

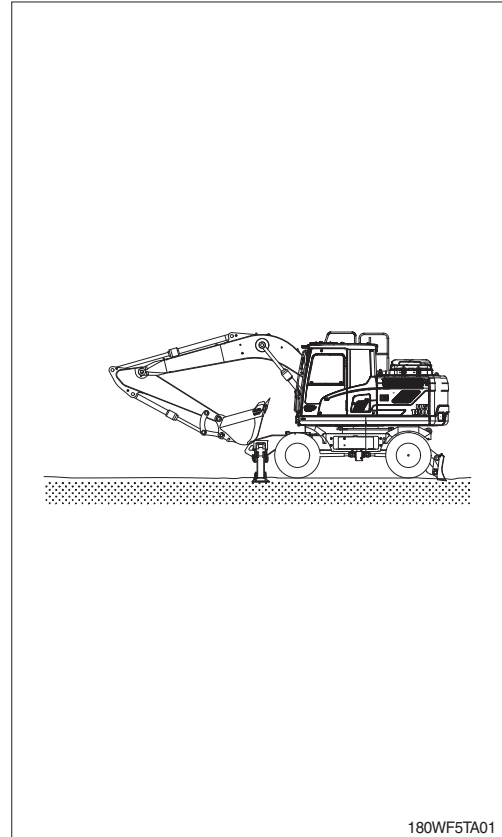
1. ROAD TRAVELING

As this machine can run at the maximum speed of 39 km/h (24.2 mph), it is not necessary to transport the machine on trailer in a short distance.

But the transportation by the trailer is convenient in a long distance.

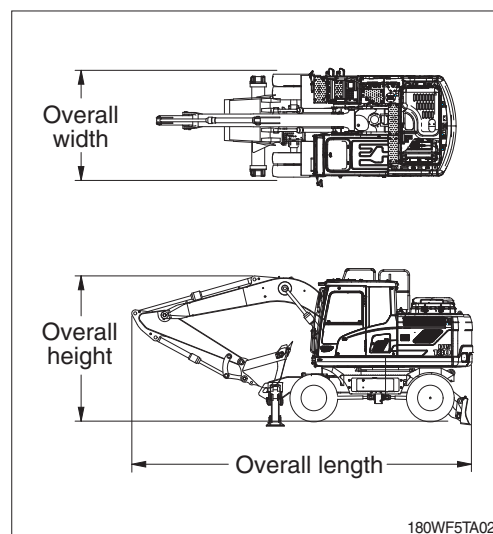
If it is necessary to travel on a road, observe the followings.

- 1) Comply with regulations regarding this machine for the sake of safety.
- 2) Perform daily inspection before starting the machine.
- 3) Cross the bridge after checking that it will safely support the machine weight. If the bridge can not support, a detour must be prepared or the bridge must be reinforced.
- 4) When traveling for a long distance, stop every hour to allow tires and other components to cool down and check any abnormality.
- 5) Drive with the bucket empty.



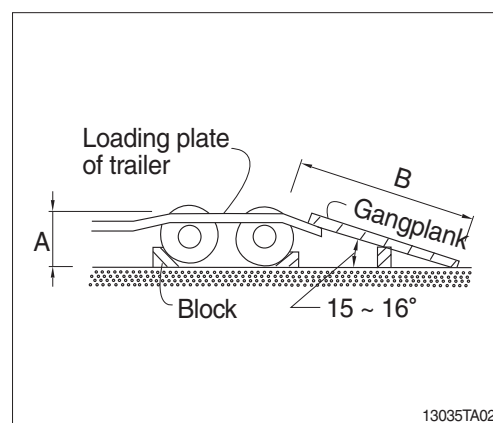
2. PREPARATION FOR TRANSPORTATION

- 1) 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.
- 3) Check the whole route such as the road width, the height of bridge and limit of weight and etc., which will be passed.
- 4) Get the permission from the related authority if necessary.
- 5) Prepare suitable capacity of trailer to support the machine.



- 6) Prepare gangplank for safe loading referring to the below table and illustration.

A	B
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



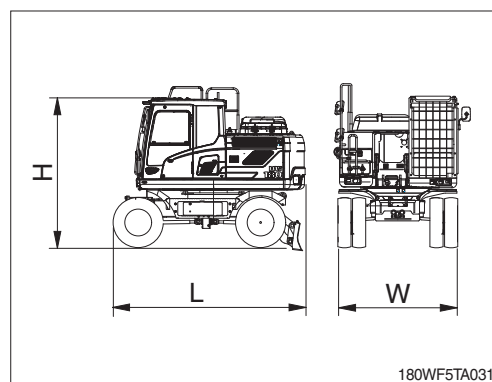
3. DIMENSION AND WEIGHT

1) HW160

(1) Base machine

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	5030 (16' 6")
H	Height	mm (ft-in)	3190 (10' 6")
W	Width	mm (ft-in)	2500 (8' 2")
Wt	Weight	kg (lb)	13735 (30280)

