

ISEKI Front Mower

SF237/225



- | | |
|------------------------------------|-------------------|
| 1. Model configuration and line up | 7. Collector |
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1. Model configuration and line up

	Class		Engine		4WD F	HST	Power steering	Rear steering	Cruise control	Aux. hydraulic valve	Blower B	Homologation light G	Weight W	Seat Z	ROPS R	ISO5395
			E3FH	E3112												
NEW	SF237E	SF237FBGRE42	X		X	X	X	X	-	X	X	X	-	-	X	X
NEW		SF237FBGZRE42	X		X	X	X	X	-	X	X	X	-	X	X	X
NEW		SF237FGWZRE42	X		X	X	X	X	-	X	-	X	X	X	X	X
NEW	SF225E	SF225FBGRE42		X	X	X	X	X	-	X	X	X	-	-	X	X
NEW		SF225FBGZRE42		X	X	X	X	X	-	X	X	X	-	X	X	X
NEW		SF225FGWZRE42		X	X	X	X	X	-	X	-	X	X	X	X	X

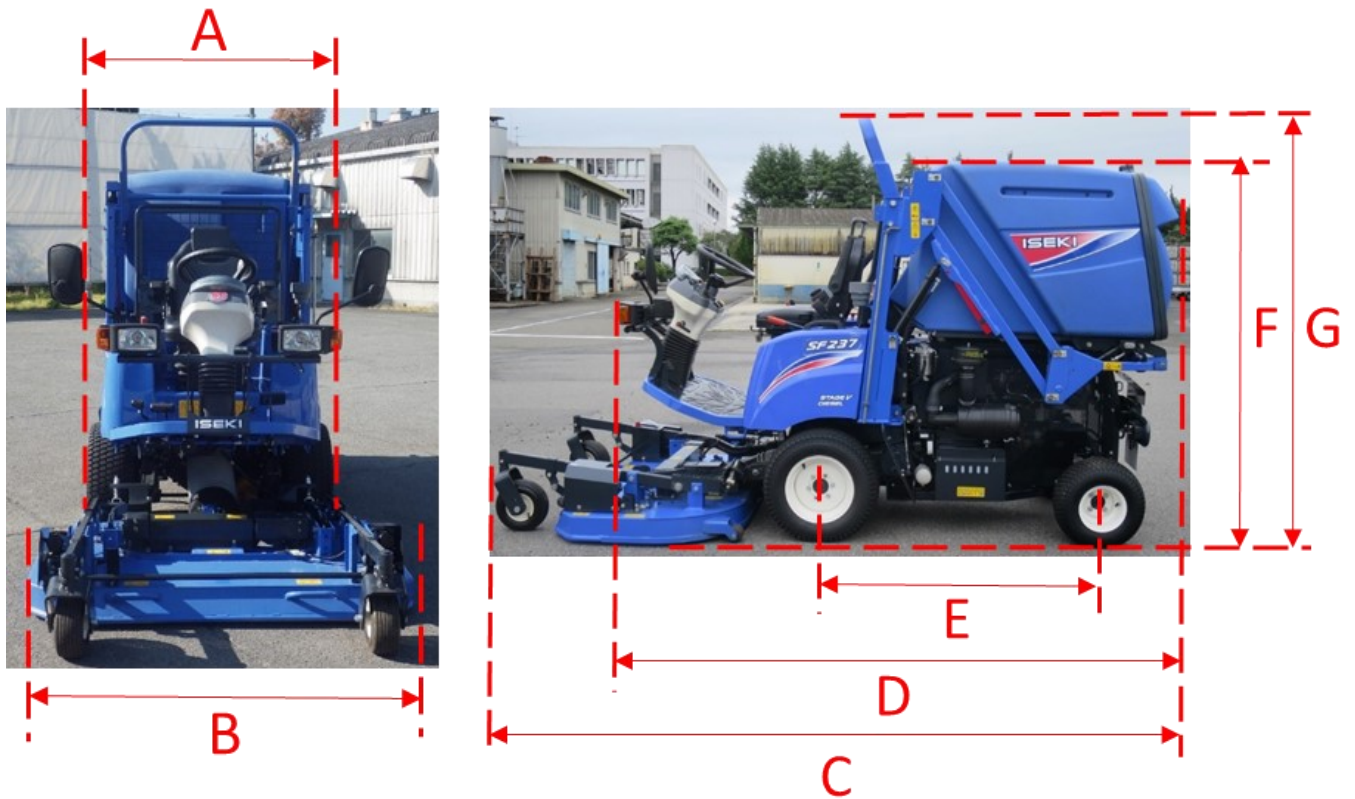
	Class		Deck side(inch)		Discharge			Height adjustment		Applicable model
			60"	54"	Center	Side	Mulching	Hydro.	One-touch	
NEW	SCMB60E	SCMB60SF237HE4	○	-	○	-	Applicable	○	-	SF237
Continued	SCMB60E	SCMB60SF235E4	○	-	○	-	Applicable	-	○	SF237, SF235
Continued	SCMA54E	SCMA54SF235E4	-	○	○	-	Applicable	-	○	SF237/225,235/224
Continued	SSM54E	SSM54SF235E4	-	○	-	○	-	-	-	SF237/225,235/224

	Class		Capacity	Hydro.	Hydro.	Blower	Quick	Overhang		Applicable model
			950L	Lift	Dump	Less	attach	300-400mm	187mm	
NEW	SBC95E	SBC950F3HE4	○	○	○	○	N/A	○	-	SF237/225

Class		Tire size		Applicable model
		Front	Front	
TYSF235	TYSF235F2E	23 x 10.50 -12	18 x 8.5 - 8	SF237/225,235/224

PS	ISEKI		Grillo		Gianni Ferrari	
	StageV	StageIIIA	StageV	StageIIIA	StageV	StageIIIA
50	SF551 (1300L,54"/60")			FD2200 TS (1400L,61"/71")		Turbo 4 Fifty (1400L,59"/71")
45	SF544 (1300L,54"/60") (60"H)	SF450 (1300L,54"/60")	FD2200 TS (1400L,61"/71")	FD2200 4WD (1200L,61")		Turbo 2T/4T (1300L,51"/60"/67")
40		SF438 (1300L,54")	FD2200 4WD (1200L,61")			Turbo 2/4 (1300L,51"/60"/67")
35	SF237 (950L,60"/54")	SF235 (950L,60"/54")		FD13.09 4WD (900L, 52"/61")		Turbo 1 WT (1100L,51"/59")
30			FD13.09 4WD (900L, 52"/61")		PG280 (800L,44"/50")	Turbo1/1W (1100L,51"/59")
25					Turbo1/1W (1100L,51"/59")	
20	SF225 (950L,54")	SF224 (950L,54")			PG220 (800L,44"/50")	PG220 (800L,44"/50")

2. Dimension

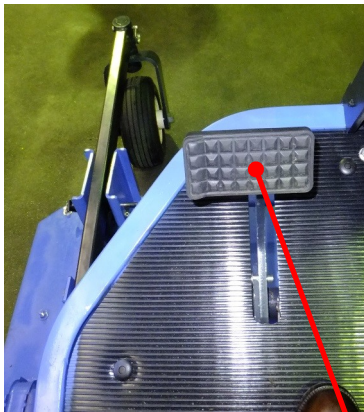
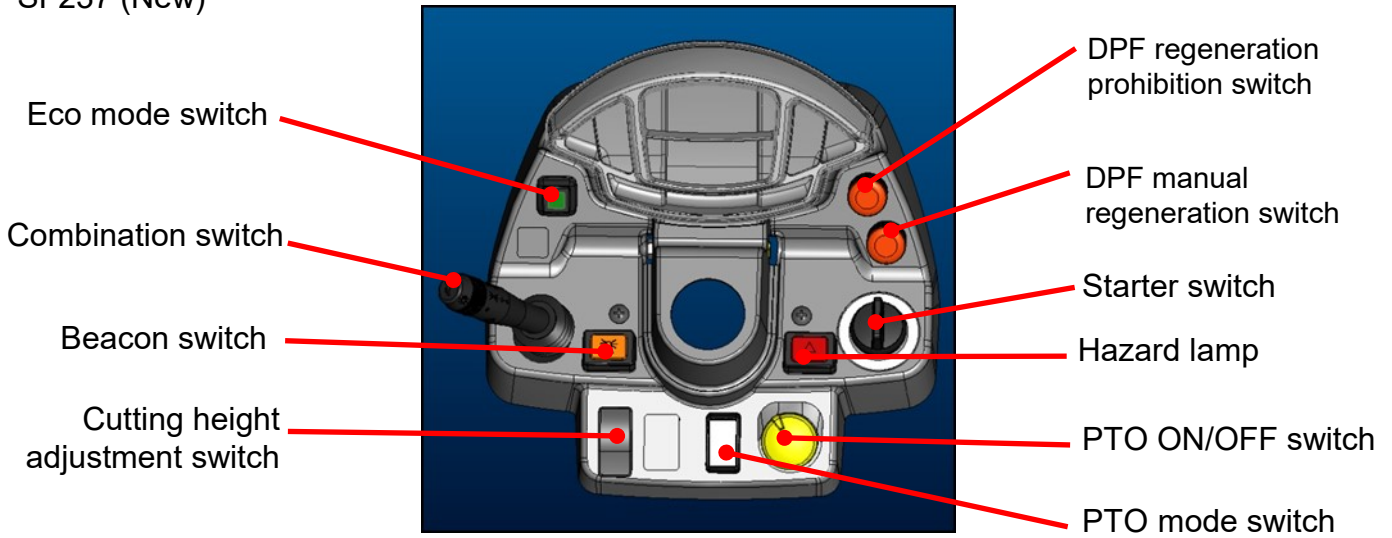


