SEAWD00404

Field Assembly Manual

HD465-5

HD605-5

DUMP TRUCK

SERIAL NUMBERS **HD465-5 -4001 and up**
HD605-5 -1001

It is out policy to improve our products whenever it is possible and practical to do so. We reserve the right to make changes or improvements at any time without incurring any obligation to install such changes on products sold previously.

Due to this continuous program of research and development, revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.

November 2001

CONTENTS

LIST OF JIGS AND WEAR PARTS FOR LOCAL ASSEMBLY

※ For details of local manufactured jigs, see sketches of special tools.

No.	Item	Specification	Q'ty	Location of use
1	Truck crane	25 ton	1	
2	Truck crane	45 ton	1	
3	Forklift truck	2.5 ton	1	
4	Gas cutter	No. A 112R	1	
5	Burner	No.2 1220N	1	
6	Acetylene gas		1	For gas cutter
7	Oxygen gas	150kg/cm^2	1	For gas cutter
8	Grinder (round)	FG50L-1	1	
9	Grindstone	SCW50 x 19 • 10	1	
10	Grinder	LISG-7S	1	For finishing
11	Grindstone	180ø× 6× 22	3	
12	Diamond bar	CB7C105	1	
13	Diamond bar cutter	6GH	1	
14	Semi-automatic welding machine	500A	3	
15	Hand shield	GP-1S	3	
16	Semi-automatic wire	1.2 mm	80kg	
17	Chipper scaling hammer	FCM-20F	2	
18	Port power	300 mm 10 ton	1	For correcting misalignment of dump body
19	Hydraulic jack	10 ton	1	For dump body
20	Hydraulic jack	5 ton	1	For dump body
21	Body hinge through pin	WJ46-74001-022(Locally manufactured)	1	
22	Fireproof cloth	1m× 10m	1	Protection when welding by actually positioning parts on machine
23	Spacer	ATH-465-027(Locally manufactured)	1	When welding by actually positioning exhaust flange on machine
24	Nitrogen gas charger	566-88-14003	1	
25	Nitrogen gas cylinder	150 kg/cm^2	1	Charging suspension
26	Tire pressure gauge	No.2252	1	
27	Grease pump gun	For 20 kg can	1	
28	Grease	GL-2	5kg	
29	Step	3 steps	1	
30	Step	6 steps	1	
31	Blue sheet	5m x 10m	5	Protection of material
32	Wooden block	300 mm square, length 1 m	12	
33	Oil container	5L	1	For filling with oil
34	Oil	Engine oil SAE10W	70 ℓ	For details, see local assembly procedure sheet
35	Oil container, washing can		2	
36	Waste oil can	Empty drum	1	
37	Cloth		5kg	
38	Diesel oil			For refueling machine
39	Anti-freeze		51	For adding inside sub tank (density differs according to area)
40	Air hose	6ø x 1m	1	For bleeding air
41	Sander for sanding paint	914B	1	
42	Paper for sanding paint	#80	100	
43	Paper for sanding paint	#180	10	
44	Cup gun set	W87-20R2S	1	For painting
45	Brush		1	For correcting paint work
46	Air compressor	3.5 m3/minute, min. 7 kg/cm2	1	
47	Air hose	With 12ø x mouth piece	5	For impact grinder
48	Impact wrench	UW-13SK	2	
49	Impact wrench	KW-3800P	1	
50	Impact wrench	UW-9SK	2	

No.	Item	Specification	Q'ty	Location of use
51	Extension for impact 38S	Length 150 mm	1	
52	Socket	1 inch × 41 mm	1	For tightening tire
53	Socket	1 inch × 36 mm	1	For tightening ROPS
54	Socket	1 inch × 30 mm	1	For tightening support
55	Torque wrench	1800QL	1	For propeller shaft
56	Torque wrench	10000QLE	1	
57	Torque wrench, socket type	Width across flats: 27 mm, 4200 CL	1	
58	Torque wrench, ring type	Width across flats: 30 mm, 7000 LCK	1	
59	Steel tape	5m	1	
60	Loctite 1	LT-2	1	
61	Vinyl tape		1	For binding wiring harness
62	Standard tool (ISO)	700SX	2	
63	Bar	1m	1	
64	Bar		1	For aligning hole
65	Sledge hammer	101b	1	
66	Shackle	BD10 for 500 kg	4	
67	Shackle	BC40 for 10 ton	4	For installing dump body
68	Chain	ATH-465-042(Locally manufactured)	1	For general use
69	Nylon sling	Width 100 mm × 5 m	2	For installing fuel tank
70	Nylon sling	Width 250 mm × 5 m	1	For installing right platform
71	Nylon sling	Width 60 mm × 3 m	2	For installing support, other small items
72	Nylon sling	Width 100 mm × 12 m	1	For installing front tire
73	Nylon sling	Width 30 mm × 2 m	3	For installing front axle
74	Nylon sling	Width 100 mm × 3 m	1	For installing front axle
75	Pin	60ø × 250mm	2	For raising chassis, rear end
76	Body lifting jig	ATH-785-006(Locally manufactured)	4	For installing dump body
77	Lever block	3/4 ton, LB008	3	For installing front axle
78	Lever block	2 ton, LB020	1	For installing front axle
79	Wire	7m 28ø	2	For lifting chassis
80	Wire	4m 28ø	2	For installing dump body
81	Wire	5m 28ø	2	For installing dump body
	Instead of No. 79 - 81, it is also possible to use the following four items (Locally manufactured)			
		ATH-465-039	1	For installing dump body
		ATH-465-040	2	For lifting chassis
		ATH-465-041	1	For lifting half dump body

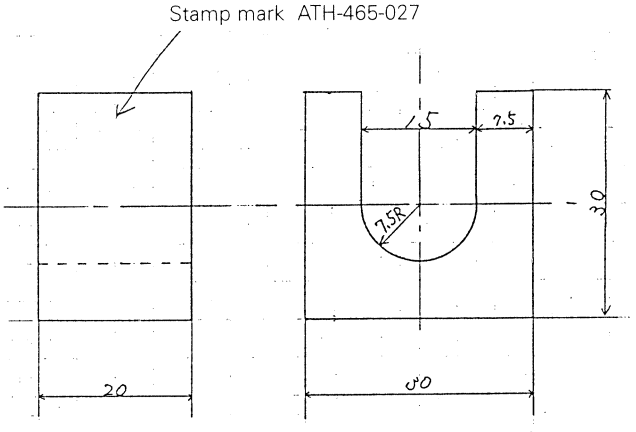
TOUCH-UP PAINT LIST FOR DUMP BODY

No.	Part Name	Unit	Q'ty
1	Rethane GP primer	4kg	1
2	Rethane GP hardening agent	0.8kg	1
3	Rethane GP thinner	161	1
4	NAX mighty lac G2KB natural yellow	10kg	2
5	NAX mighty lac G2KB hardening agent	2kg	2
6	NAX mighty lac G2KB 500 standard thinner	16kg	1
7	Acrykid cloud grey	Spray can	1
8	Heat resistance silver	Spray can	1

SKETCHES OF SPECIAL TOOLS

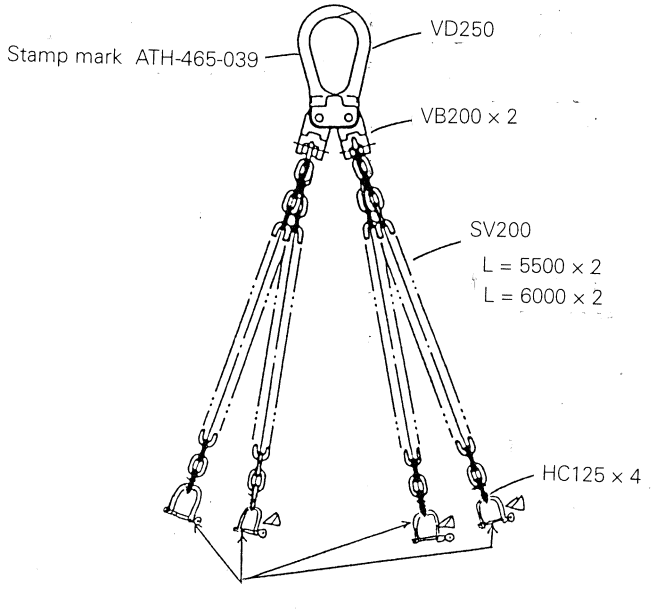
Note: Komatsu cannot accept any responsibility for special tools manufactured according to these sketches.

