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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: \_\_\_\_\_

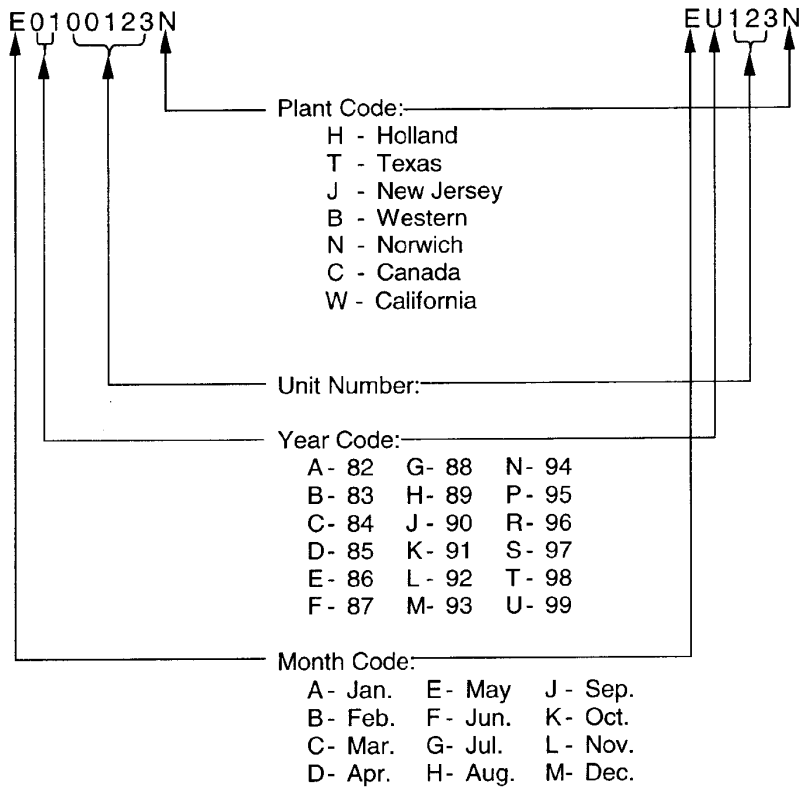
Pump Model No: \_\_\_\_\_

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.

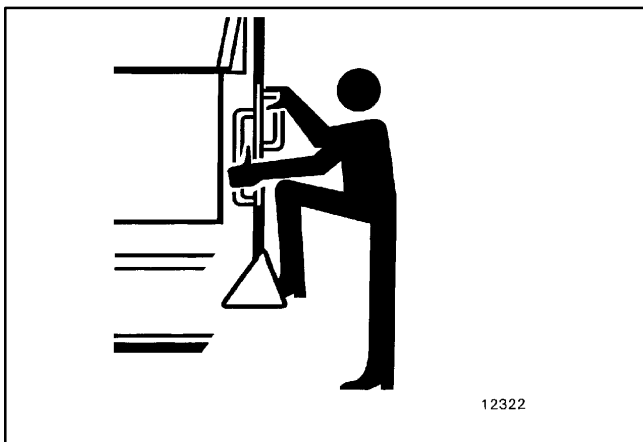
Never operate the liftgate unless the area is clear of obstacles and other personnel.

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.

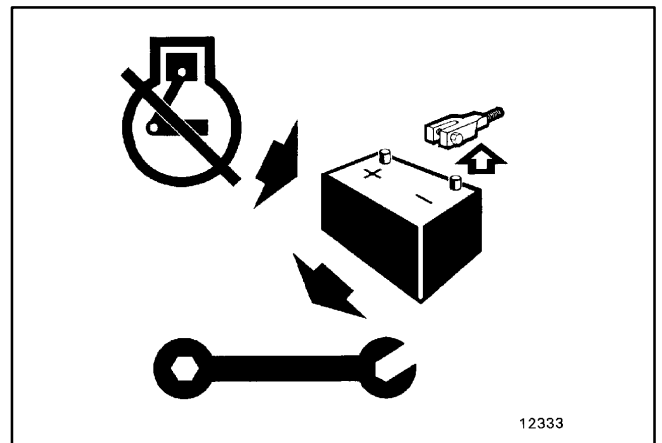


### WARNING

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

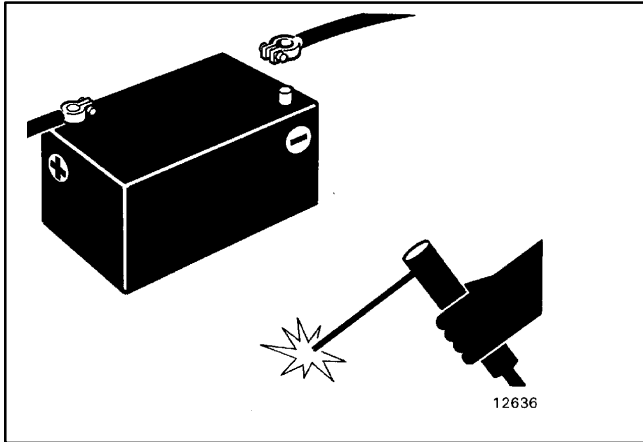
While servicing or repairing equipment, always shut off the engine and cycle all appropriate controls to relieve trapped hydraulic pressure.

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



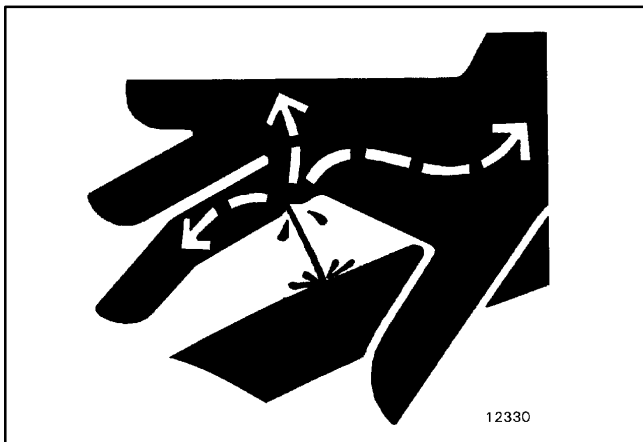
When welding is required ensure that the battery ground cable is disconnected and that all electronic equipment are completely isolated electrically before welding is initiated.

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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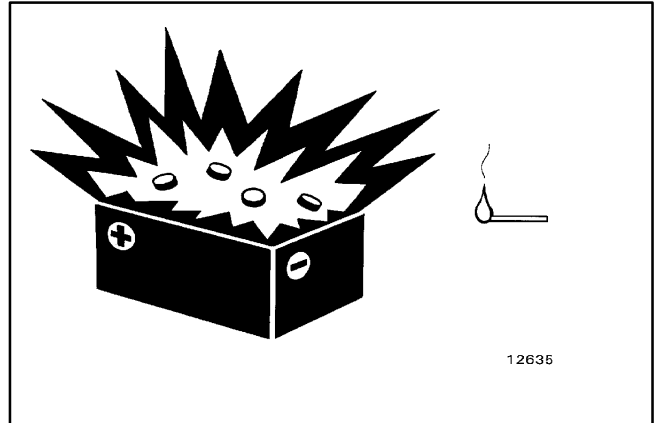
## 2.6 Servicing Safety Precautions



### 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. Before Getting Started

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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.



### **CAUTION**

**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.**

## **3.2 Tools Required**

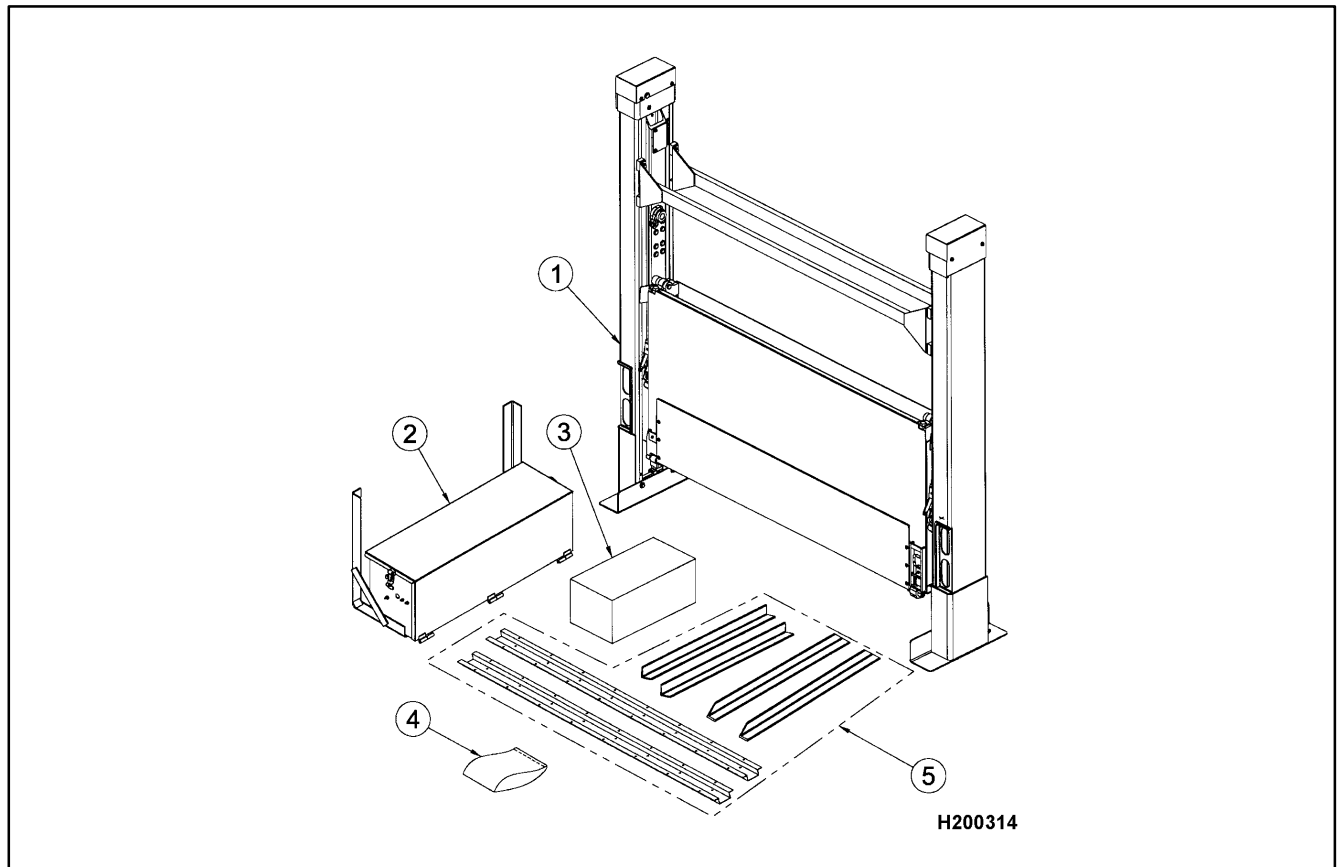
The following list of tools and equipment is provided and recommended to ensure safe and proper installation of the liftgate.

