

Service Manual

(Supplement)

AMS
JS Machines

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Introduction

Care and Safety

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The JCB A.M.S system (Advanced Management System) is a whole machine electronic control system which replaces the CAPS II system. The system controls engine speed, pump power, transmission, excavator functions, lights, wiper, auxiliary circuits, warning lamps, etc.

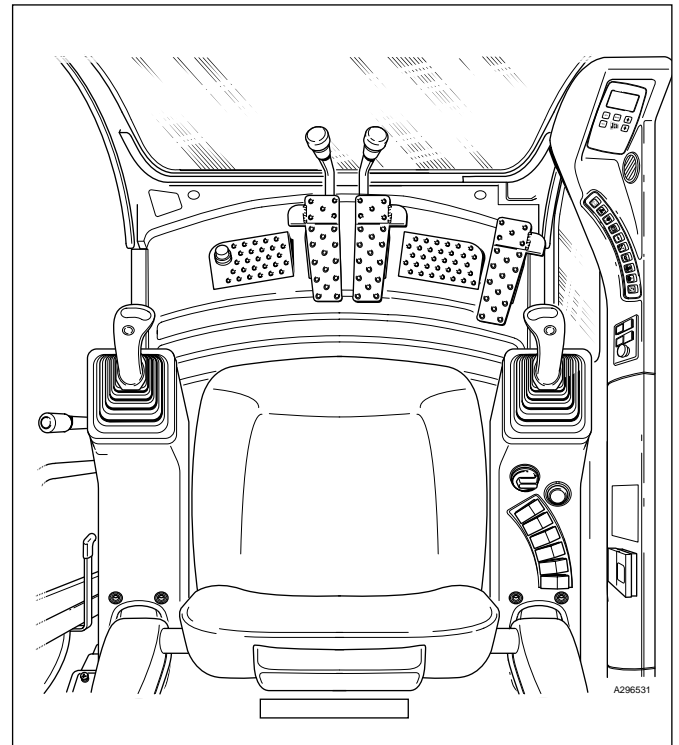
This manual is a supplement to the following JS XO Machine Service Manuals:

Manual No.	Machine No.	Serial No.
9803/6410	JS 130 JS 160	
9803/6310	JS 130W JS 145W JS 160W JS 175W	
9803/6400	JS 200 JS 220 JS 240 JS 260	
9803/6320	JS 200W	
9803/6420	JS 330 JS 450 JS 460	

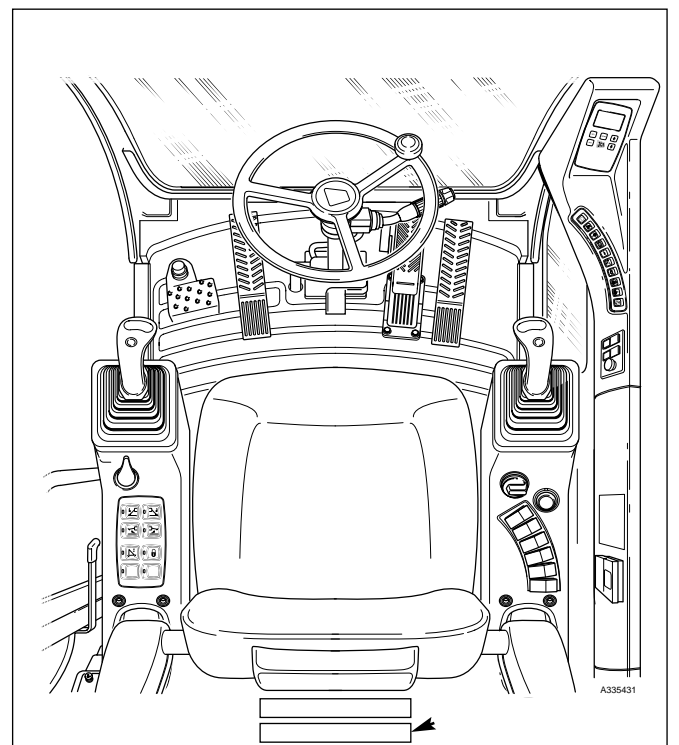
Note: Only those areas of the machines which are different from the standard version are dealt with here. For all other aspects refer to the above manuals.

Care and Safety

Before carrying out any maintenance procedures on this machine, make sure you read the Care and Safety information in Section 2 of the above Service Manuals. The relevant information in that Section should be observed as well as any care and safety information contained in this manual.

