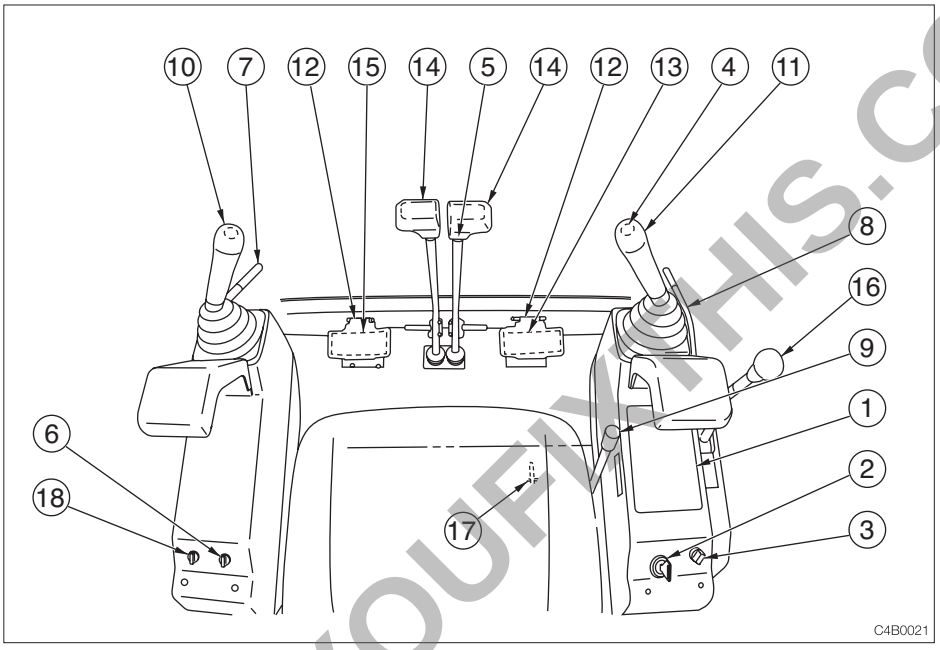


1. Instrument panel
2. Starter switch
3. Light switch
4. Horn switch
5. Travel speed switch
6. Wiper switch (Cab)
7. Safety lock lever
8. Safety lock lever (Canopy)
9. Throttle lever
10. Left operating lever
11. Right operating lever
12. Pedal lock
13. Boom swing pedal
14. Travel lever
15. Auxiliary pedal
16. Blade lever
17. Selector lever
18. Heater fan switch (Cab)

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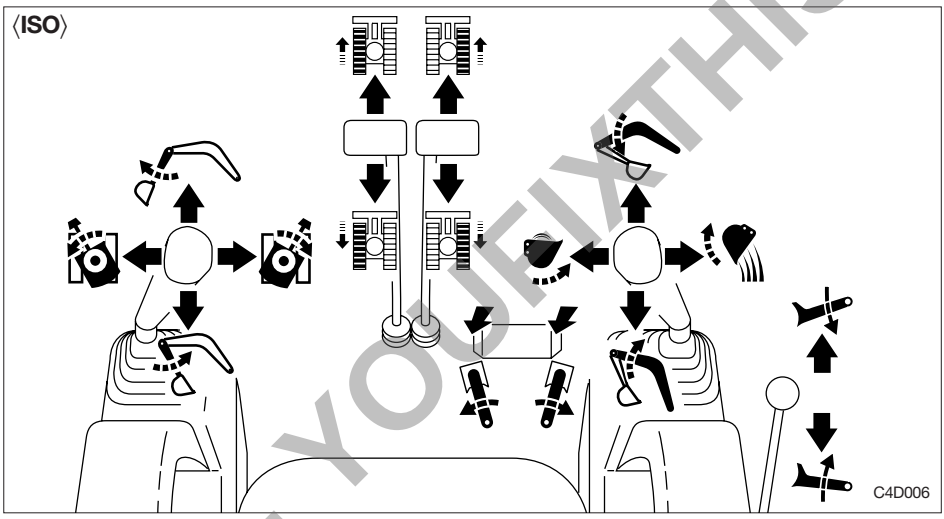
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Lever Pattern (ISO Pattern)

