

Field Assembly Instruction

WHEEL LOADER

WA800-3

SERIAL NUMBERS 50001 and up

KOMATSU

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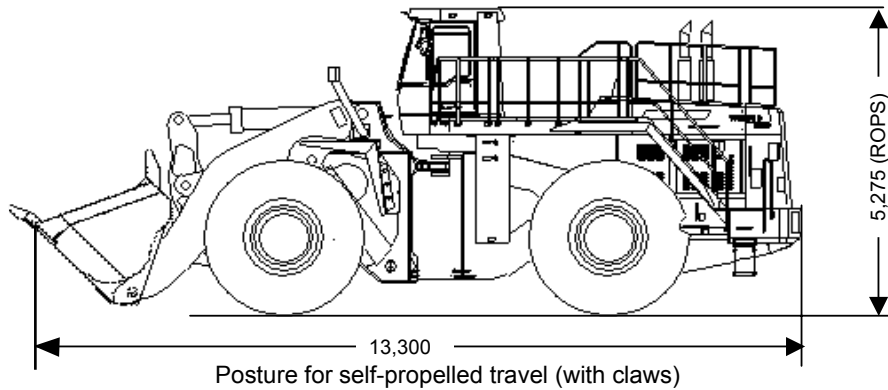
Field assembly inspection report

A-10 General drawing and transportation specification of machine

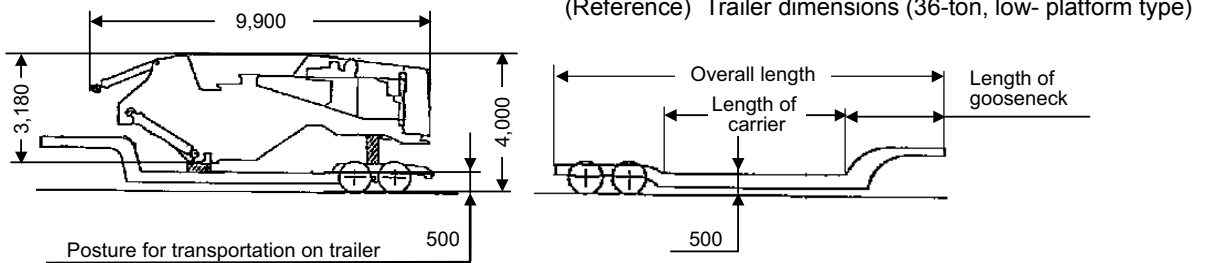
Land transportation

Specification	Related specifications				Means of transportation and necessary work for transportation
	Weight (kg)	Overall length (mm)	Overall width (mm)	Overall height (mm)	
Self-propelled travel	98,300 (Operating weight)	13,300	4,760 (Bucket width)	5,275 (Top of ROPS)	—
Transportation on trailer	31,500 (Bare machine)	9,900	3,200	3,300	36-t trailer × 1 [Chassis, excluding following parts to be removed] 15-t trailers × 4 [Bucket, loader link, front axle, rear axle (including swivel support), tires and rims, cab and operator's seat, exterior parts (hood grille, fenders, ladder, platform, handrails, light support), counterweight, fuel tank (including fuel), and exhaust pipe]

Self-propelled travel



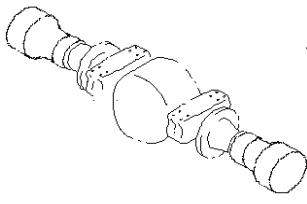
Transportation on trailer



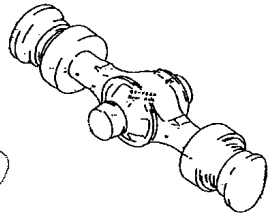
Type		—
Hauling capacity	ton	36
Length of carrier	mm	6,300
Width of carrier	mm	3,200
Overall length	mm	11,900
Length of gooseneck	mm	2,500

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No.
A-20 Drawings of disassembled units



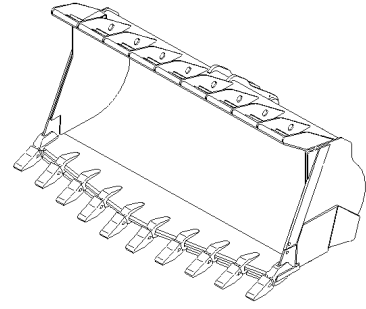
1. Front axle assembly



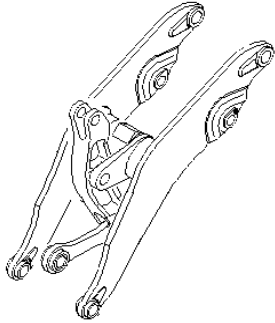
2. Rear axle assembly
(Axle support)



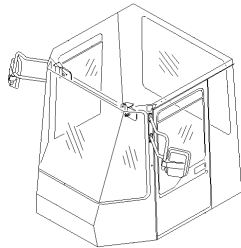
3. Wheel and tire assembly



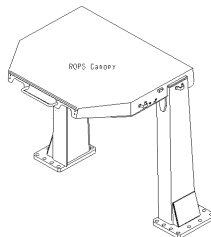
4. Bucket assembly



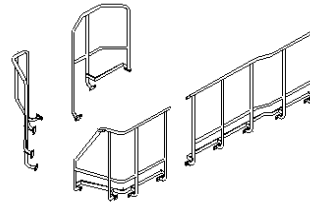
5. Lift arm assembly



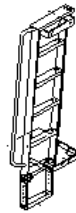
6. Floor and cab
assembly



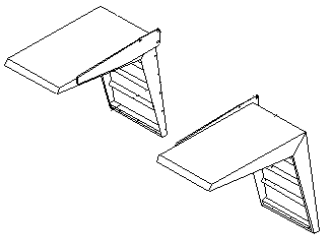
7. ROPS canopy
assembly



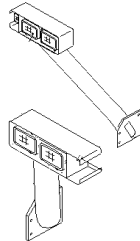
8. Floor handrail assembly



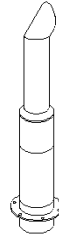
9. Ladder
assembly



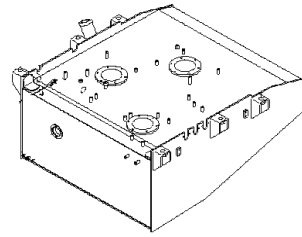
10. Front fender (1 piece)



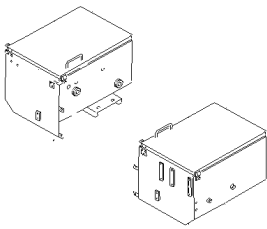
11. Front lamp assembly
(1 piece)



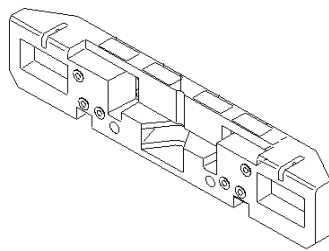
12. Muffler stack



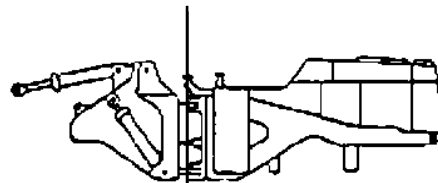
13. Fuel tank assembly



14. Battery box assembly



15. Counterweight



16. Front frame
sub-assembly

17. Rear frame
sub-assembly

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

A-30 Dimensions of removed units

Dimensions table of removed units

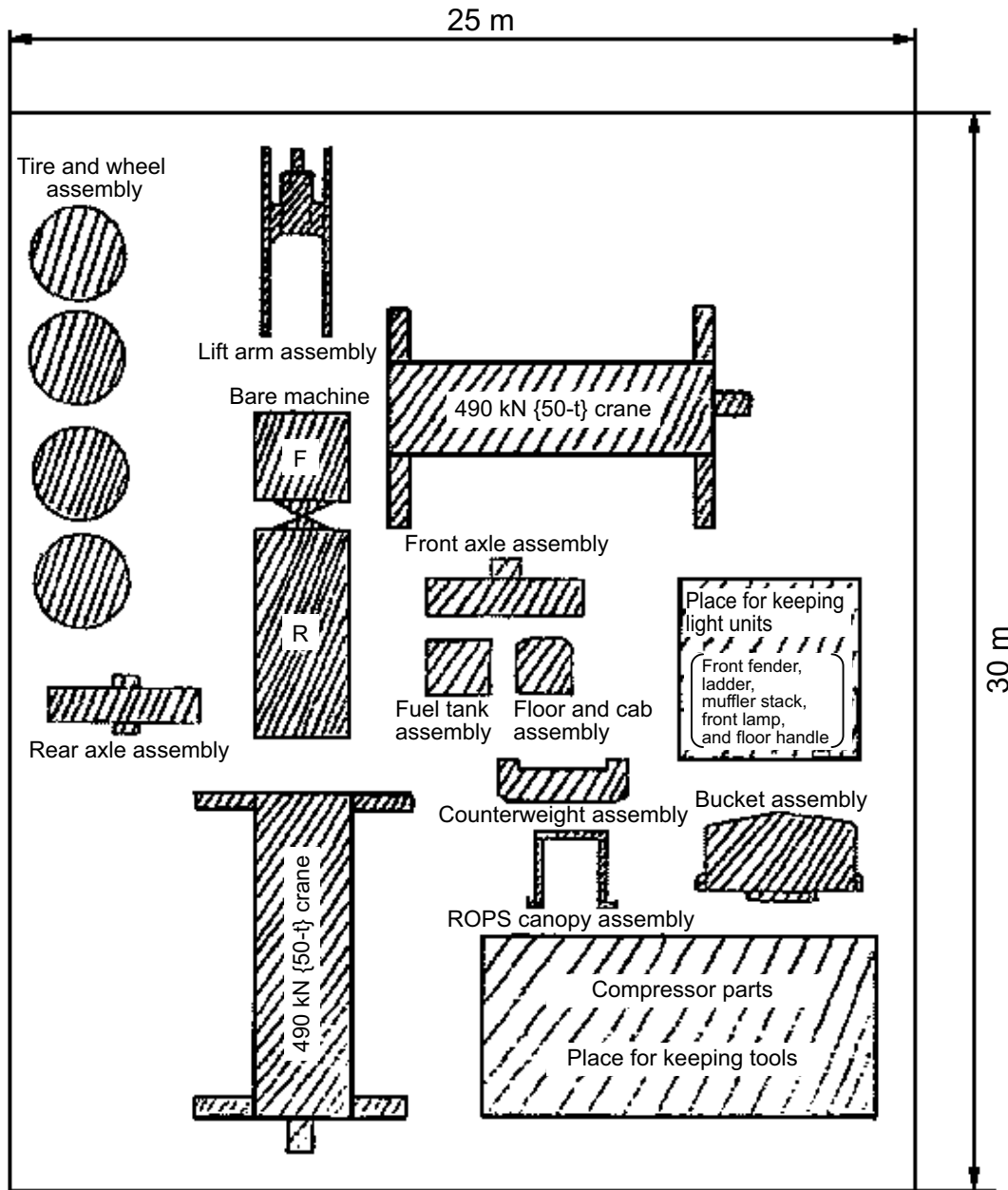
No.	Unit name	Weight (kg)	L: Overall length (mm)	W: Overall width (mm)	H: Overall height (mm)
1	Front axle assembly	8,514	4,400	1,600	1,000
2	Rear axle assembly (with axle support)	8,500	4,400	1,800	1,000
3	Wheel and tire assembly	13,900	1,200	2,800	2,800
4	Bucket assembly	11,430	5,200	2,900	2,500
5	Lift arm assembly	8,495	2,400	5,200	2,600
6	Floor and cab assembly	1,000	2,300	1,800	2,100
7	ROPS canopy assembly	1,387	2,500	1,900	2,200
8	Floor handrail and rear access step assembly	650	1,820	3,940	1,100
9	Ladder assembly	60	500	700	2,400
10	Front fender	170	800	1,700	1,400
11	Front lamp assembly	65	800	700	1,300
12	Muffler stack	50	400	400	1,700
13	Fuel tank assembly	790	1,800	1,900	1,100
14	Battery box assembly	580	900	900	800
15	Counterweight	2,900	3,200	1,200	600
16	Front frame sub-assembly	11,500	4,830	2,250	3,150
17	Rear frame sub-assembly	23,936	6,425	3,200	3,155

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

A-40 Layout of work space

Layout of work space

(The wider the work space is, the more easily you can work. At least the following space 25 m × 30 m is necessary.)



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

A-50 Necessary tools

Necessary tools and equipment

1. Necessary tools

No.	Tool name	Specification	Q'ty	Remarks
1	General standard tools	Spanner, ring wrench, socket wrench, chisel	2	
		Screwdriver, hammer, adjustable wrench, hexagonal wrench, etc.		
2	Power wrench	16-time	1	Front and rear axle mounts, ROPS canopy mount
3	Power wrench	4-time	1	Fuel tank mount
4	Socket	60 (Socket: 38.1), L: 84	1	For front and rear axle mounts
5	Socket	36 (Socket: 25.4), L: 68	1	For rear axle support cover, tire, and counterweight
6	Socket	46 (Socket: 25.4), L: 72	1	For fuel tank and counterweight
7	Socket	55 (Socket: 38.1), L: 82	1	ROPS mount
8	Socket	55 (Socket: 25.4), L: 82	1	ROPS mount
9	Extension bar	Insertion angle: 12.7, L: 150	1	For fuel tank
10	Adapter	Insertion angle: 19, 12.7, L: 55	1	For fuel tank
11	Extension bar	Insertion angle: 25.4, L: 160	1	For tire, counterweight, and ROPS canopy
12	Preset-type torque wrench (socket type)	39.2 - 274.6 Nm {4 - 28 kgm}	1	For power wrench
13	Preset-type torque wrench with replaceable head	58.8 - 137.3 Nm {6 - 14 kgm}	1	For connecting hose/tube
14	Preset-type torque wrench with replaceable head	19.6 - 44.1 Nm {2 - 4.5 kgm}	1	For connecting hose/tube
15	Preset-type torque wrench with replaceable head	29.4 - 68.6 Nm {3 - 7 kgm}	1	For connecting hose/tube
16	Preset-type torque wrench with replaceable head (spanner type)	Width across flats: 27 (Socket: ø 15), 9 (Socket ø12)	1 each	For connecting hose/tube
		22 (Socket: ø 12), 24 (Socket ø12), 36, 41		
17	Preset-type torque wrench (socket type)	196.1 - 1,372.9 Nm {20 - 140 kgm}	1	For rear axle support cover, counterweight
18	Preset-type torque wrench (socket type)	490.3 - 2,059.4 Nm {50 - 210 kgm}	1	For counterweight
19	Preset-type torque wrench (socket type)	58.8 - 411.9 Nm {6 - 42 kgm}	1	For rear axle support cover
20	Impact wrench	GT-P8M or equivalent	1	
21	Impact wrench	GT-P14M or equivalent	1	
22	Impact wrench	GT-S22M or equivalent	1	For tire and ROPS canopy
23	Adapter	Insertion angle: 19, 25.4, L: 71	1	For power wrench and torque wrench
24	Adapter	Insertion angle: 12.7, 9.5, L: 41	1	For power wrench and torque wrench
25	Large hammer	10 lb	1	
26	Pneumatic grinder	—	1	
27	Bar	Large, medium, and small	2 each	For adjusting hole and moving heavy part
28	Pointed steel bar	—	2	For adjusting hole
29	Grease gun (Hand pump type)	Capacity: About 300 cc	1	Supplying grease to pin
30	Oil pitcher	Capacity: 1,000 - 2,000 cc	1	Bleeding air from brake line
31	Vinyl hose	Inside diameter: 6.5 - 7.0, L: 1,000 - 1,500		Bleeding air from brake line
32	Preset-type torque wrench with replaceable head	196.1 Nm {20 kgm}	1	For connecting tube/hose
33	Preset-type torque wrench with replaceable head	176.5 Nm {18 kgm}	1	For connecting tube/hose

	Precautions	Special tools		Necessary equipment	
		Name	Q'ty	Name	Q'ty
	Others				

A-60 Necessary equipments and slings

Necessary tools and equipment

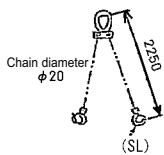
2. Necessary equipment

1	Crane	Min. 490 kN {50 t}	2	
3	Forklift	Min. 19.6 kN {2 t}	1	
4	Compressor	Capacity: Min. 32 ℓ	1	Impact wrench, bleeding air from brake system
5	Lever block	1 t	3	For holding cylinder and drive shaft
6	Stepladder (Work bench)	4 steps (About 1.6 m)	3	For work
7	Steel plate	(Large) 9 × 1,219 × 2,438	4	For positioning bare machine
8	Steel plate	(Large) 25 × 250 × 600	4	For positioning bare machine
9	Wool block	400 × 400 × 900	14	For positioning bare machine
		200 × 400 × 800	4	For positioning bare machine
10	Pneumatic grease gun	Capacity: 18 ℓ	1	
11	Air conditioner refrigerant charger	Gauge, manifold, leak tester	1	
12	Circuit tester		1	

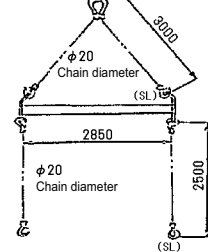
3. Necessary slings

No.	Sling name	Specification	Q'ty	Remarks
1	Front frame sling	2-point sling (L: 2,250, Chain diameter: ø20, Sling hook (SL))	1	See figure below
2	Rear frame sling	Balance 2-point sling (Chain diameter: ø20, Sling hook (SL))	1	See figure below
3	Rear axle sling	2-point sling (L: 5,500, Chain diameter: ø16, Crab hook (G))	1	See figure below
4	Nylon sling	500 × 2000	2	Holding axle support and cylinder
5	Front/Rear axle sling	Balance 2-point sling (Chain diameter: ø16, Sling hook (SL))	1	See figure below
		Balance 2-point sling (Chain diameter: ø12.5, Sling hook (G))	1	
6	Drive shaft nylon sling	50 × 5000	1	See figure below
7	Fuel tank sling	2-point sling (L: 5,000, Chain diameter: ø6.3, Sling hook (SL))	2	See figure below
8	Floor and cab assembly sling	2-point sling (L: 2,000, Chain diameter: ø6.3, Sling hook (SL))	2	
9	Nylon sling	150 × 10000	1	Tire sling
10	Wire sling	Capacity: 147 kN {15 t}, L: 2,500	2	Removing wood block from chassis (Raising front)
		Capacity: 107.8 kN {11 t}, L: 2,000	1	Lift arm sling
11	Shackle	For 19.6 kN {2 t}, 49 kN {5 t}, 98 kN {10 t}, and 147kN{15 t}	2 each	Lift arm sling
12	Eyebolt	Upper: 2 pieces, Lower: 2 pieces		
13	Nylon sling	25 × 2000		

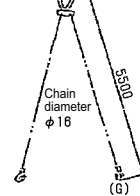
1. Front frame sling



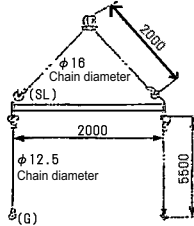
2. Rear frame sling



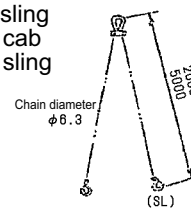
3. Rear axle sling



5. Front/Rear axle sling



7. Fuel tank sling
8. Floor and cab assembly sling



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

A-70 List of oils, greases, and paints

4. Oils, greases, etc.

No.	Oil/Grease	Specification	Q'ty
1	Extreme pressure molybdenum disulfide grease	(KES LM-P)	500 ml
2	Extreme pressure molybdenum disulfide grease	(KES LM-G)	10 l
3	Fuel	Diesel fuel	Proper quantity (Full: 1,200 l)
4	Touchup paint	Black	
5	Air conditioner refrigerant	R134a refrigerant can (400 g)	1 can
6	Windshield washer fluid	Product of SEIKEN KAGAKU	1 l can × 2

When the front and rear frames are separated, add the following oil.

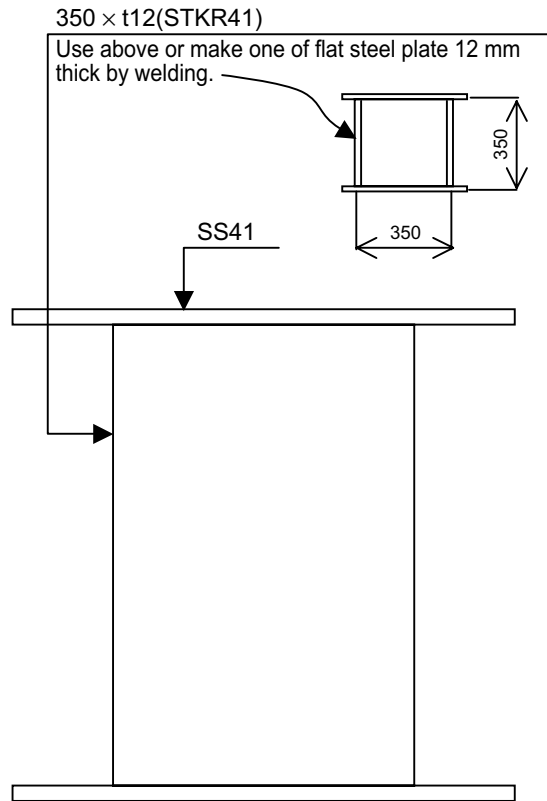
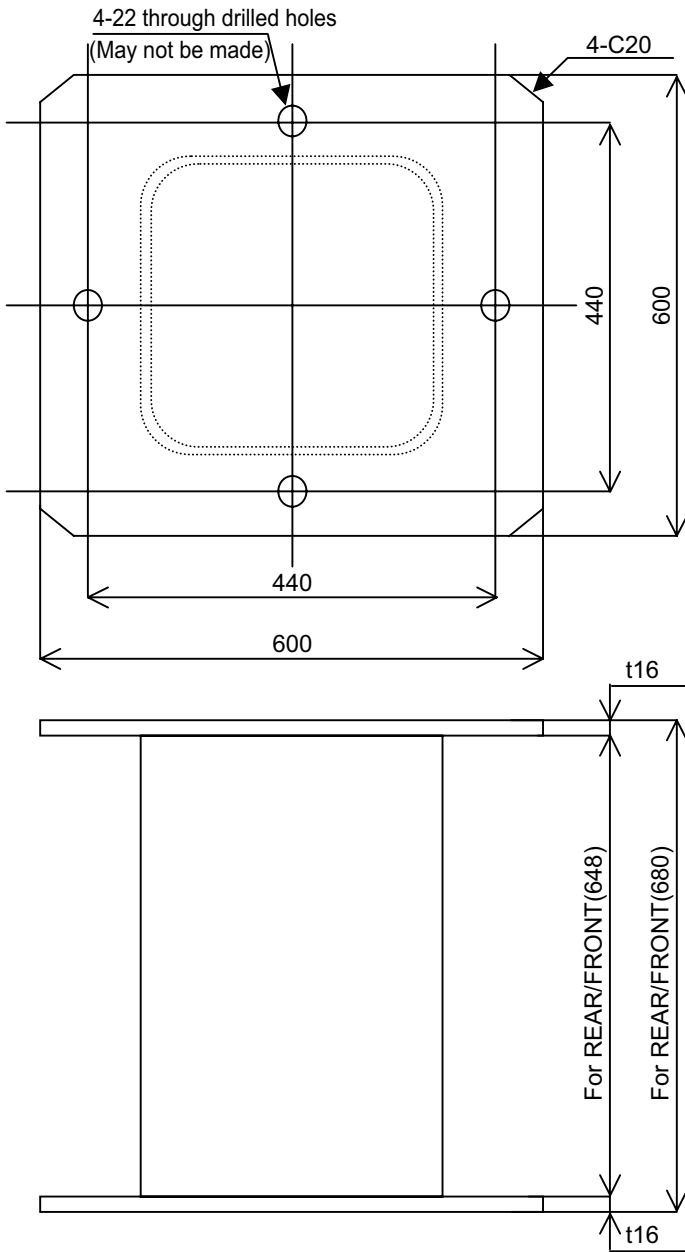
No.	Oil/Grease	Specification	Q'ty
1	Hydraulic oil	(KES EO10-CD)	1,000 l

5. Protection gears

Work clothes, safety boots, helmet, cotton gloves, goggles, and raincoat

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No.
A-80 Frame stand



(Note)
 Weld each joint in instruction drawing by 9/7.

Quantity
 For front: 2 pieces
 For rear: 2 pieces

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Block may be used instead of the above. Prepare them, however, so that height will be the same at 4 places.				
Others				

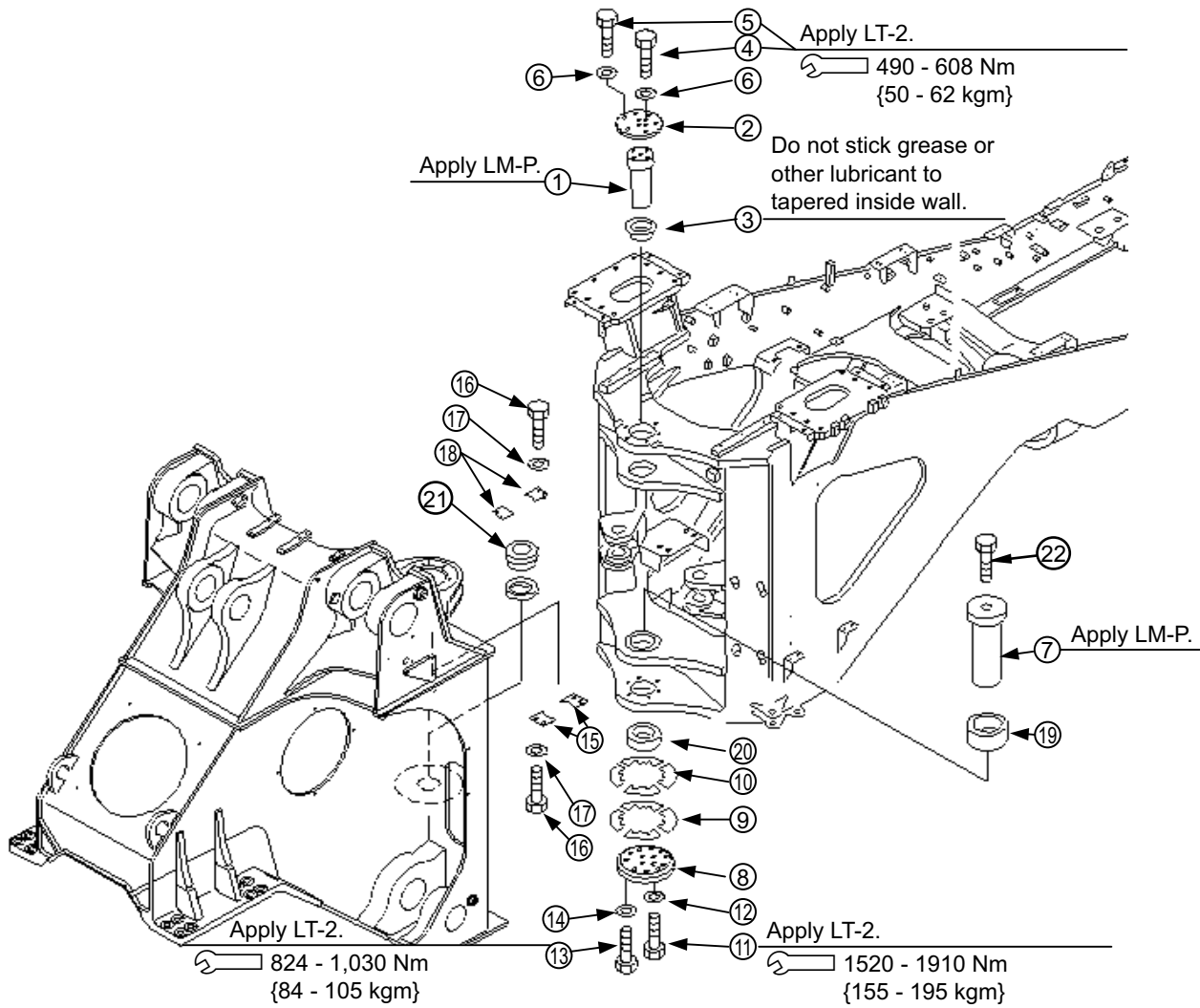
Assembly process. No.
A-90 Field assembly schedule

Day Hour	1st day								2nd day								3rd day																															
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8																								
Condition of chassis																																																
Rough assembly work	Positioning chassis								Coupling frames								Positioning axles								Installing tires								Installing fuel tank and cab								Installing step handrails and battery box							
Crane																																																
Worker	5 workers								5 workers								5 workers								5 workers								5 workers															

This process is not necessary, if the front and rear frames have been coupled.
 (Process for transportation posture in Japan)

Day Hour	4th day								5th day															
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8								
Condition of chassis																								
Rough assembly work	Installing counterweight, ROPS, and boom								Installing, checking, and adjusting bucket								Checking touchup paint							
Crane																								
Worker	5 workers								5 workers								2 workers							

B-10A Coupling front and rear frames (1/2)



No.	Part No.	Part name	Q'ty
1	427-46-11161	Shaft	1
2	427-46-11190	Retainer	1
3	427-46-11440	Bushing	1
4	01010-62065	Bolt	4
5	01010-62070	Bolt	6
6	01643-32060	Washer	10
7	427-46-11312	Shaft	1
8	427-46-11431	Retainer	1
9	427-46-11411	Shim 0.1	20
10	427-46-11421	Shim 0.5	24
11	01011-63065	Bolt	4
12	01643-33080	Washer	4
13	01010-62495	Bolt	10
14	01643-32460	Washer	10
15	427-46-11150	Plate	2
16	01010-61025	Bolt	8
17	01643-31032	Washer	8
18	427-46-11330	Plate	2
19	427-46-11480	Bushing	1
20	427-46-11490	Bushing	1
21	427-46-11321	Bushing	1
22	01010-63075	Bolt	1

B-10A Coupling front and rear frames (2/2)

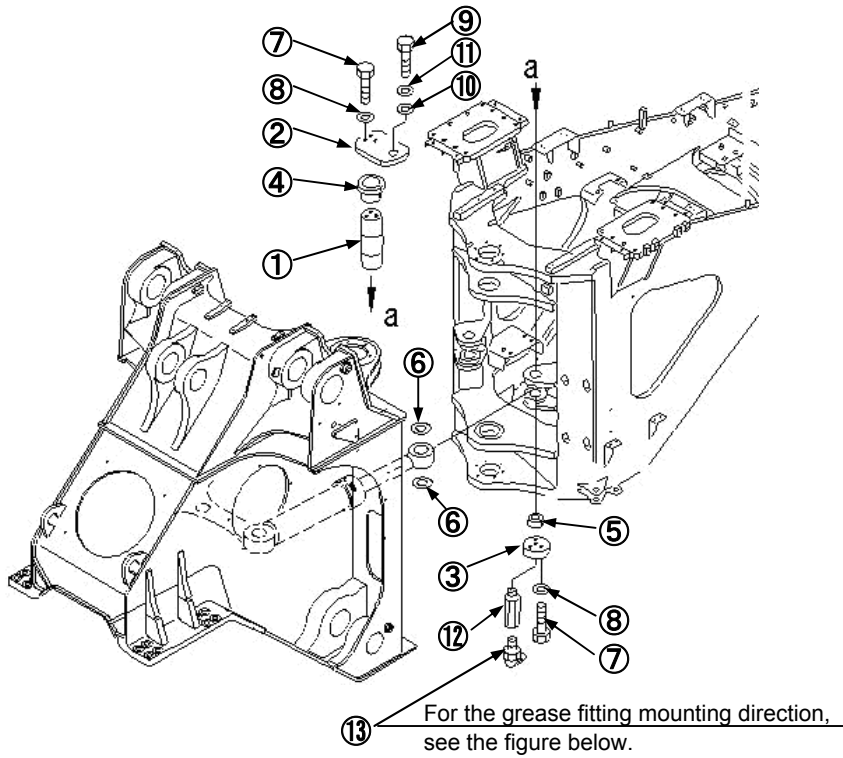
Procedure for coupling front and rear frame

1. Check that bushings ((19): 427-46-11480 and (20): 427-46-11490) are press fitted to rear frame.
 2. Check that bushing ((21): 427-46-11321) is installed to the hinge at the lower part of the front frame.
 3. Check that bushing ((3): 427-46-11440) is installed to the hinge at the upper part of the rear frame.
 4. Install retainer ((2): 427-46-11190) to the upper pin. Tightening torque: 490 - 608 Nm {50 - 62 kgm}
 5. Put the front frame between the rear frame hinges and insert the upper pin. Tightening torque: 490 - 608 Nm {50 - 62 kgm}
 6. Insert the lower pin and bushing in the lower hinge and install the retainer.
 7. Set a jack under the lower hinge of the front frame and fit the rear frame and bushing to each other and eliminate the clearance between them.
 8. Tighten the lower hinge and retainer mounting bolts (13) and (11) to 824 - 1,030 Nm {84 - 105 kgm} (M24) or 1,520 - 1,910 Nm {155 - 195 kgm} (M30), and then hit the lower pin head with a copper hammer 3 - 5 times.
 9. Repeat step 8 3 times to fit each joint, and then retighten bolts (13) and (11) to 824 - 1,030 Nm {84 - 105 kgm} (M24) and 1,520 - 1,910 Nm {155 - 195 kgm} (M30).
 10. Remove all bolts (13) and measure the clearance between the retainer and frame with feeler gauges at 3 places on the periphery (at the intervals of 120°) and calculate the average. Combine the shims so that the average clearance will be 0.08 - 0.18 mm. The total thickness of the shims must not exceed each of the measured clearances, however.
 11. Taking care not to move the front frame, remove bolts (13) and (11) and insert the shims combined in step 10.
 12. Perform steps 8 and 9.
 13. Pull out bolts (13) and (11) one by one, apply LT-2 to them, and tighten them to the specified torque. (Degrease the threads and taps perfectly.)
 14. Perform steps 8 and 9 (Apply the tightening torque for M20, however) and 13 for upper pin bolts ((5):01010-62070, (4):01010-62065).
 15. Remove the jack from under the lower hinge of the front frame.
- ★ After finishing the work, apply the safety lock bar and fix the chassis so that the chassis will not articulate, and then perform setting in Procedure No. B-50.