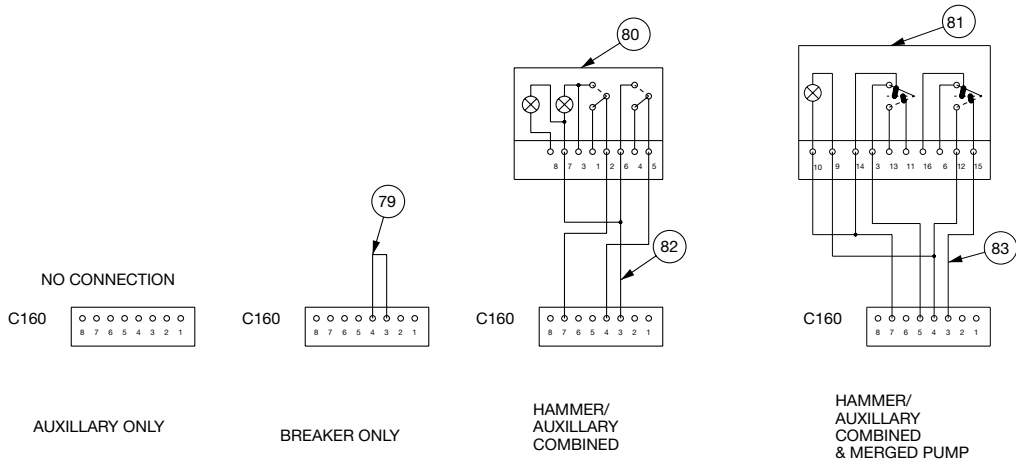


Tracked Machine

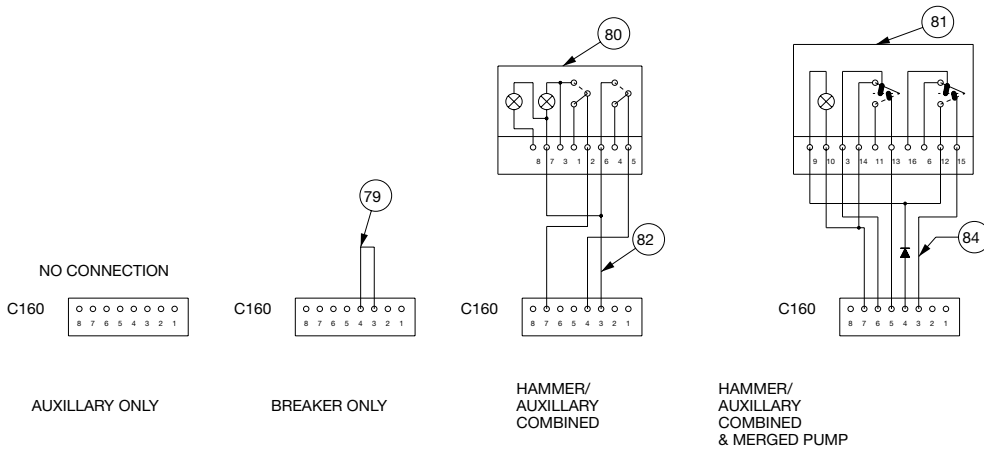


Wheeled Machine

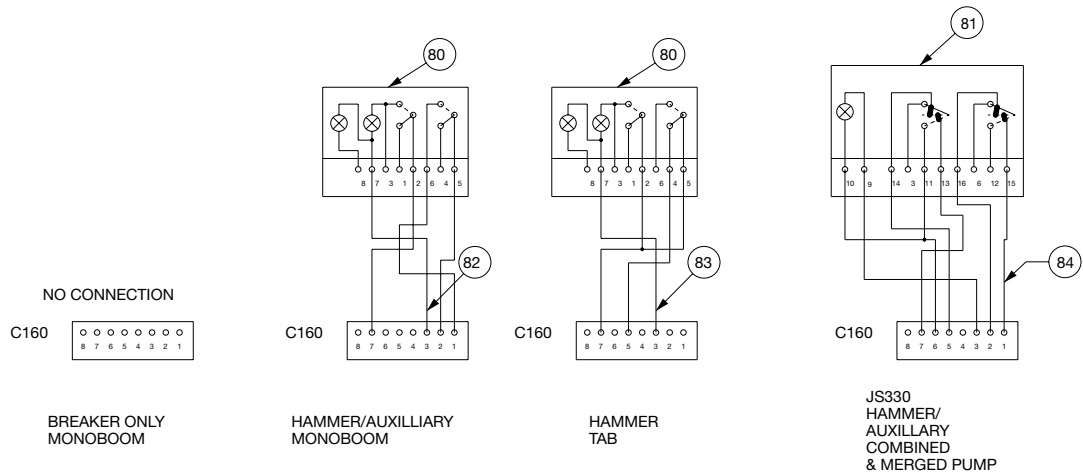
JS130 - JS260 Connection for optional hydraulic circuits (331/18657)



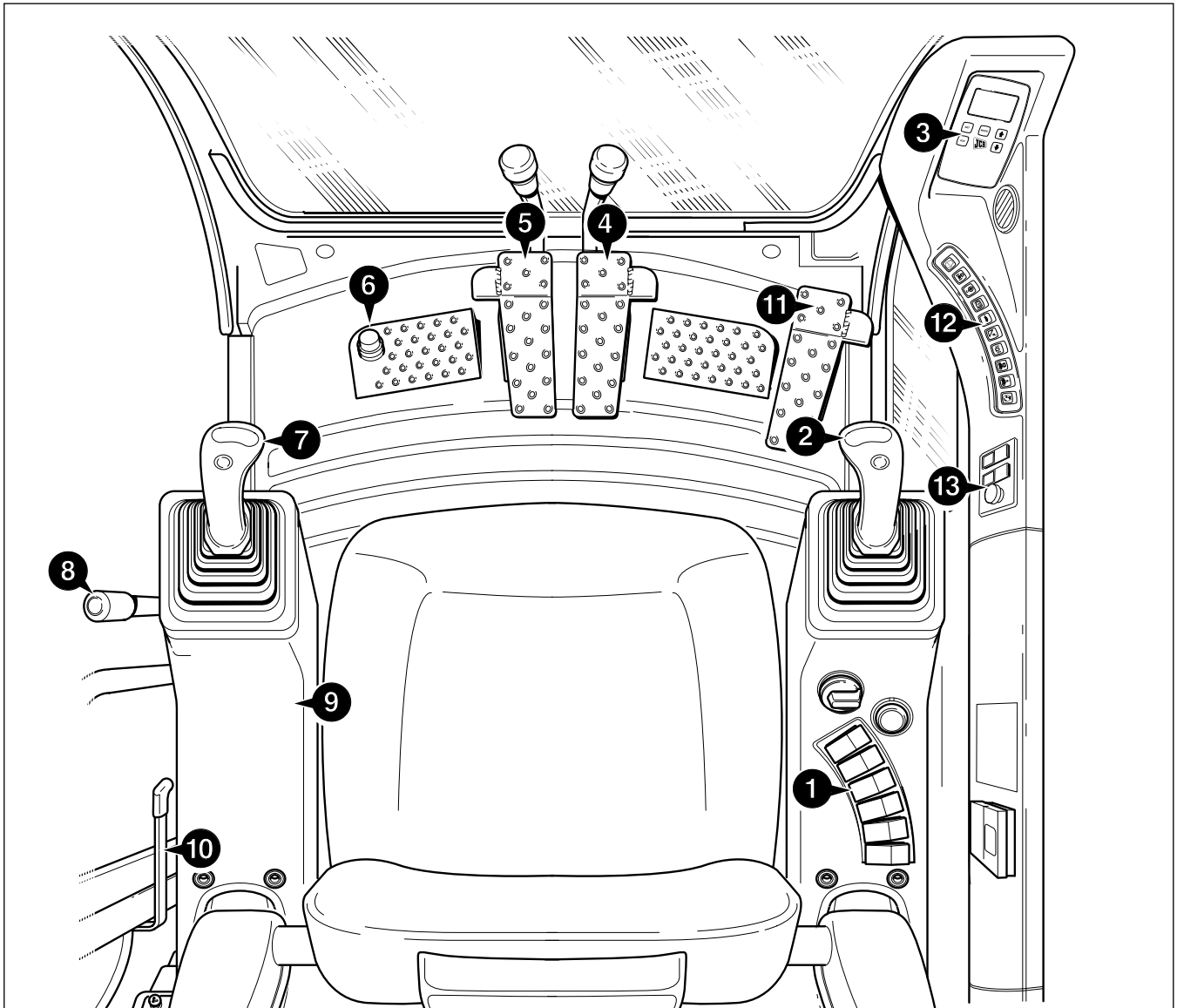
JS330 Connection for optional hydraulic circuits (331/18659)



