



Service Manual

Chassis & Mast

EP10/14/15/18(H)CA	221AE0001/E00001-up 256E00001-00791
EP 20/25(H) CA,EP28CA	241AC0001/C00001-up 257C00001-01119
EP 30 CA	251AC0001-up

6- 3. Inspection and adjustment



The wheel brake is very important part for safety.
It shall be replaced if any damages are found.

6-3-1. Brake drum - inspection, repair and replacement

1. Check the inner surface of the brake drum for streaks (damage), wear, and cracks.

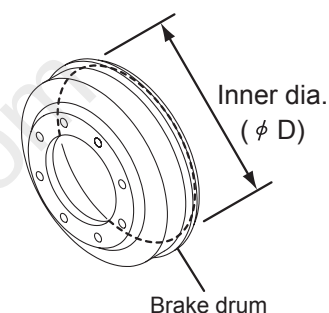


If there are streaks or partial wear, perform repairs or replacement within the limits shown below.

●Inner diameter of brake drum

Applicable model	Specific dimension(ϕ D)	Repair limit(ϕ D)
EP10CA-18CA	10-inch(254 mm)	256 mm
EP20CA-28CA	11-inch(279.4 mm)	281.4 mm
EP30CA	(310 mm)	312 mm

●Inspection of brake drum



2210036

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

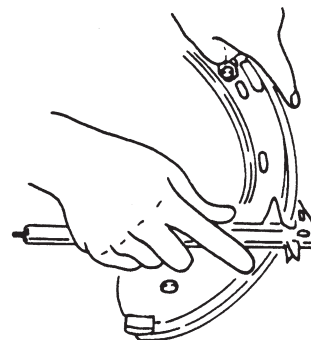
1. Measure the thickness of the lining.
➔ If the part is worn to 1.5 mm or less, replace it.



Measure the area with the most wear.

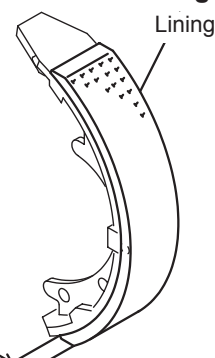
2. Check for stains, burning, and deterioration.
➔ If there are stains, burning, or deterioration, replace the part.
3. Check for cracks and damage.
➔ If there is a burn, repair it.
➔ If cracked or damaged, replace it.

