

OPERATOR'S MANUAL



SuperJet[®]
Truck Mounted Sewer Jetter

 **Super Products[®]**

Table of Contents

1 Safety

- General Safety Instructions and Practices 1 - 1
- Visual Attention Safety 1 - 2
- Personal Protection Equipment (PPE) 1 - 3
- When Using Pressurized Air or Water 1 - 4
- General Hazards and Prevention Safety 1 - 5
 - Visibility Conditions When Operating 1 - 6
 - Mounting and Dismounting Truck or Equipment 1 - 6
 - Hot Surface 1 - 6
 - Safety Signs 1 - 6
 - Equipment Guards 1 - 6
- Crushing Hazards and Prevention Safety 1 - 7
 - Truck Tip Over 1 - 7
- Power Line/Static Electrical Hazard Warnings 1 - 10
 - Overhead Power Line Tips for Construction Workers Before You Begin Construction Work 1 - 10
 - Working with Tools and Equipment 1 - 10
- Chemical and Biological Hazard Safety 1 - 11
 - Chemicals and Diesel Engine Exhaust 1 - 11
 - Sewer Gas Hazard 1 - 11
 - Chemical Waste Hazard 1 - 11
 - Biological Hazards 1 - 11
 - Dust Hazard 1 - 11
- Transport Safety and Hazards Warnings 1 - 12
 - Before Transporting Truck Inspection 1 - 12
 - Never Exceed your Gross Vehicle Weight Rating (GVWR) 1 - 12
 - Pedestrian Safety 1 - 12
- When Transporting Equipment 1 - 13
- Back Over Hazard 1 - 14
- Job Site Safety and Hazard Warnings 1 - 15
 - To Help Avoid Injury 1 - 15
 - Arrange for Traffic Control 1 - 15
 - Inspect the Job Site 1 - 16
- Visibility Conditions When Operating 1 - 16
 - Fire Extinguisher 1 - 16
- Equipment Operation Safety and Hazard Warnings 1 - 17
 - Emergency Stop Button Function 1 - 17
 - To Reset E-STOP 1 - 18
- High-Pressure Water Safety and Hazard Warnings 1 - 19
 - High Water Pressure 1 - 20
- Sewer Gas Safety and Hazard Warnings 1 - 21
 - Confined Space Hazard 1 - 21

Table of Contents

Trenching Hazards	1 - 22
De-energize and Lockout Procedures	1 - 23
Hazards with Equipment Maintenance	1 - 24
Before Performing Service, Repairs, and Maintenance on the Equipment.....	1 - 24
Performing Service, Repairs, Lubrication, and Maintenance	1 - 24
Safety Shields, Guards, and Safety Devices Inspection	1 - 24
Parts Information.....	1 - 24
Decal Location	1 - 25
Decals	1 - 30
Preparation Before Traveling to Worksite.....	1 - 35

2 Pre-Operation

Introduction.....	2 - 1
Definitions	2 - 1
Water System	2 - 2
Winter Recirculation (Option)	2 - 3

3 Control System Operation

Power Distribution Panel	3 - 1
Control System Overview	3 - 3
Cab Controls	3 - 3
Cab Control Panel Functions.....	3 - 3
Front Control Panel and Functions.....	3 - 4
Front Control Panel Display Screen Menu Operation	3 - 6
Water Pressure	3 - 6
Payout Counter	3 - 6
Status Icons	3 - 7
Information Window	3 - 8
Payout Menu	3 - 8
Function Menu	3 - 8
Diagnostic Menu	3 - 9
Pendant Diagnostics	3 - 9
Power Distribution Diagnostics	3 - 9
Control System Diagnostics	3 - 10
Operator Menu	3 - 10
Backup Controls.....	3 - 10
User Options	3 - 11
Front Control Panel Joystick Functions	3 - 11
Hose Reel Function.....	3 - 11
Pendant Functions — Wired and Wireless	3 - 12

Table of Contents

Wired Pendant (Option)	3 - 12
Pendant Jacks.....	3 - 13
Emergency Stop Switch	3 - 13
Setting the Truck at the Job Site	4 - 1
Engaging Work at the Job Site	4 - 1
Water Pump Operation - Jetting	4 - 2
Starting Sewer Cleaning — Typical Sequence	4 - 2
Purge/Prime	4 - 4
Sewer Cleaning	4 - 4
Return to Road Mode	4 - 4
Winterization	4 - 5
Water Lance Operation	4 - 7
Lance/Cleaning Gun Precautions	4 - 8

5 Lubrication and Maintenance

General Information	5 - 1
Parts Information	5 - 1
DEF Maintenance	5 - 2
Maintenance Schedule	5 - 4
Maintenance Items	5 - 5
Electrical System.....	5 - 5
Hydraulic System	5 - 5
Water System.....	5 - 6
Air Purge	5 - 6
Cabinet & Toolbox Doors	5 - 6
SuperJet Pump Check Valve Leak Test	5 - 7

6 Troubleshooting

Troubleshooting Overview	6 - 1
The Basic Troubleshooting Process	6 - 1
Electrical Troubleshooting	6 - 7
Hydraulic Schematics	6 - 12
Pneumatic Schematics	6 - 13
Control System Diagram	6 - 14
Control System Diagram	6 - 15

7 Service and Spare Parts

8 Index

General Safety Instructions and Practices

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these safety messages before assembling, operating, or servicing this equipment. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: **“ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!”** The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.



DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury and property damage. It may also be used to alert against unsafe practices.

NOTICE

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage. It may also be used to alert against unsafe practices.

NOTE

Identifies points of particular interest for more efficient and convenient operation or repair.



READ, UNDERSTAND, and FOLLOW the following **Safety Messages**.

Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use common sense to avoid hazards.

Visual Attention Safety

Pictographs are used throughout this manual to help bring your visual attention to safety issues.

1




SAFETY HAZARD	SAFETY AVOIDANCE	SAFETY PREVENTION
<p>Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided.</p> <p><i>Example:</i></p>  <p>Equipment contacting overhead electrical lines</p>	<p>Pictograph in a circle or inside a box indicates an avoidance procedure that should be followed to prevent injuries.</p> <p><i>Example:</i></p>  <p>Always shut off engine and remove key before working on equipment.</p>	<p>A circle with a slash through it indicates an action that is prohibited.</p> <p><i>Example:</i></p>  <p>No Smoking</p>

Figure 1-1

NOTE

Identifies points of particular interest for more efficient and convenient operation or repair.

Translation — Safety Section

**130 W Boxhorn Drive
Mukwonago, WI 53149
(800) 837-9711**

Personal Protection Equipment (PPE)

					
Wear Safety Glasses to Comply with ANSI Z87	Wear Hard Hat	Wear Safety Shoes	Wear Hearing Protection	Wear Protective Gloves	Wear Safety Reflective Vest

Figure 1-2

Always wear protective clothing and personal safety devices issued to you or required by job conditions.

This should always include:

- Hard hat
- Safety shoes
- Safety glasses with side shields (marked to comply with ANSI Z87), goggles, or face shield
- Heavy gloves (chemical resistant)
- Hearing protection
- Reflective clothing



WARNING

Never wear loose clothing or jewelry that can catch on controls or other parts of the machine. Loose clothing can be drawn into the suction hose. Never wear a wristwatch or finger rings when working on or around equipment. Failure to comply could result in serious injury or death.

When Using Pressurized Air or Water

			
<p>Wear Face Protection Shield</p>	<p>Wear Wet Weather Protective Suit</p>	<p>Wear Waterproof Gloves and Safety Shoes with Metatarsal</p>	<p>Wear Respirator</p>

Figure 1-3

When using pressurized air or water for cleaning or material erosion/movement, you should use the following:

- Face Shield
- Wet Weather Protective Suit
- Waterproof Gloves
- Respirator
- Safety Boots with Metatarsal Guard

General Hazards and Prevention Safety

			
Read and Understand Operator's Manual	DO NOT USE DRUGS or ALCOHOL before or while operating equipment	Always shut off engine and remove key before working on equipment	Always wear your seatbelt

Figure 1-4


WARNING

To avoid serious injury or death, do the following:

- **Read, understand, and follow** the operator's manual instructions, warnings, and safety messages
- **Do not allow** untrained or unauthorized persons to operate equipment.
- **Do not allow** untrained coworkers to operate or assist in operating equipment.
- **Do not allow** bystanders near equipment or work area.
- **Do not allow** anyone to operate equipment while under the influence of drugs or alcohol.
- **Do not use drugs or alcohol** before or while operating equipment.
- **Consult** medical professional for medication impairment side effects.
- **Wear** appropriate safety personal protective equipment (**PPE**).
- **Wear** appropriate breathing respirator and protective suit when operating with hazardous or unknown substances.
- **Do not wear** loose clothing or jewelry to avoid injury from entanglement in rotating parts.
- **Keep body and limbs away** from suction inlets.
- **Do not open or close** the tailgate or raise or lower the body unless the area is clear of people and obstructions.
- **Never** put any part of your body under an open tailgate unless it is sufficiently propped.
- **Never operate** the vacuum pump unless you are certain the suction hose is clear of people and obstructions.
- **Never operate** the vacuum pump without the safety relief systems working properly as described within this manual.
- **Do not enter the debris body** if hazardous materials are suspected inside the debris body. Take the unit to a certified tank cleaning facility.
- **Always shut off the engine**, remove the key, and set the parking brake before working on the truck or equipment.
- **Stay alert.** Prolonged operation can cause fatigue. **Stop and rest.**
- **Do not operate** equipment with any damaged or missing components.

General Hazards and Prevention Safety — continued


			
<p>Use adequate lighting for proper vision.</p>	<p>Do not touch hot surface. Keep hands and limbs away from hot surfaces.</p>	<p>Tanks can be under pressure. Relieve pressure before opening.</p>	<p>Use three-point contact when climbing on equipment.</p>

Figure 1-5

Visibility Conditions When Operating

- **Operate in daylight** or with lights that gives at least 50 yards clear visibility.
- **Be able to see** and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris, and foreign objects.
- **Use extreme care** when backing up. Vision may be limited. Severe damage or injury can occur.
- **Do not run engines** in enclosed building without adequate exhaust ventilation.

Mounting and Dismounting Truck or Equipment

- **Only** mount or dismount when truck and moving parts are stopped.
- **Always use three-point contact** when climbing on or dismounting equipment.
- **Walkways, steps, and handrails** should be checked before use to ensure a proper non-slip surface. Replace or repair damaged component immediately.

Hot Surface

- **Stay clear** of hot surfaces such as mufflers, hydraulic pumps, valves, and tanks.
- **Relieve pressure** from tank, reservoirs, valves, and hoses before servicing or opening.

Safety Signs

- **Replace** missing, damaged, or unreadable safety signs immediately!

Equipment Guards

- **Never** operate machine if equipment guards are damaged or missing.
- **Replace** missing or damaged guards immediately!

Crushing Hazards and Prevention Safety



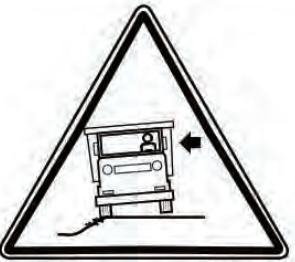
		
<p>Truck can tip over while dumping debris on un-level surface</p>	<p>Slow down on curves, High Center of Gravity</p>	<p>Truck can tip over when truck wheels are on unstable soil</p>

Figure 1-6

Truck Tip Over

 **WARNING**

Always wear seat belt while seated in truck to prevent injury.

- Truck driver must have valid and appropriate training license before transporting liquids on public roads.
- Slow down on curves to prevent truck from tipping over.
- Keep truck away from drop-offs and soft soil shoulder where truck could tip over.

Trip and Fall Prevention Safety



Figure 1-7

- Always maintain three-point contact with the machine, using two hands and one foot, or two feet and one hand, at all times during entry and exit. Never grab control levers or steering wheel when mounting or dismounting machine.
- **Walkways and steps** should be checked monthly to ensure a proper non-slip surface. Repair or replace damaged walkway or steps.
- **Keep** grab handles, steps, and walkways free of mud, oil, grease, and other foreign material. Clean non-skid surface material as required.
- **Ground level personnel** must be present whenever climbing onto unit to protect against inadvertent operation.
- **During operation**, occupants on elevated equipment surfaces must wear a full body harness with a lanyard attached to an authorized lanyard anchorage point. Attach only one lanyard per lanyard anchorage point.
- **Face the machine** when entering or leaving the elevated equipment surfaces.

High-Pressure Fluid Leak Hazards

			
High pressure oil penetrating skin.	High pressure oil eroding skin.	Using cardboard to check for oil leaks.	Tank contents under pressure. Allow oil to cool before slowly removing cap.

Figure 1-8

 **DANGER**

To avoid serious injury or death from high-pressure hydraulic oil leaks penetrating skin, follow these rules:

- **Do not operate** equipment with oil or fuel leaks.
- **Keep** all hydraulic hoses, lines, and connections **tight** and in **good condition** before applying pressure to the system.
- **Relieve hydraulic pressure** before servicing the hydraulic system.
- **Remove** and replace or test hydraulic hoses if a leak is suspected. Have a qualified service facility perform the test.

 **DANGER**

High-pressure fluid leaks can be invisible. When checking for hydraulic leaks and working around hydraulic systems, follow these rules:

- **Always wear** safety glasses with side shields (marked to comply with ANSI Z87) and impenetrable gloves.
- **Use** paper or cardboard to search for leaks.
- **Do not use** hands or body parts to search for leak.
- **Keep** hands and body **away** from pin holes and nozzles ejecting hydraulic fluid.

 **CAUTION**

Use caution when removing hydraulic tank cap. Contents may be under pressure.

- Tank contents may be under pressure.
- **Allow oil to cool** before removing cap slowly.
- **Relieve** oil pressure before removing cap slowly.
- **Stay away** from hot oil that may spray from tank or hoses.

 **DANGER**

High-pressure hydraulic oil can puncture skin. If injured, seek immediate medical attention and inform the physician of the cause of the injury. Surgery is required to remove the fluid from the body. Failure to seek proper medical attention will result in serious injury or death.



Figure 1-9

Power Line/Static Electrical Hazard Warnings

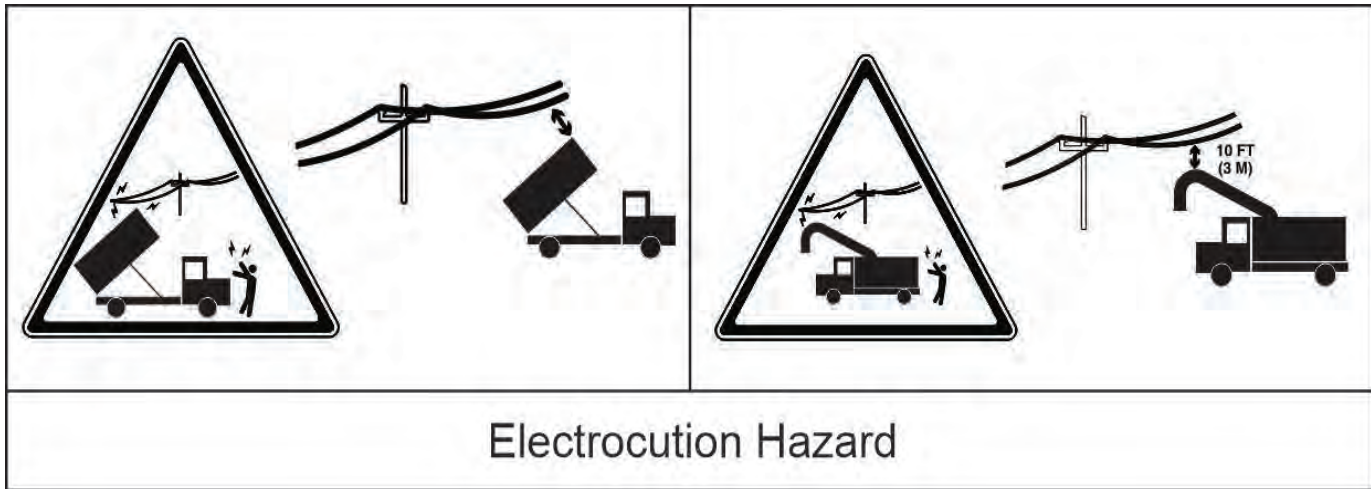


Figure 1-10



DANGER

This machine is not insulated and does not provide protection from contact or being near electrical current.

- **Never** operate the unit in an area where overhead power lines, overhead or underground cables, or other power sources may exist without ensuring that the appropriate power or utility company has de-energized the lines.

Follow all requirements for using mobile equipment when working around power lines. The Occupational Safety and Health Administration (OSHA) requirements apply to most workers. The following information is from OSHA. Additional information can be obtained from www.osha.gov.

Overhead Power Line Tips for Construction Workers Before You Begin Construction Work

- Survey the site for overhead power lines.

NOTE

Never get within 10 feet of an overhead power line!

- Consider all overhead lines as energized until the electric utility indicates otherwise or an electrician verifies that the line is not energized and has been grounded.

- In construction work, an overhead power line safety component should be part of your employer's overall safety and health program and safety training.
- If overhead lines are present, call the utility company and ask if the utility company can shut off the lines while you are working near them.
- If overhead lines cannot be shut down, ask the utility company if they can install insulation over the lines during the time you will be working near them.

Working with Tools and Equipment

- If the lines cannot be shut down and/or insulation cannot be applied, a minimum safe distance of 10 feet must be established.
- Only use non-conductive ladders when working on or near overhead power lines.
- Employees shall not be permitted to approach or carry any conductive object closer than 10 feet to an energized line.



WARNING

Non-electrical conducting coating must be used on water nozzles to prevent electrical contact with underground electrical power lines.

Chemical and Biological Hazard Safety



		
<p>Chemical Burning Skin Hazard</p>	<p>Chemical, Dust and Fumes Inhalation Hazard</p>	<p>Wear Respirator when around hazardous fumes</p>

Figure 1-11

Chemicals and Diesel Engine Exhaust

WARNING

California Proposition 65: Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects, and other reproductive harm.

WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

WARNING

Always read carefully and comply fully with the manufacturer's instructions when handling fuels, oils, solvents, cleansers, and any other chemical agent.

Sewer Gas Hazard

- Do not smoke or have lighted materials in or around sewer lines, drains, or catch basins.

Chemical Waste Hazard

- Storm drains, catch basins, and sewers may contain harmful chemicals. To prevent contamination and injury, wear chemical resistant gloves, long sleeves, trousers, and safety glasses or face shields.
- Seek immediate medical attention if exposure or contamination is suspected.

Biological Hazards

- Germs and other biological hazards are common in sewers, drains, and catch basins. Use appropriate personal protective equipment to avoid injury and contamination. Get medical attention for injuries associated with cleaning sewers, drains, and catch basins if biological contamination is suspected.

Dust Hazard

- Repeated or substantial breathing of hazardous dusts, including crystalline silica, could cause fatal or serious respiratory disease including silicosis. Concrete, masonry, many types of rock, and various other materials contain silica sand. California lists repairable crystalline silica as a substance known to cause cancer. Operation of this equipment under certain conditions may generate airborne dust particles that could contain crystalline silica. In those conditions personal protective equipment including an appropriate respirator must be used. If excessive dust is generated, a dust collection or suppression system should also be used during operation.

Transport Safety and Hazards Warnings

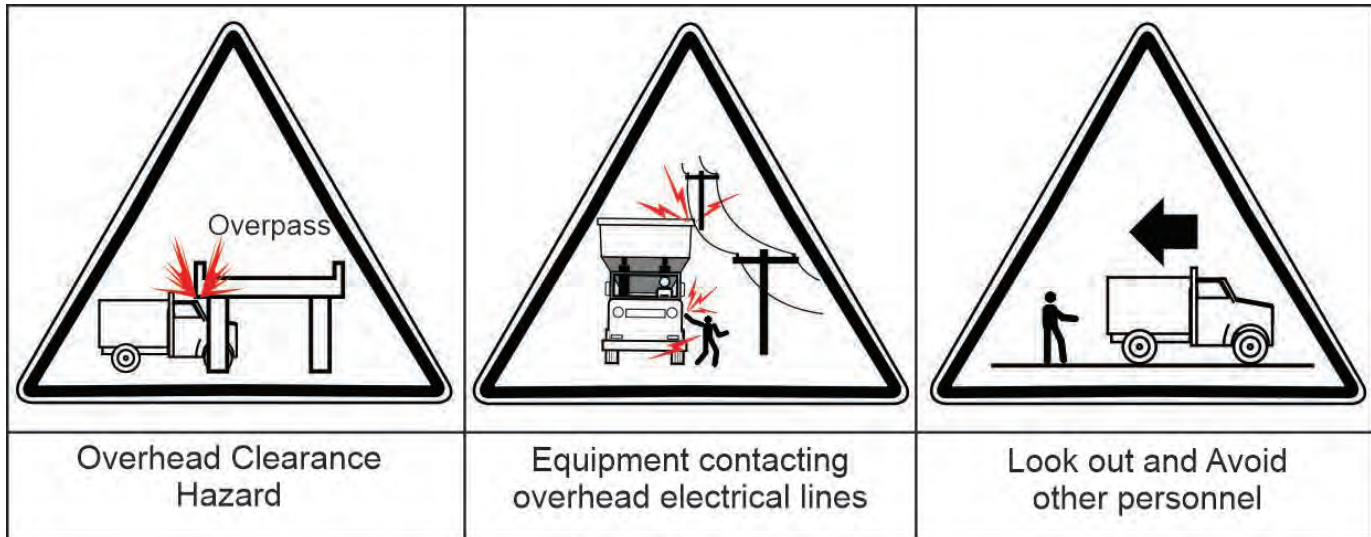


Figure 1-12



Before Transporting Truck Inspection

- Ensure unit is road worthy by performing a pre-trip inspection before driving to and from job site.
- Check that tailgate is closed and properly locked.
- Ensure all equipment is properly secured and positioned for maximum visibility and adequate clearances.
 - Close all water drain valves and install all plugs and strainers previously removed.
 - Check that boom (if equipped) is locked in transport position and properly secured.
 - Check that all tools, accessories, and work tubes/hoses are properly secured.
 - Check that cabinet doors and access panels are closed.
- Always measure overhead clearance height of truck and equipment.
- Check for low hanging electric or telephone wires and power cables on the ground.
- Look out for and avoid other personnel, machinery and vehicles in the area. Use a spotter if you **do not** have clear view.

Never Exceed your Gross Vehicle Weight Rating (GVWR)

- In operation on public highways, the combined weight of the chassis, body, and payload must not exceed the gross vehicle weight rating of the chassis as rated by the cab and chassis manufacturer.

NOTE

It is possible to overload the unit capacity.

- Load your water supply at or near the job site.
- Regulate your work to maintain minimum water storage when leaving the work location.

Pedestrian Safety

- Conduct a visual check and warning (honk horn) before starting or moving the truck to ensure the safety of people on the ground and other equipment in the area.
- Be aware of all personnel who are working on the ground.
- Look out for and avoid other personnel, machinery and vehicles in the area. Use a spotter if you **do not** have clear view.

