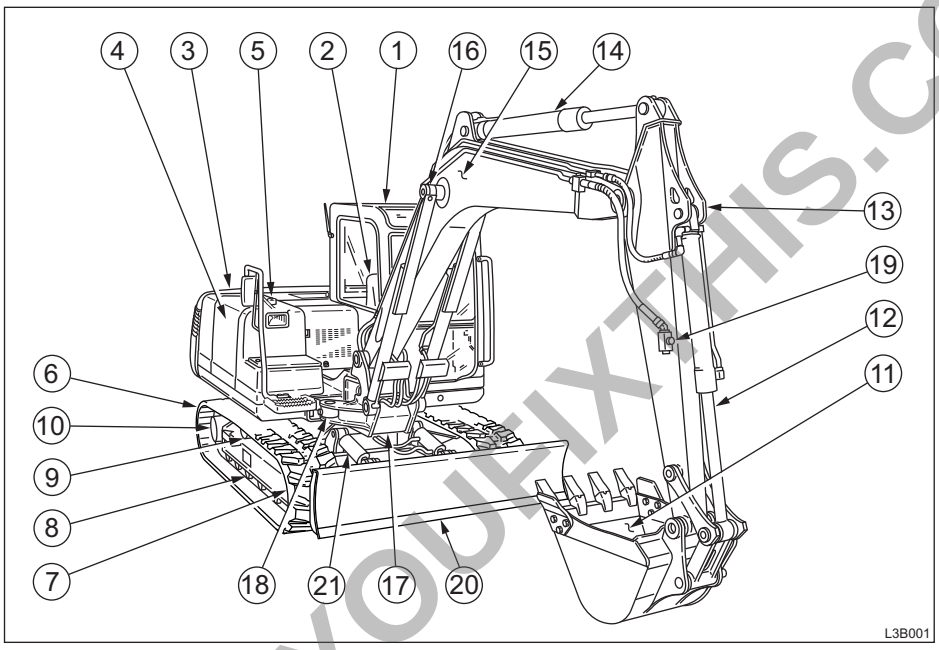
Mono-Boom

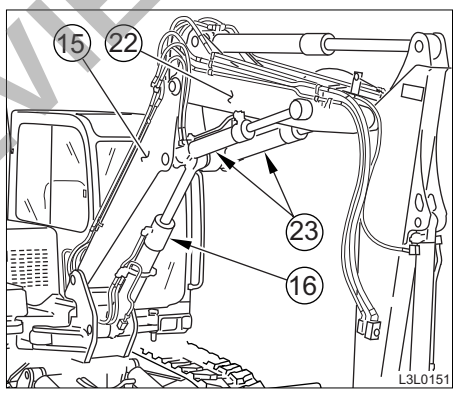


Upperstructure
1. Cab
2. Seat
3. Engine hood
4. Fuel tank
5. Hydraulic tank

Undercarriage
6. Crawler belt
7. Idler
8. Track roller
9. Carrier roller
10. Travel motor

Working equipment
11. Bucket
12. Bucket cylinder
13. Arm
14. Arm cylinder
15. Boom
16. Boom cylinder
17. Boom bracket
18. Swing cylinder
19. Auxiliary hydraulic line
20. Dozer blade
21. Blade cylinder
22. Intermediate boom
23. Boom adjustment cylinder

2-Piece Boom



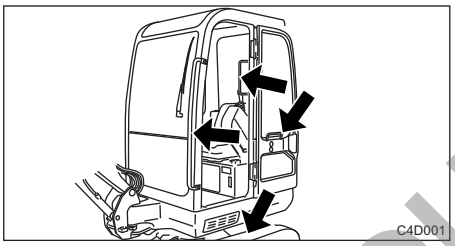
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Mounting and Dismounting

⚠ WARNING

- **Do not jump on or off the machine. Never attempt to mount or dismount a moving machine.**
- **When mounting and dismounting the cab, first open the door fully to the locked position and check that it does not move.**



- **Always face the access system and maintain a three point contact with the recommended handrails and steps while getting on and off the machine. Keep steps and platform clean.**
- **Never use the safety lock lever or control levers as hand holds.**

Walk-Around Inspection

Perform the walk-around inspections before starting the engine the first time that day.
Perform the inspections as described under “Maintenance - Walk-Around Inspection” (pages 105 and 106).

