

U *SER MANUAL*

55A *False Carriage, False Carriage & Fork Postioner*

Manual Number 6800543-R1

cascade[®]
corporation

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INTRODUCTION

This User Manual is for the Cascade 55A False Carriage or Fork Positioner. Contents include an Operator's Guide, Installation Instructions, Periodic Maintenance and Parts Manual. All specifications are shown in U.S. and (Metric) units where applicable.

IMPORTANT: The 55A attachment is metric. Supply fittings adapted as required for application.

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.



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.

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.

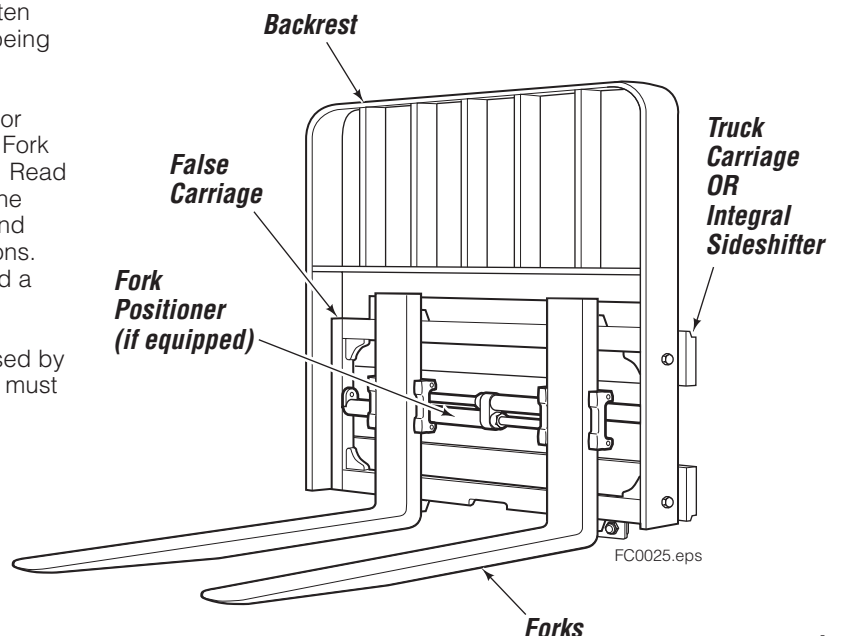
NOTE – A statement preceded by **NOTE** is information that is handy to know and may make the job easier.

OPERATION

This Section contains operating instructions for the Cascade 55A False Carriage or Fork Positioner. 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 Fork, Fork Positioner and Sideshifter 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 misjudgement. You must watch for poorly maintained equipment and hazardous situations and correct them.



Safety Rules – Industrial Lift Trucks

No riders



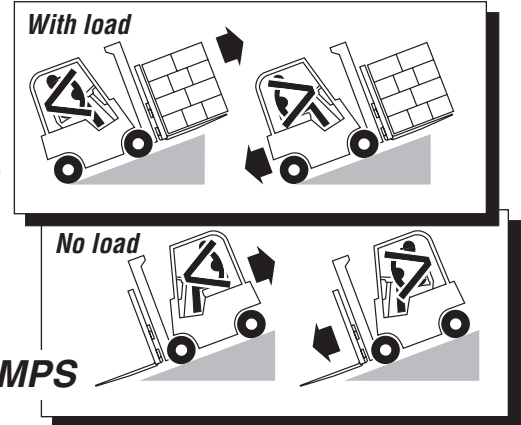
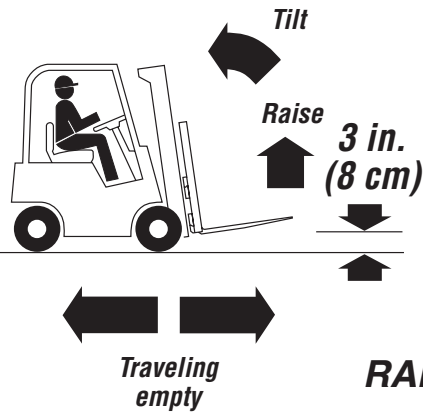
No reaching through mast



No standing under load



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GA0048.eps

TRAFFIC



Observe



Wet floors



Workers



Stops



Bumps



Dips



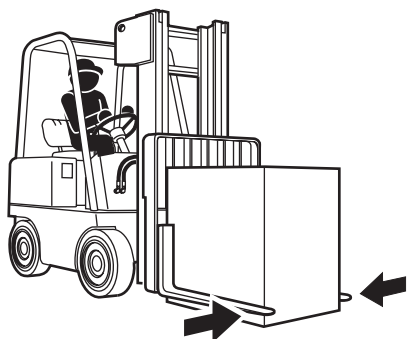
Slow for two-way traffic



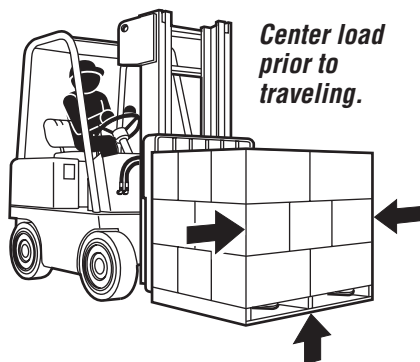
Sound horn, slow at intersection



Sound horn, slow at corner



CAUTION: Do not put side loads on forks.



