

## Quick Start Guide



## Compact Excavators



35Z-1 / 36C-1

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## Intended Use

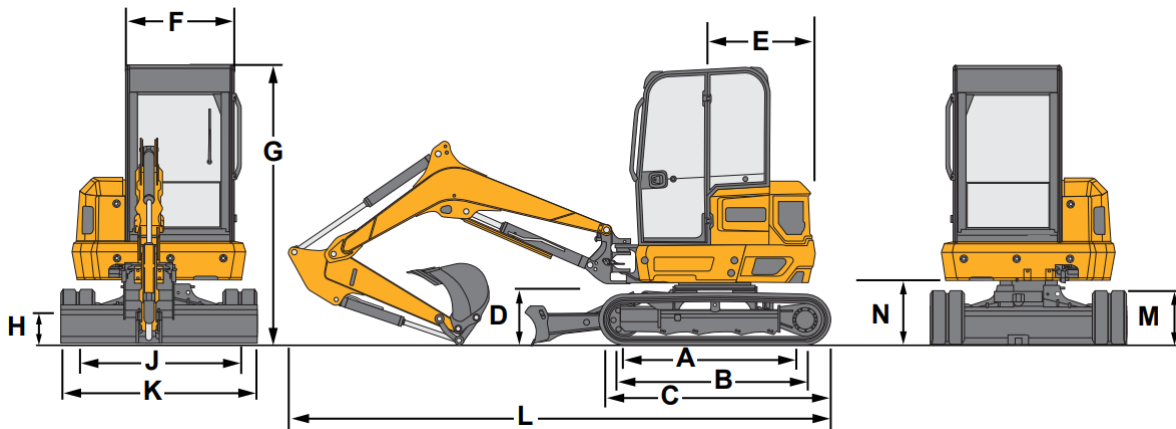
### General

- Machine type – Compact Excavator
- Self propelled machine with a tracked undercarriage
- 360° revolving upper structure with boom, dipper, bucket and slew mechanism

### Intended Use

- Machine intended to be used in normal conditions as detailed in the operators manual
- With bucket fitted, machine work cycle consists of digging, elevating, slewing and discharging of materials
- Applications include earthmoving, road construction, building and construction, landscaping etc.
- Can be used for object handling
- Not intended for use in mining and quarrying applications, demolition, forestry, any use underground and any explosive atmospheres.
- Must not be used for forestry, used with attachments of unknown weight, used on surfaces with unknown stability – list not exhaustive
- PPE may be required in certain applications/environments e.g. high silica concentration or asbestos
- The machine should not be operated by any person without appropriate qualifications, training or experience of using this type of machine
- Prior to use, the machines suitability should be considered with regards to the intended applications and any hazards which may be present

