



INSTRUCTION MANUAL
324 DETACHABLE TRAILER
BED EXCHANGE

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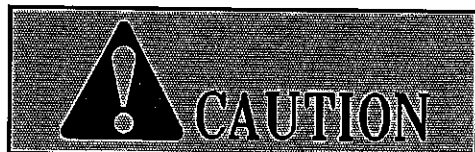
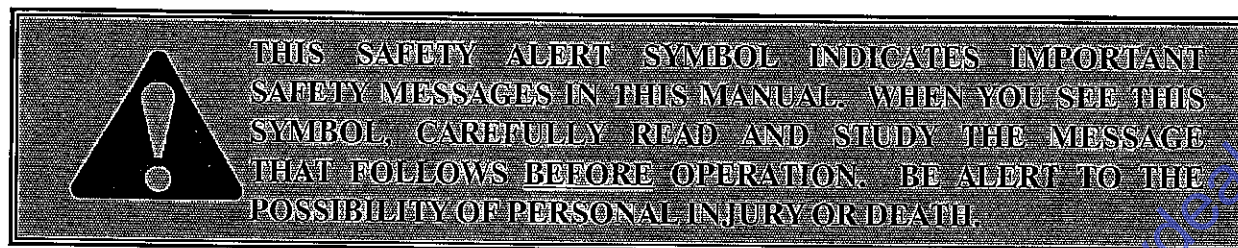
TABLE OF CONTENTS

SECTION	TITLE	PAGE
	LIST OF ILLUSTRATIONS	i
	SAFETY SUMMARY	ii
1	INTRODUCTION	1
2	TERMINOLOGY	2
3	CONTROLS	4
4	CHANGING THE SEMITRAILER BED	7

LIST OF ILLUSTRATIONS

FIG. NO.	DESCRIPTION	PAGE
2-1	GOOSENECK TERMINOLOGY	2
2-2	TRUNNION TERMINOLOGY	3
3-1	GOOSENECK LOCK HANDLE	4
3-2	HYDRAULIC CONTROLS	5
3-3	AIR HEIGHT CONTROL VALVE	5
3-4	HAND VALVE	6

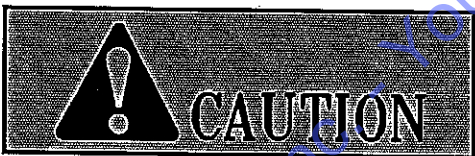
SAFETY SUMMARY



WHEN LEAVING THE SEMITRAILER UNATTENDED, POSITION ALL CONTROL SWITCHES TO THE CENTER/NEUTRAL POSITION AND SHUT OFF THE HYDRAULIC PUMP.



A STICKING SOLENOID VALVE WILL CAUSE IT'S HYDRAULIC COMPONENT TO OPERATE WHEN RELEASING THE CONTROL SWITCH FOR THAT COMPONENT. IF THIS HAPPENS, IMMEDIATELY SHUT OFF THE HYDRAULIC SYSTEM AND REPAIR OR REPLACE THE STICKING SOLENOID VALVE.



DO NOT OPERATE YOUR SEMITRAILER UNTIL YOU COMPLETELY UNDERSTAND THE PROPER USAGE AND FUNCTION OF ALL CONTROLS. IMPROPER USAGE MAY CAUSE PERSONAL INJURY, DAMAGE TO YOUR SEMITRAILER AND CARGO, AND TIME-CONSUMING BREAKDOWNS.



KEEP ALL PERSONNEL CLEAR OF FRONT, REAR, AND SIDES OF TOWING VEHICLE AND TRAILER DURING DETACHING AND RE-ATTACHING. FAILURE TO DO SO WILL RESULT IN SERIOUS PERSONAL INJURY OR DEATH.



FAILURE TO PROPERLY SET AND CHECK PARKING BRAKE, AND CHOCK WHEELS WHEN PARKING AND DURING STORAGE, COULD ALLOW MOVEMENT OF THE TRACTOR/SEMITRAILER OR THE DETACHED TRUNNION RESULTING IN SERIOUS PERSONAL INJURY, DEATH TO INDIVIDUAL(S), OR DAMAGE TO PROPERTY IN IT'S PATH.



BE SURE TO KEEP FEET CLEAR OF THE BOTTOM OF THE SEMITRAILER DURING LOWERING OPERATION. FAILURE TO KEEP FEET CLEAR WILL RESULT IN SERIOUS PERSONAL INJURY.



