NEWSTRIPE INC.

Product Manual

Airless High Pressure Pumps

Proudly Made in the USA

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Airless High Pressure Pumps

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Newstripe Airless Paint Pumps are capable of spraying a wide variety of traffic striping and athletic field striping paints.

Please read over these instructions and make sure you understand the operating procedures and maintenance requirements before use.

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Airless High Pressure Pumps

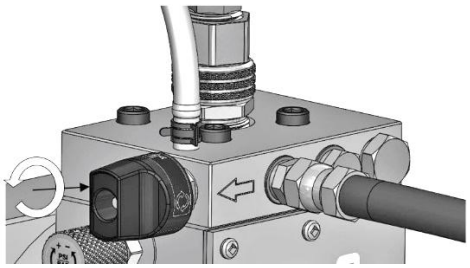
PRECAUTIONARY WARNINGS

- **PLEASE** read and understand <u>all</u> operation instructions as detailed in this manual. Failure to follow specified instructions may result in equipment damage or severe injury to personnel.
- **CAUTION:** High pressure spray can inject toxins into blood stream. **If injection occurs, seek emergency medical treatment.** Keep away from high pressure spray.
- **CAUTION:** Never point or discharge gun toward anyone or any part of your body. Gloves and other forms of clothing will not provide protection against injection injury.
- **WARNING:** Never try to stop leaks with any part of your body.
- **WARNING:** Never spray without a tip guard in place on the spray gun.
- **ALWAYS** engage the trigger lock when not spraying and make sure it is functioning properly.
- **WARNING:** Never leave the machine unattended with the system pressurized. When not spraying, always relieve the pressure in the system by turning the prime/spray valve knob on the pump to the recirculate position. ⟲⇦
- **CAUTION:** This system is capable of producing 3000 psi. Use only Newstripe Airless replacement parts rated at 3000 psi or higher.
- **DO NOT** remove the spray tip from the gun while cleaning the pump, or while the system is under pressure.
- **DO NOT** clean the spray tip in the spray gun. Relieve the pressure on the system and then remove the spray tip for cleaning.
- **ALWAYS** relieve the pressure in the system and remove the spray tip from the spray gun before cleaning the tip guard.
- **ALWAYS** consult your Facility Safety and/or Personnel Department for specified safety protocols prior to operating this equipment.
- **NEVER** use solvents containing halogenated hydrocarbons such as methyl bromine, carbon tetrachloride and ethyl iodine.
- **ALWAYS** strain your paint before use.

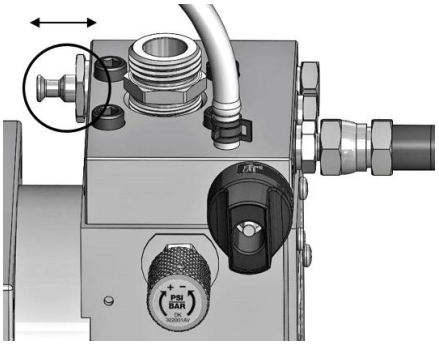
Airless High Pressure Pumps

PUMP OPERATION

1. **ALWAYS strain your paint before use.** Turn the knob on the prime/spray valve counter clockwise to the prime position.



2. Push the outlet valve push button three times to ensure free operation of the outlet valve.

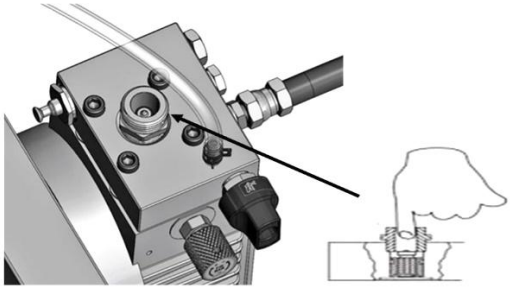


3. **Note:** If your machine has been in storage with Pump Defender or if your pump is new, purge the Pump Defender from the pump with the appropriate thinning agent for your paint, prior to painting. Do not use the pump with the engine set at idle, or damage will occur.

