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## **1.1 Foreword**

The Liftgate product is manufactured and sold by the HOLLAND GROUP companies. The HOLLAND GROUP is a worldwide organization with 14 manufacturing facilities in North America alone.

The parent company originated in 1911 in Cosica, South Dakota producing hitches for horse drawn agricultural equipment. The company then moved to Holland Michigan in 1920 and became the HOLLAND HITCH COMPANY. As the transport and agricultural industries developed and grew, the company developed products to support these industries.

READ AND UNDERSTAND THE CONTENTS OF THIS MANUAL carefully to ensure safe and proper equipment installation. Failure to do so could result in personal injury or equipment damage. If any instruction is not fully understood, contact your HOLLAND dealer or representative for clarification prior to equipment usage.



Where applicable, "Safety Alert" symbols have been used to indicate important safety measures. Read carefully, understand, and follow these instructions to prevent hazardous situations that could lead to risk of personal injury.

ACCURATELY RECORD MODEL AND SERIAL NUMBERS in the Model and Serial Numbers section in this manual. Your dealer will also require these numbers when ordering replacement parts. Serial number can be found stamped on the equipment.

The information contained in this manual is current at the time of publication; however, continuing product improvement may result in changes to the equipment which are not covered. Should information regarding such changes or further information on the equipment be required, please contact your Holland Equipment dealer or representative.

Changes of any kind to this Holland Equipment product could affect the integrity of the product, its stability, or its ability to perform as designed or intended.

HOLLAND EQUIPMENT disclaims responsibility of any unauthorized change to its product.

If any person and or organization modifies or contributes in any way to unauthorized modification, the person or organization will assume the risk involved with such modification and may be negligent in creating a dangerous situation resulting from such action.

Failure to adhere to this policy *VOIDS the product warranty policy on any items installed on the modified equipment.*

WARRANTY is provided as part of Holland Equipment policy for customers who operate and maintain their equipment as described in this manual. Refer to the Warranty Section for further details on Holland Equipment warranty policy.

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## **1.2 Warranty Application and Processing**

This warranty provides the assurance that Holland Equipment will back its products within the warranty period. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and/or possibly denied.

In the event of a potential warranty claim, be sure to identify and record the TruckMaster Model Number (e.g TG25471–212–15G) and Serial Number (BU123N or B0100123N). The end user or dealer should complete the Customer Service Form located in this manual. Fax and or mail a copy to your nearest HOLLAND location.

HOLLAND'S policy is to review all warranty claims and applicable information prior to processing the claim. If parts are required to be returned to a HOLLAND location for inspection and analysis, contact your HOLLAND dealer and or representative for a return number. Always identify the return number on the parts and the shipping paper work.

Claims will be resolved in a timely manner, once the part(s) or product have been inspected by an authorized HOLLAND representative. If the warranty claim has been accepted, the account will be appropriately credited.

If parts or products are required immediately, contact your local HOLLAND dealer or one of the two HOLLAND locations, listed below. The parts or product will be expedited and invoiced.

Should you require further assistance or clarification, please feel free to contact one of the following HOLLAND locations:

Holland Equipment Limited  
Norwich Ontario, N0J 1P0  
Telephone: (519) 863–3414  
Fax: (519) 863–2398

Holland Canada  
Surrey, British Columbia  
Telephone: (604) 574–7491  
Fax: (604) 574–0244

### 1.3 Model and Serial Number

In order to identify your Liftgate and its components correctly when communicating with your Holland Equipment dealer, please record the model and serial numbers below and refer to them when ordering replacement parts.

Equipment Model No: \_\_\_\_\_

Serial No: \_\_\_\_\_

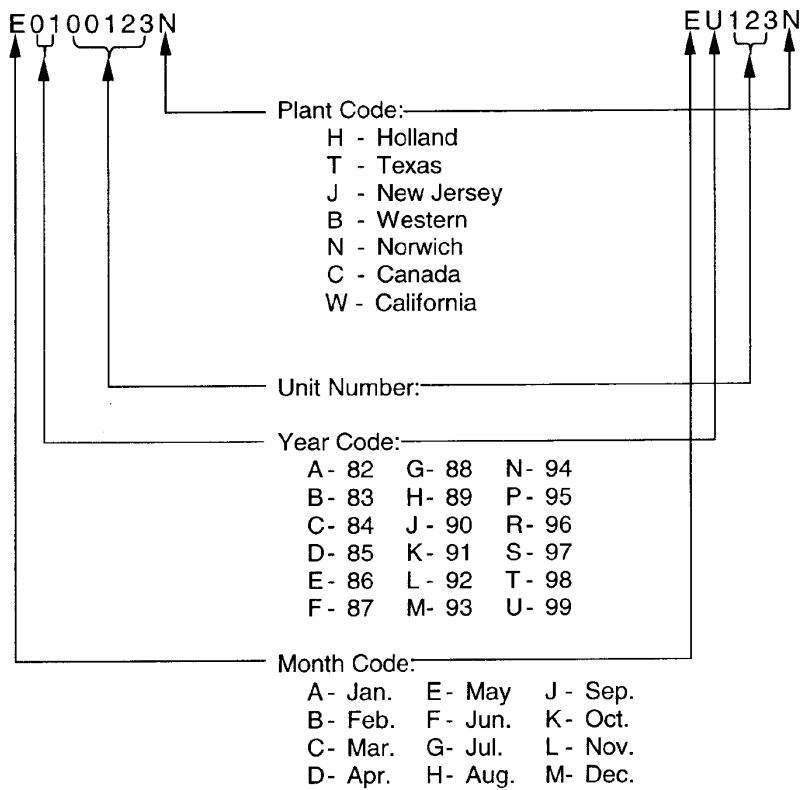
Pump Model No: \_\_\_\_\_

Serial No: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Dealer: \_\_\_\_\_

### 1.4 Serial Number Logic





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# 2. Safety

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## 2.1 General

This equipment should not be operated or maintained by personnel other than those who have been thoroughly trained on this or similar type of equipment.

Ensure that you become familiar with all occupational safety regulations pertaining to liftgate equipment as well as all safety instructions pertaining to this equipment. Observe the instructions provided in this manual and on all hazard and information decals on the equipment.

Keep decals clean and legible. Replace, decals when damaged and or missing.

## 2.2 Safety Symbol



This safety alert symbol is used throughout the manual to call your attention to areas in which carelessness or failure to follow specific procedures may result in personal injury and/or component damage or malfunction.

## 2.3 Understanding Safety Symbols



**DANGER**

**DANGER** identifies the most serious hazards where failure to follow listed procedures would result in a high probability of death or serious injury.



**WARNING**

**WARNING** identifies a hazard exists which can result in serious injury or death if proper precautions are not taken.



**CAUTION**

**CAUTION** identifies areas where failure to follow listed procedures may cause personal injury, component damage or subsequent malfunction.

## **2.4 General Safety Precautions**

To reduce the risks and ensure safety at all times, this section of the manual details a number of safety rules which should always be adhered.

Study all the safety messages in this manual and on the equipment carefully.

You must be fully trained to operate this equipment. Know the capabilities and the limitations of the equipment.

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## **2.5 Operating Safety Precautions**

Inspect the equipment daily for signs of damage, unusual wear, fluid leaks, or faulty operation.

Prior to commencing work, check all equipment controls and ensure that the equipment responds correctly. Never operate the liftgate which does not operate properly.

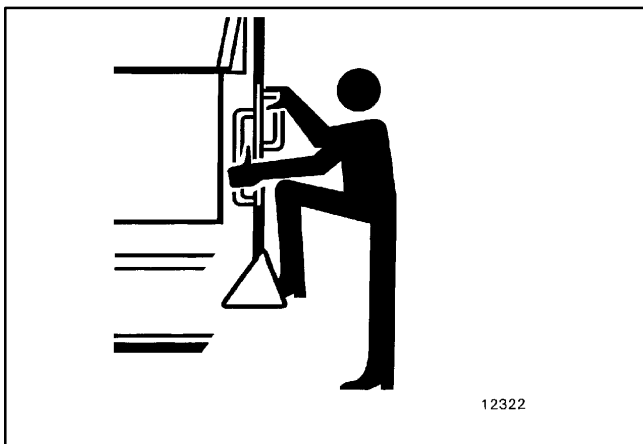
Never operate the liftgate unless the area is clear of obstacles and other personnel.

When operating the liftgate from ground level, always stand to one side of the platform. Ensure fingers, arms, hands, legs and feet are clear of moving liftgate.

Do not exceed maximum rated capacity of the liftgate.

In an emergency situation, release the control switch to stop the liftgate.

Ensure liftgate is in stowed position, when not in use.



Never dismount from moving equipment. Observe proper shutdown practices before dismounting.

Check for slippery steps and handholds and dismount the machine carefully. Do not hang on to any controls and never jump off the equipment.

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## 2.6 Servicing Safety Precautions

Do not work underneath the liftgate without properly supporting the raised platform.

Never strike any part of the liftgate with a steel hammer.

Safety protection should always be worn as protection from pressurized fluid spray, flying debris, and other airborne matter when working with tools, power tools, welding equipment, and dangerous chemicals.

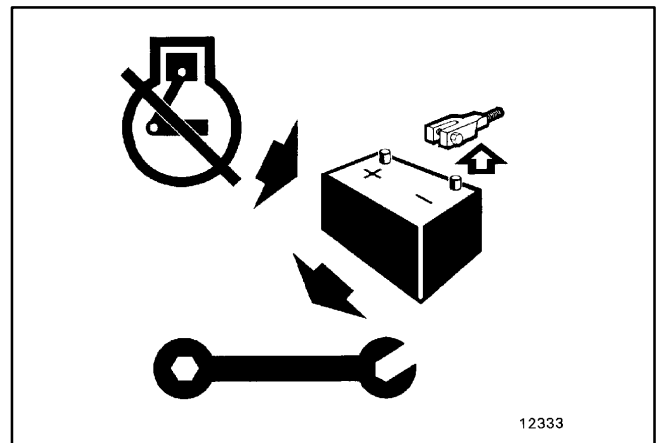


### WARNING

**Never work on the equipment with the engine running unless instructed to by this manual for specific service items.**

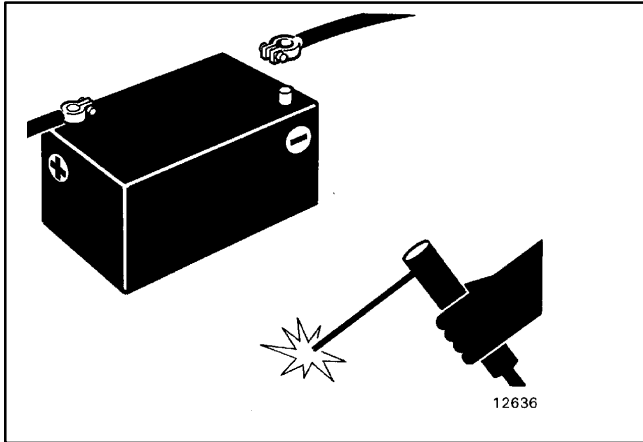
While servicing or repairing equipment, always shut off the engine and cycle all appropriate controls to relieve trapped hydraulic pressure.

