OPRATOR'S MANUAL

En (English)

MANUAL DEL OPERADOR

E (Español)

FAHRERHANDBUCH

D (Deutsch)

MANUEL POUR L'OPERATEUR

F (Français)

CONTENTS

NOTE TO OPERATORS AND SUPERVISORS

This manual explains the proper operation and maintenance of Toyota industrial vehicles as well as daily lubrication and periodic inspection procedures.

Please read this manual thoroughly even though you may already be familiar with other Toyota industrial vehicles because it contains information which is exclusive to this series of vehicles. The manual has been produced based on a standard vehicle. However, if you have questions on other types, please contact your Toyota industrial vehicle dealer (Toyota dealer).

In addition to this manual, it is essential that you review the separate publication entitled "Operator's Manual for Safety Operation" for forklift truck drivers. It contains important information about the safe operation of forklift trucks. Toyota reserves the right to make any changes or modifications of specifications in this manual without giving previous notice and without incurring any obligation.

BEFORE INITIAL OPERATION

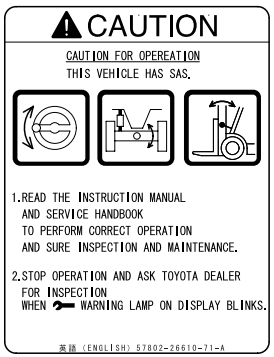
- **Please read this manual thoroughly.** This will give you a complete understanding of Toyota industrial vehicles and permit you to operate them correctly and safely.
  Proper handling of new vehicles promotes performance and extends service life. Drive with special caution while becoming familiar with a new vehicles.
  In addition to the standard operating procedures, pay attention to the following safety items.
- **Please acquire thorough knowledge on Toyota industrial vehicle.** Read the operator's manual thoroughly prior to operating the vehicle. Get to know its operation and components. Learn about the safety devices and accessory equipment and their limits and precautions. Be sure to read the caution plate attached to the vehicle.
- **Please learn safe driving points and safety management.** Understand and maintain working area traffic rules. Ask the work area supervisor about any special working precautions.
- **Wear neat clothing for operation.**
  Improper clothing for vehicle operation may interfere smooth operation and cause an unexpected accident. Always wear proper clothing for easy operation.
- **Please keep away from live electric power lines.** Know the locations of inside and outside power lines and maintain sufficient distance.
- **Be sure to perform pre-operation check and periodic maintenance.** This will prevent sudden malfunctions, improve work efficiency, save money and insure safe working conditions.
- **Always warm up the engine before starting operation.**
- **Be sure to avoid forward tilt when the loaded fork is raised.** In the worst case, this will cause overturning due to poor stability resulting from forward shifting of the center of gravity.
- **Never attempt traveling with a loaded on the lifted fork beyond the specified height.** Traveling with a load on the fork lifted beyond the specified height may cause overturning due to upward shifting of the center of gravity. Keep the fork at 10-20cm (5.9-7.9in) above the ground when traveling.
- **Please avoid overloading or uneven loading.** Overloading or uneven loading is dangerous. If the center of gravity is nearer to the front side even though the load is below the maximum, limit the loading weight according to the load table.
- **If you hear and unusual noise or sense anything unusual, inspect and repair immediately.**
- **Be sure to observe the correct operating procedures and precautions for the handling of vehicles equipped with power steering and power brakes.**
- **If the engine stops during traveling, the operation will be affected.** Stop the vehicle in a safe place as described below. Steering operation becomes heavy because the power device for the power steering becomes ineffective. Operate the steering wheel more firmly than usual.
- **Please use only the recommended types of fuel and lubricants.** Low-grade fuel and lubricants will shorten service life.
- **Flammable and/or combustible materials can be damaged, and in some cases ignited, by a hot exhaust system or hot exhaust gases. To minimize the possibility for such damage or fire, the operator must obey the following recommended practices:**
- Do not operate lift truck over or near flammable and/or combustible materials, including dried grass and paper scraps.
- Park lift truck with rear end at least 12" away from lumber, veneer board, paper products and other similar materials to avoid discoloration, deformation or combustion of those materials.

Precautions to be taken when using SAS Models
(Option)

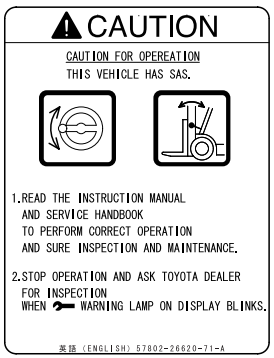
(SAS: System of Active Stability)

⚠ Caution

- **Whenever you may get on an SAS model, please check the caution plate, through which you may know what functional features are provided in the vehicle. Do not proceed to an operation of the vehicle before making certain that each of the features is operating properly.**



- **For vehicle models outfitted with double wheels, there is no rear tire swing lock control setting.**



- **While driving the vehicle, be normally alert about a warning lamp. Should an error code be indicated by a warning lamp or hour-meter, park the vehicle at a safe location and ask a Toyota dealer for an inspection.**
- **The SAS, which is electronically controlled, need be initialized after completion of a maintenance operation. Do not unnecessarily remove or modify any SAS features. Whenever an inspection may be necessary, make contact with a Toyota dealer.**
- **When washing the vehicle, carefully prevent water from splashing directly over the electronics (controller, sensor and switches) employed in the SAS.**

Description of features available in SAS models
(Option)

Active control rear stabilizer:

When the vehicle makes a turn on the spot, a centrifugal force will be generated in the lateral direction of the vehicle. In such event, this feature will operate so that rear wheels will be locked from swinging to support the vehicle on four wheels. Thus, the vehicular stability will be enhanced in both right and left directions.

⚠ Caution

With the vehicle locked from swinging, the stability does surely increase. Nevertheless, it does not signify that the vehicle would never tipover. Operate the vehicle always correctly.

Automatic fork leveling control

- With the vehicle not loaded, tilt the mast forward while pressing the tilt lever knob switch. This will cause the fork to automatically stop at its horizontal position (with the mast vertically positioned).
- After stopping the fork at its horizontal position with the tilt lever knob switch pressed, you may want to tilt the fork further. To do this, return the tilt lever to the neutral position once. Then, after releasing the tilt lever knob switch, operate the tilt lever.

When the tilt lever is operated from the backward to forward position with the knob switch depressed, the mast will perform as follows:

	Not load	Loaded
High lift height	Stop with leveling forks (mast vertical)	Not tilting forward
Low lift height	Stop with leveling forks (mast vertical)	

⚠ Caution

- **With the mast titled forward with a high load at a high lift, pressing the tilt lever knob switch will cause the mast to stop moving. Absolutely avoid such operation because this automatic fork leveling control, if operated while handling a load, involves the fear of causing the vehicle to tipover.**
- **In case of the vehicle with an attachment, do not allow the fork to be automatically positioned horizontally, with a high load at a high lift while the engine is running at a high speed. This will lead to a hazard.**
- **Some specialty models onto which a heavy attachment is mounted may not be equipped with the automatic fork leveling control. Confirm a Toyota dealer in advance.**

Note:

- The mast will not move if it is tilted forward by pressing the tilt lever knob switch with a high load at a high lift (more than 2 m).
- As long as the mast is tilted forward from its vertical position, it will no longer tilt forward even if the tilt lever knob switch is pressed.
- While it is tilting backward, the fork will not stop at its horizontal position even if the tilt lever knob switch is pressed.(expect mini lever or joy stick)

Active mast front tilt angle control

According to a lift and to a load, the angle at which the mast can be tilted forward is automatically controllable within a range of angles illustrated below.

	Light load (no load)	Intermediate load	Heavy load
High lift height	No restriction for front tilt angle	Angle restricted between 1° and forward tilt angle 5°	Forward tilt angle restricted to 1°
Low lift height	No restriction for front tilt angel		

⚠ Caution

- **If a load should be moved up while tilting the fork forward at a low lift, there is a fear that the vehicle may tipover when the fork stops at the position having a tilt angle beyond the specified angle range. Never handle any load, therefore, while tilting the mast, with the load moved up.**
- **With a high load at a high lift, never match the load (mast angle) by controlling the mast forward tilting angle, since it involves the fear that the vehicle may tip over.**

⚠ **Caution**

- **Even with a load positioned within the allowable angle range, never tilt the mast beyond its vertical position, or the vehicle may tipover, losing its stability forward and backward. Never tilt the mast forward, with a load moved up.**
- **Some specialty models onto which a heavy attachment is mounted may not be equipped with the mast forward tilt control. Confirm a Toyota dealer in advance.**
- **Once you have mounted or replaced any attachment on a fork lift model, ask a Toyota dealer for an inspection.**
- **If you use two or more removable attachments alternately, the heaviest one should be used to carry out matching (SAS setting). Ask a Toyota dealer for help in advance.**
- **When attaching a fork or attachment to a forkless model, the attachments must be compatible with the model. Contact your Toyota dealer to request compatibility matching.**

Note:

With the fork positioned at the top dead end, a high pressure (relief pressure) may remain in the lift cylinder. This high pressure causes the vehicle to judge that it has a high load even unless loaded. As a result, the mast will be hindered from tilting forward. In this case, move the fork a little downward from the top dead end (to release the pressure) and the mast may be tilted forward.

Active mast rear tilt speed control

- At a high lift, the mast has a backward tilt speed controlled (slowed down) irrespective of a load. If the high lift is changed over to the low lift while tilting the mast backward, the controlled speed will last.
- At a low lift, the mast can be tilted at the full speed irrespective of a load. If the mast is tilted backward at a low lift with the tilt knob switch pressed, the mast has a backward tilt speed controlled (slowed down) as long as the tilt lever knob switch is pressed.
- If the low lift is changed over to the high lift while tilting the mast backward, the controlled speed will last as long as the tilt lever knob switch is pressed. And the mast may be tilted backward at the full speed so long as the tilt lever knob switch is not pressed.

Key-lift interlock

With the ignition switch positioned at OFF, the fork will not move down even if the lift lever is so operated. However, if you sit in the seat and turn on the ignition switch, you can lower the fork.

Active steering synchronizer

If the steering wheel knob is not angularly matched with tires, such an out-of-position will be automatically corrected while turning the steering wheel. Thus, the knob is kept at a constant position relative to tires.

If SAS feature should fail:

An SAS model is controlled with a controller, a sensor and various actuators. If any of them is found not to be operating normally, it tells you that:

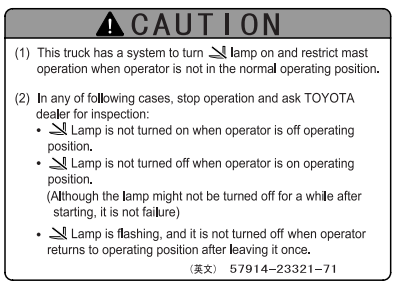
- Steering wheel knob out-of-position may not be corrected.
- Such features as automatic fork leveling control, active mast front tilt angle control and active mast rear tilt speed control.
- Swing lock may not be unlocked.
  If any of the phenomena referred to above should take place,
- Diagnosis lamp will light up or blink.
- Error code will be displayed in hour meter.
  Thus, the operator will be informed. In such event, move the vehicle to a safe location and ask a Toyota dealer for a repair.

OPS System

The OPS (Operator Presence Sensing) System prevents traveling and load handling operations when the operator is not seated in the operator's seat.

If the operator leaves the operator's seat while the vehicle is operating, the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will light up, and a buzzer will sound for one second to warn the operator that the OPS System will activate. If the operator leaves the operator's seat for longer than two seconds, the OPS System will activate and traveling and load handling operations will be suspended. However, if the operator returns to a normal seating position within two seconds, the OPS System will not activate and will allow travel and load handling operations to continue.

Again, if an abnormality occurs to the OPS System, the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will blink to warn the operator. In this case, the OPS System may have malfunctioned. Contact your Toyota dealer to request an inspection.



This forklift is equipped with an OPS (Operator Presence Sensing) System. Before operating the forklift, check that each of the System's functions is working properly.

(Clutch models are not equipped with Travel OPS Functions.)

Travel OPS Functions
(Torque converter models)

If the operator leaves the seat while the vehicle is traveling, the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will light up, and two seconds later, traveling will be stopped. However, this does not forcibly brake traveling. (If the operator returns to normal seating position within 2 seconds, traveling can be continued.)

If the OPS System is activated during driving up a slope, the driving power is interrupted and consequently the vehicle slides down. To avoid this problem, make sure to sit on the seat for operation.

To deactivate this function, return the control lever to the neutral position and sit on the seat again.

Load Handling OPS Function

Forklifts with a standard lever

If the operator leaves the seat during load handling operations, the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will light up, and two seconds later, load handling operations will be stopped. (If the operator returns to normal seating position within 2 seconds, loading can be continued.) If the operator leaves the seat while operating the control lever, loading can be continued for 2-4 seconds.

To release the stopped load handling operations, return the tilt lever to the neutral position and sit on the seat again. One second later, the OPS System will be released and load handling operations will again become possible. (Please beware that if you reseat yourself without returning the tilt lever to the neutral position, the load handling operations will start to move 1 second later.)

Forklifts with a mini lever / joy stick lever (Option)

If the operator leaves the seat during load handling operations, the diagnosis lamp will light up, and two seconds later, load handling operations will be stopped. (If the operator returns to the seat within 2 seconds, load handling operations can be continued.)

To deactivate this function, sit on the seat again and return all of the levers to the neutral position.

OPS Operation Functions

If the operator leaves the seat, a buzzer will sound for approx. one second ("pi, pi,") and the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will light up and inform the operator that the OPS System is active. If the operator returns to normal seating position, the OPS lamp will turn off.

Return-to -Neutral Warning
(Torque converter models)

If, while the travel OPS functions are operating, the operator sits on the seat but doesn't return the control lever to the neutral position, the buzzer will sound ("pipipipi..."), indicating that the travel OPS functions have not been deactivated.

Forklifts with a standard lever

If the OPS System has caused load handling operations to stop, and the operator re-seats himself while the lift lever is still set in the lowering position, the buzzer will sound ("pi, pi, pi...") indicating that suspension of lowering has not been deactivated.

Forklifts with a mini lever / joy stick lever (option)

If the OPS System has caused load handling operations to stop, and the operator re-seats himself without returning all load handling levers to neutral position, the buzzer will sound ("pi, pi, pi...") indicating that the OPS System has not been deactivated.

OPS Controller Abnormality Warning
(Except SAS models)

If the OPS System registers an abnormality, the OPS lamp (except SAS models) or diagnosis lamp (SAS models) will blink to inform the operator.

If the OPS lamp (except SAS models) or diagnosis lamp (SAS models) starts blinking, the OPS System may have malfunctioned. Park the vehicle at a safe location and request an inspection by your Toyota dealer.

In the following cases, park the vehicle in a safe location and have the vehicle inspected by your Toyota dealer.

- The OPS lamp does not light up even if the operator leaves the seat.
- The OPS lamp does not turn off even if the operator re-seats himself.

⚠ Caution

When seated for a long period with the ignition switch in OFF position, the OPS lamp may blink when the ignition switch is next turned ON. In this case, if the OPS lamp changes to an alighted condition after temporarily leaving the seat, this does not indicate an abnormality.

Travel and Load handling Control Functions
(Option)

⚠ Caution

- **Do not place too much confidence in travel control functions. Although maximum speed and high-speed acceleration will be limited according to load height and weight, this does not mean that tip-over will be prevented.**
- **According to road surface conditions and loading operations, temporary changes in speed limits and sense of acceleration may be experienced.**
- **During semi-clutch operation using the inching and brake pedal or clutch pedal, temporary changes in speed limitations and sense of acceleration may be experienced.**
- **If traveling is commenced while raising the lift, the traveling speed may accelerate.**

Speed limits after load lifting height and weight sensing
(Torque converter models only)

(Maximum speed limiter)

If travel is attempted while the load is lifted at a high position, this function restricts maximum speed between 0 to approx. 8 km/h depending on the load, to reduce vehicle instability at sudden stops.

Note:

- Although the maximum speed limiter will be deactivated when the height of the load is lowered, sudden accelerations will remain limited until the accelerator pedal is re-engaged.
- If the load height is raised when the speed limit is exceeded, the speed will be gradually reduced until the speed limit is reached.

(Travel and load handling control indicator)

While the speed limiting load height and weight sensors are active, the operator will be notified by the travel control indicator.

Load height and weight sensors to prevent sudden start ups
(Torque converter models only)

(Acceleration limiter)

When the load is lifted at a high position, this function limits sudden acceleration of the vehicle in accordance with the size of the load to prevent the load from collapsing.

Note:

At a high engine speed, the acceleration limiter may not function.

(Preventing sudden starts)

While the load is lifted at a high position, this function will suppress the sudden start up of the vehicle and resultant collapsing of the load even if the vehicle is operated erroneously such as by abruptly releasing the brake pedal or the inching and braking pedal while the accelerator pedal is engaged, or by setting the control lever in forward or reverse.

(Loading priority function)

While the load lifting height and weight sensor to prevent sudden start ups is active, and the inching and braking pedal is engaged or the control lever is set to neutral, when the accelerator pedal is re-engaged while the vehicle is traveling at less than constant speed, the load lifting height and weight sensor to prevent sudden start ups will be deactivated and will mitigate effects to loading activities.

(Travel and load handling control indicator)

When the load lifting height and weight sensor to prevent sudden start ups is active, the operator will be informed by the travel control indicator.

Low speed setting

When the low speed setting switch is pressed, traveling will not be possible at the preset speed or greater.

Pressing the low speed setting switch again will deactivate this function.

Maximum speeds can be set between approx. 8-15 km/h.

Note:

- Depending on the vehicle weight, the set speeds may not be attained while traveling uphill. Similarly, the set speed may be exceeded during downhill traveling.
- When a maximum speed limit has also been set, the lower speed setting will take precedence.
- When setting the maximum speed, consult your factory administrator or Toyota dealer.

Maximum speed limit

This function prevents the vehicle from traveling at the speed preset by your factory administrator or greater. The maximum speed can be set at a range between approx. 8-15km/h.

Note:

- Depending on the vehicle weight, the set speed may not be attained while traveling uphill. Similarly, the set speed may be exceeded during downhill traveling.
- When setting the maximum speed, consult your factory administrator or Toyota dealer.

Increasing the idling lifting speed

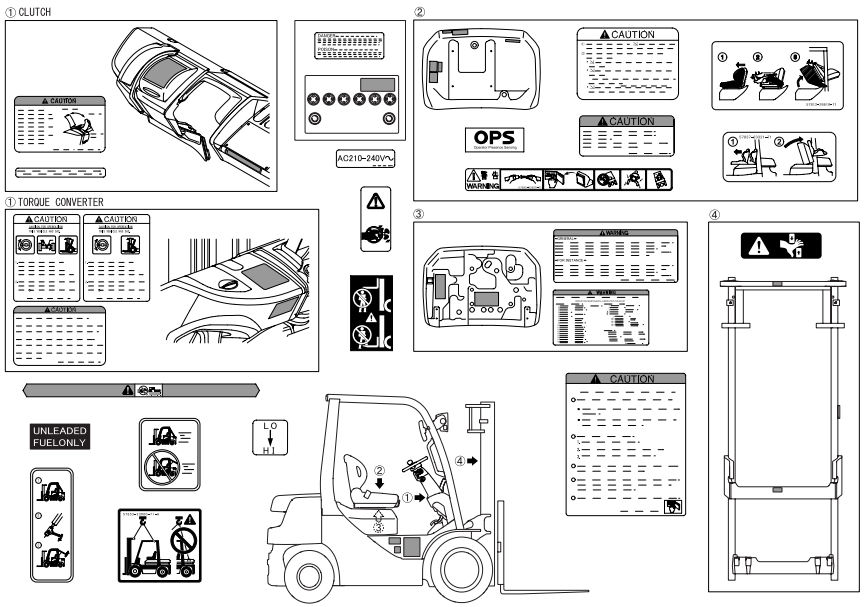
When the lift lever is raised, the idle-speed will increase to a steady value, allowing the fork to be raised at a steady speed without pressing on the accelerator pedal.

Note:

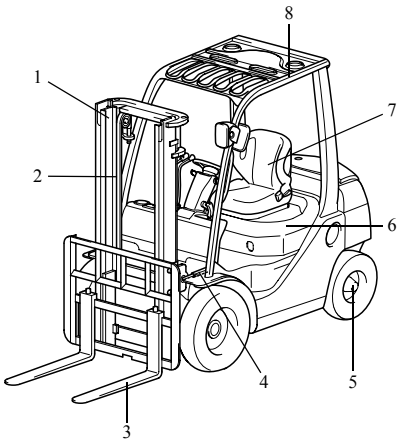
- When the vehicle is started while raising the lift, the traveling speed may increase.
- The fork raising speed will differ depending on the vehicle model, specifications, and load conditions.

CAUTION PLATES

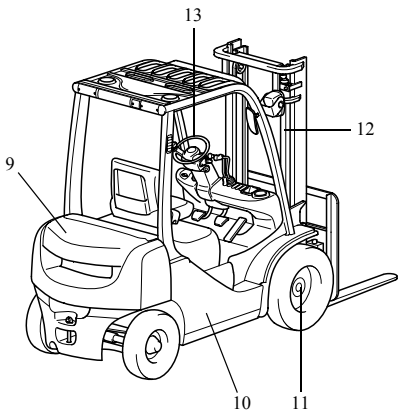
Caution plates are attached on a vehicle. Before driving it, please be sure to read them thoroughly.
(The sample shows those of an English version.)



MAIN COMPONENTS

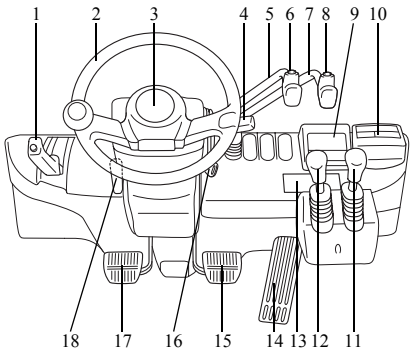


1. Mast
2. Chain
3. Fork
4. Tilt cylinder
5. Rear axle
6. Engine hood
7. Operator's seat
8. Head guard



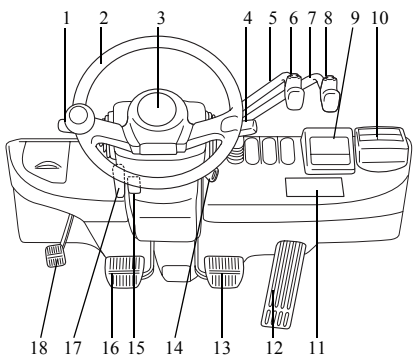
9. Counter weight
10. Frame
11. Front axle
12. Lift cylinder
13. Steering wheel

DRIVING CONTROLS AND INSTRUMENT PANEL



Clutch Models

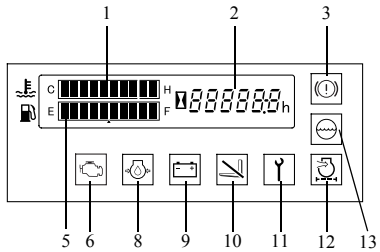
1. Parking brake lever
2. Steering wheel
3. Horn button
4. Light control and turn signal switch
5. Lift lever
6. Lift lever knob switch (Option)
7. Tilt lever
8. Tilt lever knob switch (Option)
9. Multi function display (Option)
10. DPF display (Option)
11. Gear shift lever (Forward-reverse)
12. Gear shift lever (High-low speed)
13. Combination meter
14. Accelerator pedal
15. Brake pedal
16. Ignition switch
17. Clutch pedal
18. Tilt steering adjust lever



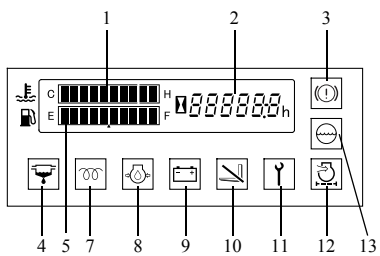
Torque converter Models

1. Control lever
2. Steering wheel
3. Horn button
4. Light control and turn signal switch
5. Lift lever
6. Lift lever knob switch (Option)
7. Tilt lever
8. Tilt lever knob switch (Option)
9. Multi function display (Option)
10. DPF-II display (Option)
11. Combination meter
12. Accelerator pedal
13. Brake pedal
14. Ignition switch
15. Parking brake release lever
16. Inching and brake pedal
17. Tilt steering adjust lever
18. Parking brake pedal

INSTRUMENTS



Gasoline models

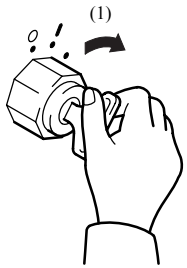


Diesel models

Combination meter

Meter illumination lamp is provided for easy meter reading at night. It comes on when the light control switch is set to ON.

1. Water temperature gauge
2. Hour meter
3. Brake warning lamp (Option)
4. Sedimenter warning lamp (Diesel models)
5. Fuel gauge
6. Engine check lamp (Gasoline models)
7. Glow indicator lamp (1DZ-II engine models) Preheating indicator lamp (2Z engine models)
8. Engine oil pressure warning lamp
9. Charge warning lamp
10. OPS lamp
11. Diagnosis lamp
12. Air cleaner warning lamp (Option)
13. Coolant level warning lamp (Option)



(1) START

Each warning lamp check method

Please check if all warning lamps come on when the ignition switch is turned to ON.

Note:
Use the light control switch to check the meter-lighting lamp.

⚠ Caution

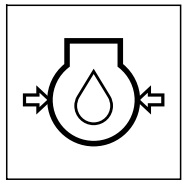
- **The glow indicator lamp (1DZ-II engine models) in on for 2 seconds when the engine coolant temperature exceeds 50°C.**
- **The preheating indicator lamp (2Z engine models) does not come on when the engine coolant temperature exceeds 2.5°C.**
- **If a lamp does not light up, contact your Toyota dealer to request an inspection.**

Hour meter also serving as diagnosis indicator

Only operates when the ignition switch is on. It indicates the total number of vehicle operating hours.
The unit of the right most digit is 1/10 hour.
Please use this meter to grasp the timing for periodic maintenance and record the operation hours.
When an abnormality occurs to the vehicle (diagnosis lamp lights up or blinks) the error code and hour meter will be alternately displayed.

⚠ Caution

Should an error code be displayed, park the vehicle at a safe location and receive an inspection by a Toyota dealer.



Engine oil pressure warning lamp

Comes on to indicate low engine oil pressure while the engine is running.

1. If normal, the lamp comes on when the ignitions switch is turned on and goes off when the engine starts.
2. If the lamp comes on while the engine is running, either the engine oil is insufficient or the lubrication system is faulty. Stop the operation immediately and ask a Toyota dealer for inspection and repair.

Note:
The “engine oil pressure warning lamp” does not indicate the oil level. Check the oil level using the oil level gauge before starting work.

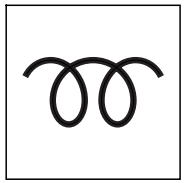
Sedimenter warning lamp
(Diesel models)

The sedimenter is a device for separating water from the fuel.

1. The warning lamp comes on to indicate water in the sedimenter exceeds the predetermined level while the engine is running.
2. If normal, the lamp comes on when the ignitions switch is turned on and goes off when the engine starts.
3. If the lamp comes on while the engine is running, drain water immediately. (See the self service section for the draining method.)

⚠ Caution

Continued operation with the lamp on may cause seizure of the injection pump and pump damage. If the warning lamp light up, always make sure to drain the water.



Glow indicator lamp
(1DZ-II engine models)

Indicates heating of glow plugs.
When the ignition switch is turned on, the lamp comes on and glow plug heating begins. The lamp goes off automatically when glow plug heating is complete. The engine will start easily once the glow plugs are heated.

Note:

The glow indicator lamp is on for 2 seconds when the engine coolant temperature exceeds 50°C.

Preheating indicator lamp
(2Z engine models: standard in designated area)

Indicates preheating of the intake heater.

1. When the ignition switch is turned on, the lamp comes on and preheating starts. The lamp goes off automatically when preheating is complete. The engine will start easily.

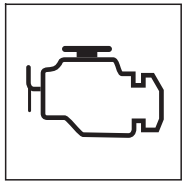
Note:

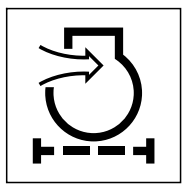
When the engine coolant temperature exceeds 2.5°C, this lamp does not come on because preheating is not carried out.

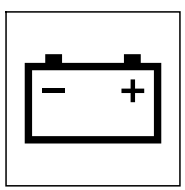
2. The length of preheating time is automatically controlled according to the engine coolant temperature. It gets somewhat longer when the engine coolant temperature is low or in a cold season.

⚠ Caution

If the indicator lamp does not go off if it comes on during engine running, the preheating intake heater may be defective. Please ask a Toyota dealer for inspection and repair.







Gasoline check lamp
(Gasoline models)

1. When an error occurs to the engine controller, the display will light up to inform the operator.
2. When condition is normal, the lamp will light up when the ignition switch is turned to the ON position. The lamp will turn off when the engine is started.

⚠ Caution

If the engine check lamp lights up during operation, suspend operations and after parking the vehicle at a safe location, ask your Toyota dealer to perform an inspection.

Air cleaner warning lamp
(Option)

1. This lamp comes on when the air cleaner element gets clogged during engine running.
2. If normal, the lamp comes on when the ignition switch is turned on and goes off when the engine starts.
3. If the lamp comes on while the engine is running, stop the engine and clean the element and dust cup. For the cleaning method, refer to the Weekly Inspection Section.

Charge warning lamp

1. This lamp comes on to indicate an abnormality in the charging system while the engine is running.
2. If normal, the lamp comes on when the ignition switch is turned on and goes off when the engine starts.
3. If the lamp comes on while the engine is running, stop the operation immediately, inspect the fan belt for cuts or loosening, adjust it, and restart the engine.
   If lamp does not go off, the generation system may be faulty.
   Please ask a Toyota dealer immediately for inspection and repair.

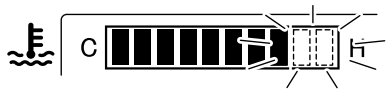
OPS lamp

If the operator leaves the seat, the OPS lamp will light up, indicating that the OPS System is operating. In such a situation, return the control lever and lift lever to the neutral position, then sit on the seat again.
Should an abnormality occur in OPS System, this lamp will blink.(excluding SAS models)

⚠ Caution

In the following cases, a malfunction may have occurred to the OPS System. Park the vehicle in a safe location and contact your Toyota dealer to request an inspection.

- If the operator leaves the seat, the OPS lamp does not light up.
- Even when the operator re-seats himself, the OPS lamp does not turn off.
- If the operator remains seated in the seat for a long period with the ignition switch turned OFF, the next time the ignition switch is turned ON, the OPS lamp may start blinking. In this case, leave the seat temporarily, and if the OPS lamp changes to an alighted condition, this indicates that an abnormality has not occurred.



Water temperature gauge

Indicates the temperature of the engine cooling water.

1. Indicates the temperature of the engine cooling water.
2. This gauge functions with the ignition switch ON, and displays the cooling water temperature from left to right in a 10-stage gradation scale.
3. The operator will be notified when the water temperature is 115ºC or over (above 8th stage), as the final two stages at far right begin blinking. Again, when the engine protection function activates (for vehicles with multifunction display: option), the entire gauge will start blinking to inform the operator.
4. Temporary overheating may be caused by water leakage, insufficient engine coolant level, loosened fan belt or other abnormality in the coolant level, loosened fan belt or other abnormality in the cooling system.
   Inspect the cooling system.

Fuel gauge
(excluding LPG models)

Indicates the amount of remaining fuel in the fuel tank in terms of a 10-stage gradation scale. The operator will be notified that remaining fuel level is low when the two stages at far left start blinking.
It takes some time for the indication to be stabilized after the fuel is supplied and the ignition switch is turned on.

⚠ Caution

- **If the road is not level, attention must be paid because the correct level may not be indicated.**
- **When the gauge begins blinking, replace the fuel as soon as possible.**
- **In case of diesel in particular, be sure to refuel it before it runs out because once it causes the engines to stop running it becomes necessary to bleed air from the fuel supply system.**

Diagnosis lamp

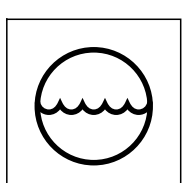
If an abnormality is registered by the SAS, OPS (SAS models), mini lever, or vehicle speed limiter, the respective lamps will light up or blink to inform the operator and the diagnosis error content will be displayed in the hour meter display area.

If the following conditions occur to the lamp, there may be a system abnormality. Contact your Toyota dealer to request an inspection.

- The lamp does not light up when the ignition switch is turned ON.
- The lamp blinks during travel (operation).

