SERVICE MANUAL

EP25(C)N
EP30(C)N
EP35N

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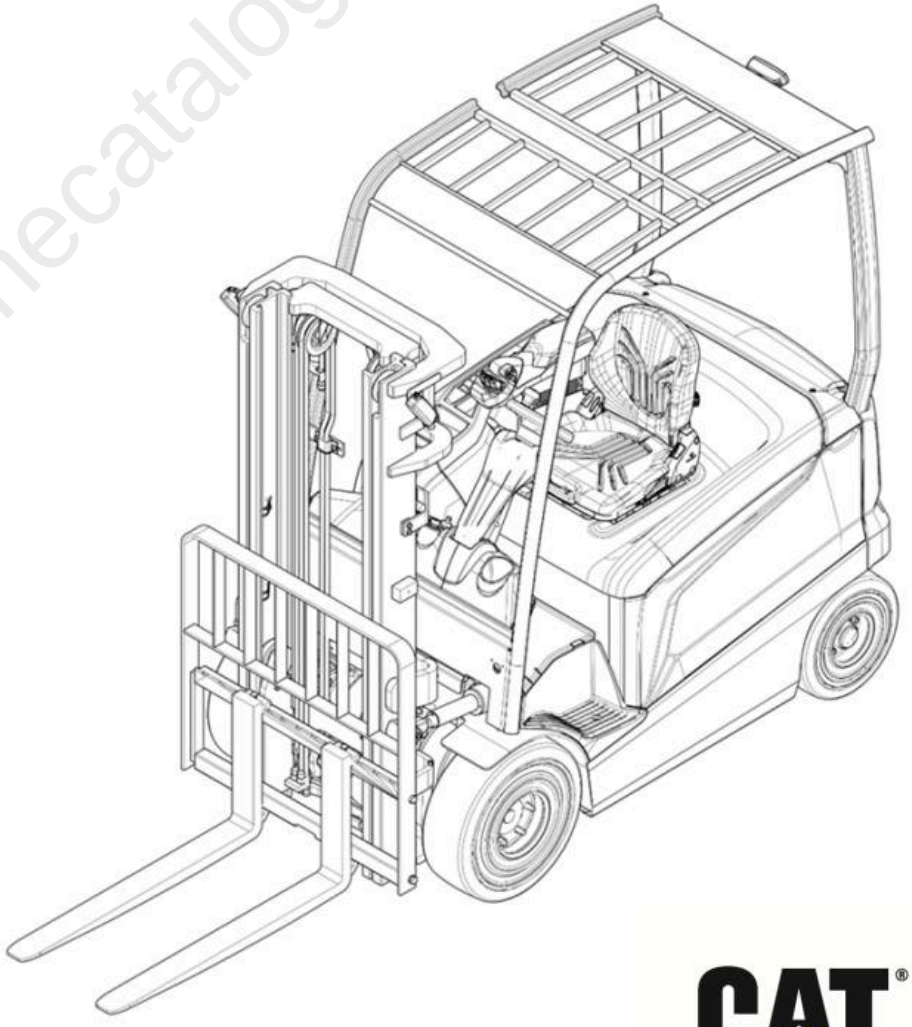

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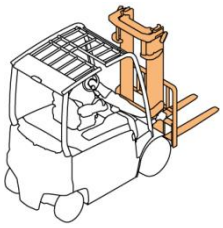
5.15.14 Tilt cylinders



