WSM

WORKSHOP MANUAL
KUBOTA EXCAVATOR

K008-3
U10-3

Kubota

Code No.97899-60730

Record of Revisions

Symbol	Date	Main Revised Points & Corrective Measures	Person-in-charge
△1			
△2			
△3			
△4			

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I. General

A.Body and engine identification marks

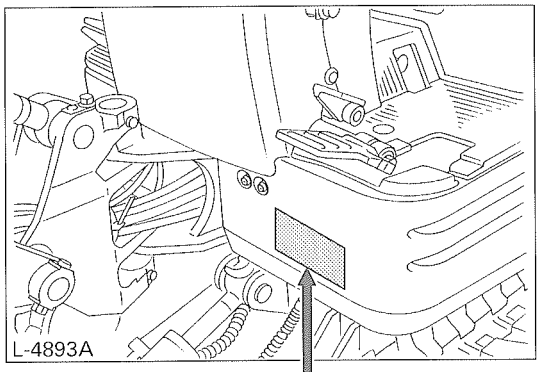
K008-3, U10-3 EU-Version

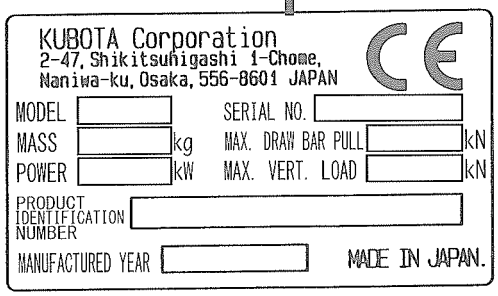
Your KUBOTA dealer is always ready to help so that your excavator offers the best performance. After having carefully read this manual, you will realize that much of the routine maintenance can be done by yourself. Your KUBOTA dealer is responsible for servicing and the derivery of sopare parts. When orderring spare parts from your KUBOTA dealer, always mention the serial number of the excavator and the engine.
Note these numbers right away in the supplied lines.

	Excavator	Excavator
Excavator	_____	_____
Engine	_____	_____

Dealer's name

(To be filled in through the owner)





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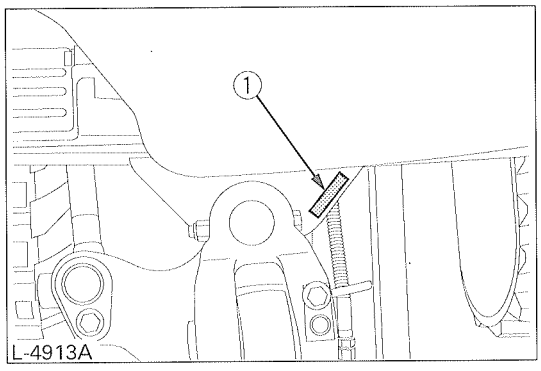
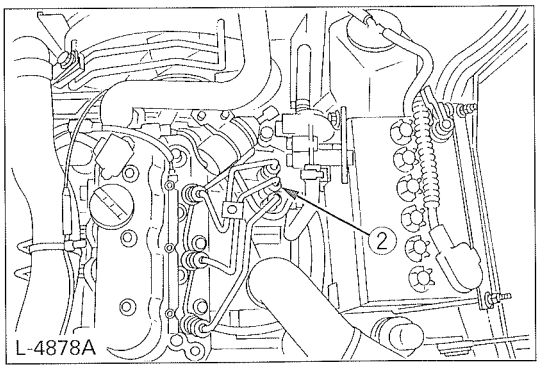


(1) Serial No.



(2) Engine serial No.

K008-3 KTC, KCL, KTA-Version

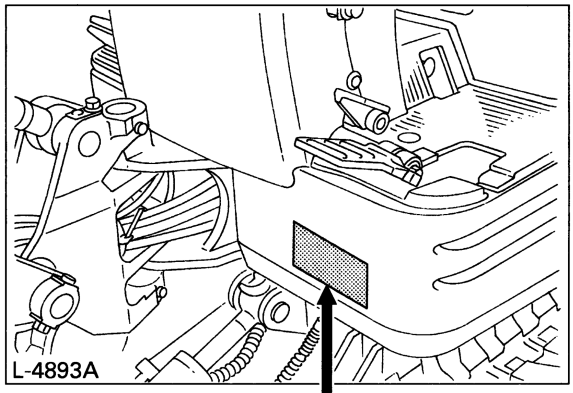
The model name, machine number and engine number of this product are described in their respective positions, as shown below. Note that their positions may be different depending on the specifications. Chech the specification of the product.

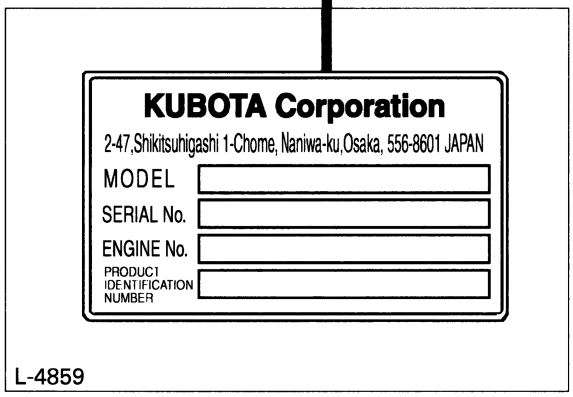
	Excavator	Excavator
Excavator		
Engine		

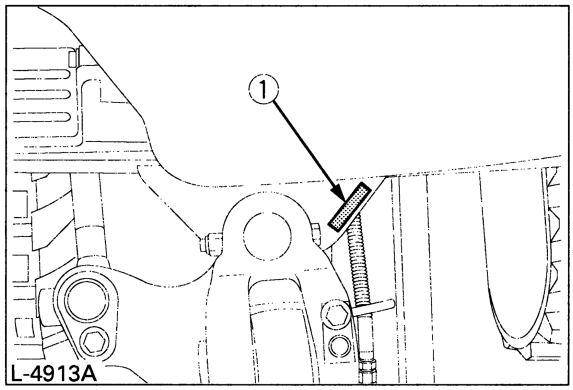
Date of Purchase _____

Name of Dealer _____

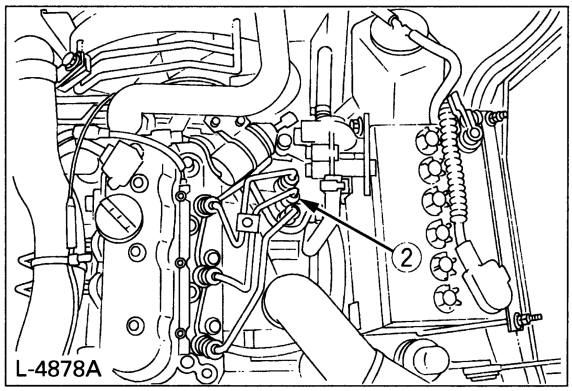
(To be filled in by purchaser)







(1) Serial No.



(2) Engine serial No.

B.Safty precautions for servicing, disassembly and reassembly

⚠ Safty precautions for servicing

Most accidents during servicing arise from carelessness. Please remember that safty involves both the welfare of the employees and improved work efficiency.

⚠ Safty precautions for Disassembly and reassembly

Machines must be diassembled and assembled efficiently and safely.
It is very important to thoroughly understand the construction and function of the machine, to make all appropriate preparations, and start operations according to the specified working procedures.

a. Safty measures before starting work

(1) Work clothes

1. Wear specified work cap and clothed. (Under no circumstances may workers wear undershirts only.)
   Cuffs must be kept buttoned, and any tears must be mended.)
2. Wear safety shoes.
3. Do not wear cotton gloves when working on the internal section of engine, reduction gears or hydrauricunits for repair or others, or when using a hammer. Wear leather gloves, however, when hoisting wires.

(2) Inspecting equipment and tools

1. Prepare equipment (cranes, fork lifts, tool, etc.) required for servicing and inspect for any problems before starting work.
2. Hammer heads (metal parts) must be firmly secured to their handles.
3. Check hosting tools (wire ropes, hoisting chains, etc.) before use.

(3) Keep workshop in order

1. Secure appropriate space needed for disassembly to the job.
2. Secure a clean, safe place for arranging disassembled parts.
3. Store volatile substances (gasoline, light oil, thinner, oily articles, etc.) in appropriate containers at selected locations to prevent fire hazards.

b. Safty measures during work

(1) Protectors

1. Wear goggles when using chisels for chipping.
2. Use appropriate protectors during welding.
3. Wear a helmet when working with a crane or at elevated locations.

(2) Team work

1. When working with two or more people, divide the work and maintain close communication.
2. Clane work must be carried out using predetermined signals.

(3) Disassembly and assembly

1. Do not wear gloves when using hammers.
2. Use rods of the specified soft material for removing pins. Do not use a hammer as a pad.
3. Do not place fingers in holes when centering.
4. Heavy parts must be adequately supported before removingbolts.

(4) Cranes

1. In principle, use a crane for objects heavier than 44lb (20kg).
2. Crane operation and hoisting must be performed only by qualified personal.
3. Pay careful attention to the center of gravity when hoisting, and do not stand under the lifted objects.