⚠ **Caution**

- **Continuing to use the vehicle while the diagnosis lamp is lighted or blinking may lead to breakdown. When the lamp lights up or blinks, halt all handling operations and park the vehicle in a safe location. Contact your Toyota dealer to request an inspection. (In the case of diesel engine vehicles, the diagnosis lamp may light up during engine warm-up after a cold-start, but does not indicate an abnormality.)**
- **If the operator remains seated for a long period with the ignition switch turned OFF, the next time the ignition switch is turned ON, the diagnosis lamp may start blinking. In this case, leave the seat temporarily, and if the lamp changes to an alighted condition, this indicates that an abnormality has not occurred.**



Cooling water level warning lamp (option)

1. When the water level of the radiator reserve tank becomes low, the indicator lamp will light up to notify the operator.
2. If the lamp lights up while the engine is running, this may indicate a deficiency in cooling water. Stop the engine and inspect the cooling water level in the radiator reserve tank and the radiator.

Note:

Even if the cooling water level warning lamp is not alighted, always inspect the cooling water before starting operations.

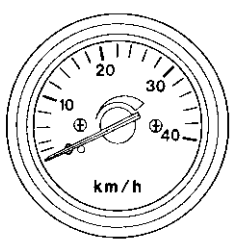
Brake warning lamp (option)

When the parking brake is engaged or brake liquid is deficient, the warning lamp will light up to notify the operator.

1. The warning lamp will light up when the parking brake is engaged. After disengaging the brake to operate the vehicle, check to make sure the warning lamp has turned off.
2. The lamp will light up to notify the operator when the brake oil is deficient.

⚠ **Caution**

- **If the warning lamp does not turn off when the parking brake is disengaged, the brake fluid may be deficient. Inspect the brake fluid level and replenish it if necessary.**
- **If the warning lamp remains alighted even if the brake fluid level is sufficient, contact your Toyota dealer to request an inspection.**

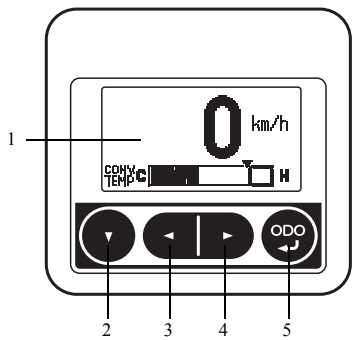


Speedometer (Option)

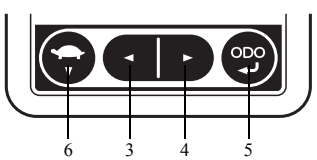
The speedometer indicates the speed of the vehicle in km/h.
Please operate the vehicle at a safe speed.

MULTIFUNCTION DISPLAY (OPTION)

(Multifunction Display)
(Multifunction Display DX)

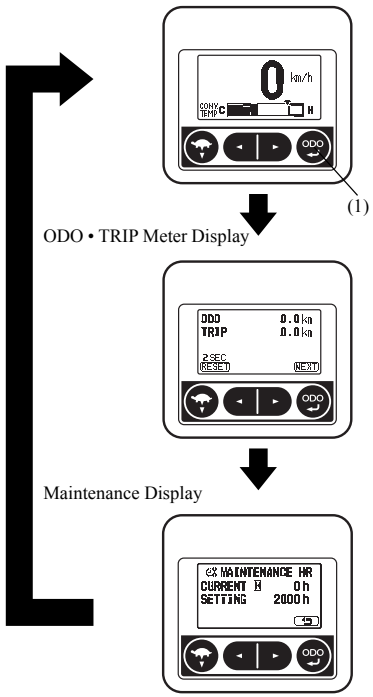


(Multifunction Display DX:
Travel and Load Handling Control)

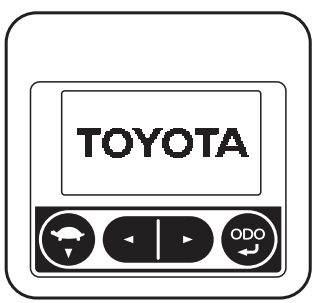


1. Multifunction display area
2. Down switch
3. Left switch
4. Right switch
5. Meter display switch
6. Low speed setting switch (only for vehicles with DX model travel and load handling control)

Digital Speed Meter Display



(1) Meter Display Switch



DISPLAY SCREEN TABLE

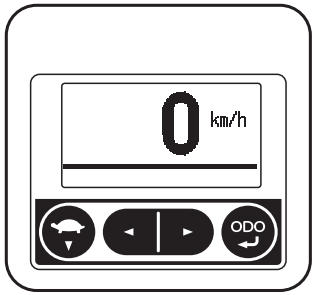
From the standard screen display, pressing the meter display switch will change the display between ODO, TRIP, and Maintenance Hour Meter display screens.

Note:
Always operate the switch panel with your finger tips.

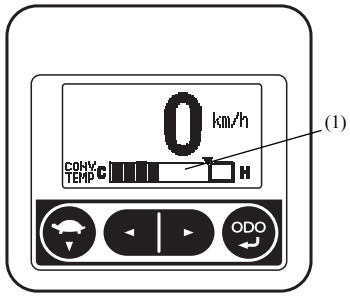
Start screen

When the ignition switch is turned ON, the start screen will appear for 1 second.

Standard screen

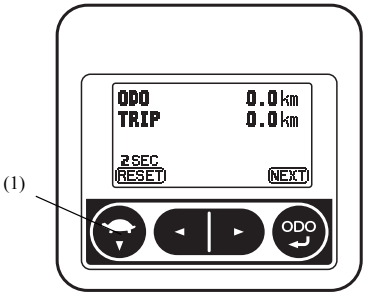


Digital speed meter (Clutch models)
Vehicle speed is digitally indicated in km/h.



(Torque converter models)
Vehicle speed is digitally indicated in km/h at the top of the screen. At the bottom of the screen, torque converter oil temperature is indicated in a 10-stage level.

(1) Torque Converter Oil Temperature Gauge



(1) Low Speed Switch or Down Switch

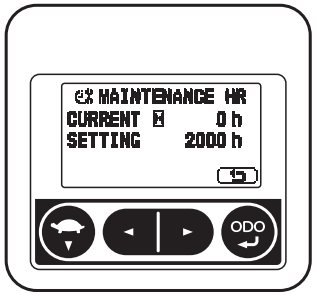
ODO • TRIP Meter

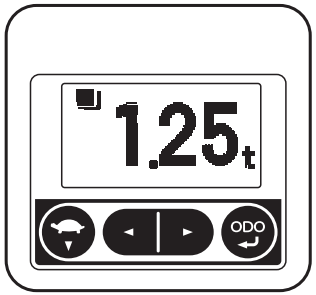
ODO ..... Displays the total distance traveled.

TRIP ..... After resetting this function, displays the total distance traveled until now.

Note:

- Pressing the low speed setting switch (DX model vehicle with travel and load handling control) or the down switch for more than 2 seconds will reset the total travel distance.
- Always operate the switch panel with your finger tips.





Maintenance Hour Meter

Displays the set value and current value of the maintenance hour meter.

CURRENT.. Displays the current time.

SETTING.... Displays the maintenance hour time setting.

The maintenance hour meter time setting can be set between 10-2000 hours. 10-200 time setting can be set in 10 hour intervals, and 200-2000 time setting can be set in 50 hour intervals.

Note:

To change the time setting, consult your factory administrator or Toyota dealer.

Live load meter
(only with DX models)

Pressing the lift lever knob switch or the live load meter switch (mini lever vehicles) will allow the operator to confirm the weight of the load being handled.

Note:

In the case of joy stick vehicles (option), the live load meter switch and fork automatic leveling control switch functions are combined.

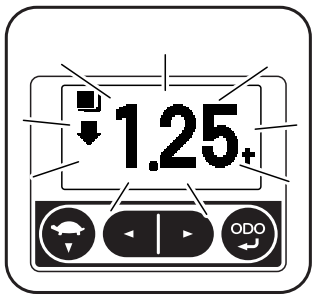
1. Adjust the load to a height of 500mm above ground level and make the mast vertical.
2. In the standard screen, press the lift lever knob switch or the live load meter switch (mini lever vehicles).

Note:

- For each operation, the meter reading will display for 3 seconds. (the display will remain indicated while the switch is held down).
- Pressing the lift lever knob switch or the live load meter switch (mini lever vehicles) while the vehicle is traveling will not display the load display screen.
- If the load is less than 100kg, the meter will indicate 0.00t.

⚠ Caution

This function should be used as reference when conducting handling operations, and not used in business dealings or as proof.



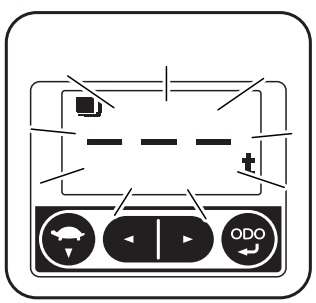
Live load meter error display

When the live load meter is operated while the load is lifted to a high position, an arrow will appear at screen left and the measured weight indication will blink to notify the operator that the reading is inaccurate.

To measure the load, always set the load to a height of approximately 500mm above ground and set the mast vertically.

Note:

If 0 is slightly deviated toward the minus side, the display will indicate -0.00 t.

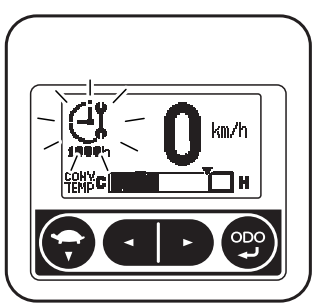


Live load meter sensor error display

When the live load meter sensor malfunctions, the display will blink as indicated in the diagram at left.

Note:

When the live load meter sensor blinks to indicate an error, contact your Toyota dealer to request an inspection.

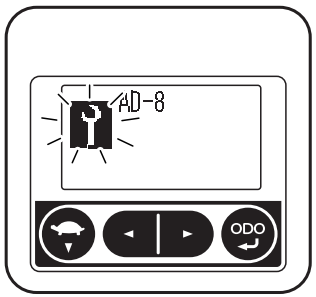


Maintenance indicator

When the reset maintenance time has arrived, the operator will be notified through display and warning sound. Conduct necessary maintenance.

Note:

The maintenance time setting should be determined by the administrator. For information on setting the maintenance time, contact your administrator or Toyota dealer.

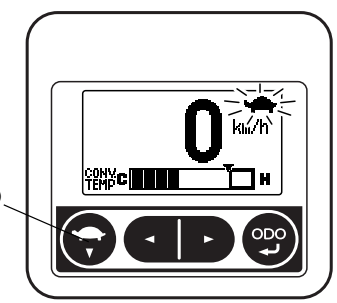


Diagnosis indicator

If an abnormality is registered within the multifunction display, the operator is notified through warning sound together with diagnosis error content display.

Note:

- The error code display will be different depending on the abnormal region and nature of the abnormality. There are also occasions when the error is not indicated depending on the region of abnormality.
- When the diagnosis indicator is displayed, contact your Toyota dealer to request an inspection.



Low speed setting indicator
(only for DX model vehicles with travel and load handling control)

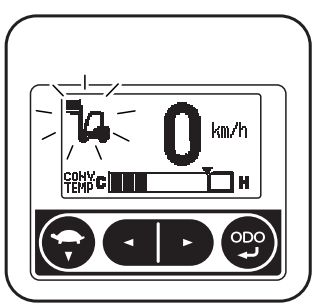
When low speed settings have been input, the turtle mark is displayed.

Each time the low speed setting switch is pressed, the turtle indicator will alternately be alighted and blink. When the indicator is alighted, the low speed setting control is active.

Note:

Always operate the switch panel with your finger tips.

(1) Low Speed Setting Switch

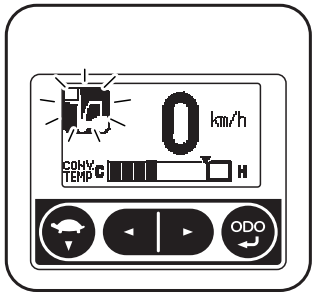


Travel and load handling control indicator
(only for DX model travel and load handling control vehicles with torque converter)

When the speed limiting load height sensor or the load height sensor to prevent sudden start ups is activated, the indicator will warn the operator.

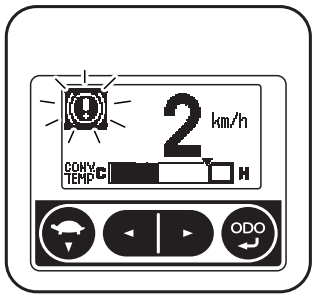
Note:

When the ignition switch is turned ON, this indicator will be displayed for a prescribed duration to indicate that the function is effective.



Function On/Off indicator
(only for DX model travel and load handling control vehicles with torque converter)

When the travel and load handling controls are engaged after the speed limiting load height sensor is deactivated using the travel and load handling controls, the operator is notified via display indication.



Parking brake on warning

When the parking brake has not been disengaged and the operator starts to operate the vehicle, the warning indicator will blink and a warning will sound to notify the operator.

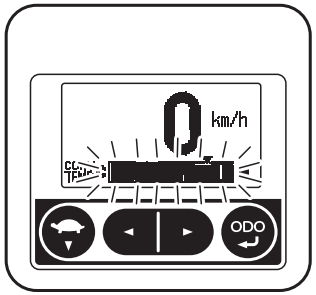
⚠ **Caution**

- **If the vehicle is operated without disengaging the parking brake, the brake will lose effectiveness and is dangerous. Contact your Toyota dealer to request an inspection.**
- **If the indicator lamp does not turn off even when the parking brake is disengaged, stop operations and contact your Toyota dealer to request inspection.**

Parking brake off warning

When the ignition switch is turned off or the operator leaves the seat while the parking brake is disengaged, a warning sound will warn the operator.

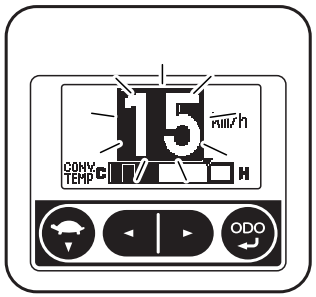
Note:
When leaving the driver's seat, always engage the parking brake, turn the ignition switch OFF and pull out the key.



Torque converter oil temperature overheating warning
(only for torque converter models)

When the torque converter oil temperature reaches level 9 on the indicator (120ºC or over), the indicator will blink to notify the operator. When the indicator reaches level 10 (140ºC or over), the entire indicator will blink to notify the operator.

Note:
When the warning lamp blinks, park the vehicle in a safe location, engage the parking brake, open the engine hood with the motor idling, and cool the torque converter oil.



Over-speed alarm
(only DX model vehicles)

When the set traveling speed is exceeded, the speed meter will blink and a warning will sound to notify the operator.

Note:
This function does not limit traveling speed. Pay attention to your speed when operating the vehicle.

Setting menu screen

With the multifunction display DX, pressing the low speed setting switch or the down switch in the standard screen for more than 2 seconds will display the setting menu screen.

Note:

- Vehicles with multifunction display do not possess a setting menu screen.
- When the administrator has locked the menu, these setting screens cannot be displayed.

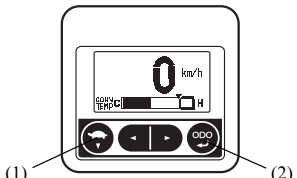
Selecting the options using the low speed setting switch or the down switch and then pressing the meter display switch will display each setting screen.

Select [END] in the setting menu screen, and then pressing the meter display switch will return to the standard screen.

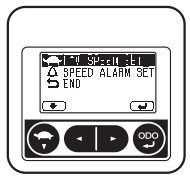
Note:

Always operate the switch panel using your finger tips.

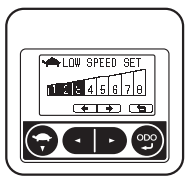
(Multifunction Display DX:
Vehicles with Travel and Load Handling Control)



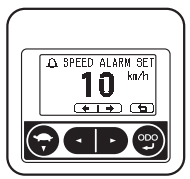
<Standard Screen>



<Setting Menu Screen>



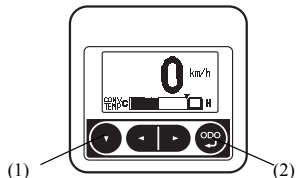
<Low Speed Setting Screen>



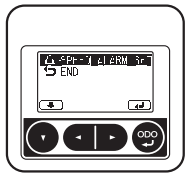
<Speed-Over Alarm Setting Screen>

(1) Low Speed Setting Switch
(2) Meter Display Switch

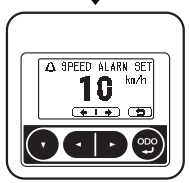
(Vehicles with Multifunction Display DX)



<Standard Screen>

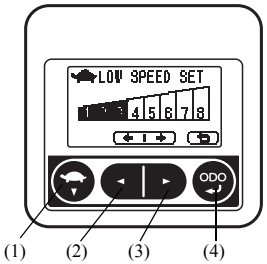


<Setting Menu Screen>

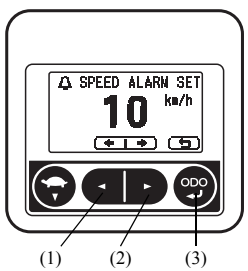


<Speed-Over Alarm Setting Screen>

(1) Down Switch
(2) Meter Display Switch



(1) Low Speed Setting Switch
(2) Left Switch
(3) Right Switch
(4) Meter Display Switch



(1) Left Switch
(2) Right Switch
(3) Meter Display Switch

Low speed setting screen

When the low speed settings are activated, a range of 8 maximum speed settings can be established.

Selecting the level 8 setting will turn off the function.

Left switch.....Decreases the setting level

Right switch.....Increases the setting level

Meter display

Menu switch .....Switches to the menu screen

Note:

- If level 8 is selected, the setting cannot be changed by pressing the low speed setting switch or down switch in the standard screen.
- Always operate the switch panel using your finger tips.

Speed-over alarm setting screen

This function allows you to set the traveling speed which will set off the alarm.

Left switch..... Reduces travel speed

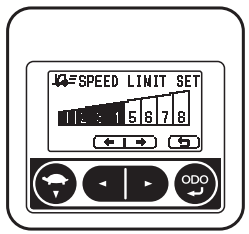
Right switch..... Accelerates travel speed

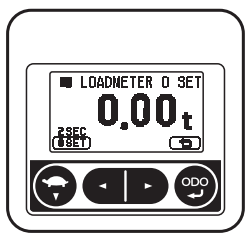
Meter display

Menu switch .....Switches to the menu screen

Note:

Always operate the switch panel using your finger tips.





Maximum speed limit setting screen

This screen allows you to set a range of 8 maximum speed limits.

Note:

This function is to be used by the administrator. For information on setting method, consult you administrator or Toyota dealer.

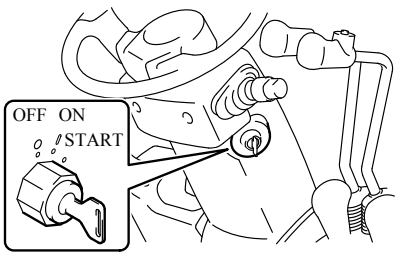
Load meter 0 setting screen

This function allows you to reset the meter to 0.00t when the load meter has deviated from 0, or when fork attachments are replaced.

Note:

This function is to be used by the administrator. For information on setting method, consult you administrator or Toyota dealer.

SWITCHES AND LEVERS



Ignition switch

○ [OFF] ..... Engine stop position.
Key insertion and withdrawal are performed in this position.

I [ON]..... Engine operation position.
Located one position clockwise from ○ [OFF] position.

The intake heater is preheated before starting in the diesel model.

START ..... Engine, start position. Located one position clockwise from the I [ON] position.

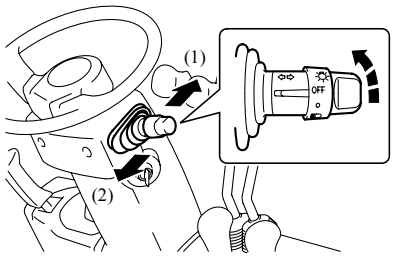
After engine start, release the key and it will return to the I [ON] position automatically.
In the torque converter model, the engine does not start unless the control lever is at the neutral position.

⚠ Caution

- **Never operate the ignition switch without first sitting on the seat. Otherwise, the forklift could start to move uncontrolled, causing an accident.**
- **When the OPS lamp is lighted, return each lever to the neutral position and sit on the seat.**
  Then confirm that the lamp has gone off.
- **Do not leave the switch in the [ON] position when the engine is stopped. It may cause overdischarge of the battery.**
- **Do not turn the switch to the START position while the engine is running.**
- **For the sake of safety it is recommended to always start the engine of a vehicle with the transmission gear shift lever shifted in the neutral position.**
- **Do not operate the starter motor for more than 30 seconds continuously. Return the switch to the [OFF] position and wait at least 30 seconds prior to attempting restart.**

⚠ Caution

- **In case of the anti-restart ignition switch (optionally available), be sure to shift the switch to the [OFF] position before attempt to start the engine again.**
- **With the ignition switch OFF (engine off), the fork will not move down even if the lift lever is so operated. However, if you sit in the seat and turn on the ignition switch, you can lower the fork. (Except mini lever models) Do not operate the lift lever before getting on the vehicle and starting up the engine. (key-off lift lock)**
- **If the diagnosis lamp does not go off even when the operator sits on the seat, the battery power may be low. In such a case, do not drive the vehicle until the lamp goes off, otherwise the vehicle may not operate properly. If you are obliged to drive the vehicle, do so with the utmost care. Also, stop driving and ask a Toyota dealer for inspection if the lamp does not go off 1-2 minutes after the engine starts, or when you race the engine for a while. (For diesel vehicles, the diagnosis lamp may be lighted for a while to warm up the engine after cold starting. This is, however, not engine trouble or failure.)**



(1) Left turn
(2) Right turn

Integrated light and turn signal switch

This switch serves as both two-position light control and turn signal switch.

Light control switch

Irrespective of a key switch position, this switch allows you to turn on and off lighting.

This switch has two positions. With the switch at each position, the lamp comes on as shown below.

Lamp name	Step 1	Step 2
Head lamps	–	○
Side clearance lamps, tail lamps (Option)	○	○
Meter illumination lamp	○	○

⚠ **Caution**

Do not keep lamps such as head lamps kept on for a long time when the engine is stopped. It may cause overdischarge of the battery to make engine starting impossible.

Turn signal switch
(Option)

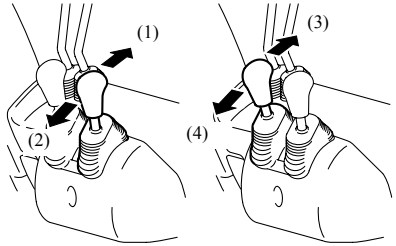
Makes the turn signal lamps blink

Left turn ..... Push forward

Right turn ..... Pull backward

The signal switch will operate when the ignition switch is ON.

The turn signal lever returns automatically to the original position after making a direction change.



(1) Forward
(2) Reverse
(3) Low speed
(4) High speed

Gear shift levers
(Clutch models)

Forward-reverse gear shift lever (right-hand side)

Lever for shifting between forward and reverse.

Forward ..... Push the lever forward

Reverse..... Pull the lever backward

The neutral position is halfway between the forward and reverse positions.

⚠ **Caution**

The engine cannot be started unless the shift lever is at the neutral position.
Stop the vehicle before shifting between forward and reverse.

High-low speed gear shift lever (left-hand side)
Lever for shifting of the traveling speed between the low (1st) speed and high (2nd) speed.

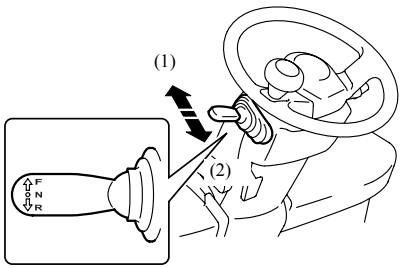
Low speed ..... Push the lever forward

High speed ..... Pull the lever backward

The neutral position is halfway between the high and low speed positions.

⚠ **Caution**

- **Bring the vehicle to a perfect stop before operating the Forward-reverse shift lever.**
- **Always set the levers at the neutral positions before starting the engine.**
- **The engine cannot be started unless the gear shift lever is at the neutral position.**



(1) Forward
(2) Reverse

Control lever
(Torque converter models)

Lever for shifting between forward and reverse.

Forward ..... Push forward

Reverse..... Pull backward

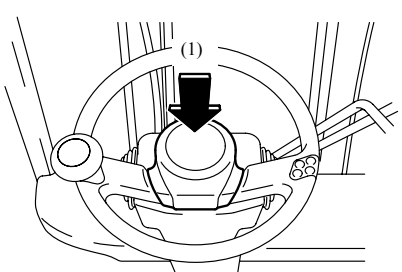
The neutral position is halfway between the forward and reverse position.

Note:

After the OPS System operates, return the accelerator pedal to its fully released position and the control lever to the neutral position, and sit on the seat to restart driving. (Even though the operator sits on the seat, driving is impossible unless the control lever is shifted to the neutral position.)

⚠ Caution

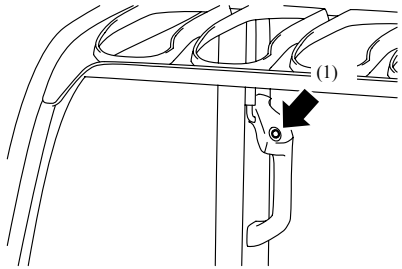
The engine cannot be started unless the control lever is at the neutral position.
Stop the vehicle before shifting between forward and reverse.



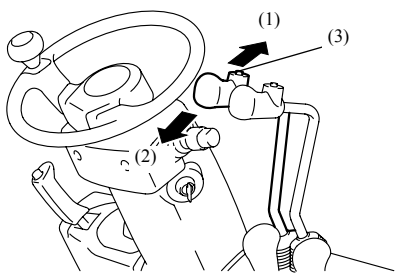
(1) Push

Horn button

Press the button in the center of the steering wheel to sound the horn.
The horn will sound even when the ignition switch off.



(1) Push



(1) Lower
(2) Raise
(3) Lift lever knob switch

Horn button
(Option)

The horn will sound when the button at the top of the rear pillar assist grip is pressed. Use this horn when backing up.

The horn will sound even when the ignition switch off.

Lift lever

Raises and lowers the forks.

Raise .....Pull backward

Lower ..... Push forward

The lifting speed can be adjusted by the degrees of accelerator pedal depression and lever operating stroke.

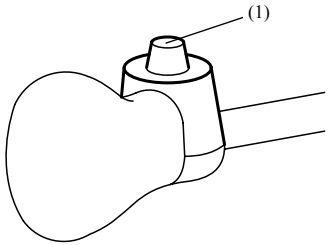
The lowering speed can be adjusted only by the degree of lever operating stroke.

Note:

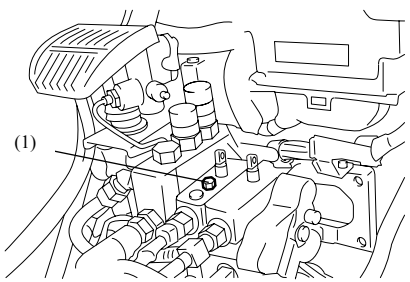
The idling lifting speed increase function (option) automatically increases fork raising speed by raising the lift lever.

⚠ Caution

- **After the OPS System operates, return the accelerator pedal to its fully released position and the lift lever to the neutral position, and sit on the seat to restart the operation. (If you sit on the seat without returning the lift lever to the neutral position, the fork may resume moving.)**
- **If the operator returns to the seat before lowering the lift lever, the fork will not descend due to the return to neutral function.**
- **Always operate the lift lever while correctly seated.**
- **As long as the ignition switch is off, the fork does not move down even if so operated. However, if you sit in the seat and turn on the ignition switch, you can lower the fork.**



(1) Lift lever knob switch



(1) Lift lock release bolt

Lift lever knob switch
(Option)

For vehicles with multifunction display DX (option), pressing the lift lever knob switch will display the weight of load.

Note:

- Operate this function when you are not performing loading operations.
- When weighing the load, always remember to position the load at a height of about 500mm above the ground and make the mast perpendicular.

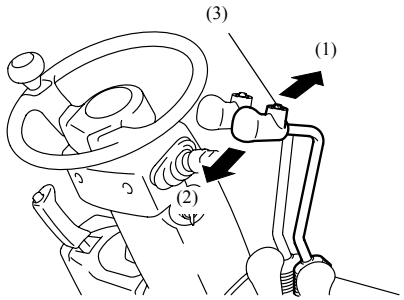
Key-lift interlock

When the ignition switch is OFF, the lift will not descend even if the lift lever is lowered. However, if the operator sits properly in the seat and turns the ignition switch ON, the lift can be lowered even if the engine is off (excepting mini lever / joy stick operated vehicles).

If the ignition switch cannot be turned ON for whatever reason, loosen the manual lowering valve located on the oil control valve beneath the top board, and operate the lift lever in the downward direction.

Note:

Once the fork has been moved down with the lift lock release bolt applied, do not fail to fasten the valve and recover its original condition.



(1) Forward tilting
(2) Backward tilting
(3) Tilt lever knob switch

Tilt lever

Tilts the mast forward and backward.

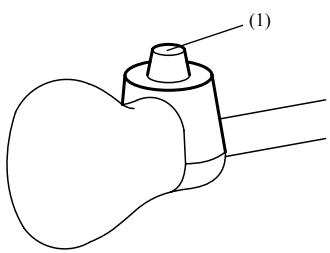
Forward ..... Push forward

Backward ..... Pull backward

The forward or backward tilting speed can be adjusted by the degrees of accelerator pedal depression and lever operating stroke.

⚠ Caution

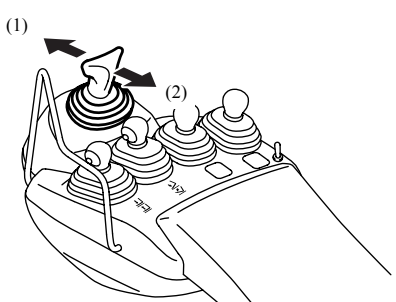
- **Always operate the tilt lever from a seated position.**
- **After the OPS System operates, return the accelerator pedal to its fully released position and the tilt lever to the neutral position, and sit on the seat to restart the operation. (If you sit on the seat without returning the tilt lever to the neutral position, the fork may resume moving.)**



(1) Tilt lever knob switch

Tilt lever knob switch
(SAS models: Option)

With this switch pressed, change tilting from backward to forward and the fork will automatically stop at its horizontal position.
It is also possible to slow down the backward tilt speed at a low lift.



(1) Forward
(2) Backward

Automatic fork leveling control

With the fork positioned at the backward lift, use the lever to tilt the fork forward while pressing the tilt lever knob. Then, the mast can be automatically stopped, with the fork horizontally positioned. This feature will be conveniently usable to pull in and out the fork while stacking a load.

Motion upon change of tilt from backward to forward, with tilt lever knob switch pressed:

	Not loaded	Loaded
High lift	Fork stopped at its horizontal position (with mast vertically positioned)	Not tilting forward
Low lift	Fork stopped at its horizontal position (with mast vertically positioned)	

Active mast rear tilt speed control

Tilt the fork backward while pressing the tilt lever knob switch. As long as this switch remains pressed, the fork is slowed down while being tilted backward. Unless the switch is pressed, moreover, the backward tilting speed will be lower at a high lift.

Mini levers
(Option)

Control lever

This lever switches between forward and backward motion.
The intermediary point between the forward and backward positions is the neutral position.

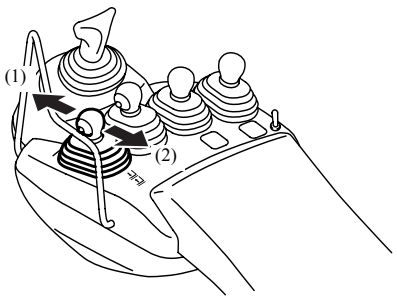
Forward ..... Operates the vehicle in a forward direction

Backward... Operates the vehicle in a backward direction

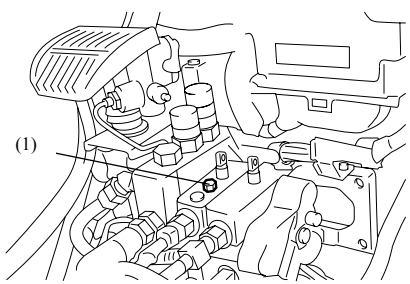
The speed of forward and backward motion can be adjusted by the extent of pressing the accelerator pedal.

Note:

- Stop the vehicle first when switching between forward and backward motion.
- After the OPS System has been activated, return the accelerator pedal and control lever to their neutral positions and re-seat yourself in proper position before recommencing operations.
- Always operate the control lever from a properly seated position.
- Depending on the vehicle specifications, the position of the control lever may vary.



(1) Lower
(2) Raise



(1) Lift lock release bolt

Lift lever

Raise and lower the forks for loading.

