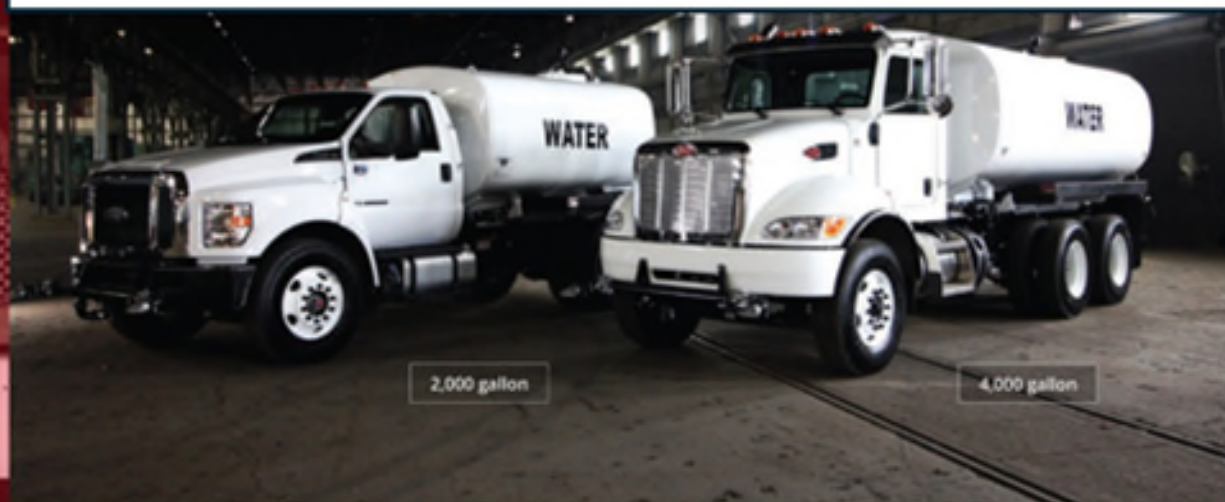




Operator Manual

Water Truck On Road Remote Engine Drive



Curry Supply Co., 1477 Degol Industrial Drive, Hollidaysburg, PA 16648

YOUR JOBS. OUR TRUCKS.

ON-ROAD WATER TRUCKS



SPECIFICATIONS

- 2,000 – 6,000 US gallon tanks
- ASTM A36 steel construction for durability
- FEA tested and designed
- Internal baffles
- Full length shaped tank runners
- LINE-X® lined fender trays
- 24" manway with mesh lift out grate
- Water level indicator
- (2) Front flushing, (1) side, (2) rear, independently controlled spray heads with air operated valves
- 4" x 3" water pump
- Manual rewind hose reel with 50' of 1-1/2" hose, adjustable nozzle
- 2-1/2" hydrant fill with anti-siphon air gap
- Heavy duty rear bumper
- DOT compliant wiring and lighting system
- Spring-loaded mounting system for long life
- Interior tank coating for superior protection
- Powder-coated parts

OPTIONAL EQUIPMENT

- Electric rewind hose reel
- Other water pumps available
- Diesel driven water pump
- Water cannon, remote controlled
- Rear gravity bar, air controlled on/off valve
- 10" rear quick dump
- Storage boxes
- Work light packages
- Strobe light packages
- Primer self loading system (creek/pond fill)
- Stainless steel tanks
- Ship out kits available for self-assembly

YOUR JOBS. OUR TRUCKS.

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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 Operator Manual contains information to safely operate more than (1) configuration of "Curry Supply On-Road Water Truck". The parts shown may not reflect the exact configuration on your truck. "Custom" style trucks may have parts not listed. If a 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 by the operator 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.

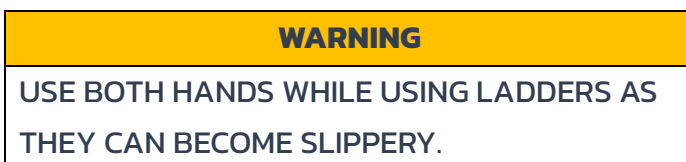
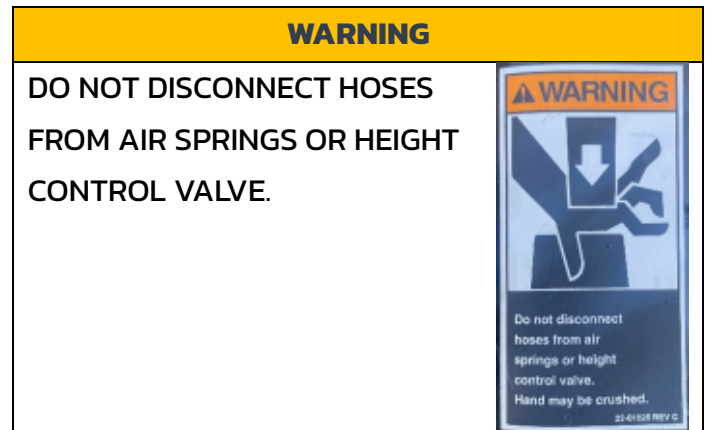
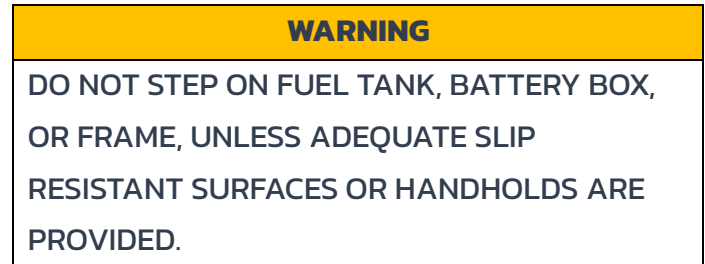
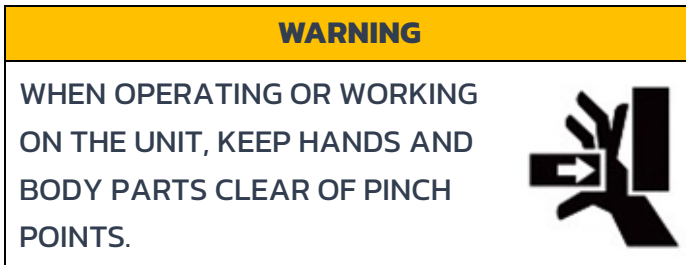
SAFETY MESSAGES

This machine has several important safety messages that everyone working on or using it must be familiar with.

