



# ***INSTALLATION INSTRUCTIONS***

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***and PERIODIC MAINTENANCE***

## ***Sliding Arm Paper Roll Clamps***

***Manual Number 6827242-R2***

**cascade<sup>®</sup>  
corporation**

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This manual provides instructions for installing a Cascade Sliding Arm Roll Clamps. Follow the suggested installation procedures for best results. If you have any questions or need more information, contact you nearest Cascade Service Department for assistance. Refer to the back cover.

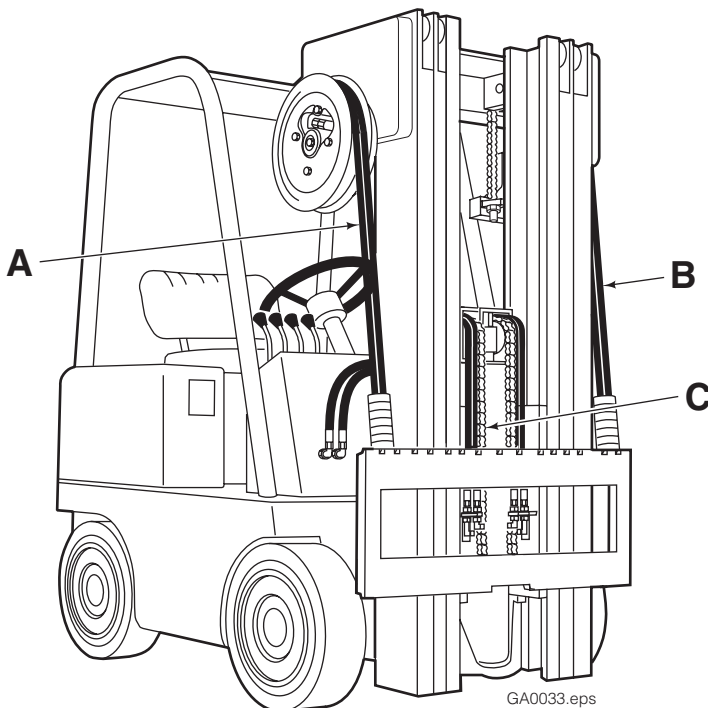
Read the **WARNING** Statements placed throughout this manual to emphasize safety during attachment installation.

**IMPORTANT:** Field alterations may impair performance or capability can could result in loss of warranty. Consult Cascade for any required modifications.

## R ECOMMENDED HYDRAULIC SUPPLY

Sliding Arm Roll Clamps provide the best performance with one of the hydraulic supply arrangements shown below. Refer to Cascade Hose & Cable Reel Selection Guide, Part No. 212199, to select the correct hose reel for the mast and truck. The hose and fitting requirements are:

- All hoses and fittings for CLAMP function should be No. 8, minimum internal diameter of 13/32 in. (10 mm).
- All hoses and fittings for SIDESHIFT function should be at least No. 6, minimum internal diameter of 9/32 in. (7 mm).



### Non-Sideshifting

#### A or B

RH or LH THINLINE™ 2-port hose reel group

#### OR

C Mast single internal hose reeving group

### Sideshifting

#### A or B

RH and LH THINLINE™ 2-port hose reel group

#### OR

C Mast double internal hose reeving group

# T RUCK REQUIREMENTS

## Truck Relief Setting

### D-Series and 70F

140 bar (2000 psi) Recommended (Rec.)  
160 bar (2300 psi) Maximum (Max.)

### 41G, 50G (see attachment nameplate)

#### Low Pressure

155 bar (2245 psi) - Rec.<sup>①</sup>  
189 bar (2740 psi) - Max.

#### High Pressure

190 bar (2755 psi) - Rec.<sup>①</sup>  
250 bar (3625 psi) - Max.

