

Product: Kubota BX23S-AU LA340AU BT603 RCK54D RCK60D RCK54 RCK60B Service Manual
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WSM

WORKSHOP MANUAL

**TRACTOR, FRONT LOADER,
BACKHOE, ROTARY MOWER**

**BX23S-AU, LA340AU,
BT603, RCK54D, RCK60D,
RCK54, RCK60B**

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TO THE READER

This Workshop Manual tells the servicing personnel about the mechanism, servicing and maintenance of *BX23S-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.

Servicing

This section primarily contains information below.

- Troubleshooting
- Servicing specifications (Service 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.

January 2018

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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 March	Added quick coupler cartridge socket drawing.	2-72
		Added quick coupler disassembly and assembly.	10-49
		Revised service intervals: <ul style="list-style-type: none">• Transmission fluid• Transmission strainer	2-17
		Revised Electrical troubleshooting topic	9-21
		Revised Backhoe troubleshooting topic	11-21
2	2019 September	Added "Checking 3 point hitch oil flow" topic.	7-34
		Revised "Removing center section" topic.	4-43

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1. INFORMATION

SAFETY FIRST

1. 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, could result in minor or moderate injury.

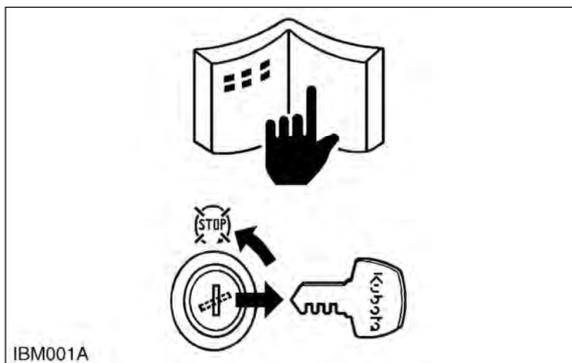
IMPORTANT

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

NOTE

- Gives helpful information.

2. Before you start service



IBM001A

- 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.

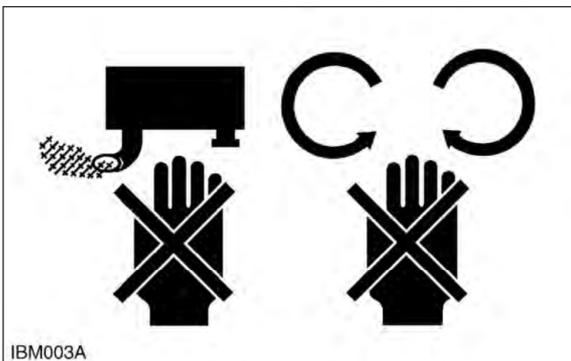
3. Start safely



IBM002A

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

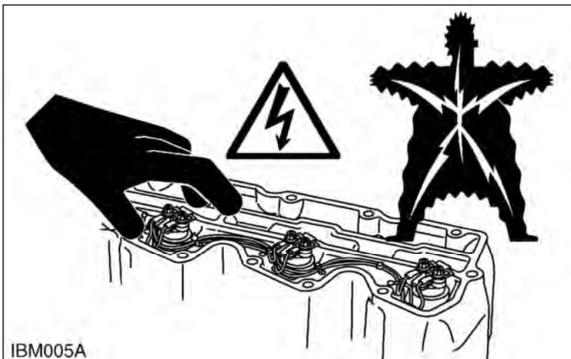
4. Operate safely



IBM003A



IBM004A



IBM005A

- 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 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.

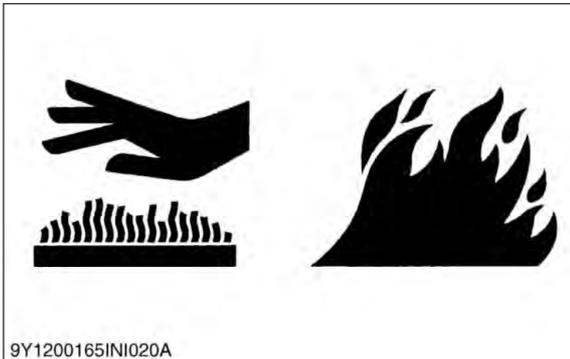
5. Protect against high pressure spray



9Y1200165INi019A

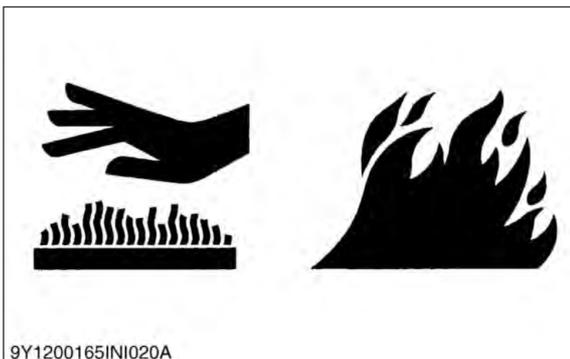
- Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.
- If an accident occurs, see a doctor immediately. Any high pressure spray injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