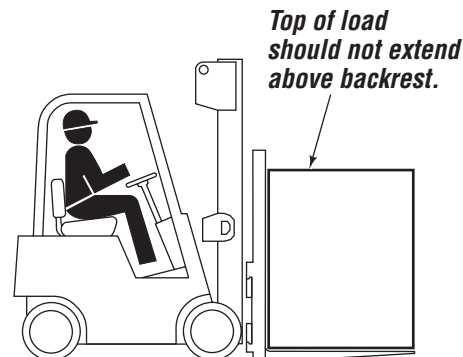
Center load prior to traveling.

Raise load prior to sidshifting.

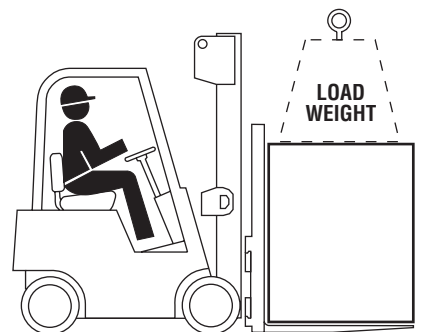
Limit sidshifting with raised load.



Limit truck movement with raised load.



Top of load should not extend above backrest.



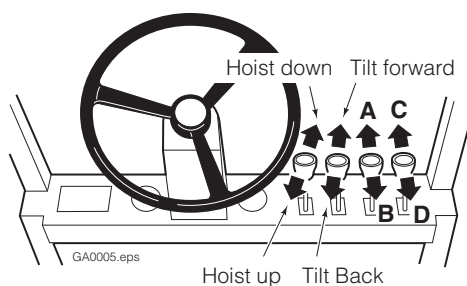
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Load weight must not exceed combined truck/attachment capacity (see truck nameplate).

Total fork capacity (LH + RH fork) must be greater than load weight. Check capacity stamp on forks.

Fork Position & Sidshift Operation

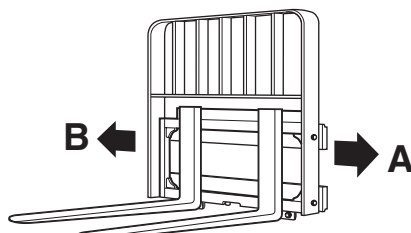
AUXILIARY VALVE FUNCTIONS



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SIDESHIFTING

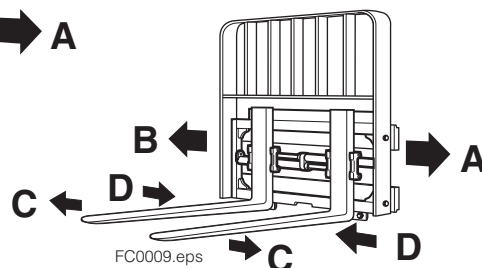
- A Sidshift Left
- B Sidshift Right



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SIDESHIFTING & FORK POSITIONING

- A Sidshift Left
- B Sidshift Right
- C Spread Forks
- D Close Forks



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SAFE OPERATION AND MAINTENANCE

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.

T RUCK REQUIREMENTS

FORK POSITIONERS

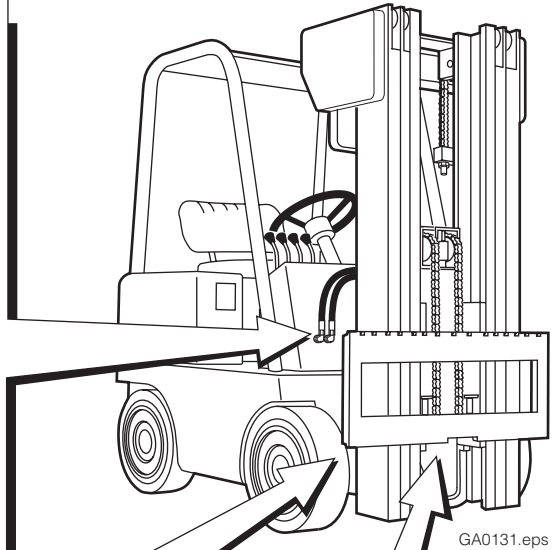
Truck Relief Setting

2200 psi (152 bar) Recommended
3500 psi (241 bar) Maximum

Truck Flow Volume ^①

	Min. ^②	Recommended	Max. ^③
55A	1 GPM (4 L/min.)	2 GPM (7.5 L/min.)	3 GPM (12 L/min.)

