

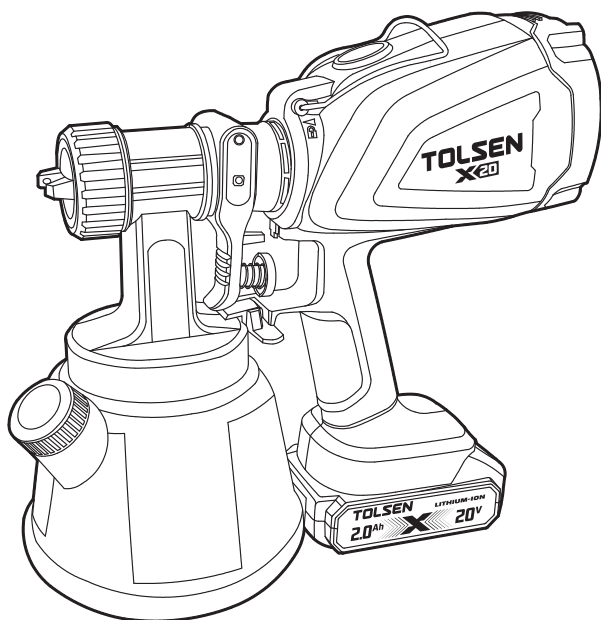
TOLSEN X20

97090

LI-ION CORDLESS SPRAY GUN

INSTRUCTION MANUAL

20V LITHIUM-ION



SAVE THIS MANUAL !

You will need this manual for safety instructions, operating procedures and warranty.
Put it and the original sales receipt in a safe dry place for future reference.

IMPORTANT SAFETY INFORMATION

General Power Tool Safety Warnings

WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

WARNING: This appliance is not intended for use by persons (including children) with reduced, physical or mental capabilities or lack of experience or knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children must be supervised to ensure that they do not play with the appliance.

Save all warnings and instructions for future reference

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work Area Safety

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Personal Safety

1. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.
4. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations
6. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
7. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
8. Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

Power Tool Use And Care

1. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
2. Do not use the power tool if the switch could not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
5. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
6. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
8. Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Battery Tool Use And Care

1. Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
2. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
3. When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
4. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
5. Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
6. Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion.
7. Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

Service

1. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
2. Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.
3. Follow instruction for lubricating and changing accessories.

Specific Safety Instructions

1. Do not expose to rain. Store indoors.
2. Risk of Explosion – Do not spray flammable liquids.
3. Do not direct spray at people or animals.
4. Read all of the information concerning coating products and cleaning solvents. Do not use chlorinated solvents (e.g. 1-1-1 trichloroethylene and dichloromethane, also known as methylene chloride) to clean spray guns. Many spray guns contain aluminum, which reacts strongly to chlorinated solvents. Contact the solvent or coating manufacturer as needed regarding potential chemical reactions.
5. Risk of injection—Do not point spray gun at any person or any part of the body. In case of skin injection, seek medical attention immediately.
6. Spraying hazardous materials may result in serious injury or death. Do not spray pesticide, acid, corrosive material, fertilizer, or toxic chemicals.
7. Paints and solvents may be harmful or fatal if swallowed or inhaled. Avoid prolonged skin contact with solvents or paints as they will irritate skin. After any contact, immediately wash off exposed area with hot, soapy water.
8. Attach all accessories properly to the tool before plugging in the tool. A loose accessory may detach or break during operation.
9. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Tolsen Tools for a replacement.
10. Avoid unintentional starting. Prepare to begin work before turning on the tool.
12. This product is not a toy. Keep it out of reach of children.
13. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should: • Avoid operating alone.
14. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

Battery Safety

WARNING

This battery can only be used in the machines included in the TOLSEN X20V lithium-ion power platform system.

This battery can only be used cooperatively with the designated battery charger.

Li-Ion batteries, if incorrectly used, stored or charged will cause a fire, burn and explosion hazard.

Failure to follow these instructions may cause overheating or fire.

