



S-100C

CORDLESS HVLP SPRAY GUN™



MODEL NO: S-100C

SAFETY & OPERATING INSTRUCTION MANUAL



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TECHNICAL DATA

TYPE	S-100C CORDLESS HVLP SPRAY GUN
RATED POWER	120W
RATED VOLTAGE	18V (MAX 20V)
FREQUENCY	
RATED SPEED	30,000rpm
AIR FLOW	160L/min
LIQUID FLOW	100-200ml/min
WEIGHT	1.5kg
BATTERY CAPACITY	2000mAh
SPRAYING DISTANCE	200-250mm
WIDTH	200-300mm
VISCOSITY	8-12s
MATERIAL POT CAPACITY	800mL

The values shown are based on a nominal voltage of 18V (max 20V). In the case of voltages and frequencies of different power, values may vary. Refer to the label technical specifications to the nominal values of the S-100C Cordless HVLP Spray Gun.

POWER TOOL SAFETY

WARNING: Before using your S-100C, it is critical that you read and understand these safety rules. Failure to follow these rules could result in damage to the tool, serious injury to you or even lead to death.

Good safety practices are a combination of common sense, staying alert and understanding how to use your tool. To avoid mistakes that could cause serious injury, do not plug in your tool until you have read and understood all safety rules.

READ and become familiar with this entire Owner's Manual. LEARN the tool's applications, limitations and possible hazards.

WARNING:

Look for this symbol that identifies important safety precautions. It means **CAUTION! BE ALERT! YOUR SAFETY IS INVOLVED!**

- **ALWAYS WEAR EYE PROTECTION.**
- Any power tool can throw foreign objects into your eyes which could cause permanent eye damage. ALWAYS wear safety goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday glasses have only impact resistant lenses. They ARE NOT safety glasses.

- **WARNING: Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury when they break.**

WORK AREA

- **Keep your work area clean and well-lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in environments where explosive elements, such as flammable liquids, gas or dust are present.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children and visitors away while operating the tool.** Distractions can cause you to lose control.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use the tool while tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewellery. Contain long hair. Keep your hair, clothing and gloves away from moving parts.** Loose clothing, jewellery or long hair can be caught in moving parts.
- **Avoid accidental starting. Be sure power switch is OFF before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch ON invites accidents.
- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- **Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat and/or hearing protection must be used in appropriate conditions.**

TOOL USE AND CARE

- **Use of any solvents or solvent-based products in the S-100C Spray Gun voids warranty.**
- **Detach the battery before making any adjustments, changing accessories or storing the tool.** Such preventative safety measures reduce the risk of the tool starting accidentally.
- **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **Maintain tools with care.** Thoroughly clean tool and components after each use.
- **Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used with another tool.
- **Keep the tool and its handle dry, clean and free from oil and grease.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products or any strong solvents to clean your tool. Following this rule will reduce the risk of fire, loss of control and deterioration of the plastic components of the tool.

SERVICE

- **Tool service must be performed only by qualified personnel.** Service or maintenance performed by unqualified personnel could result in risk of injury.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

- **1. Keep your workplace clean, never use the tool in hazardous areas that contain flammable liquids, gasses or dust.**
- **2. Only use paints, solvents or other materials with a flash point of 73 °F(22C) or higher.**
- **3. Never point the spray gun at another person or animal. In the event of an injury, seek immediate medical attention.**
- **4. Always read the paint manufacturer's thinning instructions before use.**
- **5. You must clean the spray gun thoroughly after each use.**

BATTERY & CHARGER SAFETY

- **Do not store or carry battery pack in a manner in which metal objects could contact exposed metal end.** Do not place battery in aprons, pockets, drawers, etc. with loose nails, screws, keys etc. The battery could short circuit causing a fire, personal injury or damage to the battery.
- **Never attempt to open the battery pack for any reason.** If the housing of the battery breaks or cracks, immediately discontinue use and do not recharge.
- **Do not charge the battery pack if it is wet** or shows any evidence of corrosion.
- **Do not incinerate the battery pack.** It can explode in a fire.
- Minor leakage from the battery pack may occur under extreme usage, charging or temperature conditions. This does not indicate a failure. If, however, the outer seal is broken and this leakage gets on your skin, follow these steps:
 1. Wash immediately with soap and water.
 2. Neutralize with a mild acid such as lemon juice or vinegar.
 3. If liquid gets into your eyes, flush immediately with clean water for a minimum of 10 minutes and seek medical attention.

