

INSTRUCTIONS-PARTS LIST



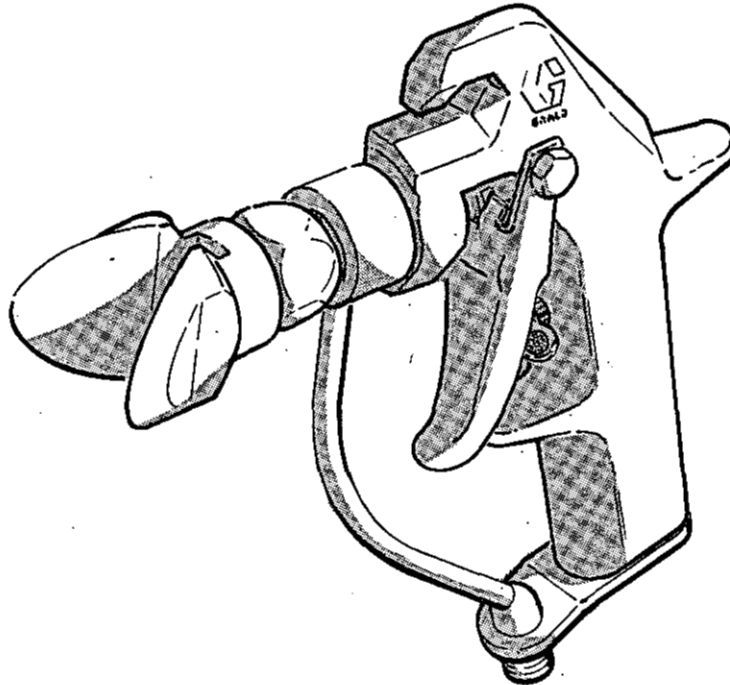
307-046

Rev. "F" 12-78
SUPERSEDES 10-76

This manual contains **IMPORTANT**
WARNINGS and **INSTRUCTIONS**
READ AND RETAIN FOR REFERENCE

AIRLESS GUNS

5000 PSI (350 bar) MAXIMUM WORKING PRESSURE



Model 208-327, Series "F"
with 0.037 in. (0.94 mm) orifice
FOR LIGHT VISCOSITY PAINTS

Model 208-663, Series "G"
with 0.090 in. (2.3 mm) orifice
FOR HEAVY VISCOSITY PAINTS

Model 208-664, Series "G"
with 0.090 in. (2.3 mm) orifice and 4 finger trigger
FOR HEAVY VISCOSITY PAINTS

Spray tip not included — order separately.

SAFETY PRECAUTIONS **IMPORTANT** READ and UNDERSTAND

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards — particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 — should be consulted in connection with your use of airless spray painting equipment.

HIGH PRESSURE SPRAY CAN CAUSE SERIOUS INJURY. Because of the high pressure and velocity of the spray, paint, solvent and fluids could penetrate the skin causing serious injury. Operate equipment *only* after all instructions are clearly understood.

KEEP AWAY FROM SPRAY

NEVER point the gun at yourself or anyone else. The tip guard can provide additional protection against injection injuries. Never put your hand, fingers or body directly over the spray tip.

Always have the tip guard in place while spraying.

Even after you shut off the pump, there is high pressure in the pump, hose and gun until you release it by triggering the spray gun *and* by opening the drain valve. So before servicing, cleaning or removal of any parts, *always* shut off the unit, trigger the spray gun, engage trigger safety, *and* open the drain valve to release pressure. *Leave drain valve in open position during all service operations.* Have a container ready to catch the draining paint.

If the spray appears to have penetrated the skin, **SEEK IMMEDIATE MEDICAL ATTENTION. DO NOT TREAT AS A SIMPLE CUT.** Be ready to tell the doctor exactly what fluid was injected.