LIFTING OPERATIONS CAN BE DANGEROUS. ONLY A CRANE, HOIST, OR SIMILAR LIFTING EQUIPMENT SHOULD BE USED TO LIFT THE SEMITRAILER BED OR TRUNNION. THIS DEVICE MUST ONLY BE OPERATED BY A TRAINED, QUALIFIED PERSON USING STANDARD, SAFE LIFTING PROCEDURES. FAILURE TO FOLLOW SAFE LIFTING PRACTICES MAY RESULT IN SERIOUS INJURY OR DEATH TO PERSONNEL, OR DAMAGE TO THE TRAILER OR EQUIPMENT.



FAILURE TO SUPPORT THE SEMITRAILER LOAD FULLY ON THE LOAD BLOCKS MAY RESULT IN DAMAGE TO THE LOAD, THE SEMITRAILER, AND POSSIBLE SERIOUS INJURY OR DEATH TO INDIVIDUALS NEAR THE SEMITRAILER.

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1 INTRODUCTION

THIS MANUAL PROVIDES OPERATING PROCEDURES TO HELP YOU OBTAIN SAFE, EFFICIENT, AND DEPENDABLE EXCHANGES OF THE INTERCHANGABLE BEDS ON THE LANDOLL 324 SEMITRAILER. THIS MANUAL ALSO CONTAINS GENERAL INFORMATION, SAFETY PRECAUTIONS, AND ILLUSTRATIONS.

READ THIS MANUAL CAREFULLY BEFORE OPERATING THE EQUIPMENT. KEEP IT HANDY FOR FUTURE REFERENCE.

IF AT ANY TIME YOU HAVE ANY QUESTIONS, OR FOR LANDOLL REPLACEMENT PARTS AND SERVICE, CONTACT YOUR LANDOLL DEALER, OR CALL:

- LANDOLL CORPORATION
- SALES & SERVICE
- 1700 MAY STREET
- MARYSVILLE, KANSAS 66508
- 913-562-5381
- OR
- 1-800-HAULOLL
- (IN KANSAS) 1-800-332-5655

THE LANDOLL MODEL 324 LOWBED SEMITRAILER IS A QUALITY PRODUCT DESIGNED TO GIVE YEARS OF TROUBLE-FREE PERFORMANCE. BY UTILIZING THE INFORMATION IN THIS MANUAL, YOUR SYSTEM WILL PERFORM AS DESIGNED, SAFELY AND EFFICIENTLY.

THE TRAILER IS DESIGNED TO BE TOWED BY A TRUCK-TRACTOR VEHICLE EQUIPPED WITH A FIFTH WHEEL, AIR BRAKE, LIGHTING SYSTEM HOOK-UPS, AND HYDRAULIC SYSTEM HOOK-UPS.

2 TERMINOLOGY

The following figures of the Landoll 324 Lowbed Semitrailer lists terms which are used throughout this manual. A good knowledge of the following terms will make the study of this manual easier.

