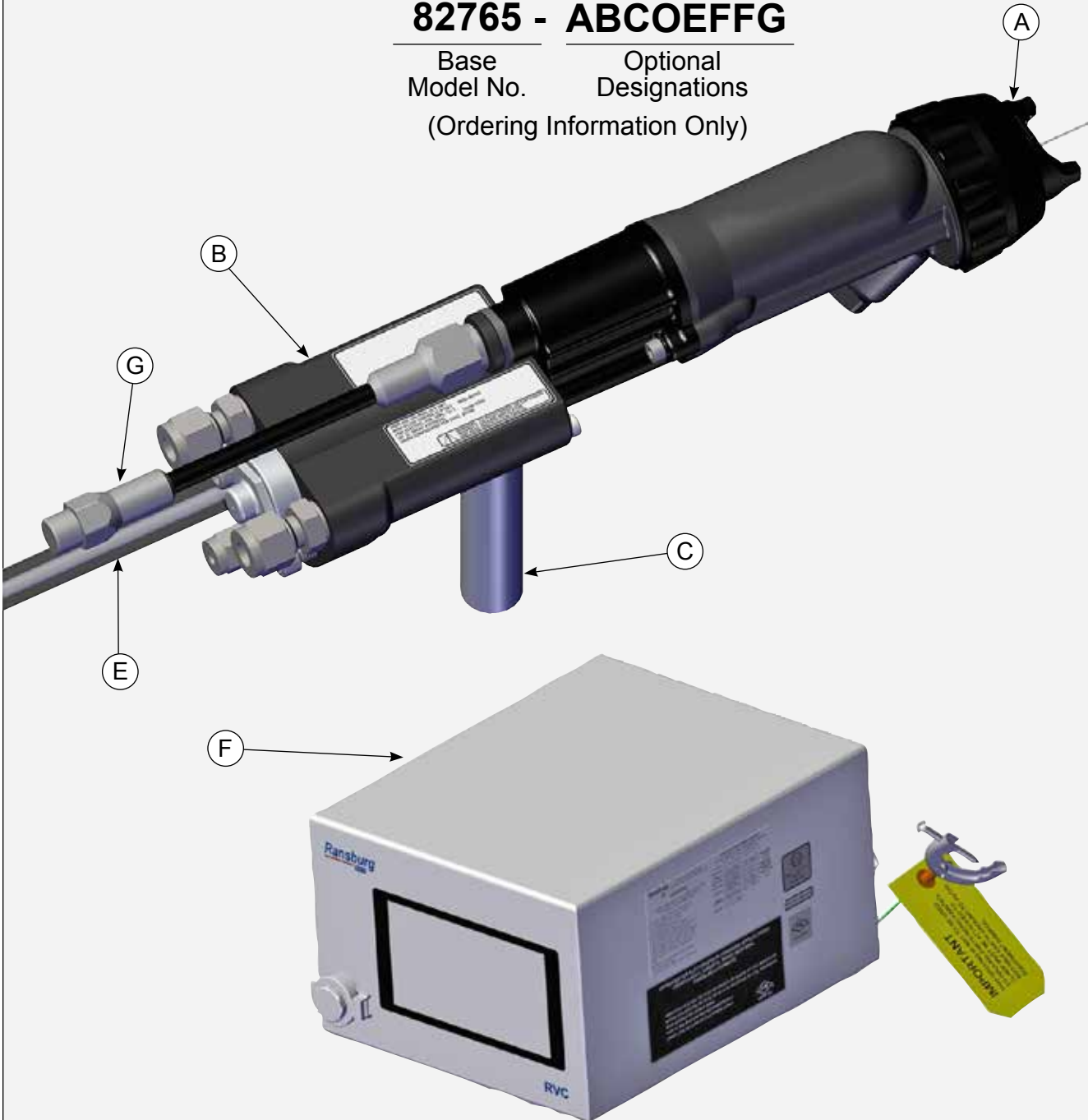
Part No.	Description	For Use With	Nozzle Color
80264-07	V SERIES 0.7mm	80265-00	Black
80264-10	V SERIES 1.0mm	80265-00	Black
80239-07	T SERIES 0.7mm	80240-00	Black
80239-10	T SERIES 1.0mm	80240-00	Black

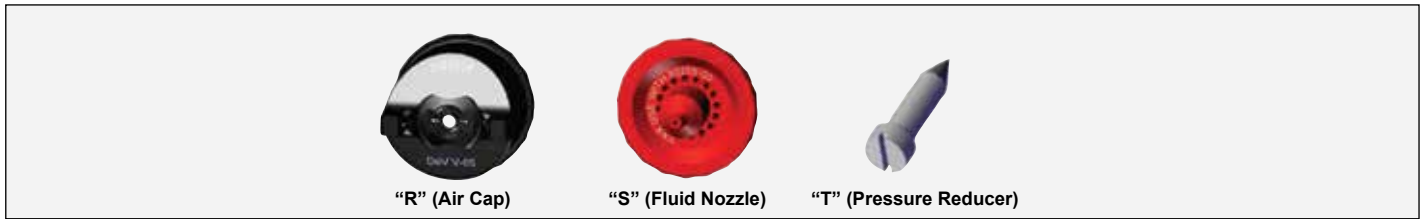


RANSFLEX RFXA - WATER BASE - (TWO GUN)

82765 - ABCOEFFG

Base Model No.	Optional Designations
(Ordering Information Only)	





ATOMIZATION - TABLE OF "A" DASHES

"A" Dash No.	"A" Description	"R"	"S"	"T"
0	V SERIES 1.2mm	80265-00	80264-12	79809-00
1	V SERIES 1.4mm	80265-00	80264-14	79809-00
2	V SERIES 1.8mm	80265-00	80264-18	79809-00
3	C SERIES 1.2mm	80231-00	80230-12	79809-03
4	C SERIES 1.4mm	80231-00	80230-14	79809-03
5	C SERIES 1.8mm	80231-00	80230-18	79809-03
6	T SERIES 1.2mm	80240-00	80239-12	74963-05
7	T SERIES 1.4mm	80240-00	80239-14	74963-05
8	T SERIES 1.8mm	80240-00	80239-18	74963-05
9	ROUND SPRAY	79962-00	80400-00	74963-05

FLUID CONTROL - TABLE OF "B" DASHES

"B" Dash No.	"B" Description	"R"
1	NON-BLEEDER	80614-01
2	BLEEDER	80614-02

MOUNTING POST - TABLE OF "C" DASHES

"C" Dash No.	"C" Description	"S"	"T"	"U"
1	19mm (0.75 in) POST	80583-19	2	8
2	12mm (0.48 in) POST	80583-12	2	8
3	NO POST	---	0	0

FLUID HOSE - TABLE OF "E" DASHES

"E" Dash No.	"E" Description	"W"
0	NO FLUID HOSE	---
1	FLUID HOSE 3/16", 10m (32.8 ft)	80500-10
2	FLUID HOSE 3/16", 15m (49.2 ft)	80500-15
3	FLUID HOSE 1/4", 10m (32.8 ft)	80501-10
4	FLUID HOSE 1/4", 15m (49.2 ft)	80501-15



POWER SUPPLY - TABLE OF “FF” DASHES

“FF” Dash No.	Trigger Type	“FF” Description	“Y”
0		NO POWER SUPPLY	---
11	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81020-02011
12	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02012
13	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81020-02013
14	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02014
21	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81020-02021
22	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02022
23	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81020-02023
24	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02024
31	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81020-02031
32	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02032
33	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81020-02033
34	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02034
41	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81020-02041
42	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02042
43	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81020-02043
44	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02044



POWER SUPPLY - TABLE OF “FF” DASHES (Cont.)

“FF” Dash No.	Trigger Type	“FF” Description	“Y”
51	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81020-02111
52	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02112
53	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81020-02113
54	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02114
61	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81020-02121
62	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02122
63	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81020-02123
64	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02124
71	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81020-02131
72	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02132
73	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81020-02133
74	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02134
81	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81020-02141
82	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02142
83	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81020-02143
84	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02144



LOW VOLTAGE CABLE - TABLE OF "G" DASHES

"G" Dash No.	"G" Description	"Z"	Qty
0	NO LOW VOLTAGE CABLE	---	---
1	10m LOW VOLTAGE CABLE (32.8 ft)	79338-10	2
2	15m LOW VOLTAGE CABLE (49.2 ft)	79338-15	2
3	20m LOW VOLTAGE CABLE (65.6 ft)	79338-20	2
4	30m LOW VOLTAGE CABLE (98.4 ft)	79338-15	4



AVAILABLE ACCESSORIES

Part No.	Description	For Use With	Nozzle Color
80264-07	V SERIES 0.7mm	80265-00	Black
80264-10	V SERIES 1.0mm	80265-00	Black
80239-07	T SERIES 0.7mm	80240-00	Black
80239-10	T SERIES 1.0mm	80240-00	Black



INTRODUCTION

GENERAL DESCRIPTION

The **RansFlex** is an air atomizing applicator powered by a RVC Power Supply. The cascade generates a high voltage DC charge to the electrode creating an electrostatic field between the atomizer and the target.

One of the many features of the RansFlex applicator system is that the electrical energy, which is available from the resistive charging electrode, is limited to the optimum level of safety and efficiency. The system is incapable of releasing sufficient electrical or thermal energy during normal operating conditions to cause ignition of specific hazardous materials in their most easily ignited concentrations in air.

As the applicator electrode approaches ground, applicator circuitry causes the high voltage to approach zero while the current approaches its maximum value. This performance is validated by independent test agencies FM 7260 approvals.

This RansFlex model is designed specifically for direct charge waterbase applications only. The waterborne fluid supply system must be isolated from ground to allow proper electrostatic charging of the fluid.

The waterbase materials either need to be non-ignitable or hard to ignite.

RANSFLEX NEW FEATURES

- DeVilbiss spray technology integration into atomization.
- Independent atom and fan air for optimal adjustment.



80765/82765 RANSFLEX WATERBORNE SPECIFICATIONS

Environmental/Physical

Applicator Length:	273mm (10.75-inches)
Weight: (Without Hose)	1050 grams (37 oz.)
Low Voltage Cable 79338-XX Lengths (Std):	10m, 15m, 20m, and 30m
Tubing Requirements:	
Atomizing Air:	5/16" (8mm) OD Nylon
Fan Air:	5/16" (8mm) OD Nylon
Trigger Air:	5/32" (4mm) OD Nylon

Electrical

Operating Voltage:	65kV DC (-) maximum
Current Output:	90 microamperes maximum
Paint Resistance:*	Water Base Paint Only
Part Sprayability:	Determine sprayability of part to be coated using 76652, Test Equipment

* Use Model No. 76652, Test Equipment (See current "Paint, HV & SCI Test Equipment" service manual TE-98-01)

Mechanical

Fluid Flow Capacity:	1000 mL/minute**
Wetted Parts:	Stainless, polyethylene, nylon, acetal polymer
Operating Pressure (Air Spray)	
Fluid:	(0-6.9 bar) 0-100 psi
Air:	(0-6.9 bar) 0-100 psi
Trigger:	(3.7-4.13 bar) 55-60 psi
Ambient Temperature:	40°C to 5°C (104°F to 41°F)
Trigger Response Time:	150 msec open and close

** This reflects the maximum fluid volume the applicator can deliver. The maximum spray volume that can be effectively atomized depends on fluid rheology, spray technology, and finish quality required.

TOOL CENTER POINT

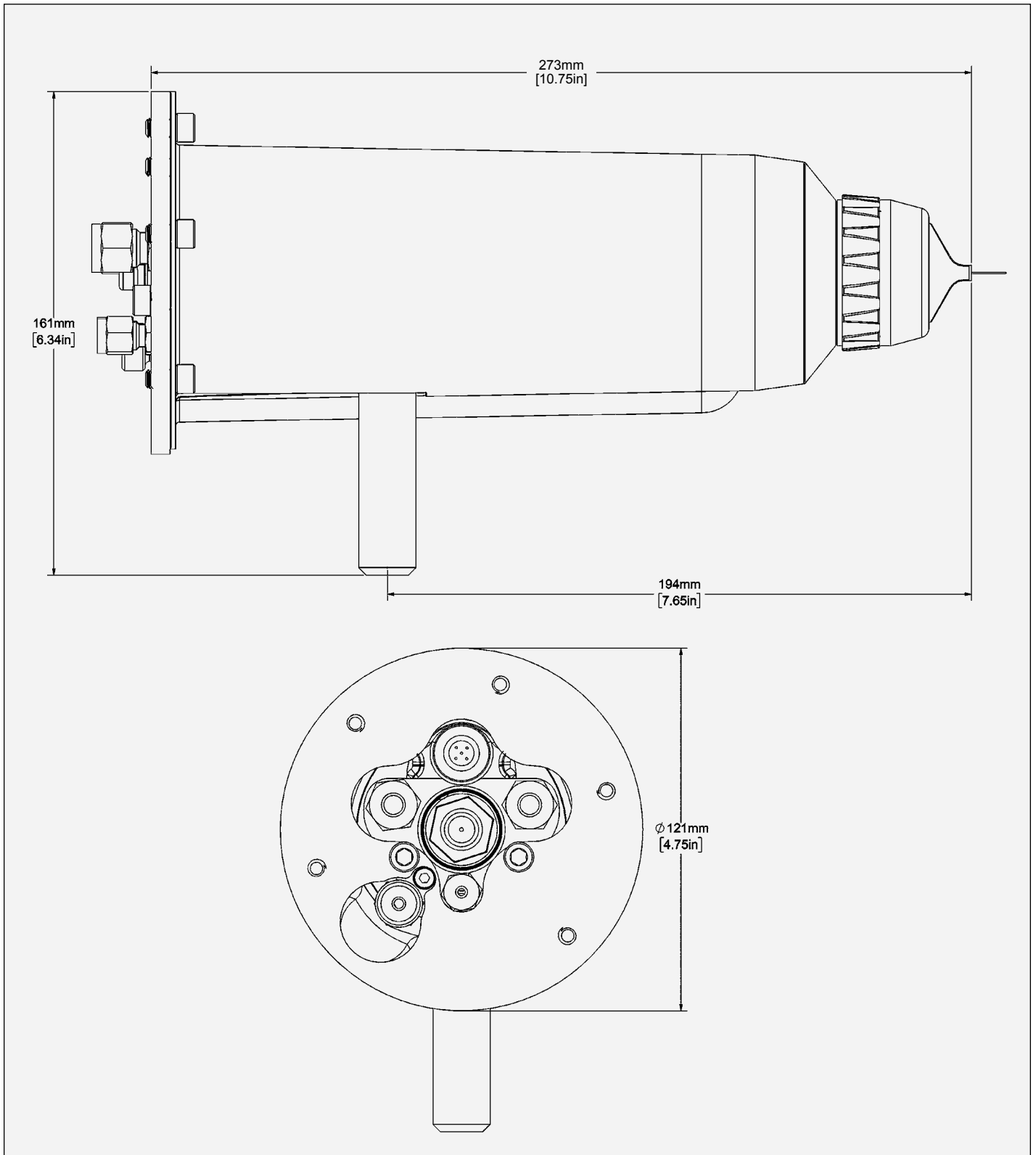




Figure 1: Water Base Direct Charge Electrostatic Spray Applicator 80765 (Shown without shroud)

RANSFLEX WATERBORNE ELECTROSTATIC SPRAY APPLICATOR 80765/82765			
No.	Description	No.	Description
1	Needle/Electrode	7	Mounting Post
2	Barrel	8	Fluid Hose
3	Cascade Housing	9	Low Voltage Cable
4	Fan Air Inlet	10	Piston Housing
5	Atom Air Inlet	11	Air Cap / Fluid Nozzle
6	Trigger Air Inlet		

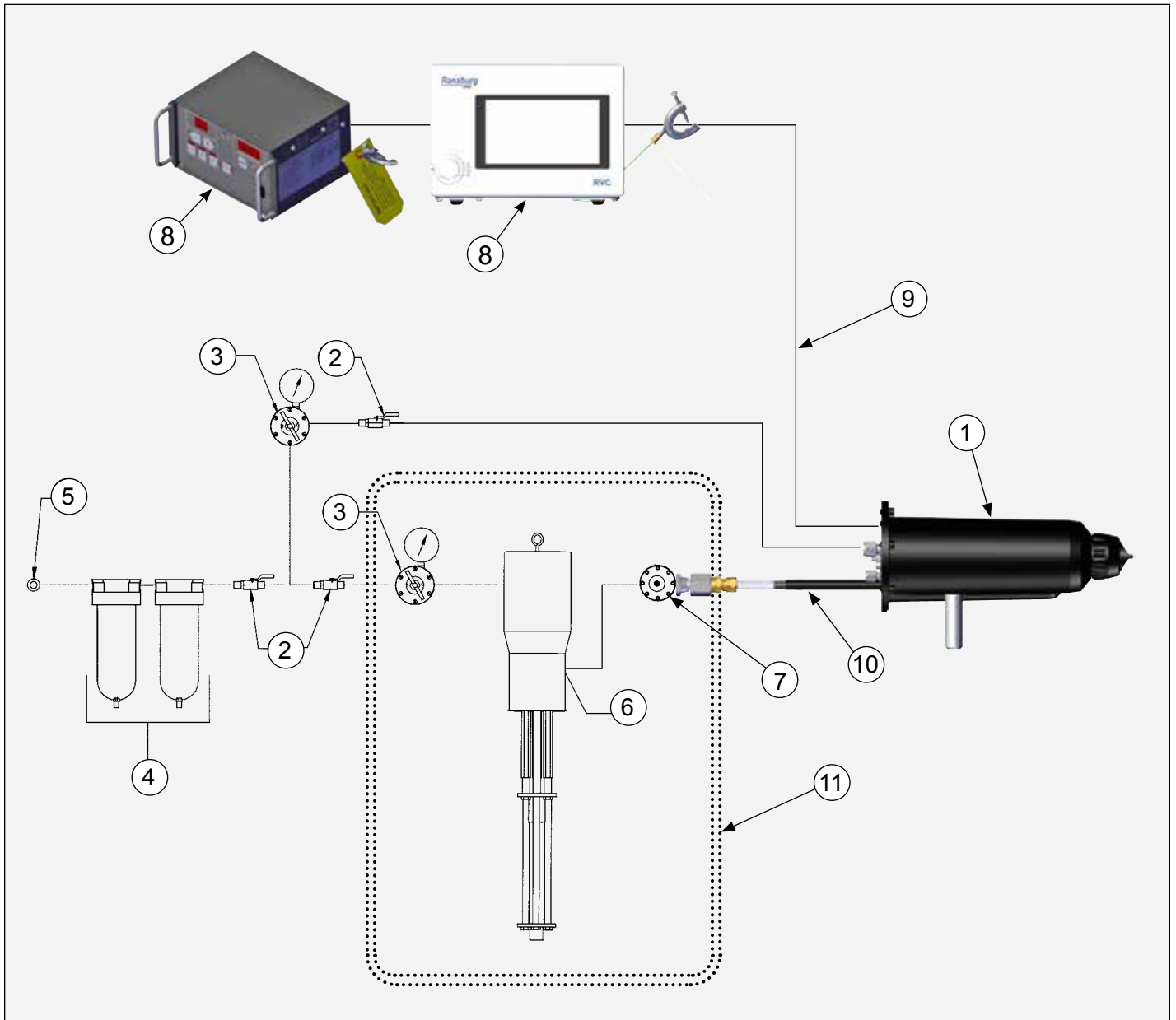


Figure 2: RansFlex Typical Waterborne Installation

RANSFLEX WATERBORNE TYPICAL INSTALLATION			
No.	Description	No.	Description
1	RansFlex 80765/82765	7	Fluid Regulator
2	Ball Valve	8	RVC Power Supply (81000, 81020, 80120)
3	Air Regulator with Pressure Gauge	9	Low Voltage Cable
4	Air / Water Separator	10	Isolated Waterborne Hose 80500-XX & 80501-XX
5	Main Air Supply Line	11	Voltage Isolation / Protection
6	Fluid Supply (Grounded)		



INSTALLATION

Fluid Hose Recommendation

Ransburg recommends using a 80500-XX & 80501-XX Fluid Hose Assembly. This assembly is made to specifically fit the fluid fitting size engineered into the applicator. This hose is available from your authorized Ransburg distributor. Available hose lengths are listed in "Accessories" in the "Parts Identification" section of this manual.

CAUTION

- Any user installed fluid hose used must be rated for (100 psig) 6.9 bar working pressure minimum.

Filters

1. Install an air filter assembly on the outlet of the main air regulator. The filter should be 5 micron with a maximum working pressure of at least 100 psig (6.9 bar). For Class 3 air quality, which is a 5 micron size and has a dew point of -4°F (-20°C), the relative humidity (RH) of the air should be 5%.
2. Ransburg recommends that a fluid filter be installed at the output of the fluid supply (pressure pot, pump, circulating system, etc.). It is the end user's responsibility to install the proper filter that meets their system's requirements.

80765/82765 RANSFLEX WATERBORNE INSTALLATION

WARNING

- The user **MUST** read and be familiar with the "Safety" section of this manual.
- This manual **MUST** be read and thoroughly understood by **ALL** personnel who operate, clean, or maintain this equipment! Special care should be taken to ensure that the warnings and requirements for operating and servicing safely are followed. The user should be aware of and adhere to **ALL** local building and fire codes and ordinances as well as NFPA, OSHA, and all related country safety codes prior to installing, operating, and/or servicing this equipment.
- Personnel **MUST** be **GROUND**ED to prevent a shock or spark during electrostatic operation.
- Install and route the hoses so they are **NOT** exposed to temperatures in excess of 120° F (49° C) and so that all hose bends are **NO LESS** than a 6-inch (15cm) radius. Failure to comply with these parameters could cause equipment malfunction that might create **HAZARDOUS CONDITIONS!**

GENERAL INSTALLATION REQUIREMENTS

All objects inside spray area must be grounded - reference EN 50176 and/or NFPA-33. Resistance to earth ground must be less than 1 megohm.

Interlocks Required

Interlock the solvent supply, booth fan, conveyor, and booth door with the RVC controller. When solvent is on the RVC power supply must be off. Refer to RVC manual for installation of user supplied interlocks.

WARNING

- The solvent supply, booth fan, conveyor, and booth door must be interlocked with the power supply.

WATERBORNE ISOLATION SYSTEM INSTALLATION GUIDELINES

WARNING

- Typical installation to spray non-flammable conductive materials (waterborne materials) must not be used to handle flammable materials (solvent based materials).

