

Hoist Operation and Maintenance

U5-OR-174



Serial #

Date

Galbreath®

Galbreath is a Wastequip® brand.

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This manual contains composite drawings, instructions, and charts for the Galbreath U5 Hoist.

All owners, operators and other involved personnel must read this manual and become thoroughly familiar with its contents, especially the sections that describe the operating procedures for this machine.



SAFETY ALERTS

This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

SAFETY SIGNAL WORDS

The following table explains the meaning of signal words used in safety alerts.



DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury, including practices that may result in damage to equipment.

**SAFETY
INSTRUCTIONS**

SAFETY INSTRUCTIONS (or equivalent) signs indicate specific safety-related instructions or procedures.

Warranty

Galbreath provides comprehensive warranty protection for our equipment, which is fully described on page 23 of this manual and can be found at <http://www.wastequip.com/terms-conditions.cfm>.

Disclaimer

Although this manual is intended to be instructional, it is not exhaustive and provides guidelines only. The operator/owner must be alert to all possible hazards and use safe work habits, common sense and industry knowledge and experience when servicing and operating the equipment.



CUSTOMER SERVICE

We believe the Galbreath support staff to be the most efficient in the industry. We provide prompt processing of requests for service, repair, and warranty assistance.

Should you have any questions or concerns with your Galbreath hoist, you can contact your local dealer or Galbreath Customer Service Representative.

If you contact us regarding a concern with your Galbreath hoist, the Galbreath Customer Service Department in Winamac, Indiana will request the following information:

- Your Company Name
- Address
- City, State, ZIP code
- Phone Number and Fax number (with area code)
- Contact Name for Service Representative to call
- Equipment Model
- Equipment Serial Number
- Brief description of the problem

The hoist serial number can be found on the Galbreath nameplate next to the main control valve or on the driver's side front of the tipping frame. The serial number is also welded on the inside passenger side front of the tipping frame.

If service is required within the warranty period, you must obtain authorization from the Galbreath Customer Service Department before ANY warranty repairs can be performed; unauthorized repair may void your warranty.

After gathering the required information, call 1-800-285-0666 and follow the phone directions to contact the customer service/warranty department. A customer service representative will advise you as to how your situation will be handled.

For sales and application issues, please call your local dealer or your closest Galbreath facility.

Galbreath Customer Service

Phone: 1-800-285-0666
Fax: 1-574-946-4579
E-Mail: Galbreathservice@wastequip.com
Web Site: www.galbreathproducts.com

Parts Place

Phone: 1-800-946-9476
Fax: 1-574-946-4269
E-Mail: parts@wastequip.com
Web Site: www.partsplace-inc.com

OWNER CARE

The owner should properly maintain mobile equipment to meet all applicable regulatory safety standards and shall be responsible for the following operational requirements:

1. Providing instruction and training in safe methods of work to operators before assigning them to operate, clean, service, maintain or repair the equipment. The owner shall maintain records of the names of operators trained and the dates of training.
2. Monitoring operator equipment operation and ensuring proper use of the equipment, including adherence to safe practices.
3. Establishing and following a program of periodic and regular inspections of all equipment to ensure that all parts, component equipment, and safeguards are in safe operating condition and adjusted in accordance with the manufacturer's recommendations. This shall include keeping all malfunction reports and records of inspections and maintenance work performed.
4. Repairing any mechanical malfunction, breakdown, or normal wear and tear, that affects the safe operation of the equipment before allowing the equipment to be placed into service. Examples: cracks, lights, hoses, latches, hitches, hold-downs, missing labels, etc.
5. Meeting the appropriate lighting requirements before attempting to operate the equipment during hours of darkness. **NOTE: The manufacturer is not required to install extra lighting on the equipment.**
6. Ensuring this equipment will not be used to lift, haul or move weight that is believed to exceed the load rating capacity for the entire piece of equipment or any of its individual components. Examples: hoist, tires, truck chassis, suspension, etc.
7. Ensuring the hoist is adequately supported when it is raised for service or maintenance.
8. Utilizing a lockout procedure when cleaning, servicing, maintaining, or repairing this equipment (see "Lockout Guideline" on page 7).
9. On equipment that carries detachable containers, affixing a sign or mark on the container near the cab on the driver's side stating the minimum overhead clearance required for the vehicle and container when positioned for normal over-the-road travel.
10. Inspecting safety equipment and protective devices to ensure they are not disabled or bypassed.



WARNING

Do not permit operation of equipment with devices that are not fully functional. Failure to comply could result in severe injury or death to operator and surrounding persons and/or damage to the truck, hoist, or other equipment.



OPERATOR CARE

Operators who work on or operate mobile equipment shall be responsible for:

1. Using all applicable safety features provided on the equipment.
2. Using the equipment only after being properly instructed and trained by the owner.
3. Reporting any damage to or malfunction of the equipment by submitting a report to the owner or responsible authority, either when the damage occurs or as soon thereafter as is practical. The operator should also document such reports.
4. Ensuring the work area is clear of all persons during all phases of the operation prior to operating the equipment.
5. Ensuring the work area has sufficient clearance on sides and overhead. Examples include: roof or ceiling, side walls, power lines, etc. for the hoist, truck, and container throughout all phases of operation.
6. Ensuring that all persons are clear of the tailgate and any container contents that may fall out before the tailgate is opened. The operator shall warn all persons not to cross under a raised container or an open tailgate.
7. Operating all equipment in accordance with the manufacturer's instructions.
8. Riding only in the cab and not on any other part of the mobile equipment. The only allowable place to ride on the equipment when it is in motion is in the cab of the truck.
9. Operating the equipment with all safety devices functional. Never bypass or remove safety devices which have been installed on the equipment. Never operate the equipment unless these devices are fully functional.
10. Avoid distractions such as texting, and phone calls while operating equipment.
11. Using container securement devices.
12. Operating the equipment only when physically and mentally fit to do so. Do not operate the equipment if work ability is impaired by fatigue, illness, or other causes.
13. Operating the equipment only when it is in proper working condition. Never operate equipment that is in need of repair, regardless of how slight the repair appears to be.
14. Following the specifications of the compactor manufacturer when coupling a container back to a compactor.

