# TRANSPORTATION

## **1. PREPARATION FOR TRANSPORTATION**

- When transporting the machine, observe the various road rules, road transportation vehicle laws and vehicle limit ordinances, etc.
- 2) Select proper trailer after confirming the weight and dimension from the chapter 2, specification.
- Check the whole route such as the road width, the height of bridge and limit of weight and etc., which will be passed.
- Get the permission from the related authority if necessary.
- <sup>5)</sup> Prepare suitable capacity of trailer to support the machine.
- 6) Prepare gangplank for safe loading referring to the below table and illustration.

А	В
1.0	3.65 ~ 3.85
1.1	4.00 ~ 4.25
1.2	4.35 ~ 4.60
1.3	4.75 ~ 5.00
1.4	5.10 ~ 5.40
1.5	5.50 ~ 5.75





# 2. DIMENSION AND WEIGHT

### 1) BASE MACHINE 1

Mark	Description	Description Unit Specification	
L	Length	mm (ft-in)	7550 (24' 9")
Н	Height	mm (ft-in)	3620 (11' 11")
W	Width	mm (ft-in)	3775 (12' 5")
Wt	Weight	kg (lb)	65420 (144230)

 $\,$  % With 700 mm (28") double grouser shoes.

\* Remove catwalk for transport.



### 2) BASE MACHINE 2

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	5950 (19' 6")
Н	Height	mm (ft-in)	2750 ( 9' 0")
W	Width	mm (ft-in)	3420 (11' 3")
Wt	Weight	kg (lb)	24800 (54670)



### 3) TRACK FRAME

Dimension mm (ft-in)					Weight
	Shoe	kg (lb)			
	700	6435	1480	1160	13370
	(24")	(21' 1")	(4' 10")	(3' 10")	(29480)
	800	6435	1480	1160	13780
	(32")	(21' 1")	(4' 10")	(3' 10")	(30380)
	900	6435	1480	1210	14190
	(35")	(21' 1")	(4' 10")	(4' 0")	(31280)

# 4) BOOM ASSEMBLY

Dimension mm (ft-in)				Weight
Boom L H W			kg (lb)	
7200	7565	2745 1340		8810
(23' 7")	") (24' 10") (9' 0") (4' 5")			(19420)
8200	8565	2580	1340	9420
(26' 11")	(28' 1")	(8' 6")	(4' 5")	(20770)

\* Includes arm cylinder, piping and pin





### 5) ARM ASSEMBLY

Dimension mm (ft-in)				Weight
Arm	L	Н	W	kg (lb)
2950	4490	1780	730	4950
(9' 8")	(14' 9")	(5' 10")	(2' 5")	(10910)
3600	5135	1600	730	4990
(11' 10")	(16' 10")	(5' 3")	(2' 5")	(11000)
4400	5930	1590	730	5140
(14' 5")	(19' 5")	(5' 3")	(2' 5")	(11330)

\* Includes bucket cylinder, linkage and pin



### 6) BUCKET ASSEMBLY

Dimension mm (ft-in)				Weight
Capacity	L	Н	W	kg (lb)
♦ 3.70 m <sup>3</sup>	2570	2090	1845	4370
(4.84 yd <sup>3</sup> )	(8' 5")	(6' 10")	(6' 1")	(9630)
∕4.25 m³	2570	2090	2045	4730
(5.56 yd <sup>3</sup> )	(8' 5")	(6' 10")	(6' 9")	(10430)
∕4.85 m³	2570	2090	2245	5000
(6.34 yd <sup>3</sup> )	(8' 5")	(6' 10")	(7' 4")	(11020)
♦ 5.40 m <sup>3</sup>	2570	2090	2445	5275
(7.06 yd <sup>3</sup> )	(8' 5")	(6' 10")	(8' 0")	(11630)
♦ 5.80 m <sup>3</sup>	2570	2090	2585	5555
(7.59 yd <sup>3</sup> )	(8' 5")	(6' 10")	(8' 6")	(12250)
<b>♦</b> 3.70 m <sup>3</sup>	2545	2150	1845	4850
(4.84 yd <sup>3</sup> )	(8' 4")	(7' 1")	(6' 1")	(10690)
<b>♦</b> 4.25 m³	2545	2150	2045	5235
(5.56 yd <sup>3</sup> )	(8' 4")	(7' 1")	(6' 9")	(11540)
<b>◆</b> 4.85 m³	2545	2150	2245	5530
(6.34 yd3)	(8' 4")	(7' 1")	(7' 4")	(12190)
<b>◆5.40</b> m³	2545	2150	2445	5830
(7.06 yd <sup>3</sup> )	(8' 4")	(7' 1")	(8' 0")	(12850)
<b>♦</b> 4.25 m³	2570	2090	2045	4150
(5.56 yd <sup>3</sup> )	(8' 5")	(6' 10")	(6' 9")	(9150)
★3.60 m <sup>3</sup>	2485	2040	1920	4600
(4.71 yd <sup>3</sup> )	(8' 2")	(6' 8")	(6' 4")	(10140)