Transport Safety and Hazards Warnings - Continued

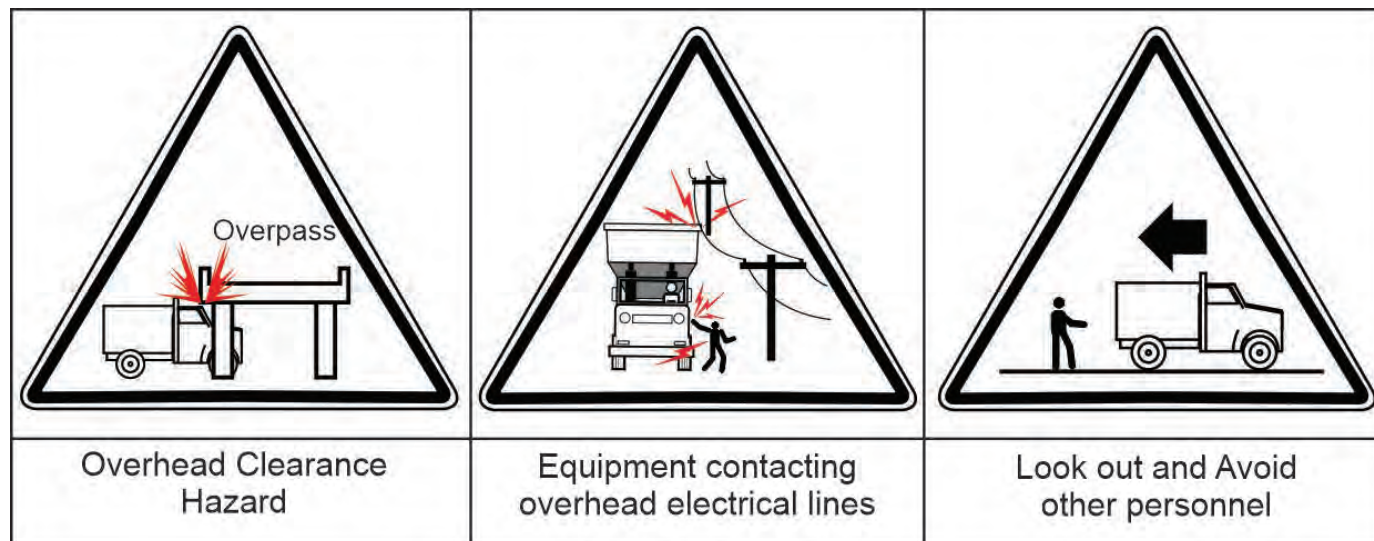


Figure 1-13

Determine Stopping Characteristics of Truck for Transporting Braking Tests

- Stopping distance with loaded debris body will be greater than empty truck.
- Reduce travel speed on wet or icy roads; stopping distances increase.

Determine Maximum Turning Speed Before Operating on Roads or Uneven Ground

- **Test** equipment by slowly increasing speed on turns to determine if it can be operated at higher speeds.
- **Use reduced** turning speeds on sharp turns to avoid equipment turning over.
- Truck has a high center of gravity when carrying a loaded debris body. Use extreme caution when transporting at highway speeds. Slow down for sharp corners to avoid tipping or turning over.

When Transporting Equipment

- **Always** wear seat belt when operating truck.
- **Follow** all local traffic regulations.
- **Use** low speeds to avoid overturn tipping.
- **Use** low speeds and gradual steering on curves, hills, rough or uneven surfaces, and wet roads
- **Turn on** truck flashing warning lights when driving slower than traffic.
- Transport the truck only at safe speeds that allow for proper control of the truck while driving and stopping

Back Over Hazard

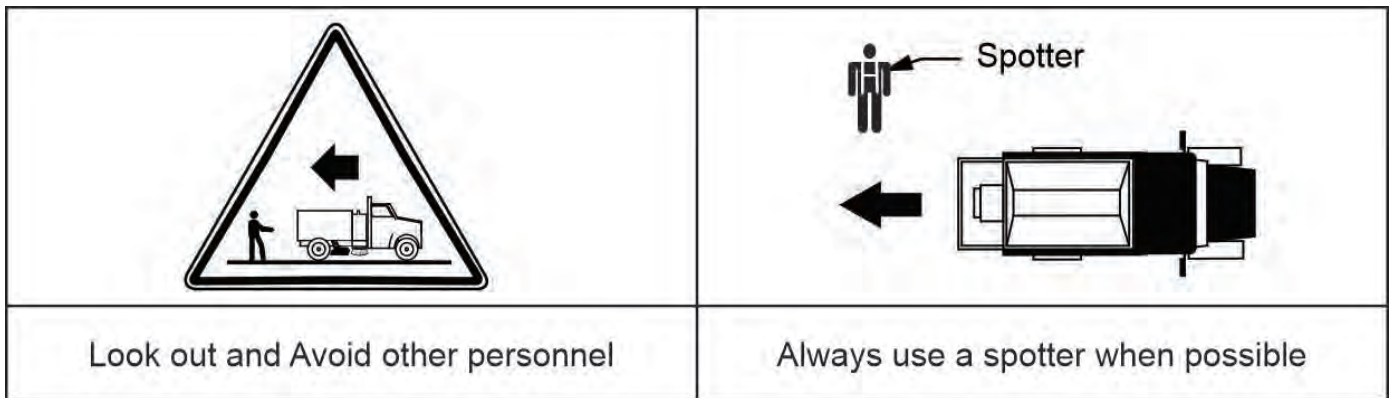



Figure 1-14

The design of the vehicle impairs operator rear vision when backing. Use extreme caution to ensure that the vehicle is not backed into the path of pedestrian or vehicle traffic. This vehicle is equipped with a rear view camera to assist the driver in avoiding backing into object or co-workers and bystanders. This rearview camera is not a substitute for the trucks rear view mirrors. Never try to back using the rearview camera and monitor only! Use side rear view mirrors to aid vision as normal and use the rearview monitor as you would a rearview mirror on your automobile to watch for obstacles. You will always have blind spots know their location, and try to minimize them.


WARNING

Make sure that no person or obstruction such as a vehicle, building, or street sign are behind the vehicle when backing up. If you cannot see behind the vehicle clearly, stop the truck and examine the area. If you cannot see clearly request assistance to guide you while backing the Truck.

Serious injury or death and property damage could result from running into, being crushed by, or run over by a vehicle.

- Check the rear view monitor to ensure you can clearly see behind the vehicle including the rear of the truck. Adjust the camera if necessary.
- Park and back defensively to prevent having to back up and possibly hitting co-workers, passersby, or objects.
- Always use a spotter when possible.
- Avoid backing whenever possible; Don't back up if you don't have to.
- When in doubt, don't back up.
- Back turning toward the driver's side of the truck, if possible.
- Get out and look prior to backing.
- Check for all types of obstacles, including overhead.
- Back immediately after checking.
- Continually check mirrors on both sides of the truck while backing
- Eliminate noise and other distractions before backing.
- Open your window so you can hear outside noises.
- Back slowly, in the lowest gear possible.

When backing follow these best practices:

- Always clean the rearview mirrors and the rearview camera and monitor daily before operating the vehicle.

Job Site Safety and Hazard Warnings

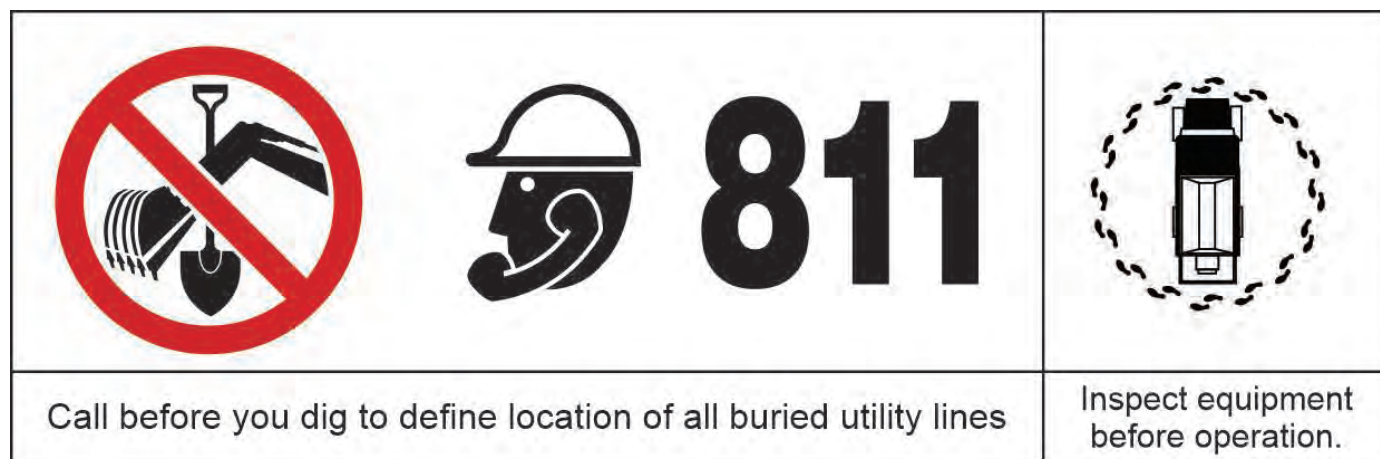


Figure 1-15

 WARNING
<p>Job site hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment.</p>

To Help Avoid Injury

If job site classification is in question or if the possibility of unmarked electric utilities exists, classify the job site as electric.

Arrange for Traffic Control

- If working near a road or other traffic area, contact local authorities about safety procedures and regulations.
- Always activate beacons and flashers before job setup.
- Always use safety cones.
- If working on a roadway, follow required temporary traffic control measures.

Job Site Safety and Hazard Warnings - Continued

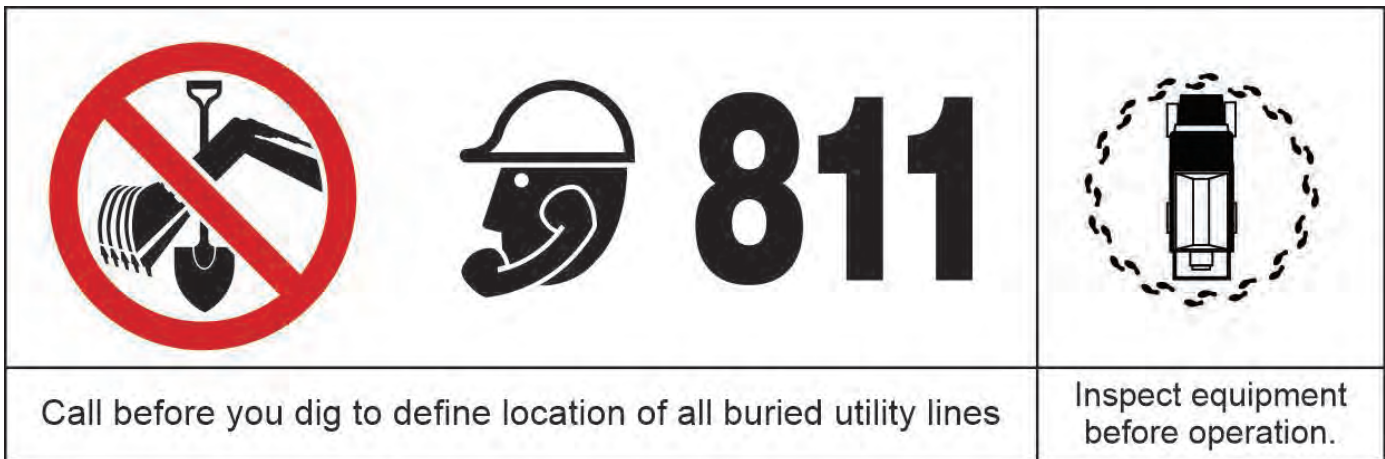


Figure 1-16

Inspect the Job Site

- Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.
- Contact your local One-Call (811 in USA) or the One-Call referral number (888-258-0808 in USA and Canada) to have underground utilities located before digging. Also contact any utilities that do not participate in the One-Call service .
- Inspect job site and perimeter for evidence of underground hazards, such as the following:
 - “Buried utility” notices
 - Utility facilities without overhead lines
 - Gas or water meters
 - Junction boxes
 - Drop boxes
 - Light poles
 - Manhole covers
 - Sunken ground
 - Mark location of all buried utilities and obstructions
- Walk and inspect job site for unsafe conditions and identify any potential hazards for operators and bystanders. Do not operate equipment if unsafe conditions cannot be controlled.

Visibility Conditions When Operating

- **Operate in daylight** or with lights that provide adequate visibility to perform job safely.
- **Make sure** passersby, steep slopes, ditches, drop-offs, overhead obstructions, and power lines are visible and identifiable.

Prepare the Job Site

- Open manholes and other access openings create risk of trips and falls. Be aware of such locations and do not step in or over them. Ensure manhole covers and other covers are in place prior to leaving the job site.
- Be aware of traffic and pedestrians on the job site. Use extreme caution while moving around the vehicle to avoid contact with other moving vehicles. Before stowing the boom or moving the vehicle, make sure pedestrians are clear of the area.
- Clear the area to be excavated.
- Select a solid area to stand on while excavating.

Fire Extinguisher

If required, mount a fire extinguisher near the power unit but away from possible points of ignition. The fire extinguisher should always be classified for both oil and electric fires. It should meet legal and regulatory requirements.

Equipment Operation Safety and Hazard Warnings



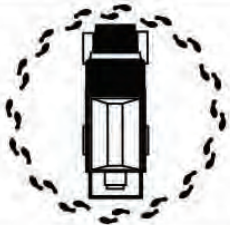
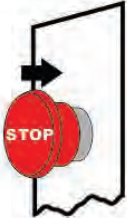
			
Read and Understand Operator's Manual.	Ensure truck parking brakes are set.	Inspect equipment before operation. Ensure all components are operating properly.	Emergency Stop Button.

Figure 1-17

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure that oneself, others, animals, and property are not injured or damaged by the operation of this equipment. Do not operate the equipment if passersby or untrained persons are within the active job site.

Never operate this equipment if a shield or guard is missing or in poor operational condition.

NOTE

Read and understand all operating instructions and the entire safety section of this manual and the truck manual before attempting to operate any equipment.

Familiarize yourself and coworkers with all the emergency equipment shut offs.

If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the unit.

 **WARNING**

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use common sense to avoid hazards.

 **WARNING**

Always set the truck parking brakes and if on unlevelled surfaces chock the wheels. Unexpected truck movement can cause serious injuries.

Before operating the equipment, conduct a walk-around inspection of the equipment for proper operation. Repair any improperly functioning, broken, or damaged equipment before operating.

Inspect the job site for unsafe conditions and identify any potential hazards for operators and bystanders. Do not operate equipment if unsafe conditions cannot be controlled.

Emergency Stop Button Function

This equipment is equipped with multiple emergency stop buttons that can be activated at any time during operation to disconnect the power and shut down the jetting operations. Emergency stop buttons are located on the control panel, and each remote pendant.

Pressing the emergency stop button while the machine is in operation has the following results:

- Brings truck RPM to idle
- Shuts off the water pump
- All functions that are stopped will remain inactive

A message on the front control panel HMI screen will indicate that it is in emergency stop mode.

Equipment Operation Safety and Hazard Warnings - Continued



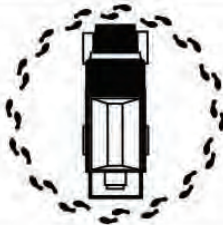

			
<p>Read and Understand Operator's Manual.</p>	<p>Ensure truck parking brakes are set.</p>	<p>Inspect equipment before operation. Ensure all components are operating properly.</p>	<p>Emergency Stop Button.</p>

Figure 1-18

To Reset E-STOP


1. The operator must reset the emergency stop button.
 - Twist the emergency stop button, and it will pop out
2. Upon resetting the emergency stop switch, the truck does not automatically go back to the state it was in when the button was pushed.
3. The switch panel must have power restored to continue operation. This will activate the hose reel functions at a neutral state.
 - The engine RPM must be increased
 - Water pump is engaged

High-Pressure Water Safety and Hazard Warnings

			
Pressurized fluid and erosion of flesh Hazard	Injection Hazard	Wear protective gloves	Wear face protection - Face Shield

Figure 1-19

- Release pressure before attempting to open any door, hatch, hose, or tube.
- Do not bend or strike high-pressure lines.
- Report any loose or damaged tubes or hoses to mechanics so repairs can be made prior to continued use.

 WARNING
In the event of any water jet injury
<ul style="list-style-type: none"> • Seek medical attention immediately! • Inform the physician of the cause of the injury. • Tell the physician what type of water jet project was being performed at the time of the accident and the source of the water.

Operators using or working around high-pressure water systems need to take additional precautions, including specialized personal protection equipment. This and additional information on high-pressure water safety is provided by and available as a wallet card from:

Water Jet Technology Association
 906 Olive Street, Suite 1200
 St Louis, MO 63101-1419
 (314) 241-1445
 fax (314) 241-1449
 e-mail: wjta@wjta.org
 website: www.wjta.org

IMPORTANT MEDICAL INFORMATION!
<p>READ THIS PLASTIC CARD AND KEEP IT IN YOUR WALLET. IN THE EVENT OF A WATERJET INJURY, SHOW THE CARD TO YOUR DOCTOR.</p>
<p>Distributed by the: WaterJet Technology Association, 906 Olive Street, Suite 1200 St Louis, MO 63101-1419, phone: (314) 241-1445, fax: (314) 241-1449 e-mail: wjta@wjta.org website: www.wjta.org</p>

Figure 1-20

- Use the handgun wash-down system for final equipment and job site cleanups or for cleaning debris buildups on the inside of body.

 DANGER
<p>The water handgun operates at high pressure. Never point the water handgun at yourself or others. Make sure you are holding handgun securely with both hands, in a secure stance. Water gun has a kickback when turned on.</p>

- Always bleed the pressure from the handgun before disconnecting it from the high-pressure handgun connection.

High-Pressure Water Safety and Hazard Warnings - continued

When setting up for rodding operations, use the appropriate guide fin and hose guard (tiger tail) to prevent the nozzle from turning in the pipe and returning toward the operator. The length of the assembled nozzle and guide fin must be greater than the diameter of the pipe to be cleaned.

Inspect the rodder hose often for indications of damage or wear. Check the hose before each use for movement in hose fittings, exposed hose reinforcement, kinking or collapsing, blisters or bubbles, and fittings that are improperly installed or cutting into the hose.

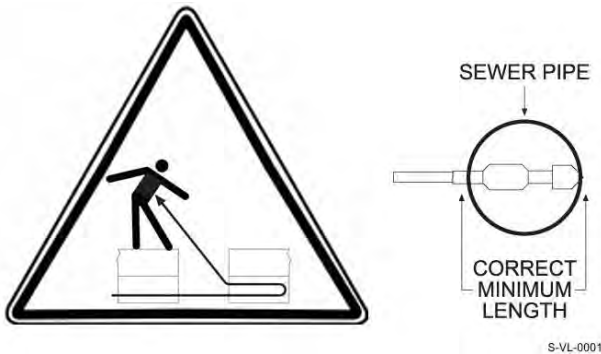


Figure 1-21

WARNING

Using improper fittings or using the sewer hose outside the sewer pipe can cause violent loss of control of the rodder hose.

The sewer hose creates tremendous pressure and must not be fitted with a reducer or handheld nozzle or be operated outside the sewer pipe. The back pressure created by such action will cause loss of control of the hose. Violent movement of the hose and fittings or high pressure can cause serious injury or death.

All hose manufacturers have instituted a color code system for identification of the hose, fittings, and tools. When repairing a hose, the inside color of the hose, the color of the fitting, and the die colors must match. Fittings from one manufacturer will not properly crimp onto hose from another manufacturer. The outside color of the hose indicates the pressure rating of the hose and must match during splicing operations. Be aware of the operating pressures associated with the vehicle and the proper hose specifications for safe operation.

Waste Equipment Technology Association publishes a variety of industrial-related information that owners and

operators can obtain. This material includes specifications, repair, and inspection information for high-pressure hoses used in connection with sewer/catch basin cleaning equipment.

Waste Equipment Technology Association
4301 Connecticut Avenue, NW
Suite 300
Washington, DC 20008-2304
(Phone) (202) 244-4700
(Fax) (202) 966-4824
(E-mail) wastecinfo@WASTEC.org
(Web) http://www.wastec.org

High Water Pressure

WARNING

The handgun operates under high pressure. High-pressure water can cause serious injury or death.

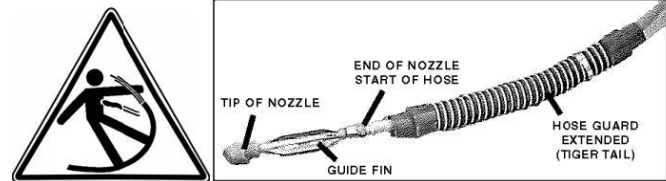


Figure 1-22

Do not turn on the water pressure until the hose is fully inserted into the sewer pipe, then increase water pressure slowly as you feed the hose into the sewer pipe.

Special safety equipment is required when operating the high-pressure handgun. Always wear safety toe shoes or boots (waterproof shoes or boots preferred), coveralls, face shield, safety goggles, and gloves (waterproof gloves preferred).

Sewer Gas Safety and Hazard Warnings






			
Explosion Hazard	Chemical, Dust and Fumes Inhalation Hazard	Wear Respirator when around hazardous fumes	Never have an open flame

Figure 1-23


WARNING

- **Sewer lines often contain poisonous or explosive gas such as methane. NEVER enter or bend over a sewer without proper ventilation and personal protective equipment. If another person needs help in a sewer, immediately call for emergency assistance. NEVER enter the sewer to help unless you have been trained to do so and have proper personal protective equipment.**
- **NEVER smoke in or around sewer lines, drains, or catch basins.**
- **Failure to follow these instructions may result in death or serious injury.**

Confined Space Hazard

Follow all requirements for confined space when servicing. All large water bodies and vessels that can be entered are to be considered permit-required confined space as defined by the Occupational Safety and Health Administration (OSHA). The following information is from OSHA 3138-01R 2004. The full document can be obtained from www.osha.gov.

Many workplaces contain spaces that are considered to be “confined” because their configurations hinder the activities of employees who must enter into, work in, or exit from them. In many instances, employees who work in confined spaces also face increased risk of exposure to serious physical injury from hazards such as entrapment, engulfment, and hazardous atmospheric conditions. Confinement itself may pose entrapment hazards, and working in confined spaces may keep employees closer to hazards such as machinery components than they would be otherwise. For example, confinement, limited access, and restricted airflow can result in hazardous conditions that would not normally arise in an open workplace.

The terms “permit-required confined space” and “permit space” refer to spaces that meet OSHA’s definition of a “confined space” and contain health or safety hazards. For this reason, OSHA requires workers to have a permit to enter these spaces.

By definition, a confined space:

- Is large enough for an employee to enter fully and perform assigned work.
- Is not designed for continuous occupancy by the employee.
- Has a limited or restricted means of entry or exit.

These spaces may include underground vaults, bodies, storage bins, pits and diked areas, vessels, and silos.

Trenching Hazards

NOTE

Reference to OSHA regulations are for informational purposes only and not intended as legal advice.

OSHA[®] QUICK CARD[™]

Working Safely in Trenches

When done safely, trenching operations can reduce worker exposure to cave-ins, falling loads, hazardous atmospheres, and hazards from mobile equipment.

OSHA standards require that trenches and protective systems be inspected daily and as conditions change by a competent person before work begins.



Never enter a trench unless:

- It has been properly inspected by a competent person.
- Cave-in protection measures are in place.
- There is a safe way to enter and exit.
- Equipment and materials are away from the edge.
- It is free of standing water and atmospheric hazards.