NOTE: The battery fluid is a 18–35% solution of potassium hydroxide.

- **Do not use an extension cord.** Plug the charger cord directly into an electrical outlet.
- Use the charger only in a standard 110–118 V/60 Hz electrical outlet.
- **WARNING: The double-insulated charger is equipped with a polarized plug (one blade is wider than the other). This plug will fit into a polarized outlet only one way. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not alter the plug in any way. Double insulation eliminates the need for the three-prong grounded power cord and grounded power supply system.**
- **Charge the battery pack only with the charger supplied with the tool.**
- **Do not use the charger in wet or damp conditions.** It is intended for indoor use only. Do not use the charger near sinks or tubs. Do not immerse the charger in water.
- **Do not allow the charger cord to hang over the edge of a table or counter or touch hot surfaces.** The charger should be placed away from sinks and hot surfaces.
- **Do not use charger to charge any batteries other than the polisher/sander battery.** Other batteries may explode.
- **Do not operate charger if cord or plug is damaged.** Replace damaged cord and plug immediately.
- **Do not operate charger if it has received a sharp impact, been dropped or otherwise damaged in any way.** Have a qualified technician examine the charger and repair it if necessary. Do

not disassemble the charger.

- For best results, only charge the battery when the temperature range of the battery and work area is between 10–40°C (50–105°F).
- **Unplug the charger when not in use and before cleaning or maintenance.**
- **Do not abuse the cord.** To reduce the risk of damage to the electric cord or plug, never carry the charger by the cord or yank the cord to pull the plug. Always grasp the plug and pull to disconnect. Always keep the cord away from heat, oil and sharp edges.

Failure to adhere to these safety rules can greatly increase the chances of injury.

REMOVING & INSTALLING BATTERY

WARNING: Always make sure your fingers are away from the ON/OFF switch when removing or installing a battery.

1. To remove the battery from the tool, squeeze the locking buttons (C) on the top of the battery.
2. Slide the battery (C) completely out of the tool.
3. Slide the battery fully into the tool handle until you hear the locking latches “clicks” into place.

NOTE: The battery will not fit into the tool if the negative polarity symbols are not aligned. If you encounter difficulty inserting the battery into the tool, check to make sure the negative polarity symbols are aligned.

Gently pull on the battery to ensure it is securely latched into the tool.

CHARGING THE BATTERY

Before beginning any project, it is important that you fully charge the battery. As it takes 2 to 3 hours to fully charge a rundown battery, it is recommended that the battery be charged the day before being used.

WARNING: Use **ONLY** the 18 Volt charger supplied with this tool to charge the battery. Do not charge any other batteries with the charger supplied with this tool. Mixing incompatible batteries and charger may cause the battery to leak or burst causing personal injury.

BATTERY & CHARGER FACTS

1. The battery supplied with the tool is NOT fully charged when shipped. The battery must be charged for at least 5 hours before being used in the spray gun.
2. There are two conditions under which a battery will not accept a full charge:
 - when the battery is new
 - when the battery has not been used for an extended period of time.

These are normal conditions and do not indicate a problem. After about four cycles of charging and discharging through use, the battery will accept a full charge.

WARNING: Remove the battery before carrying out any work on the S-100C.

Before switching on the power tool. Unpack the spray gun and check that there are no missing or damaged parts.

NOTE: The batteries are not fully charged on delivery. Prior to initial operation, charge the batteries fully. Refer to the charger operating manual.

PARTS OF THE TOOL

No.	Description	No.	Description	No.	Description
1	ST2.9*10SCRE	18	O-Ring	35	Lock Catch
2	Rear Cover	19	22 Needle Spring	36	Microswitch
3	Cotton Filter	20	Needle Set	37	Battery Pack
4	Right Cover	21	GUN	38	Battery Pack Pin
5	Switch Plunger Spring	22	Pipette	39	Left Cover
6	Switch Plunger	23	Cup-Ring	40	Gun-Ring
7	Right Side Cover	24	Suction Pipe Splint	41	Stopper
8	ST3.5*10SCRE	25	Cup	42	Motor Cover
9	Big Nut	26	Φ3 Flat Gasket	43	550 Motor
10	Spray Ball	27	Short Pin	44	Wind Mill
11	Spray Nozzle	28	Adjusting Knob	45	M4*8 SCRE
12	Barge Board	29	Trigger	46	Motor Gasket
13	Nozzle Seal	30	Spray A Knob	47	Wind Leaf
14	Needle	31	Left Side Cover	48	Wind Cover
15	Needle Insert	32	O-Ring	49	Damping Ring
16	Needle Seat	33	Atomization Circle	50	Funnel
17	Bowl Seals	34	Vent Spring	51	Pin

Function:

Suitable for disinfecting, sanitizing, deodorizing, cleaning, applying dressings, and other automotive functions.

