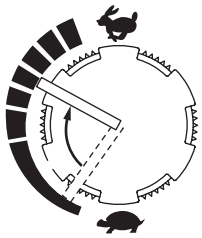
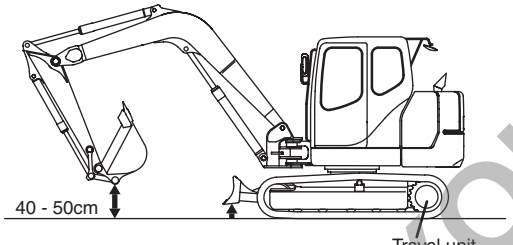
This section explains the starting and stopping procedures of the machine.

How to start

1. Turn the throttle volume and increase the speed of the engine.


2-0062E

2. Fold the attachment so that it is 16-20 inches (40-50 cm) above the ground.



2-0110E

3. Raise the blade.
4. Check the direction of the crawler.

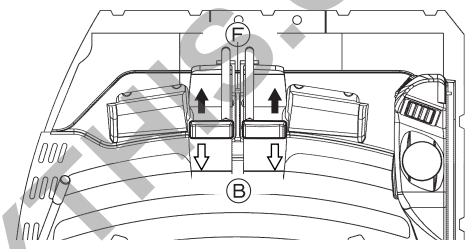
⚠ CAUTION

When the travel unit is in the rear and the travel lever is pushed forward, the machine moves forward. When the travel lever is pulled towards you, the machine moves backward.

5. Check the safety of the machine surroundings and sound the horn (give a signal), push the left and right travel levers slowly forward (travel forward) or pull them towards you (travel backward) to travel the machine.

⚠ WARNING

If the throttle volume is turned to high speed and the travel levers are operated rapidly, the machine will start rapidly.
Use extreme care when starting to more.



