



OPERATORS MANUAL

WINCH TRUCK





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SECTION 1

Introduction & Safety Messages

CONTACT US

Curry Supply Company

1477 Degol Industrial Drive, Hollidaysburg, PA 16648

service@currysupply.com CurrySupply.com

Parts 800.567.5127

Warranty Service 800.345.2829

MANUAL USAGE

This Operators Manual contains information to safely operate more than (1) configuration of "Curry Supply Winch Trucks." The parts shown may not reflect the exact configuration on your truck. "Custom" style trucks may have parts not listed. If your system is not covered in this manual, please contact Curry Supply Co. Support at 800.345.2829 or service@currysupply.com.

All personnel working on or operating the machine must become familiar with the following safety messages.

Due to the nature of these processes, ensure that all safety information, warnings, and instructions are read and understood before any operation or maintenance procedures are performed.

This manual does not supersede any local, state, or federal laws.

WARNING, CAUTION, AND NOTES

The following definitions are found throughout this manual and apply as follows:

WARNING

OPERATING PROCEDURES AND TECHNIQUES COULD RESULT IN PERSONAL INJURY OR LOSS OF LIFE IF NOT FOLLOWED CORRECTLY.

CAUTION

OPERATING PROCEDURES AND TECHNIQUES WHICH COULD RESULT IN DAMAGE TO EQUIPMENT IF NOT FOLLOWED CORRECTLY.

NOTE

OPERATING PROCEDURES AND TECHNIQUES THAT ARE CONSIDERED ESSENTIAL TO EMPHASIZE.

CAUTION

CHECK THE PTO FOR LEAKS AND LOOSE MOUNTING HARDWARE (STUDS, CAP SCREWS, NUTS). CHECK WITHIN THE FIRST WEEK OF USE, MONTHLY THEREAFTER, OR EVERY 100 HOURS OF OPERATION WHICHEVER COMES FIRST.

TAG-047

WARNING

IMPROPER USE OF EQUIPMENT COULD CAUSE SERIOUS INJURY OR DEATH. PLEASE READ AND UNDERSTAND ALL INSTRUCTIONS.



WARNING

WHEN OPERATING OR WORKING ON THE UNIT, KEEP HANDS AND BODY PARTS CLEAR OF PINCH POINTS.



WARNING

CONTACT WITH LIVE ELECTRICAL CIRCUITS COULD DAMAGE EQUIPMENT OR CAUSE INJURY.



WARNING

MOVING PARTS CAN CRUSH AND CUT. KEEP HANDS, FEET, HAIR, AND LOOSE CLOTHING AWAY FROM MOVING PARTS.



CAUTION

ADVERSE WEATHER CONDITIONS CAN CAUSE EQUIPMENT DAMAGE. WHENEVER POSSIBLE, PERFORM MAINTENANCE INDOORS.



WARNING

ALWAYS WEAR THE PROPER PPE WHILE OPERATING THE UNIT.



WARNING

DO NOT OPERATE THE UNIT WHILE INTOXICATED OR EXTREMELY EXHAUSTED.



WARNING

DO NOT WALK ON TOP OF THE VEHICLE. FALLING FROM VEHICLE CAN RESULT IN SERIOUS INJURY.



WARNING

THE VEHICLE IS EQUIPPED WITH A BACK-UP ALARM. ALARM MUST SOUND WHEN OPERATING THIS VEHICLE IN REVERSE.



WARNING

ALWAYS WEAR YOUR SAFETY BELT WHILE DRIVING THE VEHICLE. IF VEHICLE TIPS, STAY BUCKLED AND INSIDE OF THE CAB AREA.



SECTION 2

Normal Operations



Control Board

LOADING PROCEDURE

STEP 1: Engage the PTO (A) and set the engine speed to decal located on the dash (B) using the truck's cruise control. (Refer to the truck manufacture operator manual if instructions are needed to operate the truck's cruise control. Make sure that the parking brake is engaged when exiting the truck cab at any time).



(A)



(B)

STEP 2: Engage the dog out.



STEP 3: Hook the tail chain to the tank.
(Make sure the cable is routed under the front of the tank structure. Hooking locations may vary due to different tank structures).



