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ANEST IWATA

Instruction Manual

MSG-200B
MULTI SPRAY GUN

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

This **ANEST IWATA** Multi 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 Multi Spray gun is to be diverted to the ground via the conductive air hose as stipulated.

CE Ex II 2G X

IMPORTANT

This Multi 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. ANEST IWATA disclaims all responsibility for any accident or damage caused by failure to observe the operational and safety procedures in 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 Multi Spray gun operations, or if any missing parts or any damage during transportation is found, please contact your nearest ANEST IWATA Company (see last cover page).

Be sure to observe warnings and cautions in this instruction manual.
If not, it can cause paint ejection and serious bodily injury by drawing organic solvent.
Be sure to observe following ⚠ marked items which are especially important.

⚠ **WARNING**	Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of life.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property 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. operating fluid pressure:	147 bar (2160 PSI)	Max. Temperature:	
Max. operating air pressure:	6.8 bar (98 PSI)	Atmosphere	5 ~ 40 °C
Noise level (LAeqT):	69 dB (A)	Air - Fluid	5 ~ 43 °C
Spray conditions:	Nozzle tip used NT2004CMU	Air and fluid connection:	G1/4"
Fluid pressure:	100 bar (1440 PSI) Tested with water	Measuring point: 1m backwards from gun, 1.6 m height	
Atomizing air pressure: 1.5 bar (21.4 PSI)			

TECHNICAL SPECIFICATIONS

Model	Max. Operating fluid pressure bar (PSI)	Operating fluid pressure bar (PSI)	Max. atomizing air pressure bar (PSI)	Atomizing air pressure bar (PSI)	Use	Fluid output ml/min.	Filter size	Weight g (lbs)
MSG-200B	147 (2160)	49 (720)	6.8 (98)	1.5 (21.4)	General	See page 6 for selection of nozzle tip according to kind of paint	200 Mesh	510 (1.13)

Manufactured by:
ANEST IWATA Corporation 3176,Shinyoshida-cho, Kohoku-ku, Yokohama, 223-8501 Japan

SAFETY WARNINGS

FIRE OR EXPLOSION HAZARD

1. **Sparks 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.

2. **Securely ground Multi Spray gun by using air hose with built-in ground wire.**
   Ground wire : Less than 1MΩ. Check the earth stability periodically.
   Securely ground pump, Multi Spray gun, workpiece and containers containing paint or solvent. Be sure to use fluid hose with built-in ground wire to have continuous grounding between pump and Multi Spray gun. Use conductive container containing paint or solvent. If not, insufficient grounding can cause fire and explosion due to static electric sparking.

3. **Never use the following HALGOGENATED HYDROCARBON SOLVENTS**
   which can cause cracks or dissolution on gun body (aluminium) 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 can supply a list of materials used to manufacture the product.

IMPROPER USE OF EQUIPMENT

1. **Never point Multi Spray gun towards people or animals.**
   Never pull trigger of gun when human body or fingers come near tip of nozzle tip. If done, it can cause inflammation of eyes and skin or bodily injury. If you feel any abnormality during operation, consult a medical doctor immediately.

2. **Never exceed maximum operating pressure and maximum operating temperature.**
   Use at more than max. operating pressure can cause explosion of Multi Spray gun resulting in great danger.

3. **Be sure to release air and fluid pressure before cleaning, disassembling or servicing.**
   If not, remaining pressure can cause bodily injury due to improper operation or scattering cleaning liquid.
   In order to release pressure, first stop supply of fluid and thinner to Multi Spray gun.

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. If you feel any abnormality during operation, consult a medical doctor immediately.

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. **Be sure to stop pump, reduce air and fluid pressure down to 0 and securely apply safety lock of Multi Spray gun before you fit or remove nozzle tip.**
   Emission of paint or solvent during operation can cause great danger.