●Measuring thickness of lining



152T061

●Inspection of shoe & lining

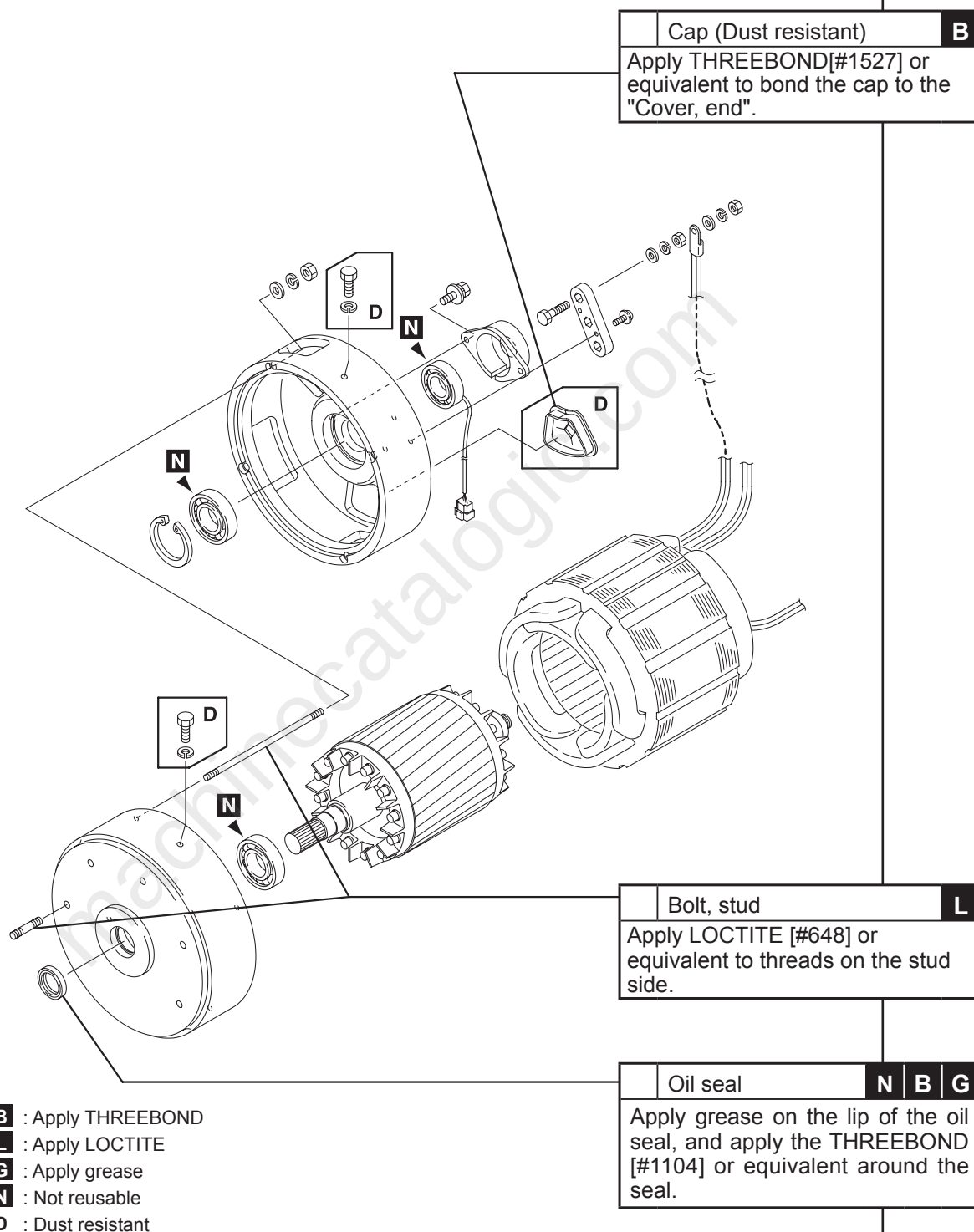


If the part is worn to 1.5 mm or less, replace it.

212E052

9-2-4. Traction motor - disassembly and reassembly

●Disassembling and reassembling the traction motor



221W052



When OIL SEALS, O-RINGS and / or BEARINGS were removed, they should be replaced to new ones.

CAUTION

- Do not disconnect the rectangular plug, AC plug and battery plug while charging.
- Push the "STOP" button when discontinue to charge.
- The charger operates with high voltage. Touch by wet hand may cause electrical shock.
- Do not operate any hydraulic valve levers or accelerator pedal while charging.