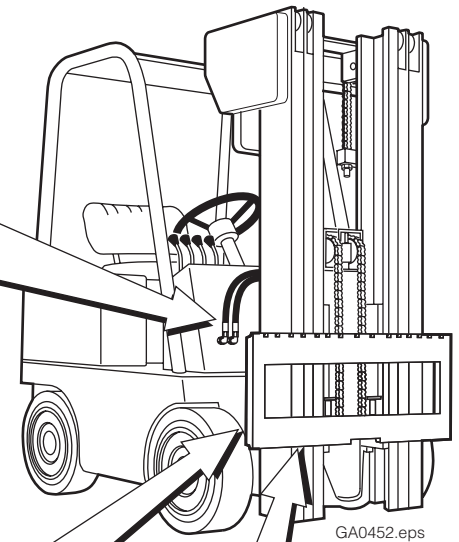
## Truck Flow Volume <sup>②</sup>

	Min. <sup>③</sup>	Recommended	Max. <sup>④</sup>
<b>D-Series</b>	26 L/min. (7 GPM)	45 L/min. (12 GPM)	57 L/min. (15 GPM)
<b>70F</b>	19 L/min. (7.8 GPM)	28 L/min. (14 GPM)	38 L/min. (17 GPM)
<b>41G, 50G</b>	38 L/Min. (10 GPM)	57 L/Min. (15 GPM)	90 L/Min. (23 GPM)

- ① Minimum truck hydraulic pressure required to reach attachment rated capacity.
- ② Cascade Sliding Arm Roll Clamps 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.
- ③ Flow less than recommended will result in unequal arm movement.
- ④ Flow greater than maximum can result in excessive heating, reduced system performance and short hydraulic system life.



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



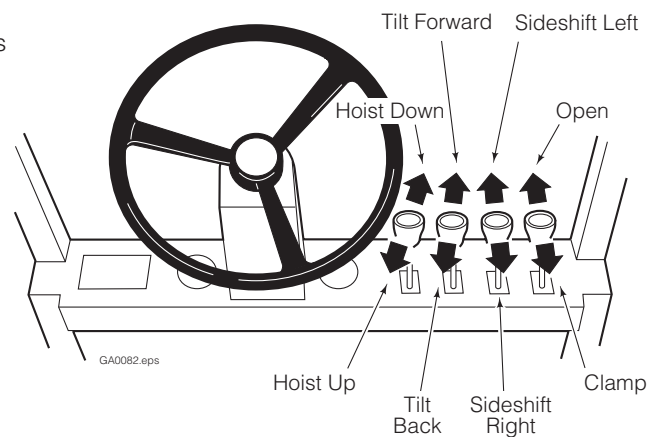
## Carriage Mount Dimension (A) ITA (ISO)

	Minimum	Maximum
<b>Class III</b>	474.5 mm (18.68 in.)	476.0 mm (18.74 in.)
<b>Class IV</b>	595.5 mm (23.44 in.)	597.0 mm (23.50 in.)

**Carriage** – Clean and inspect carriage bars. Make sure the bars are parallel and that ends are flush. Repair any damaged notches.

## Auxiliary Valve Functions

Check for compliance with ANSI (ISO) Standards



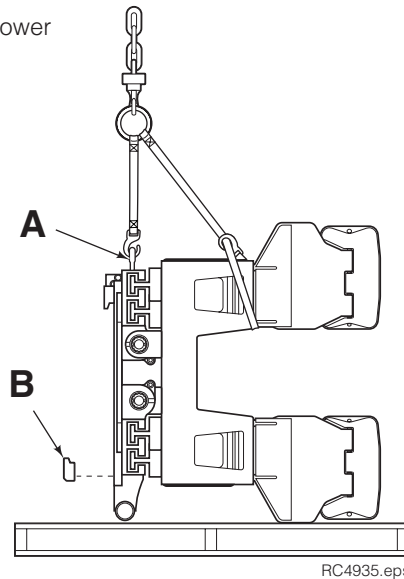
Follow the steps shown to install the attachment on the truck. Read and understand **WARNING** and **CAUTION** statements. If you don't understand a procedure, ask your supervisor or call the nearest Cascade Service Department of assistance.

## 1 Attach overhead hoist

- A** Remove banding, use multiple chains/straps to stabilize the attachment while lifting. Set the attachment upright on the pallet.
- B** If equipped, remove bolt-on lower mounting hooks.