Don't exceed 5000 PSI (350 bar) working pressure to gun. Be sure that all accessory items and system components will withstand the pressures developed. **NEVER** exceed the pressure rating of any component in system. **NEVER** alter or modify equipment.

When spray gun is not actually spraying, always set gun safety latch in closed, or "SAFE" position, making the trigger inoperative.

Always remove tip from gun to clean it.

Be very careful when removing *spray tip or hose* from gun. A plugged line contains fluid under pressure. If the tip or line is plugged, open drain valve, *then loosen tip guard or hose coupling slightly* and release pressure slowly before removing completely.

Don't exceed maximum recommended air or hydraulic inlet pressure to pump.

PREVENT STATIC SPARKING

The high velocity flow of material through the spray tip may develop static electricity. Be sure your gun is grounded. Use grounded paint hoses and be sure your supply pump and the object you are painting are grounded.

Always use the lowest pressure possible when flushing and hold gun firmly against metal waste container.

INSTALLATION

WARNING

NEVER attempt to install or remove any parts or accessories until power supply to pump has been shut off and fluid pressures relieved. To relieve fluid pressure, trigger spray gun, engage trigger safety, and if your pump has a drain valve at pump outlet, open it.

If an accessory in-line filter or swivel is to be used, install them on a grounded fluid hose (E). Then connect fluid hose to the gun's 1/4 NPSM inlet (D).

WARNING

Gun must be grounded through hose to prevent static sparking and possible fire or explosion.

Start the pump and flush the system with a suitable solvent as explained in instruction manual 306-229 or the instructions for your unit. Then shut off and relieve fluid pressure.

Unscrew the tip guard (18) and install the tip (B) with tip guard and tighten. BE SURE the gasket (7) is installed between tip and diffuser seat (16) to prevent leaking. See Fig 1. If you are using an accessory spray nozzle (see ACCESSORIES, page 6), install the appropriate tip in nozzle and screw nozzle assembly onto spray gun.

The spray tip position determines the direction of pattern width. To adjust pattern, engage trigger safety and remove tip guard (18). Position the tip so groove is horizontal for a horizontal pattern, and vertical for a vertical pattern. Place tip guard over tip and tighten.

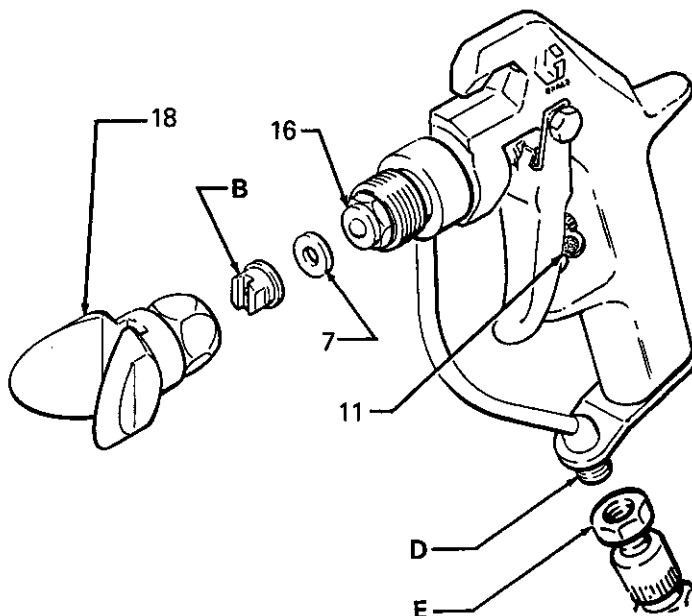


Fig 1

WARNING

When adjusting the spray pattern and when replacing the tip, ALWAYS have trigger safety engaged and NEVER point gun directly at face or body.

Check your coating material to see if there are particles in to which could clog the spray tip. Strain it if necessary.

OPERATION

Start your supply pump and adjust fluid pressure so that spray is completely atomized. Always use the lowest pressure necessary to obtain the desired results.