STEP 4: Apply the winch brake just enough to keep from creating a bird's nest on the spool. (Not too tight or the brake band will break when pulling forward).



STEP 5: Slowly pull forward to straighten out the cable.



STEP 6: Engage the Dog In



STEP 7: Shift the winch into high speed.



STEP 8: Release the winch brake.



STEP 9: Winch the cable in while lightly applying the foot brake on the tractor to keep tension on the cable and then stop before lifting the tank. (Do not winch the cable in loosely).



STEP 10: Shift the winch into low speed.



STEP 11: Resume winching the cable in (A), beginning to lift the tank (B).



(A)



(B)

STEP 12: Once the fifth wheel latches, stop winching in.



STEP 13: Winch the cable out (A) far enough to make turns (B).



(A)



(B)

STEP 14: Hook up the air lines and the light cord to the tank. (Make sure the air tank on the trailer is closed).



STEP 15: Disengage the PTO.



UNLOADING PROCEDURE

STEP 1: Remove the airlines and light cord from the tank. (Make sure the trailer air tank is drained. The trailer tires may need to be blocked. Remember to apply the parking brake when exiting the truck cab at any time).



STEP 2: Pull the pin on the fifth wheel.



STEP 3: Engage the PTO (A) and set the engine speed to the decal located on the dash (B) by using the truck's cruise control. (refer to the truck's manufacture operator manual if instructions are needed to operate the truck's cruise control).



(A)



(B)

STEP 4: Pull the truck forward to tighten up the slack.



STEP 5: Alternate winching the cable out (A) and pulling forward (B) until the tank is over the roller, then stop. (Do not free spool the tank to roller. This may cause damage to the tank or the tractor because the tank will crash to the ground).



(A)



(B)

STEP 6: Winch the cable out until the tank is on the ground.



STEP 7: Unhook the cable from the tank and hook to the rear bumper.



STEP 8: Winch the cable in (A) to tighten up the slack (B). (Do not tighten in the cable too much or damage to the suspension and/or the cable may occur).



(A)



(B)

STEP 9: Disengage the PTO.



SECTION 3

Maintenance & Lubrication

Winch Maintenance

SERVICE INTERVAL	MAINTENANCE OPERATION
Daily	<ol style="list-style-type: none"> 1. Inspect the wire rope and rigging for broken wires or other damage. 2. Carefully inspect the drum clutch and adjust the shift mechanism as required to ensure the clutch can be fully engaged and disengaged. 3. Check for external oil leaks – both hydraulic and gear oil – and repair as required. This is extremely important due to the accelerated wear that can be caused by insufficient lubrication within the winch. Gear oil must be maintained at the proper level. 4. Check hydraulic motor plumbing for damage, such as chafed or deteriorating hoses, and repair as needed. 5. Visually inspect for loose or missing bolts, pins, keepers or cotter pins, and tighten or replace as needed.
Weekly	<ol style="list-style-type: none"> 1. Perform all daily inspections. 2. Check gear oil level, and refill as needed with the recommended lubricant. 3. Lubricate the grease fittings on the bearing leg, cable drum ends, and clutch. On some winches, you will have to disengage the clutch to gain access to the drum bushing grease fitting on the clutch end of the drum. Use a high quality, moly-type grease with a rating of NLGI-2 or better. 4. Inspect the gear housing breather to ensure the fitting is not clogged with dirt or grease. Clean or replace as needed. 5. Inspect all winch mounting fasteners. Retighten or replace as required. 6. Inspect ny structural welds, and repair as needed.

<p>Monthly</p>	<ol style="list-style-type: none"> 1. Perform all daily and weekly inspections. 2. Inspect the drum clutch and clutch plate to ensure the negative draft angle is clearly evident. Replace worn clutch components as required 3. Check the hydraulic system relief valve setting to ensure proper performance and protection of hydraulic components. Adjust or repair as required. 4. Insert hydraulic system filters and strainers. Follow the system manufacturer's service recommendations for repair or replacement. 5. Inspect the band brake for wear or chipping away of the brake lining material. Adjust or replace as needed.
<p>Yearly</p>	<ol style="list-style-type: none"> 1. Perform all daily, weekly, and monthly inspections. 2. Replace gear oil.

