SERVICE MANUAL

EP14-20A(C)NT
EP16-20A(C)N

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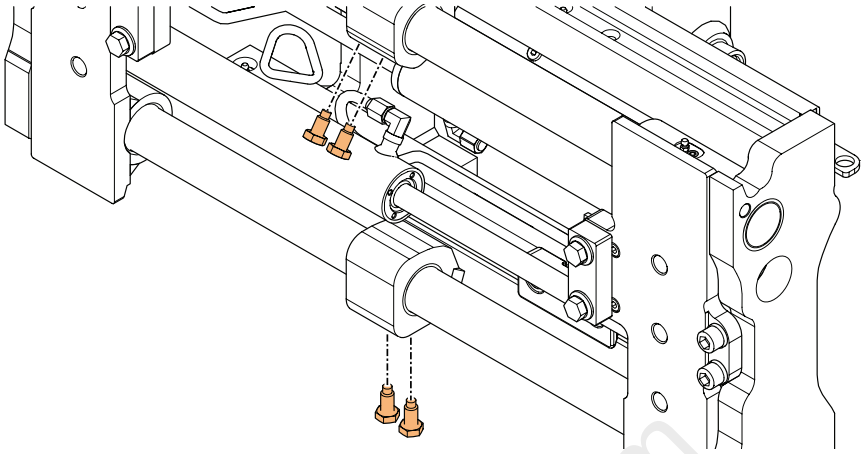
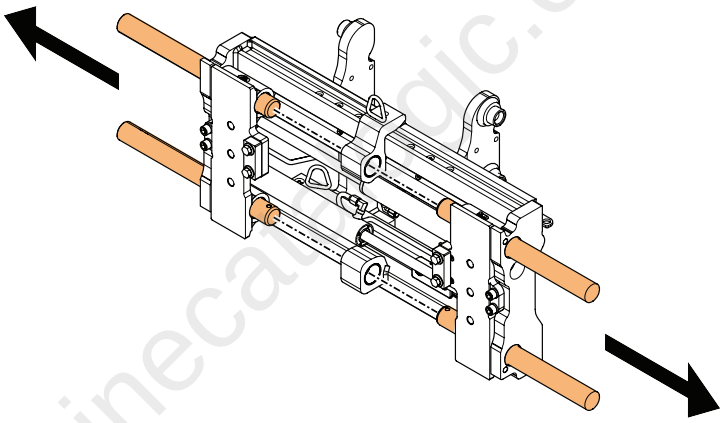
English

640899-EN A

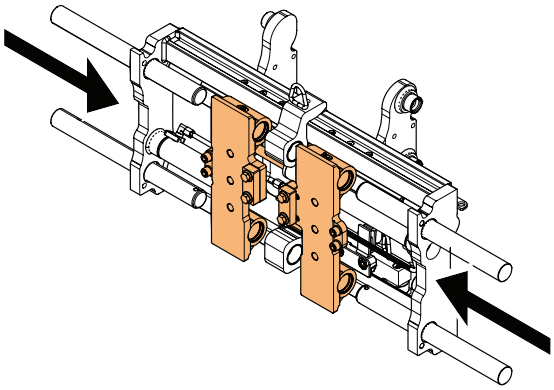
3. Remove the screws using a 6 mm Allen key.



4. Hold the support and slide out one of the chromed bars half way.



5. Remove the support from the chromed bar carefully.



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11 TruckTool Diagnostics

11.1 Overview

Software maintenance can be performed with a diagnostics application called TruckTool. This program runs on a laptop PC and connects to the data bus of the truck (CAN) via a special adapter.

TruckTool can be used to receive, display and modify settings, update (flash) controller firmware, reset settings to hardware defaults, review and clear alarms, perform calibrations, execute a quick truck setup and monitor digital and analog inputs and outputs.

Additional training is required to use the program.

Figure 188: TruckTool Diagnostics

For more information, see *https://www.trucktool-online.com/*

11.2 Location of the service socket

Figure 189: Location of the service socket shows the location of the service socket for connecting TruckTool to the truck.

