

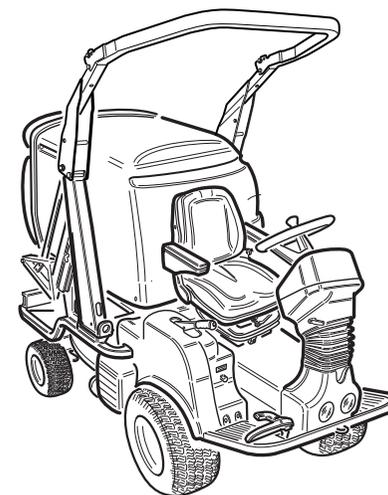
FC3-221 E

# Kubota

Code No. W780004452

## OPERATOR'S MANUAL MULTIFUNCTION TOOL CARRIER

FC3-221 E



READ AND SAVE THIS MANUAL



pag.

**EN**

**OPERATOR'S MANUAL** .....7  
**Translation of the originals instructions**

**ILLUSTRATIONS AND DIAGRAMS**.....21



## 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 attempt to assemble 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.

# CONTENTS

NOTES FOR PRODUCT DISPOSAL IN THE EUROPEAN COMMUNITY.....	8
0. EC PLATE.....	8
1. SERIAL NUMBER.....	8
2. FOR OUR CUSTOMERS.....	8
3. INTENDED USE.....	8
4. FORESEEABLE, UNPERMITTED USE.....	9
5. OPERATOR'S RESPONSIBILITY.....	9
6. SAFETY REQUIREMENTS.....	9
6.1 SLOPES.....	10
6.2 TRANSPORTATION AND UNLOADING.....	10
7. TECHNICAL CHARACTERISTICS.....	11
7.1 MACHINE WEIGHT.....	11
7.2 COMPATIBLE ATTACHMENTS.....	11
7.3 NOISE LEVEL.....	12
7.4 VIBRATIONS.....	12
8. COMMANDS AND FUNCTIONS.....	12
8.1 MACHINES: FC3-221 E.....	12
9. USE OF COMMANDS AND FUNCTIONS.....	12
9.1 FORWARD - REVERSE MOVEMENT.....	12
9.2 PARKING BRAKE LEVER.....	12
9.3 DIFFERENTIAL LOCK.....	12
9.4 BYPASS LEVER.....	12
9.5 ACCELERATOR LEVER.....	12
9.6 POWER TAKE-OFF.....	12
9.7 HYDRAULIC LIFTING.....	12
9.8 HYDRAULIC HOPPER TILTING.....	12
9.9 ELEVATOR.....	12
9.10 BATTERY CUT-OFF SWITCH.....	13
9.11 ECO-DRIVE.....	13
10. BUILT-IN COMPUTER.....	13
10.1 DESCRIPTION OF COMPUTER FUNCTIONS TOUCH SCREEN BUTTONS.....	13
10.2 MANAGING ERRORS.....	13
10.3 MANAGING MAINTENANCE FREQUENCY.....	14
10.4 MICROSWITCH DIAGNOSTICS.....	14
10.5 MULTIFUNCTION BUTTON.....	14
11. STARTING UP THE ENGINE.....	15
12. HANDLING THE MACHINE.....	15
13. GRASS CUTTING AND AUTOMATIC COLLECTION SYSTEM.....	15
14. STOPPING THE ENGINE.....	15
16. REFUELLING.....	15
16. ROUTINE MAINTENANCE.....	15
16.1 TOPPING UP THE ENGINE OIL.....	16
16.2 TOPPING UP THE COOLANT.....	16
16.3 TOPPING UP THE HYDROSTATIC TRANSMISSION OIL.....	16
16.4 TOPPING UP THE FRONT AXLE OIL.....	16
16.5 BATTERY.....	16
16.6 AIR FILTER.....	16
16.7 RADIATOR GRILLE.....	16
16.8 ENGINE GRILLE.....	16
16.9 ENGINE OIL FILTER.....	16
16.10 FUEL FILTER.....	16
16.11 TYRE PRESSURE.....	16
16.12 ADJUSTING THE BELT TENSION.....	16
16.13 CLEANING THE MACHINE.....	16
16.14 HOPPER TILTING CYLINDER GREASE NIPPLE.....	16
16.15 PTO SPRING TENSIONING.....	16
16.16 PTO GREASE NIPPLE.....	16
16.17 GREASING THE PEDAL.....	16
16.18 HYDRAULIC SYSTEM FILTERS.....	16
16.19 CHANGING HYDRAULIC DRIVE AND HYDRAULIC SYSTEM OIL.....	16
16.20 HYDRAULIC DRIVE AND HYDRAULIC SYSTEM OIL LEVEL.....	17
16.21 ANGLE DRIVE OIL LEVEL.....	17
17. SPECIAL MAINTENANCE.....	17
18. MACHINE INACTIVITY.....	17
19. DRIVING ON THE ROAD.....	17
20. SAFETY LABELS.....	17
20.1 KEY.....	18
21. GENERAL NOTES.....	18
22. MAINTENANCE TABLE.....	19
23. ERROR CODES.....	20
24. ROLLOVER PROTECTION STRUCTURE (ROPS).....	20

## **NOTES FOR PRODUCT DISPOSAL IN THE EUROPEAN COMMUNITY**



Do not dispose of the product as solid urban waste. Take it to an authorised collection centre. Abandoning the attachment may cause serious damage to the environment. If there are batteries inside the attachment, they must be removed before disposing of it. The batteries must be disposed of separately, in the appropriate collection points, as they contain highly toxic substances. The crossed-out bin symbol in the figure indicates that it's strictly forbidden to dispose of the attachment with normal waste.

### **0. EC PLATE**

See figure 0.

This label is merely an example. Refer to the one attached to the machine.

- |                           |                         |
|---------------------------|-------------------------|
| 1) Manufacturer's address | 4) Motor                |
| 2) Model                  | 5) Year of construction |
| 3) Weight                 | 6) Machine name         |

### **1. SERIAL NUMBER**

See figure 1.

## **2. FOR OUR CUSTOMERS**

- We're proud to have you as our customer.
- Before start-up, study this manual carefully to ensure a better understanding of the machine and the use and maintenance tips given.

FC3-221 E machines can be equipped with various types of attachment; it is therefore important for the user to study not only this manual but also the one relating to the specific attachment that will be mounted.

- The machines are designed and built to ensure the best work in the most diverse conditions; as always however, the quality of the work is dependent on routine maintenance.

- For more specific information and tips not contained in this handbook, contact your dealer who will be happy to answer all your questions concerning the use and maintenance of these machines.



**WARNING: this symbol draws your attention to the safety precautions that must be observed by the operator in order to avoid accidents. When you see this symbol, pay attention as it relates to your own safety and that of other people.**

## **3. INTENDED USE**

Machines in the FC3-221 E range are multifunction models designed primarily for professional use. "Intended use" includes:

- Mowing,
- Cleaning surfaces,
- Bulldozing,
- Grass shredding,
- Aeration, scarifying.

We disclaim all responsibility if the machine is fitted with accessories or attachments other than those indicated in this manual. Use only the parts and accessories purposely designed by Kubota Gianni Ferrari for the specific model you have purchased.



**WARNING: use of the rops protection structure and the safety belts is compulsory. However, even when using the rops protection structure, work on slopes that are steeper than those indicated in the "slopes" paragraph of this handbook is not permitted.**

## 4. FORESEEABLE, UNPERMITTED USE

Any type of use not indicated in the "Intended Use" section is not allowed.

The use of other equipment not listed in this manual is considered as "improper use" and dangerous because it is not covered by our risk analysis.

Other people (except for the driver), things or animals must not be carried on the machine.

It is absolutely forbidden to use the machine without having consulted this booklet.

Any transformation or modification of the machine not envisaged by this manual is therefore prohibited.

Use of the machine is prohibited unless it is in perfect working order, so always carry out the recommended checks and maintenance before using it.

Do not allow children or teenagers to use it.

Do not use the machine while wearing sandals or with bare feet.

The machine must not be used as a hoist.

Never switch on the machine engine in closed places or places without adequate ventilation. The exhaust fumes are toxic.

Do not allow flames or sparks to develop near the fuel tank or the battery.

Never park the machine on a slope.

Do not use the machine for towing.

It is absolutely forbidden to use the machine without correctly installed equipment.

Tampering with the machine speed control seals is strictly forbidden.

Do not use the machine in adverse weather conditions, especially when there is lightning.



**WARNING:** It is strictly forbidden to extend any parts of your body out beyond the limits of the backrest while the hopper is moving back to its closed position (See figure 9.8)

## 5. OPERATOR'S RESPONSIBILITY

The operator is responsible for carefully reading this manual and understanding the correct way to use, lubricate and service the machine, as explained in the instructions.

The operator is responsible for checking the machine and repairing or replacing those parts subject to continual wear (that could cause harm to other people).

Operators are liable for damage caused to third parties, themselves and things arising from improper use of the machine and in contrast with the instructions provided in this manual.

The machine must be used and serviced exclusively by people who are familiar with its specific characteristics and have fully understood the safety requirements.

Never allow children or teenagers to use the machine. Local regulations may indicate a minimum age for the operator.

Use only the couplings, parts and accessories supplied by Kubota Gianni Ferrari for the specific model you have purchased. For more information, contact your dealer.

Any transformation or modification of the machine not envisaged by this manual is therefore prohibited.

**NOTE:** When using the machine, the operator must scrupulously observe the safety precautions provided in this manual, together with accident prevention regulations, other general safety regulations and the provisions defined by the occupational health authorities.

## 6. SAFETY REQUIREMENTS

### A CAUTIOUS OPERATOR IS THE BEST OPERATOR

Many accidents could be avoided just by observing the precautions given in this manual.

#### GENERAL PART

- 1) Read every part of this manual carefully. Use of the machine by persons who have not read and understood this manual is expressly forbidden.
- 2) Before using the machine, always inspect it thoroughly. Pay attention to any malfunctioning and to loose bolts, screws or brushes, as well as any other parts that may be damaged or loose. Use of the machine is prohibited unless it is in perfect working order, so always carry out the recommended checks and maintenance before using it.
- 3) Get familiar with all the single parts and the necessary checks before starting up the machine.
- 4) The machine may only be used by one informed adult. Do not allow children or teenagers to use it. Do not use the machine if you are in poor physical condition.
- 5) Keep people and objects at a safe distance, as explained further on.
- 6) Use only parts and accessories supplied by us and do not allow any modification or transformation to be made. For more information, contact your dealer.
- 7) If the safety and warning signs are damaged, illegible or missing, have them replaced. Check the list of signs in the relative safety section. Keep the signs free of dirt, dust or mud.

- 8) Keep your body, especially hands and feet, away from moving parts.
- 9) Do not use the machine if the covers and guards are not in good condition and correctly positioned.  
Do not use the machine if the safety elements are not in good working order.  
Never tamper with the safety elements for any reason whatsoever.
- 10) If you hit or pick up an object, stop the machine straight away. Disconnect the PTO and switch off the motor, then lay the attachment on the ground and check it thoroughly. Before starting it up again, make sure the best working conditions have been restored.
- 11) When you are not using the machine, deactivate the PTO\* (\*power take-off that starts the attachment) and lower it to the ground. Switch off the motor and remove the key.
- 12) Before performing maintenance work on the machine, make sure that it is OFF. If you have to work on the electrical system, disconnect the batteries.
- 13) Use the machine and equipment at speeds compatible with safety requirements and the characteristics of the model used.
- 14) Apply extreme caution when using the machine on slopes. Reduce the speed to a minimum.
- 15) During use and maintenance of the machine, wear suitable clothing: goggles, gloves, safety, non-slip footwear and other protective clothing.
- 16) Use the machine in good visibility conditions.
- 17) All operators must receive professional, practical training. This training must focus on:
  - the need to pay attention and concentrate when working with machines with a seated driver.
  - control of a machine that slides down a slope cannot be regained by using the brakes.
 The main reasons for loss of control are:
  - a) poor wheel grip;
  - b) driving too fast;
  - c) inadequate braking;
  - d) type of machine unsuitable for work required;
  - e) a lack of awareness of the effect of the ground conditions and slopes in particular;
  - f) incorrect coupling of attachments and uneven loading as a result.
- 18) When working, always wear resistant footwear and long trousers. Do not use the machine while wearing sandals or with bare feet.
- 19) Carefully inspect the area where the machine is to be used. Eliminate any objects that the machine might pick up and throw.
- 20) Always disconnect the PTO when moving the machine from one area to another.
- 21) The towing hook should only be used if the machine is faulty.
- 22) Whenever you leave the machine unattended, even just for a moment, engage the parking brake.
- 23) Pay particular attention to people and obstacles when making reverse movements.
- 24) It is the employer's responsibility to assess and adopt the most suitable personal protective equipment.
- 25) Pressurised hydraulic fluid may penetrate and seriously damage the skin, seek medical advice immediately.

## 6.1 SLOPES See figure 6.1

- Do not use the machine on longitudinal slopes of more than 12°.
- Do not use the machine on lateral slopes of more than 12°.
- While working, do not tackle slopes of any kind (lateral or longitudinal) with the deck and hopper raised.
- Do not stop or start the machine suddenly when going up or down a slope.
- Run the machine at low speed on slopes and during tight turns.
- Pay attention to any hidden bumps, holes or other hazards. If the ground is uneven, the machine may tip over more easily.
- Do not operate near riversides, ditches or embankments; the machine could suddenly overturn if a wheel crosses their edges or the ground gives way.

