U.S.A. : **KUBOTA TRACTOR CORPORATION**
1000 Kubota Drive, Grapevine, TX 76051
Telephone : 888-4KUBOTA

Canada : **KUBOTA CANADA LTD.**
5900 14th Avenue, Markham, Ontario, L3S 4K4, Canada
Telephone : (905)294-7477

France : **KUBOTA EUROPE S.A.S**
19-25, Rue Jules Vercruysse, Z.I. BP88, 95101 Argenteuil Cedex, France
Telephone : (33)1-3426-3434

Italy : **KUBOTA EUROPE S.A.S Italy Branch**
Via Grandi, 29 20068 Peschiera Borrome (MI) Italy
Telephone : (39)02-51650377

Germany : **KUBOTA BAUMASCHINEN GmbH**
Steinhauser str, 100, 66482 Zweibrucken Rheinlandpfalz Germany
Telephone : (49)6332-4870100

U.K. : **KUBOTA (U.K.) LTD.**
Dormer Road, Thame, Oxfordshire, OX9 3UN, U.K.
Telephone : (44)1844-214500

Australia : **KUBOTA AUSTRALIA PTY LTD.**
25-29 Permas Way, Truganina, VIC 3029, Australia
Telephone : (61)-3-9394-4400

Malaysia : **KUBOTA MALAYSIA SDN. BHD.**
Lot 766, Jalan Subang 4, off Persiaran Subang Sungai Penaga Industrial Park,
47500 Subang Jaya
Telephone : (60)-3-7890-3533

Philippines : **KUBOTA PHILIPPINES, INC.**
232 Quirino Highway, Baesa, Quezon City 1106, Philippines
Telephone : (63)2-422-3500

Taiwan : **SHIN TAIWAN AGRICULTURAL MACHINERY CO., LTD.**
16, Fengping 2nd Rd, Taliao Shiang Kaohsiung 83107, Taiwan R.O.C.
Telephone : (886)7-702-2333

Thailand : **SIAM KUBOTA CORPORATION CO., LTD.**
101/19-24 Moo 20, Navanakorn Industrial Estate, Tambon Khlongnueng, Amphur Khlongluang,
Pathumthani 12120, THAILAND
Telephone : (66)2-909-0300

Japan : **KUBOTA Corporation**
Farm & Industrial Machinery International Operations Headquarters
2-47, Shikitsuhigashi 1-chome, Naniwa-ku, Osaka, Japan 556-8601

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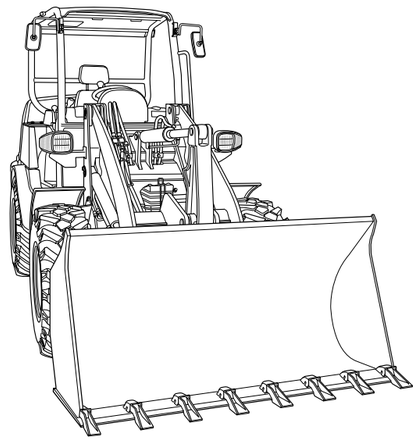
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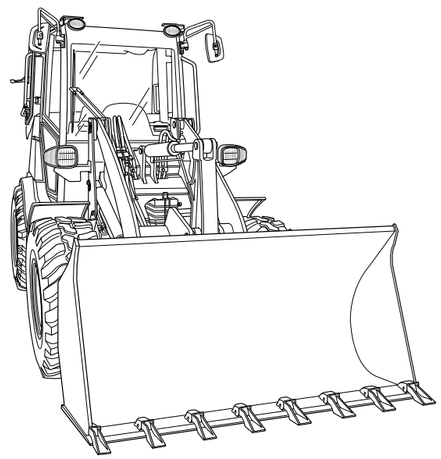
OPERATOR'S MANUAL

KUBOTA WHEEL LOADER

MODEL R540



1BBABBKAP0460



1BBABBKAP0450

READ AND SAVE THIS MANUAL

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SAFE OPERATION

Careful operation is your best insurance against an accident.
Read and understand the *Safe operation* section carefully, before operating the wheel loader.
All operators, no matter how much experience they may have had, should read this and other related manuals before operating the machine or any attachment. It is the owner's obligation to instruct all operators in safe operation.