HOW TO USE:

Before using the S-100C, material preparation is the first stage.

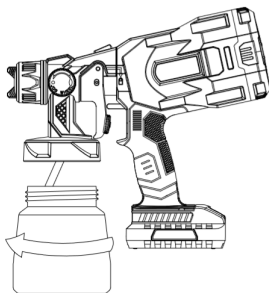
Please refer to the thinning chart and picture. *Fig.02*

Material	Run out Time (Sec)
1. Oil Enamel	25-60
2. Oil-Based Primer	30-60
3. Oil Stain	No thinning required
4. Clear Sealer	No thinning required
5. Polyurethane	No thinning required
6. Varnish	20-60
7. Lacquer Sanding Sealer	25-35
8. Lacquer	25-35
9. Automotive Finishes	20-40
10. Latex	45-90



1. Unscrew the liquid container from the spray gun.

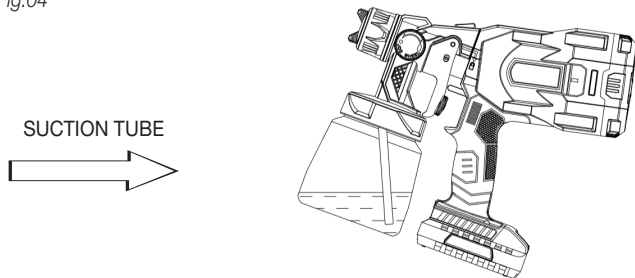
Fig.03



2. Adjust the suction tube.

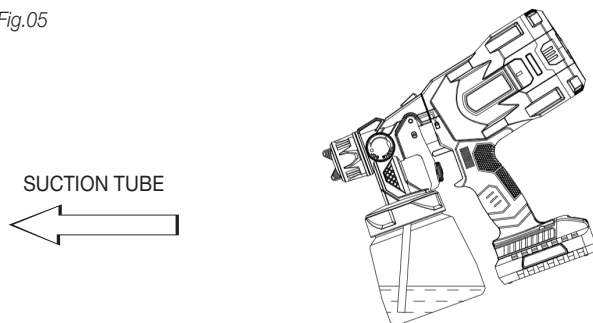
a. If spraying in an upward direction, the angled end of the suction tube should be pointing toward the rear of the gun.

Fig.04



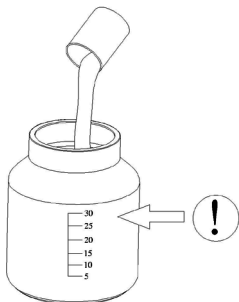
b. If spray in a downward direction, the angled end of the suction tube should be pointing towards the front of the gun.

Fig.05



3. **Pour material into container, make sure not to exceed 800ml**

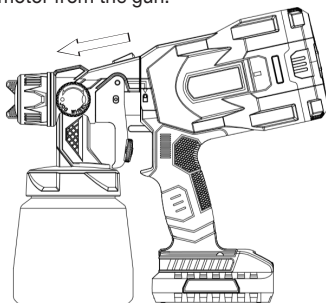
Fig.06



4. **Remove the motor**

- Hold the gun with your hand and press the latch in the direction of the arrow.
- At the same time hold the motor handle with your hand and rotate it counterclockwise 90°.
- Pull out to remove the motor from the gun.

