

1600 Series Roll Off Hoist Trailer Owner's Manual



General Information

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Introduction

This chapter will provide you with important general information regarding the safe operation of your unit and necessary warranty information.

This chapter is further broken down into the following sections:

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Important Notices

We have attempted to cover as much information as possible in this manual. However, this information does not cover all the unique variations that a 1600 Roll Off Hoist Trailer may present. Note that illustrations are typical but may not reflect all the variations of assembly. Also all data provided is based on information that was current at time of release. However, this information is **subject to change without notice**.

Safety Warnings

This section contains important safety warnings and cautions. Please read this section carefully to avoid serious injury or death. All safety precautions described in this section should be completely and thoroughly understood and used by all personnel using the equipment.

Warning: Carelessness in the operation of this equipment can result in serious injury or death. This equipment should only be operated by qualified personnel.

Cautions

To prevent possible injury or death:

- **Do Not** travel with the hoist in the raised position.
- **Do Not** go under a raised hoist unit without first propping the hoist unit to prevent accidental lowering.

Warning: Unload the unit before performing maintenance and service on it.

- **Do Not** leave the unit raised or partially raised while unattended or during performance of maintenance or service under unit. Unless you have propped the unit to prevent it from accidentally lowering.
- **Do Not** attempt to raise a loaded unit when vehicle is on unlevelled ground.
- **Do Not** stand or move through the area where the unit is operating.

Safety Operating Instructions

G&H Manufacturing designs and constructs its equipment with “state-of-the-art” precision incorporating every possible safety provision into the unit at the time of manufacture. However, no equipment can be designed for completely safe operation. Unless the equipment is installed and operated as intended by the Manufacturer and protected from tampering or misuse by unauthorized personnel.

Such persons, untrained operators and stray personnel, who may be tempted to play with the controls or equipment are considered unauthorized personnel. Therefore, it is very important that the owner(s) and/or operator(s) take the following precautions regarding 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.
- **No trash, oil, or other slippery materials** should be allowed to clutter the work area to prevent falls.

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, the hoist must be in the full down position for over the road travel.

Warning: The manufacturer is responsible for safety in design and construction, but the owner(s) and operator(s) are responsible for safe operation of the equipment.

Warning: G&H Manufacturing 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.

Manufacturer's Warranty

G&H Manufacturing, referred to herein as the Manufacturer, warrants each new product of its own manufacture to be free from defects in material and workmanship, under normal use and service, to the original purchaser only, for a period of twelve (12) months, subject to the conditions outlined below. Our obligation under this warranty is limited to repair or replacement with a genuine G&H part, any part of the product of our manufacture which **is returned to us within fifteen (15) days after discovery of the defect**, properly identified and transportation charges prepaid, and not more than twelve (12) months after purchase by the original purchaser, provided that, in our judgment, the part is defective.

The Manufacturer will furnish, without charge, **FOB** our plant a genuine G&H part. To replace any part of a product of its manufacture, which proves to be defective in normal use and service during this period.

The Manufacturer's warranty or obligation in connection with the sale of this equipment:

1. Shall be expressly limited to the repair or replacement of the defective parts, as stated above and covers only those labor charges specifically authorized by the Manufacturer. All other damages and claims, statutory or otherwise, being hereby expressly waived by the purchaser, this includes but is not limited to any towing cost and damage incurred from equipment down time.
2. Shall not apply to any failure or damage incurred through neglect, lack of maintenance, misuse, accident, improper installation, redesigning of assemblies, or through any other cause beyond the control of the Manufacturer.
3. Shall not apply to any major component such as cylinders, pumps, valves, etc., which have been disassembled in any way, or if any parts are left uncovered.
4. Shall not apply if the equipment has been operated beyond the factory recommended maximum capacity.
5. Does not cover products of other manufacturers beyond such warranty as is made by such manufacture.
6. Service parts sold by G&H Manufacturing (hoses, cables, filters, etc.) shall have a ninety (90) day warranty for replacement only, provided that factory inspection reveals a material or workmanship defect. Any labor required to replace or repair the part shall be the responsibility of the owner.
7. All perspective warranty parts must be returned to a location selected by G&H no more than fifteen (15) days after receiving the replacement part or the warranty can be voided.

