Open front screen

Service Manual

8013
8015
8017
8018
801 *Gravemaster*

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Introduction

This publication is designed for the benefit of JCB Distributor Service Engineers who are receiving, or have received, training by JCB Technical Training Department.

It is assumed that these personnel have a sound knowledge of workshop practice, safety procedures and general techniques associated with the maintenance and repair of hydraulic earthmoving equipment. Therefore, these basic subjects generally are omitted from this manual, the intention being to convey only more specialised information concerning particular aspects of a machine or component.

For example, renewal of oil seals, gaskets etc., and any component showing obvious signs of wear or damage is expected as a matter of course and, therefore, information of this nature is included only in the context of specialised procedures or where a range of wear tolerances is required. Similarly, it is expected that components will be cleaned and lubricated where appropriate, also that any opened hose or pipe connections will be blanked to prevent excessive loss of hydraulic fluid and ingress of dirt. Finally, please remember above all **SAFETY MUST COME FIRST!**

The manual is compiled in sections, the first three are numbered and contain information as follows:

1 = General Information - includes torque settings and service tools
2 = Care & Safety - includes warnings and cautions pertinent to aspects of workshop procedures etc.
3 = Routine Maintenance - includes service schedules and recommended lubricants for the machine.

The remaining sections are alphabetically coded and deal with Dismantling, Overhaul etc. of specific components, for example:

A = Attachments
B = Body & Framework ... etc.

The page numbering in each alphabetically coded section may not be continuous. This allows for the insertion of new items in later issues of the manual.

Section contents, technical data, circuit descriptions, operation descriptions etc. are inserted at the beginning of each alphabetically coded section.

All sections are listed on the front cover; tabbed divider cards align directly with individual sections on the front cover for rapid reference.

Illustrations which show a dismantled component are numbered as a guide to the dismantling sequence, which generally can be reversed for assembly.

Torque settings are given as a 'mean' figure which may be varied by plus or minus 3%. Torque figures indicated are for dry threads, hence for lubricated threads may be reduced by one third.

'Left Hand' and 'Right Hand' are as viewed from the rear of the machine.

References to alternative servicing intervals are to be treated on a 'whichever occurs first' basis.

Contents

Identification Plate

Your machine is fitted with an identification plate which is located on the front of the mainframe.
The serial numbers of the machine, engine and gearboxes are stamped on this plate.
If the engine is replaced, stamp the new serial number in place of the old one.

Vehicle Identification Number (VIN)

Code	SLP	8015	W	E	0765001
Example	A	B	C	D	

A World Manufacture Identification SLP = JCB

B Machine Model 8015

C Year of Manufacture

R = 1994	W = 1998	2 = 2002
S = 1995	X = 1999	3 = 2003
T = 1996	Y = 2000	4 = 2004
V = 1997	1 = 2001	5 = 2005

D Manufacturers Location E = England

E Machine Serial Number 0765001

Engine Identification Number

Code	A	B	C	D	E
Example	KE	50390	J	000001	W

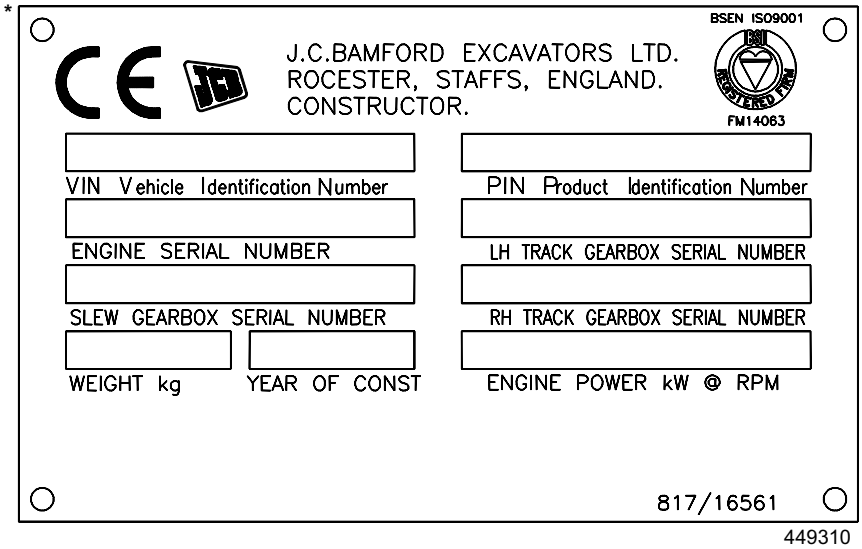
A Engine Type

B Engine Parts List

C Country of Manufacture

D Engine Serial number

E Year of Manufacture



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Preparation for Storage

The operations to place a machine into storage (-15°C to 44°C) are given below.

Note: *It is important to clean the undercarriage after working on muddy ground to prevent the build up of solidified mud affecting the moving parts of the extending/ retracting undercarriage and ram.*

1 Park the machine safely with the bucket and dipper rams retracted and the dig end outstretched. Lower the boom until the bucket rests on the ground.
Lower the dozer to the ground.
Retract the extending undercarriage.

2 Switch off the engine. Operate controls to release pressure from the rams.

3 Disconnect battery to prevent discharge.

4 Ensure the fuel tank is filled to a maximum, leaving no air space.

5 Ensure hydraulic tank is filled to maximum on the sight gauge.

6 Spray exposed ram rods with Waxoyl.

7 Slacken off rubber tracks until no visible spring tension exists.

Preparation after Storage

The operations to remove a machine from storage (-15°C to 44°C) and prepare it for use are given below.

1 Lower the fuel level to ensure that sufficient air space exists in the tank.

2 Check all oil and water levels, adjust contents to correct levels as necessary.

3 Ensure the battery is fully charged.

4 Reconnect battery.

5 Remove electrical contact from fuel injection pump solenoid.

6 Crank engine for 15 seconds or until oil pressure warning light goes out.

7 Reconnect electrical supply to the fuel injection pump solenoid.

8 Start the engine. If the engine fails to start after several attempts, bleed the fuel system.

9 Adjust track tensions.

10 Grease all lubrication points.

TOPS and FOGS

All protective structures fitted to the 8015 range of machines are tested to the following standards:

T.O.P.S. (**T**ip **O**ver **P**rotective **S**tructure) to ISO / DIS 12117: 1997 (E).

F.O.G.S. (**F**alling **O**bject **G**uard **S**tructure) to ISO / DIS 10262 LEVEL 1.

From June 1998 these structures have been fitted as standard.

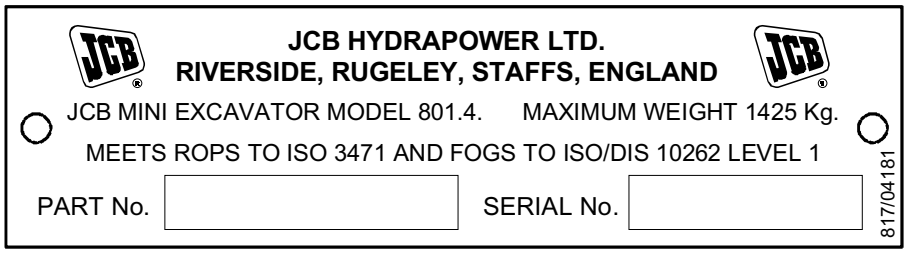
WARNING

Modified and incorrectly repaired TOPS & FOGS Structures are dangerous. Do not modify the TOPS & FOGS Structure. Do not attempt to repair the TOPS & FOGS Structure. If the TOPS & FOGS Structure has been in an accident, do not use the machine until the structure has been inspected and repaired. This must be done by a qualified person. For assistance, contact your JCB dealer or JCB Hydrapower Ltd. Failure to take precautions could result in death or injury to the operator. 5-3-1-7

Machine built to TOPS and FOGS standards have an identification label fitted to the cab.

WARNING

The TOPS & FOGS cab is designed to give you protection in an accident. If you do not wear the seat belt you could be thrown about inside the cab, or thrown out of the machine and crushed. You must wear a seat belt when using the machine. Fasten the seat belt before starting the engine.
2-2-1-9



H11680

Introduction

This chapter is arranged to guide you step-by-step through the task of learning how to use the machine. Read it through from beginning to end. By the end of the chapter you should have a good understanding of the machine and how to operate it.

Pay particular attention to all safety messages. They are there to warn you of possible hazards. Do not just read them-think about what they mean. Understand the hazards and how to avoid them.

If there is anything you do not understand, ask your JCB dealer, he will be pleased to advise you.

When you have learned where the driving controls are and what they do, practise using them. Practise driving the machine in a safe, open space clear of other people.

Get to know the "feel" of the machine and its driving controls.

Move on to the attachment controls only when you can drive the machine confidently and safely.

Take great care when practising with the attachment controls. Practise in an open space, keep people clear. Do not jerk the controls: operate them slowly until you understand the effect they have on the machine.

Finally, do not rush the job of learning. Take you time and take it safely.

Remember **BE CAREFUL**
BE ALERT
SAFE

Before entering the cab

WARNING

Walking or working under raised attachments can be hazardous. You could be crushed by the attachments or get caught in the linkages.

* **Lower the attachments to the ground before doing these checks. If you are new to his machine, get an experienced operator to lower them for you.**

If there is nobody to help you, study this handbook until you have learned how to lower the attachments. Also make sure that the slew lock is fitted before doing these checks.
HOP26

The following checks should be made each time you return to the machine after leaving it for any period of time. We advise you also to stop the machine occasionally during long work sessions and do the checks again.

All these checks concern the serviceability of the machine. Some concern your safety. Get your service engineer to check and correct any defects.

Machine Walk Round inspection

1 Check for cleanliness:

a Clean the windows and light lenses.

b Remove dirt and debris, especially from around the linkages, rams, pivot points and radiator.

c Make sure the cab and handrails are clean and dry.

d Clean all safety decals. Replace any that are missing or cannot be read.

