



SPE120  
SPE120L  
SPE140  
SPE140L  
SPE140S  
SPE160  
SPE160L  
SPE200  
SPE200D

SPE200L

Translation of the original instruction

**List of models:**

Model	T-Code	Valid from serial number
SPE120	1013	6375610-
SPE120L	1014	6375610-
SPE140	1013	6375610-
SPE140L	1014	6375610-
SPE140S	1015	6375610-
SPE160	1013	6375610-
SPE160L	1014	6375610-
SPE200	1013	6375610-
SPE200D	1014	6375610-
SPE200L	1014	6375610-

**Change history:**

Date	Change	Change description
2015-02-09	New truck model	Completely new issue
2017-09-01	General update	Updated version
2018-03-23	<i>General, page 13 - 21</i>	Changed to block 1 as standard.
	<i>List of error codes, page 7 - 11</i>	Clarified truck behaviour, 3:587 updated
	<i>Checking the split pins / securing pins, page 15 - 7</i>	
	<i>Fitting the lift cylinder, page 14 - 27</i>	Added torque to cylinder mount, top beam $47 \pm 3$ Nm
	<i>Emergency release of the parking brake, page 11 - 6</i>	Updated the transport screws.
	<i>Parameter list, page 4 - 2</i>	1142 added, 311/ 329 new value
	<i>Periodic maintenance, page 6 - 8</i>	Deleted 500h
	<i>PIN code for resetting the truck, page 13 - 22</i>	
	<i>Programming PIN codes, page 13 - 22</i>	
	<i>Diagram, page 19 - 2</i>	Modified diagram F53 changed to 20 A
	<i>PIN code defaults, page 13 - 24</i>	
	<i>Weighing system, page 13 - 25</i>	New setting
	<i>Overview, page 11 - 2</i>	New dust seal
	<i>PIN code at delivery, page 13 - 23</i>	[New information]
	<i>PreOpCheck, page 17 - 4</i>	[New information]

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## 1 General introduction

### 1.1 Images and other information

Images and other information used in this manual may differ from your truck depending on model or optional equipment.

### 1.2 Warning levels and symbols

The following warning levels and symbols are used in the repair manual:

#### **DANGER**

Indicates a dangerous situation that – if not avoided – will cause death or serious bodily injury.

#### **WARNING**

Indicates a dangerous situation that – if not avoided – could possibly cause death or serious bodily injury.

#### **CAUTION**























Indicates a dangerous situation that – if not avoided – will cause a slight or minor bodily injury.

#### *NOTICE*

Used in connection with actions that can cause material damage but not bodily injury.

Used to attract attention and to give information about various actions.

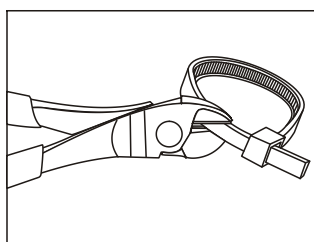
### 1.3 Pictograms

Symbol	Procedure	Symbol	Procedure
	Visual inspection of condition, wear and loose connections.		Component replacement.
	Cleaning		Measurement
	Checks for leaks.		Check that screws, nuts, etc. are tightened to torque.
	Listening for noise.		Lubrication, application.
	Check of functions.		Calibration
	Adjustment		Welding
	Disassembly/removal		Assembly/installation
	Open		Close
	Refilling		Emptying
	Update		Charging
	Lift		Lower

An example of another type of pictogram is “Cut cable ties”:

# 1 General introduction

## Abbreviations



Additional information under the pictogram can, for example, indicate the number of cable ties to be cut.

