

Product: Takeuchi TW50/60 Wheel Loader Operators Manual
Full Download: <https://www.arepairmanual.com/downloads/takeuchi-tw5060-wheel-loader-operators-manual/>

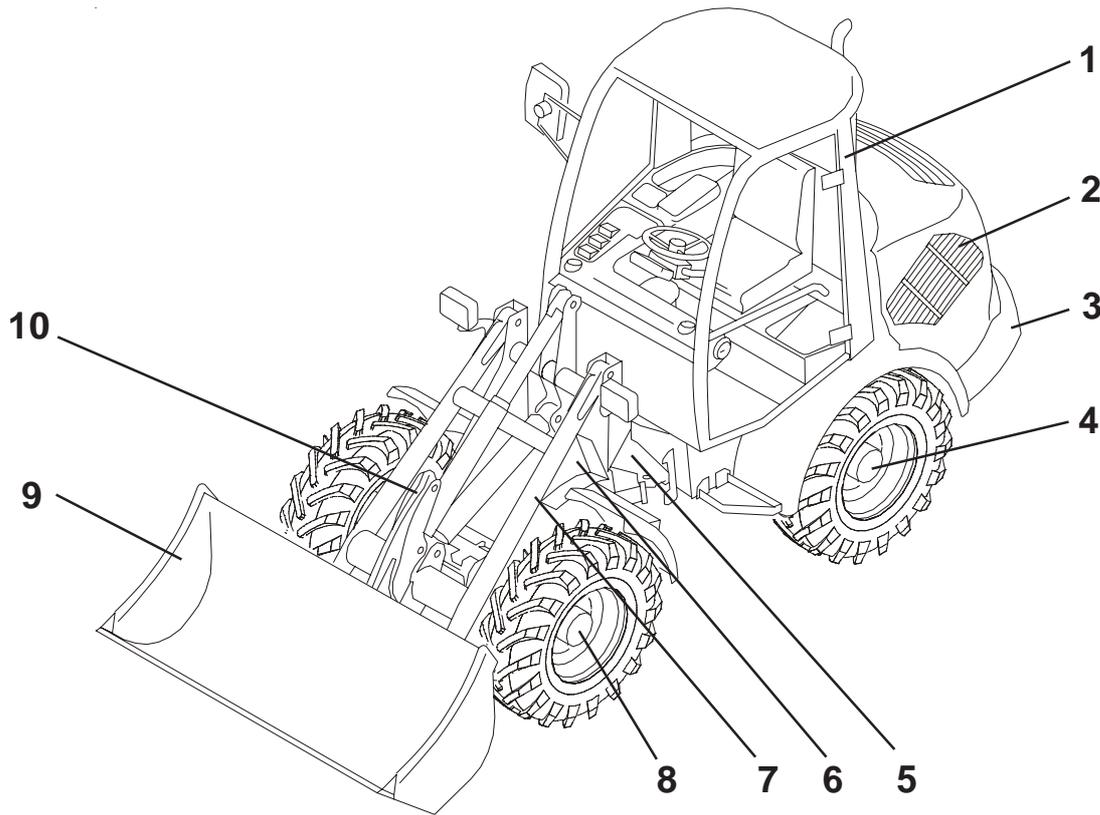
TAKEUCHI®

TW50/60 Wheel Loader Operation and Maintenance Manual



Sample of manual. Download All 89 pages at:
<https://www.arepairmanual.com/downloads/takeuchi-tw5060-wheel-loader-operators-manual/>

I. Assembly groups - overview



- | | |
|---------------------------------------|------------------|
| 1) Cab | 6) Front end |
| 2) Diesel engine and hydraulic system | 7) Hoisting gear |
| 3) Base | 8) Front axle |
| 4) Rear axle | 9) Attachment |
| 5) Articulated pendulum joint | 10) Rocker arm |

II. Outline of the contents of this manual

This manual contains the operating instructions and is composed of the following sections:

- Notes and safety instructions
- Getting acquainted with the wheel loader
- Starting the wheel loader
- Working with the wheel loader
- Maintenance of the wheel loader
- Faults
- Technical data
- Delivery forms

III. Table of Contents

- I. Assembly groups - overview 5
- II. Outline of the contents of this manual 5
- III. Table of Contents. 7

- 1 General Notes and Safety Instructions. 1-1**
 - 1.1 Notes on the safety instructions. 1-1
 - 1.2 Allocation of personnel 1-1
 - 1.3 Intended use of the wheel loader. 1-2
 - 1.3.1 Load capacity table. 1-2
 - 1.4 Safety Instructions. 1-3
 - 1.4.1 General. 1-3
 - 1.4.2 General use of the wheel loader. 1-3
 - 1.4.3 Working with the wheel loader. 1-4
 - 1.4.4 Safety instructions for emergency situations. 1-6

- 2 Getting acquainted with the wheel loader. 2-1**
 - 2.1 Warning notices and adhesive labels 2-1
 - 2.2 Overview of operating and control elements 2-2

- 3 Starting and driving the Wheel Loader. 3-1**
 - 3.1 Before entering the wheel loader. 3-1
 - 3.2 Adjusting the driver`s seat. 3-2
 - 3.2.1 Weight adjustment. 3-2
 - 3.2.2 Height adjustment. 3-2
 - 3.2.3 Longitudinal adjustment. 3-2
 - 3.2.4 Back-rest adjustment. 3-3
 - 3.2.5 Safety belt. 3-3
 - 3.2.6 Rack. 3-3
 - 3.3 Indoor lighting. 3-3
 - 3.4 Exterior rear view mirrors. 3-3
 - 3.5 Dashboard. 3-4
 - 3.6 Table of lights and symbols. 3-4
 - 3.7 Starting the engine. 3-5
 - 3.7.1 Before starting. 3-5
 - 3.7.2 Starting the engine. 3-5
 - 3.8 Driving the wheel loader. 3-6
 - 3.8.1 Driving forward and backward 3-6
 - 3.8.2 Driving forward 3-6
 - 3.8.3 Driving backward 3-6
 - 3.8.4 Changing direction. 3-7
 - 3.8.5 Shifting gears 3-7
 - 3.8.6 Differential lock. 3-8
 - 3.8.7 Inching. 3-8
 - 3.8.8 Brakes. 3-8
 - 3.8.9 Stopping and parking the wheel loader. 3-8
 - 3.8.10 Panel of switches 3-9
 - 3.8.11 Driving at night. 3-9
 - 3.8.12 Warning equipment and additional lights. 3-9
 - 3.9 Driving the wheel loader on public roads. 3-10
 - 3.9.1 Measures to be taken before driving on a public road. 3-10
 - 3.9.2 Checklist: Driving the wheel loader on public roads. 3-10

