# TOYOTA

**OPERATOR'S MANUAL** MANUAL DEL OPERADOR **FAHRERS HANDBUCH** MANUEL POUR L'OPERATEUR

English Español Deutsch Français

**TOYOTA Material Handling Company** 

Publication No. A4018-4 PRINTED IN JAPAN 7FG35,40,45 7FD35,40,45 **7FGK40 7FDK40 7FGA50 7FDA50** 



**OPERATOR'S MANUAL** 

En (English)

MANUAL DEL OPERADOR

E (Español)

FAHRERS HANDBUCH

D (Deutsch)

MANUEL POUR L'OPERATEUR

F (Français)



# **ENGLISH**

#### **CONTENTS**

Note to Operators and Supervisors	2
Before Initial Operation	2
Caution Plates	4
Main Components	5
Driving Controls and Instrument Panel	5
Instruments	6
Switches and Levers	10
Body Components	15
Handling the Toyota DPF-II System (Option)	18
Pre-Operation Check	
Before Garaging the Vehicle	26
Weekly Maintenance	26
Self Servicing	
Fuel Tank Check	31
Frame Serial Number	31
How to Read the Name Plate	31
Lubrication Chart	32
Periodic Maintenance	33
Periodic Replacement Table	33
Protect Your Investment with Toyota Genuine Parts	33
Periodic Maintenance Table	34
Service Data	
LPG Device (Option)	39
Mast Specifications & Rated Capacities	47
Wheel & Tire	
Vehicle Dimensions	51
Recommended Lubricants	202

# 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 vehicle.

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.







b En

- 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.
- Avoid touching the rotating parts. Touching these parts (fan, belt chain, etc.) could cause injury. So take great care to never touch them.
- Please note that the vehicle is hot after traveling. The engine, muffler and exhaust bulb become very hot; touching these parts could cause burn. So take care to handle them.

# Precautions to be taken when using SAS Models

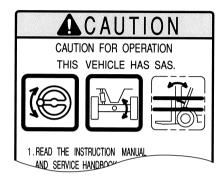
(SAS: System of Active Stability)

#### **∧** 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.



• Example: These symbols indicate that the vehicle is not provided with such controls as active mast front tilt angle control.



- While driving the vehicle, be normally alert about a warning lamp. Should an error code be indicated by a warning lamp or hourmeter, 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

#### 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:

	No 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.

#### 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 angle		





- 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.
- 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.

**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 engine killed (the ignition switch positioned at OFF), the fork will not move down even if the lift lever is so operated.

#### 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,
- SAS warning lamp will 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.

#### Action to be taken in emergency

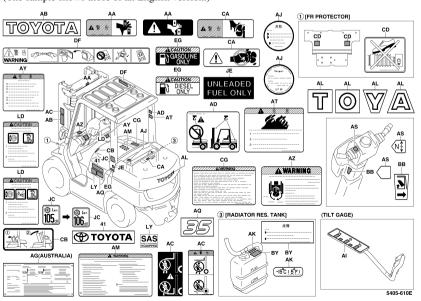
If the mast (load-handling unit) should fail to operate, remove the SAS-ECU fuse inside the fuse box and you will be able to move the vehicle by operating it similarly to a non-SAS model. Move the vehicle to a safe location and ask a Toyota dealer for a repair.

If any phenomenon different from normal operations (failure to run or the like), among others, should take place, ask a Toyota dealer for an inspection.

**Note:** Once a torque converter model has had its control lever abnormal, it is impossible to manually operate the vehicle, which need be towed, accordingly.

#### **CAUTION PLATES**

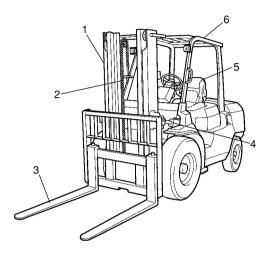
Caution plates are attached on a vehicle. Before driving it, please be sure to read them thoroughly. (The sample shows those of an English version.)

