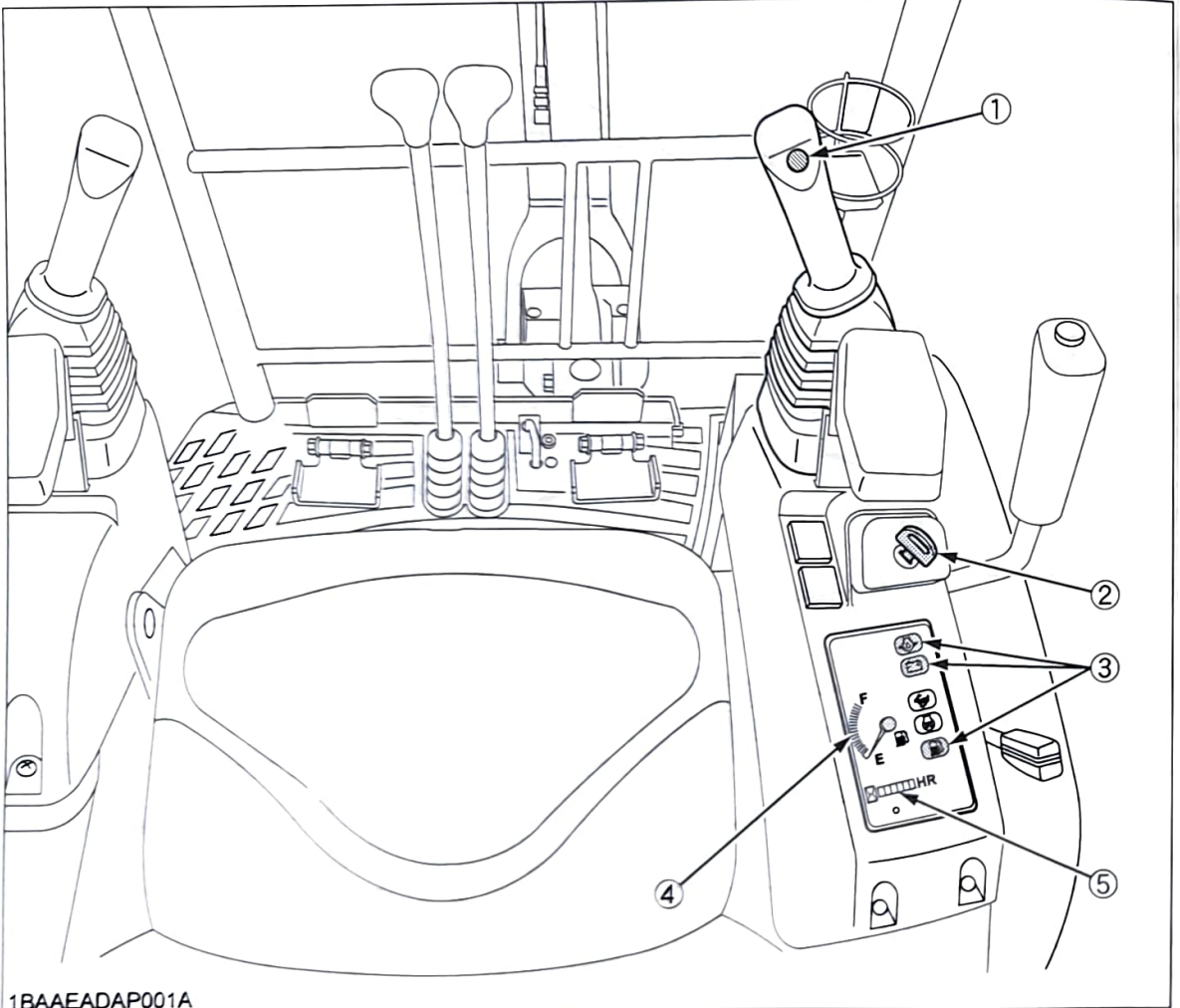


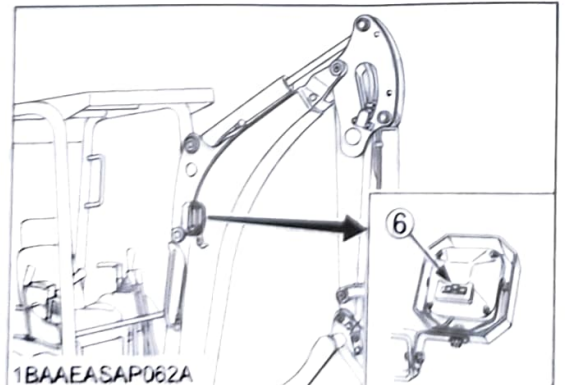
INSTRUMENT PANEL AND CONTROL ELEMENTS

Instrument Panel, Switches

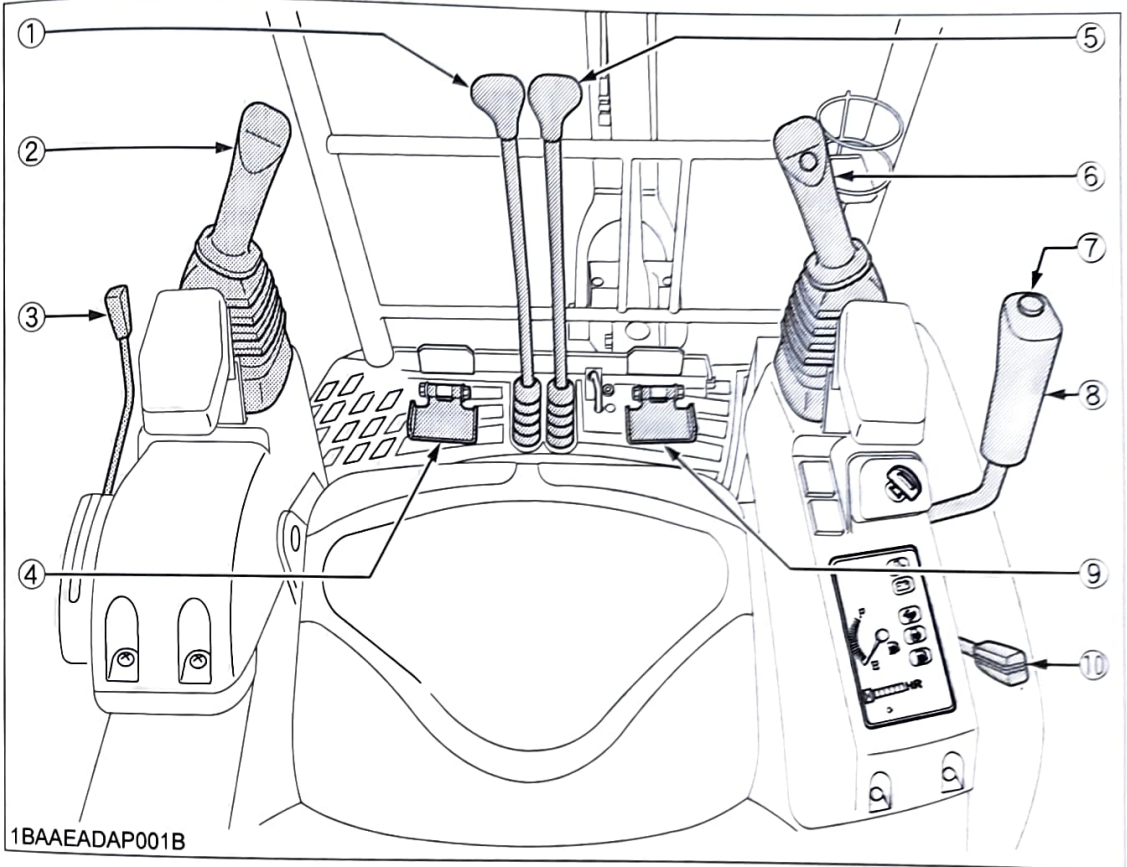


DEPICTED CONTENTS

- (1) Horn switch
- (2) Starter switch
- (3) Malfunction indicator (Quick Diagnosis)
- (4) Fuel meter
- (5) Hour meter
- (6) Working light switch

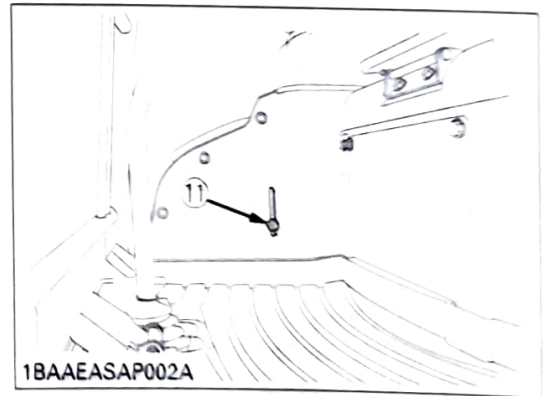


Control Pedals and Levers



DEPICTED CONTENTS

- (1) Drive lever (left)
- (2) Control lever for front attachments (left)
- (3) Lock lever for attachment control
- (4) Service port pedal
- (5) Drive lever (right)
- (6) Control lever for front attachments (right)
- (7) Two travel speed switch
- (8) Control lever for dozer or track width
- (9) Boom swing pedal
- (10) Throttle lever
- (11) Track width change / dozer select lever



BEFORE START

DAILY CHECKS

In order to avoid damage, it is important to check the condition of the excavator before starting.



CAUTION

To avoid personal injury:

- Do maintenance work on the excavator only on even ground with the engine off and the safety devices in the "Lock" position.

Checks

Walk around the excavator and check for visual damage and wear.

Check coolant level. (See regular checkpoints in "MAINTENANCE".)

Check fuel level.

Check engine oil level.

Check hydraulic fluid level.

Check air filter for clogging.

Check all control lamps, indicators, engine rpm's counter and hour meter.

Check the light system.

Check the condition of the danger, warning and caution labels. (See "DANGER, WARNING AND CAUTION LABELS" in "SAFE OPERATION".)

TILTING THE SEAT

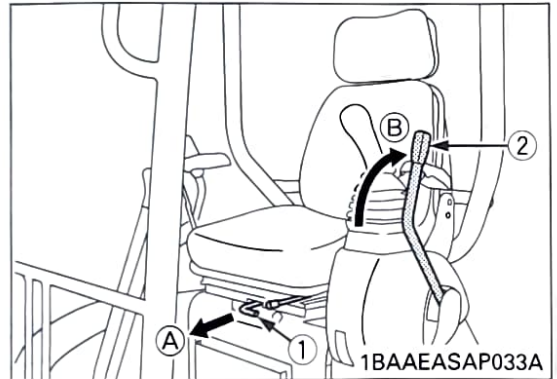


CAUTION

To avoid personal injury:

- Lock the lever for attachment control when tilting the seat.

