



“Express” Water Wagon & Water Skid

Operator’s & Parts Manual



1-20-09 01-027R11

Printed In The USA — Specifications & Design Subject To Change Without Notice!



A Message To The Owner And Operator

This equipment was carefully designed and manufactured to give you dependable service. To insure efficient operation of this equipment, please read this operator's manual carefully. Check each item and acquaint yourself with the adjustments required to maintain optimum performance and operation. ***Remember, this equipment's performance depends on how you operate and care for it!***

At the end of each season, thoroughly clean and inspect your equipment. Preventive maintenance saves time and pays dividends. Your nearest Wylie Spray Center has original equipment parts which assure proper fit and best performance. Record your equipment's model and serial numbers and the date you purchased this equipment in the space below. Have this information available when you order parts or attachments.

Model Number: _____

Serial Number: _____

Date Purchased: _____

Limited Warranty

This is a limited warranty. It covers products manufactured by WYLIE Mfg. Co. The Warrantor is **WYLIE Mfg. Co., 702 E. 40th St., Lubbock, Texas 79404 USA**. The duration of the warranty for WYLIE manufactured equipment and products (excluding polyethylene tanks) is for **one year from date of delivery to the carrier**. The Warrantor warrants to the Buyer that the product(s) sold hereunder are free from defects to material and workmanship, under normal use and service, in the hands of the original buyer.

If goods are defective, the defective goods will be replaced with identical goods. If identical goods are not available, the Buyer may elect to receive a refund of the purchase price for the defective goods, or the Buyer may order similar goods. **The damage for defective goods shall not exceed the purchase price of the defective goods. No allowance shall be made for labor or expense or repairing goods without prior approval in writing by the Warrantor.** The Buyer's remedy under this warranty does not include incidental or consequential damages.

For products not manufactured by the Warrantor, the Warrantor warrants these products to the extent of the warranties of their respective manufactures. **There are no warranties which extend beyond this limited warranty, including the implied warranty of merchantability.** Dealers or representatives shall not make any representation in regard to particular goods except as authorized by the Warrantor through a written warranty accompanying those particular goods.

Disclaimer of Warranty

WYLIE Mfg. Co., and its divisions, "Wylie Spray Centers," in each location, requires as a condition of sale and coverage by its LIMITED WARRANTY that all equipment sold by it be used in accordance with the instructions and specifications of the Warrantor. This requirement is in addition to the LIMITED WARRANTY.

Polyethylene and fiberglass tanks – These tanks are warranted for the storage and transport of water, herbicide solutions (on farm), liquid fertilizer and liquid feed. Such tanks should not be used for the storage of any bulk herbicide (undiluted). Any such use will render this warranty void.

In addition, the Warrantor makes no warranty with regard to bulkhead tank fittings used in connection with tanks containing bulk herbicides and the use of any such fittings sold by the Warrantor or any WYLIE dealer in connection with tanks containing bulk herbicides is improper.

Chemical Incompatibility – The Warrantor does not make any recommendations or warranties regarding chemical compatibility. WYLIE shall not be liable for any damages due to chemical incompatibility, and any Buyer or user should rely solely on written information furnished by the chemical manufacturer regarding chemical compatibility.

No employee of WYLIE Mfg. Co., or its representatives, agents or dealers, is authorized to vary the terms of this limited warranty.



Wylie Manufacturing Company
 702 E. 40th St.
 Lubbock, TX 79404
 Ph. 888-788-7753

“Express” Water Wagon or Skid

Date of Purchase		Model Number	
Tank Serial Number	Type of Applicator:		
Trailer Serial Number	Trailer		
Pump Model	<input type="checkbox"/> 500	<input type="checkbox"/> 1,025	
Wylie Invoice Number	<input type="checkbox"/> 800	<input type="checkbox"/> 1,600	
Owner's Name	Skid		
	<input type="checkbox"/> 500		
Address			
City	State	Zip	
Dealer			

 Owner's Signature

Must be returned within 10 days to validate the warranty.