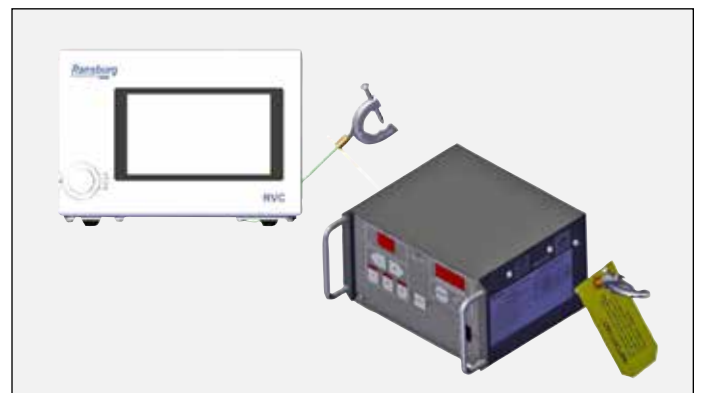
Using waterborne coating with electrostatic equipment requires that the fluid source be isolated from ground. Precautions should be taken to ensure operation safety and system efficiency. The following guidelines should be followed:

- The fluid lines and source MUST be isolated from ground. An isolating Paint Stand or similar isolating (non-porous) material MUST be used.
- Isolation stands MUST be at least 18-inches from grounded booth walls, chain link fences, or other grounded objects.
- Air hoses to the pressure pot or pump on the insulating stand should be non-conductive plastic. Many rubber hoses will have static grounding circuits or carbon content and are NOT suitable for this application.
- All charged (isolated) systems MUST be inside a fence or cage to prevent contact by personnel. An interlock system MUST be provided that interrupts high voltage flow to the applicator if the gate is opened.
- Air regulations for pots or pumps should be mounted remotely outside the fence or cage area to facilitate changes in pressure without shutting the system down.

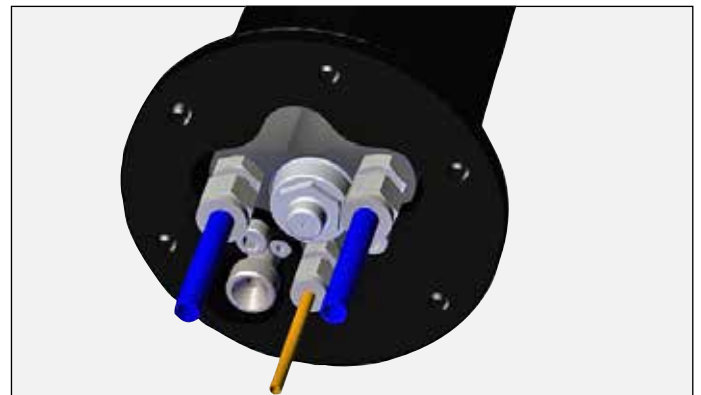
- Grounding hooks at the cage MUST be used to ground the system when personnel are working close by.
- Fluid lines to the applicator MUST be protected from scraping and abrasion on the floor or sharp metal edges that could lead to voltage pin holing and loss of kV on the charged system.
- Cleanliness and maintenance are extremely critical.

INSTALLATION

1. Ensure there is a true earth ground connection available. Connect the fluid source and power supply to this connection.
2. Turn off power.



3. Connect air.

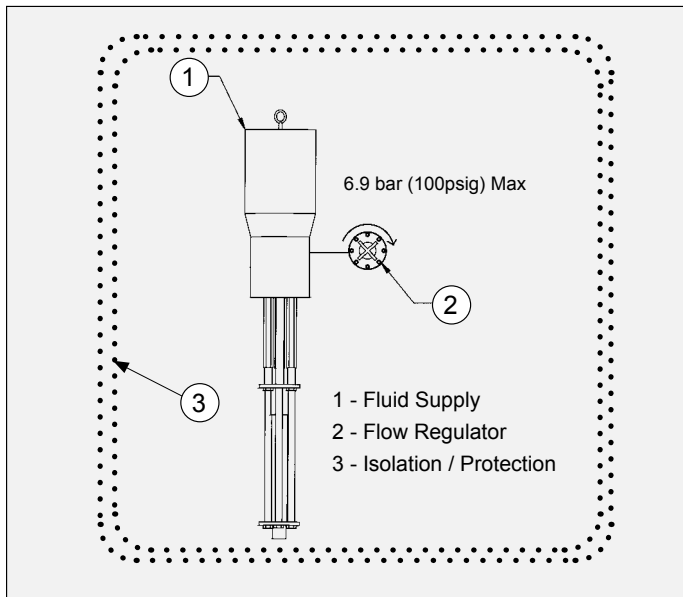


4. Trigger applicator with fluid off. Look for leaks in any connections min pressure 5.5 bar (80 psi).
5. Activate fluid, check for leaks with solvent flush if required.

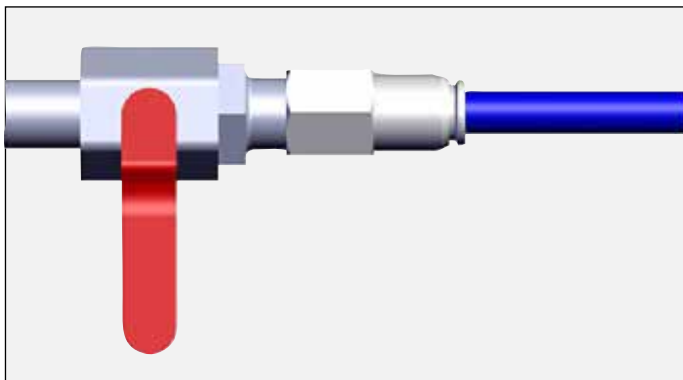
OPERATION

APPLICATOR OPERATION

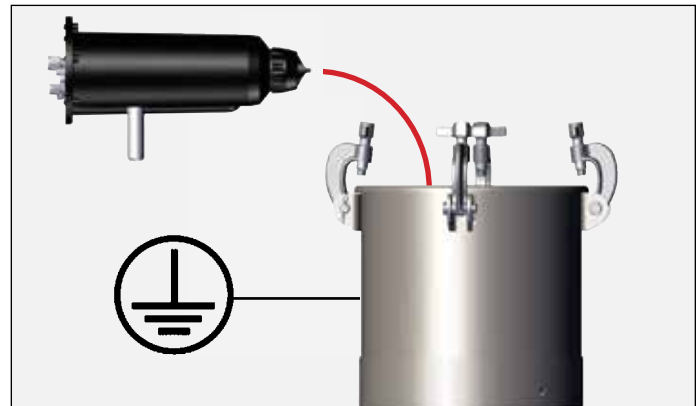
1. Set fluid pressure using flow regulator.



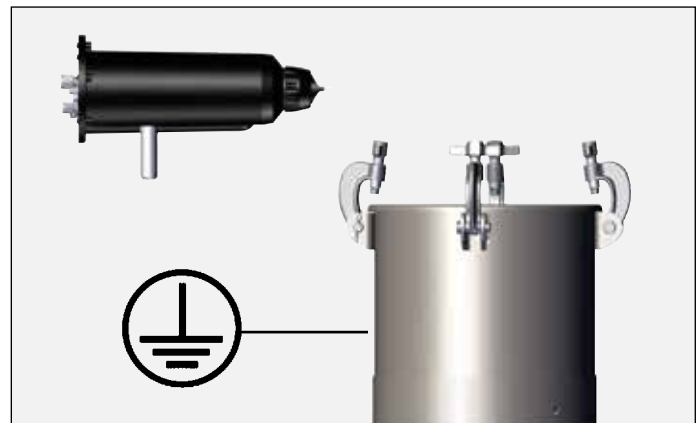
2. Disconnect the air to the applicator.



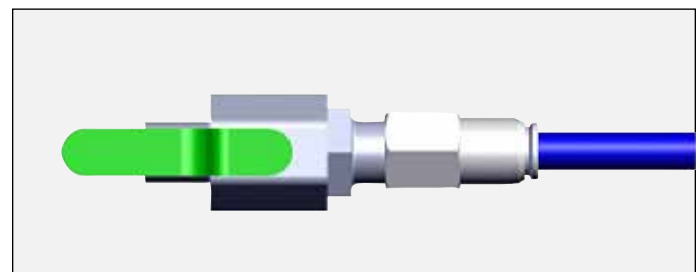
3. Activate trigger to start material stream into **grounded metal bucket or suitable area.**



4. Release trigger stop material flow.



5. Re-connect air supply.



6. Adjust air pressure.

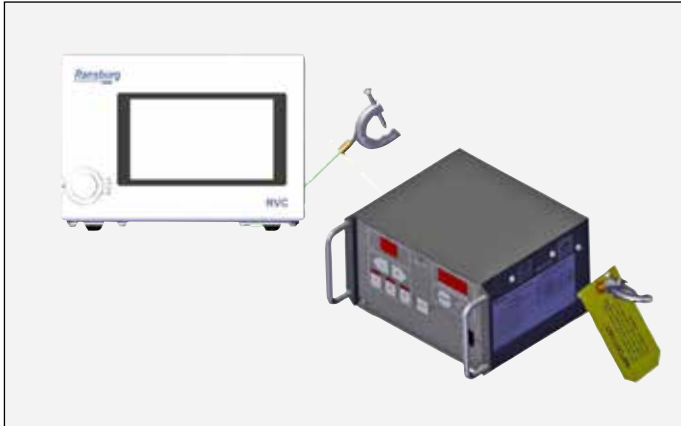
7. Position air cap to achieve pattern direction.

8. Actuate applicator (with voltage off) to spray test pattern.

WARNING

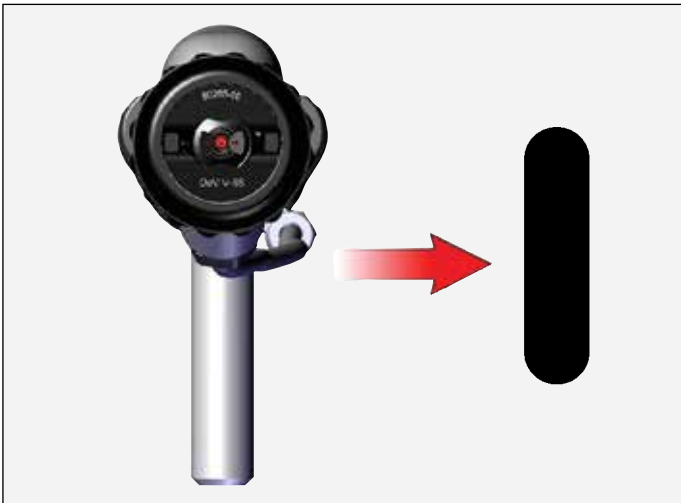
- The bucket or area sprayed into must be grounded to true earth ground.

9. Turn on voltage and trigger applicator. HV light should turn on.

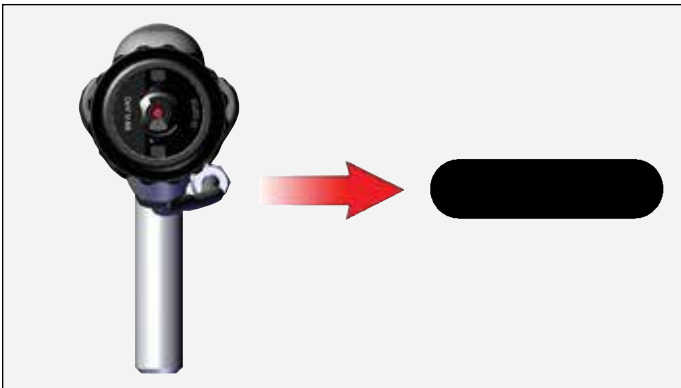


10. Adjust fluid pressure and air pressure as required to achieve finish.

11. Adjust air cap position as required.

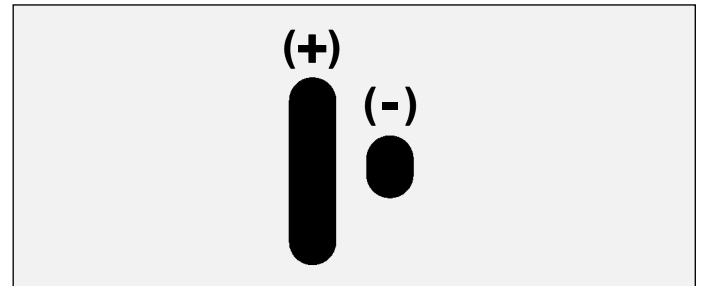
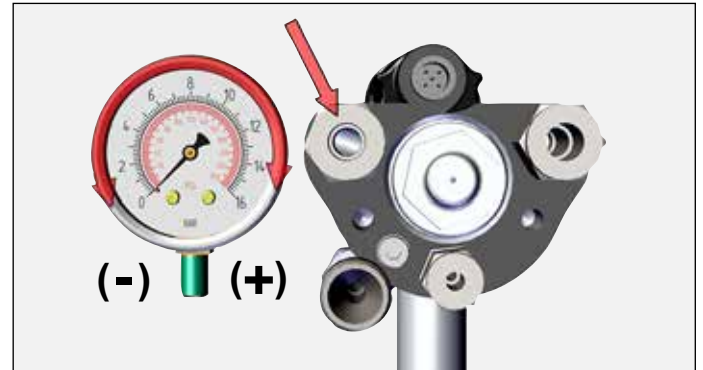


(Horns Horizontal)



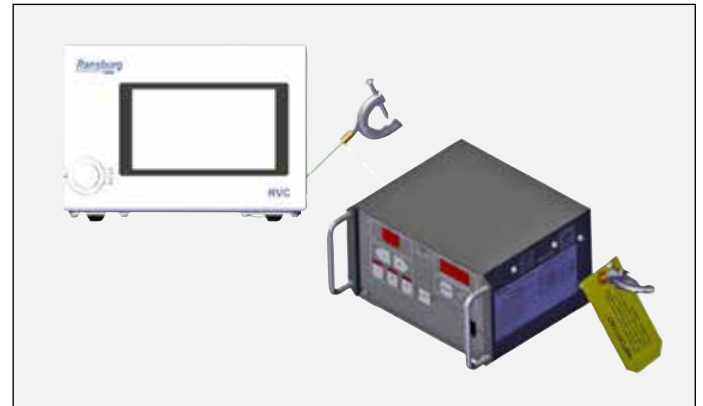
(Horns Vertical)

12. Adjust fan pattern as required.



FLUSHING / COLOR CHANGE PROCEDURE

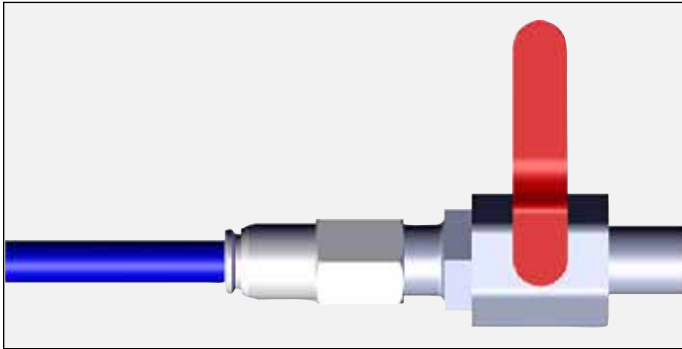
1. Turn off electrostatics.



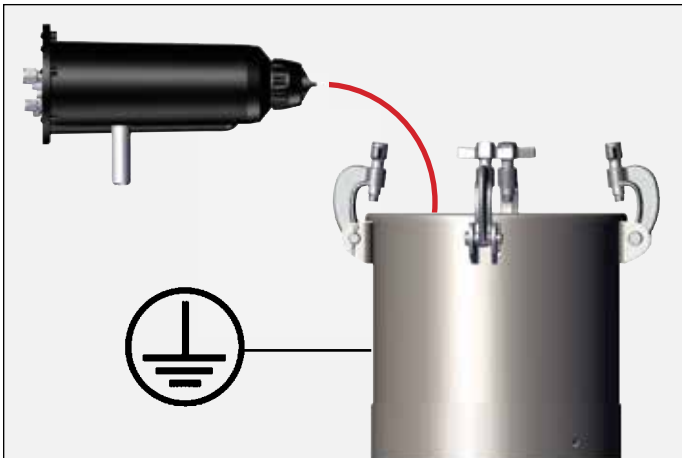
⚠ WARNING

➤ The solvent supply, booth fan, conveyor, and booth door must be interlocked with the power supply.

2. Disconnect air to applicator.



3. Discharge fluid into appropriate earth grounded metal container



4. Load next color, solvent flush and/or remove applicator from installation as required.

To identify the nozzle, each is engraved with the air cap it must be paired up with.

FLUID NOZZLE / AIR CAP

The fluid nozzle and air cap must be selected according to the application. The following charts show the nozzles and air caps available for the RansFlex.

⚠ CAUTION

➤ Nozzles from previous Ransburg design are not compatible with the RansFlex design. Use of these nozzles could cause equipment malfunction and possible damage.

NEW NOZZLE DESIGN

With the release of the RansFlex applicator a new configuration of nozzles was also released.

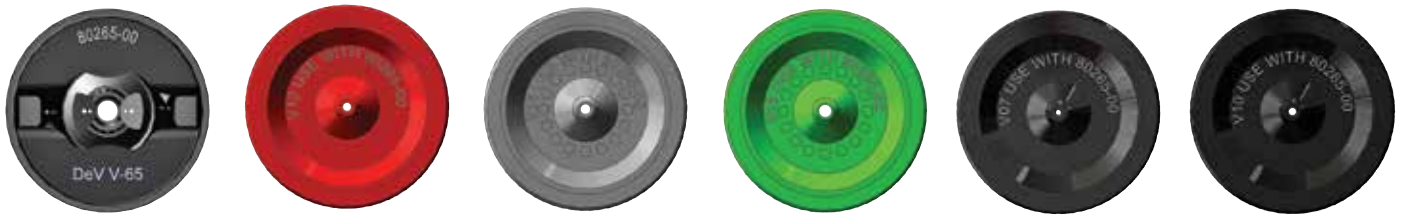
Red nozzles: 1.2 mm I.D.

Grey nozzles: 1.4 mm I.D.

Green nozzles: 1.8 mm I.D.

All other accessory sizes are black.





NOZZLE SELECTION 80265-00 / 80264-XX

Nozzle Part Number	For Use With Air Cap P/N	Color	Nozzle Opening
80264-07	80265-00	Black	0.7 mm
80264-10	80265-00	Black	1.0 mm
80264-12	80265-00	Red	1.2 mm
80264-14	80265-00	Grey	1.4 mm
80264-18	80265-00	Green	1.8 mm

HIGH WEAR NOZZLE SELECTION 80265-00 / 80464-XX

Nozzle Part Number	For Use With Air Cap P/N	Color	Nozzle Opening
80464-14	80265-00	Tan	1.4 mm
80464-18	80265-00	Tan	1.8 mm



80231-00 / 80230-XX C SERIES

Nozzle Part Number	For Use With Air Cap P/N	Color	Nozzle Opening
80230-12	80231-00	Red	1.2 mm
80230-14	80231-00	Grey	1.4 mm
80230-18	80231-00	Green	1.8 mm



80240-00 / 80239-XX T SERIES

Nozzle Part Number	For Use With Air Cap P/N	Color	Nozzle Opening
80239-07	80240-00	Black	0.7 mm
80239-10	80240-00	Black	1.0 mm
80239-12	80240-00	Red	1.2 mm
80239-14	80240-00	Grey	1.4 mm
80239-18	80240-00	Green	1.8 mm

MAX AIR CONSUMPTION AT 100psi (6.9 bar)

Air Cap	Flow Rate
V SERIES (80265-00)	615 SLPM (21.7 SCFM)
C SERIES (80231-00)	704 SLPM (24.9 SCFM)
T SERIES (80240-00)	750 SLPM (26.5 SCFM)



MAINTENANCE

SUITABLE SOLVENTS FOR CLEANING RANSFLEX APPLICATORS

When cleaning the applicator, a suitable solvent for cleaning depends on the part(s) of the applicator to be cleaned and the material that needs to be removed. Ransburg recommends that all exterior cleaning be done with non-polar solvents to prevent a conductive residue on critical components. We also understand that some of these solvents do not always meet the cleaning needs of some materials. **If conductive polar solvents are used to clean the applicator components, all residue must be removed using a non-conductive non-polar solvent (i.e. high flash Naphtha).** If there are any questions as to what solvents are best for cleaning, contact your local Ransburg distributor and/or your paint supplier.

The RansFlex applicator, low voltage cable and fluid hose, should not be submerged or soaked in solvent. However, the outer surfaces of these items can be wiped with a suitable cleaning solvent.

CAUTION

- All electrical components **cannot** be cleaned or soaked in any solvents.

Please reference Solvent Selection Guide TL-00-02 for detailed information on solvent polarity.

WARNING

- The user **MUST** read and be familiar with the safety instructions in this manual.
- If compressed air is used in cleaning, **REMEMBER** that high pressure air can be dangerous and should **NEVER** be used against the body. It can blind, deafen, and may even penetrate the skin. If used for cleaning equipment, the user should wear safety glasses.
- Be **SURE** the applicator power is **OFF** and the system is grounded before using solvent to clean **ANY** equipment.
- **DO NOT** operate a faulty applicator!
- When using cleaning solvent, standard health and safety precautions should apply.
- Any solvent used to clean the fluid passages must be discharged into a grounded container. Use of ungrounded or plastic containers may cause fire or explosion.

CAUTION

- Cleaning of the exterior surface of the applicator should be done with non-polar solvents. If cleaning requires the use of polar solvents, the applicator should be wiped down with non-polar solvent prior to going back into use. Using polar solvents will leave a semi-conductive film on the surface of the applicator that will effect efficiency of the applicator and cause damage to the components.

⚠ CAUTION

➤ Nozzles from previous Ransburg design are not compatible with the RansFlex design. Use of these nozzles could cause equipment malfunction and possible damage.

⚠ WARNING

➤ The flash point of the cleaning solvent shall be at least 15° C (27° F) above the ambient temperature. Otherwise, the cleaning process must be carried out in an area with forced air ventilation. It is the end users responsibility to ensure this condition is met.

All repairs should be made on a clean, flat surface. If a vise is used to hold parts during service or repair, DO NOT clamp onto plastic parts and always pad the vise jaws!

The following parts should be thoroughly packed with dielectric grease (LSCH0009-00) leaving NO air space or voids when assembling:

- All O-Rings (PTFE O-rings do not need lubrication)
- Needle Shaft Assembly
- Packing Tube
- Cascade and Barrel

Equipment Required

- Special Multi-Purpose Wrench (80353-00)*
- Hex Driver (79862-02)* (79862-01)*
- Dielectric Grease (LSCH0009-00)*
- 10 mm Wrench
- 15 mm Wrench
- Spanner
- 19mm Socket

* Supplied with applicator

ROUTINE SCHEDULE

Follow these maintenance steps to extend the life of the applicator and ensure efficient operation:

Several Times Daily

Inspect the air cap for paint accumulation. Clean as frequently as necessary with a soft bristled brush and a suitable solvent.