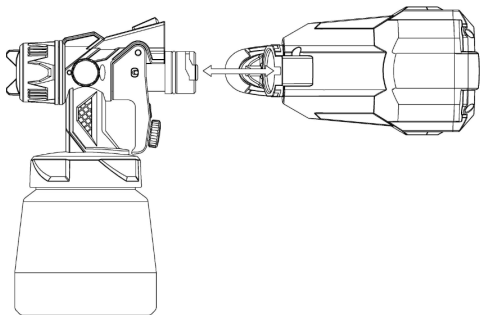
Fig. 07



5. **Connect gun body with motor**

- Hold the gun with your hand to align the slot on the gun with the slot on the motor and insert it (as shown in the figure).
- Hold the motor handle with your hand, rotate the right hand clockwise 90°.
- When the gun and host are parallel, it is locked.

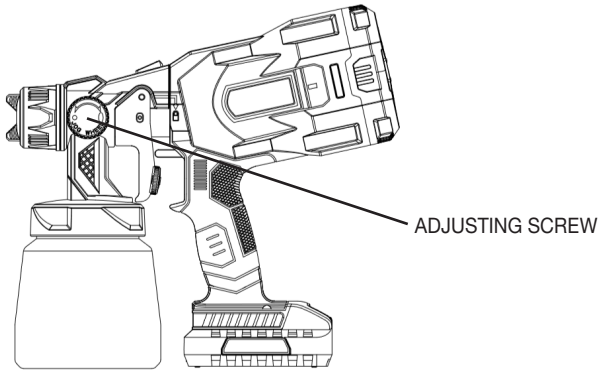
Fig. 08



6. Adjust the needle adjusting screw to meet your requirement.

- a. Adjust the screw to left to decrease liquid volume, decreasing coverage
- b. Adjust the screw to right to increase liquid volume, increasing coverage

Fig. 09



7. Spray length adjustment: Turn this knob to adjust the round shape from vertical to horizontal. Adjust the required length according to the spraying environment, reduce waste and save material.

- a. The counterclockwise rotation shortens the length, and when it rotates to the stop position, it is sprayed with the largest circle (see fig. 10).
- b. Adjust the screw to right to increase paint volume, increasing coverage (see fig. 11).

Fig. 10

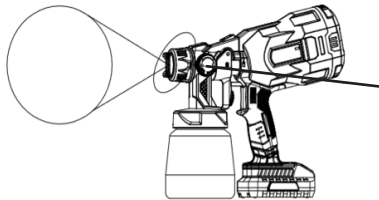
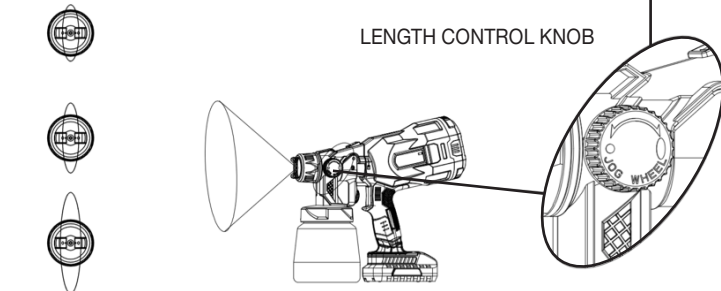


Fig. 11



8. Adjusting spray patterns

- The gun spray patterns can be changed from a horizontal oval fan pattern to a round
- detailed pattern to a vertical fan pattern by adjusting the nozzle.

Fig. 12



VERTICAL POSITION

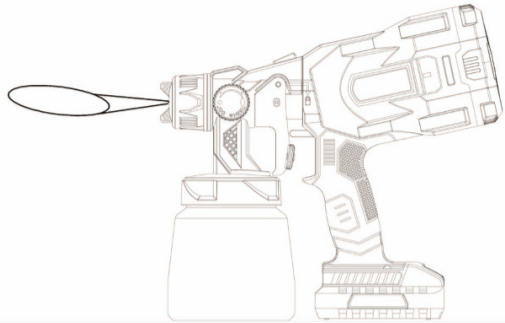
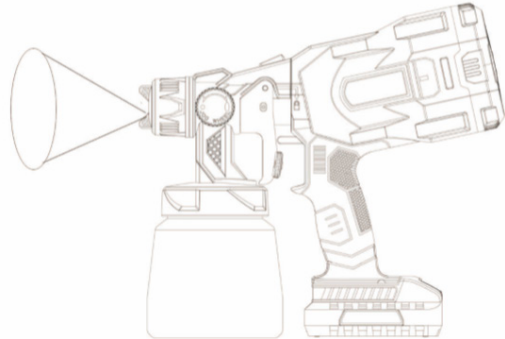


Fig. 13



HORIZONTAL POSITION



- Open the power switch, pull trigger, the liquid will spray from the nozzle.

