CROWN



Service Manual

Wartungshandbuch
Manuel de maintenance

RT3020 Serie

MidWestTech | Crown RT3020 Ride-On Pallet Truck Service Manual | Publication 812543-...

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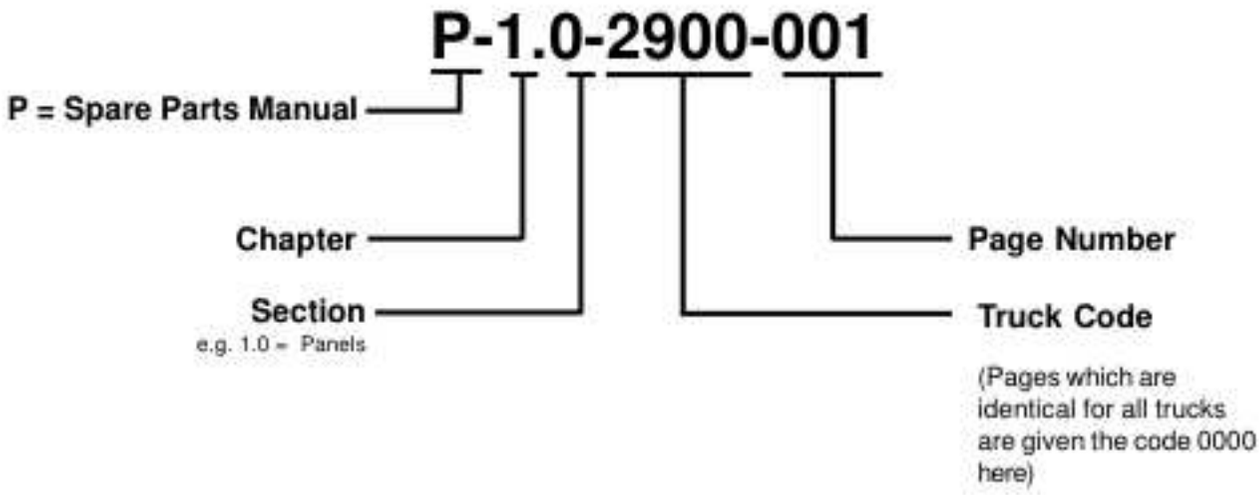
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A page beginning with P- is *only* contained in the spare parts manual:



Model-Number

RT3010

Modeldescription

Rider Pallet Truck with 2.000 kg capacity

RT3020

Modeldescription

Rider Pallet Truck with 2.200 kg capacity

RT3030

Modeldescription

Rider Pallet Truck with 3.300 kg capacity

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ES1 Traction Controller

DANGER

Jack up the truck before carrying out repair work or troubleshooting the electrical system.

General

The programmable ZAPI SEM Zero impulse controller provides effective control over the driving behaviour of the truck.

The truck is powered by a separate excited motor (SEM). This version has two variables for governing the motor output: field and armature current.

Precautionary Measures

- Do not attach the controller to a battery with a different rated voltage to that of the controller (24 - 36 VDC).
  A higher battery voltage may destroy the MOSFETs, while a lower power supply will result in system failure.
- Only operate the controller with special traction batteries. Do not connect to a rectifier or mains components.
- When commissioning jack up the truck to prevent it from starting suddenly if there is a wiring error.
- When the key switch has been turned off the filter capacitors in the controller remain charged for a few minutes. If work is performed on the controller during this time it must be disconnected from the battery (disconnect battery). Finally, to discharge the capacitors short-circuit the positive and negative terminals of the power part together over a resistance (10 - 100 Ohm, min. 5 W) for a few seconds.

Operational Features

Speed Control

Stepless, handset programmable speed control in both directions.

Reduced Speed Range

Two travel speed ranges can be chosen using the rabbit/ turtle toggle switch HES. Reduced speeds can be programmed between 30 % and 100 % of normal travel speed by using the handset.

Downhill Speed Control

When travelling downhill the controller monitors and compares the motor anchor current with the drive signal from the traction potentiometer. When the motor anchor current decreases, electrical braking with energy retention is introduced.

Regenerative Braking

Three forms of regenerative braking are available:

- Deceleration braking by setting the travel switch to an smaller value, but still > 0, without changing the drive direction.
- Inversion braking (quick inversion): travel switch set in opposite direction.
- Release braking: travel switch set to neutral.

Anti - Roll Down Function

This function prevents the truck from accidentally rolling down a slope. When the key switch is on the controller monitors anchor current of the traction motor. If the truck starts to roll down the slope without a travel comand, the controller detects the change in the achor current and braking is automatically activated. After this, the monitoring cycle starts over again.

Such, if the brake is not applied manually, the truck will therefore move down the slope very slowly.

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HYDRAULIC SCHEMATIC

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