⚠ CAUTION

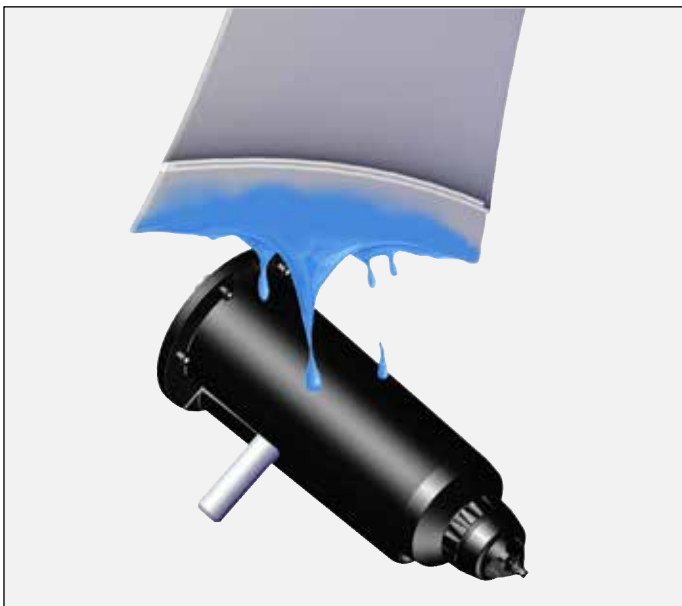
➤ **NEVER** remove the fluid nozzle assembly while paint is in the applicator or paint may enter into the air passages. Clogged or restricted air passages will cause poor atomization and/or electrical shorting. Air passages that are clogged with conductive material can lead to excessive current output levels and consequent low operating voltage or long-term electrical damage.

The applicator barrel **MUST** be tilted front down to remove the fluid nozzle. Failure to do so may allow paint to enter the air passages, thereby reducing airflow and damaging the applicator barrel/cascade. Applicators may be flushed in lieu of tilting. However, they must be either flushed or tilted down during nozzle removal!

Cleaning Flushing

1. Reference page 24 for flushing procedure. Flushing should be performed at the end of daily use or prior to any maintenance.
2. Applicator exterior cleaning at the end of each shift, wipe the outside of the applicator with a solvent soaked rag pointing the applicator nose down.





Daily (or at start of each shift)

- Verify that ALL solvent safety containers are grounded!
- Check within 6m (20-ft.) of the point of operation (of the applicator) and remove or ground ALL loose or ungrounded objects.
- Inspect work holders for accumulated coating materials (and remove such accumulations).

- Check that atomizer assembly is clean and undamaged.

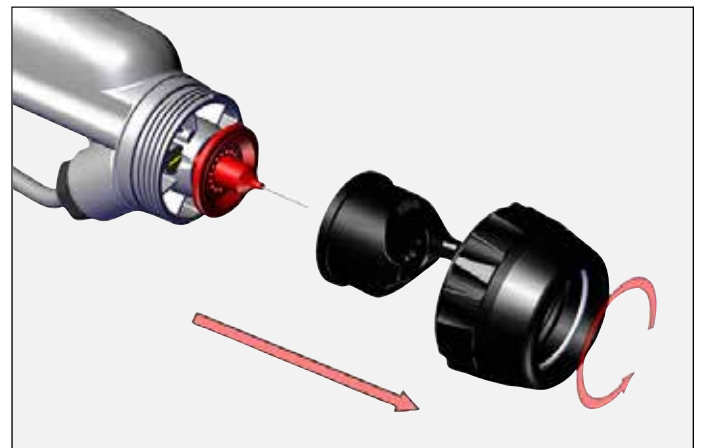
NOTE

► Standard electrode is "snap back" spray wire electrode.

- Straighten the applicator electrode if necessary.
- Clean the fluid filter, if used.

Air Cap Removal

1. Remove retaining ring and air cap.



2. Clean and replace as necessary.

3. Install in reverse order.

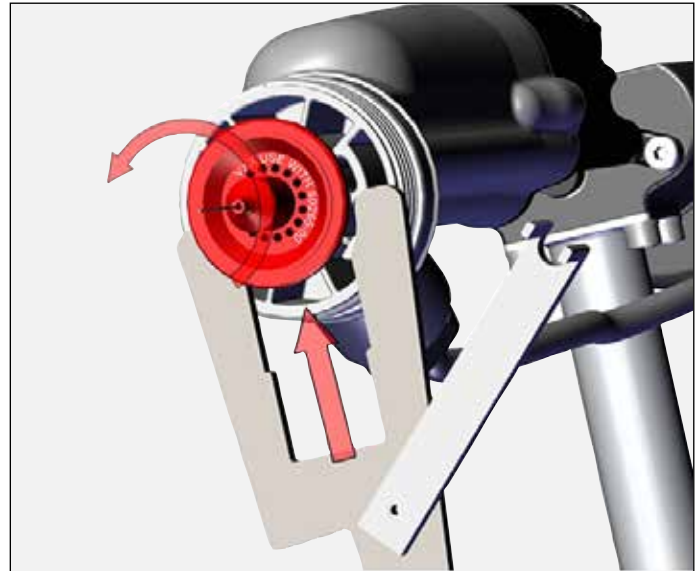
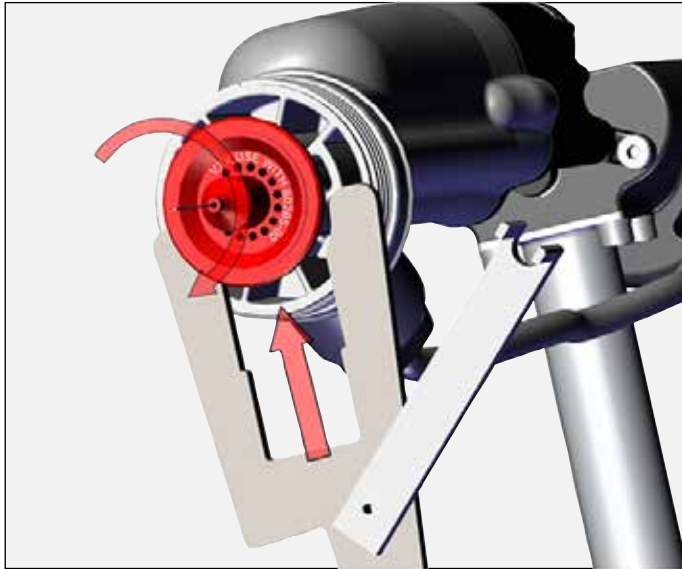


Fluid Nozzle Removal

⚠ WARNING

➤ Prior to removing the fluid nozzle, all pressure from the system must be relieved.

1. Insert 80353-00 wrench onto nozzle flats.



NOTE

➤ Do not over tighten. Fan pattern reduction will be affected.

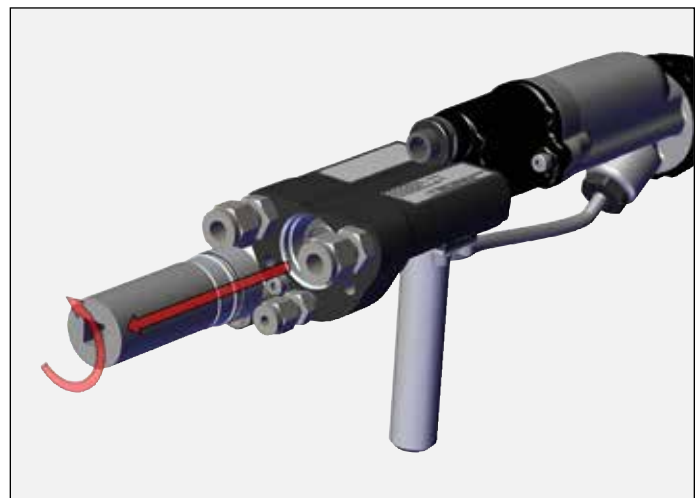
2. Insert O-ring, replace as required.



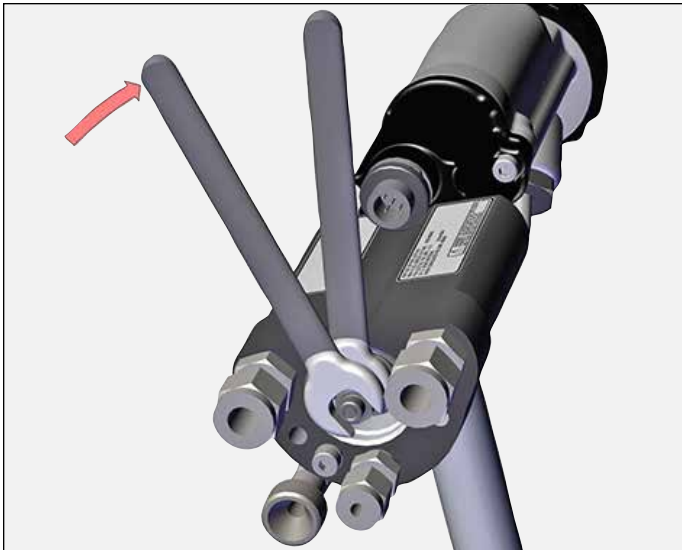
3. Install fluid nozzle using 80353-00 wrench. Tighten till nozzle seats on O-ring and then 1/8 additional turn.

Barrel Removal

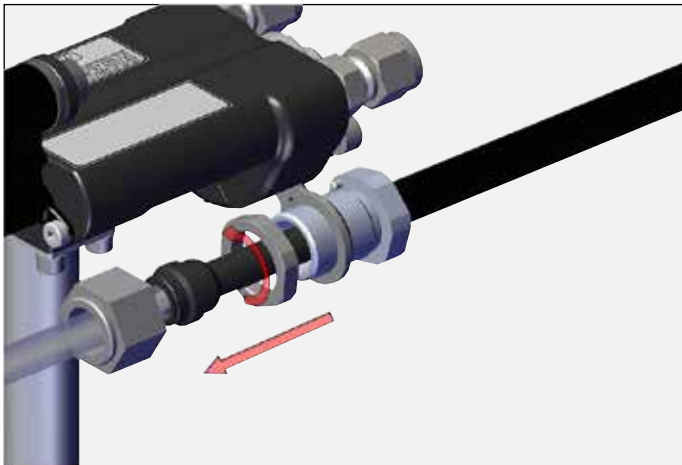
1. Remove piston cap.



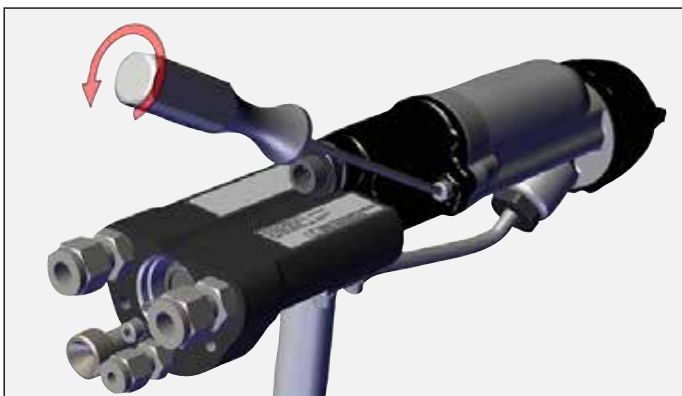
2. Remove jam nuts.



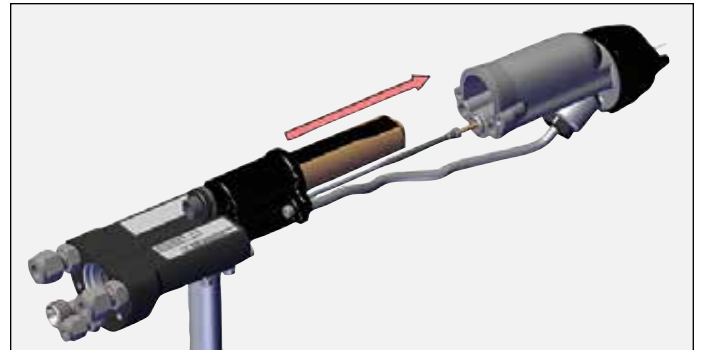
3. Remove fluid tube.



4. Remove barrel screws.



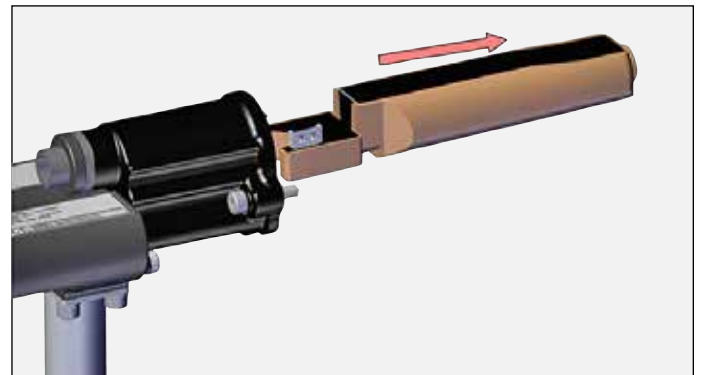
5. Pull barrel away.



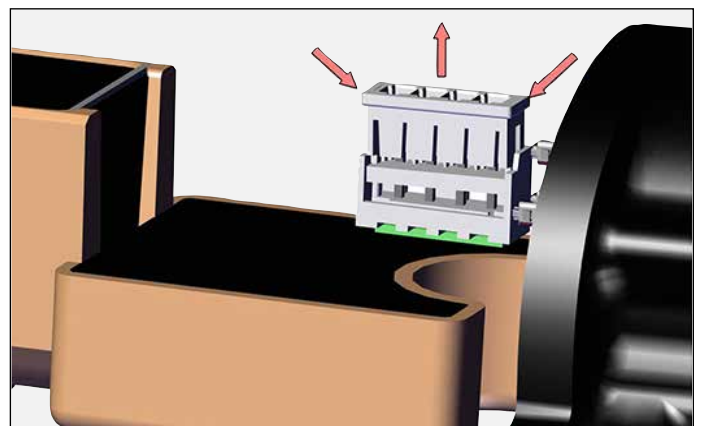
6. Pull cascade straight out.

⚠ CAUTION

➤ Do not pull with excessive force or twist wires. This could damage cascade connector or wire harness.

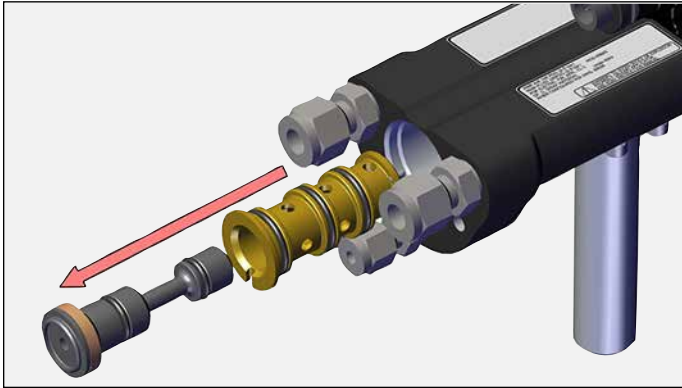


7. Carefully disconnect harness by pulling connector on both sides by hand and rocking it side to side to remove.



8. Replace cascade as necessary.

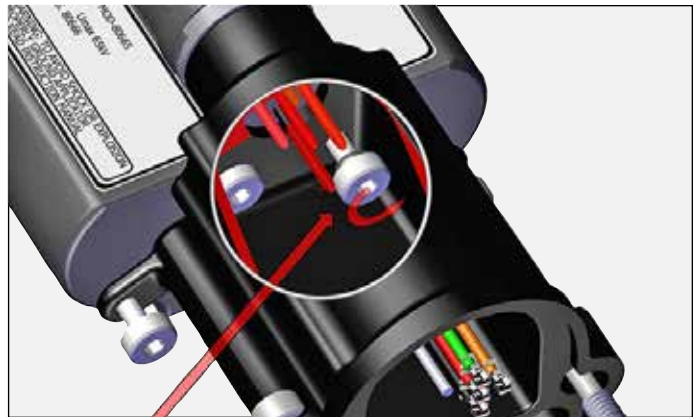
9. Remove piston and bushing.



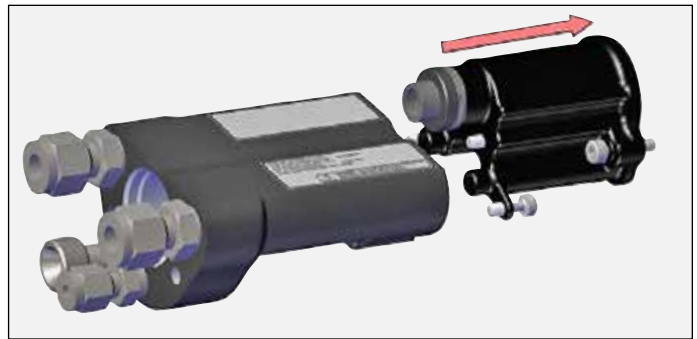
OR



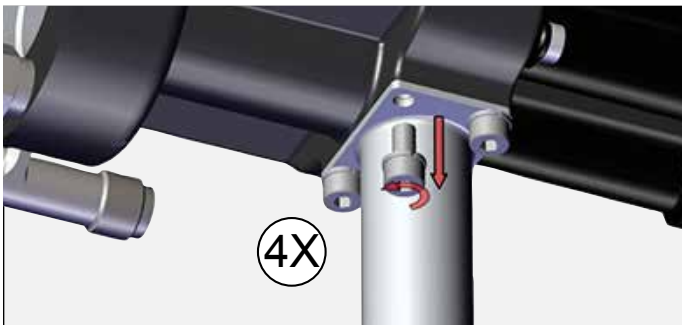
12. Remove internal housing screws.



13. Remove cascade housing from piston housing.



10. Remove screws for post.



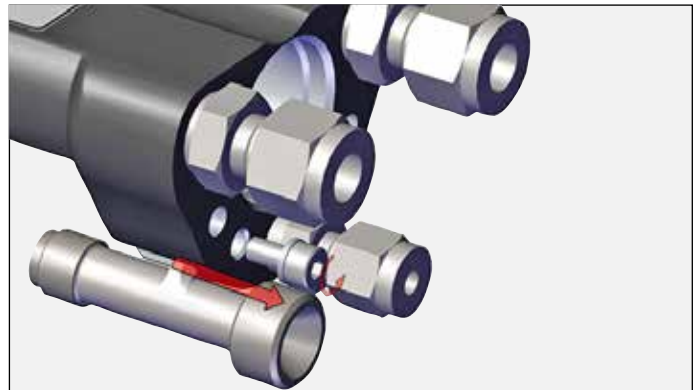
14. Remove needle packing nut and packing.



11. Remove two housing screws.



15. Remove fluid inlet.

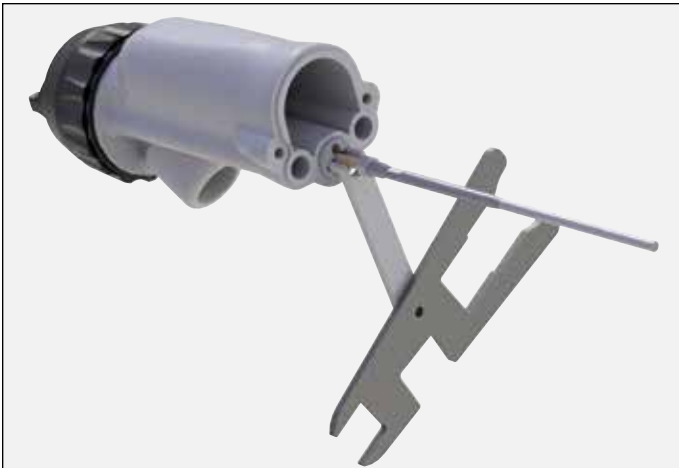


16. Remove fluid tube.

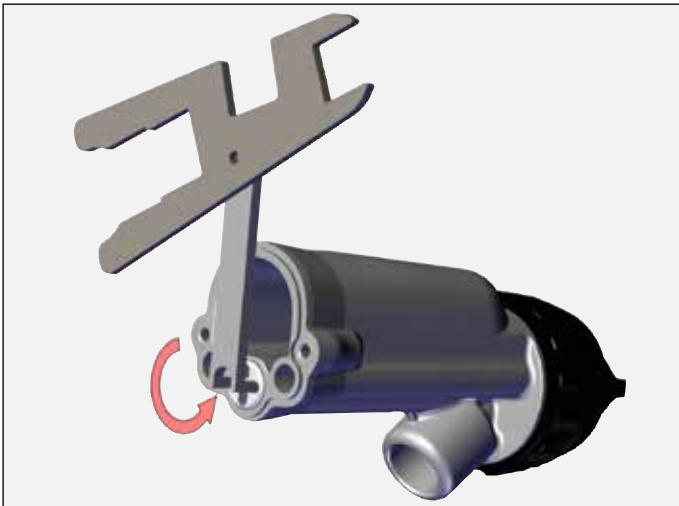


Packing Removal/Replace

1. Use 80353 wrench to remove nut.



OR



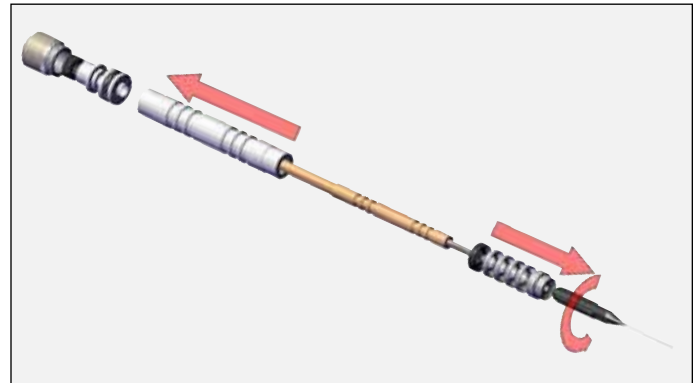
2. Pull straight out of barrel.



3. Remove nut and needle extension.



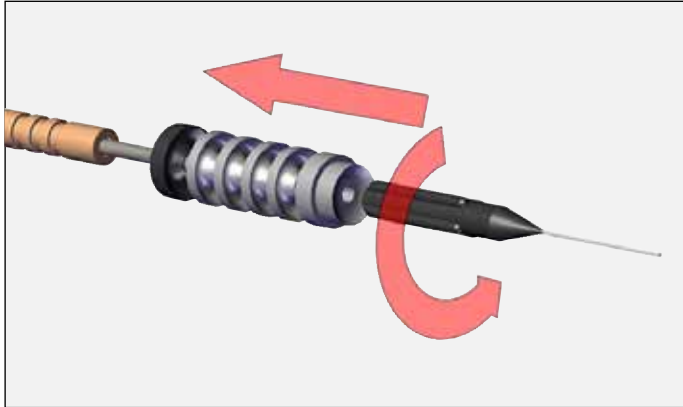
4. Remove all parts, clean with non-polar solvent. Inspect for any discolored areas. Replace parts as required.