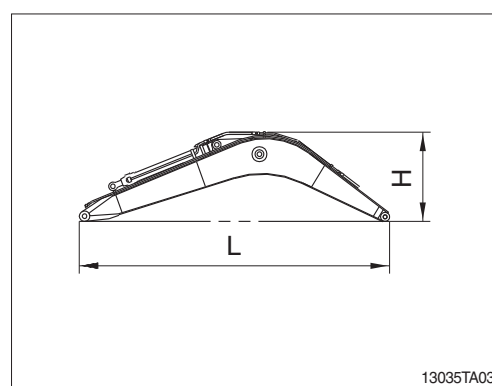
※ 2650 kg (5840 lb) counterweight.



(2) Boom assembly

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	5170 (17' 0")
H	Height	mm (ft-in)	1520 (5' 0")
W	Width	mm (ft-in)	590 (1' 11")
Wt	Weight	kg (lb)	1290 (2845)

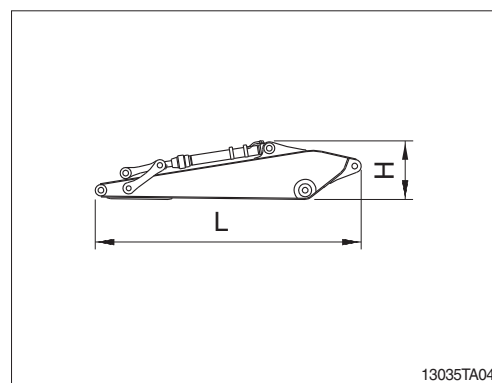
※ 5.0 m (16' 5") boom with arm cylinder (Included piping and pins).



(3) Arm assembly

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	3100 (10' 2")
H	Height	mm (ft-in)	810 (2' 8")
W	Width	mm (ft-in)	450 (1' 6")
Wt	Weight	kg (lb)	765 (1690)

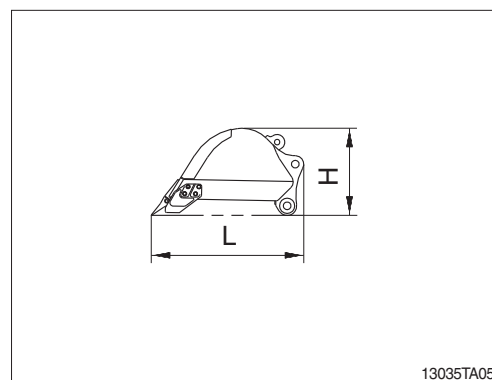
※ 2.2 m (7' 3") arm with bucket cylinder (Included linkage and pins).



(4) Bucket assembly

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	1510 (4' 11")
H	Height	mm (ft-in)	930 (3' 1")
W	Width	mm (ft-in)	1110 (3' 7")
Wt	Weight	kg (lb)	600 (1320)

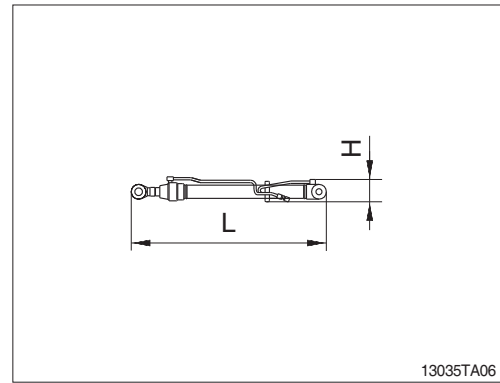
※ 0.70 m³ (0.92 yd³) SAE heaped bucket (Included tooth and side cutters).



(5) Boom cylinder (2 EA)

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	1780 (5'10"
H	Height	mm (ft-in)	230 (0' 9"
W	Width	mm (ft-in)	330 (1' 1"
Wt	Weight	kg (lb)	320 (705)

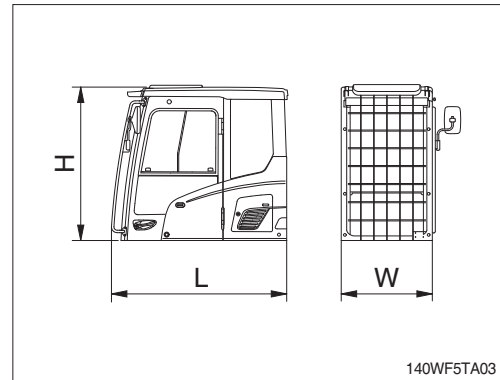
※ Included piping.



