

I **INSTALLATION INSTRUCTIONS**

and PERIODIC MAINTENANCE

D-Series

Sideshifters

Manual Number 672358-R7

cascade[®]
corporation

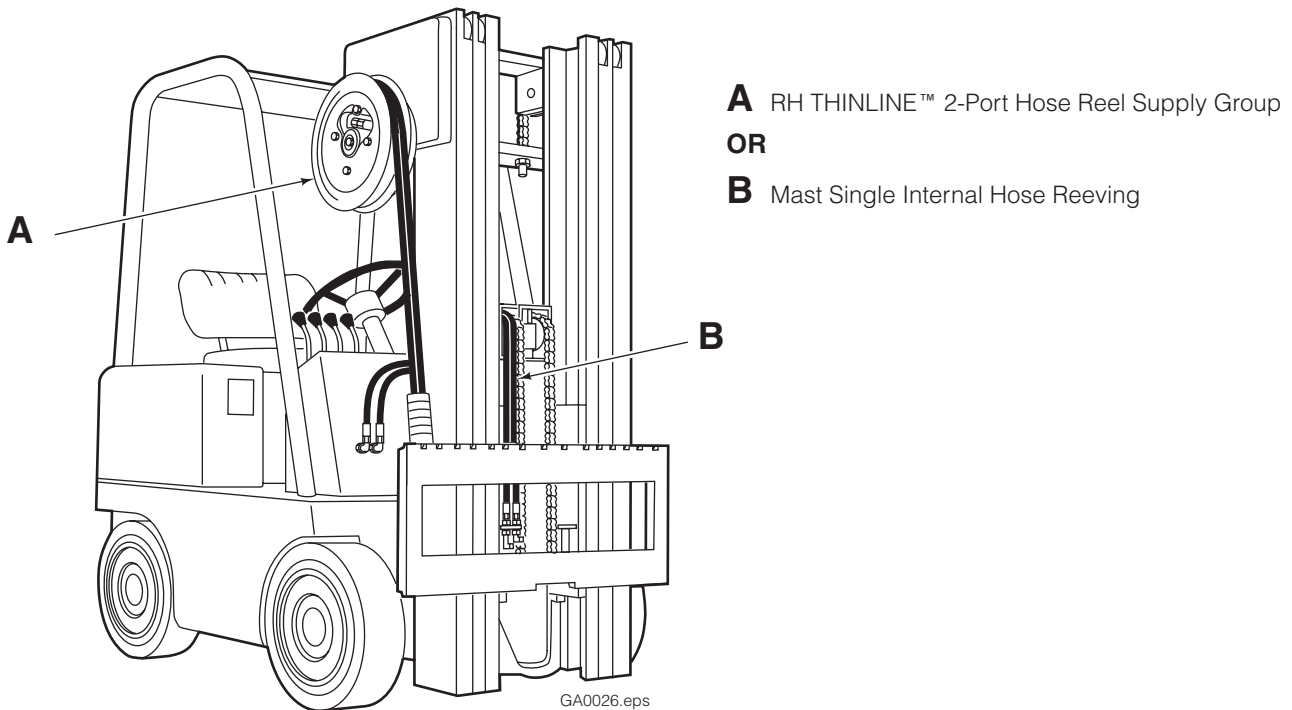
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R ECOMMENDED HYDRAULIC SUPPLY

The Sideshifter will require one of the hydraulic supply arrangements shown below. All hoses and fittings should be at least No. 4 with 3/16 in. (5 mm) minimum I.D. Refer to Cascade *Hose & Cable Reel Selection Guide*, Part No. 212199 to select the correct hose reel for the mast and truck.



T RUCK REQUIREMENTS



WARNING: Rated Capacity of the truck/attachment/fork 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

2000 psi (140 bar) Recommended
3000 psi (210 bar) Maximum

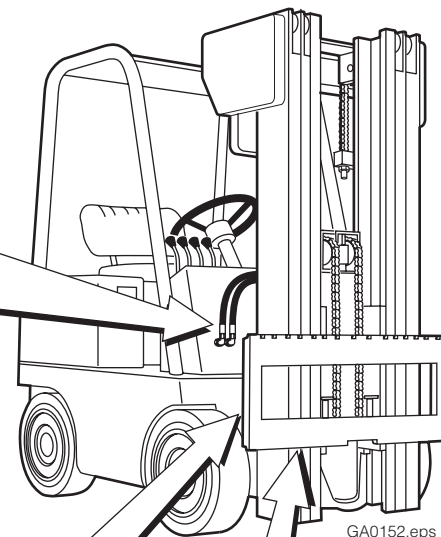
Truck Flow Volume ^①

	Min. ^②	Recommended	Max. ^③
40D, 55D, 60D	1 GPM (4 L/min.)	2.5 GPM (9.5 L/min.)	4 GPM (15 L/min.)
100D, 120D	1 GPM (4 L/min.)	4 GPM (15 L/min.)	5 GPM (19 L/min.)
150D, 165D	1 GPM (4 L/min.)	6 GPM (6 L/min.)	12 GPM (45 L/min.)