(5) Others

1. To work under a jacked-up carrier, be sure to place wood pieces under it.
2. When charging batteris, make sure there are no open flames in the immediate vicinity.
3. All electric tools must be grounded.
4. Before welding the machine, remove the battery.
   - When removing the battery, be sure to disconnect negative (-) cord first.
   - When mounting the battery, be sure tp connect the positive (+) cord first.

c. Preparation for disassembly

(1) Cleaning

Remove mud and dirt from the body before disassembly.

(2) Acceptance inspection

The machine must be checked before it is disassembled to record existing conditions, such as those listed below.

Model, serial number, and hourmeter reading

- Reason for repair and repair history
- Element stains
- Fuel and oil condition
- Parts damage *(Take photographs if nessesary.)

(3) Equipment and tools

prepare equipment, tools, cranes and parts storage racks as required.

d. Precautions for disassembly and reassembly

(1) Disassembly

1. Follow the specified disassembly procedures.
2. Make alignment marks to insure correct reassembly.
3. Arrange disassembled parts in an orderly way, and attach identification tags or put marks if needed.

(2) Reassembly

1. Clean all parts before assembly. Repair any scratches or dents. Take special precautions against dirt and dust.
2. Parts with rust-preventive coatings must be assembles only after removing the corting.
3. Separated parts must be correctly reassembled using alignment marks.
4. As a rule, use a press to reassembled bearings, bushing and oil seals. Use pads when using a hammer.

C.IMPORTANT SAFTY PROCESS AND CRITICAL FUNCTIONAL PROCESS

The following instructions are related to essential adhesives, important safety process [S] and critical functional process [A] .Pay special attention in servicing these process. (Pay also close attention in reconnecting the electrical cables.)

a. Essential Adhesives

Type of screw adhesive
- Unless otherwise specified, use Three-Bond 1324 adhesive (medium-duty type). Keep the screw threads free of oil and water.

Type of instantaneous adhesive
- Use Three-Bond 1733 or Three-Bond 1741E adhesive. Keep the bond areas free of oil and water.

b. Important Safety Process [S] .

1. Reconnecting the fuel hose (clearance, hose routes, clamps, etc.)
2. Electrical cabling (engine, instrument panal, controls, etc.) (wiring routes, clamps and couplers)

c. Important Critical Functional Process [A] .

1. Setting up the travel wheel motor (tightening torque)
2. Reassembling the rotary joints (joint direction and shaft set-up)
3. Installing the swivel base bearing and the swivel motor (tightening torque)
4. Fitting the pump couplings (tightening torque)
5. Installing the counter weight.

D.IMPORTANT INSPECTION ITEMS AFTER REASSEMBLING

a Operate the Machine and check for Unusual Noise and Vibrations.

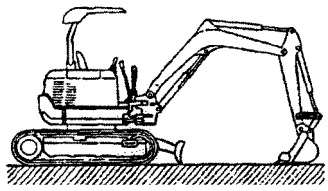
b Make Sure the Safety decals and Wireharness Clamps are in their Specified Positions.

c With the Machine Front in a Specified Posture, Check the Amount of Hydrauric Oil

Checking the oil level (For further datails, refer to the Operator's Manual of each model.)

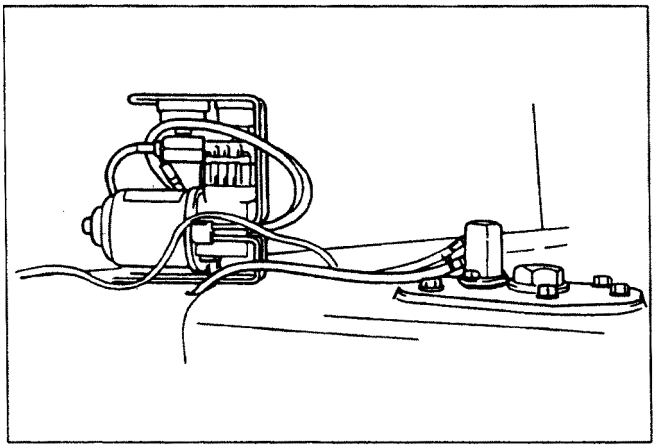
1) Park the machine on a level ground.
2) Make sure the hydrauric oil temperature is in the range of 10-30°C (50-86°F) and see if the oil level is within the specified zone of the oil level gauge.
3) Keep the machine front as shown as following posture.

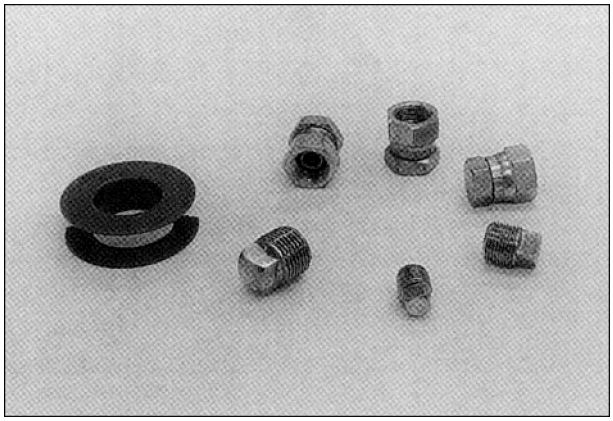
Posture: Extend the rods of the arm and bucket cylinders nealy half. Place the bucket on the ground, the offset swing at the center, and the dozer also on the ground.

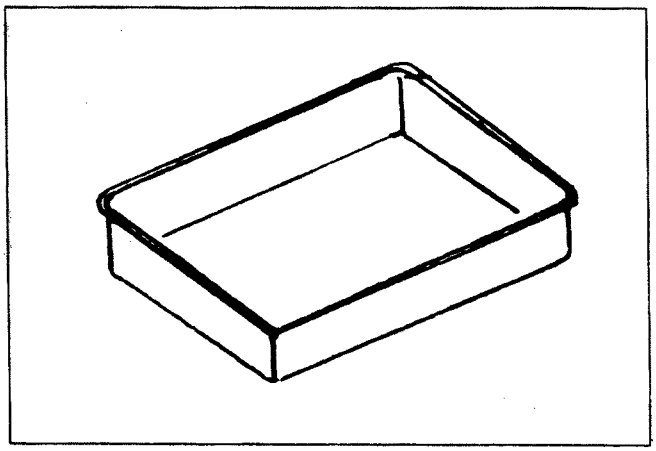


E.SERVICING FUNDAMENTALS

Locking adhesive







a.Items for Servicing

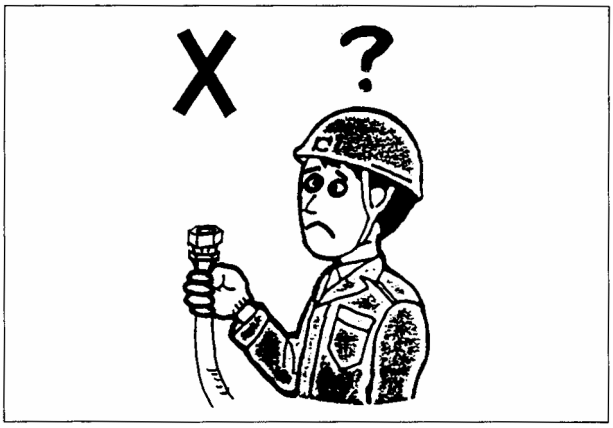
1) Tighten bolts, nuts, adapters,and similar parts to their specified torques which are given in the list of tightening torques and adhesive as well as in this manual. Be sure to observe the specified torques for important tightened parts and components.
2) Wipe out water, oil and grease off the screws on which loctite adhesive is to be applied. Be sure to apply the adhesive to specified locations.

Types of screw adhesive
Equivalent to LOCTITE 271 (Heavy-duty) Equivalent to THREE-BOND 1305P (Heavy-duty) Equivalent to THREE-BOND TB1401B (Light-duty) Unless specified otherwise, use THREE-BOND 1324 (Medium-duty).

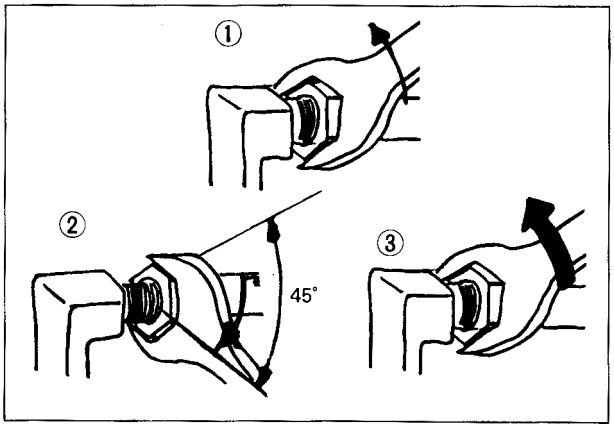
Type of instantaneous adhesive
Use THREE-BOND 1733 or 1741E

The word “LOCTITE“ in this manual denotes the red-color type.