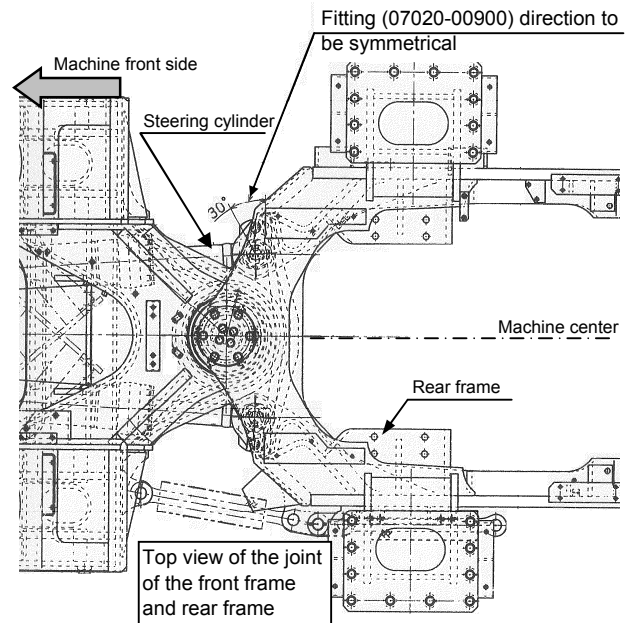
Precautions	Special tools		Necessary equipment	
	Name		Name	Q'ty
★ When assembling, supply sufficient amount of grease to inside of bearings. ★ After assembling, supply grease to the upper hinge and lower hinge shafts until it comes out of the dust seals. ★ Touch up the black bolts and machined surfaces.	Impact wrench (Sockets: #17, #30, #36, and #46)		50 ton crane	2
	Torque wrench (Sets: 549, 927, and 1,715 Nm {55.9, 94.5 and 174.8 kgm})		Slings (for front frame and rear frame)	1 each
	Jack, feeler gauge, copper hammer		Air compressor	1
	Other tools			
	Others			

B-20A Installing steering pin (1/4)

1. Remove (1) - (13) being temporarily installed on the rear frame assembly.



No.	Part No.	Part name	Q'ty
1	427-46-12410	Shaft	2
2	427-46-12420	Plate	2
3	427-46-12430	Plate	2
4	427-46-12440	Bushing	2
5	427-46-12450	Bushing	2
6	421-70-11331	Shim	16
7	01010-81475	Bolt	12
8	01643-31445	Washer	12
9	01010-81635	Bolt	2
10	01643-31645	Washer	4
11	421-70-11280	Washer	2
12	6141-55-5630	Nipple	2
13	07020-00900	Fitting	2

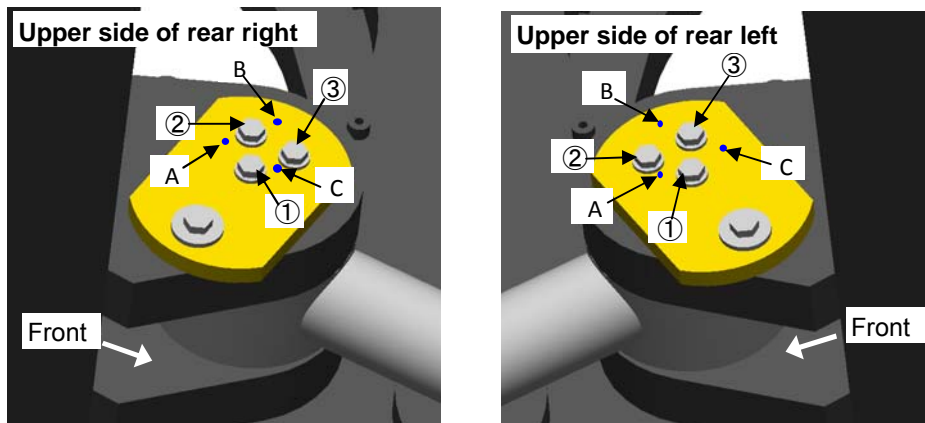


Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Clean the steering cylinder and pin inserting part carefully and remove all foreign matter.	Impact wrench	1	Air compressor	1
	Socket (22 mm, 24 mm)	1 each		
	Spanner (10 mm, 14 mm)	1 each		
	Torque wrench	1 each		
	98Nm {10kgm} set, 147Nm {15kgm} set, 177Nm {18kgm} set, 196Nm {20kgm} set			
	Plastic hammer (Size: No.B-20A (4), see Fig. 2)	1		
	Ratchet wrench (Length= 200)	1		
Others				

B-20A Installing steering pin (2/4)

2. Assemble steering cylinder pin by referring to the following figure in accordance with the following procedure.

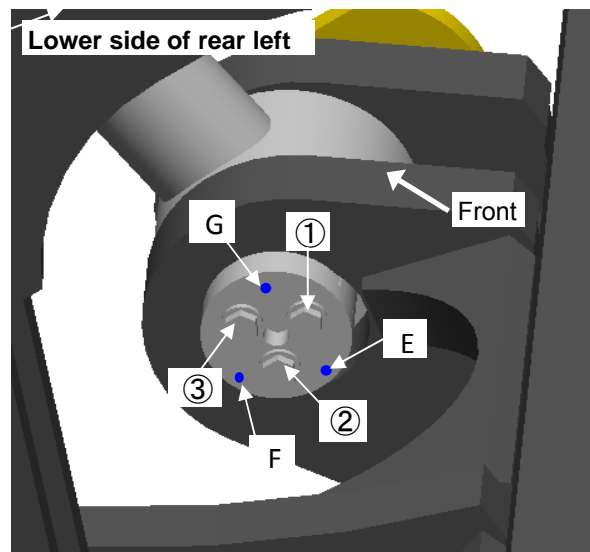
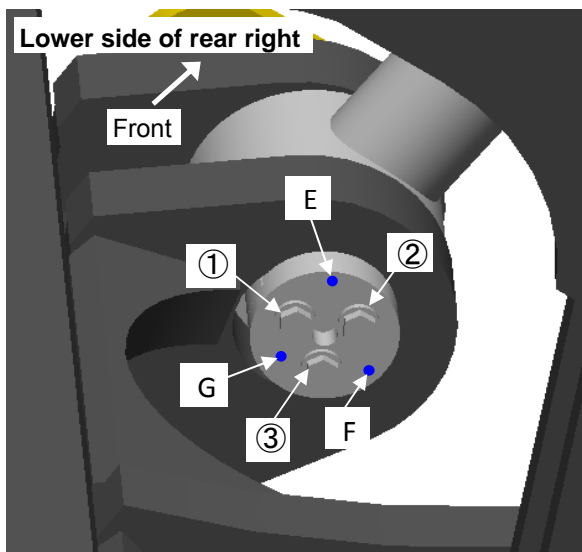
- (1) Assemble taper collets on the upper side and steering cylinder pin, and then assemble taper collets on the lower side and steering cylinder pin.
- (2) Tightening of bolts on the upper side (make sure to read precautions of NO.B-20A (4) beforehand)
 - (a) Tighten bolts <1>, <2>, and <3> by using ratchet wrench with tightening torque of approximately 39Nm {4kgm} each until seat surface of those bolts come in contact.
(Tightening torque of 39Nm {4kgm}: Tightening with operating effort of 196Nm {20kg} by using ratchet wrench as a reference)
After that, tighten bolts in three places in clockwise in order of <1>, <2>, <3>, <1>, <2>, <3> and so on, with tightening torque of approximately 39Nm {4kgm} by using ratchet wrench until it becomes immovable.
 - (b) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 98Nm {10kgm}. Perform this work one round
 - (c) Check the clearance between the taper collets and frame (NO.B-20A (4) Fig.3: Y). Tap points of A or B or C twice by using plastic hammer to equalize the clearance and to correct the inclination of taper collets.
After that, tap points of A, B, and C twice of each by using a plastic hammer. Perform this work two rounds.
 - (d) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 98Nm {10kgm}. Perform this work three rounds.
 - (e) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 147Nm {15kgm}. Perform this work three rounds.
 - (f) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 177Nm {18kgm}. Perform this work three rounds.
 - (g) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 196Nm {20kgm}. Perform this work three rounds.
 - (h) Loosen bolt <1> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
Loosen bolt <2> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
Loosen bolt <3> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
 - (i) Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 177Nm {18kgm}. Perform this work three rounds.



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Clean the steering cylinder and pin inserting part carefully and remove all foreign matter.	Impact wrench	1	Air compressor	1
	Socket (22 mm, 24 mm)	1 each		
	Spanner (10 mm, 14 mm)	1 each		
	Torque wrench	1 each		
	98Nm {10kgm} set, 147Nm {15kgm} set, (Size: No.B-20A (4), see Fig. 2)			
	Plastic hammer (Size: No.B-20A (4), see Fig. 2)	1		
	Ratchet wrench (Length= 200)	1		
Others				

B-20A Installing steering pin (3/4)

- (3) Tightening of bolts on the lower side (make sure to read precautions of NO.B-20A (4) beforehand)
- Tighten bolts <1>, <2>, and <3> by using ratchet wrench with tightening torque of approximately 39Nm {4kgm} each until seat surface of those bolts come in contact.
(Tightening torque of 39Nm {4kgm}: Tightening with operating effort of 196Nm {20kg} by using ratchet wrench as a reference)
After that, tighten bolts in three places in clockwise in order of <1>, <2>, <3>, <1>, <2>, <3> and so on, with tightening torque of approximately 39Nm {4kgm} by using ratchet wrench until it becomes immovable.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 98Nm {10kgm}. Perform this work one round
 - Tap points of E, F, and G twice of each by using a plastic hammer. Perform this work two rounds.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 98Nm {10kgm}. Perform this work three rounds.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 147Nm {15kgm}. Perform this work three rounds.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 177Nm {18kgm}. Perform this work three rounds.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 196Nm {20kgm}. Perform this work three rounds.
 - Loosen bolt <1> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
Loosen bolt <2> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
Loosen bolt <3> once, apply Loctite262, and tighten it by using torque wrench which is set at 177Nm {18kgm}.
 - Tighten bolts in three places in clockwise in order of <1>, <2>, and <3> by using torque wrench which is set at 177Nm {18kgm}. Perform this work three rounds.



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Clean the steering cylinder and pin inserting part carefully and remove all foreign matter.	Impact wrench	1	Air compressor	1
	Socket (22 mm, 24 mm)	1 each		
	Spanner (10 mm, 14 mm)	1 each		
	Torque wrench	1 each		
	98Nm {10kgm} set, 147Nm {15kgm} set, (Size: No.B-20A (4), see Fig. 2)			
	Plastic hammer (Size: No.B-20A (4), see Fig. 2)	1		
	Ratchet wrench (Length= 200)	1		
Others				

B-20A Installing steering pin (4/4)

(4) Precautions

- (a) Assemble it with the slit of taper collet (Fig.1:B) facing to inside the machine.
- (b) Make sure that clearance between frame and taper collet (Fig.3: Y) is even when it is temporarily assembled before starting tightening.
- (c) Make sure that clearance described above is even when it is being tightened and after tightening.
- (d) Use a plastic hammer of size shown in Fig.2. (It is called as 11/2)
- (e) Tap by using a plastic hammer until the height becomes 150mm. (Fig.3: dimension H)
- (f) For bolts and thread hole, perform the work after degreasing.
- (g) Apply LM-P to inner surface of bushing on the cylinder side and dust seal lip before assembling the pin. (Fig.3. a) Install dust seal with its out. (Fig.3.P view)
- (h) Do not allow any of lubricant such as grease to be attached to pin portion and taper portion of taper collet. (Fig.3.b)

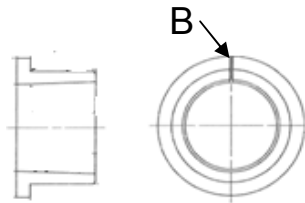
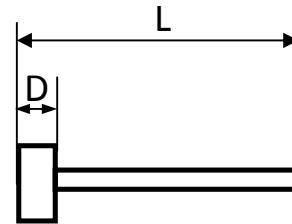


Fig 1.



Plastic hammer [mm]

	D	L
Dimension	38	320

Fig 2.

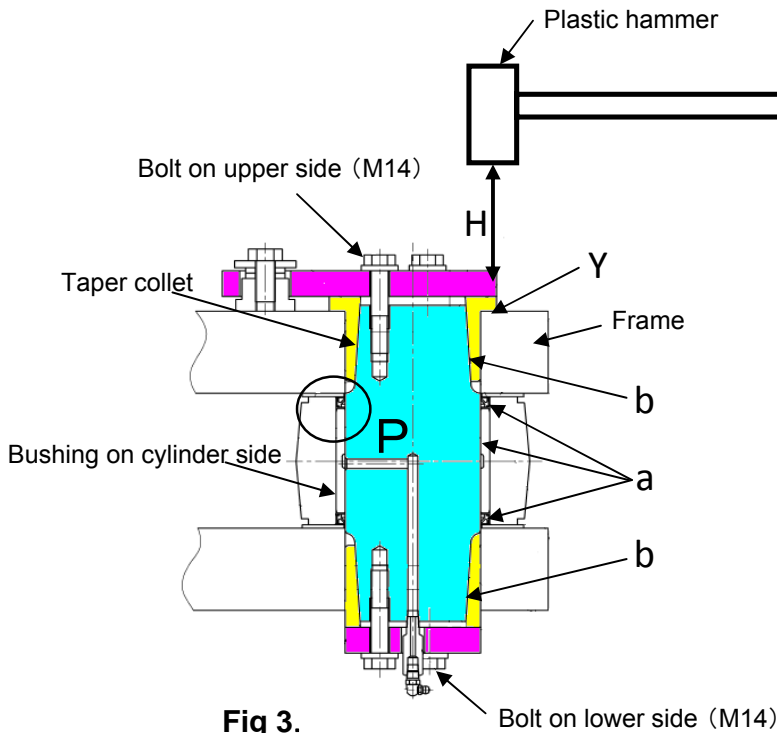
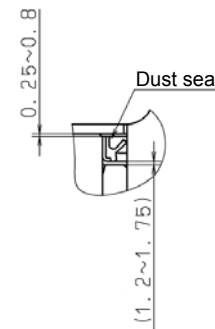


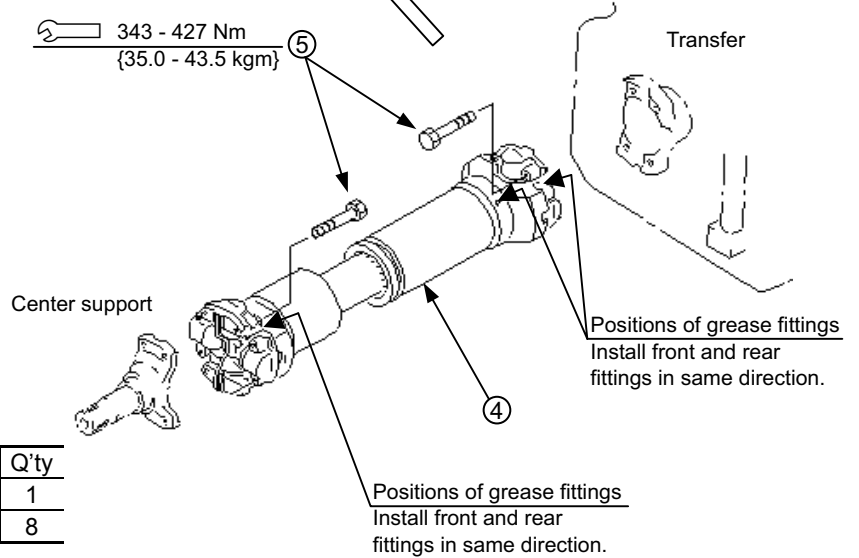
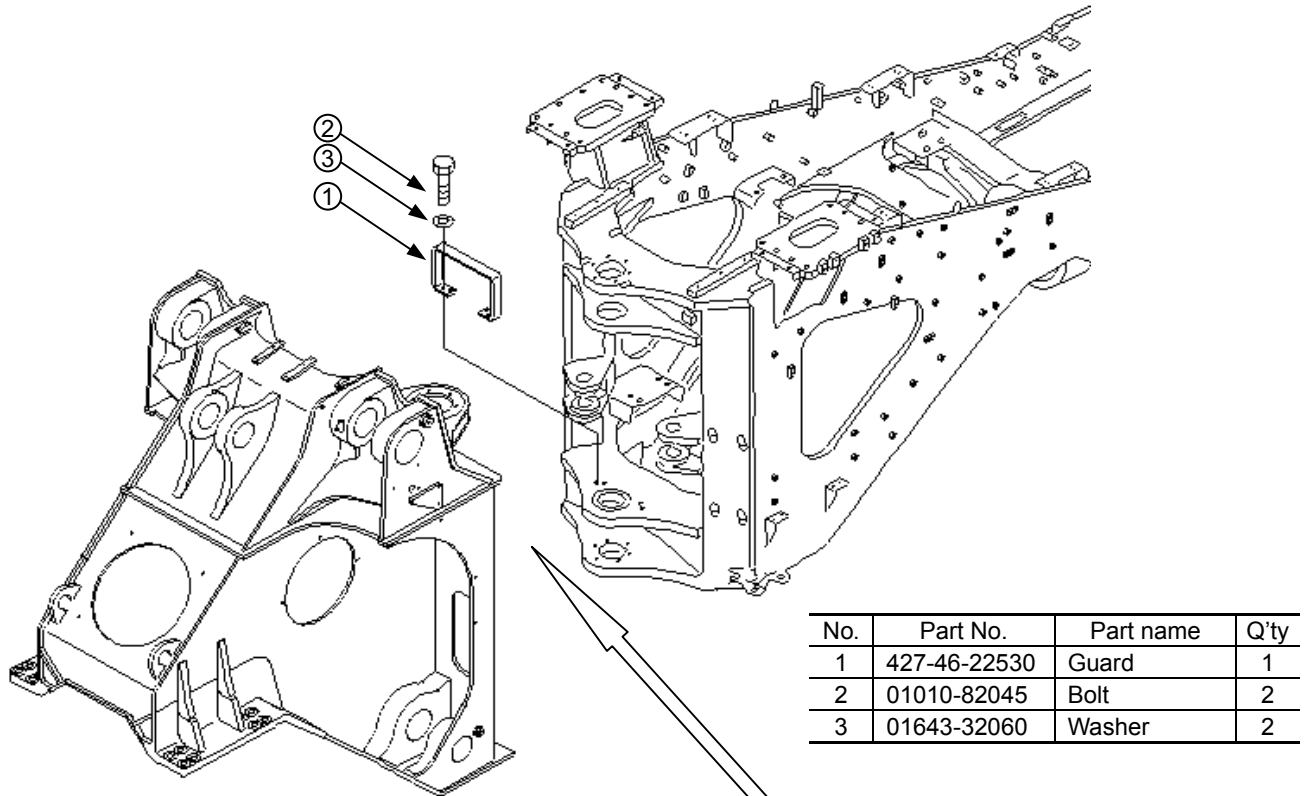
Fig 3.



Detail of P

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Clean the steering cylinder and pin inserting part carefully and remove all foreign matter.	Impact wrench	1	Air compressor	1
	Socket (22 mm, 24 mm)	1 each		
	Spanner (10 mm, 14 mm)	1 each		
	Torque wrench	1 each		
	98Nm [10kgm] set, 147Nm [15kgm] set, (Size: No.B-20A (4), see Fig. 2)			
	Plastic hammer (Size: No.B-20A (4), see Fig. 2)	1		
	Ratchet wrench (Length= 200)	1		
Others				

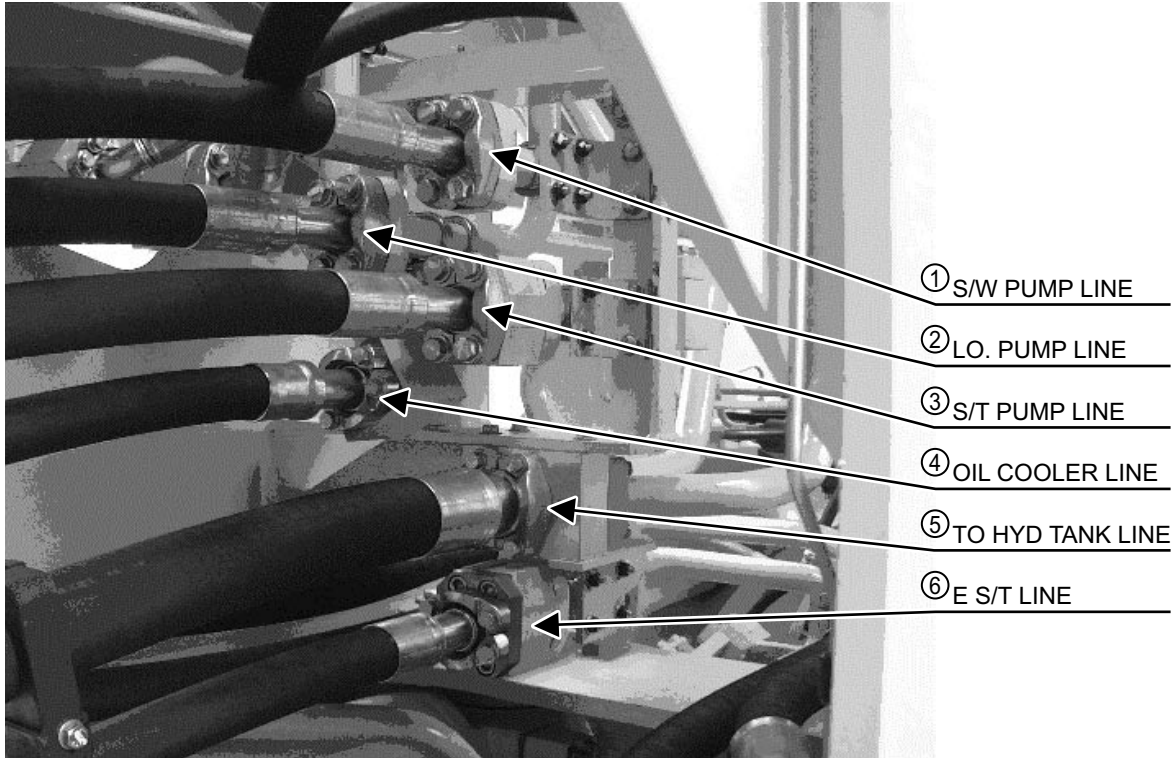
Assembly process. No.
B-30A Installing drive shaft



No.	Part No.	Part name	Q'ty
4	427-70-12112	Shaft	1
5	01050-61895	Bolt	8

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Clean the drive shaft installing surface carefully and remove all foreign matter. 2. After the work, touch up the black bolts so that they will not rust.	Impact wrench	1	Air compressor	1
	Socket (27 mm, 30 mm)	1 each		
	Torque wrench (385 Nm set)	1		
Others				

B-40A Connecting piping (1/2)



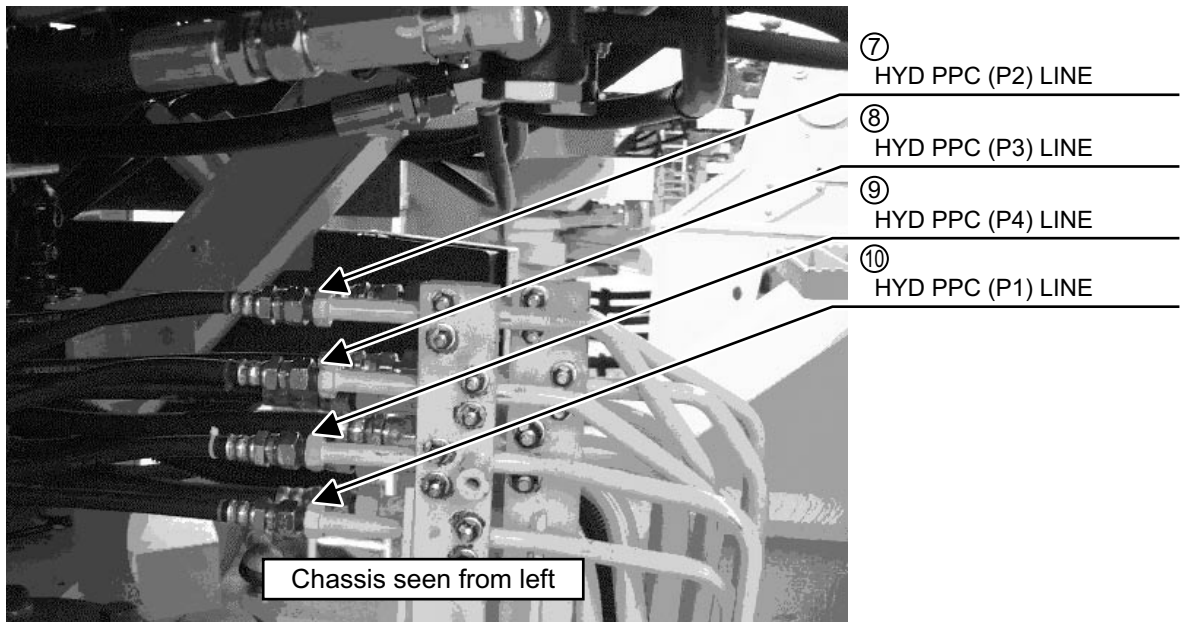
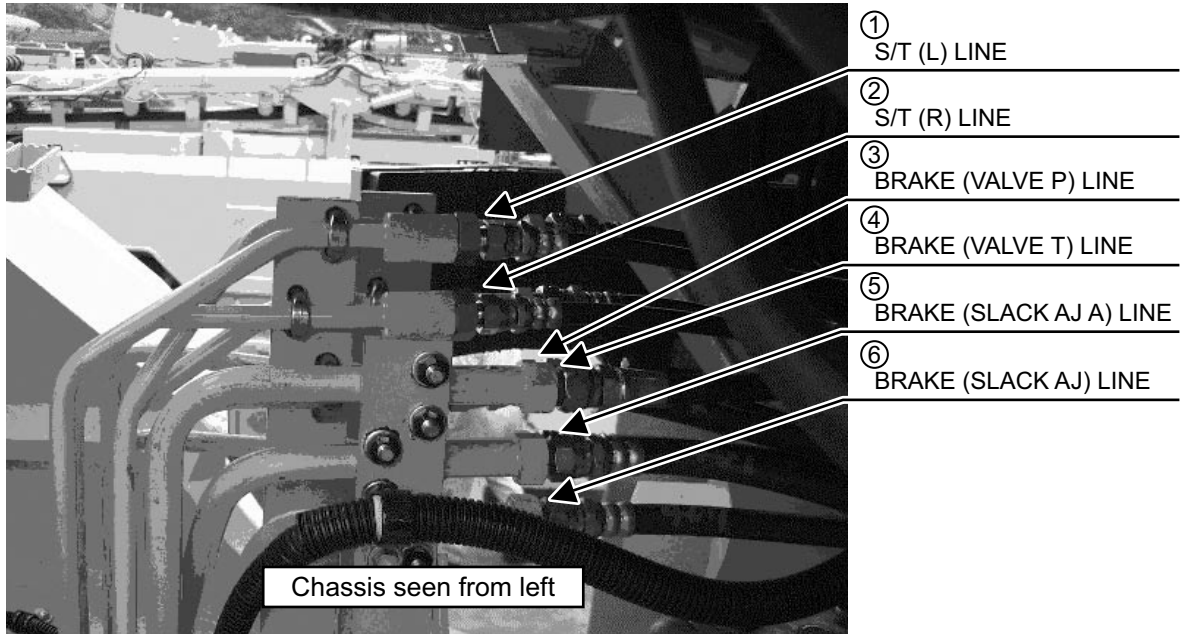
★ Connect the hoses for lines (1) - (6).
 (Do not connect the hoses for the 6 lines simultaneously, but perform following steps 1 - 4 for each line at a time.)

1. Remove the pipe plugs.
2. Check that foreign matter is not sticking.
3. Check that no O-rings are damaged.
4. Connect the hoses. (Tighten the bolts according to KES 04.123.1 Impact wrench.)

