

# QUICK OPERATION GUIDE

## CRAWLER CRANE

# CC1908S-1

Serial No. 9003 and up

### WARNING

- This operation guide explains basic operation of the machine. Before starting work, always conduct checks written in OPERATION MANUAL.  
For safety cautions and detailed operation of the machine not explained in this book, please read and understand the separate "OPERATION MANUAL" before operating this machine.
- This quick operation guide does not replace the operation manual. This is just a short helpful information paper to assist the trained crane operator with the basic operation of the crane. For complete and detailed information we refer to the operation manual of the crane.

# MAEDA



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# 1. SAFETY


Safety cautions and detailed operation of the machine not explained in this book, please read and understand the separate "OPERATION MANUAL" before operating this machine.

## 1.1 SAFETY INFORMATION

This manual classifies hazards as follows to ensure this manual and the safety labels attached to this machine are easy to understand:

 <b>DANGER</b>	This indicates imminent hazards that can cause serious injury or death. It also provides information on how to avoid such hazards.
 <b>WARNING</b>	This indicates hazards that can cause serious injury or death. It also provides information on how to avoid such hazards.
 <b>CAUTION</b>	This indicates potential hazards that may cause minor or moderate injury or serious damage to the machine. It also provides information on how to avoid such hazards.

This manual also uses the following indications for precautions that must be adhered to and for other useful information:

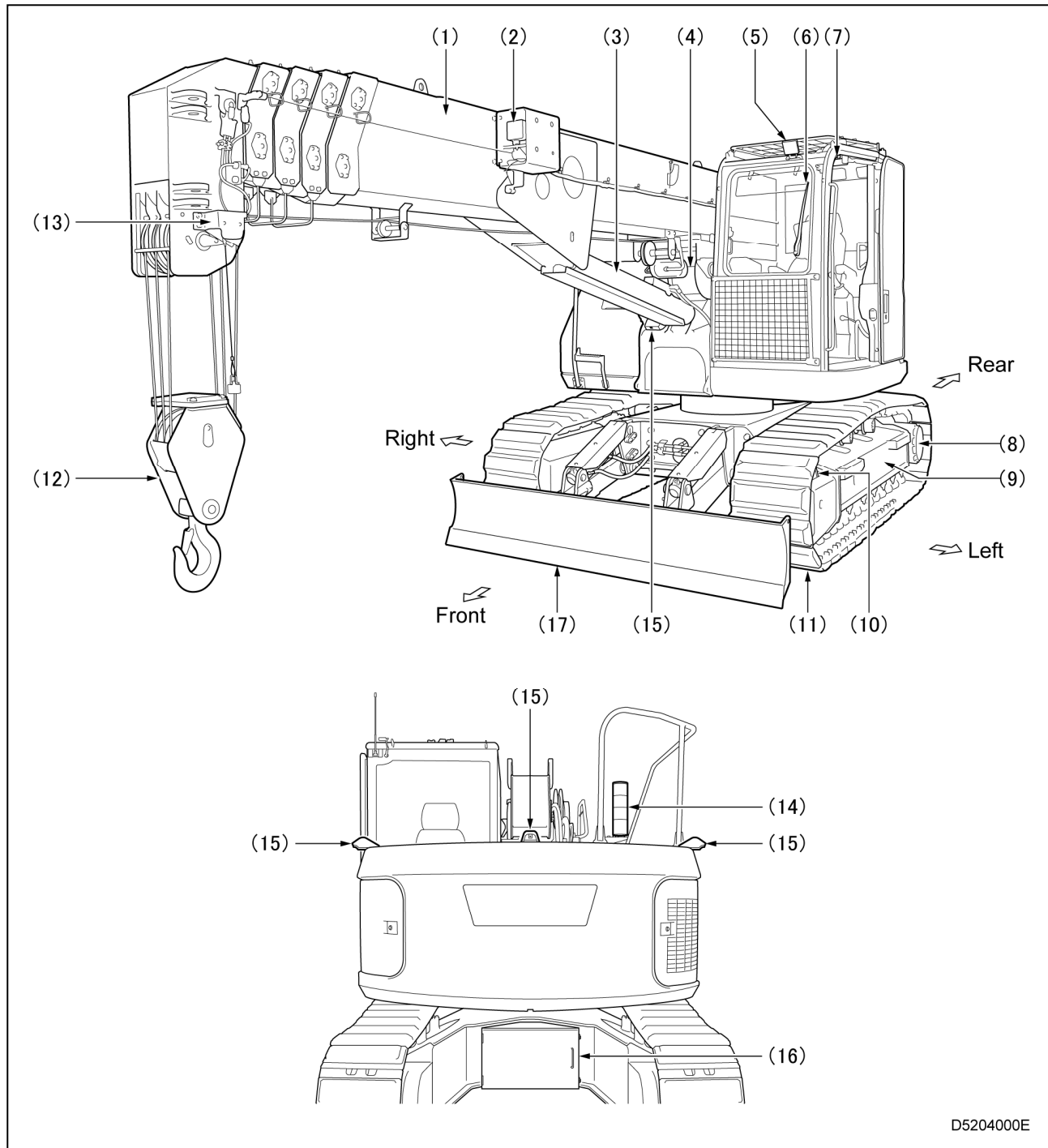
<b>IMPORTANT</b>	This denotes that failure to properly handle the machine may damage it or shorten its service life.
	This denotes useful information.

The operating procedures, inspection and maintenance procedures, and safety precautions described in this manual apply only when the machine is used for the specified tasks. The precautions given in this manual and on this machine do not necessarily cover every safety issue.

When carrying out machine operations or inspection and maintenance procedures that are not described in this manual, you are responsible for taking the necessary safety precautions. Regardless of the above, never attempt to perform work or operations that are prohibited in this manual.