Coarse Thread, Grade 8 Bolt Torque Specs

Nominal Diameter	Clamp Load (lbs)	Tightening Torque
		K = 0.20
1/4	2864	143 in-lbs
5/16	4719	295 in-lbs
3/8	6974	44 ft-lbs
7/16	9568	70 ft-lbs
1/2	12771	106 ft-lbs
9/16	16375	154 ft-lbs
5/8	20340	212 ft-lbs
3/4	30101	376 ft-lbs
7/8	41556	606 ft-lbs
1	54517	909 ft-lbs
1 1/4	87220	1817 ft-lbs
1 3/8	103939	2382 ft-lbs
1 1/2	126473	3162 ft-lbs

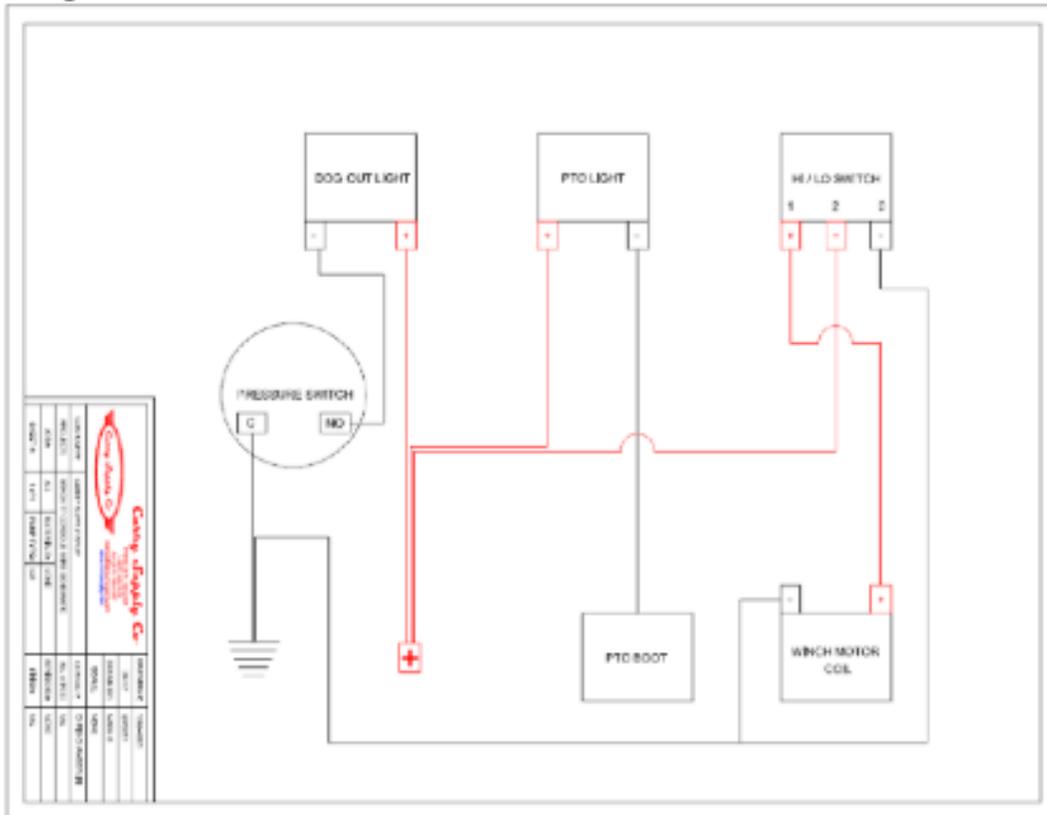
SECTION 4

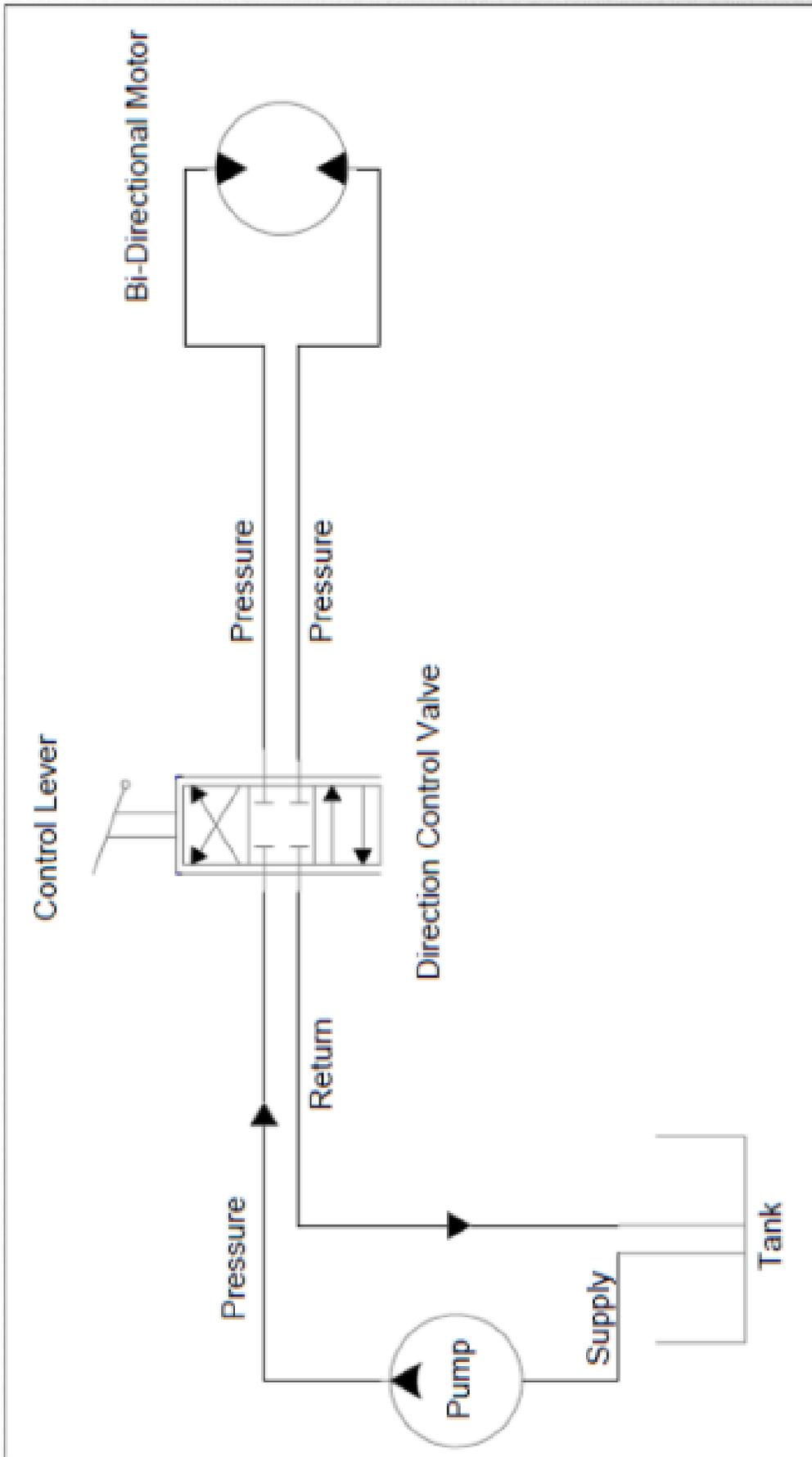
Schematics

Air Schematic

Description	Port	Function
PTO	1	Air Supply
	2	PTO Disengage
	4	PTO Engage
Dog (push/pull)	P	Air Supply
	A	Dog Out tee press switch
	B	1/8" Plug
Winch (lever)	P	Air Supply
	A	Winch Out
	B	Winch In
Brake (lever)	Inlet	Air Supply
	Outlet	Brake

