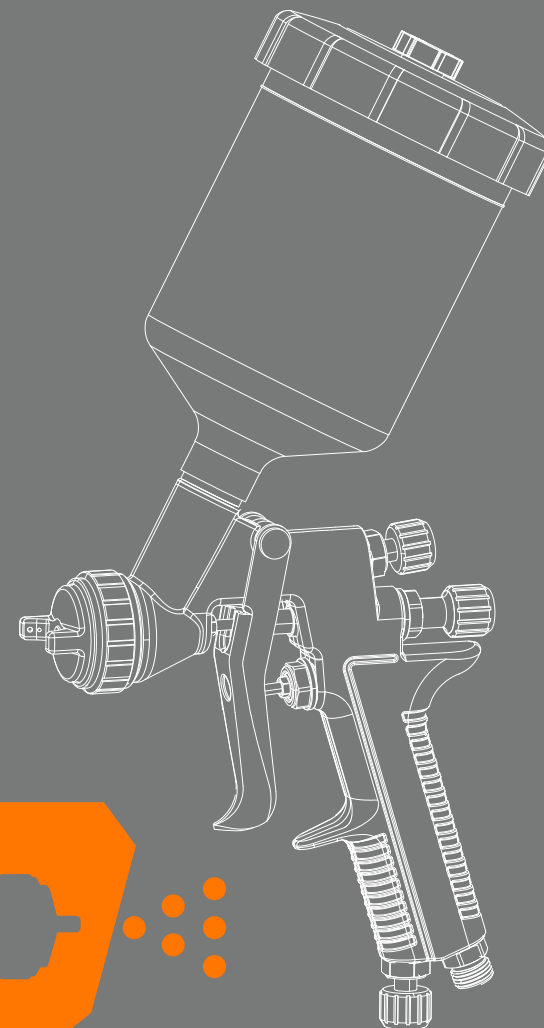




PLEASE PAY ATTENTION TO SAFETY WHEN USING



# REFINE<sup>®</sup>



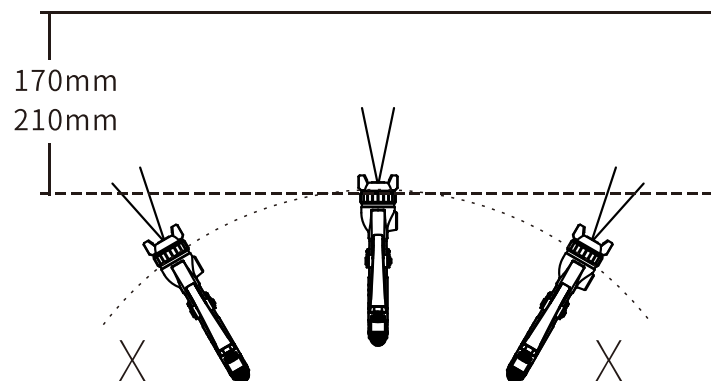
## SPRAY GUN SPECIFICATION

### SYMBOLS

⚠ WARNINGS	⚠ CAUTION	⚠ NOTE
Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.	Hazards or unsafe practices which could result in minor personal injury, product or property damage.	Important installation, operation or maintenance information.

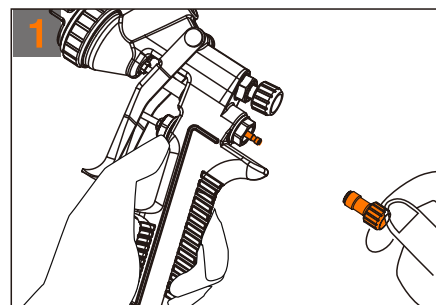
### HOW TO OPERATE

Suggested air pressure is 3.0bar(43PSI)  
 Desirable viscosity differs from 15 to 30 sec according to paint property and spraying conditions.  
 Ford cup#4 is recommendable.  
 Keep fluid output as small as possible to the extent that the job will not be hindered. It will have better finishing with fine atomization.  
 Set the spray distance from the gun to the work piece within the range of 170-210mm (6.7-8.27 in).  
 The gun should be held so that it is perpendicular to the surface of the work piece at all times.  
 Then, the gun should move in a straight and horizontal line.  
 Moving the gun in an arc will result in uneven painting

