CAT Lift Trucks

Operation & Maintenance Manual

FC/LC

DP100NM1	T15E-20011-39999
DP100NM1S	T15E-20011-39999
DP120NM1	T15E-20011-39999
DP120NM1S	T15E-20011-39999
DP135NM1	T15E-20011-39999
DP135NM1S	T15E-20011-39999
DP150NM1	T24C-20011-39999
DP150NM1S	T24C-20011-39999

Original Instructions

Keep this manual in your lift truck as a ready reference

99790-47120

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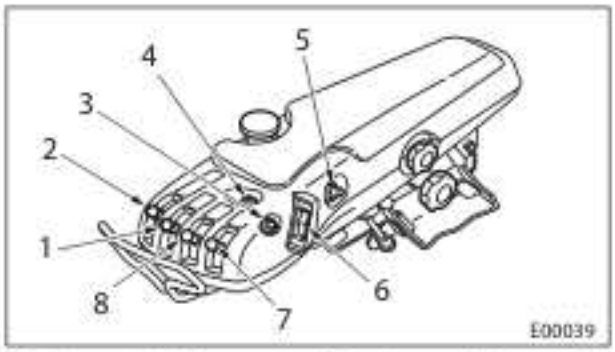
◆ Operating Switches and Controls

▶ FC Control Box (Type-A)

The Mast Interlock System is one of the functions of the Presence Detection System installed on this lift truck. The lift truck senses when the operator is not properly seated in the operator seat and will prevent the mast from operating until the operator is properly seated. In the following cases, the mast interlock system disconnects power to the hydraulic control valve and the mast and attachment will not move even if the operating control switches are operated:

(1) The operator leaves the operator seat for approximately 3 seconds with the key switch in the ON position regardless of whether the engine is running or not.

(2) When the engine is running but the emergency mast stop button is in the STOP (lock) position (being pushed down).



1. Attachment switch A
2. Attachment switch B
3. Mast vertical switch
4. Selector switch between fourth and fifth attachment
5. Lowering speed selector switch
6. Direction switch
7. Lift switch
8. Tilt switch

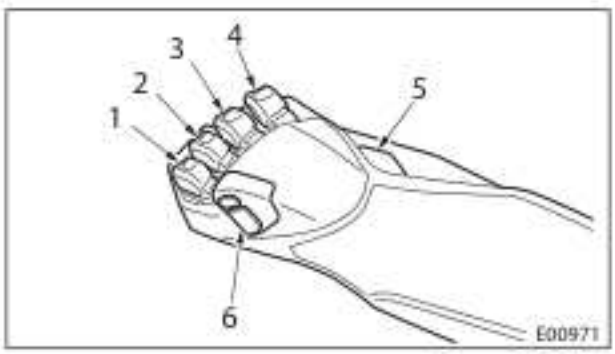
Note: The mast interlock will work for the lift, tilt, and attachment switches. If the engine is not running or the key switch is in the OFF position, the lift, tilt, and attachment switches will not move regardless of whether the operator presence switch position is ON or OFF.

▶ FC Control Box (Type-B)

Equipped with mast interlock system

The mast interlock will work for the lift, tilt, and attachment switches.

If the operator leaves the operator seat for 3 seconds while the key switch is in the ON position, regardless of whether the engine is running or not, the mast and attachment will not lift, lower, or tilt when the lift, tilt, or attachment switch is operated. This is not a failure, but the mast interlock system is being activated.



1. Lift switch
2. Tilt switch
3. Attachment switch A
4. Attachment switch B
5. Adjuster button
6. FNR switch

▶ Lift Switch

Lifting speed is controlled by the engine speed (depressed amount of the accelerator pedal) and the position of the lift switch. Lowering speed is controlled only by the position of the lift switch regardless of the engine speed. The switch will return to the NEUTRAL position when released.

To deactivate the mast interlock system, the operator sits on the operator seat while the key switch is in the ON position with the engine running, and then operate the lift switch.