Wiring Schematics





SECTION 5

Troubleshooting

TROUBLE	PROBABLE CAUSE	REMEDY
<p style="text-align: center;">A</p> <p>The winch will not reel-out the load or not reel-out the load smoothly.</p>	<ol style="list-style-type: none"> 1. The problem could be a plugged or loose pilot orifice. The pilot orifice is a small pipe plug with a hole drilled through it, located behind the pilot port fitting on the brake valve. If it becomes plugged, it will prevent the pilot pressure, from the manifold, from opening the brake valve. If it becomes loose, it will allow an unregulated amount of oil in to operate the brake valve which causes erratic brake valve operation. 2. The friction brake may not be releasing as a result of a defective brake cylinder seal. <p>NOTE: <i>If the brake cylinder seal is defective you will usually find oil leaking from the winch vent plug.</i></p> <ol style="list-style-type: none"> 3. Friction brake will not release as a result of damaged brake discs. 	<p>Remove the pilot hose and fitting from the brake valve, then use a 5/32 inch Allen wrench to remove the pilot orifice. The diameter of the orifice is approximately .020 inches. Clean and install the pilot orifice tightly in the brake valve.</p> <p>Check brake cylinder seal as follows:</p> <ol style="list-style-type: none"> A. Disconnect the swivel tee from the brake release port. Connect a hand pump with accurate 0-2000 psi gauge and shut-off valve to the -4 J.I.C. fitting in the brake release port. B. Apply 1000 psi to the brake. Close shut-off valve and let stand for five (5) minutes. C. If there is any loss of pressure in five (5) minutes, the brake cylinder should be disassembled for inspection of the sealing surfaces and replacement of the seals. Refer to "Motor Support-Brake Cylinder Service". <p>Disassemble brake to inspect brake discs. Check stack-up height as described in "Motor Support-Brake Cylinder Service".</p>
<p style="text-align: center;">B</p> <p>Oil leaks from vent plug.</p>	<ol style="list-style-type: none"> 1. Same as A2. 2. Motor seal may be defective as a result of high system back pressure or contaminated oil. 	<p>Same as A2.</p> <p>System back pressure must not exceed 150 psi. Inspect hydraulic system for a restriction in the return line from the control valve to the reservoir. Be sure control valve and plumbing is properly sized to winch motor. Ensure case drain line is connected and adequate size.</p> <p>Oil analysis may indicate contamination has worn motor shaft and seal. Thoroughly flush entire hydraulic system and install new filters and oil. Install new motor seal.</p>

TROUBLE	PROBABLE CAUSE	REMEDY
<p style="text-align: center;">C</p> <p>The brake will not hold a load with the control lever in neutral.</p>	<ol style="list-style-type: none"> 1. Excessive system back pressure acting on the brake release port. 2. Friction brake will not hold due to worn or damaged brake discs. 3. Brake clutch is slipping. 	<p>The same as Remedy 2 of Trouble B2.</p> <p>Same as Remedy 3 of Trouble A3.</p> <p>Improper planetary gear oil may cause the brake clutch to slip. Drain old gear oil and flush winch with solvent. Thoroughly drain solvent and refill winch with recommended planetary gear oil listed in "Preventive Maintenance".</p> <p>Brake clutch may be damaged or worn. Disassemble and inspect brake clutch as described in "Brake Clutch Service".</p>
<p style="text-align: center;">D</p> <p>The winch will not reel-in the rated load.</p>	<ol style="list-style-type: none"> 1. The winch may be mounted on an uneven or flexible surface which causes distortion of the winch base and binding of the gear train. Binding in the gear train will absorb horsepower needed to hoist the rated load and cause heat. 2. System relief valve may be set too low. Relief valve needs adjustment or repair. 3. Be certain hydraulic system temperature is not more than 180 degrees F. Excessive hydraulic oil temperatures increase motor internal leakage and reduce motor performance. 4. Winch line pull rating is based on 1st layer of wire rope. 5. Rigging and sheaves not operating efficiently. 	<p>Reinforce mounting surface.</p> <p>If necessary, use shim stock to level winch. Refer to "Winch Installation".</p> <p>First loosen, then evenly retighten all winch mounting bolts to recommended torque.</p> <p>Check relief pressure as follows:</p> <p>A. Install an accurate 0-4000 psi (27,580 kPa) gauge into the inlet port of the brake valve.</p> <p>B. Apply a stall pull load on the winch while monitoring pressure.</p> <p>C. Compare gauge reading to winch specifications. Adjust relief valve as required.</p> <p>NOTE: <i>If pressure does not increase in proportion to adjustment, relief valve may be contaminated or worn out. In either case, the relief valve may require disassembly or replacement.</i></p> <p>Refer to winch performance charts for additional information.</p> <p>Perform rigging service as recommended by crane manufacturer.</p>