Prevent trench collapses:

- Trenches 5 feet deep or greater require a protective system.
- Trenches 20 feet deep or greater require a protective system designed by a registered professional engineer.

Protective systems for trenches:

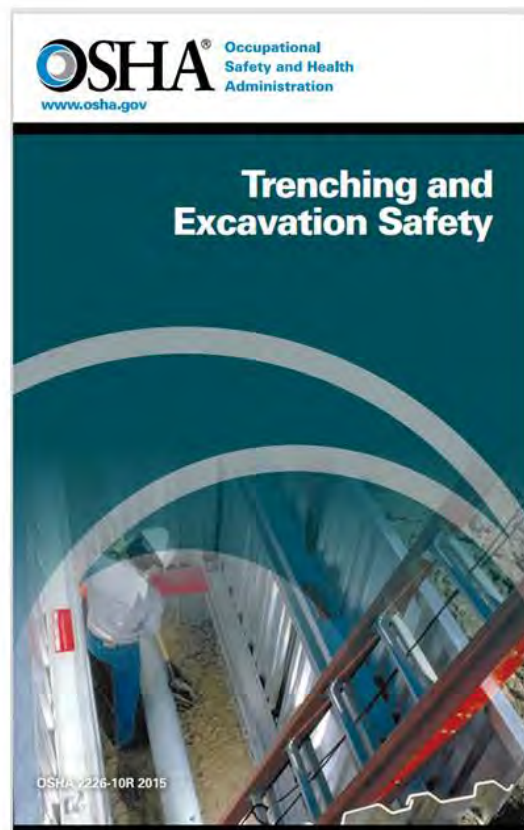
- SLOPE or bench trench walls by cutting back the trench wall at an angle inclined away from the excavation.
- SHORE trench walls by installing aluminum hydraulic or other types of supports to prevent soil movement.
- SHIELD trench walls by using trench boxes or other types of supports to prevent soil cave-ins.

For more information:



OSHA[®] Occupational Safety and Health Administration
www.osha.gov (800) 321-OSHA (6742)

OSHA-3243-09R 2018



De-energize and Lockout Procedures






				
Electrical Wire Hazard	Hand Crushing Hazard	Remove key and read service/maintenance manual/handbook before servicing	Wait until all moving parts have stopped completely	Lock-Out

Figure 1-24

 **WARNING**

If machinery being serviced or maintained unexpectedly energizes, starts up or releases stored energy, it could result in serious injury or death.

Note

Follow all requirements for PPE when servicing equipment.

De-energization and lockout refer to specific practices and procedures to safeguard employees from the unexpected energization or startup of machinery and equipment or from the release of hazardous energy during service or maintenance activities.

De-energization requires the authorized employee to turn off and disconnect the machinery or equipment from its energy source(s) before performing service or maintenance and to either lock out or isolate the equipment/components to prevent the release of hazardous energy (e.g., electricity, compressed air, high pressure fluid, etc.).

Lockout devices hold energy-isolation devices in a safe or “off” position. They provide protection by preventing machines or equipment from becoming energized because they are positive restraints that no one can remove without a key or other unlocking mechanism or through extraordinary means, such as bolt cutters.

To properly de-energize this equipment:

- Place the transmission in the park position.
- Set the parking brake.
- Turn off the engine and remove the keys.
- Switch the battery power off if the truck has a battery disconnect switch, or disconnect the battery ground cables.
- Lock the truck doors and securely store the truck keys.

Hazards with Equipment Maintenance



WARNING

Avoid serious injury or death from component failure by keeping implement in good operating condition by performing proper service, repairs, and maintenance.

1

Before Performing Service, Repairs, and Maintenance on the Equipment

- **Stop PTO and engine**, engage parking brake, lower implement, allow all moving parts to stop, and remove key before dismounting from truck.
- **Place** debris body, tailgate, and boom in lowered position or securely block up with support props.
- **Wear safety glasses, protective gloves** and follow **safety procedures** when performing service, repairs and maintenance on the equipment.
- Allow components to cool before servicing or performing maintenance.
- **Avoid contact** with hot hydraulic oil tanks, pumps, motors, valves and hose connection surfaces.
- **Securely** support or **block up** raised framework and lifted components before working underneath equipment.
- **Follow instructions** in maintenance section when replacing hydraulic cylinders to prevent component from falling.
- **Stop and shut off truck** engine before doing any work procedures.
- **Use** ladder or raised stands to reach high equipment areas inaccessible from ground.
- **Ensure** good footing by standing on solid flat surfaces when getting on equipment to perform work.
- **Follow** manufacturer's instructions in handling oils, solvents, cleansers, and other chemical agents.
- **Do not** change any factory-set hydraulic calibrations to avoid component or equipment failures.
- **Do not** modify or alter equipment, functions, or components.

Performing Service, Repairs, Lubrication, and Maintenance

- **Inspect** for loose fasteners, worn or broken parts, leaky or loose fittings, missing or broken cotter keys, washers on pins, and all moving parts for wear.
- **Replace** any worn or broken parts with authorized service parts.
- **Never** lubricate, adjust, or remove material while it is running or in motion.
- Lubricate unit as specified by lubrication schedule.
- **Torque** all bolts and nuts as specified.

Safety Shields, Guards, and Safety Devices Inspection

- **Replace** any missing, broken, or worn safety shields, guards, and safety devices.
- **Replace** any damaged or worn safety warning decals. Damaged or worn decals need to be replaced with new ones.

Parts Information

Super Products uses balanced and matched system components for jetting, electrical systems, hydraulic systems, water systems and other components. These parts are made and tested to Super Products specifications. Non-genuine or "will fit" parts do not consistently meet these specifications. The use of non-genuine or "will fit" parts may reduce performance, void Super Products warranties, and present a safety hazard. Use genuine Super Products parts for economy and safety.

Decal Location

In addition to the decals provided by Super Products® there may be decals shown that are part of the cab and chassis or other non Super Products components; these will not be covered.

Some decals shown may appear in a different location than pictured due to differences in optional equipment on each machine and differences in cab and chassis configuration.

If any decal provided by Super Products is missing or becomes illegible, a replacement decal can be requested from Super Products at no charge and should be replaced immediately.

1



ITEM	DESCRIPTION	TYPE	PART NO.	SEE FIG.
1	Parameters and software	INSTRUCTION	0003392	1-30
2	Vehicle height	CAUTION	0030707	1-31

Figure 1-25 Inside Cab

1



ITEM	DESCRIPTION	TYPE	PART NO.	SEE FIG.
1	Drain here	INSTRUCTION	3050-00024	1-32
2	Water Tank Fill	INSTRUCTION	3050-00579	1-33
3	Rotating shafts can be dangerous	WARNING	3050-01180	1-34
4	Winterization/air purge system	NOTICE	0030918	1-36
5	High-pressure water	WARNING	0007437	1-37
6	Water pump valve positions	NOTICE	0026472	1-38
7	Stand Clear of Hose Reel	CAUTION	0030915	1-39
8	Made in the U.S.A.	INSTRUCTION	3050-00433	1-35

Figure 1-26 Left Side of Truck

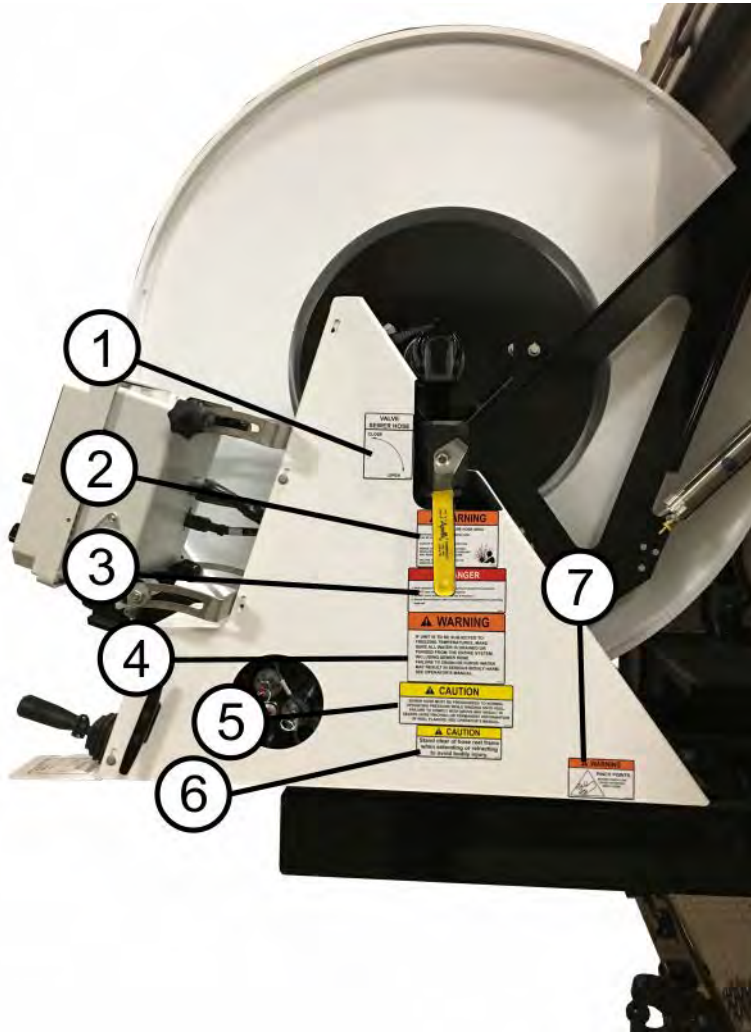


1

ITEM	DESCRIPTION	TYPE	PART NO.	SEE FIG.
1	Drain Here	INSTRUCTION	3050-00024	1-32
2	Water Supply On/Off	INSTRUCTION	3050-00572	1-40
3	Rotating shafts can be dangerous	WARNING	3050-01180	1-34
4	Water tank fill	INSTRUCTION	3050-00579	1-33
5	High-pressure water	WARNING	0007437	1-37
6	Hydraulic reservoir	INSTRUCTION	3050-0051	1-41
7	Hydraulic Valve Position	CAUTION	3050-01286	1-42
8	Winter Recirculation	INSTRUCTION	3050-00205	1-43

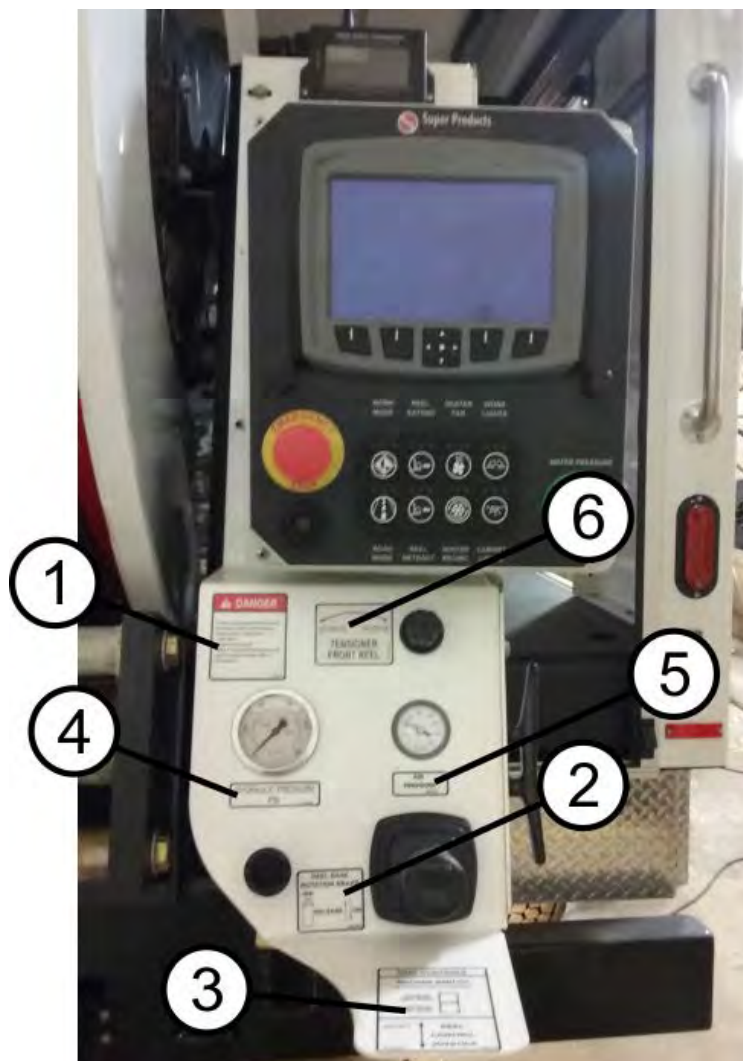
Figure 1-27 Right Side of Truck

1



ITEM	DESCRIPTION	TYPE	PART NO.	SEE FIG.
1	Valve Sewer Hose	INSTRUCTION	0007423	1-44
2	High-pressure hose area	WARNING	007437	1-37
3	General Hazards	DANGER	0030916	1-45
4	Freezing temperatures	WARNING	0007436	1-46
5	Sewer hose must be pressurized	CAUTION	3050-00075	1-47
6	Hose Reel Hazards	CAUTION	0030915	1-48
7	Pinch Point Hazards	WARNING	3050-01201	1-49

Figure 1-28 Right Side of Reel



ITEM	DESCRIPTION	TYPE	PART NO.	SEE FIG.
1	Avoid unexpected vehicle movement	DANGER	0030917	1-50
2	Reel base rotation brake	INSTRUCTIONS	3050-00981	1-51
3	Reel controls	INSTRUCTIONS	0031135	1-52
4	Hydraulic Pressure	INSTRUCTIONS		–
5	Air Pressure	INSTRUCTIONS		–
6	Tensioner Front Reel	INSTRUCTIONS		–

Figure 1-29 Front of Reel

NOTICE

WINTERIZATION / AIR PURGE SYSTEM

Follow these steps to purge water from the water system and winterize water pump. Perform with truck running.

1. Drain the water tanks by opening the front drain valve and the supply valve then remove Y-strainer cap.
2. After all water has drained from the water tanks, close the water supply lines valve, install the Y-strainer cap.
3. Open the sewer hose valve located on the reel and open the air purge valve allowing air to push water out of the sewer hose. Spin the front hose reel to assist the water removal process. Close the sewer hose valve when all the water is expelled.
4. **OPTION:** If the truck is equipped with the **WINTER RECIRCULATION**, connect the sewer hose to the recirculation line located on the right side cabinet floor. Open the sewer hose valve until air enters the water tanks. Open both drain valves at the rear of the cabinet floor until water is expelled, then close the sewer hose valve.
5. **OPTION:** If your truck is equipped with a **RETRACTABLE HOSE REEL**, install a spray handgun and open the 3-way valve at the water pump. Squeeze the trigger until all water is expelled. Remove the spray handgun and close the retractable hose reel 3-way valve.
6. Open the heat exchanger drain and close when all water is expelled.
7. Open the 3-way valve at the bottom of the water pump and stroke the pump in the "prime / purge" mode. Perform this until no water is coming from the pump drain and close valve when all water is expelled.
8. Close the air purge valve.
9. Open the glycol tank feed valve until the pump ingests about one gallon of glycol. Turn off the pump and close the glycol tank valve. Open the 3-way valve at the water pump to verify glycol is in the water pump and close valve.

0030918

Part No. 0030918
Figure 1-36

1



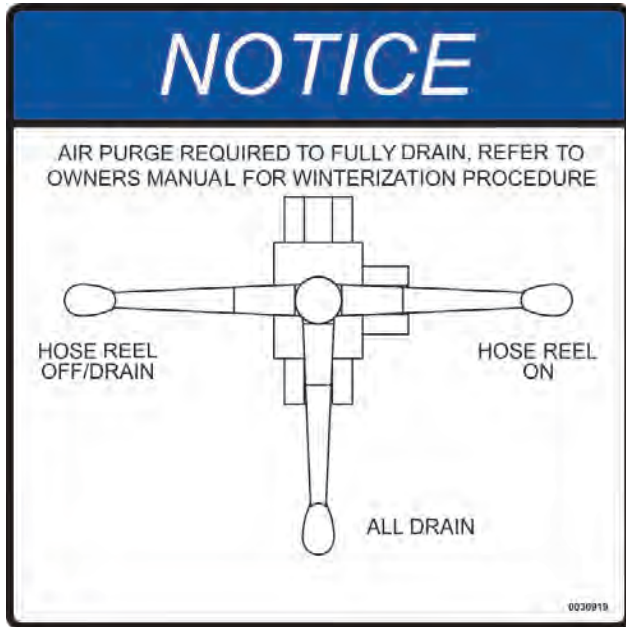
Part No. 0007437
Figure 1-37



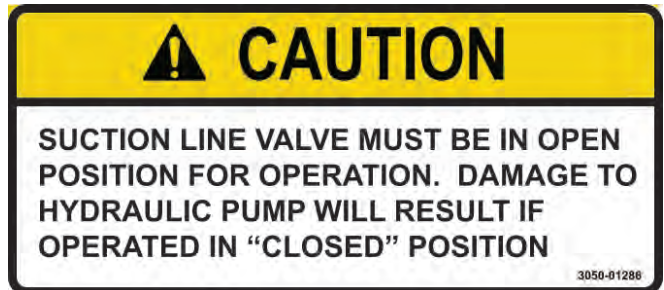
Part No. 3050-00572
Figure 1-40



Part No. 3050-00051
Figure 1-41



Part No. 0030919
Figure 1-38



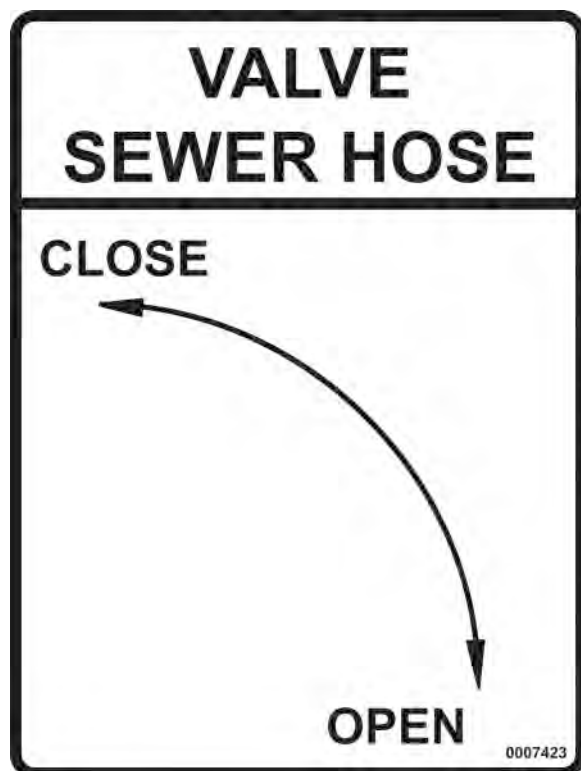
Part No. 3050-01286
Figure 1-42



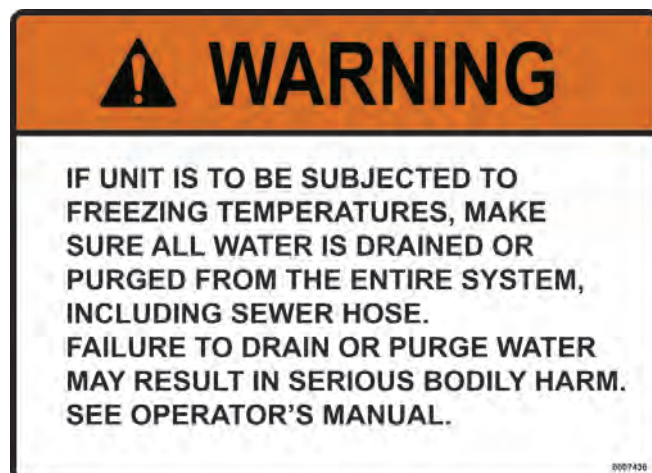
Part No. 0030915
Figure 1-39



Part No. 3050-00205
Figure 1-43



Part No.0007423
Figure 1-44



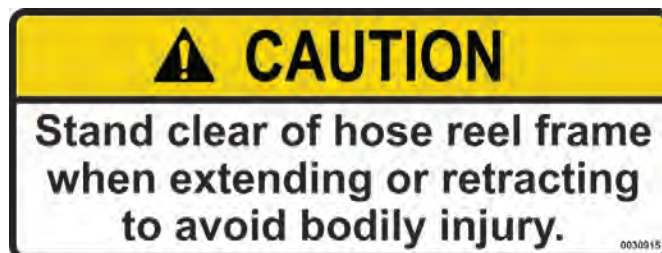
Part No. 0007436
Figure 1-46



Part No. 3050-00075
Figure 1-47



Part No. 0030916
Figure 1-45



Part No. 0030915
Figure 1-48

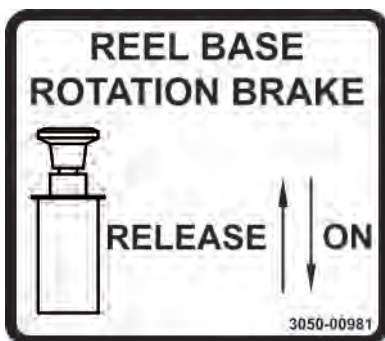
1



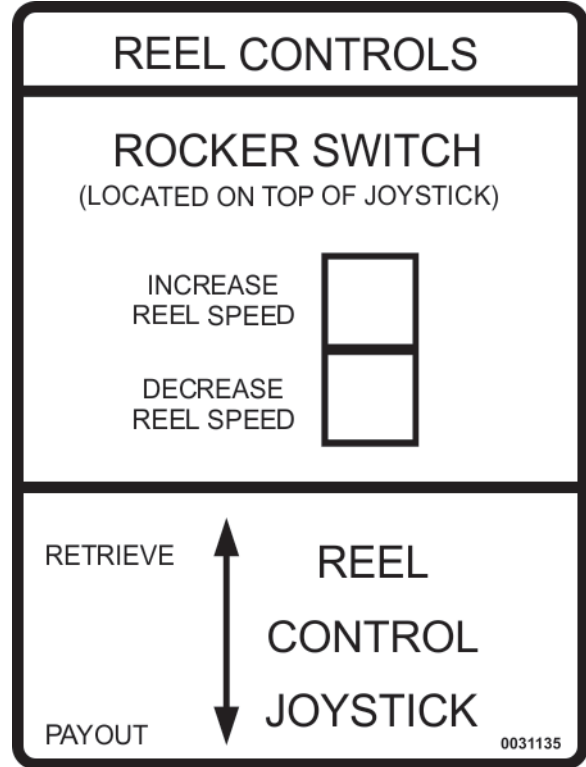
Part No. 3050-01201
Figure 1-49



Part No. 0030917
Figure 1-50



Part No. 3050-00981
Figure 1-51



Part No. 0031135
Figure 1-52



Part No. 3050-00025
Figure 1-53

Preparation Before Traveling to Worksite

If there are any questions on how to implement the below procedures, contact Super Products prior to starting operation. Super Products will not be responsible for any damage or injuries if all safety procedures are not completely followed.