The spray tip orifice size and spray angle determines the coverage and pattern. Don't try to get more coverage by increasing pressure; use a larger tip instead.

Whenever you stop spraying for awhile, engage the trigger safety (11). See Fig 2.

Use a full open, full close triggering action. Hold the gun about 14 in. (350 mm) from, and perpendicular to, the surface. Don't swing the gun in an arc. Practice to find the best length and speed of stroke.

Clean out the front of the tip frequently, at least twice a day, with a solvent soaked brush to keep material from building up and clogging the tip.

NOTE: If the spray tip clogs while spraying, engage trigger safety, shut off pump, put a container under the unit's drain valve, and open drain valve to release pressure. Leave the drain valve open during servicing. *Loosen the tip guard slowly before removing completely.* Remove tip and blow out obstruction with air from the front of tip, or let tip and gun nozzle soak long enough to dissolve the obstruction. If it won't dissolve, jar it out by tapping the back of the tip against a flat surface.

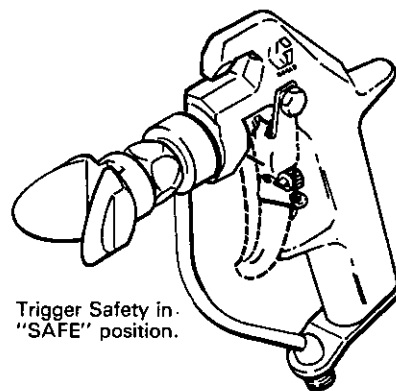
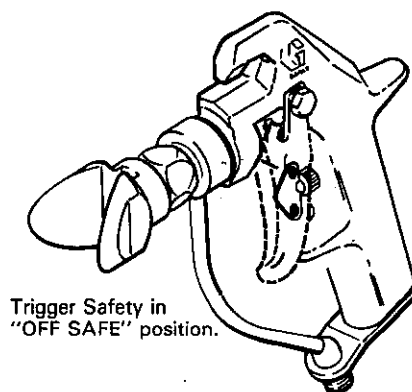


Fig 2

WARNING

Before servicing tip or gun, and before disassembling gun, always shut off pump, trigger spray gun, engage trigger safety, and open pump drain valve to relieve system pressures. Disconnect fluid hose from gun.

Periodically disassemble the gun to clean and inspect parts.

NOTE: Numbers and letters in parentheses in the text refer to the references on parts drawing and in illustrations.

If your gun leaks at the tip when you release the trigger, the needle or seat is worn or damaged and must be repaired. See Repair Kit below.

To disassemble: Remove the trigger (8), tip guard (18), tip, seat (16) and plug (4). Loosen the setscrew (2), remove the fluid housing (17) from the gun body (9) and remove the needle from the housing by pushing or tapping the back of the needle on a table top. Soak the parts in clean solvent and wipe clean. Inspect for wear or damage and reassemble the gun, using new parts as necessary.

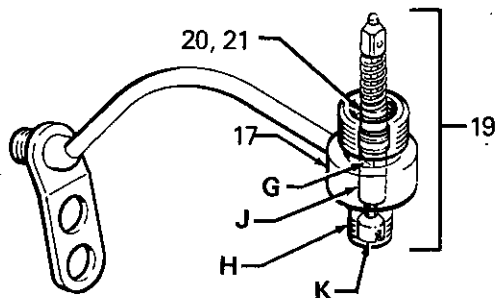


Fig 3

To reassemble, lubricate the packings (20) and o-ring (21) of the needle assembly (19) with lightweight oil and pull the needle through the fluid housing from the rear (H) until the trigger flats (G) are exposed. See Fig 3.

SERVICE INFORMATION

Listed below by the assembly changed are OLD, and NEW parts.

