

I **INSTALLATION INSTRUCTIONS** *and PERIODIC MAINTENANCE*

H-Series

Fixed Frame

Pivot Arm

Paper Roll Clamps

Manual Number 6077316-R3

cascade[®]
corporation

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IMPORTANT: Field alterations may impair performance or capability and could result in loss of warranty. Consult Cascade for any required modifications or before making field alterations.

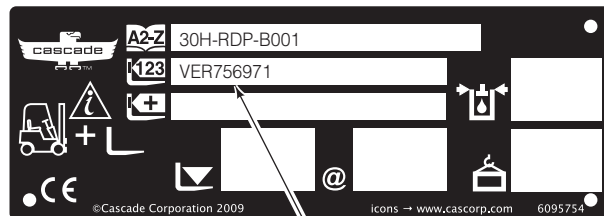
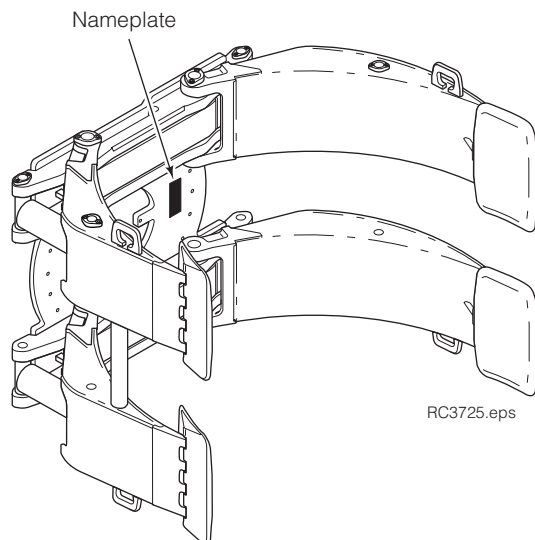
I NTRODUCTION

This manual provides installation instructions and periodic maintenance for Cascade H-Series Fixed Frame Paper Roll Clamps.

In any communication about the attachment refer to the product catalog and serial numbers stamped on the nameplate. If the nameplate is missing, the numbers can be found stamped on the front of the faceplate top or side.

IMPORTANT: Supply input fittings are JIC.

NOTE: Specifications are shown in both U.S. and (Metric) units. All fasteners have a torque value range of $\pm 10\%$ of stated value.



SPECIAL DEFINITIONS

The statements shown below 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 special information that is useful when servicing the attachment.



WARNING - A statement preceded by a 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.

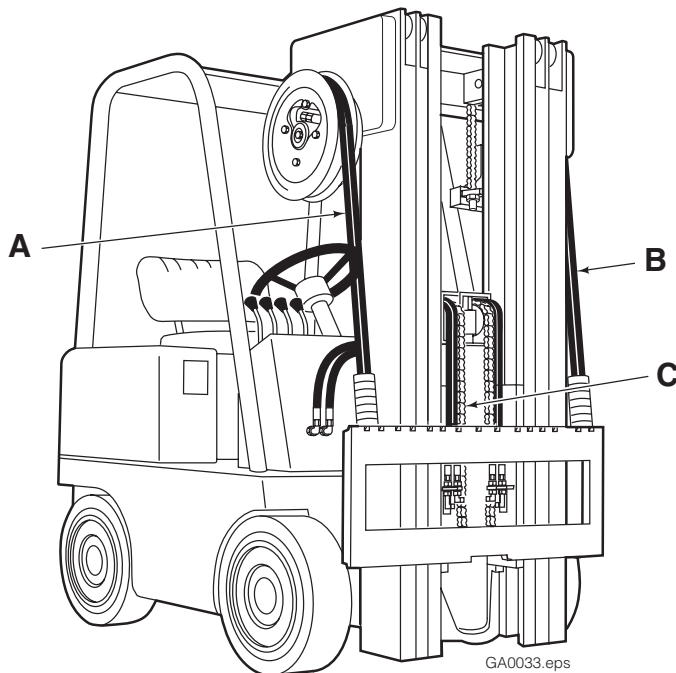
IMPORTANT – A statement preceded by IMPORTANT is information that possesses special significance.

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

RECOMMENDED HYDRAULIC SUPPLY

H-Series Fixed Frame Paper Roll Clamps provide the best performance with the hydraulic supply arrangement shown below. Refer to Cascade **Hose and Cable Reel Selection Guide**, Part No. 212119, to select the correct hose reel for the mast and truck. The hose and fitting requirements are:

- **18H** – All hoses and fittings for both CLAMP and ROTATE functions require No. 6 hose with 9/32 in. (7 mm) minimum I.D.
- **20H, 25H, 30H, 33H** – All hoses and fittings for both CLAMP and ROTATE functions require No. 8 hose with 13/32 in. (10 mm) minimum I.D.



A and B

RH and LH THINLINE™ 2-Port Hose Reel Groups.

OR

A and C

RH THINLINE™ 2-Port Hose Reel Group and Mast Single Internal Hose Reeving Group.

T RUCK REQUIREMENTS

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.

Truck Relief Setting
2300 psi (160 bar) Maximum

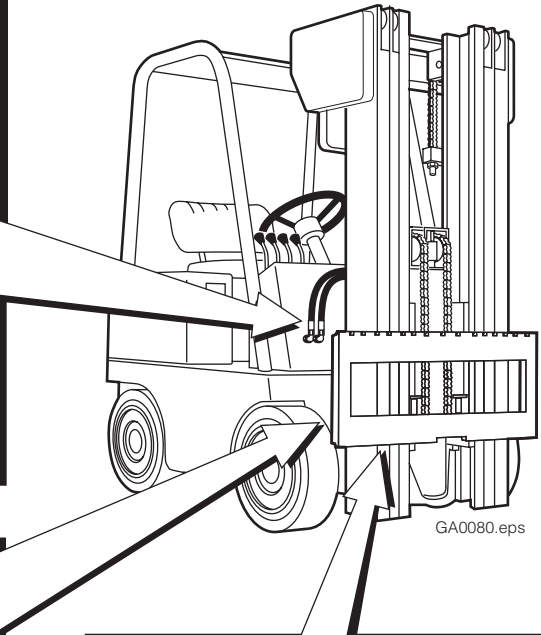
Truck Flow Volume ①

	Min. ②	Recommended	Max. ③
18H, 20H, 25H, 30H, 33H	5 GPM (18 L/min.)	10 GPM (37 L/min.)	15 GPM (56 L/min.)