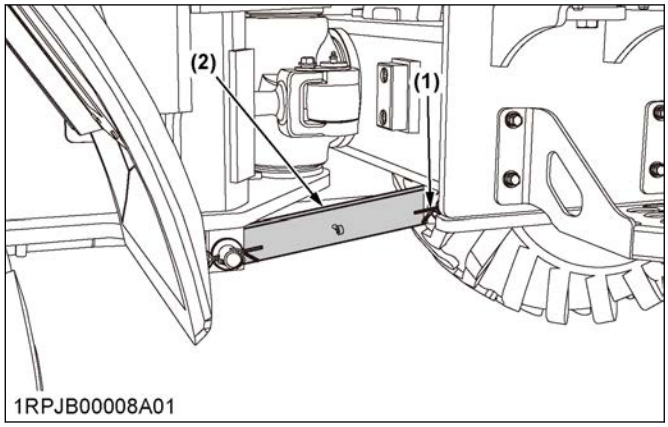
PRECAUTIONS BEFORE OPERATING THE WHEEL LOADER

1. General precautions

Know your equipment and its limitations. Read and understand this entire manual before starting and operating the machine.

- If using an attachment on the machine, read the attachment operator's manual to ensure the safe operating procedures.
- Pay special attention to the safety labels on the machine and the attachments.
- Do not start or operate an unsafe machine. Before working the machine, be sure that any unsafe condition has been satisfactorily remedied. Check brakes, steering, and attachment controls before moving. Consult a proper maintenance authority if any malfunctioning part of the system is observed. Be sure all safety appliances are in the right place and in good operating condition.
- Wear and use safety gear such as non-slip safety shoes or boots, safety glasses, and safety hardhats as appropriate for the job. Do not operate or work around the machine, when wearing loose, bulky clothing.
- Never operate the machine or any equipment while under the influence of alcohol or other drugs, or while fatigued.
- Before allowing other people to use your machine, give instruction to the operator on safe and correct use of the machine and make sure that the operator reads and understands the Operator's Manual for the machine.
- Inspect your seat belt daily for signs of fraying, wear or other weakness that could endanger your safety.
- Do not use the loader bucket or an attachment to lift or carry a person.
- Do not use the bucket or any other working attachment of the machine for crane work.

  Otherwise, the machine may lose its balance and overturn.
- Use the following precautions when changing the attachment.
  1. Position the machine and attachment on level ground.
  2. Make sure that no persons are in the immediate vicinity of the machine.
  3. When actuating the machine to change the front attachment:
     a. Lower the bucket and attachment to the ground.
     b. Actuate the parking brake switch.
     c. Stop the engine (for machines with mechanical quick coupler).
     d. Release the hydraulic pressure in the hydraulic system by operating the appropriate control levers (for machines with mechanical quick coupler).
  4. After changing the front attachment, make sure that the installed attachment is securely attached to the quick coupler.
- To mount a fire extinguisher, use the space above the fender on the side of the operator's seat.
- Carry out the following procedure when lifting the machine.
  1. Attach the steering-frame-lock.



(1) Snap pin *(2) Steering frame lock*

  2. Use the locations indicated by marks in the diagram to lift the machine.

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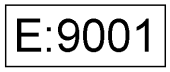
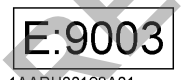
3.3.2 PM warning level and required procedures for Inhibit Mode

In the *"Inhibit Mode"*, the buzzer starts sounding and the indicator display changes in response to the PM level in order to prompt the operator to perform the required procedure listed in the following table.

IMPORTANT :

- **Once the regeneration level has been reached, immediately perform the required procedure for regeneration.**
  Interrupting the regeneration cycle or continuing operation by while ignoring the warning signs may cause DPF and engine damage.