   Start the engine and set at ¾ throttle. Engage the pump lever (if equipped). Turn the knob on the pressure valve clockwise just until it stops. Do not turn the pressure valve knob until it is tight, or you may damage the valve. Fluid should begin moving up through the suction tube.

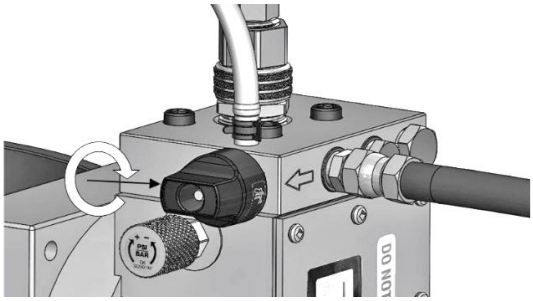
4. Allow the fluid to circulate for one minute to ensure all air has been purged from the pump. If bubbles continue to form in the bypass tube, make sure that the suction tube is tight on the inlet of the pump. You may slightly snug the suction tube with channel lock pliers, but **use caution to not overtighten it**, or damage to the hose washer may occur. If the suction tube is tight, but you still have bubbles, remove the suction tube, and inspect the rubber hose washer for wear or damage. Replace the rubber hose washer if necessary.

5. If the pump will not prime, and the suction tube is tight, remove the suction tube. Inspect the rubber hose washer for wear or damage and replace it if necessary. With your small finger, push on the inlet valve stem to insure that it moves freely. Replace the suction tube and repeat steps 1 - 4.



6. Once the pump has primed and you are ready to spray, turn the knob on the prime/spray valve clockwise to the spray position to pressurize the system.

   Note: When pump builds pressure properly, it should produce a knocking sound indicating it has reached the desired pressure. Watch for leaks. If leaks are present, address them Immediately!



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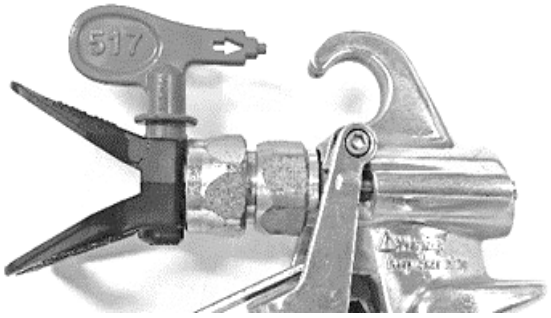
SPRAY OPERATIONS

1. **ALWAYS strain your paint before use.** Paint may have particles that will clog the foot filter, spray gun filter, and spray tips. Follow the paint manufacturer's recommendations for thinning the paint. Do not run the pump with the engine set at idle. This system is meant to be used with the engine set around ¾ throttle where it runs smoothest. Running this system with the engine set at idle will cause premature pump failure.
2. Rotate the spray tip in the spray gun to the cleaning position as shown below.

   Note: If your machine has been stored with Pump Defender or solvent, you will need to purge your hose and gun with paint prior to painting.



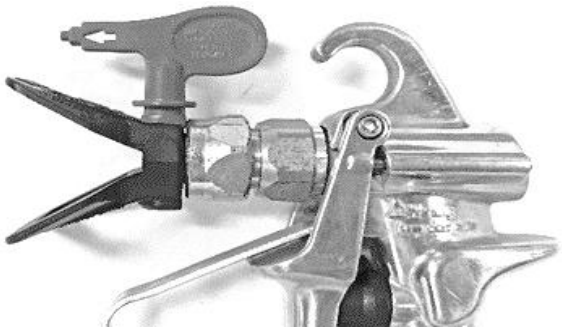
3. Point the spray gun into an empty waste pail and pull the trigger until paint comes out of the gun. To reduce splashing, direct the stream along the inside of the pail wall, well above any fluid level.

