LIMITED WARRANTY

Subject to the terms and conditions below, Super Products warrants to its original purchaser ("original 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 shipment 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) any parts and components manufactured by Super Products. Super Products must be notified with thirty (30) days of such defect or failure, at which time Super Products will provide instructions on the warranty procedures to be followed. This limited warranty is subject to those limitations and exclusions as described in such warranty procedures. Super Products will not honor claims for warranty that have not been previously authorized via the warranty procedures (including that labor rates and times must be preapproved in writing).

In addition, Super Products agrees to provide extended warranties for certain components as indicated below: (extended warranty periods begin from the shipment date to the original purchaser).

- "10 Years on the debris body and all poly water tanks (from defects in material or workmanship).
- "3 Years on Super Products' single-piston water pump (from defects in material or workmanship).

Super Products does not provide any express or implied warranty to (and Super Products shall not be responsible for)

- "Any major components of the equipment that Super Products used in manufacturing or assembling the equipment but that Super Products did not manufacture (including, but not limited to, truck engines or any component of the chassis, vacuum pump, water pump, and hydraulics, driveline, power takeoff, and transfer case). Super Products assigns to the original purchaser any warranty extended by the manufacturer of such components. Disposition of any warranty claim for such components will be at the sole discretion and remedy of the component supplier. Super Products shall have the right of disposal of parts and components that are replaced.
- "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 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 original 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 original purchaser; or (c) their non-compliance with the general standard of reasonable care.

OTHER THAN AS EXPRESSLY STATED HEREIN, THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED. MORE SPECIFICALLY, THERE ARE NO IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY. ORIGINAL PURCHASER ACKNOWLEDGES AND AGREES THAT SUPER PRODUCTS MAKES NO REPRESENTATIONS OR PROMISES, AND THAT ORIGINAL 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 ORIGINAL PURCHASER'S REMEDY IS LIMITED TO EITHER (a) REPAIR OR REPLACEMENT OF THE DEFECTIVE EQUIPMENT, OR AT SELLER'S OPTION (b) RETURN OF THE PRODUCT AND REFUND OF THE PURCHASE PRICE. SUCH REMEDY SHALL BE ORIGINAL PURCHASER'S ENTIRE AND EXCLUSIVE REMEDY. ORIGINAL PURCHASER ACKNOWLEDGES THAT UNDER NO CIRCUMSTANCES 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 BUYER, WHICH AMOUNT MAY BE REDUCED DUE TO DEPRECIATION AND DAMAGE BEYOND NORMAL WEAR AND TEAR. ORIGINAL PURCHASER UNDERSTANDS THAT THE LIMITATION OF SUPER PRODUCTS' LIABILITY RELATING TO THE EQUIPMENT IS A MATERIAL TERM OF THE PARTIES' TRANSACTION.

This limited warranty is not transferable without the prior written approval of Super Products.

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

130 W Boxhorn Drive, Mukwonago, WI 53149 • P: 800.837.9711 • www.superproductsllc.com

As of 12/20/19
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8 Index
Chapter 1

Safety

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.

Practice all usual and customary safe working precautions and above all remember safety is up to you. Only you can prevent serious injury or death from unsafe practices.

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.

<table>
<thead>
<tr>
<th>SAFETY HAZARD</th>
<th>SAFETY AVOIDANCE</th>
<th>SAFETY PREVENTION</th>
</tr>
</thead>
</table>
| Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided.  
_Example:_  
![Equipment contacting overhead electrical lines](image) | Pictograph by itself or inside a box indicates an avoidance procedure that should be followed to prevent injuries.  
_Example:_  
![Always shut off engine and remove key before working on equipment.](image) | A circle with a slash through it indicates an action that is prohibited.  
_Example:_  
![No Smoking](image) |

**Figure 1-1**

**NOTE**

If you want a translation of this safety section in Spanish or French, please contact:

_Translation — Safety Section_  
130 W Boxhorn Drive  
Mukwonago, WI 53149  
(800) 837-9711
Personal Protection Equipment (PPE)

<table>
<thead>
<tr>
<th>Wear Safety Glasses</th>
<th>Wear Hard Hat</th>
<th>Wear Safety Shoes</th>
<th>Wear Hearing Protection</th>
<th>Wear Protective Gloves</th>
<th>Wear Safety Reflective Vest</th>
</tr>
</thead>
</table>

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, 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.
## When Using Pressurized Air or Water

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Face Shield" /></td>
<td><img src="image2" alt="Wet Weather Protective Suit" /></td>
<td><img src="image3" alt="Waterproof Gloves with Safety Shoes" /></td>
<td><img src="image4" alt="Respirator" /></td>
</tr>
<tr>
<td>Wear Face Protection Shield</td>
<td>Wear Wet Weather Protective Suit</td>
<td>Wear Waterproof Gloves and Safety Shoes with Metatarsal</td>
<td>Wear Respirator</td>
</tr>
</tbody>
</table>

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

Figure 1-4

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid serious injury or death, do the following:</td>
</tr>
</tbody>
</table>

- 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.
- Do not extend or retract the hose reel unless the area is clear of people and obstructions.
- 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.
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.

Equipment Guards

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

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!
Crushing Hazards and Prevention Safety

![Warning signs](image)

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

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**

- **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

![DANGER](image1)

**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](image2)

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

- **Always wear** safety glasses 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](image3)

**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](image4)

**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.**
Power Lines/Static Electrical Hazard Warnings

**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.

**Working with Tools and Equipment**

- 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.

**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

**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**

<table>
<thead>
<tr>
<th><img src="image1.png" alt="Overhead Clearance Hazard" /></th>
<th><img src="image2.png" alt="Equipment contacting overhead electrical lines" /></th>
<th><img src="image3.png" alt="Look out and Avoid other personnel" /></th>
</tr>
</thead>
</table>

**WARNING**

Follow all steps before moving truck when towing or transporting equipment to avoid serious injury and death:

**Before Transporting Truck Inspection**

- Ensure unit is road worthy by performing a pre-trip inspection before driving to and from job site.
- 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

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 full of water. 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.
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.

