

Product: KOMATSU HD785-7 Rigid Dump Truck Service Repair Field Assembly Manual(GEN00058-08)

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Field Assembly Instruction

DUMP TRUCK

HD785-7

SERIAL NUMBERS 7001 and up

KOMATSU

Sample of manual. Download All 221 pages at:

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8. Welding procedure

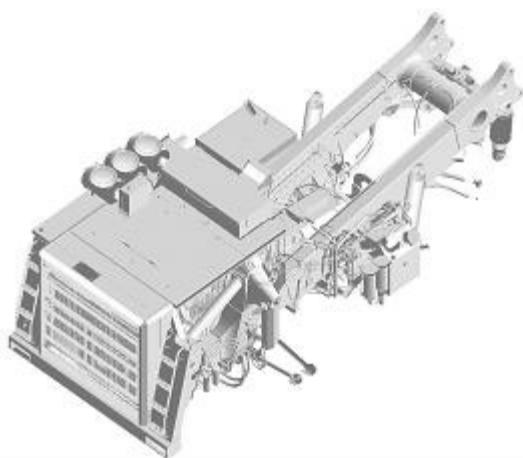
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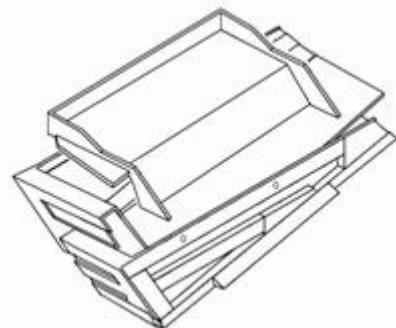
Field assembly inspection report

1. Outline of division (Only main components)

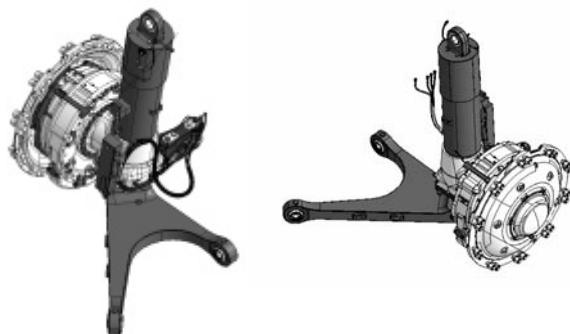
1. Bare machine



2. Dump body (Divided into 3)



3. Front axle assembly



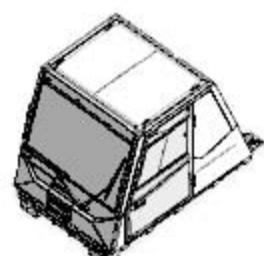
4. Rear axle and tire assembly



5. Front tire and wheel assembly



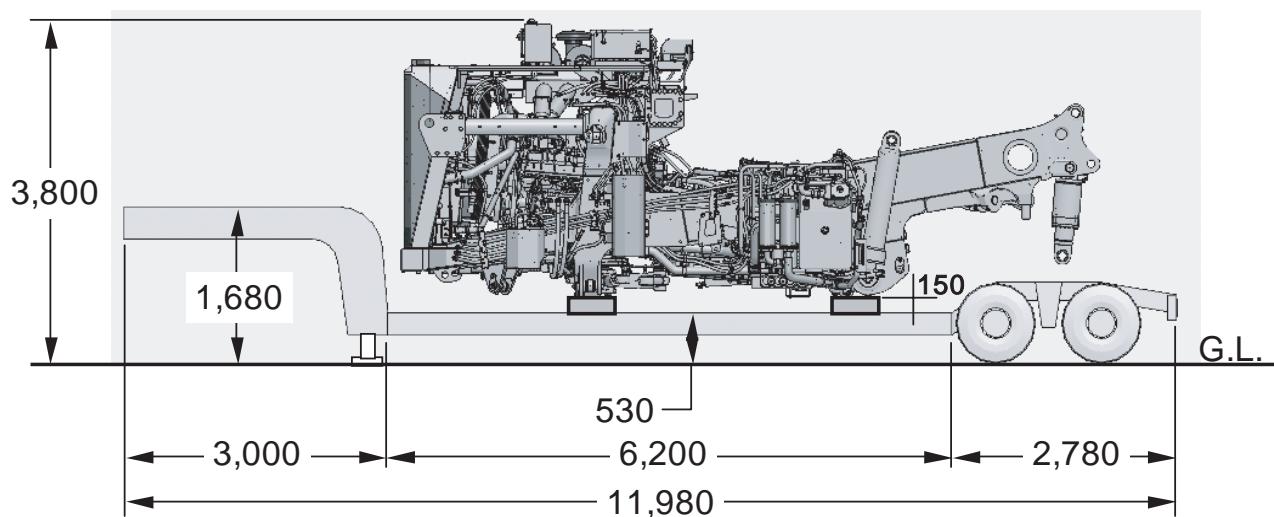
6. Cab assembly



2. Dimensions of main components

| No. | Unit name | Weight (kg) | Overall length (mm) | Overall width (mm) | Overall height (mm) |
|-----|---------------------------------------|-------------|---------------------|--------------------|---------------------|
| 1 | Bare machine | 21,600 | 7,930 | 3,190 | 3,120 |
| 2 | Dump body | 15,400 | 7,250 | 3,100 | 3,100 |
| 3 | Right and left front axle assembly | 2,400 | 2,200 | 1,700 | 2,100 |
| 4 | Rear axle and tire assembly | 17,000 | 4,390 | 2,700 | 2,700 |
| 5 | Front tire and wheel assembly (1 set) | 2,000 | 2,700 | 750 | 2,700 |
| 6 | Cab | 3,000 | 2,760 | 2,010 | 2,190 |

