CAT® Lift Trucks

Service Manual

Chassis & Mast

EP10/14/15/18(H)CA1(J)	221E20001-up	256E00792-up
EP20/25(H)CA1(J),EP28CA1(J)	241C10001-up	257C01120-up
EP30CA1(J)	251AC2001-up	

machinecatalogic.com

99759-6R110

6- 3. Inspection and adjustment

⚠CAUTION **Wheel brake is very important for safe operation. Always replace Wheel brake whenever it is damaged.**

6-3-1. Wheel brake - inspection and adjustment

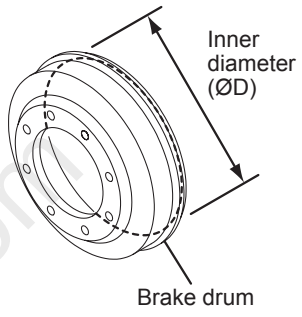
1. Check for Brake drum inner surface streaks, uneven wear, and cracks.

⚠CAUTION **If there are streaks or partial wear, repair or replace Brake drum based on the allowable limits in the table below.**

● **Inner diameter of Brake drum**

Applicable model	Specified dimension(ØD)	Repair limit (ØD)
EP10CA1-18CA1	10-inch (254mm)	256mm
EP20CA1-28CA1	11-inch (279.4mm)	281.4mm
EP30CA1	310mm	312mm

● **Inspecting Brake drum**



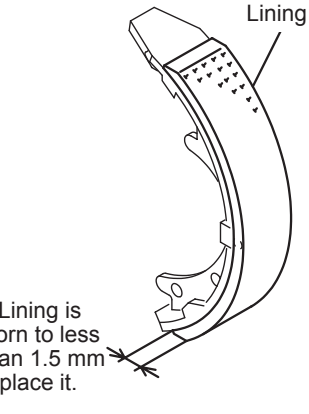
6-3-2. Shoe and lining - inspection and replacement

1. Measure the thickness of Lining
   ▶If Lining is worn to less than 1.5mm, replace it.

⚠CAUTION **Measure Lining at the point with the most wear.**

2. Check for stains, burnout and deterioration.
   ▶ If you find any abnormalities, replace Lining.
3. Check for cracks and damage.
   ▶ If you find any burrs, remove them.
   ▶ If you find any abnormalities, replace lining.