	For (1), (2), (3)	For (4), (6)	For (5)
Sleeve head	07378-11410 (3)	07378-11400	07378-12400
Flange	07379-01470 (3)	07379-01460	07379-02484
O-ring	07000-03048 (3)	07000-E3048	07000-F2070
Split flange	07371-51470 (6)	07371-31465 (2)	07371-12484 (2)
Bolt	01010-81460 (12)	07372-21240 (4)	07372-21240 (4)
Washer	01643-31445 (12)	01643-31030 (4)	01643-51232 (4)

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
After connecting the piping, if oil sticks to the peripheral parts, wipe it off.	Impact wrench	1	Air compressor	1
	Socket (19 mm, 22 mm)	1 each		
Others				

Assembly process. No.
B-40A Connecting piping (2/2)

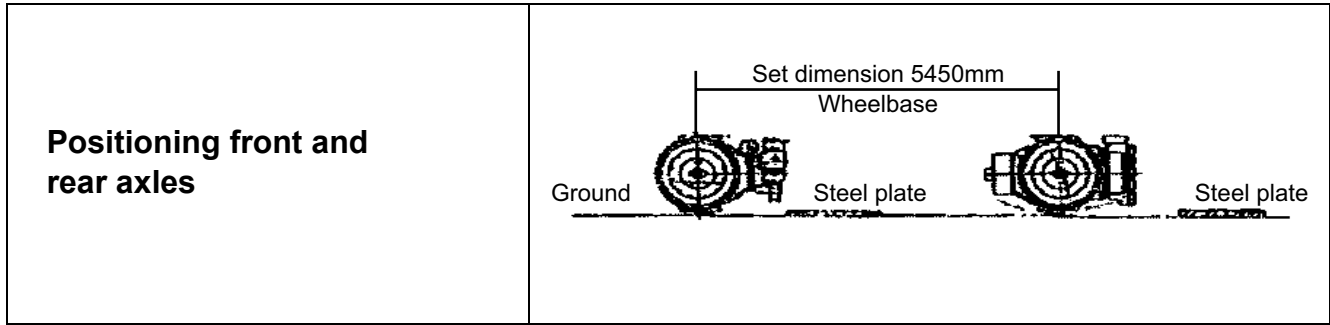


★ Connect the hoses for lines (1) - (10).
 (Do not connect the hoses for the 10 lines simultaneously, but perform following steps 1 - 3 for each line at a time.)

1. Remove the pipe plugs.
2. Check that foreign matter is not sticking.
3. Connect the hoses. (Tighten the hose joints according to KES D07102 and D07108.)

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
After connecting the piping, if oil sticks to the peripheral parts, wipe it off. (03) for (1), (2), (7), (8), (9), and (10) Plug 07376-50315 (6) Sleeve nut 07211-20315 (6) Plug for sleeve nut 07222-00312 (6) (04) for (3), (4), (5), and (6) Plug 07376-50422 (4) Sleeve nut 07211-20422 (4) Plug for sleeve nut 07222-00414 (4)	Torque wrench (Sets: 49 Nm and 78.5 Nm (499.6 and 800.5 kgm))	1 each		
Others				

B-50 Positioning axles and installing supports

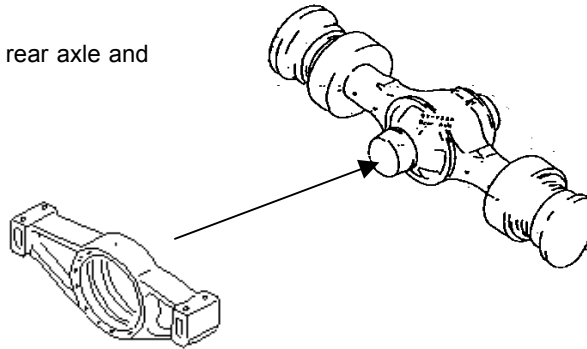


Position the front axle assembly and rear axle assembly (having the axle support) to the wheelbase of 5,450 mm in the chassis assembly area as shown in the above figure.

Cleaning and greasing inside of rear axle support

Thoroughly wipe the inside of the rear axle support with cloths and apply grease to the inside wall of the bushing.

Fit the rear axle support to the rear axle and secure it with wires, etc.



Support

Hanging load: 2.9 kN {300 kg}, 2 pieces of 50 × 2,000 nylon sling

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Secure the support with wires, etc. (to prevent it from vibrating and coming out)				
Others				

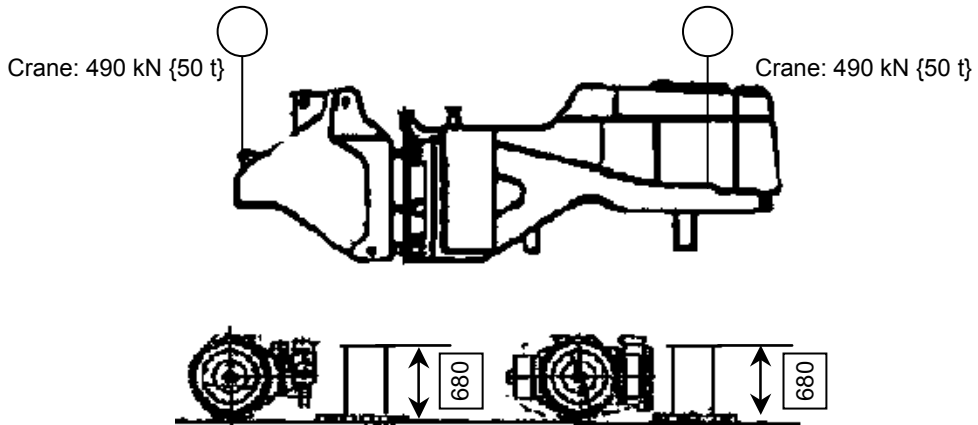
Assembly process. No.
B-60 Positioning bare machine

Sling the bare machine of the front and rear frames with 2 cranes and position it onto the frame and rear axles.

Using the lifting eyes of the frames, sling the bare machine with 2 490 kN {50-t} cranes.

Position the bare machine on the frame stand so that you can install the tire and wheel assemblies.
 When positioning the bare machine on the ground, place steel plates under the wood blocks to prevent the bare machine from sinking or slanting. Use 2 steel plates of size of 1,219 × 2,438 × 9 (thick).

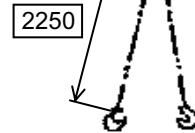
- ★ Position the bare machine on a flat place so that it will not slant in any direction at all.
 (If it slants, you cannot adjust the pin holes easily when installing the lift arm.)



Detail of sling

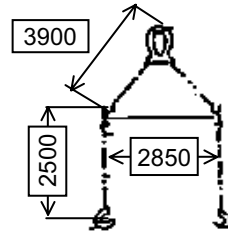
Front

Hanging load: 112.8 kN {11.5 t}
 Crane: 490 kN {50 t}



Rear

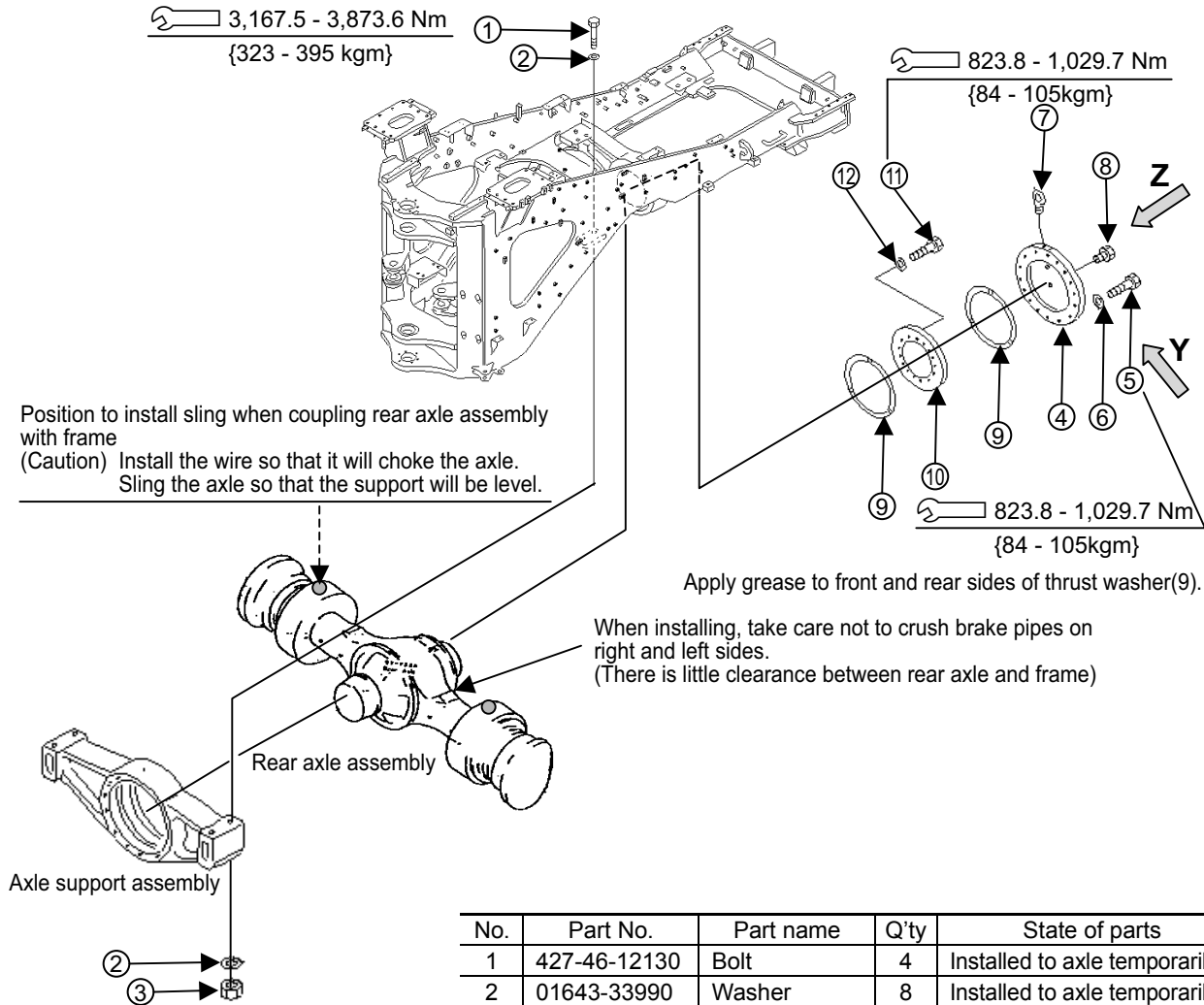
Hanging load: 196 kN {20 t}
 Crane: 490 kN {50 t}



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No. B-70 Installing rear axle

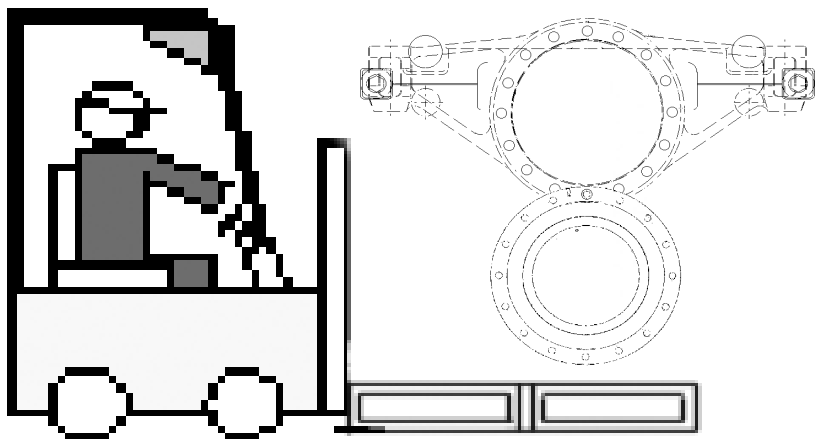
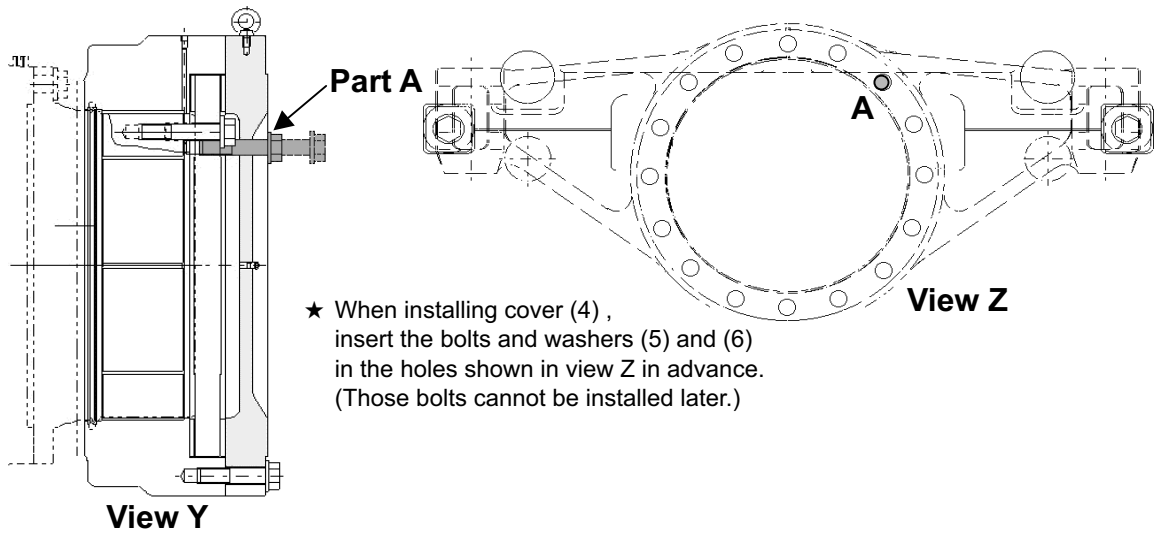
Sling the rear axle and couple it with the rear frame.
(Precautions for installing the cover are shown in the next page.)



No.	Part No.	Part name	Q'ty	State of parts
1	427-46-12130	Bolt	4	Installed to axle temporarily
2	01643-33990	Washer	8	Installed to axle temporarily
3	01580-03931	Nut	4	Installed to axle temporarily
4	427-46-12180	Thrust cover	1	Loose-supply item
5	01011-82400	Bolt	16	Installed to chassis temporarily
6	01643-32460	Washer	16	Installed to chassis temporarily
7	04530-11018	Eye bolt	1	Loose-supply item
8	07029-00000	Valve	1	Loose-supply item
9	427-46-12161	Thrust washer	2	Installed to axle temporarily
10	427-46-12171	Thrust plate	1	Installed to axle temporarily
11	01011-82420	Bolt	16	Installed to axle temporarily
12	01643-32460	Washer	16	Installed to axle temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Power wrench	1		
	Torque wrench	1		
	Socket 60 mm	1		
	Socket 36 mm	1		
Others				

B-80 Procedure for installing cover on rear axle side



Carry the cover with a forklift to under the mounting position.
Lift it up gradually and install it, matching the positions of the holes.
At this time, the cover shall be held and positioned by 2 workers.

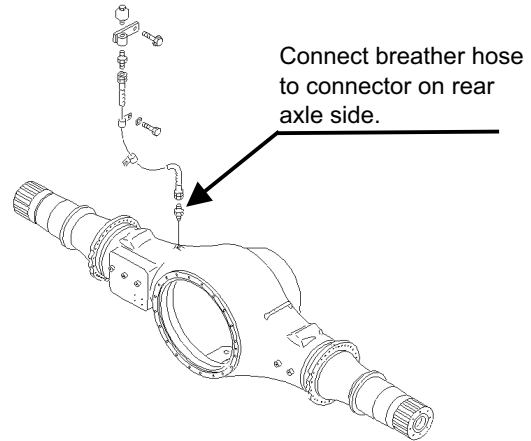
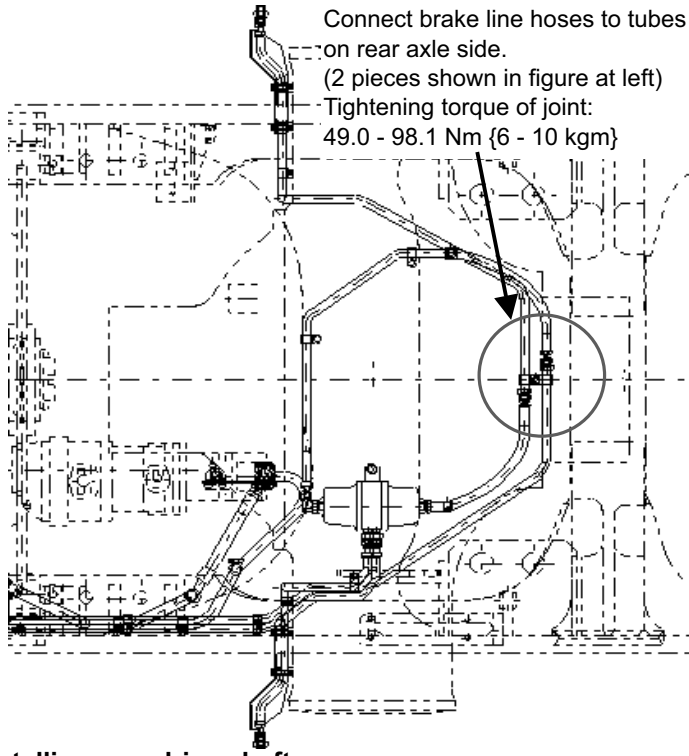
Caution) The forklift operator and workers must make signs securely while working.

Caution) Weight: 119 kg

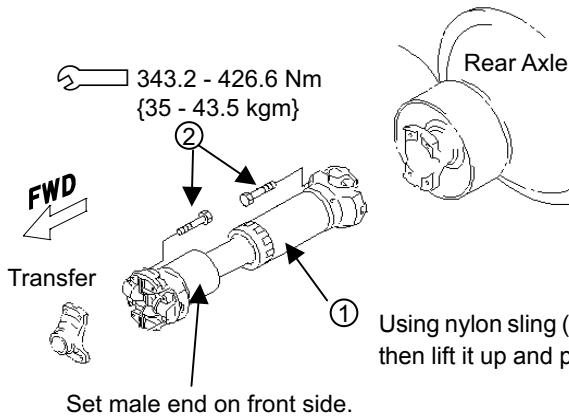
Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Since the cover is as heavy as 119 kg, install it carefully.				
Others				

B-90 Installing rear axle piping and drive shaft

Rear axle piping



Installing rear drive shaft



Cautions

1. Before installing the drive shaft, clean the mounting faces.
2. When installing the front, rear, and center drive shafts, set the grease fittings of the spiders in the same direction.
3. Install each drive shaft with the male end on the front side.

Using nylon sling (50 × 5,000), pass drive shaft through center of frame, and then lift it up and position and install it with crane from above right platform.

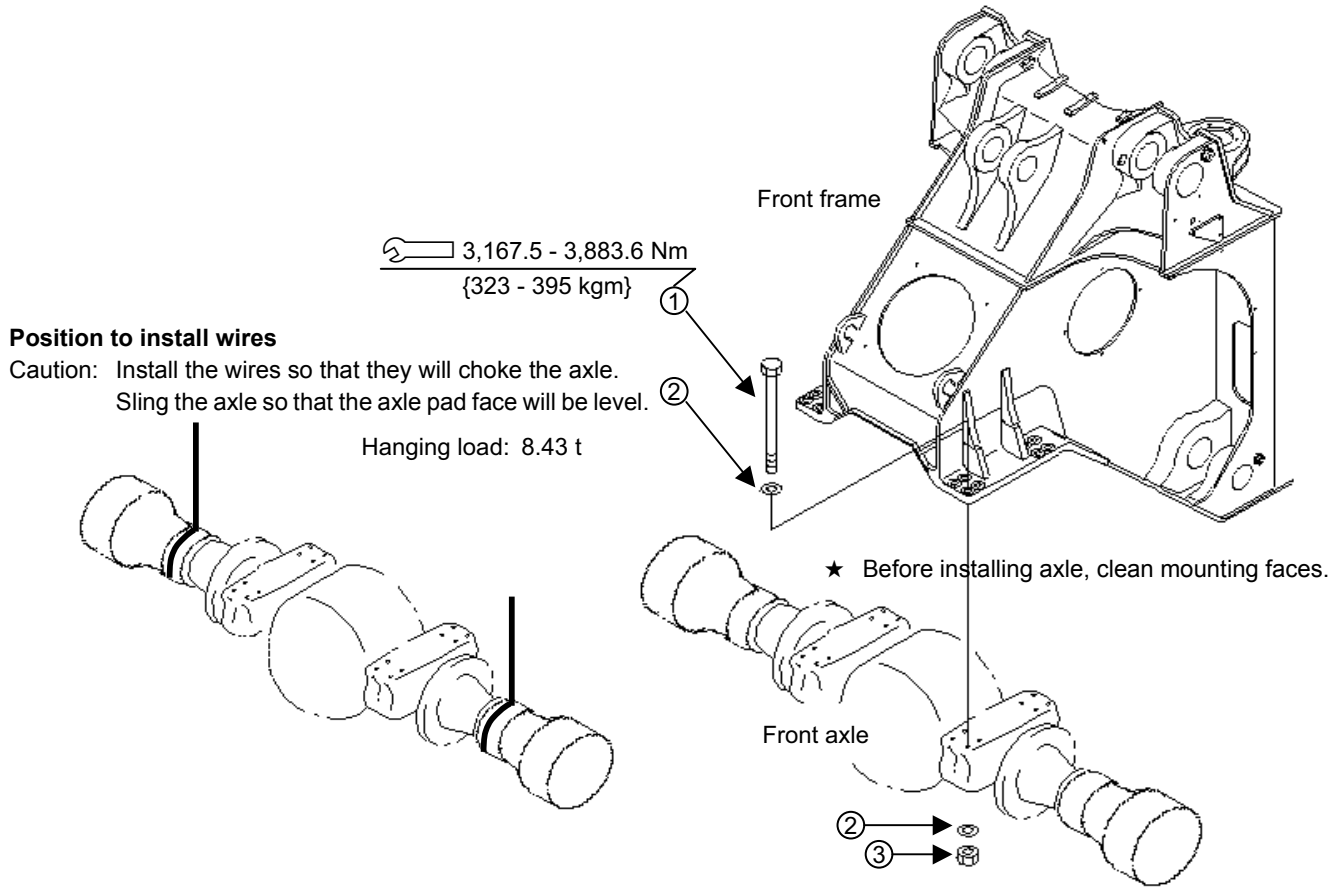
No.	Part No.	Part name	Q'ty	State of parts
1	427-20-12210	R.P. shaft	4	Loose-supply item
2	01050-61895	Bolt	8	Installed to chassis and axle temporarily

Supply grease (molybdenum disulfide grease) to grease fittings for axle support and drive shafts.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

Assembly process. No.
B-100 Installing front axle

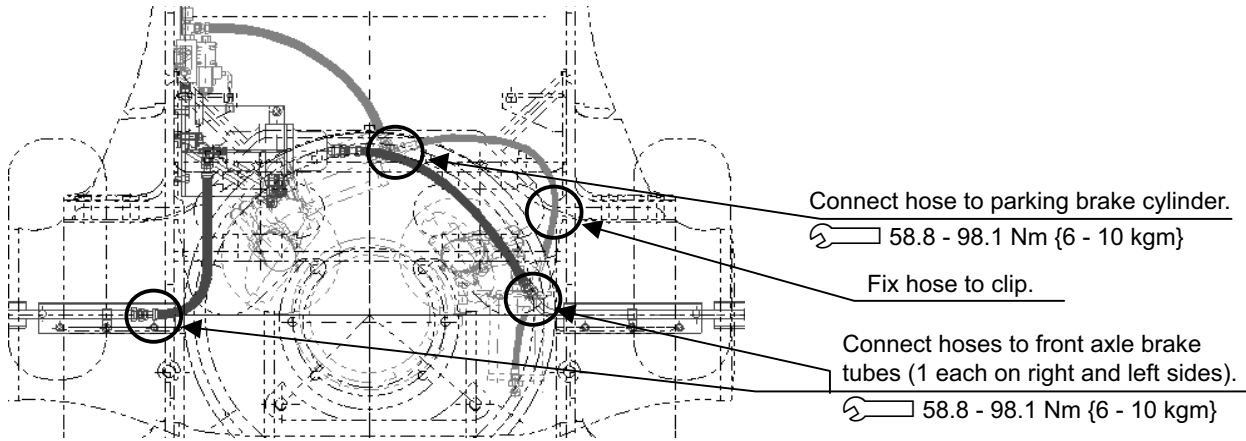
No.	Part No.	Part name	Q'ty	State of parts
1	427-46-1452	Bolt	16	Installed to axle temporarily
2	01643-33990	Washer	32	Installed to axle temporarily
3	01580-03913	Nut	16	Installed to axle temporarily



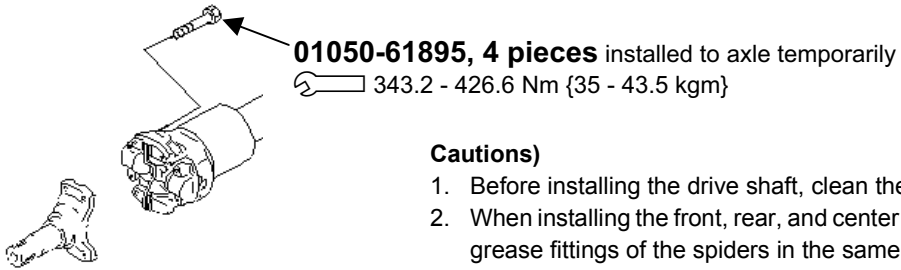
Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-110 Installing front axle piping and connecting drive shaft

1. Connecting front axle hoses



2. Connecting drive shaft

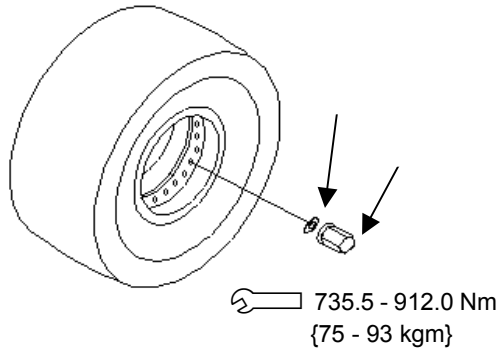


Supply grease (molybdenum disulfide grease) to grease fittings for axle support and drive shafts.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No.
B-120 Installing tires

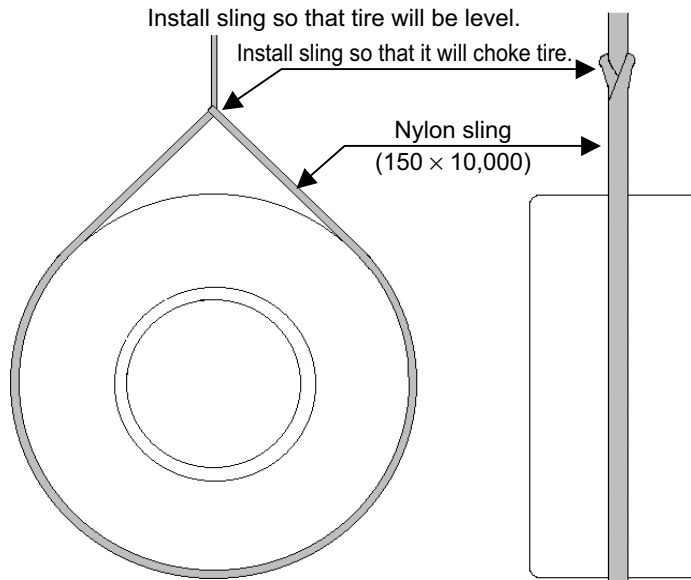
Installing wheel and tire assembly



1. Lift up the tire with a crane, install it to the axle, and install the mounting nuts.
 Before installing the mounting nuts, remove grease from the stud bolts.
 Take care not to damage the air supply tube.
2. Tighten the tire mounting nuts temporarily with an impact wrench.
 ★ Since the nuts are installed at high positions and they are large in number, you should use a balancer to hold the impact wrench for the ease of work.
 Tighten the tire mounting nuts to the specified torque with a torque wrench.
3. Put chocks under the tires and remove the wood blocks from under the chassis.

No.	Part No.	Part name	Q'ty	State of parts
1	426-22-12930	Nut	106	Loose-supply item
2	01643-32460	Washer	106	Loose-supply item

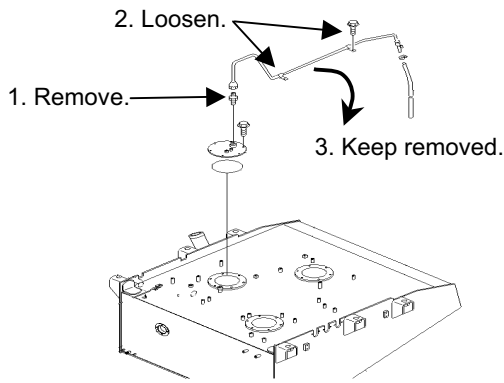
How to sling tire



(Weight of tire and wheel assembly: 34.3 kN {3.5 t})

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Before installing, remove grease from the stud bolts. When positioning the wheel and tire assembly, take care not to damage the air supply tube.	36 mm socket	1		
	Torque wrench	1		
	Extension bar	1		
Others				

B-130 Installing fuel tank



★ Before installing the fuel tank, remove the breather tube.

After installing the fuel tank, be sure to return the breather tube.

★ Before installing the fuel tank, clean the mounting faces.

1. Using a forklift, etc., position the fuel tank assembly under the rear frame.

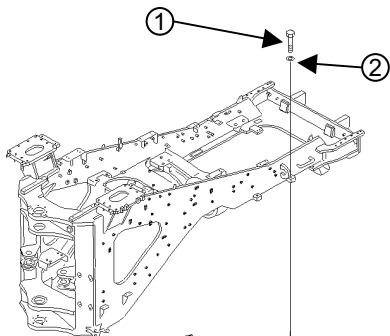
2. Sling the fuel tank assembly with a balance sling.

3. Raising the fuel tank gradually, install the breather tube temporarily.

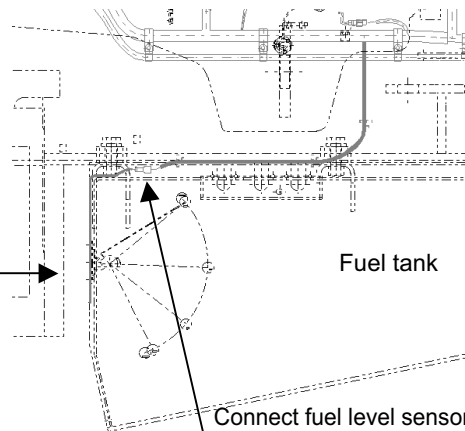
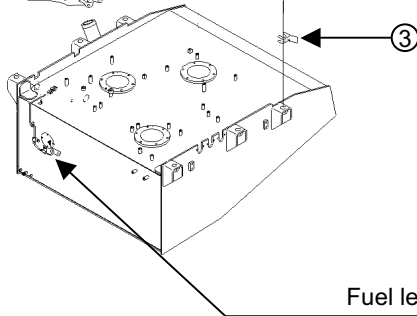
4. Insert only the bolts on the right side temporarily and perform the piping work shown in the following pages.

5. After finishing all the piping work, tighten the bolts to the specified torque.

1,520.0 - 1,912.3 Nm {155 - 195 kgm}



Adjust so that clearance between fuel tank and rear frame will be 0.5mm or less.



