



Service Manual

Chassis, Mast

EP13TCA

215AF0001-up

EP15TCA/18TCA

216AF0001-up

EP20TCA

288AD0001-up

4- 2. Rear tyre

4-2-1. Rear tyre - disassembly and reassembly

●EP13TCA-18TCA

Rim bolt and Nut

Hub bolt and Nut

Tightening torque	
68.5 - 78.5 N · m	
{ 7 - 8 kgf · m }	

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

●EP20TCA

Rim bolt and Nut

Hub bolt and Nut

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

Tightening torque	
216 - 264 N · m	
{ 22 - 26.9 kgf · m }	

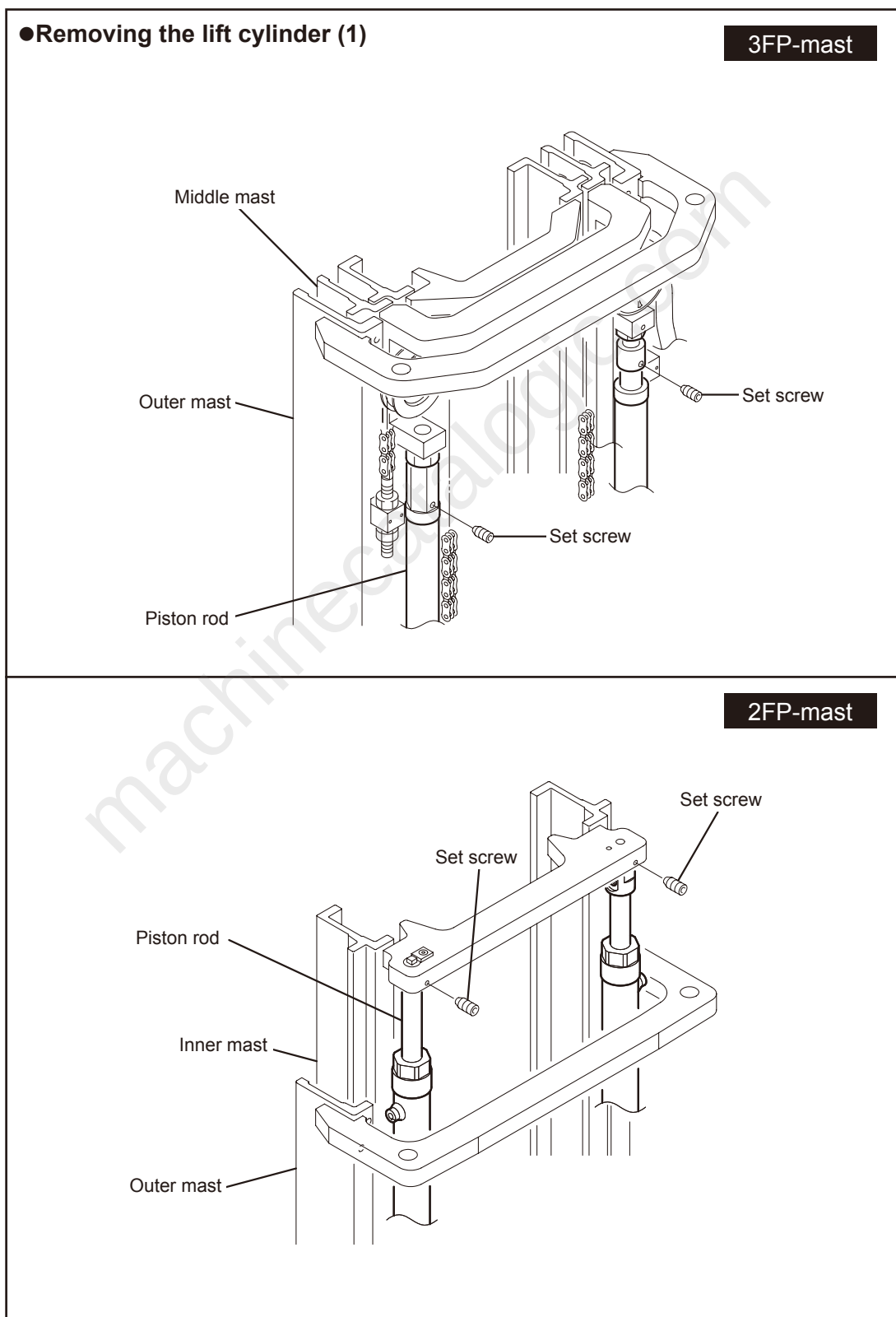
: Tightening torque

4-2-2. Tyre size (rear)

