

A Word to NISSAN FORKLIFT Operators

This booklet describes operating procedures, daily cares and simple maintenance for safe usage of your NISSAN FORKLIFT. We urge you to read this booklet carefully before operating the lift truck to familiarize yourself with safety instructions. These instructions will not only reduce mechanical troubles of your lift truck, but may also save your life.

If you encounter any problems with your NISSAN FORKLIFT truck, contact the authorized NISSAN FORKLIFT dealer in your area and request a complete check-up. The dealership will insure that your Lift Truck is serviced in accordance with the latest factory approved methods.

All information, specifications and illustrations in this manual are on a basis of the latest data obtainable at the time of the publication. Nissan reserves the right to make changes or improvements at any time without notice.

Throughout this manual we have used the symbol  followed by the word **WARNING**. This is used to indicate the presence of a hazard which may cause the possibility of a personal injury or other damage and must be followed precisely.

CAUTION. This is also used throughout the manual to indicate the presence of a hazard that could cause possible minor injury to yourself or components and the procedures must be followed carefully.

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TOKYO, JAPAN

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This Operator's Manual has been prepared on the assumption that your truck is fully equipped (including all optional equipment). Thus if you have any questions regarding equipment, please contact your authorized NISSAN FORKLIFT dealer.

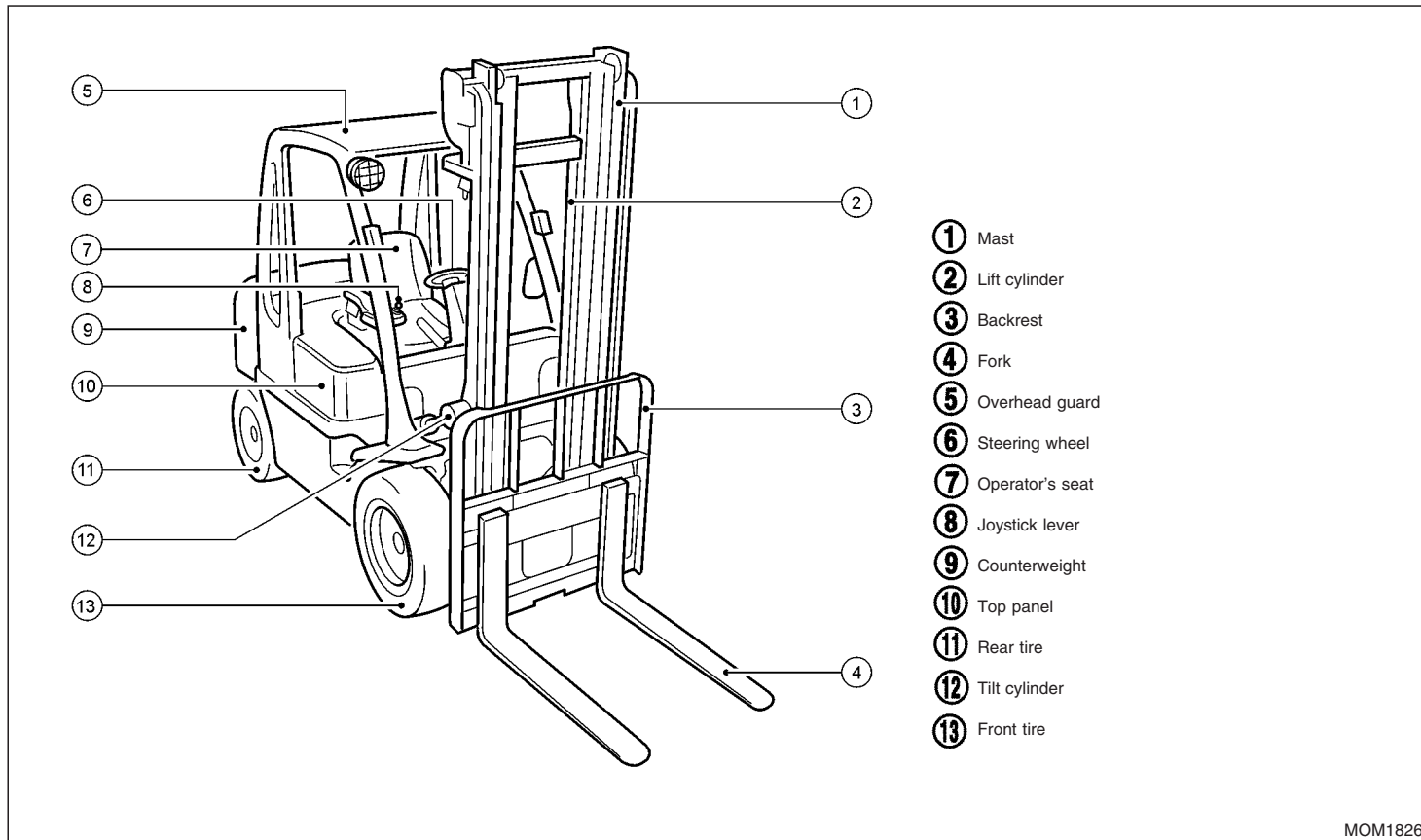
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NAME OF COMPONENTS



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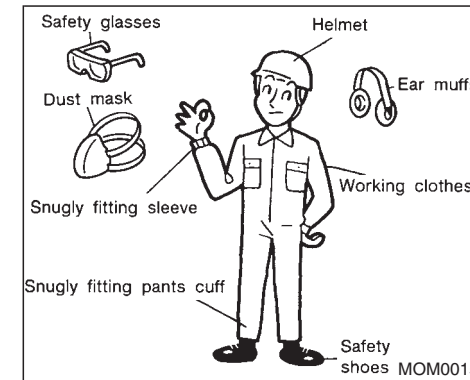
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SAFETY RULES

-  The forklift shall be operated in accordance with the conditions of the operator's license, and the applicable provisions of the laws and regulations of your country.
-  Operator must be trained and authorized to drive the lift truck, and must understand safety technics and rules for lift truck operation.
-  Before installing hook-on attachments, be sure to read the installation manual issued by the attachment manufacturer to assure correct and proper installation. Contact your NISSAN FORKLIFT dealer for the revised load capacity figures.
-  When warning and caution labels are damaged so they cannot be read or have peeled off, they should be immediately replaced with new labels to ensure that they are constantly maintained in a legible condition. The warning and caution labels are available at your nearest NISSAN FORKLIFT dealer.
-  Inspect the lift truck before operating. Do not operate lift truck if it is

in need of repair. If it is in need of repair, tag the lift truck, remove the key, and report the condition to the proper authority. Do not attempt repair unless you are trained and authorized for repairing.



-  The working clothes worn by the operator shall be such that sleeves and cuffs fit snugly so as to prevent them from getting caught on forklift levers, etc., and safety glasses, ear muffs, dust mask and safety shoes should also be worn.
-  Do not remove overhead guard or backrest unless specifically authorized.
-  Make sure that forward-reverse lever is set in neutral and hand brake is applied before starting the engine. Do not start or operate the lift truck if you are not in designated

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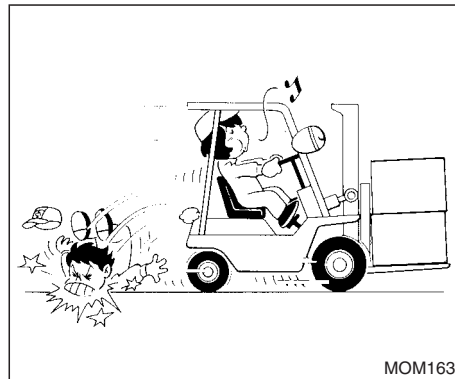
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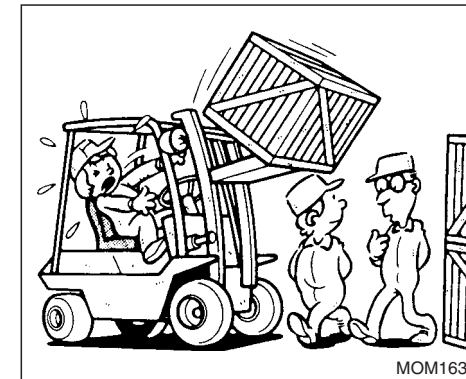
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operator's position.

-  Before starting the engine, make sure that the seat belt is secure.
-  D01/D02 models do not have creeping phenomena.
-  Do not allow anyone on any part of the lift truck while moving or lifting.
-  The truck will not move if the select lever is in the F (forward) or R (reverse) position unless you depress the accelerator pedal. When depressing the accelerator pedal, be sure to visually confirm the position of the forward-reverse lever. When starting on slopes, be sure to apply the parking brake to hold the truck and then start, even if the slopes are gentle. Avoid rapid acceleration (especially during high loading).



-  Do not allow anyone to stand or ride on the forks, pallet, etc.



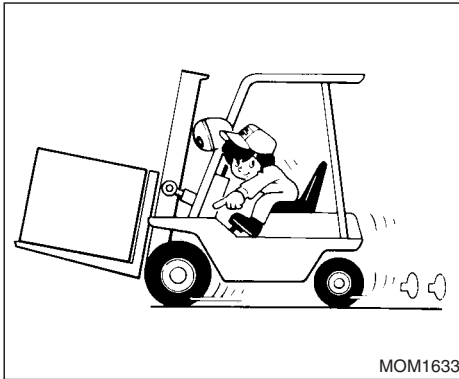
-  Do not allow anyone to stand or walk under the elevated portion of the forks whether it is empty or loaded.
-  Keep hands, feet and other parts of your body inside the operator's compartment all the times.
-  Never put any part of your body into the mast structure or between the mast and the truck.

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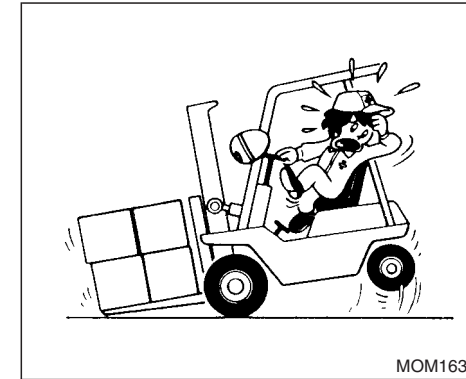
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- ⚠ Space forks as far apart as the load will permit.
- ⚠ Always carry loads low with the mast tilted to the backmost position, never forward. Do not elevate loads except during stacking.
- ⚠ Maintain a careful lookout for people and obstructions, and watch the path of travel. Watch clearances, especially overhead and tail swing. When visibility is obstructed, use extreme caution. Yield right of way to pedestrians.
- ⚠ If the load obstructs the front view, drive the lift truck in reverse.



- ⚠ Do not place load higher than the backrest of the lift truck. A load placed higher than the backrest may drop towards the operator and is very dangerous. If such a load must be handled, securely fasten the load using suitable ropes or holddown bands.



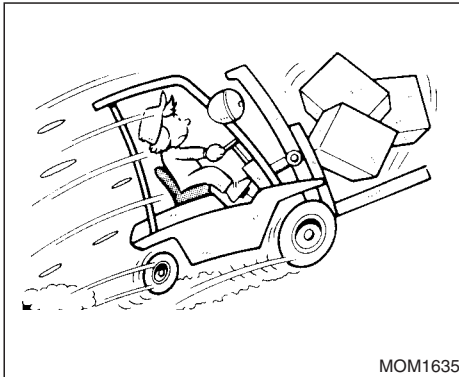
- ⚠ Do not overload lift truck. Check the load chart for load weight and load center information. Always pick up loads as close to weight center as possible to avoid off-center loading.

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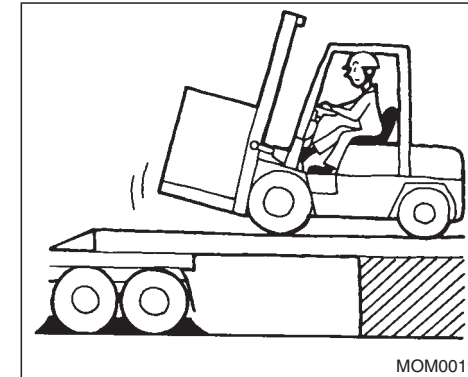
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-  **Avoid sudden starts, stops or turns. Slow down for turns and on uneven or slippery surfaces that could cause lift truck to overturn or slide.**
-  **Use special care when traveling without load as risk of lateral overturn may be greater than when traveling with load.**
-  **When moving the forklift in elevators, check to make sure the elevator is capable of withstanding the truck weight or the truck weight plus load weight. Be sure to apply stoppers under**

the tires so as prevent the forklift from moving while it is parked in the elevator.
Do not carry out work in the elevator.



-  **Precautions relating to driving onto freight cars and trailers**
Check freight cars and trailers to make sure they will not move. The ramp for driving the forklift onto a freight car or trailer shall have sufficient strength to withstand the weight of forklift and its load, and the forces exerted by the bouncing of the truck. The ramp shall be anchored so that it is prevented from shifting. Use the utmost care when driving on and off a freight car or trailer.
-  **Before entering trucks or trailers, be certain the brakes on the truck**

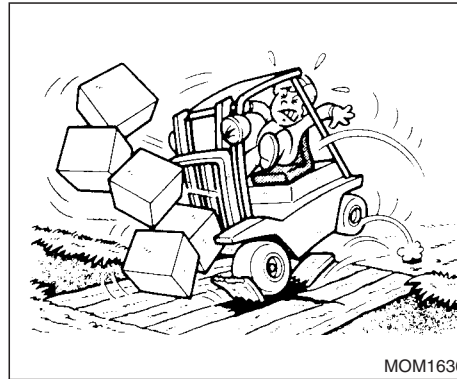
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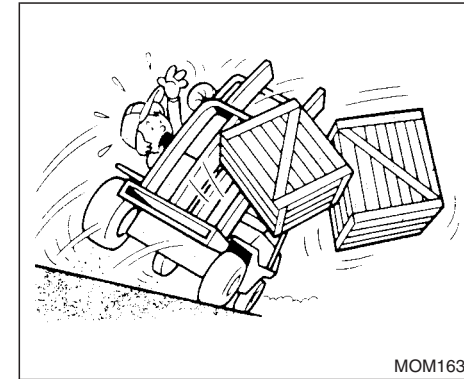
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or trailer are applied and the wheel chocks are in place or trailer is locked to the loading dock.



Before driving over a dockboard or bridge plate, be certain that it is properly secured. Drive carefully and slowly across the dockboard or bridge.
Never exceed its rated capacity.



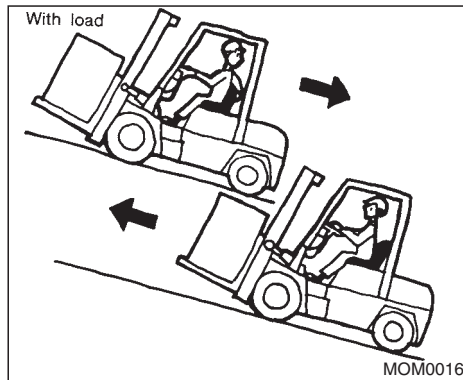
Use special care when operating on slopes. Travel slowly and do not angle across or turn.

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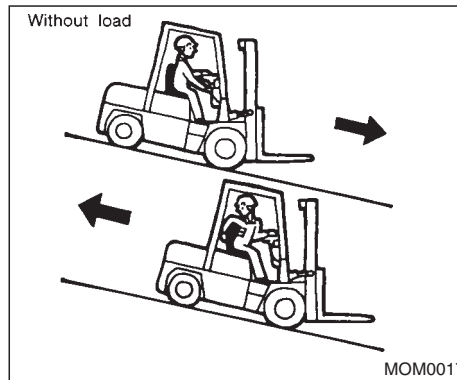
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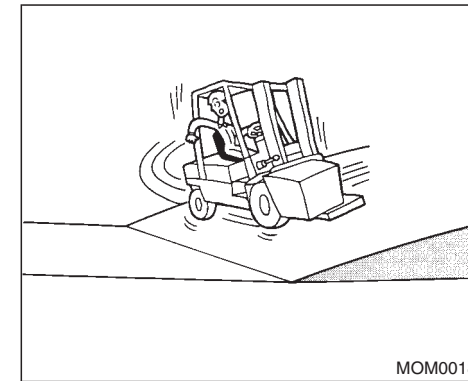
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! Use care when traveling on gradients. When traveling on gradients with a load, always drive forward on upward slopes and in reverse on downward slopes. Drive slowly on slopes. Drive in the reverse direction on upward slopes when without a load, and drive forward on downward slopes.



! Use the brake pedal and engine brake together when driving downhill so as to maximize the effectiveness of the engine brake.



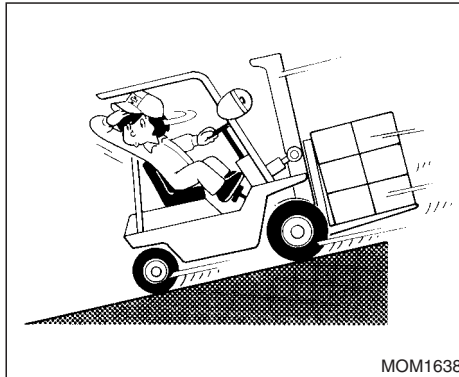
! Do not traverse and turn around on slopes. Since driving on slopes causes the center of gravity to shift towards the lowest point, the forklift is likely to lose its balance.

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-  When ascending or descending slopes, drive the lift truck with the load facing upgrade.
-  Do not handle unstable or loosely stacked loads. When handling long, high or wide loads, use special care to ensure stability and carefully watch the surrounding conditions.
-  When approaching cross aisles, slow down, and sound horn if visibility is obstructed.
-  Before leaving the lift truck, be sure that forks or attachments are low-

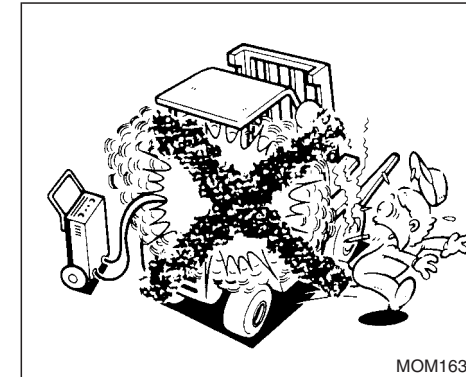
ered, forward-reverse lever is in neutral, hand brake is applied and key switch is turned off. Avoid parking lift truck on a slope.



Fuel is highly flammable. It must be handled with the utmost care, in accordance with the safe handling requirements of fuels and the applicable safety provisions of laws and regulations of your country.

When filling the tank with fuel, make sure the truck is properly parked. Turn off the key switch and remove it.

When fuel is spilled, wipe the area clean with a cloth. The cloth shall be disposed of in accordance with the requirements of safe handling of fuels, environmental requirements, and the applicable provisions of the laws and regulations of your country.



-  When filling the tank with fuel or recharging the battery, stop the engine and place the lift truck only in designated area with good ventilation. Keep away from arcs, sparks, flames or lit cigarettes.
-  Do not breathe exhaust gases: they contain colorless and odorless carbon monoxide. Carbon monoxide is a dangerous gas and can cause unconsciousness or death.
-  Do not run the engine in closed spaces or poorly ventilated rooms such as a garage or refrigerator, etc.

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 WARNING	 Lateral tip-over can occur if truck is improperly operated. Don't risk injury or death. Slow down before turning!	 Buckle up belt Stay in seat
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 DANGER	 IN CASE OF TIP-OVER Follow these instructions:	 Lean away	 Hold on steering wheel	 Brace feet	 Don't jump!
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MOM0137C

 **IN CASE OF TIP-OVER**

 Be extremely careful to prevent the lift truck from tipping over during operation. Slow down the lift truck sufficiently when turning a corner or tight curve. The following precautions should be closely observed to ensure safe

operation of the lift truck as well as to protect personnel against injury.

 If the forklift is equipped with a seat belt, always make sure that your seat belt is securely fastened and the top panel latch is in the locked position.

 If the lift truck begins to tip, **DO NOT ATTEMPT TO JUMP CLEAR.** The lift truck will fall faster than you can jump. Brace your feet and hold yourself inside the operator compartment by holding onto the steering wheel with both hands.

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Tilt the mast back to the maximum without load.

Check the approach angle, departure angle, and ramp breakover angle to make sure the underside of the forklift will not contact the load carrying platform or the ground.

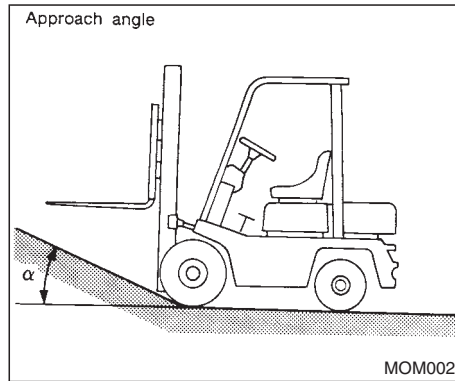
When using a gangway, make sure the planks are capable of supporting the truck weight. Drive forklift on and off the carrier slowly.

When winching the forklift onto a load carrying platform, be sure to attach the cable to the traction pin. Do not ride on the forklift while it is being winched.

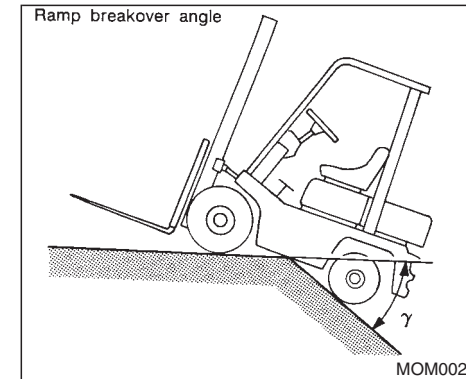
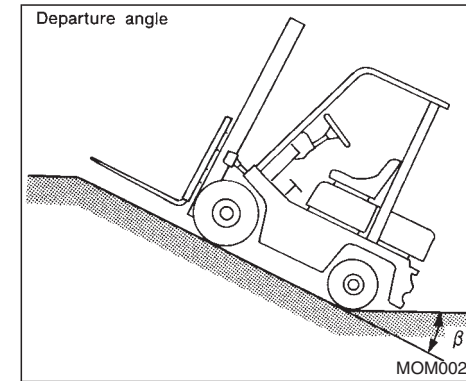
Be sure to use lashing points and firmly secure the truck to the load carrying platform.

When hoisting the forklift, be sure to use the lifting points.

Turn off the key switch and remove it.



APPROACH ANGLE, DEPARTURE ANGLE AND GANGWAY

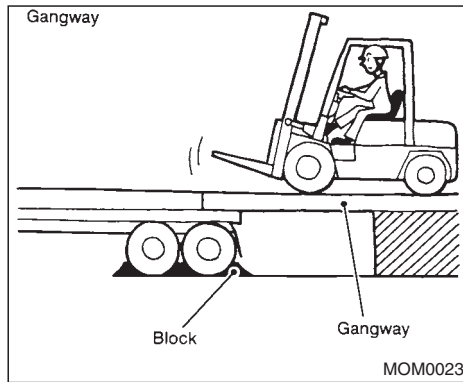


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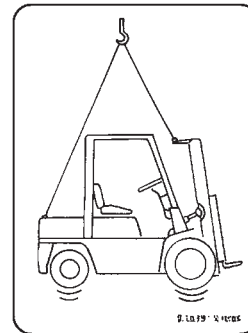
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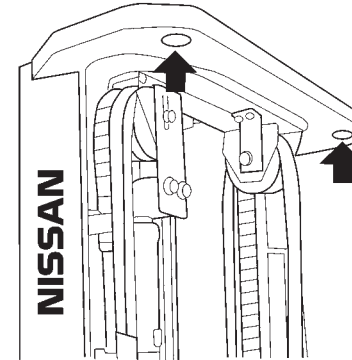
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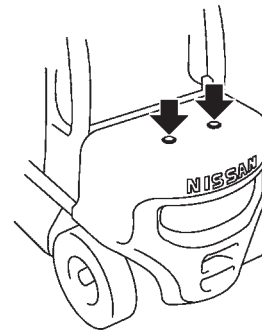
LIFTING POINTS



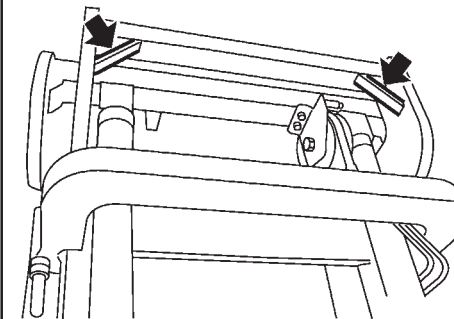
Mast side (2F/3F MAST)



Truck body side



Mast side (2W MAST)



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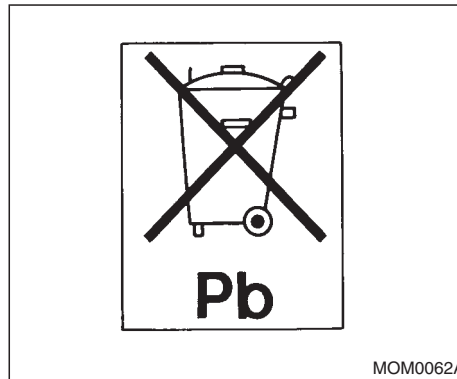
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 Carry out the daily checks as per "Daily care" on page 46, and the applicable provisions of laws and regulations of your country.