2 Check for damage:

a Inspect the machine generally for damaged and missing parts.

b Make sure that the bucket teeth are secure and in good condition.

c Make sure that all the pivot pins are secured correctly in place.

d Inspect the windows for cracks and damage.

e Check for oil, fuel and coolant leakages beneath the machine.

WARNING

You could be killed or injured with damaged tracks. Do not use the machine with damaged or excessively worn tracks. HOP27

3 Check the Tracks (Rubber)

Check for cut rubber and penetration by sharp objects. Do not use a machine with damaged tracks.

4 Check the engine cover/panels and fuel filler cap

a Make sure the engine cover / panels are fitted and securely locked.

b Make sure the fuel filler cap is tightly closed (we also recommend that you lock it).

WARNING

For safety reasons, machines fitted with single access canopies from new must not have the barrier removed. The machine must always be entered/exited with the LH isolator raised via the LH side.

Entering/Exiting the cab

WARNING

Do not enter or exit the cab unless the arm rest or lever lock is fully engaged.

To give sufficient clearance to enter or leave the cab, the left lock must be raised.

When the lock is in the raised position the excavator controls cannot be operated. Lowering the lock to the normal position connects the excavator controls and allows the normal operation of the levers.

CAUTION

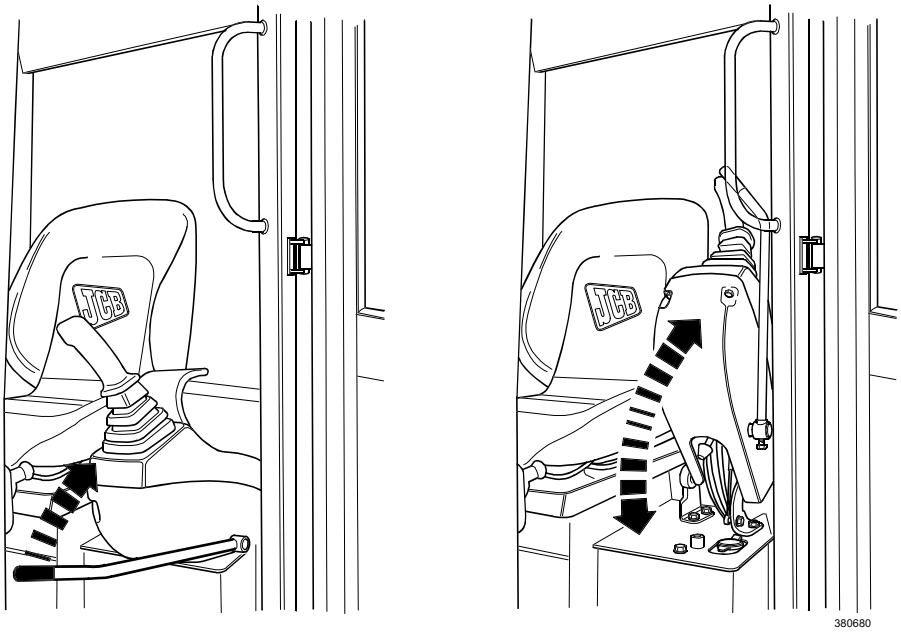
On cable operated machines, ensure that the levers are fully locked and the machine controls are disabled before exiting the cab.

Note: *When entering or leaving a canopy machine, both LH and RH locks must be raised.*

Note: *The illustration shows a typical model; your machine may look different from the model shown.*

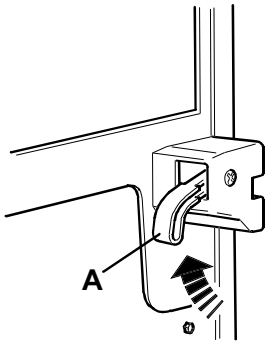
WARNING

Always face the machine when entering or leaving the cab. Use the step(s) and handrails. Make sure the step(s), handrails and your boot soles are clean and dry. Do not jump from the machine. Do not use the machine controls or lever locks as handholds, use the handrails. Failure to follow these instructions could result in unexpected movement of the machine.



Cab

The cab is bolted on top of the mainframe and is a welded steel construction. The cab has a sliding window on the right side, a hinged door and an up and over windscreen. All windows are of toughened glass. The cab is fitted with a windscreen wiper, heater fan, seat and all operating controls and instruments.



CAUTION

Do not drive the machine with the door unlatched. It must be correctly closed or secured fully open.
HOP29

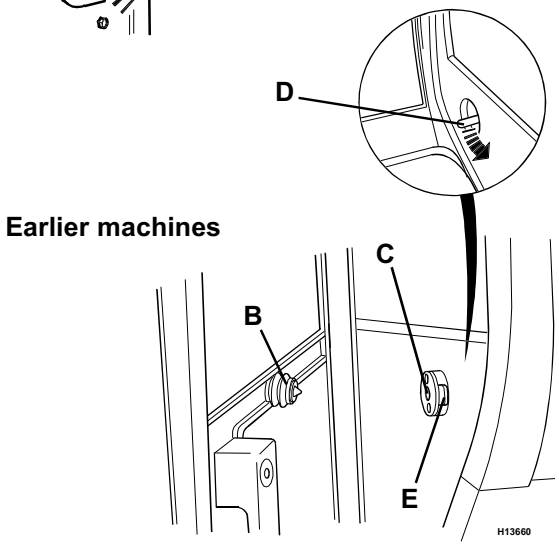
Opening and Closing the Door

To open the door from the outside, unlock it with the key provided and press the lock barrel to release the catch. To open a door from inside, push lever **A** upwards. Close the door from the inside by pulling it firmly, it will latch itself.

Securing the Door in the Open Position

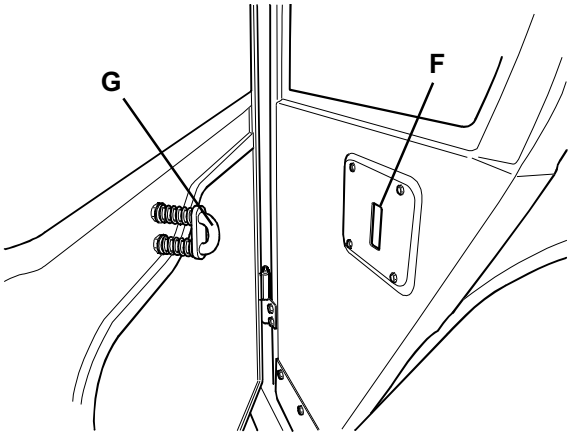
The door can be secured in the fully open position.

Earlier machines



Earlier machines
Swing the door fully open until the spigot **B** on the door locates securely in the socket **C** on the side of the cab

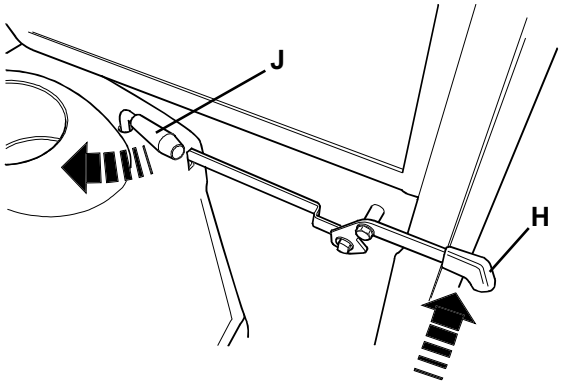
To release the door when it is secured fully open, operate the Lever **D** on the inside of the cab or the button **E** on the outside of the cab.



* **8015** machines from 0894200
8017 machines from 0896000
8018 machines from 0897000

Swing the door fully open until the catch plate **F** on the door locates securely on the sprung latch **G** on the side of the cab.

When the door is secured fully open, it can be released from outside the cab by operating lever **H**, or from inside the cab by operating lever **J**, as illustrated. Make sure the door is securely closed.

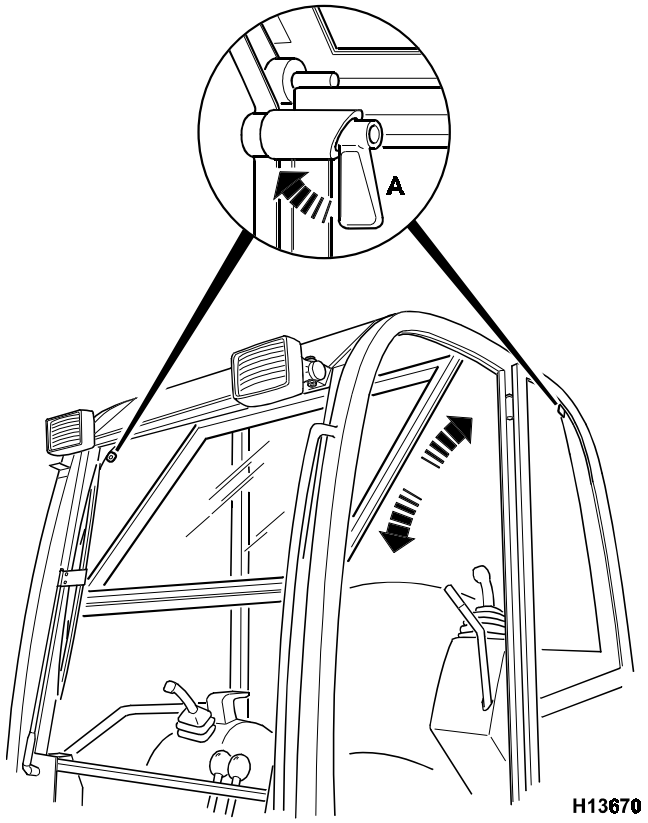


Opening the Windscreen

To open the up and over window, disengage both latch pins **A** on the top edge of the screen, lift the screen to the mid position or to the fully open position (parallel with the roof). Secure in place with the latch pins **A**.

To close the tilting windscreen: disengage the latch pins **A**. Carefully lower the complete windscreen into the closed position. Ensure the latches on the windscreen engage in the locating points in the cab frame.