To tilt the seat forward, pull the seat tilting lock lever and tilt the seat forward.



(1) Seat tilting lock lever

(A) "Tilting forward"

(2) Lock lever for

(B) "Lock"

attachment control

OPENING AND CLOSING OF PARTS

■ Opening / Closing the Rear Bonnet



CAUTION

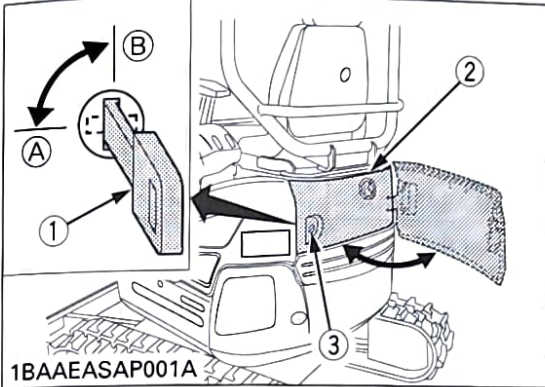
To avoid personal injury:

- Do not touch the exhaust muffler or the exhaust pipe; serious burns can occur.

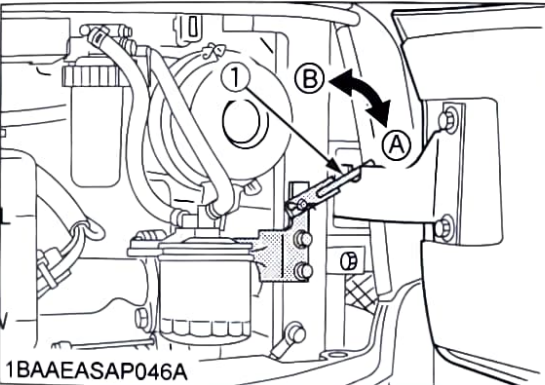
1. Put the starter key in the key slot and turn it clockwise to the vertical position. The rear bonnet will be unlocked. Press the button, and the rear bonnet can be opened sideways.

When the rear bonnet is opened, the rear bonnet will be locked with the lock lever.

2. To close the rear bonnet, make sure the left bonnet is locked, unlock the lock lever and push the rear bonnet until it clicks into position. To lock the bonnet, turn the starter key counterclockwise to the horizontal position.



- (1) Key
(2) Rear bonnet
(3) Button
(A) "Lock"
(B) "Unlock"



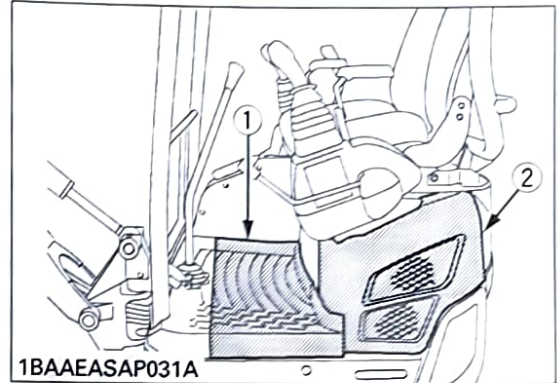
- (1) Lock lever
(2) Rear bonnet
(3) Button
(A) "Lock"
(B) "Unlock"

IMPORTANT:

- Do not run the machine with the bonnet open. The bonnet may get damaged.

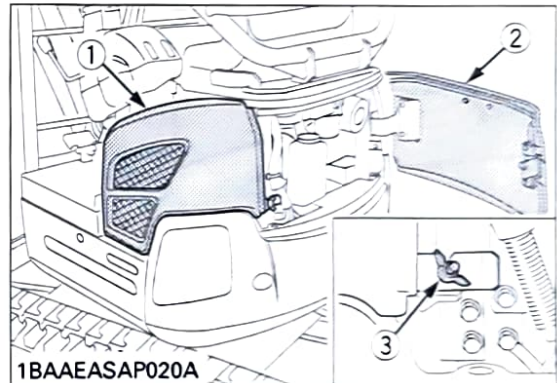
◆ Opening/closing the left bonnet

1. Remove the rubber mat off the left bonnet side. Then undo the step fixture.



- (1) Rubber mat
(2) Left bonnet

2. To open the left bonnet, do this: open the rear bonnet first and then turn the wing nut, located as shown below, to unlock the left bonnet.

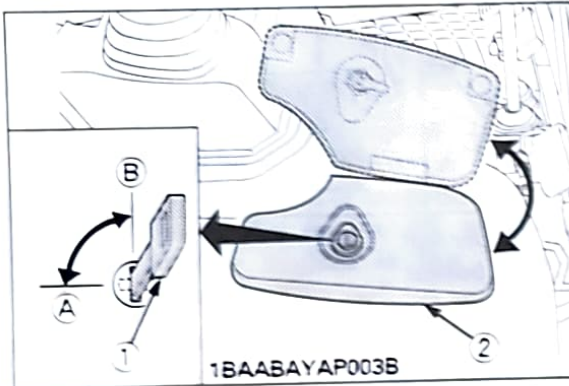


- (1) Left bonnet
(2) Rear bonnet
(3) Wing nut

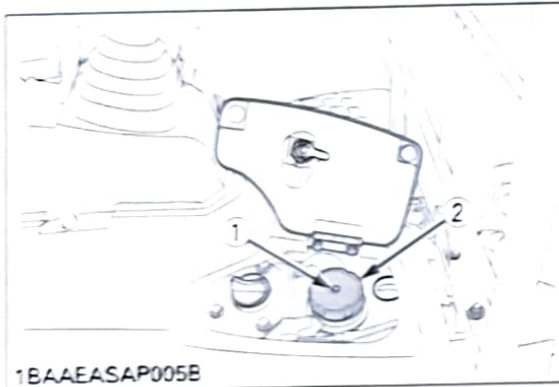
3. To close the left bonnet, do this: push it back into position, apply the lock fixture in place and hand-tighten the wing nut.
4. Spread the rubber mat back in its original place.

■ Opening and Closing of the Fuel Tank Cover

To open the tank cover, first insert the key into the key slot and turn it counterclockwise to unlock, then open the tank cover upward. For closing, return the tank cover to original position and turn the key clockwise to lock, then remove the key.

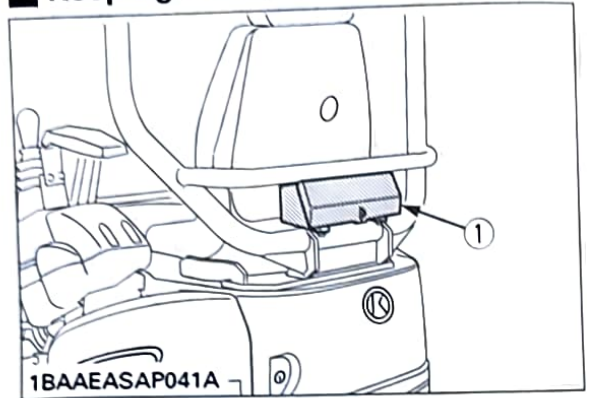


- (1) Key
- (2) Tank cover
- (A) "Unlock"
- (B) "Lock"



- (1) Air vent
- (2) Fuel tank cap

■ Keeping the Tools



- (1) Tool Box

■ Operator's Manual Storage

Keeping the operator's manual in the tool box.

HANDLING THE SAFETY DEVICES

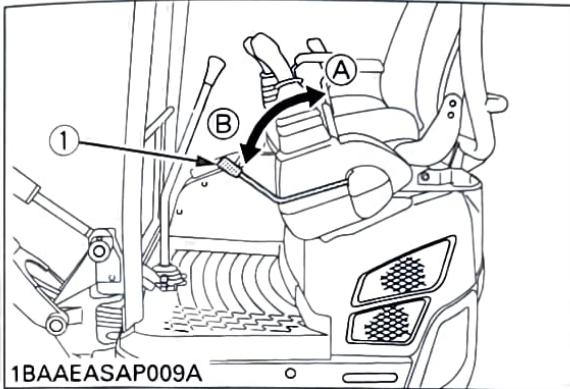
Control lever lock



CAUTION

- When the excavator is not used or left unattended, be sure to place the lock lever in "Lock" position.

The attachment control lever lock is located on the left side.



(1) Lock lever for attachment control

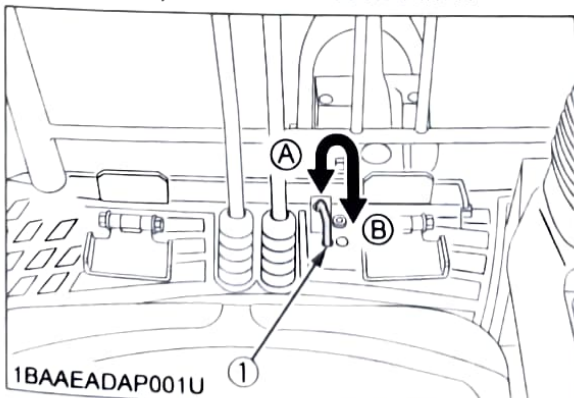
(A) "Lock"
(B) "Unlock"

Swing lock pin

This pin is used to lock the swing frame. Set the lock pin to the "Lock" position and the swing frame gets locked to the track frame.

IMPORTANT:

- Before locking the lock pin, be sure to place the swing frame and the track frame in parallel with each other.



(1) Swing lock pin

(A) "Unlock"
(B) "Lock"

OPERATION OF THE ENGINE



CAUTION

To avoid personal injury:

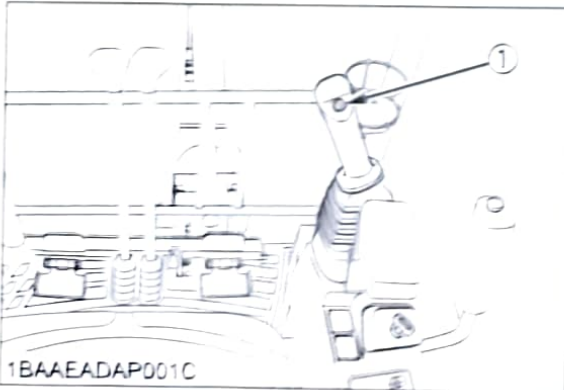
- Read "SAFE OPERATION" at the beginning of this operator's manual.
- Obey the danger, warning and caution labels on the excavator.
- Exhaust gases are poisonous. Do not let the engine run in closed quarters without sufficient and adequate ventilation.
- Always start the engine from the operator's seat. Do not start the engine while standing next to the excavator. Before starting the engine, sound the horn to get the attention of persons standing nearby.

