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KUBOTA Corporation

Code No.
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Code Nr.

GR1600-II·GR2100-II

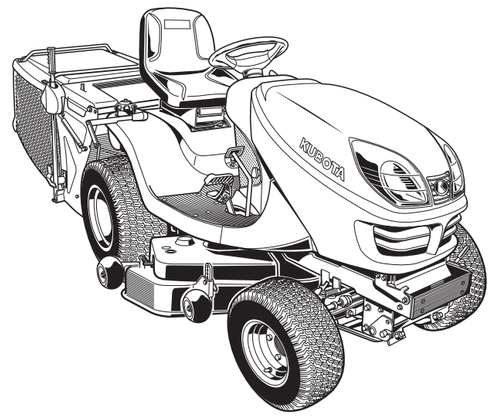
OPERATOR'S MANUAL
KUBOTA RIDING MOWER

MANUEL DE L'UTILISATEUR
TONDEUSE AUTOPORTEE KUBOTA

BEDIENUNGSANLEITUNG
KUBOTA AUFSITZMAHER

ENGLISH
FRANÇAIS
DEUTSCH

MODELS GR1600-II
MODELES GR2100-II
MODELLE



1BDAHAGAP0360

READ AND SAVE THIS MANUAL
MANUEL A LIRE ET A CONSERVER
DIESE ANLEITUNG SORGFÄLTIG
DURCHLESEN UND AUFBEWAHREN

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SAFE OPERATION

Careful operation is your best insurance against an accident. Read and understand this section carefully before operation. All operators, no matter how experienced they may be, should read this and other related manuals before operation of the machine or any implement attached to it. It is the owner's obligation to instruct all operators in safe operation.
This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

1. BEFORE OPERATING

1. Know your equipment and its limitations. Read, understand and follow all instructions in this manual before attempting to start and operate the machine.
2. Know the controls and how to stop quickly.
3. Pay special attention to the safety labels on the machine and mower.
4. The exhaust gas from the muffler is very hot. To prevent fire, do not expose dry grass, mowed grass, oil or any other combustible materials to exhaust gas. Use a spark arrester where required. Also keep the engine and muffler clean all the time. Replace the muffler if it has a fault.
5. Never wear loose, torn, or bulky clothing. It may catch on moving parts or controls, leading to the risk of accident. Safety boots or shoes, eye and hearing protection, gloves, dust mask, etc. are recommended.
6. While mowing, always wear substantial foot wear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
7. Do not operate machine or any implement attached to it while under the influence of alcohol, drugs, or other substances or while fatigued.
8. Check brakes, and other mechanical parts for faulty adjustment and wear. Replace worn or damaged parts promptly. Check the tightness of all nuts and bolts regularly. (For further details, see "MAINTENANCE" section.)
9. Keep the machine and attachments in good operating condition and keep safety devices in place and in proper working condition.
10. This machine is equipped with many safety devices. Do not attempt to remove or alter them.
11. Keep all shields and guards in place. Replace all missing or damaged items for your safety.
12. Never allow any bystanders around or near machine during operation.
    Be sure the area is clear of other people before mowing.
    Stop machine if anyone enters the area.
13. Before allowing other people to use your machine, explain proper operation to them and have them read this manual before operation.
14. Never allow passengers or non-qualified operators on the machine at any time. You must operate the machine from the seat only.
15. Carefully check the area to be mowed and clear any objects such as rocks, bottles, cans, toys, etc., that may damage the mower, the grass catcher or cause personal injury.
16. Keep your machine clean. Dirt, grease, and trash accumulations contribute to fires or lead to personal injury.
17. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
    Check the mower blade mounting bolts for proper tightness at frequent intervals. On multi-bladed mowers, take care as rotating one blade can cause other blades to rotate.
18. Use only attachments recommended by KUBOTA.
    Use proper ballast to front or rear of machine to reduce the risk of upsets. Follow the "Safe Operation" procedures, specified in the Equipment's Manual.
19. Follow the maintenance recommendations. See "MAINTENANCE " section.
20. It is recommended that your machine be thoroughly inspected at least once a year by an authorized KUBOTA Dealer.

2. OPERATING

◆ **Starting**

1. Never start engine or operate levers from anywhere other than the seat.
2. Before starting the engine, make sure that all levers (including auxiliary control levers) are in their neutral positions, that the parking brake is engaged, and that both the mower clutch and the Power Take-Off (PTO) are disengaged.
3. Do not start engine by shorting across starter terminals or by by-passing the safety start switch. The machine may start and move if normal starting circuitry is bypassed.
4. Do not operate or idle engine in a poorly ventilated area. Exhaust contains poisonous carbon monoxide, a colorless and odorless gas.