   CAUTION: If a flammable solvent is used in conjunction with a metal pail, touch the metal part of the spray gun to the side of the grounded metal pail to eliminate static discharge between the pail and spray gun. Keep your face clear of the pail.

4. Rotate the spray tip in the spray gun to the spray position as shown below. You may paint stencils or any other object freely or place the spray gun in the gun mount of your machine to paint lines. Raise the gun mount up to widen the line or move the gun mount down to narrow the line.

   Note: Turn the knob on the pressure valve counterclockwise to reduce system pressure. When the spray pattern begins to narrow, increase pressure by turning the pressure valve clockwise until the spray pattern is normal. Using the system at the lowest pressure that achieves good results may prolong the life of the system.

   CAUTION: Relieve the pressure on the system by placing the prime/spray valve of the pump in the recirculate position ⟲⇦, and lock the spray gun trigger to prevent accidental discharge when moving the spray gun in or out of the gun mount.



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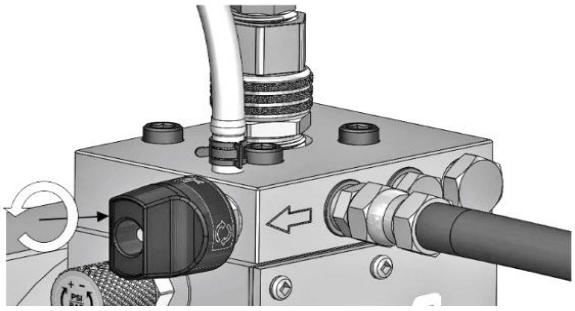
SYSTEM CLEANING

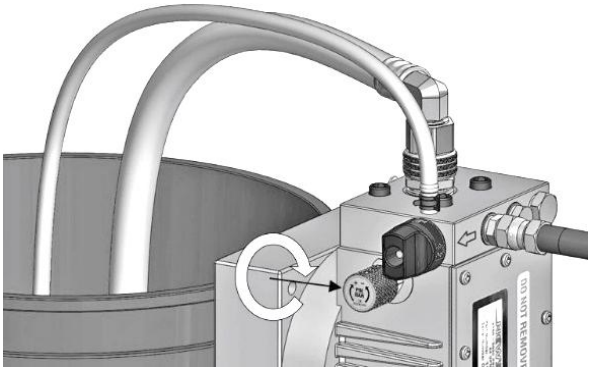
CAUTION: Failure to follow these instructions may cause damage to your pump.

- Do not use oil based solvents to clean your system after using water based paints. Use only warm soapy water for cleaning.
- Do not use metal or other hard objects to pick dried paint from the pump inlet or the spray tip orifice.

1. Turn the prime/spray valve to the prime position.



2. Turn the knob on the pressure valve clockwise until it stops. Do not turn the pressure valve knob until it is tight, or you may damage the valve.



3. Start the engine at ¾ throttle. Engage the pump lever (if equipped).
4. Lift the suction filter above the paint level in the pail and allow the majority of the paint to be exhausted from the pump through the return hose. Shut off the engine or disengage the pump lever.
5. Place the suction assembly and return hose in a container with enough of the appropriate solvent or water to clean the system. Restart the engine or engage the pump lever. Allow the pump to prime and circulate for 10 minutes.
6. While the cleaning fluid is circulating, wipe off the suction assembly and return hose with a rag.
7. Turn the prime/spray valve to the spray position and then turn the spray tip in the spray gun to the cleaning position.
8. Point the spray gun into an empty waste pail, pull the trigger, and spray for 1 minute, or until the spray runs clear. To reduce splashing, direct the stream along the inside of the pail wall, well above any fluid level. After the hose and gun are adequately cleaned, turn the prime/spray valve to the prime position, shut off the engine, and trigger the spray gun to release pressure.

