



INSTRUCTION MANUAL

Compliant* Spray Gun W-400-LV/-WBX



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 | Operating Temperature | |
| Noise Level | 70.0 dB(A) | Ambient | 5 - 40°C (41 - 104°F) |
| Spray condition | Recommended | Air / Fluid | 5 - 43°C (41 - 110°F) |
| Measuring point | 1.0m backwards and 1.6m height from gun | | |

Main Specifications

| Model | Type of feed | Nozzle size mm (in) | Air cap set | Recommended condition | | | | Air/Fluid connection | Mass g (lbs) |
|---------------|--------------|---------------------|-----------------|--|---------------------|-----------------------------|-----------------------|----------------------|--------------|
| | | | | Atomizing air pressure** (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 | *Compliant Operation Max 1.4/20 | 100 | 300 (10.5) | 250 (9.8) | 1/4" (Air) | 380 (0.84) |
| W-400LV-134G | | 140 | | | 270 (10.6) | | | | |
| W-400LV-144G | | 155 | | | 290 (11.4) | | | | |
| W-400LV-164G | | 185 | | | 305 (12.0) | | | | |
| W-400LV-184G | | 1.8 (0.071) | W-400 LV4 (RED) | Performance Range 1.4/20 - 2.0/28.5 | 100 | 300 (10.5) | 250 (9.8) | 1/4" (Air) | |
| W-400LV-12WBX | | 140 | | | 270 (10.6) | | | | |
| W-400LV-13WBX | | 155 | | | 290 (11.4) | | | | |
| W-400LV-14WBX | | 170 | | | 300 (11.8) | | | | |
| W-400LV-15WBX | 1.5 (0.059) | | | 185 | | 305 (12.0) | M16X1.5 (Fluid) | | |
| W-400LV-16WBX | 235 | | | 325 (12.8) | | | | | |
| W-400LV-18WBX | 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

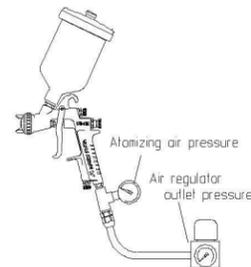
- Never modify spray gun for any other applications. It can cause insufficient performance and malfunction.
- Be careful to work inside working range of other equipment such as robots, reciprocators, etc. To avoid accident stop the equipments before working if necessary.
- Never use spray gun to spray 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

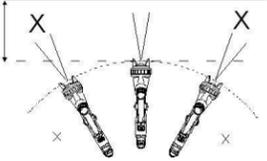
- Use clean air filtered through a dryer and a filter finer. If not, it can cause spray gun malfunction and finish problem.
- Make sure that needle packing set is installed securely on spray gun before use. If loosened, hand tighten it and tighten 1/8 to 1/4 turn more with ANEST IWATA gun wrench.
- Flush 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

- Adjust fluid output and pattern width.
- Double-check inlet air pressure at 1.0 - 1.4bar (14 - 20psi) at spray gun. 100 - 200 mm This spray gun is designed to perform better at the inlet pressure range. (4.0 - 8.0 inch) Always pull the trigger fully to measure the inlet air pressure.
- 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. Always spray paint perpendicular to the surface of work piece. Arcing spraying can cause uneven finish.
- Recommended paint viscosity is 12 - 23sec/NK-2 (15 - 25sec/Ford#4) depending on paint spec and working condition.



Maintenance

WARNING

- Always release air and fluid pressure before cleaning, disassembly or service.
- Be careful that fluid needle has a sharp point.
- Pay attention to avoid hitting or dropping spray gun, especially air cap, fluid nozzle, fluid needle and fluid nipple.
- Never use metal brush for cleaning.
- Never soak whole spray gun into solvent for cleaning. It can cause spray gun malfunction.
- 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

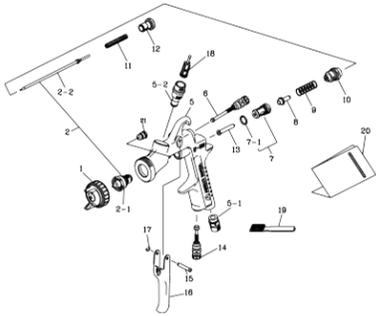
Make sure that spray gun model, parts description, fluid nozzle size before ordering replacement parts.

Fluid nozzle and needle indicates marking on as following chart:

| Size mm (in) | Fluid nozzle | | Fluid needle |
|--------------|--------------|------|--------------|
| | Mark | Mark | Mark |
| 1.2 (0.047) | 400WB / 12 | | 40012 |
| 1.3 (0.051) | 400WB / 13 | | 20015 |
| 1.4 (0.055) | 400WB / 14 | | |
| 1.5 (0.059) | 400WB / 15 | | |
| 1.6 (0.063) | 400WB / 16 | | 20020 |
| 1.8 (0.071) | 400WB / 18 | | |

| 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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

AUG 19 2011

Mr. Mark Hebbeler
North American Marketing Manager
ANEST IWATA USA, Inc.
5325 Muhlhauser Road
West Chester, Ohio 45011

Dear Mr. Hebbeler:

This letter is in response to your request for approval of the ANEST IWATA W400-LV spray gun, as equivalent to the transfer efficiency achieved by high-volume, low-pressure (HVLV) spray guns, for use when spray applying automotive refinish coatings under Clean Air Act regulations, subpart HHHHHH of 40 Code of Federal Regulations (CFR) Part 63. These spray guns are approved, with conditions outlined below, for operations subject to the regulations cited below.