IMPORTANT:

- Do not use start help spray or similar fluids.
- In order not to overload the battery and starter, avoid start-ups of more than 10 sec.
- When the engine does not start in 10 sec., please set the interval of 20 sec. or more, and restart.

■ Horn Switch

When the key in "RUN" position, the horn sounds by pushing the switch.



(1) Horn switch

STARTING THE ENGINE



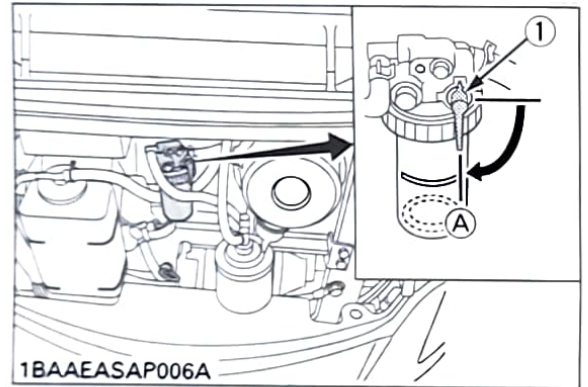
CAUTION

To avoid personal injury:

- The operator should not depend solely on the alarm lamps, but should always conduct the routine checks (see "MAINTENANCE").

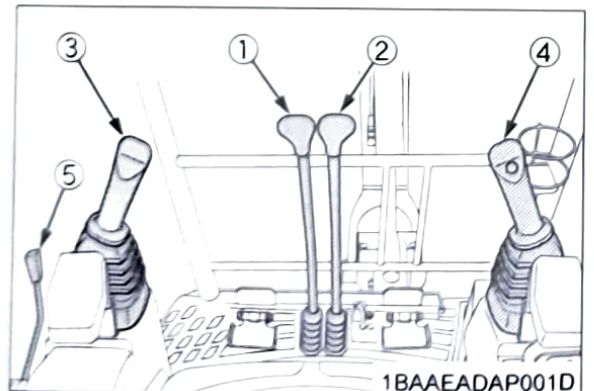
Start the engine in the following manner:

1. Make sure that the fuel cock is in the "Open" position.



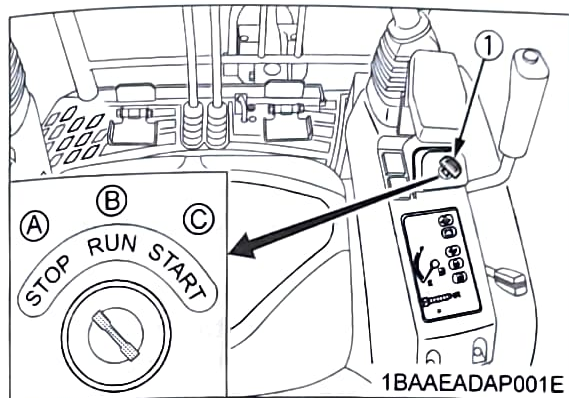
(1) Fuel cock (A) "Open"

2. Before starting the engine, make sure that all control levers are in the neutral positions.



(1) Drive lever (left)
 (2) Drive lever (right)
 (3) Attachment control lever (left)
 (4) Attachment control lever (right)
 (5) Lock lever

3. Pull the lock lever all the way back. (lock position).
4. Insert the key into the starter switch and turn it to the "RUN" position, and the glow lamp indicator will light up while the engine is preheated, and will go out automatically after preheating is finished.



(1) Starter Switch

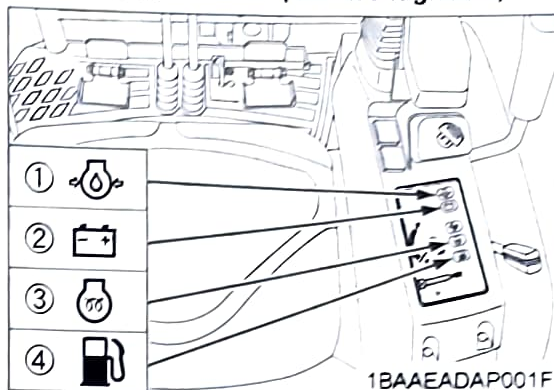
(A) "STOP"

(B) "RUN"

(C) "START"

5. Turn the key to "START" position and release after the engine has started; it will automatically return to the "RUN" position.
6. Check if all warning lamps have gone out. Should a warning lamp still be lit up, stop the engine then remove the key and check for the cause.

Malfunction Indicator (Quick Diagnosis)



① Warning Lamp "Engine Oil Pressure"

This lamp lights up when there is an abnormality in the engine oil circulation. It lights up when the starter switch is in "RUN" position and goes out as soon as the engine starts running. Should the lamp light up while the engine is running, check the engine oil level.

② Warning Lamp "Battery Charge"

This lamp lights up when there is a malfunction in the charge system. The lamp lights up when the Starter Switch is in "RUN" position and goes out as soon as the engine starts.

③ Indicator Lamp "Glow"

This lamp lights up when the starter switch is in "RUN" position and goes out after the engine has been sufficiently preheated.

④ Warning Lamp "Fuel Level too Low"

This lamp lights up when the fuel level in the fuel tank is lower than in the following table.

0.53 US gal (2L)

IMPORTANT:

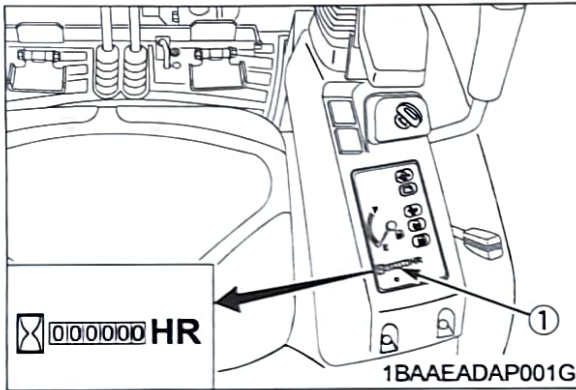
- When the lock levers are in "UNLOCK" position, the engine does not start.

■ Hourmeter

The hourmeter shows the total operating hours of the excavator.

◆ Meter reading

The meter counts up about 1 for one operating hour. The electric meter keeps counting even when the engine is stopped but the key is in "ON" position.



(1) Hourmeter

■ Checkpoints after Starting the Engine

After starting the engine, but before starting operation, check two following points:

1. Put the throttle lever in "LOW" position and let the engine idle for approx. 5 minutes. This allows the engine lubricant to warm up and penetrate every part of the engine.

Note:

- This idling is usually called "Warm-up".
2. Once the engine has warmed up, check:
 - the warning lamp "Engine oil pressure" has gone out.
 - the warning lamp "Battery charge" goes out when engine speed is increased.
 - the colour of the exhaust is normal and no abnormal noises or vibrations are heard or felt.
 - no fluid is leaking from pipes or hoses.

◆ Should any following conditions occur, stop the engine immediately.

- The engine rpm's increases or decreases suddenly.
- Sudden abnormal noises are heard.
- Exhaust is black.
- Alarm lamp for engine oil lights up during operation.

IMPORTANT:

- In these cases, the excavator must be checked and serviced by your local KUBOTA dealer.

■ Precautions in case of overheat



CAUTION

- Do not open the radiator cap during and just after operation. Hot water may gush out and get you burned. Wait long enough until the radiator cools down.

If by any chance cooling water gets heated up to the boiling point or over (overheated), the whistle at the reserve tank drain hose end blows. In such case, take the following steps.

1. Stop operation in a safe condition. (Disconnect the engine's load.)
2. Do not stop the engine suddenly. Keep the engine idling under no load for about 5 minutes and turn it off.
3. Keep yourself enough away from the machine for another 10 minutes or while steam is given off.
4. Make sure there is no hazard of getting burned. Pinpoint and remove the cause of overheat, referring to "TROUBLESHOOTING". Then get the engine restarted.

STARTING THE ENGINE UNDER COLD CONDITIONS



CAUTION

To avoid personal injury:

- Make sure that the lock lever is in the lock position during warm up.

Start the engine in the following manner;

1. Pull the lock levers all the way back (lock position).
2. Turn the starter switch to the "RUN" position (glow position) and keep until the indicator lamp has gone out.
3. Move the starter switch to the "START" position; to crank and start the engine.
4. Release the starter switch after the engine has started; it will automatically return to the "RUN" position.

IMPORTANT:

- Let the engine warm up after start-up for approx. 10 minutes under no load conditions. If the hydraulic fluid temperature is too low, the operations will be affected.
Do not operate the excavator under full load before the engine has warmed up enough.

STOPPING THE ENGINE



WARNING

To avoid personal injury or death:

- Do not keep the bucket or dozer in the lifted position, as a person could accidentally touch the levers and cause serious accidents.

1. After slowing the engine to idle, turn the key to "STOP".
2. Remove the key.

Emergency Engine Stop Fuse

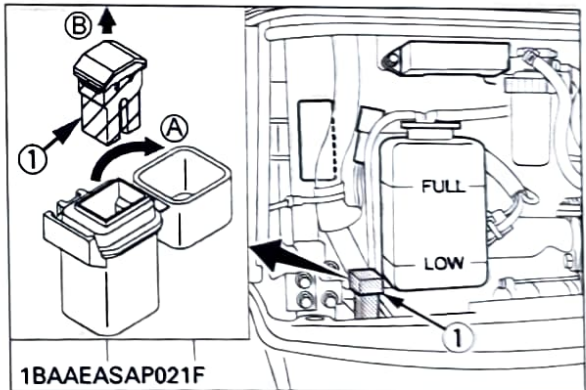


CAUTION

To avoid personal injury:

- Do not open engine hood before stopping engine. Only when engine does not stop by key, open engine hood and pull out the fuse.

The engine will stop when the cap is removed and the fuse inside is pulled out. The engine can be restarted when the fuse is pushed back into its original position.



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- (1) Emergency engine stop fuse (A) "OPEN"
(B) "PULL OUT"

NOTE:

- If the engine does not stop with the key, contact your KUBOTA dealer.