No claim under this warranty shall be valid, unless such claim is submitted within twelve (12) months after date of sale or within fifteen (15) days after the discovery of the defect, which is the basis for such claim, whichever event shall occur first.

Equally important to you as any specific time warranty, is the fact that the Manufacturer's reputation for quality and dependability is tradition as old as the company itself. It has always been a basic company policy to insure complete customer satisfaction. This is your assurance that you can expect prompt and courteous service on your equipment from the entire factory organization.

There are no warranties, expressed or implied, which extend beyond the warranty set forth in this Owner's Manual, and any other warranties, expressed or implied, are hereby disclaimed by the Manufacturer.

Warranty Procedure

To best serve our customers needs the warranty department will use the following procedure to handle all warranty claims.

1. Customer notifies G&H home office at (800) 654-5291 of warranty need. The replacement parts will be shipped out that day (overnight shipping is available upon request and depending on parts availability).
2. Warranty report (found on page 1-8 of this manual or call (800) 654-5291 to have a copy faxed to you) must be filled out completely and mailed or faxed to the contact information below.

G&H Manufacturing
1015 Commercial Blvd. S.
Arlington TX. 76001
Fax: (817) 472-5548

3. Customer must issue a purchase order for the new part(s) and return the defective part(s) within two weeks of receiving the replacement part(s) or, the warranty request will be voided. To return a defective part(s), the customer needs to obtain a return number from the parts salesperson and send damaged or defective part(s) to the above address for G&H manufacturing.
4. G&H will return the part(s) to the original vendor for inspection or certification upon receipt of the damaged or defective part(s). If the warranty is valid G&H will issue credit to the customer for the warranty claim amount.

Warranty Report

Customer _____ Date _____

Address _____ Rep. _____

City _____ State _____ Zip _____ Phone _____

Product _____ Model _____ S/N _____

Date Shipped _____ Date Put Into Service _____

Original Sales Order No. _____ Original Work Order No. _____

Problem

Solution

Action Taken

Warranty Approved ____ Yes ____ No Repair Price \$ _____

Reported By _____

Approved By _____

Replacement Parts

If you need to order replacement parts for your GH 1600 Roll Off Trailer contact G&H manufacturing at the contact information below.

G&H Manufacturing

ATTN: Carol Carroll

1015 Commercial Blvd. S.

Arlington, TX 76001

Phone: (817) 467-9883

Fax: (817) 472-5548

ccarroll@ghmfg.com

Also, please have the following information handy when you write, call, or email to place your order:

- Your complete shipping address.
- Your required method of shipment (if you do not specify a method, the least costly method will be used).
- Your equipments model and serial number for which you are ordering the part.

Operating a 1600 Roll Off Hoist Trailer

Introduction

This chapter contains information, instructions, and diagrams that will help you operate your 1600 Roll Off Hoist Trailer. Please note that the first three sections must be read and fully understood before operating your 1600 Roll Off Hoist Trailer. If your 1600 Roll Off Hoist Trailer came equipped with a Stinger, instructions for this option can be found in the Options Appendix.

G&H Manufacturing has designed this chapter for use in the cab by the operator. We suggest that you make a copy of this chapter, put it in a plastic page protector, and place it in the cab of the truck for reference. You will need to thoroughly read and understand these instructions before operating your 1600 Roll Off Hoist Trailer.

Consider how airline pilots fly planes. No matter how often they have performed a task, they use a written procedure to increase safety. **You can never be too careful.**

This chapter is further broken down into the following sections:

Introduction	2-1
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Hooking and Unhooking the 1600 Roll Off Hoist Trailer.....	2-3
Operating the Control Valve	2-4
Operating a 1600 Roll Off Hoist Trailer	2-5

Lowering and Raising the Landing Gear

Use the landing gear crank on the front driver's side to raise or lower the landing gear. The crank on the landing gear is a two speed crank.