5. **Never try to stop leaks by hand, when paint leaks.**
   In case of leaks, stop pump immediately and reduce paint pressure down to 0 pressure.
   High pressure paint emitted through small hole can pierce an iron plate and can cause severe injury since paint can enter human body directly through eyes, mouth or skin. It is very dangerous. If you feel any abnormality or receive any injury, consult a medical doctor immediately

6. **If operators pull the trigger many times during operation, it may cause carpal tunnel syndrome.**
   Rest if you feel any discomfort in your hand.

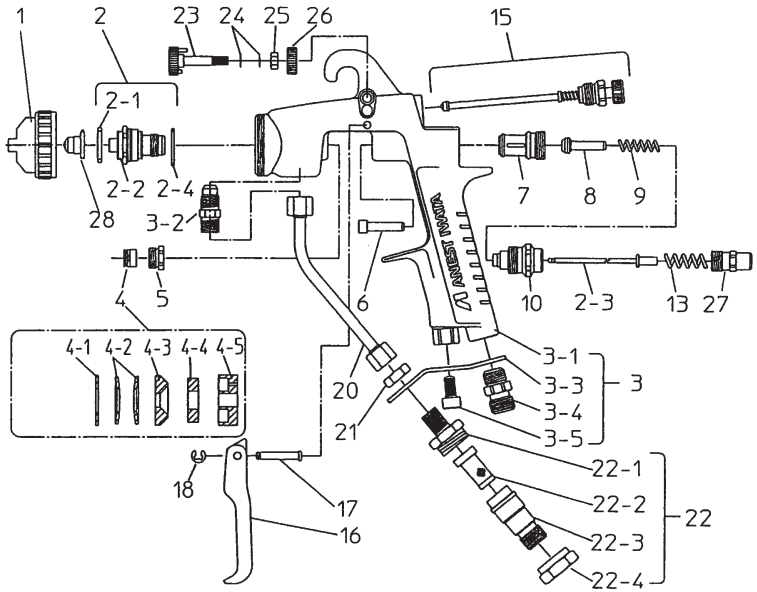
7. **Vibrations of the spray gun, caused by the pulsation of the pump during prolonged use, can cause the operator to suffer from carpal tunnel syndrome.** If you feel any fatigue in your hand, stop painting for a brief pause. Dampen the pulsations caused by the pump, using damping elements on the inlet connection of the equipment, or by using inlet anti-pulsation hoses able to absorb the pulsations.

BURST FLUID HOSE

1. **Never use cracked, damaged, bent or crushed fluid hose.**
   High pressure paint emitted from small hole can pierce an iron plate and cause great danger.

2. **Never bend fluid hose with a radius of less than permitted bend radius.**
   Contact us, or the shop who sold the hose to you, about permitted bend radius. Never put heavy things on it in order not to damage the hose. If done, hose can explode causing great danger.

SPARE PARTS LIST



● Marked parts are consumable parts

DESCRIPTION	REF.PART	
AIR CAP SET	1	
NOZZLE NEEDLE SET	2	●
O RING	2-1	●
NOZZLE GLAND	2-2	
FLUID NEEDLE	2-3	
O RING	2-4	●
BODY	3-1	
FLUID NIPPLE	3-2	
STAY	3-3	
AIR NIPPLE	3-4	
BOLT	3-5	
FLUID NEEDLE PACKING SET	4	●
WASHER	4-1	
SPRING WASHER	4-2	
PACKING HOLDER	4-3	
FLUID NEEDLE PACKING	4-4/4-5	
FLUID NEEDLE PACKING SEAT	5	
AIR VALVE BAR	6	●
AIR VALVE SEAT	7	
AIR VALVE	8	
AIR VALVE SPRING	9	

FLUID ADJUSTMENT GUIDE SET	10	
FLUID NEEDLE SPRING	13	
PATTERN ADJUSTMENT SET	15	
TRIGGER	16	
TRIGGER STEM	17	
E STOPPER	18	
FLUID PIPE	20	
JAM NUT	21	
FILTER SET	22	
FILTER CASE	22-1	
FILTER (200 mesh)	22-2	●
FILTER JOINT	22-3	
FILTER NUT	22-4	
TRIGGER STOPPER	23	
WASHER	24	
HEXAGON NUT	25	
KNOB	26	
SPRING HOLDER	27	
NOZZLE TIP (NOT INCLUDED)	28	

SELECTION OF NOZZLE TIP ACCORDING TO KIND OF PAINT

NUMBERING SYSTEM

Diameter size x 0.001 inch
Angle

MST - 13 50TR

Use a nozzle tip two sizes larger when using high viscosity paint or paint which can clog easily.