(6) Cab assembly

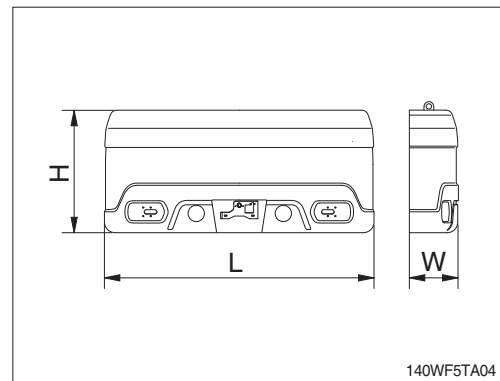
Mark	Description	Unit	Specification
L	Length	mm (ft-in)	1950 (6' 5") [2070 (6' 10")]
H	Height	mm (ft-in)	1780 (5' 10") [1822 (6')]
W	Width	mm (ft-in)	1104 (3' 7") [1126 (3' 8")]
Wt	Weight	kg (lb)	486.8 (1073) [641.7 (1415)]

[] : with FOG GUARD



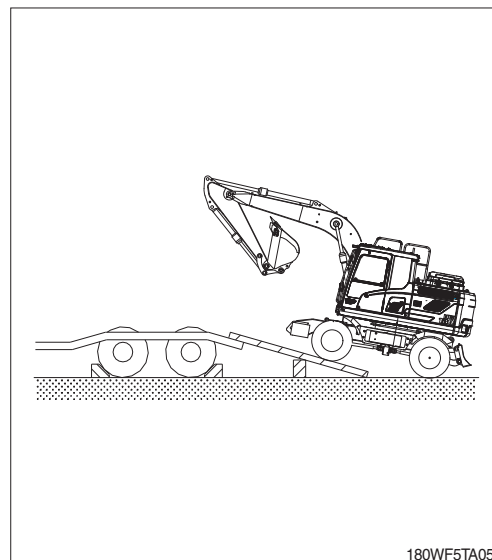
(7) Counterweight

Mark	Description	Unit	Specification
L	Length	mm (ft-in)	2475 (8' 1")
H	Height	mm (ft-in)	1150 (3' 9")
W	Width	mm (ft-in)	460 (1' 6")
Wt	Weight	kg (lb)	2650 (5840)

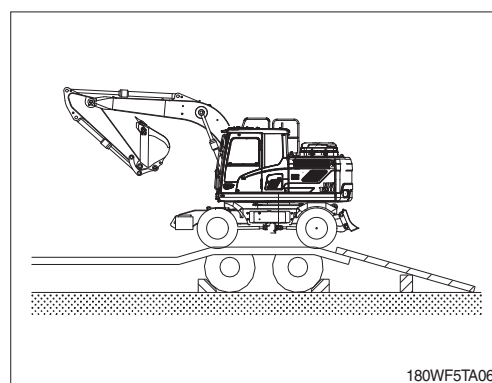


4. LOADING THE MACHINE

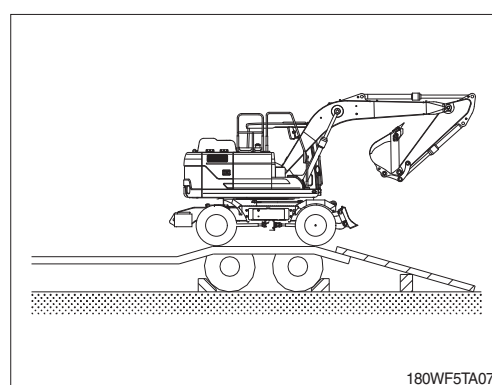
- 1) Load and unload the machine on a flat ground.
- 2) Use the gangplank with sufficient length, width, thickness and gradient.
- 3) Place block tires of the truck and the trailer not to move the trailer.
- 4) Place the swing lock device to the **LOCK** position before fixing the machine at the bed of trailer and confirm if the machine parallels the bed of trailer.
- 5) Drive straight and depress the acceleration pedal slowly on the gangplank with the two speed switch positioned as low speed.



- 6) Do the following after loading the machine to the trailer.
 - (1) Stop loading when the machine is located horizontally with the rear wheel of trailer.



- (2) Place the swing lock device to the **LOCK** position after the swing the machine 180 degree.



(3) Lower the working equipment gently after the location is determined.