ASSEMBLY CHANGED	PART DESIGNATION	REF NO.	PART NO.	NAME
^a 208-327	OLD		208-799	Diffuser-Seat
Series to "F"	NEW	16	214-967 ^{a,b}	Diffuser-Seat
^b 208-663	OLD		212-061	Tip Guard
Series to "G"	NEW	18	212-033 ^{a,b,c}	Tip Guard
^c 208-664	OLD		210-513	Needle Assy
Series to "G"	NEW	19	214-932 ^a	Needle Assy
	OLD		210-512	Needle Assy
	NEW	19	214-931 ^{b,c}	Needle Assy

INTERCHANGEABILITY NOTE: NEW parts replace OLD parts listed directly above them.

CAUTION

Never push needle into housing from front. Pushing could bend the needle, causing excessive wear. The fluid housing (17) must be removed from gun while installing needle.

With needle installed, install the fluid housing (17) on the gun body (9) and tighten the setscrew (2) securely. Screw the seat (16) into the housing and torque to 15-20 ft-lb (20-27 N·m). Install the trigger (8).

Then, with the trigger safety (15) engaged, and the trigger held against the safety, turn the adjusting screw (K) counterclockwise until the needle guide (J) just touches the trigger, then back off 1/4 to 1/2 turn. See Figs 3 & 4. Install the plug (4) and tip (A).

WARNING

BE SURE to adjust needle properly to prevent spraying with safety latch on.

Flush the gun out when you flush your supply pump, hoses, etc. Always remove the tip before flushing.

WARNING

Always use low pressure to flush. Adjust fluid pressure as low as possible to flush out equipment and hoses. Always hold the metal part of gun firmly against waste container to prevent static sparking and possible fire or explosion. Use only metal waste containers.

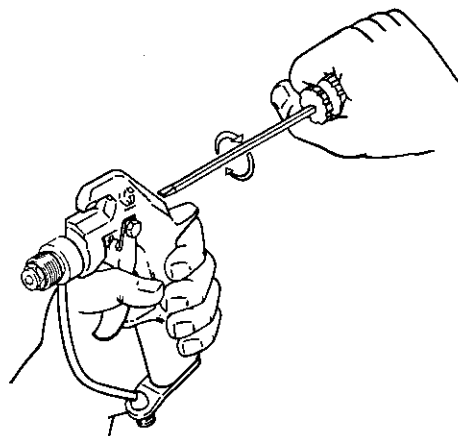


Fig 4

REPAIR KITS

(Must be purchased separately).