The operator must be alert to all possible hazardous situations and conditions. This list is not exhaustive and provides guidelines only. Each installation has unique care requirements. Use common sense. For example, if fluids are leaking, do not operate the equipment.



WARNING

Use this hoist only with a container that has specifications that match the hoist specifications (i.e., proper style hookup, spacing between long sills, etc.). Operation in a manner other than specified and/or with equipment that is not compatible with the hoist could result in severe injury or death to the operator and surrounding persons and/or damage to the truck, hoist, or other equipment.



LOCKOUT GUIDELINE

(Required By Safety Standards)

The purpose of a Lockout Procedure is to recognize, isolate, and render safe all types of energy sources. The Lockout Procedure should establish performance habits which protect all personnel from injury while they are in, on, or around the equipment during repair, maintenance, and other associated activities.

Compliance and enforcement of a Lockout Procedure is the responsibility of the owner and operator. The following information provides a guideline for creating a Lockout Procedure. A detailed documented program must be established to fit each situation and condition.

1. Observe and review all conditions of the equipment. All sources of stored energy must be recognized, managed, and cautiously released by qualified personnel. Examples:
 - Shut down truck engines and any auxiliary engines.
 - Disengage power take-off systems.
 - Relieve stored hydraulic or pneumatic pressure after installing any blocking devices.
 - Relieve all entrapped hydraulic pressure.
2. Remove the key from the vehicle ignition.
3. Notify all affected individuals that they must comply with the Lockout Procedure.
4. Tag all controls to inform personnel that the equipment is "under repair," "do not operate," or whatever the situation dictates. All affected personnel must be informed of the meaning and appearance of the Lockout Tag.

MINIMUM REQUIREMENTS FOR LOCKOUT TAG:

- Tags must be made of a material capable of withstanding the environment to which they are exposed. Examples: oil, grease, fuel, etc.
- Tags must be easily recognizable and clearly visible at the location of the operating controls.

- Tags must be standardized using one or more of the following criteria: color, shape, size, and/or format.
5. Only authorized individuals should release the equipment for use after repairs have been made.
 6. Periodic inspections should be done by the owner to verify the correct use and compliance with the Lockout Procedure.



WARNING

Failure to comply with the lockout procedure may result in severe injury or death and/or damage to equipment.

NOTE: Other procedures and responsibilities may be associated with the Lockout Procedure as dictated by the uniqueness of each situation and any applicable standards and/or codes.

Please note that the guidelines listed above are intended to create an awareness of the necessity for a "Lockout/Tagout Procedure." The owner should obtain a current copy of the following references:

- ANSI Z244.1
- Federal Code Of Regulations Title 29 Part 1910 Section 1910.147

The Federal Code Of Regulations may be accessed via the Internet at the National Archives and Records Administration website at:

<http://www.access.gpo.gov/nara/cfr/>

It is ultimately the owner's responsibility to establish, train for, and oversee the implementation of all lockout/tagout procedures.



OPERATING PRECAUTIONS

Always observe the following precautions:

- Do not use chains to hook onto any container, as the hoist has the power to break most chains.
- Never adjust the hydraulic pressure setting without using an accurate working pressure gauge placed in the system on the pressure side of the main hydraulic control valve. **NOTE: Do not set the pressure to exceed pressures shown on the hydraulic schematic.**
- Operate one control at a time. The control valve is not designed to operate two or more functions simultaneously.
- Do not alter the hydraulic valves or the hydraulic system in any way without prior approval in writing from the manufacturer.
- Never use a locking device to hold a control handle or a valve open, as the valves are designed to return to the center when released, allowing a complete stop of movement.
- Check the cable for excessive wear and replace as needed. Cable manufacturer recommends changing cable once a year or sooner depending on working conditions or environmental factors.

NOTE: Change all cable clamps when replacing the cable.

- Observe and obey all caution and warning decals on both hoist and containers.
- Always power the hoist down. Do not let the hoist drift down with the Power Take Off (PTO) disengaged. This may cause air infiltration into the hydraulic system. Damage to the pump may occur.
- Never drive the truck with the PTO engaged.
- Never drive the truck with the hoist in any position other than fully down.

- Hydraulic oil warm up is required in very cold weather. Engage PTO and let the truck idle for several minutes.
- Never allow anyone to work on the hoist in the raised position without the safety props in place to prevent it from lowering. The safety props are designed and constructed to be used in conjunction with other safety mechanisms on the truck, in particular the hydraulic cylinders. Do not use the safety props on their own at any time – especially while personnel are working under or around the hoist.
- Never move the truck unless the container and hoist hold-downs are engaged.
- Never move a truck with the container loaded unless the hoist is down in the over-the-road travel position. If the unit is equipped with a rear stabilizer, it must be raised off the ground before moving the truck.
- Always drive slowly over rough and bumpy roads to prevent excessive stress on the equipment. Operate the equipment smoothly and slowly.
- Always operate the roll-off within its rated capacity and follow the suggested maintenance and lubrication program.