① Cascade H-Series Roll Clamps 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 a rotate speed less than 2 RPM.

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



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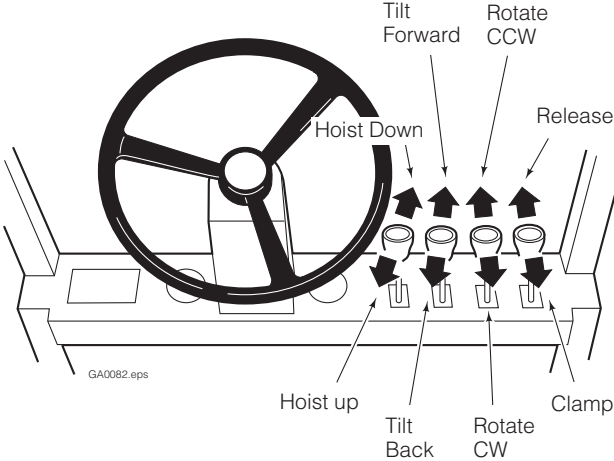
Carriage Mount Dimension (A) ITA (ISO)

	Minimum	Maximum
Class II	14.94 in. (380.0 mm)	15.00 in. (381.0 mm)
Class III	18.68 in. (474.5 mm)	18.74 in. (476.0 mm)
Class IV	23.44 in. (595.5 mm)	23.50 in. (597.0 mm)

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Carriage
Clean and inspect carriage bars for damage and smoothness. Repair any protruding welds or damaged notches.

Auxiliary Valve Functions
Check for compliance with ANSI (ISO) standards:



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INSTALLATION

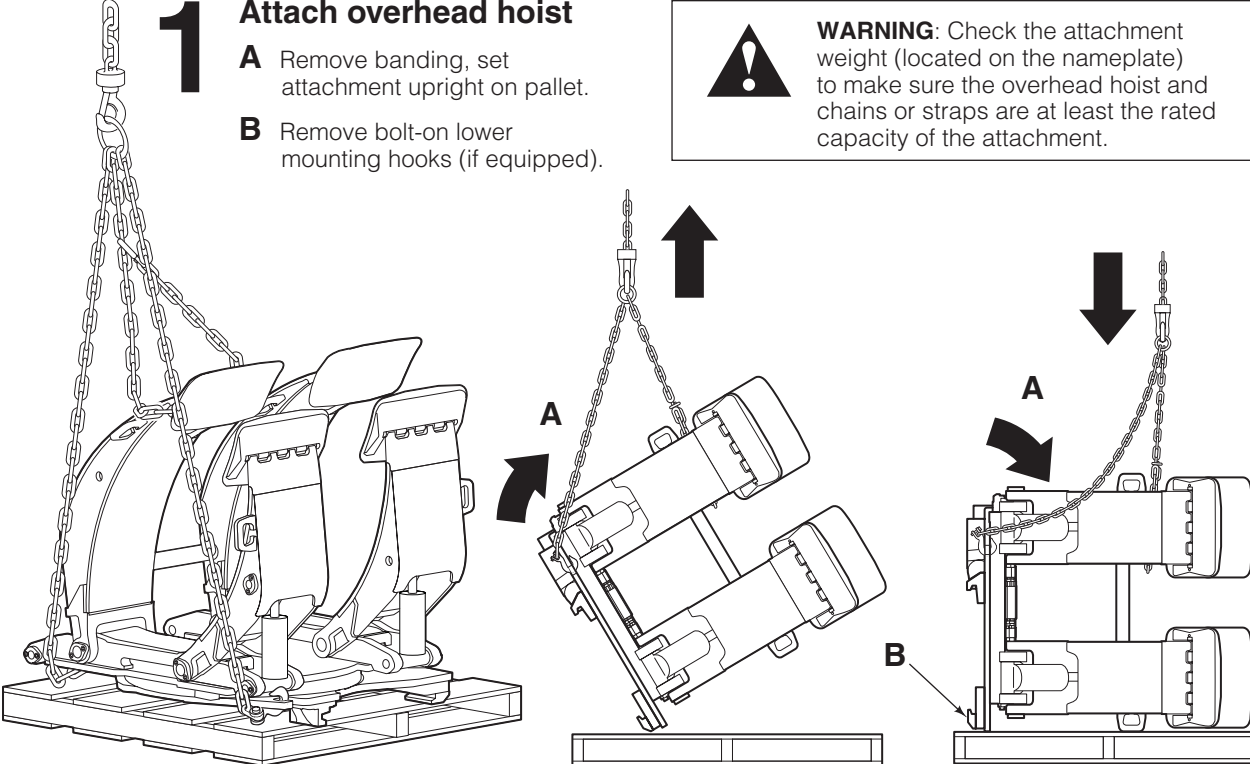
Follow the steps shown to install the attachment on the truck. Read and understand all **WARNING** statements. If you don't understand a procedure, ask your supervisor, or call the nearest Cascade Service Department for assistance.

1 Attach overhead hoist

A Remove banding, set attachment upright on pallet.

B Remove bolt-on lower mounting hooks (if equipped).