STARTING WITH AN AUXILIARY BATTERY



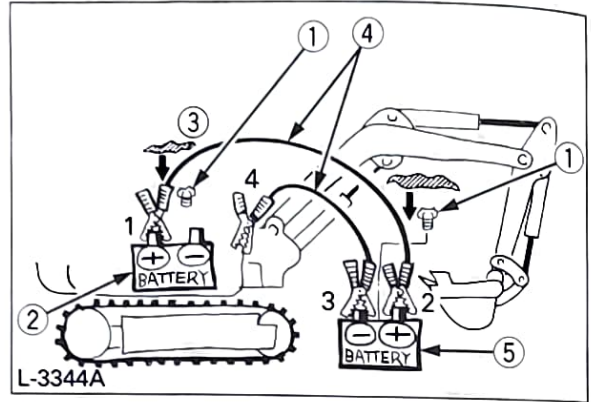
CAUTION

To avoid personal injury:

- Battery gases can explode. Do not smoke and keep sparks and flames away.
- Do not start the engine with an auxiliary battery if excavator battery is frozen.
- Do not connect the black jumper cable to the negative (-) terminal of the excavator battery.

■ Observe Following Guidelines when Starting with an Auxiliary Battery

1. Bring the helping machine with the same battery voltage as near as possible to the excavator.
THE MACHINES MUST NOT COME IN CONTACT WITH EACH OTHER.
2. Bring the levers and pedal of both vehicles in the neutral position and put the lock lever in the "Lock" position.
3. Wear eye protection and rubber gloves.
4. Remove the battery caps from both batteries. (If present)
5. Cover the battery opening with a cloth. Make sure that the cloth does not touch the battery terminals.
6. Connect the terminal of the red jumper cable with the plus (+) terminal of the low battery and connect the other end of the cable to the plus (+) terminal of the auxiliary battery.
7. Connect the black cable to the minus (-) terminal of the auxiliary battery.
8. Connect the other end of the black cable (coming from the auxiliary battery) to the excavator frame as far away as possible from the low battery.
9. Start the engine of the helping machine and let it run for a while. Start the excavator with the low battery.
10. Disconnect the jumper cables in the reverse sequence (Steps 8, 7, 6).
11. Remove the cloth and replace the battery caps.



- (1) Remove battery caps (if present)
- (2) Low battery
- (3) Put a cloth over the battery openings
- (4) Jumper cables
- (5) Auxiliary battery

IMPORTANT:

- This excavator has a negative (-) earthed 12 Volt starting system.
- Only use the same voltage when using an auxiliary battery.
- Using a higher voltage will cause serious damage to the electrical system. When using an auxiliary battery, only the compatible (same) voltage is permissible.

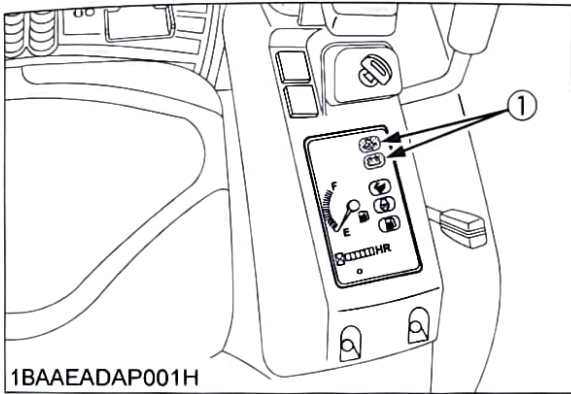
EXCAVATOR OPERATION

CONTROL OBSERVATIONS DURING OPERATION

■ Stop the Engine immediately if:

- Sudden increase or decrease in engine rpm's occurs.
- Sudden abnormal noises occur.
- Exhaust gases turn suddenly very dark.

Make following control observations during operation to be sure that everything functions normally.



(1) Alarm lamps

■ Alarm Lamps

Should a alarm lamp light up during operation, stop the engine immediately and as described below, check for the cause. Do not use the excavator when a alarm lamp is lit up. Explanation of alarm lamp is described of "Malfunction Indicator (Quick Diagnosis)" under "STARTING THE ENGINE" in "OPERATION OF THE ENGINE".

⚙️ Engine Oil Pressure

When the engine oil pressure sinks under the prescribed level, the alarm lamp will light up. Should this occur during operation and not go out even if the engine rpm's is increased by 1000 rpm, check the engine oil level. (see "Check Engine Oil Level" under "DAILY CHECKS" in "MAINTENANCE").

🔋 Battery Charge

If the battery is not charged by the generator, the alarm lamp will light up. Should this occur during operation, check the electrical system or contact your KUBOTA dealer. (see "TROUBLESHOOTING")

RUNNING-IN OF THE NEW EXCAVATOR

The operation and care of the new excavator influences its life span. Your new excavator has been carefully checked and tested before leaving the factory. In spite of this, all movable components must run-in during the first 50 work hours. Do not work with full engine rpm's and full loads during this period. It is most important to run-in your excavator properly in order to achieve its full performance and longevity. During the running-in, the following points should be adhered to in all cases.

■ Do not Work with Full Engine Rpm's or Full Loads during the First 50 Working Hours

- Let the engine warm up sufficiently in the cold season.
- Do not let the engine rev-up more than necessary.

■ Oil Change in the Run-in Stage

The lubrication oil plays a specific and important role during the run-in phase of the excavator. The numerous movable parts are not yet run-in, so many fine metal particles are generated and cause damage and shorten the lifetime of many components. Pay attention to the oil-change intervals and complete them sooner than later. See the subject "Care and Maintenance" for more details on the oil-change intervals.

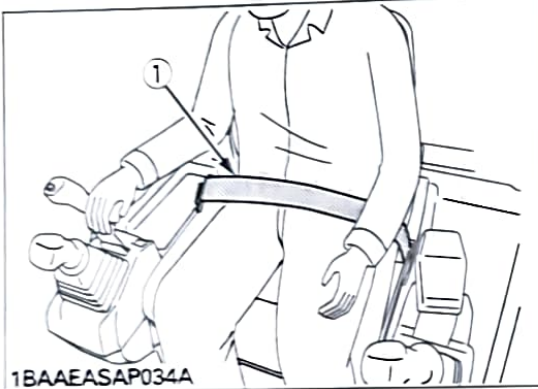
■ Seat Belt



WARNING

To avoid personal injury or death:

- Always use the seat belt with a ROPS/FOPS protection structure. Adjust the seat to the optimal position and buckle up.



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(1) Seat belt

STARTING



CAUTION

To avoid personal injury:

- No persons, other than those familiar with the excavator, are allowed to use the excavator.
- Do not allow any person other than the operator to ride on the excavator.

1. Adjusting the Operator's Seat

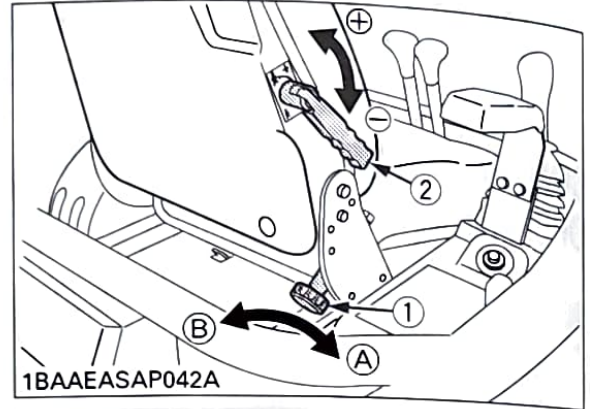
■ Operator's Seat



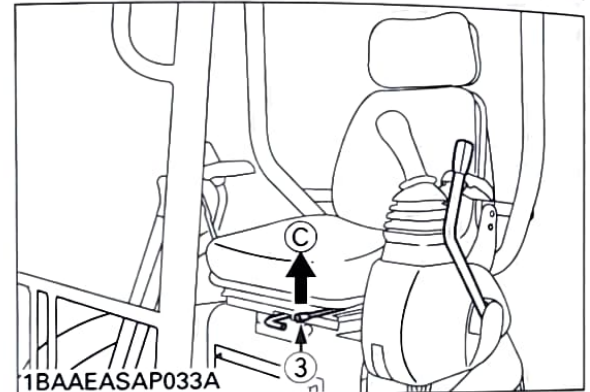
CAUTION

To avoid personal injury:

- Make sure that the seat is completely secured after each adjustment.
- Do not allow any person other than the driver to ride on the excavator.



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- (1) Knob for tilt
- (2) Suspension adjustment lever
- (3) Travel adjust lever
- (A) "FORWARD"
- (B) "BACK"
- (C) "UNLOCK"

- ◆ Tilting the back rest : (1)
To tilt the backrest forward, turn the knob clockwise.
To set the backrest back, turn the knob counterclockwise.
- ◆ Adjustment of seat suspension : (2)
Turn the lever according the operator's weight.
For light operator, turn the lever clockwise (-)
For heavy operator, turan the lever counterclockwise (+)
- ◆ Travel adjustment : (3)
Pull the travel adjust lever and slide the seat backward or forward, as required.
The seat will lock in position when the lever is released.

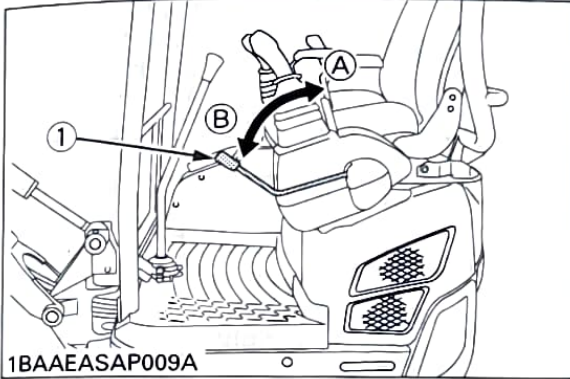
2. Bring the lock lever into the "Unlock" position.



CAUTION

To avoid personal injury:

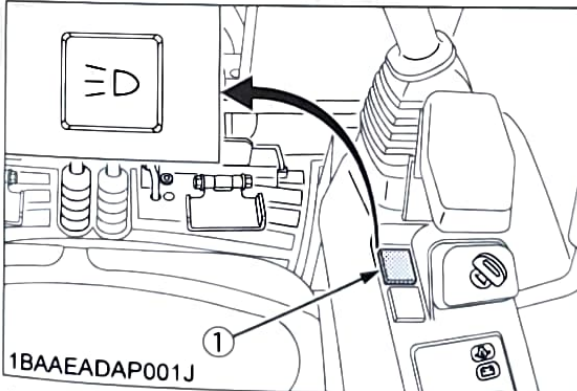
- Check safety features all around the excavator.