Daily Inspection

Perform the daily inspections once a day before starting the engine the first time that day.
Perform the inspections as described under “Maintenance - Daily Inspection” (pages 107 to 111).

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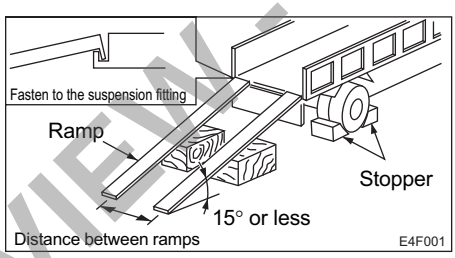
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⚠ WARNING

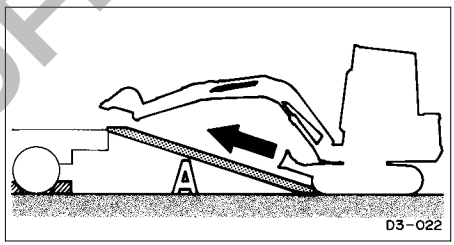
The machine may roll or tip over or fall while loading or unloading it. Take the following precautions:

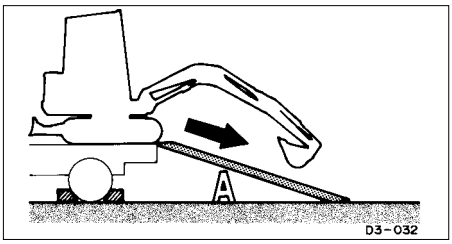
- **Select a firm, level surface and keep sufficient distance from road shoulders.**
- **Use loading ramps of adequate strength and size. Maintain the slope of loading ramps within 15 degrees.**
- **Keep the truck bed and loading ramps clean of oil, clay, ice, snow, and other materials which can become slippery. Clean the tracks.**
- **Never change course on the ramp.**
- **Do not slew (swing) on ramps. The machine may tip over.**
- **When slewing (swinging) on the truck bed, do so slowly as the footing can be unstable.**

When loading or unloading the machine, be sure to use ramps and following the procedure below.



1. Apply the truck's parking brake and place stoppers against its tires.
2. Fasten the ramps securely to the truck bed so that they will not come off. Set the ramps to an angle of 15° or less.
3. Line up the center of the truck bed with the center of the machine and the center of the ramps with the center of the crawlers.
4. Make sure the dozer blade does not hit the ramps.
5. Lower the hoe attachment as much as possible, making sure it will not hit the truck.
6. Lower the engine speed.





7. Determine the direction on the ramps, then slowly travel up or down the ramps in 1st speed (low speed), following the signals of a flagman.
8. Load the machine properly at the prescribed position on the bed.
   Refer to page 93 "Transporting Posture".

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Maintenance Chart

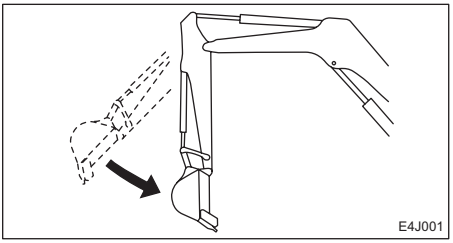
Maintenance Items	See page
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* If the percentage of the traveling time within the total operating time is high, replace the gear oil earlier than the specified time.

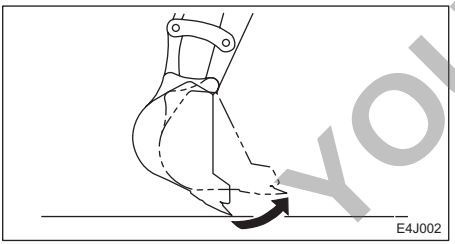
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The following symptoms are not malfunctions:



- When the arm reaches the vertical position while contracting it while the engine is running at low speed, the contracting speed slows down momentarily.