Fuel level sensor

Fuel tank

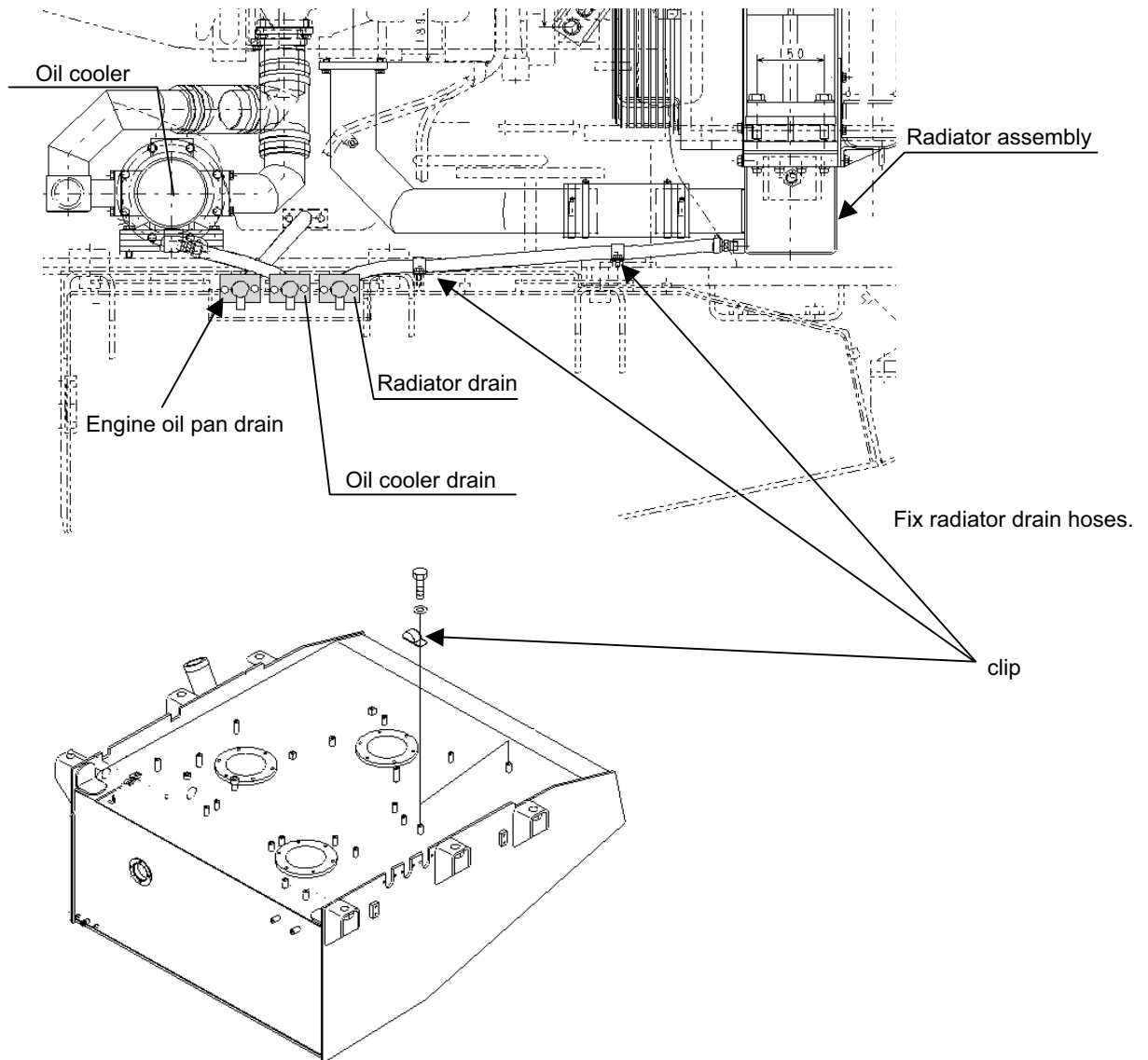
Connect fuel level sensor connector.

No.	Part No.	Part name	Q'ty	State of parts
1	01011-63000	Bolt	6	Installed to fuel tank mounting support temporarily
2	01643-33080	Washer	6	Loose-supply item
3	416-855-1190	Shim	10	Loose-supply item

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Impact wrench	1		
	Power wrench (4-times wrench)	1		
	Torque wrench (Set: 431.5 Nm {44 kgm})	1		
	Extension	1		
	Socket: 46 mm	1		
Others				

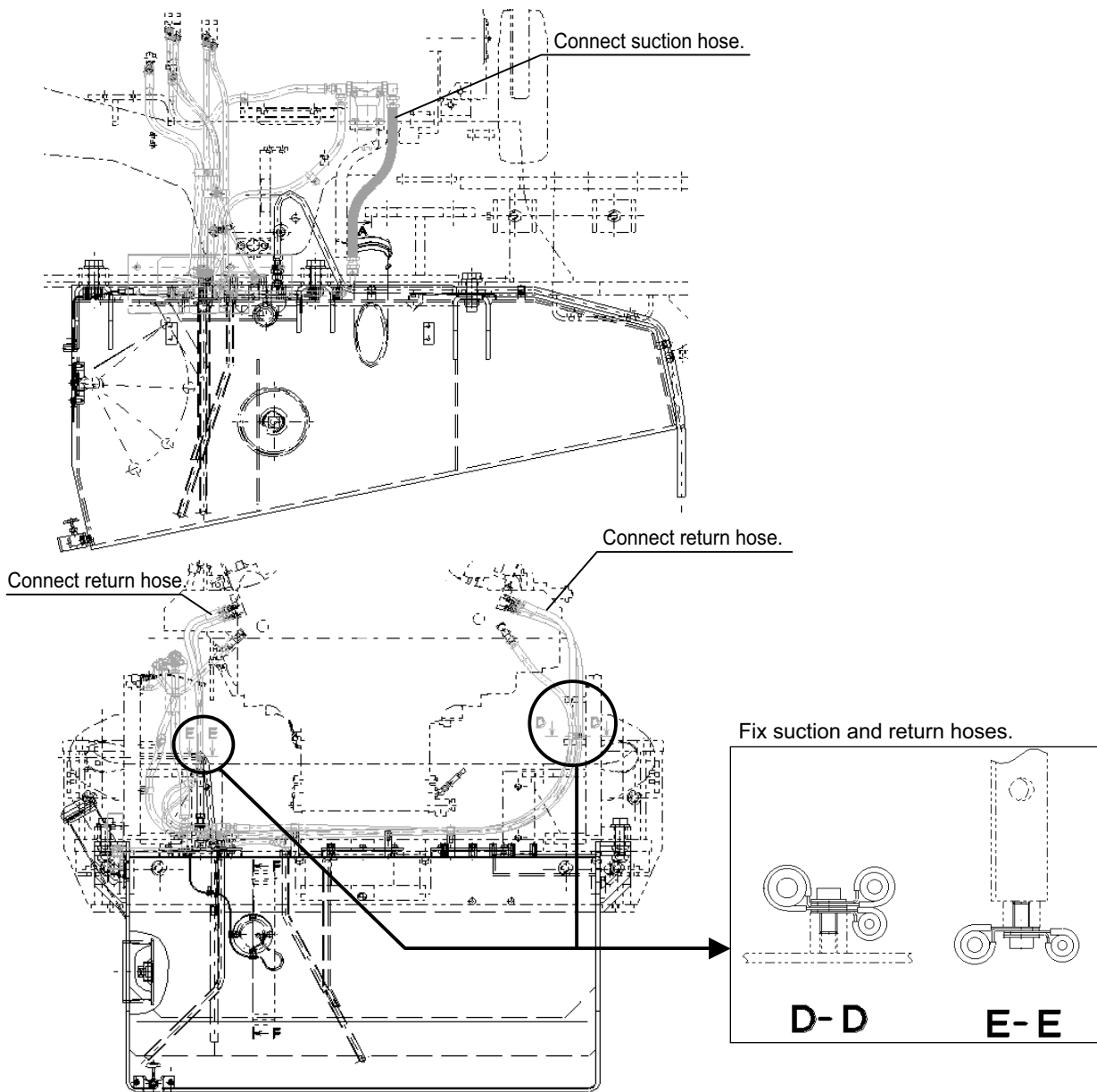
Assembly process. No.
B-140 Installing drain line

★ Use the drain tube mounting bolts installed to the fuel tank temporarily.



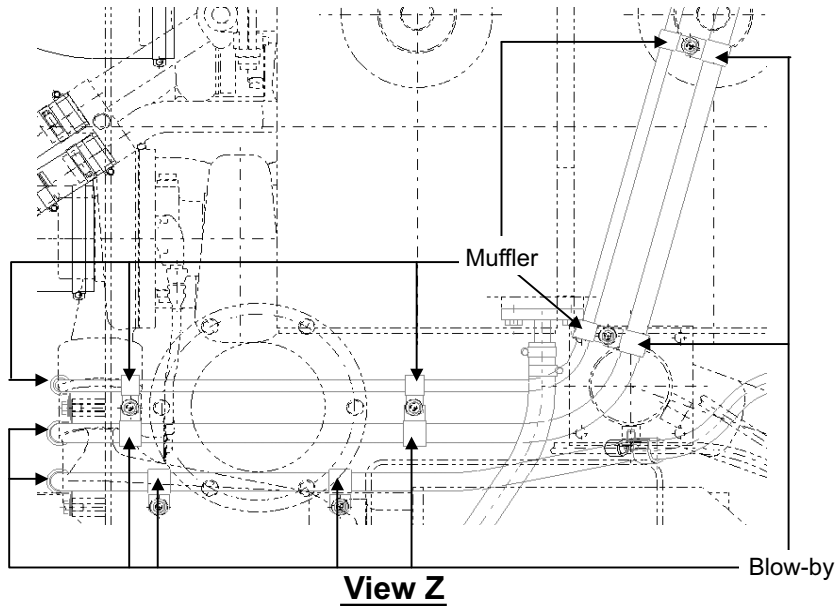
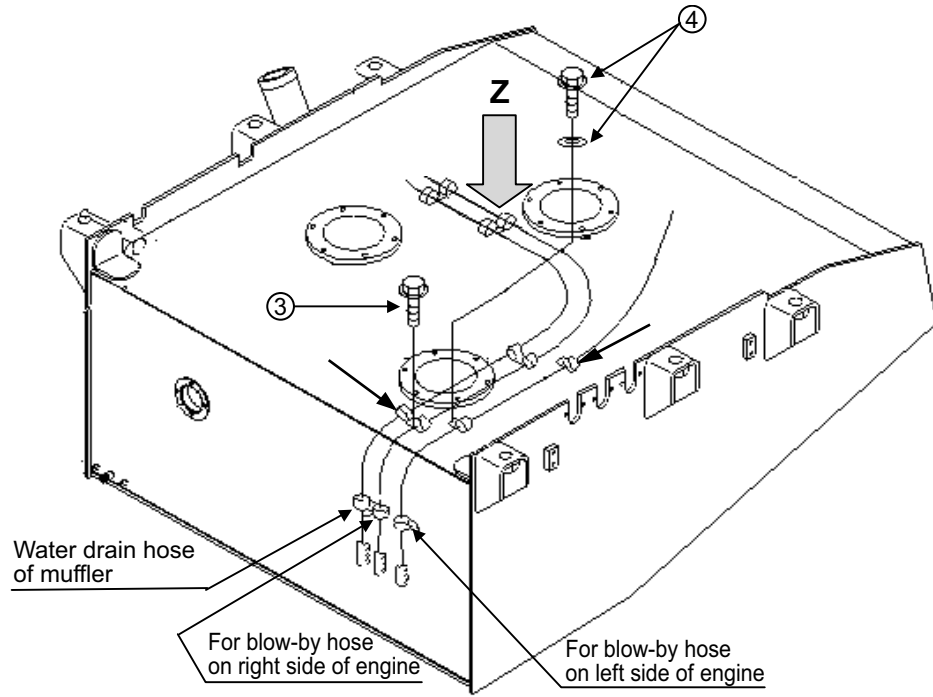
Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-150 Connecting and fixing fuel piping



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Impact wrench	1		
	Socket: 14 mm	1		
	SP-type torque wrench (24 × 49 Nm {5 kgm})	1		
	SP-type torque wrench (27 × 78.4 Nm {8 kgm})	1		
Others				

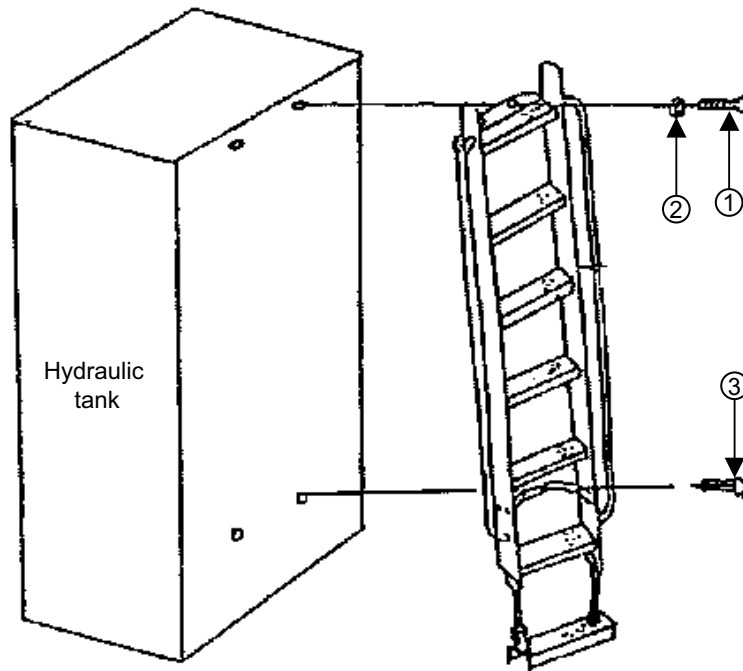
B-160 Fixing drain hoses of engine



No.	Part No.	Part name	Q'ty	State of parts
1	08036-01814	Clip	5	Installed to fuel tank top temporarily
2	08036-02514	Clip	8	Installed to fuel tank top temporarily
3	01435-01016	Bolt	5	Installed to fuel tank top temporarily
4	01024-81016	Bolt	5	Installed to fuel tank top temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-170 Installing ladder (right)

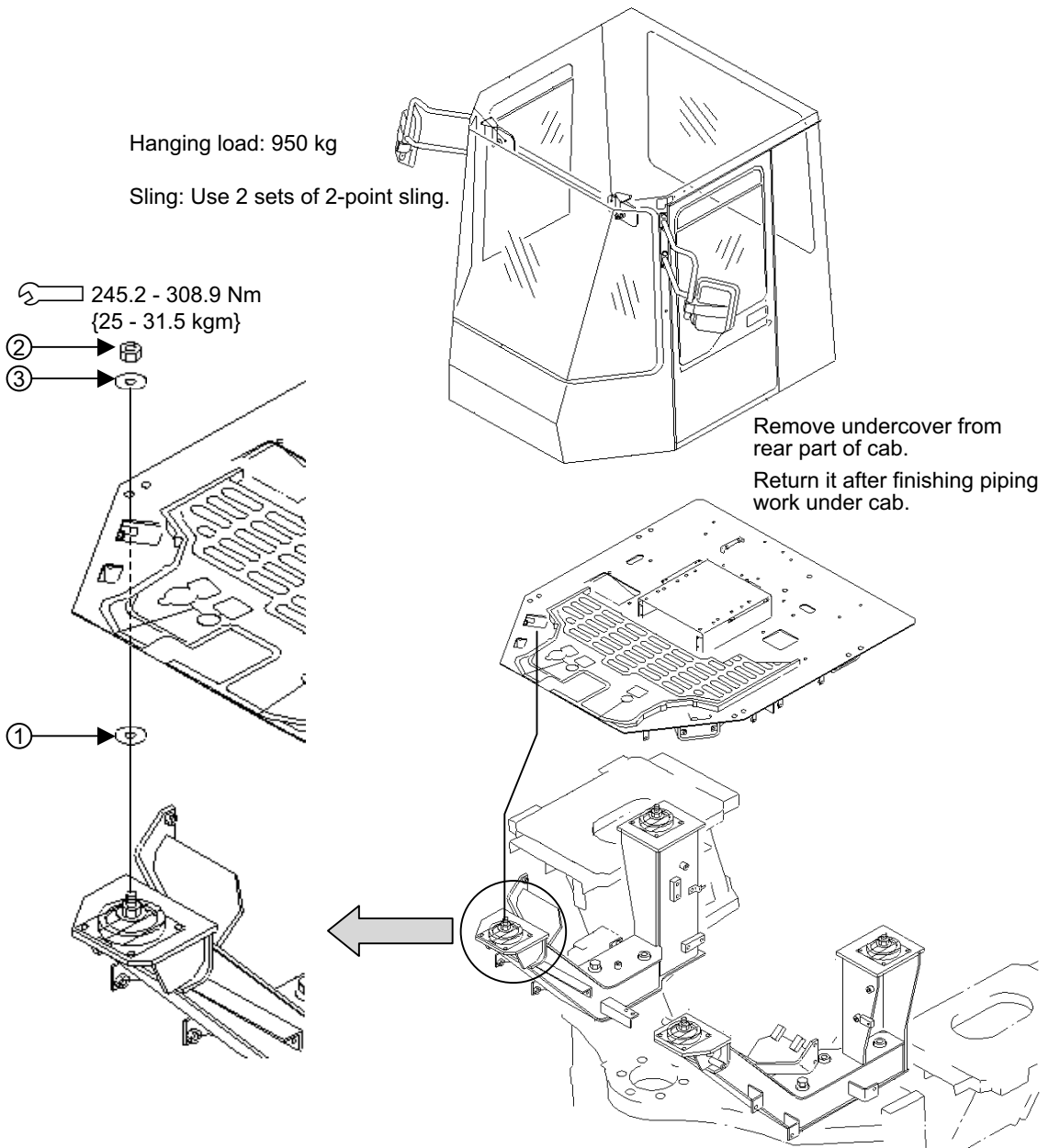


Install ladder to hydraulic tank (right).

No.	Part No.	Part name	Q'ty	State of parts
1	01010-81635	Bolt	2	Installed to hydraulic tank temporarily
2	01643-31645	Washer	2	Installed to hydraulic tank temporarily
3	01435-01225	Bolt	2	Installed to hydraulic tank temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

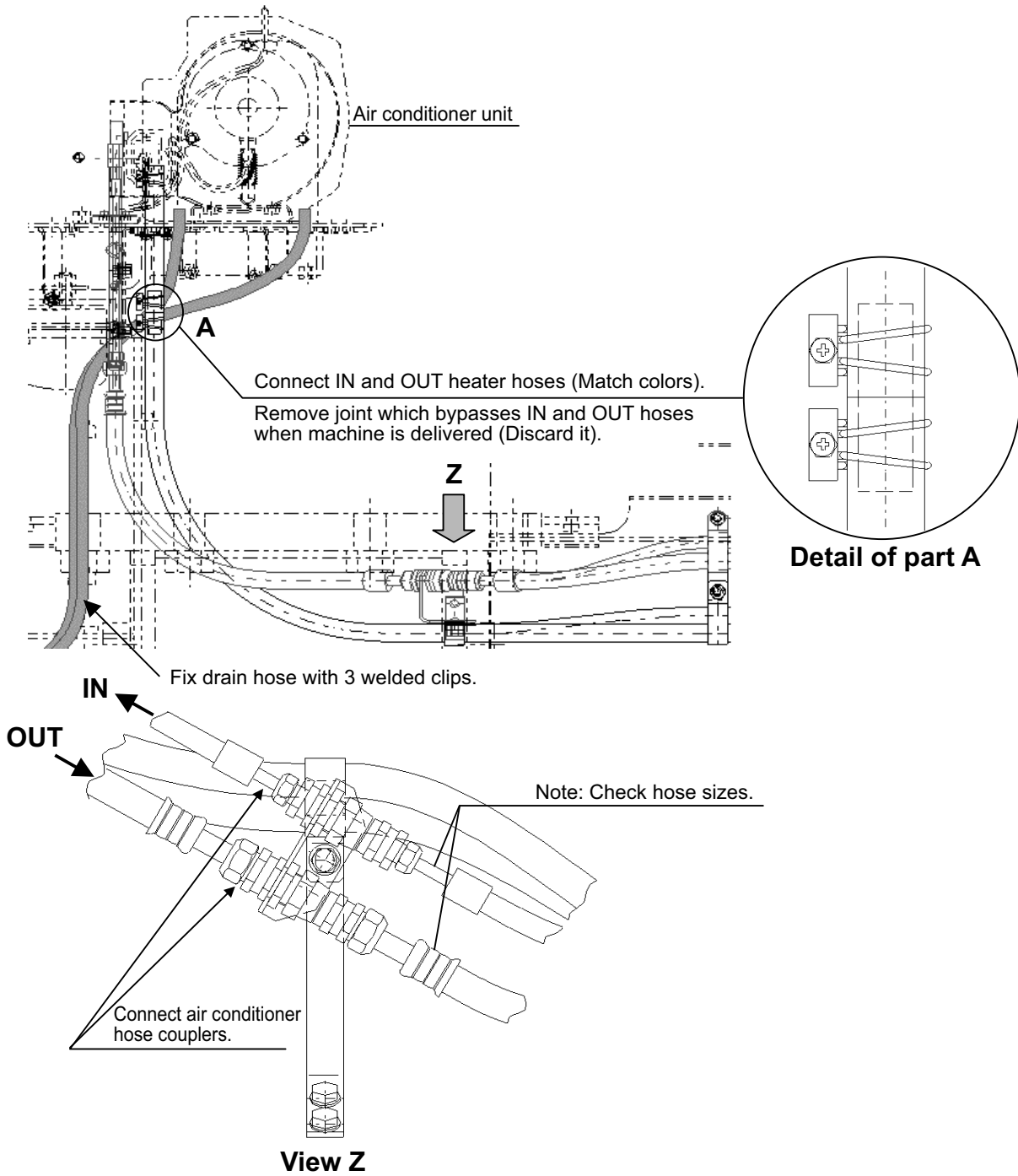
B-180 Installing floor and cab assembly



No.	Part No.	Part name	Q'ty	State of parts
1	421-54-23260	Plate	4	Installed to chassis temporarily
2	04596-01615	Lock nut	4	Installed to chassis temporarily
3	425-70-11290	Washer	4	Installed to chassis temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

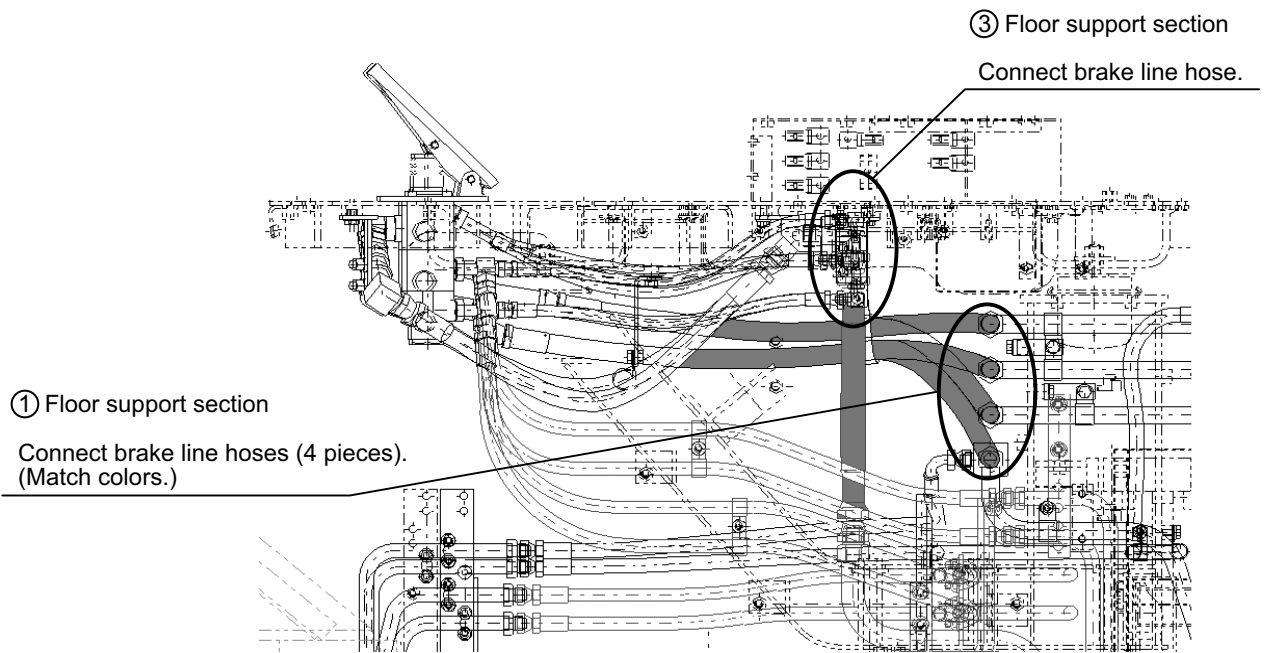
B-190 Connecting air conditioner hoses



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

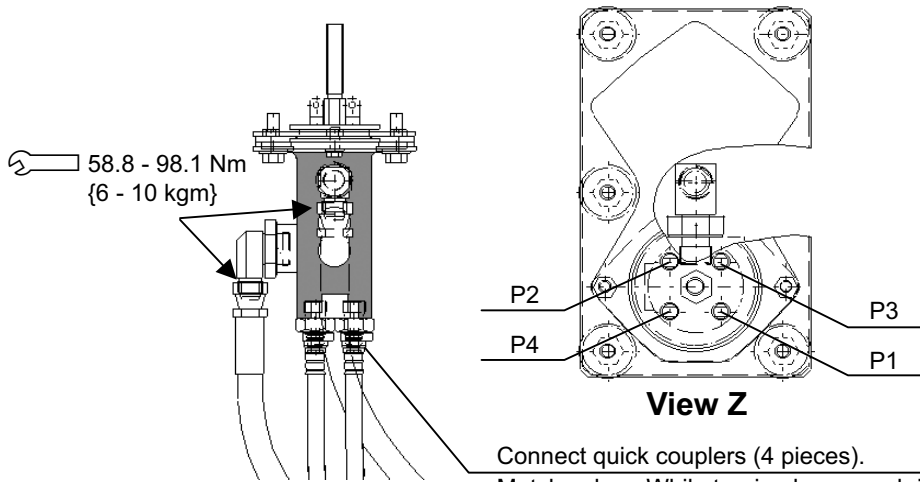
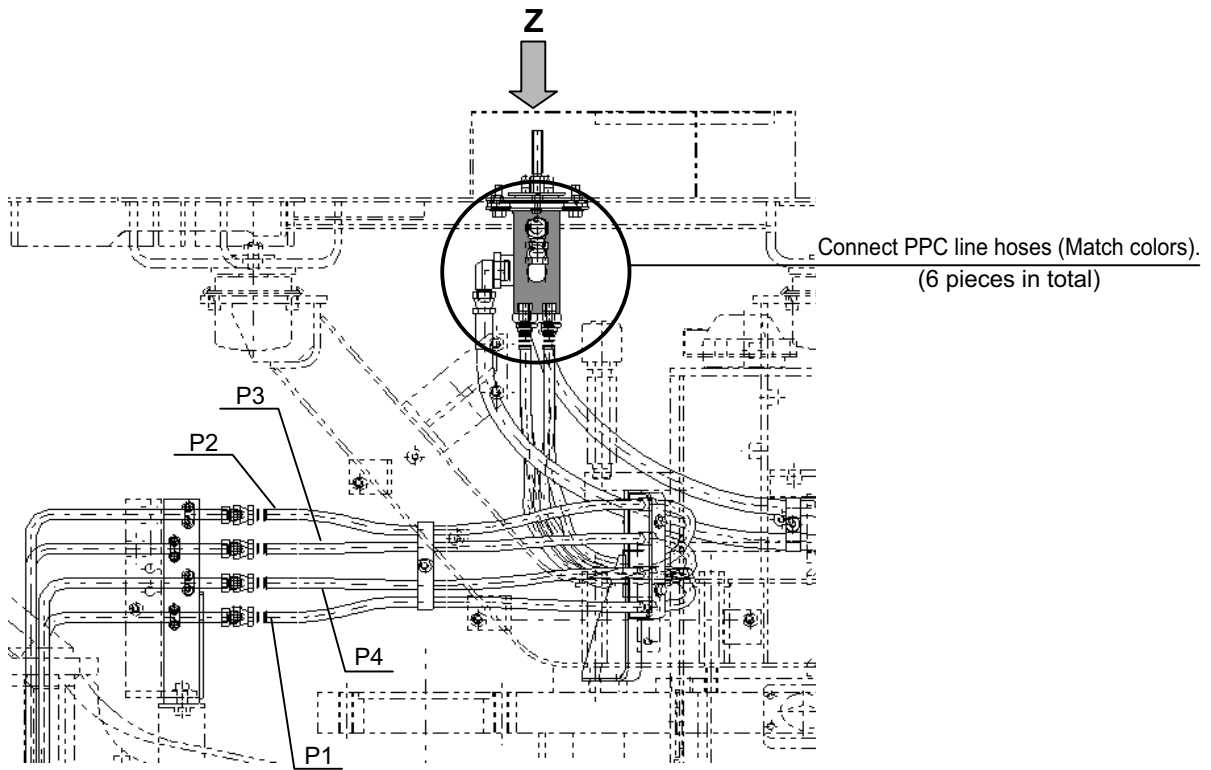
Assembly process. No.
B-200 Connecting brake line

