USER MANUAL

30B Magnetic Layer Picker

Fork Mount and Carriage Mount

Manual Number 6170709-R1

cascade® corporation

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INTRODUCTION

This user manual is for the 30B Magnetic Layer Picker. Contents include an Operator's Guide, Installation Instructions, and Periodic Maintenance.

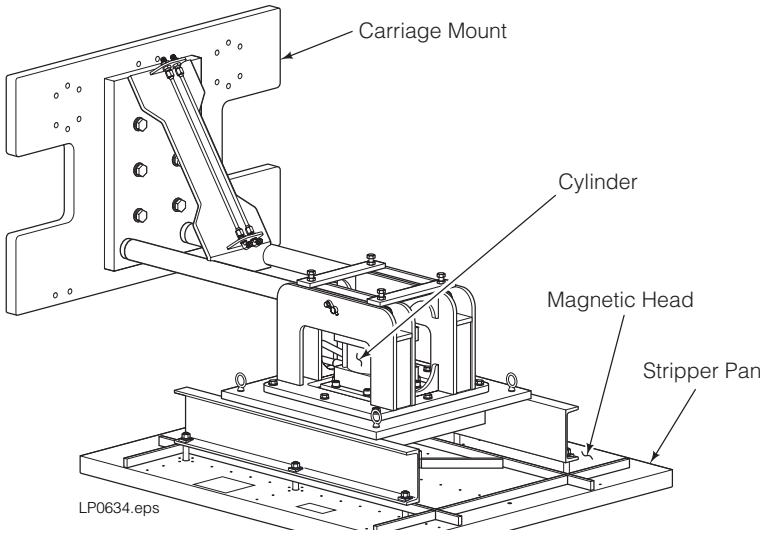
NOTE: All specifications are shown in US and (Metric) units where applicable. All fasteners have a torque value range of ±10% of stated value.

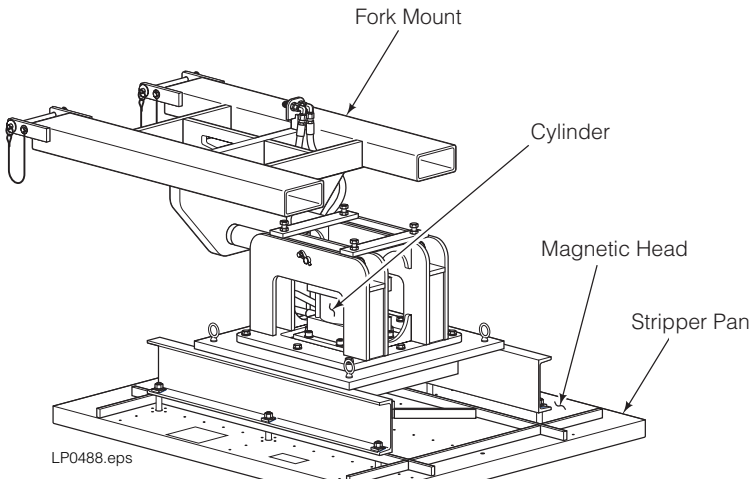
IMPORTANT: The attachment fittings are JIC. Supply fittings adapted as required for application.

What The System Does

The Magnetic Layer Picker is designed to remove an entire layer of cans at one time from a multi-layer stack of steel cans. The entire layer can be transferred to a take-away belt, a retort, or any other area. The magnet can also be used in reverse order to deposit a layer on a pallet. The operation can be repeated to form a multi-layer stack. The cans may be full or empty. The magnetic head, when in the pick-up position, rests on the stripper pan. The cylinder with 1.5 in. (37 mm) stroke is actuated to raise the magnetic head when the cans are to be released, as shown.

The stripper pan should extend over the edges of the can layer by approximately 1 in. (25 mm) minimum on all four sides. This will establish adequate holding power on the outside can edges, as shown.





INTRODUCTION

Special Definitions

The statements shown appear throughout this manual where special emphasis is required. Read all WARNINGS and CAUTIONS before proceeding with any work. Statements labeled IMPORTANT and NOTE are provided as additional information of special significance or to make the job easier.

WARNING – A statement preceded by WARNING is information that should be acted upon to prevent **bodily injury**. A WARNING is always inside a ruled box.

CAUTION – A statement preceded by CAUTION is information that should be acted upon to prevent machine damage.

IMPORTANT – A statement preceded by IMPORTANT is information that possesses special significance.

NOTE – A statement preceded by NOTE is information that is handy to know and may make the job easier.

WARNING: Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than shown on the attachment nameplate. Consult the truck nameplate.

WARNING: Do not operate this attachment unless you are a trained and authorized lift truck driver.

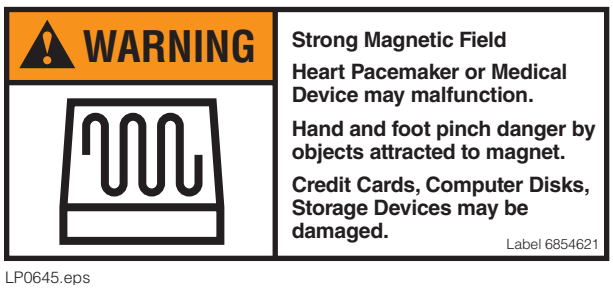
OPERATION

This section contains operating instructions for the Cascade Magnetic Layer Pickers. It will help you avoid common errors which often cause damage to the equipment or product being handled.

This information is intended to simplify operator understanding about effective and safe Magnetic Layer Picker use and operation. Read this information thoroughly before operating the attachment. Be sure you know and understand all operating procedures and safety precautions. If you have any questions, or don't understand a procedure, ask your supervisor.

Emphasize Safety! Most accidents are caused by operator carelessness or misjudgment. You must watch for poorly maintained equipment and hazardous situations and correct them.

CAUTION: Sliding the magnetic assembly on the floor will cause extensive wear to the stripper pan. Avoid this action.