6. Avoid hot exhaust



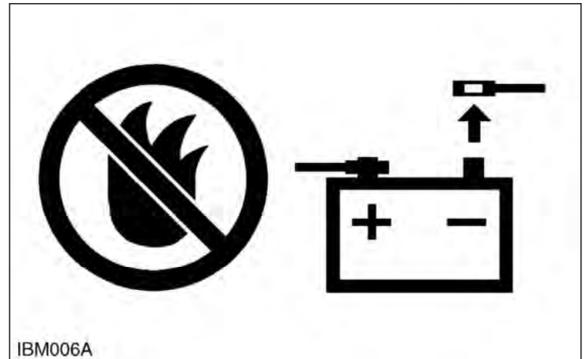
- Servicing machine or attachments with engine operating can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.
- Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

7. Exhaust filter cleaning



- Servicing machine or attachments during exhaust filter cleaning can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.
- During auto or manual/stationary exhaust filter cleaning operations, the engine will operate at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite, or melt common materials.

8. 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.

9. Keep a good airflow in the work area



- 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.

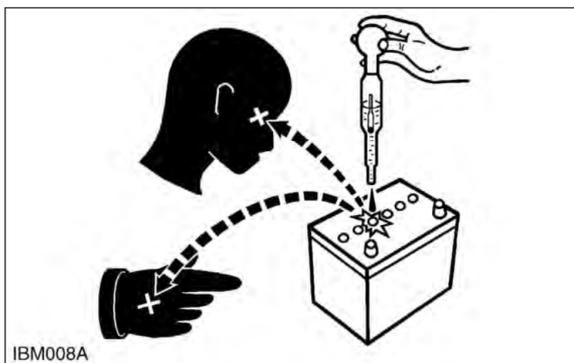
10. Discard fluids correctly



IBM009A

- 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.

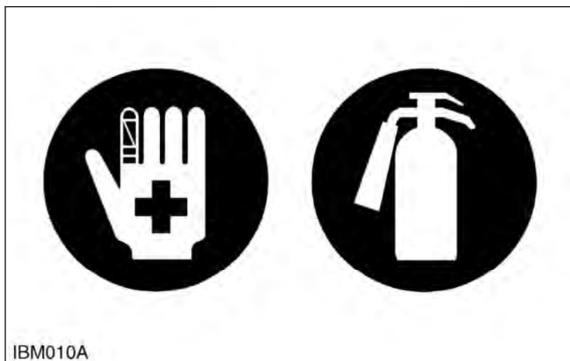
11. Prevent acid burns



IBM008A

- 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.

12. Prepare for emergencies



IBM010A

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

SAFETY LABEL

1. Safety labels for BX tractor

The safety labels are installed on the machine. If a label becomes damaged, illegible or is not on the machine, replace it. The label part number is listed in the parts list.

1. INFORMATION

(1) Part No. K2871-6548-1

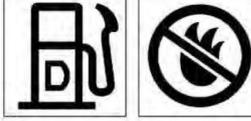
WARNING

TO AVOID PERSONAL INJURY OR DEATH:

1. Read and understand the operator's manual before operation.
2. Before starting the engine, make sure that everyone is at a safe distance from the tractor and that the PTO is OFF.
3. Do not allow passengers on the tractor at any time.
4. Before allowing other people to use the tractor, have them read the operator's manual.
5. Check the tightness of all nuts and bolts regularly.
6. Keep all shields in place and stay away from all moving parts.
7. Slow down for turns, or rough roads.

1AGAJBMAP0460

(2) Part No. K1272-6585-2
Diesel fuel No fire only



**ULTRA LOW SULFUR
DIESEL FUEL ONLY**

1BDAHAOAP002A

(3) Part No. K2591-6557-2

WARNING



TO AVOID PERSONAL INJURY OR DEATH FROM ROLL-OVER:

1. Keep Roll-Over Protective Structures (ROPS) in the upright and locked position.
2. Fasten SEAT BELT before operating.



THERE IS NO OPERATOR PROTECTION WHEN THE ROPS IS IN THE FOLDED POSITION.