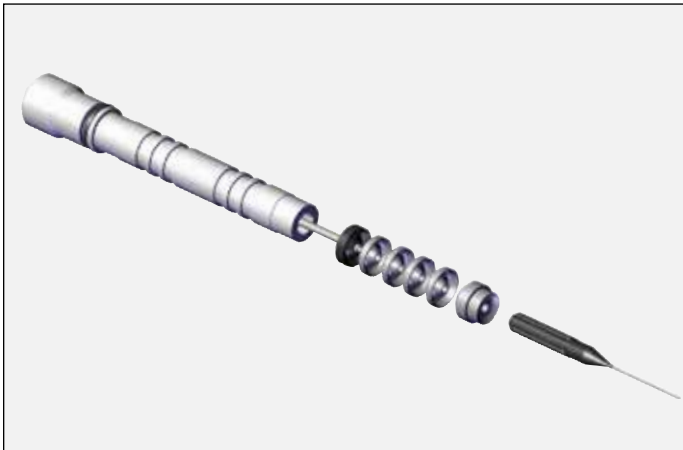
5. Prior to installation, apply dielectric grease inside packing tube, completely full.



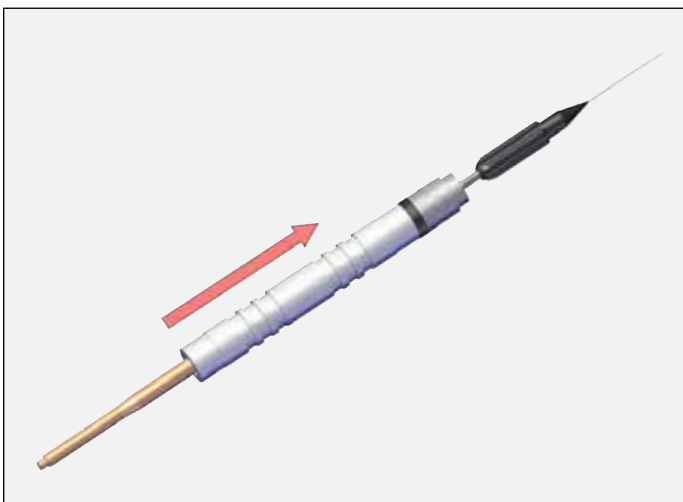
6. Insert 4 parts on front of shaft.



OR



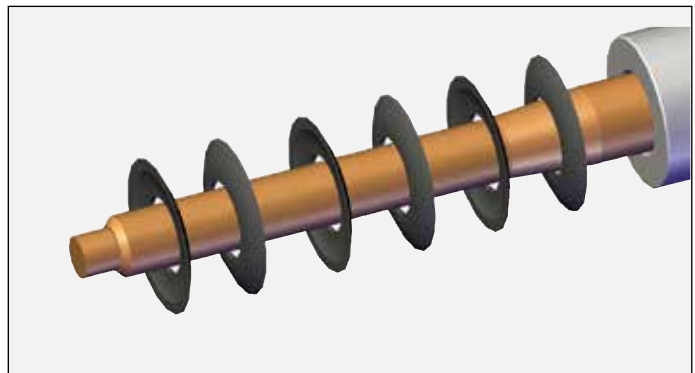
7. Insert packing tube onto shaft. Wipe excess grease over front parts and outside of packing tube.



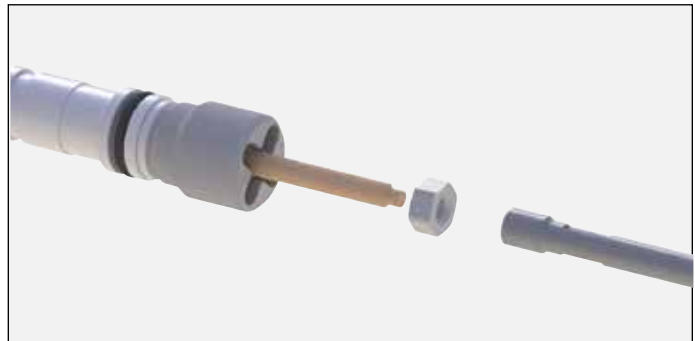
8. Install rear parts.



9. Install Bellville washers in sequence shown.



10. Install rear nut. Install extension finger tight.



11. Tighten nut and extension.

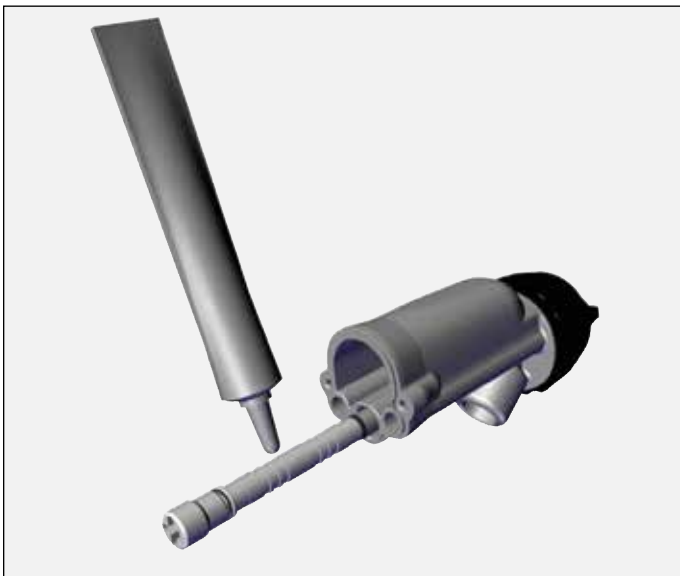


Re-Install Needle Shaft Into Barrel

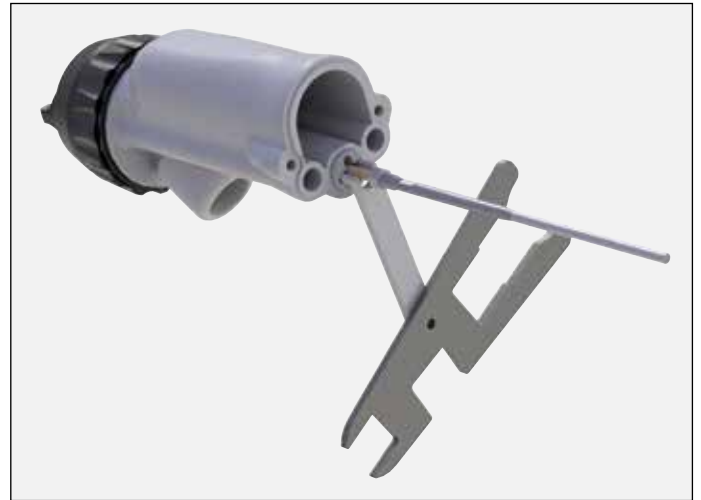
1. Install needle shaft into barrel with dielectric grease.



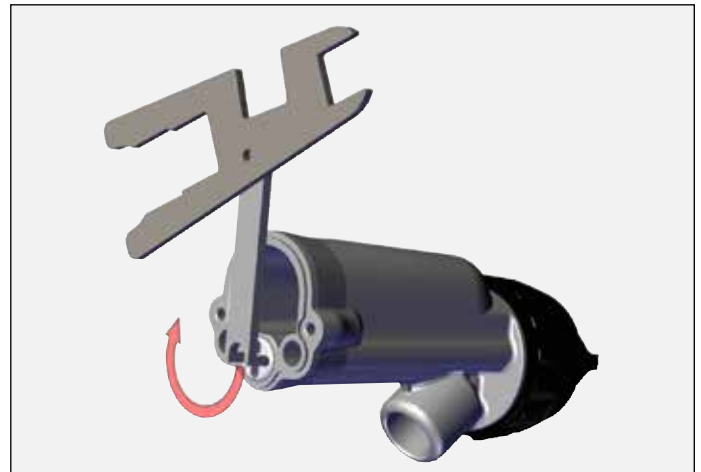
OR



2. Tighten packing using wrench. Pull back and forth on the needle shaft till a slight amount of drag is felt.



OR



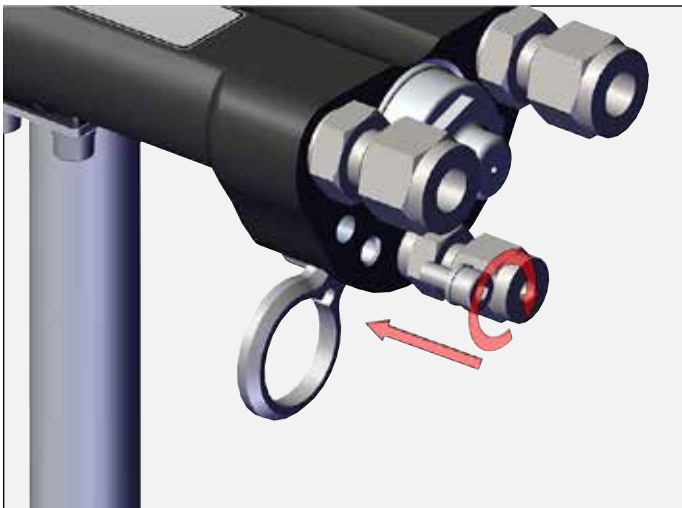
3. Install fluid tube.



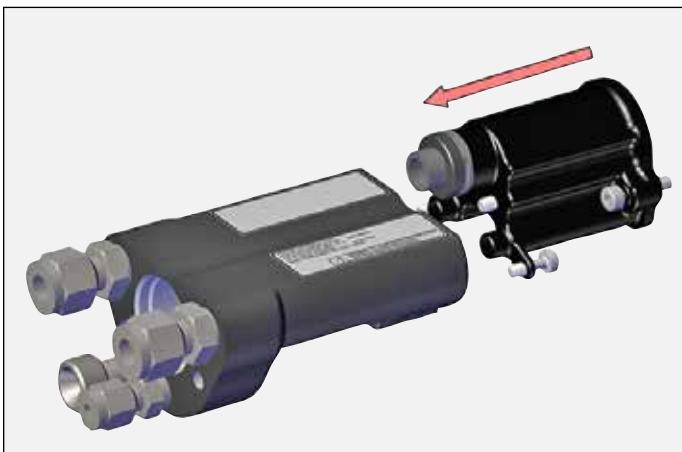
4. Install needle nut and packing.



5. Install fluid inlet fitting.



6. Install cascade housing onto piston housing.



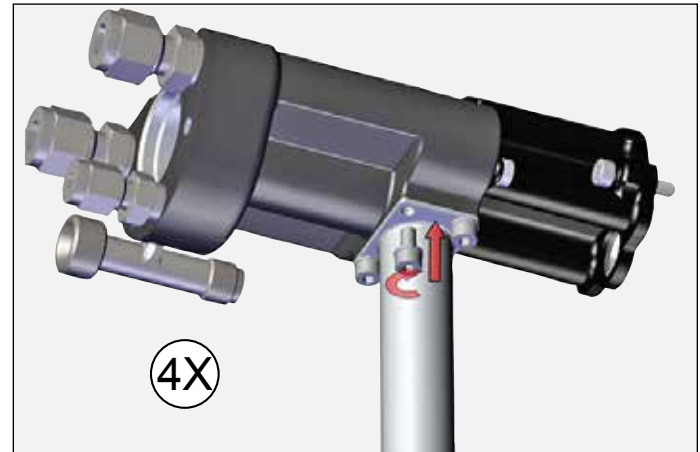
7. Tighten internal screws.



8. Tighten external screws.



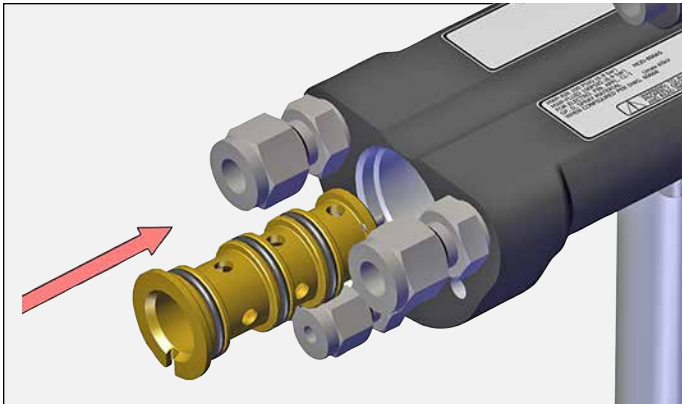
9. Install post.



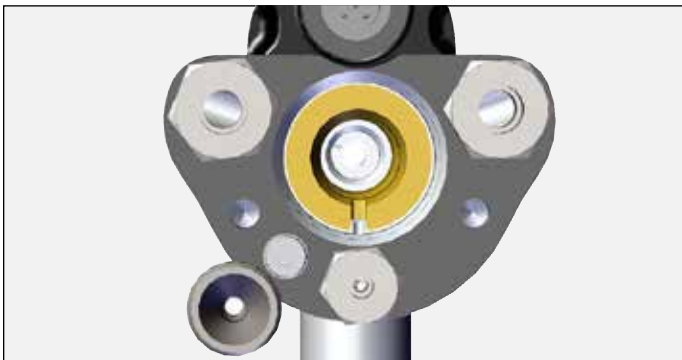
10. Verify white O-ring is installed in bushing.



11. Install bushing into piston housing.



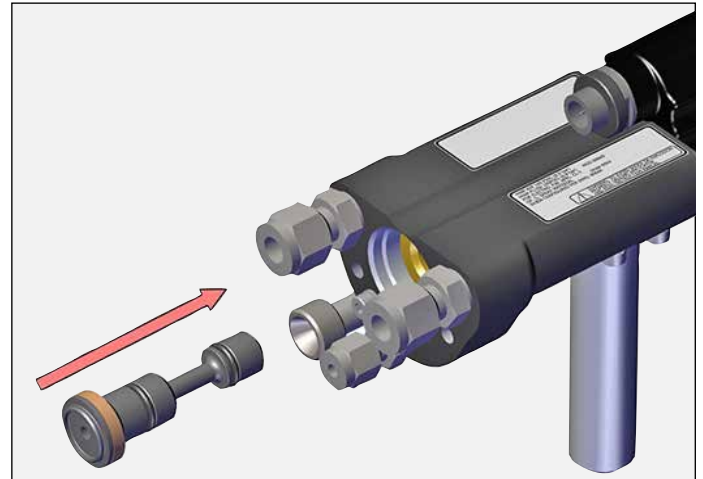
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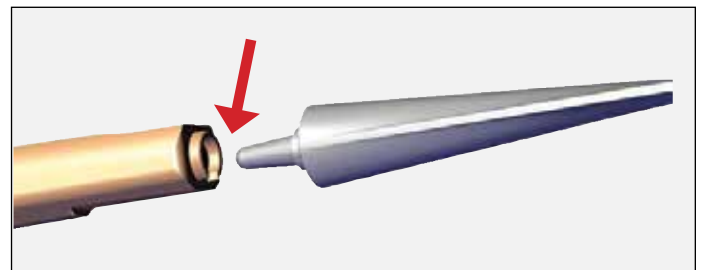
NOTE

► Bushing orientation.

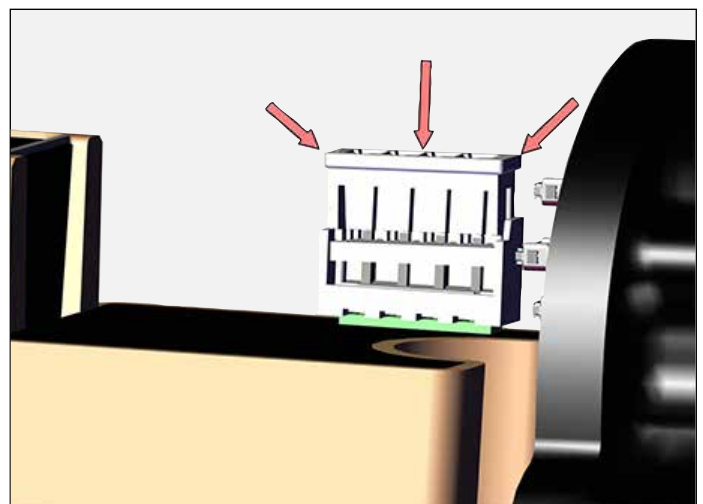
12. Grease all seals prior to installing piston into housing.



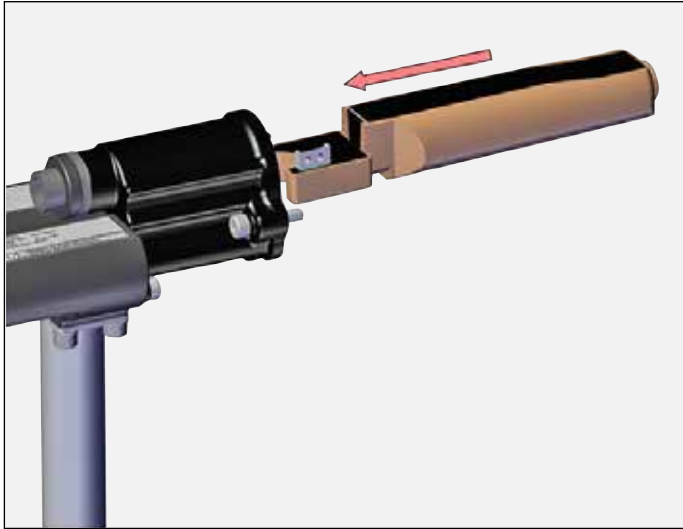
13. Apply LSCH0009 grease onto end of cascade.



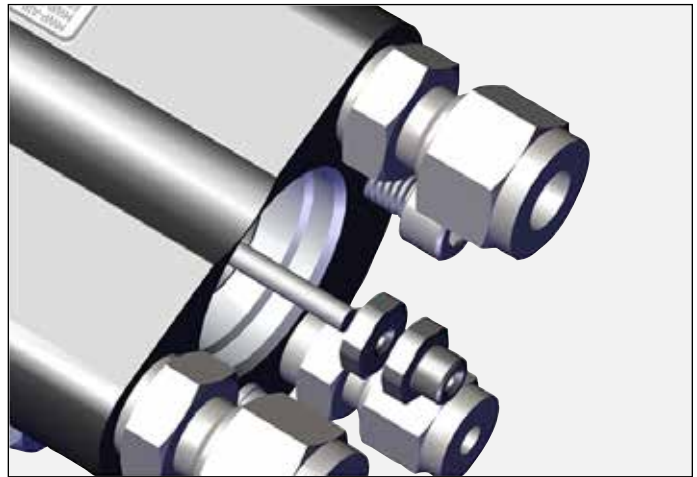
14. Reconnect harness by pushing down to snap.



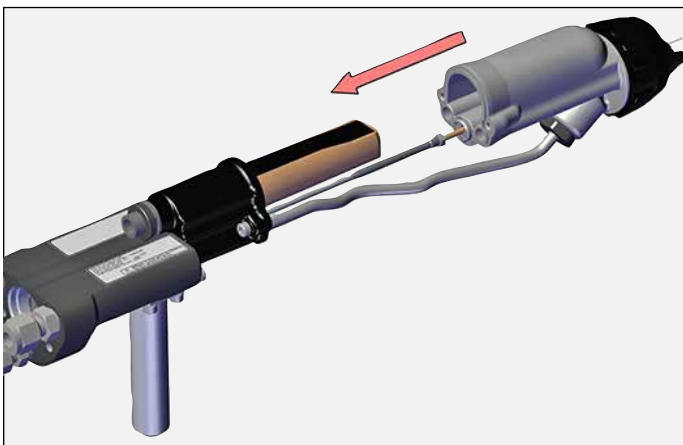
15. Reinstall cascade into housing.



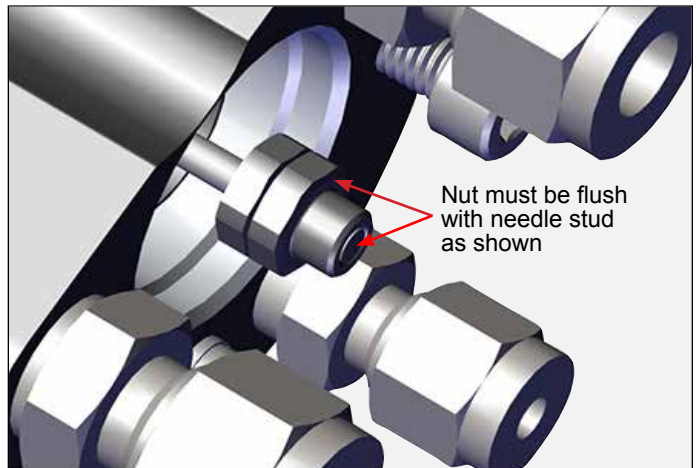
18. Install jam nuts finger tight.



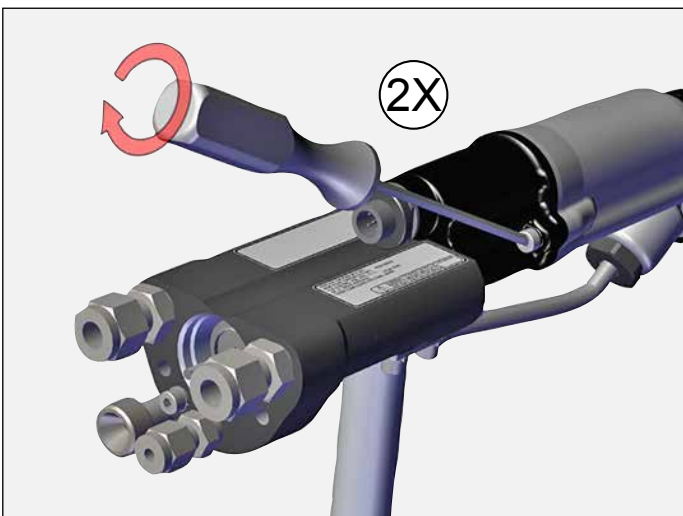
16. Install barrel over cascade.



