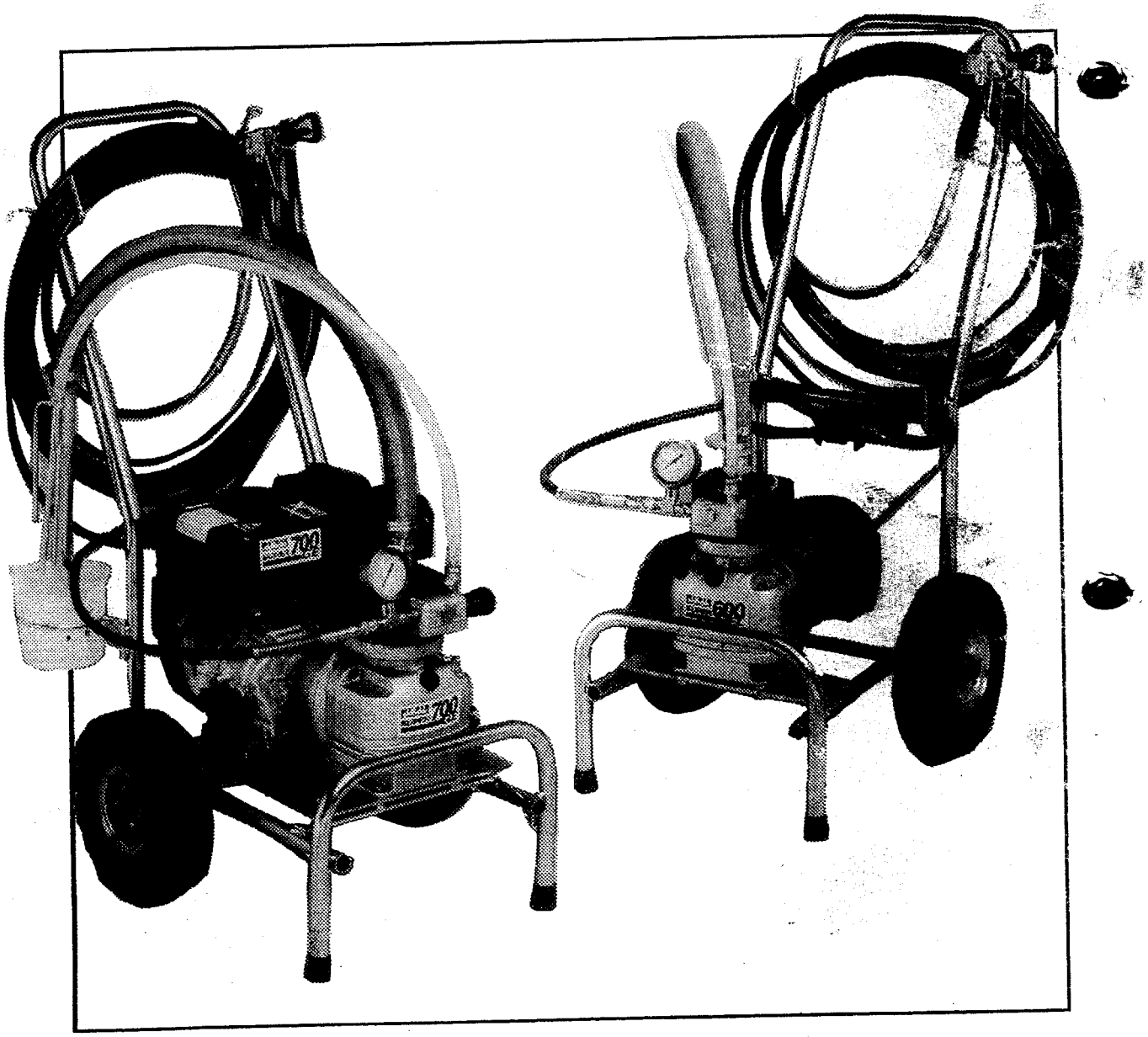
oldfields

PRO SERIES

AIRLESS PUMPS & ACCESSORIES



INSTRUCTION MANUAL

THE ONE THE *REAL* PROFESSIONALS USE

WARNING (Continued)

4) Never attempt to force the flow of fluid backward through the gun with your finger, hand, or hand-held object pressed against the gun nozzle. THIS IS NOT AN AIR SPRAY GUN.

5) **WARNING:** The paint hose can develop leaks from wear, kinking, abuse, etc. A leak is capable of injecting fluid into the skin, therefore the paint hose should be inspected before each use. Never attempt to plug a hose leak with any part of your body, adhesive tape or any other makeshift device. Do not attempt to repair a spray hose, instead replace it with a new grounded hose. Use only with hoses that have spring guards.

6) Tighten all fluid connections before each use. Never exceed 3,600 psi with this unit. Make sure that all accessory hoses, connections swivels, and so forth can withstand the high pressure which develop, Never exceed the pressure rating of any component in the system.

7) Be sure that the airless equipment being used and the object being sprayed are properly grounded, to prevent static discharge or sparks which could cause fire or explosion. Never exceed 500ft. overall combined hose length to assure electrical continuity. Always hold gun against metal container when flushing system.

8) Always follow the coating and solvent manufacturers safety precautions and warnings. When spraying, always keep area well ventilated.

9) Personal protective equipment may be required depending on type of material being sprayed and conditions of ventilation. Always contact supplier of material for recommendations.

DO NOT USE EQUIPMENT BEFORE READING THIS SECTION

WARNING

POSSIBLE EXPLOSION HAZARD

A HAZARDOUS SITUATION MAY BE PRESENT IN YOUR PRESSURISABLE FLUID COATING SYSTEM!

Halogenated Hydrocarbon Solvents can cause an explosion when used with aluminium or galvanised components in a closed (pressurisable) fluid system (pumps, heaters, filters, valves, spray guns, tanks, etc.)

The explosion could cause serious injury, death, and/or substantial property damage.

Cleaning agents, coatings, paints, etc., may contain halogenated hydrocarbon solvents.

Some Titan Tool Inc.® spray equipment includes aluminium or galvanised components and will be affected by halogenated hydrocarbon solvents.