When backing follow these best practices.

- Always clean the rearview mirrors and the rearview camera and monitor daily before operating the 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.
Job Site Safety and Hazard Warnings

![Warning Icon]

**WARNING**

**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.

Call before you dig to define location of all buried utility lines

Inspect equipment before operation.

Figure 1-15
Job Site Safety and Hazard Warnings — continued

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.

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.

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.
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.

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

Always set the truck parking brakes and if on unleveled 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.

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.
Equipment Operation Safety and Hazard Warnings — continued

To Restore Power

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

Figure 1-19
High-Pressure Water Safety and Hazard Warnings

- 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:
- 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!**

READ THIS PLASTIC CARD AND KEEP IT IN YOUR WALLET. IN THE EVENT OF A WATERJET INJURY, SHOW THE CARD TO YOUR DOCTOR.

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

**DANGER**

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.

- 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.

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@WASTE.C.org
(Web) http://www.wastec.org

High Water Pressure

WARNING

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).

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.
Sewer Gas Safety and Hazard Warnings

**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.

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.

Do NOT enter an unprotected trench!

Each employee in a trench shall be protected from a cave-in by an adequate protective system.

Some of the protective systems for trenches are:

- Sloped for stability; or

- Cut to create stepped benched grades; or

- Supported by a system made with posts, beams, shores or planking and hydraulic jacks; or

- Supported by a trench box to protect workers in a trench.

Additionally, excavated or other materials must be at least 2 feet back from the edge of a trench; and

A safe means of egress shall be provided within 25 feet of workers in a trench.
De-energize and Lockout Procedures

**WARNING**

Workers can be seriously or fatally injured if machinery they service or maintain unexpectedly energizes, starts up, or releases stored energy.

**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.

<table>
<thead>
<tr>
<th>Electrical Wire Hazard</th>
<th>Hand Crushing Hazard</th>
<th>Remove key and read service/maintenance manual/handbook before servicing</th>
<th>Wait until all moving parts have stopped completely</th>
<th>Lock-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Figure 1-25</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

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.
- **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.
- **Lubricate** unit as specified by lubrication schedule.
- **Never** lubricate, adjust, or remove material while it is running or in motion.

- **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.

**SEE YOUR SUPER PRODUCTS DEALER**
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.

---

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>PART NO.</th>
<th>SEE FIG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parameters and software</td>
<td>INSTRUCTION</td>
<td>0003392</td>
<td>1-31</td>
</tr>
<tr>
<td>2</td>
<td>Vehicle height</td>
<td>CAUTION</td>
<td>0030707</td>
<td>1-32</td>
</tr>
<tr>
<td>3</td>
<td>Contact info</td>
<td>INSTRUCTION</td>
<td>3050-00193</td>
<td>1-33</td>
</tr>
</tbody>
</table>

Figure 1-26: Inside Cab
## SAFETY

### Figure 1-27: Left Side of Truck

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>PART NO.</th>
<th>SEE FIG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Drain here</td>
<td>INSTRUCTION</td>
<td>3050-00024</td>
<td>1-34</td>
</tr>
<tr>
<td>2.</td>
<td>Water Tank Fill</td>
<td>INSTRUCTION</td>
<td>3050-00579</td>
<td>1-35</td>
</tr>
<tr>
<td>3.</td>
<td>Rotating shafts can be dangerous</td>
<td>WARNING</td>
<td>3050-01180</td>
<td>1-36</td>
</tr>
<tr>
<td>4.</td>
<td>Winterization/air purge system</td>
<td>NOTICE</td>
<td>0030918</td>
<td>1-39</td>
</tr>
<tr>
<td>5.</td>
<td>High-pressure water</td>
<td>WARNING</td>
<td>0007437</td>
<td>1-39</td>
</tr>
<tr>
<td>6.</td>
<td>Water pump valve positions</td>
<td>NOTICE</td>
<td>0026472</td>
<td>1-40</td>
</tr>
<tr>
<td>7.</td>
<td>Stand Clear of Hose Real</td>
<td>CAUTION</td>
<td>0030915</td>
<td>1-41</td>
</tr>
<tr>
<td>8.</td>
<td>Made in the U.S.A.</td>
<td>INSTRUCTION</td>
<td>3050-00433</td>
<td>1-37</td>
</tr>
</tbody>
</table>
### Figure 1-28: Right Side of Truck

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>PART NO.</th>
<th>SEE FIG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drain Here</td>
<td>INSTRUCTION</td>
<td>3050-00024</td>
<td>1-34</td>
</tr>
<tr>
<td>2</td>
<td>Water Supply On/Off</td>
<td>INSTRUCTION</td>
<td>3050-00572</td>
<td>1-42</td>
</tr>
<tr>
<td>3</td>
<td>Rotating shafts can be dangerous</td>
<td>WARNING</td>
<td>3050-01180</td>
<td>1-36</td>
</tr>
<tr>
<td>4</td>
<td>Water tank fill</td>
<td>INSTRUCTION</td>
<td>3050-00579</td>
<td>1-35</td>
</tr>
<tr>
<td>5</td>
<td>High-pressure water</td>
<td>WARNING</td>
<td>0007437</td>
<td>1-39</td>
</tr>
<tr>
<td>6</td>
<td>Hydraulic reservoir</td>
<td>INSTRUCTION</td>
<td>3050-0051</td>
<td>1-43</td>
</tr>
<tr>
<td>7</td>
<td>Hydraulic Valve Position</td>
<td>CAUTION</td>
<td>3050-01286</td>
<td>1-44</td>
</tr>
<tr>
<td>8</td>
<td>Winter Recirculation</td>
<td>INSTRUCTION</td>
<td>3050-00205</td>
<td>1-45</td>
</tr>
<tr>
<td>ITEM</td>
<td>DESCRIPTION</td>
<td>TYPE</td>
<td>PART NO.</td>
<td>SEE FIG.</td>
</tr>
<tr>
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<td>------------------------------</td>
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<td>--------------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>Valve Sewer Hose</td>
<td>INSTRUCTION</td>
<td>0007423</td>
<td>1-46</td>
</tr>
<tr>
<td>2</td>
<td>High-pressure hose area</td>
<td>WARNING</td>
<td>007437</td>
<td>1-39</td>
</tr>
<tr>
<td>3</td>
<td>General Hazards</td>
<td>DANGER</td>
<td>0030916</td>
<td>1-47</td>
</tr>
<tr>
<td>4</td>
<td>Freezing temperatures</td>
<td>WARNING</td>
<td>0007436</td>
<td>1-48</td>
</tr>
<tr>
<td>5</td>
<td>Reel winding</td>
<td>CAUTION</td>
<td>3050-00075</td>
<td>1-49</td>
</tr>
<tr>
<td>6</td>
<td>Hose Reel Hazards</td>
<td>CAUTION</td>
<td>0030915</td>
<td>1-50</td>
</tr>
<tr>
<td>7</td>
<td>Pinch Point Hazards</td>
<td>WARNING</td>
<td>3050-01201</td>
<td>1-51</td>
</tr>
</tbody>
</table>