1. Keep the battery out of reach of children.
2. The battery should be charged at ambient temperatures between 5 and 40°C (ideally around 20°C) . After charging, allow 15 minutes for the battery to cool before use.
3. The Battery Charger monitors battery temperature and voltage while charging. DO NOT leave batteries on charge for extended periods and NEVER store batteries on charge. Ensure that the charger is disconnected from the mains supply after use.
4. When not in use batteries should be stored at room temperature. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 40°C (ideally around 20°C) .
5. Ensure that battery contacts cannot accidentally short in storage. Keep batteries clean; foreign objects or dirt may cause a short. Keep away from other metal objects, for example, paperclips, coins, keys, nails and screws.
6. **DO NOT** store lithium-ion battery packs in a discharged state over a long period as this can damage the lithium-ion cells. For long-term storage, store batteries in a high charge state disconnected from the power tool.
7. Batteries can become faulty over time, individual cells in the battery can fail and the battery could short. The charger will not charge faulty batteries. Use another battery, if possible, to check correct functionality of the charger and purchase a replacement battery if a faulty battery is indicated.
8. **DO NOT** open, disassemble, crush, heat or incinerate. Do not dispose of in fire or similar.

Battery Charger Safety

WARNING

This charger can only be used to charge the batteries which has TOLSEN X20V symbol. If it is used to charge other kinds of batteries, there is a risk of explosion. **DO NOT** attempt to recharge non-rechargeable batteries.

1. This is class 2 power supply. It is suitable for indoor use only.
2. Before use, the input and output technical data must be checked to secure correct use.
3. Do not use the Battery Charger in the circumstances that the output polarity does not match the load polarity.
4. Do not attempt to use the charger with any batteries other than those supplied. Keep your battery charger clean; foreign objects or dirt may cause a short or block air vents. Failure to follow these instructions may cause overheating or fire
5. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Before Use

Removing a battery

Remove the Battery from the tool by pressing the lock button, then slide the Battery out of the Battery Slot.

WARNING:

DO NOT try to remove the Battery without pressing the lock button. The tool or Battery could be damaged.

Fitting a battery

1. Fit a battery by sliding it on to the Battery Slot of the tool until it clicks and locks into position

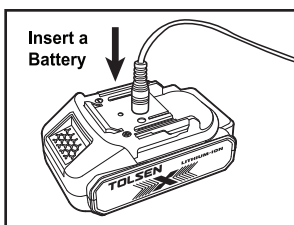
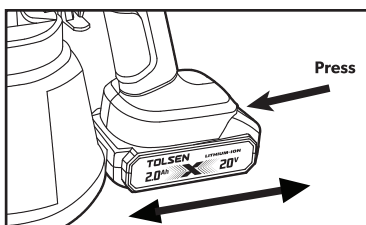
Note: Make sure the Battery and tool are lined up correctly. If the Battery does not slide into the tool easily, do not force it. Instead, slide the Battery out of the tool again, check the top of Battery and the tool battery slot are clean and undamaged and that the contacts are not bent

Setting up the battery charger

1. If there is battery fitted, remove any battery from battery charger first

2. Insert the Battery Charger mains plug into a suitable mains socket

Note: The Green LED on the Charger will always bright to indicate that the charger is ready to charge the battery.



WARNING: Use this charger ONLY to charge the supplied battery or additional purchased batteries that are specifically designed for this tool.

Charging the battery

WARNING: Failure to follow the correct procedure when charging batteries will result in permanent damage.

Note: Normal charging time is approximately 1hr for a recently discharged 2.0Ah capacity battery. However, if the Battery has been left in a discharged state for some time, it may take additional time to charge.

1. Slide a fully or partially discharged Battery on to the Battery Charger .

2. Once charging commences, the Red LED will on.

3. When the Battery is fully charged, the Red LED will off and Green LED will on.

IMPORTANT: When a low charge level is indicated, the tool may stop operating while in use, which is dangerous when operating it. Always ensure the battery pack has a good charge level.