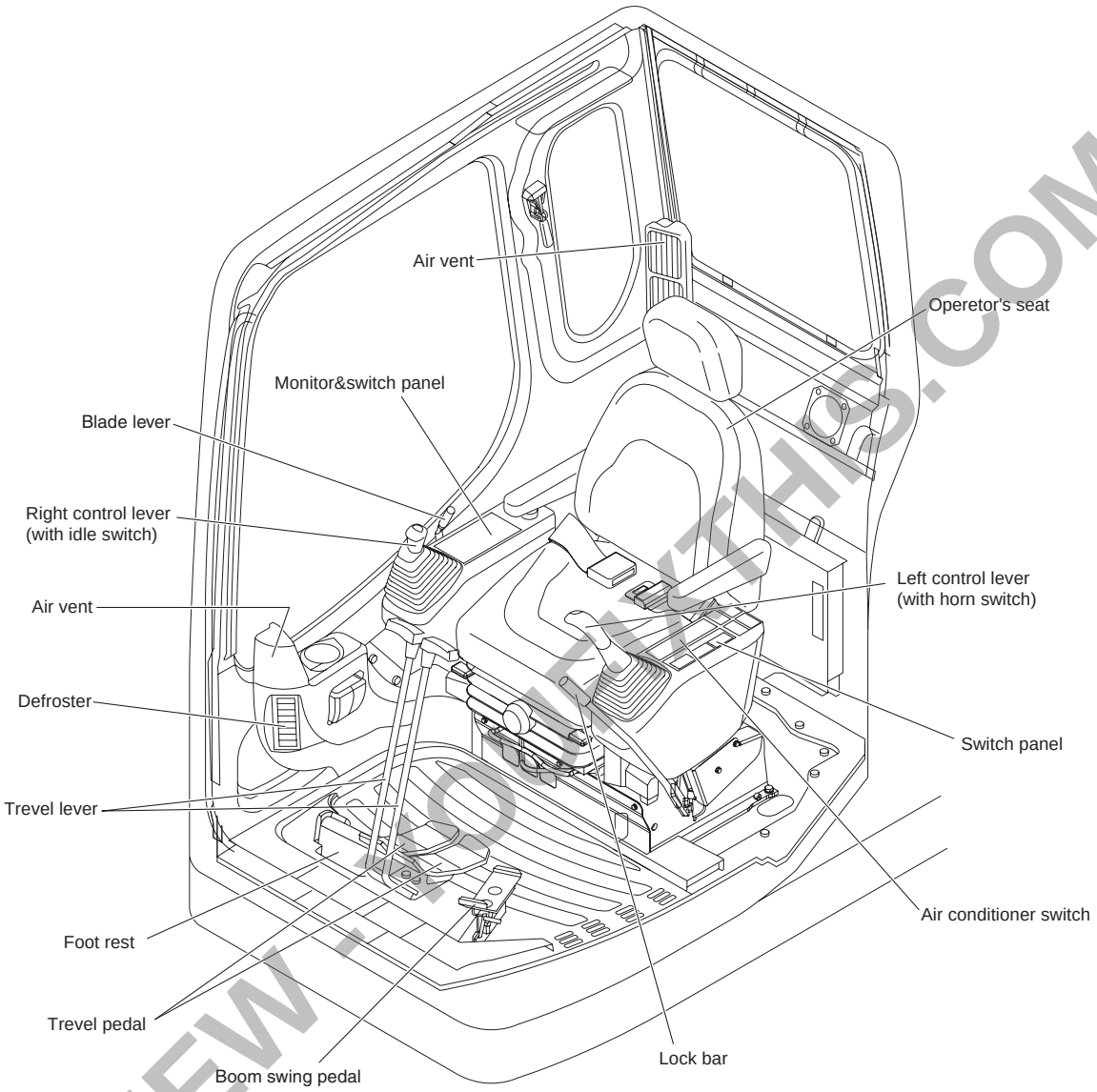
2-0064E

Ⓕ Forward
Ⓑ Backward

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Operator’s Cab



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Daily Inspections (Prior to Operation)

Inspections and maintenance	Procedure	Grease / oil (replacement parts)	Reference
Check prior to starting the engine			
Overall			
1. Check any water or oil leakage 2. Check to ensure nuts & bolts are secure 3. Eliminate accumulated dust (from engine / inside cab) 4. Check physical exterior damage 5. Check inside the cab and window glass for cleanliness	 Tighten and secure Clean 		 Bolts
Engine			
1. Check engine oil level, and see if it needs changed 2. Check coolant level 3. Check radiator and oil cooler to see if damaged or plugged 4. Check the fan belt tension 5. Check if air cleaner element is clean / if it is clogged 6. Check parts for water / oil leakage, check hoses and pipes for breakage 7. Draining the water and sediments from the fuel filter (main and pre)	Refill or change Refill Repair or clean Clean or replace 	Engine oil Soft water Element 	Engine Engine Engine Engine Engine Fuel
Swing Unit			
1. Check fuel level in fuel tank 2. Drainage of the water and sediments in the fuel tank 3. Check oil level in hydraulic oil tank 4. Check if hydraulic oil is clean 5. Check components for water / oil leakage, check hoses and pipes for integrity 6. Check components for physical damage or distortion 7. Check electrical wiring for short circuits Ensure terminals are secure 8. Adjust rear view mirror	Refill Refill 	Diesel Fuel Hydraulic oil 	Fuel Fuel Hydraulic oil
Track			
1. Check shoe (track roller) for looseness, wear, or breakage 2. Check upper / lower rollers and idlers for oil leakage or wear 3. Ensure bolts are all secure, and not missing			Travel Unit Travel Unit
Work Unit			
1. Check cylinders, hoses for oil leakage or breakage 2. Check bucket for wear or breakage 3. Check if bucket teeth are loose, worn, or missing 4. Ensure components around front of machine are properly greased or oiled 5. Ensure bolts are all secure and not missing		 Extreme pressure grease 	 Bucket Bucket Attachments
Check after starting the engine			
Overall			
1. Check if engine starts fine, check exhaust hue, listen for any abnormal noise 2. Check hydraulic components, check any abnormal noise 3. Check components for oil / water leakage 4. Check horns, buzzers, working lights, windshield wipers, and monitors for proper operation 5. Check units for proper operation (travel, swing, and attachments) 6. Check swing brake for proper operation			

Refer to the Daily Inspection Prior to Operation section for check procedures for major components.