Figure 1-29: Right Side of Reel
SAFETY

Table 1-1: Front of Reel

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>PART NO.</th>
<th>SEE FIG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avoid unexpected vehicle movement</td>
<td>DANGER</td>
<td>0030917</td>
<td>1-52</td>
</tr>
<tr>
<td>2</td>
<td>Reel base rotation brake</td>
<td>INSTRUCTIONS</td>
<td>3050-00981</td>
<td>1-53</td>
</tr>
<tr>
<td>3</td>
<td>Reel controls</td>
<td>INSTRUCTIONS</td>
<td>0031135</td>
<td>1-54</td>
</tr>
<tr>
<td>4</td>
<td>Hydraulic Pressure</td>
<td>INSTRUCTIONS</td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>5</td>
<td>Air Pressure</td>
<td>INSTRUCTIONS</td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>6</td>
<td>Tensioner Front Reel</td>
<td>INSTRUCTIONS</td>
<td></td>
<td>–</td>
</tr>
</tbody>
</table>

Figure 1-30: Front of Reel
SAFETY

"ATTENTION!" This unit has special parameters that are necessary for operation. Download these parameters before modifying the control software. Then reload them for proper operation. For questions, please call Super Products customer service at 1-800-837-9711.

Part no. 0003392
Figure 1-31

Part no. 3050-00024
Figure 1-34

Part no. 3050-00579
Figure 1-35

Part no. 3050-01180
Figure 1-36

Part no. 3050-00433
Figure 1-37

---

Part no. 0030707
Figure 1-32

Part no. 0030707

---

CAUTION

VEHICLE HEIGHT
10’-7”

---

Part no. 0030707

---

ENTANGLEMENT HAZARD

To avoid serious injury or death from a rotating shaft:
- Do not go under the vehicle when the engine is running.
- Do not work on PTO or shaft (with or without a guard) when the engine is running.
- Do not engage or disengage the PTO or driven equipment by hand from under the vehicle when engine is running.
- Always shut the engine off before working on or near the system.

---

Super Products
TRUCK MOUNTED VACUUM EQUIPMENT

800.837.9711 • www.superproductsllc.com

---

Made in the U.S.A.

Part no. 3050-00433
**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.

Part no. 0030918  
Figure 1-38
**WARNING**

HIGH PRESSURE HAZARD
Never point high pressure water at people.
Always wear proper protection
Repair or replace damaged hose.
Failure to do so can result in serious injury or death.

Part no. 0007437
Figure 1-39

---

**WATER SUPPLY ON/OFF**

Part no. 3050-00572
Figure 1-42

---

**NOTICE**

AIR PURGE REQUIRED TO FULLY DRAIN. REFER TO OWNERS MANUAL FOR WINTERIZATION PROCEDURE

Part no. 0030919
Figure 1-40

---

**HYDRAULIC RESERVOIR**

USE SUPER PRODUCTS SPEC. 3060-00045 CHEVRON RANDO HD PREMIUM OIL MV

Part no. 0030915
Figure 1-41

---

**CAUTION**

SUCTION LINE VALVE MUST BE IN OPEN POSITION FOR OPERATION. DAMAGE TO HYDRAULIC PUMP WILL RESULT IF OPERATED IN “CLOSED” POSITION

Part no. 3050-01286
Figure 1-44

---

**WINTER RECIRCULATION**

Part no. 3050-00205
Figure 1-45
**SAFETY**

**WARNING**

IF UNIT IS TO BE SUBJECT TO FREEZING TEMPERATURES, MAKE SURE ALL WATER IS DRAINED OR PURGED FROM THE ENTIRE SYSTEM, INCLUDING SEWER HOSE. FAILURE TO DRAIN OR PURGE WATER MAY RESULT IN SERIOUS BODILY HARM. SEE OPERATOR’S MANUAL.

Part no. 0007436

**Figure 1-48**

**CAUTION**

SEWER HOSE MUST BE PRESSURIZED TO NORMAL OPERATING PRESSURE WHILE WINDING ONTO REEL. FAILURE TO COMPLY WITH ABOVE MAY RESULT IN SEVERE HOSE PINCHING OR PERMANENT DEFORMATION OF REEL FLANGES. SEE OPERATOR’S MANUAL.

Part no. 3050-00075

**Figure 1-49**

**DANGER**

1. Read operation manual before attempting to operate this equipment.
2. DO NOT load vehicle beyond rated capacity
3. DO NOT move vehicle while hose reel is extended.
4. Ensure the work area is clear of personnel and equipment before extending hose reel.

Part no. 0030916

**Figure 1-47**

**CAUTION**

Stand clear of hose reel frame when extending or retracting to avoid bodily injury.

Part no. 0030915

**Figure 1-50**
**SAFETY**

---

**WARNING**

**PINCH POINT HAZARD**
Moving parts can crush or sever.
Keep Clear.

Part no. 3050-01201

Figure 1-51

---

**DANGER**

To avoid unexpected vehicle movement follow these steps before increasing engine speed at control panel:
1. Set brakes
2. Deploy wheel chocks
Failure to comply with these steps could result in property damage, death or serious injury.