Ensure that all safety messages are clearly readable. If the messages are hard to read, clean them or replace them. If the illustrations are unclear, replace them as well. When cleaning the

messages, use soap and water—do not use solvents, gasoline, or harsh chemicals.

If any safety message is damaged or missing, replace it. If a safety message was attached to a part that was replaced, make sure to put a new message on the new part.



**WARNING**

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

**WARNING**

IMPROPER DISPLAY COULD
CAUSE A TRAFFIC ACCIDENT
RESULTING IN SEVERE INJURY
OR DEATH.

**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**

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

**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.

**CAUTION**

DRAIN ALL WATER DAILY DURING
FREEZING TEMPERATURES.
FREEZING WATER CAN RESULT IN
DAMAGE TO EQUIPMENT.



WARNING

HIGH PRESSURE WATER. DO NOT OPERATE THE SPRAY VALVES OR CANNON UNTIL ALL THE PERSONNEL ARE AT A SAFE DISTANCE AWAY FROM THE VEHICLE.

**WARNING**

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

**DANGER**

Danger to life, danger of injury or danger of property damage due to incorrect use of batteries.



- Do not place tools or other metal objects on the battery.
- Before performing work on the electrical equipment, always disconnect the negative battery terminal.
- Never swap the plus (+) and negative (-) battery terminals.
- When installing the battery, first connect the **plus cable** and then the **negative cable**.
- When removing the battery, first disconnect the **negative cable** and then the **plus cable**.
- It is imperative to prevent short circuits and mass contact of current carrying cables.
- If faults occur, check the cable connections for good contact.

**DANGER**

Danger of explosion from flammable substances.



There is a danger of explosion from flammable gases.

- Keep batteries away from open flames and incendiary sparks.
- Do not smoke when working with batteries.

WARNING

Rotating parts. Can catch hands, feet, or clothing.

Stay clear of equipment and keep shields in place while pump is running.

Stop motor or engine before servicing pump.

Read owner's manual before using equipment.

S16859 (Rev. 12/14)



Cleaning with a high pressure cleaner is prohibited!

- Do not spray the Hatz instrument box with a high-pressure water jet.

SECTION 2

System Descriptions

FRONT VIEW



SIDE VIEW



REAR VIEW



The truck shown in the pictures is built on a F750 chassis. It's equipped with a remote HATZ liquid cooled diesel engine which supplies power to the water pump. This Operator's Manual provides information on how to safely operate more than one version of the "Curry Supply Company On Road Water Truck." The truck shown may not exactly match your truck's configuration. "Custom" trucks may have different parts that aren't listed here. If your system isn't covered in this manual, please contact Curry Supply Co. Support at 800-345-2829 or service@currysupply.com.

EQUIPMENT

Trucks are manufactured with various equipment combinations. Find more information about these components by clicking the links below. If unsuccessful finding the information needed, call Curry Supply Company at 1-800-345-2829.

[HATZ 3H50 Remote Diesel Engine](#)

[MVP A3350 Engine Display & Control Panel](#)

[Brush Hawk Water Cannon](#)

[Berkeley B3ZQM Water Pump](#)

[Berkeley Elastomer Mounted Hub Coupling](#)

[Buyers Products Co Back Up Camera 8883000](#)

WATER TANK



Located on top of the chassis, the tank is the holding area for water. Curry On-Road water tanks range from 2,000-6,000 US gallons.

SPRAY BARS



Mounted to the front and rear of the vehicle. The Spray bars are equipped with two spray heads each.

SPRAY HEADS



Located on the spray bars in the front, side, and rear of the truck. Water will spray from these heads when the valve is open & the remote engine is running. The valve is at the rear of the

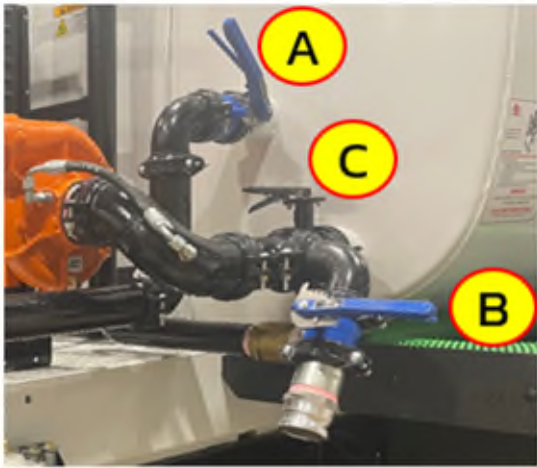
truck while the control for the remote engine is in the cab.

WATER PUMP



The water pump is located at the rear of the vehicle and attached to the remote engine. Powered by the remote HATZ diesel engine, the water pump pressurizes the system to dispense water through the spray heads.

SUCTION / CREEK FILL VALVES



Located at the rear, passenger side of the truck, these valves are used in the "Suction or Creek Fill" method to suck water into the tank.

- A – Creek Tank Fill Valve
- B – Creek Suction Valve
- C – Tank Sump Valve

FILL TUBE



Located on the rear of the truck, the fill tube is the main source to fill the tank with water. Water travels up this tube to an opening on the top of the tank, filling it with water.

WATER TANK FILL OPENING



Located on top of the tank, this is where the tank is filled by water, either by a water dump or fill tube.

SIGHT TUBE INDICATOR



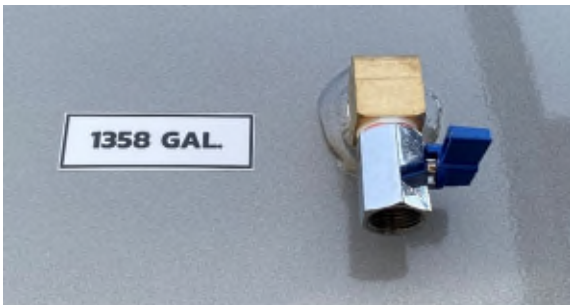
Located on both the front and rear of the tank, is a clear tube that displays the level of water inside of the tank. The tank should be at minimum 1/4 full to operate water functions.