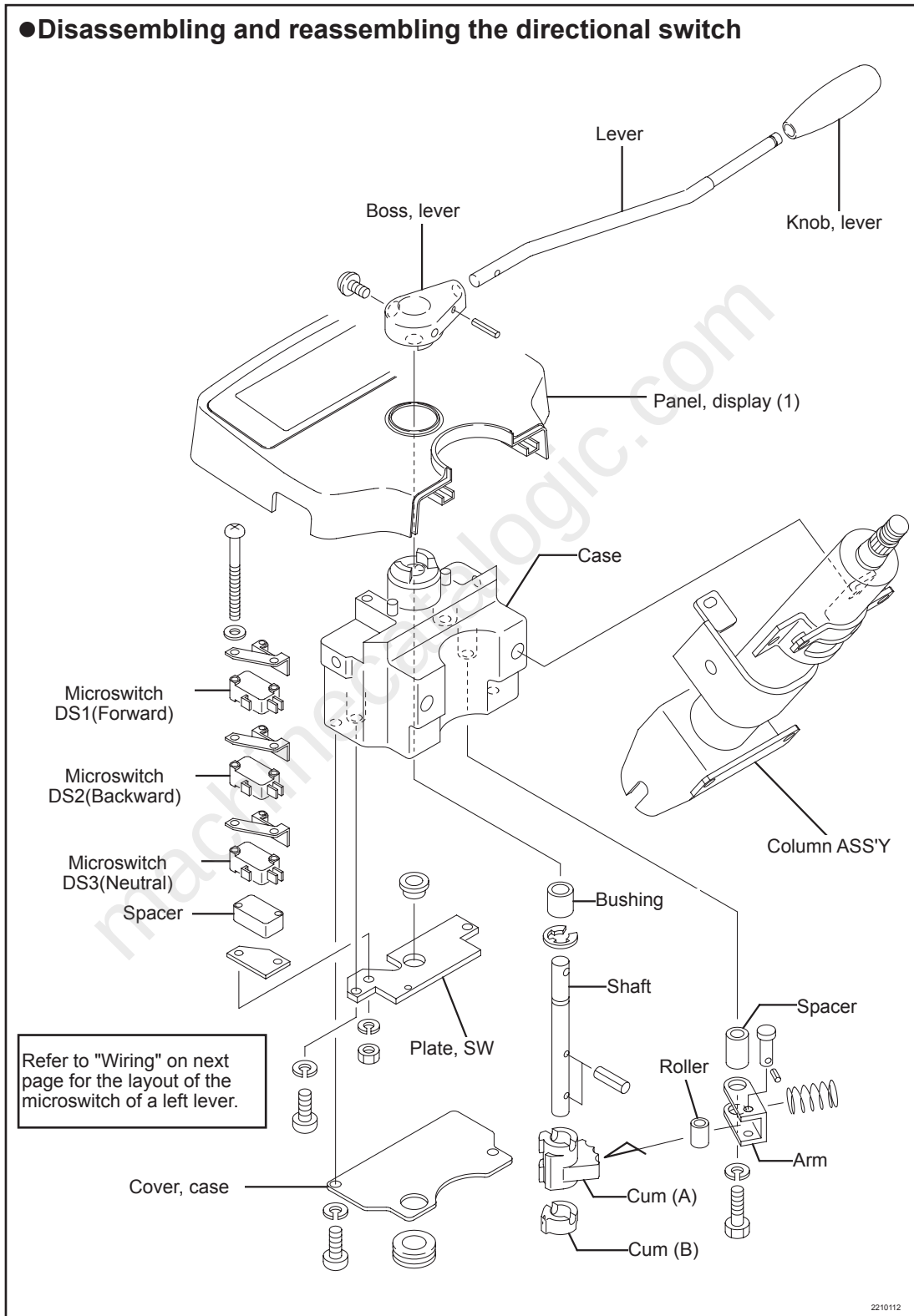
CAN-BUS control**CAUTION**

- The display is turned off when blacking out while charging.
When the power returns within one hour after it blacks out and the power is supplied , the charge is restarted and the charging passage is displayed.
The charge is not restarted when one hour or more has passed since it blacked out and the charge passage is not displayed.
- 44 hours pass with the charge plug connected after the charge ends, and when outside temperature is less than five degrees, re-charging is done only once.
In this case, the charging passage is displayed.

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10b-2. Directional switch - Disassembly and reassembly

10b-2-1. Display panel - disassembly and name



* This illustration shows right lever type. Some trucks may have the left lever type.

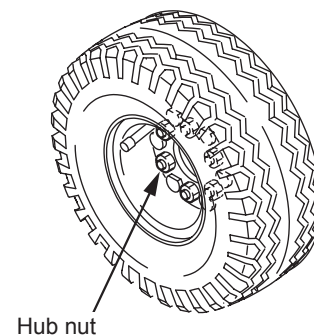
➔Refer to "Wiring" on next page for the layout of the microswitch of a left lever.