1. Perform required maintenance as specified in the Maintenance Schedule section of this manual.
2. Check the oil and water levels in the engine, transmission, and fuel.
3. Close all water drain valves and install all plugs and strainers previously removed.
4. Make sure all tools, accessories, and work tubes/ hoses are properly secured.
5. Make sure all cabinet doors and access panels are closed and there are no loose items on the truck exterior.
6. Make sure the fresh water fill pipe strainer is clean.
7. Conduct a complete truck walk-around to visually inspect the truck for damage, leaks, or unsafe conditions.
8. Check all lights for proper operation.
9. Set the brakes and place the transmission in neutral. Turn the key on without starting the truck and lower the hose reel.
10. Check the engine oil, coolant, windshield washer fluid, and transmission fluid. The truck must be running to check the transmission fluid.
11. Return the hose reel to the transport position and secure.
12. Make sure the jetting hose is securely fastened.
13. Turn the ignition key to off.
14. Make sure the Y-strainer is clean and the cap is on the drain.
15. Make sure the hydraulic fluid reservoir is full, showing halfway up on the sight glass.

Pre-Operation

Introduction

This manual contains important information regarding safe operation, adjustment, and maintenance for the Super Products' SuperJet® Truck Mounted Jetter.

DO NOT allow anyone to operate or service this machine until they have read and understood all aspects of this manual.

DO NOT use this machine for any purpose or application other than those listed in this manual. Improper use or neglect of safety precautions will cause serious injury or death. Refer to Section 1, Safety.

NOTE

This operator's manual is to stay with the truck and be used as reference for operator personnel.

Principles of Operation

The SuperJet is designed as a high-pressure water jetting sewer cleaning system. The SuperJet uses a water system to break up the material.

Definitions

- Road Mode — Used for driving the truck. Work mode functions are not operable when this mode is selected.
- Work Mode — Applies hydraulics for the water pump and hose reel functions. The truck cannot be driven when work mode is selected.
- Winter Recirculation Mode — Allows the water pump to circulate water at low pressure while in road mode, work mode, or with truck parked and engine idling.

Testing with Wireless Pendant Remote Control

1. Visually inspect the wireless pendant for damage. Repair or replace as necessary.
2. Press green button(1) to turn ON. Display screen will turn ON.
3. With the truck at idle, press the E-stop(2) button on the remote and verify that functions are disabled by pressing hose reel extend button(3).

4. Reset to work mode by holding the E-Stop button for 3 seconds.

NOTE

Make sure the wireless pendant remote is turned off when not in use to conserve battery power. Store the wireless remote on the charging station in the cab when not in use.



Figure 2-1

- 1) OFF/ON Button
- 2) E-Stop Button
- 3) Reel Extend Button

DANGER

Never work beyond the distance from the truck that the wireless remote control was previously tested. Failure to comply could result in loss of control of the equipment and/or the equipment not operating properly.

Water System

CAUTION

Never allow the hydraulic system to go over hydraulic relief for extended periods of time. This will cause overheating and pump and valve failure.

1. Locate a known sewer line that is as large as possible and is long enough to pay out all the hose on the reel.

NOTE

The sewer line must not be located in residential areas to avoid damage to homes and businesses when using maximum water pressure.

2. Pay out the entire length of sewer hose at the lowest possible pressure (800 psi).
3. When all the hose is paid out, increase the water pressure to maximum and rewind the hose back onto the reel under pressure.

The system consists of water fill (1), water tanks (2), a suction line shutoff valve (3), a Y-strainer (4), a water pump (5) and hose reel (6).



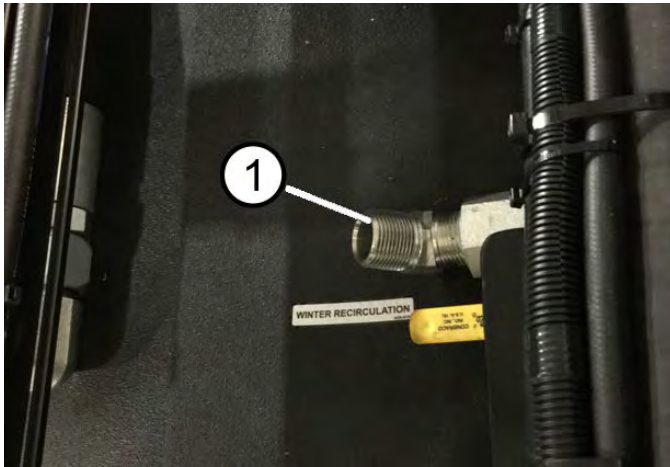
Figure 2-2

- | | |
|-------------------------------|---------------|
| 1) Water Fill | 4) Y-Strainer |
| 2) Water Tank | 5) Water Pump |
| 3) Suction Line Shutoff Valve | 6) Hose Reel |

Winter Recirculation (Option)

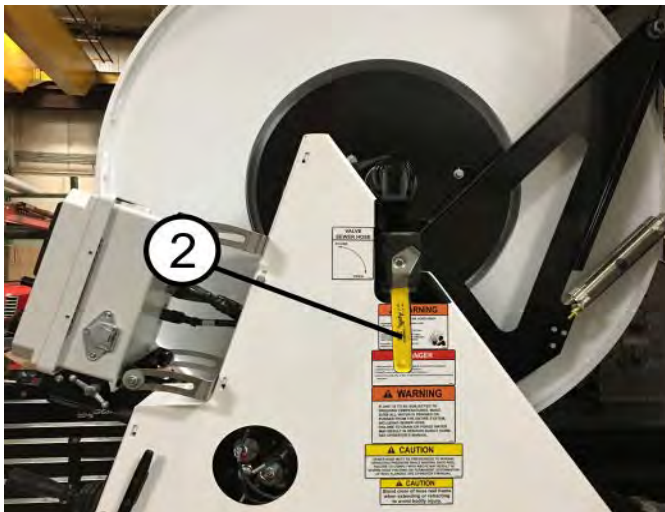
The truck may be equipped with an optional winter recirculation system to circulate water through the pump and back to the tank to prevent freeze-up in colder climates. This can be used while the truck is in road mode and when the truck is in work mode while stationary.

1. Remove the sewer hose from the travel fitting and attach it to the winter recirculation fitting (1) at the rear of the cabinet floor.



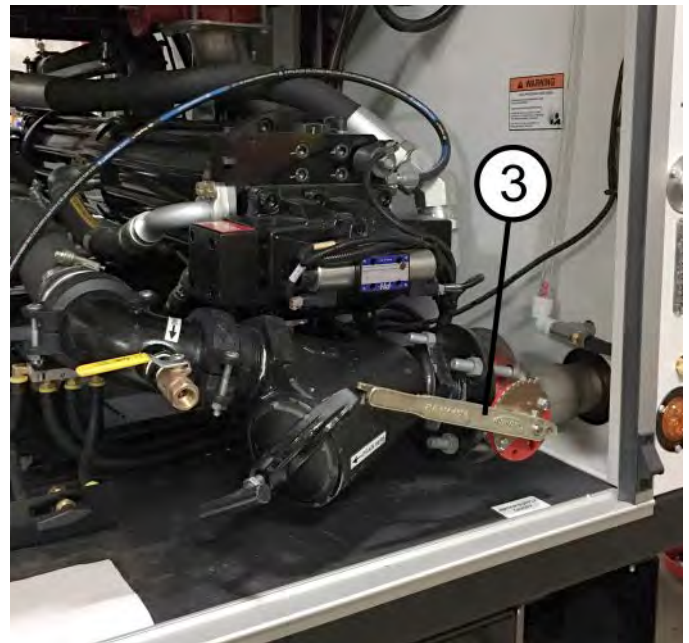
Winter Recirculation Fitting
Figure 2-3

2. Open the sewer hose valve (2).



Sewer Hose Valve Shown Closed
Figure 2-4

3. Open the water supply valve (3) at the front cabinet.



Water Supply Valve Shown Open
Figure 2-1

3. Press ON the RECIRCULATE button (4) on the front control panel or on the keypad in the cab.



Front Control Panel
Figure 2-2

2

PRE-OPERATION

Once winter recirculation has started, the control panel keypad and cab keypad will indicate with green LEDs on the keypads that WINTER Recirculation is ON.

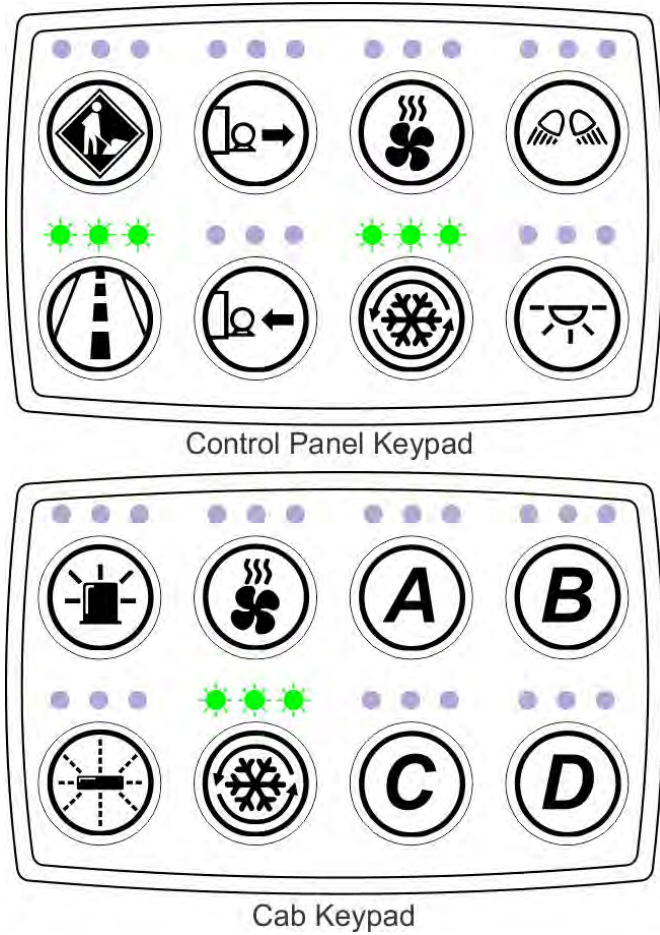


Figure 2-3

Control System Operation

Power Distribution Panel

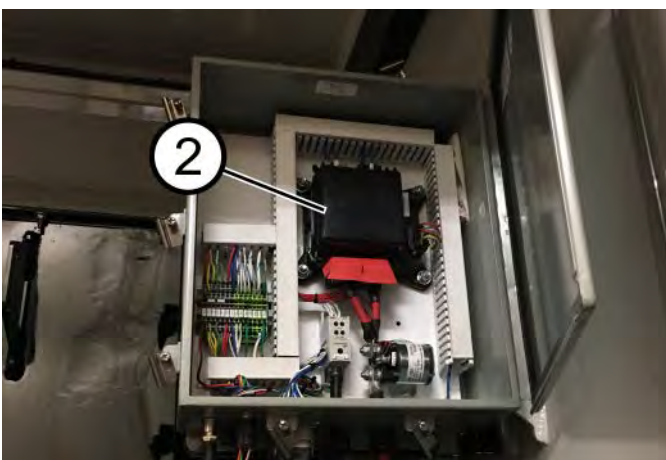
When the truck's ignition key is turned to the **on** position, the power distribution panel (1) distributes power separately to all devices, and the control system will boot up.



Power Distribution Panel

Figure 3-1

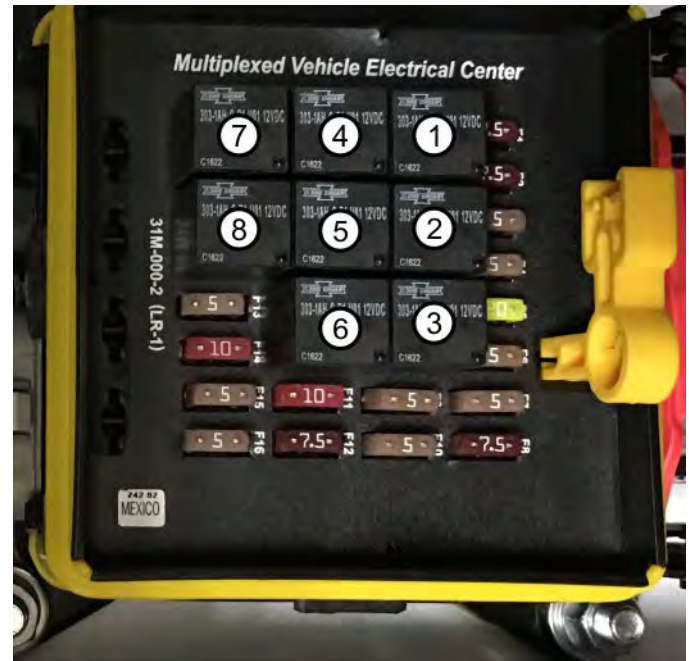
Within the power distribution panel you will find a fuse box (2) containing all fuses and relays for the control system.



Fuse and Relay Box

Figure 3-2

Open the fuse box to access specific fuses and relays. See Table 3-1 for additional fuse information.



- 1) High Mount Strobes
- 2) Interior Lights
- 3) Spare
- 4) Low Mount Strobes
- 5) Exterior Work Lights
- 6) Spare
- 7) Spare
- 8) Heater Fan

Figure 3-3

Table 3-1 Fuse Information

FUSE	AMPERAGE	RELAY	CIRCUIT
F8	7.5A	R5	Work Lights
F4	5A	R2	Interior Lights
F2	7.5A	R4	Strobe Lights
F1	7.5A	R1	Beacon Lights
F7	5A	R3	Spare
F3	5A	R7	Spare
F6	5A	R6	Spare
F5	20A	R8	Heater Fan
F16	5A	-	Spare
F15	5A	-	Spare
F10	5A	-	Spare
F9	5A	-	Spare
F13	5A	-	Spare
F14	10A	-	Control Panel
F11	10A	-	I/O
F12	5A	-	Cab



Fuse and Relay Status

Figure 3-5

4. Press the HOME button to exit this menu screen.

The status of the control panel fuses and relays can be checked on the HMI screen on the control panel.

1. Press the diagnostics button.
2. Press UP/DOWN arrow to select Power Distribution. Press Center navigation button to enter selection.



Figure 3-4

3. The status of the fuses and relays will now be displayed on the screen.

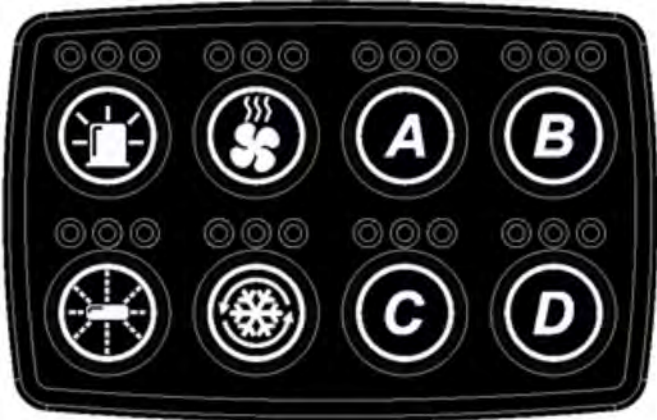
Control System Overview

Cab Controls



Cab Control Panel
Figure 3-6

Cab Control Panel Functions



Cab Keypad
Figure 3-7

3

NOTICE

The Department of Transportation (DOT) regulations do not allow the rear spot light or backup lights to be on while driving on the road.

Front Control Panel and Functions



Front Control Panel

- | | |
|-------------------------------|-----------------|
| 1) Water Pressure Rotary Dial | 4) Panel Lights |
| 2) Emergency STOP Switch | 5) Alarm |
| 3) Display Screen | |

Figure 3-8

The following section will provide information on the use of available functions for the front control panel. It will also provide instructions and information on navigating the control panel monitor.

Water Pressure Rotary Dial

Water pressure can be controlled by the WATER PRESSURE rotary dial (1) on the front panel or the WATER INCR/WATER DECR buttons on the pendants or backup control screen.

The computer will obey the most recent command input.

The water pump is turned off when the speed dial is turned to less than 10%.

If the water pressure dial is already set to a value greater than 10% when the truck enters work mode, the control system will ignore the speed dial setting until the setting is turned back to less than 10% or until the water pump switch on the curbside panel is pressed to decrease pressure.

When the speed dial is turned to 10% or greater, the following will happen:

1. The water pressure speed dial will affect engine RPM – 1600 RPM maximum.

Water Pressure

Water pressure will be shown on the front control panel display screen (3). Water pressure is displayed in pounds per square inch (PSI). Alternate water pressure units are user-selectable by accessing the Options menu.

Emergency STOP Switch

If the emergency STOP switch (2) is actuated the following will occur:

1. All functions will be turned off (water, hose reel, etc.)
2. The engine will be brought down to idle.
3. A red EMERGENCY STOP Active error message will be displayed on the display screen, and the alarm will sound. The alarm can be silenced by pressing the center navigation button on the front panel.



Emergency Stop HMI Screen

Figure 3-9

4. To return to full operation, reset the system by twisting the red emergency stop switch clockwise.

Recirculate Keypad Button (Option)

Winter recirculation mode is used to circulate water through the water system plumbing and water tanks to prevent freezing. Winter recirculation is meant to run when the truck is either idling or driving on the road. When the winter recirculation switch is switched ON, the water pump hydraulic pumps are engaged. The water pump will run a minimum of 10 GPM (gallons per minute) while at idle. Faster engine RPM while in road mode will cause the water pump to pump up to 30 GPM or more due to the faster running hydraulic pump.



Control Panel Keypad Buttons

- 1) Work Mode Button
- 2) Reel Extend Button
- 3) Heater Fan Button
- 4) Work Lights Button
- 5) Road Mode Button
- 6) Reel Retract Button
- 7) Recirculate Button
- 8) Interior Lights Button

Figure 3-10

Front Control Panel Display Screen Menu Operation

Water Pressure

Water pressure (6) is displayed on the front display panel screen after initial power-up. Water pressure is displayed in a range of 0–3000 PSI.

Payout Counter

The payout counter (4) can be reset independently of the reel counter once the hose is in the horizontal sewer line. This can alert the operator when the hose is nearing the opening.



- | | |
|-----------------------|------------------------|
| 1) Water Level | 9) Menu Buttons |
| 2) Fuel Level | 10) LVDT Position |
| 3) Fuel Consumption | 11) Information Window |
| 4) Payout Counter | 12) Status Icons |
| 5) Hose Reel Speed | |
| 6) Water Pressure | |
| 7) Requested Pressure | |
| 8) Navigation Buttons | |

Figure 3-11

Status Icons

Status icons are displayed to show current status of the control system.



The wired pendant icon is displayed when the wired pendant is plugged in and communicating with the control system.



The wireless pendant icon is displayed when the wireless pendant is linked and communicating with the control system.



The flow control icon is displayed when the control system is operating in flow control mode. The control system will enter flow control mode when excessive flow has been detected and limiting the output pressure to control the output flow rate.



The autofill mode icon will be displayed when the Autofill Mode is activated in the Function menu.



The block buster icon will be displayed when Block Buster is activated in the Function menu.



The pump low icon will be displayed when Pump Low is activated in the Function menu.



The winter recirculation icon will be displayed when Winter Recirculation is activated from the keypad.



The system warning icon will be displayed anytime there is an active alarm present.

Information Window

The information menu displays information about the water system, chassis, and system status. The left/right navigation buttons can be used to select the desired information tab to view.

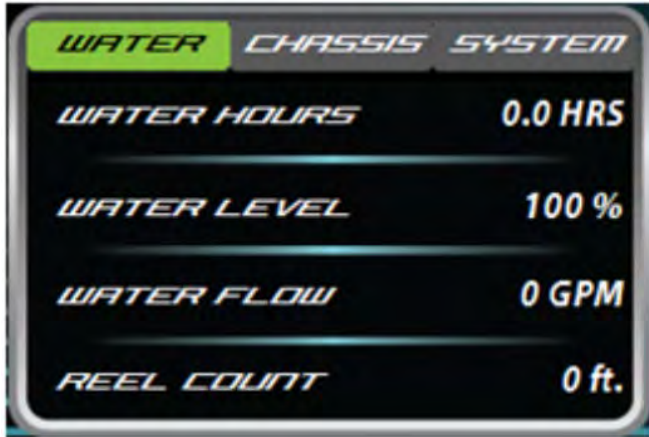


Figure 3-12

Payout Menu

The payout menu can be accessed by pressing the Payout button. The menu options can be selected by using the Up/Down navigation arrows and pressing the center navigation button to confirm the selection. Selecting Clear will clear the current hose payout. Selecting Store will store the current hose payout to the next available memory location. Selecting Recall will pop out the Payout Recall selections. The user can navigate to the desired payout footage to recall and loading it to the current hose payout footage using the navigation buttons. Selecting Clear Fill will reset all memory locations to zero. Selecting Return will return the user to the Payout Menu.



Figure 3-13

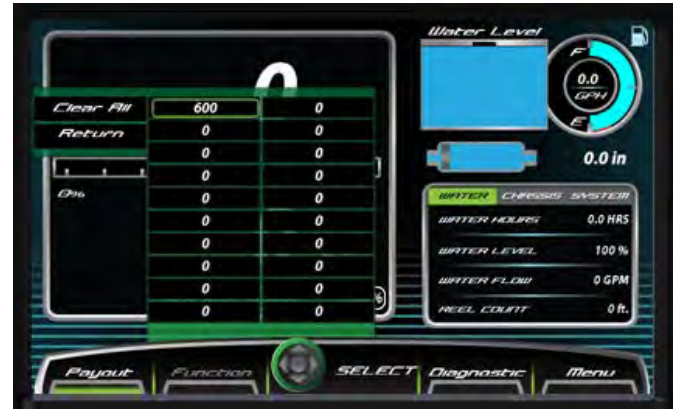


Figure 3-14

Function Menu

The function menu is only available in work mode. Pressing the Function button will allow the user to turn on or off functions of the truck's water system. These functions include the Pump Low feature, Autofill mode (if equipped) and Block Buster option (if equipped). Use the Up/Down navigation arrows to select a function and press the center navigation button to turn the function on or off. Functions which are not available will be grayed out and cannot be selected.



Figure 3-15

Diagnostic Menu

The diagnostic menu allows the user to view diagnostic information about the control system. The menu options can be selected by using the Up/Down navigation arrows and pressing the center navigation button to confirm the selection.



Figure 3-16

Power Distribution Diagnostics

The Power Dist diagnostics screen will show the status of the fuses and relays of the circuits used in the control system. At the top, the status of the mVec module on the network is shown. Below that is a listing of all the circuits with the fuse and relay status. To the left of the descriptions are indicators of the circuit status. Black is off, Green is on, and red is faulted. If a circuit is faulted, the type of fault is displayed as the status and the indicator on the left of the screen will display in red to easily identify the location of the faulty component on the mVec module.



Figure 3-18

Pendant Diagnostics

The Pendant diagnostics screen will show the status of any connected pendants. If a pendant is connected, it will be indicated by the green highlighted area around either Wired, Wireless, or both if they are both connected. As buttons are pushed, the button will change colors to indicate it is pushed and the associated function will also be highlighted in green. The pendant will also display the RF link status and battery charge of the wireless pendant when connected.



Figure 3-17

Control System Diagnostics

The Control System diagnostics screen will show the status of the various subsystems in the control system. The subsystems include the tank, PTO, network, control panel, reel, and pump. The subsystems can be selected by using the navigation arrows. Digital inputs and outputs will be shown as on or off. Analog inputs will display the analog value. Faulted inputs or outputs will display the type of fault that is detected. Any subsystem which contains a fault will be highlighted in red.