(1) Lock lever for attachment control (A) "Lock"
(B) "Unlock"

■ Working Light Switch (OPTION)

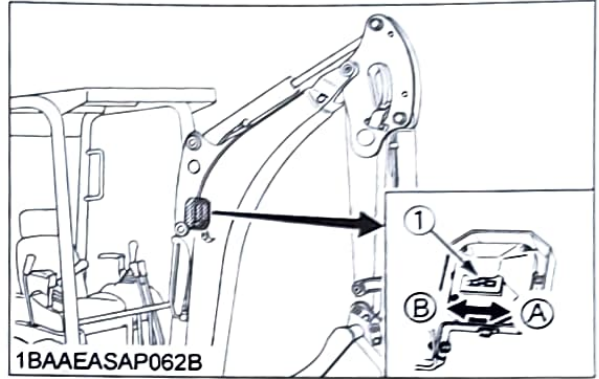
If the key in "RUN" position, the lights can be switched on by pressing the switch.



(1) Working light switch

NOTE:

- Always turn on the switch of the working light attached on the boom.



(1) Working light switch (boom) (A) "ON"
(B) "OFF"

◆ Night operation



CAUTION

To avoid personal injury:

- Visibility is reduced in darkness, so that the working light alone is not enough. Prepare additional lighting, observe safety rules as well as special regulations for night work.

■ Travel Buzzer (OPTION)

When you handle the drive levers, the buzzer sounds at the same time or before the excavator starts to run.

TWO PATTERN SELECTION SYSTEM (TPSS)



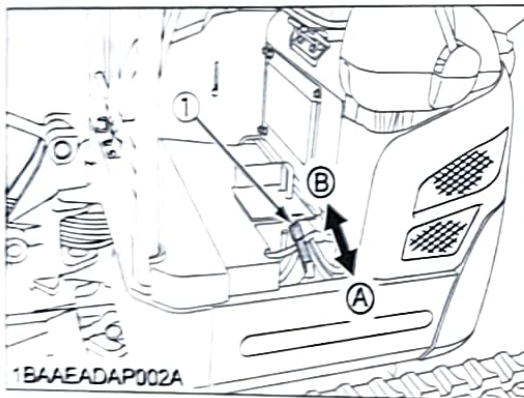
CAUTION

To avoid personal injury:

- Study control lever pattern A and pattern B. Then choose the one which is most familiar
- Position the pattern selector lever in either the left side position of the machine (pattern A) or the right side position (pattern B).
- Familiarize yourself with the pattern selected by operating slowly.

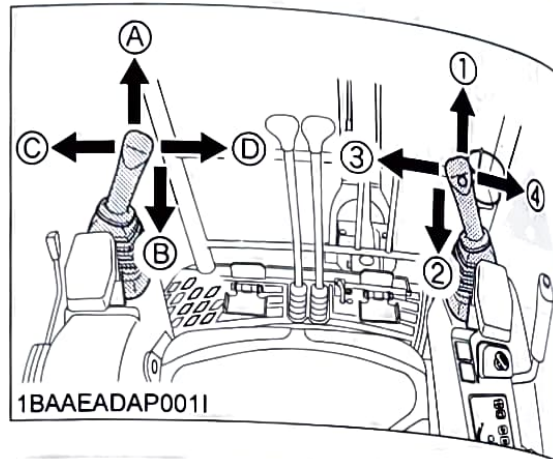
■ Pattern Change

Position the pattern selector lever to the desired position.



(1) Pattern selector lever
(Two Pattern Selection System: TPSS)

(A) Pattern A
(B) Pattern B



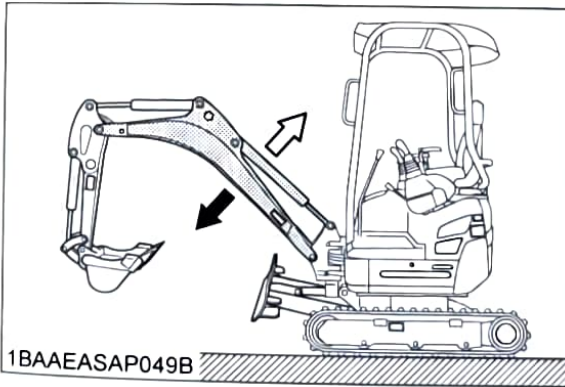
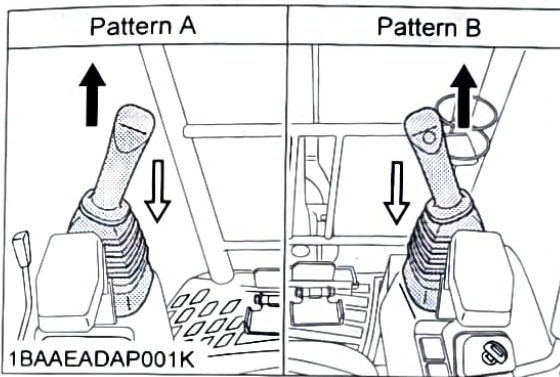
Lever Position		Pattern A	Pattern B
Attachment Control Lever (Left)	A	Boom down	Arm up
	B	Boom up	Arm crowd
	C	Swing left	Swing left
	D	Swing right	Swing right
Attachment Control Lever (Right)	1	Arm up	Boom down
	2	Arm crowd	Boom up
	3	Bucket crowd	Bucket crowd
	4	Bucket dump	Bucket dump

OPERATION OF THE BOOM

To raise the boom, pull the attachment control lever back.

The boom is equipped with a cushion cylinder which helps prevent excavated material in the bucket from falling out. Low hydraulic oil temperature, (e.g. after starting the engine in cold weather) the cushioning function will be effected for a short period of time (approx. 3 to 5 seconds). This condition results from the viscosity of the hydraulic oil and is not a sign of malfunction.

The cushion cylinder will operate normally as the oil warms up.



IMPORTANT:

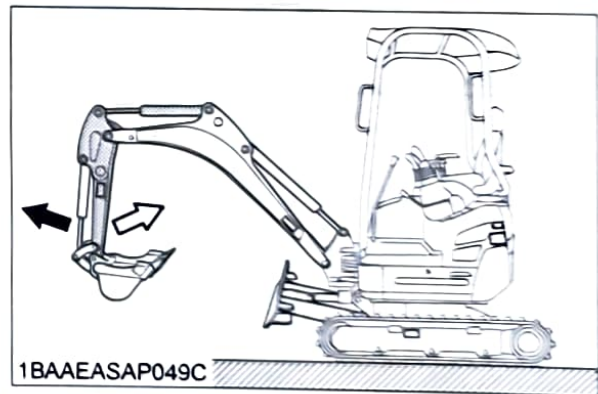
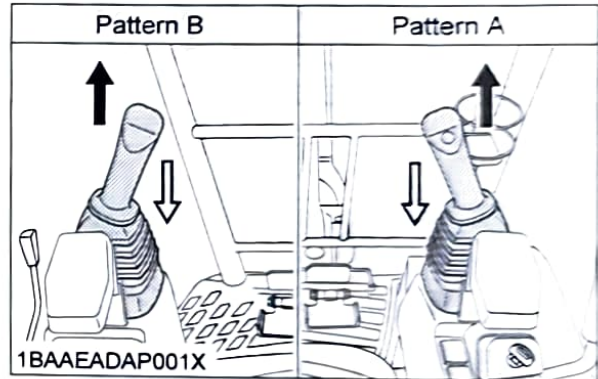
- When lowering the boom, make sure that it does not hit the dozer and that the bucket teeth do not touch the dozer.

OPERATION OF THE ARM

Pull back the attachment control lever and the arm will be pulled in. To move the arm out, push the control lever towards the front.

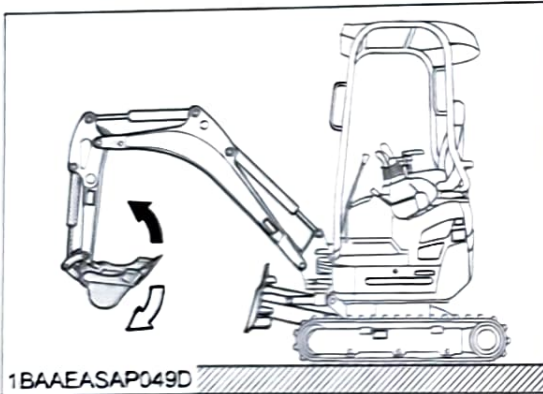
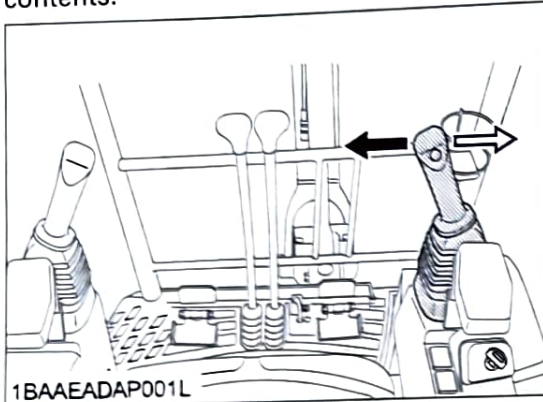
NOTE:

- When pulling in the arm, the movement may stop for a short moment when the arm is in its vertical position. This is caused by the combined load of the arm and bucket moving the cylinder piston away from the hydraulic flow causing a short delay in the cylinder action, until the flow catches up with cylinder piston. This is a characteristic of the hydraulic system and is no sign of a malfunction.



OPERATION OF BUCKET

To dig using the bucket, move the right attachment control lever from the neutral position left. Moving the control lever right, moves the bucket outwards and dumps its contents.



SWIVEL (UNIT SWING) OPERATION



CAUTION

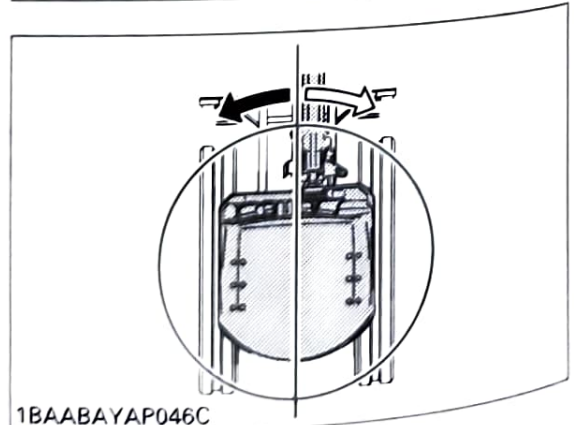
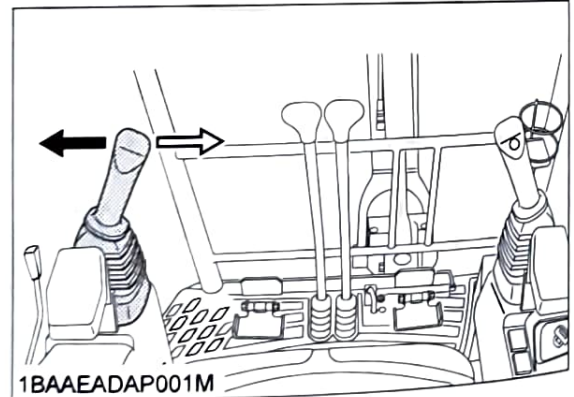
To avoid personal injury:

- When working in groups, always let the others know what you are going to do before you do it.
- Keep away from the working area.