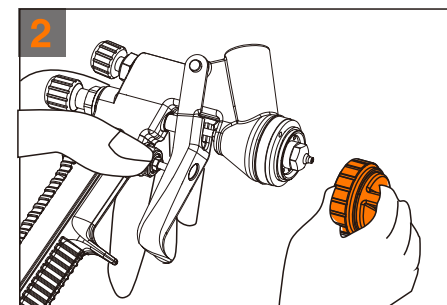


### NOZZLE SET REPLACEMENT

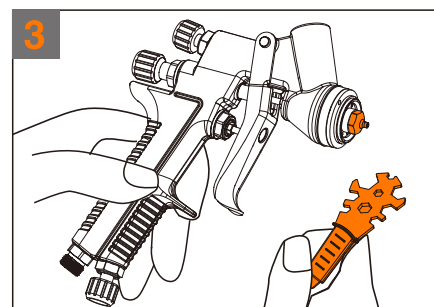
#### 1. Disassemble and install nozzle set



Turn the Fluid Adjustment Knob counterclockwise to remove Knob, Fluid Needle and Spring.



Remove the Air Cap Set.

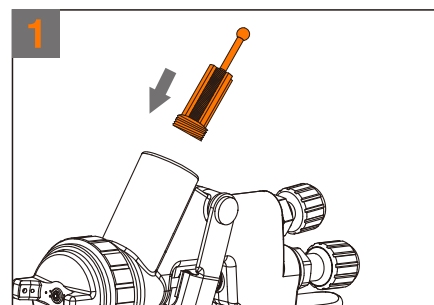


Unscrew the Fluid Nozzle with spanner.

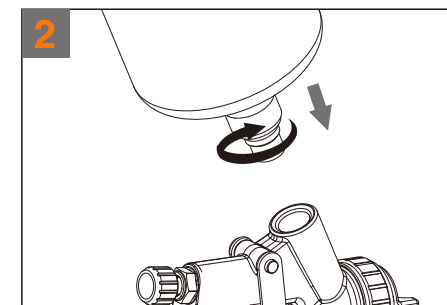
#### 2. Re-assembly: be remember to tighten the Fluid Nozzle to prevent fluid leakage.

**NOTE:**  
 Replace the whole set of Air Cap, Nozzle, Fluid Needle at the same time.

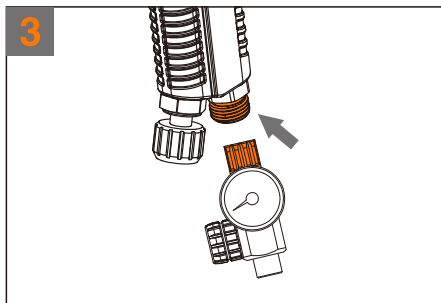
### ASSEMBLY



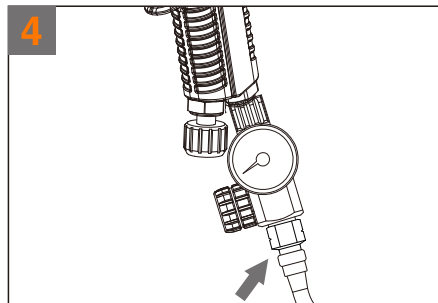
Install the Filter.



Screw the Paint Cup clockwise.

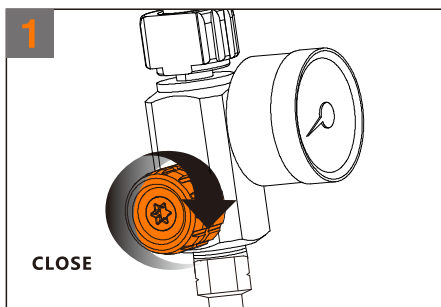


Connect the air pressure regulator to the air inlet.

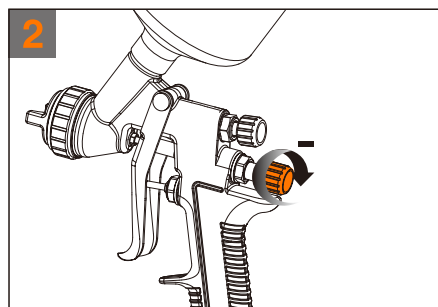


Connect the 1/4"NPS air inlet connector to the air pressure regulator and air inlet hose.