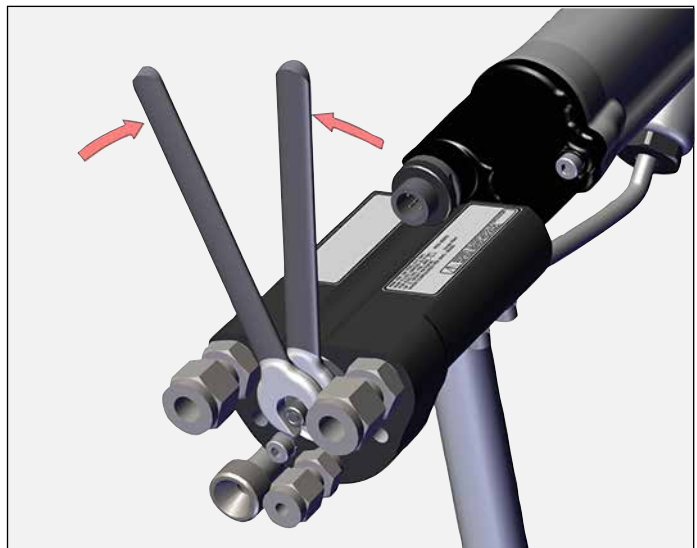
19. Set air before fluid.



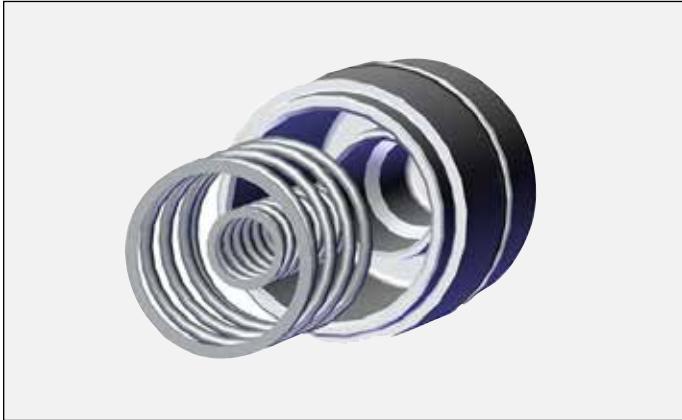
17. Tighten barrel screws.



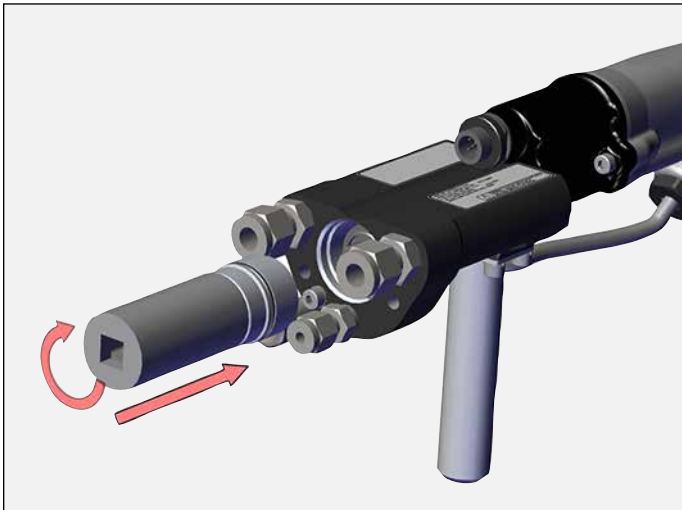
20. Tighten jam nuts.



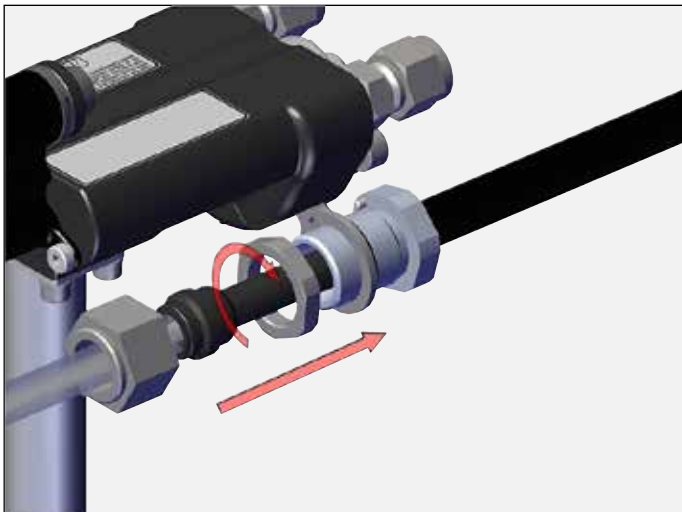
21. Place springs in piston cap.



22. Install piston cap using 19mm (3/4") hex socket.

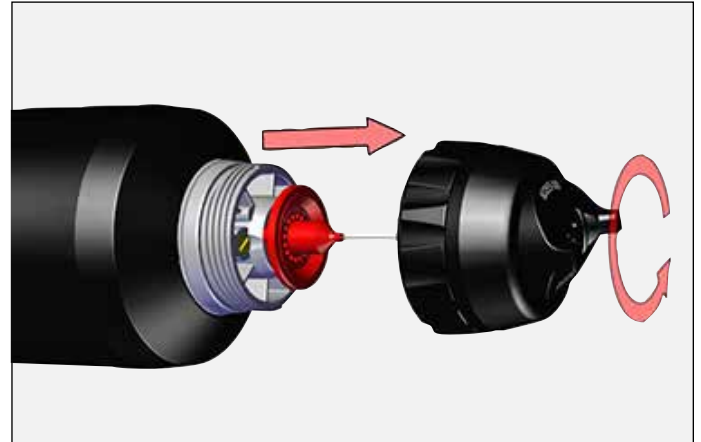


23. Tighten fluid nut.

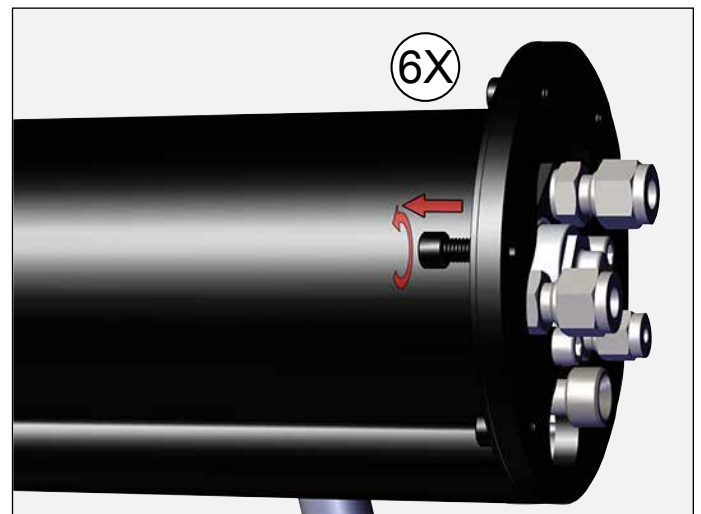


Shroud Removal

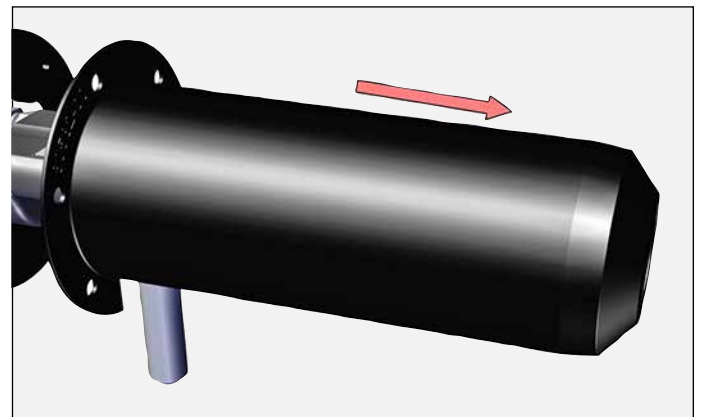
1. Remove air cap and retaining ring.



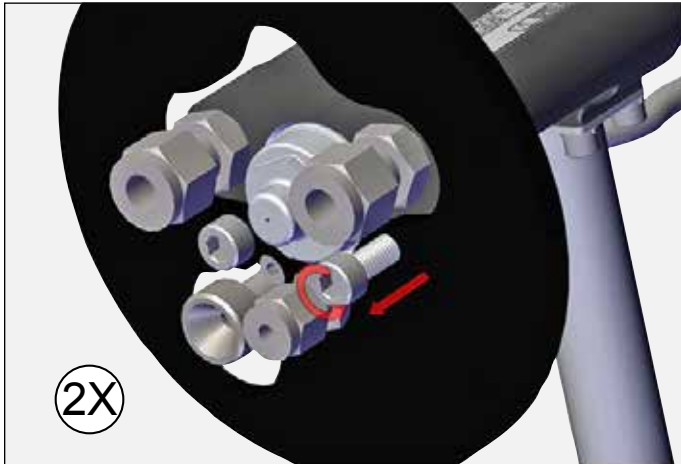
2. Remove shroud screws.



3. Remove shroud.

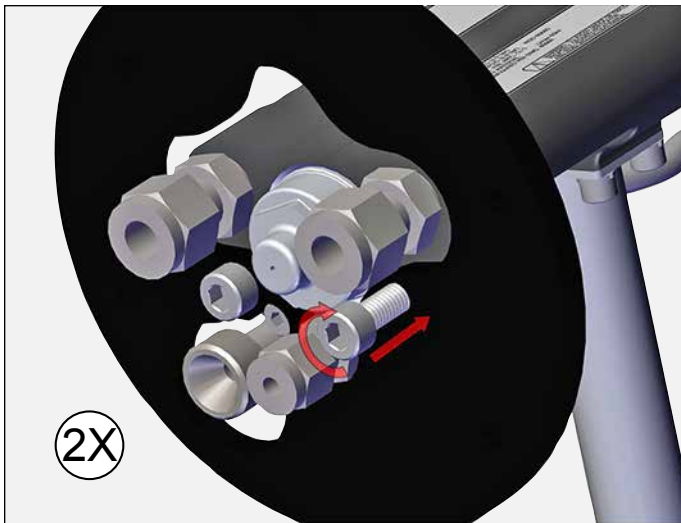


4. Remove back plate screws.

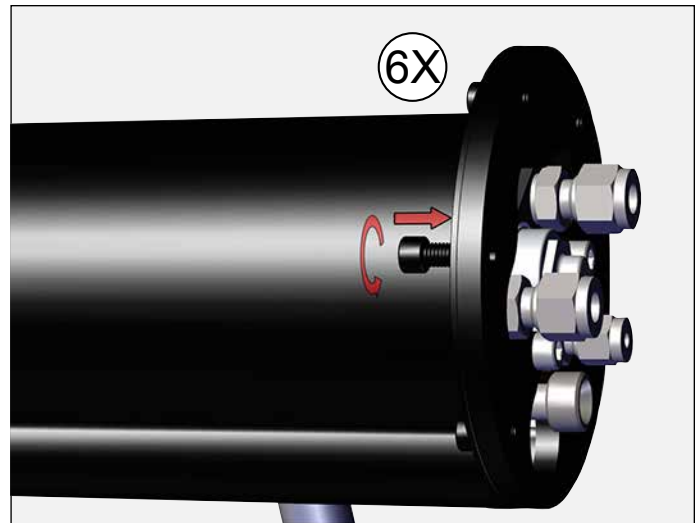


Shroud Installation

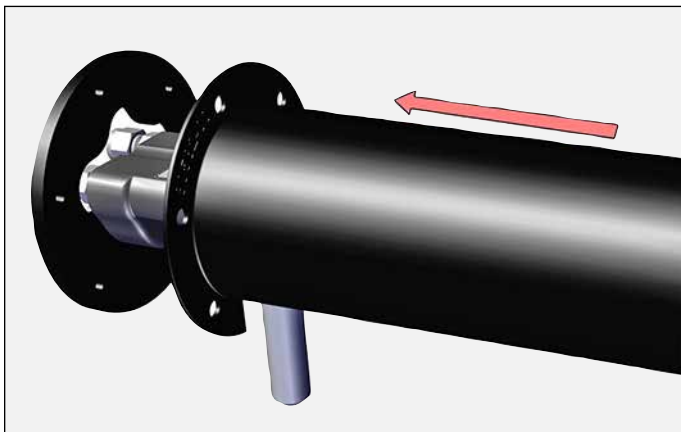
1. Install back plate screws.



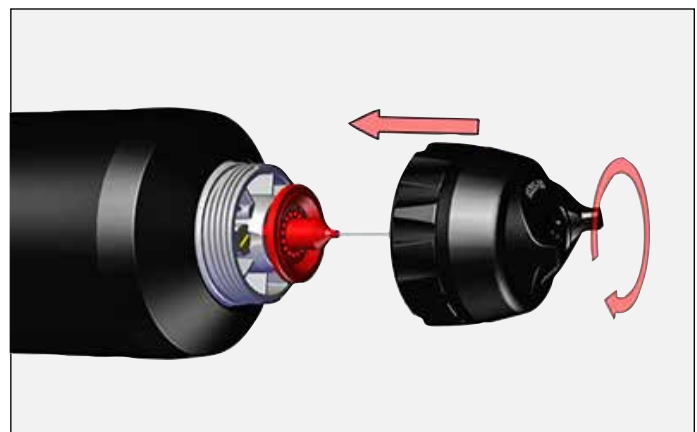
3. Install shroud screws.



2. Install shroud.

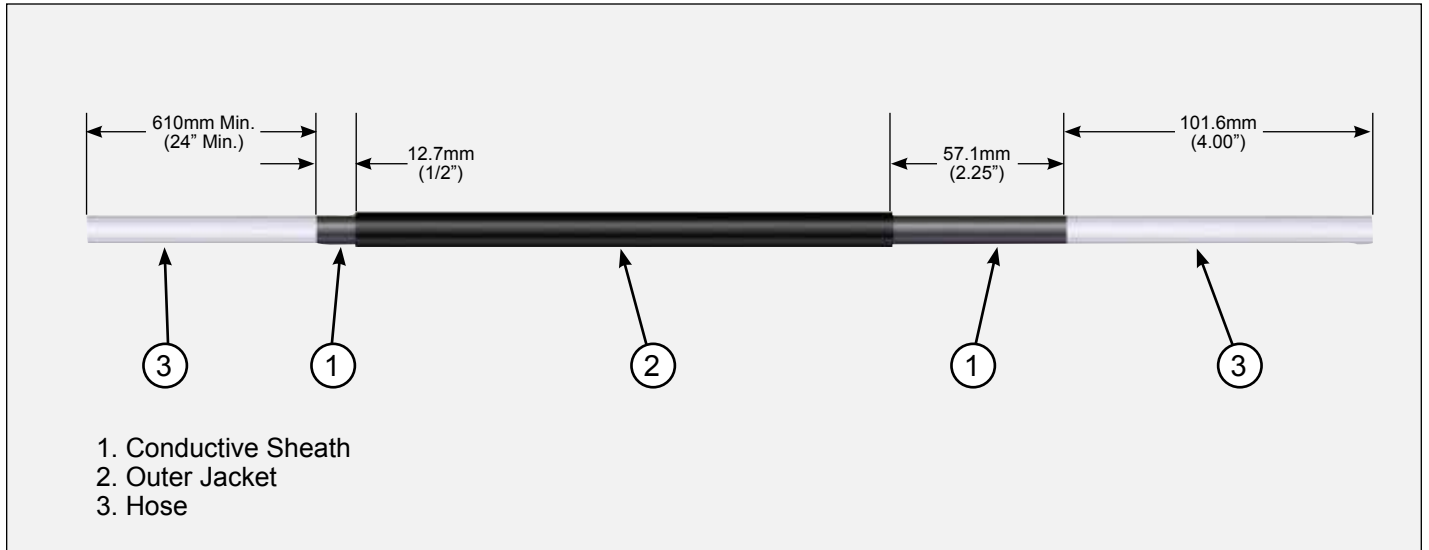


4. Install air cap and retaining ring.



Hose Cut Dimensions

If the water base hose is serviced for any reason, the cut dimensions are shown below. (Reference 80500-XX & 80501-XX fluid hose assembly)

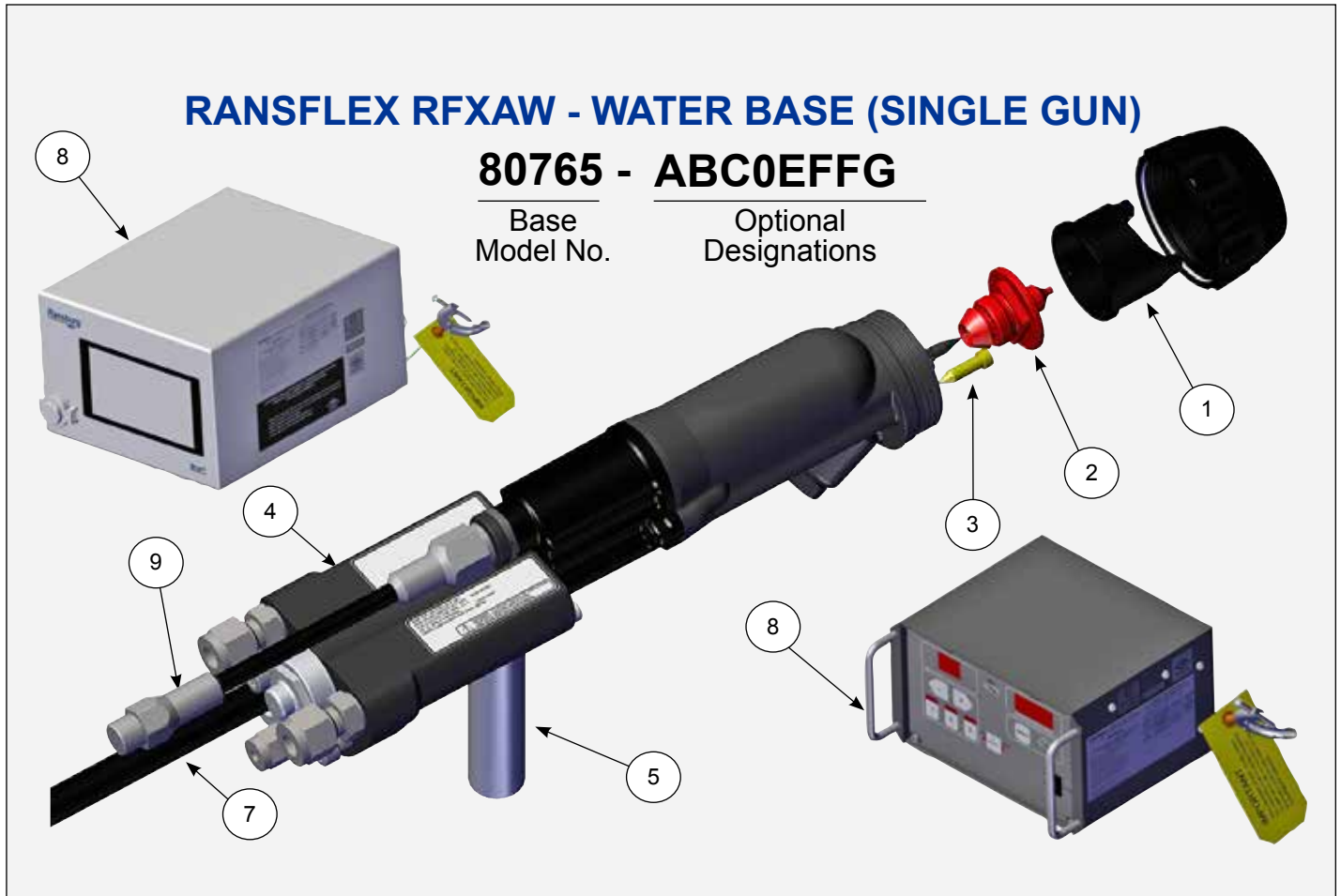




TROUBLESHOOTING GUIDE

General Problem	Possible Cause	Solution
ELECTRICAL		
No kV	No ground connection.	Ensure the power supply is properly grounded to the earth ground.
	Cascade not functioning.	Ensure cascade is functioning properly, swap parts as required.
	Too conductive paint.	Ensure paint resistance > .1 megohm.
Low kV	Fluid remnants in the air passage.	a. Clean air passage with non-polar solvent. b. Ensure fluid nozzle is properly tightened.
	Wrong solvent used for final cleaning process.	Use non-polar solvent for the final cleaning process.
INADEQUATE DELIVERY		
No Fluid Flow	No pressure.	Ensure trigger pressure at applicator is 5.5 bar (80psi).
	Fluid tube may be plugged.	Replace or clean.
	Fluid nozzle may be plugged.	Replace or clean.
	Electrode not properly assembled.	Reassemble tightened to stop.
	Material too viscous.	Thin the material to a viscosity that is sprayable.
Spray Performance	No adjustment of fan pattern.	a. Restrictor missing. Ensure restrictor is in place. b. Fluid nozzle tightened too tight. Tighten nozzle till it seats on the barrel o-ring then an additional 1/8 turn.
	Poor atomization.	Ensure atomization air passages are clear of all foreign particles.
	Fluid in air passages.	Ensure fluid nozzle is properly tightened.
	Spits.	Ensure air before fluid is properly adjusted.