JS 200W Connection for optional hydraulic circuits (331/18660)

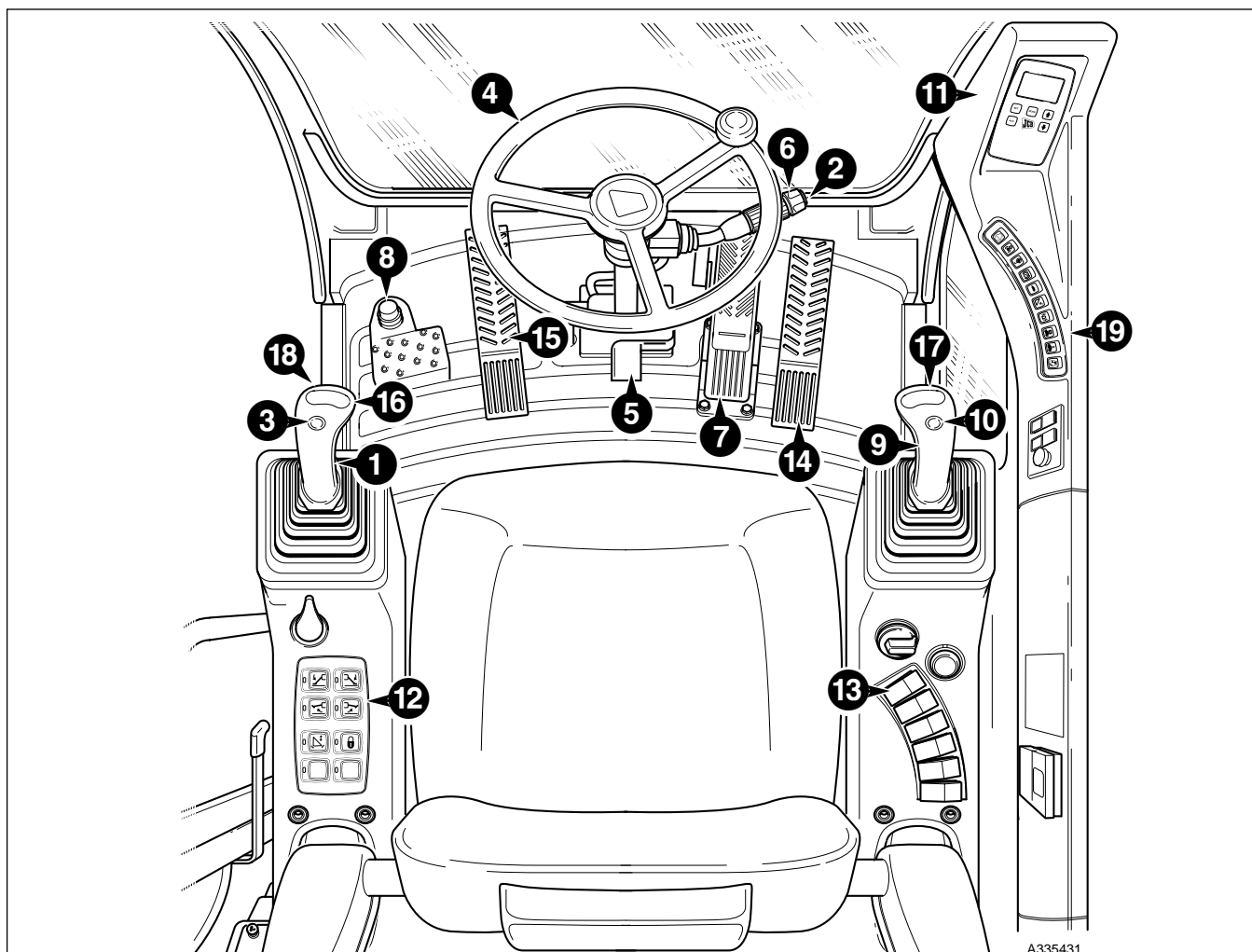


Location of Controls and Components - JS Tracked machine



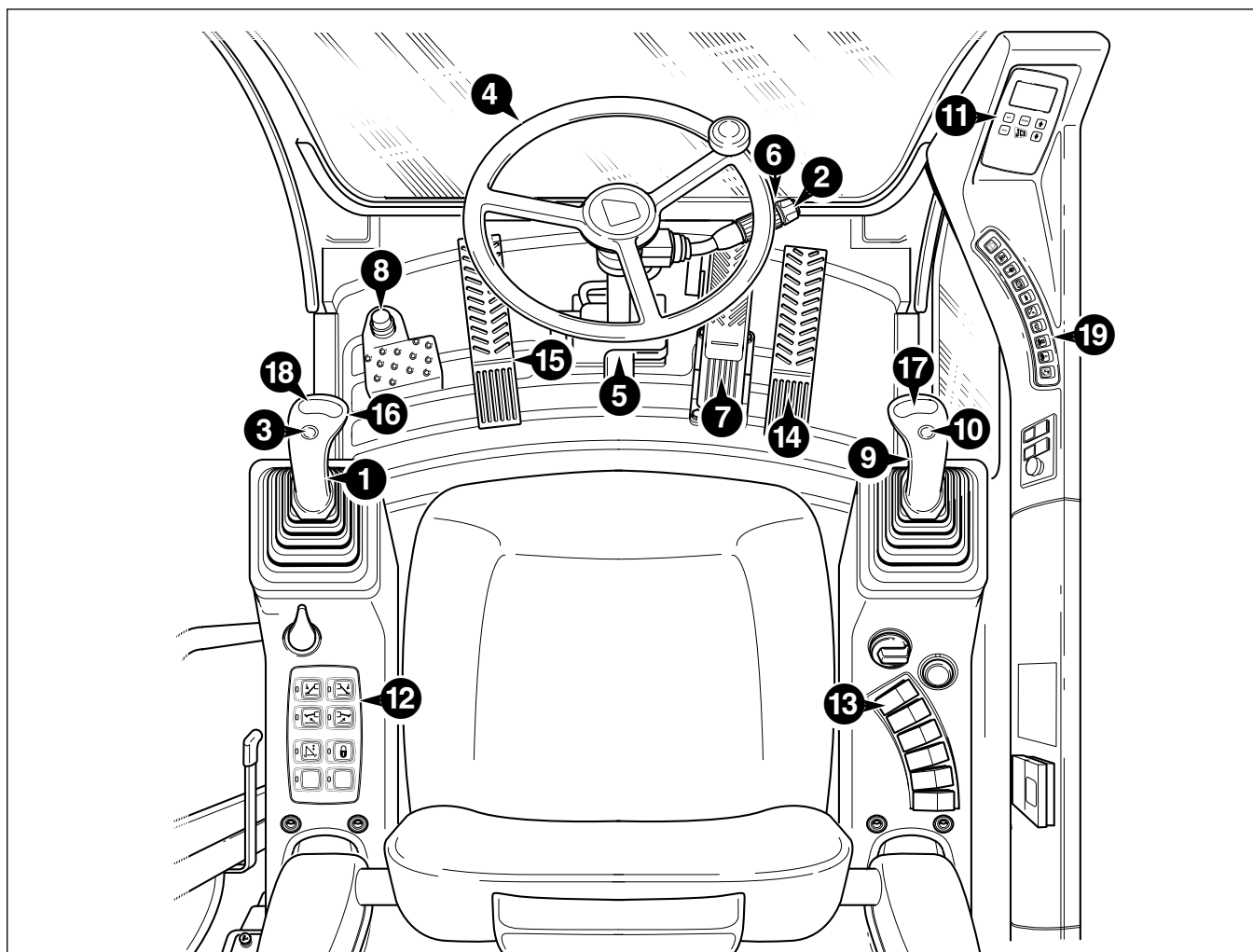
- | | |
|------------------------------------|---------------------------------------|
| 1 Right Console | 8 Control Lock Lever |
| 2 Right Excavator Joystick Control | 9 Left Console |
| 3 Display Monitor | 10 Door Lock Release Lever |
| 4 Right Hand Track Control | 11 Optional Circuit Pedal (if fitted) |
| 5 Left Hand Track Control | 12 Facia Panel |
| 6 Travel Speed Range Change Switch | 13 Lightswitch Panel |
| 7 Left Excavator Joystick Control | |