BACK UP CAMERA



Located on the rear of the tank, when in reverse, the backup camera will show the view behind the vehicle on the dashboard display.

GALLON INDICATOR DRAIN VALVE



Located on the rear end of the tank, these drain water from the tank to the marked gallon level.

HOSE & HOSE REEL



Typically located on the lower rear of the vehicle, fitted with a 50-foot 1 1/2-inch rubber hose with a twist style nozzle. Both electric and manual reels are available.

WATER DRAIN VALVES



There are four water drains installed. They are located on the tank, spray bars, and water pump. These are used to drain the water after use.

WATER CANNON (if installed)



Located on top of the truck or on the front spray bar. Allows the ability to spray water in precise

locations by rotating both horizontally and vertically. It is controlled by a joystick inside of the cab.

SPRAY HEAD CONTROLS

Control tower



Dash



Located inside the cab, these controls open and close the spray heads. There are two different control panels that come standard with Curry Supply water trucks. One option is a control tower that has slide levers to open and close the spray heads. The spray head location will be labeled along with on/off or open/close.

Another option is a dashboard system that uses push buttons. Push in the top part of button to open a spray head, and a light will come on to show that it is open. Push the bottom part of the button to close it and the light will turn off.

WATER CANNON CONTROL SWITCH

(If installed)



The water cannon valve operates the same way as the spray head controls. Direction of the water cannon is controlled by the joystick located inside the cab.

WATER CANNON JOYSTICK

(If installed)

Located inside the cab, the water cannon joystick allows the operator to aim the cannon in different directions and control the spray width. The cannon can rotate both horizontally and vertically.



REMOTE ENGINE (HATZ 3H50)

Located at the rear of the truck. Liquid cooled diesel engine completely encased within protective panels.



SECTION 3

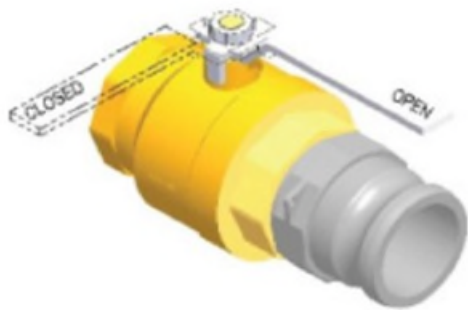
Normal Operations

This section provides the vehicle operator with step-by-step operating procedures for the installed systems.

Prior to any operation, please perform a walk around inspection of the vehicle. Check specifically for any leaks or broken hoses.

VALVE OPERATION

Valves can be opened or closed by hand to allow or restrict flow.



OPEN – Handle aligns with the tube or hose.

CLOSED – Handle is perpendicular, or at 90 degrees, with the tube or hose.

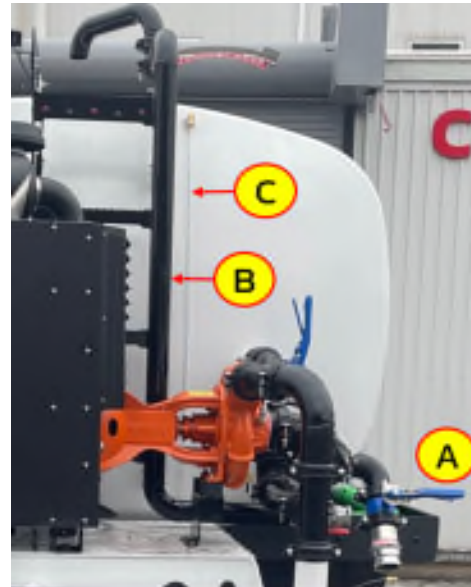
FILL OPERATIONS

The tank may be filled using two methods, hydrant fill and suction/creek fill.

CAUTION

FILL TANK WITH FRESH NON-POTABLE WATER ONLY. SALTWATER AND OTHER CHEMICALS COULD RUIN THE INTERIOR COATING

HYDRANT TANK FILL



A – Fill Tube Valve

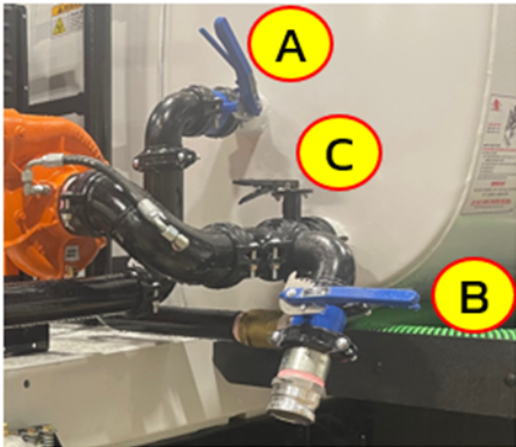
B – Fill Tube

C – Sight Tube Indicator

1. Ensure that the truck is parked, and the emergency brake is ON. If truck has air brakes, place truck in neutral and have air brakes engaged.
2. Ensure tank fill opening is clear of obstruction.
3. Ensure the fill tube valve is clear of obstruction.
4. Attach hydrant hose to fill tube valve on rear of truck. "A"
5. Open the valve on fill tube.
6. Attach the other end of hose to fire hydrant or water source valve.
7. Open the water source to allow flow of water through fill tube. "B"

8. Once filled to the desired level, close the water source to stop the flow of water.
The water level can be viewed by fill tube indicator "C."
9. Close the fill tube valve.
10. Remove the hydrant hose from water source.
11. Remove the hydrant hose from fill tube valve.

SUCTION FILL/CREEK FILL OPERATION



As an option during purchasing, the vehicle may come with sections of 3-inch suction hose for the creek fill operation. One section will have a strainer to avoid sucking up rocks or debris. They are typically stored on fender trays, beneath the water tank.

1. Begin with all valves closed.
2. Hook up suction hose to the suction valve at "B". (see above reference photo)

3. Submerge the end of hose with strainer in water.



4. Open the Sump Valve (C) and Tank Fill (A) Valve.
5. Turn the truck ignition on.
6. Ensure the emergency brake is on.
7. Activate the remote engine.