PARTS IDENTIFICATION



ATOMIZATION - TABLE OF "A" DASHES				
"A" Dash No.	"A" Description	"R"	"S"	"T"
0	V SERIES 1.2mm	80265-00	80264-12	79809-00
1	V SERIES 1.4mm	80265-00	80264-14	79809-00
2	V SERIES 1.8mm	80265-00	80264-18	79809-00
3	C SERIES 1.2mm	80231-00	80230-12	79809-03
4	C SERIES 1.4mm	80231-00	80230-14	79809-03
5	C SERIES 1.8mm	80231-00	80230-18	79809-03
6	T SERIES 1.2mm	80240-00	80239-12	74963-05
7	T SERIES 1.4mm	80240-00	80239-14	74963-05
8	T SERIES 1.8mm	80240-00	80239-18	74963-05
9	ROUND SPRAY	79962-00	80400-00	74963-05

**FLUID CONTROL - TABLE OF "B" DASHES**

"B" Dash No.	"B" Description	"4"
1	NON-BLEEDER	80614-01
2	BLEEDER	80614-02

MOUNTING POST - TABLE OF "C" DASHES

"C" Dash No.	"C" Description	"5"
1	19mm (0.75 in) POST	80583-19
2	12mm (0.48 in) POST	80583-12
3	NO POST	---

FLUID HOSE - TABLE OF "E" DASHES

"E" Dash No.	"E" Description	"7"
0	NO FLUID HOSE	---
1	FLUID HOSE 3/16" ID, 10m (32.8 ft)	80500-10
2	FLUID HOSE 3/16" ID, 15m (49.2 ft)	80500-15
3	FLUID HOSE 1/4" ID, 10m (32.8 ft)	80501-10
4	FLUID HOSE 1/4" ID, 15m (49.2 ft)	80501-15

POWER SUPPLY - TABLE OF "FF" DASHES

"FF" Dash No.	Trigger Type	"FF" Description	"Y"
0		NO POWER SUPPLY	---
11	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81000-02011
12	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02012
13	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81000-02013
14	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02014
21	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81000-02021
22	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02022
23	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81000-02023
24	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02024
31	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81000-02031
32	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02032
33	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81000-02033
34	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02034

**POWER SUPPLY - TABLE OF “FF” DASHES (Cont.)**

“FF” Dash No.	Trigger Type	“FF” Description	“Y”
41	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81000-02041
42	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02042
43	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81000-02043
44	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02044
51	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81000-02111
52	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02112
53	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81000-02113
54	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02114
61	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81000-02121
62	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02122
63	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81000-02123
64	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02124
71	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81000-02131
72	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02132
73	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81000-02133
74	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02134
81	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81000-02141
82	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81000-02142
83	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81000-02143
84	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81000-02144



POWER SUPPLY - TABLE OF "FF" DASHES (9060 OPTION)

"FF" Dash No.	Trigger Type	"FF" Description	"Y"
91	REMOTE I/O	9060 POWER SUPPLY DOMESTIC	80120-711
92	REMOTE I/O	9060 POWER SUPPLY EUROPEAN	80120-712
93	REMOTE I/O	9060 POWER SUPPLY CHINA	80120-713

LOW VOLTAGE CABLE - TABLE OF "G" DASHES

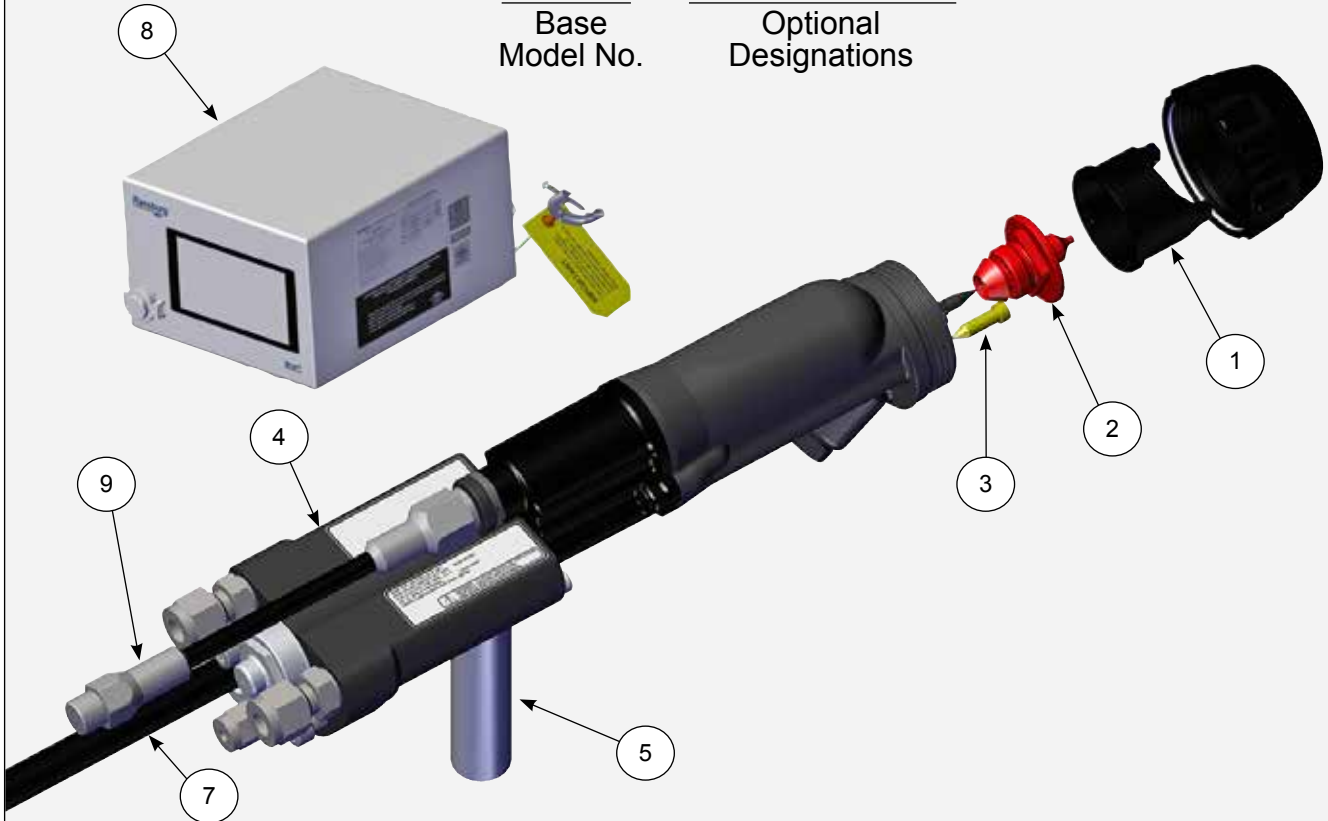
"G" Dash No.	"G" Description	"g"	Qty
0	NO LOW VOLTAGE CABLE	---	---
1	10m (32.8 ft) LOW VOLTAGE CABLE	79338-10	1
2	15m (49.2 ft) LOW VOLTAGE CABLE	79338-15	1
3	20m (65.6 ft) LOW VOLTAGE CABLE	79338-20	1
4	30m (98.4 ft) LOW VOLTAGE CABLE	79338-15	2

RANSFLEX RFXAW - WATER BASE (TWO GUN)

82765 - ABCOEFFG

Base Model No.

Optional Designations



ATOMIZATION - TABLE OF "A" DASHES

"A" Dash No.	"A" Description	"R"	"S"	"T"
0	V SERIES 1.2mm	80265-00	80264-12	79809-00
1	V SERIES 1.4mm	80265-00	80264-14	79809-00
2	V SERIES 1.8mm	80265-00	80264-18	79809-00
3	C SERIES 1.2mm	80231-00	80230-12	79809-03
4	C SERIES 1.4mm	80231-00	80230-14	79809-03
5	C SERIES 1.8mm	80231-00	80230-18	79809-03
6	T SERIES 1.2mm	80240-00	80239-12	74963-05
7	T SERIES 1.4mm	80240-00	80239-14	74963-05
8	T SERIES 1.8mm	80240-00	80239-18	74963-05
9	ROUND SPRAY	79962-00	80400-00	74963-05

**FLUID CONTROL - TABLE OF "B" DASHES**

"B" Dash No.	"B" Description	"4"
1	NON-BLEEDER	80614-01
2	BLEEDER	80614-02

MOUNTING POST - TABLE OF "C" DASHES

"C" Dash No.	"C" Description	"5"
1	19mm (0.75 in) POST	80583-19
2	12mm (0.48 in) POST	80583-12
3	NO POST	---

FLUID HOSE - TABLE OF "E" DASHES

"E" Dash No.	"E" Description	"7"
0	NO FLUID HOSE	---
1	FLUID HOSE 3/16" ID, 10m (32.8 ft)	80500-10
2	FLUID HOSE 3/16" ID, 15m (49.2 ft)	80500-15
3	FLUID HOSE 1/4" ID, 10m (32.8 ft)	80501-10
4	FLUID HOSE 1/4" ID, 15m (49.2 ft)	80501-15

POWER SUPPLY - TABLE OF "FF" DASHES

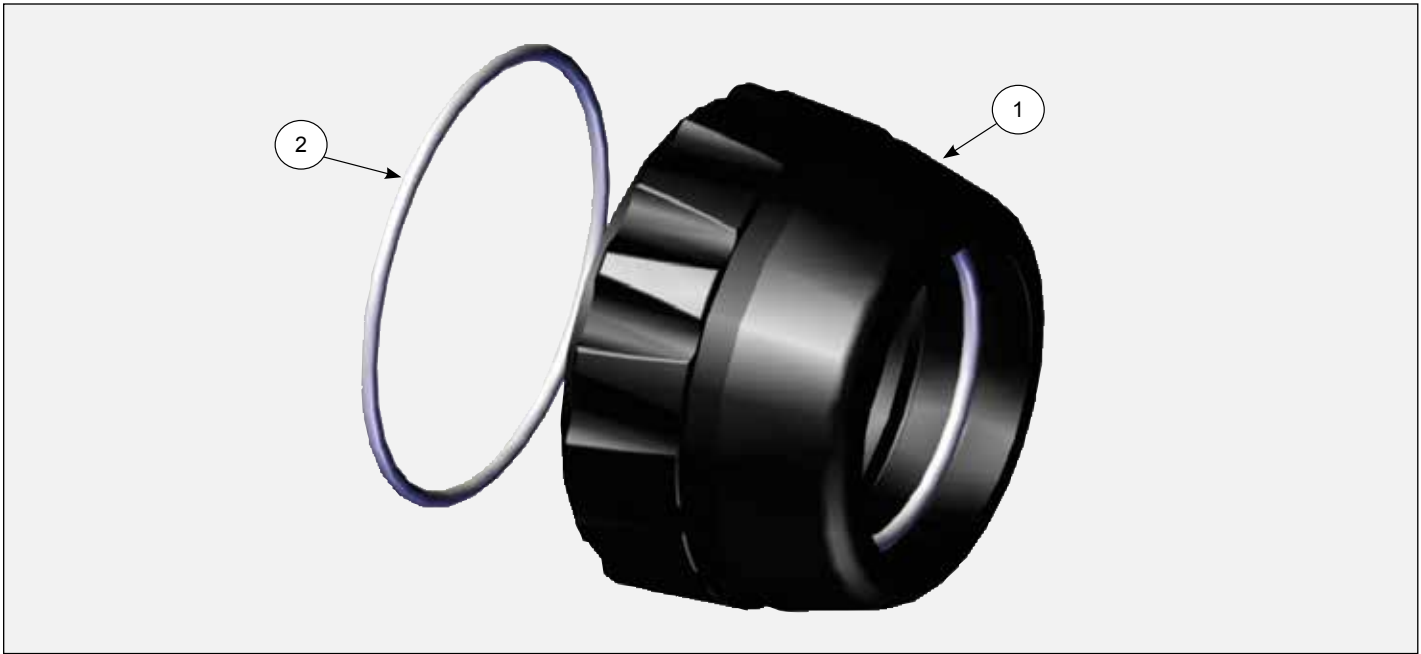
"FF" Dash No.	Trigger Type	"FF" Description	"Y"
0		NO POWER SUPPLY	---
11	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81020-02011
12	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02012
13	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81020-02013
14	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02014
21	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81020-02021
22	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02022
23	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81020-02023
24	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02024
31	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81020-02031
32	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02032
33	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81020-02033
34	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02034

**POWER SUPPLY - TABLE OF "FF" DASHES (Cont.)**

"FF" Dash No.	Trigger Type	"FF" Description	"Y"
41	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81020-02041
42	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02042
43	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81020-02043
44	REMOTE I/O	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02044
51	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE	81020-02111
52	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02112
53	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE	81020-02113
54	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE B (NA) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02114
61	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE	81020-02121
62	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02122
63	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE	81020-02123
64	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE F (EU) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02124
71	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE	81020-02131
72	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02132
73	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE	81020-02133
74	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE I (CN) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02134
81	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE	81020-02141
82	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 3m I/O CABLE WITH JUNCTION BOX	81020-02142
83	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE	81020-02143
84	PRESSURE SWITCH	RANSBURG VOLTAGE CONTROLLER - TYPE G (UK) CORD - 15m I/O CABLE WITH JUNCTION BOX	81020-02144

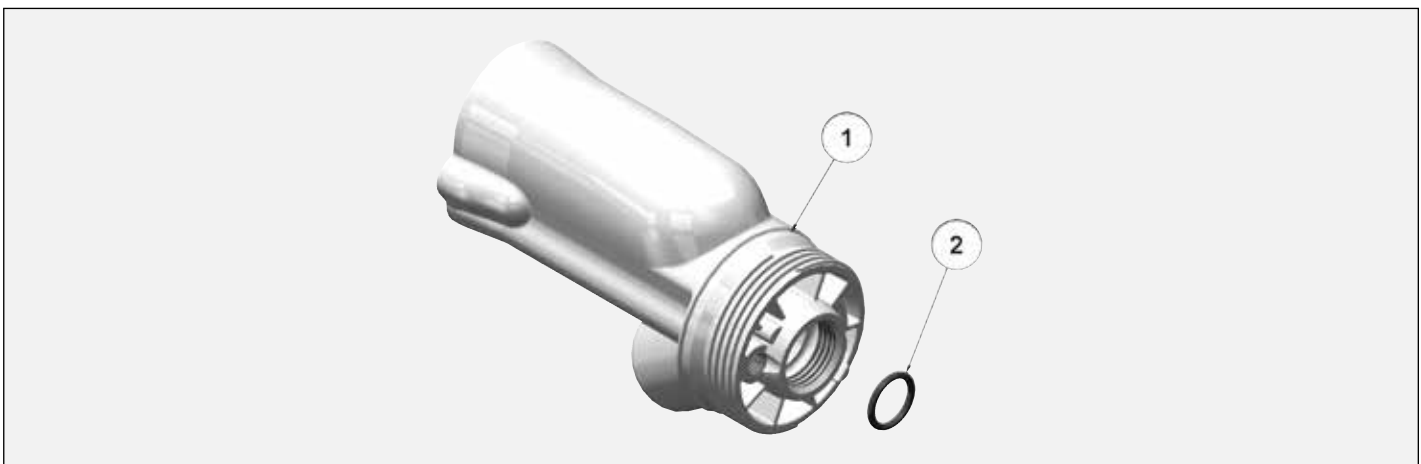
LOW VOLTAGE CABLE - TABLE OF "G" DASHES

"G" Dash No.	"G" Description	"g"	Qty
0	NO LOW VOLTAGE CABLE	---	---
1	10m (32.8 ft) LOW VOLTAGE CABLE	79338-10	2
2	15m (49.2 ft) LOW VOLTAGE CABLE	79338-15	2
3	20m (65.6 ft) LOW VOLTAGE CABLE	79338-20	2
4	30m (98.4 ft) LOW VOLTAGE CABLE	79338-15	4



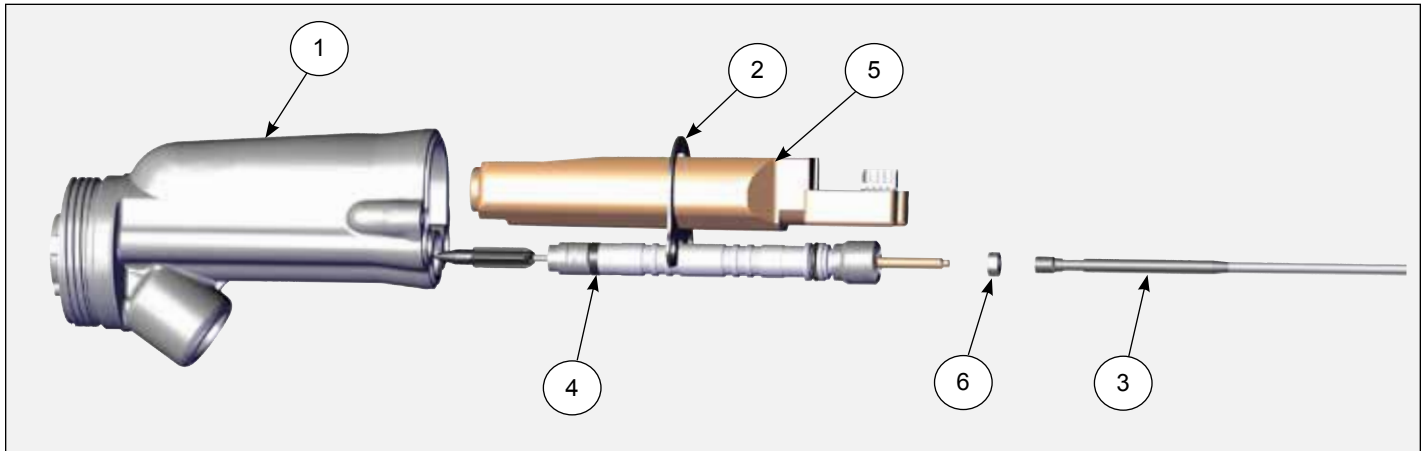
RETAINING RING (80377-00)

Item No.	Part No.	Description	Qty.
1	80377-00	NUT, RETAINING & O-RING ASSEMBLY (CONTAINS ALL PARTS)	1
2	LSOR0005-17	O-RING, ENCAPSULATED	1

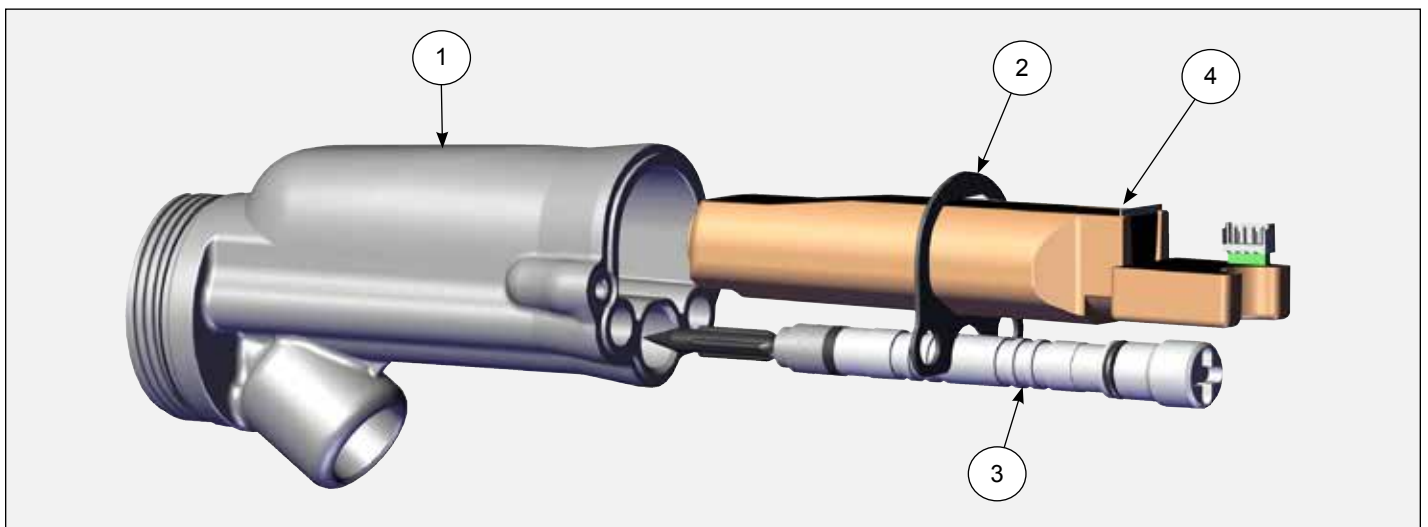


65kV BARREL (80489-00)

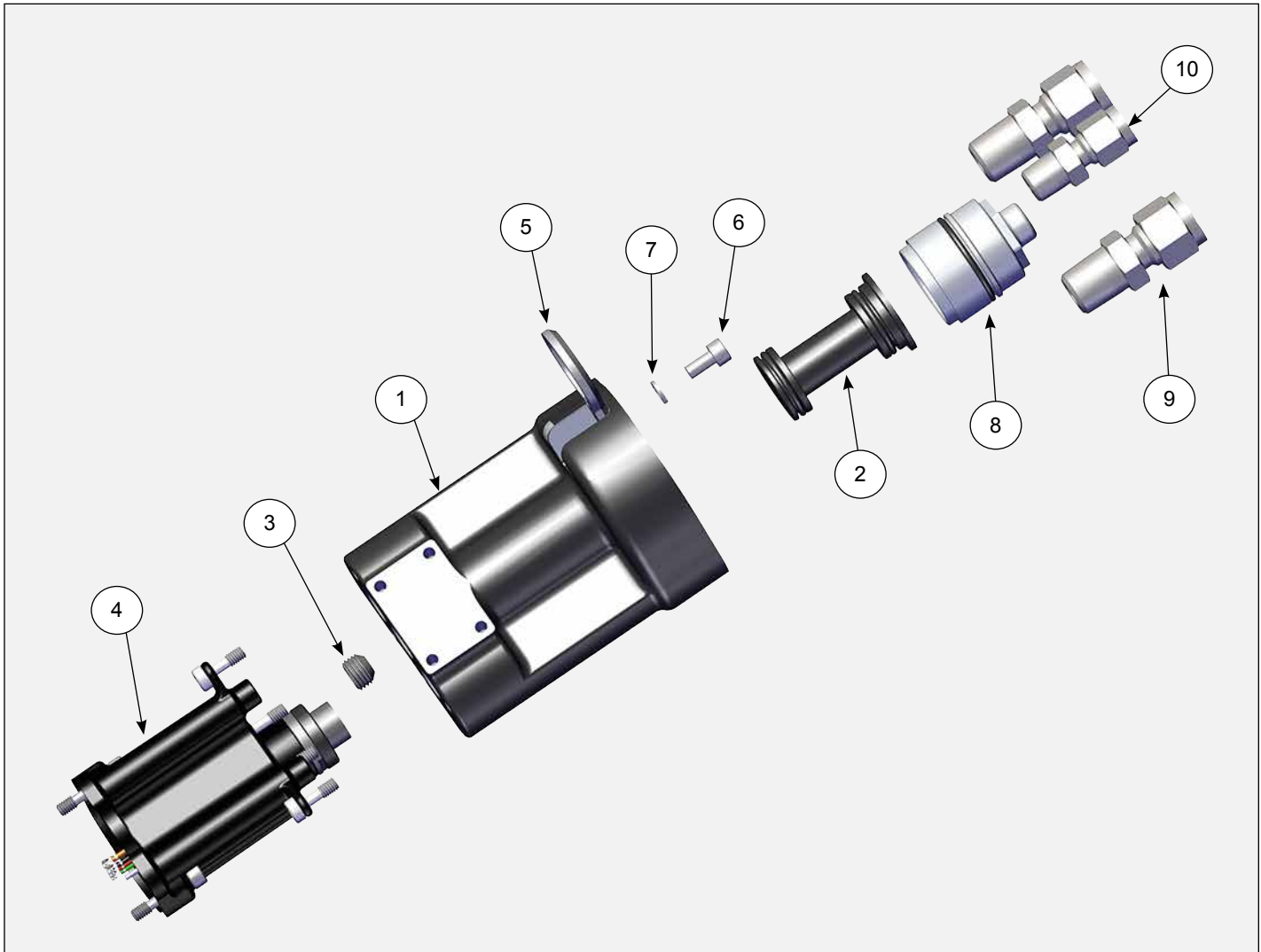
Item No.	Part No.	Description	Qty.
1	80489-00	BARREL 65kV (INCLUDES O-RING)	1
2	79001-07	O-RING, SOLVENT PROOF	1