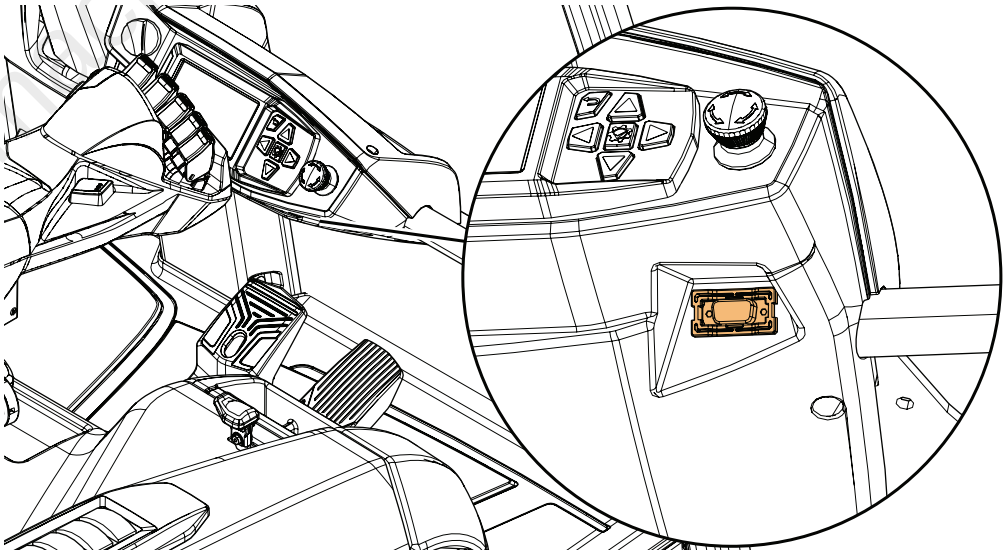

Figure 189: Location of the service socket

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Figure 228: Lifting point

Figure 229: Passenger warning sticker

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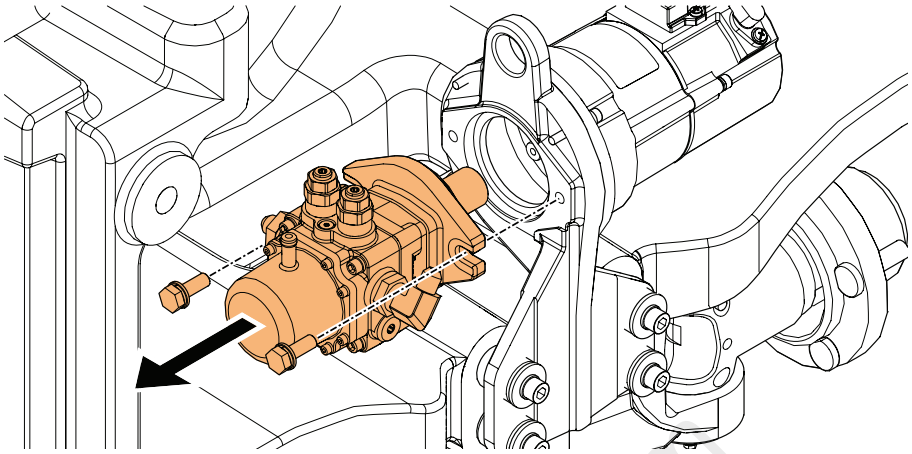
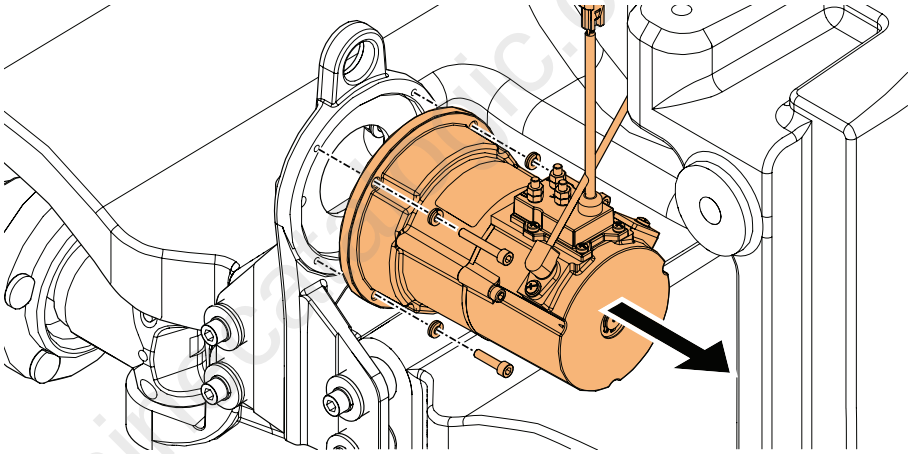
4. Remove the two bolts and the pump.



5. Remove the screws and the pump motor.



8.5.3 Steering controller

This forklift truck is equipped with the EPS AC-0 AMPSEAL Controller, which performs the steering functions that are usually present in walkie and ride-on pallet trucks, stackers and low level order pickers.

The controller can perform the following functions:

- Steering controller for AC asynchronous 3-phase motors
- Digital control using two microprocessors
- CAN bus interface
- Both microprocessors CAN bus connected
- Encoder interface
- Stepper motor or twin pot interface
- Analogue feedback pot interface (1,024 steps resolution)
- Analogue PT1000 temperature sensor input
- Analogue input with 1,024 steps resolution (one input)
- Analogue input with 4,096 steps resolution (one input)
- Two digital inputs
- Double safety relay inside

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	Before daily use (Operator)	Monthly (Owner)	1,000 h or every year (Service)
Examine the truck frame and the fork carriage	C	C	C
Examine the overhead guard for deformation, cracking and damage			C
Examine the gas springs	C	C	C
Make sure that the type plate is in the correct position and not damaged.	C	C	C
Examine the covers, see *Section 5.6 Truck covers overview*.	C	C	C
Safety functions • Brake • Operator presence pedal (if applicable) • Battery cover lock • Warning stickers • Emergency switch • Key switch	C	C	C
Examine the fastening of the steering wheel			C
Test the functionality of the door and battery cover mounting and lock	C		
Examine the functionality and mounting of the arm rest	C		
Examine the mounting and functionality of the seat	C		
Options (CSM)			
Accessory clamp	C	C	C
Examine the functionality of the options, see *Section 14.1 Options*.			C
With the cabin, examine all the installed options	C		

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13.4 Oils and lubricants

NOTE: Make sure that you do not mix different lubricants. It is possible that different brands of lubricants are not compatible with each other.