TABLE OF CONTENTS

gb-50-60_000_2

3.10	Line-of-sight obstruction.	3-11
3.11	Cross-country driving.	3-11
4	Working with the Wheel Loader.	4-1
4.1	Safety instructions concerning work with the vehicle.	4-1
4.2	Control lever.	4-2
4.3	Connecting attachments.	4-3
4.3.1	Using the Quick Disconnect Coupler (QDC).	4-3
4.3.2	Switching the attachment hydraulics.	4-4
4.3.3	Retracting the QDC bolts.	4-4
4.4	Working with the bucket.	4-5
4.4.1	Picking up material.	4-5
4.4.2	Driving with load.	4-6
4.4.3	Dumping material.	4-6
4.4.4	Emergency lowering.	4-6
4.5	Working and driving with the pallet forks.	4-7
4.6	Road sweeping.	4-8
4.7	Transporting the wheel loader.	4-9
4.7.1	Checklist for transporting the wheel loader.	4-9
4.8	Towing.	4-10
4.8.1	Safety instructions referring to towing.	4-10
4.8.2	Towing preparations.	4-10
4.8.3	Short-circuiting the hydraulic circuit.	4-10
4.8.4	Towing the wheel loader.	4-11
4.8.5	After towing the wheel loader.	4-11
5	Maintenance of the Wheel Loader.	5-1
5.1	Technical inspections.	5-1
5.2	Maintenance.	5-1
5.2.1	Maintenance plan.	5-1
5.2.2	Service intervals.	5-2
5.2.3	Consumables.	5-2
5.2.4	Maintenance intervals.	5-3
5.3	Greasing points - front end.	5-4
5.3.1	Notes.	5-4
5.4	Engine.	5-5
5.4.1	Overview.	5-5
5.4.2	Checking the engine oil level.	5-6
5.4.3	Changing the engine oil.	5-6
5.4.4	Changing the engine oil filter.	5-7
5.4.5	Changing the fuel filter.	5-7
5.4.6	Venting the fuel system.	5-8
5.4.7	Changing the preliminary fuel filter.	5-8
5.4.8	Checking the V-belt.	5-9
5.4.9	Replacing the V-belt.	5-9
5.4.10	Cleaning the air filter.	5-10
5.4.11	Filling the cooling circuit.	5-11
5.4.12	Draining the cooling water.	5-11
5.4.13	Cleaning the radiator.	5-12
5.4.14	Filling the fuel tank.	5-12
5.4.15	Cleaning the fuel tank.	5-12
5.5	Electrical installation.	5-13
5.5.1	Notes.	5-13
5.5.2	Battery.	5-13

5.5.3	Replacing fuses.	5-14
5.5.4	Table - Fuse assignment	5-14
5.6	Hydraulic system.	5-15
5.6.1	Overview.	5-15
5.6.2	Notes.	5-15
5.6.3	Checking the hydraulic oil.	5-16
5.6.4	Adding hydraulic oil.	5-16
5.6.5	Draining water/oil (if organic oil is used).	5-16
5.6.6	Changing the hydraulic oil filter.	5-17
5.6.7	Cleaning the hydraulic oil cooler.	5-18
5.7	Brake system.	5-18
5.7.1	Checking the brake fluid.	5-18
5.8	Chassis.	5-19
5.8.1	Checking the axle oil level (front and rear axle).	5-20
5.8.2	Changing the axle oil (front and rear axle).	5-20
5.8.3	Changing the axle oil (wheel hub).	5-21
5.9	Cleaning and preservation.	5-21
5.9.1	Cleaning the diesel engine.	5-21
5.9.2	Preservation.	5-22
6	Faults.	6-1
6.1	Table of fault messages.	6-1
7	Technical Data.	7-1
7.1	Table of general technical data.	7-1
7.2	Table of dimensions.	7-2
7.3	Consumables.	7-3
7.3.1	Table of lubricants and oils.	7-3
7.3.2	Fuel.	7-4
7.3.3	Table of filling quantities.	7-4
7.4	Tire pressures.	7-5
7.5	Miscellaneous.	7-5
7.5.1	Noise emission.	7-5
7.5.2	Vibrations of earth-moving machinery.	7-5
8	Service.	8-1
8.1	Certificate of delivery.	8-1
8.1.1	Checklist to be completed upon delivery of the wheel loader in conjunction with a demonstration.	8-1
8.1.2	Checklist 1st Inspection.	8-3
8.1.3	Checklist Maintenance Certificate A.	8-5
8.1.4	Checklist Maintenance Certificate B.	8-7
8.1.5	Checklist Maintenance Certificate C.	8-9
8.1.6	Summary of periodical maintenance measures.	8-11
Appendix C: Maintenance Certificates.....		C-1
C.1	First 2500 hrs.....	C-1

TABLE OF CONTENTS

gb-50-60_000_2

1 General Notes and Safety Instructions

1.1 Notes on the safety instructions

The operating manual contains all the information required for the operation of TW 50 and TW 60. In addition, all maintenance work to be carried out by the operator or service personnel is described in order to ensure that the wheel loader is always in good operating condition.

Be sure to pay attention to and observe the safety instructions as stated both in the individual sections and in the section "Safety Instructions". These safety instructions are presented in the following manner:

Attention!



The wheel loader is to be exclusively operated by individuals who are both physically and mentally fit and have undergone the appropriate training!

All instructions must be read, understood and observed by the operating personnel before starting the wheel loader.

1.2 Allocation of personnel

It is the responsibility of the owner of the wheel loader to see to it that only trained and properly instructed individuals operate the wheel loader.

The driver of the wheel loader must be able to read and understand the warning signs on the vehicle. Ask the driver to confirm this in written form.

Attention!



Familiarize yourself with all the information necessary for the operation of the wheel loader!

- ***Read the operating manual.***
- ***The safety regulations for the operation of earth-moving machinery in the state or country of operation apply .***
- ***The wheel loader is to be exclusively operated by individuals who are both physically and mentally fit and have undergone the appropriate training!***
- ***The wheel loader must not be operated by individuals under the influence of alcohol or drugs.***

Unknown environmental conditions!

- ***Before starting work, the driver has to make sure that the weather, the condition of the road and the ground permit safe operation.***
- ***Before any operation, check whether the job site presents any dangers. Eliminate them and take adequate precautions, if necessary.***

The owner (or operator, respectively) of the vehicle is responsible for damages to the wheel loader caused by inexpert operation or insufficient knowledge on the part of the staff.

1.3 Intended use of the wheel loader

The TW 50 and TW 60 wheel loaders are intended to be used for loading and unloading material, moving of soil, rocks etc. by means of attachments.

Caution!



When working with attachments, observe the authorized payloads, as indicated in the table below.
The use of attachments or accessories which have not been authorized by Takeuchi causes an immediate and complete expiration of the warranty.

- **Special tools may be used after consultation with our authorized dealers or with our explicit authorization.**

1.3.1 Load capacity table

Wheel loader type	TW 50	TW 60
Operating Weight	8708 lbs	10251 lbs
Bucket capacity	.91yd3	1.1 yd3
Bucket Breakout Force	8992 lbs	11600 lbs
Torque	8543 lbf	9554 lbf
Bucket:		
Tipping load		
extended	6790 lbs	7992 lbs
fully articulated	5578 lbs	7055 lbs
Hoisting power, near ground	7644 lbs	10454 lbs
Pallet forks:		
Static tipping load		
straight and articulated	4716 lbs	5888 lbs
Hoisting power, near ground*	6070 lbs	6396 lbs
Payload**	3772 lbs	4711 lbs
Payload***	2828 lbs	3532 lbs

* at a load center distance of 19.7in.

** stability factor 1.25

***stability factor 1.67

1.4 Safety Instructions

1.4.1 General

Danger!



Utilization in danger zones!

- **Before starting the wheel loader, the operator must be acquainted with the special safety requirements for work in this danger zone and check whether the necessary precautions have been taken.**

Caution!



Before transporting the wheel loader, pay attention to the following safety instructions:

- **The wheel loader is to be loaded by experienced and trained personnel only .**
- **The loading is to be carried out on horizontal and firm ground.**
- **Do not overload the transport vehicle.**
- **The wheel loader tires are to be freed from snow, ice and mud.**

1.4.2 General use of the wheel loader

Caution!