Table Of Contents

- Safety Issues 2-3
- Reporting Safety Defects..... 3
- Safety Decals & Placement 4
- Introduction..... 5
- Inspection & Setup 6
- Operation..... 7-10
- Maintenance..... 10-11
- Tip Charts 11
- Troubleshooting Guidelines..... 12
- Repair Parts..... 14--28
 - 500 Elliptical, 1,025 Gallon Trailer Assembly..... 14
 - 500 Gallon Rectangular Tank Trailer Assembly..... 15
 - 800 Gallon Trailer Assembly..... 16
 - 1,600 Gallon Trailer Assembly..... 17
 - Axles & Hubs 18
 - Lighting 19
 - Trailer Pump & Plumbing..... 20
 - Rectangular Tank Trailer Pump & Plumbing..... 21
 - Suction Plumbing..... 22
 - Skid Assembly 23
 - Skid Pump & Plumbing..... 24 - 25
 - Spray Bar..... 26
 - Fire Hose, Side Watering Kit , Anti-Siphon Fill Kit, Garden Hose..... 27
 - Tsurumi Pump..... 28



 **Safety Precautions** 

Be alert when you see the above symbol in the manual. It warns of a hazard which might lead to injury. It means: **Attention! Become alert! Your safety is Involved!**

Three (3) words are associated with this symbol. They are:

DANGER – Indicates an imminently hazardous situation which, if not avoided, likely will cause serious injury or death. It is associated with the most extreme situations, typically for machine components, which, for functional purposes, cannot be guarded.

WARNING – Indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death. Relates to hazards that are exposed when guards are removed and alerts against unsafe practices.

CAUTION – Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may be used as an alert against unsafe practices.

Before Use 

Do not operate trailer until this manual has been read and understood!

- ☛ Thoroughly read and understand all instructions before operating this trailer. If you have questions, please contact **Wylie Manufacturing, 702 E. 40th St., Lubbock, TX 79404, (888) 788-7753**. You can also contact your nearest **Wylie Spray Center**.
- ☛ Make sure that the trailer is properly attached to the tow vehicle, including lights, safety chains, hitch and breakaway brake cable.
- ☛ Check lug bolts for tightness and tires for wear.
- ☛ Adjust hitch height as needed to assure that trailer is level when fully loaded.
- ☛ Always wear safety goggles, chemical resistant apron and rubber gloves when handling chemicals.
- ☛ Read and understand the chemical manufacturer's safety guidelines on handling, mixing and application.

During Use 

- ☛ Do not allow anyone to ride on trailer during operation. Falling can cause injury or death.
- ☛ Reduce speed when crossing uneven or rough terrain.
- ☛ Always turn off tow vehicle engine before making adjustments or repairs to an attached trailer.



After Use



- ☛ Inspect trailer for wear or damage.
- ☛ Ensure that all fasteners and fittings are tight.
- ☛ Flush tank and pump with fresh water if chemicals are used. Dispose of flush water using appropriate means.
- ☛ Carry out maintenance and/or lubrication procedures as outlined in this manual.

Always



- ☛ Keep hands, feet and clothing away from moving parts.
- ☛ Wear protective clothing and gloves when working with chemicals.
- ☛ Assure that the hitch is attached to the proper size ball.
- ☛ Attach the safety chains and breakaway brake cable to the tow vehicle.
- ☛ Plug the lights into the tow vehicle.

Operator's Instructions



- ☛ When possible, avoid operating the tow vehicle near ditches, embankments and holes.
- ☛ Reduce speed when turning, crossing slopes and on rough, slick or muddy surfaces.
- ☛ Do not permit others to ride.
- ☛ Operate tow vehicle smoothly – no jerky turns, starts and stops.
- ☛ Hitch only to the hitch points recommended by the tow vehicle manufacturer.
- ☛ When tow vehicle is idle, engage brakes and park lock securely.
- ☛ Tighten lug bolts before transporting the first time and maintain proper torque.
- ☛ Check lights and wiring daily. Service and replace to maintain proper operation.

Wylie Manufacturing, 702 E. 40th St., Lubbock, TX 79404

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Wylie Manufacturing.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in any individual problems between you, your dealer, or Wylie Manufacturing.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (366-0123 in Washington, DC area) or write to:

**NHTSA
U. S. Department of Transportation
400 7th Street SW, (NSA-11)
Washington, DC 20590**

You can also obtain other information about motor vehicle safety from the Hotline.



Safety Decals & Placement "Express" Water Wagon



CAUTION

Do not operate this trailer without checking the following list.

Operating Checklist

- ✓ Coupler and ball must be same size.
- ✓ Coupler must be locked.
- ✓ Safety chains must be crossed beneath hitch and attached to truck.
- ✓ Breakaway brake cable must be attached to truck.
- ✓ Trailer lighting must be operating properly.
- ✓ Jack must be retracted.
- ✓ Wheel lug bolts must be properly tightened.
- ✓ Brakes must be properly adjusted.
- ✓ Trailer load must be evenly distributed for proper towing.
- ✓ Cargo and trailer equipment must be properly secured.