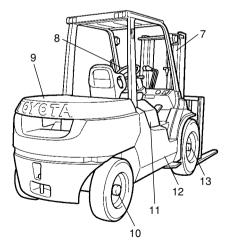






## **MAIN COMPONENTS**

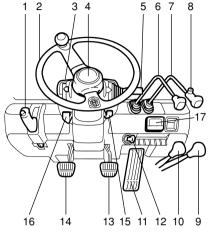




#### 1. Mast

- 2. Chain
- 3. Fork
- 4. Tilt cylinder
- 5. Operator's seat
- 6. Head guard

## 1 2 3 4 5 6 7 8 Clutch Models



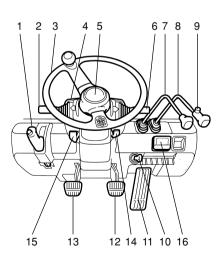
- 1. Parking brake lever
- 2. Steering wheel
- 3. Integrated monitoring center
- 4. Horn button
- 5. Turn signal and light control switch (Option)
- 6. Lift lever

DRIVING CONTROLS AND INSTRUMENT PANEL

- 7. Tilt lever
- 8. Tilt lever knob switch (SAS models)
- 9. Gear shift lever (Forward-reverse)
- 10. Gear shift lever (High-low speed)
- 11. Accelerator pedal
- 12. Ignition switch
- 13. Brake pedal
- 14. Clutch pedal
- 15. Tilt steering adjust lever
- 16. Engine hood lock release lever
- 17. DPF display (Option)



- 7. Lift cylinder
- 8. Steering wheel
- 9. Counter weight
- 10. Rear axle
- 11. Engine hood
- 12. Frame
- 13. Front axle



#### **Torque converter Models**

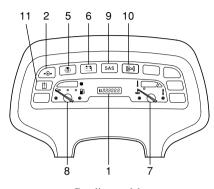
- 1. Parking brake lever
- 2. Control lever
- 3. Steering wheel
- 4. Integrated monitoring center
- 5. Horn button
- 6. Turn signal and light control switch (Option)
- 7. Lift lever
- 8. Tilt lever
- 9. Tilt lever knob switch (SAS models)
- 10. Ignition switch
- 11. Accelerator pedal
- 12. Brake pedal
- 13. Inching and brake pedal
- 14. Tilt steering adjust lever
- 15. Engine hood lock release lever
- 16. DPF display (Option)



En



# **INSTRUMENTS**



Gasoline models

#### **Integrated monitoring center**

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

- 1. Hour meter used also to diagnose the SAS
- 2. Engine oil pressure warning lamp
- 3. Sedimenter warning lamp (Diesel models)
- 4. Preheating indicator lamp (Diesel engine models: Standard in designate area)
- 5. Air cleaner cleaning warning lamp
- 6. Charge warning lamp
- 7. Water temperature gauge
- 8. Fuel gauge
- 9. SAS warning lamp (SAS models)
- 10. Swing lock indicator lamp (SAS models)
- 11. Mini lever warning lamp (Option)



#### Each warning lamp check method

- (1) Please check if all warning lamps come on when the ignition switch is turned to ON.
- (2) If any lamp does not come on, the lamp may be burnt out. Inspect the lamp.

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

#### **⚠** Caution

The preheating indicator lamp (Diesel engine models) does not come on when the engine coolant temperature exceeds 2.5°C.



Diesel models



# Hour meter also serving as an SAS diagnosis indicator (SAS models)

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 operating hours.

#### SAS models

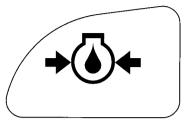
The hour-meter display will alternately indicate an error code and an hour-meter reading in the SAS.

#### **⚠** Caution

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





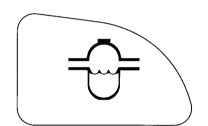




Comes on to indicate low engine oil pressure while the engine is running.

- 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.

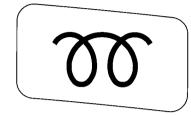
- 1. The warning lamp comes on to indicate water in the sedimenter exceeds the predetermined level while the engine is running.
- 2. If normal, the lamp comes on when the ignitions switch is turned on and goes off when the engine starts.

**Note:** If the OK monitor is provided, the lamp does not come on when the ignition switch is turned on. It functions the same way as the OK monitor.

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.



#### Preheating indicator lamp

(Diesel 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.