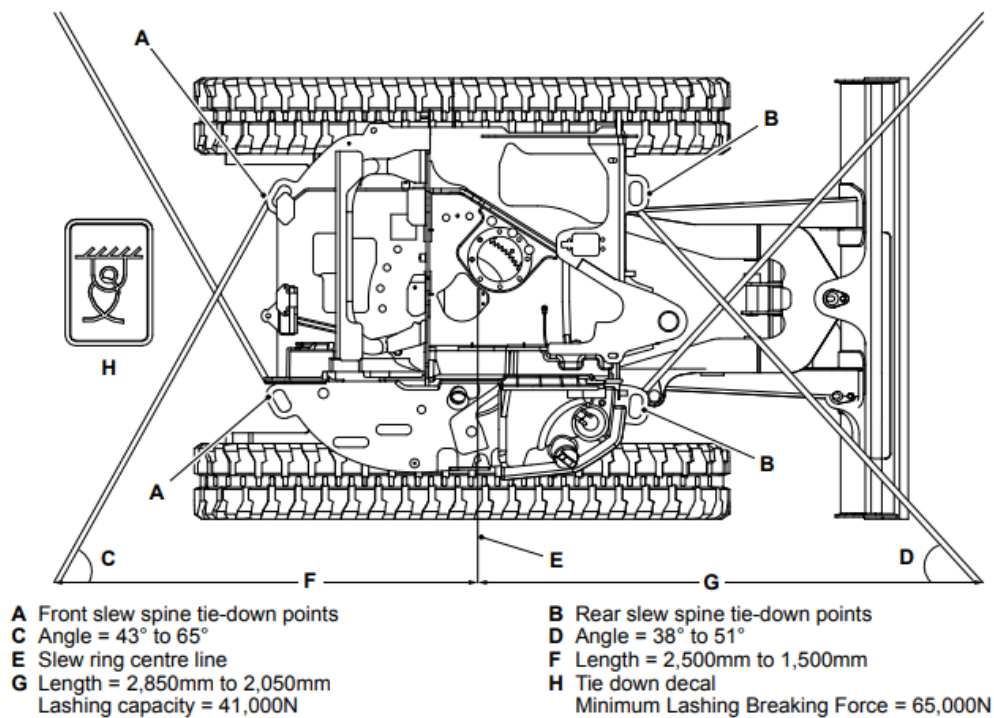
## Dimensions



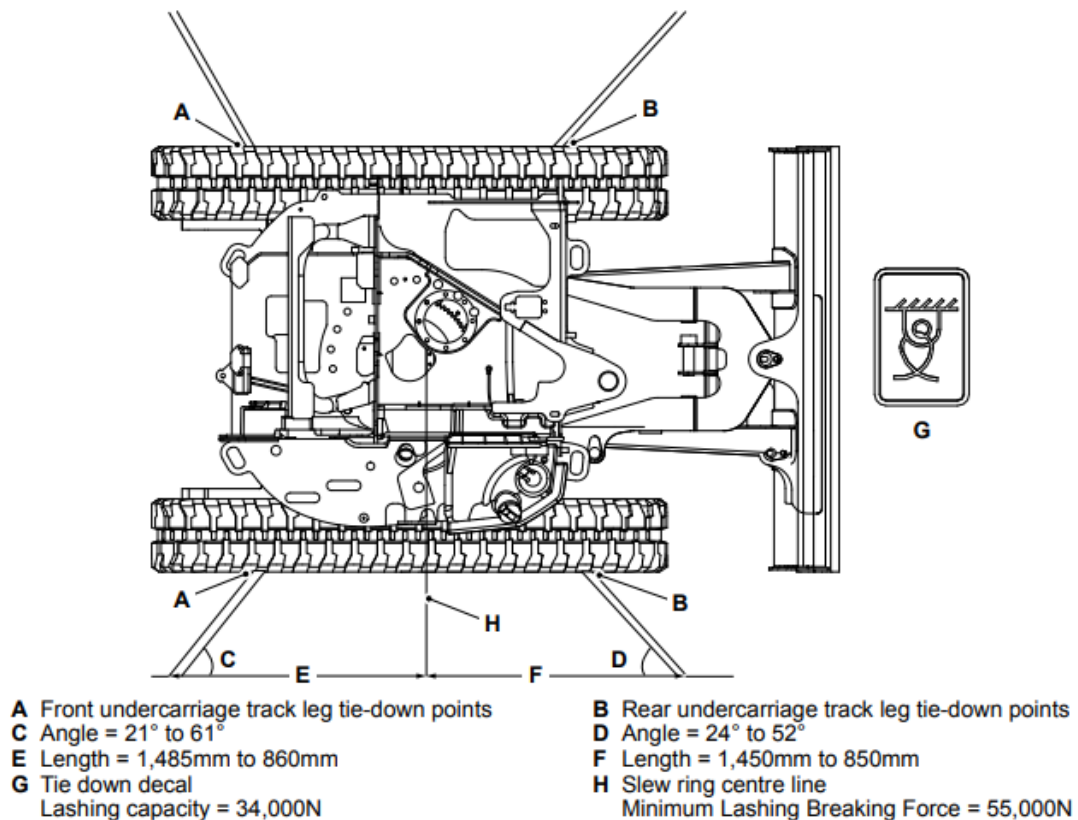
Item	Description	35Z-1	36C-1
A	Sprocket idler centres	1590mm	
B	Track length on ground	1590mm	
C	Undercarriage overall length	2049mm	
D	Kingpost clearance	555mm	
E	Tailswing radius – Light CW	900mm	1200mm
	Tailswing radius – Heavy CW	1000mm	1300mm
F	Overall width of superstructure	1550mm	
G	Height over cab	2482mm	
H	Ground clearance	275mm	
J	Track gauge	1400mm	1200mm
K	Width over tracks	1750mm	1550mm
L	Transport length – standard dipper	4851mm	4806mm
M	Track height - rubber	480mm	
N	Counterweight clearance	563mm	

# Tie down points

## Method 1



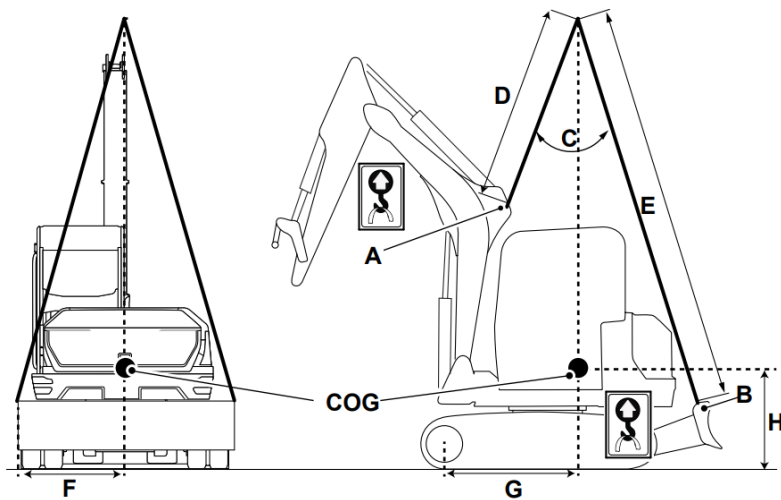
## Method 2



## Lifting Points

Carry out the following procedure when lifting a machine:

1. Remove all attachments
2. Remove all loose equipment from machine exterior
3. Check the unladen weight of the machine
4. Attach lifting equipment to each end of the dozer blade. Correct lift-point positions are identified on the machine by a label.
5. Attach lifting equipment to each end of the boom. Correct lift-point positions are identified on the machine by a label.
6. Position the dig end as shown below.
  - 6.1. Boom in centre position and ram fully extended.
  - 6.2. Dozer ram fully raised.
  - 6.3. Dipper ram fully extended.
7. Maintain correct angle between the boom and dozer blade.
8. Check that the lifting eye is positioned directly above the machine centre of gravity.