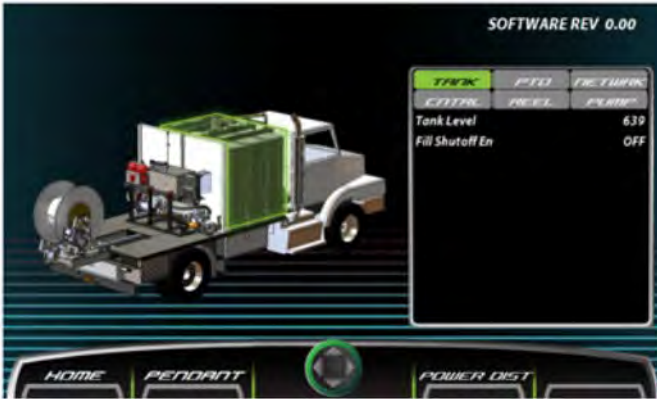


Figure 3-19



Figure 3-20

Operator Menu

The operator menu allows the user to select user options or activate the backup controls in the event of a component failure. The menu options can be selected by using the Up/Down navigation arrows and pressing the center navigation button to confirm the selection.



Figure 3-21

Backup Controls

The Backup controls screen allows the user to control the hose reel and water pressure in the event of a component failure. The water pressure can be increased and decreased using the up/down navigation buttons. The hose payout and payout can be controlled using the left/right navigation buttons. The hose reel can be moved in and out of the truck using the Reel Out and Reel In buttons.



Figure 3-22

3

User Options

The Options screen shows the user options that can be changed. The options can be selected by using the up/down navigation buttons. The selection can be changed by using the left/right navigation buttons. Pressing the Defaults button will reset all values to their factory default value. Unsaved values will be highlighted with orange text. To save the selections, press the center navigation buttons. The Factory button will navigate to a screen with factory level variables used for troubleshooting. These variables are not able to be edited without a factory password.

The valve offsets can be used to either increase or decrease the operating speed of the controls per the operator's preference. The black bar represents the full operating range of the hydraulic valve while the blue area indicates the actual operating range.

The Calibrate Hose button will reset both the hose payout and reel payout counters to zero to calibrate the hose counter function. This parameter should be calibrated to zero at the vertical entry point.



Figure 3-23

Front Control Panel Joystick Functions

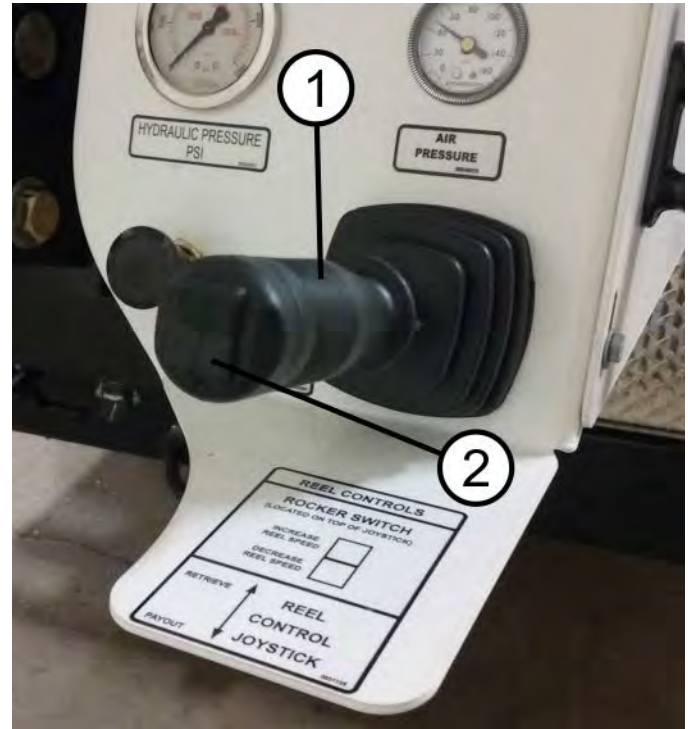


Figure 3-24

Hose Reel Function

- Pushing the reel control joystick (1) up will rotate the hose reel to retrieve (pay in) the sewer hose.
- Pulling the reel control joystick down will rotate the hose reel to pay out the sewer hose.
- The thumb switch (2) on the top of the reel control joystick will increase or decrease the hose reel speed.
- The hose reel speed, as a percentage of maximum, is shown below the payout of the home screen.

NOTE

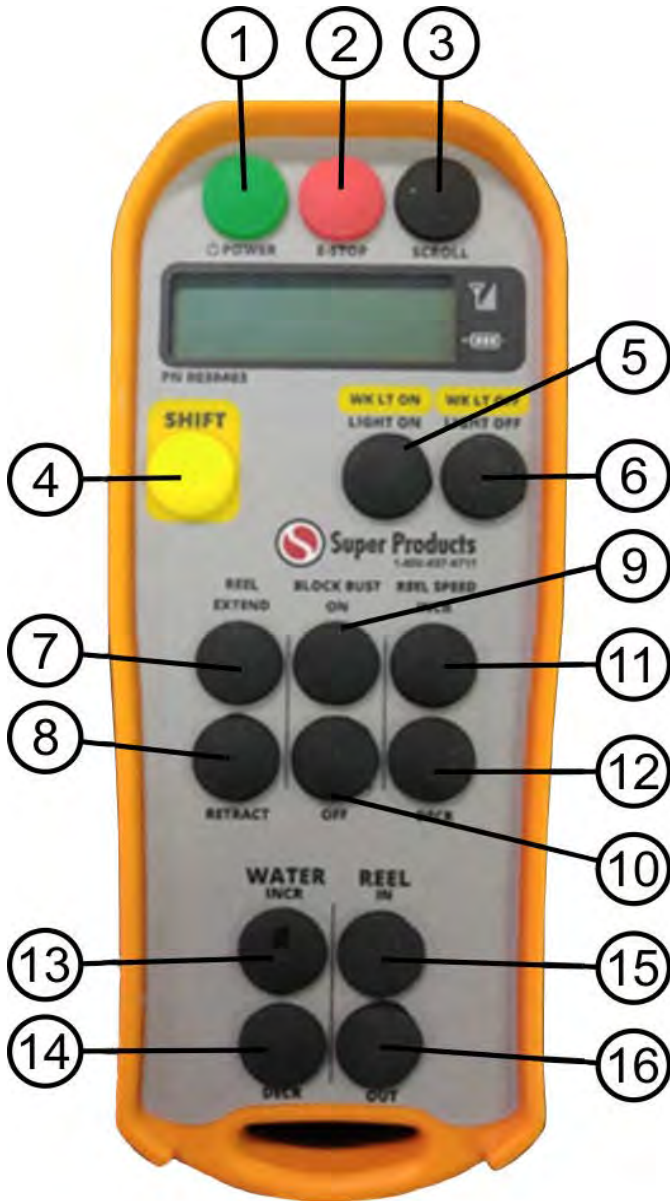
The vac function will not operate if the ejector plate is not in the home position.

Pendant Functions — Wired and Wireless

The functions, buttons, and labels on the wireless pendant are the same as those used on the wired pendant. Alternate functions require pressing and holding the SHIFT button and then pressing the corresponding button. Only one pendant function can be turned on at a time.

The pendant functions are as follows:

1. Pendant Power/Backlight
2. Emergency Stop
3. Scroll
4. Shift
5. Interior Light On
 - »+ SHIFT = Work Light ON
6. Interior Light Off
 - »+ SHIFT = Work Light OFF
7. Reel Extend
8. Reel Retract
9. Block Buster ON
10. Block Buster OFF
11. Reel Speed Increase
12. Reel Speed Decrease
13. Water Pressure Increase
14. Water Pressure Decrease
15. Reel Retract
16. Reel Extend



Wired Pendant (Option)

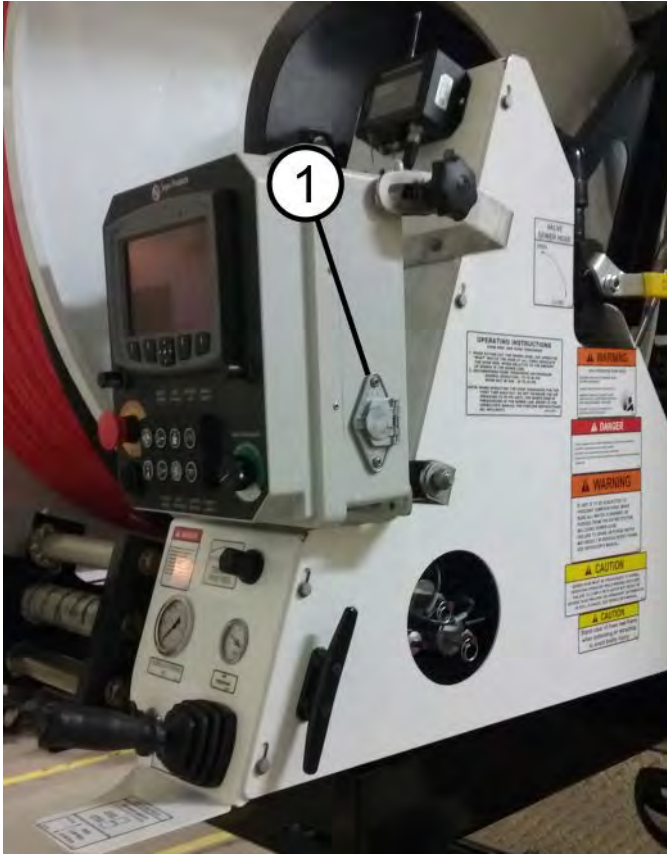
The wired pendant is connected to the receptacle for power and system connections. The wired pendant receives 12VDC power from, and sends commands to, the control system.

Pendant Functions - Wired and Wireless

Figure 3-25

Pendant Jacks

There is a receptacle for the wired pendant located at the control panel (1).



Control Panel Wired Pendant Receptacle

Figure 3-26

Wireless Pendant (Option)

The functions, buttons, and labels on the wireless pendant are the same as the ones used on the wired pendant.

NOTE

*The wireless pendant power must be turned **off** when not in use to conserve battery power.*

Emergency Stop Switch

If an emergency condition arises, press the emergency stop button on the remote pendant, the remote throttle, hose reel and water pump will be disabled.

1. The truck engine returns to idle since the work mode is now disabled.
2. The red EMERGENCY STOP Active error message will be displayed on the control panel HMI screen, and the alarm will sound. The control panel alarm can be silenced by pressing the center navigation button on the front control panel.
3. To return to full operation, reset the emergency stop button on the remote pendant, hold the e-stop button for 3 seconds. (This will also silence the front control panel alarm.)

Sewer Cleaning - Typical Sequence

Setting the Truck at the Job Site

1. Position the truck at the job site.
2. Wait for the air brake pressure to rise to the proper level and make sure the red low air pressure warning lights and alarm go out.
3. Place the transmission in neutral (N). Both the SELECT and MONITOR indicators will display NN.
4. Apply the park brake.
5. Turn on the appropriate strobe lights, work lights, and traffic manager lights.
6. Place wheel chocks in front of and behind one of the rear tires. Place safety cones as needed.



Figure 4-1

Engaging Work at the Job Site

1. Press WORK (1) on the control panel.



Figure 4-2

Water Pump Operation - Jetting

Determine what work will need to be performed at the job site to facilitate the proper positioning of the truck. Let's assume that we will clean a 12 in. storm line. The handgun may be needed as well.

Starting Sewer Cleaning — Typical Sequence

1. Position the truck so that the manhole is 2-3 feet directly behind the truck.
2. Make sure the truck's parking brakes are set. Let the engine idle and turn on the appropriate flashers, strobes, arrow boards, etc. Put on the proper PPE. Place wheel chocks in front of and behind one of the rear tires. Place safety cones as needed.
3. Retrieve the following items from the tool box:
 - Manhole hook to remove the drain cover.
 - Tiger tail to protect the jetting hose.
4. Position the hose guide by unlocking the hose reel base rotation brake (2) by pulling the knob out. Extend the hose reel by pressing the "Reel Extend" Button (3).



Hose Reel Base Rotation Brake

Figure 4-3

5. Push brake knob to prevent reel rotation.
6. If the hose reel cannot be placed directly over the drain, an upper manhole roller guide should be used to protect the jetting hose from damage. The front mount hose reel will operate in a 200° radius. For remote manhole operations, the sewer hose should not be routed through the hose guide.

! WARNING

A sewer rupture can cause serious injury or death. Wear personal protection equipment (PPE) including hard hat and face shield when operating.

Wear The Right PPE
reduce your exposure to hazards...



Personal Protection Equipment

Figure 4-4

- The pipe extension should be at least as long as the diameter of the sewer pipe. The pipe extension will keep the nozzle from turning in the drain line or inadvertently going up a lateral. Contact your local distributor or Super Products for information on the wide variety of nozzles and their uses.



S-VL-0001

- If the wired or wireless remote pendant is to be used, it must stay in the operator's possession at all times during the sewer cleaning procedure.

! WARNING

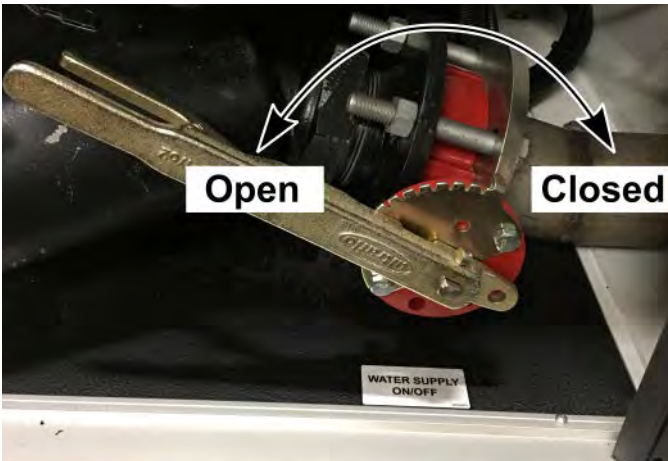
If there is an emergency while operating the truck, immediately press one of the red emergency stop buttons.

- The pumps will shut off immediately, the truck will return to idle.
- To reactivate, do not pull the emergency stop button out; instead, turn the knob clockwise, and the button will pop out.

! DANGER

Never pressurize the sewer hose when the hose is lying on the street or not properly oriented in the sewer and the sewer nozzle is inside the pipe. The pressurized nozzle will cause the hose to whip uncontrollably and could cause serious injury or death.

7. Make sure the water supply line valve located on the passenger side of the front cabinet is open.



Water Supply Line Valve

Figure 4-5

8. Make sure all drain valves are closed. There is one located at the back of the heat exchanger, one located at the driver side of the water pump, and one located next to the y-strainer, and two at the rear of the cabinet floor.

NOTE

Any time the sewer or leader hose is added on or removed, the footage counter parameters should be reset.

! DANGER

- Avoid close contact with a pressurized hose. Injury could result from hose bursts or coupling failure. When in close contact, relieve the pressure by dialing the water pressure back to zero.

9. Slip the hose guide (tiger tail) over the jetting hose.

NOTE

Operators may prefer to put the tiger tail on the sewer hose rope end first, but for difficult areas, the tiger tail can be put on the hose rope end last to help lift and direct the nozzle into place.

10. Fasten the nozzle and the 1 in. nozzle extension hand-tight onto the jetting hose. Always make sure the nozzle is the proper pressure and flow rating for the water pump to avoid personal injury and provide maximum efficiency. Never attach any type of spray device to the jetting hose.
11. Lower the sewer hose and tiger tail into the bottom of the basin, allowing for a few extra feet of hose. The normal procedure is to jet up-stream, against the flow of water. Use care to avoid hose tangles, and, with a swinging motion, position nozzle into the line being cleaned. Open the sewer hose water valve. Slowly increase the water pressure on the jetting head and pay out 2 feet of hose into the sewer line. Make sure the tiger tail is aligned properly with the lower entrance to the line. The tiger tail will protect the jetting hose from wear and tear and possible damage. Secure the tiger tail rope to the truck and turn off the water pump. Place the jetting hose in the hose guide and lower the hose guide roller into place. Tighten the wing nut on the roller. The hose is now secured in the guide.

NOTE

The variable pressure dial for the water pump allows use of various flow nozzles. Turn off the water pressure first and slowly increase the pressure up to the nozzle rating. Do not exceed the pressure rating of the hose or nozzle.

Purge/Prime

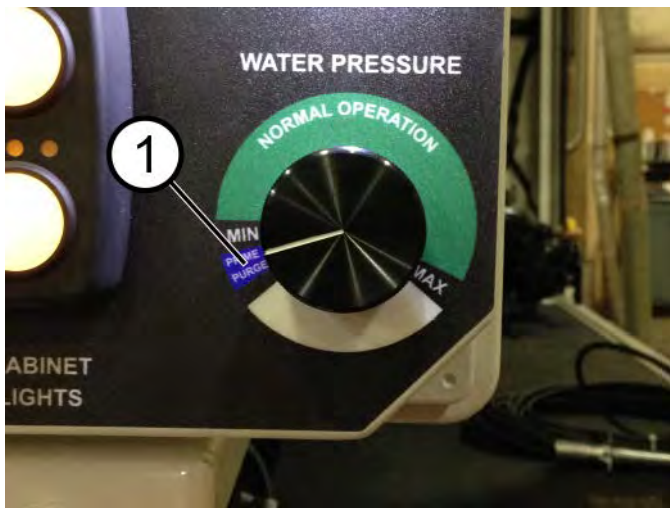
If the water pressure is not steady or the sewer hose jumps there may be air in the water pump.

The truck is equipped with an innovative purge/prime system that strokes the water pump the full extent of the stroke. This aids in removing unwanted air while in work mode. When winterizing the jetting system, the purge feature aids in removing water from the pump.

NOTE

The system may be primed with the sewer hose secured in the travel fitting on the hose reel, in the winter recirculating fitting, or after the hose has been placed in the sewer.

Turn the water pressure dial up slowly to the blue purge/prime (1) setting and until movement of the pump (LVDT) is observed on the screen of the control panel display (HMI). The LVDT directional arrow will appear blue in Purge/Prime mode.



Blue Purge/Prime Dial

Figure 4-6

If the engine RPM increases and the stroke of the LVDT shortens, the water pressure dial has been advanced too far into the normal operation zone. The LVDT directional arrow will appear green under normal operation. Decrease the dial setting until LVDT movement resumes on the display. Stroking the pump several times should yield the desired results.

With the pump running in purge/prime mode, open the purge/prime valves (2) for 10 seconds, or until all air is removed from the water pump. Then close the valves and resume normal operations.



Figure 4-7

Sewer Cleaning

1. The jetting operation can now be started. Open the sewer hose valve and slowly increase the water pressure on the jetting head. Proper water pressure depends on nozzle size, sewer construction materials, and condition of the sewer.
2. Send the sewer hose upstream using the lowest water pressure possible.
3. Adjust hose reel speed by pressing the rocker switch on the joy stick. Reel speed percentage is shown on the control panel display screen.
4. Monitor footage of hose paid out on the control panel display screen.
5. Once at the end target, increase the water pressure and return the hose slowly.
6. Turn down water pressure before the sewer nozzle exists the sewer pipe.



DANGER

Never allow the cleaning nozzle to come out of the sewer line. If this happens, the cleaning nozzle will whip uncontrollably and could cause damage or death.

7. When the jetting operation is complete, shut off the water, close the sewer hose valve on the hose reel, and return the hose reel to the stored position.

Return to Road Mode

1. Store all equipment and close all tool boxes.
2. Press "Road Mode" button on control panel.
3. Close all cabinet doors.

Winterization

It is beneficial to purge the water from all water lines to prepare for freezing temperatures.

The SuperJet® is equipped with an integral air purge system.

Follow these steps to purge water from the water system and winterize water pump. Perform with truck running.

1. Drain the water tanks by opening the front drain valve (1) and the supply valve (2) then remove the Y-strainer cap (3).

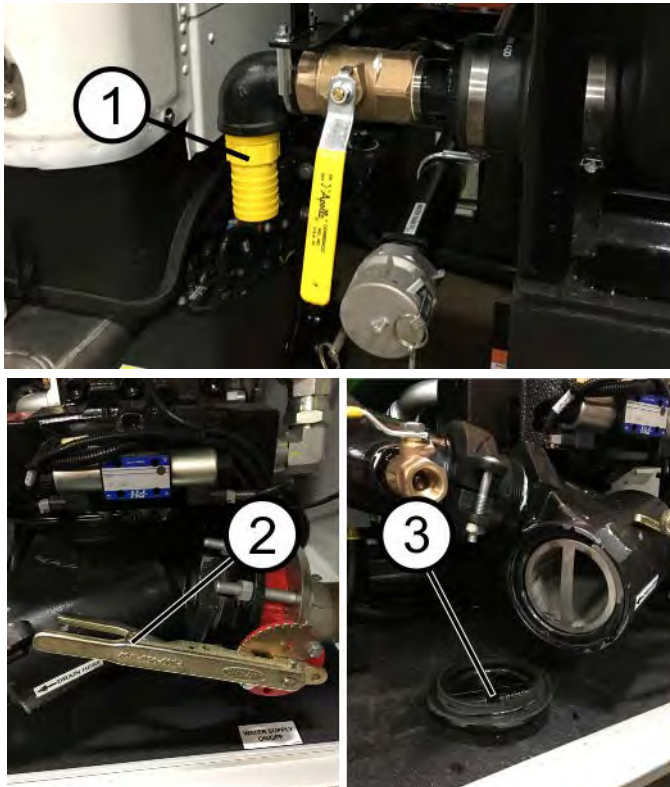
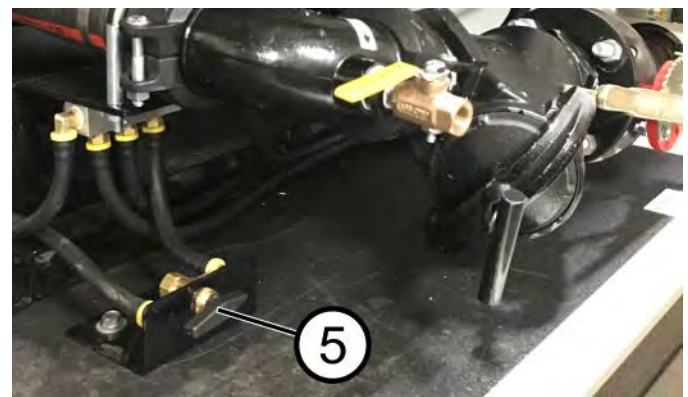
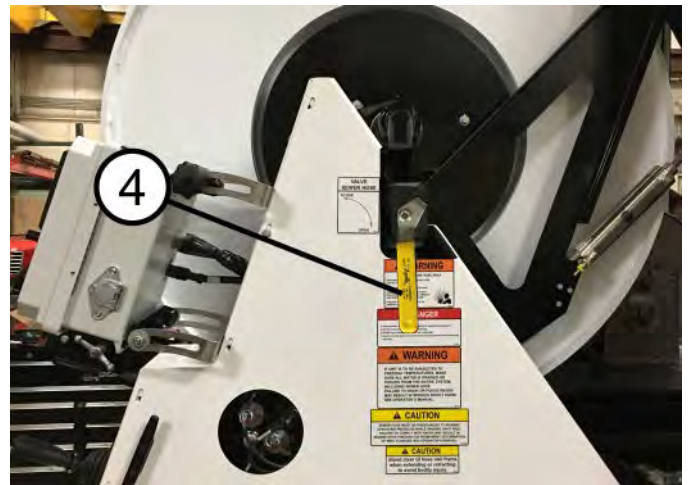


Figure 4-8

2. After all water has drained from the water tanks, close the water supply line valves (2), and install the Y-strainer cap (3).
3. Open the sewer hose valve (4) located on the reel and open the air purge valve (5) allowing air to push water out of the sewer hose. Spin the front hose reel to assist the water removal process. Close the sewer hose valve when all water is expelled.