Note: Symbolology

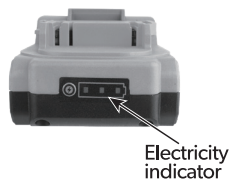
	Class II Double insulated for additional protection
	CE conformity
	Read the instruction manual before using
	Wear hearing protection while operating the tool
	Wear hand protection
	Always use breathing apparatus when machining materials which generate dust.
	Wear ear protection.
	Operating environmental temperature
	Do not incinerate battery pack
	Do not expose to water
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	Batteries and rechargeable batteries are not household waste! As a consumer, you are required by law to dispose of all batteries and accumulators, whether or not they contain harmful substances *, at a collection point in your municipality / neighborhood or in commerce so that they can be disposed of in an environmentally sound manner.
	Battery pack is recyclable and should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice
	Safety alert
	For indoor use only
	Internal time lag fuse with a maximum current of 2A.

SPECIFICATIONS

Rated voltage	20VDC
Paint tank capacity	1200mL
Max. Flow	600mL/min
Max. Viscosity	60din/sec
Plastic nozzle	Ø2.2mm
Battery pack (96090 not include)	
Battery pack Voltage	20VDC
Battery capacity	2.0Ah
Charger (96090 not include)	
Input Voltage	110-120VAC 60Hz
Output Voltage	21.5VDC
Rated output current	1.5A
Charging Time	85 minutes fast charging(2.0Ah battery)
Protection class	

FUNCTIONS

Fig. 1



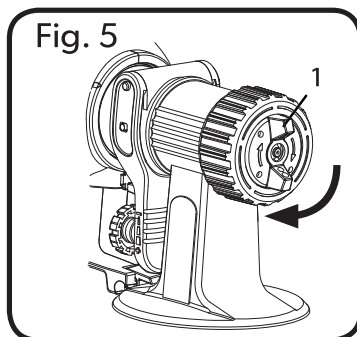
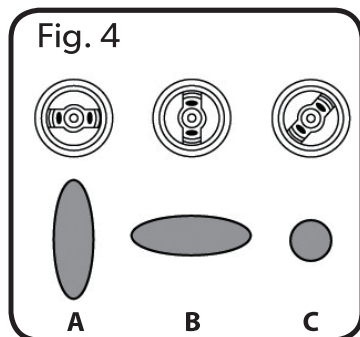
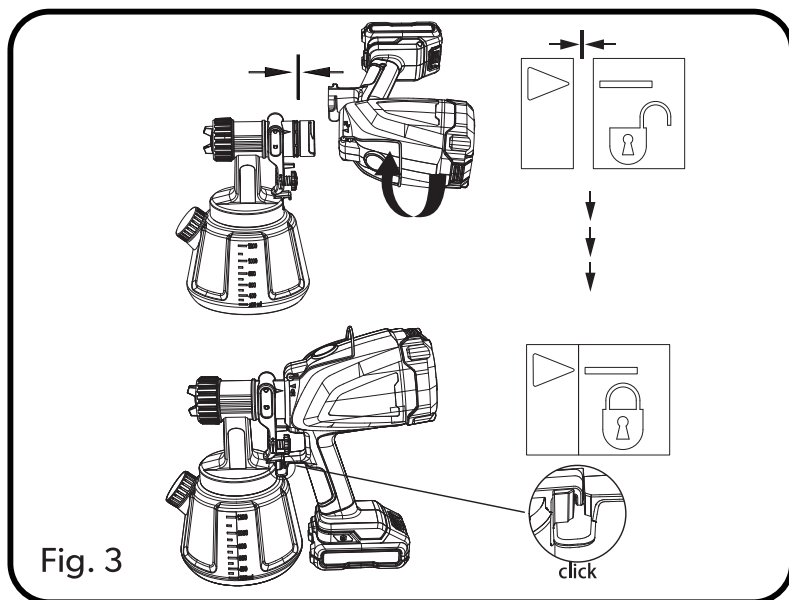
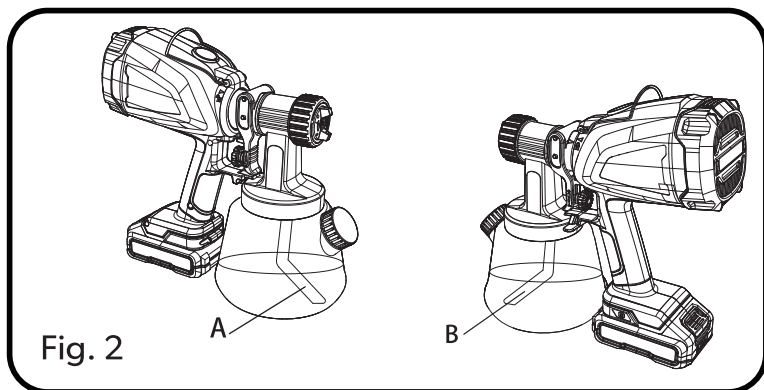


Fig. 6

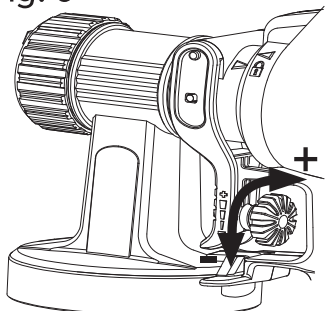


Fig. 7

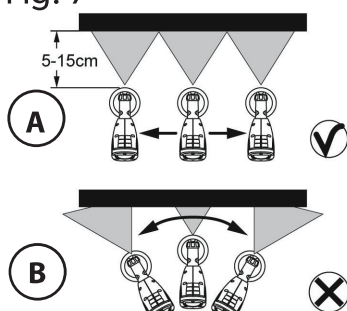


Fig. 8

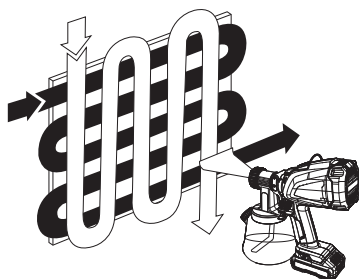


Fig. 9

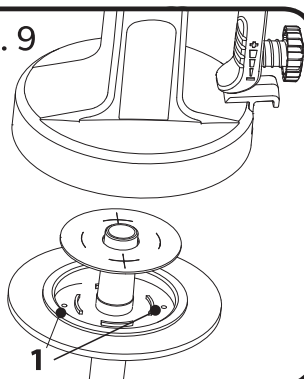


Fig. 10

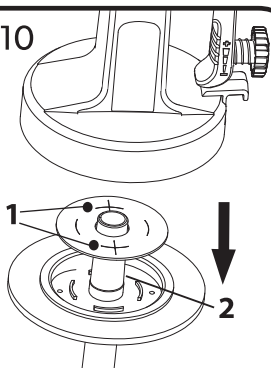


Fig. 11

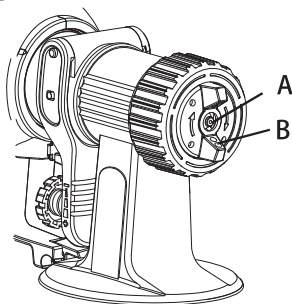


Fig. 12

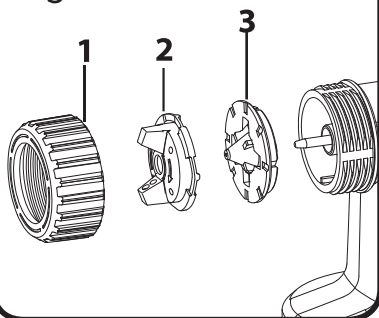


Fig. 13

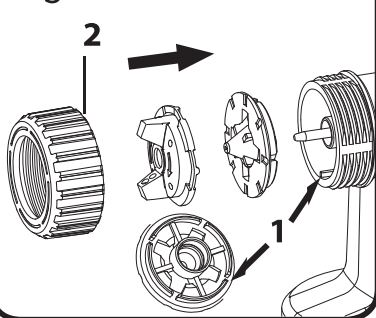


Fig. 14

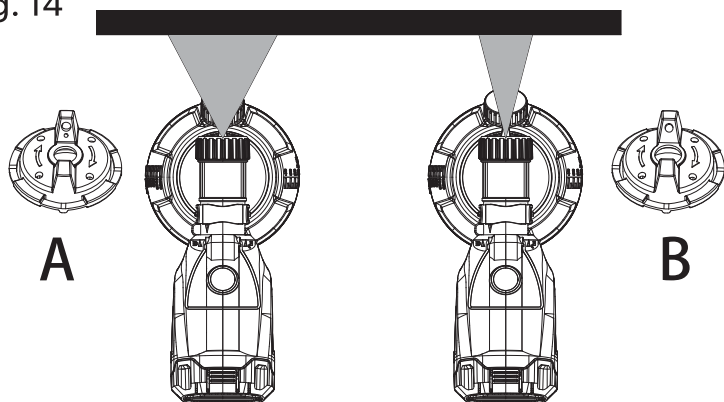


Fig. 15

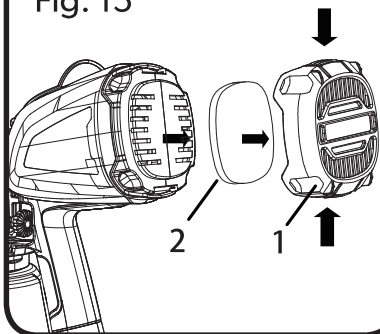
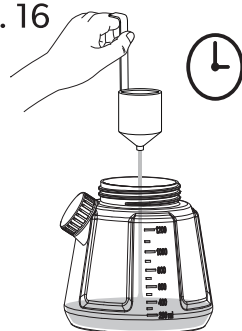


Fig. 16



WORK PIECE AND WORK AREA SET UP

Coating Materials Suitable For Use

Water- and solvent-based paints, finishes, primers, 2-component paints, clear finishes, automotive finishes, staining sealers, and wood sealer-preservatives. All coating materials with the red Perfect Spray logo.

Coating Materials Not Suitable For Use

Wall paints without the red Perfect Spray logo.
Alkali and acidic paints. Flammable materials.

Preparation Of The Coating Material

- (1) Stir well the paint before starting to measure.
- (2) Dip the viscosity cup fully into the liquid you intend to spray, and fill the viscosity cup to the brim with paint.
- (3) Take the viscosity cup out of the liquid, hold the viscosity cup over the paint or stain pot, and then calculate the time it takes for the liquid to drain from the cup. This is called liquid's run-DIN-seconds (DIN-s). If it takes longer for the liquid to leave the viscosity cup than the time shown on the chart, dilute the liquid until the run-DIN-seconds (DIN-s) falls within the time range shown for the liquid you are using. (Fig. 16)
- (4) After completing this process, if you are using a water-based product, clean the viscosity cup with warm soapy water. If you are using an oil-based product, follow the paint manufacturer's instructions for cleaning

The data below shows recommended run-DIN-seconds for different types of materials:

Solvent-based paints	15-50
Varnishes	15-40
Waterborne paints	20-40
Automotive topcoats	20-40
Wood preservatives	no need to dilute
Enamel, Latex Paint	25-40

Start-up

- Unscrew the container from the spray gun.
- Aligning suction tube. (Fig. 2)
If the suction tube is positioned correctly, the container contents can be sprayed without almost any residue.
When working on lying objects: Turn the suction tube forwards. (Fig. 2 A)
Spraying work when working on overhead objects: Turn the suction tube rearwards. (Fig. 2 B)
- Set the container on a sheet of paper, pour in the prepared coating material, and screw the container tightly onto the spray gun.
- Connect the front part with the rear part of the gun (Fig. 3).
- Put the machine down only on a level, clean surface. Otherwise, the machine could tip over!
- Pull the trigger guard. It has a two-stage trigger guard. In the first stage, the turbine is started. If the trigger guard is pressed further, the material is transported.
- Adjust the spray setting on the spray gun.