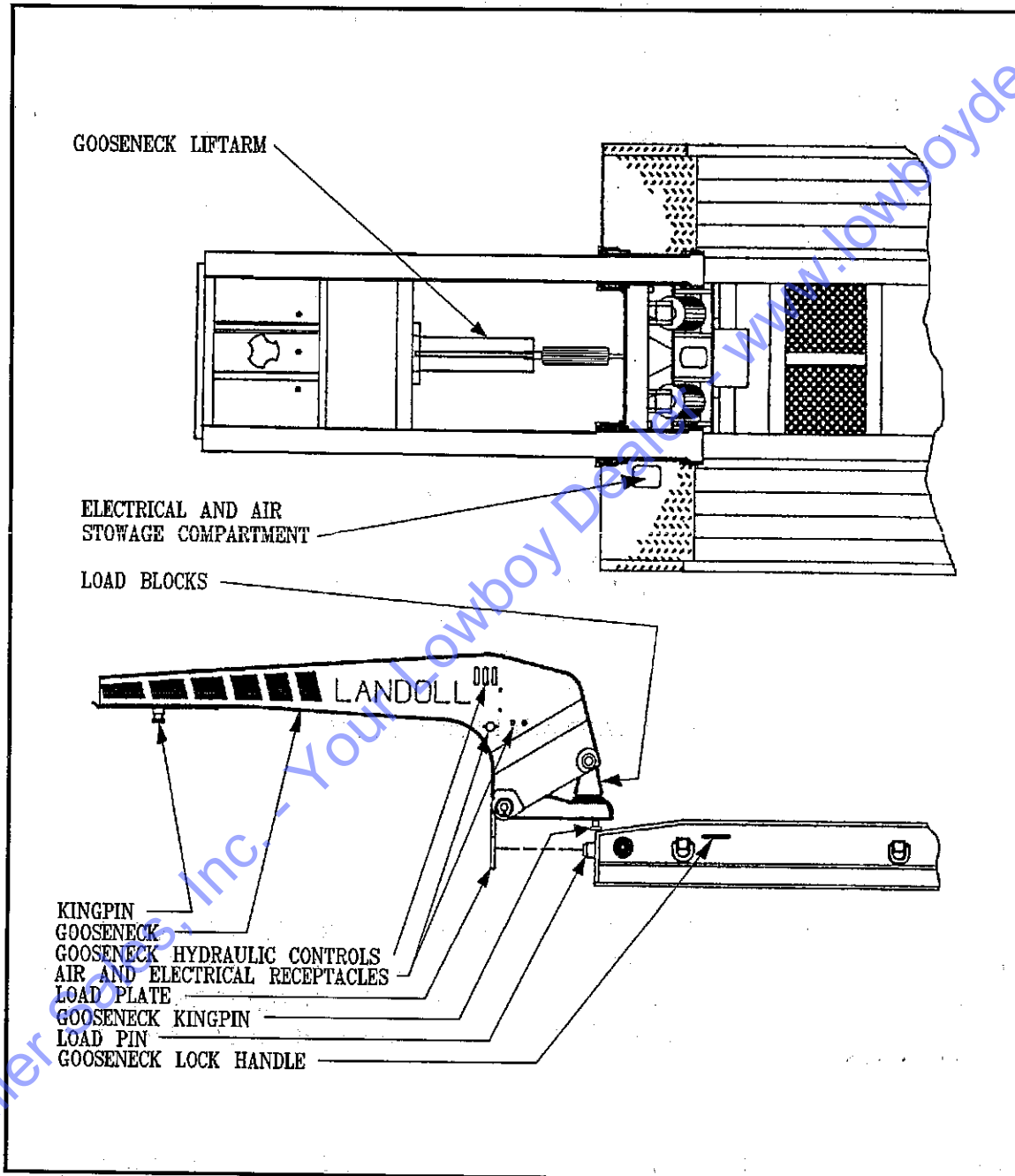


FIG. 2-1 GOOSENECK TERMINOLOGY

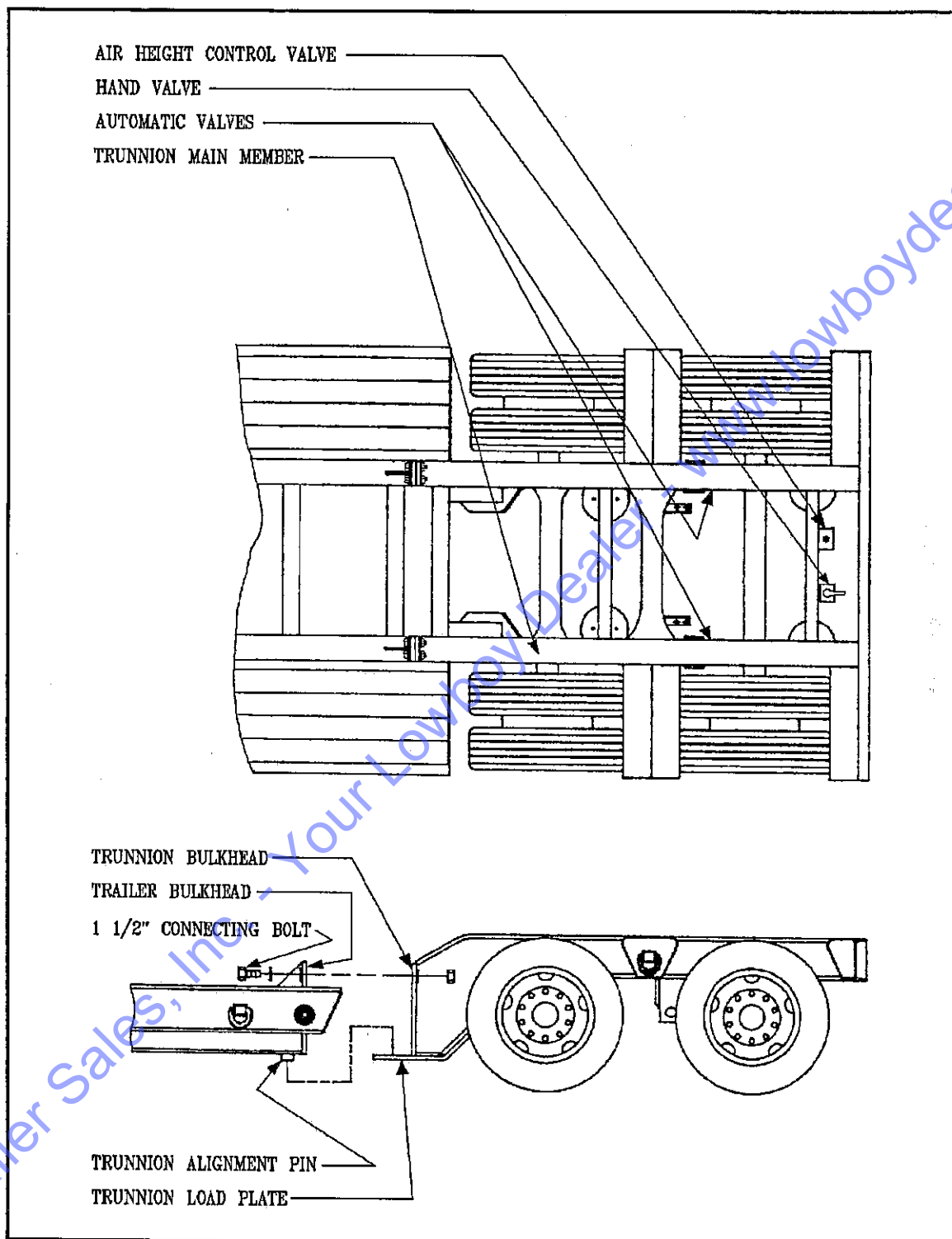


FIG. 2-2 TRUNNION TERMINOLOGY

3 CONTROLS

PREFACE

This section describes the controls