W9029

Decal #V9029

WARNING

**DOT Approved For
Non-Flammable & Non-Hazardous
Materials Only**

Transporting flammable or hazardous materials in this trailer may be dangerous and unlawful.

Decal #V9020



500 Gal. "Express" Water Wagon



800 Gal. "Express" Water Wagon



500 Gal. "Express" Water Wagon



1,025 Gal. "Express" Water Wagon



500 Gal. "Express" Water Skid

Introduction

The Wylie "Express" Water Wagon and Skid are the result of years of testing and field proven experience. They are built of the finest materials and expert workmanship to provide you with years of reliable service. The "Express" Water Wagon is available with a 500, 800, 1,025, or 1,600 gal. tank. Features include a Tsurumi transfer pump powered by a Honda engine, spray bar, fire hose and nozzle, discharge and suction manifold, lights, brakes and fenders.

The "Express" Water Skid features a 500 gallon elliptical tank as well as the same pump, motor, spray bar, fire hose and suction manifold found on the Water Wagon. All of the functions of the "Express" Water Skid are very similar to the Water Wagon and can be easily adapted from the instructions in this manual.

The "Express" Water Wagon and Skid are designed to control dust, compact roads and building sites, water remote landscape, cool concrete saws and a variety of other watering projects.

This manual explains where and how to make necessary adjustments to your "Express" for safe and proper operation. Thoroughly read and understand the contents of this manual before operating your sprayer. If you have questions or do not understand particular items, contact your nearest Wylie Spray Center or call Wylie Manufacturing at (888) 788-7753. Please keep this manual handy to answer questions you may have as they arise.

Pay Particular Attention To All Safety Suggestions – Their purpose is to assure safe operation of the sprayer and prevent injury or damage to yourself or the unit.



Inspection & Setup

Your "Express" Water Wagon is delivered ready for operation. However, it is suggested that you check fasteners for tightness such as lug nuts. Check the motor to assure that it has the proper oil level (see the motor operator's manual for details). Make a visual inspection to assure that nothing was damaged in shipping. Report any problems to your dealer or to Wylie Mfg.

Attaching To Pickup

The 500 gallon trailer is equipped with a 2" hitch while the 800, 1,025, and 1,600 gallon trailers are equipped with a 2 5/16" hitch. Make sure that the pickup or tractor has the proper ball. Engage the locking trigger and rotate the hitch lock to open the hitch. Lower the hitch on the ball. Close the hitch by rotating the hitch lock until it locks in place.

Attach the safety chains and plug in the lights. **DOT regulations require that the safety chains cross as they are attached.** Surge and electric brake trailers have an emergency brake cable that activates the trailer brakes if the trailer becomes unhitched from the pickup while travelling. Hook the brake cable to the safety chain eyelet.

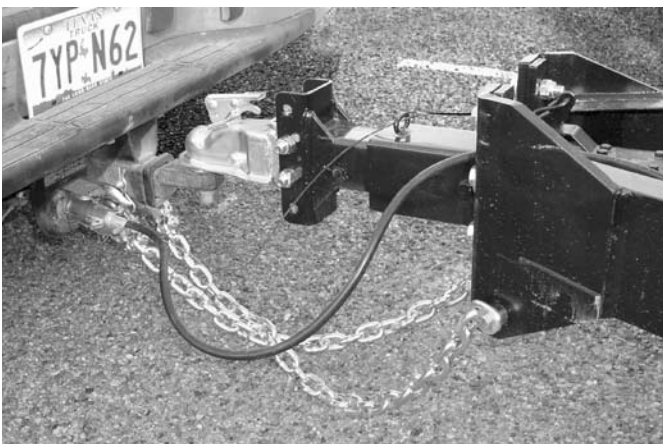


Figure A1
Attaching Trailer To Pickup



Check to make sure that the ball and hitch are the same size. Attaching a 2 5/16" hitch to a 2" ball could allow the trailer to become unhitched during transport. Serious bodily injury could follow.