Assembly of cab and floor frame assembly



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

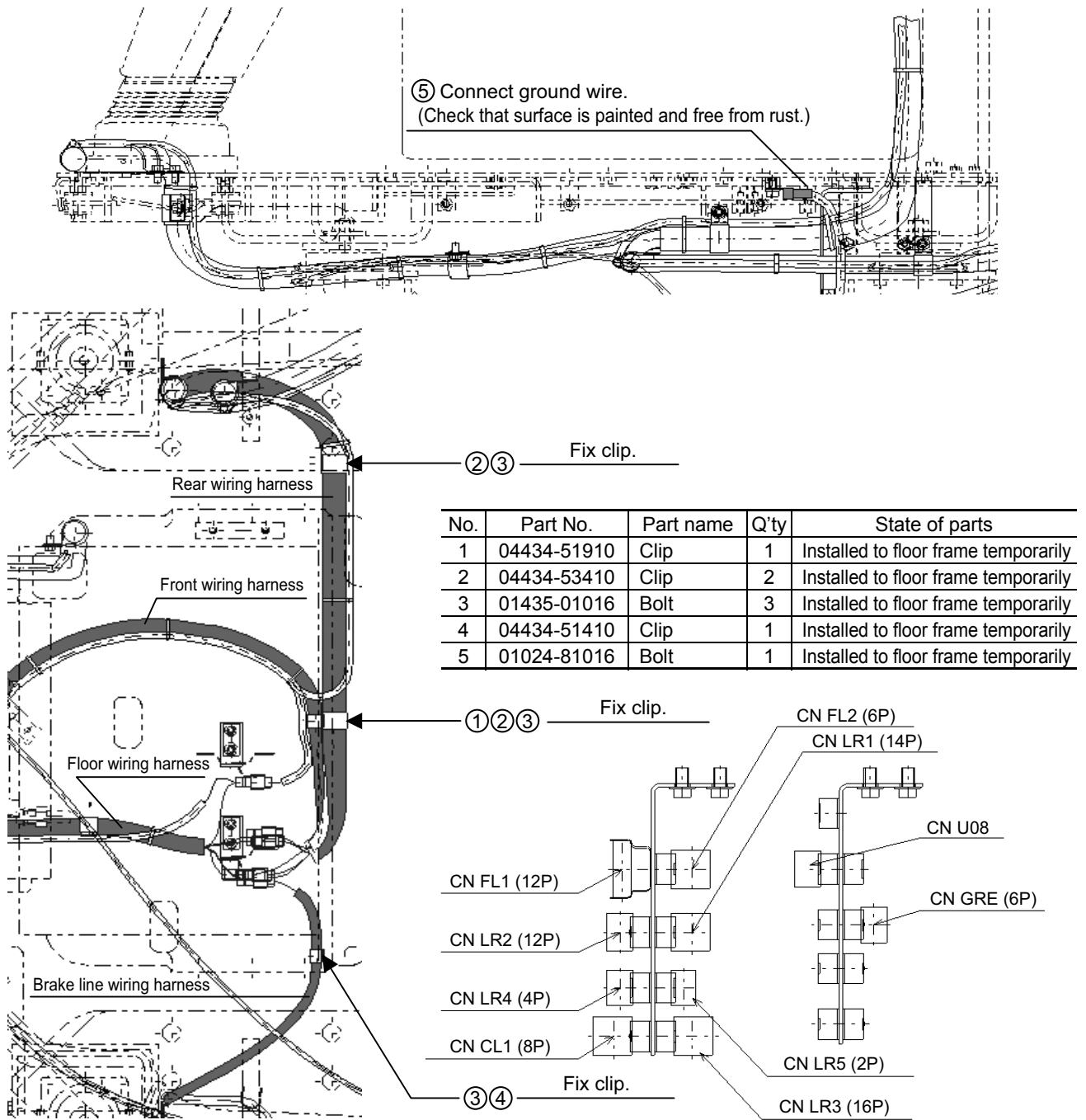
B-210 Connecting PPC line hoses



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

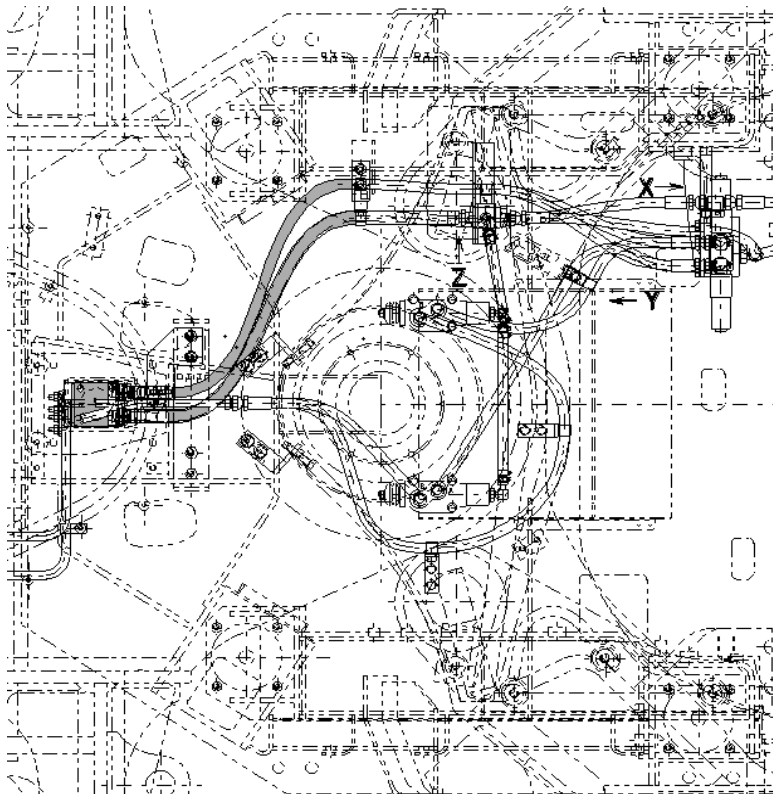
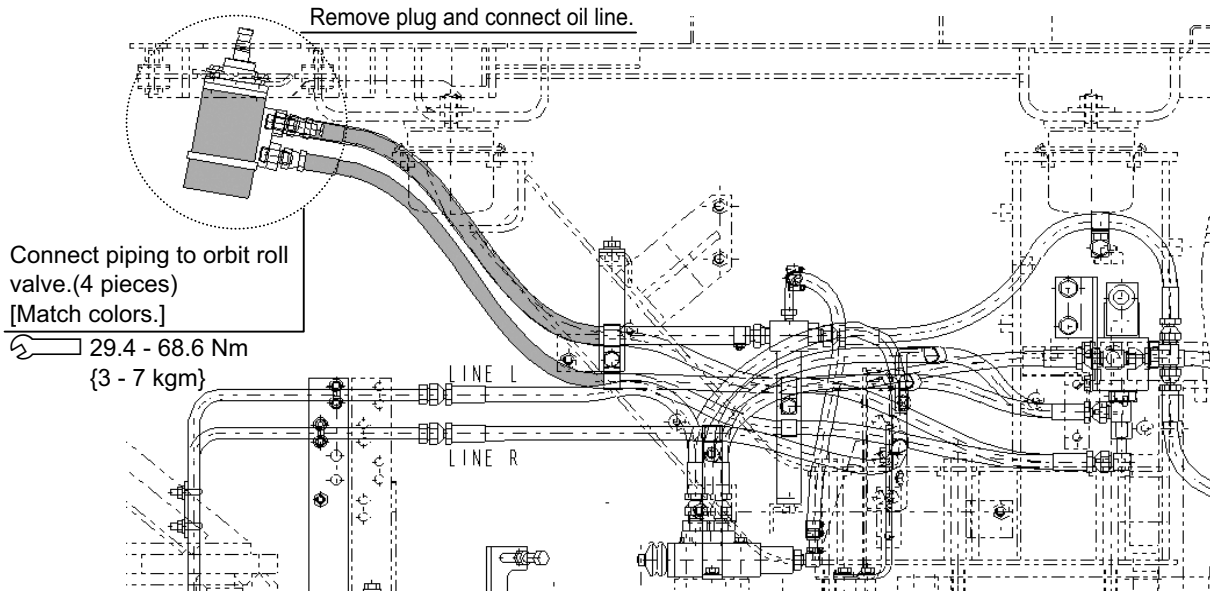
B-220 Connecting wiring harnesses

Connecting floor wiring harness (under rear part of floor frame)



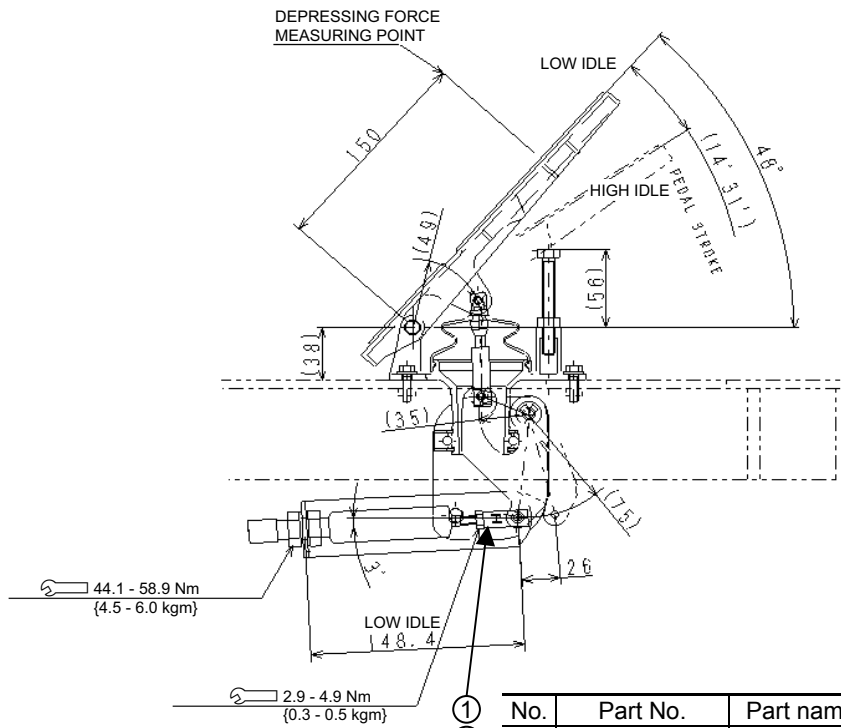
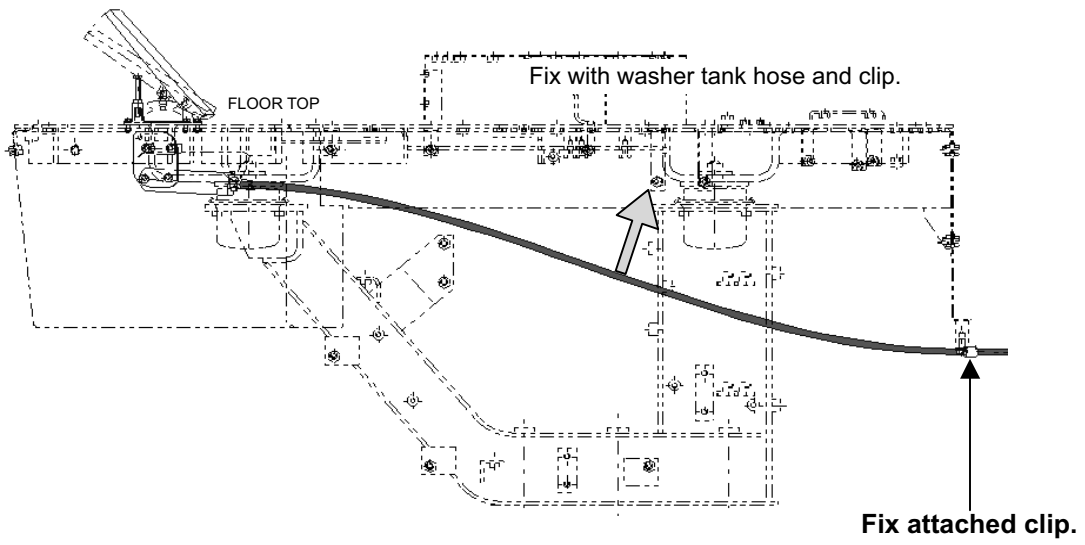
	Precautions		Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty	Name	Q'ty
Others						

B-230 Connecting steering oil line



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Torque wrench (24 × 49 Nm {5 kgm})	1		
	Spanner (Hex: 24 mm)	1		
	Others			

Assembly process. No.
B-240 Connecting throttle cable

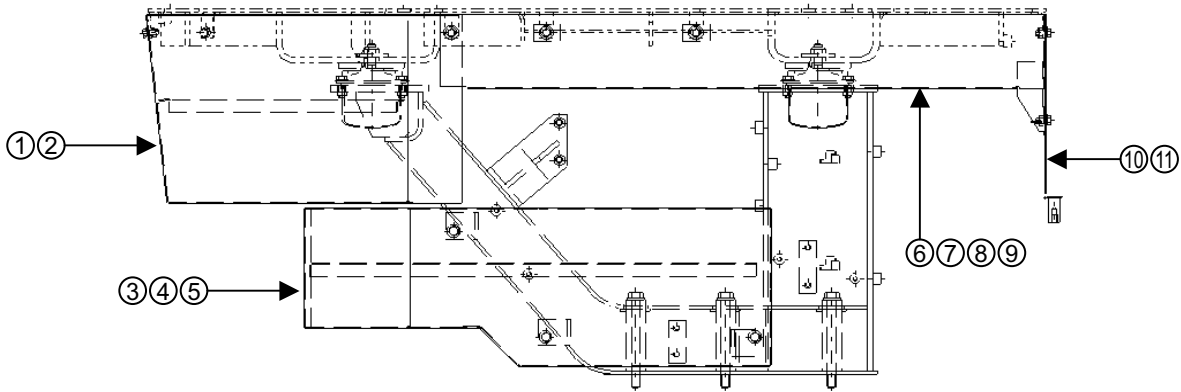


No.	Part No.	Part name	Q'ty	State of parts
①	04050-11612	Cotter pin	1	Installed to floor frame temporarily
②	04205-10620	Cotter pin	1	Installed to floor frame temporarily
③	04210-20624	Yoke	1	Installed to floor frame temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

Assembly process. No.
B-250 Installing floor cover

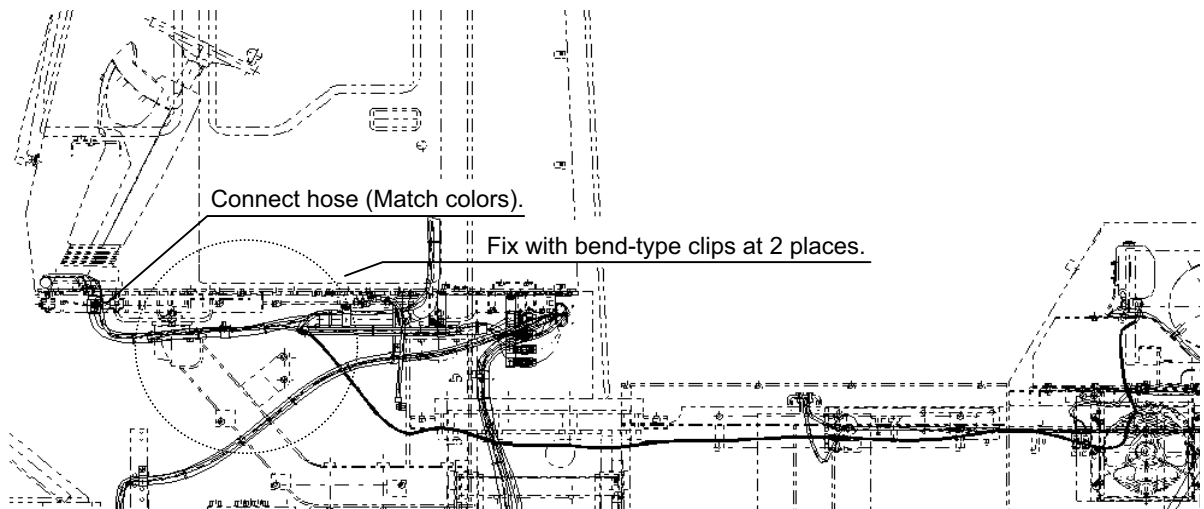
Installing floor cover



No.	Part No.	Part name	Q'ty	State of parts
1	427-54-24311	Cover	1	Loose-supply item
2	01435-01020	Bolt	4	Installed to floor frame temporarily
3	427-54-24351	Cover (L.H.)	1	Installed to floor frame temporarily
4	427-54-24360	Cover (R.H.)	1	Installed to floor frame temporarily
5	01435-01220	Bolt	6	Installed to chassis temporarily
6	427-54-24320	Cover (L.H.)	1	Loose-supply item
7	427-54-24330	Cover (R.H.)	1	Loose-supply item
8	01435-01025	Bolt	6	Installed to floor frame temporarily
9	424-09-12650	Washer	6	Installed to floor frame temporarily
10	427-54-24341	Cover	1	Installed to floor frame temporarily
11	01435-01020	Bolt	7	Installed to floor frame temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-260 Connecting windshield washer hose and supplying washer fluid

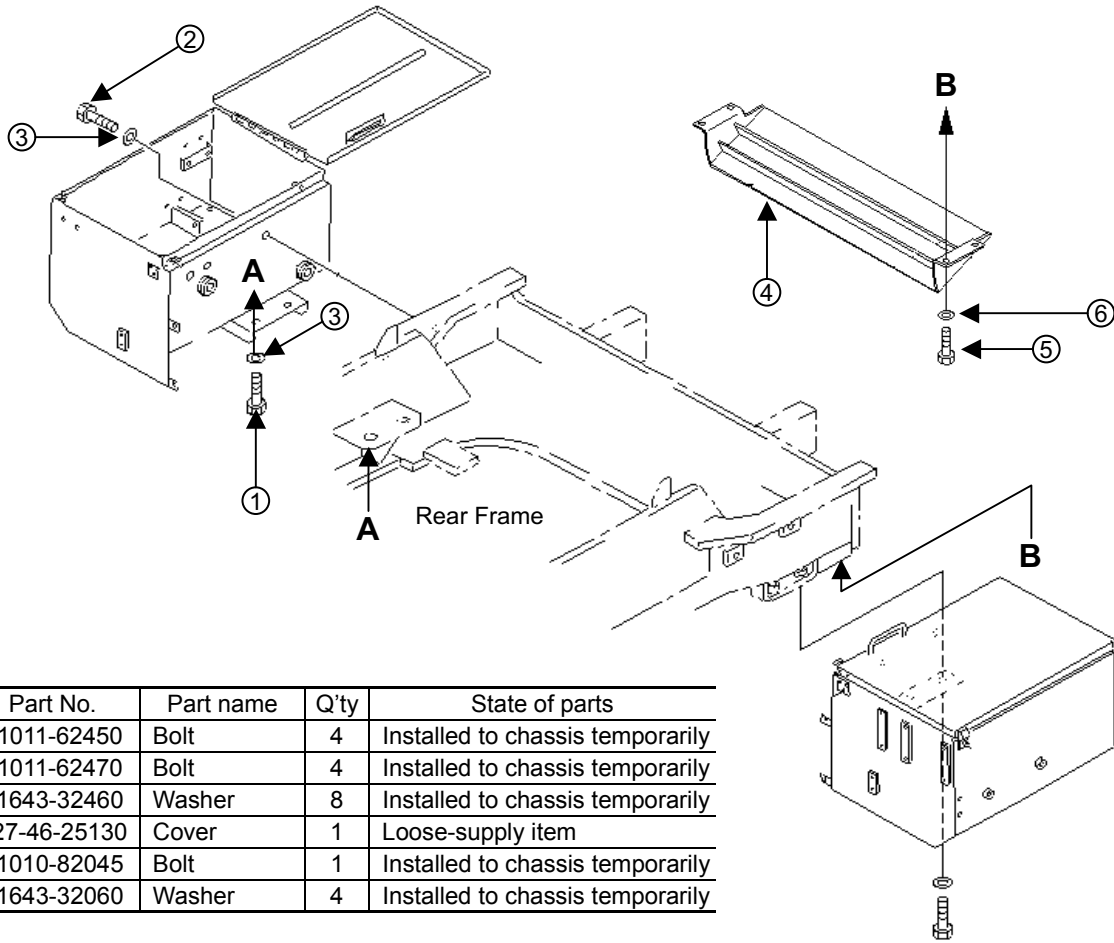


Supplying washer fluid

Open the cover at the front of the bulkhead and supply BEAR BLAND manufactured by SEIKENN KAGAKU or equivalent (1 ℓ container × 2) and city water (soft water).

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-270 Installing battery box assembly



No.	Part No.	Part name	Q'ty	State of parts
1	01011-62450	Bolt	4	Installed to chassis temporarily
2	01011-62470	Bolt	4	Installed to chassis temporarily
3	01643-32460	Washer	8	Installed to chassis temporarily
4	427-46-25130	Cover	1	Loose-supply item
5	01010-82045	Bolt	1	Installed to chassis temporarily
6	01643-32060	Washer	4	Installed to chassis temporarily

Tighten the battery box assembly temporarily at this time.
Tighten it permanently after adjusting the clearance between it and counterweight and positioning it against the ladder.

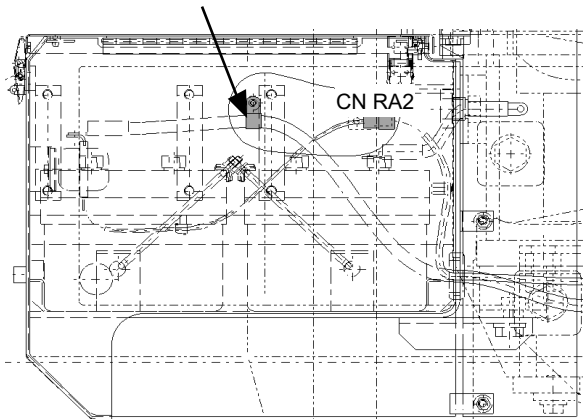
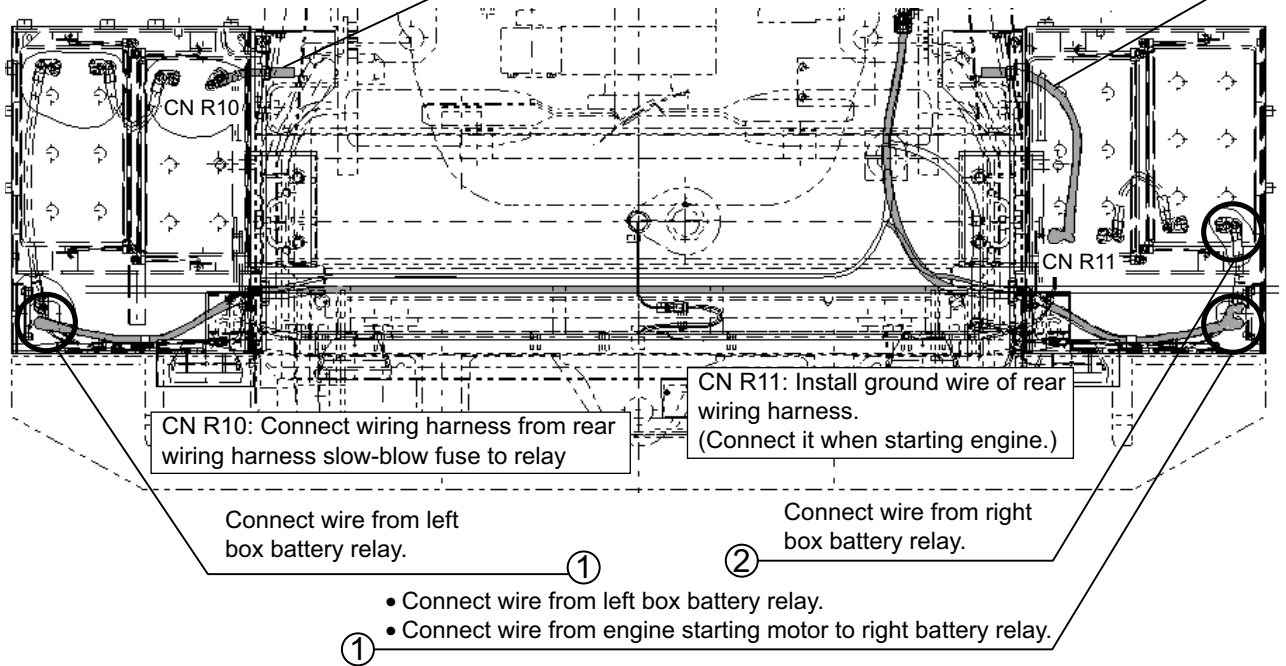
Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Torque wrench 10000QLE (Torque: 824 - 1,030 Nm {84 - 105 kgm})	1		
Others				

Assembly process. No.
B-280 Wiring battery

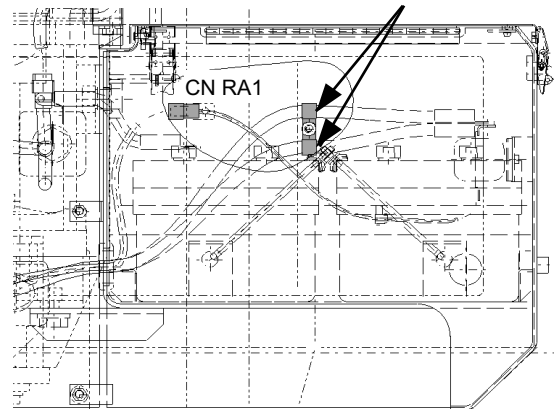
Connecting and fixing wires in battery box

Install ground cable.
 (Connect it to battery when starting engine.)

Install ground cable.
 (Connect it to battery when starting engine.)



Left side of battery box



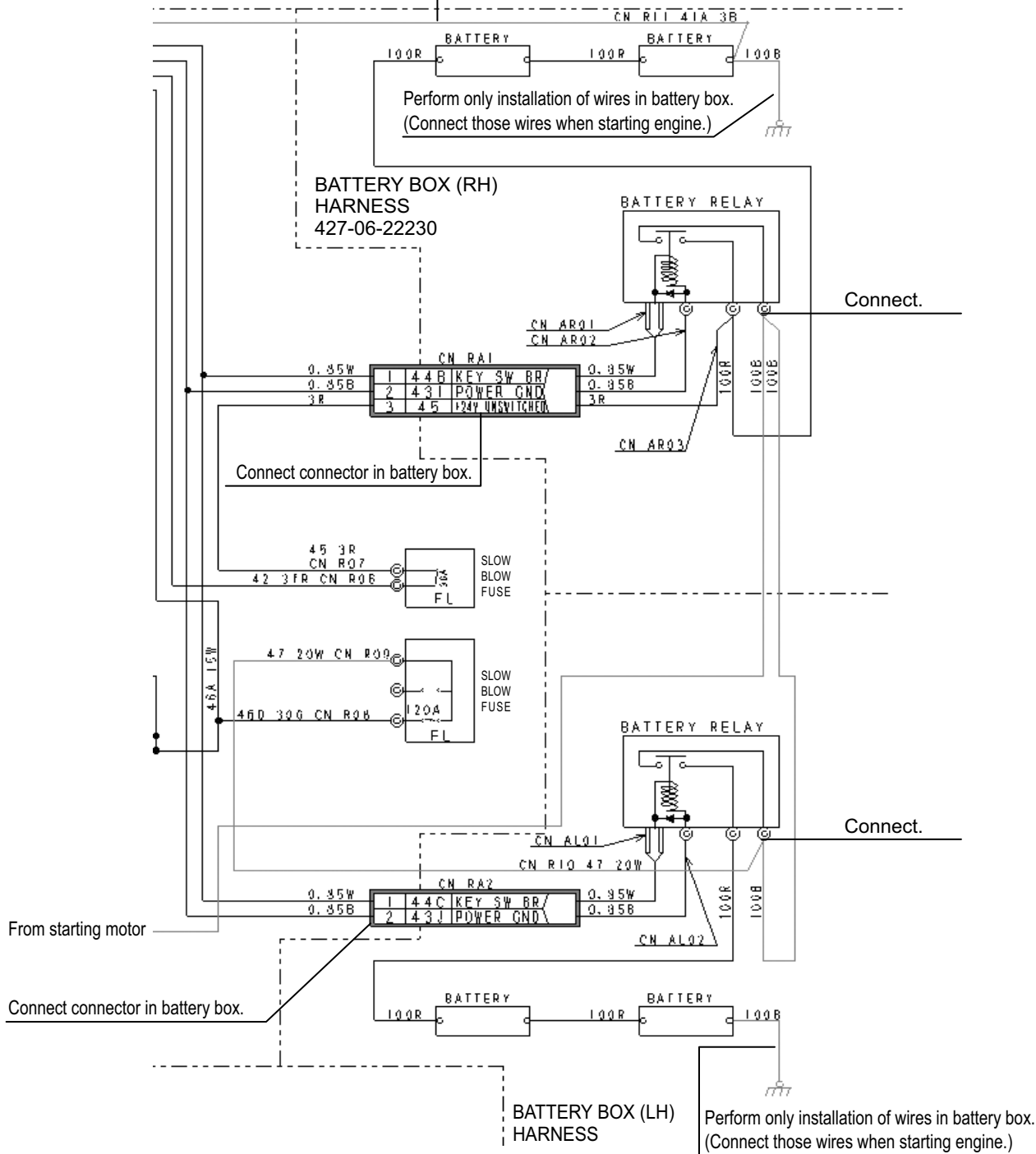
Right side of battery box

No.	Part No.	Part name	Q'ty	State of parts
1	08038-00035	Cap	2	Installed to chassis temporarily
2	424-09-12540	Cap	1	Installed to battery box temporarily
3	04434-51910	Clip	3	Installed to battery box temporarily
4	01435-01016	Bolt	2	Installed to battery box temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-290 Wiring diagram for battery

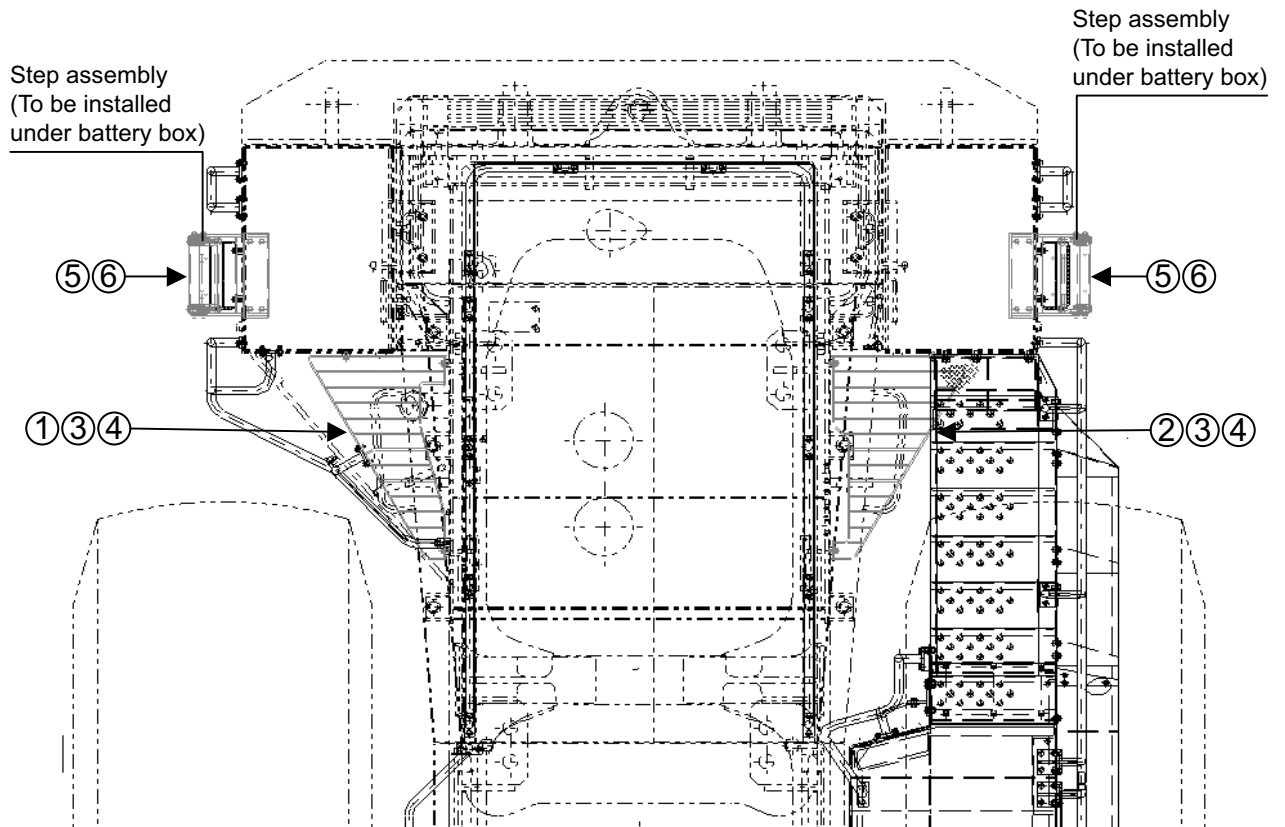
Perform only installation of wires in battery box.
(Connect those wires when starting engine.)