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

1. ENGINE

Type	: Water-cooled, 4-cycle diesel, 4-cylinder in line, direct injection, Turbocharger with air cooled intercooler
Model	: ISUZU AU-4LE2X
Rated flywheel horse power (80/1269/EEC)	: 40.0 kW at 2000 min^{-1}
Piston displacement	: 2179 cc
Maximum torque (80/1269/EEC)	: 210 N-m at 1500 min^{-1}
Bore and stroke	: 85.0 mm × 96 mm
Voltage	: 24 V
Alternator	: 50 Amp
Starter	: 24 V 3.2 kW
Emergency stop	: Mechanical system

2. HYDRAULIC SYSTEM

(a) Main pumps	: 2 variable displacement axial piston pumps
(1) Max. oil flow	: 2 × 68.0 l/min at 2000 min^{-1}
(2) Working circuit pressure	
Boom/Arm/Bucket/Boom swing	: 29.4 Mpa (300 kgf/cm^2)
Swing circuit	: 22.6 MPa (230 kgf/cm^2)
Travel circuit	: 29.4 MPa (300 kgf/cm^2)
(b) Pilot pump	: 1 gear pump
(1) Max. oil flow	: 21.4 l/min
(2) Working circuit pressure	: 4.2 MPa (42.8 kgf/cm^2)
(c) Blade pump	: 1 gear pump
(1) Max. oil flow	: 24.2 l/min
(2) Working circuit pressure	: 22.6 MPa (230 kgf/cm^2)
(d) Control valves	: With Boom holding valve
	: One 4-spool valve for Right track travel, Boom and Bucket and Arm acceleration
	: One 5-spool valve for Left track travel, Arm Swing and Boom acceleration and Auxiliary
	: One 2-spool valve for Boom swing and Blade
(e) Swing device	
(1) Motor	: Fixed displacement axial piston motor
(2) Brake	: Mechanical disc brake
(3) Final drive	: Planetary gear reduction
(4) Turn table bearing	: Ball bearing type with internal gear
(5) Maximum swing speed	: 9.5 min^{-1}

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

To extend the machine service life and improve the rate of operation, daily inspection and lubrication are necessary as well as for isolating any problem found and dealing with it. If the machine is operated with the problem uncorrected, it may cause major problem and sometimes lead to a serious accident or injury.
If problem occurs, search for the cause in the items described below and make adjustments, repairs, or take measures as necessary. If the cause is not identified, contact our dealer or Service Shop.

Engine and Related Area

Refer to "Operator's Manual for Engine".

Problem	Cause	Remedy
Engine does not start	Defective starter switch (Starter does not run)	Connect, repair connection (improper connection on battery terminals)
	Defective rotation of starter (Starter rotates slowly)	Discharged battery, starter problems, contaminated or loose wiring connectors
	Improper viscosity of engine oil	Inspect and replace as necessary
	Excessive cooling of engine (Cold weather)	Preheat with air heater Warm up the coolant (add hot water)
	Possible seizure in engine	Repair*
	Incomplete air bleeding of fuel system	Bleed air completely
	No fuel in fuel tank	Refill
	Poor Fuel Quality	Inspect and replace as necessary
	Fuel filter clogged	Clean and replace as necessary
	Low compression	Repair*
	Defective fuel injection pump	Repair*
Engine stops during operation	No fuel in fuel tank	Refill
	Fuel filter clogged	Clean or replace
	Air is mixed in the fuel system	Retighten fuel line connection
Improper oil pressure (Engine oil pressure)	Improper oil	Refill
	Defective oil pressure switch	Replace*
	Oil filter clogged	Replace element
	Low oil viscosity	Replace with oil of viscosity matching temperature
	Improper oil pumping	Adjust, clean, or replace if necessary*
	Oil leakage	Repair
Engine exhaust shows white or blue hue	Excessive oil level	Drain oil to proper level
	Low oil viscosity	Replace with oil of viscosity matching temperature
	Excessive cooling on radiator	Cover over radiator or replace parts if necessary
	Improper fuel injection timing	Adjust*
	Low compression	Disassemble and repair, replace parts*
Engine exhaust shows black or dark gray hue	Improper fuel	Replace with correct fuel
	Improper valve clearance	Adjust
	Improper injection pumping	Adjust or replace if necessary*
	Low compression	Disassemble and repair, replace parts*
	Insufficient air intake (air cleaner clogged)	Clean or replace element
Excessive fuel consumption	Improper injection pumping	Adjust or replace if necessary*
	Improper spray from fuel injection nozzle	Adjust or replace if necessary*
	Improper fuel injection timing	Adjust or replace if necessary*
	Improper fuel	Replace with correct fuel
	Low compression	Disassemble and repair, replace parts*
	Insufficient air intake	Clean or replace element.