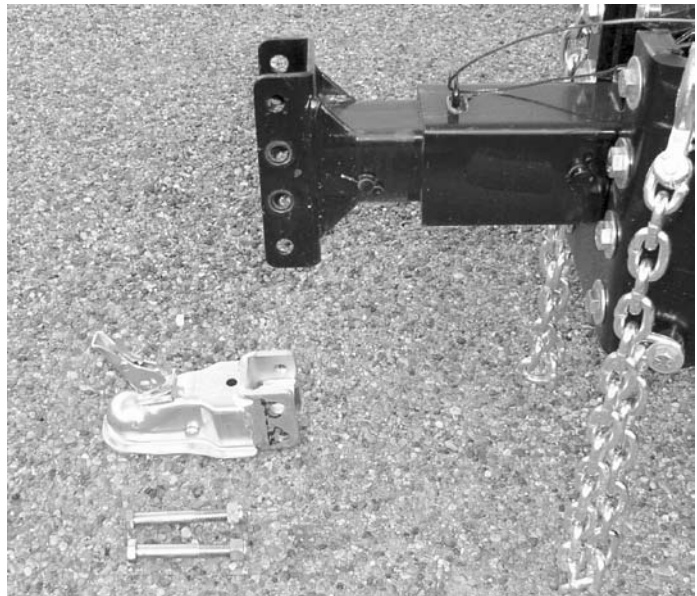


Figure A2
Remove Hitch To Prevent Theft

The "Express" is equipped with cam-lock caps over the quick couplers. They must remain locked in place except when attaching a suction hose. The caps are secured with pins as shown in Figure A3.



Figure A3
Coupler Cap Lockpins



Operation

The “Express” Water Wagon features a suction and discharge manifold. The suction manifold contains the valves and fittings for filling the tank, supplying the pump and a gravity feed faucet. The discharge manifold has valves controlling the bypass, fire hose, pressure hose and spray bar. *Note: Open the ball valves by turning the handle parallel to the flow. Close the valve by turning the handle perpendicular to the flow.*

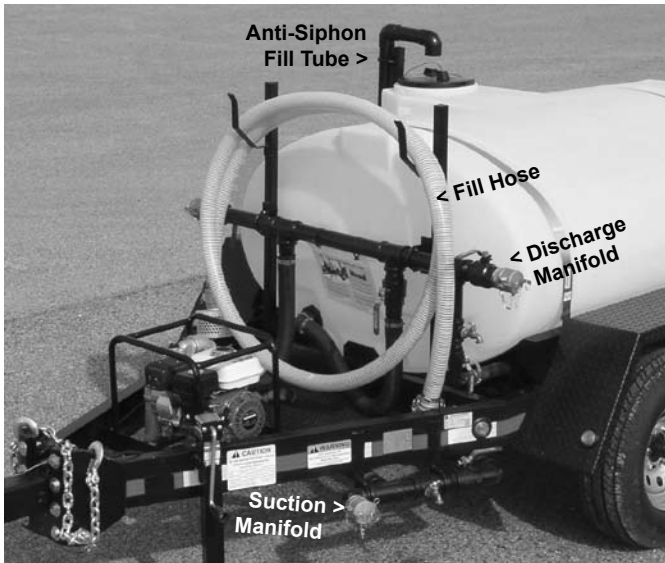


Figure B1
Water Wagon Suction and Discharge Manifolds



Figure B3
Filling Tank Through Anti-Siphon Fill

Filling The Tank

The water tank can be filled by three means: (1) through the anti-siphon fill tube (2) drawing water through the pump (3) through the quick-fill fitting.

To fill the tank through the anti-siphon fill, remove the tank lid, couple the fill hose to the anti-siphon coupler and turn the water source on as shown in Figure B3. A fire hydrant adapter is provided that couples to the end of the fill hose.

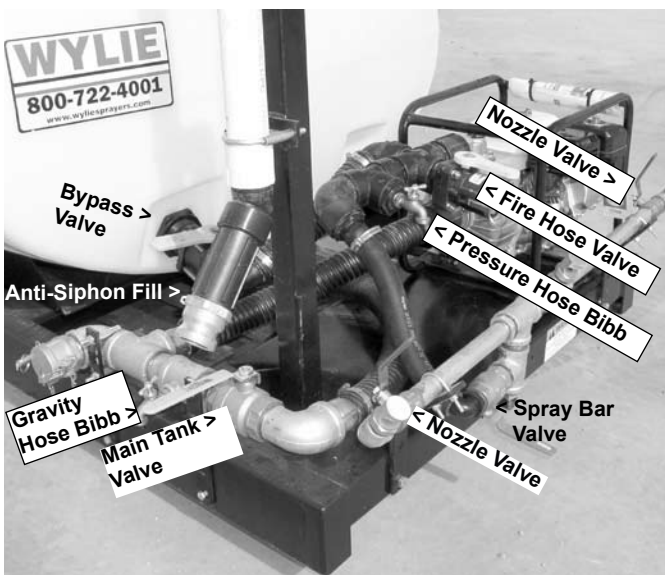


Figure B2
Water Skid Valves



Figure B4
Filling Tank With Transfer Pump



If the tank is to be filled through the quick-fill fitting, couple the hose to the quick-fill coupler as shown in Figure B4. Open the main tank valve, then open the water source.



*Figure B5
Filling Trailer From Tank*

In order to fill the tank with the transfer pump as shown in Figure B5, close the main tank valve and attach the fill hose to the suction manifold quick-fill coupler. Open the bypass valve on the discharge manifold. Set the end of the fill hose in the pond, tank or other water source with the suction screen coupled to the end of the hose. See Figure B5. Be sure that the suction hose bibb is closed. A partially open hose bibb will let air into the suction manifold, causing cavitation in the pump and not build pressure.

Start the engine to pump water from the water source to the tank. If this is the first time to use the pump, it may be necessary to pour water in the top of the pump to prime it. Once the pump has water in it, it is self-priming thereafter.

Bypass Valve

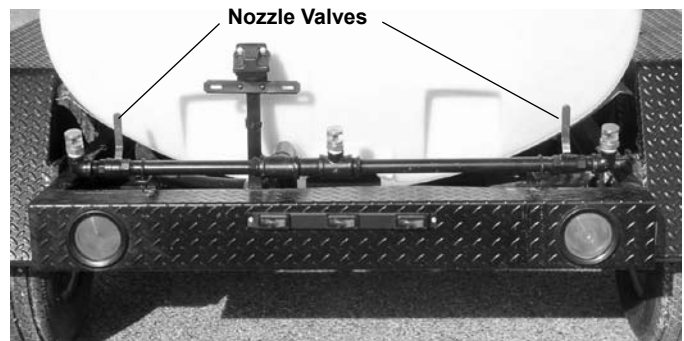
The bypass valve is located on the discharge manifold and is useful for filling the tank through the pump, circulating water through the tank when the pump is turned on but no water is being discharged, and mixing any chemicals that are added to the water.



*Figure B6
Open Bypass Valve*

Spray Bar

The Spray Bar is controlled by the spray bar valve as well as the nozzle valves. Open the main tank valve and close the bypass valve. If you want to spray through all three of the spray bar nozzles, open both nozzle valves. Close both valves to spray only through the center nozzle. Close one of the valves to spray through the center nozzle and the opposite nozzle.



*Figure B7
Spray Bar Nozzle Valves*

Start the engine and increase to full throttle. Open the spray bar valve. Use the pickup speed to control the rate that water is applied. The amount of water flowing through the spray bar can be controlled by partially closing the spray bar valve or slightly opening the bypass valve. Do not close the main tank valve. Pump damage can result.

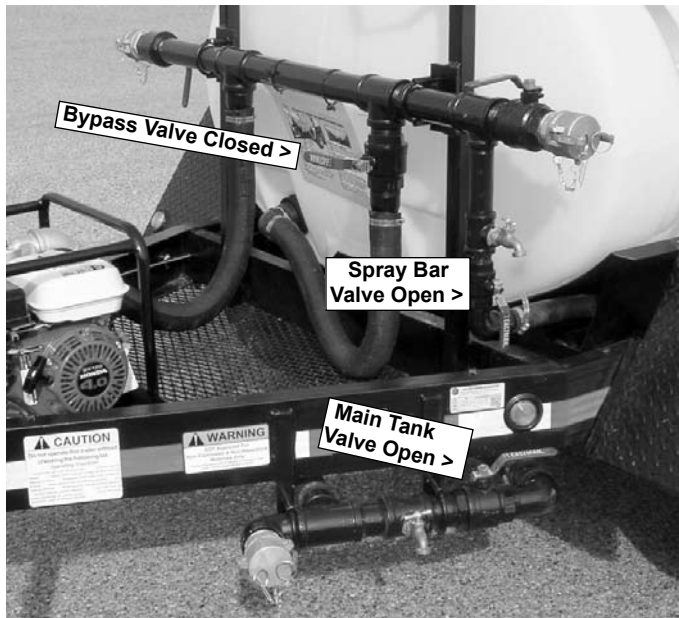


Figure B8
Spray Bar Valve

The spray bar covers a maximum swath of 25'. Common uses include controlling dust on roads and parking lots, compacting roads and building sites.



Figure B9
Operating Spray Bar

Fire Hose

The 25' fire hose couples to the fire hose valve on either side of the trailer. Remove the fire hose coupler cap and quick couple the fire hose. Open the main tank valve, close the bypass and spray bar valves. Open the fire hose valve on the side that the hose is attached. The fire nozzle adjusts from wide spray to straight stream by rotating the body of the nozzle.

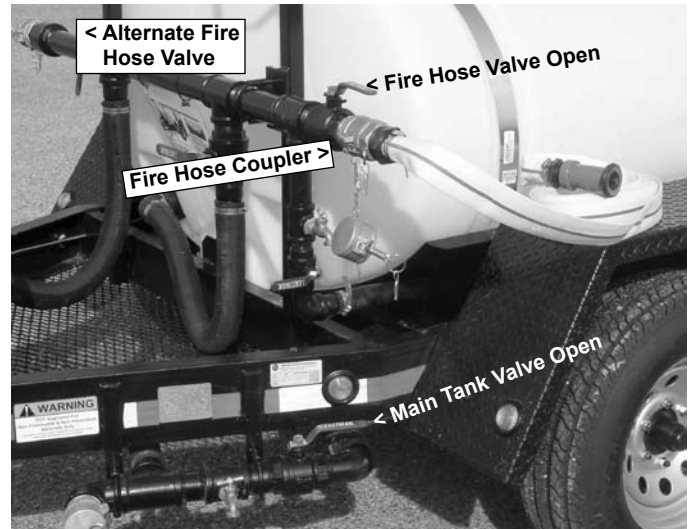


Figure B10
Fire Hose Connection

The fire hose and nozzle can be used for spot watering to control dust and compact building sites. Other uses include watering remote landscape and fighting grass fires.



Figure B11
Operating Fire Hose



**Do not direct the spray from the fire hose or pressure hose at electrical connections, boxes or lines.
Electrical shock could cause serious bodily injury or death.**



Figure B11
Side Watering Nozzle

Side Watering Nozzle

The discharge manifold can be fitted with an optional side watering nozzle. Quick couple the nozzle to the fire hose coupler and open the fire hose valve.

Pressure Hose

To operate the pressure hose, attach the pressure hose to the discharge manifold hose bibb, open the main tank valve and start the engine. All of the ball valves on the discharge manifold should be closed. Open the hose bibb and engage the trigger gun.

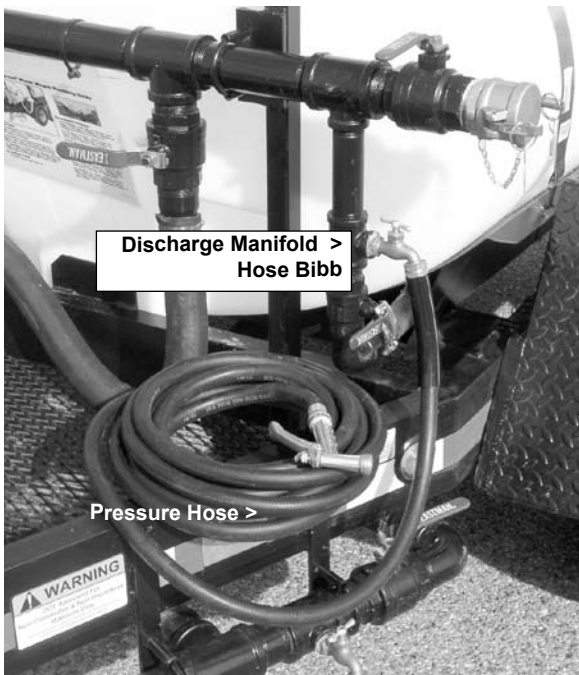


Figure B12
Pressure Hose Connection

Suction Manifold Hose Bibb

A second hose bibb is located on the suction manifold and is useful for gravity feeding water to concrete saws and other low volume applications. With the engine turned off, attach the pressure hose to the suction manifold hose bibb and remove the trigger gun. Open the main tank valve and the suction manifold hose bibb. The outlet of the hose must be lower than the level of the water in the tank for the water to gravity flow through the hose.

