

Service Manual

AC Power pallet with platform

Developed and Collected By:

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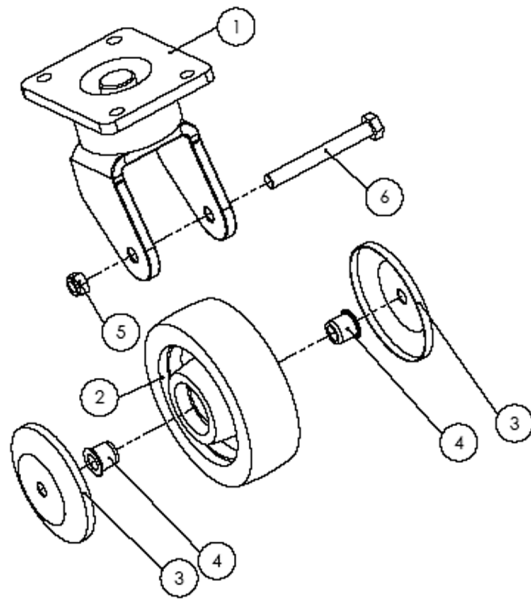


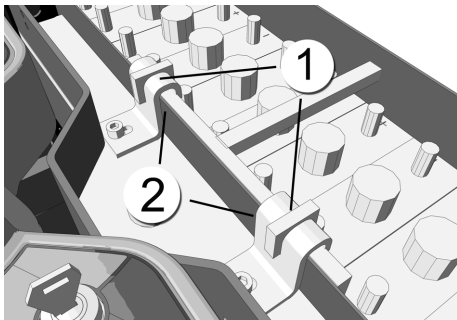
Figure: Castor wheel

Remove the main covers to gain better access to the wheels. Check all the wheels on a truck for damage and wear. The wheels should wear evenly, and there should be no flats or holes in the wear surface. The wheels should also turn smoothly on their axles and there should not be play in the bearings. Even wear can be tested by driving the truck on a smooth surface to test that all the wheels turn and the truck rides smoothly. If a wheel or a bearing has sustained damage that affects use or if its surface has worn completely, it should be replaced. Refer to *Chapter 6 Mechanical maintenance* for information on replacing and servicing wheels.

3.4.5. Checking that the batteries are securely fastened

The fastening of the batteries depends on how the truck is ordered. Open the battery cover to perform this check. There are two possibilities:

Fixed fastening



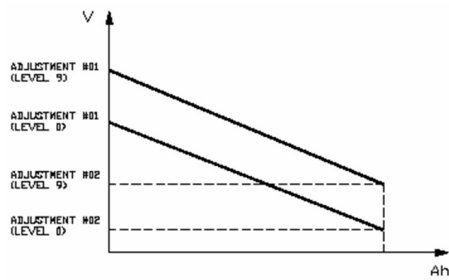


Figure: Battery discharge

LOAD HM FROM MDI

This parameter controls the hour meter reading by replacement of controller and the old MDI remains in the truck and you want to keep the amount of running hours (stored in MDI) in your new controller. Set this parameter temporarily “ON” within 1 minute after turning the key switch on. Before finishing the replacement go back and set this parameter “OFF” after checking the parameters according to available table.

CHECK UP DONE

This parameter controls and can be used (i.e. set to ON) temporarily to reset the service interval alarm (see CHECK UP TYPE below). This parameter must be set to OFF after resetting.

CHECK UP TYPE

This parameter controls and determines how the truck alerts of required maintenance based on the duration of use. The following options are available:

- 0: No programmed maintenance alarm.
- 1: Alarm after 300 hours of use (CHECK UP NEEDED)
- 2: Alarm after 300 hours of use and speed reduction after 340 hours of use.
- 3: Alarm after 300 hours of use, speed reduction after 340 hours of use and traction blocked after 380 hours of use.

4.3.3. Traction Controller (AC1) Alarm List

- 8: WATCH DOG
- 13: EEPROM KO
- 16: AUX OUTPUT KO

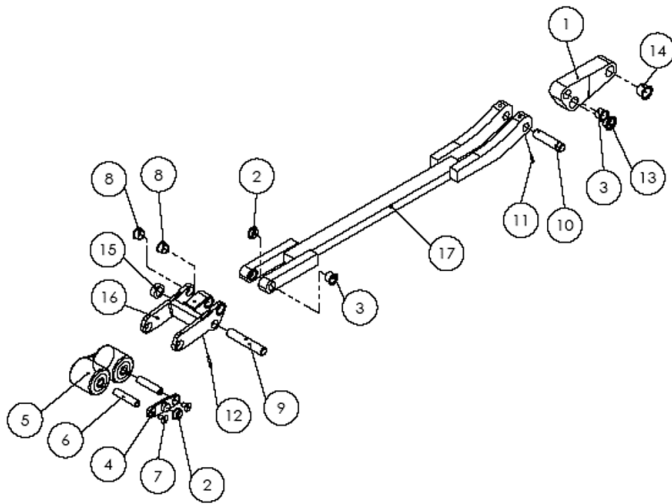


Figure: Double load wheels only (tandem) 2,500 kg model

1. Lift the truck using a jack. Place supporting brackets under the truck.
2. Remove the axle bolt using an 8 mm Allen key on both ends of the bolt.
3. Replace the load wheel and reattach the axle bolt.

6.1.3. Replacing the castor wheels

The side-supporting castor wheels are located under the main chassis on either side of the drive wheel. The side supporting castor wheels support the truck and prevent it from tilting on possibly uneven floors, where the traction unit of the truck might suspend up and down. The castor wheels turn automatically to follow the direction of travel.

To replace the castor wheels:

1. Lift the truck using a jack. Place supporting brackets under the truck.
2. Remove the axle bolt using a 17/19 mm wrench on both ends of the bolt.
3. Replace the castor wheel and reattach the axle bolt.

Lowering

1. The solenoid valve (8) is opened with the lowering switch.
2. Hydraulic fluid flows through a 300 μ sieve (7) back to the fluid tank.
3. As the hydraulic pressure reduces, the lifting cylinder piston retracts and the forks are lowered.

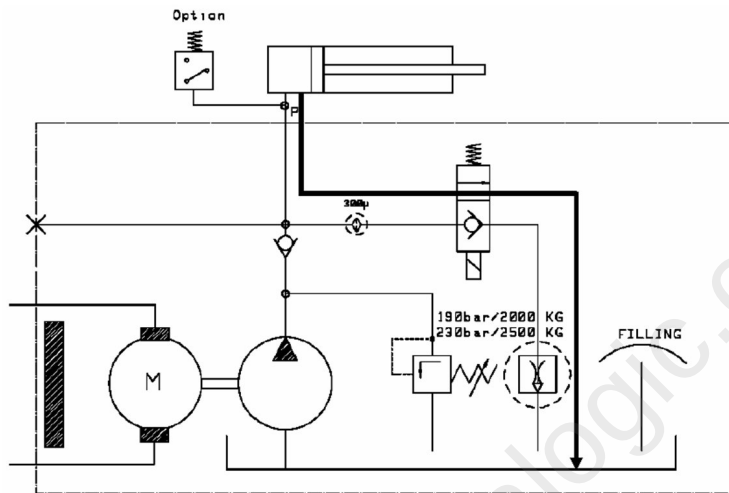


Figure: Hydraulic fluid flow during lowering

Various truck models can have different configurations of the hydraulic system.

5.2. Hydraulic maintenance and repairs

The following sections illustrate various hydraulic maintenance procedures not covered in *Chapter 3 Regular maintenance*.

5.2.1. Replacing gaskets

NOTE When the gasket of the hydraulic cylinder needs to be replaced, the wiper and guide strips are also replaced.

To replace gaskets:

1. Pull out the piston rod from the cylinder.
2. Remove the wiper from the cylinder using suitable pliers.
3. Pull the old gasket carefully out of the cylinder.



NOTE If you enter a wrong code 3 times, the keypad will be locked for 30 seconds.

After use, switch off the power by pressing **Shutdown** (3). When the Driver Present mode is activated, the power can also be switched off automatically after a certain time if there is no driver input. This is a precaution to prevent unauthorised use.

The PIN code entry device has two indicator lights. When you switch on the power from the main switch, the red light (2) will briefly illuminate. In normal operation they signal the following:

- Green: truck activated
- Red on for 3 seconds: wrong code
- Red flashing slowly: wrong code entered 3 times

2.5.4. Driving

- Turn the accelerator lightly in the driving direction.
- To brake, turn the accelerator in the opposite direction to the driving direction.
- Steer the truck smoothly because abrupt movements may cause a dangerous situation, especially when driving at high speed.

2.5.5. General driving instructions

Practice steering and controlling the truck carefully in a safe area.

- Drive slowly at intersections and when turning.
- Handle the truck responsibly and always keep it under control.

Full Version Available

Caterpillar NPV20N Pallet Truck Service, Operator and Schematic Manual (WHSM0003)

Caterpillar NPV20N Pallet Truck service manual, covers hydraulics, drive unit, wiring, and schematics. Searchable PDF download.

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