Part no. 0030917

Figure 1-52

---

**REEL BASE ROTATION BRAKE**

**RELEASE**

Part no. 3050-00981

Figure 1-53

---

**REEL CONTROLS**

**ROCKER SWITCH**
(LOCATED ON TOP OF JOYSTICK)

INCREASE REEL SPEED

DECREASE REEL SPEED

RETRIEVE

PAYOUT

REEL CONTROL JOYSTICK

Part no. 0031135

Figure 1-54

---

**HOSE MAINTENANCE INSTRUCTIONS**

**REPAIR OR REPLACE HOSE AT FIRST INDICATION OF COVER WEAR-THROUGH AND REINFORCEMENT EXPOSURE**

Figure 1-55
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.
Chapter 2

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

10 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**

When purchasing a new truck or when installing a new sewer hose on an existing reel, you must follow a procedure to pressurize the new hose (one time only).

Failure to follow this procedure could result in loose wraps and/or severe pinching of the hose and possible damage to the reel itself.

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
2. Water Tank
3. Suction Line Shutoff Valve
4. Y-Strainer
5. Water Pump
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.

2. Open the sewer hose valve (2).

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

4. Press ON the RECIRCULATE button (4) on the front control pane or on the keypad in the cab.
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 2-7
Chapter 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.

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

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

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

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

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

### Table 3-1: Fuse Information

<table>
<thead>
<tr>
<th>FUSE</th>
<th>AMPERAGE</th>
<th>RELAY</th>
<th>CIRCUIT</th>
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<td>7.5A</td>
<td>R5</td>
<td>Work Lights</td>
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<tr>
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<td>5A</td>
<td>R2</td>
<td>Interior Lights</td>
</tr>
<tr>
<td>F2</td>
<td>7.5A</td>
<td>R4</td>
<td>Strobe Lights</td>
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<td>7.5A</td>
<td>R1</td>
<td>Beacon Lights</td>
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<td>5A</td>
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<td>10A</td>
<td>-</td>
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</tr>
<tr>
<td>F12</td>
<td>5A</td>
<td>-</td>
<td>Cab</td>
</tr>
</tbody>
</table>
Control System Overview

Cab Controls

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

Cab Control Panel Functions

Figure 3-6

Figure 3-7
Front Control Panel and Functions

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.

**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.

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

Figure 3-10
CONTROL SYSTEM OPERATION

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.

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

Figure 3-11

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

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](image)

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 3-14](image)

![Figure 3-15](image)
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.

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.

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.
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

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 payin 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
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.

Front Control Panel Joystick Functions

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.*
CONTROL SYSTEM OPERATION

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.

Figure 3-24

Pendant Functions — Wired and Wireless
Pendant Jacks
There is a receptacle for the wired pendant located at the control panel (1).

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.)
Chapter 4

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.

Engaging Work at the Job Site

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

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

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.

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.
SEWER CLEANING — TYPICAL SEQUENCE

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.

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.

Figure 4-7

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.

DANGER

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).

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. 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).
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.

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

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

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.
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**

Open 3-way valve to turn on handgun hose reel.

3. Close the sewer hose valve.
5. 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**

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 personal injury.

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 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 personal injury or property damage.

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.

**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.

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 with the above could result in serious injury or death.

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 with these safety precautions could result in personal injury and/or property damage.

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 personal 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.

Table 4-1:

<table>
<thead>
<tr>
<th>Serious Injury or Death May Result.</th>
<th>Safety Should Always Be Observed.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DO NOT:</strong></td>
<td><strong>DO:</strong></td>
</tr>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Place hands or any other portion of the body in front of the spray nozzle.</td>
<td>Carefully check and tighten all connections regularly. Make sure all connections are secure and leak-proof.</td>
</tr>
<tr>
<td>Alter equipment in any manner. (If repairs are necessary, use only genuine factory repair parts available from Super Products.)</td>
<td>Make sure trigger is operating properly.</td>
</tr>
<tr>
<td>Operate the lance gun without the trigger guard attached.</td>
<td>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.</td>
</tr>
<tr>
<td>Exceed the maximum operating pressure.</td>
<td>Keep lance gun clean to allow for a positive grip and safe operation.</td>
</tr>
<tr>
<td>Leave the equipment under pressure and unattended at any time.</td>
<td>Relieve water pressure by shutting off the water supply. Actuate the lance gun trigger until water stops flowing.</td>
</tr>
<tr>
<td>Use if the hose if damaged or weakened.</td>
<td>Make sure the lance gun is insulated properly when used in a dangerous environment.</td>
</tr>
<tr>
<td>Operate the lance gun if there are any leaks from the packing, fittings, or hoses.</td>
<td>Never exceed the maximum operating pressure. Make sure the relief valve is operating properly.</td>
</tr>
<tr>
<td>Tape or otherwise lock the lance gun trigger into the ON position.</td>
<td></td>
</tr>
</tbody>
</table>
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.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Lubricant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grease</td>
<td>Super Products Spec 3060-00023 White Lithium</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic System</td>
<td>Super Products Spec 3060-00048 Chevron Rando HD</td>
</tr>
<tr>
<td></td>
<td>Premium Oil MV</td>
</tr>
</tbody>
</table>
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 aftertreatment.

NOTE

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

Exhaust Aftertreatment 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.
2. If the first screen is ignored, after a period of time a REGEN Required Now warning message will be displayed. At this time the operator must cease all work operations, put the truck into road mode, and perform a regen cycle.

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.