① Cascade D-Series Sideshifters 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 may be required. Contact Cascade.

② Flow less than recommended will result in slow sideshift speed.

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



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Carriage Mount Dimension (A) ITA (ISO)



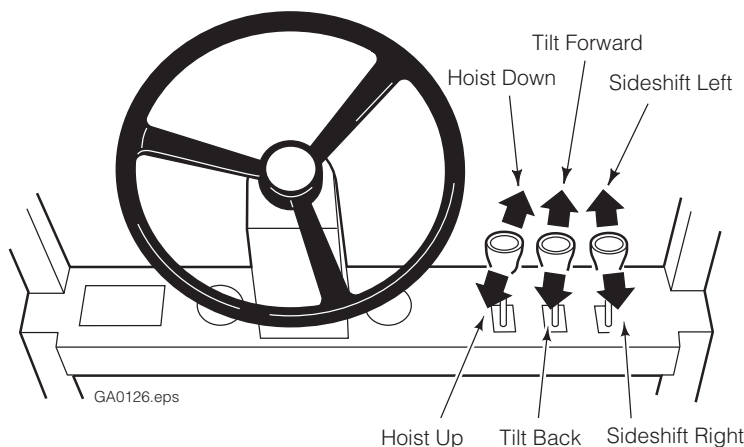
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	Minimum	Maximum
Class II	14.94 in. (380.0 mm)	15.00 in. (381.0 mm)
Class III	18.68 in. (474.5 mm)	18.74 in. (476.0 mm)
Class IV	23.44 in. (595.5 mm)	23.50 in. (597.0 mm)

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.

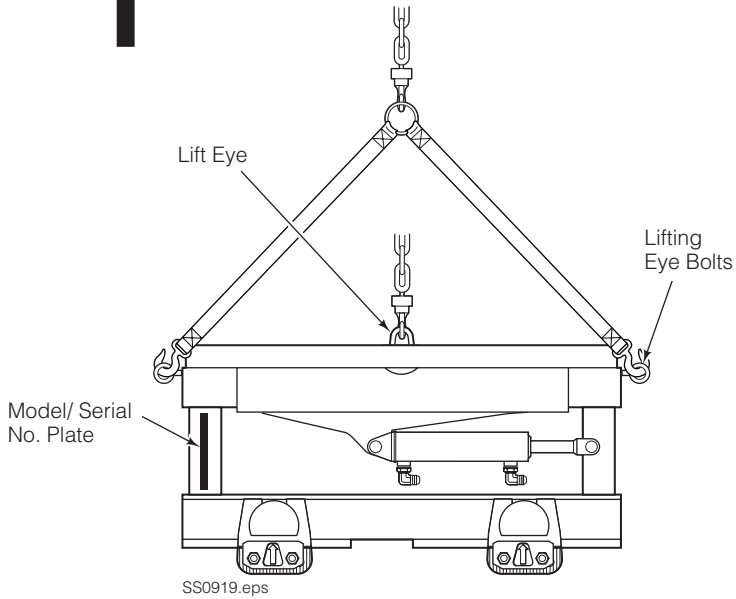
Auxiliary Valve Functions

NOTE: Check for compliance with ITA (ISO) standards:



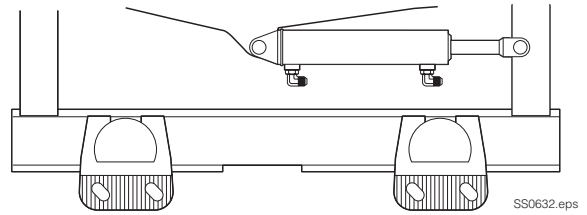
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1 Remove From Box