IMPORTANT:

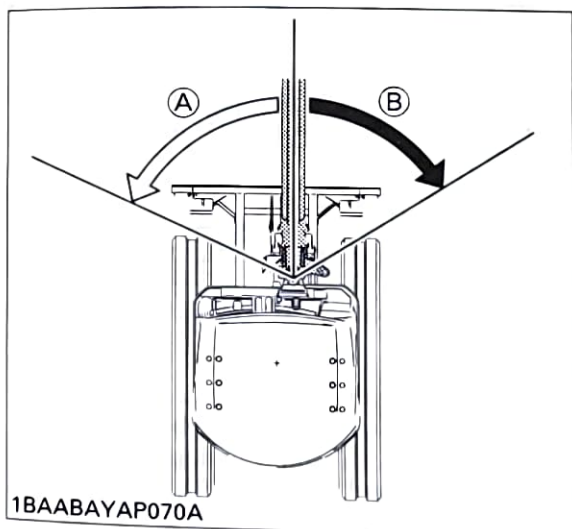
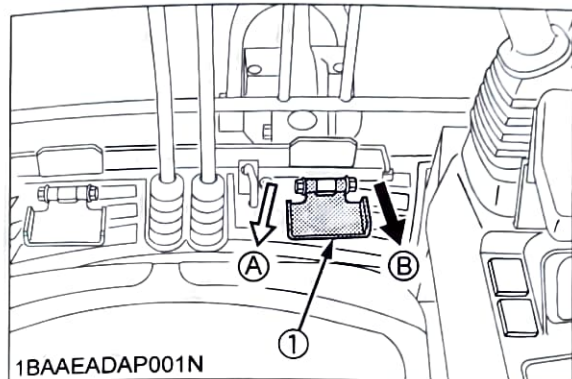
- Do not operate the left attachment control lever abruptly from right to left (or vice versa). Because of the law of inertia, this causes an impact load on the swing gear and the swing motor. Additionally, the life of the excavator will be shortened.
- Unlock the swing lock pin before doing swivel operations.

1. Move the control lever to the left and the upper structure will turn to the left.
2. Move the control lever to the right and the upper structure will turn to the right.



BOOM SWING OPERATION

1. Step on the left side of the pedal to swing the boom to the left.
2. Step on the right side of the pedal to swing the boom to the right.



(1) Boom swing pedal

(A) Swing to left

(B) Swing to right

BOOM SWING PEDAL



WARNING

To avoid personal injury or death:

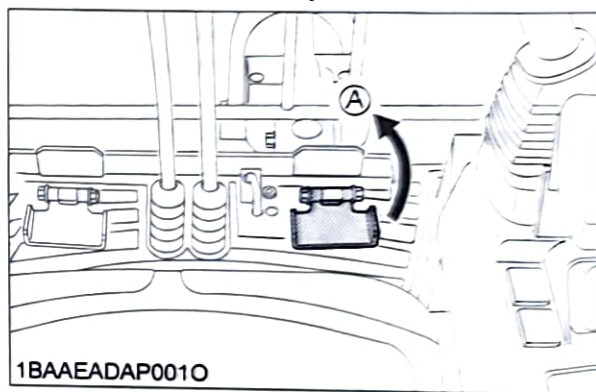
- Always keep your toes within the edge of foot step; otherwise there is a possibility that your toes will be caught between swing frame and boom or boom cylinder.



CAUTION

To avoid personal injury:

- When boom swing operation is not in use, fold the boom swing pedal forward to fix the pedal from unexpected move.



(A) "Fix"

OPERATION OF TRACK WIDTH CHANGE AND DOZER



CAUTION

To avoid personal injury:

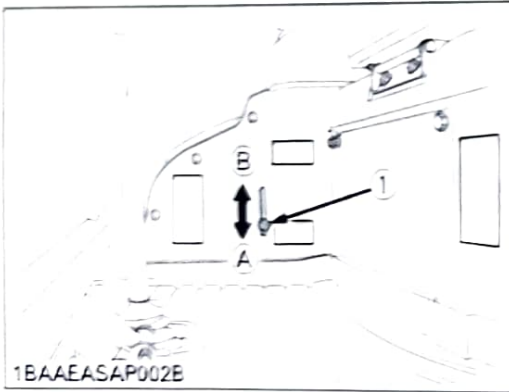
- Do not operate in narrow track width [39in. (990mm)], it makes risk of the excavator tipping over, operate always in standard track width [49in. (1240mm)], except to pass through narrow space on a even ground.

- For changing the track width or using the dozer, set the track width change/dozer select lever fully.

If not, the excavator may unintentionally move.

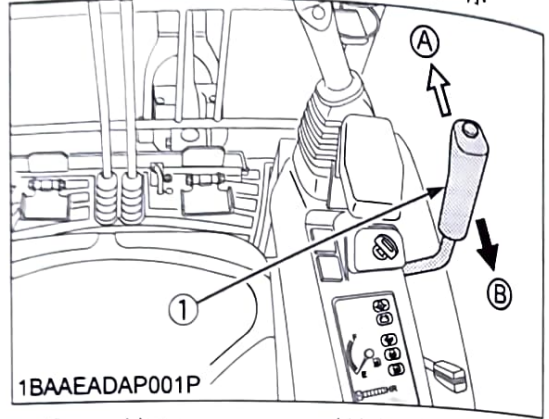
■ Operation of the Track Width

1. Set the track width change/dozer select lever to the "Track width change" position (B).



(1) Track width change / (A) "Dozer" dozer select lever (B) "Track width change"

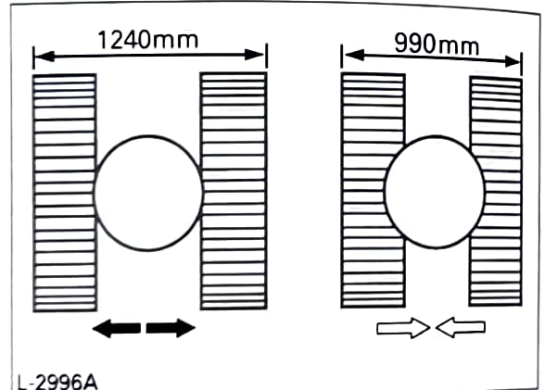
2. Push the control lever forward.
... The track width reduces [from 49in. to 39in. (1240 mm to 990 mm)].
Pull the control lever backward.
... The track width increases [from 39in. to 49in. (990 mm to 1240 mm)].



(1) Control lever

(A) "Reduce"

(B) "Increase"

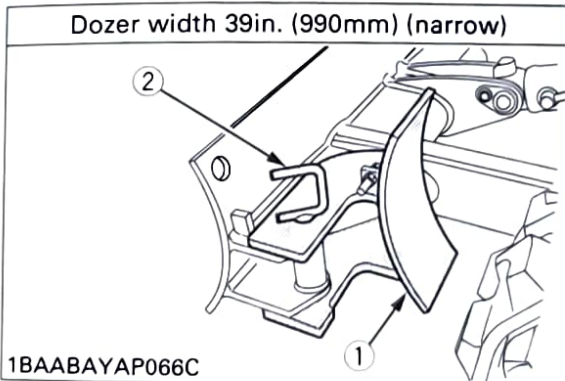
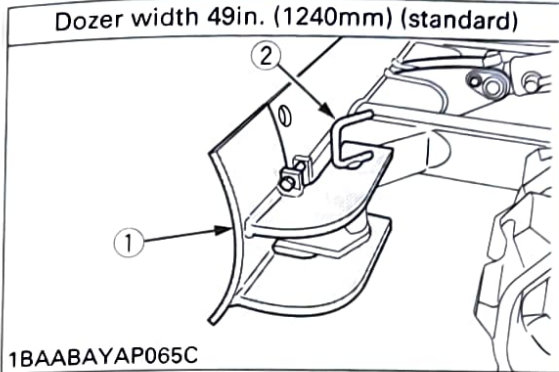


3. After track width change, be sure to set the track width change/dozer select lever to the "Dozer" position (A).

■ Adjustment of the Dozer Width

For changing from standard width to narrow width:

1. Pull out the fixing pin (2) and remove the extension dozer (1).
2. Set as under illustration the extension dozer (1), insert fixing pin (2).
3. It is the same operations for opposite side (left or right), and also for changing from standard width to wide width.

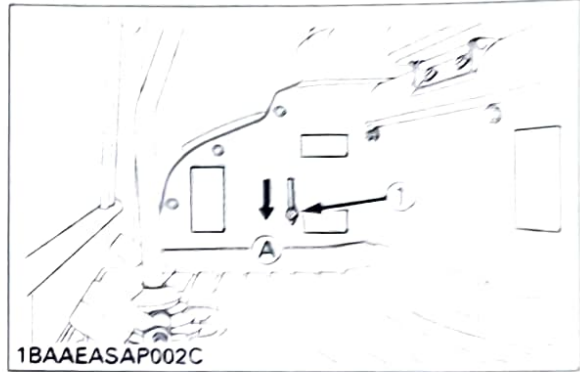


- (1) Extension dozer
- (2) Fixing pin

■ Operation of the Dozer

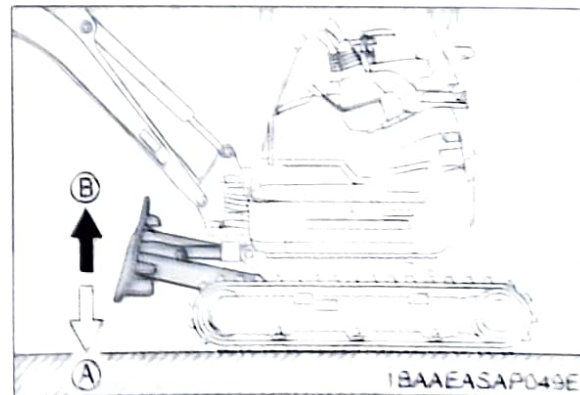
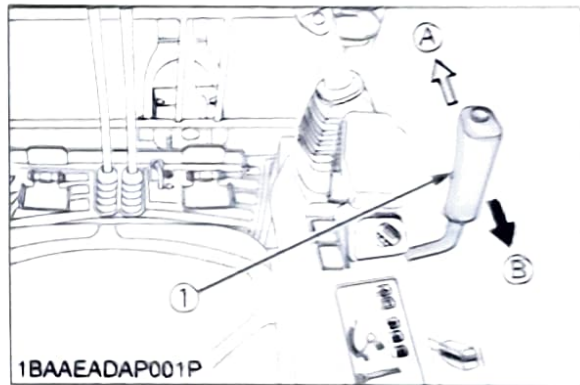
NOTE:

- While operating the dozer, the track width change / dozer select lever must be set position (A).