- When the bucket teeth reach the horizontal position while the engine is running at low speed, the speed of bucket movement slows down momentarily.
- The slew motor produces noise at the beginning and end of the slewing operation.
- The travel motor produces noise when stopped suddenly during high speed travel.
- The control valve produces noise if excessive force is applied to the working equipment and when the stroke end is reached.
- When the bucket is operated while making a right pivot turn (i.e., when only the left crawler is turning), the speed of the pivot turn may suddenly increase.

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Main Specifications

TYPE			Mono-Boom	2-Piece Boom
MASS				
Machine mass kg (lb.) (not including operator)	Rubber crawlers		7280 (16045)	7940 (17505)
	Steel crawlers		7405 (16330)	8145 (17955)
PERFORMANCE				
Bucket capacity m^3 (cu.ft.) (standard bucket)	Heaped		0.245 (8.65)	
	Struck		0.185 (6.53)	
Slew speed min^{-1} (rpm)	Slow speed		7.6 (7.6) / 4.1 to 7.6 (4.1 to 7.6)*	
	Normal speed		10.7 (10.7)	
Travel speed km/h (mph)	Rubber crawlers	1st	2.9 (1.8)	
		2nd	5.5 (3.42)	
	Steel crawlers	1st	2.8 (1.74)	
		2nd	5.3 (3.29)	
Gradeability (degrees)			35	
Ground pressure kPa (psi)	Rubber crawlers		32.9 (4.77)	35.9 (5.21)
	Steel crawlers		33.9 (4.91)	36.9 (5.35)
Noise level dB(A)	Sound-power level		L_{WA} 98	
	Sound-pressure level		L_{pA} 80	
ENGINE				
Manufacturer and model			Yanmar 4TNE98-TBZ	
Rated output kW / min^{-1} (hp / rpm)			43.5 / 2100 (58.4 / 2100)	
Displacement ml (cu.in.)			3319 (202.5)	
Starter V – kW			24 – 3.5	
Alternator V – kW			24 – 0.96	
Battery V – A·h			24 – 64 x 2	

* The maximum set speed in slow speed can be adjustable. Upon shipment, it is set to 7.6 min^{-1} (7.6 rpm).

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Precautions on Safety

- Consult with a Takeuchi dealer before installing optional attachments.
- Do not use attachments that have not been approved by Takeuchi or a Takeuchi dealer. Doing so may compromise safety or adversely affect the machine's operation or service life.
- Takeuchi will not be held responsible for any injuries, accidents or damage to products caused by the use of a non-approved attachment.

⚠ WARNING

Heed the following when removing or installing an attachment or option:

- **Choose a flat, hard surface to perform the operations. Also make sure there is enough light and good ventilation.**
- **Clean the area, remove any articles that may get in the way or be dangerous, and remove any spilt oil or grease.**
- **When performing lifting operations, determine a person to lead the operations and always follow that person's instructions.**
  - **Follow the leader's instructions on operating methods and procedures.**
  - **Determine a signal leader and heed this person's signals.**
- **When removing or installing the hoe attachment, place it in a stable position so that it does not tip over.**
- **Due to the risk of loads falling and/or hitting people, do not allow unauthorized personnel in the work area.**
- **Use the crane to carry heavy objects (25 kg (55 lb.) or greater).**
- **When removing heavy parts, be sure to prop them up before removing them. When lifting them with a crane, be careful to balance them properly.**
- **Operating with loads suspended with the crane is dangerous. Place loads on a stand and check for safety.**
- **When attaching the boom or arm, failure to follow proper procedures could result in serious damage. Consult with a Takeuchi dealer beforehand.**

Precautions on Installing Attachments

After replacing optional attachments or other special attachments, test-run them, then inspect the hydraulic oil level and add oil if necessary.
In addition, consult with a Takeuchi dealer for details of removal and installation procedures.

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SAFETY ALERT SYMBOL

This symbol means Attention! Be Alert! Your Safety Is Involved.
The message that follows the symbol contains important information about safety.
Read and understand the message to avoid personal injury or death.