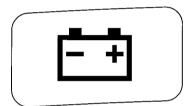


En









#### Air cleaner warning lamp

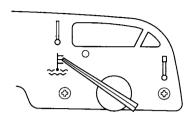
- 1. This lamp comes on when the air cleaner element gets clogged during engine running.
- 2. If normal, the lamp comes on when the ignition switch is turned on and goes off when the engine starts.
- 3. If the lamp comes on while the engine is running, stop the engine and clean the element and dust cup.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

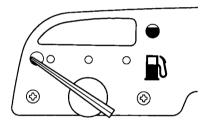
#### Charge warning lamp

- 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.





#### Water temperature gauge

Indicates the temperature of the engine cooling water.

- 1. Operates when the ignition switch is on.
- 2. In normal state, the indicator is in the green zone at the center.
- 3. If the indicator is in the red zone, the engine may be overheated. Stop the vehicle in a safe place, idle the engine for a while, and stop the engine when the indication falls.
- 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 fuel level in the fuel tank in the range of  $\bigcirc$  -  $\bigcirc$  .

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.
- Add fuel early when the indicator approaches ○.
- 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.

#### Reference

Remaining fuel at  $\bigcirc$  point.

3.5 ton model	4 ton model	K4 ton model	4.5 ton model	A5 ton model
17 ℓ 4.5 US gal	<b>←</b>	<b>←</b>	19 ℓ 5.0 US gal	<b>←</b>





# ition switch is turned

Mini lever warning lamp

(Option)

When the ignition switch is turned ON, this lamp comes on, and goes out after two seconds. This suggests that the mini lever function is working normally. If the mini lever function becomes abnormal, the lamp comes on to inform the operator.

If the mini lever warning lamp shows the following states, there may be some problem with the system. Please ask your Toyota dealer for inspection.

- The lamp does not come on even though the ignition switch is turned ON.
- The lamp comes on during operation.

#### **⚠** Caution

Continuous operation with a malfunction of the mini lever may lead to a hazard. When the warning lamp comes on, stop the operation, park the vehicle at a safe location, and ask your Toyota dealer for an inspection.

# Torque converter oil temperature gauge (Torque converter model: Option)

Indicates the torque converter oil temperature.

- 1. Operates when the ignition switch is on.
- 2. Indicates the green zone if the oil temperature is normal during operation.
- 3. If, during operation, the gauge indicates the red zone, please stop the operation, inspect the oil level, and add oil if insufficient. (See the torque converter oil inspection section for the methods for inspection and addition.)
- 4. If the gauge indicates the red zone white the torque converter oil level is proper, ask a Toyota dealer for inspection.

#### Speedometer

(Option)

The speedometer indicates the speed of the vehicle in km/h.

Please operate the vehicle at a safe speed.

#### SAS warning lamp

(SAS models)

SAS

When the ignition switch is turned on, this lamp should come on. After the engine has started up, the SAS warning lamp should go out. Then, the SAS may be deemed operating normally.

If this warning lamp falls in any of the cases referred to below, the system may be deemed abnormal. Then, receive an inspection by a Toyota dealer.

- The SAS warning lamp does not come on even if the ignition switch is turned on.
- The SAS warning lamp may blink while the vehicle is running.

#### **⚠** Caution

Do not use the vehicle with the SAS left abnormal. If so, it may lead to a hazard. Once the warning lamp has begun to blink, discontinue the operation in progress and park the vehicle at a safe location. Then, ask a Toyota dealer for an inspection.



# 10 + 40 + 50 + k m/h

## Swing lock indicator lamp

(SAS models)

When the ignition switch is turned on, this lamp should come on. After the engine has started up, the SAS warning lamp should go out. Then, the SAS swing lock cylinder may be deemed operating normally. This tells the operator that the vehicle is supported with four front and rear wheels, with swing lock cylinder locked by the SAS feature.

This lamp will go out when the swing lock cylinder is unlocked.

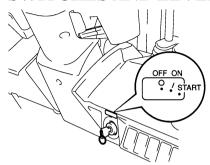








#### **SWITCHES AND LEVERS**



#### **Ignition switch**

The ignition key is inserted with the teeth facing upward.