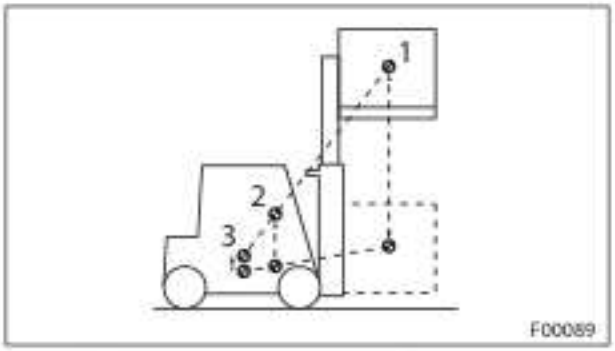
▶ Tilt Switch

Tilt speed is controlled by the engine speed (depressed amount of the accelerator pedal) and the position of the tilt switch. The switch will return to the NEUTRAL position when released.

To deactivate the mast interlock system, the operator sits on the operator seat while the key switch is in the ON position with the engine running, and then operate the tilt switch.

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These factors must be considered when the lift truck is unloaded as well. Because an empty lift truck will tipover more easily than a lift truck carrying a load in the lowered position.



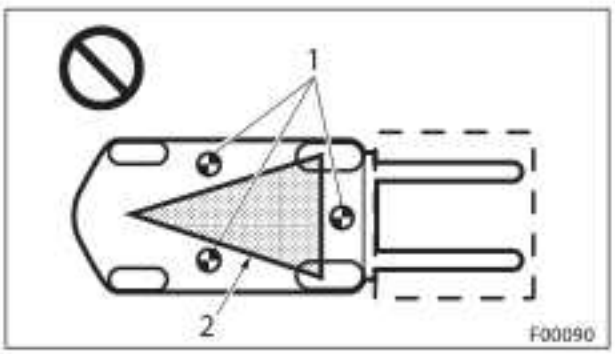
1. CG Load
2. Combined CG
3. CG truck

◆Lift Truck Stability Base

In order for the lift truck to be stable (not tip over FORWARD or to the side), the CG must stay within the area of the lift truck stability base triangle drawn between the front wheels and the pivot of the rear axle.

If the CG moves forward of the front axle, the lift truck will tip over FORWARD.

If the CG moves outside of the line on either side of the stability base, the lift truck will tipover to the side.

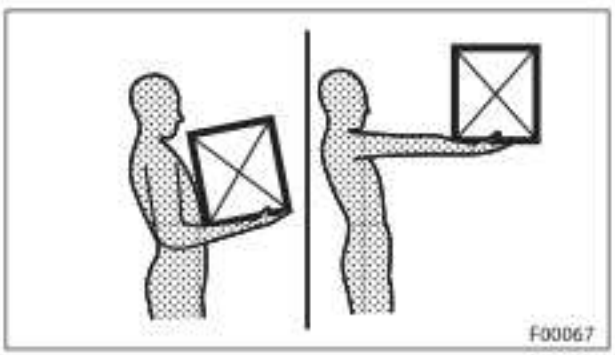


1. Combined CG
2. Stability base

◆ Capacity (Weight and Load Center)

The capacity of the lift truck is shown on the capacity plate. It is determined by the weight and load center. The load center is determined by the location of the CG of the load.

The load center shown on the capacity plate is the horizontal distance from the front face of the forks, or the load face of an attachment, to the CG in the load. The location of the CG of the vertical direction is the same as the horizontal dimension.