BARREL ASSEMBLY - PART OF 82765			
Item No.	Part No.	Description	Qty
1	80489-00	65kV BARREL & O-RING ASSEMBLY	1
2	80745-00	GASKET, BARREL	1
3	80591-00	NEEDLE SHAFT EXTENSION	1
4	80263-65	ASSEMBLY, NEEDLE SHAFT	1
5	80590-65	ASSEMBLY, CASCADE	1
6	80592-00	NUT, JAM	1

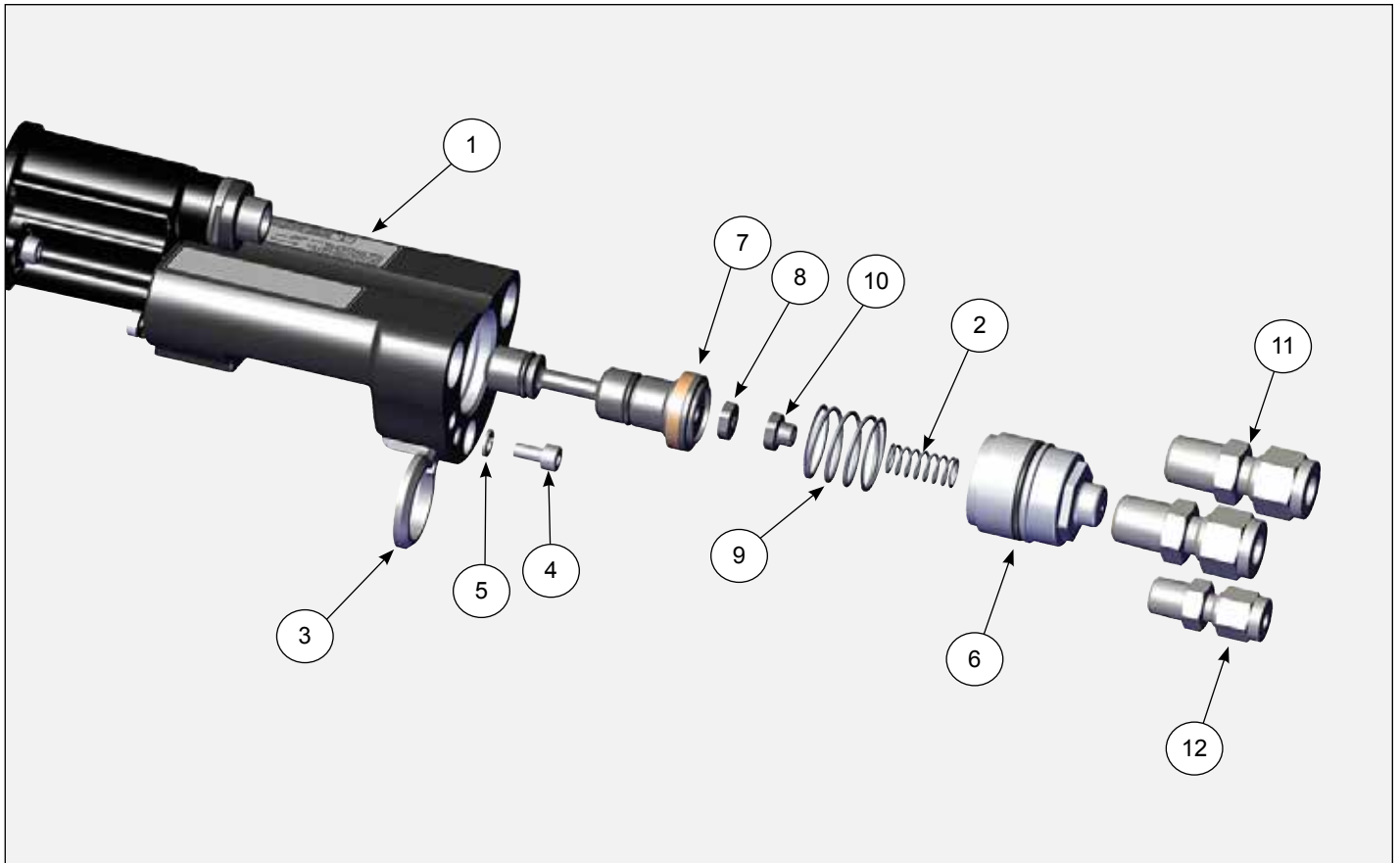


BLEEDER BARREL ASSEMBLY - PART OF 82765			
Item No.	Part No.	Description	Qty
1	80489-00	65kV BARREL & O-RING ASSEMBLY	1
2	80745-00	GASKET, BARREL	1
3	80585-65	ASSEMBLY, NEEDLE SHAFT	1
4	80590-65	ASSEMBLY, CASCADE	1



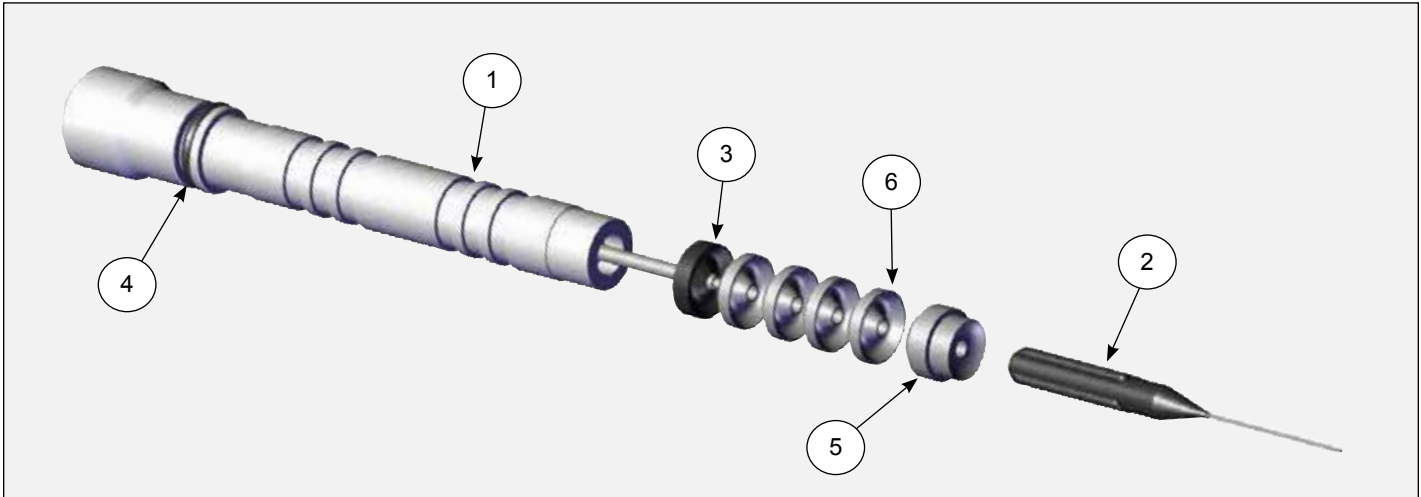
BLEEDER BODY ASSEMBLY - PART OF 82765

Item No.	Part No.	Description	Qty
1	80602-00	ASSEMBLY, BODY	1
2	80601-00	BLEEDER PLUG	1
3	80599-00	PLUG	1
4	80605-00	CASCADE HOUSING ASSEMBLY	1
5	80615-00	FLUID BRACKET	1
6	A11119-08	SCREW, SOCKET HD CAP	1
7	7734-03	LOCK WASHER, STANDARD	1
8	80595-00	CAP ASSEMBLY	1
9	80579-00	TUBE FITTING 8mm	2
10	80580-00	TUBE FITTING 4mm	1



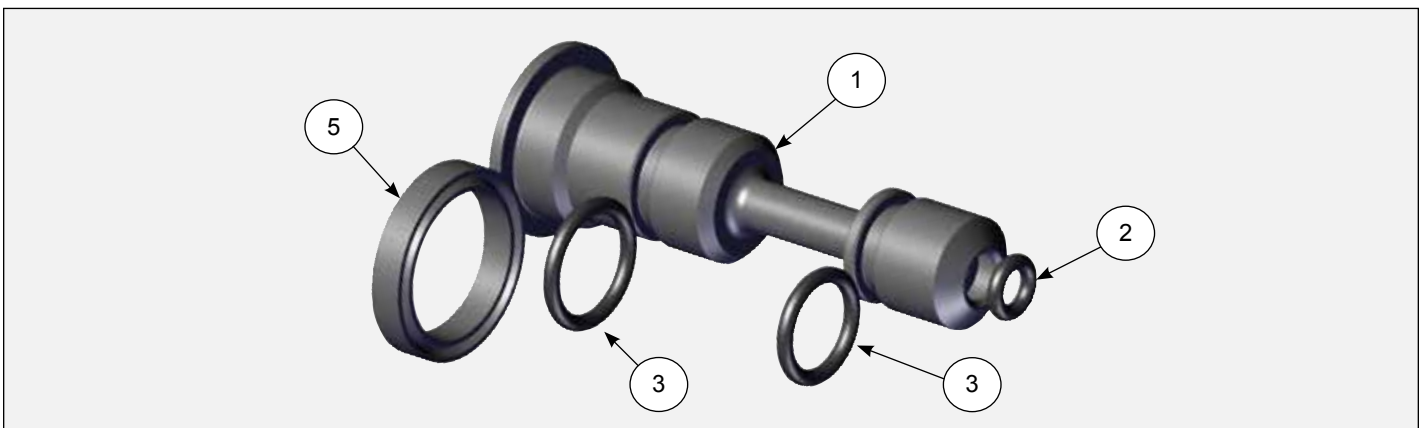
PISTON HOUSING - PART OF 82765

Item No.	Part No.	Description	Qty
1	80600-01	BODY ASSEMBLY	1
2	80258-00	SPRING, FLUID RETURN	1
3	80615-00	FLUID BRACKET	1
4	A11119-08	SCREW, SOCKET HD CAP	1
5	7734-03	LOCK WASHER	1
6	80595-00	CAP ASSEMBLY	1
7	80594-00	PISTON ASSEMBLY	1
8	80593-00	NUT, REAR JAM	1
9	80587-00	SPRING, PISTON RETURN	1
10	80588-00	SPRING GUIDE JAM NUT	1
11	80579-00	TUBE FITTING 8mm	2
12	80580-00	TUBE FITTING 4mm	1



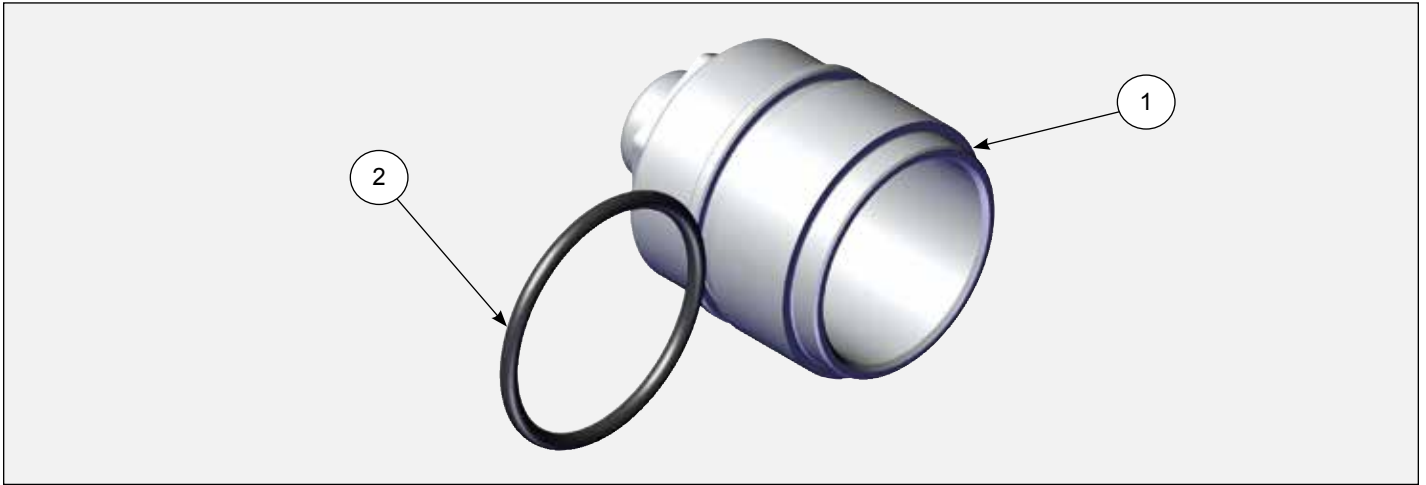
BLEEDER NEEDLE SHAFT ASSEMBLY (80585-65)

Item No.	Part No.	Description	Qty.
1	80585-65	BLEEDER NEEDLE SHAFT ASSEMBLY BLEEDER (INCLUDES ALL PARTS)	1
2	70430-01	ASSEMBLY, ELECTRODE, HIGH WEAR	1
3	18821-00	ADAPTER, FEMALE CHEVRON	1
4	79001-06	O-RING, SOLVENT PROOF	1
5	80677-00	ADAPTER, MALE	1
6	14323-00	SEAL,CHEVRON,3/8 DIA.	4



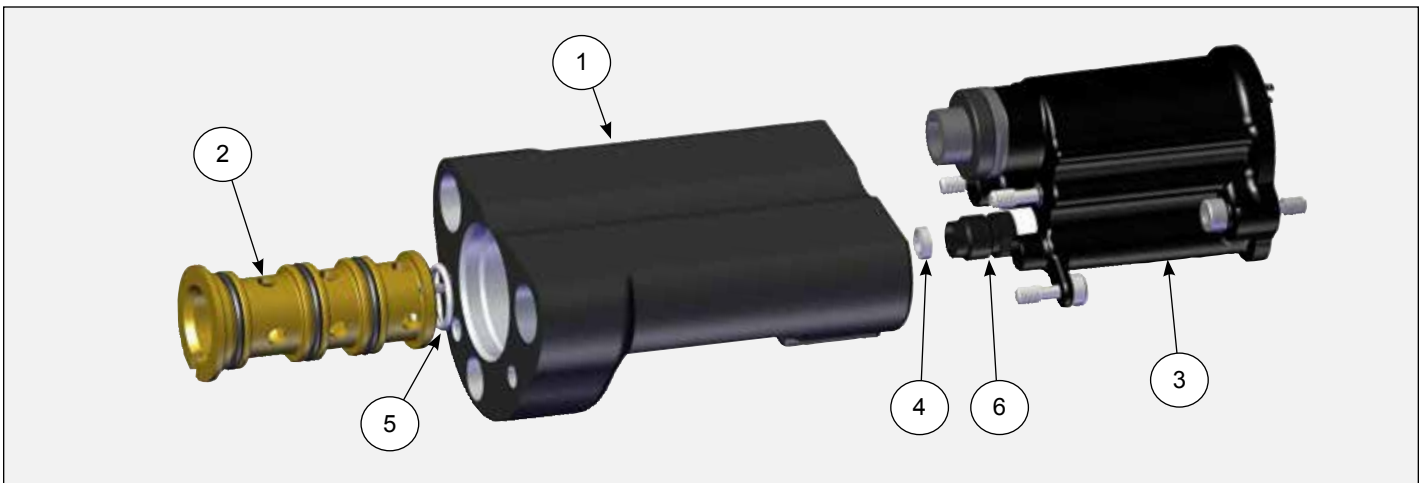
PISTON (80594-00)

Item No.	Part No.	Description	Qty.
1	80596-00	PISTON (INCLUDES PARTS BELOW)	1
2	79001-03	O-RING, SOLVENT PROOF	1
3	79001-06	O-RING, SOLVENT PROOF	2
5	80597-00	U-CUP SEAL SPRING ENERGIZED	1



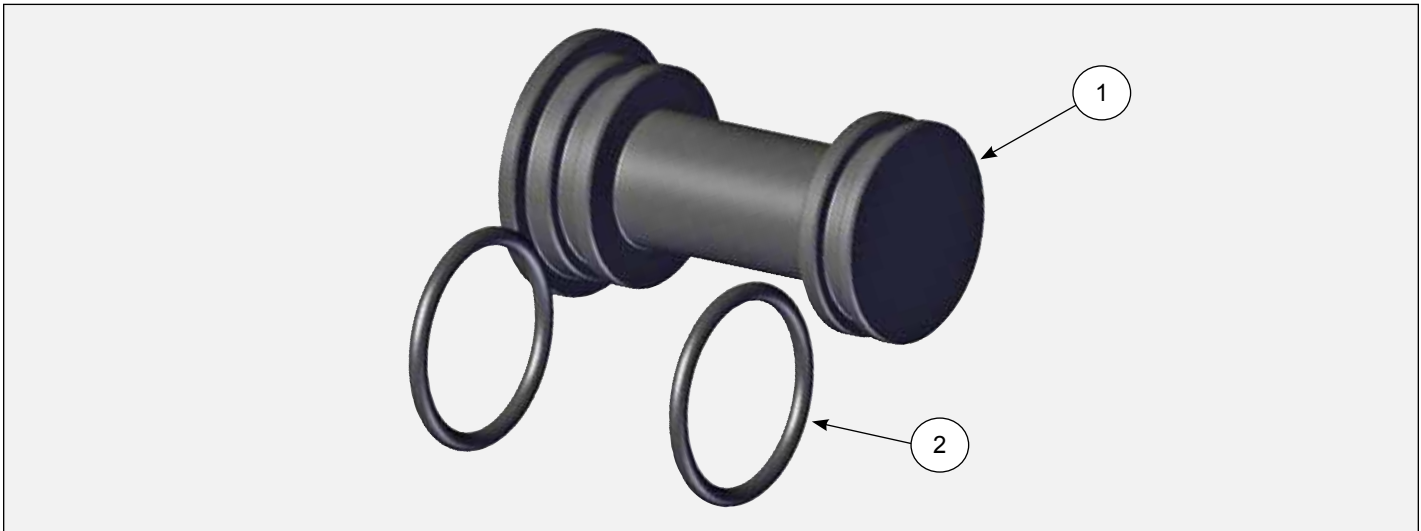
PISTON CAP (80595-00)

Item No.	Part No.	Description	Qty.
1	80595-00	PISTON CAP (INCLUDES O-RING)	1
2	79001-12	O-RING, SOLVENT PROOF	1



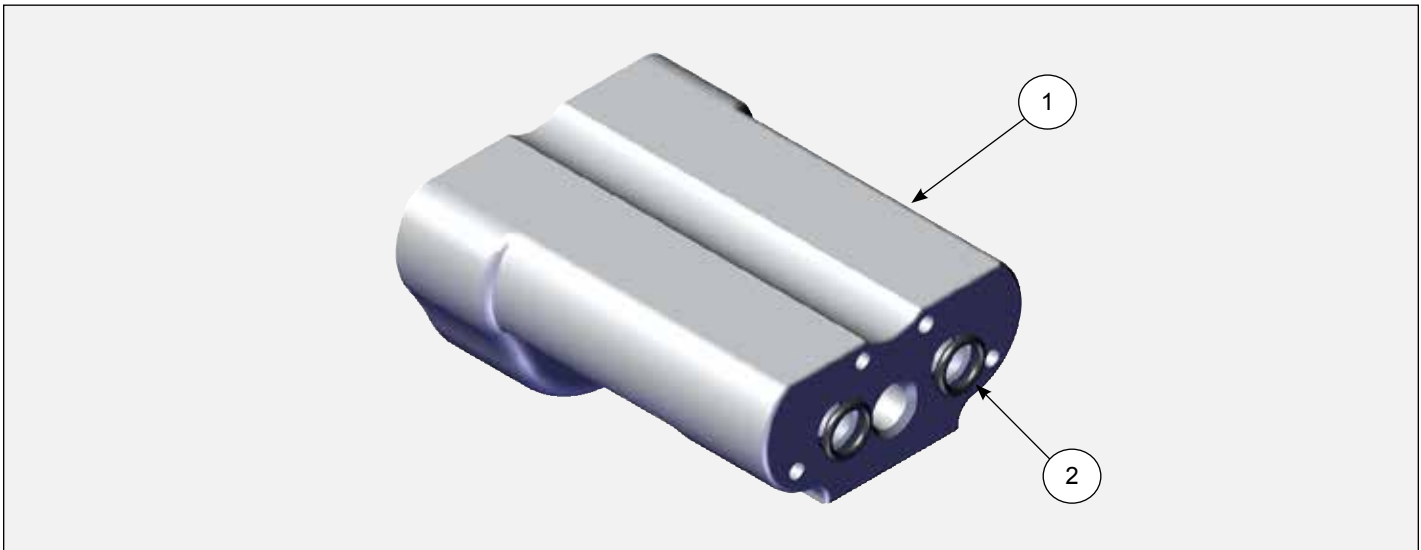
BODY ASSEMBLY (80600-01)

Item No.	Part No.	Description	Qty.
1	80602-00	ASSEMBLY BODY	1
2	80603-00	BUSHING ASSEMBLY	1
3	80605-00	CASCADE HOUSING ASSEMBLY	1
4	10051-05	CUP SEAL, SPRING LOADED	1
5	13076-12	O-RING	1
6	80606-00	NUT, RETAINING, AIR VALVE	1



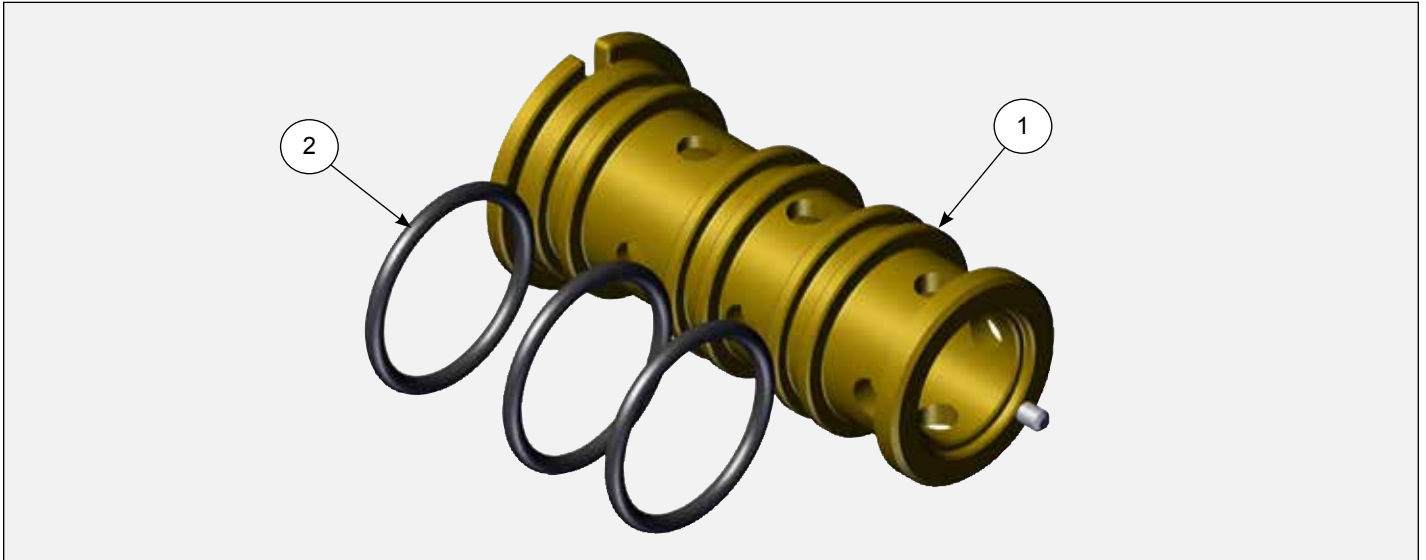
PISTON PLUG (80601-00)

