Instruction Manual



II 2G X

# SPRAY GUN AZ10 HTE - AZ10 HTE AV **AZ10 HTE SE**

Before use, adjustment or maintenance, it is important to read this instruction manual very GB carefully. This manual must be stored in a safe place for any future reference that may be necessary.

This AIR GUNSA spray guns kit complies to ATEX regulations 94/9/EC, protection level: II 2 G X Suitable for using Zones 1 and 2. X marking: Any static electricity discharge from the spray gun is to be diverted to the ground via the conductive air hose as stipulated.



This spray gun should be operated only by an adequately trained operator, for safe use and maintenance of the equipment. Any misuse or handling other than those indicated in this Instruction Manual is not covered by guarantee. AIR GUNSA disclaims all responsibility for any accident or damage caused by failure to observe the operational and safety procedures as from this manual. In the interest of user friendliness, this manual contains information in a brief and concise form.

For any additional information you may require regarding spray guns operations, or if any missing parts or any damage during transportation is found, please contact your nearest AIR GUNSA Company (see last cover page).

If not, it can caus	ve warnings and cautions in this instruction manual. se paint ejection and serious bodily injury by drawing organic solvent. ve following M marked items which are especially important.					
	WARNING Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of li					
	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or pro- perty damage.					

IMPORTANT Indicates notes which we ask you to observe. The safety precautions in this instruction manual are the minimum necessary conditions. Follow national and local regulations regarding fire prevention, electricity and safety as well as your own company regulations.

### **IMPORTANT SPECIFICATIONS**

Max. Pressure:	7.0 bar (100 PSI)	Max. Temperature:	
Noise Level (LAeqT)	75.2 dB (A)	Atmosphere	5 ~ 40 °C
Spray conditions	Recommended condition in Tech. Specifications	Air and fluid	5 ~ 43 °C
Measuring point	1m backwards from gun, 1,6 m height	Air connection:	G 1/4"
		Fluid connection:	G 1/4" AZ10 HTE
			G 3/8" AZ10 HTE SE

### **TECHNICAL SPECIFICATIONS**

				Recommen	ded condition			
Model	Nozzle Orifice	Air Cap	(1)Atomizing	(2) Fluid Output	Air	Pattern	Weight	Weight
		set Mark	Air pressure		Consumption	Width	Without Cup	With Cup
	Ø mm (in)		bar (PSI)	ml/min	NI/min (cfm)	mm (in)	g (lbs)	g (lbs)
AZ10 HTE / AZ10 HTE AV / AZ10 HTE SE Suc			uction feed					
AZ10 HTE 1.0	1.0 (0.039)	10		90	210 (7.41)	150 (5.90)		AZ10 HTE
AZ10 HTE 1.3	1.3 (0.051)	13		150	210 (7.41)	190 (7.48)		790 (1.73)
AZ10 HTE 1.5	1.5 (0.059)	15		200	210 (7.41)	200 (7.87)	400	AZ10 HTE AV
AZ10 HTE 1.8	1.8 (0.070)	18	2.5 (36)         230         280 (9.89)           260         280 (9.89)	2.5 (36) 230 280 (9.89)	230 (9.05)	460 (1.01)	800 (1.76)	
AZ10 HTE 2.0	2.0 (0.079)	20		260	280 (9.89)	260 (10.23)	(1.01)	000 (1.70)
AZ10 HTE 2.5	2.5 (0.098)	25		290	290 (10.23)	290 (11.41)		AZ10 HTE SE
AZ10 HTE 3.0	3.0 (0.118)	30		300	300 (10.59)	300 (11.81)		910 (2.00)

(1) Atomizing air pressure means air pressure at gun inlet when trigger is pulled and air flows. (2) Paint viscosity; 21sec/Ford cup#4

Manufactured by: AIR GUNSA \_ Anest Iwata Gruop



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ANEST IWATA

### **SAFETY WARNINGS**

#### FIRE OR EXPLOSION HAZARD

#### 1. Spark and open flames are strictly prohibited.

Paints can be highly flammable and can cause fire. Avoid any ignition sources such as smoking, open flames, electrical goods, etc.



COMMENTS

2. Never use the following HALGOGENATED HYDROCARBON SOLVENTS

which can cause cracks or dissolution on gun body (aluminum) by chemical reaction.

- Unsuitable solvents: methyl chloride, dichloromethane, 1.2-dichloroethane, carbon tetrachloride, trichloroethylene, 1.1.1-trichloroethane

(Be sure that all fluids and solvents are compatible with gun parts. We are ready to supply a material list used in the product.)