Code	Description	Angle	Ø orifice		Pattern width	Fluid output
			mm	inch	mm	l/min
14216520	MST-0740TR	40°	0,18	0,007"	140 - 180	0,20
14216530	MST-0925TR	25°	0,23	0,009"	100 - 140	0,27
14216540	MST-0940TR	40°	0,23	0,009"	140 - 180	0,27
14216550	MST-0950TR	50°	0,23	0,009"	180 - 220	0,27
14216580	MST-1140TR	40°	0,28	0,011"	140 - 180	0,34
14216590	MST-1150TR	50°	0,28	0,011"	180 - 220	0,34
14216600	MST-1165TR	65°	0,28	0,011"	220 - 260	0,34
14216610	MST-1325TR	25°	0,33	0,013"	100 - 140	0,52
14216620	MST-1340TR	40°	0,33	0,013"	140- 180	0,52
14216630	MST-1350TR	50°	0,33	0,013"	180 - 220	0,52
14216640	MST-1365TR	65°	0,33	0,013"	220- 260	0,52

PROBLEMS AND REMEDIES

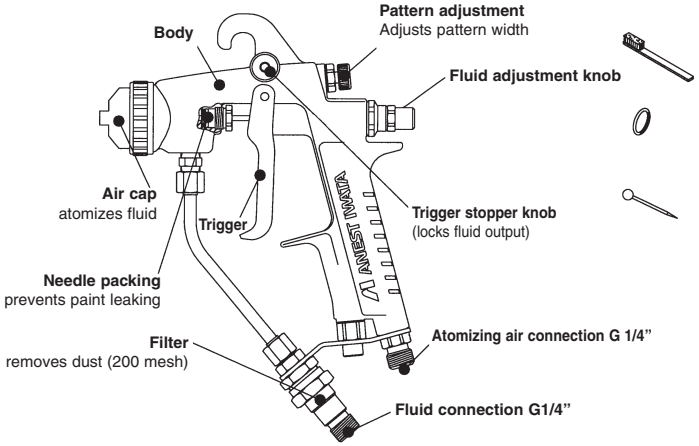
IMPORTANT: For * marked items, ask our distributor to remedy it for you. Incorrect remedy cannot achieve satisfactory performance.

Problem	Where it occurred	Where to check	Cause	Tighten	Adjust	Clean	Replace
Air leaks	Each joint connection	All joints, connections	Weak tightening	X			
			Damage on seat				X
			Dirt on seat			X	
	Air cap	Air valve seat- Air valve	Damage on seat				X*
			Dirt on seat			X*	
			Wear on seat				X*
		Air valve spring	Weak spring				X*
Fluid leaks	Each joint, connection	All joints, connections	Weak tightening	X			
			Damage on seat				X
			Dirt on seat			X	
	Fluid nozzle Air cap set holes	Nozzle gland	Weak tightening	X*			
		Gun body	Damage on seat				X*
		Fluid needle spring	Weak tightening				X*
		Nozzle tip	Damage on seat				X
		Nozzle gland	Dirt on seat			X	
		Air cap set	Weak tightening	X			
	Fluid needle packing set	Fluid needle packing	Worn				X*
		Fluid needle	Worn				X
		Fluid needle packing seat	Weak tightening	X			
Small or no fluid output	Fluid supply route	Fluid pressure	Pressure too low		X		
		Filter set	Clogged			X	X
		Fluid hose	Clogged			X	X
	Tip of gun	Fluid nozzle	Clogged			X	
	Safety lock	Trigger stopper knob	Unlock		X		
	Paint	Paint viscosity	Viscosity too high		X		
Paint residue buildup on air cap set	Air cap set	Air cap holes	Clogged			X	
			Deformed or damaged				X
			Paint buildup			X	
		Air cap, fluid nozzle	Deformed or damaged passages				X
		Fluid nozzle	Clogged			X	
			Worn or damaged				X
Incomplete pattern	Same as above	Same as above	Same as above				
	Atomizing air route	Atomizing air pressure	Too low (tails occur)		X		
			Too high (heavy at both ends of spray pattern)		X		