The wheel loader is to be used in faultless condition only.

- **Carry out the required checks and maintenance work, see chapter 'Maintenance'.**
 - **Repair the wheel loader immediately or call the service team.**
- Do not continue work unless all malfunctions have been eliminated.**

Caution!



When working with attachments, make sure to observe the authorized payloads indicated in the table in section 1.3.1!

No warranty is given for attachments without factory approval!

- **Special tools may be used after consultation with the vendor or manufacturer.**

Warning!



Danger of plunging when mounting or descending!

- **Always face the wheel loader, use handles and steps!**
- **Steps and handles are to be kept clean and dry!**
- **Do not use operating elements as handles!**

Danger!



Visibility is adversely affected by dust, fog or other factors!

- Stop the wheel loader or reduce speed until visibility improves.
- Do not hang up clothes or objects which might obstruct your vision.

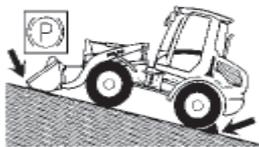
Caution!



Environmental protection!

- Make sure no oil or fuel penetrates the ground, pollutes water or leaks into the sewer system.
- When working in protected areas, use environmentally friendly hydraulic oil (e.g. any SAE approved oil).

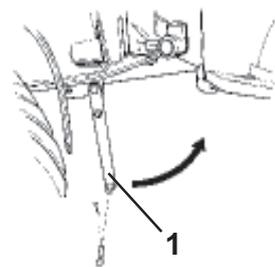
Danger!



Danger of injury!

- Secure the wheel loader against rolling.
- Lower the attachment to the ground.

Danger!



Risk of Crushing!

- Before working in this section, insert the anti-buckling device (1).
- After completion of maintenance or repair work, the anti-buckling device is to be brought into the operating position again.

1.4.3 Working with the wheel loader

Danger!



Individuals are not allowed to stand within the working range of the wheel loader!

- The job site is to be secured against unauthorized trespassing.
- Before and during backing up, look behind you.

Warning!



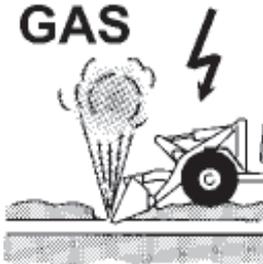
At blind places, ask someone to direct you.

- Hand signals and instructions are to be agreed on beforehand!

Danger!

Danger of injury when establishing a conductive connection!

- Before starting work related to the electrical installation, disconnect the ground strap from the battery and disconnect the printed circuit board.

Danger!

Conductive connections, explosions, intoxication and high-pressure jets caused by damaged lines can be fatal!

- Watch out for subterranean objects!
- Obtain information on the location of lines and tubes and mark their positions on the job site.
- If necessary, have them taken out of operation.

Danger!

Danger to life!

In the event of a conductive connection:

- Move the attachment out of the working area.
- If this is impossible:
 - Advise individuals on the job site to keep away.
 - Have the power switched off.

Warning!

Risk of being run over or falling!

- It is prohibited to give someone a lift!
- Do not lift or transport people by means of the attachment!

Caution!

Dropping objects! Collapsing sand walls!

- See the National Safety Regulations.

Caution!

Danger of poisoning when working in closed spaces!

- Ensure sufficient aeration and de-aeration.

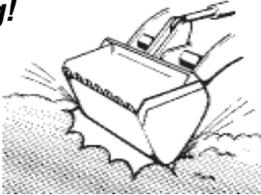
Danger!



Sliding or breaking in of the wheel loader!

- Exercise extra caution when close to water!
- Before starting to work, check both the ground's soil bearing capacity and its inclination.

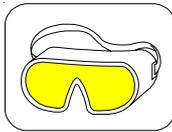
Warning!



Material damage!

- The attachment is not to be used as a demolition tool!
- Avoid extreme situations.

Danger!



Eye injuries caused by splinters!

- Be sure to wear safety glasses if there is any risk of splinters splitting off while working with a hammer or other tools.

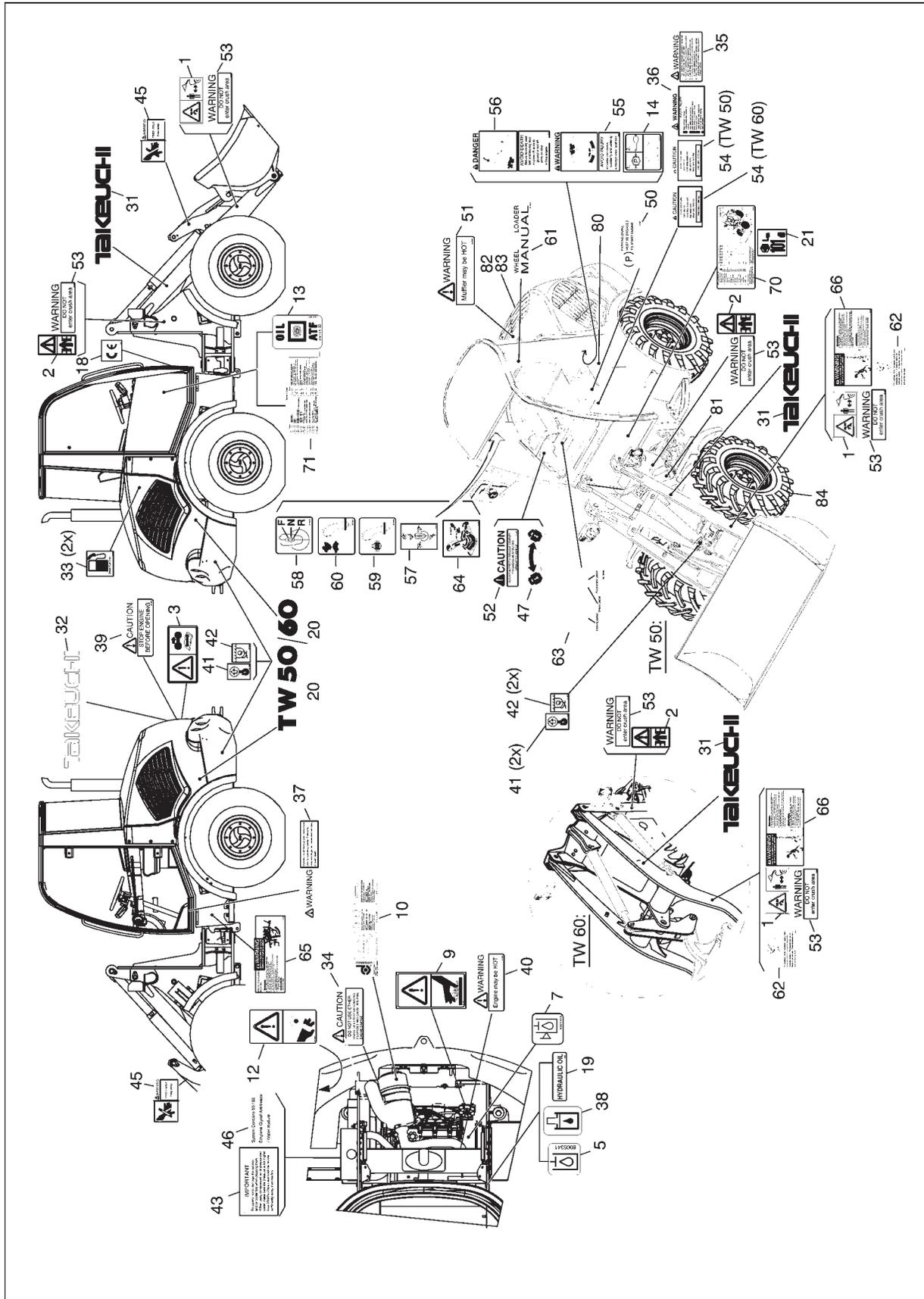
1.4.4 Safety instructions for emergency situations

Caution!