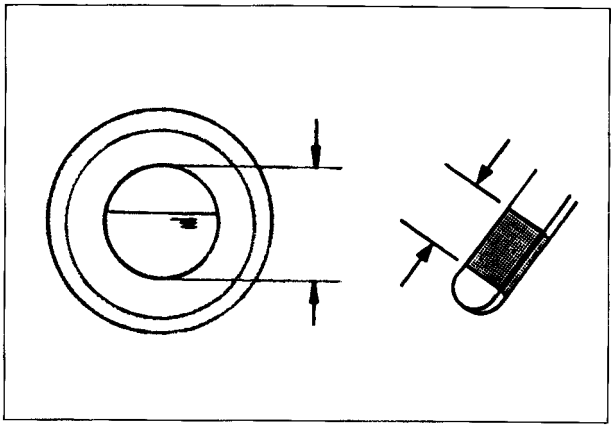
3) Precautions in disassembling the hydraulic equipment
   - Use a vacuum pump, pulgs, oil pans, waste cloth and the like to prevent oil from running out or splashing.
   - Wipe out leaking oil completely first and then add oil as required.
   - Protect the openings with plugs, covers or the like to keep off foreign matters. Most of hydraulic system troubles are caused by the entry of foreign matters.
   - Before reassembling, clean up the parts and components and apply hydraulic oil on them.
   - The system consists of precision parts. Be careful not to scratch them and apply excessive force on them.



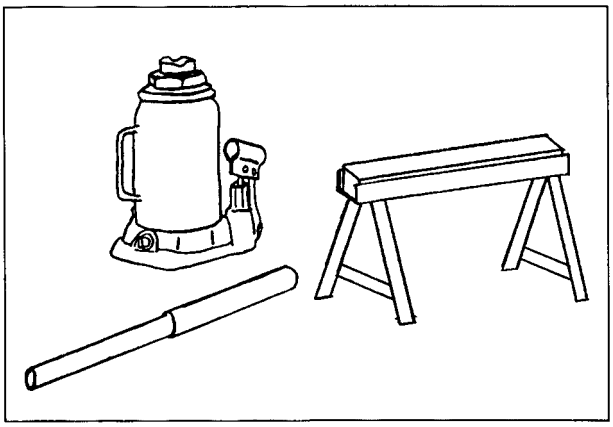
4) Precautions in tightening hoses and pipes.
   - Flexible hoses have a slight natural bend of their own. Utilize the natural bend. Be also careful not to twist them.
   - Be careful not to confuse the routes of the hoses.
   - Do not hold the hoses in tight contact with their adjacent parts and surfaces.



- Tightening steps
  ① First tighten the nut to its specified torque.
  ② Then loosen the nut by about 45° to fit the seat of the joint to the connection.

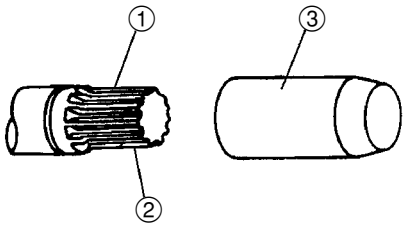


5) The quantities of oil, fuel, water and others, except for the oil to be filled in the track rollers and idlers, are listed just as reference. Fill up the fluid up to the specified center level of a level gauge if it is provided.

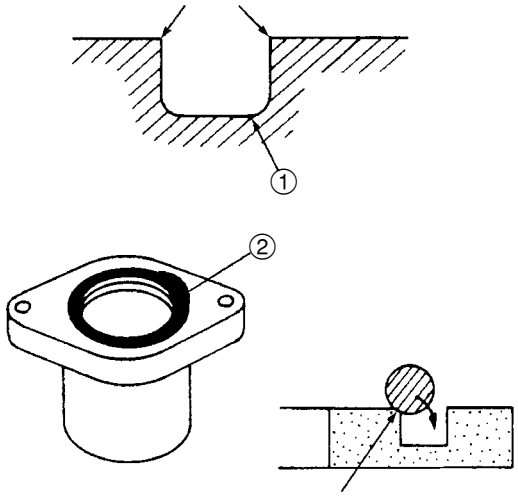


6) Security support the machine with a jack and a supporting jig when it is jacked up for servicing.
7) Be sure to use a crane in disassembling and reassembling heavy parts and components (frame, front attachment, crawler, etc.).

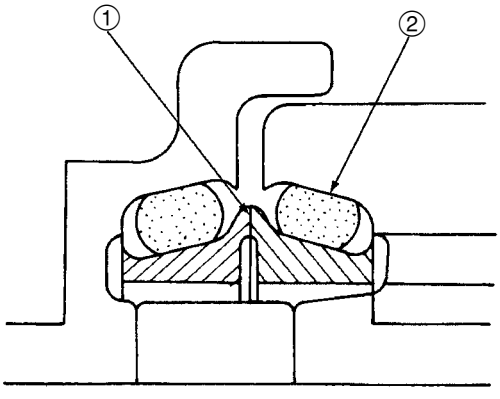
b.O-ring, Oil seal, Circlip and Roll Pin



①O-ring
②Spline
③Guide



①O-ring groove
②O-ring

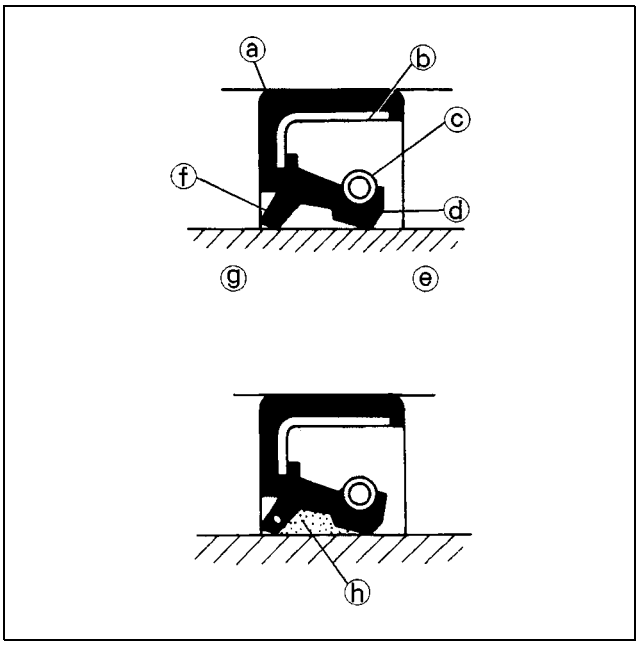


①Sliding surface
②O-ring

(1) General precautions
- Make sure the O-ring and the oil seal are free of anything unusual (uneven surface, scratches, chipping, etc.).
- Check the O-ring groove for burrs. Correct, if any, using an oil stone or the like.
- When putting a part past a sharp edge into position, protect such edge with a cover or get the part chamfered.

(2) O-ring
- Clean up the O-ring groove and deburr its edge as required.
- Before installing the ring, be sure to apply lubricant (grease) over it. (Do not do this to the floating seal.)
- Fit the O-ring into its groove without twist. With your fingertip, push the ring gently and evenly into the final position. Otherwise the ring would easily get twisted in contact with the inner edge of the groove.

(3) Floating seal
- Be sure to wipe oil off the O-ring and the O-ring contact surface. (Note, however, that oil must be applied thinly over those of the wheel motor.)
- In fitting the O-ring into the floating seal, be careful not to twist the O-ring.
- Before installing the floating seal together with the O-ring, apply sealing oil thinly over the sliding surface. Be careful to keep the sliding surface and O-ring in alignment with the housing.
- Finally turn hte floating seal 2 or 3 times by hand in order to form an oil film over the sliding surface as well as to get the sealing surface well it.

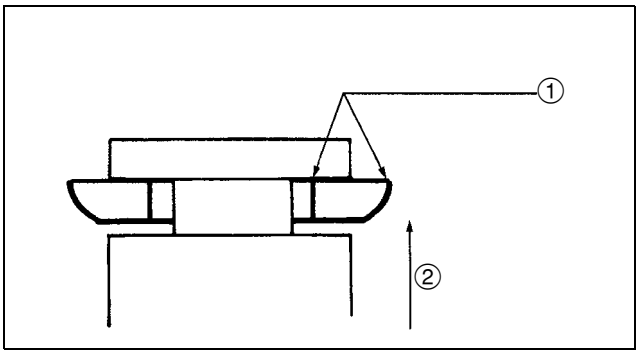


(4) Oil seal

- Do not confuse the orientation of the oil seal lips. Direct the main lip toward the oil chamber; in other word, toward what is to be sealed.

ⓐ	Packing	ⓕ	Dustproof lip
ⓑ	Metal ring	ⓖ	Atmosphere (outside)
ⓒ	Spring	ⓗ	Grease
ⓓ	Main lip		
ⓔ	Oil chamber (inside)		

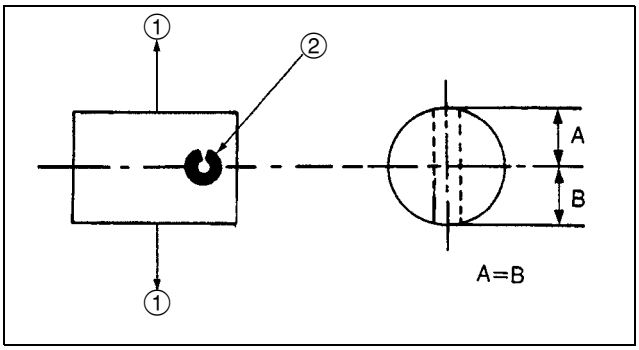
- If in dry state, the oil seal may wear out when running in the machine. To prevent this, be sure to apply lubricant (grease) over the lip sliding surface. If provided also with a dustproof lip, fill the space between this lip and the main lip with grease.
- As a rule, use a press to press-fit the oil seal. If not available, allpy a suitable tool and tap it evenly without allowing any tilt. Press-fit the oil seal deep down to the bottom of the oil seal fitting boss.