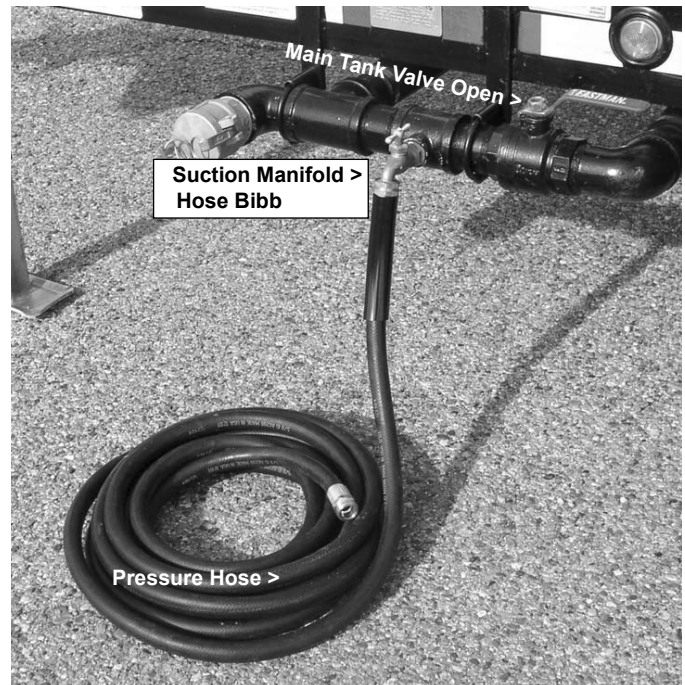


Figure B13
Gravity Flow Hose Connection

Maintenance

The “Express” is a low maintenance machine, but will operate much longer if due care is taken on a regular basis. Several times each season the “Express” should be examined for worn hoses, loose fasteners, worn tires, and leaks. Refer to the engine and pump owner’s manual for information regarding maintenance on these components.



From time to time it may be necessary to drain the main tank such as during cold weather. Remove the Quick-Fill cap, open the main tank valve to drain the tank. Remove the pump's bottom plug to drain the pump. Remove the plug from the spray bar tee to drain the spray bar. For maximum freeze protection, add a few gallons of anti-freeze solution to the tank and circulate through the system.

If water is held for long periods of time in the white tank, algae will grow in the tank. To prevent algae growth, drain the tank when the trailer is not in use. Algae growth can be retarded by adding bleach to the water.

Lubrication

The wheel hubs should be packed with grease once a year under heavy use, every other year under light to medium use.

Check the engine owner's manual for the proper oil to add to the engine.