* For items marked with *, contact our Service Shop.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

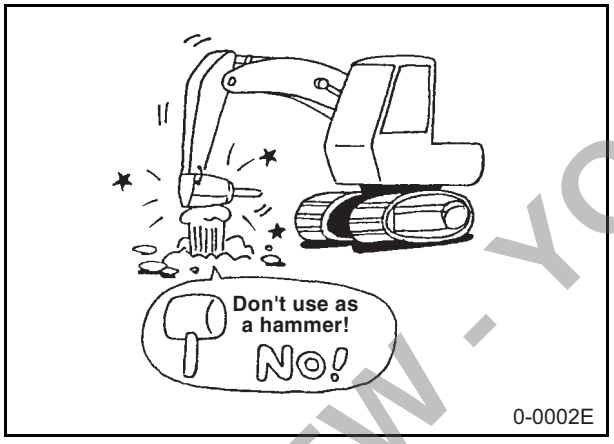
Handling the Breaker (Attachment)

⚠ CAUTION

1. **When attaching hydraulic breaker**
   It is necessary to choose a breaker suitable for the shovel body.
   Contact your nearest distributor, when selecting a hydraulic breaker.
2. **When using hydraulic breaker**
   Read the instruction manual thoroughly for the breaker. Take care not to damage either the breaker or the machine and carry out operations safely.

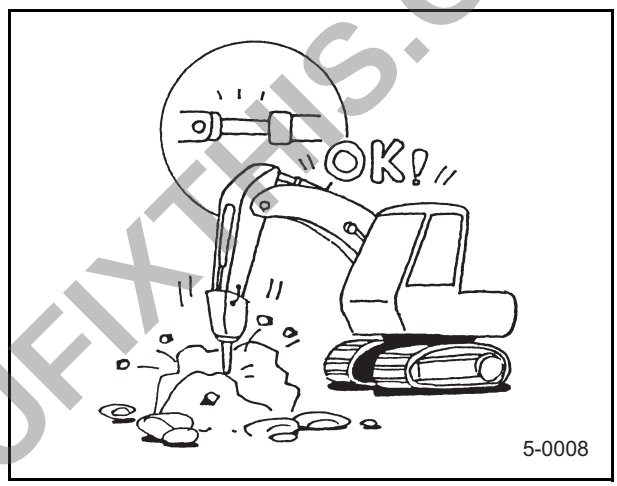
Use for other purposes prohibited

The breaker is intended to used for crushing stones, building wrecking, cracking quarried rocks, etc.



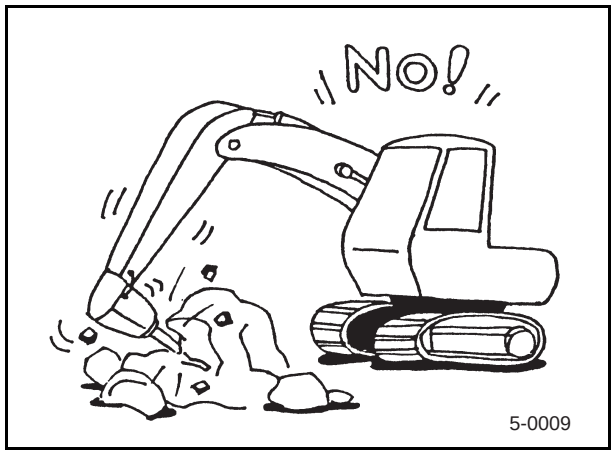
Do not operate the hydraulic cylinder at stroke end !!

Otherwise, it may cause the cylinder and/or the shovel body to be damaged.
Do not operate the machine at the stroke end of the cylinder but operate it by taking a margin to some extent.
In case where the arm is brought down with the cylinder put at its stroke end in addition, the arm cylinder may be damaged by the shock.
Operate it so that each cylinder will not come at its stroke end.



Using the chisel for gouging work is prohibited

Gouging work can cause damage to the breaker main body and shovel main body.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Bolt and Nut Torque
• After the first 50 hours/Maintenance: every 250 hours

Tighten the bolts and nuts according to the table. After daily work, check the bolts and nuts for looseness and for any missing. Tighten if loose and replace if missing.
Tighten the bolts and nuts after the first 50 hours of operation and every 250 hours thereafter.