- **It is the owner or employer's responsibility to fully instruct each operator in the proper and safe operation of all equipment. All persons using this machine should thoroughly familiarize themselves with the following sections.**
- **All operators must be instructed on the proper functions of the excavator before running the machine.**
- **Learn and practice correct use of the machine controls in a safe, clear area before operating this machine on a job site.**

⚠ CAUTION



E3A010

Improper operation, inspection and maintenance of this machine can cause injury or death.
Read and understand this manual before performing any operation, inspection or maintenance on this machine.

- Always store this manual near at hand preferably on the machine itself. If it should be lost or damaged, immediately order a new one from your Takeuchi dealer.
  When transferring ownership of this machine, be sure to provide this manual to the next owner.
- Takeuchi supplies machines complying to the local regulations and standards of the country of export. If your machine has been purchased in another country or from a person or company of another country, it may not have the safety devices or safety standards required for use in your country. Should you have any question about whether your machine complies with the regulations and standards of your country, contact a Takeuchi dealer.
- Please note that the contents and diagrams included in this manual may not match your machine exactly.

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It is your responsibility to observe all pertinent laws and regulations and to follow the manufacturer's instructions on machine operation, inspection and maintenance.

Virtually all accidents occur as the result of a failure to observe basic safety rules and precautions. An accident can often be avoided by recognizing potentially hazardous situations beforehand. Read and understand all of the safety messages which explain how to prevent these accidents from occurring. Do not operate the machine until you are sure that you have gained a proper understanding of its operation, inspection and maintenance.

■ SIGNAL WORDS

Safety messages appearing in this manual and on machine decals are identified by the words "DANGER", "WARNING" and "CAUTION". These signal words mean the following:

⚠ DANGER	⚠ WARNING	⚠ CAUTION
The word "DANGER" indicates an imminently hazardous situation which, if not avoided, can result in serious injury or death.	**The word "WARNING" indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.**	**The word "CAUTION" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

IMPORTANT: The word "IMPORTANT" is used to alert against operators and maintenance personnel about situations which can result in possible damage to the machine and its components.

It is impossible to foresee every possible circumstance that might involve a potential hazard. The warnings in this manual or on the machine can not cover all possible contingencies. You must exercise all due care and follow normal safety procedures when operating the machine so as to ensure that no damage occurs to the machine, its operators or other persons.

■ EXPLANATION OF GRAPHICAL SYMBOLS

Following is an explanation of symbols used in this manual.

⃠ , X..... prohibition

/ ..... Lock

/ ..... Unlock

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Daily Inspection (Every 10 Hours)

Perform the following inspections once every day before starting the engine the first time.

⚠ WARNING

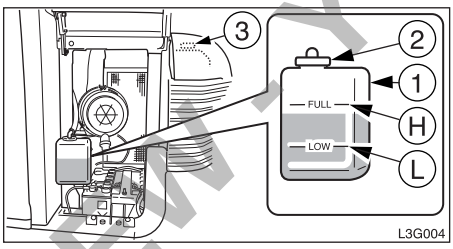
- **Before operating, perform the Daily inspections and make repairs immediately should any irregularities be found.**
- **Be sure to secure the engine hood or cover when opening it. Do not open the engine hood or cover on slopes or in strong wind.**

Inspecting and Replenishing the Coolant

⚠ WARNING

Do not remove the radiator cap or drain plugs when the coolant is hot. Stop the engine, let the engine and radiator cool and loosen the radiator cap or drain plugs slowly.

Inspection



1. Open the engine hood and left side cover.
2. Inspect the quantity of coolant in the reserve tank (1).
   The level should be between the upper limit (H) and lower limit (L).
   If it is below the lower limit (L), replenish.

Replenishing

1. Remove the reserve tank's cap (2).
2. Supply coolant up to the upper limit (H) of the reserve tank (1).
   If the reserve tank is empty, inspect for fluid leakage, then inspect the radiator (3) coolant level. If it is low, supply water to the radiator (3) first, then to the reserve tank.
3. Install the cap (2).

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