The emergency kit can save lives!

- Always keep a first-aid kit and a fire extinguisher close at hand.
- Make sure the emergency kit is always ready for use.
- Familiarize yourself with using the emergency kit beforehand.



DESIGN OF THE WHEEL LOADER

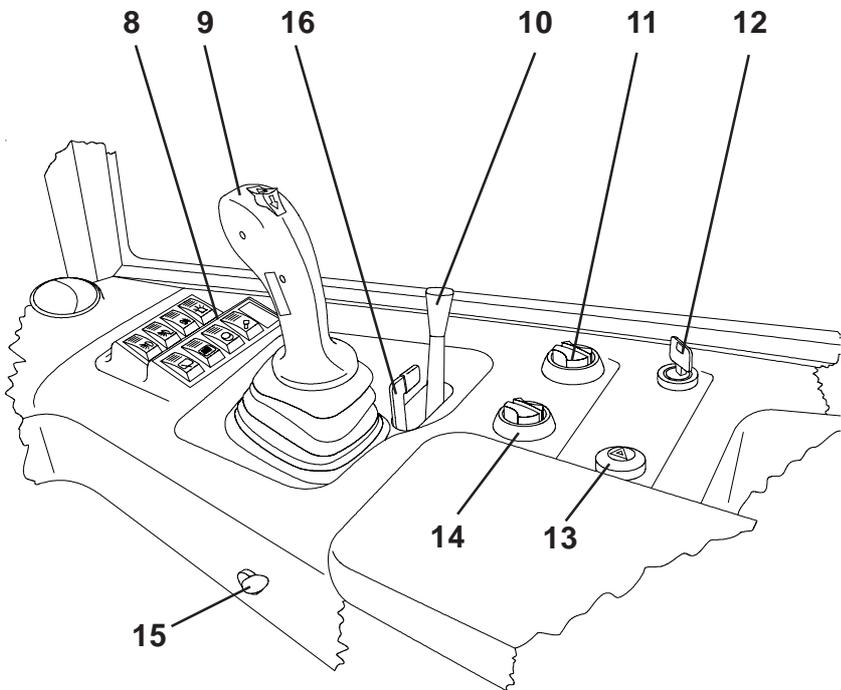
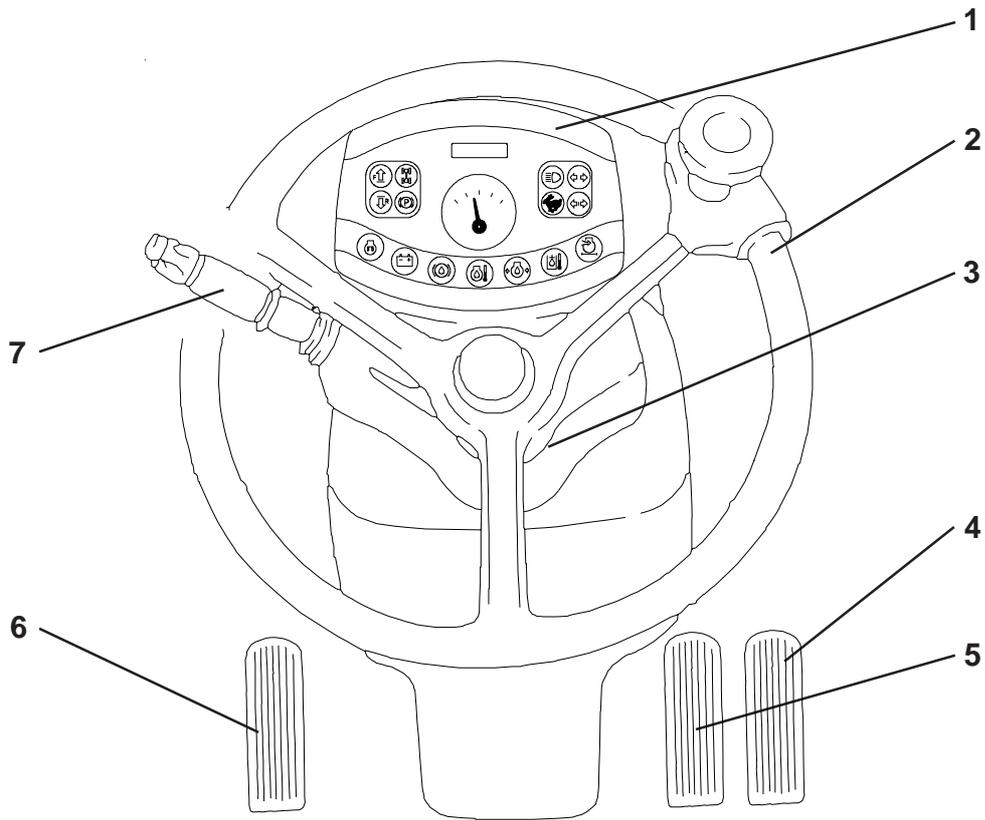
2 Getting acquainted with the wheel loader

2.1 Warning notices and adhesive labels (see illustration on the previous page)

- | | |
|---|--|
| 1) Distance to the lifting unit | 43) Maintenance oil cooler |
| 2) Risk of Death/ Bodily Harm! | 45) Warning - Pinch Area! |
| 3) Stop engine and pull out ignition key! | 46) Glycol/Water |
| 5) Hydraulic oil | 47) Joystick lock |
| 7) Hydraulic oil level | 50) Parking brake |
| 9) Danger of burns! | 51) Hot muffler |
| 10) Maintenance air filter | 52) Caution - hydraulic coupler |
| 12) Risk of cuts! | 53) Warning - crush area |
| 13) Oil ATF | 54) Caution - avoid overturn |
| 14) Starting instructions | 55) Safety belt |
| 18) CE label | 56) Danger of death - lower lifting unit |
| 19) Hydraulic oil | 57) Joystick - Lifting unit |
| 20) Wheel loader type | 58) Joystick - forward/backward |
| 21) Noise level | 59) Joystick - Differential lock |
| 31) Logo Takeuchi red | 60) Joystick - Gears |
| 32) Logo Takeuchi white | 61) Wheel loader manual |
| 33) Diesel fuel only | 62) Crossover cock |
| 34) Do not use ether | 63) Pedals |
| 35) Warning - Risk of injury or death | 64) Joystick - third section |
| 36) Warning - Risk of injury | 65) Protection against buckling |
| 37) Warning - Risk of injury or death | 66) Warning - lift arm |
| 38) Hydraulic oil level (SAE) | 70) Check list maintenance |
| 39) Stop engine | 71) Fuses |
| 40) Warning - hot engine | (for positions 80-84 see spare parts list) |
| 41) Loading lug | |
| 42) Tying lug | |

2.2 Overview of operating and control elements

DESIGN OF THE WHEEL LOADER



- 1) Dashboard
- 2) Steering wheel
- 3) Steering column
- 4) Accelerator pedal
- 5) Brake pedal
- 6) Inching pedal
- 7) Multifunction lever
- 8) Panel of switches
- 9) Joystick
- 10) QDC control lever
- 11) Heating control
- 12) Ignition lock
- 13) Hazard warning lights

- 14) Ventilation fan
- 15) Joystick lock
- 16) QDC control lever lock

3 Starting and driving the wheel loader

3.1 Before entering the wheel loader

Attention! *Obligation to inform yourself!*

Familiarize yourself with all the information required to operate the wheel loader!