①Edge:Outside
②Force direction

(5) Mounting the circlip

- Place the circlip with its sharp edge facing outward (in the locking direction).
- Fit the circlip securely in the groove. For the hole circlip in particular, install and turn it slightly to make sure it fits well.



①Revolving
②Spring pin

(6) Tapping the roll pin (spring pin)

- Place the roll pin (spring pin) with its opening perpendicular to the load.
- Place the roll pin (spring pin) with its opening in the turning direction.
- Evenly tap the roll pin (spring pin) into position.

c. Piping

(1) General precautions

- Tightening the pipe socket to the specified torque. If too tight, the socket itself or a hydraulic component may get damaged. It too loose, an oil leak may result.
- In connecting a new hose or pipe, tighten its nut first to the specified torque and then turn it back (about 45°). Then tighten it again to the specified torque. (Do not this to the sealing tape-applied hose or pipe.)
- When disconnecting a vertical hose or pipe, separate its bottom connection first.
- In desconnecting and reconnecting the hose and pipe, be sure to use two wrenches. With one wrench, restrain the mating part to allow no twist.
- Check the mating connector's sleeve and the hose's taper for dust deposits and scratches.
- When the pipe socket has been tightened up, wipe the joint clean. Apply the maximum operating pressure 2 or 3 times to make sure there is no oil leak.

(2) Hydraulic hose

Check the hydraulic hose for too tight a connect or twist.

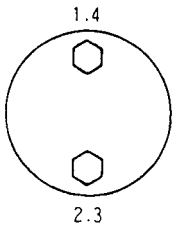
* Excessivly tight contact

Let's suppose that a hose is in contact with another hose or other part. If the hose is pulled away by a force of 2 kg but still in contact, it means the contact is too tight.

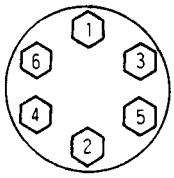
(3) Precautions in tightening the bolts and nuts

- Use bolts of specified length.
- Do not over tighten the bolts: Its threads may get deformed or the fixed part may get damaged. Do not undertighten the bolt either: It may get loose.
- In other words, tighten the bolt to the specified torqoe.
- Tighten the bolts and nuts diagonally for even tightness.

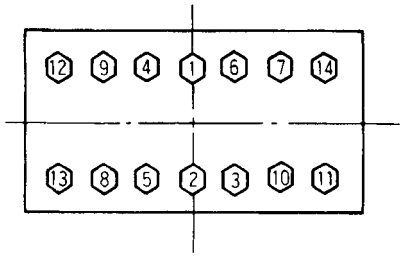
Top and bottom alternately

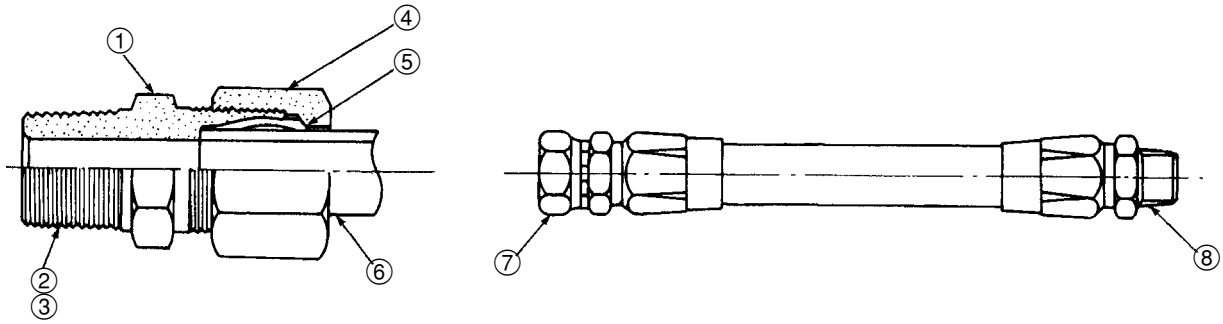


Diagonally



Diagonally staring from center





①Joint body
②R (Tapered thread)
③G (Straight thread)
④Nut
⑤Sleeve
⑥Steel pipe
⑦Union nut
⑧Tapered thread

(4) Hose screw

Thread size (piping screw)	Tightening torque N·m kgf·m ft·lbf		Wrench size (reference)
	Union nut section	Taper thread section	
1/8”	7.8 ~ 11.8 N·m 0.8 ~ 1.2 kgf·m 5.8 ~ 8.7 ft·lbf	14.71 ~ 19.61 N·m 1.5 ~ 20 kgf·m 10.85 ~ 14.47 ft·lbf	17 mm 0.67 in
1/4”	24.5 ~ 29.4 2.5 ~ 3.0 18.1 ~ 21.7	36.3 ~ 44.1 3.7 ~ 4.5 26.8 ~ 32.5	19 mm 0.75 in
3/8”	49.0 ~ 53.9 5.0 ~ 5.5 36.2 ~ 39.8	49.0 ~ 68.6 5.0 ~ 7.0 36.2 ~ 50.6	22 mm 0.87 in
1/2”	58.8 ~ 63.7 6.0 ~ 6.5 43.4 ~ 47.0	83.4 ~ 88.3 8.5 ~ 9.0 61.5 ~ 65.1	27 mm 1.06 in
3/4”	117.7 ~ 127.5 12.0 ~ 13.0 86.8 ~ 94.0	127.5 ~ 147.1 13.0 ~ 15.0 94.0 ~ 108.5	36 mm 1.42 in
1”	137.3 ~ 147.1 14.0 ~ 15.0 101.3 ~ 108.5	147.1 ~ 166.7 15.0 ~ 17.0 108.5 ~ 123.0	41 mm 1.61 in

Metric Size Hose

Thread size (piping screw)	Torque N·m kgf·m ft·lbf
M12 × 1.5	20 ~ 30 2.0 ~ 3.1 14.75 ~ 22.13
M14 × 1.5	20 ~ 30 2.0 ~ 3.1 14.75 ~ 22.13
M16 × 1.5	30 ~ 50 3.1 ~ 5.1 22.13 ~ 36.9
M18 × 1.5	30 ~ 50 3.1 ~ 5.1 22.13 ~ 36.9
M22 × 1.5	40 ~ 60 4.1 ~ 6.1 29.5 ~ 44.25

(5) Joint bodies

Thread size (piping screw)	Tightening torque N·m kgf·m ft·lbf		Spanner size (reference)	Remarks Steel pipe (OD)	
	R (tapered thread)	G (straight thread)			
1/8”	19.6 ~ 29.4 N·m 2.0 ~ 3.0 kgf·m 14.5 ~ 21.7 ft·lbf	-	17 mm 0.67 in	When in steel pipe is in use.	8 mm 0.31 in
1/4”	36.3 ~ 44.1 3.7 ~ 4.5 26.8 ~ 32.5	W/O-ring *Joint Torque* 58.8 ~ 78.5 6 ~ 8 43.4 ~ 57.9	19 mm 0.75 in		12 mm 0.47 in
3/8”	39.2 ~ 49.0 4.0 ~ 5.0 28.9 ~ 36.2	W/O-ring *Joint Torque* 78.5 ~ 98.1 8 ~ 10 57.9 ~ 72.3	23 mm 0.91 in		15 mm 0.59 in
1/2”	49.0 ~ 68.6 5.0 ~ 7.0 36.2 ~ 50.6	W/O-ring *Joint Torque* 117.7 ~ 137.3 12 ~ 14 86.8 ~ 101.3	26 mm 1.02 in		16 mm 0.63 in

(6) Tightening torque table for hose clamp (Screw type)

No.	Dia. (mm)	Code No.	Tightening torque N·m kgf·m ft·lbf
1	Ø12 ~ 16	09318-89016	2.5 ~ 3.4 25 ~ 35 1.84 ~ 2.51
2	Ø19 ~ 25	09318-89024	
3	Ø31 ~ 40	09318-89039	
4	Ø36 ~ 46	09318-89045	
5	Ø15 ~ 25	RC101-64580	4.9 ~ 5.9 50 ~ 60 3.61 ~ 4.35
6	Ø26 ~ 38	68311-72820	
7	Ø13 ~ 20	RB101-63630	3.4 ~ 4.4 35 ~ 45 2.58 ~ 3.31
8	Ø40 ~ 55	RC411-63180	4.9 ~ 5.9 50 ~ 60 3.61 ~ 4.35
9	Ø77 ~ 95	69284-63170	
10	Ø50 ~ 60	RC401-63190	
11	Ø32 ~ 44	RD411-63820	