214-970

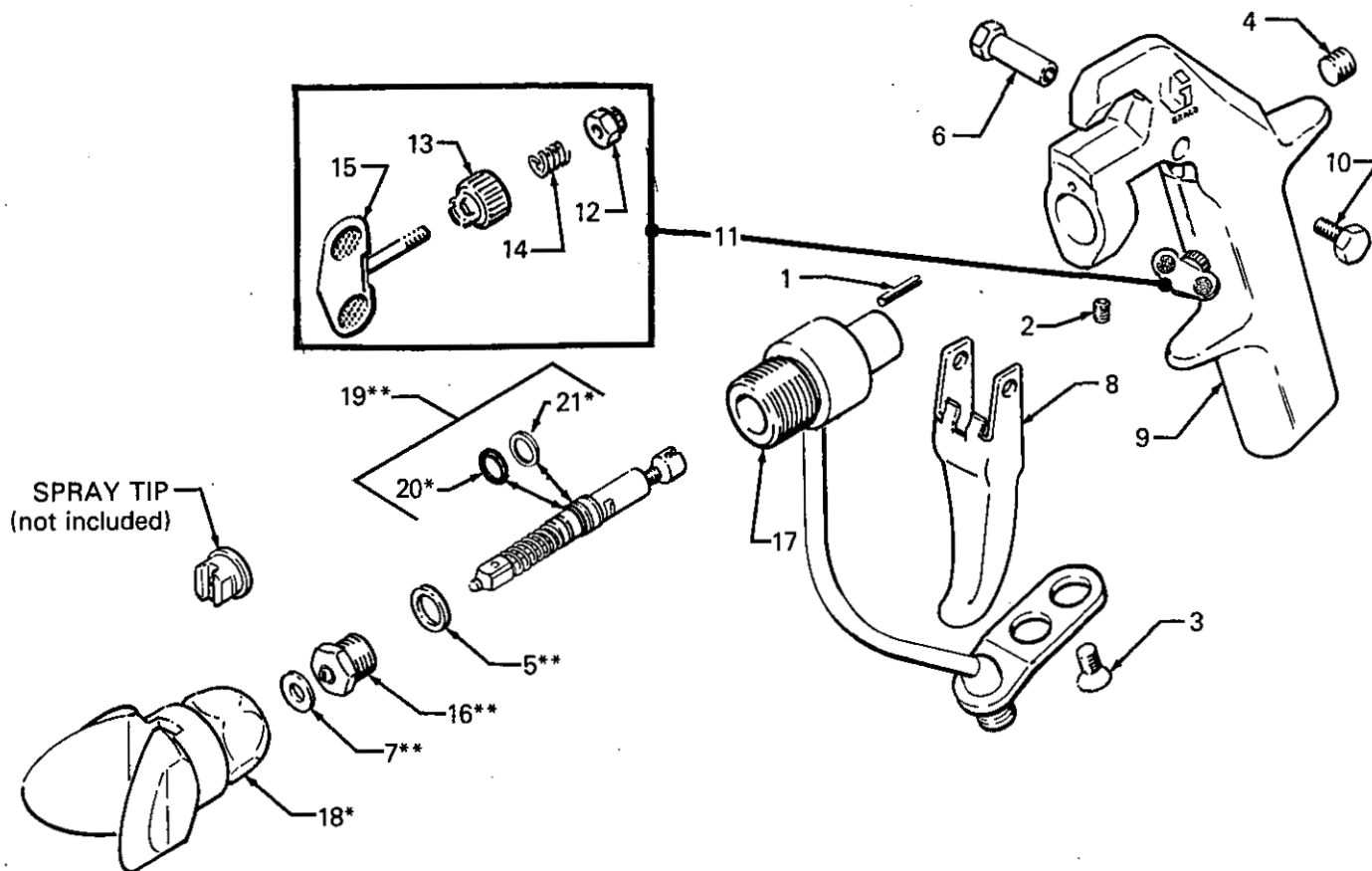
For Models 208-663 and 208-664 only
Consists of:

Ref No.	Qty
5	1
7	1
16	1
19	1

214-975

For Model 208-327 only
Consists of:

Ref No.	Qty
5	1
7	1
16	1
19	1



PARTS LIST

REF NO.	PART NO.	DESCRIPTION	QTY
1	101-804	PIN, spring; straight	1
2	102-207	SETSCREW, soc hd cup pt; 1/4-20 x 1/4	1
3	103-204	SCREW, oval hd mach; 1/4-20 x 3/8	2
4	103-219	PLUG, screw	1
5	**156-766	GASKET, copper	1
6	160-217	PIN, pivot	1
7	**166-969	WASHER, flat; "Delrin", 1/16" thick	1
8	169-550	TRIGGER, gun (Model 208-327 and 208-663 only)	1
	170-668	TRIGGER, gun (Model 208-664 only)	1
9	169-615	BODY, gun	1
10	203-953	SCREW, lock	1
11	206-946	TRIGGER STOP ASSY includes items 12-15	1
12	101-965	LOCKNUT; no. 5-40 thread	1
13	166-937	BUSHING	1
14	166-938	SPRING	1
15	169-614	STOP, trigger	1
16	**208-337	DIFFUSER-SEAT (Model 208-327 only)	1
	**214-967	DIFFUSER-SEAT (Models 208-663 and 208-664 only)	1