   CAUTION: If a flammable solvent is used in conjunction with a metal pail, touch the metal part of the spray gun to the side of the grounded metal pail to eliminate static discharge between the pail and spray gun. Keep your face clear of the pail.

9. Remove and wipe the inside of the suction filter housing with a rag. Clean the suction filter disc separately and then reinsert it in the suction filter housing.

10. Repeat steps 1 - 3 and 5 - 8 with fresh solvent or water.
11. Remove the spray gun filter and clean with the appropriate solvent or soapy water or replace it if it is damaged.

Airless High Pressure Pumps

PRECAUTIONARY WARNINGS

- **ALWAYS** release the pressure in the system before changing or cleaning the spray tip. (Place the prime spray knob in the prime position ⟲⇦, turn off the machine, and then squeeze the spray trigger to release the pressure).
- **NEVER** use fuel such as gasoline to clean the equipment.
- **NEVER** use solvents containing halogenated hydrocarbons such as methyl bromine, carbon tetrachloride and ethyl iodine.

CLEANING PROCEDURE FOR EXTENDED PERIODS OF NON-USE

1. Clean the machine as instructed in the cleaning procedure.
2. Pick up suction filter and hold it with the bottom facing up and then pour about 2 ounces of Pump Defender into the suction filter so there is about 2 inches of fluid showing in the suction hose.
3. Leave the engine off and pull the recoil starter until you see Pump Defender in the return hose.
4. The machine may now be stored with Pump Defender remaining inside the hoses and pump.

   Note: Pump Defender is added to the system through the purge tank on ride-on machines. It will take more than 2 ounces to be able to get pump defender into the pump.

CLEANING PROCEDURE FOR WINTER (FREEZING) STORAGE

1. Clean the machine as instructed in the cleaning procedure and then place ½ bottle of Pump Defender in the pail.
2. Place the prime/spray knob in the prime position ⟲⇦ and the run pump until Pump Defender flows from the return hose.
3. Turn the prime/spray knob to the spray position and trigger the gun until Pump Defender sprays from the gun.
4. Turn the prime/spray knob back to the prime position ⟲⇦, move the pump engaging lever to the OFF position, and then trigger the spray gun to release the pressure.
5. Remove as much fuel from the engine gas tank of the machine as you can and then start the engine and run it until it runs out of gas.
6. Disconnect the paint hose from the pump and gun and then drain the hose.
7. Reconnect the paint hose to the gun and pump. The machine may now be stored in freezing temperatures.
8. Check the engine oil of the machine in the spring after it warms enough to paint. Use SAE 5W-30 Full Synthetic Motor Oil.

IMPORTANT NOTES

1. **DO NOT** use cleaners that have a high PH level in this pump. These cleaners will damage the internal surfaces of the pump. Warm soapy water is best for water based paints, or the appropriate thinner recommended by the paint manufacturer for oil based paints. Do not mix water and oil base products.
2. **DO NOT** use Acetone, MEK, or Lacquer thinners to clean the system unless specifically recommended by the paint manufacturer. Do not leave these solvents in the pump or hoses for long periods of time.

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MAINTENANCE ITEMS AND TORQUE SPECIFICATIONS

ALWAYS use a torque wrench when replacing parts on a Newstripe airless pump. Over tightening will damage the pump. Under tightening may result in a leak that may cause personal injury.

ALWAYS remove the old crush washers from the valve pockets and replace them with the new crush washers provided with the new valves. The crush washers are a one-time use item.