***Location of Controls and Components - JS130W/145W/160W/175W**



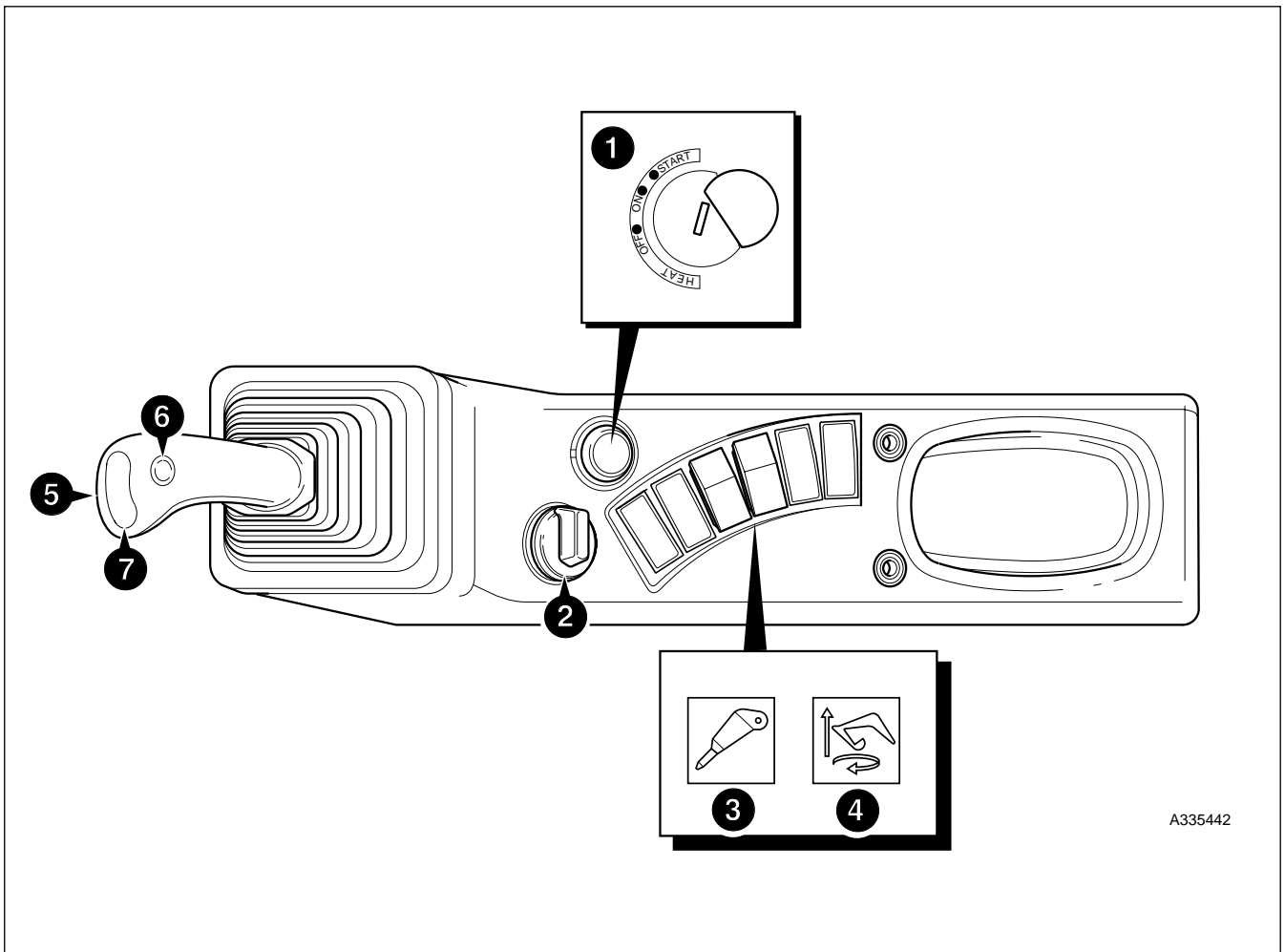
- | | |
|--|--|
| <p>1 Left Excavator Joystick Control
Slew and dipper.</p> <p>2 Horn Button</p> <p>3 Alternative Horn Button (Not Germany)</p> <p>4 Steering Wheel</p> <p>5 Steering Column Lock Latch</p> <p>6 Multipurpose Steering Column Switch</p> <p>7 Foot Brake Pedal</p> <p>8 Gearbox Ratio Change Switch</p> <p>9 Right Excavator Joystick Control
Boom and bucket.</p> <p>10 One Touch Idle Switch</p> | <p>11 Display Monitor</p> <p>12 Left Console</p> <p>13 Right Console</p> <p>14 Travel Pedal</p> <p>15 TAB Position Ram Pedal (if fitted)</p> <p>16 Rockbreaker ON/OFF Switch (if fitted)</p> <p>17 Auxiliary Circuit Switch</p> <p>18 Dozer Blade Switch</p> <p>19 Right Switch Panel</p> |
|--|--|