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

Assembly process. No.
B-300 Installing battery step

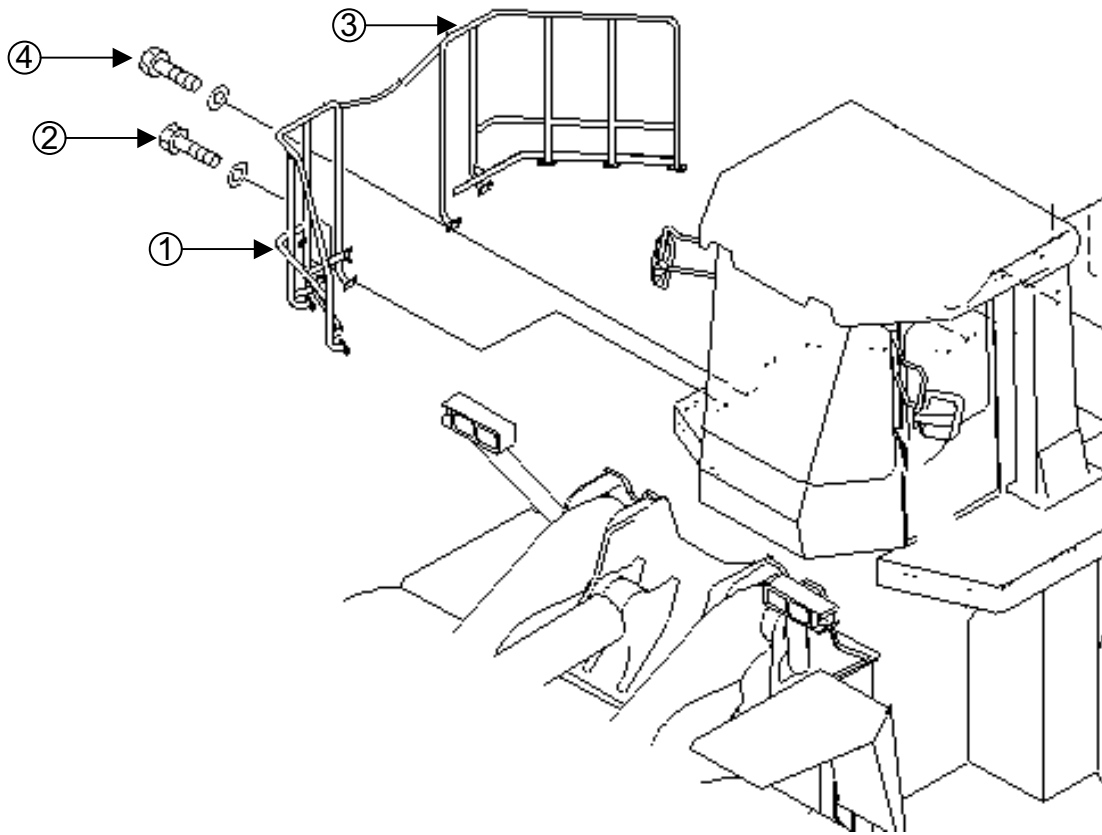
Installing step assembly



No.	Part No.	Part name	Q'ty	State of parts
1	427-54-22130	Step (R.H.)	1	Loose-supply item
2	427-54-24180	Step (L.H.)	1	Loose-supply item
3	01435-01225	Bolt	12	Installed to battery box temporarily
4	01643-31232	Washer	12	Installed to battery box temporarily
5	—	Step ass'y	2	Loose-supply item
6	01435-01230	Bolt	8	Installed to battery box temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

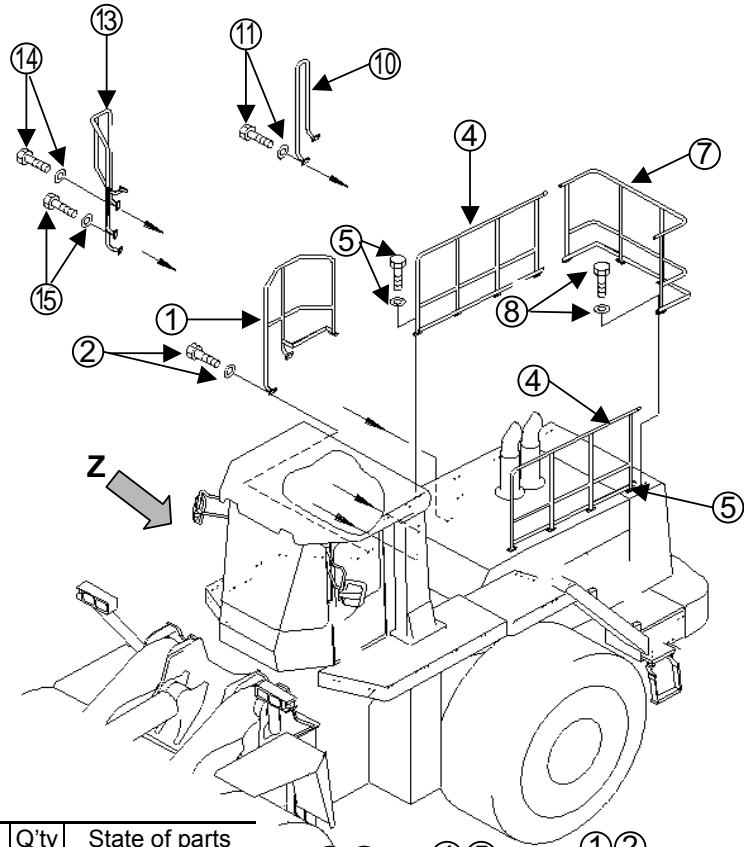
B-310 Installing handrail (to right bracket)



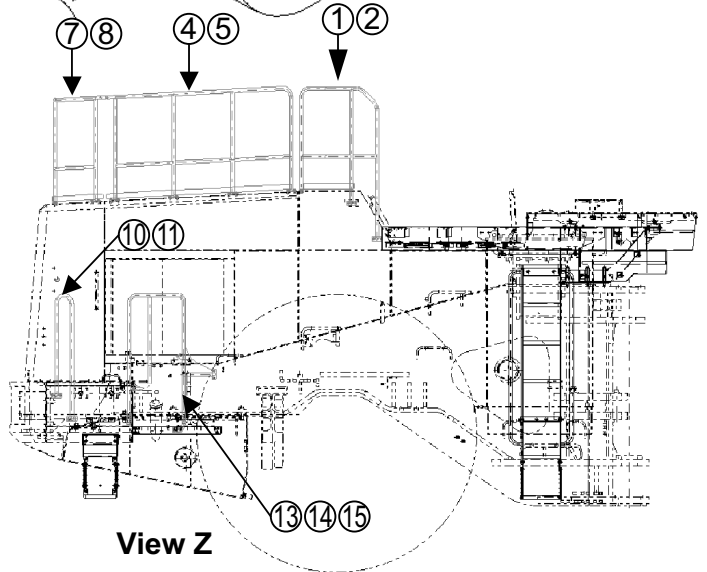
No.	Part No.	Part name	Q'ty	State of parts
1	427-54-25122	Handrail	1	Loose-supply item
2	01024-81235	Bolt	8	Installed to chassis temporarily
3	427-54-25141	Handrail	1	Loose-supply item
4	01024-81235	Bolt	8	Installed to chassis temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-320 Installing handrail (to right battery box and top hood)

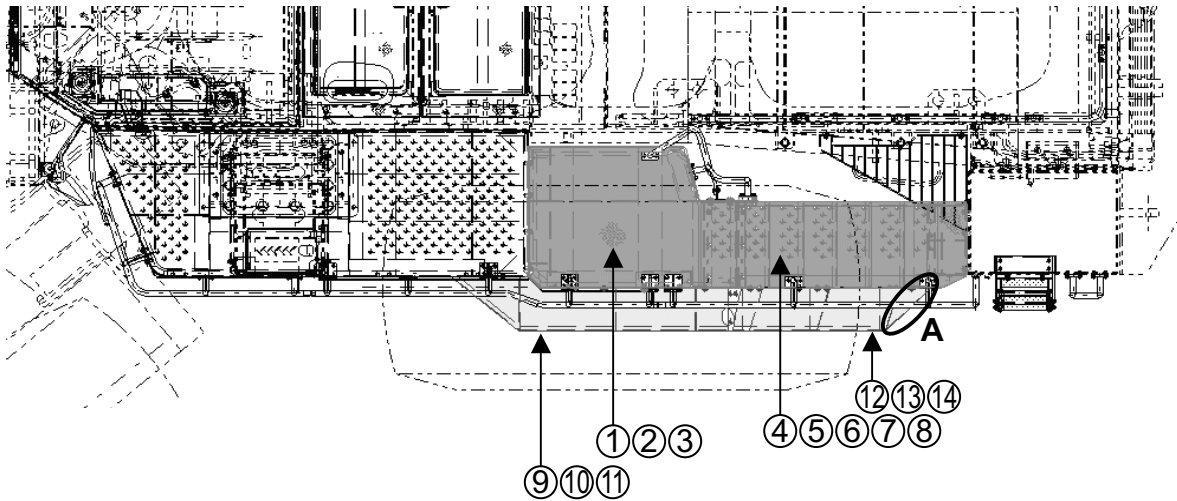


No.	Part No.	Part name	Q'ty	State of parts
1	427-54-25191	Handrail	1	Loose-supply item
2	01024-81235	Bolt	6	Installed to chassis temporarily
3				
4	1427-54-25210	Handrail	2	Loose-supply item
5	01024-81235	Bolt	16	Installed to chassis temporarily
6				
7	427-54-25220	Handrail	1	Loose-supply item
8	01024-81235	Bolt	8	Installed to chassis temporarily
9				
10	427-54-25180	Handrail	1	Loose-supply item
11	01024-81235	Bolt	4	Installed to chassis temporarily
12				
13	427-54-25230	Handrail	1	Loose-supply item
14	01024-81245	Bolt	2	Installed to chassis temporarily
15	01024-81235	Bolt	6	Installed to chassis temporarily

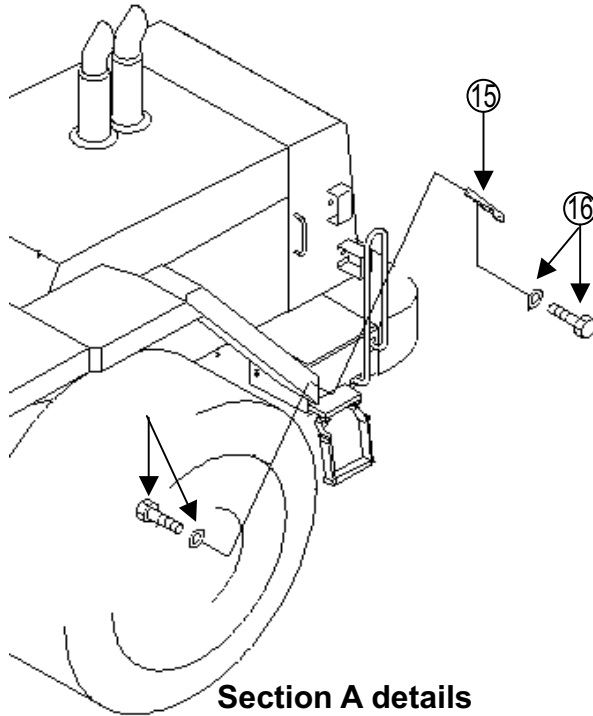


	Precautions		Special tools		Necessary equipment	
			Name	Q'ty	Name	Q'ty
Others						

B-330 Installing rear access step

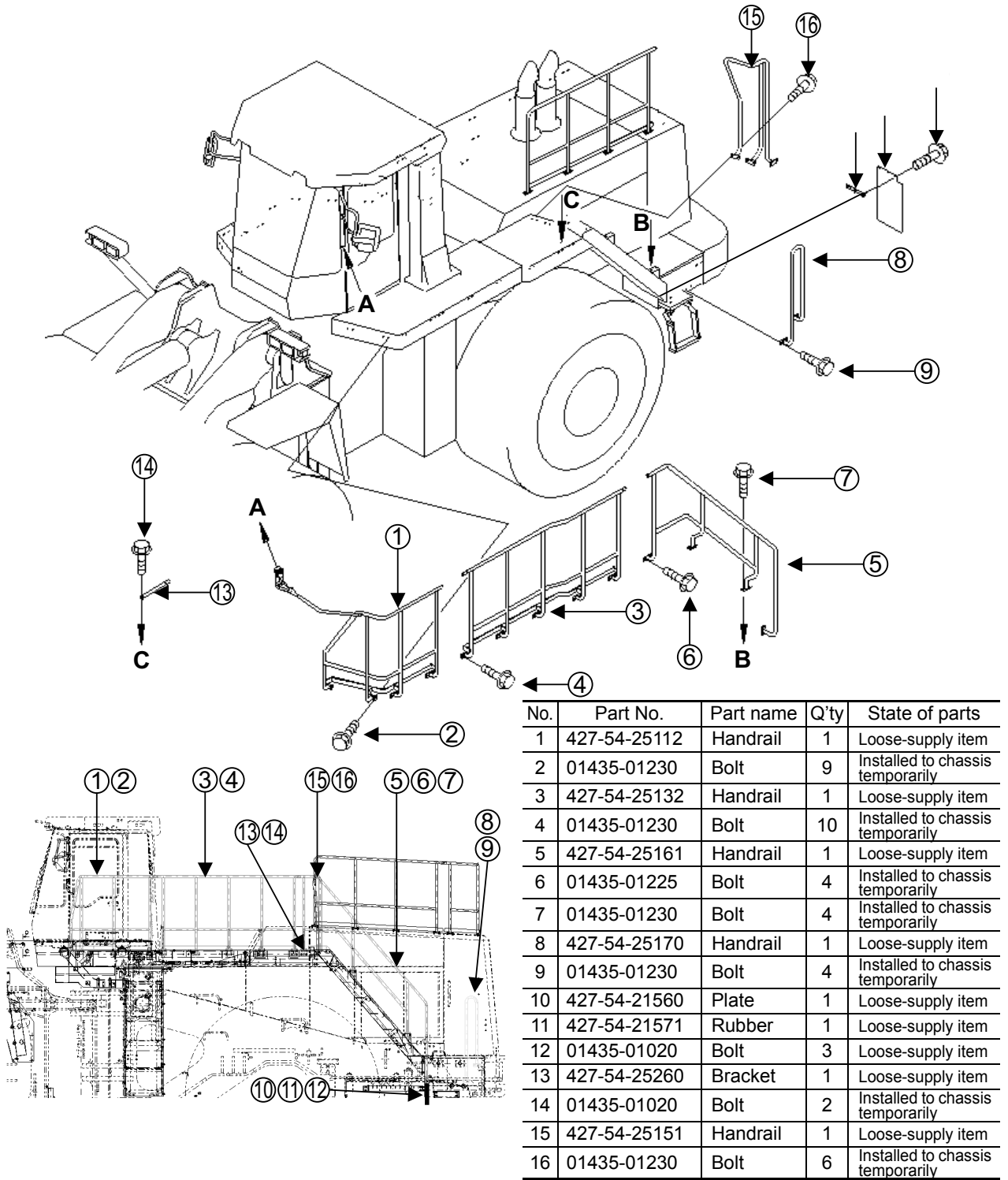


No.	Part No.	Part name	Q'ty	State of parts
1	427-54-24142	Floor	1	Loose-supply item
2	01010-81435	Bolt	8	Installed to chassis temporarily
3	01643-31445	Washer	8	Installed to chassis temporarily
4	427-54-24251	Step	1	Loose-supply item
5	01010-81435	Bolt	10	Installed to chassis temporarily
6	01643-31445	Washer	10	Installed to chassis temporarily
7	01010-81635	Bolt	6	Installed to chassis temporarily
8	01643-31645	Washer	6	Installed to chassis temporarily
9	427-54-24191	Cover	1	Loose-supply item
10	01435-01220	Bolt	6	Installed to chassis temporarily
11	124-54-26540	Washer	6	Installed to chassis temporarily
12	427-54-24260	Cover	1	Loose-supply item
13	0435-01220	Bolt	7	Installed to chassis temporarily
14	124-54-26540	Washer	7	Installed to chassis temporarily
15	427-54-21580	Fender	1	Loose-supply item
16	01024-81558	Bolt	4	Installed to chassis temporarily



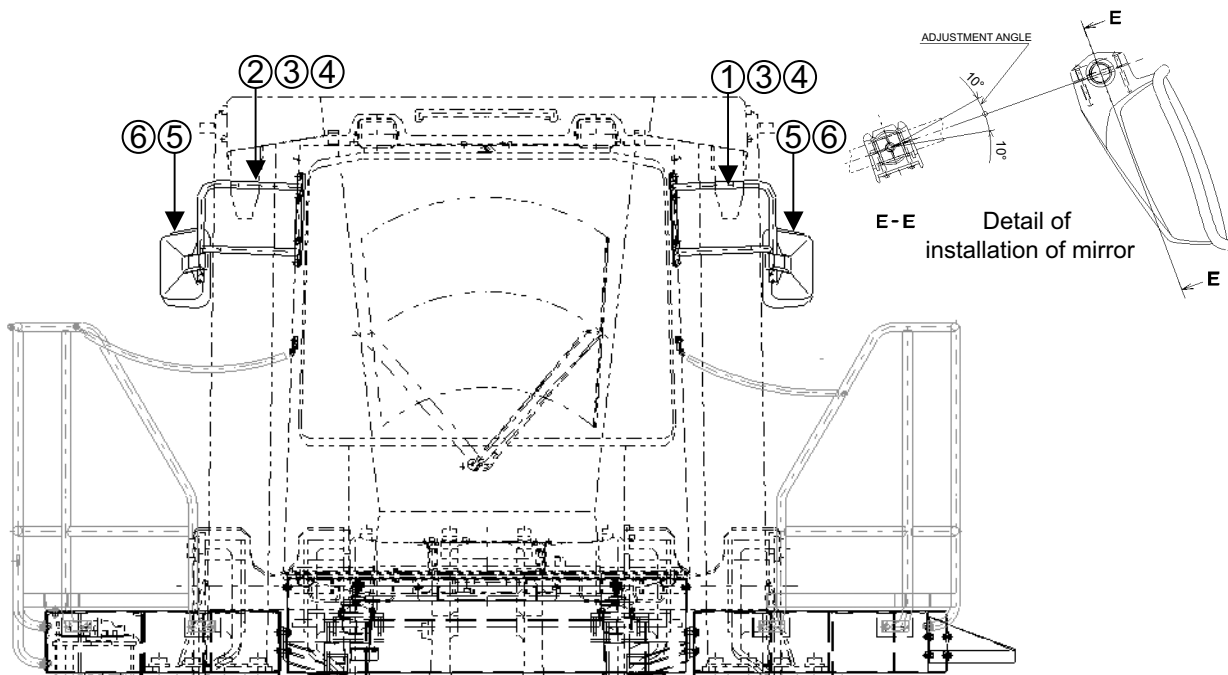
	Precautions		Special tools		Necessary equipment	
			Name	Q'ty	Name	Q'ty
Others						

Assembly process. No.
B-340 Installing left handrail



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

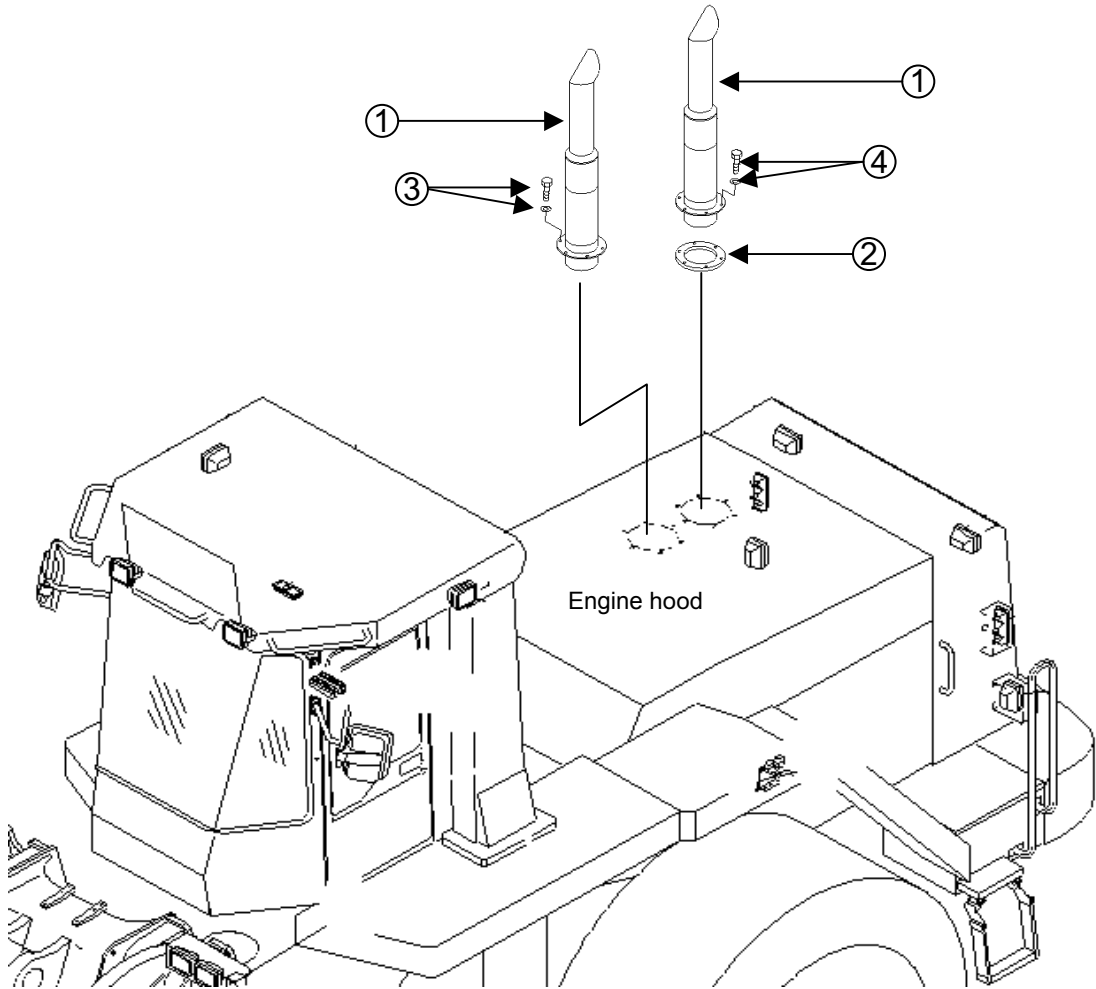
B-350 Installing rear view mirrors



No.	Part No.	Part name	Q'ty	State of parts
1	426-54-25710	Stay (L.H.)	1	Loose-supply item
2	426-54-25720	Stay (R.H.)	1	Loose-supply item
3	01435-01025	Bolt	8	Loose-supply item
4	363-54-31450	Cap	8	Loose-supply item
5	421-54-25610	Mirror	2	Loose-supply item
6	04025-00632	Spring pin	2	Loose-supply item

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

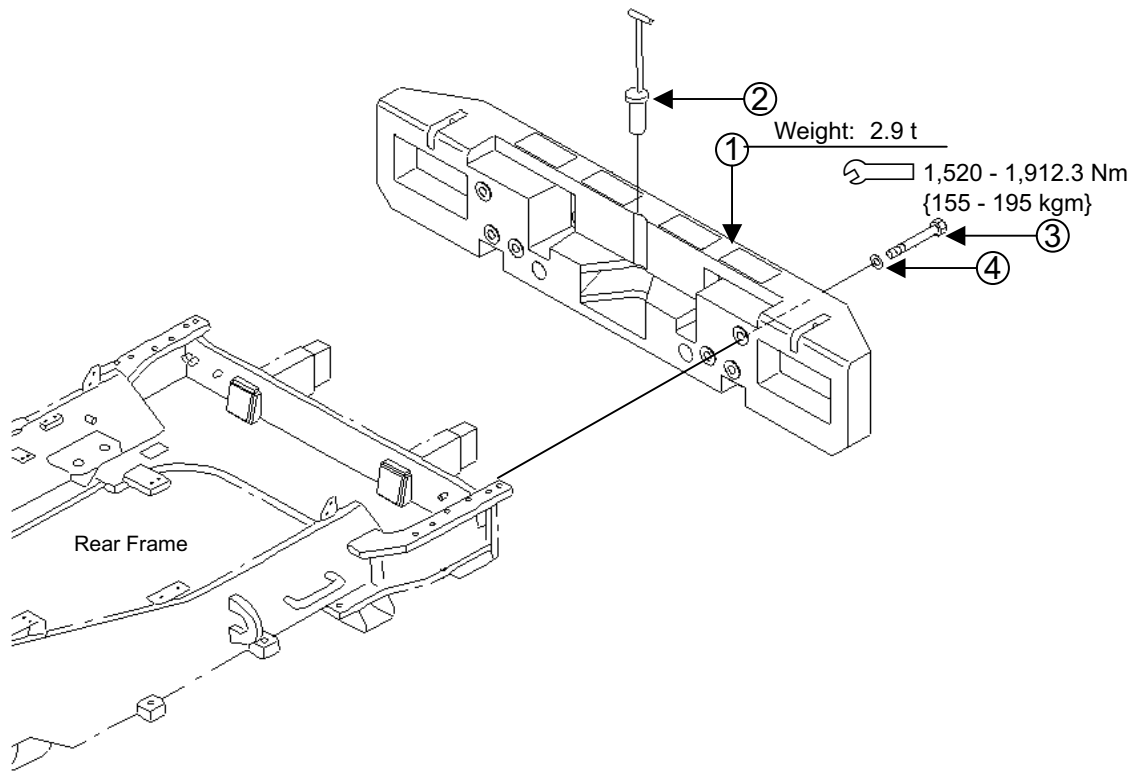
Assembly process. No.
B-360 Installing muffler pipe



No.	Part No.	Part name	Q'ty	State of parts
1	427-02-11121	Exhaust pipe	2	Loose-supply item
2	427-02-11130	Plate	1	Installed to center hood top temporarily
3	01024-81240	Bolt	6	Installed to center hood top temporarily
4	01024-81255	Bolt	6	Installed to center hood top temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

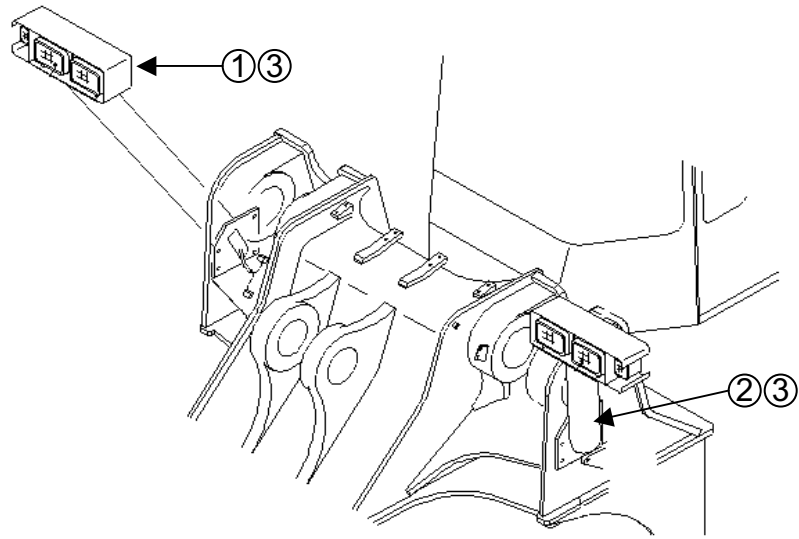
B-370 Installing counterweight



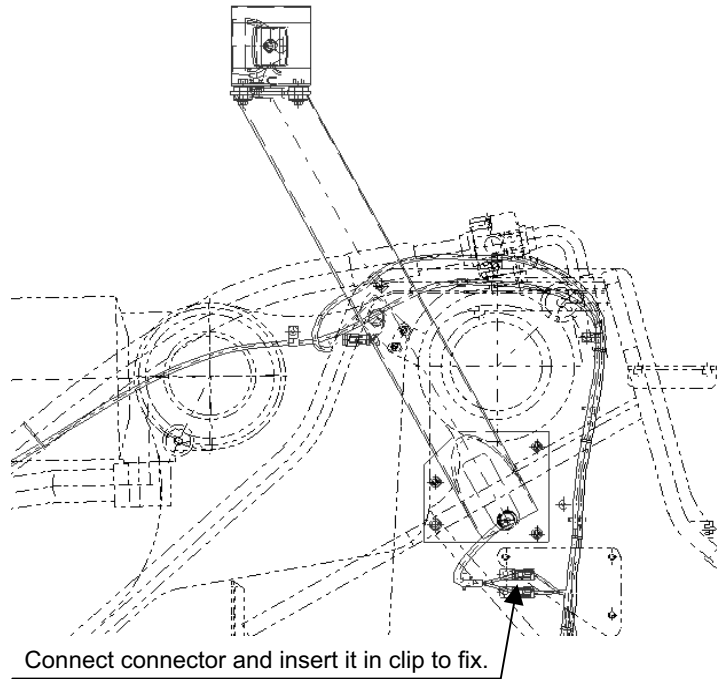
No.	Part No.	Part name	Q'ty	State of parts
1	427-46-25120	Counterweight	1	Loose-supply item
2	427-46-43120	Pin (Drawbar)	1	Loose-supply item
3	425-974-1160	Bolt	6	Installed to rear part of rear frame temporarily
4	01643-33080	Washer	6	Installed to rear part of rear frame temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Torque wrench: 2100QLE (Torque: 1,520 - 1,912.3 Nm {155 - 195 kgm})	1		
	Socket: 46 mm	1		
	Extension	1		
	Impact wrench (For M30)	1		
	Others			

B-380 Installing front lamp assembly



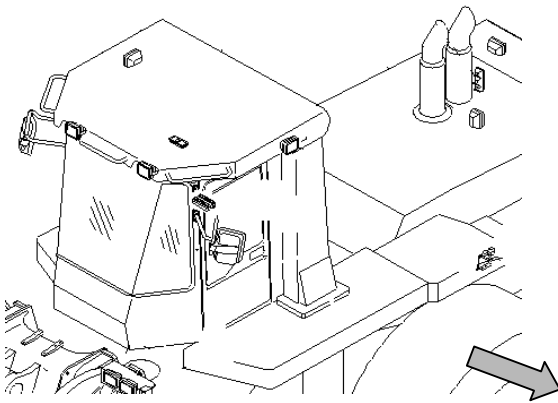
No.	Part No.	Part name	Q'ty	State of parts
1	—	Right front lamp assembly	1	Loose-supply item
2	—	Left front lamp assembly	1	Loose-supply item
3	01435-01245	Bolt	8	Installed to right and left of front frame temporarily



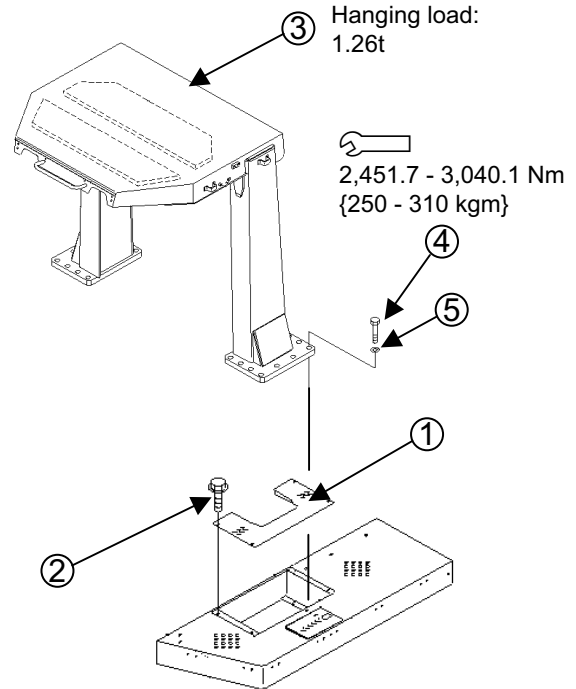
Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-390 Installing ROPS canopy assembly

Sling: 2-point sling (Use sling for floor and cab assembly.)



Remove cover, install ROPS canopy, and return cover.

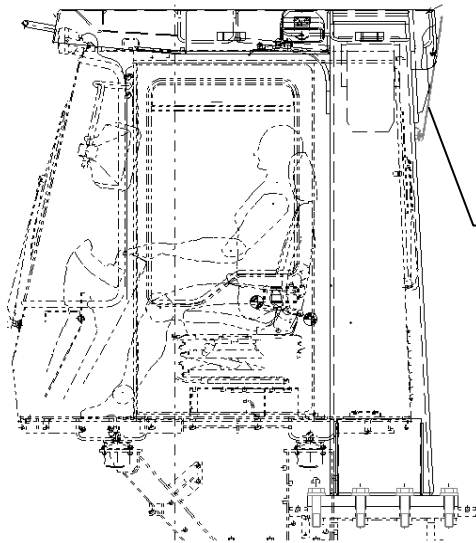


★ Before installing ROPS canopy, clean mounting faces.