## 6.2 TRANSPORTATION - UNLOADING - LIFTING See figure 6.2

The machine is heavy and can lead to serious crushing injuries.

Load and unload it with caution using loading ramps.

Transport the machine on a type-approved trailer. During transportation, apply the parking brake and hold the machine in place with the aid of type-approved belts, chains or ropes.

**IMPORTANT: If the machine is packed and placed on its pallets, it can be moved with the forklift.**

**MINIMUM CAPACITY 1200 kg**



**WARNING: The parking brake is not sufficient to block the machine during transportation. Secure the machine to the vehicle appropriately using type-approved devices.**

## 7. TECHNICAL CHARACTERISTICS See figure 7.

measurements in mm.

**\*\*** See the attachment technical manual

EN

Engine	FC3-221 E
	KUBOTA D 902
Power (kW)	15.9
Displacement (cc)	898
N° Cylinders	3
rpm	3200
Wheel drive	Front with differential lock possible
Type of drive	hydrostatic
Service brake	hydrostatic
Parking brake	Mechanical with disc
Max speed (Km/h)	11
Fuel tank capacity (L)	30
Collector capacity (L)	600 (20")

### 7.1 MACHINE WEIGHT

Model	Weight (kg)
FC3-221 E	823

### 7.2 COMPATIBLE ATTACHMENTS

Consult the technical manual specifically for the attachment.

NUMBER OF BALLAST		Machine		Machine	
		FC3-221 E	Fig.	FC3-221 E (Germany)	Fig.
Code	Attachments				
RC50C-FC3	Mower Deck	-	-	-	-
RCR51C-FC3	Mower Deck	-	-	-	-
VACUUM HOSE-FC3	Vacuum Hose	-	-	-	-
RCF53C-FC3	Flail Mower	 x 8	7.2.1	-	-
SNOW BLADE 150-FC3	Snow Blade	-	-	-	-

Contact an authorised assistance centre.

### 7.3 NOISE LEVEL

	FC3-221 E
SOUND POWER	105,6 dB (A) ± 2,8
SOUND PRESSURE IN OPERATOR'S POSITION	93,6 dB (A) ± 3,1

### 7.4 VIBRATIONS

	FC3-221 E
Exposure of upper limbs to acceleration	2,31 ± 0,45 m/s <sup>2</sup>
Exposure of body to acceleration	0,49 ± 0,10 m/s <sup>2</sup>

### 8. COMMANDS AND FUNCTIONS See figure 8.

The machine driving system uses the following commands:

- |                                   |                                  |   |
|-----------------------------------|----------------------------------|---|
| 1) Forward - reverse pedal        | 8) Steering wheel                | 15) Elevator activation lever (elevator vers. only) |
| 2) Seat longitudinal adjustment   | 9) Parking brake lever.          | 16) P.D.P. and turbine activation                   |
| 3) Seat height adjustment         | 10) Emergency socket             | 17) Differential lock pedal                         |
| 4) Suspension rigidity adjustment | 11) Battery cut-off switch       |   |
| 5) Bipolar nebuliser socket       | 12) Accelerator /Eco-Drive lever |   |
| 6) Bypass lever                   | 13) Attachment lifting lever     |   |
| 7) Steering column adjustment     | 14) Hopper tilting lever         |   |

#### 8.1 MACHINES: FC3-221 E See figure 8.1

- |                                |                                |
|--------------------------------|--------------------------------|
| 18) Light indicator            | 22) Computer                   |
| 19) Ignition key               | 23) Turn signal switch         |
| 20) Direction light indicators | 24) Emergency light switch     |
| 21) Light switch and horn      | 25) Rotating lamp light switch |

### 9. USE OF COMMANDS AND FUNCTIONS

#### 9.1 FORWARD - REVERSE MOVEMENT See figure 9.1

#### 9.2 PARKING BRAKE LEVER See figure 9.2

#### 9.3 DIFFERENTIAL LOCK See figure 9.3

#### 9.4 BYPASS LEVER See figure 9.4

 **IMPORTANT:**  
Avoid towing the machine for long distances with the bypass engaged.

#### 9.5 ACCELERATOR LEVER See figure 9.5

#### 9.6 POWER TAKE-OFF See figure 9.6

#### 9.7 HYDRAULIC LIFTING See figure 9.7

#### 9.8 HYDRAULIC HOPPER TILTING See figure 9.8

1. Hopper tilting lever
2. Quick connector lever

#### 9.9 ELEVATOR See figure 9.9

1. Hopper lifting lever
1. Hopper tilting lever
2. Quick connector lever

 **WARNING:**  
When driving the machine, especially on bends, the hopper must never be protruding.

## 9.10 BATTERY CUT-OFF SWITCH See figure 9.10

## 9.11 ECO-DRIVE See figure 9.11

# 10. BUILT-IN COMPUTER

## 10.1 DESCRIPTION OF COMPUTER FUNCTIONS TOUCH SCREEN BUTTONS

See figure 10.1

1. Display
2. Open menu button (Touch screen)
3. Change display colour button (Touch screen)
4. Alarm button (Touch screen)
5. Settings button (Touch screen)
6. Maintenance button (Touch screen)
7. Diagnostics button (Touch screen)
8. Home screen button (Touch screen)
9. Error register button (Touch screen)

\* the touch screen works by holding down the buttons for at least 2 seconds

\* holding down button (8) returns to the home screen

The display has an area for the various indicator lights:

10. **Total hour counter:** indicates the number of machine operating hours up until that moment. Maximum hours: 9999.9. When this number is reached, the counter restarts from 0.
10. **Partial hour counter:** indicates the number of machine operating hours since the last reset made by the user. Maximum value of partial hour counter: 999.9 hours. When this value is reached, the counter restarts from 0.
10. **Any error messages**
11. **Engine water temperature:** indicates the temperature of the engine water, in degrees Celsius.
12. **Clock.**

The lower part of the display has an area for the various indicator lights:

13. **Alternator charge:** if the alternator is recharging, this indicator light is OFF (engine switched on); if the alternator isn't charging, the light is ON (engine switched off, or alternator fault).
14. **Lights:** this indicator light is ON if the lights are switched on, and OFF when the lights are deactivated.
15. **Parking brake:** this indicator light is ON when the parking brake is engaged. An intermittent acoustic alarm warns the user if the vehicle moves (pedal pressed) while the brake is engaged and the engine is switched on.
16. **Fuel:** this indicator light flashes for 10 seconds when the diesel runs out, and is accompanied by an acoustic signal.
17. **Engine oil pressure:** this indicator light comes on when the engine oil pressure level is insufficient. In this case, there is also an intermittent acoustic signal when the engine is switched on, and this signal persists until the problem is resolved or the machine is switched off.
18. **Triangle with exclamation mark:** appears in the event of an error and/or malfunctioning on at least one machine part.
19. **Spanner:** appears if one scheduled maintenance task or more has expired.
20. **Micro seat:** appears when the operator is not sitting.
21. **Air filter clogged:** appears if the filter is clogged
22. **Pre-heating glow plugs:** stays on when pre-heating engine glow plugs
23. **Oil filter clogged:** appears if the filter is clogged

## 10.2 MANAGING ERRORS See figure 10.2

The error codes appear on the display when detected by the control unit.

- To view errors, press the button (2) at the bottom (Fig.10.1a), press the triangle (4) to open the alarm menu (Fig.10.1b), from which all errors can be viewed in detail (see appropriate image (chap. 10.2).
- To exit the "ALARMS" mode, press ESC to go to the menu page, or press on the button "represented by a small house" to go to the home page.

The list of errors, with the cause and solution, can be seen in chap. 23.

### 10.3 MANAGING MAINTENANCE FREQUENCY See figure 10.3

- On switching on the vehicle, if necessary, a spanner will appear on the display, alerting the user that the maintenance intervals have expired.
- To access the maintenance menu, press the button (2) at the bottom (Fig.10.1a), press the spanner symbol (6) (Fig.10.1b), and the intervals will be displayed (see specific image (Fig.10.3)).
- If the task has already been carried out, the message can be reset by pressing the reset button (Fig. 10.3).
- If the task has not yet been carried out, the spanner symbol (ref. 20) will remain on the display to remind the user of the need to do it.
- To exit the "MAINTENANCE" mode, press ESC to go to the menu page, or press on the button "represented by a small house" to go to the home page.

### 10.4 MICROSWITCH DIAGNOSTICS See figure 10.4

DISPLAY	CONTROLLED SWITCH	OPEN STATE	CLOSED STATE
P1	PTO	<input type="checkbox"/> PTO OFF	<input checked="" type="checkbox"/> PTO ON
P2	FULL HOPPER	<input type="checkbox"/> EMPTY HOPPER	<input checked="" type="checkbox"/> FULL HOPPER
P3	PARKING BRAKE	<input type="checkbox"/> BRAKE ON	<input checked="" type="checkbox"/> BRAKE OFF
P4	SEAT	<input type="checkbox"/> MAN ON GROUND	<input checked="" type="checkbox"/> MAN ON BOARD
P5	HOPPER CLOSED	<input type="checkbox"/> HOPPER OPEN	<input checked="" type="checkbox"/> HOPPER CLOSED
P6	LID	<input type="checkbox"/> LID OPEN	<input checked="" type="checkbox"/> LID CLOSED

- Switch on the machine and press the button (2) (Fig.10.1a) until the menu appears (See fig. 10.1b)
- Press the button (7) to open the screen referring to microswitch diagnostics (See fig. 10.4)
- The states corresponding to the switches are graphically displayed with a solid circle (switch closed) or blank circle (switch open) as shown in the table.
- To exit the "DIAGNOSTICS" mode, press ESC to go to the menu page, or press on the button "represented by a small house" to go to the home page.

### 10.5 MULTIFUNCTION BUTTON See figure 10.1a

You can access and control some basic machine functions using this button such as:

- Setting the clock
- Microswitch diagnostics
- Resetting of maintenance frequency
- Resetting of partial counter
- List of active errors
- Error register list. (See fig.10.5b)

Setting the clock:

1. - Press the button (2) (Fig.10.1a) until the menu appears (See fig. 10.1b)
2. Press the button (5) to open the time setting screen (Fig.10.5a)
3. To adjust the minutes, hold down the button for more than approx. 2 seconds. (the value will turn yellow See fig. 10.5a)
4. To increase the minutes, press the two buttons represented by two arrows. Each time the button is pressed, it increases by one unit. The same holds for adjusting the date.
5. From this screen, the partial counter (TRIP) can also be reset
6. Before exiting, press the "SAVE" button
7. To exit the "settings" mode, press ESC to go to the menu page, or press on the button "represented by a small house" to go to the home page.

## **11. STARTING UP THE ENGINE**

See figure 11.

- 1) Sit correctly on the seat.
- 2) Make sure that the battery cut-off switch is in the ON position.
- 3) Make sure that the PTO switch is completely disengaged.
- 4) Make sure that the parking brake pedal is fully engaged.
- 5) Turn the ignition key to ON and wait for the glow plugs to preheat.
- 6) Turn the ignition key towards the symbol to switch on the engine.
- 7) With temperatures of below 0° C keep the engine running at a medium speed for at least 5 minutes.

## **12. HANDLING THE MACHINE**

See figure 12.

- 1) Adjust the accelerator lever.
- 2) Disengage the parking brake.
- 3) Select the desired speed using the pedals on the RH side (A and B).
- 4) The steering wheel controls the rear wheels.

**IMPORTANT: To stop the machine, simply release the forward or reverse pedal; once stationary, block the parking brake pedal.**

**NOTE:** Until you are an expert driver, drive slowly. Keep people and animals at a distance of at least 3 m.

## **13. GRASS CUTTING AND AUTOMATIC COLLECTION SYSTEM**

See figure 13.

## **14. STOPPING THE ENGINE**

- 1) Stop the machine.
- 2) Disengage the PTO lever.
- 3) Pull up the parking brake lever.
- 4) Fully lower the attachment using the special lever.
- 5) Make sure that the hopper is fully retracted.
- 6) Reduce the engine to idling speed.
- 7) Move the ignition key from ON to STOP.
- 8) Turn the battery cut-off key to OFF.

## **16. REFUELLING**

See figure 16.

Refuelling must be carried out in an open or sufficiently ventilated area with the engine switched off and no flames or sparks. Also ensure that the fuel is the one indicated on the label affixed to the tank.



**WARNING: fuel is highly flammable.**

**Keep fuel in special containers. Only refuel in open areas and do not smoke. Add the fuel before starting the engine. Never remove the tank cap or add fuel when the engine is running or is hot.**

if there is a fuel leak, do not attempt to start the engine but move the machine away from the area where the leak occurred and do not create sources of ignition until the vapours have dissipated. Put the tank caps back on correctly and put the fuel container back in place.

Never store the machine with fuel in its tank inside a building where the vapours can come into contact with a naked flame or spark.

Leave the engine to cool before storing the machine in an enclosed area.

## **16. ROUTINE MAINTENANCE**

See figure 16.

When carrying out maintenance operations, use only original spare parts to ensure maximum reliability for the machine.