Model	Size
EP13TCA-15TCA	15 x 4 1/2-8-12PR(Std)
	15 x 4 1/2-8 SOLID(Opt)
EP18TCA	15 x 4 1/2-8 SOLID(Std)
EP20TCA	16 x 6-8-10PR(Std)
	16 x 6-8 SOLID(Opt)

7d-1-2. Lift cylinder - removal : 2FP-mast (2-stage duplex), 3FP-mast (3-stage triplex)

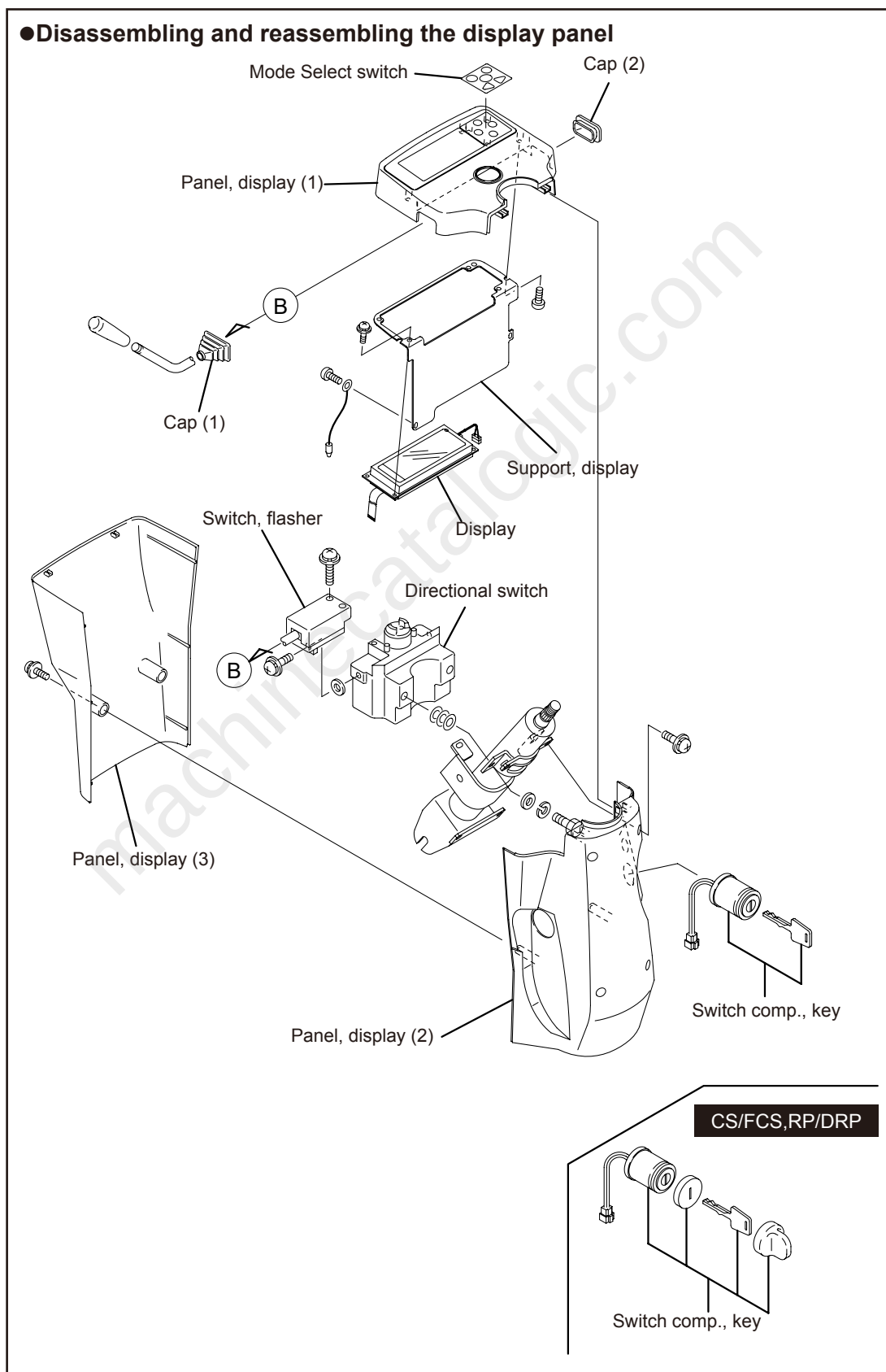
1. Pull the lift lever backward to raise the middle/inner mast about 50 mm.
2. Support the middle/inner mast with a wire rope or wood block.
3. Remove set screws that fix the piston rod.