To Choose the Landing Gear Speed:

- Pull the crank out to operate faster (lighter loads).
- Push the crank in to operate slower (heavier loads).

To Raise and Lower the Landing Gear:

- Turn clockwise to raise the trailer and lower the landing gear.
- Turn counterclockwise to lower the trailer and raise the landing gear.

Hooking and Unhooking the 1600 Roll Off Hoist Trailer

Caution: Always test the lights and brakes before transporting the trailer.

To Hook the 1600 Roll Off Hoist Trailer To the Truck:

1. Crank the landing gear on the trailer to the appropriate height for the truck.
2. Back the truck in front of the trailer aligning the truck with the trailer.
3. Back the truck into the trailer triggering the automatic latch on the fifth wheel.
4. Pull the truck forward to make sure the automatic latch has locked.
5. Raise the landing gear completely.
6. Hook up the hydraulic lines.
7. Hook the red air supply line from the truck into the corresponding glad hand on the trailer.
8. Hook the blue control air line from the truck into the corresponding glad hand on the trailer.
9. Plug the electrical plug from the truck into the corresponding socket on the trailer.

To Unhook the 1600 Roll Off Hoist Trailer From the Truck:

1. Unhook the hydraulic lines.
2. Unhook both glad hands.
3. Unplug the electrical plug from the socket.
4. Lower the landing gear.
5. Pull the fifth wheel release.
6. Pull the truck away from the trailer.

Operating the Control Valve

The first two controls are used for operating the hoist and hoist cable. A third handle may be furnished for an optional stinger.

To Use the Cable and Hoist:

1. Locate the controls half way down on the driver's side of the trailer.
2. Use the left control to raise or lower the hoist.
 - Pull the handle to raise the hoist.
 - Push the handle to lower the hoist.
3. Use the right control to let the cable in or out.
 - Pull the handle to bring the cable in.
 - Push the handle to let the cable out.

To Use the Trailer Park Brake Release Button:

Note: To operate the trailer park brake release button, the truck must be in neutral with the P.T.O. engaged and the truck brakes not set.

Note: The trailer park brake release button is a dead man's switch and will only release the trailer's parking brake when pushed in and held.

The trailer park brake release button is located on the driver's side at the front of the trailer. To move the trailer and truck forward from outside the cab press and hold the trailer park brake release button. The trailer's parking brakes will release and the weight of the truck will pull the trailer forward. To stop moving the trailer and truck forward release the park brake release button.

Operating a 1600 Roll Off Hoist Trailer

- Warning: **The P.T.O. must be shifted out before driving the truck.** Your failure to shift out the P.T.O. before driving the truck can result in injury or death.
- Warning: Only pull or back the trailer or truck over level ground. Do not pull or back the trailer or truck over ground that has been unlevelled by dumping the truck or trailer.
- Warning: Clear all electrical power lines and overhead structures before raising or lowering a hoist.
- Warning: Never operate the hoist while anyone is around the work area.
- Warning: When lowering the hoist make sure the P.T.O. is in gear to prevent creating air in the system and overflowing the oil tank.
- Warning: Stop raising the hoist when the rear of the hoist touches the ground. Continuing to raise the hoist may cause the hoist to become unstable.
- Caution: Read and understand the instructions for shifting the P.T.O. for your brand of hoist and using the control valves for the 1600 Roll Off Hoist Trailer before operating the trailer.

To Load a Container:

1. Back the trailer up to the container.
2. Set the trailer park brake from inside the cab, leaving the truck in neutral.
3. Engage the P.T.O.
4. Let all the cable out.

Note: When the hoist begins to raise a switch will trigger automatically raising the bumper.

