

# INSTRUCTION MANUAL

## Compliant Spray Gun W-400LV



### IMPORTANT

This instruction manual contains IMPORTANT WARNINGS, CAUTIONS and INSTRUCTIONS.

Equipment in this instruction manual is exclusively for coating purposes. Do not use for other purposes.

The operator shall fully understand the requirements stated within the instruction manual including important warnings, cautions and operation and correct handling.

Read and understand the instruction manual before use and retain for reference.

Incorrect operation or mishandling can cause serious bodily injury, death, fire, explosion, finish problem and spray gun malfunction. Pay special attention to section shown with the symbols below.

The safety precautions in this instruction manual describe the minimum necessary information. Be sure to follow national and local regulations on fire prevention, electricity and safety as well as your own corporate regulations.

**WARNING** This symbol indicates that a potentially hazardous situation may result in serious injury or death if not followed.

**CAUTION** This symbol indicates that a potentially hazardous situation may result in minor or moderate injury or damage.

**IMPORTANT** This symbol indicates important information needed to achieve full performance and function of the equipment.

## Important Specifications

Max. Pressure	0.68MPa / 6.8bar / 98psi
Noise Level	70.0 dB(A)
Spray condition	Recommended
Measuring point	1.0m backwards and 1.6m height from gun

Operating Temperature	
Ambient	5 - 40°C (41 - 104°F)
Air / Fluid	5 - 43°C (41 - 110°F)

## Main Specifications

Model	Type of feed	Nozzle size mm (in)	Air cap set	Recommended condition				Air/Fluid connection	Mass g (lbs)
				*1 Atomizing air pressure MPa (bar/psi)	Fluid output ml/min	Air consumption l/min (cfm)	Pattern width mm (in)		
W-400LV-124G	Gravity	1.2 (0.047)	W-400 LV4	0.14 (1.4/20)	100	300 (10.5)	250 (9.8)	1/4" (Air)  M16X1.5 (Fluid)	380 (0.84)
W-400LV-134G		1.3 (0.051)			140		270 (10.6)		
W-400LV-144G		1.4 (0.055)			155		290 (11.4)		
W-400LV-164G		1.6 (0.063)			185		305 (12.0)		
W-400LV-184G		1.8 (0.071)			235		325 (12.8)		

\*1 Atomizing air pressure: inlet air pressure to spray gun during pulling trigger fully and air flows

## Safety Warnings

### WARNING

#### FIRE OR EXPLOSION HAZARD

- Fluid and/or solvent can be highly flammable or combustible.
  - Use in well-ventilated spray booth.
  - Avoid any ignition sources such as smoking, open flames or electrical hazard.
- Never use the following halogenated hydrocarbon solvent. It can cause cracks or dissolution on gun body (aluminum) by chemical reaction.
  - Methyl chloride, Dichloromethane, 1,2-dichloroethane, Carbon tetrachloride, Trichloroethylene, 1,1,1-trichloroethane

Be sure to use compatible fluids with the wetted parts of spray gun. Make sure to review Material Safety Data Sheet (MSDS) from paint or fluid manufacturer.
- To reduce the risk of static sparking, grounding continuity to spray gun and work piece being sprayed must be maintained. Grounded air hose designed by ANEST IWATA is available. Ground wire must be less than 1MΩ.



#### MISUSE HAZARD

- Pressurized hazardous fluid can cause serious injury or death. Never spray toward a person or animals and never pull the trigger of spray gun near the body.
- Be sure to use spray gun at less than the maximum working pressure.
- Always release air and fluid pressure when not the use and before cleaning, disassembly or service.
- Be careful that fluid needle has a sharp point.
- Never operate spray gun of disassemble without receiving proper education and training.