Figure C1
Main Tank Drain

Spray Bar Tip Chart "210" nozzle is standard

Nozzle Inlet Connection NPT (M)		Capacity Size	Orifice Diam. Nom. Inches	CAPACITY (gallons per minute)							SPRAY ANGLE							
1/8	1/4			3/8	1/2	3/4	1	3 psi	5 psi	7 psi	10 psi	15 psi	20 psi	30 psi	40 psi	60 psi	7 psi	20 psi
●			.25	.016							.03	.035	.04	.05	.06			83° 117°
●			.50	.024							.06	.07	.08	.10	.12			89° 122°
●			.75	.028						.075	.09	.11	.13	.15	.18			106° 125°
●			1	.033						.10	.12	.14	.17	.20	.24			109° 128°
●			1.5	.041					.12	.15	.18	.21	.26	.30	.37			73° 108° 125°
●			2	.046					.17	.20	.24	.28	.35	.40	.49			83° 113° 129°
●	●		2.5	.052				.18	.21	.25	.31	.35	.43	.50	.61			98° 122° 133°
●	●		3	.057				.21	.25	.30	.37	.42	.52	.60	.73			86° 112° 126°
●	●		4	.065				.28	.33	.40	.49	.57	.69	.80	.98			97° 123° 132°
●	●		5	.073				.35	.42	.50	.61	.71	.87	1.0	1.2			114° 128° 142°
●	●		7.5	.091				.41	.53	.63	.75	.92	1.1	1.3	1.5	1.8		101° 119° 134°
●	●		10	.104				.55	.71	.84	1.0	1.2	1.4	1.7	2.0	2.5		115° 133° 145°
●	●		12	.116				.66	.85	1.0	1.2	1.5	1.7	2.1	2.4	2.9		128° 139° 153°
●	●		15	.129				.82	1.1	1.3	1.5	1.8	2.1	2.6	3.0	3.7		98° 113° 123°
●	●		18	.141				.99	1.3	1.5	1.8	2.2	2.5	3.1	3.6	4.4		106° 120° 131°
●	●		20	.148				1.1	1.4	1.7	2.0	2.4	2.8	3.5	4.0	4.9		110° 122° 133°
●	●		22	.156				1.2	1.6	1.8	2.2	2.7	3.1	3.8	4.4	5.4		113° 125° 136°
●	●		24	.161				1.3	1.7	2.0	2.4	2.9	3.4	4.2	4.8	5.9		115° 131° 144°
●	●		27	.173				1.5	1.9	2.3	2.7	3.3	3.8	4.7	5.4	6.6		119° 135° 148°
●	●		30	.180				1.6	2.1	2.5	3.0	3.7	4.2	5.1	6.0	7.3		100° 110° 121°
●	●	●	35	.196				1.9	2.5	2.9	3.5	4.3	5.0	6.1	7.0	8.6		105° 118° 128°
●	●	●	40	.209				2.2	2.8	3.3	4.0	4.9	5.7	6.9	8.0	9.8		111° 126° 136°
●	●	●	45	.221				2.5	3.2	3.8	4.5	5.5	6.4	7.8	9.0	11.0		115° 130° 140°
●	●	●	50	.238				2.7	3.5	4.2	5.0	6.1	7.0	8.7	10.0	12.3		117° 131° 140°
●	●	●	60	.256				3.3	4.2	5.0	6.0	7.3	8.5	10.4	12.0	14.7		120° 134° 142°
●	●	●	70	.281				3.8	5.0	5.9	7.0	8.6	9.9	12.1	14.0	17.2		123° 137° 146°
●	●	●	80	.297				4.4	5.6	6.7	8.0	9.8	11.3	13.8	16.0	19.6		127° 138° 149°
●	●	●	90	.316				4.9	6.4	7.5	9.0	11.0	12.7	15.6	18.0	20		120° 133° 140°
●	●	●	100	.332				5.5	7.1	8.4	10.0	12.3	14.1	17.3	20	24		123° 136° 145°
●	●	●	110	.348				6.0	7.8	9.2	11.0	13.5	15.6	19.0	22	27		125° 138° 148°
●	●	●	120	.368				6.6	8.5	10.0	12.0	14.7	17.0	21	24	29		129° 143° 150°
●	●	●	140	.406				7.7	9.9	11.7	14.0	17.1	19.8	24	28	34		118° 127° 135°
●	●	●	160	.437				8.8	11.3	13.4	16.0	19.6	23	28	32	39		121° 130° 137°
●	●	●	180	.453				10.0	12.7	15.1	18.0	22	25	31	36	44		124° 133° 139°
●	●	●	210	.484				11.5	14.8	17.5	21.0	26	30	36	42	51		128° 139° 145°
●	●	●	300	.578				16.5	21	25	30	37	43	52	60	74		110° 128° 135°
●	●	●	450	.703				25	32	38	45	55	64	78	90	111		118° 132° 138°



Troubleshooting Guidelines

Problem	Cause	Solution
Pump Will Not Operate	(1) Engine not starting or running properly	(1) Refer to engine owner's manual
Pump will not spray solution	(1) Spray tank empty (2) Main tank ball valve closed (3) Plugged strainer (4) Malfunctioning pump (5) Proper discharge valve not open	(1) Fill tank (2) Open ball valve (3) Clean strainer screen (4) See pump owners manual or contact Wylie Spray Center (5) See operation section of manual
Pump output is very low; erratic	(1) Spray tank low; air getting in pump (2) Tank ball valve partially closed (3) Plugged strainer (4) Collapsed suction hose (5) Air leak in suction system (6) Malfunctioning pump (7) Engine speed too slow	(1) Fill tank (2) Open ball valve (3) Clean strainer screen (4) Replace suction hose (5) Tighten fittings; Check for cracked or cut components; Apply thread sealant to pipe threads; Close suction manifold hose bibb. (6) See pump owners manual or contact Wylie Spray Center (7) Increase engine speed
Gun or nozzles do not operate	(1) Controlling ball valve not open	(1) Open appropriate ball valve
No output or insufficient pressure at spray tip(s)	(1) Air leak in suction side of system (2) Problem with pump (3) Ball valve malfunctioning (4) Bypass valve open	(1) See above (2) See above (3) Repair or replace ball valve (4) Close bypass valve
Spray pattern uneven at one tip	(1) Trash in tip orifice (2) Damaged tip orifice (3) Worn or damaged tip	(1) Clean tip (2), (3) Replace tip