4- 2. Inspection and adjustment

4-2-1. Hub nut - inspection

1. Check for damage.
2. Check for loosening.
- ➡ If loose, re-tighten it.

● Inspection of hub nut



Hub nut

212E034

► Front

Tightening torque (M12)		
[EP10CA/ 14CA]	89-108 N · m	
	{9-11 kgf · m}	
Tightening torque (M16)		
[EP15CA/ 18CA]	216-264 N · m	
	{22-27 kgf · m}	
Tightening torque (M18)		
[EP20CA- 30CA]	315-385 N · m	
	{32-39 kgf · m}	

► Rear

	Tightening torque (M18)	
88.2-108 N · m		
{9-11 kgf · m}		

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

1. Check for damage.
2. Check for loosening.
- ➡ If loose, re-tighten it.



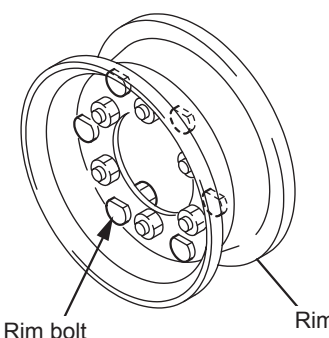
NOTE

There are no rim bolts for the following models:

Front : EP15CA-30CA

Rear : EP20CA-28CA

● Inspection of rim and rim bolt



Rim bolt

Rim

212E035

► Front

Tightening torque (M18)		
[EP10CA/ 14CA]	68.5-78.5 N · m	
	{7-8 kgf · m}	

► Rear

Tightening torque		
[EP10CA/14CA/ 15CA/18CA/30CA]	68.5-78.5 N · m	
	{7-8 kgf · m}	

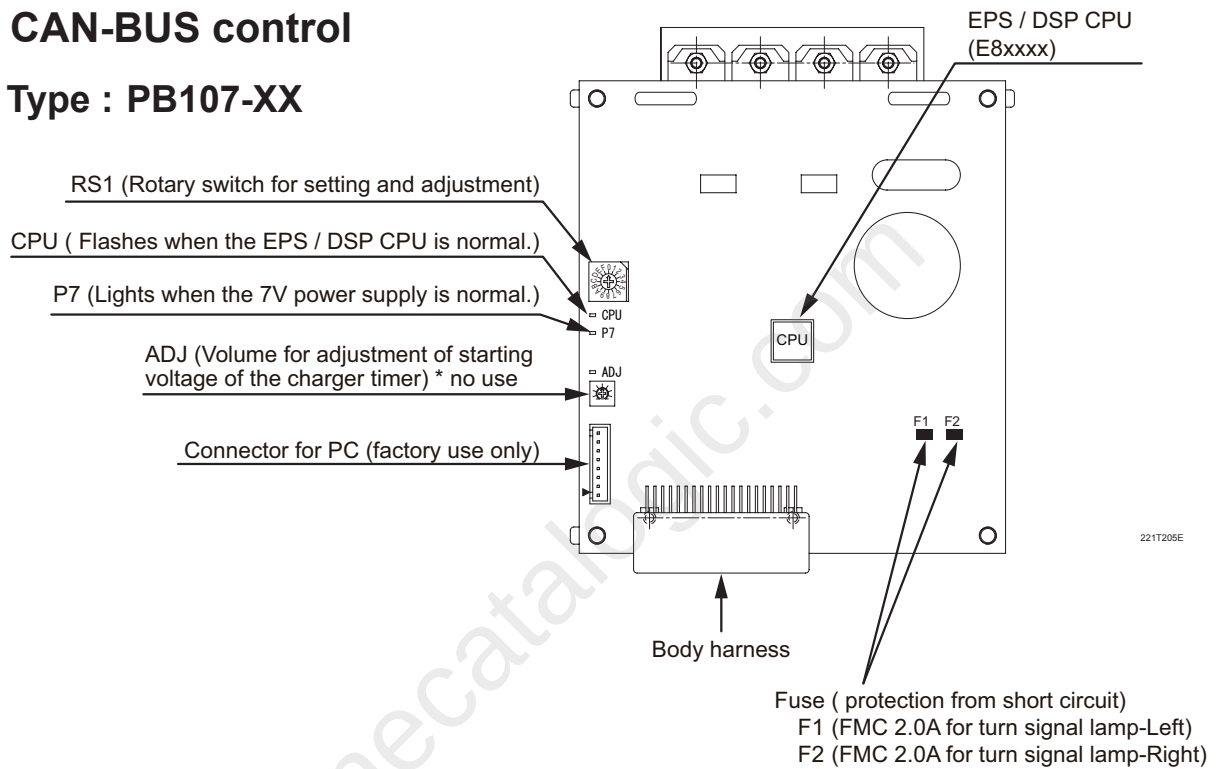
10g-1-2. EPS controller board (EPS / DSP board)



Even when the key is turned off, voltage from the battery is still sent to the display board or EPS controller (EPS / DSP board). Disconnect the battery plug before performing this work.

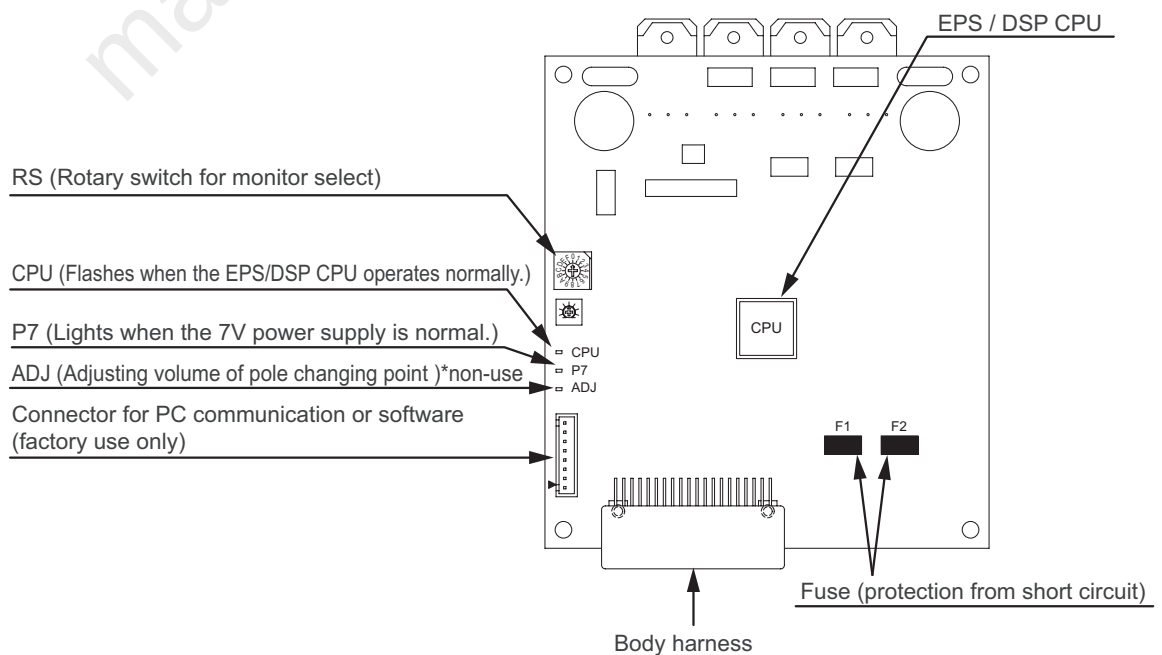
CAN-BUS control

Type : PB107-XX



MPU board unified gate circuit

Type : PB109-XX / PB110-XX / PB112-XX / PB113-XX



Full Version Available

Caterpillar EP20CA Forklift Service Manual (99N19-61110)

Caterpillar EP20CA forklift service manual, covers hydraulics, drive systems, mast, brakes, and wiring. Searchable PDF download.

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