5. Raise the hoist until the rear roller is touching the ground.
6. Hook the rectangular end of the cable onto the container hook.
7. Pull the cable in while releasing the trailer park brakes, this will allow the trailer to be pulled under the container as the container slides up the hoist.
8. Set the trailer park brake when the container guides are past the hinge point on the hoist.
9. Continue to pull the cable in while lowering the hoist gradually until the hoist is level.
10. Pull the container to the front stops.
11. Attach ratchet tie downs at the rear of the hoist to the container guide.

12. Tighten the ratchet tie downs with the ratchet, located behind the driver's side fender, securely latching the container guide before transport.
13. Disengage the P.T.O.
14. Release the trailer park brake from inside the cab.

To Dump a Container:

1. Back the truck up to the dumpsite.
2. Set the trailer park brake from inside the cab, leaving the truck in neutral.
3. Engage the P.T.O.
4. Open the end gate of the container.
5. Raise the hoist.
6. Press the trailer park brake release button to move the truck and trailer forward and dump the contents of the container.
7. Lower the hoist.
8. Close the end gate on the container.
9. Release the trailer park brake from inside the cab.
10. Disengage the P.T.O.

To Unload a Container:

1. Back the truck up to the off load site.
2. Engage the P.T.O.
3. Remove the ratchet tie downs from the container.
4. Slowly raise the hoist while letting the cable out until the back of the container is touching the ground.
5. Let the rest of the cable out.
6. Pull the truck slowly forward, letting the rest of the container slide to the ground.
7. Unhook the rectangular cable end from the container hook.
8. Lower the hoist.
9. Hook the rectangular cable end onto the trailer's holding hook.
10. Pull the cable in.
11. Disengage the P.T.O.

Appendix: Maintenance



Introduction

For years of trouble-free service, it is important to properly maintain your equipment. Failure to do so could be costly and may void your Manufacturer's warranty. This appendix will help you to maintain your 1600 Roll Off Hoist Trailer by providing a regular maintenance checklist, troubleshooting guide, diagrams, and schematics for its maintenance.

The following regular maintenance checklist, troubleshooting guide, diagrams, and schematics are located within this appendix:

Introduction	A-1
Maintenance and Lubrication Checklist	A-2
Hydraulic Hose Assembly Maintenance	A-3
Hydraulic System Information	A-5
Troubleshooting.....	A-6

Maintenance and Lubrication Checklist

The following are the minimum maintenance recommendations:

Each Day

Inspect the cable for:

- Broken wires.
- Severe twists or kinks.
- Crushing of the ropes.

Inspect the sheave for:

- Excessive wear or damage.
- Wire rope to run straight off the sheaves.

Inspect the drum to make sure the cable is rolling on evenly with no crossing of the cable.

Inspect all hardware on the cable for excessive wear or damage.

Replace or repair any part that is in need of repair.

Each Week

Lubricate grease points.

- Rollers
- Sheaves
- Rear Hinge
- Lift Cylinders

For Stinger

Lubricate the two extra Rear Rollers on the stinger attachment..

Every Two (2) Months After

Inspect oil for any discoloration:

- Milky color indicates water or condensate.
- Darkened color indicates oxidation or dirt.

Listen carefully for any abnormal pump noise.

Hydraulic Hose Assembly Maintenance

Inspect the hydraulic hose assembly every 400-600 hours or every three months depending on the following factors:

- Critical Nature of Equipment
- Operating Temperatures
- Operating Pressures
- Environmental Factors
- Type of Usage (rugged, abusive, shock, vibration, operating time)
- Accessibility of Equipment

Pay closer attention to high heat source areas, tight abrasion areas, and routing. These areas may need their hoses to be replaced more often.

Caution: Before inspecting your hydraulic hose assembly be aware of the following safety precautions.

- **Pressure** - Hydraulic fluid under pressure is dangerous and can cause serious injury. Never touch a pressurized hydraulic hose assembly with any part of your body. Instead use a piece of cardboard to locate a pressurized leak. If by accident hydraulic fluid should puncture the skin seek immediate medical attention or risk losing the injured body part or death.
- **Temperature** - Hot fluid can cause severe burns.
- **Flammability** - When ignited some hydraulic fluids can explode and/or cause fires.
- **Mechanical** - Hydraulic fluid creates movement, which causes parts of your equipment to move or rotate at high speeds.
- **Electricity** - Electricity can create the spark that causes a fire, explosion, or electrocution. Shut it down.

To Inspect Hydraulic Hose Assemblies

1. Turn off equipment power. We suggest taking the key, placing it in a safe place, and disconnecting the battery.
2. Place equipment and components in a safe or neutral position. Make sure components are not in mid-stroke, mid-cycle, or holding a load.
3. Inspect hose and fittings for damage or leaks. Pay close attention to the following areas:

Hose Cover

Visually inspect the cover for signs of:

- Abrasion.
- Blisters.
- Nicks, cracks, or cuts.

Squeeze with your hands to test for hardness. Be careful, the hose could be hot.

Leakage

The signs of leakage are :

- Puddles of fluid in or around the equipment.
- Low fluid reservoir.
- Greasy/dirty hose.

Routing

Check to make sure the hoses are not:

- Rubbing against each other.
- Located next to a high heat source.
- Twisting or kinking.

4. Repair or replace as needed.
5. Inspect other hydraulic components. Take the time to inspect valves, pumps, cylinders, and other hydraulic components for leaks and damage.
6. Turn on the power.

If any step in this inspection indicates a problem or even a potential problem, have it checked out and repaired immediately. Also keep a detailed record of all inspection and service information. Use this record to identify problem areas and trends.

Be aware of your equipment. You know your equipment better than anyone else. If you feel something is not right, check it out to avoid the unwanted result of a hose assembly rupture.

Hydraulic System Information

Because the hydraulic oil is in constant contact with precision-machined surfaces, the oil should be kept as clean as possible to prevent unnecessary wear. Dirt particles in the hydraulic oil could cause pump failure. In such instances, the entire hydraulic system must be drained, flushed clean, the filter changed, and the entire system filled with new oil.

Maintain the hydraulic oil level by observing the sight gauge on the reservoir when all cylinders are in the retracted position. The hydraulic oil must be kept between the high and low mark on the sight gauge.

The recommended hydraulic oil for use in this system will meet the following specifications:

Note: All temperatures are in Fahrenheit.

Gravity	31	Pour Maximum Degrees Fahrenheit	
Flash Point Min	360°	Color Max	35
Viscosity	100° to 210°	SAE	2
Fire Min	415°	Carbon Residue – Max %	10
Viscosity 210°	48	Neutral #	0.05
V.I. Min	95	Sulfur	0.02

Note: Oil operating temperatures should not exceed 180° F.

Caution: Use only oil which contains anti-foam and anti-oxidizing additives. Do not use oils with low viscosity, naphtha base, aircraft hydraulic oil, or hydraulic brake fluid. Oil with a low pour-point must be used for low temperature operation.

Important Note

Hydraulic System Pressure.....1900 PSI at 1500 RPM

Operating this system in excess of the Manufacturer's recommendations will void warranty

Troubleshooting

Use the following table to help you diagnose and resolve problems with the operation of the unit.

Problem	Probable Cause and/or Solution
Unit operates with jerky motion.	<ul style="list-style-type: none"> • Be sure oil is at the proper level. • Check for possible leaks and repair if necessary. • After any work on the hydraulic system: <ol style="list-style-type: none"> 1) Fill tank with hydraulic oil. 2) Replace filter cartridge. 3) Operate cylinders to remove air from the system.
Oil is cold	<ul style="list-style-type: none"> • Use the following procedure to warm the oil: <ol style="list-style-type: none"> 1) Start the engine. 2) Engage the pump. 3) Operate the hoist control to bottom out the cylinder keeping the lever pushed for approximately five (5) minutes to warm up the oil. 4) If the problem reoccurs, check the type of oil being used. It is highly likely that the wrong type of oil is being used.
Air in the System (Oil is a milky color)	<ul style="list-style-type: none"> • Check for a leak in the suction line.
Unit does not lift loaded container	<ul style="list-style-type: none"> • Hydraulic pressure is set too low. Reset the pressure to 1900 PSI with engine at 1500 RPM. If pressure cannot reach 1900 PSI, check pump and replace if necessary. • Hydraulic cylinder may have an internal leak. Determine which cylinder is leaking and repack.
Control problems - hesitation noted	<ul style="list-style-type: none"> • Air is present in the system. Be sure oil is at the proper level. Look for any possible air leaks at hose clamps on the suction hose. • Determine oil type: use only anti-foam hydraulic oil.
Noisy Pump	<ul style="list-style-type: none"> • Movement is sluggish or absent.
Pump is noisy and faltering when lifting load	<ul style="list-style-type: none"> • Possible damage to pump: check and replace if necessary.
Vibrations, particularly at high speed	<ul style="list-style-type: none"> • Suction line is clogged.
Oil leaks noticed	<ul style="list-style-type: none"> • If oil is noticed: <ol style="list-style-type: none"> 1) Change the seal on the pump shaft. 2) Repack the cylinders. 3) Properly tighten fittings.

	4) Check hydraulic oil for foaming.
Reservoir is overflowing from top	<ul style="list-style-type: none">• Reservoir is too full.• Hoist is being lowered without engaging the pump.• Air is present in the system.

Appendix: Optional Features

B

Introduction

This appendix contains information on the 1600 Roll Off Hoist Trailer's optional features. The following options are covered:

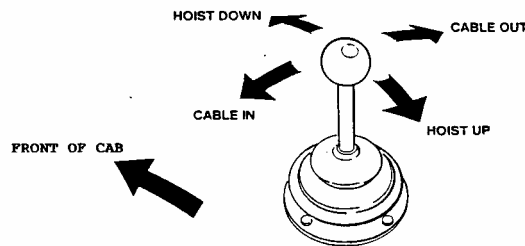
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Air Controls

Note: If an Auxiliary Air Control is furnished, it is located next to the joystick.

To Use the Cable and Hoist from Inside the Cab:

1. Locate the joystick between the seats to the right of the driver.



2. Moving the joystick forward and backward will control the hoist.
 - Pull the joystick back to raise the hoist.
 - Push the joystick forward to lower the hoist.
3. Moving the joystick right and left will control the cable.
 - Move the joystick to the right to let the cable out.
 - Move the joystick to the left to pull the cable in.

Dead Lift

- Warning: Never operate the Hoist while anyone is around the work area.
- Warning: Clear all electric power lines and overhead structures before raising the hoist.
- Warning: Only pull or back the trailer or truck over level ground. Do not pull or back the trailer or truck over ground that has been unlevelled by dumping the truck or trailer.
- Warning: Stop raising the hoist when the rear of the hoist touches the ground. Continuing to raise the hoist may cause the hoist to become unstable.
- Caution: Read and understand the instructions for shifting the P.T.O. for your brand of hoist and using the control valves for the 1600 Roll Off Hoist Trailer before operating the trailer.
- Note: Follow the instructions for a regular 1600 Roll Off Hoist Trailer to dump the 1600 Roll Off Hoist Trailer with a stinger.

To Load a Container Onto the Dead Lift:

1. Back the trailer up to the container lining up the rails with the guides on the container.
2. Engage the P.T.O.
3. Let the cable out. (Instructions on pg. 2-5)
4. Hook the cable end onto the container by sliding the post into the hole and flipping the latch down over the hook.
5. Raise the hoist.
6. Pull the cable in until the container guides are past the hinge point on the hoist.
7. Lower the hoist to the angle of the container.
8. Continue to pull the cable in while lowering the hoist gradually until the hoist is almost level (raised approximately 3 in. from the trailer bed.).
9. Pull the container to the front stops.
10. Lower the hoist completely to engage the front container lock.
11. Attach ratchet tie downs at the rear to the container guides.
12. Tighten the tie downs with the ratchet, located at the back of the driver's side fender, securely latching the container to the hoist before transport.
13. Disengage the P.T.O.