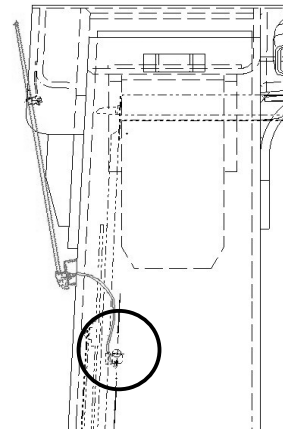
No.	Part No.	Part name	Q'ty	State of parts
1	427-54-24210	Cover	2	Installed to chassis temporarily
2	01435-01220	Bolt	8	Installed to chassis temporarily
3	—	ROPS canopy ass'y	1	Loose-supply item
4	01010-63650	Bolt	20	Installed to chassis temporarily
5	01643-33690	Washer	20	Installed to chassis temporarily

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Power wrench (16-times wrench)	1		
	Socket (55 mm)	1		
	Extension	1		
	Torque wrench	1		
	Others			

B-400 Installing antenna and working lamp

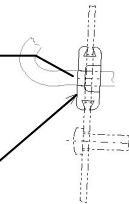


Remove antenna installed to cab temporarily and install it to canopy.



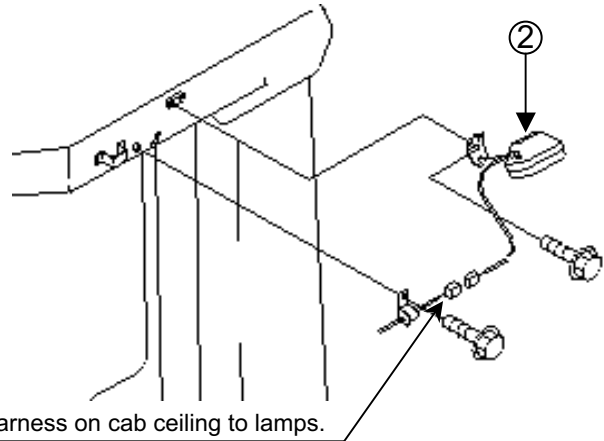
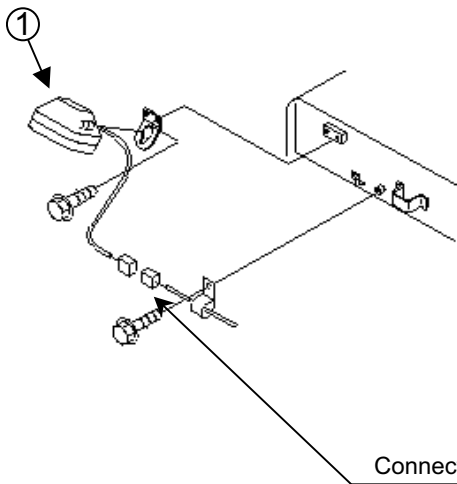
Extend antenna wire from cab.

Install wire with slit down. Apply CEMEDINE 366E or equivalent all over periphery, including slit.



Step lamp (Rear side of left top of ROPS)

Side lamp (Right and left of ROPS)

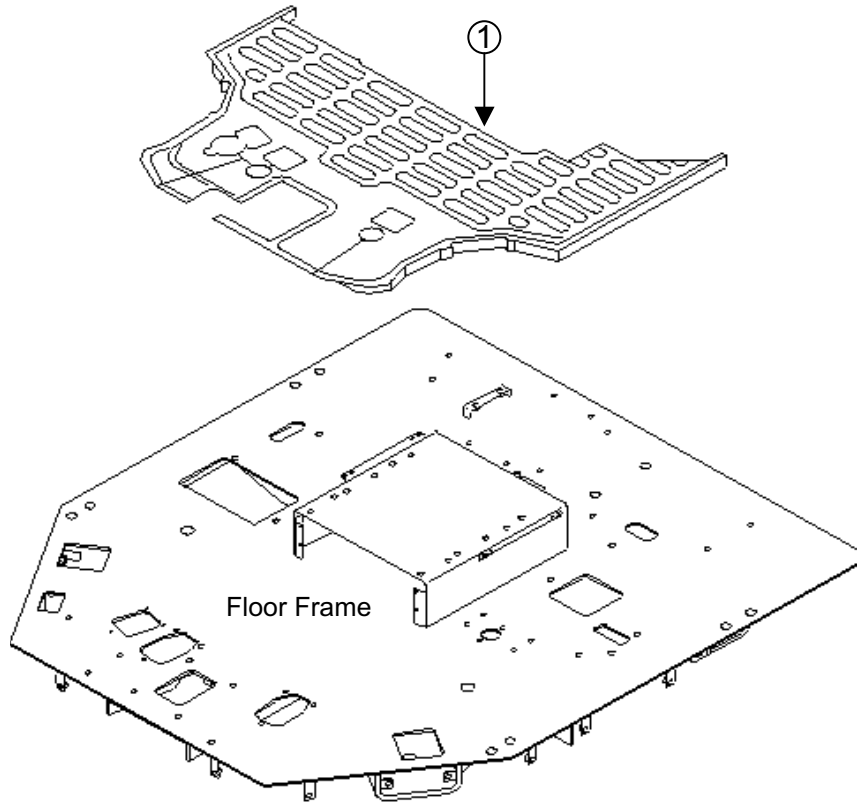


Connect wiring harness on cab ceiling to lamps.

No.	Part No.	Part name	Q'ty	State of parts
1	—	Step lamp	1	Loose-supply item
2	—	Side lamp	2	Loose-supply item

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

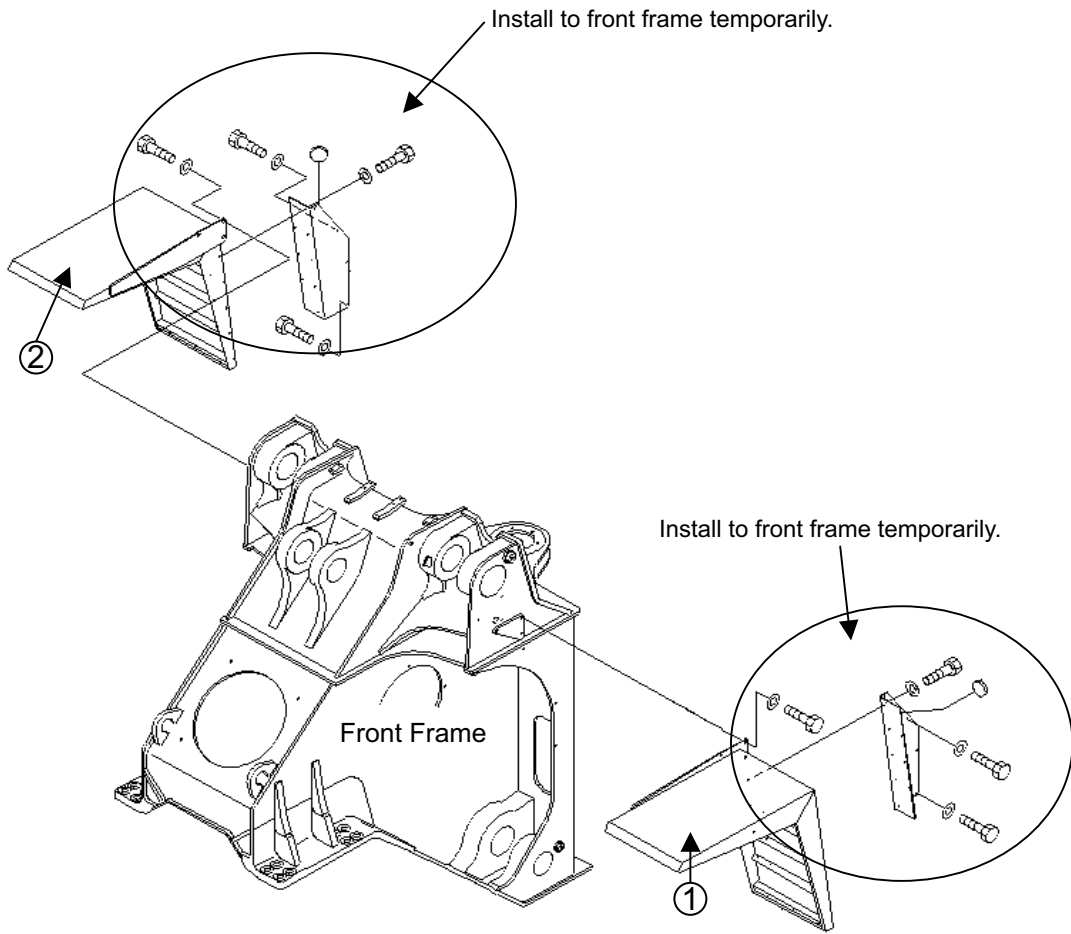
B-410 Installing floor mat



No.	Part No.	Part name	Q'ty	State of parts
1	426-54-22833	Mat	1	Loose-supply item

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No.
B-420 Installing front fenders



No.	Part No.	Part name	Q'ty	State of parts
1	427-54-24152	Fender (L.H.)	1	Loose-supply item
2	427-54-24162	Fender (R.H.)	1	Loose-supply item

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-430 Procedure for starting engine

1. **Check oil/water level at each part and add oil/water if necessary.**
 - **Coolant level**
 - **Oil level in engine oil pan and brake oil tank**
 - **Fuel level**
 - ★ For the locations of the gauges and standard oil/water level, see the Operation & Maintenance Manual.
 - ★ Since the axles and cab are removed when the machine is delivered, supply hydraulic oil before starting the engine. While running the engine, check the oil level constantly.

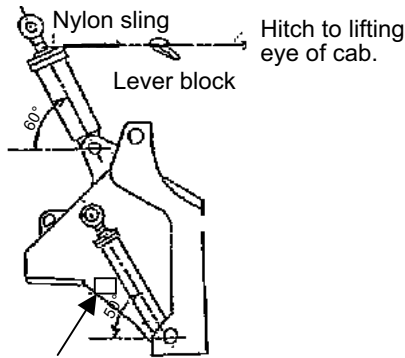
2. **For the starting method, see the Operation & Maintenance Manual.**
 - ★ Check the method of stopping the engine, too.
 - **Run the engine at low idling for 10 minutes.**
 - ★ At this time, do not move the control lever.
 - ★ If oil leakage, abnormal sound, or another trouble is detected, stop the engine immediately.

3. **Stop the engine then check it.**
 - ★ Check the engine for oil leakage.
 - ★ Check the oil/water level at each part and add oil/water if necessary.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

Assembly process. No. B-440 Installing boom assembly

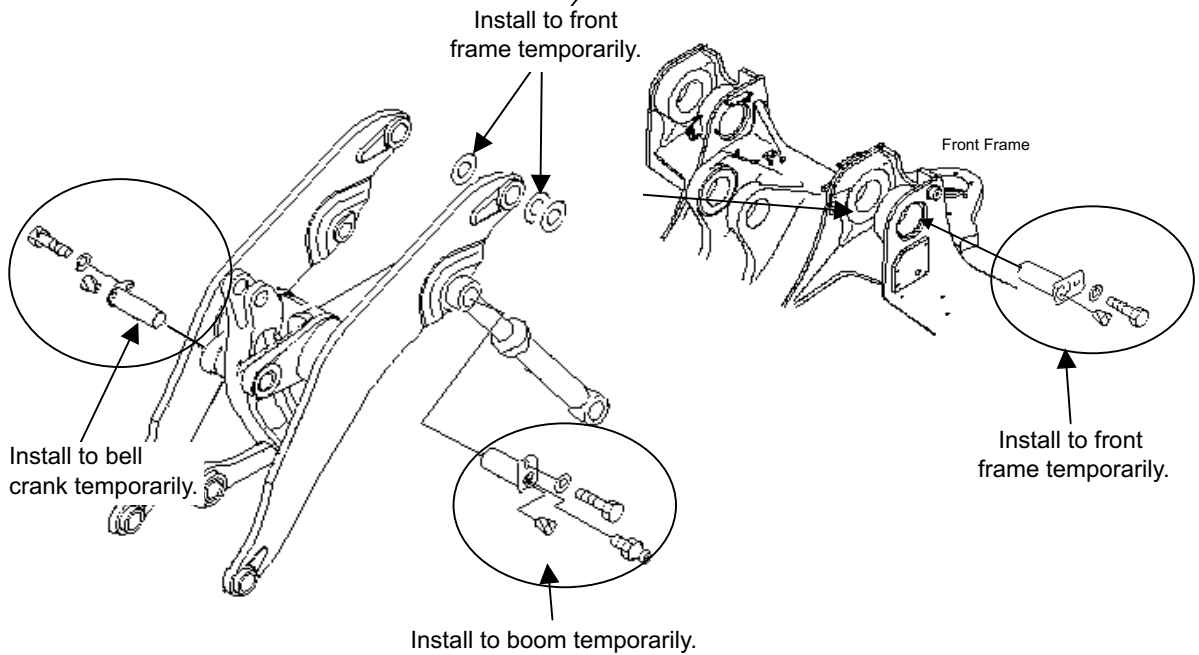
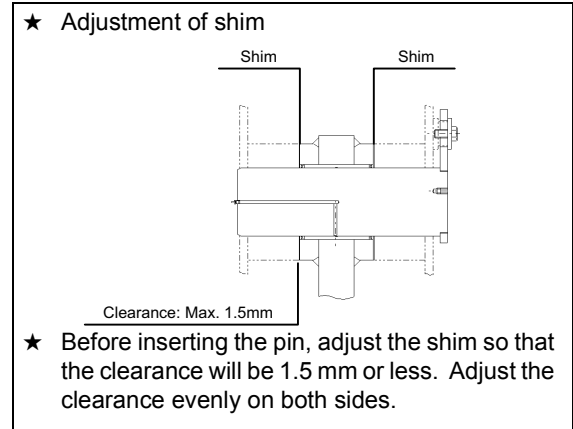
1. Hold the dump and lift cylinders with lever blocks.



Hold with wood block.

2. Sling the boom assembly with a crane and move it to above the front frame and position it, and then insert the lift arm hinge pin.
 3. Adjust positions of the boom assembly and lift cylinder, and then insert the lift cylinder head pin.
 4. While slinging the cylinder head with the crane and adjusting its position, insert the cylinder head pin.
- ★ Start the engine, raise the boom, and adjust the positions of the holes.

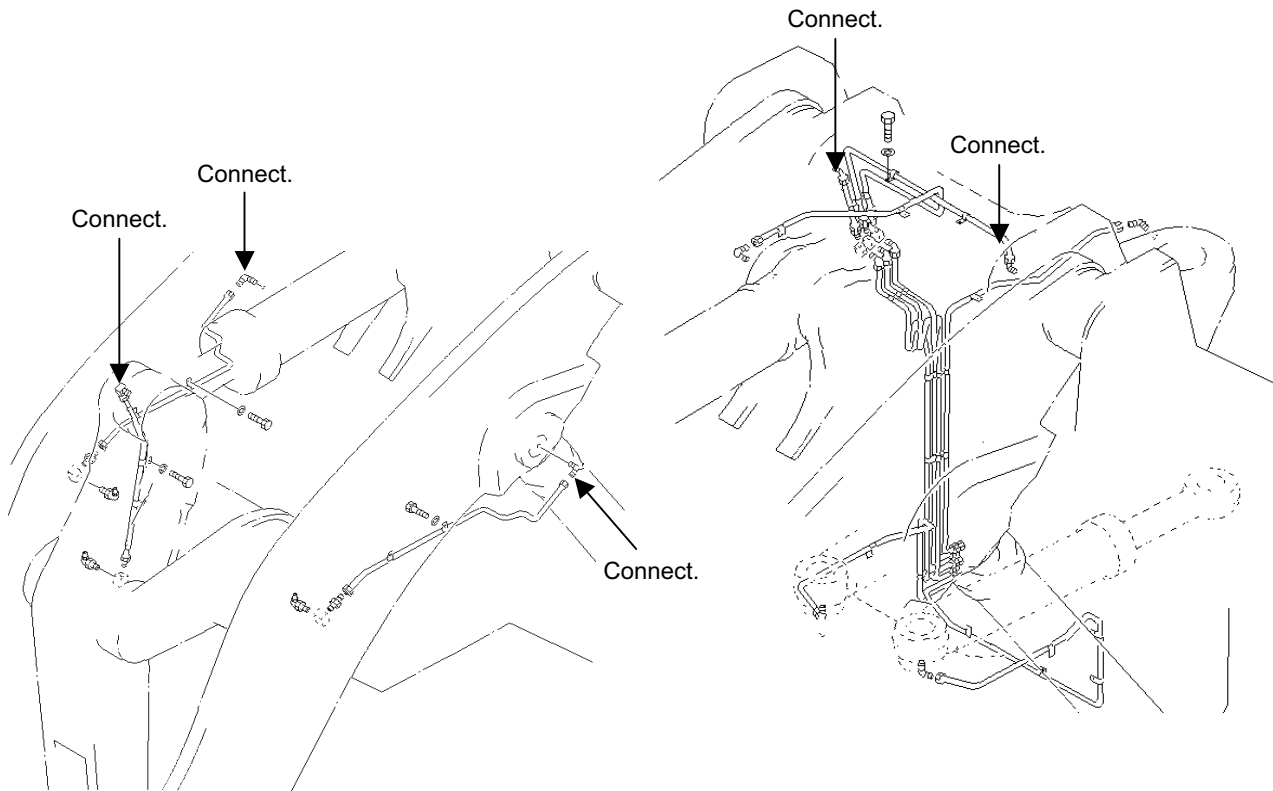
- ★ Before inserting the pin, wipe it and the inside wall of the pin hole thoroughly with cloths and apply molybdenum disulfide paste LM-P to them.
- ★ When inserting the pin, apply grease to the seal so that the seal will not be damaged.



Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
<ul style="list-style-type: none"> ★ Before inserting the pin, wipe it and the inside wall of the pin hole thoroughly with cloths and apply molybdenum disulfide paste LM-P to them. ★ When inserting the pin, apply grease to the seal so that the seal will not be damaged. ★ When aligning the pin holes, never insert your fingers in them. 				
Others				

B-450 Connecting remote grease tubes

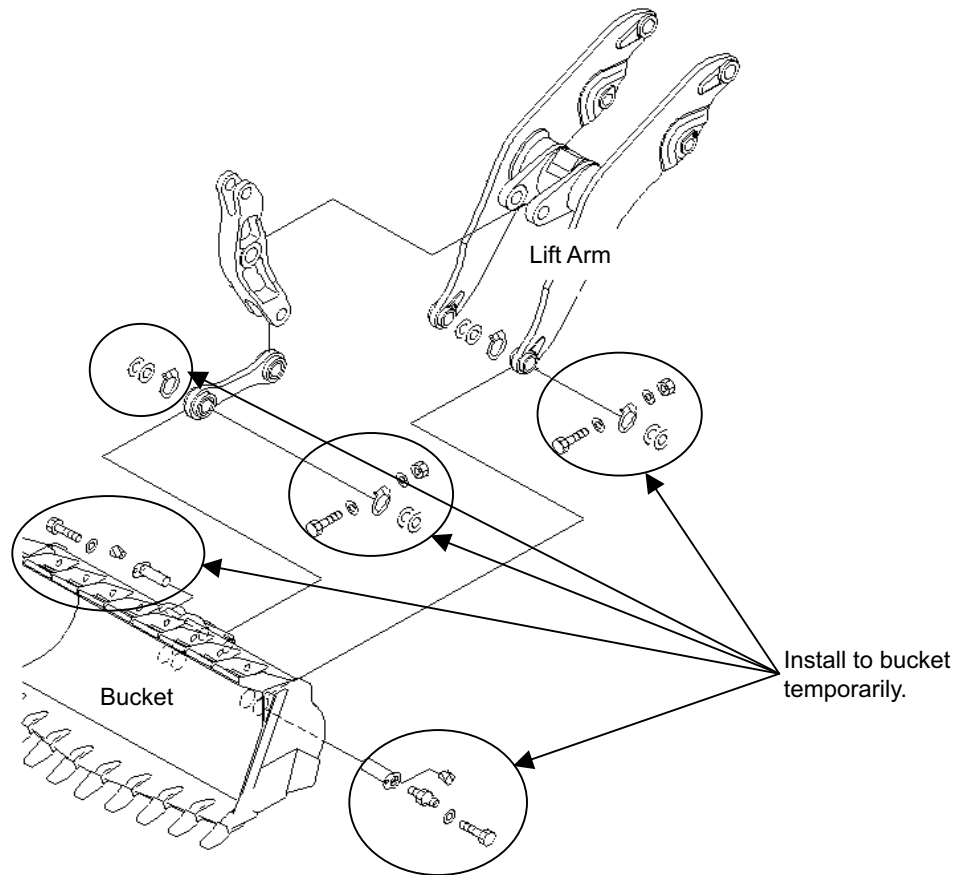
Connecting remote grease tubes at 5 places



Supply grease (molybdenum disulfide grease) to the grease fitting of each pin of the boom.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-460 Preparing for installing bucket



1. Sling the bucket with a crane and position it to the front of the truck.
 Bucket: 8,600 kg
 Sling: Use the upper part of the balance of the balance sling for the rear axle.

2. Wipe off grease and paint from the periphery of the pin hole of the bucket.

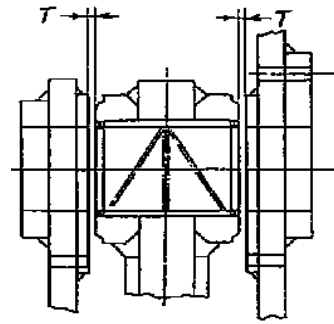
3. Wipe off grease and paint from the periphery of the pin holes of the boom pivot and bucket link pivot.
 - ★ Check that the dust seal is installed and the seal lip is set in the correct direction.
 - ★ Check that the dust seal is not projected from the boom and from the pivot end of the bucket link.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-470 Procedure for installing bucket

4. Installing bucket to boom
(Sling the bucket with a crane and adjust the positions of the holes.)

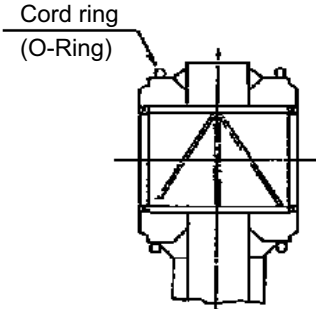
- (1) Bring the bucket near the lift arm and match the bucket mounting pins.
- (2) Select shims so that clearance **T** between the boom pivot and bucket pivot will be 1.5 mm or less.
★ Select shims so that the clearance will be even on the right and left sides.



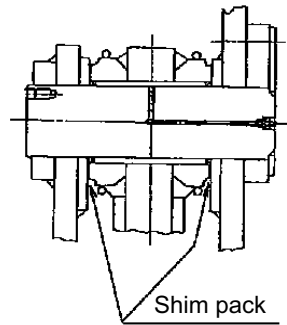
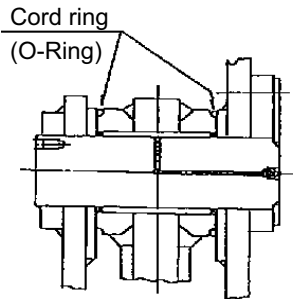
(3) Separate the bucket from the lift arm and install the cord ring to the boom pivot temporarily.

(4) Insert the shim pack selected in (2) above between the bucket and boom pivot, and then match the pin holes and insert the pin.

- ★ Apply KES LM-P molybdenum disulfide paste (Brand: SHINTOA KOEKI MOLYCOAT G or equivalent) to the pin, dust seal lip, and inside of bushing in advance so that the dust seal lip will not be damaged at this time.



(5) Install the cord ring to the pivot.



(6) Tighten the set bolt for the pin.

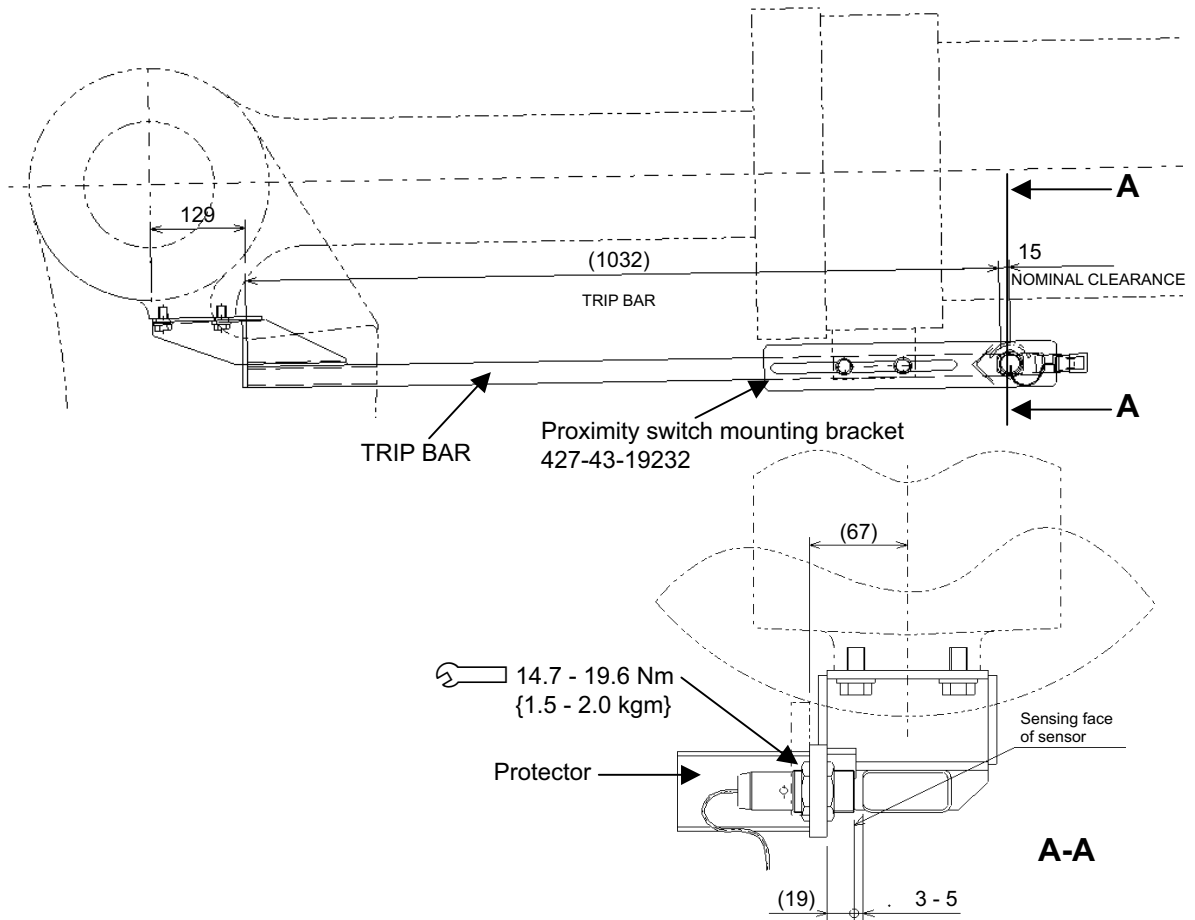
5. Connecting bucket link to bucket pivot

- ★ In the following procedure, install the pin similarly to the procedure for connecting the boom pivot.

6. Supply grease (molybdenum disulfide grease) to the grease fitting of each pin of the bucket.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

B-480 Adjusting bucket positioner

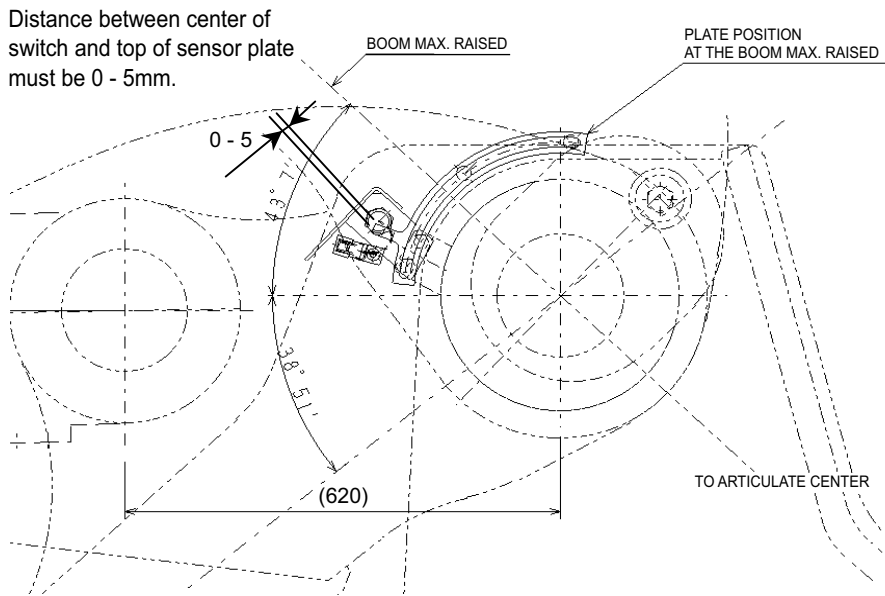
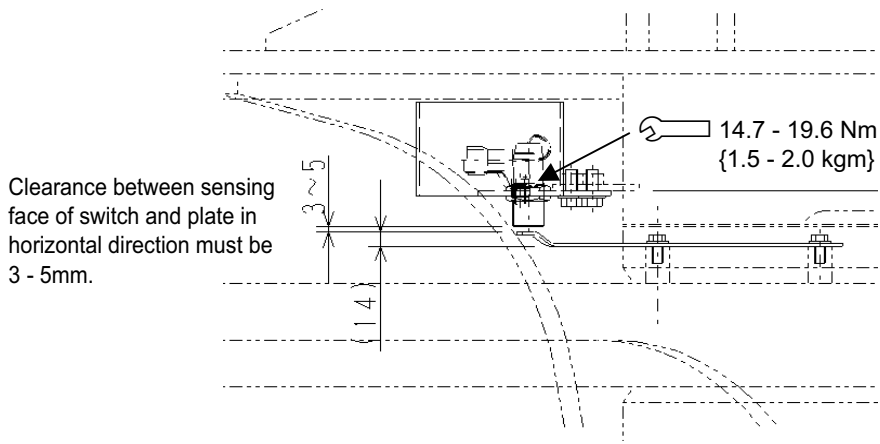


Adjusting bucket positioner

- (1) Lower the bucket to the ground and set it to a level. (Lower it to the level ground.)
- (2) Adjust and fix the proximity switch so that its sensing face can be pulled in about 0.5 - 1.0 mm from the end of the protector.
- (3) Since the trip bar moves transversely on the sensing face of the switch, adjust it so that clearance of 3 - 5 mm will be secured all over its stroke.
- (4) While running the engine at medium speed (1,500 rpm), operate the positioner and adjust the proximity switch mounting bracket (427-43-19232) so that the bucket angle will be 0 - 1° when the bucket is lowered to the ground. (The relationship between the bucket angle and cylinder length near the ground level is 8.7 mm/1°.)
- (5) Variation of operation of the positioner with the engine speed must be 4° or less when the bucket is near the ground.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Impact wrench	1		
	Socket: 19 mm	1		
	Torque wrench	1		
	Spanner (Hex: 36 mm)	1		
Others				

B-490 Adjusting boom kick-out



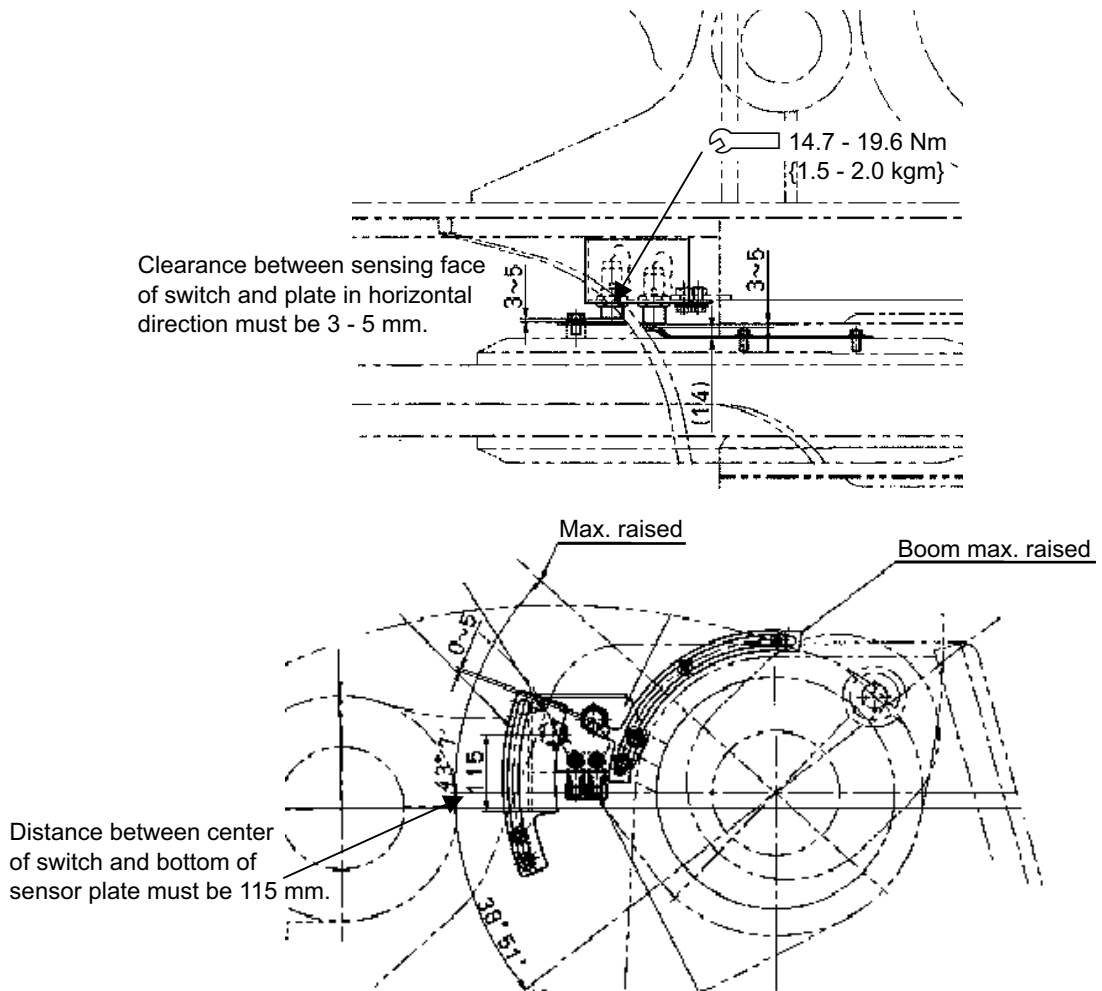
Adjusting boom kick-out

- (1) Raise the boom to the stroke end and fix the plate so that the distance between the center of the switch and the top of the sensor plate will be 0 - 5 mm.
- (2) Fix the switch so that the clearance between the sensing face of the switch and the plate in the horizontal direction will be 3 - 5 mm.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-500 Adjusting drive force UP switch

Perform the following work for only when the machine is equipped with the 2-stage hydraulic system.