Note: *Care must be taken when lowering the window not to bump the top edge of the lower front window.*

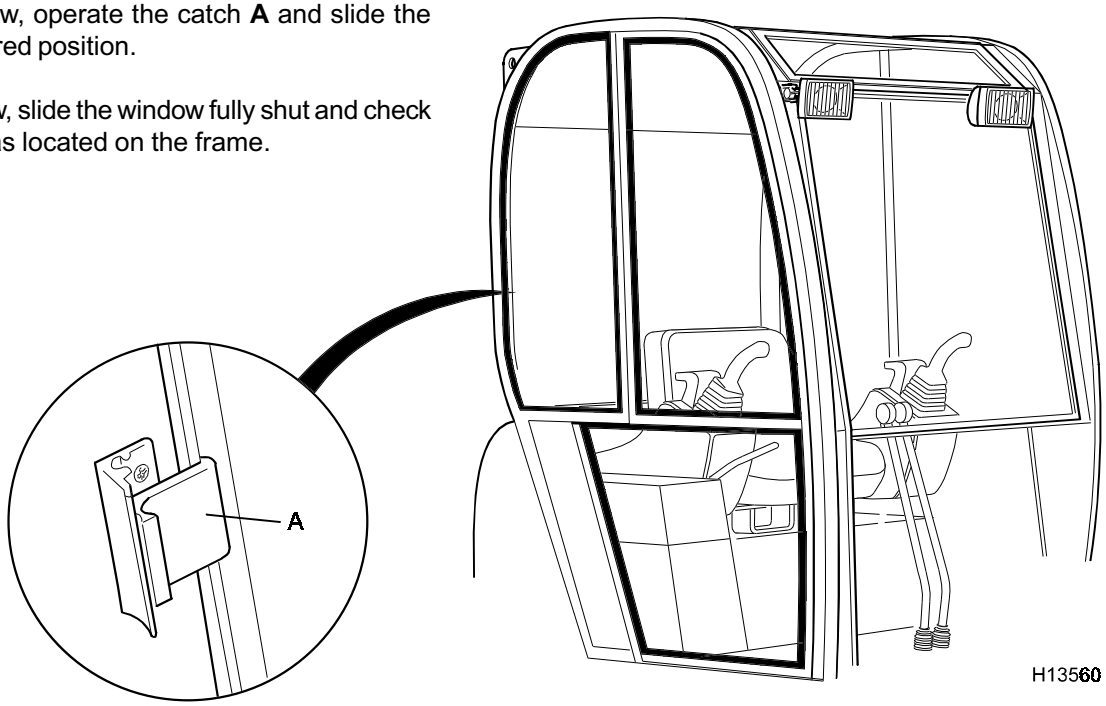


Opening the side window

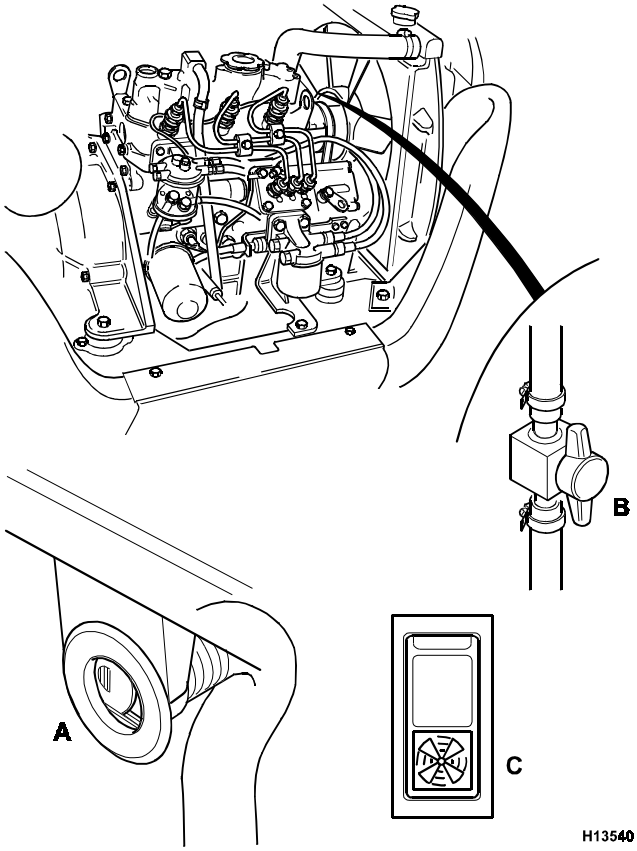
The side window is held closed by catch **A** operated from inside the cab.

To open the window, operate the catch **A** and slide the window to the desired position.

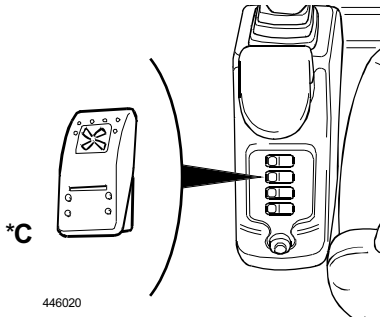
To close the window, slide the window fully shut and check that the catch **A** has located on the frame.



Heater controls



Earlier machines



8015 machines from 0894200
8017 machines from 0896000
8018 machines from 0897000

Windscreen Louvres

Hot air can be directed to the windscreen and / or the cab floor by closing / opening flaps **A**. For the summer use, the heater element can be turned off at the water valve **B** on the engine.

WARNING

Stop the engine before lifting the engine cover to operate valve B. HOP30

Heater Fan

Press the rocker switch **C** down to switch the fan on to the lower speed. Press the switch again to select the faster speed (optional). Return the switch to the first position to turn the fan off.

Seat control

WARNING

Do not adjust the seat with the engine running otherwise your legs could knock the control levers. HOP31

Depending on the type of machine various adjustments can be made to the positions of the control levers and the seat consoles/armrests.

The operators seat can be adjusted for your comfort. A correctly adjusted seat will reduce operator fatigue. Position the seat so that you can comfortably reach the controls with your feet on the cab floor. The seat is adjustable for height and reach.

CAUTION

Having adjusted the seat position, ensure the seat locking lever has engaged fully.

Suspension Seat - when fitted

WARNING

Whilst seated, adjust the dial on the left of the seat until your weight in kgs appears in the red shaded area. Failure to set the weight adjustment dial will reduce the beneficial isolation effect of the seat suspension and may result in personal discomfort or injury. 2-2-1-12

Seat Belt

Fasten the Seat Belt

Sit correctly in the seat. Make sure the belt is not twisted. Push the male fitting **A** into the buckle **B** until it latches.

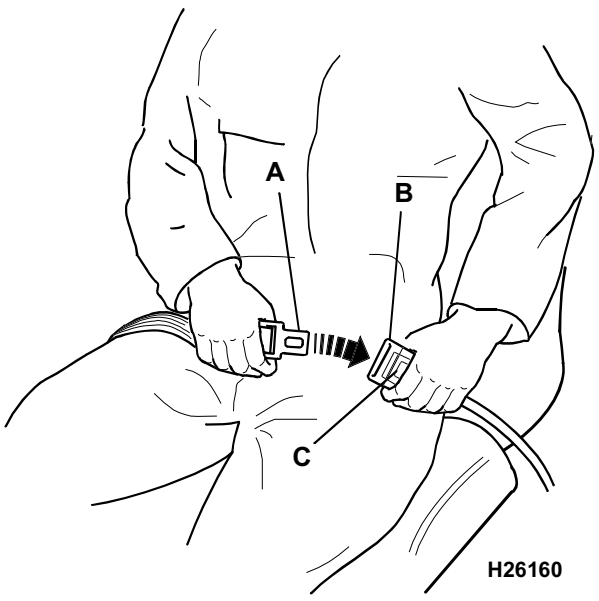
Release the Seat Belt

Press button **C** and pull the recoil side of the belt outwards.

WARNING

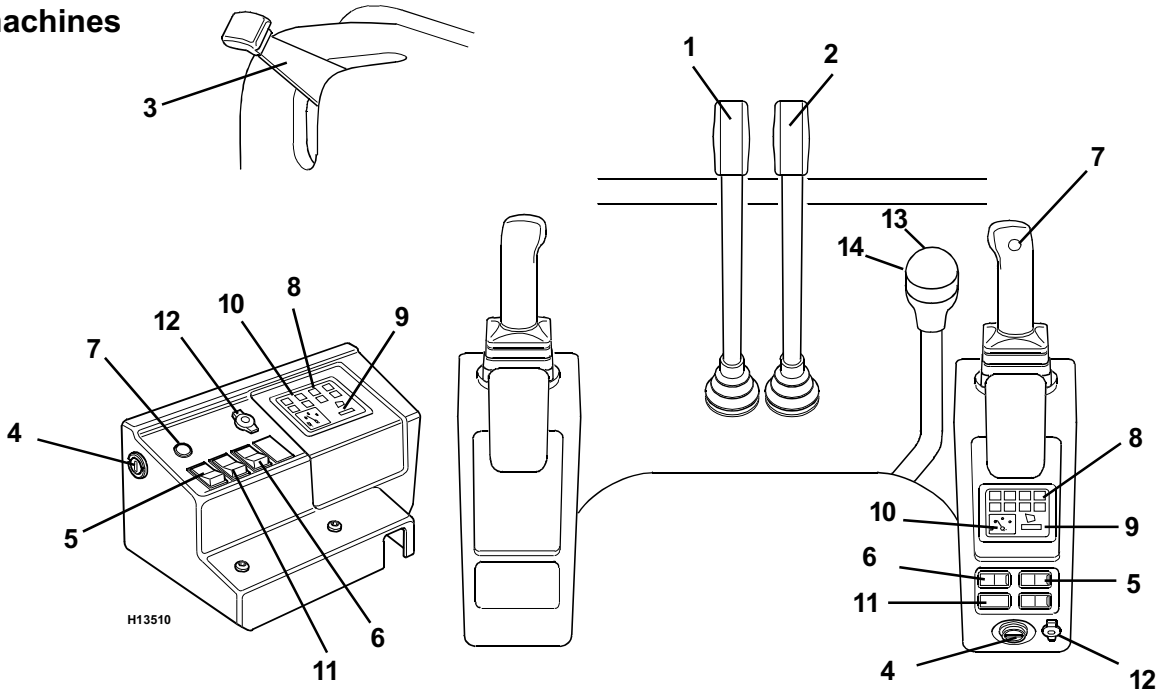
*__The ROPS and TOPS cab is designed to give you protection in an accident.__ If you do not wear the seat belt you could be thrown about inside the cab, or thrown out of the machine and crushed. You must wear a seat belt when using the machine. Fasten the seat belt before starting the engine.