4. 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.
## Maintenance Schedule

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

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Every 1,000 Hours or Yearly</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WATER SYSTEM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drain System</td>
<td>Clean/Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handgun Connectors</td>
<td>Clean/Inspect</td>
<td>Lubricate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y-Strainer</td>
<td>Inspect</td>
<td>Clean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Gauge</td>
<td>Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoses</td>
<td>Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Pump</td>
<td>Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball Valves</td>
<td></td>
<td>Inspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check Valve</td>
<td></td>
<td>Leak Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nozzles</td>
<td></td>
<td></td>
<td>Inspect</td>
<td></td>
</tr>
<tr>
<td>Water Tank Connectors</td>
<td></td>
<td>Inspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotary Elbows</td>
<td></td>
<td>Lubricate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reel Rotation Bearings</td>
<td></td>
<td>Lubricate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulator Pressure</td>
<td></td>
<td></td>
<td></td>
<td>Adjust 500 - 1250psi</td>
</tr>
<tr>
<td><strong>ELECTRICAL SYSTEM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights</td>
<td>Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wireless Remote Pendant</td>
<td></td>
<td>Inspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wired Pendant Receptacles</td>
<td>Inspect</td>
<td>Dielectric Grease</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HYDRAULIC SYSTEM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic Oil</td>
<td>Inspect</td>
<td></td>
<td>Replace</td>
<td></td>
</tr>
<tr>
<td>Hoses and Fittings</td>
<td>Inspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulic Filter</td>
<td>Inspect</td>
<td></td>
<td>Replace</td>
<td></td>
</tr>
<tr>
<td><strong>AIR PURGE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball Valve</td>
<td></td>
<td>Inspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check Valve</td>
<td></td>
<td>Inspect</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BODY COMPONENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive Shafts</td>
<td></td>
<td>Inspect/Lubricate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CABINET &amp; TOOL BOX DOORS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latches</td>
<td></td>
<td>Inspect/Lubricate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hinges</td>
<td></td>
<td>Lubricate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

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

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

**Figure 5-9**

- **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.

**Figure 5-8**

- **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).

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.

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

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 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

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road mode:</strong> starting truck</td>
<td>Engine will not start when in road mode</td>
<td>Engine problems</td>
<td>Have engine mechanic check for problems.</td>
</tr>
<tr>
<td><strong>Emergency stop</strong></td>
<td>Engine will start but all functions will not operate</td>
<td>Emergency stop switch pushed at front panel or curbside panel</td>
<td>Reset the emergency stop switch by twisting the knob.</td>
</tr>
<tr>
<td><strong>Emergency stop on remote pendants</strong></td>
<td>Engine RPM drops to idle</td>
<td>Pendant emergency stop button depressed</td>
<td>Clear emergency stop mode by pressing for 3 seconds the emergency stop button.</td>
</tr>
<tr>
<td></td>
<td>Emergency stop message displayed on the control panel HMI screen</td>
<td>Wireless pendant batteries are dead</td>
<td>Recharge the wireless pendant batteries.</td>
</tr>
<tr>
<td><strong>All functions do not work</strong></td>
<td>Receiver power lost</td>
<td></td>
<td>See Table 6-2: Electrical Troubleshooting.</td>
</tr>
<tr>
<td><strong>Control system</strong></td>
<td>Control system not turning on</td>
<td>Main fuse blown</td>
<td>See Table 6-2: Electrical Troubleshooting.</td>
</tr>
<tr>
<td></td>
<td>Ignition enable signal failed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Throttle control</strong></td>
<td>Engine RPM will not increase or decrease</td>
<td>Engine speed dial advanced too far</td>
<td>Turn dial back to zero and then turn it back up.</td>
</tr>
<tr>
<td></td>
<td>Emergency stop is enabled on pendant</td>
<td></td>
<td>• Mute the emergency stop alarm at the display until situation is corrected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• See “Emergency stop” function in this table.</td>
</tr>
<tr>
<td><strong>Hydraulics</strong></td>
<td>No main hydraulic oil pressure</td>
<td>Work mode not enabled, still in road mode</td>
<td>Enable work mode.</td>
</tr>
<tr>
<td></td>
<td>Hydraulic pump not engaged. Pump drive shaft not spinning in work mode.</td>
<td></td>
<td>• Set park Brake</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Shift to neutral</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Engine RPM above 900. Wait for engine to idle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• PTO failure see PTO</td>
</tr>
<tr>
<td></td>
<td>Supply valve closed</td>
<td>Open the hydraulic supply valve.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low oil level in hydraulic reservoir</td>
<td>Add oil as required.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for leaks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oil pump suction line plugged or hose liner collapsed (very rare)</td>
<td>Repair or replace as required.</td>
<td></td>
</tr>
</tbody>
</table>
## Troubleshooting Hydraulics

### Hose Reel and Functions Not Moving

- **Symptom:** Hydraulic valve fouled with debris
- **Probable Cause:**
  - 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.
- **Solution:**
  - 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.
  - Connect pressure gauge to manifold port and check for pressure.
  - Have the hydraulic valve repaired or replaced.
  - Verify that the proper mode is selected for the desired function.
  - See Table 6-2: Electrical Troubleshooting.

### Failed Directional or Proportional Valve

- **Symptom:** Air in hydraulic oil tank
- **Probable Cause:** Inspect suction hose and fittings from hydraulic oil tank to pump for any air leaks.
- **Solution:**
  - Drain all oil in system and replace oil and oil filter.
  - Inspect or replace hydraulic reservoir fill cap.