#### 3. Securely ground spray gun by using air hose with built-in ground wire.

Ground wire : Less than  $1M\Omega$ . Check the earth stability periodically. If not, insufficient grounding can cause fire and explosion due to static electric sparking.



IMPROPER USE OF EQUIPMENT



If done, it can cause inflammation of eyes and skin or bodily injury.

2. Never exceed maximum operating pressure and maximum operating Temperature.

#### 3. Be sure to release air and fluid pressures before cleaning, disassembling or servicing.

If not, remaining pressure can cause bodily injury due to improper operation or scattering of cleaning liquid. In order to release pressure, first stop supply of compressed air, fluid and thinner to spray gun. Then remove fluid adj. knob and pull fluid needle set towards you.



#### 4. Tip of fluid needle set has a sharp point.

Do not touch the tip of fluid needle during maintenance for the protection of the human body.



**PROTECTION OF HUMAN BODY** 

#### 1. Use in a well-ventilated site by using spray booth.

If not, poor ventilation can cause organic solvent poisoning and catch fire.

#### 2. Always wear protective gear (safety glasses, mask, gloves).

If not, cleaning liquid, etc., can cause inflammation of eyes and skin. If you feel something wrong with eyes or skin, immediately see a doctor.

#### 3. Wear earplugs if necessary.

Noise level can exceed 85 dB(A), depending on operating conditions and painting site

**4.If operators pull the trigger many times during operation, it may cause carpal tunnel syndrome.** Be sure to take a rest if you feel tired.



OTHER PRECAUTIONS

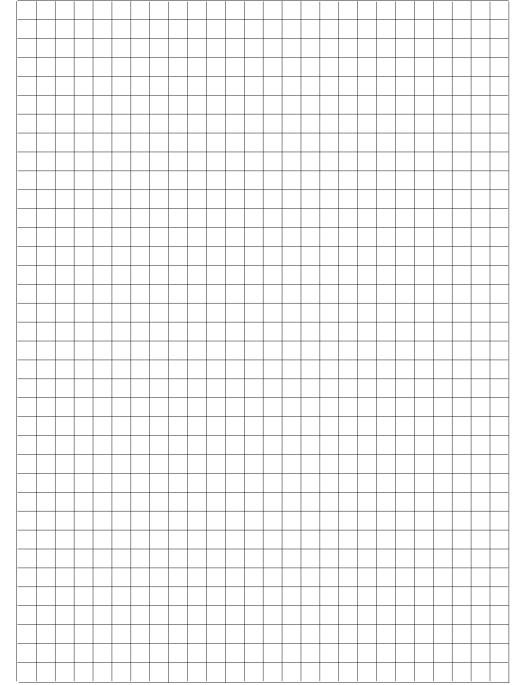
#### 1. Never alter this spray gun.

If done, it can cause insufficient performance and failure.

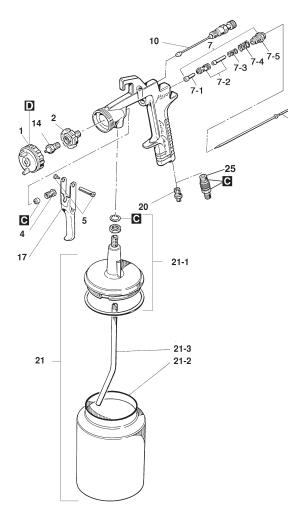
2. Enter working areas of other equipment (robots, reciprocators, etc.) after machines are turned off. If not, contact with them can cause injury.

#### 3. Never spray foods or chemicals through this gun.

If done, it can cause accident by corrosion of fluid passages or adversely affect health by mixed foreign matter.