EXPLANATION OF THE HAZARD:

These are the three key elements to the Halogenated Hydrocarbon (HHC) solvent hazard. These elements are:

1. ***The presence of HHC solvents.*** 1,1,1-Trichloroethane and Methylene Chloride are the most common of these solvents. However, other HHC solvents are suspect if used; either as part of paint or adhesives formulation, or for cleanup or flushing.
2. ***Aluminium or Galvanised Parts.*** Most handling equipment contains these elements. In contact with these metals, HHC solvents could generate a corrosive reaction of a catalytic nature.
3. ***Equipment Capable of Withstanding Pressure.*** When HHC solvents contact aluminium or galvanised parts inside a closed container, such as a pump, spray gun, or fluid handling system, the chemical reaction can, over time, result in a build-up of heat and pressure, which can reach explosive proportions.

When all three elements are present, the result can be an extremely violent explosion. The reaction can be sustained with very little aluminium or galvanised metal: any amount of aluminium is too much.

The reaction is unpredictable. Prior use of an HHC solvent without incident (corrosion or explosion) does NOT mean that such use is safe. These solvents can be dangerous alone (as a cleanup or flushing agent) or when used as a component of a coating material. There is no known inhibitor that is effective under all circumstances. Furthermore, the mixing of HHC solvents with other materials or solvents, such as MEK, alcohol, and toluene, may render the inhibitors ineffective.

The use of reclaimed solvents is particularly hazardous. Reclaimers may not add any inhibitors, or may add incorrect amounts of inhibitors, or may add improper types of inhibitors. Also, the possible presence of water in reclaimed solvents could feed the reaction.

Anodised or other oxide coatings cannot be relied upon to prevent the explosive reaction. Such coatings can be worn, cracked, scratched, or too thin to prevents contact. There is no known way to make oxide coatings or to employ aluminium alloys, which will safely prevent the chemical reaction under all circumstances.

Several solvents suppliers have recently begun promoting HHC solvents for use in coating systems. The increasing use of HHC solvents is increasing the risk. Because of their exemption from many State implementation Plans as Volatile Organic Compounds (VOC's), their low flammability hazard, and their not being classified as toxic or carcinogenic substances, HHC solvents are very desirable in many respects.

If you are now using halogenated hydrocarbon solvents in pressurisable fluid systems having aluminium or galvanised wetted parts, IMMEDIATELY TAKE THE FOLLOWING STEPS:

- Empty system, shut off, completely depressurise in accordance with equipment service instructions.
- Remove equipment from service, disassemble in accordance with equipment servicing instructions.
- Inspect all parts for corrosion and/or wear. Replace any damaged parts.
- Thoroughly clean all parts of the equipment with a non-halogenated solvent and reassemble in accordance with equipment servicing instructions.
- Flush equipment with non-halogenated solvent.
- Do NOT reuse equipment with HHC solvents or with materials containing such solvents.
- Material suppliers and/or container labels should be consulted to ensure that the solvents used are compatible with your equipment.

We are aware of no stabilisers available to prevent halogenated hydrocarbon solvents from reaction under all conditions with aluminium components in a closed fluid system.

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PLEASE DIRECT THIS IMPORTANT SAFETY INFORMATION to the appropriate people in your company, such as your Plant Manager, Production Manager, Paint Line Supervisor, and others that may be concerned.

HALOGENATED SOLVENTS

DEFINITION - Any hydrocarbon solvent containing any of the following elements:

Fluorine (F) "-fluor-"
Chlorine (C1) "-chlor-"
Bromine (Br) "-bromo-"
Iodine (I) "-iodo-"

EXAMPLES (not all-inclusive):

Fluorocarbon Solvents:
Dichloroflouromethane
Trichloroflouromethane

Brominated Solvents:
Ethylene dibromide
Methylene chlorobromide
Methyl bromine

Iodinated Solvents:
N-butyl iodide
Methyl iodide
Ethyl iodide
Propyl iodide

Chlorinated Solvents:
Carbon tetrachloride
Chloroform
Ethylene dichloride
METHYLENE CHLORIDE or DICHLOROMETHANE
Monochlorobenzene
Orthodichlorobenzene
Perchloroethylene
TRICHLOROETHANE
Thichloroethylene
Monochlorotoluene

Consult your material supplier to determine whether your solvent or coating contains Halogenated Hydrocarbon Solvents.

CLEAN UP

1. Cleanliness is extremely important.
2. Clean the sprayer at the end of each days usage.
3. Shut off the sprayer.
4. Relieve the pressure by opening the prime valve.
5. Set trigger safety lock.
6. Remove spray tip and soak in solvent.
7. Place sump hose in a container of solvent. With waterbased paint, use water. With oil paint, use solvent recommended by the paint manufacturer.
8. Place the prime hose in a second container.
9. Turn on the sprayer and increase the pressure by turning pressure control knob clockwise until solvent or water flows from the prime hose. Continue for 3 - 4 minutes or until the solvent water is clear. Then close the prime valve.
10. Trigger the gun into the paint can until solvent/water appears.
11. Trigger the gun into the container of solvent. Continue for 3 - 4 minutes or until the solvent/water is clear.
12. IMPORTANT - Hold the gun firmly against the metal container to prevent static spark.
13. You may speed up the cleanup process by increasing the pressure. Hold the nozzle of the gun under the water/solvent to avoid splashing.
14. Make the final flush with turps and oil mix or kerosene. Do not leave water in the sprayer as this can cause rust.
15. Shut off the sprayer. Trigger the gun to relieve pressure. Set the safety lock on the gun. Unplug the sprayer.
16. For change of colours, follow steps 3 - 13.
17. If using waterbased paint, flush thoroughly with water and make final flush with turps - oil mix or kerosene.
18. If using oil base paint, flush thoroughly with appropriate solvent. Make final flush with turps - oil mix or kerosene.
19. Do not flush with turpentine only (leaves gum deposits).

MAINTENANCE AND INSPECTION

A. Oil Change

1. Do it regularly - First time: after 50 hours
   Afterward: Every 200 hours
2. To drain the oil, take off the cap and unplug the drain-plug.
3. Use zinc free hydraulic oil. (Max 1 Litre.)
4. For GE models use friction modified oil in motor.
5. The amount poured will be seen at the oil gauge. If you pour too much, it will leak through the oil escaping valve.