- Welder
- Cutting Torch
- Chain Hoist or Forklift with Chain (2400# minimum capacity)
- Floor Jack
- Various Hand Tools and Wrenches
- Wire-Cutter
- Pliers
- Tape Measure
- Pry Bar
- Hydraulic Oil and Grease
- Level

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## **3.3 Liftgate Installation Components**

### **3.3.1 Included Parts**



1. Dual Hydraulic Column Lift
2. Pump Box Assembly
3. Installation Kit (Truck or Trailer)
4. Decal Kit
5. Optional Mounting Angle and Conduit Channel (Trailer Installation Only)

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## **3.3 Liftgate Installation Components**

### **3.3.2 Truck Installation Kit**

**Note!**

**Ensure all components and parts have been received prior to start of liftgate installation. If any component or part is missing, contact your HOLLAND representative.**

Listed below are the parts and components which are included in the liftgate kit.

<b>Item</b>	<b>Description</b>	<b>Qty</b>
1.	Control Station, Dual Toggle	1
2.	Wire Harness	1
3.	Mounting Bracket, Remote	1
4.	Battery Cable, 12.00 inches.	2
5.	Battery Cable, 40 feet	1
6.	Cable, 4 wire, 18 feet	1
7.	Cable End, 5/16 inch hole	2
8.	Light Kit, Oval	4
9.	Cable Assy, 6 wire, 72.00 inches	1
10.	Hose Assy, 168.00 inches	1
11.	Hose Assy, 60.00 inches	2
12.	Hose Assy, 132.00 inches	1
13.	Fitting, Swivel Run Tee – 8	1
14.	Hose Assy, 40 inches	2
15.	Battery Cable, 18 inches	1
16.	Bolt, 1/4 inch UNC x 1.00 inch	2
17.	Locknut, 1/4 inch UNC	2

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## **3.3 Liftgate Installation Components**

### **3.3.3 Trailer Installation Kit**

**Note!**

**Ensure all components and parts have been received prior to start of liftgate installation. If any component or part is missing, contact your HOLLAND representative.**

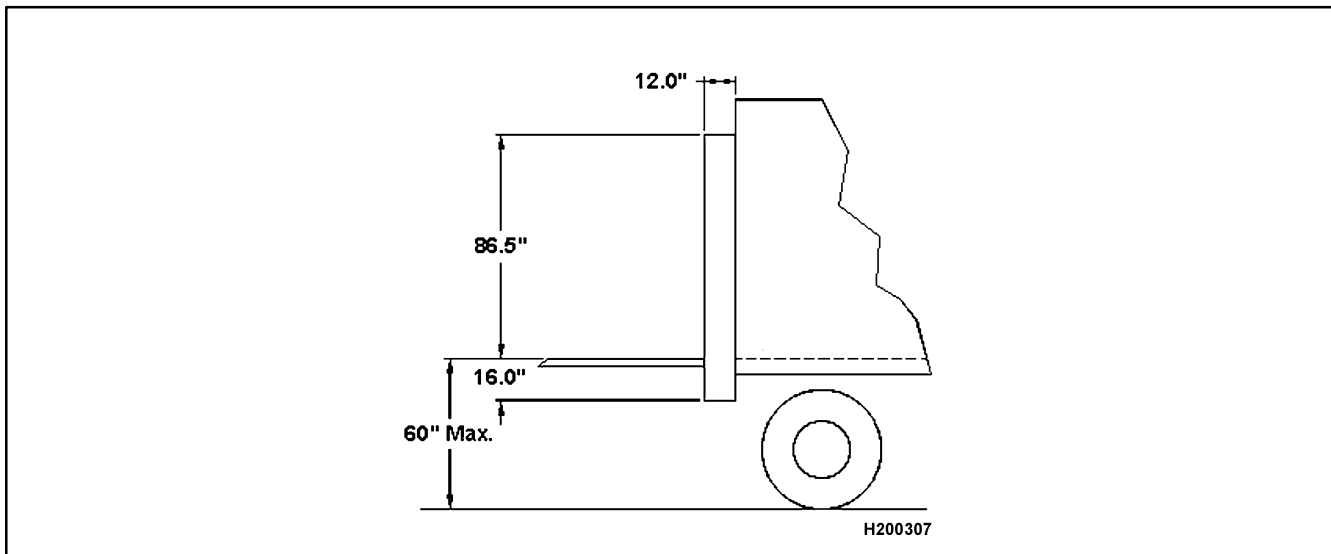
Listed below are the parts and components which are included in the liftgate kit.

<b>Item</b>	<b>Description</b>	<b>Qty</b>
1.	Control Station, Dual Toggle	1
2.	Wire Harness	1
3.	Mounting Bracket, Remote	1
4.	Battery Cable, 12.00 inches.	2
5.	Battery Cable, 40 feet	1
6.	Cable, 4 wire	1
7.	Cable End, 5/16 inch hole	2
8.	Light Kit, Oval	4
9.	Cable Assy, 6 wire, 288.00 inches	1
10.	Hose Assy, 396.00 inches	1
11.	Hose Assy, 300.00 inches	2
12.	Hose Assy, 132.00 inches	1
13.	Fitting, Swivel Run Tee – 8	1
14.	Hose Assy, 264 inches	2
15.	Connector, Single Pole Socket	1
16.	Battery Cable, 18 inches	1
17.	Bolt, 1/4 inch UNC x 1.00 inch	2
18.	Locknut, 1/4 inch UNC	2

## 3.4 Standard Requirements

### 3.4.1 Deck Height

The deck height is the measurement from the ground to floor level of the vehicle and will vary with the platform size of each liftgate.



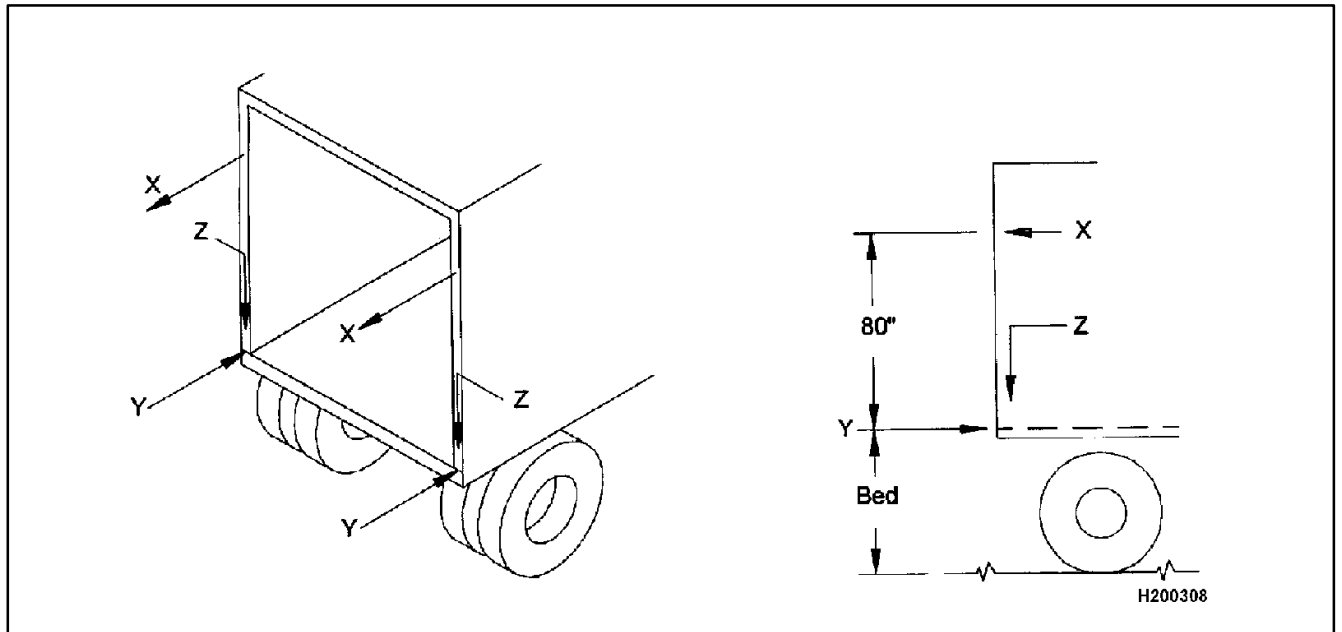
Capacity	Platform Flat*	Minimum Deck Height
3500	86 X 48	50" - 60"
	86 X 60	38" - 60"
	86 X 72	44" - 60"
4400	86 X 60	38" - 60"
	86 X 72	44" - 60"
	86 X 84	44" - 60"
5500	86 X 60	38" - 60"
	86 X 72	44" - 60"
	86 X 84	44" - 60"
6600	86 X 60	38" - 60"
	86 X 72	44" - 60"
	86 X 84	44" - 60"

\* Platform width shown is for 102" wide models. 90" wide models have an 80" wide platform.

