

Service Manual

GP15, GP18, GP20, GP25, GP30, GP35, DP20, DP25, DP30, DP35 Mast Supplement

GP15 3AM00001-up

GP18 3AM00001-up

GP20 5AM00001-up

5AM90001-up

GP25 5AM00001-up

5AM90001-up

GP30 7AM00001-up

GP35 8AM00001-up

DP20 5BM00001-up

DP25 5BM00001-up

DP30 7BM00001-up

DP35 8BM00001-up

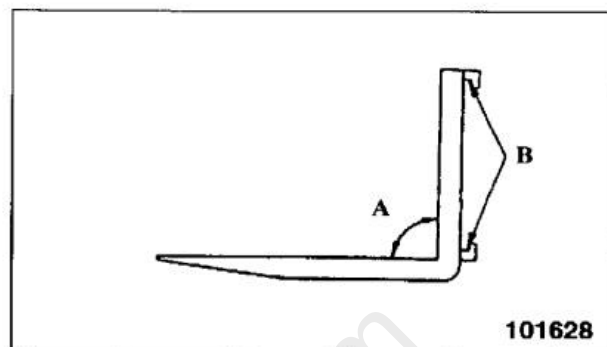
INSPECTION AND ADJUSTMENT

Forks

1. Carefully inspect the forks for cracks. Special attention should be given to the heel section A, all weld areas and B mounting brackets.

Forks with cracks should be removed from service.

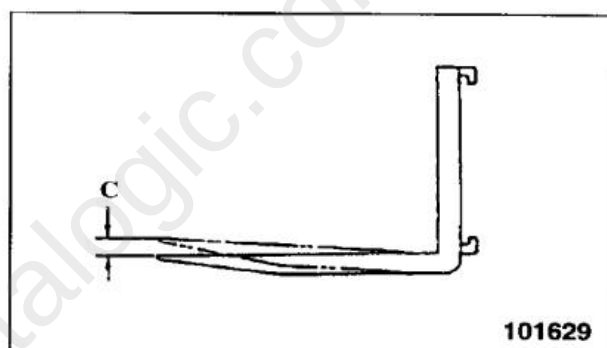
"Wet Test" magnetic particle inspection is generally preferred due to its sensitivity and the ease of interpreting the results.



2. Check the difference in height of one fork tip to the other when mounted on the fork carrier. A difference in fork tip height can result in uneven support of the load and cause problems when entering loads.

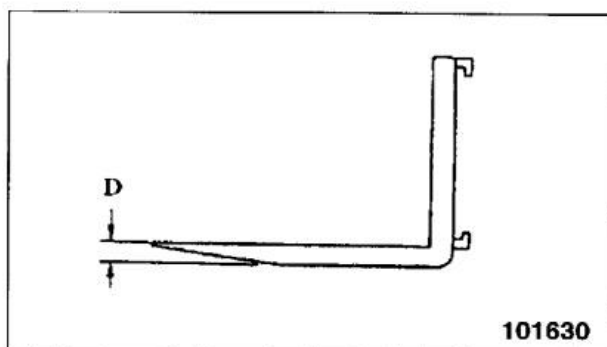
The maximum allowable difference in fork tip elevation C is 5 mm (0.20 in.) for pallet forks.

Replace one or both forks when the difference in fork tip height exceeds the maximum allowable difference.



3. Check the fork blade D. The fork should be withdrawn from service if the thickness is reduced to less than the tolerant thickness.

Fork blade length may also be reduced by wear, especially on tapered forks and platens. Remove the forks from service when the blade length is no longer adequate for the intended loads.



Unit: mm (in.)

Tolerant thickness	Standard	Limit
GP15	40 (1.6)	31 (1.2)
GP18	40 (1.6)	33 (1.3)
GP20, DP20	45 (1.8)	36 (1.4)
GP25, DP25	45 (1.8)	39 (1.5)
GP30, DP30	45 (1.8)	40 (1.57)
GP35, DP35	50 (2.0)	45 (1.8)

A = Assembly standard B = Repair or service limit

Unit: mm (in.)

Item	Truck model	GP15, GP18	GP20, GP25 DP20, DP25	GP30, GP35 DP30, DP35
Inner mast Outer mast Lift bracket				
207106				
Tightening torque N·m(kgf·m)[Tbf·ft]	Mast support bolts	A	74 (7.5) [54]	178 (18.2) [132]
	Upper nut ②	A	57 (5.8) [42.0]	84 (8.6) [62.2]
	Double nut (lower) ①	A	98 (10) [72.3]	147 (15.0) [108.5]
Distortion of finger bar		A	5 (0.2)	
Anchor bolt ② Upper nut ① Double nut (lower)				
102709				

MAST AND FORK

3. Lift chains, chain wheels and chain wheel supports

- (1) Measure the length of each chain to be sure that two chains are equal in length. Also check the chains for wear, evidence of breakage, link binding and twist.
- (2) Check each chain anchor bolt for cracks or damaged thread.
- (3) Check each chain wheel support and chain wheel for crack or wear. Check to be sure that the wheels are capable of smooth rotation.

Length of Lift Chain (per 20 links)

A = Assembly standard

B = Repair or service limit

Unit: mm (in.)

	GP15, GP18	GP20, GP25 DP20, DP25	GP30, GP35 DP30, DP35
A	318 (12.52)	381 (15.00)	508 (20.00)
B	327 (12.87)	392 (15.43)	523 (20.59)

4. Mast strips

Check the mast strips for damage, wear or distortion.

Reassembly

To reassemble, follow the reverse of disassembly sequence and do the following steps:

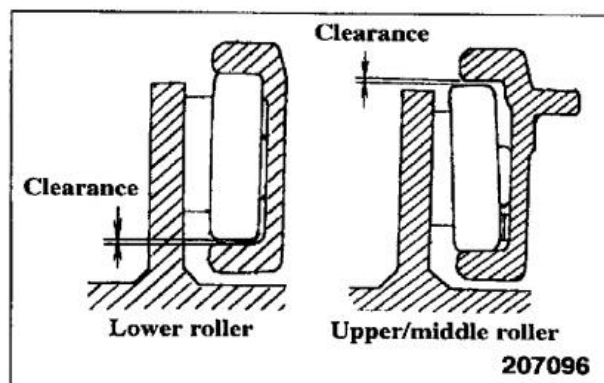
1. Adjusting mast and lift bracket clearance

Rollers for mast and lift bracket are available in three sizes (diameters) for selective use. Select the size that will provide a longitudinal clearances of 1 mm (0.04 in.) and less.

Roller Sizes

Unit: mm (in.)

Diam of main roller	GP15, GP18	GP20 thru GP35 DP20 thru DP35
S	99 (3.90)	113.8 (4.48)
M	100 (3.94)	115 (4.53)
L	101 (3.98)	116 (4.57)



Full Version Available

Caterpillar DP35 Forklift Mast Supplement Service Manual (99719-72102)

Caterpillar DP35 Forklift mast service manual, covers mast repair and adjustment procedures. Instant PDF download.

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