

Field Assembly Manual

HM400-2

ARTICULATED DUMP TRUCK

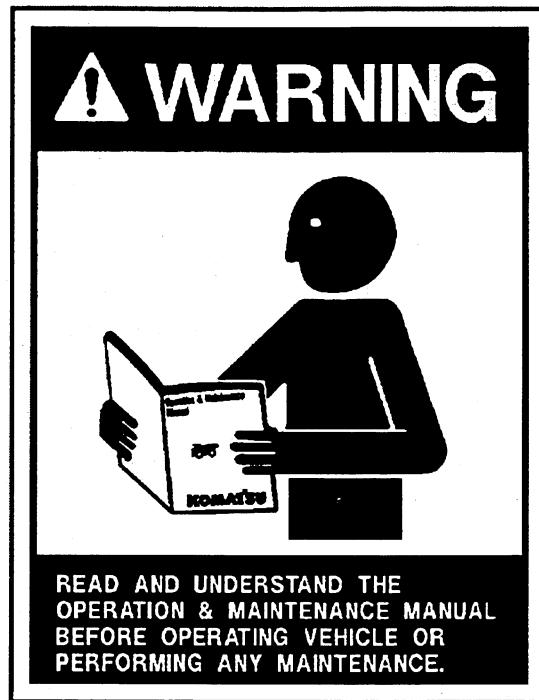
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! WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who come in contact with it.

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

CALIFORNIA

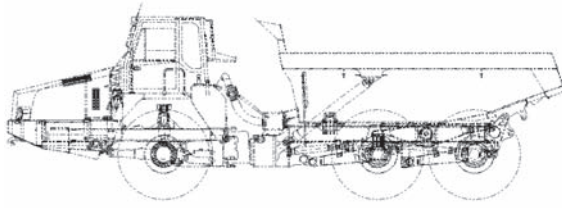
Proposition 65 Warning

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects and reproductive harm. Wash hands after handling.

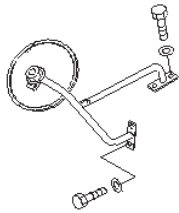
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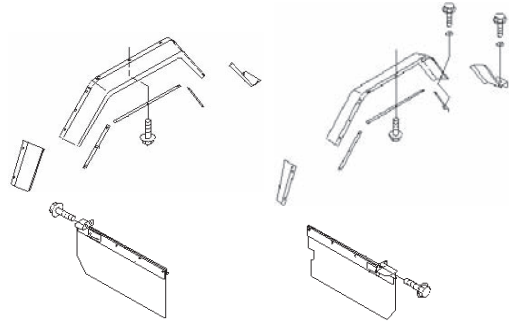
1 Drawings of removed units



1. Bare machine



2. Engine hood mirror



3. Fender related parts

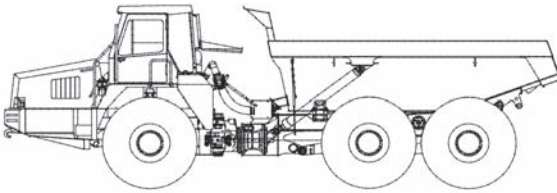


Specifications of HM400-2 completed truck

Specifications	Related items			
	Weight (kg)	Overall length (mm)	Overall width (mm)	Overall height (mm)
Self-propelled travel	32,460 (Weight of machine)	11,310	3,450	3,720 (When empty)

2 Dimensions of removed units

No.	Unit name	Weight (kg)	Overall length (mm)	Overall width (mm)	Overall height (mm)
1	Bare machine	–	11,310	3,450	3,720
2	Engine hood mirror	–	–	–	–
3	Fender related parts	–	–	–	–

3 Assembly procedure, necessary equipments, and schedule

Day Hour	1st day								
	1	2	3	4	5	6	7	8	
Assembly unit	 <p>(1) Positioning bare machine (2) Installing L.H. and R.H. over-fenders (3) Installing L.H. and R.H. mudguards (4) Installing engine hood mirror (5) Adjusting N2 gas of front and rear suspensions (6) Installation of tail gate (for tail gate specification)</p>								
Assembly procedure No.	No.0100 – 0500 (T0100 – T0600) [☆]								
Number of workers	2	→							
Suspension gas pouring tool	Adjusting suspension gas				→				
[☆] Crane (Hydraulic, with operator)	 1 unit					→			
[☆] Forklift	 1 unit	→							
[☆] Air compressor and generator	3.7 m ³ /min (KOMATSU EC35Z5 or equivalent)	→							
Remarks	Meeting before work Unloading			Starting assembly Completion of assembly					

4 Necessary tools and equipments

(1) Necessary tools

No.	Tool name	Specifications	Q'ty	Remarks
1	Ring wrench	17mm, 19 mm, 24 mm, 30 mm, 36 mm	Each 1	For assembling parts
2	Impact wrench	GTP-800P/GTP-60VP or equivalent	Each 1	For assembling parts
3	Socket	17mm, 19 mm, 24 mm, 30 mm, 36 mm	Each 1	For assembling parts
4	Suspension gas pouring tool	(7926-10-1000)	1	For adjusting suspension gas

(2) Necessary equipments

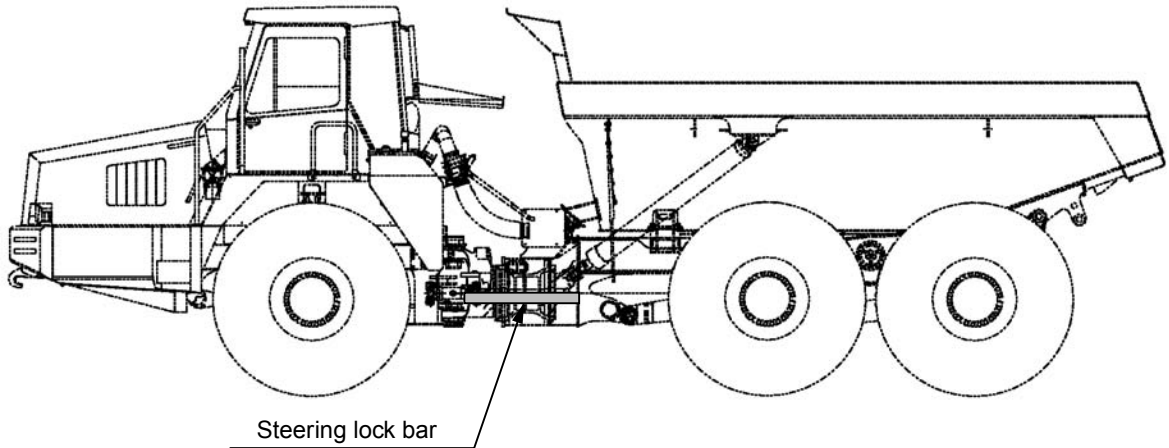
No.	Equipment name	Specifications	Q'ty	Remarks
1	Stepladder (Work stand)	4 steps (About 1.5 m)	1	For work
2	Truck crane ☆	Approx. 4 ton	1	For slinging tail gate
3	Forklift ☆	Min. 2 ton	1	For carrying parts
4	Compressor ☆	Capacity: Min. 32 ℓ	1	For impact wrench

(3) Sling

No.	Equipment name	Specifications	Q'ty	Remarks
1	Sling ☆		1	For slinging tail gate
2	Shackle ☆	Min. 1 ton	1	For slinging tail gate

☆ marks = Necessary for tail gate specification

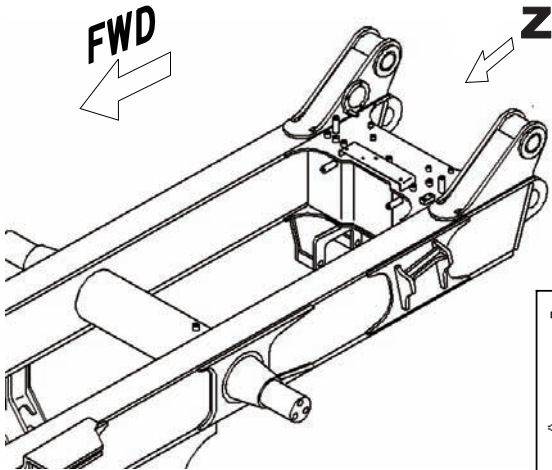
1. Positioning bare machine



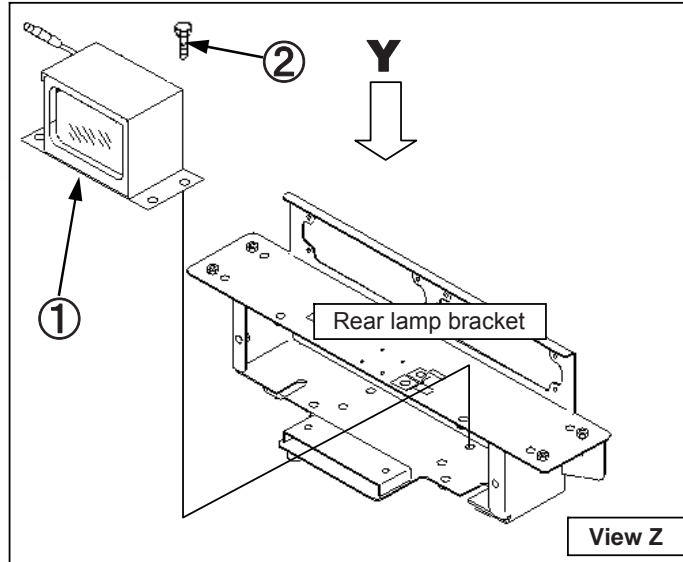
1. Lower the bare machine from the trailer and position it on the flat ground.
2. Set the steering lock bar securely.

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Before starting the work, set the steering lock bar securely.				
Others				

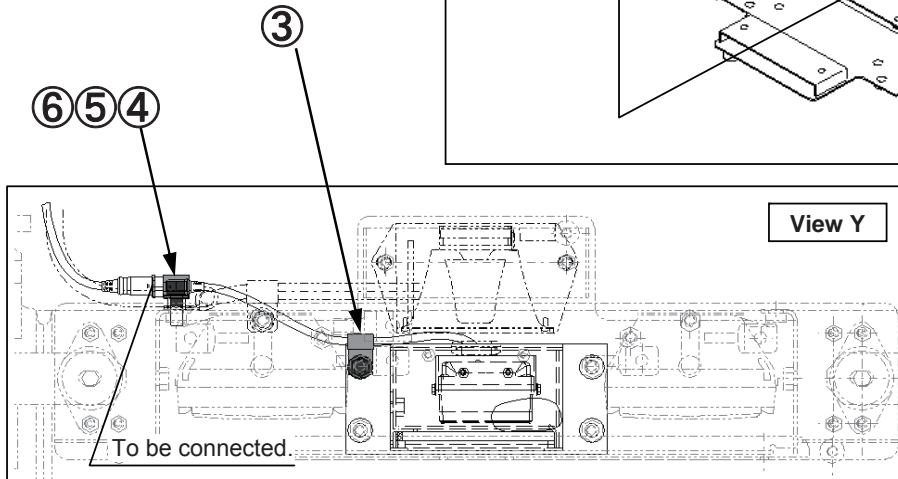
Installation of rear monitor



1. Install the rear monitor assembly as shown in view Z.
2. Connect the rear monitor cable.
3. Fix the rear monitor cable as shown in view Y.



(To be fixed together with rear monitor assembly.)

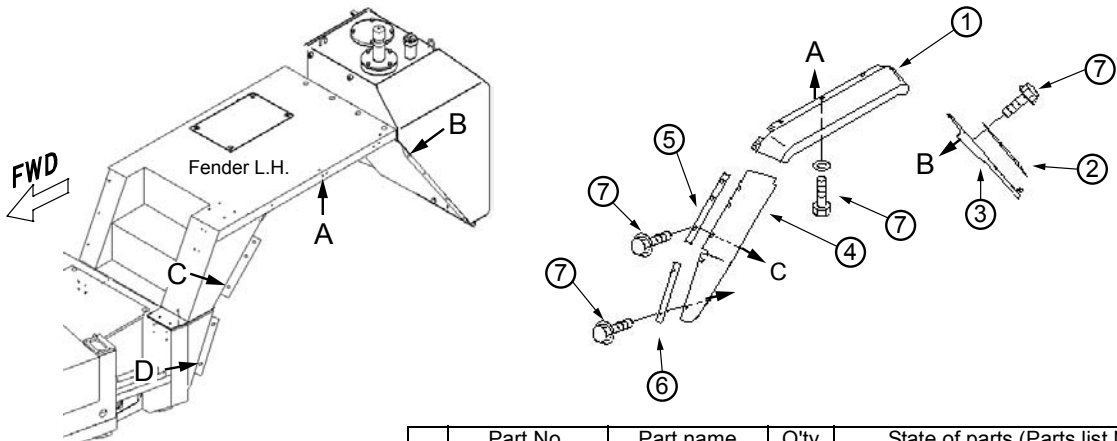


	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	561-86-8310A	REAR MONITOR ASS'Y	1	Separately packed (M42-06-050)
(2)	01024-81020	BOLT	4	Temporarily installed to rear lamp bracket
(3)	04434-50810	CLIP	1	Temporarily installed to rear lamp bracket
(4)	04434-51410	CLIP	1	Temporarily installed to rear lamp bracket
(5)	01024-81030	BOLT	1	Temporarily installed to rear lamp bracket
(6)	424-54-14380	COLLAR	1	Temporarily installed to rear lamp bracket

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

Installing L.H. and R.H. over-fenders

1. Installing L.H. over-fender

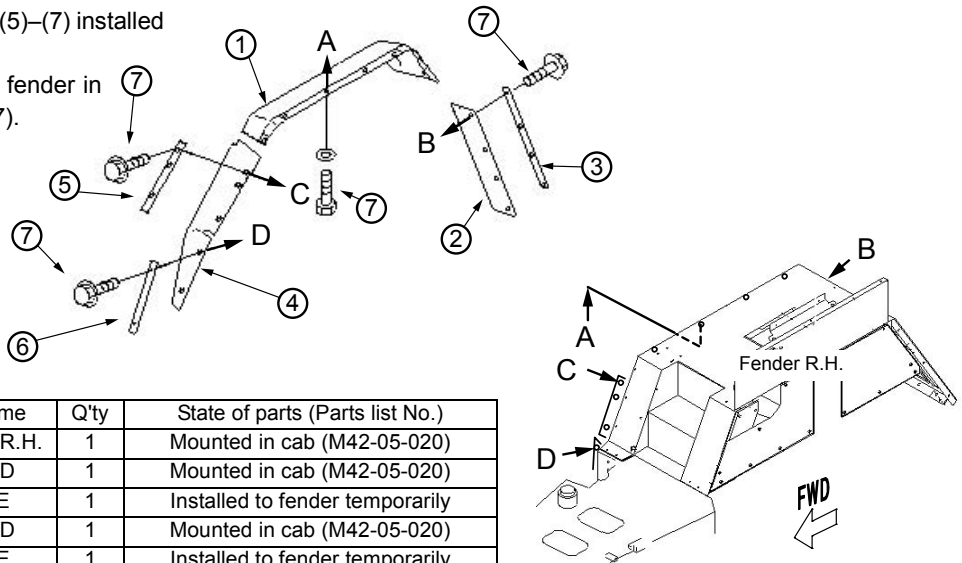


1. Remove the parts (3), (5)–(7) installed temporarily.
2. Install the parts to the fender in the order from (1) to (7).

	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-54-18821	GUARD, L.H.	1	Mounted in cab (M42-05-020)
(2)	56B-54-18851	GUARD	1	Mounted in cab (M42-05-020)
(3)	56B-54-12461	PLATE	1	Installed to fender temporarily
(4)	56B-54-18841	GUARD	1	Mounted in cab (M42-05-020)
(5)	56B-54-18890	PLATE	1	Installed to fender temporarily
(6)	56B-54-12490	PLATE	1	Installed to fender temporarily
(7)	01024-81030	BOLT	13	Installed to fender, B-box and hydraulic tank temporarily