used to operate the 324 Lowbed Semitrailer.

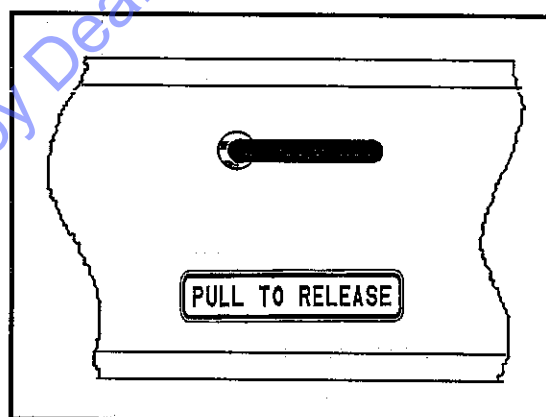
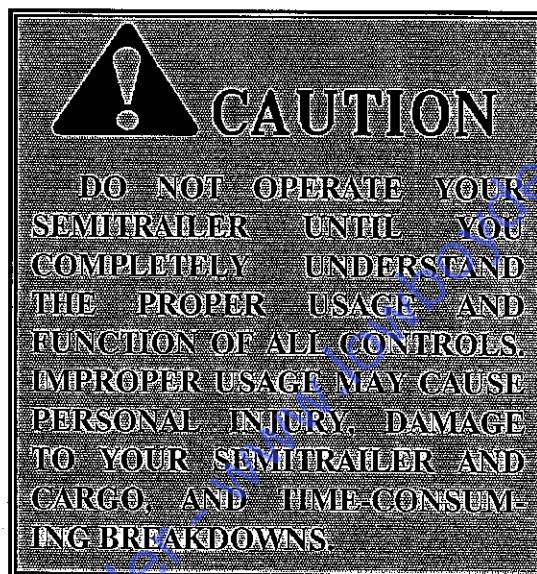
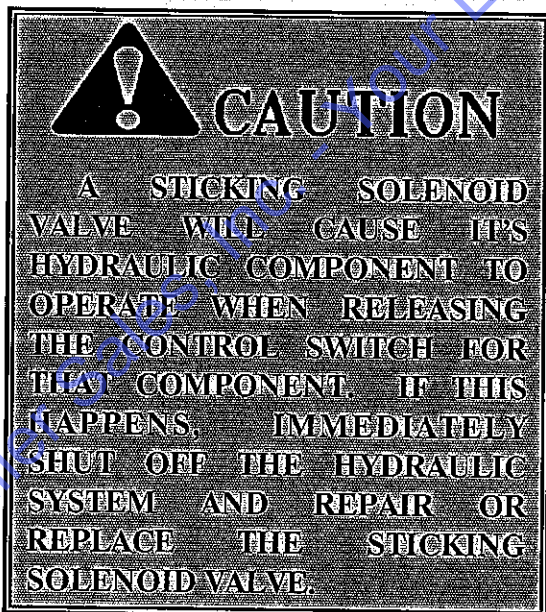
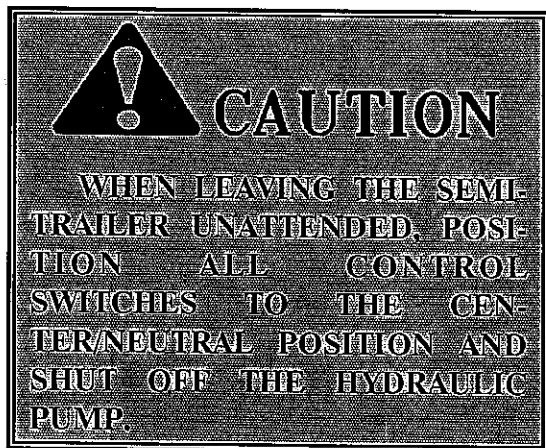