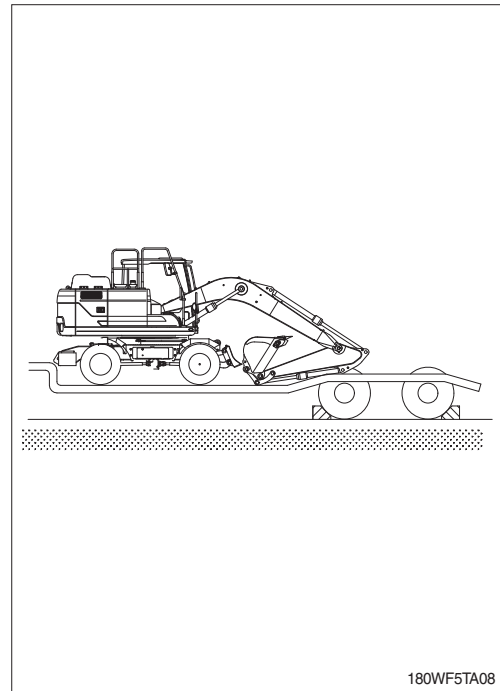
※ **Place rectangular timber under the bucket cylinder to prevent the damage of it during transportation.**

▲ **Be sure to keep the travel speed switch on the low speed while loading and unloading the machine.**

▲ **Avoid using the working equipment for loading and unloading since it will be very dangerous.**

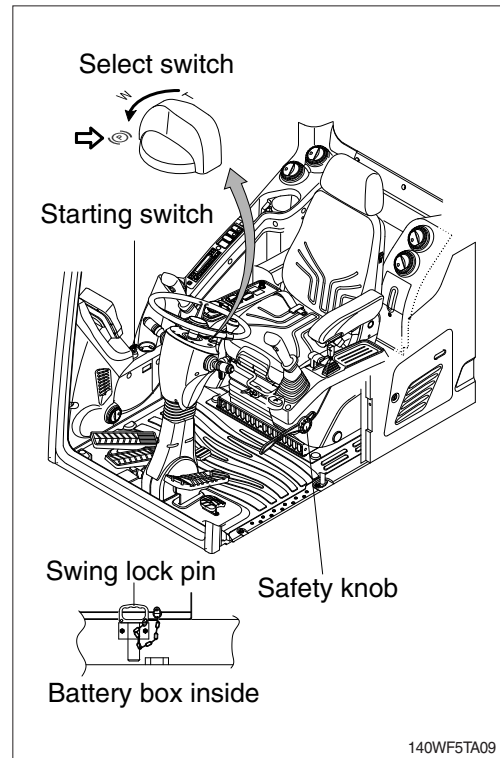
▲ **Do not operate any other device when loading.**

▲ **Be careful on the boundary place of loading plate or trailer as the balance of machine will abruptly be changed on the point.**

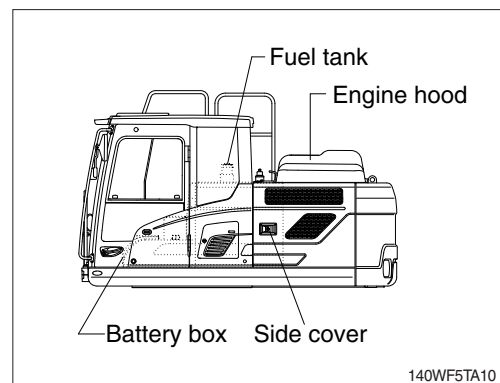


5. FIXING THE MACHINE

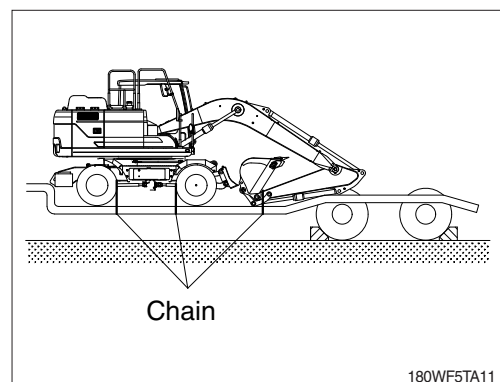
- 1) Place the swing lock device on the LOCK position.
- 2) Place the select switch to the parking position.
- 3) Keep the safety knob on the LOCK position.
- 4) Turn OFF all the switches and remove the key.



- 5) Secure all locks.



- 6) Place timber underneath of the tires and fix firmly with wire rope to prevent the machine from moving forward, backward, right or left.



6. LOADING AND UNLOADING BY CRANE

- 1) Check the weight, length, width and height of the machine referring to the chapter 2, specification when you are going to hoist the machine.
- 2) Use long wire rope and stay to keep the distance with the machine as it should avoid touching with the machine.
- 3) Put a rubber plate where the wire rope contact with the machine's body to prevent damage.
- 4) Place crane on the proper place.
- 5) After the boom is raised to the maximum high, install the wire rope and stay like the illustration.

- ⚠ **Make sure wire rope is proper size.**
- ⚠ **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 damage to the machine.**
- ⚠ **Do not load abruptly.**
- ⚠ **Keep area clear of personnel.**
- ⚠ **Recommend to manufacture the stays separately as per lifting conditions.**