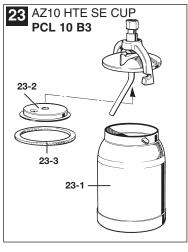


### **SPARE PARTS LIST**





	Part
AIR CAP	1
NOZZLE HOLDER	2
NEEDLE PACKING NUT	4
TRIGGER STUD	5
COMPLETE AIR VALVE	7
AIR VALVE SHAFT	7-1
AIR VALVE SET	7-2
AIR VALVE SPRING	7-3
	7-4
	7-5
	10
	12
	13
	14
FLUID NEEDLE	15
	17
	20
	24
	25
1	
PACKING SET	С
	D
For AZ10HTE and AZ10HTEAV	
COMPLETE CUP SET	21
LID SET	21-1
1 It. CONTAINER	21-2
SUCTION TUBE	21-3
	Set
	23
	23-1
	23-2
	23-3
	/ gun's ed No.o
	NEEDLE PACKING NUT TRIGGER STUD COMPLETE AIR VALVE AIR VALVE SHAFT AIR VALVE SPRING AIR VALVE SPRING AIR VALVE SPRING FLUID ADJUSTMENT GUIDE PATTERN ADJUSTMENT FLUID NEEDLE SPRING FLUID NEEDLE ADJ. KNOB FLUID NIPPLE (AZ10 HTE) FLUID NIPPLE (AZ10 HTE SE) PACKING SET 11 Aluminium PIN Lock Cup Set For AZ10HTE and AZ10HTEAV COMPLETE CUP SET 11 Aluminium LEVER Lock Cup For AZ10HTE SE COMPLETE CUP SET PCL 10B3 11 t. CONTAINER NON DRIP SET PACKING SET NOTE: When ordering parts, specify





### OTHER PRECAUTIONS

4. If something goes wrong, immediately stop operation and find the cause. Do not use again until you have solved the problem.

### HOW TO CONNECT

CAUTION



- Use clean air filtered through air dryer and air filter. If not, dirty air can cause painting failure.

When you use this gun for the first time after purchasing, adjust fluid needle packing set. Slowly tighten fluid packing seat and loosen a bit when fluid needle set does not return smoothly, and adjust so that fluid needle set smoothly moves.

- When use this gun for the first time after purchasing, clean fluid passages spraying thinner and remove rust preventive oil.

If not, remaining preventive oil can cause painting failure such as fish eyes.

- Firmly fix hose or container to spray gun. If not, disconnection of hose and drop of container can cause bodily injury.

1. Connect an air hose to air nipple tightly.

2. Connect an applicable cup to fluid nipple tightly.

3. Flush the gun fluid passage with a compatible solvent.

4. Pour paint into container, test spray and adjust fluid output as well as pattern width.

## HOW TO OPERATE

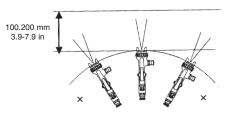
Suggested air pressure is 2.0 to 3.0 bar (29 to 44 PSI)

Recommended paint viscosity differs according to paint property and painting conditions. 12 to 23 sec. / Ford cup #4 is recommendable.

Keep fluid output as small as possible to the extent that the job will not be hindered. It will lead to better finishing with fine atomization.

Set the spray distance from the gun to the work piece as near as possible within the range of 100\_200 mm (3.9\_7.9 in).

The gun should be held so that it is perpendicular to the surface of the workpiece at all times. Then, the gun should move in a straight and horizontal line. Arcing the gun causes uneven painting.



# MAINTENANCE AND INSPECTION

#### WARNING

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- First release air and pressure fully according to item No. 3 of "Improper use of equipment" of WARNING on page 2.
- Tip of fluid needle set has a sharp point. Do not touch the tip of needle valve during maintenance for protection of the human body.
- Be careful not to damage the tip of the fluid nozzle or put your hand on it.
- Only an experienced person who is fully conversant with the equipment can do maintenance and inspection.

#### CAUTION

- Never use commercial or other parts instead of AIR GUINSA original spare parts.
- Never immerse the whole gun into liquid such as thinner.
- Never damage holes of air cap fluid nozzle or fluid needle.