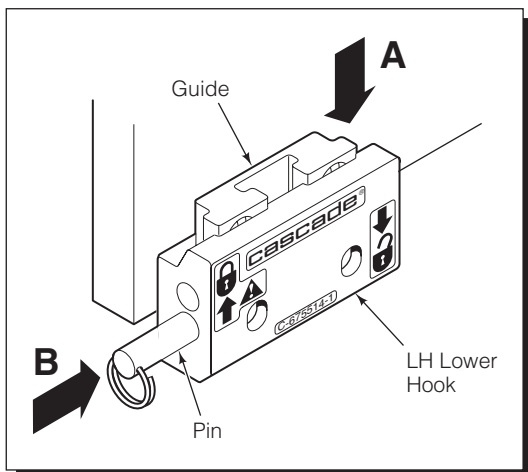
**WARNING:** Check the attachment weight (located on the nameplate) to make sure the overhead hoist and chains or straps are at least the rated capacity of the attachment.



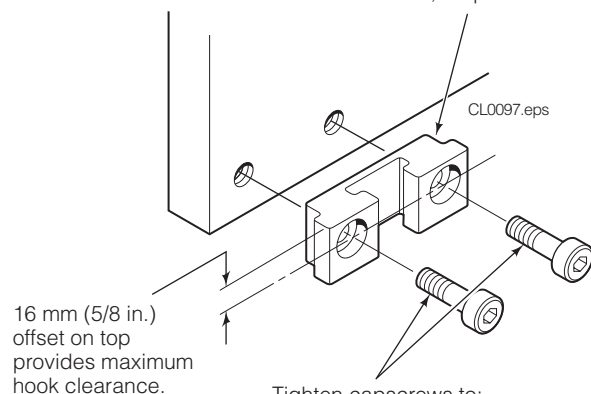
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## 2 Unlock quick-change lower mounting hooks (if equipped)

- A** Remove pin and drop hooks into unlocked position.
- B** Re-installed pin in lower hole.



**NOTE:** Guides can be reversed to change hook-to-carriage clearance. Refer to lower hook installation, Step 6.



Tighten capscrews to:  
**CL III** – 150 Nm (110 ft.-lbs.)  
**CL IV** – 260 Nm (190 ft.-lbs.)

## 3 Prepare hoses

**CAUTION:** Connect the hydraulic hoses to the attachment using Cascade Attachment Installation Kit No. 659245 for non-sideshifting clamps and clamps with solenoid adaption, Kit No. 659249 for sideshifting clamps **OR** use hoses and fittings as shown.

- A** Position the truck carriage behind the attachment to determine hose lengths required for hydraulic supply configuration.
- B** Cut hoses to length and install end fittings or use hose kits supplied.

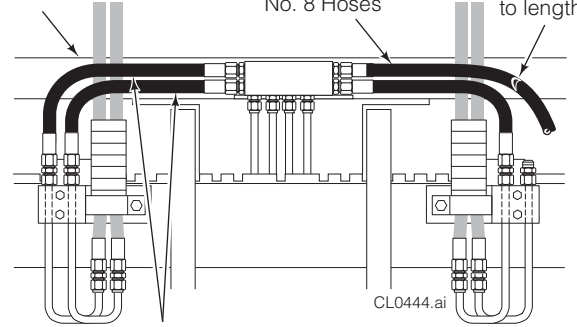


**WARNING:** Do not remove the fitting from the valve Clamp (CL) port. For No. 6 hose connection, use a 6-8 reducer.

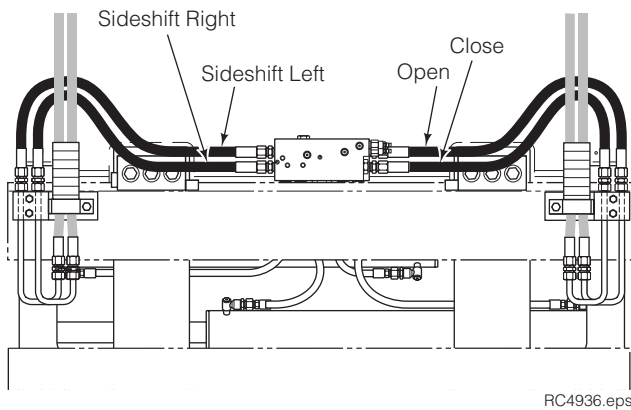
Hoses should not project above the Check Valve Bracket

No. 8 Hoses

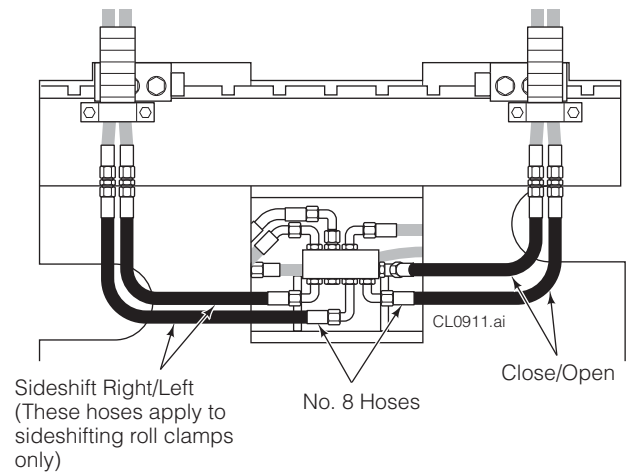
Remove fittings and cut hoses to length



**Valve Upper Mount – D-Series**



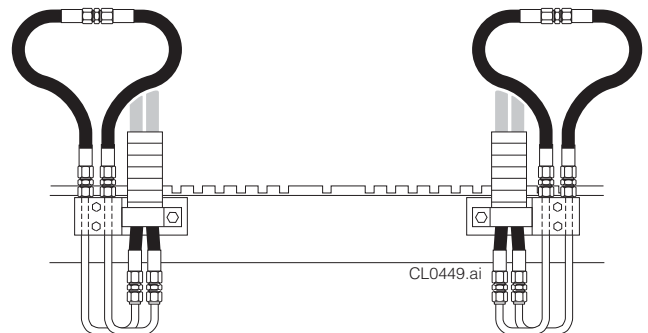
**Valve Upper Mount – 41G & 50G**



**Valve Cylinder Mount**

## 4 Flush hydraulic supply hoses

- A** Install hoses using union fittings.
- B** Operate valves for 30 seconds.
- C** Remove union fittings.

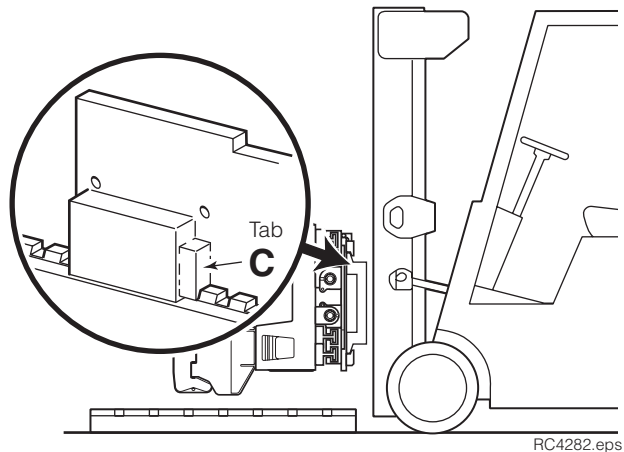


## 5 Mount Clamp on truck carriage

- A** Center truck behind attachment.
- B** Tilt forward and raise carriage into position.
- C** Engage the mounting hook tab with the closest upper carriage bar notch and raise the truck carriage into position behind the attachment.
- D** Lift attachment off the pallet.

**NOTE:** The attachment may not be perfectly centered on the carriage bar when the mounting hook tab is engaged in the closest carriage notch. This is normal.