### LED on Solenoid Connector or I/O Module Not Lit When Function is Enabled

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic Oil Foamy or Milky</td>
<td>Air in hydraulic oil tank</td>
<td>Inspect suction hose and fittings from hydraulic oil tank to pump for any air leaks.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 6-1: Mechanical Troubleshooting (Continued)
### Table 6-1: Mechanical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hose Reel</td>
<td>Hose Reel will not rotate.</td>
<td>Brake on brake off: brake band tight</td>
<td>Release brake</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Adjust brake band</td>
</tr>
<tr>
<td>Hose reel will not extend</td>
<td>Not in WORK mode.</td>
<td>Press WORK mode.</td>
<td>Clear path.</td>
</tr>
<tr>
<td>or retract.</td>
<td>Objects obstructing the path.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Broken, loose or misroute electrical wire.</td>
<td>Locate, repair or replace.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No hydraulic oil pressure or flow.</td>
<td>See Symptom: “No Hydraulic Oil Pressure”.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hydraulic line pinched, plugged or broken.</td>
<td>Locate, repair or replace.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hydraulic cylinder failed.</td>
<td>Replace cylinders.</td>
<td></td>
</tr>
<tr>
<td>Hose Reel Brake not</td>
<td>Brake off.</td>
<td>Apply Brake.</td>
<td></td>
</tr>
<tr>
<td>working. (Switch on/Brake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>on)</td>
<td>Brake band loose.</td>
<td>Adjust brake band.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cylinder obstructed (rod or rotation).</td>
<td>Remove obstruction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No air/insufficient air pressure.</td>
<td>See symptom: “low air pressure”.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air hose pinched or broken.</td>
<td>Locate, repair or replace.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air cylinder failed.</td>
<td>Replace cylinder.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6-1: Mechanical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water pump</td>
<td>No water pressure</td>
<td>Water pressure knob left turned up</td>
<td>Turn water pressure knob down to zero and then back up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water supply valve closed</td>
<td>Open supply valve.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water tanks empty</td>
<td>Fill water tanks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In ROAD mode</td>
<td>Select WORK mode.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drain valve open</td>
<td>Close drain valve.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plugged or dirty water supply strainer</td>
<td>Clean water supply strainer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nozzle too big or worn out</td>
<td>Replace nozzle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water hose leaking</td>
<td>Replace hoses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PTO failure error message</td>
<td>• Engine speed greater than 900 RPM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• PTO hydraulic enable solenoid failure or failed confirm switch.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water pump directional valve issue</td>
<td>Remove solenoid connectors and use the manual override to move the water pump.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water pump position stuck at one end</td>
<td>Check LVDT for proper movement from 0 to 17 inches using manual override.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No hydraulic pressure</td>
<td>See “Hydraulics” function in this table.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical malfunction</td>
<td>See Table 6-2: Electrical Troubleshooting.</td>
</tr>
<tr>
<td>Winter recirculation</td>
<td>Water pump will not run</td>
<td>Winter recirculation button off</td>
<td>Turn winter recirculation button on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water pump not moving</td>
<td>PTO failure. See “Power Take-off (PTO)” function in Table 6-2: Electrical Troubleshooting.</td>
</tr>
<tr>
<td>Water Pressure Surging</td>
<td>Accumulator turned off.</td>
<td>Accumulator turned off.</td>
<td>Turn on accumulator.</td>
</tr>
<tr>
<td></td>
<td>Air in the water pump.</td>
<td>Prime water pump.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6-1: Mechanical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless pendant</td>
<td>Wireless pendant not functioning</td>
<td>Truck not in WORK mode</td>
<td>Press WORK mode on control panel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pendant not enabled</td>
<td>Enable pendant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pendant batteries are dead</td>
<td>Recharge batteries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical malfunction (loss of communication)</td>
<td>• Check transmitter/receiver communication link LED.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• See Table 6-2: Electrical Troubleshooting.</td>
</tr>
<tr>
<td>Wired pendant</td>
<td>Wired pendant not functioning</td>
<td>Pendant plug not fully engaged in receptacle</td>
<td>• Re-seat pendant plug.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged pendant cable</td>
<td>• Plug into alternate receptacle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Replace wired pendant cable.</td>
</tr>
<tr>
<td>Chassis air</td>
<td>Low air pressure (never reaching 100 PSI)</td>
<td>Solenoid valve or diaphragm valve on filter</td>
<td>Clean, repair, or replace as required.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>stuck open</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faulty compressor or regulator on truck</td>
<td>Repair or replace compressor or regulator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leak in the air lines, pneumatic valves,</td>
<td>Locate the leak and repair or replace as required.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cylinders, or tanks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective dash air pressure gauge</td>
<td>Replace dash air pressure gauge.</td>
</tr>
</tbody>
</table>
### Electrical Troubleshooting