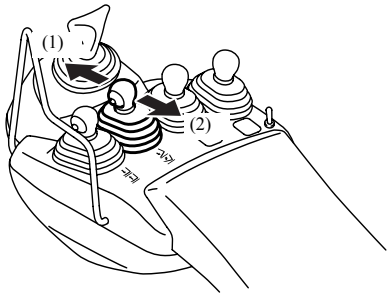
Raise .....Pull backward

Lower ..... Push forward

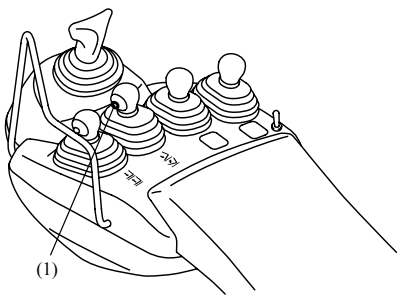
Raising speed can be adjusted by the extent of pressing the accelerator pedal and pulling the lift lever.
Lowering speed can be adjusted by the extent of pushing the lift lever.

Note:

- When the OPS lamp is lighted, return all of levers to the neutral position and sit on the seat again.Then confirm that the OPS lamp has gone off.
- If you return to the seat while lowering the lift lever, the fork will not descend due to the return to neutral function.
- Always operate the lift lever from a properly seated position.
- If you use the idling lifting speed increase function (option), raising the lift lever will automatically increase the engine speed and raise the fork at a constant speed without having to step on the accelerator pedal.
- In the case of mini lever vehicles, when the ignition switch is turned OFF, the fork will not descend even if the lift lever is lowered. (key off lift lock)
- When the forks do not move down due to failure and other reasons, they can be lowered by unfastening the lift lock release bolt.
- If you lower the forks by unfastening the lift lock release bolt, make sure to refasten it.



(1) Forward
(2) Backward



(1) Automatic fork leveling switch

Tilt lever

Tilt the mast forward and backward.

Forward ..... Push forward

Backward.....Pull backward

Forward or backward tilting speed can be adjusted by the extent of pressing the accelerator pedal and operating the lever.

Note:

- When the OPS lamp is lighted, return all of the levers to the neutral position and sit on the seat again.Then confirm that the OPS lamp has gone off.
- Always operate the tilt lever from a properly seated position.

Automatic fork leveling switch (Work same as the tilt lever knob switch.)

While pressing the switch and the fork is operated forward from a backward-tilted position, or backward from a forward-tilted position, the fork will automatically stop at a horizontal position. Releasing the switch will allow for normal tilt lever operation.

Fork forward-tilt automatic leveling control

When the fork is in a backward-tilted position, operating the lever forward while pressing the automatic fork leveling switch will automatically stop the fork at a horizontal position. This function is convenient when handling loads or attaching/detaching forks.

While pressing the automatic fork leveling switch, operating the fork forward from a backward-tilted position.

	Not loaded	Loaded
High lift	Forks stopped at their horizontal position (with mast vertically positioned)	Not tilting forward
Low lift	Forks stopped at their horizontal position (with mast vertically positioned)	
Highest position	Not tilting forward	

Fork backward-tilt automatic leveling control

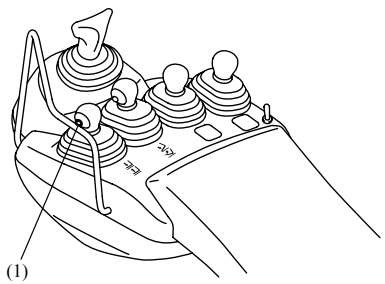
When the fork is in a forward-tilted position, operating the lever backward while pressing the automatic fork leveling switch will automatically stop the fork at a horizontal position. This function is convenient when using clamp-type attachments while the mast is tilted forward from the vertical position.

While pressing the automatic fork leveling switch, operating the fork backward from a forward-tilted position.

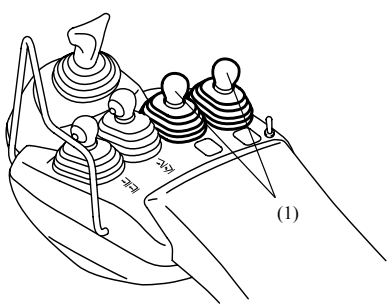
	Not loaded	Loaded
High lift	Forks stopped at their horizontal position (with mast vertically positioned)	Not tilting forward
Low lift	Forks stopped at their horizontal position (with mast vertically positioned)	

Active mast rear tilt speed control

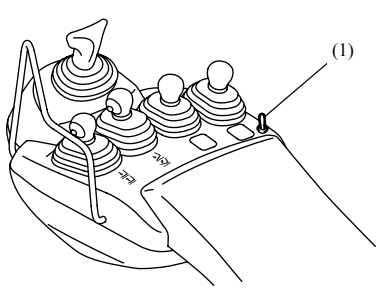
When the mast is raised to a high position, backward-tilt speed will automatically slow down.



(1) Live load meter switch



(1) Attachment lever



(1) Attachment lever switch

Live load meter switch (option)

For vehicles equipped with multifunction display DX (option), pressing the live load meter switch will display the weight of the load.

Note:

- Operate this function when you are not performing loading operations.
- When weighing the load, always remember to position the load at a height of about 500mm above the ground and make the mast perpendicular.

Attachment lever

Operates the attachment.
Attachment speed can be adjusted by the extent of pressing the accelerator pedal and operating the lever.

Note:

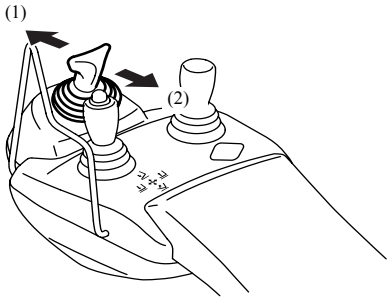
- When the OPS lamp is lighted, return all of the levers to the neutral position and sit on the seat again.Then confirm that the OPS lamp has gone off.
- Always operate the attachment lever from a properly seated position.

Attachment lever switch (only for 5 lever series)

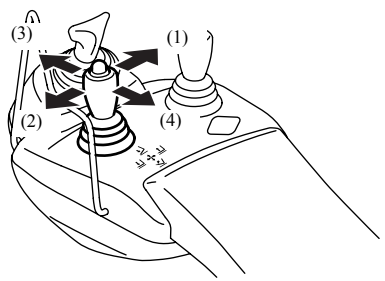
This switch allows attachment lever operations to be switched between the 3rd and 4th levers. Toggling the switch to the left and right will switch the operation of the attachment lever on the left side (inside the vehicle).

⚠ Caution

Operate the attachment lever switch when attachment operations are stopped.



(1) Forward
(2) Backward



(1) Raising
(2) Lowering
(3) Forward-tilt
(4) Backward-tilt

Joy stick (option)

Control lever

This lever switches between forward and backward motion.
The intermediary point between the forward and backward positions is the neutral position.

Forward .....Operates the vehicle in a forward direction
Backward...Operates the vehicle in a backward direction

The speed of forward and backward motion can be adjusted by the extent of pressing the accelerator pedal.

Note:

- Stop the vehicle first when switching between forward and backward motion.
- After the OPS System has been activated, return the accelerator pedal and control lever to their neutral positions and re-seat yourself in proper position before recommencing operations.
- Always operate the control lever from a properly seated position.
- Depending on the vehicle specifications, the position of the control lever may vary.

Lift tilt lever

Operation to the left and right controls lift, and forward and backward operation controls tilt.

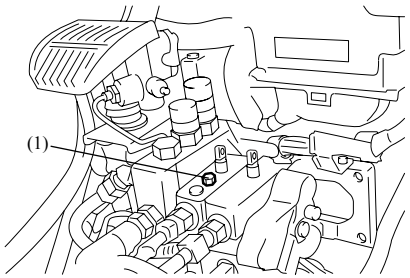
Raising .....Operate the lever to the right
Lowering.....Operate the lever to the left
Forward-tilt.....Operate the lever forward
Backward-tilt.....Operate the lever backward

Raising speed and forward and backward-tilt speed can be adjusted by the extent of pressing down on the accelerator pedal and operating the lever.

Lowering speed can be adjusted by operating the lever.

Note:

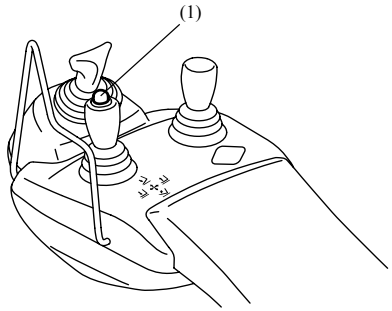
Using the idling lifting speed increase function (option), when the lift tilt lever is raised, the engine's speed is automatically increased without having to press the accelerator pedal, allowing the fork to be raised at a constant speed.



(1) Lift lock release bolt

Note:

- After the OPS System has been activated, return the accelerator pedal and all other levers to their neutral positions and re-seat yourself in proper position before recommencing operations.
- If you return to seated position while lowering the lift lever, the lift will not descend due to the return to neutral warning function.
- Always operate the lift tilt lever from a properly seated position.
- In the case of joy stick vehicles, when the ignition switch is turned OFF, the fork will not descend even if the lift tilt lever is lowered. (key off lift lock)
- When the forks do not move down due to failure and other reasons, they can be lowered by unfastening the lift lock release bolt.
- If you lower the forks by unfastening the lift lock release bolt, make sure to refasten it.



(2) Automatic Fork Leveling Switch

Fork automatic leveling switch

While pressing the switch and the fork is operated forward from a backward-tilted position, or backward from a forward-tilted position, the fork will automatically stop at a horizontal position. Releasing the switch will allow for normal tilt lever operation.

Fork forward-tilt automatic leveling control

When the fork is in a backward-tilted position, operating the lever forward while pressing the automatic fork leveling switch will automatically stop the fork at a horizontal position. This function is convenient when handling loads or attaching/detaching forks.

While pressing the automatic fork leveling switch, operating the fork forward from a backward-tilted position.

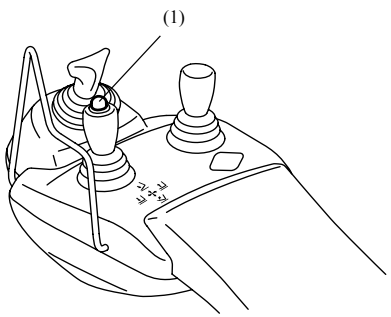
	Not loaded	Loaded
High lift	Forks stopped at their horizontal position (with mast vertically positioned)	Not tilting forward
Low lift	Forks stopped at their horizontal position (with mast vertically positioned)	
Highest position	Not tilting forward	

Fork backward-tilt automatic leveling control

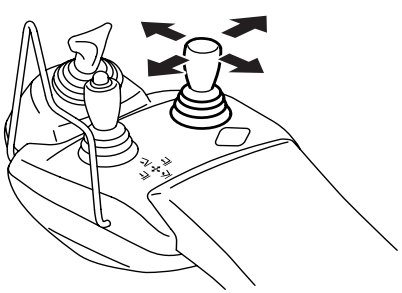
When the fork is in a forward-tilted position, operating the lever backward while pressing the automatic fork leveling switch will automatically stop the fork at a horizontal position. This function is convenient when using clamp-type attachments while the mast is tilted forward from the vertical position.

While pressing the automatic fork leveling switch, operating the fork backward from a forward-tilted position.

	Not loaded	Loaded
High lift	Forks stopped at their horizontal position (with mast vertically positioned)	Not tilting forward
Low lift	Forks stopped at their horizontal position (with mast vertically positioned)	



(1) Automatic Fork Leveling Switch



Active mast rear tilt speed control

When the mast is raised to a high position, backward-tilt speed will automatically slow down.

Live load meter display

In the case of vehicles with multifunction display DX (option), pressing the fork automatic leveling switch will display the weight of the load being handled.

Note:

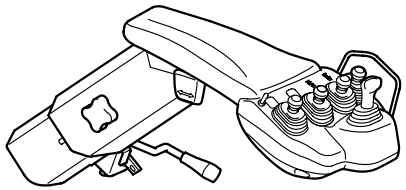
- The live load meter switch and fork automatic leveling control switch functions are combined.
- Operate this function when loading is not being conducted.
- When weighing the load, always remember to position the load at a height of about 500mm above the ground and make the mast perpendicular.

Attachment lever

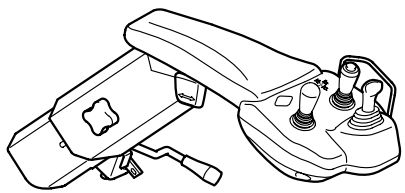
Operates attachment. Attachment speed can be adjusted by the extent of pressing the accelerator pedal and operating the lever.

Note:

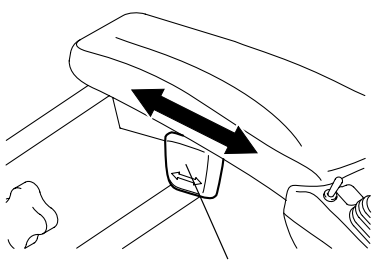
- When the OPS System is activated, return the accelerator pedal and all other levers to their neutral positions and return to a properly seated position before recommencing loading activities.
- Operate the attachment lever after you are seated properly in the vehicle.



Mini lever models



Joy stick models



(1) Back-and-forth position adjustment knob

Arm rest
(mini lever and joy stick vehicles)

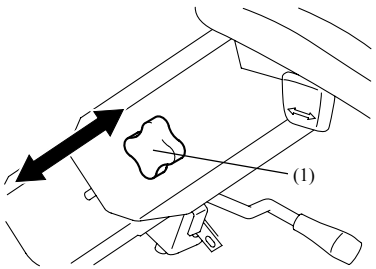
Before starting up the engine, adjust the armrest to set the optimum driving position.

⚠ Caution

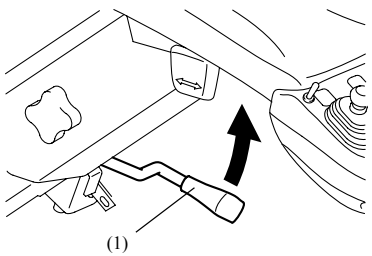
- **After you have finished adjusting the armrest forward-backward position, height and tilt, confirm that the knob and the lever have been secured in place. Loose knob and lever will cause operation mistake or an accident.**
- **Do not adjust the position of the armrest while operating the vehicle.**
- **To operate the vehicle in safety, fix down the arm rest securely. Before operating the vehicle, always confirm that the lever for turning and securing the armrest is locked.**

Adjusting the back-and-forth position

Pull up and thereby loosen the forward-backward position adjusting knob. Adjust the armrest forward-backward position. Then press the knob, securing it in place.



(1) Height adjuster knob



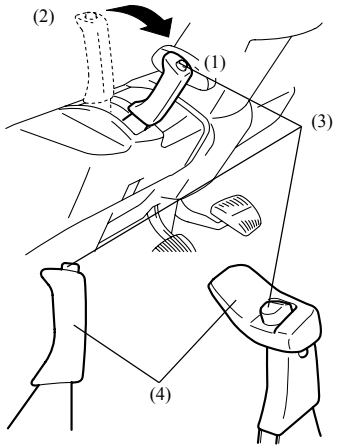
(1) Lever for turning and securing the armrest

Adjusting the height position

Turn the knob counterlockwise to release the lock.Then,move the armrest up-and-down to place it to an appropriate position.

Tilt adjustment

Lift and thereby loosen the lever for turning and securing the armrest.Adjust the tilt of the armrest.Then push the lever down,securing it in place.This lever is used in order to turn the armrest when you open and close the engine hood.



Standard Option

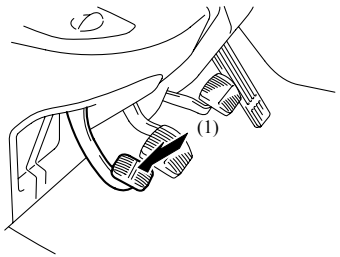
(1) Lock
(2) Release
(3) Release knob
(4) Grip

Parking brake lever
(Clutch models)

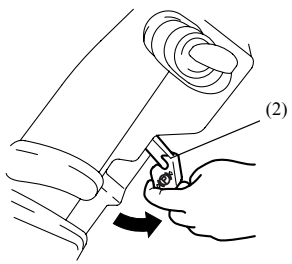
When parking, grasp the grip of the lever and fully pull it toward you.
When releasing the brake push in the release knob check that the pawl moves away from the sector and then push back the lever.
While operation the parking brake lever, keep the brake pedal fully depressed.

⚠ Warning

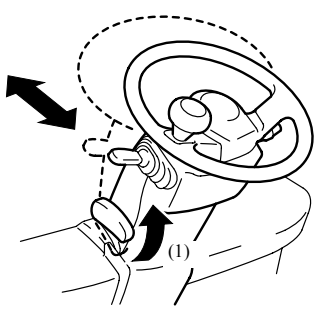
- **Never hold the lever at other than the grip because a finger may be pinched. When releasing the parking brake by holding the lever for starting on a slope for example, hold the grip at above the protrusion.**
- **When parking on a slope, apply wheel chocks to the wheels.**
- **Traveling without releasing the brake will spoil the brake performance.**



(1) Press Down



(2) Release Lever



(1) Raised

Parking brake pedal
(torque converter vehicles)

Use the parking brake pedal when parking or stopping.

1. When engaging the parking brake, while stepping on the brake pedal, fully press down on the parking brake pedal.
2. To disengage the parking brake pedal, while stepping on the brake pedal, pull the release lever toward you.

⚠ Warning

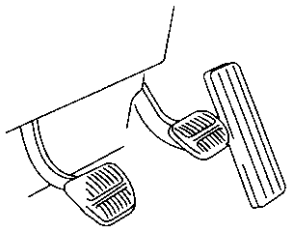
- **Before operating the parking brake pedal, step on the brake pedal and always confirm that the vehicle has come to a stop.**
- **When parking on a slope, apply wheel chocks to the wheels.**
- **Traveling without releasing the brake will spoil the brake performance.**

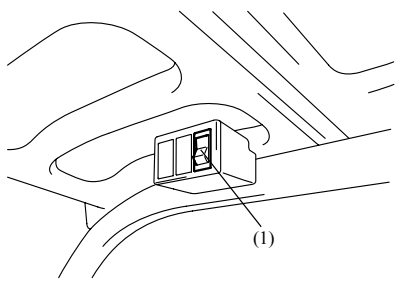
Tilt steering adjustment

1. The steering wheel position may be adjusted back and forth while the tilt steering adjust lever is raised.
2. Lowering the lever at the proper position fixes the steering wheel at that position.
3. After the adjustment, try to move the steering wheel back and forth to see that it is fixed.

⚠ Caution

The steering wheel position must be adjusted before starting the vehicle.
Adjustment during traveling must be avoided.





(1) Back Buzzer Switch

Pedals

(Clutch models)

From the right: accelerator pedal, brake pedal and clutch pedal.

(Torque converter models)

From the right: accelerator pedal, brake pedal and inching pedal.

Note:

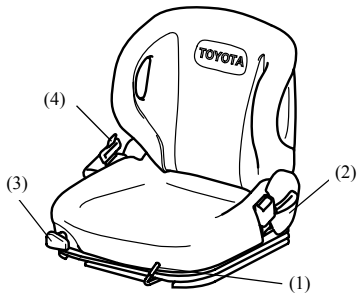
Accelerator pedal stays neutral even when control lever is shifted to forward-reverse,due to accelerator switch.
The vehicle will move only when accelerator pedal is depressed.

Back buzzer switch (option)

This switch turns the back buzzer ON and OFF.

While the switch is ON, shifting the gear shift lever (forward-reverse) or the control lever to the reverse position will cause the buzzer to sound. The buzzer will not sound when it is turned OFF.

BODY COMPONENTS



(1) Seat slide lever
(2) Recliner adjust lever (Option)
(3) Weight adjust knob (Option)
(4) Seat belt

Operator's seat

The operator's seat and seat belt are provided for your safety.

The seat can be moved back and forth for position adjustment while the adjust lever is pulled upward.

⚠ Caution

- **Due to the seat switch, the forklift cannot be driven and the fork cannot be raised or lowered unless the operator is sitting on the seat. Therefore, please sit on the seat before attempting to operate the forklift. Moreover, do not operate it with an object placed on the seat. (Clutch models are not equipped with Travel OPS Functions.)**
- **Do not turn on the seat switch by any method other than sitting on the seat.**

Suspension seat

The seat suspension mechanism provides a comfortable seating position according to the weight of the driver. The optimum driving position can be set using the knob and levers.

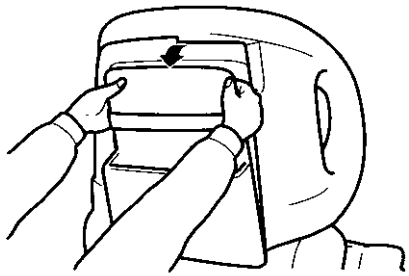
Seat slide lever
Pull the slide lever to the left, to adjust the back-and-forth position of the seat. The seat is secured in position when you release the lever.

Recliner adjust lever (Option)
Pull the lever on the left to adjust the seat's angle of recline.

Weight adjust knob (Option)
Turn the knob on the right of the seat clockwise to adjust for a heavier body weight. Turn the knob counterclockwise to adjust for a lighter body weight. Adjustment can be made for body weights between 40 kg and 120 kg.

⚠ Caution

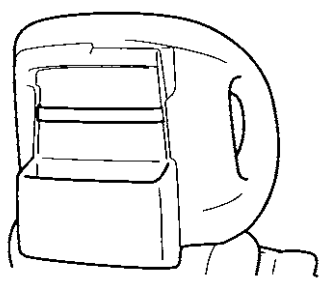
After adjustment, lightly shake the seat forward and backward to confirm that the seat is firmly locked in position.



Pocket

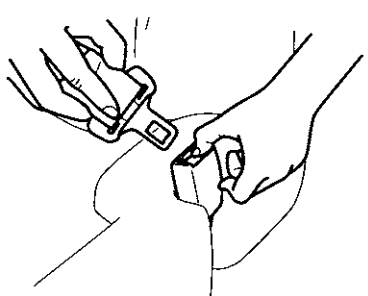
An operator's manual and operator's manual for safety operation are located on the rear side of the seat. Make sure to open the seat back pocket with both hands. If your truck does not have an operator's manual and operator's manual for safety operation, please contact (your authorized Toyota Dealer) to obtain copies for your truck.

Note:
Make sure the pocket is closed securely.



Magazine box

There is a box at the rear of the pocket for small items such as sketch boards and work gloves.
To prevent items in the pocket from falling out when opening and closing the engine hood or driving on bad road surfaces, secure firmly with the belt.



Seat belt

To fasten your seat belt, pull it out of the retractor and insert the tab into the buckle.
You will hear a click when the tab locks into the buckle. Pull on the belt to make sure the buckle is securely latched.
The seat belt length automatically adjusts to your size.

Disconnecting method
Push the release button and allow the belt to retract.

⚠ **Warning**

- **Buckle up. Your seat and seat belt can reduce the risk of serious injury or death in case of a truck tipover. You chances for avoiding serious injury or death in a tipover are better if you stay with the truck in the operator's compartment.**
- **Always wear your seat belt when driving the truck. Trucks can be tipped over if operated improperly. To protect operators from the risk of serious injury or death in the event of a tipover, it is best to be held securely in the seat. The seat and seat belt will help to keep you safely within the truck and operator's compartment, in the event of a tipover, don't jump, grip the steering wheel, brace your feet, lean away from the direction of tipover, and stay with the truck.**
  Please always buckle up your seat belt when driving your truck.

Rotation seat (option)

This rotating seat is useful when backing up over long distances or when dismounting from the vehicle.

Backing up (rotation to the right)

1. For standard models, pull the release lever backward to release the lock.
   For mini lever and joy stick models (option) pull the lock release lever upward to release the lock.

Note:
Let go of the lock release lever once the seat starts to rotate.

2. Rotate the seat to the right and lock the seat.
3. After backing up, return the seat to normal position.

Dismounting from the vehicle
(rotation to the left)

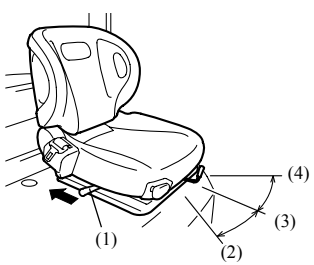
1. For standard models, pull the lock release lever backward to release the lock.
   For mini lever and joy stick models (option), pull the lock release lever upward to release the lock.

Note:
Let go of the lock release lever once the seat starts to rotate.

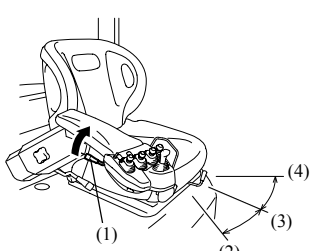
2. Rotate the seat to the left and dismount the vehicle. The seat will not lock into place during vehicle dismounting (rotation to the left).

⚠ **Caution**

- **When rotating the seat, be careful not to get your hand caught between the seat and cab.**
- **After using this function, return the seat to normal position and confirm that the seat is locked in place.**
- **While operating the vehicle forward or backward, make sure that the seat is securely locked in a normal operating position.**
- **To prevent accidents, do not rotate the seat while operating the vehicle.**
- **The seat will not lock into place when dismounting the vehicle so take care when mounting and dismounting.**

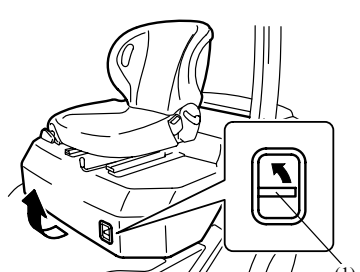


Standard models



Mini lever / Joy stick models(Option)

(1) Lock Release Lever
(2) Backing Up (Lock Included)
(3) Normal Traveling (Lock Included)
(4) Vehicle Dismounting (No Lock)

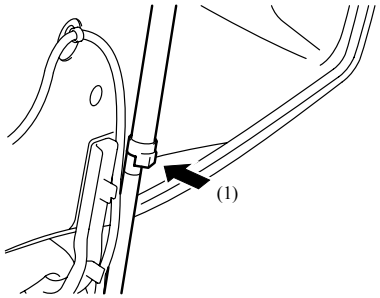


(1) Engine hood lock release lever

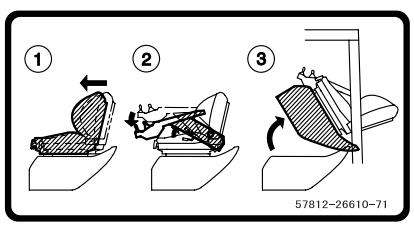
Engine hood

Opening

1. Pulling up on the engine hood lock release lever will release the engine hood lock, and the engine hood will pop up slightly.
2. Lift the engine hood.
3. Open the engine hood all the way, then shake the hood slightly to check that the hood damper has been securely fastened before letting go.



(1) Push



Closing

1. Lift up the engine hood and press the hood damper lock to release the lock.
2. Close the engine hood quietly, and press down on the hood until you hear a clicking sound.

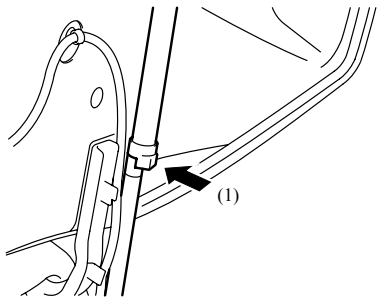
⚠ Caution

Operating the vehicle without firm locking of the engine hood is very dangerous. Be sure to check firm locking before operating the vehicle.

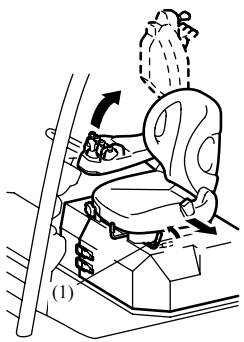
Engine food
(Mini lever / Joy stick models: Option)

Opening

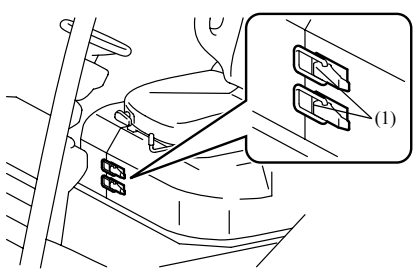
1. Pull the slide lever to the left and slide the seat to the forward-most position.
2. Pull up on the arm rest forward-backward angular adjustment lever, and after tilting the arm rests forward, lower the forward-backward angular adjustment lever and again lock it in place.
3. Pull up on the engine hood lock release lever to release the lock. The engine hood will slightly pop up and lift up the engine hood.
4. Open the engine hood all the way, shake the hood to check that the hood damper is engaged before letting go.



(1) Push



(1) Side Slide Lever



(1) Engine Hood Catch

Closing

1. Lift up the engine hood, press the hood damper lock to release the lock.
2. Close the hood quietly, and press down on the hood until you hear a clicking sound.

⚠ Caution

Operating the vehicle without firm locking of the engine hood is very dangerous. Be sure to check firm locking before operating the vehicle.

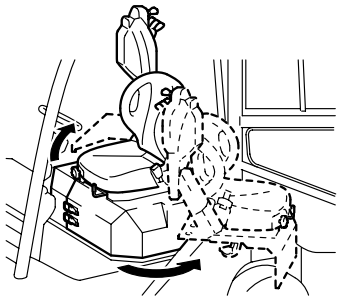
3. Return the seat and arm rests to their normal position.

Engine food
(Premium cabin models: option)

Opening

1. After lifting the arm rest up, slide the seat to the left while pulling up on the side slide lever.

2. Disengage the engine hood catches at two locations.



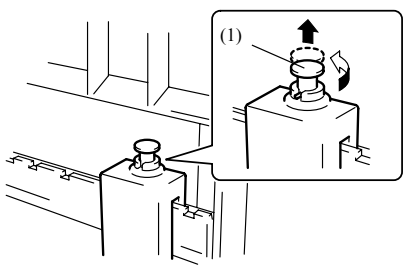
3. Open the hood until the left side engine hood damper is securely locked in place.
4. Open the hood until the right side engine hood damper is securely locked in place.

Closing

1. Close the right side engine hood.
2. Close the left side engine hood.
3. Securely lock the engine hood catches at two locations.
4. Restore the arm rest to its original position.

⚠ Caution

Confirm that the engine hood catches are securely locked at two locations. It is dangerous for the engine hood catches to come undone during operation.



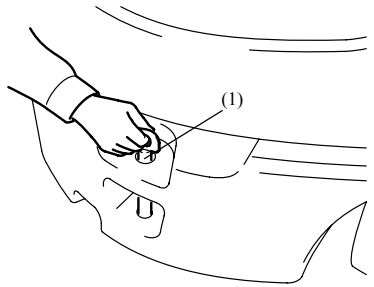
(1) Fork stopper

Forks

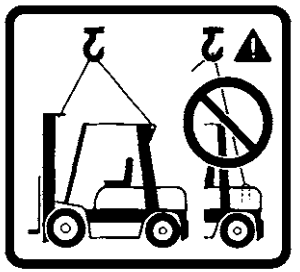
Lift each fork stopper and turn to release so that forks can be shifted left and right.
Adjust the forks in the position most appropriate for the load.
When adjusting the forks, make sure that the center of gravity of the load corresponds to the center of the vehicle. After adjustment, turn the stoppers to lock the forks in place.

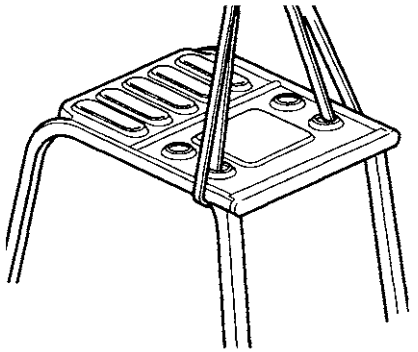
⚠ Warning

Make the forks are locked before carrying a load.



(1) Draw bar





Draw bar

The draw bar is located at the back of the counterweight, and is used to pull the vehicle should its tires drop into a gutter or become stuck in mud.
It can also be used for loading the forklift onto a truck or another vehicle.

⚠ Caution

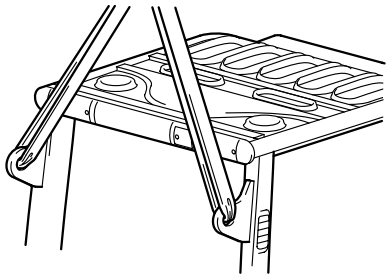
The draw bar should not be used for towing the forklift or for towing another vehicle using the forklift.

Vehicle hoisting method

When hoisting the vehicle, use the lifting holes near the top of the mast for the front side and the overhead guard for the rear position as shown in the illustration.