Location of Controls and Components - JS200W



- | | |
|--|--|
| <p>1 Left Excavator Joystick Control
Slew and dipper.</p> <p>2 Horn Button</p> <p>3 Alternative Horn Button (Not Germany)</p> <p>4 Steering Wheel</p> <p>5 Steering Column Lock Latch</p> <p>6 Multipurpose Steering Column Switch</p> <p>7 Foot Brake Pedal</p> <p>8 Gearbox Ratio Change Switch</p> <p>9 Right Excavator Joystick Control
Boom and bucket.</p> <p>10 One Touch Idle Switch</p> | <p>11 Display Monitor</p> <p>12 Left Console</p> <p>13 Right Console</p> <p>14 Travel Pedal</p> <p>15 TAB Position Ram Pedal (if fitted)</p> <p>15 Rockbreaker ON/OFF Switch (if fitted)</p> <p>16 Boom Priority Switch</p> <p>17 Auxiliary Circuit Switch</p> <p>18 Dozer Blade Switch</p> <p>19 Right Switch Panel</p> |
|--|--|

Right Console - Tracked machine only



A335442

1 Starter Switch

This key operated rotary switch has four positions. The key can only be inserted or removed in the OFF position. The positions are:

OFF - Isolates all electrics.

Turning key to this position stops the engine and, if appropriate, silences the warning buzzer.

HEAT: For pre-heating the engine air intake during cold weather, key must be held in this position. Returns to OFF when key is released.

ON - Switch position for normal running.

START: Key held in this position cranks the starter motor for starting the engine. Release the key when the engine starts and the switch returns to ON.

2 Throttle Dial

This rotary control provides progressive engine speed control over the full range.

Note: If the engine speed does not change even after turning the throttle dial it is because the idle switch (6) is ON. Push the idle switch to OFF to re activate the throttle dial.

If the engine is started with the throttle dial not at the minimum position, no engine speed control will be possible until after the dial has been turned to the minimum position.

3 Hammer switch (if fitted)

Press the switch to change the additional hydraulic circuit from hammer (reduced flow) circuit to auxiliary (full flow) circuit.

Right Console - Tracked machine only (cont'd)

4 Boom Priority Switch-if fitted (Standard on JS330)

Press the switch to change priority of boom raise to swing. Selecting the boom priority switch during simultaneous slew and boom operation will restrict flow to the slew motor and therefore give more flow to the boom up operation.

When the switch is pressed the monitor will display "BOOM PRIOR" acknowledgement message.

5 Power-up Button

With the **Work Mode Selection** switch in 'H' or 'S' mode, depression of the button initiates the application of maximum digging power for a period of 8 seconds, during which time the 'POWER UP' message is displayed on the **Display Monitor**.

6 One Touch Idle Switch

Pressing this switch instantly changes the engine rpm back and forth between that selected for working and a 'low idling' speed. When 'low idling' has been selected the message "LOW IDLE" is displayed on the **Display Monitor**. This facility is overridden when the **Manual/Auto Change** switch is set to 'Auto'.

7 Auxiliary Circuit Switch

This three-position rocker switch, spring loaded to the central OFF position, provides bi-directional flow for relevant attachments, e.g. weedcutter, grab rotate. Press and hold the switch to the right or left, as appropriate, for as long as the attachment is to be used. Release the switch to turn off the attachment.