- **Read and observe the safety instructions in this operating manual.**
- **In addition, the safety regulations regarding the operation of earth-moving machinery as valid in the country of deployment apply.**
- **When in doubt, contact your local authorized dealer.**

WARNING! *On entering and leaving the vehicle, make sure that...*

... you always face the wheel loader and use handles and steps!

... all steps and handles are dry and clean!

... you do NOT use operating elements as handles!

3.2 Adjusting the driver`s seat

Sit down and familiarize yourself with your seat. Always adjust it *before* starting the wheel loader.

DANGER! *Accident hazard!*

Readjusting the seat while the vehicle is in motion is prohibited.

Always stop the wheel loader before readjusting your driver`s seat.

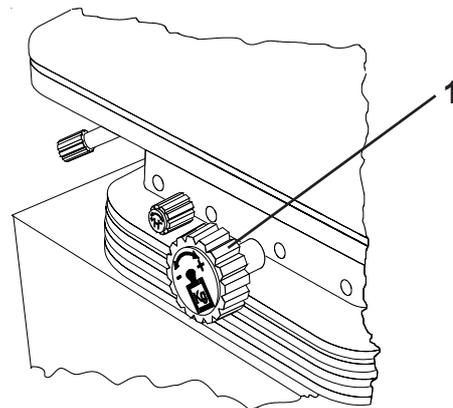


3.2.1 Weight adjustment

NOTE! The seat has been designed for a **max. weight of 265 lbs.**

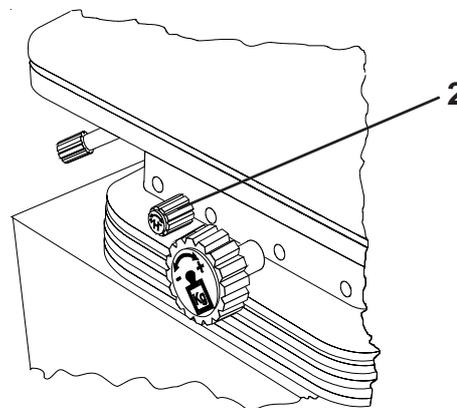
In order to avoid damage to your health, the individual operator`s weight setting should be checked and adjusted before each operation.

- The seat setting is correct if the springing does not hit the limit stop.
- The driver should be seated while adjusting the seat.
 - Turn the weight regulating wheel (1) clockwise for a heavier driver`s weight.
 - Turn the regulating wheel (1) counterclockwise for a lighter driver`s weight.



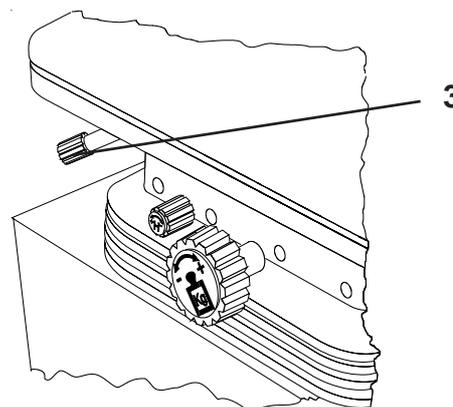
3.2.2 Height adjustment

- Modify the height of the seat after adjusting the weight setting.
- The height can be adjusted by means of the small regulating wheel (2) within a range of **3.2 in.**
- Increase seat height:
 - Turn the regulating wheel (2) counterclockwise.
- Decrease seat height:
 - Turn the regulating wheel (2) clockwise.
- During the adjustment, be sure to relieve the seat several times.



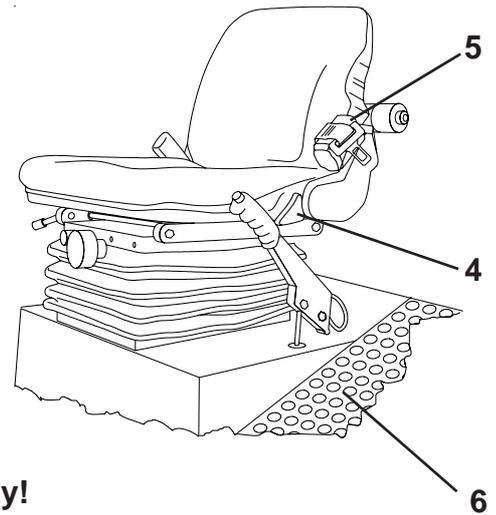
3.2.3 Longitudinal adjustment

- The operator`s seat can be adjusted in longitudinal direction within a range of **6.7 in** by pressing the notch lever (3) upwards.
- As soon as the desired position has been reached, let the notch lever (3) snap-in in order to lock the operator`s seat into place.



3.2.4 Back-rest adjustment

- 1) The back rest can be adjusted by means of the notch lever (4).
- 2) As soon as the desired position has been reached, let the notch lever (4) snap-in in order to lock the back rest into place.



3.2.5 Safety belt

The safety belt (5) is at the left side of the seat.

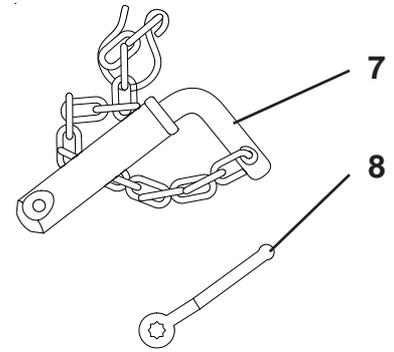
- 1) Always fasten the seat belt!
- 2) Make sure the seat belt lock snaps securely into place.

**Wearing the safety belt is of vital importance to your safety!
Never operate the wheel loader without buckling up!**

3.2.6 Tool Storage

Tool storage (6) is at the left side, next to the seat.

In the storage container, you can find the bolt (7) for the tow coupling and the wrench (8) for the crossover cock at the quick disconnect coupler (QDC). See section “Switching the attachment hydraulics” in the chapter “Working with the wheel loader”.

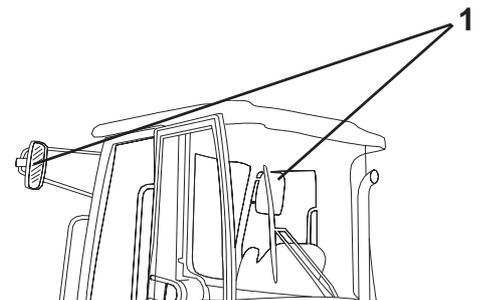


3.3 Indoor lighting

The indoor lighting is on the right side.

3.4 Exterior rear view mirrors

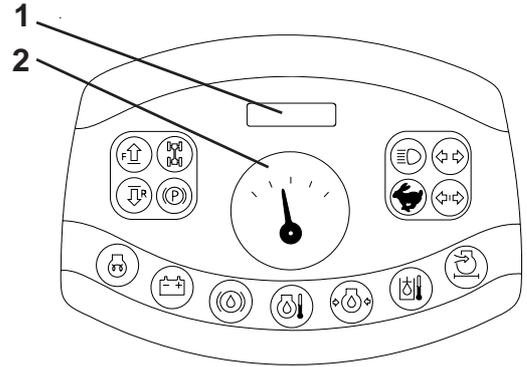
The rear view mirrors (1) are on the exterior, on the right and left side.