4

Figure 4-9

4. OPTION: If the truck is equipped with the WINTER RECIRCULATION, connect the sewer hose to the recirculation line located on the right side cabinet floor. Open the sewer hose valve until air enters the water tanks. Open both drain valves (6 & 7) at the rear of the cabinet floor until water is expelled, then close the sewer hose valve (4).

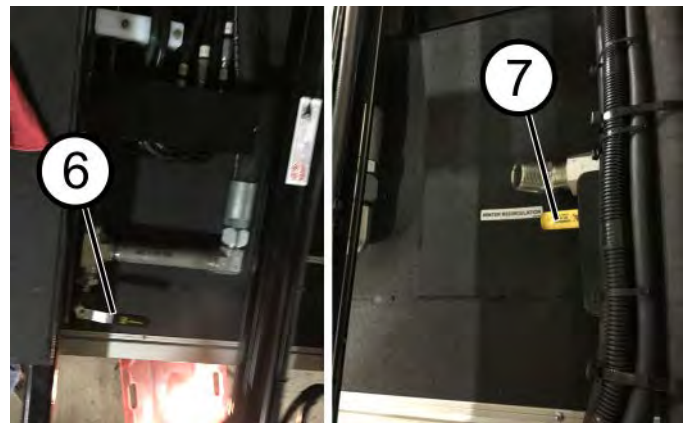


Figure 4-10

SEWER CLEANING - TYPICAL SEQUENCE

5. OPTION: If your truck is equipped with a RETRACTABLE HOSE REEL, install a spray handgun and open the 3-way valve (8) at the water pump. Squeeze the trigger until all water is expelled. Remove the spray handgun and close the retractable hose reel 3-way valve.

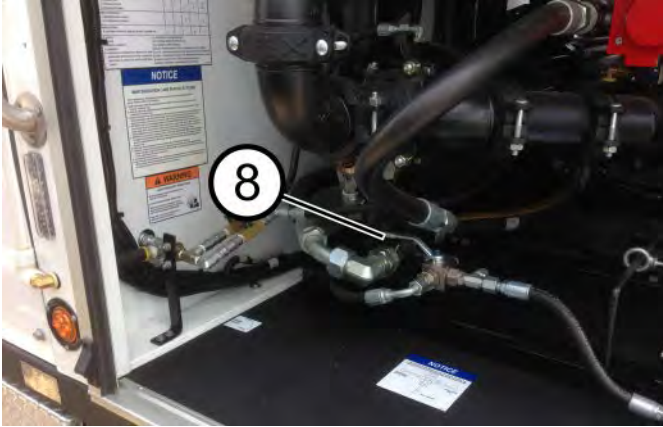


Figure 4-11

6. Open the hear exchanger drain (9) and close when all water is expelled.



Figure 4-12

7. Open the purge/prime valves (11) and close when all water is expelled.



Figure 4-13

8. Open the 3-way valve at the bottom of the water pump and stroke the pump in the “prime/purge” mode. Perform this until no water is coming from the pump drain and close valve when all water is expelled.
9. Close the air purge valve.
10. Open the glycol tank feed valve (10) until the pump ingests about a gallon of glycol. Turn off the pump and close the glycol tank valve. Open the 3-way valve at the water pump to verify glycol is in the water pump and close valve.



Figure 4-14

Water Lance Operation

The truck is equipped with a water system used for loosening soils, for wetting down dry materials, and for general cleanup.



WARNING

Never point the discharge flow of water from the lance toward a person since serious injury could result. Always make sure your feet are firmly planted and you are securely holding the lance with both hands before operating the lance.

1. Start the truck engine and allow it to idle. Make sure the parking brake is set and the wheel chocks are positioned. Place the transmission into neutral (N).
2. Pull out the hose from the spring return reel located on the right side of the truck and attach the lance gun and the appropriate extensions along with the appropriate lance.



WARNING

Only use the nozzles with urethane coatings that are fully intact to protect against damaging exposed lines. Never hold the lance stationary while pointing toward any pipe or conduit since it could penetrate them. Always keep the lance moving. Failure to comply could result in serious injury or death.

3. Open 3-way valve to turn on handgun hose reel.
4. Close the sewer hose valve.
5. Press "Work Mode" button on the control panel.
6. Turn the water pump on by turning the water pump speed dial on the control panel clockwise to the desired water pressure, or by pressing the WATER INCR button on the pendant remote.



WARNING

Always wear a full face shield with eye protection, safety shoes, and gloves. Make sure all skin is covered by work clothes. There could be flying material from the lance as the water stream strikes the soil. Failure to comply could result in serious injury or death.

7. Firmly grab the lance with both hands and point it in the direction of the work to be done. Squeeze the trigger on the lance and begin operation. Releasing the trigger will shut off the flow of water through the lance.



WARNING

Never block or tie back the trigger on the lance since this is a safety device that allows the water stream to be instantaneously shut off if the need arises. Failure to comply could result in serious injury.

8. When done using the lance, shut the water pump off by turning the water pump speed dial fully counterclockwise or by pressing and holding the WATER DECR button on the pendant remote.
9. Disengage the hydraulic pump by pressing the "Road Mode" button on the control panel.
10. Point the lance in a safe direction and pull the trigger to release any pressure inside the line. Once the pressure is reduced to zero, you can disconnect the extensions and lance from the hose.
11. Store the hose, lance, and extensions in their proper locations.
12. Turn the wired pendant OFF before moving the truck.



CAUTION

Never exceed the pressure rating of your system. Super Products supplies systems that are rated at 2000, 2500, and 3000 PSI. Know which system you have. If you have any questions, contact Super Products. Failure to comply could result in serious injury or property damage.

Lance/Cleaning Gun Precautions

NOTE

The lance is to be operated only by trained operators. Please read the following instructions before attempting to operate.

Maximum operating pressure: 3000 PSI.

Make sure the maximum operating pressure does not exceed the equipment's maximum operating pressure rating.


DANGER

If any part of the body comes in contact with the pressurized spray stream, immediately contact a physician.

4

Serious Injury or Death May Result. DO NOT:	Safety Should Always Be Observed. DO:
Aim the lance gun at any person or any part of the body. Fluids under high pressure can penetrate the skin and result in severe injury, amputation, or death.	Develop a habit of shutting off the pressure at the lance gun and hose before attempting to remove the nozzle, gun, or any part of the gun, or when the lance gun is not in use.
Place hands or any other portion of the body in front of the spray nozzle.	Carefully check and tighten all connections regularly. Make sure all connections are secure and leak-proof.
Alter equipment in any manner. (If repairs are necessary, use only genuine factory repair parts available from Super Products.)	Make sure trigger is operating properly.
Operate the lance gun without the trigger guard attached.	Adapt a secure body stance prior to and during lance gun operation to aid in control of the high reactionary force of the lance gun.
Exceed the maximum operating pressure.	Keep lance gun clean to allow for a positive grip and safe operation.
Leave the equipment under pressure and unattended at any time.	Relieve water pressure by shutting off the water supply. Actuate the lance gun trigger until water stops flowing.
Use if the hose is damaged or weakened.	Make sure the lance gun is insulated properly when used in a dangerous environment.
Operate the lance gun if there are any leaks from the packing, fittings, or hoses.	Never exceed the maximum operating pressure. Make sure the relief valve is operating properly.
Tape or otherwise lock the lance gun trigger into the ON position.	

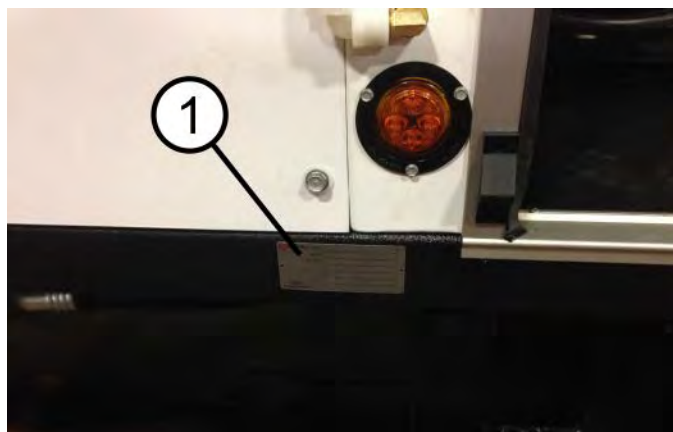
Lubrication and Maintenance

General Information

Operators of this truck should have a good understanding of the required equipment maintenance and normal sequence of operation. Refer to other sections of this manual as required.

Extreme care must be taken when adjustments or repairs are made to this truck. Observe all applicable decals and safety precautions.

The serial number placard (1) is located on the driver's side frame rail in front of the cabinet.



Serial Number Placard

Figure 5-1

Preventive Maintenance Instructions

Preventive maintenance routines assist in keeping all equipment in proper working condition.

Preventive maintenance and inspection schedules are not only desirable but also necessary to ensure continued trouble-free operation of the equipment. They can also prevent and reveal mechanical, hydraulic, or electrical problems that might otherwise develop into equipment malfunction.

We urge you to protect your investment by servicing it according to the lubrication and maintenance schedule listed on the following pages. Regular maintenance will ensure maximum truck performance, long life, safety, reliability, and full warranty protection.

Parts Information

Super Products uses balanced and matched system components for jetting, electrical systems, hydraulic systems, water systems and other components. These parts are made and tested to Super Products specifications. Non-genuine or "will fit" parts do not consistently meet these specifications. The use of non-genuine or "will fit" parts may reduce performance, void Super Products warranties, and present a safety hazard. Use genuine Super Products parts for economy and safety.

SEE YOUR SUPER PRODUCTS DEALER

Lubrication Recommendation Chart

Component	Lubricant
Grease	Super Products Spec 3060-00023 White Lithium
Hydraulic System	Super Products Spec 3060-00048 Chevron Rando HD Premium Oil MV

DEF Maintenance

The cab and chassis supplied with your SuperJet® sewer cleaner is equipped with a diesel exhaust after treatment system that must be maintained properly to ensure proper operation of the truck.

Always make sure the diesel exhaust fluid (DEF) tank (1) has adequate DEF fluid. The truck's emissions system is constantly consuming this fluid to perform the exhaust after treatment.

NOTE

The DEF tank may be located in different locations on the truck depending on the specific cab and chassis configuration.



Figure 5-2

Exhaust After Treatment Regeneration Information

When the truck needs to go into a regen cycle, a series of alarms and warning messages will be displayed on the control panel HMI screen to instruct the operator to shut down work operations and put the truck into a regen cycle.

NOTE

For specific regen instructions and DEF specifications, see the owner's manual supplied with the OEM chassis.

1. The first screen that will be displayed will be a REGEN Required Soon message to alert the operator, that under current operating conditions, a regen cycle will soon be required.

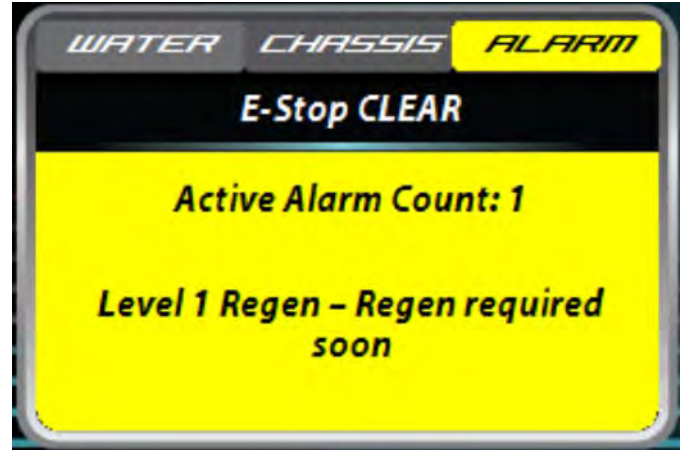


Figure 5-3

2. The next screen that will be displayed will be a REGEN Required Now message to alert the operator, that a regen cycle is required now.

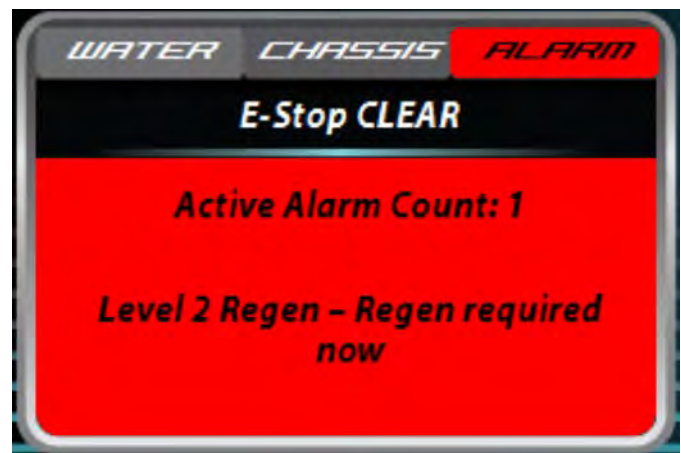


Figure 5-4

3. If a regen cycle is not performed after the first two messages are displayed, a REGEN OR Engine Stops message will be displayed. This is the operator's final opportunity to perform a regen cycle before the engine stops.

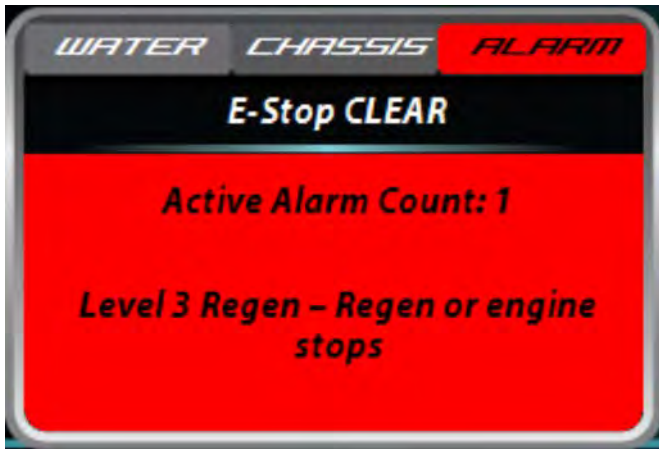


Figure 5-1

1. If all three regen messages are ignored, a STOP ENGINE Now message will be displayed. The operator will no longer be able to perform a regen cycle, and functions of the truck become limited. The engine must be turned off to prevent damage, and the truck will need to be serviced by a dealer before it can be restarted.



Figure 5-1

Maintenance Schedule

For assistance on how to perform each task listed, follow the provided steps.

	DAILY	WEEKLY	MONTHLY	EVERY 1,000 HOURS OR YEARLY
WATER SYSTEM				
Drain System	Clean/Inspect			
Handgun Connectors	Clean/Inspect	Lubricate		
Y-Strainer	Inspect	Clean		
Pressure Gauge	Inspect			
Hoses	Inspect			
Water Pump	Inspect			
Ball Valves		Inspect		
Check Valve		Leak Test		
Nozzles			Inspect	
Water Tank Connectors			Inspect	
Rotary Elbows			Lubricate	
Reel Rotation Bearings			Lubricate	
Accumulator Pressure				Adjust 500 - 1250psi
ELECTRICAL SYSTEM				
Lights	Inspect			
Wireless Remote Pendant		Inspect		
Wired Pendant Receptacles	Inspect	Dielectric Grease		
HYDRAULIC SYSTEM				
Hydraulic Oil		Inspect		Replace
Hoses and Fittings		Inspect		
Hydraulic Filter		Inspect		Replace
AIR PURGE				
Ball Valve			Inspect	
Check Valve			Inspect	
BODY COMPONENTS				
Drive Shafts			Inspect/Lubricate	
CABINET & TOOL BOX DOORS				
Latches			Inspect/Lubricate	
Hinges			Lubricate	

5

Maintenance Items

NOTE

See *Lubrication Recommendation Chart* for servicing the SuperJet truck. If a product is unavailable, contact Super Products for a recommendation of alternate products.

Electrical System

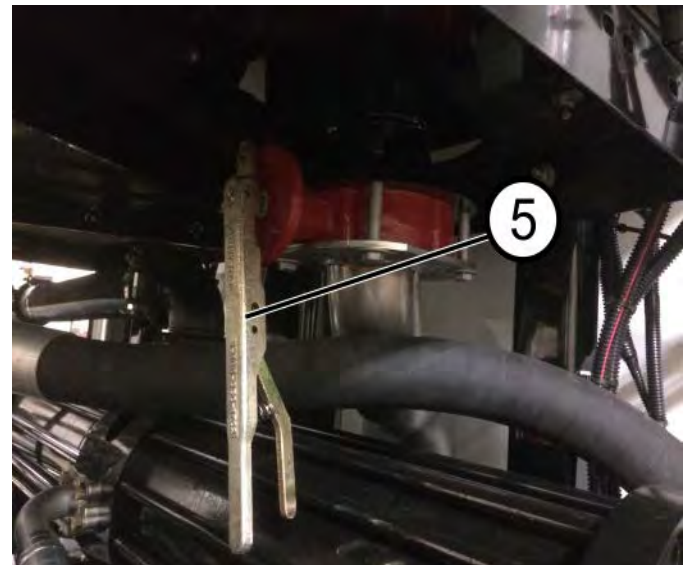
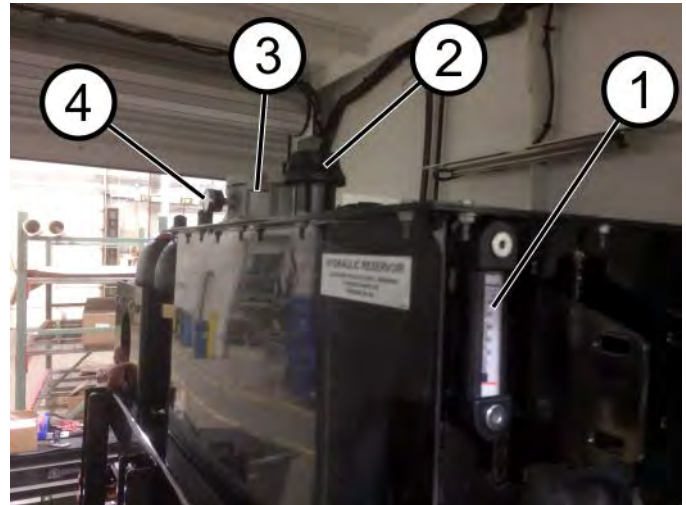
- **Lights** — Make sure that all vehicle lights are working properly.
- **Pendant Plugs and Receptacles** — Inspect the pendant plugs and receptacles for proper contact and alignment. Clean the terminals monthly and lubricate them with dielectric grease.

NOTE

Avoid directly spraying electrical enclosures and components with high-pressure water.

Hydraulic System

- **Hydraulic Oil** — Inspect the hydraulic oil level in the reservoir weekly. The oil level should be at the center of the sight glass (1) with all of the hydraulic cylinders retracted.
 - Remove cap (2) and add hydraulic oil to correct level as needed.
 - Hydraulic oil should be changed yearly or after every 1,000 hours of use.
- **Hydraulic Filter** — Replace the hydraulic filter (3) yearly, after every 1,000 hours of use, or when the filter indicator (4) is in the red area.
- **Hoses and Fittings** — Inspect all hoses and fittings for leaks weekly. Check hoses for cracks, fraying, and rubbing. Close valves (5) and replace the necessary hoses and/or tighten fittings.



Hydraulic Oil Reservoir

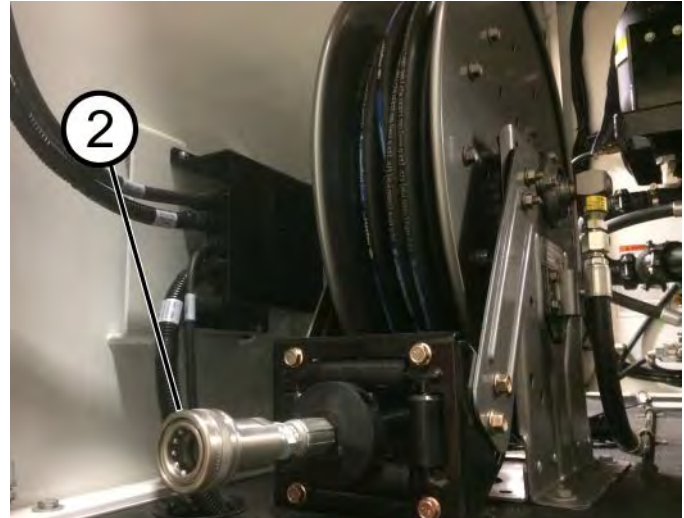
Figure 5-2

- **Drive Shafts** — Inspect the universal joints (5) and drive shaft weekly. Grease the universal joints and drive shaft slip yokes (6) monthly.



Drive Shaft Slip Yolk And U-joint Grease Points.

Figure 5-3



Passenger Side Hose Reel Handgun Connection

Figure 5-5

Water System

- **Y-Strainer** — Remove and clean the Y-strainer filter element (1) at the end of every workday.



Drive Shaft Slip Yolk And U-joint Grease Points.

Figure 5-4

- **Water Tank Connections** — Inspect water tank connections for leaks, damage, or wear monthly. Repair or replace as required.
- **Ball Valves** — Inspect ball valves for proper operation and wear weekly. Adjust stem packing if leaks occur. Rebuild or replace valves if necessary.
- **Handgun Connections** — Clean and inspect handgun connections (2) for proper operation or leaks daily. Lubricate connections weekly.

- **Drain Water System** — In freezing weather, drain the water system and all hoses. See various drain system instructions located in this manual.
- **Regulator** — Inspect the regulator for leaks and any possible spring damage.
- **Hoses** — Inspect the hose for cracks, tears, or other damage.
- **Nozzles** — Inspect nozzles for worn or plugged orifices and cracked housing. Repair or replace as necessary. Make sure the nozzle pressure rating matches the water pump pressure rating.

Air Purge

- **Ball Valve** — Inspect the ball valve for proper operation and wear. Adjust the stem packing if leaks occur. Repair or replace the ball valve as necessary.
- **Check Valve** — Drain for water in air tanks. If present, check that the valve is positioned or operating properly.

Cabinet & Toolbox Doors

- **Hinges** — Lubricate panel hinges with oil monthly.
- **Latches** — Lubricate panel latches with oil monthly. Adjust latches to ensure proper panel retention.

SuperJet Pump Check Valve Leak Test

Perform this procedure weekly to check for wear on water pump check valves.

1. For this test the sewer hose may be connected to the winter recirculation line, or positioned in a sewer to safely jet water.
2. Make sure the water pump is fully primed and the prime/purge valves are closed.
3. Using the water pressure dial, turn the water pump on to the Purge/Prime setting (1).

