

WSM

WORKSHOP MANUAL

**Z411KW-AU,
Z421KW-AU,
Z412KW-AU, Z422KW-AU**

Kubota

TO THE READER

This Workshop Manual tells the servicing personnel about the mechanism, servicing and maintenance of the Z411KW-AU, Z421KW-AU, Z412KW-AU, Z422KW-AU. It contains 4 parts: "Information", "General", "Mechanism", and "Servicing".

Information

This section primarily contains information below.

- Safety first
- Safety decal
- Specifications
- Dimensions

General

This section primarily contains information below.

- Engine identification
- Model identification
- General precautions
- Maintenance check list
- Check and maintenance
- Special tools

Mechanism

This section contains information on the structure and the function of the unit. Before you continue with the subsequent sections, make sure that you read this section.

Refer to the latest version of Workshop Manual (Code No. 9Y021-18200) for the *Tractor mechanism* that this Workshop Manual does not include.

Servicing

This section primarily contains information below.

- Troubleshooting
- Servicing specifications
- Tightening torques
- Checking, disassembling and servicing

All illustrations, photographs and specifications contained in this manual are of the newest information available at the time of publication.

Kubota reserves the right to change all information at any time without notice.

Since this manual includes many models, information or illustrations and photographs can show more than one model.

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RECORD OF REVISIONS

For pdf, use search function [Search word] to find all the revised locations.

Last digit of the code No.	Month of revision	Main revised point and corrective measure [Search word]	Reference page
1	2019 February	Changed PTO switch starting with serial numbers: Z421KW-AU: 10040, Z411KW-AU: 10058 Changed starter switch starting with serial numbers: Z421KW-AU: 10191, Z411-AU: 10266	7-15 7-19 7-19
		Added battery label starting with serial numbers: Z421KW-AU: 10301, Z411-AU: 10334	1-5
		Horsepower changed	1-13
2	2019 November	Added product identification number (PIN)	2-1
		Added periodic service chart label	2-17
3	2020 December	Added Z412KW and Z422KW model codes	—
		Added product identification number information for Z411KW and Z421KW: <ul style="list-style-type: none"> • Removing HST pulley • Loosening HST belt 	3-12 4-14
		Added serial number breaks for RCK48P-400Z, RCK54-400Z, RCK60-400Z: <ul style="list-style-type: none"> • Removing tension pulley and mower belt • Removing tension pulley and idler pulley • Removing blade • Removing blade shaft and pulley holder 	8-15 8-16 8-16 8-17
		Revised checking procedure for link stopper	6-5
		Added adjusting procedure for link stopper	6-5

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1. INFORMATION

SAFETY FIRST

SAFETY FIRST

- This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully.
- It is essential that you read the instructions and safety regulations before you try to repair or use this unit.

DANGER

- Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

- Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

- Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

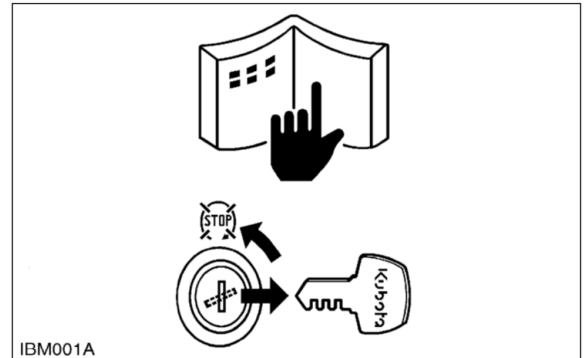
■ IMPORTANT

- Indicates that equipment or property damage could result if instructions are not followed.

■ NOTE

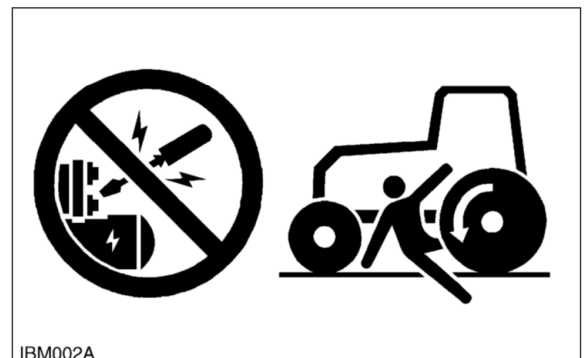
- Gives helpful information.

1. Before you start service



- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a stable and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, then remove the key.
- Disconnect the battery negative cable.
- Hang a **[DO NOT OPERATE]** tag in the operator station.

2. Start safely

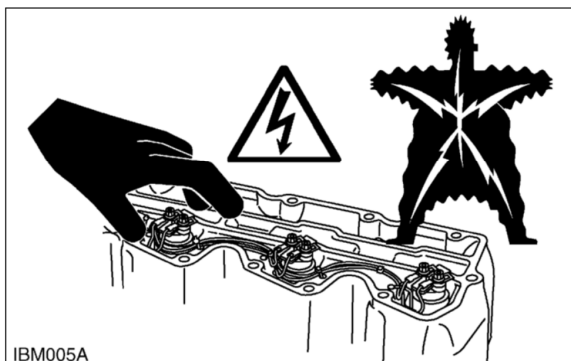
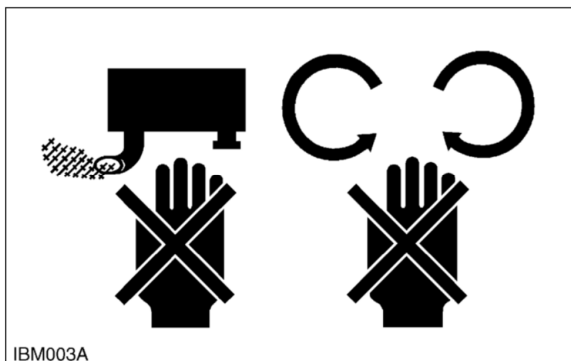


- Do not do the procedures below when you start the engine.
 1. Short across starter terminals.
 2. Bypass the safety start switch.
- Do not alter or remove any part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.

1. INFORMATION

- Do not start the engine when you stay on the ground. Start the engine only from operator's seat.

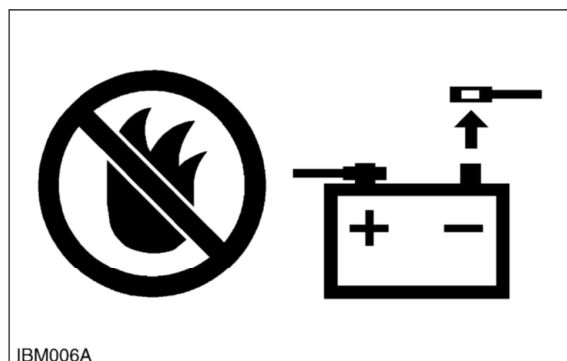
3. Operate safely



- Do not use the machine after you consume alcohol or medication or when you are tired.
- Put on applicable clothing and safety equipment.
- Use applicable tools only. Do not use alternative tools or parts.
- When 2 or more persons do servicing, make sure that you do it safely.
- Do not operate below the machine that only a jack holds. Always use a safety stand to hold the machine.
- Do not touch the hot parts or parts that turn when the engine operates.

- Do not remove the radiator cap when the engine operates, or immediately after it stops. If not, hot water can spout out from the radiator. Only remove the radiator cap when it is at a sufficiently low temperature to touch with bare hands. Slowly loosen the cap to release the pressure before you remove it fully.
- Released fluid (fuel or hydraulic oil) under pressure can cause damage to the skin and cause serious injury. Release the pressure before you disconnect hydraulic or fuel lines. Tighten all connections before you apply the pressure.
- Do not open a fuel system under high pressure. The fluid under high pressure that stays in fuel lines can cause serious injury. Do not disconnect or repair the fuel lines, sensors, or any other components between the fuel pump and injectors on engines with a common rail fuel system under high pressure.
- Put on an applicable ear protective device (earmuffs or earplugs) to prevent injury against loud noises.
- Be careful about electric shock. The engine generates a high voltage of more than DC100 V in the ECU and is applied to the injector.

4. Prevent a fire



- Fuel is very flammable and explosive under some conditions. Do not smoke or let flames or sparks in your work area.
- To prevent sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- The battery gas can cause an explosion. Keep the sparks and open flame away from the top of battery, especially when you charge the battery.
- Make sure that you do not spill fuel on the engine.

5. Keep a good airflow in the work area



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- If the engine is in operation, make sure that the area has good airflow. Do not operate the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.

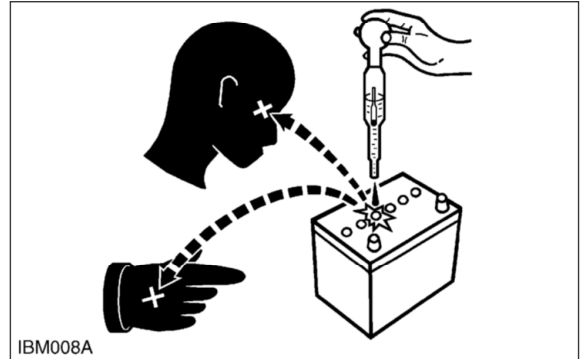
6. Discard fluids correctly



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- Do not discard fluids on the ground, down the drain, into a stream, pond, or lake. Obey related environmental protection regulations when you discard oil, fuel, coolant, electrolyte and other dangerous waste.

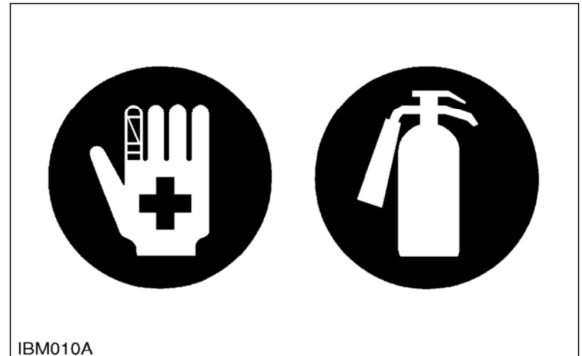
7. Prevent acid burns



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- Keep electrolyte away from your eyes, hands and clothing. Sulfuric acid in battery electrolyte is poisonous and it can burn your skin and clothing and cause blindness. If you spill electrolyte on yourself, clean yourself with water, and get medical aid immediately.

8. Preparing for emergencies



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- Keep a first aid kit and fire extinguisher ready at all times.
- Keep emergency numbers near your telephone at all times.

1. INFORMATION