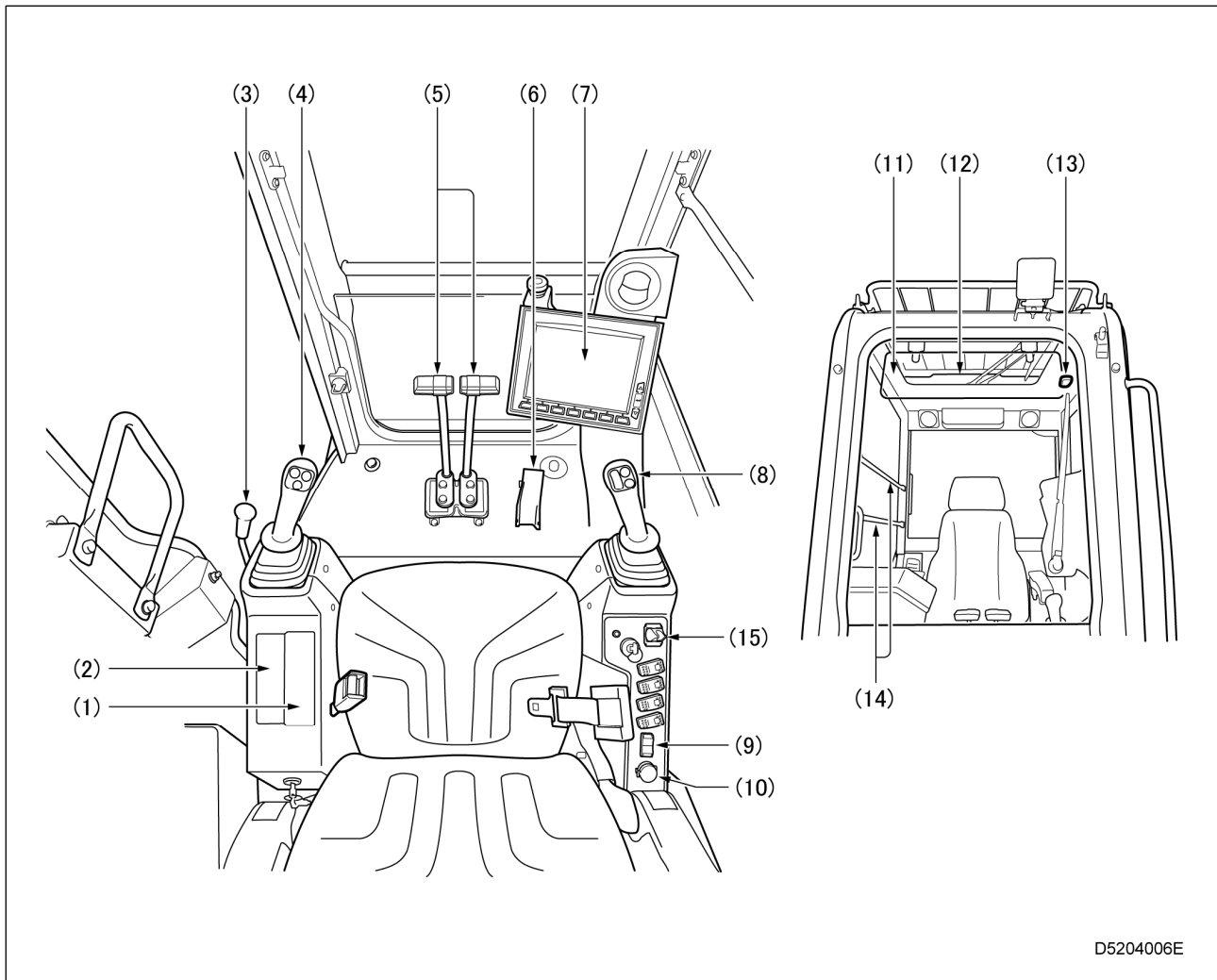
## 2. PART NAMES

### 2.1 MACHINE PART NAMES



- |                              |                               |
|------------------------------|-------------------------------|
| (1) Boom                     | (9) Track frame               |
| (2) Boom working light       | (10) Idler                    |
| (3) Boom derricking cylinder | (11) Crawler                  |
| (4) Winch                    | (12) Hook block               |
| (5) Head light               | (13) Overwinding detector     |
| (6) Wiper (Front window)     | (14) Working status lamp      |
| (7) Wiper (Roof window)      | (15) Multi-assist view camera |
| (8) Sprocket, travel motor   | (16) Toolbox (Option)         |
|                              | (17) Blade (Option)           |

## 2.2 CAB INTERIOR UNIT NAMES

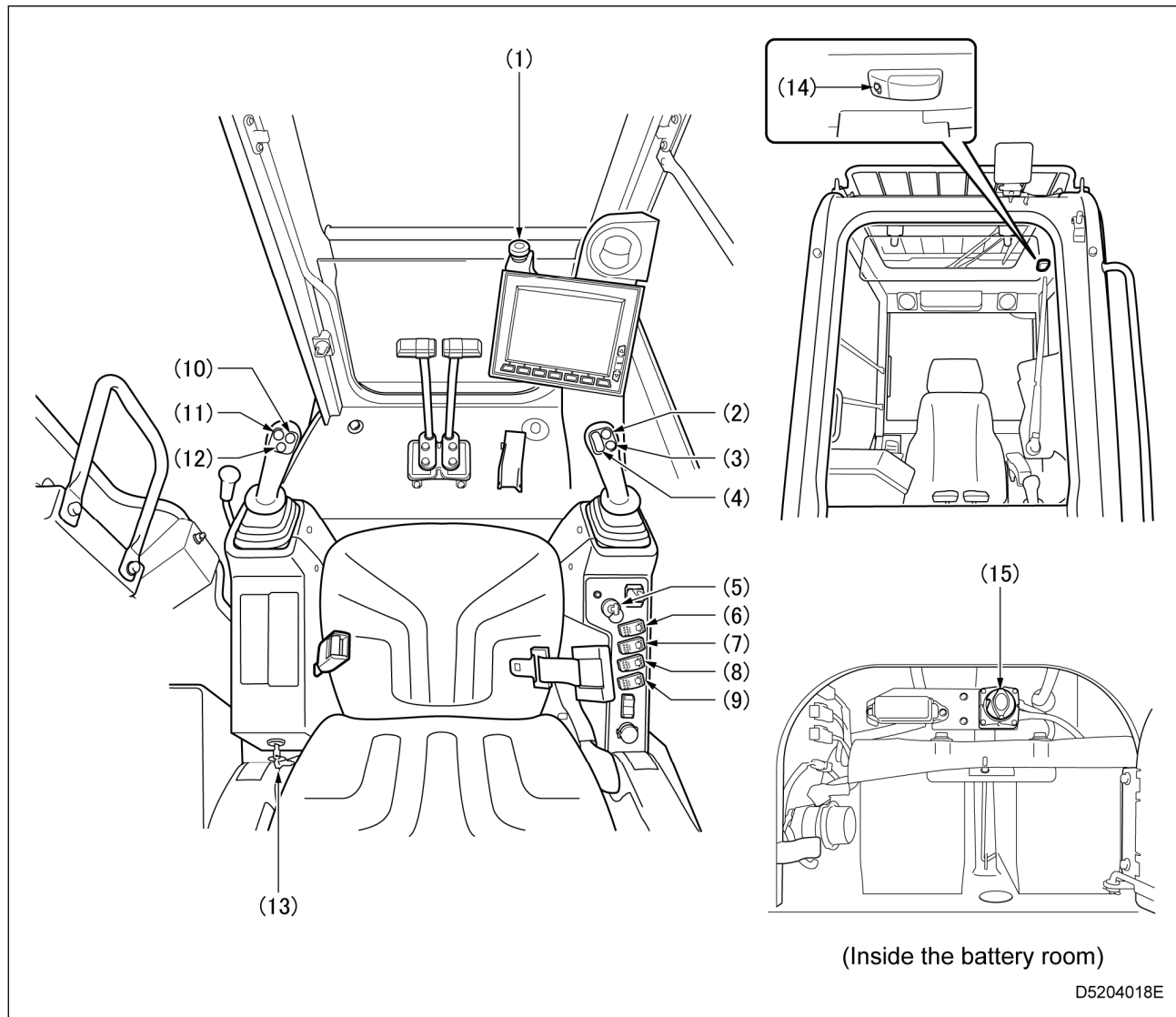


D5204006E

- (1) Air conditioner operation unit
- (2) Cab radio
- (3) Safety lock lever
- (4) Left-hand control lever
- (5) Travel levers
- (6) Accelerator pedal
- (7) Monitor

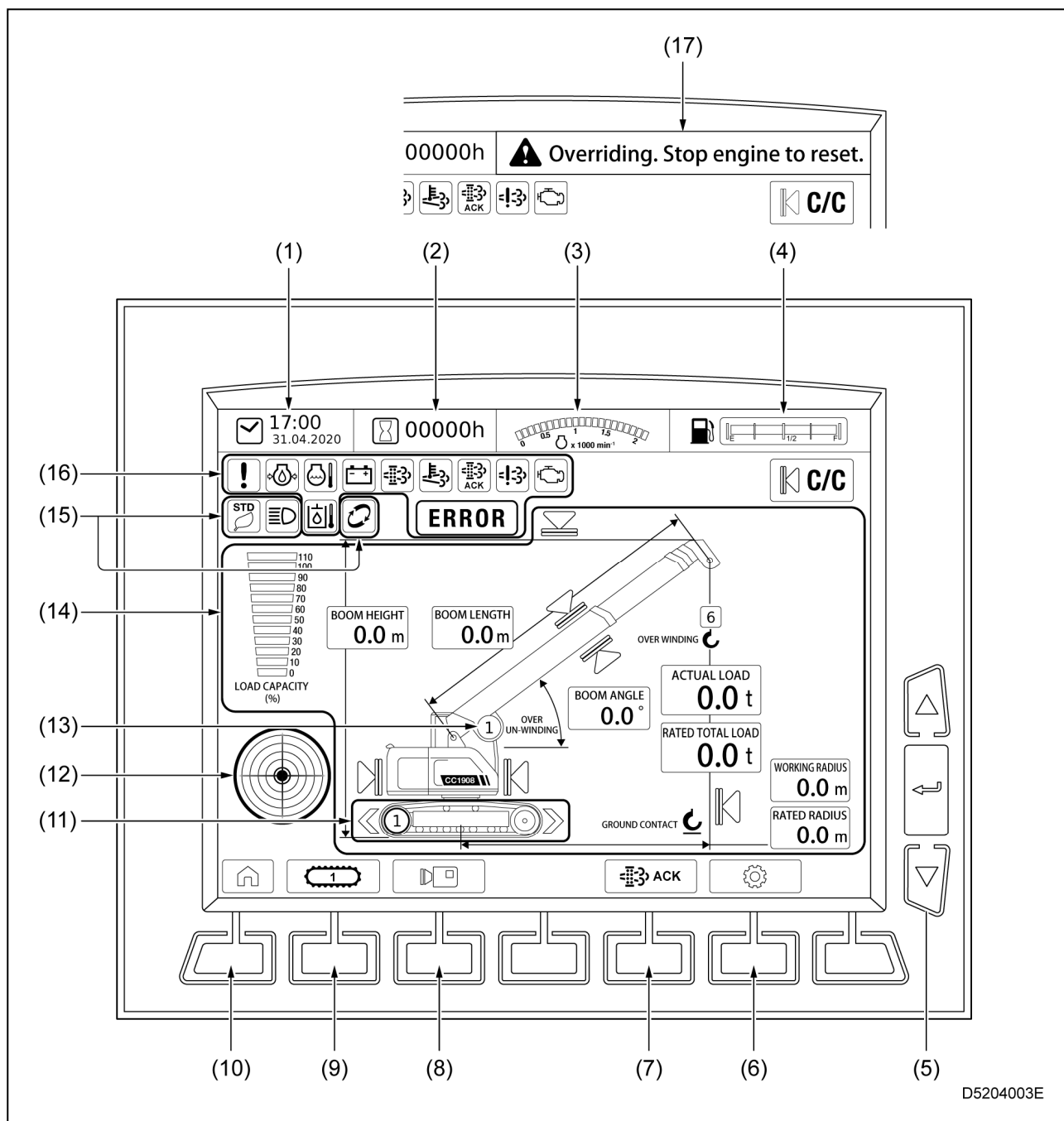
- (8) Right-hand control lever
- (9) USB power supply port
- (10) Accessory power supply
- (11) Sun visor
- (12) Sun shade
- (13) Interior lamp
- (14) Option bar (Option)
- (15) Blade control lever (Option)