FIG. 3-1 GOOSENECK LOCK HANDLE

3-1 GOOSENECK LOCKHANDLE

The GOOSENECK LOCK HANDLE (See Fig. 3-1) is located at the front of the drivers side, side member and is labeled accordingly. Pulling the handle out releases the fifth wheel lock jaws. The handle snaps into place automatically when the gooseneck kingpin is securely locked into place.

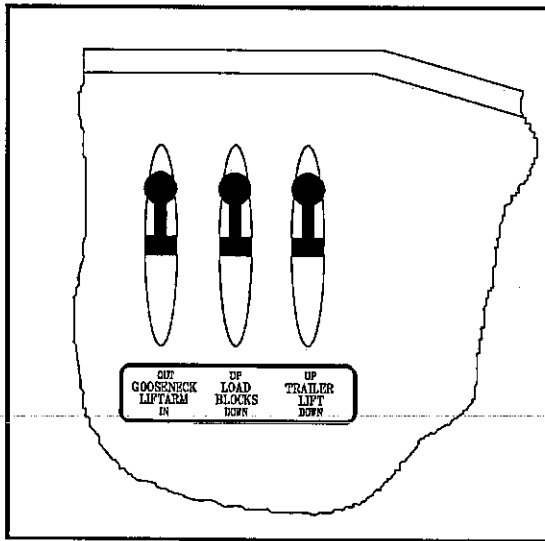


FIG. 3-2 HYDRAULIC CONTROLS

3-2 GOOSENECK LIFTARM

The **GOOSENECK LIFTARM** lever (See Fig. 3-2) is located on the drivers side of the gooseneck assembly. It is the first, or left-most lever. The lever has three positions:

UP: Placing the **GOOSENECK LIFTARM** lever in this position raises the gooseneck lift arm, to the transport or hook-up position.

CENTERED: This is a neutral position. This position will not operate any of the semitrailer components.

DOWN: Placing the **GOOSENECK LIFTARM** lever in this position lowers the gooseneck lift arm, permitting the transport of the detached gooseneck.

3-3 LOAD BLOCKS

The **LOAD BLOCKS** lever (See Fig. 3-2) is located on the drivers side of the gooseneck assembly. It is the second, or center lever. The lever has three positions:

UP: Placing the **LOAD BLOCKS** lever in this position raises the load blocks into the gooseneck, permitting the lowering and detaching/attaching of the semitrailer deck.

CENTERED: This is a neutral position. This position will not operate any of the semitrailer components.

DOWN: Placing the **LOAD BLOCKS** lever in this position lowers the load blocks, relieving the hydraulic cylinders of the weight of the trailer.

3-4 TRAILER LIFT

The **TRAILER LIFT** lever (See Fig. 3-2) is located on the drivers side of the gooseneck assembly. It is the third, or right-most lever. The lever has three positions:

UP: Placing the **TRAILER LIFT** lever in this position raises the semitrailer deck, allowing the load blocks to be lowered into transport position.

CENTERED: This is a neutral position. This position will not operate any of the semitrailer components.

DOWN: Placing the **TRAILER LIFT** lever in this position lowers the semitrailer deck, allowing the detachment of the semitrailer deck or allowing the weight of the semitrailer and load to rest on the load blocks.

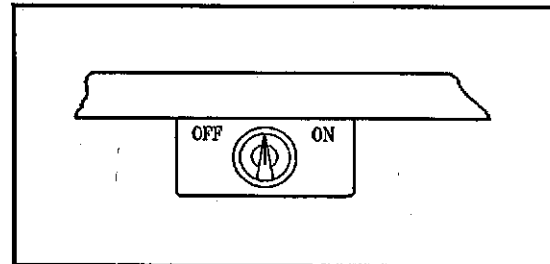


FIG. 3-3 AIR HEIGHT CONTROL VALVE

3-5 AIR HEIGHT CONTROL VALVE

The **AIR HEIGHT CONTROL VALVE** (See Fig. 3-3) is located at the back of the trunnion in-between the main members on the Airbag Crosstube. This control determines whether the air ride system is controlled manually or automatically.