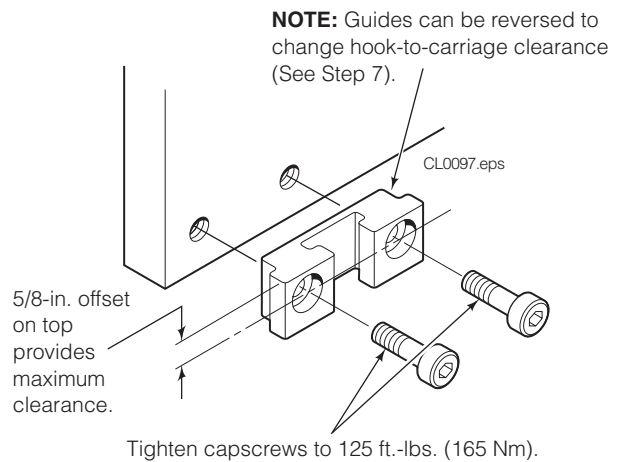
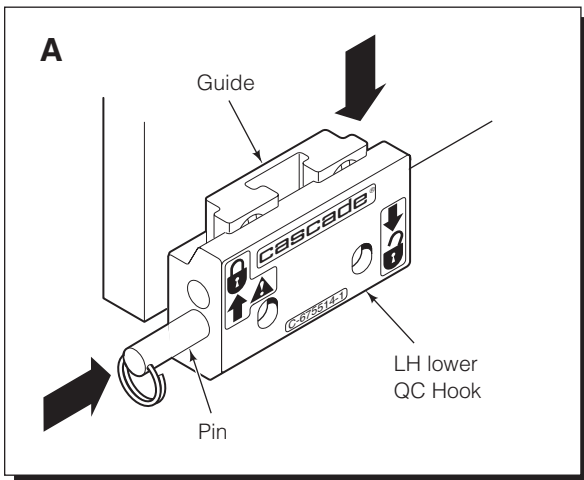
WARNING: Check the attachment weight (located on the nameplate) to make sure the overhead hoist and chains or straps are at least the rated capacity of the attachment.



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2 Unlock Quick-Change lower mounting hooks

- A** Move hooks into unlocked position (pin in lower hole).



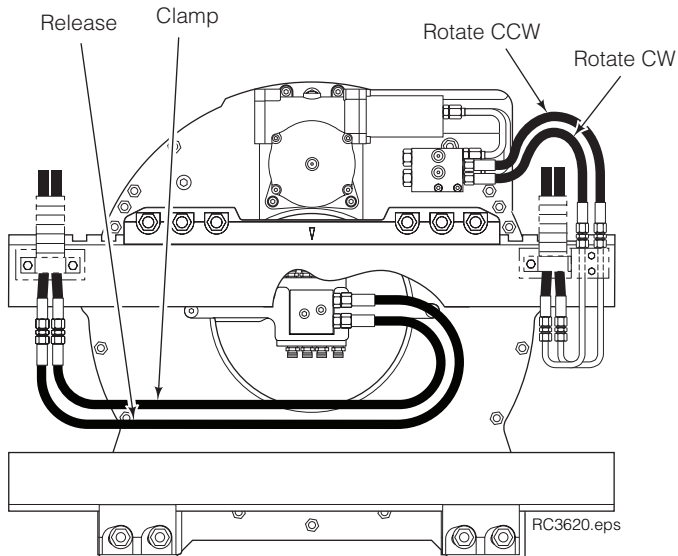
3 Preparing Hoses

- A** Position truck carriage behind attachment.
- B** Determine hose lengths required.
- C** Cut hoses to length, install end fittings.

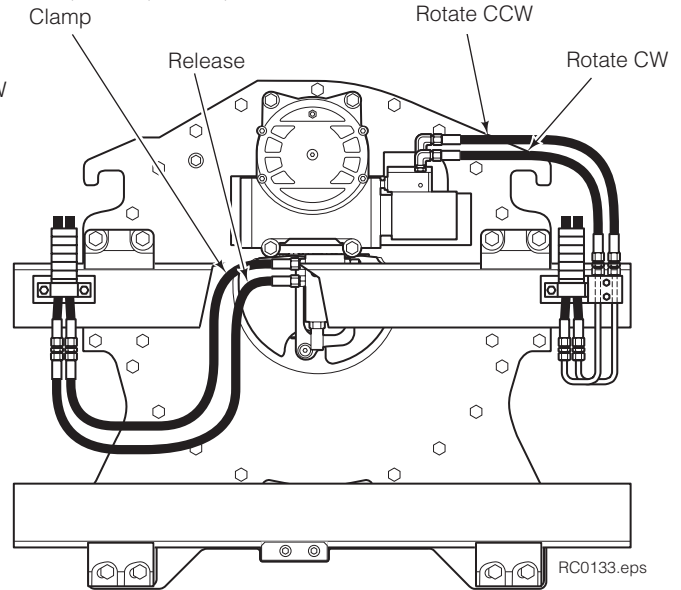
CAUTION: Use No. 6 Hoses (18H) and No. 8 Hoses (20H, 25H, 30H, 33H), 2300 psi (160 bar) working pressure rated for all functions.

INSTALLATION USING RH & LH 2-PORT THINLINE™ HOSE REELS:

18H

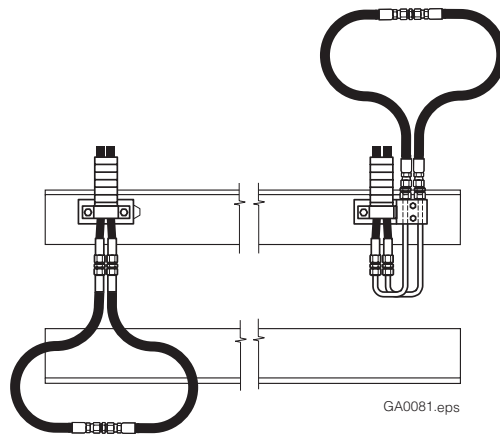


20H, 25H, 30H, 33H



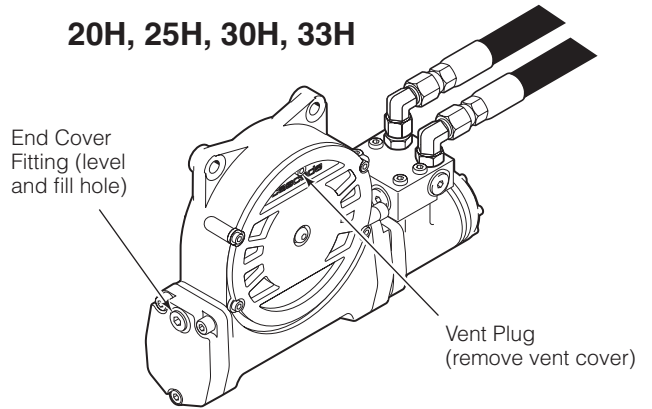
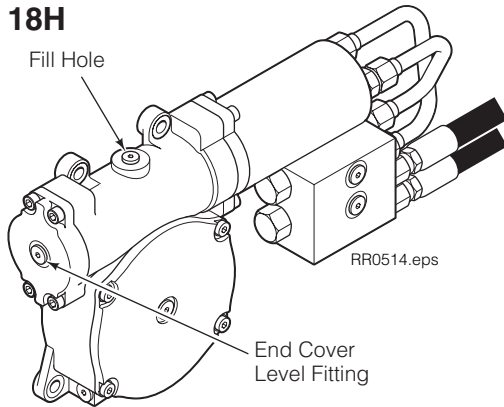
4 Flush hydraulic supply hoses

- A** Install hoses as shown.
- B** Operate auxiliary valves for 30 sec.
- C** Remove union fittings.
- D** Install hoses to attachment fittings as shown in Step 3 above.