INDEX

INTRODUCTION

Oldfields have been marketing airless sprayers in Australia for over 15 years and in that time have gained the confidence of the master painter by providing service and quality on a national basis. The Pro Series range of airless sprayers are the result of continued research and development by the Oldfields team of design engineers and marketing personnel. These models are the latest development in airless spray and are backed up by over 75 years of Oldfield service and tradition to the Australian painting industry.

Designed and assembled in Australia for Australian paints and conditions, the ProSeries are certain to be the choice of the master painter.

"Make sure it's an Oldfields!
The one the *REAL* professionals use."

Oldfields have compiled this training manual as an introduction to Airless Spray for beginners and progresses through covering all aspects, explaining specifications, differences in design, and the latest technology regarding Airless Spray Painting. If you already own a diaphragm pump, whatever the make or model, it can also be a handy guide for troubleshooting, operation, maintenance and care of your machine.

AIRLESS PAINT SPRAYING
WHAT IS IT?

What is Airless Paint Spraying?

As the name suggests, airless paint spraying allows paint and other related materials to be sprayed without the use of compressed air. The spray action is caused by pumping the material at extremely high pressures through a small opening at the tip of an airless spray gun. The high velocity with which material passes through the nozzle causes it to atomise into a fine spray while maintaining sufficient momentum to carry the particles to the surface. This process is known as atomisation.

An example of what is actually occurring can be ascertained when one watches water from a garden hose pass through a nozzle. Because the nozzle opening is much smaller than the fluid passage in the hose, there is a build-up of pressure which causes the water to separate into a fine spray when it is released. Due to the low viscosity of water, this is accomplished at very low pressure (40 PSI). Paint and other coating materials, however, have much higher viscosities, requiring higher pressures (1,000 - 3,000 PSI) to separate the particles and allow atomisation. Therefore, the key elements in an airless system are pressure, and a small opening to increase the velocity of the material which thereby creates atomisation.

Why Airless Paint Spraying?

The combination of high pressure and the precise opening in the nozzle (which defines the spray pattern) allows the operator to apply coatings at maximum efficiency with very little overspray. A second coat is quite often not required due to the uniform coverage achieved by airless spraying.

EFFICIENCY

IMPROVED PRODUCTION CAPABILITIES

INCREASED PROFITS

PRIMARY COMPONENTS OF AN AIRLESS SPRAYING SYSTEM.

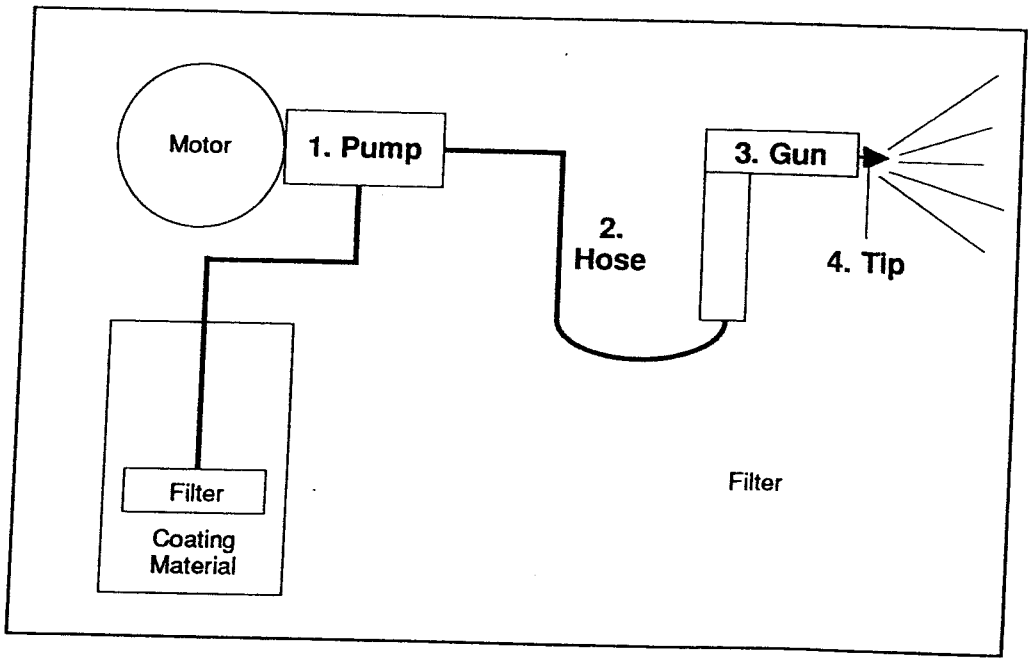
1. **The pump.** The pump is the heart of the system. It draws the paint into itself and pressurises it forcing the coating up the paint hose to the gun, pumps are usually powered by an electric, petrol or air motor.

2. **The Hose.** The pressurised material is forced through a hose which is attached to an airless spray gun. The hose allows the operator the mobility to move independently of the pump and additionally acts as a reservoir to avoid pressure variation which distorts the spray pattern. (A minimum of 32/10M of hose should always be used.

3. **The Gun.** The gun is the shut-off valve for the system. Activating the trigger allows paint to flow from the hose to the tip. The gun is designed for comfort and durability, since it is what the painter will actually work with for the duration of the job.