● **Inspecting Shoe and lining**



machinecatalogic.com

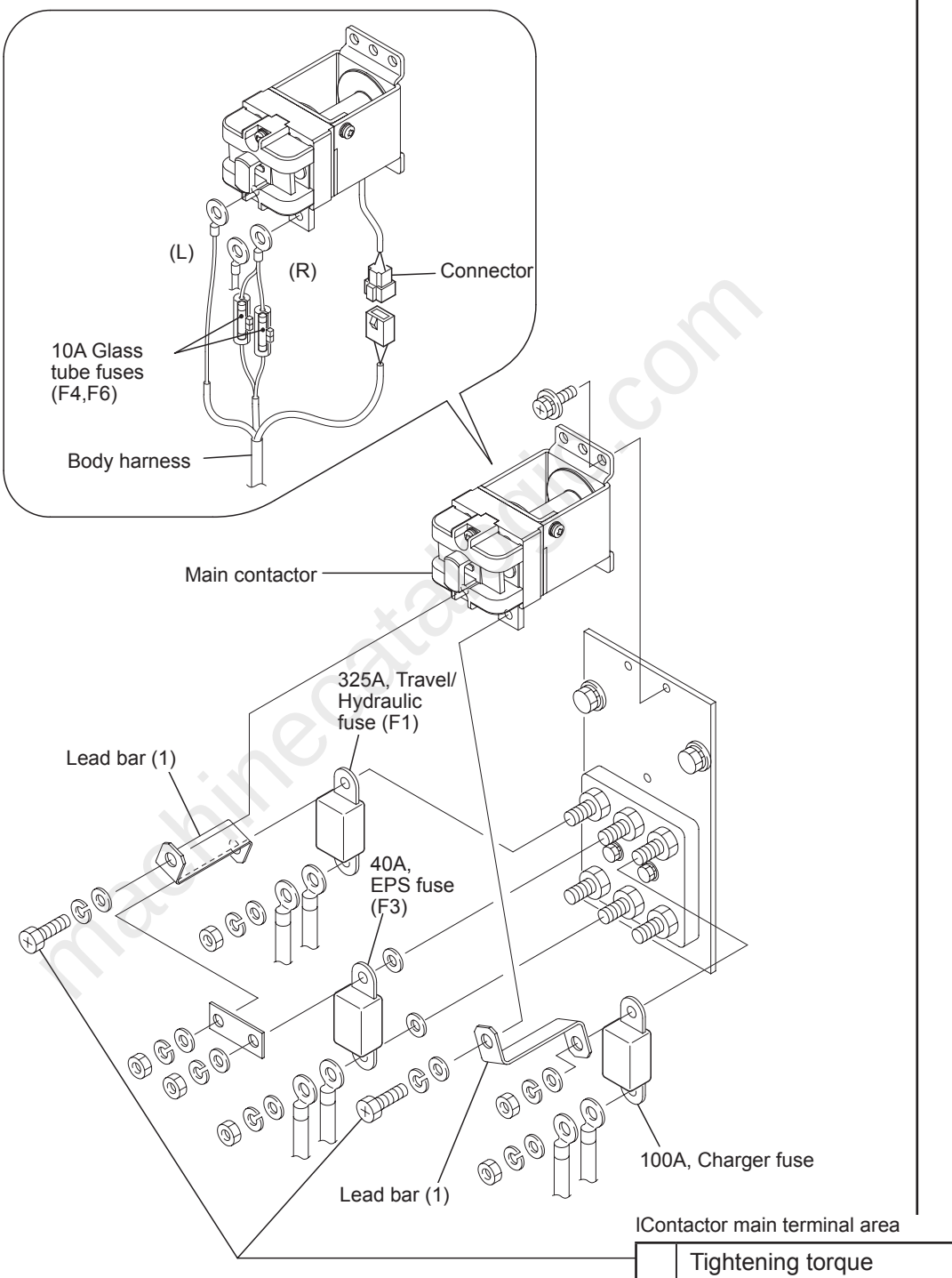
MEMO

machinecatalogic.com

2. Remove Main contactor and Fuses.

1. Disconnect wiring connectors of Main contactor and lead wires.
2. Refer to the diagram below and remove Main contactor and all fuses.

●Removing Main contactor and Fuse



IContactor main terminal area

	Tightening torque
	6.4 - 7.4 N · m
	{0.65 - 0.75 kgf · m}
	Use a bolt included attached on Main contactor.

: Tightening torque

221W1026

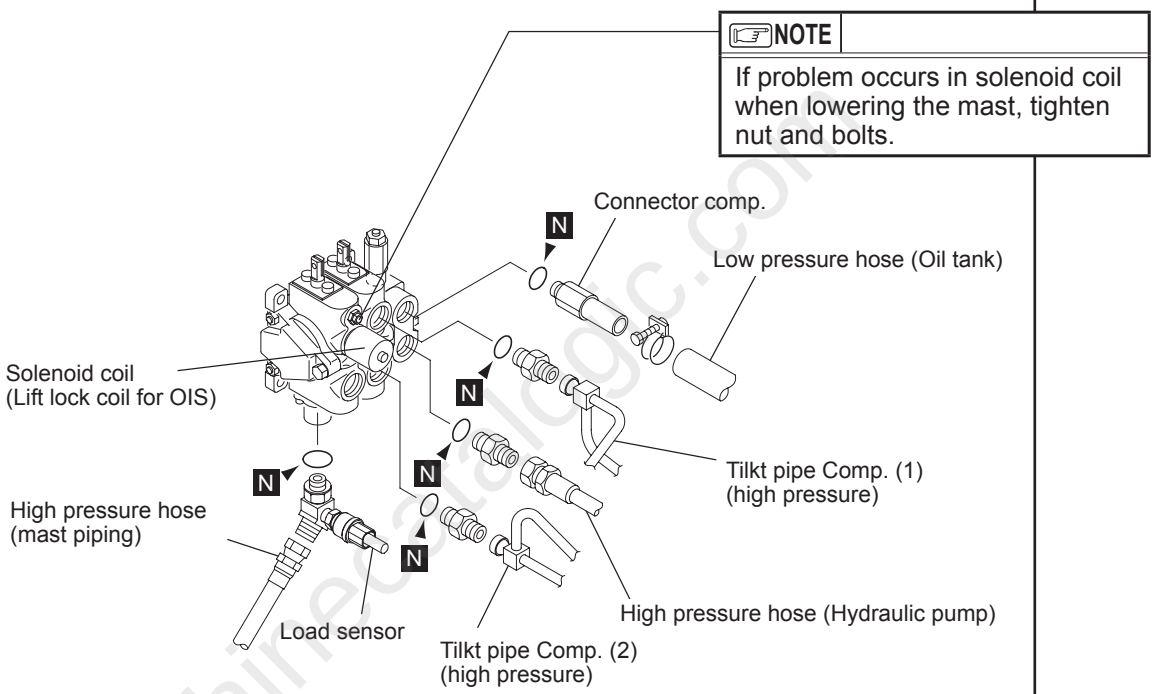
***** Install Main contactor and fuse in reverse order of removal.

2. Disconnect pipes and hoses shown in the following illustration.

CAUTION

Before removing a high pressure hose or a high pressure pipe, push Lift lever forward for several times (fork downward operation) while keeping the key switch ON, and remove the pressure inside the pipe. Do not perform any lever operation other than the lift downward lever operation, because the pressure is applied when oil hydraulic motors are operated.

● **Disconnecting Hydraulic pipe and Hose**



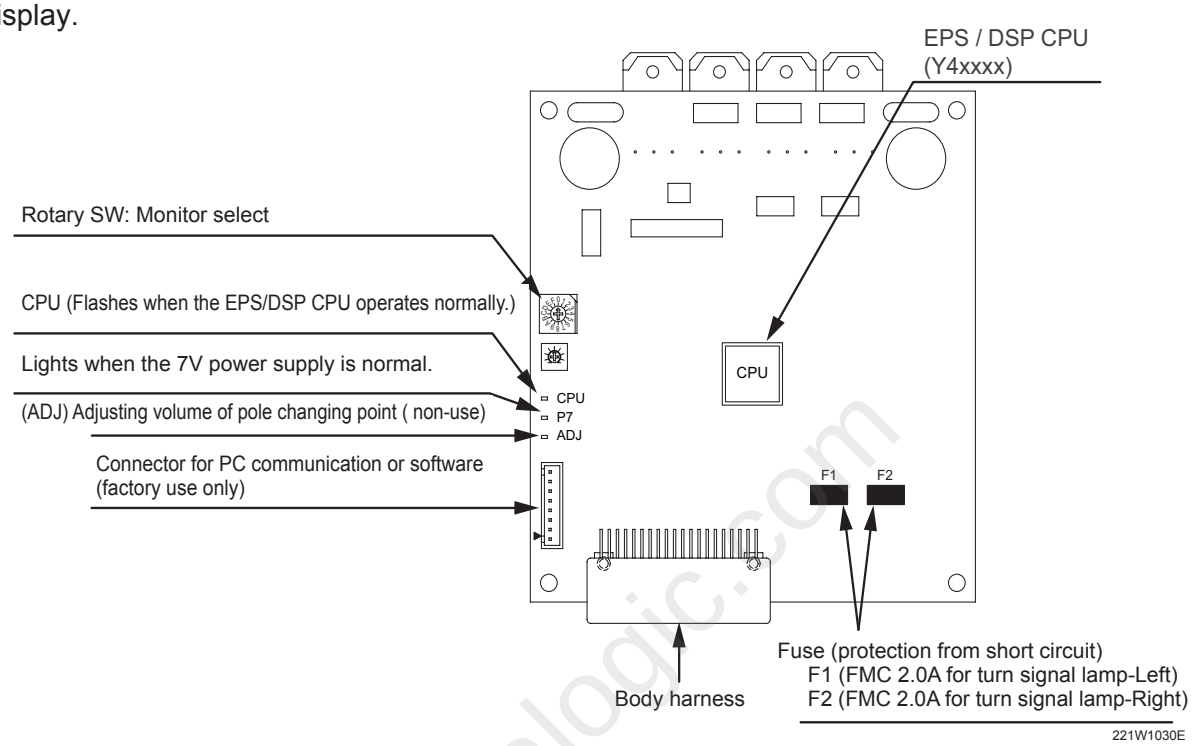
NOTE **Do not touch the terminals of load sensor by dry hand.**

3. Remove Snap pins and Valve pins to remove Valve linkage.

machinecatalogic.com

10b-1-2. EPS controller

This controls data shared between each board and the display.



CAUTION **Even when the key is turned OFF, the battery sends current to EPS controller. Before working, always disconnect Battery plug.**

<EPS controller model>

Applicable model	Vehicle body specification	EPS controller model	Printed board model
EP10CA1 - 28CA1	STD	CU114-50	PB112-40x / PB113-50x
	CS	CU114-52	PB112-41x / PB113-51x
EP30CA1	STD	CU114-51	PB112-42x / PB113-52x
	CS	CU114-53	PB112-43x / PB113-53x

machinecatalogic.com

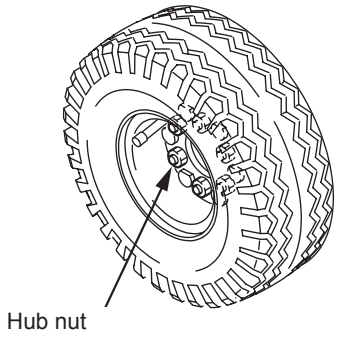
4- 2. Inspection and adjustment

4-2-1. Hub nut - inspection

1. Check for damage.
2. Check for loose bolts and nuts.

▶ Tighten any loose bolts or nuts.

●Inspecting Hub nut



▶ Front

	Tightening torque (M12)
[EP10CA1-14CA1]	89-108 N·m {9-11 kgf·m}
	Tightening torque (M16)
[EP15CA1/18CA1]	216-264 N·m {22-27 kgf·m}
	Tightening torque (M18)
[EP20CA1-30CA1]	315-385 N·m {32-39 kgf·m}

▶ Rear

Tightening torque (M12)
88.2-108 N·m {9-11 kgf·m}

4-2-2. Rim and Rim bolt - inspection

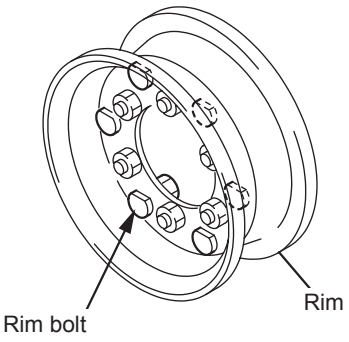
1. Check for damage.
2. Check for loosenes.

▶ Tighten any loose bolts.

NOTE

The following models do not have Rim bolts:
Front :EP15CA1-30CA1
Rear :EP20CA1-28CA1

●Inspecting Rim and Rim bolt



▶ Front

	Tightening torque
[EP10CA1-14CA1]	68.5-78.5 N·m {7-8 kgf·m}

▶ Rear

	Tightening torque
[EP10CA1-18CA1/30CA1]	68.5-78.5 N·m {7-8 kgf·m}

machinecatalogic.com

Full Version Available

Caterpillar EP20CA1(J) Forklift Service Manual (99759-6R110)

Caterpillar EP20CA1(J) Forklift service manual, covers wiring, hydraulics, drive unit, and electric systems. Searchable PDF download.

VIEW THE FULL MANUAL

https://machinecatalogic.com/caterpillar-ep20ca1j-forklift-service-manual-99759-6r110/