- (1) Track width change / dozer select lever
- (A) "Dozer"

1. To raise the dozer, pull back the control lever. Pushing the control lever forwards, lowers the dozer.

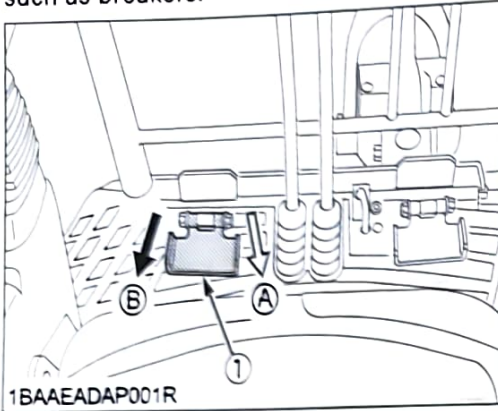


- (1) Control lever
- (A) "Lower"
- (B) "Raise"

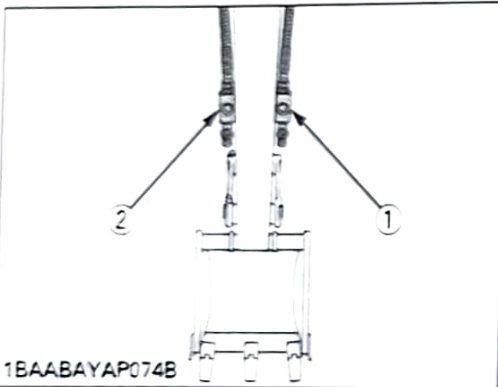
2. While undertaking earth moving work, control both drive levers with the left hand and the control lever with the right hand.

SERVICE PORT OPERATION

This pedal is used to operate attachments such as breakers.



(1) Service port pedal (A) Sends oil to the port (A)
(B) Sends oil to the port (B)



(1) Port (A)
(2) Port (B)

- Push the right of the pedal (↘) to send oil to the port (A).
- Push the left of the pedal (↙) to send oil to the port (B).

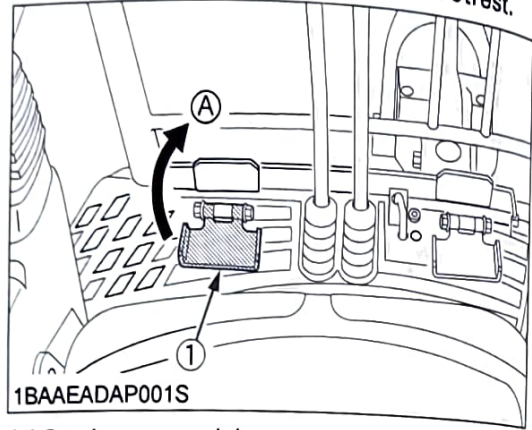
Max. Flow Volume Theoretical L min.	27.0
Max. Pressure psi [MPa (kgf/cm ²)]	2697 [18.6 (190)]

IMPORTANT:

- When the service port is not used for a long period, dirt particles can settle in the lower part of the service port lines. When the plugs on the service port lines are removed to connect attachments, drain approx. 100 cc of oil per side. For breaker choices, contact your dealer.

NOTE:

- When the service port is not in use, fold the service port pedal forward. The pedal gets fixed and can be used as footrest.



(1) Service port pedal

(A) "Fix"

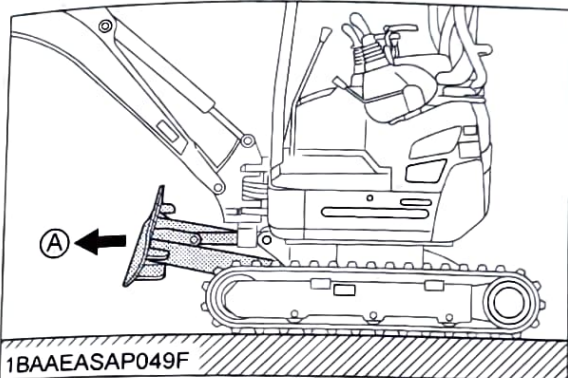
DRIVING



WARNING

To avoid personal injury or death:

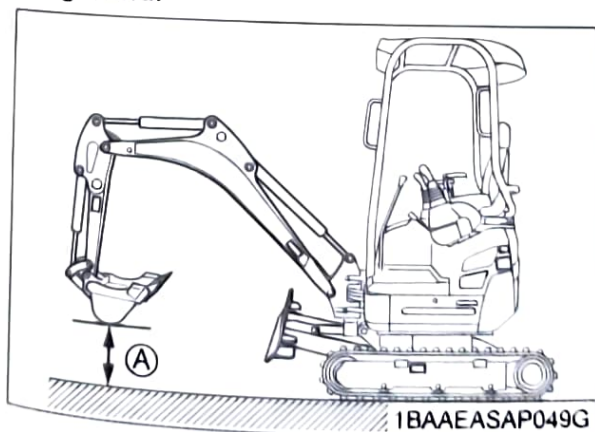
- Before starting the engine, make sure that no one is near the excavator.
- Before operating the excavator, check the track direction. (Idler and dozer to the front of the excavator).



(A) "Front"

- Avoid travelling across a slope or working sideways on a slope.

1. To lock the swing frame with the track frame, engage the swing lock pin.
2. Adjust the engine speed from idling to an intermediate speed.
3. Unlock the lock lever for attachment control.
4. Raise the dozer and hold the bucket about 8 to 16 in. (20 to 40 cm) over the ground.



(A) 8 to 16 in. (20 to 40 cm)

Throttle Lever

At the operator's seat,

1. Move the throttle lever to the "FAST" position, and the engine speed increases.
2. To stop the engine, pull the throttle lever fully to the "SLOW" position and turn the starter switch to the "STOP" position.



(A) "SLOW"

(B) "FAST"

■ Drive Levers (Right, Left)

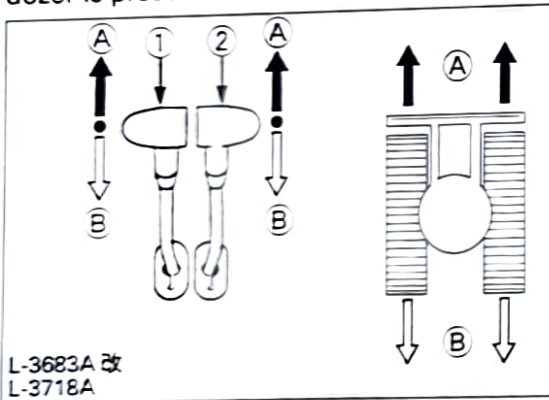


WARNING

To avoid personal injury or death:

- If the swing frame has been turned 180°, i.e. the dozer is, seen from the operator, "behind", then the travel direction is opposite to the drive direction of the levers (when activating the drive lever forwards, the excavator, seen from the operator, will move backwards).

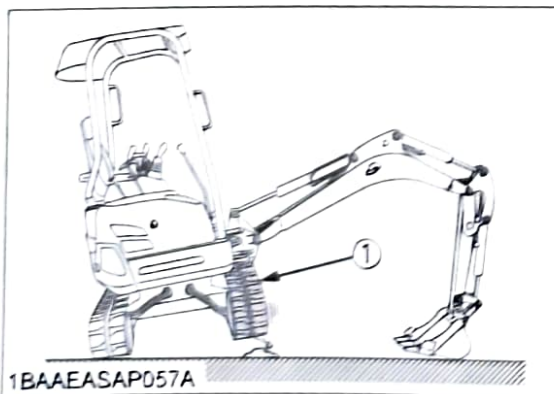
Pushing the drive lever forward, moves the excavator forward, and vice-versa. The front of the excavator is the direction where the dozer is present.



- (1) Drive lever (left) (A) "Forward"
- (2) Drive lever (right) (B) "Backward"

IMPORTANT:

- If the track are clogged with sand or gravel while working on soft ground, lift up one track with the help of the boom, arm and bucket and let the track rotate to shake off the sand and gravel.



(A) "Rotate to shake off sand and gravel"

■ Travel Speed Switch



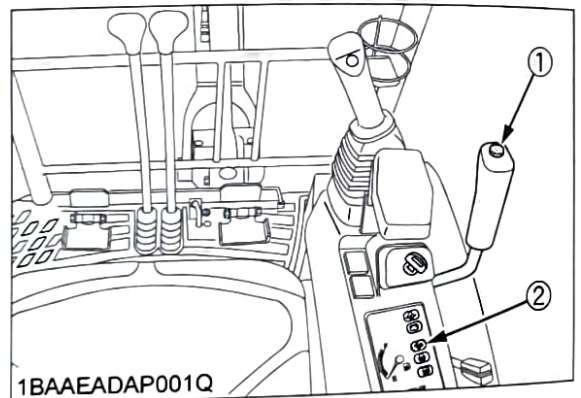
CAUTION

To avoid personal injury:

- When activating the travel speed switch, it must be pushed down completely.

Travel speed will increase when the switch is pushed down.

1. Press the travel speed switch. The travel speed changes from first speed to second. The symbol lights up.
2. Press the travel speed switch again, and the travel speed changes from second to first. The symbol light goes out.



- (1) Travel speed switch
- (2) symbol

NOTE:

- Each time the travel speed switch is pressed, the travel speed is switched between first and second.

IMPORTANT:

- Do not activate the travel speed switch when there is increased drive resistance (e. g. driving on inclines or on uneven grounds).

TURNS



CAUTION

To avoid personal injury:

- Do not change direction on steep slopes, or the excavator could tip over.
- Before changing direction, beware of people in the working area.