CAUTION

TANK SHOULD BE FILLED TO AT LEAST 1/4 FULL TO SAFELY OPERATE THE SPRAY SYSTEM.

8. Slowly open the Suction Valve (B) and let the inlet line fill with water from the tank.
9. Slowly close the Sump Valve (C)" and the tank will begin to fill.
10. Once filled to the desired water level, turn the remote engine off.
11. Close the Suction Valve (B) and Tank Fill Valve (A).
12. Remove hose from the Suction Valve (B).
13. Return all valves to original closed positions for normal operation.

DISPENSE OPERATIONS

SPRAY HEAD SYSTEM

CONTROL TOWER



DASH



1. With the truck in park, start the engine.
2. Select a spray head to use and switch it to the on position.

CAUTION

AT LEAST ONE SPRAY HEAD MUST BE OPEN PRIOR TO TURNING ON THE REMOTE ENGINE TO AVOID DAMAGE TO THE WATER PUMP.



3. Turn the remote engine switch to start the engine.
4. Toggle the remote engine RPM switch until the desired spray is reached. Water will begin to spray out of the selected spray head.

NOTE

AS A SAFETY MEASURE, THE REMOTE ENGINE WILL NOT INCREASE RPM BEYOND 2400.

5. Put the truck into gear and slowly start driving.
6. To increase pressure, increase the remote engine RPM. To decrease pressure, lower the RPM of the remote engine.

TO SWITCH BETWEEN SPRAY HEADS

1. Once the above steps are complete, open the next spray head that is desired while the previous one is still open.
2. Water will begin to flow from the newly open spray head, as well as the previous spray head.
3. Close the original spray head to add pressure to the new spray head.

NOTE

OPERATING MORE THAN 2 SPRAY HEADS
SIMULTANEOUSLY WILL REDUCE THE SPRAY
WIDTH AND FLOW OF ACTIVE SPRAY HEADS

TO SHUT DOWN SPRAY HEAD SYSTEM (following the previous steps)

1. Ensure one spray head is still open.
2. Switch remote engine off to stop power to the water pump.
3. Close the spray head to stop the flow of water.

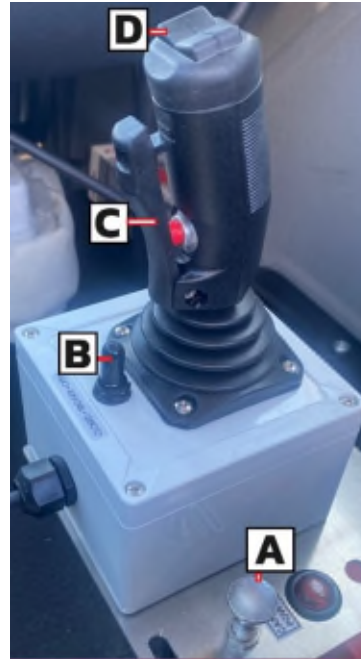
WATER CANNON**CAUTION**

WATER TANK MUST BE AT LEAST 1/4 FULL TO
AVOID WATER PUMP DAMAGE DURING
OPERATION.

1. Make sure that the area around the truck is clear and safe to operate the cannon.
2. With the truck in park, start the engine.
3. Open the water cannon switch on the dash or control tower.



4. Start the remote engine.
5. Turn on cannon power by lifting the knob next to the joystick (A). The light will turn on next to it to signal that the power is on.



- A – Water Cannon power knob
B – Closed, Trigger, Open Toggle Switch
C – Water Cannon trigger
D – Fogger/Spray Width Control button

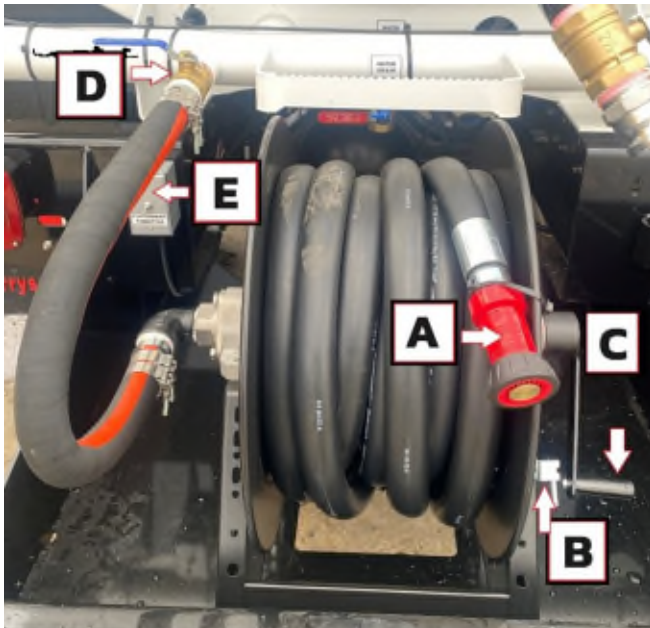
6. The direction of the cannon is controlled by the joystick.
7. Cannon can be operated while vehicle is in motion.
8. The toggle switch (B) – As of 12/12/24, this switch is no longer used in this vehicle configuration. Flow is controlled by the valve on the dash. Water will begin to spray when the remote engine starts with at least one spray head open.

9. The trigger (C) – As of 12/12/24, this switch is inactive in this vehicle configuration.
10. Water spray width is adjusted by the thumb button on top of the joystick (D).

TO SHUT DOWN WATER CANNON (following the previous steps)

1. Ensure the water cannon valve is still open.
2. Turn the remote engine off.
3. Turn the water cannon power off at the joystick.
4. Close the water cannon valve.

HOSE & HOSE REEL



1. Ensure the hose nozzle (A) is CLOSED (head rotates to OPEN and CLOSE).
2. With the truck parked, and parking brake on, start the engine.

WARNING

THE FOLLOWING WILL PRESSURIZE THE SYSTEM, MAINTAIN CONTROL OF HOSE.

3. Turn the remote engine on.



4. Open the hand valve (D) to allow water to fill the hose from the tank.
5. Pull spring loaded locking pin (B) to allow reel to spin freely.
6. Unwind or pull the hose (C) to the desired length.
7. Adjust the spray width by rotating the hose nozzle.
8. When the job is complete, turn the remote engine off inside the cab.
9. Close the hand valve.
10. Reel the hose back into the reel and lock the reel with the spring-loaded pin.