OTHER PRECAUTIONS

1. **Never alter this Multi Spray gun.**
   If done, it can cause insufficient performance and failure.
2. **Enter working areas of other equipment (robots, reciprocators, etc.) after machines have been turned off.**
   If not, contact with them can cause injury.
3. **Never spray food or chemicals through this gun.**
   If done, it can cause accident by corrosion of fluid passages or adversely affect health by mixed foreign matter.
4. **Securely connect fluid hose.**
   If hose is disconnected during operation, hazardous hose movement and paint ejection will cause severe bodily injury.
5. **If something goes wrong, immediately stop operation and find the cause. Do not use again until you have solved the problem.**

NAME OF COMPONENTS AND CHECKING THE PRODUCT



ACCESSORIES:

- Cleaning brush
- O ring
- Cleaning needle

1. **Pulling trigger carefully causes air valve to open and only atomizing air to emit.**
2. **Pulling trigger further causes fluid valve to open which enables fluid to emit.**
3. **Tightening stopper knob prevents fluid valve from opening and trigger is locked.**

- **When you receive the gun after purchase, ensure that components have not been damaged during transport.**
- **If there is any damage, or if any components are missing, do not use the product to avoid causing further damage. Contact the distributor immediately.**
- **Always keep caution plates (warning displays) clean and in good condition. Replace them if they are damaged or missing.**

PAINTING

WARNING

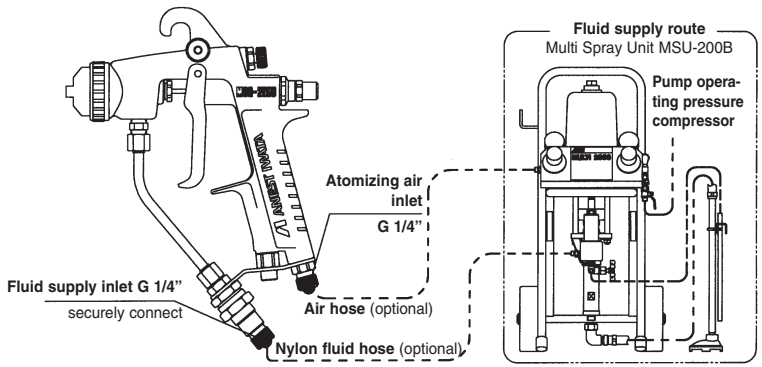
Securely connect fluid hose. When paint leaks, never try to stop it with hands but stop pump immediately and reduce paint pressure down to 0 pressure.

Be sure to use fluid hose with built-in ground wire in order to connect to ground.

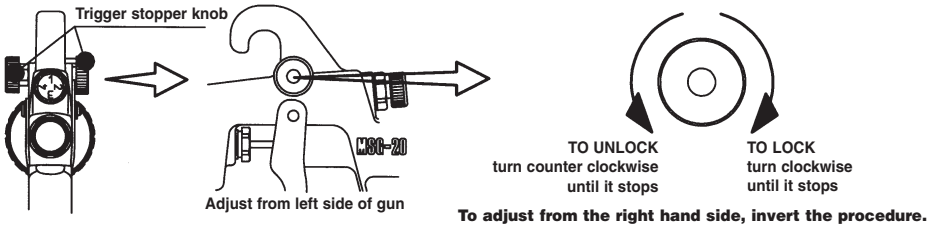
CAUTION

Before using a new Multi Spray gun, clean inside it. If not, rust preventive oil inside Multi Spray gun can cause painting failure.