Pivot Turn

NOTE:

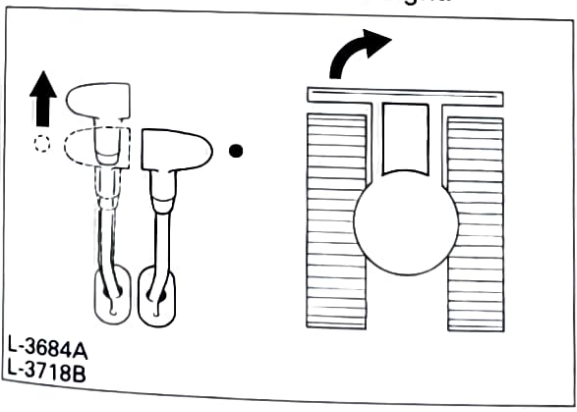
- Movement as illustrated shows the turning directions with the dozer in the front.

When the dozer is in the back, the steering direction is reversed.

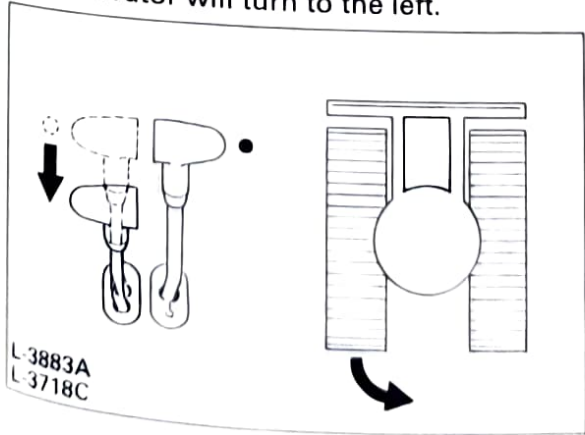
(For example, push the left drive lever forward and the excavator turns right; the left track, seen from the operator, will move backward from the operator.)

Change of Direction while Stationary

1. Push the left drive lever forward; the excavator will turn to the right.

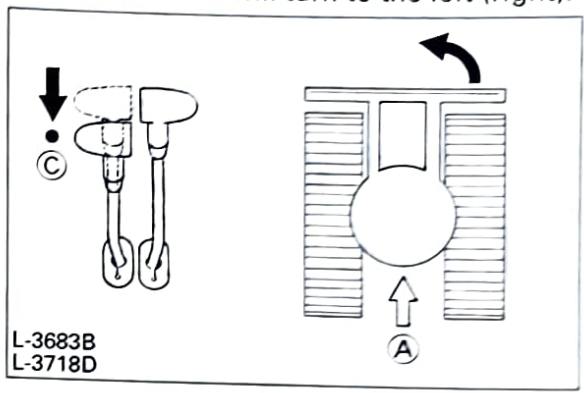


2. Pull the left drive lever backward; the excavator will turn to the left.



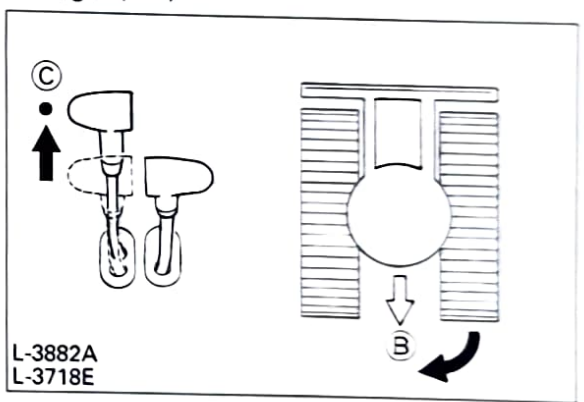
Change of Direction while Travelling

1. While travelling forwards, bring the left (right) drive lever in the neutral position; the excavator will turn to the left (right).



(A) "Travelling forward"
(C) "Neutral position"

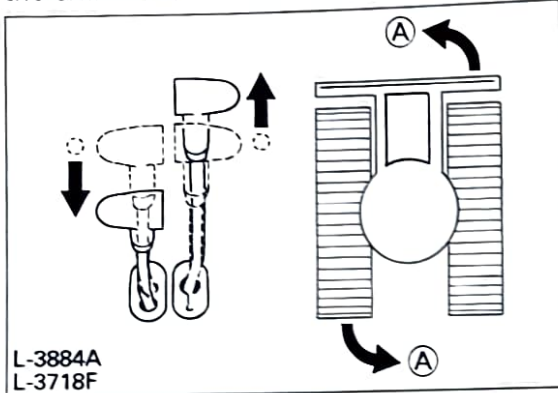
2. While travelling backwards, bring the left (right) drive lever in the neutral position; the excavator will turn to the right (left).



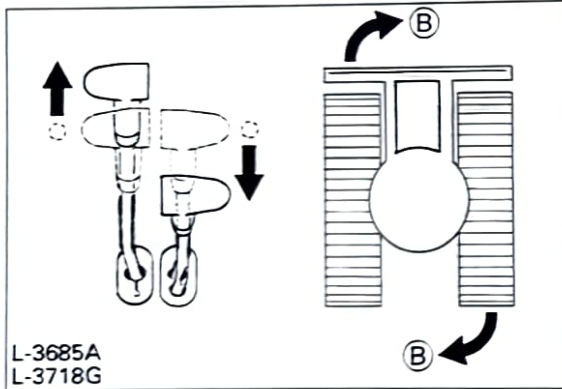
(B) "Travelling backward"
(C) "Neutral position"

Spin Turn

When both drive levers are activated in the opposite directions, both track will rotate with the same speed but in opposite directions. Center of rotation is the center of the excavator.



(A) "Left spin turn"



(B) "Right spin turn"

UP AND DOWNHILL TRAVELLING



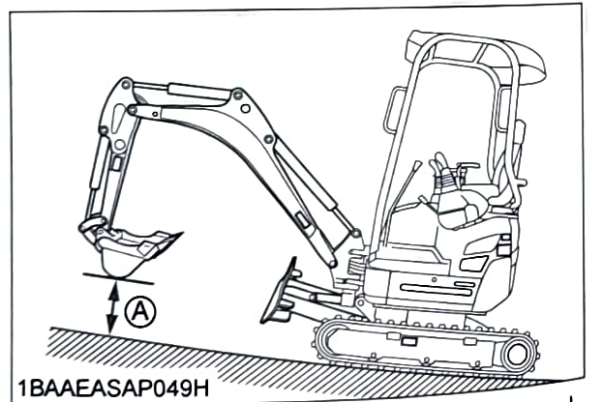
CAUTION

To avoid personal injury:

- Before travelling up and downhill, be sure to be in standard track width [49in. (1240mm)].
- When travelling up or down a slope for long periods of time, be sure to engage the swing lock pin. Also engage the swing lock pin when standing on a slope for a long time or the excavator is being transported.

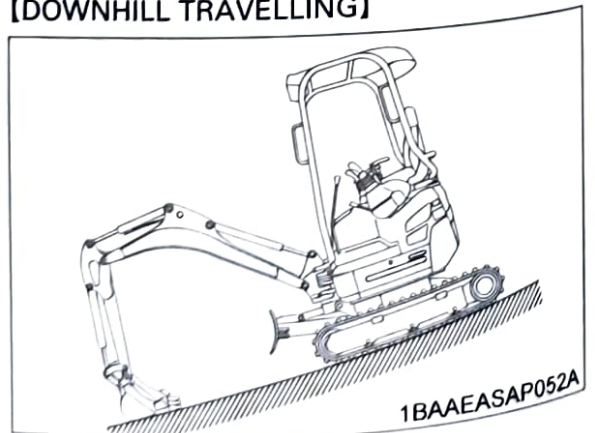
While travelling uphill, keep the lower edge of the bucket approx. 8 to 16in. (20 to 40cm) above the ground. Although the KUBOTA excavator will not slip easily because of the tracks, it is safer to let the bucket slide over the ground while travelling downhill. Always choose slow speed for uphill and downhill travelling.

[UPHILL TRAVELLING]



(A) 8 to 16 in. (20 to 40 cm)

[DOWNHILL TRAVELLING]



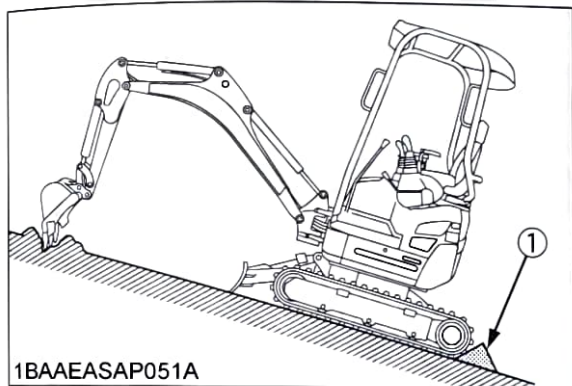
PARKING ON A SLOPE



WARNING

To avoid personal injury or death:

- When the excavator is parked or left unattended on a slope, be sure to put the bucket on the ground and place all control levers in neutral position, then brace the tracks with drags.



1BAAEASAP051A

(1) Drag

IMPORTANT INFORMATION ON EXCAVATOR OPERATION

- Do not try to crush concrete or boulders using side swings with the bucket. Also avoid using side sweeps of the bucket to move earth piles.
- Under all circumstances avoid the following operations:
 - Excavation using the gravitational impact of the machine.
 - Compacting of gravel or soil using the dropping action of the bucket.
 - Excavation using the travelling power of the machine.
- Do not try to drop or shake off soil adhering to the bucket in the manner given in the points below. This can cause damage to the machine.

Adhered soil can be shaken off when the bucket is being emptied by moving the bucket out to the maximum stroke of the cylinder. Should this not suffice, swing out the arm as far as possible and operate the bucket back and forth.
- Do not hit the dozer with the boom cylinder!

Make sure that the boom cylinder does not hit the dozer when doing deep excavation. If necessary swing around so that the dozer is in the back of the machine.
- Pay attention when pulling in the bucket!

When pulling in the bucket (for driving or transportation) avoid hitting the dozer.
- Avoid collisions!

When moving the excavator, pay attention that the dozer does not collide with obstructions such as boulders etc.. Such collisions shorten the life of the dozer and the cylinder substantially.
- Support the machine correctly!

When stabilizing the machine with the dozer, lower the dozer to engage the full width on the ground.

- If the water or mud level reaches higher than the top of the tracks, the swivel bearing, swivel motor gear and ring gear may be exposed to mud, water and other foreign objects.

The excavator must be properly pressure washed after each use.

- Thoroughly clean the area around the swivel bearing, swivel motor gear and ring gear to remove foreign objects.
- Inspect the swivel motor oil sump (if equipped) for water contamination. If water is present, refer to operator's manual for lubricant replacement procedure.
- Refer to operator's manual for proper swivel bearing, swivel motor gear and ring gear lubrication procedures.
- Reinstall any protective covering if removed earlier.