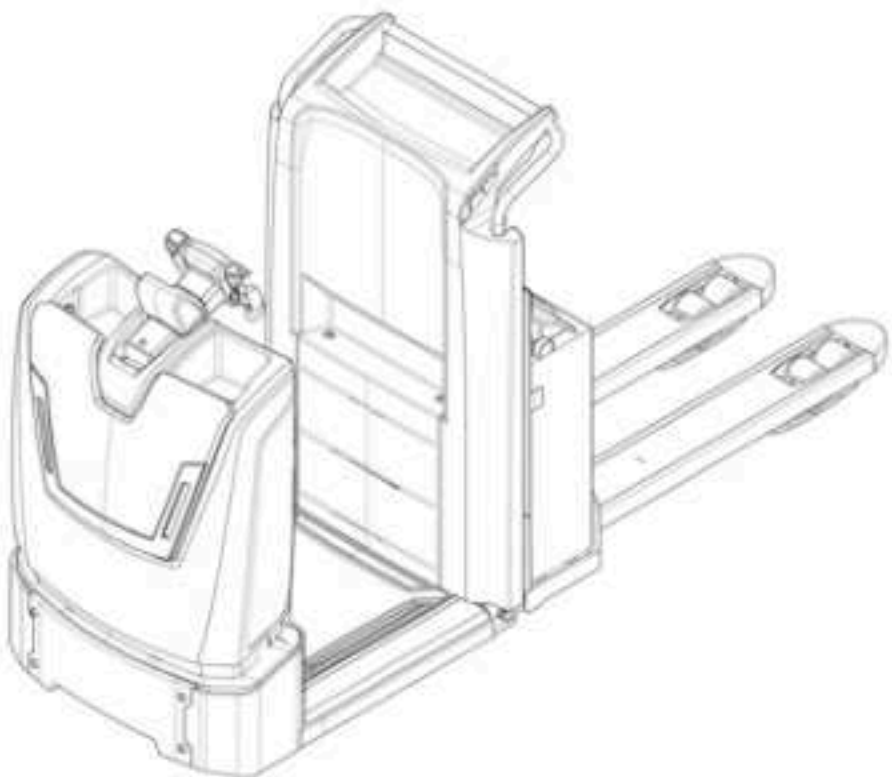
SERVICE MANUAL

NO
20NE/20NEP
10NEF/10NEFP
20NEX/20NEXP
NTR30N



English 2015
624877

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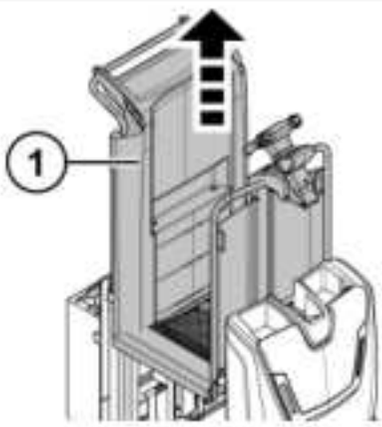
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5.16.5 Replace the wiring harness

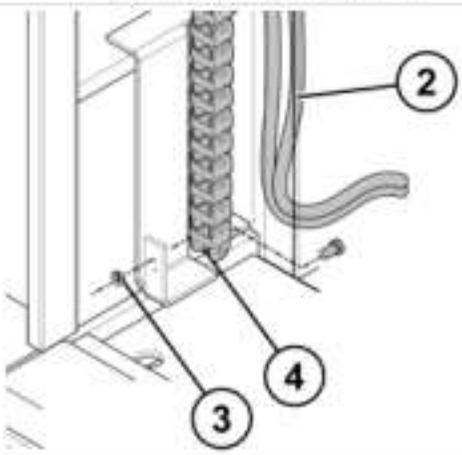
⚠ CAUTION

Before you do maintenance work below the lifting platform, support the lifting platform below with jacks.

1. Lift the lifting platform to the up position.



2. Remove the wires from the wiring harness.
3. Remove the nuts from the wiring harness.
4. Remove the wiring harness.



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13.2 Pump controller

NOTE: Before you start to troubleshoot the truck, make sure that all the power supplies, fuses and connections are in order. Low voltage in the controller can cause alarms. See also the beginning of chapter 13.

The fault diagnostic system of the pump controller is divided into two main groups:

- Alarms

  These are faults, which open the power bridge and, when possible, also the main contactor is opened and the magnetic brake activated. Failures in the motor, the controller or the safety functions cause alarms.

- Warning

  These are faults, which do not stop the truck or stop the truck by using regeneration braking. The controller is working well, but it has detected some conditions that reduce the performance or stop the truck without opening the power devices. Incorrect operation sequences or conditions requiring performance reductions (for example, high temperatures) cause warnings.

The text **Stored** means that the alarm or warning is stored in the pump controller logbook.

Table 26. Pump controller alarm codes

CODE	ALARM / CONSOLE DESCRIPTION		
8	Self diagnosis test failed WATCHDOG	(Alarm)	Stored
	This is a safety-related self-diagnosis test within the logic between the master (drive) and slave (pump) microcontrollers. This alarm occurs when the master and slave watchdog message is missing or late. This alarm can be caused by a CAN bus malfunction, which prevents the communication between the master and the slave. Examine all the CAN bus cables and measure the bus resistance between CAN high and low. The bus resistance value must be 60 Ω. Measure also the resistance of the CAN cables between the truck chassis and the 0 cables. There should not be any significant connection and the resistance value should be over 1 MΩ. If the CAN bus is not damaged, the problem is in the controller and you must replace it.		
13	Controller memory error EEPROM KO	(Warning)	Stored
	This warning is caused by a hardware or software defect of the non-volatile embedded memory supporting the controller parameters. This alarm does not prevent truck operation, but the truck only works with the default values. When this alarm occurs, clear the EEPROM. Set the power of the truck OFF and ON and read the result. If the alarm occurs permanently, replace the pump controller. If the alarm disappears, the previously stored parameter values are replaced by the default values.		