Maximum Container Weight

U5-OR-174	60,000 LBS	27,216 KG
U5-OR-194	60,000 LBS	27,216 KG



LOADING PROCEDURE

These instructions are intended to promote efficient and proper operation. They do not cover every possible situation that can occur when operating the equipment.

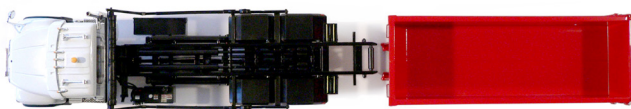
WARNING

Before operating the equipment:

1. Be sure the area is clear.
2. Check the area for low power lines or any other obstacle which may interfere with hoist operation.
3. Never operate equipment which is damaged and/or improperly maintained.
4. Always operate the equipment within its rated capacity.
5. Study this entire manual and become properly trained with this equipment before attempting to operate it.

Failure to follow the procedures listed above may result in severe injury or death and/or damage to equipment.

1. Align the hoist rails with the long sills on the container and back the truck as squarely as possible to the container. Allow 3 - 4 feet between the container and hoist (allow 8 - 9 feet for extendable tail models). Put the transmission in neutral and engage the PTO. Fully extend the tail on extendable tail models.



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



3. Set truck brakes. Retract the winch cylinder and connect the cable to the container hook.

WARNING

Check to be sure the cable connection is securely attached and in good condition.

A cable breaking or releasing under tension could result in severe injury or death to the operator and/or bystanders.



4. Release truck brakes. Pull the container onto the hoist allowing the truck to roll under the container.

NOTICE

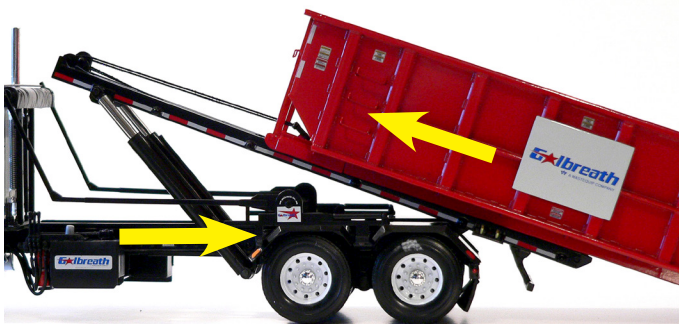
Be sure the container long sills are lined up on the hoist properly.



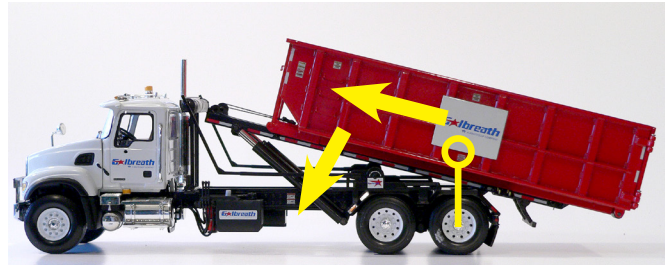
5. Continue pulling the container onto the hoist. After the container front rollers are ahead of the hoist rear hinge point, lower the hoist enough to keep the container long sills and hoist rails in line and even with one another.



NOTE: Container front roller ahead of hoist rear hinge point.



Lower the hoist when the center of gravity of the container is forward of the rear hinge and continue pulling the container forward until it is securely locked into the front stops.



NOTE: Center of gravity of container is past the rear hinge point of the hoist.



NOTICE

Do not attempt to power the hoist down before the center of gravity of the container is past the rear hinge point of the hoist. This can cause excessive stress, loss of control and/or damage to equipment.

6. In addition to the front stops, container and hoist should always have a rear container hold-down device. Disengage PTO and relieve all pressure in the system before driving away. Fully retract the tail before departing for all extended tail models.



WARNING

The container and hoist must be equipped with the proper front stops and rear hold-downs. The container specifications must match the hoist specifications. (Example: roller size and location, proper style hook up, spacing between long sills, etc.). The container and hoist must be in good working order. Failure to comply with these requirements could result in serious injury to persons and/or damage to equipment, and is the operator/owner's responsibility.



DUMPING PROCEDURE



WARNING

Before raising the hoist, check both sides and rear of the hoist for personnel. Do not raise the hoist if anyone is close enough to be hit should the hoist tip over. Also, check for any personnel that may be heading into the area during the dumping operation. Failure to follow these procedures may result in severe injury or death.

Review the following guidelines to perform the dumping operation. These items do not cover every possible situation which may occur, but are intended to promote proper operation when combined with safe work habits and common sense.

1. Examine the dump site. The area should be level, solid, and clear of obstacles. Check for overhead clearances such as power lines.
2. With hoist and container in the down position, open the tailgate and secure the door in the open position using the chain provided on the container door. Engage PTO and raise hoist until load slides out.

NOTICE

In the event that all of the load is not discharged or it becomes necessary to move the unit forward, lower the hoist and container to the full down or travel position prior to any forward movement of the truck. Always keep the tires properly and evenly inflated.



UNLOADING PROCEDURE

1. Set truck brakes.
2. Raise the hoist high enough to allow the container to move rearward.
3. Lower the container.
4. Release the truck brakes. Continue lowering the container allowing the truck to roll out from under the container.