◆ **Working**

1. Watch where you are going at all times. Watch for and avoid obstacles. Be alert near trees and other obstructions.
2. When working in groups, always let others know what you are doing ahead of time.

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SPECIFICATIONS

	Model			GR1600-II	GR2100-II
Engine	Model			Z482-E2-GX	D782-E2-GX
	Type			Liquid-cooled diesel	
	Total displacement		cm^3	479	778
	Gross power		kW	10.0	15.6
	No. of cylinders			2	3
	Starter			Electric starter with battery	
	Battery			51R (12V, 450CCA)	
	Fuel			Diesel fuel No.1 (below -10℃) Diesel fuel No.2 (above -10℃)	
	Preheating system			Super glow	
	Engine stop			Key stop	
Capacity	Fuel tank		L	18	
	Engine oil		L	1.2	2.8
	Radiator coolant		L	1.9	2.1
	Hydrostatic transmission oil		L	2.8	3.3
Machine	PTO			Shaft drive	
	PTO clutch			Mechanical Wet Multi Discs	
	PTO brake			Wet Multi Discs	
	Tires	Front		15 x 6.00 - 6	16 x 7.50 - 8
		Rear		20 x 10.0 - 8	23 x 10.50 - 12
	Steering type			Manual	Full hydraulic power steering (Glide steer)
	Brake			Internal expanding brake	
	Travel speed control			Foot pedal	
	Transmission			Hydrostatic	
	Traveling speeds	Forward	km/h	0 to 10	
		Reverse	km/h	0 to 5	
Dimensions	Overall length (with Grass Catcher)		mm	2710	2880
	Overall width		mm	1110	1280
	Overall height		mm	1190	1230
	Wheel base		mm	1280	
	Tread	Front	mm	750	825
		Rear	mm	800	
	Weight (without Mower and Grass Catcher)		kg	310	360

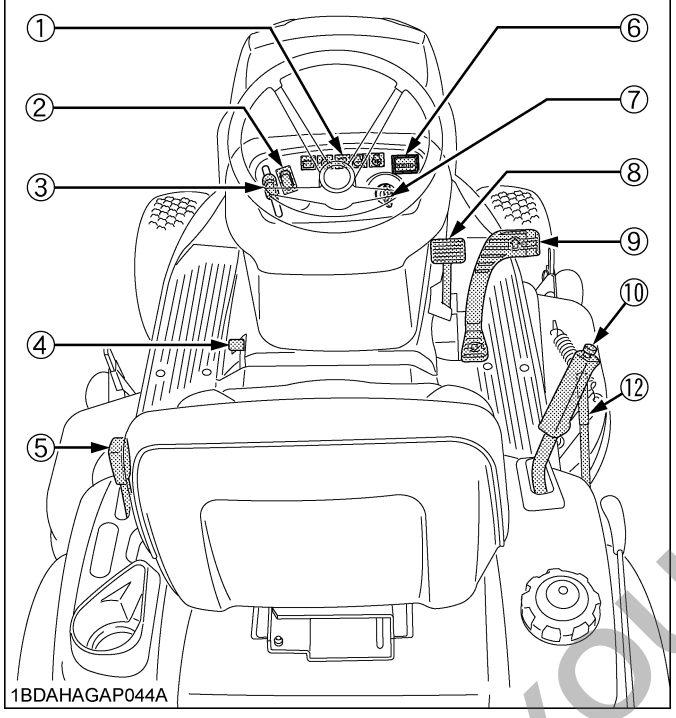
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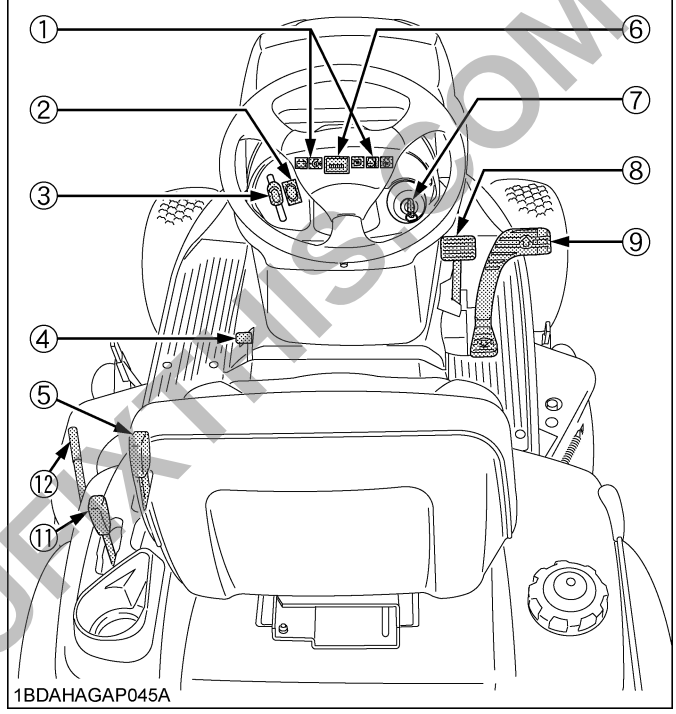
INSTRUMENT PANEL AND CONTROLS