2. Installing R.H. over-fender

1. Remove the parts (3), (5)–(7) installed temporarily.
2. Install the parts to the fender in the order from (1) to (7).



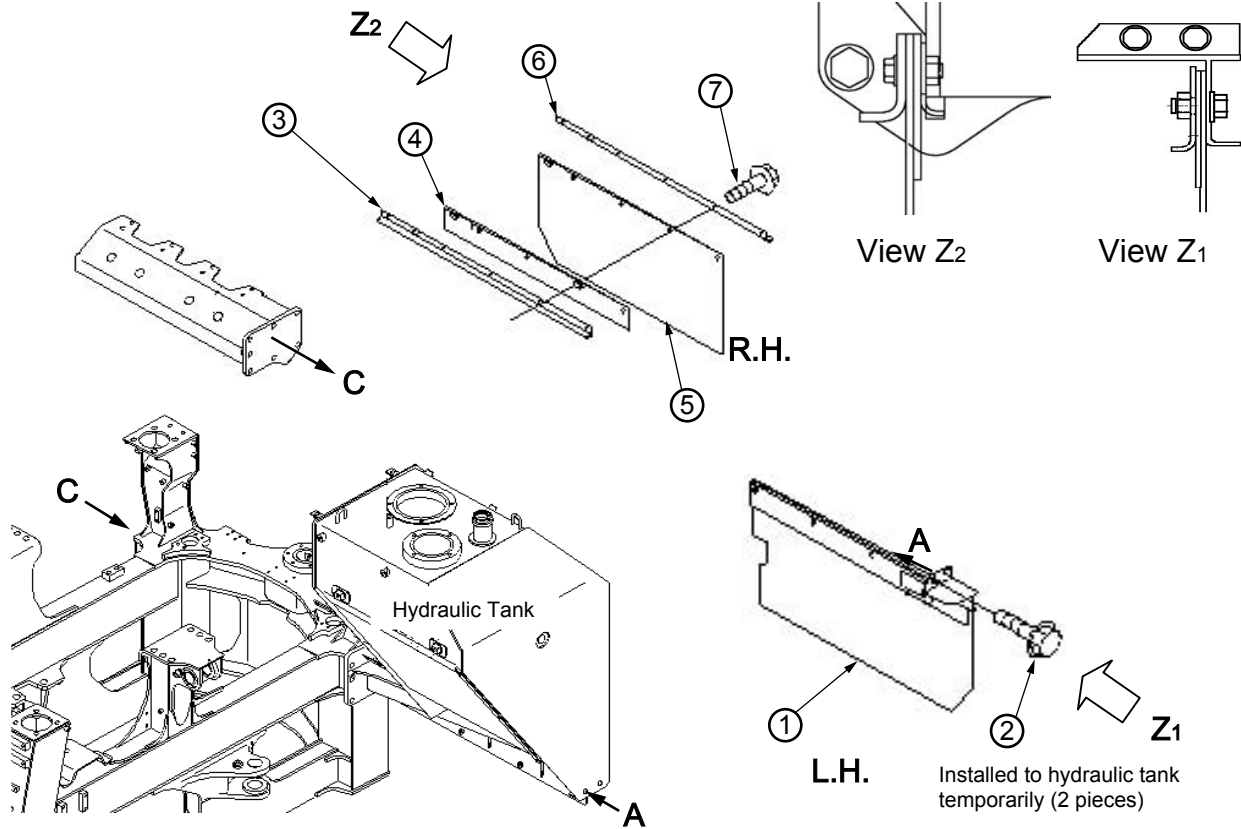
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-54-18831	GUARD, R.H.	1	Mounted in cab (M42-05-020)
(2)	56B-54-18950	GUARD	1	Mounted in cab (M42-05-020)
(3)	56B-54-12461	PLATE	1	Installed to fender temporarily
(4)	56B-54-18940	GUARD	1	Mounted in cab (M42-05-020)
(5)	56B-54-18890	PLATE	1	Installed to fender temporarily
(6)	56B-54-12490	PLATE	1	Installed to fender temporarily
(7)	01024-81030	BOLT	14	Installed to fender, B-box and hydraulic tank temporarily

	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Precautions	Socket wrench (17 mm)	1	Stepladder (Work stand)	1
	Impact wrench	1		
Others				

Installing L.H. and R.H. mudguards

1. Installing L.H. and R.H. mud guards

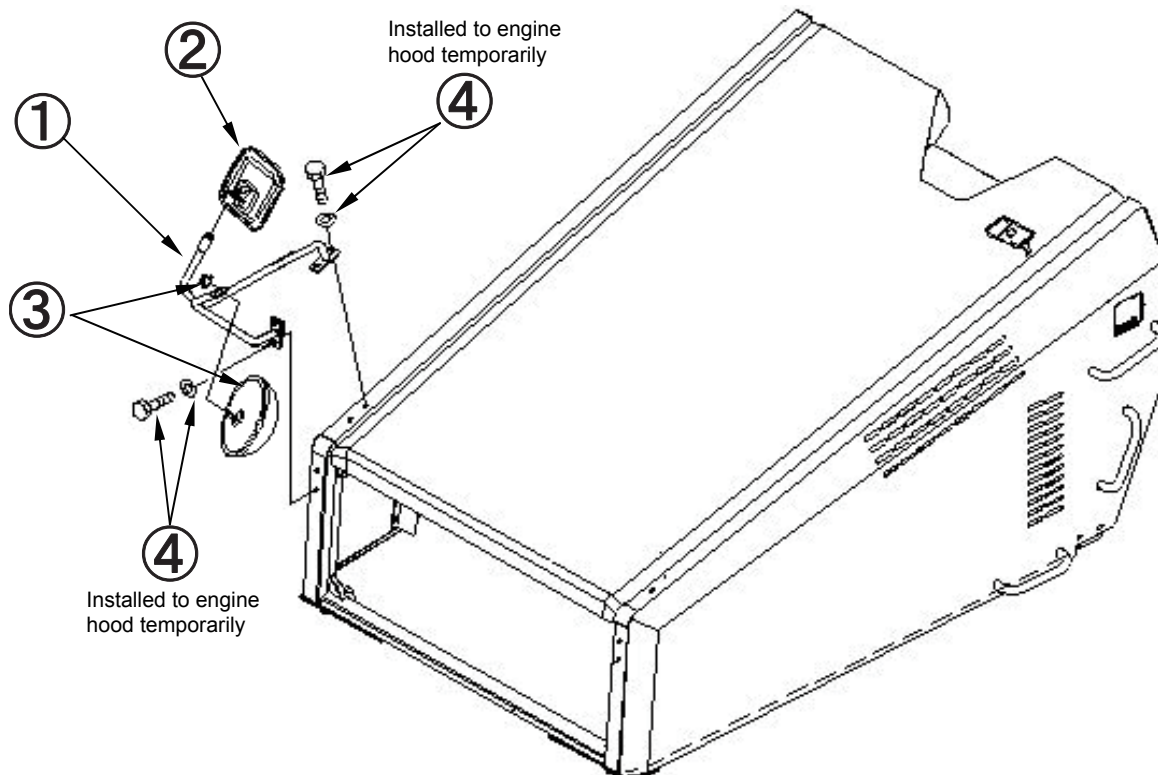
1. Remove the temporary mounting bolt of hydraulic tank.
2. Install L.H. and R.H. mud guards assembly.



	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-54-2751A	GUARD L.H. Ass'y	1	Packed separately (M42-05-020)
(2)	01435-01230	BOLT	2	Installed to fender temporarily
(3)	56B-54-22921	BRACKET	4	Packed separately (M42-05-020)
(4)	56B-54-27520	GUARD	1	Packed separately (M42-05-020)
(5)	56B-54-22440	GUARD R.H.	1	Packed separately (M42-05-020)
(6)	56B-54-22380	BRACKET	1	Packed separately (M42-05-020)
(7)	01435-01030	BOLT	5	Packed separately (M42-05-020)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket wrench (19 mm)	1		
	Impact wrench	1		
Others				

1. Installing engine hood mirror

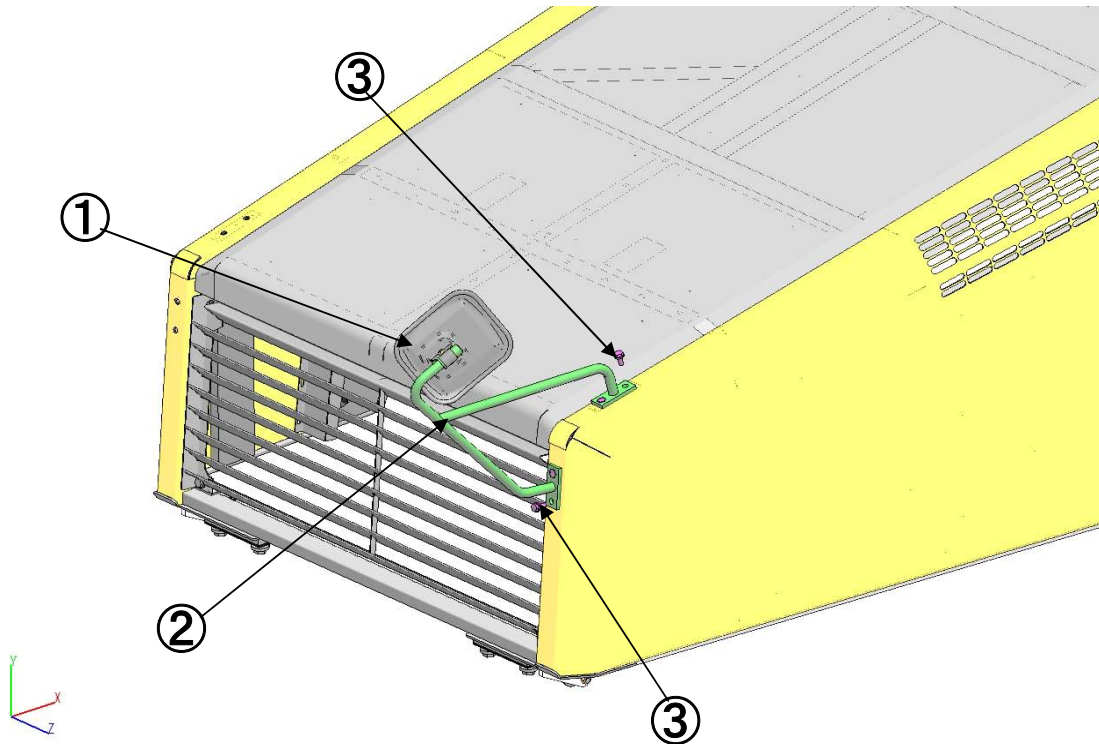


	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-54-21521	STAY	1	Packed separately (M42-05-010)
(2)	23W-P86-2890	MIRROR	1	Packed separately (M42-05-010)
(3)	23S-54-36270	MIRROR	1	Packed separately (M42-05-010)
(4)	01024-81230	BOLT	4	Installed to engine hood temporarily

1. Remove the bolts and washers installed to the engine hood temporarily.
2. Install (1) – (3) put in the cab to the engine hood.
3. Adjust the angle of the mirror.
★ To adjust, see Operation and Maintenance Manual.

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket wrench (19 mm)	1	Stepladder (Work stand)	1
	Others			

1. Installing engine hood mirror (If equipped)



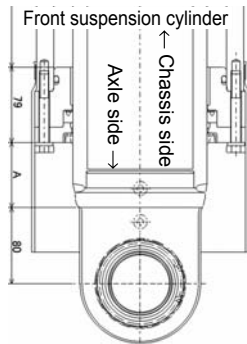
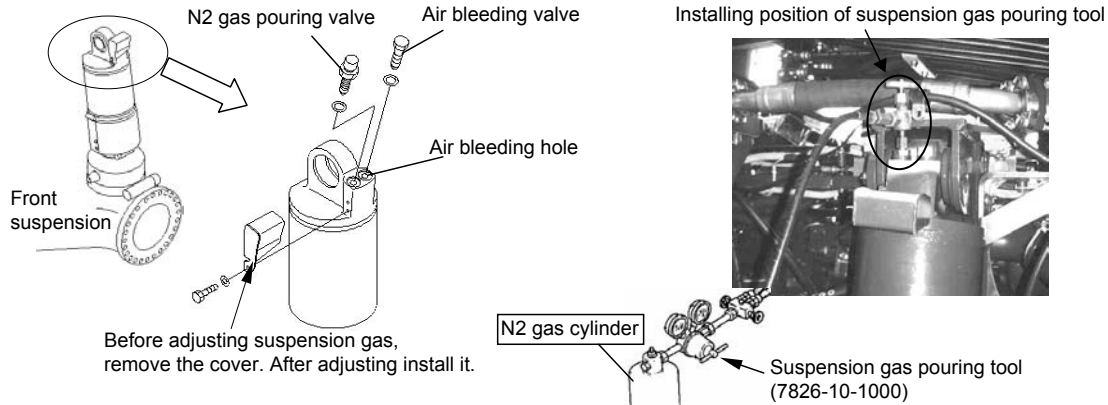
1. Remove the bolts and washers installed to the engine hood temporarily.
2. Install (1) – (3) put in the cab to the engine hood.
3. Adjust the angle of the mirror.

	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-54-21511	STAY	1	Separately Packed (M42-05-011)
(2)	23W-P86-2890	MIRROR	1	Separately Packed (M42-05-011)
(3)	01024-81030	BOLT	4	Separately Packed (M42-05-011)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket wrench (19 mm)	1	Stepladder (Work stand)	1
Others	Sales code : 6HL48T			

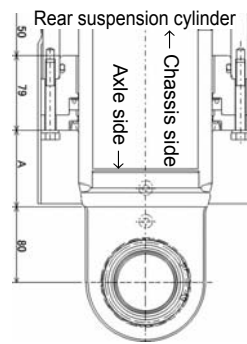
1. Adjusting N2 gas of front and rear suspensions

Adjust the quantity of N2 gas (front and rear, 4 places).