INSTALLATION

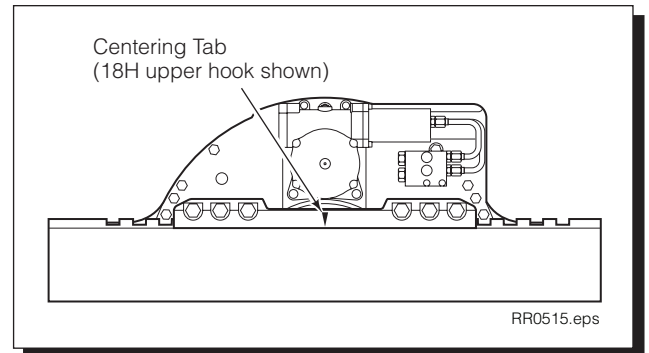
5 Remove gearbox end cover fitting, Check lubricant level



If necessary, fill gearbox with Cascade Gear Lube 656300 or equivalent SAE 90 wt. gear lube (AGMA 'mild' 6EP Gear Oil).

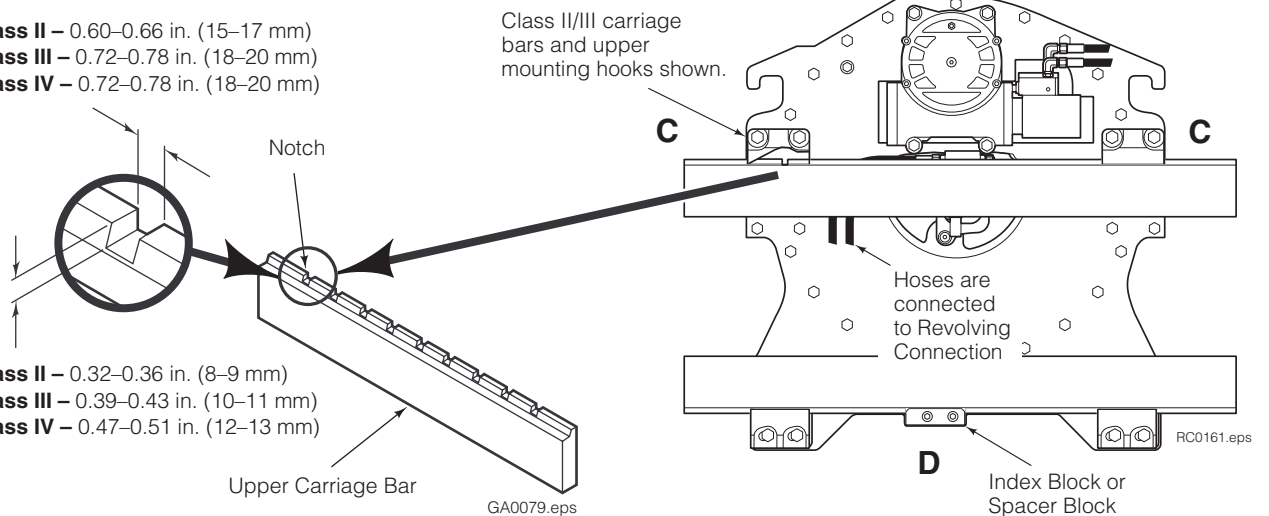
6 Mount attachment on truck carriage

- A** Center truck behind attachment.
- B** Tilt forward and raise carriage into position.
- C** Engage top mounting hooks with carriage.
 - 18H, 25H/30H/33H(CLIII)** – Make sure the centering tab engages the center notch on top carriage bar.
 - 20H (CLII/III), 25H/30H/33H (CLII/IV)** – Make sure left hook engages closest notch on top carriage bar.
- D** Lift attachment 2 in. (5 cm) off pallet. Make sure lower index block (if equipped) engages fork slot on lower carriage bar.



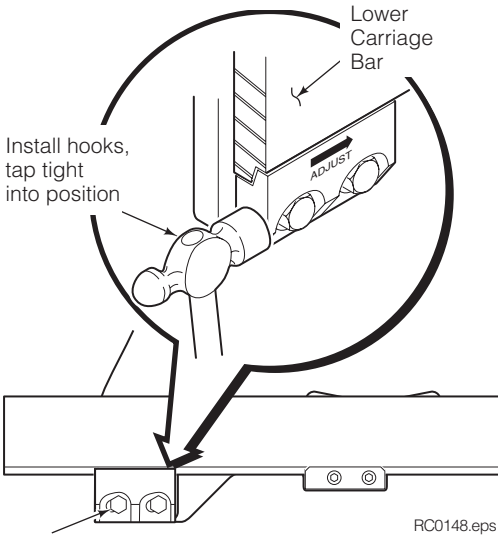
- ITA Class II** – 0.60–0.66 in. (15–17 mm)
- ITA Class III** – 0.72–0.78 in. (18–20 mm)
- ITA Class IV** – 0.72–0.78 in. (18–20 mm)

- ITA Class II** – 0.32–0.36 in. (8–9 mm)
- ITA Class III** – 0.39–0.43 in. (10–11 mm)
- ITA Class IV** – 0.47–0.51 in. (12–13 mm)



