

Service Manual

AC Stacker

22.07.2005

Revision Level: 3

If any problems are encountered during this test, take the truck out of use until it is fully operational.

3.4.12. Testing the parking brake

The trucks are equipped with an automatic parking brake. The brake should be active when the main power is off and also when the main power is on unless the accelerator is moved to issue a driving command. Test the parking brake by trying to move the truck. When the brake is active, the truck should not move forward or backward. The parking brake only affects the drive wheel so that the other wheels are still free to turn. The tiller arm can also be freely moved from side to side while the parking brake is active.

3.4.13. Testing the lifting hydraulics and controls

Test the operation of the lifting hydraulics by lifting and lowering the forks. Refer to *Chapter 2 Operating the truck* for information on the truck's controls. The forks should rise smoothly from the lowest position to the highest position. The forks should stop smoothly when reaching the upper position. If the forks hit the upper position at full speed, there may be a problem in the system. Refer to *Chapter 6 Mechanical maintenance* for information on mechanical maintenance.

3.5. Weekly maintenance

Like daily maintenance, weekly maintenance is important for keeping the truck in full working order. Weekly maintenance should be scheduled for a certain day of the week, so that the maintenance interval does not fluctuate. When weekly maintenance is due, complete all of the daily maintenance procedures first before continuing with the weekly maintenance procedures.

Before beginning, ensure that the main power of the truck is turned off. Open the main and top covers of the truck before commencing with the weekly maintenance procedures. Refer to *Section 3.2 Maintenance guidelines* for information on how to open the truck's covers.

Should the weekly maintenance procedures reveal anything that affects the use or safety of the truck, the truck must immediately be taken out of use until it is restored to full working order.

4.3.2.21. Parameter 81: Lift cut-off

This parameter controls the lift cut-off function. When it is active, that is, set to 1, lifting is disabled when the low battery warning is triggered. The low battery warning level is set with parameter 175.

4.3.2.22. Parameter 98: Stop mode tiller

This parameter controls how the controller decelerates when the tiller arm is removed from the driving position. There are three choices, indicated by the number 1, 2 or 3. The default and recommended value is 2. Its advantage is that it reduces the wear of the electrical brake. The alternatives are:

1. The motor's power feed is cut and the brake is applied at the same time.
2. The motor's deceleration ramp is applied and the brake is engaged after the truck has come to a standstill.
3. The motor's deceleration ramp is applied and the brake engaged at the same time.

4.3.2.23. Parameter 107: Warn. temp. contr.

This parameter sets the temperature level for the controller's high temperature warning. The value is entered in degrees Celsius (°C) and can be between 50 and 79. The default value is 70, which should not be changed.

4.3.2.24. Parameter 133: Acceleration

This parameter controls the rate at which the truck accelerates when the accelerator is moved to request traction. Acceleration is given in km/h/s with an accuracy of two decimals and in the range from 0.50 to 6.00. The default value is 1.60.

4.3.2.25. Parameter 134: Deceleration

This parameter controls the rate at which the truck decelerates when the accelerator is released to request stopping. Deceleration is given in km/h/s with an accuracy of two decimals and in the range from 0.50 to 6.00. The default value is 2.50.

2. Raise the forks and lift the truck slightly with a jack.
3. Remove the locking pin from the axle.
4. Remove the load wheel axle.
5. Replace the load wheel and reattach the axle and the locking pin.

To replace double load wheels:

1. Lift the truck using a jack. Place supporting brackets under the truck.
2. Remove the axle bolt using a 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 wheel

The supporting castor wheel is located under the main chassis opposite to the drive wheel. The castor wheel balances the truck and turns automatically to follow the direction of travel.

To replace the castor wheel:

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

6.2. Replacing the tiller arm gas spring

This section gives instructions on how to replace the gas spring of the tiller arm. The purpose of the gas spring is to return the tiller arm automatically to the upright resting position. It is a safety device, which must always be fully operational.

To replace the gas spring:

1. Remove the cover from the base of the tiller arm.

5.1.2.5. Initial lowering

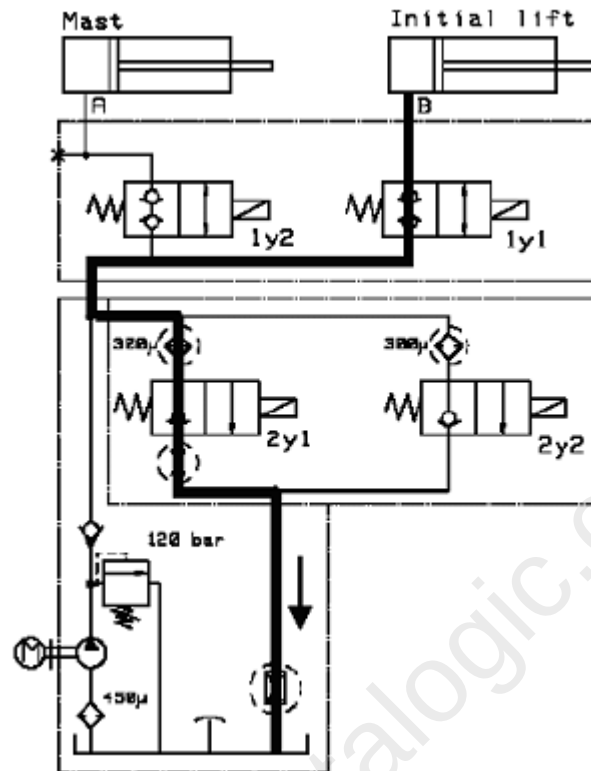


Figure 5.26. Hydraulic fluid flow during initial lowering

1. The operator activates the tiller switch for initial lowering. First the pressurised hydraulic fluid flows from the initial cylinder through the locking valve (1Y1) and then through the strainer.
2. The fluid flows through the first magnetic valve (2Y1).
3. The fluid flows through the flow restrictor back to the tank.

Full Version Available

Caterpillar NSP12KI Stacker Service, Operator and Schematic Manual (WHSM0005)

Caterpillar NSP12KI Stacker service manual, covers lift hydraulics, drive unit, wiring, diagnostics, and schematics. Downloadable PDF format.

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