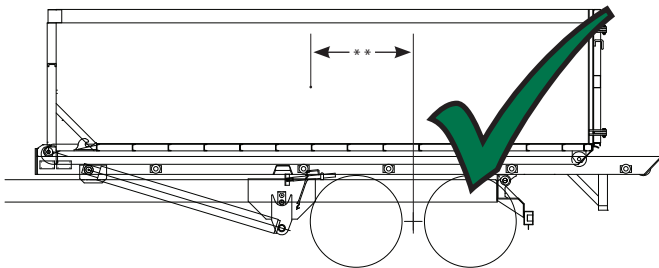
NOTICE

If the container being unloaded is heavy, feather the control valve to slow the downward movement of the container. Do not allow the front of the container to hit the ground abruptly. Failure to do so can result in damage to the container and/or hoist.

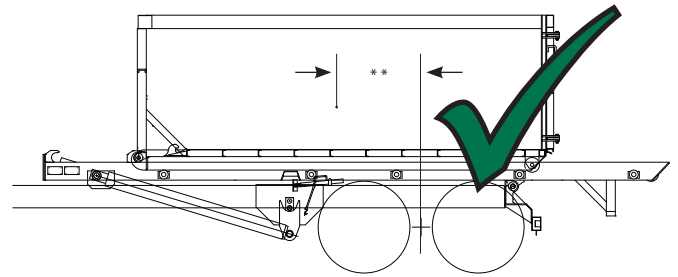
CONTAINER POSITIONING

CORRECT CONTAINER POSITIONING

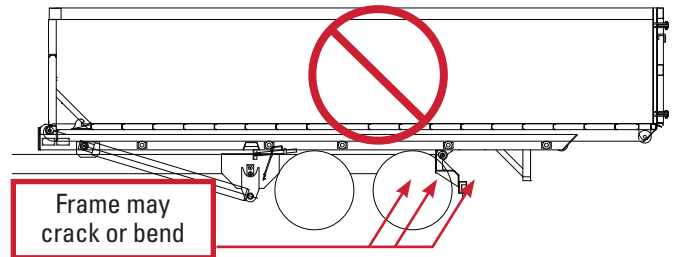
** Center of Gravity is approximately 10-12% of wheel base in front of center point of the tandem.



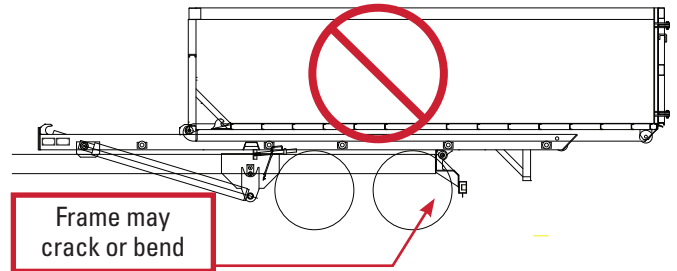
NOTE: Scale equipment to determine proper weight distribution.



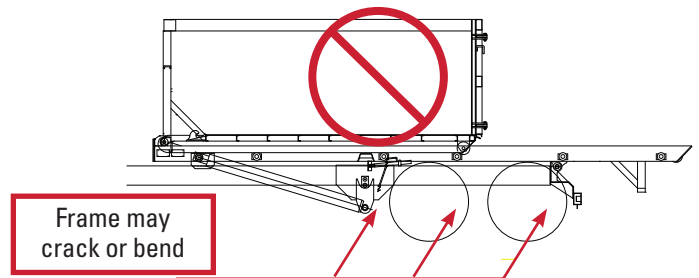
INCORRECT CONTAINER POSITIONING



1. This Container is too long for hoist.



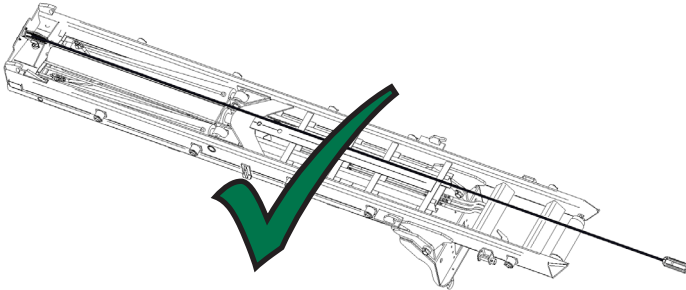
2. This Container is too far back.



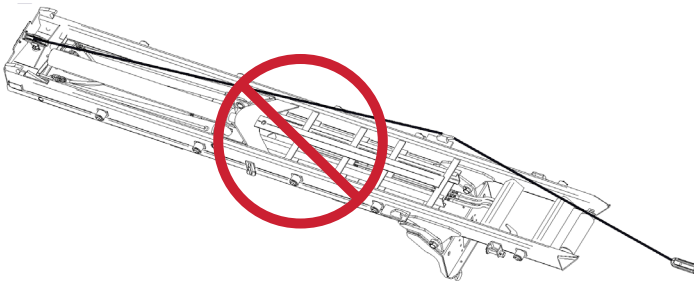
3. This Container is too far forward.

CABLE POSITION

When operating your hoist, make sure the cable runs straight down the center of the hoist.

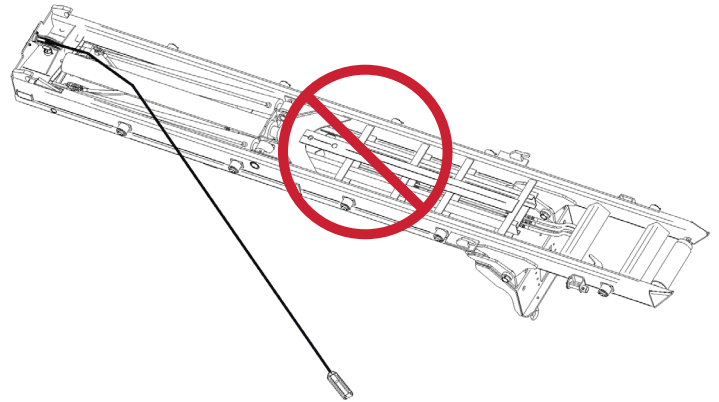


Be careful not to have the cable looped on the outboard side of the rear hold-down as illustrated.



CAUTION

Always pull cable up center of hoist. Never allow the cable to be pulled over the side of hoist when winching on, as this can cause the cable to destroy itself or damage the front sheave. Injury to the operator and/or bystanders could result if the cable breaks and snaps back around to the truck cab area.



PINTLE HOOK APPLICATIONS

- Before operating the equipment, inspect for worn, damaged, or missing parts. Inspect the entire pintle hook and the area where it is mounted to the truck for cracks, bends, or any damage. Repair and/or replace the equipment before using.
- The towing vehicle on which the pintle hook is mounted must be of a sufficient rated capacity for the trailer and in proper working condition.
- The truck air system must be equipped with an air dryer to prevent dirt and moisture from getting into the air valves.
- The trailer must have retaining cables or chains hooked to an attachment capable of holding the trailer should a detachment occur.
- Never jack-knife the trailer for any reason when dumping, loading, unloading or backing. Always keep the trailer and truck in a straight line. Jack-knifing the trailer can cause damage to the pintle hook and/or trailer tongue.
- Before moving any trailer, make all necessary connections, including the service and emergency air lines and electrical hookup.

CAUTION

The air pressure must be allowed to build up in the trailer's air reservoir tank(s) before you move the equipment. When the air pressure has built up, check the trailer brakes to ensure proper working condition. If trailer brakes are not in proper working condition, an accident can occur, causing injury to the operator and/or other drivers.

- Always drive the equipment slowly over rough and bumpy roads. Always operate the equipment smoothly and carefully.

NOTICE

The bouncing of the truck suspension is carried backwards to the pintle hook. The pintle hook then becomes a moving force with the impact of a large hammer upward and downward on the trailer tongue eye causing abuse to equipment. Always drive at reduced speeds over rough terrain to minimize this destructive action.

- Never exceed the capacity of the pintle hook and/or any equipment being used.

WARNING

Applying the brakes severely increases the weight transferred to the trailer tongue on trailers without front axles. Therefore, products that can shift, such as sludge, water, etc., must never be transported by this type of trailer. Failure to comply can result in injury.

- Be particularly careful not to damage the pintle hook when coupling and uncoupling the trailer.



INTRODUCTION TO MAINTENANCE

Maintenance begins with the purchase and use of the correct hoist properly designed for the application. Trained, qualified, and competent personnel should perform all operation, inspections, service, and maintenance.

Galbreath strongly urges each owner/operator to set up a "Preventive Maintenance Program" that will provide timely inspection, servicing, and repair of their hoist and its components. The purpose of this program is to provide safe operation and maximize the service life of the equipment.

NOTE: The suggested preventative maintenance inspection and time intervals may need to be adjusted due to factors such as: severe or heavy usage, muddy or dusty environments, special applications, and warranty and maintenance history issues.

QUICK REFERENCE

These inspections are intended to verify that the hoist and its components are in the proper safe operating condition and are within normal wear guidelines. If there are any items that do not pass your inspection, notify the responsible party. A lockout tag must then be placed on the equipment as outlined in the "Lockout Procedure Guideline" section of this manual.

Daily Inspections:

- Back-up and hoist-up warning systems
- Cable and cable ends
- Electrical wiring
- Front and rear stops
- Hydraulic and air leaks
- Hydraulic components
- Lamps
- Nuts and bolts
- Oil level
- Pivot points

- Rear hinge
- Reflectors
- Rollers
- Shafts and cotter keys
- Sheave blocks
- Structural components and welds
- Warning label legibility

Weekly Inspections:

Grease all grease fittings. Refer to Lube Chart on page 18 for grease fitting locations.

Every Three Months:

Inspect the condition of hydraulic oil for proper color, odor, and feel.

Every Six Months:

- Replace hydraulic oil filter
- Replace air breather

Every Twelve Months:

- Replace hydraulic oil
- Replace air and hydraulic oil filters
- Clean suction strainer

NOTE: Refer to the "Preventive Maintenance" section below for additional detailed information



PREVENTIVE MAINTENANCE – GENERAL

Lubrication	Proper lubrication is essential for all types of bearings, gearing, and friction-producing mechanical devices. Lack of adequate and proper lubrication results in premature wear and failure of components due to increased abrasion or excessive heat. Lubricate unit a minimum of once a week. Refer to the “Lube Chart” on page 18.
Grease	All grease fittings should be properly greased after 40 hours of service or a minimum of once a week for average usage. Refer to the “Lube Chart” on page 18.
Hydraulic System	Inspect daily for leaks, loose hydraulic lines and fittings, oil level and proper operation of hydraulic system.
Air Breather	Replace air breather every six months. Refer to the “Lube Chart” on page 18.
Oil Filter	Replace oil filter every six months. Refer to the “Lube Chart” on page 18.
Suction Strainer	Inspect and clean suction strainer when changing hydraulic oil. Refer to “Flushing the Hydraulic System” on page 20.
Hydraulic Oil	<ol style="list-style-type: none"> 1. Every Three Months: Inspect oil for proper color, odor and feel. Replace oil if it is milky or dark in color, begins to have an odor, or lacks lubricity to your touch. 2. Every Twelve Months: Replace oil with MV36 anti-wear hydraulic oil filtered through the return filter, or filter existing oil to ISO Code 18/15 and remove water with water separation media filter (water less than 50 parts per million). <p>NOTE: When replacing or adding oil, always filter the oil through the return filter.</p>
Hydraulic Cylinders	Inspect cylinder rods, fittings and operation. Apply grease to the grease fitting on the hydraulic cylinder every week.
Warning Labels	Clean and replace as necessary.



PREVENTIVE MAINTENANCE – MECHANICAL

Structural and Weld Integrity	Check to ensure proper and safe working condition of structural members. Make sure wear is within normal guidelines. Inspect weld joints.
Front and Rear Stops	Check to ensure proper and safe working condition of stops.
Nuts, Bolts, Shafts, Cotter Keys, etc.	Check to ensure proper and safe working condition. Make sure wear is within normal guidelines and all items are within proper torque guidelines.
Rollers, Sheave Blocks, Rear Hinge, Pivot Points	Check to ensure proper lubrication, adjustment and operation.
Container Hold-Down Devices	Check to ensure proper and safe working condition.
Hoist Cable	Inspect the cable daily and conduct a thorough inspection every 40 hours of usage for breakage, unraveling, or flat spots. Inspect cable ends, clamps and pins as well. Lubricate the cable frequently to prevent rusting.

PREVENTIVE MAINTENANCE – ELECTRICAL

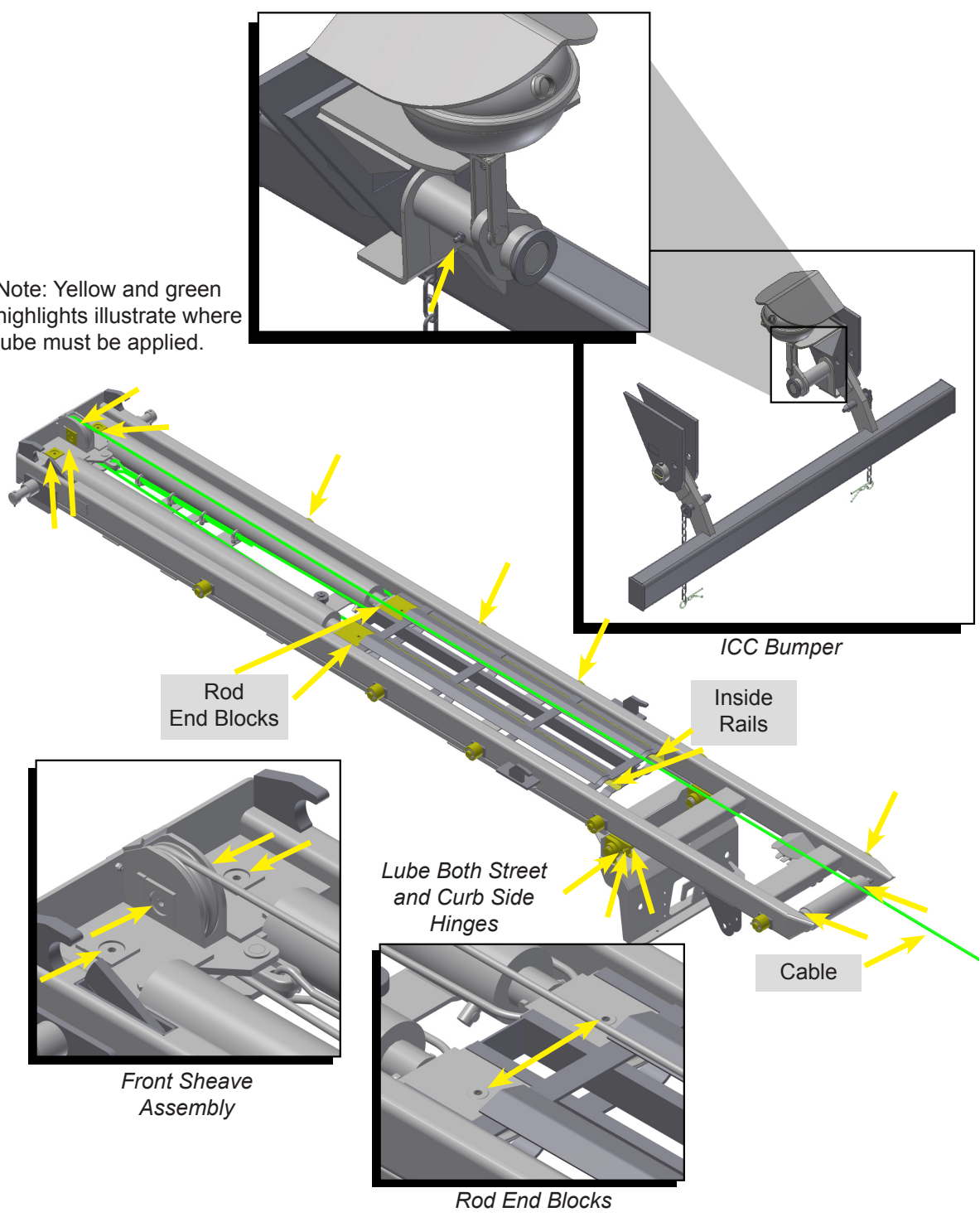
Reflectors/Lights	Inspect all lamps and reflectors daily. Make sure they are cleaned and in proper working order.
Electrical Wiring	Inspect all visible wiring to ensure that it is not frayed, is properly supported and protected, and all connections are tight.
Wire Splicing	Use wire connectors with shrink tubing for water-tight connections.
Back-up and Hoist-Up Warning Systems	Verify proper and safe operation.

NOTE: Always apply conductive (dielectric) grease in receptacles and in bulb sockets prior to re-assembly.

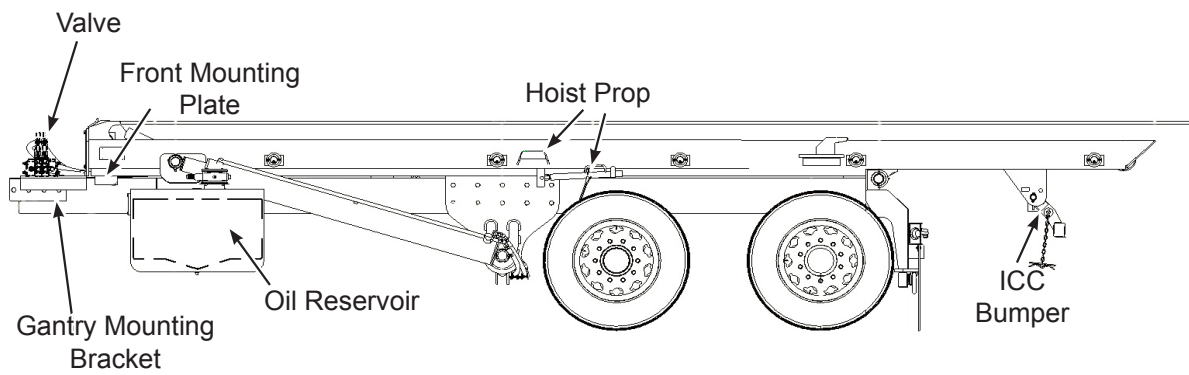
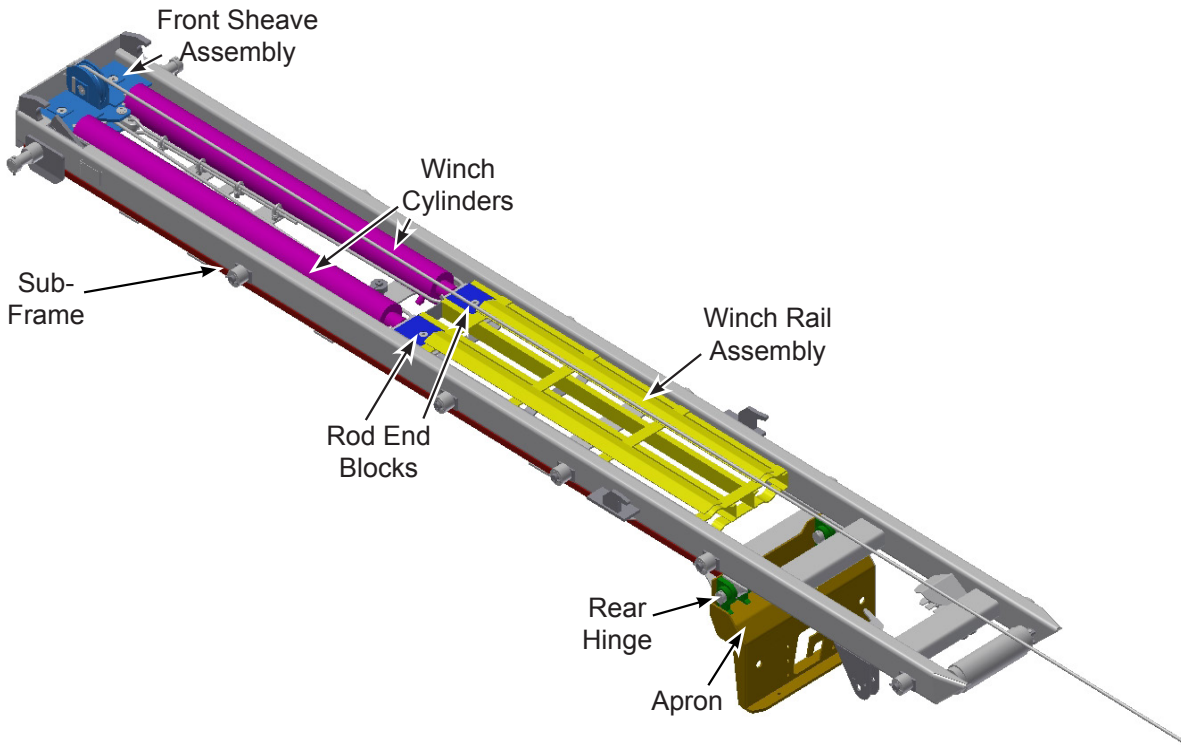


LUBE CHART

Note: Yellow and green highlights illustrate where lube must be applied.



PARTS LIST



FLUSHING THE HYDRAULIC SYSTEM

NOTICE

Before starting the following procedures, make sure that all hydraulic cylinders are completely retracted.

1. Shut the gate valve, located on the oil tank, close the valve by turning the handle 90° clockwise to the off position. Remove the suction line at the gate valve and drain oil from tank using the gate valve to regulate the flow.



2. Once all oil has drained out, remove the suction strainer which is located in the tank, on the line that has the gate valve.



With the strainer out, clean with a solvent by flowing the solvent from the inside of the strainer out. After cleaning, check that relief valve in the end of the strainer is operational. It should push inwards with about three (3) pounds of pressure.

3. To service the return filter, remove the four bolts on top of the filter canister.



4. Remove the return filter and replace it with a new filter. **DO NOT REUSE THE OLD RETURN FILTER.** Reinstall return filter and suction strainer using appropriate thread sealant and/or "O" rings. Check the "O" rings for nicks or cuts before reinstalling. Also reinstall the suction hose to the gate valve. **OPEN GATE VALVE (COUNTERCLOCKWISE) FULLY.**
5. Remove the four bolts near the bottom of the filter canister. Inspect inside the tank for contaminants.
6. Remove the 3/4" magnetic plug found on the bottom side of the tank. Metal debris found in the oil will attach to the plug. Clean the plug of debris.



7. Trace down the retract line to the main control valve from the lift and winch cylinders. Mark the lines so they do not get crossed when you reconnect them to the control valve. Disconnect the retract lines at the main control valve. Place the lines in an appropriate-sized container or add enough hose to the retract lines so that they will extend into a 55 gallon drum.
8. Fill the oil tank with MV36 or equivalent type hydraulic oil so that it just comes to the top of the sight gauge mounted on the oil tank.
9. Start up the truck and engage the PTO. With the truck idling and the PTO running, activate the main control valve lever to "extend" or "on" for the winch cylinder.



CAUTION

Hydraulic oil may come out at high velocity, which could lead to injuries.



This will force the oil out of the retract hoses that are disconnected and flush the old oil out. When the winch cylinder is completely extended, shut the truck off and reconnect the retract hose for the winch cylinder back on the main control valve. Start the truck again, engage the

PTO and retract the winch cylinder completely. Check the oil level in the tank and fill to the top of the sight gauge again.

10. Similar to Step 9, activate the main control valve lever to "extend" or "lift" for the lift cylinders with the truck idling and the PTO running.



This will force the oil out of the retract hoses that are disconnected and flush the old oil out. When the lift cylinders are completely extended, shut the truck off and reconnect the retract hose for the lift cylinders back on the main control valve. Start the truck again, engage the PTO and retract the lift cylinders completely. Check the oil level in the tank and fill to the top of the sight gauge again.

THINK GREEN

Conserve resources and recycle hydraulic oil. Always dispose of oil properly. If you have any questions pertaining to the procedures involved, please contact the Customer Service Department at Galbreath at 1-800-285-0666.

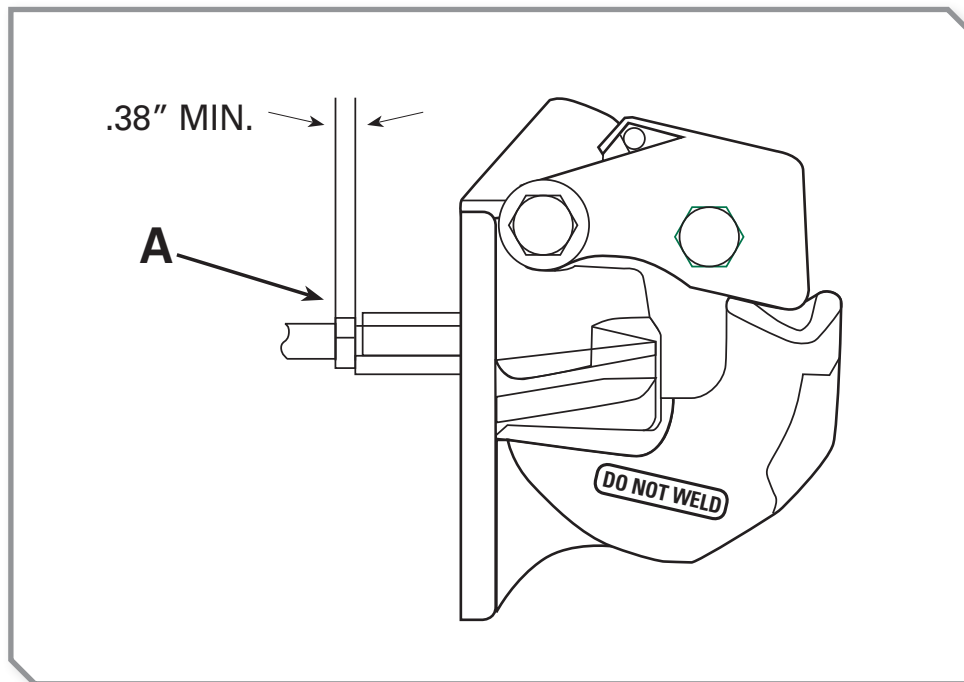


PINTLE HOOK MAINTENANCE

Some equipment does not include a pintle hook. The following is from Holland's PH-410 Series Specifications document XL-PH342-ES Rev C.

For proper performance, the following maintenance steps should be performed every 30,000 miles or three (3) months, whichever comes first.

1. Clean and check for proper operation. Inspect for worn, damaged or missing parts. Replace as required using only authorized Holland parts.
 2. Inspect, in particular, the coupling contact area. Replace when wear exceeds $3/16"$ ($0.19"$) from the original surface profile.
 3. Lubricate latch pivots with a light oil lubricant.
 4. Check mounting fasteners for proper torque.
5. Check plunger adjustment. Adjustment of Holland's air activated plunger:
 - Loosen chamber rod jam nut shown below.
 - Holland plungers have an adjustment range of approximately $1-1/2"$. The plunger is pre-set at the factory to provide approximately 1 inch of adjustment out or $1/2"$ adjustment in. At no time should the chamber rod have less than $3/8"$ engagement with the plunger, as indicated in the illustration below. To adjust, loosen jam nut (A) from plunger. Turn plunger rod clockwise for less engagement or counter-clockwise for more engagement. After adjusting, re-tighten jam nut (A) securely against plunger rod.
 6. With the latch closed, measure the gap between the hook and the latch while lifting up on the latch. Replace the latch.



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