Before carrying out maintenance work, carefully read the instructions provided in paragraph 6 "Safety Requirements".

If you have to work on the machine with the hopper raised, make sure that the mechanical safety device "S" is correctly inserted.

## **16.1 TOPPING UP THE ENGINE OIL** See figure 16.1

### **• KUBOTA D902**

Refer to the engine User and Maintenance Manual.

OIL SHELL SPIRAX S3 T

## **16.2 TOPPING UP THE COOLANT** See figure 16.2

## **16.3 TOPPING UP THE HYDROSTATIC TRANSMISSION OIL** See figure 16.3

OIL SHELL SPIRAX S3 T

## **16.4 TOPPING UP THE FRONT AXLE OIL** See figure 16.4

OIL SHELL SPIRAX S3 T

## **16.5 BATTERY**

The battery liquid doesn't need to be checked or topped up.

## **16.6 AIR FILTER** See figure 16.6

Regular checks.

## **16.7 RADIATOR GRILLE** See figure 16.7

Regular checks.

## **16.8 ENGINE GRILLE** See figure 16.8

Regular checks.

## **16.9 ENGINE OIL FILTER** See figure 16.9

Refer to the engine User and Maintenance Manual.

**NOTE:** Remove the partition A to carry out maintenance on the engine oil filter.

## **16.10 FUEL FILTER** See figure 16.10

## **16.11 TYRE PRESSURE** See figure 16.11

If the front tyres have been inflated with different pressure values, the blades will cut the grass at different heights.

## **16.12 ADJUSTING THE BELT TENSION** See figure 16.12

After the first 5-10 hours of work, adjust the tension of the PTO belts:

1) Fully disengage the PTO and mark the position of the tierod T using a marker pen.

2) Insert the PTO and check that the indicated measurement is 10-12 mm. If it is less than this, adjust screw A and screw B.

## **16.13 CLEANING THE MACHINE** See figure 16.13

## **16.14 HOPPER TILTING CYLINDER GREASE NIPPLE** See figure 16.14

With elevator.

## **16.15 PTO SPRING TENSIONING** See figure 16.15

## **16.16 PTO GREASE NIPPLE** See figure 16.16

## **16.17 GREASING THE PEDAL** See figure 16.17

Refer to the maintenance table.

## **16.18 HYDRAULIC SYSTEM FILTERS** See figure 16.18

## **16.19 CHANGING HYDRAULIC DRIVE AND HYDRAULIC SYSTEM OIL** See figure 16.19

## **16.20 HYDRAULIC DRIVE AND HYDRAULIC SYSTEM OIL LEVEL** See figure 16.20

## **16.21 ANGLE DRIVE OIL LEVEL** See figure 16.21

OIL SHELL SPIRAX S3 T (0.2L)

## 16.22 PLATFORM OPENING

See figure 16.22

- Lifting grass catcher. Put safety locks on cylinders
- Lift the platform
- To close the platform, do the reverse operation

EN

## 17. SPECIAL MAINTENANCE

Contact an authorised service workshop when special machine maintenance is required.

## 18. MACHINE INACTIVITY

If the FC3-221 E machine has to be left unused for a long time, you are advised to follow these steps to ensure it remains in good working order for a long time:

- Disconnect the attachment from the machine and follow the steps indicated in the use and maintenance manual to put it "out of service".
- Follow all the indications provided in the use and maintenance manual of the motor to put it "out of service".
- Remove the battery and store it in a dry and ventilated place.
- Thoroughly check and clean the machine by paying special attention to where incrustations have formed due to residues of soil and grass.
- Perform the "routine maintenance" operations described above and, if necessary, also perform "special maintenance" tasks.
- Park the machine on a level surface in a dry, well-ventilated area, covering it with a suitable non-waterproof protective sheet.
- During inactivity periods, always keep the tyres at the indicated pressure and turn them at intervals to vary the support point on the ground.

## 19. DRIVING ON THE ROAD

See figure 19.

This machine is fitted / available with general lighting kits and road related devices, it is important to consult with your local jurisdictions road authority to ensure that all requirements for registration of the machine are satisfied when registering the machine for road use. Always comply with road rules / laws.

**NOTE:** Before driving on roads open to traffic, make sure you are familiar with the machine controls.

## 20. SAFETY LABELS

See figure 20.

### 20.1 KEY

See figure 20.1

LABEL NUMBER	DESCRIPTION	LABEL NUMBER	DESCRIPTION
1	Maximum permitted tilt	12	Do not put your hands near the transmission shaft
	Do not go on slopes with elevator open	13	Danger flying objects
2	Turbine hazard	14	Keep at a safe distance
3	Elevator hazard	15	Do not put your hands near the fan blades
4	Blade coupling	16	Do not put your hands near the transmission belts
5	Parking brake	17	Battery cut-off switch
6	Machine moving, keep a distance	18	Lifting point
7	Keep a distance, moving parts	19	ROPS safety
8	Warning sign: Stop the engine, remove the key, read the manual before carrying out repair or maintenance work	20	Risk of crushing upper limbs when returning the grass catcher to the closed position. Prohibition of protruding body parts beyond the backrest. Correct position must be maintained at all times.
9	Do not approach the machine until all the parts are stationary		
10	Risk of crushing. Do not stand between the machine and the attachment	21	Protect your hearing
11	Read the instruction manual before using the machine	22	Protect your eyes
		23	Attention hot area

## 21. GENERAL NOTES

- A) For technical interventions not covered by this manual, contact one of our authorised assistance centres  
 B) Keep the use and maintenance manual in a safe place and do not modify it. This manual may be modified without prior warning or notice to include variations and improvements to units already consigned. The reproduction or translation of any part of this manual IS forbidden without written consent from the owner.

## 22. MAINTENANCE TABLE

MAIN MAINTENANCE TASKS	FIRST TASK HOURS	FREQUENCY					NOTES	FIG.
		DAILY	WEEKLY	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 500 HOURS		
CLEANING OF ENGINE INTAKE FILTER		X+						16.7
BELT CHECK	5		X					16.12
CLEANING OF CONTAINER FILTER		X+					●	16.13
CLEANING OF HYDRAULIC DRIVE		X					●	16.13
BLADE SHARPENING				X+				
GENERAL OVERALL CLEANING		X					●	16.13
GENERAL PRECISION CLEANING			X				●	16.13
GREASING				X				16.14
WHEEL DRIVE OIL LEVEL					X			16.4
ANGLE DRIVE OIL LEVEL					X			16.21
HYDROSTATIC DRIVE AND HYDRAULIC SYSTEM OIL LEVEL					X			16.20
CHANGING HYDRAULIC DRIVE AND HYDRAULIC SYSTEM OIL						X+		16.19
CLEANING AIR FILTER		X+						16.6
ENGINE OIL LEVEL		X						16.1
CHANGING ENGINE OIL	50 K				X			16.1
CHANGING ENGINE OIL FILTER CARTRIDGE	50 K				X			16.9
CHANGING FUEL FILTER					X+			16.10
CHANGING AIR FILTER					X+			16.6
COOLANT LEVEL		X						16.3
CHANGING COOLANT						X		16.3
ENGINE MAINTENANCE						X		16.1
CHANGING HYDRAULIC SYSTEM FILTERS	50					X		16.18
TYRE PRESSURE CHECK			X					16.11
WHEEL BOLT TIGHTENING CHECK			X				91 ±2 Nm	16.11
PTO SPRING TENSIONING	50			X				16.15
CHECKING HYDRAULIC PIPES					X			

K = Kubota

+ if the work conditions are particularly demanding, the tasks must be performed more frequently.

 Engine maintenance: refer to the engine User and Maintenance Manual.

● These cleaning tasks should be done using compressed air if possible. Avoid using water.

 Contact an authorised assistance centre.

## 23. ERROR CODES

PHASE	ERROR CODE	DESCRIPTION OF THE ERROR/ALARM	POSSIBLE CAUSES AND/OR SOLUTIONS	NOTES
<b>ANY</b>	<b>CC1</b>	Short-circuit on the command line of the glowplug pre-heating relay	Check the glowplug pre-heating relay	Pre-heating is inhibited by the control unit. Code on the display + 1-second acoustic alarm repeated 3 times
	<b>CC2</b>	Short-circuit on the starter relay command line	Check the starter relay	Start-up is inhibited by the control unit. Code on the display + 1-second acoustic alarm
	<b>CC3</b>	Short-circuit on the buzzer line	Check the buzzer	The buzzer is inhibited by the control unit. Code on the display
	<b>CC4</b>	Short-circuit or open circuit on the stop lights line	Check the stop lights circuit	The stop lights command is inhibited by the control unit. Code on the display + 1-second acoustic alarm
<b>INITIAL</b>	<b>1</b>	Measured temperature higher than the permitted value	Sensor damaged or earth connection	Three dashes in place of the T value. Code on the display + 1-second acoustic alarm
	<b>2</b>	Measured temperature lower than the permitted value	Sensor damaged or disconnected or temperature below 0°C.	Three dashes in place of the T value. Code on the display + 1-second acoustic alarm
	<b>10</b>	The safety test has found the PTO engaged.	Disengage the PTO.	
	<b>11</b>	The safety test has found the parking brake disengaged.	Engage the parking brake.	
	<b>12</b>	The safety test has detected that the user is not sitting on the seat.	Sit on the seat.	
	<b>14</b>	The safety test has detected the engine compartment open.	Close the engine compartment.	
	<b>25</b>	Hopper open	Close the hopper	
	<b>27</b>	50-hour maintenance not carried out	Carry out the 50-hour maintenance	The spanner symbol appears on the display
	<b>28</b>	100-hour maintenance not carried out	Carry out the 100-hour maintenance	The spanner symbol appears on the display
	<b>29</b>	500-hour maintenance not carried out	Carry out the 500-hour maintenance	The spanner symbol appears on the display
<b>OPERATING CYCLE</b>	<b>20</b>	The safety test has found the PTO engaged.	Disengage the PTO.	
	<b>21</b>	The safety test has found the parking brake disengaged.	Engage the parking brake.	
	<b>22</b>	The safety test has detected that the user is not sitting on the seat.	Sit on the seat.	
	<b>24</b>	The safety test has detected the engine compartment open.	Close the engine compartment.	
	<b>30</b>	The hopper is full, with the PTO engaged	"Hopper full" microswitch pressed	Intermittent buzzer sound: this is a particular operating condition, not an error
	<b>36</b>	Control unit button jammed	Check the button is working properly	Code on the display + 1-second acoustic alarm
	<b>38</b>	Engine temperature above 105°C	Make sure the radiator is clean	Flashing T on the screen and intermittent buzzer sound.
	<b>40</b>	Insufficient engine oil pressure	Check the oil level	Intermittent buzzer sound and indicator light ON.

## 24. ROLLOVER PROTECTION STRUCTURE (ROPS)

See figure 24.



---



## **ILLUSTRATIONS AND DIAGRAMS**

0.

2 7 3 4

1

Kubota Gianni Ferrari S.r.l. - via Vespucci, 53 - 42046 Reggiolo (RE) - Italy

6

MODEL	TYPE	MASS [kg]	POWER [kW]	CE
FC3-221 E	BFC001	823	15,9	
				Multifunction Tools Carrier
				Year 2023
				00555200586

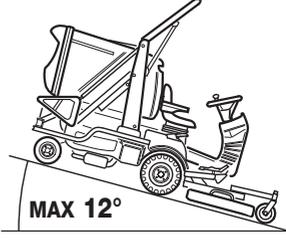
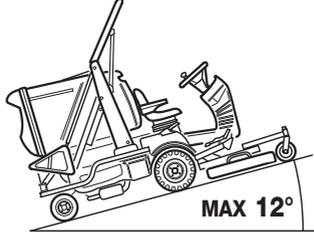
5  
8

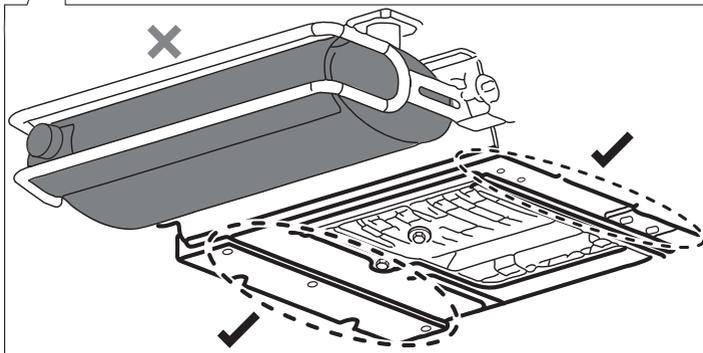
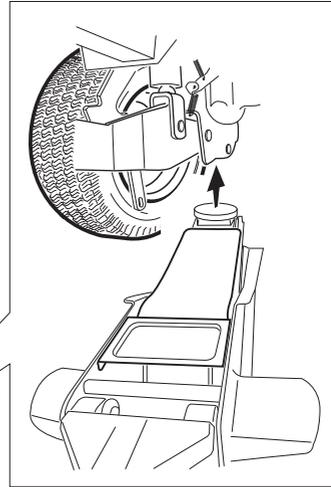
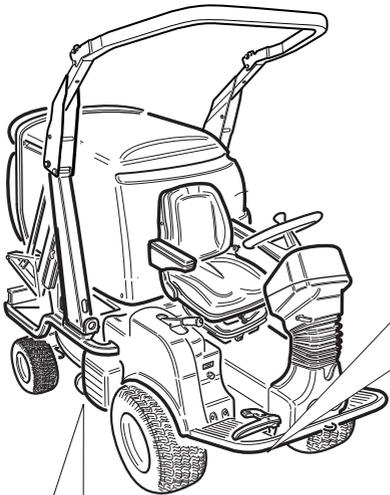
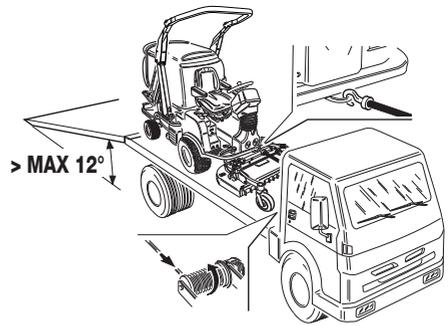
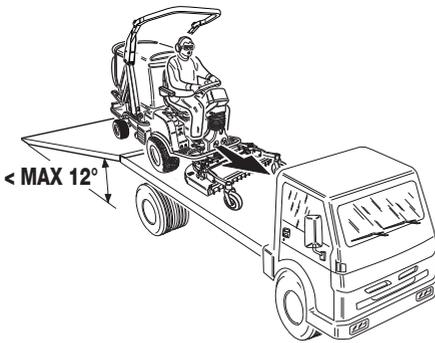
1.