## 2.3 SWITCHES



- |                                  |  |
|----------------------------------|--|
| (1) Emergency stop switch        | (9) Buzzer cancelling switch                   |
| (2) Horn switch                  | (10) Winch 1st speed/2nd speed selector switch |
| (3) Boom/fly jib selector switch | (11) Travel mode selector switch               |
| (4) Hook stowage lever           | (12) Camera selector switch                    |
| (5) Starter switch               | (13) Maintenance switch                        |
| (6) Light switch                 | (14) Interior lamp switch                      |
| (7) Front window wiper switch    | (15) Disconnecting switch                      |
| (8) Roof window wiper switch     |  |

## 2.4 MONITOR : HOME SCREEN

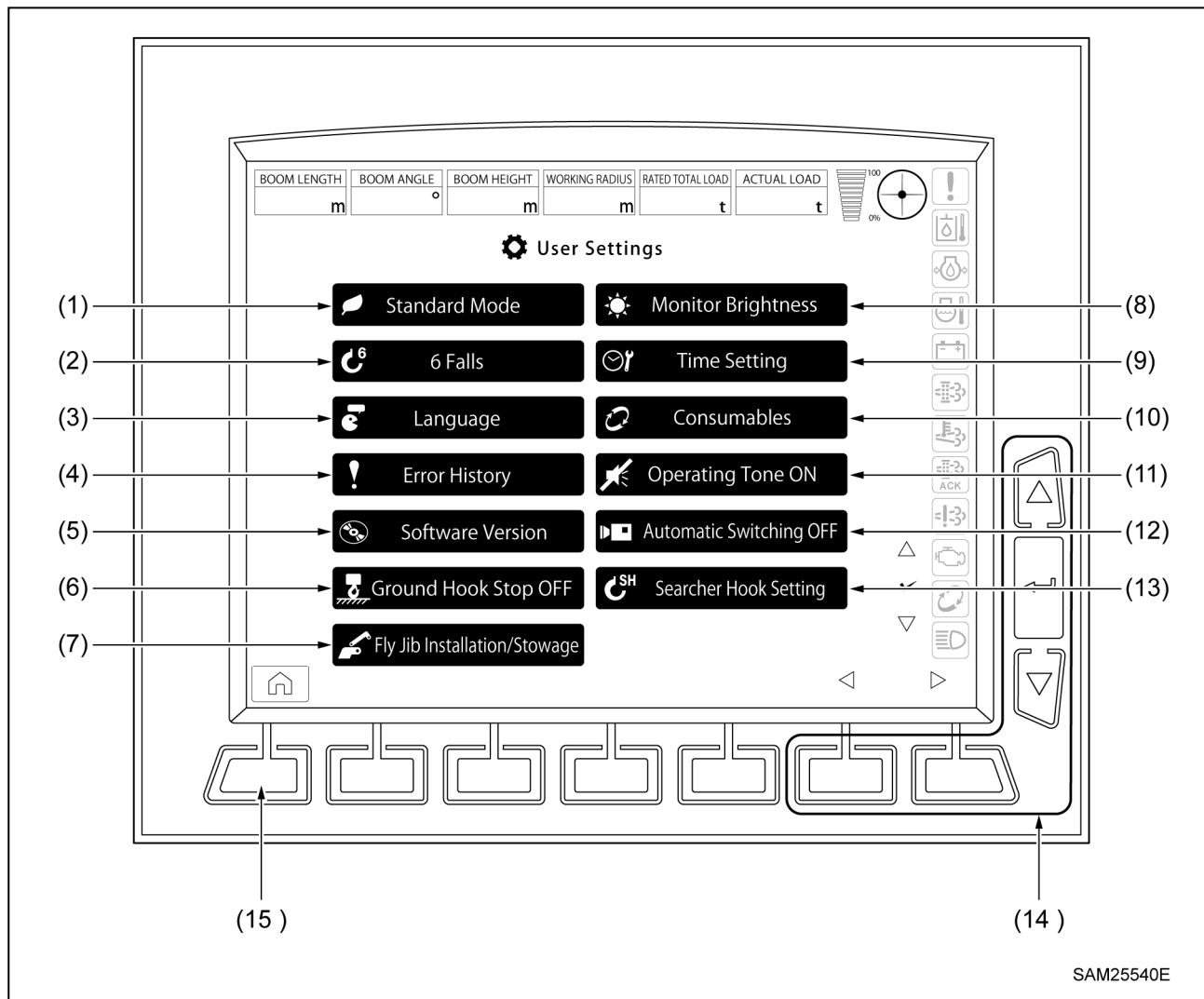


- |  |  |
|--|--|
| (1) Clock/date display                         | (10) Home switch                       |
| (2) Hour meter                                 | (11) Travel status                     |
| (3) Engine speed                               | (12) Level gauge                       |
| (4) Fuel gauge                                 | (13) Winch 1st speed/2nd speed display |
| (5) Pop-up selector switches (Home screen)     | (14) Moment limiter display            |
| (6) User setting switch                        | (15) Status display                    |
| (7) DPF stationary regeneration switch         | (16) Warning display                   |
| (8) Camera selector switch                     | (17) Message display                   |
| (9) Travel 1st speed/2nd speed selector switch |  |