2-2-1-9



Engine and Track Controls, Switches and Instruments

Earlier machines



1	Left Track Control Lever	**6**	Windscreen Wiper Switch	**11**	Heater Fan
2	Right Track Control Lever	**7**	Horn Button	**12**	Beacon Socket
3	Hand Throttle Lever	**8**	Warning Lights	**13**	Two-Speed Tracking Switch
4	Starter Switch	**9**	Hourmeter	**14**	Extending/Retracting Undercarriage Switch
5	Working Lights Switch	**10**	Fuel Gauge		

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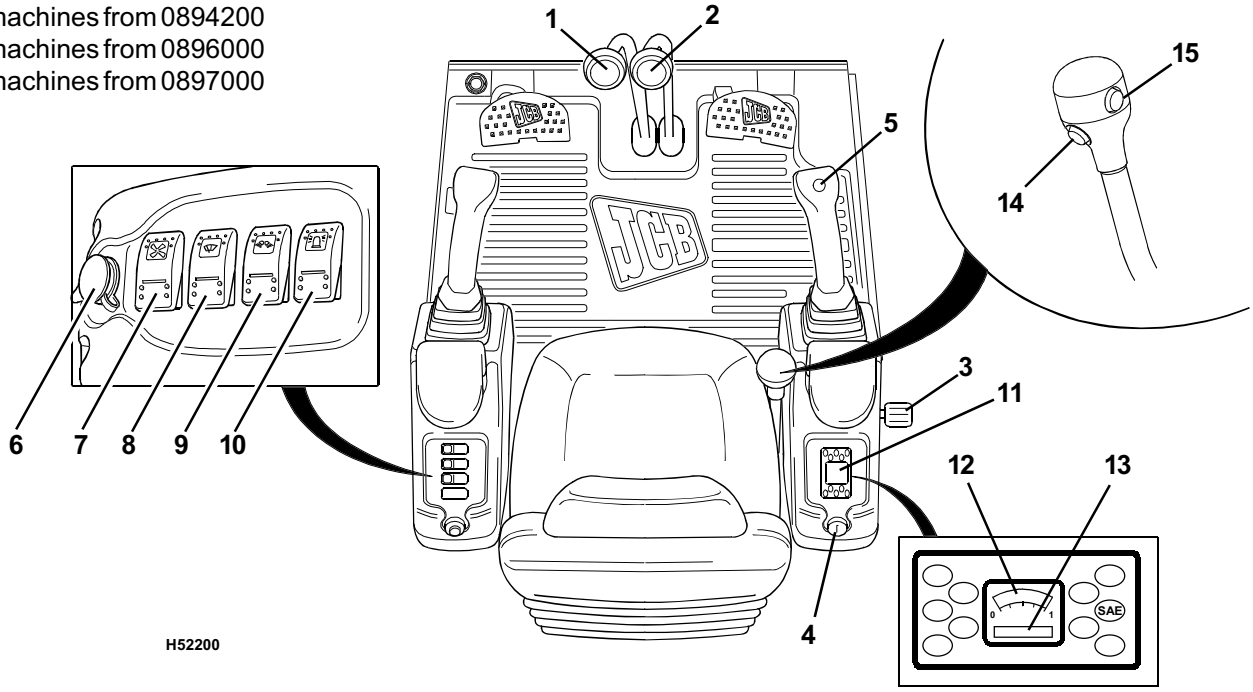
*__8015__ machines from 0894200
__8017__ machines from 0896000
__8018__ machines from 0897000



1	Left Track Control Lever	**6**	Beacon socket	**11**	Warning Lights
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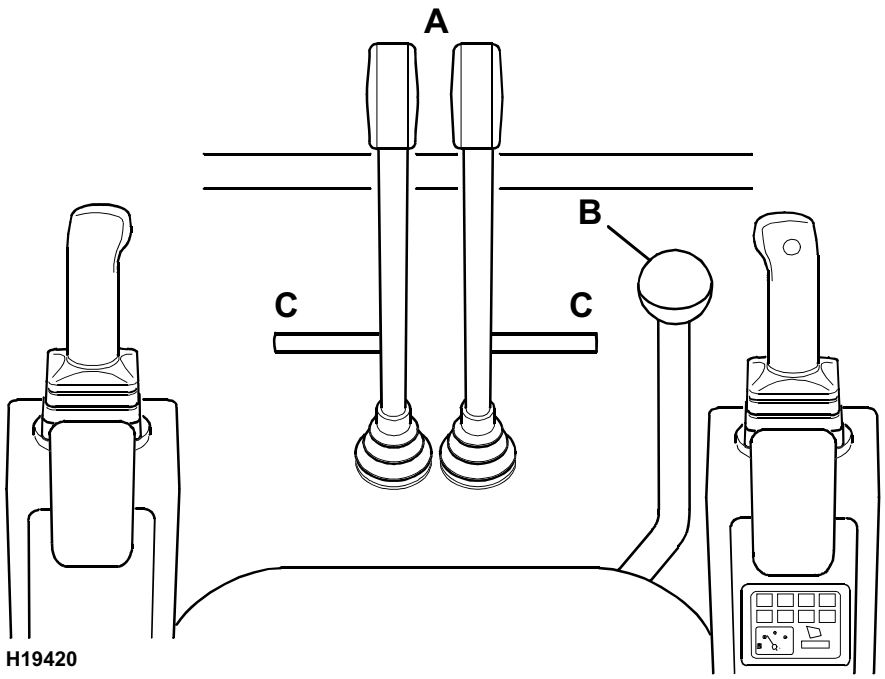
4	Starter Switch	**9**	Working Light Switch	**14**	Two Speed Tracking Switch
5	Horn	**10**	Beacon Switch	**15**	Extending/Retracting Undercaggiage Switch

Engine and Track Controls, Switches and Instruments - continued



Track Controls

The two tracks are controlled by a pair of control levers **A** in front of the seat. Each lever controls one track and is spring loaded to a central position. In this position the track does not operate. The left side lever controls the left track. The right side lever controls the right track. The two levers can be operated individually or together as necessary to move the machine as required. This can be done using one hand or both. The levers can also be operated by using the foot pedals **C** (optional).

An increase in speed may be achieved by operating the two speed tracking button **B** located on the dozer control lever knob (standard on 8017 and 8018, optional on 8015)

NOTE: *An extra selector button is fitted to this knob for machines with an extending undercarriage.*

WARNING

Make sure that all persons are clear before moving.

WARNING

The track controls operate as described when the dozer is located in front of the windscreen. If the dozer is positioned behind the cab, the lever operation will be reversed. It is advisable when tracking to always position the dozer to the front of the machine.

Forward

To move the machine forward, push both levers forward. Release the levers to stop.

Reverse

To move the machine backward, pull both levers backward. Release the levers to stop.

Turn

To turn the machine whilst travelling, move the lever back towards the central position on the side towards which you want to go e.g. move the left lever back to turn left. This causes one of the tracks to move slower than the other. The faster moving track will push the machine around. Release the lever to stop.

Spin

To spin the machine around though 360º, without moving it, operate one lever, in a forward position and the other in a reverse position. This will cause the tracks to drive in opposite directions and hence push the machine around.

Engine and Track Controls, Switches and Instruments - continued

Engine Controls

Engine Speed

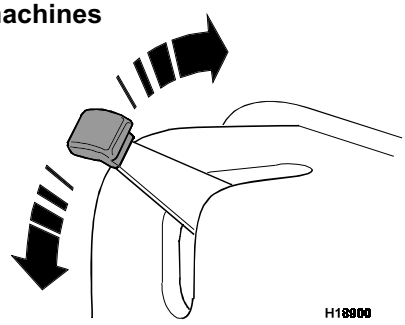
A hand operated throttle lever in the cab, controls the speed of the engine.

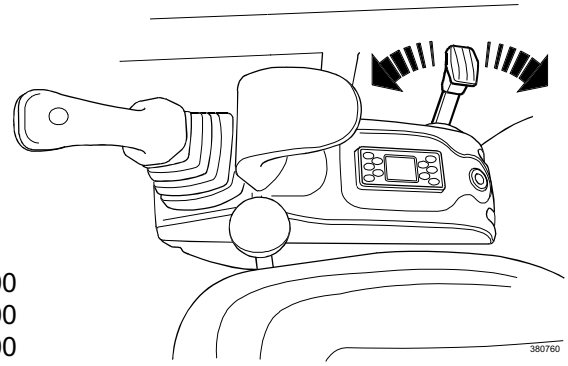
Move the lever to increase or decrease the engine speed. The lever can be left in any position between idle and maximum as required.

Engine Start / Stop

To start and stop the engine use the starter switch, see **Switches** on the following page.

Earlier machines





8015 machines from 0894200
* **8017** machines from 0896000
8018 machines from 0897000

Switches

Starter Switch A

Note:** Read ***Section 1, Starting The Engine before starting the machine.

This is operated by the starter key. It has four positions. The key can only be removed when in the **'O'** position.