TROUBLE	PROBABLE CAUSE	REMEDY
<p style="text-align: center;">E</p> <p>The winch runs hot.</p>	<p>1. Same as D1.</p> <p>2. Be certain that the hydraulic system temperature is not more than 180 degrees F. Excessive hydraulic oil temperatures may be caused by:</p> <p>A. Plugged heat exchanger.</p> <p>B. Too low or too high oil level in hydraulic reservoir.</p> <p>C. Same as D2.</p> <p>D. Hydraulic pump not operating efficiently.</p> <p>3. Excessively worn or damaged internal winch parts.</p>	<p>Same as remedies for Trouble D1.</p> <p>Thoroughly clean exterior and flush interior.</p> <p>Fill/drain to proper level.</p> <p>Same as remedies for Trouble D2.</p> <p>Prime mover low on horsepower or R.P.M. Tune/adjust prime mover.</p> <p>Check suction line for damage.</p> <p>If pump is belt driven, belts are slipping. Replace/tighten belts.</p> <p>Pump worn. Replace pump.</p> <p>Disassemble winch to inspect/replace worn parts.</p>
<p style="text-align: center;">F</p> <p>Winch "chatters" while raising rated load.</p>	<p>1. Same as D2.</p> <p>2. Hydraulic oil flow to motor may be too low.</p> <p>3. Controls being operated too quickly.</p>	<p>Same as remedies for Trouble D2.</p> <p>Same as remedies for Trouble E2.</p> <p>Conduct operator training as required.</p>

SECTION 6

Warranty & Proprietary Information

Curry Supply Company warrants products designed and manufactured by Curry Supply Company to be free from defects in material and workmanship under proper use and maintenance.

Products must be installed and operated in accordance with Curry Supply's written instructions and capacities. All warranty periods will begin on the in-service date as defined in this document. This warranty shall cover the following Curry Supply Products:

	1 Year	2 Years	Variable
On Road Water / Flatbed / Crash Attenuator / Lube Skid			
Curry Manufactured Components		✓	
Paint Coverage on Curry Manufactured Parts	✓		
Parts	✓		
Repair Labor	✓		
Off Road / Dump / Industrial Carrier / Vacuum / Winch / Railroad			
Tank	✓		
Tank Exterior Paint Coverage	✓		
Parts	✓		
Repair Labor	✓		
Mechanics			
Body (Refer to Manufacture Warranty)			✓
Crane (Refer to Manufacture Warranty))			✓
Paint Coverage (Refer to Manufacture Warranty)			✓
Parts (Refer to Manufacture Warranty)			✓
Repair Labor (Refer to Manufacture Warranty)			✓
Lube			
Body (Refer to Manufacture Warranty)	✓		
Tanks (Refer to Manufacture Warranty)			✓
Parts	✓		
Repair Labor	✓		
Paint Coverage	✓		
Utility Lift			
Body (Refer to Manufacture Warranty)			✓
Lift (Axion)			✓
Parts	✓		
Repair Labor	✓		
Body Paint Coverage	✓		

Definitions

Curry Supply Manufactured Components/Structures – Includes any structural weldment or load bearing support structure manufactured by Curry Supply Company.

Rust Through on Curry Supply Components/Structures – Rust Through is defined as a hole in the metal caused by corrosion. Excluded is corrosion caused by external caustics, including but not limited to improper cleaning material, road salt and other chemicals left on the structure for extended periods of time.

Paint Coverage on Curry Supply Manufactured Parts – Curry Supply guarantees that exterior paint will not fail in terms of adhesion, blistering or unreasonable loss of color or gloss for a 1-year period. Excluded is damage such as chips, dents, scratches, tank interior coating, and corrosion due to caustic chemicals (eg. Brine Solution / Leachate) and dirt build-up. Regular cleaning and maintenance of the product to remove external factors is expected to keep this warranty in force.