REF NO.	PART NO.	DESCRIPTION	QTY
17	208-338	HOUSING, fluid (Models 208-327 and 208-663 only)	1
	208-802	HOUSING, fluid (Model 208-664 only)	1
18	*212-033	TIP GUARD	1
19	**214-932	NEEDLE ASSY (Model 208-327 only) includes items 22, 23 and needle	1
	**214-931	NEEDLE ASSY (Models 208-663 and 208-664) incl. items 20, 21 and needle	1
20	*103-185	O-RING, polyurethane	1
21	*103-186	RING, back-up; PTFE 1"	1

*Recommended "tool box" spare parts. Keep on hand to reduce down time.

**Supplied in repair kit. (Must be purchased separately).

Order parts by name and number. Always give the model number and series letter of the assembly for which you are ordering.

ACCESSORIES

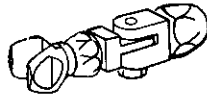
(Must be purchased separately)

DIRECTIONAL SPRAY NOZZLE ADAPTERS

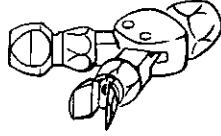
3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

Tip filter and tip retainer nut included.

206-235 Single nozzle swivels 180°, permits spray pattern direction to suit job.



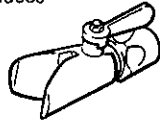
206-236 Dual nozzle provides wider spray pattern or two spray patterns angled in opposite directions.



SELECT-A-FAN (with customer's choice of tips)

3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

Fits the fan pattern to both wide and narrow surfaces and clears tip stoppages. See 306-819 for tip combinations available.



REVERSE-A-CLEAN I

205-614

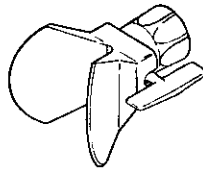
3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

Tip stoppages cleared with paint pressure by reversing tip nozzle. Includes ball tip of choice. See 306-737 for tip combinations available.

REVERSE-A-CLEAN III

5000 PSI (350 bar) MAXIMUM WORKING PRESSURE

Tip stoppages cleared with paint pressure by reversing tip nozzle. Includes tip of choice. See 307-321 for tip combinations available.



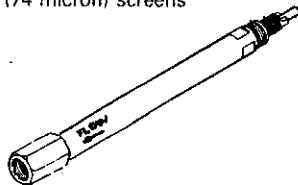
IN LINE FILTER 210-742

5000 PSI (350 bar) MAXIMUM WORKING PRESSURE
60 mesh (250 micron) screen, standard replacement screen for 210-742.

210-731 Includes three 60 mesh (250 micron) screens

210-732 Includes three 100 mesh (149 micron) screens

210-733 Includes three 200 mesh (74 micron) screens



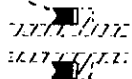
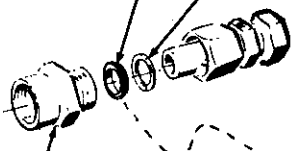
SWIVEL 207-946

5000 PSI (350 bar) MAXIMUM WORKING PRESSURE

1/2 NPSM (F) x 3/8 NPT (F)

102-918 SEAL

168-667 WASHER



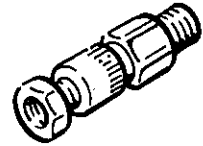
Install seal with "V" in direction shown

168-666 SEAL HOUSING

SWIVEL 204-940

3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

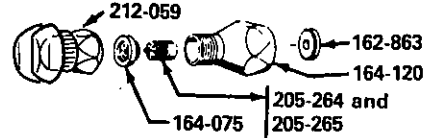
1/4 NPT x 1/4 NPSM



TIP FILTER KIT 212-058

3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

Permanent edge-type filter with .005 in. spacing and mounting parts.

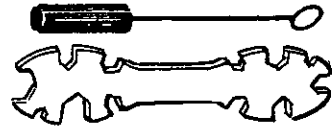


BRUSH AND WRENCH

For cleaning and repairing gun

101-892 Nylon brush, 5/8 dia.