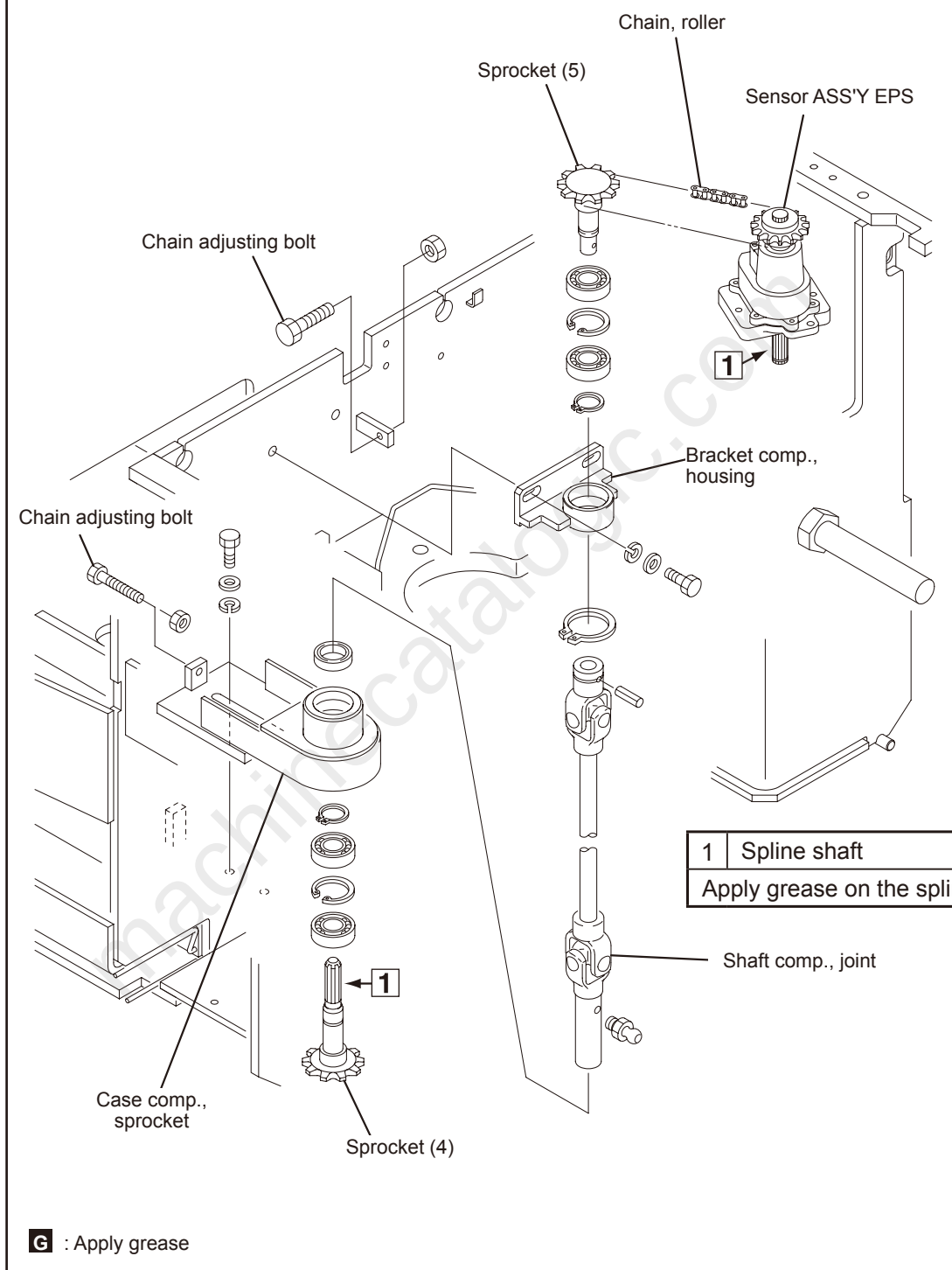
10c. DISPLAY PANEL AND DIRECTIONAL SWITCH