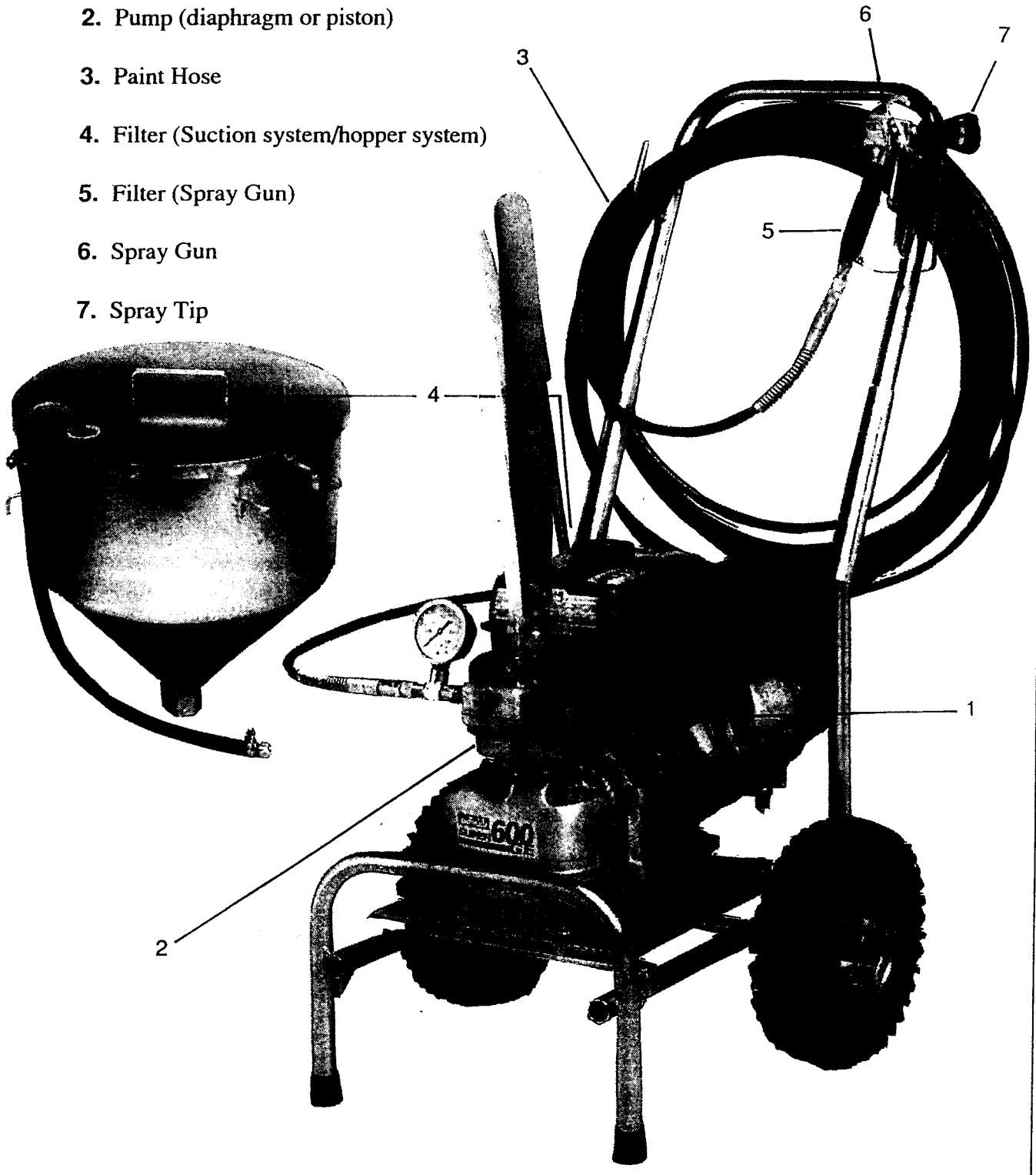
4. **The Tip.** The tip defines the spray pattern and controls the flow. Ultimately, the tip tells the pump how hard it must work. As paint is forced through this precision orifice, it atomises and forms a spray pattern. The tip is therefore critical to achieving a well defined spray pattern and allows the operator to apply paint quickly and accurately.

Due to the small opening in the tip (approximately half the diameter of a pin), clogging can present a problem. Therefore, it is essential to always clean the pump properly and use filters in the pump and gun. Tips comes in a wide variety of sizes to suit any material or job condition. The orifice size determines the amount to be atomised while the shape of the orifice determines the fan width.

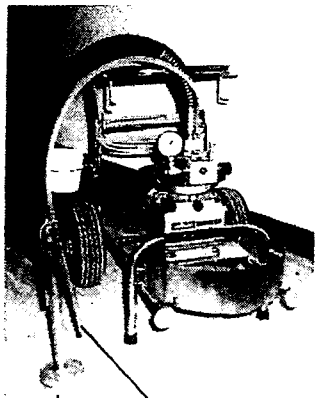


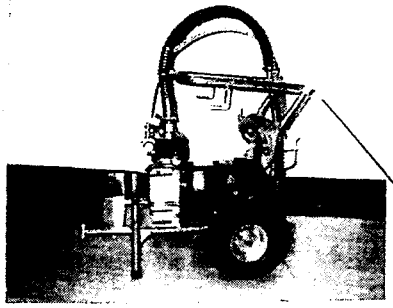
AIRLESS SPRAY SYSTEM
HOW DOES IT WORK?

1. Motor (air, electrical or gasoline powered)
2. Pump (diaphragm or piston)
3. Paint Hose
4. Filter (Suction system/hopper system)
5. Filter (Spray Gun)
6. Spray Gun
7. Spray Tip



COMPONENTS OF AN OLDFIELDS PRO SERIES AIRLESS SPRAYER





12. Airless sprayer frame (handle folds down)

3. Paint hose (20 metres)

6. Prime hose return

7. Inlet paint filter

1. Tip system

5. Inlet paint suction

8. Paint head

4. Pressure gauge

2. Spraygun with inbuilt filter swivel

10. Pressure control valve

13. 240 volt 50 HZ electric motor.

14. Drum Holder (optional).

11. Hydraulic pump

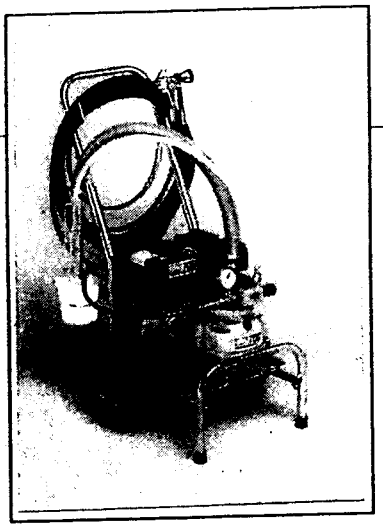
9. Prime valve

OLDFIELDS PRO SERIES 700GE
Airless Sprayer (Petrol Powered)

The more powerful of the petrol units capable of spraying most heavy bodied viscous materials and industrial coatings such as coal, tar epoxies etc. With same performance as Pro Series 700EL, it is ideal for special applications.

This unit is powered by a Honda 4 h.p. petrol, air cooled motor and its larger capacity airless pump provides a free flow output of 7 litres per minute and 0-3000 p.s.i. adjustable pressure.

Comes complete with a 6.3mm (1/4") 15 metres I.D. spray hose and LX80 spray gun with a SC5 reversible tip.



MODEL: OLDFIELDS PRO SERIES 700GE

Pressure Adjustable: 0-3000 p.s.i.

Maximum Tip Size: 036° fitted with 1 gun
028° fitted with 2 guns
0.21° fitted with 3 guns

Maximum Output: 7 litres per minute

Power: 4.0 h.p. Mitsubishi petrol motor, air cooled, 4 stroke, 141 cc., Tank capacity 3 litres.

Pump: Positive displacement, direct drive, diaphragm, 1400 rpm, tungsten inlet poppet valve, tungsten outlet ball and seat.

Pressure Gauge: Direct read.

Weight: 47 kg

Spray Gun: Fitted with Titan LX80 spray gun and SC5 reversible tip.

Spray Hose: 6.3mm (1/4") I.D. x 15m high pressure hose rated to 3300 p.s.i. burst pressure 12,000 p.s.i.

MAINTENANCE AND CLEANING

1. Cleanliness is important to assure trouble free operation. Flush unit after each use. **Important:** When flushing, always remove tip, adjust pressure to lowest possible setting, and hold gun firmly against metal container to prevent static sparking. Use only metal containers.

2. Trigger can be placed in a lock-on position by pulling trigger and rotating safety lock towards back of gun. **Important:** This lock-on feature should never be used while spraying. Use for flushing only, when tip is removed and pressure is adjusted to lowest possible setting.

3. Store clean unit in a dry place. Do not leave in water or solvents.

Technical Information

- Pressure rated @ 3600 PSI, 252 BAR
- Weight: 20 oz.
- 3/16 inlet
- Tungsten carbide ball valve and swivel.
- Comes equipped with a TTI 517 SC-4 Tip
- Comes equipped with a 60 mesh filter
- Product No. 580-100

UNDERSTANDING AIRLESS TIPS

Airless tips are a key component to the successful operation of an airless system. They define the spray pattern, control the flow and ultimately tell the pump how hard it must work. Airless tips are available in many different styles, each offering an assortment of fan widths and orifice sizes (actual opening measured in thousandths of an inch). The orifice size determines the amount of fluid to be sprayed while the shape of the orifice determines the fan width. The orifice is always elliptical in shape and therefore creates a similarly shaped spray pattern. The more elongated the orifice, the wider the spray pattern.

AIRLESS TIP SELECTION

Proper tip selection is critical to the success or failure of the airless system. It is therefore essential to understand the method of referencing the orifice and fan width. Although there are several different numbering systems utilised by different manufacturers, remember that each in its own way will identify the orifice and fan width. The most common method of identification works as follows.

517 - The first digit (5) indicates 1/2 of the minimum fan width. Add 2" for maximum fan width. (5 = a 10" to 12" pattern while spraying 12" from surface)

The last two digits (17) indicates the equivalent orifice size: (17 = .017).

Measured in thousandths of an inch.

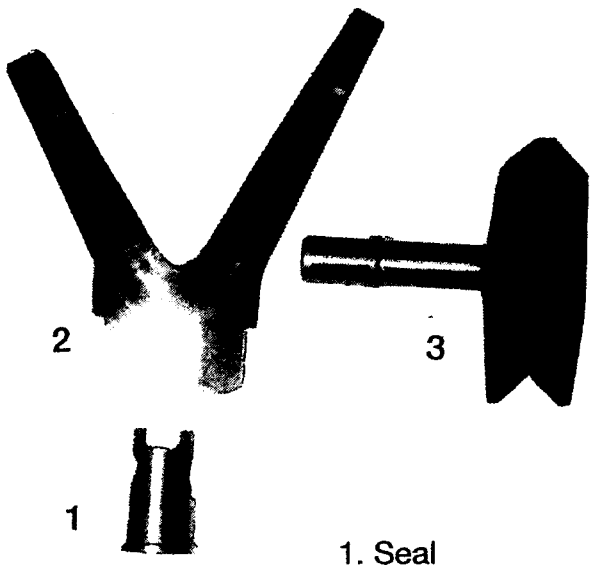
AIRLESS SPRAY CHARACTERISTICS

It is important to remember that the orifice size, in conjunction with the fan width size, determines the spray characteristics of the tip.

OPERATING AND MAINTENANCE INSTRUCTIONS

ASSEMBLY:

1) Insert seal (1) into base safety guard.
2) Hand screw safety guard onto gun.
3) Insert tip 3 through slot on guard and into base retainer and tighten firmly.
IMPORTANT: Make sure that the tip is fully inserted and cannot be removed when fully inserted and cannot be removed when complete unit is tightened on gun.



1. Seal
2. Safety Guard
3. Tip Insert

OPERATING INSTRUCTION:

1) To spray, position tip handle so that the solid side of handle is pointed in the direction you wish to spray.
2) When tip clogs, rotate tip handle 180° until hole side of handle is pointed in spray direction.
3) Trigger gun and line pressure will remove clog. **Note:** Do not direct gun toward work surface while cleaning.
4) Reverse tip to spray position. **IMPORTANT:** Make sure tip is in full spray/clean position before triggering.

TO CHANGE TIPS: Tips can easily be removed and replaced without disassembling the unit. Note: When a tip is replaced due to wear, a new seal should be installed. **IMPORTANT:** Never attempt to change tips while unit is pressurised. Always engage gun safety before proceeding.

1) Loosen retaining nut on safety guard until the tip is able to slide from base retainer.
2) Insert new tip into retainer and tighten remaining nut firmly. **Note:** Make sure that the tip is fully inserted and cannot be removed when complete unit is tightened on gun.

MAINTENANCE AND CLEANING:

1) Cleanliness is important to assure trouble free operation. Flush unit after each use. **Note:** Adjust fluid pressure to lowest possible setting.
2) To store unit: clean, disassemble, and store dry.

TIP SIZE IDENTIFICATION:

Example: Tip Marking 417
To determine spray pattern width, multiply 1st digit by 2. Add 2" for maximum. (4 = 8" to 10" pattern width, 12" from work.)
Last two digits indicate equivalent orifice diameter. (17 = .017)

PRO SERIES
OPERATION PROCEDURE

Preparation

1. Connect Paint Hose, Suction Hose, Return Hose and Airless Gun properly
2. Check the oil Levels.
3. Check that unit is switched "off" connect to 240V power. Now the lamp should be lit. Do not exceed 15 metres if using extension cord.

WARNING: All power supplies and cords must be earthed.

Start

1. Turn relief valve anti-clockwise to its limit.
2. Turn pressure regulating valve clockwise to its limit.
3. Insert Suction and Return hoses into material to be sprayed.
4. Switch on motor and turn pressure regulating knob (No. 10) slowly clockwise.
5. When material is being returned to the can via the return hose (when bubbles stop appearing in the can) the pump is primed.
6. Turn the relief valve clockwise slowly to its limit. Wait for the hose to fill with material and the pressure gauge indicates approximately 3000 p.s.i. and adjust pressure to suit material.

You are now ready to spray.

SAFETY INSTRUCTIONS

A. High Pressure

1. Never pull the trigger of the gun toward people. Unlock the trigger ONLY when you spray the paint or take off the nozzle tip.
2. Never use a damaged hose. Due to the high pressure even a small flaw may cause an accident.
3. Pressure is very high and extremely dangerous. You must handle it with meticulous care.
4. Do not raise the pressure unnecessarily.
5. Connect all the attachments properly and tightly so that no paint would leak.

If paint leaks while you are working, stop the pump immediately. Let the air go and lower the pressure.

6. Ensure you are using the correct hose. Refer to page 11 or contact your supplier if in doubt.

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WARNING
HIGH PRESSURE SPRAY CAN CAUSE SERIOUS INJURY.

Maximum Working Pressure 3000 psi, 220 Bar

An airless spray gun requires that fluid be introduced to it at very high pressure. Fluids under high pressure, from spray or leaks can penetrate the skin and inject substantial quantities of toxic fluid into the body. If not promptly and properly treated, the injury can cause tissue death or Gangrene and may result in serious permanent disability or amputation of the wounded part. Therefore extreme caution must be exercised when using any airless spray equipment. IF YOU ARE INJECTED, SEE A PHYSICIAN IMMEDIATELY. DO NOT TREAT AS A SIMPLE CUT!

NOTE TO PHYSICIAN: Injection into the skin is a serious, traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the blood stream. Consultation with a plastic surgeon or a reconstructive hand surgeon may be advised.

1) Handle the spray gun carefully. Never point the gun at yourself or anyone else. Never permit any part of your body to come in contact with the fluid stream of either the gun or any hose leak. Always keep the gun trigger safety lever in a locked position when not spraying. Always use a tip safety guard.

2) Never attempt to remove tip, disassemble or repair gun without first doing the following:

PRESSURE RELIEF PROCEDURE

A. Set trigger safety in a locked position.
B. Shut off pump and in addition unplug electrical cord or turn off air supply.
C. Release fluid pressure from entire system, and trigger gun.
D. Reset trigger safety in a locked position.

3) If tip or line is plugged, follow the pressure relief procedures described above and then loosen safety guard lightly and relieve the pressure before removing completely. After removing, trigger gun to relieve pressure from line.

WARNING (Continued)

4) Never attempt to force the flow of fluid backward through the gun with your finger, hand, or hand-held object pressed against the gun nozzle. THIS IS NOT AN AIR SPRAY GUN.

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- Flush equipment with non-halogenated solvent.
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EXAMPLES (not all-inclusive):

Fluorocarbon Solvents:
Dichloroflouromethane
Trichloroflouromethane

Brominated Solvents:
Ethylene dibromide
Methylene chlorobromide
Methyl bromine

Iodinated Solvents:
N-butyl iodide
Methyl iodide
Ethyl iodide
Propyl iodide

Chlorinated Solvents:
Carbon tetrachloride
Chloroform
Ethylene dichloride
METHYLENE CHLORIDE or DICHLOROMETHANE
Monochlorobenzene
Orthodichlorobenzene
Perchloroethylene
TRICHLOROETHANE
Thichloroethylene
Monochlorotoluene

Consult your material supplier to determine whether your solvent or coating contains Halogenated Hydrocarbon Solvents.

CLEAN UP

1. Cleanliness is extremely important.
2. Clean the sprayer at the end of each days usage.
3. Shut off the sprayer.
4. Relieve the pressure by opening the prime valve.
5. Set trigger safety lock.
6. Remove spray tip and soak in solvent.
7. Place sump hose in a container of solvent. With waterbased paint, use water. With oil paint, use solvent recommended by the paint manufacturer.
8. Place the prime hose in a second container.
9. Turn on the sprayer and increase the pressure by turning pressure control knob clockwise until solvent or water flows from the prime hose. Continue for 3 - 4 minutes or until the solvent water is clear. Then close the prime valve.
10. Trigger the gun into the paint can until solvent/water appears.
11. Trigger the gun into the container of solvent. Continue for 3 - 4 minutes or until the solvent/water is clear.
12. IMPORTANT - Hold the gun firmly against the metal container to prevent static spark.
13. You may speed up the cleanup process by increasing the pressure. Hold the nozzle of the gun under the water/solvent to avoid splashing.
14. Make the final flush with turps and oil mix or kerosene. Do not leave water in the sprayer as this can cause rust.
15. Shut off the sprayer. Trigger the gun to relieve pressure. Set the safety lock on the gun. Unplug the sprayer.
16. For change of colours, follow steps 3 - 13.
17. If using waterbased paint, flush thoroughly with water and make final flush with turps - oil mix or kerosene.
18. If using oil base paint, flush thoroughly with appropriate solvent. Make final flush with turps - oil mix or kerosene.
9. Do not flush with turpentine only (leaves gum deposits).

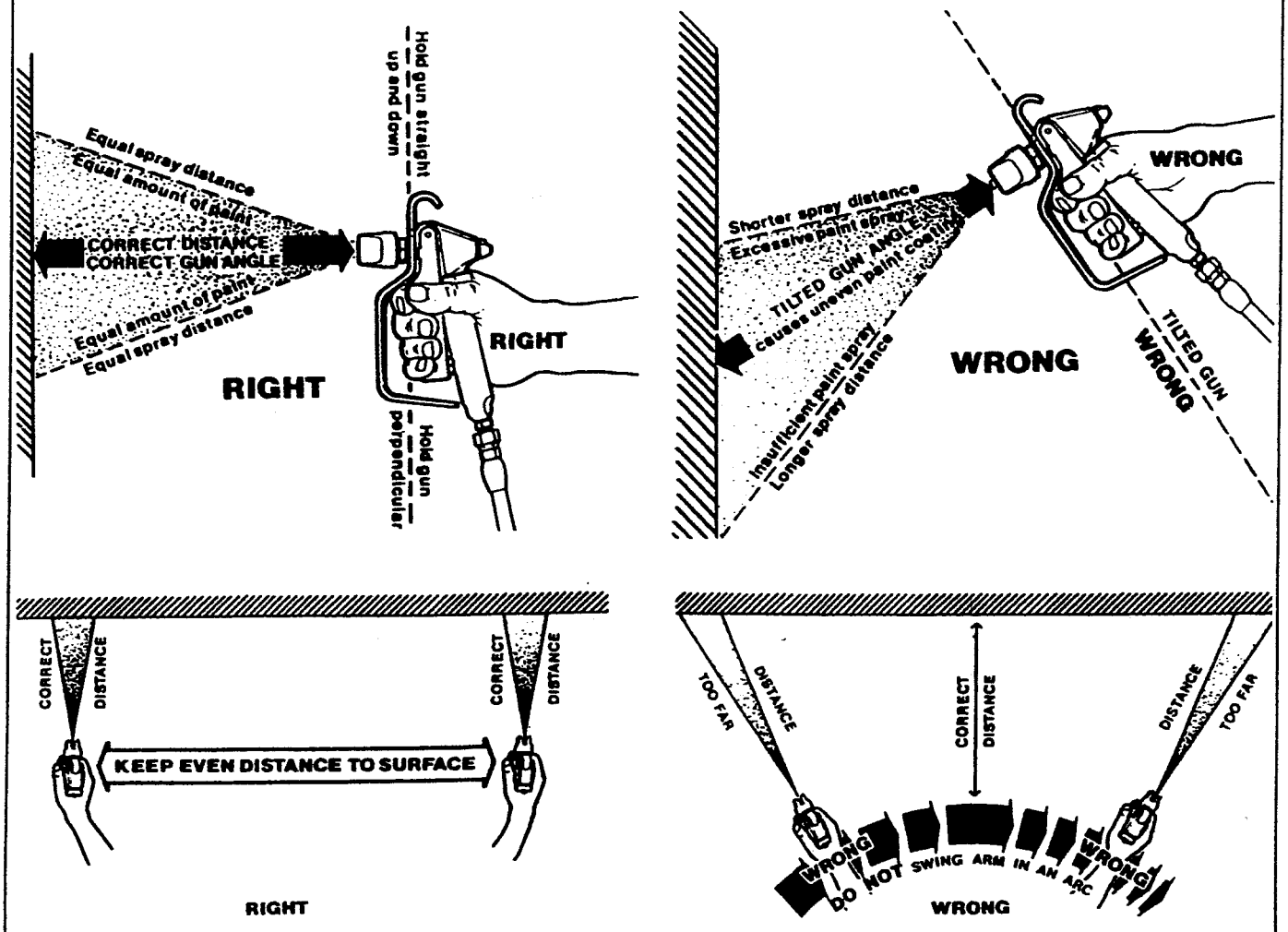
MAINTENANCE AND INSPECTION

A. Oil Change

1. Do it regularly - First time: after 50 hours
   Afterward: Every 200 hours
2. To drain the oil, take off the cap and unplug the drain-plug.
3. Use zinc free hydraulic oil. (Max 1 Litre.)
4. For GE models use friction modified oil in motor.
5. The amount poured will be seen at the oil gauge. If you pour too much, it will leak through the oil escaping valve.

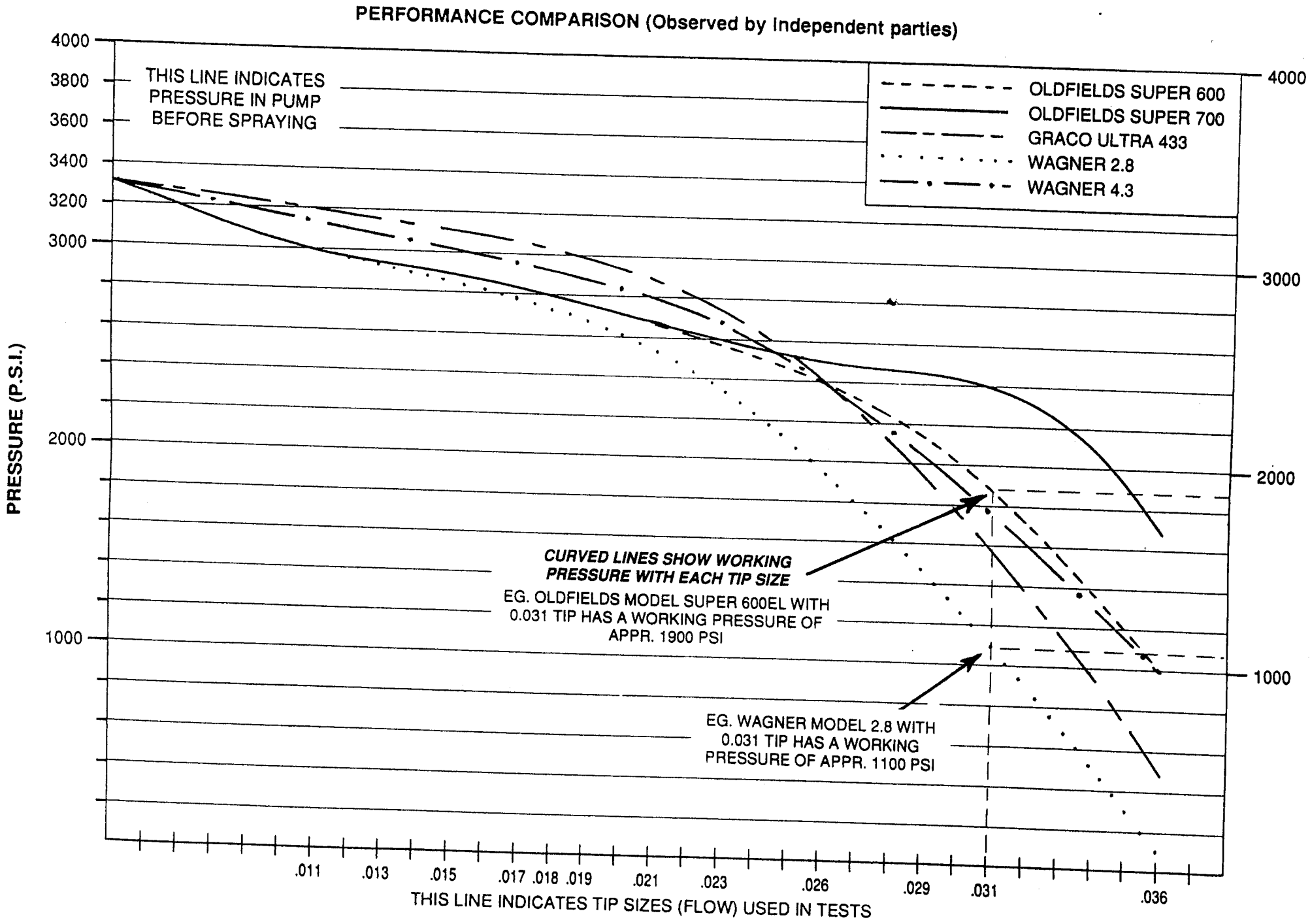
SPRAYPAINTING TECHNIQUE

1. Hold the spray gun perpendicular to the surface and always at the same distance.
2. Move the gun parallel to the work and at a right angle to the surface. Hold the gun 12 - 15 inches (30 - 38 cm) from the surface.
3. The closer the gun is held to the work, the thicker the paint is deposited and the faster the gun must be moved to prevent sags. Holding the gun too far from the work will cause excessive fog and overspray.
4. Move the gun across the surface at the same steady rate in order to apply a full wet coat with each stroke. The wet coat should be just under the thickness at which a sag or run will occur.
5. Always lap the same distance when making successive strokes. Overlap strokes 30% - 50% to achieve a uniform film thickness.
6. Trigger the gun off the work and after gun movement has started. Release the trigger after passing the end of the painted area but before the gun movement has stopped.
7. Spray with straight uniform strokes from left to right and from right to left, holding stroke speed, distance, lapping and triggering as uniform as possible.



TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Sprayer does not start or stops after running	1) No electrical power, cord unplugged, blown fuse. 2) Thermal protector switch open.	check power, cord, fuses. Let sprayer cool. Reset switch. Correct overload cause.
Sprayer will not prime	1) Prime valve closed. 2) Inlet or outlet valve sticking. 3) Inlet strainer screen dirty. 4) Pressure control knob set too low. 5) Worn inlet valve or outlet 6) Paint too thick. 7) Clogged filter screen.	Open prime valve Clean inlet or outlet valve Clean. Turn knob clockwise, increase pressure. Replace. Thin paint as needed. Clean filter screen.
Sprayer primes, builds pressure, but pressure drops greatly when trigger is pulled.	1) No tip in gun. 2) Worn tip. 3) Worn outlet ball or seat. 4) Worn outlet valve.	Install tip. Replace tip. Replace. Replace inlet valve
Poor spray pattern, tails or fingering of spray pattern.	1) Worn tip. 2) Spray tip too large. 3) Paint too thick or poor quality 4) Pressure too low. 5) Paint hose too long. 6) Clogged inlet strainer screen. 7) Clogged filter screen 8) Dirty or worn valves.	Replace tip. Replace with smaller tip. Thin paint or replace. Increased pressure Use shorter paint hose. Clean. Clean. Clean or replace inlet and/or outlet valve.
Gun Spitting.	Improper gun adjustment.	Adjust gun or replace worn parts.
Static sparking from spray gun.	Sprayer or object not grounded.	Check and ground.
Coarse spray pattern.	Low pressure.	Increase pressure.
Thin centre.	1) Wrong tip. 2) Material too thick.	Use larger tip and/or narrower Thin cautiously.
Excessive fogging.	1) High pressure. 2) Wrong tip or worn tip. 3) Material too thin.	Reduce pressure but maintain pattern. Use smaller tip but only if less flow is desired or replace. Use less thinner.
Pattern too wide.	Fan angle too large.	Use narrower fan angle.
Pattern too narrow.	Fan angle too narrow.	Use wider fan angle.
Too much material.	Tip too large	Use smaller tip size.
Too little material.	Tip too small.	Use larger tip size.
Clogged tip.	Tip clogged. Screens not proper size for tip. Paint too coarse.	Clean carefully. Use smaller mesh screen. Use larger tip.
Spray pattern irregular, deflected.	1) Tip partially clogged. 2) Tip damaged.	Clean carefully. Replace with new tip.
Clogged screens	Extraneous material in paint.	Clean screens.


PERFORMANCE COMPARISON (Observed by Independent parties)
PRESSURE (P.S.I.)
4000
3800
3600
3400
3200
3000
2000
1000
THIS LINE INDICATES PRESSURE IN PUMP BEFORE SPRAYING
OLDFIELDS SUPER 600
OLDFIELDS SUPER 700
GRACO ULTRA 433
WAGNER 2.8
WAGNER 4.3
CURVED LINES SHOW WORKING PRESSURE WITH EACH TIP SIZE
EG. OLDFIELDS MODEL SUPER 600EL WITH 0.031 TIP HAS A WORKING PRESSURE OF APPR. 1900 PSI
EG. WAGNER MODEL 2.8 WITH 0.031 TIP HAS A WORKING PRESSURE OF APPR. 1100 PSI
.011
.013
.015
.017
.018
.019
.021
.023
.026
.029
.031
.036
THIS LINE INDICATES TIP SIZES (FLOW) USED IN TESTS