⚠ WARNING

- **Be careful to check which pattern of lever control arrangement you are operating with before beginning operations.**
- **The explanations in this manual are for the ISO pattern.**

⟨ISO⟩



	Left Crawler Forward		Right Crawler Forward
	Left Crawler Reverse		Right Crawler Reverse
	Arm Out		Boom Lower
	Arm In		Boom Raise
	Upperstructure Slew Left		Bucket Load
	Upperstructure Slew Right		Bucket Dump
	Boom Swing Left		Dozer Blade Lower
	Boom Swing Right		Dozer Blade Raise

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Maintenance Items	See page
Walk-Around Inspection	
Inspecting by opening the engine hood and covers	105
Inspecting by walking around the machine	106
Inspecting while sitting in the operator's seat	106
Daily Inspection (Every 10 Hours)	
Inspecting and replenishing the coolant	107
Inspecting and replenishing the engine oil	108
Inspecting the dust indicator	108
Inspecting the water separator	109
Checking the fuel level	109
Inspecting the hydraulic oil level and replenishing	110
Lubricating the working equipment	111
After First 50 Hours (New Machines Only)	
Replacing the hydraulic oil return filter	112
Replacing the engine oil and oil filter	113
Inspecting and adjusting the fan belt	114
Every 50 Hours	
Inspecting and adjusting the crawler tension	115
Lubricating the slew bearing	116
Lubricating the slew motor pinion	117
Inspecting the battery fluid level and replenishing	117
Draining the fuel tank	118
Every 100 Hours	
Cleaning the fuel filter	119
Cleaning the water separator	119
After First 250 Hours (New Machines Only)	
Replacing the travel motor gear oil	120

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For symptoms not included on the table below or if the problem persists after the proper procedures have been taken, consult a Takeuchi sales or service outlet.

Symptom	Main cause	Procedure
Left and right operating levers do not move smoothly	● Insufficient grease on left and right operating levers	● Add grease. Refer to page 131.
Travel levers, blade lever or pedals do not move smoothly	● Insufficient grease on travel levers, blade lever or pedals ● Stretched wire	● Add grease. Refer to page 132. ● Adjust or replace. (Request at a sales or service outlet.)
Hoe attachment, slewing or traveling operation not possible	● Safety lock lever is raised ● Fuse is blown ● Faulty travel lock adjustment	● Lower the safety lock lever. Refer to page 49. ● Replace the fuse. Refer to page 142. ● Adjustment. (Request at a sales or service outlet.)
Digging force is insufficient	● Insufficient hydraulic oil level ● Hydraulic oil is not heated ● Air cleaner is clogged ● Hydraulic oil is not of suitable type	● Replenish to the prescribed level. Refer to page 110. ● Perform the warm-up procedure. Refer to page 68. ● Clean the air cleaner. Refer to page 121. ● Replace the hydraulic oil. Refer to page 127.
Traveling is not possible or not smooth	● Stones or foreign objects are stuck	● Remove the foreign object.
Machine does not travel straight forward	● Stones or foreign objects are stuck ● Faulty crawler tension adjustment	● Remove the foreign object. ● Adjust the crawler to the prescribed tension. Refer to page 115.
Travel speed cannot be changed	● Fuse is blown	● Replace the fuse. Refer to page 142.
Slewing is not possible or not smooth	● Insufficient grease on slew bearing	● Add grease. Refer to page 116.

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TB014 Equipped with 830 mm (33 in.) Arm

TYPE			CANOPY	CAB
MASS				
Machine mass kg (lb.) (not including operator)	With rubber crawlers		1465 (3230)	1595 (3520)
	With steel crawlers		1515 (3340)	1645 (3630)
PERFORMANCE				
Bucket capacity m^3 (cu.ft.) (standard bucket)	Heaped		0.038 (1.33)	
	Struck		0.028 (0.97)	
Slew speed min^{-1} (rpm)			9.0 (9.0)	
Travel speed km/h (mph)	Rubber crawlers	1st	2.0 (1.24)	
		2nd	3.9 (2.42)	
	Steel crawlers	1st	1.9 (1.18)	
		2nd	3.7 (2.3)	
Gradeability (degrees)			25	
Ground pressure kPa (psi)	With rubber crawlers		28.7 (4.17)	31.2 (4.52)
	With steel crawlers		30.0 (4.35)	32.5 (4.71)
Noise level dB(A)	Sound-power level		L_{WA} 93	L_{WA} 93
	Sound-pressure level		L_{pA} 77	L_{pA} 80
ENGINE				
Manufacturer and model			Kubota D782-E2B-BHTU-1 deasel engine	
Rated output	kW / min^{-1} (hp / rpm)		9 / 2200 (12 / 2200)	
Displacement	ml (cu.in.)		778 (47.5)	
Starter	V – kW		12 – 1.2	
Alternator	V – kW		12 – 0.48	
Battery	V – Ah		12 – 38	