**NOTE:** The lower hooks cannot be properly installed if the upper hook tab is not engaged in the carriage notch.



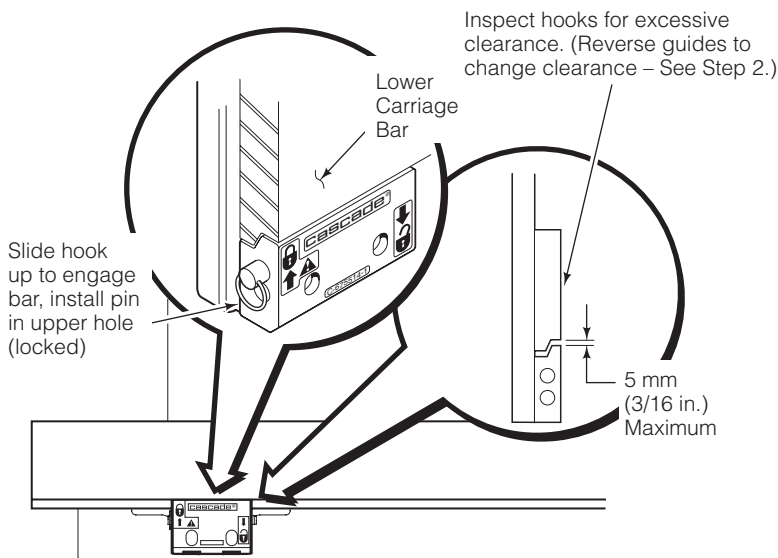
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**WARNING:** The mounting hooks must properly engaged with the upper carriage bar. The tab on the left mounting hook must be engaged in a mating notch on the upper carriage bar.

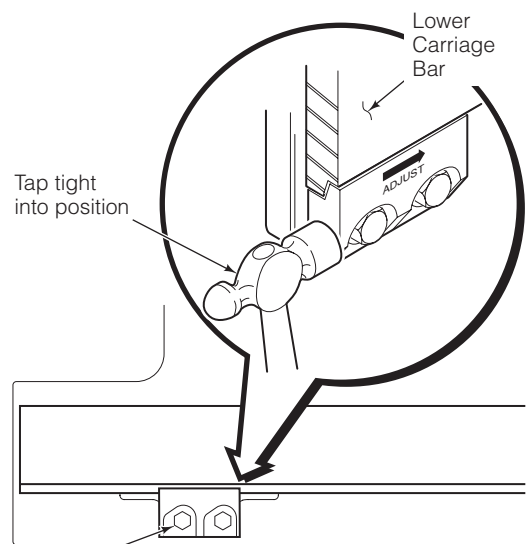
## 6 Install and engage lower hooks

### QUICK-CHANGE TYPE



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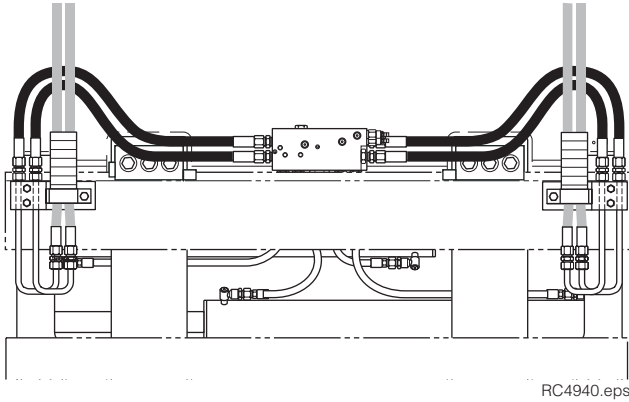
### BOLT-ON TYPE



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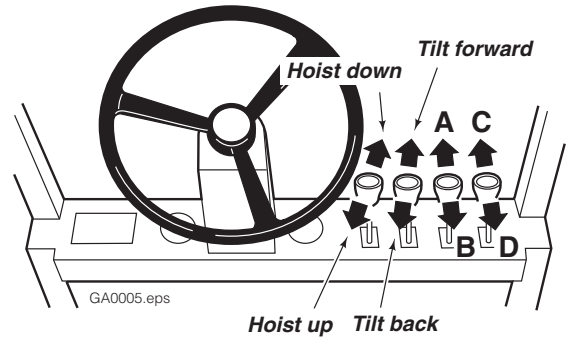
Tighten capscrews to:  
**A & G-Series CL IV** – 435 Nm (320 ft.-lbs.)  
**D-Series & 70F CL III** – 165 Nm (120 ft.-lbs.)  
**D-Series & 70F CL IV** – 265 Nm (195 ft.-lbs.)

## 7 Connect Hoses



## 8 Cycle Attachment Functions

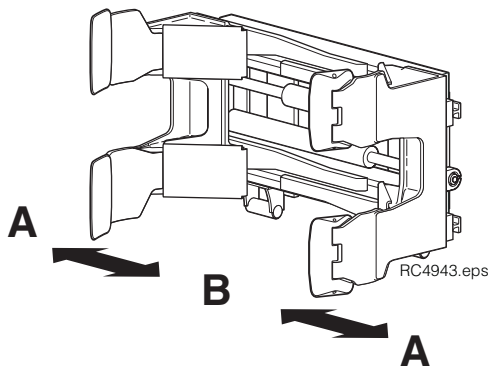
- With no load, cycle all functions several times.
- Check functions for operation in accordance with ANSI (ISO) standards.
- Clamp a maximum load and check for smooth arm movement.
- Check for leaks at fittings and cylinder rod ends.