 When replacing NISSAN FORKLIFT truck parts (including lubricants), be sure to use NISSAN FORKLIFT genuine parts or the equivalents guaranteed by Nissan Motor Co., Ltd.
Any irregularities arising from the use of parts other than those specified above shall not be covered under warranty.



 Used parts and materials such as engine oil, long-life coolant, paint, rag, battery fluid, and batteries shall be disposed of as per the applicable provisions of the laws and regulations of your country. Also consult with your nearest NISSAN FORKLIFT dealer.

POSITIONING OF WARNING, CAUTION AND INSTRUCTION LABELS

WARNING AND CAUTION LABELS

 **WARNING:**

When warning and caution labels are damaged so they cannot be read or have peeled off, they should be immediately replaced with new labels to ensure that they are constantly maintained in a legible condition. The warning and caution labels are available at your nearest NISSAN FORKLIFT dealer.

- The warning and caution labels are affixed to the designated locations of the forklift as shown in the figure below. Before operating the truck, be sure to make note of the details given in the labels so as to ensure proper and safe operation.

①

 WARNING ACHTUNG ATTENTION ADVERTENCIA 	•Before commencing lifting operations, apply the handbrake and put the forward/reverse lever into neutral. •Bei Betätigung der Hydraulic ist der Vorwärts-/Rückwärtshebel in die Neutralstellung zu bringen und die Handbremse fest anzuziehen. •Pendant les opérations de chargement et de déchargement, placer le sélecteur de sens de marche au point neutre, serrer le frein à main. •Carga: Coloque la palanca de marchas en la posición neutral y aplique el freno de mano.
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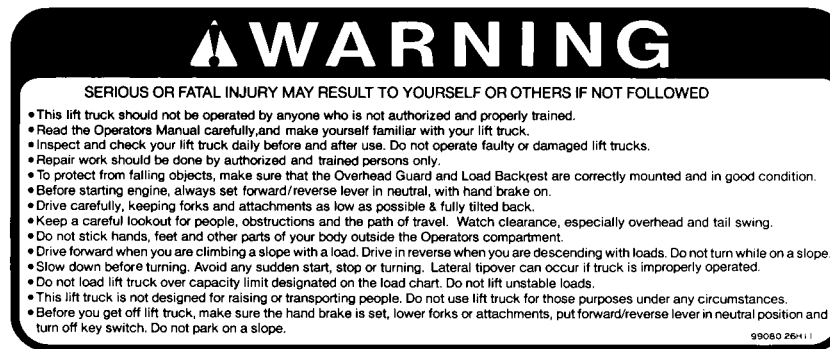
MOM1562A



WARNING:

- This truck has no creeping phenomena.
- The truck will not move if the forward-reverse lever is in the F or R position unless you depress the accelerator pedal. When depressing the accelerator pedal, be sure to visually confirm the position of the forward-reverse lever.
- When starting on slopes, be sure to apply the parking brake to hold the truck and then start, even if the slopes are gentle.
- Avoid rapid acceleration (especially during high loading).

②



MOM1809



WARNING:

Operation precautions

- This label contains instructions on how to operate the forklift safely and avoid accidents. Therefore, be sure to take careful note of the instructions before operating the forklift.

③

 WARNING	 Lateral tip-over can occur if truck is improperly operated. Don't risk injury or death. Slow down before turning!	 Buckle up belt Stay in seat
---	---	---

 DANGER	 IN CASE OF TIP-OVER Follow these instructions:	 Lean away	 Hold on steering wheel	 Brace feet	 Don't jump!
--	---	--	---	---	--

MOM0137B

 **IN CASE OF TIP-OVER**

 Be extremely careful to prevent the lift truck from tipping over during operation. Slow down the lift truck sufficiently when turning a corner or tight curve. The following precautions should be closely observed to ensure safe

operation of the lift truck as well as to protect personnel against injury.

 If the forklift is equipped with a seat belt, always make sure that your seat belt is securely fastened and the top panel latch is in the locked position.

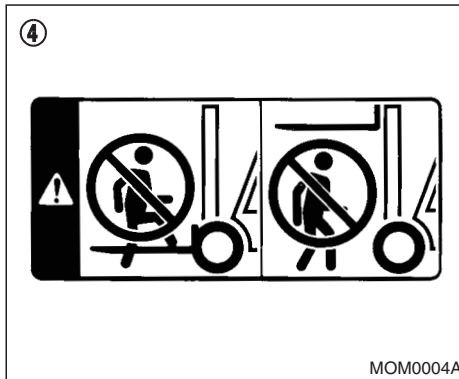
 If the lift truck begins to tip, **DO NOT ATTEMPT TO JUMP CLEAR.** The lift truck will fall faster than you can jump. Brace your feet and hold yourself inside the operator compartment by holding onto the steering wheel with both hands.

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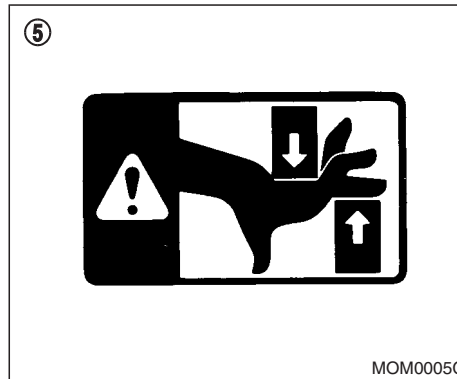
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WARNING:

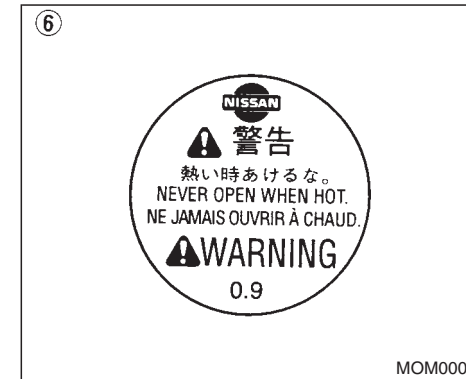
Do not stand on or below forks.

- Riding on forks is strictly prohibited. Furthermore, do not stand immediately below the forks. Otherwise, serious accidents can occur if the forks should move abruptly and the load placed on the forks unexpectedly falls down. In the worst cases, these accidents can be fatal.



WARNING:

Be sure to keep your hands, feet, and body away when operating the mast or closing the top panel. Otherwise, parts of the body are liable to become caught between the moving and fixed sections of the masts or top panel and injury may be incurred.



WARNING:

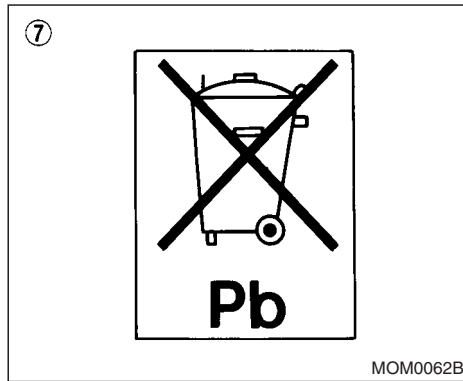
Handling of radiator cap

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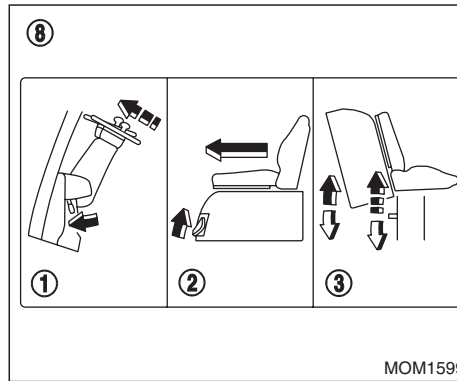
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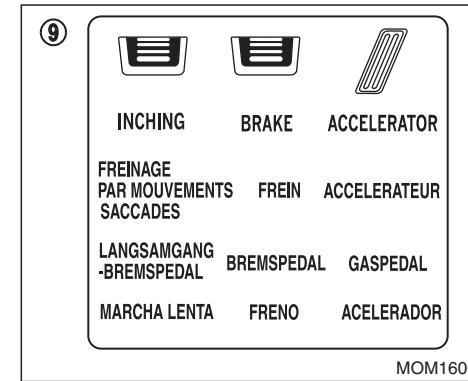
! WARNING:

- Diluted sulfuric acid and lead are used in the battery.
- Used battery fluid, and batteries shall be disposed of as per the applicable provisions of the laws and regulations of your country.
- Also consult with your nearest NISSAN FORKLIFT dealer.



! WARNING:

- As soon as the top panel is opened while the engine is operating, the engine will stop.
- The engine cannot be started while the top panel is open.



! WARNING:

Pay attention to the position of the pedal.

- The labels indicate the positions of pedals for the operation of forklift.

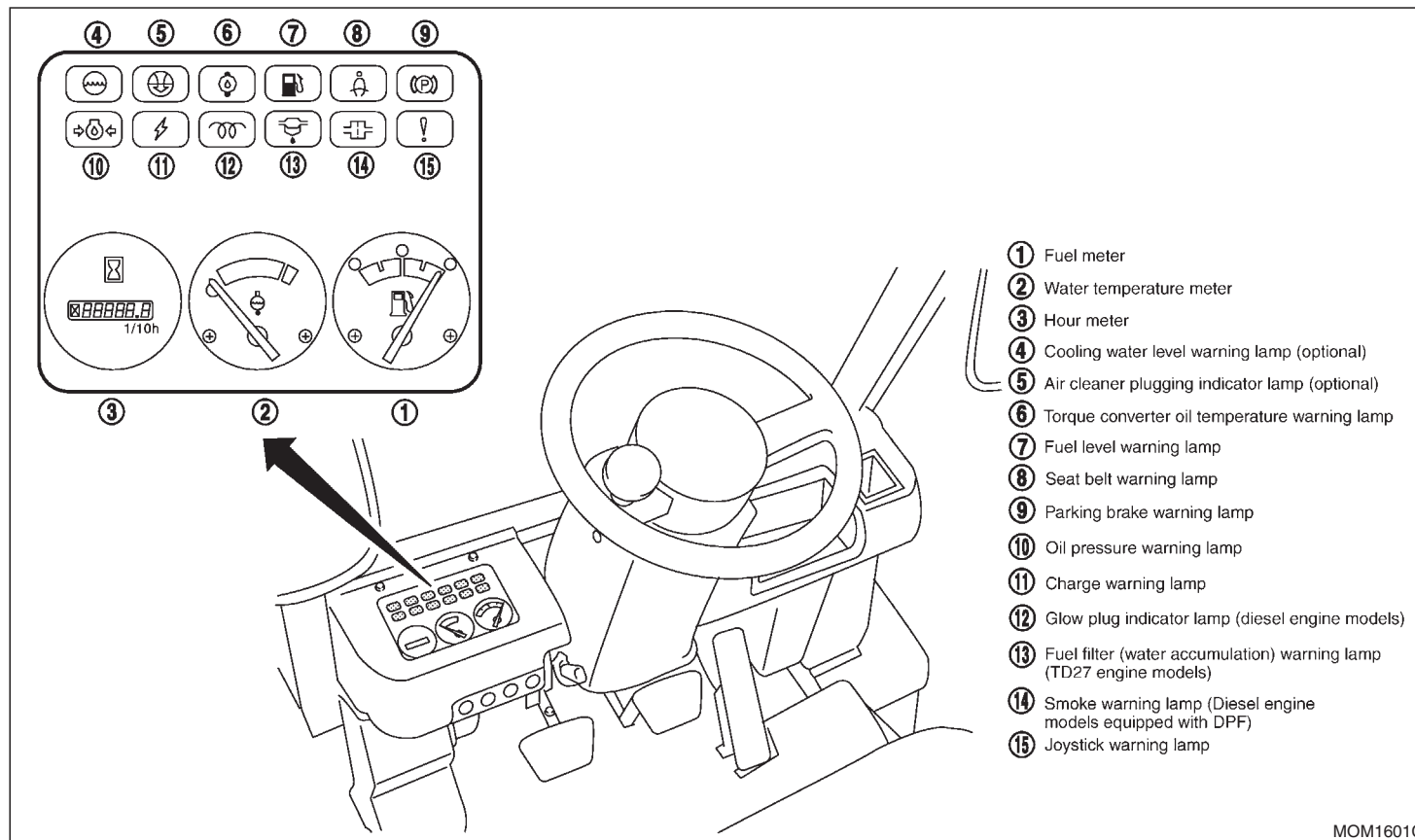
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INSTRUMENTS AND CONTROLS



MOM1601C

METERS, GAUGES, INDICATOR AND WARNING LAMPS

Fuel meter

With the ignition switch ON, the fuel meter indicates the approximate amount of fuel in the tank. Always top up the fuel tank.

Water temperature meter

When the ignition switch is set at ON, the water temperature meter operates and pointer indicates coolant temperature. During ordinary operation, the pointer will remain about the center range of the gauge. If the pointer indicates "H" position and remains there for more than a few minutes, stop the Lift Truck and cool the engine at idling speed. After stopping the engine, check the coolant level and fan belt deflection.

Hour meter

The hour meter operates when the ignition switch is in the ON position. The dial of the hour meter advances one number when the ignition switch remains in the ON position for an hour. Consequently, the number of the hour meter indicates total operating period of hour.



Cooling water level warning lamp (Option)

This lamp comes on when the ignition switch is turned to START. If the lamp comes on while the forklift is in operation, it indicates that the coolant in the radiator reservoir tank has dropped below the MIN. level.

Add coolant to the MAX. level.



Air cleaner plugging indicator lamp (Option)

This lamp comes on when the air cleaner is clogged. If the lamp comes on while driving, clean the air cleaner immediately.



Torque converter oil temperature warning lamp

Under normal operating conditions, the warning lamp turns on when the key switch is turned to the START position and turns off when the engine starts. The lamp will turn on during engine operation whenever the torque converter oil temperature exceeds the normal level.

NOTE:

Immediately stop the engine whenever the warning lamp turns on during operation. Check the oil level and replenish if required. If the lamp remains lit after oil

replenishment, contact your nearest NISSAN FORKLIFT dealer to have the torque converter inspected and serviced.

(Refer to "Automatic transmission oil level" on Page 50 for the inspection and oil replenishment procedure).



Fuel level warning lamp

If the remaining fuel drops below the specified level when the key switch is turned ON, the fuel warning lamp will come on.

When the fuel warning light illuminates, add fuel up to the specified level as soon as possible.



Emergency seat belt warning lamp

The seat belt warning lamp comes on when the seat belt is not fastened with the key switch turned ON.

Fasten the seat belt.



Parking brake warning lamp

The parking brake warning lamp comes on when the parking brake is applied with the key switch turned ON.

- **Drive the vehicle with the parking brake released.**

- **Make sure that the parking brake is released during operation. Failure to do this may cause premature wear of braking parts, overheat the brake system and result in poor braking performance.**



Oil pressure warning lamp

This lamp glows red when the ignition switch turns ON and oil pressure is not built effectively in the engine lubricating system. If the lamp glows under ordinary operating conditions, stop the engine immediately and check the engine lubrication system.



Charge warning lamp

With the ignition switch ON, the warning lamp glows red when the alternator is not supplying current to the electrical system. After the engine starts, the lamp should go out, indicating that the alternator is operating properly. If the lamp glows or flickers occasionally during normal operating, the alternator and electrical system should be checked.



Glow plug indicator lamp (Diesel engine)

This lamp goes on when the ignition switch is ON, and goes out when the glow plugs have been preheated.

If the lamp remains lit after the glow plugs

are preheated, this indicates an abnormality in the glow system.

Have the system checked at your nearest NISSAN FORKLIFT dealer or other competent service shop.



Fuel filter (water accumulation) warning lamp (Diesel engine)

Under normal operating conditions, the warning lamp turns on when the key switch is moved to the START position and turns off when the engine starts.

The lamp will turn on during engine operation whenever the accumulated water in the fuel filter exceeds the specified level.

When the lamp turns on during operation, drain the water from the fuel filter as soon as possible.

(Refer to the fuel filter draining procedure on Page 57.)

Continued operation with the warning lamp on can result in fuel pump seizure.



Joystick warning lamp

With the key switch turned ON, the joystick warning lamp comes on when the electrically controlled joystick system is malfunctioning.



WARNING:

If the warning lamp comes on, suspend cargo handling operations and have the system checked and repaired by the nearest NISSAN FORKLIFT dealer.

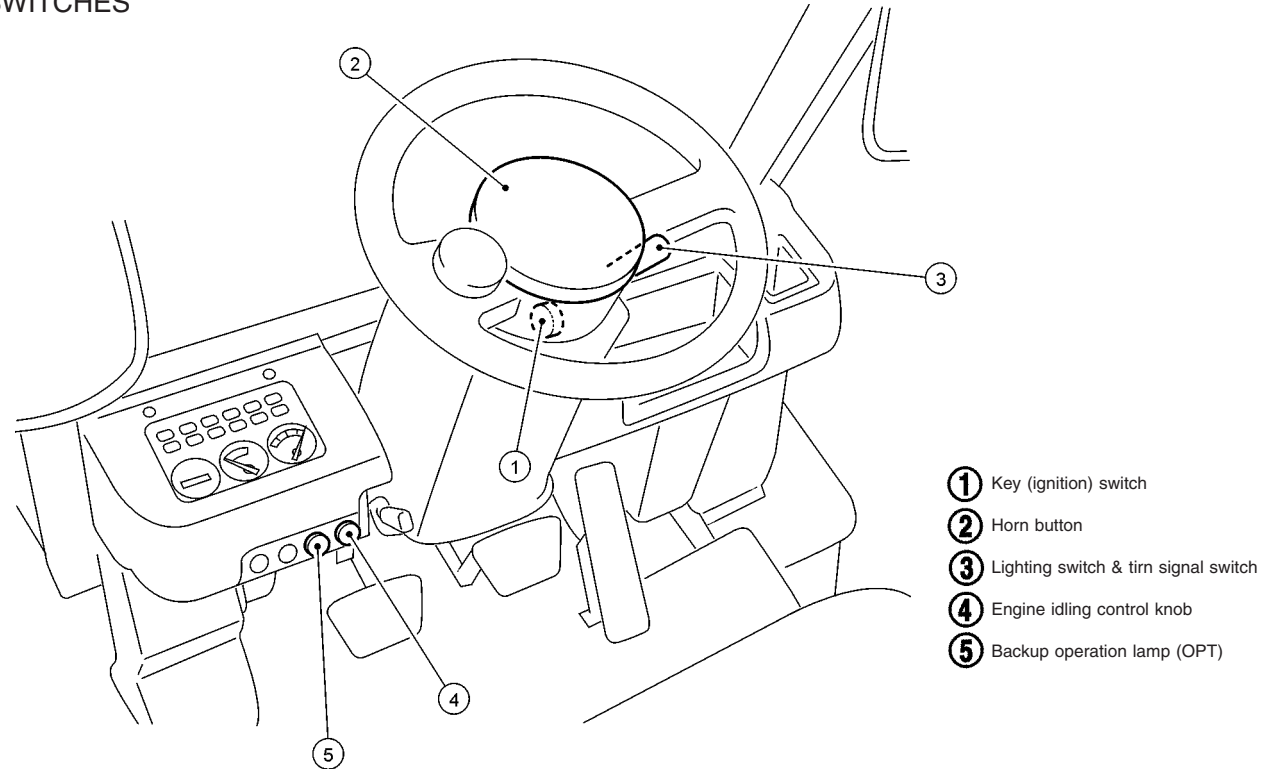
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SWITCHES



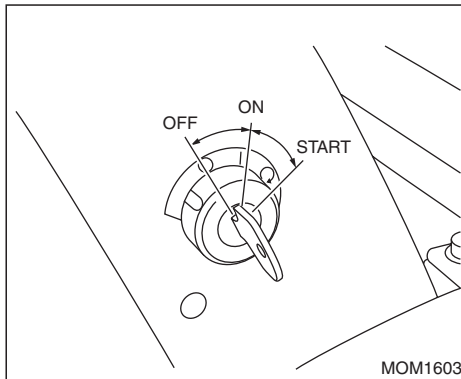
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Key switch

The key switch controls the engine ignition system and most of electrical equipments and has three positions. The key can be inserted or withdrawn only when the key is in the OFF position.

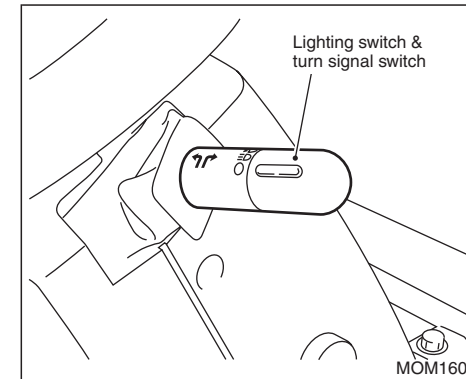
To turn on the ignition system as well as other electrical circuits, turn the key to ON position. The start position allows to start engine. After the engine has started, by releasing the key, it will automatically spring back to the ON position.

This key switch incorporates an anti-restart function. When restarting, return the key to

the OFF position once, then turn it to the START position.

Horn button

Pushing the button in the center of the steering wheel will sound the horn, regardless of key position.



Lighting switch

The switch controls the headlamps and tail lamps.

The lighting switch operates independently of the key switch.

Turn the switch knob clockwise. The lamps corresponding with the marked position will come on. For details concerning lamp operation, refer to the table.

Turn signal switch

Push the switch lever forward when turning left, and pull it backward when turning right.

The switch lever will automatically return to its

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original position after the lift truck has turned to the left or right. If it does not, return it by hand.

Switch lever position	Without combination lamp (Standard)			With combination lamp (Optional)		
	Headlamp	Tail lamp	Turn signal lamp	Headlamp	Tail lamp	Turn signal lamp
Passing lamp	Comes on	—	—	Comes on	Goes out	—
Turn to 1st step	Comes on			—	Comes on	—
Turn to 2nd step	Comes on			Comes on	Comes on	—
Turn to the right or left	—			—	—	Comes on

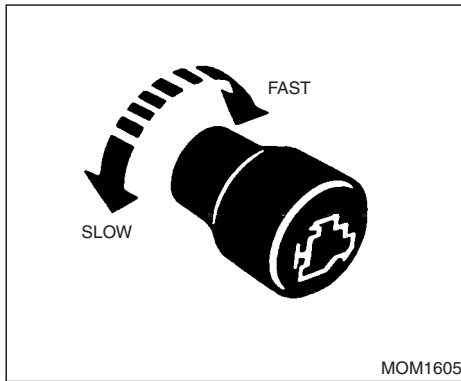
The turn signal lever can be moved even in vehicles not equipped with a combination lamp.

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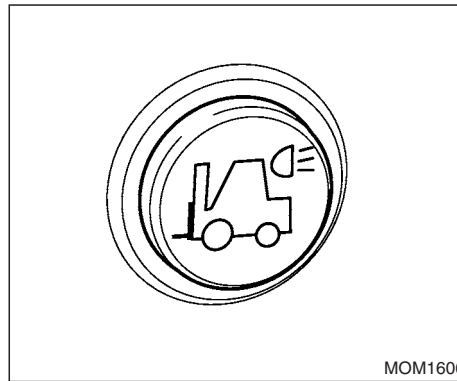


Engine idling control knob
(For diesel engines: cold climate specifications are optional)

The control is located on the meter panel.

Turning the knob clockwise will increase the engine idling speed.

Turning the knob counterclockwise will slow down the engine idling speed. It is used to warm up the engine at starting.



Backup operation switch (Optional)

The rear operating lights are used for nighttime operation and operation in poorly lit areas. The rear operating light switch controls these lights.

The light switch is a button type. When this switch is pushed, the back operation lamp comes on. When it is pushed again, the lamp goes out.

- The backup operation switch works independently of the key switch ON and OFF positions.
- Be sure to turn off the rear operating lights by pushing the knob in whenever the engine is stopped or operation suspended.

ended. Failure to do so can result in a dead battery.