When welding by actually positioning exhaust flange on machine



HEAT TREATMENT	MATERIAL
PU-4	SS40
PART NAME	QTY
SPACER	3
ATH-465-027	

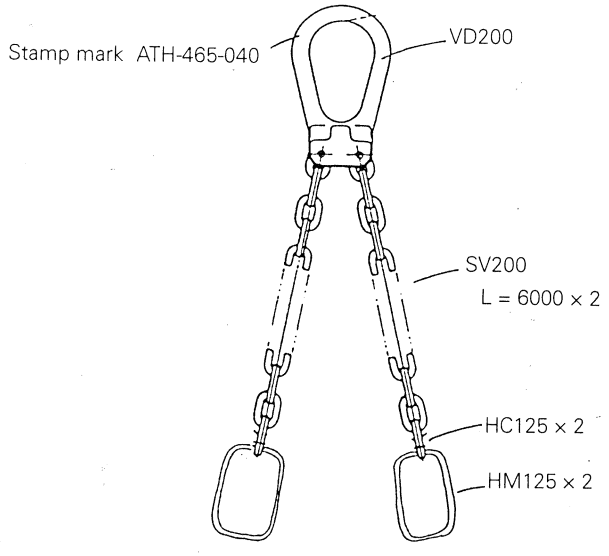
Body assembly lifting tool



Shackle (10 ton) BC nominal 40

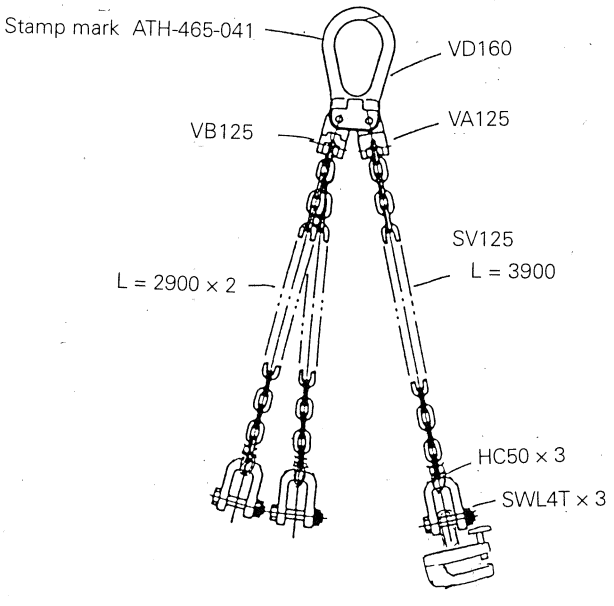
HEAT TREATMENT	MATERIAL
—	—
PART NAME	QTY
Body assembly lifting tool	1
ATH-465-039	

Chassis lifting tool



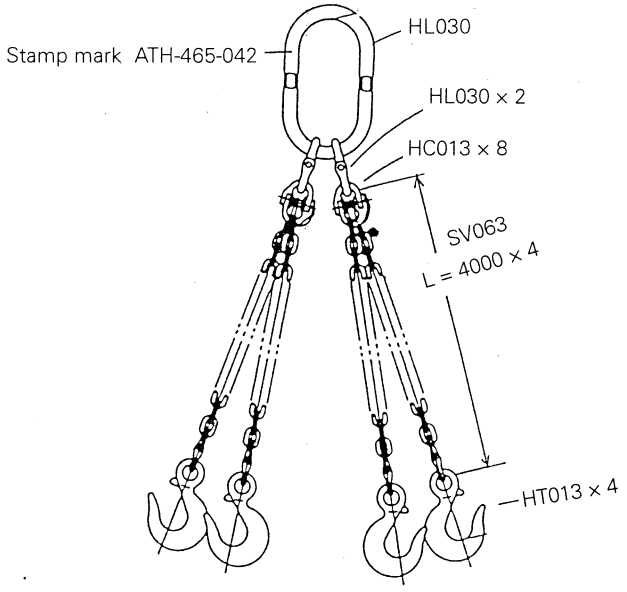
HEAT TREATMENT	MATERIAL
—	—
PART NAME Chassis lifting tool	QTY 2
ATH-465-040	

?? dump body lifting tool



HEAT TREATMENT	MATERIAL
—	—
PART NAME ?? dump body lifting tool	QTY 1
ATH-465-041	

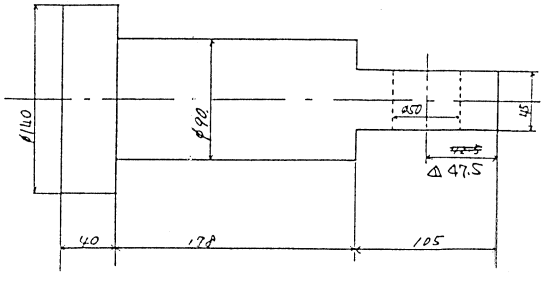
Universal lifting tool

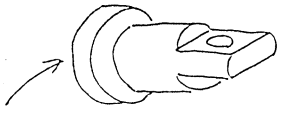


QL-4T

HEAT TREATMENT	MATERIAL
—	—
PART NAME	QTY
Universal lifting tool	1
ATH-465-042	△

Body lifting pin

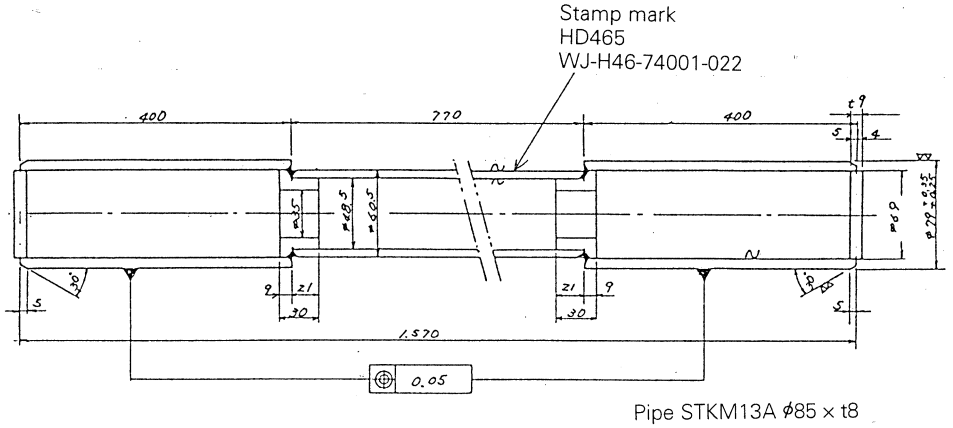




Stamp mark ATH-785-006

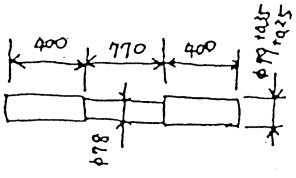
HEAT TREATMENT	MATERIAL
—	SS400
PART NAME	QTY
Body lifting pin	4
ATH-785-006	△