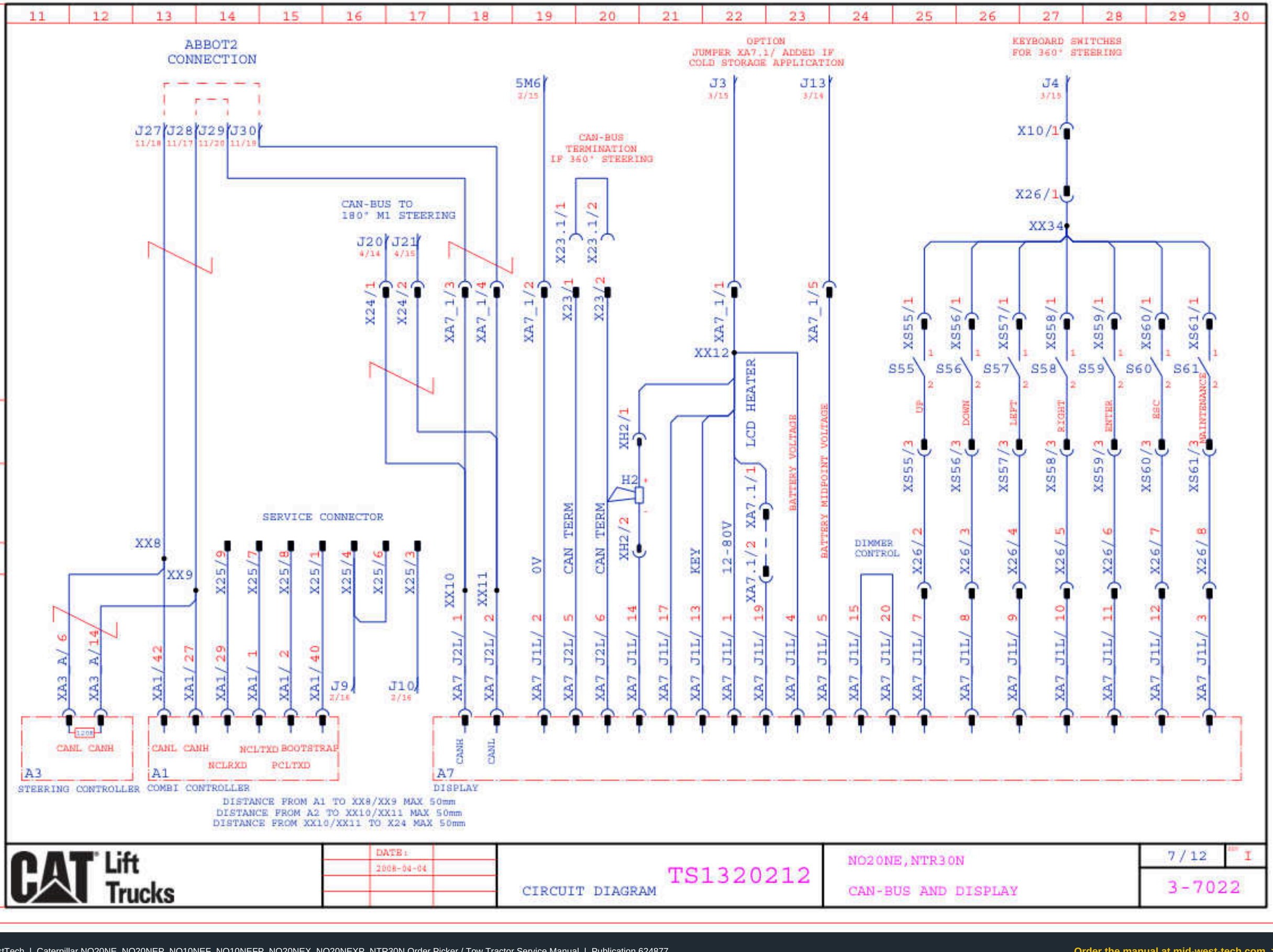
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1	IDENTIFICATION					
1.1	Manufacturer		Rocla Oyj	Rocla Oyj	Rocla Oyj	Rocla Oyj
1.2	Model		NO20NE NO20NEP	NO20NEX NO20NEXP	NO10NEF NO10NEFP	NTR30N
1.3	Power source		Battery	Battery	Battery	Battery
1.4	Operation mode		Stand-on	Stand-on	Stand-on	Stand-on
1.5	Nominal capacity/load	Q [kg]	2,000	2,000	1,000	3,000
1.6	Load center (COG)	c [mm]	600	1,200	600	-
1.7	Rated drawbar pull	F [N]	-	-	-	600
1.8	Load wheel shaft to fork face (forks lowered)	x [mm]	961	1,480	630	-
1.9	Wheelbase (forks lowered)	y [mm]	2,041	2,732	1,961	1,256
2	WEIGHTS					
2.1	Service weight (with battery, see 6.5)	[kg]	941 (1,070)	1,521 (1,650)	1,249 (1,383)	900
2.2	Shaft loadings (with nominal load and battery weight), drive / load side	[kg]	1,072 / 1,869 (1,046 / 2,024)	1,135 / 2,386 (1,249 / 2,401)	810 / 1,439 (833 / 1,550)	-
2.3	Shaft loadings (without load / with battery), drive / load side	[kg]	625 / 316 (740 / 330)	974 / 547 (1,076 / 574)	724 / 525 (829 / 554)	414 / 486
3	WHEELS					
3.1	Wheels, material (R=rubber / Vul=Vulkollan / P=Power Thane) drive / load side		Vul / Vul	Vul / Vul	Vul / Vul	Vul / Vul
3.2	Load wheel dimensions	[mm]	85x75	85x75	85x75	285x75
3.3	Traction wheel dimensions	[mm]	250x100	250x100	250x100	253x85
3.4	Castor wheel dimensions	[mm]	150x50	150x50	150x50	-
3.5	Number of the wheels (x=driven) load / drive side		2+1x/4	2+1x/4	2+1x/4	1x / 2
3.6	Track width (centre of wheels), drive side	b10 [mm]	554	554	554	-
3.7	Track width (centre of wheels), load side	b11 [mm]	374	359	385	710
4	DIMENSIONS					
4.2	Truck height (lifting platform lowered / lifted)	h1 [mm]	1,335 (1,365 / 2,045)	1,335 (1,365 / 2,045)	1,335 (1,365 / 2,045)	-
4.4	Lift	h3 [mm]	115	725	705	-
4.5	Height, mast extended	h4 [mm]	-	1,478	1,280	-

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NO20NE,NTR30N

CAN-BUS AND DISPLAY

7/12 I

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