1. Check the operating area and fold the ROPS only when absolutely necessary.
2. Do not wear SEAT BELT if ROPS is folded.
3. Raise and lock ROPS as soon as vertical clearance allows.
4. Read ROPS related instructions and warnings.

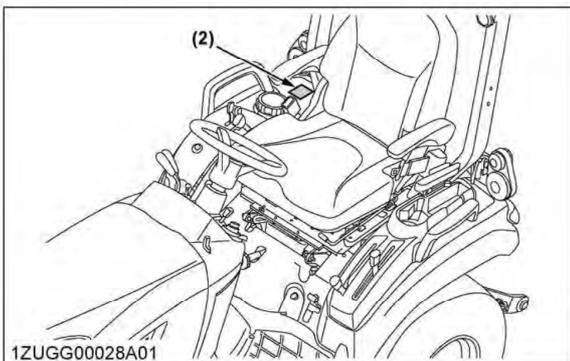
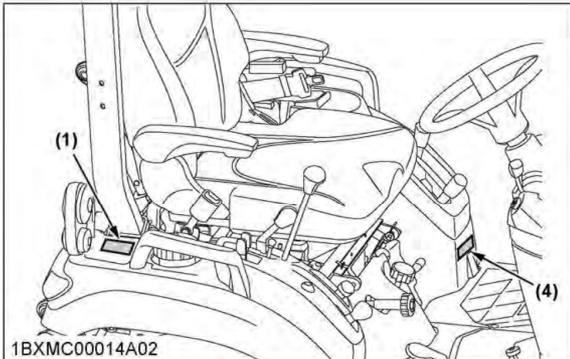
1HNAAACAP0690

(4) Part No. K3603-4718-1

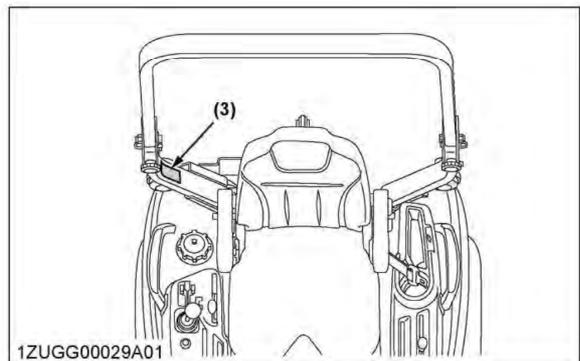
Use ear protection to avoid damage to hearing.
Always wear protective glasses.