O Off/Stop Engine
Turn the key to this position to stop the engine. Make sure the controls are in neutral and the excavator and dozer are lowered before stopping the engine.

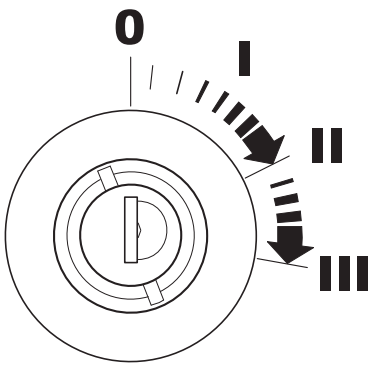
I On
Turning the key in this position connects the battery to the electrical circuits The key will spring back to this position when released from **II**.

II Heat Position
Holding the key in this position switches on the glow plugs. The glow plugs warm the engine combustion chambers for cold weather starting. Do not hold in this position for more than 60 seconds. The key will spring back to **I** when released.

***III Start**
Operates the starter motor to turn the engine.

Note: Do not operate the starter for more than 15 seconds at one time. If the engine fails to start, allow the starter to cool for a few minutes before trying again.

The starter switch has an inhibitor to stop the switch being turned ON when the engine is running. If the engine fails to start, the switch needs to be returned to the OFF position before re-engaging the starter.



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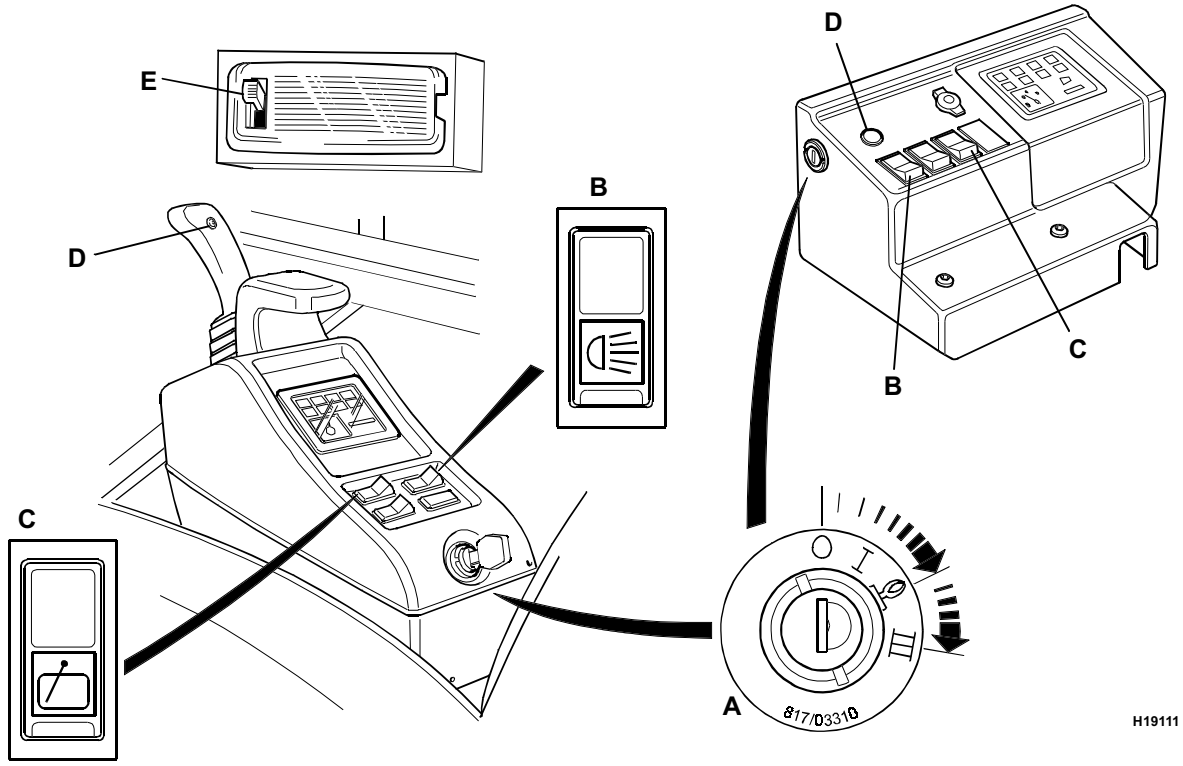
Engine and Track Controls, Switches and Instruments - continued

Earlier machines



Switches - continued

*** Working Light Switch B**

This is an illuminated rocker switch. Press the switch down to switch the working lights on. The yellow part of the switch will come on. Press the switch again to switch the working lights off, the yellow part of the switch will go out.

Windscreen Wiper Switch C

This is a two position rocker switch. Press the switch down on one side to switch the windscreen wiper onto the slower speed. Press the switch to the other side to switch the windscreen wiper onto the fast speed. Put the switch to the centre position to switch off the windscreen wiper, which will then self park.
Functions only with the starter switch at **I**.

Horn Button D

This is a push button switch located in the R.H. excavator control lever or positioned in the instrument console. Press the switch to activate the horn.

Cab Light E

A cab light is situated on the right side of the cab, above the window. It is operated by an integral sliding switch.

Engine and Track Controls, Switches and Instruments - continued

*__8015__ machines from 0894200
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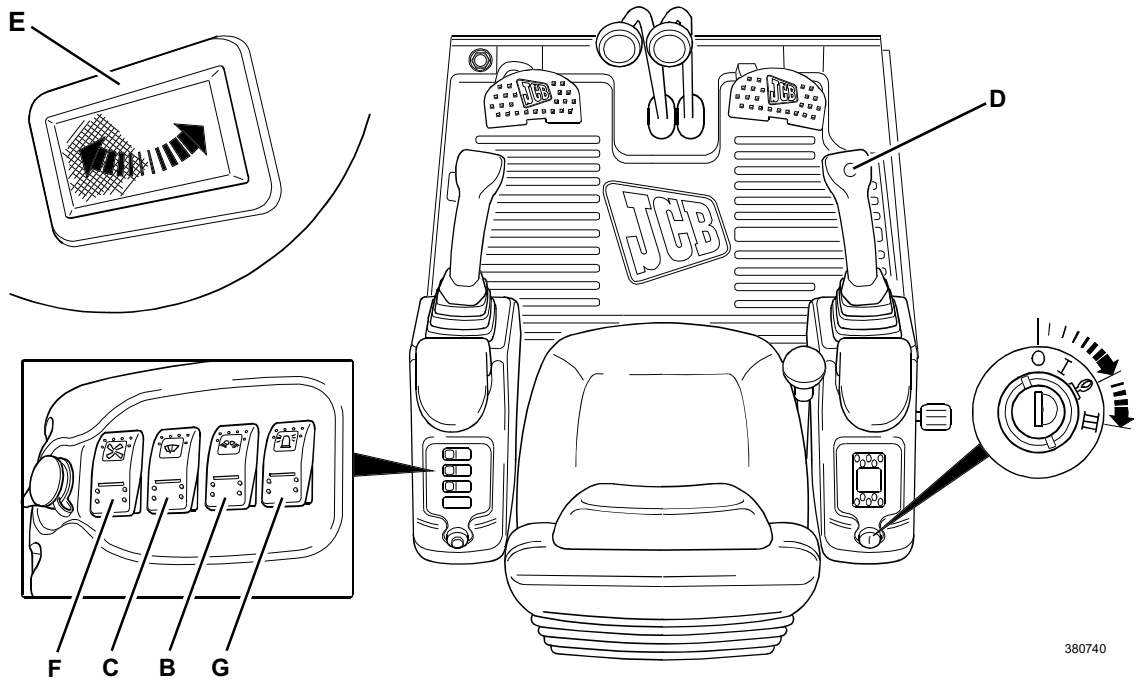


Switches - continued

Work Light Switch B

On/Off Switch

Windscreen Wipe Switch C

Press the switch down once to switch the windscreen wiper on.
Put the switch to the OFF position to turn off the windscreen wiper, which will then self park.
Fuctions only with the starter switch at position **I**.

Horn Button D

This is a push button switch located in the R.H. excavator control lever.
Press the switch to activate the horn.

Cab Light E

A cab light is situated on the right side of the cab, above the rear window. It is operated by pressing either end of the light lens.

Heater Fan Switch F

Press the rocker switch **C** down to switch the fan on to the lower speed. Press the switch again to select the faster speed (optional). Return the switch to the first position to turn the fan off.

Flashing Beacon Switch G

On/Off switch.
Functions with ignition ON or OFF.

Engine and Track Controls, Switches and Instruments - continued

Instrument Cluster - Earlier machines

Indicators for the engine and related systems are mounted in the instrument cluster in the R.H. console.

A Hourmeter
Indicates the accumulative machine operating hours.

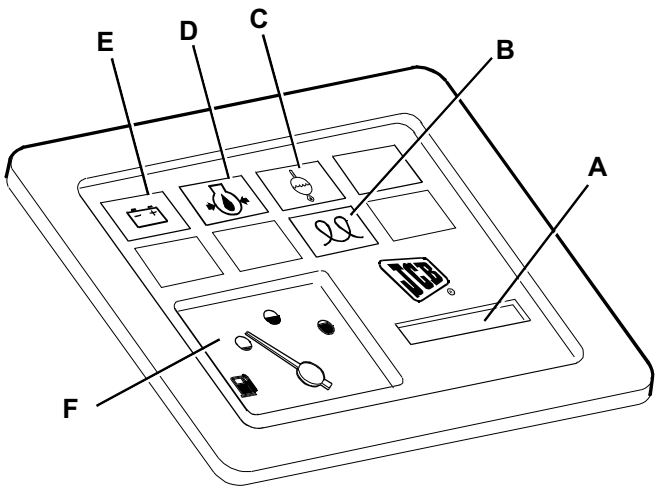
B Glow Plug
Illuminated with the starter key at positions **II** and **III.** Extinguished at all other times.