DRAIN OPERATIONS

GALLON INDICATOR DRAIN VALVES

There may be up to two of these drains installed on the rear of the tank.



Water may need to be drained to meet a safe weight for transportation on highways and/or bridges.

To open these drain valves, rotate the knob so that it is in line, or parallel to the drain. If the water level is higher than the drain, water will flow out until it reaches drain height.

To close the drain valves, rotate the knob so that it is perpendicular to the drain, or sideways.

NOTE

IT IS THE OPERATOR'S RESPONSIBILITY TO COMPLY WITH LAWS AND REGULATIONS REGARDING THE WEIGHT OF THE VEHICLE THAT THEY ARE OPERATING.

WATER DRAIN VALVES

There are four drain valves located on the truck.

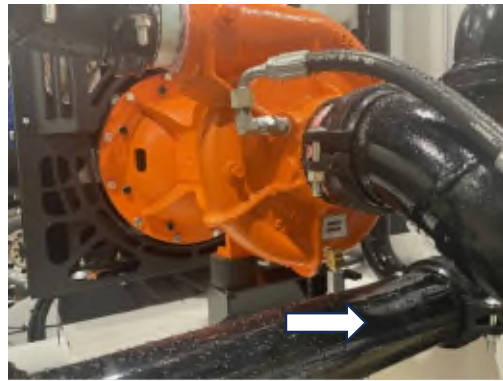
- front spray bar
- rear spray bar
- water pump
- rear bottom of the tank.



Front Spray Bar Drain Valve



Water Pump Drain Valve



Rear Spray Bar & Tank Drain Valves



Opening these will allow water to drain completely from the tank and spray bars. To avoid ice damage, all water should be drained, and valves left open during winter months, and when truck is idle for extended periods of time.

To open these drain valves, rotate the knob so that it is in line, or parallel to the drain. If there is water inside of the tank it will start to flow out of the drain.

To close the drain valves, rotate the knob so that it is perpendicular to the drain, or sideways.

Valves should be closed when transitioning to normal operation.

SECTION 4

Maintenance & Lubrication

Due to numerous jobs and purposes, varying environments and climates, and importance to safety, routine maintenance is highly recommended. Regular maintenance keeps the water trucks functioning correctly and at optimum efficiency. The following tasks can help prevent breakdown and keep the truck on the job when you need it most.

NOTE

FOR THE MOST ACCURATE MAINTENANCE FOR A SPECIFIC SYSTEM, REFER TO THE PRODUCT SPECIFIC USER MANUAL

DAILY SAFETY MAINTENANCE

Tires – Check for proper inflation and tread depth.

Brake System – Routine inspections on brake pads and calipers for safe operation.

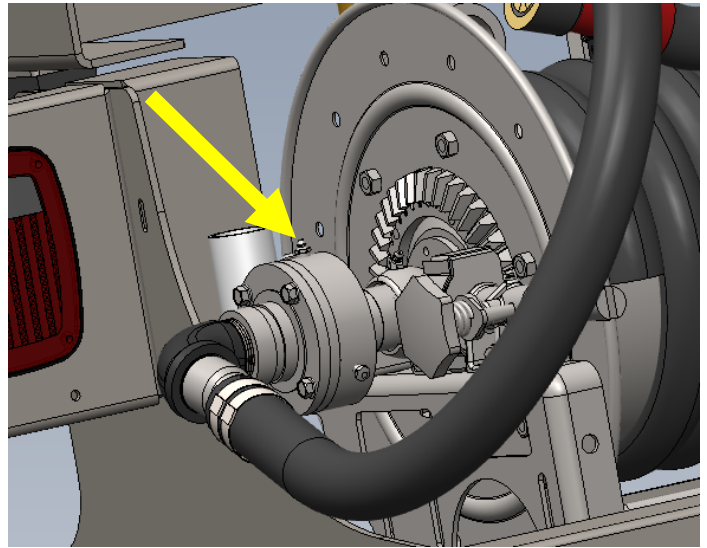
Lights – Check all lights are working and functioning correctly.

Fluids – Check engine oil, coolant, hydraulic fluid, and wiper fluid are at proper levels.

Hoses – Check for leaks, cracks, and that they are fully secure.

HOSE REEL

Grease the swivel bearing at a minimum of once quarterly. Grease it more often if using the hose reel regularly. Some truck configurations do not incorporate a swivel bearing and therefore, will not need to be greased.



WATER PUMP

A well-maintained pumping system will extend the life of the unit and require fewer repairs. This means less down time, which could be extremely critical when constant delivery of liquid is required. A routine maintenance and inspection schedule should be set up on a weekly, quarterly, and annual basis with records kept of these actions.

The following is a list of recommended maintenance tasks.

WEEKLY MAINTENANCE (~250 miles)

Bolt Torque: During operation, bolts can become loose. Check to make sure bolts are lined up with correct bolt torque markings. If not, retighten them to the correct torque.

Vibration: All rotating machines can be expected to produce some vibration. However, excessive vibration can reduce the life of the unit. If the vibration seems excessive, discontinue operation, determine the cause, and correct the issue.

Noise: When the unit is operating under load, listen closely for unusual sounds that might indicate the unit is in distress. Determine the cause and correct the issue.

Operating Temperature: During operation, heat is dissipated from the pump bearings and the driver. After a brief time, the surface of the pump bracket will be warm (as high as 150° degrees F), which is normal. If the surface temperature of the pump bracket or driver is excessive, discontinue operation, determine the cause of the temperature rise, and correct the issue. Bearings will run hotter for a brief run-in period after packing, which is normal. However, worn bearings will cause excessive temperatures and need to be replaced. The pump unit is cooled by the water following through it and will normally be at the temperature of the pumping liquid.

Rope Packing: After a brief period of operation, verify that the stuffing box area and gland are not hot. If heating is detected, loosen the gland nuts evenly until water is just running out of stuffing box in a DROPLET form. Water must not be streaming or spraying out (water drops should be 40–60 drops a minute). Verify cool operation periodically. Adjust gland nuts EVENLY as necessary for lubrication and cooling of the packing. If packing has been tightened to the limit of the packing gland travel, additional packing is necessary.