(7) Nuts for piping

Steel pipe size (O.D. × I.D. × Thickness)	Tightening torque N·m kgf·m ft·lbf	Spanner size (reference)	Remarks
8 × 6 × 1 mm 0.31 × 0.24 × 0.04 in	29.4 ~ 39.2 3.0 ~ 4.0 21.7 ~ 28.9	17 mm 0.67 in	When sleeve nut is in use.
10 × 7 × 1.5 mm 0.39 × 0.28 × 0.06 in	39.2 ~ 44.1 4.0 ~ 4.5 28.9 ~ 32.5	19 mm 0.75 in	
12 × 9 × 1.5 mm 0.47 × 0.35 × 0.06 in	53.9 ~ 63.7 5.5 ~ 6.5 39.7 ~ 47.0	21 mm 0.83 in	
16 × 12 × 2 mm 0.63 × 0.47 × 0.08 in	88.3 ~ 98.1 9.0 ~ 10.0 65.1 ~ 72.3	29 mm 1.14 in	
18 × 14 × 2 mm 0.71 × 0.55 × 0.08 in	127.5 ~ 137.3 13.0 ~ 14.0 94.0 ~ 101.3	32 mm 1.26 in	
27.2 × 21.6 × 2.8 mm 1.07 × 0.85 × 0.11 in	235.4 ~ 254.97 24.0 ~ 16.0 173.6 ~ 188.1	41 mm 1.61 in	

(8) Tightening torque of bolts and nuts

Refer to the tightness torque table below.

Bolts, Nuts / Nomial Dia.	4T 	7T 	9T 
	SS41	S40C, S45C	SCr4
M6	7.8 ~ 9.3 N·m 0.80 ~ 0.95 kgf·m 5.8 ~ 6.9 ft·lbf	9.8 ~ 11.3 N·m 1.00 ~ 1.15 kgf·m 7.2 ~ 8.3 ft·lbf	12.3 ~ 14.2 N·m 1.25 ~ 1.45 kgf·m 9.0 ~ 10.5 ft·lbf
M8	17.7 ~ 20.6 N·m 1.80 ~ 2.10 kgf·m 13.0 ~ 15.2 ft·lbf	23.5 ~ 27.5 N·m 2.40 ~ 2.80 kgf·m 17.4 ~ 20.3 ft·lbf	29.4 ~ 34.3 N·m 3.00 ~ 3.50 kgf·m 21.7 ~ 25.3 ft·lbf
M10	39.2 ~ 45.1 N·m 4.00 ~ 4.60 kgf·m 28.9 ~ 33.3 ft·lbf	48.0 ~ 55.9 N·m 4.90 ~ 5.70 kgf·m 35.4 ~ 41.2 ft·lbf	60.8 ~ 70.6 N·m 6.20 ~ 7.20 kgf·m 44.8 ~ 52.1 ft·lbf
M12	62.8 ~ 72.6 N·m 6.40 ~ 7.40 kgf·m 46.3 ~ 53.5 ft·lbf	77.5 ~ 90.2 N·m 7.90 ~ 9.20 kgf·m 57.1 ~ 66.5 ft·lbf	103.0 ~ 117.7 N·m 10.50 ~ 12.00 kgf·m 75.9~ 86.8 ft·lbf
M14	107.9 ~ 125.5 N·m 11.00 ~ 12.80 kgf·m 79.6 ~ 92.6 ft·lbf	123.6 ~ 147.1 N·m 12.60 ~ 15.0 kgf·m 91.1 ~ 108.5 ft·lbf	166.7 ~ 196.1 N·m 17.00 ~ 20.00 kgf·m 123.0 ~ 144.7 ft·lbf
M16	166.7 ~ 191.2 N·m 17.00 ~ 19.50 kgf·m 123.0 ~ 141.0 ft·lbf	196.1 ~ 225.6 N·m 20.00 ~ 23.00 kgf·m 144.7 ~ 166.4 ft·lbf	259.9 ~ 304.0 N·m 26.50 ~ 31.00 kgf·m 191.7 ~ 224.2 ft·lbf
M18	245.2 ~ 284.4 N·m 25.00 ~ 29.0 kgf·m 180.8 ~ 209.7 ft·lbf	274.6 ~ 318.7 N·m 28.00 ~ 32.50 kgf·m 202.5 ~ 235.1 ft·lbf	343.2~ 402.1 N·m 35.00 ~ 41.00 kgf·m 253.2 ~ 296.5 ft·lbf
M20	333.4~ 392.2 N·m 34.00 ~ 40.00 kgf·m 245.9 ~ 389.3 ft·lbf	367.7 ~ 431.5 N·m 37.50 ~ 44.0 kgf·m 271.2 ~ 318.2 ft·lbf	519.8 ~ 568.8 N·m 53.00 ~ 58.00 kgf·m 383.3 ~ 419.5 ft·lbf

(9) Types and materials of bolts and nuts

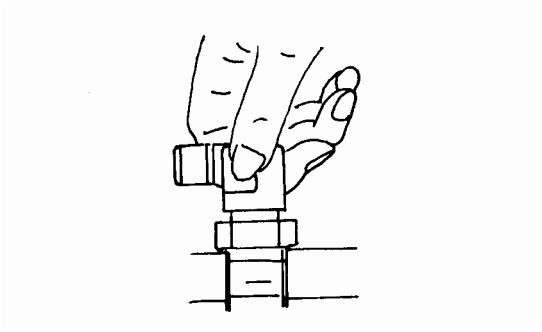
[ex. bolts]

Types	Material	Tensile strength	Hardness	Bolt head marking	
4T	SS41	Over 392 MPa 4000 kgf/cm^2 56892 lbf/in^2	H_RB 62 ~ 98		No mark or marked 4
7T	S40C S45C	Over 686 MPa 7000 kgf/cm^2 99561 lbf/in^2	H_RC 20 ~ 28		Marked 7
9T	SCr4	Over 882 MPa 9000 kgf/cm^2 128007 lbf/in^2	H_RC 28 ~ 34		Marked 9

(10)Washer-equipped elbow

Tightening torque

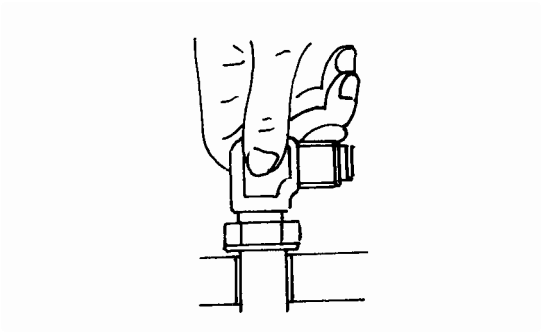
Size	N·m	kgf·m	ft·lbs
G1/4	25 ~ 30	2.5 ~ 3.0	18 ~ 22
G3/8	49 ~ 54	5.0 ~ 5.5	36 ~ 40
G1/2	59 ~ 64	6.0 ~ 6.5	43 ~ 47
G3/4 G1	118 ~ 127	12.0 ~ 13.0	87 ~ 94



Tightening procedure

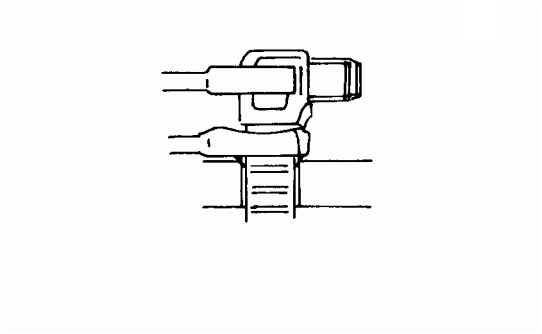
1) Connecting with the valve
   - Screw in the elbow by hand until the washer comes into contact.

Note: Clean up hte mating seal boforehand.



2) Positioning
   - Turn the elbow back to its set position.

Note: Do not make any more than one turn back.