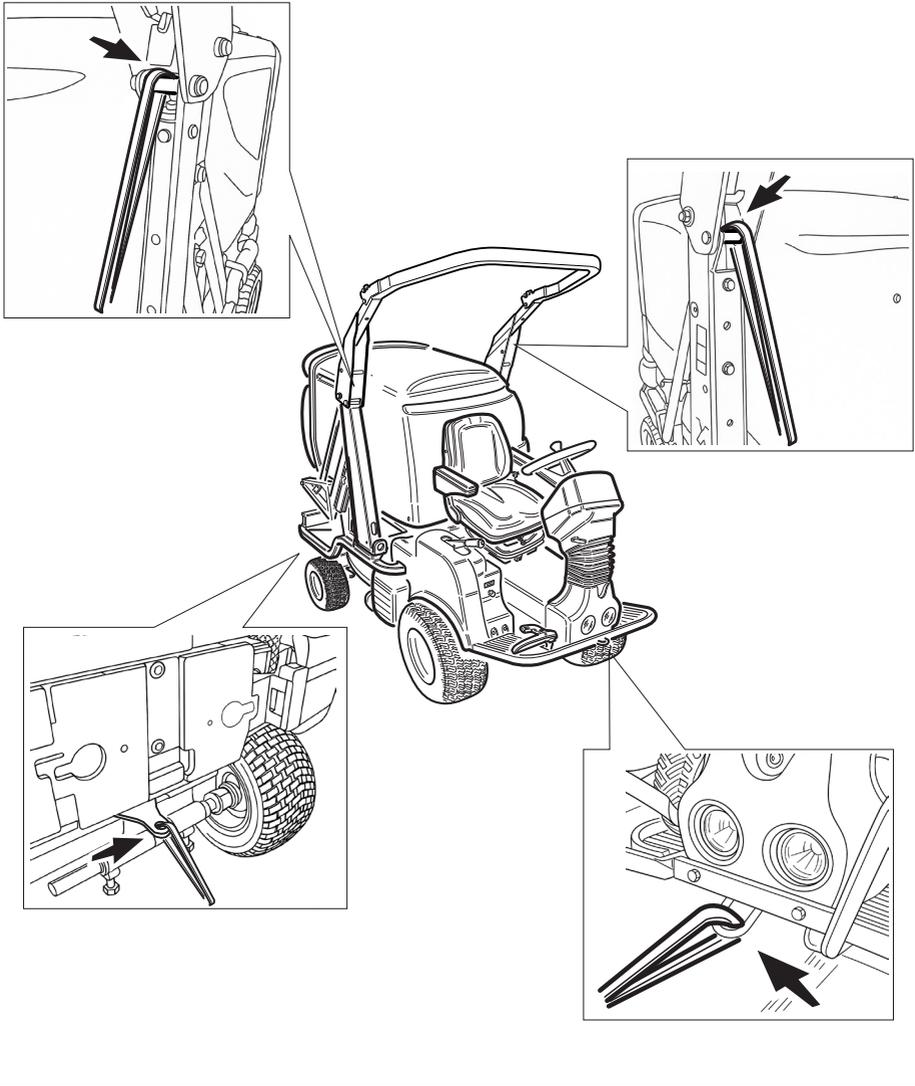
0000000 XXXX

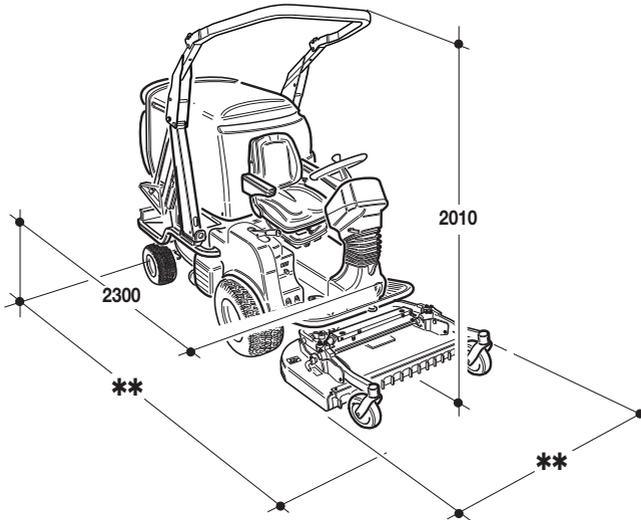
6.1

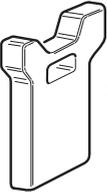
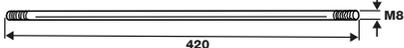


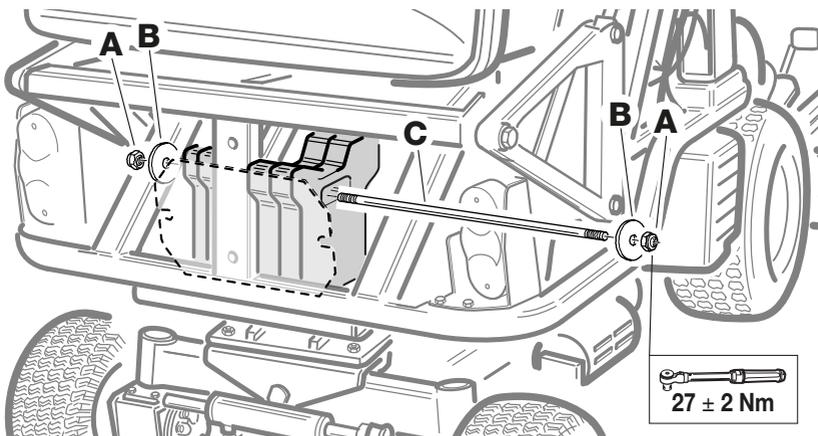


6.2



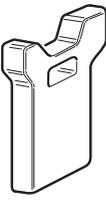
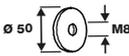
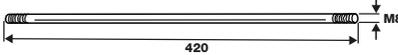


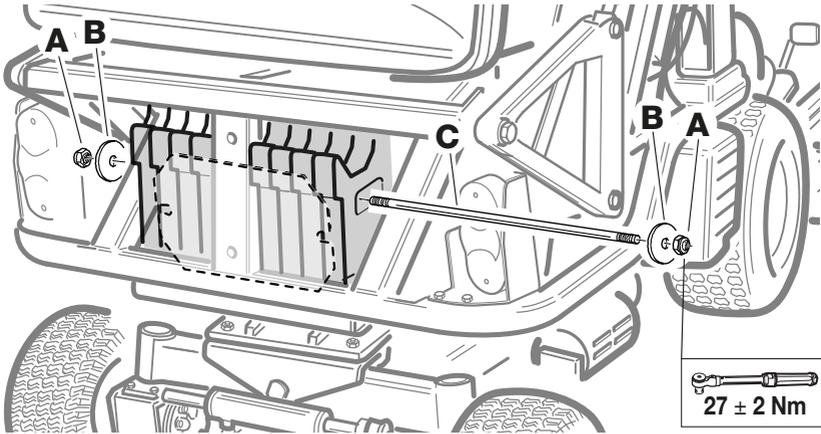
 x 4	<b>A</b>	 M8	x 2
	<b>B</b>	 ø 50 M8	x 2
	<b>C</b>	 420 M8	x 1

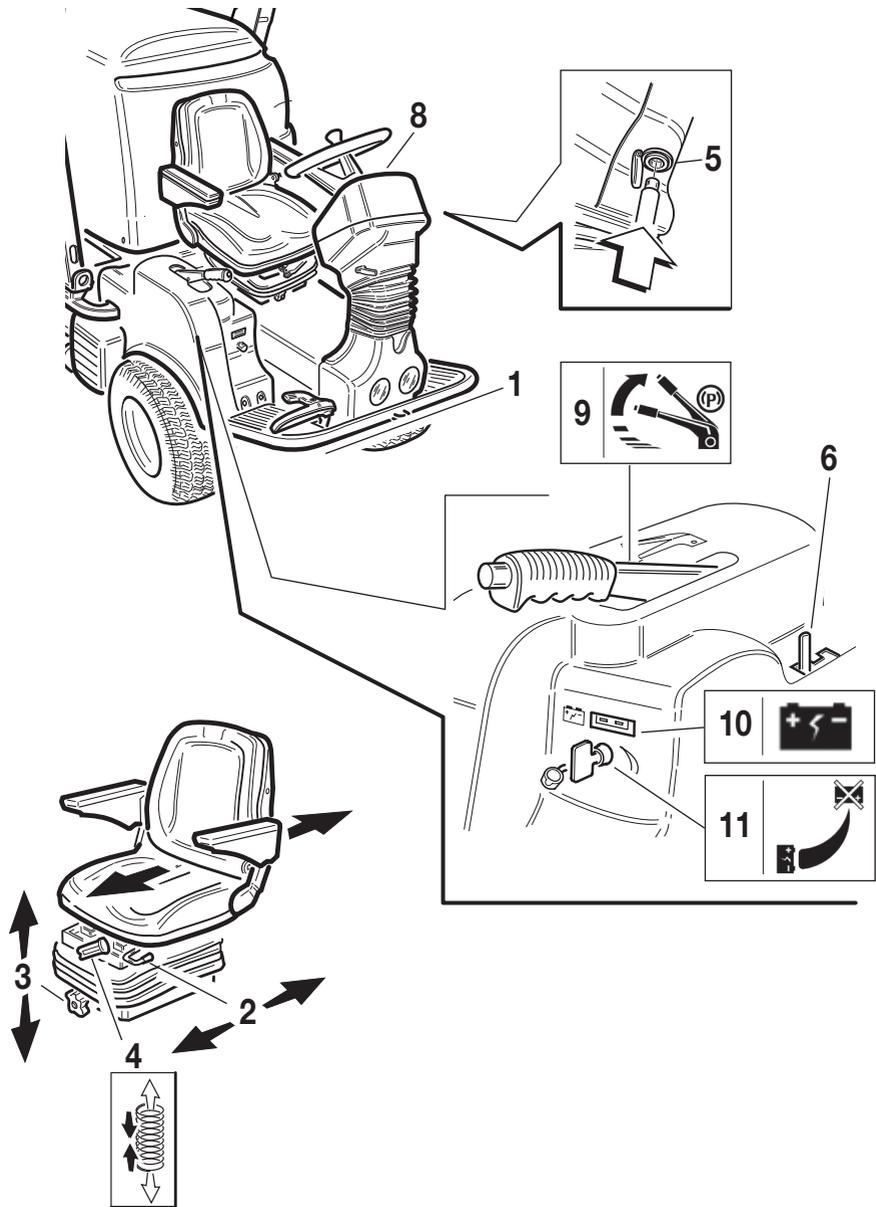



  
 $27 \pm 2 \text{ Nm}$

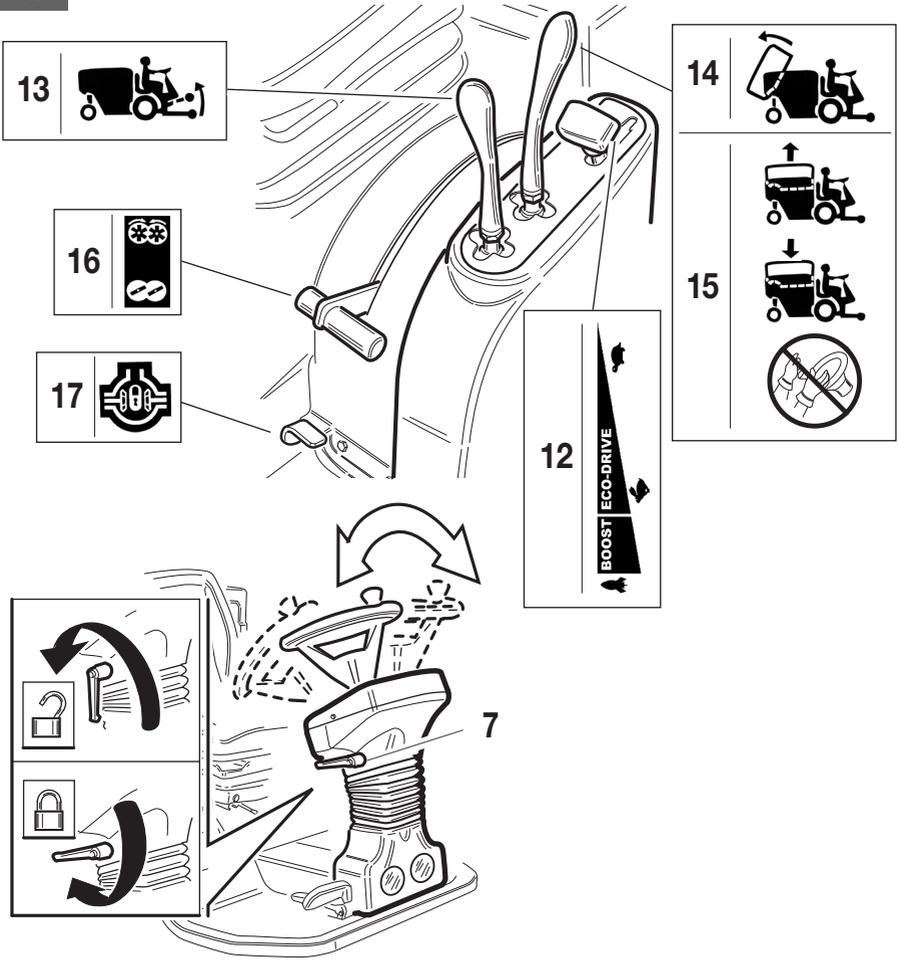
# 7.2

 x 8	<b>A</b>	 M8	x 2
	<b>B</b>	 $\varnothing 50$ M8	x 2
	<b>C</b>	 420 M8	x 1

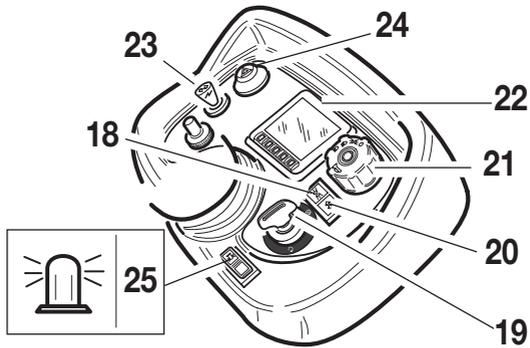


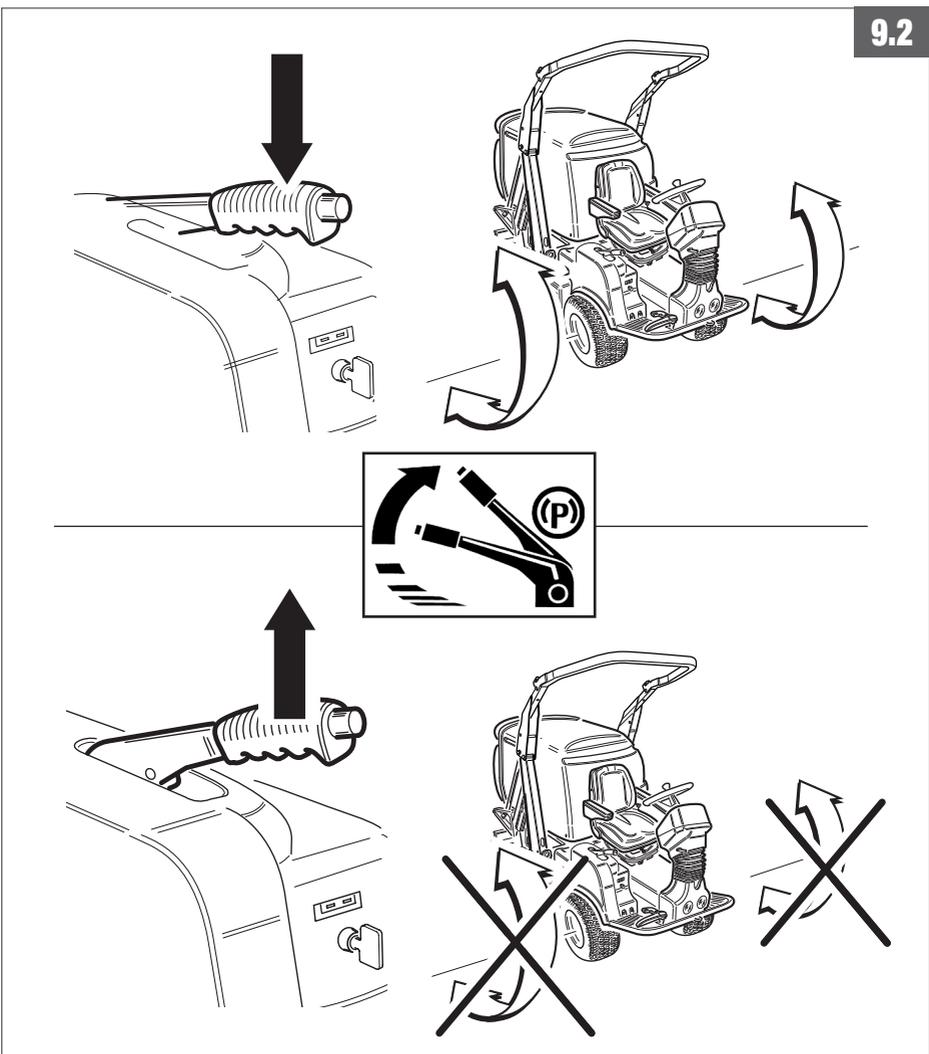
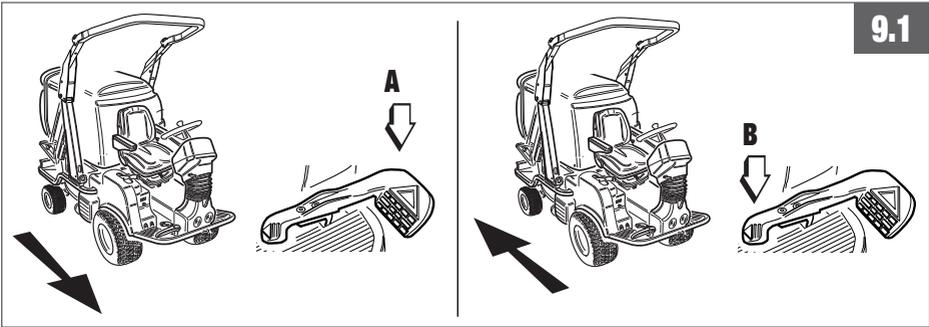


# 8.

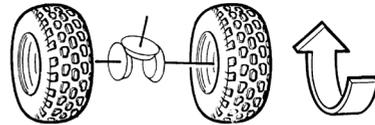
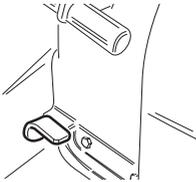
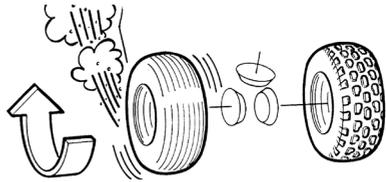
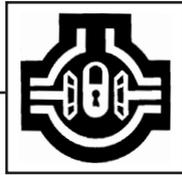
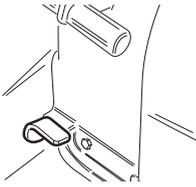


# 8.1

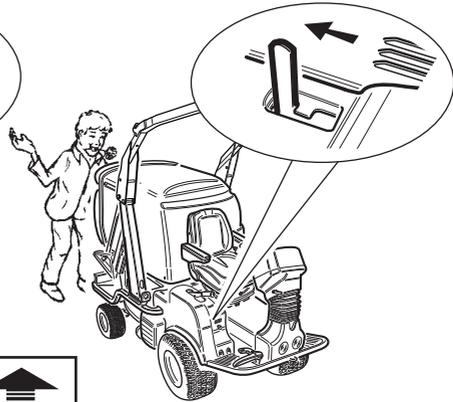




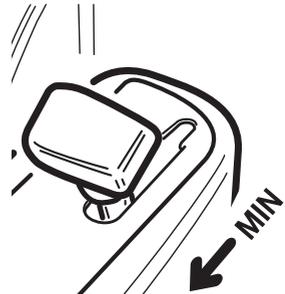
9.3

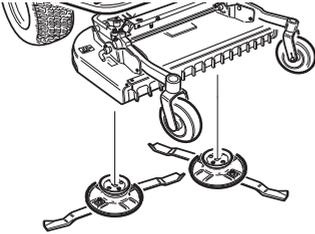
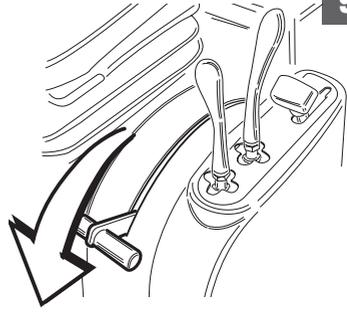
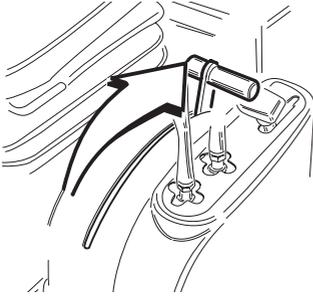


9.4

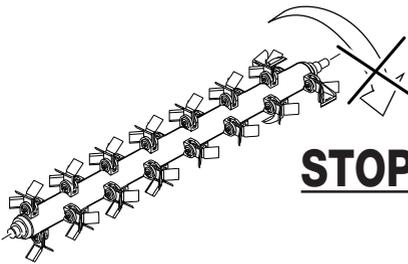
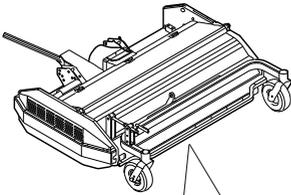
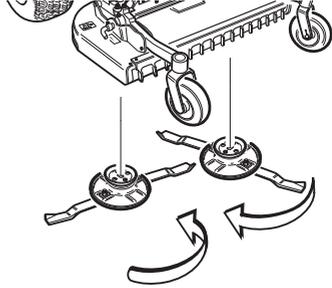


9.5

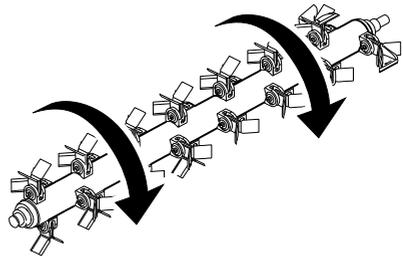




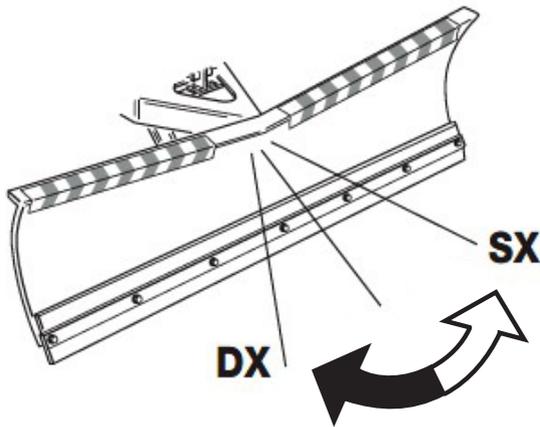
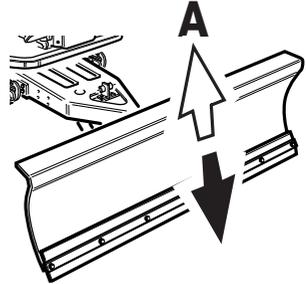
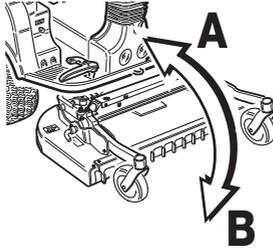
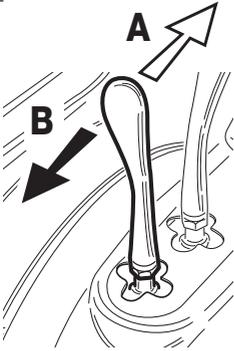
**STOP!!**

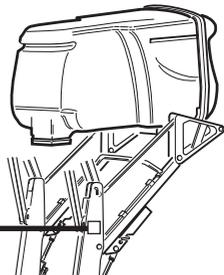
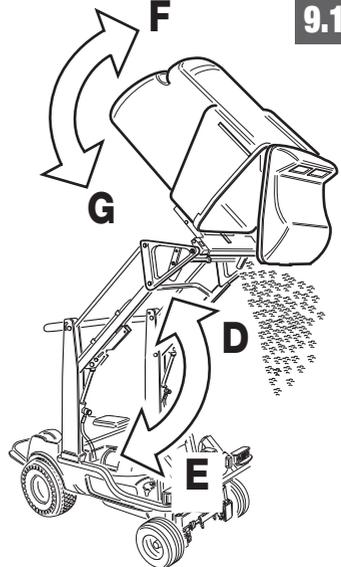
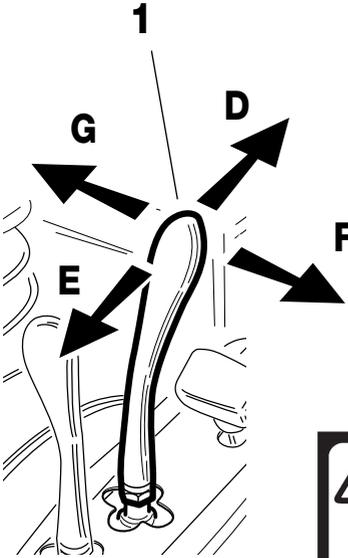
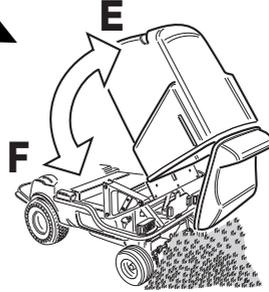
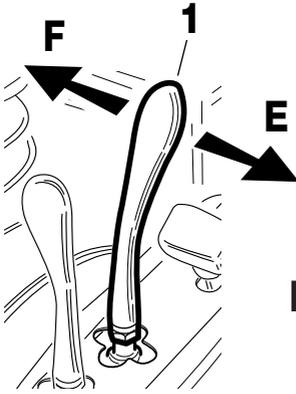


**STOP!!**

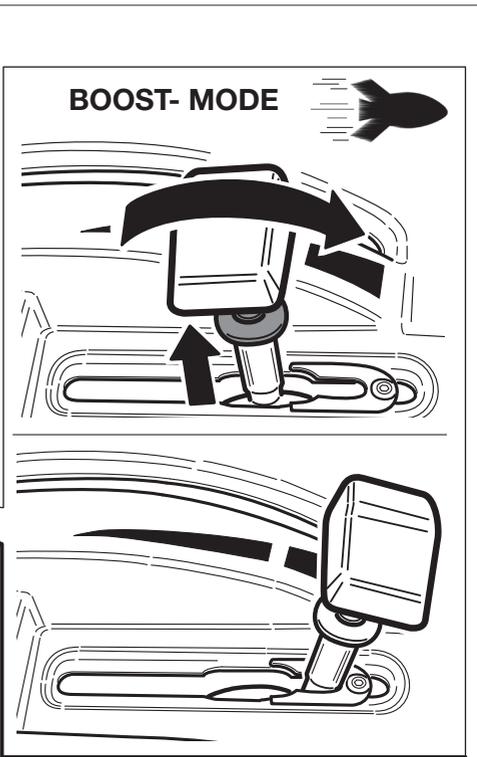
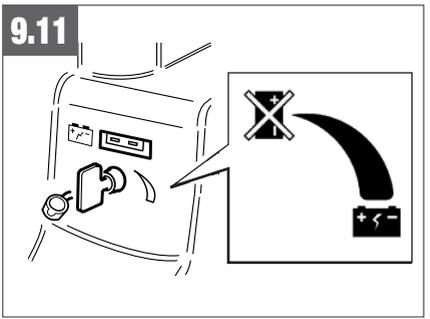


9.8





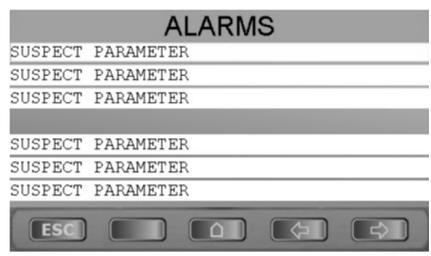
9.11



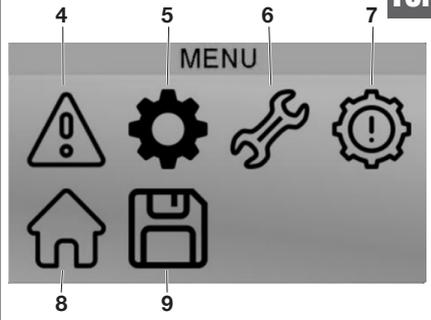
10.1a



10.2



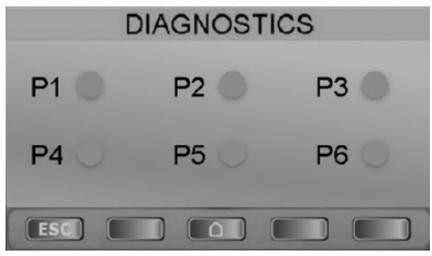
10.1b



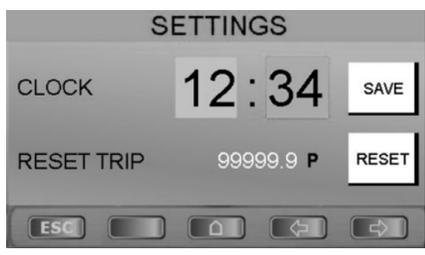
10.3



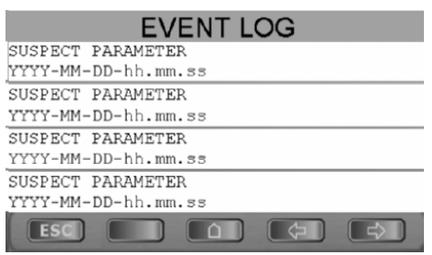
10.4



10.5a



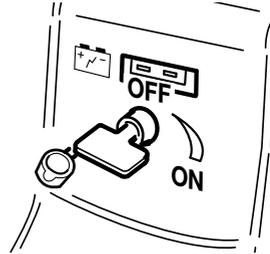
10.5b



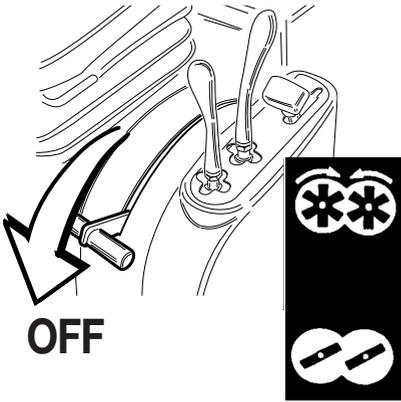
11.



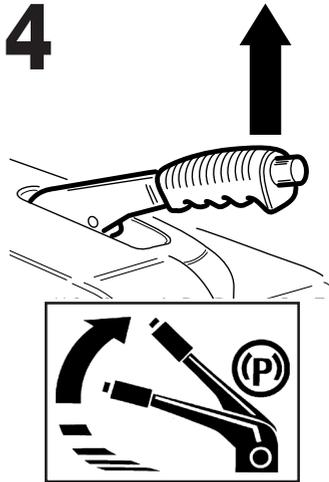
2



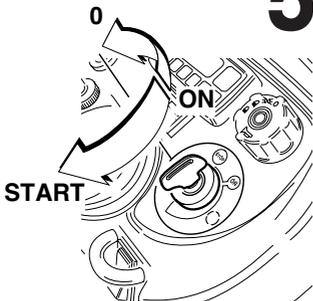
3



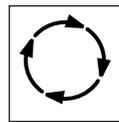
4



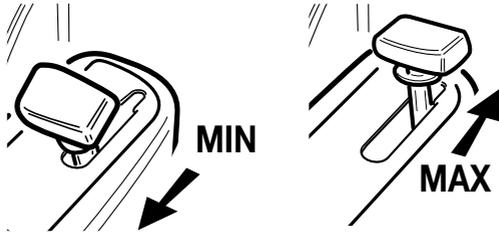
5



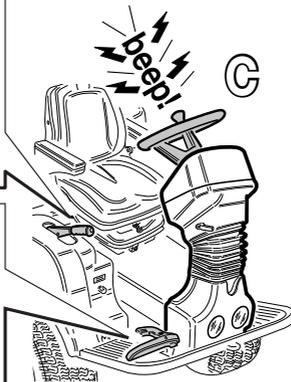
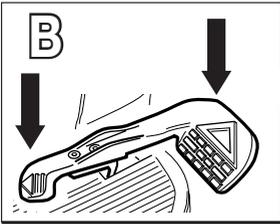
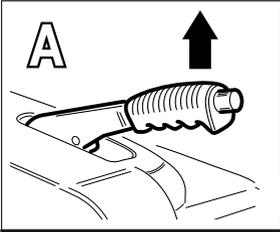
6



1



**NO !!**

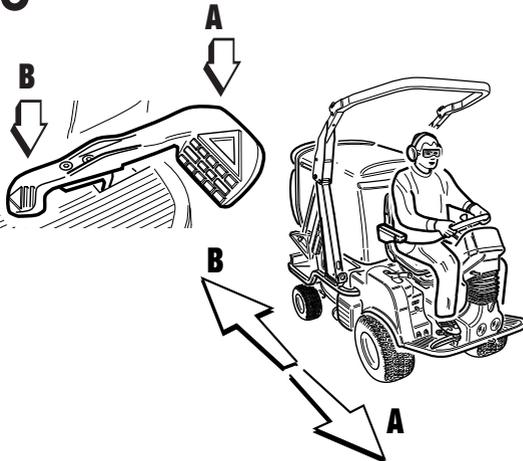


2

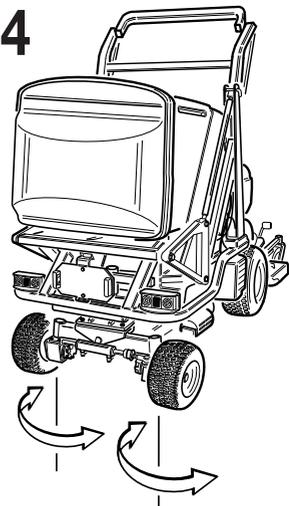
**OK**



3

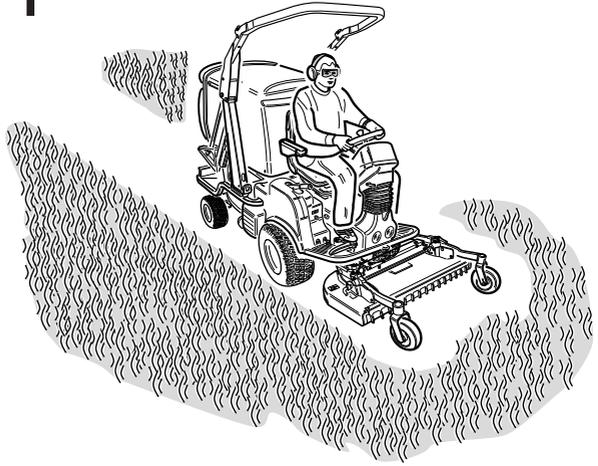


4

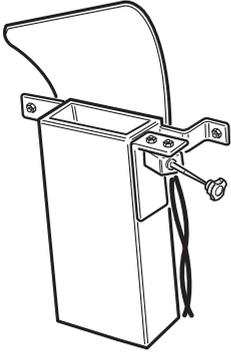


13.

1



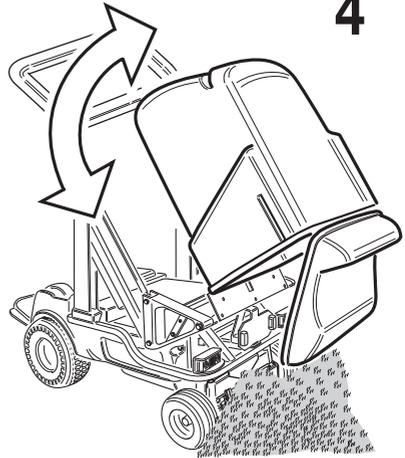
2



3

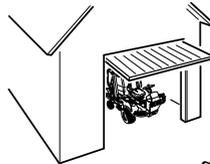


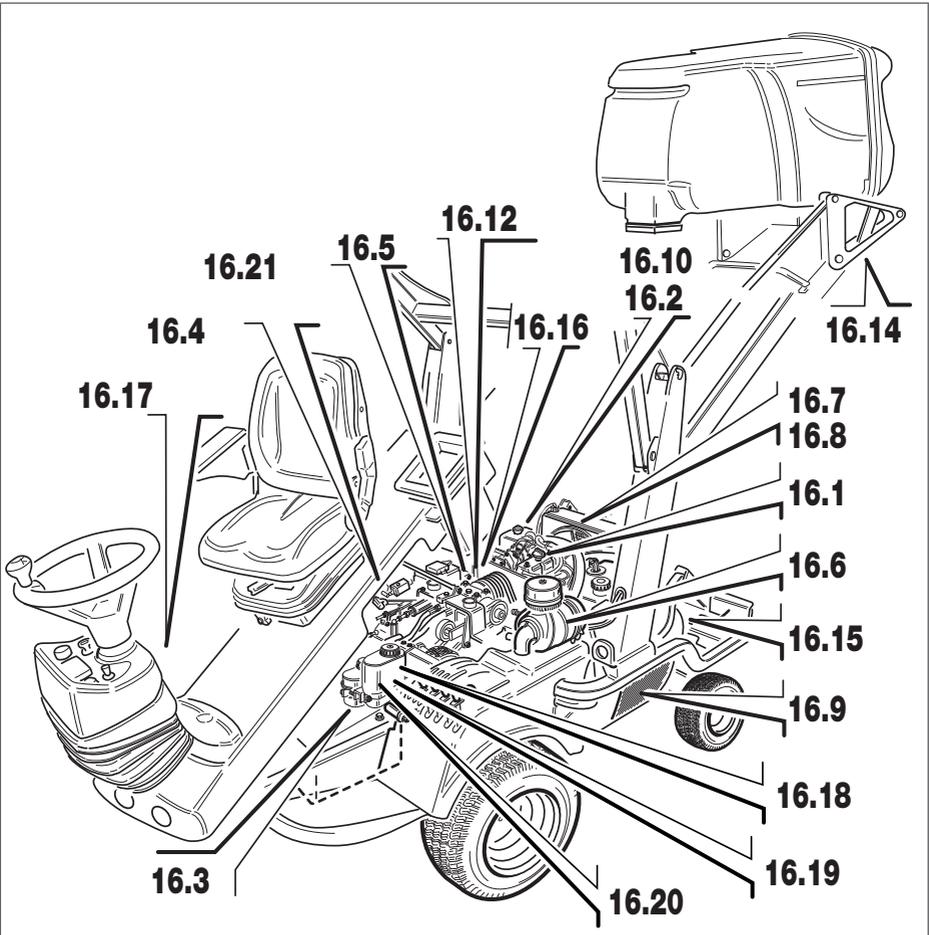
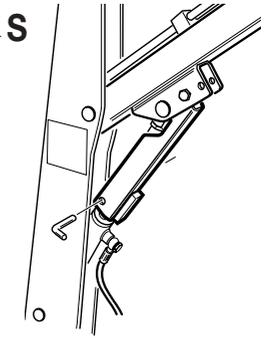
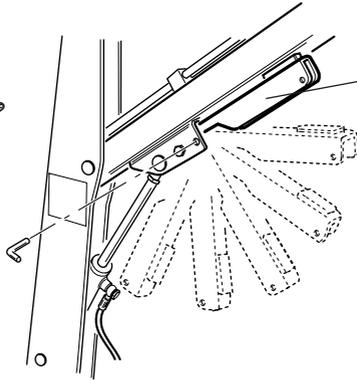
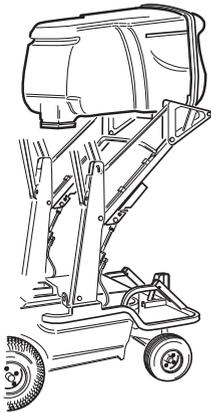
4



15.

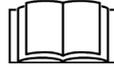
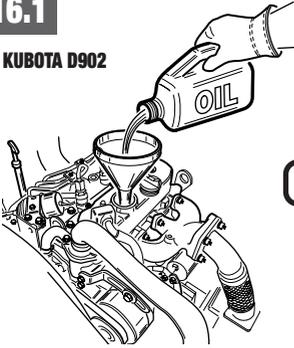
OK



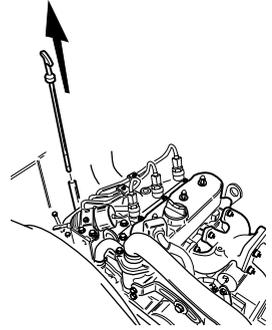


16.1

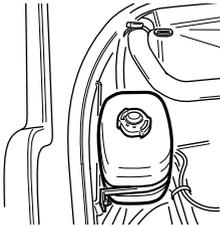
KUBOTA D902



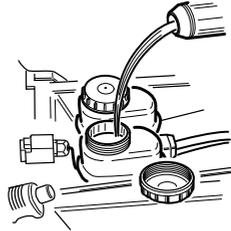
OIL SHELL SPIRAX S3 T



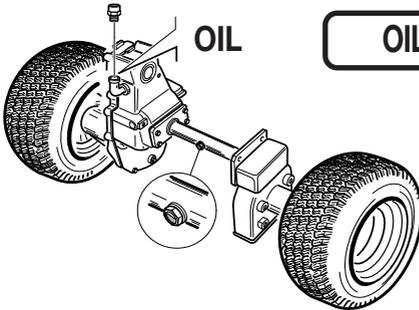
16.2



16.3



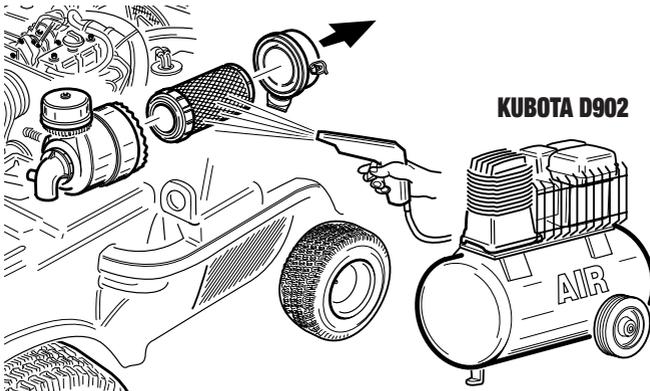
16.4



OIL

OIL SHELL SPIRAX S3 T

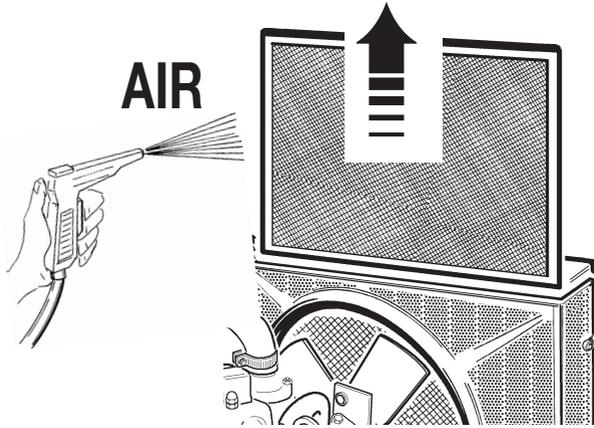
16.6



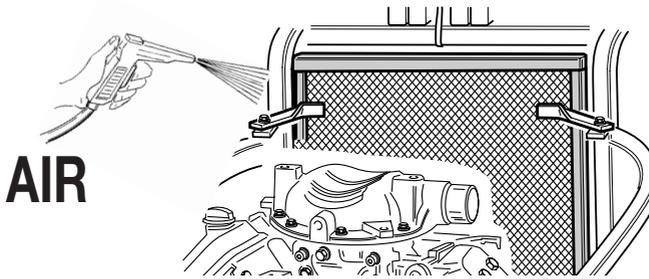
KUBOTA D902

AIR

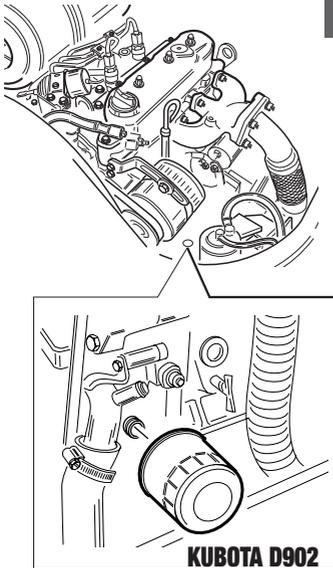
16.7



16.8



16.9

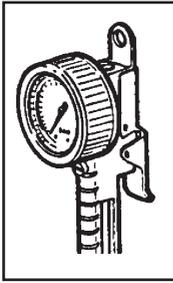


16.10

KUBOTA D902



**16.11**



**15" 2 bar**

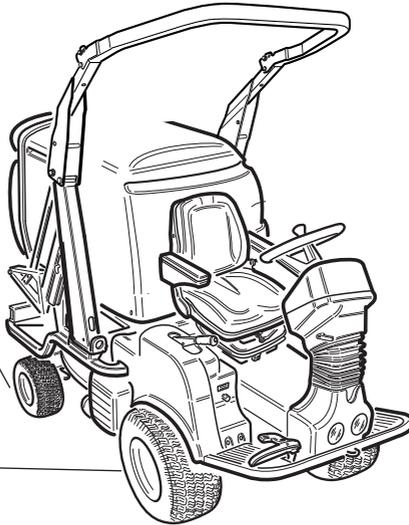


**91 ± 2 Nm**

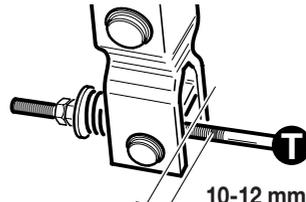
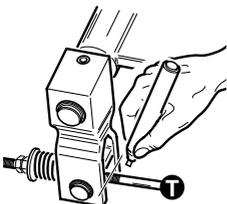
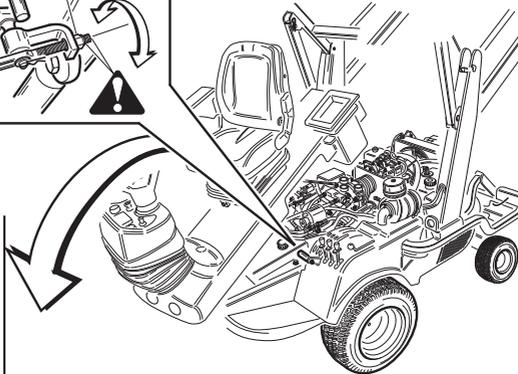
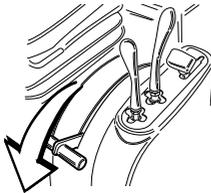
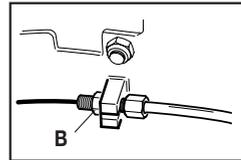
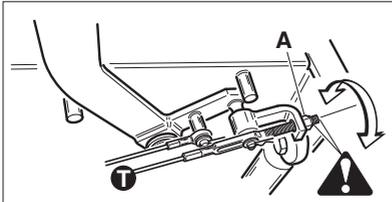
**20" 1,5 bar**



**91 ± 2 Nm**

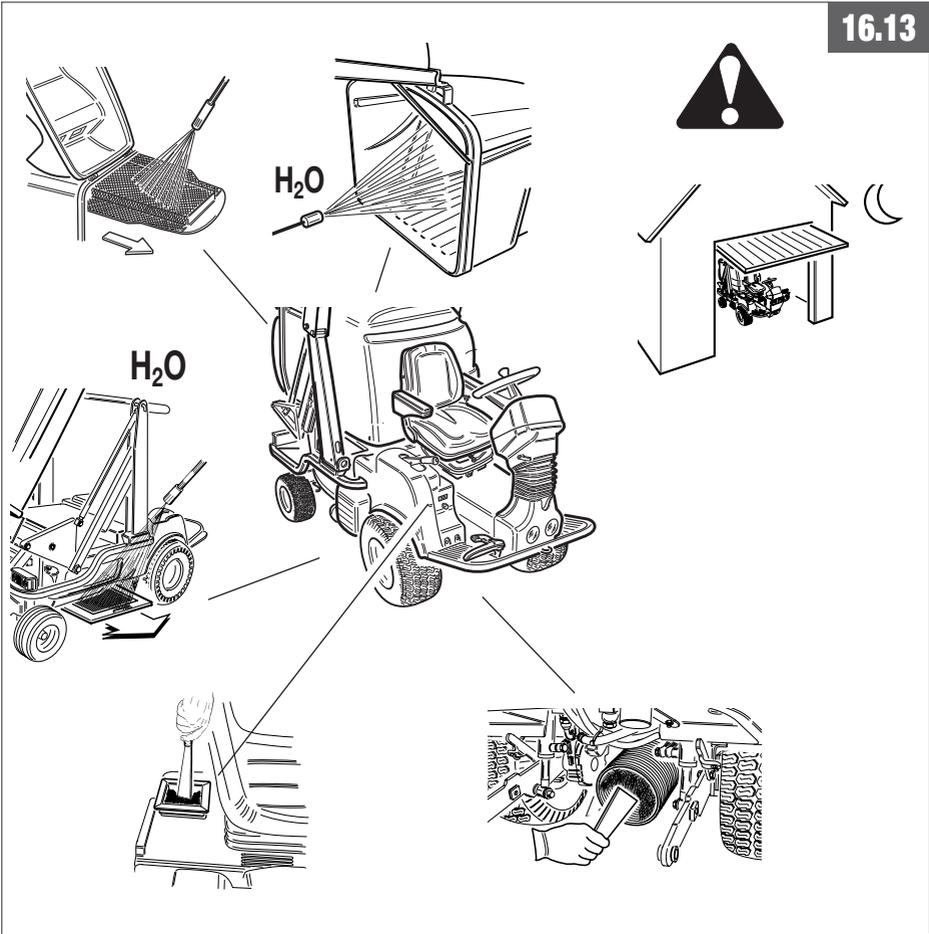


**16.12**

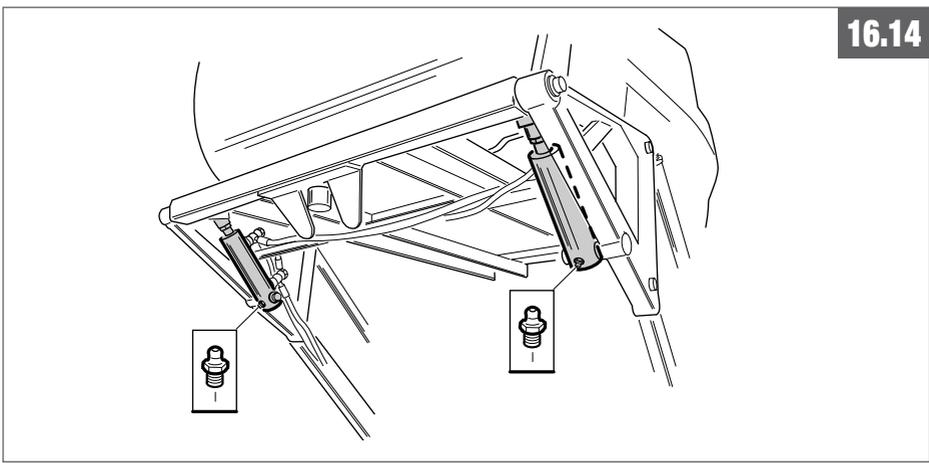


**10-12 mm**

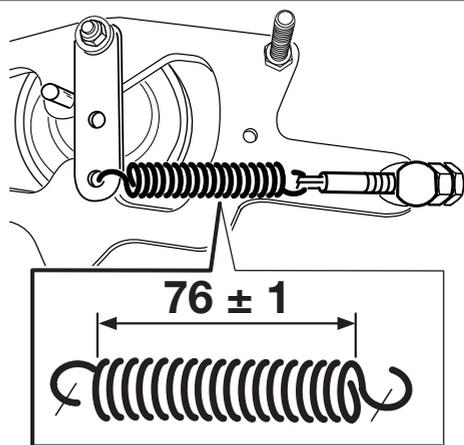
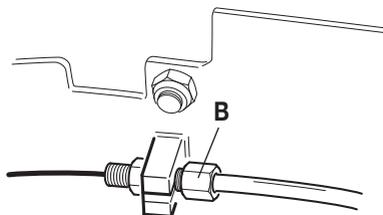
16.13



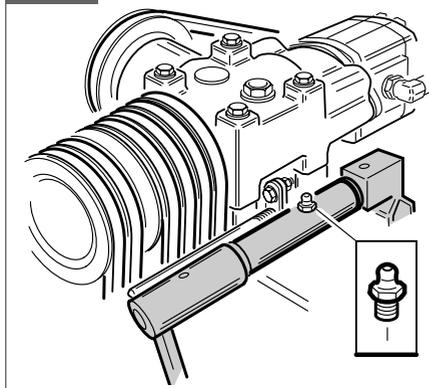
16.14



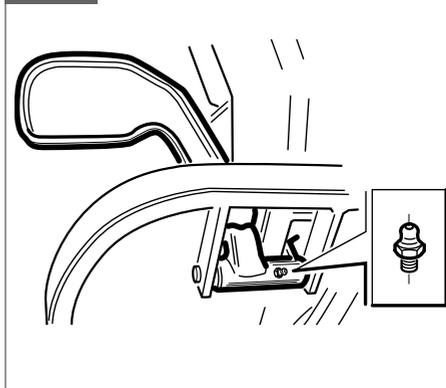
16.15



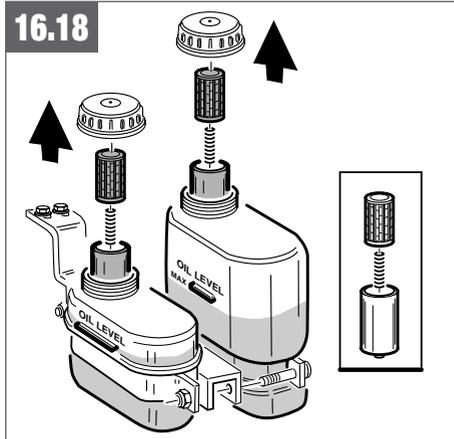
16.16



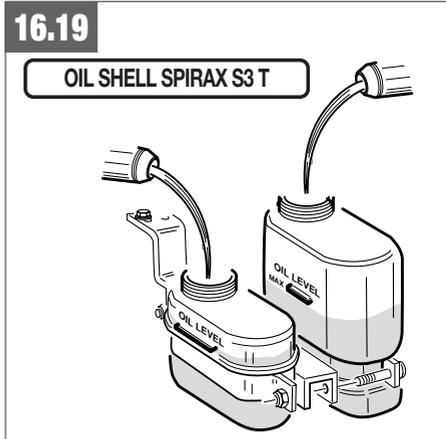
16.17



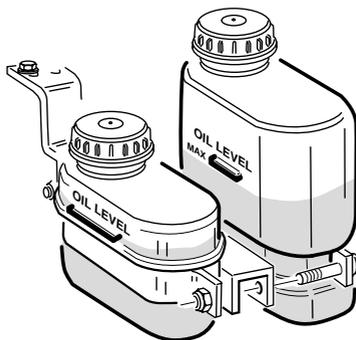
16.18



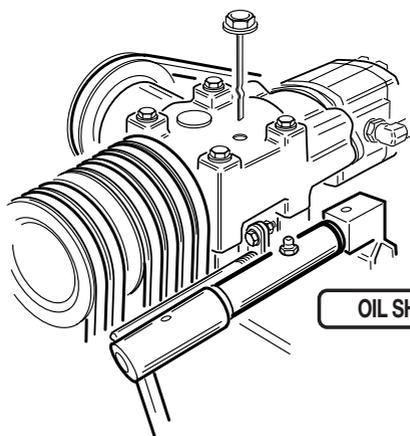
16.19



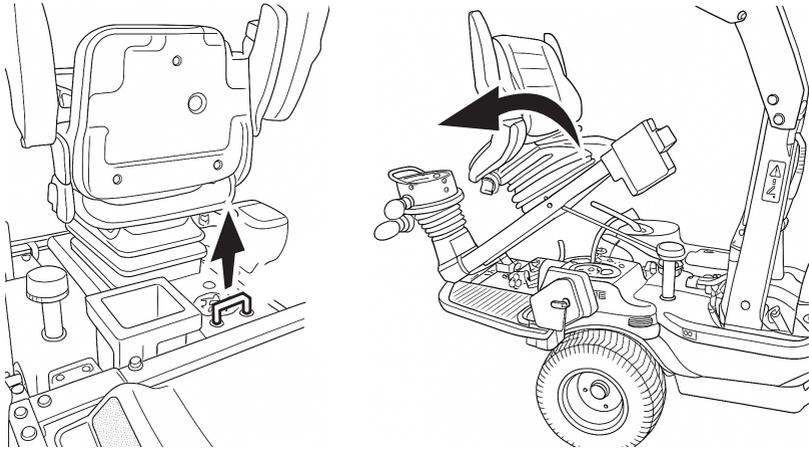
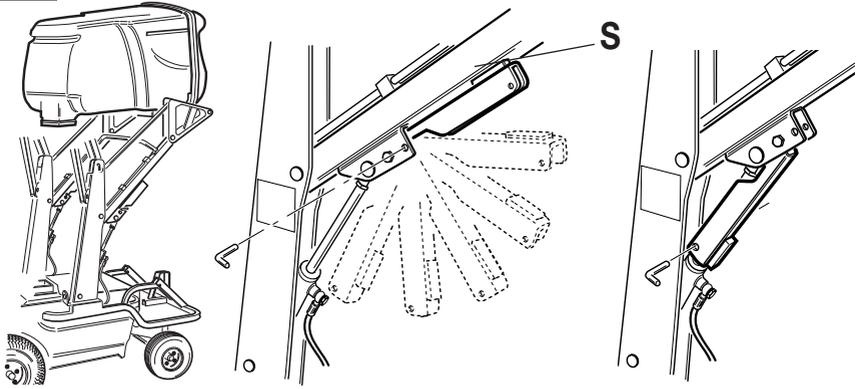
16.20



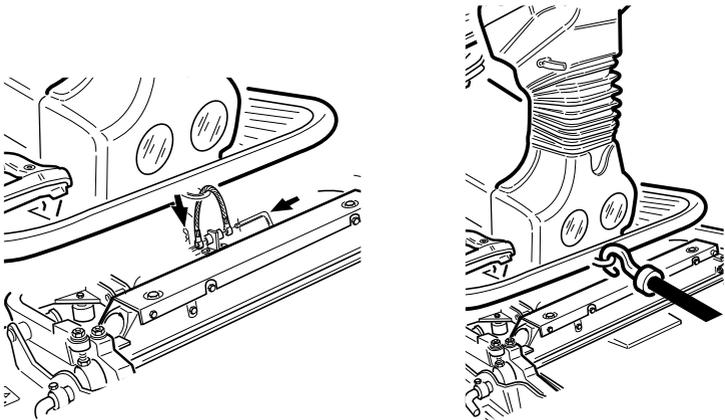
16.21

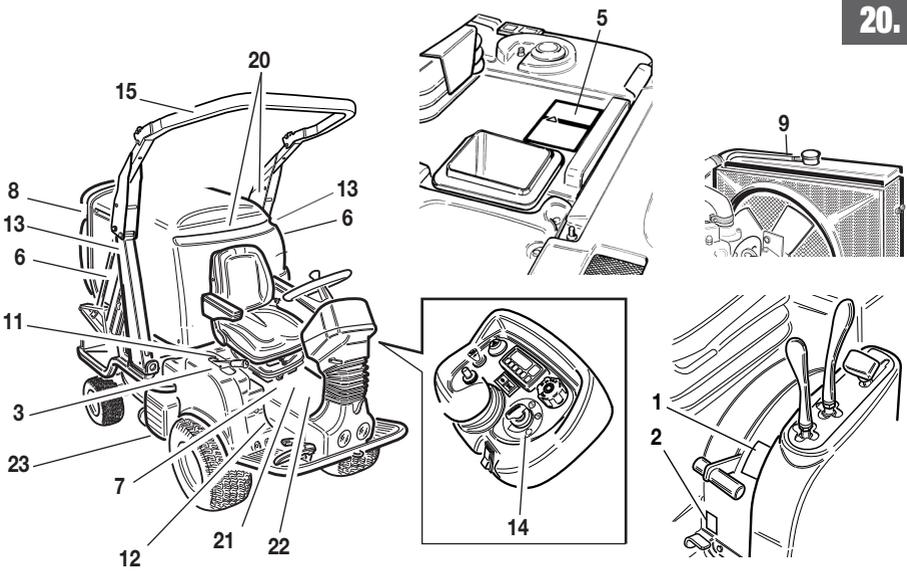


16.22



19.





Kubota Gianni Ferrari S.r.l. - Via Vespucci, 53 - 42046 Peggolo (RE) - Italy				
MODEL	TYPE	MASS (kg)	POWER (kW)	CE
FC3-221 E	BFC001	823	15,9	Multifunction Tools Carrier Year 2023 R0555200506

Kubota Gianni Ferrari S.r.l. - Via Vespucci, 53 - 42046 Peggolo (RE) Italy

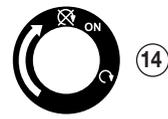
Protective structure: **ROPS**

Machine model: **FC3 - 261 / FC3 - 221 E**

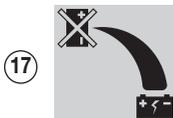
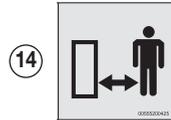
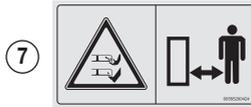
Rops reference mass: **1600 kg**

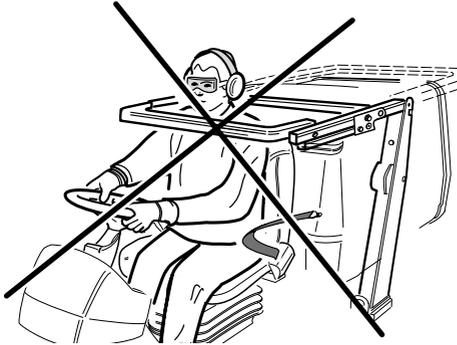
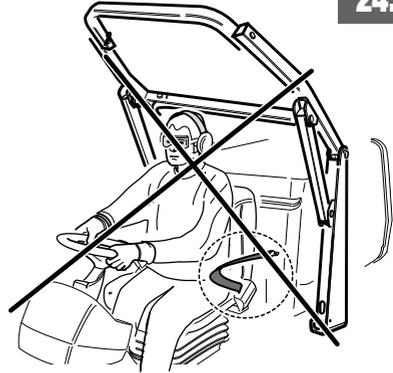
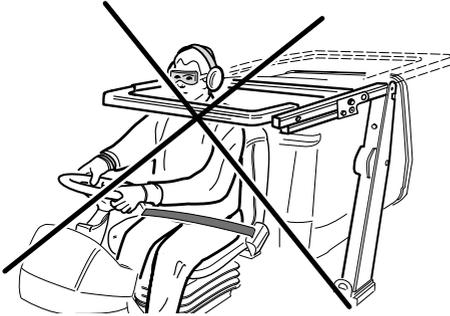
In conformance with: **ISO 21299:2009**  
for energy absorbing ROPS requirements

00555200580

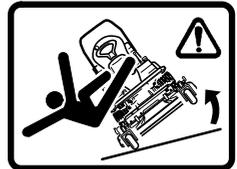


# 20.1

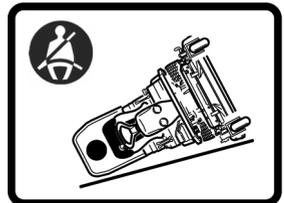
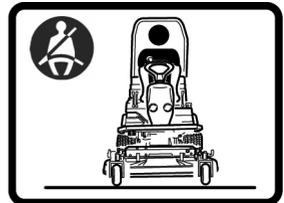




**NO!!**



**OK**



24.