Use the proper tool for the job. Repair or replace worn or damaged tools, before initiating repair work on your equipment.



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## 2.6 Servicing Safety Precautions



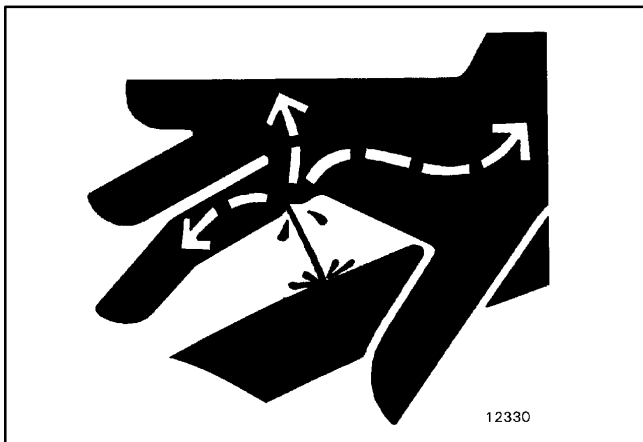
When welding is required ensure that the battery ground cable is disconnected and that all electronic equipment are completely isolated electrically before welding is initiated.

Before starting any welding ensure that the area to be repaired is cleaned of debris and combustible material. Have a charged fire extinguisher available and know how to use it.



### WARNING

Hydraulic fluid under pressure can penetrate the skin and cause serious personal injury, blindness or death. If any fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with treating this type of injury.



*NEVER USE YOUR BARE HAND TO CHECK FOR FLUID LEAKS!*

Fluid leaks under pressure may not be visible. When searching for leaks, wear work gloves and use a piece of cardboard or wood as detector. Wear a safety face shield or goggles for eye protection.

Pressure can remain in a hydraulic system after the power source and pump have been shut down. Cycle all appropriate controls to relieve trapped pressure before performing work on components, or disconnecting any hoses.

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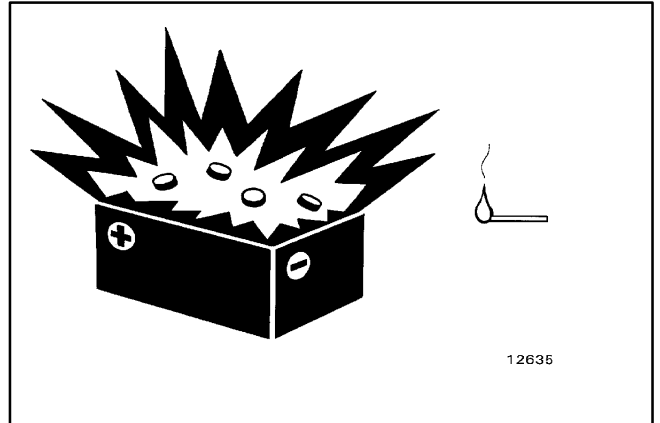
## 2.6 Servicing Safety Precautions



### WARNING

Lead-acid batteries contain sulfuric acid which can severely damage your eyes or skin on contact. When servicing a battery, always wear a safety face shield, rubber gloves, and protective clothing to prevent accidents.

Lead-acid batteries produce flammable and explosive gasses. Keep arcs, sparks, open flames, and lighted tobacco a safe distance away from the batteries.



Dispose of waste fluids properly. Do not pour contaminated fluids onto the ground, or into a stream, pond or lake.

Before draining any fluids, know the proper way to dispose of them.

Observe local environmental protection regulations when disposing of old batteries, hydraulic oil, and other environmentally harmful items.



## **2.7 Fire Prevention**



Inspect the equipment daily for potential fire hazards and make any necessary repairs immediately.

Inspect electrical wiring and connections, fuel and hydraulic hose runs to ensure they are secure and not rubbing against other components.

Clean up any excess grease, oil accumulation, and spillage immediately.

Use only nonflammable products for cleaning the machine or components.

Store rags and other combustible materials in a safe, fireproof location.

Before starting repair work, such as welding, the surrounding area should be cleaned and a fire extinguisher should be close by.



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# 3. Liftgate Operation

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## 3.1 Introduction

Every user and installer using the HOLLAND TRUCK MASTER LIFTGATE either recommended or not recommended by HOLLAND must thoroughly satisfy himself that the installation procedure is structurally sound and is appropriate for the vehicle, product and application. They must also thoroughly satisfy themselves that the installed Liftgate functions in a safe manner as intended.



### WARNING

Do not exceed recommended liftgate load capacity. Load capacity is rated at 5500 lbs (truck) and 6600 lbs (trailer) when the load is centered on the platform.



### WARNING

Read and understand the information in this manual and on the decal located above the control station prior to operation of the tailgate.



### WARNING

Never, under any circumstance position forklift on the liftgate platform. Failure to follow this safety precaution could lead to equipment damage and or personal injury.



### CAUTION

This liftgate is intended for loading and unloading cargo ONLY. Do not use for any other purpose, other than its intended use.



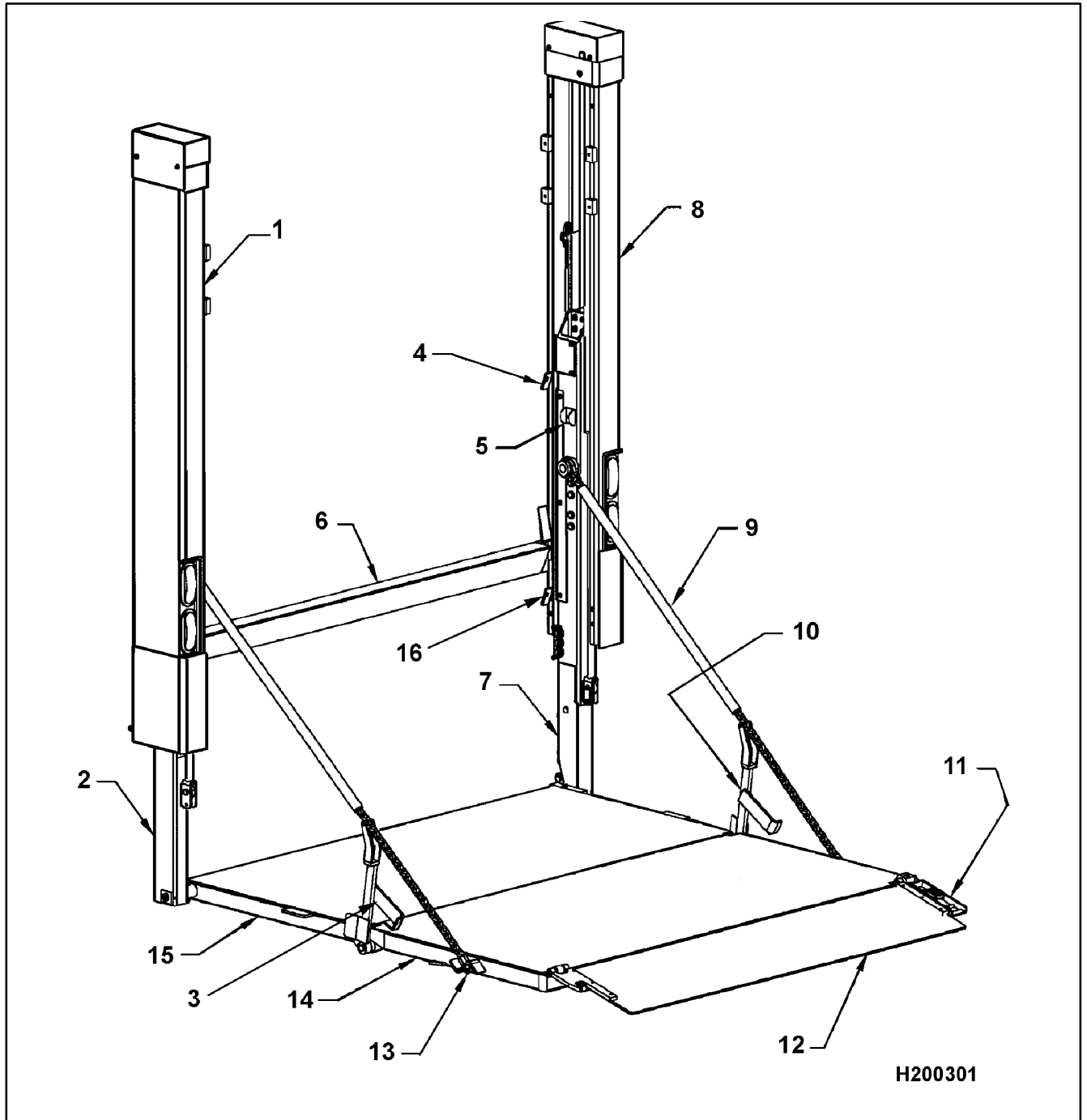
### WARNING

Never, under any circumstance travel with the platform unfolded. Ensure the liftgate has been placed in stowed position prior to leaving the loading area. Failure to follow this safety precaution could lead to equipment damage and or personal injury.

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## 3.2 Liftgate General Terminology

### 3.2.1 Direct Hydraulic Twin Column Liftgate



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Direct Hydraulic Twin Column Liftgate

## **3.2 Liftgate General Terminology**

### **3.2.1 Direct Hydraulic Twin Column Liftgate**

1. Left Column
2. Left Runner
3. Chain Stanchion (Left)
4. Travel Lug
5. Toggle Control (Runner Mounted)
6. Cross Member
7. Right Runner
8. Right Column
9. Chain
10. Chain Stanchion (Right)
11. Spring Bolt Hinge
12. Aluminum Retention Ramp
13. U-Bolt Adjustment
14. Outer Platform
15. Inner Platform
16. Dock Storage Lug

### 3.3 Liftgate Control Station

#### Control Station Operation



#### WARNING

In the event in an emergency while operating the liftgate, immediately release the control toggle switch and turn the master disconnect OFF, to stop the unit.



#### WARNING

During operation of the liftgate always stand to one side of the platform. Ensure fingers, arms, hands, legs and feet are clear of moving liftgate.

To operate the liftgate, use the toggle switches on the control station, located at curbside of vehicle.