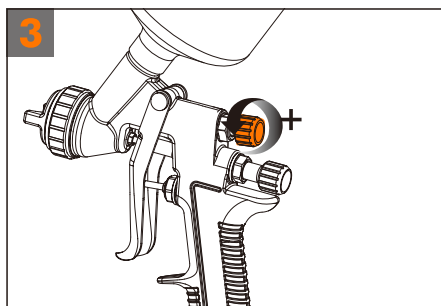
### SET UP



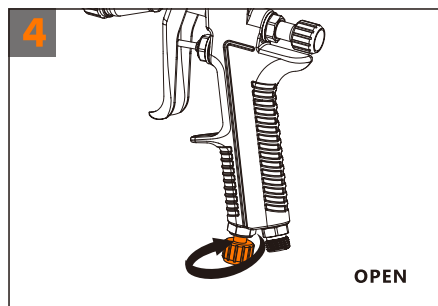
Turn the Air Pressure Regulator Knob clockwise to make sure the air inlet is closed.



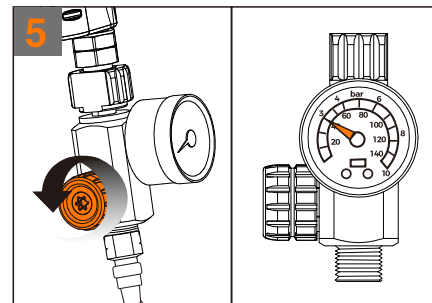
Turn the Fluid Adjustment Knob clock-wise to the minimum to prevent the needle from moving.



Turn the Fan Adjustment Knob counter-clockwise to fully open the fan.

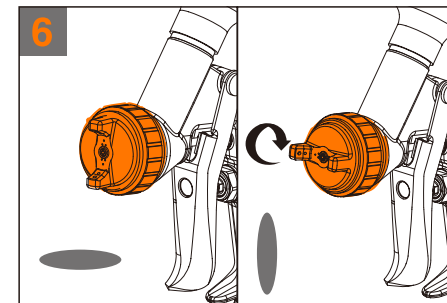


Turn the Air Pressure Regulator Knob clockwise to make sure the air inlet is open.

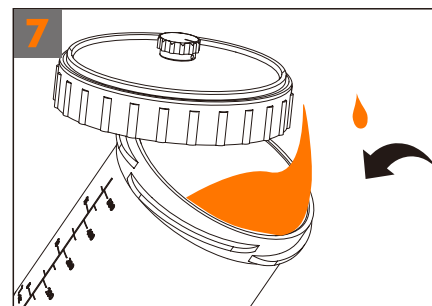


Hold the Gun Trigger. Then turn the Air Pressure Regulator Knob counterclockwise to raise the air pressure up to 2.5 to 3.0bar.

**WARNING: MAX 3.5Bar(50psi).**



Change the spray pattern at vertical or horizontal by rotating the Air Cap at 90°



Mix coating material by Manufacturers' instructions and pour into the Paint Cup.

### PRECAUTIONS

#### ⚠ SAFETY WARNING






- ① No open flames and keep ventilated when spraying.
- ② Do not spray on humans or animals to avoid damaging eyes and skin.
- ③ Use protective devices like respiratory protection equipments and eye-protective devices during any spraying.
- ④ Insulate or release the pressure inside the device before cleaning or maintenance.
- ⑤ Do not use wires to dredge the feed port and nozzle to avoid damage to parts and abnormal spraying.
- ⑥ Do not immerse spray gun and its parts in diluting solvent for a long time. Take out and dry it in the air.
- ⑦ Do not overhaul it by force if the paints bond together.
- ⑧ The spraying distance should be between 170mm and 210mm, and the viscosity is about 15 to 30 sec./Ford cup#4 for the best effect.