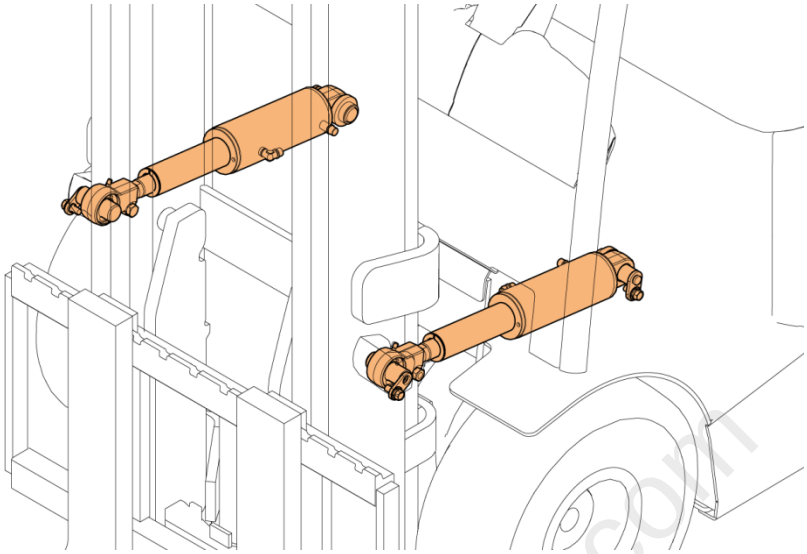
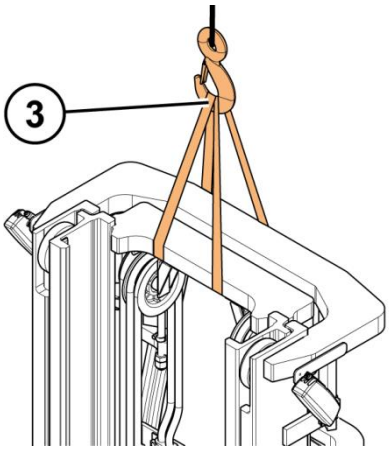


Figure 123. Tilt cylinders overview

5.15.14.1 Remove the tilt cylinders

1. Remove the pedal plate, see section 5.6.2. **2.** Remove the step cover, see section 5.6.9.	
3. Attach a lifting device to the mast and tighten the chains or ropes. NOTE: Make sure that you use applicable lifting devices and follow the safety instructions given by the lifting device manufacturer.	

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10.6 Hydraulic valve unit with manual levers

⚠ CAUTION

When working on the hydraulic valves and connectors, avoid getting any dirt into the connectors or valves. Dirt in the hydraulic system often causes problems in the functionality of the truck.