Dimension A (Front side)

When cylinder is retracted fully:	MIN	(32 ± 1 mm)
Specified quantity of filled oil:	OIL	53 ± 3 mm
When empty:	EMPTY	(153 ± 10 mm)
When cylinder is extracted fully:	MAX	(209 ± 1 mm)



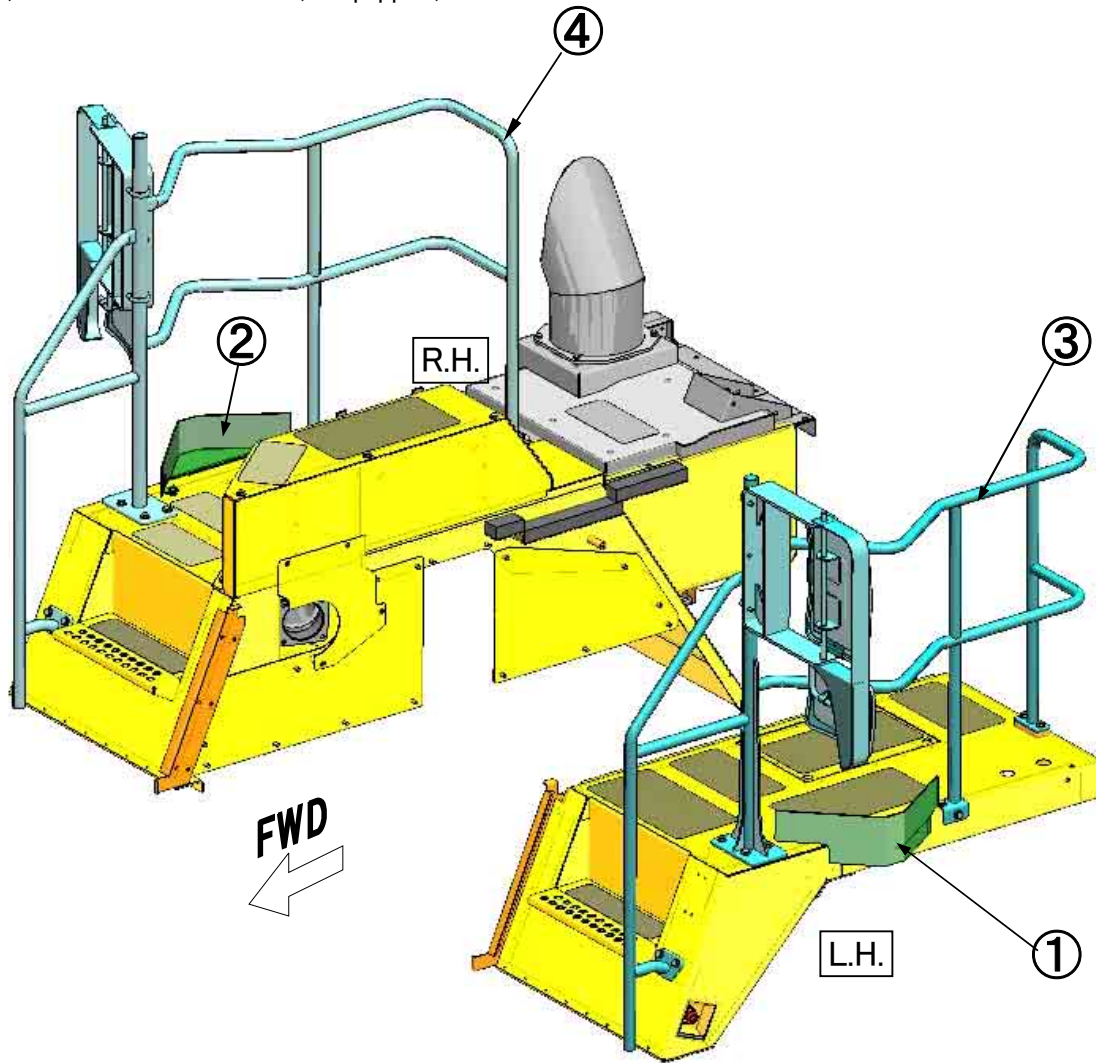
Dimension A (Rear side)

When cylinder is retracted fully:	MIN	(26 ± 1 mm)
Specified quantity of filled oil:	OIL	66 ± 3 mm
When empty:	EMPTY	(96 ± 5 mm)
When cylinder is extracted fully:	MAX	(116 ± 1 mm)

- Loosen the air bleeding valves of the right and left front suspension cylinders and bleed air thoroughly. (Check that air does not come out any more (and only oil flows out) and tighten the valves again. Tightening torque: 39.2 – 49.0 Nm {4 – 5 kgm})
- Check that the valves are closed and install the suspension gas pouring tool to the gas cylinder.
- Connect the hoses of the suspension gas pouring tool to the nitrogen gas pouring valves. (Since there are 2 hoses, connect them to the right and left suspension cylinders and pour the nitrogen gas simultaneously so that pressure will be applied to both cylinders evenly.)
- Open the valve of the suspension gas pouring tool gradually.
- When the suspension cylinders rise to the specified level shown above, close the valve. (Pour the gas to the front suspension cylinders until they rise to the level indicated by the decalcomania. Pour the gas to the rear suspension cylinders until they rise to the level shown in the above figure.)
- Remove the hoses from the nitrogen gas pouring valves and move the machine forward and in reverse to fit the suspension cylinders, and then stop without applying the brake. (Finally, stop the machine without applying the brake to prevent an uneven load caused by braking.)
- Apply the parking brake and check the length of the suspension cylinders.
- If the length of the suspension cylinders is out of the standard range, repeat steps 3 - 7. (Usually, adjustment is completed by repeating those steps 3 - 4 times.)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
1. Bleed air from the cylinders. 2. Pour nitrogen gas in the right and left suspension cylinders simultaneously. 3. Do not extend the suspension cylinders to the stroke end. 4. After moving the machine forward and in reverse, stop it without applying the brake. 5. Do not steer the machine before finishing this adjustment. (If it is steered, the piping may be broken.)	Suspension gas pouring tool	1		
	(7926-10-1000)			
Others				

(1) Installation of handrail (If equipped)



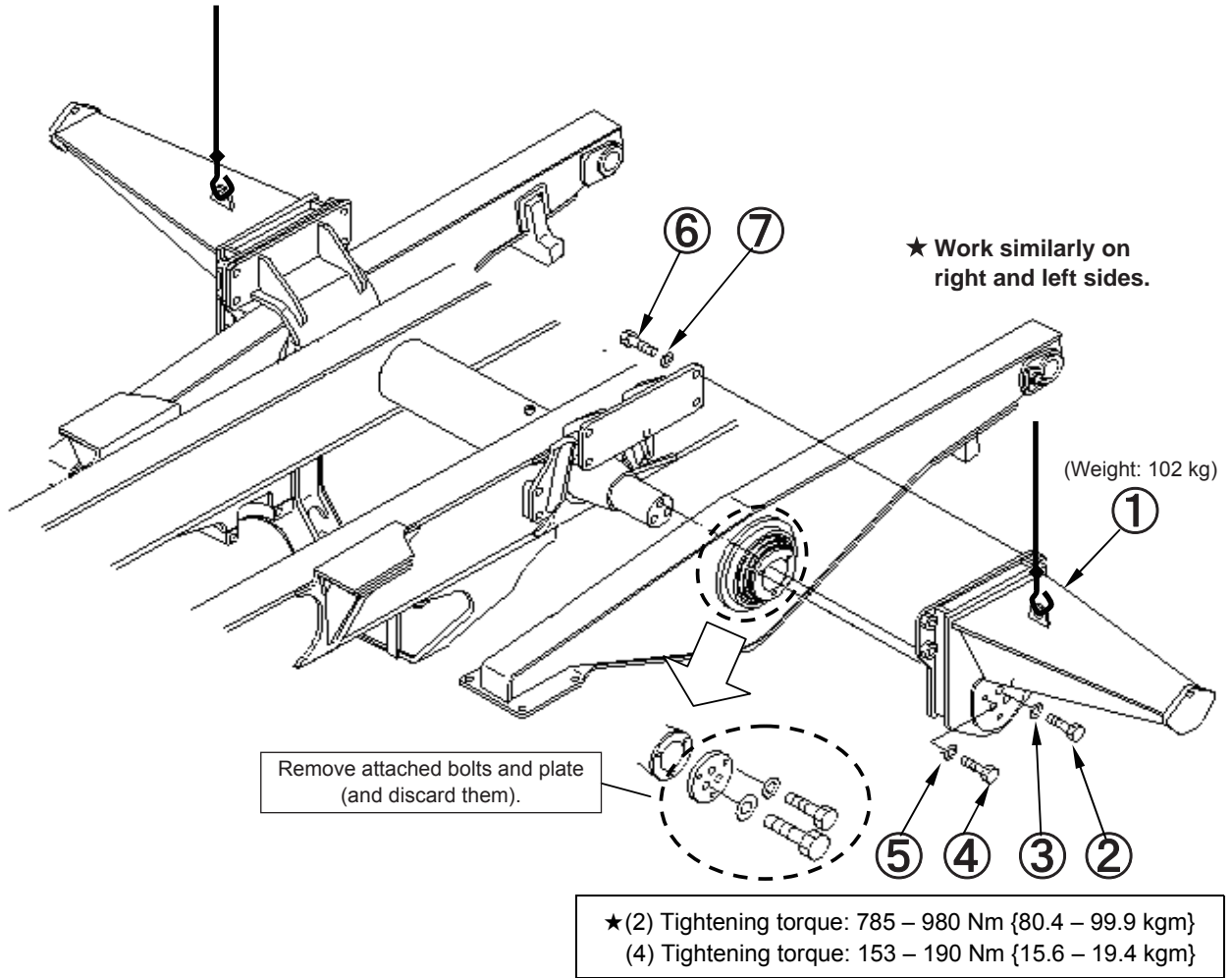
1. Remove bolts from the right and left fender.
2. Install (1) to (4) by using removed bolts.

No.	Part No.	Part Name	Q'ty	State of part (Parts list No.)
(1)	56B-89-27710	GUARD,L.H	1	Separately Packed (M42-05-013)
(2)	56B-89-27740	GUARD,R.H	1	Separately Packed (M42-05-013)
(3)	56B-89-2788A	HANDRAIL L.H., ASSY	1	Separately Packed (M42-05-013)
(4)	56B-89-2775A	HANDRAIL R.H., ASSY	1	Separately Packed (M42-05-013)

Cautions	Special tool		Necessary Equipment	
	Name	Q'ty	Name	Q'ty
Other	Sales code : 6HM99000			

Assembly of tail gate: Installation of brackets

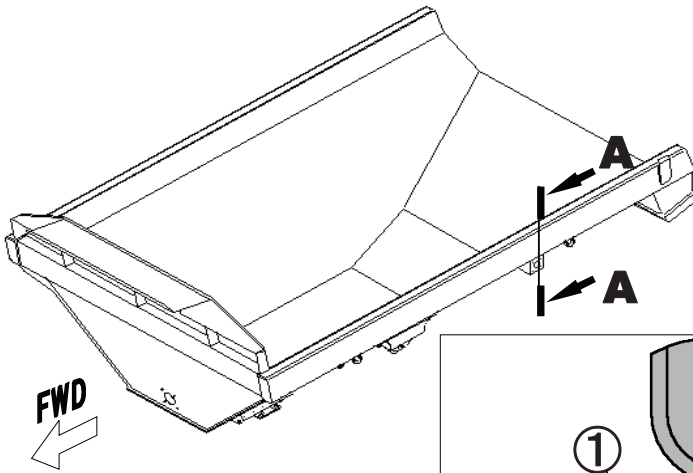
- 1) Remove the retaining plate and bolts installed to the shaft.
- 2) Sling bracket (1) packed separately (with a crane etc.)
- 3) Install the bracket as shown in the following figure.



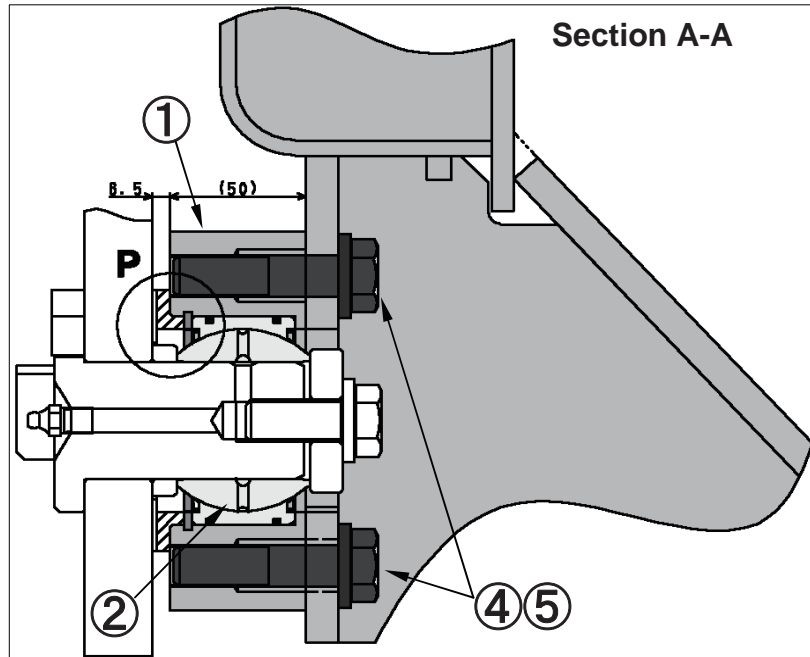
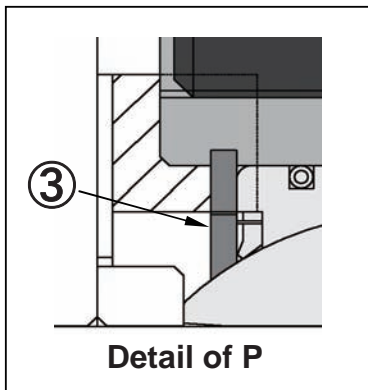
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-16312	BRACKET	2	Packed separately (M42-05-031)
(2)	01010-82465	BOLT	6	Packed separately (M42-05-031)
(3)	01643-32460	WASHER	6	Packed separately (M42-05-031)
(4)	01010-81450	BOLT	6	Packed separately (M42-05-031)
(5)	01643-31445	WASHER	6	Packed separately (M42-05-031)
(6)	01010-82060	BOLT	8	Packed separately (M42-05-031)
(7)	01643-32060	WASHER	8	Packed separately (M42-05-031)

	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Precautions	Socket 24 mm, 30 mm, 36 mm	1 each	Crane	1
	Impact wrench	1		
	Torque wrench	1		
Others				

1) Install the bearings to the body.



★ Work similarly on right and left sides.

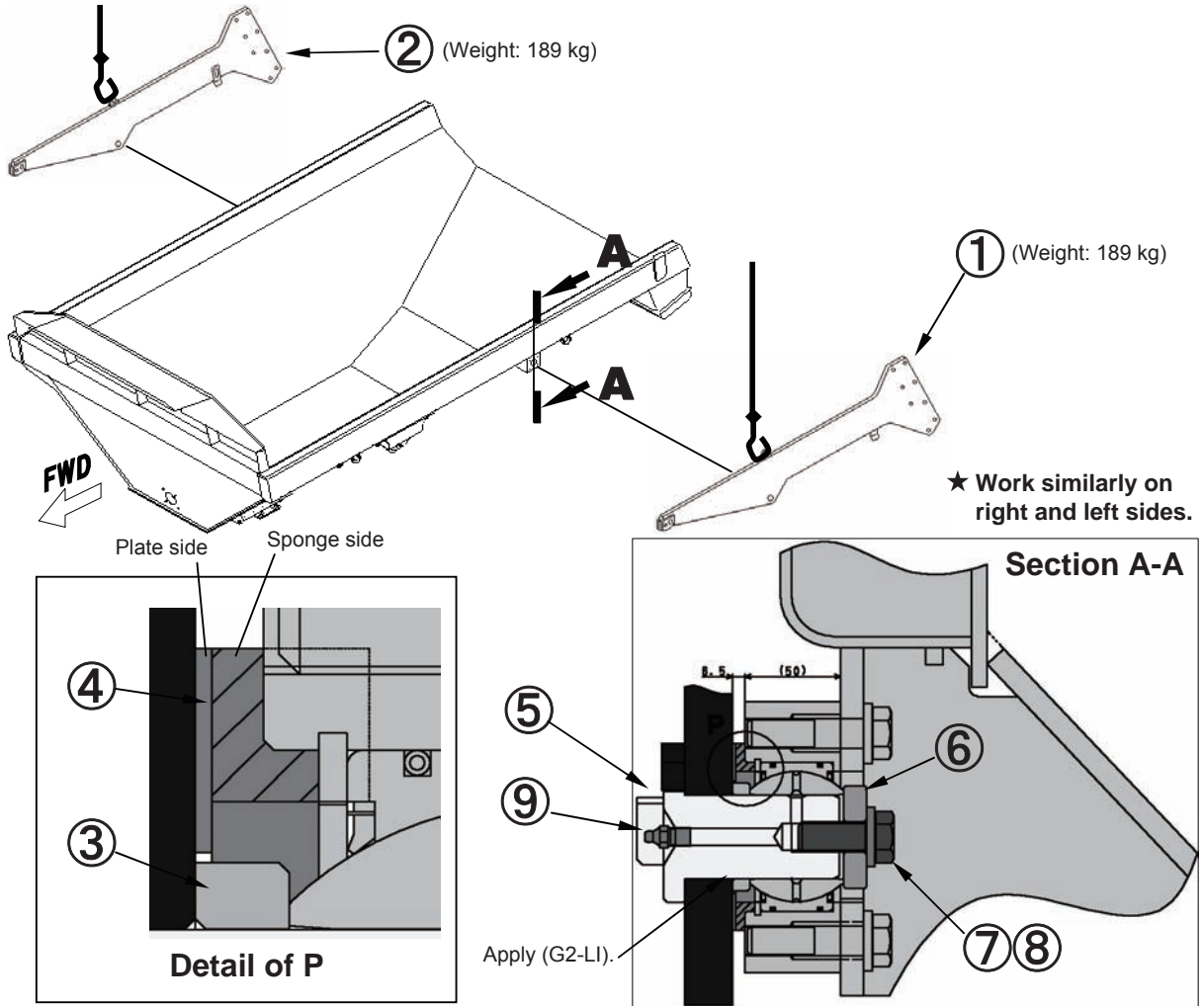


	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56D-83-16150	HOUSING	2	Packed separately (M42-05-030)
(2)	567-50-11450	BEARING	2	Packed separately (M42-05-030)
(3)	04065-08025	RING-SNAP	2	Packed separately (M42-05-030)
(4)	01010-81665	BOLT	8	Packed separately (M42-05-030)
(5)	01643-31645	WASHER	8	Packed separately (M42-05-030)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 24 mm	1	Stool (Work stand)	1
	Impact wrench	1		
Others				

Assembly of tail gate: Installation of side arms

- 1) Sling bracket (1) packed separately (with a crane etc.)
- 2) Install the bracket as shown in the following figure.

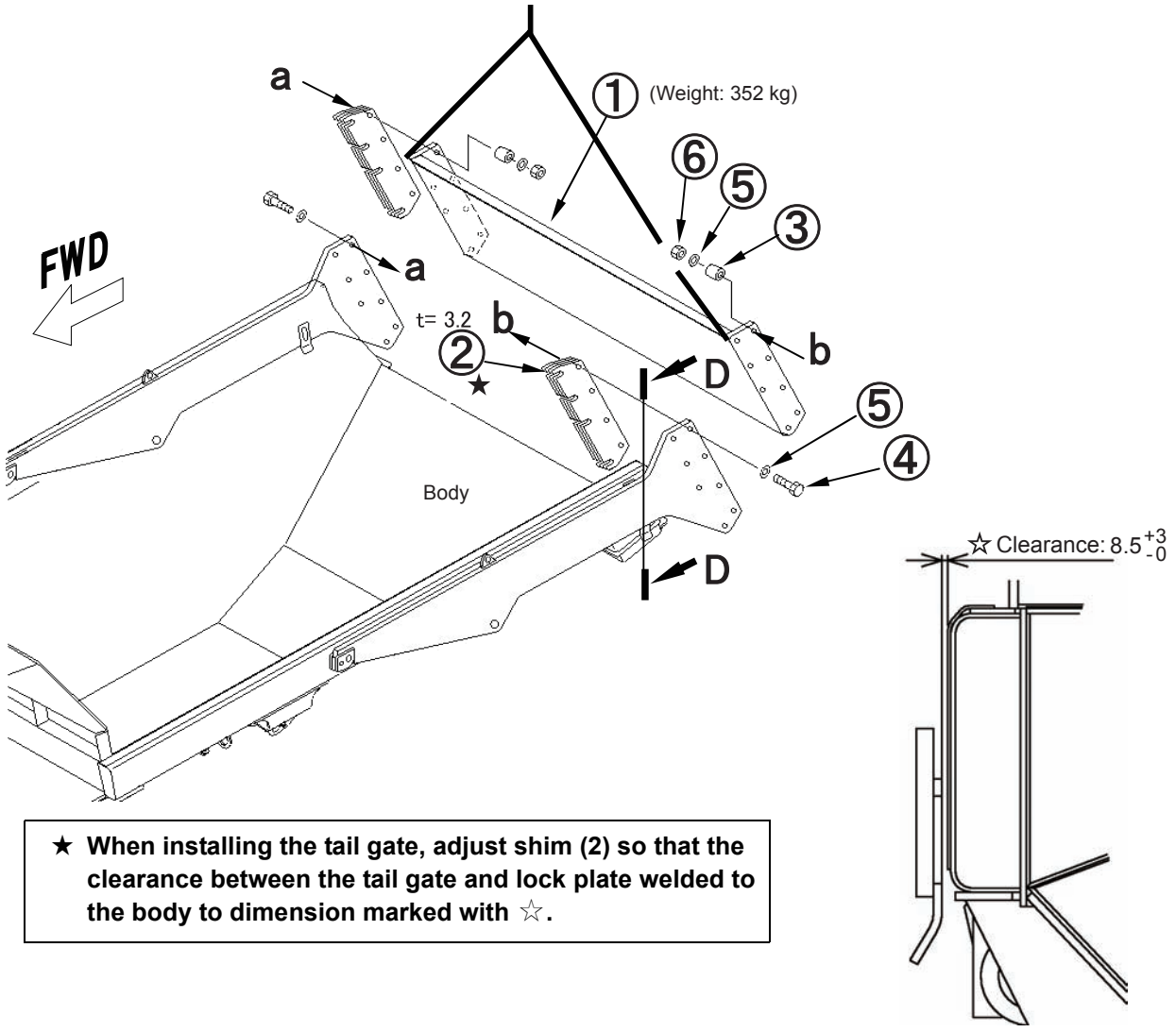


	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-16120	ARM, L.H.	1	Packed separately (M42-05-030)
(2)	56B-83-16130	ARM, R.H.	1	Packed separately (M42-05-030)
(3)	56D-83-16140	COLLER	2	Packed separately (M42-05-031)
(4)	56D-83-16160	SEAL	2	Packed separately (M42-05-031)
(5)	56D-83-16280	PIN	2	Packed separately (M42-05-031)
(6)	56D-83-16290	PLATE	2	Packed separately (M42-05-031)
(7)	01010-81640	BOLT	2	Packed separately (M42-05-031)
(8)	01643-31645	WASHER	2	Packed separately (M42-05-031)
(9)	07020-00000	FITTING	2	Packed separately (M42-05-031)

	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Precautions	Socket 24 mm	1	Stool (Work stand)	1
	Impact wrench	1	Crane	1
Others				

Assembly of tail gate: Installation of tail gate

- 1) Sling tail gate (1) packed separately (with a crane etc.)
- 2) Install the tail gate as shown in the following figure.



★ When installing the tail gate, adjust shim (2) so that the clearance between the tail gate and lock plate welded to the body to dimension marked with ☆.

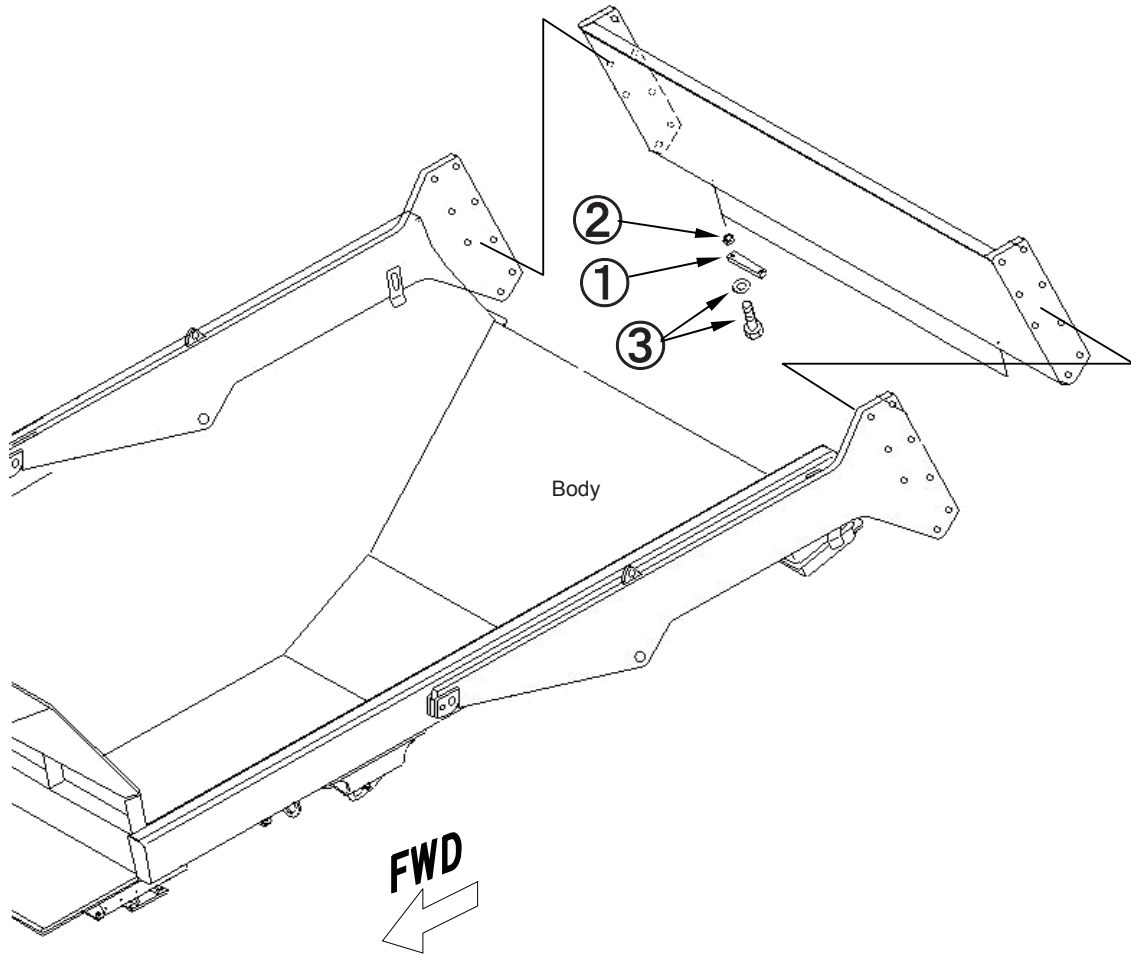
Section D-D

	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-16110	GUARD, TAILGATE	1	Packed separately (M42-05-030)
(2)	56B-83-16240	PLATE	10	Packed separately (M42-05-030)
(3)	56D-83-16250	COLLER	16	Packed separately (M42-05-030)
(4)	01011-61610	BOLT	16	Packed separately (M42-05-030)
(5)	01643-31645	WASHER	32	Packed separately (M42-05-030)
(6)	01580-01613	NUT	16	Packed separately (M42-05-030)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 24 mm	1	Stool (Work stand)	1
	Impact wrench	1	Crane	1
Others				

Assembly of tail gate: Installation of cushion

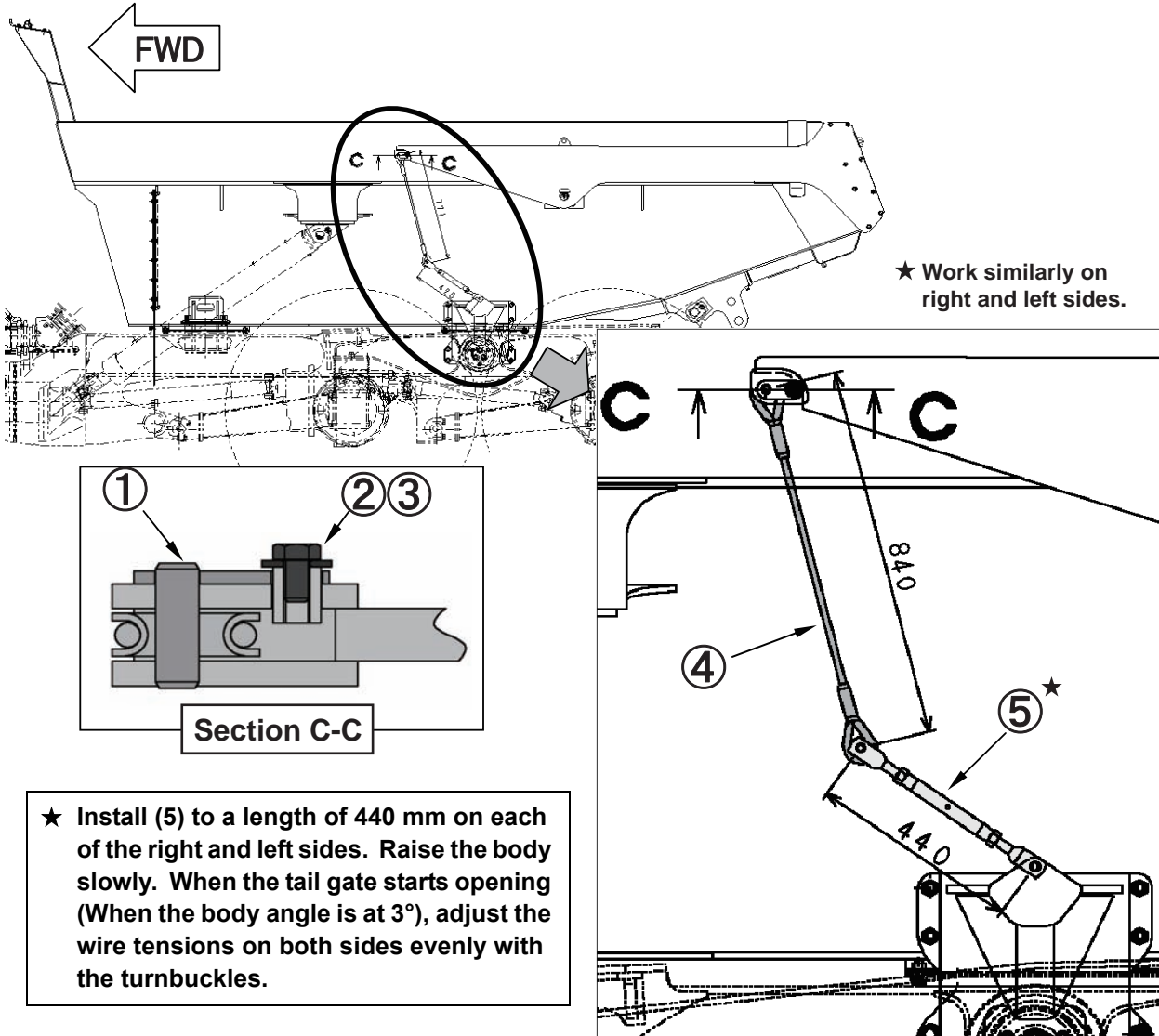
1) Install the cushion to the underside of the tail gate.



	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56D-83-16260	CUSHION	2	Packed separately (M42-05-030)
(2)	424-54-14230	SPACER	4	Packed separately (M42-05-030)
(3)	01024-81230	BOLT	4	Packed separately (M42-05-030)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 19 mm	1	Stool (Work stand)	1
	Impact wrench	1		
	Others			

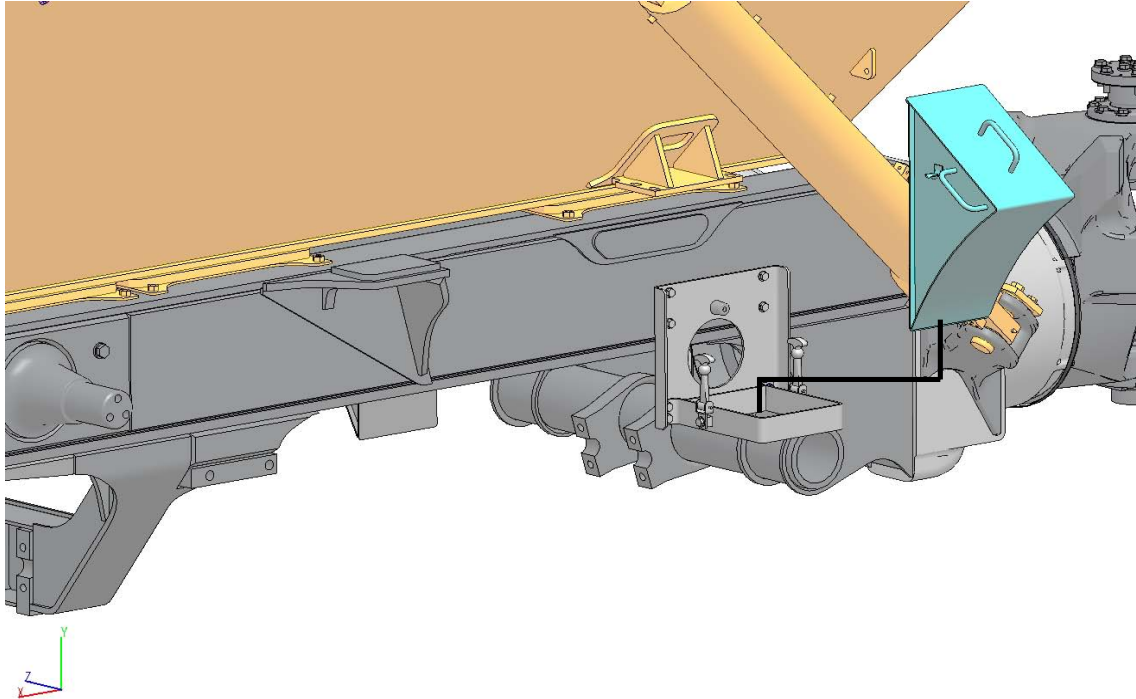
1) Connect the side arm ends and brackets by wires.



	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56D-83-16210	PIN	2	Packed separately (M42-05-031)
(2)	01010-81220	BOLT	2	Packed separately (M42-05-031)
(3)	130-43-64260	WASHER	2	Packed separately (M42-05-031)
(4)	56B-83-16191	WIRE	2	Packed separately (M42-05-031)
(5)	56D-83-16180	JOINT A., TURNBUCKLE	2	Packed separately (M42-05-031)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 19 mm	1	Stool (Work stand)	1
	Impact wrench	1		
Others				

(1) Install chock bracket (If equipped)



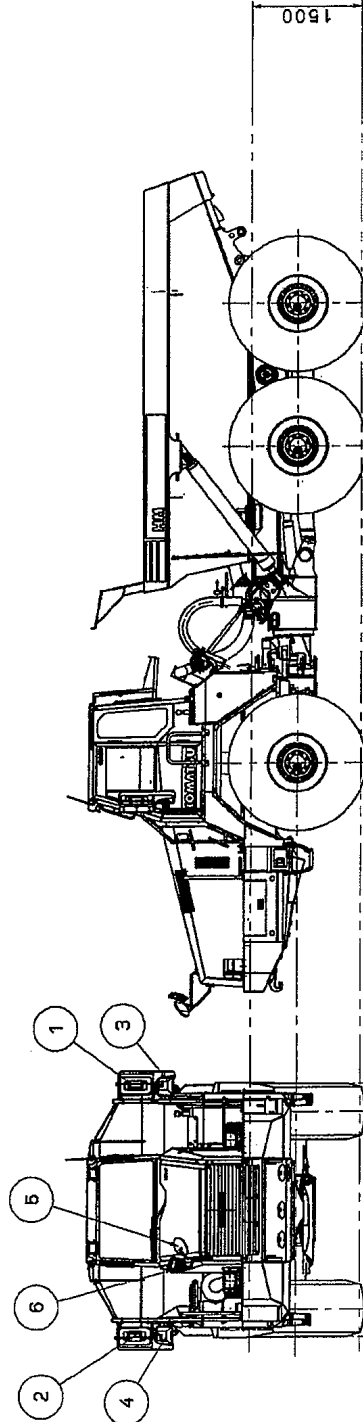
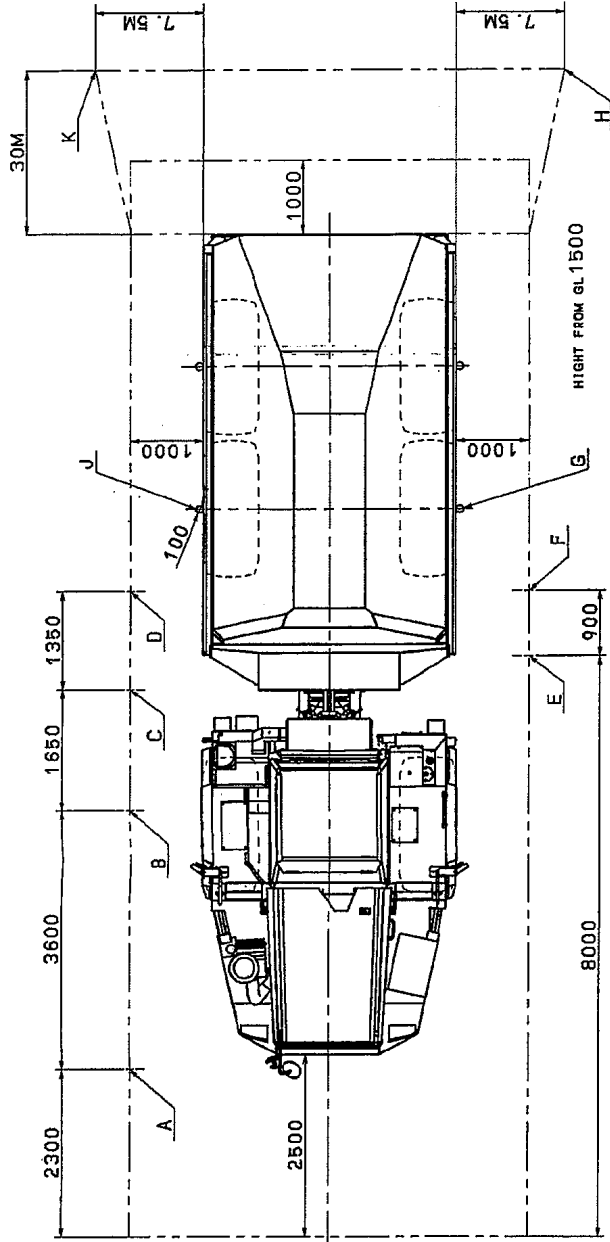
*** Install it to the left as well as the right.**

1. Chock the wheels on the right and left of rear frames.

No.	Part No.	Part Name	Q'ty	State of part (Parts list No.)
(1)	56B-86-22290	STOPPER	2	Separately Packed (M42-05-105)

Cautions		Special tool		Necessary Equipment	
		Name	Q' ty	Name	Q' ty
Other		Sales code : 6HA990004			

Mirror adjustment procedure



WHEN YOU SEE EACH MIRROR (D - G) FROM THE
 EACH CHECK POINT (A - K) OF THE DRAWING IN HEIGHT
 FROM GL ACCORDING TO A LEFT TABLE.

MIRROR NUMBER	CHECK POINT
①	NONE
②	B
③	C
④	NONE
⑤	A
⑥	B

MIRROR NUMBER	CHECK POINT
①	F
	G
	H
	C
	D
②	J
	K

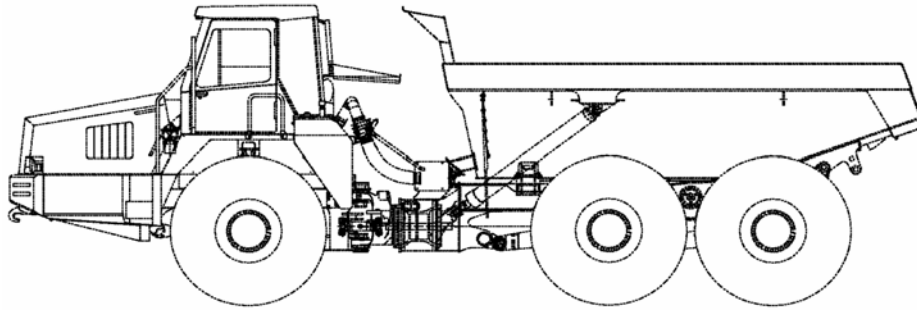
Extension specification

1	Drawings of removed units	19
2	Dimensions of removed units	19
3	Necessary tools and equipments	20
4	Assembly procedure	21
0010	Setting of bare machine	21
0020	Assembly of tail gate	22
0030	Installation of protector	23
0040	Installation of side extension	24
0050	Installation of tail gate 1	25
0060	Installation of tail gate 2	26
0070	Connection and fixing of grease tubes	27
0080	Greasing	28
0090	Touch up painting of body	29

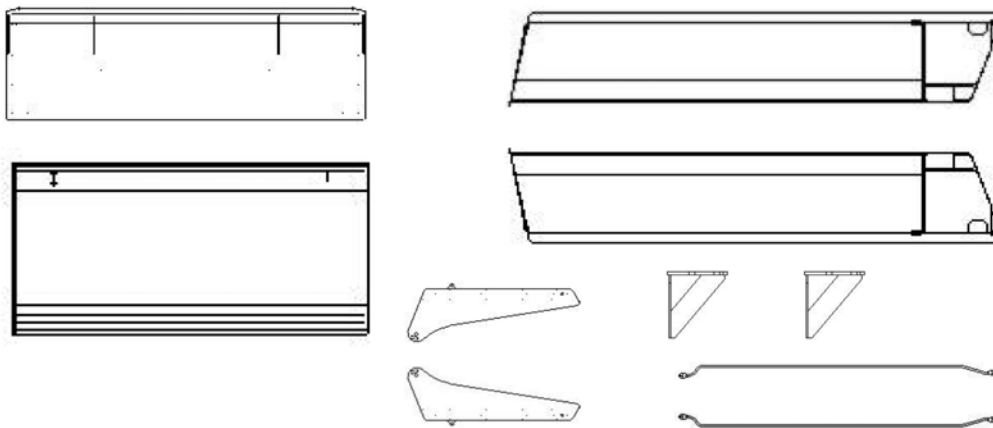
HM400-2 extension specification

1 Drawings of removed units

1. Bare machine



2. Parts related to extension and tail gate



Specifications of HM400-2 extension specification complete machine

Specifications	Related items			
	Weight (kg)	Overall length (mm)	Overall width (mm)	Overall height (mm)
Self-propelled travel	– (Weight of machine)	11,510	3,680	4,120 (When empty)

2 Dimensions of removed units

No.	Unit name	Weight (kg)	Overall length (mm)	Overall width (mm)	Overall height (mm)
1	Bare machine	32,460	11,310	3,450	3,720
2	Parts related to extension and tail gate	–	–	–	–

HM400-2 extension specification

3 Necessary tools and equipments

(1) Necessary tools

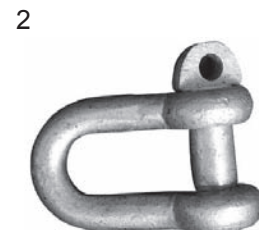
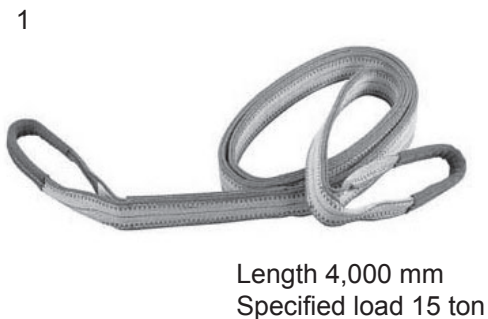
No.	Tool name	Specifications	Q'ty	Remarks
1	Ring wrench	General tools (Wrench set)	Each 1	For assembling parts
2	Socket	General tools (Socket set)	Each 1	For assembling parts
3	Impact wrench		2	For assembling parts
4	Touch up paint spray can	Natural yellow	4	For touching up machined surface
5	Grease gun		1	For applying grease
6	Paint spray can	Clear	2	For touching up bolt head

(2) Necessary equipments

No.	Equipment name	Specifications	Q'ty	Remarks
1	Truck crane	Min. 25 ton	2	For slinging bare machine
2	Compressor	Capacity: Min. 32 ℓ	1	For impact wrench
3	Stool (Work stand)	4 steps (About 1.5 m)	1	For work

(3) Sling

No.	Equipment name	Specifications	Q'ty	Remarks
1	Nylon sling	For 15 ton × L4,000	4	For slinging bare machine, tail gate and extension
2	Shackle	Withstand load: Min. 1 ton	4	For connecting body sling tools
3	Eyebolt	For M20 Withstand load: Min. 630 kg	2	For slinging extension

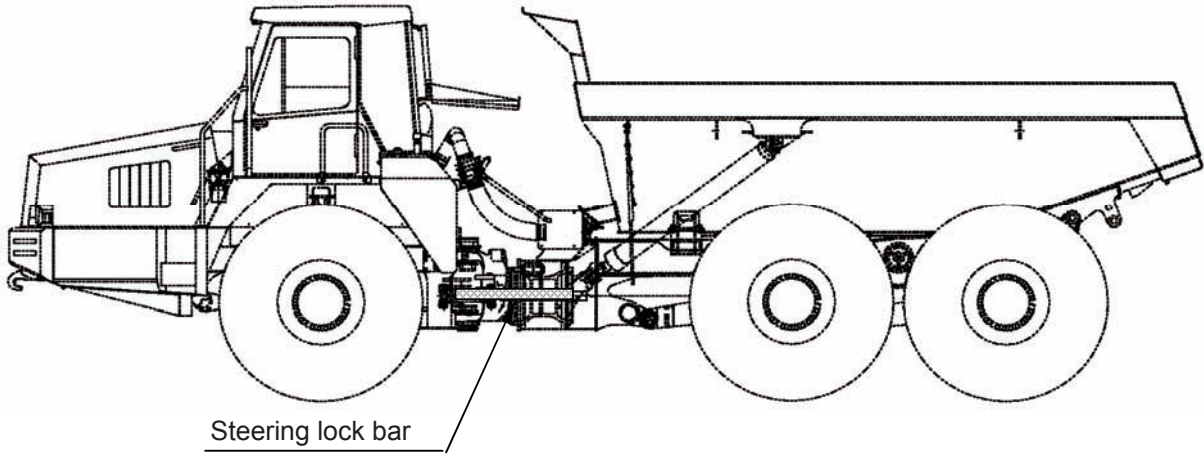


Assembly procedure No.

No.0010

Setting of bare machine

(1) Set the bare machine



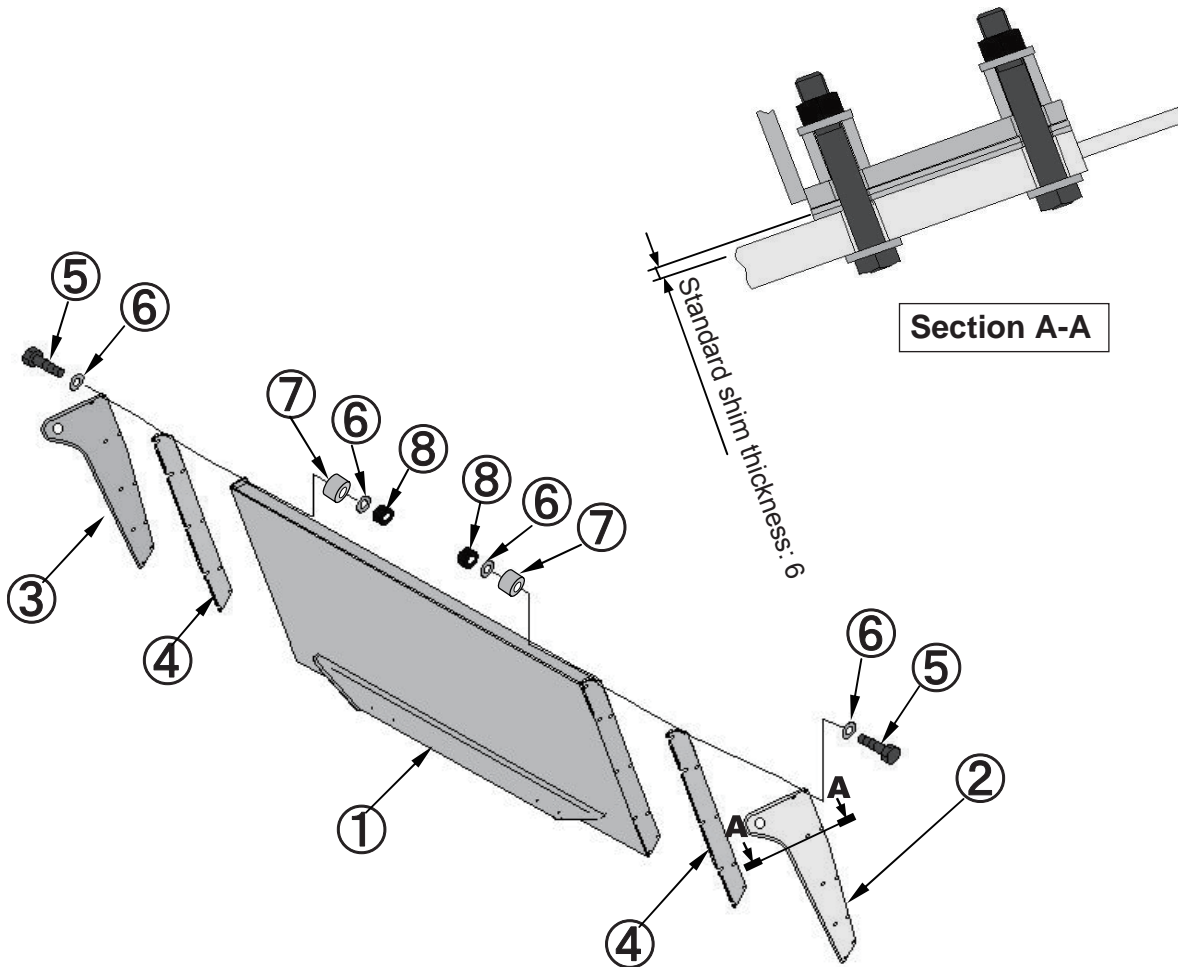
1. Park the machine on a flat ground.
2. Set the steering lock bar securely.

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
Before starting the work, set the steering lock bar securely.				
Others				

Assembly of tail gate

1) Assemble the tail gate.

※ Install plate (4) so that its thickness will be 6 mm.

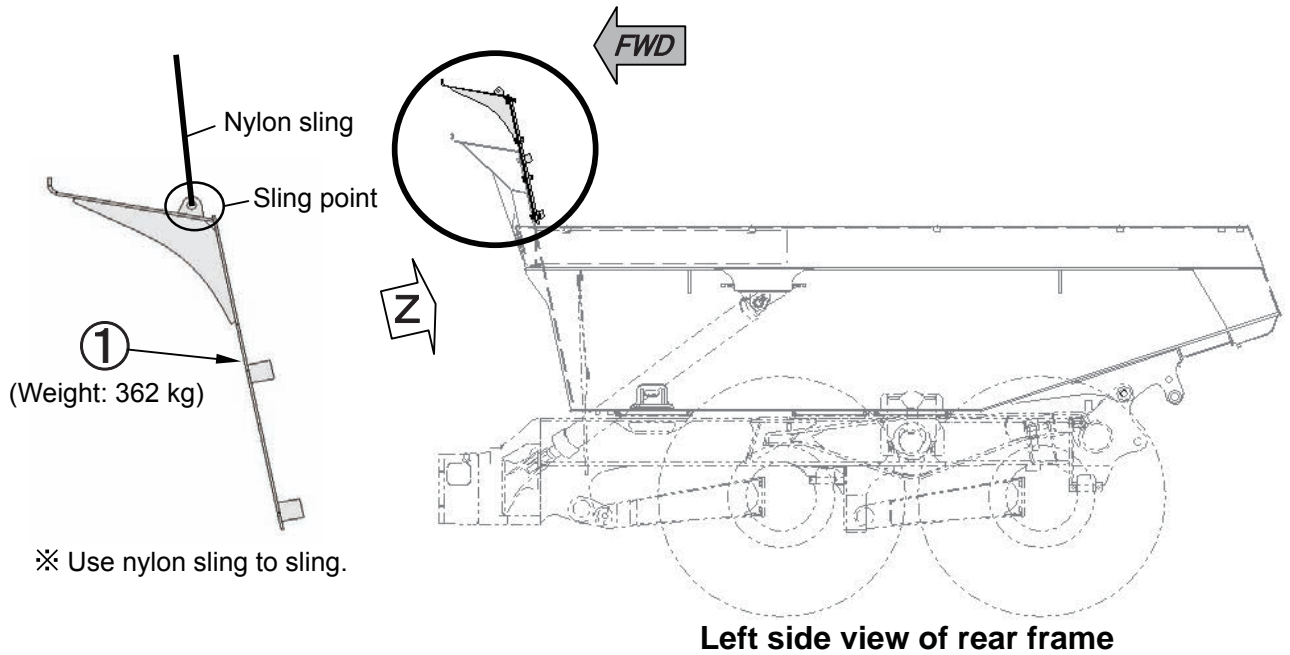


※ (5) Tightening torque: 235 – 285 Nm {24 – 29.1 kgm}
(Target: 260 Nm {26.4 kgm})

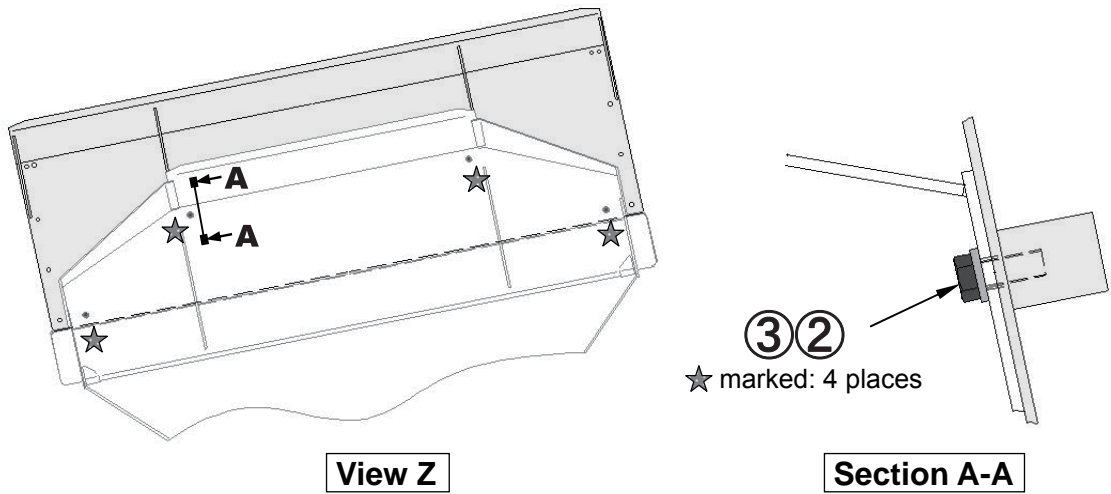
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-25310	GUARD, TAILGATE	1	Packed separately (M42-05-110)
(2)	56B-83-25320	ARM, L.H.	1	Packed separately (M42-05-110)
(3)	56B-83-25330	ARM, R.H.	1	Packed separately (M42-05-110)
(4)	56B-83-25340	PLATE	10	Packed separately (M42-05-110)
(5)	01011-61610	BOLT	24	Packed separately (M42-05-110)
(6)	01643-31645	WASHER	48	Packed separately (M42-05-110)
(7)	56D-83-16250	COLLAR	24	Packed separately (M42-05-110)
(8)	01580-01613	NUT	24	Packed separately (M42-05-110)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 24 mm	1		
	Torque wrench	1		
Others				

1) Sling the protector.



2) Install the protector.



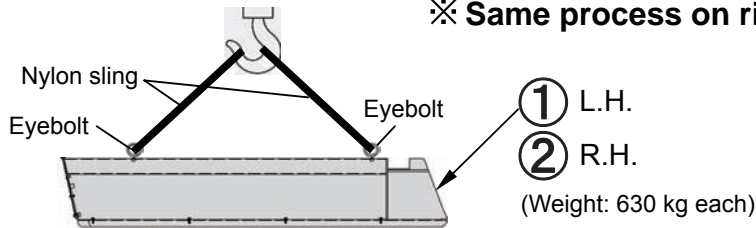
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-25230	BODY, PROTECTOR	1	Packed separately (M42-05-111)
(2)	01010-82050	BOLT	4	Packed separately (M42-05-111)
(3)	01643-32060	WASHER	4	Packed separately (M42-05-111)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 30 mm	1	Crane	1
	Impact wrench	1	Stool (Work stand)	1
	Nylon sling	2		
Others				

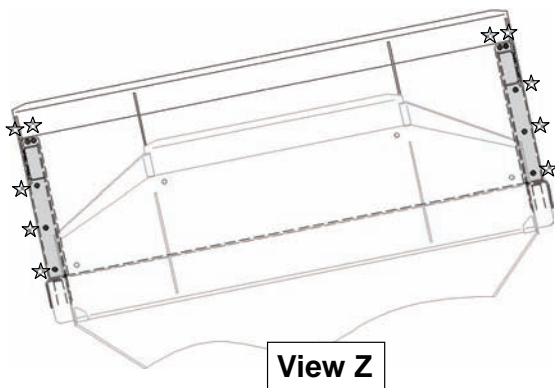
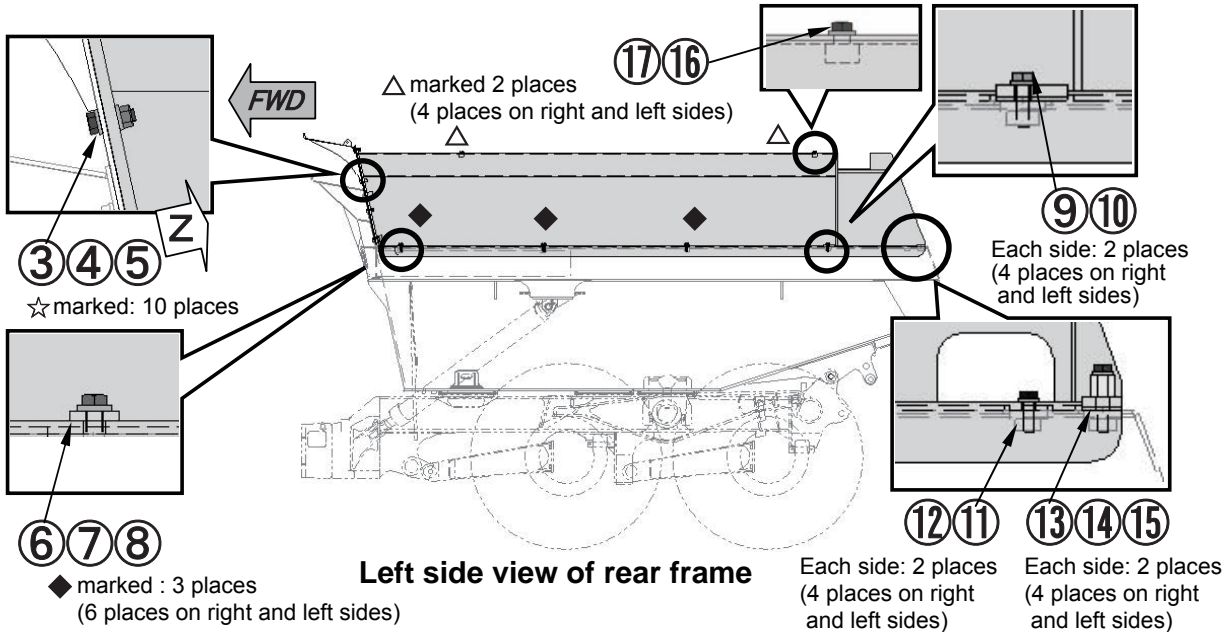
Installation of side extension

1) Install the eyebolts to the sling points of the side extension and sling the side extension with the nylon slings.

※ Same process on right and left sides



2) Install the side extension.

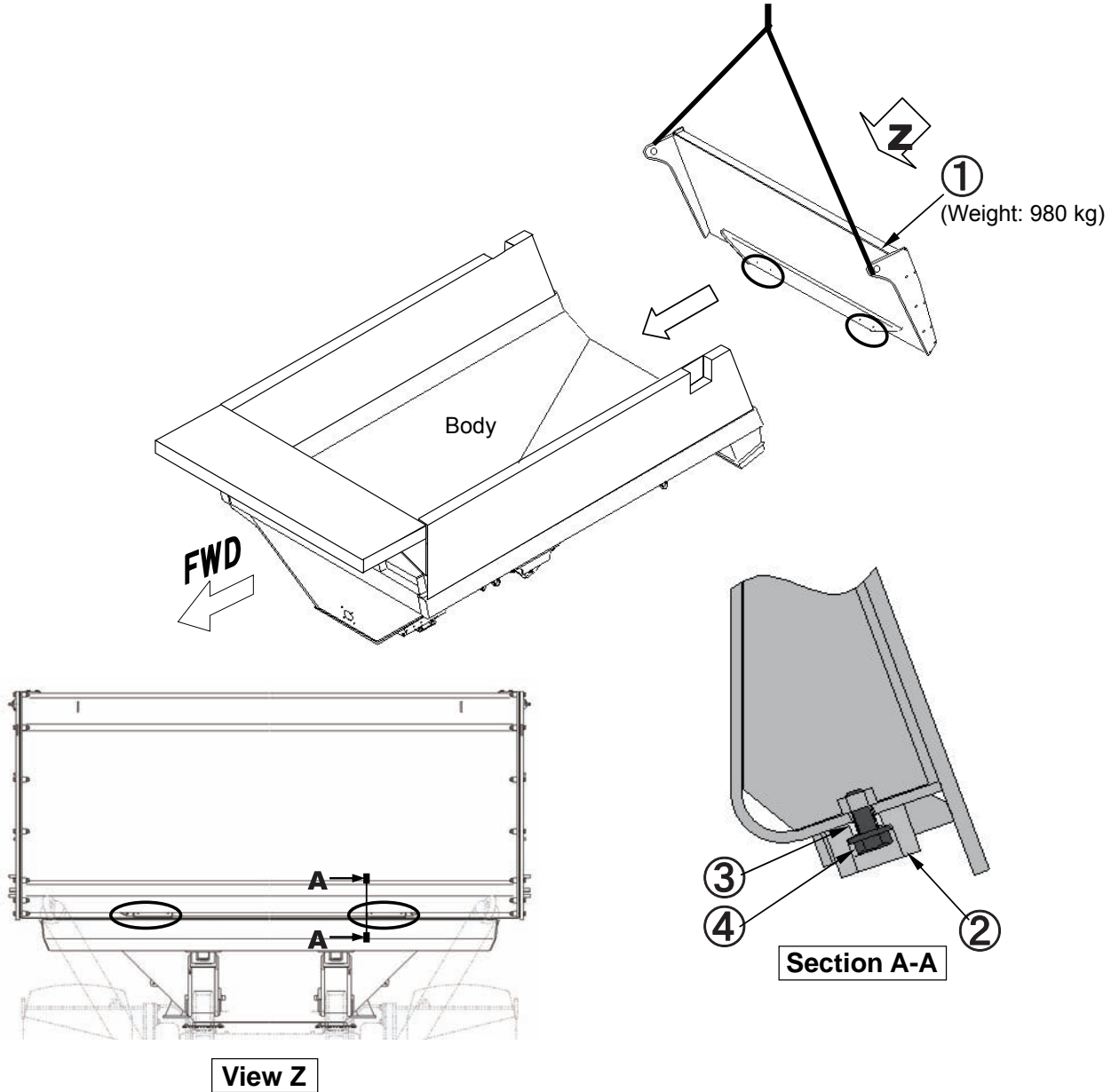


	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-25210	BODY, EXTENSION	1	Packed separately (M42-05-112)
(2)	56B-83-25220	BODY, EXTENSION	1	Packed separately (M42-05-112)
(3)	01010-82060	BOLT	10	Packed separately (M42-05-112)
(4)	01643-32060	WASHER	20	Packed separately (M42-05-112)
(5)	01580-12016	NUT	10	Packed separately (M42-05-112)
(6)	01010-82080	BOLT	6	Packed separately (M42-05-112)
(7)	01643-32060	WASHER	6	Packed separately (M42-05-112)
(8)	56B-83-16490	WASHER	6	Packed separately (M42-05-112)
(9)	01010-82075	BOLT	4	Packed separately (M42-05-112)
(10)	01643-32060	WASHER	4	Packed separately (M42-05-112)
(11)	01010-82065	BOLT	4	Packed separately (M42-05-112)
(12)	01643-32060	WASHER	4	Packed separately (M42-05-112)
(13)	01011-82015	BOLT	4	Packed separately (M42-05-112)
(14)	01643-32060	WASHER	4	Packed separately (M42-05-112)
(15)	561-04-61230	COLLAR	4	Packed separately (M42-05-112)
(16)	01010-82050	BOLT	4	Packed separately (M42-05-112)
(17)	01643-32060	WASHER	4	Packed separately (M42-05-112)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 30 mm	1	Crane	1
	Impact wrench	1	Stool (Work stand)	1
	Nylon sling	2		
	Eyebolt M20	2		
	Others			

Installation of tail gate 1

- 1) Sling the tail gate assembly (1) according to field assembly instruction No. 0020. (With a crane etc.)
- 2) Install the tail gate as shown below.



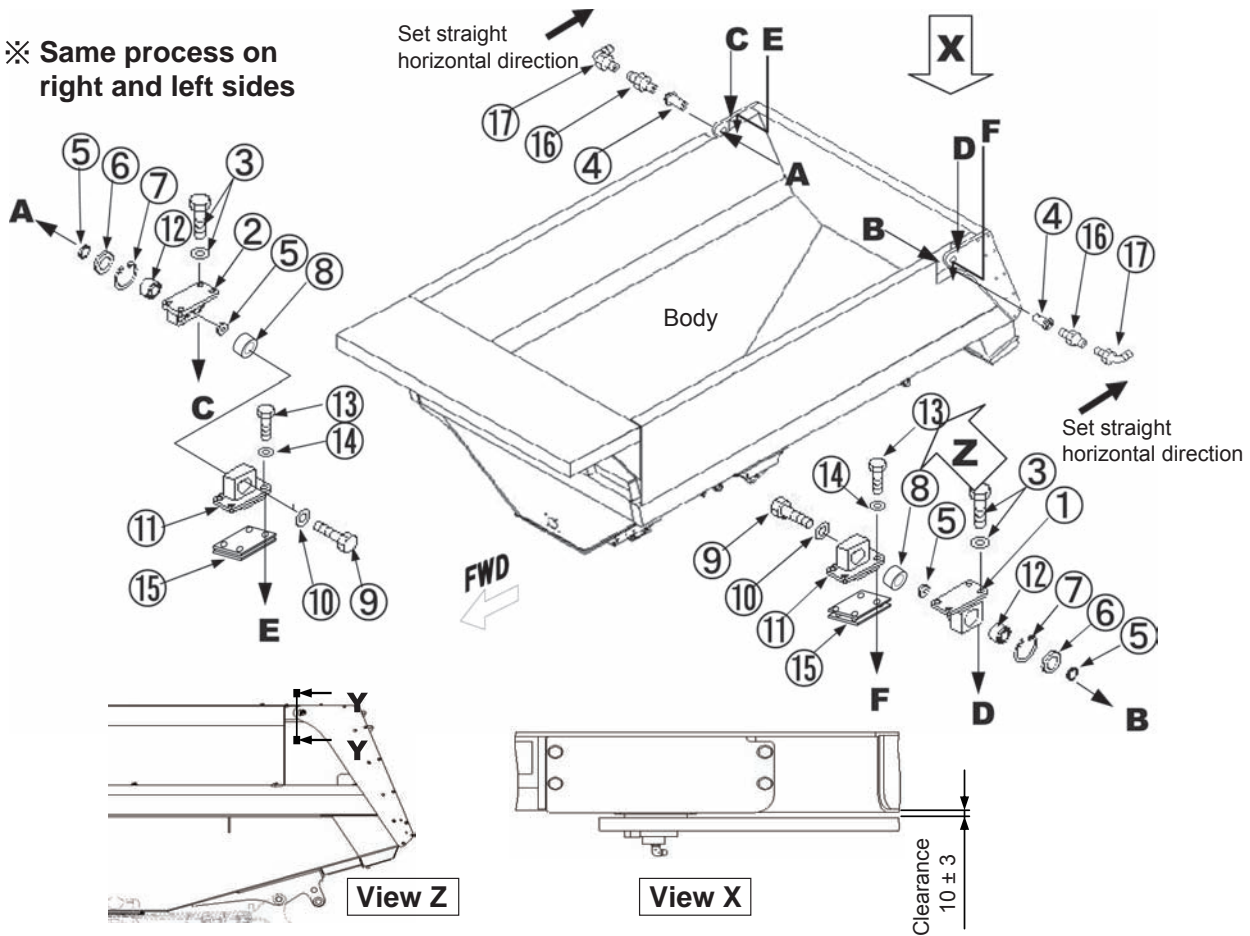
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	(56B-83-25310)	TAILGATE A.	1	See field assembly instruction No. 0020
(2)	56D-83-16260	CUSHION	2	Packed separately (M42-05-113)
(3)	424-54-14230	SPACER	4	Packed separately (M42-05-113)
(4)	01024-81230	BOLT, SEMS	4	Packed separately (M42-05-113)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 19 mm	1	Crane	1
	Impact wrench	1	Stool (Work stand)	1
	Nylon sling	2		
Others				

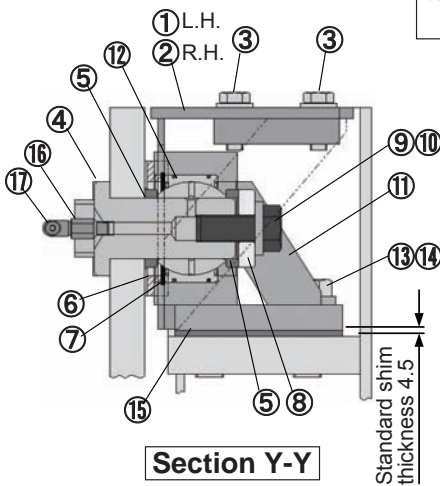
Installation of tail gate 2

- 1) Install each part as shown below.
 ★ For detail of assembly, see section Y-Y.

※ Same process on right and left sides



※ (9) Tightening torque: 455 – 565 Nm {46.4 – 57.6 kgm}
 (Target: 510 Nm {52 kgm})



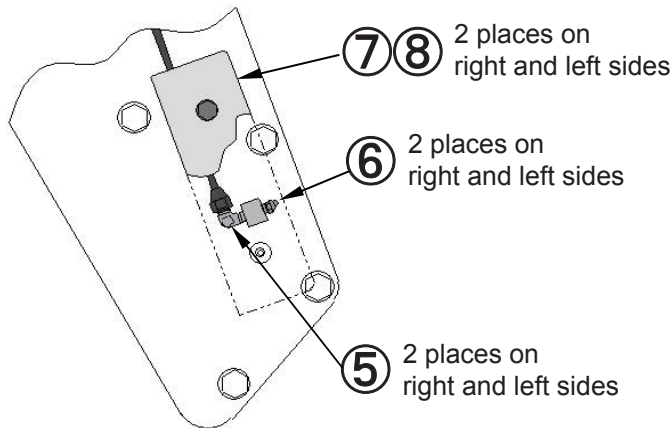
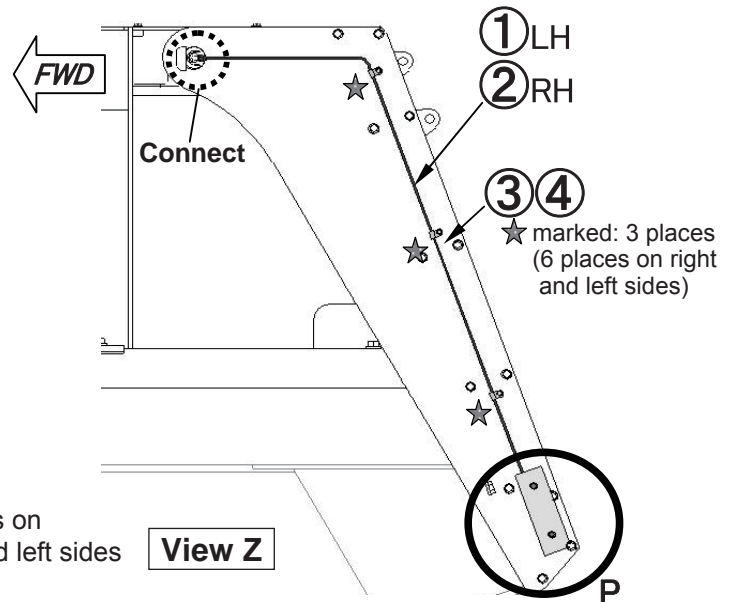
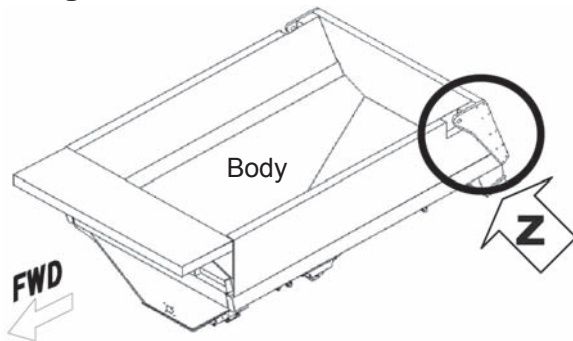
	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-25250	BRACKET	1	Packed separately (M42-05-113)
(2)	56B-83-25260	BRACKET	1	Packed separately (M42-05-113)
(3)	01024-81235	BOLT, SEMS	8	Packed separately (M42-05-113)
(4)	56B-83-16480	PIN	2	Packed separately (M42-05-113)
(5)	56B-83-16460	WASHER	4	Packed separately (M42-05-113)
(6)	56D-83-16160	SEAL	2	Packed separately (M42-05-113)
(7)	04065-08025	SNAP RING	2	Packed separately (M42-05-113)
(8)	56B-83-16490	WASHER	2	Packed separately (M42-05-113)
(9)	01010-82045	BOLT	2	Packed separately (M42-05-113)
(10)	01643-32060	WASHER	2	Packed separately (M42-05-113)
(11)	56B-83-16450	BRACKET	2	Packed separately (M42-05-113)
(12)	567-50-11450	BEARING	2	Packed separately (M42-05-113)
(13)	01010-82060	BOLT	8	Packed separately (M42-05-113)
(14)	01643-32060	WASHER	8	Packed separately (M42-05-113)
(15)	56B-83-25350	PLATE	6	Packed separately (M42-05-113)
(16)	566-52-12210	NIPPLE	2	Packed separately (M42-05-113)
(17)	421-09-12540	ELBOW	2	Packed separately (M42-05-113)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 19 mm, 30 mm	1 each	Crane	1
	Impact wrench	1	Stool (Work stand)	1
	Torque wrench	1		
Others				

Connection and fixing of grease tubes

1) Connect and fix the grease tubes to the tail gate.

※ Same process on right and left sides



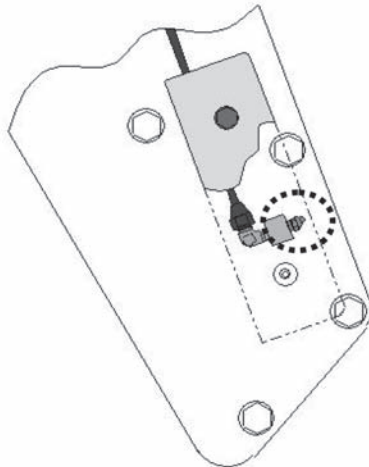
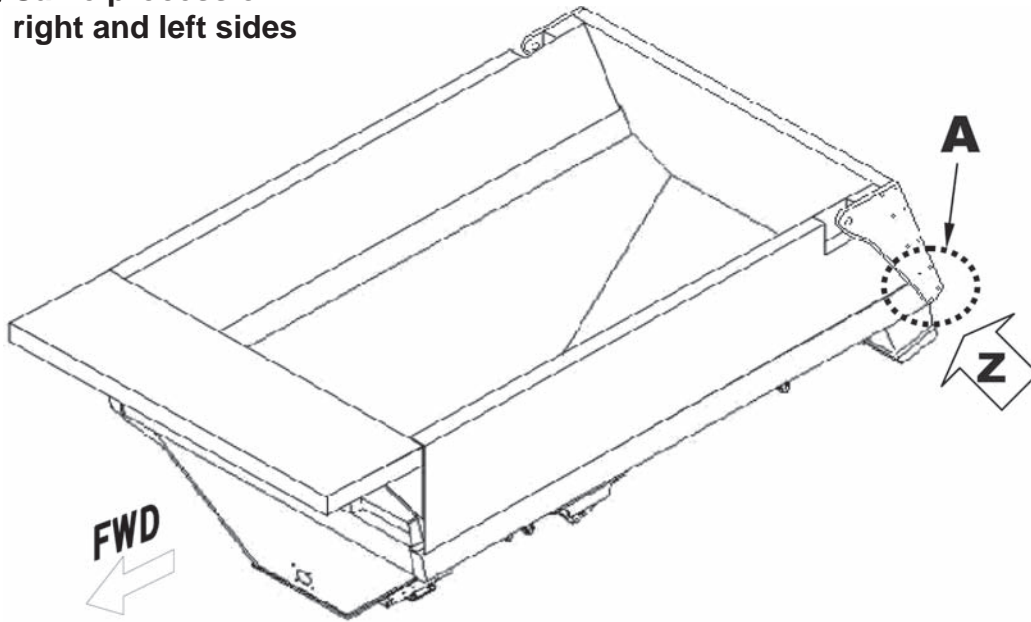
Detail P

	Part No.	Part name	Q'ty	State of parts (Parts list No.)
(1)	56B-83-25370	TUBE	1	Packed separately (M42-05-114)
(2)	56B-83-25380	TUBE	1	Packed separately (M42-05-114)
(3)	04434-50610	CLIP	6	Packed separately (M42-05-114)
(4)	01024-80816	BOLT, SEMS	6	Packed separately (M42-05-114)
(5)	421-09-12540	ELBOW	2	Packed separately (M42-05-114)
(6)	07020-00000	FITTING	2	Packed separately (M42-05-114)
(7)	56C-86-11140	BRACKET	2	Packed separately (M42-05-114)
(8)	01024-81016	BOLT, SEMS	4	Packed separately (M42-05-114)

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Socket 13 mm, 17 mm	1 each	Stool (Work stand)	1
	Impact wrench	1		
Others				

1) Supply grease (2 places marked with A on the right and left sides).

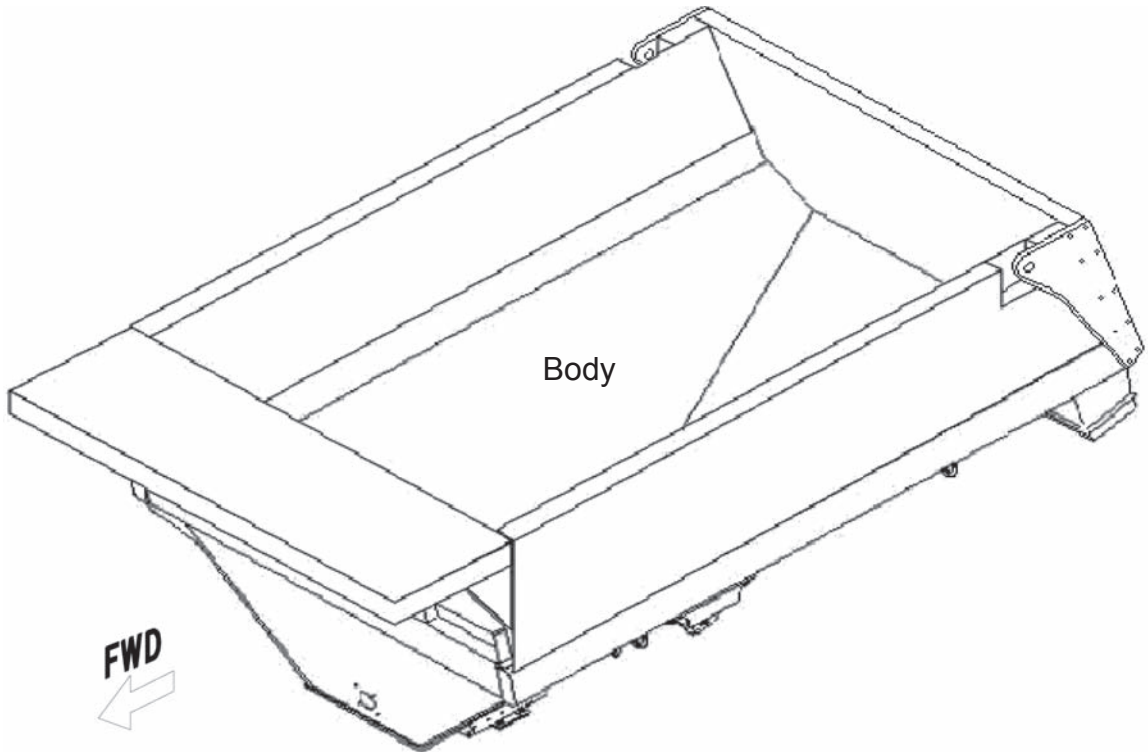
※ Same process on right and left sides



View Z

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Grease gun (G2-LI)	1		
	Others			

1) Touch up paint the body.



- Touch up paint the parts of the body rubbed with the slings with natural yellow paint.

Precautions	Necessary tools		Necessary equipment	
	Name	Q'ty	Name	Q'ty
	Touch up spray	4		
Others				

No.	Inspection items	Judgment procedures and criteria	Check	Maintenance	Remarks
19	Shock made when dump body is lower to end	There should be no harsh shock when the dump body gets seated on the frame (sensory check). *Perform this check after completing the calibration.			
20	Function of positioner	Operate lever to RAISE position and check that it does not return to HOLD when released. Operate lever to RAISE position to raise dump body and check that it automatically returns to HOLD at a point 50 – 100 mm before end of H/T cylinder stroke.			
21	Alignment of dump body on right and left	When dump body is raised fully, it must not sway to right or left.			
		When dump body is lower fully, it must come in contact with mount evenly. (Contact area must be at least 60%.)			
		The clearance at the hinge pin section should not exceed 1mm on one side. (Perform this check for both the clearances on the right and left sides.)			
		The clearance at the deflection stopper should be 1 to 2 mm on one side when the dump body is in the lower end position.			
22	Body lifting speed (Oil temperature: 80°C)	Engine speed: Rated speed (2,000rpm) Standard: 12.0 ± 1.5 sec, Measured value: () sec			
23	Body lowering speed (Lever at FLOAT, Oil temperature: 70 – 90 °C)	Power down (from No. 1 cylinder: Hi to No. 2 cylinder: LiL) Standard: 15.0±1.5 sec, Measured value:()sec			
24	Hydraulic drift of dump body	Hydraulic drift in 5 minutes must be 85 mm or less. (From point where cylinder No. 2 is extended by 100 mm). Measured value: () mm			
Stop truck on level ground and measure.					
25	Length of suspension cylinder (Front) * Measure with dump body empty.	Length must be shorter than dimension A. Dimension A: 153 ± 10 mm Measured value: Left () mm, Right () mm			
26	Length of suspension cylinder (Rear) * Measure with dump body empty.	Length must be shorter than dimension A. Dimension A: 96 ± 5 mm Measured value: Left () mm, Right () mm			
Inspect each part.					
27	Function of safety pin	Safety pin must be inserted without obstruction in right and left stopper holes.			
28	Storage function of safety pin	Safety pin must be removed from, installed to, and locked at storage position securely.			
29	Inspection around engine	No oil and water leakage.			
30	Inspection around transmission	No oil leakage.			
31	Inspection of hydraulic oil system (tank, cylinder, pump, piping)	No oil leakage.			
32	Tightness of tire hub nuts *See the Assembling Procedure for the tightening torque specification.	(1) Front left: Should be retightened to the specification.			
		(2) Front right: Should be retightened to the specification.			
		(3) Center left: Should be retightened to the specification.			
		(4) Center right: Should be retightened to the specification.			
		(5) Rear left: Should be retightened to the specification.			
		(6) Rear right: Should be retightened to the specification.			
33	Tire inflation pressure (When dump body is empty)	Standard: Shown at left Measured value: Front left () MPa) Front right () MPa)			
	29.5-R25 (Standard for Japanese markets) Front wheels : 0.37 ± 0.01 Mpa Front wheels & Rear wheels : 0.37 ± 0.01 Mpa	Standard: Shown at left Measured value: Center left inside () MPa) Center right inside () MPa)			
	BS VKT (Standard for other markets than Japan) Front wheels : 0.37 ± 0.01 Mpa Front wheels & Rear wheels : 0.37 ± 0.01 Mpa	Standard: Shown at left Measured value: Rear left outside () MPa) Rear right outside () MPa)			

No.	Inspection items	Judgment procedures and criteria	Check	Maintenance	Remarks
34	Flaw of tires (6 wheels)	Tires must be free from flaw and tear.			
35	Hoist cylinders (Both sides)	Plated surfaces must be free from rust, harmful flaw, spatter, paint, etc.			
Remarks (Reports)					
<p>· Enter any problem found during the field inspection in this space.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>					

Calibration of dump body system

Note: Before starting the calibration, make sure all adjustments of the dump body system and potentiometer have been satisfactorily completed.

【Calibration procedure】

- 1) Start the engine and let it operate to warm the hydraulic oil to 80 to 90°C.
- 2) With the dump body in the seated position (dump body caution light OFF), keep the dump lever in the FLOAT position for at least 5 seconds.
- 3) With the dump body raised to the end of stroke, keep the dump lever in the UP position for at least 5 seconds.
- 4) Bring the dump body to the seated position.
- 5) With the engine running at a low idle, move the dump lever to the UP and FLOAT positions several times.
(* Move the lever to the end of stroke both when placing it into the UP position and the FLOAT position.)
- 6) With the engine running at a high idle, move the dump lever to the UP and FLOAT positions several times.
(* Move the lever to the end of stroke both when placing it into the UP position and FLOAT position.)
- 7) Calibration can be considered to have been satisfactorily completed if the dump body gets seated without shock in both Steps 5) and 6).

HM400-2 ARTICULATED DUMP TRUCK

Form No GEN00042-04