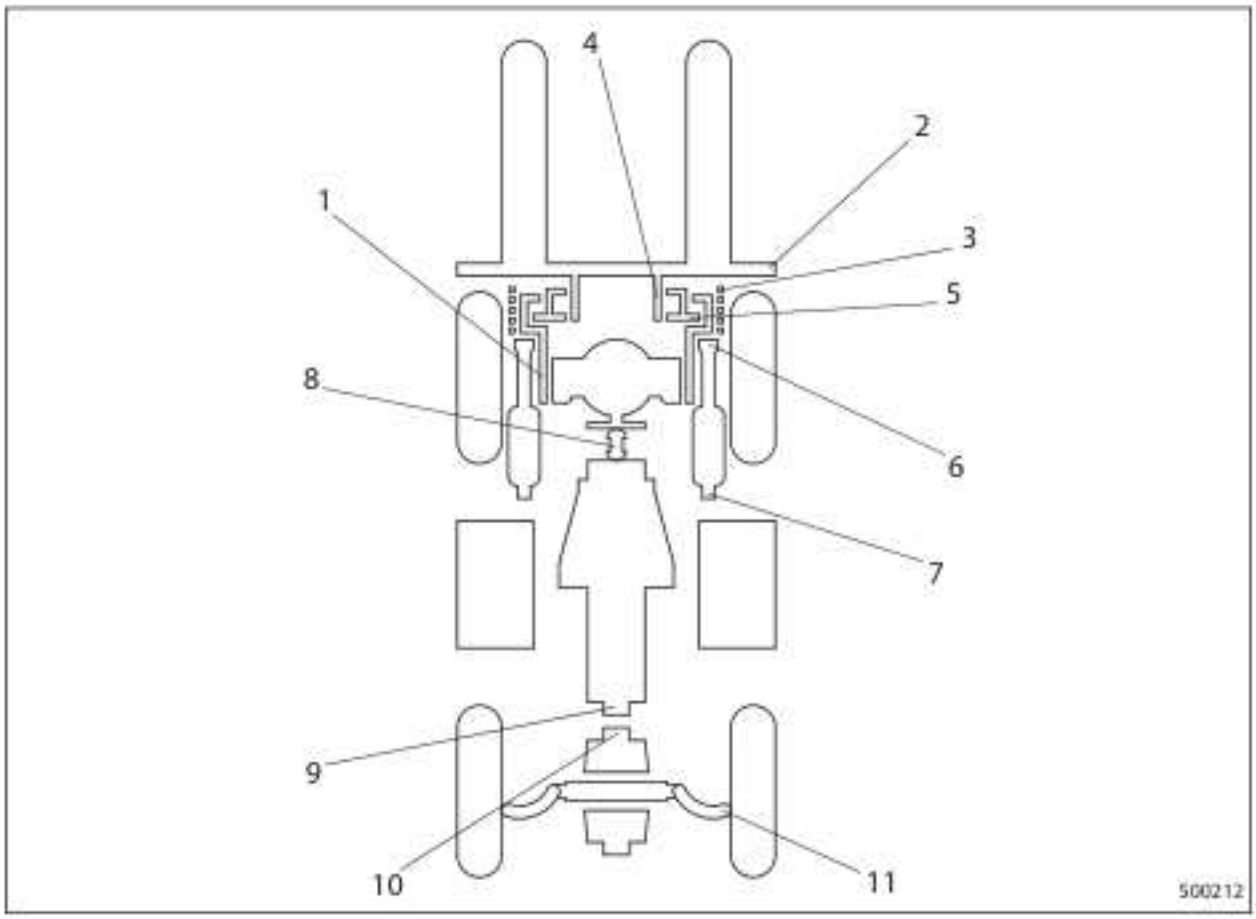


Keep in mind that, unless otherwise indicated, the capacity shown on the capacity plate is for a standard lift truck with standard load backrest extension, forks, mast, and having no special-purpose attachment. In addition, the capacity presumes the load center is no further from the top of the forks than it is from the face of the load backrest extension.

If these conditions do not exist, the operator may have to reduce the safe operating load because the lift truck stability may be reduced. The lift truck should not be operated if its capacity plate does not indicate capacity.

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◆Lubrication Chart



Ref.	Lubricating point	Lubricant/grease	Period
1	Mast support bushings (Each side)	Multipurpose-type grease	Every 500 service hours or 3 months, whichever comes first
2	Fork guide bar		
3	Lift chain (Each side)	Engine oil	
4	Mast and lift bracket side rollers (Each side)	Multipurpose-type grease	
5	Mast strips surfaces (Each side)		
6	Tilt socket pins (Each side)		
7	Tilt cylinder pins (Each side)		
8	Universal joint (2 places)		
9	Fan belt pulleys (3 fittings)		
10	Rear axle supports (Front and Rear)		
11	Tie rod pins (4 places)		

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