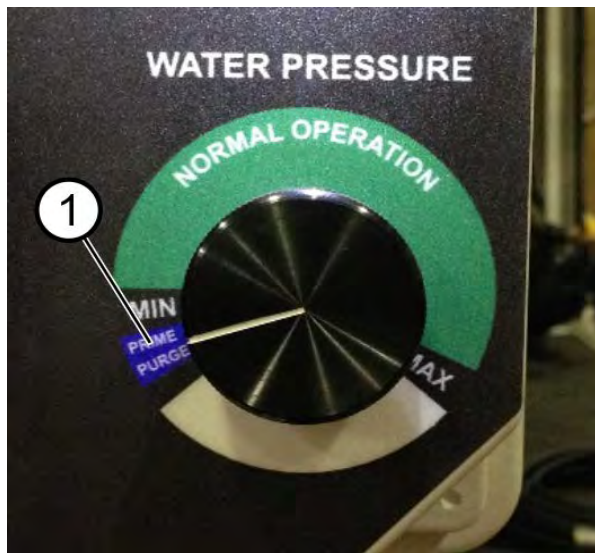


Figure 5-6

4. Observe the "Arrow" and the LVDT position readout next to the water pump icon on the display screen. The "Arrow" (2) indicates which direction the water pump is moving. The LVDT position readout indicates the exact position in inches of the piston inside the pump.



Figure 5-7

5. While the "Arrow" is pointing to the RIGHT, quickly close the sewer hose ball valve (3).

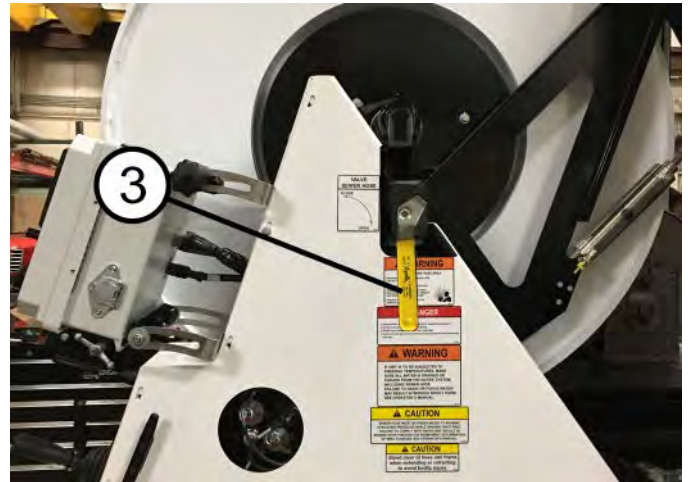


Figure 5-8

6. Does the pump stop moving? (Does the LVDT position stay the same number)?
 - a) Yes, the valve is not leaking
 - b) No, the valve may need replacement
7. Repeat the test in the other pump direction. Open the sewer hose ball valve (3) at hose reel and let the pump change directions. (The Arrow will change directions).
8. While the "Arrow" is pointing to the LEFT, quickly close the sewer hose ball valve.
9. Does the pump stop moving? (Does the LVDT position stay the same number)?
 - a) Yes, the valve is not leaking
 - b) No, the valve may need replacement

If LVDT position continues to move in either direction with the sewer hose ball valve closed, schedule immediate replacement of water pump check valves. Running a leaking valve too long will result in valve failure and possible pump damage.

Call Customer Service for replacement parts at 1-800-837-9711.

Troubleshooting

Troubleshooting Overview

This guide is intended as a quick reference to aid operators and technicians in troubleshooting potential issues with the SuperJet® sewer cleaners. This guide describes symptoms and lists several probable causes and their solutions. The primary rule of troubleshooting is to check the simple things first; therefore, the probable causes are generally listed in order of simplest to most complex.

Before attempting any repair, read, understand, and follow the operator's manual instructions, warnings, and safety messages.

All repairs should be performed by a qualified technician.

The Basic Troubleshooting Process

1. Prepare tools, information, and safety equipment.
2. Define the symptom.
 - What is the problem?
 - When does it occur?
 - When did it work properly?
 - When did it stop working properly?
 - What was done in between those times?
3. Reproduce the symptom.
4. Narrow it down to the root cause.
 - Proceed logically.
 - Check the simple things first.
 - Divide and conquer — rule out what is not the problem. This is especially important to define if the root cause is human error, electrical, hydraulic, or mechanical.
 - Believe your evidence — if all else is eliminated, that which remains must be true.
 - Never assume anything — check it yourself.
 - Check everything — you could have multiple faults
5. Repair or replace the defective component.
6. Educate and train the operator when it is a case of human error.
7. Verify the symptom is gone.

Mechanical Troubleshooting

Table 6 1: Mechanical Troubleshooting

Function	Symptom	Probable Cause	Solution
Road mode: <i>starting truck</i>	Engine will not start when in road mode	Engine problems	Have engine mechanic check for problems.
Emergency stop	Engine will start but all functions will not operate	Emergency stop switch pushed at front panel or curbside panel	Reset the emergency stop switch by twisting the knob.
Emergency stop on remote pendants	Engine RPM drops to idle	Pendant emergency stop button depressed	Clear emergency stop mode by pressing for 3 seconds the emergency stop button.
	Emergency stop message displayed on the control panel HMI screen	Wireless pendant batteries are dead	Recharge the wireless pendant batteries.
	All functions do not work	Receiver power lost	See Table 6-2: Electrical Troubleshooting.
Control system	Control system not turning on	Main fuse blown	See Table 6-2: Electrical Troubleshooting.
		Ignition enable signal failed.	
Throttle control	Engine RPM will not increase or decrease	Engine speed dial advanced too far	Turn dial back to zero and then turn it back up.
		Emergency stop is enabled on pendant	<ul style="list-style-type: none"> Mute the emergency stop alarm at the display until situation is corrected. See “Emergency stop” function in this table.
Hydraulics	No main hydraulic oil pressure	Work mode not enabled, still in road mode	Enable work mode.
		Hydraulic pump not engaged. Pump drive shaft not spinning in work mode.	<ul style="list-style-type: none"> Set park Brake Shift to neutral Engine RPM above 900. Wait for engine to idle. PTO failure see PTO.
		Supply valve closed	Open the hydraulic supply valve.
		Low oil level in hydraulic reservoir	Add oil as required. Check for leaks.
		Oil pump suction line plugged or hose liner collapsed (very rare)	Repair or replace as required.

6

Function	Symptom	Probable Cause	Solution
Hydraulics <i>(Continued)</i>	Hose reel and functions not moving	Hydraulic valve fouled with debris	<ul style="list-style-type: none"> Shift the hydraulic valve using the manual override. This may free the fouled valve. A dirty cartridge valve may need to be cleaned or replaced. Change the hydraulic filter.
		Directional valve not controlling the function	<ul style="list-style-type: none"> Set the manual override on the associated proportional valve by turning the screw inward, starting at about 25%. If the directional solenoid LEDs are lit and the function moves, the directional valve and coil are good. If the directional solenoid LEDs are not lit and if using manual directional overrides moves the function, the directional valves are good. If the function does not work using the directional valve overrides, then the directional or proportional valve may have failed.
		Failed directional or proportional valve	Connect pressure gauge to manifold port and check for pressure.
		Hydraulic valve fouled with debris	Have the hydraulic valve repaired or replaced.
		LED on solenoid connector or I/O module not lit when function is enabled	<ul style="list-style-type: none"> Verify that the proper mode is selected for the desired function. See Table 6-2: Electrical Troubleshooting
		Hydraulic oil foamy or milky	Air in hydraulic oil tank
Water in oil	<ul style="list-style-type: none"> Drain all oil in system and replace oil and oil filter. Inspect or replace hydraulic reservoir fill cap. 		

TROUBLESHOOTING

Function	Symptom	Probable Cause	Solution
Hose Reel	Hose Reel will not rotate.	Brake on brake off: brake band tight	Release brake Adjust brake band
	Hose reel will not extend or retract.	Not in WORK mode.	Press WORK mode.
		Objects obstructing the path.	Clear path.
		Broken, loose or misroute electrical wire.	Locate, repair or replace.
		No hydraulic oil pressure or flow.	See Symptom: "No Hydraulic Oil Pressure".
		Hydraulic line pinched, plugged or broken.	Locate, repair or replace.
		Hydraulic cylinder failed.	Replace cylinders.
	Hose Reel Brake not working. (Switch on/Brake on)	Brake off.	Apply Brake.
		Brake band loose.	Adjust brake band.
		Cylinder obstructed (rod or rotation).	Remove obstruction.
		No air/insufficient air pressure.	See symptom: "low air pressure".
		Air hose pinched or broken.	Locate, repair or replace.
		Air cylinder failed.	Replace cylinder.

6

Function	Symptom	Probable Cause	Solution
Water pump	No water pressure Note: <i>Water pump function should be available in both vac mode and dump mode.</i>	Water pressure knob left turned up	Turn water pressure knob down to zero and then back up.
		Water supply valve closed	Open supply valve.
		Water tanks empty	Fill water tanks.
		In ROAD mode	Select WORK mode.
		Drain valve open	Close drain valve.
		Plugged or dirty water supply strainer	Clean water supply strainer.
		Nozzle too big or worn out	Replace nozzle.
		Water hose leaking	Replace hoses.
		PTO failure error message	<ul style="list-style-type: none"> • Engine speed greater than 900 RPM. • PTO hydraulic enable solenoid failure or failed confirm switch.
		Water pump directional valve issue	Remove solenoid connectors and use the manual override to move the water pump.
		Water pump position stuck at one end	Check LVDT for proper movement from 0 to 17 inches using manual override.
Winter recirculation	Water pump will not run	Winter recirculation button off	Turn winter recirculation button on.
		Water pump not moving	PTO failure. See “Power Take-off (PTO)” function in Table 6-2 Electrical Troubleshooting..
	Water Pressure Surging	Accumulator turned off. Air in the water pump.	Turn on accumulator. Prime water pump.

TROUBLESHOOTING

Function	Symptom	Probable Cause	Solution
Wireless pendant	Wireless pendant not functioning	Truck not in WORK mode	Press WORK mode on control panel.
		Pendant not enabled	Enable pendant.
		Pendant batteries are dead	Recharge batteries.
		Electrical malfunction (loss of communication)	<ul style="list-style-type: none"> • Check transmitter/receiver communication link LED • See Table 6-2: Electrical Troubleshooting.
Wired pendant	Wired pendant not functioning	Pendant plug not fully engaged in receptacle	Re-seat pendant plug. Plug into alternate receptacle.
		Damaged pendant cable	Replace wired pendant cable.
Chassis air	Low air pressure (never reaching 100 PSI)	Solenoid valve or diaphragm valve on filter stuck open	Clean, repair, or replace as required.
		Faulty compressor or regulator on truck	Repair or replace compressor or regulator.
		Leak in the air lines, pneumatic valves, cylinders, or tanks	Locate the leak and repair or replace as required.
		Defective dash air pressure gauge	Replace dash air pressure gauge.

Electrical Troubleshooting

Table 6 2: Electrical Troubleshooting

Function	Symptom	Probable Cause	Solution
Road mode: <i>starting truck</i>	Engine will not start when in road mode	Engine problems	Locate and repair or replace defective components.
	Truck will not go into road mode from work mode	Engine speed dial turned up on front panel	Turn down speed dial at the front control panel, then reattempt switching to ROAD mode.
Emergency stop	Engine will start, but all functions will not operate	Emergency stop button pushed at front panel or curbside panel	Reset the emergency stop switch by twisting the knob.
Emergency stop on remote pendants	Engine RPM drops to idle	Pendant emergency stop button depressed	Clear emergency stop by pressing the emergency stop button for 3 seconds.
	Emergency stop message on the front display	Wireless pendant batteries are dead	Recharge wireless pendant batteries.
	All functions do not work	Receiver power lost	Locate where power is being lost and repair or replace faulty components.
Control system	Control system not turning on	Main fuse blown	Check fuses at battery power distribution box.
		Ignition enable signal failed	Check ignition enable fuse at chassis fuse panel.
		Control system component failure	Check status LED on module (they should flash green at a 1/2 second rate).
Throttle control	Engine RPM will not increase or decrease for engine speed or water pressure dials	Dial already turned up	Turn dial back to zero and then turn it back up.
		Emergency stop mode is enabled on pendant	<ul style="list-style-type: none"> Mute the emergency stop alarm at the display until situation is cleared. See “Emergency Stop” function in this table.

TROUBLESHOOTING

Function	Symptom	Probable Cause	Solution
Hydraulics	No main hydraulic oil pressure	Work mode not enabled, still in road mode	Enable work mode.
	Hose reel and functions not moving	Hydraulic valve fouled with debris	<ul style="list-style-type: none"> Shift the hydraulic valve using the manual override. This may free the fouled valve. A dirty cartridge valve may need to be cleaned or replaced. Change the hydraulic filter.
		Directional valve not controlling the function	<ul style="list-style-type: none"> Set the manual override on the associated proportional valve by turning the screw inward, starting at about 25%. If the directional solenoid LEDs are lit and the function moves, the directional valve and coil are good. If the directional solenoid LEDs are not lit and if using manual directional overrides moves the function, the directional valves are good. If the function does not work using the directional valve overrides, the directional or proportional valve may have failed.
		Failed directional or proportional valve	Connect pressure gauge to manifold port and check for pressure.
		Hydraulic valve fouled with debris	See Table 6-1: Mechanical Troubleshooting.
		LED on solenoid connector or I/O module not lit when function is enabled	<ul style="list-style-type: none"> Verify that the proper mode is selected for the desired function. Locate and repair or replace.

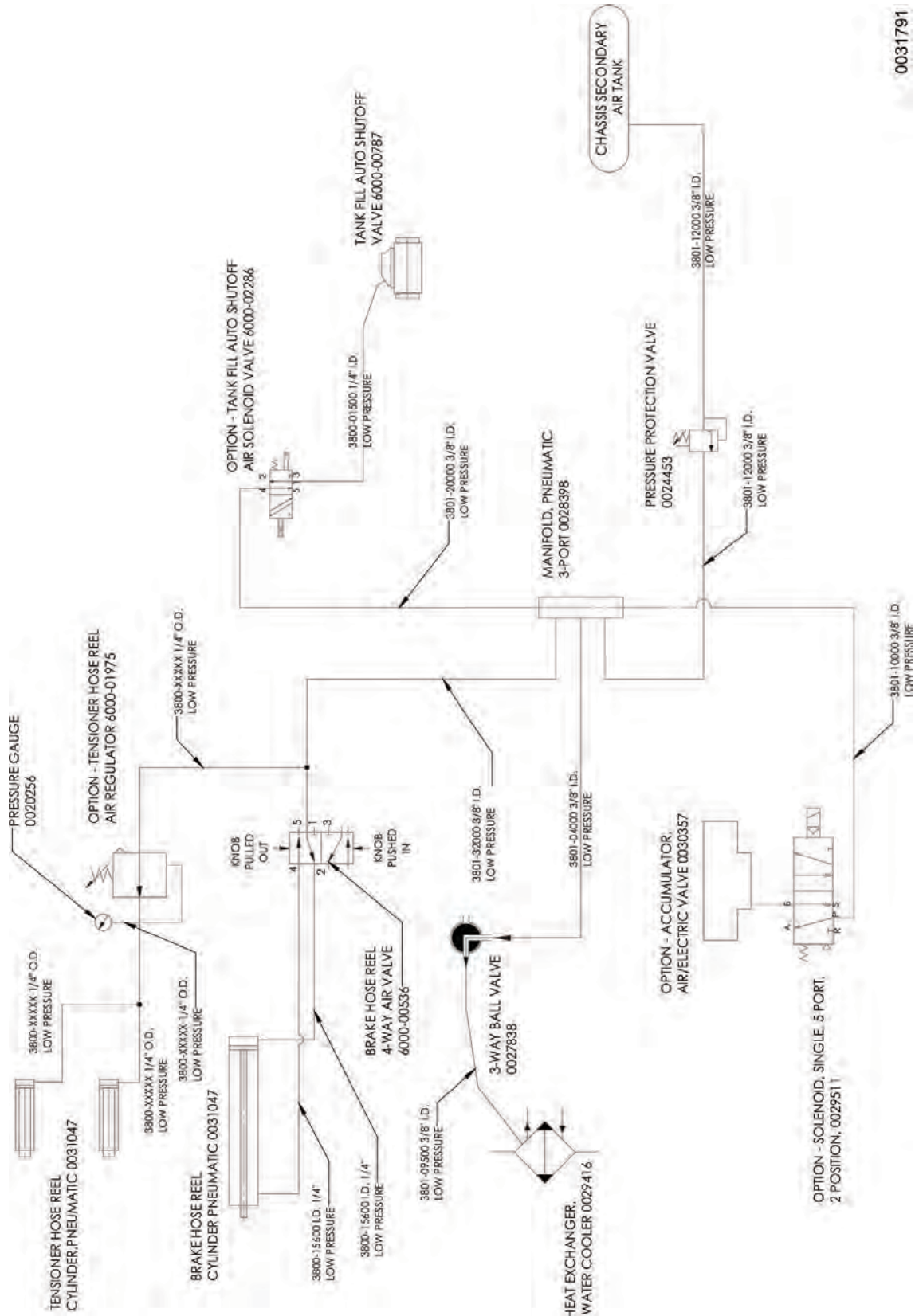
Function	Symptom	Probable Cause	Solution
Power take-off (PTO)	PTO not engaged	No PTO enable signal present at solenoid	Make sure PTO CONFIRM HYD input LED is lit on chassis module.
		No signal from PTO pressure confirm switch	Locate and repair or replace.
	Display shows PTO error on screen, and buzzer sounds	Engine speed greater than 900 RPM when enabling VAC mode on front control panel	Reduce engine speed to idle before enabling VAC mode.
		PTO pressure confirm switch indicates PTO did not shift	<ul style="list-style-type: none"> • Make sure the PTO shaft is spinning. • Locate and repair or replace.
		PTO failure	Locate and repair or replace.
Water pump	Will not run; no water pressure	Water pressure knob left turned up	Turn water pressure knob down to zero and then back up.
		Hydraulic PTO not enabled	<ul style="list-style-type: none"> • Select WORK on the control panel MODE rocker switch. • See “Power take-off (PTO)” function in this table.
		Hydraulic pressure to water pump not enabled by load sense valve	Perform a manual override and verify the water pump is stroking by watching the LVDT movement on the front control panel HMI screen.
		Water pressure potentiometer failure	Repair or replace the water pressure potentiometer.
		Load sense valve failed	Repair or replace the load sense valve.
Winter recirculation	Water pump will not run	Winter recirculation rocker switch off	Turn winter recirculation button on.
		PTO failure	See “Power take-off (PTO)” function in this table.
Lights	Lights will not work	Too much current load	Determine the cause of the overcurrent condition.
		Fuse blown	Correct the reason for blown fuse, then replace blown fuse.

TROUBLESHOOTING

Function	Symptom	Probable Cause	Solution
Wireless pendant	Wireless pendant not functioning	Truck not in work mode	Enable work mode.
		Pendant not enabled	Enable pendant.
		Batteries are dead	Recharge batteries.
		Not in Work mode	Press Work mode on control panel.
		Electrical malfunction (loss of communication)	Check transmitter/receiver communication link LED.
Wired pendant	Wired pendant not functioning	Pendant plug not fully engaged in receptacle	<ul style="list-style-type: none"> • Reseat pendant plug. • Plug into alternate receptacle.
		Damaged pendant cable	Replace wired pendant cable.
Power distribution	Control system not powered up	Ignition signal not present	Fuse at chassis fuse panel.
		Power not available to control system modules	Check for ignition signal at control panel main power relay.
	Power for components of the control system not present	Component has blown the fuse	Determine the cause of the overcurrent.
		Load on an output exceeds the output limit and has shut down	See module drawing for maximum current ratings. Determine and correct the cause of overcurrent.
		Other electrical problem	Inspect, and repair or replace faulty components.
Electrical troubleshooting basics	Loss of power immediately	Fuse blown by a short circuit to ground	Determine the cause of the short circuit.
		Device connected to output is exceeding the maximum current rating	Determine the cause of the overcurrent.
	Loss of power after period of time	Fuse blown by device drawing too much current that is too close to the maximum amperage rating	Determine the cause of the overcurrent.
	Control signal not present	Output not on due to missing input command	Check for proper input command and LED.
	Output on, but function not working	Device failure	Check for proper output and LED illumination.
		Output module in overcurrent protection mode	Disconnect device.

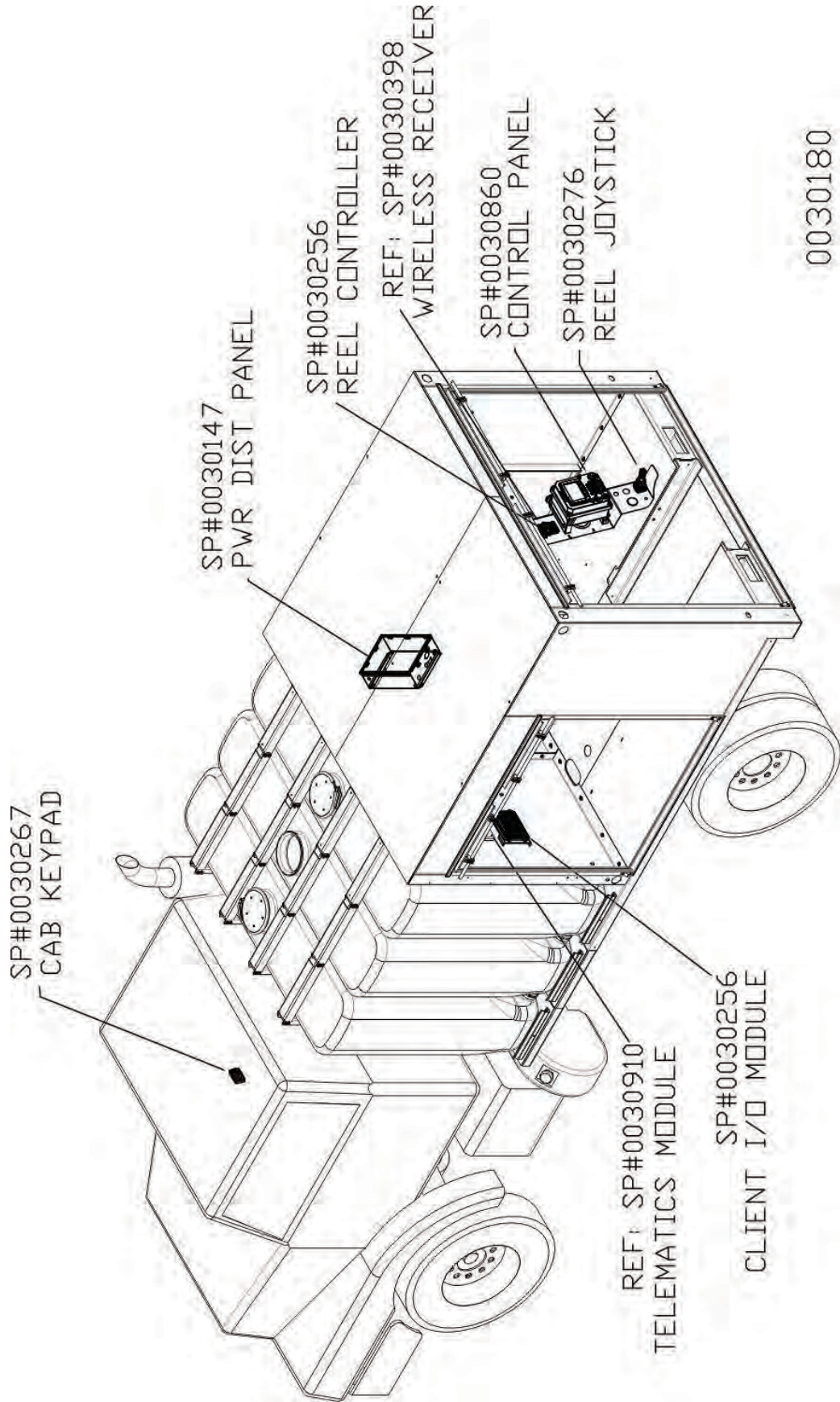
Function	Symptom	Probable Cause	Solution
Electrical troubleshooting basics <i>(Continued)</i>	Electrical connection failed	Loss of electrical connection	Power, signal, or ground return wire failure.
		Cut, broken, or dislodged wire	Locate and repair or replace.
		Connector pin not fully seated inside connector	Reseat pin into connector.
		Wire pulled out of crimped pin	Locate and repair or replace.
		I/O module has failed to operate	Check module power or power input LEDs.
	Analog signal not working	Special control signal not readable with a voltmeter	Check the diagnostic screens to view input and output status. Green indicates on; white indicates off.
		Wires connected to wrong pin location	Check wiring against the drawing to determine where the signal is lost.
		Loose wire connection	Connect an incandescent lamp to the circuit and wiggle wires.
		Device failed	Using wire jumpers, temporarily connect power and ground to get device to work. CAUTION: Incorrect wiring may damage device. Check LEDs on device. Replace device. LED light on proximity sensor should light up when it senses steel. Ensure that LED light polarity is connected correctly.
	Function will not work using wired or wireless pendants	Electrical coil failure	If the directional solenoid LEDs are lit but function does not move, try again by setting the manual override on the proportional valve.
		Electrical malfunction. If at least one of the control devices makes the function work properly, the root cause is not hydraulic	If the function works with manual override, and the LED light on the coil connector lights up, the solenoid coil may have failed and will need to be replaced.