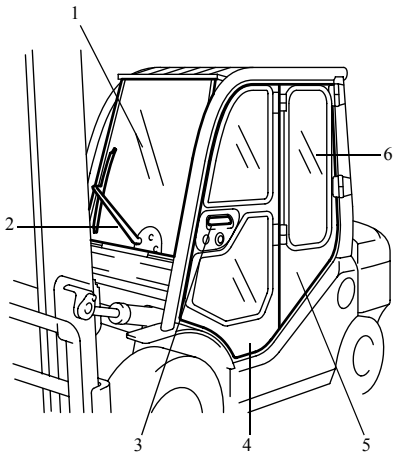
⚠ Caution

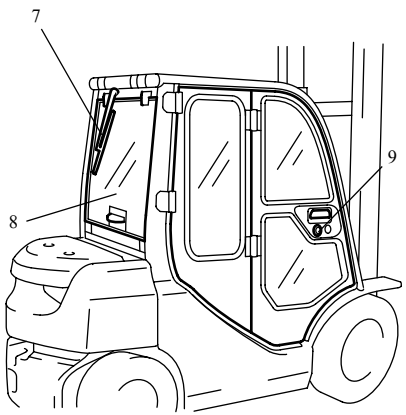
- **Use wire cable which is sufficiently strong.**
- **Never use the holes on the upper side of the counterweight to hoist the vehicle.**



Vehicle hoist hooks (option)

Use the hoist hooks attached to the rear pillars.

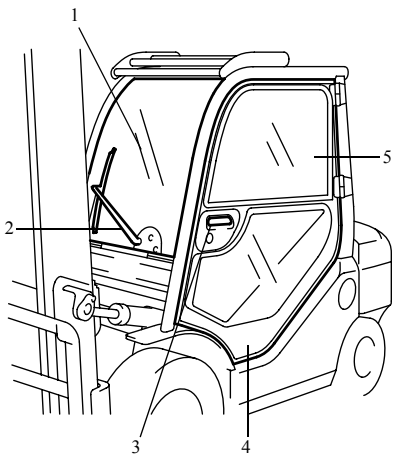




Using the cabin (Option)

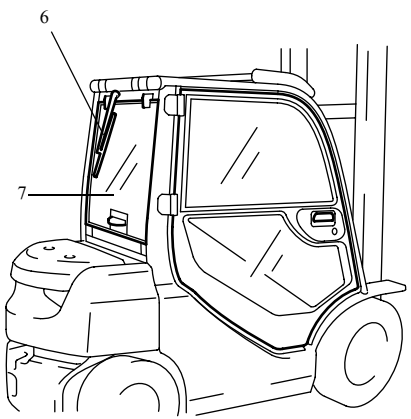
Interior-folding door cabin model

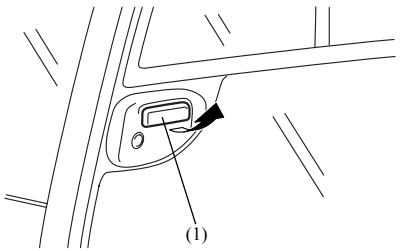
1. Front glass
2. Front wiper
3. Door handle
4. Front door
5. Rear door
6. Rear door window
7. Rear wiper
8. Rear window
9. Door open lock



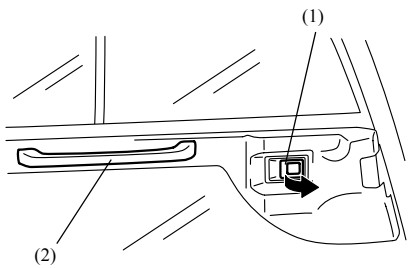
Premium cabin model

1. Front glass
2. Front wiper
3. Door handle
4. Front door
5. Side door window
6. Rear wiper
7. Rear window





(1) Door Handle



(1) Door Inside Lever
(2) Door Pull Handle

Opening/closing doors
(Outside the vehicle)

1. Grasp the door handle and pull toward you to release the lock and open the door.
2. When closing the door, press until the door lock catches.

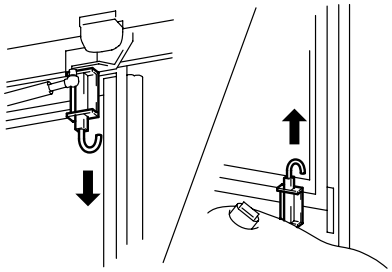
Note:
To open the engine hood for cabin type models, first open the cabin doors to the right and left.

Opening/closing doors
(Inside the vehicle)

1. Pulling the door inside lever toward you will release the lock and open the door.
2. Open the door using the door pull handle.

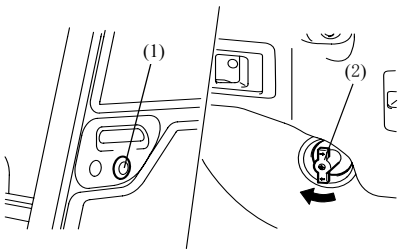
⚠ Caution

- **When opening doors, be aware of pedestrians or other vehicles.**
- **When closing the door, make sure to use the door pull handle. Before operating the vehicle, confirm that the doors are securely shut.**



Opening/closing rear doors
(Interior-folding door type cabin)

1. Open the front door slightly.
2. Pull simultaneously on the rear door lock levers in two locations at the top and bottom of the rear door interior to open the rear door.



Front Door Exterior Front Door Interior

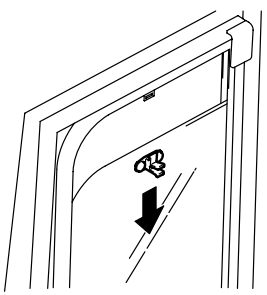
(1) Door Open Lock

(2) Lock Release Knob

Opening front doors
(Interior-folding door type cabin)

When operating the vehicle with the front doors open, make sure to securely fasten the door open locks.

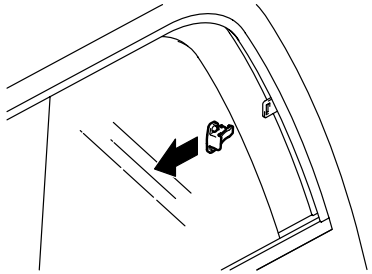
1. Open the front doors toward the rear doors, and slightly push up on them until they lock.
2. Turning the lock release knobs located on the inside of the front doors in the indicated direction will release the locks.



Opening/closing rear door window
(Interior-folding door type cabin)

The rear door windows can be opened vertically.

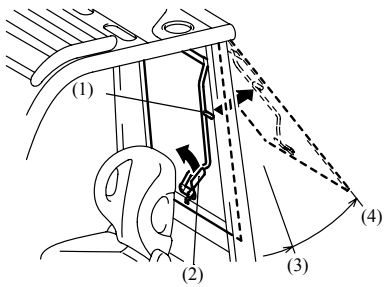
1. Grasping the knob at the center of the window will release the lock. Pull down on the knob.
2. To close the rear windows, pull up on the knobs.



Opening/closing side door window
(Interior-folding door type cabin)

The side windows can be opened in the right-left direction.

1. Grasping the knob at the center of the window will release the lock. Open the window to the left or right.
2. To close the side windows, use the knobs to slide the window to the right or left.



(1) Damper Lever

(2) Lock Lever

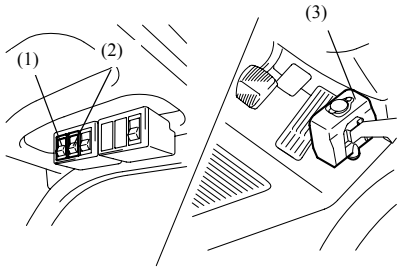
(3) Ventilation Mode

(4) Maintenance Mode

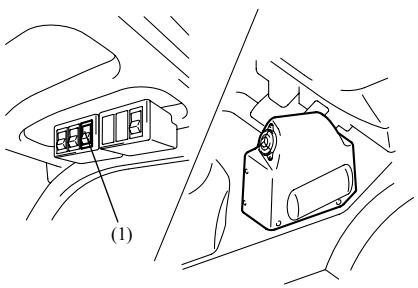
Opening/closing rear window

The rear window is a flip-up style window which can be set in two stages - to ventilation mode or maintenance mode.

1. Releasing the lock lever at the bottom of the window will open the window. Gripping the damper lever and pushing the window back will open the window the window to ventilation mode.
2. Pushing the damper lever further back will open the window to maintenance mode.
3. To close the rear window, grip the damper lever and pull on the rear window until it closes completely, then operate the bottom lock lever to lock position.



(1) Front Wiper Switch
(2) Rear Wiper Switch
(3) Reserve Tank



(1) Heater Switch

Operating the wiper

The wiper will operate by turning the front rear wiper switch to the right of the head guard to the ON position.

Press the washer button at the bottom of the front wiper switch to release wiper fluid.

Note:

To inspect or replenish washer fluid, use the reserve tank located to the right of the driver's seat.

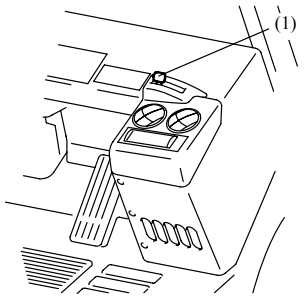
Using the heater

The heater is attached to the step region on the right-side of the driver's seat. The heater switch is located at the right-side of the head guard.

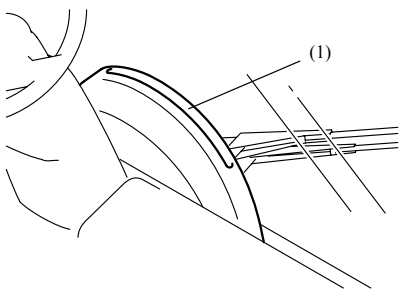
The heater switch can be set to Hi or Low which will operate the heater in two air volumes. The air outlet can be opened or closed and the entry of debris and dust into the heater unit can be prevented.

Note:

- Use the heater after sufficiently warming up the engine.
- Running the heater fan for extended periods of time while the engine is stopped or while idling the motor may cause the battery to run out.
- Using the heater for extended periods of time will cause the air inside the cabin to become stale and the glass to fog, so take care to open windows and ventilate the interior.



(1) Temperature Adjustment Lever



(1) Defroster

Temperature adjustment lever (premium cabin model)

This lever adjusts the temperature of the heater. Adjust the temperature to your preference.

Raise the temperature
.....Shift the lever to the left

Lower the temperature
.....Shift the lever to the right.

Using the defroster

The defroster is attached at the base of the front windshield.

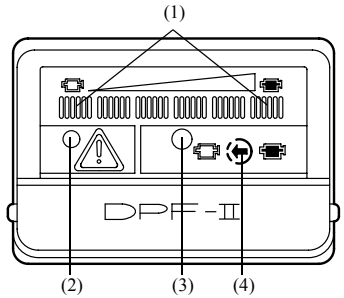
Closing the air outlet of the heater will switch function to the defroster. Use the heater switches to operate and stop the defroster. It will allow you the quickly defog the front windshield.

HANDLING THE TOYOTA DPF-II SYSTEM (OPTION)

The Toyota DPF System is a device which traps the minute particles of black smoke in diesel engine exhaust gas with a DPF (diesel particulate filter) and carries out correct maintenance (combustion and elimination) by microcomputer control depending on the trapped amount.

⚠ Caution

- **Do not proceed to a long-hours' continuous operation before regenerating the DPF.**
- **When the yellow trapping indicator lamp on the display is on, carry out maintenance soon.**
- **Once the "Green/Yellow" lamp has begun to blink on the trapping indicator display, with the alarm buzzer sounding, carry out a regeneration treatment immediately.**
- **Do not turn off the power during maintenance expect in an emergency. (Turning off the power will cause the buzzer to sound. Turning off the buzzer for one minute or longer will cause the playback display lamp to blink.)**
- **If the display's alarm lamp goes on and the alarm buzzer rings to an abnormality during maintenance, have the device inspected by your Toyota dealer.**
- **Do not allow water to get into the DPF System when your vehicle is being washed.**
- **The DPF System uses a high voltage (single phase AC200~240V), so be careful of electric shocks.**
- **The DPF System reaches high temperatures during operation so do not place objects that can easily catch fire, such as paper, etc., around it during maintenance.**
- **Use automobile light oil. If you use a crude fuel such as heavy oil, a pale smoke will be emitted and the running time and life span of the DPF System might be adversely affected.**
- **An engine that consumes a lot of engine oil will have an adverse affect on the DPF System, so have it serviced by your Toyota dealer.**
- **If white smoke (vapor, etc.) is emitted in some cases such as in acceleration just after starting the engine, there is nothing wrong with the engine system.**
- **Due to the operation of the AC power input detection function, if the AC power is not turned on during playback, playback will not start even when the playback switch is pressed. Again, when the AC power is turned on when starting the engine, the engine will not start and the operator will be notified via the blinking of the warning display lamp and a buzzer sound.**
- **Due to the affects of gaseous and liquid substances, abnormal amounts of debris may be trapped in the DPF, and playback may not function. In this case, contact your Toyota dealer to request an inspection.**



(1) Trapping indicator lamps
(2) Alarm indicator lamp
(3) Maintenance indicator lamp
(4) Maintenance switch

Display

Trapping indicator lamps
According to a level of the trapped black smoke, the "Green" lamps will incrementally come on one by one and then the "Yellow" will come on sequentially.

Alarm indicator lamp
This lamp comes on and the buzzer rings simultaneously to warm you when the amount of black smoke trapped exceeds the limit or when malfunction occurs in the DPF System.

⚠ Caution

When the alarm indicator lamp comes on, request an inspection from your Toyota dealer.

Maintenance indicator lamp
Indicate that DPF maintenance is underway.

Maintenance switch
Starts maintenance.

Explanation of display

1. Turn on the ignition switch.

(1) All the display lamps come on, so check if any are off, and the buzzer rings.

(2) 1 second later, the display shows the amount of black smoke trapped.

[Display]

DPF trapping stage Breakdown			Small	Large	Limit/Dangerous
Trapping indicator lamps	Green 1-5	On	On	Flashing	Flashing
	Yellow		On	Flashing	Flashing
Alarm indicator lamps					On
Alarm buzzer		–	–	Intermittent "beep, beep, ..."	Continuous "beep" (5 second)
Maintenance		Normal	Maintenance required	Maintenance required immediately	Replace DPF

2. Starting up the engine

⚠ Caution

Do not start up the engine with the external power connector plugged in. If so, the buzzer will sound and the alarm indicator will blink.

3. During operation
   The amount of black smoke trapped is indicated by the trapping indicator lamp, the alarm indicator lamp and the buzzer, in that order.
4. If a malfunction occurs in the DPF System, the alarm indicator lamp comes on and the buzzer rings for 5 seconds.

⚠ Caution

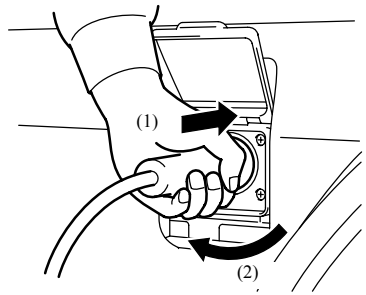
When the alarm indicator lamp comes on, stop operation and request an inspection from your Toyota dealer.

5. Operation completion
   Carry out DPF maintenance when a day's operation is over.

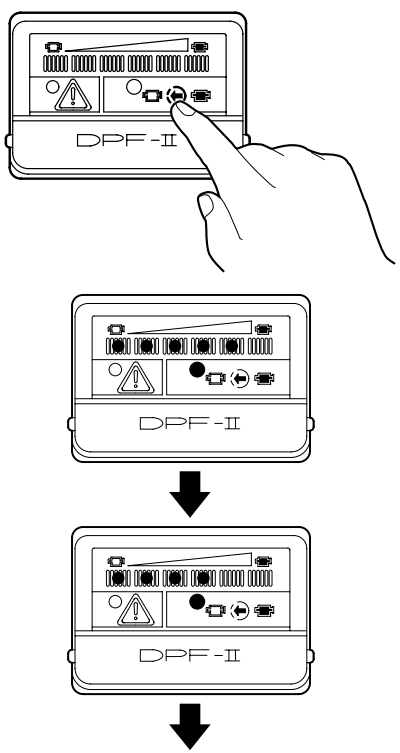
Toyota DPF-II System maintenance method (Option)

⚠ Caution on maintenance

- **Use a single phase AC200~240V external power source, rated 15 A or more. Connect securely to a power source earth.**
- **Have any repairs to the external power supply plug done by an electrical specialist.**
- **Always fit an electromagnetic switch 'with earth leakage breaker) to the external current plug electrical source.**
- **Do not allow water into the DPF air cleaner when washing the vehicle, etc.**
- **When the external power is cut off for one minute or longer due to power outage among others, the abnormality is detected, and the operator is notified by the blinking of the maintenance indicator lamp. At this time, after confirming that the external power has been normally restored, conduct playback again.**
- **Check that there are no objects that can easily catch fire around the DPF System before carrying out maintenance.**
  Select a location for maintenance which is well ventilated (with a draught), away from the rain and not near any waste paper etc. that can easily catch fire.
- **Do not handle the power plug with wet hands. A high voltage is used (single phase AC200~240V), so there is a danger of electric shock.**
- **Before starting DPF maintenance operation, make sure that a specified external power is supplied to the machine.**
  So long as the external power is not supplied, regeneration will fail to start, even if attempted.
- **During maintenance operation, combustion smoke is emitted out of the tail pipe.**



(1) Insert
(2) Lock



Maintenance operation procedure

1. Stop the vehicle, put the parking brake on and remove the engine switch.
2. Insert the plug into an external power supply connection socket and turn it in the locking direction.
3. Press the maintenance switch on the display the buzzer rings to start maintenance.

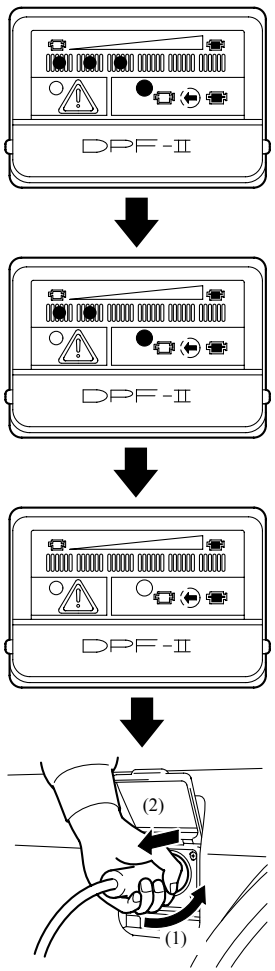
⚠ Caution

- **Remove your finger once the buzzer rings and the maintenance indicator lamp comes on. Pressing the switch for a long time stops maintenance operation procedure.**
- **With the engine switch ON, the power will not come on even if you press the maintenance switch.**
- **If the external power is supplied, with the engine switch ON, the buzzer will sound.**
- **Always use your fingertip to operate the switch panel on the display.**
- **If the maintenance indicator lamp should come on without the buzzer sounding, ask a Toyota dealer for an inspection.**

4. When maintenance starts, the maintenance indicator lamp and the trapping indicator lamps (all six) come on.

Note:

The microcomputer (ECU) automatically carries out maintenance, so the operator does not have to attend to the vehicle.



(1) Unlock
(2) Remove

5. The trapping indicator lamps go out in sequence from right to left (yellow → green) as maintenance proceeds. (every 10 minutes)

6. Once maintenance is over, all the indicator lamps go out and maintenance automatically stops.

Note:
The recovering time is about 50 minutes when the green trapping indicator lamps (up to 5) light and about 70 minutes when the yellow trapping indicator lamp lights.

7. Be sure to remove the power plug.

⚠ Caution
Soot combustion interruption (Maintenance interruption)
When interruption soot combustion in progress is unavoidable, press the maintenance switch for about 5 seconds until the buzzer sounds. Then, the left green lamp and the maintenance lamp will come on. After about 5 minutes, when all the indicator lamps are off, the engine can be activated again. Plug out the power cable after the maintenance lamp is off. Do not interrupt soot combustion unless unavoidable as next soot combustion will be required earlier due to combustion remains.

PRE-OPERATION CHECK

Pre-operation check

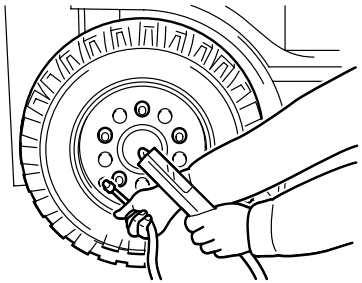
Pre-operation checks and weekly inspections are the responsibility of the Toyota industrial vehicle user.
Be sure to perform a pre-operation check before beginning work to ensure safety.

Item	Inspection
Previously detected malfunctions	Correct.
Exterior	Vehicle body, oil leakage, water leakage, loose parts, exterior damage.
Wheels	Tire pressure, wear or damage, rims hub nuts.
Lamps	Lamp condition, damaged lamps.
Hydraulic oil	Oil level, contamination, consistency.
Radiator	Coolant level, antifreeze requirement.
Engine	Oil level, contamination, consistency, noise, exhaust.
Clutch	Engagement, pedal, play.
Brake pedal	Pedal play, braking effect.
Brake fluid	Fluid level.
Parking brake	Operating force, braking effect.
Steering wheel	Looseness, play, vibration, veering.
Horn	Sound.
Instruments	Functioning.
Load handling system	Parts, oil leakage, cracking, looseness. Make certain that the SAS is functioning.
Fuel	Amount.

Walk around inspection

Vehicle uprightness

Does the vehicle lean to one side or the other? It so, check for a tire puncture or a problem with the undercarriage.



Beneath the vehicle

Check for any oil or water leakage on the ground or floor where the vehicle was parked.
Check for loose parts or damage.
If any unusual condition is found, have the vehicle inspected at a Toyota dealer.

Tire inspection

Tire inflation pressure

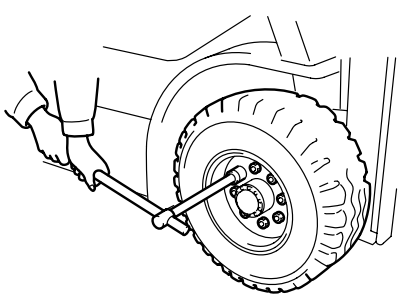
1. Use a tire pressure gauge and measure the inflation pressure. Adjust it to the proper level.

- See the service data section for the proper inflation pressure.
- Do not raise the pressure beyond the proper level.

2. After the adjustment, check if air is not leaking from the valve.

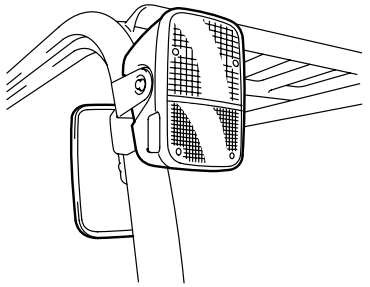
Damage, crack and wear of tires and rims

Check the tires for damage and wear, and the rims for bending. If the tires are damaged, or there is a marked difference in the wearing of tires between the front and rear or between the left and right is perceived, or bent rims are found, ask a Toyota dealer for inspection.



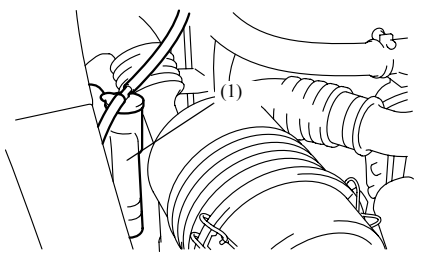
Hub nut inspection

Check the tightness of the hub nuts.
Avoid uneven torque and tighten all of the nuts uniformly. Refer to service data for proper torque.



Lamp inspection

(Rear view mirror and turn signal lamp are optional)
Are the filaments intact? Is there any lens damage?
Always keep the lenses clean to insure proper forward vision.



(1) Reservoir tank

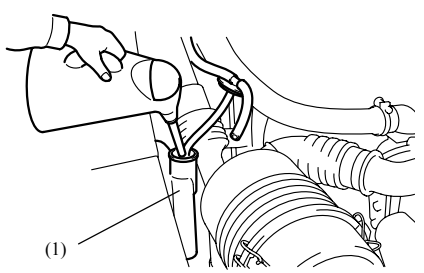
Engine compartment inspection

Engine coolant level check and supply

Level check and supply of engine coolant shall be performed while the coolant is cool.

1. With the engine off, open the engine hood and check the engine coolant level in the reservoir tank.

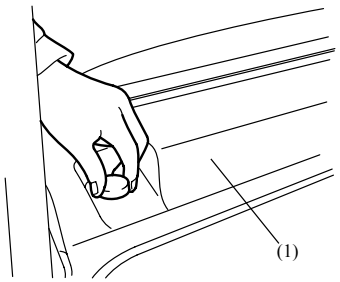
Note:
The reservoir tank equipped to the radiator automatically supplies the engine coolant when the coolant quantity in the radiator becomes insufficient.



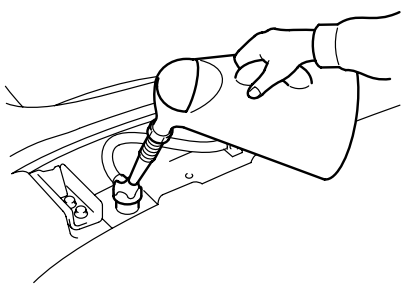
(1) Reservoir tank

2. The coolant level is proper if it is between the upper and lower limits. If the level is below the lower limit, supply coolant to the upper limit.
3. The concentration of the long life coolant (LLC) in the engine coolant must be 30% (or 50% in a frigid zone.)

Note:
If no engine coolant remains in the reservoir tank, be sure to check the coolant level in the radiator, too.



(1) Radiator cover



Checking the engine coolant level in radiator

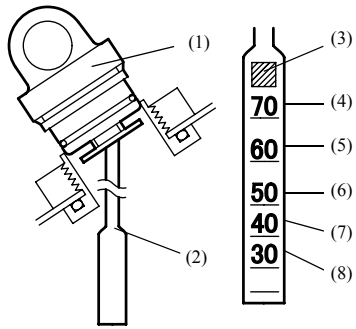
1. Remove the radiator cover.
2. Remove the cap and check the coolant level from the filler port.
3. If the engine coolant is not visible through the filler port, fill appropriately diluted coolant (LLC) to the port.

Note:

To close and tighten the radiator cap, match the pawl on the reverse side of the cap with the notch on the filler port and turn the cap fully clockwise while applying a downward force.

⚠ Warning

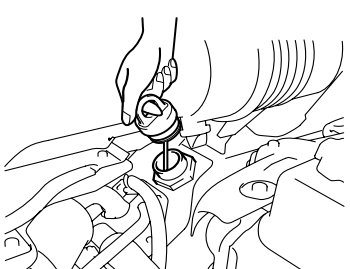
When the engine is hot, it is very dangerous to remove the cap. Coolant level check must always be performed when the engine is cold.



(1) Oil cap
(2) Level gauge
(3) Gauge identifier
(4) Lift High 6,100~7,000mm
(5) Lift High 5,500~6,000mm
(6) Lift High 4,500~5,000mm
(7) Lift High 3,300~4,000mm
(8) Lift High 3,000mm or less

4. If the oil level is insufficient, add oil. Spilled and splashed oil must be wiped off thoroughly. Adjust the oil level so that it will fall within a range of 0 thru +10mm from the lift-high mark on the gauge as illustrated on the left side.

Gauge Identifier	Applicable Models
10, 18, K2, K3	30(32)-8FG10, 15 60(62)-8FD10, 15 32-8FG18 62-8FD18 32-8FGK20, 25, 30 62-8FDK20, 25, 30
20, 25	30(32)-8FG20, 25 60(62)-8FD20, 25 70(72)-8FD20, 25
28, 30, 35	30(32)-8FG30 60(62)-8FD30 70(72)-8FD30 30(32)-8FGJ35 70(72)-8FDJ35



Checking hydraulic oil level

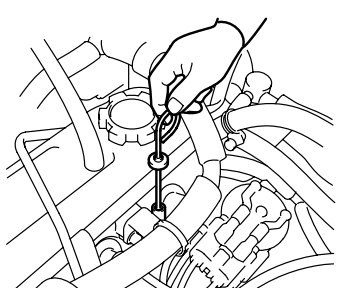
Always stop the engine and lower the fork to the ground before checking the level of the hydraulic oil, while the vehicle is on level ground.

1. Open the engine hood and remove the oil cap.
2. Wipe the level gauge attached to the oil cap with clean cloth, and insert it again into the tank.

Note:

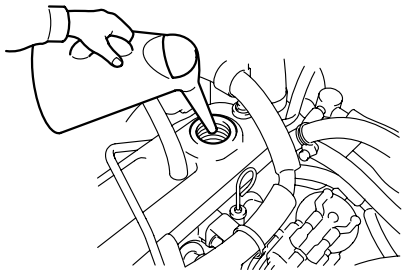
Inspect the oil level by placing the level gauge on the opening of the oil supply inlet, without pushing the oil cap in.

3. Extract the level gauge gently and check if the oil adhesion is up to the level line.



Engine oil inspection

1. Park the vehicle on a flat ground. If the vehicle is inclined, the indicated level may be incorrect.
2. The oil level must be checked before starting the engine or at least 3 minutes after the engine is stopped.
3. Extract the oil level gauge and wipe it with clean cloth. Insert it again and check if the oil level is between the F and L levels.
4. If the oil level is below the L line, add oil to the F line.



Adding engine oil

1. To supply oil, remove the filler cap and pour oil through the filler port. Never let the oil level exceed the F line.
2. The oil to be supplied must be appropriate for the season.

SAE40 Ambient temperature
higher than 30°C (86°F)
SAE30 Ambient temperature
0°C to 30°C (32°F-86°F)
SAE20 Ambient temperature
-10°C to 0°C (14°F-32°F)

⚠ **Caution**
Always use the same brand of oil if possible.

Leakage inspection

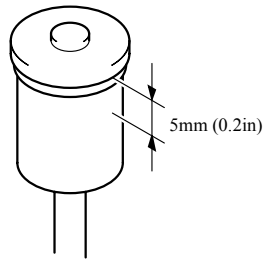
Check the engine compartment for any oil or fuel leakage.
Clean the radiator if it is clogged and check if there are any foreign objects, such as paper or other, onto the radiator grill.

(1) Reservoir tank

On board vehicle inspection

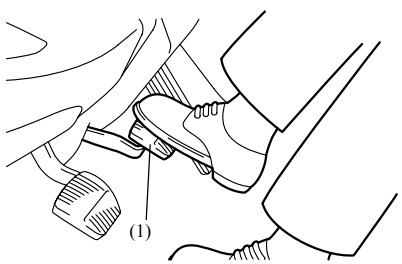
Brake fluid inspection

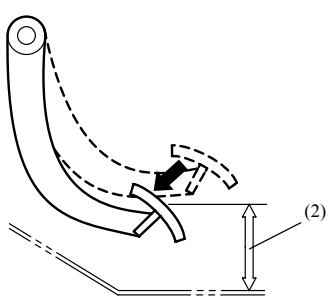
With the engine off, check the level of the brake fluid in the reservoir tank. The level should be within the range shown in the figure.
If the level is below the lower limit, add brake fluid up to the proper level. If the decrease in brake fluid is excessive, the brake system may be leaky. Ask a Toyota dealer for inspection as early as possible.



⚠ **Warning**

- **Never use any oil other than brake fluid.**
- **Do not allow dirt to get into the reservoir tank. Even a small amount of dirt in the brake fluid can prevent proper braking. This is extremely dangerous.**
- **Check the small vent hole in the reservoir tank cap frequently to make sure that it is not clogged with dirt.**





(1) Brake pedal
(2) Brake pedal floor clearance

Brake pedal inspection

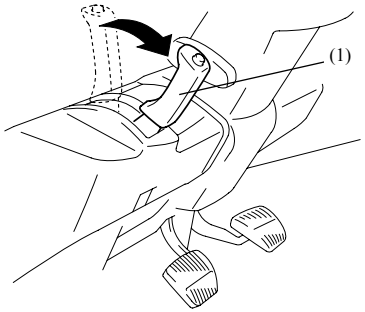
1. Depress the brake pedal fully, and check the floor clearance (clearance between the pedal and floor)

Note:
See the service data section for the floor clearance.

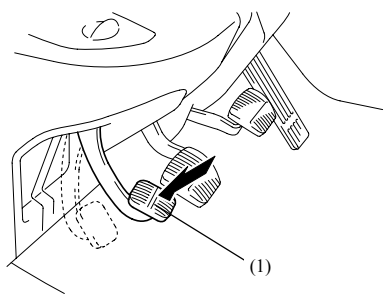
2. Make sure that the pedal dose not go any further when it is kept depressed.
3. Also check that no abnormality is observed with pedal depression and return.
4. Manually depress the brake pedal to check the play until a resistance is felt.

Note:
See the service data section for the value of brake pedal play.

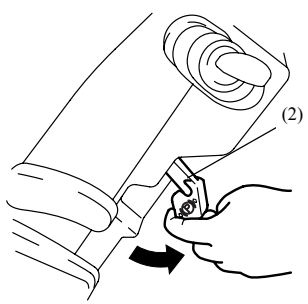
⚠ **Warning**
Ask a Toyota dealer for inspection if the play is excessive, pedal movement is abnormal or brake performance is improper.



(1) Parking Brake lever



(1) Parking brake pedal



(2) Parking brake release lever

Parking brake inspection

Parking brake lever (Clutch models)

Check the operating force required for pulling the parking lever fully.

Note:

See the service data section for the operating force.

⚠ Warning

Ask a Toyota dealer for inspection if any abnormality is found.

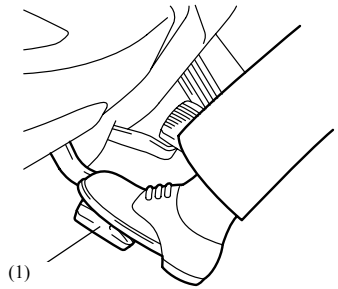
Parking brake pedal

(Torque converter models)

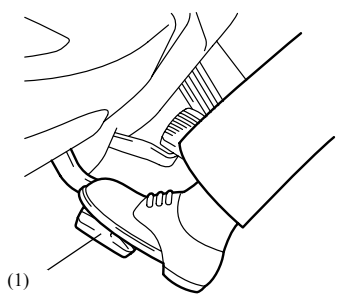
1. Fully press down on the parking brake pedal and inspect that the brake is functioning normally.
2. After fully pressing the parking brake pedal, pull the parking brake release lever toward you and confirm that the parking brake is released.

⚠ Warning

Ask a Toyota dealer for inspection if any abnormality is found.



(1) Clutch pedal



(1) Inching and brake pedal

Clutch pedal inspection
(Clutch models)

Note:

Since power clutch is adopted in oil clutch models (Option) the clutch pedal must be inspected after starting the engine.

1. Manually depress the clutch pedal to check the play until a resistance is felt.

Note:

See the service data section for the value of clutch pedal play.

2. Depress the clutch pedal and check that there is no obstruction or abnormal resistance.

⚠ Caution

Ask a Toyota dealer for inspection when any abnormality is found.

Inching and brake pedal inspection
(Torque converter models)

1. Manually depress the inching and brake pedal to check the play until a resistance is felt.

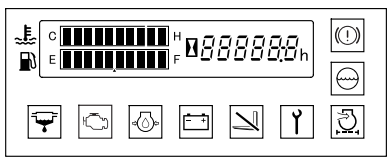
Note:

See the service data section for the value of inching and brake pedal play.

2. Depress the inching and brake pedal and check that there is no destruction or abnormal resistance.

⚠ Caution

Ask a Toyota dealer for inspection when any abnormality is found.



Inspection of OPS lamp

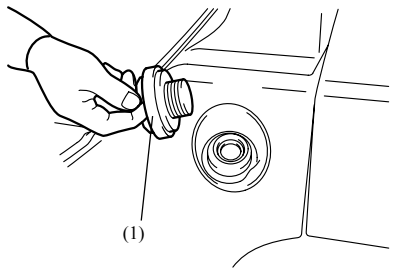
Sit on the seat, start the engine, and check that the OPS lamp is not lighted.

In the following cases, a malfunction to the OPS lamp may have occurred. Park the vehicle at a safe location and contact your Toyota dealer.

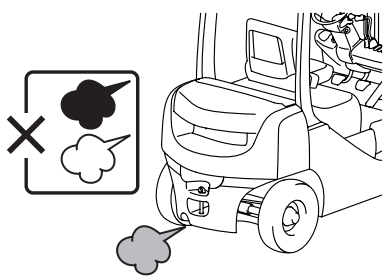
- The OPS lamp does not light up even when the operator leaves the seat.
- The OPS lamp does not turn off even if the operator properly re-seats himself.

Instrument inspection

Start the engine and see that they operate properly.



(1) Fuel tank cap



Fuel level check and supply

1. Observe the fuel meter to see if the fuel is sufficient.

Note:

After the end of daily operation, fill the tank with fuel to prevent the moisture in the air in the tank from mixing into the fuel.

2. When supplying fuel, stop the engine, remove the fuel tank cap by turning it counterclockwise, and pour fuel through the fuel filler neck.
3. After fueling, be sure to tighten the fuel tank cap.

⚠ Caution

- **Always stop the engine and keep any fire source away before and during the fueling operation.**
- **Carefully prevent entrance of water and dirt into the tank during fueling.**

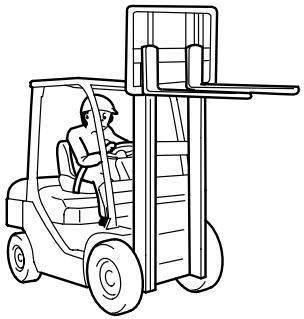
Engine inspection

Start the engine and warm it up sufficiently.

1. Check each meter and warning lamp to see there is no abnormality.
2. Check if the engine is generating abnormal sound or vibration.
3. Check the exhaust gas color to see it is normal.
   Colorless or light blue exhaust indicates complete combustion; black exhaust, incomplete combustion; and white exhaust, burning oil as a result of oil getting into the cylinders.

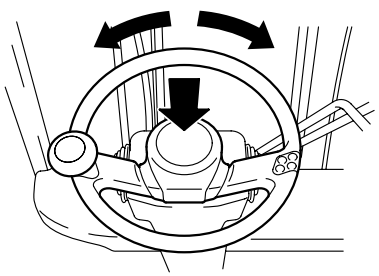
⚠ Warning

- **The exhaust gas is harmful. If you must start the engine inside a building or enclosure, insure sufficient ventilation.**
- **The gasoline engine carburetor is equipped with the automatic choke that keeps the engine running at a relatively high speed a while.**
  Do not be bothered, however, becomes the engine resumes a normal speed upon warming enough.



Load handling system

1. Check the fork installation state, for cracks and bending.
2. Check for mast distortion, chain tension and oil leakage from cylinders and piping.
3. Operate the lift and tilt levers to check their operating state.
   If anything unusual is found, have the vehicle inspected at a Toyota dealer.



Steering wheel inspection

Note:
Perform the inspection after starting the engine.

1. Check the steering wheel play with the rear wheel set in the straight traveling direction.

Note:
See the service data section for the standard play of steering wheel.

2. Turn the steering wheel in the circumferential direction and also move it up and down to check there is no looseness.
3. Push the horn button to check if the horn sounds normally.
4. If any abnormality is found, ask a Toyota dealer for inspection.

While moving slowly

Clutch disengagement and slipping

(Clutch models)
Press the clutch pedal and check clutch engagement while moving.

(Torque converter models)
Press the inching pedal and check clutch engagement while moving.

⚠ Caution
Insure that the gear shift lever or control lever operates properly in each gear and then make above checks while moving slowly.

Brake effectiveness

Inspect to see if there is anything unusual when the brake pedal is pressed or if the brakes only work on the side.
Effect the parking brake and insure that the vehicle can be stopped and that a parked condition can be maintained.

⚠ Caution
If anything feels even slightly unusual, stop vehicle operation immediately and have the vehicle inspected at a Toyota dealer.

Steering inspection

While moving the vehicle slowly in a safe location, turn the steering wheel to the left and right and check for any unusual movement.

Inspecting SAS system
(Option)

Check the SAS system to make certain that it is functioning properly.
Check the mast to make certain that it can be properly tilted either forward or backward and moved up. Besides, make certain that the mast can automatically stop at its horizontal position.

⚠ Caution
If you feel that something is abnormal even slightly, or when the diagnosis lamp lights up or blinks, or if an error code appears on the hour meter display, immediately stop operating the vehicle and contact your Toyota dealer to request an inspection. (In the case of diesel engine vehicles, the diagnosis lamp may light up during engine warm-up after a cold-start, but this does not indicate a malfunction.)

BEFORE GARAGING THE VEHICLE

Remove dirt from all vehicle components and then perform the following.

1. Inspect for oil or water leakage.
2. Inspect each component for warping, scratches, dents or cracks.
3. Clean the air filter element and lubricate parts as required.
4. Raise the forks all the way up and down to lubricate the inside of the lift cylinder.

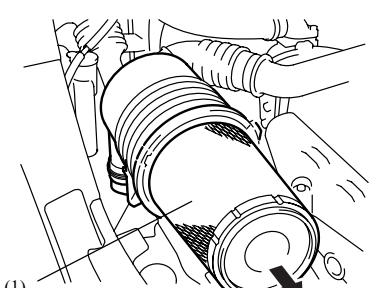
⚠ Caution

Even a small malfunction can cause a serious accident.
Do not operate the vehicle until repairs have been completed.
If you sensed anything unusual during operation, notify the supervisor.

WEEKLY MAINTENANCE

Inspect the items below in addition to the pre-operation items. Have necessary adjustments or replacements performed at a Toyota dealer. Please inspect the vehicles thoroughly to insure safety and pleasant working conditions.

Weekly (40-hour) inspection items
Air cleaner - clean
Fan belt - inspect
Torque converter oil level - check
Battery electrolyte level -check
Bolts and nuts - retighten
Mast and steering linkage - grease
Chain Lubrication - engine oil



(1) Element

Air cleaner cleaning

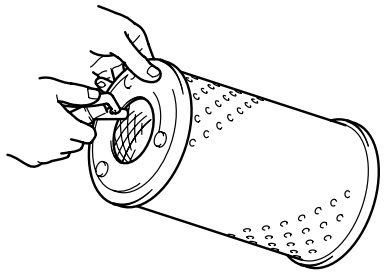
The element can be taken out after removing the three catches fixing the element.

Element cleaning

1. Tap the element filter paper lightly without causing any damage or blow dust off with compressed air (7 kg/cm^2 or less) from inside.
2. After element cleaning, remove any dust in the evacuator valve.

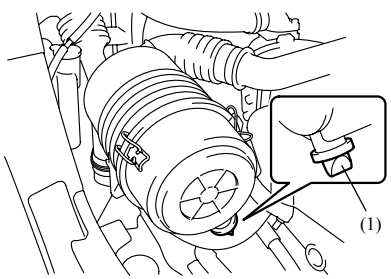
Note:

- Always replace the element if the filter paper is torn or damaged.
- Wash the element if heavily contaminated.



How to wash the element

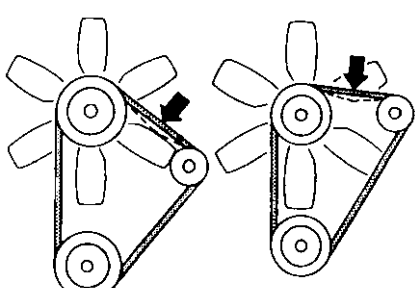
1. Soak the element in water containing neutral detergent for approximately 30 minutes and then wash. Use care not to scratch the filter paper.
2. After washing, rinse the element with clean water (water pressure less than 2.8 kg/cm^2).
3. Allow to dry naturally or use a dryer (cold air). Never use compressed air or flame.



(1) Evacuator valve

Note:

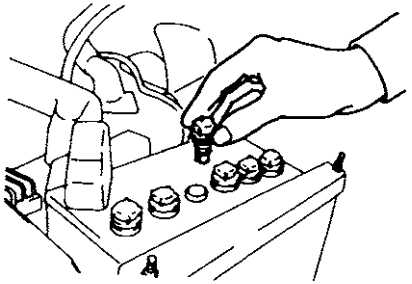
- The element should be replaced after washing six times or after it is used for one year.
- It is unnecessary to clean the inside element when cleaning the double cyclone air cleaner.(Option)
  Only clean the outside element.
  It is essential to replace both outside and inside elements, in time of replacement.



4Y Engine 1DZ-II, 2Z Engine

Fan belt inspection

Inspect the fan belt for cracks, fraying and tension.
If any abnormalities are found, have the belt replaced or adjusted at a Toyota dealer.
Refer to service data for tension.

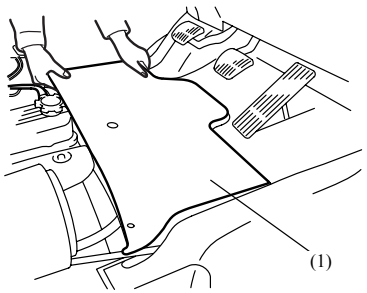


Battery electrolyte check

1. The battery electrolyte should be between the upper and lower levels (10 to 15 mm from the top of the plates).
2. If the electrolyte level is below the lower level, remove the cap and add distilled water to the upper level through the water inlet port.

⚠ Caution

Be sure to use distilled water for battery electrolyte. Also, wear protective glasses when working on the battery.



(1) Toe board

Torque converter oil inspection

1. Park the vehicle at a safe and level ground, and stop the engine.

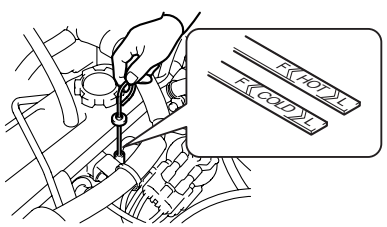
⚠ Caution

Inspect with the parking brake pedal is effected and the forks are lowered to the ground.

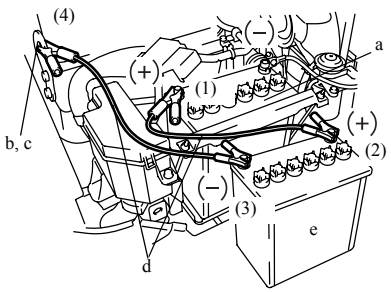
2. Open the engine hood and remove the toe board.
3. Extract the level gauge and wipe it with clean cloth.
4. Insert the level gauge back to the hole from which it is removed, and extract it again to check if the oil level is between the F and L lines on the level gauge.

Note:

- Perform inspections using the COLD side of the level gauge before operating the vehicle.
- The level gauge contains the inscriptions “COLD” and “HOT” on either side. Conduct inspections using the “COLD” side before operating the vehicle and when the oil temperature is 40° or under. If you have operated the vehicle and the oil temperature is 60° or over, use the “HOT” side to conduct inspections after 30 seconds and within five minutes after the engine is stopped.



5. If the level is near or below the L line, add oil to the F line.



a. Dead-battery vehicle
b. Engine hanger
c. To frame
d. Booster cable
e. Rescue battery

Retightening of bolts and nuts

Retighten each bolt and nut on the chassis and load handling system.

Greasing mast and steering linkage

Grease in accordance with the lubrication table.

⚠ Caution

- **Clean the grease fitting tips thoroughly prior to greasing.**
- **After greasing, wipe off excess grease.**

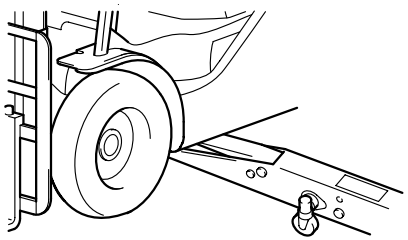
When the battery is dead

When a booster cable is available, it is possible to start the engine using the battery of another vehicle.
Connect the booster cable following the sequence of the illustration.
Make sure of (+) and (-) terminals of the cable when connecting.

⚠ Caution

- **Connection (1): The (+) terminal of dead battery.**
- **Connection (4): Use a frame apart from the battery.**
- **Do not directly connect batteries to avoid a danger of explosion. (An inflammable gas generated from batteries may catch fire.)**

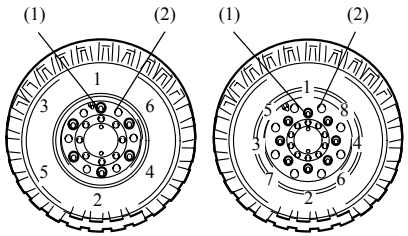
SELF SERVICING



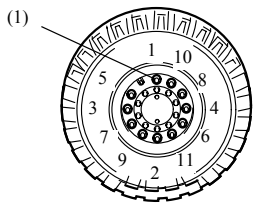
Changing tires

⚠ **Caution**

- **Use proper safety precautions when jacking the vehicle.**
  Never get under the forks or frame.
- **In the case of a wheel with a divided rim, do not loosen the rim bolts and nuts when loosening the hub nuts. When loosening the rim nuts or removing the rim bolts, be sure to completely remove the air before loosening.**
- **Refer to service data for hub nut tightening torque and tire air pressure.**
- **Tire air pressure is very high, so pay attention to rim deformation, cracks, etc. Never exceed proper air pressure.**
- **Do not replace any tire without turning on the ignition switch before jacking up the vehicle. Upon completion of the tire replacement, return the ignition switch to the OFF position (SAS models).**



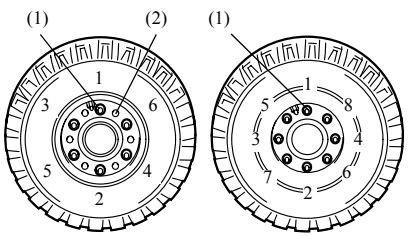
(1, K2, 3, J3.5 ton models) (2 ton models)



(3 ton models)

(1) Hub nuts

(2) Rim nuts
(Never loosen without removing the air)



(1, 2, K2, 3, J3.5 ton models) (K3 ton models)

(1) Hub nuts

(2) Rim nuts
(Never loosen without removing the air)

Front wheels

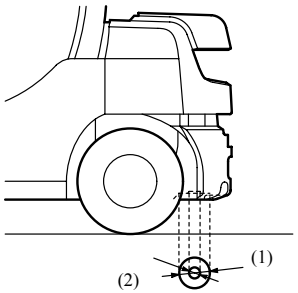
1. Unload the vehicle and place it on level ground.
2. Set the parking brake and chock the wheels. Locate the jack-up point on the bottom surface of the frame in the rear of a front tire. Securely insert the jack there. Confirm that the jack is properly positioned.
3. Jack up to just prior to the wheels coming up off the ground and loosen the hub nuts.
4. Jack up until the wheels come off the ground. Completely remove the air pressure from the tire then remove the hub nuts and remove the wheel.
5. To reinstall the wheel after changing a tire, perform the steps for removing in reverse order. The hub nuts should be tightened evenly and in the sequence shown in the figure.
6. After replacing the wheel, check and adjust the tire air pressure.

Rear wheels

1. Place the vehicle on level ground.
2. Set the parking brake and chock the wheels then insert the jack under the weight.

⚠ **Caution**

Never loosen the divided rim nuts. Should any of the nuts be found loose or otherwise abnormal, deflate the tires and then loosen the hub nuts to remove the tires.



(1) Garage jack (unavailable in 1-ton models)

(2) Pulsometric type jack

Jack setting position

Apply the jack to the jack point under the counter-weight.

⚠ **Caution**

Be sure to use a jack whose capacity is 5.0 ton or more.

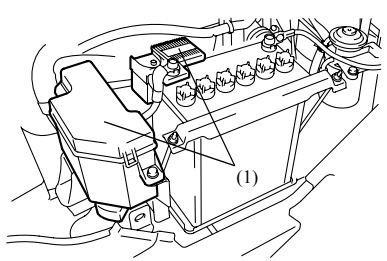
1. Jack up to just prior to the wheels coming up off the ground and loosen the hub nuts.
2. Jack up until the wheels come off the ground. Completely remove the air pressure from the tire then remove the hub nuts and remove the wheel.
3. To reinstall the wheel after changing a tire, perform the steps for removing in reverse order.
   The hub nuts should be tightened evenly and in the same sequence as for the front wheels.
4. After replacing the wheel, check and adjust the tire air pressure.

Adding antifreeze

If the vehicle is left in an area where the temperature is less than 0°C, the cooling water will freeze and may damage the radiator and/or cylinder block. In such cases, antifreeze coolant must be used.
When long-life coolant (LLC) is used, it must be changed once every two years.
Freezing temperature varies depending on the amount of antifreeze added.

Antifreeze mixture (%)

Freeze protection temperature (°C)	-12	-15	-24	-35
Mixture (%)	25	30	40	50



(1) Fuse box

⚠ **Caution**

The antifreeze fluid is flammable, so be particularly careful to avoid flame.
Prior to adding antifreeze, inspect the radiator, water pump, piping and cylinder block for leaks.
The procedures for adding antifreeze are as follows.

1. Remove the radiator cap. Loosen the drain cock on the radiator and cylinder block and drain the cooling water.
2. Flush out the radiator and cylinder block by adding clean water through the radiator inlet.
3. After the water has drained out of the radiator and cylinder block, tighten the radiator and engine drain cocks.
4. Add the proper amount of antifreeze to the radiator inlet and fill up the remaining space with clean water.
5. When warm weather arrives and there is no longer any danger of freezing, drain the cooling water containing the antifreeze (except LLC, LLC is every 2 years in replacement).
   Flush out the radiator and engine block and fill with clean water.

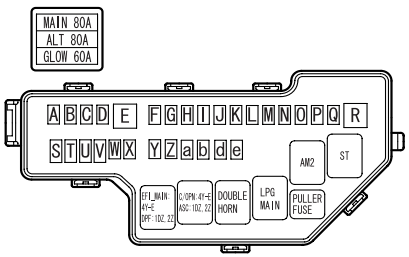
Cleaning of Pre-cleaner (Option)

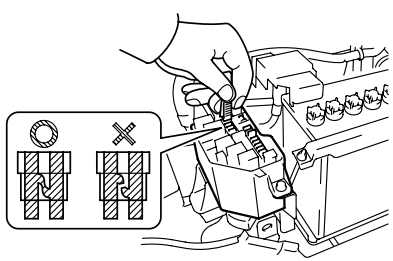
Inspect the pre-cleaner and clean it if dust has accumulated up to the white line.

Fuse replacement

If a lamp does not come on or an electrical device does not function, the corresponding fuse may be blown.
Check the fuse for each device. The fuse box is located in the front left as seen from the opened engine hood.

Note:
See the table below for the device corresponding to each fuse.





Fuse assignment

A	25A	BLR	O	15A	HTR
B	30A	STA	P	15A	WORK_LP
C	20A	RR-WIP	Q	15A	HEAD
D	20A	FR-WIP	R	40A	AM2
E	40A	AM1	S	30A	SPARE
F	15A	HORN	T	7.5A	SPARE
G	15A	CDS	U	7.5A	HOUR MET
H	15A	EFI:4Y-E	V	7.5A	ST
		DPF:1DZ,2Z	W	10A	GAUGE
I	7.5A	ALT-S	X	10A	BACK_LP
J	7.5A	STOP	Y	7.5A	SFT
K	7.5A	ACC-B	Z	7.5A	TURN
L	7.5A	TAIL	a	7.5A	IGN:4Y-M
M	7.5A	ECU-B		15A	IGN:4Y-E
N	15A	E-THRQ: 4Y-E	b	15A	SPARE
			d	10A	SPARE
	7.5A	ECU-B2: 4Y-M,1DZ,2Z	e	10A	ECU-IG

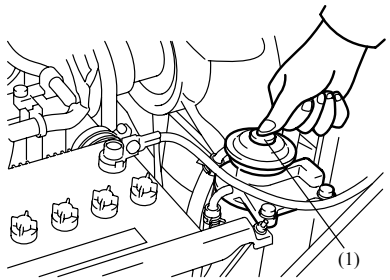
Including optional accessories

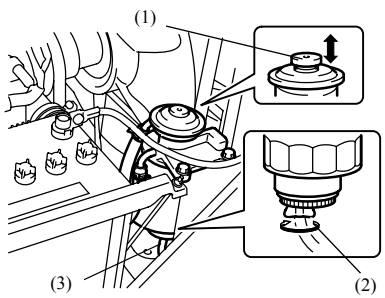
The fuse check and replacement procedures are as follows:

1. Set the ignition switch to the OFF position.
2. Remove the fuse box cover and take off the clip attached to the fuse box.
3. Apply the fuse clip to a fuse to remove the fuse.
4. The fuse is blown if its state is as shown at right in the left illustration. Replace it with a spare fuse.

⚠ Caution

- **Use the fuse having the same capacity as that of the installed one.**
- **If the replaced fuse is blown again, ask a Toyota dealer for inspection.**
- **Ask a Toyota dealer to replace the GLOW or ALT fuse, if necessary.**





(1) Priming pump
(2) Drain plug
(3) Drain hose

Air purge of the fuel system
(Diesel engine models)

When fuel has been completely depleted or when maintenance has been performed on the fuel system, be sure to perform air purge in the following sequence.

1. Open the engine hood.
2. Operate the priming pump up and down to perform air bleeding.

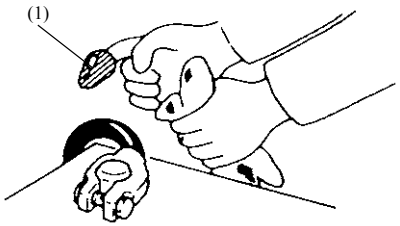
Draining the sedimenter
(Diesel engine models)

The sedimenter separates the water contained in the fuel. It is integrated with the fuel filter.
If the sedimenter warning lamp comes on, immediately drain water according to the following procedure because the accumulated water in the sedimenter is above the specified level:

1. Place a water receiving container under the open end of the drain hose under the fuel filter.
2. Turn around the drain cock a time or two to loose it and operate the priming pump up and down to drain the water in the sedimenter.
3. When light oil starts to flow out after the end of water draining, firmly tighten the drain cock.

⚠ Caution

Wipe the light oil cleanly from the adjacent area.



(1) Grease

Maintaining the battery

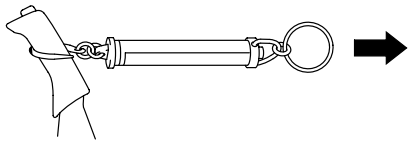
Terminals

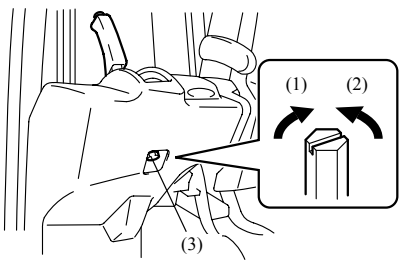
1. A loose or corroding terminal causes failure in connection: Eliminate white powder, if noticed on the terminal, by pouring warm water over it to disable and then grease the terminal.
2. Remove the terminal, if it is extremely corroded, from the battery to brush off the corrosion using a wire brush or sandpaper. Then connect the terminal tightly to the battery and grease the terminal.

Note:
Remove the negative terminal (-) first, but replace the same, second.

⚠ Caution

- **Stop the engine when attempt to work on the battery and terminals.**
- **Be careful not permitting any foreign matter to come into the battery by means of putting the lids tightly in place.**
- **Be careful not causing a short circuit on the battery nor nearing fire, such as smoking fire, because the battery-emitted gas is inflammable.**
- **Be cautious enough not to contact the battery electrolyte.**
  When it comes into contact with an eye or skin, wash it off immediately with plenty of water and then see a doctor.
- **Charge the battery with the lids off in a well-ventilated area.**
- **When battery electrolyte is spilt, be certain to wash it off with water thoroughly the spot and adjoining area.**





(1) Hard
(2) Soft
(3) Knob

Adjustment of parking brake lever operating force
(Clutch models)

1. Attach a spring scale to the center of the grip of the parking brake lever and pull backward to measure the operating force.

Note:
Please refer to Service Data for the desired range of force value.

2. Should the force value be short of or in excess of the desired range, then turn the knob to adjust accordingly.
   Be sure to unlock brake to release power when the adjustment is made.
   Turn clockwise to increase force.

Cleaning the radiator fin

Clean the radiator and radiator fin. If debris is trapped therein, this may cause over-heating.

⚠ Caution

- **After stopping the engine, confirm that the engine has sufficiently cooled down before conducting cleaning. Taking adequate precautions may result in burns.**
- **When cleaning the radiator fin, take care not to cause it to become deformed.**
- **When performing cleaning, always wear safety goggles and dust mask.**

FUEL TANK CHECK

Check fuel tank, tank covering, fuel inlet, and drain plug against possible fuel leak. Follow the steps below.

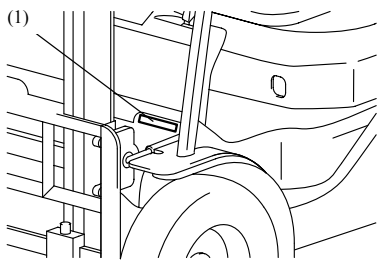
1. Try to smell leak.
2. Look for leak.
3. Touch possible leak.

See the nearest Toyota dealer upon finding leak and have them repair tank immediately.

⚠ Caution

Never perform do-it-yourself welding or other repair work for it might cause explosion or fire.

FRAME SERIAL NUMBER

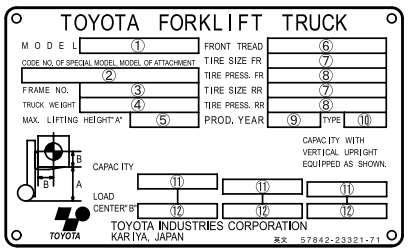


(1) Frame serial number location

Frame serial number location

The frame serial number is stamped on the front cross plate. Please refer to the frame serial number when making inquiries about your vehicle.

HOW TO READ THE NAME PLATE



The load capacity is engraved on the name plate.

Make sure of the load center and capacity before starting the operation.

1. Vehicle type
2. Special vehicle type, Attachment type
3. Frame No.
4. Vehicle weight
5. Mast lifting height
6. Front tread
7. Tire size
8. Air pressure
9. The year of manufacture
10. UL specification
11. Load capacity
12. Load center

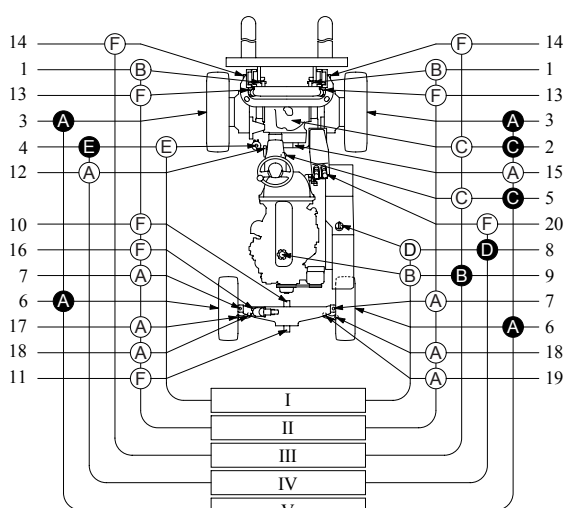
LUBRICATION CHART

Clutch models

1. Chain
2. Differential gear
3. Front wheel bearing
4. Brake and clutch master cylinder
5. Transmission case
6. Rear wheel bearing
7. Steering knuckle king pin
8. Oil tank
9. Engine crankcase
10. Rear axle beam front pin
11. Rear axle beam rear pin
12. Tilt steering locking mechanism
13. Must support bushing
14. Tilt cylinder front pin
15. Propeller shaft
16. Gear shift link
17. Swing lock cylinder
18. Tie rod end pin
19. Rear axle cylinder end pin
20. Gear shift lever

i) Inspect every 8 hours (daily)
ii) Inspect every 40 hours (weekly)
iii) Inspect every 250 hours (6 weeks)
iv) Inspect every 1000 hours (6 monthly)
v) Inspect every 2000 hours (annually)
○: Inspect and service
●: Replase
A) MP grease
B) Engine oil
C) Hypoid gear oil
D) Hydraulic oil
E) Brake fluid
F) Molybdenum disulfide grease

Note:
In case of the hard operating condition, service interval of 170 hours or 1 month may be recommendable.



Torque converter models

1. Chain
2. Differential gear
3. Front wheel bearing
4. Brake and clutch master cylinder
5. Transmission case
6. Rear wheel bearing
7. Steering knuckle king pin
8. Oil tank
9. Engine crankcase
10. Rear axle beam front pin
11. Rear axle beam rear pin
12. Tilt steering locking mechanism
13. Must support bushing
14. Tilt cylinder front pin
15. Propeller shaft
16. Swing lock cylinder
17. Tie rod end pin
18. Rear axle cylinder end pin

i) Inspect every 8 hours (daily)
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iii) Inspect every 250 hours (6 weeks)
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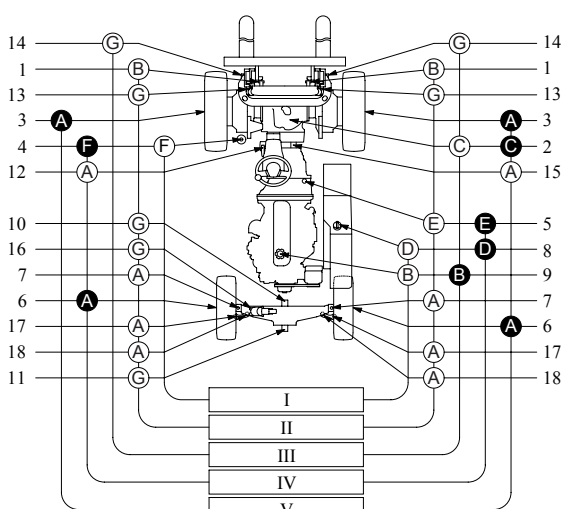


PERIODIC MAINTENANCE

Periodic inspection and maintenance are necessary to keep your Toyota industrial vehicle running smoothly. The designated number of hours in the inspection cycle are as follows.

Daily (pre-operation check) ....Every 8 hours
Weekly .....Every 40 hours
6 weeks .....Every 250 hours
3-month .....Every 500 hours
6-month .....Every 1,000 hours
Annually.....Every 2,000 hours

If operation time exceeds 250 hours within 6 weeks use the number of hours as the guide for performing periodic inspection. Pre-operation checks and weekly inspections should preferably be performed by the user. 6 weeks, 3-month, 6-month and annual inspection should be performed by a Toyota dealer since high-level technology and special tools are required.
Refer to the periodic maintenance table to determine inspection and maintenance items and inspection cycles.
Use only genuine Toyota parts for replacement parts, and use the recommended types of lubricants.

PERIODIC REPLACEMENT TABLE

REPLACEMENT PERIOD (Accumulated hours of operation or monthly periods of operation, whichever comes sooner.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
Engine oil		●	←	←	←	
Engine oil filter		●*1	●	←	←	
Cooling water (except LLC, LLC is every 2 years)			●	←	←	
Air cleaner element					●	
Fuel filter				●	←	
Torque converter oil				●	←	
Torque converter oil filter				●	←	
Manual transmission oil					●	
Differential gear oil					●	
Hydraulic oil				●	←	
Hydraulic oil filter		●*1		●	←	
Wheel bearing grease					●	
Spark plugs				●	←	
Master cylinder, wheel cylinder cap and seals					●	
Brake fluid				●	←	
DPF inline filter (Option)				●	←	
Power steering hose			(Every 2 years)			
Power steering rubber parts			(Every 2 years)			
Hydraulic hose			(Every 2 years)			
Reserve tank hose			(Every 2 years)			
Fuel hose			(Every 2 years)			
Torque converter rubber hose			(Every 2 years)			
Fork damper (Option)			(Every 2 years)			
Chain			(Every 3years)			
DPF muffler filter (Option)			(Every 3 years)			
DPF air cleaner (Option)			(Every 2 years)			
Hydraulic oil pump seal			(Every 3 years or 6,000 hours)			
Swing lock cylinder (SAS models)			(Every 10,000 hours)			

*1:For new vehicles

Note:
In case of the hard operating condition, the service interval of 170 hours or 1 month may be recommendable.

PROTECT YOUR INVERSTMENT WITH TOYOTA GENUINE PARTS

Why gamble with your valuable assets? When your forklift needs periodic maintenance - as every forklift does - you need Toyota Genuine Parts.

The same parts used on Toyota assembly lines - meeting the same tough Toyota standards for “PERFORMANCE”, “DURABILITY”, and “SAFETY”.

TOYOTA GENUINE PARTS

Offer Excellent Dust-catching Performance on:
e.g. Air Element, Torque converter Oil Filter Return Oil Filter, Engine Oil Filter Fuel Filter

IF YOU USE A NON-GENUINE ENGINE OIL FILTER:
1. Clogging may result, which can lead to engine seizure.
2. The engine oil may become dirty faster, necessitating frequent oil changes.
3. It can pass dirty oil to the engine, causing engine wear.

TOYOTA GENUINE PARTS

Offer Supreme Durability on:
e.g. Clutch Disc Radiator Hose V Belt

IF YOU USE A NON-GENUINE RADIATOR HOSE:
1. The hose may wear out extremely rapidly.
2. The hose may be susceptible to water leakage, necessitating frequent replacement.

TOYOTA GENUINE PARTS

Offer Added Safety on:
e.g. Lift Roller Lift Chain Tie-rod End Brake Shoe

IF YOU USE A NON-GENUINE BRAKE SHOE:
1. Braking performance may be excessive, insufficient, or erratic, which is dangerous.
2. The brakes may drag. wasting fuel or battery power.

Call your Toyota authorized shop for after-sale service.

With high quality TOYOTA genuine parts and superior service technology, Toyota help keep customers forklifts in the best condition for efficient work and higher productivity. We deliver satisfaction to the customers with Toyota genuine part.

PERIODIC MAINTENANCE TABLE

Periodic maintenance

INSPECTION METHOD

I: Inspect and correct and replace as required. T: Tighten C: Clean L: Lubricate M: Measure and correct and adjust as required.

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
ENGINE						
Basic components						
1. Starting condition and unusual noise		I	←	←	←	
2. Rotating condition during idling		M	←	←	←	
3. Rotating condition during acceleration		M	←	←	←	
4. Exhaust condition		I	←	←	←	
5. Air cleaner element		C	←	←	←	
6. Valve clearance		M*			M	
7. Compression					M	
8. Cylinder head bolt					T	
9. Muffler rubber mount					I	
Blow by gas reduction device						
10. Clogging and damage of PCV valve and piping		I	←	←	←	
Governor						
11. Maximum no-load stabilized rotation speed		M	←	←	←	
Lubrication system						
12. Oil leakage		I	←	←	←	
13. Oil level		I	←	←	←	
14. Clogging and fouling of oil filter		I	←	←	←	
Fuel system						
15. Fuel leakage		I	←	←	←	
16. Carburetor link mechanism operation		I	←	←	←	
17. Fouling and damage of fuel filter element		I	←	←	←	
18. Injection timing				M	←	
19. Injection nozzle injection pressure and condition					M	
20. Draining of sedimenter				I	←	
Cooling system						
21. Radiator cooling water level and leakage		I	←	←	←	
22. Rubber hose deterioration		I	←	←	←	
23. Radiator cap condition		I	←	←	←	
24. Fan belt tension and damage		I	←	←	←	
25. Radiator rubber mount					I	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
Travel and load handling control device (Option)						
26. Step motor damage			I	←	←	
27. Accelerator pedal sensor and switch damage			I	←	←	
28. Speed sensor damage					I	
POWER TRANSMISSION SYSTEM						
Clutch						
1. Clutch pedal play		M	←	←	←	
2. Abnormal noise and operating condition (engagement)		I	←	←	←	
3. Clutch power booster function and oil leakage		I	←	←	←	
4. Oil clutch function and oil leakage				I	←	
5. Fluid level		I	←	←	←	
Manual transmission						
6. Oil leakage		I	←	←	←	
7. Oil level		I	←	←	←	
8. Gear operation and unusual noise		I	←	←	←	
Differential						
9. Oil leakage		I	←	←	←	
10. Oil level		I	←	←	←	
11. Loose bolts					T	
Torque converter and transmission						
12. Oil leakage		I	←	←	←	
13. Oil level		I	←	←	←	
14. Operating mechanism function and looseness		I	←	←	←	
15. Control valve and clutch function		I	←	←	←	
16. Inching valve function		I	←	←	←	
17. Stall test and oil pressure measurement				M	←	
Propeller shaft and axle shaft						
18. Loosening of joint			I	←	←	
19. Looseness at spline connection					I	
20. Looseness at universal joint					I	
21. Twisting and cracks of axle shaft					I	
RUNNING EQUIPMENT						
Wheels						
1. Tire air pressure		M	←	←	←	
2. Tire cuts, damage and uneven treads		I	←	←	←	
3. Loose rim and hub nuts		T	←	←	←	
4. Tread depth		M	←	←	←	
5. Metal fragments, stones or other foreign objects in tires		I	←	←	←	
6. Rim, side ring and disc wheel damage		I	←	←	←	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
7. Front wheel bearing unusual noise and looseness		I	←	←	←	
8. Rear wheel bearing unusual noise and looseness		I	←	←	←	
Front axle						
9. Housing cracks and damage					I	
Rear axle						
10. Beam cracks, damage and deformation					I	
11. Axle beam forward and backward direction looseness		M*			M	
STEERING SYSTEM						
Steering wheel						
1. Play and looseness		I	←	←	←	
2. Operating condition		I	←	←	←	
Steering valve						
3. Oil leakage		I	←	←	←	
4. Mounting looseness		T	←	←	←	
Power steering						
5. Oil leakage		I	←	←	←	
6. Mounting and linkage looseness		I	←	←	←	
7. Power steering hose damage					I	
Knuckle						
8. King pin looseness		I	←	←	←	
9. Cracking and deformation					I	
BRAKING SYSTEM						
Brake pedal						
1. Play and reserve		M	←	←	←	
2. Braking effect		I	←	←	←	
Parking brake						
3. Operating force		I	←	←	←	
4. Braking effect		I	←	←	←	
5. Linkage and cable looseness and damage		I	←	←	←	
Brake pipe and hose						
6. Leakage, damage and mounting condition		I	←	←	←	
Brake oil						
7. Level		I	←	←	←	
Master cylinder or wheel cylinder						
8. Function, wear, damage and mounting looseness					I	
Brake drum and brake shoe						
9. Clearance between drum and lining		M	←	←	←	
10. Shoe sliding portion and lining wear					I	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
11. Drum wear and damage					I	
12. Shoe operating condition					I	
13. Anchor pin rusting					I	
14. Return spring wear, etc.					M	
15. Automatic adjusting function operation					I	
Backing plate						
16. Deformation cracking and damage					I	
17. Mounting looseness					T	
LOAD HANDLING SYSTEM						
Forks						
1. Fork and stopper pin condition		I	←	←	←	
2. Left and right fork uniformity		I	←	←	←	
3. Cracks in fork base and welded portion					I*[1]	
Mast and lift bracket						
4. Deformation, damage and cracks in welded portion		I	←	←	←	
5. Mast and lift bracket looseness		I	←	←	←	
6. Mast support bushing wear and damage					I	
7. Roller wear, damage and rotating condition		I	←	←	←	
8. Roller pin wear and damage					I	
9. Mast strip wear and damage		I	←	←	←	
Chain and chain wheel						
10. Chain tension, deformation and damage		I	←	←	←	
11. Chain lubrication		I	←	←	←	
12. Chain anchor bolt condition		I	←	←	←	
13. Chain wheel wear, damage and rotating condition		I	←	←	←	
Various attachments (Option)						
14. Abnormalities and mounting condition		I	←	←	←	
HYDRAULIC SYSTEM						
Cylinder						
1. Cylinder mounting looseness and damage		T	←	←	←	
2. Rod and rod screw and rod end deformation and damage		I	←	←	←	
3. Cylinder operation		I	←	←	←	
4. Natural drop and natural forward tilt		M	←	←	←	
5. Oil leakage and damage		I	←	←	←	
6. Pin and cylinder shaft support wear and damage		I	←	←	←	
7. Lifting speed		M	←	←	←	
8. Uneven movement		I	←	←	←	
Oil pump						
9. Oil leakage and unusual noise		I	←	←	←	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
Hydraulic oil tank						
10. Oil level and contamination		I	←	←	←	
11. Tank and oil strainer				C	←	
12. Oil leakage		I	←	←	←	
Control lever						
13. Linkage looseness		I	←	←	←	
14. Operation		I	←	←	←	
Oil control valve						
15. Oil leakage		I	←	←	←	
16. Relief pressure measurement					M	
17. Relief valve and tilt lock valve function		I	←	←	←	
Oil pressure piping						
18. Oil leakage		I	←	←	←	
19. Deformation and damage		I	←	←	←	
20. Linkage looseness		T	←	←	←	
ELECTRICAL SYSTEM						
Ignition system						
1. Distributor cap cracking		I	←	←	←	
2. Spark plug burning and gap		I	←	←	←	
3. Distributor side terminal burning		I	←	←	←	
4. Distributor cap center piece wear and damage		I	←	←	←	
5. Plug cord internal disconnection					I	
6. Ignition timing				M	←	
Starter						
7. Pinion gear meshing		I	←	←	←	
Charger						
8. Charging effect		I	←	←	←	
Battery						
9. Battery electrolyte level		I	←	←	←	
10. Specific gravity				M	←	
Electrical wiring						
11. Wiring harness damage		I	←	←	←	
12. Fuses		I	←	←	←	
Preheater						
13. Glow plug heat coil breakage				I	←	
14. Open circuit in intake heater				I	←	
DPF muffler (Option)						
15. Filter				I	←	
16. Inline filter (for back pressure sensor)			I	←	←	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
SAFETY DEVICES, ETC.						
Head guard						
1. Welded portion cracking		I	←	←	←	
2. Deformation and damage		I	←	←	←	
Back rest						
3. Mounting looseness		T	←	←	←	
4. Deformation, cracking and damage		I	←	←	←	
Lighting system						
5. Operation and mounting condition		I	←	←	←	
Horn						
6. Operation and mounting condition		I	←	←	←	
Instrument						
7. Operation		I	←	←	←	
Back-up buzzer (Option)						
8. Operation and mounting condition		I	←	←	←	
SAS (Option)						
9. Operation		I	←	←	←	
10. Looseness at and/or damage to sensor fittings		I	←	←	←	
11. Damage to, deformation of and/or oil leakage at functional parts and loosening mounting		I	←	←	←	
12. Looseness at and/or damage to wire harness		I	←	←	←	
13. Performance of lock cylinder and/or accumulator					I	
14. Rust and/or corrosion in load-handling sensor					I	
OPS						
15. Function		I	←	←	←	
Seat						
16. Mounting looseness and damage		I	←	←	←	
17. Damage to and/or operation of seat belts		I	←	←	←	
18. Operating condition of seat switch		I	←	←	←	
Body						
19. Frame, cross member, etc. damage and cracking					I	
20. Bolt looseness					T	
Cabin (Option)						
21. Deformation, cracks and damage		I	←	←	←	
22. Cracks in welds		I	←	←	←	
23. Deterioration and cracking of weather-stripping, silicon adhesive					I	
24. Deterioration and damage to the cabin mounting rubber material					I	
Rear-view mirror (Option)						
25. Dirt, damage		I	←	←	←	

INSPECTION PERIOD (Accomplish based on operating hours or month, whichever is soonest.)	EVERY	6 WEEKS	3	6	12	MONTHS
	EVERY	250	500	1000	2000	HOURS
26. Rear reflection status		I	←	←	←	
Others						
27. Lubrication		L	←	←	←	

*: For new vehicle
*1: Fissure and crack detector

Note:
In case of the hard operating condition, the service interval of 170 hours or 1 month may be recommendable.

SERVICE DATA

Adjustment value table

Item	Models			1~1.75 ton	2~2.5 ton	K2~K2.5 ton	3 ton	K3 ton	J3.5 ton
Fan belt tension (10 kg (22 lb.) pressure applied)	mm (in)			8~13 (0.31~0.51)	←	←	←	←	←
Spark plug gap	mm (in)		4Y	0.7~0.8 (0.028~0.031)	←	←	←	←	←
Spark plug type			4Y	W9EXR-U	←	←	←	←	←
Ignition timing (BTDC)	deg/rpm		4Y	7/750	←	←	←	←	←
Ignition sequence			4Y	1-3-4-2	←	←	←	←	←
Fuel injection timing (BTDC)	deg		1DZ-II•2Z	0 (Static)	←	←	←	←	←
Fuel injection sequence			1DZ-II•2Z	1-3-4-2	←	←	←	←	←
Valve clearance (When warm)	mm (in)	IN.	4Y	0 (Self adjusting)	←	←	←	←	←
			1DZ-II	0.18~0.22 (0.007~0.009)	←	←	←	←	←
			2Z	0.15~0.25 (0.006~0.010)	←	←	←	←	←
		EX.	4Y	0 (Self adjusting)	←	←	←	←	←
			1DZ-II	0.33~0.37 (0.013~0.015)	←	←	←	←	←
			2Z	0.31~0.41 (0.012~0.016)	←	←	←	←	←
Idling speed	rpm		4Y	750 ± 30	←	←	←	←	←
			1DZ-II, 2Z	750 $^{+25}_{0}$	←	←	←	←	←
No load maximum speed	rpm		4Y	2570	←	←	←	←	←
			1DZ-II	2600	←	←	←	←	–
			2Z	–	2400	–	2400	–	2400
Engine compression	kg/cm^2/rpm (psi/rpm)	Standard value	4Y	12.5/250 (178/250)	←	←	←	←	←
			1DZ-II	29/260 (412/260)	←	←	←	←	←
			2Z	33/260 (469/260)	←	←	←	←	←
		Limit	4Y	9.0/250 (128/250)	←	←	←	←	←
			1DZ-II	20/260 (284/260)	←	←	←	←	←
			2Z	20/260 (284/260)	←	←	←	←	←
Tire air pressure	kg/cm^2 (psi)	Front wheels	Single	7.0 (100)	7.0 (100)	9.0 (128)	7.0 (100)	9.0 (128)	8.5 (121)
			Double	7.0 (100)	7.0 (100)	–	7.0 (100)	–	7.0 (100)
		Rear wheels	Divided rim	8.0 (114)	7.0 (100)	7.5 (107)	7.75 (110)	–	–
			Side ring rim	8.0 (114)	7.0 (100)	7.5 (107)	7.75 (110)	10.0 (142)	9.0 (128)
			Special single	–	–	–	9.0 (128)	–	–
Steering wheel play (When idling)	mm (in)			20~50 (0.79~1.97)	←	←	←	←	←
Oil control valve set pressure	kg/cm^2 (psi)		Lift	182 (2580)	191 (2710)	←	←	←	←
			Tilt	120 (1710)	150 (2130)	←	←	←	←
Brake pedal play	mm (in)			1~5 (0.04~0.20)	←	←	←	←	←
Brake pedal floor clearance	mm (in)			90 (3.54) or more	←	←	←	←	←
Clutch pedal play	mm (in)			1~5 (0.04~0.20)*1	←	←	←	←	←
Inching and brake pedal play	mm (in)			1~3 (0.039~0.12)	←	←	←	←	←

*1: Oil clutch model (option) 1-5mm (0.04-0.20in)

Item	Models					1~1.75 ton	2~2.5 ton	K2~K2.5 ton	3 ton	K3 ton	J3.5 ton
Hub nut tightening torque	kg-m (ft-lb)	Front wheels	Divided rim			12~20 (87~145)	18~40 (130~289)	–	–	–	–
			Side ring rim	Single		18~40 (130~289)	←	←	30~60 (217~434)	12~20 (87~145)	30~60 (217~434)
				Double	Inner	18~40 (130~289)	←	–	30~60 (217~434)	–	30~60 (217~434)
					Outer	18~40 (130~289)	←	–	30~60 (217~434)	–	30~60 (217~434)
		Rear wheels	Divided rim			9~16 (65~116)	12~20 (87~145)	12~20 (87~145)	12~20 (87~145)	–	–
			Side ring rim			9~16 (65~116)	18~40 (130~289)	12~20 (87~145)	12~20 (87~145)	12~20 (87~145)	12~20 (87~145)
Divided rim set bolt tightening torque	kg-m (ft-lb)	Front wheels				5~7 (36~51)	12~18 (87~130)	–	–	–	–
		Rear wheels				3~4.5 (22~32)	5~7 (36~51)	8~12 (58~87)	5~7 (36~51)	–	–
Parking brake lever operating force	kg (lb)					18~22 (40~49)	←	←	←	←	23~27 (51~60)
Battery electrolyte specific gravity (20°C)								1.28			

Lubricant capacities and types

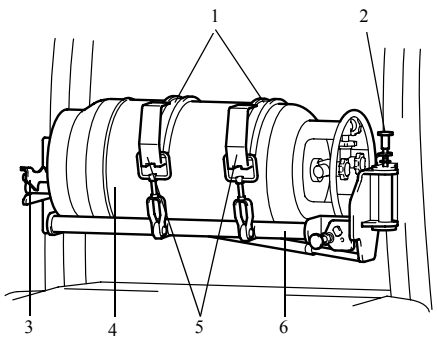
Item					1~1.75 ton	2~2.5 ton	K2~K2.5 ton	3 ton	K3 ton	J3.5 ton	Type
Engine oil	ℓ (US. gal)	Gasoline	4Y		4.0 (1.06)	←	←	←	←	←	API SL,SM
		Diesel	1DZ-II		7.9 (2.09)	←	←	←	←	–	API : CF-4
			2Z		–	9.0 (2.38)	–	9.0 (2.38)	–	9.0 (2.38)	
Torque converter	ℓ (US. gal)	1 speed			9.0 (2.38)	←	←	←	←	←	ATF GM Dexron II
		2 speed			12.0(3.17)	←	←	←	←	←	
Differential gear	ℓ (US. gal)	Clutch model			5.8 (1.53)	6.1 (1.61)	5.8 (1.53)	8.2 (2.16)	6.1 (1.61)	8.2 (2.16)	API GL 4 Hypoid gear oil API GL 5 Hypoid gear oil
		Torque converter model			5.8 (1.53)	6.1 (1.61)	5.8 (1.53)	8.2 (2.16)	6.1 (1.61)	8.2 (2.16)	
Transmission	ℓ (US. gal)				3.6 (0.95)	←	←	←	←	←	
Fuel tank	ℓ (US. gal)				45 (11.9)	60 (15.8)	55 (14.5)	60 (15.8)	55 (14.5)	60 (15.8)	
Wheel bearings, chassis, tilt steering and mast and grease fittings							Appropriate amount				MP Grease
Brake and clutch line	ℓ (US. gal)				0.2 (0.05)	←	←	←	←	←	SAE J-1703 DOT-3
Engine cooling system (excluding reserve tank)	ℓ (US. gal)	4Y	Clutch model		8.2 (2.16)	8.3 (2.20)	8.2(2.16)	8.3 (2.20)	8.2 (2.16)	8.3(2.20)	L.L.C.*
			Torque converter model		8.4 (2.22)	8.5 (2.24)	8.4 (2.22)	9.7 (2.56)	8.4(2.22)	9.7 (2.56)	
		1DZ-II	Clutch model		6.8 (1.80)	7.0 (1.85)	6.8(1.80)	7.0 (1.85)	6.8 (1.80)	–	
			Torque converter model		7.0 (1.85)	8.4 (2.22)	7.0 (1.85)	8.4 (2.22)	7.0 (1.85)	–	
		2Z	Clutch model		–	7.9 (2.09)	–	7.9 (2.09)	–	7.9(2.09)	
			Torque converter model		–	8.1 (2.14)	–	9.3 (2.46)	–	9.3(2.46)	
Radiator reserve tank (at FULL mark level)	ℓ (US. gal)				1.55 (0.41)	←	←	←	←	←	
Hydraulic oil	ℓ (US. gal)				30 (7.9)	33 (8.7)	33 (8.7)	34 (9.0)	33 (8.7)	34 (9.0)	ISO VG 32

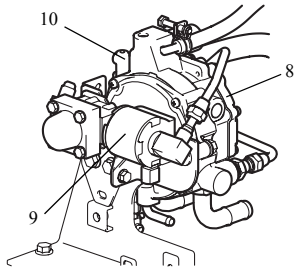
* L.L.C. = Long Life Coolant (Appropriately diluted with fresh water)
The hydraulic oil level pertains to the V-mast with a lift of 3,000 mm.

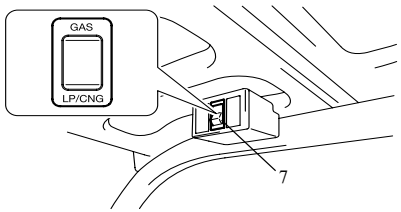
LPG DEVICE (OPTION)

NAMES OF LPG DEVICE COMPONENTS

1. Tank band
2. Set pin
3. Tank bracket stopper
4. LPG tank
5. Tank clamp
6. Tank bracket
7. LPG switch
8. Filter
9. Solenoid valve
10. Regulator







SWITCHES

Fuel Switch

Fuel switch (gasoline/ LPG models)

This is a switch to turn on and off the LPG or gasoline fuel feeder.

OFF . . .horizontal position
Engine cannot be started up since no fuel is fed.

LPG . . .low position

GAS . . .upper position

Note:

- With the engine switch OFF, no fuel will be fed even if the fuel switch is positioned at LPG or GAS.
- To turn off the LPG model engine, turn the fuel switch OFF, and run the engine until it naturally stops. After the engine has stopped, take out the gas tank, close the valve, turn the ignition switch OFF, and remove the key.

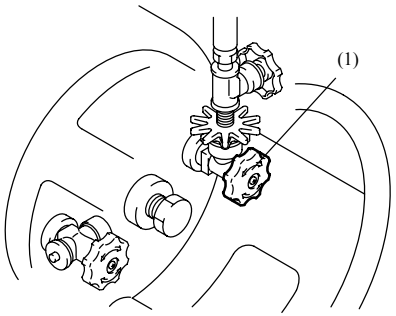
LPG remainder alarm (Option)

Once LPG has decreased to a certain level, this lamp will come on while the buzzer will sound, thereby informing the operator. While the buzzer is sounding with the lamp ON, press the switch and the buzzer will stop sounding.The lamp, however, will continue being illuminated.

Note:

Once the lamp has come on, replenish the fuel.

LPG TANK AND RELATED PARTS



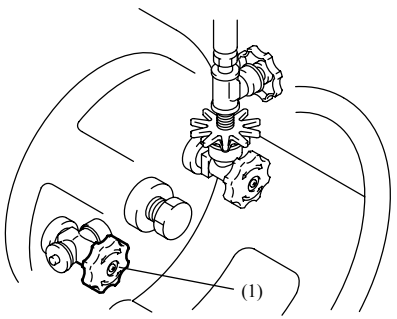
(1) Outflow valve

Outflow valve

This valve controls the flow of LPG fuel from the LPG tank to the regulator.

To open the valve . . . turn it counterclockwise.

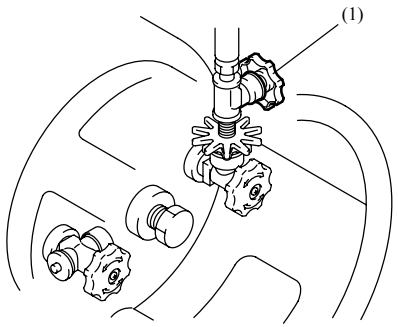
To shut the valve. . . . . turn it clockwise.



(1) Inflow valve

Inflow valve

LPG is filled in the tank through this valve. The tank must be filled by an LPG filling station attendant. Be sure that this valve is shut tightly at all times during use.



(1) Pipe valve

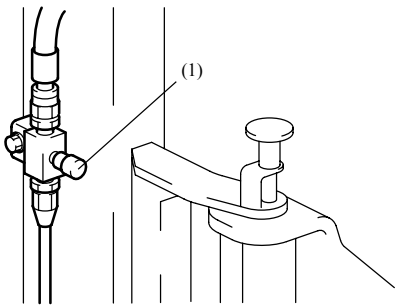
Pipe valve

When the fuel hose needs to be disconnected for tank replacement, etc., close this valve to prevent the liquid from running out of the hose.

This valve is normally left open.

To open the valve. . . turn it counterclockwise.

To shut the valve . . . . . turn it clockwise.

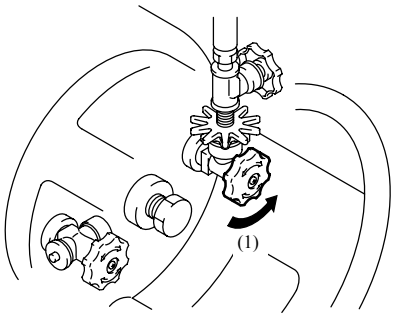


(1) Relief valve

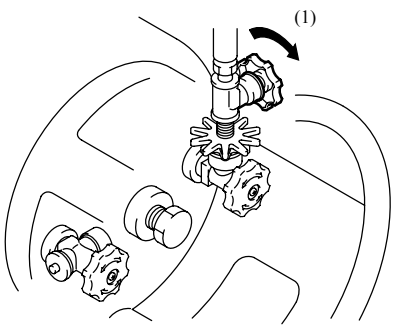
Relief Valve

This valve prevents explosion that might be caused when the LPG pressure rises above a normal level or when the hose becomes deteriorated.

OPERATING LPG-POWERED FORKLIFTS



(1) Open



(1) Open

Starting the Engine (LPG models)

1. Turn the outflow valve of the tank counterclockwise to open it.

2. Be sure that the pipe valve is open.

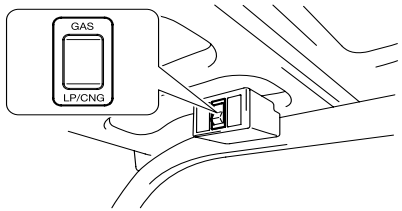
⚠ **Caution**

Never depress the accelerator pedal repeatedly or hold it down completely during starting. The engine will not start easily.

3. Wait for an initial ignition of the engine, and depress the accelerator pedal lightly. Wait for the engine to start running, and set the engine switch to the "I" (ON) position.
4. Let the engine idle for 5 to 6 minutes.

⚠ **Caution**

Never depress the accelerator pedal completely. It will send an extra amount of LPG and its heat of vaporization may freeze the regulator and damage the engine.



Starting the Engine (Gasoline/LPG models)

If the ambient temperature is sufficiently high, start the engine the same way as you would start the engine of LPG models. If the temperature is very low and starting the engine is difficult with LPG fuel, set the fuel switch to the GAS position and start the engine. Change the fuel setting to the LPG position after the engine becomes hot (stop the engine first).

1. Set the fuel switch to the GAS position.
2. Start and warm up the engine as you would start and warm up an ordinary gasoline engine.
   See the other Operator's Manual for engine starting procedures.
3. Set the fuel switch to the OFF position and let the engine stop naturally.
4. Set the fuel switch to the LPG position and start the engine again as you would start the engine of LPG models.

⚠ **Caution**

Never change the fuel switch setting from GAS to LPG positions while the engine is running. It will increase the engine rpm sharply and cause a serious damage to the engine.

To prolong the Engine Life

Refrain from handling and driving the vehicle roughly especially when it is new.

Parking

1. Parking for a short time.

(1) Turn the fuel switch to the OFF (go-out) position.

(2) Let the engine stop naturally so that any LPG fuel in the piping leaves the system. Turn the engine switch to the "O" (OFF) position and remove the key.

2. Parking for a long time.

(1) Turn the LPG tank outflow valve clockwise to shut the fuel supply.

(2) Let the engine stop naturally so that any LPG fuel in the piping leaves the system. Turn the fuel switch and the engine switch to the "O" (OFF) position and remove the key.

Changing the LPG Tank

⚠ Caution

Under no circumstances what so ever may the LPG tank replacement be performed near a lighted cigarette, lighted match, gas stove burner, electric heater, motor or any other electric appliance that emits sparks, flame or any type of fire (referred to collectively as "fire" below).

⚠ Warning

To avoid serious injury from fire or explosion, you must follow these rules:

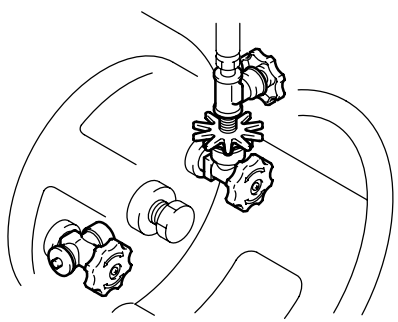
- **Switch ignition and lights off.**
- **Change tanks only in well ventilated, approved areas.**
- **No fire or flames allowed.**
- **Check all connections for damage or missing parts.**
- **Check for leaks.**
- **Do not restart until all smell of gas is gone.**
- **If truck will not restart, get a mechanic to inspect it.**
- **Filling tanks requires special procedures.**
  Make sure someone explains them all to you.

Removing the LPG Tank

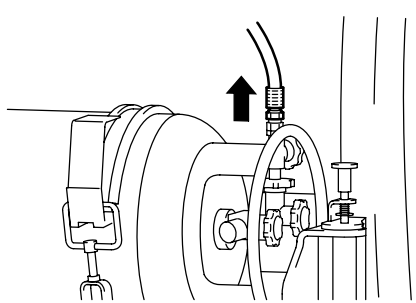
1. Stop the engine according to instructions for "Parking for a long time".

(1) Turn the LPG tank outflow valve clockwise to shut the fuel supply.

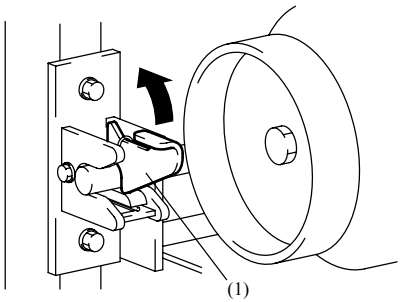
(2) Let the engine stop naturally. Turn the fuel switch to the "O" (OFF) position.



2. Turn the pipe valve clockwise to shut it.

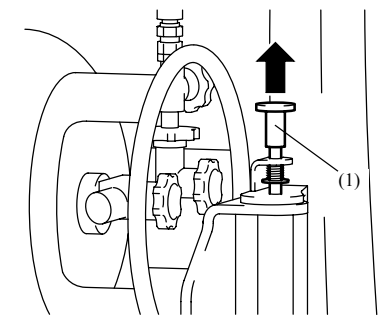


3. Disconnect the piping from the LPG tank (turn the screw counterclockwise).



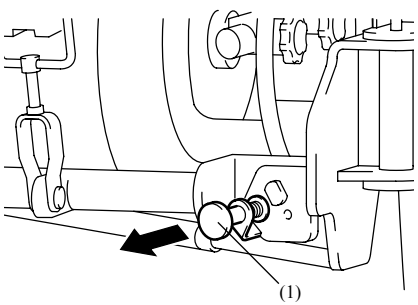
(1) Tank bracket stopper

4. Lift up the tank bracket stopper for the left tank bracket and release the lock.



(1) Set pin (Upper side)

5. Unlock the set pin (upper side) on the right side of the tank bracket by lifting it, turn the bracket rearward, and fix the set pin.

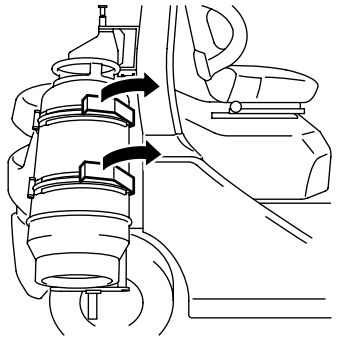


(1) Set pin (Lower side)

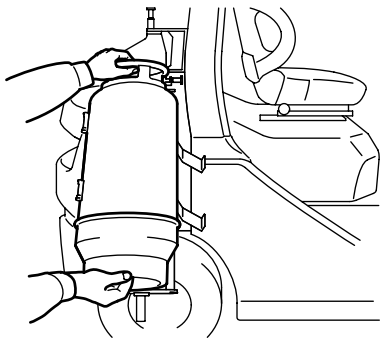
6. Pull the set pin (lower side) on the lower side of the tank bracket for unlocking. The tank bracket falls.
   Lower the tank bracket and fix the lock pin.

⚠ **Warning**

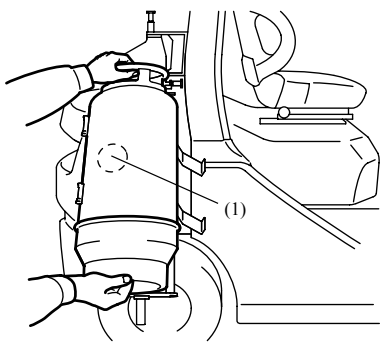
- **When unlocking the tank bracket set pin, never enter the area under the tank bracket.**
  Pay special attention as the tank bracket falls due to its own weight.
- **Never unlock the set pin when the tank is full. Otherwise, the tank bracket falls rapidly to cause a dangerous state.**



7. Pull the tank clamp toward you and unlock the tank bands.



8. Raise the tank bands away from you and remove the LPG tank.



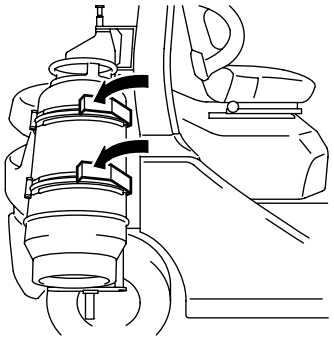
(1) Mark

Installing the LPG Tank

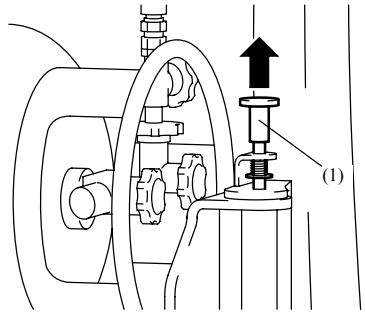
1. Put the LPG tank on the bracket.

(1) The outflow valve must face the right or upper side of the vehicle.

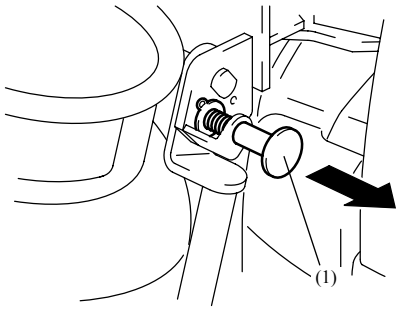
(2) The tank must be placed with the correct side up. Find a marking on the tank. It must face upward or rearward.



2. Put bands over the tank, hook clamps to bands and push clamps up to clamp the tank.



(1) Set pin (Upper side)

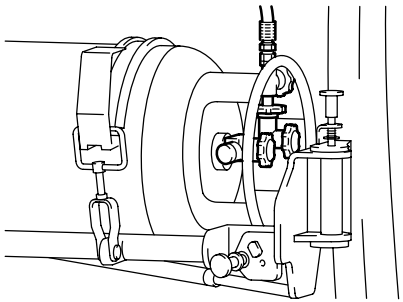


(1) Set pin (Lower side)

3. Unlock the tank bracket by pulling the set pin (lower side) under the tank bracket. Raise the tank bracket and fix the set pin.

⚠ Warning

It is dangerous to unlock the set pin without the load (tank) because the bracket may jump up due to the spring force. Unlock the set pin while the tank is loaded on the bracket.
Remove the set pin, turn the tank bracket around the pivot and set the bracket stopper knob accurately.



4. Connect the piping to the outflow valve of the tank (turn the screw counterclockwise).
5. Wet the pipe connection to the tank with soap water or neutral detergent. Open the outflow valve and the pipe valve, and check the connection for any gas leaks. Wipe off the soap water or detergent after inspection is completed.

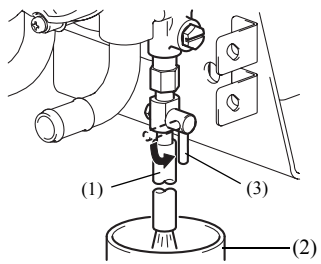
Important Information about Properties of LPG

- **LPG normally contains a substance that gives it a noticeable odor in concentration of 1/200 or more in air.**
  If a large amount of the LPG is leaking from the tank of the system, it can be detected by the smell. LPG does not contain carbon monoxide and is not poisonous although it is explosive.
- **LPG is a highly pressurized gas and leaks very easily.**
  The vapor has a volume 250 times that of the liquefied gas and it twice as dense as air. Therefore, it collects in low places.
- **LPG increases in pressure as the temperature increases.**

Safety Precautions about Operating LPG-Powered Forklifts

- **LPG is inflammable. A tiny spark can cause a fatal explosion if it is handled carelessly. It is very crucial that the following precautions are observed most strictly to avoid hazards.**
- **All LPG-powered forklifts must be operated and maintained (including the LPG tank renewal) by designated persons only.**
- **Never stop or park an LPG-powered forklift near fire.**
- **Whenever possible, do not stop or park an LPG-powered forklift in direct sunlight. Covering it with a sheet highly recommendable. And make sure the vehicle is well ventilated.**
- **Do not operate an LPG-powered forklift in the presence of fire.**
- **When operating or inspecting an LPG-powered forklift, post a large "FIRE HAZARD" sign and make sure that persons using fire do not approach the vehicle.**
- **Remove the ignition key from an LPG-powered forklift before parking or storing it so that no unauthorized person can operate it.**
- **Use only soap water or neutral detergent to check the vehicle for gas leaks. Do not use any other fluid.**
- **If the gas leak inspection must be performed at night with the help of a flashlight, turn the flashlight on far away from the vehicle and walk toward it. The flashlight might cause a spark when it is turned on and cause an accident.**
- **If a gas leak is detected, immediately put out any fire, ventilate the area and keep the area in a strictly fire free condition. Then call a qualified Toyota dealer or service garage.**
- **Store LPG tanks in a strictly free area having a gas detector at all times.**
- **Have LPG tanks refilled only by an LPG gas filling station attendant.**
- **Use LPG of an appropriate chemical composition according to the climate. In hot climate, use LPG with a relatively high butane content; in cold climate, use LPG with a relatively high propane content.**

SERVICING THE REGULATOR



(1) Hose
(2) Oil pan
(3) Drain cock (Option)

Removing Tar from the Regulator

Tar tends to collect in the regulator and it must be removed regularly on a weekly basis when the day's work is finished. Let the engine cool down, and remove tar as started below.

1. Set the fuel switch to the "O" (OFF) position and open the engine hood.
2. Connect a hose to the drain cock located under the regulator.
3. Put an oil pan under the drain cock.
   Open the drain cock and let tar drop into the oil pan.
4. After all tar is removed from the regulator, close the drain cock and disconnect the hose.

⚠ Caution
If tar is adhering to the vehicle, it must be wiped off completely with a cloth.

INSPECTING AND SERVICING LPG-POWERED FORKLIFTS

Inspect and service LPG-powered forklifts as you would conventional forklifts. In addition, inspect and service them as written below.

- Inspection before Starting Operation.
- LPG gas leak check
- After the gas leak check is completed, wipe off the soap water or neutral detergent from the wet parts.
- If a gas leak is detected, immediately put out any fire, ventilate the area and keep the area in a strictly firefree condition. Then call a qualified Toyota dealer or service garage.

⚠ Caution

Never perform LPG gas leak checks near fire. Make certain that there is no source of fire in the area throughout the gas leak check.

⚠ Warning

To avoid serious injury from fire or explosion, you must follow these rules;

- **Switch ignition and lights off.**
- **Check for leaks only in well ventilated, approved areas.**
- **No smoking, fire of flames allowed.**
- **Brush soapy water on all joints, bubbles will show leaks.**
- **Never use any other liquids, or any open flame for leak checks.**
- **Do not try to start engine until all gas smell is gone.**
- **If any gas leakage is found, immediately report it to the supervisor for repair by a qualified mechanic or your Toyota dealer. The truck is not allowed to be operated.**

1. Turn the LPG tank outflow valve counterclockwise to open it.
2. The pipe valve must be open also.
3. Set the engine switch to the "I" (ON) position.
4. Turn the fuel switch "I" (ON) and "O" (OFF) repeatedly for several times, and leave it in the "O" (OFF) position finally.
5. Wet the hose and the LPG tank and regulator connections with soap water or neutral detergent. Lock for gas leak.
6. Press the fuel test bar fitted to the regulator a few times toward the outside of the vehicle.
7. Wet the hose and the regulator and carburetor connections with soap water or neutral detergent. Lock for gas leak.

■Monthly Inspection and Maintenance

Item
Gas leak from pipes and joints (connections)
Damage to pipes and joints (connections)
Regulator adjustment
Crack, damage to and gas leak from the tank
Loose or damaged tank bracket
Damage to electrical wiring, loose terminals
Rotation of liquid drain valve
Gas leak from the regulator body

■Quarterly Inspection and Maintenance

Carburetor and adaptor
Regulator function (to be disassembled and repaired every year)
Solenoid valve
Filter

LUBRICANT AND COOLANT

Engine oil

Use SAE 30 motor oil (SAE 20 in cold weather).
Replace the oil once a month.

Cooling water

Use a mixture of equal parts of water and a long-life coolant.
Change the cooling water every two years.

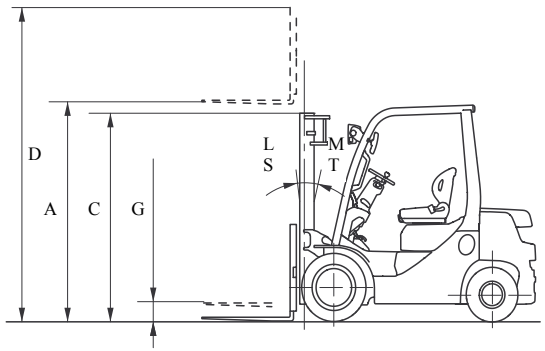
ENGINE SPECFICATIONS

Item		Engine	4Y	
			a	b
Gasoline/LPG models	Max. power	PS/rpm	48/2400	52/2600
	Max. torque	kg/rpm	15/1600	←
	Ignition timing	BTDC°/rpm	7°/750	←
	Idling speed	rpm	750	←
	Max. no-load rpm	rpm	2600	2800
LPG models	Max. power	PS/rpm	50/2400	54/2600
	Max. torque	kg/rpm	16/1800	←
	Ignition timing	BTDC°/rpm	7°/750	←
	Idling speed	rpm	750	←
	Max. no-load rpm	rpm	2600	2800

a: 4Y engine-powered, 1.0 ~ 2.5, K2 ~ K3 ton class pneumatic tire vehicles

b: 4Y engine-powered, 3.0 ton class pneumatic tire vehicles

MAST SPECIFICATIONS & RATED CAPACITIES



T Mast Type	**B** Overall Height		**G** Free Lift		**J** Single Tire				**Q** Dual Tire			
A Maximum Fork Height	**C** Lowered	**D** Extended		**H** Without Load Backrest	**I** With Standard Load Backrest	**K** Tilt Range		**N** Load Capacity at 500 mm LC		**R** Tilt Range		**U** Load Capacity at 500 mm LC PN/PSC Tire
		E Without Load Backrest	**F** With Standard Load Backrest			**L** FWD	**M** BWD	**O** PN Tire	**P** PSC Tire	**S** FWD	**T** BWD	

V
Wide visible Mast

FV
Wide Visible Full-Free Lift Two-Stage Mast

FSV
Wide Visible Full-Free Lift Three Stage Mast

deg
deg

NOTE
NOTE: Height of standard load backrest is 1220 mm (48 in).

Model: 30-8FG10/60-8FD10/32-8FG10/62-8FD10

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	# 1820	(# 71.7)	* 3145	(* 123.8)	3920	(154.3)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3000	(118)	# 1970	(# 77.6)	* 3445	(* 135.6)	4220	(166.1)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3300	(130)	# 2120	(# 83.5)	* 3745	(* 147.4)	4520	(178)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3500	(138)	# 2220	(# 87.4)	* 3945	(* 155.3)	4720	(185.8)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3700	(145)	# 2380	(# 93.7)	* 4145	(* 163.2)	4920	(193.7)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	4000	(157.5)	# 2570	(# 101.2)	* 4445	(* 175.0)	5220	(205.5)	140	(5.5)	140	(5.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	4500	(177)	# 2820	(# 111)	* 4945	(* 194.7)	5720	(225.2)	140	(5.5)	140	(5.5)	7	5	950	(2095)	1000	(2205)	7	10	950	(2095)
	5000	(197)	# 3070	(# 120.9)	* 5445	(* 214.4)	6220	(244.9)	140	(5.5)	140	(5.5)	7	10	950	(2095)	1000	(2205)	7	5	950	(2095)
FV	** 2870	(** 113)	# 1905	(# 75)	3465	(136.4)	4125	(162.4)	# 1340	(# 52.8)	# 680	(# 26.8)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3000	(118)	# 1970	(# 77.6)	3595	(141.5)	4245	(167.1)	# 1400	(# 55.1)	# 750	(# 29.5)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3300	(130)	# 2120	(# 83.5)	3895	(153.3)	4545	(178.9)	# 1550	(# 61.0)	# 900	(# 35.4)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3500	(138)	# 2220	(# 87.4)	4095	(161.2)	4745	(186.8)	# 1650	(# 65.0)	# 1000	(# 39.4)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	3700	(145)	# 2380	(# 93.7)	4295	(169.1)	4945	(194.7)	# 1810	(# 71.3)	# 1160	(# 45.7)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
	4000	(157.5)	# 2570	(# 101.2)	4595	(180.9)	5245	(206.5)	# 2000	(# 78.7)	# 1350	(# 53.1)	7	10	1000	(2205)	1000	(2205)	7	10	1000	(2205)
FSV	3700	(145)	# 1770	(# 69.7)	4240	(166.9)	4920	(193.7)	# 1230	(# 48.4)	# 550	(# 21.7)	7	5	950	(2095)	950	(2095)	7	5	950	(2095)
	4000	(157.5)	# 1870	(# 73.6)	4540	(178.7)	5220	(205.5)	# 1330	(# 52.4)	# 650	(# 25.6)	7	5	900	(1985)	900	(1985)	7	5	900	(1985)
	4300	(169)	# 1970	(# 77.6)	4840	(190.6)	5520	(217.3)	# 1430	(# 56.3)	# 750	(# 29.5)	7	5	900	(1985)	900	(1985)	7	5	900	(1985)
	4500	(177)	# 2040	(# 80.3)	5040	(198.4)	5720	(225.2)	# 1500	(# 59.1)	# 820	(# 32.3)	7	5	900	(1985)	900	(1985)	7	5	900	(1985)
	4700	(185)	# 2120	(# 83.5)	5240	(206.3)	5920	(233.1)	# 1580	(# 62.2)	# 900	(# 35.4)	7	5	900	(1985)	900	(1985)	7	5	900	(1985)
	5000	(197)	# 2220	(# 87.4)	5540	(218.1)	6220	(244.9)	# 1680	(# 66.1)	# 1000	(# 39.4)	7	5	850	(1874)	900	(1985)	7	5	850	(1874)
	5500	(216.5)	# 2380	(# 93.7)	6040	(237.8)	6720	(264.6)	# 1840	(# 72.4)	# 1160	(# 45.7)	7	5	850	(1874)	900	(1985)	7	5	850	(1874)
	6000	(236)	# 2570	(# 101.2)	6540	(257.5)	7220	(284.3)	# 2030	(# 79.9)	# 1350	(# 53.1)	7	5	700	(1544)	800	(1764)	7	5	800	(1764)
	6500	(256)	# 2820	(# 111)	7040	(277.2)	7720	(303.9)	# 2280	(# 89.8)	# 1600	(# 63.0)	–	–	–	–	–	–	7	5	700	(1544)
	7000	(275.5)	# 3070	(# 120.9)	7540	(296.9)	8220	(323.6)	# 2530	(# 99.6)	# 1850	(# 72.8)	–	–	–	–	–	–	7	5	650	(1433)

Note : 1.With Optional Tire Size : 6.50-10-10PR (I), Lowered Overall Height Increases in +25mm (1in). (#-Marked Portions)
2.With A4 Piping, Extended Overall Height (Without Load Backrest) Increases in +155mm (6.1in). (*-Marked Portions)
3.FV-mast 2870mm (113in) (**-Marked Portion) is set only to a Russian specification.

Model: 30-8FG15/60-8FD15/32-8FG15/62-8FD15

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1845	(72.6)	* 3145	(* 123.8)	3920	(154.3)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3000	(118)	1995	(78.5)	* 3445	(* 135.6)	4220	(166.1)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3300	(130)	2145	(84.4)	* 3745	(* 147.4)	4520	(178)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3500	(138)	2245	(88.4)	* 3945	(* 155.3)	4720	(185.8)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3700	(145)	2405	(94.7)	* 4145	(* 163.2)	4920	(193.7)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	4000	(157.5)	2595	(102.2)	* 4445	(* 175.0)	5220	(205.5)	145	(5.7)	145	(5.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	4500	(177)	2845	(112)	* 4945	(* 194.7)	5720	(225.2)	145	(5.7)	145	(5.7)	6	6	1450	(3197)	1500	(3308)	7	10	1450	(3197)
	5000	(197)	3095	(121.9)	* 5445	(* 214.4)	6220	(244.9)	145	(5.7)	145	(5.7)	6	11	1300	(2867)	1400	(3087)	7	5	1300	(2867)
FV	** 2870	(** 113)	1930	(76)	3430	(135)	4085	(160.8)	1365	(53.7)	710	(28)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3000	(118)	1995	(78.5)	3560	(140.2)	4210	(165.7)	1430	(56.3)	710	(30.7)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3300	(130)	2145	(84.4)	3860	(152)	4510	(177.6)	1580	(62.2)	710	(36.6)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3500	(138)	2245	(88.4)	4060	(159.8)	4710	(185.4)	1680	(66.1)	710	(40.6)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	3700	(145)	2405	(94.7)	4260	(167.7)	4910	(193.3)	1840	(72.4)	710	(46.9)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
	4000	(157.5)	2595	(102.2)	4560	(179.5)	5210	(205.1)	2030	(79.9)	710	(54.3)	6	11	1500	(3308)	1500	(3308)	7	10	1500	(3308)
FSV	3700	(145)	1795	(70.7)	4235	(166.7)	4915	(193.5)	1260	(49.6)	580	(22.8)	6	6	1400	(3087)	1400	(3087)	7	5	1400	(3087)
	4000	(157.5)	1895	(74.6)	4535	(178.5)	5215	(205.3)	1360	(53.5)	680	(26.8)	6	6	1400	(3087)	1400	(3087)	7	5	1400	(3087)
	4300	(169)	1995	(78.5)	4835	(190.4)	5515	(217.1)	1460	(57.5)	780	(30.7)	6	6	1400	(3087)	1400	(3087)	7	5	1400	(3087)
	4500	(177)	2065	(81.3)	5035	(198.2)	5715	(225)	1530	(60.2)	850	(33.5)	6	6	1350	(2978)	1400	(3087)	7	5	1350	(2978)
	4700	(185)	2145	(84.4)	5235	(206.1)	5915	(232.9)	1610	(63.4)	930	(36.6)	6	6	1350	(2978)	1400	(3087)	7	5	1350	(2978)
	5000	(197)	2245	(88.4)	5535	(217.9)	6215	(244.7)	1710	(67.3)	1030	(40.6)	6	6	1250	(2756)	1350	(2978)	7	5	1300	(2867)
	5500	(216.5)	2405	(94.7)	6035	(237.6)	6715	(264.4)	1870	(73.6)	1190	(46.9)	6	6	950	(2095)	1050	(2315)	7	5	1250	(2756)
	6000	(236)	2595	(102.2)	6535	(257.3)	7215	(284.1)	2060	(81.1)	1380	(54.3)	6	6	700	(1544)	800	(1764)	7	5	1100	(2426)
	6500	(256)	2845	(112)	7035	(277)	7715	(303.7)	2310	(90.9)	1630	(64.2)	–	–	–	–	–	–	7	5	900	(1985)
	7000	(275.5)	3095	(121.9)	7535	(296.7)	8215	(323.4)	2560	(100.8)	1880	(74)	–	–	–	–	–	–	7	5	650	(1433)

Note : 1.With Optional Tire Size : 6.50-10-10PR (I), Lowered Overall Height Increases in +25mm (1in). (*-Marked Portions)
2.FV-mast 2870mm (113in) (**-Marked Portion) is set only to a Russian specification.

Model: 32-8FG18/62-8FD18

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1845	(72.6)	* 3320	(* 130.7)	3920	(154.3)	145	(5.7)	145	(5.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3000	(118)	1995	(78.5)	* 3620	(* 142.5)	4220	(166.1)	145	(5.7)	145	(5.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3300	(130)	2145	(84.4)	* 3920	(* 154.3)	4520	(178)	145	(5.7)	145	(5.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3500	(138)	2245	(88.4)	* 4120	(* 162.2)	4720	(185.8)	145	(5.7)	145	(5.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3700	(145)	2405	(94.7)	* 4320	(* 170.1)	4920	(193.7)	145	(5.7)	145	(5.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	4000	(157.5)	2595	(102.2)	* 4620	(* 181.9)	5220	(205.5)	145	(5.7)	145	(5.7)	6	11	1700	(3749)	1750	(3859)	7	10	1700	(3749)
	4500	(177)	2845	(112)	* 5120	(* 201.6)	5720	(225.2)	145	(5.7)	145	(5.7)	6	6	1600	(3528)	1700	(3749)	7	10	1600	(3528)
	5000	(197)	3095	(121.9)	* 5620	(* 221.3)	6220	(244.9)	145	(5.7)	145	(5.7)	6	11	1550	(3418)	1650	(3638)	7	5	1550	(3418)
FV	** 2870	(** 113)	1930	(76)	3430	(135)	4085	(160.8)	1365	(53.7)	710	(28)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3000	(118)	1995	(78.5)	3560	(140.2)	4210	(165.7)	1430	(56.3)	780	(30.7)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3300	(130)	2145	(84.4)	3860	(152)	4510	(177.6)	1580	(62.2)	930	(36.6)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3500	(138)	2245	(88.4)	4060	(159.8)	4710	(185.4)	1680	(66.1)	1030	(40.6)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	3700	(145)	2405	(94.7)	4260	(167.7)	4910	(193.3)	1840	(72.4)	1190	(46.9)	6	11	1750	(3859)	1750	(3859)	7	10	1750	(3859)
	4000	(157.5)	2595	(102.2)	4560	(179.5)	5210	(205.1)	2030	(79.9)	1380	(54.3)	6	11	1700	(3749)	1750	(3859)	7	10	1700	(3749)
FSV	3700	(145)	1795	(70.7)	4235	(166.7)	4915	(193.5)	1260	(49.6)	580	(22.8)	6	6	1600	(3528)	1600	(3528)	7	5	1600	(3528)
	4000	(157.5)	1895	(74.6)	4535	(178.5)	5215	(205.3)	1360	(53.5)	680	(26.8)	6	6	1600	(3528)	1600	(3528)	7	5	1600	(3528)
	4300	(169)	1995	(78.5)	4835	(190.4)	5515	(217.1)	1460	(57.5)	780	(30.7)	6	6	1550	(3418)	1600	(3528)	7	5	1550	(3418)
	4500	(177)	2065	(81.3)	5035	(198.2)	5715	(225)	1530	(60.2)	850	(33.5)	6	6	1500	(3308)	1600	(3528)	7	5	1500	(3308)
	4700	(185)	2145	(84.4)	5235	(206.1)	5915	(232.9)	1610	(63.4)	930	(36.6)	6	6	1500	(3308)	1600	(3528)	7	5	1500	(3308)
	5000	(197)	2245	(88.4)	5535	(217.9)	6215	(244.7)	1710	(67.3)	1030	(40.6)	6	6	1450	(3197)	1550	(3418)	7	5	1450	(3197)
	5500	(216.5)	2405	(94.7)	6035	(237.6)	6715	(264.4)	1870	(73.6)	1190	(46.9)	6	6	1100	(2423)	1200	(2646)	7	5	1400	(3087)
	6000	(236)	2595	(102.2)	6535	(257.3)	7215	(284.1)	2060	(81.1)	1380	(54.3)	6	6	850	(1874)	950	(2094)	7	5	1200	(2646)
	6500	(256)	2845	(112)	7035	(277)	7715	(303.7)	2310	(90.9)	1630	(64.2)	–	–	–	–	–	–	7	5	850	(1875)
	7000	(275.5)	3095	(121.9)	7535	(296.7)	8215	(323.4)	2560	(100.8)	1880	(74)	–	–	–	–	–	–	7	5	600	(1323)

Note : 1.With Optional Tire Size : 6.50-10-10PR (I), Lowered Overall Height Increases in -15mm (-0.6in). (*-Marked Portions)
2.FV-mast 2870mm (113in) (**-Marked Portion) is set only to a Russian specification.

Model: 30-8FG20/60-8FD20/70-8FD20/32-8FG20/62-8FD20/72-8FD20

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1845	(72.6)	* 3375	(* 132.9)	3920	(154.3)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3000	(118)	1995	(78.5)	* 3675	(* 144.7)	4220	(166.1)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3300	(130)	2145	(84.4)	* 3975	(* 156.5)	4520	(178)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3500	(138)	2245	(88.4)	* 4175	(* 164.4)	4720	(185.8)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3700	(145)	2405	(94.7)	* 4375	(* 172.2)	4920	(193.7)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	4000	(157.5)	2595	(102.2)	* 4675	(* 184.1)	5220	(205.5)	145	(5.7)	145	(5.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	4500	(177)	2845	(112)	* 5175	(* 203.7)	5720	(225.2)	145	(5.7)	145	(5.7)	6	6	1950	(4300)	2000	(4410)	6	11	1950	(4300)
	5000	(197)	3095	(121.9)	* 5675	(* 223.4)	6220	(244.9)	145	(5.7)	145	(5.7)	6	6	1850	(4079)	2000	(4410)	6	6	1900	(4190)
FV	3000	(118)	1995	(78.5)	3560	(140.2)	4175	(164.4)	1395	(54.9)	780	(30.7)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3300	(130)	2145	(84.4)	3860	(152)	4435	(174.6)	1545	(60.8)	970	(38.2)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3500	(138)	2245	(88.4)	4060	(159.8)	4635	(182.5)	1645	(64.8)	1070	(42.1)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	3700	(145)	2405	(94.7)	4260	(167.7)	4835	(190.4)	1805	(71.1)	1230	(48.4)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
	4000	(157.5)	2595	(102.2)	4560	(179.5)	5135	(202.2)	1995	(78.5)	1420	(55.9)	6	11	2000	(4410)	2000	(4410)	6	11	2000	(4410)
FSV	3700	(145)	1795	(70.7)	4275	(168.3)	4910	(193.3)	1220	(48)	580	(22.8)	6	6	2000	(4410)	2000	(4410)	6	6	2000	(4410)
	4000	(157.5)	1895	(74.6)	4575	(180.1)	5210	(205.1)	1320	(52)	680	(26.8)	6	6	1950	(4300)	1950	(4300)	6	6	1950	(4300)
	4300	(169)	1995	(78.5)	4875	(191.9)	5510	(216.9)	1420	(55.9)	780	(30.7)	6	6	1900	(4190)	1900	(4190)	6	6	1950	(4300)
	4500	(177)	2065	(81.3)	5075	(199.8)	5710	(224.8)	1490	(58.7)	850	(33.5)	6	6	1850	(4079)	1850	(4079)	6	6	1900	(4190)
	4700	(185)	2145	(84.4)	5275	(207.7)	5910	(232.7)	1570	(61.8)	930	(36.6)	6	6	1850	(4079)	1850	(4079)	6	6	1900	(4190)
	5000	(197)	2245	(88.4)	5575	(219.5)	6210	(244.5)	1670	(65.7)	1030	(40.6)	6	6	1450	(3197)	1600	(3528)	6	6	1850	(4079)
	5500	(216.5)	2405	(94.7)	6075	(239.2)	6710	(264.2)	1830	(72)	1190	(46.9)	6	6	1200	(2646)	1350	(2977)	6	6	1800	(3969)
	6000	(236)	2595	(102.2)	6575	(258.9)	7210	(283.9)	2020	(79.5)	1380	(54.3)	6	6	850	(1874)	1000	(2205)	6	6	1600	(3528)
	6500	(256)	2845	(112)	7075	(278.5)	7710	(303.5)	2270	(89.4)	1630	(64.2)	–	–	–	–	–	–	6	6	1550	(3418)
	7000	(275.5)	3095	(121.9)	7575	(298.2)	8210	(323.2)	2520	(99.2)	1880	(74)	–	–	–	–	–	–	6	6	1200	(2646)

Note : 1.With A4 Piping, Extended Overall Height (Without Load Backrest) Increases in -15mm (0.6in). (*-Marked Portions)

Model: 32-8FGK20/62-8FDK20

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1825	(71.9)	3365	(132.5)	3920	(154.3)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3000	(118)	1975	(77.8)	3665	(144.3)	4220	(166.1)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3300	(130)	2125	(83.7)	3965	(156.1)	4520	(178)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3500	(138)	2225	(87.6)	4165	(164)	4720	(185.8)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3700	(145)	2385	(93.6)	4365	(171.9)	4920	(193.7)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	4000	(157.5)	2575	(101.4)	4665	(183.7)	5220	(205.5)	120	(4.7)	120	(4.7)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	4500	(177)	2825	(111.2)	5165	(203.3)	5720	(225.2)	120	(4.7)	120	(4.7)	7	5	1950	(4300)	2000	(4410)	–	–	–	–
	5000	(197)	3075	(121.1)	5665	(223)	6220	(244.9)	120	(4.7)	120	(4.7)	7	10	1850	(4079)	2000	(4410)	–	–	–	–
FV	3000	(118)	1975	(77.8)	3560	(140.2)	4165	(164)	1365	(53.7)	760	(29.9)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3300	(130)	2125	(83.7)	3860	(152)	4425	(174.2)	1515	(59.6)	950	(37.4)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3500	(138)	2225	(87.6)	4060	(159.8)	4625	(182.1)	1615	(63.6)	1050	(41.3)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	3700	(145)	2385	(93.9)	4260	(167.7)	4825	(190)	1775	(69.9)	1210	(47.6)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
	4000	(157.5)	2575	(101.4)	4560	(179.5)	5125	(201.8)	1965	(77.4)	1400	(55.1)	7	10	2000	(4410)	2000	(4410)	–	–	–	–
FSV	3700	(145)	1775	(69.9)	4350	(171.3)	4910	(193.3)	1125	(44.3)	560	(22)	7	5	2000	(4410)	2000	(4410)	–	–	–	–
	4000	(157.5)	1875	(73.8)	4650	(183.1)	5210	(205.1)	1225	(48.2)	660	(26)	7	5	1950	(4300)	2000	(4410)	–	–	–	–
	4300	(169)	1975	(77.8)	4950	(194.9)	5510	(216.9)	1325	(52.2)	760	(29.9)	7	5	1900	(4190)	2000	(4410)	–	–	–	–
	4500	(177)	2045	(80.5)	5150	(202.8)	5710	(224.8)	1395	(54.9)	830	(32.7)	7	5	1850	(4079)	2000	(4410)	–	–	–	–
	4700	(185)	2125	(83.7)	5350	(210.6)	5910	(232.7)	1475	(58.1)	910	(35.8)	7	5	1850	(4079)	2000	(4410)	–	–	–	–
	5000	(197)	2225	(87.6)	5650	(222.4)	6210	(244.5)	1575	(62)	1010	(39.8)	7	5	1450	(3197)	1600	(3528)	–	–	–	–
	5500	(216.5)	2385	(93.9)	6150	(242.1)	6710	(264.2)	1735	(68.3)	1170	(46.1)	7	5	1200	(2646)	1350	(2977)	–	–	–	–
	6000	(236)	2575	(101.4)	6650	(261.8)	7210	(283.9)	1925	(75.8)	1360	(53.5)	7	5	850	(1874)	1000	(2205)	–	–	–	–

Model: 30-8FG25/60-8FD25/70-8FD25/32-8FG25/62-8FD25/72-8FD25

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1845	(72.6)	* 3375	(* 132.9)	3920	(154.3)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3000	(118)	1995	(78.5)	* 3675	(* 144.7)	4220	(166.1)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3300	(130)	2145	(84.4)	* 3975	(* 156.5)	4520	(178)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3500	(138)	2245	(88.4)	* 4175	(* 164.4)	4720	(185.8)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3700	(145)	2405	(94.7)	* 4375	(* 172.2)	4920	(193.7)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	4000	(157.5)	2595	(102.2)	* 4675	(* 184.1)	5220	(205.5)	150	(5.9)	150	(5.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	4500	(177)	2845	(112)	* 5175	(* 203.7)	5720	(225.2)	150	(5.9)	150	(5.9)	6	11	2150	(4741)	2300	(5072)	6	11	2450	(5402)
	5000	(197)	3095	(121.9)	* 5675	(* 223.4)	6220	(244.9)	150	(5.9)	150	(5.9)	6	11	1700	(3749)	1850	(4079)	6	6	2400	(5292)
FV	3000	(118)	1995	(78.5)	3560	(140.2)	4175	(164.4)	1400	(55.1)	785	(30.9)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3300	(130)	2145	(84.4)	3860	(152)	4435	(174.6)	1550	(61)	975	(38.4)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3500	(138)	2245	(88.4)	4060	(159.8)	4635	(182.5)	1650	(65)	1075	(42.3)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	3700	(145)	2405	(94.7)	4260	(167.7)	4835	(190.4)	1810	(71.3)	1235	(48.6)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
	4000	(157.5)	2595	(102.2)	4560	(179.5)	5135	(202.2)	2000	(78.7)	1425	(56.1)	6	11	2500	(5513)	2500	(5513)	6	11	2500	(5513)
FSV	3700	(145)	1795	(70.7)	4270	(168.1)	4910	(193.3)	1225	(48.2)	585	(23)	6	6	2500	(5513)	2500	(5513)	6	6	2500	(5513)
	4000	(157.5)	1895	(74.6)	4570	(179.9)	5210	(205.1)	1325	(52.2)	685	(27)	6	6	2500	(5513)	2500	(5513)	6	6	2500	(5513)
	4300	(169)	1995	(78.5)	4870	(191.7)	5510	(216.9)	1425	(56.1)	785	(30.9)	6	6	2300	(5072)	2300	(5072)	6	6	2500	(5513)
	4500	(177)	2065	(81.3)	5070	(199.6)	5710	(224.8)	1495	(58.9)	855	(33.7)	6	6	2000	(4410)	2000	(4410)	6	6	2450	(5402)
	4700	(185)	2145	(84.4)	5270	(207.5)	5910	(232.7)	1575	(62)	935	(36.8)	6	6	2000	(4410)	2000	(4410)	6	6	2450	(5402)
	5000	(197)	2245	(88.4)	5570	(219.3)	6210	(244.5)	1675	(65.9)	1035	(40.8)	6	6	1500	(4410)	1650	(3638)	6	6	2400	(5292)
	5500	(216.5)	2405	(94.7)	6070	(239)	6710	(264.2)	1835	(72.2)	1195	(47.1)	6	6	1250	(2756)	1400	(3087)	6	6	2050	(4520)
	6000	(236)	2595	(102.2)	6570	(258.7)	7210	(283.9)	2025	(79.7)	1385	(54.5)	6	6	900	(1985)	1050	(2315)	6	6	1700	(3749)
	6500	(256)	2845	(112)	7070	(278.3)	7710	(303.5)	2275	(89.6)	1635	(64.4)	–	–	–	–	–	–	6	6	1550	(3418)
	7000	(275.5)	3095	(121.9)	7570	(298)	8210	(323.2)	2525	(99.4)	1885	(74.2)	–	–	–	–	–	–	6	6	1200	(2646)

Note : 1.With A4 Piping, Extended Overall Height (Without Load Backrest) Increases in -15mm (0.6in). (*-Marked Portions)

Model: 32-8FGK25/62-8FDK25

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1825	(71.9)	3365	(132.5)	3920	(154.3)	125	(4.9)	125	(4.9)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3000	(118)	1975	(77.8)	3665	(144.3)	4220	(166.1)	125	(4.9)	125	(4.9)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3300	(130)	2125	(83.7)	3965	(156.1)	4520	(178)	125	(4.9)	125	(4.9)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3500	(138)	2225	(87.6)	4165	(164)	4720	(185.8)	125	(4.9)	125	(4.9)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3700	(145)	2385	(93.6)	4365	(171.9)	4920	(193.7)	125	(4.9)	125	(4.9)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	4000	(157.5)	2575	(101.4)	4665	(183.7)	5220	(205.5)	125	(4.9)	125	(4.9)	7	5	2500	(5513)	2500	(5513)	–	–	–	–
	4500	(177)	2825	(111.2)	5165	(203.3)	5720	(225.2)	125	(4.9)	125	(4.9)	7	5	2150	(4741)	2300	(5072)	–	–	–	–
	5000	(197)	3075	(121.1)	5665	(223)	6220	(244.9)	125	(4.9)	125	(4.9)	7	5	1700	(3749)	1850	(4079)	–	–	–	–
FV	3000	(118)	1975	(77.8)	3560	(140.2)	4165	(164)	1370	(53.9)	765	(30.1)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3300	(130)	2125	(83.7)	3860	(152)	4425	(174.2)	1520	(59.8)	955	(37.6)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3500	(138)	2225	(87.6)	4060	(159.8)	4625	(182.1)	1620	(63.8)	1055	(41.5)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	3700	(145)	2385	(93.9)	4260	(167.7)	4825	(190)	1780	(70.1)	1215	(47.8)	7	10	2500	(5513)	2500	(5513)	–	–	–	–
	4000	(157.5)	2575	(101.4)	4560	(179.5)	5125	(201.8)	1970	(77.6)	1405	(55.3)	7	5	2500	(5513)	2500	(5513)	–	–	–	–
FSV	3700	(145)	1775	(69.9)	4345	(171.1)	4910	(193.3)	1130	(44.5)	565	(22.2)	7	5	2500	(5513)	2500	(5513)	–	–	–	–
	4000	(157.5)	1875	(73.8)	4645	(182.9)	5210	(205.1)	1230	(48.4)	665	(26.2)	7	5	2500	(5513)	2500	(5513)	–	–	–	–
	4300	(169)	1975	(77.8)	4945	(194.7)	5510	(216.9)	1330	(52.4)	765	(30.1)	7	5	2300	(5072)	2450	(5402)	–	–	–	–
	4500	(177)	2045	(80.5)	5145	(202.6)	5710	(224.8)	1400	(55.1)	835	(32.9)	7	5	2000	(4410)	2150	(4741)	–	–	–	–
	4700	(185)	2125	(83.7)	5345	(210.4)	5910	(232.7)	1480	(58.3)	915	(36)	7	5	2000	(4410)	2150	(4741)	–	–	–	–
	5000	(197)	2225	(87.6)	5645	(222.2)	6210	(244.5)	1580	(62.2)	1015	(40)	7	5	1500	(3308)	1650	(3638)	–	–	–	–
	5500	(216.5)	2385	(93.9)	6145	(241.9)	6710	(264.2)	1740	(68.5)	1175	(46.3)	7	5	1250	(2646)	1400	(3087)	–	–	–	–
	6000	(236)	2575	(101.4)	6645	(261.6)	7210	(283.9)	1930	(76)	1365	(53.7)	7	5	850	(1874)	1000	(2205)	–	–	–	–

Model: 30-8FG30/60-8FD30/70-8FD30/32-8FG30/62-8FD30/72-8FD30

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1865	(73.4)	* 3440	(* 135.4)	3920	(154.3)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3000	(118)	2015	(79.3)	* 3740	(* 147.2)	4220	(166.1)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3300	(130)	2165	(85.2)	* 4040	(* 159.1)	4520	(178)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3500	(138)	2265	(89.2)	* 4240	(* 166.9)	4720	(185.8)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3700	(145)	2425	(95.5)	* 4440	(* 174.8)	4920	(193.7)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	4000	(157.5)	2615	(103)	* 4740	(* 186.6)	5220	(205.5)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	4500	(177)	2865	(112.8)	* 5240	(* 206.3)	5720	(225.2)	135	(5.3)	135	(5.3)	6	6	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	5000	(197)	3115	(122.6)	* 5740	(* 226.0)	6220	(244.9)	135	(5.3)	135	(5.3)	6	6	2600	(5733)	2750	(6064)	6	6	3000	(6615)
FV	3000	(118)	2015	(79.3)	3655	(143.9)	4260	(167.7)	1400	(55.1)	795	(31.3)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3300	(130)	2165	(85.2)	3955	(155.7)	4515	(177.8)	1550	(61)	990	(39)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3500	(138)	2265	(89.2)	4155	(163.6)	4715	(185.6)	1650	(65)	1090	(42.9)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	3700	(145)	2425	(95.5)	4355	(171.5)	4915	(193.5)	1810	(71.3)	1250	(49.2)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
	4000	(157.5)	2615	(103)	4655	(183.3)	5215	(205.3)	2000	(78.7)	1440	(56.7)	6	11	3000	(6615)	3000	(6615)	6	11	3000	(6615)
FSV	3700	(145)	1915	(75.4)	4315	(169.9)	4920	(193.7)	1300	(51.2)	695	(27.4)	6	6	3000	(6615)	3000	(6615)	6	6	3000	(6615)
	4000	(157.5)	2015	(79.3)	4615	(181.7)	5220	(205.5)	1400	(55.1)	795	(31.3)	6	6	3000	(6615)	3000	(6615)	6	6	3000	(6615)
	4300	(169)	2165	(85.2)	4915	(193.5)	5520	(217.3)	1550	(61)	945	(37.2)	6	6	3000	(6615)	3000	(6615)	6	6	3000	(6615)
	4500	(177)	2215	(87.2)	5115	(201.4)	5720	(225.2)	1600	(63)	995	(39.2)	6	6	3000	(6615)	3000	(6615)	6	6	3000	(6615)
	4700	(185)	2265	(89.2)	5315	(209.3)	5920	(233.1)	1650	(65)	1045	(41.1)	6	6	3000	(6615)	3000	(6615)	6	6	3000	(6615)
	5000	(197)	2425	(95.5)	5615	(221.1)	6220	(244.9)	1810	(71.3)	1205	(47.4)	6	6	2600	(5733)	2750	(6064)	6	6	2950	(6505)
	5500	(216.5)	2615	(103)	6115	(240.7)	6720	(264.6)	2000	(78.7)	1395	(54.9)	6	6	1900	(4190)	2050	(4520)	6	6	2650	(5843)
	6000	(236)	2865	(112.8)	6615	(260.4)	7220	(284.3)	2250	(88.6)	1645	(64.8)	6	6	1500	(3308)	1650	(3638)	6	6	2050	(4520)
	6500	(256)	3115	(122.6)	7115	(280.1)	7720	(303.9)	2500	(98.4)	1895	(74.6)	–	–	–	–	–	–	6	6	1600	(3528)
	7000	(275.5)	3365	(132.5)	7615	(299.8)	8220	(323.6)	2750	(108.3)	2145	(84.4)	–	–	–	–	–	–	6	6	1200	(2646)

Note : 1.With A4 Piping/Extended Overall Height (Without Load Backrest) Increases in -20mm (0.8in). (*-Marked Portions)

Model: 32-8FGK30/62-8FDK30

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	1830	(72)	* 3440	(* 135.4)	3920	(154.3)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3000	(118)	1980	(78)	* 3740	(* 147.2)	4220	(166.1)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3300	(130)	2130	(83.9)	* 4040	(* 159.1)	4520	(178)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3500	(138)	2230	(87.8)	* 4240	(* 166.9)	4720	(185.8)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3700	(145)	2390	(94.1)	* 4440	(* 174.8)	4920	(193.7)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	4000	(157.5)	2580	(101.6)	* 4740	(* 186.6)	5220	(205.5)	135	(5.3)	135	(5.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	4500	(177)	2830	(111.4)	* 5240	(* 206.3)	5720	(225.2)	135	(5.3)	135	(5.3)	6	6	3000	(6615)	3000	(6615)	–	–	–	–
	5000	(197)	3080	(121.3)	* 5740	(* 226.0)	6220	(244.9)	135	(5.3)	135	(5.3)	6	6	2600	(5733)	2750	(6064)	–	–	–	–
FV	3000	(118)	1980	(78)	3655	(143.9)	4260	(167.7)	1365	(53.7)	760	(29.9)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3300	(130)	2130	(83.9)	3955	(155.7)	4515	(177.8)	1515	(59.6)	955	(37.6)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3500	(138)	2230	(87.8)	4155	(163.6)	4715	(185.6)	1615	(63.6)	1055	(41.5)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	3700	(145)	2390	(94.1)	4355	(171.5)	4915	(193.5)	1775	(69.9)	1215	(47.8)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
	4000	(157.5)	2580	(101.6)	4655	(183.3)	5215	(205.3)	1965	(77.4)	1405	(55.3)	6	11	3000	(6615)	3000	(6615)	–	–	–	–
FSV	3700	(145)	1880	(74)	4280	(168.5)	5070	(199.6)	1300	(51.2)	510	(20.1)	6	6	3000	(6615)	3000	(6615)	–	–	–	–
	4000	(157.5)	1980	(78)	4580	(180.3)	5370	(211.4)	1400	(55.1)	610	(24)	6	6	3000	(6615)	3000	(6615)	–	–	–	–
	4300	(169)	2130	(83.9)	4880	(192.1)	5670	(223.2)	1550	(61)	760	(29.9)	6	6	2900	(6395)	3000	(6615)	–	–	–	–
	4500	(177)	2180	(85.8)	5080	(200)	5870	(231.1)	1600	(63)	810	(31.9)	6	6	2800	(6174)	2850	(6284)	–	–	–	–
	4700	(185)	2230	(87.8)	5280	(207.9)	6070	(239)	1650	(65)	860	(33.9)	6	6	2800	(6174)	2850	(6284)	–	–	–	–
	5000	(197)	2390	(94.1)	5580	(219.7)	6370	(250.8)	1810	(71.3)	1020	(40.2)	6	6	2400	(5292)	2550	(5623)	–	–	–	–
	5500	(216.5)	2580	(101.6)	6080	(239.4)	6870	(270.5)	2000	(78.7)	1210	(47.6)	6	6	1700	(3749)	1850	(4079)	–	–	–	–
	6000	(236)	2830	(111.4)	6580	(259.1)	7370	(290.2)	2250	(88.6)	1460	(57.5)	6	6	1200	(2646)	1350	(2977)	–	–	–	–

Note : 1.With A4 Piping, Extended Overall Height (Without Load Backrest) Increases in -20mm (0.8in). (*-Marked Portions)

Model: 30-8FGJ35/70-8FDJ35/32-8FGJ35/72-8FDJ35

T	A		B						G				J						Q			
			C		D				H		I		K		N				R		U	
					E		F						L	M	O		P		S	T		
	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	deg	deg	kg	(lbs)	kg	(lbs)	deg	deg	kg	(lbs)
V	2700	(106)	2000	(78.7)	3560	(140.2)	3920	(154.3)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3000	(118)	2120	(83.5)	3860	(152)	4220	(166.1)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3300	(130)	2300	(90.6)	4160	(163.8)	4520	(178)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3500	(138)	2400	(94.5)	4360	(171.7)	4720	(185.8)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3700	(145)	2500	(98.4)	4560	(179.5)	4920	(193.7)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	4000	(157.5)	2750	(108.3)	4860	(191.3)	5220	(205.5)	140	(5.5)	140	(5.5)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	4500	(177)	3000	(118.1)	5360	(211)	5720	(225.2)	140	(5.5)	140	(5.5)	6	6	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	5000	(197)	3250	(128)	5860	(230.7)	6220	(244.9)	140	(5.5)	140	(5.5)	6	6	3300	(7277)	3450	(7607)	6	6	3400	(7497)
FV	3000	(118)	2120	(83.5)	3660	(144.1)	4145	(163.2)	1395	(54.9)	910	(35.8)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3300	(130)	2300	(90.6)	3960	(155.9)	4395	(173)	1575	(62)	1140	(44.9)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3500	(138)	2400	(94.5)	4160	(163.8)	4595	(180.9)	1675	(65.9)	1240	(48.8)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	3700	(145)	2500	(98.4)	4360	(171.7)	4795	(188.8)	1775	(69.9)	1340	(52.8)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
	4000	(157.5)	2750	(108.3)	4660	(183.5)	5095	(200.6)	2025	(79.7)	1590	(62.6)	6	11	3500	(7718)	3500	(7718)	6	11	3500	(7718)
FSV	3700	(145)	2030	(79.9)	4425	(174.2)	4910	(193.3)	1305	(51.4)	820	(32.3)	6	6	3500	(7718)	3500	(7718)	6	6	3500	(7718)
	4000	(157.5)	2180	(85.8)	4725	(186)	5210	(205.1)	1455	(57.3)	970	(38.2)	6	6	3500	(7718)	3500	(7718)	6	6	3500	(7718)
	4300	(169)	2230	(87.8)	5025	(197.8)	5510	(216.9)	1505	(59.3)	1020	(40.2)	6	6	3500	(7718)	3500	(7718)	6	6	3500	(7718)
	4500	(177)	2280	(89.8)	5225	(205.7)	5710	(224.8)	1555	(61.2)	1070	(42.1)	6	6	3400	(7497)	3400	(7497)	6	6	3400	(7497)
	4700	(185)	2440	(96.1)	5425	(213.6)	5910	(232.7)	1715	(67.5)	1230	(48.4)	6	6	3400	(7497)	3400	(7497)	6	6	3400	(7497)
	5000	(197)	2630	(103.5)	5725	(225.4)	6210	(244.5)	1905	(75)	1420	(55.9)	6	6	3300	(7277)	3300	(7277)	6	6	3300	(7277)
	5500	(216.5)	2880	(113.4)	6225	(245.1)	6710	(264.2)	2155	(84.8)	1670	(65.7)	6	6	2700	(5954)	2850	(6284)	6	6	3200	(7056)
	6000	(236)	3130	(123.2)	6725	(264.8)	7210	(283.9)	2405	(94.7)	1920	(75.6)	6	6	2000	(4410)	2150	(4741)	6	6	2400	(5292)
	6500	(256)	3380	(133.1)	7225	(284.4)	7710	(303.5)	2655	(104.5)	2170	(85.4)	–	–	–	–	–	–	6	6	1650	(3638)
	7000	(275.5)	3630	(142.9)	7725	(304.4)	8210	(323.2)	2905	(114.4)	2420	(95.3)	–	–	–	–	–	–	6	6	900	(1985)

WHEEL & TIRE

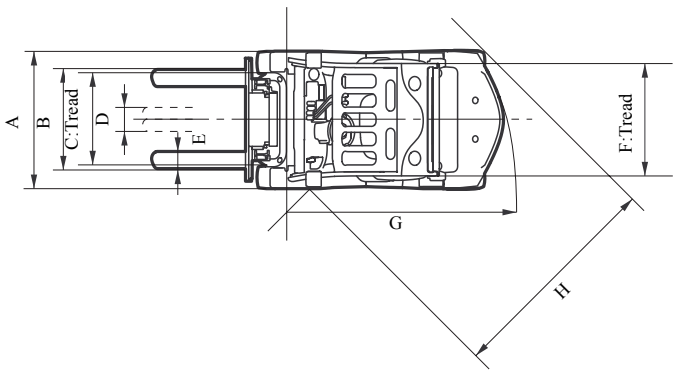
Model	Tire Arrangement			Rim Size	Tire Size	J-Lug	Long Life	J-Lug NON-Punk	White NON-Punk
8FD/G10	Front	Single	A	4.00E X 9 DT	6.00-9-10PR	○	●		
			A	5.00F X 10 DT	6.50-10-10PR	●	●		
			A	4.00E X 9 DT	6.00-9			●	●
		Dual	C	3.50D X 12 DC	4.50-12-8PR	●	●		
			C	3.00D X 12 SDC	4.50-12			●	
	Rear		E	3.00 X 8 DT	5.00-8-8PR	○	●		
			F	3.00 X 8 TB	5.00-8-8PR	●	●		
			E	3.00 X 8 DT	5.00-8			●	●
			F	3.00 X 8 TB	5.00-8			●	
8FD/G15	Front	Single	A	5.00F X 10 DT	6.50-10-10PR	○	●		
			A	5.00F X 10 DT	6.50-10			●	●
			B	6.00E X 9 TB	21X8-9-10PR	●	●		
			B	6.00E X 9 TB	21X8-9			●	
		Dual	C	3.50D X 12 DC	4.50-12-8PR	●	●		
			C	3.00D X 12 SDC	4.50-12			●	
	Rear		E	3.00 X 8 DT	5.00-8-8PR	○	●		
			F	3.00 X 8 TB	5.00-8-8PR	●	●		
			E	3.00 X 8 DT	5.00-8			●	●
			F	3.00 X 8 TB	5.00-8			●	
8FD/G15	Front	Single	A	5.00F X 10 DT	6.50-10-10PR	○	●		
			A	5.00F X 10 DT	6.50-10			●	●
			B	6.00E X 9 TB	21X8-9-10PR	●	●		
			B	6.00E X 9 TB	21X8-9			●	
		Dual	C	3.50D X 12 DC	4.50-12-8PR	●	●		
			C	3.00D X 12 SDC	4.50-12			●	
	Rear		E	3.00 X 8 DT	5.00-8-8PR	○	●		
			F	3.00 X 8 TB	5.00-8-8PR	●	●		
			E	3.00 X 8 DT	5.00-8			●	●
			F	3.00 X 8 TB	5.00-8			●	
8FD/G K20	Front	Single	A	6.00E X 9 TB	21X8-9-14PR	○			
			A	6.00E X 9 TB	21X8-9			●	●
	Rear		E	4.25 X 8 DT	18X7-8-10PR	○			
			E	4.25 X 8 DT	18X7-8			●	●
			F	4.33R X 8 TB	18X7-8-16PR	●			
			F	4.33R X 8 TB	18X7-8			●	
8FD/G K25	Front	Single	A	6.00E X 9 TB	21X8-9-14PR	○			
			A	6.00E X 9 TB	21X8-9			●	●
	Rear		E	4.25 X 8 DT	18X7-8-10PR	○			
			E	4.25 X 8 DT	18X7-8			●	●
			F	4.33R X 8 TB	18X7-8-16PR	●			
			F	4.33R X 8 TB	18X7-8			●	
8FD/G20	Front	Single	A	5.00S X 12 DT	7.00-12-12PR	○	●		
			A	5.00S X 12 DT	7.00-12			●	●
		Dual	C	4.50E X 15 SDC	5.50-15-8PR	●	●		
			C	4.50E X 15 SDC	5.50-15			●	
			D	5.00S X 12 TB	7.00-12-12PR	●	●		
			D	5.00S X 12 TB	7.00-12			●	
	Rear		E	4.00E X 9 DT	6.00-9-10PR	○	●		
			E	4.00E X 9 DT	6.00-9			●	●
			F	4.00E X 9 TB	6.00-9-10PR	●	●		
			F	4.00E X 9 TB	6.00-9			●	

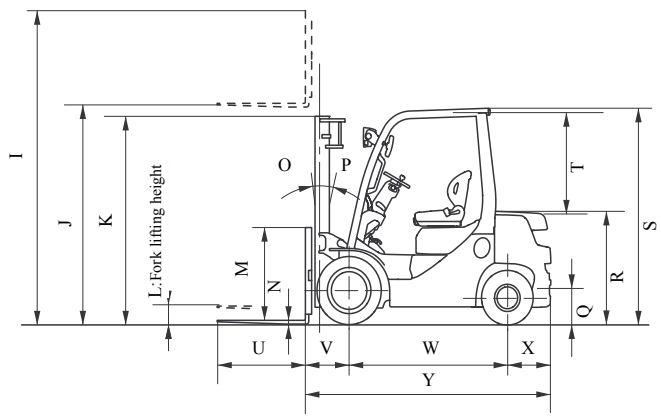
A: Divided rim single B: Side rim single C: Standard double D: Special double E: Divided
F: Side ring

Model	Tire Arrangement			Rim Size	Tire Size	J-Lug	Long Life	J-Lug NON-Punk	White NON-Punk
8FD/G25	Front	Single	A	5.00S X 12 DT	7.00-12-12PR	○	●		
			A	5.00S X 12 DT	7.00-12			●	●
		Dual	C	4.50E X 15 SDC	5.50-15-8PR	●	●		
			C	4.50E X 15 SDC	5.50-15			●	
			D	5.00S X 12 TB	7.00-12-12PR	●	●		
			D	5.00S X 12 TB	7.00-12			●	
	Rear		E	4.00E X 9 DT	6.00-9-10PR	○	●		
			E	4.00E X 9 DT	6.00-9			●	●
			E	5.00F X 10 DT	6.50-10			●	●
			F	4.00E X 9 TB	6.00-9-10PR	●	●		
			F	4.00E X 9 TB	6.00-9			●	
8FD/G K30	Front	Single	A	6.50F X 10 TB	23X9-10-16PR	○			
			A	6.50F X 10 TB	23X9-10			●	●
	Rear		F	4.33R X 8 TB	18X7-8-16PR	○			
			F	4.33R X 8 TB	18X7-8			●	●
8FD/G28	Front	Single	B	6.00S X 15IR	28X8-15-12PR	○	●		
			B	6.00S X 15IR	7.00-15/6.00			●	
			B	7.00T X 15IR	28X9-15-12PR	●	●		
			B	7.00T X 15IR	28X9-15				●
		Dual	C	4.50E X 15SDC	6.00-15-10PR	●	●		
			C	4.50E X 15 SDC	6.00-15			●	
			D	6.00S X 15 IR	28X8-15-12PR	●	●		
			D	6.00S X 15 IR	7.00-15/6.00			●	
	Rear		E	5.00F X 10 DT	6.50-10-10PR	○	●		
			E	5.00F X 10 DT	6.50-10			●	●
			F	5.00F X 10 TB	6.50-10-10PR	●	●		
			F	5.00F X 10 TB	6.50-10-12PR	●	●		
			F	5.00F X 10 TB	6.50-10			●	
8FD/G30	Front	Single	B	7.00T X 15 IR	28X9-15-12PR	○	●		
			B	7.00T X 15 IR	28X9-15			●	●
		Dual	C	4.50E X 15 SDC	6.00-15-10PR	●	●		
			C	4.50E X 15 SDC	6.00-15			●	
			D	6.00S X 15 IR	28X8-15-12PR	●	●		
			D	6.00S X 15 IR	7.00-15/6.00			●	
	Rear		E	5.00F X 10 DT	6.50-10-10PR	○	●		
			E	5.00F X 10 DT	6.50-10			●	●
			F	5.00F X 10 TB	6.50-10-10PR	●	●		
			F	5.00F X 10 TB	6.50-10-12PR	●	●		
			F	5.00F X 10 TB	6.50-10			●	
8FD/G J35	Front	Single	B	7.00T X 15 IR	250-15-16PR	○	●		
			B	7.00T X 15 IR	250-15/7.00			●	●
		Dual	C	4.50E X 15 SDC	6.00-15-10PR	●	●		
			C	4.50E X 15 SDC	6.00-15			●	
			D	6.00S X 15 IR	28X8-15-12PR	●	●		
			D	6.00S X 15 IR	7.00-15/6.00			●	
	Rear		F	5.00F X 10 TB	6.50-10-12PR	○	●		
			F	5.00F X 10 TB	6.50-10			●	●

A: Divided rim single B: Side rim single C: Standard double D: Special double E: Divided
F: Side ring

VEHICLE DIMENSIONS





Unit: mm (in)

	30(32)-8FG10 60(62)-8FD10	30(32)-8FG15	60(62)-8FD15	32-8FG18 62-8FD18	32-8FGK20 62-8FDK20	32-8FGK25 62-8FDK25	30(32)-8FG20 60(62)-8FD20 70(72)-8FD20	30(32)-8FG25 60(62)-8FD25 70(72)-8FD25	32-8FGK30 62-8FDK30	30(32)-8FG30	60(62)-8FD30 70(72)-8FD30	30(32)-8FGJ35 70(72)-8FDJ35
A	1045 (41.1)	1070 (42.1)	←	←	1155 (45.5)	←	1150 (45.3)	←	1255 (49.4)	1240 (48.8)	←	1290 (50.8)
B	920 (36)	←	←	←	1020 (40)	←	←	←	←	1070 (42)	←	←
C	885 (34.8)	←	←	←	960 (37.8)	←	←	←	1030 (40.6)	1010 (39.8)	←	1060 (41.7)
D	200 (8)	←	←	←	240 (9.5)	←	←	←	←	←	←	280 (11)
E	100 (4)	←	←	←	120 (4.5)	←	←	←	←	←	←	140 (5.5)
F	895 (35.2)	←	←	←	940 (37)	←	965 (38)	←	940 (37)	965 (38)	←	←
G	1910 (75.2)	1990 (78.3)	←	2010 (79.1)	2040 (80.3)	2090 (82.3)	2200 (86.6)	2280 (89.8)	2130 (83.9)	1910 (75.2)	←	2490 (98)
H	1975 (77.8)	2010 (79.1)	←	2020 (79.5)	2070 (81.5)	2135 (84.1)	2140 (84.3)	2210 (87)	2200 (86.6)	2305 (90.7)	←	2350 (92.5)
I	3920 (154.3)	←	←	←	←	←	←	←	←	4070 (160.2)	←	←
J	3000 (118)	←	←	←	←	←	←	←	←	←	←	←
K	1970 (77.6)	←	1995 (78.5)	←	1975 (77.8)	←	1995 (78.5)	←	1980 (78)	2020 (79.5)	1870 (73.6)	2125 (83.7)
L	140 (5.5)	145 (5.7)	←	←	125 (4.9)	130 (5.1)	150 (5.9)	155 (6.1)	135 (5.3)	←	←	140 (5.5)
M	920 (36.2)	←	←	←	←	←	←	←	←	1070 (42.1)	←	←
N	30 (1.2)	35 (1.4)	←	←	36 (1.4)	40 (1.6)	36 (1.4)	40 (1.6)	44 (1.7)	←	←	50 (2)
O	7°	6°	←	←	7°	←	6°	←	←	←	←	←
P	10°	11°	←	←	10°	←	11°	←	←	←	←	←
Q	285 (11.2)	←	←	←	←	←	310 (12.2)	←	285 (11.2)	335 (13.2)	←	←
R	1070 (42.1)	1065 (41.9)	←	1060 (41.7)	1215 (47.8)	←	1095 (43.1)	1090 (42.9)	1215 (47.8)	1130 (44.5)	←	←
S	2080 (81.9)	←	←	←	2085 (82.1)	←	2110 (83.1)	←	2085 (82.1)	2170 (85.4)	←	2180 (85.8)
T	1055 (41.5)	←	←	←	←	←	←	←	←	←	←	←
U	770 (30)	920 (36)	←	←	←	1070 (42)	920 (36)	1070 (42)	←	←	←	←
V	405 (15.9)	410 (16.1)	←	←	440 (17.3)	450 (17.7)	455 (17.9)	465 (18.3)	475 (18.7)	500 (19.7)	←	515 (20.3)
W	1485 (58.5)	←	←	←	←	←	1650 (65)	←	1485 (58.5)	1700 (66.9)	←	←
X	355 (14)	395 (15.6)	←	420 (16.5)	455 (17.9)	510 (20.1)	455 (17.9)	520 (20.5)	560 (22)	595 (23.4)	←	650 (25.6)
Y	2245 (88.4)	2290 (90.2)	←	2315 (91.1)	2380 (93.7)	2445 (96.3)	2560 (100.8)	2635 (103.7)	2520 (99.2)	2795 (110)	←	2865 (112.8)