C Coolant Temperature
Illuminated when the engine coolant becomes overheated.

D Engine Oil Pressure
Illuminated when the pressure of the oil in the engine is too low, and initially with the starter at position **I** before the engine is cranked.

E Alternator
Illuminated when the alternator supply current to the battery is defective and/or the fan belt is broken. It will also illuminate initially with the starter key at position **I** before the engine is cranked.

F Fuel Gauge
Indicates the amount of fuel in the tank.



H50600

*Instrument Cluster - 8015 from 0894200, 8017 from 0896000, 8018 from 0897000

Indicators for the engine and related systems are mounted in the instrument cluster in the R.H. console.

A Charge (Fault) Indicator
Indicates Alternator operation. Illuminates RED when a fault occurs.

B Coolant Temperature (High) Indicator
Illuminates RED when coolant temperature is too high.

C Engine Oil (Low) Indicator
Illuminated RED when engine oil pressure is too low.

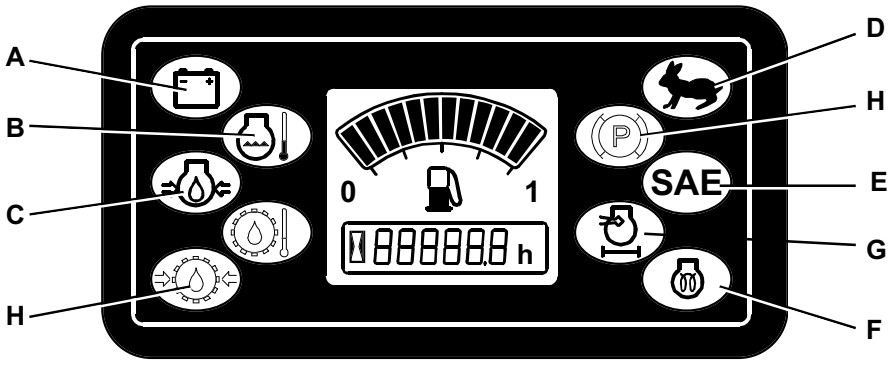
D Two Speed (High Engaged) Indicator
Illuminated GREEN when high speed is engaged.

E SAE Controls (Selected) Indicator
Illuminates GREEN when SAE control pattern is selected.

F Glow Plugs (On) Indicator
Illuminates YELLOW when the Glow Plugs are energised.

G Air Filter (Blocked) Indicator
Illuminates YELLOW when the Air Filter is blocked.

H Indicators (not fitted on this machine)



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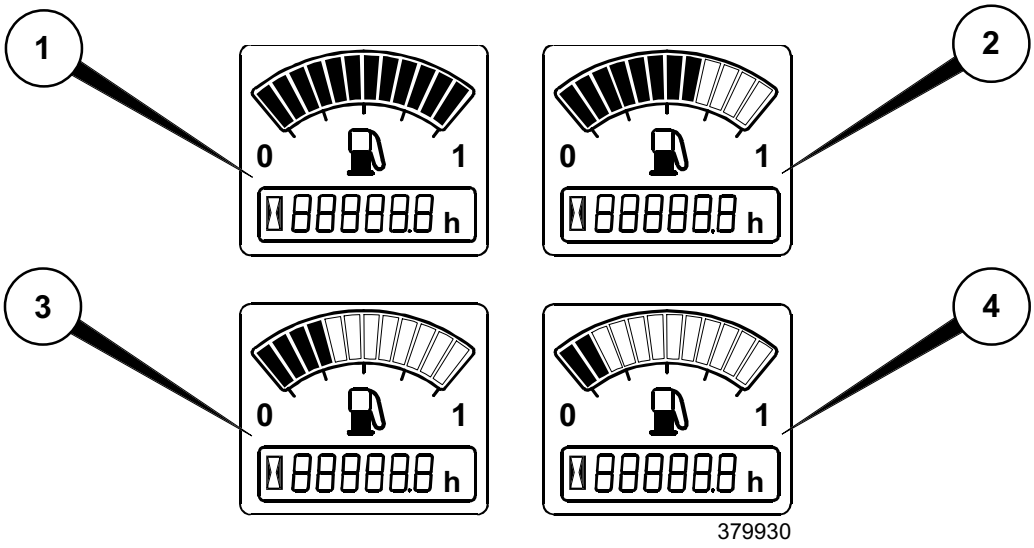
Engine and Track Controls, Switches and Instruments - continued

*__8015__ machines from 0894200
__8017__ machines from 0896000
__8018__ machines from 0897000



Digital LCD Fuel Gauge

Fuel Tank Level Indicator

1	**Full Tank**	All bars illuminated Filler symbol illuminated
2	**4 bars to Full**	Filler symbol illuminated All bars illuminated and reducing as level drops ie. 11 bars, 10 bars, 9 bars etc.
3	**4 bar to 3 bar**	Buzzer gives 3 short beeps. Pump symbol starts to flash.
4	**3 bar to 1 bar**	Pump symbol remains flashing 1 bar illuminated (nearly empty) 0 bars illuminated (tank empty)

Note: *The flashing of all fuel level bars and the filler pump symbol indicates a fault in the fuel sender circuit. Contact your JCB dealer.*

Audible Warnings

A buzzer will sound if any of the following display a machine fault.

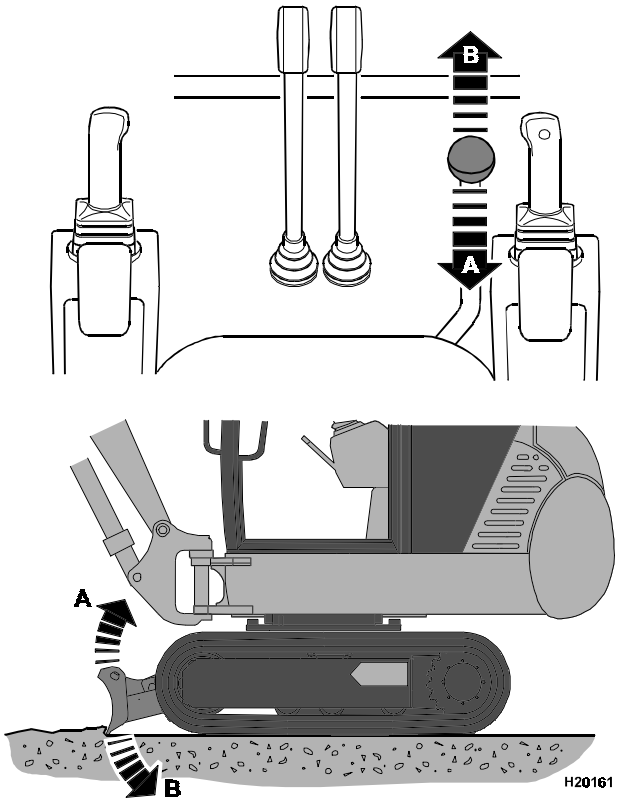
A Charge indicator
B Coolant indicator
C Engine oil pressure
G Air Filter indicator

(see instrument cluster illustration)

If the fault is ignored the buzzer will sound continuously for 180 seconds, after which it will sound intermittently, 1 second on, 2 seconds off.

Switch the ignition off to reset all operations.

Dozer controls



The dozer is operated by a single control lever on the right side of the cab. The buttons fitted to the lever knob allows the extending/retracting undercarriage operation or two-speed tracking on machines with these options. The lever is spring loaded to the central position. In this position the dozer will not move.

CAUTION

Before operating the dozer, make sure that large rocks or other objects are not between it and the tracks that can jam the mechanism. HOP34

CAUTION

Before stopping the engine lower the dozer blade to the ground. HOP35

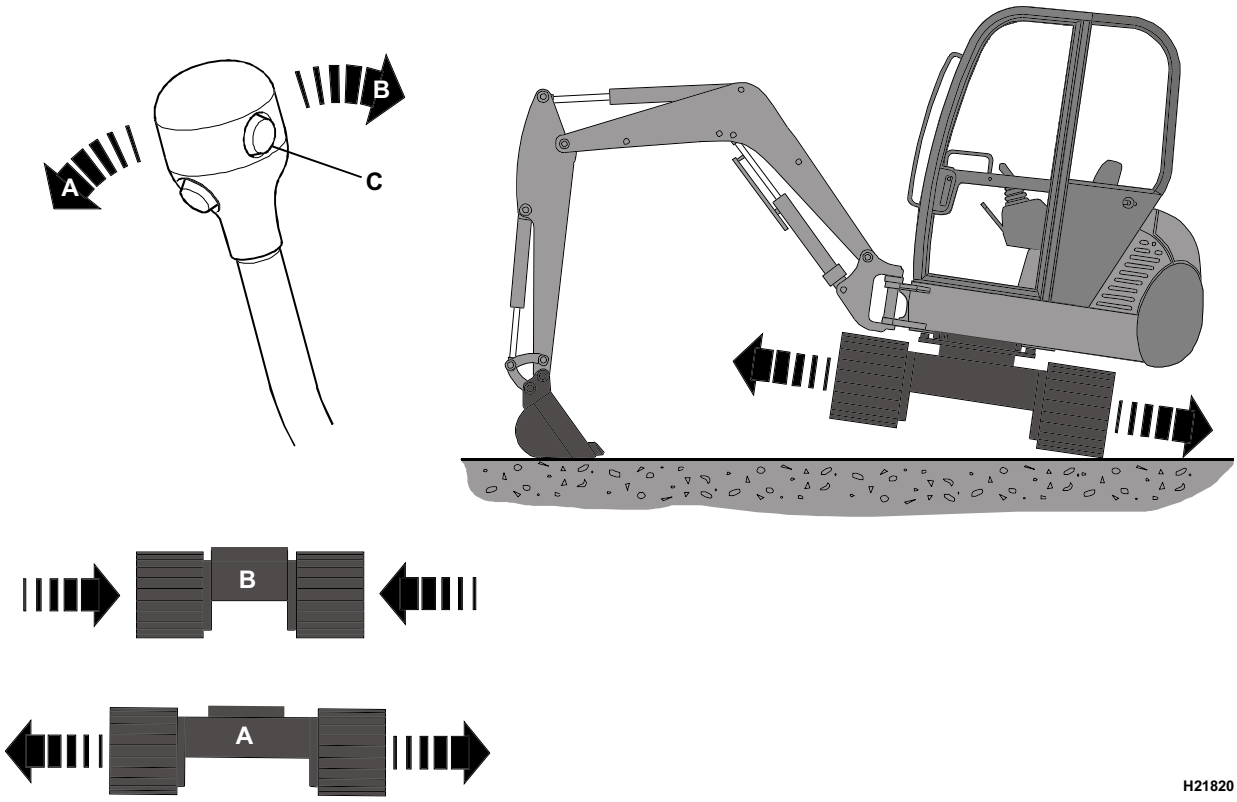
Raise Dozer 'A'

To raise the dozer pull the lever backward. At the required position release the lever.