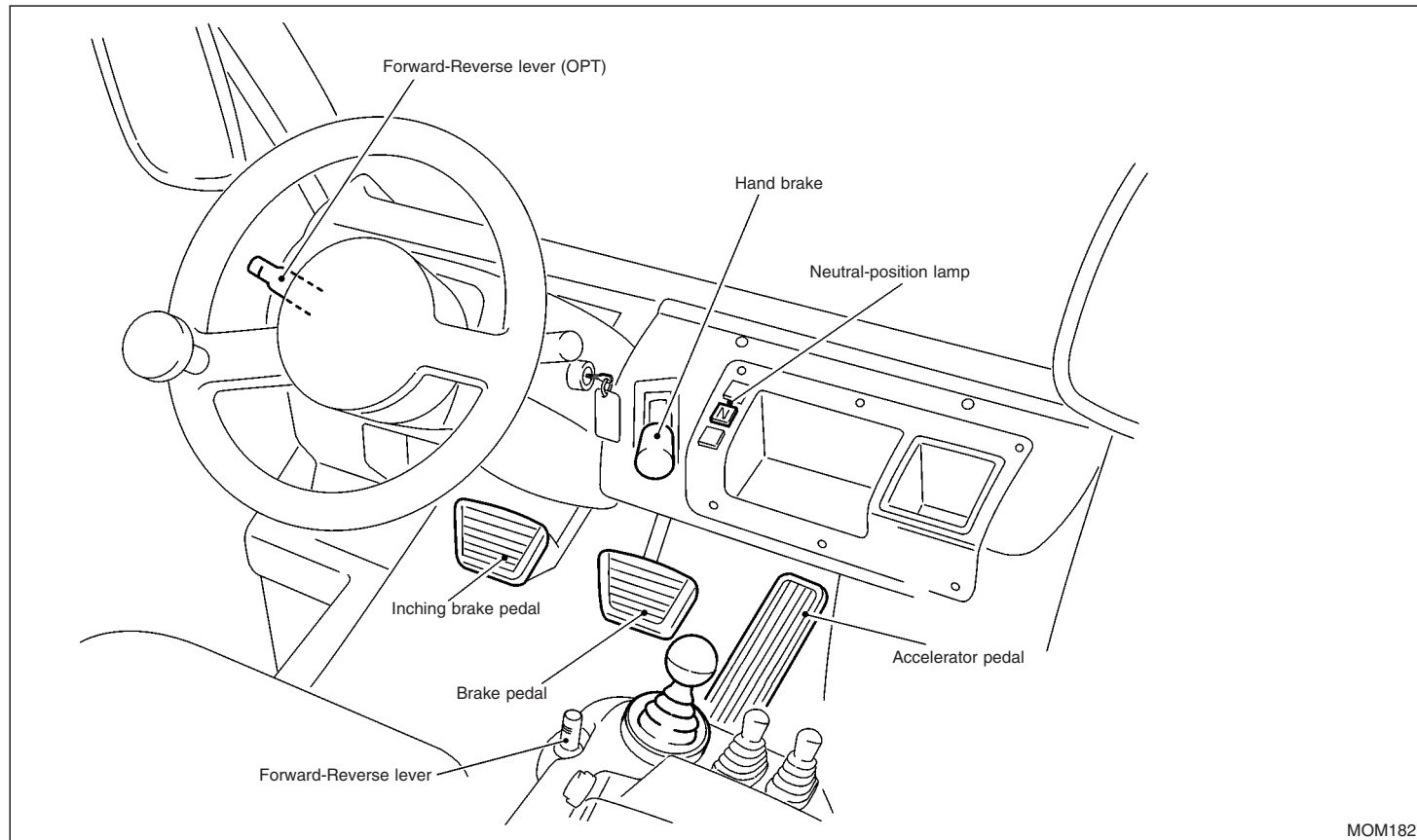
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STARTING AND OPERATING

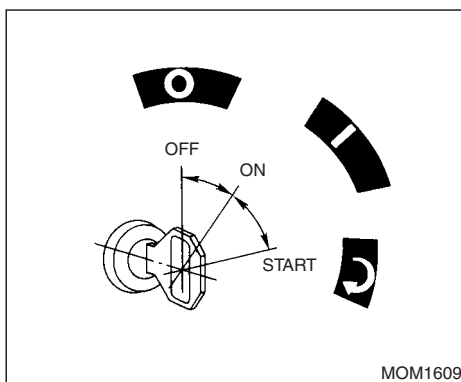


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Gasoline engine starting (Including LPG vehicles)

The engine is equipped with a fully automatic choke. Follow the procedure outlined below to start the engine.

On LPG models, open the discharge valve and then start the engine.

1. Pull the hand brake lever up as far as possible. Move the forward-reverse lever to the neutral position.

NOTE:

When the forward-reverse lever is in the F or R position, it is not possible to start the engine.

2. Press the accelerator pedal fully to the floor board (one-time only) and slowly release it. If the engine is warm at starting, it is not necessary to press the accelerator pedal.
3. Remove your foot from the accelerator pedal. Turn the starter to start the engine.

NOTE:

Do not operate the starter for more than ten seconds. If the engine fails to start within ten seconds, release the starter and wait for ten seconds before attempting to start the engine again. This allows the battery time to recover.

4. After starting the engine, allow it time to warm up. Allow the engine to idle for one minute after starting. Then, press the accelerator pedal lightly and release it. If the surrounding temperature is high, lightly pressing and releasing the accelerator pedal will reduce engine speed and permit quiet warming up. This also results in fuel savings.

NOTE:

- The engine is cold immediately after starting. Do not intermittently race the engine or run the engine at high speeds immediately after starting.
- Do not move the key to the START

position when the engine is running. Damage to the starter motor will result.

- Engine speed is high immediately after starting. Exercise caution when moving the vehicle or handling cargo.



WARNING:

- Inspect the condition of LPG hose connections and check for gas leaks from LPG hoses and pipes before starting engine.
- In the event of LP gas leakage or some other abnormal occurrence, close the discharge valve immediately. Have your LP gas system checked at an authorized service facility.

Stopping

Gasoline engine

To stop the engine, turn the ignition key to the OFF position, then engine will stop.

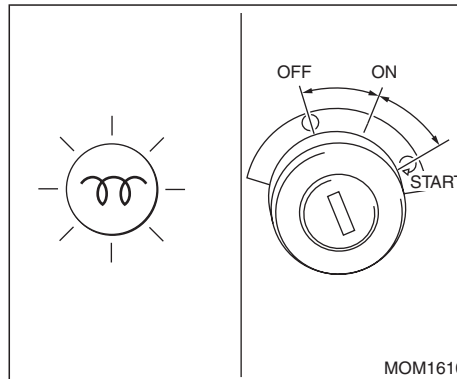
LPG model



WARNING:

Carefully follow the below procedures when turning the engine off after LPG operation:

- (1) Completely close the discharge valve (red).
 - (2) Race the engine until it stops.
 - (3) Make sure that all of the remaining LPG (in the piping and other receptacles) has been used. After the engine stops, turn the key switch to the OFF position.
- After completion of operation and before storing the vehicle for an extended period, check the engine for gas leakage. Refer to "LPG cylinder replacement" on Page 60.
 - In the event of gas leakage, an accident, or some other abnormal occurrence, immediately and completely close the discharge valve (colored red). Have your LP Gas system checked at an authorized service facility.



DIESEL ENGINE

Starting

1. Pull the hand brake lever up as far as possible. Move the forward-reverse lever to the neutral position.

NOTE:

When the forward-reverse lever is in the F or R position, it is not possible to start the engine.

2. When the key switch is set to the ON position, the glow plug indicator lamp on the combination meter goes on, indicating that engine preheating has started. Keep the key switch in the ON position till

the glow plug indicator lamp goes out (indicates completion of preheating).

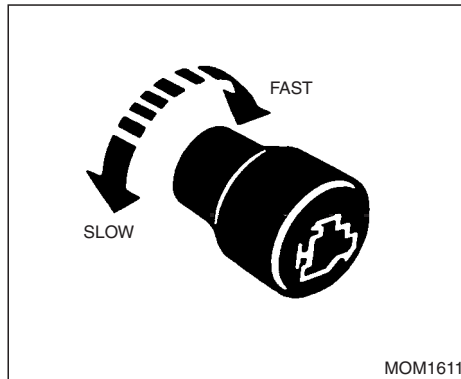
Engine preheating is controlled automatically corresponding to the engine coolant temperature, atmospheric air temperature and so forth, and the glow plug indicator lamp goes out when the engine is preheated to the specified temperature.

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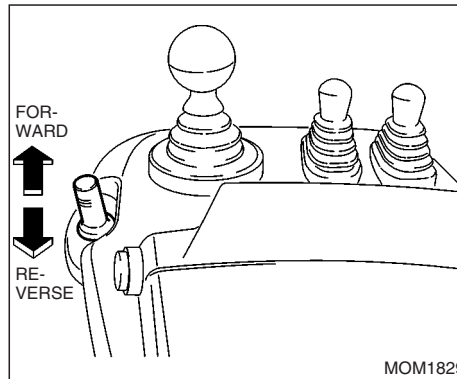


- When the glow plug indicator lamp has gone out, turn the key switch to the START position while depressing fully the accelerator pedal, until the engine starts.
- After the engine has started, release the accelerator pedal gradually, and turn the engine control knob clockwise until the engine runs smoothly.

When restarting, return the key to the OFF position once, then turn it to the START position.

Stopping

To stop the engine, turn the ignition key to the OFF position, then engine will stop.



Forward-reverse lever

This lever is used to change the direction of the lift truck, forward and reverse.

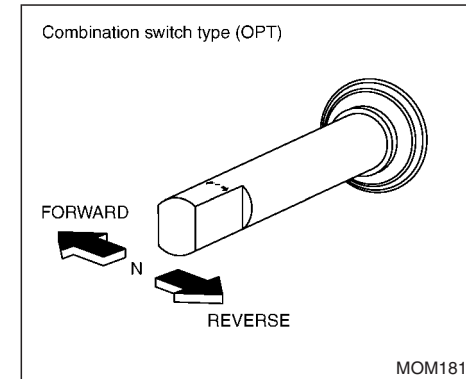
If the lever is pushed forward, the lift truck moves forward; if pulled backward, the lift truck moves backward. The midpoint between the forward and reverse positions is the neutral position. The engine must be started with the lever set in the neutral position.

Lever in forward position:

When moving the lift truck forward.

Lever in reverse position:

When moving the lift truck backward.



Lever in neutral position:

When starting the engine and parking the lift truck. (The neutral position lamp comes on.)

CAUTION:

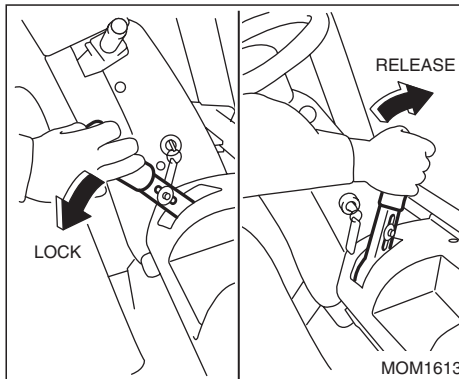
Before changing the direction of travel, depress the brake pedal to stop the forklift completely and place the change lever in the Forward or Reverse position as desired.

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HAND BRAKE LEVER

To set the brake, pull the hand brake lever backward. To release the brake, push it forward. Before leaving the lift truck, be sure to apply the hand brake securely.

As soon as the hand brake lever is locked, the park brake warning lamp (P) in the combination meter cluster will come on.

HAND BRAKE WARNING BUZZER (OPT)

When the key switch is turned OFF, a buzzer sounds if the hand brake is released. The buzzer stops when the hand brake is set.

FOOT PEDALS

Inching brake pedal

This brake pedal is located on the left side of the steering column, and also works as a clutch pedal because of the inching valve built in the hydraulic system.

When the pedal is depressed slightly the engine power is disconnected. When depressed further, brake begins to operate.

CAUTION:

Do not overuse the inching brake pedal. It may cause automatic transmission oil to overheat or the clutch to slip if it is used as a footrest or used for a long time.

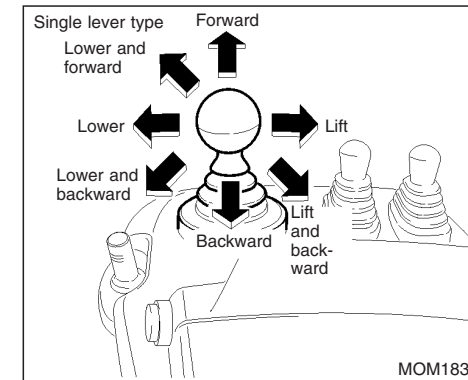
Brake pedal

This lift truck is equipped with a conventional brake pedal as well as an inching brake pedal. The conventional pedal is located on the floor to the right of the steering column.

Accelerator pedal

The accelerator pedal is located in a convenient position to the right of the steering column.

(Refer to page 27 for the pedal location.)



JOYSTICK LEVER TYPE (Electrically controlled type)

The joystick lever is an electrically controlled type. Cargo handling operation can be performed only when the key switch is turned ON and engine is running.

NOTE:

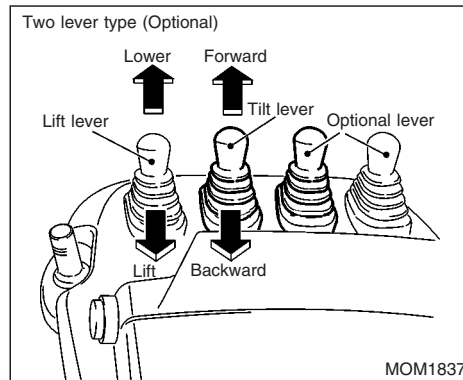
- Before the key switch is turned ON, make sure that the joystick lever is set to Neutral for safety.
- When the key switch is turned OFF, the forks does not lower even under its own

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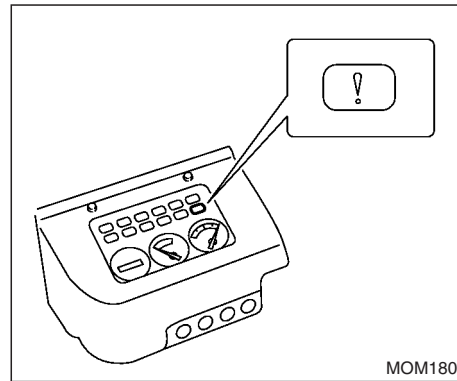
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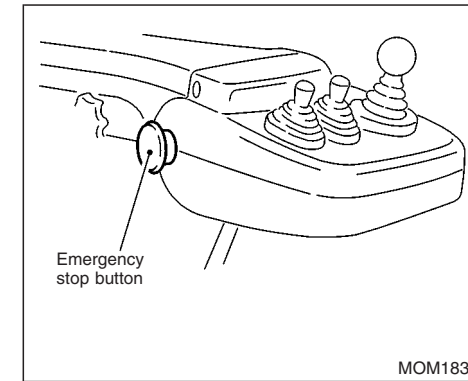
weight.

- The joystick lever is used to tilt the mast assembly forward or backward and to lift or lower the forks. Cargo handling speed (lift, forward and backward) can be adjusted by varying the engine speed and the distance the lever is moved. But the lowering speed can be adjusted only by the distance the lever is moved.
- Operating the control lever without properly sitting in the operator's seat causes the loading mechanism to be inactive.



WARNING:

The joystick warning lamp ! on the combination meter illuminates when the joystick system malfunctions. When this occurs, immediately suspend cargo handling operations and have your lift truck checked and repaired by the nearest NISSAN FORKLIFT dealer.



WARNING:

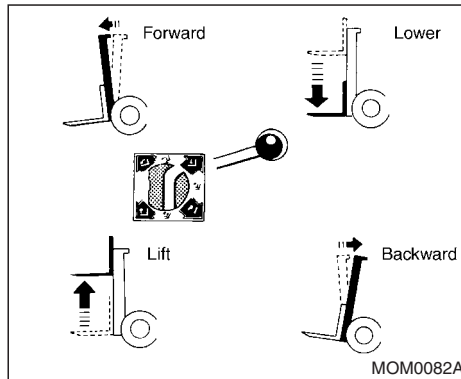
If erroneous cargo handling operation is noted regardless of the joystick lever position, press the emergency stop button on the console box, suspend cargo handling operations and have your lift truck checked and repaired by the nearest NISSAN FORKLIFT dealer. (To release the emergency stop button, turn it in the direction indicated by the arrow.)

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MECHANICAL SINGLE CONTROL LEVER (OPT)

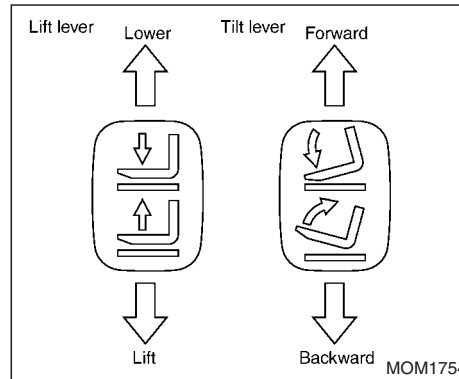
The lift-tilt control lever is used either to tilt the mast forward or backward and to lift or lower the forks. Positions of the lever are marked on the instrument panel.

When two different operations are required to perform at once, the lever should be pushed midway between the two positions.



WARNING:

Be extremely careful even when the key switch is turned OFF, as the operation of the lift-lower lever lowers the forks.



MECHANICAL TWO CONTROL LEVER TYPE (OPT)

Lift lever

Lift and lowers the forks.

Lower Push forward

Lift Pull backward

The lifting speed can be adjusted by varying the engine speed and the distance the lever is moved.

The lowering speed can be adjusted only by the distance the lever is moved.



WARNING:

Be extremely careful even when the key switch is turned OFF, as the operation of the lift-lower lever lowers the forks.

Tilt lever

Tilts the mast forward and backward.

Forward Push forward

Backward Pull backward

The forward or backward tilting speed can be adjusted by the engine speed and the distance the lever is moved.

STARTING



WARNING:

D01/D02 models do not have creeping phenomena.

- **The truck will not move if the forward-reverse lever is in the F or R position unless you depress the accelerator pedal. When depressing the accelerator pedal, be sure to visually confirm the position of the forward-reverse lever.**
- **When starting on slopes, be sure to apply the parking brake to hold the truck and then start, even if the slopes are gentle.**
- **Avoid rapid acceleration (especially during high loading).**

When starting the vehicle from stopped condition

Move the forward-reverse lever to the F or R position.

Release the hand brake lever, then depress the accelerator pedal.

The lift truck starts moving.

TRAVELING

While traveling, the mast should be tilted back

and the forks be lowered approximately 200 mm (8 in) above the ground.

When the forward-reverse lever is in the F or R position:

- The vehicle keeps traveling by depressing the accelerator pedal.
- When the accelerator pedal is released

The engine brake is applied with clutch engaged if the vehicle speed is above 4.5 km/h (2.8 MPH).

The clutch disengages into neutral position if the vehicle speed is below 4.5 km/h (2.8 MPH).

When the forward-reverse lever is in the neutral position:

- The lever is in the neutral position independent of the vehicle speed.

TURNING

The smaller the radius of a turn to be made, the lower the speed of the lift truck should be. When making a sharp turn, always drive the truck at low speed.

CLIMBING

For safety reasons, when driving a loaded lift truck up a steep grade, it must be driven forward with the load in front; on a downgrade,

backward, with the load behind.

On NISSAN Forklifts equipped with an automatic transmission, standing starts and stopping on a slope can be accomplished safely and easily by manipulating the accelerator and brake pedals as required.

For stopping, the brake pedal should be used.

For traveling, depress the accelerator pedal. To make a standing start on a slope, the hand brake can be utilized in place of the brake pedal.

STOPPING AND PARKING

To stop the lift truck, remove foot from the accelerator pedal and step on the brake pedal. Do not make sudden stops as the truck will pitch forward and drop load.



WARNING:

When leaving the lift truck, set the hand brake, adjust the mast to an upright position, lower the forks until they rest on the ground and turn off the key.

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LOADING AND UNLOADING



WARNING:

Joystick lever equipped models:

- The joystick warning lamp ! on the combination meter illuminates when the joystick system malfunctions. When this occurs, immediately suspend cargo handling operations and have your lift truck checked and repaired by the nearest NISSAN FORKLIFT dealer.
- If erroneous cargo handling operation is noted regardless of the joystick lever position, press the emergency stop button on the console box, suspend cargo handling operations and have your lift truck checked and repaired by the nearest NISSAN FORKLIFT dealer. (To release the emergency stop button, turn it in the direction indicated by the arrow.)

LOADING

Adjust distance between the forks symmetric to the center line of the lift truck. The wider the interval between forks, the better the balance. Be sure to apply the fork stoppers after setting the forks.

Approach slowly, straight toward the load, and stop just in front of it. Adjust mast to vertical position, matching the height of the forks to the position of the pallet. Advance slowly and

completely insert forks beneath the load. Set the forward-reverse lever to NEUTRAL and apply the hand brake. Then raise the load. Confirm that the load is stable and tilt it backward. Release the hand brake and back the lift truck slowly.

TRANSPORTATION

When transporting loads, the lift truck should be driven carefully at slow speed with the load kept low and tilted back. When the load is big enough to block forward visibility, drive the lift truck backward. Follow the safety rules.

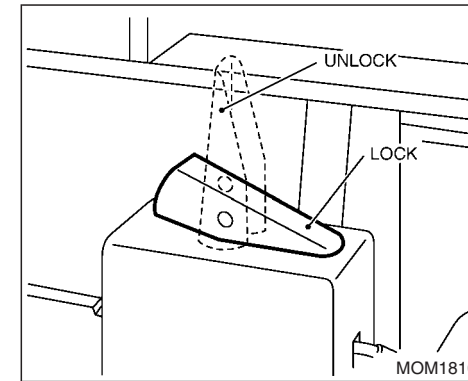
UNLOADING

Slowly approach the unloading site and stop facing straight ahead.

Move the forward-reverse lever into NEUTRAL and apply the hand brake. After adjusting the mast to the vertical position, raise the load a little above the stack on which it is to be placed. Release the hand brake and advance slowly into the proper position for stowing. Apply the hand brake and place the forward-reverse lever in NEUTRAL.

Slowly lower the forks to set down the load. After moving the forward-reverse lever to REVERSE, release the hand brake and back the lift truck up until the forks separate completely from the load.

OTHER HANDLING AND OPERATIONS



FORKS

The fork-to-fork distance can be properly adjusted by unlocking the lock levers on the forks. These levers are unlocked by turning them 90°. Forks must be equally located from the center of the lift truck. After correct fork-to-fork distance is obtained, secure the forks with the lock levers.

Various kinds of forks are available depending on the lifting capacity. Select proper forks so that the specifications stamped on the upper face of them may meet the lifting capacity of your lift truck (i.e., above lifting capacity). Never use

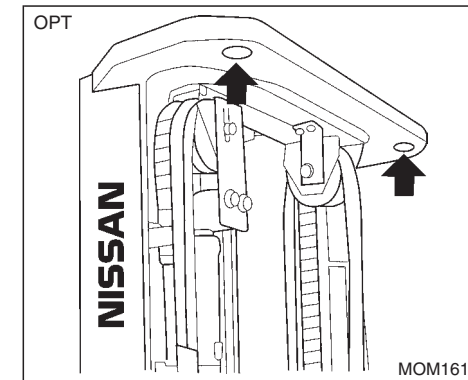
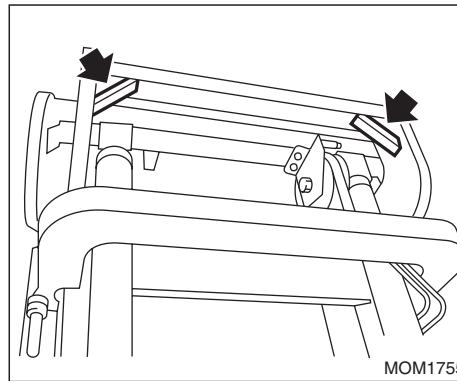
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forks below the lifting capacity of your lift truck.



LIFTING UP FORKLIFT TRUCK

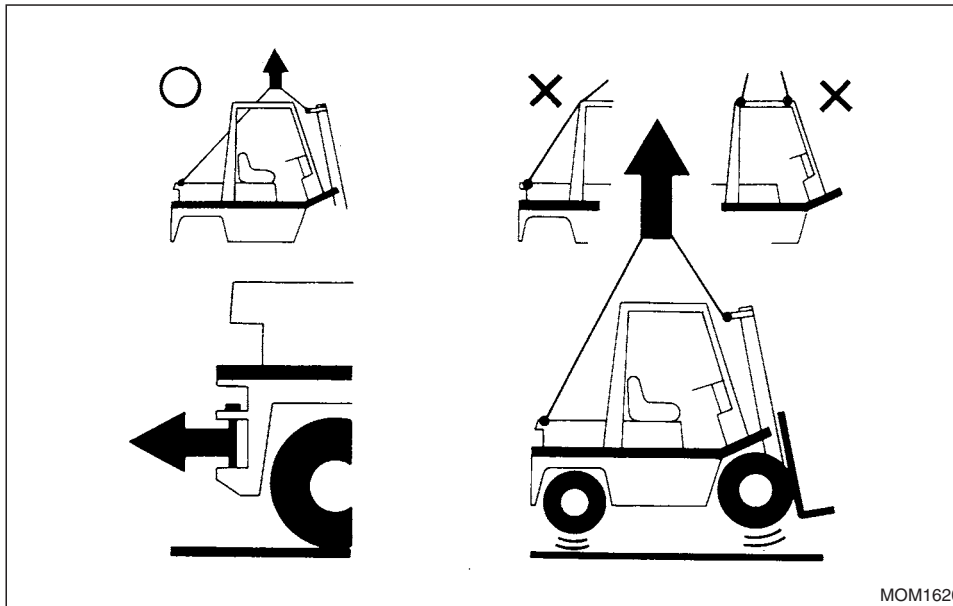
When lifting the entire forklift truck, secure wire ropes to the portion shown in the illustration of the outer mast cross beam and to the hole on the counterweight, and then utilize a lifting device.

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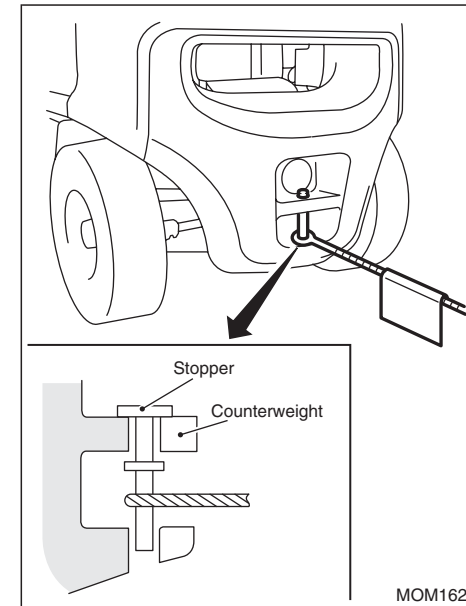


WARNING:

- Make sure that the wire ropes do not interfere with the overhead guard while lifting the truck.
- Ensure that the wire ropes and lifting device are strong enough to support the

lift truck safely, as the lift truck is extremely heavy.

- Do not use the cab frame (overhead guard) to lift up the truck.
- Never get under the lift truck while lifting the truck.



TOWING BAR

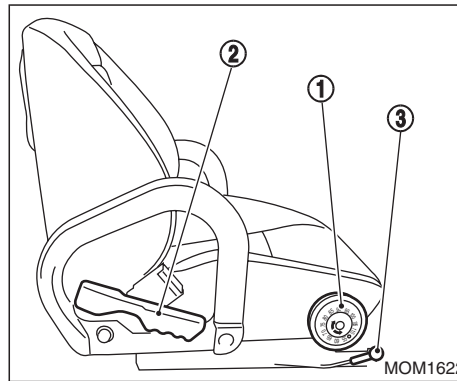
- Use the towing bar when the tires drop into ditches, or when loading the forklift onto carriers.
- Be sure to insert the towing bar until the stopper reaches the counterweight.



WARNING:

Use care in using the towing bar.

- The towing bar is used to pull the truck out of ditches with a tow car. Avoid using the forklift to tow objects.
- Also use the towing bar to anchor the forklift when loaded on a carrier.
- Do not use the towing bar for towing objects (such as trolleys).
- Use wire cables that are not damaged and have sufficient strength to tow objects.
- Avoid jerky movements. Tow gently. Abrupt pulling is apt to cause the towing bar to shift and bend.
- Use care in tying the towing bar with rope to prevent it from slipping off. When the towing bar slips off, immediately stop and check the conditions for safety. As soon as safe conditions are returned, set the towing bar properly, and resume the work.



SEAT

NOTE:

On vehicles equipped with the joystick lever, adjust the suspension seat after tilting the console box forward.

Weight adjustment

The seat can be adjusted to adapt to the driver's weight by turning the button (1) toward the front or rear. Turn the button in the proper direction until the approximate kilogram weight of the driver is attained.

The seat adjusting range is from 55 to 110 kg.

Backrest inclination adjustment

Can be effected by turning handle (2) — adjustment scope of backrest 0° - 24°

Longitudinal adjustment

After releasing the adjustment rails by using lever (3), the seat can be adjusted over a range of 100 mm (3.94 in) in increments of 10 mm (0.39 in).

Release the lever to lock the seat.

Before operating the lift truck, be sure the seat is locked securely.



WARNING:

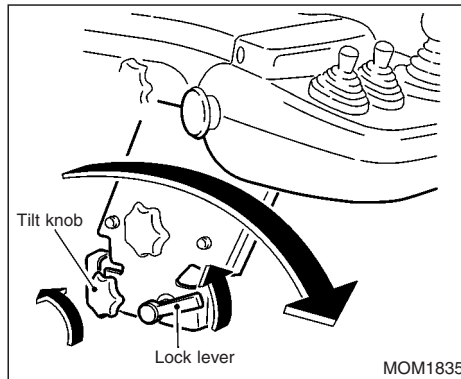
- a. Before adjusting the seat, turn the ignition key off.
- b. Be sure to adjust the seat position while the lift truck is stationary.
- c. After adjustment, gently rock in the seat to make sure it is securely locked.
- d. Be sure to fasten the seat belt after being seated.

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Top panel

As soon as the top panel is opened while the engine is operating, the engine will stop.

When the top panel is open, the engine cannot be started.

Opening procedure

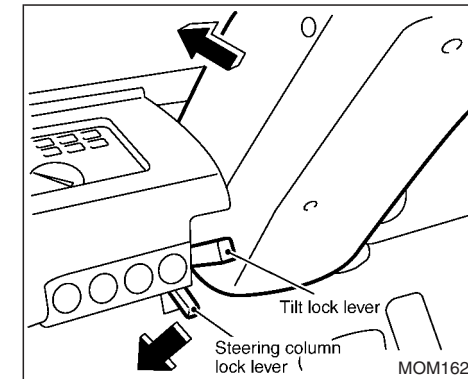
NOTE:

Make sure that the seat slider and reclining device are returned to their normal positions before releasing the top panel lock on all except the LPG D01 model. On the LPG D01 model, move the seat all the way forward in advance.

For models equipped with a cabin, refer to the

top panel opening procedure on page 98.

1. On LPG models, release the lock lever at the side of the LPG cylinder mount. Tilt the cylinder towards the rear. (Refer to "LPG cylinder replacement" on page 60.)
2. Release the lock lever and the tilt knob on the right side of the joystick lever unit, and tilt the joystick lever unit forward. (If equipped with joystick lever.)



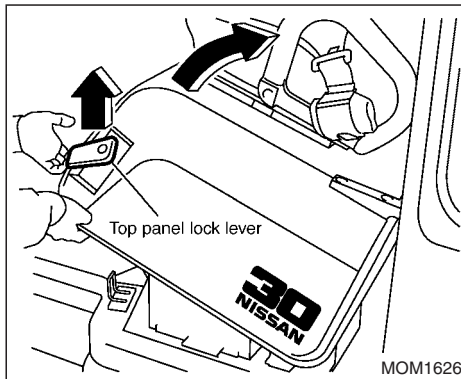
3. Release the steering column lock lever. The steering column can then be tilted forward.

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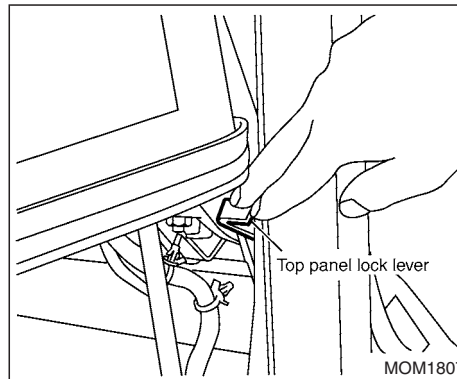
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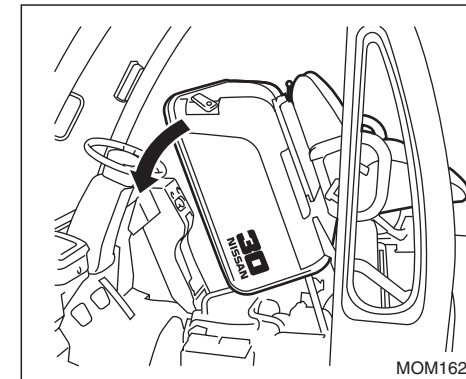


4. Release the top panel lock lever and then open the top panel backward until it locks.



Closing procedure

Grasp the handle and push the top panel forward to close it while releasing the top panel lock lever.



- Tilt the steering column backward and lock with the steering column lock lever.
- Tilt the console box backward.

CAUTION:

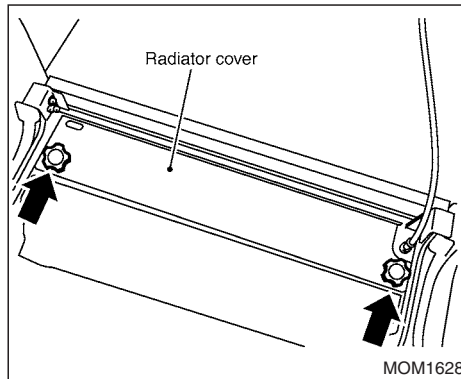
- To avoid pinching your fingers, always grasp the handle when closing the top panel.
- After closing the top panel, make sure that the top panel, steering column lock lever and console box are locked securely.

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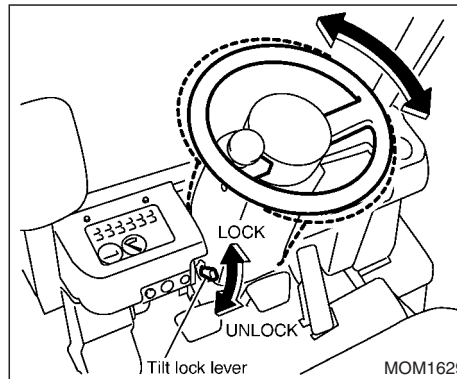
Radiator cover

The radiator cover can be removed with the top panel closed.

Cooling water level is checked by removing the radiator cover.

NOTE:

- Be absolutely sure to hand-tighten the bolts when reinstalling the radiator cover.
- Refer to Page 45 for information on the cooling water level check procedure.



TILT STEERING WHEEL

The position of the steering wheel can be adjusted. To adjust, push down on the tilt lock lever located on the left side of the steering column, and move the wheel to the desired position. After selecting the wheel position, pull up the lever fully to lock.



WARNING:

- Before adjusting the steering wheel, turn the ignition key off.
- Be sure to adjust the steering wheel position while the lift truck is stationary.
- After adjustment, force the steering

wheel upward or downward to assure it is locked securely.

- Do not confuse the tilt steering wheel adjustment lever with the steering column lock lever during adjustment procedures.

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AGAINST COLD AND HOT WEATHER**In cold weather**

- **Oil and grease**

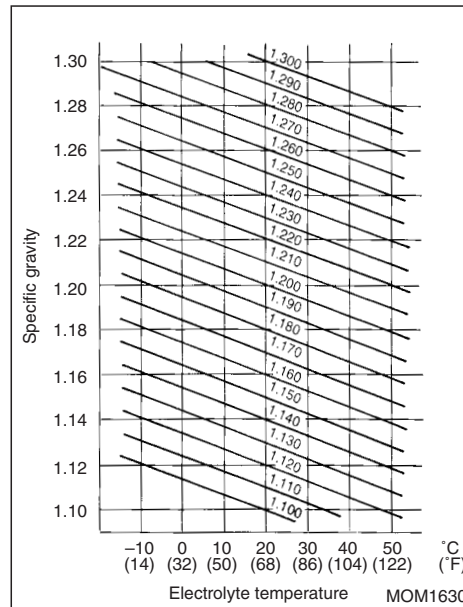
Use engine oil and grease suitable for ambient temperature. (Refer to RECOMMENDED LUBRICANTS.)

- **Coolant**

When coolant might freeze under low ambient temperature, drain out the coolant completely. In such cold weather, it is recommended to mix anti-freeze solution into the cooling system.

Anti-freeze:**[Example]**

Coolant capacity	Anti-freeze		
	0.8ℓ (3/4 Imp qt)	1.7ℓ (1-1/2 Imp qt)	2.5ℓ (2-1/4 Imp qt)
5.0ℓ (4-3/8 Imp qt)	-7°C (19°F)	-18°C (0°F)	-35°C (-31°F)



- **Battery**

Battery should not be left in discharged state. When battery performance becomes questionable, check the specific gravity of the electrolyte, terminals of battery and alternator.

The normal specific gravity is 1.260 as corrected at 20°C (68°F). It changes about 0.0007

for every 1°C (1.8°F). If the specific gravity of electrolyte does not indicate the desirable value, charge the battery soon.

In hot weather

- **Oil**

Engine oil should be changed to summer type oil.

- **Coolant**

Because the engine is more likely to overheat under hot weather, the lift truck should be parked in shade. Overheating sometimes comes from defective hoses, connections, loosened radiator cap, or defective fan belt. So check carefully the cooling system to maintain the best cooling effect.

- **Battery**

Since the battery electrolyte evaporates much in hot weather, it is necessary to top up distilled water frequently.

DAILY CARE

The functional tests are carried out to see whether the forklift functions correctly after it has been transported (over land or water), or after it has been taken out of storage.

The test covers the following items, but since exclusive tools and equipment are required for Items 1, 2 and 3, request that your NISSAN FORKLIFT dealer perform the test.

1. Daily care

To maintain your lift truck in proper condition, ready for safe operation, be sure to perform the daily checks indicated below. **If you note any abnormality, notify your authorized NISSAN FORKLIFT dealer.**



WARNING:

Do not operate the lift truck if it is in need of repair.

- 1) Check engine oil level.
- 2) Check engine coolant level, and also check engine cooling system for leakage.
- 3) Check battery fluid level in each cell.
- 4) Check leakage and amount of brake fluid.
- 5) Check steering wheel play.
- 6) Check automatic transmission oil level and leakage.

- 7) Check hydraulic oil level and oil line leaks.
- 8) Check fuel line (hoses, pipings, connections) for leaks.
- 9) Check equipment pipe connections for gas leaks at mating sections. (LPG models)
- 10) Check water separator of fuel filter. If necessary, drain water from water separator.
- 11) Check the vaporizer for tar. If necessary, drain tar from the vaporizer. (LPG models)
- 12) Check tire pressure and check for looseness, wear or damage of wheel nuts and bolts.
Remove objects that are embedded in the tread.
Check for damage and friction of wheels and for bends and cracks in the rim.
- 13) Check operation of horn, headlight and all indicators.
- 14) Check operation of hydraulic control valve.
- 15) Check the mast operation for the following items:
 - Smooth lifting and lowering
 - Smooth roller rotation
 - Wear or damage to chains

- Lift bracket and forks for bend and damage
- 16) Check safety start system operation.
 - 17) Check brake pedal operation.
 - 18) Check hand brake operation.
 - 19) Check the backrest and overhead guard for proper installation and function.
 - 20) Check fork latches.
 - 21) Check forks for cracks, breaks, bend and wear.
 - 22) Check the radiator core for clogging.
- If there is dirt or dust on the radiator core, the engine may overheat. Clean the radiator core with compressed air or steam so as not to deform the core fins.
- ### 2. Dynamic tests
- 1) Mobility (traveling and maneuvering) test
Make sure the forklift moves in the direction specified by the forward-reverse lever, and the forklift operates correctly when the parking brake lever is locked or released. Also check to see that the steering feels normal and that it operates satisfactorily. Elevate and lower test load.

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2) Stacking test

Raise the test load to the maximum height of the mast and lower at maximum speed, stopping the descent several times, to see that it stops smoothly.

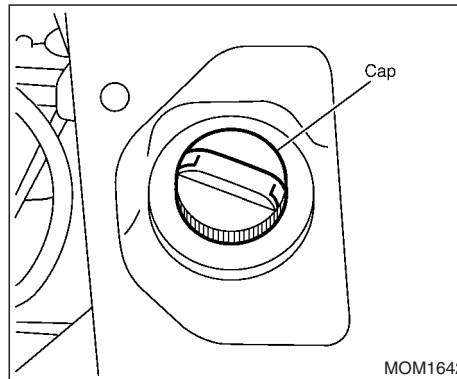
3) Lowering speed test

Check to make sure the maximum lowering speed does not exceed 0.6 m/s (2.0 ft/s) (by measuring the speed).

3. Test for holding load

Check the rate at which the mast lowers naturally. [100 mm (3.94 in)/10 min max]

Check the rate at which the tilt cylinder tilts forwards naturally. (5 degrees/10 min max)



Fuel recommendation

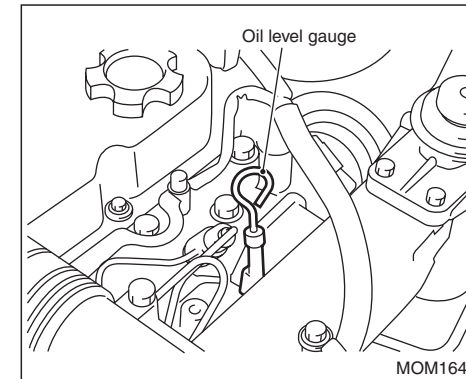
The fuel inlet is located on the left rear side of the overhead guard pillar. At the end of each day's run, top up the tank with fuel.

Gasoline to be used

- Except Germany: Regular
- For Germany: Normal gasoline leaded DIN 51 600 or normal unleaded DIN 51 607.

Diesel engine models

Your diesel engine was designed to run only on diesel fuel with at least a 42 cetane rating.



Engine oil level

To check oil level, pull out the level gauge, wipe it clean and reinsert; remove it again to read oil level.

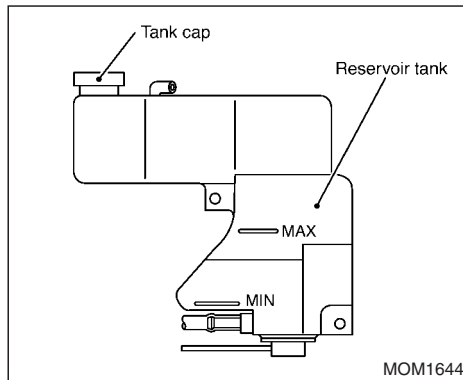
The level should be between the "L" and "H" marks.

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WARNING:

Never remove the radiator cap when the engine is hot; serious burns could be caused by high pressure fluid escaping from the radiator.

Wrap a thick cloth around cap and carefully remove the cap by turning it a quarter turn to allow built-up pressure to escape and then turn the cap all the way off.

Engine coolant level

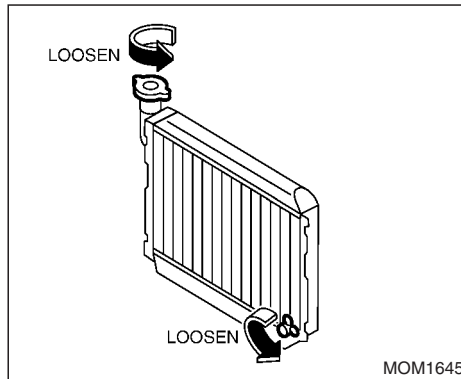
Visually check the amount of coolant in the reservoir tank when the engine is cold. If the coolant level is below the "MIN" level, remove the reservoir tank filler cap and add coolant until the "MAX" level is reached. If the reservoir tank is empty, check the coolant level in the radiator. If there is insufficient coolant in the radiator, pour coolant into the radiator up to the cap and also pour it into the reservoir tank up to the "MAX" level. If it becomes necessary to repeatedly add coolant, your cooling system should be inspected by a NISSAN FORKLIFT dealer or other competent service shop.

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Changing engine coolant

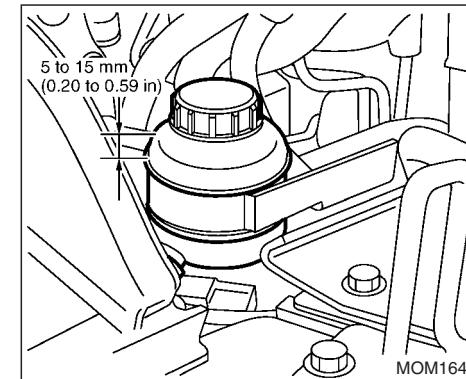
1. Open the radiator cap and drain cock to drain the coolant. Then flush the cooling system.
2. Close the drain cock securely.
3. Fill the radiator with new coolant up to the filler opening. Fill the reservoir tank up to the "MAX" level. Then put on the radiator cap.
4. Run the engine sufficiently.
5. Stop the engine and after it completely cools down, refill the coolant up to the radiator filler opening. Fill the reservoir tank up to the "MAX" level with coolant.

6. Check the drain cock for any sign of leakage.

WARNING:

To avoid the danger of being scalded, never attempt to change the coolant when the engine is hot.

Refer to page 42 for the proper mixing ratio of anti-freeze solution to cooling water.



Check the brake fluid level. Normal brake fluid level is within the area shown in the illustration.

WARNING:

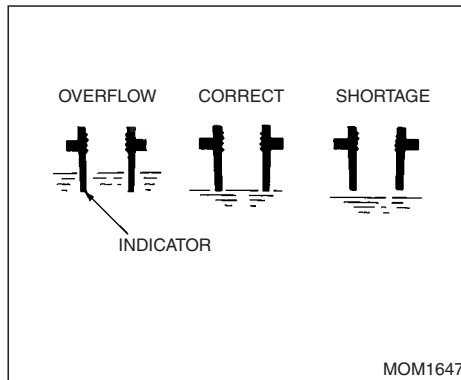
Use DOT3 (F.M.V.S.S. No. 116) brake fluid only.

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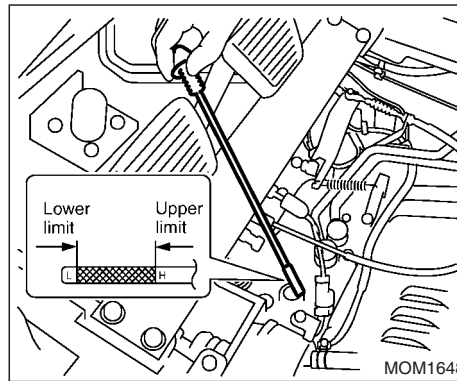


Battery fluid level

Check the fluid level in each battery cell.

If necessary, add only distilled water to bring the level to the indicated point. Do not overfill.

The battery surface should be clean and dry. Periodically apply a small amount of grease to each terminal to prevent corrosion formation.



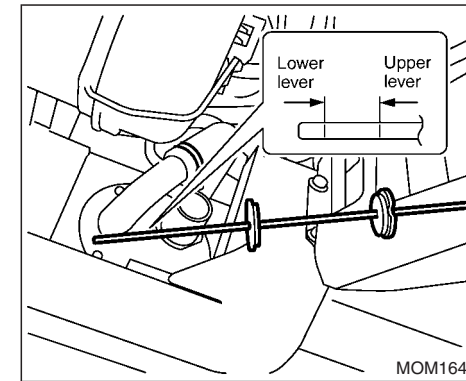
Automatic transmission oil level

Check the automatic transmission oil level.

The oil level gauge is accessible after opening the lid on the floorboard and removing the rubber mat.

The oil level should be between the upper and lower level marks on the gauge rod.

To check the oil level, park the lift truck on a level surface, run the engine with the transmission in Neutral and raise the A/T oil temperature to 30 to 70°C (86 to 158°F). Then stop the engine and read the oil level indicated on the gauge rod.



Hydraulic oil

Check the oil level in the hydraulic oil tank.

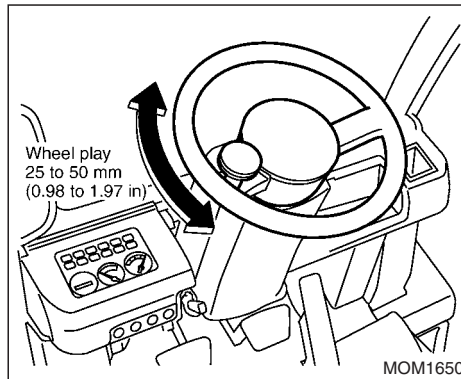
The oil level should be between the upper and lower level marks on the gauge rod.

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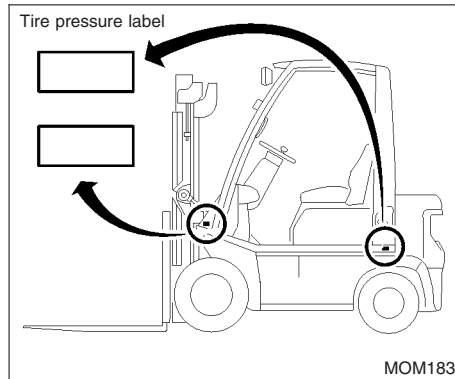
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Steering wheel

Turn the steering wheel to the right and left; a play in circumference of less than 10 mm (0.39 in) at idling is normal.

If there is excessive play or looseness, have the steering wheel adjusted by a NISSAN FORKLIFT dealer or other competent service shop.



Wheel and tire

Maintain the correct tire pressures by checking frequently with an accurate tire gauge.

Inflate tires to the correct pressure if necessary.

Tire pressure:

Tire	Tire pressure kPa (bar, kg/cm ² , psi)
STD	900 (9.0, 9.18, 131)
Industrial Pneumatic (OPT)	700 (7.0, 7.14, 102)
Radial (OPT)	1000 (10.0, 10.20, 145)

NOTE:

For radial tires special rims are required. Please consult your NISSAN FORKLIFT dealer.



WARNING:

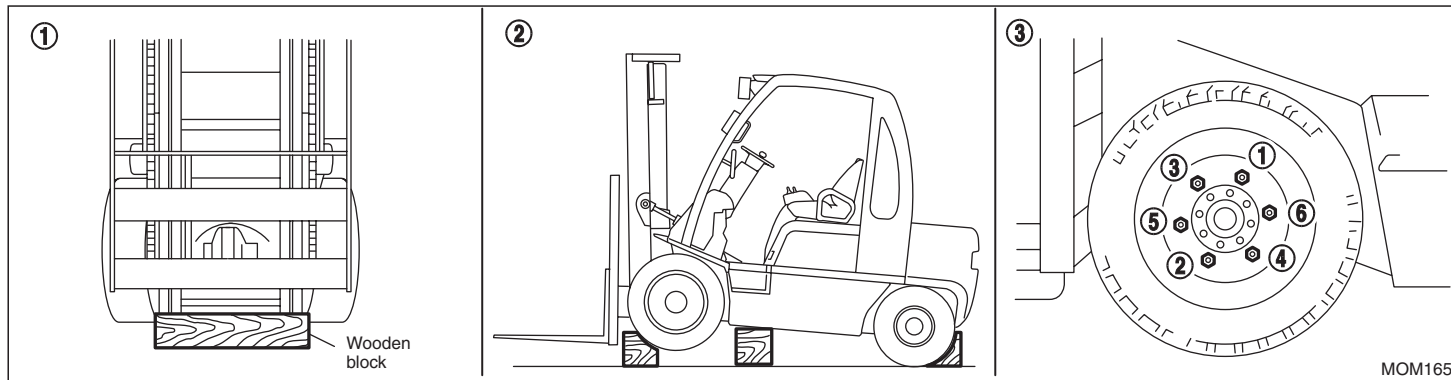
If the tire pressure is not correct, problems such as tires bursting or premature tire wear will result.

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Tire replacement

Front tire

1. Place the lift truck on a level and solid surface.
2. Start the engine and raise the carriage about 100 mm (3.94 in).
3. Place chocks behind the rear wheels to prevent movement of the lift truck.
4. Loosen the wheel nuts one or two turns each by turning them counterclockwise.
5. Tilt the mast fully backward, place a wooden block under each side of the outer mast.

6. Tilt the mast forward until the front tires are raised from the surface.



WARNING:

Do not remove wheel nuts until the front tires are raised from the ground.

7. Support the lift truck by putting additional wooden blocks under each side of the front-end frame as shown in the above illustration. Stop the engine.
8. Remove the wheel nuts and replace the front tire.



WARNING:

a. When removing the tire from the wheel

rim, do not remove rim set bolts and nuts before releasing air.

b. Make sure that the wooden blocks used to support the lift truck are solid and one-piece units.

c. Never get under the lift truck while it is supported only by the wooden blocks.

9. Reinstall the wheel nuts and temporarily tighten them in the sequence shown in the above illustration.

10. Start the engine and remove the wooden blocks from the underside of the frame.

11. Lower the lift truck slowly by tilting the mast fully backward. Remove the wooden block

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from the underside of the mast, and remove the chocks.

12.Tighten the wheel nuts to the specified torque in a crisscross fashion. Refer to the "Tightening torque" table on page 53.

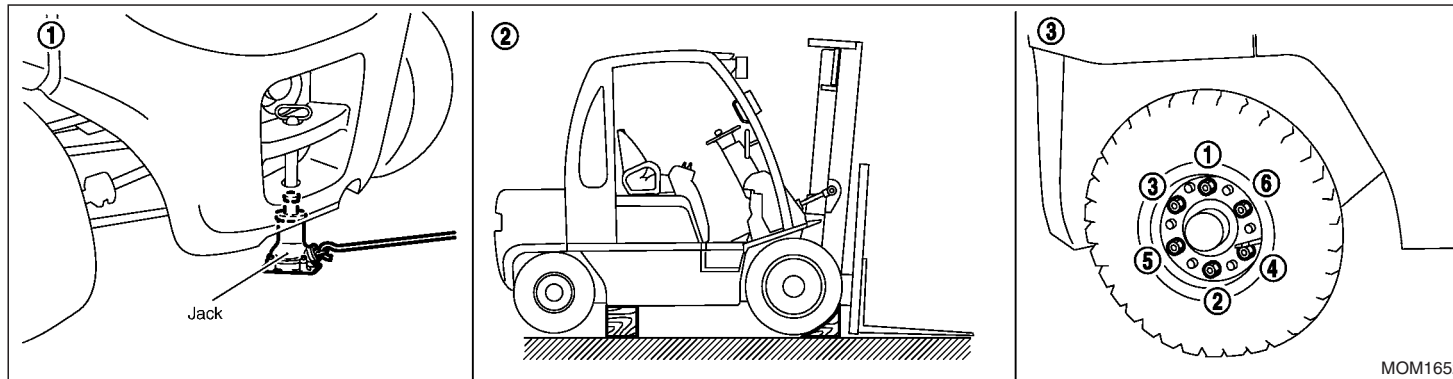
13.Adjust the tire pressures to the value specified in the "Tire pressure" table on page 48.

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Rear tire

NOTE:

To replace a tire, contact properly trained personnel, NISSAN FORKLIFT dealer or other competent service shop.

Pneumatic tire

1. Place the lift truck on a level and solid surface.
2. Apply the hand brake, and place chocks in front of the front tires to prevent the movement of the lift truck.
3. Place the jack under the cutout portion at the bottom of the counterweight, as shown in the above illustration.

Make sure that the jack has a capacity of at least 2/3 of the total weight of the lift truck as shown on the model number plate.

4. Loosen the wheel nuts one or two turns each by turning them counterclockwise.



WARNING:

Do not remove wheel nuts until the rear tires are raised from the ground.

5. Jack up the lift truck slowly until the rear tires clear the ground, and support the lift truck by putting wooden blocks under each side of the rear end frame as shown in the above illustration.

6. Remove the wheel nuts and replace the rear tire.



WARNING:

- a. When removing the tire from the wheel rim, do not remove rim set bolts and nuts before releasing air.
- b. Make sure that the wooden blocks used to support the lift truck are solid and one-piece units.
- c. Never get under the lift truck while it is supported only by the wooden blocks.
7. Reinstall the wheel nuts and temporarily tighten in the sequence shown in the above illustration.

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8. Remove the wooden blocks and lower the lift truck slowly until the rear wheel touches the ground. Then remove the chocks and the jack.
9. Tighten the wheel nuts to the specified torque in a crisscross fashion. Refer to the "Tightening torque" table on page 53.
10. Adjust the tire pressure to the value specified in the "Tire pressure" table on page 48.

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Tightening torque:

Unit: N·m (kg·m, ft·lb)

Item			Model	D01 series	D02 series	
				1.5 t, 1.75 t	2.0 t, 2.5 t	3.0 t, 3.2 t
Pneumatic-tire model	Front	Single tire	167 to 186 (17 to 19, 123 to 137)	246 to 294 (25 to 30, 181 to 216)	442 to 588 (45 to 60, 325 to 434)	
		Double tire	 167 to 186 (17 to 19, 123 to 137)*1	 246 to 294 (25 to 30, 181 to 216)*1	 540 to 686 (55 to 70, 398 to 506)*1	
			167 to 186 (17 to 19, 123 to 137)*3	246 to 294 (25 to 30, 181 to 216)*2	589 to 735 (60 to 75, 434 to 542)*2	
			79 to 98 (8 to 10, 58 to 72)*2	246 to 294 (25 to 30, 181 to 216)*3	344 to 441 (35 to 45, 254 to 325)*3	
	Rear		79 to 98 (8 to 10, 58 to 72)	167 to 186 (17 to 19, 123 to 137)		

 : Bolt

 : Nut

*1 : Inner wheel

*2 : Outer wheel nut

*3 : Hub nut (Outer hub)

Checking horn

Check the horn for proper operation.

Checking lights

Make sure that lights go on when switches are turned on.

Checking "LIFT-TILT" control lever

Increase the engine speed and check the "LIFT-TILT" control lever for proper operation in the following manner.

Manipulate the joystick lever or the mechanical control lever to insure that the forks are lifted, lowered, or tilted forward and backward properly.

Check the rollers for proper rotation.

Checking mast and forks

Check the mast and forks to insure that.

a) The forks are secured in their proper positions and have no crack or bending.

- Check the forks for cracks and binding.
- Check the mast for cracks and distortion.
- Check for oil leakage from cylinders and piping.
- Check the rollers for proper rotation.

b) No oil leakage occurs at and around the lift and tilt cylinders.

c) Checking the chain anchors and pins.

Checking chains

- Check the lift chains for cracks or broken links and pins.
- Check the chain anchors and pins for cracks, wears and damages.

Checking area around fuel tank

When performing daily care before operating the forklift, also check the area around the fuel tank.

- Check for fuel drops (gasoline or light oil) on the floor where the forklift is parked.
- Check for fuel leakage at the drain plug of the fuel tank (underside of the left frame).
- Check for fuel leakage where the fuel tank and fuel neck join (upper side of the left frame).
- Check for fuel leakage where the fuel gauge is mounted (upper side of the left frame).

If any of the above conditions are found, stop operating the forklift immediately and contact the nearest NISSAN FORKLIFT dealer or competent service facility.

Drain plug

Remove the drain plug before washing the inside of the fuel tank. To do this, turn the drain plug counterclockwise.

- When removing the drain plug, be careful not to lose the packing. Before installing the drain plug, be sure to install the packing.

Tightening torque:

25 to 39 N·m (2.5 to 4.0 kg-m, 18 to 28 ft-lb)

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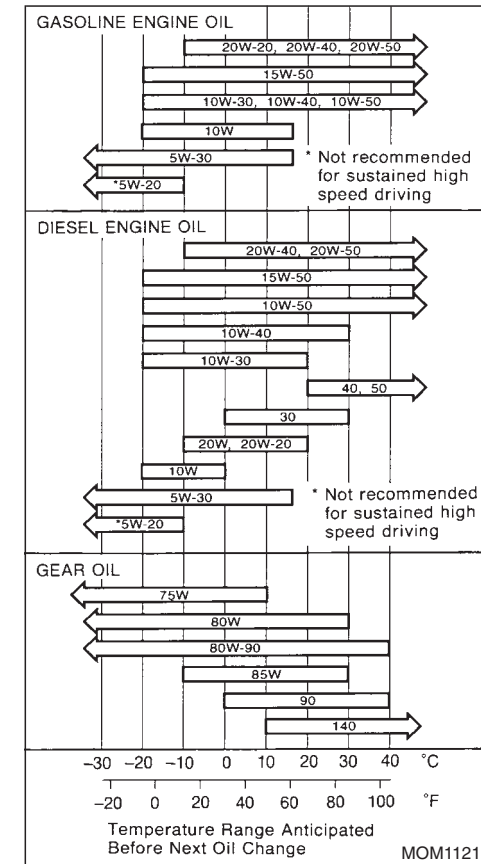
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MAINTENANCE

RECOMMENDED LUBRICANTS

Item		Specifications	Remarks
Engine oil	Gasoline	API SD or SE	Refer to Recommended SAE Viscosity Chart.
	Diesel	API CC or CD	
Gear oil	Transmission	API GL-4 or 5	Lithium soap base
	Differential	API GL-4 or 5	
Grease	Chassis	N.L.G.I. 1	Lithium soap base
	Wheel bearing	N.L.G.I. 2	
	Mast and chain guide bar	N.L.G.I. 2	
Power steering oil		Hydraulic oil SAE No. 10W	—
Hydraulic oil		Hydraulic oil I.S.O. VG32	Wear-proof oil
Automatic transmission (Torque converter) oil		Type DEXRON or M2C-33E or F	—
Brake fluid		DOT3 (F.M.V.S.S. No. 116)	F.M.V.S.S.: Federal Motor Vehicle Safety Standard
Anti-freeze		—	Permanent anti-freeze (Ethylene glycol base)

RECOMMENDED SAE VISCOSITY NUMBER

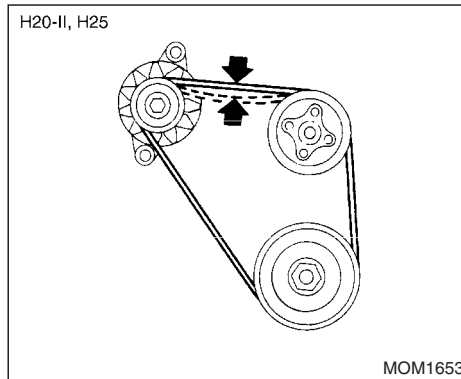


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ENGINE

Fan belt

Check the belt deflection by applying moderate thumb pressure at a point midway between the pulleys. If necessary, adjust the belt deflection.

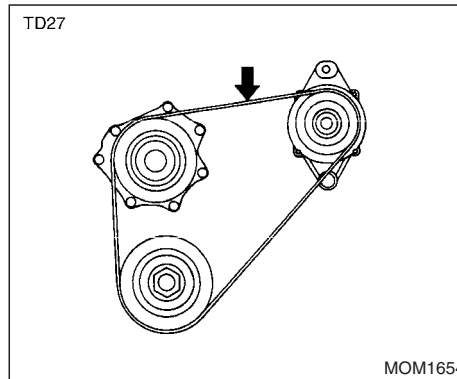
Fan belt deflection:

H20-II, H25

11 to 13 mm
(0.43 to 0.51 in)

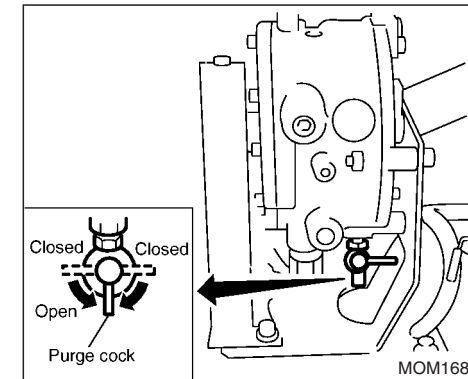
TD27

11 to 15 mm
(0.43 to 0.59 in)



WARNING:

- a. Be sure the engine is not running and the hand brake is applied securely.
- b. Keep the hands clean.



Draining of tar from the vaporizer (LPG vehicle)

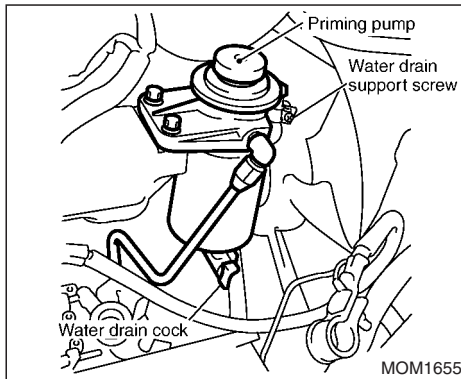
The vaporizer is an apparatus used during LPG operation to control and reduce fuel pressure within the LPG cylinder and regulate vaporization. The vaporization process produces tar (a thick, sticky liquid) which accumulates in the vaporizer. When tar accumulation becomes excessive, idling speed adjustment is adversely affected. Tar must be purged from the vaporizer at least once a month. The tar purging procedure should be performed when the engine is hot. Turn the key switch to the OFF position. Turn the purge cock to the fully open position. Use a rag to clear the tar from the vaporizer.

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WATER SEPARATOR

Draining water from water separator (Diesel engine)

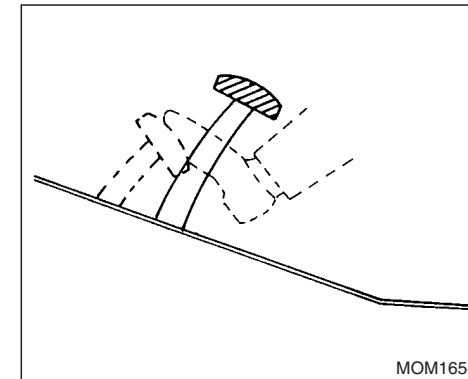
If the filter warning lamp lights while the engine is running, drain any water that is in the fuel filter. Proceed as follows:

1. Place a container under the fuel filter.
2. Loosen the water drain support screw and the water drain cock 4 to 5 turns to drain water.
3. After the water has been completely drained, tighten the water drain support screw and drain cock.

Air purge (Diesel engine)

When refilling empty fuel tank and/or draining water from water separator, purge the air out of fuel system. Proceed as follows:

Move the priming pump up and down until no further air-bleed comes out of the air purge screw.



CHASSIS AND BODY

Brake pedal

When the engine is running and the brake pedal is fully depressed, the distance between the upper surface of the pedal pad and floor board should be 60 mm (2.36 in) or more.

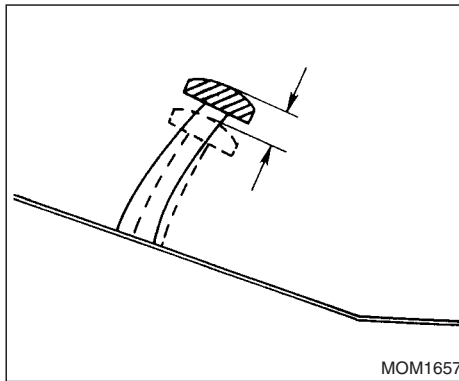
When this distance approaches the prescribed limit value, have the brake adjusted by a NISSAN FORKLIFT dealer or other competent service shop.

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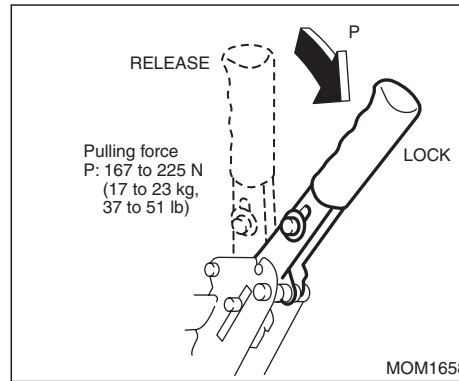


Pedal free play

The standard free play of the pedal is as follows:

Unit: mm (in)

Model	All models
Brake pedal	1 to 3 (0.04 to 0.12)

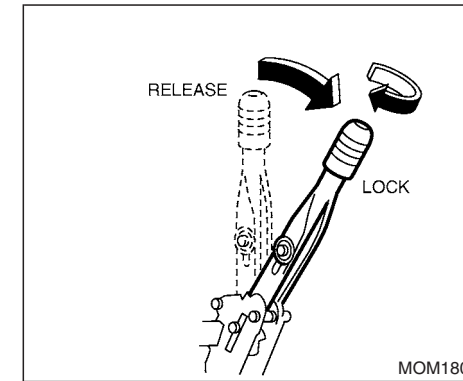


Hand brake

Make sure the hand brake works properly when pulled and then returns to its original position.

Pulling force at gripping position:

167 to 225 N
(17 to 23 kg, 37 to 51 lb)



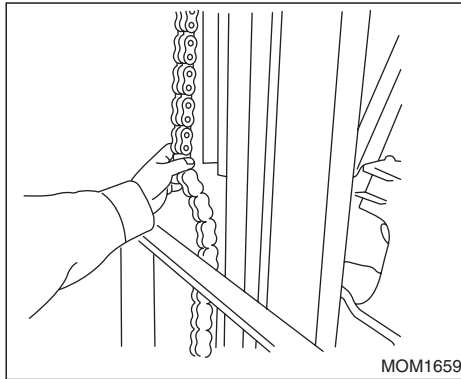
To increase the pulling force of the hand brake, turn the grip clockwise.
To decrease the pulling force, turn the grip counterclockwise.

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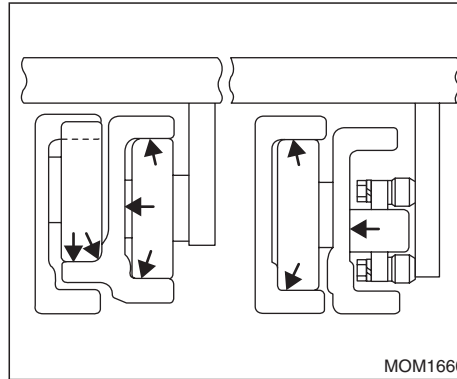
Lift chain

Check lift chain tension periodically. Set the fork level on the ground and depress the mid-point of the lift chain with the finger.

Deflection:

25 to 35 mm (0.98 to 1.38 in)

If the deflection is not within the specifications, have the chain adjusted by a NISSAN FORKLIFT dealer or other competent service shop.



Lubrication points

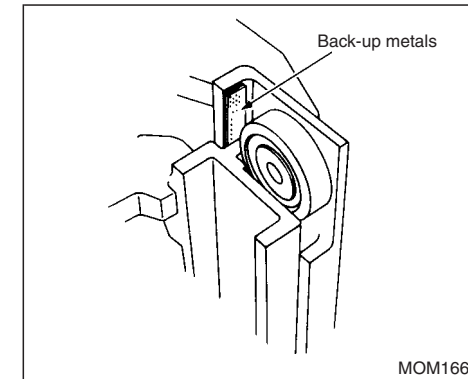
Lubricate the following points periodically in accordance with the Periodic Maintenance and Lubrication Schedule chart.

Mast

Apply a coat of grease to the thrust metals and back-up metals.

NOTE:

a) The lubrication interval will vary with working conditions. During months in which working conditions are severe, it will be necessary to grease the parts frequently.



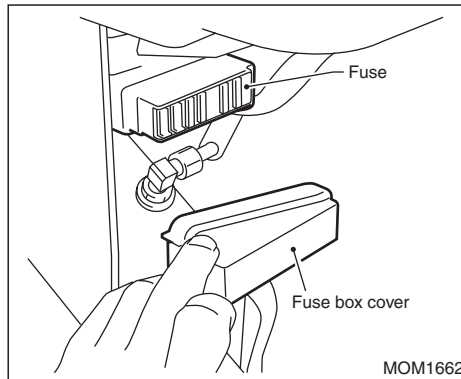
b) When forklifts are operated, apply a coat of grease to the contact surface of the lift roller and inner mast or outer mast.

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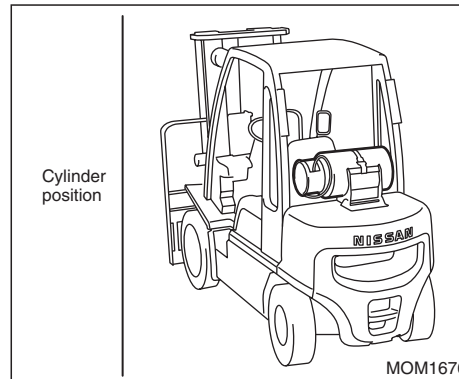
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Fuses

The fuse box is installed to the left side of the instrument panel under the combination meter.

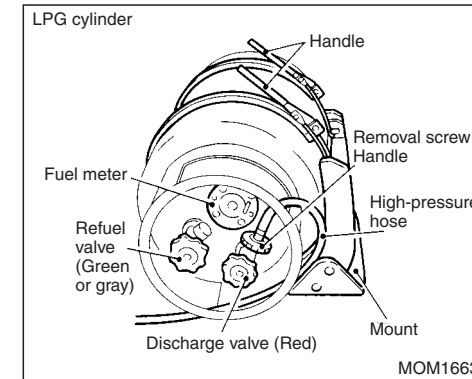
Before replacing any faulty fuse, check and correct the cause of problem. Use a fuse of the specified rating which is clearly shown on the fuse cover.



LPG model

Cylinder size	Vehicle classification	Cylinder			
		Capacity	Weight	Diameter	Length
1.0 to 3.2 ton (2,000 to 6,400 lb)		36ℓ (7-7/8 Imp gal)	15 kg (33 lb)	320 mm (12.60 in)	660 mm (25.98 in)

The items in the above table are based on NISSAN FORKLIFT standards.



LPG cylinder replacement

⚠ WARNING:

- Only a person who is familiar with replacing LPG should replace the cylinder.
- Replace the cylinder in a well ventilated area.
- While replacing the cylinder, never use or get close to fire.
- Use LPG cylinders with the capacity shown in the table.

The cylinder is installed to the vehicle with the discharge valve on the left side when viewed from the rear of the vehicle. The high-pressure

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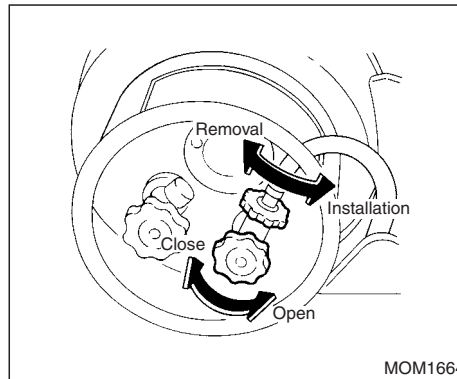
hose is connected to the discharge valve with a threaded screw type connector or a quick-coupling device. The LPG cylinder replacement procedure with the thread screw type device is described below.

**LPG cylinder replacement procedure
Swing-back type LPG cylinder
mount**

1. Turn the discharge valve slowly at the cylinder side to the right (clockwise) to fully close the valve. Allow the engine to run until it stops naturally (fuel exhausted). Turn the key switch to the OFF position.

NOTE:

Do not touch the refuel valve (green or gray) on the LPG cylinder.



2. Turn the high-pressure valve removal screw handle to the left (counterclockwise when looking directly at the front of the valve) and disconnect the high-pressure hose. Take care not to damage the packing around the tip of the hose.

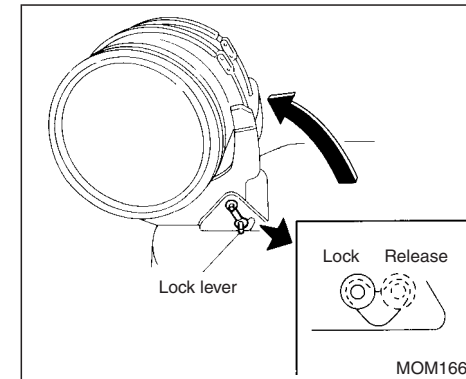
3. Go to the other side of the vehicle.



WARNING:

Please wear gloves in order to prevent any propane vapor from contacting the skin.

4. Move the lock lever to the release position. Tilt the cylinder toward the rear of the vehicle.



5. Loosen the handle and release it to allow the cylinder to drop. Install the new cylinder in the reverse order of removal.



WARNING:

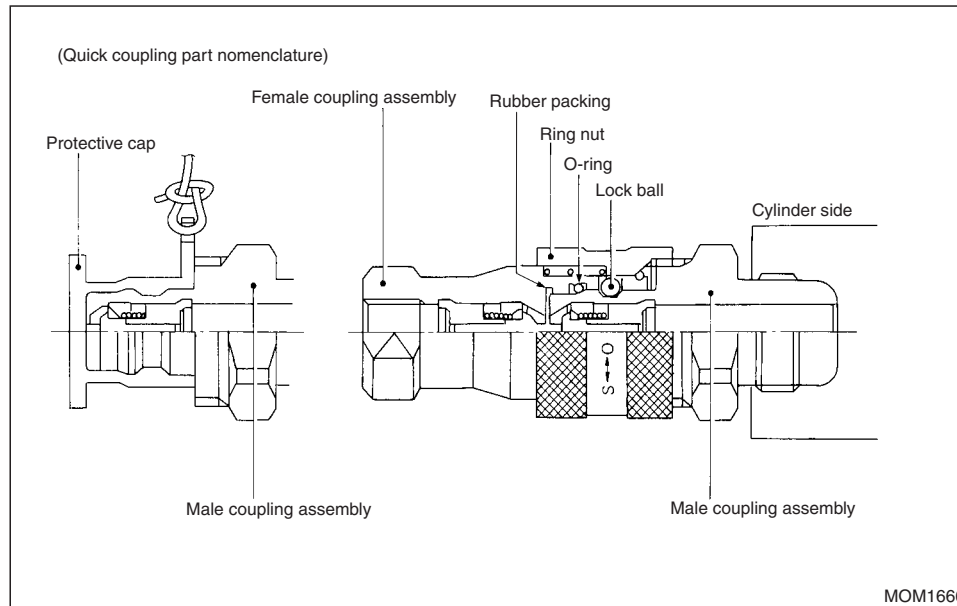
- **Make sure the high pressure hose is free from twists after installation.**
- **Make sure the lock lever is locked securely.**

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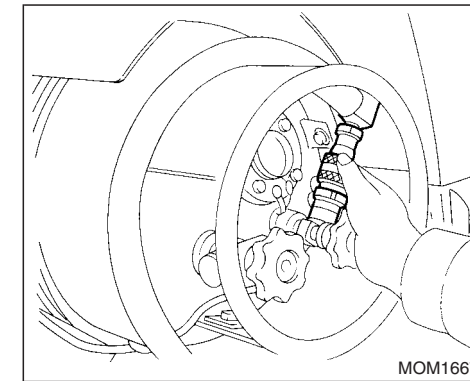


● Cylinder replacement procedure with the quick coupling

- (1) Turn the discharge valve (colored red) at the cylinder side to the right until the valve is completely closed.
Wait until the engine stops naturally (runs out of fuel). Turn the key switch to the OFF position.

NOTE:

Do not operate the replenishment valve (green or gray color).



- (2) Turn the quick coupling ring nut to the left (counterclockwise when viewed from the hose). Turn the quick coupling to the left (when viewed from the discharge valve) and pull the hose and coupling free of the assembly.

The symbol (S—O) is stamped on the ring nut. (S) indicates the tightening direction. (O) indicates the loosening direction.

NOTE:

- **Do not strike the coupling with a mallet or similar object during the removal procedure. Doing so can result in coupling distortion and other damage.**
- **Be sure to install the protective cap to**

the male assembly side cap ring after cylinder (container) removal.

Follow Steps 3 - 5 in the previous item "LPG cylinder replacement procedure" to complete replacement.

NOTE:

Coupling connection precautions

- **Inspect the male assembly side for dust or other foreign material. Clean the assembly if required. If the female side assembly O-ring is dry, apply a small amount of oil or grease to it so that it rotates smoothly.**
- **Take care not to damage the O-ring side facing the male assembly during the connection procedure.**
- **Connect the lock ball. Check that the ring nut has returned to the specified position. Turn the ring nut to the right to thread it into position.**

After replacing with a new cylinder, proceed as follows:

1. Slowly open the discharge valve to the full-open position.
(Do not open the discharge valve quickly; this may activate the pressure check valve so that gas can not flow properly.)

Place soapy water over the high-pressure hose connection to make sure no gas leaks occur.

2. After making sure there are no gas leaks, turn the key switch to start the engine. If the engine does not start, the pressure check valve may activate to hamper the gas flow. In this case, turn the key switch "OFF", close the discharge valve, slowly open it and repeat step 1 above.
3. If abnormalities such as gas leaks are noted, close the discharge valve and have your LP gas system checked at an authorized service facility.

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PERIODIC MAINTENANCE AND LUBRICATION SCHEDULE

Before delivery of your new Forklift, your Dealer provides a pre-delivery inspection and adjustment service specified by the factory and designed to ensure satisfactory performance.

The following tables list the servicing required to keep your Forklift operating at peak mechanical condition, and should be attended to as indicated, preferably by an authorized NISSAN FORKLIFT dealer.

MAINTENANCE OPERATION		MAINTENANCE INTERVAL											
Periodic maintenance should be performed after specified intervals have elapsed in months or hours, whichever comes first.	Months	1	2	3	4	5	6	7	8	9	10	11	12
	Hundreds of hours	2	4	6	8	10	12	14	16	18	20	22	24
ENGINE COMPARTMENT MAINTENANCE (EXCEPT LPG FUEL SYSTEM)													
1. Intake & exhaust valve clearances		A		A			A			A			A
2. Drive belt tension		I	I	I	I	I	I	I	I	I	I	I	I
3. Cylinder head bolts & manifold nuts		T											
4. Radiator outside	(1)			C			C			C			C
5. Engine oil	(1)	R	R	R	R	R	R	R	R	R	R	R	R
6. Oil filter	(1)	R		R			R			R			R
7. Engine coolant (L.L.C.)													R
8. Fuel strainer element (H20-II, H25)	(1)	C		C			C			C			R
Water separator (TD27)		D		D			D			D			R
9. Air cleaner element	(1)	C	C	C	C	C	R	C	C	C	C	C	R
10. Engine idle rpm		A	A	A	A	A	A	A	A	A	A	A	A
11. Ignition timing (Gasoline)		A	A	A	A	A	A	A	A	A	A	A	A
12. Spark plugs (Gasoline)		I	I	I	I	I	I	I	I	I	I	I	I
13. Nozzles (Diesel)	(2)						I						
14. Distributor point, cap & rotor (Gasoline)		I	I	I	I	I	I	I	I	I	I	I	I
Distributor inside (IC ignition system)	(1)												C
15. P.C.V. valve (Gasoline)	(1)			I			I			I			I
16. P.C.V. hoses (Gasoline)				I			I			I			I
17. Battery specific gravity							I						I

NOTE: (1) Under dusty or other dirty operating conditions, more frequent maintenance is necessary.

(2) If engine power decreases, black exhaust smoke is emitted or engine noise increases before the maintenance period comes, check and, if necessary, adjust the fuel injection nozzle starting pressure and the fuel spray pattern.

Abbreviations: I = Inspect. Correct or replace if necessary. L = Lubricate R = Replace

A = Adjust C = Clean D = Drain T = Retighten

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MAINTENANCE OPERATION		MAINTENANCE INTERVAL											
Periodic maintenance should be performed after specified intervals have elapsed in months or hours, whichever comes first.	Months	1	2	3	4	5	6	7	8	9	10	11	12
	Hundreds of hours	2	4	6	8	10	12	14	16	18	20	22	24
ENGINE COMPARTMENT MAINTENANCE (LPG FUEL SYSTEM)													
1.	Piping or pipe connector portion for gas leakage	I	I	I	I	I	I	I	I	I	I	I	I
2.	Tar in vaporizer	D	D	D	D	D	D	D	D	D	D	D	D
3.	Piping or pipe connector portion for damage	I	I	I	I	I	I	I	I	I	I	I	I
4.	Mounting bracket of LPG cylinder for looseness or damage	I	I	I	I	I	I	I	I	I	I	I	I
5.	Piping or pipe connector portion for gas leakage (1)												
6.	Filter for LPG			C			C			C			R

NOTE: (1) At time of LPG cylinder replacement, inspect pipe connectors for gas leakage with soapy water.

Abbreviations: I = Inspect. Correct or replace if necessary.

D = Drain C = Clean R = Replace

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MAINTENANCE OPERATION			MAINTENANCE INTERVAL											
Periodic maintenance should be performed after specified intervals have elapsed in months or hours, whichever comes first.		Months	1	2	3	4	5	6	7	8	9	10	11	12
		Hundreds of hours	2	4	6	8	10	12	14	16	18	20	22	24
CHASSIS & BODY MAINTENANCE														
1.	Brake, inching brake & clutch pedal free play		I		I			I			I			
2.	Hand brake operation		I		I			I			I			
3.	Brake booster operation (D02 series only)													I
4.	Lift chain tension		I		I			I			I			I
5.	Carriage rollers for damage				I			I			I			I
6.	Mast operation		I		I			I			I			
7.	Mast rollers for damage							I						I
8.	Lift & tilt cylinder fitting		I	I	I	I	I	I	I	I	I	I	I	I
9.	Lift & tilt cylinder operation		I		I			I			I			I
10.	Hydraulic oil pump operation		I		I			I			I			I
11.	Torque converter oil		(1)					R						R
12.	Torque converter suction filter							C						C
13.	Hydraulic oil		(1)					R						R
14.	Hydraulic oil filter		(1)					R						R
15.	Differential oil			I		I		I			I			R
16.	Transmission oil			I		I		I			I			R
17.	Brake fluid													R
18.	Wheel bearing grease													R
19.	Lift chain		(1)	L	L	L	L	L	L	L	L	L	L	L
20.	Mast support bushing					L		L			L			L
21.	All links of chassis					L		L			L			L
22.	Back-up metals			L	L	L	L	L	L	L	L	L	L	L
23.	Thrust metals			L	L	L	L	L	L	L	L	L	L	L
24.	Mast rail			L	L	L	L	L	L	L	L	L	L	L
25.	Tilt cylinder pin					L		L			L			L
26.	Hose (Brake hose/P.S. hose/Fuel hose)			I	I	I	I	I	I	I	I	I	I	I
27.	Fork arms (cracks, wear, damage)							I						I

NOTE: (1) Under dusty or other dirty operating conditions, more frequent maintenance is necessary.

Abbreviations: I = Inspect. Correct or replace if necessary. L = Lubricate C = Clean R = Replace

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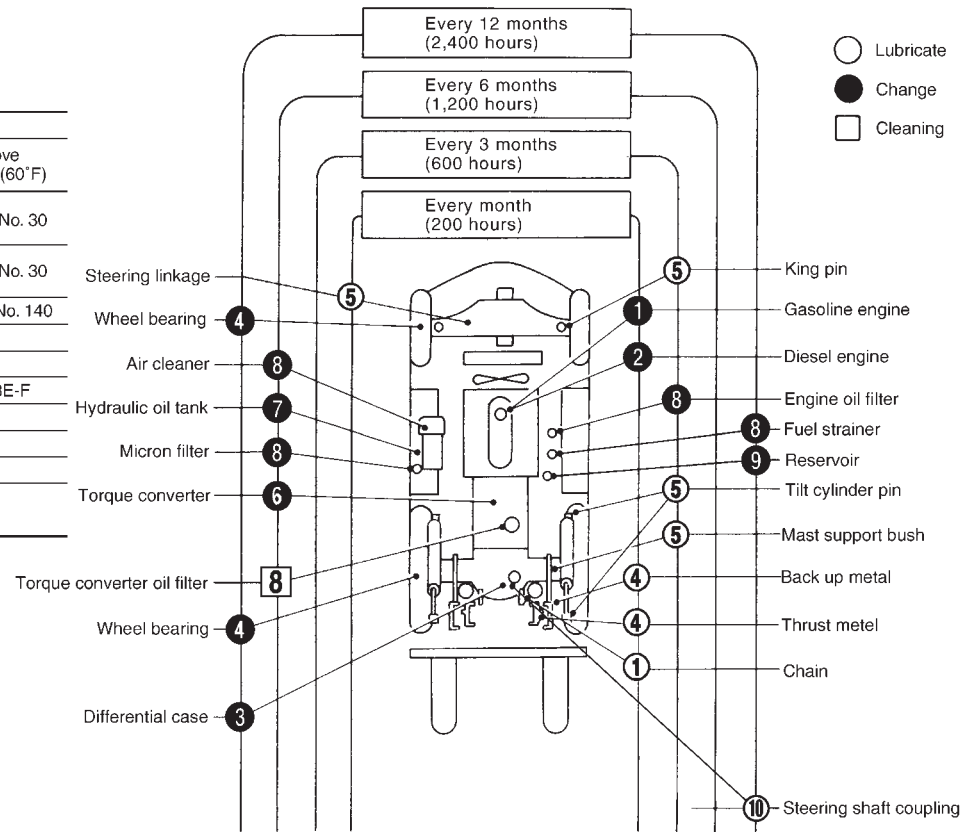
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LUBRICATION CHART

Item	Suitable oil	
	Below 16°C (60°F)	Above 16°C (60°F)
① Gasoline engine oil	SAE No. 20	SAE No. 30
② Diesel engine oil	SAE No. 20	SAE No. 30
③ Gear oil	SAE No. 90	SAE No. 140
④ W.B. grease	NLGI No. 2	
⑤ Chassis grease	NLGI No. 1	
⑥ Tor. con. oil	Dexron or M2C-33E-F	
⑦ Hyd. oil	I.S.O. VG32	
⑧ Replace or clean element		
⑨ Brake fluid	FMVSS Dot 3	
⑩ Grease for heavy load	NEM5065 NLD No.2	



MOM1670

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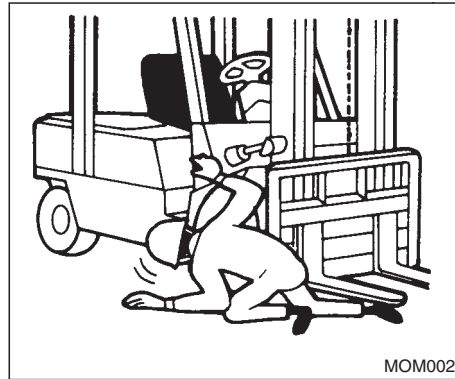
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PUTTING FORKLIFT IN STORAGE

Putting the forklift in storage involves storing the forklift at the end of each working day or storing the forklift over a long period of time.

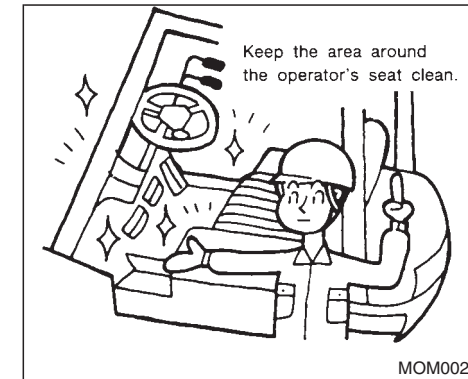
Be sure to observe the precautions for forklift storage.



DAILY STORAGE

At the end of the working day, check the truck. Always park it in the designated location. Put stopper under the tires to prevent the truck from moving by itself. Check the forklift for water and oil leakages, and other abnormalities.

Keep the body and areas surrounding the driver seat clean. Make it a habit to always keep the truck clean.



WARNING:

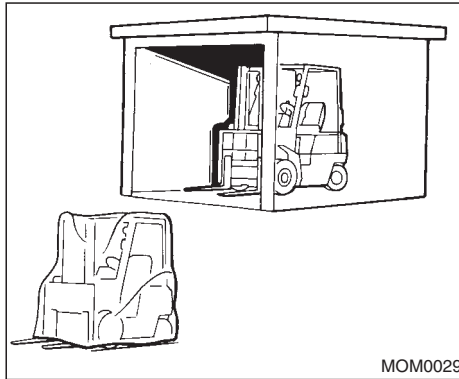
As soon as an abnormality is detected, notify the person responsible for maintenance and take the proper remedial actions or request your nearest NISSAN FORKLIFT dealer carry out repairs. Do not operate the truck until the abnormality is corrected.

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Storage for long period

- Place truck on a level ground.
- Disconnect all cables from battery terminals to minimize self-discharging. It is better to remove and store battery in a cool and dry place.
- Keep tires inflated at normal air pressure.
- Drain cooling system thoroughly and refill system before operation. In case of being filled with long life coolant, it is not necessary to drain cooling system.
- Do not expose to direct sunrays; remove the LPG cylinder from the truck. (Refer to "LPG cylinder replacement" on page 63.)

When the operation of the forklift is completely suspended for a given period of time, take the following measures and store the truck in a dry area.

Pre-storage servicing

1. Lubricate the forklift as per "Lubrication Schedule". Change the oil, and coat all exposed areas of hydraulic cylinders with corrosion resistant grease.
2. Completely remove cooling water or fill the radiator with antifreeze to prevent the engine from freezing.
3. In order to protect the inner walls of the cylinders against corrosion, remove the spark plugs from gasoline engines and injection nozzles from diesel engines, and spray a small amount of oil into the cylinders. Then turn the motor over several times with the starter so that oil is distributed throughout the cylinders. Finally, replace the plugs or injection nozzles.
4. Remove the battery, charge it, and store it indoors in low fire risk areas.
5. When storing gasoline-engine forklifts [including dual-fuel (LPG) forklifts] for a long period of time, idle the engine until all the gasoline is used up. Otherwise, the remaining gasoline will decompose and turn into a

rubbery substance, making it very difficult to start the engine.

Servicing the forklift in storage

1. Periodically check the specific gravity and level of the battery fluid. Charge and replenish as necessary.
2. Check various sections of the forklift for stains or corrosion. Clean such areas and coat with a corrosion preventive agent.

NOTE:

- **When the forklift cannot be stored indoors, park it on level ground. Cover with a waterproof sheet or protective covering.**
- **When storing for a long period of time, be sure to consult your nearest NISSAN FORKLIFT dealer.**

Post-storage servicing

1. Remove corrosion resistant grease coated on the exposed areas of the hydraulic cylinders.
2. Check lubrication of all sections of the truck and cooling water level. If there are impurities or the level is low, change the coolant or top up to the prescribed level.
3. Check the battery fluid level and specific

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LOAD CHART

gravity. Be sure to completely charge the battery before putting it back on the truck. When connecting the battery cables, make sure the positive and negative terminals are connected correctly.

4. In order to lubricate the inner walls of the cylinders, remove the spark plugs from gasoline engines and the injection nozzles from diesel engines, and spray a small amount of engine oil into the cylinders. Then turn the motor over several times with the starter to thoroughly distribute oil in the cylinders, and replace the plugs or injection nozzles.
5. As soon as the engine is started, make sure the oil pressure warning lamp goes off, and continue to warm up the engine so that the various sections of the engine are sufficiently worked in. Also check the instruments, indicating lamps, and warning lamps to see that they are operating properly.
6. Follow "DAILY CARE" on page 43.

NISSAN		CE
MODEL VARIATION		KW
CHASSIS NO.		
MAST	TIRE	
ATTACHMENT		
TRUCK WEIGHT	KG	
CAPACITY		
WITH MAST VERTICAL		
	MAX. LIFT HEIGHT	mm
		KG
LOAD CENTER	mm	
MANUFACTURED BY NISSAN FORKLIFT (EUROPE) S.A. NISSAN MOTOR CO. LTD. GALLÉ, 80100 GRIVILLE, 59110 NORD (NORTH) SPAIN		

MOM1830

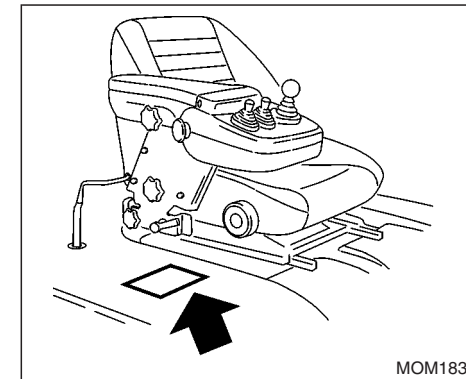
LOAD CHART

For countries where trucks with the CE marking must be used

The load chart, attached to the top panel, indicates all necessary information regarding the type of attachments, lifting capacity, etc.

**WARNING:**

Do not exceed the rated capacity of the lift truck.



Refer to the "LOAD CHART LABEL" attached to the top panel.

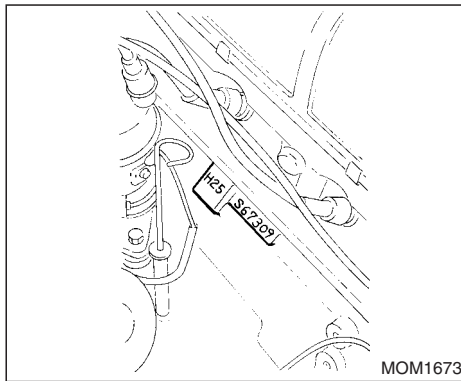
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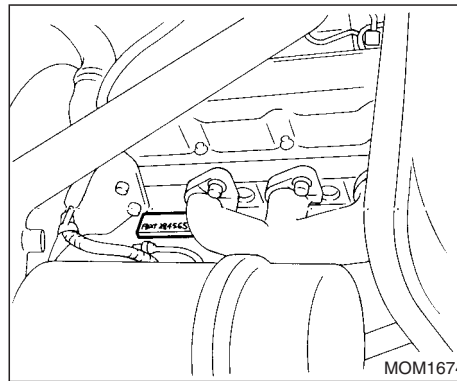
IDENTIFICATION NUMBERS



ENGINE SERIAL NUMBER

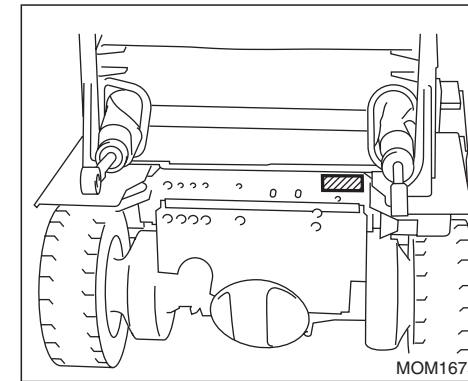
Gasoline engine

H20-II	—	SXXXXX	
H25	—	SXXXXX	
			Serial number
			Engine type



Diesel engine

TD27	XXXXXX	
		Serial number
		Engine type



CHASSIS SERIAL NUMBER

PD01	—	XXXXXX	
FD01	—	XXXXXX	
UD02	—	XXXXXX	
UGD02	—	XXXXXX	
FD02	—	XXXXXX	
FGD02	—	XXXXXX	
			Chassis serial number
			Lift truck model

The number is stamped on the left side of the frame.