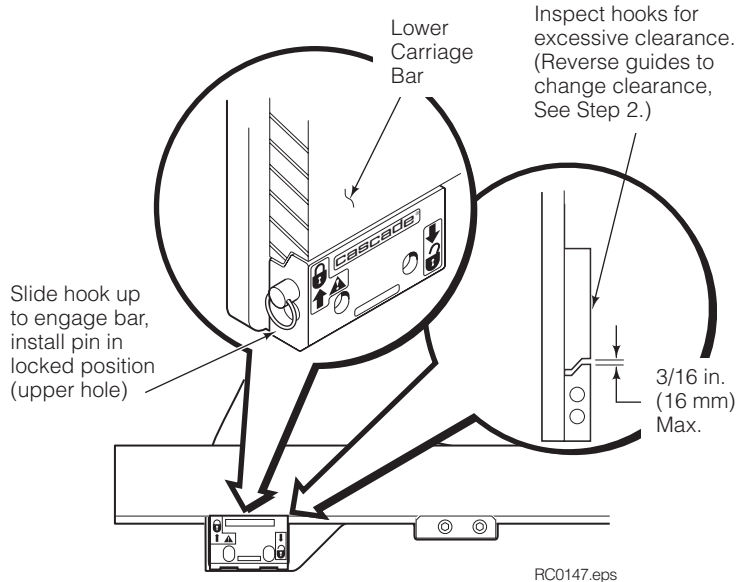
7 Install and engage lower hooks

BOLT-ON TYPE



Tighten capscrews to:
Class II/III – 125 ft.-lbs. (165 Nm)
Class IV – 195 ft.-lbs. (265 Nm)

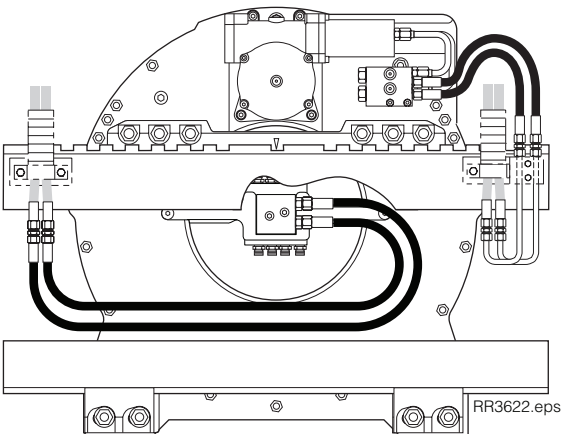
QUICK-CHANGE TYPE (OPTIONAL)



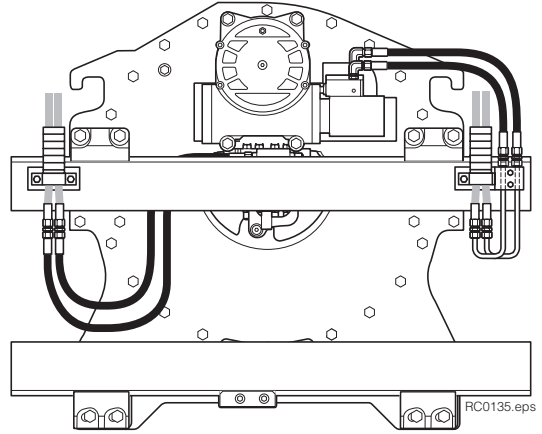
8 Connect hoses to hose terminal fittings

INSTALLATION USING RH & LH 2-PORT THINLINE™ HOSE REELS:

18H



20H, 25H, 30H, 33H

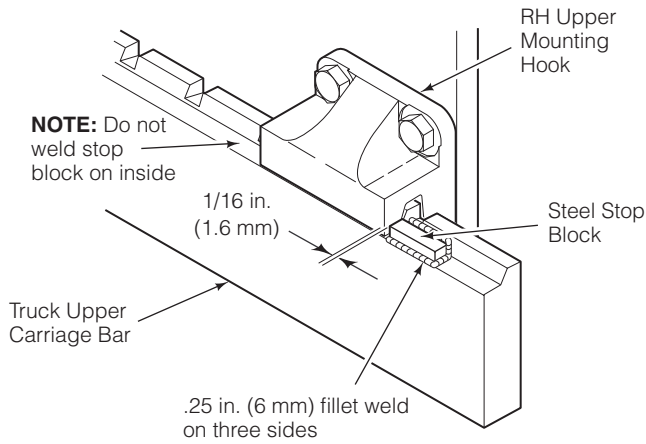


Back (Driver's) Views

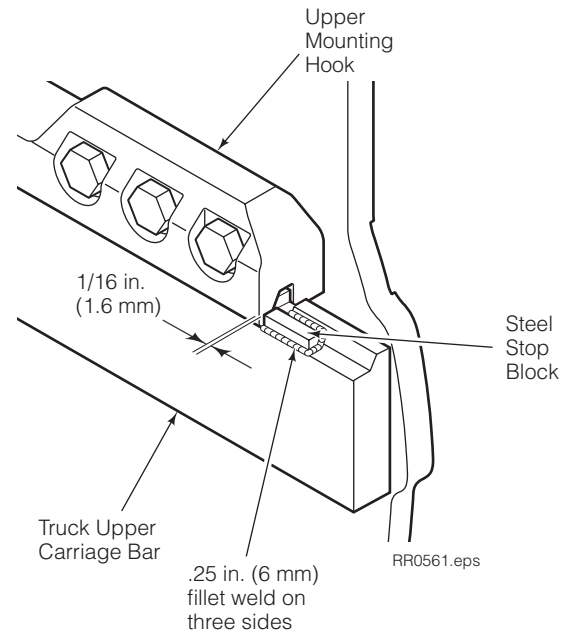
9 Install stop block kit

- Locate one stop block on the outside of each upper hook. Preheat each stop block and carriage bar weld area to 325 °F (180 °C).
- Use AWS E7018 low hydrogen rod and weld a .25 in. (6 mm) fillet full length on three sides of each stop block.