Lower Dozer 'B'

To lower the dozer push the lever forward until an increased resistance is felt and the blade moves. At the required position release the lever.

Extending/Retracting Undercarriage



WARNING

The 801 Gravemaster is designed for a specialised function and must not be used for more arduous general excavating or earth moving duties. The extra long dipper fitted to the Gravemaster will reduce machine stability, take care if working on inclines or when across the tracks.

WARNING

Always work with the undercarriage extended.

The extending/retracting undercarriage is operated by pressing and holding button **C** on the dozer lever, the lever then operates the undercarriage. The dozer operation returns to the lever when the button is released.

CAUTION

When excavating, the undercarriage must be extended to full width. Do not extend or retract undercarriage on sloping ground.

Operation

1 Position machine on level ground, ensure all persons are clear of the machine.

2 Operate the dozer lever to raise the dozer.

3 Slew the machine 90° across tracks, position the bucket on the ground, (as shown).

4 Select boom down and operate to raise one track just clear of the ground.

5 Press and hold undercarriage button **C**.

6 Operate the dozer lever to operate undercarriage

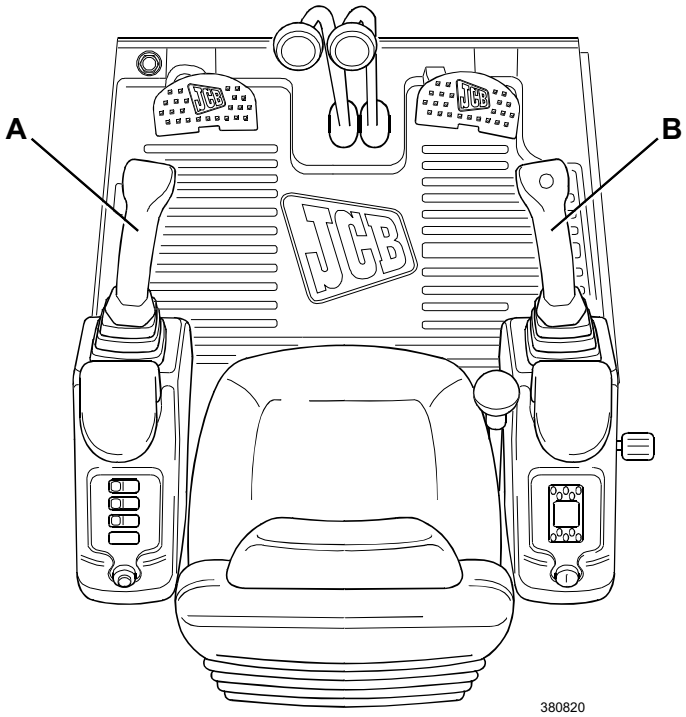
A Forward - to extend undercarriage

B Back - to retract undercarriage

7 When fully retracted/extended, release button **C**.

8 Select boom up and slowly lower the track to the ground.

Excavator Controls



The excavator controls consist of those levers which operate the boom, dipper and bucket and slew the cab.

There are two excavator controllers **A** and **B** which control all the functions.

The controls are situated in the operators seat armrests. Raising the left armrest when leaving the cab prevents the services operating. When re-entering the cab, ensure the armrest is replaced firmly to ensure correct operation.

In the standard ISO pattern, the left side controller **A** controls slew and dipper functions. The right side controller **B** controls boom and bucket functions as standard.

It is possible to specify SAE style operating functions i.e. left controller **A** controlling slew and boom. The right hand controller **B** controlling dipper and bucket operation.

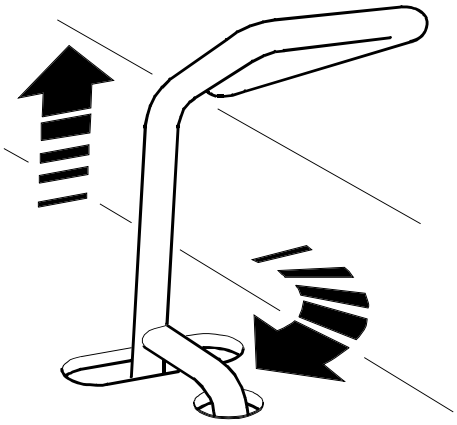
Both controllers are spring loaded to the central position. In this position related services will not operate.

Most excavating movements are achieved using a combination of both controllers at the same time. Practise such movements until you are familiar with the operations that can be achieved safely.

Excavator controls - continued

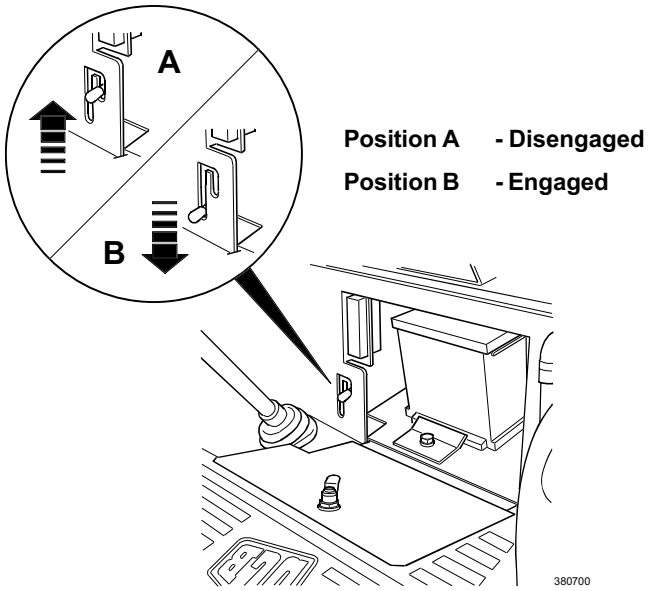
Earlier machines

Before slewing the cab, ensure that the slew lock is disengaged (the up position).



*__8015__ machines from 0894200
__8017__ machines from 0896000
__8018__ machines from 0897000

The slew lock is situated in the seat bulkhead. Lift and move to the left placing it in the unlocked position. Ensure it is UNLOCKED before operating the excavator controls.



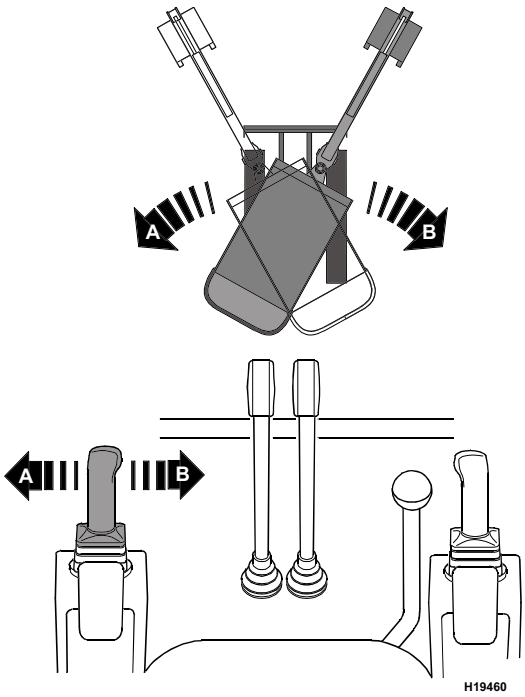
Excavator controls - continued

Slew Cab Left

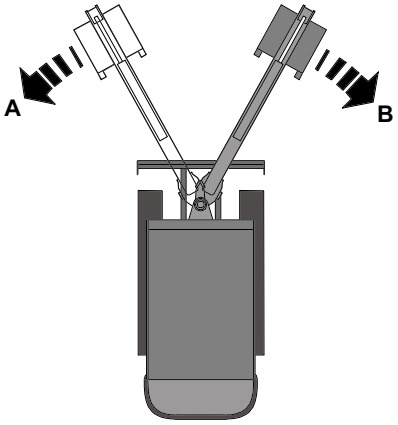
To slew the cab to your left, move the left controller to the left **A**. Release the controller when you have moved to the desired position.

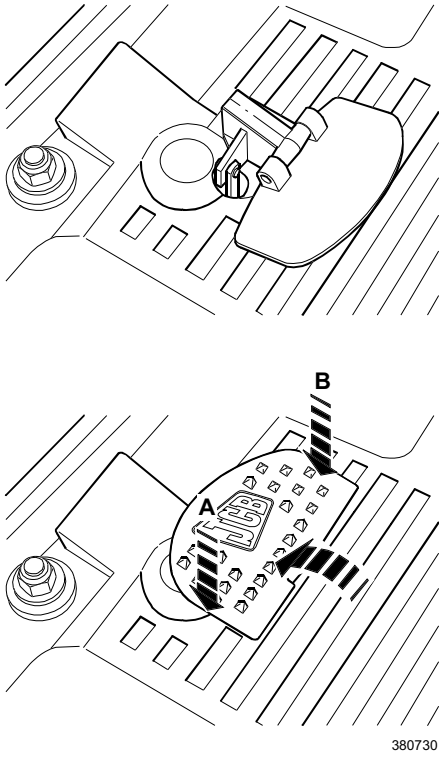
Slew Cab Right

To slew the cab to your right, move the left controller to the right **B.** Release the controller when you have moved to the desired position.