Step-by-step procedure	Important				
1.Pour remaining paint to another container. Clean fluid passages and air cap set. Spray a small amount of thinner to clean fluid passages.	<ol> <li>Incomplete cleaning can fail pattern shape and uniform particles.</li> <li>Especially clean fully and promptly after use with two-component paint.</li> </ol>				
2.Clean each section with brush soaked with thinner and wipe out with waste cloth.	<ul> <li>2. Do not immerse the whole gun in thinner. If done, it can damage parts.</li> <li>When cleaning, never scratch any holes of air cap set and fluid nozzle, and fluid needle set.</li> </ul>				
<ol> <li>Before disassembly, fully clean fluid passages.</li> <li>Disassemble fluid nozzle.</li> </ol>	<ol> <li>During disassembly, do not scratch seat section.</li> <li>(1) Remove fluid nozzle after removing fluid needle set or while keeping fluid needle pulled, in order to protect seat section.</li> </ol>				
(2) Disassemble fluid needle set. You do not need to remove fluid adj. guide set from gun body. Remove fluid adj. knob and fluid needle spring, and then pull out fluid needle spring, and then pull out fluid needle set from back of fluid adj. guide set.	(2) Be careful when handling tip of fluid needle set since it is sharp. Disassemble fluid adj. guide set as little as possible.				
4.To adjust fluid needle packing set, while keeping fluid needle set inserted, tighten fluid needle packing seat by hand and then tighten further by spanner.	4. Too much tightening of fluid needle packing set can cause bad movement of fluid needle set and fluid leakage from the tip of fluid needle set.				
5.In order to assemble air valve, first assemble air valve & air valve spring & fluid adj. guide set together. Next, insert fluid needle set into fluid adj. guide set, then fit it to gun body set and screw fluid adj. guide set.	<ol> <li>If you try to fit air valve spring and air valve to gun body set without fluid needle set, air valve will not be fitted correctly and packing inside fluid adj. guide set will be damaged.</li> </ol>				
6.Turn pattern adj. knob or air adj. knob counterclockwise to fully open. And then tighten pattern adj. set or air adj. set.	<ol> <li>If pattern adj.Knob or air adj. Knob are not fully opened, tip of it can contac and damage fluid nozzle and cause seizure of thread.</li> </ol>				
Where to inspect	Parts replacement standard				
1. Each hole passage of air cap and fluid nozzle	Replace if it is crushed or deformed.				
2. Packing and O ring	Replace if it is deformed or worn out.				
<ol> <li>Leakage from seat section between fluid nozzle and fluid needle set</li> </ol>	Replace them if leakage does not stop after fully cleaning fluid nozzle and fluid needle set. If you replace fluid nozzle or fluid needle set only, fully match them and confirm that there is no leakage.				

# TROUBLESHOOTING

Spray Pattern	Problems	Remedies
Fluttering	<ol> <li>Air enters between fluid nozzle and tapered seat of gun body.</li> <li>Air is drawn from fluid needle packing set</li> <li>Air enters at fluid container fitting nut or fluid hose joint</li> </ol>	<ol> <li>Remove fluid nozzle to clean seat. If it is damaged, replace nozzle.</li> <li>Tighten fluid needle packing.</li> <li>Fully tighten joint section.</li> </ol>
Crescent	<ol> <li>Paint buildup on air cap partially clogs horn holes. Air pressure from both horns differs.</li> </ol>	<ol> <li>Remove obstructions from horn holes with attached brush. But do not use metal objects to clean horn holes.</li> </ol>
Inclined	<ol> <li>Paint buildup or damage on fluid nozzle cir- cumference and air cap center.</li> <li>Fluid nozzle is not properly fitted.</li> </ol>	<ol> <li>Remove obstructions. Replace if damaged.</li> <li>Remove fluid nozzle, clean seated section</li> </ol>
Split	1. Paint viscosity too low. 2. Fluid output too high.	<ol> <li>Add paint to increase viscosity.</li> <li>Tighten fluid adj. knob to reduce fluid output or turn pattern adj. knob clockwise.</li> </ol>
Heavy Center	1. Paint viscosity is too high. 2. Fluid output is too low.	<ol> <li>Add thinner to reduce viscosity.</li> <li>Turn fluid adj. knob counter-clockwise to increase fluid output.</li> </ol>
Spit	<ol> <li>Fluid nozzle and fluid needle set are not seated properly.</li> <li>The first-stage travel of trigger (when only air discharges) decreases.</li> <li>Paint buildup inside air cap set.</li> </ol>	<ol> <li>Clean or replace fluid nozzle and fluid needle set.</li> <li>Replace fluid nozzle and fluid needle set.</li> <li>Clean air cap set.</li> </ol>

### PROBLEMS AND REMEDIES

Problem	Where it occurred	Parts to be checked	Cause	Retighten	Adjust	Remedy Clean	Replace
Air leaks (from tip of air cap)	Air valve set	Air valve	ir valve *Dirt or damage on seat			х	x
	-	Air valve seat set	*Dirt or damage on seat			х	x
			*Wear on air valve spring				x
		O ring	*Damaged or deteriorated				x
Paint leaks	Fluid nozzle	Fluid nozzle - fluid needle set	*Dirt, damage, wear on seat			x	x
	_		*Loose fluid needle adj. knob		x		
			*Wear on needle spring				х
		Fluid nozzle -	*Insufficient tightening	x			
_		gun body	*Dirt or damage on seat			х	х
		Fluid needle - packing set	*Needle does not return due to packing set too tight		x		x
			*Needle does not return due to paint buildup on fluid needle		x	x	
	Fluid needle	Needle packing set, needle set	*Wear	x			x
	Pac	Packing seat	*Insufficient tightening	x			
Paint does not flow	Tip of gun	Fluid adj. knob	*Insufficient opening		х		
		Tip hole of nozzle	*Clogged			х	
		Paint filter	*Clogged			х	x