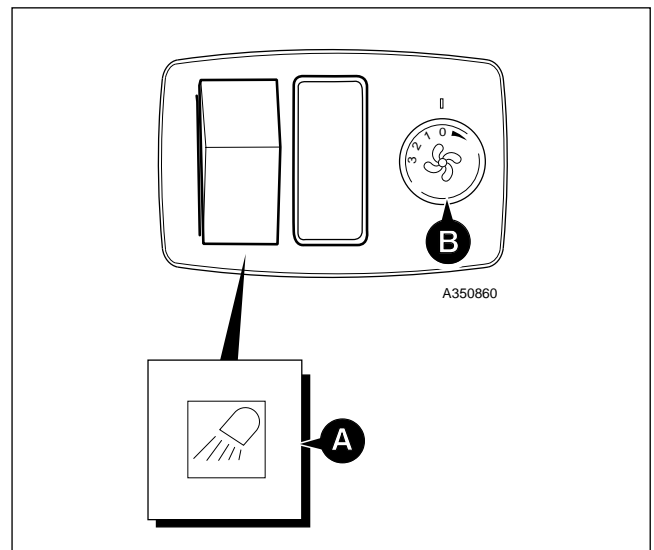
Lightswitch Panel

Work Light Switch

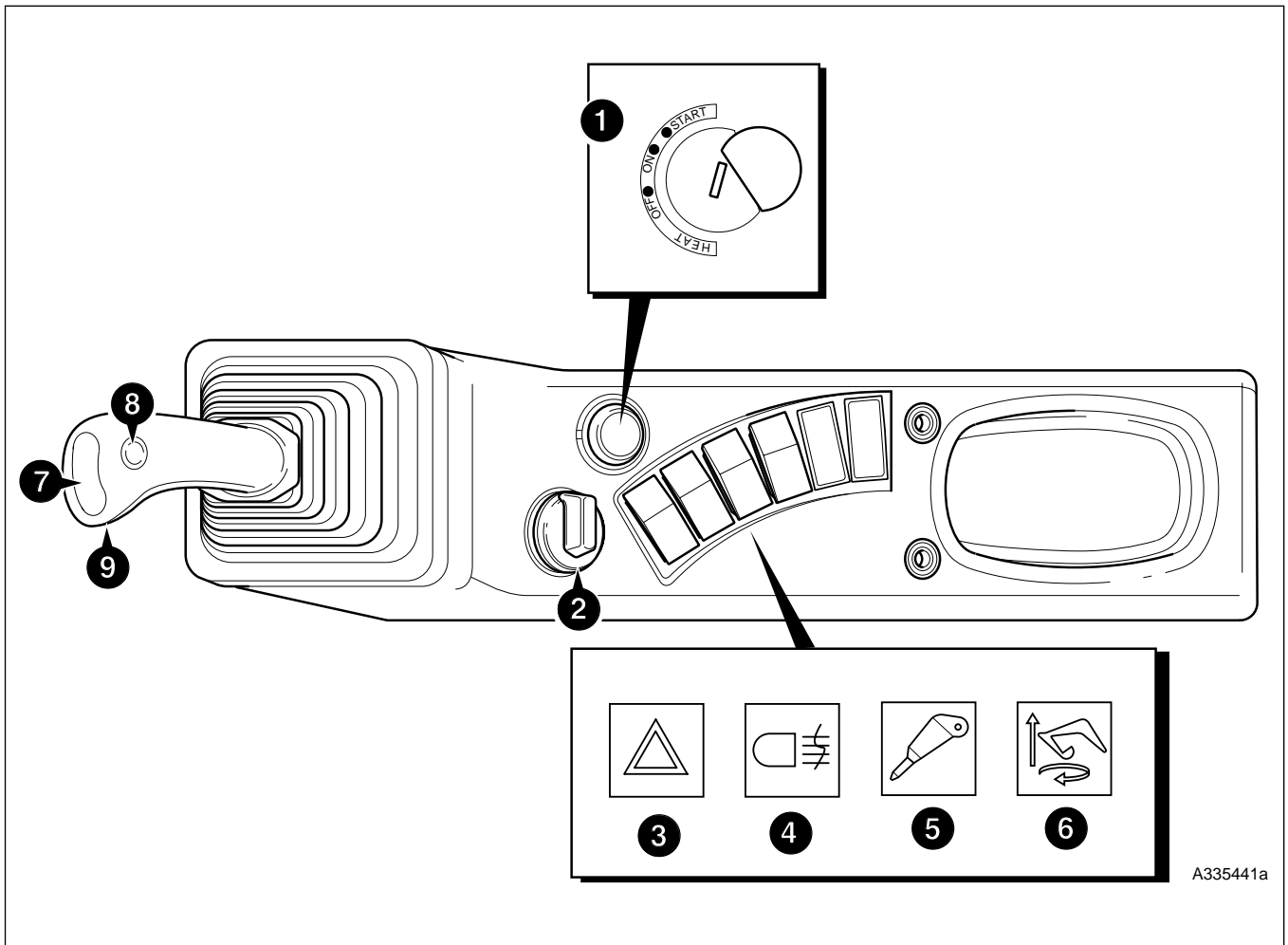
Press the switch **A** to the first position to switch ON the Standard work lights (on boom and the right hand of the machine). Press the switch to the second position to switch ON the optional lights (on the cab and the counterweight - if fitted).

Heater Fan

Turn rotary switch **B** (on the lightswitch panel) clockwise to turn on the heater fan. The volume of air from the heater increases by rotating the switch clockwise to the next position.



Right Console - Wheeled machine only



1 Starter Switch

This key operated rotary switch has four positions. The key can only be inserted or removed in the OFF position. The positions are:

OFF - Isolates all electrics except side lights and hazard lights.

Turning key to this position stops the engine and, if appropriate, silences the warning buzzer.

HEAT: For pre-heating of the engine air intake during cold weather, key must be held in this position. Returns to OFF when key is released.

ON - Switch position for normal running.

START: Key held in this position cranks the starter motor for starting the engine. Release the key when the engine starts and the switch returns to ON.

2 Throttle Dial

This rotary control provides progressive engine speed control over the full range.

Note: If the engine speed does not change even after turning the throttle dial it is because the idle switch (8) is ON. Push the idle switch to OFF to re activate the throttle dial.

If the engine is started with the throttle dial not at the minimum position, no engine speed control will be possible until after the dial has been turned to the minimum position.

3 Hazard Warning Switch

Press the switch to switch ON the hazard warning lights. Hazard warning lights can be turned ON with or without the ignition ON.

4 Fog Light Switch

Press the switch to switch ON the fog lights (Headlights must be ON).

Right Console (cont'd)

5 Rockbreaker switch (if fitted JS200W only)

For monoboom equipped machines:

- A The switch has two positions, press the switch to change the additional hydraulic circuit from rockbreaker (reduced flow) circuit, position 1 to auxiliary full flow position 2.

For triple articulating boom equipped machines:

- A When a rockbreaker circuit only is fitted, the switch has two positions. Press the switch to change the function of the foot pedal from rockbreaker, position 1 to boom position control, position 2.
- B When combined rockbreaker and auxiliary circuits are fitted, the switch has three positions. Press the switch to change the function of the foot pedal from rockbreaker (reduced flow) circuit, position 1 to auxiliary (full flow) circuit position 2. Press further to change to boom position control circuit position 3.

6 Boom Priority Switch (JS 200W only)

Press the switch to change priority of boom raise to swing. Selecting the boom priority switch during simultaneous slew and boom operation will restrict flow to the slew motor and therefore give more flow to the boom up operation.

When the switch is pressed the monitor will display "BOOM PRIOR" acknowledgement message.

7 Power-up Button

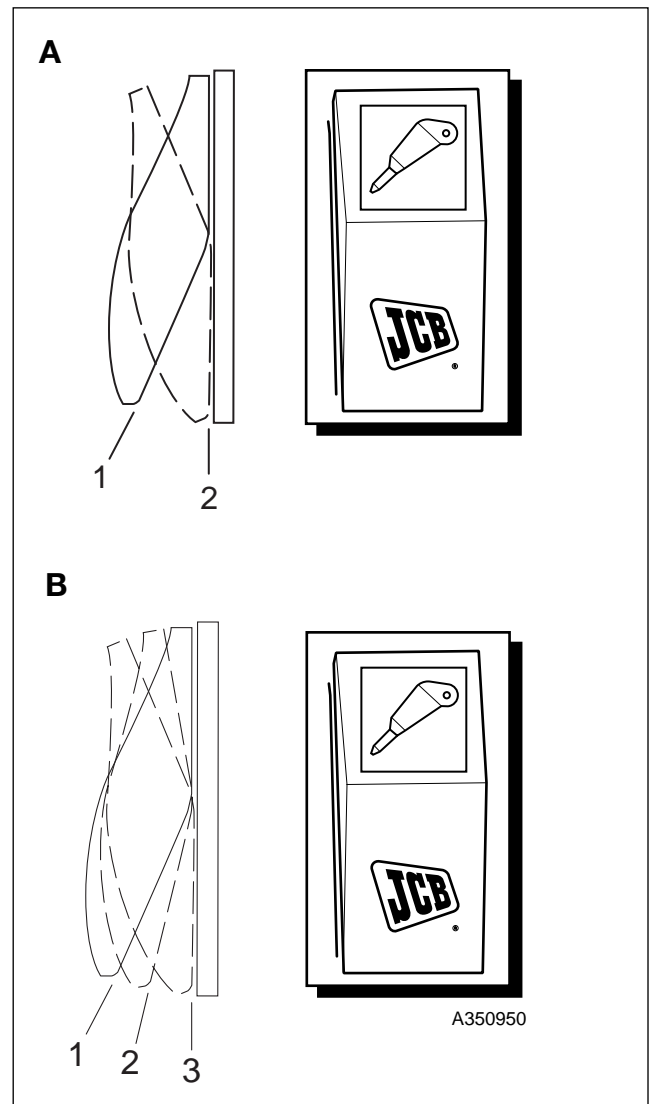
With the **Work Mode Selection** switch in 'H' or 'S' mode, depression of the button initiates the application of maximum digging power for a period of 8 seconds, during which time the 'POWER UP' message is displayed on the **Display Monitor**.