**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.

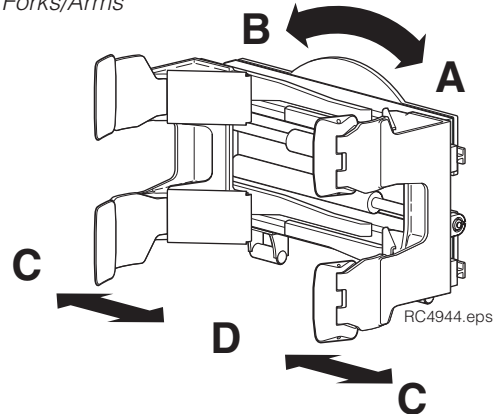
### NON-SIDESHIFTING CLAMPS

- A** Open Arms
- B** Close Arms
- C** (not used)
- D** (not used)



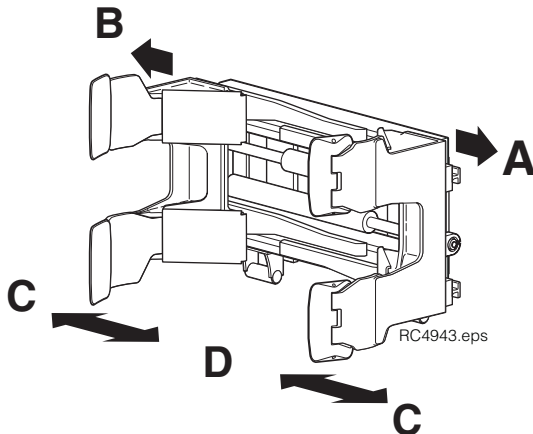
### REVOLVING CLAMPS

- A** Rotate Counterclockwise (CCW)
- B** Rotate Clockwise (CW)
- C** Open Forks/Arms
- D** Close Forks/Arms



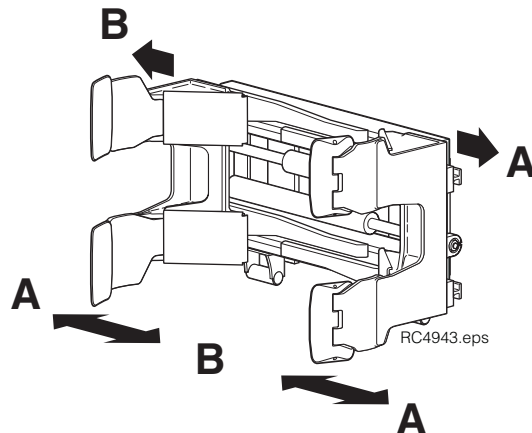
### SIDESHIFTING CLAMPS

- A** Sideshift Left
- B** Sideshift Right
- C** Open Arms
- D** Close Arms



### SIDESHIFTING WITH SOLENOID VALVE

- A** Sideshift Left
- A** Open Arms (Press knob button)
- B** Sideshift Right
- B** Close Arms (Press knob button)



## 100-Hour Maintenance

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

- Check for loose or missing bolts, worn or damaged supply hoses and hydraulic leaks.
  - Check decals and nameplate for legibility.
  - Inspect the cylinder anchor joint for lubrication and correct hold.
- NOTE:** Anchor joint operates with a loose clearance. Lubricate with wheel bearing grease.
- Check for equal arm movement.
  - Arm bearing life can be extended by a light application of teflon lubricant (Cascade part no. 6850769 or Dupont D00080101), if permitted by your application.
  - Check the load holding hydraulic system for proper function. Cascade Clamp Force Indicators 300G-CFI-812C and 300G-CFI-824C are available for this test.



**WARNING:** After completing any service procedure, always test the clamp through five complete cycles. First test the clamp empty, then test with a load to make sure the attachment operates correctly before returning 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 lower mounting hook engagement clearance with the truck carriage bar:

**Quick-Change Hooks** – 2.5 mm (3/32 in.) minimum  
5 mm (3/16 in.) maximum

**Bolt-On Hooks** – Tight against lower carriage bar.

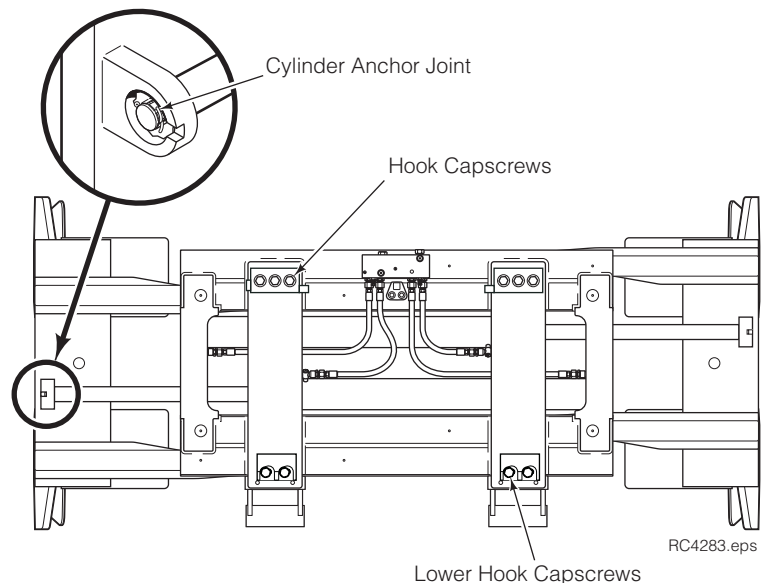
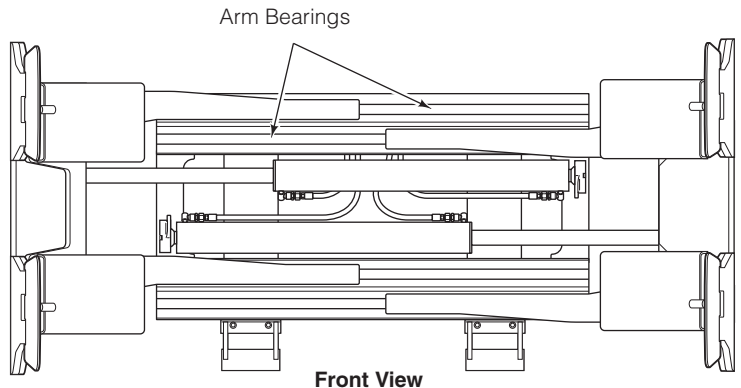
If adjustment is necessary, refer to Installation Step 6. Tighten the lower hook capscrews as follows:

**D-Series & 70F Class III Mounting** – 150 Nm  
(110 ft.-lbs.)

**D-Series & 70F Class IV Mounting** – 260 Nm  
(190 ft.-lbs.)

**G-Series Class IV Mounting** – 435 Nm  
(320 ft.-lbs.)

- Tighten the upper hook capscrews to:
  - D-Series & 70F Class IV Mounting** – 285 Nm  
(210 ft.-lbs.)
  - G-Series Class IV Mounting** – 435 Nm  
(320 ft.-lbs.)
- Inspect all load-bearing structural welds on arms, frame and cylinder anchor areas for visual cracks. Replace components as required.
- Inspect contact pads, pivot pins, wear tiles and arm tips for wear and damage. Replace or repair, as needed.



Back (Driver's) View

## 1000-Hour Maintenance

After each 1000 hours of lift truck operation, in addition to the 100-hour and 500-hour maintenance procedures, perform the following procedures:

- Inspect the arm bearings for wear. If any bearing is worn to less than 1.5 mm (.060 in.) thickness, replace all bearings.

## 4000-Hour Maintenance

After each 4000 hours of truck operation, in addition to the 100, 500 and 1000-hour maintenance, perform the following procedures:

- Due to normal mechanical wear and component service life, cylinder seals should be replaced to maintain performance and safe operation.

**Do you have questions you need answered right now?**

Call your nearest Cascade Service Department.

Visit us online at [www.cascorp.com](http://www.cascorp.com)

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