Table 41: Oils and lubricants

Hydraulic oil	
Ambient temperatures -40...+0°C	ISO VG 15
Ambient temperatures -10...+30°C	ISO VG 32
Ambient temperatures +10...+50°C	ISO VG 46

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NOTE:
The display images in this manual have English messages as examples. The display language can be changed via TruckTool. Contact the service personnel. See APPENDIX B: Truck display languages.

4.3.9.2 Hierarchy of the truck display menus

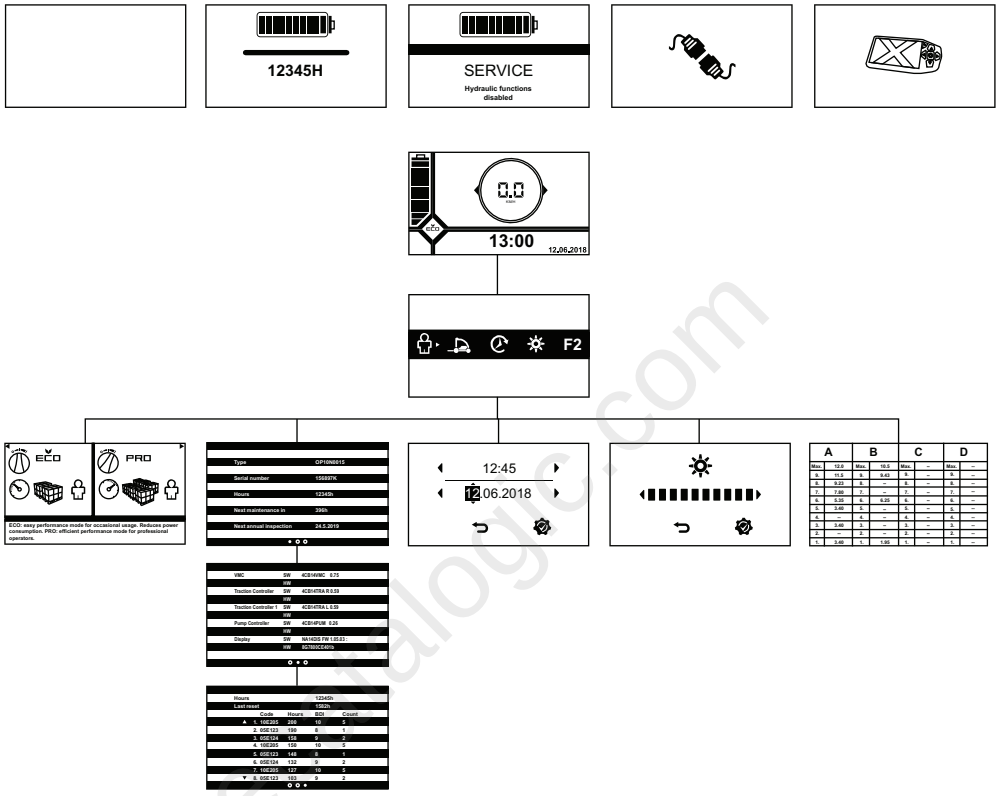

Figure 14: Hierarchy of the truck display menus

4.3.10 Pedals

There are 3 different pedal combination alternatives for the truck:

- Accelerator pedal and brake pedal
- Accelerator pedal, operator presence pedal and brake pedal
- Dual pedal and brake pedal

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	Before daily use (Operator)	Monthly (Owner)	1,000 h or every year (Service)
Examine the rollers, roller pins and welds for cracking and damage			C
Apply grease to the lubrication points of the tilt cylinder			C
Maintain the additional equipment according to the instructions of the manufacturers	See the instructions of the manufacturers		
Fork carriage			
Examine the fork carriage welding for cracking			C
Examine the mounting, wear and damage of the forks and the load handling device			C
Fork thickness and locking			C
Load backrest	C	C	C
Rear axle			
Apply grease to the lubrication points of the rear axle, see *Section 13.4 Oils and lubricants*.			C
Examine the operating condition of the bearings, check for looseness of the bearings			C
Examine the welds for cracks			C
Examine the mounting of the rear axle			C
Examine the condition of the rubber spring			C
Examine the mounting of the wheels		C	
Wheels			
Damage and wear in the wheels			C
Measure the pressure of the pneumatic wheels		C	
Battery			
Battery water level, see *Section 7.3 Battery maintenance*.	C	C	C
Clean the battery if necessary			C
Battery cable and connector, see *Section 7.3 Battery maintenance*.	C	C	C
Battery cell voltage and specific gravity, see *Section 7.3 Battery maintenance*.			C

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