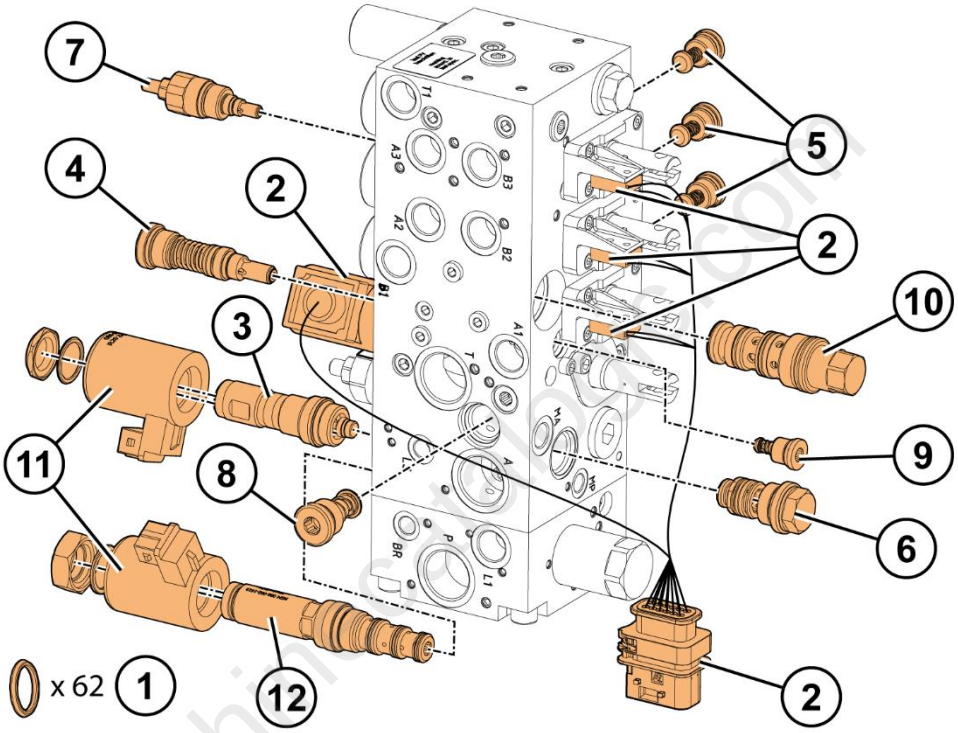

Figure 214. Spare parts of the hydraulic valve unit with manual levers overview

1. *Seal kit*
2. *Wiring harness 4-axis*
3. *Electric piloted check valve*
4. *Backpressure valve*
5. *Check valve cpl.*
6. *Check valve assembly*
7. *Pressure relief valve NG4*
8. *Check valve NG12*
9. *Check valve*
10. *Brake valve*
11. *Solenoid coil 80 V DC*
12. *4/2 directional valve*

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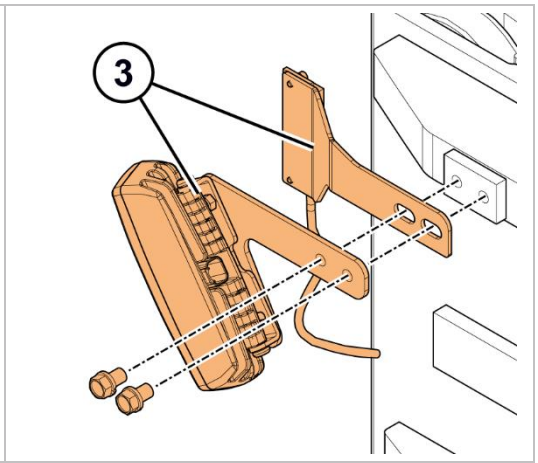
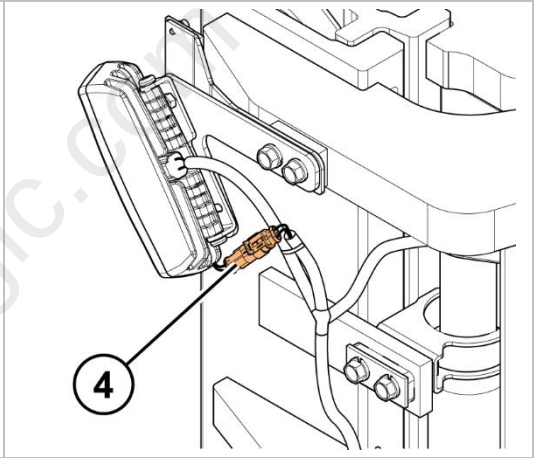
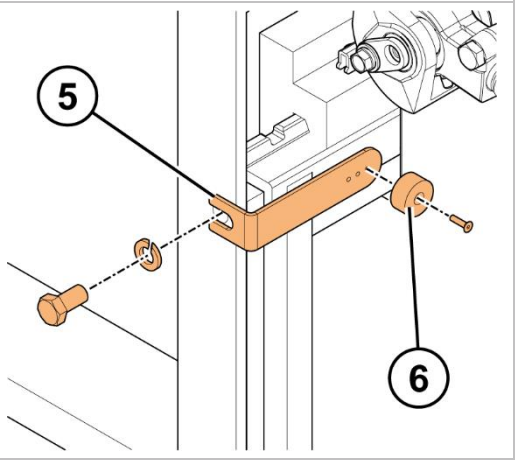
3. Install the mast height sensor and the working light to the mast with 2 screws.	
4. Connect the sensor connector.	
5. Install the counterpart of the mast height sensor to the lifting carriage with a screw. **6.** Install the magnetic part of the sensor to the mounting plate with a screw.	