		SF237		SF225
		SCMB60	SCMA54	SCMA54
(A) Width	(mm)	1,245	←	←
(B) Deck width	(mm)	1,575	1,445	1,445
(C) Overall length	(mm)	3,385	3,160	3,160
(D) Length	(mm)	2,790	←	2,725
(E) Wheel base	(mm)	1,375	←	1,275
(F) Height without ROPS	(mm)	1,910	←	1,750
(G) Overall height	(mm)	2,120	←	2,120
Weight (machine)*	(kg)	1,060	←	910

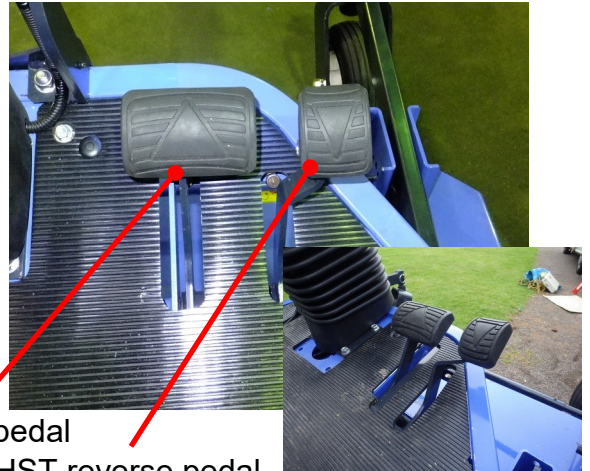
*with blower and seat

3. Exterior

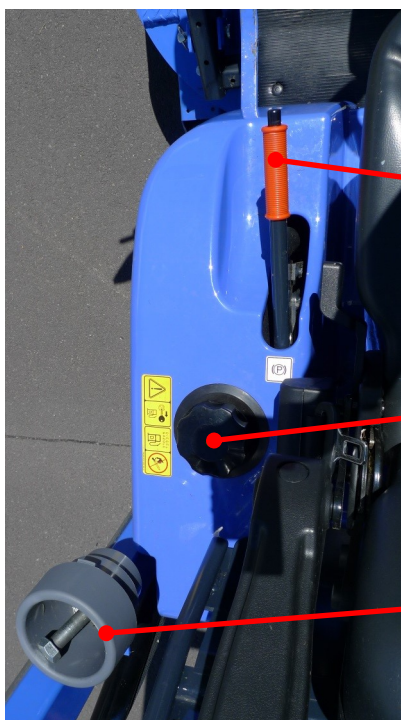
SF237 (New)



Brake pedal



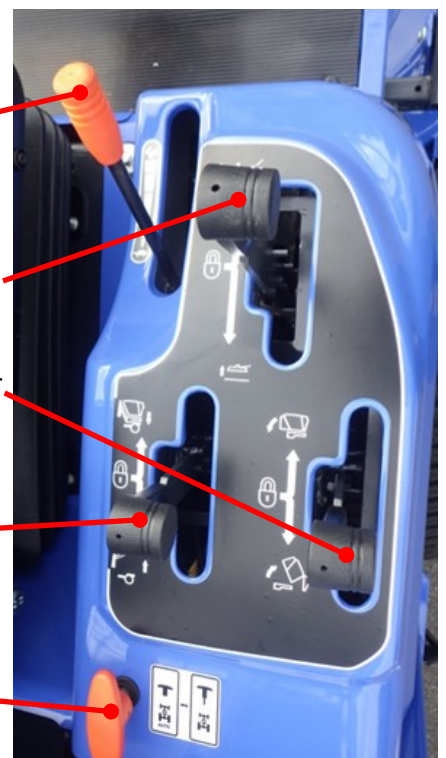
HST forward pedal
HST reverse pedal



Parking brake

Fuel cap

Cup holder



Throttle lever

Mower lift lever

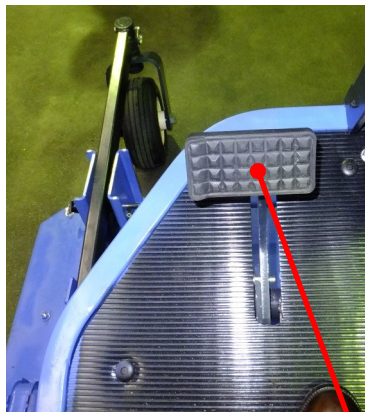
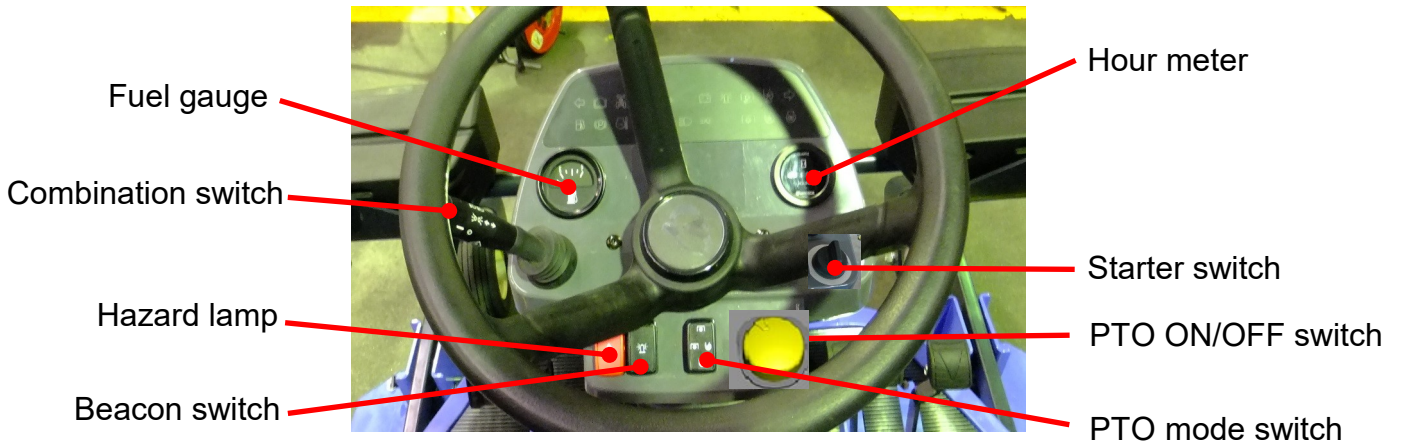
Collector dump lever

Collector lift lever

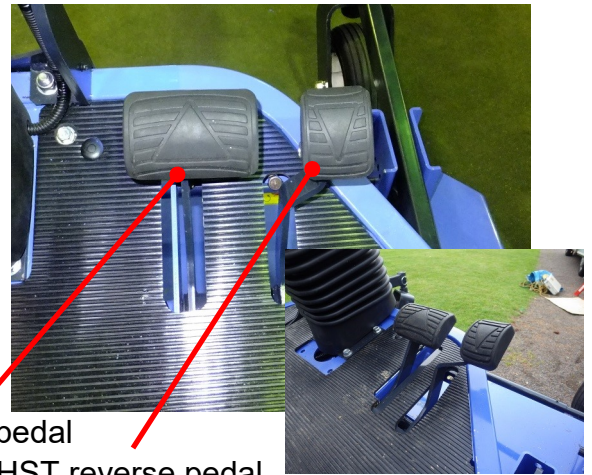
Auto / 4WD
change-over lever

3. Exterior

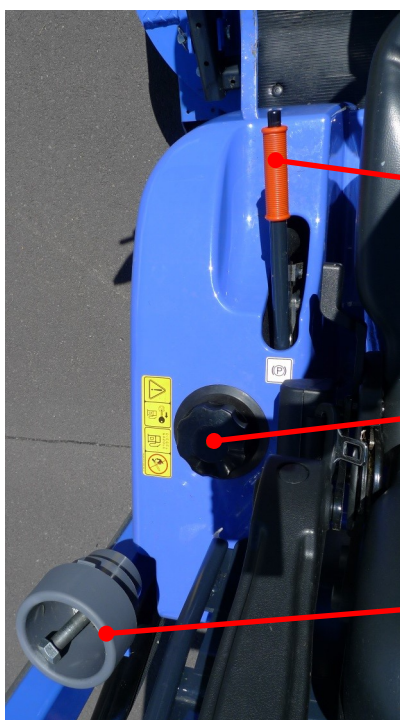
SF225



Brake pedal



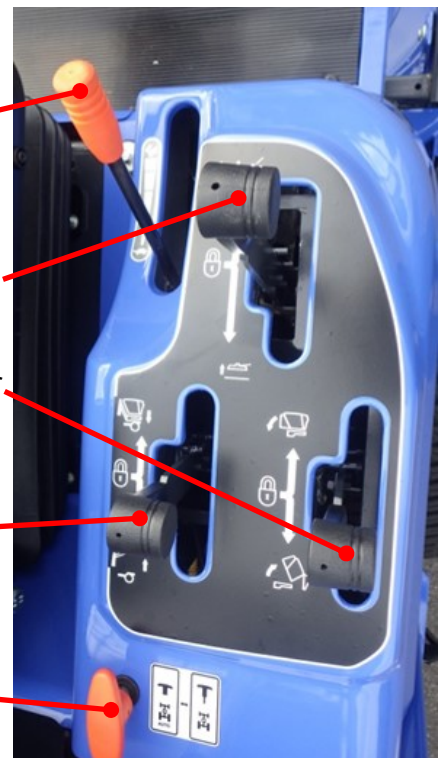
HST forward pedal
HST reverse pedal



Parking brake

Fuel cap

Cup holder



Throttle lever

Mower lift lever

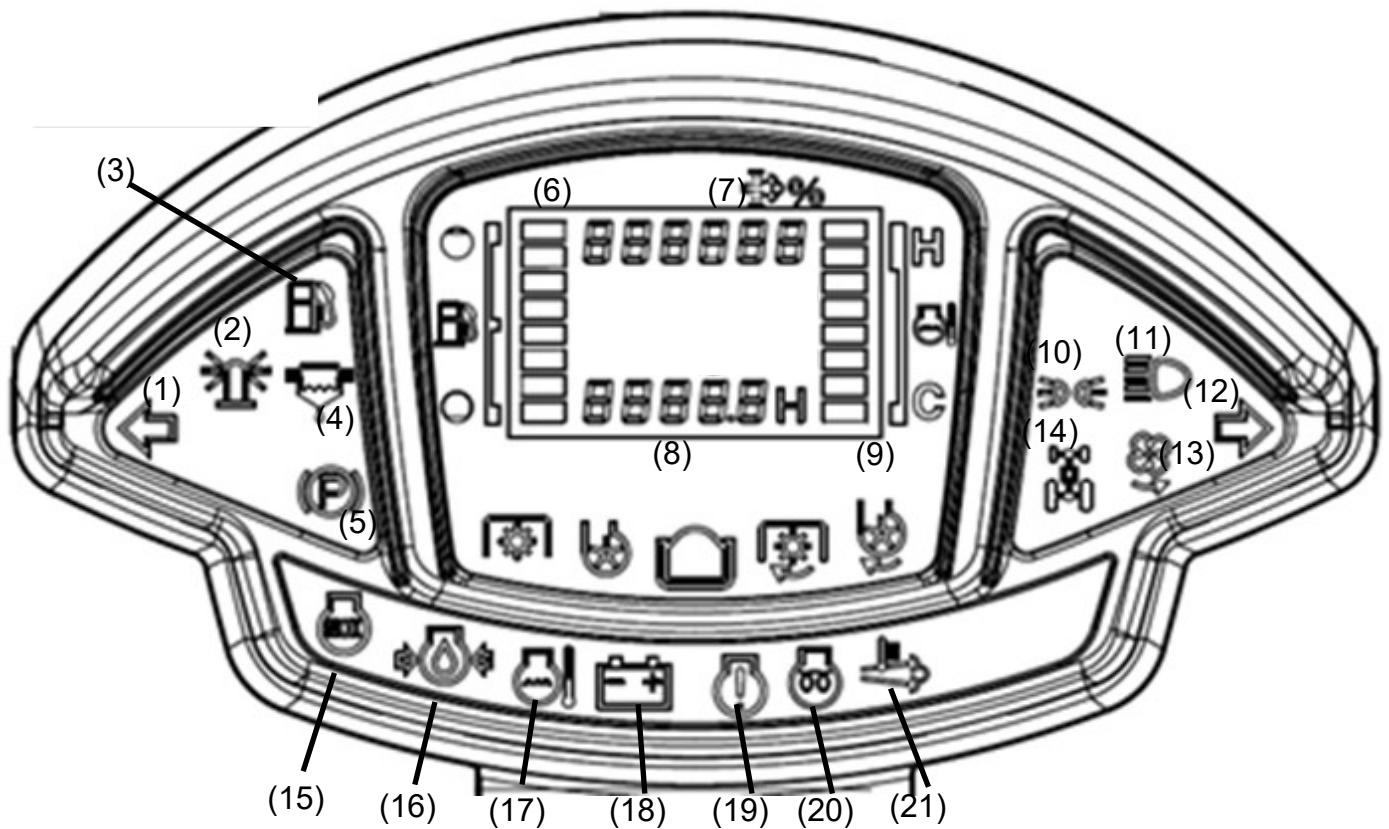
Collector dump lever

Collector lift lever

Auto / 4WD
change-over lever

3. Exterior

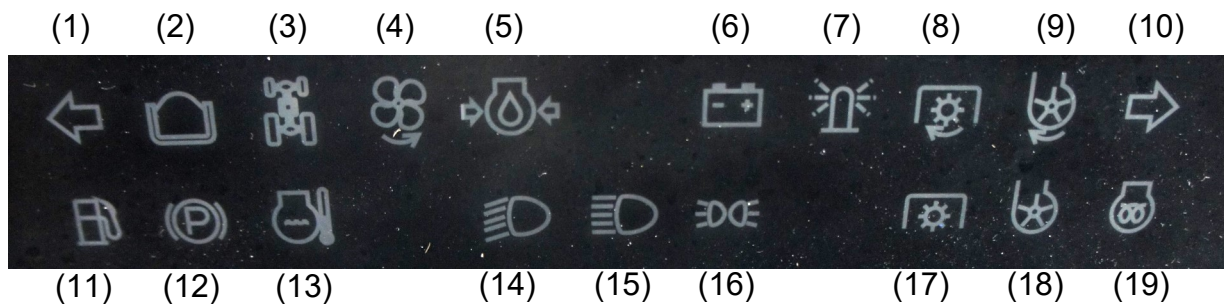
SF237 (New)



- | | |
|---|----------------------------------|
| (1) Direction indicator (Left) | (12) Direction indicator (Right) |
| (2) Beacon lamp | (13) Radiator fan reverse |
| (3) Fuel empty | (14) 4WD |
| (4) Fuel filter sediment
(Lights when water accumulate in the
filter) | (15) NOX error |
| (5) Parking lamp | (16) Oil pressure lamp |
| (6) Fuel gauge | (17) Water temperature warning |
| (7) DPF soot level & engine error code | (18) Battery charge |
| (8) Hour meter | (19) Engine warning lamp |
| (9) Water temperature | (20) Glow lamp |
| (10) Head lamp ON | (21) Exhausted gas too hot |
| (11) High beam | |

3. Exterior

SF225



- | | | |
|------------------------------|--------------------------------|----------------------------|
| (1) Turning indicator (left) | (8) Mower PTO ON | (15) Headlight (high beam) |
| (2) Collector full | (9) Blower PTO ON | (16) Position lamp |
| (3) 4WD | (10) Turning indicator (right) | (17) Mower PTO OFF |
| (4) Reversing radiator fan | (11) Fuel empty | (18) Blower PTO OFF |
| (5) Oil pressure | (12) Parking brake | (19) Glow lamp |
| (6) Battery charge | (13) Overheated | |
| (7) Beacon lamp | (14) Headlight (low beam) | |

· Tilt steering

New SF2 series provide a comfortable operation by tilt steering.

Steering can be adjusted forward and backward for 35 degree by single action.

Adjustment handle is located on the left side of steering column.



Adjustment handle



Tilt steering

3. Exterior

·ISEKI standard seat

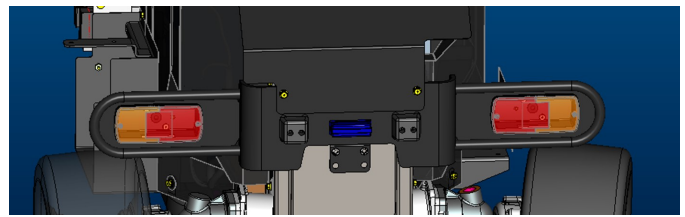
ISEKI standard seat is mounted to “Z model”. (refer to page 2 for Model configuration and line up.) Even longer operation, the seat with mechanical suspension and armrest provide a comfortable operation.



·Homologated front and rear combination lamp



Front combination lamp

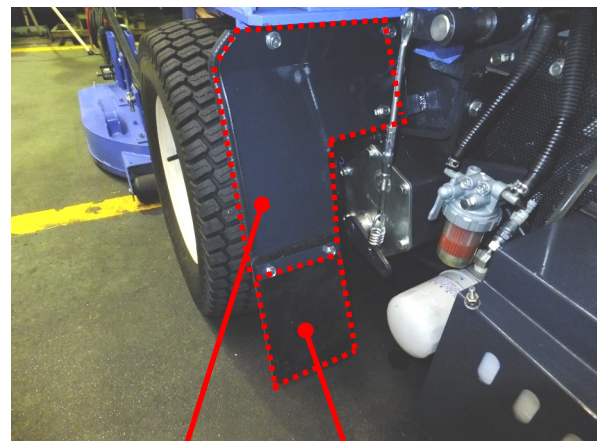


Rear combination lamp

·Mud guard

For both SF237 and SF225, mud guard is standardly equipped to front tires. It prevents oil filter, fuel filter and battery from damage by splashed mud and stone.

Mud guard is composed of iron and rubber as like picture on the right side.



Iron

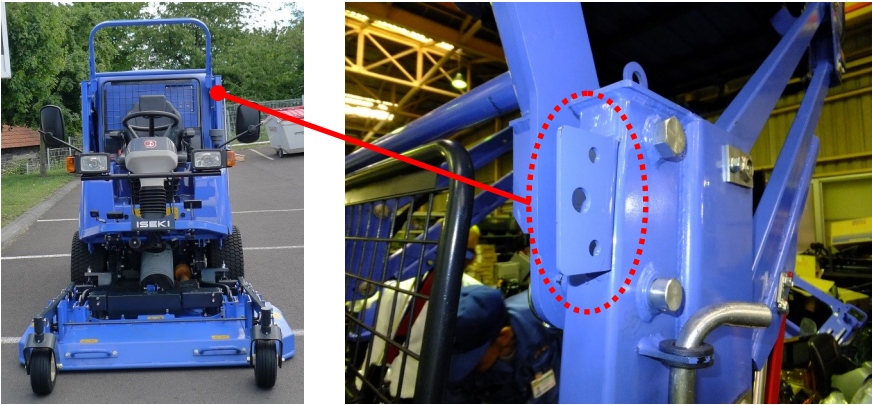
Rubber

3. Exterior

· Beacon lamp stay

Beacon lamp stay is standardly equipped on the left side of ROPS.

※Please arrange beacon lamp locally.

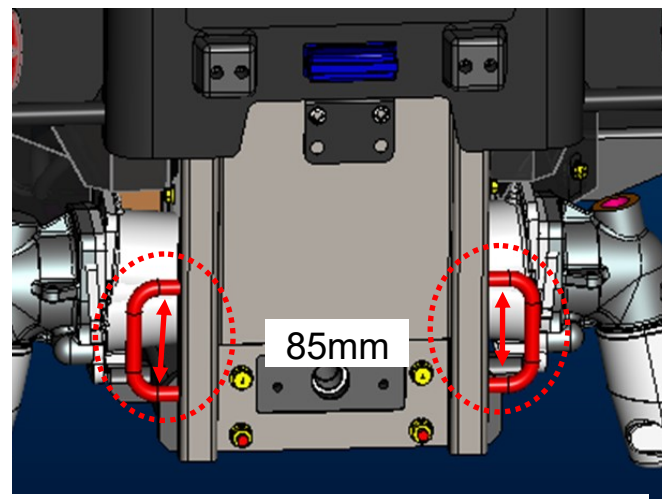


· Transportation hook (New)

Two ring hooks for transportation are respectively equipped to front and rear of SF237/225. The Hook became wider than the current model and it is able to use local hook .



Front

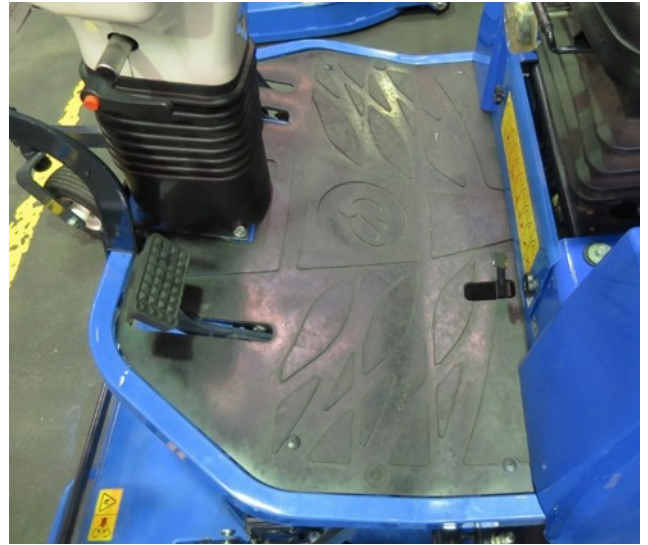


Rear

3. Exterior

·Floor mat (New)

The floor mat is renewed with one-piece formed new design floor mat. ISEKI's "i" mark will be additionally stamped.



·Hand catcher (New)

It is easier to ride on the floor with an additionally installed hand catcher.

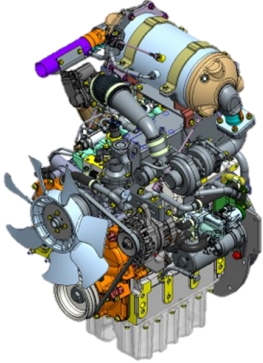
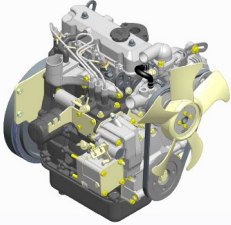


·Cover rear lamp (New)

A new cover additionally installed at rear for the purpose of preventing dumped grass from being stock. SF225 does not need this cover since there is no spot to catch grass after the rear design reviewed.

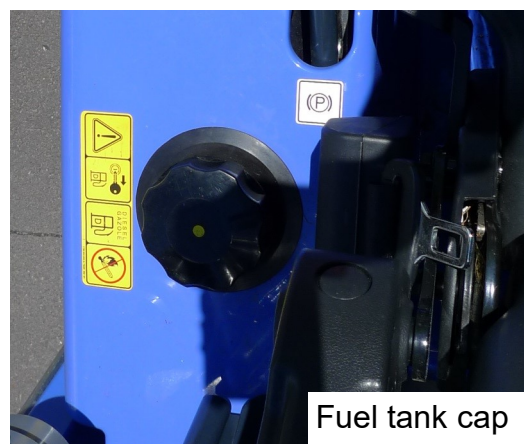


4. Engine

		New	
		SF237	SF225
			
Engine model		E3FH	E3112-G08
No. of cylinders		3	←
Bore	(mm)	87	78.2
Stroke	(mm)	102.4	78
Displacement		(L)	1.826
Output	Gross	(kW{PS})	25.7{34.9}
	Net	(kW{PS})	24.8{33.7}
Rated rotation speed		(min-1)	2600
Max. torque		(N-m)	112.5
Fuel injection		DI	←
Common rail		STD	←
After-treatment system		DOC + DPF	←
Emission regulations		StageV	StageV

· Fuel tank

Both SF237 and SF225 are mounting 40L fuel tank which is larger than tank of FD13.09 by 17L for long operation.



·Engine hood

To keep engine room clean, engine is fully covered by engine hood and also clearance gap between engine and shooter is covered by plate. Engine hood open backward and handle is equipped to left side of engine hood.

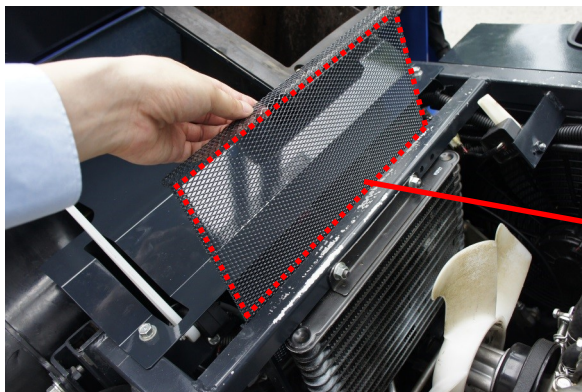
Covered by plate

Handle for opening engine hood



·Cover net

There is a cover net in front of cooling fan which keeps engine room clean. To take grass and dust from the net, pull it out from engine room as fig.1.



Cover net



Fig. 1

Engine room

·Radiator

Grass and dust which stick to radiator will be taken off by automatic reversing radiator every 5 minute. Intake fresh air to engine room prevent overheat and also free maintenance of radiator lead to efficient work.



Radiator

StageV engine (New)

- New emission regulation

Traditionally, “particulate matter” (PM) emitted from engines has been regulated by its “weight”. In this new regulation, not only “weight” limits is stricter, but also a new regulation called “PN limits” has been introduced. That’s because PM “weight” value does not reflect the exact values of ultra-fine particles that can easily enter into the human body. For this reason, this “PN limits” will newly regulate particles by its “number” instead. In order to pass this strict regulation, we have to additionally install some equipment such as DOC (Diesel Oxidation Catalyst), DPF (Diesel Particulate Filter) , Common-rail system and so on.

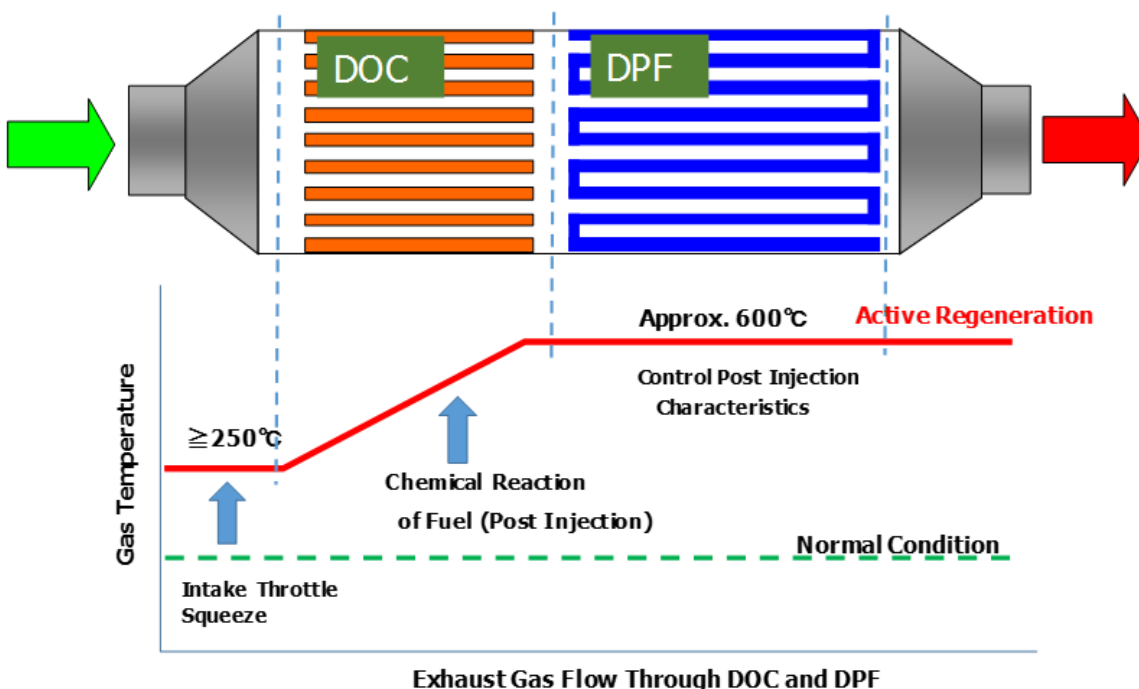
From the beginning of 2019

Engine output kW	Engine output PS	Regulation	CO g/kWh	HC g/kWh	NOx g/kWh	PM mass g/kWh	PN #/kWh
$19 \leq P < 37$	$25.8 \leq P < 50$	Stage V	5.00	HC+NOx		0.015	1×10^{12}

By the end of 2018

Engine output kW	Engine output PS	Regulation	CO g/kWh	HC g/kWh	NOx g/kWh	PM mass g/kWh
$19 \leq P < 37$	$25.8 \leq P < 50$	Stage IIIA	5.5	HC+NOx		0.6

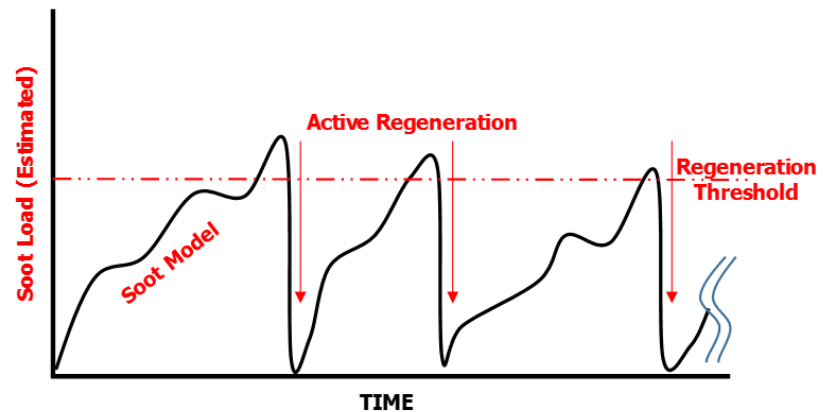
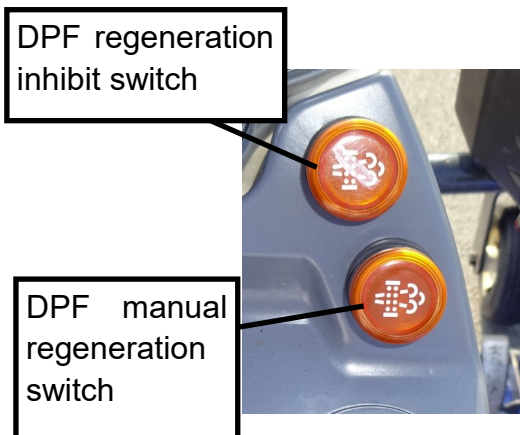
- After-treatment system



In the common rail fuel injection system, fuel that does not burn in the cylinder is injected, and the amount of inhaled air is controlled to raise the exhaust gas temperature in the DOC. Accumulated soot in the DPF is burned by the high-temperature exhaust gas. In this case, as shown in the figure, the gas temperature needs to be 250 degrees or higher before flowing into the DOC to activate the catalyst. As a result, the temperature of the gas flowing into the DPF is over 600 degrees and the accumulated soot burns.

- Active Regeneration

The amount of soot accumulated in the DPF is calculated according to the operating conditions or environmental conditions, and automatic combustion starts when the soot level exceeds a certain threshold (Active regeneration). Even when the amount of soot accumulation exceeds a certain level, depending on the conditions, automatic combustion may not start. When manual regeneration is requested, it is necessary to press the DPF manual regeneration switch and burn the soot manually. In the worst case where forced regeneration is not possible, the DPF must be replaced. On the other hand, if you want to temporarily stop active regeneration, press the DPF regeneration inhibit switch for 3 seconds to stop automatic combustion. The regeneration inhibit mode is canceled by turning the key switch off or pressing the switch again for 3 seconds.

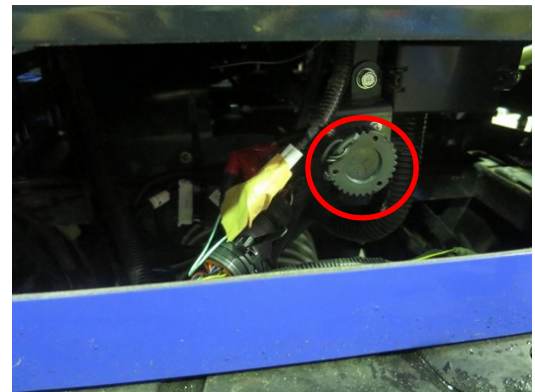
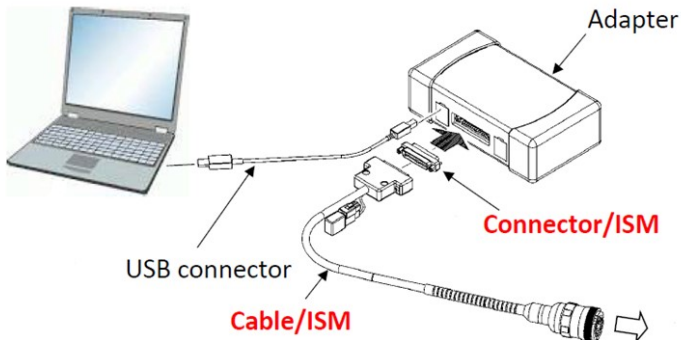


- Eco mode

On the dash board, there is a green switch which is used to switch on and off "Eco mode". While ECO mode is on, the maximum engine speed (at no load) is limited to 2550 min^{-1} . This system helps us to save fuel consumption and extends the life of the engine.



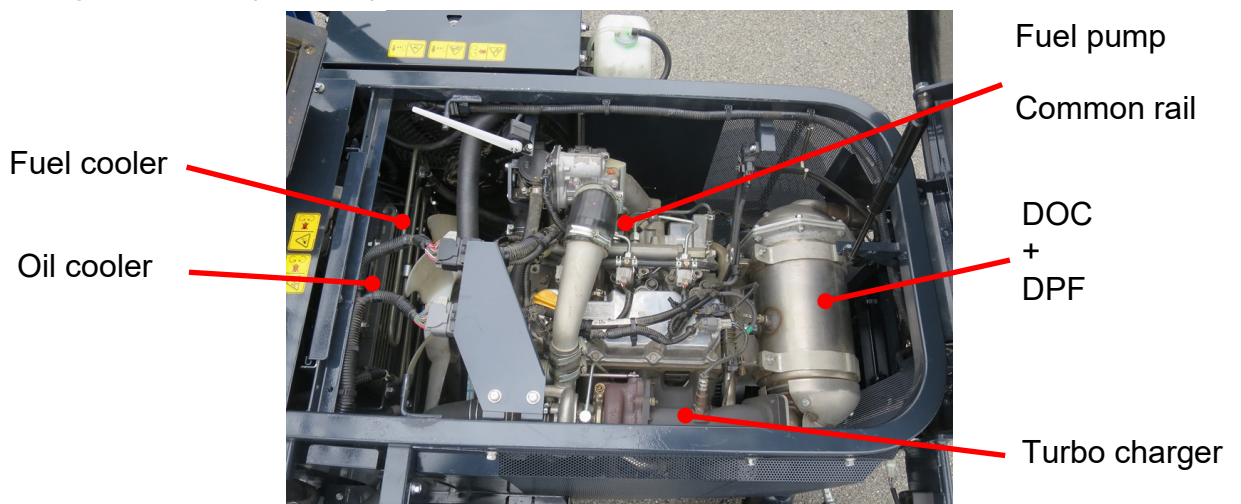
·StageV Engine service tool



Connecting point under the seat

Service tool for ISEKI Stage V engine				
NO	PARTS NAME	PARTS CODE	Price (ISEKI Parts Dept.)	QTY
1	ENGINE SERVICE TOOL/ISM	6285-501-005-00	JPY 35,000	1
1-1	Adapter	-		
1-2	USB connector	-		
2	CABLE/ISM	6285-509-017-00	JPY 16,000	1
3	CONNECTOR/ISM	6285-509-015-00	JPY 1,800	1

·StageV Engine room (SF237)



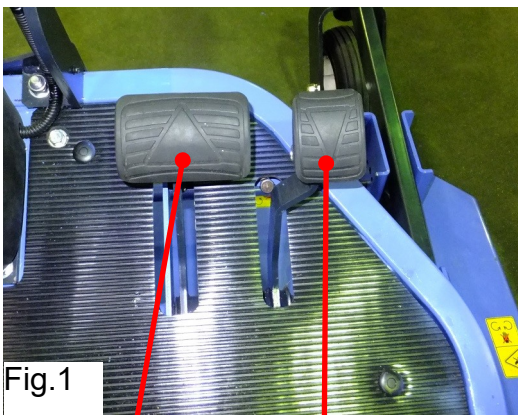
5. Transmission & tire

Transmission

HST transmission mounted on SF237/225 provides you a quick response with a smooth acceleration and also make it possible to mow in a hard conditions with speed.

Two HST pedal provide you an easy change of direction. (See Fig.1)

Manufacturer	ISEKI	
Model	SF237	SF225
Transmission	HST	
HST pedal	2 pedals	
Auto accelerator	Std.	
Forward speed (km/h)	0~15.0	
Reverse speed (km/h)	0~10.0	



HST forward pedal

HST reverse pedal

Tire

Large and wide tire provide a stable traveling regardless on the slope or off road. Damage to ground and grass can be minimized and keep it in a great condition.

Manufacturer	ISEKI
Model	TYSF235F2E
Applicable model	SF237 & SF225
Front tire size	23x10.50-12
Rear tire size	18x8.5-8



Rear tire

Front tire

6. Mower deck

·Specification

	New			
Model	SCMB60	SCMB60	SCMA54	SSM54
Applicable model	SF237	SF237	SF237/225	SF237/225
Cutting width (inch)	60"	60"	54"	←
Discharge	Center	←	←	Side
Mulching kit	Std.	←	←	N/A
Number of blade	4	←	2	3
Flip-up angle	65°	←	←	60°
Cutting height adjustment	Hydraulic	1 action lever	←	Pin type
Cutting height (mm)	25-125	25-120	←	30-120
Weight (kg)	225	200	125	130



SCMB60



SCMA54

·Mulching kit

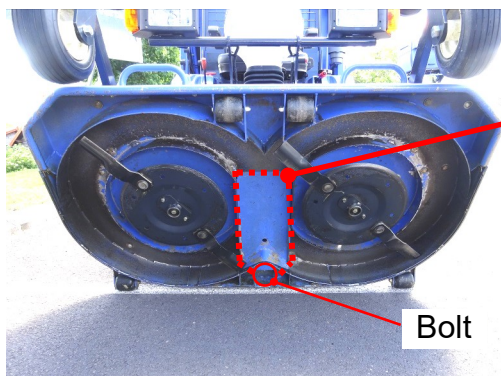
Mulching kit is standard for SCMB60/SCMA54.

It is able to change from center discharge to mulching with attaching mulching plate by one bolt for SCMB60. The blades of which are used for center discharge SCMB60 is applicable to mulching so no need to change the blade.

To use SCMA54 as mulching, attach mulching blades and plate.

Contents of mulching kit

	Blade	Plate
SCMB60	-	X
SCMA54	X	X



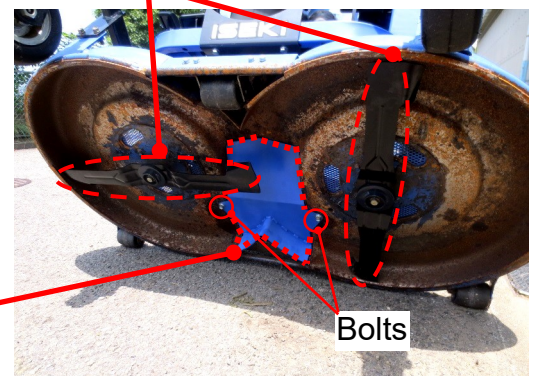
Mulching (SCMB60)



Mulching Plate

Bolt

Mulching blades



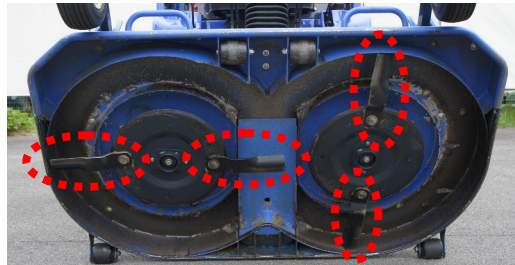
Mulching (SCMA54)

Bolts

6. Mower deck

· Blade

7mm thickness blade with high durability is equipped to SCMB60. The blade is applicable to center discharge and mulching.



· Flip-up

Flip-up angle of SF237/225 with SCMB60 and SCMA54 is 65° which is same angle as FD13.09. Operator have an enough space for easier cleaning and maintenance.



SF237+SCMB60



SF225+SCMA54



FD13.09+52inch mower deck

· Visibility of mower deck from operator

The edge of mower deck is visible from operator so that it is possible to cut the edge of trees or to avoid damage to others.

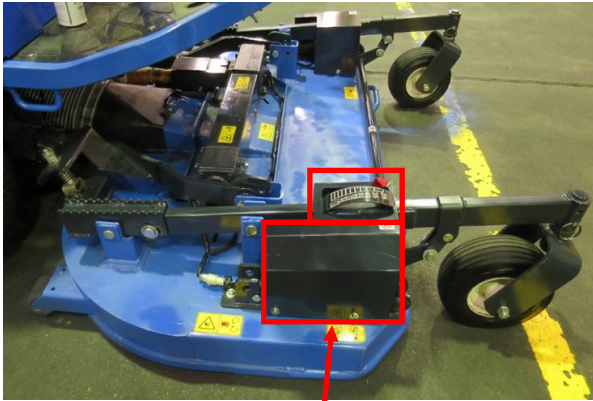


SF237+SCMB60

6. Mower deck

-Hydraulic cutting height adjustment (60 inch) (New)

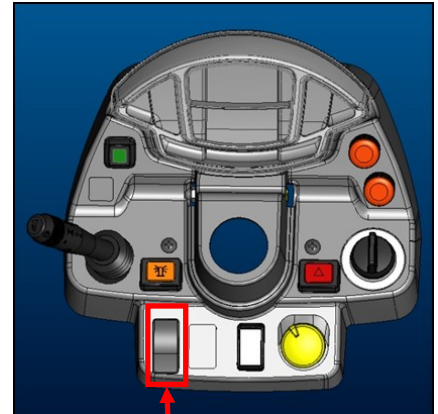
Operator is no need to get off from the seat to adjust the cutting height. Operator is able to adjust it from the operator seat. Cutting height indicator is located on the right top of mower deck. Visible from operator seat.



Cover for Hydraulic



height indicator



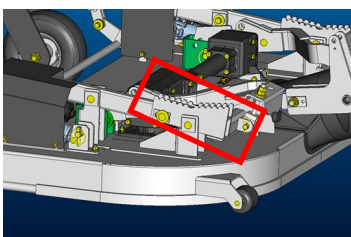
Cutting height adjustment switch
(Switch design will be announced soon)

Wiring & hose for hydraulic cutting height adjustment

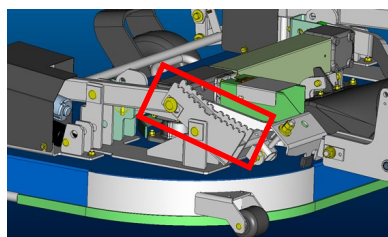
Since cutting height is controlled electrically, overall layout of wiring and hoses is beautifully located.



-Step on the linkage (New)



Mower deck down



Mower deck up

6. Mower deck

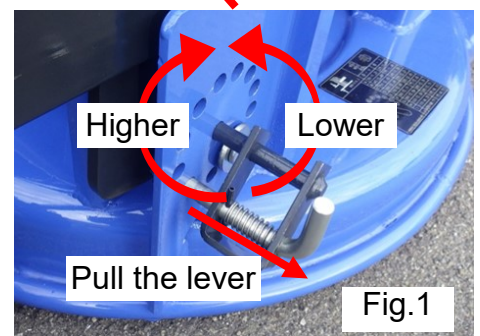
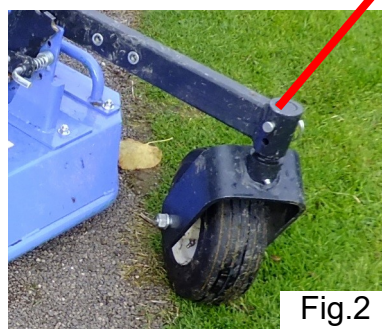
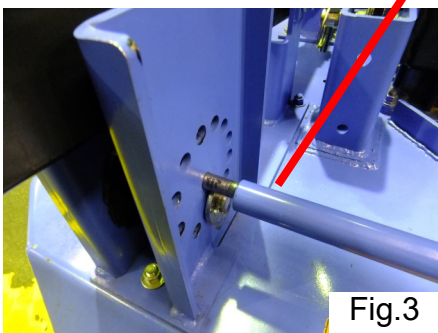
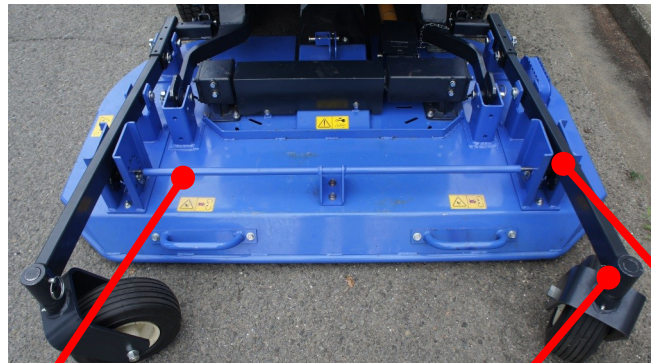
•Cutting height adjustment

Cutting height can be easily adjusted each 10mm by one action height adjustment lever located left front of mower deck. (See fig.1)

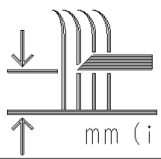
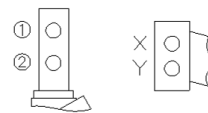
Turning the lever to clockwise, mowing height will be higher 10mm and turning the lever to anti-clockwise, mowing height will be 10mm lower.

By adjusting pin of front gauge wheel, it is possible to adjust each 5mm. (See Fig. 2)

Cutting height adjustment bar is protected by cover to prevent any damage. (See Fig. 3)



•Cutting height chart

		
	① - X	② - Y
A	30 (1.2)	25 (1.0)
B	40 (1.6)	35 (1.4)
C	50 (2.0)	45 (1.8)
D	60 (2.4)	55 (2.2)
E	70 (2.8)	65 (2.6)
F	80 (3.1)	75 (3.0)
G	90 (3.5)	85 (3.3)
H	100 (3.9)	95 (3.7)
I	110 (4.3)	105 (4.1)
J	120 (4.7)	115 (4.5)

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7. Collector

950L collector is able to mount for both SF237 and SF225. Its large capacity collector make the work efficient than ever. Furthermore the collector of SF237/225 is 50L larger than the collector of FD13.09.

·Specification

Manufacturer	ISEKI	ISEKI
Model	SBC950	←
Applicable model	SF237	SF225
Capacity (L)	950	←
Container	Plastic	←
Dump	Hydraulic	←
Lift	Hydraulic	←
Dump height (mm)	2,250	2,130

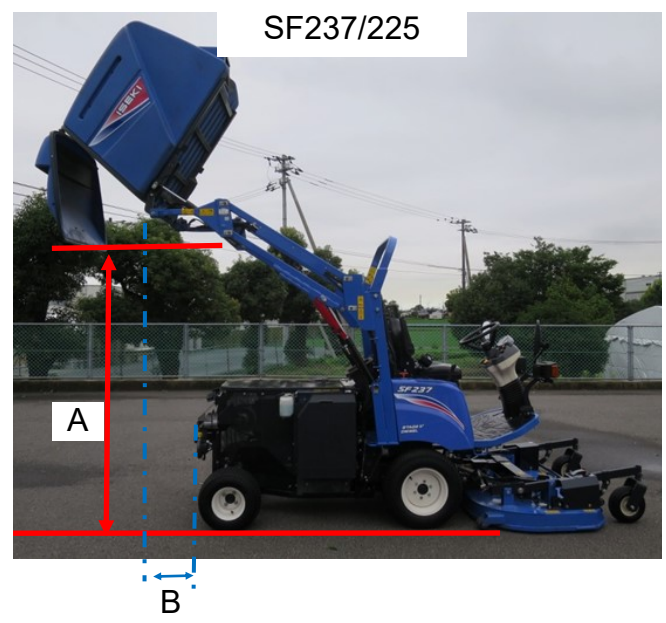
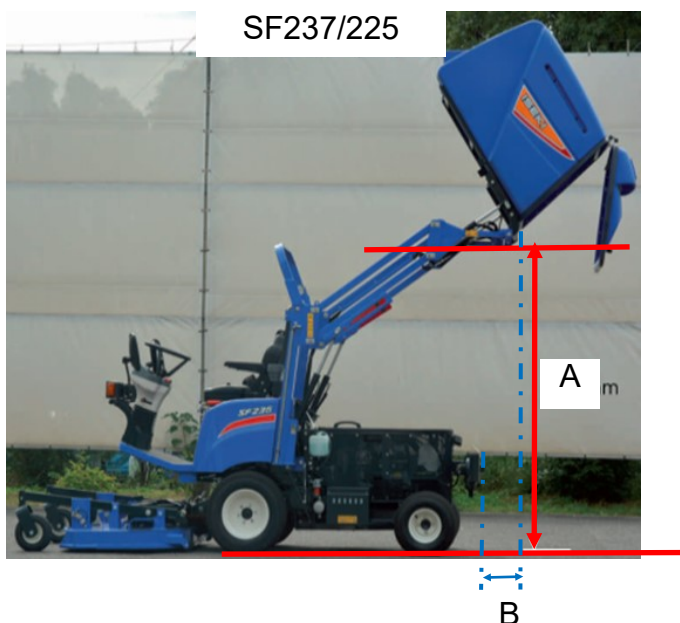
·Assembly of collector

Composing the collector by plastic, assembly of collector to machine become efficient. Distributor and dealer can reduce working on assembly.



·Dump height

Dump height of SF237 with SBC950 is 2,250mm which is 75mm higher than SF237. When dumping grass, SF237/225 will have more overhang than current model so that it is able avoid to touch truck.



		New		Current	
		SF237	SF225	SF235	SF224
(A) Lift height	(mm)	2,250	2,130	2,175	←
(B) Overhang	(mm)	350	325	240	←

7. Collector

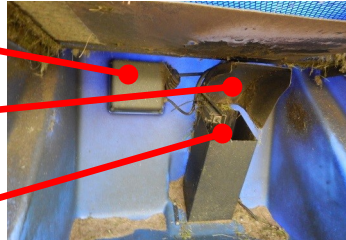
•Filling rate

Swing mower and thrower spread the grass all over inside the collector so that filling rate of collector is improved.

Swing motor

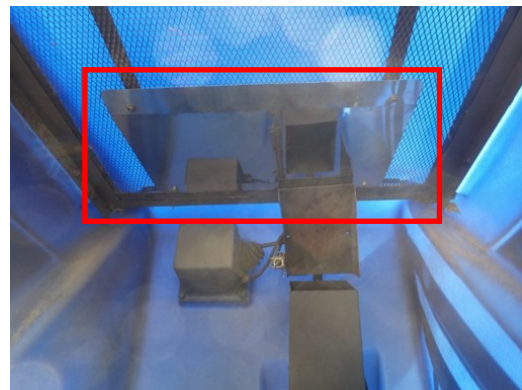
Swing cover

Full sensor



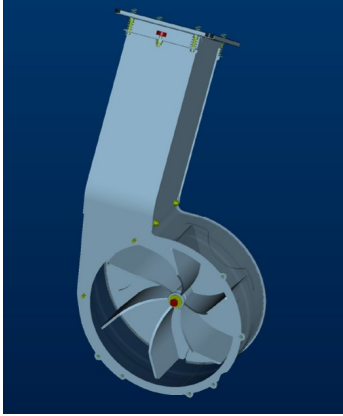

•Container upper plate

The material is change to stainless from plastic. It is more durable and clean than plastic plate.



8. Blower

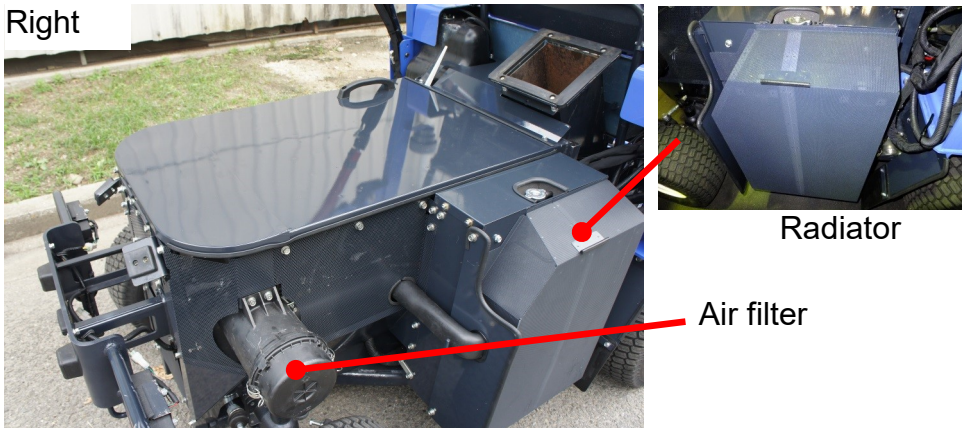
To reduce the noise level to under 105dBA, blower speed of SF225 is slower than SF237 because its engine PS is below 20kW and it is categorized as “lawnmowers” (definition in item 32 of Annex II , 2000/14/EC amended by 2005/88/EC). Noise level of “lawnmowers” with more than 1,200mm width must be under 105dBA. (ISEKI mower deck width of SCMB60 is 1,524mm and SCMA54 is 1,372mm)

			
Class	SF237	SF225	FD13.09
Blower speed (min-1)	2,650(@2,600)	2,100(@2,600)	-

9. Maintenance

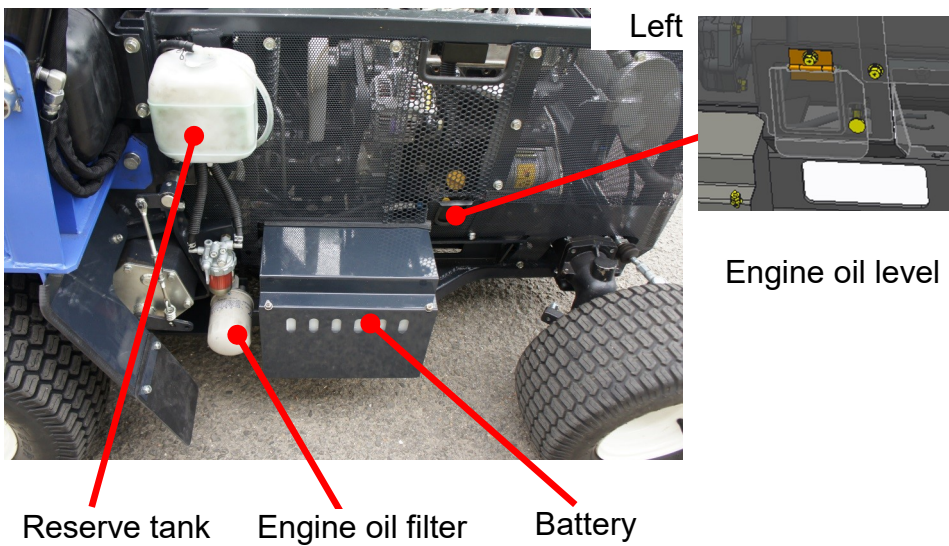
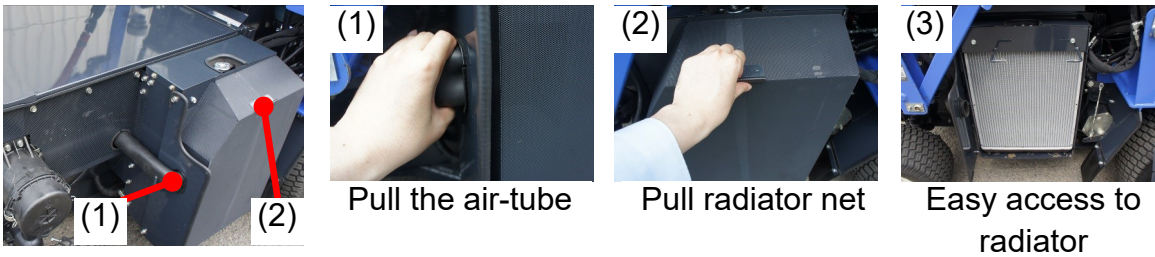
SF225

Right



Access radiator

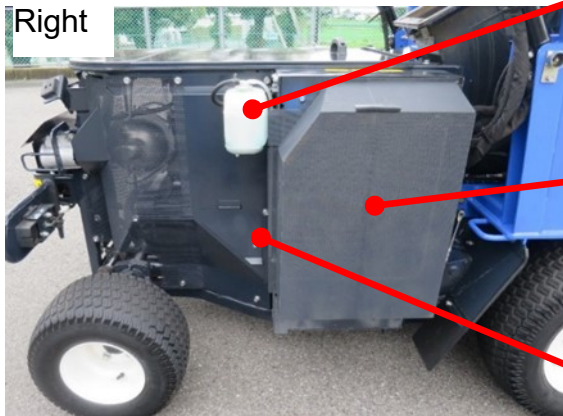
No tool is needed to access radiator.



9. Maintenance

SF237 (New)

Right



Coolant reserve tank



Radiator



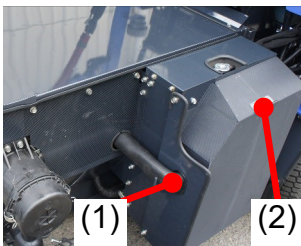
Radiator cap



Oil level gauge

Access radiator

No tool is needed to access radiator.



(1)

(2)



(1)

Pull the air-tube



(2)

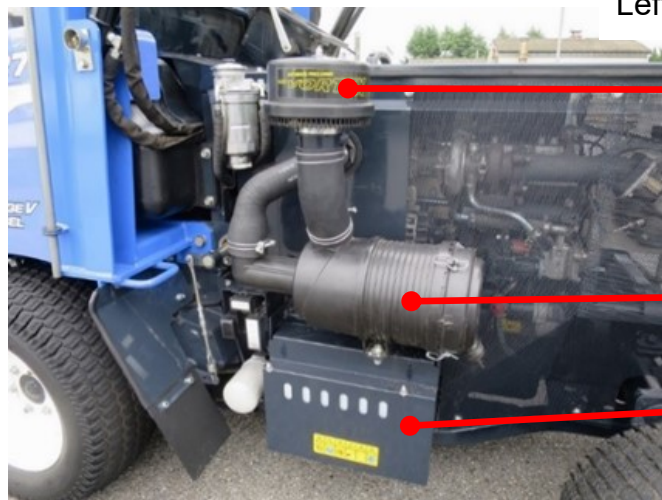
Pull radiator net



(3)

Easy access to radiator

Left

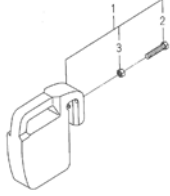
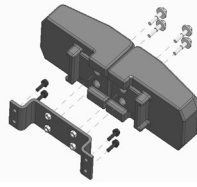
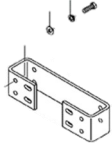


Pre-cleaner

Air cleaner

Battery

10. Optional parts

No.	Parts code/ Description	Image	Remarks
1	1614-922-200-20 Bumper weight (15kg x1)		15kg/each (Max. 6 pieces)
2	1832-923-600-00 Rear Weight (40kg x2)		2 pieces (40kg/each) of weight must be mounted together.
3	1728-410-360-00 Bumper		To mount bumper weight, bumper is need to attached to SF237/225.

•When option part is needed.

Model	Implement	Conditions
SF237/225FGWZRE42 (without blower)	ISEKI mower deck	Rear weight must be mounted. (Standard)
SF237/225FBGRE42 SF237/225FBGZRE42 (with blower)	ISEKI mower deck	No weight is needed but collector must be mounted.
	Other implement which is heavier than ISEKI mower deck	Rear or bumper weight must be mounted. Adjust weight according to weight of implement. Collector also must be mounted. (To mount bumper weight, bumper is needed.)

11. Specification

		SF237	SF225	
Dimension	Overall length (mm)	2,790	2,725	
	Overall width (mm)	1,245	←	
	Overall height (mm)	2,120	←	
	Overall height (w/o ROPS) (mm)	1,910	1,750	
	Wheelbase (mm)	1,375	1,275	
	Weight (kg)	1,063	935	
Engine	Model	ISEKI	←	
	Output (PS)	34.9	32.9	
	No. of cylinders	3	←	
	Displacement (L)	1.826	1.498	
	Rated rotation speed (min-1)	2600	←	
	Exhaust gas regulations	StageV	StageIIIA	
	Fuel tank capacity	40	←	
Transmission	Transmission	HST		
	HST pedal	2 pedals		
	Auto accelerator	Std		
PTO	Front side (for mower)	Clutch	Wet disk (Independent)	
		Rate speed (min-1)	1,988 @2,600	
	Front center (for blower)		Std	
		Clutch	Wet disk (Independent)	
Front axle	Diff. lock		Std (Lh)	
	Brake	Type	Dry dram	
		Position	Lh	
	Parking brake		Lever	
	Max. traveling speed	Forward (km/h)	15	
		Reverse (km/h)	10	
Tire	Turf	Front	23x10.50-12	
		Rear	18x8.5-8	
Rear axle	4WD/2WD		Auto or 4WD	
	Steering		Power steering	
	Tilt steering		Std	
	Aux. valve for mower deck & collector		Std (3 valves)	
Electric	Front light & rear combination lamp		Std (homologated)	
	Meter	Fuel gauge	Std (Electric)	
		Hour meter	Std	
	Warning lamp	Battery charge		Std
		Engine oil pressure		Std
		Engine water temperature		Std (with buzzer)
		Parking brake		Std
		Collector full		Std (with buzzer)
4WD-On		Std		
Exterior	Engine hood		Tilt	
	Seat		Factory opt (Z model: armrest & suspension seat)	
	Floor mat		Std	
	Rear weight		Opt (without blower model is std.)	
ROPS		Std (foldable)		

11. Specification

		SCMB60	New SCMB60(H)	SCMA54	SSM54
Mower	Cutting width (inch)	60"	←	54"	←
	Discharge	Center	←	←	Side
	Number of blade	4	←	2	3
	Flip-up angle	65°	←	←	60°
	Cutting height adjustment	1 action lever	Hydraulic	1 action lever	Pin type
	Min. cutting height (mm)	25	←	←	30

		SBC950F3
Collector	Capacity (L)	950
	Container	Plastic
	Dump	Hydraulic
	Lift	Hydraulic
	Dump height (mm)	2,250(SF237) 2,130(SF225)