- ① Cascade 55A Fork Positioners are compatible with SAE 10W petroleum base hydraulic fluid meeting Mil. Spec. MIL-O-5606 or MIL-O-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 slow fork positioning speed.
- ③ Flow greater than maximum can result in excessive heating, reduced system performance and short hydraulic system life.



Carriage Mount Dimension (A) ITA (ISO)

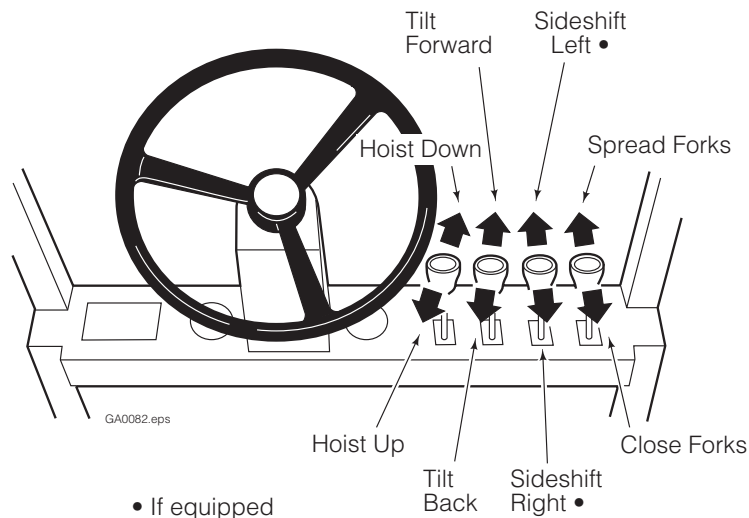
	Minimum	Maximum
Class II	14.94 in. (380.0 mm)	15.00 in. (381.0 mm)

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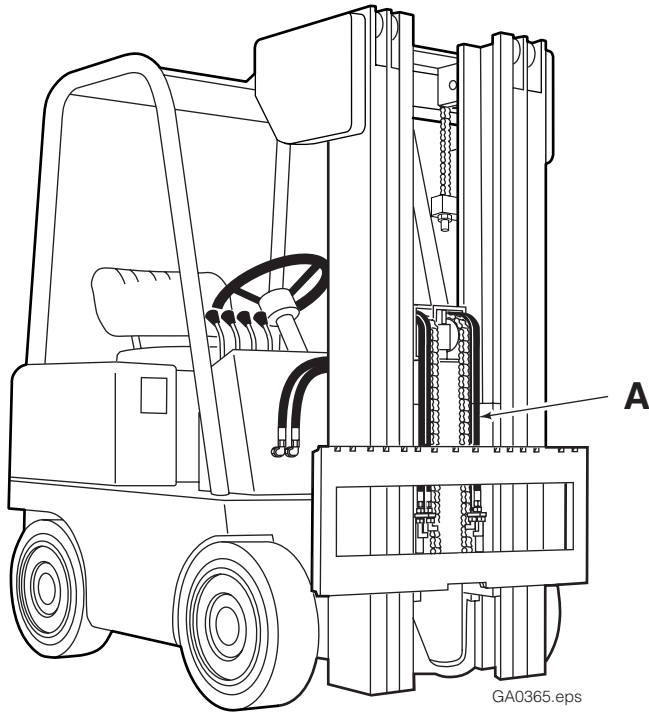
Carriage – Clean and inspect carriage bars. Assure that bars are parallel and that ends are flush. Grind smooth any protruding welds that may affect Sideshifter lower bearings. Repair any damaged notches.

Auxiliary Valve Functions

Check for compliance with
ITA (ISO) standards:



Fork Positioning function: No. 3 hose/No. 4 fittings with 5/32 in. (4 mm) minimum I.D.



Fork Positioning

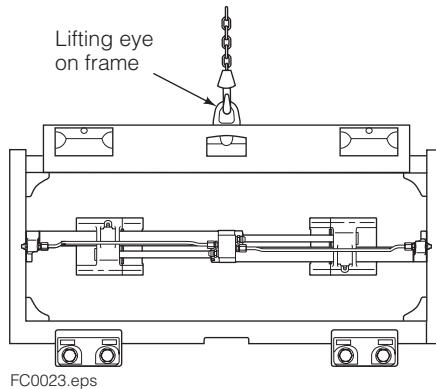
A Mast Single Internal Reeving

INSTALLATION

1 Attach overhead hoist



WARNING: Make sure overhead hoist has a rated capacity of at least 1000 lbs. (450 kg).