20H, 25H, 30H, 33H



18H



10 Adjust 180-degree stop valve (if equipped/required)



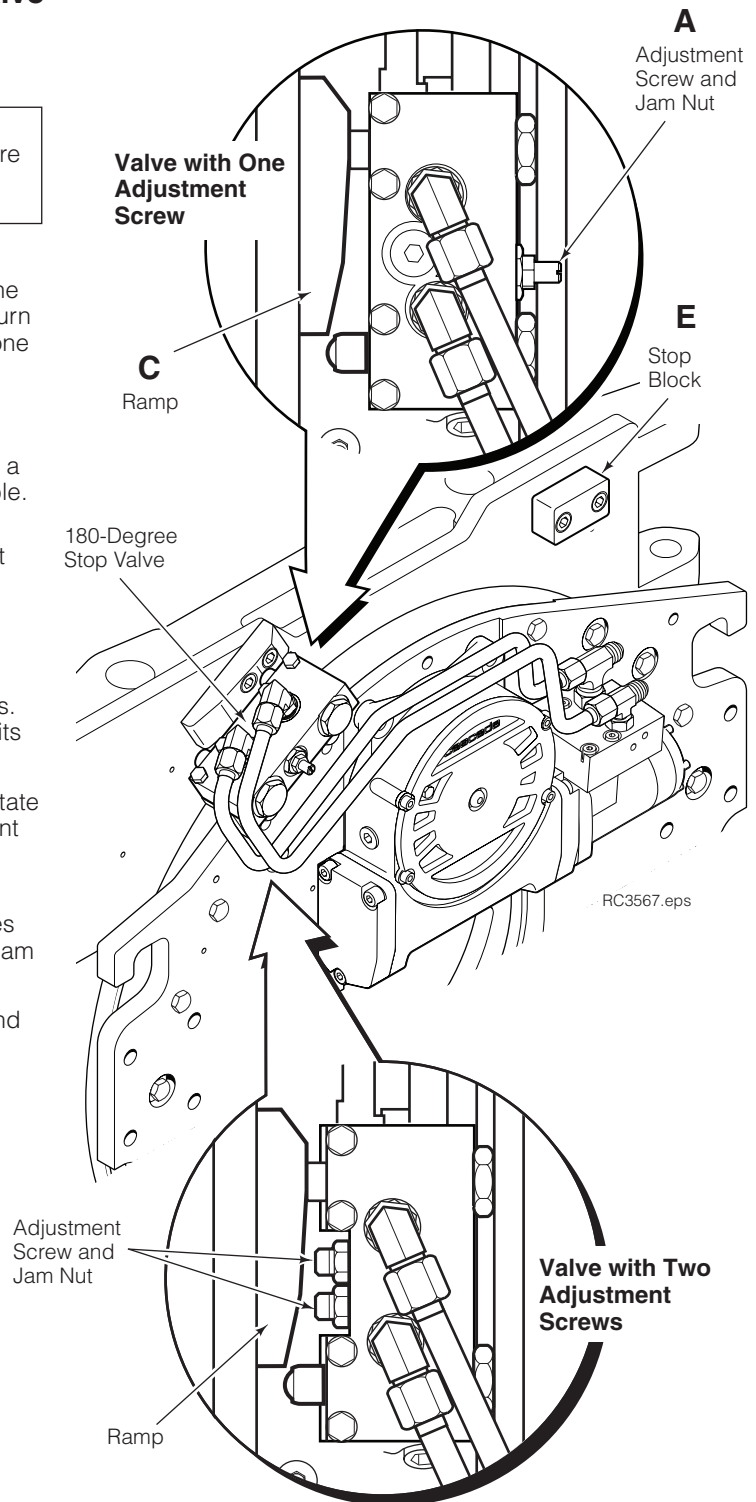
WARNING: Make sure all personnel are clear of attachment during adjustment.

A Valves with One Adjustment Screw – Loosen the jam nut on the stop valve adjustment screw and turn the screw IN (clockwise) until it stops. Back out one turn.

Valves with Two Adjustment Screws – Loosen the jam nut on the stop valve adjustment screws and turn the screws OUT (counterclockwise) until a groove marking the maximum-out position is visible. Adjustment screws should be adjusted equally.

IMPORTANT: Backing the adjustment screws out past the groove will cause hydraulic leakage.

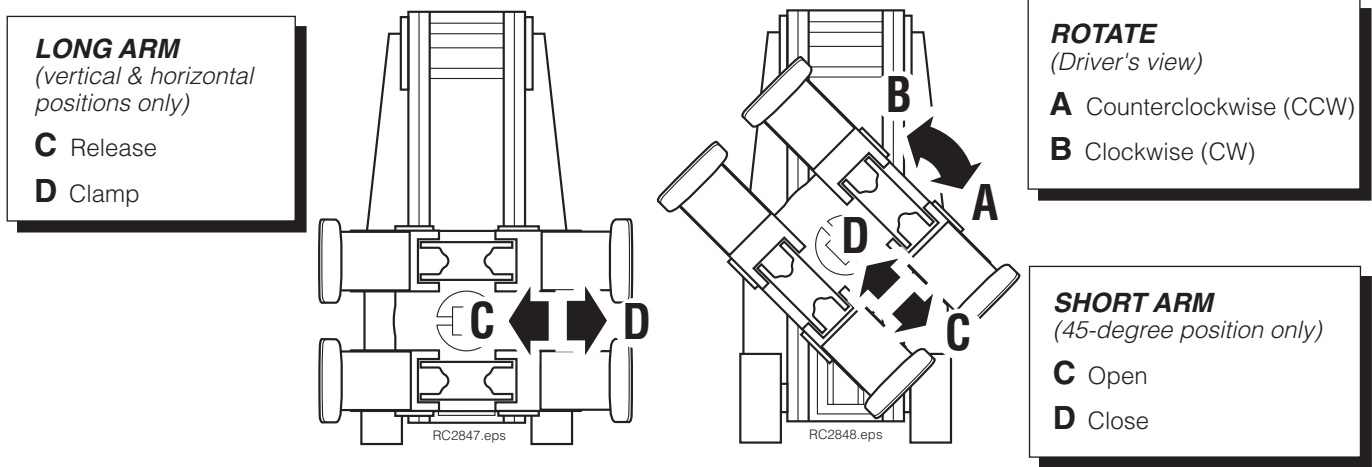
- B** Using a load that: A) is the heaviest to be lifted, or B) requires maximum motor torque, rotate the attachment back and forth to the stops at full speed for 1–2 minutes before making adjustments. Observe whether the attachment fully completes its rotation slowly into the hard stop.
- C** If rotation does not continue into the hard stop, rotate the stop valve off the ramp and turn the adjustment screw IN (clockwise) one-eighth turn. Test for complete rotation slowly into the hard stop.
- D** Repeat Step C until the attachment fully completes its rotation slowly into the hard stop. Tighten the jam nut on the adjustment screw.
- E** Check the torque on the stop block capscrews and tighten to 80 ft.-lbs. (110 Nm) if necessary.



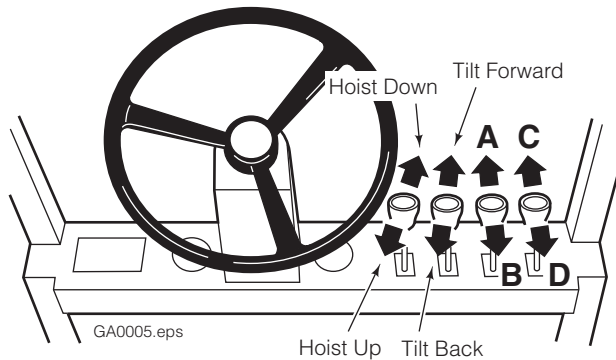
12 Cycle Clamp functions

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

WARNING: Make sure all personnel are clear of attachment during testing.

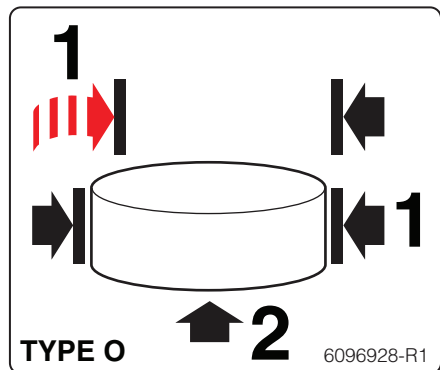


Auxiliary Valve Functions



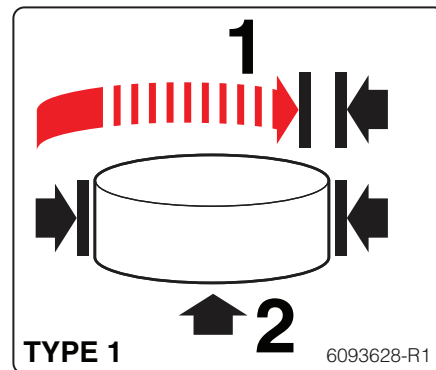
WARNING: Truck control handle and attachment function activation shown here conforms to ASME/ANSI B56.1 recommended practices. Failure to follow these practices may lead to serious bodily injury or property damage. End user, dealer and OEMs should review any deviation from the practices for safe operation.

The following identification decal (located on the baseplate), shows how the split-arm roll clamp functions:



Clamp force is developed without the need for the top arm to fully close.

OR



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The top arm must fully close before clamp pressure is developed.

100-Hour Maintenance

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 bolts, worn or damaged hoses and hydraulic leaks.
- Check edges of contact pads for wear or sharp nicks that could damage or tear paper rolls. Grind edges smooth.
- Check the torque on the stop block capscrews and tighten to 80 ft.-lbs. (110 Nm) if necessary.
- Check that load-holding hydraulic system is functioning properly. Cascade Clamp Force Indicators 830141 and 832442 are available for this test.
- Check decals and nameplate for legibility.

500-Hour Maintenance

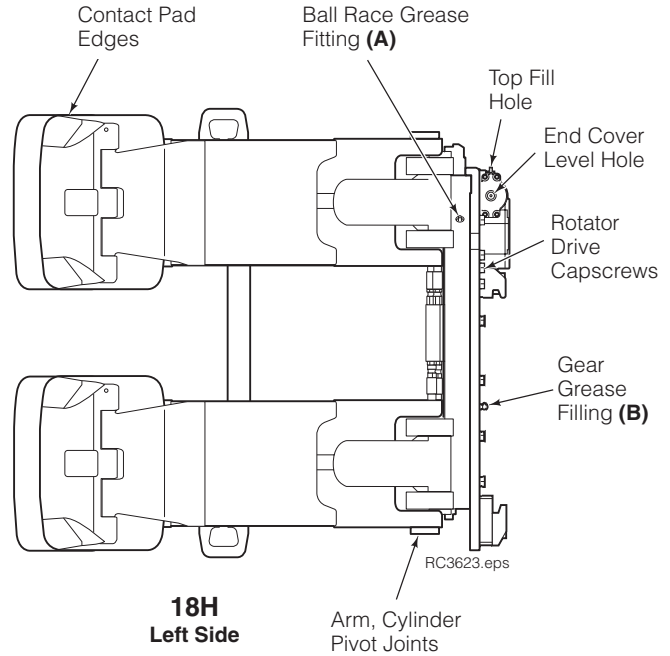
After each 500 hours of truck operation, in addition to the 100-hour maintenance, perform the following procedures:

- Check sample of baseplate capscrews for proper torque value. See Technical Bulletin TB183, Service Manual 680568 (18H) or Service Manual 6078255 (20H-33H) for checking and replacement procedures.
- Check sample of bearing capscrews for proper torque value. See Technical Bulletin TB183, Service Manual 680568 (18H) or Service Manual 6078255 (20H-33H) for checking and replacement procedures.
- Tighten lower mounting hook capscrews to:
 - Class II/III** – 125 ft.-lbs. (165 Nm)
 - Class IV** – 195 ft.-lbs. (265 Nm)
- Tighten rotator drive capscrews to:
 - 18H** – 24 ft.-lbs. (32 Nm)
 - 20H, 25H, 30H, 33H** – 65 ft.-lbs. (88 Nm)
- Lubricate rotator bearing assembly ball race (A) and gear (B) with EP-2 grease. (Whitmore 'Omnitask' or equivalent). Rotate attachment in 90-degree increments and grease in each position.
- Check rotator drive gearcase lubricant level.
 - 18H** – Lubricant should be filled up to the end cover level hole. Add lubricant through the top fill hole.
 - 20H, 25H, 30H, 33H** – Lubricant should be filled up to end cover hole. Add lubricant through the end cover hole.

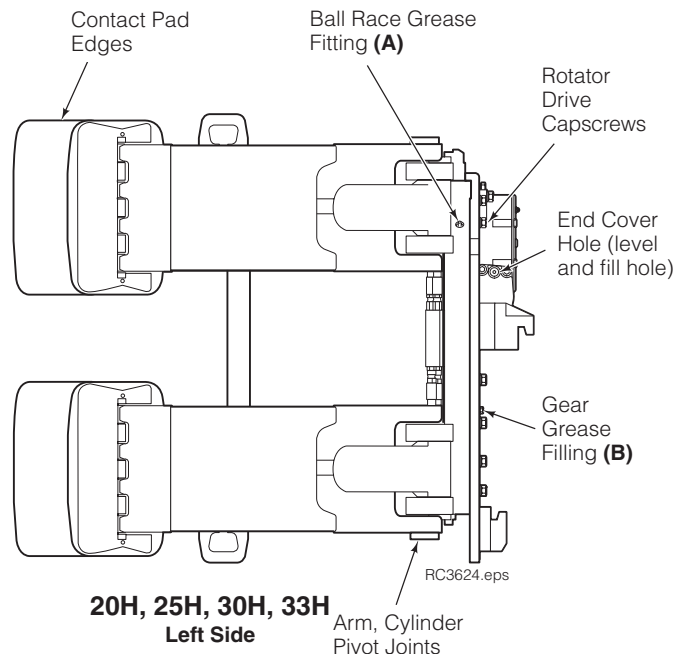
If necessary, fill with Cascade Rotator Drive Lubricant, Part No. 656300 or SAE 90 wt. gear lube (AGMA 'mild' 6 EP Gear Oil). Replace the plug.
- Inspect all arm, frame and cylinder pivot bushings for wear. Replace if necessary.
- Inspect all load-bearing structural welds on arms, arm pivots and cylinder pivot areas for visual cracks. Replace components as required.



WARNING: After completing any service procedure, always test the attachment through five complete cycles. First test the attachment empty, then test with a load to make sure the attachment operates correctly before returning it to the job.



WARNING: A sampling of rotation capscrews must be checked for proper torque at 500 hours (see TB183). A complete inspection is required every 2000 hours. Failure to keep the capscrews tightened can result in attachment damage and serious injury.



1000-Hour Maintenance

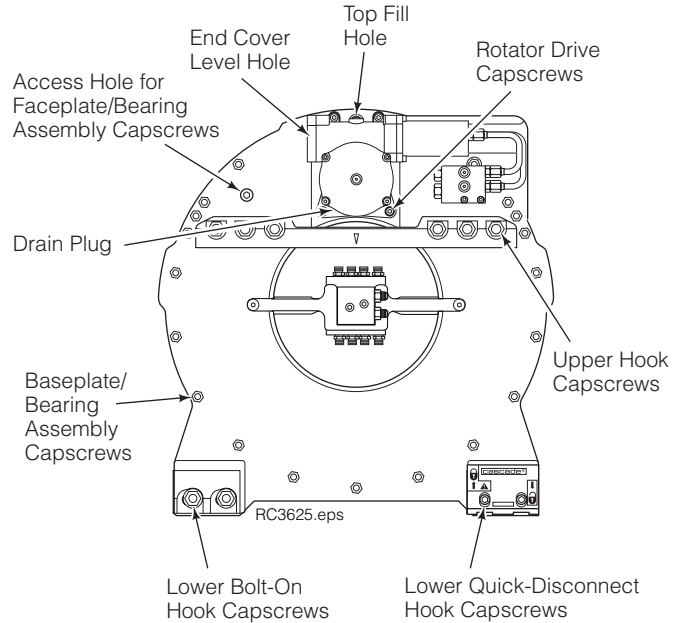
After each 1000 hours of truck operation, in addition to the 100 and 500-hour maintenance, perform the following procedures:

- Change 18H rotator drive gearcase lubricant. Drain oil out the bottom case hole. Fill through top fill hole up to the end cover level hole. Use Cascade Rotator Drive Lubricant, Part No. 656300, or SAE 90 wt. gear lube (AGMA 'mild' 6 EP Gear Oil). Replace plug.

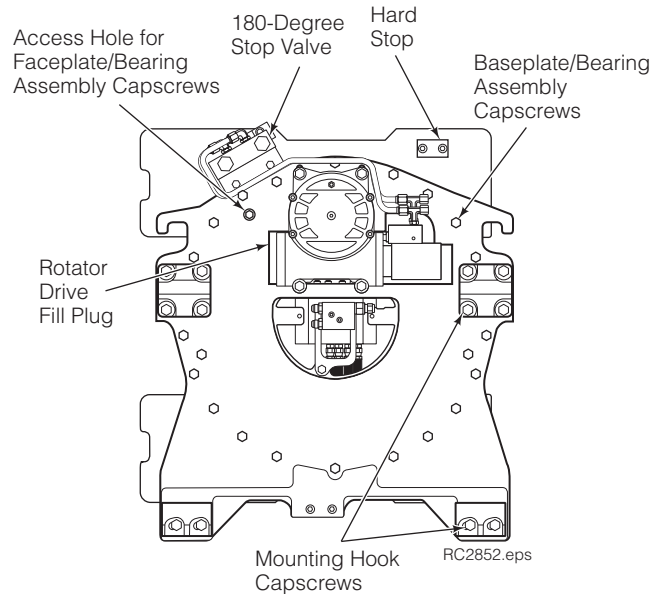
2000-Hour Maintenance

After each 2000 hours of truck operation, in addition to the 100, 500 and 1000-hour maintenance, perform the following procedures:

- Check **all** rotation bearing capscrews for proper torque value. See Technical Bulletin TB183, Service Manual 6805681 (18H) or Service Manual 6078255 (20H-33H) for checking and replacement procedures.
- Inspect all arm and cylinder pivot pins for wear and replace if necessary.
- Check 18H rotator drive gearcase lubricant level. Lubricant should be filled up to end cover level hole. If necessary, fill with Cascade Rotator Drive Lubricant, Part No. 656300, or SAE 90 wt. gear lube (AGMA 'mild' 6 EP GEAr Oil). Replace top plug.



18H
Back (Driver's) Side



20H, 25H, 30H, 33H
Back (Driver's) Side

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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