Chassis lifting tool



Pipe STKM13A ϕ85 x t8

or whole pipe also possible



HEAT TREATMENT	MATERIAL
—	STKM13A
PART NAME	QTY
Shaft	1
WJ-H46-74001-022	

HEAT TREATMENT	MATERIAL
PART NAME	QTY

MAN-HOURS, WORKERS NEEDED FOR LOCAL ASSEMBLY

		Assembly	Welding	Installing dump body, aligning exhaust	Inspection	Maintenance	Painting	Total	Remarks
HD465, HD605 series (day)		1.5	3	1	0.5	0.5	1	6	
	With lock (local welding)	1.5	5	1	0.5	0.5	2	9	
HD785, HD985 series (day)		2.5	3	1	1.5	0.5	1	7	
	With lock (local welding)	2.5	5	1	1.5	0.5	2	10	
No. of workers	Assembly (worker/day)	3		3		1		3	Total: Max. per day
	Welding (worker/day)		3	2				3	Total: Max. per day
	Inspection (worker/day)				1			1	
	Painting (worker/day)						2	2	

PROCEDURE FOR FIELD ASSEMBLY

1. LIFTING AND LOWERING REAR AXLE ASSEMBLY

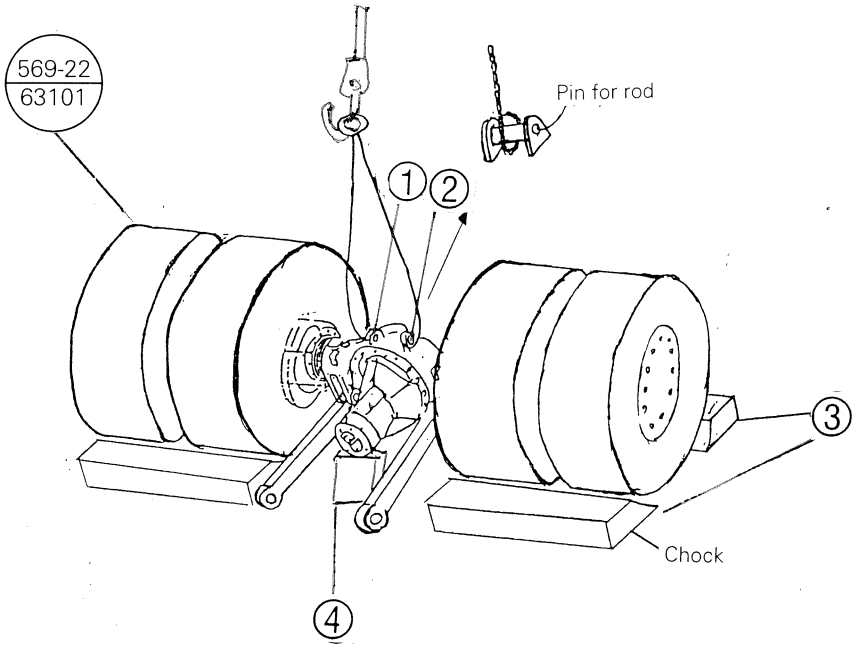
1. On the trailer, remove the set bolts of pins ① and ② on the top of the differential, and pull out the pins.
   kg Weight of axle assembly: 10.5 tons

2. Install chain slings or wires 28mm in diameter and 6m long to the pin holes.
   ★ The rear axle is 10.5 tons in weight. Take care not to damage the rear axle.

3. Lift the rear axle and lower it to the ground.
   ★ Select a flat and level place for grounding the rear axle.

4. When lowering the rear axle to the ground, place chocks ③ and a wood block under packing disc plate ④.
   ★ Adjust the height of wood block ④ so that the axle will be level.

5. Remove the chain sling or wire.


569-22
63101
Pin for rod
①
②
③
④
Chock

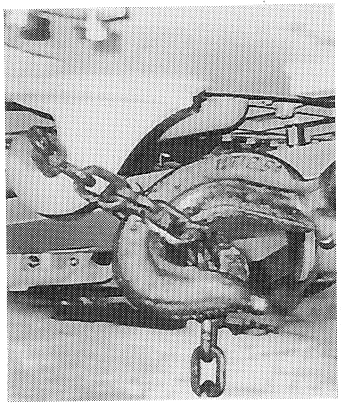

作
業
'95年 3月

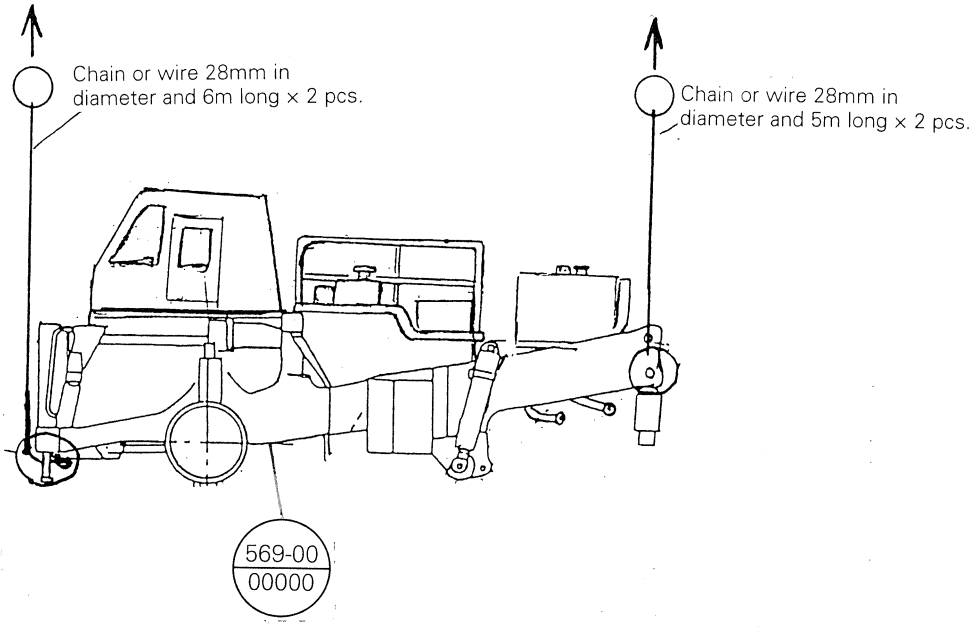
2. LIFTING CHASSIS ASSEMBLY

1. Prepare two 25-ton cranes.
   kg Weight of chassis assembly: 16.8 tons

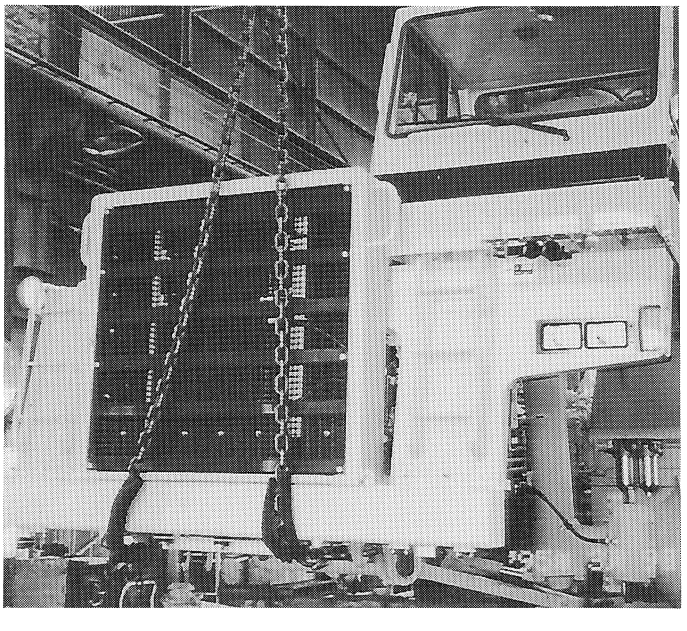
2. Install two chain slings or two wires 28mm in diameter and 6m long to the hooks under the chassis bumper.
   ★ Protect the bumper so that it will not be damaged by the wires (chains) on the front bumper side.

3. Install two chain slings or two wires 28mm in diameter and 5m long to the holes for the dump body stopper pins of the chassis. (If there are not the round bars and pins, use pins 569-74-61670 (supplied separately).
   ★ Take care that the slings or wires will not interfere with the grease tube for the dump body hinge pins on the rear side.

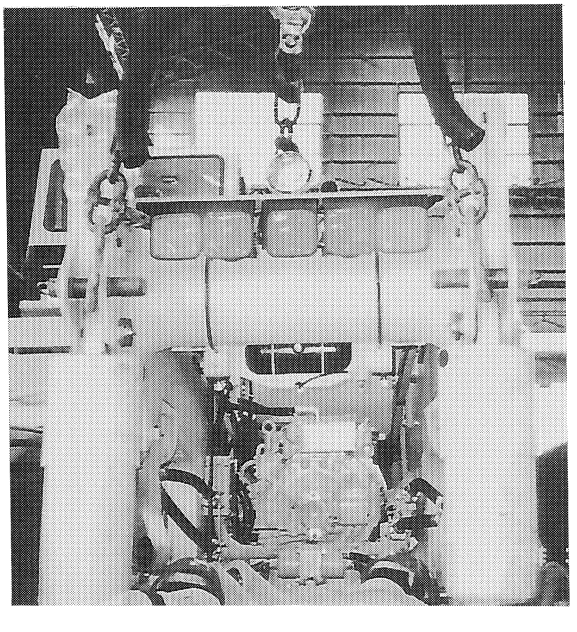




Take care of balance. Adjust length so that lifting position of left-hand bumper will be center.



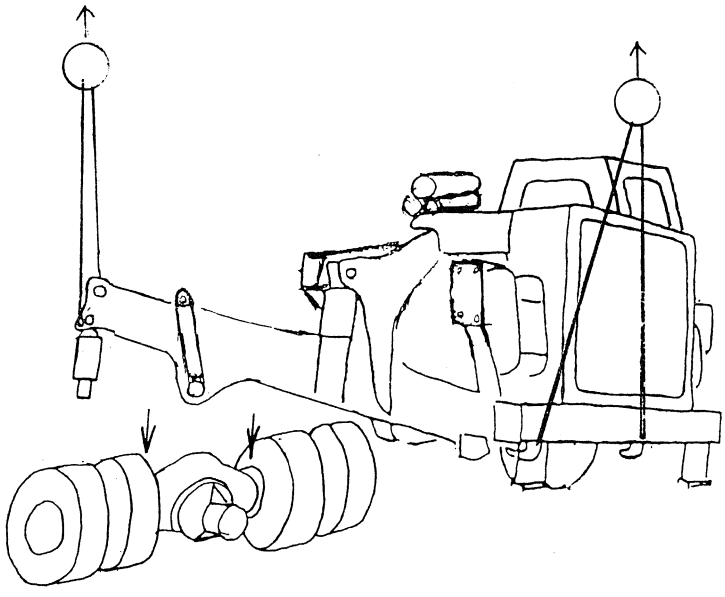
Use holes for dump body stopper pins

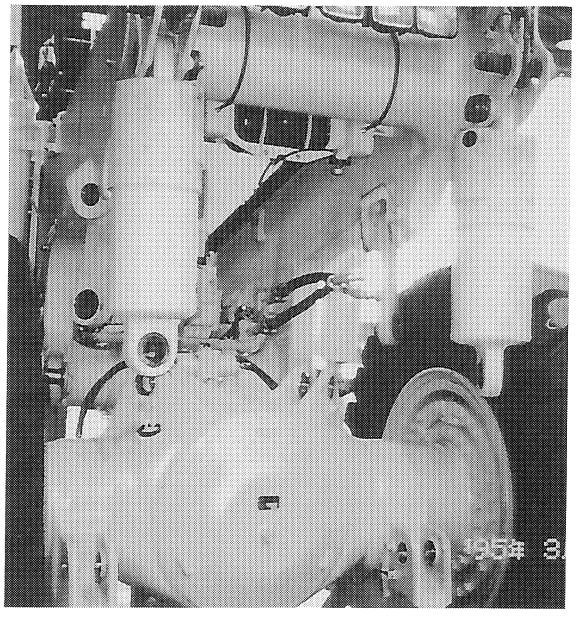


3. INSTALLING CHASSIS TO REAR AXLE

1. Lift the chassis assembly with the two cranes and move it to the center of the rear axle.
   ★ Only one signal person may guide the cranes, and they must use clearly-understood signals.

2. When lowering the cranes, support the mounting rod above the differential.






KOMATSU

4. INSTALLING REAR AXLE

1. Insert a claw bar in the rod and rear axle mounting section to match the pin holes to each other.

2. Lift with the claw bar and fit two spacers 569-52-41950 to the rubber bushing. Holding the spacers, lower toward the axle side gradually and match the pin holes by operating the claw bar and cranes.
   ★ Do not put your hand or fingers in the pin holes.
   ★ Do not apply a strong force to the spacers with a screwdriver, etc. since they may be deformed.

3. Insert the pins.

4. Install the set bolts and washers.

5. Install the right side similarly.

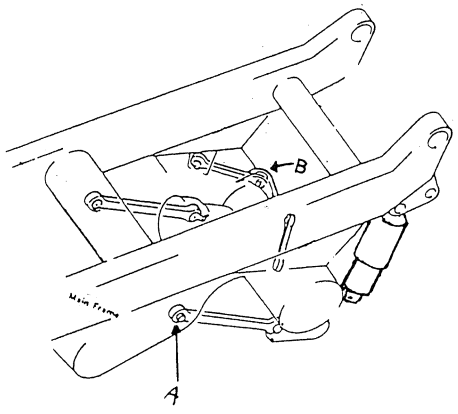
6. Remove the pins and spacers from part A.

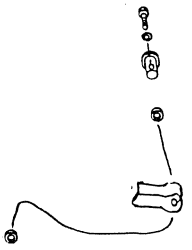
7. Operate the front crane to match the pin holes.
   ★ The rods can be lifted with the lever block from the frame.

8. Fit and hold the two spacers, and insert the pins, matching the pin holes.
   ★ Do not apply a strong force to the spacers with a screwdriver, etc. since they may be deformed.

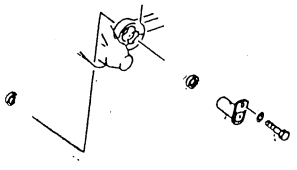
9. Install the set bolts and washers.

10. Apply grease to each pin.

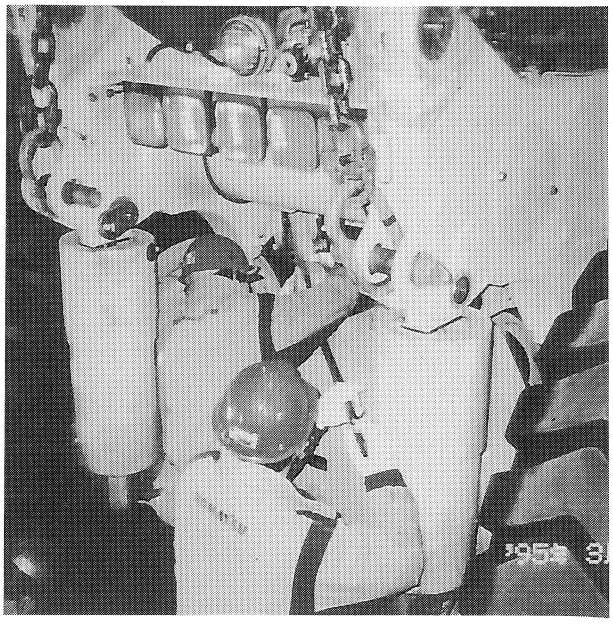


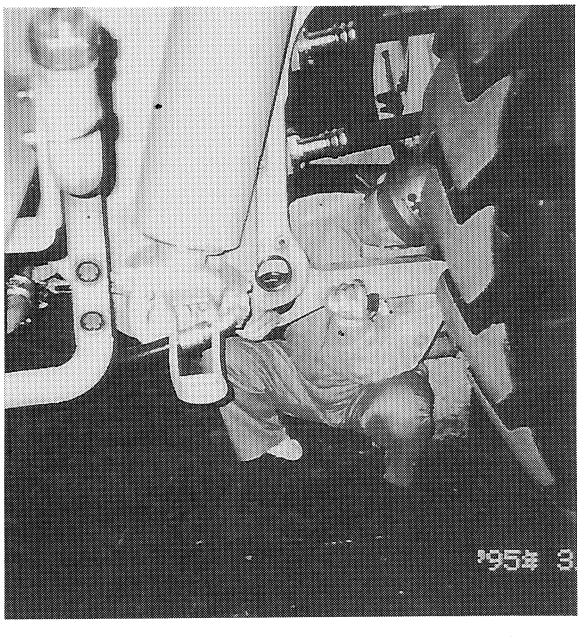


Detail of B



Detail of A





5. INSTALLING REAR SUSPENSION

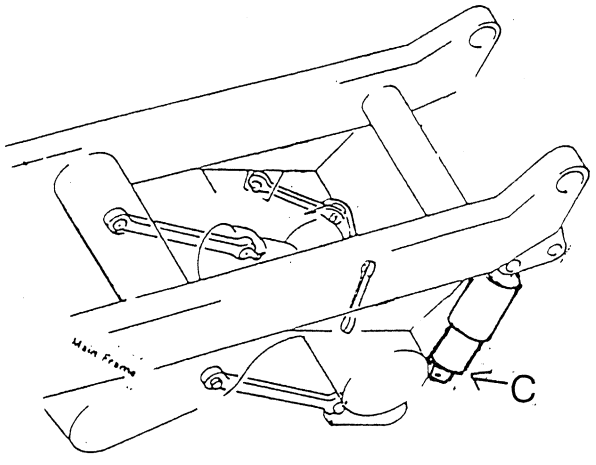
1. Remove the pins and spacers for the suspension on the rear axle side.

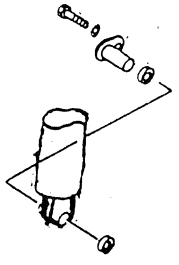
2. Match the pin holes by operating the crane.
   ★ Do not put your hand or fingers in the pin holes.

3. Fit two spacers, Part No.: 569-52-41950, and insert the pins.

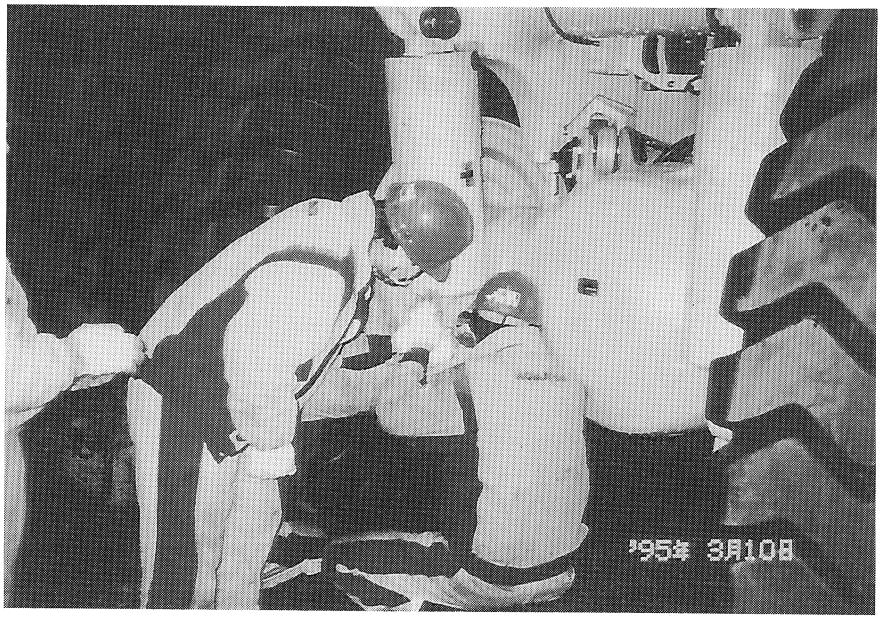
4. Install the set bolts.

5. Apply grease to the pins.





Detail of C



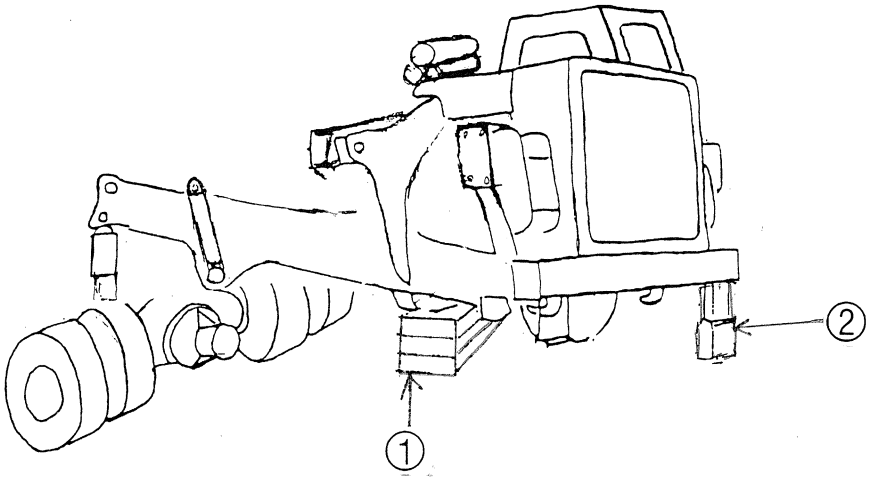
6. SETTING STAND ON FRONT SIDE

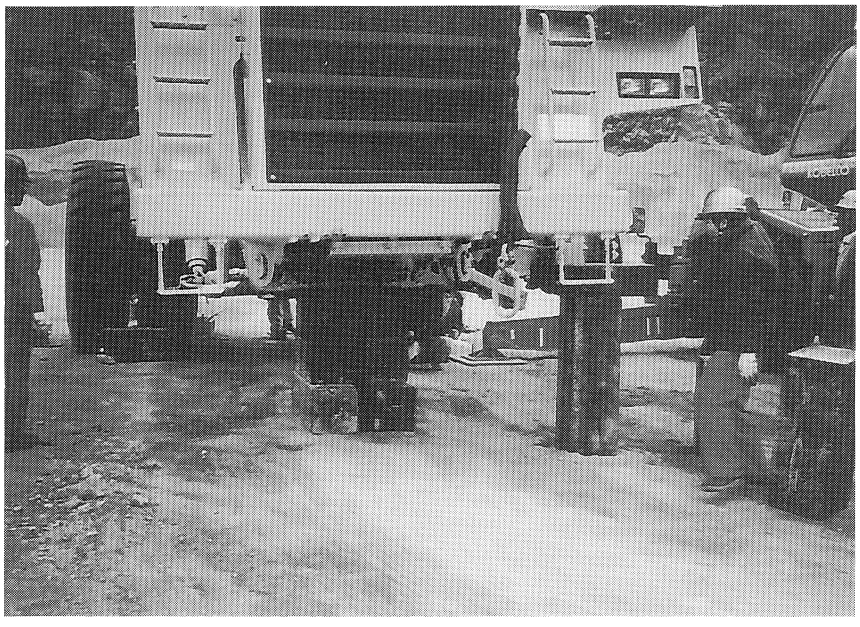
1. Set three layers of wood block ① 300mm square and 1m long under the vertical member of the frame.

2. Set a wood block under the left-hand bumper to prevent the chassis from tipping over.
   ★ Adjust the height according to the unevenness of the ground surface.

3. After checking the area for safety, lower the crane.

4. Remove the slings.


①
②



7. CONNECTING PARKING BRAKE AND BRAKE HOSES

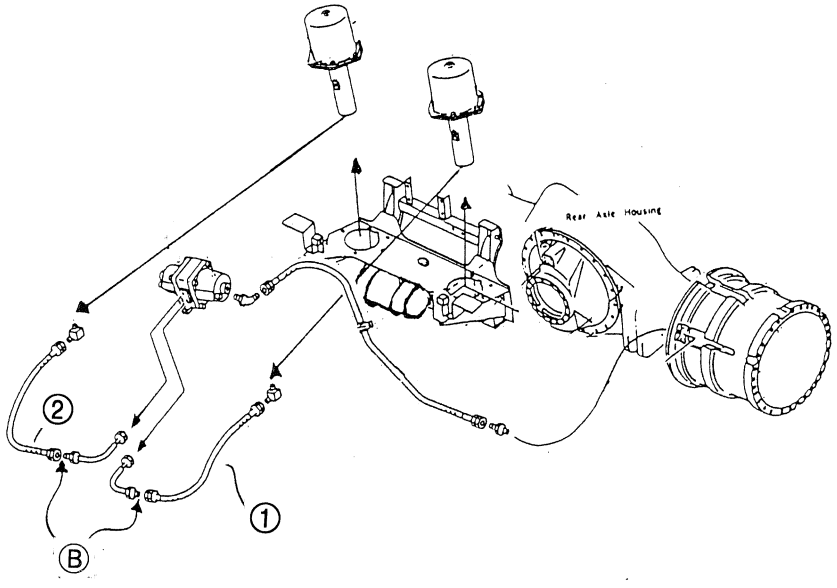
1. Remove the blind plug from parking brake chamber elbow Ⓐ.

2. Connect hose ③ of the relay valve on the chassis side to the elbow.
   kgm Tightening torque:
   29 to 69Nm {3.0 to 7.0kgm},
   Target: 49Nm {5.0kgm}

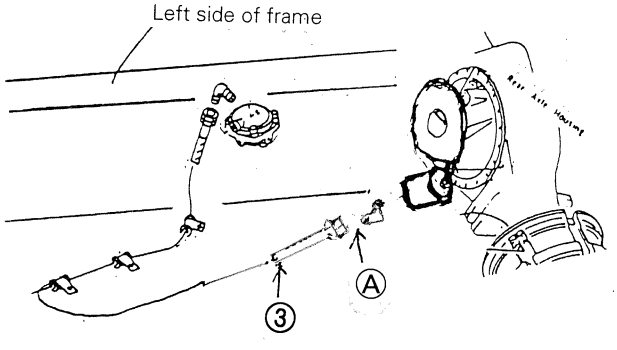
3. Remove the blind plug from section Ⓑ.

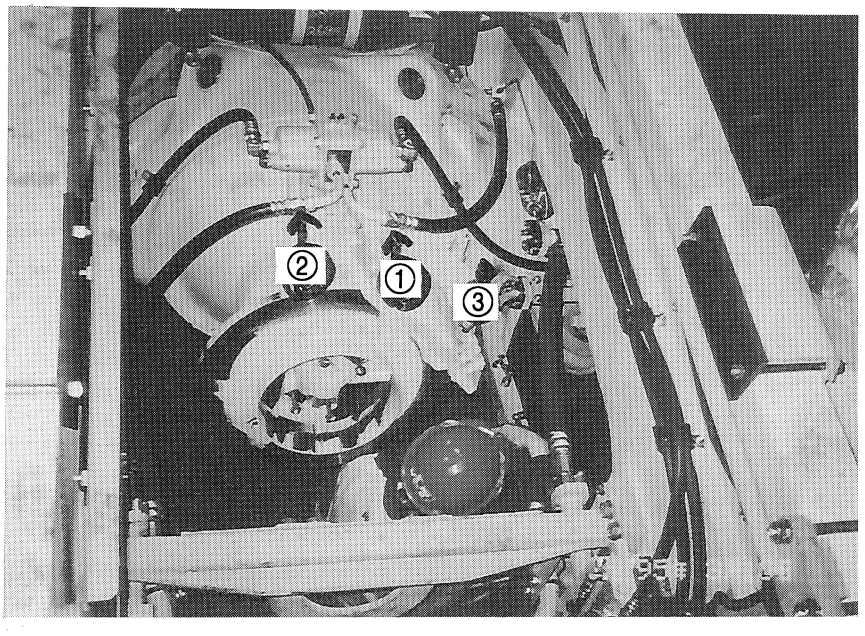
4. Connect hoses ① and ② to the tubes on the slack adjuster side.
   kgm Tightening torque:
   108 to 167Nm {11.0 to 17.0kgm},
   Target: 137Nm {14.0kgm}

Connection of brake hoses



Connection of parking brake hoses





8. CONNECTING BRAKE COOLING HOSES

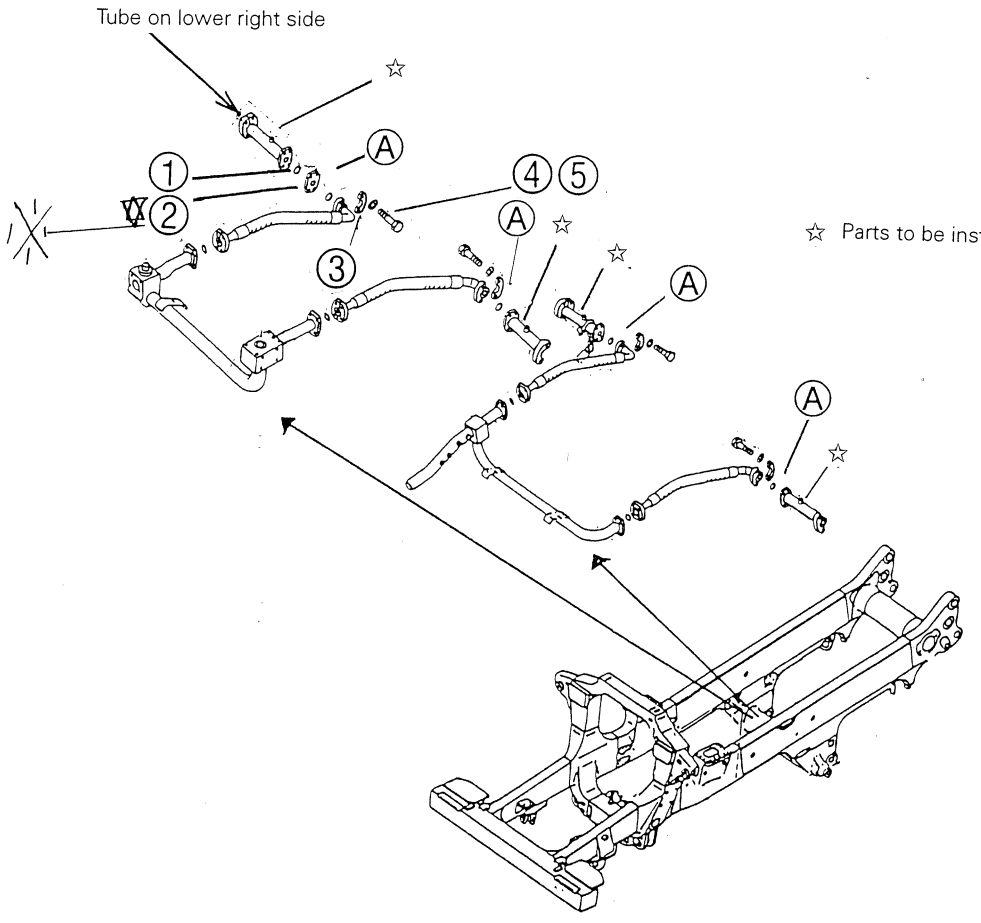
1. Prepare an oil container.

2. Remove the blind flange from section Ⓐ on the rear axle tube side.

3. Disconnect the lower side of the hoses installed to the chassis, and install them to both axle sides.
   ★ Install the spacers of the tube on the lower right side without fail.

4. Disconnect the upper side of the hoses installed to the chassis, and install them to left and right sides of the axle.
   ★ Do not cross the hoses.

5. Wipe off oil.


Tube on lower right side
☆ Parts to be installed to rear axle


'95年 3月10日

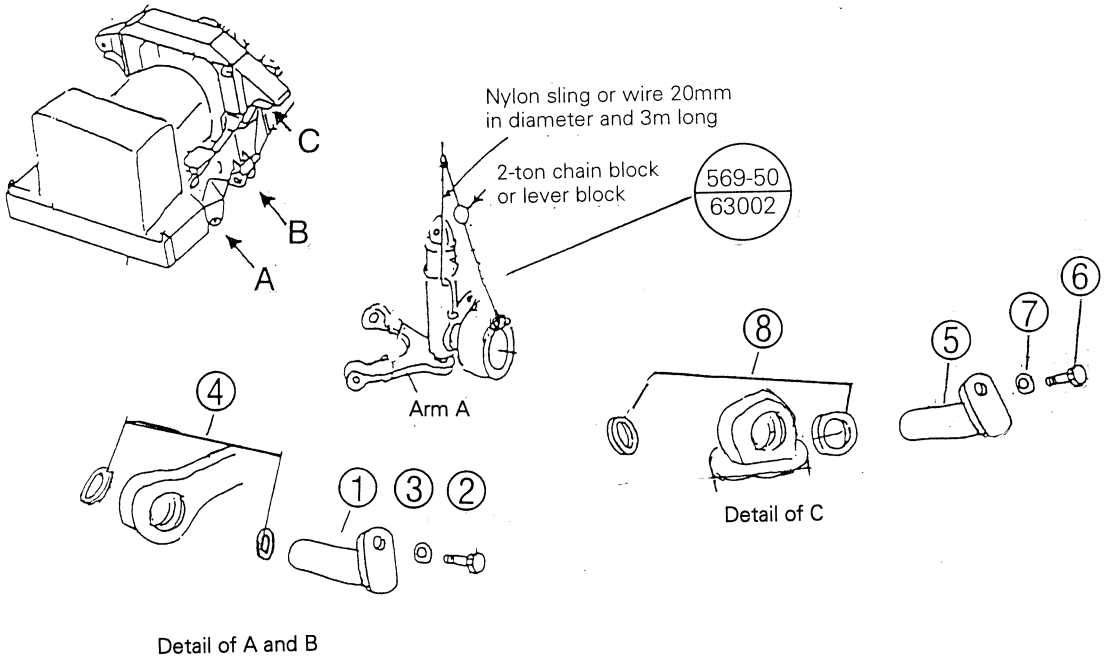
9. INSTALLING FRONT AXLE (1)

1. Install nylon slings or wires to the front suspension as shown in the photo. Loosen the nuts on the hub side and Lift the front suspension with a chain block or a lever block.
   kg Weight of front axle assembly: 1.3 tons
   ★ Install the slings or wires so that the top mounting part of the suspension will be level.

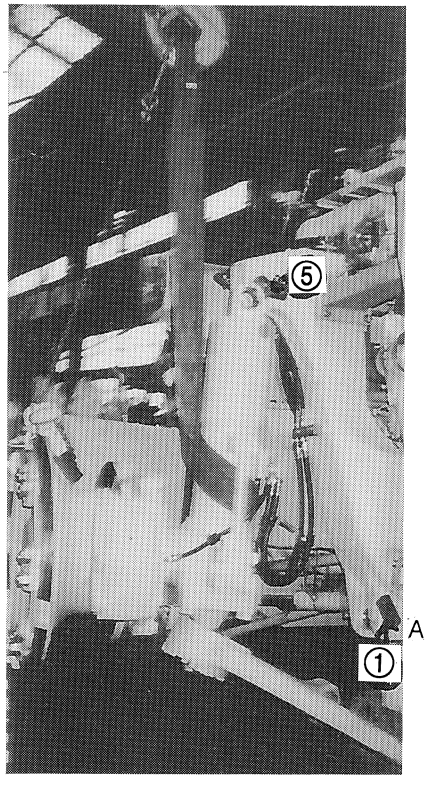
2. Remove the pins and spacers from sections Ⓐ, Ⓑ and Ⓒ on the chassis side.
   ★ Since the pins have different length from each other, take care when remounting them.
   ★ If rust-preventive oil is sticking, remove it with diesel fuel oil, etc.

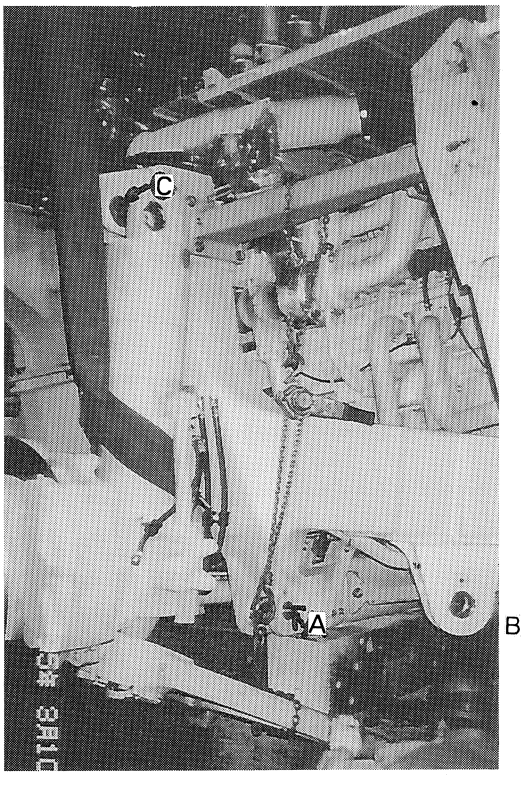
3. Move the front axle with the crane to the mounting position.

4. Install wires or nylon slings to the stay installed to the front support and chassis, and lift arm **A** with a 3/4-ton lever block.



Detail of A and B





10. INSTALLING FRONT AXLE (2)

1. Install removed four spacers ④ to the mounting section of arm **A** so that they will be in parallel with the rubber cover of the bushing.
   ★ Check that the O-ring is fitted to the bushing of arm **A**.

2. Adjusting with the crane and chain block, fit the spacers to the chassis mounting section.
   ★ Adjust so that spacers **A** and **B** will be fitted at the same time.
   ★ If the spacers are fitted forcibly, they will be deformed. Take care.

3. Match the pin holes and insert the two pins.
   ★ Check that there is no gap for the spacers.

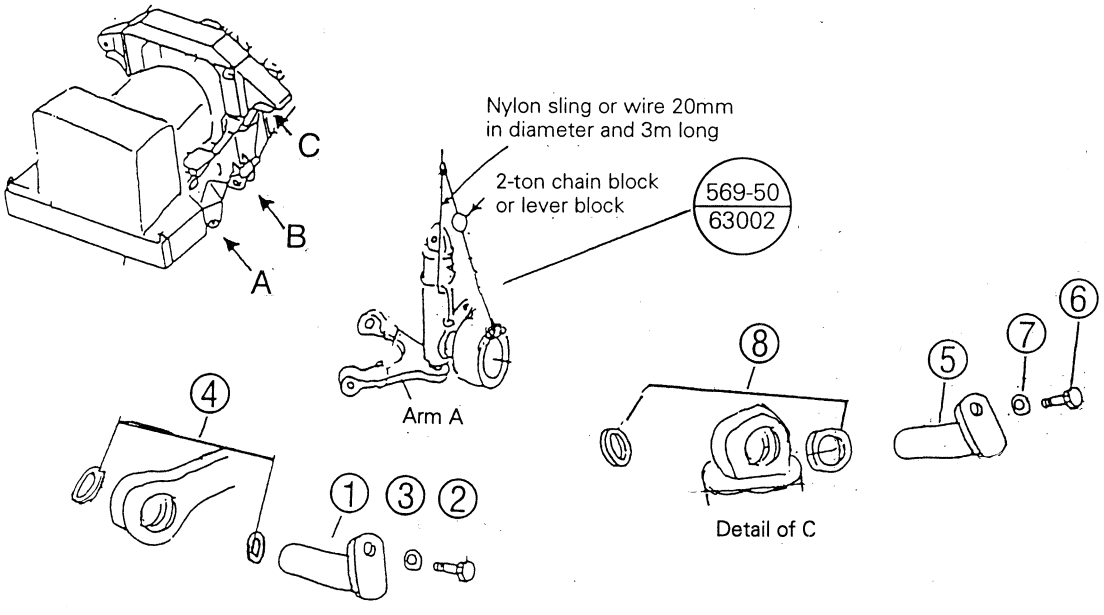
4. Install the two set bolts.

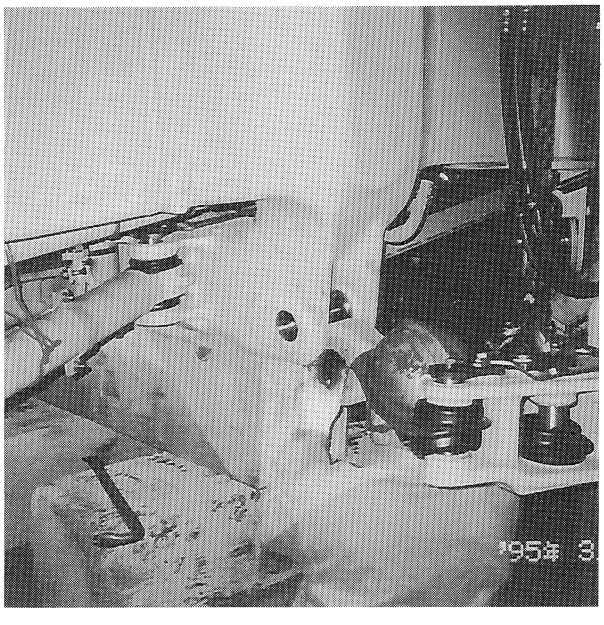
5. Remove the lever block from arm **A**.

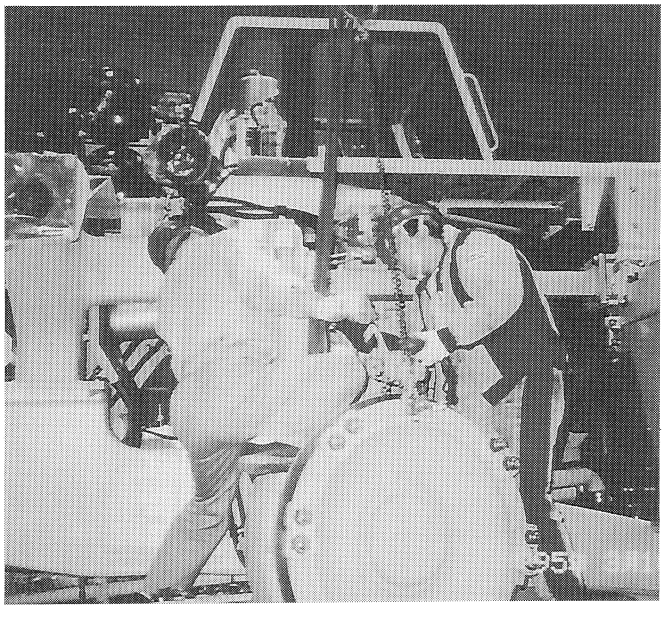
6. Adjusting the crane and chain block, match the pin holes above the suspension.

7. Fit the spacers removed from part **C**, then insert the pin.
   ★ Do not put your hand in the pin hole.

8. Install the set bolt.


C
B
A
Nylon sling or wire 20mm
in diameter and 3m long
2-ton chain block
or lever block
569-50
63002
Arm A
4
1 3 2
8
5
7
6
Detail of C
Detail of A and B





11. INSTALLING FRONT AXLE AND STEERING CYLINDER TIE ROD

1. Remove the grease tube from the steering cylinder tie rod installed to the front axle, then remove the pin and boots.
   ★ Check that the O-ring is fitted to the bushing of the cylinder tie rod.

2. Lift the axle with the crane so that the steering cylinder will be in parallel with the lever.
   ★ Set the axle to a position a little lower than the upper stroke end of the suspension.

3. Install the upper and lower boots. Match the pin holes and insert the pin.

4. Similarly, adjust the tie rod and install the boots, then insert the pin, matching the pin holes.

5. Install the set bolt.

6. Install the grease tubes.

7. Apply grease to each installed pin.

8. Remove the blind plugs from the hose on the axle side and nipple on the chassis side.

9. Tighten the hose to the chassis side.
   kgm Tightening torque:
   29 to 69Nm {3.0 to 7.0kgm},
   Target: 49Nm {5.0kgm}

10. Remove the slings and set the hub in parallel with the vehicle dump body.
    ★ A lever block is useful for this work.