3) Fixing
   - Tighten up the lock nut with a wrench.
   - Lock nut tightening torque
     G1/4:25 ~ 30 N·m (2.5 ~ 3.0 kgf·m, 18 ~ 22 ft·lbs)
     G3/8:50 ~ 55 N·m (5.0 ~ 5.5 kgf·m, 36 ~ 40 ft·lbs)
     G1/2:60 ~ 65 N·m (6.0 ~ 6.5 kgf·m, 43 ~ 47 ft·lbs)
     G3/4:118 ~ 127 N·m (12.0 ~ 13.0 kgf·m, 87 ~ 94 ft·lbs)
     G1:118 ~ 127 N·m (12.0 ~ 13.0 kgf·m, 87 ~ 94 ft·lbs)

F Machine Quality Specifications

a. K008-3, U10-3 EU-Version

Machine specification:Service port, Wrist rest, STD-arm, KBT-cab, KBT-bucket

No		Specifications Items			Unit	K008-3	U10-3	Remarks
Q1	Main Spec. JIS A8404							
1	1	Machine size	Total length (Transport)		mm	2750 ± 55	2985 ± 60	
	2		Total width [Track extended]		mm	860 ± 17	990 ± 20	
	3		Total width [Track retracted]		mm	700 ± 14	750 ± 28	
	4		Total height		mm	1420 ± 28	1380 ± 28	
2	1	Weight	Machine weight		kg	880 ± 18	980 ± 20	Fuel tank
3	1	Performance	Swivel speed	L	rpm	8.3 ± 0.8	8.3 ± 0.8	
	2			R	rpm	8.3 ± 0.8	8.3 ± 0.8	
	3		Travel speed	Rubber F1	km/h	2.0 ± 0.2	2.0 ± 0.2	
	4			Rubber F2	km/h	-	4.0 ± 0.4	
	5		Gradeability		deg	30<	30<	
4	1	Rear end min. turning radius			mm	750 ± 15	500 ± 10	
	2	Swivel frame rear ground clearance			mm	350 ± 7	350 ± 7	
	3	Tambler center distance			mm	900 ± 27	1010 ± 30	
	4	Crawler total length			mm	1230 ± 37	1340 ± 40	
	5	Crawler total width [retracted]			mm	700 ± 14	750 ± 15	
	6	Crawler total width [extended]			mm	860 ± 17	990 ± 20	
	7	Min. ground clearance			mm	140 ± 8	130 ± 7	
5	1	Front attachment	Bucket heaped capacity	CECE	m^3	0.022	0.024	
	2			SAE, JIS	m^3	0.019	0.019	
	3		Bucket width		mm	350 ± 7	350 ± 7	Without side cutter
	4		Swing angle	Canopy L	deg	52 ± 3	55 ± 3	
	5			Canopy R	deg	62 ± 3	55 ± 3	
	6		Max. digging radius		mm	3075 ± 46	3380 ± 51	
	7		Ground level Max. digging radius		mm	3025 ± 45	3335 ± 50	
	8		Ground level Min. finish radius		mm	905 ± 18	1105 ± 22	Bucket bottom horizontal
	9	Front attachment	Max. digging depth		mm	1715 ± 34	1790 ± 36	
	10		Max. vertical digging depth		mm	1375 ± 28	1550 ± 31	
	11		Max. digging height	Conopy	mm	2870 ± 57	3055 ± 61	
	12		Max. dump height	Conopy	mm	2035 ± 41	2215 ± 44	
	13		Mini. turning radius	Conopy	mm	1120 ± 34	1245 ± 37	
	14		Mini. turning radius (Left swing)	Conopy	mm	945 ± 47	1075 ± 54	
6	1	Dozer	Width		mm	700-860	750-990	
	2		Height		mm	200 ± 10	200 ± 10	
	3		Max. lift above GL		mm	200 ± 10	195 ± 10	
	4		Max. below GL		mm	180 ± 13	200 ± 14	

The figures in parentheses are for the KTC, KCL and KTA versions.

No		Specifications Items			Unit	K008-3	U10-3	Remarks
Q2	Main Specs JIS A8404							
1	1	Bucket tooth slag-gish			mm	50>	50>	F - 30 kgf
	2	Front digger's tilt-down			mm	10>	10>	
	3	Dozer's declination			mm	5>	5>	
2	1	Min. clearance between boom and backet teeth			mm	50 ± 25	47 ± 25	
3	1	Approach angle			deg	29 ± 3	29 ± 3	
4	1	Max. crawler height			mm	325 ± 7	325 ± 7	Include grouser on the spocket
Q3	Engine performance							
1	1	Max, engine rpm	no load		rpm	2350>	2350>	
	2		1 pump relief		rpm	-	-	
	3		2 pump relief		rpm	-	-	
2	1	Idler			rpm	1200 ± 100	1200 ± 100	
Q4	Travelling performance							
1	1	Travel motor block performance	L		mm	300>	300>	20 deg, 10 min Engine stop Oil temp. 50 ± 5°C
	2	Travel motor block performance	R		mm	300>	300>	
2	1	Max, Traction force	F1		kgf	460<	786<	On the center
					kN	45<	7.7<	
	2		F2		kgf	-	-	
					kN	-	-	
3	1	Travel straightness	F1		mm	1000>	1000>	10m distance
4	1	Track shoe sag dis-tance	Rubber		mm	8 ~ 13	8 ~ 13	
Q5	Work performance							
1	1	Boom lifting capacity			kgf	92<	122<	Front end, Arm extend bucket crowd, dozer down.
					kN	0.9<	1.2<	
	2	Arm digging force			kgf	439<	561<	Bucket tooth root
					kN	4.3<	5.5<	
	3	Bucket digging force			kgf	950<	1010<	Machine stance to JIS bucket tooth root
					kN	9.3<	9.9<	
	4	Dozer force		down	kgf	1030<	1071<	Cutting edge down force at ground level
					kN	10.1<	10.5<	
2	1	Boom speed	Canopy	up 1st	sec	2.5 ± 0.3	2.5 ± 0.3	Oil temp. 50 ± 5 °C (122 ± 41 °F) 1st : Ground to max.up or Max. up to Ground. 2nd : Max.down to Max.up or Max. up to Max. down.
	2			up 2nd	sec	3.7 ± 0.3	3.7 ± 0.3	
	3			down 1st	sec	2.8 ± 0.3	2.8 ± 0.3	
	4			down 2nd	sec	4.0 ± 0.3	4.0 ± 0.3	
3	1	Arm speed		crowd	sec	3.0 ± 0.3	4.0 ± 0.3	
	2			extend	sec	2.2 ± 0.3	2.8 ± 0.3	
4	1	Bucket speed		crowd	sec	2.9 ± 0.3	2.9 ± 0.3	Oil temp. 50 ± 5 °C (122 ± 41 °F)
	2			dump	sec	2.0 ± 0.3	2.0 ± 0.3	
5	1	Dozer speed		up 1st	sec	-	-	Ground to max. up
	2			up 2nd	sec	1.6 ± 0.3	1.6 ± 0.3	Max. down to max. up
	3			down 1st	sec	-	-	Max.up to ground
	4			down 2nd	sec	1.2 ± 0.3	1.2 ± 0.3	Max. up to max. down
6	1	Arm cylinder cavita-tion			mm	5>	5>	Oil temp. 1300 rpm 95 ± 5 °C (203 ± 41 °F) Bucket heaped.

No		Specifications Items			Unit	K008-3	U10-3	Remarks
7	1	Max. digging height radius	Canopy		mm	1302 ± 130	1468 ± 146	
	2	Max. dump height radius	Canopy		mm	1183 ± 71	1619 ± 162	at bucket pin
	3	Bucket wrist angle			degree	186 ~ 192	186 ~ 192	
Q6	Swivel, swing performance							
1	1	Swivel torque		L	kgf·m	118<	127<	Arm extend,show/ Quick
					N·m	1159<	1250	
				R	kgf·m	118<	127<	
					N.m	1159<	1250	
2	1	Swivel angle		L	deg	27<	20<	Bucket load=JIS heaped×1.8
				R	deg	27<	20<	
3	1	Swivel block perfor-mance		L	deg	20>	30>	
				R	deg	20>	30>	
4	1	Swivel start-up speed		L	sec	2.1 ± 0.3	2.2 ± 0.3	0~90 deg swivel
				R	sec	2.1 ± 0.3	2.2 ± 0.3	
5	1	Swing speed	Canopy	L	sec	4.2 ± 0.3	4.2 ± 0.3	
				R	sec	4.1 ± 0.3	4.1 ± 0.3	
6	1	Swing Lock		Swivel R&L	mm	7.0>	7.0>	90 deg-swivel, 100 times actual digging cylinder dislocation
Q7	Hydraulic performance							
1	1	Relief pressure set-ting		P1	kgf/cm^2	170 ± 5.1	180 ± 5.1	At pump deliery 50 ± 5 °C
					MPa	16.7 ± 0.5	17.7 ± 0.5	
					bar	167 ± 5	177 ± 5	
	2			P2	kgf/cm^2	170 ± 5.1	180 ± 5.1	
					MPa	16.7 ± 0.5	17.7 ± 0.5	
					bar	167 ± 5	177 ± 5	
	3			P3	kgf/cm^2	-	30^{+5}_{0}	
					MPa	-	$2.9^{+0.5}_{0}$	
					bar	-	29^{+5}_{0}	
2	1	Cylinder oil sealing capacity	Boom	50 ± 5 °C (122 ± 41°F)	mm	20 >	20 >	Arm extend, bucket
	2			95 ± 5 °C (203 ± 41°F)	mm	20 >	20 >	
	3		Arm	50 ± 5 °C (122 ± 41°F)	mm	11>	11>	height 1m, 10 min.
	4		Bucket	50 ± 5 °C (122 ± 41°F)	mm	10 >	10 >	Bucket load=JIS heaped×1.8
	5		Dozer	50 ± 5 °C (122 ± 41°F)	mm	20 >	20 >	
3	1	Boom cushioning performance		30 °C(86 °F)	sec			
				50 °C(122 °F)	sec	0.4~0.7	0.4~0.7	
				80 °C(176 °F)	sec			
Q8	Lever operating force & stroke							
1	1	Boom lever operat-ing force		up	kgf	1.5 ± 0.5	1.5 ± 0.5	
					N	14.7 ± 5	14.7 ± 5	
				down	kgf	1.5 ± 0.5	1.5 ± 0.5	
					N	14.7 ± 5	14.7 ± 5	
	2	Arm lever		crowd	kgf	1.5 ± 0.5	1.5 ± 0.5	Extend & crowd
					N	14.7 ± 5	14.7 ± 5	
				extend	kgf	1.5 ± 0.5	1.5 ± 0.5	
					N	14.7 ± 5	14.7 ± 5	