8 One Touch Idle Switch

Pressing this switch instantly changes the engine rpm back and forth between that selected for working and a 'low idling' speed. When 'low idling' has been selected the message 'LOW IDLE' is displayed on the **Display Monitor**. This facility is overridden when the **Manual/Auto Change** switch is set to 'Auto'.

9 Auxiliary Circuit Switch

This three-position rocker switch, spring loaded to the central OFF position, provides bi-directional flow for relevant attachments, e.g. weedcutter, grab rotate. Press and hold the switch to the right or left, as appropriate, for as long as the attachment is to be used. Release the switch to turn off the attachment.



Lightswitch Panel

Drive Light Switch

Press switch **C** to the first position to switch ON the side lights. The side lights can be turned ON with or without the ignition being switched ON. Press the switch to the second position to switch ON the headlights (the ignition must be ON).

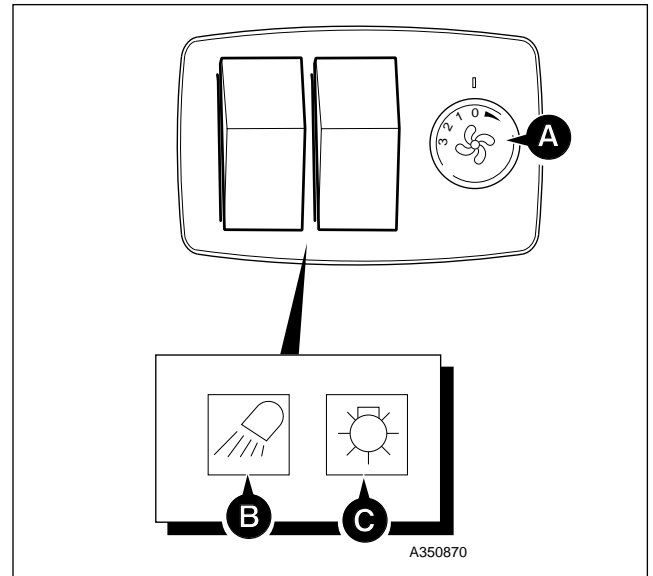
Work light Switch

Press switch **B** to the first position to switch ON the Standard work lights (on boom and the right hand of the machine). Press the switch to the second position to switch ON the optional lights (on the cab and the counterweight - if fitted).

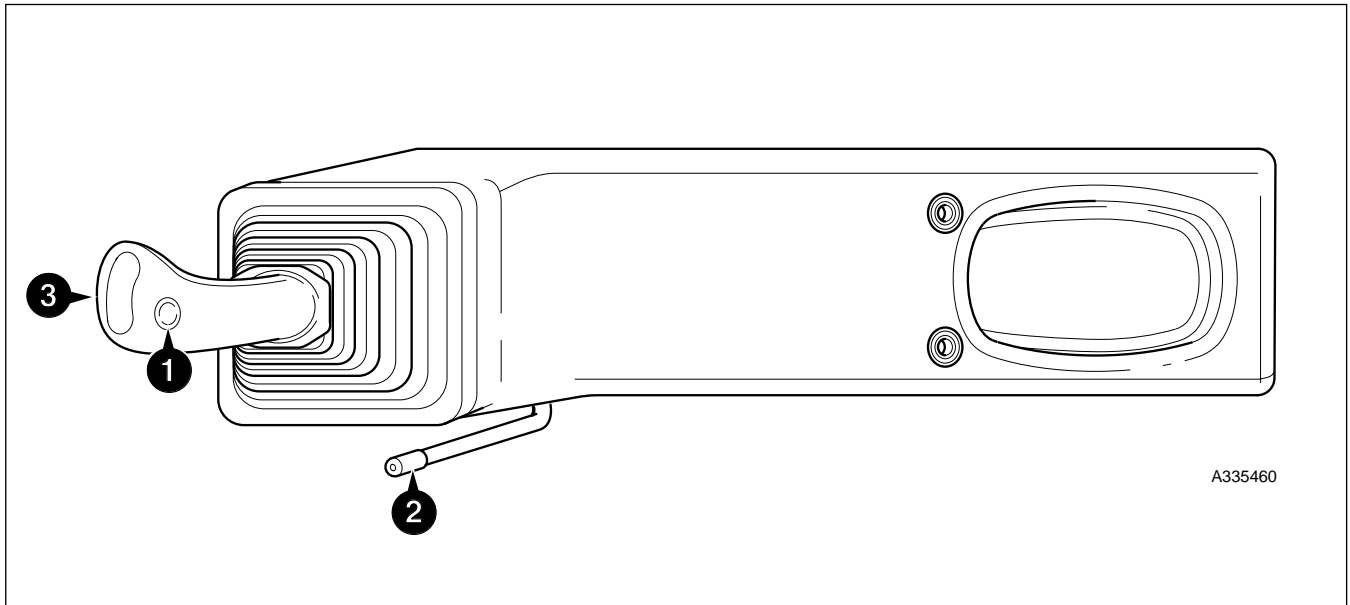
The side lights must be ON in order to turn ON the work lights.

Heater Fan

Turn rotary switch **A** clockwise to turn on the heater fan. The volume of air from the heater increases by rotating the switch clockwise to the next position.



Left Console - Tracked machines only



1 Horn Switch

When the horn switch is pressed the horn will sound.