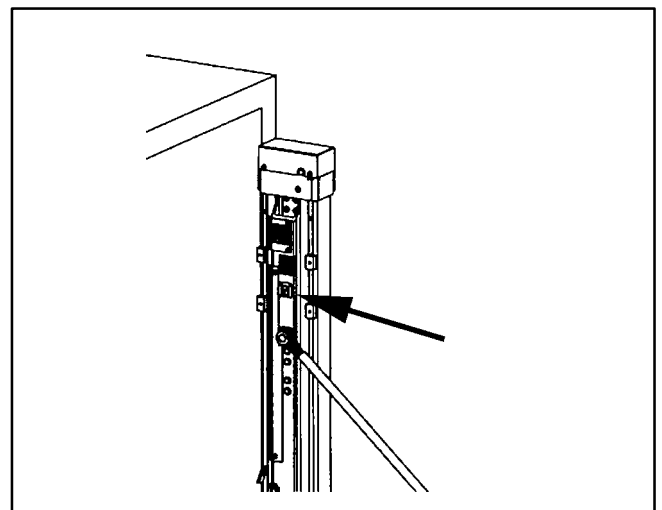
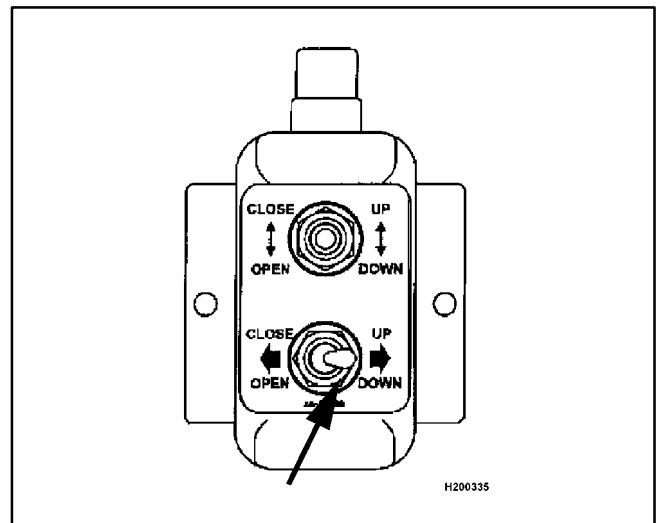
These toggle switches enables the operator to raise, lower, fold, and unfold the liftgate platform.

#### Note!

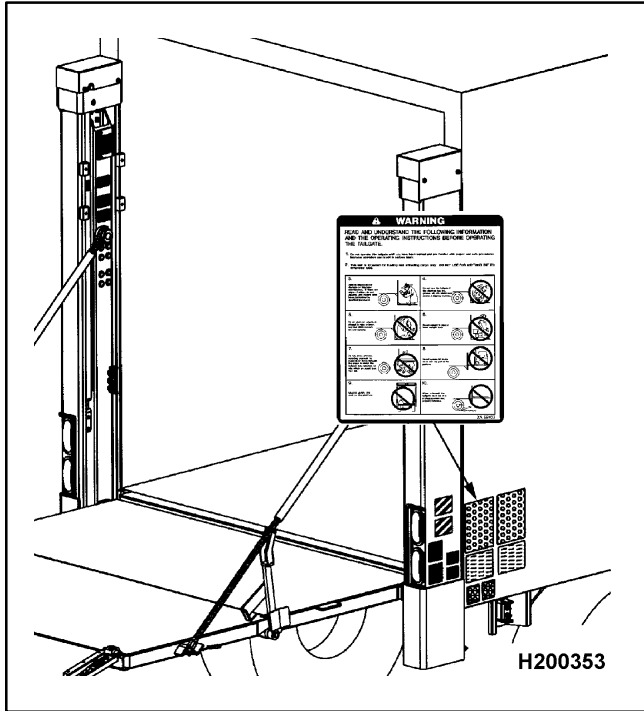
**Up/Down mode is the default position of the bottom toggle switch.**

If the operator is required to ride the platform up or down, a toggle switch is located on the right hand runner.

This switch allows the operator easy access to raise or lower the platform only.



## 3.4 Liftgate Operation



### Raise and Open Platform

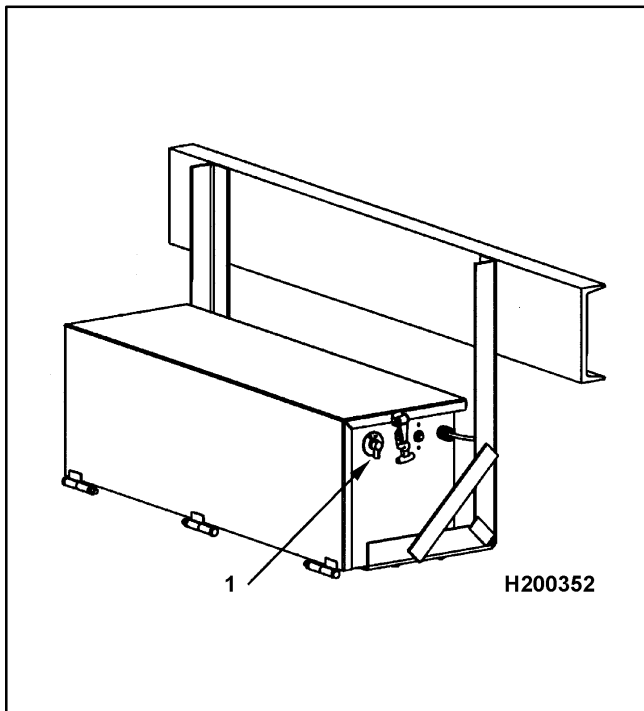


## WARNING

Prior to operating the platform, ensure the platform area is clear of obstacles and other personnel. Inspect the liftgate for any damage. Identify any bruised paint, bent members, or exposed cables and hoses that may indicate the lift is unsuitable for operation.

### *Important!*

*Prior to operating the liftgate, read and understand the warning decal located above the control station.*



### *Important!*

*Ensure that the vehicle parking brake is securely engaged and turn the master disconnect switch (1) to the ON position.*

### *Important!*

*Ensure the vehicle is parked on level ground. This will ensure that when the liftgate is lowered, it is resting on a flat surface.*

## 3.4 Liftgate Operation

### Raise and Open Platform



#### WARNING

In the event in an emergency while operating the liftgate, immediately release the control toggle switch and turn the master disconnect OFF, to stop the unit.

Push the top toggle switch only to the up position. This will raise the folded platform to its utmost vertical position so that the angled bracket on the chain stanchion (A) clears the travel lug (B) located on the side of each column.

#### ***Important!***

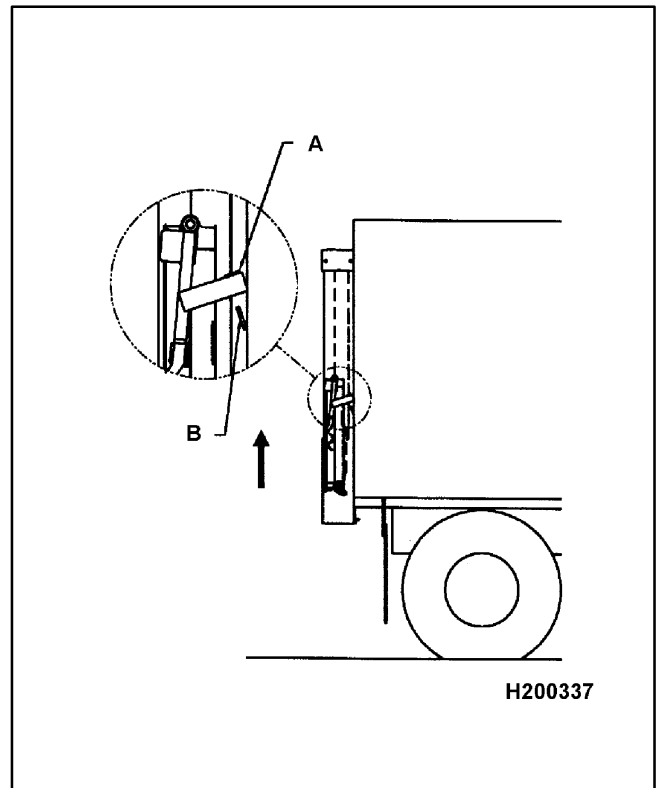
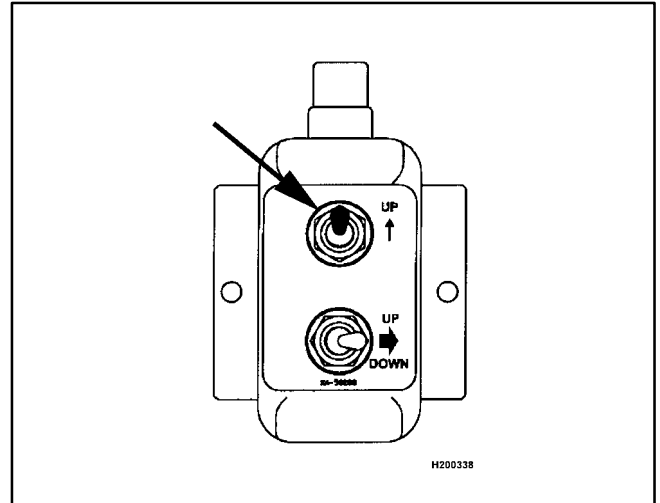
***One side of the lift may be fully raised before the other. Ensure that there is no upward travel of the runner remaining on either sides of the lift.***

#### ***Important!***

***If the platform ever becomes out of level, raise the platform to the utmost vertical position (deck level) and continue to hold the control toggle switch in the up position until the platform has leveled itself.***

#### **Note!**

Ensure the align arrows, on the column and runner are even with each other.



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## 3.4 Liftgate Operation

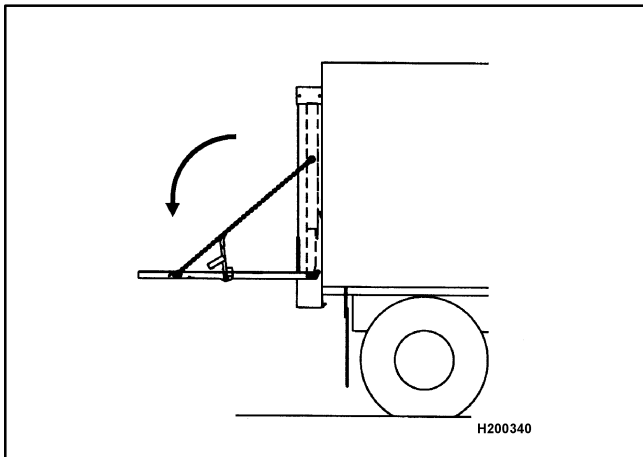
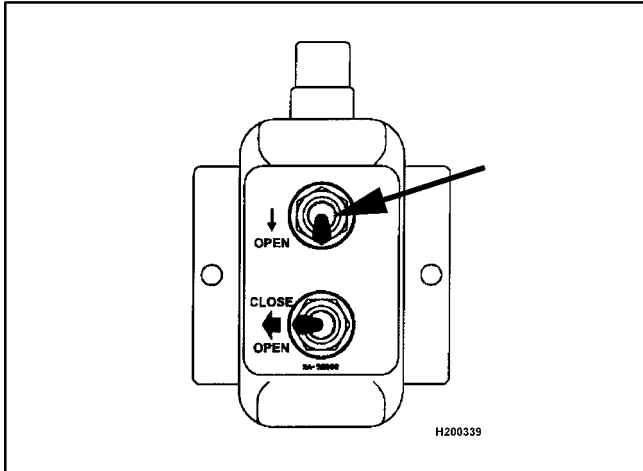
### Raise and Open Platform

#### Note!

The retention ramp should be deployed from stowed position prior to unfolding the platform. See “Retention Ramp Operation”, for instructions on deploying the ramp from stowed position.

Push and hold the bottom toggle switch to the left to put the control into “Open/Close” mode.