Pneumatic Schematics

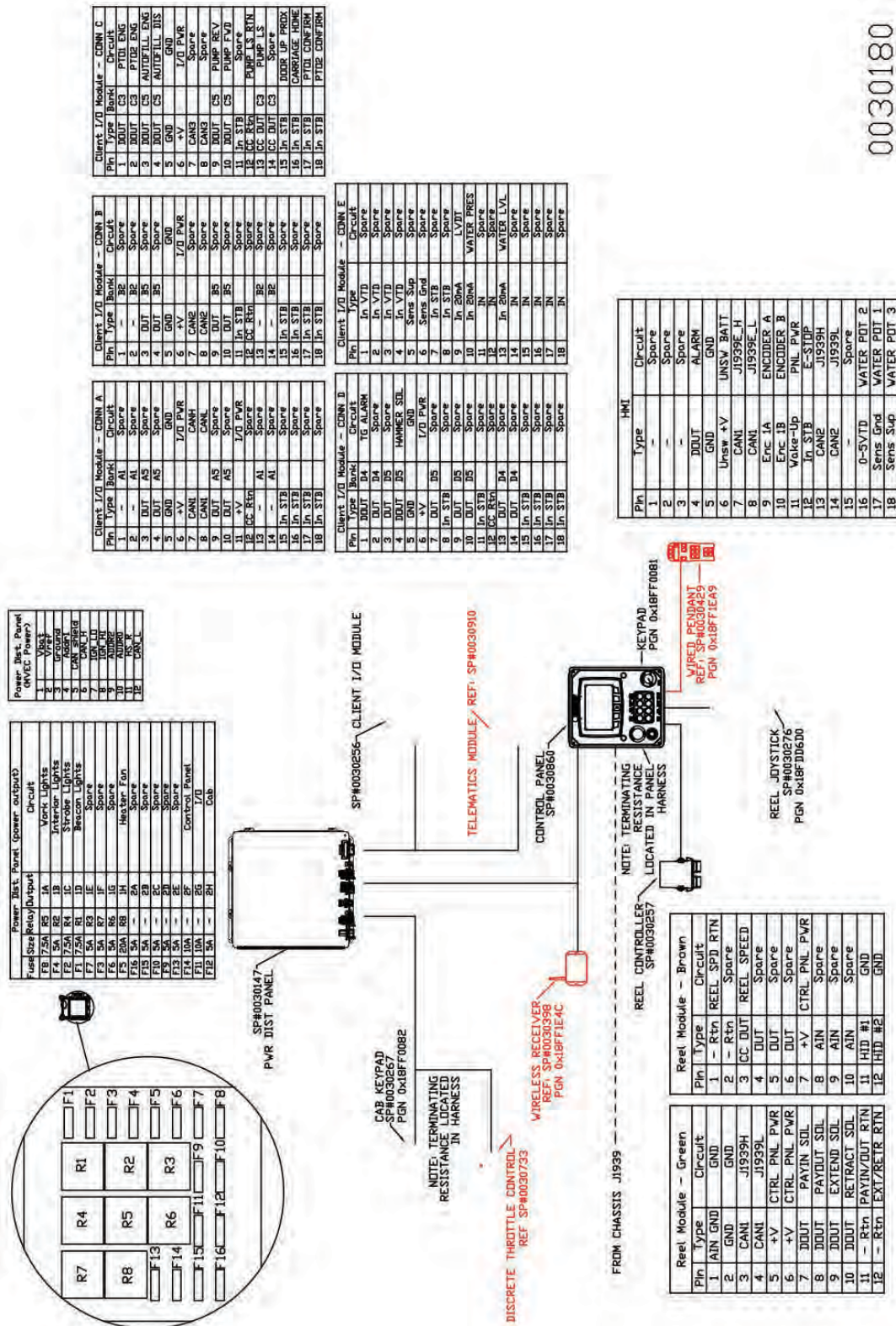


0031791

Control System Diagram



Control System Diagram



0030180

Service and Spare Parts

First Year Spare Parts	
Description	Part Number
Hydraulic Case Drain Element	0031305
Hydraulic Return Filter Element	0031304
Y-Strainer Complete	0020239
Y-Strainer Lid Gasket	0025680
Y-Strainer Screen	0026277
Y-Strainer Screen Gasket	0026279
Y-Strainer Lid	0026280
Y-Strainer Cap Clamp	0026281
Chevron Rando HD Premium Oil	3060-00045
Purge/Prime Check Valve	0025820

Super Accessories	
Description	Part Number
NOZZLES	
3/4" Radial Cleaning Nozzle - 50GPM @ 3000PSI	6000-02072-5030
3/4" Chisel Nozzle - 50GPM @ 3000PSI	6000-02011-5030
3/4" Grenade Nozzle - 50GPM @ 3000PSI	6000-02065-5030
3/4" Grand Slam Nozzle - 50GPM @ 3000PSI	6000-02017-5030
1" Radial Cleaning Nozzle - 65GPM @ 2000PSI	6000-02072-6520
1" Chisel Nozzle - 65GPM @ 2000PSI	6000-02011-6520
1" Grenade Nozzle - 65GPM @ 2000PSI	6000-02065-6520
1" Grand Slam Nozzle - 65GPM @ 2000PSI	6000-02017-6520
1" Superior Penetrator Nozzle - 65GPM @ 2000PSI	6000-02012-6520
1" Small Flying Nozzle - 65GPM @ 2000PSI	6000-02076-6520
1" Large Flying Nozzle 65GPM @2000 PSI	6000-02075-6520
1" Radial Cleaning Nozzle - 80GPM @ 2000PS	6000-02072-8020
1" Chisel Nozzle - 80GPM @ 2000PSI	6000-02011-8020
1" Grenade Nozzle - 80GPM @ 2000PSI	6000-02065-8020
1" Grand Slam Nozzle - 80GPM @ 2000PSI	6000-02017-8020
1" Superior Penetrator Nozzle - 80GPM @ 2000PSI	6000-02012-8020
1" Small Flying Nozzle - 80GPM @ 2000PSI	6000-02076-8020
1" Large Flying Nozzle 80GPM @2000 PSI	6000-02075-8020

SERVICE AND SPARE PARTS

Super Accessories	
Description	Part Number
SEWER ACCESSORIES	
3/4" standard nozzle extension	9050-00038-0001
3/4" finned nozzle extension	9050-00039
1" standard nozzle extension	9050-00038-0002
1" finned nozzle extension	9050-00058
Hose, 25', plastic - Single Jacket Filler Hose	0025085
Hose, 50', plastic - Single Jacket Filler Hose	3500-00245
Hose, 25', cotton - Single Jacket Filler Hose	0027059
Hose, 50', cotton - Single Jacket Filler Hose	3500-00259
Leader Hose 3/4" x 10'	3736-12000-0012
Leader Hose 1" x 10'	3736-12000-0016
Grabber assembly (replaces 3000-01029)	9510-00016
1/2" dia x 35' Whip Hose with quick disconnects	9410-02179
Handgun rated at 3000 PSI	9010-01146
Cleaning Lance (For Handgun) w/ Adjustable Nozzle	9010-01150
Tigertail Sewer Hose Guide	3000-02601
Upper manhole roller shoe assembly	9410-00001
Lower manhole roller guide with pipes	3000-02226
Hydrant wrench	3000-01242
Puller hook	3000-01244
Assy, Wash Down Handgun W/Lance, Adjustable	0023397

7

Other Service Parts	
Description	Part Number
DOORS AND CANOPY	
Assy, Bottom Rail 60" x 60" Roll-up Door	0029460
Assy, Bottom Rail 84" x 74.25" Roll-up Door	0029814
Assy, Counter Balance, - 60" Roll-up Door	0029461
Assy, Counter Balance, - 84" Roll-up Door	0029815
Assy, Slat - 60" Roll-up Door	0031641
Assy, Slat - 84" Roll-up Door	0031679
Assy, Strap, Roller N35 Stnd Roll-up Door	0031637
Fabric Canopy	0030043
Plate, Sill - 60" Roll-up Door	0031642
Plate, Sill - 84" Roll-up Door	0031658
Rail, Door Side - 60" Roll-up Door	0031639
Rail, Door Side - 84" Roll-up Door	0031681
Roller, 2", Canopy	0030153
Roller, 84" Roll-up Door	0031661
Seal, Door Side - 60" Roll-up Door	0031638
Seal, Door Side - 84" Roll-up Door	0031680
Seal, Gutter - 60" Roll-up Door	0031644
Seal, Gutter - 84" Roll-up Door	0031677
Seal, Gutter Top - 60" Roll-up Door	0031646
Seal, Gutter Top - 84" Roll-up Door	0031676
Strap looped, Door Pull	0031437
Trim, Gutter - 84" Roll-up Door	0031667

Other Service Parts	
Description	Part Number
ELECTRICAL	
Charger Wireless Pendant	0030423
Hose Reel Encoder	0008208
Light, LED, Amber Clearance	0008713
Light, LED, ID, ASSY	9000-00958
Light, LED, License, Assy	5500-01881
Light, LED, Red Clearance	0006227
Light, LED, Tail, Turn, Stop, BU	0029584
Light, LED, Yellow Strobe	0030698
Light, Safety Director Bar, Amber	0005914
Pressure Sensor, Low Water Level	0026040
Pressure Sensor, Water	0008245
Receiver Wireless	0030398
Wired Remote Control Pendant	0030429
Wireless Pendant	0030403
HYDRAULIC & PNEUMATIC	
Air Purge Air Valve	6000-00536
Auto-Fill Air Solenoid Valve	6000-02286
Block Buster Air Ball Valve	0030357
Block Buster Air Solenoid Valve	0029511
Heat Exchanger, Oil to Water	0029416
Hose Reel Brake Pneumatic Cylinder	0031047
Hose Reel Extend/Retract Hyd Cylinder	0029508
Hose Tensioner Pneumatic Cylinder	0031047
HYD. Pressure Gauge	6000-00260

7

Other Service Parts	
Description	Part Number
WATER SYSTEM	
2.5" x 25' Fill Hose	0025085
4" Rubber Hump Hose for Water Tanks	3000-01953-0003
Hose Reel Extension Slide, UHMW	0029499
Kit, Seal, Oil Side	0026094
Kit, Seal, Water Pump, Full Rebuild	0026095
Kit, Seal, Water Side	0026093
Kit, Water Pump Valves	0031809
Kit, Water Pump Valves, High Wear	0031810
Purge/Prime 1/4 Valve	6000-02112
Water Fill Strainer 2" Assy	20152-003
Water Fill Strainer Bowl	7350-00097
Water Fill Strainer Gasket	7350-00098
Water Fill Strainer Screen	7350-00099
Water Pump Inlet Valve	0026088
Water Pump Inlet Valve High Wear	0030642
Water Pump Inlet Valve, O-Ring	0027246
Water Pump Outlet Valve	0026089
Water Pump outlet Valve High Wear	0030643
Water Pump Outlet Valve, O-Ring	0027247

A

Air Purge 5-6
Arrange for Traffic Control 1-15

B

Back Over Hazard 1-14
Backup Controls 3-10
Bag Pulsing 3-1
Before Performing Service, Repairs, and Maintenance on the Equipment 1-24
Before Transporting Truck Inspection 1-12
Biological Hazards 1-11
Boom Maintenance 5-5

C

Cab Control Panel Functions 3-3
Cab Controls 3-3
Cabinet & Toolbox Doors Maintenance 5-6
Chemical and Biological Hazard Safety 1-11
Chemical Waste Hazard 1-11
Chemicals and Diesel Engine Exhaust 1-11
Confined Space Hazard 1-21
Control System Diagnostics 3-10
Control System Diagram 6-14
Control System Operation 2-1, 3-1
Control System Overview 3-3
Crushing Hazards and Prevention Safety 1-7

D

Debris Level Sensor (Option) 4-5
Decal Location 1-25
De-energize and Lockout Procedures 1-23
DEF Maintenance 5-2
Definitions 2-1
Determine Maximum Turning Speed Before Operating on Roads or Uneven Ground 1-13
Determine Stopping Characteristics of Truck for Transporting Braking Tests 1-13
Diagnostic Menu 3-9
Dumping Payload 4-4
Dust Hazard 1-11

E

Electrical System Maintenance 5-5
Electrical Troubleshooting 6-7
Emergency Stop Button Function 1-17
Emergency STOP Switch 3-4
Emergency Stop Switch 3-13

Engaging Work at the Job Site 4-1
Engine Speed 3-6
Equipment Guards 1-6
Exhaust After Treatment Regeneration Information 5-2

F

Fire Extinguisher 1-16
Front Control Panel and Functions 3-4
Front Control Panel Display Screen Menu Operation 3-6
Front Control Panel Joystick Functions 3-11
Function Menu 3-8

G

General Hazards and Prevention Safety 1-5
General Safety Instructions and Practices 1-1

H

Hazards with Equipment Maintenance 1-24
High Water Pressure 1-20
High-Pressure Fluid Leak Hazards 1-9
High-Pressure Water Safety and Hazard Warnings 1-19, 1-20
Hose Reel Counter 3-6
Hose Reel Function 3-11
Hot Surface 1-6
Hydraulic Schematics 6-12
Hydraulic System Maintenance 5-5

I

Information Window 3-8
Inspect the Job Site 1-16
Introduction 2-1

J

Job Safety and Hazard Warnings 1-15, 1-16
Job Site Safety and Hazard Warnings 1-15

L

Lance/Cleaning Gun Precautions 4-8
Lubrication and Maintenance 5-1
Lubrication Recommendation Chart 5-1

M

Maintenance Items 5-5
Maintenance Schedule 5-4
Mechanical Troubleshooting 6-2
Mounting and Dismounting Truck or Equipment 1-6

Index

N

Never Exceed your Gross Vehicle Weight Rating (GVWR) 1-12

O

Operator Menu 3-10
Overhead Power Line Tips for Construction Workers Before You Begin Construction Work 1-10

P

Parts Information 1-24
Payout Counter 3-6
Payout Menu 3-8
Pedestrian Safety 1-12
Pendant Diagnostics 3-9
Pendant Functions — Wired and Wireless 3-12
Pendant Jacks 3-13
Performing Service, Repairs, Lubrication, and Maintenance 1-24
Personal Protection Equipment (PPE) 1-3
Pneumatic Schematics 6-13
Power Distribution Diagnostics 3-9
Power Distribution Panel 3-1
Power Line/Static Electrical Hazard Warnings 1-10
Power Lines/Static Electrical Hazard Warnings 1-10
Preparation Before Traveling to Worksite 1-35
Prepare the Job Site 1-16
Preventive Maintenance Instructions 5-1
Principles of Operation 2-1
Purge/Prime 4-4

R

Recycle Rocker Switch (Option) 3-4
Return to Road Mode 4-4

S

Safety 1-1
Safety Shields, Guards, and Safety Devices Inspection 1-24
Safety Signs 1-6
Schematic Supersucker Liquid Ring Water System - 0042508 6-13
Separator Air System 4-5
Setting the Truck at the Job Site 4-1
Sewer Cleaning 4-4
Sewer Cleaning - Typical Sequence 4-1
Sewer Gas Hazard 1-11

Sewer Gas Safety and Hazard Warnings 1-21
Starting Sewer Cleaning — Typical Sequence 4-2
Status Icons 3-7
SuperJet Pump Check Valve Leak Test 5-7

T

The Basic Troubleshooting Process 5-1, 6-1
To Help Avoid Injury 1-15
To Reset E-STOP 1-18
To Reset E-Stop 1-18
Transport Safety and Hazard Warnings 1-12, 1-13
Transport Safety and Hazards Warnings 1-12
Trenching Hazards 1-22
Trip and Fall Prevention Safety 1-8
Troubleshooting Overview 6-1
Truck Tip Over 1-7

U

User Options 3-11

V

Vacuum Equipment Operation Safety and Hazard Warnings 1-17, 1-18
Vacuum Speed Control from Remotes 3-13
Visibility Conditions When Operating 1-6, 1-16
Visual Attention Safety 1-2

W

Water Lance Operation 4-7
Water Pressure 3-4, 3-6
Water Pump Operation - Jetting 4-2
Water System 2-2, 5-6
When backing follow these best practices 1-14
When Transporting Equipment 1-13
When Using Pressurized Air or Water 1-4
Winter Recirculation (Option) 2-3
Winterization 4-5
Wired Pendant (Option) 3-12
Wireless Pendant (Option) 3-13
Working with Tools and Equipment 1-10



Limited Factory Warranty

Subject to the terms and conditions below, Super Products warrants to its original purchaser or an approved transferee ("Purchaser") that new equipment sold after the effective date of this limited warranty is free of defects in material or workmanship at the time it was shipped from Super Products for a period of 12 months from the following: (i) the shipment date or 60 days from the invoice date (whichever occurs first) if the equipment is sold directly to the Purchaser by Super Products or (ii) the in service date if the equipment is sold to the Purchaser by an authorized dealer ("Warranty Period Start Date"), provided the equipment is used in a normal and reasonable manner and in accordance with all operating instructions. Super Products agrees, at its sole election, to either repair or replace (inclusive of labor if through a service center authorized by Super Products) any defective parts and components incorporated in or included with the equipment, not to include any chassis manufactured by third party manufacturers. This Limited Factory Warranty is subject to those terms, conditions, limitations, and exclusions described herein and in Super Products' Warranty Policy in effect on the Warranty Period Start Date. Super Products will not honor warranty claims that have not been filed within thirty (30) days of the repair of the defect or failure that initiated such warranty claim and have not been completed in accordance with Super Products' Warranty Policy.

As part of this Limited Factory Warranty, Super Products provides the following warranties for the designated components:

- 10 Years from the Warranty Period Start Date on the debris body (from defects in material or workmanship), including parts and labor, but any claims submitted after the first 12 months of the warranty period must be preapproved by Super Products.
- 10 Years from the Warranty Period Start Date on the poly water tanks (from defects in material or workmanship), including parts and labor in first 12 months of warranty period, but any claims submitted after the first 12 months of the warranty period must be preapproved by Super Products (after first 12 months only parts are included).
- 3 Years from the Warranty Period Start Date on Super Products' single-piston water pump (from defects in material or workmanship), including parts and labor, but any claims submitted after the first 12 months of the warranty period must be preapproved by Super Products.
- 90 days from the Warranty Period Start Date on loose hardware, fitting and hose leaks, and loose electrical connections (from defects in material and workmanship).

Super Products does not provide any express or implied warranty for the following components, parts, and services; however, Super Products in its sole discretion may choose to repair or replace any such components and parts or perform any such services:

- Any major components of the equipment that Super Products used in manufacturing or assembling the equipment manufactured by a third party manufacturer (including, but not limited to, truck engines or any component of the chassis). Super Products assigns to the Purchaser any applicable warranty offered by the manufacturer of such components.
- Normal wear parts, including but not limited to, valves, gaskets, light bulbs, filters, oils and fluids.
- Consumable items, including but not limited to, vacuum hose, sewer hose, nozzles, and vacuum tubes.
- Normal adjustments and maintenance services.

This Limited Factory Warranty does not cover any damage to nonfunctioning or malfunctioning of the equipment, or any components or parts comprising the equipment, due to: (a) any alteration, substitution, misuse or abuse by the Purchaser or its agents; (b) their non-compliance with any operator's manual, maintenance manual or warning published by Super Products or the component manufacturer and issued to the Purchaser; or (c) their non-compliance with the general standard of reasonable care.

OTHER THAN AS EXPRESSLY STATED HEREIN, TO THE EXTENT ALLOWED BY LAW, SUPER PRODUCTS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. SUPER PRODUCTS MAKES NO REPRESENTATIONS OR PROMISES, AND PURCHASER IS NOT RELYING UPON ANY ORAL OR WRITTEN REPRESENTATIONS OR PROMISES, REGARDING ANY PERFORMANCE CHARACTERISTICS OR CAPABILITIES OF THE EQUIPMENT OR THE COMPONENTS THEREOF (INCLUDING, WITHOUT LIMITATION, THE INTEGRATION OF SUCH COMPONENTS OR THE COMBINATION IN WHICH SUCH COMPONENTS MAY BE USED), EXCEPT AS EXPRESSLY STATED IN THE DESCRIPTION OF THE EQUIPMENT CONTAINED IN THE ACKNOWLEDGMENT OR OTHER WRITTEN DESCRIPTIONS PROVIDED BY SUPER PRODUCTS.

SUPER PRODUCTS' MAXIMUM LIABILITY SHALL NOT EXCEED AND PURCHASER'S ENTIRE AND EXCLUSIVE REMEDY IS LIMITED TO EITHER (A) REPAIR OR REPLACEMENT OF THE DEFECTIVE EQUIPMENT, OR AT SUPER PRODUCTS' SOLE OPTION (B) RETURN OF THE EQUIPMENT AND REFUND OF THE PURCHASE PRICE. IN NO EVENT SHALL SUPER PRODUCTS BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN CONNECTION WITH OR OUT OF THE EQUIPMENT AND THAT SUPER PRODUCTS' LIABILITY, WHETHER IN CONTRACT, TORT, UNDER ANY WARRANTY OR OTHERWISE SHALL NOT EXCEED THE RETURN OF THE AMOUNT OF THE PURCHASE PRICE PAID BY PURCHASER, WHICH AMOUNT MAY BE REDUCED DUE TO DEPRECIATION AND DAMAGE BEYOND NORMAL WEAR AND TEAR. PURCHASER UNDERSTANDS THAT THE LIMITATION OF SUPER PRODUCTS' LIABILITY RELATING TO THE EQUIPMENT IS A MATERIAL TERM OF THE PARTIES' TRANSACTION.

This Limited Factory Warranty is not transferable without the prior written approval of Super Products.

NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS LIMITED FACTORY WARRANTY OR TRANSACTIONS UNDER THIS LIMITED FACTORY WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.



130 W BOXHORN DR. MUKWONAGO, WI 53149 • P: 800.837.9711 • www.superproducts.com