- ON:** Placing the **AIR HEIGHT CONTROL VALVE** in this position permits the air ride height to be altered manually using the **HAND VALVE**.
- OFF:** Placing the **AIR HEIGHT CONTROL VALVE** in this position permits the air ride height to be adjusted automatically by the automatic valves.

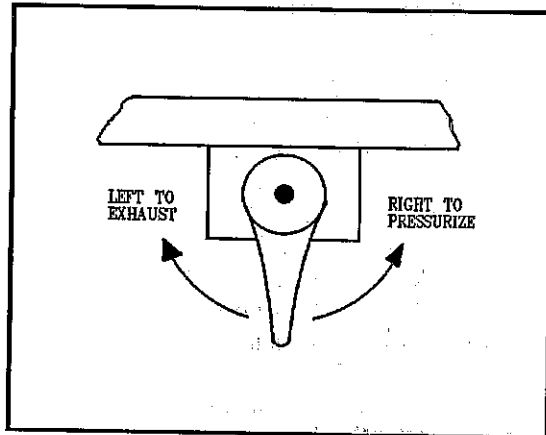


FIG. 3-4 HAND VALVE

3-6 HAND VALVE

The **HAND VALVE** (See Fig. 3-4) is

located besides the **AIR HEIGHT CONTROL VALVE** on the Airbag Crosstube. This valve controls the air ride height when the **AIR HEIGHT CONTROL VALVE** is in the "ON" position.

LEFT: Placing the **HAND VALVE** in this position exhausts the air pressure in the air ride system, lowering the suspension.

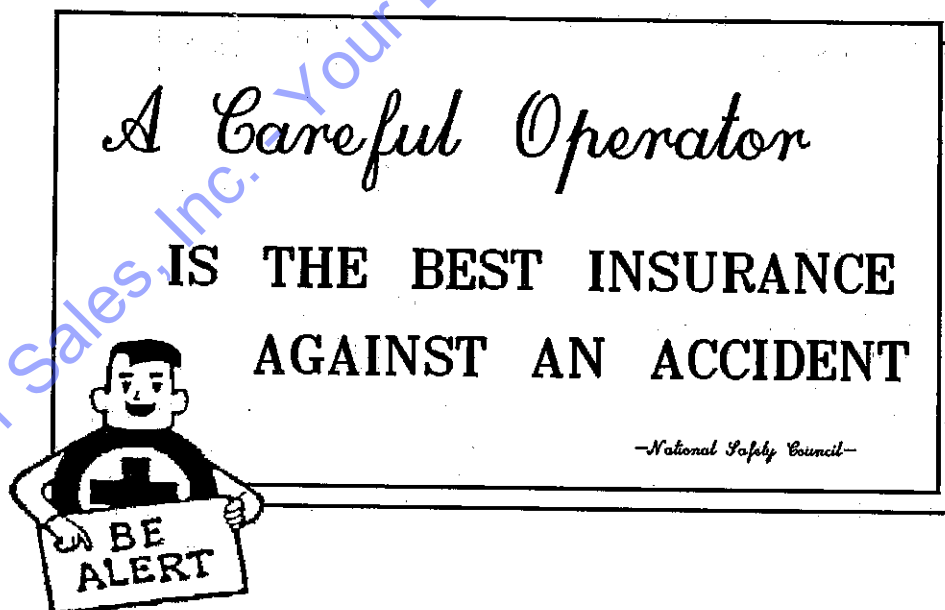
CENTERED: This position does not operate any function of the air ride system.

RIGHT: Placing the **HAND VALVE** in this position increases the air pressure in the air ride system, raising the suspension.

3-7 AUTOMATIC VALVES

The **AUTOMATIC VALVES** (See Fig. 2-2) are located inside each main member of the trunnion. The function of this valve is to automatically control the height of the air ride system when the **AIR HEIGHT CONTROL VALVE** is in the "OFF" position.

POSITION: The **AUTOMATIC VALVES** have no particular position, but are adjusted constantly by the configuration of the surface the trunnion is traveling or resting on.



4 CHANGING THE SEMITRAILER BED

This section describes the proper operating procedures for changing the semitrailer beds on the Landoll 324 Detachable Gooseneck Semitrailer. The towing vehicle's air system must be pressurized to a minimum of 90 PSI and hooked up to the semitrailer before the air ride controls will be operational.



DANGER

KEEP ALL PERSONNEL CLEAR OF FRONT, REAR, AND SIDES OF TOWING VEHICLE AND TRAILER DURING DETACHING AND RE-ATTACHING. FAILURE TO DO SO WILL RESULT IN SERIOUS PERSONAL INJURY OR DEATH.