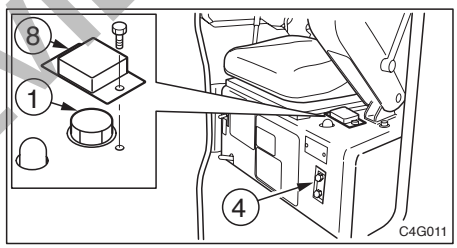
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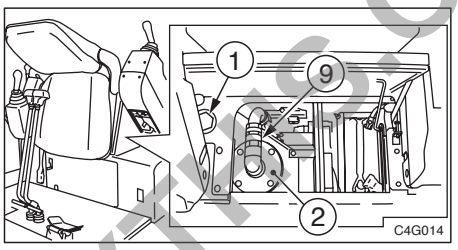
Replacing the Hydraulic Oil Return Filter

⚠ WARNING

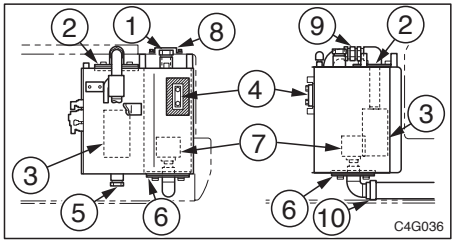
- **Stop the engine and allow the machine to cool down before performing maintenance.**
  - **The engine, hydraulic lines and many other parts of the machine are hot directly after the engine is stopped. Touching these parts will cause burns.**
  - **The hydraulic fluid is also hot and under high pressure.**
    Be careful when loosening caps and plugs. Working on the machine under these conditions could result in burns or injuries due to the hot oil spurting out.
- **Oil may spurt out if caps or filters are removed or pipes disconnected before releasing the pressure in the hydraulic system.**
  - **Gradually loosen the vent plug to relieve tank pressure.**
  - **When removing plugs or screws or disconnecting hoses, stand to the side and loosen slowly to gradually release the internal pressure before removing.**



1. Set the left safety lock lever to the locked position.
2. Loosen the bolt and remove the cover (8).
   (For cab models)



3. Slowly turn the vent plug (1) to relieve tank pressure, then remove.
4. Open the maintenance cover.
5. Remove the four bolts from the cover (2).
6. Remove the adapter (9), then remove the cover (2).



7. Remove the return filter (3).
8. Install the new return filter.
9. Install the adapter (9) and cover (2).
10. Inspect the level with the sight gauge (4), and replenish if the level is low.
    Refer to page 110 “Inspecting the Hydraulic Oil Level and Replenishing”.
11. Pressurize the hydraulic tank.
    Refer to page 110 “Pressurizing the hydraulic tank”.

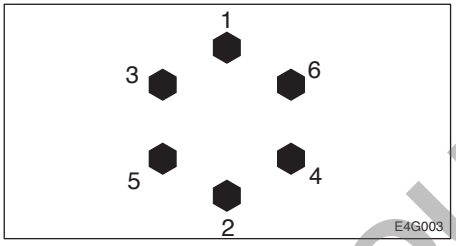
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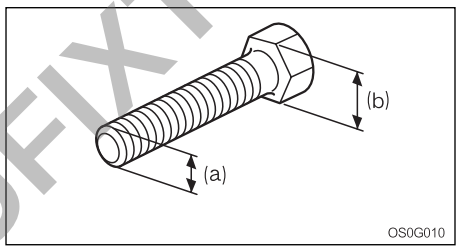
Tightening Torques

Nuts and Bolts (for ISO strength category 10.9)

Tighten nuts and bolts at the torques shown on the table below, unless otherwise specified in the text.