Inhibit Mode

DPF system status					Required procedure
PM warning level	**Buzzer**	**Engine output**	**Indicator**		
1	Not sounding	sufficient		The regeneration indicator starts flashing.	A specific level of PM has built up in the DPF muffler.
2	Not sounding	sufficient		The regeneration indicator starts flashing.	Move the machine to a safe area, then follow the Operating the machine for Parked Regeneration Mode on page 57. At PM warning levels range from 1 to 2, it is also possible to change the DPF switch to *"Auto Regeneration Mode"* then perform regeneration. (See Regeneration operating procedure for Auto Regeneration Mode on page 55)
				The parked-regeneration-indicator starts flashing.	
If the parked regeneration cycle is interrupted or the machine is continuously operated in the PM-warning-level 2, DPF system becomes in the PM-warning-level 3.					
3  1AARU00127A01	Constantly sounds	50%		The regeneration indicator starts flashing.	Immediately stop working the machine, move the machine to a safe area, and then follow the Operating the machine for Parked Regeneration Mode on page 57. If the machine is operated further and the operator ignores the warning signs, then regeneration will be disabled.
				The engine-warning-indicator starts flashing.	
				The parked-regeneration-indicator starts flashing.	
If the regeneration cycle is interrupted or the machine is continuously operated ignoring the warning signs, in the PM-warning-level 3, DPF system becomes in the PM-warning-level 4.					
4  1AARU00128A01	Constantly sounds	50%		The engine-warning-indicator remains constantly *"ON"*.	Immediately move the machine to a safe place, place the machine in park, and turn *"OFF"* the engine. Contact your local KUBOTA dealer. • At PM-warning-level 4, do not continue to operate the machine. Otherwise, damage will result to the DPF and the engine.

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SPECIFICATIONS

SPECIFICATION TABLE

Model				**R540**	
Type				**CANOPY**	**CAB**
*1Operating weight			kg	4355	4520
Bucket capacity			m^3	0.68	
Engine	Manufacturer			KUBOTA	
	Model			Water-cooled V2607-CR-E5-WL	
	Horse power	SAE J1995	kW/rpm (HP/rpm)	38.0 / 2400 (51.0 / 2400)	
		SAE J1349	kW/rpm (HP/rpm)	35.7 / 2400 (47.9 / 2400)	
	Number of cylinders			4	
	Displacement		cc	2615	
	Starter		V/kW	12 / 2	
	Battery		V/Ah	12 / 95	
Dimensions	Overall length		mm	5395	
	Overall width (without bucket)		mm	1680	
	Overall height		mm	2460	2480
	Min. ground clearance		mm	330	
	Wheel base		mm	2000	
	Tread		mm	1355	
	Angle of articulation		Deg	40 each	
	Angle of oscillation		Deg	8 each	
	Loader clearance circle		mm	4146	
Bucket	Hinge pin height		mm	3230	
	Dump height (w/cutting edge)		mm	2525	
	Reach fully raised (w/cutting edge)		mm	730	
	Tipping load	Straight (ISO 14397-1)	kg	3280	3440
		Full turn (ISO 14397-1)	kg	2880	3020
	Rated operating capacity (ISO 14397-1)		kg	1440	1510
	Lifting capacity at ground level		kgf (kN)	3069 (30.1)	
	Breakout force (ISO 14397-2)		kgf (kN)	3711 (36.4)	
Fork	Tipping load	Full turn (ISO 14397-1)	kg	2240	2350
	Rated operating capacity	Firm and level ground (ISO 14397-1)	kg	1790	1880
		Rough terrain (ISO 14397-1)	kg	1340	1410

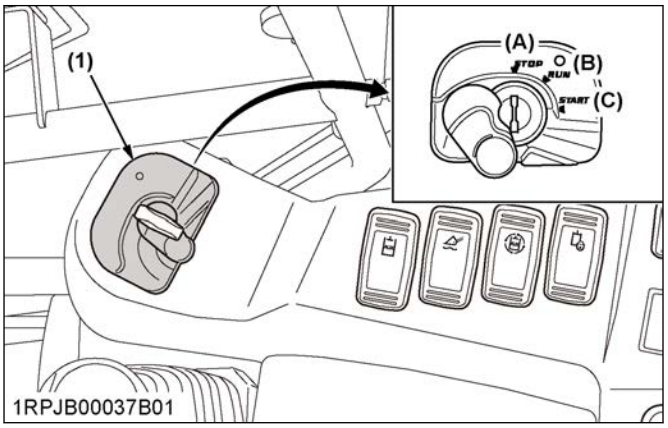
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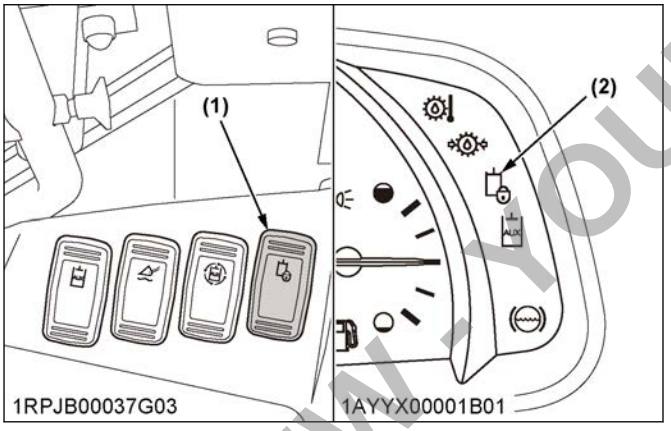
2. Handling the AUX port