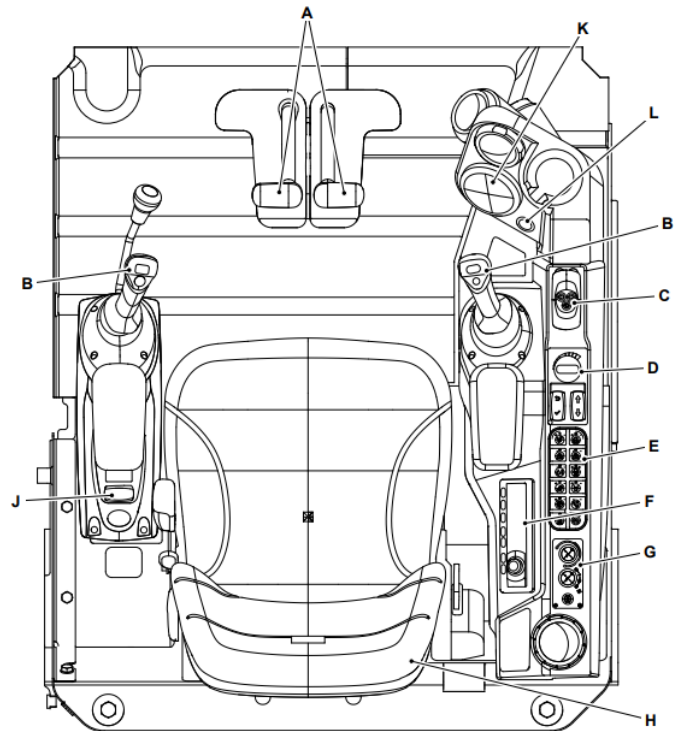


Item	35Z/36C
A	Boom lift point
B	Dozer blade lift point
C	38°
D	2148mm
E	4653mm
F	875mm
G	764mm
H	880mm

# Cab Layout & Controls

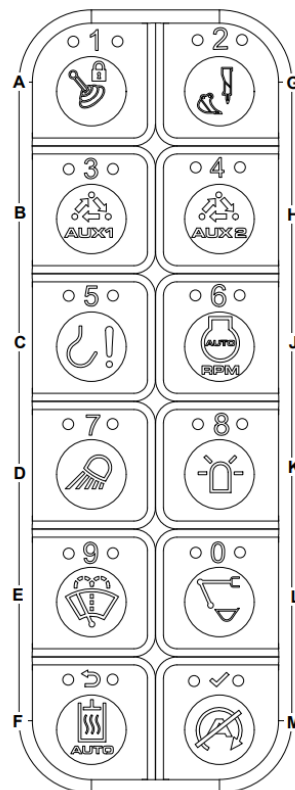
## Component Locations

- A. Track Controls
- B. Excavator controls
- C. Dozer blade control lever
- D. Throttle control
- E. Switch console
- F. Entertainment system
- G. Air-conditioning controls
- H. Operator seat
- J. ISO/SAE control pattern switch
- K. Instrument panel
- L. 12V Power socket



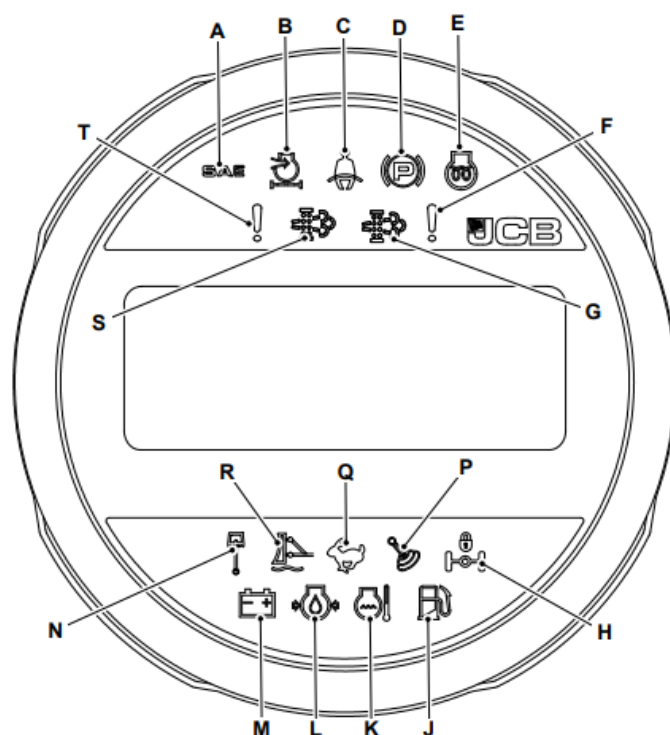
## Console Switches

- A. Hydraulics controls isolation (2 GO)
- B. Initiate Auto Aux Vent
- C. Lift overload
- D. Worklights
- E. Wiper
- F. Not used
- G. Tool selection
- H. Not Used
- J. Auto Idle
- K. Beacon
- L. Quick Hitch
- M. Auto stop switch