ITEM	CHECK	MAINTENANCE ACTION
Suction or Inline Filter	Before and after each use	Keep the filter or screen clean. Replace the filter or screen if it is damaged. Clean after use.
Hoses	Before each use	Check for wear or damage and replace them if needed.
Outlet Push Button	Before each use	Check for evidence that it is leaking and replace it if needed. Operating the pump with a leaking push button will cause irreparable damage to the block.. Always replace it if you replace the outlet valve. **Torque to 200 inch pounds with a $^{7}/_{8}$" socket.**
Inlet Hose Washer	If the pump will not prime	Check for wear or damage and replace it if the pump will not prime. Hand tighten or lightly snug with pliers. **Do not over tighten.**
Inlet Valve	If the pump will not prime	Recommended replacement of this valve is every 500-1000 gallons. **Torque to 150 inch pounds with a 1 $^{1}/_{16}$" socket.**
Outlet Valve	If the pump will not prime	Recommended replacement of this valve is every 500-1000 gallons. Always Replace the outlet push button when replacing this valve. **Torque to 150 inch pounds with a ¾" socket.**
Prime/Spray Valve	If the pump will not toggle between Prime and Spray	Recommended replacement of this valve is every 1000-1500 gallons or if it stops working. (Paint bypasses to the tank in the spray position) **Torque to 80 inch pounds with a ¾" crow foot wrench.**
Spray Pump	After each use	Check for leaks and address any that may have developed. Protect the pump with Pump Defender if not using the machine for more than one day.
Pressure Valve	If the pump primes but will not develop full pressure	Recommended replacement of this valve is every 5000 gallons. or if it stops working. **Newstripe Service is Recommended. Torque to 75 inch pounds with a $^{5}/_{8}$" crowfoot wrench.**
Diaphragm Assembly	Only if the block has been removed	Recommended replacement of this part is every 5000 gallons. **Torque the block assembly to 275 inch pounds with a ¼" Hex in an X pattern. Newstripe Service is Recommended.**
Outlet Fitting or Plug	Does not normally need replacement	**Torque to 350 inch pounds with a 5/8" socket.**

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MAINTENANCE NOTES

1) **ALWAYS STRAIN YOUR PAINT.** Clogged suction filters, inline filters, and gun filters may result from not straining your paint.
2) The number one reason that a pump may not prime is a worn or torn rubber washer between the inlet hose or suction tube and the inlet valve. A damaged inlet hose or suction tube may cause the same issue.
3) Keep your spray system as clean as possible to ensure the longevity of the system. Do not use cleaners with a high PH level to clean the pump internals, or damage to the pump may occur. Use Newstripe Pump Defender to keep your pump protected from corrosion and freezing.
4) Keep the suction tube or hose and bypass/return tube or hose clean. This minimizes the chance of dried paint flaking off and clogging the suction or inline filter and the possibility of the dried paint damaging the pump.
5) Function of the valves, diaphragm, and oil are not visibly observable. Following the Maintenance Chart and these notes may significantly prolong the performance of your machine.
6) If an oil leak is detected at the faceplate gasket, between the valve block assembly and housing, or output shaft seal, please contact Newstripe for service. A puncture in the diaphragm may also cause your pump to lose oil. Never try to clean the pump inlet by sticking object into the pump inlet valve or damage may occur. Do not remove the faceplate unless you are instructed to do so by a Newstripe representative. Do not remove the pressure valve without the pressure valve port facing upward, or oil will escape the pump and cause cavitation.
7) If the valve block assembly has been removed for any reason, the diaphragm should be replaced. The rim of the diaphragm is crushed between the valve block and the pump housing and is meant to be a one-time use. Reusing a diaphragm may cause the pump to leak oil and or paint.
8) When removing and replacing valves, the plastic crush washers must also be removed from the valve pocket with the pick tool provided with the new valve and then replaced with the new crush washer provided. Reusing crush washers or placing a new crush washer on top of an old crush washer may cause operational issues or a leak.
9) ALWAYS follow the instructions regarding torque in this manual or in the instructions that come with the part you are replacing.
10) **Please call Newstripe at (303) 364-7786** if you have any questions.