Push the top toggle switch to “Open” position to unfold the platform.



Hold both switches until platform reaches deck height and is completely unfolded, then release both switches.

#### **Important!**

***Ensure the platform is unfolded to its utmost horizontal position.***



## 3.4 Liftgate Operation

### Lowering Platform



#### WARNING

When lowering an empty platform at deck level, always ensure that the platform is as level as possible prior to task. This is achieved by ensuring that there is no upward travel of the runners remaining on either sides of the lift.

#### Note!

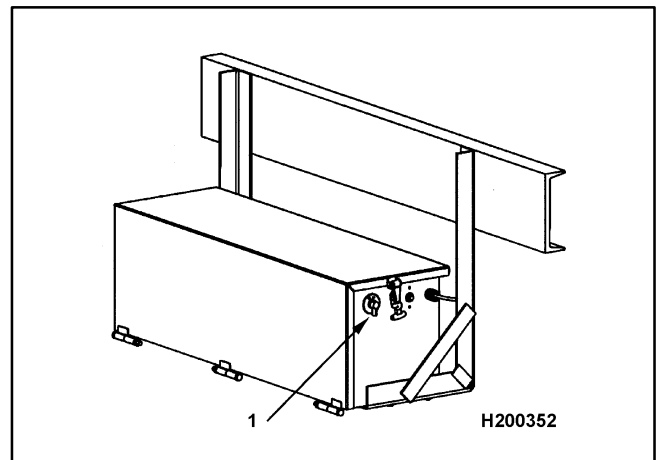
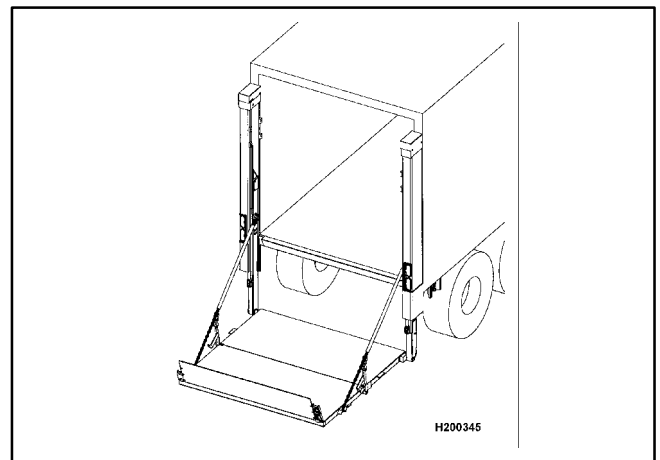
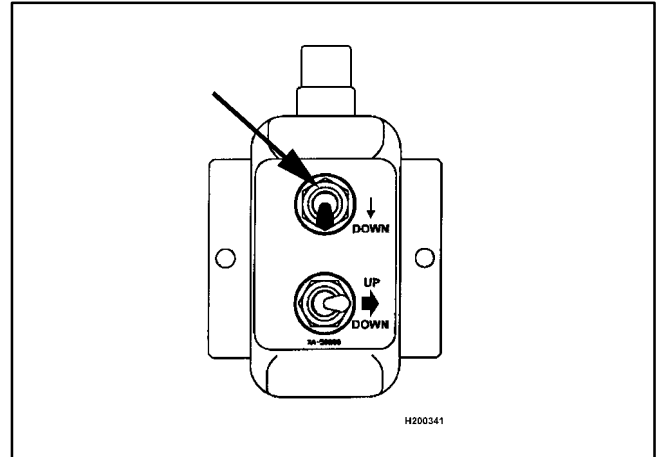
If lowering the platform with a load, the retention ramp should be placed in cart-stop position. See “Retention Ramp Operation”, for instructions on placing the ramp in cart-stop position.

Push the top toggle switch only to the down position. This will lower the platform from deck height to ground level.

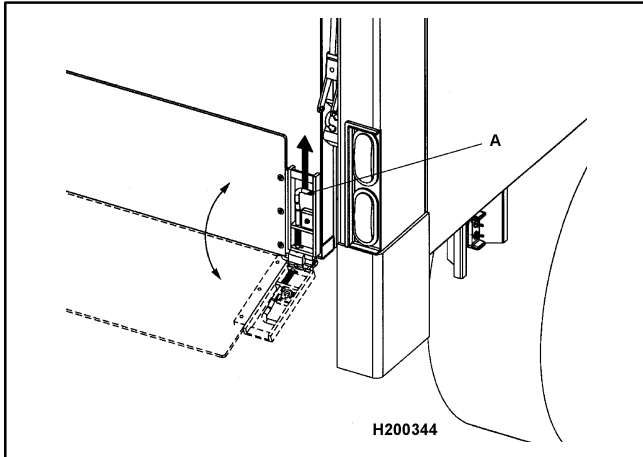
Hold the toggle switch until platform reaches ground level and release the switch.

#### **Important!**

*If leaving the lift unattended for any period of time, turn the master disconnect switch (1) OFF to disable the unit from unauthorized use.*



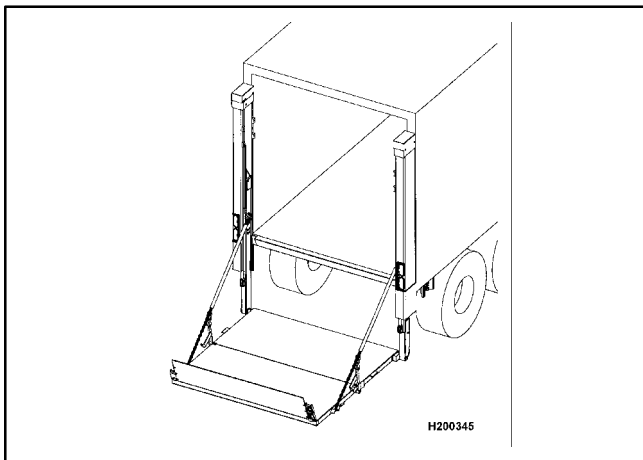
## 3.5 Retention Ramp Operation



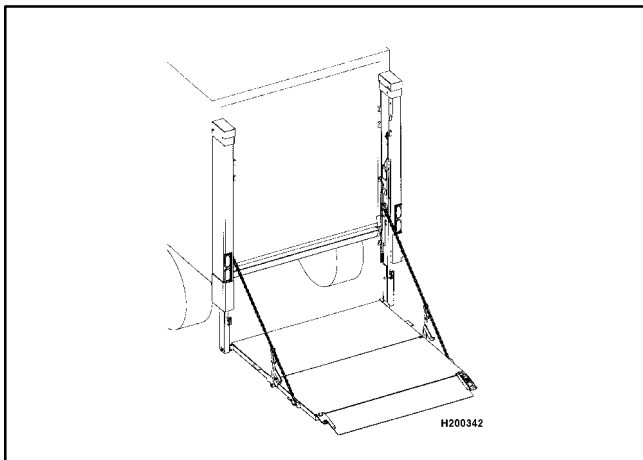
### WARNING

While deploying the retention ramp, always stand to one side of the platform. Ensure fingers and hands are clear of moving parts.

To deploy the retention ramp, pull up to release the spring bolt (A) from stowed position and rotate the ramp away from the platform, until the spring bolt engages in the cart-stop position.



To place the retention ramp in cart ramp position, pull the spring bolt to release the retention ramp from the cart-stop position. Rotate the ramp downwards, until the leading edge rests firmly on the ground.



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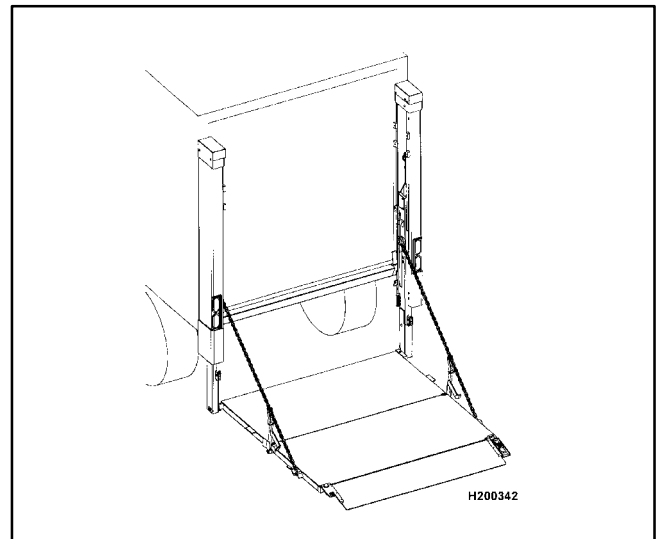
## 3.6 Platform Loading



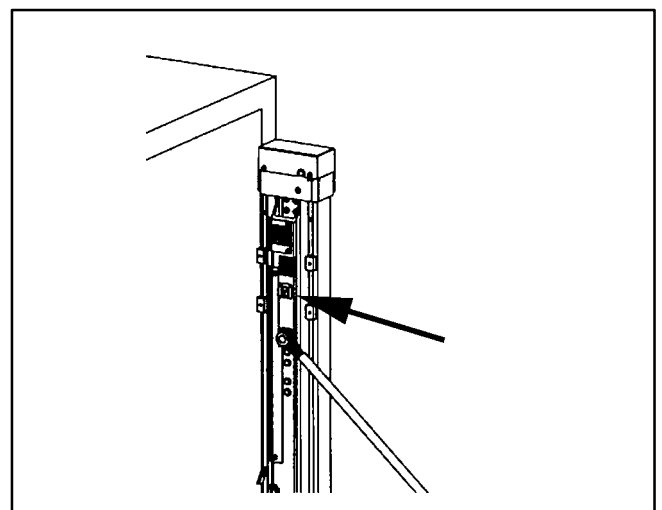
### WARNING

When loading the platform, **NEVER** extend load past platform edge, **NEVER** place unstable loads on platform and **NEVER** allow loads to exceed lifting capacity of the liftgate. If standing on platform, ensure feet do not extend beyond inboard edge of platform.

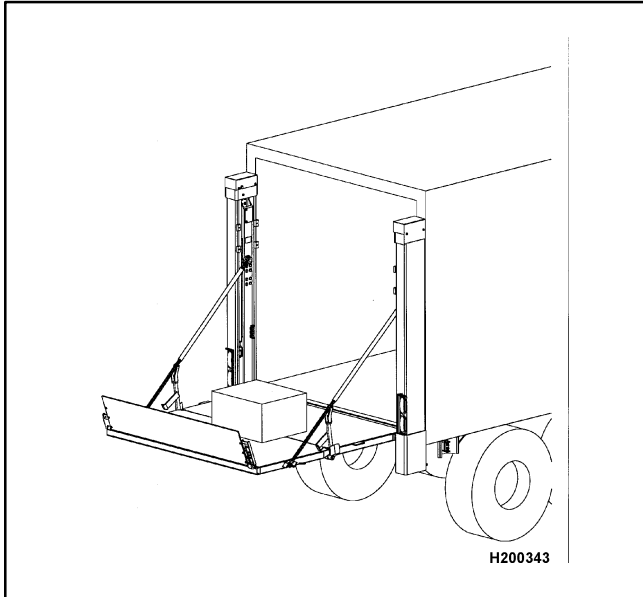
If the operator is required to ride the platform to access the load, slowly lower the platform to ground level. Follow procedures in “Liftgate Operation” to open and lower the platform.