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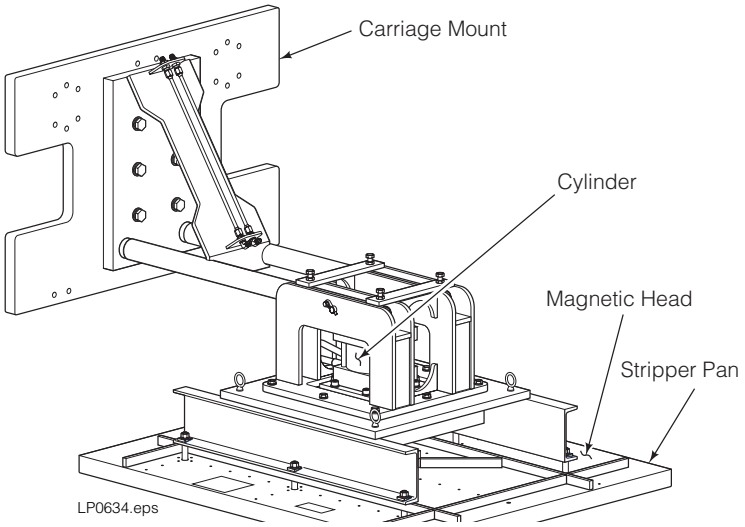

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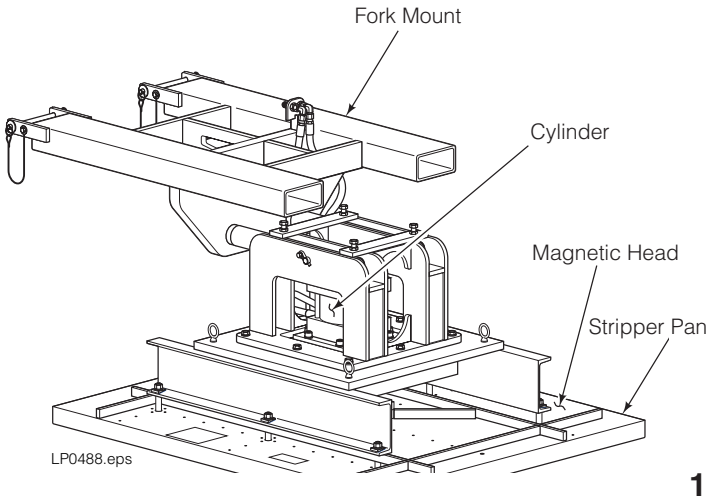

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Safety Rules – Industrial Lift Trucks

No riders

No reaching through mast

No standing under load or magnetic assembly

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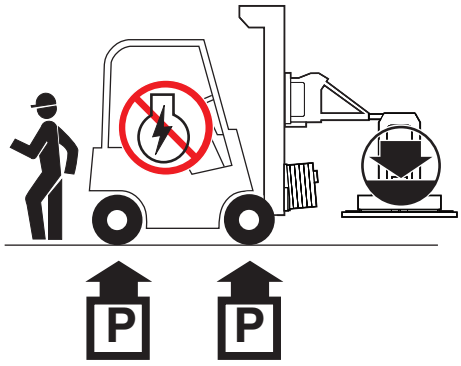
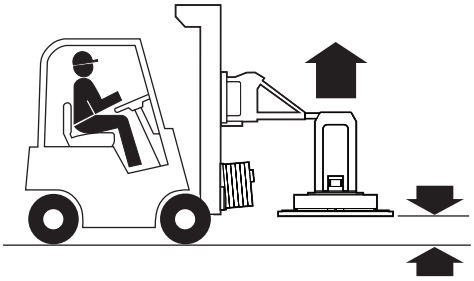


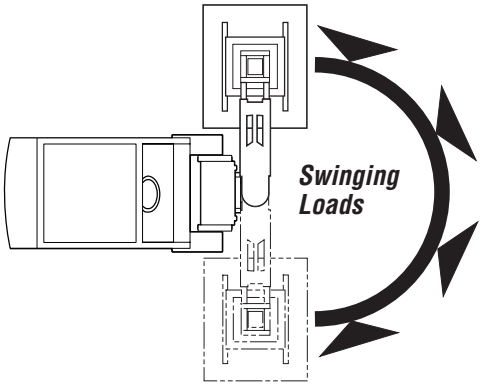
Motor off, park, lower load

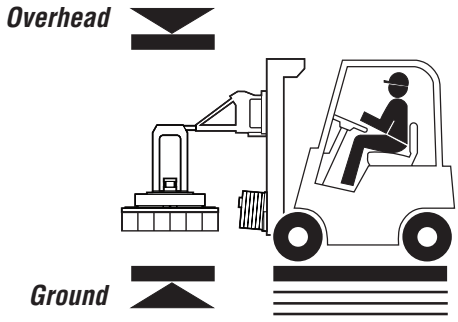


Traveling empty

3 in. (8 cm)

No traveling loaded on ramps





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Watch clearances

TRAFFIC

Observe

Wet floors

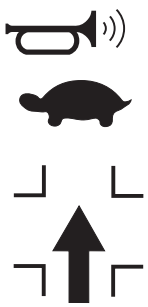
Workers

Stops

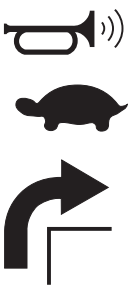
Bumps

Dips

Slow for two-way traffic

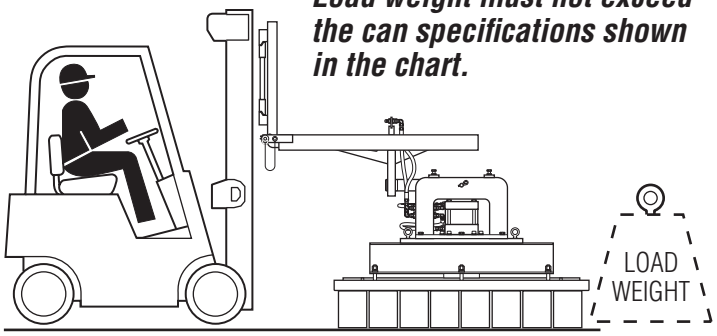


Sound horn, slow at intersection



Sound horn, slow at corner

OPERATION
Safety Rules – Handling Loads



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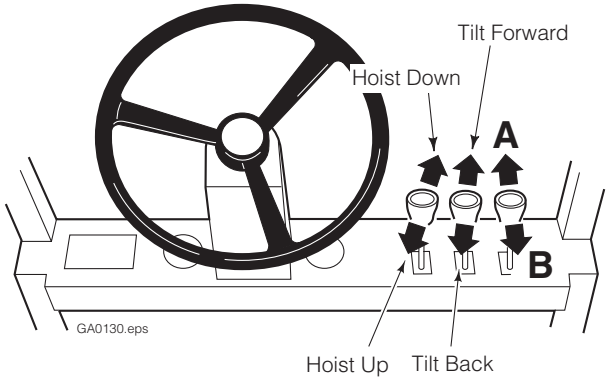
LOAD WEIGHT:
Load weight must not exceed the can specifications shown in the chart.

CAN SIZE (Diameter)	HOLDING POWER	RECOMMENDED MAXIMUM CAN WEIGHT✳
7.95 in. (202 mm)	2.25 lb (1 kg)	1.5 lb (0.7 kg)
8.30 in. (211 mm)	4.5 lb (2 kg)	3 lb (1.4 kg)
15.74 in. (400 mm)	7 lb (3.2 kg)	5 lb (2.3 kg)
15.80 in. (403 mm)	7 lb (3.2 kg)	5 lb (2.3 kg)
23.74 in. (603 mm)	12 lb (5.5 kg)	9 to 9.5 lb (4.1 to 4.3 kg)

✳ Maximum can weight is based on approximately 3/4 of the maximum holding power.

OPERATION
Auxiliary Valve Functions



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WARNING: Truck control handle and attachment function activation shown here conforms to ASME/ANSI B56.1 recommended practices. Failure to follow these practices may lead to serious bodily injury or property damage. End user, dealer and OEMs should review any deviation from the practices for safe operation.

PALLETIZE
(Driver's view)

A Engage (Lower Magnetic Head)

B Release (Raise Magnetic Head)

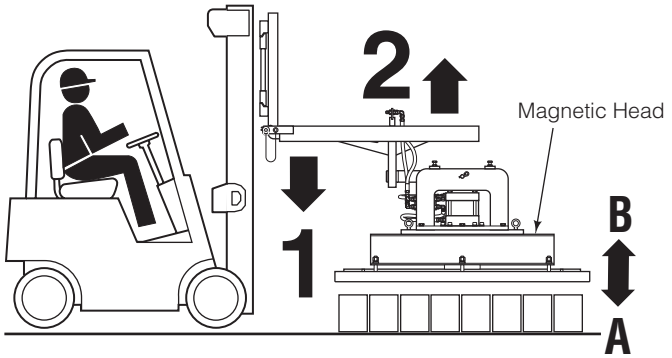
1 Lower the attachment until the stripper pan contacts the cans to be handled.

2 **A** Engage (Lower Magnetic Head).

3 Raise the load and transport to desired area.

4 **B** Release (Raise Magnetic Head).

5 Raise the attachment.



CAUTION: Sliding the magnetic assembly on the floor will cause extensive wear to the stripper pan. Avoid this action.

OSHA Regulations – Industrial Trucks and Attachments (Specific Regulations from OSHA 1910.178)

WARNING: The safe operation and maintenance of industrial trucks is regulated by Occupational Safety and Health (OSHA) regulations 1910.178 and American National Standards Institute (ANSI) Safety Standard for Powered Industrial Trucks, ANSI B56.1. When operating and maintaining industrial trucks equipped with attachments you should pay particular attention to the following sections of these regulations. You should be familiar with **all** sections of these regulations. **Ask your employer for the complete regulations.**

(a) General Requirement

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the appropriate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and maintained in a legible condition.

(e) Safety Guards

(2) If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension in accordance with (a)(2) following.

(a)(2) All new powered industrial trucks acquired and used by an employer after February 15, 1972 shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1", except for vehicles intended primarily for earth moving or over-the-road hauling.

(l) Operator Training

Only trained and authorized operators shall be permitted to operate a powered industrial truck. Methods shall be devised to train operators in the safe operation of powered industrial trucks.

(m) Truck Operations

(1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(4) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.

(5i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off and brakes set. Wheels shall be blocked if the truck is parked on an incline.

(5ii) A powered industrial truck is unattended when the operator is 25 feet or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(5iii) When the operator of an industrial truck is dismounted and within 25 feet of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized and the brakes set to prevent movement.

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock or platform or freight car. Trucks shall not be used for opening or closing freight doors.

(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

(n) Traveling

(4) The driver shall be required to slow down and sound the horn at cross isles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(7i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(7iii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(o) Loading

(1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

(p) Operation of the Truck

(1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

(q) Maintenance of Industrial Trucks

(1) Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examinations shall be made at least daily. When industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.

Truck Relief Setting

2000 psi (138 bar) Recommended
2300 psi (160 bar) Maximum

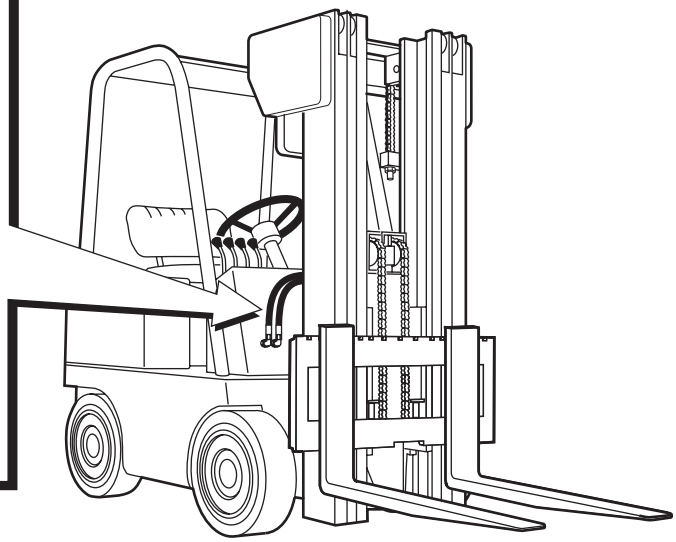
Truck Flow Volume ①

	Min. ②	Recommended	Max. ③
30B	5 GPM (19 L/min.)	7 GPM (26 L/min.)	10 GPM (38 L/min.)

① Cascade Magnetic Layer Pickers are compatible with SAE 10W petroleum base hydraulic fluid meeting Mil. Spec. MIL-0-5606 or MIL-0-2104B. Use of synthetic or aqueous base hydraulic fluid is not recommended. If fire resistant hydraulic fluid is required, special seals must be used. Contact Cascade.

② Flow less than recommended will result in reduced system performance.

③ Flow greater than maximum can result in excessive heating, reduced system performance and short hydraulic system life.



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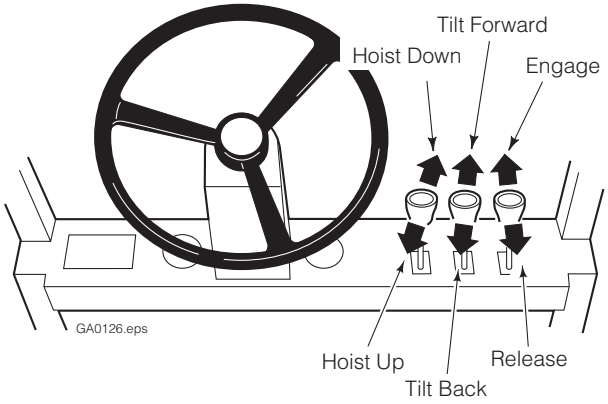
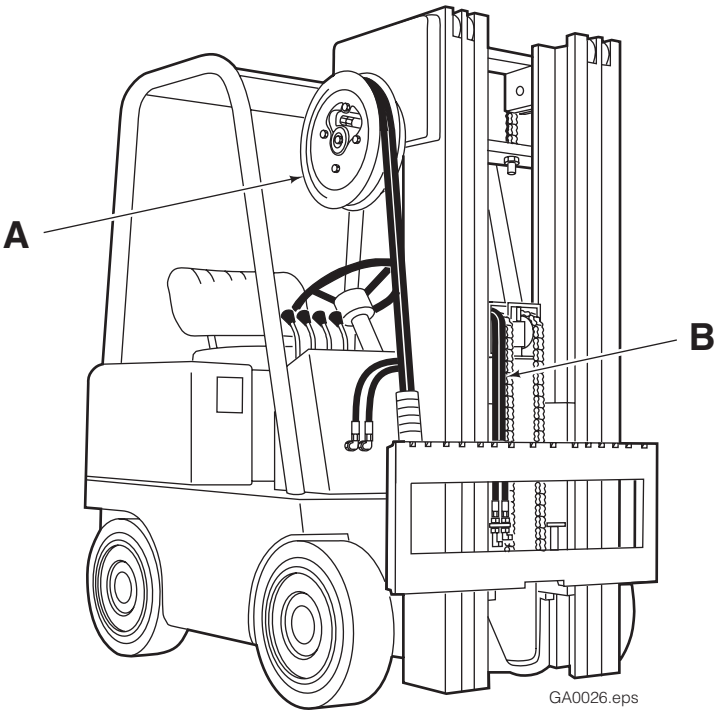
Auxiliary Valve Functions

Check for compliance with ANSI (ISO) standards:



Magnetizing function: No. 6 hose with 9/32 in. (7 mm) minimum ID.

Refer to Cascade *Hose & Cable Reel Selection Guide*, Part No. 212199 to select the correct hose reel for the mast and truck.



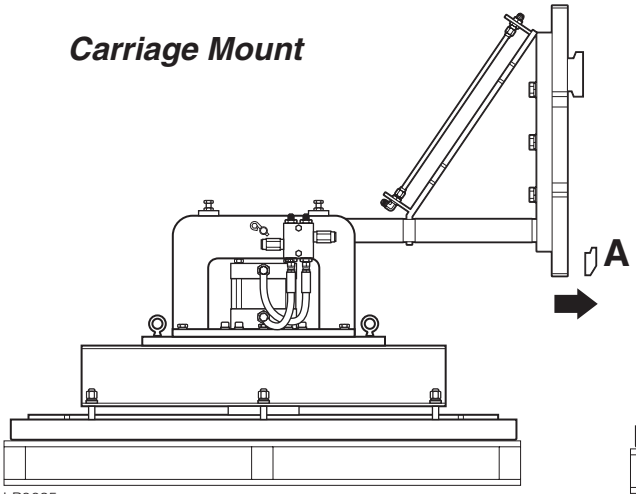
A RH or LH THINLINE™ 2-Port Hose Reel Group
OR
B RH or LH Single Internal Hose Reeving Group

1 Remove mounting components

A **Carriage Mount –** Remove bolt-on lower hooks, if equipped.

B **Fork Mount –** Remove cotter pins. Remove fork pin assembly, if equipped.

Carriage Mount



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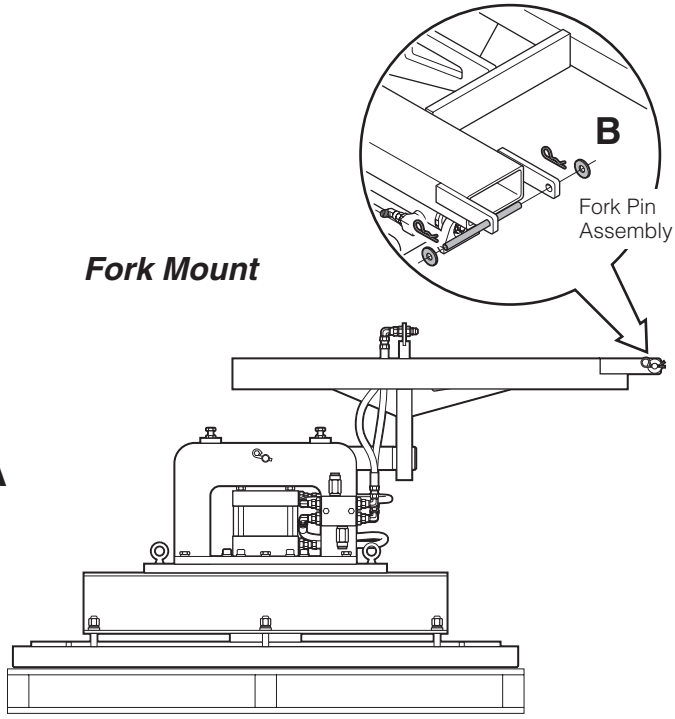
Fork Mount



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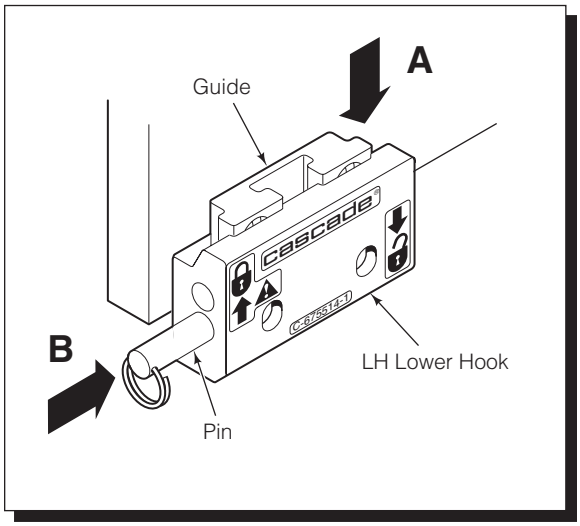
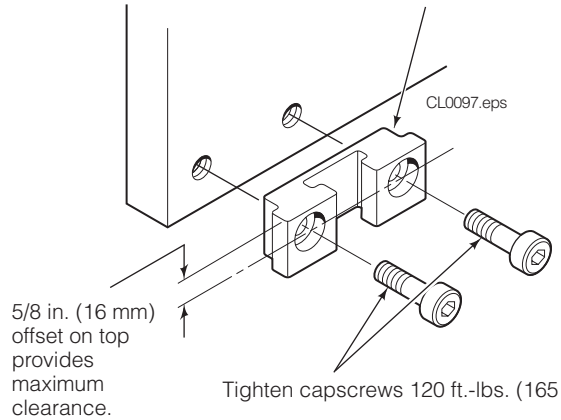
2 Unlock Quick-Change mounting hooks, if equipped

A Move hooks into unlocked position.

B Reinstall pin in lower holes.



NOTE: Guides can be reversed to change hook to carriage clearance. Refer to Step 5.



3 Mount the Carriage Mount, if applicable

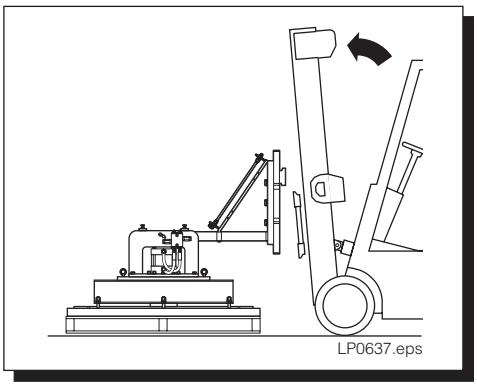
IMPORTANT: Keep the attachment banded on pallet until securely mounted on the truck carriage.

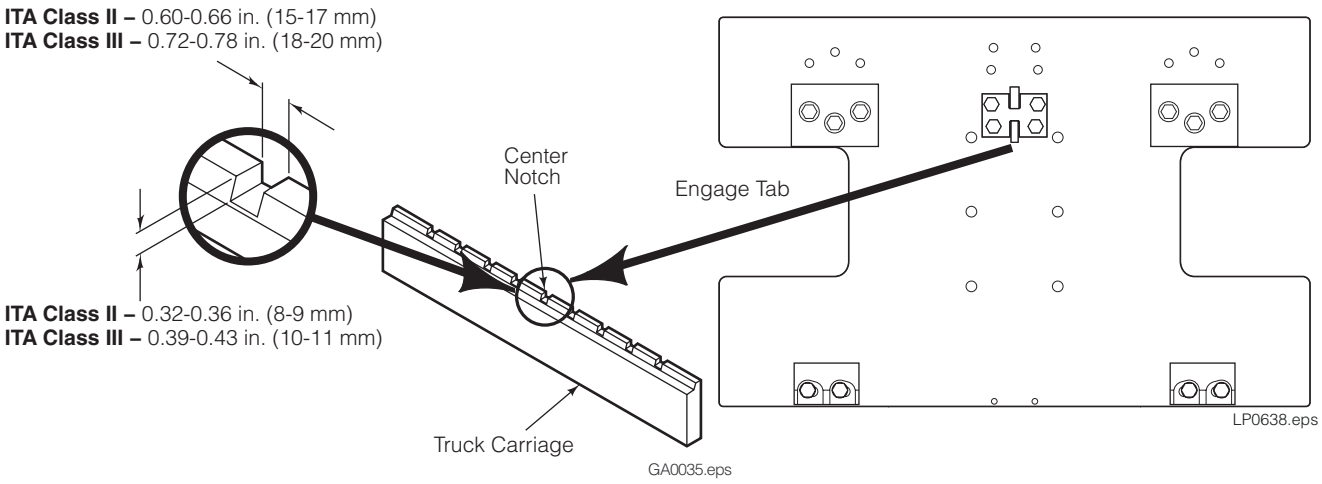
A Center truck behind the attachment.

B Title forward and raise carriage in position.

C Engage top mounting hooks with carriage. Make sure key plate engages center notch on top carriage bar.

D Lift the attachment 2 in. (5 cm) off pallet.



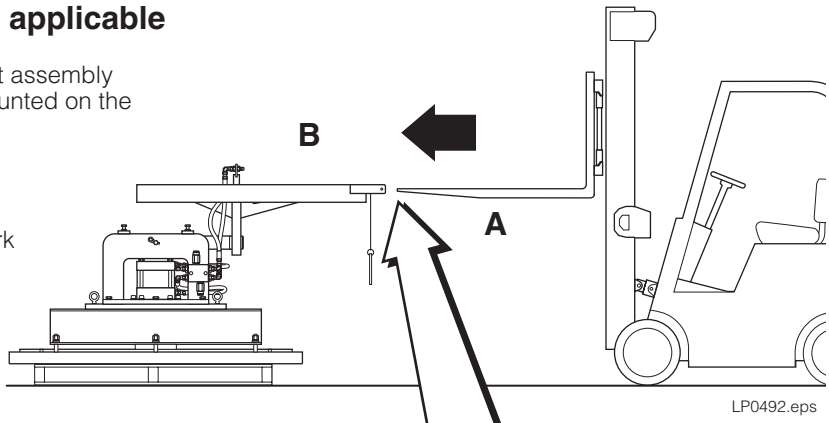


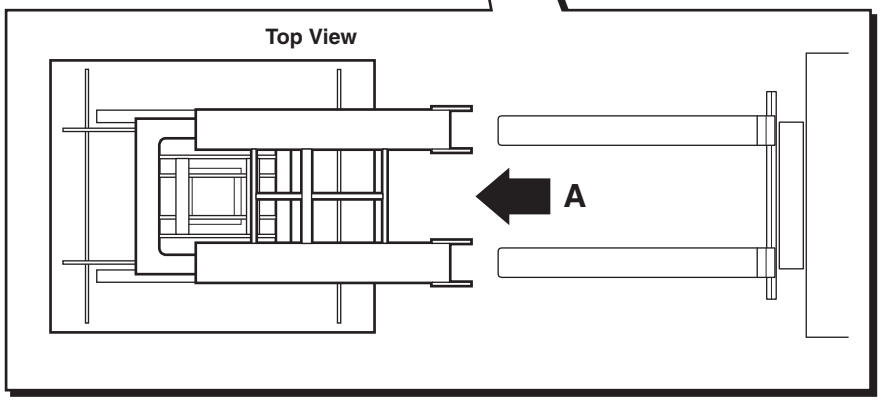
4 Mount the Fork Mount, if applicable

IMPORTANT: Keep the attachment assembly banded on pallet until securely mounted on the forks.

A Position forks to attachment's fork mount assembly.

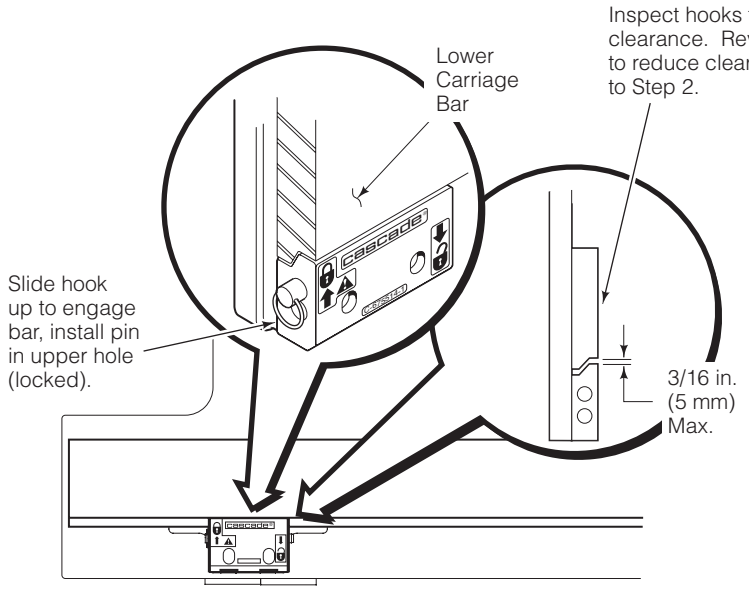
B Drive forks into attachment's fork mount pockets.



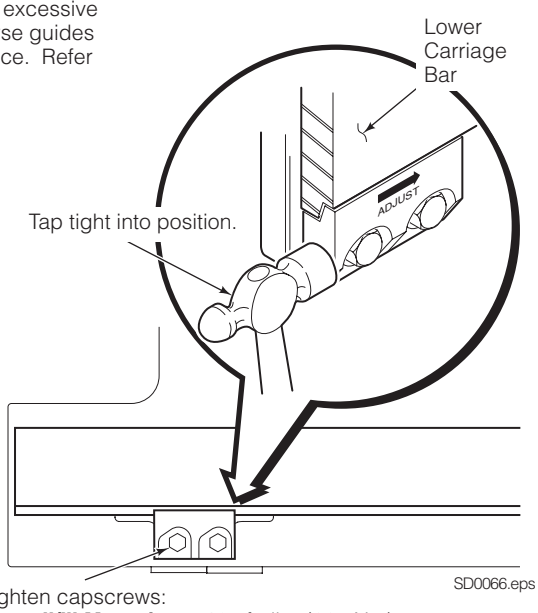


5 Install and engage lower hooks (if equipped).

QUICK-CHANGE TYPE



BOLT-ON TYPE

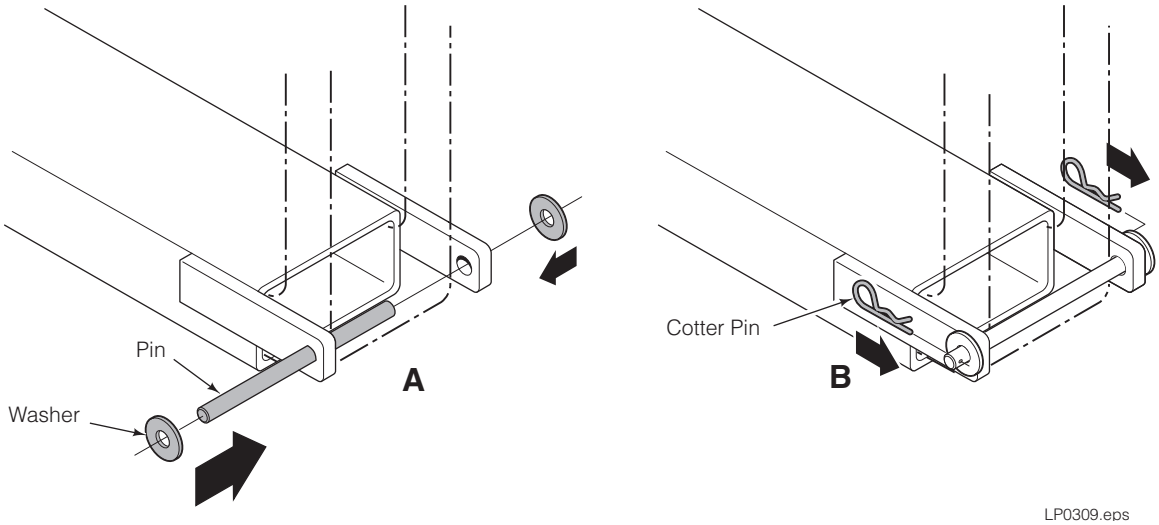


Tighten capscrews:
Class II/III Mounting – 165 ft.-lbs (225 Nm)

6 Install back fork pin assembly (if equipped).

A Install pins and washers.

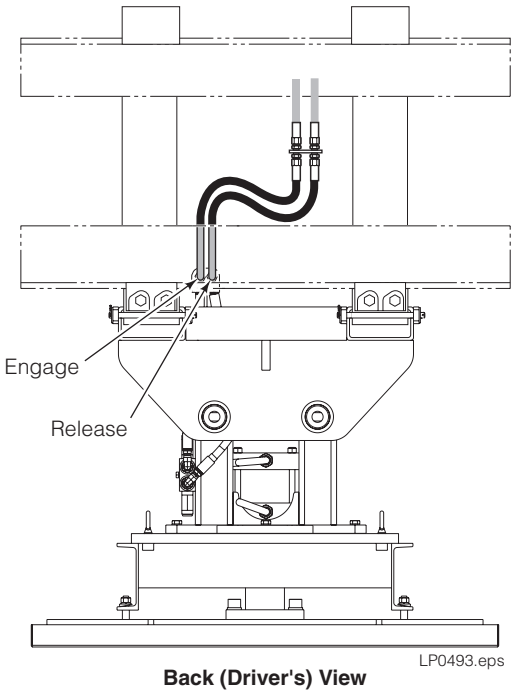
B Install cotter pins.



7 Prepare and connect hoses

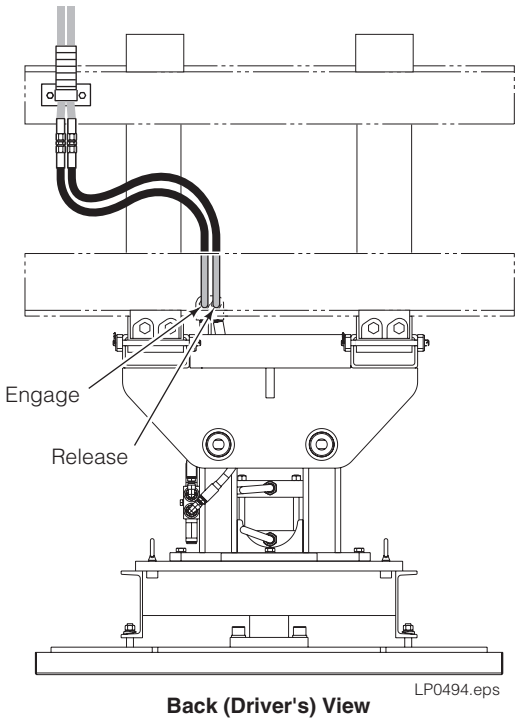
Fork Mount

Internal Hose Reeving



Back (Driver's) View

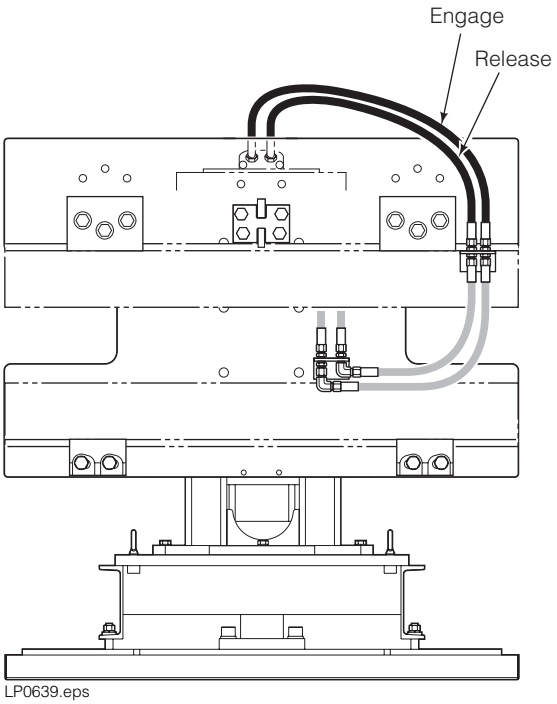
Hose Reel
(Left Configuration Shown)



Back (Driver's) View

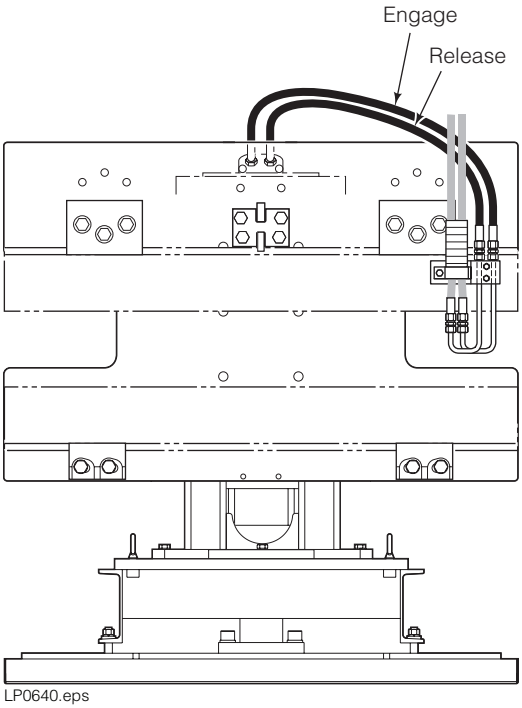
Carriage Mount

Internal Hose Reeving



Back (Driver's) View

Hose Reel
(Right Configuration Shown)



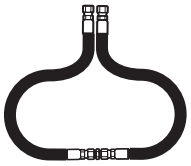
Back (Driver's) View

8 Flush supply hoses

A Install hoses to truck auxiliary valves. Temporarily connect the other ends together using union fittings

B Operate auxiliary valves for 30 seconds.

C Remove union fittings.



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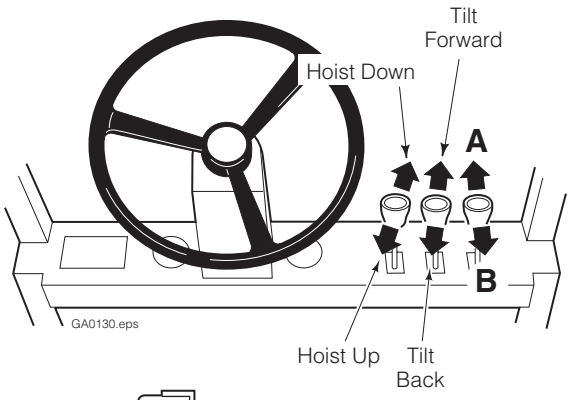
9 Cycle attachment functions

- Check for leaks at fittings, valves and cylinders.
- With no load, cycle through the attachment functions several times.
- Check for control lever function in accordance with ANSI standards (Ref. ANSI B56.1, "Lever or Handle-Type Controls").
- Pick up and cycle a maximum load, check that stripper pan contacts all cans to be lifted. The layer to be lifted must also be flush and level.

WARNING: Truck control handle and attachment function activation shown here conforms to ASME/ANSI B56.1 recommended practices. Failure to follow these practices may lead to serious bodily injury or property damage. End user, dealer and OEMs should review any deviation from the practices for safe operation.

Auxiliary valve Functions



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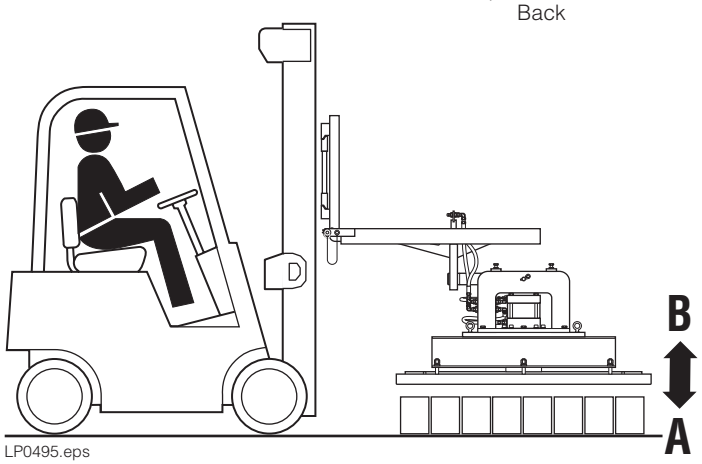

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PALLETIZE
(Driver's view)

A Engage (Lower Magnetic Head)

B Release (Raise Magnetic Head)

CAUTION: Sliding the magnetic assembly on the floor will cause extensive wear to the stripper pan. Avoid this action.

100-Hour Maintenance

Every time the lift truck is serviced of every 100 hours of truck operation, whichever comes first, complete the following maintenance on the attachment:

- Check for loose or missing fasteners, worn or damaged hoses and hydraulic leaks.
- Inspect the stripper pan for damage or wear. Replace as necessary.
- Check that the fork pin locks are engaged.

WARNING: After completing any service procedure, always test each function through five complete cycles. First test with no load, then test with a load to make sure the Layer Picker operates correctly before returning it to the job.

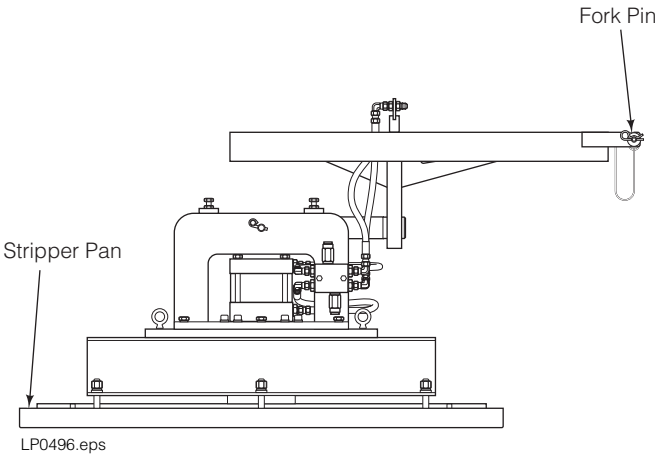
500-Hour Maintenance

After each 500 hours of truck operation, in addition to the 100-hour maintenance, perform the following procedures.

- Check the clearance between the lower mounting hooks and the truck carriage bar:

  Quick-Change Hooks – 3/16 in. (4.8 mm) maximum
  Bolt-On Hooks – 3/32 in. (2.4 mm) minimum and 3/16 in. (4.8 mm) maximum.

  If adjustment is necessary, refer to Installation section, step 5. Tighten the lower hook capscrews to 125 ft.-lbs. (170 Nm).



Fork Mount
Side View

2000-Hour Maintenance

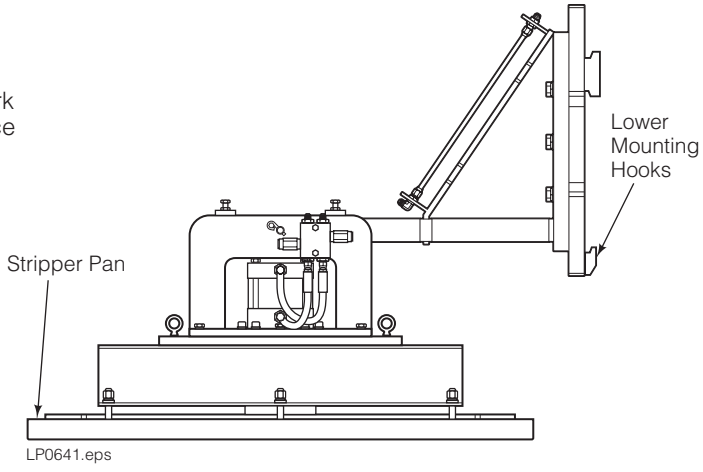
After 2000 hours of truck operation, in addition to the 100 and 500-hour maintenance, forks in use shall be inspected at intervals of not more than 12 months (for single shift operations) or whenever any defect or permanent deformation is detected. Severe applications will require more frequent inspection.

Fork inspection shall be carried out by trained personnel to detect any damage that might impair safe use. Any fork that is defective shall be removed from service. Reference ANSI B56.1-2005.

Inspect for the following defects:

- Surface cracks
- Straightness of blade and shank
- Fork angle
- Difference in height of fork tips
- Positioning lock
- Wear on fork blade and shank
- Wear on fork hooks
- Legibility of marking

NOTE: Fork Safety Kit 3014162 contains wear calipers, inspection sheets and safety poster. Also available is fork hook & carriage wear gauge 209560 (Class II) and 209561 (Class III).



Carriage Mount
Side View

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