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

■ [ON] ...Engine operation position. Located one position clockwise from O[OFF] position. The intake heater is preheated before starting in the diesel model.

START ...Engine, start position. Located one position clockwise from the  $\blacksquare$  [ON] position. After engine start, release the key and it will return to the  $\blacksquare$  [ON] position automatically. In the torque converter model, the engine does not start unless the control lever is at the neutral position.

#### **∧** Caution

- Do not leave the switch in the [ON] position when the engine is stopped. It may cause over-discharge of the battery.
- Do not turn the switch to the START position while the engine is running.

This may damage the starter motor.

- 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.
- 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 killed), the fork will not move down even if the lift lever is so operated. Do not operate the lift lever before getting on the vehicle and starting up the engine. (key-off lift lock)
- When starting the engine, depress the accelerator pedal once before operating the ignition switch (1FZ engine models).



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	Step1	Step2
Head lamps	_	0
Side clearance lamps, tail lamps (Option)	0	0
Meter illumination lamp	0	0

#### **⚠** 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

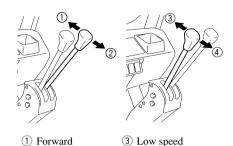
(Option)

Makes the turn signal lamps blink









4 High speed

#### Gear shift levers

(Clutch models)

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



(For vehicle equipped with optional Neutral Safety Switch)

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.

#### **⚠** 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.

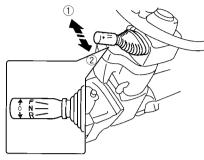
#### Control lever

(2 speed torque converter models)

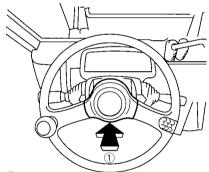
Lever for shifting between forward and reverse. Forward 2nd speed ... Push two step forward. Reverse 1st speed ... Pull one step backward. The neutral position is halfway between the forward and reverse positions.

#### **⚠** Caution

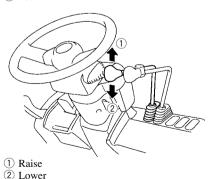
The engine cannot be started unless the control lever is at the neutral position. Stop the vehicle before shifting between forward and reverse.



- ① Forward
- (2) Reverse



1 Push



# Lift lever

Control lever

**⚠** Caution

ward and reverse.

wheel to sound the horn.

Horn button

switch off.

ward and reverse position.

(Torque converter models: Option)

Reverse ...... Pull backward

The neutral position is halfway between the for-

The engine cannot be started unless the con-

Stop the vehicle before shifting between for-

Press the button in the center of the steering

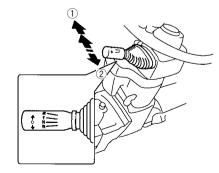
The horn will sound even when the ignition

trol lever is at the neutral position.

Raises and lowers the forks.

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

**Note:** As long as the engine is killed, the fork does not move down even if so operated on the models using SAS.



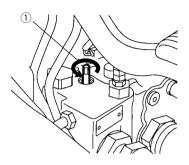
Forward
 Reverse

(2) Reverse

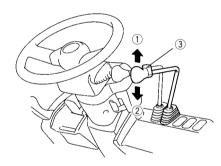




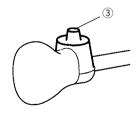




#### 1 Manual move-down valve



- 1 Forward tilting
- ② Backward tilting
- 3 Tilt lever knob switch



#### Key-lift interlock

(SAS models)

As long as the engine has stopped, the vehicle is so designed that the lift will not move down even if so operated.

If the engine should fail to start up for any reason, the lift may be moved down by unfastening the manual move-down valve located on the top of the oil control valve.

**Note:** Once the fork has been moved down with the manual move-down valve applied, do not fail to fasten the valve and recover its original condition.

#### Tilt lever

Tilts the mast forward and backward.

Tilt lever knob switch

tilt speed at a low lift.

a load.