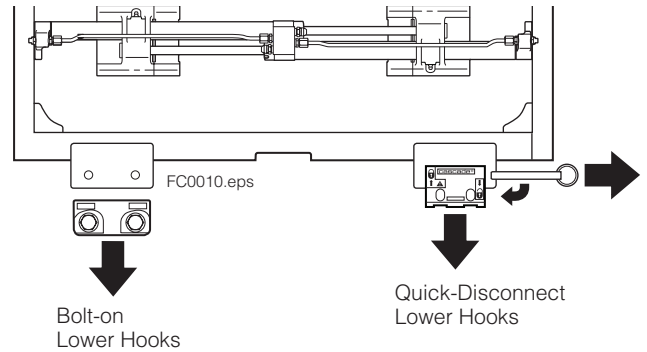


2 Lower hooks

A Remove bolt-on lower hooks.

OR

B Pull pin to lower quick-disconnect hooks. Install pin in lower hole.

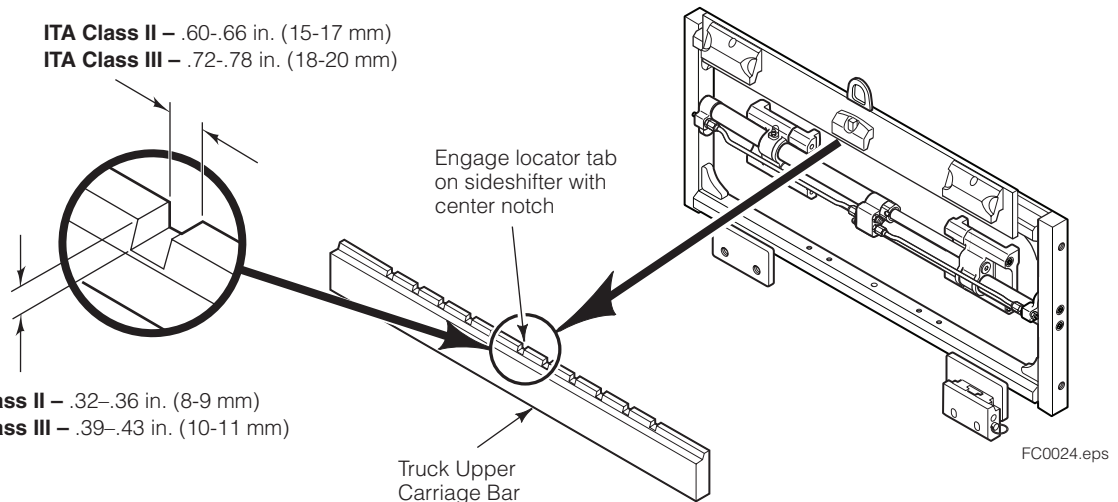


Back (Driver's) Views

3 Mount unit on truck carriage

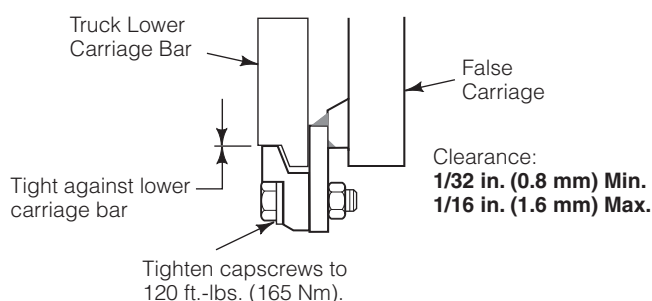
ITA Class II – .60-.66 in. (15-17 mm)
ITA Class III – .72-.78 in. (18-20 mm)

ITA Class II – .32-.36 in. (8-9 mm)
ITA Class III – .39-.43 in. (10-11 mm)

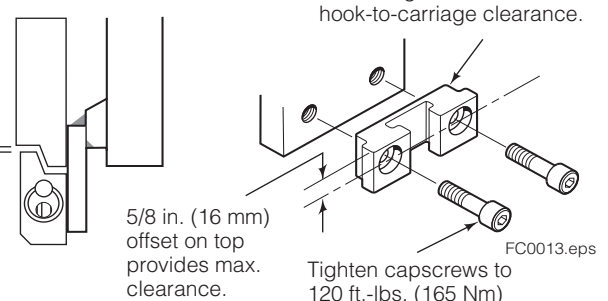


4 Install lower hooks

BOLT-ON

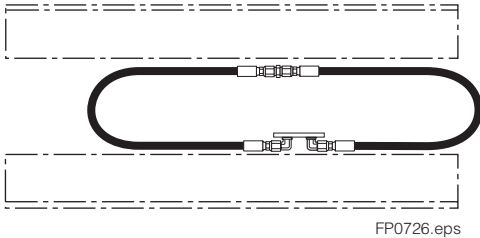


QUICK-DISCONNECT



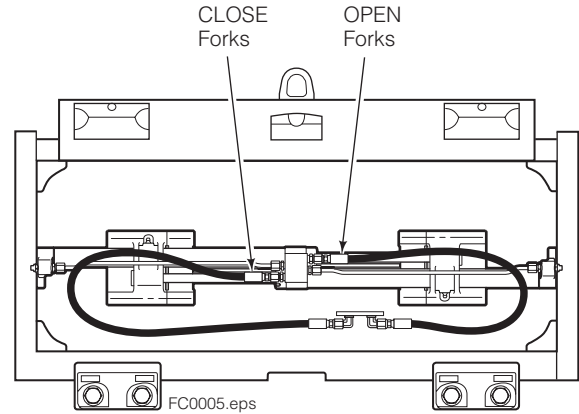
5 Fork Positioner – Flush supply hoses

- A** Connect supply hoses to supply terminals and connect together using a union fitting as shown.
- B** Operate auxiliary valve for 30 sec.
- C** Remove union fitting



