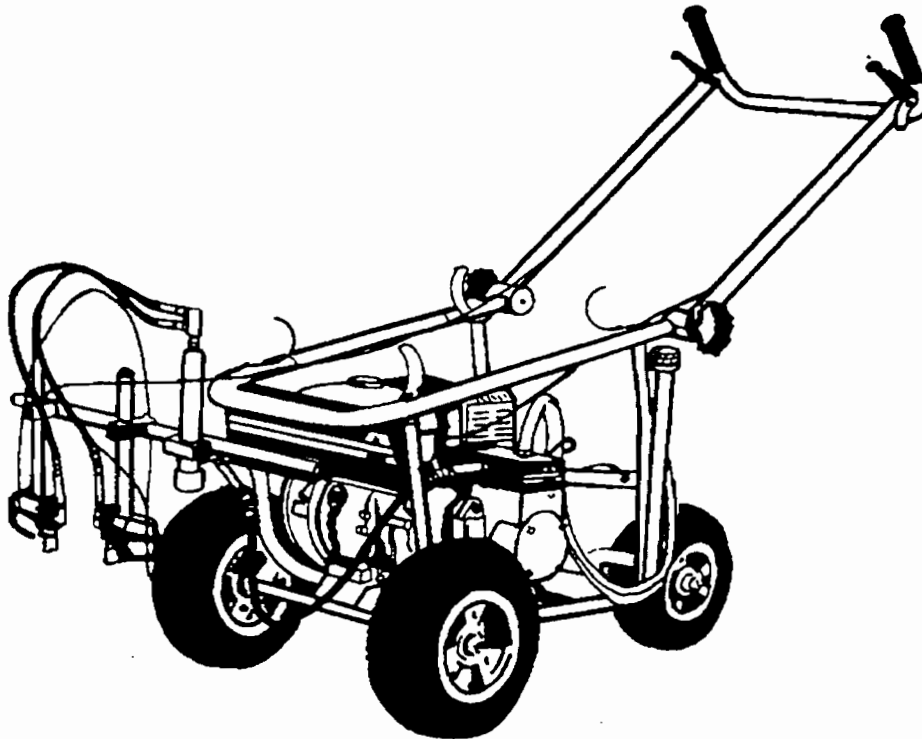




OPERATION MANUAL AND PARTS LIST FOR 3100GS-5 STRIPER

(Models 136-001DE, 136-001DE2)



WARNING: HANDLE THIS UNIT AS YOU WOULD A LOADED FIREARM ! The high pressure spray can cause extremely serious injury. OBSERVE ALL WARNINGS !

WARNING: Before operating this unit, read & follow all safety warnings and instructions related to usage of this equipment.

READ, LEARN & FOLLOW the Pressure Relief Procedure.

All Service Procedures to be performed by Authorized Airlessco Service Center Only. No modifications or alterations of any Airlessco equipment or part allowed.

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INTRODUCTION TO THE 3100GS-5 STRIPER

The Airlessco 3100 Series of airless paint equipment was developed to operate under high pressure with abrasive liquids such as paint. A major concern in the design was to incorporate simplicity, reliability and ease of maintenance and service. All the units in this group share these features and are operated in similar fashion.

The Airlessco 3100's consist of a mechanically driven diaphragm pump, the heart of the machine.

When the diaphragm is deflected upwards by a cam, paint in the pumping chamber is pushed through the discharge valve and high pressure hose and out through the spray gun. When the diaphragm is deflected downwards, the discharge valve closes, and fresh paint is drawn into the pump chamber through the suction valve.

The Pressure-Relief valve controls the pressure in the hose. When the knob is turned clockwise, pressure is increased. When it is turned fully counterclockwise, the valve opens (under very low pressure) and allows paint to be drawn into the pumping chamber (priming).

The 3100 GS-5 Striper employs the basic AIRLESSCO 3100 pump, with some modification for the more specialized task of striping. With an optional Airlessco 007 spray gun and high pressure hose, the striper can also be used for all kinds of airless spraying. The striper further differs from the basic unit in that it is powered by a gasoline engine rather than an electric motor. This does not significantly alter the manner in which the unit is used but does greatly increase the mobility of the Striper. Hence, nearly all instructions for use of the painting function of the basic unit are applicable to the striper.

The Striper engine throttle is controlled by the cable trigger on the left side of the unit. On the frame below this trigger is a trigger bypass control which is used to maintain operating rpms when the left-hand trigger is not used (such as when the unit is used as a sprayer for painting other than striping).

To operate the throttle bypass, first trigger the throttle, then switch the bypass lever backwards to lock the trigger on.

The AIRLESSCO 3100GS-5 comes with several standard features:

- 1) A folding handle, adjustable to suit the height of the operator. The handle also folds for ease of storage.
- 2) Gun Arm swings and locks on either side of the striper.
- 3) Third Wheel Swivels or can be locked in place using the adjustable turnbuckle (adjusts for circles down to 18" or straight lines).
- 4) Automatic clutch only operates pump when engine speed is increased (clutch never needs adjustment) refer to the engine manual for lubrication recommendations.

OPTIONAL ACCESSORIES

- 1) Double line Kit # 136-184 converts the 3100 GS-5 Striper for painting 2 parallel lines.
- 2) Swivel Spray Head #136-055 for spraying vertical surfaces. When used in conjunction with the Double Line Kit, curbs can be sprayed in one pass.
- 3) Spray Pack 002-001ST converts the 3100GS-5 into an airless spray unit. Use for spraying stencils, buildings and fences etc.
- 4) Bead Dispenser

SAFETY WARNINGS

HIGH PRESSURE SPRAY CAN CAUSE EXTREMELY SERIOUS INJURY OBSERVE ALL WARNINGS THIS SPRAYER IS FOR PROFESSIONAL USE ONLY

WARNING: HIGH PRESSURE SPRAY CAN CAUSE EXTREMELY SERIOUS INJURY, HANDLE AS YOU WOULD A LOADED FIREARM!! LEARN AND FOLLOW PRESSURE RELIEF PROCEDURE. READ AND UNDERSTAND ALL INSTRUCTION MANUALS, TAGS, WARNINGS, USER'S GUIDES AND LABELS ON MACHINE BEFORE OPERATING EQUIPMENT.

Order new labels from Durotech Co. if unreadable.

SAFETY IS THE RESPONSIBILITY OF THOSE WHO OPERATE THIS EQUIPMENT.

INJECTION HAZARD

Fluids under high pressure from spray or leaks can penetrate the skin and cause extremely serious injury, including the need for amputation.

NEVER point the spray gun at anyone or any part of the body.

NEVER put hand or fingers over the spray tip. Do not use rag or other materials over your fingers. Paint would penetrate through and into the finger.

NEVER try to stop or deflect leaks with your hand or body.

ALWAYS have gun tip guard in place when spraying.

ALWAYS remove tip from the gun to clean it.

NEVER try to "blow back" paint, this is not an air spray sprayer.

ALWAYS follow the **Pressure Relief Procedure**, as shown on Page 4, before cleaning or removing the spray tip or servicing any system equipment.

Be sure equipment safety devices are operating properly before each use.

MEDICAL TREATMENT

If any fluid appears to penetrate your skin, get **EMERGENCY CARE AT ONCE. DO NOT TREAT AS A SIMPLE CUT.**

Tell the doctor exactly what fluid was injected. For treatment instructions have your doctor call the

**NATIONAL POISON CENTER NETWORK
(412) 681-6669**

GENERAL PRECAUTIONS

NEVER alter equipment in any manner.

NEVER smoke while in spraying area.

NEVER spray highly flammable materials.

NEVER use around children.

NEVER allow another person to use sprayer unless he is thoroughly instructed on its safe use.

ALWAYS wear a suitable face mask while spraying.

ALWAYS ensure fire extinguishing equipment is readily available and properly maintained.

NEVER LEAVE SPRAYER UNATTENDED WITH PRESSURE IN THE SYSTEM. FOLLOW PRESSURE RELIEF PROCEDURES AS OUTLINED ON PAGE 4.

ALWAYS INSPECT SPRAYING AREA

Keep spraying area free from obstructions.

Make sure area has good ventilation to safely remove vapors and mists.

Never keep flammable materials in spraying area.

Never spray in vicinity of open flame or other sources of ignition.

Spraying area must be at least 20 ft. away from spray unit.

SPRAY GUN SAFETY

ALWAYS set safety lock on the gun in "LOCKED" position when not in use and before servicing or cleaning.

DO NOT remove or modify any part of gun.

ALWAYS REMOVE SPRAY TIP when cleaning. Flush unit with **LOWEST POSSIBLE PRESSURE.**

CHECK operation of all gun safety devices before each use.

BE VERY CAREFUL WHEN REMOVING THE spray tip or hose from gun. A plugged line contains fluid under pressure. If the tip or line is plugged, follow the Pressure Relief Procedure as outlined on Page 4.

TIP GUARD

ALWAYS have the tip guard in place on the spray gun while spraying. The tip guard alerts you to the injection hazard and helps prevent accidentally placing your fingers or any part of your body close to the spray tip.