3.5 Dashboard

The wheel loader dashboard informs the operator about important wheel loader functions and currently selected values.

- 1) Operating hour meter (1)
- 2) Fuel gauge (2)



3.6 Table of lights and symbols

	Forward travel	Lights up when driving forward
	Reverse travel	Lights up when in reverse gear
	Differential lock	Lights up with the differential lock activated
	Parking brake	Light indicates activation of the parking brake. The diesel engine can only be started with the parking brake activated. Driving is suspended whenever the parking brake is activated.
	Brights	Light indicates activation of the brights
	High Speed Travel	(hydraulic)
	Turn signals - wheel loader	Light flashes whenever a turn signal is activated
	Turn signals - trailer	Light flashes whenever a turn signal is activated
	Preheat	LED (yellow) lights up while the diesel engine is being preheated (ignition lock position II). With the engine started, the light goes out
	Charge warning lamp	LED (red) lights up briefly when the engine is started and automatically turns off! If it does not immediately turn off after the starting procedure, an electrical failure has occurred
	Brake fluid	Light indicates an insufficient brake fluid level. (see chapter "Checking the brake fluid")

	Engine temperature	When lighting up immediately stop the wheel loader and let the diesel engine run in idle speed, in order to let the engine oil cool down! The indicator lamp lights up at an engine oil temperature of 230° F.
	Diesel engine (oil pressure)	When this lamp lights up during operation immediately stop the diesel engine!
	Hydraulic oil temperature indicator	Lights up when the temperature of the hydraulic oil rises above 197° F. Stop the wheel loader and determine the cause (see chapter "Fault messages").
	Engine air filter	When yellow LED lights, determine the cause (see chapter "Fault messages").

3.7 Starting the engine

3.7.1 Before starting

Carry out the following checks:

- 1) Diesel engine and hydraulic oil levels.
- 2) Fuel level.

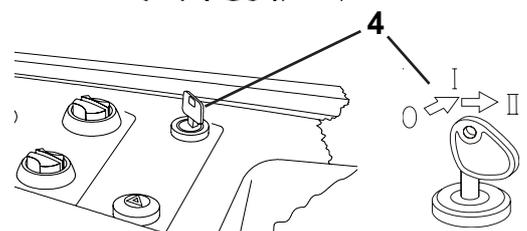
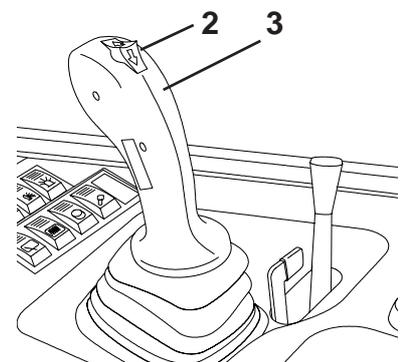
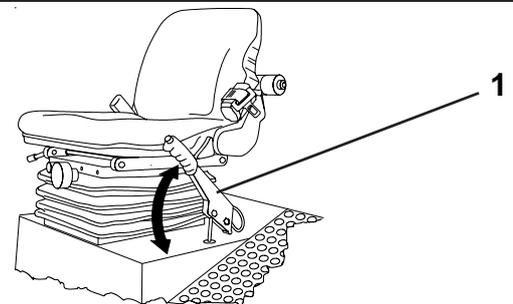
DANGER! Danger of injury!



- **Always fasten the safety belt before starting the engine!**

3.7.2 Starting the engine

- 1) Actuate the parking brake (1).
- 2) Put the upper switch (2) on the joystick (3) into the central position (neutral).
- 3) Insert the ignition key (4) into the ignition lock.
- 4) Turn the ignition key (4) to the right:
 - position I : activating the ignition
 - position II : preheating (approx. 5-10 seconds)
 - position III : starting
 - until the diesel engine has started.
- 5) As soon as the engine is running, immediately let go the ignition key.
- 6) When starting the engine for the first time, drive the wheel loader until it reaches operating temperature.



3.8 Driving the wheel loader

DANGER! Before setting the wheel loader in motion and while driving, ensure that...

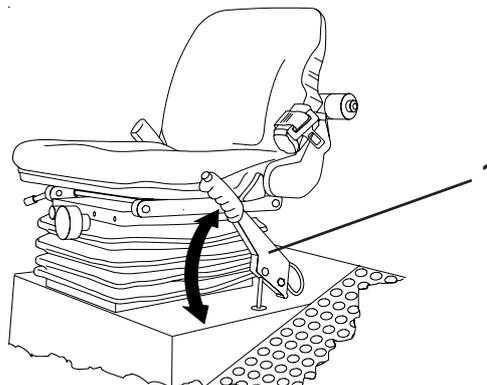


- ...the QDC is correctly locked.
- ...the attachment has been lifted from the ground.
- ... the driving speed is adequate with regard to the local conditions, the load and the position of the attachment.

3.8.1 Driving forward and backward

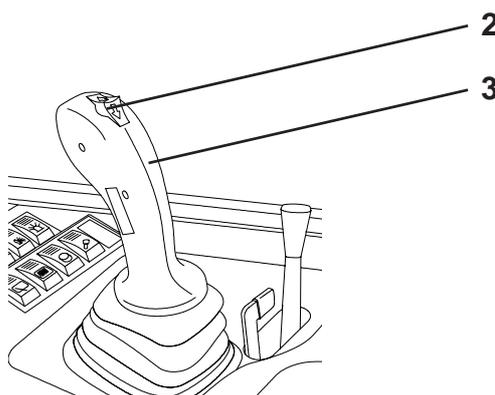
- 1) Release the parking brake (1).

NOTE! It is not possible to drive with the parking brake activated.



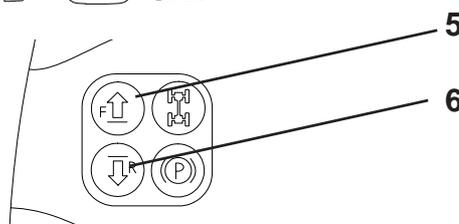
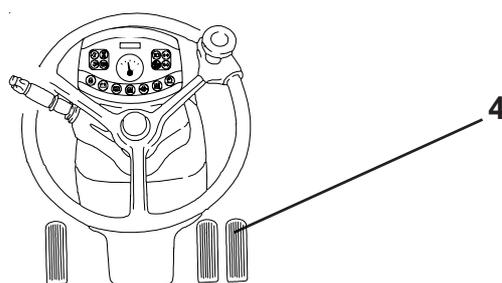
3.8.2 Driving forward

- 1) Move the upper switch (2) on the joystick (3) forward.
- 2) Forward travel is indicated on the display (5).
- 3) Increase the diesel engine speed by stepping on the accelerator pedal (4).
- 4) The wheel loader starts to move forward.



3.8.3 Driving backward

- 1) Press the upper switch (2) on the joystick (3).
- 2) Reverse travel is indicated on the display (6).
- 3) Increase the diesel engine speed by stepping on the accelerator pedal (4).
- 4) The wheel loader starts to move backward.



CAUTION! Accident hazard!



In order to drive backward, make sure your view to the rear is unobstructed. If necessary, ask someone to give you directions.

3.8.4 Changing direction

Steering

- 1) The travel direction can be changed by means of the steering wheel (1).