### 3.4 Standard Requirements

#### 3.4.2 Side Wall

Ensure the vehicle is capable of supporting the forces shown below. If required, contact your HOLLAND representative for additional information.



Model	X and Y (lbs)	Z (lbs)
DH35XX	2150	3500
DH45XX	2400	4500
DH55XX	2900	5500
DH66XX	3400	6600

X = Side Wall Tension  
 Y = Side Wall Compression  
 Z = Side Wall Shear

---

## 3.5 Vehicle Preparation

### 3.5.1 Rear Frame

**Important!**

*To prevent alternator and battery damage, disconnect the vehicle electrical system prior to welding.*

1. Remove bumper, step or any protrusions that would prevent your liftgate from being mounted flush against the rear vehicle door frame.

**Note!**

**A minimum of 3/16" thickness is required on the rear vehicle door frame.**



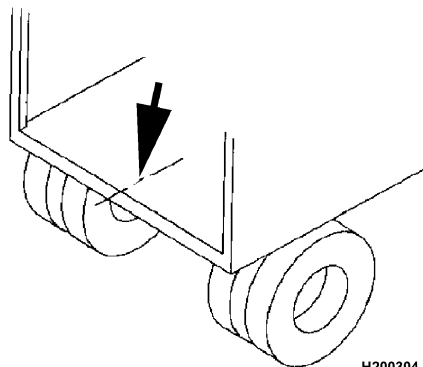
### WARNING

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch. Work in a well ventilated area that will carry toxic fumes and dust away. Always wear appropriate respirator. Dispose of paint and solvent properly.

**Note!**

**Ensure paint has been removed to a minimum of 76 mm (3 in.) from the area affected by heat.**

2. Ensure all paint has been removed and the vehicle clear of any debris prior to installation of the liftgate.
3. Locate and position a centerline on the vehicle bed.





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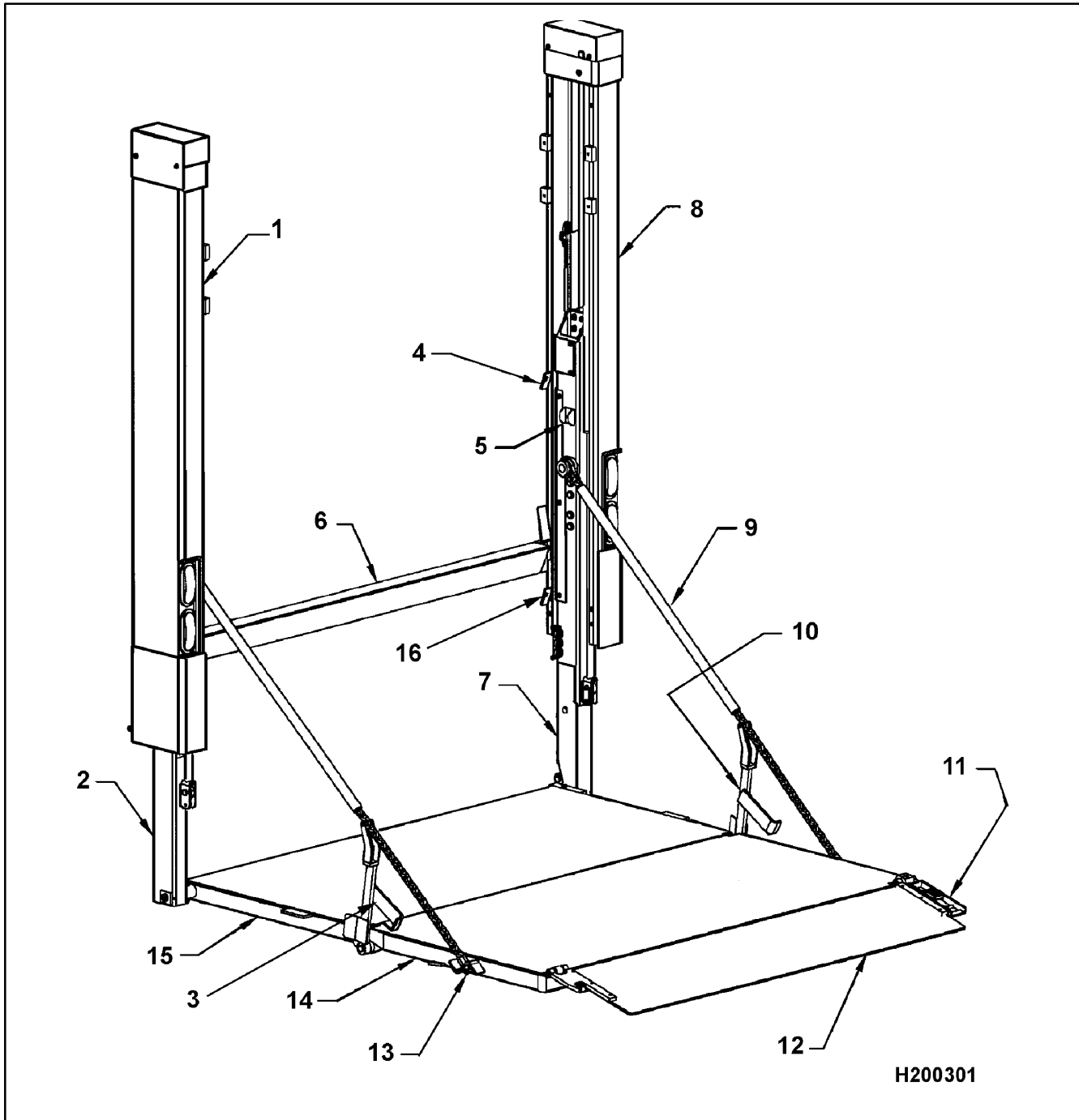
# 4. Installation

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## 4.1 Liftgate General Terminology

### 4.1.1 Direct Hydraulic Twin Column Liftgate



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Direct Hydraulic Twin Column Liftgate

## **4.1 Liftgate General Terminology**

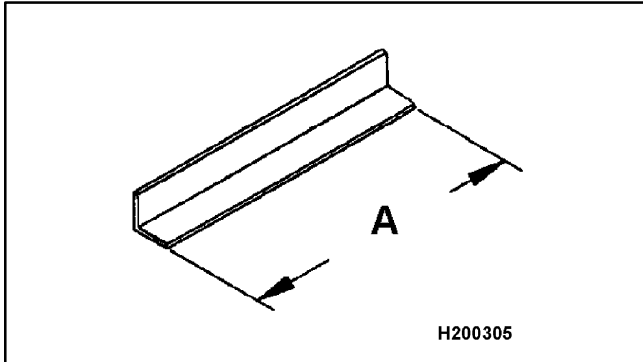
### **4.1.1 Direct Hydraulic Twin Column Liftgate**

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

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## 4.2 Installation Instructions

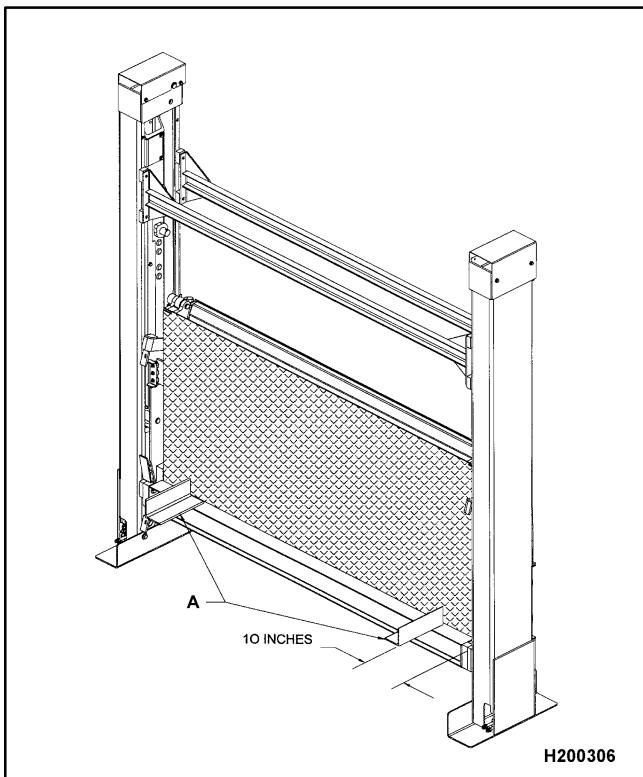
### 4.2.1 Liftgate Preparation



### WARNING

Do not remove any shipping supports from the liftgate. Failure to follow this procedure could result in improper installation of the liftgate.