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

2 Remove Lower Hooks

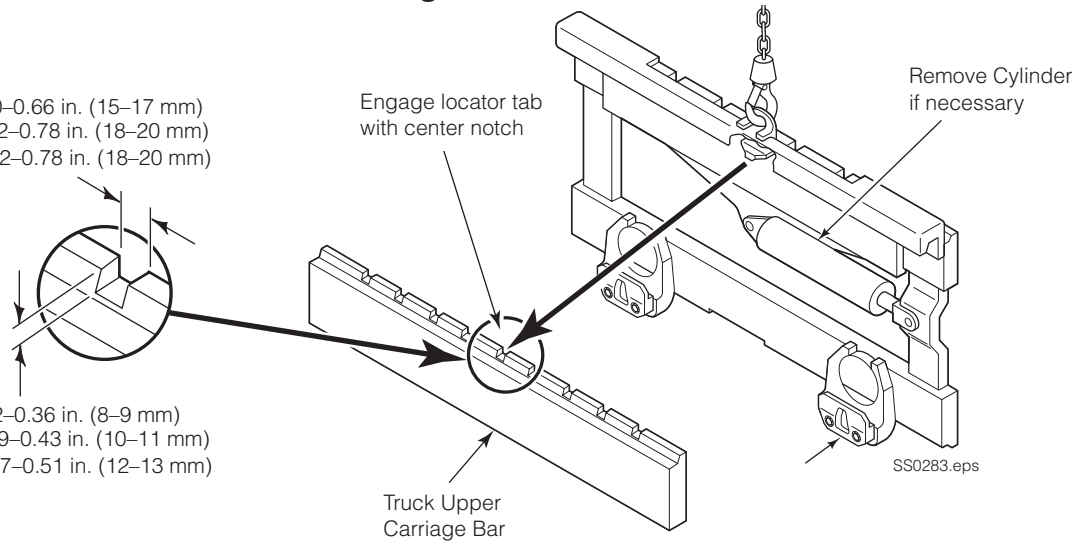


Back (Driver's) Views

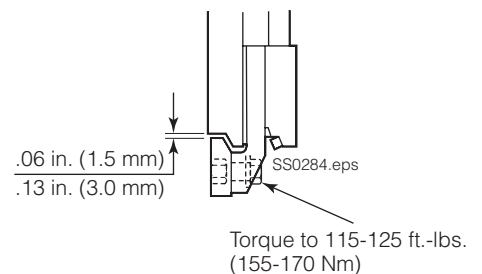
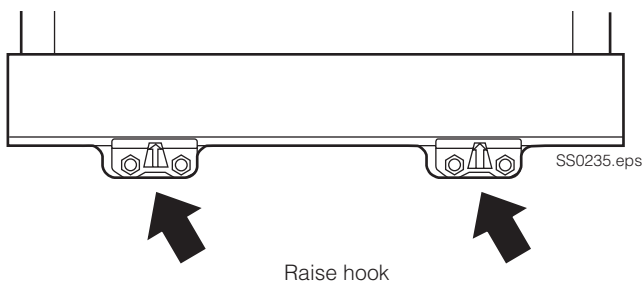
3 Mount Sideshifter on truck carriage

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)

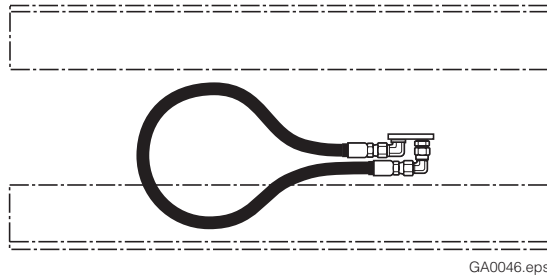


4 Install lower hooks



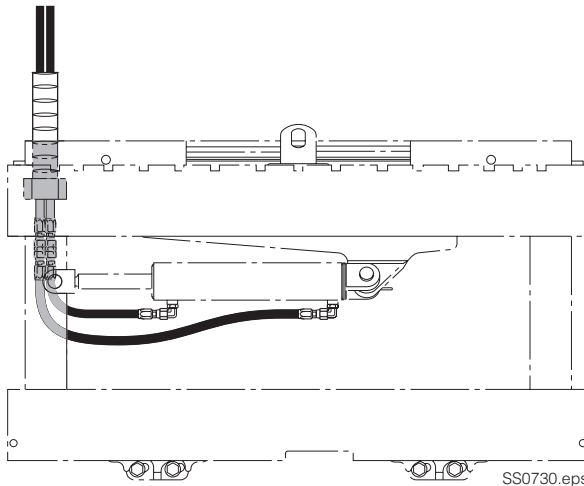
INSTALLATION

5 Flush supply hoses

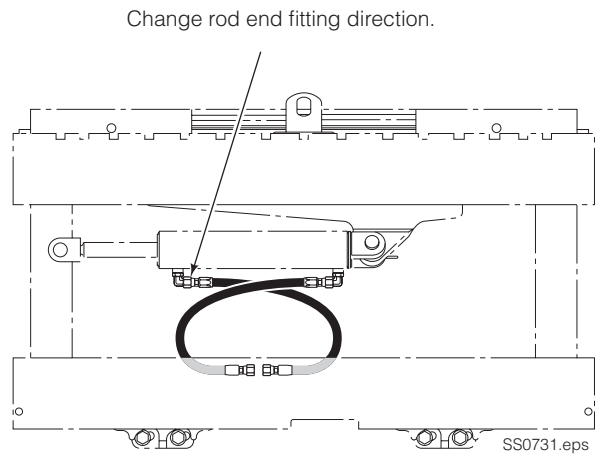


6 Install hoses

Single Sideshifter



Hose Reel/ Hose Terminal shown.

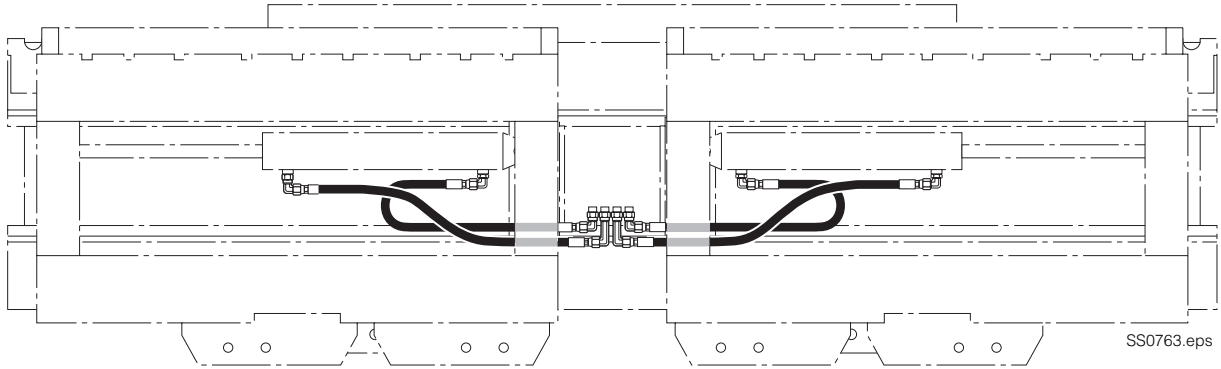


Internal Reeving shown.

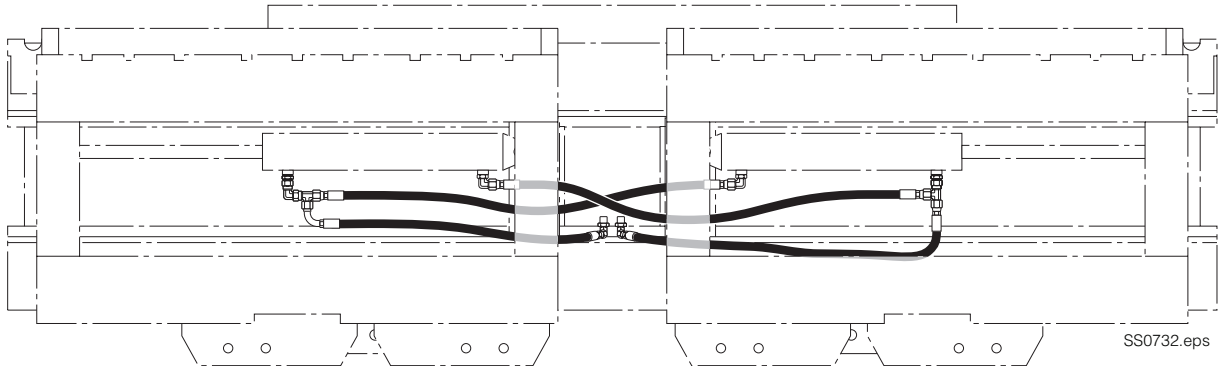
6 Install hoses

Double Wide Sideshifter

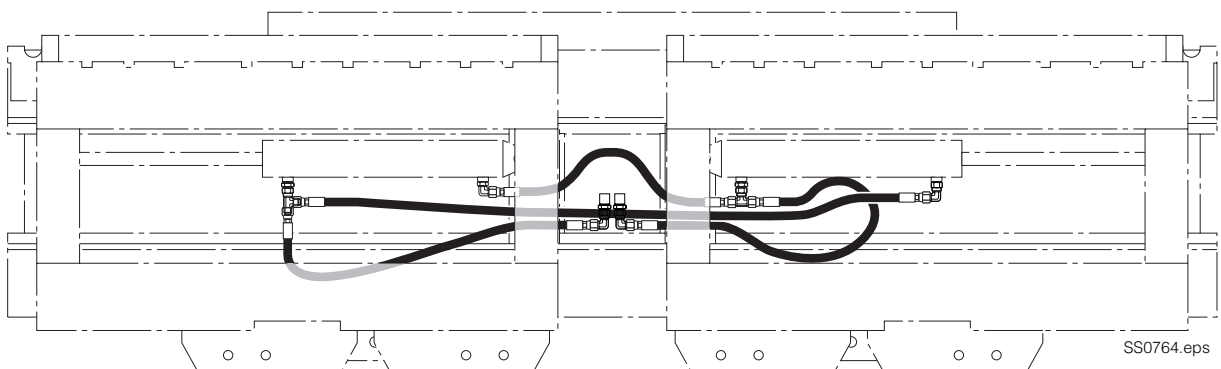
Independent Operation (Requires two auxiliary valves or solenoid)



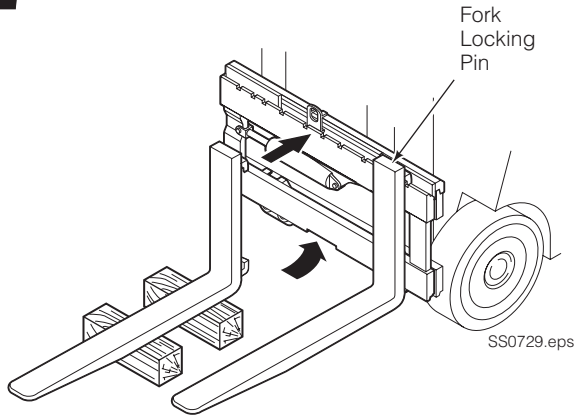
Simultaneous Left Or Right



Simultaneous Open or Close

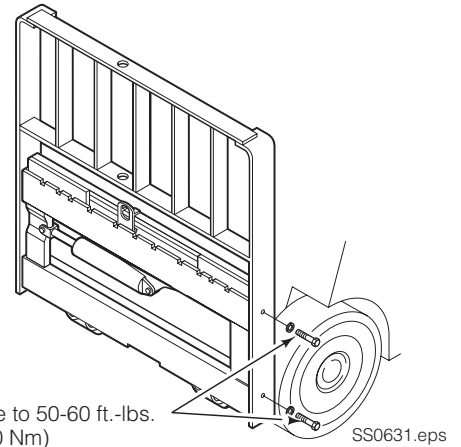


7 Install Forks



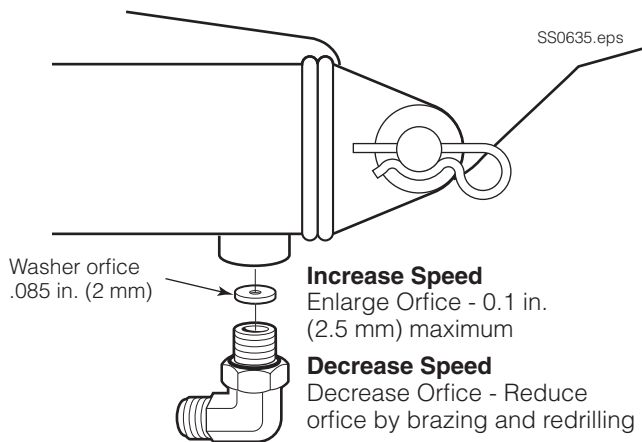
WARNING: If the fork locking pin is not fully engaged, the fork could become disengaged from the carriage.

8 Install backrest



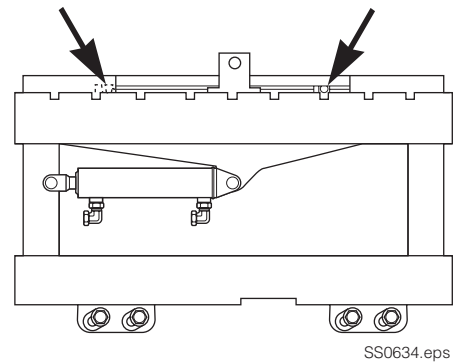
Torque to 50-60 ft.-lbs.
(70-80 Nm)

9 Adjust Speed



10 Lubrication Points

IMPORTANT: Upper bearings are prelubed at the Factory with break-in grease. No lubrication is required during installation.



Lubricate every 500 hours - sideshift to exposed upper fittings.



WARNING: If the fork locking pin is not fully engaged, the fork could become disengaged from the carriage.



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

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 bolts, worn or damaged hoses, hydraulic leaks, and damaged or missing fork stops.
- Inspect lower hooks for wear and proper clearance. Adjust if necessary (see Step 4, Installation). Tighten lower hook capscrews to 120 ft.-lbs (165 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 Nm).
- Apply general-purpose lithium-based chassis grease to Sideshifter upper and lower bearings.

1000-Hour

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

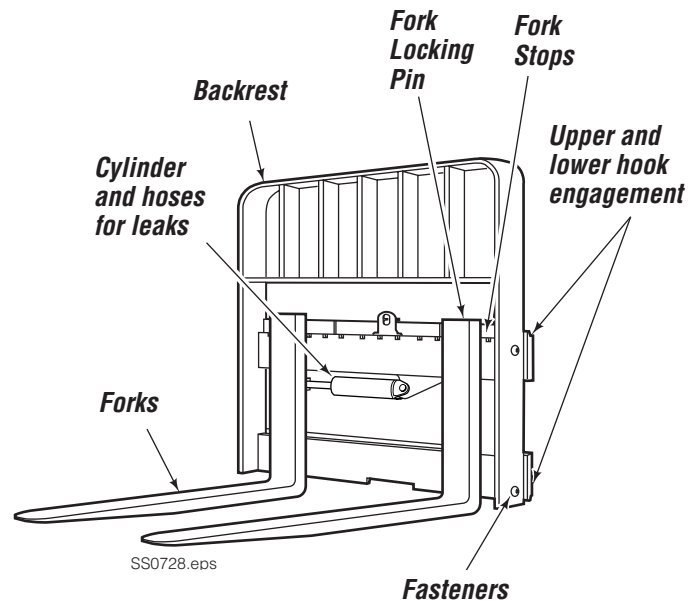
- Inspect upper and lower bearings for wear. If any bearing is worn to less than 3/32 in. (2.5 mm) thickness, replace the entire bearing set. See Service Manual for replacement procedure.
- Inspect forks for wear.

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

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.



2000-Hour (Continued)

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).

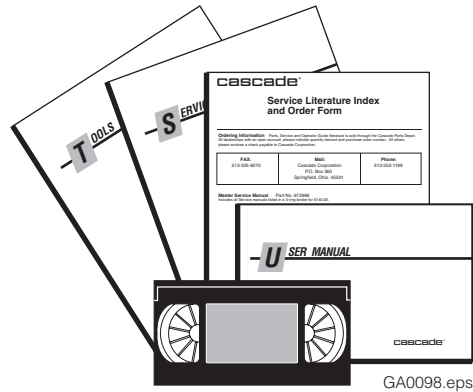
Recommended Spare Parts

Frames with Round Lower Bearings					Frames with Rectangular Lower Bearings		DESCRIPTION	UNITS SERVICED		
40D, 50D PART NO.	60D PART NO.	100D PART NO.	120D, 150D PART NO.	165D PART NO.	120D, 150D PART NO.	165D PART NO.		1-5 QTY.	6-19 QTY.	20-50 QTY.
671165	672018	672018	672018	804065	672018	804065		8	16	32
675662	675662	676650	676650	676650	208350	208350	6	12	24	
677160	678034	677160	678034	678034	6004779	6004779	0	2	4	
681047	623597	638601	638601	638601	752903	752903	0	4	8	
553857	553857	553857	553857	553857	678990	678990	0	4	8	
667225	667225	667225	667225	667225	667225	667225	0	4	8	

Cylinder Service Kits			UNITS SERVICED		
40D, 50D, 60D PART NO.	100D, 120D PART NO.	150D, 165D PART NO.	1-5 QTY.	6-19 QTY.	20-50 QTY.
553861	553866	561430	1	2	4

Publications

PART NO.	DESCRIPTION
672715	Operator's Guide
677287	Service Manual
679929	Tool Catalog
673964	Literature Order Form



Do you have questions you need answered right now? Call your nearest Cascade Service Department. Visit us online at www.cascorp.com

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