Drawing of bare machine on trailer



Reference

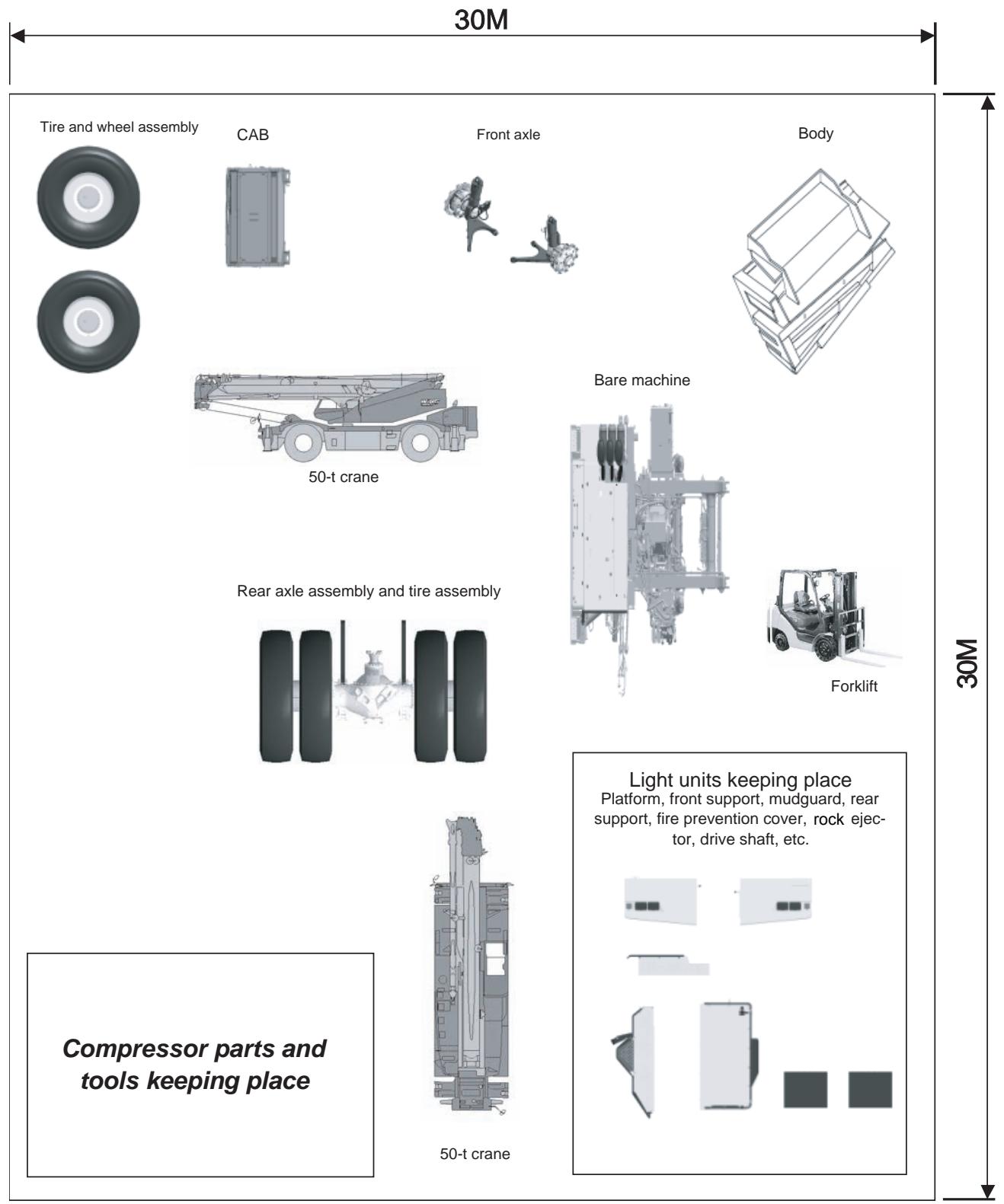
Specifications of completed truck

| Specifications | | Related items | | | |
|--------------------------|---------|-----------------------------|--|--------------------|-----------------------|
| | | Weight (kg) | Overall length (mm) | Overall width (mm) | Overall height (mm) |
| In self-propelled travel | HD785-7 | 64,600 (Mass of machine) | 10,290 (Front bumper – End of body) | 5,528 | 5,047 (When empty) |

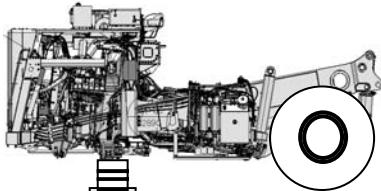
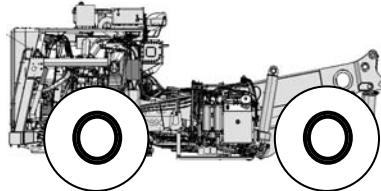
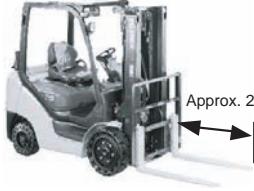
3. Layout of work space

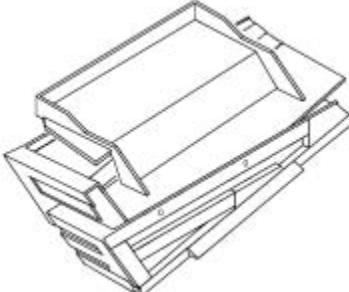
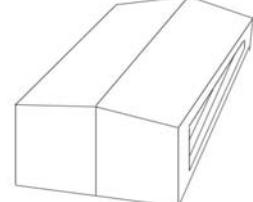
(The work space should be wider for the ease of work and must be at least 30 m square.)

Caution: The work space must be level and drained well.



4-1. Rough schedule of assembly and welding

| | Day | 1st day | | | | | | | | | | | | | |
|---------------------------------|---|---------|---|---|---|---|---|---|---|--|--|--|--|--|--|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | |
| Condition of chassis |   | | | | | | | | | | | | | | |
| Rough contents of assembly work | Positioning rear axle Positioning chassis | | | Installing front axle Installing tires | | | | | | | | | | | |
| Crane |    490 kN {50 ton} 245 kN {25 ton} 245 kN {25 ton} (98 kN {10 ton}) | | | | | | | | | | | | | | |
| Forklift |  Approx. 2 m | | | | | | | | | | | | | | |
| Number of workers | 2 | | | | | | | | | | | | | | |

| | Day | 1st day | | | | | | | | | | | | | |
|--------------------------|---|---------|---|--|---|---|---|---|---|--|--|--|--|--|--|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | |
| Condition of body |   | | | | | | | | | | | | | | |
| Contents of welding work | Unloading Removal of stands and fixing parts | | | Positioning and fixing split body Welding back side | | | | | | | | | | | |
| Crane |   245 kN {25 ton} 245 kN {25 ton} | | | | | | | | | | | | | | |
| Number of workers | 3 | | | | | | | | | | | | | | |

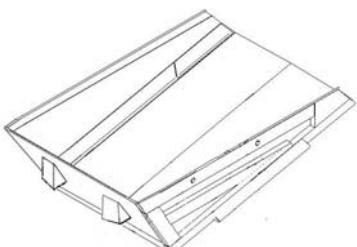
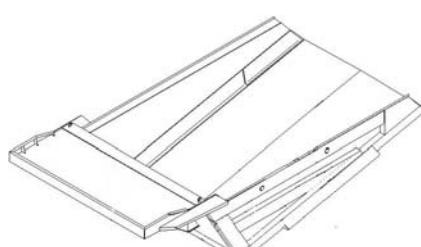
4-2. Rough schedule of assembly and welding

| Day Hour | 2nd day | | | | | | | |
|---------------------------------|--------------------------------------|-----------------|---|---|-------------------|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | | |
| Condition of chassis | | | | | | | | |
| Rough contents of assembly work | Installing support Installing cab | | | | Piping and wiring | | | |
| Crane | | | | | | | | |
| | | 490 kN {50 ton} | | | | | | |
| Forklift | | | | | | | | |
| Number of workers | 2 | | | | | | | |

| Day Hour | 2nd day | | | | | | | | |
|--------------------------|--|-----------------|---|---|--------------|---|---|---|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | | | | | | | |
| Condition of body | | | | | | | | | |
| Contents of welding work | Positioning and fixing split body Welding back side | | | | Turning over | | | | |
| Crane | | | | | | | | | |
| | | 245 kN {25 ton} | | | | | | | |
| Number of workers | 3 | | | | | | | | |

4-3. Rough schedule of assembly and welding

| Day | 3rd day | | | | | | | | | | | |
|---------------------------------|--|--|---|---|--|---|---|---|--|--|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Condition of chassis |   | | | | | | | | | | | |
| Rough contents of assembly work | Installing platform Painting | | | | Supply of oil and coolant Starting engine | | | | | | | |
| Crane | | | | | | | | | | | | |
| Forklift |  | | | | | | | | | | | |
| Number of workers | 2 |  | | | | | | | | | | |

| Day | 3rd day | | | | | | | | | | | |
|--------------------------|--|--|---|---|-------------------|---|---|---|--|--|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Condition of body |   | | | | | | | | | | | |
| Contents of welding work | Welding inside of body | | | | Welding protector | | | | | | | |
| Crane |  245 kN {25 ton} | | | | | | | | | | | |
| Number of workers | 3 |  | | | | | | | | | | |

4-4. Rough schedule of assembly and welding

| Day Hour | 4th day | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | | |
| Condition of chassis |   | | | | | | | |
| Rough contents of assembly work | Mounting body Adjusting shims Field welding | | | | | | | |
| Crane |    490 kN {50 ton} 245 kN {25 ton} 245 kN {25 ton} (98 kN {10 ton}) | | | | | | | |
| Number of workers | 2  | | | | | | | |

| Day Hour | 4th day | | | | | | | |
|--------------------------|---------|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | | |
| Condition of body | | | | | | | | |
| Contents of welding work | | | | | | | | |
| Crane | | | | | | | | |
| Number of workers | | | | | | | | |

4-5. Rough schedule of assembly and welding

| Day | 5th day | | | | | | | | | | | |
|---------------------------------|--|--|---|---|---------------------------------------|---|---|---|--|--|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Condition of chassis |   | | | | | | | | | | | |
| Rough contents of assembly work | Installing exterior parts Painting | | | | Maintenance, adjustment Inspection | | | | | | | |
| Crane |  245 kN {25 ton} (98 kN {10 ton}) | | | | | | | | | | | |
| Number of workers | 2 |  | | | | | | | | | | |

| Day | 4th day | | | | | | | |
|--------------------------|---------|---|---|---|---|---|---|---|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Condition of body | | | | | | | | |
| Contents of welding work | | | | | | | | |
| Crane | | | | | | | | |
| Number of workers | | | | | | | | |

5-1 List of jigs, tools, and consumables for field assembling (1/2)

| No. | Item | Specification | Q'ty | Remarks |
|-----|---|------------------------------------|------|---|
| 1 | Truck crane | 25 tons | 2 | See Field Assembling Procedures |
| 2 | Truck crane | 50 tons | 2 | See Field Assembling Procedures |
| 3 | Forklift | 4 tons | 1 | See Field Assembling Procedures |
| 4 | Gas cutting machine | | 1 | |
| 5 | Torch | 1220N2 | 1 | |
| 6 | Acetylene gas | | 1 | For gas cutting machine |
| 7 | Oxygen gas | 14.7 MPa {150kg/cm ² } | 1 | For gas cutting machine |
| 8 | Grinder (round) | FG50L-1 | 1 | |
| 9 | Grindstone | SCW50 × 19 • 10 | 1 | |
| 10 | Grinder | LISG-7S | 1 | For finishing |
| 11 | Grindstone | 180ø × 6 × 22 | 3 | |
| 12 | Dia. bar | CB7C105 | 1 | |
| 13 | Dia. bar blade | 6GH | 1 | |
| 14 | Semi-automatic welding machine | 500A | 3 | |
| 15 | Hand shield | GP-1S | 3 | |
| 16 | Welding wire for semi-automatic welding machine | 1.2 mm | 80kg | |
| 17 | Chipper scaling hammer | FCM-20F | 2 | |
| 18 | Port power | 300 mm for 10 tons | 1 | For adjustment of dump body deviation |
| 19 | Hydraulic jack | 10 tons | 1 | For dump body |
| 20 | Hydraulic jack | 5 tons | 1 | For dump body |
| 21 | Shaft | WJ-H46-74001-023 | 1 | |
| 22 | Refractory cloth | 1 m × 10 m | 1 | Protection when field welding |
| 23 | Spacer | ATH-465-027 | 3 | Use when welding exhaust flange in field |
| 24 | Nitrogen gas injector | 7926-10-1000 | 1 | |
| 25 | Nitrogen gas bottle | 14.7 MPa {150 kg/cm ² } | 1 | Injection into suspension |
| 26 | Tire inflation gauge | No. 2252 | 1 | |
| 27 | Grease pump gun | For 20kg can | 1 | |
| 28 | Grease | GL-2 | 5 kg | |
| 29 | Footstool | 3-step | 1 | |
| 30 | Footstool | 6-step | 1 | |
| 31 | Blue sheet | 5 m × 10 m | 5 | Protection for equipment |
| 32 | Wood block | 300 mm square, 1 m long | 12 | * Quantity depends on using condition. |
| 33 | Oil jack | 5 ℥ | 1 | For oil injection |
| 34 | Oil | See Field Assembling Procedures. | — | See Field Assembling Procedures. |
| 35 | Oil sump, washing can | | 2 | |
| 36 | Drained oil can | Empty drum can | 1 | |
| 37 | Cloth | | 5kg | |
| 38 | Diesel fuel | See Field Assembling Procedures. | | For refilling fuel |
| 39 | Antifreeze | | 5 ℥ | For adding in subtank (to change mixing ratio depending on local weather) |
| 40 | Air hose | 6ø × 1m | 1 | For air bleeding |

5-2 List of jigs, tools, and consumables for field assembling (2/2)

| No. | Item | Specification | Q'ty | Remarks |
|-----|--|--|------|---|
| 41 | Sanding machine for scaling-off coating | 914B | 1 | |
| 42 | Sandpaper | #80 | 100 | |
| 43 | Sandpaper | #180 | 10 | |
| 44 | Cup gun set | W87-20R2S | 1 | Use for coating |
| 45 | Brush | | 1 | Use to repair coating. |
| 46 | Air compressor | Not less than 3.5 m ³ or 7 kg/cm ² | 1 | |
| 47 | Air hose | With mouthpiece of ø12 | 5 | For impact grinder |
| 48 | Impact wrench | UW-13SK | 2 | |
| 49 | Impact wrench | KW-3800P | 1 | |
| 50 | Impact wrench | UW-9SK | 2 | |
| 51 | Extension for impact wrench 38S | 150 mm long | 1 | |
| 52 | Socket | 1 inch × 46 mm | 1 | For tightening tire |
| 53 | Socket | 1 inch × 30 mm | 1 | For tightening support |
| 54 | Torque-wrench | 2800QL | 1 | For drive shaft and body pin |
| 55 | Torque-wrench | 21000QLE | 1 | For tightening tire |
| 56 | Convex | 5m | 1 | |
| 57 | Locktite | LT-2 | 1 | |
| 58 | Vinyl tape | | 1 | Use to bundle harnesses |
| 59 | Standard tool (ISO specification) | 700SX | 2 | |
| 60 | Bar | 1m | 1 | |
| 61 | Pointed steel bar | | 1 | For hole alignment |
| 62 | Large hammer | 10 lb | 1 | |
| 63 | Axle pin installation guide | ATH-785-078 | 2 | |
| 64 | Shackle | BD10 for 500 kg | 4 | |
| 65 | Shackle | BC40 for 10 tons | 4 | For mounting body |
| 66 | Chain | ATH-465-042 | 1 | Multi purpose |
| 67 | Nylon shoe ring | 100 mm wide × 5 m | 2 | For mounting fuel tank |
| 68 | Nylon shoe ring | 60 mm wide × 3 m | 2 | For mounting support and small articles |
| 69 | Nylon shoe ring | 100 mm wide × 12 m | 1 | For mounting front tires |
| 70 | Nylon shoe ring | 30 mm wide × 2 m | 3 | For installing front axle |
| 71 | Nylon shoe ring | 100 mm wide × 3 m | 1 | For installing front axle |
| 72 | Pin | ø60 × 250 mm | 2 | For slinging chassis, rear side (Safety pin can substitute) |
| 73 | Jig for slinging body | ATH-785-006 | 4 | For mounting body |
| 74 | Lever block | 3/4 tons, LB008 | 3 | For installing front axle |
| 75 | Lever block | 2 tons, LB020 | 1 | For installing front axle |
| 76 | Wire | 7m 28ø | 2 | For slinging chassis |
| 77 | Wire | 4m 28ø | 2 | For mounting body |
| 78 | Wire | 5m 28ø | 2 | For installing body |
| | The following items may be substituted for No. 76 to 78. | | | |
| | ATH-465-039 | | 1 | For mounting body |
| | ATH-465-040 | | 2 | For slinging chassis |
| | ATH-465-041 | | 1 | For slinging separated body |

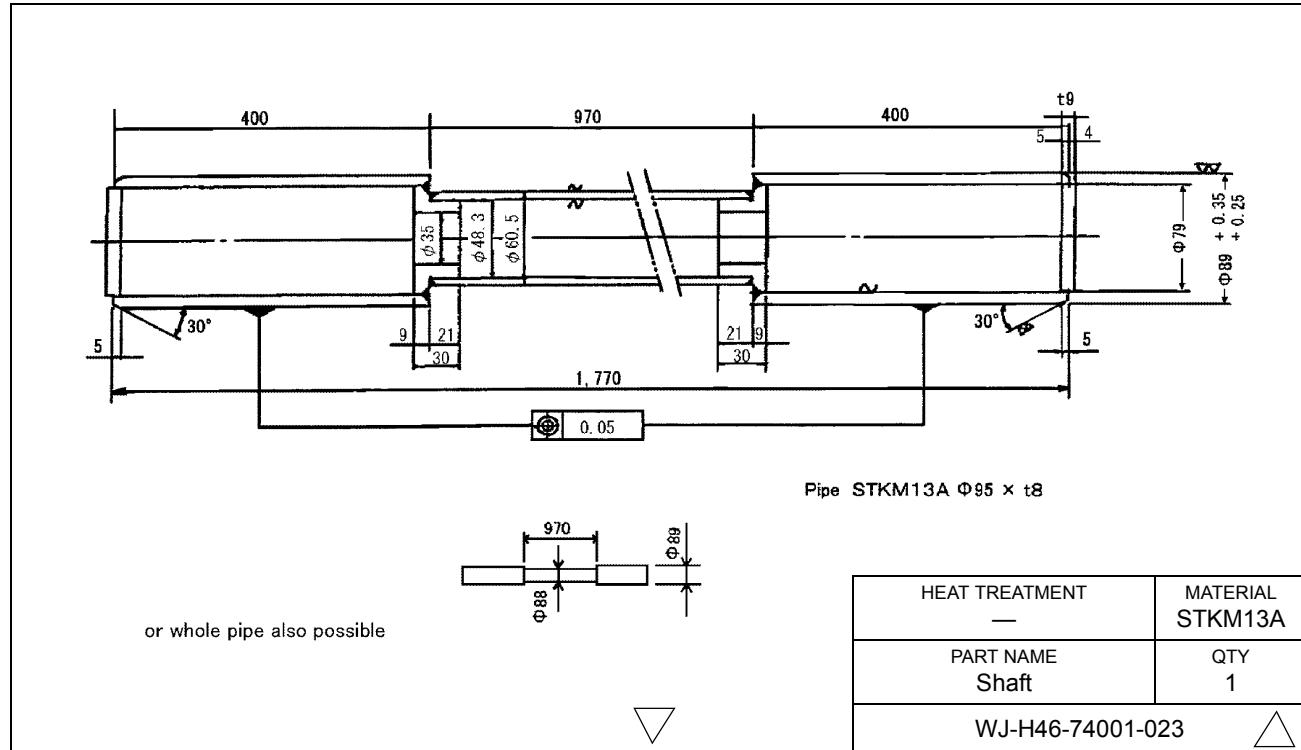
List of touch-up coating on body for overseas specifications

| No. | Part Name | Unit | Q'ty |
|-----|---------------------------------------|-----------|------|
| 1 | Retane GP primer | 4kg | 1 |
| 2 | Retane GO hardener | 0.8kg | 1 |
| 3 | Retane GP thinner | 4ℓ | 1 |
| 4 | AX Mightyacq G2KB type natural yellow | 16kg | 1 |
| 5 | NAX Mightyacq G2KB type hardener | 15kg | 1 |
| 6 | X Mightyacq G2 500 standard thinner | 17ℓ | 1 |
| 7 | Acryliquid cloud gray | Spray can | 1 |
| 8 | Heat-resistance silver | Spray can | 1 |

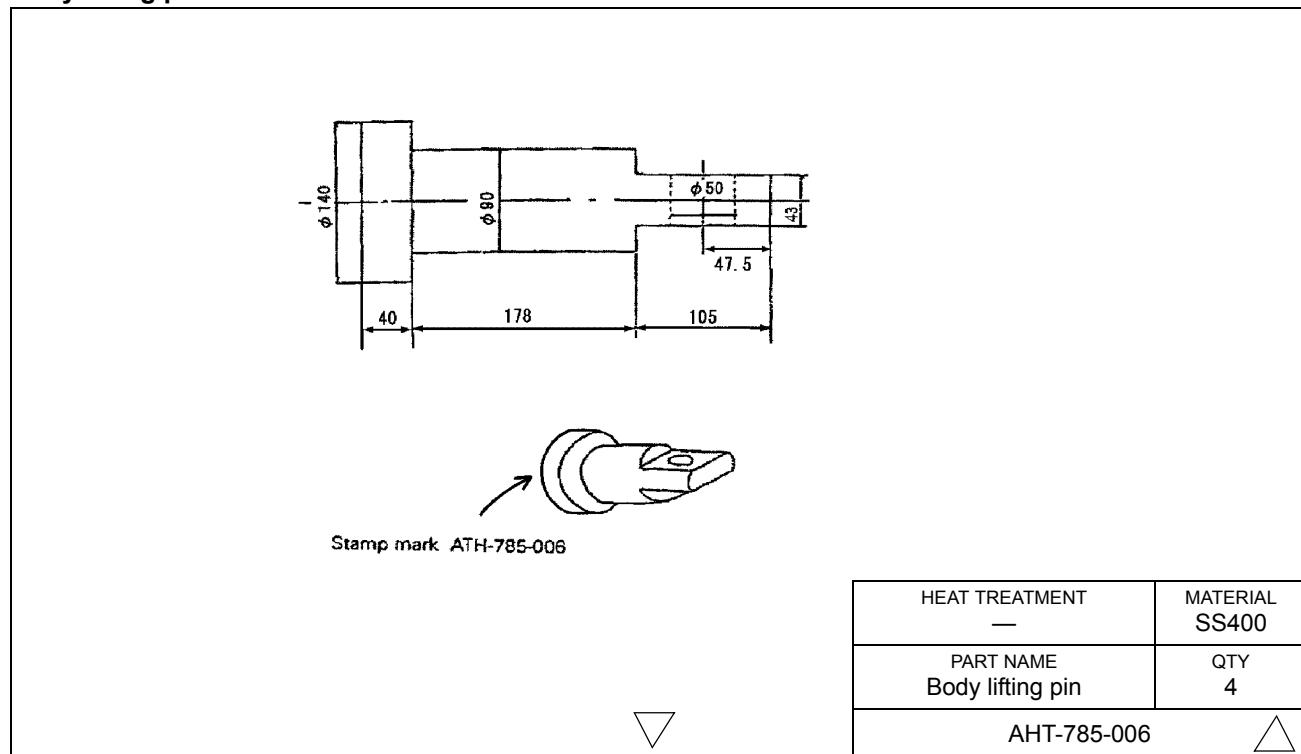
5-3. Tools and consumables

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

Body alignment shaft



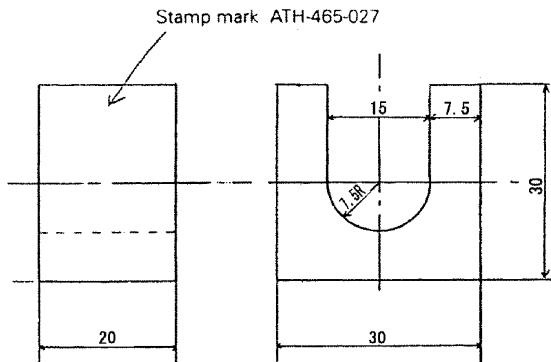
Body lifting pin



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

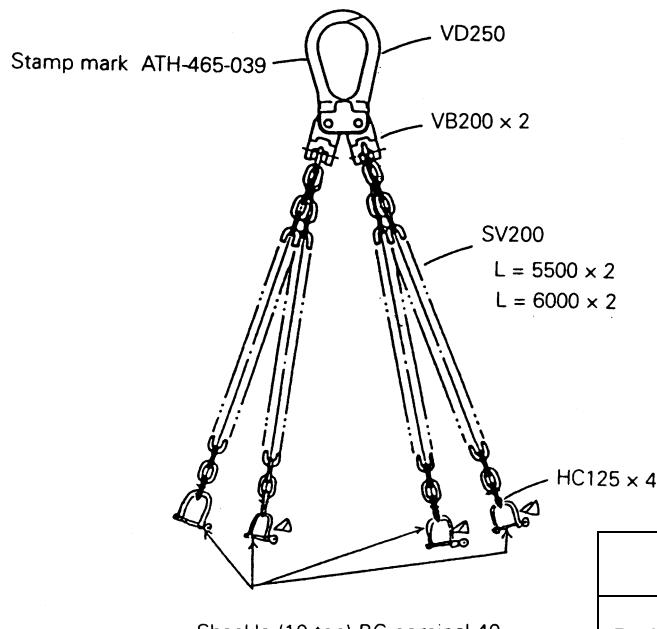


| | |
|------------------------|------------------|
| HEAT TREATMENT PU-4 | MATERIAL SS40 |
| PART NAME SPACER | QTY 3 |

ATH-465-027



Body assembly lifting tool

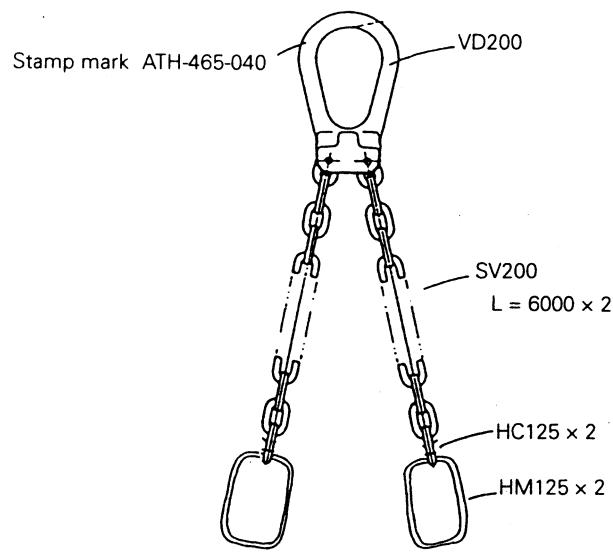


| | |
|---|---------------|
| HEAT TREATMENT — | MATERIAL — |
| PART NAME Body assembly lifting tool | QTY 1 |

ATH-465-039

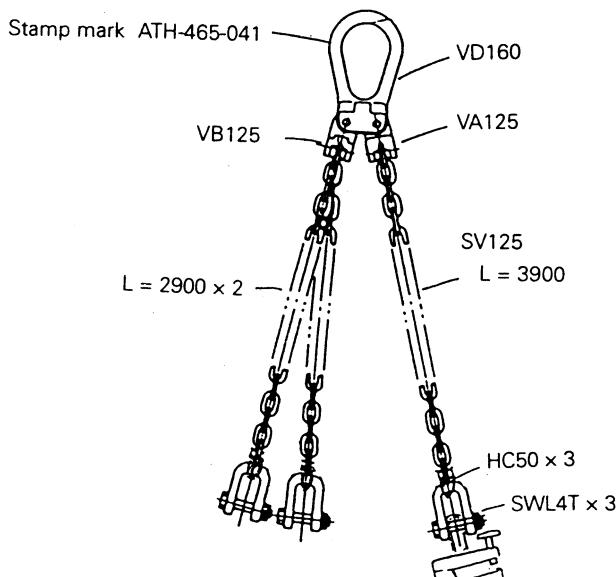


Chassis lifting tool



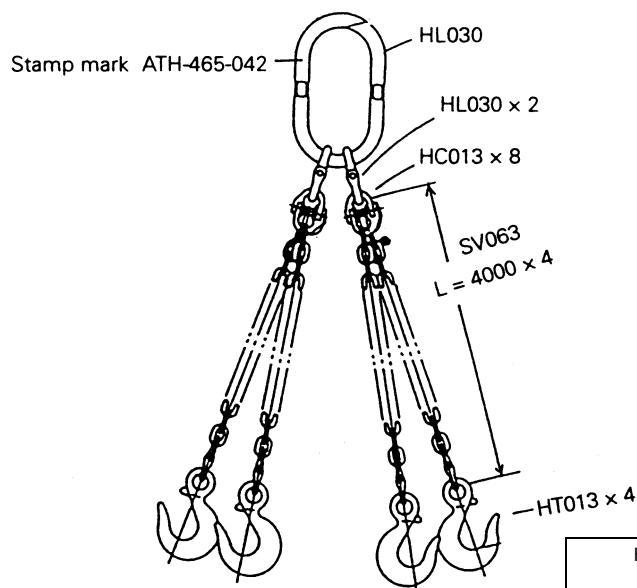
| HEAT TREATMENT | MATERIAL |
|-----------------------------------|----------|
| — | — |
| PART NAME Chassis lifting tool | QTY 2 |
| ATH-465-040 | |

Dump body lifting tool



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

Universal lifting tool

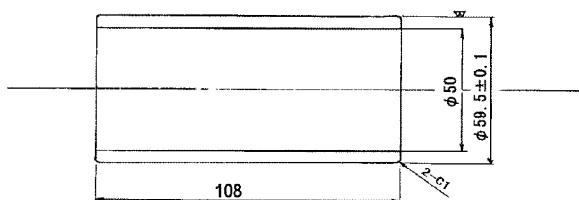


| HEAT TREATMENT | MATERIAL |
|-------------------------------------|----------|
| — | — |
| PART NAME Universal lifting tool | QTY 1 |

ATH-465-042



Front axle installation guide



| HEAT TREATMENT | MATERIAL |
|--|----------|
| — | — |
| PART NAME Front axle installation guide | QTY 2 |

ATH-785-078



| | |
|-------------------------------------|---------------------------------|
| Assembly process No. 0010 | Oil, grease, and coolant |
|-------------------------------------|---------------------------------|

Method of using fuel, lubricant, and coolant according to ambient temperature

■ Fuel, oil

Use the correct type for the ambient temperature as shown in the table below.

★ Specified capacity: Total amount of oil including oil for components and oil in piping

Refill capacity: Amount of oil needed to refill system during normal inspection and maintenance.

★ When starting the engine in an ambient temperature of less than 0°C, always use EOS0W30, or EOS5W40, even though the temperature goes up to 10°C during the daytime.

■ Coolant

Komatsu genuine super coolant (AF-NAC) is added to the cooling water, so there is no need to change it for temperatures down to -10°C.

If the temperature goes below -10°C, adjust the density. For details, see CLEANING INSIDE OF COOLING SYSTEM in the WHEN REQUIRED Section of the Operation and Maintenance Manual.

| Reservoir | Fluid Type | Ambient Temperature, degrees Celsius | | | | | | | | | | Recommended Komatsu Fluids | |
|---------------------------------------|---------------------------------|--------------------------------------|----|----|----|----|----|----|-----|-------|------|--|--|
| | | -22 | -4 | 14 | 32 | 50 | 68 | 86 | 104 | 122°F | 50°C | | |
| Engine oil pan | Engine oil | (Note.1) | | | | | | | | | | Komatsu EOS0W30 Komatsu EOS5W40 Komatsu EO10W30DH Komatsu EO15W40DH Komatsu EO30DH | |
| | | (Note.1) | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Transmission Case Brake sub tank | Power train oil (Note.2) | | | | | | | | | | | TO10 | |
| | | | | | | | | | | | | TO30 | |
| Steering, hoist oil tank | Power train oil | | | | | | | | | | | TO10 | |
| | Hydraulic oil | | | | | | | | | | | HO46-HM | |
| Front suspension Rear suspension | Hydraulic oil | | | | | | | | | | | HO-MVK | |
| | | | | | | | | | | | | | |
| Differential case Final drive case | Power train oil | | | | | | | | | | | TO30 | |
| | | | | | | | | | | | | TO50 | |
| Grease fitting | Hyper grease (Note.3) | | | | | | | | | | | G2-T, G2-TE | |
| | Lithium EP grease | | | | | | | | | | | G2-LI | |
| Cooling system | Supercoolant AF-NAC (Note.4) | | | | | | | | | | | AF-NAC | |
| Fuel tank | Diesel fuel | | | | | | | | | | | ASTM Grade No.1-D S15 ASTM Grade No.1-D S500 | |
| | | | | | | | | | | | | ASTM Grade No.2-D S15 ASTM Grade No.2-D S500 | |

★ For details of the notes (e.g., Note. 1, Note.2 ...) in the table, see the Operation and Maintenance Manual.

| | | | | |
|----------------------|---|--|--|--|
| Assembly process No. | Levels of oil, grease, and coolant | | | |
| 0020 | | | | |

| Lubrication point | Type of oil | Specified capacity (ℓ) | Refill capacity (ℓ) | Volume of refilled oil (ℓ) |
|--|----------------|-----------------------------------|---------------------------------|----------------------------|
| Engine oil pan | Power line oil | 134 | 129 | — |
| Transmission case (Including brake sub tank) | | 404 | 241 | 200 |
| Steering and hoist oil tank | | 270 | 175 | 150 |
| Front suspension | | 29.8 each on right and left sides | — | — |
| Rear suspension | | 16.5 each on right and left sides | — | — |
| Differential case | | 137 | 137 | — |
| Final drive case | | 64 each on right and left sides | 64 each on right and left sides | — |
| Fuel tank | Diesel fuel | 1,308 | — | — |
| Cooling system | Coolant | 283 | 279 | — |

Caution) Before starting the engine, be sure to check each oil/coolant level.

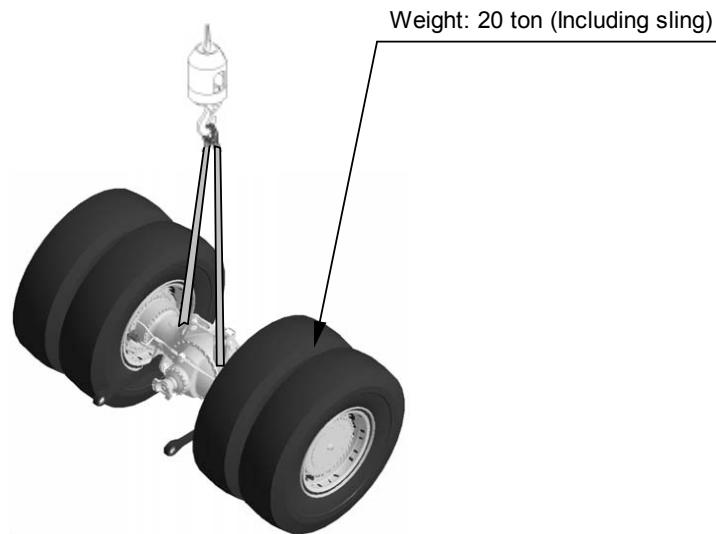
Do not steer the machine largely before adjusting the suspension
(If it is steered largely, the piping may be damaged).

| Precautions | Necessary tools | | Necessary equipment | |
|---------------|-----------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Other remarks | | | | |

| | |
|-------------------------------------|---------------------------------------|
| Assembly process No. 0030 | Positioning rear axle assembly |
|-------------------------------------|---------------------------------------|

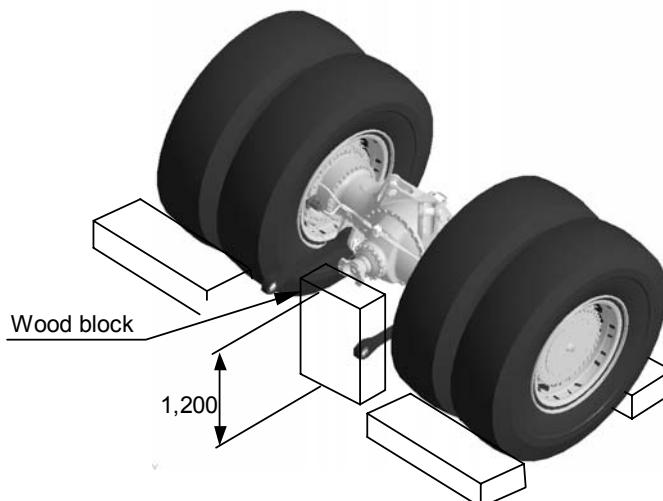
Slinging of rear axle

1. Sling the rear axle and tire assembly with a 50 ton crane.
Slinging position: Rod mounting portion on differential



Positioning of rear axle

1. Position the rear axle. See the following figure.
(Secure the ground clearance under the coupling section so that the rear axle assembly will be horizontal.)
When positioning the rear axle on the ground, prevent slanting of the machine caused by subsidence of the ground.
2. Lock the wheels with chocks to prevent the rear axle from moving.

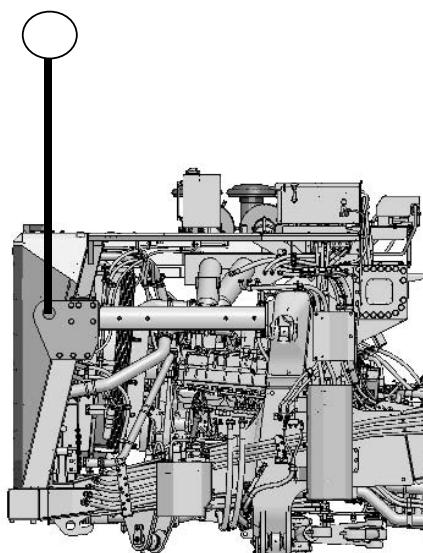


| Precautions | Necessary tools | | Necessary equipment | |
|---|------------------------------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| Lock the wheels with chocks to prevent the rear axle from moving. | Nylon sling (250 mm wide × 5 m) | 1 | Crane (50 ton) | 1 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Other remarks | | | | |

Assembly process No.

0040**Slinging and moving of bare machine****Sling of bare machine**

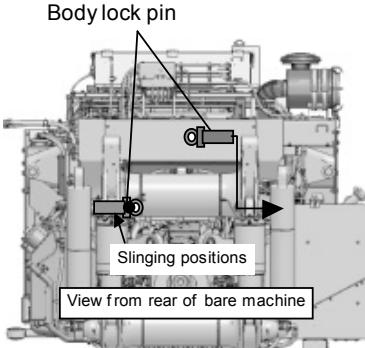
Front
12.5 ton (Including sling)
Crane: 50 ton



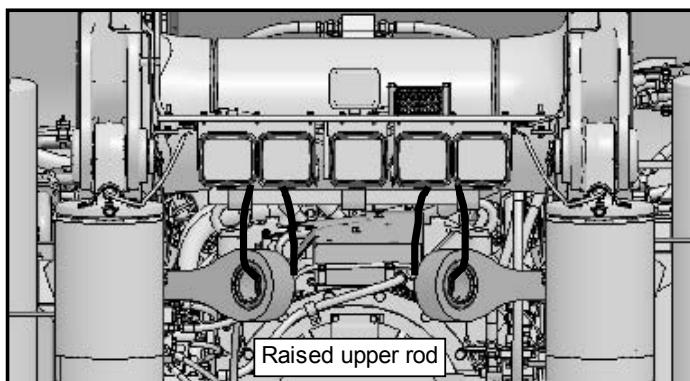
Body lock pin

Slinging positions
View from rear of bare machine

Rear
10.8 ton (Including sling)
Crane: 25 ton



1. Apply cloths etc. to the body so that the body will not be damaged when it is slung.
2. Sling the bare machine with 2 cranes (Front side: 50 ton, Rear side: 25 ton).
 - Sling : Chain sling (ATH-465-040) or ø28 wire
 - Slinging position on front side : Frame slinging bracket
 - Slinging position on rear side : Body lock pin installing position
 * Insert the body lock pin from inside of the machine (See the above figure).
3. Raise the differential upper part installing rod (upper rod).

**Moving of bare machine**

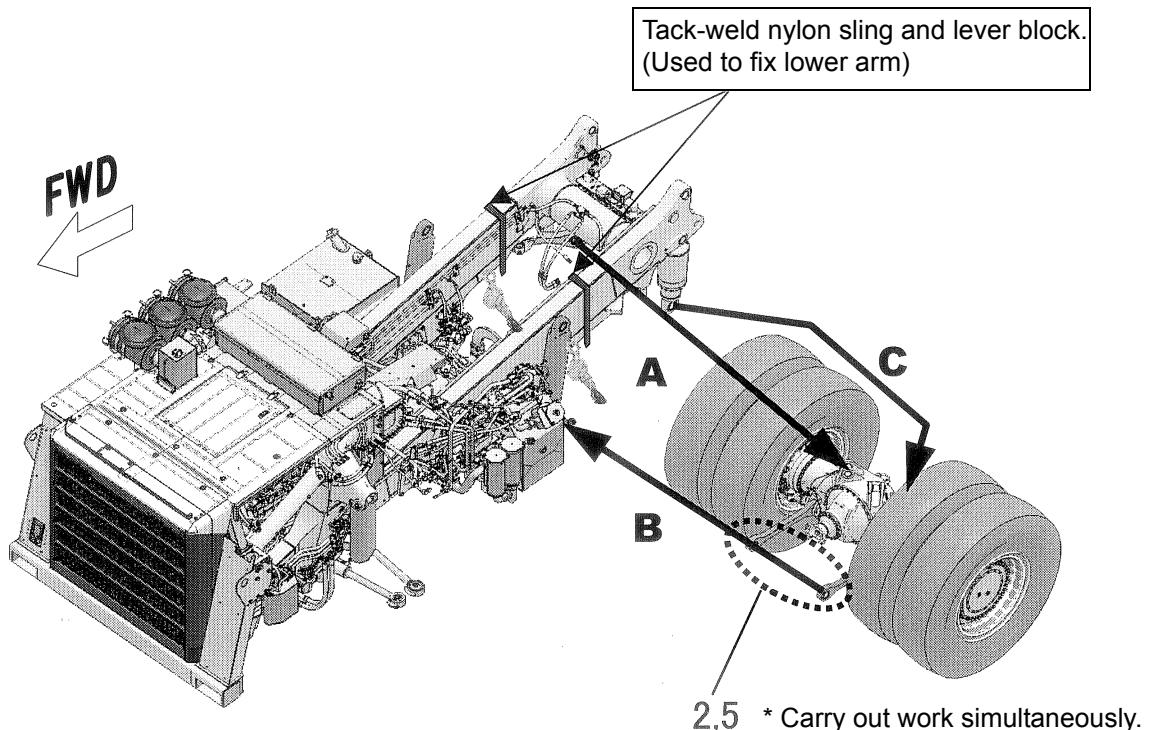
1. Move the bare machine to above the rear axle.

| Precautions | Necessary tools | | Necessary equipment | |
|---|-----------------|------|-------------------------|--------|
| | Name | Q'ty | Name | Q'ty |
| Insert the body lock pin for slinging the rear side from inside of the machine. (If it is inserted from outside, it cannot be removed after the tire is installed.) | | | Cranes (50 ton, 25 ton) | 1 each |
| | | | Sling (ATH-465-040) | 2 |
| | | | Pin (60 ø x 250 mm) | 2 |
| | | | Wire (7 m, 28 ø) | 2 |
| | | | | |
| | | | | |
| | Other remarks | | | |

| | |
|----------------------|-------------|
| Assembly process No. | 0050 |
| | |

Connection of rod and rear suspension

Connection of rod and rear suspension



1. Connect A, B and C in order.

Remove the pins installed temporarily and the spacers and bolts to be used in step 3.

| | Part No. | Part name | Q'ty | Condition of parts |
|---|------------------|-----------|------|--------------------------------------|
| A | (1) 561-52-81210 | Pin | 2 | Temporarily installed to rear axle A |
| | (2) 01010-81430 | Bolt | 2 | Temporarily installed to rear axle A |
| | (3) 569-40-61710 | Washer | 2 | Temporarily installed to rear axle A |
| B | (4) 561-52-81210 | Pin | 2 | Temporarily installed to frame B |
| | (5) 01010-81430 | Bolt | 2 | Temporarily installed to frame B |
| | (6) 569-40-61710 | Washer | 2 | Temporarily installed to frame B |
| C | (7) 561-52-81210 | Pin | 2 | Temporarily installed to rear axle C |
| | (8) 01010-81425 | Bolt | 2 | Temporarily installed to rear axle C |
| | (9) 569-40-61710 | Washer | 2 | Temporarily installed to rear axle C |

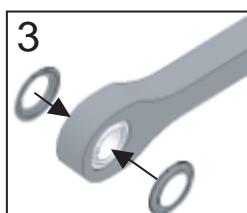
2. Adjust the pin holes and remove the rod from the pin holes temporarily.

3. Put the spacer in the rubber part of the spherical bushing. (See the figure at right.)

4. Adjust the pin holes and insert the pin.

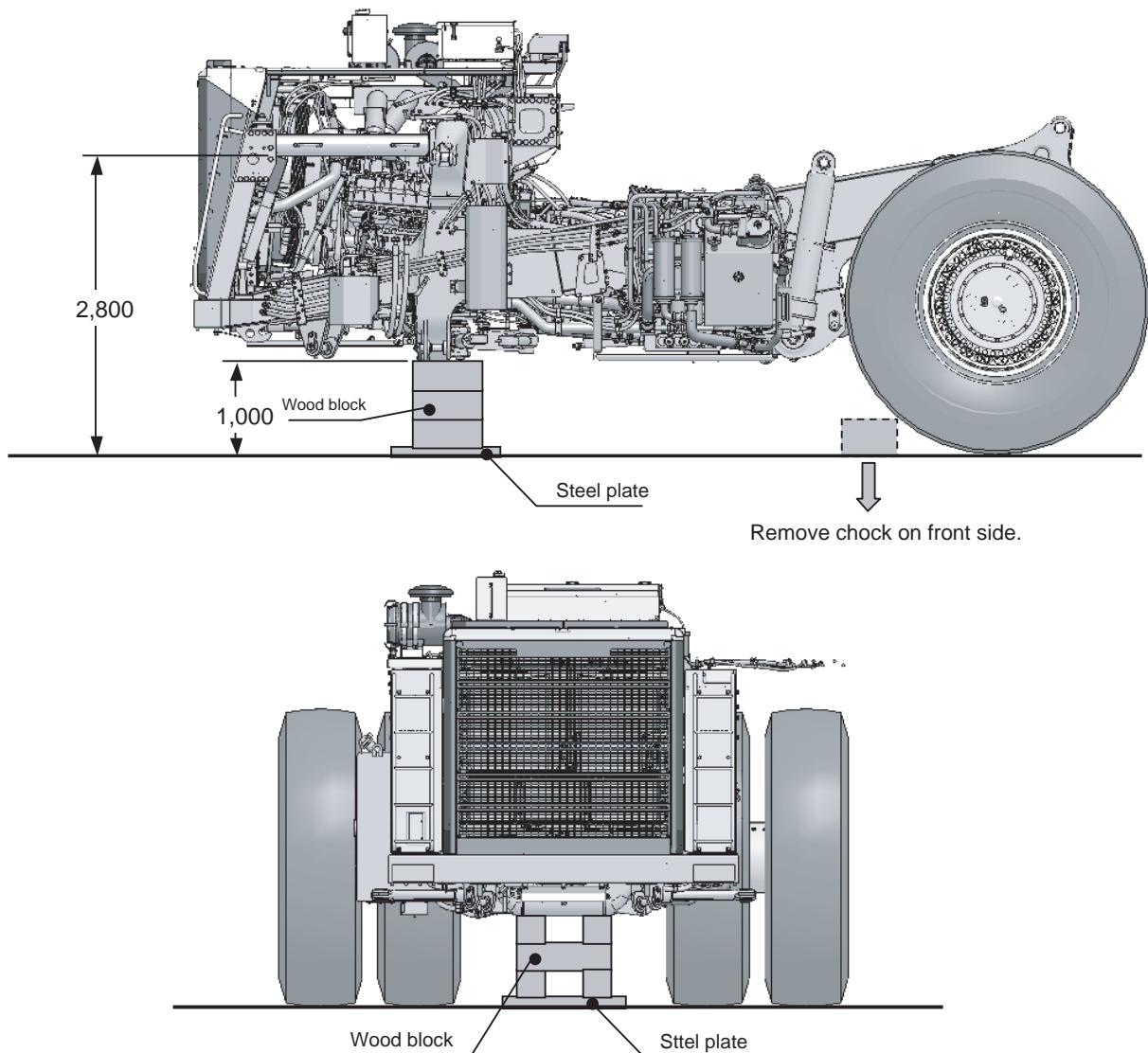
5. Install the lock bolt and washer.

6. Supply grease.



| Precautions | Necessary tools | | Necessary equipment | |
|---|-----------------------------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| 1. When adjusting the holes, take care not to catch your finger. | Nylon sling (60 mm wide × 3 m) | 2 | | |
| 2. If the spacer is installed forcibly, it is deformed. Take care. | Lever block (2 ton, LB020) | 2 | | |
| 3. When hitting the pin, take care not to crash the grease fitting. | | | | |
| 4. Clean the pins installed temporarily and parts A, B and C. | | | | |
| | Other remarks | | | |

Assembly process No.

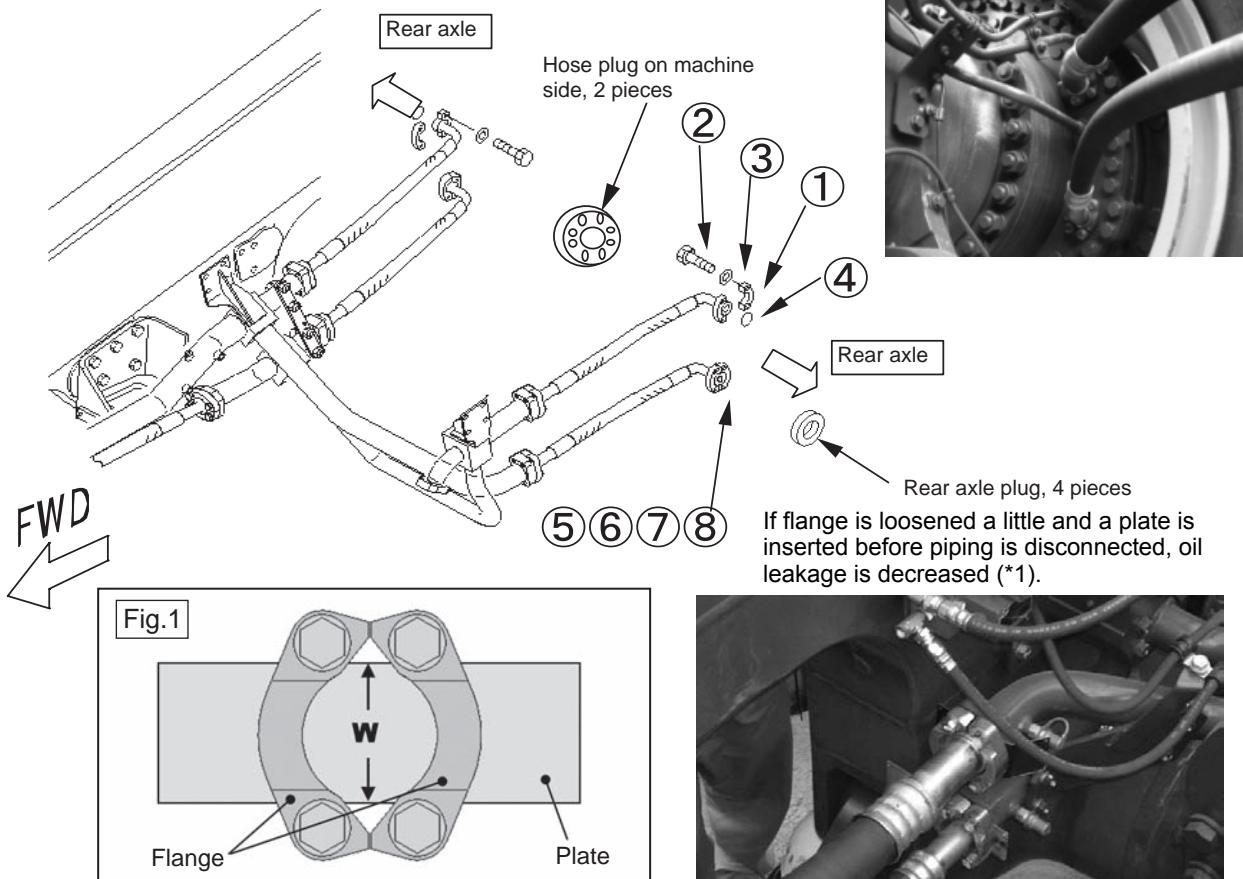
0060**Positioning bare machine**

1. Set the wooden blocks 1 m high under the vertical member as shown above.
(If wooden blocks are set under the bumper, the machine is more stabilized.)
When positioning the bare machine on the ground, place a steel plate under the wood blocks so that the bare machine will not sink and lean.
2. Remove the sling.
3. Discard the bolts and washers used to install the sling since they are not used any more.

| Precautions | Necessary tools | | Necessary equipment | |
|--|------------------------------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| Take care that the chassis will not move. | Wood block (300 mm square, 1 m) | 6 | | |
| Set the bare machine to proper height so that you can install the front tires. | Steel plate | 1 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Other remarks | | | | |

| | |
|----------------------|---|
| Assembly process No. | Connection of rear axle cooling hose |
| 0070 | |

Connection of rear axle cooling hose



1. Remove all of the hose plugs on the machine side (2 pieces) and rear axle plugs (4 pieces).
2. Connect the hoses by using the following parts.

Note) Do not damage the O-ring.

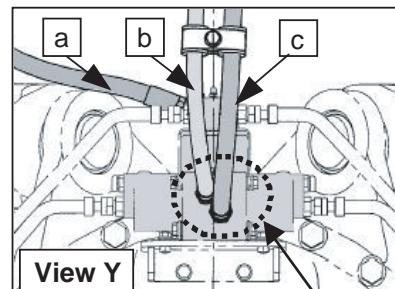
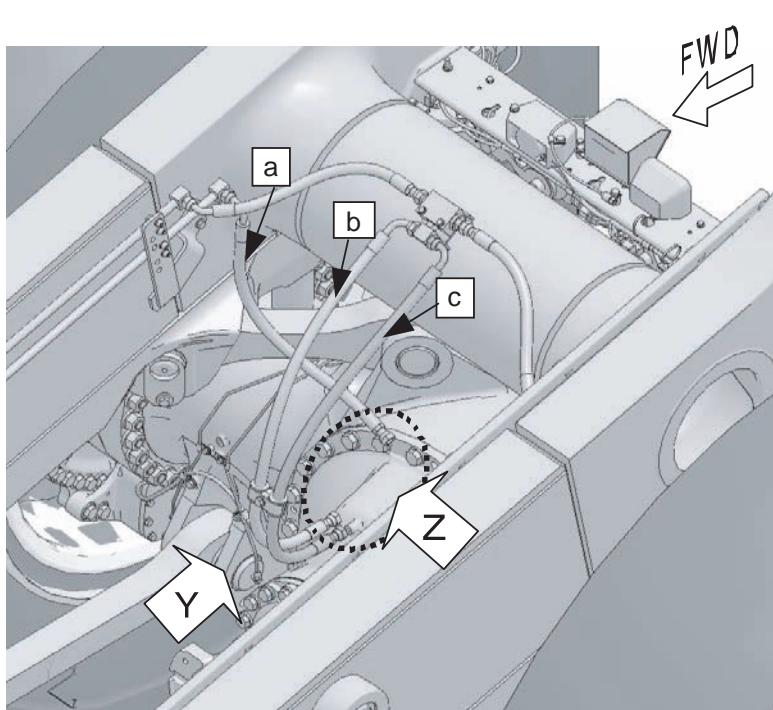
| | Part No. | Part name | Q'ty | Condition of parts |
|-----|-------------|-----------|------|--------------------|
| (1) | 07371-21465 | Flange | 4 | Installed parts |
| (2) | 07372-21245 | Bolt | 8 | Installed parts |
| (3) | 01643-51232 | Washer | 8 | Installed parts |
| (4) | 07000-F3048 | O-ring | 2 | Installed parts |
| (5) | 07371-32076 | Flange | 4 | Installed parts |
| (6) | 07372-21240 | Bolt | 8 | Installed parts |
| (7) | 01643-51232 | Washer | 8 | Installed parts |
| (8) | 07000-F2060 | O-ring | 2 | Installed parts |

3. Clean the parts stained with oil.

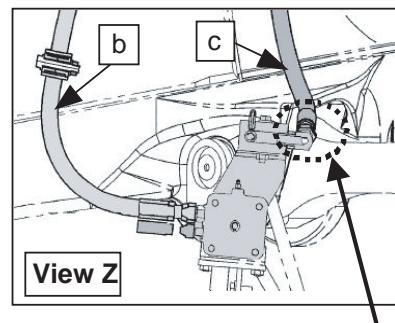
| Precautions | Necessary tools | | Necessary equipment | |
|---|-------------------------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| When connecting each hose, check that no dirt is in the hose and the O-ring is fitted securely. | Impact wrench (For M12 mm) | 1 | | |
| When removing each plug, set an oil drain case to receive the leaking oil. | Socket (19 mm) | 1 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| *1. Dimension of plate (See "Fig 1") Large pipe: W = 63 mm Small pipe: W = 55 mm | | | | |
| Other remarks | | | | |

Connection of rear axle brake hose

Connection of rear axle brake hose



Connection: From block to front side of valve
(Reuse O-ring)



Connection: From tube to rear side of valve
(Reuse O-ring)

1. Remove the plugs from each part.
2. Connect the 3 hoses.
3. Clean the parts stained with oil.

Caution: Install the hoses horizontally.

| Precautions | Necessary tools | | Necessary equipment | |
|---|-----------------|------|---------------------|------|
| | Name | Q'ty | Name | Q'ty |
| 1. Take care extremely not to mistake the connecting positions. | | | | |
| 2. When removing each plug, do not lose the O-ring. | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Other remarks | | | | |

Sample of manual. Download All 221 pages at: www.EasyEngineering.net

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