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8.5 Sensors

8.5.1 Traction motor sensors

8.5.1.1 Temperature sensor

The left and right traction motors have separate temperature sensors.

Type	PTC resistor
Switching output	Variable resistance based on temperature
Electrical wiring	2 wires: red and white. No polarity.

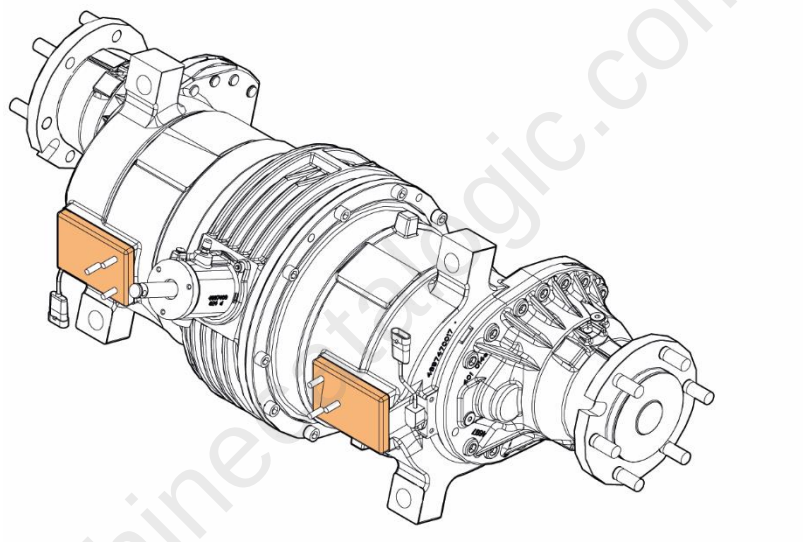

Figure 176. Temperature sensor overview

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Functionality check of the temperature sensor

Both traction motors have a separate temperature sensor. The motors also have spare sensors that are beside the temperature sensors and covered with protective caps. When you do troubleshooting, compare the value of the temperature sensor to the value of the spare sensor. If the temperature sensor is broken, connect the spare sensor.

The condition of the temperature sensor can also be verified with a multimeter. The value should be ~580 Ω.

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CODE	TRUCKTOOL DESCRIPTION	DISPLAY DESCRIPTION	MESSAGE TYPE
13A232	Wrong sw version		Alarm
	This alarm does not exist in this truck application. It can occur when updating the controller software, but does not occur when the truck is used. When this alarm occurs, clear the event history. If the alarm still occurs, update the controller.		
13A236	Current gain	Critical Failure Use brake pedal to stop!	Alarm
	Possible internal error, current gain procedure is not performed. For a solution to the problem, see the troubleshooting instructions under code 13A13.		
13A237	Analog value reading error	Critical Failure Use brake pedal to stop!	Alarm
	AD conversion inside the controller has frozen. Possible controller internal error. For a solution to the problem, see the troubleshooting instructions under code 13A13.		
13A239	Not genuine hardware	Critical Failure Use brake pedal to stop!	Alarm
	Error with the controller hardware / software. Genuine part check failed. • Make sure that you have the original hardware and software installed to your truck: The original hardware has the letters RO in the controller type plate. The original software is downloaded by TruckTool. • Set the truck back to the default settings. Run the truck model configuration wizard. • If the default settings do not help, flash the controller and run the wizards again. • If flashing does not help, replace the current controller with another controller. **NOTE:** If the controller replacement does not help, install the original controller back to the truck. • If the problem still occurs, contact an authorized dealer.		
13A241	Input mismatch	Internal Error Call Service	Alarm
	Possible internal error in the controller related to reading inputs. The master uC and the slave uC are reading different values. For a solution to the problem, see the troubleshooting instructions under code 13A13.		
13A242	Setpoint mismatch	Critical Failure Use brake pedal to stop!	Alarm
	Motor control issue. Master uC has detected wrong setpoint at the slave uC. For a solution to the problem, see the troubleshooting instructions under code 13A13.		