Tightening Torque Table

No.	Tightening Point	Bolt Diameter	Wrench	Tightening Torque [N•m]
①	Travel Motor	M16	24mm	267-312
②	Drive Sprocket	M14	22mm	173-202
③	Take-up Roller	M10	17mm	63-73
④	Upper (Carrier) Roller	M16	24mm	267-312
⑤	Lower (Track) Roller	M20	30mm	521-608
6	Shoe Bolt	M14	22mm	245±25
7	Counterweight	M24	46mm	850-992
8	Turntable Bearing (Lower Frame)	M16	24mm	252-283
9	Turntable Bearing (Swing Frame)	M16	24mm	252-283
⑩	Swing Equipment	M16	24mm	272-317
⑪	Engine (Engine Mount)	M16	24mm	265-313
⑫	Engine Bracket	M10	17mm	64-74
13	Radiator	M12	19mm	64-74
⑭ ⑮	Hydraulic Pump	M10 M12	17mm Hex. Socket	64-73 109-126
⑯	Hydraulic Oil Tank	M12	19mm	67-78
⑰	Fuel Tank	M12	19mm	98-108
⑱	Control Valve	M12	19mm	59
⑲	Rotating Joint	M12	19mm	88-107
⑳	Rotating Joint	M12	19mm	109-127

Note: Use Loctite No. 262 (adhesive) equivalent on those marked with ○ and tighten to the torque listed in the above table.
Tightening torque is N•m ÷ 9.8=kgf•m

The tightening torque for the bolts and nuts not listed above are as follows:

Bolt Diameter (size)			M6	M8	M10	M12	M14	M16	M18	M20
Hex. Bolt	Wrench	[mm]	10	13	17	19	22	24	27	30
	Tightening Torque	[N·m]	6.9	19.6	39.2	58.8	98.1	157.0	196.0	274.0
Hex. Socket Head Bolt	Wrench	[mm]	5	6	8	10	12	14	14	17
	Tightening Torque	[N·m]	8.8	21.6	42.1	78.4	117.6	176.4	245.0	343.03

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Table of Contents

To the Owner 0-1
Safety Labels 0-2
For Safe Driving 0-3

Safety Section 0-7
Precaution Identification Plates (DECALS) 0-8
Identification Plates inside the Cabin 0-8
Outside Identification Plate 0-13
Precaution Identification Plates on Parts (Examples) 0-17
Prior to Operation 0-18
Confirmation of Safety items 0-20
During Operation 0-23
While Traveling 0-27
After Operating 0-28
While Transporting 0-29
Before Regular Inspection & Maintenance 0-30
Inspection and Maintenance 0-31

Instruments and Controls 1-0
Location of Components 1-1
Overall View 1-1
Operator's Cab 1-2
Right Console 1-4
Right Console 1-4
Monitor & Switch Panel 1-5
Monitor & Switch Panel 1-5
Moniter Display 1-6
Switch Panel 1-7
Left Console 1-9
Left Console 1-9
Switch 1-10
Air Conditioner 1-11
Air Conditioner (If equipped) 1-11
Explanation of device 1-13
Radio 1-13
Operation Levers 1-15
Operation Levers 1-15
Operator's Seat 1-19
Operator's Seat 1-19
Operator's Cab 1-21
Fuses 1-23
Fuses 1-23
Explanation of device 1-24
Battery 1-24
Starting the Engine by Using Booster Cables 1-25

Operating Instructions 2-0
Operation of New Machine 2-1
Using a New Machine 2-1
Daily Inspections 2-2
Daily Inspections 2-2
Starting and Stopping the Engine 2-4
Inspections before Starting the Engine 2-4
Starting the Engine 2-5
Inspections after Starting the Engine 2-6
Stopping the Engine (Normal Operation) 2-7
Warm-up Operation 2-8
Warm-up Operation 2-8
Operations (Traveling) 2-10
Operations (Swing) 2-19
Swing Operation 2-19
Operations (Attachment) 2-20
Operations (Attachment) 2-20
Operations 2-21
Blade Operation 2-22
Characteristics of Hydraulic Excavator 2-22
Cautions for operations 2-23
Cautions for Interference 2-23
Operating Instructions (Cautions) 2-25
Operating Instructions (Procedures) 2-26
Bucket: Turning Over and Replacement 2-28
Bucket: Turning Over and Replacement 2-28
On Completion of Daily Operations 2-30
On Completion of Daily Operations 2-30
Operating in Cold Climates 2-32
Operating under Extreme Conditions 2-33
Transportation 2-34
Loading and Unloading 2-34
Switch settings during loading and unloading 2-34
Transportation 2-34
Storing 2-38