### COMMON TROUBLES AND TROUBLESHOOTING OF SPRAY GUN

TOROUBLES	CAUSES	TROUBLESHOOTING
No paint	No compressed air in	Inspect air supply pipe
	Needle valve regulating knob not fully opened	Regulate needle valve knob according to standard
	High paint viscosity	Dilute the paint according to the standard formula
There is paint spilling at the nozzle when stopping pulling the trigger	Mismatch of needle valve and nozzle	Equip with proper nozzle and needle valve according to standards
	Abrasion of needle valve	Replace the needle valve
	Abrasion of nozzle	Replace the nozzle
Airflow nozzle leakage when stopping pulling the trigger	Stain inside air valve	Dismantle the air valve and cleanse inner parts
	Damage of air valve seal ring or air valve spring	Replace seal ring or air valve spring
Excessive painting at airflow nozzle cause painting drops when pulling the trigger	Incorrect installation of nozzle at the gun head	Install nozzle according to standards
	Airflow nozzle is blocked	Cleanse air cap thoroughly
Paint leakage out of nozzle and needle valve	Scratch, damage or abrasion at the base inside nozzle	Replace the nozzle
	Damage or abrasion outside nozzle	Replace needle valve
	Needle valve or nozzle is not sealed due to unclean juncture	Remove foreign matters or excessive paint
	Mismatch of nozzle and needle valve	Equip with nozzle or needle valve according to standards
	Unclean needle valve	Clean and lubricate needle valve
	Unclean needle valve seal cartridge	Take the seal cartridge down and clean it
	Incorrect installation of nozzle	Install the nozzle according to standards
Excessive paint	Leakage of needle valve or nozzle	Replace seal cartridge
	Damage of airflow nozzle	Replace airflow nozzle
Excessive paint at airflow nozzle	Rebounding paint buildup at the nozzle leads to blockage of the airflow nozzle	Clean the airflow nozzle thoroughly
	Abrasion or looseness of needle valve seal cartridge	Tighten or replace sealing plug as required
Paint leakage out of needle valve seal cartridge	Abrasion of needle valve	Replace needle valve
	Bend of air valve root	Replace broken parts
Air valve is dull when controlling the trigger	Unclean air valve root	Take it down and wash it
	Abrasion or loss of seal ring inside air valve	Replace seal ring
Leakage at air valve root	Bend of air valve root	Replace broken air valve root
	Unclean air valve root	Take the air valve down and clean it
Bluntness of the trigger	Unclean spindle screws of fixed trigger	Clean spindle screws
	Unclean needle valve	Clean needle valve
	Needle valve seal cartridge is too tight	Regulate and lubricate sealing plug
	Damage of needle valve spring or air valve spring	Replace spring
Paint leakage out of needle valve at the top of handle	Abrasion or loss of seal ring	Replace seal ring
Airflow nozzle locating ring can not work	Unclean thread of locating ring	Wash the front end of the gun in solvent
	Distortion or crack of locating ring	Replace the locating ring

TORUBLES	CAUSES	TROUBLESHOOTING
Sector valve can not be regulated	Damage or crack of inner seal ring	Replace seal ring
	Paint stained regulating screw	Take it down and wash it thoroughly
No dot spraying	Incorrect installation of nozzle or spacer	Reinstallation
	Damage of spacer	Replace the spacer
Sector control valve or inlet valve is loose	Abrasion of inner seal ring	Replace seal ring
Air leakage of spacer and seal ring	Damage of spacer and seal ring	Replace the spacer
	Paint stained spacer and seal ring	Take it down and wash it
Air control valve on the handle of spray gun can not work	Damage or crack of inner seal ring	Replace seal ring
	Paint stained regulating screw	Take it down and wash it
Trembling spraying or stoppage of the gun	Insufficient paint in the bucket	Add the paint
	Unscrewed nozzle	Screw the nozzle
	Abrasion of needle valve or seal ring	Replace the gun or seal ring
	Loose needle sealing plug	Screw sealing plug
	Loose joint of paint tube	Screw joint of paint tube

SPRAY PATTERN	REASON	REMEDIES
 <b>TAPER</b>	Air enters the junction of feed nozzle and nozzle holder	Clean junctions of nozzle and nozzle Holder, and reinstall them, replace them, replace the parts if junctions are broken.
	Air enters the junction of spacer and gun	Reinstall junctions of parts after cleaning, replace the parts if junctions are broken.
	Air enters the needle sealing screw	Tighten the needle sealing screw
	Air enters the juncture of feed channel joint and charging bucket	Reinstall and tighten relevant junctions
 <b>MOON</b>	Blockage at vent hole of airflow nozzle, causing imbalanced air output	Remove the foreign matters and wash with hairbrush instead of metal cleaners to avoid damage
 <b>ONE END WIDE AND ONE END NARROW</b>	Damage or solid matter sticking to fit clearance of feed nozzle and airflow nozzle	Remove solid matters and replace the broken parts
	Foreign matter sticking to discharge port of feed nozzle	Reinstall feed nozzle and needle valve assembly after cleaning junctions of them
 <b>NARROW IN THE MIDDLE</b>	Low viscosity	Increase viscosity of the paint
	Excessive paint sprayed	Reduce the paint sprayed with amplitude regulator, but it will also reduce the spraying swath
 <b>DENSE IN MIDDLE</b>	High viscosity	Diluent should be added to reduce the viscosity of the paint
	Excessive paint sprayed	Increase the paint sprayed with amplitude regulator