## 2.5 MONITOR : USER SETTINGS SCREEN

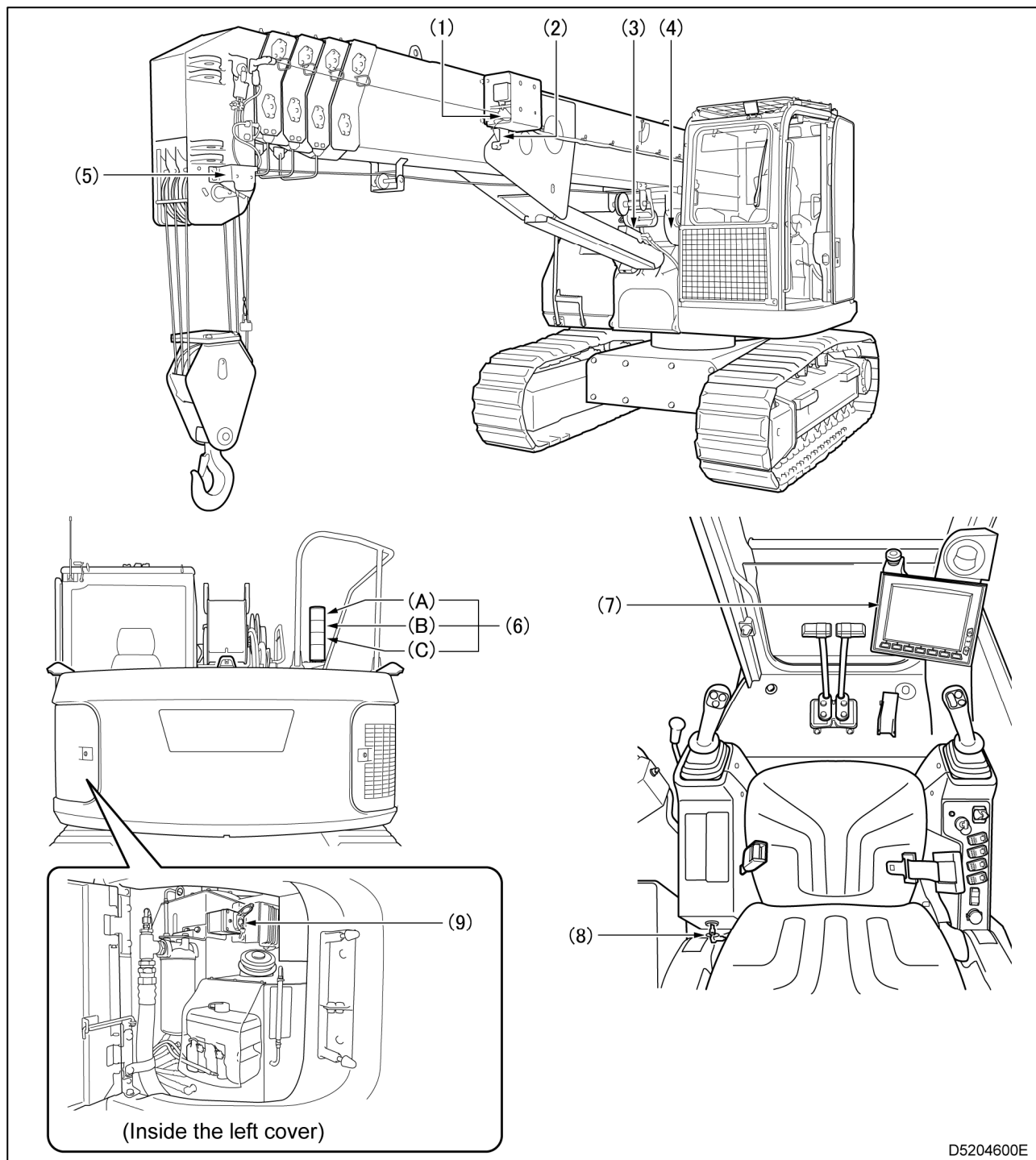
The User Settings screen is displayed by pressing the user setting switch on the home screen.



- |  |   |
|--|---|
| (1) ECO setting selection                | (8) Monitor brightness adjustment                 |
| (2) Number of falls selection            | (9) Time setting                                  |
| (3) Language selection                   | (10) Consumables display                          |
| (4) Error history display                | (11) Switch operation tone on/off selection       |
| (5) Software version                     | (12) Multi-assist view automatic switching on/off |
| (6) Hook grounding stop on/off selection | (13) Searcher Hook Setting                        |
| (7) Fly jib installation/stowage         | (Only when searcher hook is mounted)              |
| (Only with fly jib mounted)              | (14) Pop-up selector switches                     |
|  | (User Settings screen)                            |
|  | (15) Home switch                                  |

### 3. MOMENT LIMITER

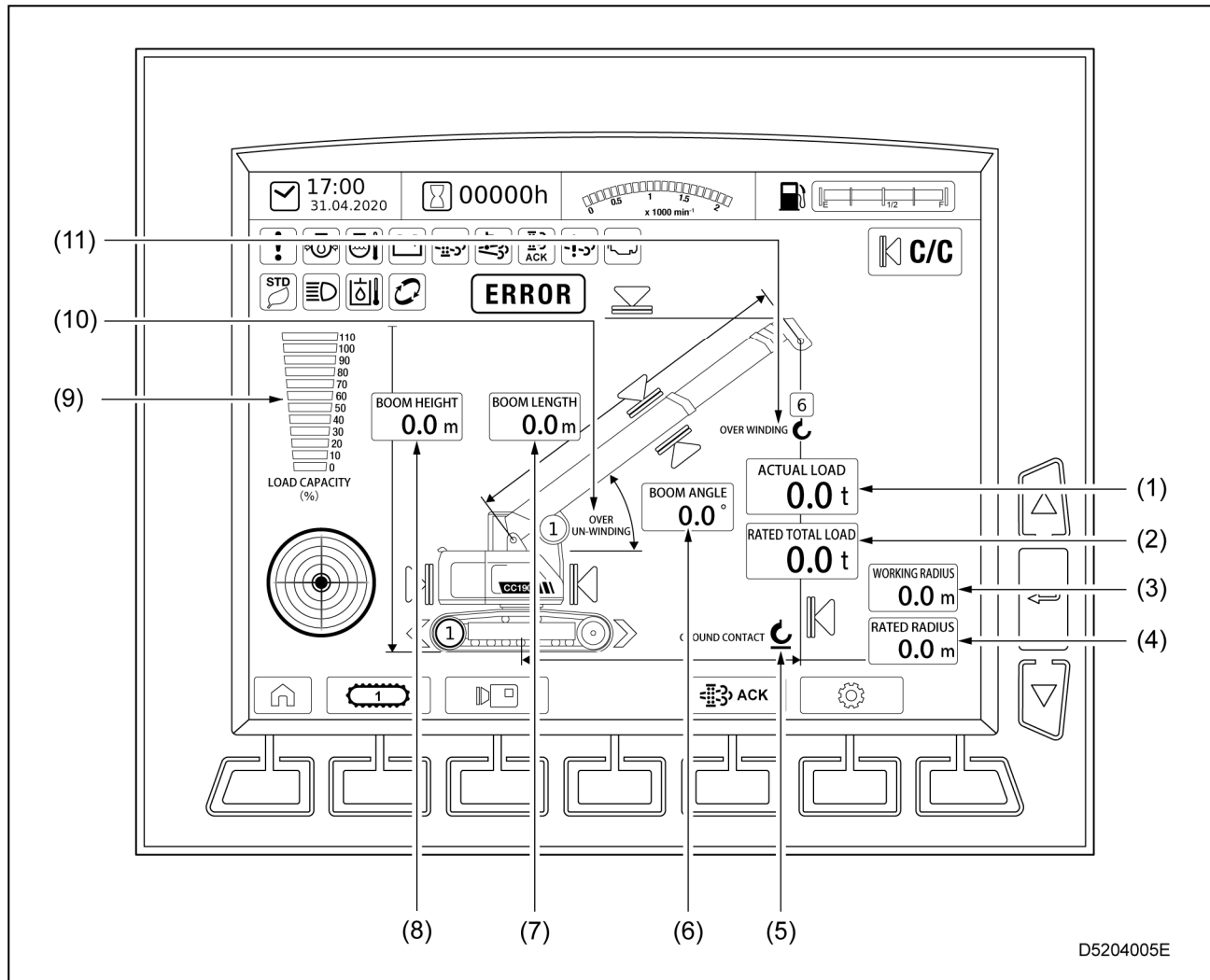
#### 3.1 MOMENT LIMITER CONFIGURATION



- (1) Boom length meter (left side of boom)
- (2) Boom angle indicator (left side of boom)
- (3) Pressure sensor (derricking cylinder) (2 units)
- (4) Over un-winding prevention device (winch)
- (5) Overwinding detector (side of boom tip)
- (6) Working status lamp
  - (A) Rotating red lamp (warning lamp when load factor is 100 % or more)

- (B) Rotating yellow lamp (advance warning lamp when load factor is 90 % to less than 100 %)
- (C) Rotating green lamp (operation lamp when load factor is less than 90 %)
- (7) Monitor (moment limiter display) (inside cab)
- (8) Maintenance switch (inside cab)
- (9) Override switch

### 3.2 MONITOR : MOMENT LIMITER DISPLAY



- |                                   |                              |
|-----------------------------------|------------------------------|
| (1) Actual load display           | (7) Boom length display      |
| (2) Rated total load display      | (8) Boom height display      |
| (3) Actual working radius display | (9) Load factor display      |
| (4) Rated working radius display  | (10) Over un-winding display |
| (5) Hook ground contact indicator | (11) Overwinding display     |
| (6) Boom angle display            |                              |

## 4. OPERATION

### 4.1 STARTING AND STOPPING ENGINE

#### [STARTING ENGINE]

#### ⚠ DANGER

**Never refuel while the engine is running.  
Always stop the engine before refuelling.**

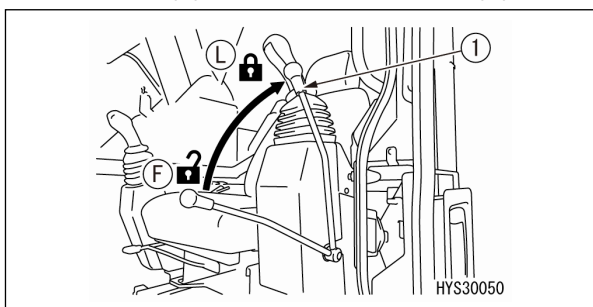
#### ⚠ WARNING

**Exhaust gas is toxic. When starting the engine in narrow, enclosed locations, pay due attention to ventilation.**

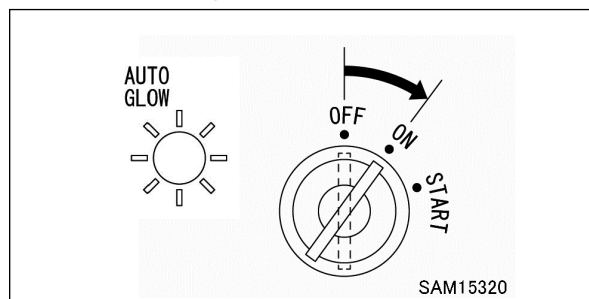
#### IMPORTANT

- Do not start the engine while depressing the accelerator pedal. This may damage the engine.
- Do not keep the starter turned on for more than 15 seconds. Doing so will accelerate the battery discharge.
- If the engine fails to start, wait for more than 30 seconds before retrying.
- If the fuel has temporarily run out, wait for fuel to be fed in by the feed pump before starting.

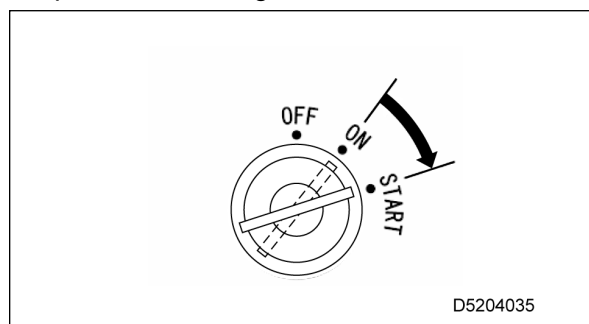
1. Check that the lock lever (1) is in the lock position (L). The engine will not start if the lock lever (1) is in the free position (F).



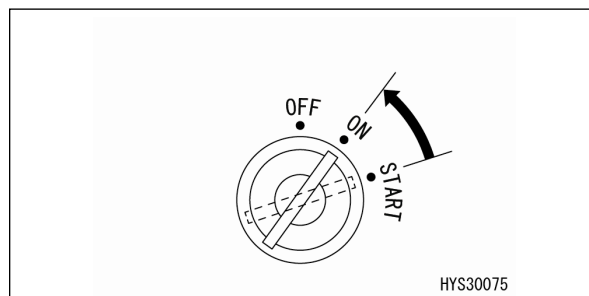
2. Insert the key into the starter switch, turn the key to the "ON" position, and check that the AUTO GLOW lamp turns on. When preheating is completed, the AUTO GLOW lamp goes out.



3. When the AUTO GLOW lamp goes out, turn the starter switch key to the "START" position. The engine will start.



4. Once the engine has started, release your hand from the key. The key automatically returns to the "ON" position.

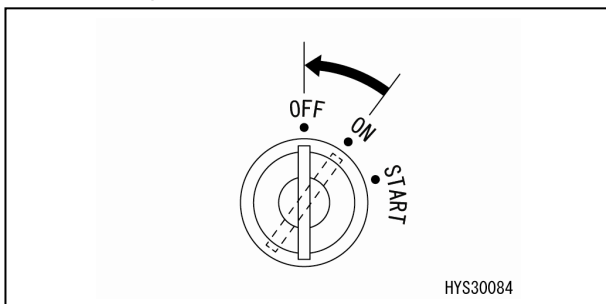


## [STOPPING ENGINE]

### IMPORTANT

- Stopping the engine before it has sufficiently cooled down may shorten the service life of the engine components. Do not stop the engine suddenly except in an emergency.
- If the engine has overheated, do not stop the engine suddenly. Reduce the engine speed to gradually cool it down before stopping.

1. Release your foot from the pedal to reduce the speed to idle, and continue operating with no load for approximately five minutes.
2. Turn the starter switch key to the "OFF" position.  
The engine stops.



3. Remove the starter switch key.

## 4.2 MACHINE TRAVELLING

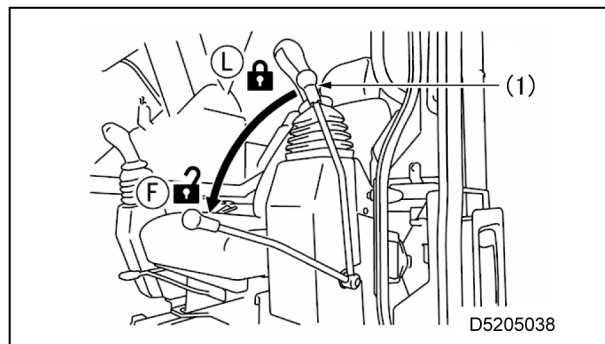
### **⚠ WARNING**

- Check the direction of the track frame before operating the travel levers. When the track frame faces backward (i.e., when the sprocket is at the front), the direction of the travel lever operation will be opposite to the direction of the machine movement.
- Do not allow anyone near the machine.
- Clear the route of any obstructions.
- Check for safety in the vicinity of the machine, and sound the horn before starting to move the machine.
- The rear of the machine body is a blind spot. Be sure to check your surroundings visually before reversing. The camera should be used to complement visual checking.
- Depressing the accelerator pedal while travelling is dangerous as it will cause the machine to move suddenly. Be sure to operate the pedal cautiously.
- When travelling, check that the travelling alarm operates normally.
- All crane operations are disabled while the crane is travelling. Stop the machine before performing crane operations such as slewing.

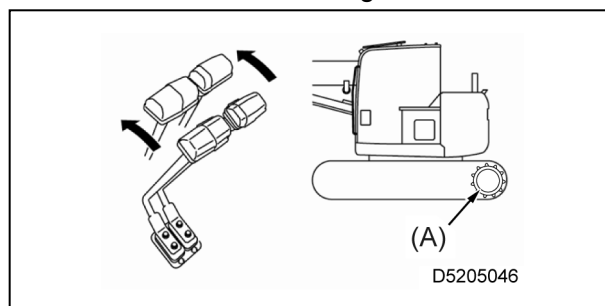
- ☞ If the machine does not travel at the proper speed in low temperatures, allow it to warm up sufficiently. If the machine does not travel at the proper speed due to sand or mud on the undercarriage, remove the sand and mud.
- ☞ When the hook block is in the simple stowage position, it may be loosened by vibration during travelling. If this occurs, simply stow the hook block in the simple stowage position again.

### **[MOVING FORWARD]**

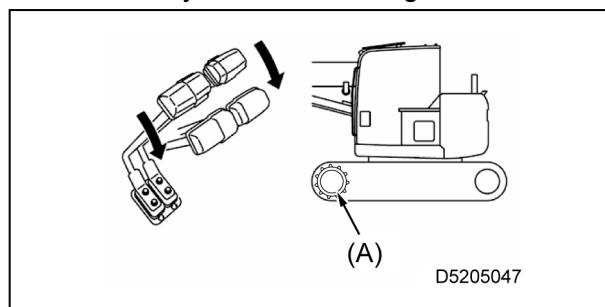
1. Place the lock lever (1) in the free position (F).



2. Operate the right and left travel levers as follows:
  - If the sprocket (A) is at the rear of the machine, push the travel levers slowly forward to start moving.

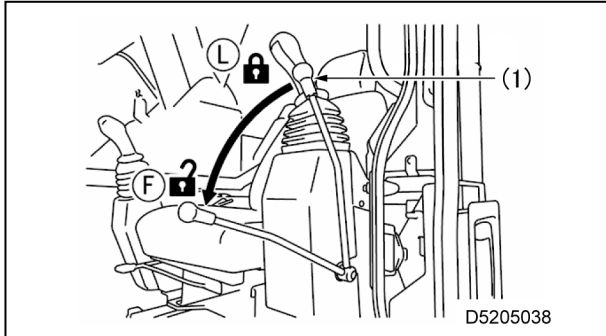


- If the sprocket (A) is at the front of the machine, pull the travel levers slowly toward you to start moving.



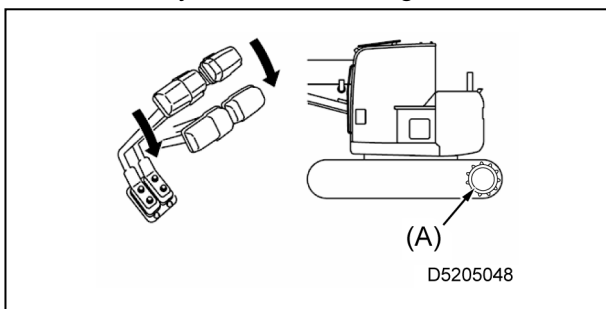
**[REVERSING]**

1. Place the lock lever (1) in the "Free" position.

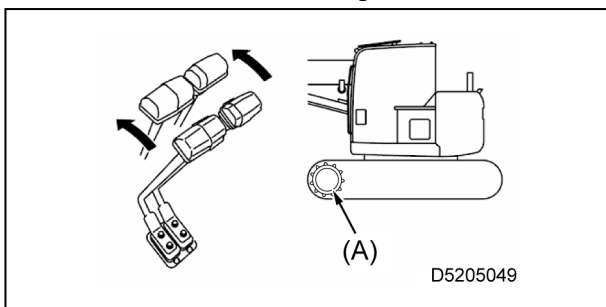


2. Operate the right and left travel levers as follows:

- If the sprocket (A) is at the rear of the machine, pull the travel levers slowly toward you to start moving.

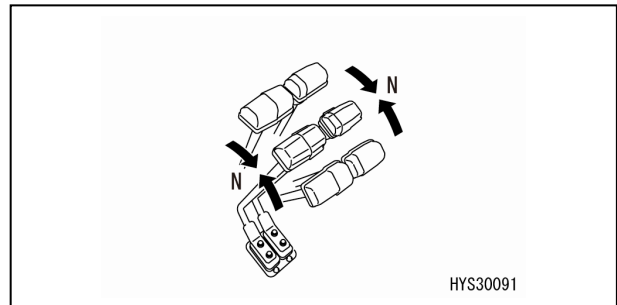


- If the sprocket (A) is at the front of the machine, push the travel levers slowly forward to start moving.

**[STOPPING]**

Avoid sudden stops and try to stop with a safety margin where possible.

- Place the right and left travel levers in the neutral position (N).  
The machine stops.



## [STEERING THE MACHINE]

Operate the travel levers to change the direction.  
Avoid sudden direction changes whenever possible.

In particular, stop the machine before making a pivot turn (spin turn).

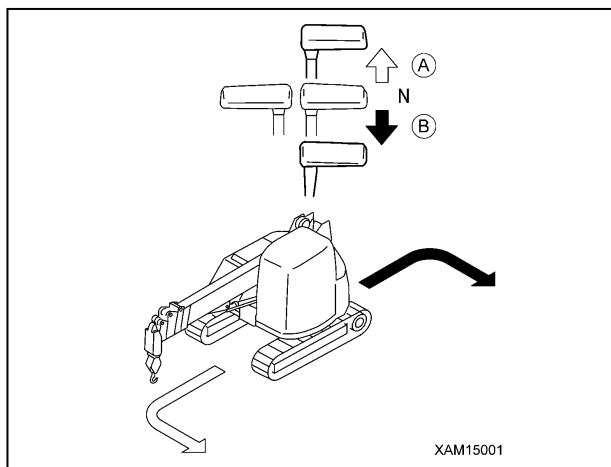
Operate with two travel levers in the following manner:

### ▪ CHANGING MACHINE DIRECTION WHEN STOPPED

To turn to the left, push the right travel lever forward to turn to the left in the forward direction. Pulling the lever toward you turns the machine to the left in the reverse direction.

(A): Left turn in forward direction

(B): Left turn in reverse direction



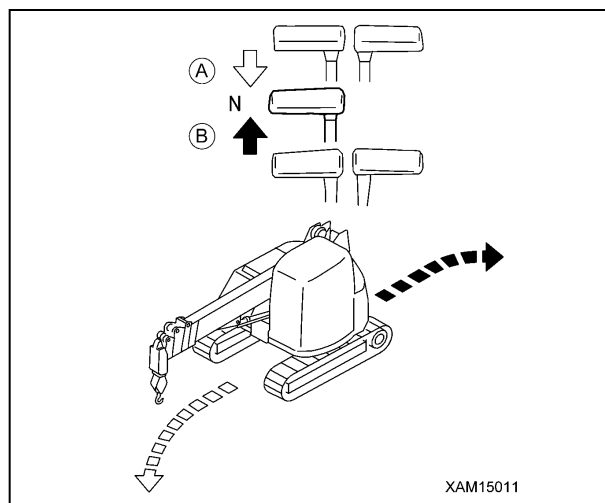
☞ To turn to the right, push the left travel lever forward to turn to the right in the forward direction. Pulling the lever toward you turns the machine to the right in the reverse direction.

### ▪ CHANGING DIRECTION TO THE RIGHT OR LEFT WHILE MOVING FORWARD

To turn to the left, return the left travel lever to the neutral position (N).

(A): Left turn in forward direction

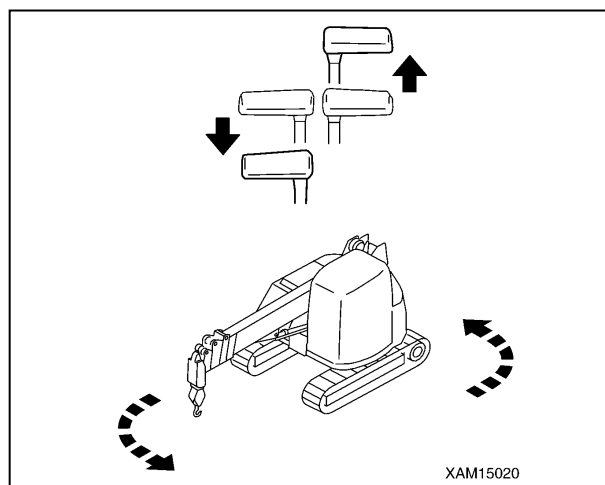
(B): Left turn in reverse direction



☞ To turn to the right, return the right travel lever to the neutral position (N).

### ▪ TURNING (SPIN TURN) ON THE SPOT

To turn on the spot to the left, pull the left travel lever toward you and push the right travel lever forward.



☞ To turn on the spot to the right, pull the right travel lever toward you and push the left travel lever forward.



## 4.3 CRANE OPERATION

### [HOISTING AND LOWERING]

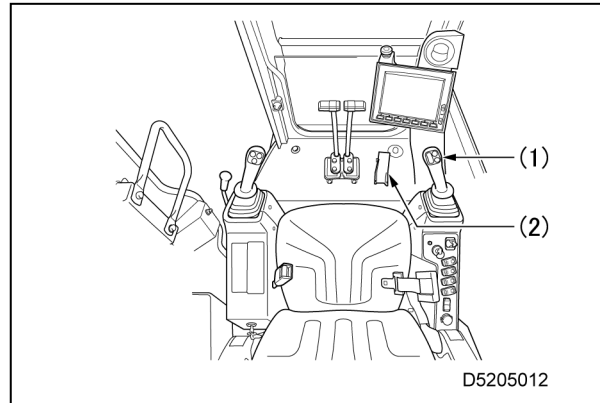
#### **⚠ WARNING**

- When hoisting a load, the load will shift forward slightly due to boom deflection. Notify slinging operators and other workers in the vicinity.
- If the hook block is over-hoisted, the overwinding prevention device detects overwinding and the warning buzzer sounds intermittently. When the buzzer sounds, immediately place the right-hand control lever in the neutral position to stop the hoisting operation.
- When lowering the hook a long distance such as for underground work, be sure to leave at least three turns of wire rope on the winch drum.

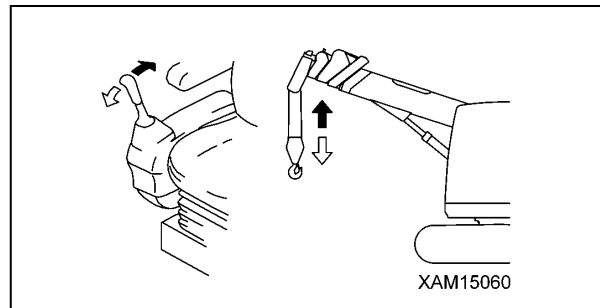
#### **IMPORTANT**

- Take care not to lower the hook block excessively in order to prevent it from coming into contact with the ground. Doing so results in irregular winding on the winch drum.
- When stopping the winch operation, do not suddenly return the lever to its neutral position. Doing so may loosen the wire rope, resulting in irregular winding on the winch drum.

Operate the right-hand control lever (1) as follows:



- Lowering: Push the lever forward.
- Neutral: Release your hand from the lever. The lever will return to the neutral position and the hoisting/lowering of the hook block stops.
- Hoisting: Pull the lever toward you.

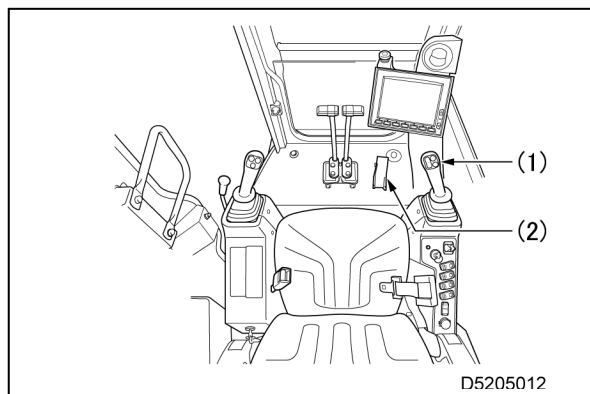


- ☞ Adjust the winch hoisting and lowering speed by varying the stroke of the right-hand control lever (1) and the depression of the accelerator pedal (2).

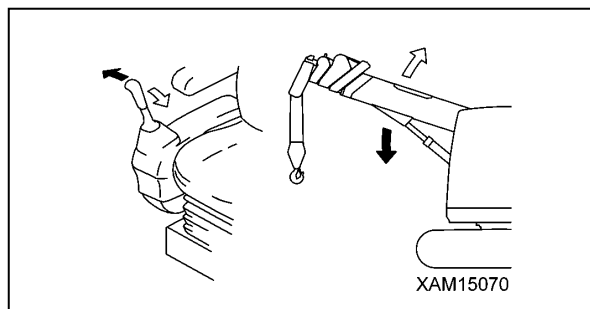
**[BOOM DERRICKING]****⚠ WARNING**

- Operate the right-hand control lever as slowly as possible.  
Especially avoid sudden lever operations when a load is hoisted, which may cause the load to sway and hit the machine, damaging the crane or causing the machine to topple.
- Drawing in a load or standing it upright by derricking is prohibited. Be sure to use hook hoisting to lift loads.
- Lowering the boom increases the working radius and reduces the rated total load that can be hoisted. When derricking the boom, pay extra attention so that the weight of the load at the lowermost boom position does not cause overloading.

Operate the right-hand control lever (1) as follows:



- Lowering: Push the lever outside (right side).
- Neutral: Release your hand from the lever. The lever returns to the neutral position and boom derricking stops.
- Raising: Pull the lever inside (left side).



- ☞ Adjust the boom derricking speed by varying the stroke of the right-hand control lever (1) and the depression of the accelerator pedal (2).
- ☞ When the boom length display on the moment limiter display is "6.0 m" or longer, lowering stops automatically to prevent the boom angle falling below a horizontal position.

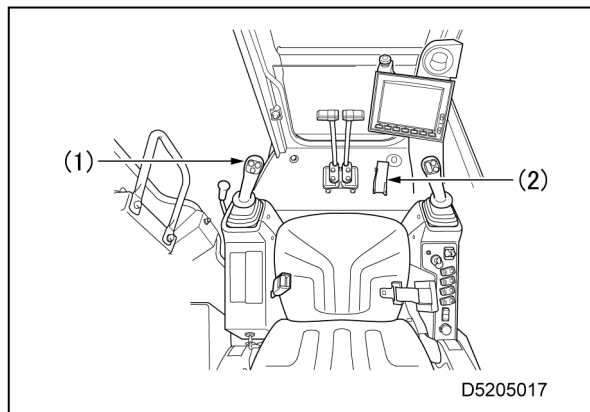
**[BOOM TELESCOPING]****⚠ WARNING**

- Operate the left-hand control lever as slowly as possible.  
Especially avoid sudden lever operations when a load is hoisted, which may cause the load to sway and hit the machine, damaging the crane or causing the machine to topple.
- Pulling a load laterally or drawing it in by extending or retracting the boom is prohibited. Be sure to use hook hoisting to lift loads.
- Extending the boom increases the working radius and reduces the rated total load that can be hoisted. When extending or retracting the boom, pay extra attention so that the weight of the load with the boom fully extended does not cause overloading.
- The hook block will be raised while the boom is being extended.  
If the warning buzzer of the overwinding detector sounds while extending the boom, return the boom telescoping lever immediately to the neutral position and stop extending the boom.

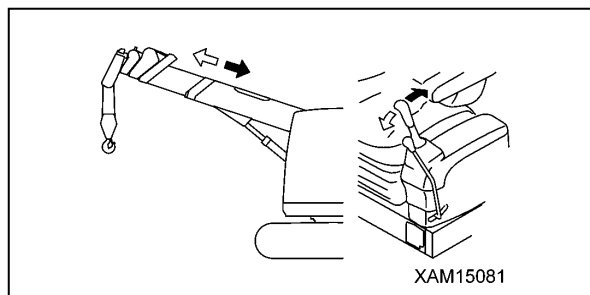
**IMPORTANT**

- The hook block will be raised or lowered while the boom is being extended or retracted. Always use the winch operation simultaneously to adjust the hook block height.
- When the boom is extended for a long time, the boom retracts slightly due to the temperature change in the hydraulic oil. If this occurs, extend the boom as necessary.

Operate the left-hand control lever (1) as follows:



- Extending: Push the lever forward.
- Neutral: Release your hand from the lever. The lever returns to the neutral position and the boom telescoping stops.
- Retracting: Pull the lever toward you.



- ☞ Adjust the boom extending/retracting speed by varying the stroke of the left-hand control lever (1) and the depression of the accelerator pedal (2).
- ☞ When the boom extends, the second stage extends first, then the third stage and finally the fourth and fifth stages extend simultaneously.  
When the boom retracts, it retracts in the reverse order of extension.

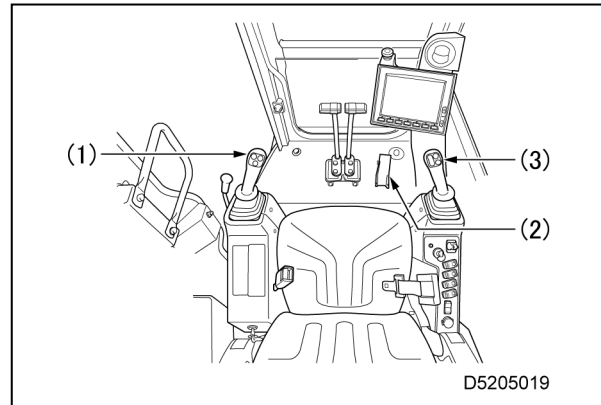
**[SLEWING OPERATION]****⚠ WARNING**

- The rear end of the machine protrudes beyond the crawler width. Check for safety in the vicinity visually and using the multi-assist view before slewing.
- Check for safety around the machine and sound the horn before slewing.
- Perform the slewing operation as slowly as possible. Be sure to start smoothly, slew at low speed, and stop gently. Especially avoid sudden lever operations when a load is hoisted, which may cause the load to sway and cause the machine to lose balance, damaging the crane or tip the machine.
- Pulling a load laterally, drawing it in, or standing it upright by slewing is prohibited. Be sure to use hook hoisting to lift loads.

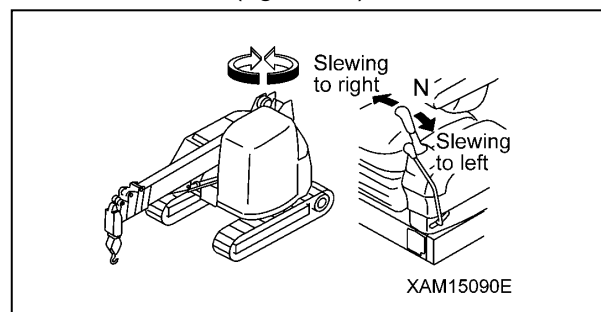
**IMPORTANT**

The rated total load is the same in all directions regardless of the slewing stop position.

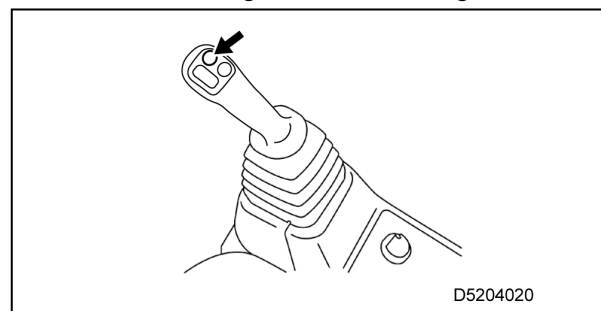
Operate the left-hand control lever (1) as follows:



- Left slewing: Push the lever outside (left side).
- Neutral: Release your hand from the lever. The lever returns to the neutral position and the slewing stops.
- Right slewing: Pull the lever inside (right side).



- ☞ Adjust the crane slewing speed by varying the stroke of the left-hand control lever (1) and the depression of the accelerator pedal (2).
- ☞ There is a horn switch at the centre of the knob on the right-hand control lever (3). Use the switch to signal when slewing.



## 5. RTL AND WORKING RADIUS/LIFTING HEIGHT

### 5.1 RATED TOTAL LOAD CHART FOR 6-FALL HOOK

Units: kg

Working radius (m)	5.52 m boom		8.99 m boom		12.46 m boom		15.93 m boom		19.40 m boom	
	Stationary	Pick & carry	Stationary	Pick & carry	Stationary	Pick & carry	Stationary	Pick & carry	Stationary	Pick & carry
2.000	8,090	3,500	6,390	3,200						
2.500	8,090	3,500	6,390	3,200	4,690					
2.800	8,090	3,500	6,390	3,200	4,690					
3.000	7,430	3,500	6,390	3,200	4,690		3,390			
3.430	6,210	3,110	6,390	3,200	4,690		3,390			
3.500	6,050	3,030	6,250	3,130	4,690		3,390		2,390	
4.000	5,150	2,580	5,370	2,690	4,690		3,390		2,390	
4.430	4,590	2,300	4,760	2,380	4,690		3,390		2,390	
4.500	4,520	2,260	4,670	2,340	4,590		3,390		2,390	
5.000	4,050	2,030	4,080	2,040	4,010		3,390		2,390	
5.350	3,790	1,900	3,730	1,870	3,670		3,390		2,390	
5.430			3,650	1,830	3,590		3,390		2,390	
5.500			3,590	1,800	3,530	N/A	3,340		2,390	
6.000			3,170	1,590	3,130		3,040		2,390	
6.430			2,850	1,430	2,840		2,810		2,390	
6.500			2,800	1,400	2,790		2,770	N/A	2,350	
7.000			2,490	1,250	2,500		2,540		2,140	
8.000			1,960	980	2,030		2,140		1,800	
8.820			1,620	810	1,720		1,860		1,570	N/A
9.000					1,660		1,810		1,530	
10.000					1,360		1,530		1,310	
11.000					1,120		1,300		1,130	
12.000					920		1,100		970	
12.290					870		1,050		940	
13.000							930		850	
14.000							780		730	
15.000							650		640	
15.730							560		570	
16.000									550	
17.000									480	
18.000									410	
19.000									350	
19.230									340	

• Rated total load restriction depending on number of falls

Up to 8,090 kg

• Boom length

5.52 m boom → Boom retracted minimum

8.99 m boom → Boom length more than 5.52 m and less than 8.99 m

12.46 m boom → Boom length more than 8.99 m and less than 12.46 m

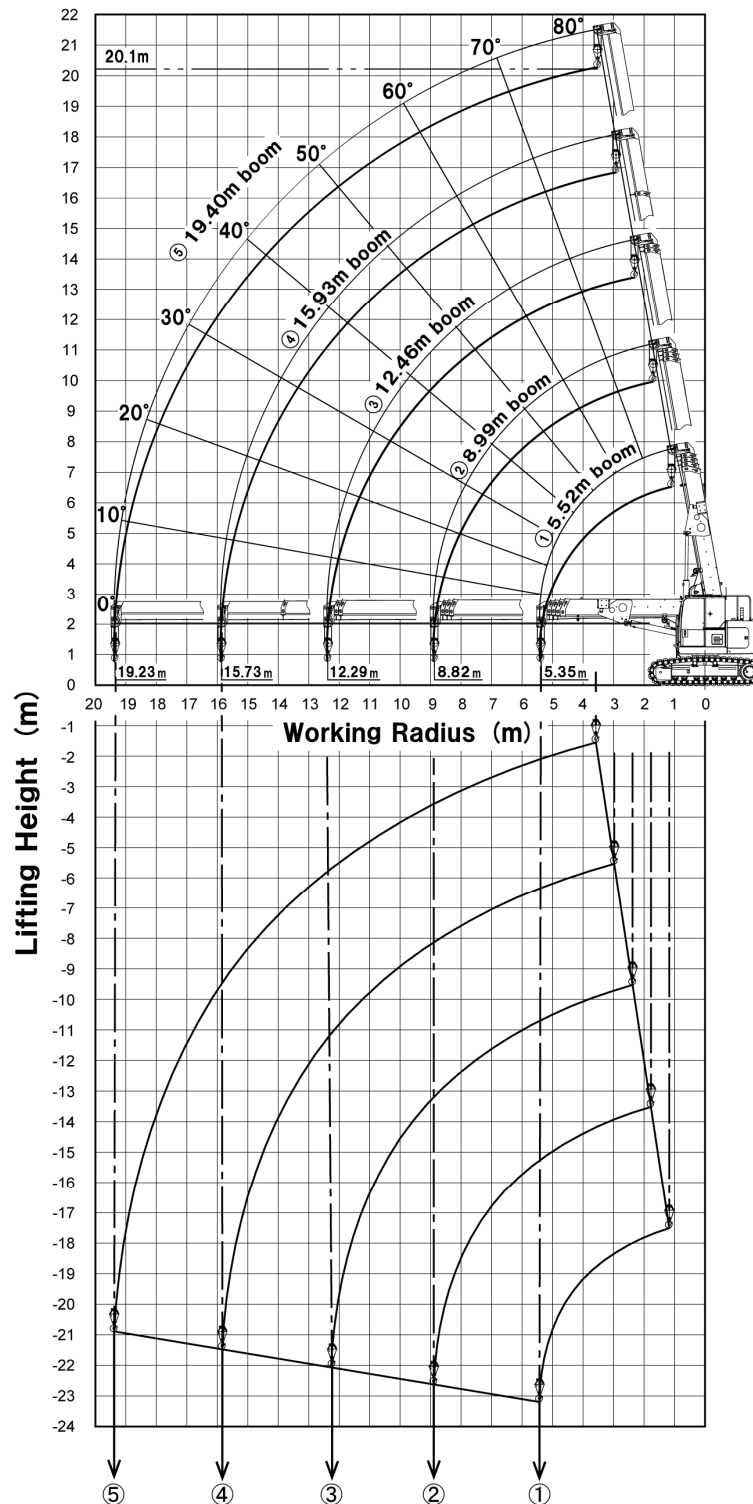
15.93 m boom → Boom length more than 12.46 m and less than 15.93 m

19.40 m boom → Boom length 15.93m or more

• The rated total load chart is based on the actual working radius including boom deflection.

• The rated total load chart indicates the load including the mass of hoisting accessories (hook mass: 90 kg).

## 5.2 WORKING RADIUS/LIFTING HEIGHT DIAGRAM



Boom length	Maximum lifting height below ground level (m)				
Number of falls	⑤19.40 m boom	④15.93 m boom	③12.46 m boom	②8.99 m boom	①5.52 m boom
6 falls	20.9	21.5	22.1	22.7	23.2
4 falls	32.3	33.2	34.0	34.9	35.8
2 falls	66.3	68.0	69.7	71.5	73.2
Single fall	134.9	138.4	141.8	145.3	148.8

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## **QUICK OPERATION GUIDE for MAEDA CRAWLER CRANE CC1908S-1**

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1095, Onbegawa, Shinonoi, Nagano City,

Nagano Prefecture, 388-8522 Japan

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