 $\diamondsuit$ : Heavy duty

Rock-heavy duty
Light-heavy duty

★ : Rock-special heavy duty (Cubic marble handling)

# 7) BOOM CYLINDER

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	3185 (10' 5")
Н	Height	mm (ft-in)	350 ( 1' 2")
W	Width	mm (ft-in)	550 ( 1' 10")
Wt (1EA)	Weight	kg (lb)	860 (1900)

\* Included piping.

### 8) CAB ASSEMBLY

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	1950 (6' 5") [2070 (6' 10")]
н	Height	mm (ft-in)	1780 (5' 10") [1822 (6')]
W	Width	mm (ft-in)	1104 (3' 7") [1126 (3' 8")]
Wt	Weight	kg (lb)	486.8 (1073) [641.7 (1415)]

[]: with FOG GUARD

# 9) COUNTERWEIGHT

Dimension mm (ft-in)				Weight
	kg (lb)			
отр	3420	1540	790	13600
510	(11' 3")	(5' 1")	(2' 7")	(29980)
OPT	3420	1540	790	16500
UFI	(11' 3")	(5' 1")	(2' 7")	(36380)

# 10) CATWALK

Dimension mm (ft-in)				Weight	
Arm	Arm L H W				
LH Front, Rear	1475	50	480	30	
RH Rear	(4' 10")	(2")	(1' 7")	(66)	
LH Middle	1970	50	480	45	
	(6' 6")	(2")	(1' 7")	(99)	
RH Front	1200	50	480	30	
(2 EA)	(3' 11")	(2")	(1' 7")	(66)	









### **3. DISASSEMBLE FOR TRANSPORTATION**

- 1) DISCONNECTING HYDRAULIC HOSES AND LINES
- (1) Position the machine on flat, firm and level ground.
- (2) Retract the bucket cylinder and arm cylinder completely.
- (3) Lower the boom to the ground as shown.
- (4) Stop the engine.
- (5) Turn the safety knob to the LOCK position to lock the system securely.
- \* Refer to the page 3-39 for details.
- (6) Turn the engine start switch to ON position.Do not start the engine.
- (7) Turn the safety knob to the UNLOCK position, Move the left and right operating levers, respectively to the full extension in all directions to remove internal pressure from the hydraulic circuits. And then turn the safety knob to the LOCK position.
- (8) Turn the start switch to OFF position.
- (9) Release internal pressure in the hydraulic tank through the air breather of the hydraulic tank.
- (10) Disconnect hoses and lines.
- \* Treat oil in an environmentally safe way.
- (11) Dismantle the components (boom, arm, counterweight etc.)
- A Immediately after operating the machine, the hot hydraulic oil can cause severe burns to unprotected skin.
- ▲ These may be residual hydraulic pressure can remain in the hydraulic system. Serious injury may result if this residual pressure is not released before any service is done on the hydraulic system.



#### 2) DISASSEMBLING ATTACHMENT

\* Follow the disconnecting hydraulic hoses and lines procedure before disassemble the components.

### (1) Bucket and arm with bucket cylinder

Use cable sheaths to protect the lifting cable from being damaged by the edges of the arm. Protect piston rod and the cylinder tube.



#### (2) Boom with arm cylinder

Use cable sheaths to protect the lifting cable from being damaged by the edges of the boom. Secure piston rod of the arm cylinder to the cylinder tube.



### 3) COUNTERWEIGHT REMOVAL AND INSTALLATION

### (1) Counterweight removal

- ① Position the machine on flat, firm and level ground, free from any obstruction or interference.
- 2 Keep the service position.
- ③ Turn the safety knob to the LOCK position to lock the system securely.
- \* Refer to the page 3-39 for details.
- ④ As shown in the illustration, connect the lifting cables or slings with sufficient strength for the counterweight at the lifting eye correctly.
- 5 Disassemble four bolts.
- 6 Lift the counterweight enough.
- O Place the counterweight onto suitable support.