Inspections and Maintenance 3-0
General Cautions 3-1
Periodic Maintenance Check List 3-2
Daily Inspections (Prior to Operation) 3-2
Periodic Maintenance Check List 3-3
Fuel / Lubricants for Different Ambient Temperature Settings 3-4
Genuine CASE Company LLC Parts and Elements 3-5
Disposable Items 3-6
Grease / Oil and Elements 3-7
Inspection Prior to Operation 3-8
Inspections Prior to Operation 3-8
Greasing Attachments 3-12
Greasing Front Attachment Pins 3-12
Fuel System 3-15
Fuel 3-15
Fuel Refilling and Fuel Level Checking 3-18
Drainage of Water and Sediments in the Fuel Tank 3-18
Draining Water from the Water Separator 3-19
Fuel Filter (Main) Replacement 3-19
Engine 3-20
Engine Oil Replacement 3-20
Engine Oil Filter Replacement 3-20
Cooling System 3-22
Inspecting and Refilling Coolant 3-22
Replacing the Coolant 3-23
Cleaning and Inspecting the Radiator Net and Fin 3-24
Cleaning and Replacing the Air Cleaner (double elements) 3-25
Inspection and Adjustment of Fan Belt 3-27
Bolt Torque 3-28
Bolt and Nut Torque 3-28

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Safety Section

⚠ WARNING

You must read this safety section carefully. This section contains important safety information.

The ⚠ symbols on precaution film labels are attached to machines in order to prevent personal injury. Before starting operations, read carefully the indications on film labels with ⚠ symbols.

It is a very difficult task to cover and handle all possible dangers in this manual. For this reason, the descriptions on precaution film labels do not always cover everything. Try to understand fully this manual and drive and operate properly, paying special attention to prevent damage to the machine or personal injury.

Contents of the manual

- Precaution Identification Plates (DECALS)
- Prior to Operation
- Confirmation of Safety items
- During Operation
- While Traveling
- After Operating
- While Transporting
- Before Regular Inspection & Maintenance
- Inspection and Maintenance

PREVIEW - YOUFIXTHIS.COM

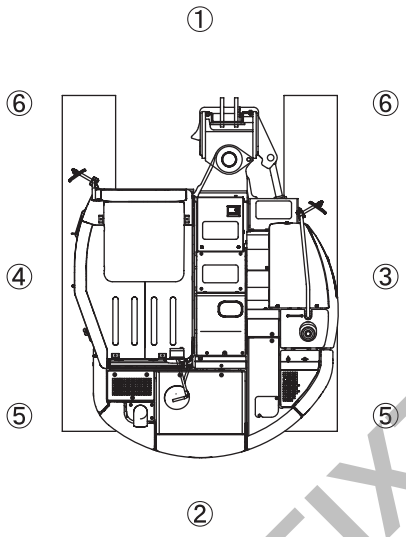
Download full manual at youfixthis.com

Safety Labels

RIGHT, LEFT, FRONT AND REAR OF THE MACHINE

The terms “Right”, “Left”, “Front” and “Rear” are used in this manual to indicate the sides as they are seen from the operator’s seat when the cab is over the idler wheels.

The illustration below shows the machine in normal TRAVEL position. In normal TRAVEL position, the cab is over the idler wheels. The travel reduction gears are at the rear of the upperstructure.



0-0178E

① FRONT
② REAR
③ RIGHT-HAND SIDE
④ LEFT-HAND SIDE
⑤ TRAVEL REDUCTION GEARS
⑥ IDLER WHEELS

Break-in

This product is shipped after full inspections and conditioning, however, extremely overloaded usage at the initial stage could lead the reduction in performance and life. Therefore, approx. initial 100 hours (indicated hours on the service meter) break-in is neccessary.

