SPARTAN ROLL-OFF MODEL TITAN OWNER'S MANUAL





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SPARTAN ROLL-OFF MODEL SRO 60T

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Introduction

Congratulations on your purchase of a Spartan roll-off! Spartan Truck Company has been a leader in the manufacturing of truck bodies since 1972. Spartan is known for its high quality components and extremely durable, low-maintenance systems.

These instructions will guide you through the safe operation and maintenance of your new roll-off truck.

Limited Warranty

SPARTAN TRUCK COMPANY, INC. (SPARTAN) warrants each new SPARTAN Roll-Off unit for one (1) year on parts and labor (2 years on cylinders) and according to the following terms:

This warranty coverage provides for original retail purchaser (Customer) only. The effective date is the original retail sale date. The Warranty will be honored only when warranty registration form or bill of sale from dealer has been received by SPARTAN.

All warranty work needs to be performed by an authorized SPARTAN service center. Approval in advance will be required before any warranty work can proceed. Coverage during the first year will include labor schedule, cost of parts replacement and freight charges for any part returns requested.

This Warranty does not cover service items subject to normal wear, such as - but not limited to - reeving or winch cable, brake linings or tires on lift axles, light bulbs, fuses etc. or after market components installed on products manufactured by SPARTAN.

This Warranty does not provide coverage for any unit that has been subject to misuse, neglect, negligence, accident or operated in a way contrary to the operating or maintenance instructions as specified in this manual.

This warranty does not apply to any unit that as been altered or modified so as to adversely affect the unit's operation, performance or durability, or that has been modified so as to change its intended use. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories not supplied by SPARTAN.

An authorized SPARTAN Service center must perform repairs or replacements qualifying under this warranty. SPARTAN responsibility with respect to claims is limited to making the required repairs or replacements. No claim of breach of warranty shall be cause for cancellation of the contract of sale of any unit. SPARTAN assumes no liability or responsibility for loss of use of the unit, loss of time, inconvenience, or other damage, consequential or otherwise, including but not limited to all costs for delivering the units to the Service center and all costs of returning the units to the owner, mechanic travel time, telephone or fax charges, trailering or towing charges, rental of like unit during the time warranty repairs are being performed, travel, lodging, loss or damage to personal property, or loss of revenue.

SPARTAN reserves the right to change or improve the design of any unit without assuming the obligation to modify units previously manufactured by SPARTAN.

All implied warranties are limited in duration to one (1) year for original unit standard parts and labor. Accordingly any such implied warranties - including merchantability, fitness for a particular purpose or otherwise - are disclaimed in their entirety after the expiration of the warranty period. SPARTAN obligation under this warranty is absolutely and exclusively limited to repair or replacement of defective parts and SPARTAN does not assume and does not authorize anyone to assume for them, any other obligation.

This warranty applies only to the original retail purchaser of the completed products shipped from a SPARTAN facility. Second owner or subsequently owned units are not covered under the warranty.

This warranty applies only to components, assemblies, and labor associated to the manufacturing of the SRO 60T roll-off unit. This warranty does not apply to labor provided by the distributor, installation process provided by the distributor, or any damage caused by incorrect installation by the distributor. Distributors should provide warranty for the installation process and any additional components or options added to the SRO 60T roll-off kit. In the event that the unit is installed at the SPARTAN facility then the above warranty will apply to installation.

Owners obligation and responsibility

Normal maintenance service and replacement of service items are the responsibility of the Customer and as such are not considered defects in material or workmanship with the terms of this warranty. Individual operating habits and usage may contribute extensively to the need for maintenance service.

DISCLAIMER OF WARRANTIES

THE LIMITED AND CONDITIONAL WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ANY AND ALL REPRESENTATIONS, SPECIFICATIONS, WARRANTIES AND REMEDIES, EITHER EXPRESS OR IMPLIED, HEREIN OR ELSEWHERE, OR WHICH MIGHT ARISE UNDER LAW OR EQUITY, OR PURSUANT TO ANY CUSTOM OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR ANY SPECIFIED OR INTENDED PURPOSE.

LIMITATION OF REMEDIES AND LIABILITY

PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST SPARTAN SHALL BE THE REMEDY OF DEFECTS IN PRODUCTS DELIVERED HEREUNDER AS PROVIDED BY, AND WITHIN THE TIME PERIOD SPECIFIED IN, SPARTAN'S LIMITED WARRANTY SET FORTH ABOVE. SPARTAN'S LIMITED WARRANTY CONSTITUTES THE SOLE REMEDY WITH RESPECT TO OR ARISING OUT OF THE EQUIPMENT, PRODUCTS OR SERVICES OF SPARTAN. NOTWITHSTANDING ANY OTHER PROVISIONS HEREOF, IN NO EVENT SHALL SPARTAN BE LIABLE IN CONTRACT, TORT OR EQUITY FOR ANY LOSS OF ANTICIPATED PROFITS, LOST SALES, INJURY TO PERSONS OR PROPERTY, LOSS BY REASON OF PLANT SHUTDOWN, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, SERVICE INTERRUPTIONS, CLAIMS OF CUSTOMERS, COST OF MONEY, LOSS OF USE OF CAPITAL OR REVENUE, OR FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES OF ANY KIND WHATSOEVER.

Operating Precautions

Spartan Truck Co. strives to optimize our designs to incorporate every possible safety feature into each roll-off unit. However, designs are not foolproof and still require responsible operators to follow protocol. Therefore, the following precautions should be considered regarding the risks from mechanical or hydraulic components:

- All malfunctions or indications of improper operation should be reported to the owner(s) to allow for immediate inspection and repair.
- No adjustments, modifications, alterations, or repairs should be made to the equipment by anyone other than qualified personnel.
- All individuals authorized to operate the equipment should be trained in the proper use of the controls. All potential danger points should be specifically pointed out to the operator(s). The owner(s) of the equipment should keep in mind that newly hired employees might acquire bad working habits or misinformation from older employees. All training activities should be delegated only to responsible individuals.

Note: It is suggested that a periodic review of safety measures be conducted for all operators, particularly where equipment is leased to and operated by customers unfamiliar with refuse equipment.

• No untrained personnel should be allowed to operate the equipment at any time. No one other than the authorized operator(s) should be allowed to have the keys to this equipment.

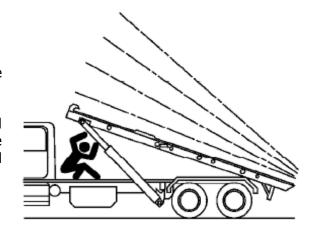
Note: The presence of hydraulic oil beneath the equipment may indicate a leak in need of repair.

All indications of a need for repair should be carefully monitored. These
indications include but are not limited to blown fuses, electrical equipment
sparking, electrical shocks from touching the equipment, bulging or deformed
structural members, cracked welds or steel members, excessive oil leaks, or
abnormal appearance or performance of the equipment.

Warning! To prevent possible injury or death, hoist must be in the full down position for over the road travel.

Warning! Owner(s) and operator(s) are responsible for safe operation of equipment.

Warning! Before working around a raised hoist, the hoist must be supported by the hoist safety prop. Failure to do so could result in serious injury or death.



Warning! Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids. If an accident occurs, see a doctor immediately, as gangrene may result.

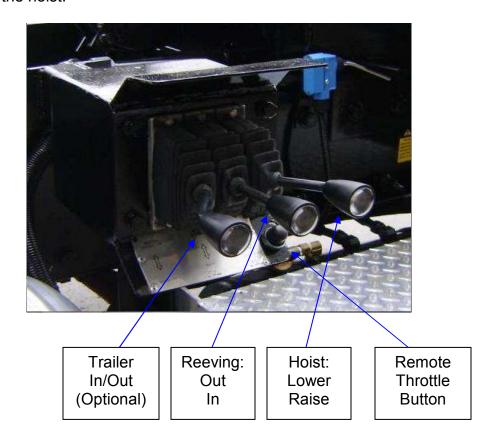
Warning! Spartan Truck Co. makes no warranties regarding the safety of the equipment unless these safety instructions are observed by the owner(s) and operator(s) at all times.



Hydraulic Valve Operation (Reeving and Hoist Controls)

To use the cable and hoist from inside the cab, first locate the controls on the top of the console tower near the driver's seat. Engage the PTO (push in the clutch before engaging the PTO if the transmission is <u>not</u> automatic) then raise or lower the hoist and let the cable in or out according to the labels adjacent to the control handles. The PTO indicator light should be lit when PTO is engaged. The hoist up warning light should be lit when the hoist is raised.

To use the cable and hoist from outside the cab, engage the PTO, then refer to diagram below. If your SRO 60T came equipped for a trailer or compactor, the additional section will be included on the left side of the reeving control handle. The handle on the right side controls the hoist.