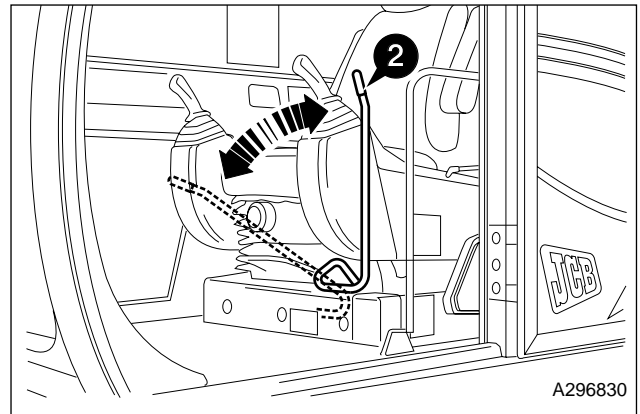
Note: always press the switch and sound the horn to give signals, when the machine is started or you engage travel or slew.

2 Control Lock Lever

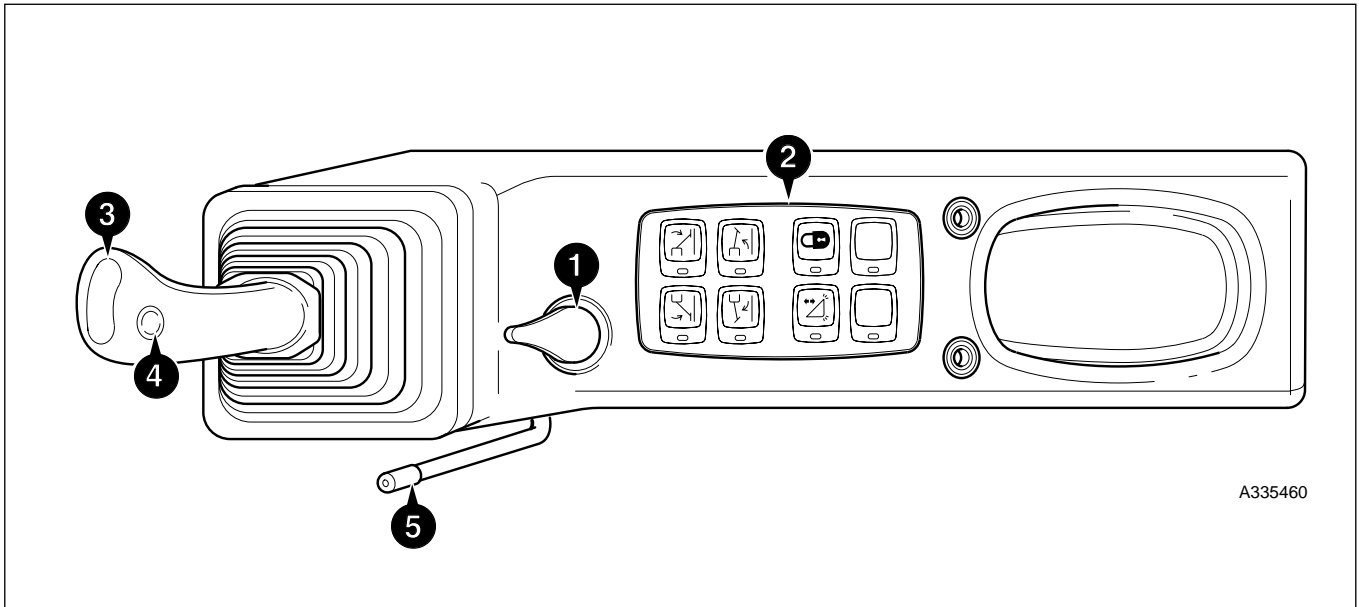
Raising the lever provides a method of isolating the hydraulic controls in addition to raising the **Left Console** or operating the **Servo Isolator Switch** and is an integral part of the procedure for vacating the cab. Lower the lever to activate the hydraulic controls.

3 Boom Priority Switch (Option)

Press and hold the switch to change priority of slew to boom raise. Release the switch to deselect boom priority.



Left Console - Wheeled machines only



A335460

1 Console Tilt Handle

Turn the tilt handle anti-clockwise to unlock the console which can then be hinged up and down. Raising the console provides a method of isolating the hydraulic controls (in addition to operating the **Servo Isolator Switch** (on the fascia panel) or raising the **Control Lock Lever** (step 5)) and is an integral part of the procedure for vacating the cab. Release the handle and lower the console to the operating position where it locks.

Note: For JS200W and German and Italian JS130W/160W machines - When the console is in the raised position, all controls except travel are isolated. When travelling on roads, raise the left console to prevent the accidental movement of the excavator end.

2 Left Console Switch Panel

3 Dozer Switch

This switch transfers Left Excavator Joystick controls from the slew and dipper to the dozer blade and vice-versa. Press the left side of the switch to select dozer and illuminate the **Dozer Selected** lamp (see **Warning Light Panel, Monitor Panel**); press the right side to revert to slew and dipper. When 'dozer' is selected, push the joystick forward to lower the dozer and pull it back to raise the dozer. Release the joystick to stop dozer movement.

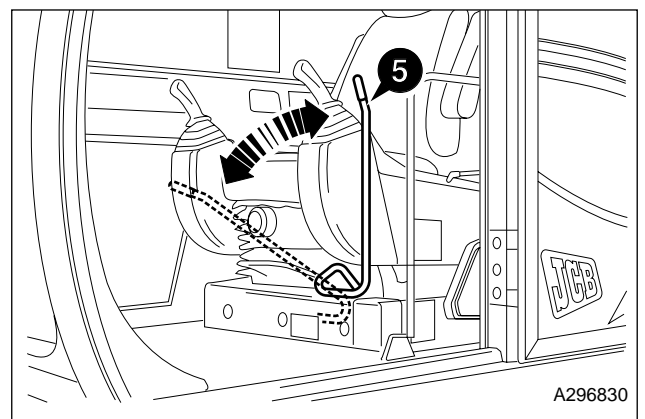
4 Horn Switch

When the horn switch is pressed the horn will sound.

Note: always press the switch and sound the horn to give signals, when the machine is started or you engage travel or slew.

5 Control Lock Lever

Raising the lever provides a method of isolating the hydraulic controls (in addition to raising the **Left Console** (step 1) or operating the **Servo Isolator Switch** (step 2)) and is an integral part of the procedure for vacating the cab. Lower the lever to activate the hydraulic controls.



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