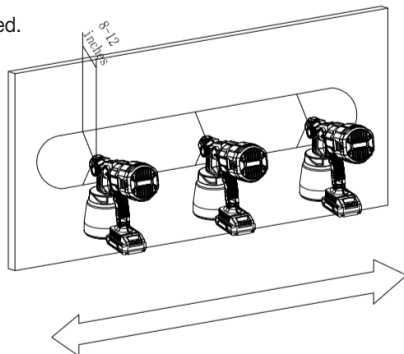
HOW TO SPRAY PROPERLY:

Even coat throughout.

- Keep stroke smooth and at even speed.

Fig. 14

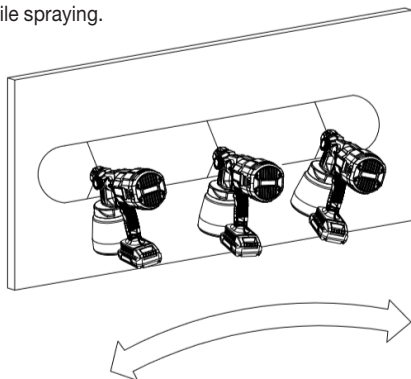
CORRECT



- Do not flex wrist while spraying.

Fig. 15

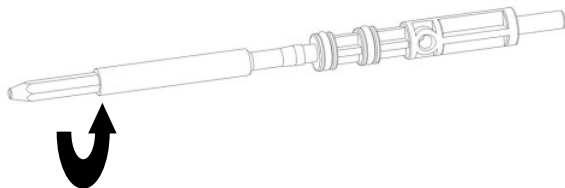
INCORRECT



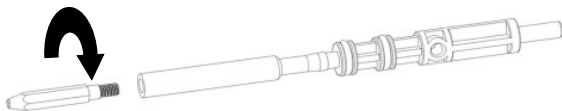
REPLACE NOZZLE AND NEEDLE:

When disassembling the nozzle, please pull the trigger first, then press and remove the nozzle.

- a. As shown in the figure, rotate to remove the needle



- b. As shown in the figure, rotate to set up the needle



TROUBLESHOOTING

Problem	Cause(s)	Solution(s)
Little or no material flow	1. nozzle clogged	1. clean
	2. suction tube clogged	2. clean
	3. material volume setting turn too far to the right	3. turn to the left
	4. suction tube loose	4. insert fully
	5. material is too thick	5. check viscosity
	6. inconsistent paint	6. strain paint
	7. container is loose	7. tighten the container
Material leaking	1. nozzle loose	1. tighten
	2. nozzle worn	2. replace
	3. nozzle seal worn	3. replace
	4. material build-up on spray pattern dial and nozzle	4. clean
Atomization is too coarse	1. viscosity of material too high	1. thin the material
	2. material volume too large	2. turn to the right
	3. nozzle clogged	3. clean
	4. too little pressure build-up in container	4. tighten container
Spray jet pulsates	1. material in container running out.	1. refill
	2. material is too thick	2. check viscosity
Pattern runs or sags	1. applying too much material	1. adjust material flow or increase movement of spray gun
Too much over-spray	1. gun too far from spray object	1. reduce distance
	2. too much material applied	2. turn material volume setting to right
Pattern is very light and splotchy	1. moving the spray gun too fast	1. adjust material flow or decrease movement of spray gun
Large cloud of paint	1. gun too close to surface	1. move gun away from surface and reduce paint flow

Inserting/replacing the battery

- Press the charged battery (C) into the power tool until it clicks into place.
- To remove, press the release button 7 and pull out the battery.

CAUTION! When the device is not in use, protect the battery contacts. Loose metal parts may short-circuit the contacts; explosion and fire hazard!

Battery state of charge

- If the LED light turns green, this indicates that charging is complete. If the LED light is off, the battery is faulty and must be replaced.

Attaching the tools

NOTE: Use original accessories on this model. Not using original accessories may lead to a poor spraying result, increased vibrations and greater wear or even damage to the power tool.

Maintenance and Care

WARNING: Remove the battery before carrying out any work on the S-100C.

Cleaning

- Clean the S-100C and grille in front of the vent slots regularly. Frequency of cleaning is dependent on the material and duration of use.
- Regularly blow out the housing interior and motor with dry compressed air.