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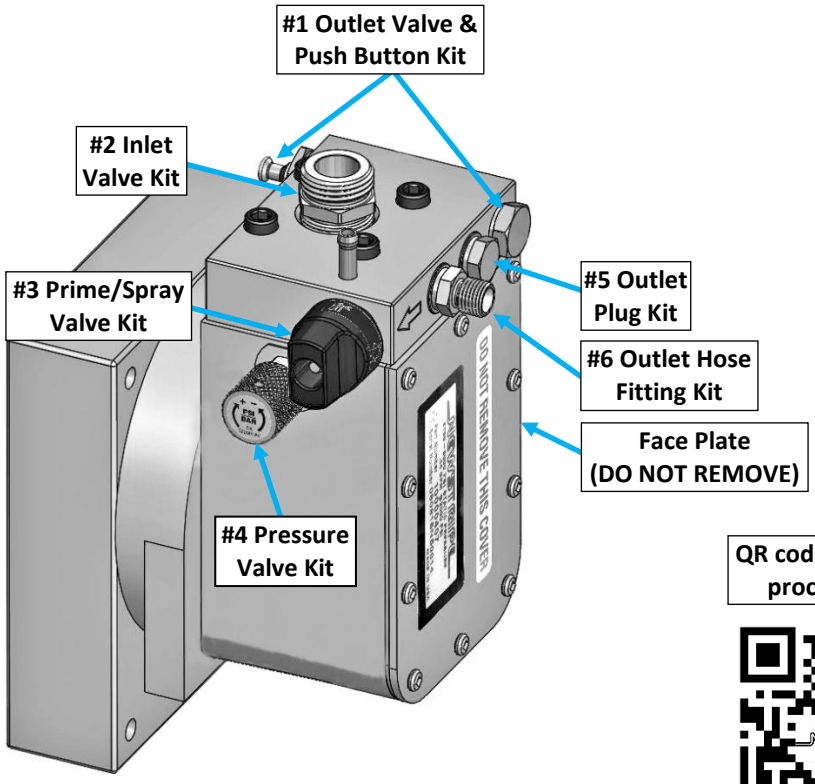
PARTS LIST

Item	Description	Part Number
#1	Outlet Valve & Push Button Kit	10005102
#2	Inlet Valve Kit	10002745
#3	Prime/Spray Valve Kit	10004000
#4	Pressure Valve Kit	10000380

Item	Description	Part Number
#5	Auxiliary Outlet Plug Kit	10005065
#6	Outlet Hose Fitting Kit	10003881
#7	Lip Seal Diaphragm Kit (Not Shown)	10000382
#8	Inlet Hose Washer 5-Pk (Not Shown)	10000711



QR code link for bleed procedure video

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	SOLUTION
Pump will not prime	Loose inlet hose/suction tube, or the sealing surface is dirty.	Remove the hose and clean sealing surfaces. Push the inlet valve stem in with your small finger to make sure it moves freely. Replace the hose and hand tighten. **Gently** snug with pliers only if necessary. **Do not over tighten.**
	Inlet hose/suction tube rubber washer is split or deformed.	Replace the rubber hose washer.
	The Prime/Spray knob is in the Spray position.	Place the Prime/Spray control knob in the Prime position (circular arrows aligned with the arrow on the pump block).
	The outlet valve check ball is stuck.	Press the outlet valve brass push button three times to free the check ball.
	Clogged suction or inline filter.	Clean or replace the filter screen and strain your paint.

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Pump will not prime (Continued)	The pressure valve knob is turned to the bleed position.	Turn the pressure valve clockwise until it stops. Do not tighten the knob or damage to the valve will occur.
	The hydraulic circuit of the pump is cavitated.	Scan the QR code on the previous page for the bleed procedure. Follow instructions in the video. If your pump still will not prime, please call Newstripe for assistance.
	Inlet and outlet valves are worn.	See the Maintenance Section for valve replacement intervals.
Pump primes and builds pressure but does not maintain pressure.	Loose inlet hose/suction tube, or the sealing surface is dirty.	Remove the hose and clean sealing surfaces. Replace the hose and hand tighten. **Gently** snug with pliers, but only if necessary. **Do not over tighten.**
	Inlet hose/suction tube rubber washer split or deformed.	Replace the rubber hose washer.
	Clogged suction or inline filter.	Clean or replace the filter screen and strain your paint.
	Inlet and outlet valves are worn.	See the Maintenance Section for valve replacement intervals.
	The spray tip is worn.	Relieve the system pressure and then replace the spray tip in the spray gun.
	The paint is too thick due to cold temperatures.	Refer to the paint manufacturers recommendations for the minimum temperature for painting.
Pump primes and builds pressure but equipment does not spray or produce a quality line.	The spray gun filter inside the spray gun handle is clogged.	Relieve the system pressure and then clean or replace the spray gun filter. **Note:** The narrow open end of the filter goes toward the top.
	The spray tip is clogged.	Reverse the spray tip and trigger the spray gun in a safe direction to clear the clog.
	The spray tip is damaged or worn.	Relieve the system pressure and then replace the spray tip.
	The Prime/Spray Valve is worn.	Make sure that no fluid is returning to the tank with the valve in the spray position. If there is, the valve needs replacement. Refer to the Maintenance Section.
	The paint requires thinning.	Follow the paint manufacturers recommendations for thinning the paint.
Pump Leaks	Oil between the valve block and pump housing.	Tighten the block bolts with a torque wrench as outlined in the Maintenance Section. If the leak continues, the diaphragm is damaged.
	Loose connection.	Tighten the connection with the appropriate wrench. Torque valves and fittings as specified in the Maintenance Section if one has come loose.
	Damaged component	Replace the component as specified in the Maintenance Section.
Oil in the paint	The diaphragm or valve block is damaged.	Replace the damaged parts as outlined in the Maintenance Section.

Airless High Pressure Pumps

12 Month Warranty

Newstripe, Inc. (“Newstripe”) warrants to the original purchaser, for 12 (Twelve) Months after date of purchase, that the high pressure pumps* (excluding wear items such as diaphragms and valves) hereby sold shall be free of defects in materials and workmanship. This warranty does not extend to any damage or malfunction resulting in misuse, neglect, accident, improper operation, or normal wear and tear.

* Remanufactured Newstripe high pressure pumps (excluding wear items such as diaphragms and valves) are warrantied for materials and workmanship for 6 (Six) Months after the date of purchase.

Damage incurred in shipment from Newstripe to the purchaser is the total responsibility of the shipping carrier. The purchaser is responsible for noting any damages on the Bill of Lading of the shipping carrier and Newstripe will work with the shipping carrier to resolve any damages incurred.

The Newstripe obligation under this warranty and any implied warranties is limited to replacement or repair of defective parts of its manufacture without charge for 12 (Twelve) Months from date of purchase. For service under this warranty, the purchaser shall obtain an approved Return Materials Authorization (RMA) from Newstripe and then ship the defective part or parts of the equipment, transportation prepaid by the purchaser, to Newstripe together with a written description of any claimed defect and proof of purchase date of the materials being returned. To review Newstripe’s complete guidelines for warranty claims and returns, please visit our website at www.newstripe.com.

The responsibilities described above are the only responsibilities of Newstripe under this written warranty or any implied warranty and may be exercised only within 12 (Twelve) Months from the date of original purchase. In no event shall Newstripe be liable for incidental or consequential damages and no person had any authority to bind it to any representation or warranty. Newstripe is not responsible for work done, materials furnished, or repairs made by others without its specific written authorization.

This warranty shall be in lieu of any and all other warranties, expressed or implied, including any warranties of merchantability or fitness for a particular purpose, and there is no other representation or warranty of any kind with respect to the goods sold hereby except as set forth herein. It is expressly agreed that this warranty shall be limited to the adjustment, repair or replacement of parts and the labor and services required thereby. In no event, including any claim of negligence, shall Newstripe be liable for incidental or consequential damages.