## Cab Layout & Controls

### Instrument Panel

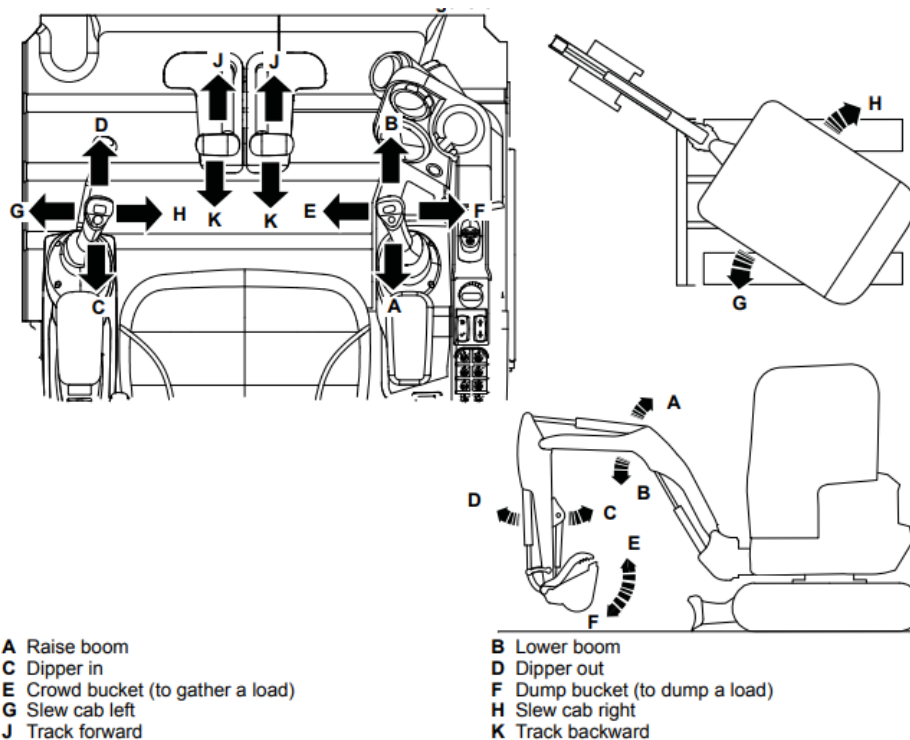


A	SAE active
B	Air filter (blocked) indicator
C	Seat belt
D	Park brake
E	Engine pre-heat
F	Master warning
G	After treatment critical warning
H	Axle lock
J	Fuel indicator
K	Coolant temperature
L	Engine oil pressure
M	Battery charging condition
N	Swing active
P	Hydraulic active
Q	High travel speed
R	Dozer blade, float
S	After treatment critical warning
T	Master warning

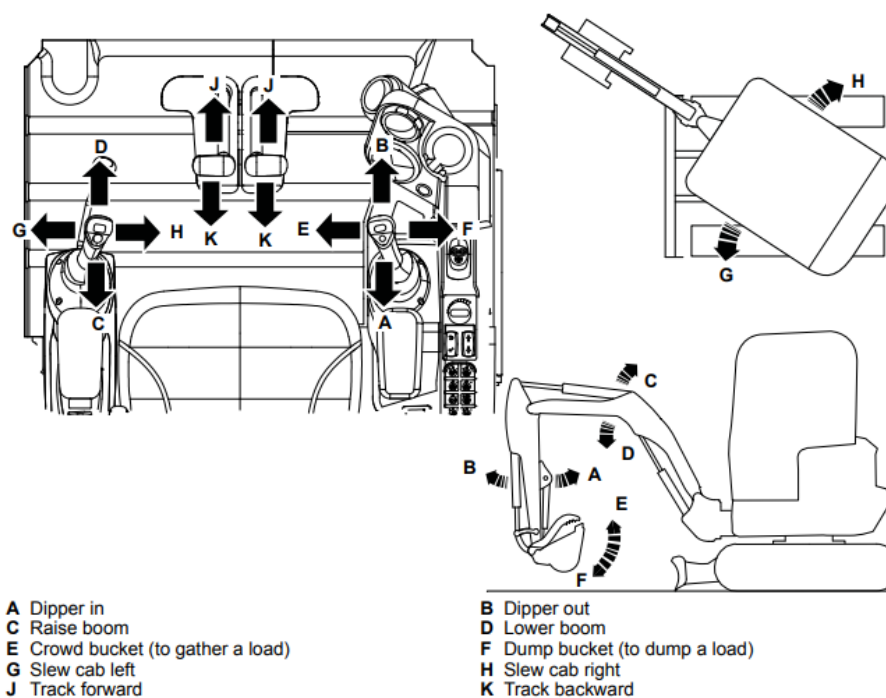


## Cab Layout & Controls

### Excavator Levers (ISO Control Pattern)



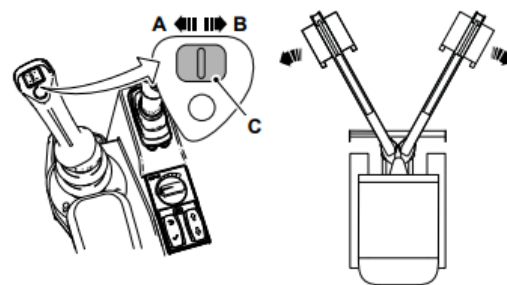
### Excavator Levers (SAE Control Pattern)



## Cab Layout & Controls

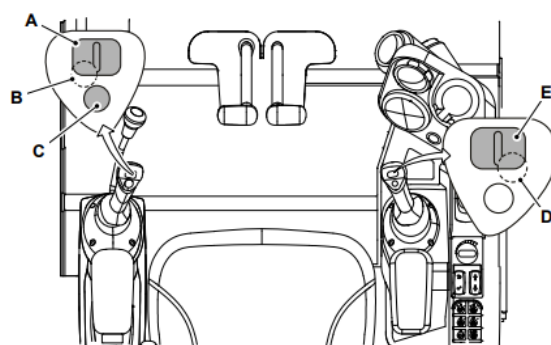
### Swing Control Switch

- A. Swing left
- B. Swing right
- C. Swing control switch



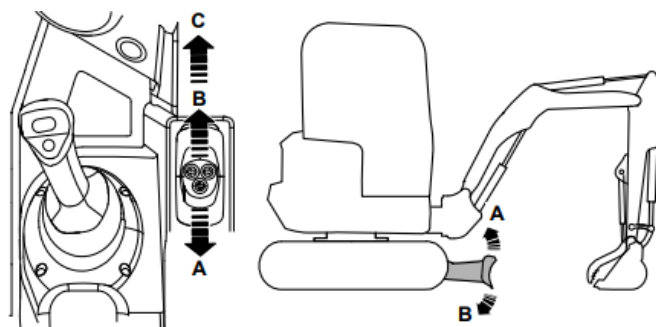
### Auxiliary Controls

- A. Left electro-proportional switch for aux 2 (low flow)
- B. Tilt/grab changeover for tilt-rotator
- C. Boom swing/AUX changeover
- D. Right finger button – High flow AUX maximum preset flow button (momentary/latching depending on settings in menu)
- E. Right electro-proportional switch for aux 1 (high flow)

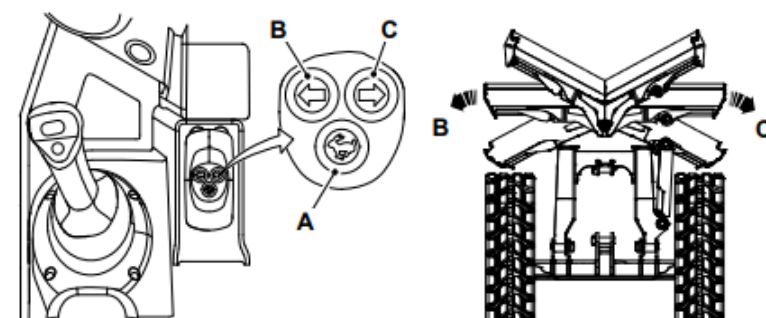


### Dozer Blade Controls

- A. Raise the dozer
- B. Lower the dozer
- C. Dozer float



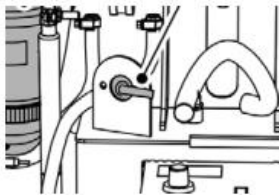
- A. Travel speed selector button
- B. 4-Way dozer rotate left
- C. 4-Way dozer rotate right



## Start Up Sequence

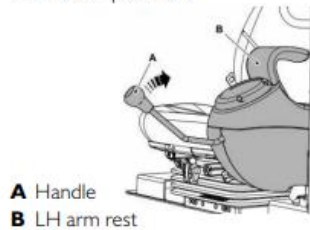
### 1 Insert Isolator Key

Insert isolator key (A) and turn in a clockwise direction.



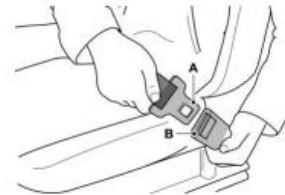
### 2 Raise LH Arm Rest

Ensure the hydraulic isolation lever (left hand arm rest) is in the raised position.



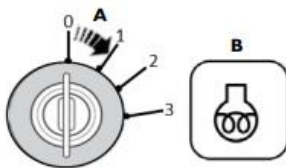
### 3 Engage Seat Belt

Engage seat belt (A) into latch (B) before starting machine.



### 4 Engine Pre Heat

Turn ignition to position 1 (A) to pre-heat engine before start. Wait until pre-heat symbol (B) on instrument panel goes off.



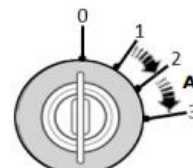
### 5 Disarm Immobiliser

If fitted disarm by entering PIN code using one of the below methods.



### 6 Start Machine

From ignition position 1 turn ignition to position 3 (A) to start the machine.



### 7 Lower LH Arm Rest

Lower the LH arm rest to activate the hydraulics.

*Note: If 2 GO enabled go to step 8, if not go to step 9*



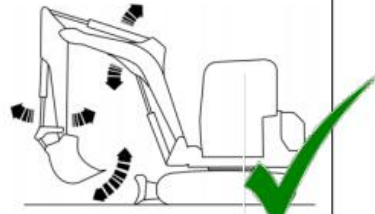
### 8 Press 2 GO Button

If enabled press 2 GO button (A) to activate hydraulics. Instrument panel will illuminate (B) when active.



### 9 Operate Machine

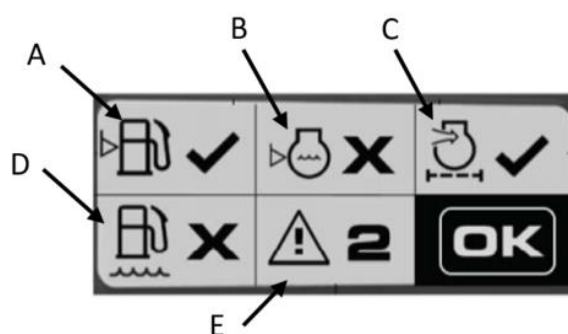
All controls are now active and the machine is now ready to use.



## Machine Health Check

- The machine health check screen is displayed for every user when the ignition is switched on for the first time that day.
- This screen is designed to highlight any possible issues with the machine prior to the machine being worked.
- It will appear after the key code has been entered, or the correct immobiliser key has been used.
- If there are no issues present, the health check screen disappears after the specified duration and returns to the home screen.
- If there are any faults present, then acknowledgement of the faults are required by pressing the enter button.
- The fault screen with each symbol labelled is shown below:

- A. Fuel level low
- B. Coolant level low
- C. Blocked air filter
- D. Water in fuel indicator
- E. 'Master warning' – contact JCB dealer



## Shut Down Sequence

**1 Park Machine Up**

Park the machine on firm level ground. Position the attachment (A) just above the ground and dozer (B) on the ground.

**2 Leave & Secure**

Switch off all switches. Leave machine using the handrails and footholds. Close & lock all doors and windows to secure machine.


**3 Isolate Machine**

Turn isolator key anti-clockwise and remove key.

# Hydraulic Hitch Unlock System

**1 Start Unlock Process**

To start quick hitch unlock process ensure hydraulics are live then press quick hitch sequence button (A).




**2 Confirm Process**

Instrument panel will indicate need to confirm process (A). To confirm process press 2 GO button (B).



**3 Boom LED Indicator**

When the sequence is confirmed the LED on the boom will flash red (A).




**4 Remove Attachment**

To disengage the pivot pin, crowd attachment for 3 seconds then remove attachment.




**5 Change Attachment**

Operate the machine to engage the jaw (A) with the attachment (B) and then full crowd the attachment to align latch.



**6 Lock Quick Hitch**


To engage the lock on the quick hitch press one of the following two buttons and visually check hitch is locked.



## Specialised Attachments

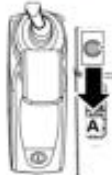
**4a Crowd Override**

For large attachments where crowding is not possible press & hold rotary dial (A) for 5 seconds.



**4b Remove Attachment**

To disengage the pivot pin operate use the dozer lift lever (A) until the hitch unlocks then remove attachment.

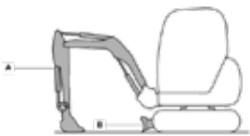
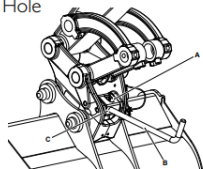
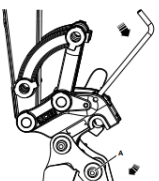
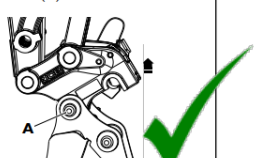


Specialised attachments are any attachment that when crowded fully could foul boom/dipper.

When using a specialised attachment that requires this process to be followed, replace No.4 above with No.4 a & b then continue to follow steps 5 and 6 to finish.

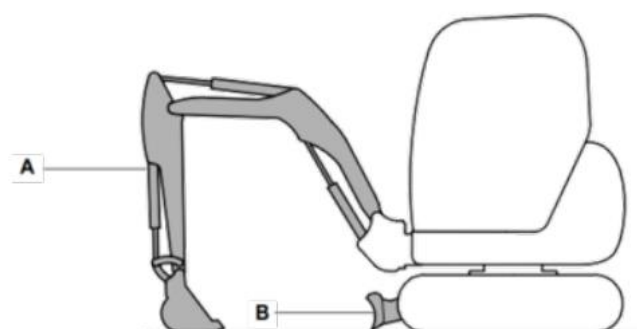


## Mechanical Hitch Unlock System

<p><b>1 Park Machine Up</b></p> <p>Park the machine on firm level ground. Position the attachment (A) just above the ground and dozer (B) on the ground.</p> 	<p><b>2 Disconnect Attachment</b></p> <p>Stop the engine, remove any connected hydraulic hoses and remove the locking pin.</p>	<p><b>3 Insert tommy bar</b></p> <p>Insert the tommy bar into the hole of the latch hook.</p> <p><b>A</b> Latch Hook <b>B</b> Tommy Bar <b>C</b> Hole</p> 
<p><b>4 Release Attachment</b></p> <p>Apply downward pressure to the tommy bar to release the buckets rear pivot.</p> 	<p><b>5 Restart Machine</b></p> <p>Start the engine, rest attachment on the ground and engage the hydraulics.</p>	<p><b>6 Remove Attachment</b></p> <p>Slowly roll the quickhitch in the direction of the arrow whilst raising the dipper to release the front pivot (A).</p> 

## Maintenance Position

1. Park machine on solid, level ground
  - 1.1. Release the two track levers
  - 1.2. Set handle throttle lever to idle position
2. Lower the dozer blade (B)
3. Lower excavator so attachment is flat on ground (A)
4. Stop the engine
5. Discharge the hydraulic pressure
6. Isolate controls and remove ignition key
7. Isolate battery to prevent accidental operation of the engine



**A** Attachment flat on the ground  
**B** Dozer blade lowered to ground

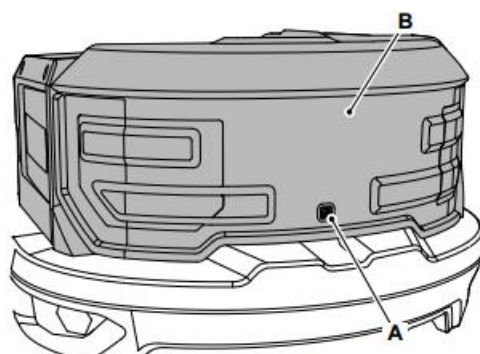
## Service and Maintenance

Daily Checks (10h)	Action
Check condition of attachments / optional equipment	Visual Check
Grease attachments / optional equipment / pivot pins as required	Lubricate
Clean bodywork and framework	Clean
Check condition of bodywork and framework	Visual Check
Check condition of cab/canopy including seat belt	Visual Check
Check engine for leaks and oil level	Visual Check
Check fuel system for leaks	Visual Check
Drain water from water separator on fuel filter	Clean
Check engine coolant for leaks, condition and level	Visual Check
Check condition of cooling pack and system	
Check hydraulic oil level	Visual Check
Check window washer fluid level	Visual Check
Check the condition of the fire extinguisher	Visual Check
Check operation of all services i.e. excavator, dozer etc.	Operate
Check operation of electrical equipment	Operate
Grease pivot pin	Lubricate

Weekly Checks (50h)	Action
Grease slew ring bearing	Lubricate
Clean cooling pack	Clean
Check condition and tension of tracks	Operate
Check condition of air filter	Visual Check
Check condition of drive belt	Visual Check
Check hydraulic hoses / pipework for leaks and damage	Operate
Check condition of the rams	Visual Check
Check operation of electrical equipment i.e. warning lights, beacon	Operate
Check the battery terminals	Clean
Check the operation of the battery isolator	Operate