To Unload a Container From the Dead Lift:

1. Back the trailer up to the off load site.
2. Engage the P.T.O. (Instructions on pg. 2-2)
3. Remove ratchet tie downs from the container.
4. Raise the hoist. (Instructions on pg. 2-5)
5. Let the cable out until the end of the container touches the ground.
6. Let out all of the cable.
7. Pull the truck forward slowly letting the rest of the box slide to the ground.
8. Unhook the cable end from the container by releasing the latch from the hook and pulling the post from the hole.
9. Lower the hoist.
10. Hook the cable end onto the holding hook.
11. Pull the cable in.
12. Disengage the P.T.O.

Stinger

- Warning: Never operate the Hoist while anyone is around the work area.
- Warning: Clear all electric power lines and overhead structures before raising the hoist.
- Warning: Only pull or back the trailer or truck over level ground. Do not pull or back the trailer or truck over ground that has been unlevelled by dumping the truck or trailer.
- Warning: Stop raising the hoist when the rear of the hoist touches the ground. Continuing to raise the hoist may cause the hoist to become unstable.
- Caution: Read and understand the instructions for shifting the P.T.O. for your brand of hoist and using the control valves for the 1600 Roll Off Hoist Trailer before operating the trailer.
- Note: Follow the instructions for a regular 1600 Roll Off Hoist Trailer to dump the 1600 Roll Off Hoist Trailer with a stinger.

The stinger can be used to access containers in shallow areas such as parking garages. To operate the stinger:

- Push the handle to extend the stinger.
- Pull the handle to retract the stinger.

To Load a Container With a Stinger:

1. Back the truck up to the container.
2. Set the trailer park brake from inside the truck cab, leaving the truck in neutral.
3. Engage the P.T.O.
4. Extend the Stinger.
5. Raise the trailer hoist until the rear roller is touching the ground.
6. Let the cable out.
7. Hook the rectangular cable end onto the container hook.
8. Pull the cable in while releasing the trailer park brakes. This will allow the trailer to be pulled under the container as the container slides up the hoist.
9. Set the trailer park brake when the container guides are past the hinge point on the hoist.
10. Continue to pull the cable in while lowering the trailer hoist gradually until the hoist is level.
11. Pull the container to the front stops.
12. Attach ratchet tie downs to the container guide.

13. Tighten the ratchet tie downs with the ratchet, located behind the driver's side fender, securely latching the container guide before transport.
14. Retract the stinger.
15. Release the trailer park brake from inside the cab.
16. Disengage the P.T.O.

To Unload a Container With a Stinger:

1. Back the truck up to the off load site.
2. Engage the P.T.O.
3. Set the trailer park brake from inside the cab leaving the truck in neutral.
4. Remove the ratchet tie downs from the container.
5. Extend the stinger.
6. Slowly raise the trailer hoist while letting the cable out until the back of the container is touching the ground.
7. Let the rest of the cable out.
8. Pull the truck slowly forward allowing the rest of the box to slide to the ground.
9. Unhook the rectangular cable end from the container.
10. Lower the trailer hoist.
11. Retract the stinger.
12. Hook the cable end onto the holding hook.
13. Pull the cable in.
14. Disengage the P.T.O.

Fold-Up Stops

Caution: While raising the fold-up stops make sure no one is near the cable controls.

The two fold-up stops are used to load smaller containers onto the 1600 Roll Off Hoist Trailer. The two fold-up stops are on the inside of the hoist rails by the cylinders. To use the fold-up stops simply reach in between the hoist rail and cylinder and swing the fold-up stop into an upright position locking it in place.