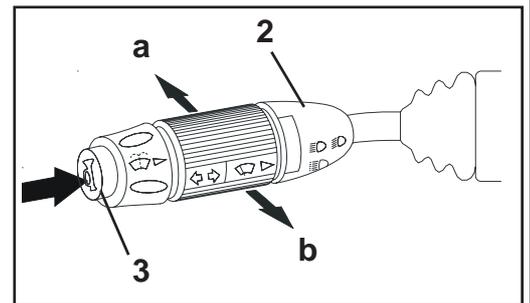
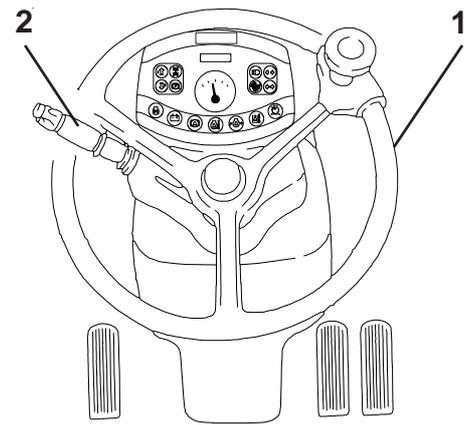
Turn signals

The turn signals are activated by means of the steering column lever (2).

- 2) Turn signal, right:
 - Move lever forward (a).
- 3) Turn signal, left:
 - Move lever towards the seat (b).

Signal horn

- 4) Press button (3) towards the steering column.



3.8.5 Shifting gears

Gears are shifted by means of the switch (1) on the control lever (3).

DANGER! Danger of injury!



Shifting from the second gear to the first gear corresponds to an emergency stop and causes the wheel loader to come to an abrupt stop!

- **Shift gears only at walking speed.**

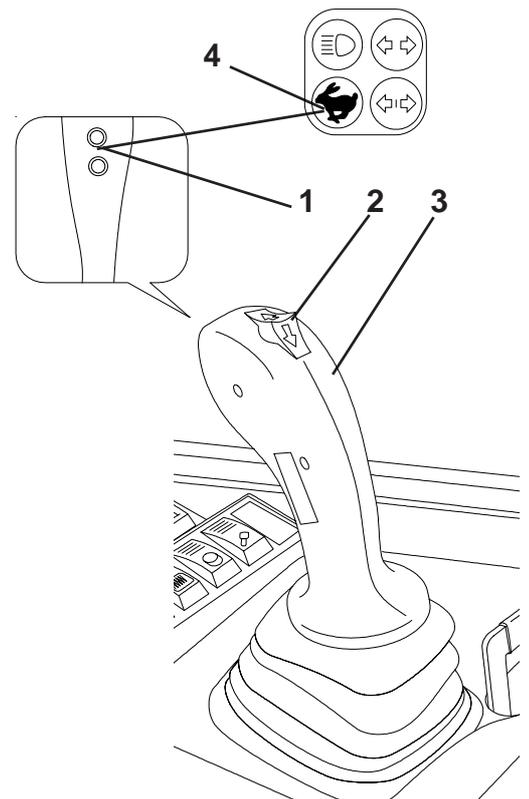
- 1) The gear selector switch (1) can be actuated when travelling. Depending on the travelling range, switch to **low** or **high speed** travel.
- 2) When driving in gear II, be sure to reduce the wheel loader's speed to walking speed.
- 3) Press switch (1) to select the travelling range.
 - Gear I = off-road driving is selected.

Travel speeds and characteristics gear I:

- Off-road speed range **0 - 4.3 mph**.
 - Low speed, high performance.
- 4) When driving in gear I, press switch (1) for the travelling range:
 - Gear II = road speed is selected.
 - 5) The display on the dashboard shows the symbol (4) for road speed.

Travel speeds and characteristics gear II:

- Road speed range **0 - 12.4 mph**.
- High speed.

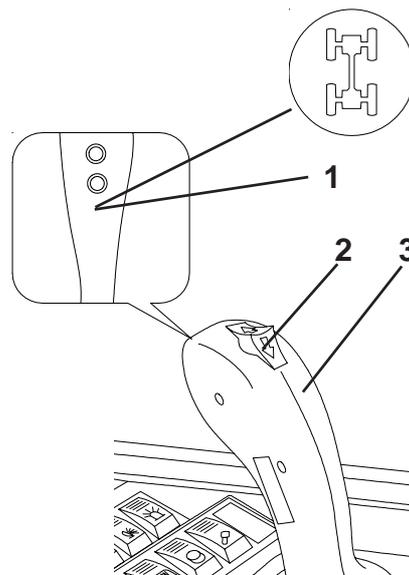


3.8.6 Differential lock

Serves to enhance the thrust transfer on wet or soft grounds. The differential lock can only be used with gear I.

- 1) Press and hold down the lower button (1) on the control lever (3), which activates the differential lock.
- 2) As long as the button (1) is pressed down, the differential lock remains activated.
- 3) When releasing the push button (1), the differential lock is automatically deactivated at the next change of load.

NOTE! Do not activate the differential lock when driving on roads.



3.8.7 Inching

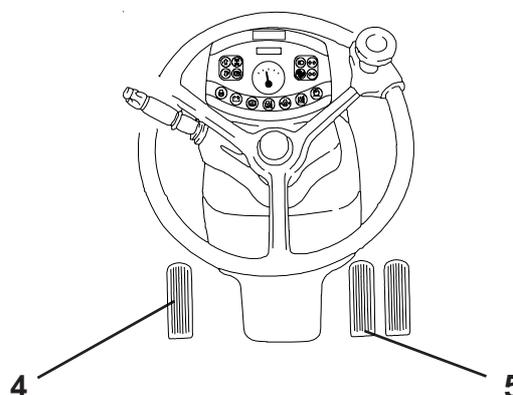
Use the inching pedal (4) in order to reduce the travel speed while running at the highest engine speed. Thus, the entire engine output is made available to the loading hydraulics.

3.8.8 Brakes

The brake pedal (5), a hydraulically operated foot brake, is equipped with an additional braking function operated by the travel hydraulics.

3.8.9 Stopping and parking the wheel loader

- 1) Reduce the engine speed.
- 2) Use the inching pedal (4) to stop the wheel loader.
- 3) Put the upper switch (2) on the joystick (3) to neutral.

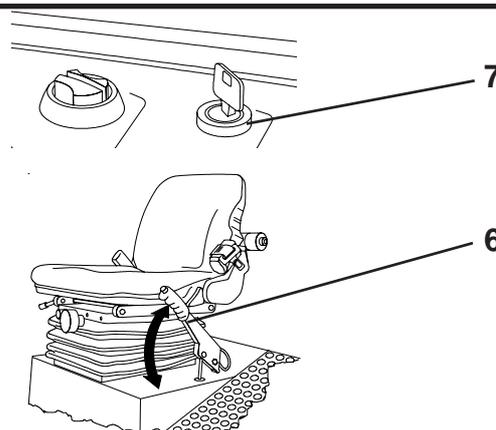


DANGER! Danger of injury!



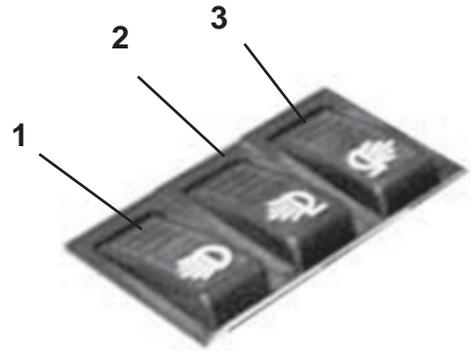
Switching to neutral while driving or before the wheel loader has come to a complete stop has the effect of an emergency stop!