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Center information area

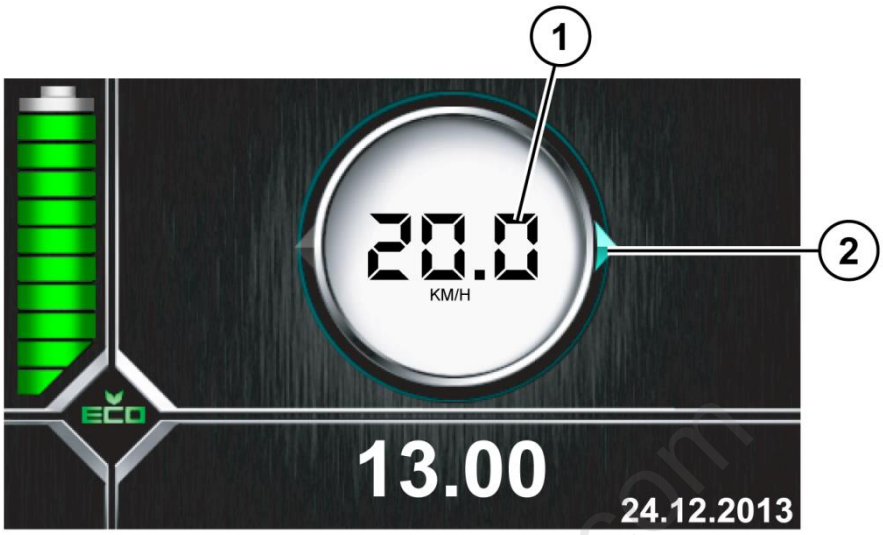

Figure 23. Center information area overview

1. *Speed indicator*
2. *Driving direction indicator*

In a normal operating situation, the center information area shows the speed indicator. In addition, the driving direction of the truck is indicated with 2 arrows on the opposite sides of the center information area. If no driving direction is set, the arrows are blinking. When the driving direction is set, the selected direction is indicated with a solid blue colored arrow and the other arrow turns gray.

Parking brake indicator

The parking brake indicator is shown in the bottom left-hand corner of the truck display. The parking brake engages automatically, when the truck is stopped.

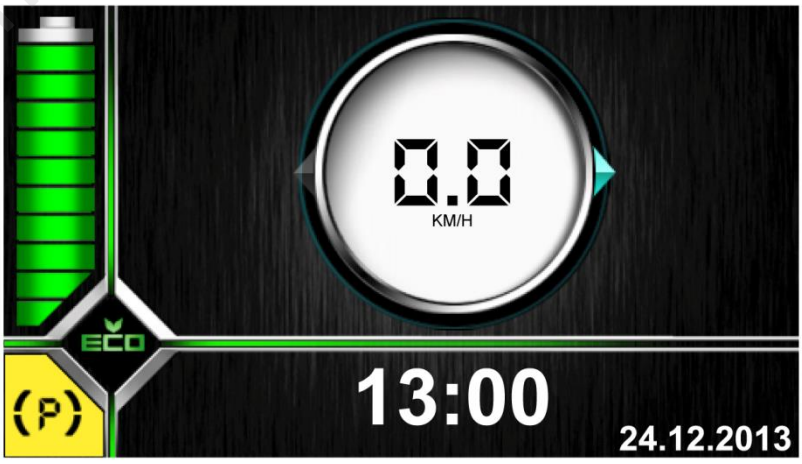

Figure 24. Parking brake indicator overview

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Full Version Available

Caterpillar EP30CN Forklift Service, Operator and Schematic Manual (624632-EN-B.1)

Caterpillar EP30CN Forklift service manual, covers hydraulics, mast, drive unit, wiring, and electric controls. Instant PDF download.

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