### 1.4 Abbreviations

Abbreviation	Meaning	Explanation
ACC	Alternate Current Combi	Motor control, hydraulics and drive.
ACH	Alternate Current Hydraulic	Motor control, hydraulics.
ACT	Alternate Current Traction	Motor control, drive.
ADU	Automation Display Unit	Display used for automated applications for control inputs and visual feedback from the automatic system.
ACU	Automation Camera Unit	Camera equipment used for automatic applications in order to identify empty places in racking, etc.
ACP	Automation Control Panel	Control panel used for automated applications for control inputs and visual feedback from the automatic system.
AUX	Auxiliary	Outside equipment
BCU	Onboard system	
BDI	Battery Discharge Indicator	Unit indicating the state of battery charge.
BMS	Battery Management System	A interface for battery to truck communication.
CAN	Controller Area Network	A standardised interface that enable communication between different electrical units.
CID	Central Information Display	Display with menu-based information system that is used as the primary communication tool between operator and truck.
DHU	Data Handling Unit	
DX	Duplex	Mast with two sections.
EPS	Electronic Power Steering	Complete steering servo with its own motor control.
ESO	Emergency Switch Off	Emergency stop switch.
FCM	Fuse Central Module	Fuse panel.
FCU	Fork Control Unit	Unit for fork functions.
GFU	General Function Unit	Unit for general functions.
HPS	Height Pre-Select	Height pre-selection
ICH	Integrated Control Handle	
IPM	Intelligent Power Module	Power control unit
LID	Load Information Display	Display that provides the operator information such as lift height, load weight and height preselection.
LGU	Laser Guidance Unit	Laser guidance unit
LSU	Laser Scanner Unit	Laser scanner that detects objects.
MC	Main Contactor	Main contactor
MCU	Main Control Unit	Main control unit.
MLD	Multi Load Detection	Sensor for automatic detection of loads, etc.
PDA	Personal Digital Assistant	A compact, portable handheld computer.
PPS	Personal Protection System	Personal protection system.
PTC	Positive Temperature Coefficient	Electrical property that causes resistance to increase with temperature.
SAU	Secondary Automation Unit	Device used for automatic control in order to have enough I/O.

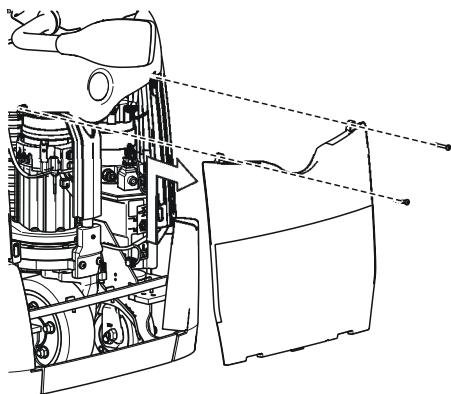
Abbreviation	Meaning	Explanation
SCU	Secondary Control Unit	Secondary control unit
SEU	Spider Expansion Unit	Expansion unit
SF	Shuttle Forks	Telescoping fork unit.
SR	Safety Relay	Relay to disconnect power to certain components in order to stop all movements.
SPLC	Safety PLC	Device used in automation applications for control with SR and UAC.
SSU	Shock Sensor Unit	Shock sensor that registers any collision.
TBD	To Be Defined	Means that the instruction/chapter will be added at a later date.
TCS	Truck Control System	The truck control system that communicates with units.
TH	Turret Head	Turret head fork unit
I-Site	Toyota Wireless Information System	Wireless communication.
TX	Triplex	Mast with three sections.
UAC	Unit for Automation Control	Device used for automated control of an operator-less truck. UAC will build an extra CAN and a power system for automation by itself
VNA	Very Narrow Aisle	Narrow aisles
VRE	Very narrow aisle Rider Electric	

## 8 Chassis C0000

### Frame, chassis C0300

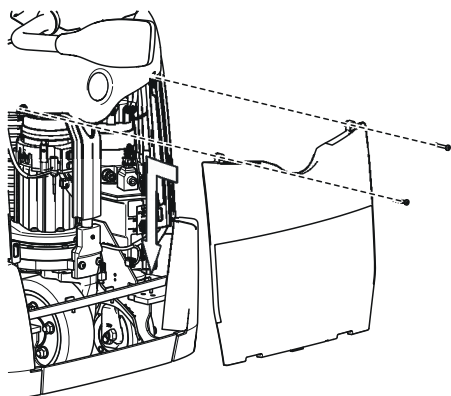
#### 8.2.2.1.2 Replacing a service cover

##### 8.2.2.1.2.1 Removing a service cover



1. Undo the screws.
2. Turn out the upper edge of the cover.
3. Carefully remove it from the rubber seal.

##### 8.2.2.1.2.2 Installing a service cover



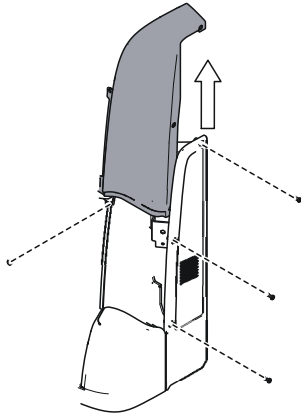
1. Fit the lower edge of the cover.
2. Turn in the cover.
3. Fit the screws