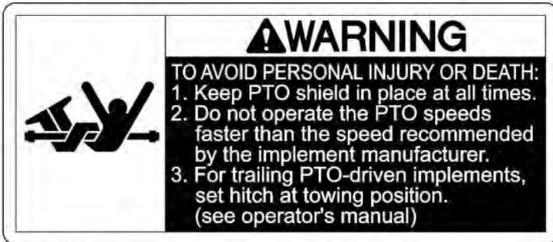
1BDABDMAP011A



1ZUGG00027A01



(1) Part No. K2581-6554-1



1AGAJBMAP0470

(2) Part No. K2581-6555-1



1AGAJBMAP0480

(3) Part No. K2871-6556-1



1AGAJBMAP0490

(4) Part No. K2871-6552-2



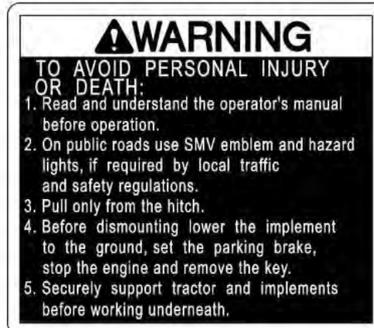
1AGAJBMAP0500

(5) Part No. K2651-6568-1

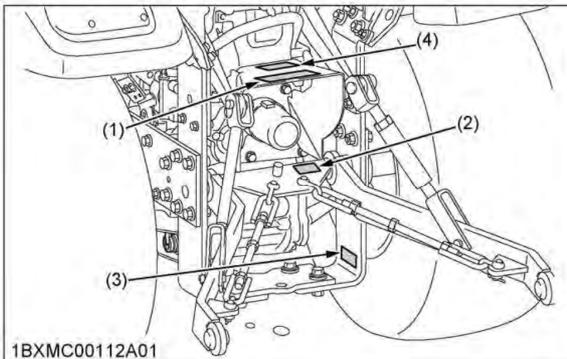


1AYAACAAP1000

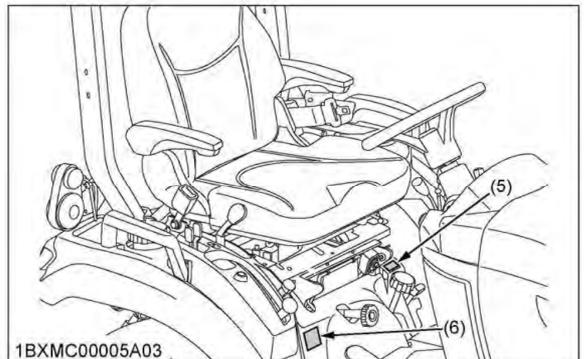
(6) Part No. K2871-6558-1



1AGAJBMAP0530



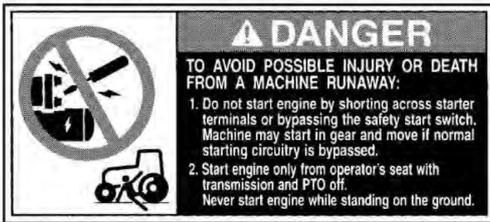
1BXMC00112A01



1BXMC00005A03

1. INFORMATION

(1) Part No. K2871-6541-1



1AGAJAXAP048E

(2) Part No. K2581-6547-1
Stay clear of engine fan and fanbelt.



1AGAJAXAP049E

(4) Part No. K2774-6528-1
LH and RH
Do not reach hands underneath fender to avoid pinching.



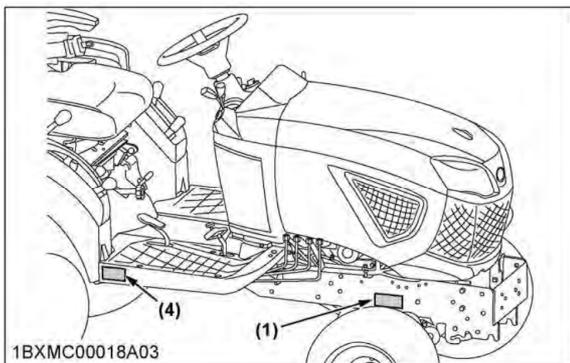
1WFBX00013000

(3) Part No. K2581-6543-1

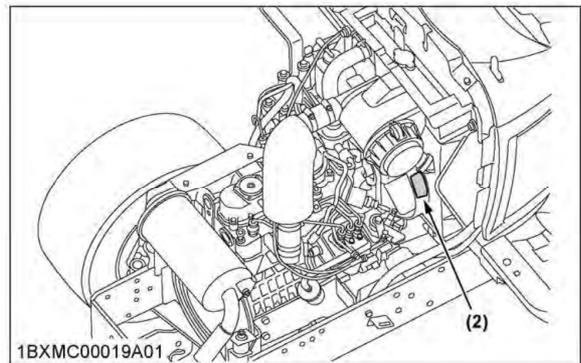
Stay clear of engine fan and fanbelt.



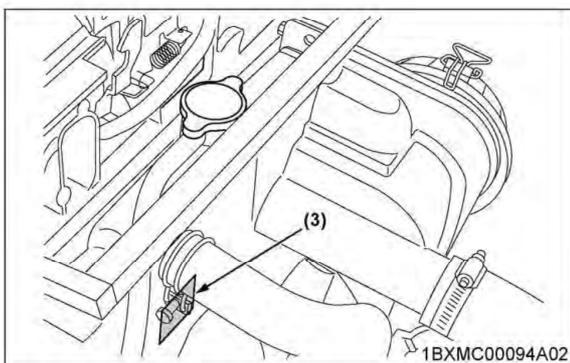
1AGAJAXAP052E



1BXMCM00018A03



1BXMCM00019A01



1BXMCM00094A02

1ZUGG00030A01

(1) Part No. K7591-6114-3

 FLAMMABLES	 SHIELD EYES	 KEEP OUT OF THE REACH OF CHILDREN	DANGER EXPLOSIVE GASES CIGARETTES, FLAMES OR SPARKS COULD CAUSE BATTERY TO EXPLODE. ALWAYS SHIELD EYES AND FACE FROM BATTERY. DO NOT CHARGE OR USE BOOSTER CABLES OR ADJUST POST CONNECTIONS WITHOUT PROPER INSTRUCTION AND TRAINING.
 CAUTIOUS OF SULFURIC ACID	 READ INSTRUCTION MANUAL CAREFULLY	 EXPLOSIVE	POISON CAUSES SEVERE BURNS CONTAINS SULFURIC ACID. AVOID CONTACT WITH SKIN, EYES OR CLOTHING. IN EVENT OF ACCIDENT FLUSH WITH WATER AND CALL A PHYSICIAN IMMEDIATELY.
			KEEP OUT OF REACH OF CHILDREN  California Proposition 65 WARNING : This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov .

1AGAJBMAP096A

(2) Part No. K2871-6564-1

⚠ WARNING
 Never modify or repair a ROPS because welding, grinding, drilling or cutting any portion may weaken the structure.

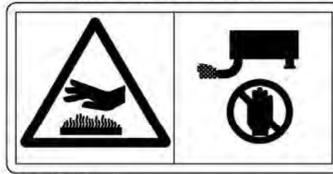
⚠ WARNING
 TO AVOID PERSONAL INJURY OR DEATH WHEN RAISING OR FOLDING ROPS:

1. Set parking brake and stop engine.
2. Remove any obstruction that may prevent raising or folding of the ROPS.
3. Do not allow any bystanders.
4. Always perform function from a stable position at the rear of the tractor.
5. Hold the top of the ROPS securely when raising or folding.
6. Make sure all pins are installed and locked.

1AGAJBMAP0560

(3) Part No. K2883-6527-1

Do not touch hot surface like muffler, etc.



1PPEP00062000

(4) Part No. K2601-9616-2

PROPOSITION 65 WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **WASH HANDS AFTER HANDLING.**

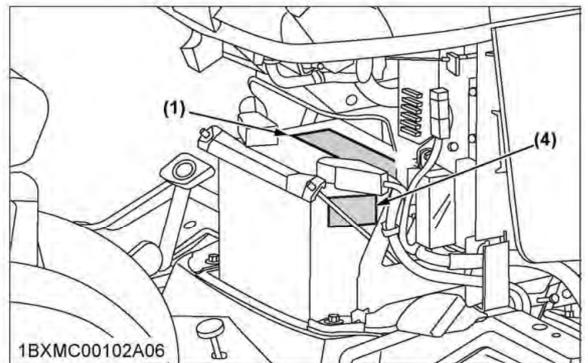
ADVERTENCIA DE LA PROPOSTA 65: Los postes de batería, terminales y accesorios relacionados pueden contener plomo y compuestos de plomo, productos químicos conocidos en el estado de California por causar cáncer y daños a la reproducción. Las baterías también contienen otros productos químicos conocidos en el estado de California por causar cáncer. **LÁVESE LAS MANOS DESPUÉS DE LA MANIPULACIÓN.**

AVERTISSEMENT PROPOSITION 65 : Les bornes de batterie, les prises et les accessoires associés contiennent du plomb et des composés de plomb, des produits chimiques connus dans l'état de la Californie pour causer le cancer et des effets nocifs sur la reproduction. Les batteries contiennent aussi d'autres produits chimiques connus dans l'état de la Californie pour causer le cancer. **SE LAVER LES MAINS APRES MANIPULATION.**

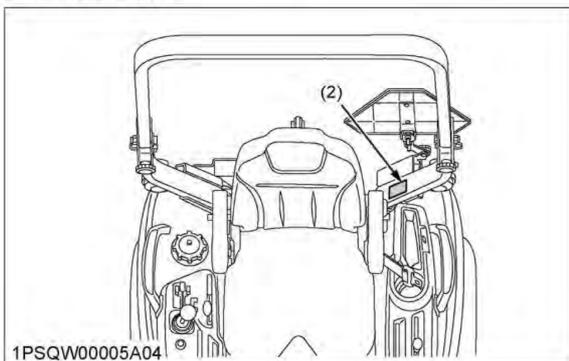


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1AYAACPAP080A

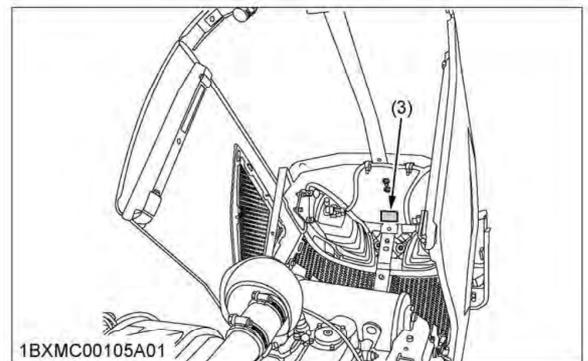


1BXMC00102A06



1PSQW00005A04

1PSQW00008A01enUS



1BXMC00105A01