Item No.	Part No.	Description	Qty.
1	80601-00	PISTON PLUG (INCLUDES O-RINGS)	1
2	79001-19	O-RING, SOLVENT PROOF	2

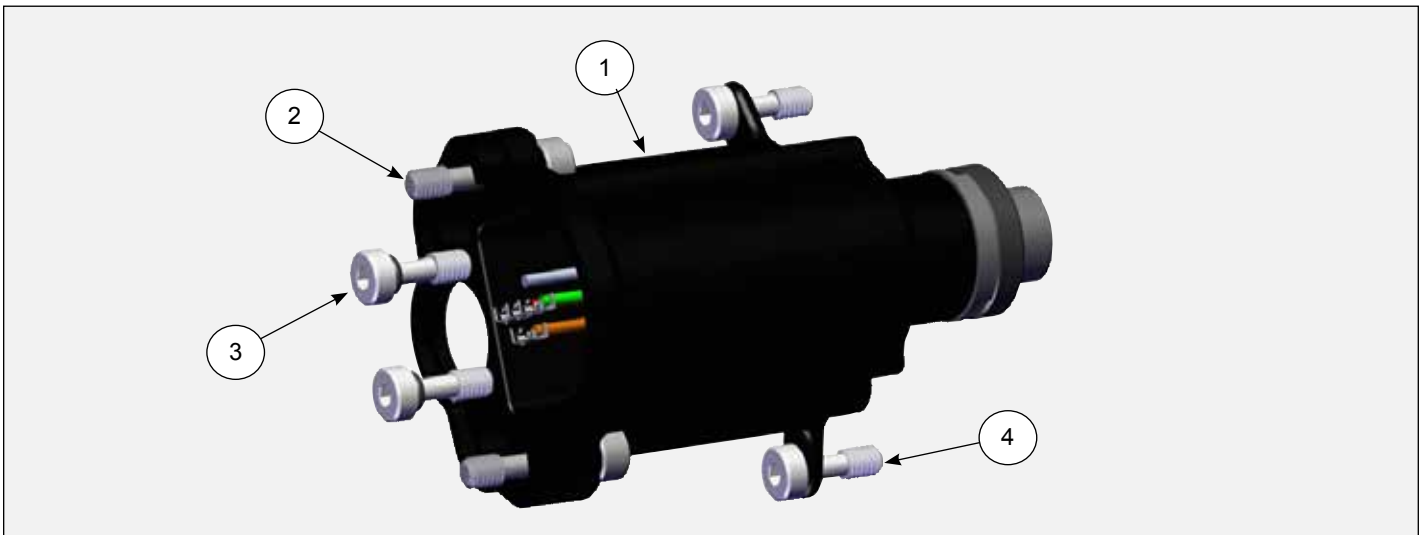


PISTON BODY (80602-00)

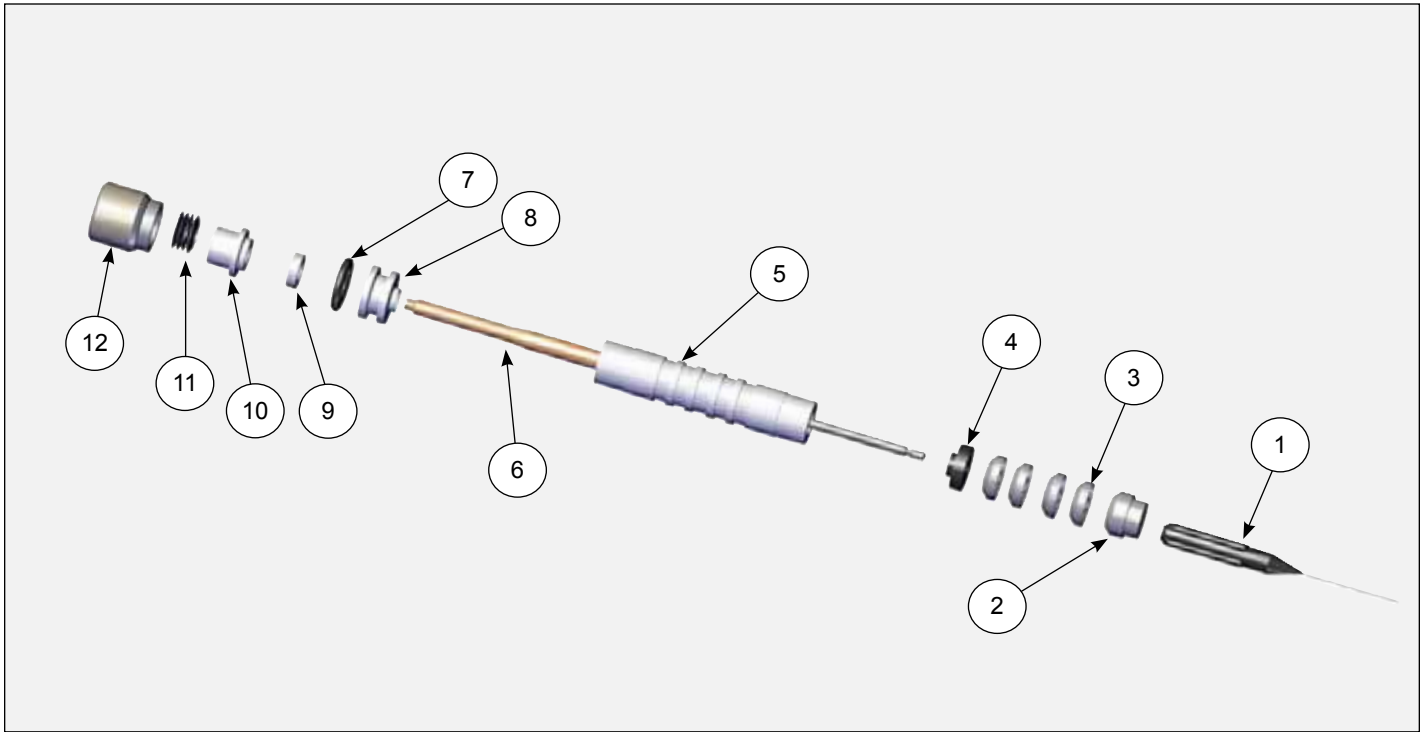
Item No.	Part No.	Description	Qty.
1	80602-00	PISTON BODY (INCLUDES O-RINGS)	1
2	79001-06	O-RING, SOLVENT PROOF	2



PISTON BUSHING (80603-00)			
Item No.	Part No.	Description	Qty.
1	80607-00	PISTON BUSHING	1
2	79001-19	O-RING, SOLVENT PROOF	3

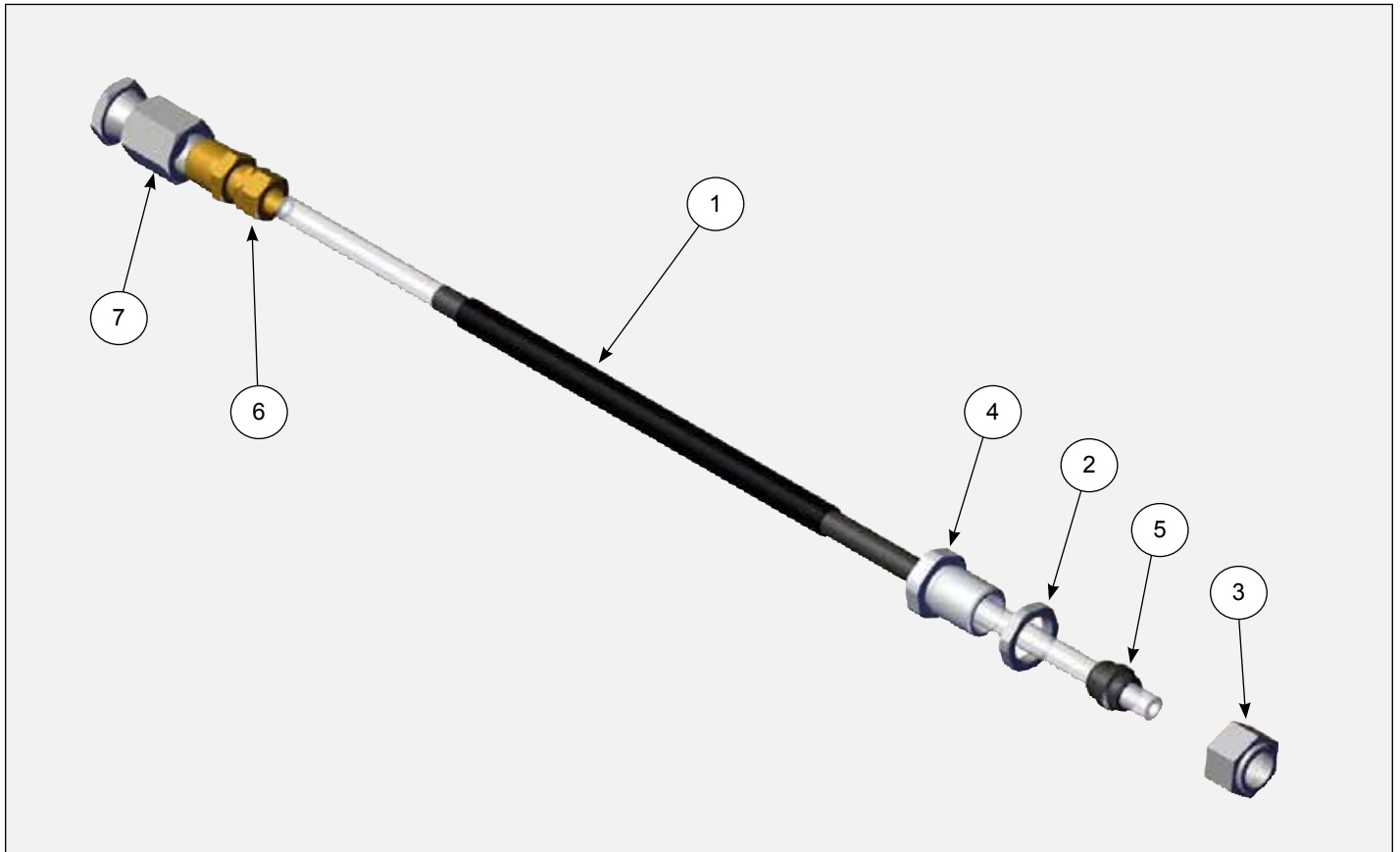


CASCADE HOUSING ASSEMBLY (80605-00)			
Item No.	Part No.	Description	Qty.
1	80672-00	HOUSING ASSEMBLY	1
2	80695-00	SCREW	2
3	80609-00	SCREW AND O-RING ASSEMBLY	2
4	80608-00	LOW PROFILE SCREW	2

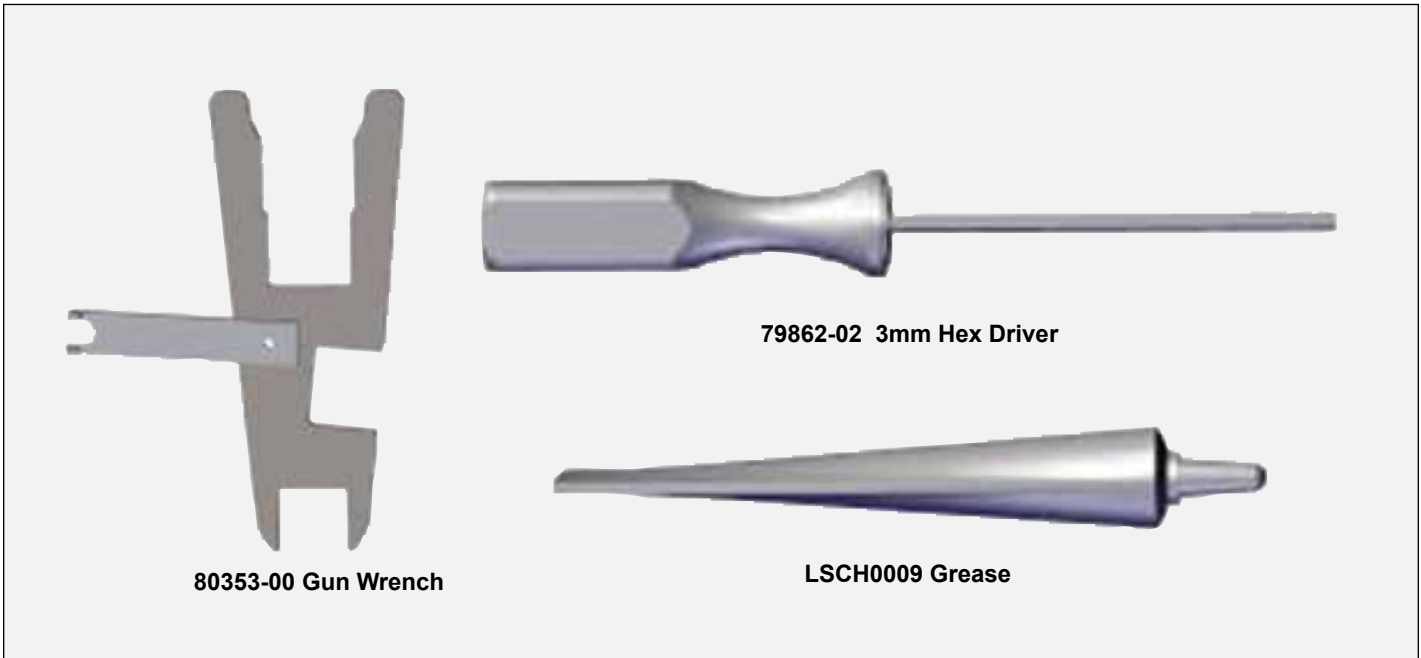


RFX 65kV NEEDLE SHAFT (80263-65)

Item No.	Part No.	Description	Qty.
1	70430-01	ASSEMBLY, ELECTRODE, HIGH WEAR	1
2	80677-00	ADAPTER, MALE	1
3	14323-00	SEAL, CHEVRON, 3/8 DIA.	4
	14323-00-K4	SEAL, CHEVRON (KIT OF 4)	1
4	18821-00	ADAPTER, FEMALE CHEVRON	1
5	80257-65	TUBE, PACKING	1
6	80225-65	NEEDLE SHAFT ASSEMBLY	1
7	79001-06	O-RING, SOLVENT PROOF	1
8	78629-00	RETAINER, NEEDLE SEAL, REAR	1
9	10051-05	CUP SEAL, SPRING LOADED	1
10	78630-00	SPACER, SEAL	1
	78630-00	SPACER, SEAL	1
11	17390-04	WASHER, SPRING, BELVILLE	6
	17390-04-K6	WASHER, SPRING, BELVILLE (KIT OF 6)	1
12	78631-00	NUT, PACKING	1



WATER BASE HOSE ASSEMBLIES 80500-XX, 80501-XX			
Item No.	Part No.	Description	Qty.
1	80498-10	3/16" ID HOSE	1
	80498-15	3/16" ID HOSE	1
	80499-10	1/4" ID HOSE	1
	80499-15	1/4" ID HOSE	1
2	10553-05	NUT, SPECIAL	1
3	3587-02	NUT, NYLO-SEAL, TUBE FITTING	1
4	72310-00	BULKHEAD CONNECTOR ASSEMBLY	1
5	72315-00	FERRULE, CONDUCTOR	1
6	6241-06	CONNECTOR, MALE	1
7	7787-03	FTG STL FEMALE X FEMALE SVL PIPE	1



ACCESSORIES

Part #	Description
59972-00	Pack of 4 LSCH0009 Grease
76102-00	Applicator Mounting Bracket
76652-01	HV Probe
76652-02	Sprayability and SCI Paint Test Meter
76652-03	Paint Resistivity, Sprayability
76652-04	Deluxe Kit
80464-14	Nozzle, Fluid, High Wear for 80265-00 1.4 mm
80464-18	Nozzle, Fluid, High Wear for 80265-00 1.8 mm

**SPARE PARTS KITS**

Part #	Description
79001-07-K3	Fluid inlet O-ring of barrels
80264-XX-K3	V Series nozzles in kits of 3 (XX = 12, 14 or 18)
80464-XX-K3	V Series high wear nozzles in kits of 3 (XX = 14, 18)
80230-XX-K3	C Series nozzles in kits of 3 (XX = 12, 14 or 18)
80239-XX-K3	T Series nozzles in kits of 3 (XX = 12, 14 or 18)
80401-65	V Series Atomization Kit - Contains (1) 80265-00 Air Cap, (2) 80264-14 Nozzle and (1) 79809-00 Restrictor
80401-40	T Series Atomization Kit - Contains (1) 80240-00 Air Cap, (2) 80239-14 Nozzle and (1) 74963-05 Restrictor
80401-31	C Series Atomization Kit - Contains (1) 80231-00 Air Cap, (2) 80230-14 Fluid Nozzle and (1) 79809-03 Restrictor
70430-01-K3	Resistive electrode in kits of 3
80697-00	All soft parts required to rebuild an applicator



RANSFLEX RECOMMENDED SPARE PARTS (Quantities Per Applicator)

Part #	Description	Qty
80264-XX	Nozzle, Fluid V Series (See page 43)	1
80264-XX-K3	Nozzle, Fluid V Series (See page 43) (Kit of 3)	1
80230-XX	Nozzle, Fluid C Series (See page 43)	1
80230-XX-K3	Nozzle, Fluid C Series (See page 43) (Kit of 3)	1
80239-XX	Nozzle, Fluid T Series (See page 43)	1
80239-XX-K3	Nozzle, Fluid T Series (See page 43) (Kit of 3)	1
80265-00	Air Cap V Series	2
80231-00	Air Cap C Series	2
80240-00	Air Cap T Series	2
80377-00	Nut, Retaining, Air Nozzle	1
EMF-202-05	Ferrule, Back	2
EMF-203-05	Ferrule, Front	2
80258-00	Spring, Fluid Return	1
70430-01	Electrode	2
70430-01-K3	Kit of 3 Electrodes	1
80263-65	Shaft Assembly	1
10051-05	Seal, Air Valve	1
LSCH0009-00	Dielectric Grease	2
80590-65	Cascade Assembly (RFXA)	1
80587-00	Piston Return Spring	1
80597-00	U-Cup Seal	1
13076-12	O-Ring	1



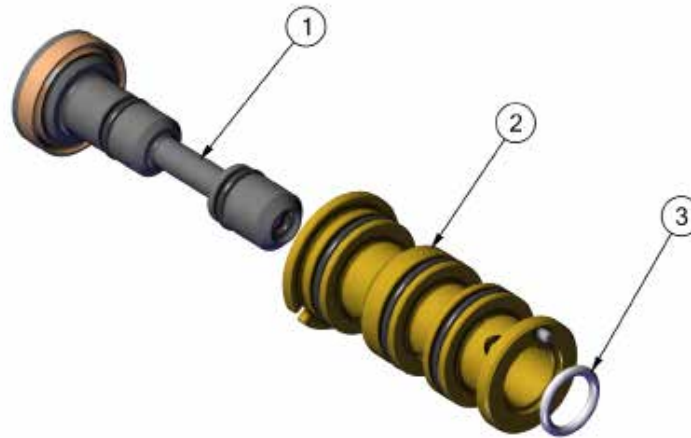
RansFlex Auto Gun

80665/82665 RFXA
80765/82765 RFXAW

From shared customer feedback we have further improved the RansFlex Auto Applicators regarding the following issues:

- Pilot operating pressures to trigger the applicators for fluid. Prior pressure activation was 80-90 PSIG (5.52-6.20 Bar). We have redesigned the feature to operate at 50-60 PSIG (3.44-4.14 Bar). We understand that not all customers have suitable pressures from compressed air and need lower activation pressures.
- Non-Bleed gun option addressing PSIG air leakage when actuated. It was noted that the non-bleed gun was losing excessive air when actuated to trigger the gun. We have addressed the design to add in sealing O-ring 13076-12 to eliminate any PSIG air leakage when the gun is triggered.

Shown below is Retrofit Kit Part No. 80892-00 which includes new piston and cage along with all required O-rings and seals. This kit will replace your current piston and cage within your RansFlex Auto gun provided the gun assembly is a “Non-Bleed” gun version. Please reference the AA-17-01(80665/82665 RFXA) and AA-18-02 (80765/82765 RFXAW) service manuals on removal and installation of the piston and cage components. Any issues please contact Carlisle Fluid Technologies Service Department.



80892-00 PISTON KIT			
Item No.	Part No.	Description	Qty.
1	80594-00	PISTON ASSEMBLY	1
2	80603-00	BUSHING ASSEMBLY	1
3	13076-12	O-RING 2-012 PTFE	1



MANUAL CHANGE SUMMARY

AA-18-02-R7 - Replaces AA-18-02-R6 with the following changes:

No.	Change Description	Page(s)
1.	Remove EX logo and text	1
2.	Correct spacing on FM number and date in bullet point 3	10
3.	Update text in paragraph 1 and redo text in paragraph 2	11
4.	Correct labels	12
5.	Change O to a zero in part number	13
6.	Update paragraph 3 and replace paragraph 5 text	23
7.	Replace images for steps 1, 2, and 3	41
8.	Replace images for steps 10 and 11	42
9.	Replace image for step 2	43
10.	Change O to a zero in part number	51



WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided, may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

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

Region	Industrial / Automotive	Automotive Refinishing
Americas	Tel: 1-800-992-4657 Fax: 1-888-246-5732	Tel: 1-800-445-3988 Fax: 1-800-445-6643
Europe, Africa Middle East, India		Tel: +44 (0)1202 571 111 Fax: +44 (0)1202 573 488
China		Tel: +8621-3373 0108 Fax: +8621-3373 0308
Japan		Tel: +81 45 785 6421 Fax: +81 45 785 6517
Australia		Tel: +61 (0) 2 8525 7555 Fax: +61 (0) 2 8525 7575

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