Vendor Supplied Components/Structures – Products purchased by Curry Supply from outside vendors. These items shall be covered by the warranty offered by the respective manufacturer only. Curry Supply does not obligate itself to any such warranty.

Warranty Process

Curry Supply's obligation under this warranty is limited to, and the sole remedy for any such defect shall be, the repair and/or replacement (at Curry Supply's option) of the unaltered part and/or component in question. Curry Supply after-sales service personnel must be notified by telephone, email, or letter of any warranty applicable damage within fourteen (14) days of its occurrence. If possible, Curry Supply will ship the replacement part within 24-hours of notification by the most economical, yet expedient, means possible. Expedited freight delivery will be at the expense of the owner.

Warranty claims must be submitted and shall be processed in accordance with Curry Supply's established warranty claim procedure. Curry Supply after-sales service personnel must be contacted prior to any warranty claim. A return materials authorization (RMA) may be issued to the claiming party prior to the return of warranty parts. Parts returned without prior authorization will not be recognized for warranty consideration. All damaged parts must be returned to Curry Supply freight prepaid; freight collect returns will be refused. Freight reimbursement of returned parts will be considered as part of the warranty claim.

Warranty Repair

Warranty service will be performed by any Curry Supply factory, Curry Supply mobile technician, Curry Supply authorized service partner, or by the affected owner. At the time of requesting warranty service, Curry Supply after-sales service personnel will verify date of delivery of the product. The owner shall be obligated to pay for any overtime labor requested of the servicing company by the owner, any field service call charges, and any towing and/or transportation charges associated with moving the equipment to the designated repair/service provider.

All obligations of Curry Supply and its service providers shall be voided if someone other than an authorized Curry Supply provider performs other than routine maintenance service without prior written or verbal approval from Curry Supply. In the case repair work is performed on a Curry Supply-manufactured product, original Curry Supply parts must be used to keep the warranty in force. The warranty may also be voided if the product is modified or altered in any way not approved, in writing, by Curry Supply.

Warranty Limitations/Responsibilities

This warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear and tear, accident, mishap, untrained operators, or improper or unintended use. The owner has the obligation of performing routine care and maintenance duties as stated in Curry Supply's written instructions, recommendations, and specifications. Any damage resulting from owner/operator failure to perform such duties shall void the coverage of this warranty. The owner will pay the cost of labor and supplies associated with routine maintenance.

The only remedies the owner has in connection with the breach or performance of any warranty on the Curry Supply product specified are those set above. In no event will Curry Supply, or any company affiliated with Curry Supply, be liable for business interruptions, costs of delay, or for any special, indirect, incidental, or consequential costs or damages. Such costs may include, but are not limited to, loss of time, loss of revenue, loss of use, wages, salaries, commissions, lodging, meals, towing, hydraulic fluid, or any other incidental cost.

All products purchased by Curry Supply from outside vendors shall be covered by the warranty offered by that respective manufacturer only. Curry Supply does not participate in, or obligate itself to, any such warranty.

Curry Supply reserves the right to make changes in design or improvement upon its products without imposing upon itself the same upon its products theretofore manufactured.

This warranty will apply to all Curry Supply manufactured components/structures and upfit workmanship shipped from Curry Supply's factory. The warranty is for the use of the original owner only and is not transferable without prior written permission from Curry Supply.

Curry Supply After-Sales Contact Information:

Phone: (800) 345-2829

Email: service@currysupply.com

Mailing Address: 1477 DeGol Industrial Drive, Hollidaysburg, PA 16648

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISION OF MATERIAL AND SERVICES, AS SPECIFIED HEREIN. CURRY SUPPLY COMPANY, IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

EXCEPT AS STATED, THERE IS NO WARRANTY, EXPRESS OR IMPLIED, IN CONNECTION WITH THE DESIGN, MANUFACTURE, SALE OR USE OF THE MACHINERY, ACCESSORIES, EQUIPMENT AND PARTS SOLD BY CURRY SUPPLY CO. CURRY SUPPLY COMPANY'S LIABILITY ON ITS WARRANTY SHALL IN NO EVENT EXCEED THE COST OF THE ITEM OF SALE.



For technical help or parts, please have the model number available and call our customer service 800.345.2829