1. Turn the starter key to the **[RUN]** position.



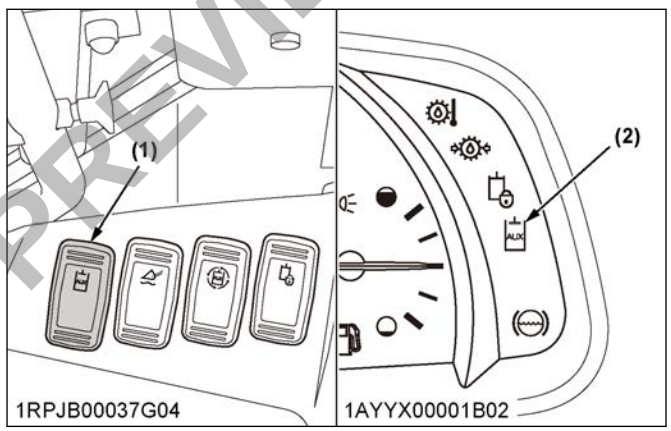
(1) Starter switch
(A) STOP
(B) RUN
(C) START

2. Let the engine warm up after start-up for approx. 10 minutes under no load conditions.
3. Release the hydraulic-lock-switch to *"UNLOCK"*.



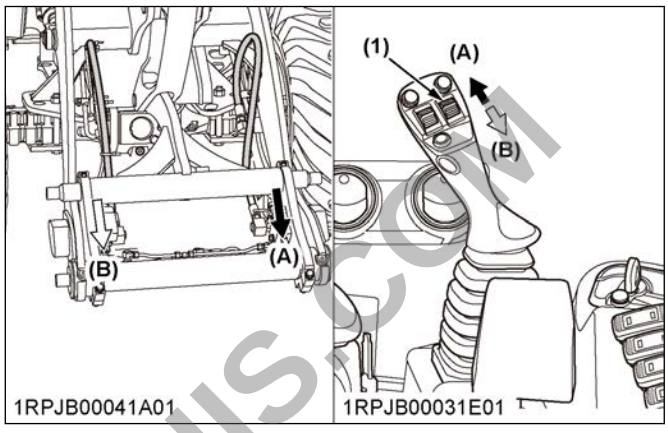
(1) Hydraulic lock switch
(2) Hydraulic lock indicator

4. Push the AUX-port-enable-switch.



(1) AUX port enable switch
(2) AUX operation indicator

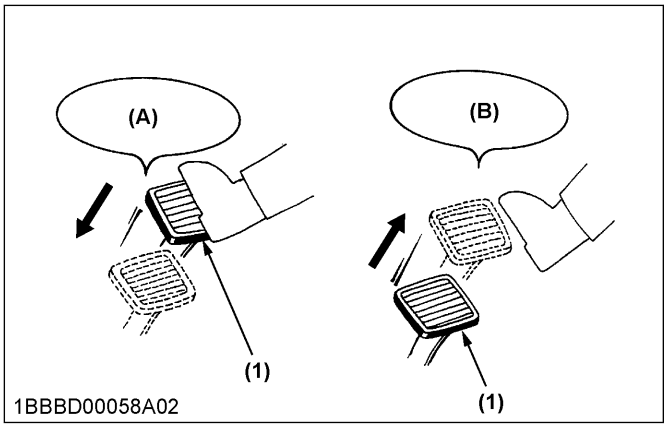
5. Move the AUX-port-variable-switch to send oil to the port as follows.
   - Move the AUX-port-variable-switch forward to send oil to the port-A.
   - Move the AUX port variable switch downward to send oil to the port-B.