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SPECIFICATIONS

D01 SERIES

PERFORMANCE

Item				Model	1.5 ton (3,000 lb)		
				H20-II	TD27		
					STD		Low Noise Option
Load capacity				kg (lb)	1,500 (3,000)	1,500 (3,000)	
Load center				mm (in)	500 (20)	500 (20)	
Maximum fork height				mm (in)	3,000 (118.1)	3,000 (118.1)	
Tilt angle (Forward/Backward)				degree	6/12	6/12	
Lifting/ lowering speed	2W	Lifting (F/L / N/L)	mm/sec (FPM)	580 (114.2)/650 (128.0)	640 (126.0)/690 (135.9)		540 (106.3)/580 (114.2)
	2W	Lowering (F/L / N/L)	mm/sec (FPM)	500 (98.5)/500 (98.5)	500 (98.5)/500 (98.5)		
	2F	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)		500 (98.5)/540 (106.3)
	2F	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/310 (61.0)	480 (94.5)/310 (61.0)		
	3F	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)		500 (98.5)/540 (106.3)
	3F	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/370 (72.9)	480 (94.5)/370 (72.9)		
	3V	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)		500 (98.5)/540 (106.3)
	3V	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/370 (72.9)	480 (94.5)/370 (72.9)		
Free lift				mm (in)	155 (6.1)	155 (6.1)	
Min. turning radius (Outside)				mm (in)	1,970 (77.6)	1,970 (77.6)	
Min. turning radius (Inside)				mm (in)	135 (5.3)	135 (5.3)	
Travel speed	Forward (N/L)		km/h (MPH)	19 (12)	18 (11)		17 (10.5)
	Reverse (N/L)		km/h (MPH)	19 (12)	18 (11)		17 (10.5)
Drawbar pull	F/L stall		N (kg, lb)	19,600 (1,999, 4,406)	20,580 (2,099, 4,626)		19,140 (1,952, 4,299)
	No load		N (kg, lb)	9,064 (925, 2,038)	9,898 (1,010, 2,225)		9,300 (948, 2,089)
Grade- ability	F/L stall		%	53	53		50
	No load		%	23	23		21

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Item			Model	1.75 ton (3,500 lb)		
			H20-II	TD27		
				STD	Low Noise Option	
Load capacity			kg (lb)	1,750 (3,500)	1,750 (3,500)	
Load center			mm (in)	500 (20)	500 (20)	
Maximum fork height			mm (in)	3,000 (118.1)	3,000 (118.1)	
Tilt angle (Forward/Backward)			degree	6/12	6/12	
Lifting/ lowering speed	2W	Lifting (F/L / N/L)	mm/sec (FPM)	580 (114.2)/650 (128.0)	640 (126.0)/690 (135.9)	540 (106.3)/580 (114.2)
	2W	Lowering (F/L / N/L)	mm/sec (FPM)	500 (98.5)/500 (98.5)	500 (98.5)/500 (98.5)	
	2F	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)	500 (98.5)/540 (106.3)
	2F	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/310 (61.0)	480 (94.5)/310 (61.0)	
	3F	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)	500 (98.5)/540 (106.3)
	3F	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/370 (72.9)	480 (94.5)/370 (72.9)	
	3V	Lifting (F/L / N/L)	mm/sec (FPM)	530 (104.4)/590 (116.2)	590 (116.2)/640 (126.0)	500 (98.5)/540 (106.3)
	3V	Lowering (F/L / N/L)	mm/sec (FPM)	480 (94.5)/370 (72.9)	480 (94.5)/370 (72.9)	
Free lift			mm (in)	155 (6.1)	155 (6.1)	
Min. turning radius (Outside)			mm (in)	2,000 (78.7)	2,000 (78.7)	
Min. turning radius (Inside)			mm (in)	135 (5.3)	135 (5.3)	
Travel speed	Forward (N/L)		km/h (MPH)	19 (12)	18 (11)	17 (10.5)
	Reverse (N/L)		km/h (MPH)	19 (12)	18 (11)	17 (10.5)
Drawbar pull	F/L stall		N (kg, lb)	19,600 (1,999, 4,406)	20,580 (2,099, 4,626)	19,140 (1,952, 4,299)
	No load		N (kg, lb)	9,064 (925, 2,038)	9,898 (1,010, 2,225)	9,300 (948, 2,089)
Grade- ability	F/L stall		%	47	49	46
	No load		%	20	20	18

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DIMENSIONS

Item		Model	1.5 ton (3,000 lb)		1.75 ton (3,500 lb)	
			H20-II	TD27	H20-II	TD27
Overall length (without fork)		mm (in)	2,260 (89.0)	2,260 (89.0)	2,300 (90.6)	2,300 (90.6)
Overall width	Single	mm (in)	1,080 (42.5)	1,080 (42.5)	1,080 (42.5)	1,080 (42.5)
	SPL double	mm (in)	1,480 (58.3)	1,480 (58.3)	1,480 (58.3)	1,480 (58.3)
Overall height	OHG	mm (in)	2,115 (83.3)	2,115 (83.3)	2,115 (83.3)	2,115 (83.3)
	Mast (Lowered)	mm (in)	1,995 (78.5)	1,995 (78.5)	1,995 (78.5)	1,995 (78.5)
	MAST (Extended) with backrest	mm (in)	3,945 (155.3)	3,945 (155.3)	3,945 (155.3)	3,945 (155.3)
Front tread	Single	mm (in)	890 (35.0)	890 (35.0)	890 (35.0)	890 (35.0)
	SPL double	mm (in)	1,095 (43.1)	1,095 (43.1)	1,095 (43.1)	1,095 (43.1)
Rear tread		mm (in)	900 (35.4)	900 (35.4)	900 (35.4)	900 (35.4)
Wheelbase		mm (in)	1,415 (55.7)	1,415 (55.7)	1,415 (55.7)	1,415 (55.7)
Overhang	Front	mm (in)	400 (15.7)	400 (15.7)	405 (15.9)	405 (15.9)
	Rear	mm (in)	445 (17.5)	445 (17.5)	480 (18.9)	480 (18.9)
Fork length		mm (in)	1,100 (43.3)	1,100 (43.3)	1,100 (43.3)	1,100 (43.3)
Fork (width x thickness)		mm (in)	100 (3.9) x 35 (1.4)	100 (3.9) x 35 (1.4)	100 (3.9) x 40 (1.6)	100 (3.9) x 40 (1.6)
Ground clearance	under mast	mm (in)	115 (4.5)	115 (4.5)	115 (4.5)	115 (4.5)
	under frame	mm (in)	145 (5.7)	145 (5.7)	145 (5.7)	145 (5.7)
	under power unit	mm (in)	140 (5.5)	140 (5.5)	140 (5.5)	140 (5.5)

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D02 SERIES PERFORMANCE

Item				Model			2.0 ton (4,000 lb)			2.5 ton (5,000 lb)		
							H25	TD27		H25	TD27	
								STD	Low Noise Option		STD	Low Noise Option
Load capacity				kg (lb)			2,000 (4,000)	2,000 (4,000)		2,500 (5,000)	2,500 (5,000)	
Load center				mm (in)			500 (20)	500 (20)		500 (20)	500 (20)	
Maximum fork height				mm (in)			3,000 (118.1)	3,000 (118.1)		3,000 (118.1)	3,000 (118.1)	
Tilt angle (Forward/Backward)				degree			6/12	6/12		6/12	6/12	
Lifting/ lowering speed	2W	Lifting (F/L / N/L)	mm/sec (FPM)				620 (122.1)/ 700 (137.8)	640 (126.0)/ 690 (135.9)	540 (106.3)/ 580 (114.2)	620 (122.1)/ 700 (137.8)	640 (126.0)/ 690 (135.9)	540 (106.3)/ 580 (114.2)
	2W	Lowering (F/L / N/L)	mm/sec (FPM)				500 (98.5)/ 500 (98.5)	500 (98.5)/500 (98.5)		500 (98.5)/ 500 (98.5)	500 (98.5)/500 (98.5)	
	2F	Lifting (F/L / N/L)	mm/sec (FPM)				590 (116.2)/ 670 (131.9)	610 (120.1)/ 660 (130.0)	520 (102.4)/ 560 (110.2)	590 (116.2)/ 670 (131.9)	610 (120.1)/ 660 (130.0)	520 (102.4)/ 560 (110.2)
	2F	Lowering (F/L / N/L)	mm/sec (FPM)				480 (94.5)/ 300 (59.1)	480 (94.5)/300 (59.1)		480 (94.5)/ 300 (59.1)	480 (94.5)/300 (59.1)	
	3F	Lifting (F/L / N/L)	mm/sec (FPM)				590 (116.2)/ 660 (130.0)	600 (118.1)/ 650 (128.0)	510 (100.4)/ 550 (108.3)	590 (116.2)/ 660 (130.0)	600 (118.1)/ 650 (128.0)	510 (100.4)/ 550 (108.3)
	3F	Lowering (F/L / N/L)	mm/sec (FPM)				480 (94.5)/ 330 (65.0)	480 (94.5)/330 (65.0)		480 (94.5)/ 330 (65.0)	480 (94.5)/330 (65.0)	
	3V	Lifting (F/L / N/L)	mm/sec (FPM)				580 (114.2)/ 650 (128.0)	590 (116.2)/ 640 (126.0)	500 (98.5)/ 540 (106.3)	580 (114.2)/ 650 (128.0)	590 (116.2)/ 640 (126.0)	500 (98.5)/ 540 (106.3)
	3V	Lowering (F/L / N/L)	mm/sec (FPM)				470 (92.6)/ 320 (63.0)	470 (92.6)/320 (63.0)		470 (92.6)/ 320 (63.0)	470 (92.6)/320 (63.0)	

Note *: 3.200 kg on 2W, 3.100 kg on 2F, 3F or 3V.

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Item				Model			3.0 ton (6,000 lb)			3,2 ton (6,400 lb)		
							H25	TD27		H25	TD27	
								STD	Low Noise Option		STD	Low Noise Option
Load capacity				kg (lb)			3,000 (6,000)	3,000 (6,000)		3,200 (6,400)*	3,200 (6,400)*	
Load center				mm (in)			500 (20)	500 (20)		500 (20)	500 (20)	
Maximum fork height				mm (in)			3,000 (118.1)	3,000 (118.1)		3,000 (118.1)	3,000 (118.1)	
Tilt angle (Forward/Backward)				degree			6/12	6/12		6/12	6/12	
Lifting/ lowering speed	2W	Lifting (F/L / N/L)	mm/sec (FPM)	510 (100.4)/ 580 (114.2)			530 (104.4)/ 570 (112.2)	440 (86.6)/ 480 (94.5)		470 (92.5)/ 580 (114.2)	490 (96.5)/ 570 (112.2)	410 (80.7)/ 480 (94.5)
	2W	Lowering (F/L / N/L)	mm/sec (FPM)	500 (98.5)/ 500 (98.5)			500 (98.5)/500 (98.5)			500 (98.5)/ 500 (98.5)	500 (98.5)/500 (98.5)	
	2F	Lifting (F/L / N/L)	mm/sec (FPM)	460 (90.6)/ 520 (102.4)			480 (94.5)/ 510 (100.4)	410 (80.7)/ 430 (84.6)		400 (78.8)/ 520 (102.4)	420 (82.7)/ 510 (100.4)	360 (70.9)/ 430 (84.6)
	2F	Lowering (F/L / N/L)	mm/sec (FPM)	470 (92.5)/ 320 (63.0)			470 (92.5)/320 (63.0)			470 (92.5)/ 320 (63.0)	470 (92.5)/320 (63.0)	
	3F	Lifting (F/L / N/L)	mm/sec (FPM)	500 (98.5)/ 560 (110.3)			520 (102.4)/ 550 (108.3)	440 (86.6)/ 470 (92.5)		430 (84.7)/ 560 (110.3)	450 (88.6)/ 550 (108.3)	380 (74.8)/ 470 (92.5)
	3F	Lowering (F/L / N/L)	mm/sec (FPM)	470 (92.5)/ 360 (70.9)			470 (92.5)/360 (70.9)			470 (92.5)/ 360 (70.9)	470 (92.5)/360 (70.9)	
	3V	Lifting (F/L / N/L)	mm/sec (FPM)	480 (94.5)/ 540 (106.4)			500 (98.5)/ 530 (104.4)	430 (84.6)/ 440 (86.6)		410 (80.8)/ 540 (106.4)	430 (84.7)/ 530 (104.4)	370 (72.8)/ 440 (86.6)
	3V	Lowering (F/L / N/L)	mm/sec (FPM)	450 (88.6)/ 350 (68.9)			450 (88.6)/350 (68.9)			450 (88.6)/ 350 (68.9)	450 (88.6)/350 (68.9)	

Note *: 3.200 kg on 2W, 3.100 kg on 2F, 3F or 3V.

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Item		Model	2.0 ton (4,000 lb)			2.5 ton (5,000 lb)		
			H25	TD27		H25	TD27	
				STD	Low Noise Option		STD	Low Noise Option
Free lift		mm (in)	150 (5.9)	150 (5.9)		150 (5.9)	150 (5.9)	
Min. turning radius	(Outside)	mm (in)	2,190 (86.2)	2,190 (86.2)		2,250 (88.6)	2,250 (88.6)	
	(Inside)	mm (in)	170 (6.7)	170 (6.7)		170 (6.7)	170 (6.7)	
Travel speed	Forward (N/L)	km/h (MPH)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)
	Reverse (N/L)	km/h (MPH)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)
Draw-bar pull	F/L stall	N (kg, lb)	21,070 (2,150, 4,737)	20,580 (2,099, 4,626)	19,140 (1,952, 4,300)	21,070 (2,150, 4,737)	20,580 (2,099, 4,626)	19,140 (1,952, 4,300)
	No load	N (kg, lb)	14,700 (1,499, 3,305)	14,994 (1,529, 3,371)	13,940 (1,422, 3,132)	14,700 (1,499, 3,305)	14,994 (1,529, 3,371)	13,940 (1,422, 3,132)
Grade-ability	F/L stall	%	41	38	36	35	33	31
	No load	%	26	26	24	22	22	20

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Item		Model	3.0 ton (6,000 lb)			3,2 ton (6,400 lb)		
			H25	TD27		H25	TD27	
				STD	Low Noise Option		STD	Low Noise Option
Free lift		mm (in)	150 (5.9)	150 (5.9)		150 (5.9)	150 (5.9)	
Min. turning radius	(Outside)	mm (in)	2,390 (94.1)	2,390 (94.1)		2,390 (94.1)	2,390 (94.1)	
	(Inside)	mm (in)	160 (6.3)	160 (6.3)		160 (6.3)	160 (6.3)	
Travel speed	Forward (N/L)	km/h (MPH)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)
	Reverse (N/L)	km/h (MPH)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)	19.5 (12.1)	18.5 (11.5)	17.5 (10.9)
Drawbar pull	F/L stall	N (kg, lb)	20,090 (2,049, 4,516)	19,110 (1,949, 4,296)	17,770 (1,812, 3,991)	20,090 (2,049, 4,516)	19,110 (1,949, 4,296)	17,770 (1,812, 3,991)
	No load	N (kg, lb)	17,248 (1,759, 3,877)	17,542 (1,789, 3,943)	16,310 (1,663, 3,663)	16,703 (1,703, 3,754)	17,394 (1,773, 3,909)	16,180 (1,650, 3,635)
Grade-ability	F/L stall	%	27	25	23	26	24	22
	No load	%	23	23	21	22	22	20

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DIMENSIONS

Model			2.0 ton (4,000 lb)		2.5 ton (5,000 lb)		3.0, 3.2 ton (6,000, 6.400 lb)		
			H25	TD27	H25	TD27	H25	TD27	
Overall length (without fork)			mm (in)	2,530 (99.6)	2,530 (99.6)	2,605 (102.6)	2,605 (102.6)	2,770 (109.1)	2,770 (109.1)
Overall width	Single	mm (in)	1,157 (45.6)	1,157 (45.6)	1,157 (45.6)	1,157 (45.6)	1,230 (48.4)	1,230 (48.4)	
	SPL double	mm (in)	1,595 (62.8)	1,595 (62.8)	1,595 (62.8)	1,595 (62.8)	1,650 (65.0)	1,650 (65.0)	
Overall height	OHG	mm (in)	2,130 (83.9)	2,130 (83.9)	2,130 (83.9)	2,130 (83.9)	2,155 (84.8)	2,155 (84.8)	
	Mast (Lowered)	mm (in)	1,995 (78.5)	1,995 (78.5)	1,995 (78.5)	1,995 (78.5)	2,025 (79.7)	2,025 (79.7)	
	MAST (Extended) with backrest	mm (in)	4,225 (166.3)	4,225 (166.3)	4,225 (166.3)	4,225 (166.3)	4,355 (171.5)	4,355 (171.5)	
Front tread	Single	mm (in)	965 (38.0)	965 (38.0)	965 (38.0)	965 (38.0)	1,005 (39.6)	1,005 (39.6)	
	SPL double	mm (in)	1,185 (46.7)	1,185 (46.7)	1,185 (46.7)	1,185 (46.7)	1,252 (49.3)	1,252 (49.3)	
Rear tread			mm (in)	970 (38.2)	970 (38.2)	970 (38.2)	970 (38.2)	975 (38.4)	975 (38.4)
Wheelbase			mm (in)	1,650 (65.0)	1,650 (65.0)	1,650 (65.0)	1,650 (65.0)	1,760 (69.3)	1,760 (69.3)
Overhang	Front	mm (in)	455 (17.9)	455 (17.9)	455 (17.9)	455 (17.9)	485 (19.1)	485 (19.1)	
	Rear	mm (in)	425 (16.7)	425 (16.7)	450 (17.7)	450 (17.7)	525 (20.7)	525 (20.7)	
Fork length			mm (in)	1,100 (43.3)	1,100 (43.3)	1,100 (43.3)	1,100 (43.3)	1,100 (43.3)	
Fork (width x thickness)			mm (in)	100 (3.9) x 40 (1.6)	100 (3.9) x 40 (1.6)	100 (3.9) x 40 (1.6)	100 (3.9) x 40 (1.6)	100 (3.9) x 45 (1.8)	100 (3.9) x 45 (1.8)
Ground clear- ance	under mast	mm (in)	115 (4.5)	115 (4.5)	115 (4.5)	115 (4.5)	145 (5.7)	145 (5.7)	
	under frame	mm (in)	165 (6.5)	165 (6.5)	165 (6.5)	165 (6.5)	190 (7.5)	190 (7.5)	
	under power unit	mm (in)	155 (6.1)	155 (6.1)	155 (6.1)	155 (6.1)	165 (6.5)	165 (6.5)	

AISLE WIDTH

- The right angle stacking aisle shown as A_s in the following tables is front-rear length of load (permissible load) plus 200 mm (7.87 in).
- The right angle intersecting aisle is shown as A_i in the following tables on standard models (under no load conditions).

D01/D02 series

Item	Model	D01 series		D02 series		
		A15	A18	A20	A25	A30
		1.5 ton (3,000 lb)	1.75 ton (3,500 lb)	2.0 ton (4,000 lb)	2.5 ton (5,000 lb)	3.0, 3.2 ton (6,000, 6,400 lb)
Right angle stacking aisle (A_s)	mm (in)	2,370 (93.3)	2,405 (94.7)	2,645 (104.1)	2,705 (106.5)	2,875 (113.2)
Right angle intersecting aisle (A_i)	mm (in)	1,820 (71.7)	1,835 (72.2)	1,985 (78.1)	2,015 (79.3)	2,110 (83.1)

NOISE LEVEL

A weighted sound pressure level at the operator's position, L_{PAZ} and the uncertainty value, K_{PZ} , according to EN120531:2001 is as follows. Guaranteed sound power level, L_{WA} , according to directive 2000/14/EC is listed below.

Unit: dB (A)

Item	Model	D01 series				D02 series							
		PD01		FD01		UD02		FD02		UGD02		FGD02	
		STD	Low Noise Option	STD	Low Noise Option	STD	Low Noise Option	STD	Low Noise Option	STD	Low Noise Option	STD	Low Noise Option
L_{PAZ} as Measured		77	76	79	77	78	77	80	78	78	77	80	78
L_{WA} Guaranteed		104	104	106	104	105	104	107	104	105	104	107	104
K_{PZ} Uncertainty Value		4	4	4	4	4	4	4	4	4	4	4	4

NOTE: Higher or lower noise emissions can occur during operation of the truck, depending on the truck usage. Influences from surroundings or other sources of noise emissions can also result in higher or lower noises.

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NOMINAL POWER IN kW

The values are measured based on ISO Gross.

Unit: kW/rpm

Model	D01 series			D02 series		
Engine type	H20-II	H20-II (LPG)	TD27	H25	H25 (LPG)	TD27
Output	36.3/2,600	35.0/2,600	42.5/2,500	42.0/2,300	39.0/2,600	42.5/2,500

TIRE SIZE

D01 series	Front	6.50-10-14PR (I)	
	Rear	5.00-8-8PR (I)	
D02 series	Front	2.0 to 2.5 ton (4,000 to 5,000 lb)	7.00-12-14PR (I)
		3.0 to 3.2 ton (6,000 to 6,400 lb)	28 x 9-15-14PR (I)
	Rear	2.0 to 2.5 ton (4,000 to 5,000 lb)	6.00-9-10PR (I)
		3.0 to 3.2 ton (6,000 to 6,400 lb)	6.50-10-10PR (I)

ENGINE

Item	Model	H20-II	H25	TD27
Type		Gasoline		Diesel
Cylinder arrangement		4-cylinder, in-line		
Valve mechanism		Overhead valve type		
Bore x Stroke	mm (in)	87.2 x 83.0 (3.433 x 3.268)	92 x 93 (3.62 x 3.66)	96 x 92 (3.78 x 3.62)
Total displacement	cm ³ (cu in)	1,982 (120.94)	2,472 (150.84)	2,663 (162.50)
Compression ratio		8.7	8.7	24.6
Firing order		1-3-4-2		

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OIL & WATER CAPACITY

Model	H20-II		H25		TD27	
	ℓ	Imp qt	ℓ	Imp qt	ℓ	Imp qt
Engine (with oil filter)	3.8	3-3/8	3.8	3-3/8	6.2	5-1/2
Engine cooling water	9	7-7/8	8	7	11	9-5/8

FUEL & OIL CAPACITY

Model	D01 series		D02 series			
			2.0, 2.5 ton (4,000, 5,500 lb)		3.0, 3.2 ton (6,000, 6,400 lb)	
	ℓ	Imp	ℓ	Imp	ℓ	Imp
Fuel tank	49	10-3/4 gal	66	14-1/2 gal	72	15-7/8 gal
Hydraulic oil tank	35.9	7-7/8 gal	46.4	10-1/4 gal	51.4	11-3/8 gal
Transmission oil	8.0	7 qt	9.0	7-7/8 qt	9.0	7-7/8 qt
Differential oil	3.0	2-5/8 qt	3.0	2-5/8 qt	5.0	4-3/8 qt

BULBS

Item		Wattage (W)
Headlamp		55
Rear combination light	Stop/Tail	27/8
	Turn signal	27
	Back-up	27
Front turn signal lamp		25
Back operation lamp		35
Combination meter	Illumination lamp	2
	Warning lamp	2
Neutral lamp		3.4

FUSE

Power supply	No.		FUSE capacity (A)	Applicable parts
Ignition (Key) switch	1	IGN	10	Engine electrical parts
	2	METER	10	Meter warning lamp
	3	TURN SIGNAL	10	Turn signal lamp, back lamp, back-up buzzer
	4	OPT	20	Option (Power supply for ON)
Battery	5	OPT	20	Option (Battery power supply)
	6	STOP LAMP	10	Stop lamp, rear service lamp
	7	HORN	10	Horn
	8	LIGHT	15	Headlamps, tail lamps, clearance lamps, meter illumination lamps

VIBRATION

The whole body vibration, $a_{w,z}$ according to EN13059:2002.

Vibration emission value : D01 series ... 1.3 m/s², D02 series ... 1.2 m/s².

Uncertainty : D01 series ... 0.4 m/s², D02 series ... 0.4 m/s².

Remarks: a is mean value.

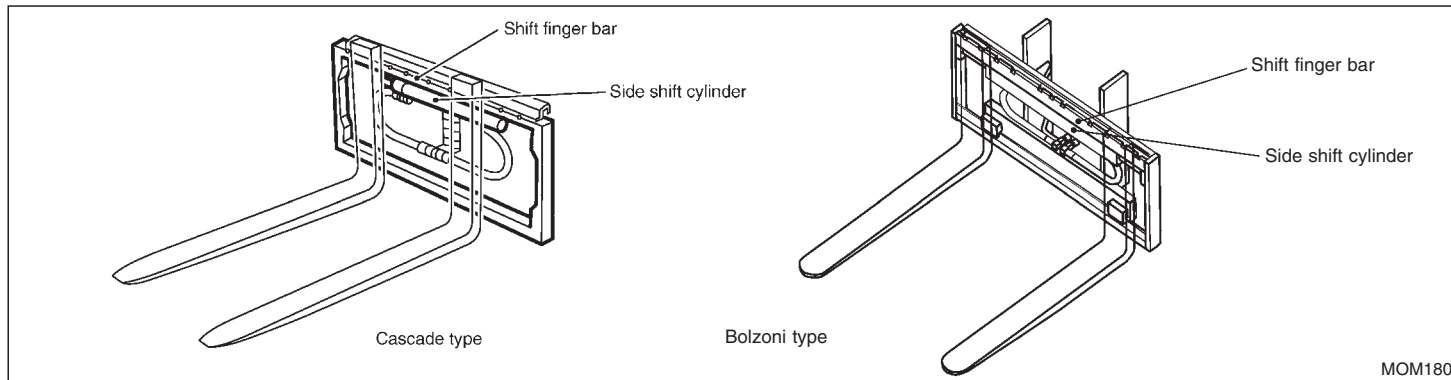
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SIDE SHIFT (OPTIONAL ATTACHMENT)



This section describes only the handling (safety, operations, inspection) of the side shift. Before using the side shift, be sure to read this section thoroughly and understand it. For handling (safety, operations, inspection) of the truck, refer to the applicable sections of this manual.

OVERVIEW OF SIDE SHIFT

Since the shift finger bar (on which the forks and the backrest are mounted) can be shifted to the right and the left only by operating the lever from the operator's seat, you can accurately insert the forks under pallets or stack loads correctly at targeted positions.

The following is the standard amount of side shift.

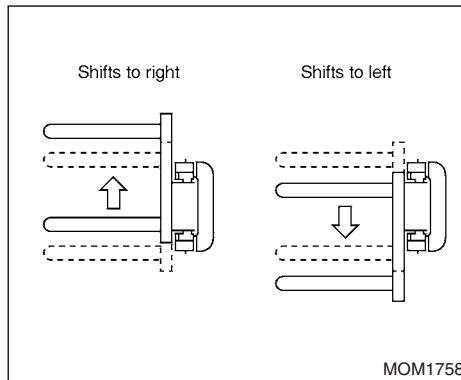
Model variation	Side shift distance mm (in)
D01/D02	Each to right/left 100 (3.94)

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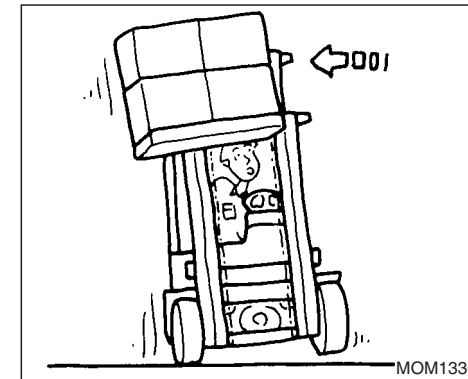
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with the loading/unloading devices to perform a variety of loading and unloading.



Main terms used in this section

Shift:

To move the forks or loads to the right or the left.

Side shift stroke:

The maximum distance the forks or the loads can travel to the right or the left.

Shift finger bar:

An oblong board on which the forks and the backrest are mounted. This shift finger bar shifts (moves) to the right and the left.

Attachment:

Equipment or parts to be added to or replaced



WARNING:

Do not operate the side shift when the forks are not supported with supports such as a load table.

Never operate the side shift when the forks are loaded without any supports such as a load table just beneath it. This is dangerous because the forklift can overturn when it loses balance.

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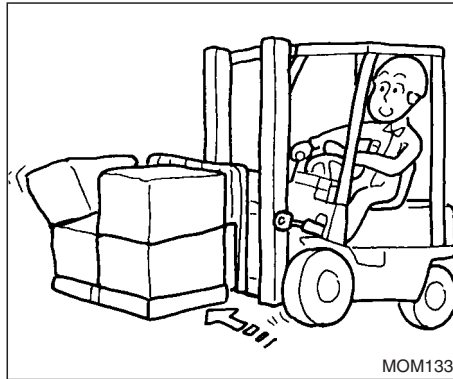
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WARNING:

Do not make sudden and quick shifts with the forks loaded.

If you make sudden shifts with the forks loaded, there is a risk of a load collapse or an overturn. Be careful when you operate the forklift.



WARNING:

Do not travel with loads shifted.

When loads are shifted, they are less laterally stable. If you travel without shifting loads to the neutral position, there is a risk of a load collapse or an overturn of the truck. Be sure to shift into the neutral position before traveling.



WARNING:

Do not shift while traveling with loads.

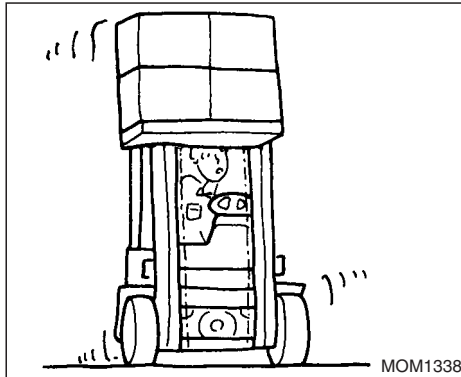
If you shift while traveling, dynamic balance will be lost, resulting in a load collapse or tipping over of the truck. Never shift while traveling.

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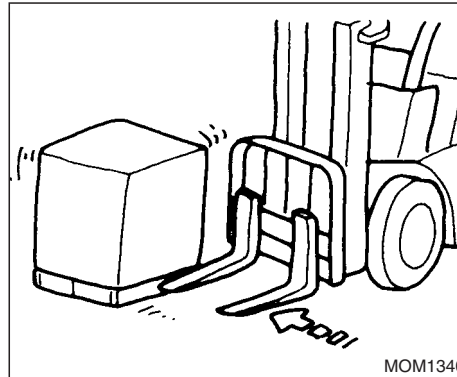
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CAUTION:

Do not lift or lower with loads shifted.

When loads are shifted, they are less laterally stable. Therefore, it is dangerous if you lift or lower the loads without shifting them into the neutral position, because the forklift will become unstable. Be sure to shift loads into the neutral position before lifting or lowering.



CAUTION:

Do not use the shift function to push or pull loads or pallets.

If you use the side shift to pull or push loads, the equipment can be overstrained, resulting in a malfunction. In addition, there are risks of damaging loads or injuring people. Never push or pull loads with the side shift.

CAUTION:

Do not shift when the forks are in contact with the floor or on a table.

If you do so, it can result in a malfunction of the equipment or a load collapse. Do not shift when the forks are in contact with the ground.

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CAUTION: CONCERNING SIDESHIFTING OPERATION.

- LOAD SHOULD BE CENTERED WHILE TRAVELLING, RAISING OR LOWERING THE LOAD.
- AVOID SUDDEN SIDESHIFTING, AND CHECK YOUR SURROUNDINGS FOR CLEARANCE AND SAFETY, BECAUSE SUDDEN SIDESHIFTING MAY CAUSE ACCIDENTS DUE TO LOAD IMBALANCE.

ATTENTION: OPÉRATION DU TABLIER À DÉPLACEMENT LATÉRAL.

- LA CHARGE DOIT ÊTRE PLACÉE AU CENTRE DES FOURCHES AU TRANSPORT, À LA MONTÉE ET À LA DESCENTE DE LA CHARGE.
- ÉVITER TOUTE OPÉRATION SOUDAINE DES FOURCHES, ET GARDER UN ESPACE SUFFISANT AUX ALENTOURS PAR SÉCURITÉ, UNE OPÉRATION SOUDAINE PEUT CAUSER UN ACCIDENT GRAVE DU AU DÉSÉQUILIBRE DE LA CHARGE.

PRECAUCION: MANEJO DEL DESPLAZADOR LATERAL.

- LA CARGA DEBERA ESTAR CENTRADA MIENTRAS SE CONDUCE, SE SUBE O SE BAJA LA CARGA.
- EVITAR CAMBIOS DE DIRECCION BRUSCOS Y COMPROBAR QUE LOS ALREDEDORES ESTAN DESPEJADOS Y SEGUROS. CAMBIOS BRUSCOS DE DIRECCION PUEDEN CAUSAR ACCIDENTES DEBIDO AL DÉSQUILIBRIO DE LA CARGA.

VORSICHTSMASSNAHMEN BEI SEITLICHEM VERSCHIEBEN DER LADUNG.

- WENN DIE GABELN SEITLICH VERSCHOBEN WURDEN, UM LADUNG AUFZUNEHMEN, SICHERSTELLEN, DASS DIE GABELN WIEDER IN IHRE NORMALE MITTELSTELLUNG ZURÜCKGESTELLT WERDEN UND DIE LADUNG NICHT MEHR AUSSERHALB DES ZENTRUMS LIEGT, EHE DER STAPLER GEFAHREN ODER EIN LAD/ENTLADENVORGANG DURCHFÜHRT WIRD.
- DIE GABELN NICHT PLÖTZLICH ODER RUCKARTIG SEITLICH VERSCHIEBEN. DIE UMGEBUNG AUF AUSREICHENDEN ABSTAND UND SICHERHEIT PRÜFEN, WENN EINE SEITLICHE VERSCHIEBUNG DER GABELN ERFOLGT, UND STETS MIT DER GEBOTENEN VORSICHT VORGEHEN.

99063 9G001

MOM1759

CAUTION AND INSTRUCTION LABELS

Caution label

CAUTION:

Precautions for handling the side shift

This caution label indicates precautions that you should strictly follow when using the side shift. Be sure to read and understand it before operating the side shift.

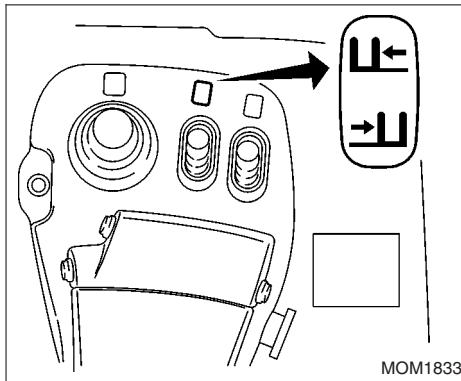
The labels are attached to the upper surface of the rear top panel.

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CONTROL LEVER OPERATION AND EQUIPMENT MOVEMENT

Control lever

A forklift attached with a side shift has a control lever to operate the side shift, in addition to the control levers for standard specifications.

Instruction label

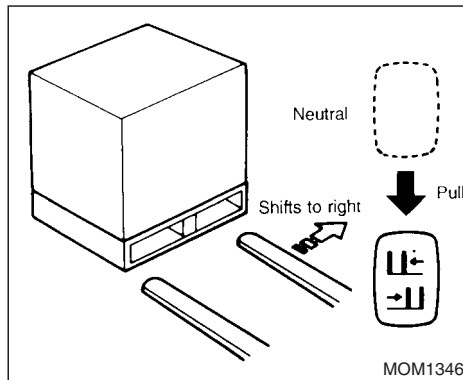
This label indicates to which side the shift finger bar shifts (moves) according to the direction you tilt the lever.

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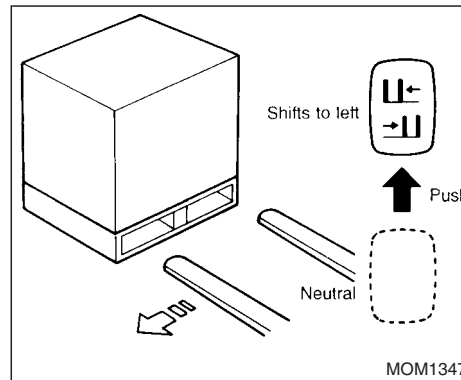
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Operation of the control lever for the side shift

When you pull the lever toward the operator, the shift finger bar (mounted on the forks) shifts (moves) to the right.



When you push the lever forward, the shift finger bar (with forks mounted) moves to the left.

CAUTION:

Do not move the levers suddenly and quickly. There is a risk of a load collapse.

INFORMATION:

The shifting speed changes according to the level you tilt the lever and the level you depress the accelerator pedal.

DAILY CHECKS AND SIMPLE MAINTENANCE

CAUTION:

If any abnormality is noted in the daily checks, notify the responsible person, and never resume operation before repair is completed. Contact your authorized NISSAN FORKLIFT dealer for repair.

To assure safe operation and maintain the side shift in proper functional condition, be sure to perform the daily checks below in addition to the check items under "Daily care" (refer to page 43).

1. Check that any problems noted the previous day have been completely repaired.
2. Check all parts of the hydraulic piping and the cylinder of the side shift for oil leaks and looseness.
3. Check that the side shift is not damaged or deformed.
4. Check visually the jaw installation bolt on the finger bar for looseness.
5. Operate the side shift for several times to check that it operates smoothly without abnormal noise. Also check that the side shift lever operates smoothly without rattling.

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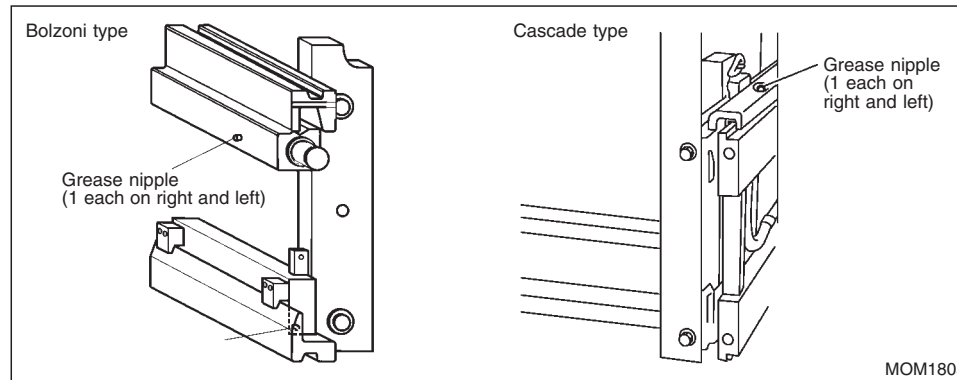
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CAUTION:

When you operate your side shift, make sure to raise the forks approximately 100 to 200 mm (3.94 to 7.87 in) from the ground before operation. If you shift with the forks while they are in contact with the ground, it is dangerous when the forks get caught.



Apply chassis grease once a week (or every 50 hours) to the grease nipples in the sleeve of the shift finger bar.

LOADING AND UNLOADING

This section describes the operation of your side shift.

Always keep the side shift finger bar in the neutral position except during load handling.

Adjust the forks as far apart as possible in order to minimize the deviation.

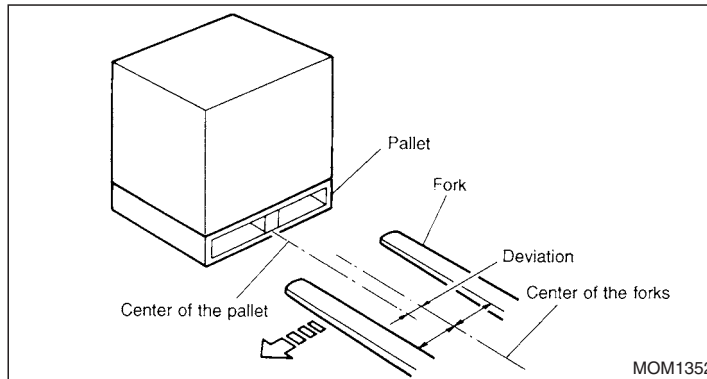
For basic operations, refer to "Loading and unloading" on page 35.

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If the forks deviate either to the right or the left, operate the side shift lever and shift (move) the forks until the center of the pallet matches the center of the interval between the forks.

CAUTION:

- Do not shift the forks while the forks are inserted into the pallet. This is dangerous because loads will shift if the pallet is pushed.
- If the center of the interval between the forks is not aligned with the center of the pallet even when the forks are shifted as much as possible, stop the operation and start once again from the beginning. This is dangerous because loads will be

further off center if you go on with the operation without correcting the situation.



WARNING:

Do not shift while traveling with loads.

STACKING

CAUTION:

Do not operate the side shift when the loads are lifted (without any supports such as a table or a shelf just beneath them). This is dangerous because there is a risk of a load collapse or even an overturn of the forklift in some cases.

CAUTION:

Do not operate the side shift lever and the lift lever quickly. It is dangerous if a load collapse occurs.

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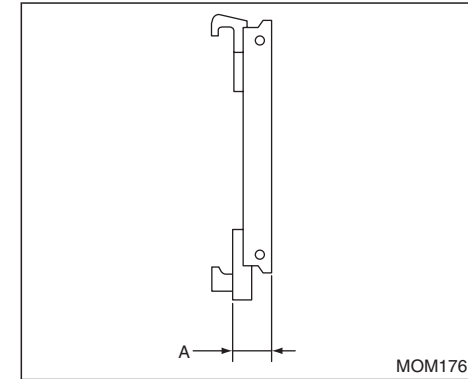
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SPECIFICATIONS

Type		Integral type Bolzoni			Hook-on type Bolzoni		
Model		D01	D02	GD02	D01	D02	GD02
Carriage width		920	1,020	1,020	920	1,020	1,020
		mm (in)	(36.22)	(40.16)	(36.22)	(40.16)	(40.16)
Front overhang	2W-MAST	439 *	481	514	434 *	481	514
		mm (in)	(17.28)	(18.94)	(17.09)	(18.94)	(20.24)
	2F-MAST	439 *	481	514	434 *	481	514
		mm (in)	(17.28)	(18.94)	(17.09)	(18.94)	(20.24)
3F-MAST		438 *	495	514	433 *	499	514
		mm (in)	(17.24)	(19.49)	(17.05)	(19.65)	(20.24)
3V-MAST		474 *	520	534	468 *	524	532
		mm (in)	(18.65)	(20.46)	(18.43)	(20.63)	(20.94)
Effective thickness	A mm (in)	—	—	—	62 (2.44)	62 (2.44)	65 (2.56)

Note: * Numbers are for 1.5 ton truck.
1.8 ton truck = 1.5 ton + 5mm.



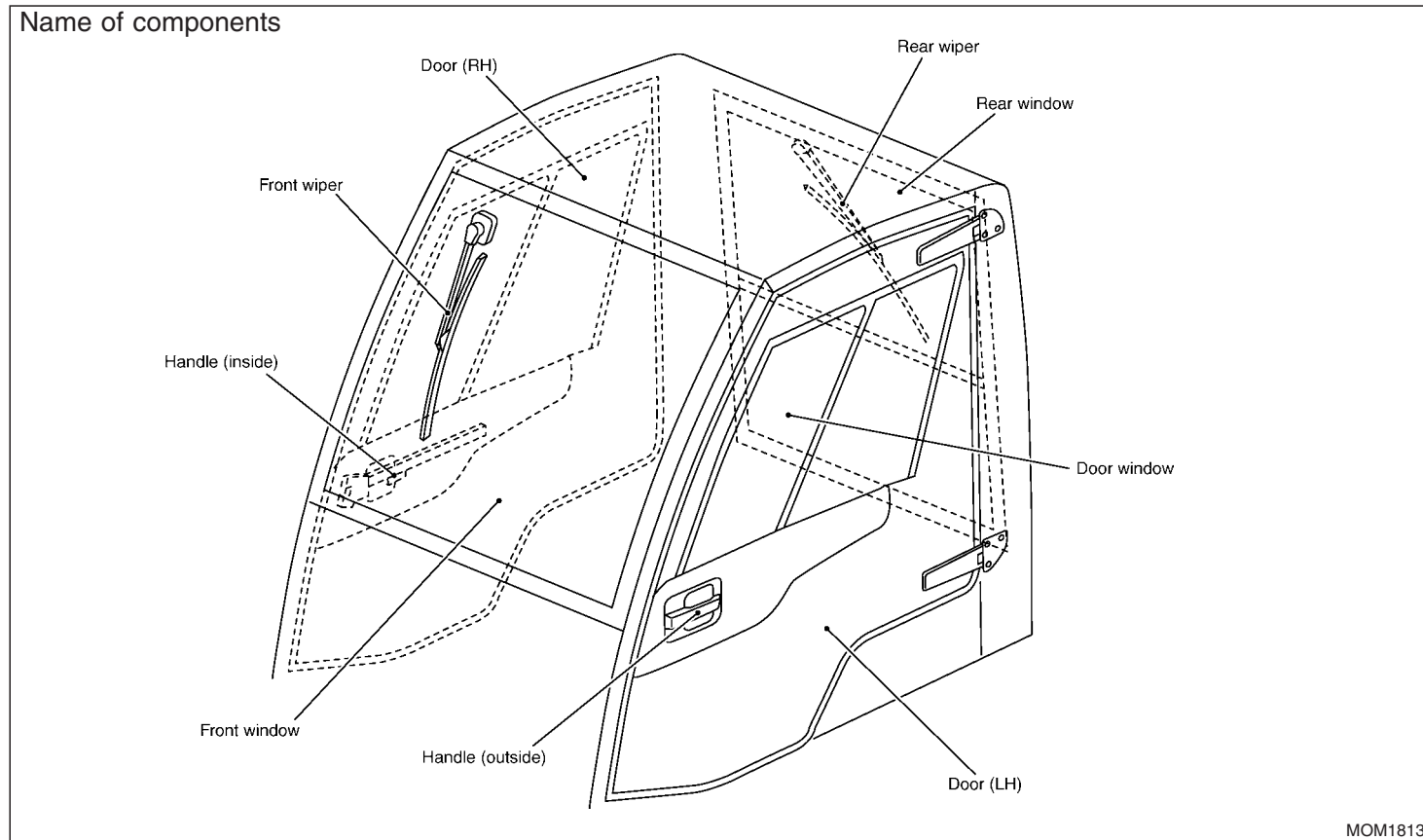
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CABIN (OPTION)

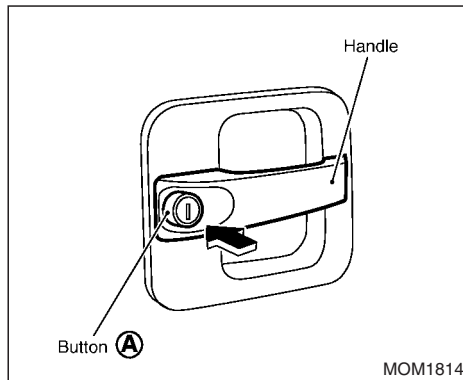


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Door opening/closing button

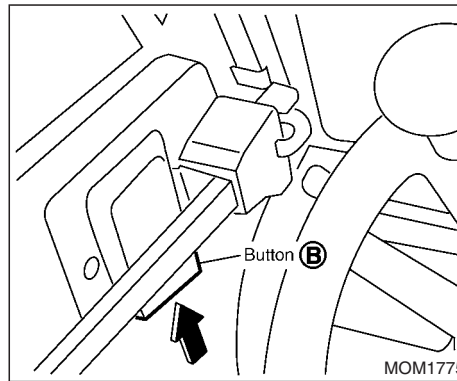
Push the button to release the door lock and the door will open.

Button (A) : Used to open the door from the outside to enter the lift truck

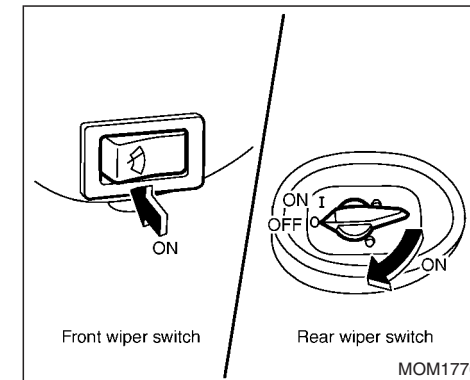
Button (B) : Used to open the door from inside the cabin when getting out

CAUTION:

Be careful not to pinch your fingers when closing the door.



Make sure the door is securely locked after the door is closed.



Wiper switch

The wiper operates when the wiper switch is turned on with the key switch ON.

NOTE:

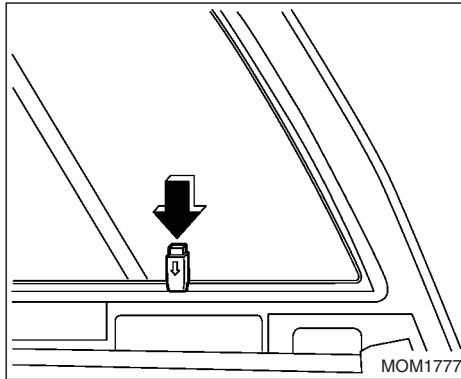
Be sure to turn the wiper switch off when not using the wiper.

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Door window opening/closing button

Open the window while pushing the button (with the door lock released).

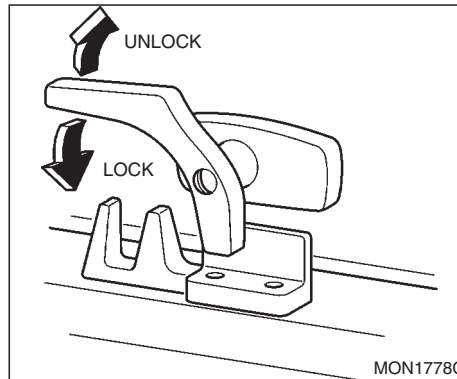
NOTE:

The window can be locked when it is fully closed or opened.

It cannot be locked when the window is between the fully closed and open positions.

CAUTION:

Be careful not to pinch your fingers while opening or closing the window.

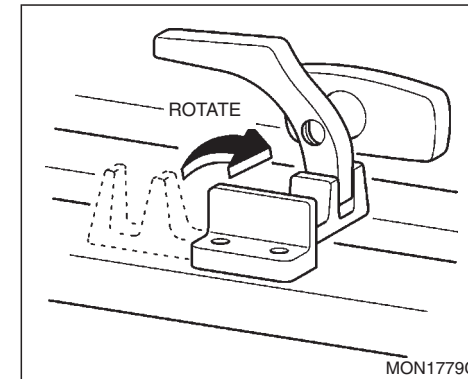


Rear window opening/closing lock

When opening the rear window, release the lock.

CAUTION:

Be careful not to pinch your fingers while opening or closing the rear window.



Ventilation lock

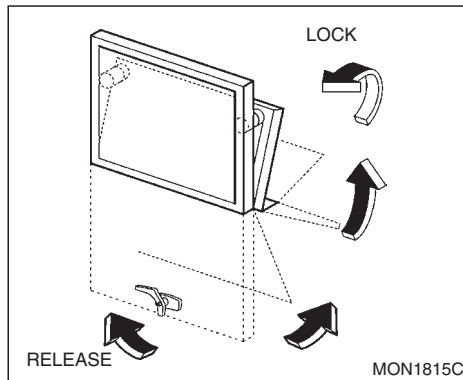
When making ventilated condition, the stopper can be used by rotating support.

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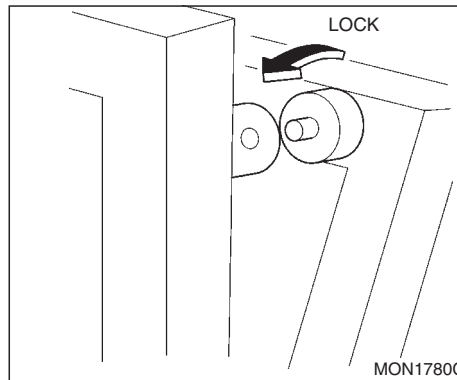
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Top panel opening procedure

On LPG models, turn the LPG cylinder over backward.

1. Open both doors.
2. Release the rear window lock and open the half rear window.



3. Lock the half rear windows lock and open the whole rear window.

- On models with joystick, turn the console box over forward.
- 4. Move the seat all the way to the rear.
- 5. Release the steering column lock lever. The steering column can then be tilted forward.
- 6. Release the top panel lock and open the top panel backward.

CAUTION:

- Be careful not to pinch your fingers while closing the half rear window.
- Make sure the lock for the half rear window is securely locked before opening the whole rear window.

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Closing procedure

To close the top panel, reverse the order of the opening procedure. Note the following:

CAUTION:

- **Be careful not to pinch your fingers while closing the top panel, rear window, door, etc.**
- **Make sure the locks for the top panel, rear window, door, console box and steering column are securely locked.**

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