(SAS models)

With this switch pressed, change tilting from

backward to forward and the fork will automati-

It is also possible to slow down the backward

With the fork positioned at the backward lift,

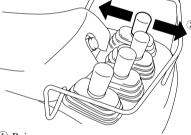
use the lever to tilt the fork forward while press-

ing the tilt lever knob. Then, the mast can be

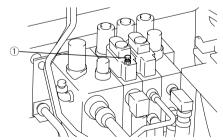
automatically stopped, with the fork horizontally positioned. This feature will be conveniently usable to pull in and out the fork while stacking

cally stop at its horizontal position.

Automatic fork leveling control



- 1 Raise
- 2 Lower



1 Lift lock release bolt

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)

**Note:** Cargo handling is possible only when the operator is seated and the engine is running.

#### Lift lever

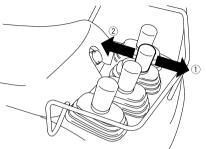
Lowering speed can be adjusted by the extent of pushing the lift lever.

#### Note:

- As with standard models, with "mini lever" models, as long as the engine is stopped, vehicle is so designed that the forks do not move down even if you operate the lift lever (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.







# Tilt lever

Tilts the mast forward and backward.

the forks lifted high, even though the switch is not turned ON.

Note: Turn OFF the automatic fork leveling

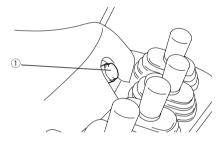
switch, when the feature is not required.

While the automatic fork leveling switch is

Mast backward tilt speed control

turned ON, backward tilt speed for the forks is slowed down. The speed also becomes slow with

Forward
 Backward



1 Automatic fork leveling switch

#### Automatic fork leveling switch

(Works same as the tilt lever knob switch.)

With this switch ON (being pressed), if you change tilting from backward to forward, the forks will automatically stop at their horizontal position.

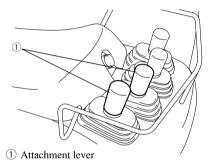
It is also possible to slow down the backward tilt speed at a low lift.



With the automatic fork leveling switch ON, use the tilt lever to move the mast from backward tilt position to forward tilt position. Then, the mast can be automatically stopped with the forks horizontally positioned. This feature is convenient for loading and pulling in and out the forks.

Motion upon change of tilt from backward to forward, with the automatic fork leveling switch ON:

	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		

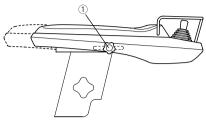


#### Attachment lever

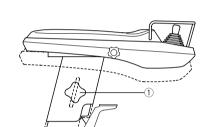
Operates the attachment.

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





#### 1 Forward/backward position adjustment knob



1 Height position adjustment knob

#### Mini-lever box

(Option)

Before operating the vehicle, adjust the minilever box until the correct operating posture that matches that of the operator is reached.

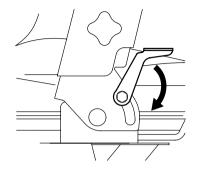
1. Forward/backward position adjustment Loosen the forward/backward position adjustment knob in a clockwise direction and wiggle back and forth to move.

#### 2. Height position adjustment

Loosen the height position adjustment knob in a clockwise direction and wiggle up and down to move.

#### **∧** Caution

- When adjusting the forward/backward position and height position, be sure to loosen the knob and secure the mini-lever box. If the knob becomes loose during operation, an operational mistake could occur.
- Do not adjust the position of the mini-lever box during traveling or material handling operation.



# ① Lock ② Release ③ Release Knob

(4) Grip

#### Mini-lever box release lever

(Cabin specification models)

To release the engine hood, backwardly tilting the mini-lever box is necessary. This lever is used for the operation.

- 1. Lower the release lever to release the lock.
- 2. Tilt the mini-lever box backwardly and raise the release lever to fix the box.

#### **Marning**

Driving the vehicle without firmly fixing the mini-lever box is very dangerous. Please make sure that the release lever is locked before traveling.

#### Parking brake lever

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.





Tilt steering adjustment

the steering wheel at that position.

before starting the vehicle.

(Torque converter models)

ver is kept lowered.

**⚠** Caution

avoided.

**Pedals** 

(Clutch models)

and clutch pedal.

and inching pedal.