No		Specifications Items			Unit	K008-3	U10-3	Remarks
1	3	Bucket lever		crowd	kgf	1.5 ± 0.5	1.5 ± 0.5	Dump & crowd
					N	14.7 ± 5	14.7 ± 5	
				extend	kgf	1.5 ± 0.5	1.5 ± 0.5	
					N	14.7 ± 5	14.7 ± 5	
	4	Swivel (Swing) lever		R	kgf	1.5 ± 0.5	1.5 ± 0.5	Left & right
					N	14.7 ± 5	14.7 ± 5	
				L	kgf	1.5 ± 0.5	1.5 ± 0.5	
					N	14.7 ± 5	14.7 ± 5	
	5	Dozer lever		up	kgf	2.0 ± 0.5	2.0 ± 0.5	Up & down
					N	19.6 ± 5	19.6 ± 5	
				down	kgf	2.0 ± 0.5	2.0 ± 0.5	
					N	19.6 ± 5	19.6 ± 5	
	6	Travel lever	L	Forward	kgf	1.1 ± 0.5	0.8 ± 0.5	
					N	10.8 ± 5	7.8 ± 5	
				Back	kgf	1.1 ± 0.5	0.8 ± 0.5	
					N	10.8 ± 5	7.8 ± 5	
			R	Forward	kgf	1.1 ± 0.5	0.8 ± 0.5	
					N	10.8 ± 5	7.8 ± 5	
				Back	kgf	1.1 ± 0.5	0.8 ± 0.5	
					N	10.8 ± 5	7.8 ± 5	
	7	Accelerator lever		up	kgf	-	-	
					N	-	-	
				down	kgf	2.5 ± 1	2.5 ± 1	
					N	24.5 ± 9.8	24.5 ± 9.8	
	8	Swing pedal		R	kgf	5.0 ± 1	5.0 ± 1	
					N	49.0 ± 9.8	49.0 ± 9.8	
				L	kgf	5.0 ± 1	5.0 ± 1	
					N	49.0 ± 9.8	49.0 ± 9.8	
	9	Safety lock lever		up	kgf	2.0 ± 0.2	2.0 ± 0.2	Up & down
					N	19.6 ± 1.5	19.6 ± 1.5	
				down	kgf	2.0 ± 0.2	2.0 ± 0.2	
					N	19.6 ± 1.5	19.6 ± 1.5	
2	1	Boom lever stroke		up	mm	80 ± 10	81 ± 10	
				down	mm	80 ± 10	81 ± 10	
	2	Arm lever stroke		crowd	mm	80 ± 10	81 ± 10	
				extend	mm	80 ± 10	81 ± 10	
	3	Bucket lever stroke		crowd	mm	70 ± 10	81 ± 10	
				extend	mm	70 ± 10	81 ± 10	
	4	Swivel, Swing lever stroke		R	mm	70 ± 10	81 ± 10	
				L	mm	70 ± 10	81 ± 10	
	5	Dozer lever stroke		up	mm	37 ± 10	32 ± 10	
				down	mm	37 ± 10	32 ± 10	
	6	Travel lever stroke	L	Forward	mm	55 ± 10	58 ± 10	
				Back	mm	55 ± 10	58 ± 10	
			R	Forward	mm	55 ± 10	58 ± 10	
				Back	mm	55 ± 10	58 ± 10	

No		Specifications Items			Unit	K008-3	U10-3	Remarks
Q9	Stability							
1	1	Standard arm, static limited load [track frame : extended]	Bucket load to tip fully	Side	kgf	83<	85<	Arm extend, bucket crowd oil temp.50 ± 5 °C (122 ± 41 °F)
					N	812<	833<	
	2			Front	kgf	108<	104<	
					N	1059<	1015<	
	3	[track frame : retracted]	Bucket load to tip fully	Side	kgf	56<	68<	
					N	547<	671<	
	4			Front	kgf	108<	79<	
					N	1059<	777<	
Q10	Comfortability							
1	1	Noise level	At operator's ear LPA	Canopy	db(A)	78>	73	
	2		Noise source;LWA		db(A)	92.9>	90	

b. K008-3 KTC KCL, KTA - Version

Machine specification: Service port, Wrist rest, STD-arm, KBT-cab, KBT-bucket

No		Specificatios Items			Unit	K008-3		Remarks
Q1	Main Speed JIS A8404							
1	1	Machine size	Total length (Transport)		mm	2750 ± 55		
					inch	108.3 ± 2.2		
	2		Total width [Track extended]		mm	860 ± 17		
					inch	33.9 ± 0.7		
	3		Total width [Track retracted]		mm	800 ± 14		
					inch	31.5 ± 0.6		
	4		Total height		mm	2230 ± 45		
					inch	87.8 ± 1.77		
2	1	Weight	Machine weight		kg	920 ± 18		Fuel tank
					lbs	2028 ± 40		
3	1	Performance	Swivel speed	L	rpm	8.3 ± 0.8		
	2			R	rpm	8.3 ± 0.8		
	3		Travel speed	Rubber F1	km/h	2.0 ± 0.2		
					mph	1.25 ± 0.13		
	4			Rubber F2	km/h	4.0 ± 0.4		
					mph	2.5 ± 0.25		
	5		Gradeability		deg	30<		
4	1	Rear end min. turning radius			mm	880 ± 18		
					inch	34.6 ± 0.7		
	2	Swivel frame rear ground clearance			mm	350 ± 17		
					inch	13.8 ± 0.7		
	3	Tambler center distance			mm	900 ± 27		
					inch	35.4 ± 1.1		
	4	Crawler total length			mm	1230 ± 37		
					inch	48.4 ± 1.5		
	5	Crawler total width [Retracted]			mm	700 ± 14		
					inch	27.6 ± 0.6		
	6	Crawler total width [Extended]			mm	860 ± 17		
					inch	33.9 ± 0.7		
	7	Min. ground clearance			mm	140 ± 8		
					inch	5.5 ± 0.3		
5	1	Front attachment	Bucket heaped capacity	CECE	m^3	0.022		
					yd^3	0.029		
	2			SAE, JIS	m^3	0.019		
					yd^3	0.025		
	3		Bucket width		mm	350 ± 7		Without side cutter
					inch	13.8 ± 0.3		
	4		Swing angle	L	deg	52 ± 3		
	5			R	deg	62 ± 3		
	6		Max. digging radius		mm	3075 ± 46		
					inch	121 ± 1.8		
	7		Ground level Max. digging radius		mm	3025 ± 45		
					inch	119.1 ± 1.8		
	8		Ground level Min. finish radius		mm	905 ± 18		Bucket bottom horizontal
					inch	35.6 ± 0.7		
	9		Max. digging depth		mm	1715 ± 34		
					inch	67.5 ± 1.3		

No		Specificatios Items			Unit	K008-3		Remarks
5	10	Front attachment	Max. vertical dig-ging depth		mm	1375 ± 28		
					inch	54.1 ± 1.1		
	11		Max. digging height		mm	2870 ± 57		
					inch	113.0 ± 2.2		
	12		Max. dump height		mm	2035 ± 57		
					inch	80.1 ± 1.6		
	13		Mini. turning radius		mm	1120 ± 34		
					inch	44.1 ±1.3		
	14		Mini. turning radius (Left swing)		mm	945 ± 47		
					inch	37.2 ± 1.9		
6	1	Dozer	Width		mm	700-860		
					inch	27.6-33.9		
	2		Height		mm	200 ± 10		
					inch	7.9 ± 0.4		
	3		Max. lift above GL		mm	200 ± 10		
					inch	7.9 ± 0.4		
	4		Max. below GL		mm	180 ± 13		
					inch	7.1 ± 0.5		
Q2	Main Specs JIS A8404							
1	1	Bucket tooth slag-gish			mm	50>		F-50N
					inch	2.0>		
	2	Front digger's tilt-down			mm	10>		
					inch	0.4>		
	3	Dozer's declination			mm	5>		
					inch	0.2>		
2	1	Min. clearance between boom and backet teeth			mm	50 ± 25		
					inch	1.97 ± 0.98		
3	1	Approach angle			deg	29 ± 3		
4	1	Max. crawler height			mm	325 ± 7		Include grouser on the spocket
					inch	12.80 ± 0.28		
Q3	Engine performance							
1	1	Max, engine rpm	no load		rpm	2350>		
	2		1 pump relief		rpm	-		
	3		2 pump relief		rpm	-		
2	1	Idler			rpm	1200 ± 100		
Q4	Travelling performance							
1	1	Travel motor block performance	L		mm	300>		20 deg, 10 min Engine stop Oil temp. 50 ± 5 °C
					inch	11.81>		
	2		R		mm	300>		
					inch	11.81>		
2	1	Max, Traction force	F1		kgf·m	460<		On the center
					kN·m	4.5<		
					ft·lbf	3320		
	2		F2		kgf·m	-		
					kN·m	-		
					ft·lbf	-		
3	1	Travel straightness	F1		mm	1000>		10m distance
					inch	39.37>		
4	1	Track shoe sag dis-tance	Rubber		mm	8 ~ 13		Between treads
					inch	0.31 ~ 0.51		