- 4) Engage the parking brake/hand brake (6).
- 5) Stop the diesel engine.
- 6) Remove the ignition key (7).
- 7) Lock the engine hood.



3.8.10 Panel of switches

- 1) Headlight switch
- 2) Flood light, front (option)
- 3) Flood light, rear (option)



3.8.11 Driving at night

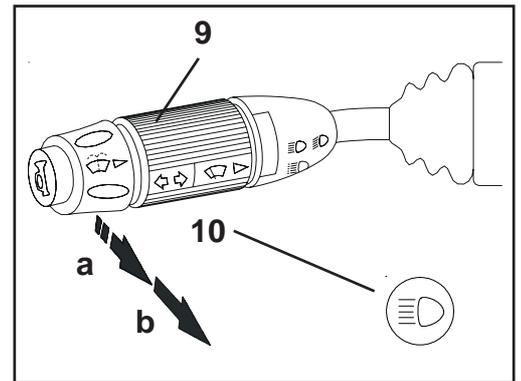
Headlight switch

The headlight switch (1) is on the left side of the panel and has two positions:

- Position I: Parking light
- Position II: Dipped beam/brights

Brights

- 1) With the dipped headlights turned on, pull the lever (9) to position **b** (see illustration on the right).
- 2) Activation of the brights is indicated by the lamp (10).



3.8.12 Warning equipment and additional lights

Headlamp flasher

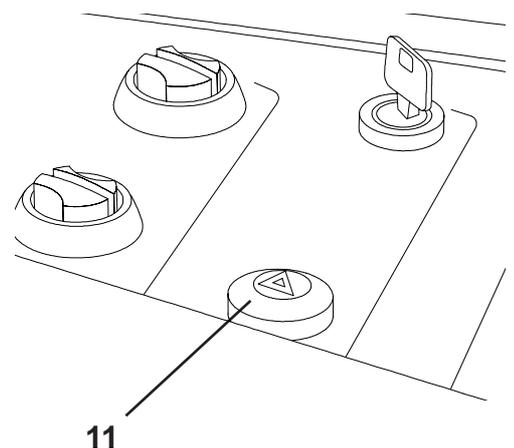
- 1) Pull the lever upwards (a) and let go.
- 2) The control lamp (10) for the brights lights up for a few seconds.

Front and rear flood lights

- 4) Activate the front and rear flood lights by pressing the corresponding switches 2 and 3 on the panel.

Hazard warning lights

- 5) Push the button (11) in front of the ignition key to activate the hazard warning lights. Push the button again to turn the hazard warning lights off.



3.9 Driving the wheel loader on public roads

Attention! Federal Motor Vehicle Safety Standards!

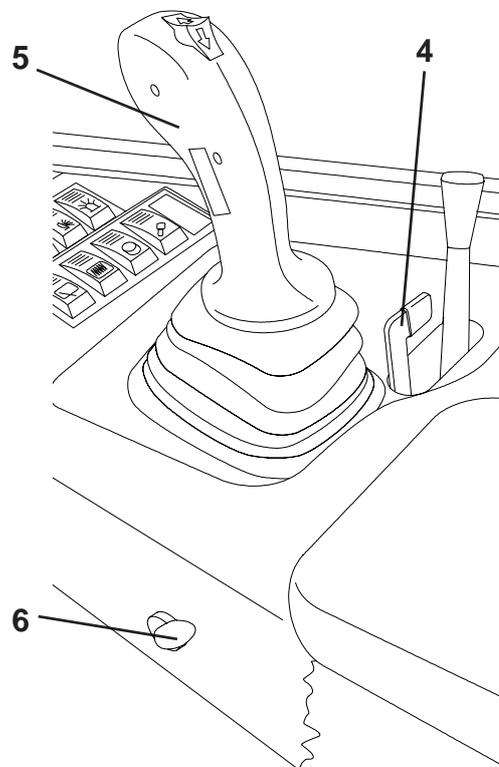
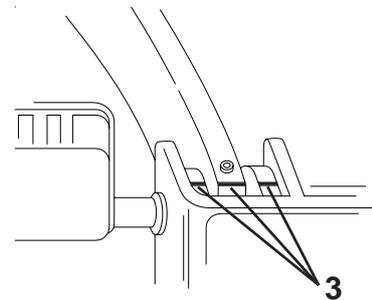
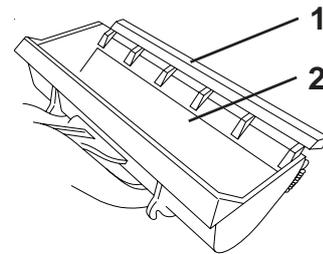


Strictly adhere to the National Safety Regulations and make sure you carry a valid driver's licence before driving the wheel loader.

3.9.1 Measures to be taken before driving on public roads (Pursuant to local laws and regulations)

Before driving the wheel loader on public roads, take the following measures:

- 1) Clean the wheel loader, including the attachment.
- 2) Check the wheel loader's lighting.
- 3) Adjust the exterior rear view mirrors.
- 4) Close and lock the engine hood.
- 5) Secure the attachment, e.g. by means of a protective strip (1).
- 6) In case a bucket is attached, fully retract it (2).
- 7) Lift or lower the hoisting gear in such a way that the marks (3) are in line. Make sure this position is maintained while the vehicle is in motion. If necessary, stop the wheel loader and adjust the hoisting gear again.
- 8) Mechanically secure the QDC control lever by means of the locking device (4).
- 9) Secure the control lever (5) by means of the locking device (6).
- 10) Verify that you carry all the safety equipment required by national law and regulations and a valid driver's licence.



3.9.2 Checklist: Driving the wheel loader on public roads

Check public roads	Yes	No
Do you have a valid operating licence?	<input type="checkbox"/>	<input type="checkbox"/>
Is the company nameplate on the left side?	<input type="checkbox"/>	<input type="checkbox"/>
Are the required test reports available?	<input type="checkbox"/>	<input type="checkbox"/>
Is the operating manual in the cab?	<input type="checkbox"/>	<input type="checkbox"/>
Do you carry a valid driver's licence?	<input type="checkbox"/>	<input type="checkbox"/>
Have you received all the necessary information?	<input type="checkbox"/>	<input type="checkbox"/>
Have you performed all the required visual checks?	<input type="checkbox"/>	<input type="checkbox"/>
Do you carry a first-aid box?	<input type="checkbox"/>	<input type="checkbox"/>
Do you carry a warning triangle?	<input type="checkbox"/>	<input type="checkbox"/>
Do you carry a signal vest?	<input type="checkbox"/>	<input type="checkbox"/>
Do you carry a fire extinguisher?	<input type="checkbox"/>	<input type="checkbox"/>
Is the attachment correctly positioned?	<input type="checkbox"/>	<input type="checkbox"/>
Is the attachment empty?	<input type="checkbox"/>	<input type="checkbox"/>
Are the two (!) rear view mirrors adjusted?	<input type="checkbox"/>	<input type="checkbox"/>
Has the attachment been sufficiently secured?	<input type="checkbox"/>	<input type="checkbox"/>
Is the seat belt fastened?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a wheel chock close at hand?	<input type="checkbox"/>	<input type="checkbox"/>
Is the vehicle in roadworthy condition (control lamps, brakes, steering, lighting, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>

Sample of manual. Download All 89 pages at: