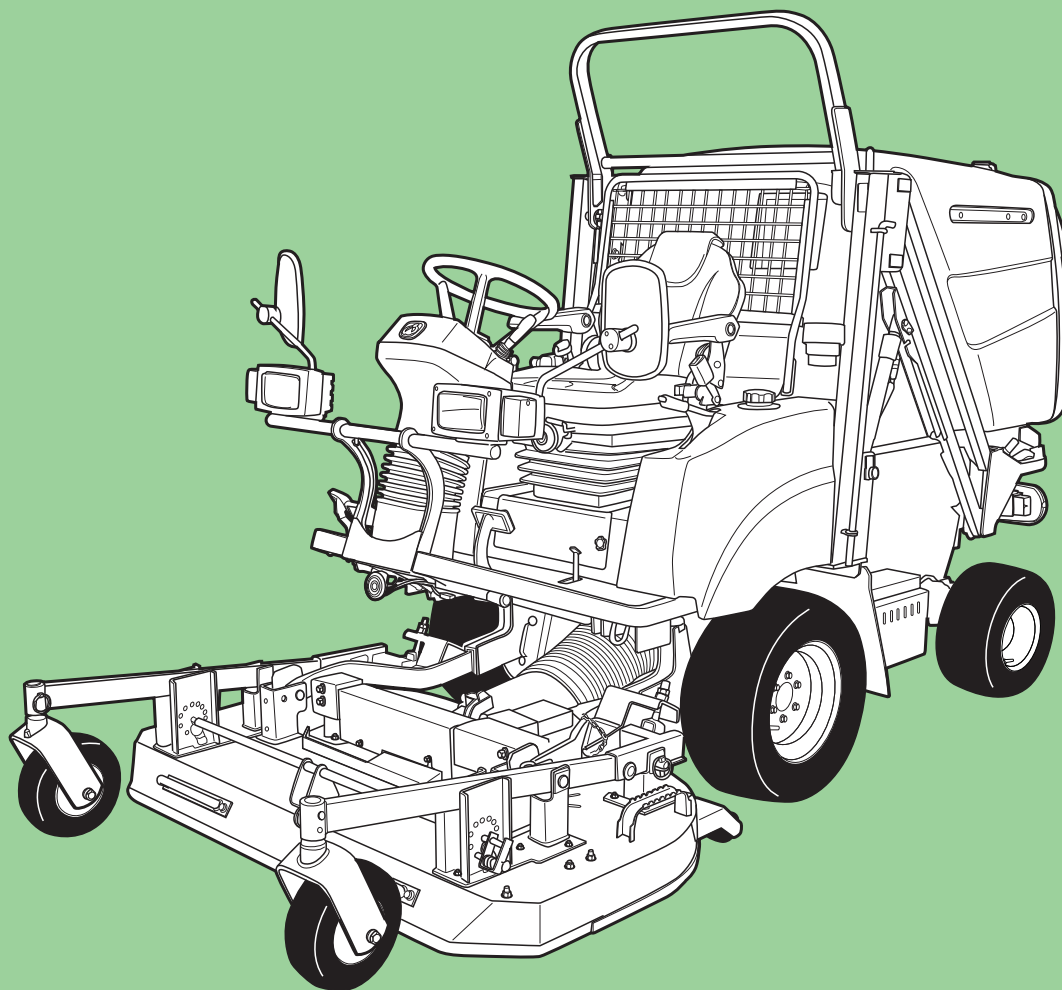


# ISEKI FRONT MOWERS



## Operator's Manual

FRONT MOWERS:

**SF224 & SF235**

MOWER DECKS:

**SCMA54 & SCMB60 & SSM54**

COLLECTOR:

**SBC950**



**ISEKI**

ENGLISH  
-Original Instructions-

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## **SF224,235**

- 3.27. Never attempt to use the front mower to draw an implement or a trailer. It is not designed to draw a load.
- 3.28. Stay alert and stop the front mower if people or pets enter the area.
- 3.29. Do not carry passengers
- 3.30. Never carry children, even when the cutting means are not moving. Children may fall off the front mower and become seriously injured or prevent you from operating the front mower safely. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the front mower.
- 3.31. If you use the lawn mower for long time, make sure to take rest every 2 or 3 hours.
- 3.32. When you hear thunder, stop the lawn mower and move indoors immediately. If you cannot move indoors, get to low place. Otherwise, you can be struck by lightning.
- 3.33. Before stopping the engine, be sure to lower the mower deck onto the ground, apply the parking brakes and turn the PTO switch to the OFF position.
- 3.34. Before leaving the operating position of the front mower for any reason, always do the following:
  - Stop the front mower on level ground.
  - Stop the cutting unit(s), disengage PTO, and lower the attachment(s).
  - Disengage the drive(s).
  - Apply the parking brake. In order to maximize the performance of the parking brake, depress the brake pedal, and then apply the parking brake.
  - Stop the engine and wait for all moving parts to stop.

## SF224,235

### 13. LONG TERM STORAGE

- 13.1. Never store the mower with fuel in the tank inside a building where fumes can reach an open flame or spark
- 13.2. Lower the cutting unit(s) when you store the front mower, unless you lock the cutting unit(s) into position.
- 13.3. Allow the engine to cool before storing the front mower in any enclosure.
- 13.4. Before storing the front mower for a long period of time, disconnect the battery cables to prevent them, in case they are gnawed by rats, from causing a short circuit, which may lead to a fire. When disconnecting the battery, disconnect the negative (-) cable first, while connecting the positive (+) cable first when connecting the battery. Wrong order of disconnecting or connecting the battery will cause sparks, which is very dangerous.

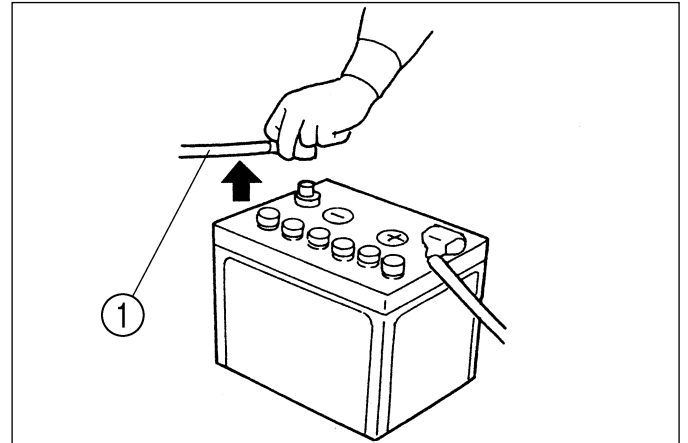


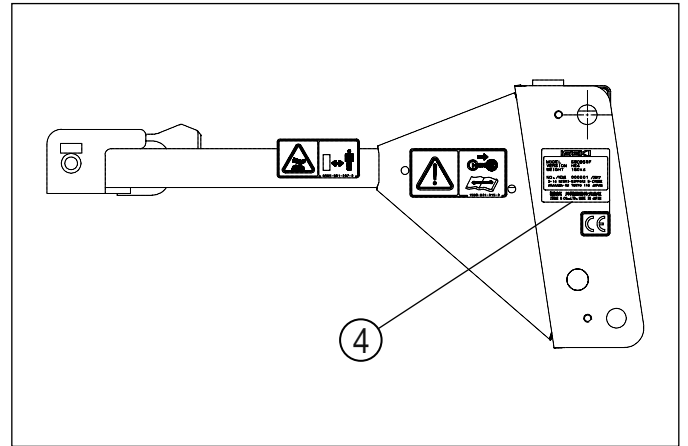
FIG. 22

(1) Negative cable

**SF224,235**

**Collector (SBC950)**

(4) Model name and serial number



**FIG. 26**

## SF224,235

### 1.8. FUEL GAUGE

The gauge indicates fuel level in the fuel tank when the starter switch is in the ON position.

When needle is the closer to "F", the more fuel is in the fuel tank. So not let the fuel gauge reach the empty point, "E".

*NOTE: The gauge can not indicate an accurate fuel level when the front mower is on the slope. It takes a little time to indicate an accurate level after the front mower recovers its horizontal position.*

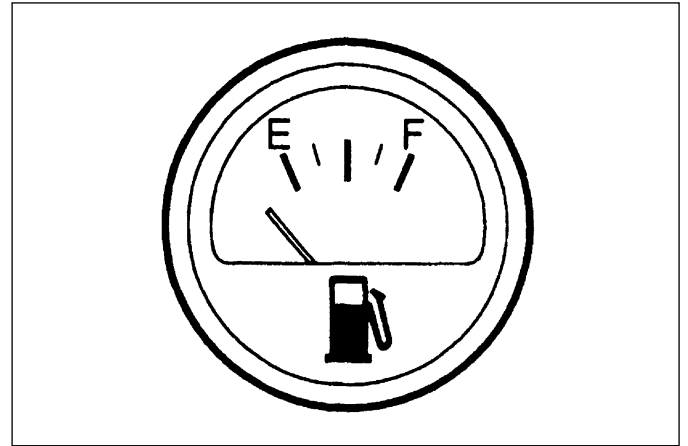


FIG. 35

(7) Fuel gauge

### 1.9. HOUR METER

The hourmeter counts operation hours of the front mower and show them in 5-digit number. The least significant figure shows one tenth hour of operation.

### 1.10. COOLANT TEMPERATURE WARNING SYSTEM (HORN AND LAMP)

*IMPORTANT: When the engine coolant is over-heated, the warning horn sounds for 2 seconds and Engine coolant warning lamp illuminates. Rotation of the radiator fan is reversed for a few second, and then PTO is stopped automatically.*

*When the warning horn sounds, decelerated the engine to idling, and wait until the warning horn turns off.*

*When the warning horn turns off, stop the engine and correct the trouble (clogged grass or dust around engine, radiator, etc.). Then re-start operation.*

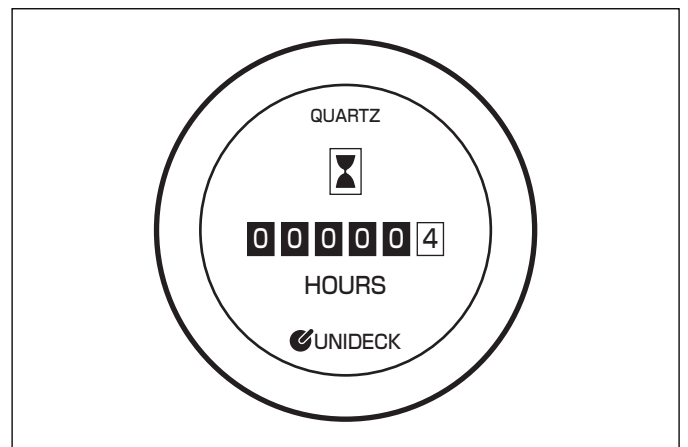


FIG. 36

(8) Hour meter



**WARNING:** When inspecting the radiator, be sure that the engine cools down sufficiently. Never release the radiator cap while the coolant is hot, or boiling water will gush out.

## SF224,235

### 4. 4WD LEVER

With this lever, 2WD/4WD automatic change-over and permanent 4WD is selectable.

**4WD PERM:** Shift(push) the lever to engage permanent 4WD mode.

**4WD AUT:** Shift(pull) the lever to engage AUTO 4WD mode.

In AUTO 4WD mode, 2WD and 4WD is selected automatically during operation on a level ground, so the lever operation is not required.

When operating on a slope, shift the changeover lever to the 4WD position without fail.

**IMPORTANT:** *Be sure to shift the 4WD lever to the "AUTO" position when operating on level ground, as level ground operation with the 4WD selected leads to a larger turning radius and may cause turf damage.*

**IMPORTANT:** *When shifting the 4WD lever, slow down the travelling speed below 1 km/h and make the machine go straight.*

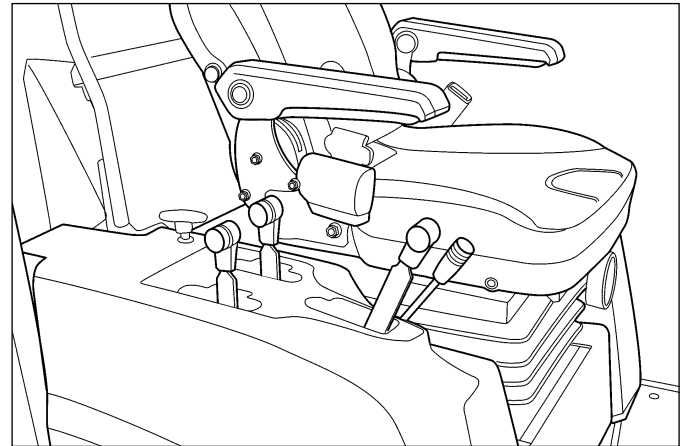


**WARNING:** When operating the front mower on a slope, be sure the 4WD lever is locked in the 4WD position from the reasons mentioned below:

In the AUTO position the mechanism shifts to 2WD automatically when the peripheral speed of the front wheels exceeds that of the rear wheels, which means loss of rear wheel driving power.

For example, when moving uphill if the front wheels slip, the mechanism stays in 4WD. But moving downhill if the front wheels slip and lose grip, and begin to slip down the slope, it shifts to 2WD, that is, braking effect of the HST unit is lost, which means loss of front mower control.

From another point of view, when you try to turn the front mower on a slope, rear wheel driving power is lost and the front mower may slip down the slope, which is also very dangerous.



**FIG. 47**

(1) 4WD Shift Lever

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**12. WHEEL TIGHTENING BOLTS AND NUTS**

Check the wheel tightening bolts and nuts for looseness. All bolts and nuts should be tightened to the specified torque.

**Specified tightening torque (Bolt):**

Front wheel: 45.1 N · m ~ 57.9 N · m (460 kgf · cm ~ 590 kgf · cm)
Rear wheel: 127.2 N · m ~ 147.2 N · m (1298 kgf · cm ~ 1502 kgf · cm)

Tighten the bolts near the maximum level and tighten again so that the groove and hole aligned together, insert the cotter pin through the hole and groove, split the edge of it.

**13. BATTERY**



**DANGER:**

- The battery generates very explosive gases, so avoid smoking and keep sparks and open flames away from the battery. Charging the battery should be done in a place well ventilated to disperse explosive gasses as quickly as possible.
- Battery electrolyte is very corrosive and will cause burns, so if it splashes on skin or clothes, wash it off immediately. If acid contacts eyes, flush immediately with clean water and get medical attention.
- When using booster cables, take sufficient safety measures.

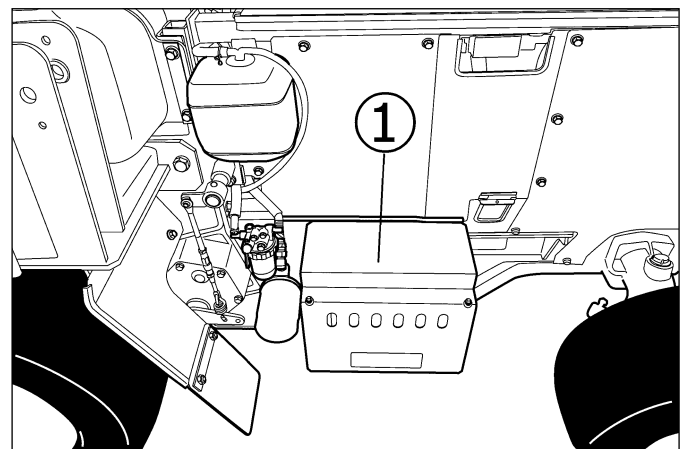
**INSPECTION OF BATTERY**

The battery, 1, is installed on the middle of the left hand side of the front mower. Check to see if the electrolyte level is between the upper and lower limits. When the level is near to the lower limit or below, raise the level with distilled water to the upper limit.



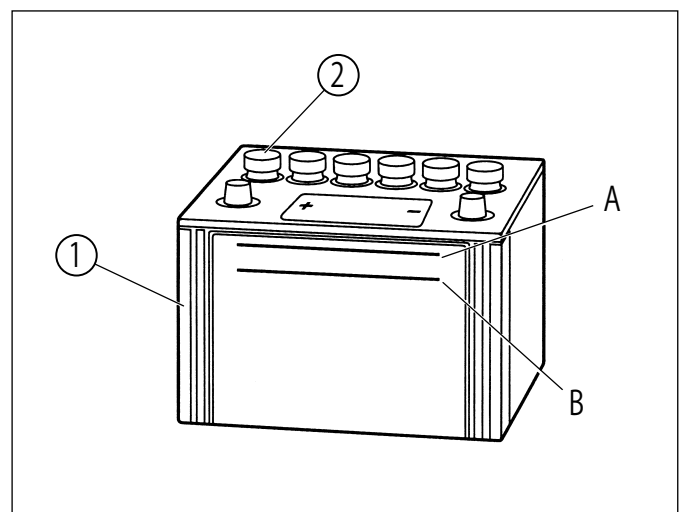
**WARNING:** Never attempt to keep on using or charging the battery with an electrolyte level lower than the limit, or the battery may explode or its service life be shortened due to deterioration inside the casing.

**IMPORTANT:** The electrolyte level should always be kept between the upper and lower limits. A too high level will cause the electrolyte to overflow and corrode other parts.



**FIG. 72**

(1) Battery



**FIG. 73**

(1) Battery      (2) Filler plug  
 A Upper limit      B: Lower limit

**25. WASHING OF THE MACHINE**



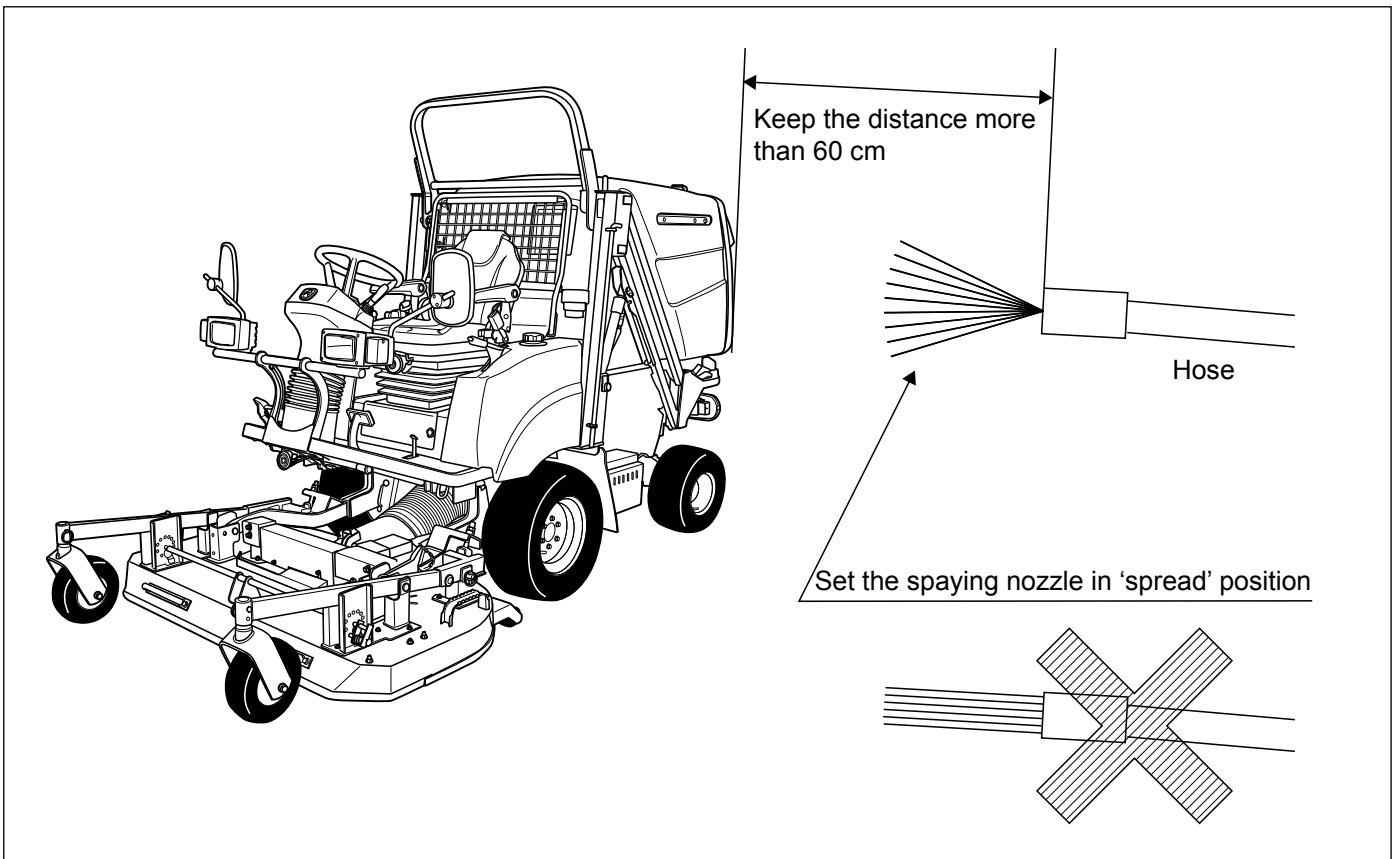
**CAUTION:** If you use compressed water, be sure to use in accordance with this operator's manual and safety label. In case of irregular use, it may cause personal injury and damage to the machine.



**CAUTION:** Set the spraying nozzle in 'spread' position and keep the distance away from the machine more than 60 cm in order to avoid damage to the machine. Especially, be care not to hit the compressed water to electrical parts and label.

Unsuitable washing may cause the following accidents;

1. Fire as a result of short circuit or the damage to the electrical parts.
2. Oil leakage as a result of the damage to the hydraulic hose.
3. Damage to the machine.
  - (1) Label peeling.
  - (2) Accident occurs by the damaged electrical parts, engine, radiator, and interior.
  - (3) Lubber parts (tire, seal) and resin parts are damaged.
  - (4) Paint peeling.





## SCMA54, SCMB60, SSM54

### 3. STARTING MOWING OPERATION



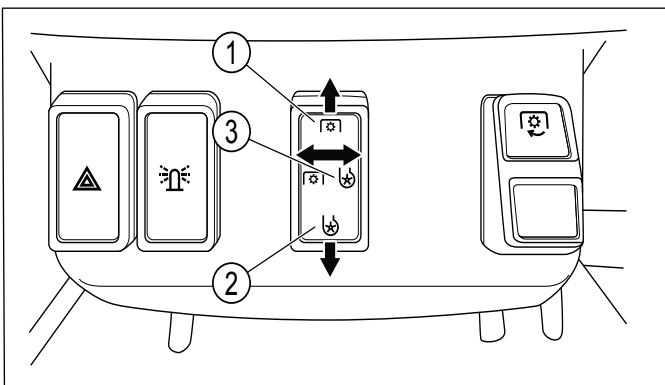
#### CAUTION :

- Read the contents of this manual thoroughly and carefully and keep safe operation in mind.
- Before moving the front mower into the working site, investigate the whole site and get rid of all obstacles such as stones, wood, empty tins, bottles, wires, etc for operation safety.
- Investigate the site for pits, mounds, steps, slope angles, ground softness, water pools, etc to avoid turning over, falling down, and side-shifting.
- Also make sure there is no danger of hurting children, animals, by-standers. and damaging nearby trees, buildings, etc.

- Start the engine and turn the throttle lever (5) to the intermediate position between the low speed and high speed positions.
- Shift the mower lift lever (4) to the up position to raise the mower deck.
- Release the parking brake.
- Depress the HST forward travel pedal gradually to drive the front mower into the working site.
- Release the HST pedal gradually to stop the front mower.
- Shift the mower lift lever (4) to the down position to lower the mower on the ground.
- Select the MOWER AND BLOWER SWITCH from (A1) to (A3) for proper operation.
- Slide and push BOTTOM button(B2) of PTO ROTATION Switch.

**NOTE:** In order to operate blower PTO or mower PTO, PTO ROTATION SWITCH (PTO ON/OFF SWITCH) to be set ON position by sliding(B3) and push Top button(B1). Push Top button of PTO ROTATION SWITCH, when stopping PTO operation.

#### A: MOWER AND BLOWER SWITCH

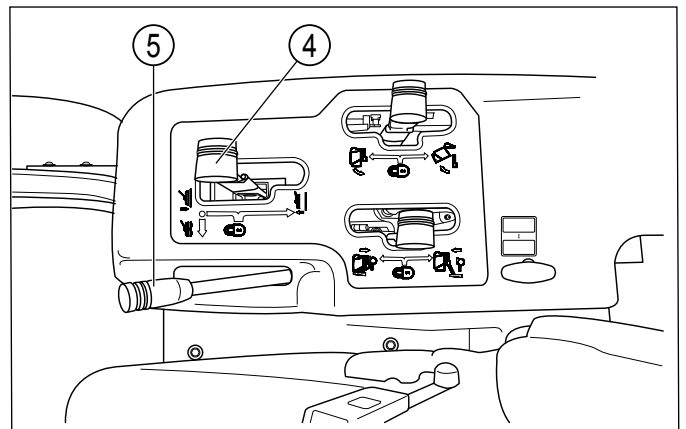


- Mower PTO switch (Forward/TOP)
- Blower PTO switch (Rearward/BOTTOM)
- For Mower and Blower (Center)

**NOTE:** When blower and mower PTO are operating, both blower and mower PTO will stop by pushing the blower PTO switch.

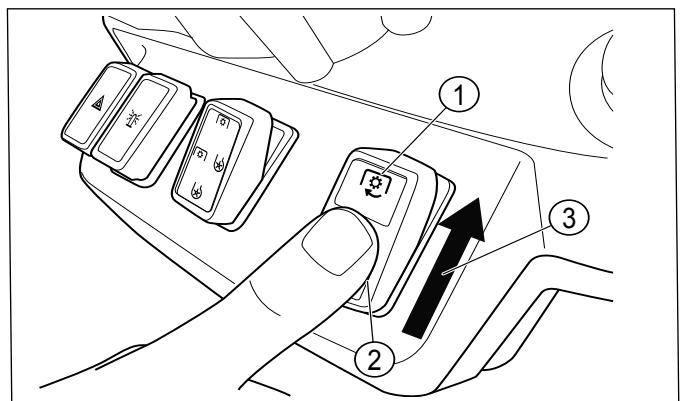
**NOTE:** When the collector is lifted, mower and blower PTO cannot be operated.

**NOTE:** When this switch is in center position, both mower and blower can be operated, if the PTO ON/OFF switch is in ON position.



(4) Mower lift lever (5) Throttle lever

#### B: PTO ROTATION Switch



- TOP button
- BOTTOM button
- Sliding Direction

**\*Please also refer to P38 1.5 MOWER AND BLOWER SWITCH section and 1.6 PTO ROTATION SWITCH.**



#### CAUTION :

- PTO restriction mechanism works only while the PTO is working.
- Before starting to mow, make sure that this mechanism works properly. Be sure to detach the drive shaft before checking the PTO restriction mechanism.

## SCMA54, SCMB60, SSM54

### INSPECTION & REPLACEMENT OF BLADES(SSM54)

#### • Inspection of blades

- a. Apply the parking brakes.



**CAUTION: Be sure to apply the parking brakes securely.**

- b. Start the engine and turn the throttle lever to the low speed position to decelerate the engine.
- c. Shift the lift lever to the UP position and raise the mower deck to the highest position.
- d. Stop the engine.
- e. Remove the rear linkage of mower deck by pull out the pin.
- f. Lift up the front position of mower deck.



**CAUTION: When turning the mower deck, take care not to allow it to hit your feet.**

- g. Lock the mower deck by inserting the stopper pin into the hole in the left-hand lift arm.
- h. Check the mower blades for deformation and damage.

#### • Replacement of blades(SSM54)

Lift up the mower deck and stop the engine or remove the mower deck from the front mower.



**CAUTION: As blade edges are very sharp, be sure to wear gloves to avoid being cut.**

- a. Chock a blade by inserting a piece of wood between the blade and mower deck to prevent the blades from rotating. Loosen the blade tightening nut.

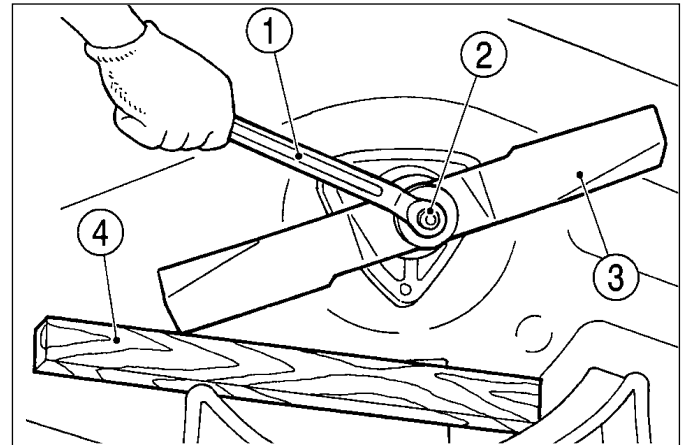


#### CAUTION:

• **Never attempt to loosen the blade tightening nut by holding the blade by hand.**

• **The chocking wood should be held securely so as not to become dislocated. During this operation, always pay sufficient care not to be hurt even when the wood is removed.**

As the blades are tightened along with washers and shims, take care not to lose them when the blades are disassembled.



- (1) Spanner      (3) Blade  
(2) Nut          (4) Wood

**SCMA54, SCMB60, SSM54**

Troubles	Presumable causes	Remedies
Excessive noise and vibration	<ul style="list-style-type: none"><li>• Deformed or interfering shaft cover</li><li>• Damaged bevel gears</li><li>• Broken or unbalanced blades</li><li>• Loose blade tightening bolts</li></ul>	<ul style="list-style-type: none"><li>• Repair it.</li><li>• Consult your dealer.</li><li>• Replace them with new one.</li><li>• Re-tighten them to 1000 kgf•cm.</li></ul>
Too low engine output	<ul style="list-style-type: none"><li>• Too low engine speed</li><li>• Too fast travelling speed</li><li>• Foreign matter caught between blade and blade support</li><li>• Defective engine</li></ul>	<ul style="list-style-type: none"><li>• Mow at full throttle (👉).</li><li>• Slow down.</li><li>• Clean.</li><li>• Consult your dealer.</li></ul>
Gauge wheels do not turn.	<ul style="list-style-type: none"><li>• Foreign matter caught in shaft</li><li>• Broken wheel</li><li>• Short of grease</li></ul>	<ul style="list-style-type: none"><li>• Clean.</li><li>• Replace it with new one.</li><li>• Inject grease.</li></ul>
Blades do not rotate.	<ul style="list-style-type: none"><li>• Loose blade tightening bolts</li><li>• Foreign matter caught in blades or blade supports</li><li>• Broken bevel gears</li></ul>	<ul style="list-style-type: none"><li>• Re-tighten them to 1000 kgf•cm.</li><li>• Clean.</li><li>• Consult your dealer.</li></ul>
Mower does not rise.	<ul style="list-style-type: none"><li>• Inside of the mower deck is clogged with too much grass or mud.</li><li>• Defective hydraulic system</li></ul>	<ul style="list-style-type: none"><li>• Clean.</li><li>• Consult your dealer.</li></ul>

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