(1) AUX port variable switch
(A) To port-A
(B) To port-B

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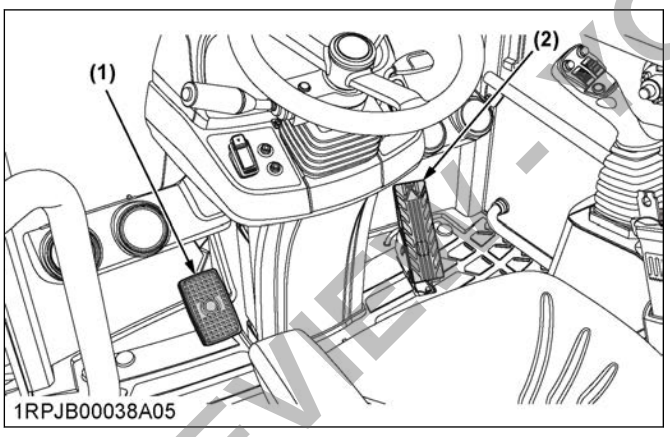
(1) Inching and brake pedal *(A) Press fully*
(B) Release pedal

2. Using the inching and brake pedal according to the job

⚠ WARNING

To avoid personal injury or death:

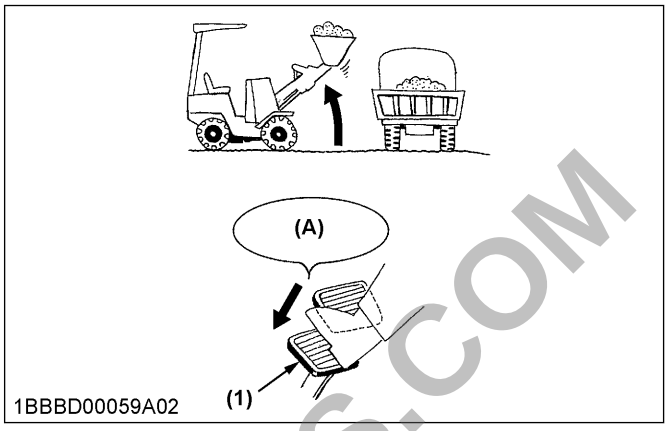
- **When traveling with a fully-loaded bucket, do not press the inching-and-brake-pedal all the way. The machine will brake abruptly and cause dangerous loss of balance that may cause an accident.**

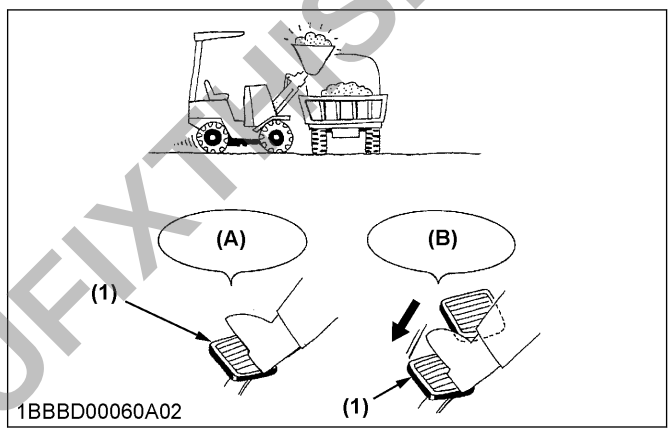


(1) Inching and brake pedal *(2) Accelerator pedal*

Loading

1. Press the inching-and-brake-pedal slightly while pressing the accelerator pedal to approach an object slowly.
   You can also perform slow approach of inching-and-brake-pedal by regulating accelerator-pedal operation.
   You can operate the bucket at the maximum engine rpm when the inching-and-brake-pedal is used to approach slowly. Bucket-operation-speed is thus maintained.
2. Press the inching-and-brake-pedal slightly to allow the machine to approach to the desired stop position.
3. Then press the inching-and-brake-pedal all the way to stop the machine completely.





(1) Inching and brake pedal *(A) Press slightly*
(B) Press all the way

Refilling

1. Press the inching-and-brake-pedal slightly to approach the desired stop position.
2. Then press the inching-and-brake-pedal all the way to stop the machine at the exact position.
   - The traveling speed automatically decreases to prevent the engine stalling as the external load increases.
   - During traveling with bucket operation, the traveling speed abruptly increases at the time of dumping operation since the external load changes at that time.
3. Use the inching-and-brake-pedal and concentrate the power to the attachment operation near holes or slopes.

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COMPLETION OF OPERATION AND STORING

STORING THE MACHINE

⚠ WARNING

To avoid personal injury or death:

- **Before storing, perform the following procedure.**
  1. **Stop the engine.**
  2. **Lower the bucket and attachment to the ground.**
  3. **Release the hydraulic pressure in the hydraulic system by operating the control levers.**
  4. **Remove the starter key.**

Measures before completion of operation

1. Wash and clean each part of the machine, and store the machine indoors.
   Never leave the machine outdoor.
   If you must store the machine outdoors, choose a flat place, lay planks, park the machine, and cover it completely.
2. Add oil and grease, and change oil.
3. Apply grease sufficiently to the piston rods of the hydraulic cylinders where they are exposed.
4. Remove and store the battery separately.
5. Check the antifreeze in the coolant.
   Add the antifreeze for adequate protection when temperatures down to the following values.

Temperature	-25 ℃

Measures during storing

1. Recharge the battery regularly.

Restarting after storing

1. Remove the grease applied to the piston rods of the hydraulic cylinders.
2. Check all oil levels, the sediment trap of the fuel system, the tire pressure and the functioning of the disc brake, and the parking brake.
3. Run the engine with no load and operate all the functions of the hydraulic system.

CAUTION WHEN WASHING THE MACHINE

- Stop the engine before washing the machine. If you wash the machine while running the engine, splashing water will get into the air cleaner through its intake and cause engine trouble.
- Wash carefully and do not splash the water over the air cleaner.

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– **Minimum cetane number is 45. Cetane number greater than 50 is preferred, especially for the following temperatures or elevations.**

Temperatures	Below -20 ℃
Elevations	Above 1500 m

– **Diesel fuels specified to the following are recommended.**

Diesel fuel	EN 590 or ASTM D975

– **The following product is a distillate fuel of lower volatility for engines in industrial and heavy mobile service.**
Refer to SAE J313 JUN87.

Distillate fuel	No. 2-D

- **Indicated capacities of water and oil are manufacture's estimate.**

IMPORTANT :
- **If you use different fuel or engine oil, the cleaning efficiency of the DPF (6000 hours) will be reduced and the DPF longevity will be shorter than expected.**
- **Filters must trap sulfate additives of fuel and lubricant (Zn, Pb, Na, K, Ca, Mg, Cu, Ba, P, and so on) as ash during combustion.**
Control the fuel carefully to prevent the additives such as the fuel tank anti-oxidants, the water remover, the antifreeze, and so on from being mixed into fuel.

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TRANSPORTING BY TRUCK

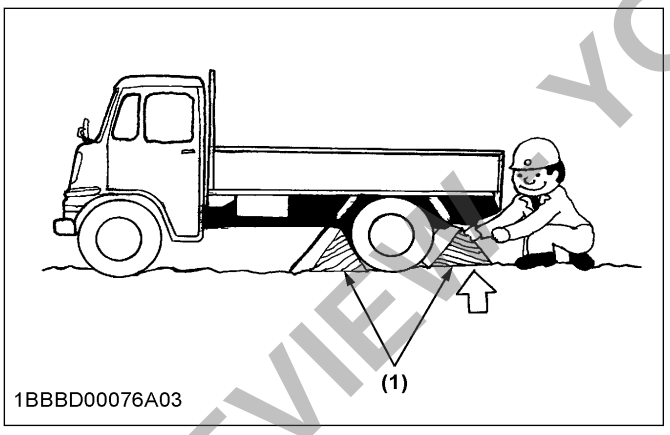
LOADING THE MACHINE ON AND FROM A TRUCK

⚠ WARNING

To avoid personal injury or death:

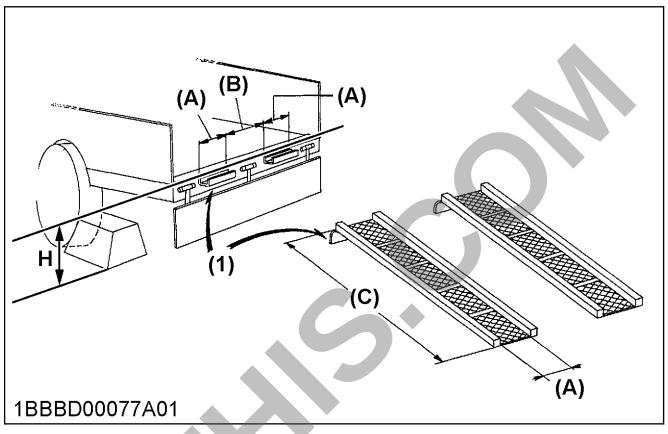
- **When loading or unloading the machine on or from a truck, be sure to use strong ramps. Never use wet lumber, and so on.**
- **Keep the ramps at an angle such that the machine can be kept stable (10 degrees to 15 degrees). Never try to change directions while on the ramps.**
- **Do not alter the climbing direction when the machine is already on the ramps.**
  If direction of climb needs correcting, first bring the machine down off the ramps and correct the climbing direction.

1. Before loading the machine onto a truck, apply the parking brake of the truck and block the front and rear wheels.



(1) Block

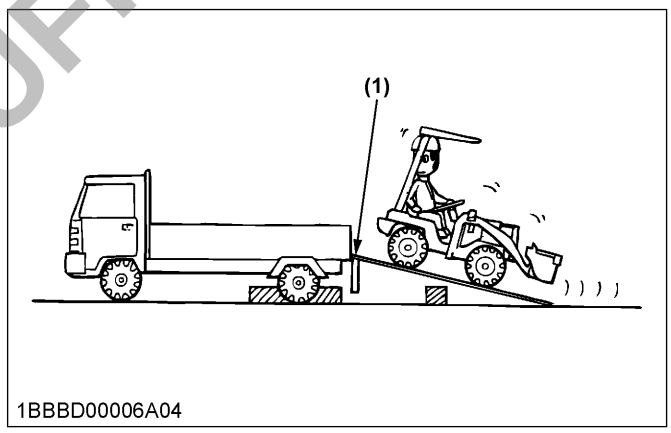
2. Fix the ramps securely to the truck so that the machine and the truck cannot slip.



(1) Lock plate

(A) 500 mm to 600 mm
(B) 650 mm
(C) 4 x H or more

3. Support the rear end of the bed to prevent the front of truck from rising.



(1) Rear end of bed

4. When loading or unloading the machine on or from a truck, keep the bucket about 40 cm up from the ground and reverse the machine at low speed to load it, or advance it at the same speed to unload it.

   IMPORTANT :
   - **When advancing and reversing the machine on the truck bed, be careful not to hit the cabin and the gates.**

PRECAUTIONS FOR TRANSPORTING

⚠ WARNING

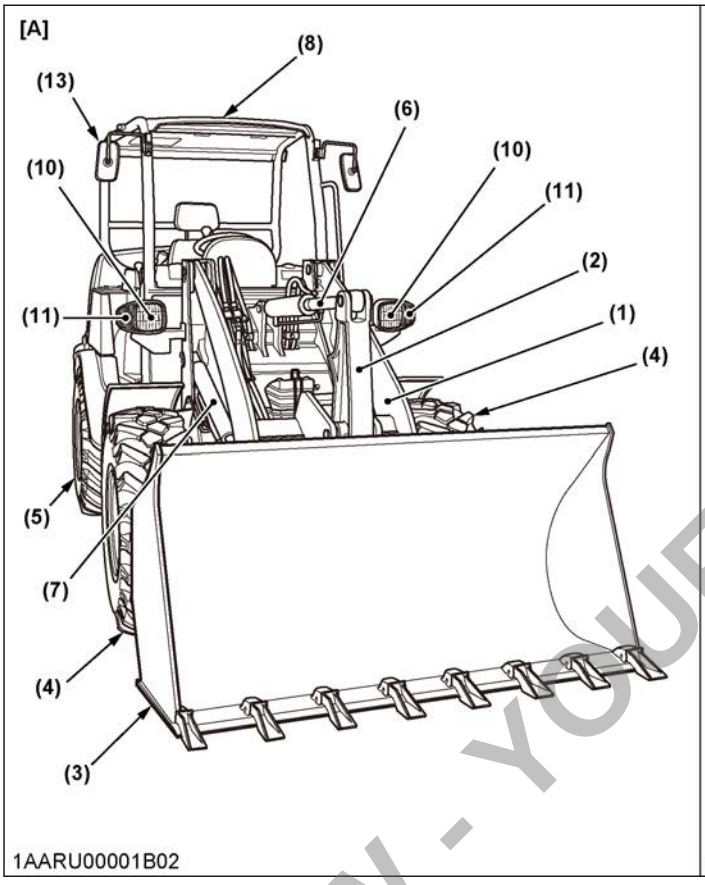
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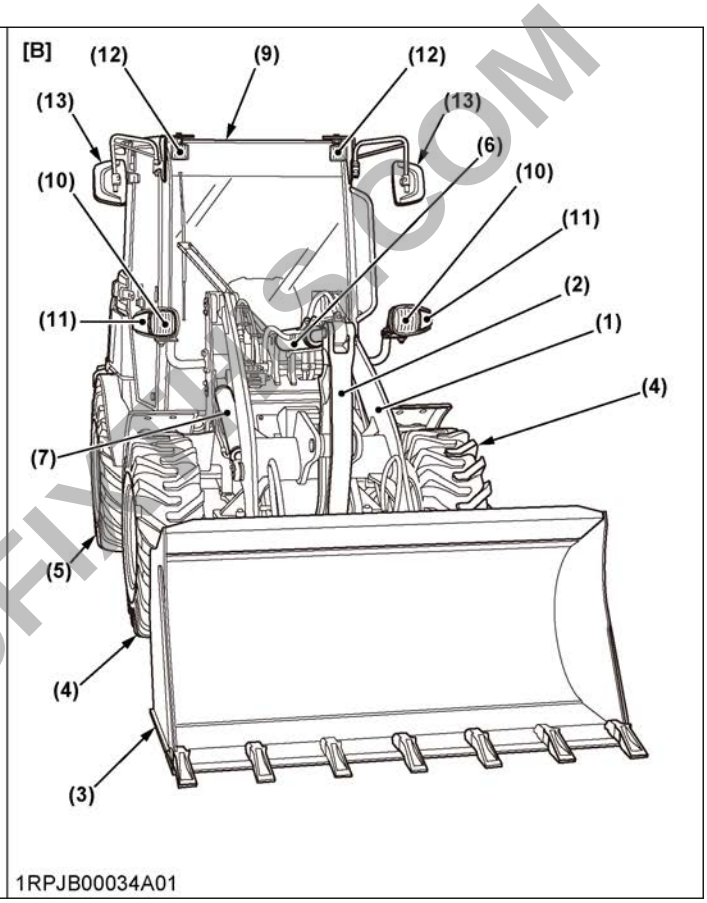
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MACHINE PARTS

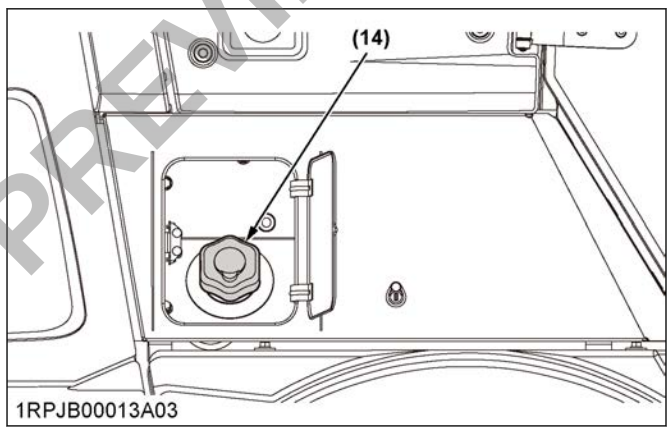
DESCRIPTION OF MACHINE PARTS



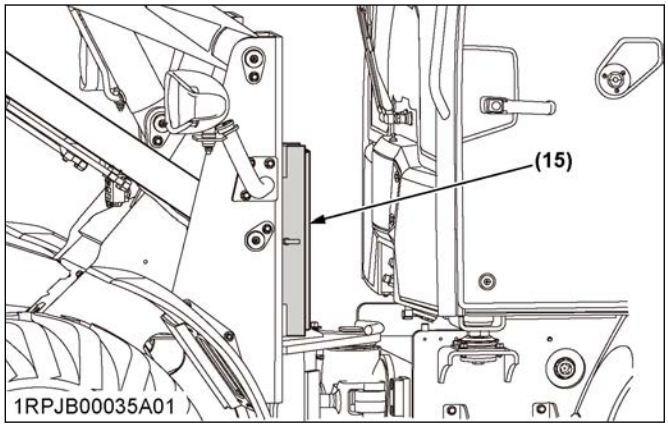


(1) Lift arm
(2) Bell crank
(3) Bucket
(4) Front wheel
(5) Rear wheel
(6) Bucket cylinder
(7) Lift cylinder
(8) ROPS/FOPS canopy
(9) ROPS/FOPS cabin
(10) Headlight
(11) Turn signal light / Clearance light
(12) Working light
(13) Rearview mirror
[A] Canopy
[B] Cabin

Right side



(14) Fuel tank cap



(15) Lift arm support

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