CAUTION

IF THE UNIT IS EQUIPPED WITH A ROPE SEAL WATER PUMP THAT REQUIRES A MINIMUM DRIP. DO NOT OVER TIGHTEN THE SEAL.

Mechanical Seal: Inspect seal for leakage. There should be no leakage from mechanical seal.

Suction Line: Inspect line and screen for flow obstruction.

QUARTERLY (~3,000 miles)

Pump and Piping Connections: Inspect all system piping connections for leakage or misalignment. Misalignment of pipe connections to the pump will put excessive strain on the pump case and can cause damage to internal components of both the pump and motor. If stress on the pump case is suspected, adjust pipe supports to correct. For flange connections, misalignment can be checked by shutting down

the pump and removing the pipe flange bolts on the pump connections. If the mating flanges come apart or shift, there is pressure at the connection(s) and adjustments should be made to the piping supports until flanges mate without force. This procedure can be done throughout the piping system.

- Check pump foundation for integrity and ensure all hold-down bolts are secure.
- Inspect packing or mechanical seal for possible replacement. Examine shaft sleeve, if present, for wear and replace it if necessary.
- Inspect pumping plant panel for signs of wear (i.e.: replace pitted contactors, etc., as needed).
- Check pump and/or motor bearings for signs of wear. Repair or replace as required.

ANNUALLY (~12,000 miles)

- Inspect the pump and entire pumping system for signs of wear.
- Inspect system valves and screens.
- Check electric motor windings for degradation, rewind if necessary.
- Inspect impeller, volute case, and seal chamber for signs or excessive wear or corrosion.
- Liquid End of pump requires no lubrication.
- Drain compressor to reduce condensation.

Wear rings, packing rings, and models using a mechanical shaft seal, are lubricated by the liquid being pumped.

CAUTION

DO NOT RUN DRY! LUBRICATION IS NEEDED TO AVOID DAMAGE.

BEARING FRAME: Add approximately 2 ounces of a lithium based NGLI No. 2 extra pressure ball bearing grease to each bearing during quarterly inspection.

NOTE

GREASE FITTING IN PACKING AREA IS FOR PRIMING

HOSE REEL: Grease hose reel quarterly to avoid friction and rust build up.

REMOTE ENGINE

WARNING

ONLY PERFORM MAINTENANCE WORK WHEN ENGINE IS SWITCHED OFF.

WARNING

PROTECT THE STARTING KEY FROM UNAUTHORIZED ACCESS.

WARNING

DISCONNECT THE NEGATIVE BATTERY TERMINAL.

WARNING

WHEN THE MAINTENANCE WORK HAS BEEN COMPLETED, ENSURE THAT ALL TOOLS ARE REMOVED FROM THE MACHINE.

Instructions to perform the following tasks can be found in the manufacturer's operating

manual. A link to this manual can be found in section two of this manual.

DAILY

- Check the oil level.
- Check the intake area of the combustion air.
- Check the cooler fins form contamination.
- Check the cooling system.

AFTER THE FIRST 50 OPERATING HOURS

- Change the engine oil & filter.
- Check the screw connections.

EVERY 500 OPERATING HOURS (OR ANNUALLY)

- Diagnosis of engine management to be performed by trained technicians. The engine control module continuously evaluates the engine-relevant data during operation. The service technician can extract and evaluate the data.
- Update engine control unit to be performed by trained technicians. The unit can only be updated using diagnostic software.
- Clean the engine.
- Check the anti-freeze concentration.
- Change the engine oil and filter.
- Check the poly belt.
- Change the oil separator of the crankcase ventilation.
- Check the screw connections.
- Change the fuel prefilter.
- Change the main fuel filter.
- Drain the charge air cooler.

- Change the air filter (primary filter). The secondary filter must be replaced after every fifth replacement of the primary (no later than two years).
- Drain the water separator.

EVERY FOUR YEARS

- Change the coolant.

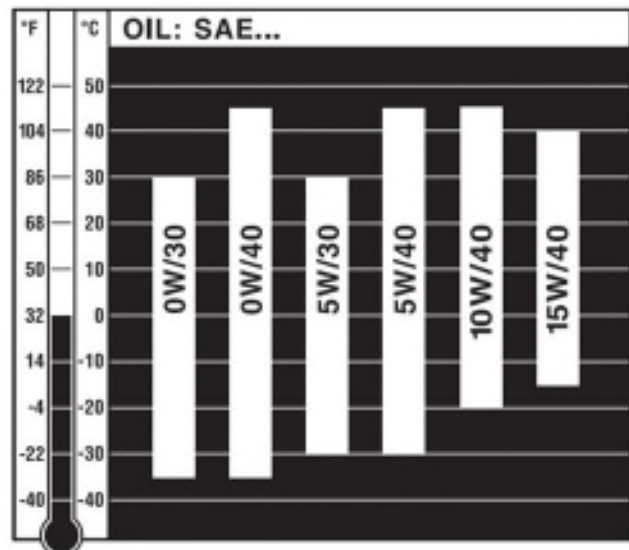
EVERY 3,000 OPERATING HOURS

- Replace the poly V belts

EVERY 4,000 OPERATING HOURS

- Clean the main radiator of the exhaust gas recirculation (ECR) to be performed by trained technicians.

Select the recommended viscosity of oil depending on the ambient temperature at which the remote engine will be operated.



The recommended oil is ACEA E6 or E8 for engines with diesel oxidation catalyst (DOC).

The recommended oil is ACEA E6, E7 or E9 for engines without DOC.

CAUTION

UNSUITABLE ENGINE OIL CONSIDERABLY REDUCES ENGINE SERVICE LIFE. ONLY USE THE RECOMMENDED OIL WITH THE CORRECT VISCOSITY.

The recommended remote engine coolant is Mitan C12+. Alternate coolants can be found in the Hatz manual (see web link to the manual in section two).