[GR1600-II]



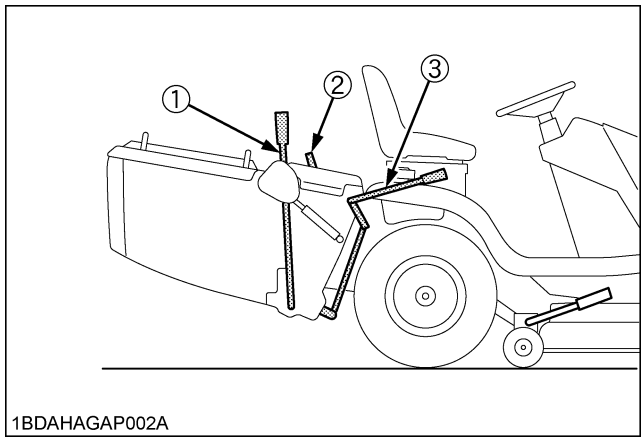
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[GR2100-II]



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(1) Easy checker(TM)..... 22
(2) Head light switch..... 19
(3) Throttle lever..... 21
(4) Parking brake pedal..... 14
(5) PTO lever..... 30
(6) Hour meter..... 23
(7) Key switch..... 15
(8) Brake pedal..... 14
(9) Speed control pedal..... 21
(10) Mower lift lever (GR1600-II)..... 20
(11) Hydraulic lift lever (GR2100-II)..... 20
(12) Front quick clean lever..... 32



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(1) Grass container lift lever..... 32
(2) Top cover lock lever..... 12
(3) Rear quick clean lever..... 35

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MOWER MOUNTING

ATTACHING THE MOWER

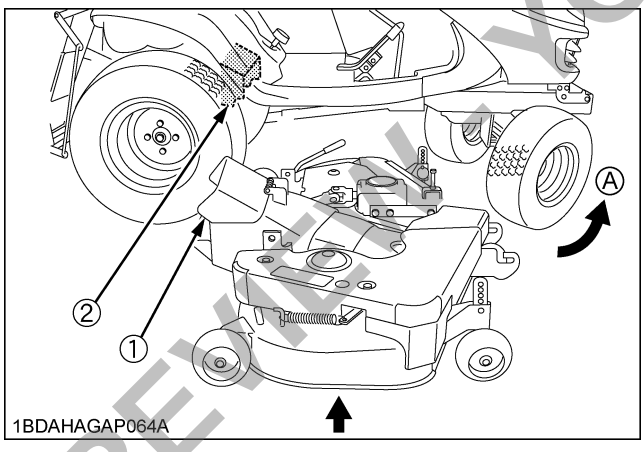
CAUTION

To avoid personal injury:

- **Shut off the engine and remove the key before attaching the mower.**

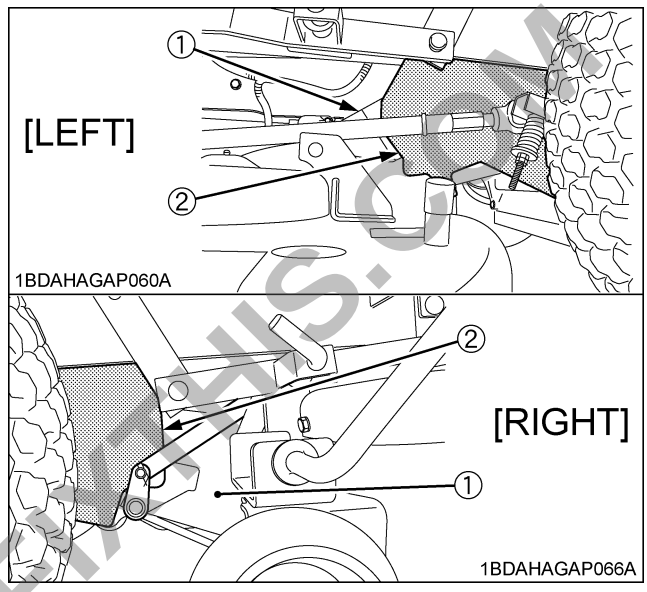
■Mounting the Mower Deck

1. Park the machine on level ground and place the mower deck at the right side of the machine.
2. Set the front anti-scalp rollers at the topmost position. Turn the front wheel to the left.
3. **[GR1600-II]**
   Raise the mower lift lever and lock in the raised position.
   [GR2100-II]
   Pull the hydraulic lift lever to raise rear links.
4. Adjust the height control dial to "1". Slide the mower deck under the machine.
   Insert the container discharge duct between the mower duct and the lift link so that neither the container discharge duct, the mower duct nor the lift link may interfere one another.