6 Install hoses

CAUTION: If installed on a sideshifter, allow for 4 in. (100 mm) movement in each direction for sideshifting ('rolling' hose arrangement recommended).

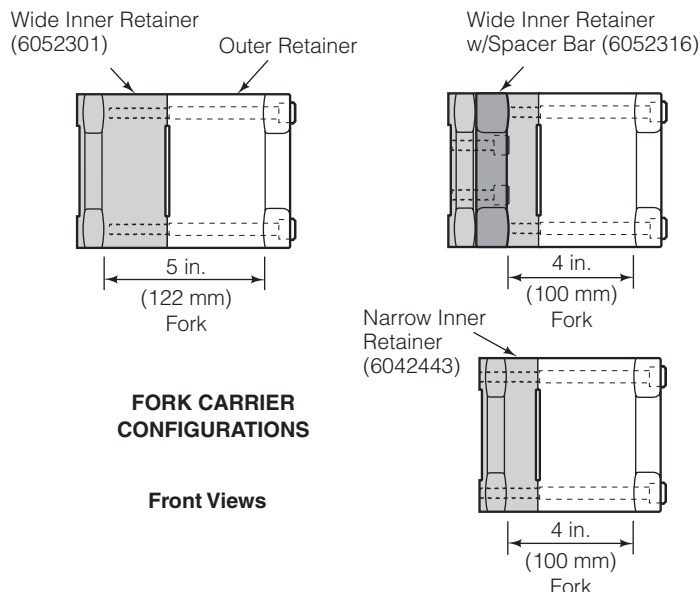
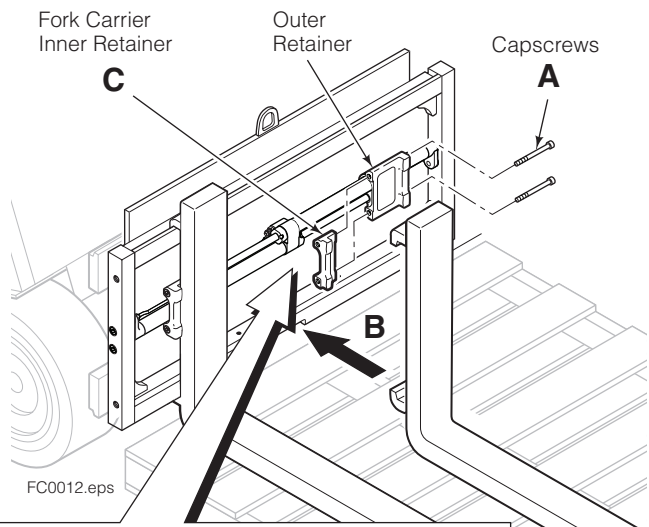


Back (Driver's) View

7 Fork Positioner – Install forks

- A** Remove capscrews and fork carrier inner retainer sections.
- B** Install forks using a pallet or blocks. Keep feet clear of forks.
- C** Reinstall fork carrier inner retainer sections and tighten capscrews to 25 ft.-lbs. (35 Nm).

NOTE: See illustration below to position inner retainers for various fork widths.