1. Cut two 15 in. to 20 in. (A) angle supports.



2. Tack weld the angle supports (A) to the top surface of the extension deck.
3. Locate and mark the centerline of the liftgate.

**Note!**

The centerline mark should match up with the centerline marked previously on the vehicle bed.

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## 4.2 Installation Instructions

### 4.2.2 Liftgate Mounting



#### CAUTION

When positioning the liftgate, ensure all personal stand clear of the installation area. Failure to follow this caution could lead to serious injury.



#### WARNING

Prior to performing any electrical welding procedures to the liftgate, connect the ground cable as close as possible to the liftgate component being welded (eg, column assemblies, platform assemblies and runners).

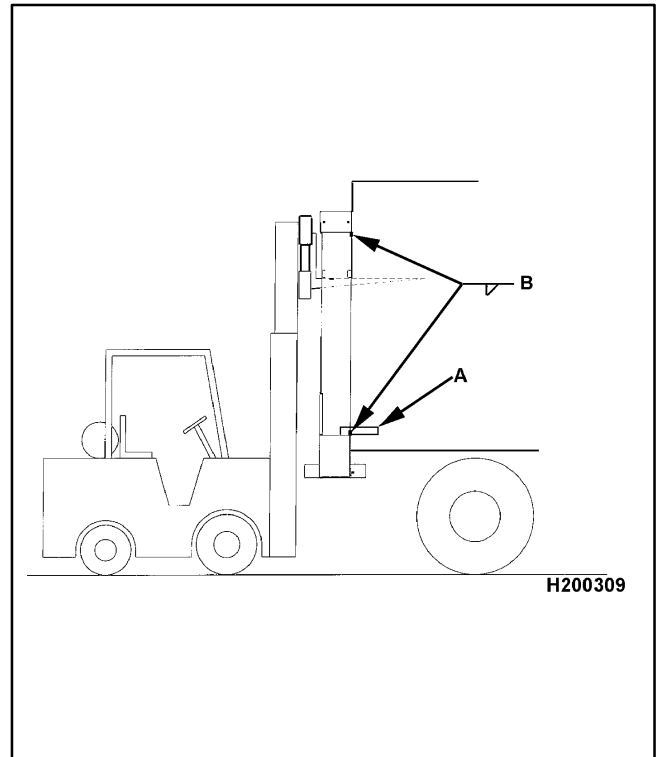
These assemblies are insulated by bearings, failure to follow this procedure can cause severe damage to electrical components and metal parts.

Use a forklift or suitable lifting device to center the liftgate against the vehicle rear frame. Rest the angle support (A) on the top surface of the vehicle deck.

Tack weld a 1/8 x 1 inch long weld (B) to the left and right columns.

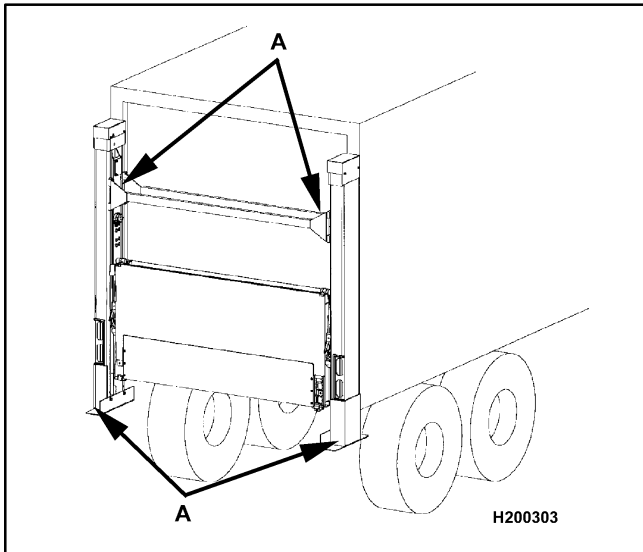
Verify positioning of liftgate to ensure the following:

- A. Crossmember is flush with vehicle deck.
- B. Liftgate is centered on vehicle.
- C. Columns are tight against door frame.



## 4.2 Installation Instructions

### 4.2.3 Liftgate Welding



#### WARNING

Prior to performing any electrical welding procedures to the liftgate, connect the ground cable as close as possible to the liftgate component being welded (eg, column assemblies, platform assemblies and runners).

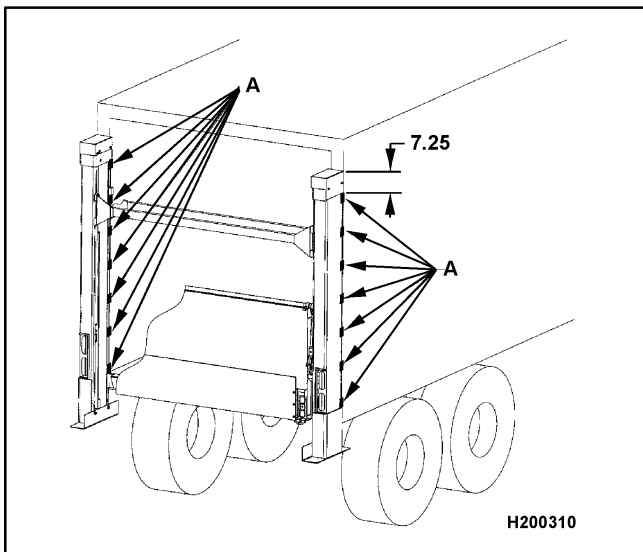
These assemblies are insulated by bearings, failure to follow this procedure can cause severe damage to electrical components and metal parts.



#### WARNING

Do not remove the support fixtures prior to welding.

A – Support Fixtures



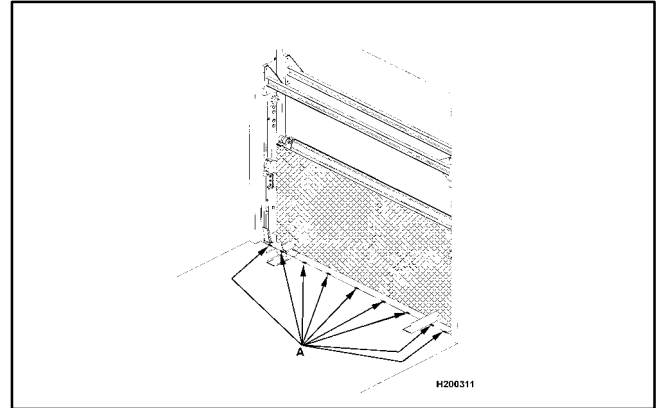
Weld a 5/16 inch fillet weld (A) (2 inches in 7 equally spaced places ) on both sides of the columns to the vehicle rear frame. Start weld 7.25 inches from top of column.

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## 4.2 Installation Instructions

### 4.2.3 Liftgate Welding

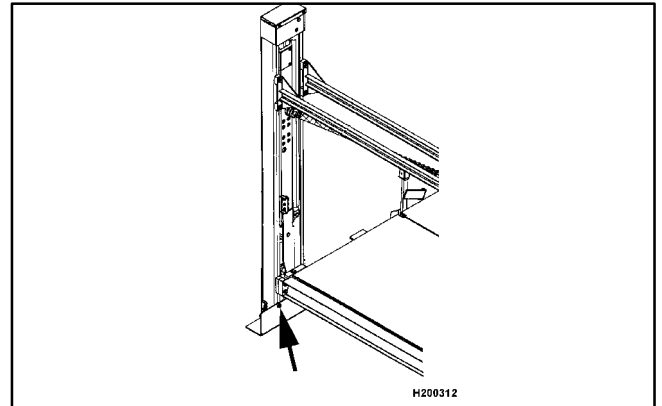
Remove forklift and weld a 3/16 inch fillet weld (A) (2 inches in 9 equally spaced places) along the crossmember to the vehicle rear frame.



***Important!***

***Do not remove the shipping supports until the liftgate has been completely welded to the vehicle rear frame.***

Remove the four bolts and locknuts securing the footplate shipping supports to the columns. Remove the supports.

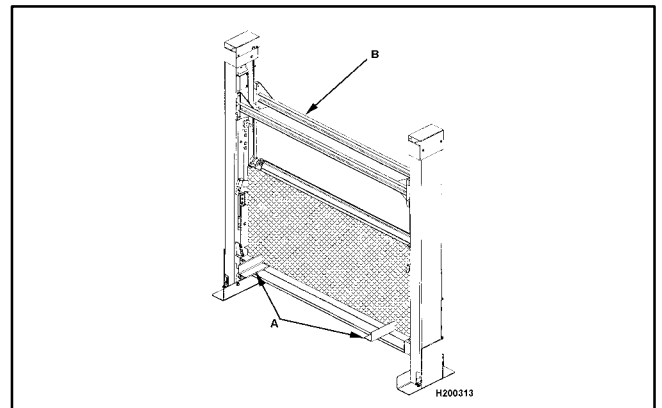


Remove the eight bolts and locknuts securing the lifting support (B) to the columns. Remove the support.

Carefully grind off the welds from the angle supports (A).

***Important!***

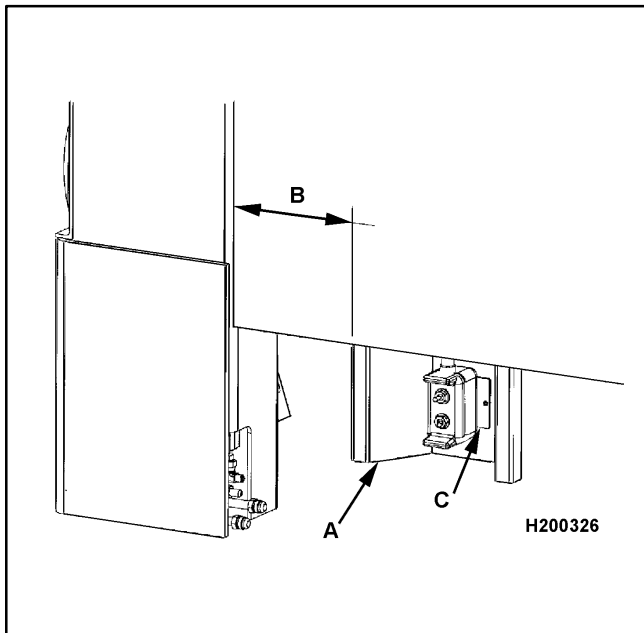
***When grinding off the welds, care must be taken not to damage the crossmembers.***



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## 4.2 Installation Instructions

### 4.2.4 Control Station



### WARNING

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.

Weld the mounting bracket (A) 4–6 inches (B) from the right column to the underside of the chassis crossmembers.

Using two 1/4 inch bolts and lock nuts, provided in the liftgate installation kit, install the control station (C) onto the mounting bracket.



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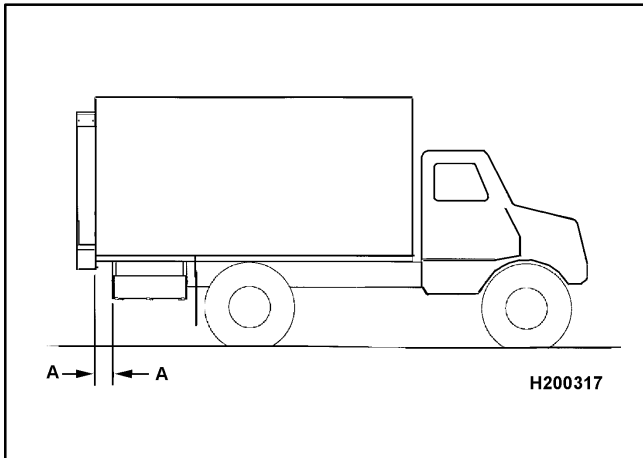
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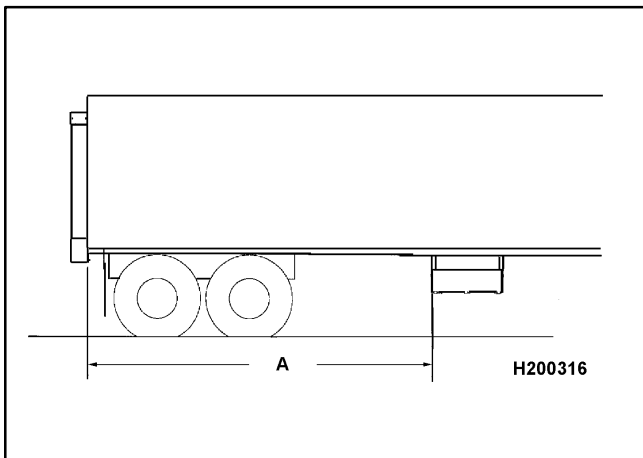
## 5.1 Pump Box

### 5.1.1 Pump Box Location



#### Truck Position

The pump and battery box must be positioned a maximum of 4 feet (A) from the truck rear frame.



#### Trailer Position

The pump and battery box must be positioned a maximum of 20 feet from the trailer rear frame.

## 5.1 Pump Box

### 5.1.2 Pump Box Welding



#### WARNING

When working below a vehicle, always ensure the vehicle is supported with rigid blocks, or other stable supports.



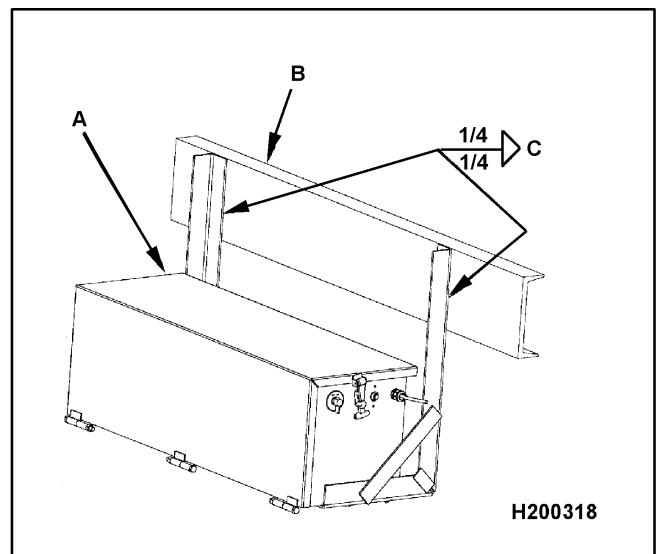
#### WARNING

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.

#### Truck Pump Box Installation

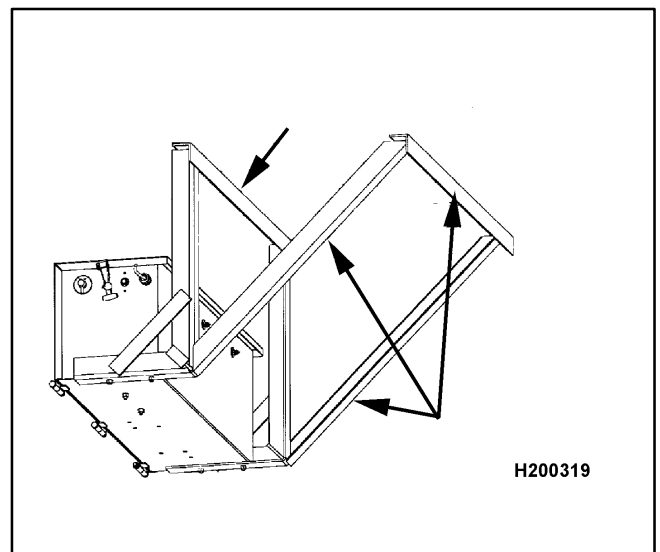
Using a suitable lifting device, position the pump box assembly (A) 4 feet from the truck rear frame (B).

Using a 1/4 inch weld (C), weld the pump box assembly to the truck frame rail.



#### Trailer Pump Box Installation

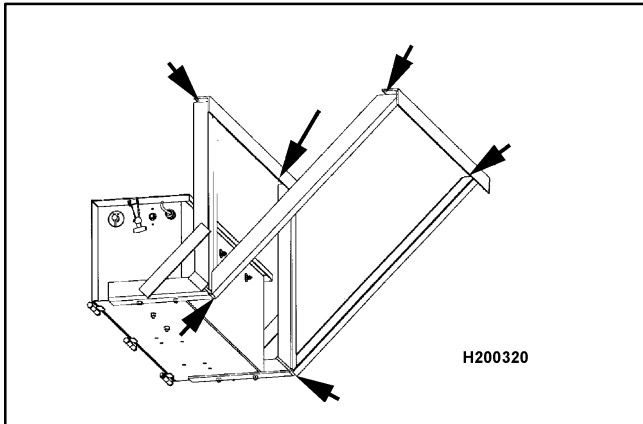
With the pump box resting on a level surface, weld the four pieces of mounting angle provided in the liftgate kit.



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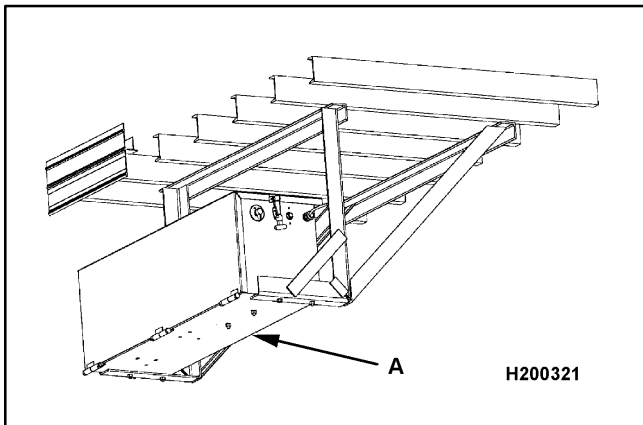
## 5.1 Pump Box

### 5.1.2 Pump Box Welding

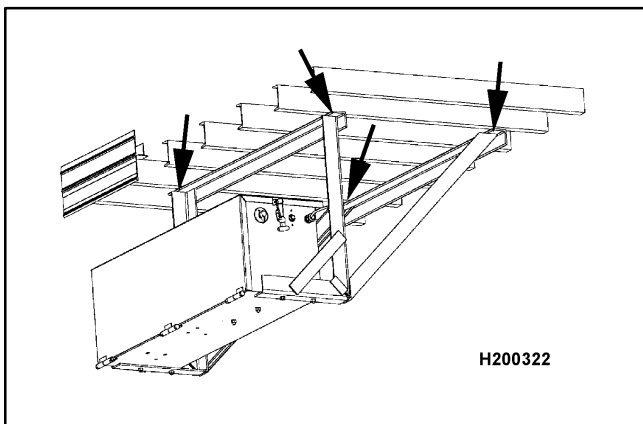


#### Trailer Pump Box Installation

Completely weld each angle intersection.



Using a suitable lifting device, position the pump box assembly (A) approximately 20 feet from the trailer rear frame.



Using a 3/16 inch weld, weld the pump box assembly to the trailer chassis crossmembers.

**Note!**

**The pump box assembly should be welded to each of the chassis crossmembers.**

## 5.1 Pump Box

### 5.1.3 Hydraulic Hose Routing



#### 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.



#### CAUTION

To prevent contaminants from entering the hydraulic system, keep all caps in the hose end fittings until immediately prior to making the hose connections. Contamination can lead to serious damage to the liftgate hydraulic components.



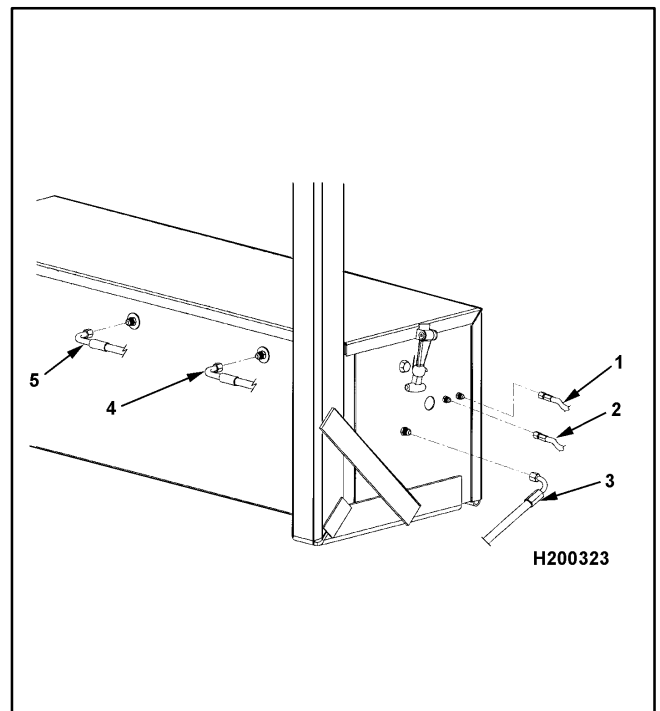
#### CAUTION

When routing hydraulic hoses, avoid moving parts, brake lines, sharp edges, and sharp bends. Ensure the hoses are free of kinks and securely mounted.

### Pump Box Hose Connection

Connect hydraulic hoses supplied in the liftgate installation kit, to the pump box.

1. Line "A" Power Fold (Truck 40", Trailer 264")
2. Line "B" Power Unfold (Truck 40", Trailer 264")
3. Low Pressure Return Line (Power Down)  
(Truck 60", Trailer 300")
4. High Pressure Line (Truck 60", Trailer 300")
5. High Pressure Line (Truck 168", Trailer 396")



---

## 5.1 Pump Box

### 5.1.3 Hydraulic Hose Routing

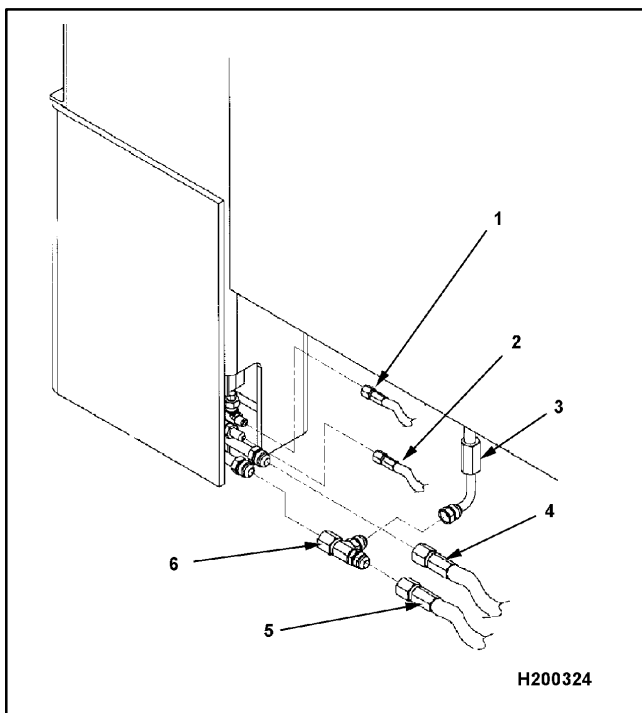
#### Right Column Hose Connection

Connect swivel tee fitting (6) supplied in the liftgate installation kit, to the right column.

Run hydraulic hoses from the pump box to the right column hose connection fittings.

**Note!**

**When routing hydraulic hoses on a trailer, use the conduit channel supplied in the liftgate installation kit to secure the hoses to the chassis crossmembers.**



1. Line "A" Power Fold (Truck 40",Trailer 264" )
2. Line "B" Power Unfold (Truck 40",Trailer 264")
3. Low Pressure Return Line (Truck/Trailer 132")  
(from left column)
4. High Pressure Line (Power Up) (Truck 60",  
Trailer 300")
5. Low Pressure Return Line (Power Down)  
(Truck 60", Trailer 300")
6. Swivel Tee Fitting

---

## 5.1 Pump Box

### 5.1.3 Hydraulic Hose Routing

#### Left Column Hose Connections

Run hydraulic hose from the pump box to the left column hose connection fittings.

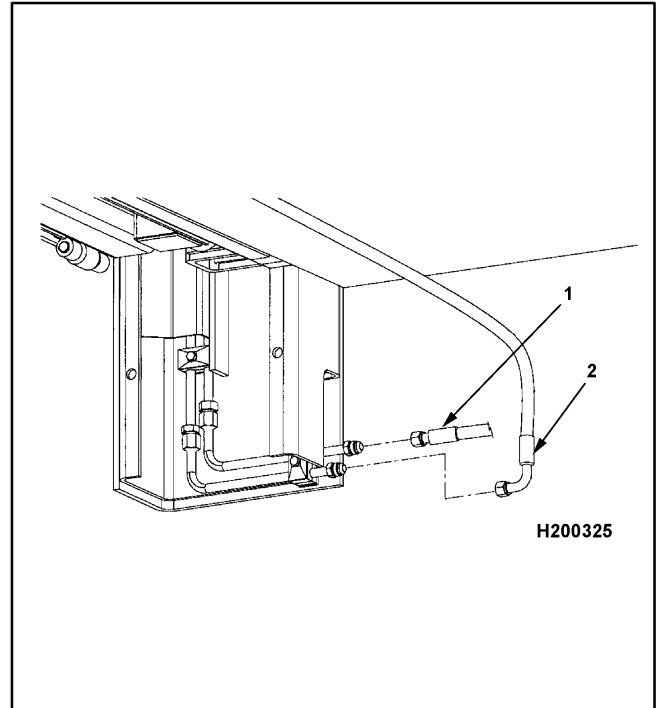
**Note!**

**When routing hydraulic hoses on a trailer, use the conduit channel supplied in the liftgate installation kit to secure the hoses to the chassis crossmembers.**

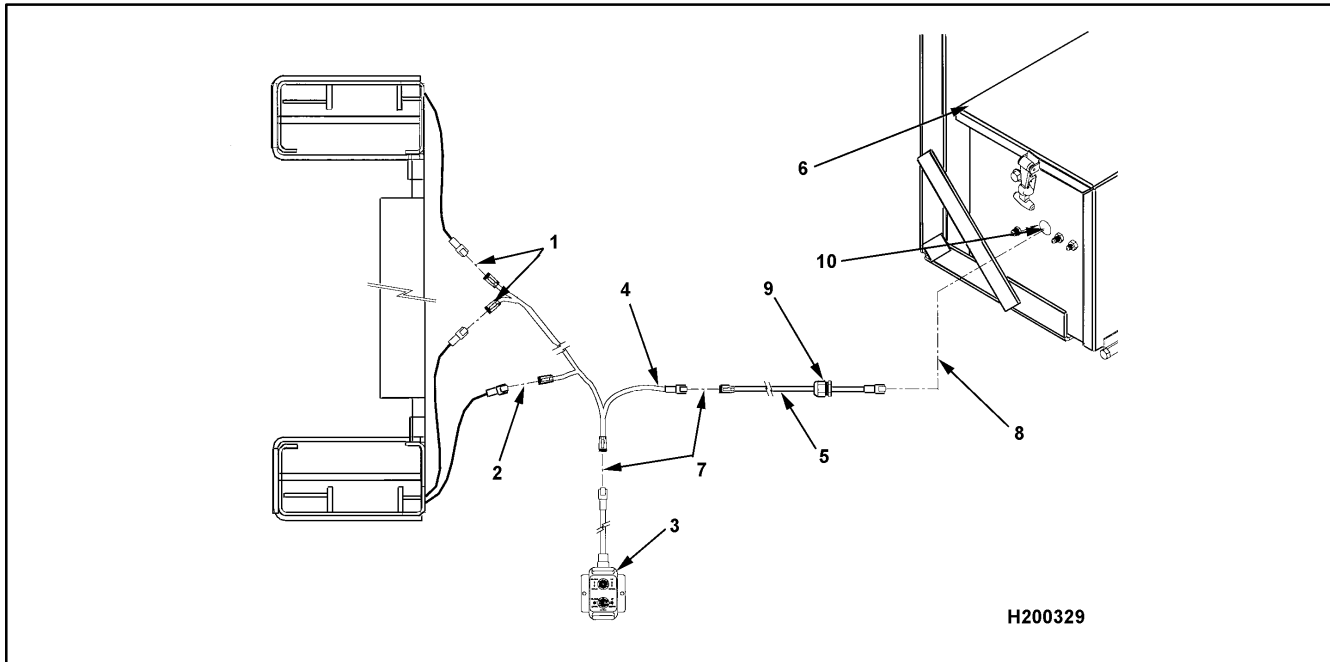
1. High Pressure Line (Power Up) (Truck 168", Trailer 396")
2. Low Pressure Return Line (Power Down) (Truck/Trailer 132" (curbside)) (from right column)

Once all hydraulic hoses have been connected, check to ensure all hoses are free of twists or kinks and are securely mounted to the vehicle.

Check and tighten all hose connections and fittings.



## 5.2 Wire Harness Installation



### WARNING

Ensure battery has been disconnected, never route an energized wire. When routing the wire harness, avoid moving parts, sharp edges, and sharp bends. Ensure the wire harness is free of twists and securely mounted.

1. Starting at the left and right columns, connect the 2-pin connections (1) and the 3-pin connection (2) to the wire harness (4).
2. Connect the wire harness to the control station (3) and the \*cable assembly (5).
3. Install the strain relief (9) in the access hole (10) of the pump box.
4. Open the pump box (6) and connect the 6-pin connection (8) through the access hole to the 6-pin plug located inside the pump box.
5. Ensure the wire harness is free of twists and is securely mounted to the vehicle.

#### Note!

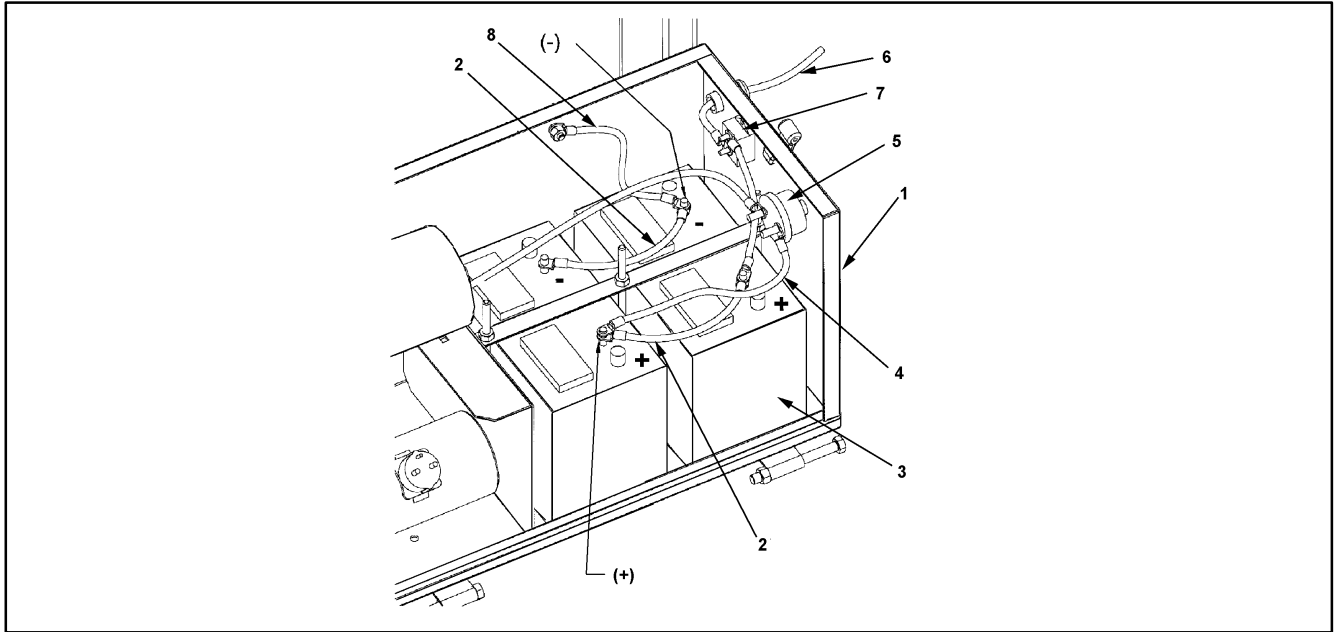
**\*Cable assembly (5) for truck installation is 72 inches long, and trailer installation is 288 inches long.**

#### Note!

**On trailer installation ONLY, route the 6 wire cable in conduit channel provided in installation kit, under trailer crossmembers.**



## 5.3 Battery Cable Installation



### WARNING

To prevent personal injury and equipment damage, ensure master disconnect switch is in the OFF position.



### WARNING

Never route an energized wire. When routing the battery cables, avoid moving parts, sharp edges, and sharp bends. Ensure the cables are free of twists and kinks.

#### **Important!**

**Ensure battery cable connections are as shown.**

1. Open lid of pump box assembly (1) and connect the two 12 inch battery cables (2) to the negative and positive battery terminals (3) as shown.
2. Connect the 18 inch battery cable (4) to positive terminal and to master disconnect (5).
3. Connect battery cable (6) to circuit breaker (150 amp) (7). Connect cable end, 5/16 inch hole (supplied in truck installation kit, item 7) to battery cable (6) then to positive terminal on vehicle battery.

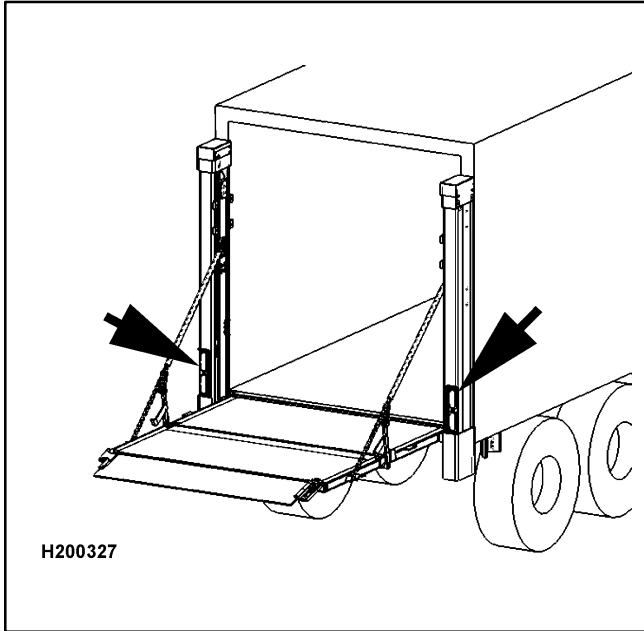
#### **Note!**

**For trailer installation, connect single pole socket connector, supplied in the trailer installation kit, to battery cable (6) prior to connecting to vehicle battery.**

4. Connect the battery ground cable (8).

---

## 5.4 Liftgate Light Installation



### WARNING

Ensure battery has been disconnected, never route an energized wire. When routing the wire harness, avoid moving parts, sharp edges, and sharp bends. Ensure the wire harness is free of twists and securely mounted.

Install the light kit and connect the 4 wire cable supplied in the installation kit to the trailer/truck electrical system.

## 5.5 Filling Hydraulic Reservoir

**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.**

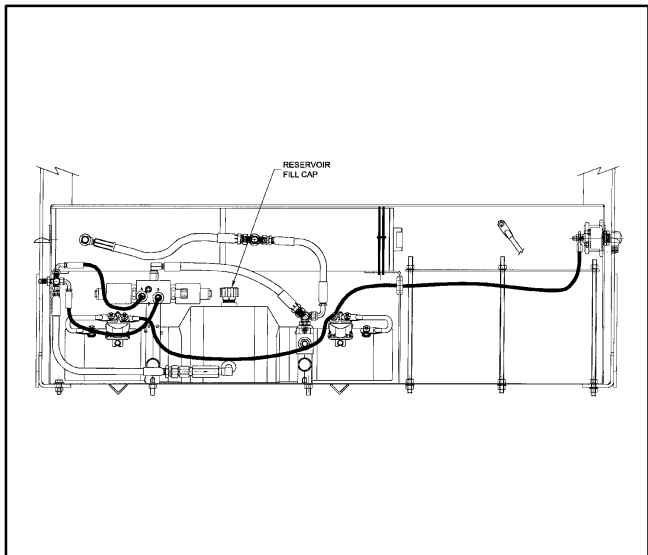
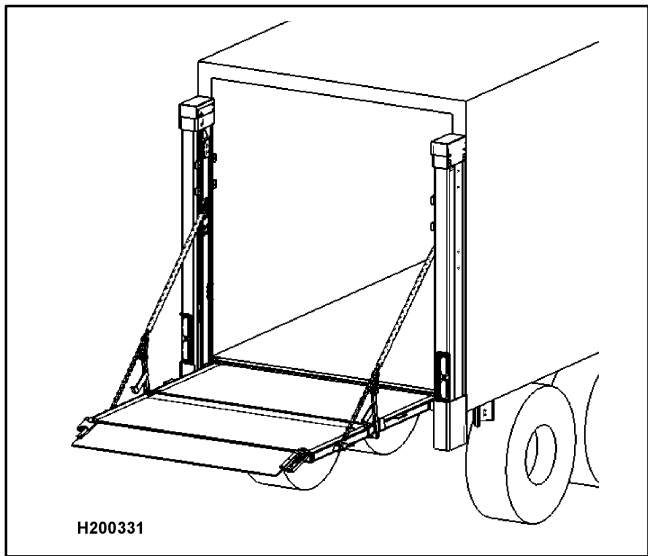
Temperature Range	Recommended Fluids	
	Manufacturer	Type
Above 0° C (32° F)	Any	AW-32, ISO-32, ATF
-25 to 65° C (-15 to 150° F)	Any ESSO.EXXON MOBIL SHELL	DEXRON III HYDRAUL 50 DTE 11 DONAX TD Low Viscosity
-35 to 50° C (-30 to 120° F)	EXXON/ESSO SHELL PETRO-CAN	UNIVIS N15 TELLUS T15 MV ARCTIC 15
-45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



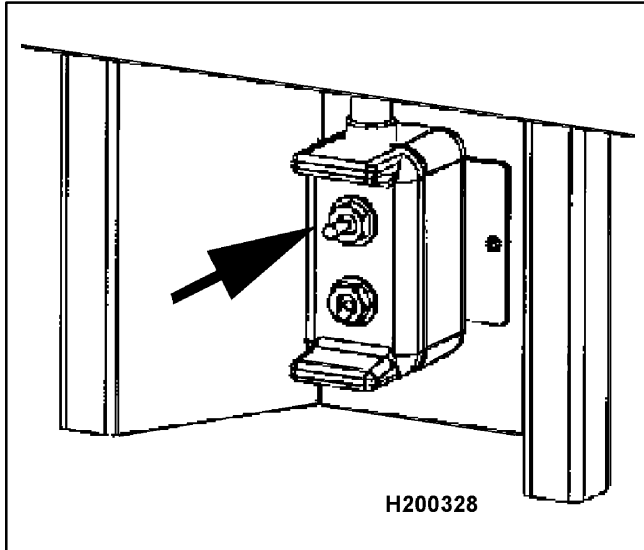
### WARNING

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.



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## 5.6 Purge Hydraulic System

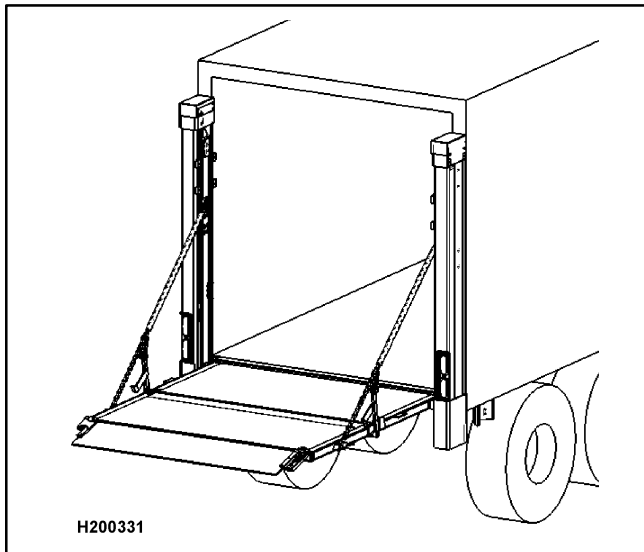


### ***Important!***

***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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# 6. Miscellaneous

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## 6.1 Decal Part Numbers



### IMPORTANT

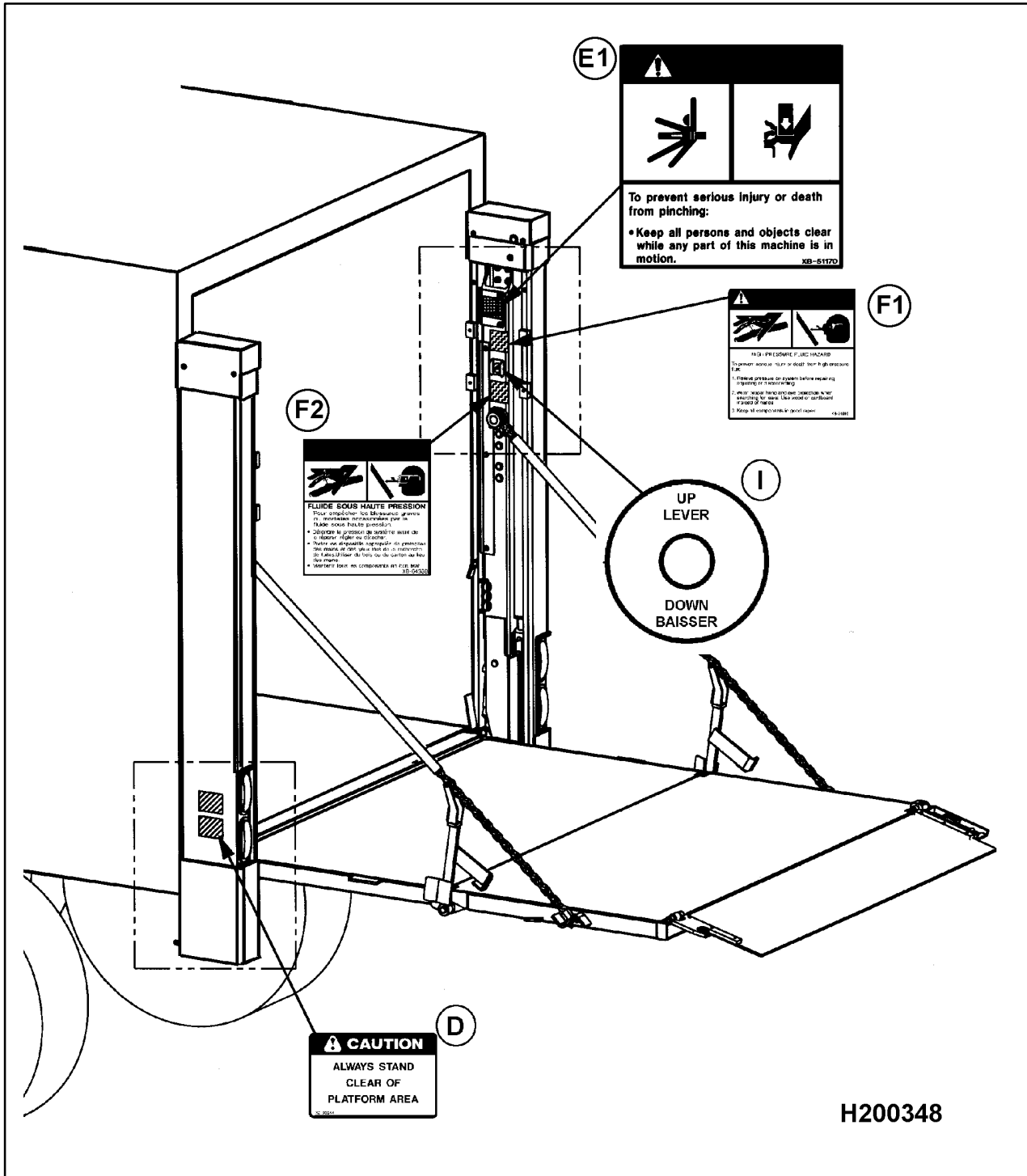
The decals must be installed, maintained, and kept visible and legible. Failure to do so could result in operation without the benefit of important information which may lead to unsafe conditions or damage to equipment. Holland Equipment will not be liable and warranty becomes void.

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



## 6.2 Decal Installation

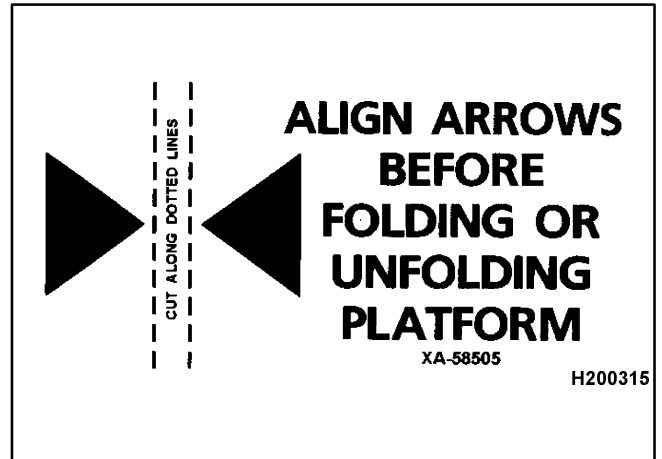




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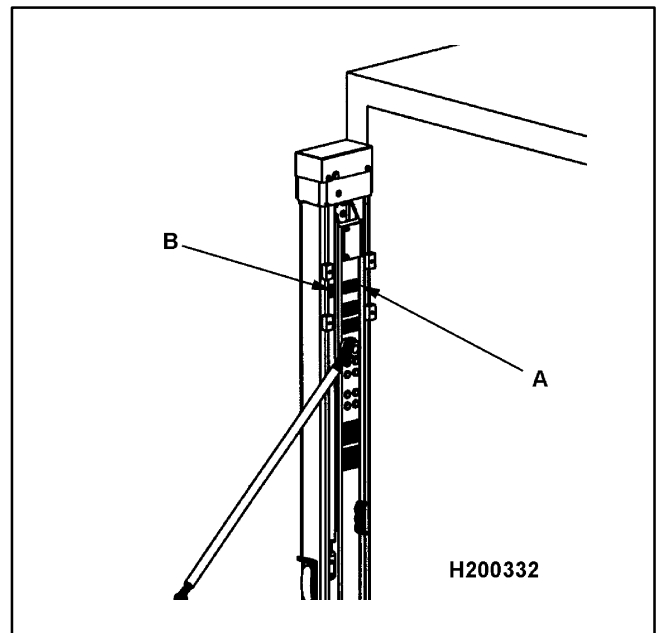
## 6.3 Align Arrows Decal

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.



## **6.4 Final Inspection List**

### **6.4.1 Pre-Delivery Inspection**

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

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

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

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

#### **Pre-Installation Inspection**

Correct Model  
Correct Capacity  
Correct Platform Size  
Correct Options  
Manuals and Decals

#### **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

#### **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

#### **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

#### **Operation Inspection**

Check Operation of Outside Control  
Check Operation of Runner Control  
Platform Folds and Unfolds (4–6 Seconds)  
Lowering Speed (10–25 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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