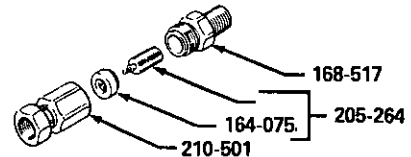
171-147 Wrench



IN-LINE FILTER 210-500

3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

Installs between gun and hose.



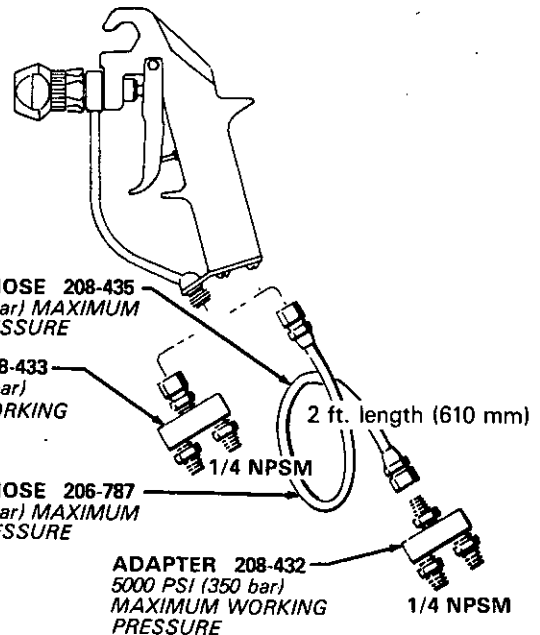
ADAPTERS FOR CONVERTING GUN TO CIRCULATING SYSTEM

1/4" NYLON HOSE 208-435
2500 PSI (170 bar) MAXIMUM WORKING PRESSURE

ADAPTER 208-433
5000 PSI (350 bar) MAXIMUM WORKING PRESSURE

1/8" NYLON HOSE 206-787
2500 PSI (170 bar) MAXIMUM WORKING PRESSURE

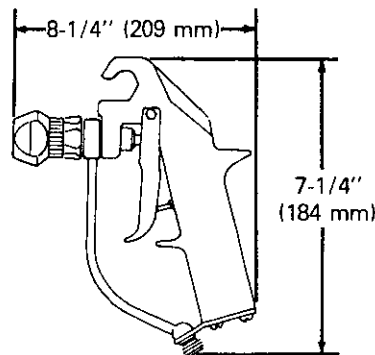
ADAPTER 208-432
5000 PSI (350 bar) MAXIMUM WORKING PRESSURE



TECHNICAL DATA

Maximum working pressure : 5000 PSI (350 bar)
Wetted parts : Stainless Steel-303 or 304,
Tungsten Carbide, PTFE
Polyurethane, Acetal
Homopolymer (Delrin)
Weight : 21 oz. (0.6 kg)

DIMENSIONAL DRAWING



THE GRACO WARRANTY

Graco Inc. warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship under normal use and service. This warranty extends to the original purchaser for a period of 12 months from the date of purchase and applies only when the equipment is installed and operated in accordance with written factory recommendations. This warranty does not cover damage or wear which, in the reasonable judgment of Graco, arises from misuse, abrasion, corrosion, negligence, accident, substitution of non-Graco parts, faulty installation or tampering.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective for examination by Graco to verify the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge, any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in workmanship or material, repairs will be made at a reasonable charge and return transportation will be charged.

THIS LIMITED WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES (EXPRESS OR IMPLIED) INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF ANY NON-CONTRACTUAL LIABILITIES INCLUDING PRODUCT LIABILITIES BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED.

EQUIPMENT NOT COVERED BY GRACO WARRANTY. Accessories or components of equipment sold by Graco that are not manufactured by Graco (such as electric motors, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making such claims.

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