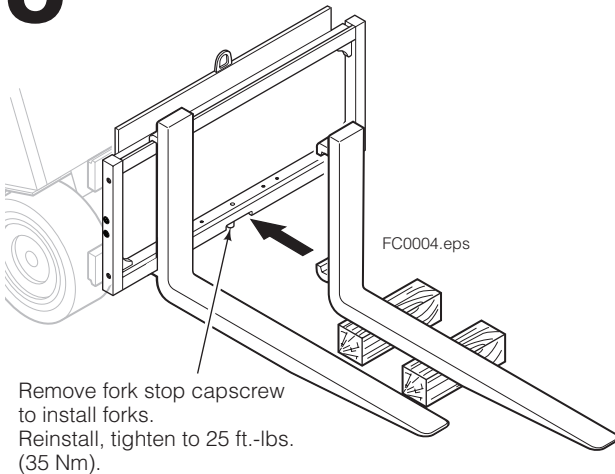


FORK CARRIER CONFIGURATIONS

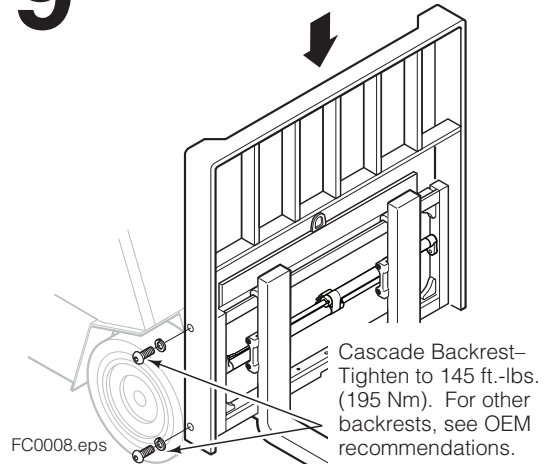
Front Views

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8 False Carriage – Install forks



9 Install backrest



10 Lubrication

Fork Positioner is prelubed at the Factory and requires no lubrication for installation. Use graphite dry lube for fork bars as required ('Slip Plate Aerosol', 'GraphoKote' or equivalent).

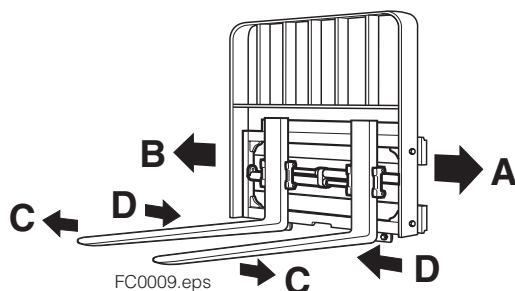
After use, lubricate fork positioner as described in *Periodic Maintenance* Section in this Manual.

11 Cycle Fork Positioner functions

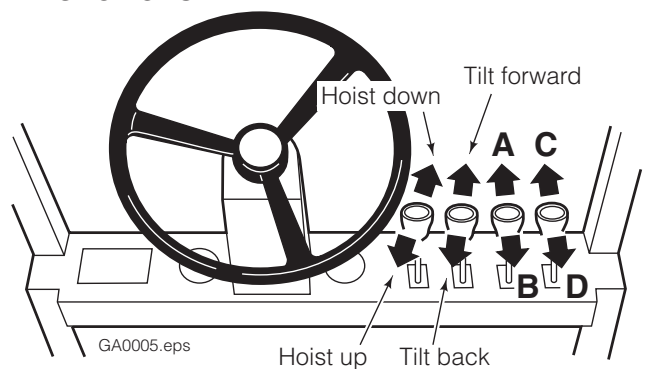
- Open and close forks several times. Sideshift (if equipped) left and right. Check for smoothness and equal movement.
- Check for operation in accordance with ITA (ISO) standards.
- Check for leaks at fittings, valve, cylinders.

SIDESHIFTING & FORK POSITIONING

- A** Sideshift Left
- B** Sideshift Right
- C** Spread Forks
- D** Close Forks

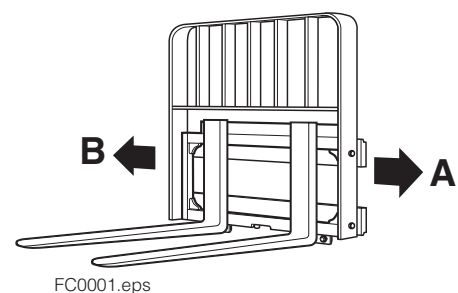


AUXILIARY VALVE FUNCTIONS



SIDESHIFTING

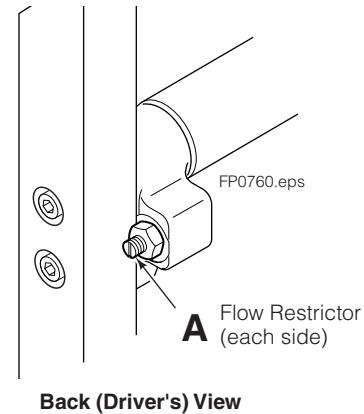
- A** Sideshift Left
- B** Sideshift Right



12 Fork Positioner – Adjust forks for equal movement (if required)

NOTE: Attachment is Factory-adjusted for equal fork movement when operated at recommended pressure and flow rate.

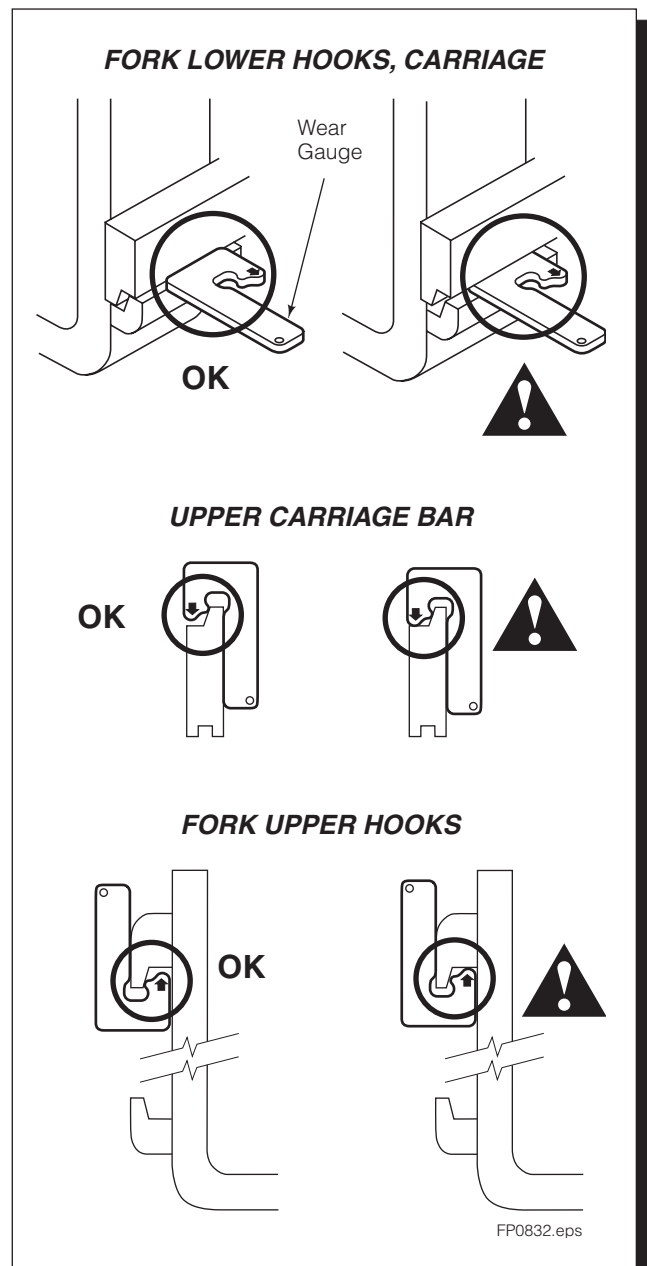
- A** Locate flow restrictors at each end. Loosen jam nuts and screw both flow restrictors in until they bottom. Screw each restrictor out (CCW) three turns.
- B** Open forks fully, then close. Look for unequal fork movement.
- C** On faster fork (one that bottoms first), screw flow restrictor in (CW) 1/2 turn.
- D** Repeat Steps B and C until fork movement is equal. Tighten jam nuts.



13 Inspect fork hooks, carriage bar clearance

NOTE: Use go/no-go Wear Gauge Part No. 209560 (Class II) or 209561 (Class III).

- A** Inspect the fork lower hooks and carriage bar. If the gauge fits between the carriage bar and lower hook, repair or replacement is needed.
- B** Inspect the upper carriage bar. If the gauge arrow touches the carriage bar, repair or replacement is needed.
- C** Inspect the fork upper hooks. If the gauge arrow touches the hook, repair or replacement is needed.



Daily

Check items shown each day. Report problems to your supervisor. See Service Manual for troubleshooting, maintenance and repair procedures.

100-Hour

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

- Check for loose or missing capscrews, worn or damaged hoses, and hydraulic leaks.
- Inspect lower hooks for wear and proper clearance. Adjust if necessary (see Installation, Step 4).
- Tighten fork positioner mounting flange capscrews to a torque of 50 ft.-lbs. (65 Nm).
- Tighten fork carrier capscrews to a torque of 25 ft.-lbs. (35 Nm).
- Tighten fork positioner cylinder rod anchor plugs to a torque of 50 ft.-lbs. (65 Nm).
- Tighten lower hook capscrews to 120 ft.-lbs. (165 Nm).
- False Carriages – Tighten lower fork stop capscrew to 25 ft.-lbs. (35 Nm).

300-Hour

After each 300 hours of truck operation, in addition to the 100-hour maintenance, perform the following procedures:

- Tighten backrest capscrews (Cascade) to 145 ft.-lbs. (195 ft.-lbs.).
- Apply general-purpose chassis grease to fork carrier grease fittings.
- Apply graphite dry-lube to fork carriage bars as required ('Slip Plate Aerosol', 'GraphoKote' or equivalent).

1000-Hour

After each 1000 hours of truck operation, in addition to the 100 and 300-hour maintenance, perform the following procedures:

- Inspect fork carriers for looseness on bearing tubes, and cylinder rod anchors for excessive end play (see Service Manual for repair procedures). **NOTE:** Cylinder rod anchors operate with a loose clearance.

2000-Hour

After 2000 hours of truck operation, in addition to the 100, 300 and 1000-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.

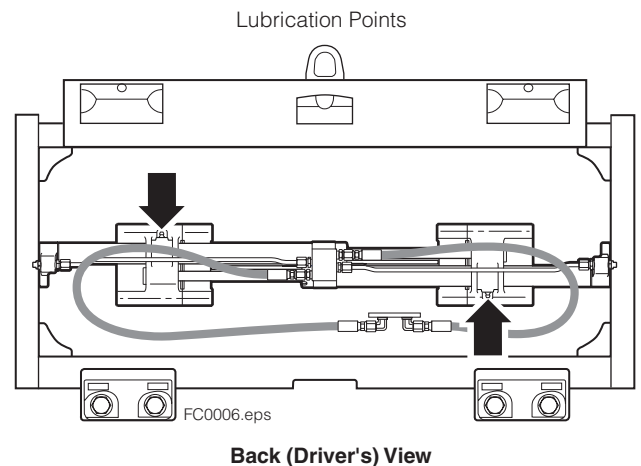
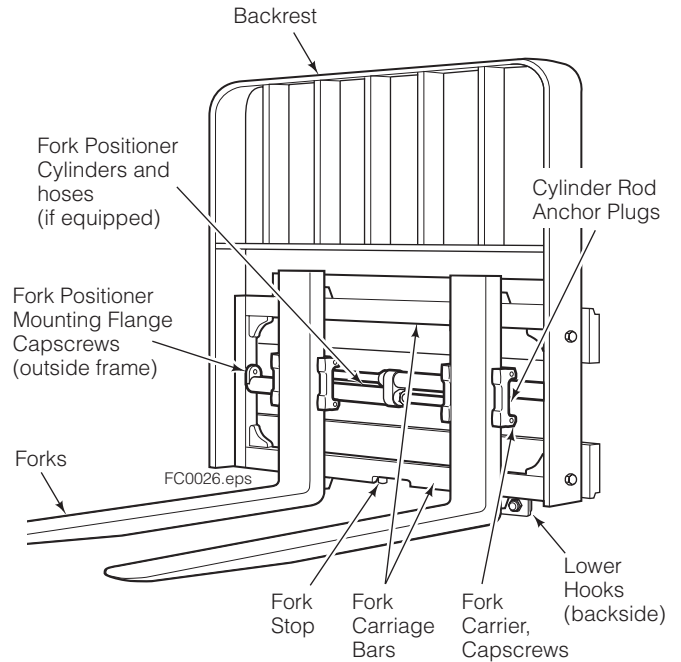
Fork inspection shall be carried out by trained personnel to detect any damage that might impair safe use. Any fork that is defective shall be removed from service. Reference ANSI B56.1-2005.

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



WARNING: After completing any service procedure, always test the Fork Positioner through five complete cycles to make sure the attachment operates correctly before returning it to the job.



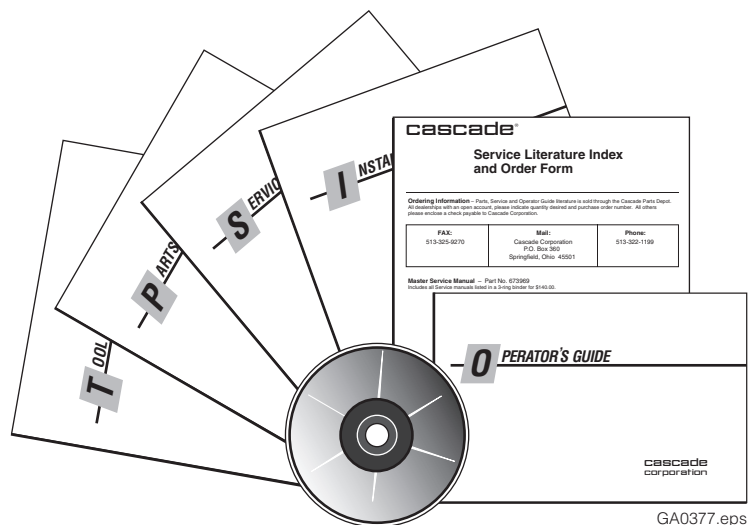
NOTE: Fork Safety Kit 3014162 contains wear calipers, inspection sheets and safety poster. Also available is fork hook & carriage wear gauge 209560 (Class II) and 209561 (Class III).

Recommended Spare Parts

FORK POSITIONER		UNITS SERVICED		
55A PART NO.	DESCRIPTION	1-5 QTY.	6-19 QTY.	20-50 QTY.
6055389	Cylinder Service Kit	0	4	6
6055390	Bearing Service Kit-Composite	1	2	4
6055391	Bearing Service Kit-Bronze	1	2	4
6039245	Mounting Shims	4	6	8
768825	Fork Stop Capscrew, M12 x 20	1	2	4

Publications

PART NO.	DESCRIPTION
6800543	User Manual
679929	Tool Catalog
673964	Literature Order Form



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Do you have questions you need answered right now?

Call your nearest Cascade Service Department.
Visit us online at www.cascorp.com

AMERICAS

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