WATER PUMP DIAGRAM



Type "B" Single Stage
Centrifugal Pump
SAE Engine Mount

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CAST IRON IMPELLER

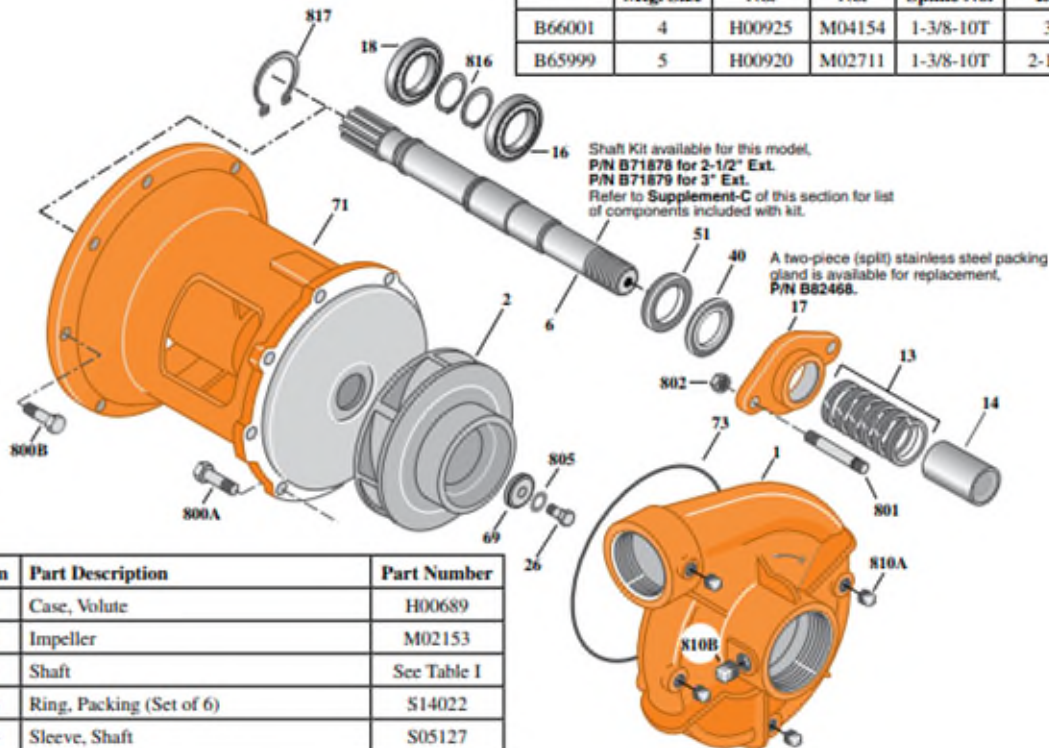
B3ZQM

Threaded Case (NPT)

Packing Construction

Table I

B/M No.	SAE Mtg. Size	Bracket No.	Shaft No.	Shaft Spline No.	Shaft Ext.
B66001	4	H00925	M04154	1-3/8-10T	3"
B65999	5	H00920	M02711	1-3/8-10T	2-1/2"



Item	Part Description	Part Number
1	Case, Volute	H00689
2	Impeller	M02153
6	Shaft	See Table I
13	Ring, Packing (Set of 6)	S14022
14	Sleeve, Shaft	S05127
16	Bearing, Ball	S13270
17	Gland, Packing	S04948
18	Bearing, Ball	S14059
26	Screw, Impeller 3/8-16x1"	S23566
40	Slinger, Water	S12260
51	Seal, Oil	S14762
69	Washer, Impeller	S06314
71	Bracket	See Table I
73	O-Ring (See Note)	M14943
800A	Capscrew, Hex 3/8-16x7/8" (8 Req.)	S26825
800B	Capscrew, Hex 3/8-16x1-1/4" (12 Req. - SAE 4)	S26828
800B	Capscrew, Hex 3/8-16x1-1/4" (7 Req. - SAE 5)	S26828
801	Stud, 3/8-16x3" (2 Req.)	S04439

Item	Part Description	Part Number
802	Nut, Hex 3/8-16 (2 Req.)	S23343
805	Washer, Lock	S23036
810A	Plug, Pipe 1/4 NPT (4 Req.)	S23715
810B	Plug, Pipe 1/2 NPT	S23717
816	Ring, Retaining (2 Req.)	S23010
817	Ring, Retaining	S24652
	Fitting, Grease (Not illustrated)	S23700

NOTE: Also accepts gasket S05126 as replacement for o-ring. See *Supplement E* located at the beginning of this section.

WATER CANNON

(if equipped)

The complete monitor and control system should be inspected during each apparatus check. Careful inspection for damage to the monitor and nozzle is especially important after each use.

Visually inspect each system component including the Monitor, Nozzle, Joystick, Valve and Wire Harnesses.

- Operate each function (left-right, up-down, jet-fog) from each control point.
- Flow water to check the nozzle pattern. If the pattern is disrupted, use the nozzle flush feature to clear the debris. To flush the nozzle, while spraying water from the cannon, open the spray pattern the full way, then close it to the tightest pattern, and repeat again. If the obstruction remains, remove the nozzle, and check for debris lodged between the nozzle stem and body.
- During nozzle flow test, inspect monitor swivel joints for leaks.
- Inspect all exposed wiring for signs of damage.

Drain water cannon after use by opening installed petcock valve. Stagnant water may cause rust, corrosion, or cracks when frozen.

WINTERIZING/FREEZE PREVENTION

Frozen water inside of the system can lead to considerable damage. To prevent damage please consider the following:

- Water Tank – Drain the water tank as much as possible, parking on an incline with the drain at the lowest point.
- Drain Valves – Open any drain valves installed on the spray system.
- Water Cannon – Open the drain valve on the cannon and open the nozzle to allow air flow.
- Hose – Remove hose reel supply hose and leave ball valve open. Open the hose nozzle and leave it open to drain.

SPARE PARTS

The number and type of spare parts kept on hand at any pump site is dictated by the severity of the service in which the pump is used. It is recommended that the following spare parts be kept on-site as a minimum back-up to service pump and reduce downtime. Parts shown do not apply to all models. Check your model/style when selecting spare parts.

- Mechanical shaft seal
- Packing set and packing hooks
- Shaft sleeve(s)
- Impeller wear ring
- All gaskets and O-Rings are required for one entire pump assembly.
- Retaining rings
- Additional diaphragms for the air valves

If having a non-operational pump causes severe consequences, a back-up pump should be

considered. Otherwise, a backup impeller, volute case, bearings, and shaft, would be prudent.