DISPOSAL INFORMATION

WARNING! Render redundant power tools unusable: mains operated power tool by removing the power cord, battery operated power tool by removing the battery.



EU countries only

Do not throw electric power tools into the household waste!

In accordance with the European Directive 1812/19/EU on Waste Electrical and Electronic Equipment and transposition into national law used electric power tools must be collected separately and recycled in an environmentally friendly manner.

Device, accessories and packaging should be recycled in an environmentally friendly manner. Plastic parts are identified for recycling according to material type.

WARNING!

Do not throw batteries into the household waste, fire or water. Do not open used batteries.

EU countries only:

In accordance with Directive 1806/66/EC defective or used batteries must be recycled.

NOTE: Contact your dealer about disposal options!

Li-ion rechargeable battery of 2000mAh/18.5V, Reference Standard GB/T 18287-2013

Weight	240g	
Rated Capacity	Standard 2000mAh	.5C charge and .5C discharge to cut-off voltage 0.5C
	Minimum 1960mAh	
Nominal Voltage	18.5V	
Internal Impedance	Battery: $\leq 230m\Omega$	AC 1KHz after standard charge
Charge Voltage	21V	
Current	400mA	0.2C
Max. Charge Current 2A		
Standard Discharge Current	400mA	0.2C
Max. Discharge Current	20A	10C
Peak Value	20A	
Voltage	14V	
Operating Temperature	0~+45°C	Charging
	-40~+50°C	Discharging
Storage Temperature	within 1 month: -20°C~+45°C	Relative humidity: $\leq 75\%RH$
	within 3 month: -20°C~+35°C	
	within 6 month: -20°C~+25°C	



LIMITED WARRANTY

1 year internal parts, not wearable parts. 90 days for battery. Warranty does not cover neglect or misuse. Use of any solvents or solvent-based products in the S-100C Spray Gun voids warranty. Warranty starts from the date of sale to the end user.

End user or distributor sends the unit back to Tornador® at the end user/distributor's expense. Include the bill of sale to help with determining the 1 year as well as contact name, phone number and return address. **ALSO INCLUDE A BRIEF DESCRIPTION OF WHAT IS WRONG WITH THE UNIT.**

If covered under warranty, it will be fixed and returned freight prepaid.

If it is not covered under warranty, Tornador® will contact the end user/distributor with an estimate of the repair cost. The end user/distributor is responsible for paying the repair charges if they authorize the unit to be repaired. The unit will also be shipped back at the end user/distributors expense.

Please note that any prior attempt at a repair by the end user or unauthorized repair facility will void the warranty.

Send to: Tornador®
 Attn: Vehicle Care Repair Team
 11210 Katherine's Crossing
 Suite 100
 Woodridge, IL 60517

S-100C

CORDLESS HVLP SPRAY GUN

A detailed illustration of the S-100C cordless HVLP spray gun, showing its ergonomic handle, trigger, and the spray gun head with a nozzle.

Thank you for the purchase of your new Tornador® S-100C Cordless HVLP Spray Gun. We are very happy to welcome you into the Tornador® family! Thank you for your support!

The S-100C uses High-Volume, Low-Pressure (HVLP) technology to evenly disperse the flow of any liquid with less risk of overspray. The S-100C is designed for the professional detailer and home enthusiast looking to disinfect, sanitize, deodorize, and/or clean any vehicle, without having to worry about cords. The S-100C can also handle viscous products like water-based dressings to make applying dressings easy no matter on the interior or exterior surfaces. Do detail work in less time with the 3 selectable spray patterns: vertical, round, and horizontal. The S-100C is ready to handle whatever the job entails!

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Fax: **1-972-248-8542**

E-Mail: **info@tornador.us**

For Product Info: **www.tornador.us**

For Ordering Info: **www.tornadortools.com**

For Repair Info: **www.tornador-repairs.com**

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Serving the automotive industry since 1969
Innovations in chemistry since 1935

Tornador® covered by one or more of the following: U.S. Patent Nos. 8,480,011; 8,690,077; 9,475,071; 10,189,034; 10,343,177; 10,730,062; 10,562,078; Taiwanese Patent No. 1617360 and U.S. Design Pat. Appl. Nos. 29/756,918; 29/756,919; 29/756,920; 29/756,921.

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