**Table 6-2: Electrical Troubleshooting**

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road mode: starting truck</td>
<td>Engine will not start when in road mode</td>
<td>Engine problems</td>
<td>Locate and repair or replace defective components.</td>
</tr>
<tr>
<td></td>
<td>Truck will not go into road mode from work mode</td>
<td>Engine speed dial turned up on front panel</td>
<td>Turn down speed dial at the front control panel, then reattempt switching to ROAD mode.</td>
</tr>
<tr>
<td>Emergency stop</td>
<td>Engine will start, but all functions will not operate</td>
<td>Emergency stop button pushed at front panel or curbside panel</td>
<td>Reset the emergency stop switch by twisting the knob.</td>
</tr>
<tr>
<td>Emergency stop on remote pendants</td>
<td>Engine RPM drops to idle</td>
<td>Pendant emergency stop button depressed</td>
<td>Clear emergency stop by pressing the emergency stop button for 3 seconds.</td>
</tr>
<tr>
<td></td>
<td>Emergency stop message on the front display</td>
<td>Wireless pendant batteries are dead</td>
<td>Recharge wireless pendant batteries.</td>
</tr>
<tr>
<td></td>
<td>All functions do not work</td>
<td>Receiver power lost</td>
<td>Locate where power is being lost and repair or replace faulty components.</td>
</tr>
<tr>
<td>Control system</td>
<td>Control system not turning on</td>
<td>Main fuse blown</td>
<td>Check fuses at battery power distribution box.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ignition enable signal failed</td>
<td>Check ignition enable fuse at chassis fuse panel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control system component failure</td>
<td>Check status LED on module (they should flash green at a 1/2 second rate).</td>
</tr>
<tr>
<td>Throttle control</td>
<td>Engine RPM will not increase or decrease for engine speed or water pressure dials</td>
<td>Dial already turned up</td>
<td>Turn dial back to zero and then turn it back up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency stop mode is enabled on pendant</td>
<td>• Mute the emergency stop alarm at the display until situation is cleared.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• See “Emergency Stop” function in this table.</td>
</tr>
</tbody>
</table>
## Table 6-2: Electrical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulics</td>
<td>No main hydraulic oil pressure</td>
<td>Work mode not enabled, still in road mode</td>
<td>Enable work mode.</td>
</tr>
</tbody>
</table>
|                | Hose reel and functions not moving           | Hydraulic valve fouled with debris                                           | • 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                               | • 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     | • Verify that the proper mode is selected for the desired function.  
• Locate and repair or replace. |
| 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                     | • Make sure the PTO shaft is spinning.  
• Locate and repair or replace. |
<p>|                |                                              | PTO failure                                                                  | Locate and repair or replace.                                           |</p>
<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water pump</td>
<td>Will not run; no water pressure</td>
<td>Water pressure knob left turned up</td>
<td>Turn water pressure knob down to zero and then back up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hydraulic PTO not enabled</td>
<td>• Select WORK on the control panel MODE rocker switch.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• See “Power take-off (PTO)” function in this table.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hydraulic pressure to water pump not enabled by load sense valve</td>
<td>Perform a manual override and verify the water pump is stroking by watching the LVDT movement on the front control panel HMI screen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water pressure potentiometer failure</td>
<td>Repair or replace the water pressure potentiometer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Load sense valve failed</td>
<td>Repair or replace the load sense valve.</td>
</tr>
<tr>
<td>Water recirculation</td>
<td>Water pump will not run</td>
<td>Winter recirculation rocker switch off</td>
<td>Turn winter recirculation button on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PTO failure</td>
<td>See “Power take-off (PTO)” function in this table.</td>
</tr>
<tr>
<td>Lights</td>
<td>Lights will not work</td>
<td>Too much current load</td>
<td>Determine the cause of the overcurrent.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuse blown</td>
<td>Correct the reason for blown fuse, then replace blown fuse.</td>
</tr>
<tr>
<td>Wireless pendant</td>
<td>Wireless pendant not functioning</td>
<td>Truck not in work mode</td>
<td>Enable work mode.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pendant not enabled</td>
<td>Enable pendant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Batteries are dead</td>
<td>Recharge batteries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not in Work mode</td>
<td>Press Work mode on control panel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical malfunction (loss of communication)</td>
<td>Check transmitter/receiver communication link LED.</td>
</tr>
<tr>
<td>Wired pendant</td>
<td>Wired pendant not functioning</td>
<td>Pendant plug not fully engaged in receptacle</td>
<td>• Reseat pendant plug.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Plug into alternate receptacle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damaged pendant cable</td>
<td>Replace wired pendant cable.</td>
</tr>
<tr>
<td>Power distribution</td>
<td>Control system not powered up</td>
<td>Ignition signal not present</td>
<td>Fuse at chassis fuse panel.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Power not available to control system modules</td>
<td>Check for ignition signal at control panel main power relay.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Power for components of the control system not present</td>
<td>Component has blown the fuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Load on an output exceeds the output limit and has shut down</td>
<td>See module drawing for maximum current ratings. Determine and correct the cause of overcurrent.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other electrical problem</td>
<td>Inspect, and repair or replace faulty components.</td>
</tr>
</tbody>
</table>
## Table 6-2: Electrical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of power immediately</td>
<td>Loss of power after period of time</td>
<td>Fuse blown by a short circuit to ground</td>
<td>Determine the cause of the short circuit.</td>
</tr>
<tr>
<td></td>
<td>Loss of power after period of time</td>
<td>Device connected to output is exceeding the maximum current rating</td>
<td>Determine the cause of the overcurrent.</td>
</tr>
<tr>
<td>Control signal not present</td>
<td>Output on, but function not working</td>
<td>Device failure</td>
<td>Check for proper output and LED illumination.</td>
</tr>
<tr>
<td>Output module in overcurrent protection mode</td>
<td>Output module in overcurrent protection mode</td>
<td>Output module in overcurrent protection mode</td>
<td>Disconnect device.</td>
</tr>
</tbody>
</table>
### Table 6-2: Electrical Troubleshooting (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical troubleshooting basics (Continued)</td>
<td>Electrical connection failed</td>
<td>Loss of electrical connection</td>
<td>Power, signal, or ground return wire failure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cut, broken, or dislodged wire</td>
<td>Locate and repair or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Connector pin not fully seated inside connector</td>
<td>Reseat pin into connector.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wire pulled out of crimped pin</td>
<td>Locate and repair or replace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I/O module has failed to operate</td>
<td>Check module power or power input LEDs.</td>
</tr>
</tbody>
</table>
| | 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. |
Hydraulic Schematics
Troubleshooting

Control System Diagram
Control System Diagram
## Service and Spare Parts

### First Year Spare Parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic Case Drain Element</td>
<td>0031305</td>
</tr>
<tr>
<td>Hydraulic Return Filter Element</td>
<td>0031304</td>
</tr>
<tr>
<td>Y-Strainer Complete</td>
<td>0020239</td>
</tr>
<tr>
<td>Y-Strainer Lid Gasket</td>
<td>0025680</td>
</tr>
<tr>
<td>Y-Strainer Screen</td>
<td>0026277</td>
</tr>
<tr>
<td>Y-Strainer Screen Gasket</td>
<td>0026279</td>
</tr>
<tr>
<td>Y-Strainer Lid</td>
<td>0026280</td>
</tr>
<tr>
<td>Y-Strainer Cap Clamp</td>
<td>0026281</td>
</tr>
<tr>
<td>Chevron Rando HD Premium Oil</td>
<td>3060-00045</td>
</tr>
<tr>
<td>Purge/Prime Check Valve</td>
<td>0025820</td>
</tr>
</tbody>
</table>

### Super Accessories

**NOZZLES**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; Radial Cleaning Nozzle - 50GPM @ 3000PSI</td>
<td>6000-02072-5030</td>
</tr>
<tr>
<td>3/4&quot; Chisel Nozzle - 50GPM @ 3000PSI</td>
<td>6000-02011-5030</td>
</tr>
<tr>
<td>3/4&quot; Grenade Nozzle - 50GPM @ 3000PSI</td>
<td>6000-02065-5030</td>
</tr>
<tr>
<td>3/4&quot; Grand Slam Nozzle - 50GPM @ 3000PSI</td>
<td>6000-02017-5030</td>
</tr>
<tr>
<td>1&quot; Radial Cleaning Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02072-6520</td>
</tr>
<tr>
<td>1&quot; Chisel Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02011-6520</td>
</tr>
<tr>
<td>1&quot; Grenade Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02065-6520</td>
</tr>
<tr>
<td>1&quot; Grand Slam Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02017-6520</td>
</tr>
<tr>
<td>1&quot; Superior Penetrator Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02012-6520</td>
</tr>
<tr>
<td>1&quot; Small Flying Nozzle - 65GPM @ 2000PSI</td>
<td>6000-02076-6520</td>
</tr>
<tr>
<td>1&quot; Large Flying Nozzle 65GPM @2000 PSI</td>
<td>6000-02075-6520</td>
</tr>
<tr>
<td>1&quot; Radial Cleaning Nozzle - 80GPM @ 2000PS</td>
<td>6000-02072-8020</td>
</tr>
<tr>
<td>1&quot; Chisel Nozzle - 80GPM @ 2000PSI</td>
<td>6000-02011-8020</td>
</tr>
<tr>
<td>1&quot; Grenade Nozzle - 80GPM @ 2000PSI</td>
<td>6000-02065-8020</td>
</tr>
<tr>
<td>1&quot; Grand Slam Nozzle - 80GPM @ 2000PSI</td>
<td>6000-02017-8020</td>
</tr>
<tr>
<td>1&quot; Superior Penetrator Nozzle - 80GPM @ 2000PSI</td>
<td>6000-02012-8020</td>
</tr>
<tr>
<td>1&quot; Small Flying Nozzle - 80GPM @ 2000PSI</td>
<td>6000-02076-8020</td>
</tr>
<tr>
<td>1&quot; Large Flying Nozzle 80GPM @2000 PSI</td>
<td>6000-02075-8020</td>
</tr>
<tr>
<td>Description</td>
<td>Part Number</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>SEWER ACCESSORIES</strong></td>
<td></td>
</tr>
<tr>
<td>3/4” standard nozzle extension</td>
<td>9050-00038-0001</td>
</tr>
<tr>
<td>3/4” finned nozzle extension</td>
<td>9050-00039</td>
</tr>
<tr>
<td>1” standard nozzle extension</td>
<td>9050-00038-0002</td>
</tr>
<tr>
<td>1” finned nozzle extension</td>
<td>9050-00058</td>
</tr>
<tr>
<td>Hose, 25’, plastic - Single Jacket Filler Hose</td>
<td>0025085</td>
</tr>
<tr>
<td>Hose, 50’, plastic - Single Jacket Filler Hose</td>
<td>3500-00245</td>
</tr>
<tr>
<td>Hose, 25’, cotton - Single Jacket Filler Hose</td>
<td>0027059</td>
</tr>
<tr>
<td>Hose, 50’, cotton - Single Jacket Filler Hose</td>
<td>3500-00259</td>
</tr>
<tr>
<td>Leader Hose 3/4” x 10’</td>
<td>3736-12000-0012</td>
</tr>
<tr>
<td>Leader Hose 1” x 10’</td>
<td>3736-12000-0016</td>
</tr>
<tr>
<td>Grabber assembly (replaces 3000-01029)</td>
<td>9510-00016</td>
</tr>
<tr>
<td>1/2” dia x 35’ Whip Hose with quick disconnects</td>
<td>9410-02179</td>
</tr>
<tr>
<td>Handgun rated at 3000 PSI</td>
<td>9010-01146</td>
</tr>
<tr>
<td>Cleaning Lance (For Handgun) w/ Adjustable Nozzle</td>
<td>9010-01150</td>
</tr>
<tr>
<td>Tigertail Sewer Hose Guide</td>
<td>3000-02601</td>
</tr>
<tr>
<td>Upper manhole roller shoe assembly</td>
<td>9410-00001</td>
</tr>
<tr>
<td>Lower manhole roller guide with pipes</td>
<td>3000-02226</td>
</tr>
<tr>
<td>Hydrant wrench</td>
<td>3000-01242</td>
</tr>
<tr>
<td>Puller hook</td>
<td>3000-01244</td>
</tr>
<tr>
<td>Assy, Wash Down Handgun W/Lance, Adjustable</td>
<td>0023397</td>
</tr>
<tr>
<td>Description</td>
<td>Part Number</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>DOORS AND CANOPY</strong></td>
<td></td>
</tr>
<tr>
<td>Assy, Bottom Rail 60” x 60” Roll-up Door</td>
<td>0029460</td>
</tr>
<tr>
<td>Assy, Bottom Rail 84” x 74.25” Roll-up Door</td>
<td>0029814</td>
</tr>
<tr>
<td>Assy, Counter Balance, - 60” Roll-up Door</td>
<td>0029461</td>
</tr>
<tr>
<td>Assy, Counter Balance, - 84” Roll-up Door</td>
<td>0029815</td>
</tr>
<tr>
<td>Assy, Slat - 60” Roll-up Door</td>
<td>0031641</td>
</tr>
<tr>
<td>Assy, Slat - 84” Roll-up Door</td>
<td>0031679</td>
</tr>
<tr>
<td>Assy, Strap, Roller N35 Stnd Roll-up Door</td>
<td>0031637</td>
</tr>
<tr>
<td>Fabric Canopy</td>
<td>0030043</td>
</tr>
<tr>
<td>Plate, Sill - 60” Roll-up Door</td>
<td>0031642</td>
</tr>
<tr>
<td>Plate, Sill - 84” Roll-up Door</td>
<td>0031658</td>
</tr>
<tr>
<td>Rail, Door Side - 60” Roll-up Door</td>
<td>0031639</td>
</tr>
<tr>
<td>Rail, Door Side - 84” Roll-up Door</td>
<td>0031681</td>
</tr>
<tr>
<td>Roller, 2”, Canopy</td>
<td>0030153</td>
</tr>
<tr>
<td>Roller, 84” Roll-up Door</td>
<td>0031661</td>
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