#### BODY PROTECTION

- Toxic vapors produced by spraying certain materials can cause intoxication and serious damage to health.
  - Use in well-ventilated area
  - Always wear protective clothing, eyewear, gloves and respirator to prevent toxic vapor, solvent and paint from coming into contact with your eyes and skin

Stop spraying and see a doctor immediately if you feel something wrong.
- Wear hearing protection if necessary. Noise level can exceed more than 85dB(A) depending on use and working conditions.
- Continual pulling trigger for long hours can cause carpal tunnel syndrome. Take a break if you feel something wrong.



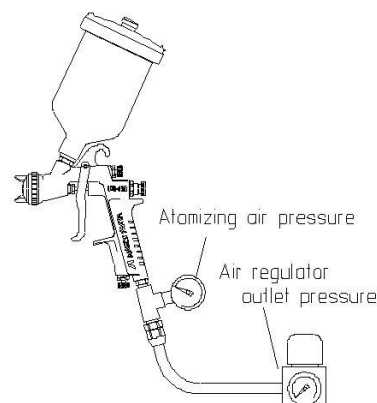
#### OTHER HAZARD

- Never modify spray gun for any other applications. It can cause insufficient performance and malfunction.
- Be careful to work inside working range of other equipment such as robots, reciprocators, etc. To avoid accident stop the equipments before working if necessary.
- Never use spray gun to spray food products or chemical agents. It can cause accident by corrosion of fluid passage or health disturbance by tampering.
- If operation appears incorrect, immediately stop operation and find the cause. Never use until the problem has been solved.
- Never soak whole spray gun into solvent for cleaning. It can cause spray gun malfunction.
- Repair or replace worn or damaged parts immediately. Always use ANEST IWATA replacement parts.

## Setup

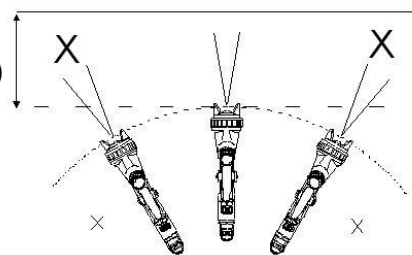
### CAUTION

- Use clean air filtered through a dryer and a filter finer. If not, it can cause spray gun malfunction and finish problem.
  - Make sure that needle packing set is installed securely on spray gun before use. If loosened, hand tighten it and tighten 1/8 to 1/4 turn more with ANEST IWATA gun wrench.
  - Flush fluid passage of spray gun completely with cleaning fluid before first use and every time after use. If not, it can cause finish problem and spray gun malfunction.
  - Be sure to tighten all connection, hoses, paint cups and containers. If not, it can cause problem and injury.
- Connect air hose to air nipple on spray gun. If air hose or fittings are damaged, replace immediately.
  - Attach paint cup to fluid nipple on spray gun.
  - Open air adjusting set, pattern adjusting set and fluid adjusting knob fully.
  - Flush fluid passage of spray gun with compatible solvent. If it leaks, find cause and repair.
  - Put paint into the cup.
  - Adjust inlet air pressure at 1.0 - 1.4bar (14 - 20psi) at spray gun using air regulator.



## How to operate

1. Adjust fluid output and pattern width.
2. Double-check inlet air pressure at 1.0 - 1.4bar (14 - 20psi) at spray gun. 100 - 200 mm (4.0 - 8.0 inch)  
This spray gun is designed to perform better at the inlet pressure range. Always pull the trigger fully to measure the inlet air pressure.
3. Spray paint 100 - 200mm (4.0 - 8.0inch) away from work piece to achieve fine finish and high transfer efficiency. If it is too far or too close, it can cause finishing problem or low transfer efficiency.
4. Always spray paint perpendicular to the surface of work piece. Arcing spraying can cause uneven finish.
5. Recommended paint viscosity is 12 - 23sec/NK-2 (15 - 25sec/Ford#4) depending on paint spec and working condition.



## Maintenance

### WARNING

1. Always release air and fluid pressure before cleaning, disassembly or service.
2. Be careful that fluid needle has a sharp point.
3. Pay attention to avoid hitting or dropping spray gun, especially air cap, fluid nozzle, fluid needle and fluid nipple.
4. Never use metal brush for cleaning.
5. Never soak whole spray gun into solvent for cleaning. It can cause spray gun malfunction.
6. Never disassemble spray gun without receiving proper education and training.

Cleaning and Disassembly	IMPORTANT
1. Remove remaining paint to a container. Put cleaning liquid to spray gun and spray to clean fluid passage. Continue until clean inside completely.	Incomplete cleaning can cause finishing problem and spray gun malfunction. Clean carefully and quickly as possible after using two-component paint.
2. Brush or wipe off paint on air cap set, gun body and fluid nipple with cleaning liquid.	Soaking whole spray gun into solvent can cause spray gun malfunction. Never damage holes of air cap set, fluid nozzle and fluid needle, it can cause spray gun malfunction.
3. Before disassembly, clean fluid passage completely.	Pay attention to avoid damage or scratch seat section.
1. Disassemble fluid needle. Remove fluid adjusting knob and needle spring and pull fluid needle out.	Pull fluid needle out straight to avoid damage or scratch.
2. Disassemble fluid nozzle using ANEST IWATA gun wrench.	Always remove fluid needle before disassembling fluid nozzle to avoid damage the tip of fluid needle.
4. Disassemble fluid adjusting guide set using ANEST IWATA gun wrench and remove air valve and air valve spring. And use 10mm Allen wrench to disassemble air valve seat set.	Always assemble air valve, air valve spring and fluid adjusting guide set with fluid needle together to assemble them correct and avoid damage.
5. Disassemble air adjusting set and pattern adjusting set.	Make sure air adjusting set and pattern adjusting set are open fully before disassembly and assembly to avoid damage.

Inspection	Parts replacement standard
1. Holes of air cap set and fluid nozzle	Replace if damaged
2. Tip of fluid nozzle and fluid needle	Replace if damaged or worn
3. Packing and O-ring	Replace if damaged or worn out
4. Leak paint between fluid nozzle and fluid needle	Replace if leaked after cleaning

## Parts list

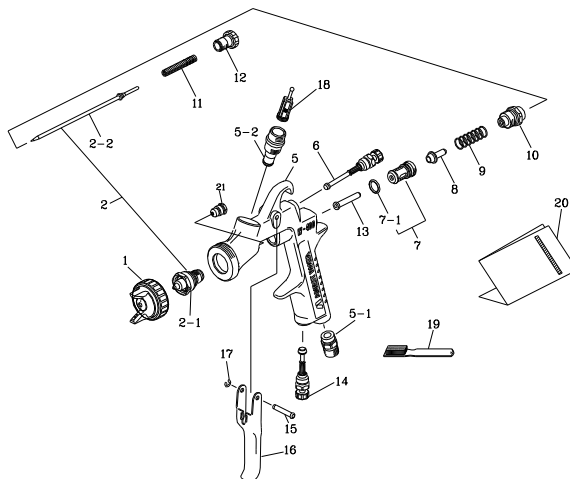
Make sure that spray gun model, parts description, fluid nozzle size before ordering replacement parts.

Fluid nozzle and needle indicates marking on as following chart:







Fluid nozzle		Fluid needle
Size mm (in)	Mark	Mark
1.2 (0.047)	400WB / 12	40012
1.3 (0.051)	400WB / 13	20015
1.4 (0.055)	400WB / 14	
1.6 (0.063)	400WB / 16	
1.8 (0.071)	400WB / 18	20020

No.	Description	Qty	No.	Description	Qty
1	Air cap set	1	12	Fluid adj. knob	1
2	Nozzle/needle set	1	13	Air valve shaft	1
2-1	Fluid nozzle	1	14	Air adj. set	1
2-2	Fluid needle	1	15	Trigger stud	1
5	Gun body	1	16	Trigger	1
5-1	Air nipple	1	17	E stopper	1
5-2	Fluid nipple	1	18	Filter	1
6	Pattern adj. set	1	19	Cleaning brush	1
7	Air valve seat set	1	20	Instruction manual	1
7-1	O-ring	1	21	Needle packing set	1
8	Air valve	1			
9	Air valve spring	1			
10	Fluid adj. guide	1			
11	Fluid needle spring	1			

♦ marked parts are wearable parts



## Trouble shooting

Spray pattern	Causes	Remedies
 Fluttering	<ol style="list-style-type: none"> <li>1. Pressured air breaks into fluid passage from between fluid nozzle and gun body.</li> <li>2. Air goes into fluid passage from needle packing set</li> <li>3. Air goes into fluid passage from fluid nipple.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean fluid nozzle and gun body. Replace if damaged.</li> <li>2. Replace needle packing set.</li> <li>3. Tighten paint cup, container or hose joint or clean them and fluid nipple. Replace if damaged.</li> </ol>
 Crescent	<ol style="list-style-type: none"> <li>1. Paint build up on air cap set and clogs horn holes or damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean fluid nozzle and gun body. Replace if damaged. Do not use metal brush for cleaning to avoid damage.</li> </ol>
 Inclined	<ol style="list-style-type: none"> <li>1. Paint build up on tip of fluid nozzle or center holes of air cap set or damaged.</li> <li>2. Paint residue or dust is on seat surface of inside fluid nozzle or fluid needle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean fluid nozzle or air cap set. Replace if damaged. Do not use metal brush for cleaning to avoid damage.</li> <li>2. Clean fluid nozzle or fluid needle.</li> </ol>
 Split	<ol style="list-style-type: none"> <li>1. Paint viscosity is too thin.</li> <li>2. Too much paint output.</li> <li>3. Atomizing air pressure is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust paint viscosity.</li> <li>2. Adjust paint output with fluid adjusting knob.</li> <li>3. Adjust inlet air pressure.</li> </ol>
 Center heavy	<ol style="list-style-type: none"> <li>1. Paint viscosity is too heavy.</li> <li>2. Paint output is not enough.</li> <li>3. Atomizing air pressure is too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust paint viscosity.</li> <li>2. Adjust paint output with fluid adjusting knob.</li> <li>3. Adjust inlet air pressure.</li> </ol>
 Spit	<ol style="list-style-type: none"> <li>1. Fluid nozzle and fluid needle does not seat completely.</li> <li>2. Fluid nozzle and fluid needle worn and air valve does not open enough.</li> <li>3. Paint build up inside air cap set.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean fluid nozzle and fluid needle set. Replace if damaged.</li> <li>2. Replace fluid nozzle and fluid needle set.</li> <li>3. Clean air cap set. Do not use metal brush for cleaning.</li> </ol>

Remedy - R1: Retighten R2: Adjust R3: Clean R4: Replace parts

Problem	Place	Parts to inspect	Cause	Remedy			
				R1	R2	R3	R4
Air leak	Air cap set	Air valve	Dirt or damage on seat surface			○	○
		Air valve seat set	Dirt or damage on seat surface			○	○
		Air valve spring is worn					○
	Air valve shaft (behind trigger)	O-ring	Damaged				○
		Air valve shaft	Dirt or damage on seat surface			○	○
Paint leak	Fluid nozzle	Fluid adjusting guide set	Packing inside set is worn or damaged				○
		Fluid nozzle - fluid needle set	Dirt or damage on seat surface or wear			○	○
			Fluid needle adj. knob is loosened too much		○		
			Needle spring is worn				○
	Fluid needle	Fluid nozzle - gun body	Fluid nozzle is not tightened enough	○			
			Dirt or damage on seat surface			○	○
		Needle packing set - fluid needle	Needle packing set or fluid needle is worn				○
		Needle packing set	Loosened	○			
Less paint output	-	Fluid nipple	Dirt or damage on seat surface			○	○
		Paint cup, container or joint	Dirt or damage on seat surface			○	○
		Fluid adjusting knob	Closed		○		
		Tip of nozzle	Clogged			○	
		Paint filter	Clogged			○	○



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