We have completed our review of your reports entitled:

“Final Test Report ANEST IWATA Corporation W400-LV Spray Gun Transfer Efficiency Equivalency Evaluation For Use in SCAQMD” sent as an attachment to email message from Mr. Mark Hebbeler dated 7/20/11.

“Final Test Report ANEST IWATA W400-LV Spray Gun DuPont Performance Coatings Transfer Efficiency Equivalency Evaluation for use by SCAQMD” dated October 14, 2005.

The results of the transfer efficiency testing performed indicate that the ANEST IWATA W400-LV spray guns are capable of achieving equivalent or better transfer efficiency than HVLV spray equipment. As a result, the ANEST IWATA W400-LV spray guns are approved for operations subject to §63.11173(e)(3) of 40 CFR Part 63 Subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating Operations. This approval is subject to the following conditions.

1. ANEST IWATA shall supply written notification with each ANEST IWATA W400-LV spray gun sold or distributed that the spray gun is approved as providing equivalent transfer efficiency as HVLV spray guns for the application of coatings subject to 40 CFR Part 63 Subpart HHHHHH.
2. This approval is only valid if the air pressure supplied to the ANEST IWATA W400-LV spray gun is equal to or less than 20 psig. ANEST IWATA shall supply written notification with each ANEST IWATA W400-LV spray gun sold or distributed that the maximum air pressure supplied to the spray gun shall not exceed 20 psig for the application of coatings subject to 40 CFR Part 63 Subpart HHHHHH.

3. ANEST IWATA shall supply an ANEST IWATA AK-1B air flow control valve and pressure gauge (item #8130), AK-1B2 air flow control valve and pressure gauge (item #8130B) or AK-1R air flow regulator and pressure gauge (item #8131) to identify the allowable spray gun inlet air pressure with each ANEST IWATA W400-LV spray gun sold or distributed. ANEST IWATA shall supply written notification with each ANEST IWATA W400-LV spray gun sold or distributed that the ANEST IWATA AK-1B air flow control valve and pressure gauge (item #8130), AK-1B2 air flow control valve and pressure gauge (item #8130B) or AK-1R air flow regulator and pressure gauge (item #8131) shall be attached to the spray gun and be in good working condition whenever the spray gun is in operation for the application of coatings subject to 40 CFR Part 63 Subpart HHHHHH.

4. ANEST IWATA shall provide written notification to buyers/users of the ANEST IWATA W400-LV spray gun that they must be equipped with a properly operating ANEST IWATA AK-1B air flow control valve and pressure gauge (item #8130), AK-1B2 air flow control valve and pressure gauge (item #8130B) or AK-1R air flow regulator and pressure gauge (item #8131) as described in condition number 3 and that they must be operated at less than or equal to 20 psig when they are used for applying coatings subject to 40 CFR Part 63 Subpart HHHHHH.

The written notification requirements outlined in this letter may be fulfilled by including a copy of this approval letter with the documentation provided to the purchaser of the spray gun. If you have any questions regarding this approval, please contact Kim Teal, of my staff, at (919) 541-5580 or teal.kim@epa.gov.

Sincerely,

Stephen D. Page
Director

Office of Air Quality Planning
and Standards

Troubleshooting

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

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 | | | | ○ | |
| | | O-ring | Damaged | | | | ○ |
| | | Air valve shaft (behind trigger) | Dirt or damage on seat surface | | | ○ | ○ |
| Paint leak | Fluid nozzle | Fluid nozzle - fluid needle set | Dirt or damage on seat surface or wear | | | ○ | ○ |
| | | Fluid nozzle adj. knob is loosened too much | | | ○ | | |
| | | Needle spring is worn | | | | ○ | |
| | Fluid nozzle - gun body | Fluid nozzle is not tightened enough | | ○ | | | |
| | | Dirt or damage on seat surface | | | | ○ | ○ |
| | Fluid needle | Needle packing set - fluid needle | Needle packing set or fluid needle is worn | | | | ○ |
| | | Needle packing set | Loosened | | ○ | | |
| Fluid nipple | Fluid nipple | Dirt or damage on seat surface | | | | ○ | ○ |
| | Paint cup, container or joint | Dirt or damage on seat surface | | | | ○ | ○ |
| Less paint output | | Fluid adjusting knob | Closed | | ○ | | |
| | | Tip of nozzle | Clogged | | | | ○ |
| | | Paint filter | Clogged | | | | ○ |

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