CONNECT FLUID HOSE AND CLEAN INSIDE GUN



HOW TO APPLY SAFETY LOCK (TRIGGER STOPPER KNOB)



To adjust from the right hand side, invert the procedure.

FITTING OR REMOVING NOZZLE TIP (nozzle tip is optional)

***Refer to page 6 for selection of nozzle tip according to type of paint**

WARNING

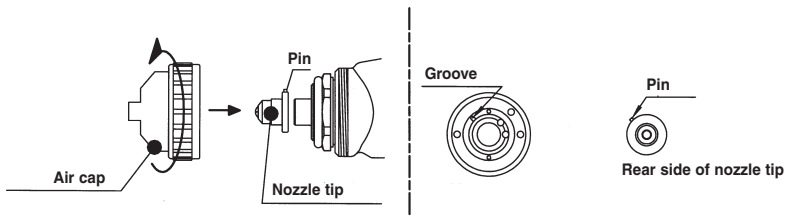
Be sure to stop pump, reduce fluid pressure down to 0 pressure and securely apply safety lock of gun before you fit or remove nozzle tip.

HOW TO REMOVE MULTI SPRAY FLUID NOZZLE

Loosen air cap cover and remove nozzle tip.

HOW TO FIT MULTI SPRAY FLUID NOZZLE

Fit pin to inner groove of air cap then tighten air cap cover.



WARNING

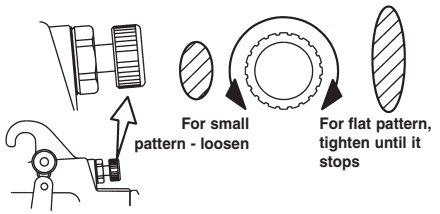
During painting, be sure to wear protective clothing such as glasses, mask or gloves to avoid serious injury caused by paint or solvent which could come into contact with eyes or be inhaled.

As fluid pressure and air pressure increase, paint mist becomes finer and finishing becomes better. But on the other hand, high pressure can be dangerous, precipitate corrosion of equipment and nozzle tip, increase spray mist and decrease transfer efficiency. Adjust pressure to the lowest level possible (fluid pressure 49 bar, atomizing air pressure 1.5 bar) whilst maintaining a satisfactory finish.

Adjust spray distance as near as possible whilst still maintaining a satisfactory finish, in order to reduce spray mist and increase transfer efficiency.

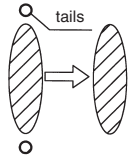
HOW TO ADJUST SPRAY PATTERN

(Pattern size differs according to nozzle tip.)



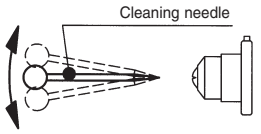
HOW TO ELIMINATE TAILS

(Tails appear according to fluid viscosity and paint property. When they appear, increase atomizing air pressure slightly.)

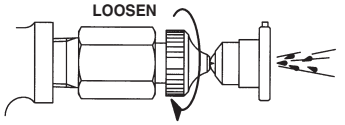


HOW TO CLEAN NOZZLE TIP

(Use attached cleaning needle.)



Remove fluid nozzle from air cap and blow air through fluid nozzle.



CLEANING AND MAINTENANCE

Fully clean after each use to ensure longer lifetime of the spray gun and good performance at next use.

WARNING

During painting, be sure to wear protective clothing such as glasses, mask or gloves to avoid serious injury caused by paint or solvent which could come into contact with eyes or be inhaled.

Be sure to stop pump and reduce fluid pressure down to 0 pressure before disassembling Multi Spray gun

CAUTION

Never use commercial or other parts instead of ANEST IWATA original spare parts.

PROCESS	WHERE TO CLEAN	HOW TO CLEAN
1	Nozzle tip	Remove nozzle tip from spray gun and clean it.
2	Fluid passage of gun body	Clean fluid passage of spray gun with cleaning liquid which is compatible with paint being used.
3	Filter	1. Remove filter nut (22-4) and filter joint (22-3). 2. Remove filter set (22-2) and clean it.