### (2) Counterweight installation

①Carry out installation in the reverse order to removal.

•Tightening torque :  $390\pm40 \text{ kgf} \cdot \text{m}$ (2820±290 lbf  $\cdot$  ft)

- ▲ Turn the safety knob to the LOCK position to lock the system securely, See the safety knob on page 3-39. And attach a warning tag (do not start the engine) to the left operating lever.
- Personal injury or death can occur from a counterweight falling during installation. Do not allow personnel under or around the counterweight during installation.
- ▲ Use certified cables and shackles of adequate load rating. Improper lifting can allow the load to shift and cause injury or death.



### 4) DISCONNECTING UPPER AND LOWER STRUCTURE

- (1) Disconnect the upper and lower structure for transporting if needed.
- ① Check the weight, length, width and height of the machine referring to the "dimension and weight" when you are going to disconnect.
- ② Disassemble and hoist the machine on the firm and level ground.
- ③ Turn the safety knob to the LOCK position to lock the system securely.
- ④ Stop the engine and check the safety of the machine around and then lock the door of the cab, front window and engine hood.
- (5) Loosen the upper bolts of the swing bearing to disconnect the upper and lower structure.
- <sup>(6)</sup> Prepare the hoist cables and slings with sufficient strength for the machine weight and connect them to exact point as figures.
- ⑦ In case of the upper structure, connect the wire rope to the lifting eye of the upper frame and mounting hole of counterweight rear side.
- (8) In case of the lower frame, connect the wire rope to between track roller No. 1 and No.2 and between track roller and idler.
- Ise stay between the wire rope and the machine to prevent damage to the rope or machine.

Set the lifting angle of the wire rope to  $30^{\circ} \sim 40^{\circ}$ .

- Remove any parts (footboard, etc) that may be damaged by contact with the lifting device damaged before lifting.
- ① After the machine comes off the ground, check the hook condition and the lifting posture, and then lift slowly.
- ▲ Do not disconnect and hoist the machine with personal in the cab or on the machine.
- ▲ Use the hoist cables and slings with sufficient strength and without damage and deterioration.

Place the safety knob to LOCK position to prevent the machine moving when hoisting the machine.

The wrong hoisting method or installation of wire rope can cause serious injury or damage to the machine.

- A Do not load to the wire rope abruptly.
- A Keep clear of personnel under or around hoisting machine.
- A Make sure the hoisting devices are proper situations and conditions.



## 4. ADJUSTABLE TRACK GAUGE

### 1) LOWER TRACK RETRACTION

#### $f \Delta$ Do not retract the track gauge except transporting purpose.

- (1) Remove 12 bolts (1), and spacers from lower track (2) to the retracted.
- \* Do not loosen two bolts (3) on guide (4).



- (2) Turn superstructure so that it is perpendicular to lower track to be retracted. Raise lower track to approximately 15degree from ground using a jack. Lower track should slide by its own weight and hit against the stop.
- If lower track does not slide in this condition, allow lower track that is not contraction ground to move back and forth slowly.
- ▲ The arm must be set at 90~110°. Never set it at an angle less than 90°.
- (3) After lower track (2) has slid into place, lower superstructure to ground.Align the bolts holes and install 6 spacers and bolts (1).
- \* Tighten bolts to  $280 \pm 30 \text{ kgf} \cdot \text{m} (2020 \pm 220 \text{ lbf} \cdot \text{ft})$
- Repeat procedure at opposite side center frame support.





### 2) FRAME EXTENSION

- (1) Remove 6 bolts (1), and spacers from lower track (2) to be extended.
- \* Do not loosen two bolts (3) on guide (4).



- (2) Turn superstructure so that it is perpendicular to lower track to be extended.
- (3) Attach one end of cable on arm and the other end on lower track.
- (4) Raise lower track slightly with jack and block.
- (5) Extend arm gradually to side frame out until it hits stop.
- (6) After lower track has slid into place, lower superstructure to ground. Remove cable.
- (7) Install 12 spacers and bolts (1).
- \* Tighten bolts to  $280 \pm 30 \text{ kgf} \cdot \text{m} (2020 \pm 220 \text{ lbf} \cdot \text{ft})$
- Repeat procedure at opposite side center frame support.