Break-in should be conducted paying attention to the following points:

- Try to keep idling and warming for 5 minutes after starting the engine.
- Avoid operation under heavy load or at high speeds.
- Avoid any sudden start, acceleration or unnecessary sudden stop and quick turn.

Specified Work

This product is designed to use mainly in the following work:

- Excavation
- Land granding work
- Trenching work
- Loading work
- Demolition (Demolition specification vehicle only)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Battery

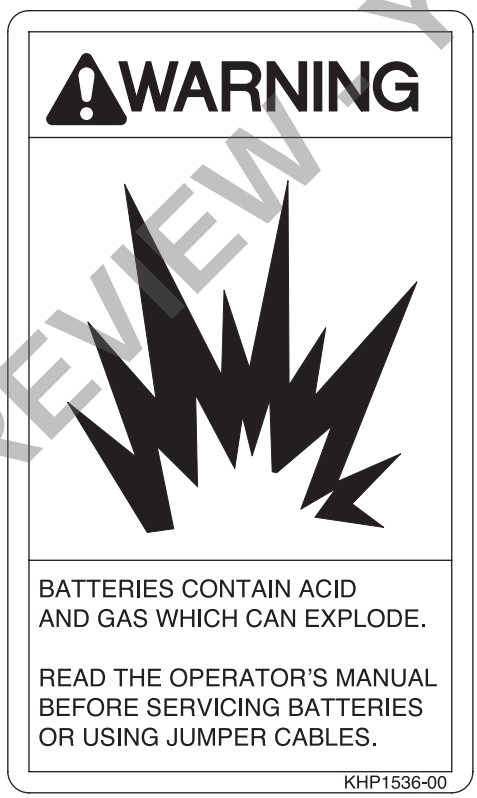
⚠ WARNING

Before inspecting and handling the battery, be sure to turn off the power supply (turn the starter switch to OFF).
Since the battery generates inflammable hydrogen gas, it may catch fire and explode.

- **Do not use any matches, cigarettes, or other sources of fire or sparks near the battery.**
- **Before charging the battery, remove it from the machine and remove all the plugs. Select a well ventilated area.**

Sulfuric acid is used as the electrolyte. It is dangerous because it can cause burns or loss of eyesight.

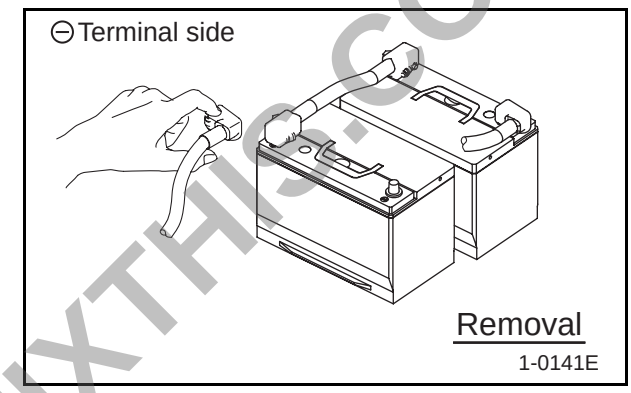
- **If the battery fluid comes into contact with skin or clothes, immediately wash it off with lots of water.**
- **If the battery fluid gets into your eyes, immediately wash your eyes with lots of water and have your eyes treated by a doctor.**



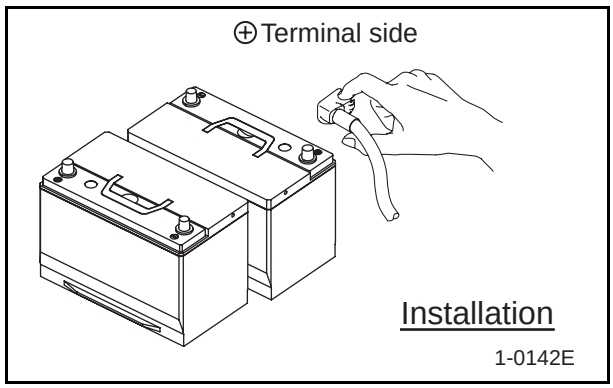
0-0032E

Installation and Removal of Battery

- For removal, first disconnect the ground side terminal ((-) terminal side).
  If any tool or other object should come into contact with the (+) terminal, there is the danger that a spark may be caused.
- For installation, connect the ground side terminal ((-) terminal side) last.