Excavator Controls - continued





WARNING

When using the boom and dipper fully extended, take the following precautions, otherwise the machine could get damaged or become unstable and a danger to you and other people.
Make sure you do not exceed the working capacity of the boom at maximum reach.
Swing the boom slowly to prevent any chance of the machine becoming unstable. For the same reason avoid dumping downhill if possible.
HOP36

CAUTION

Do not excavate on hard or rocky ground with the boom set diagonally across the undercarriage. This induces a rocking motion that can cause damage to the track gearbox sprockets and tracks.
HOP37

Swing Boom Left

To swing the boom to your left **A**, unlock the swing pedal by pivoting the pedal **C** forward into its operating position, press the pedal to the left side. Release the pedal when the excavator end has reached the desired position.

Swing Boom Right

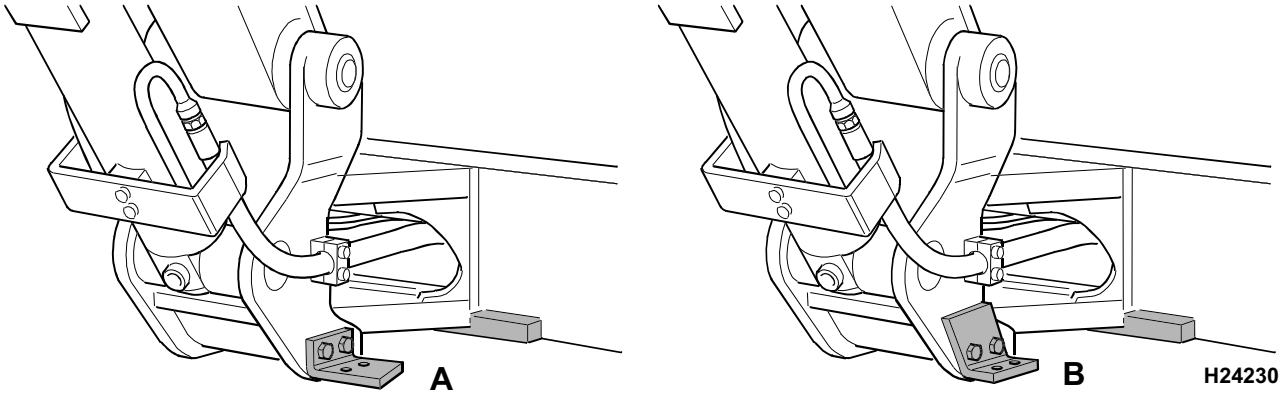
To swing the boom to your right **B**, unlock the swing pedal by pivoting the pedal **C** forward into its operating position, press the pedal to the right side. Release the pedal when the excavator end has reached the desired position.

CAUTION

The swing pedal must be in the locked position when not in use.

Excavator Controls - continued

Earlier machines



Boom Swing Stop

The boom swing can be adjusted to allow an increased swing to the left from 60º to 90º by repositioning the swing stop.

60° Operation

Set the swing stop to position **A** this enables the machine to operate in an arc of 60º to the left and 50º to the right.

90° Operation

Set the swing stop to position **B** this enables the machine to operate in an arc of 90° to the left and 50° to the right.

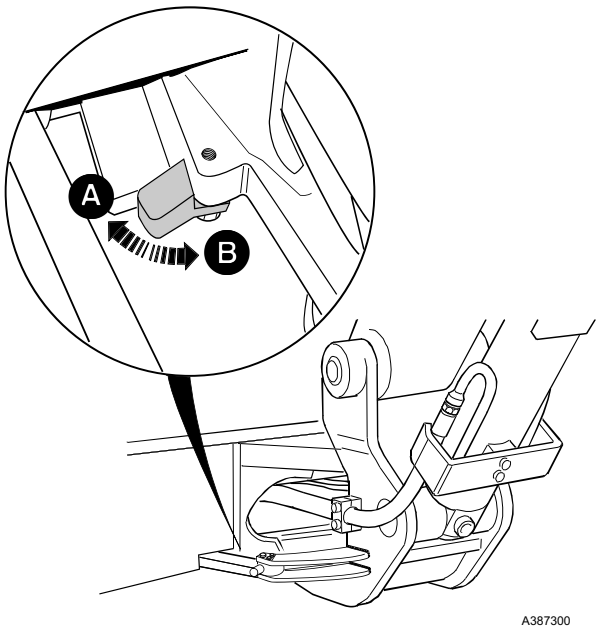
CAUTION

With certain digging configurations with the boom stop set to 90° the bucket can contact the cab. Care should be taken whenever operating with the boom stop set to 90° especially at the extremes of position. The machine can become unstable with a fully laden bucket. HOP39

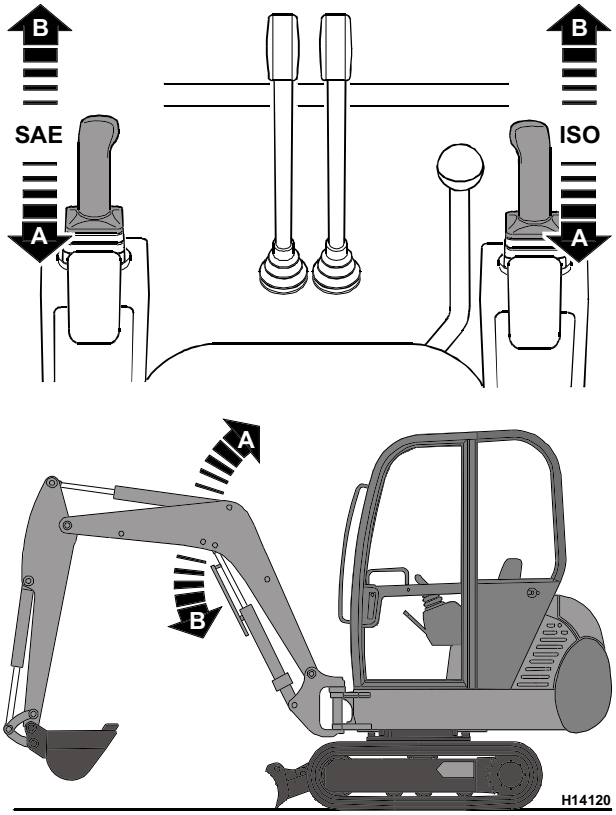
CAUTION

The boom stop should only be used in the 90° position for the duration of the job. Return the boom stop to the 60° position for normal operating.

*__8015__ machines from 0894200
__8017__ machines from 0896000
__8018__ machines from 0897000



Excavator Controls - continued



WARNING

Thoroughly warm the hydraulic oil before operating the excavator services. Before selecting boom up, check there are no overhead obstructions or electric power cables. HOP40

CAUTION

The boom service is operated by the R.H. controller on standard ISO control machines or by the L.H. controller on the optional SAE control pattern machines. HOP41

Raise Boom

To raise the boom pull the respective controller backwards **A**. Release the controller when the boom has reached the desired position. The boom ram incorporates damping at the limit of boom raise, reducing the speed of the ram, eliminating shock loadings.

Boom Boost

Partial selection of the controller will limit the speed of boom raise. Boom Boost is automatically engaged when controller is fully selected.

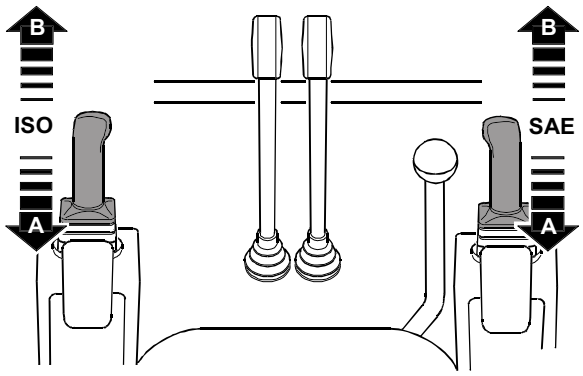
Lower Boom

To lower the boom, push the respective controller forwards **B**. Release the controller when the boom has reached the desired position.

Excavator Controls - continued

CAUTION

The dipper service is operated by the L.H. controller on standard ISO control machines or by the R.H. controller on the optional SAE control pattern machines. HOP42

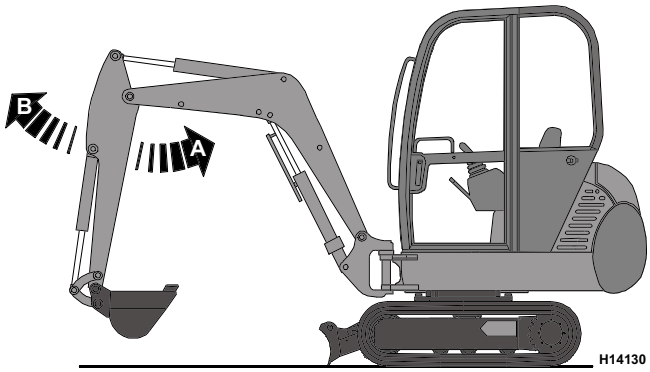


Dipper In

To bring the dipper in, pull the respective controller backward **A**. Release the controller when the dipper is at the desired position.

Dipper Out

To push the dipper out, push the respective controller forward **B**. Release the controller when the dipper is at the desired position.



WARNING

Care must be taken with machines fitted with an extra long dipper as it may affect the stability of the machine.

Excavator Controls - continued

Close Bucket

To close the bucket (to gather a load), move the right controller to the left **A**. Release the controller when the bucket is closed sufficiently.

Open Bucket

To open the bucket (to dump a load), move the right controller to the right **B**. Release the controller when the bucket is open far enough.