Adjusting The Desired Spray Setting(Fig. 7)

Three different spray jet settings can be chosen on the spray gun, depending on the application and target object.

WARNING! Danger of injury! Never pull the trigger guard while adjusting the air cap.

- Turn the air cap (Fig. 5-1) to the desired spray setting position (arrow).

Fig. 4 A = vertical° t jet → for horizontal surfaces

Fig. 4 B = horizontal° t jet → for vertical surfaces

Fig. 4 C = circular t jet → for corners, edges and hard-to-reach surfaces

- Replace air cap (Fig.14) to desired spray setting width.

Fig. 14 A = Wide spray width

Fig. 14 B = Narrow spray width

Adjusting The Material Volume (Fig. 6)

Set the material volume by turning the regulator on the trigger guard of the spray gun.

- turn to the left → lower material volume

+ turn to the right → higher material volume

Spray Technique

- The spray result depends heavily on the smoothness and cleanliness of the surface to be sprayed. Therefore, the surface should be carefully prepared and kept free of dust.
- Cover all surfaces not to be sprayed.
- Cover screw threads or similar parts of the target object.
- It is advisable to test the spray gun on cardboard or a similar surface to test the correct setting. Important: Begin spraying outside of the target area and avoid interruptions inside the target area.
- Correct (Fig. 7a): Be sure to hold the spray gun at an even distance of approximately 5 - 15 cm to the target object.
- Incorrect (Fig. 7b): Heavy spray fog build-up, uneven surface quality.
- Move the spray gun evenly cross-wise or up-and-down, depending on the spray pattern setting.
- An even movement of the spray gun results in an even surface quality.
- When coating material builds up on the nozzle (A) and air cap (B) (Fig. 11), clean both parts with a solvent or water.

Interruption Of Work Till 4 Hours

- Turn the machine off.
- When processing 2-component varnishes, clean the device immediately.

TAKING OUT OF OPERATION AND CLEANING

Proper cleaning is the prerequisite for problem-free operation of the paint application device.

No warranty claims are accepted in case of improper or no cleaning.

- (1) Vent the container in case of longer breaks and after the work has been terminated. This can be done by briefly turning open and then closing the container or by pulling the trigger guard and letting the paint into the original paint container.
 - (2) Divide the spray gun. Press the hook (Fig. 3b "click") slightly downwards. Turn the gun front part and gun rear part against each other and take them apart.
 - (3) Unscrew the container. Empty any remaining coating material back into the material tin.
 - (4) Pour solvent or water into the container. Screw the container back on. Do not use flammable materials for cleaning purposes.
 - (5) Assemble the gun again (Fig. 3).
 - (6) Turn on the machine, and spray the solvent or water into a container or a cloth.
 - (7) Repeat the above procedure until the solvent or water emerging from the nozzle is clear.
 - (8) Turn off the machine.
 - (9) Screw off the container and empty it. Pull out the suction tube with the container seal.
- CAUTION!** Never clean seals, diaphragms, and nozzle or air holes of the spray gun with metal objects.
- (10) The ventilation hose and diaphragm are only solvent-resistant to a limited extent. Do not immerse in solvent, only wipe.
 - (11) The device can only be operated with an intact valve (Figs. 10,1). If paint passes through the valve clearance (Figs. 10,1), check and clean the valve (see Maintenance Section).
 - (12) Rotate the mounting nut (Fig. 12,1) to remove it more easily.
 - (13) Unscrew the mounting nut (Fig. 12,1). Clean the air cap (2) and the nozzle (3) with a handbrush and solvent or water.
 - (14) Clean the outside of the spray gun and container with a cloth soaked in solvent or water.
 - (15) Assemble the parts again (see "Assembly").
 - (16) Clean the outside of the spray gun and container with a cloth soaked in solvent or water.
 - (17) Unscrew the union nut (Fig. 12, 1) and remove the air cap (2) and nozzle (3). Clean the air cap, nozzle with a brush and solvent or water.

Assembly

- (1) Screw the union nut (Fig. 12, 1) onto the gun and tighten it.
- (2) Place the container seal from below on the suction tube and slide it over the collar, while turning the container seal slightly.

MAINTENANCE

Air Filter

Disconnect the power supply before changing parts

WARNING! Never operate the machine without the air filter; dirt could be sucked in and interfere with the function of the machine.

Disconnect the power supply before changing parts

Change the air filter if it is soiled.

For this, pull the air filter out of the unit (Fig. 15).

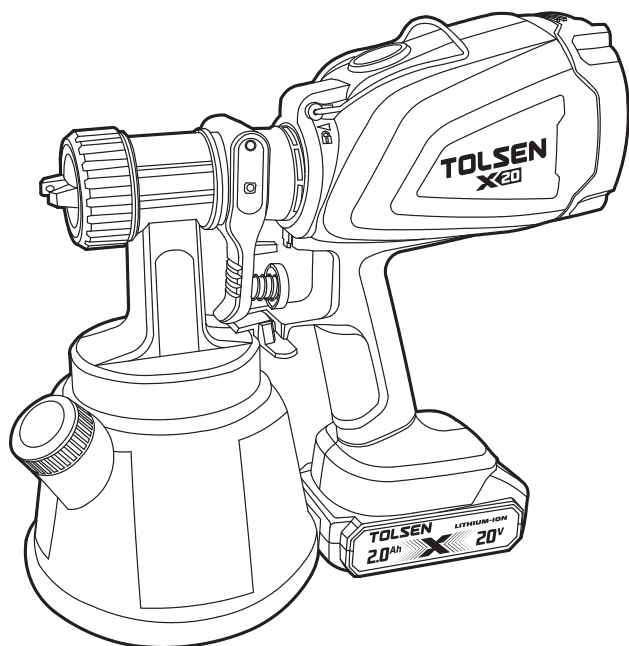
Put a new air filter into the compartment.

Ventilating Valve

- (1) Pull the straw out of the bottom of the gun (Fig.10.2) and remove the valve (Fig.10.1) from the straw. Clean the part carefully or replace it if it is damaged.
- (2) Insert the valve (Figs. 10,1) into the upper portion of the straw and place it in the groove.

TROUBLESHOOTING

Problem	Cause	Remedy
No coating material emerges from the nozzle	Nozzle clogged Feed tube clogged Material volume setting turned too far to the left (-) Feed tube loose No pressure build-up in container	→ Clean → Clean → Turn to the right (+) → Insert → Tighten container
Coating material drips from the nozzle	Nozzle loose Nozzle worn Nozzle seal is missing or worn Coating material assembly at air cap, nozzle or needle	→ Tighten → Change → Insert an intact nozzle seal → Clean
Atomisation too coarse	Viscosity of coating material too high Material volume too large Material volume adjusting screw turned too far to the right (+) Nozzle contaminated Air filter heavily soiled Too little pressure build-up in container	→ Thin → Turn material volume adjusting screw to the left (-) → Clean → Change → Tighten container
Spray jet pulsates	Coating material in container running out Air filter heavily soiled Nozzle seal is missing or worn	→ Refill → Change → Insert an intact nozzle seal
Coating material causes "paint tears"	Too much coating material applied	→ Turn material volume adjusting screw to the left (-)
Too much fog of coating material (Overspray)	Distance to the object too large Too much coating material applied	→ Reduce distance → Turn material volume adjusting screw to the left (-)
Paint in the ventilating hose	Diaphragm soiled Diaphragm defective	→ Clean the diaphragm → Replace the diaphragm



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