## Service and Access Covers

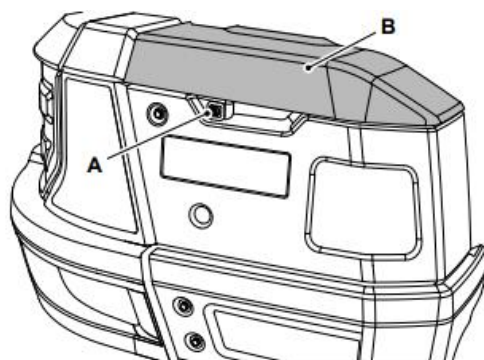
### Engine Compartment Cover



A Button

B Engine compartment cover

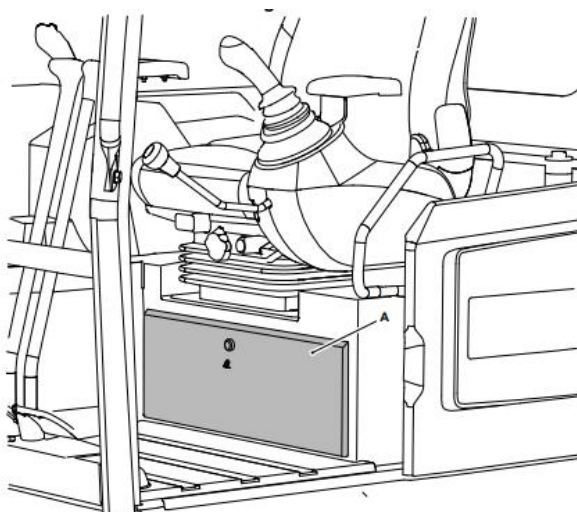
### Hydraulic Compartment Cover



A Button

B Hydraulic compartment cover

### Toolbox



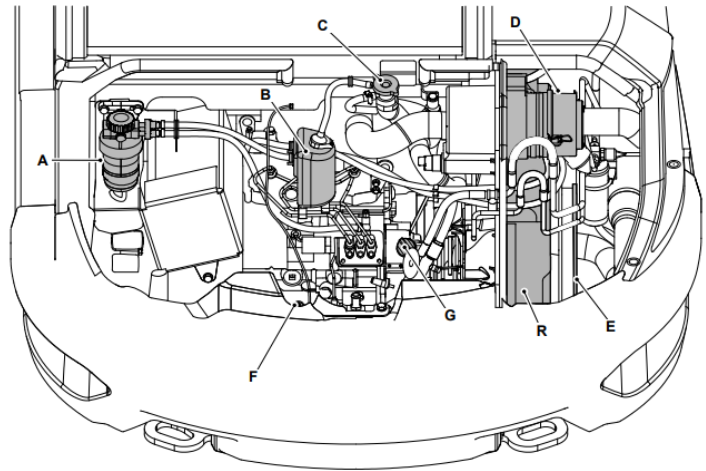
A Panel



## Service and Access Covers

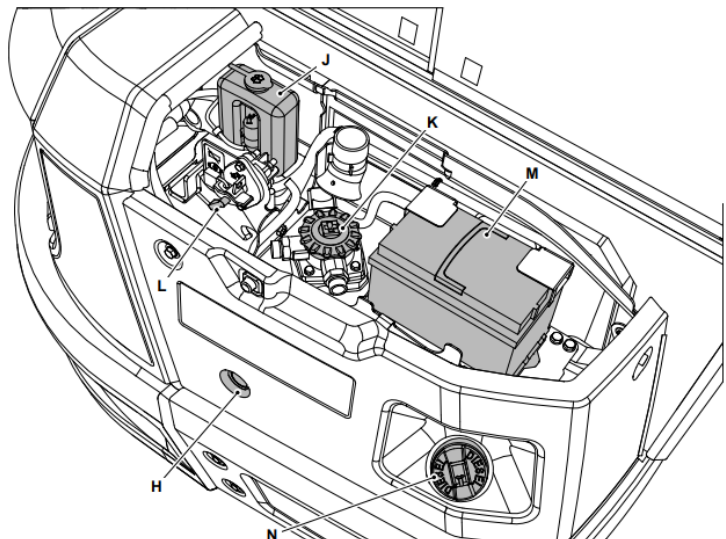
### Engine Compartment

- A. Main fuel filter
- B. Overflow bottle
- C. Coolant system filter cap
- D. Air filter
- E. Air conditioning condenser (if fitted)
- F. Engine oil dipstick
- G. Engine oil filler cap
- R. Radiator



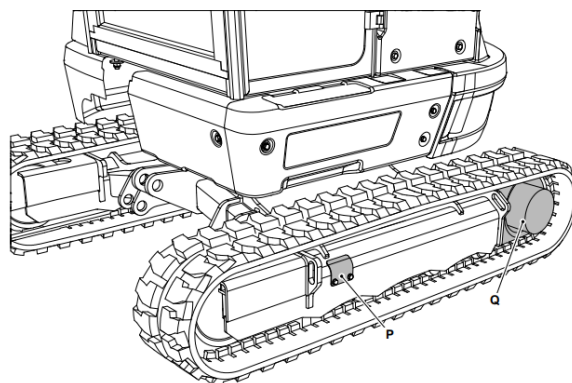
### Hydraulic Compartment

- H. Hydraulic oil level indicator
- J. Window washer fluid tank
- K. Hydraulic oil filler cap
- L. Battery isolator
- M. Battery
- N. Fuel filler cap



### Cab and exterior

- P. Track tensioner cover
- Q. Track gearbox



## Fluids and Lubricants

Item	Capacity	Fluid/lubricant	JCB Part Number	Container Size
Fuel tank	50L	Diesel Oil	-	20L
Engine oil	5.2L	JCB Engine 10W 30 HP	4001/3700	-
Engine coolant	7.3L (Cab) 6.4L (Canopy)	JCB Antifreeze HP/Coolant/Water	4006/1120	20L
Track gearbox	0.8L	JCB Engine Oil HP SAE 30 (Not Multigrade)	4001/0305	20L
Track idler wheel	0.8L	JCB HP90 Gear oil	4000/0305	20L
Track roller (Top)	0.003L	JCB HP90 Gear oil	4000/0305	20L
Track roller (Bottom)	0.08L	JCB HP90 Gear oil	4000/0305	20L
Hydraulic system	47.5L	-5°C (23.0°F) to 55°C (130.9°F): JCB Hydraulic Fluid HP68	4002/0700	20L
		-10°C (14.0°F) to 45°C (112.9°F): JCB Hydraulic Fluid HP46	4002/0800	
		-20°C (-4°F) to 55°C (95°F): JCB Hydraulic Fluid HP32	4002/1000	
Hydraulic tank	21L	-5°C (23.0°F) to 55°C (130.9°F): JCB Hydraulic Fluid HP68	4002/0700	20L
		-10°C (14.0°F) to 45°C (112.9°F): JCB Hydraulic Fluid HP46	4002/0800	
		-20°C (-4°F) to 55°C (95°F): JCB Hydraulic Fluid HP32	4002/1000	
Slew ring bearings	As required	JCB Special Slew Pinion Grease	4003/2017	0.4kg x 24
Slew ring gear teeth	As required	JCB Special Slew Pinion Grease	4003/1619	0.4kg
All other grease	As required	JCB HP Grease	4003/2017	0.4kg x 24
HVAC	0.775kg	R134a	141/4770	-