10c-1. Disassembly and reassembly

10c-1-1. Display panel - disassembly and reassembly



●Disassembling and reassembling the steering linkage (3)



9- 2. Inspection and adjustment

9-2-1. Rotor comp. (Traction/Hydraulic motor) - inspection and replacement

▶ 1 Inspection for damage

1. Check the rotor comp. for damage, especially for burning.

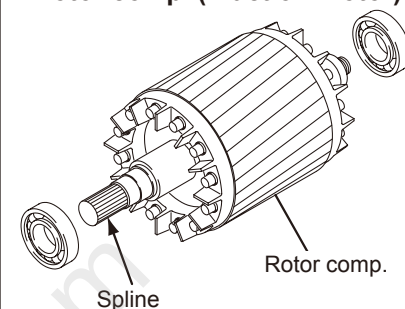
➔ If it is damaged, replace it.

▶ 2 Inspection of spline

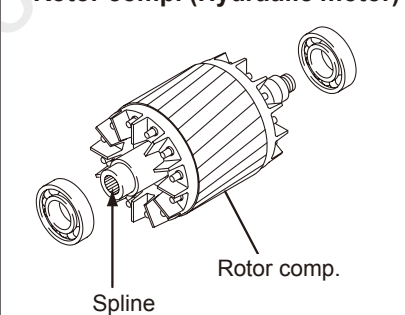
1. Check for wear of spline.

➔ If it is extremely worn, replace it.

●Rotor comp. (Traction motor)



●Rotor comp. (Hydraulic motor)

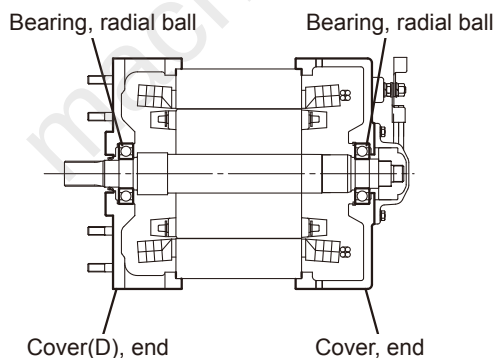


▶ 3 Inspection of ball bearing

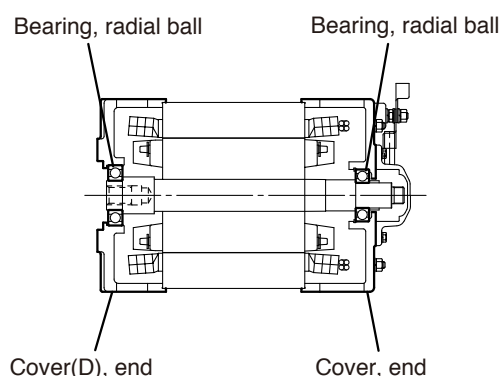
1. Check fitting part of the bearing in the "cover, end" and the "cover(D), end".

➔ If loose, replace them.