When standing on the platform, the switch located on the right hand runner allows the operator easy access to raise or lower the platform.



## 3.6 Platform Loading



**Important!**

**Ensure the retention ramp has been placed in the cart-stop position. See “Retention Ramp Operation”, for instructions on placing ramp in cart-stop position.**

Raise the platform to deck height and load the platform.

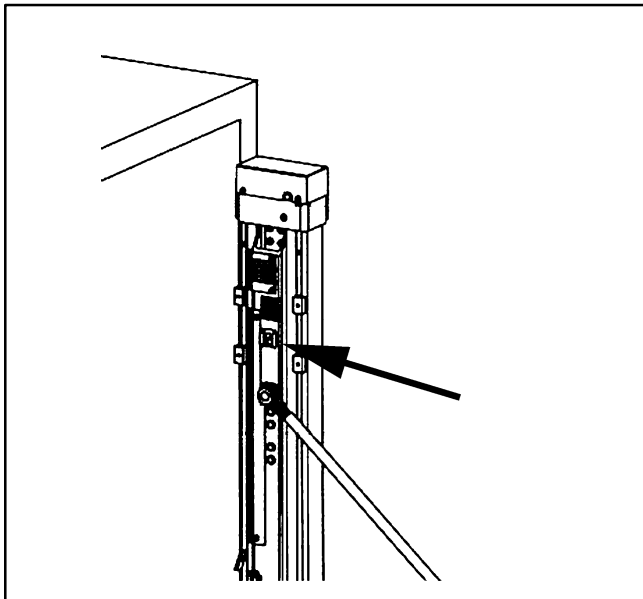
**Important!**

**Ensure loads are placed as close to the inboard platform edge with the heaviest part of the load toward the vehicle body. Never operate a lift truck on or over the platform.**



### WARNING

When raising or lowering the platform, the load center must never be placed beyond the center of the platform.



Using the toggle switch on the right hand runner, lower the platform to ground level and unload.

If required, repeat procedures to continue with additional loads. When loading is complete, raise the platform to stowed position. Refer to “Platform Stowage” for stowage procedure.

## 3.7 Platform Stowage



### WARNING

During operation of the liftgate always stand to one side of the platform. Ensure fingers, arms, hands, legs and feet are clear of moving liftgate.



### WARNING

In the event in an emergency while operating the liftgate, immediately release the control toggle switch and turn the master disconnect OFF, to stop the unit.

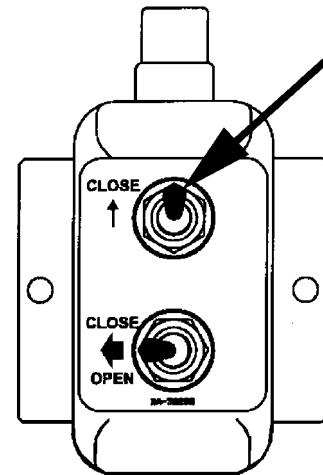
Standing clear and to the side of the platform, use the control station to raise the platform to deck height.

Position and hold the bottom toggle switch to "Open/Close" mode. Push the top toggle switch Up to the "Close" position.

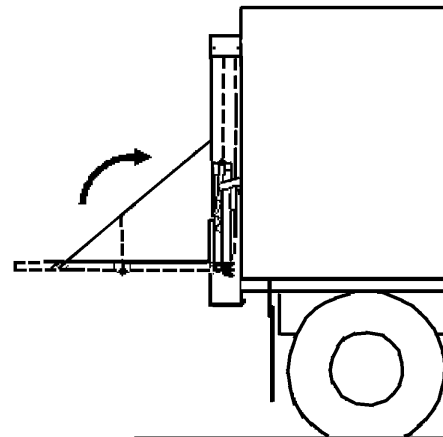
Hold both switches until the platform is folded.

#### **Important!**

***If the platform ever becomes out of level, raise the platform to the utmost vertical position (deck level) and continue to hold the control toggle switch in the up position until the platform has leveled itself.***



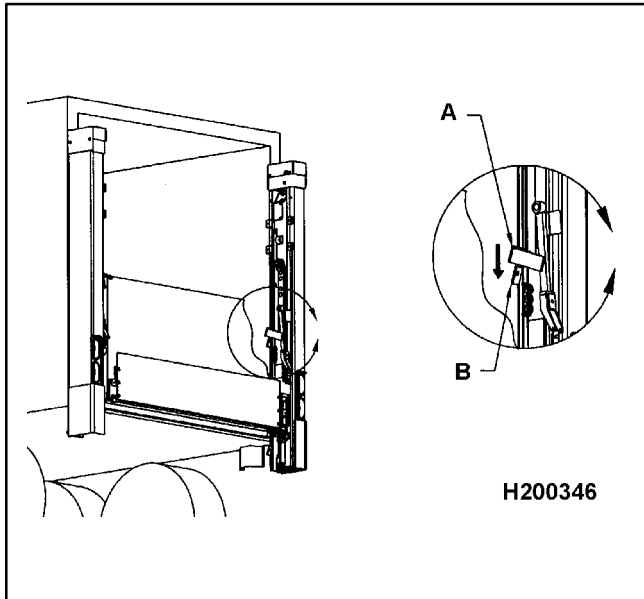
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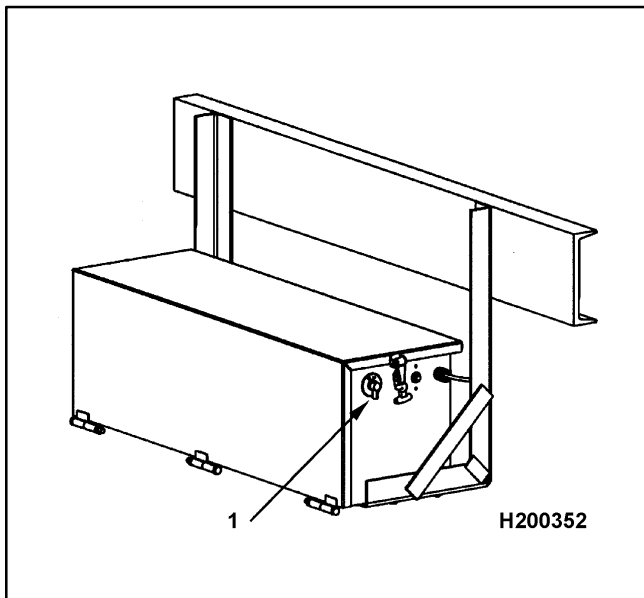
## 3.7 Platform Stowage



**Note!**

Release the retention ramp from cart-stop position. See “Retention Ramp Operation”, for instructions on releasing the ramp from cart-stop position.

Lower folded platform so the travel brackets (A), located on the right and left chain stanchions are securely resting on the column travel lugs (B).

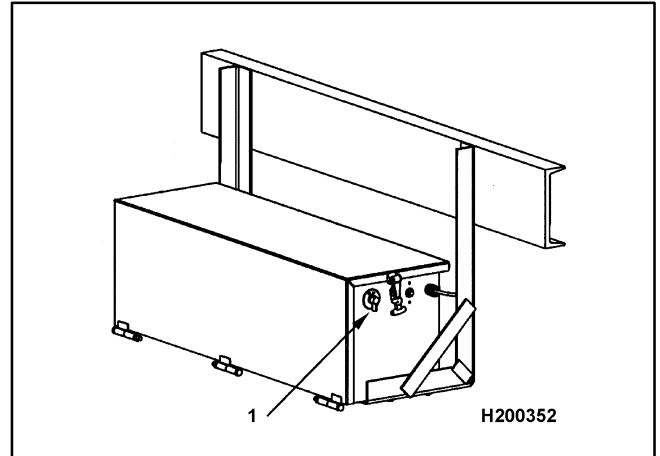
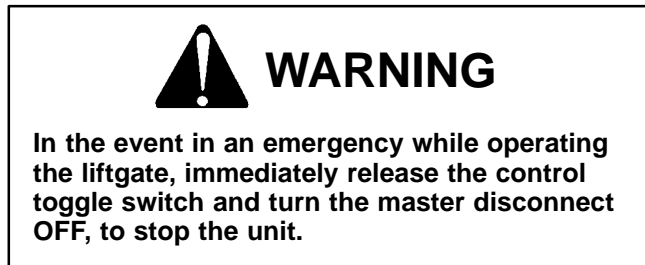


Once the folded platform has been securely stowed in the travel position, turn the master disconnect switch (1) OFF.

## 3.8 Dock Loading

### **Important!**

**Ensure that the vehicle parking brake is securely engaged and turn the master disconnect switch (1) to the ON position.**



### **Important!**

**Prior to performing the following procedures, ensure the vehicle has been positioned a few feet from the dock loading area.**

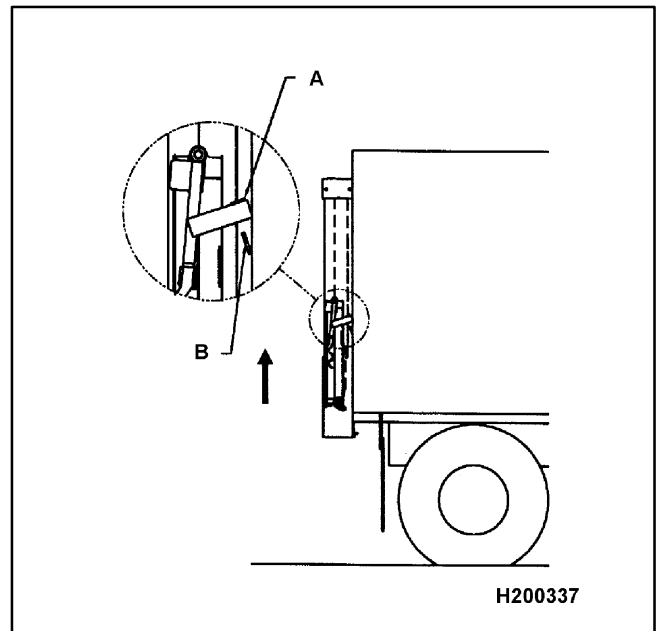
- Using the control station, raise the folded platform to its utmost vertical position so the angled bracket on the chain stanchion (A) clears the travel lugs (B) located on the side of each column.