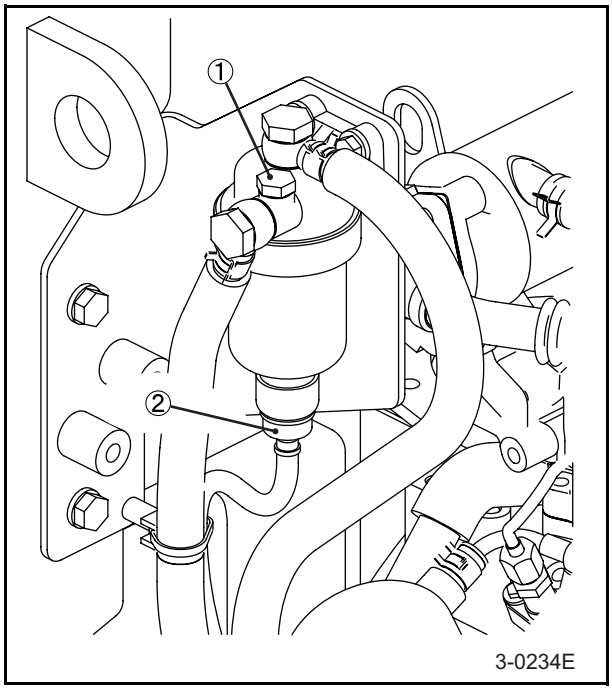
- Do not connect the battery with the terminal connections reversed (connection of (+) to (-) or (-) to (+). It may cause damage to the generator or others.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Draining Water from the Water Separator
• As Necessary



① Plug
② Drain plug

1. Loosen the plug ① and also drain plug ② and drain the water and sediments.
2. When the float sinks to the bottom, tighten the plug ① and the drain plug ②.
   Tightening torque:
   Plug ① : 10 ± 2 N•m
   Moisture may be frozen up in cold temperature. Drain water after the frozen moisture has thoroughly melted.
3. Verify that no fuel leaks.

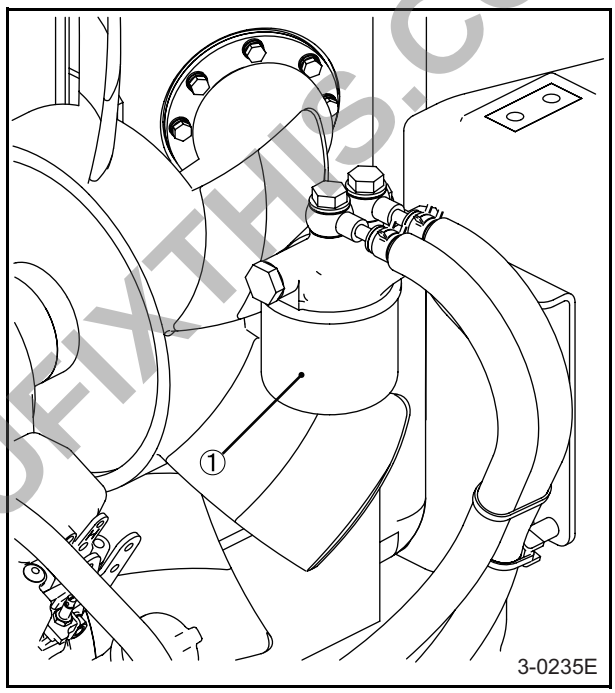
⚠ WARNING

Completely wipe off any spilled diesel fuel. It may cause a fire.

Fuel Filter (Main) Replacement
• Maintenance: every 500 hours

⚠ WARNING

Completely wipe off any spilled diesel fuel after replacing an element or air bleeding.



① Fuel filter cartrige

(Refer to operator's manual for the engine.)

1. Using a tool, turn the fuel filter counterclockwise and remove it.
   (Replace the entire cartrige.)
   (Do not spill the fuel which is inside the filter.)
   (Completely wipe off any spilled diesel fuel.)
2. Install a new fuel filter.
3. For installation, put a thin coat of engine oil on the packing and tighten it with a specified touque of 13.7 ± 0.3 N•m

It is so designed that bleeding air is to be carried out automatically when the engine has been started.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 196 pages

The full manual includes:

- All 196 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Case CX80 Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual