

## To 1. Design criteria for generator, battery, cables, fuses

ETMA taillift.org	Voltage system					
	12V			24V		
Capacity tail lift [kg]	electrical power [AMP]	battery capacity [Ah]	generator output [A]	electrical power [AMP]	battery capacity [Ah]	generator output [A]
≤ 750 kg	200	143	70	150	105 (2x)	70
≤ 1000 kg	250	143	70	200	105 (2x)	70
≤ 1500 kg	250	180	90	200	180 (2x)	90
> 1500 kg	250	180	110	250	180 (2x)	110
> 1500 kg power user	300	220	110	300	220 (2x)	110

Table 1: Minimum recommendation truck battery

## To 2. Electrical Preparation of tail lifts at trucks

### Preparation of control feed Code A:

The preparation of control feed contains:

- ON/OFF switch with control light
- Relay for Starter Control
- Relay to control the feedback control lights (RM)
- Feed back control lights
- Fuse to secure the Ignition feed
- Wire from driver's cabin to end of chassis, with an extension of 1000 mm, measured from end of right hand chassis beam
- 7 pin plug after DIN 72585 (see drawing 02139.000-3-E)

### Preparation of main feed code B/code C:

This preparation gives the truck manufacturer the great advantage that the complete wire laying on chassis is under his control. Other not qualified engagements are impossible. That means a faultless and frame independent ground cable back laying is secured.

The only work the body builder has to do on truck chassis is to install the specific PLV fuse. According to the assembly process he can fit the PLV after mounting the body. In combination with code A every other electrical connecting work for body builder is inapplicable.

PLVs have different motor outputs corresponding to their load capacities. These have an influence of wire cross-section and fuse. After a time of experience it is obvious that it is not economically to make a preparation for highest requirements. Caused by that code B preparation for heavy and code C preparation for light PLVs was chosen. Also the question if there is a 12 or 24 V power pack is crucial.

The preparation of a truck for the main feed in order to fit a tail lift contains:

#### Code B

- ground cable 25 mm<sup>2</sup>, connect battery with battery minus pole, tail lift with 1-poled ITT Cannon uppercircuit Plug blue.
- Plus (+) connection 25mm<sup>2</sup>, connect battery with shoe Ø 10 mm for connection of main fuse to the battery plus pole, on tail lift side with one-poled ITT Cannon uppercircuit Plug red.
- Both wires have at the end of right hand chassis beam end an extension of 1000 mm.

## To 4. SmartCharge

### Assembly



SmartCharge with fuse directly connected to the tractor's battery terminal.



Battery connection at the trailer similar to the tractor. Feedback signal is realized by a crimp connection.



Easy connection at the tail lift by the electrical interface. There is no further electrical installation at the frame or the driver's cabin.



Trucks with an electrical preparation following ETMA with a prefitted display light in the driver's cabin.

Electrical preparation following ETMA	
Truck manufacturer	Code A
Mercedes-Benz	EV3 (Sprinter) E33 (Atego/Axor) EH9 (Actros neu) EH9/POL (Atego 967)
MAN	320 EC
DAF	SELCO 2597
Scania	03775A
Volvo	PMR 10-3130
Iveco	75182
Volkswagen	5S4

Table 3: Electrical preparation following ETMA