### **Important!**

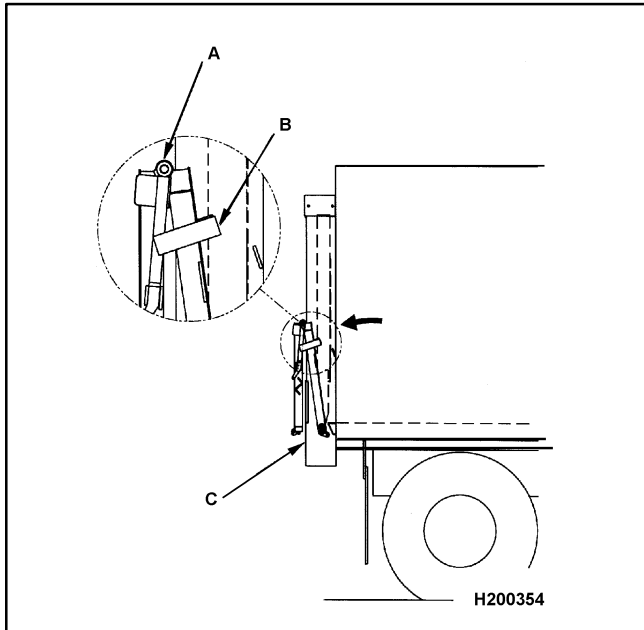
**One side of the lift may be fully raised before the other. Ensure that there is no upward travel of the runner remaining on either sides of the lift.**

### **Important!**

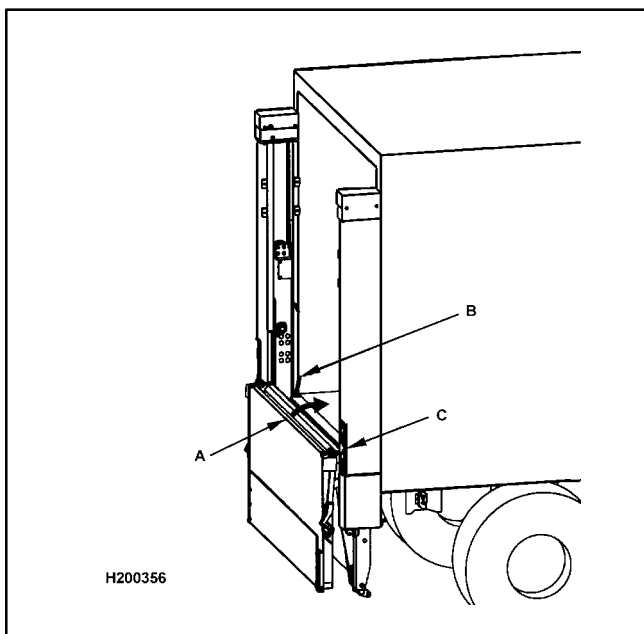
**If the platform ever becomes out of level, raise the platform to the utmost vertical position (deck level) and continue to hold the control toggle switch in the up position until the platform has leveled itself.**



## 3.8 Dock Loading



2. Ensure the rear half of the platform and hinge pin (A) have past the column rear face (C) and the chain stanchion (B) clears the travel lug.



3. Lower the platform until the top edge of the platform (A) is aligned with the top of the skid plate (B) or the middle of the light box (C).
4. Fold the platform completely against the runner stops.



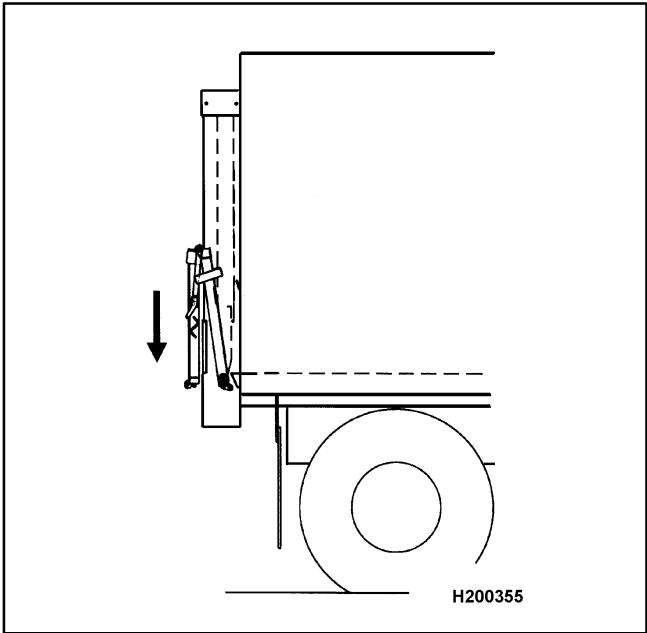
### 3.8 Dock Loading


- 5. Lower the folded platform so it rests on the dock level storage lugs.

 **WARNING**

Ensure that the folded platform assembly securely rests on the dock storage lugs before proceeding with dock loading material. If, after many attempts, the platform will not engage in the storage lugs, have the lift promptly inspected by authorized service technician for any damage.

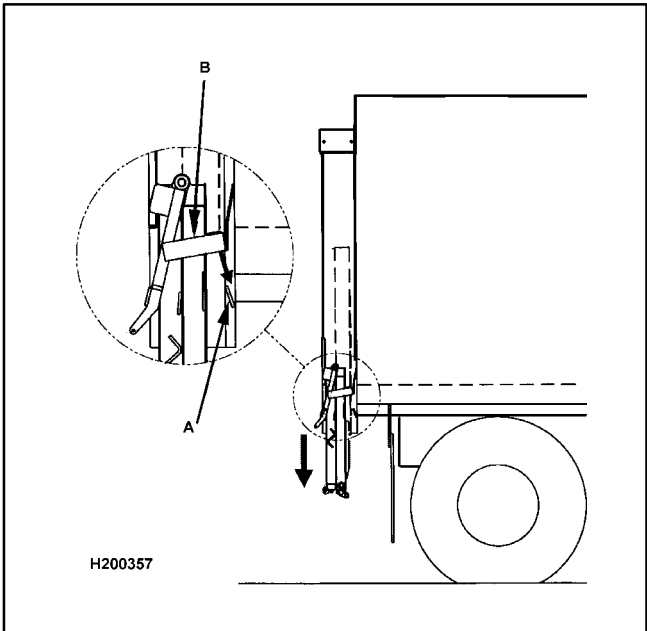
**Important!**  
 If the platform was lowered too far below the dock storage lugs (A), and does not engage when attempting to lower it down onto the lugs, raise the completely folded platform (does not need to resume to partially open position) until the chain stanchions (B) pass the dock storage lugs. Lower the folded platform assembly so that it is resting securely.



 **WARNING**

Prior to returning platform to the travel position, ensure the vehicle has been located a safe distance away (min. 2 / max. 10 feet) from the dock loading area. Failure to follow this procedure could result in damage to the chain stanchions.

- 6. To return to the travel position from the dock level position, raise the folded platform to its utmost vertical position (chain stanchions by-pass travel lugs automatically on the way up), then lower the folded platform to rest on the travel lugs.





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# 4. Maintenance

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4.2 Filling Hydraulic Reservoir	4-6
4.3 Purge Hydraulic System	4-7

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## 4.1 General Maintenance

### 4.1.1 General

Ensure that you become familiar with all occupational safety regulations pertaining to liftgate equipment as well as all safety instructions pertaining to this equipment. Observe the instructions provided in this manual and on all hazard and information decals on the equipment.

This equipment should not be operated or maintained by personnel other than those who have been thoroughly trained on this or similar type of equipment.

The inspection and maintenance procedures shown in this section should be performed at recommended intervals or any time the liftgate shows signs of improper or abnormal operation. If further maintenance is required that is not covered in this manual, contact your nearest HOLLAND dealer.



#### **WARNING**

Prior to performing any maintenance procedure always stand to one side of the platform. Ensure fingers, arms, hands, legs and feet are clear of moving liftgate



#### **WARNING**

To prevent injury, equipment or component failure, always use proper tools for the job, follow procedures and adhere to all safety symbols placed within the instructions.



#### **WARNING**

When working below a vehicle, always ensure the vehicle is supported with rigid blocks, or other stable supports. Failure to follow this safety precaution could result in personal injury or equipment damage.

---

## **4.1 General Maintenance**

### **4.1.2 Daily Inspection**

Before use, inspect the Liftgate for damage to mounting assemblies, mechanical parts, and hydraulic components and hoses. Any noticeable defects must be repaired prior to operation to avoid damage and possible injury.

Inspect and replace any decals that have been removed or have become illegible.

### **4.1.3 Monthly Inspection**

1. Perform the following procedures to ensure the control station operates correctly.
  - A. With the master disconnect switch in the "OFF" position, the liftgate should be disabled.
  - B. With the master disconnect switch in the "ON" position, and the bottom toggle switch in the default position "Up/Down", push the top toggle switch to "UP", this should raise the folded platform.
  - C. With the master disconnect switch in the "ON" position, and the bottom toggle switch in the default position "Up/Down", push the top toggle switch to "Down", this should lower the folded platform.
  - D. With the master disconnect switch in the "ON" position, the bottom toggle switch to "Close/Open", push the top toggle switch down to "Open", this should unfold the platform.
  - E. With the master disconnect switch in the "ON" position, the bottom toggle switch to "Close/Open", push the top toggle switch up to "Close", this should fold the platform.
2. Check to ensure the liftgate operates freely and smoothly throughout the entire operating cycle without unusual noise or vibration.
3. Check to ensure the platform is level when raised or lowered.
4. Check to ensure there is no damage to either chain stanchion or travel lug.
5. Check to ensure there is no damage, twists, or missing links, to either chain.

---

## **4.1 General Maintenance**

### **4.1.3 Monthly Inspection**

6. Check to ensure the platform chains have an equal amount of tension when the platform is completely unfolded and off the ground.
7. Ensure the U-bolts that anchor the chains to the platform are not loose in their respective z-bracket. If the U-bolts are loose, ensure the U-bolt hole sizes on the z-bracket have not increased due to wear.
8. Perform a overall inspection on liftgate for damage such as bent or distorted members, any cracked welds, which may have resulted from overloading and or abuse.
9. Check to ensure all nuts, bolts, pins and hinges are in place and properly secured and none are missing or damaged.
10. Check all covers and guards, ensure they are properly placed and secure.
11. With the liftgate fully opened and at ground level, ensure the retention ramp operates properly.
12. Check that the platform engages properly with the travel lugs in the travel position.
13. Ensure hydraulic connections at pump box and liftgate columns are securely mounted and free of twists or kinks.
14. Check for oil leaks from lift cylinders, hydraulic hoses, hydraulic fittings and hydraulic components. Tighten all connections and fittings.
15. Check to ensure oil level in the hydraulic reservoir located in the pump box assembly is at proper level. Refer to Filling Hydraulic Reservoir section for proper filling procedure.
16. Check all electrical wiring and battery cable connections are tight and free of corrosion.
17. Check electrolyte level of the batteries.
18. Inspect all decals, ensure they are legible and not damaged. Replace any damaged or missing decal. Refer to Liftgate Decal Location section.
19. Perform lubrication procedure shown in Liftgate Lubrication section.

---

## **4.1 General Maintenance**

### **4.1.4 Semi-Annual Inspection**

1. Perform all procedures shown in Monthly Inspection section.
2. Check for any excessive wear in the following areas:
  - A. Roller and Pin Assemblies.
  - B. Platform hinge pins and hinge plates.
  - C. Platform inner and outer hubs (both sides).
  - D. Platform chain and chain stanchion.
  - E. All pivot points.
  - F. All cylinder pins, nuts and bolts.
3. Perform the following procedure to inspect the pump motor.
  - A. Disconnect battery cable.
  - B. Remove motor end cover.
  - C. Examine the armature brushes for excessive wear.