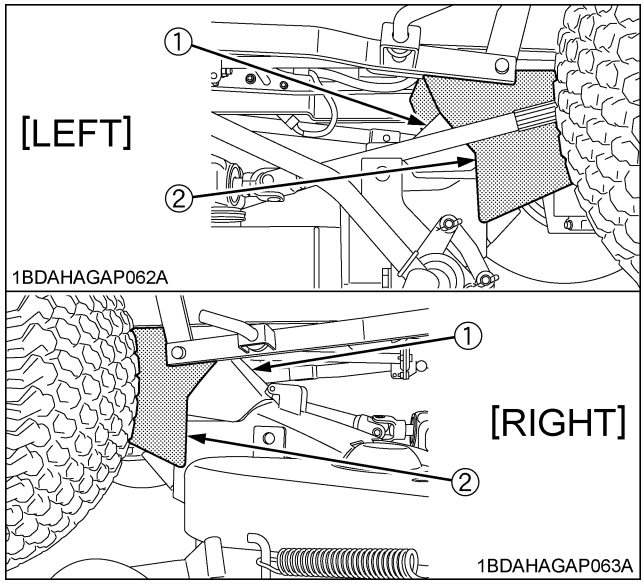
(1) Mower duct *(A) "LEFT"*
(2) Container discharge duct

[RCK42GR-II]



(1) Mower duct
(2) Container discharge duct

[RCK48GR-II]



(1) Mower duct
(2) Container discharge duct

NOTE :

- Make sure that the mower duct is positioned properly inside of the container discharge duct.

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OPERATING THE ENGINE

CAUTION

To avoid personal injury:

- **Read "Safe Operation" in the front of this manual.**
- **Read the danger, warning and caution labels located on the machine.**
- **To avoid danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.**
- **Never start the engine while standing on the ground. Start the engine only from the operator's seat.**

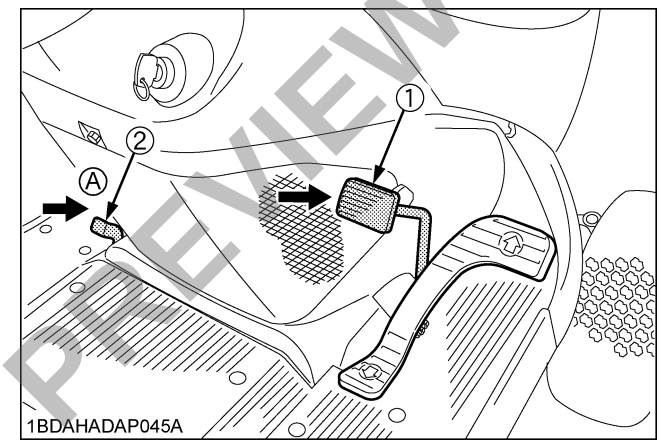
STARTING THE ENGINE

1. Sit on the operator's seat.

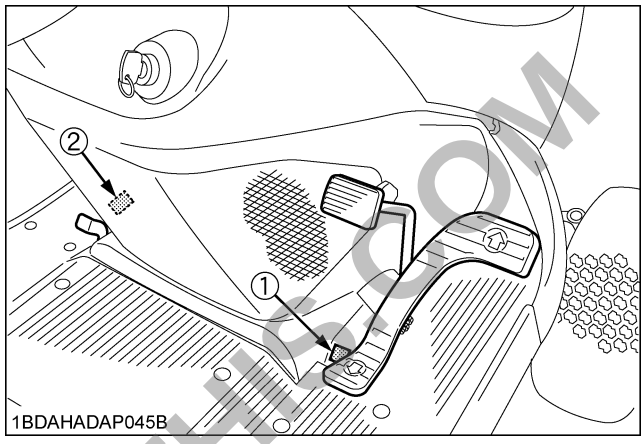
2. Apply the parking brake.

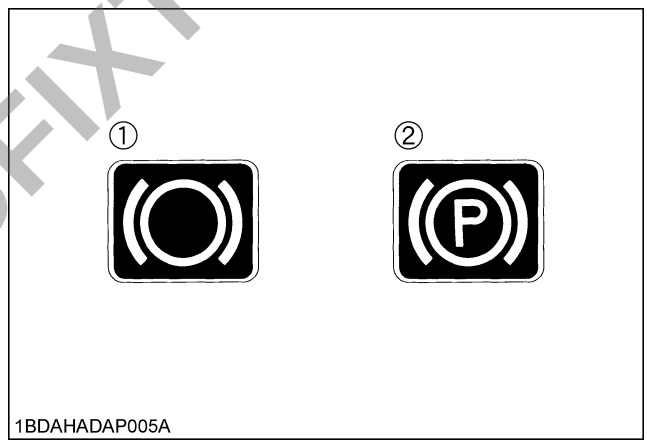
To apply the parking brake:
Depress the brake pedal firmly with your right foot and the parking brake pedal simultaneously with your left foot. Then release the brake pedal while holding the parking brake pedal down.

To release the parking brake:
Depress the brake pedal and release slowly.

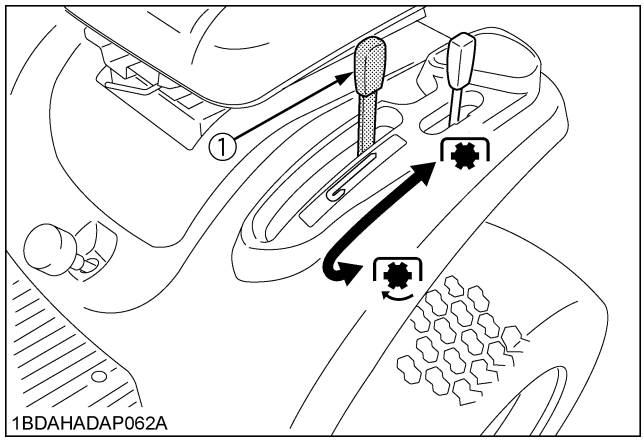


(1) Brake pedal
(2) Parking brake pedal
(A) "PARKING"





3. Make sure that the PTO lever is in the "DISENGAGED" position.



(1) PTO lever

: "ENGAGED"
: "DISENGAGED"

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GRASS CATCHER MOUNTING

ATTACHING THE GRASS CATCHER

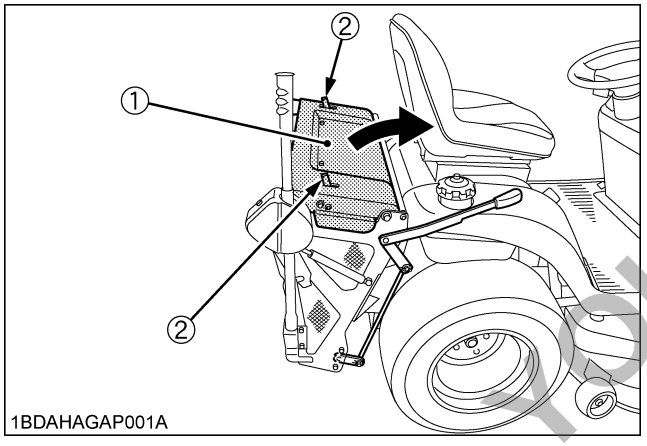
CAUTION

To avoid personal injury:

- **Shut off the engine and remove the key before attaching the grass catcher.**

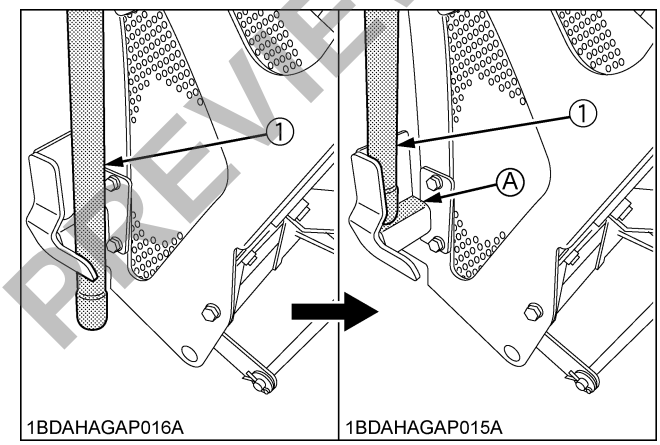
■Mounting the Container

1. Park the machine on a level ground, shut off the engine and remove the key.
2. Open the top cover to pull the top cover lock lever.



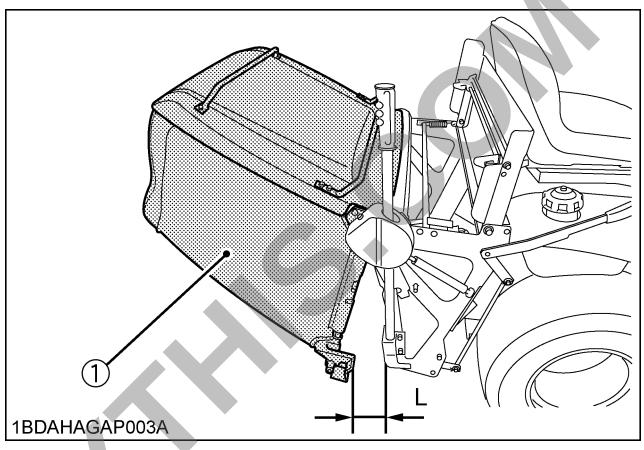
(1) Top cover
(2) Top cover lock lever

3. Place the bottom of the grass container lift lever to the "LEVER LOCK" position.



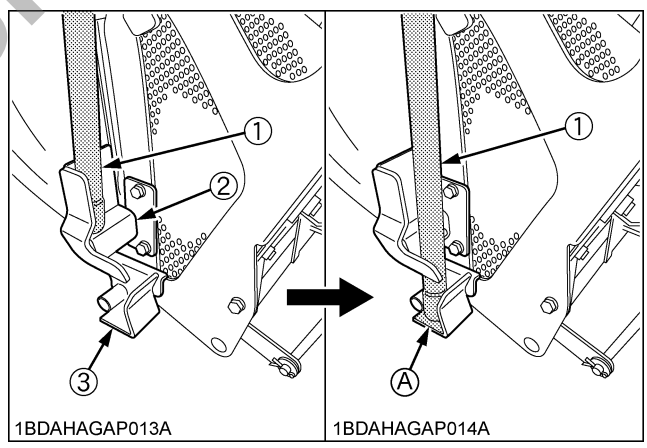
(1) Grass container lift lever *(A) "LEVER LOCK" position*

4. Hook the container to the frame shafts with the container rear edge inclined a little bit upward.



(1) Container *L: 0 to 5 cm*

5. Lock the container by inserting the grass container lift lever between 2 lock plates.



(1) Grass container lift lever
(2) Frame lock plate
(3) Container lock plate
(A) "CONTAINER LOCK" position

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LUBRICANTS

Place	Capacities		Lubricants
	GR1600-II	**GR2100-II**	
Fuel	18 L		• No.2-D diesel fuel • No.1-D diesel fuel if temperature is below -10 ℃
Coolant	1.9 L	2.1 L	Fresh clean water with anti-freeze
Recovery tank	0.25 L		
Engine crankcase	1.2 L *	2.8 L *	• Engine oil: API Service Classification CD, CE or CF Above 25 ℃.....SAE30, SAE10W-30 or 10W-40 0 to 25 ℃.....SAE20, SAE10W-30 or 10W-40 Below 0 ℃.....SAE10W, SAE10W-30 or 10W-40
Transmission case	2.8 L	3.3 L	• KUBOTA UDT or SUPER UDT fluid*1
Front axle case	---	1.9 L	
Mower gear box	0.33 L	0.4 L	SAE 90 gear oil (API service classification: more than GL-3)

Greasing	No. of greasing points		Capacity	Type of grease
	GR1600-II	**GR2100-II**		
Engine transmission universal joint	1		Until grease overflows	• Multipurpose Grease NLGI-2 OR NLGI-1 (GC-LB)
King Pin	2			
Center Pin	---	2		
Glide steer bolt	---	2		
Glide steer rear arm	---	2		
Speed control pedal shaft	---		Moderate amount	• Oil
Mower link	---			
Seat adjuster	---			
Cable	---			
PTO lever	---			
Hydraulic lift lever	---			
Grass catcher hinge	---			
[MOWER]			Until grease overflows	• Multipurpose Grease NLGI-2 OR NLGI-1 (GC-LB)
Spindle shafts	2	3		
Tension arm	1	2		
Mower universal joint	1		Moderate amount	• Oil

Note * Oil amount when the oil level is at the upper level of the oil level gauge.

NOTE :
- Check the oil level of the transmission case with the mower lifted up. [GR2100-II]

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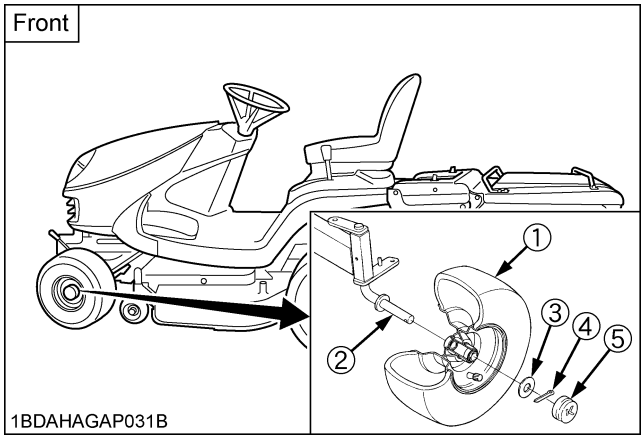
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WHEELS

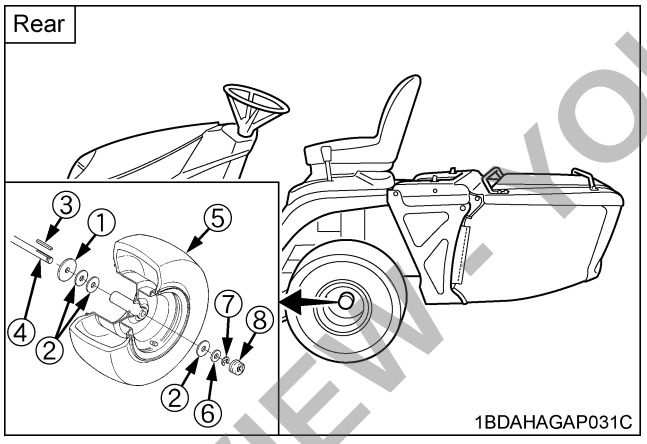
[GR1600-II]

IMPORTANT :

- When re-fitting wheels, make sure the cotter pin of the front wheel and the retaining ring of the rear wheel are set properly.



(1) Front tire assy
(2) Axle
(3) Plain washer
(4) Cotter pin
(5) Front wheel cap



(1) Plain washer
(2) Plain washer
(3) Key
(4) Rear axle
(5) Rear tire
(6) Plain washer
(7) Retaining ring
(8) Rear wheel cap

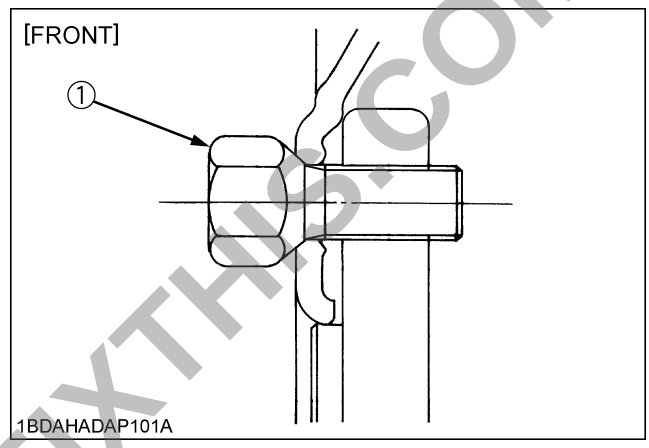
[GR2100-II]

IMPORTANT :

- When re-fitting a wheel, tighten the wheel bolt to the following torques then recheck after travelling 200 m (200 yards) changing directions several times.

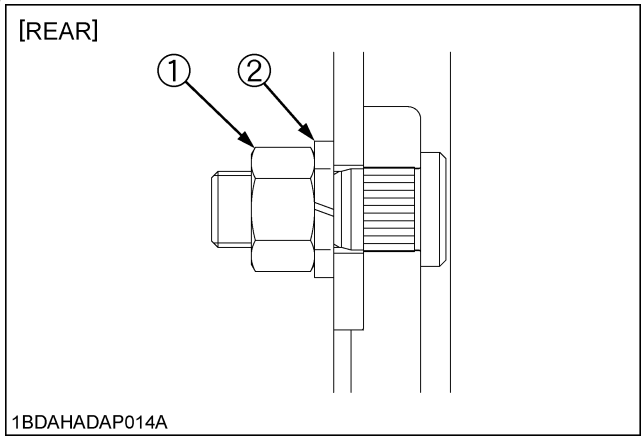
NOTE :

- Wheels with beveled or tapered holes: Use the tapered wheel bolt. (Front)



(1) Bolt

Front 108.5 to 130.2 N-m (11.07 to 13.29 kgf-m) (80 to 96 ft-lbs.)



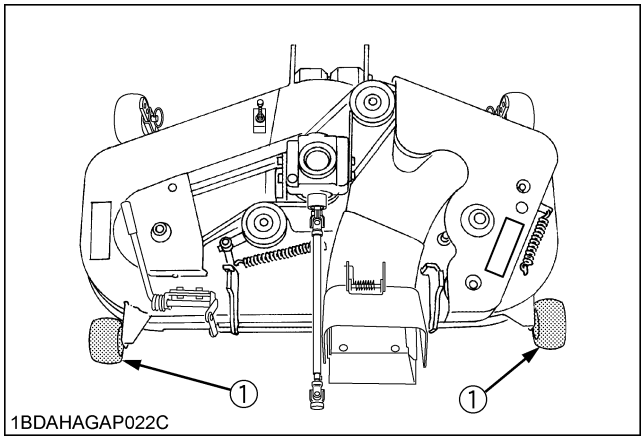
(1) Nut
(2) Spring washer

Rear 77.6 to 90.2 N-m (8.0 to 9.2 kgf-m) (57.1 to 66.5 ft-lbs.)

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[RCK48]

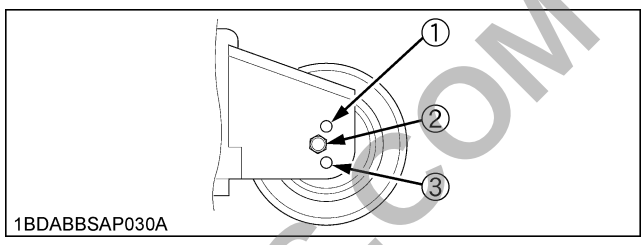


(1) Anti-scalp roller (Rear)

[RCK42]

Reference

- Set the position for a recommended ground clearance of 19 mm (3/4 in.).
  (Figure shows a setting position of cutting height 50 or 55 mm (2.0" or 2.25"))



Cutting height inch (mm)	Position of bolts	(Ref.) Ground clearance between rollers and the ground
1" (25) *1	1	6 mm (0.2 in.)
1.25" (32) *2		12.4 mm (0.5 in.)
1.5" (38)		19.0 mm (0.7 in.)
1.75" (44)		25.4 mm (1.0 in.)
2.0" (50)	2	19.0 mm (0.7 in.)
2.25" (58)		25.4 mm (1.0 in.)
2.5" (64)	3	19.0 mm (0.7 in.)
2.75" (70)		25.4 mm (1.0 in.)
3.0" (76) *3		(31.8 mm) (1.3 in.)
3.5" (89) *3		(44.6 mm) (1.8 in.)
4.0" (102) *3		(57.4 mm) (2.3 in.)

*1. Cutting height 1" is a ground clearance of 6 mm.

*2. Cutting height 1.25" is a ground clearance of 12.4 mm.

*3. For cutting heights above 3.0". The anti-scalp rollers will still be effective against scalping.

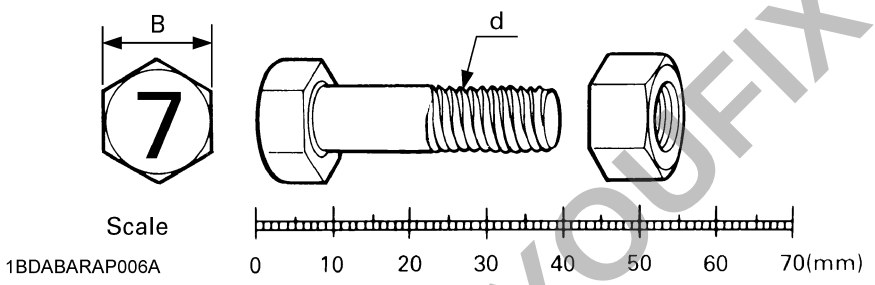
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TIGHTENING TORQUE CHART

Thread size d (mm)	Hexa-Bolt Head size B (mm)	No mark			7T		
		ft-lbs	N-m	kgf-m	ft-lbs	N-m	kgf-m
M8	12 or 13	**13.0 - 15.2** (14.1 ± 1.1)	**17.8 - 20.6** (19.2 ± 1.4)	**1.9 - 2.1** (2.0 ± 0.1)	**17.5 - 20.3** (18.9 ± 1.4)	**23.5 - 27.5** (25.5 ± 2.0)	**2.4 - 2.8** (2.6 ± 0.2)
M10	14 or 17	**28.9 - 33.3** (31.1 ± 2.2)	**39.3 - 45.1** (42.2 ± 2.9)	**4.0 - 4.6** (4.3 ± 0.3)	**35.4 - 41.2** (38.3 ± 2.9)	**48.1 - 55.9** (52.0 ± 3.9)	**4.9 - 5.7** (5.3 ± 0.4)
M12	17 or 19	**46.3 - 53.5** (49.9 ± 3.6)	**62.8 - 72.6** (67.7 ± 4.9)	**6.4 - 7.4** (6.9 ± 0.5)	**57.1 - 66.5** (61.8 ± 4.7)	**77.6 - 90.2** (83.9 ± 6.3)	**8.0 - 9.2** (8.6 ± 0.6)
M14	19 or 22	**79.6 - 92.6** (86.1 ± 6.5)	**107.9 - 125.5** (116.7 ± 8.8)	**11.0 - 12.8** (11.9 ± 0.9)	**91.1 - 108.5** (99.8 ± 8.7)	**123.6 - 147.0** (135.3 ± 11.7)	**12.6 - 15.0** (13.8 ± 1.2)

NOTE :
- Figure "7" on the top of the bolt indicates that the bolt is of special material.
- Before tightening, check the figure on the top of bolt.



1BDABARAP006A

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