1. The steering wheel position may be adjusted

back and forth while the tilt steering adjust le-

2. Raising the lever at the proper position fixes

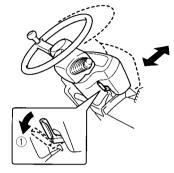
3. After the adjustment, try to move the steering wheel back and forth to see that it is fixed.

The steering wheel position must be adjusted

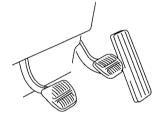
Adjustment during traveling must be

From the right: accelerator pedal, brake pedal

From the right: accelerator pedal, brake pedal



#### ① Lower



# **BODY COMPONENTS**



#### 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.

#### 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.

(1) Seat slide lever

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

2 Recliner adjust lever (Option)

Pull the lever on the left to adjust the seat's angle of recline.

3 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.

(4) Seat belt

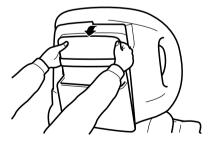
#### **∧** Caution

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, magazines 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.

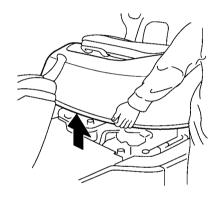
#### / Warning

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.



1 Engine hood lock release lever



#### Closing

Press the lock release button of the damper stay and close the engine hood. Holding the hood until it is locked to the position with a checking sound.

Pull the steering wheel backward to return it to the original position.

#### **⚠** Caution

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





#### Opening

- 1. When the engine hood lock release lever on the lower left side of the parking brake lever is pulled backward, the steering.-column is tilted forward and the engine hood is unlocked.
- 2. Hold the engine hood using the clearance underneath, and raise it.
- 3. Fully open the engine hood and release it after checking sure locking of the hood stay.

**Note:** Rear panel vehicles must have the reclining set backwards and the seat moved to the front row position before opening the engine hood.

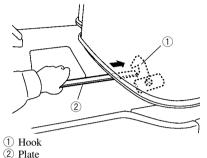


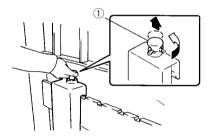




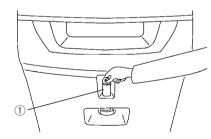








1 Fork stopper



1 Draw bar

#### Opening in an emergency

If the engine hood lock release lever becomes inoperable to make it impossible to open the engine hood as described above, take the following procedure:

- 1. Lower the tilt steering adjust lever and tilt the steering column forward. (Refer to the illustration.)
- 2. Insert the plate into the gap between the engine hood and the toe-board. Push the hook and
- 3. Insert your hand to raise the engine hood.

#### Vehicle hoisting method

When hoisting the vehicle, use the lifting holes near the top of the mast for the front side and the holes on the upper side of the counterweight for the rear side as shown in the illustration.

En

**⚠** Caution

Use wire cable which is sufficiently strong.

#### **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 sure the forks are locked before carrying a load.

#### 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

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.





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 except in an emergency.
- 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.

#### Display

1 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.

2 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.

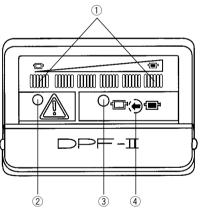
#### **⚠** Caution

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

- 3 Maintenance lamp: Indicate that DPF maintenance is underway.
- 4 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]

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



18



Toyota Forklift 7fg Fgk Fdk Fga Fda 35 50 Operator Manual

(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 there is a power cutoff due to power failure etc., the system might sense a malfunction making the alarm indicator lamp come on. In this case, request an inspection from vour Tovota dealer.
- · 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
- · Before starting DPF maintenance operation, make sure that a specified external power is supplied to the machine.

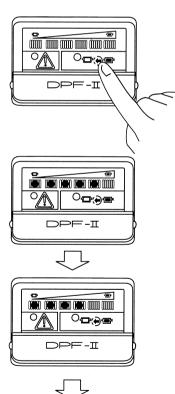
So long as the external power is not supplied. regeneration will fail to start, even if attempted.

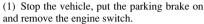
· During maintenance operation, combustion smoke is emitted out of the tail pipe.



(1) Insert

2 Lock





(2) Insert the plug into an external power supply connection socket and turn it in the locking direction.

Maintenance operation procedure

(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.