If the pump is to be out of service for an extended period, such as the winter months, the following storage procedures should be followed:

- Remove exterior dirt and grime or any substance that may trap moisture. Exposed metal is subject to oxidation, prime and repaint if necessary.
- Flush suction and discharge lines. Check for leaks and replace any worn gaskets.
- Remove the lowest plug in the pump, drain the pump casing, and suction and discharge lines.
- Lubricate the bearings.
- If possible, keep the unit clean and dry during storage period to guard against corrosion.
- Seal all open ports to keep out foreign objects such as insects, rodents, dust, and dirt.
- Rotate driver shaft periodically to prevent freeze-up of internal components.
- Shelter the pump from the elements when possible.

BOLT TORQUE SPECIFICATION CHART

Part	Bolt Size	Torque
Upper Tie Downs	5/8" Grade 8	212 ft/lbs.
Lower Tie Downs	5/8" Grade 8	212 ft/lbs.
Tie Down Spring Tension	5/8" Grade 8	5/8" of spring compression
Ladder	3/8" Stainless Steel	19 ft/lbs.
Water Pump Brace	1/2" Grade 8	106 ft/lbs.
Water Pump	7/16" Grade 8	70 ft/lbs.
Rear Bumper	5/8" Grade 8	212 ft/lbs.
Compressor Mount (Ford)	5/8" Grade 8	212 ft/lbs.
Remote Engine Oil Drain Screw		43 ft/lbs.
Remote Engine Cooler Drain Screw		37 ft/lbs.
Remote Engine Charge Drain Screw		37 ft/lbs.
Remote Engine Protective Guards	M10	22 ft/lbs.

NOTE

ALL TORQUED BOLTS ARE TO BE MARKED AFTER BEING TIGHTENED TO SPECIFICATIONS.

CAUTION

ALL BOLTS SHOULD BE RECHECKED TO MEET TORQUE SPECS EVERY 500 MILES

SECTION 5

Schematics

Schematics may be found by scanning the below QR code. Select the truck and then select "Schematics".



CAUTION

PLEASE CONTACT CURRY SUPPLY COMPANY BEFORE ATTEMPTING ANY CHANGES TO THE ELECTRICAL SYSTEMS. DOING SO MAY CAUSE EQUIPMENT DAMAGE OR VOID WARRANTY.

SECTION 6

Troubleshooting

PROBLEM	POSSIBLE CAUSE	REMEDIES
No water pressure.	Remote engine not turned on.	Turn on remote engine to get power to the water pump.
	Creek fill valve left open	Close all creek fill valves to build water pressure.
Spray head not spraying water	Spray head not open	Make sure spray head is open on tower or control dash.
	Remote engine not running.	Start the remote engine.
Remote engine malfunction indicator lights up.	Various errors in different assemblies.	Refer to diagnostic trouble codes in remote engine operator manual (link to manual in section two)
Remote engine does not start but can be turned with the starter.	Hydraulic load too high.	Reduce the hydraulic load.
	Insufficient compression.	Contact Curry Supply Company 800-345-2829.
	Cylinder &/or piston wear.	
	Fuel supply is interrupted.	Add fuel.
	Electrical fuel pump is not working.	Check the cabling.
	Fuel prefilter is clogged.	Change the filter.
	Main fuel filter is clogged.	
	Cold temperature causes oil to be too viscous.	Change engine oil & filter. Use oil with appropriate viscosity.
	Insufficiently charged battery.	Charge the battery.
	Machine is not uncoupled.	Uncouple the machine from the remote engine.
	Battery or other cable connections are loose and/or oxidized.	Clean and tighten cables.

Remote engine starter does not switch on & engine does not turn.	Battery is defective &/or not loaded.	Replace battery.
	Defective starter.	Replace starter.
	Defective relay, monitoring elements etc.	Replace defective parts.
Remote engine turns off spontaneously during operation.	Tank ran out of fuel.	Fill tank.
	Mechanical defects.	Contact Curry Supply Company 800-345-2829.
	Electrical defects.	Trouble shoot and correct defects.
	Engine malfunction (indicator lights up).	Refer to diagnostic trouble codes in remote engine operator manual (link to manual in section two)
Remote engine loses power & speed, & black smoke emerges from the exhaust.	Dirty air filter.	Clean or replace air filter.
	Turbocharger faulty.	Contact Curry Supply Company 800-345-2829.
	Turbocharger hoses leaking.	Tighten or replace hoses.
	Injector not fully functional.	Contact Curry Supply Company 800-345-2829.
Remote engine becomes very hot & the temperature indicator lights up.	Cooling air guides clogged.	Clean the cooling air guides.
	Cooler &/or fins clogged/dirty.	Clean cooler & cooler fins.
	Defective thermostat or water pump.	Contact Curry Supply Company 800-345-2829.
Water Cannon will not function	Water Cannon Power not turned on	Turn on power by pulling up on water cannon power knob.
	Water Canon toggle switch is in "Closed" position	Move toggle switch to either "Trigger" or "Open" Position.
	Debris blocking movement	Check for debris and clear obstruction.

Water Cannon will not move, moves intermittently	Monitor wires damaged	Inspect wires for connection or splicing, replace or contact customer service.
Back up camera has no picture.	Improper connection of automobile adapter.	Check user manual for proper connection and power supply.
	Unauthorized power supply.	
	Improper connection of AV cable.	
	Power switch is off.	Turn on switch.
	SYSTEM.RESOLUTION is not the same as camera inputs.	Set SYSTEM.RESOLUTION the same as camera inputs or AUTO.
Back up camera displays a dark picture.	Adjustments set incorrectly.	Adjust brightness and contrast.
	Environment is too cold.	Warm up the camera.
Back up camera displays no color.	Adjustments set incorrectly.	Adjust color settings.
Back up camera displays upside down or lateral inverted picture.	Improper orientation setting.	Use the remote control horizontal/vertical selection switch to set the proper orientation.
Back up camera has no reversing function (i.e. Picture).	The black wire of the monitor AV cable to the reversing light may be loose.	Tighten the wire.
	The red wire from the monitor may be loose.	



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

800.345.2829

SECTION 7

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 (e.g. 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.