- Tightening torques when mounting plastic covers differ from the values on the table below. Consult a Takeuchi sales or service outlet. Tightening too strongly will break the cover.
- When replacing nuts and bolts, replace them with nuts and bolts of the same size and standards.
- Tighten nuts and bolts alternately (top, bottom, left then right) or in 2 or 3 times so that they are tightened uniformly.





Thread	Head width (b)	Size (a) X Pitch	Torque	
			General Connection Points	
	mm	mm	N·m	ft-lb
Coarse	10	M6 X 1.0	9.8 ± 0.5	7.2 ± 0.4
	12, 13	M8 X 1.25	22.6 ± 1.1	16.6 ± 0.8
	14, 17	M10 X 1.5	47.1 ± 2.4	34.7 ± 1.7
	17, 19	M12 X 1.75	83.4 ± 4.1	61.5 ± 3.0
	19, 22	M14 X 2.0	134.4 ± 6.7	99.1 ± 4.9
	22, 24	M16 X 2.0	207.9 ± 10.4	153.3 ± 7.7
	27, 30	M20 X 2.5	410.9 ± 20.5	303.1 ± 15.1
Fine	12, 13	M8 X 1.0	24.5 ± 1.2	18.1 ± 0.9
	14, 17	M10 X 1.25	50 ± 2.5	36.9 ± 1.8
	17, 19	M12 X 1.5	87.3 ± 4.3	64.4 ± 3.2
	19, 22	M14 X 1.5	135.3 ± 6.8	99.8 ± 5.0
	22, 24	M16 X 1.5	220.6 ± 11	162.7 ± 8.1
	27, 30	M20 X 1.5	452.1 ± 22.6	333.4 ± 16.6

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Attachment Combination Table

Below is the bucket combination table for when arms and telescopic arms are installed. Heed this table.

⚠ WARNING

- **Consult with a Takeuchi before installing optional attachments.**
- **Do not use attachments that have not been approved by Takeuchi. 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.**
- **Add an extra weight when using a long arm or a telescopic arm.**
- **Install a swing stopper when a bucket wider than the standard bucket, long arm and telescopic arm is installed and when using a cab version.**

✔ : Usable
Δ : Usable for light operations (digging and loading operations with dry, loose sand or mud)
— : Not usable

Total bucket weight = Weight of bucket + Weight of full bucket load (specific gravity : 1.8)

TB014 / TB016	Rated Capacity m^3 (cu.yd.)	Bucket cutting width mm (inch)	830 mm (33 in.) Arm / 930 mm (37 in.) Arm	1040 mm (41 in.) Arm / 1130 mm (44 in.) Arm	——— / Telescopic Arm 930 to 1380 mm (37 to 54 in.)
260W Bucket	0.020 (0.026)	265 (10.4)	✔	✔	✔
300W Bucket	0.023 (0.030)	300 (11.8)	✔	✔	✔
350W Bucket	0.027 (0.035)	335 (13.2)	✔	✔	✔
450W (S.T.D.) Bucket	0.038 (0.049)	435 (17.1)	✔	✔	—
500W Bucket	0.043 (0.056)	485 (19.1)	✔	✔	—
Three-Hole Bucket	0.049 (0.064)	457 (18.0)	✔	✔	—
Total bucket weight = Within 98 kg (216 lb.) for Telescopic Arm		Within 485 (19.1)	✔	✔	✔
Total bucket weight = Within 127 kg (280 lb.)		Within 485 (19.1)	✔	✔	—
Hydraulic Breaker (TKB-71)			✔	✔	—

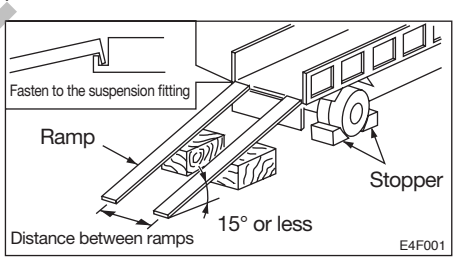
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⚠ WARNING

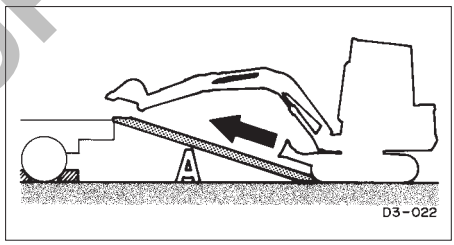
The machine may roll or tip over or fall while loading or unloading it. Take the following precautions:

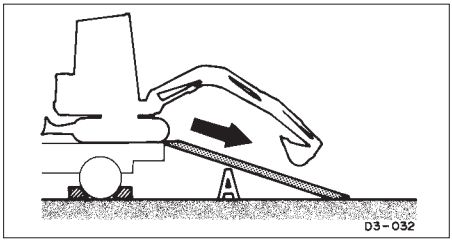
- **Select a firm, level surface and keep sufficient distance from road shoulders.**
- **Secure the ramps of adequate strength and size to the truck bed. The slope of the ramps must not exceed 15°. If the rumps are bowed down too low, support them with poles or blocks.**
- **Keep the truck bed and loading ramps clean of oil, clay, ice, snow, and other materials which can become slippery. Clean the tracks.**
- **Block the transport vehicle so it can not move.**
- **Use a signal person when loading and unloading the machine, and travel slowly in first gear (low speed).**
- **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.**
- **Engage the slew (swing) lock after loading.**
- **Block both tracks and secure the machine to the truck bed with load binders.**

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 with the throttle lever.





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 94 "Transporting Posture".

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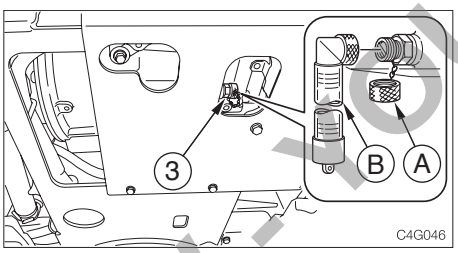
Replacing the Engine Oil and Oil Filter

⚠ WARNING

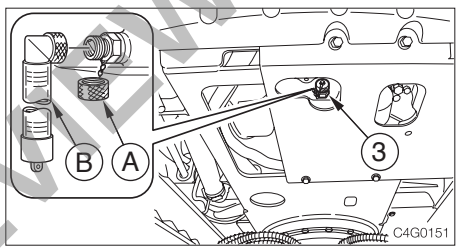
Stop the engine and allow the machine to cool down before performing maintenance.

- **The engine, muffler, radiator and many other parts of the machine are hot directly after the engine is stopped. Touching these parts will cause burns.**
- **The engine oil is also hot. Be careful when loosening caps and plugs. Working on the machine under these conditions could result in burns.**

< TB014 >



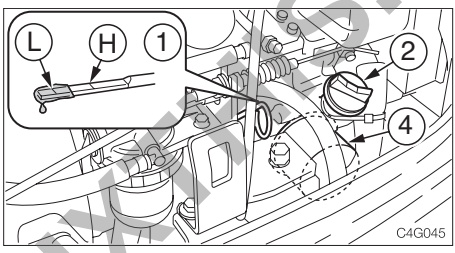
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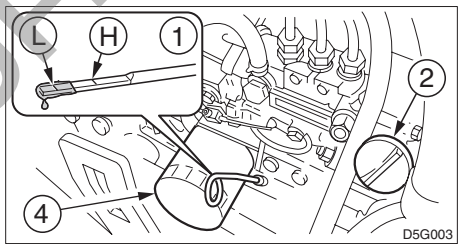
1. Place a pan for catching the spent oil under the drain plug (3).
2. Remove cap (A), install connector (B) and drain the oil. (The oil comes out when the screw is tightened.)
3. Remove connector (B) and install cap (A).

IMPORTANT: Check the spent oil. If it contains large amounts of metal powder, consult a Takeuchi sales or service outlet.

< TB014 >



< TB016 >



4. Using a filter wrench, turn the filter (4) counterclockwise and remove it.
5. Clean the surface of installation of the filter stand.
6. Apply a thin layer of oil to the packing of the new filter.
7. Install the new filter by hand.
8. Tighten 3/4 more turn after the filter packing comes in contact with the surface of installation.
9. Remove the oil supply cap (2).
10. Supply oil up to the upper limit (H) of the dipstick (1). Problems could arise if the oil level is either too low or too high.
11. Tighten the oil supply cap (2).
12. Start the engine, run it at low idle for about 3 minutes, then stop it.
13. After about 10 minutes, inspect the oil level.

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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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