SPRAY TIP SAFETY

Use extreme caution when cleaning or changing spray tips. If the spray tip clogs while spraying, engage the gun safety latch immediately. *ALWAYS* follow the **Pressure Relief Procedure** and then remove the spray tip to clean it.

NEVER wipe off build up around the spray tip. *ALWAYS* remove tip and tip guard to clean after pump is turned off and pressure relieved.

KEEP CLEAR OF MOVING PARTS

KEEP CLEAR of moving parts when starting or operating the sprayer. Do not put your fingers into any openings to avoid amputation by moving parts or burns on hot parts.

Precaution is the best insurance against an accident. When starting the engine, maintain a safe distance from moving parts of the equipment.

Before adjusting or servicing any mechanical part of the sprayer, follow the Pressure Relief Procedure, Page 4, and remove the ignition cable from the spark plug to prevent accidental starting of the sprayer.

NOTE: WARNING CONTINUED ON NEXT PAGE.

SAFETY WARNINGS

PRESSURE RELIEF PROCEDURE

To avoid possible serious bodily injury, including injection, always follow this procedure whenever the sprayer is shut off, when checking or servicing it, when installing or changing the tips, and whenever you stop spraying

1. Stop Engine.

2. Turn the Pressure Control Knob to "Prime" Position.



3. Trigger the gun.

4. Turn gun lock to locked position.



Lock Gun Trigger

If the spray tip or hose is clogged, follow Step 1 through 4 above. Expect paint splashing into the bucket while relieving pressure during Step 2. After following all 4 steps above it is safe to remove the tip from the gun to clean.

ALWAYS FOLLOW THE Airlessco-Durotech recommendations on machine pressure and operating instructions.

HOSES

Use only high pressure airless hoses with static wire approved for 3000 PSI.

High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling and result in an injection injury or serious bodily injury.

Use only hose having a spring guard. The spring guard helps protect the hose from kinks or other damage which could result in hose rupture and cause an injection injury.

Never use a damaged hose, which can result in hose failure or rupture and cause an injection injury or other serious bodily injury or property damage. Before each use, check entire hose for cuts, leaks, abrasion or bulging of cover, or damage or movement of couplings. If any of these conditions exist, replace the hose immediately. Never use tape or any device to try to mend the hose as it cannot contain the high pressure fluid. NEVER attempt to recouple the hose. High pressure hose is not recoupleable.

Help prevent damage to the hose by handling and routing carefully. Do not move the sprayer by pulling it with the hose.

GROUNDING

Grounding of sprayer is needed for operations while spraying flammable paint and cleaning with flammable thinners.

Ground the sprayer to reduce the risk of static sparking, fire or explosion which can result in serious bodily injury and property damage.

The 3100GSC has a grounding chain which you must make sure has contact with the painted surface (the ground)

Always ground all of these components:

1. Fluid hose - Use only grounded hoses. Once each week, check electrical resistance of hose (when using multiple hose assemblies, check overall resistance.) Overall (end to end) resistance of unpressurized hose must not exceed 29 megohms (max.) for any coupled length or combination of hose lengths. If hose exceeds these limits, replace it immediately. Never exceed 500 ft. (150 m.) overall combined hose length to assure electrical continuity.
2. Spray Gun grounding is obtained through connection to a properly grounded fluid hose and pump.
3. Object being sprayed, according to your local code.
4. All solvent pails used when flushing/ cleaning.

NOTE: WARNING CONTINUED ON NEXT PAGE

SAFETY WARNINGS

AVOID COMPONENT RUPTURE

This sprayer can develop 3000 PSI (205bar) fluid pressure. Always be sure that all components and accessories have a maximum working pressure of at least 3000 PSI (205 bar) to avoid rupture which can result in serious bodily injury, including injection and property damage.

NEVER leave a pressurized sprayer unattended to avoid accidental operation of it which could result in serious bodily injury.

ALWAYS follow the Pressure Relief Procedure whenever you stop spraying & before adjusting, removing or repairing any part of the sprayer.

NEVER alter or modify any part of the equipment to avoid possible component rupture which could result in serious bodily injury and property damage.

NEVER use weak or damaged or non-conductive paint hose. Do not allow kinking or crushing of hoses or allow it to vibrate against rough or sharp or hot surfaces. Before each use check hoses for damage & wear & ensure all fluid connections are secure.

REPLACE any damaged hose. **NEVER** use tape or any device to mend the hose.

NEVER attempt to stop any leakage in the line or fittings with your hand or any part of the body. Turn off the unit and release pressure by following PRESSURE RELIEF PROCEDURE.

ALWAYS use approved high pressure fittings and replacement parts.

ALWAYS ensure fire extinguishing equipment is readily available and properly maintained.

WARNING ! !

Do not use halogenated solvents in this system. The pump has aluminum parts and may explode. Cleaning agents, coatings, paints or adhesives may contain halogenated hydrocarbon solvents. **DON'T TAKE CHANCES !** Consult your material suppliers to be sure. Some of the most common of these solvents are: Carbontetrachloride, Chlorobenzene, Dichloroethane, Dichloroethyl Ether, Ethylbromide, Ethylchloride, Tetrachloroethane.

PREVENT STATIC SPARKING, FIRE/EXPLOSIONS

ALWAYS be sure all equipment and objects being sprayed are properly grounded. Always ground sprayer, paint bucket and object being sprayed. See "grounding" on page 4 for detailed grounding information.

Vapors created when spraying can be ignited by sparks. To reduce the risk of fire, always locate the sprayer at least 20 feet (6 m.) away from the spray area. Do not plug in or unplug any electrical cords in the spray area, which can create sparks, when there is any chance of igniting vapors still in the air. Follow the coating & solvent manufacturers safety warnings and precautions.

Use only conductive fluid hoses for airless applications. Be sure gun is grounded through hose connections. Check ground continuity in hose & equipment. Overall (end to end) resistance of unpressurized hose must not exceed 29 megohms for any coupled length or combination of hose length. Use only high pressure airless hoses with static wire approved for 3000 psi.

FLUSHING

Reduce the risk of injection injury, static sparking or splashing by following the specific cleaning procedure on pg. 7. **ALWAYS** follow the pressure relief procedure on pg. 4. **ALWAYS** remove the spray tip before flushing. Hold a metal part of the gun firmly to the side of a metal pail and use the lowest possible fluid pressure during flushing. **NEVER** use cleaning solvents with flash points below 140 degrees F. Some of these are: acetone, benzene, ether, gasoline, naphtha. Consult your supplier to be sure.

NEVER SMOKE IN THE SPRAYING/CLEANING AREA.

GAS ENGINE PRECAUTIONS

Locate unit 25 feet away from spray area in well ventilated area. Do not plug in electrical cords in spray area. **NEVER** operate in closed building unless engine exhaust is piped outside. **NEVER** allow hose to lay against engine mufflers or hot parts. **NEVER** refill fuel tank while engine is hot or is running.

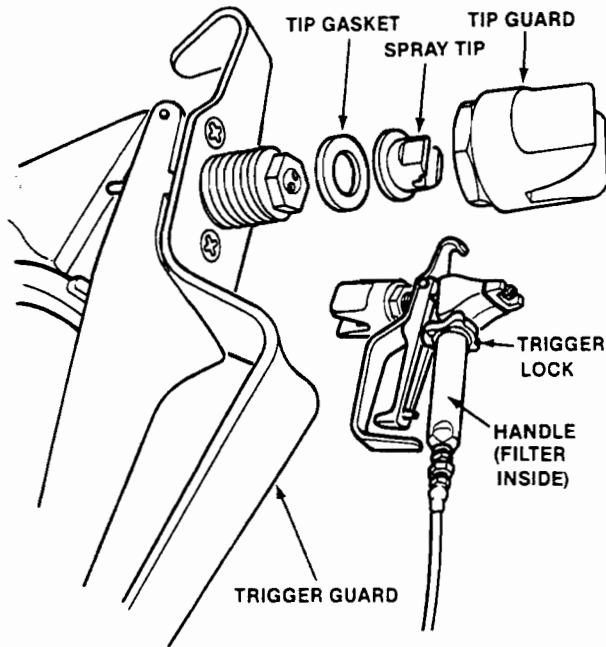
IMPORTANT: United States Government safety standards have been adopted under the Occupational Safety & Health Act. These standards, particularly the General Standards, Part 1910, & the Construction Standards, Part 1926 should be consulted.

WHEN SPRAYING & CLEANING WITH FLAMMABLE PAINTS OR THINNERS:

1. When spraying with flammable liquids, the 3100GSC unit must be located a minimum of 25 feet away from the spraying area in a well ventilated area. Ventilation must be sufficient enough to prevent the accumulation of vapors.
2. To eliminate electrostatic discharge, ground the 3100GSC, paint bucket and spraying object. Use only high pressure airless hoses approved for 3000 PSI which is conductive.
3. Remove spray tip before cleaning gun and hose. Make contact of gun with bucket and spray without the tip in a well ventilated area into the grounded steel bucket located 25 feet away from the machine.
4. Never use high pressure in the cleaning process. **USE MINIMUM PRESSURE.**
5. Do not smoke in spraying area.

007 SPRAY GUN

MAJOR COMPONENTS OF SPRAY GUN

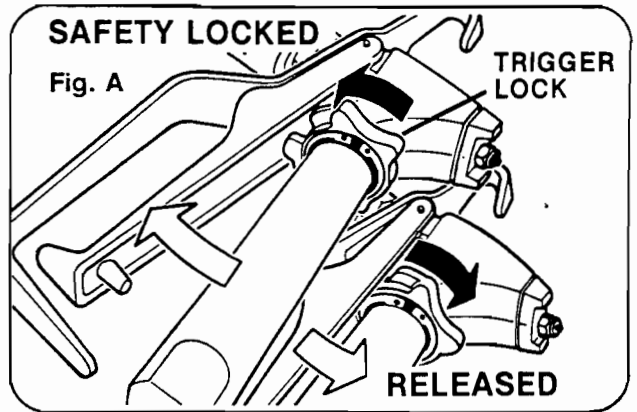


SPRAY GUN

Attach spray gun to whip hose and tighten fittings securely. Set the trigger lock.* Refer to Fig. A.

*The trigger lock should always be set when the gun is not being triggered.

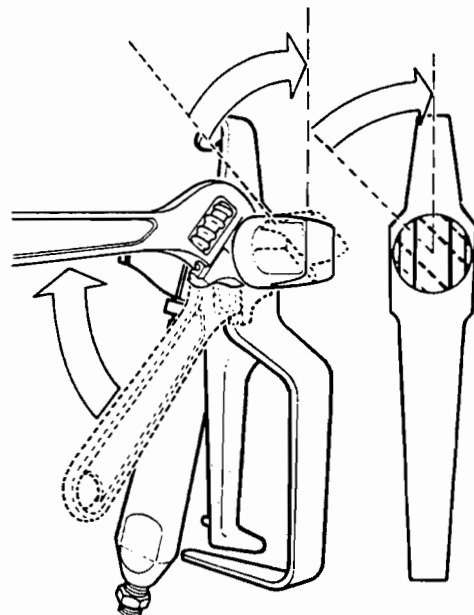
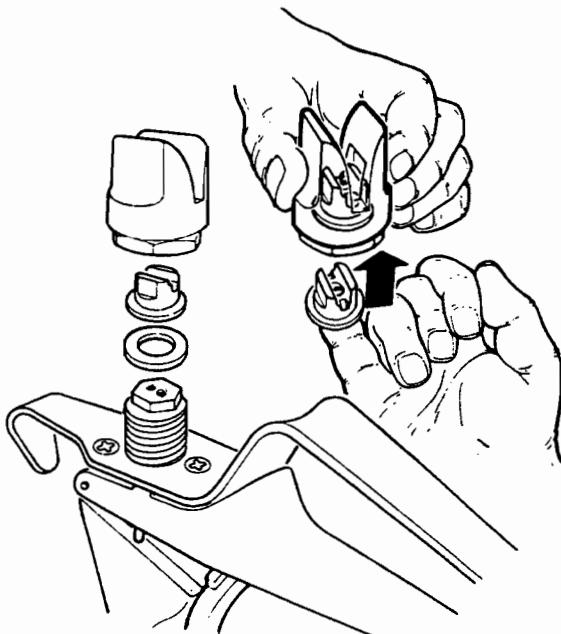
Read all warnings and safety precautions supplied with the spray gun and in product manual.



SPRAY TIP ASSEMBLY

Remove tip guard from spray gun. While holding tip guard upright, slide spray tip into tip guard. Make sure "flats" on spray tip are aligned with "ears" of tip guard. Spray tip is installed properly when "flats" recess into tip guard cavity.

Insert tip guard. Place tip gasket in tip guard behind spray tip. Thread tip guard "assembly" onto spray gun, finger tight with "ears" on a 45° angle to vertical (see figure). When the tip guard nut is wrenched tight, the tip guard "ears" and spray tip pattern will be aligned for vertical spray pattern. (Spray pattern may be adjusted to horizontal if preferred.)



STRIPER OPERATING INSTRUCTIONS

Handle this machine as you would a loaded firearm. Prior to starting, read, understand and observe all warnings & safety precautions on the following pages.

LINE STRIPING - Operating Instructions

1. Move the striper to an open area. (Never run in an enclosed area.).
2. Check the oil level in the engine and automatic clutch. (see engine manual for operating instructions).
3. Add gasoline as required (Unleaded Only). Never add gasoline while engine is running or is hot.
4. Start engine. Open the gas valve and set choke, then start engine according to engine manual. Allow to idle a few minutes to warm up. The engine engages the pump through an automatic clutch. At idle, the clutch disengages and no paint is delivered.
5. Mix and strain your paint. See paint preparation on page 1. Make sure all gun & hose connections are tight and you have a striping tip (marked "ST") in the gun. See page 8 for Striping Tip Selection.
IMPORTANT: When you want to change from striping to spraying or vice versa, always follow the Pressure Relief Procedure on page. 4.
6. NEW UNITS have oil in the pump. Before you use paint flush out the oil with paint thinner. To do this you must prime the pump by turning the Pressure Control Knob to the Prime position-counterclockwise. Put the siphon tube into a bucket of thinner, start the machine and lock the throttle on. Wait until a steady stream of thinner emerges from the small return hose. Turn the pressure control knob to low pressure and pump the

thinner/oil mix into a separate metal container (use for storage solution later).

Lift the suction hose out of the thinner and put into your pail, if you are using oil based paint. If you are using waterbased paint you need to flush again with water to remove the thinner. Now, prime the pump as before with paint. When you have a steady stream of paint coming you are ready to stripe.

7. To stripe, turn the pressure control knob to pressure (turn clockwise). The further you turn the knob the higher the pressure.

8. To test the spray pattern use a piece of cardboard placed under the gun. Squeeze the throttle and push the machine forward. Operate the gun by triggering right handle. You should see a nice clean 4" line. If the pressure is too low you will have an uneven line. If the pressure is too high, you will have overspray. The ideal pressure is the lowest setting that will give you a clean line.

Different paints need different tip sizes and different pressure. The thinner the paint the smaller the tip. The gun should be positioned approximately 5" from the ground. The gun assembly can be mounted on either side of the machine. Reversible tips are available so that if the tip should block while striping, it is just a matter of reversing the tip to blow out the blockage and then turning back to continue striping. See page for Striping Tip selection.

9. If finished for the day, follow the instructions for Sprayer Cleanup on the following page.

PAINT PREPARATION

Prepare the paint according to the manufacturer's recommendations and directions. Always follow paint & solvent manufacturer's safety precautions and warnings carefully.

Remove any skin on previously opened paint. Stir paint thoroughly to dissolve hard pigments. Strain the paint through a fine nylon mesh bag to avoid clogging of gun filter or spray tip.

Do not use abrasive, aggregate or fibre fill paint.

Most paints do not have to be thinned in order to be sprayed. However, it is possible that you may use a paint that is too thick to be sprayed. If thinning is required, add water to latex-based paint, add solvent to oil-based paint. Check paint label for proper thinning information.

STRIPER/SPRAYER CLEANUP

Clean your sprayer immediately after use

Proper Cleanup is extremely important in the maintenance of your new airless sprayer. Paint residue and rust (if water or latex was left in sprayer) will clog the system & damage internal parts.

If latex paint was used, clean with water, followed by Coro-Chek or mixture (1 to 1) of mineral spirits and oil. If oil-based paint was used, flush with appropriate solvent. (Refer to paint can label for manufacturer's recommendation.)

IMPORTANT: Never leave water or paint in the unit for even a few hours!

READ & OBSERVE ALL SAFETY WARNINGS ON PAGES 3, 4 AND 5 before operating and cleaning your sprayer.

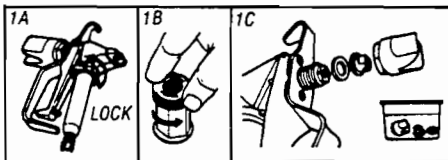
IMPORTANT PRECAUTION

Handle as you would a loaded firearm!
Always clean and flush the sprayer using VERY LOW PRESSURE WITH THE SPRAY TIP REMOVED FROM THE GUN. Always maintain firm metal to metal contact between gun and metal bucket to reduce static sparking.

STEP ONE.

Stop Engine.

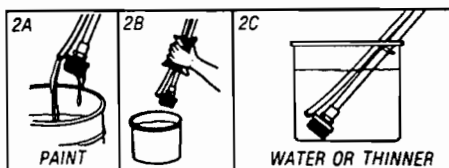
- 1A Trigger gun and turn gun safety lock to locked position.
- 1B Release pressure by turning Pressure Control Knob counterclockwise to prime.
- 1C Remove the tip from your gun and place it in thinner or water.



STEP TWO

Start Engine.

- 2A Lift the suction and return hoses from the paint and hold them above the bucket. Any paint remaining in until will return into bucket out of the return tube.
- 2B Wipe excess paint from tubes.
- 2C Place tubes into prepared bucket of thinner or water.



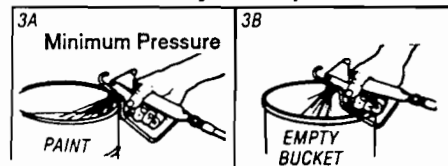
TOOLS & ITEMS NEEDED FOR CLEAN UP

1. Soft bristle brush & clean up rags.
2. 8" crescent wrench for removing gun tip and filter in gun handle.
3. Prepared 5 gal. bucket of soapy water if using latex, thinner if using oil base paint. If using latex a second bucket of water is required.
4. If using latex, a packet of Coro-chek mixed with 1 gal. of water OR if using oil base or for storage over 3 days, use mixture of half and half mineral spirits and oil.
5. Tapes or ties.
6. Empty bucket or container.

Note: Always store thinner in a metal bucket.

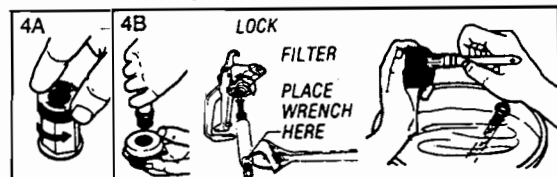
STEP THREE

- 3A Adjust Pressure Control Knob to a very minimum pressure and trigger gun into paint bucket to allow paint to run out of the hose and gun.
- 3B Place gun over empty bucket and trigger gun using very minimum pressure for 3 or 4 minutes until water or thinner runs clean. A second bucket of water may be required.



STEP FOUR

- 4A IMPORTANT: Turn Pressure Control Knob counterclockwise to prime position to release pressure and turn unit off.
- 4B Remove filters from suction tube & gun handle. Clean with water or thinner & soft brush and reassemble suction and gun filter only. IMPORTANT: Do not reassemble gun tip, tip washer and tip guard.



STEP FIVE

Mix Coro-Chek with 1 gal. of water or use your prepared mineral spirits and oil. Put suction tube into pail and prime unit. Trigger gun to fill hose and gun. LEAVE THIS MIXTURE IN THE UNIT FOR STORAGE. Stop engine while suction tube remains in bucket. Leave Pressure Control Knob in prime position.

TIP SELECTION

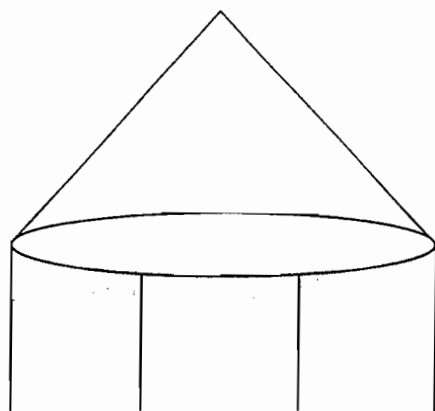
FLAT STRIPING TIPS	REVERSIBLE STRIPING TIPS	ORIFICE SIZES	FAN (")	LATEX FAN WIDTH			OIL BASED FAN WIDTH		
				2-3	3-5	4-6	2-3	3-5	4-
	550-213ST	.013	2 - 4					X	
102-115ST	550-115ST	.015	1 - 2				X		
102-215ST	550-215ST	.015	2 - 4					X	
102-315ST		.015	4 - 6						
102-415ST		.015	6 - 8						
102-117ST	550-117ST	.017	1 - 2	X					
102-217ST*	550-217ST*	.017	2 - 4		X				
102-317ST	550-317ST	.017	4 - 6			X			
102-417ST		.017	6 - 8						
102-219ST	550-219ST	.019	2 - 4		X				
102-319ST	550-319ST	.019	4 - 6			X			
102-221ST	550-221ST	.021	2 - 4		X				
102-321ST	550-321ST	.021	4 - 6			X			

Striping Tips should not be used for regular spraying.

Spray Tip Replacement: During use high pressure will cause the orifice to grow larger. This destroys the pattern or will leave tailing or two heavy lines on the outside of the pattern.

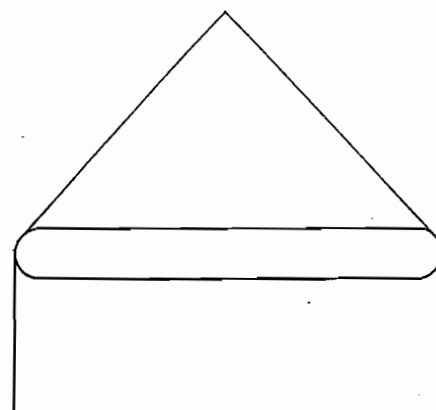
*Most popular sizes

REGULAR SPRAY TIP



LIGHT HEAVY LIGHT

STRIPING TIP

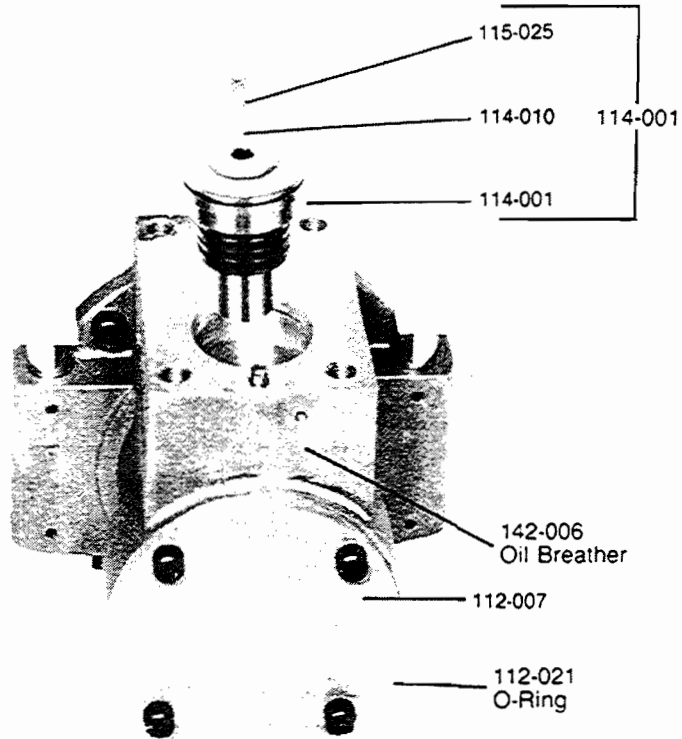


UNIFORM PATTERN

PAINT PUMP - PARTS LIST

TOOLS & TESTING EQUIPMENT

Open End Wrench 1 1/8"
Allen Wrench 7/16", PN 100-074
Allen Wrench 3/8", PN 100-073
Allen Wrench 3/16", 5/16 & 1/4"
Socket 3/8" , PN 100-071
Socket 7/16", PN 100-072
Socket 1 1/8" deep
Pressure Gauge, PN 111-045
(glycerine filled with snubbers, min 3000 psi)
Torque Wrench - min. 125 lbs.
Spray Pack (gun, tip & hose) PN 002-001
Screwdriver



OIL REQUIREMENTS

Change oil (6 oz. of Part No. 112-000) in the bearing housing every 6 months if sprayer operates daily. (If Airlessco oil unavailable - use SAE 30 non detergent).

To change oil, remove front plate (112-007) and drain the oil. Refill and replace front plate.

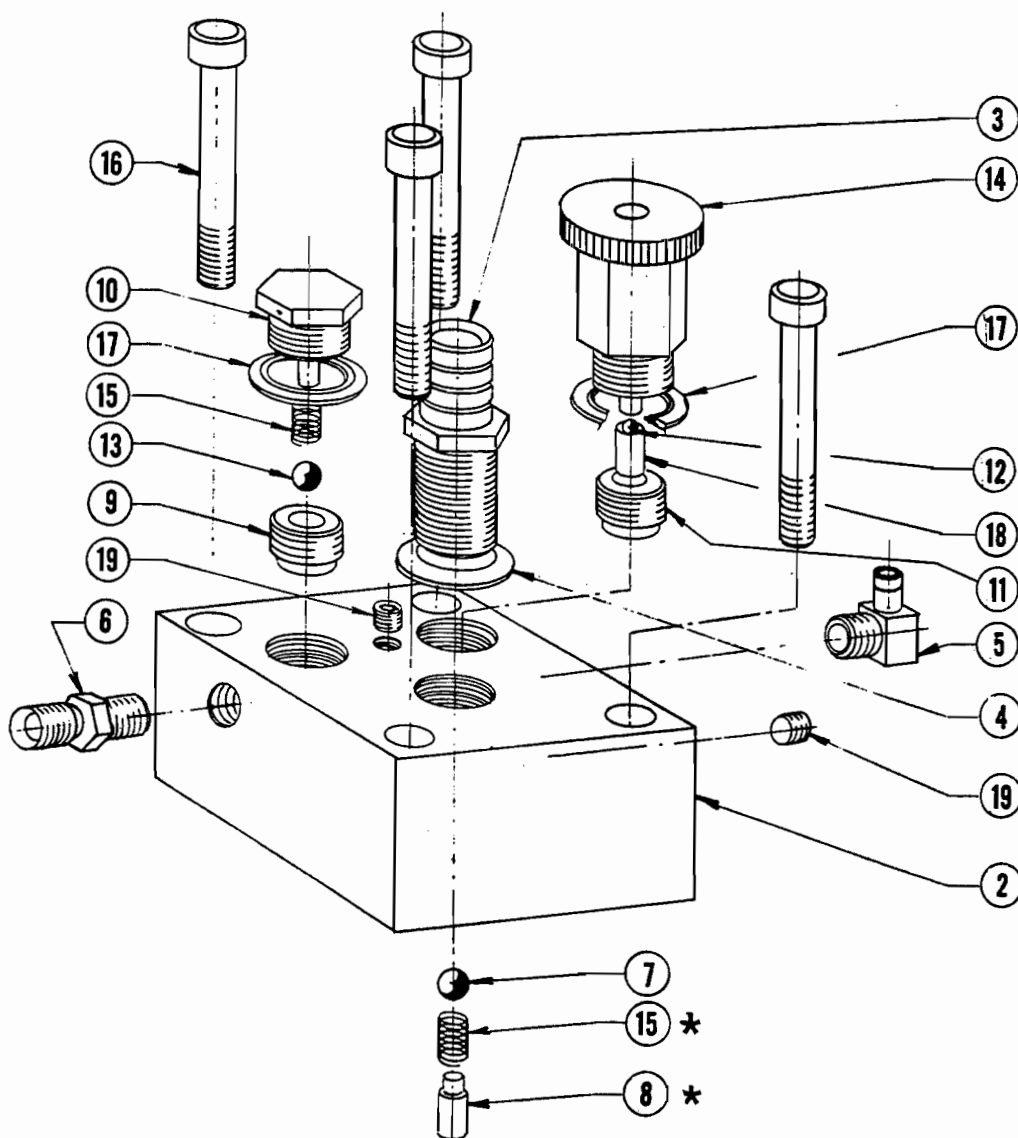
Note: Machine may spill oil due to overfill and/or temperature increase. This will not affect performance or operation.

MAINTENANCE NOTE RE: ENGINE IDLE SPEED

After a number of uses, engine idle speed may change from it's factory set speed. If the engine idles too fast, the clutch will not disengage and the unit will pump paint through the return tube while at idle. This condition will not damage the unit, but may result in increased wear on the pump. Reset idle according to the engine manual for this unit, so the clutch disengages at idle.

PUMP HEAD ASSEMBLY

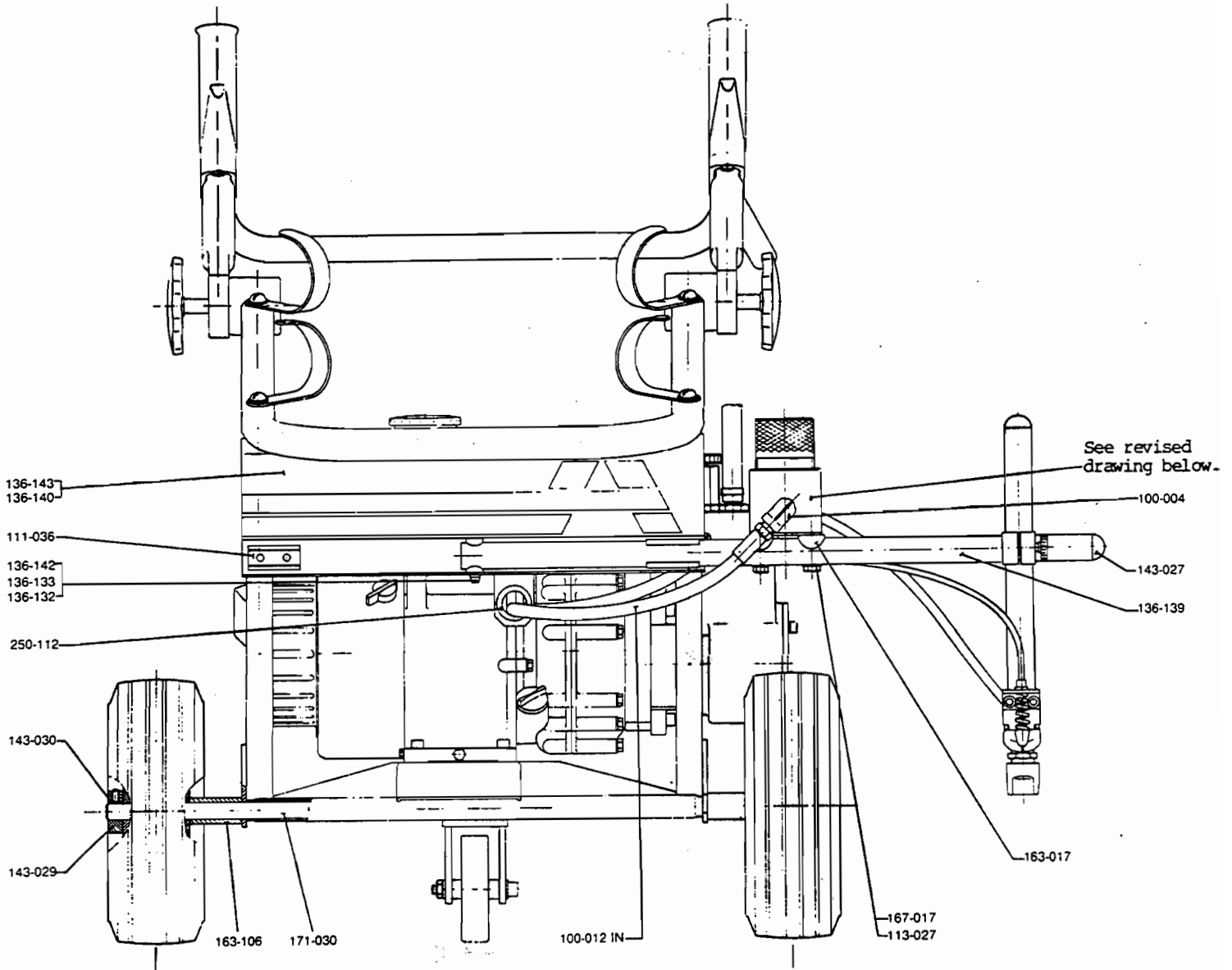
#115-101 - Models 3100, 3100GD, 3100GSC, 3100GS-5



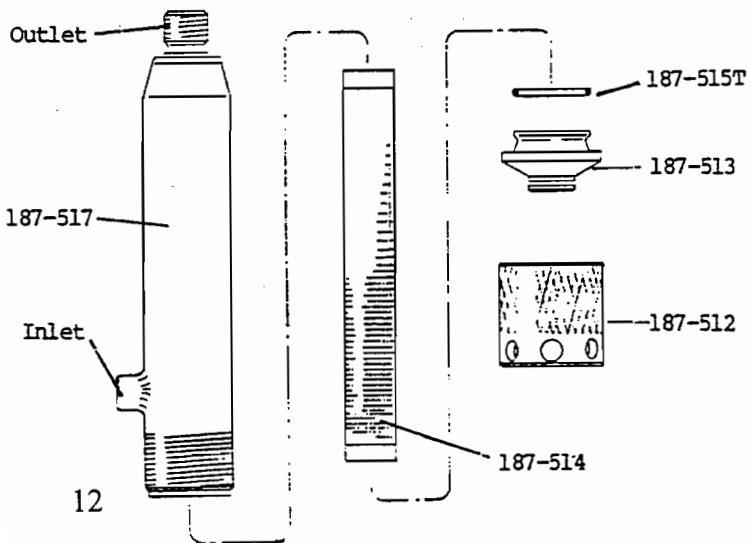
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	115-101	PUMP HEAD — ASS'Y	10	115-007	DISCHARGE VALVE BALL STOP
2	115-102	PUMP HEAD	11	115-016	CONTROL VALVE SEAT
3	115-105	SUCTION SEAT ASS'Y	12	115-017	CONTROL BALL 7/32" DIA.
4	145-006	SEAL WASHER	13	115-050	DISCHARGE BALL 11/32" DIA.
5	115-107	ELBOW	14	115-024	PRESSURE CONTROL VALVE
6	115-019	FITTING	15	115-025	SPRING *
7	115-022	SUCTION VALVE BALL 5/16 DIA.	16	115-027	SCREW
8	114-010	SUCTION VALVE * BALL STOP	17	115-028	RING SEAL
9	115-004	DISCHARGE VALVE SEAT	18	115-031	T.C. GUIDE
			19	115-034	PLUG

* NOT PART OF PUMP HEAD ASSEMBLY

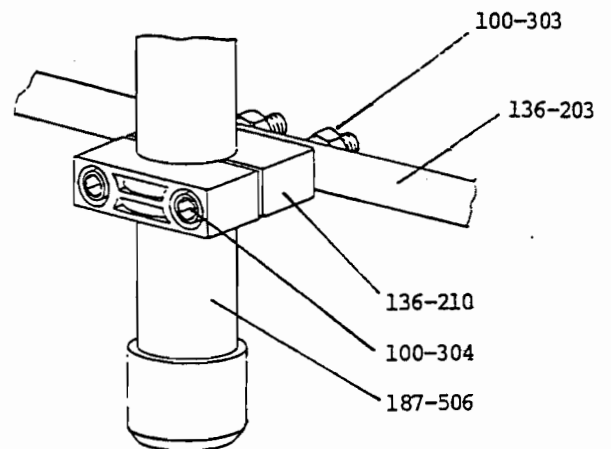
3100GS-5 PARTS LIST - FRONT VIEW



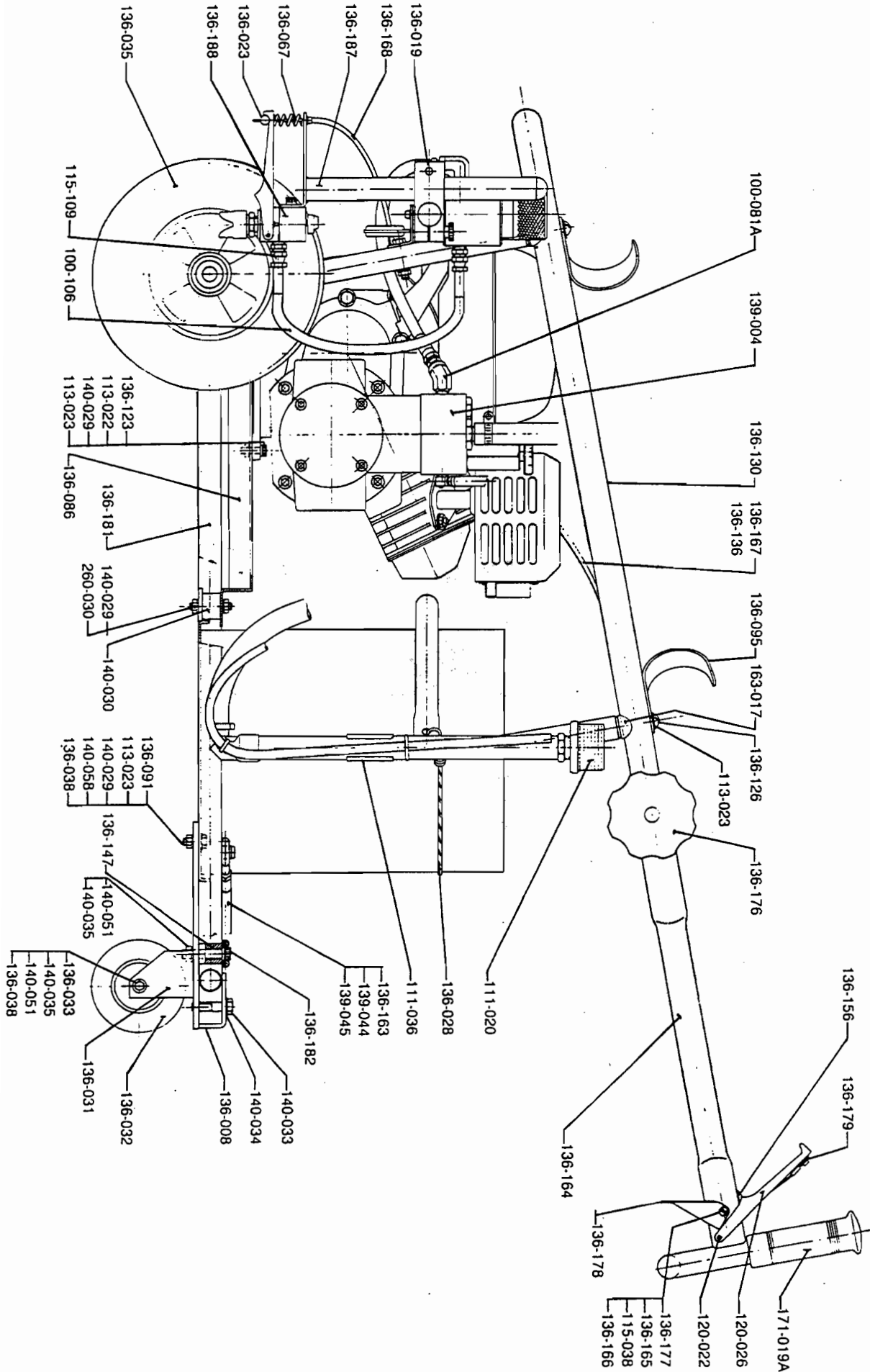
MODEL 187-506 High Pressure Filter



Mounting Bracket



3100GS-5 PARTS LIST -SIDE VIEW

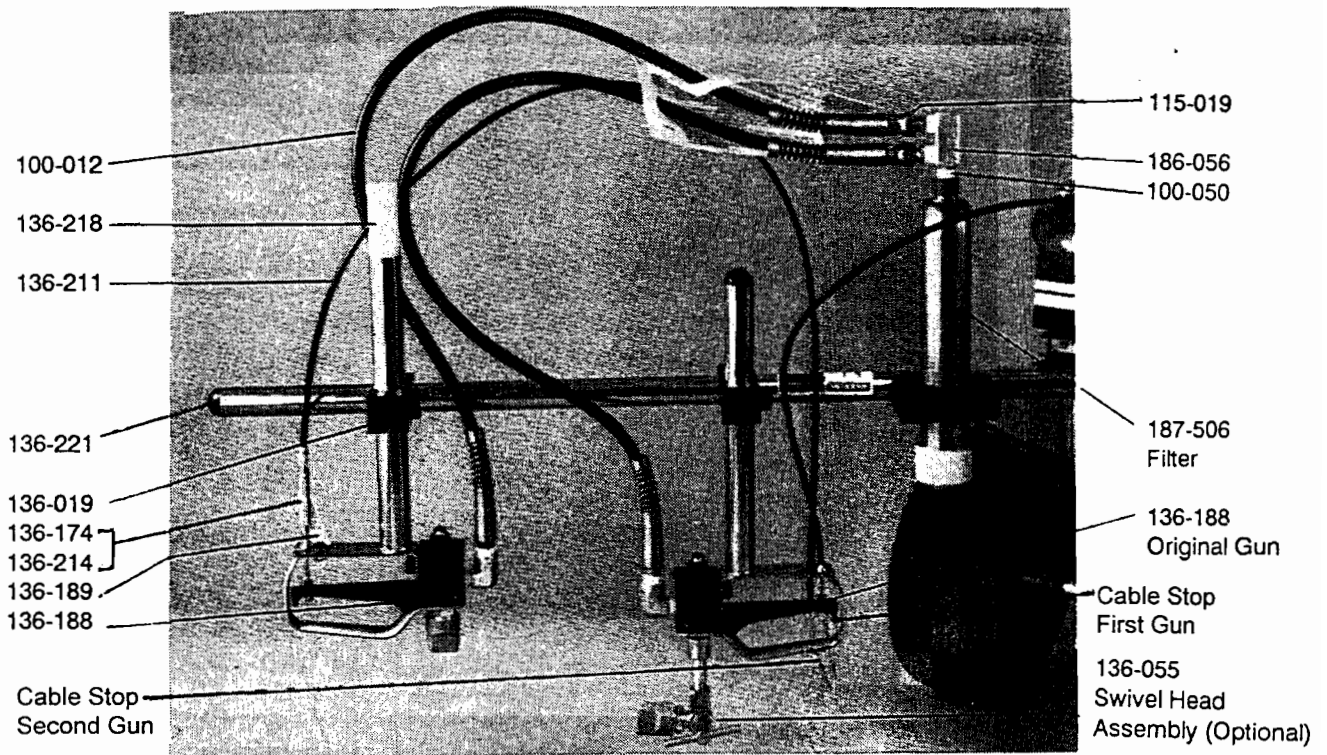


DOUBLE LINE KIT

Assembly Instructions

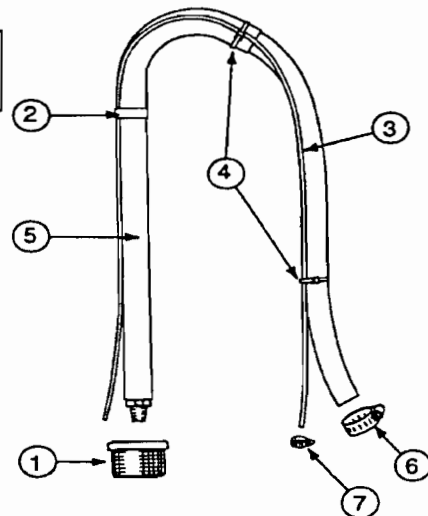
1. Pump the machine dry, then follow the pressure relief procedure in your instruction manual.
2. Remove the paint hose (100-012) and fitting (115-019) from the top of the high pressure filter.
3. Screw angle fitting (186-056) into the top of the filter.
4. Screw two hose connectors (115-019) into the two holes in the angle fitting (186-056).
5. Fit the second gun onto the swing arm.
6. Connect both hoses to the angle fitting (186-056).
7. Connect the second guns' cable (136-211) to the original gun by passing the cable through the second hole in the gun holder, pass the inner wire through the trigger and the trigger guard and fasten with the cable clamp.
8. Adjust both cables so that the second gun opens when the first gun is triggered. Both guns have cable adjusters to fine tune their operation.
9. The second gun has a cable lock (136-189). This lock holds the cable adjuster (136-214, 136-174) when both guns are being used.

To operate one gun only, slide the cable lock to one side to allow the cable adjuster to slide freely through the hole.



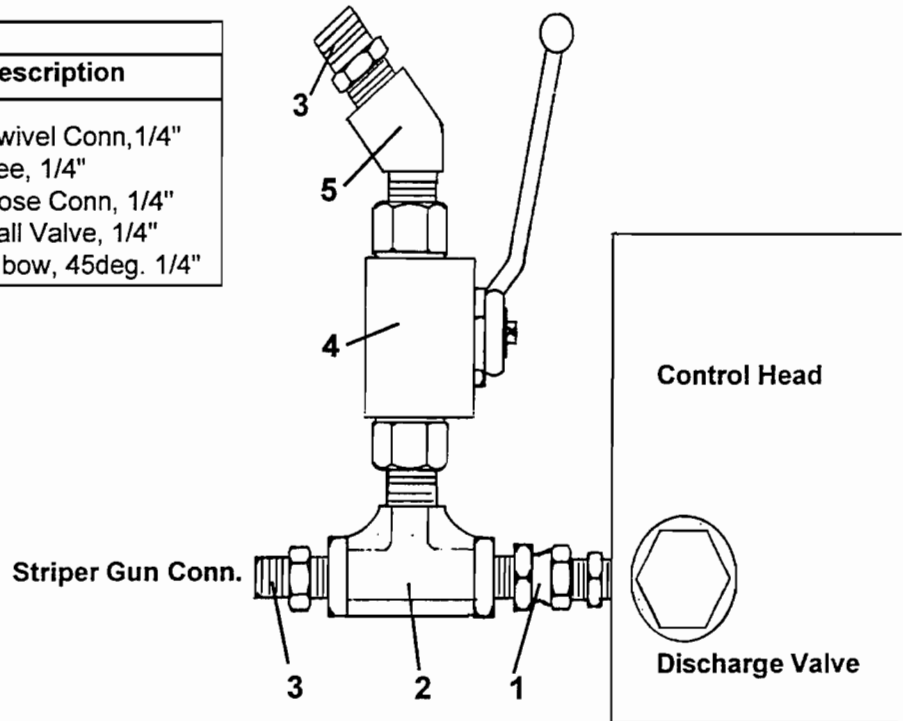
FILTER ASSEMBLY - PART NO. 331-227

ITEM #	PART #	DESCRIPTION
1	331-217	Filter 16 Mesh
2	331-135	Spring Clamp
3	331-137	Prime Hose (38")
4	111-016	Nylon Strap (2)
5	331-226	Suction Hose Ass'y
6	111-015M	Hose Clamp
7	141-015	Hose Clamp



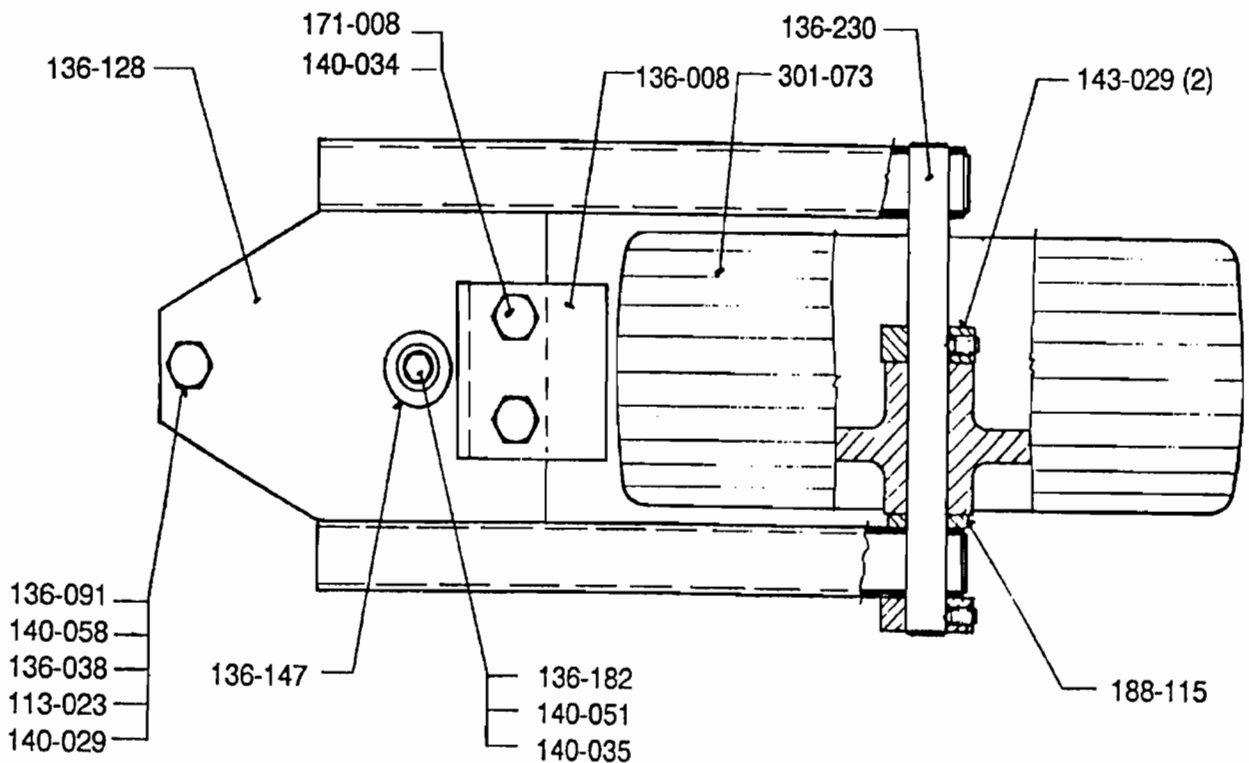
SPRAY GUN CONNECTION

PARTS LIST		
Item #	Part #	Description
1	100-003	Swivel Conn, 1/4"
2	100-352	Tee, 1/4"
3	115-019	Hose Conn, 1/4"
4	100-119	Ball Valve, 1/4"
5	100-081A	Elbow, 45deg. 1/4"



REAR WHEEL CASTER ASSEMBLY - PART NO. 136-129

Part No. 136-129 Caster Assembly includes all parts need to update earlier models. It is compatible with both the regular and turf models.



TROUBLESHOOTING

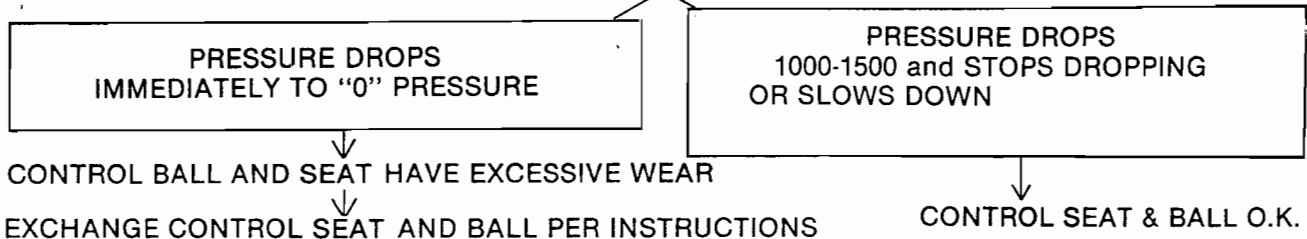
SYMPTOM	CAUSE	REMEDY
Engine not running.	<ol style="list-style-type: none"> 1. No gas in tank or gas valve closed 2. Cold Start without choke. 3. No oil in engine. 4. Loose spark plug. 	<p>See Engine Manual.</p> <p>Set choke & start. Refill. Tighten or replace.</p>
Unit does not draw up paint.	<ol style="list-style-type: none"> 1. Air in system. 2. Paint too heavy. 3. Filter dirty or plugged. 4. Paint dried out and ball stuck in valve seat. 	<ol style="list-style-type: none"> 1. Turn Pressure Control Knob counterclockwise to "Prime" and wait until system is free of air. 2. Thin paint. 3. Clean or replace Filter. 4. a. Unscrew Discharge Valve Ball Stop (115-007) and clean Ball (115-050) and Seat (115-004). b. Unscrew Pressure Control Valve (115-024) and clean Ball (115-017) and Seat (115-016). Grease Ring Seal (115-028) with multi-purpose grease before tightening Discharge Valve Ball Stop (115-007) and/or Pressure Control Valve (115-024). c. Unscrew Suction Hose Clamp and remove Suction Hose. Using small screwdriver press down slightly on suction ball to separate it from the seat.
Unit draws up paint, but pressure does not build up when spraying (Important: Check with Pressure Gauge.)	<ol style="list-style-type: none"> 1. Pressure Control Valve Open. 2. Air in system. 3. Excessive wear of or dirt in Pressure Control Valve Seat (115-016) & ball (115-017). 4. Midadjusted Control Valve Assembly. 	<ol style="list-style-type: none"> 1. Turn Pressure Control Knob (115-024) clockwise. 2. Turn Pressure Control Knob counterclockwise to "Prime" and wait until system is free of air. 3. Clean or see instructions for "Replacement of Control Valve Seat." 4. See instruction for "Adjusting Control Valve Assembly (115-024)."
Unit draws up paint, pressure builds up, but drops immediately when gun is opened. (Important: Check with Pressure Gauge.)	<ol style="list-style-type: none"> 1. Too large tip size. 2. Inlet filter plugged. 3. Paint too heavy. 4. Suction hose clamps not tight, pump sucking air. 5. Suction hose defective. 6. Control seat and ball worn. 7. Paint leaks through oil bleed hole in front of pump housing. 8. If none of above improved spraying - 	<ol style="list-style-type: none"> 1. Exchange Tips for smaller size. Tips wear out after some time, enlarging orifice. 2. Clean, or replace Filter. 3. Thin or filter paint. 4. Tighten clamps. 5. Replace suction hose. 6. See instructions for replacement of Control Valve Seat (115-016). 7. Replace diaphragm assembly. 8. Take your unit to an Authorized Airlessco Service Center.

SERVICE CENTER REPAIRS

The following service procedures should be performed only by an authorized AIRLESSCO Service Center. Unauthorized personnel repair will void warranty. Warranty repairs can be performed only by an authorized AIRLESSCO Service Center.

REPAIR TEST — LOW SPRAY PRESSURE

STEP 1 CHECK CONTROL VALVE Using 50' flexible hose and pressure gauge
PRIME PUMP AT FULL SPEED OF ENGINE.
ADJUST MAXIMUM PRESSURE
CHANGE SPEED TO IDLE.



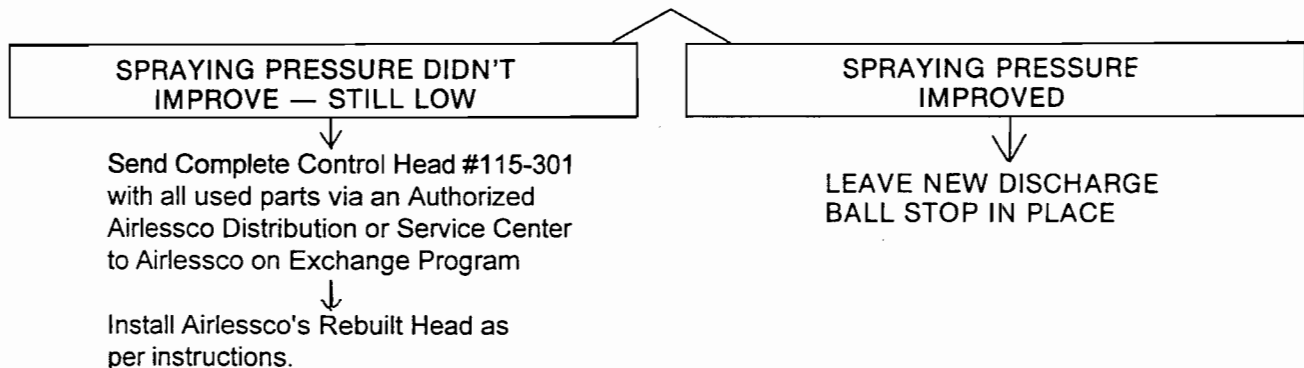
STEP 2 CHECK DISCHARGE VALVE AND SUCTION VALVE (follow this step after test #1)

Check visually the DISCHARGE BALL and SEAT. Remove the DISCHARGE VALVE BALL STOP PART (115-007) and SUCTION SEAT (115-105). Check for rings on the ball due to corrosion and or excessive wear of BALL and SEAT. Exchange parts if required.

STEP 3 CHECK DISCHARGE BALL STOP

(go to step 3 only when spray pressure is still low after completing steps 1 & 2)

PRIME PUMP
ADJUST MAXIMUM PRESSURE
SPRAY WITH .018 TIP
RECORD SPRAYING PRESSURE
TURN CONTROL KNOB TO PRIME
SHUT ENGINE OFF
REPLACE DISCHARGE BALL STOP PART (115-007) FOR NEW ONE
PRIME PUMP
ADJUST MAXIMUM PRESSURE
SPRAY WITH .018 TIP



The following service procedures should be performed only by an authorized AIRLESSCO Service Center. Unauthorized Personnel repair will void warranty. Warranty repairs can be performed only by an AIRLESSCO Service Center.

SERVICE CENTER REPAIRS

AIRLESSCO 3100 — PARTS EXCHANGE PROGRAM — OF CONTROL HEAD (115-101) • DIAPHRAGM ASSEMBLY (114-001) • CONTROL VALVE (115-024)

We offer parts exchange program for distributors to minimize the down time on your 3100 units. The repair center has available a control head assembly (115-101) and diaphragm assembly (114-001) to exchange with your used parts. This program makes it possible to completely rebuild your AIRLESSCO 3100 in a very short time.

TO REPLACE CONTROL HEAD (115-101)

1. Disconnect pick up and return hoses.
2. Remove bolts (115-027) and control head.
3. Remove old suction ball (115-022) from diaphragm.
4. Check spring (115-025) to make sure the top is 5/16" above the screw which holds the diaphragm parts in place.
5. Set new suction ball (115-022) on spring.
6. Place 2 head bolts in opposite corners of new block. Use these to center head as it is installed.
7. Tighten all 4 head bolts to 45 foot pounds.
8. Re-install pick up and return hoses.

DIAPHRAGM (114-001) SHOULD BE CHANGED WHEN:

1. Anytime the paint head is removed for any reason, a new diaphragm assembly should be installed.
2. Paint leaks from the weep hole in front. NOTE: During normal operation oil may drip out of the weep hole. This is a common occurrence and does not interfere with machine operation.
3. If paint is leaking around the head.

TO EXCHANGE A DIAPHRAGM

1. Remove the 4 head bolts (115-027) which hold the block in place.
2. Remove the head (115-101).
3. Put your thumb on the diaphragm and turn the fan with a screwdriver until you feel the diaphragm is at the top of its stroke.
4. Pry old diaphragm (114-001) assembly out by inserting a screwdriver under diaphragm washers. Do not pry against the casting.)
5. Check to make sure the shoulder inside the diaphragm is clean.
6. Insert rebuilt diaphragm with hole in guide (114-004) to the rear (away from the weep hole in the casting).
7. Press diaphragm down. Hold thumb on diaphragm, turn fan until diaphragm is at its lowest point. Check diaphragm spring. It should be 5/16 of an inch above the top of the screw.
8. Place suction ball (115-022) on diaphragm spring.
9. Clean and dry out the bottom of control head (115-101). Insert two bolts on opposite corners of the head and use these to center the head as it is re-installed on the machine.
10. After all bolts are installed, torque them to 45 foot pounds.

The following service procedures should be performed by an authorized AIRLESSCO Service Center. Unauthorized personnel repair will void warranty. Warranty repairs can be performed only by an authorized AIRLESSCO Service Center.

SERVICE CENTER REPAIRS

EXCHANGE OF WORN PARTS

TO REPLACE THE DISCHARGE SEAT (115-004)

1. Unscrew the discharge valve ball stop (115-007).
2. Remove ball (115-050).
3. Using 7/16 Allen wrench remove the seat.
4. Clean the bottom of the hole in the pump head and grease with a multi-purpose grease.
5. Install new seat and torque to 85 ft.-lb. (hold under the torque for several seconds).
6. Put new 11/32 ball (115-050) into the seat.
7. Clean and grease the ring seal (115-028). Clean top of the pump control head and shoulder of the ball stop before tightening.
8. Reinstall discharge valve ball stop (115-007). Tighten firmly to about 15 ft.-lb.

TO REPLACE CONTROL VALVE SEAT (115-016) and BALL 115-017)

1. Unscrew control valve assembly (115-024).
2. Remove ball (115-017) and guide (115-031).
3. Using a 7/16 Allen wrench remove the seat.
4. Clean the bottom of the hole in the pump head and grease with a multi-purpose grease.
5. Install new seat and torque to 85 ft.-lb.
6. Put in new ball 7/32 (115-017) and original guide (115-031) (be sure the notch on the guide is on the top).
7. Clean and grease the ring seal. Clean top of the pump control head and shoulder of the control valve before tightening.
8. Reinstall control valve and tighten to 15 ft.-lb.

TO RESET THE PRESSURE after a new control seat and ball have been installed **IMPORTANT: DO NOT READJUST PRESSURE WITH OLD SEAT AND BALL**

1. YOU MUST HAVE A Glycerine filled gauge with minimum pressure of 3000 psi.
2. A 50' flexible hose.
3. Install gauge in line between the pump head and the spray gun.
4. Remove the plastic cap from the center of the pressure control knob.
5. Prime unit with water or light oil.
6. Turn the pressure control knob clockwise against the stop.
7. Read the gauge — when using water it should read 2400 PSI — if you are using oil it should read 2500 PSI.
8. If pressure is low use a 3/16 Allen wrench and turn the set screw in the center of the pressure control knob clockwise watching the gauge until it is at a proper setting.
9. If the pressure is too high turn the set screw counterclockwise to the proper setting.
10. Replace the plastic cap.
11. Do not set the control valve above the recommended pressure (i.e. 2400 PSI with water or 2500 PSI with oil).