#### 8.2.2.1.3 Replacing a side cover

##### 8.2.2.1.3.1 Removing a side cover

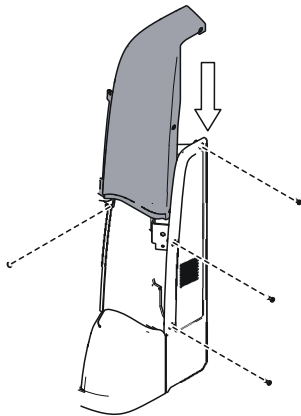
*Removing a service cover, page 8 - 4*





1. Undo the screws.
2. Remove the cover.

#### 8.2.2.1.3.2 Installing a side cover



1. Hook the side cover into the upper cover and install. Make sure the washers are seated in the rubber grommets.
2. Fit the screws.

#### Resetting

*Installing a service cover, page 8 - 4*

#### 8.2.2.1.4 Replacing an emblem cover

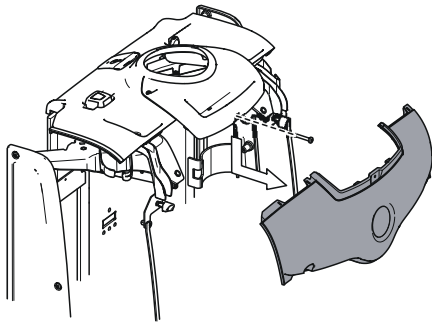
##### 8.2.2.1.4.1 Removing an emblem cover

*Removing a side cover, page 8 - 4*

## 8 Chassis C0000

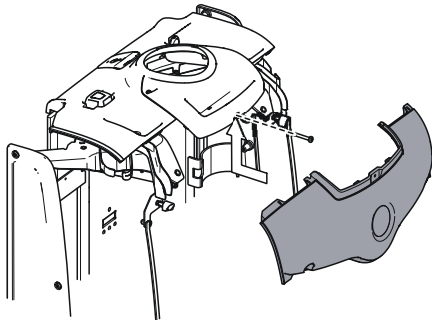
### Frame, chassis C0300

1. Pry loose the cover and move the cover downwards.



#### 8.2.2.1.4.2 Installing an emblem cover

1. Insert the pins in the holes and press the snap lock so that it engages. Fitting is easier if you take one side at a time.

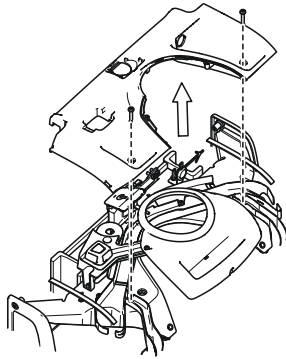


*Installing a side cover, page 8 - 5*

#### 8.2.2.1.5 Replacing an upper cover

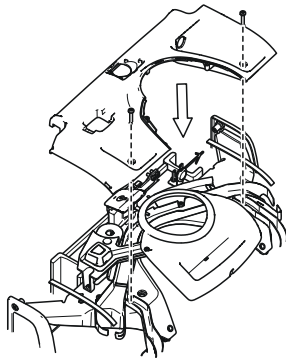
##### 8.2.2.1.5.1 Removing an upper cover

*Removing an emblem cover, page 8 - 5*



1. Undo the screws and remove the cover.

#### 8.2.2.1.5.2 Installing an upper cover



1. Position the cover and screw it in place.
2. Fit the cover to the CAN connector.

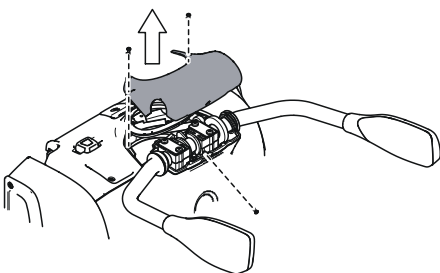
*Installing an emblem cover, page 8 - 6*

#### 8.2.2.1.6 Replacing a cover

##### 8.2.2.1.6.1 Removing a cover

Part number: 7530299

1. Remove the screws and remove the cover.





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