Adjusting drive force UP switch

- (1) Raise the boom to the stroke end and fix the plate so that the distance between the center of the switch and the bottom of the sensor plate will be 115 mm.
- (2) Fix the switch so that the clearance between the sensing face of the switch and the plate in the horizontal direction will be 3 - 5 mm.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Others				

B-510 Procedure for bleeding air from work equipment circuit

1. Bleeding air from cylinder

- (1) While running the engine at low idling, move the cylinder to 100 mm before the stroke end 3 - 4 times
- (2) While running the engine at medium speed, move the cylinder to 100 mm before the stroke end 3 - 4 times
- (3) While running the engine at high idling, move the cylinder to 100 mm before the stroke end 3 - 4 times
- (4) While running the engine at low idling, relieve the cylinder at the stroke end 3 - 4 times
- (5) While running the engine at medium speed, relieve the cylinder at the stroke end 3 - 4 times
- (6) While running the engine at high idling, relieve the cylinder at the stroke end 3 - 4 times

2. Bleeding air from POC circuit

- (1) Set the bucket control lever in the TILT position and set the boom control lever in the FLOAT position. After the cylinders reach the stroke end, keep them there for 1 minute.
- (2) Set the bucket control lever in the DUMP position and set the boom control lever in the RAISE position. After the cylinders reach the stroke end, keep them there for 1 minute.

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Spanner	1		
	Others			

AJSS-010 AJSS (Connecting steering column)

Procedure for adding attachment "AJSS"

1. Connecting steering column

Additional work items
1. Connecting steering column
2. Connecting 3 sensor connectors
3. Connecting 2 steering lock valve pipes
4. Connecting steering link

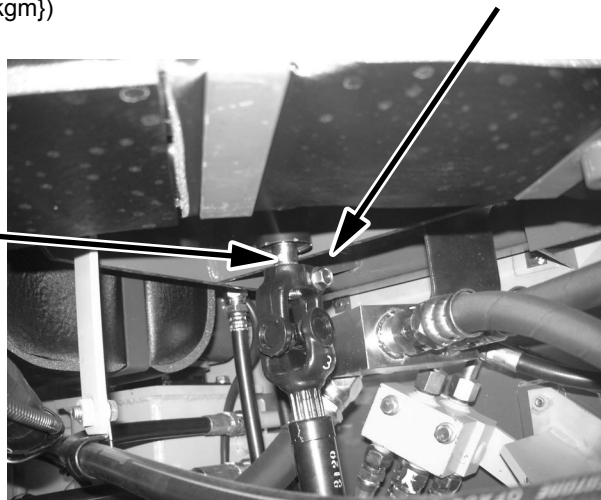
(1) Loosen the steering column bolt on the chassis side in advance.

(2) When installing the cab to the chassis, insert and install the steering column shown in the photo. (Match the marks at this time.)

(3) After fixing the cab to the chassis, tighten the bolt.
 (⌚ 48.0 - 61.8 Nm {4.9 - 6.3 kgm})

Loosen this bolt in advance.
 (⌚ 48.0 - 61.8 Nm {4.9 - 6.3 kgm})

Separating position
(Marked)



Left central part under floor

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Loosen the bolt in advance. (⌚ 48.0 - 61.8 Nm {4.9 - 6.3 kgm}) When inserting, match marks.				
Others				

AJSS-020 AJSS (Connecting connectors)

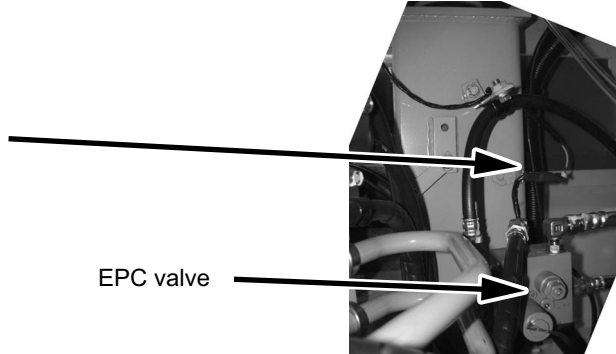
Procedure for adding attachment "AJSS"

2. Connecting 3 sensor connectors
(Connect and fix these connectors to wiring harness from floor.)

Additional work items

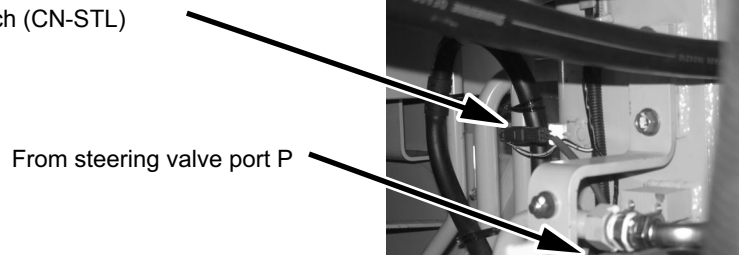
1. Connecting steering column
2. **Connecting 3 sensor connectors**
3. Connecting 2 steering lock valve pipes
4. Connecting steering link

(1) EPC valve connector (CN-L26)



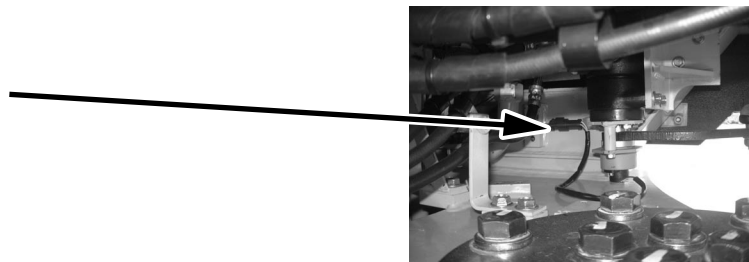
Right rear of floor support

(2) Steering lock oil pressure switch (CN-STL)



Left rear of floor support

(3) Steering potentiometer



Left lower part of floor support

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Others			

AJSS-030 AJSS (Connecting steering lock valve pipes)

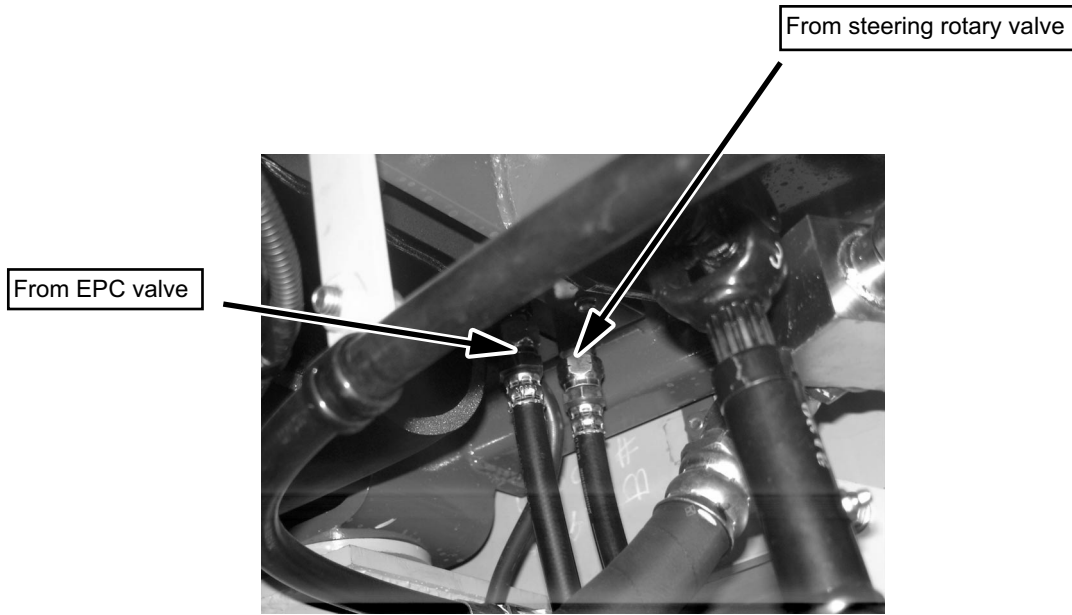
Procedure for adding attachment "AJSS"

3. Connecting 2 steering lock valve pipes

Additional work items

1. Connecting steering column
2. Connecting 3 sensor connectors
- 3. Connecting 2 steering lock valve pipes**
4. Connecting steering link

(1) Connect the 2 hoses (marked)



Left central part under floor

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Match the marks.				
Others				

AJSS-040 AJSS (Connecting steering link)

Procedure for adding attachment "AJSS"

Perform the following work only when separating the front and rear frames for delivery.

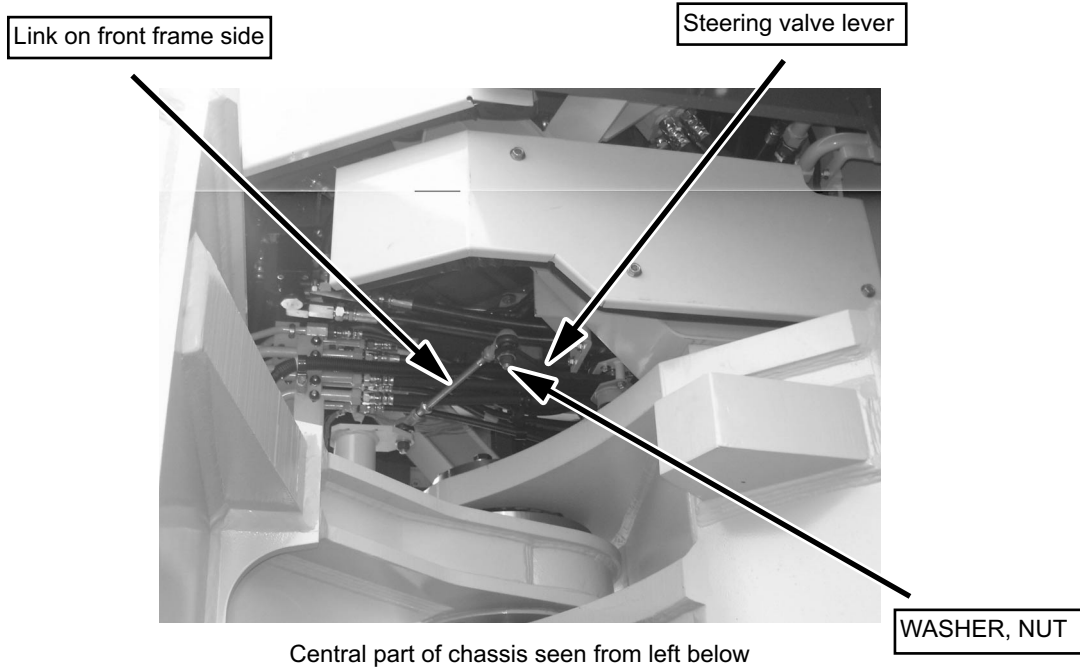
4. Connecting steering link

Additional work items

1. Connecting steering column
2. Connecting 3 sensor connectors
3. Connecting 2 steering lock valve pipes
4. **Connecting steering link**

(1) Remove the nut and washer of the link on the front frame side in advance.

(2) Insert the link in the hole of the steering valve lever, set the washer, and tighten the nut.



Central part of chassis seen from left below

Precautions	Special tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Remove the nut and washer in advance.				
Others				

FIELD ASSEMBLY INSPECTION REPORT

After completion of assembling a machine, make inspections according to these check sheets for assuring machine performance and quality.

Model – Type WA800-3	Machine Serial No.	User Unit No.	Engine Model KOMATSU SA12V140-1	Engine Serial No.
Service Meter Reading	Date of Inspection	Attachment		
Location of Machine at Inspection		1		2
		Manufacture		
		Model		
		Serial No.		
Distributor's Name				
Customer's Name	Address:	Signature:	Delivery Report No. attached	
		Date:		

Inspector's Comments:

Inspector's Name:	KOMATSU USE ONLY:
Title	
Signature:	
	C. Sheet Receiving Date: _____
	By _____
	Remark:



Check Sheets filling instructions:

- Use following indexes for entry of judgement
 -Normal
 -Abnormal
 -Correction made on abnormal point
 -Not applied
- Enter actually measured values in parentheses, [].

Notes:

(1) Criteria are based on the standards when the machine is shipped out of the factory.

SUBMITTANCE OF THIS REPORT (AND CHECK SHEETS) TO KOMATSU IS ONE OF THE CONDITIONS OF WARRANTY VALIDATION, COPY FOR KOMATSU SHALL BE FORWARDED TO THE KOMATSU REGIONAL OFFICE TOGETHER WITH THE COPY OF DELIVERY SERVICE REPORT.

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair
A Specifications	1	Record serial number stamped on machine	Stamped on right side face of front frame				
	2	Record engine serial number	Stamped on right side face of cylinder block (as seen from fan)	[]			
	3	Confirmation of specifications	Tires [- - PR, W/T, T/L, R, G] (Manufacturer:)				
			Bucket [m ³ , With teeth, Without teeth, Straight edge bucket, Spade nose bucket]				
			Others (options) []				
			[]				
	4	Paint color	Standard, specified color	[]			
5	Engine oil capacity	15W-30	[]				
6	Antifreeze	Used/not used, density	[°C]				
B Lubricant, coolant capacity, tire inflation pressure	1	Engine cooling water capacity	Above bottom edge of filler port	[Upper surface of core mm]			
	2	Engine oil capacity	H - L + 5, at least 15 minutes after stopping engine	[H ± mm]			
	3	Brake oil capacity	At least 12 H after stopping engine →  Engine at low idling → 				
	4	Hydraulic oil capacity	Between top and center of side gauge	[○]			
	5	Transmission oil capacity	H - L + 5	[]			
	6	Axle oil capacity	Bottom edge of drain plug ± 10 mm	[]			
	7	Washer fluid	Tank at least 1/3 full	[]			
	8	Battery electrolyte level	Between bottom edge of filler port and 10 mm above pole	[]			
	9	Greasing of all parts	All specified parts must be greased	[]			
	10	Tire inflation pressure	495 - 554 kPa {5.05 - 5.65 kg/cm ² }	[kPa { kg/cm ² }]			
C Starting	1	Actuation, return of main switch	There must be no catching of the key. Does it turn ON/OFF properly?				
	2	Actuation of monitor panel self check	All modules must light up				
			All dashboard lamps must light up				
			Central warning lamp must light up				
			Alarm buzzer must sound				
	3	Actuation of monitor for checks before starting	Brake oil level abnormality lamp must not be lighted up				
			Engine oil level abnormality lamp must not be lighted up				
			Engine cooling water level abnormality lamp must not be lighted up				
4	Sounding of horn	Volume must be correct. There must be no abnormal sound or vibration					
5	Actuation of directional lever neutral switch	Must be possible to start engine only when lever is at neutral position					
6	Actuation of starting motor	There must be no abnormal noise or idle running					
7	Ease of starting engine	Must start within 10 seconds					
8	Actuation, indication of hour meter	Pilot lamp must flash when engine is running. Counter display [H]					

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair
C Starting	9	Abnormal lighting up of caution pilot lamps	When engine is stopped or when engine is running				
	10	Confirmation of parking brake release	Lamp must light up when switch is turned ON				
			Machine must not move when switch is ON and shift lever is at F or R				
		◎ Driving machine Operating time: F1 - 5 minutes, F2 - 5 minutes, F3 - 5 minutes, R1 - 5 minutes, R2 - 5 minutes, R3 - 5 minutes Total 30 minutes					
D Operating machine	1	Actuation of speedometer					
	2	Actuation of fuel gauge					
	3	Actuation of torque converter oil temperature gauge	Must be within green range				
	4	Actuation of water temperature gauge	Must be within green range				
	5	Abnormality with emergency caution lamp [If any gauge is in red range, pilot lamp, warning lamp must light up and alarm buzzer must sound]	Failure in brake line				
			Engine oil pressure				
			Radiator water level				
			Engine water temperature				
Torque converter oil temperature							
	6	Abnormal noise, vibration from engine, transmission, axle					
	7	Drive machine and check for abnormal heating of axle, parking brake					
	8	Actuation of dust indicator	Red piston must not be shown				
E Performance, functions		◎ Pressurization test Operate lift cylinder to RAISE/LOWER, bucket cylinder to TILT/DUMP, and steering cylinder to left/right to the full stroke 30 times each to pressurize. Depress left and right brake pedal 30 times (transmission cut-off switch ON position) Carry out V-shape loading 5 times (engine at full throttle, cylinder operated to full stroke)					
	1	Abnormal lighting up of monitor panel					
	2	Operating effort of accelerator pedal	Max. 88.3 N {9.0 kg}	[N { kg}]			
	3	Return of accelerator pedal	Must return slowly without catching				
	4	Actuation of emergency brake					
	5	Actuation of brake pedal					
	6	Play, return of brake pedal	There must be no dragging				
	7	Braking effect	Stopping distance within 7.5 m when traveling at 20 km/h	[m]			
	8	Actuation of transmission cut-off switch	Pilot lamp must be off and transmission must not be cut when switch is OFF				
	9	Actuation of transmission cut-off					
	10	Time lag, shock, or other abnormalities in return after transmission cut-off					
	11	Operation of directional lever	Max. 10.8 N {1.1 kg}	[N { kg}]			

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair
E Performance, functions	12	Operation of speed lever	Max. 10.8 N {1.1 kg}	[N { kg}]			
	13	Actuation of speed lever 2nd speed stopper					
	14	Defective operation of directional lever	F → N, R → N, switching between F and R				
	15	Defective operation of speed lever	Shifting to 1, 2, 3				
	16	Time lag, shock, or other abnormality when shifting gear or starting off					
	17	Operation of lift lever	HOLD → RAISE, HOLD → LOWER: Max. 24.5 N {2.5 kg} LOWER → FLOAT: Max. 53.9 N {5.5 kg}	[N { kg}]			
	18	Correct fitting of lift lever in notch	FLOAT, LOWER, RAISE				
	19	Operating effort of bucket lever	Max. 23.5 N {2.4 kg}	[N { kg}]			
	20	Correct fitting of bucket lever in notch	TILT				
	21	Actuation, adjustment of work equipment lever safety lock	Lock must not come off when lever is operated. Boom must not go down				
	22	Actuation of accumulator	Boom, bucket must go down when engine is stopped and lever is operated				
	23	Adjustment of boom kick-out					
	24	Adjustment of bucket leveler					
	25	Scratches or damage to lift cylinder rod					
	26	Scratches or damage to bucket cylinder rod					
	27	Operation of steering wheel	8.8 - 14.7 N {0.9 - 1.5 kg}	[N { kg}]			
	28	Play of steering wheel	20 - 70 mm	[Left: mm, right: mm]			
	29	Abnormal noise, vibration, hunting of engine, exhaust color					
	30	Engine stall	Engine must not stop during any stall operation				
	31	Engine pick-up	Engine must accelerate from each stall operation, low idling				
	32	Actuation of engine stop	Engine must stop properly when main switch is turned OFF				
	33	Chassis holding force	Is machine held off ground when boom is lowered and front tires are raised from ground?				
	34	Parking brake effect	Must hold machine on 1/5 grade				
	35	Actuation of emergency steering	Must be possible to operate steering when engine stops while going downhill				
	36	Abnormal noise, vibration from engine, transmission, axle, work equipment during compression					
	F Others	1	Tension on hoses, wiring harnesses when boom is raised				
		2	Interference with hoses, wiring harnesses when boom is raised				
		3	Interference when there is rear wheel oscillation (check both left and right)				
		4	Interference when turning steering (check on both left and right)				

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair		
		◎ Engine speed Measurement conditions: When engine governor lever is operated to full throttle, it must contact governor stopper Engine cooling water temperature, torque converter oil temperature within operating range, hydraulic oil temperature: 45 – 55°C							
G	Measurement of basic performance	1	Low idling	620 – 700 rpm	[rpm]				
		2	High idling	2170 – 2270 rpm	[rpm]				
		3	Torque converter stall	1940 – 2140 rpm	[rpm]				
		4	Work equipment stall	----- (Record only)	[rpm]				
		5	Full stall	----- (Record only)	[rpm]				
		6	Boom RAISE speed	9.9 – 10.9 sec	[sec]				
		7	Boom LOWER speed	4.3 – 5.3 sec	[sec]				
		8	Bucket tilt back speed (tilt with boom raised to max. height)	1.7 – 2.3 sec	[sec]				
		9	Bucket tilt forward speed (dump with boom raised to max. height)	3.3 – 4.3 sec	[sec]				
				◎ Hydraulic drift of work equipment Measurement conditions: Hydraulic oil temperature: 75 – 85°C Set with bucket and boom horizontal when starting measurement Leave for 5 minutes before starting measurement					
				10	Hydraulic drift of boom	Lift cylinder retraction Max. 40 mm/15 min	[min]		
				11	Hydraulic drift of bucket	Bucket cylinder retraction Max. 20 mm/15 min	[min]		
		12	Rotating speed of steering wheel	Max. 5 sec with engine at full throttle	[Left sec], [Right sec]				
H	Lights	1	Actuation of light switches	There must be no stiffness or looseness of knobs (front lamp, working lamp, hazard)					
		2	Lighting up of parking lamp	(Front, rear, left, right)					
		3	Lighting up of clearance lamp	(Left, right)					
		4	Lighting up of tail lamp	(Left, right)					
		5	Lighting up of monitor lamp						
		6	Lighting up of front lamp (left, right)	Switching between low, high, lighting up of pilot					
		7	Lighting up of working lamp	(Front, rear, left, right) Lighting up of pilot					
		8	Lighting up of brake lamp	(Left, right)					
		9	Lighting up of back-up lamp	Back-up buzzer must sound					
		10	Actuation of turn signal indicator (front left, right, top, bottom; rear left, right), flashing of pilot						
		11	Actuation of hazard (front left, right, top, bottom; rear left, right) lighting up of pilot						
		12	Actuation of radio	Do switches work properly? Is there interference?					
		13	Actuation of stereo	Do switches work properly? Is there interference?					
		14	Lighting up of room lamp	When switch is ON, when door is open					
		15	Actuation of cigar lighter	Does it become red hot, does it automatically return?					
		16	Actuation of wipers (left, right)	Is wiping range correct?					
		17	Actuation of window washer	Is direction of nozzle correct?					

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair
H Lights	18	Actuation of air conditioner	Actuation of switches (lighting up of lamps), actuation of air flow switch				
	19	Check charging of air conditioner gas	There must be no bubbles in receiver sight gauge				
	20	Actuation of selector switches for air conditioner	Do cooling and heating work properly?				
	21	Does air conditioner FRESH/RECIRC selector switch work properly?					
	22	Operation of air conditioner condenser fan					
I Overall inspection	1	Check that there is no leakage of water from engine cooling system (left, right) Radiator inlet/outlet hoses, radiator drain hose, radiator drain valve, radiator core, aeration hose, thermostat housing, water pump shaft seal, corrosion seal, joint of cylinder block water jacket cover, water manifold, torque converter cooler inlet/outlet hoses					
	2	Check that there is no interference between water piping, hoses and sharp edge or movable parts					
	3	Check that there is no leakage of fuel from engine fuel line (left, right) Oil filter joint, dipstick tube mount, oil filler tube mount, timing gear case joint, breather mount, head cover joint, crankshaft seal, turbocharger lubricant tube, turbocharger seal, air compressor lubricant tube, oil pan joint, engine oil drain hose, engine oil drain valve, engine oil cooler tube mount					
	4	Check that there is no interference between lubrication hoses and sharp edge or movable parts					
	5	Check that there is no leakage of gas from engine exhaust system (left, right) [Exhaust manifold mount, turbocharger mount, muffler, head cover joint]					
	6	Check that there is no leakage of fuel from fuel tank (Tank weld, tank inspection cover joint, tank unit mounting surface, tank drain valve)					
	7	Check that there are no loose or missing fuel tank mounting bolts					
	8	Check that there is no leakage of oil from torque converter piping [Torque converter pump suction tube and hose joints, torque converter filter inlet/outlet hose and tube joints, filter joint, torque converter cooler hose joint]					
	9	Check that there is no interference between torque converter piping, hoses and sharp edge or movable parts					
	10	Check that there is no leakage of oil from any parts of torque converter, transmission [Torque converter input shaft seal, joint of torque converter and transmission, transmission transfer case joint, transfer case front cover joint, transmission oil drain valve, transmission breather, transmission control valve mount, transmission control valve blind plug, transmission dipstick tube mount, transmission output shaft seal (front, rear)]					
	11	Check that there is no leakage of oil from axle (front, rear)					
	12	Check that there are no loose or missing mounting bolts of axle (front, rear)					
	13	Check that there are no loose or missing mounting bolts of axle support (front, rear)					
	14	Check that there are no loose or missing mounting bolts of wheels (front, rear)					
	15	Check that there is no damage to side wall of tires					
	16	Check that there are no loose or missing mounting bolts of drive shaft (front, rear) [Front drive shaft, rear drive shaft]					
	17	Check that there is no leakage of oil from hydraulic tank [Tank weld, inspection cover joint (top, bottom, front), drain plug, sight gauge]					
	18	Check that there is no leakage of oil from hydraulic filter case [Case weld, inspection cover joint, filter cover joint]					
	19	Check that there is no leakage of oil from hydraulic pump (switch, loader, steering, torque converter, emergency steering) [Pump mount, case joint, cover joint]					
	20	Check that there is no leakage of oil from main control valve (left, right) [Relief valve, suction valve, unload valve, safety valve]					
	21	Check that there is no leakage of oil from steering valve [Relief valve, safety valve, lever shaft seal]					
	22	Check that there is no leakage of oil from PPC valve					
	23	Check that there is no leakage of oil from accumulator					
	24	Check that there is no leakage of oil from PPC relief valve					
	25	Check that there is no leakage of oil from boom cylinder (left, right) [Shaft seal, head flange portion, tube weld]					

Category	No.	Item	Judgement procedure & standard	Measured value	Judgement	Confirmation of repair	Nature of repair	
I Overall inspection	26	Check that there is no leakage of oil from bucket cylinder [Shaft seal, head flange portion, tube weld]						
	27	Check that there is no leakage of oil from steering cylinder [Shaft seal, head flange portion, tube weld]						
	28	Check that there is no leakage of oil from hydraulic piping [Piping joints, weld, plugs]						
	29	Check that there is no interference between hydraulic piping and sharp edge or movable parts						
	30	Check that there is no leakage of oil from brake line [Brake oil reservoir, brake valve, slack adjuster (front, rear), piping joint]						
	31	Check that there is no interference between brake piping and sharp edge or movable parts						
	32	Check that there are no loose or missing work equipment linkage lock pin bolts						
	33	Check that there are no loose or missing fender weight mounting bolts						
	34	Check that there is no stepped difference between counterweight and fuel tank	Stepped difference: Max. 5 mm					
	35	Check that there are no loose or missing front fender (left, right) mounting bolts						
	36	Check that there are no loose or missing front right support mounting bolts						
	37	Check that there are no loose or missing cab step mounting bolts						
	38	Check that there is no leakage of oil from engine throttle booster						
	39	Check that there is no leakage of oil from engine throttle booster inlet/outlet hose joints						
	40	Check that there is no interference between engine throttle booster inlet/outlet hoses and sharp edge or movable parts						
	41	Check that there is no interference between engine throttle cable and sharp edge or movable parts						
	42	Check that there is no interference between electric wiring and sharp edge or movable parts						
	43	Check that there is no excessive tension of electric wiring						
	44	Check that there are no loose or missing connectors or electric wiring terminals [alternator, starting motor, sensors, battery, lamps, wipers]						
	45	Check that there are no loose or missing cab mounting bolts						
	46	Check that the operator's seat adjustments (slide, tilt, up/down, weight, seat back) work properly						
	47	Check that the steering wheel tilt, lock works properly						
	48	Check that the cab door outer lock (key lock), inner lock work properly						
	49	Check that there is no interference between air conditioner hoses and sharp edge or movable parts						
	50	Check that there is no interference between heater hoses and sharp edge or movable parts						
	51	Check that there is no peeling or dents to machine bodywork						
	52	Check that there are no peeling or missing name plates on machine						

WA800-3 WHEEL LOADER

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