**Note!**

**Brushes should be replaced if less than 1/8 inch long.**

- D. Clean all residue from inside motor housing.
  - E. Apply several drops of a light weight machine oil to the armature shaft bearing in the motor end and reassemble the motor end cover.
4. Perform following procedure if hydraulic oil in the reservoir if dirty.
  - A. Drain oil from hydraulic system and flush entire system.
  - B. Remove and clean the hydraulic filter.
  - C. Replace oil. Refer to Filling Hydraulic Reservoir procedure for recommended oil.
  - D. Purge the system. Refer to Purge Hydraulic System for purging procedure.

### **4.1.5 Liftgate Lubrication**

All pivot points should be lubricated using EP2 chassis grease. In severe winter conditions it may be necessary to lubricate more frequently.

**Note!**

**Some models are equipped with greaseless bushings at all or most pivot points.**

## 4.2 Filling Hydraulic Reservoir



### WARNING

Keep dirt, water and other contaminants from entering the hydraulic reservoir. Prior to opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean the area to prevent hydraulic contamination.

#### **Important!**

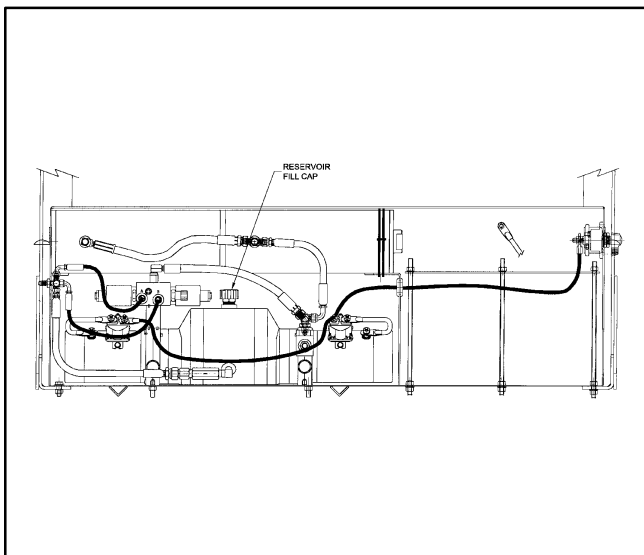
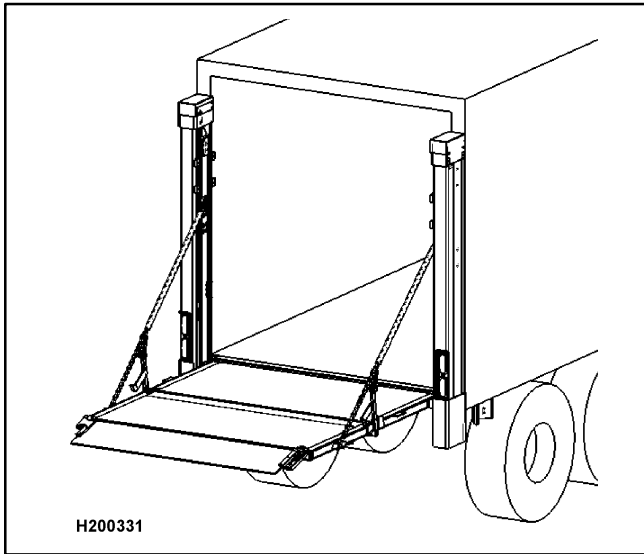
**Ensure vehicle parking brake is securely engaged.**

Using the control station switch, raise the folded platform to its utmost vertical position so that it clears the storage bracket. Place the platform in the fully open position at deck height.

Remove the filler cap and add 2 quarts of recommended hydraulic fluid to pump reservoir.

#### **Important!**

**Always use correct grade of hydraulic fluid. Refer to the chart below for recommended hydraulic fluid or contact your HOLLAND representative.**



Temperature Range	Recommended Fluids	
	Manufacturer	Type
Above 0° C (32° F)	Any	AW-32, ISO-32, ATF
-25 to 65° C (-15 to 150° F)	Any ESSO.EXXON MOBIL SHELL	DEXRON III HYDRAUL 50 DTE 11 DONAX TD Low Viscosity
-35 to 50° C (-30 to 120° F)	EXXON/ESSO SHELL PETRO-CAN	UNIVIS N15 TELLUS T15 MV ARCTIC 15
-45 to 40° C (-50 to 100° F)	ANY ESSO EXXON SHELL	MIL-H-5606 UNIVIS J-13 UNIVIS HVI 13 AEROSHELL FLUID #4

Install the filler cap, once the reservoir has been filled to correct level (1/2 inch from top) and purge the hydraulic system.



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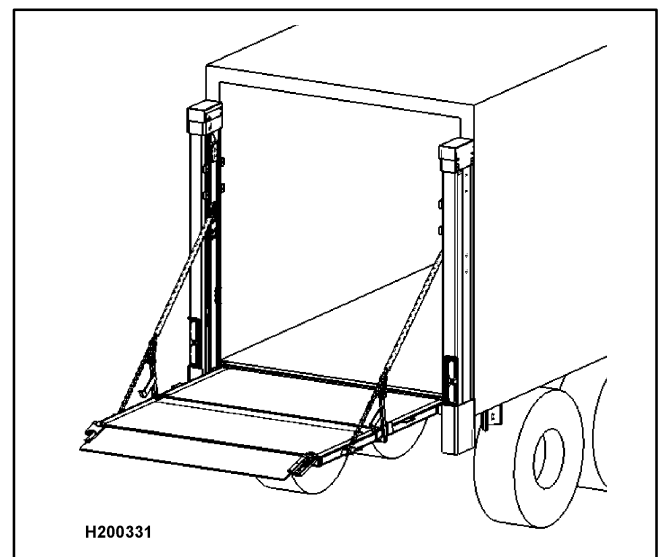
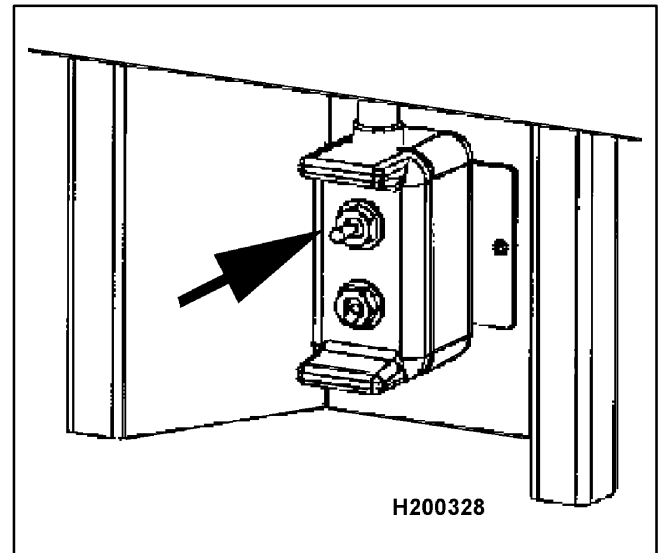
## 4.3 Purge Hydraulic System

***Important!***

***Ensure vehicle parking brake is securely engaged.***

Once the reservoir has been filled to the proper level, the system must be bled to ensure that all air has been purged from the system.

1. Cycle liftgate cylinders by using the control station to raise the folded platform to its utmost vertical position so that it clears the storage bracket.
2. Cycle the platform down to ground level and then up to deck height. Stop at deck height, continue to power the platform up for 15–20 seconds.
3. While standing clear and to the side of the platform, open the platform from a vertical to a horizontal position at deck height.
4. Repeat step 2.
5. Repeat cycle at least five times to expel air from self bleeding system.
6. Add oil as required and repeat steps 1 and 2.
7. Inspect for any leaks and add oil as required to proper level.
8. Thoroughly clean and wipe up any spilled oil.





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# 5. Miscellaneous

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## 5.1 Decal Part Numbers



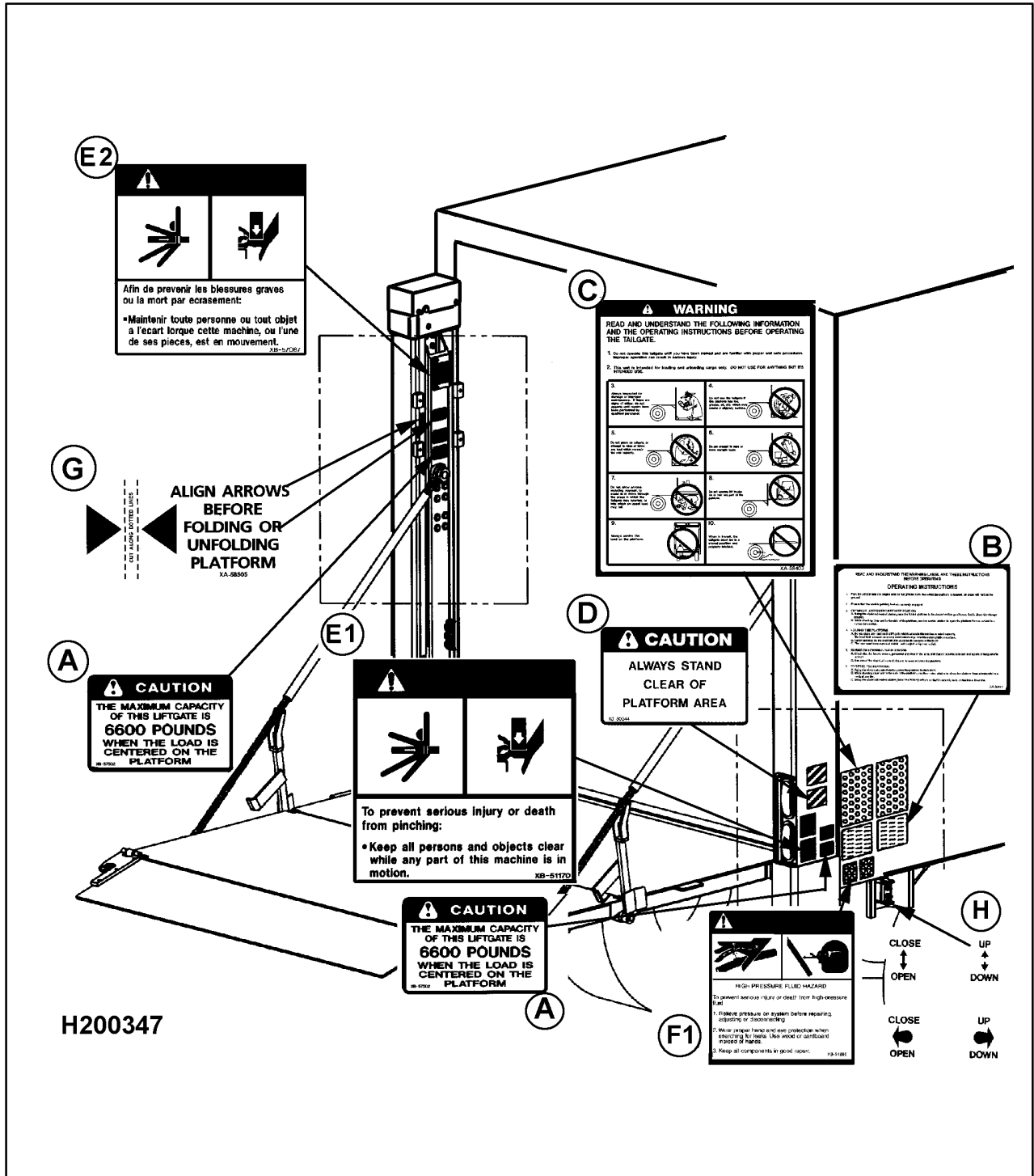
### IMPORTANT

The decals must be installed, maintained, and kept visible and legible. Failure to do so could result in operation without the benefit of important information which may lead to unsafe conditions or damage to equipment. Holland Equipment will not be liable and warranty becomes void.

Inspect all decals listed below and shown on Liftgate Decal Location section, to ensure they are in the correct location and are legible. Replace any damaged and or missing decals. Contact your nearest HOLLAND dealer for replacement decals.

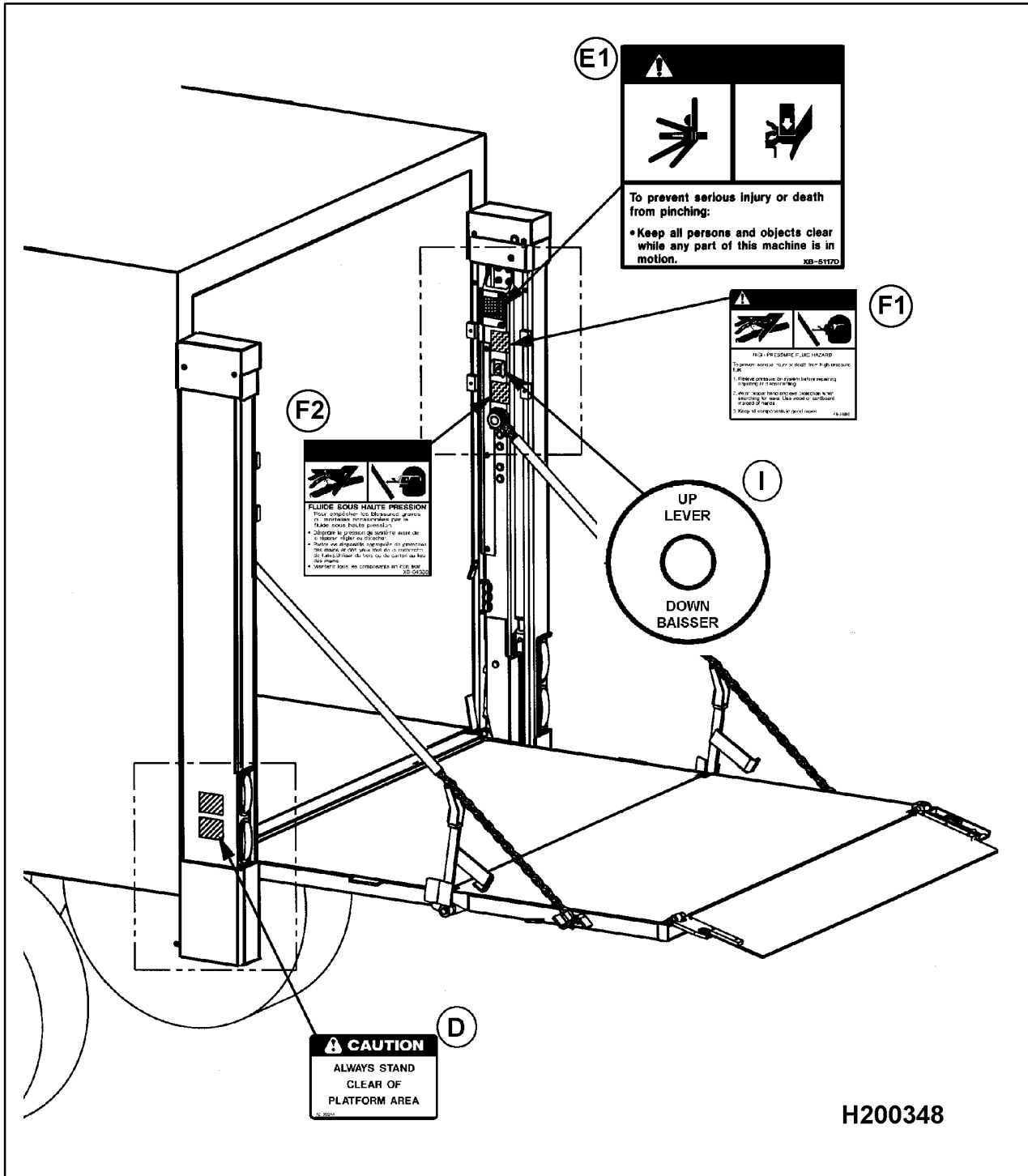
Decal	Quantity	English	French	Decal Description
A	2	XB-57502	XB-57503	MAXIMUM CAPACITY 6600
	2	XA-58099	XA-58100	MAXIMUM CAPACITY 5500
	2	XA-58090	XA-58091	MAXIMUM CAPACITY 4500
B	1	XA-58401	XA-58402	INSTRUCTION DECAL – DH SERIES
C	1	XA-58403	XA-58404	WARNING – DH SERIES
D	2	XB-50344	XB-50349	CAUTION – ALWAYS STAND CLEAR
E1	2	XB-51170		DANGER – SERIOUS INJURY
E2	2		XB-57067	DANGER – SERIOUS INJURY
F1	2	XB-54995		WARNING – HIGH PRESSURE
F2	2		XB-64388	WARNING – HIGH PRESSURE
G	1	XA-58505	N/A	ALIGN ARROWS
H	1	XA-58288	N/A	DUAL TOGGLE CONTROL
I	1	XB-51741	N/A	UP/DOWN – BILINGUAL

## 5.2 Decal Installation



Direct Hydraulic Twin Column Liftgate

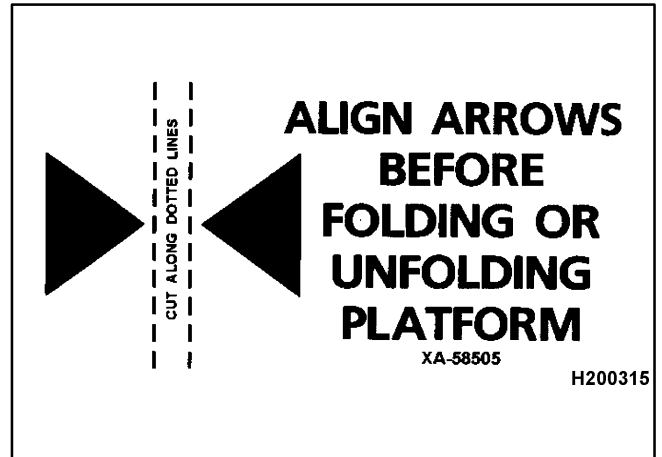
## 5.2 Decal Installation



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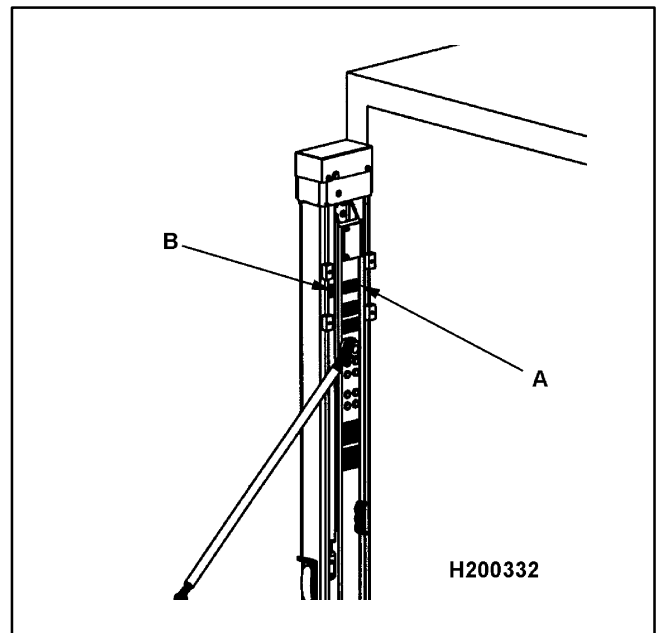
### **5.3 Align Arrows Decal**

Cut the “Align Arrows” decal on the dotted lines.



Ensure runners are in the fully raised position.

Peel and place the decal (A) on the runner and decal (B) on the column, opposite each other.



---

## **5.4 Inspection List**

**Model:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Technician:** \_\_\_\_\_

### **Structural Inspection**

Inspect Alignment of Final Assembly  
Inspect Pump Box Mounting  
Inspect all Installation Welds  
Check Pins, Bolts and Fasteners  
Check for Twists in Chain  
Check for Torsion Spring Engagement  
Ensure Platform Ramp touches Ground

### **Electrical Inspection**

Check Power/Charge Plug and Terminal  
Check for Loose Wires and Terminals  
Circuit Breaker and Fittings  
Battery Hookup  
Check for Fully Charged Batteries  
Inspect Solenoid Connections  
Check Wiring Harness Connections  
Check Control Station Location  
Wiring Harness Connections (at bottom of curb-side runner) is tight and secure

### **Hydraulic Inspection**

Proper Fluid Level  
Check Fittings for Leaks in Pump Box  
Check Fittings for Leaks in Columns  
Check for Chafing of Closing Cylinder Hose and Spring Guard

### **Operation Inspection**

Check Operation of Outside Control  
Check Operation of Runner Control  
Platform Folds and Unfolds (approx. 16 Seconds)  
Lowering Speed (less than 25 Seconds)  
Platform Raises and Lowers Evenly  
Platform Stores and Locks Securely behind both Column Wedges  
Check Lift Operation Under Load  
Decals in Correct Location and Legible



### Customer Complaint

Holland Equipment Limited  
20 Phoebe St., Norwich, Ont., N0J 1P0  
Ph. (519) 863-3414 Fax. (519) 863-2398

Warranty     Quality     Other

CSR #                      Service Notification #

Customer Information			
Company Name		Customer Contact	
Address			
City	State/Province	Country	Postal Code
Phone Number		Fax Number	
Distributor/Dealer		Distributor/Dealer Contact	
Address			
City	State/Province	Country	Postal Code
Phone Number		Fax Number	
E-mail Address			

Machine Details		
Model Number		Serial Number
Into Service Date		Purchased From
Vehicle Information		
Year	Make	Model
V.I.N.	Mileage	Into Service Date
Primary Use	Gate Cycle Frequency (per day)	
Additional Comments		

Complaint /Failure Information
<i>(describe the complaint/ failure and any relevant information)</i>

Corrective Action/ Repair
<i>(describe the action taken to resolve issue)</i>

Created By:

Date Created



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