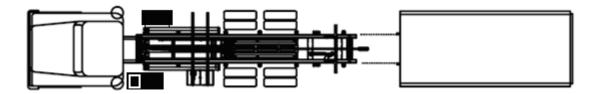


Recommended Loading Procedures

The following information is a guideline for operating a tail to ground roll-off-hoist. These instructions do not exhaust every possible situation that could occur when operating the equipment, but are intended to promote efficient and proper operation.

Before operating the equipment:

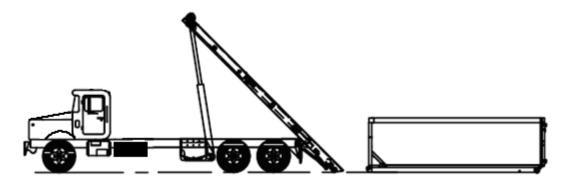
- Be sure the area is clear of people.
- Carefully inspect the area directly above the hoist for any overhead interference.
- Never operate equipment which is damaged and/or improperly maintained. NOTE: Even the smallest crack must be repaired.
- Always operate the equipment within its rated capacity.
- Study this entire manual and become properly trained with this equipment before attempting to operate this equipment.
- Respect yourself, others, and this equipment. Use safe working habits and common sense when operating this equipment.



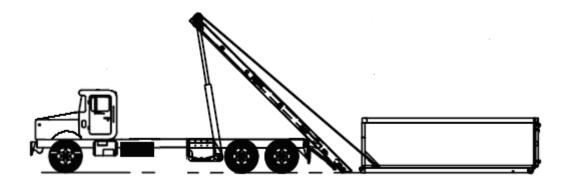
1) Align the hoist rails with the nose rollers on the container, back the truck as squarely as possible to the container. Allow approximately 3 to 4 feet between the container and the hoist.



2) Put the transmission in neutral and engage the P.T.O.

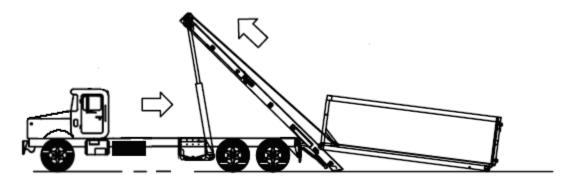


3) Raise the hoist until the tail touches the ground. (Note: Do not allow the tail to lift the truck up by raising the hoist after the tail is touching the ground.)

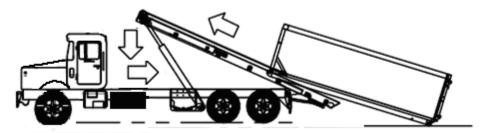


4) Set truck brakes. Extend reeving cable and connect to container hook.

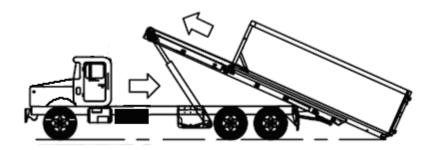
Warning! Be sure cable ring is securely attached and in good working condition.



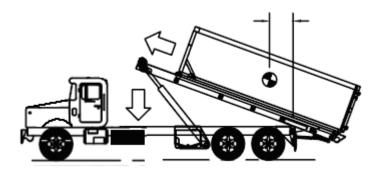
5) Release truck brakes. Pull container onto hoist, allowing truck to roll under container. **Warning!** Be absolutely sure container rails are properly lined up on hoist.



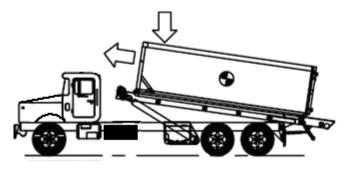
Note: Container nose roller ahead of rear hinge on hoist.



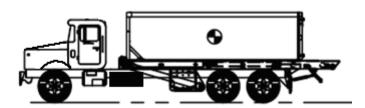
6) Continue pulling container onto hoist. After container front rollers are ahead of hoist rear hinge point, lower hoist enough to keep container rails and hoist rails in line and even with each other.



7) Note: Center of Gravity (C.G.) of container is past rear hinge point of hoist.



8) After C.G. of container is past rear hinge point of hoist, lower hoist completely. **Warning!** Do not attempt to lower hoist before C.G. of container is past rear hinge point of hoist. This can cause excessive stress and/or damage to equipment.



9) Pull container completely forward in to hoist front stops. In addition to the front stops, container and hoist should always have a rear container hold-down device. Disengage P.T.O. before driving away.

Maintenance Introduction

Trained, qualified and competent personnel should perform all operation, inspections, service and maintenance on this equipment.

Spartan Truck Co. strongly urges each owner/operator set up a preventive maintenance program that will provide adequate inspection, servicing and repair of roll-off unit and its components for the purpose of providing safe operation and to maximize the service life of this equipment.

Note: Suggested preventative maintenance inspections and time intervals may need to be adjusted due to factors such as: severe or heavy usage, muddy or dusty environment, special application, warranty and maintenance history issues.

Suggested Preventive Maintenance

Lubrication

Proper lubrication is essential to all types of bearings, gearing, and friction producing mechanical devices. Lack of adequate and proper lubrication will result in premature wear of components due to increased abrasion or excessive heat. Lubricate unit weekly.

Grease

All grease fittings should be properly greased after 50 hours of service or once a week.

Hydraulic System

Inspections should be performed daily for leaks, loose hydraulic lines and fittings, oil level and proper operation of hydraulic system.

Hydraulic Oil & Filter

Every three months: Inspect oil for proper color, odor and feel. Replace oil if milky or darkens in color, begins to have an odor, or lacks lubricity to the touch. **Metal particles in oil indicate serious damage – schedule to bring to service center immediately!** Every six months: Replace oil filter.

Every twelve months: Replace oil with AW ISO 68 hydraulic oil.

Suction Strainer

Inspect suction strainer when changing hydraulic oil.

Hvdraulic Cvlinders

Inspect cylinder rods, fittings and operation. Apply grease to the grease fittings on the hydraulic cylinder every week.

MECHANICAL

Structural & Weld Integrity

Check to insure proper and safe working condition of structural members. Make sure it is within normal wear guidelines. Inspect weld joints.

Front & Adjustable Stops

Check to insure proper and safe working condition of stops.

Nuts, Bolts, Shafts, Cotter Keys, Etc.

Check to insure proper and safe working condition. Make sure items are within normal wear and proper torque guidelines.

Rollers, Pulleys, Trolleys, Rear Hinge

Check to insure proper lubrication, adjustment and operating functions.

Container Hold Down Devices

Check to insure proper and safe working condition.

Hoist Cable

Cable should be inspected daily, along with a thorough inspection every 50 hours for breakage, unraveling or flat spots as well as cable ends and clamps. Cable should be replaced when you see 6 or more broken wires in 1 lay or every 6 months.

NOTE: Spartan recommends replacing cable clamps when replacing the cable.

ELECTRICAL SYSTEM

Reflectors/Lights

Daily inspection all lamps and reflectors. Make sure they are cleaned and in proper working order.

Electrical Wiring

Inspect all visible wiring to see that it is not frayed and is properly supported and protected and that all connections are tight.

Hoist Up & Back Up Alarms

Check to insure proper and safe operation.

Quick Reference Preventive Maintenance Interval Chart

These inspections are intended to verify that the hoist and its components are in the proper and safe operating condition and are within normal wear guidelines. If there are any items that do not pass your inspection, you must notify your supervisor and a lockout tag must be placed on the equipment if it is unsafe to operate.

QUICK REFERENCE PREVENTIVE MAINTENANCE INTERVAL CHART		
Daily Inspections	 ✓ Hydraulic components ✓ Hydraulic and air leaks ✓ Oil level ✓ Structural components and welds ✓ Front and adjustable stops ✓ Sheave blocks/reeving trolley ✓ Rear hinge ✓ Rollers ✓ Cable and cable ends ✓ Nuts, Bolts & Cotter pins ✓ LED lights ✓ Reflectors ✓ Electrical wiring ✓ Back up & hoist up warning systems ✓ Safety props 	
Weekly Inspections	 ✓ Grease all grease fittings every forty hours of operation. It may be necessary to grease more frequently during periods of heavy usage. ✓ Grease reeving trolley & tracks 	
Every Three Months	✓ Inspect the condition of hydraulic oil for proper color, odor and feel	
Every Six Months	✓ Replace hydraulic oil filter	
Every Twelve Months	 ✓ Replace hydraulic oil ✓ Replace suction strainer ✓ Inspect cable & replace if worn or damaged 	

Receipt of Owners Manual

I acknowledge that I have received a copy of "Spartan Roll-Off Model SRO 60T Owner's Manual" and will distribute it to the equipment operators and maintenance staff for the safe and proper use of the equipment.

Company name	Unit Serial Number
Signature	Date
Print Name	

Please fill out and fax back to (818) 897-4366 or scan and email to info@spartantruck.com