●Inspection of fitting parts (Traction motor)

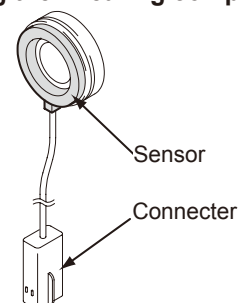


●Inspection of fitting parts (Hydraulic motor)

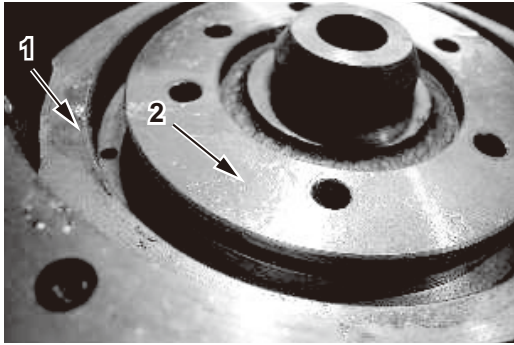


- When replacing the "bearing comp., sensor", be very careful not to damage the sensor. If the sensor is damaged, the motor will not operate correctly.
- Because the bearing sensor is very sensitive for the static electricity, do not touch any terminals in the connector directly.

●Replacing the "Bearing comp., sensor"



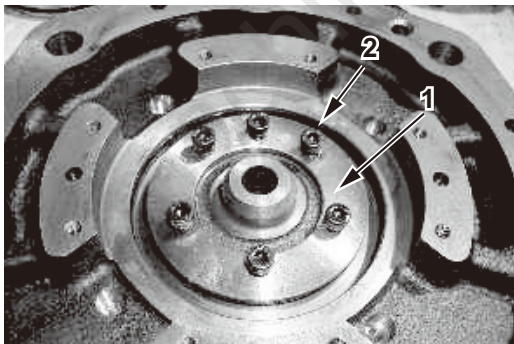
5. Install the piston inner sleeve in the transfer cover.



(1)Transfer cover
(2)Piston inner sleeve

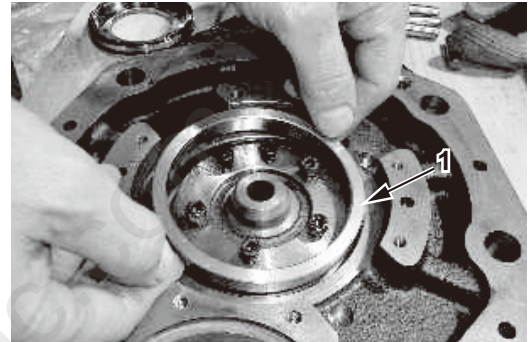
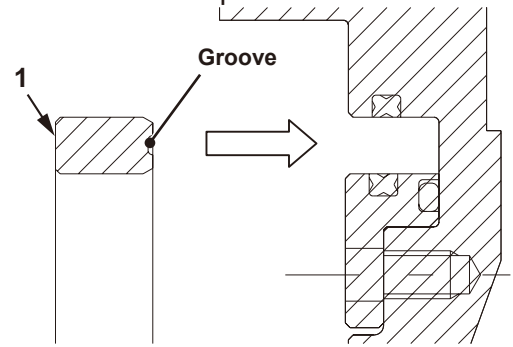
6. Tighten the piston inner sleeve temporarily after apply LOCTITE # 262 or equivalent to the hex socket screw (M5 × 0.8) (6 pieces).

L	Glue	LOCTITE [#262] or equivalent
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(1)Piston inner sleeve
(2)Hex socket screw

7. Install the brake piston.



(1)Brake piston



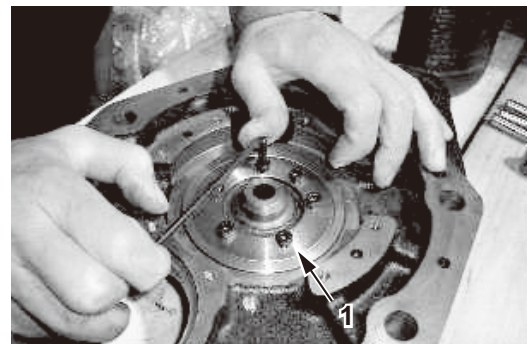
Pay attention to the direction of the groove of the brake piston when installing.



Confirm the complete insertion.

8. Tighten hex socket screws (6 pieces).

	Tightening torque	5.5 ~ 8 Nm
L	Glue	LOCTITE [#262] or equivalent



(1)Hex socket screw

Full Version Available

Caterpillar EP13TCA Forklift Service Manual (99N19-60100)

Caterpillar EP13TCA forklift service manual, covers hydraulics, drive unit, wiring, and controller diagnostics. Searchable PDF download.

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