No		Specificatios Items			Unit	K008-3		Remarks
Q5	Work performance							
1	1	Boom lifting capacity			kgf	91.8<		Front end, Arm extend bucket crowd, at tooth"
					kN	0.9<		
					lbf	202<		
	2	Arm digging force			kgf	505		Bucket tooth root
					kN	4.3<		
					lbf	1113		
	3	Bucket digging force			kgf	1000		Machine stance to JIS bucket tooth root
					kN	9.3<		
					lbf	2205		
	4	Dozer force		down	kgf	1089		Cutting edge down force at ground level
					kN	10.1<		
					lbf	2400		
2	1	Boom speed	Canopy	up 1st	sec	2.5 ± 0.3		Oil temp. 50 ± 5 °C(122±41°F) Ground to max. height (exculude cushioning)
	2			up 2nd	sec	3.7 ± 0.3		
	3			down 1st	sec	2.8 ± 0.3		
	4			down 2nd	sec	4.0 ± 0.3		
3	1	Arm speed		crowd	sec	3.0 ± 0.3		
	2			extend	sec	2.2 ± 0.3		
4	1	Bucket speed		crowd	sec	2.9 ± 0.3		Oil temp. 50 ± 5 °C(122 ± 41 °F)
	2			dump	sec	2.0 ± 0.3		
5	1	Dozer speed		up 1st	sec	-		
	2			up 2nd	sec	1.6 ± 0.3		Max. down to max. up
	3			down 1st	sec	-		
	4			down 2nd	sec	1.2 ± 0.3		Max. up to max. down
6	1	Arm cylinder cavitation			mm	5>		Oil temp. 95 ± 5 °C (203 ± 41 °F) 1300 rpm. heaped.
					inch	0.2>		
7	1	Max. digging height radius			mm	1302 ± 130		
					inch	51.26 ± 5.12		
	2	Max. dump height radius			mm	1183 ± 71		at bucket pin
					inch	46.575 ± 2.8		
	3	Bucket wrist angle			degree	189		
Q6	Swivel, swing performance							
1	1	Swivel torque		L	kgf·m	118<		Arm extend,show/ Quick
					kN·m	1159<		
					ft·lbf	855<		
	2			R	kgf·m	118<		
					kN·m	1159<		
					ft·lbf	855<		
2	1	Swivel angle		L	deg	27<		Bucket load=JIS heaped×1.8
				R	deg	27<		
3	1	Swivel block performance		L	deg	20>		Engine stop, 1 min. 20 degree slop Engine idle, Load condition.
	2			R	deg	20>		
4	1	Swivel start-up speed		L	sec	2.1 ± 0.3		0~90 deg swivel
				R	sec	2.1 ± 0.3		
5	1	Swing speed		L	sec	4.2 ± 0.3		
				R	sec	4.1 ± 0.3		
6	1	Swing Lock		Swivel R&L	mm	7.0>		90 deg-swivel, 100 times actual digging cylinder dislocation
					inch	0.28>		

No		Specificatios Items			Unit	K008-3		Remarks
Q7	Hydraulic performance							
1	1	Relief pressure setting		P1	kgf/cm^2	170 ± 5.0		At pump delivery 50 ± 5 °C
					MPa	16.7 ± 0.5		
					psi	2418 ± 71		
	2			P2	kgf/cm^2	170 ± 5.0		
					MPa	16.7 ± 0.5		
					psi	2418 ± 71		
2	1	Cylinder oil sealing capacity	Boom	50 ± 5 °C (122 ± 41 °F)	mm	20>		Arm extend, bucket
					inch	0.79>		
	2			95 ± 5 °C (203 ± 41 °F)	mm	20>		
					inch	0.79>		
	3		Arm	50 ± 5 °C (122 ± 41 °F)	mm	11>		height 1m, 10 min.
					inch	0.43>		
	4		Bucket	50 ± 5 °C (122 ± 41 °F)	mm	10>		Bucket load=JIS heaped×1.8
					inch	0.39>		
	5		Dozer	50 ± 5 °C (122 ± 41 °F)	mm	20>		
					inch	0.79>		
3	1	Boom cushioning performance		30°C(86°F)	sec	-		
	2			50°C(122°F)	sec	0.4 ~ 0.7		
	3			80°C(176°F)	sec	-		
Q8	Lever operating force & stroke							
1	1	Boom lever operating force		up	kgf·m	1.5 ± 0.5		
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
				down	kgf·m	1.5 ± 0.5		
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
	2	Arm lever		crowd	kgf·m	1.5 ± 0.5		Extend & crowd
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
				extend	kgf·m	1.5 ± 0.5		
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
	3	Bucket lever		crowd	kgf·m	1.5 ± 0.5		Dump & crowd
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
				extend	kgf·m	1.5 ± 0.5		
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
	4	Swivel (Swing) lever		R	kgf·m	1.5 ± 0.5		Left & right
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		
				L	kgf·m	1.5 ± 0.5		
					N·m	14.7 ± 5.0		
					ft·lbs	10.8 ± 3.6		

No		Specificatios Items			Unit	K008-3		Remarks
1	5	Dozer lever		up	kgf·m	2.0 ± 0.5		Up & down
					N·m	19.6 ± 5.0		
					ft·lbs	14.5 ± 3.6		
				down	kgf·m	2.0 ± 0.5		
					N·m	19.6 ± 5.0		
					ft·lbs	14.5 ± 3.6		
	6	Travel lever	L	Forward	kgf·m	1.1 ± 0.5		
					N·m	10.8 ± 0.5		
					ft·lbs	8.0 ± 3.6		
				Back	kgf·m	1.1 ± 0.5		
					N·m	10.8 ± 0.5		
					ft·lbs	8.0 ± 3.6		
			R	Forward	kgf·m	1.1 ± 0.5		
					N·m	10.8 ± 0.5		
					ft·lbs	8.0 ± 3.6		
				Back	kgf·m	1.1 ± 0.5		
					N·m	10.8 ± 0.5		
					ft·lbs	8.0 ± 3.6		
	7	Accelerator lever		up	kgf·m	-		
					N·m	-		
					ft·lbs	-		
				down	kgf·m	2.5 ± 1.0		
					N·m	24.5 ± 9.8		
					ft·lbs	18.1 ± 7.2		
	8	Swing pedal		R	kgf·m	5.0 ± 1.0		
					N·m	49.0 ± 9.8		
					ft·lbs	36.2 ± 7.2		
				L	kgf·m	5.0 ± 1.0		
					N·m	49.0 ± 9.8		
					ft·lbs	36.2 ± 7.2		
	9	Safety lock lever		up	kgf·m	2.0 ± 0.2		Up & down
					N·m	19.6 ± 1.5		
					ft·lbs	14.5 ± 1.4		
				down	kgf·m	2.0 ± 0.2		
					N·m	19.6 ± 1.5		
					ft·lbs	14.5 ± 1.4		

No	Specifications Items				Unit	K008-3		Remarks
2	1	Boom lever stroke		up	mm	80 ± 10		
					inch	3.15 ± 0.39		
				down	mm	80 ± 10		
					inch	3.15 ± 0.39		
	2	Arm lever stroke		crowd	mm	80 ± 10		
					inch	3.15 ± 0.39		
				extend	mm	80 ± 10		
					inch	3.15 ± 0.39		
	3	Bucket lever stroke		crowd	mm	70 ± 10		
					inch	2.76 ± 0.39		
				extend	mm	70 ± 10		
					inch	2.76 ± 0.39		
	4	Swivel, swing lever stroke		R	mm	70 ± 10		
					inch	2.76 ± 0.39		
				L	mm	70 ± 10		
					inch	2.76 ± 0.39		
	5	Dozer lever stroke		up	mm	37 ± 10		
					inch	1.46 ± 0.39		
				down	mm	37 ± 10		
					inch	1.46 ± 0.39		
	6	Travel lever stroke	L	Forward	mm	55 ± 10		
					inch	2.17 ± 0.39		
				Back	mm	55 ± 10		
					inch	2.17 ± 0.39		
			R	Forward	mm	55 ± 10		
					inch	2.17 ± 0.39		
				Back	mm	55 ± 10		
					inch	2.17 ± 0.39		
Q9	Stability							
1	1	Standard arm, static limited load [track frame : extended]	Bucket load to tip fully	Side	kgf·m	82.8<		Arm extend, bucket crowd oil temp.50 ± 5 °C (122 ± 41 °F)
					N·m	812<		
					ft·lbf	600<		
	2			Front	kgf·m	108<		
					N·m	1059<		
					ft·lbf	781<		
	3	[track frame : retracted]	Bucket load to tip fully	Side	kgf·m	55.8<		
					N·m	547<		
					ft·lbf	403<		
	4			Front	kgf·m	108<		
					N·m	1059<		
					ft·lbf	781<		
Q10	Comfortability							
1	1	Noise level	At operator's ear LPA		db(A)	78>		
	2		Noise source;LWA		db(A)	92.9>		