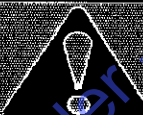
CAUTION

FAILURE TO PROPERLY SET AND CHECK PARKING BRAKE, AND CHOCK WHEELS WHEN PARKING AND DURING STORAGE, COULD ALLOW MOVEMENT OF THE TRACTOR/SEMITRAILER OR THE DETACHED TRUNNION RESULTING IN SERIOUS PERSONAL INJURY, DEATH TO INDIVIDUAL(S), OR DAMAGE TO PROPERTY IN ITS PATH.



CAUTION

BE SURE TO KEEP FEET CLEAR OF THE BOTTOM OF THE SEMITRAILER DURING LOWERING OPERATION. FAILURE TO KEEP FEET CLEAR WILL RESULT IN SERIOUS PERSONAL INJURY.



CAUTION

LIFTING OPERATIONS CAN BE DANGEROUS. ONLY A CRANE, HOIST, OR SIMILAR LIFTING EQUIPMENT SHOULD BE USED TO LIFT THE SEMITRAILER BED OR TRUNNION. THIS DEVICE MUST ONLY BE OPERATED BY A TRAINED, QUALIFIED PERSON USING STANDARD, SAFE LIFTING PROCEDURES. FAILURE TO FOLLOW SAFE LIFTING PRACTICES MAY RESULT IN SERIOUS INJURY OR DEATH TO PERSONNEL, OR DAMAGE TO THE TRAILER OR EQUIPMENT.

4-1 DETACHING THE TRUNNION

4-1.1 Park the semitrailer in a straight line on a smooth, firm, level surface, preferably in

~~preferably~~ in an open area.

4-1.2 Set the tractor and the semitrailer brakes.

4-1.3 Place a 4" high block under the front of each main member of the detachable trunnion.

4-1.4 Turn the AIR HEIGHT CONTROL VALVE to the "ON" position.

4-1.5 Use the HAND VALVE to exhaust enough air from the air ride system to allow the front of the main members to rest solidly on the blocks.

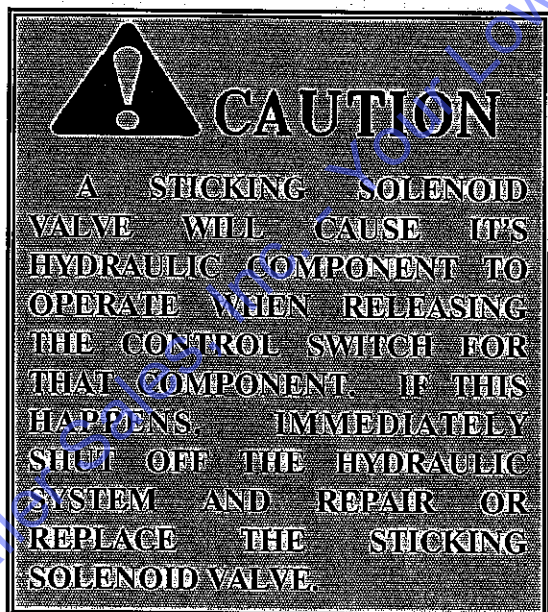
4-1.6 Disconnect the trunnion electrical and air lines from the semitrailer bed and store inside the trunnion frame.

4-1.7 Remove the four connecting bolts from the semitrailer and trunnion bulkheads. (See Fig. 2-2) Use a crane, forklift, hoist, or other satisfactory lifting device to slightly lift the back of the semitrailer bed if necessary, to provide relief on the bolts, allowing them to be removed.

4-2 DETACHING THE GOOSENECK

4-2.1 Engage the hydraulic pump.

4-2.2 Move TRAILER LIFT lever to the



up position, raising the semitrailer until a clearance of 1 inch is obtained between the load blocks and the semitrailer bed.

4-2.3 Move the LOAD BLOCK lever to the up position, raising the load blocks up into the gooseneck.

4-2.4 Move the TRAILER LIFT lever to the down position, lowering the semitrailer until a clearance of 1/4 inch has been obtained between the load plate eyes and the load pins.

4-2.5 Disconnect the air and electrical service lines from the semitrailer to the gooseneck and stow them in the cavity provided in the semitrailer bed.

4-2.6 Pull the GOOSENECK LOCK HANDLE out to the release position.

4-2.7 Move the GOOSENECK LIFTARM lever to the down position until the gooseneck liftarm rests on the tractor frame.

4-2.8 Pull the tractor forward a few inches and determine that the gooseneck has detached from the semitrailer. If the gooseneck does not detach from the semitrailer repeat steps 4-2.6, 4-2.7, and 4-2.8. If the gooseneck does detach from trailer, proceed to pull the tractor away from the semitrailer.

4-2.9 Using an acceptable lifting device such as a crane or hoist, lift the semitrailer bed and move it clear of the trunnion and the working area.

4-3 RE-ATTACHING THE TRUNNION

4-3.1 Using a crane, hoist, or other suitable lifting device, position the semitrailer bed in front of the trunnion.

4-3.2 Lower the semitrailer bed until the trunnion alignment pins are inserted into the trunnion load plates. (See Fig.)

4-3.3 Using a suitable lifting device, raise the front of the semitrailer bed until the semitrailer bulkheads contact the trunnion bulkheads.

4-3.4 Insert and tighten the four attaching bolts.

NOTE: IT MAY BE NECESSARY TO LIFT OR LOWER THE FRONT OF THE TRAILER SLIGHTLY TO PROVIDE

AMPLE SLACK TO INSERT THE FOUR CONNECTING BOLTS. USE A SUITABLE LIFTING DEVICE, SUCH AS A CRANE OR HOIST.

4-3.5 Re-connect the air and electrical supply lines and pressurize the towing vehicle's air system to a minimum of 90 PSI.

4-3.6 Turn the **AIR HEIGHT CONTROL VALVE** to the "OFF" position to return the air ride suspension to automatic control.

4-4 RE-ATTACHING THE GOOSENECK

4-4.1 Back the tractor until the gooseneck is within a few inches of the front of the semitrailer bed.

4-4.2 Pull the **GOOSENECK LOCK HANDLE** out until the semitrailer bed fifth wheel locks are open.

4-4.3 Using the **GOOSENECK LIFTARM** lever, lower or raise the gooseneck as necessary until the bottoms of the load plates are about 1 inch above the ground.

4-4.4 Slowly back the gooseneck into the semitrailer until the **GOOSENECK LOCK HANDLE** snaps into place indicating the gooseneck is locked into position.

4-4.5 Slowly try to pull the semitrailer forward a few inches to be sure that the gooseneck is locked into place. If the gooseneck is not locked into place on the semitrailer, repeat steps 4-4.2, 4-4.3, and 4-4.6. If the gooseneck is locked into place, continue the semitrailer bed exchange.

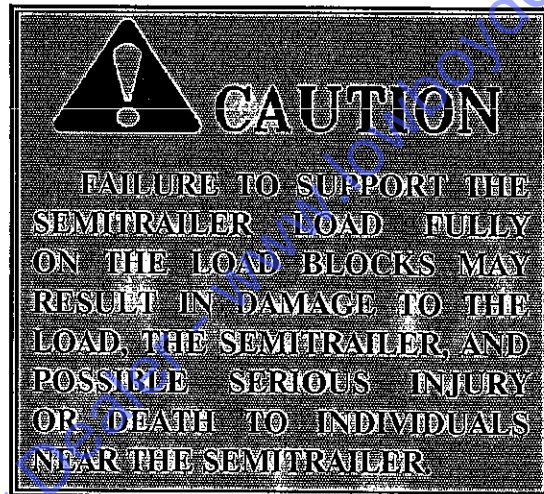
4-4.6 Reconnect the electrical and air service lines from the semitrailer to the gooseneck. The 7 pole electrical connector to the receptacle in the side of the gooseneck, the male air line to the female receptacle in the side of the gooseneck, and the female air line to the male receptacle in the side of the gooseneck.

4-4.7 Using the **GOOSENECK LIFTARM**

lever, raise the gooseneck liftarm to the "UP" position.

4-4.8 Using the **TRAILER LIFT** lever, raise the semitrailer until enough clearance is obtained to lower the load blocks.

4-4.9 Using the **LOAD BLOCK** lever, lower the load blocks completely. Be sure that both load blocks are lowered the full extent of the cylinder travel.



4-4.10 Using the **TRAILER LIFT** lever, lower the semitrailer until the semitrailer rests fully on the load blocks.

NOTE: BEFORE USING THE TRAILER MAKE A FINAL CHECK TO DETERMINE THAT ALL ELECTRICAL, AIR, AND HYDRAULIC LINES ARE PROPERLY CONNECTED, ALL BRAKES FUNCTION PROPERLY, THE LOAD BLOCKS ARE FULLY EXTENDED WITH THE WEIGHT OF THE SEMITRAILER RESTING COMPLETELY ON THE LOAD BLOCKS, AND ALL CONNECTING BOLTS ARE PROPERLY TIGHTENED.

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