



TILT ROTATOR

HYDRADIG & POTHOLE PRO



Product Selling Guide

Product Selling Guide – Tilt Rotator

Hello!

Welcome to the Tilt Rotator Sales Guide!

The new JCB Tilt Rotator is an exciting new addition to the well-received Hydradig Attachments Line-Up.

This new attachment along with machine integration has many features and benefits that enhance the product offering for both the Hydradig and Pothole Pro.

What are the objectives for this session?

By attending you will gain:

- A clear view of the key product features of the Tilt Rotator
- Skills and knowledge to enable you to conduct a customer walkaround of the JCB Tilt Rotator
- Skills to enable you to sell against key competitors in this segment.
- Details on setting-up and controlling the Tilt Rotator
- An understanding of the new Sales Codes for the Tilt Rotator

**We hope that you
enjoy today's sessions**

This Pack Contains:

- 1) Tilt Rotator Key Specifications
- 2) WALKAROUND:
 - a. Tilt Rotator Walkaround & Options Guide
 - b. Attachment Compatibility Guide
 - c. Machine Start-Up Demonstration
 - d. Controls / Joystick Set-Up & Customisation
 - e. Tilt Rotator Set-Up
 - f. Profile Customisation & Setting Saving
 - g. Flow Latching
 - h. Quick Hitch Operation
- 3) Key Selling Points
- 4) Pothole Pro
- 5) Sales Codes

I) Tilt Rotator Key Specifications

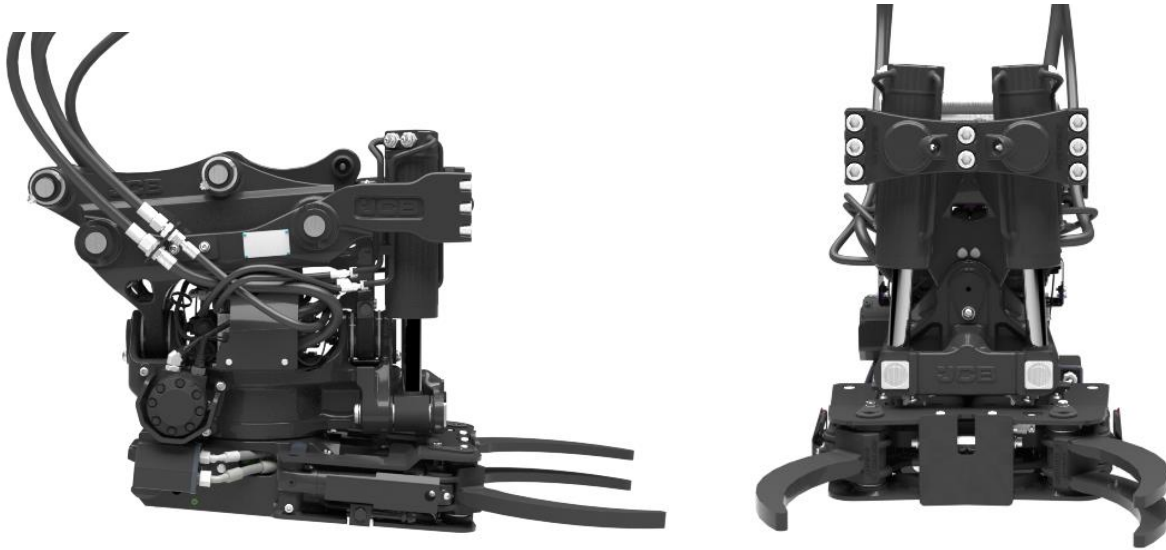


Attribute	Specification
Configuration	2-Line
Tilt Angle	45°
Max Flow (Aux 1)	80 Litres/Min
Max Flow (Aux 2)	60 Litres/Min
Pressure	210 Bar
Rotation Speed	8.5 rpm
Breakout Torque Max	67 kNm
Rotation Torque	5.4 kNm
Tilt Torque	29 kNm
Optional Extras:	
Pin Size	S45 or S50
Hitch Arrangement	Direct Mount or Sandwich Hitch
Added Equipment	Gripper or No Gripper

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2) Walkaround

a. Tilt Rotator Walkaround



PRODUCTIVITY

- Unique, narrow design allows for maximum visibility and manoeuvrability in tight spaces.
- Customisable button layout means each customer can create a bespoke setting, maximising speed, and productivity.
- Configurable with a Sandwich hitch, for those customers with working cross-industry.

PERFORMANCE

- Innovative hydraulic design, delivering a market-leading high flow of up to 80 L/Min allowing 360 degree rotation of flow demanding hydraulic attachments.
- Detachable gripper design ensures the tilt rotator can adapted to suit all jobs.
- Market leading tilt torque means smooth operation in the most extreme positions.

SAFETY

- Commonly used features and controls can be assigned to hot keys, ensuring they are always in close reach.
- Saved controls must be confirmed before machine can be started.
- Joystick steering as standard ensures customers spend minimal time with their hands away from the controls.

b. Attachments Compatibility Guide

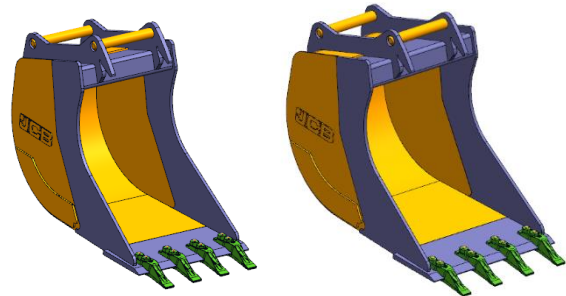
Alongside the launch of the Tilt Rotator, JCB are happy to announce that a complimentary range of both S45 & S50 S-Type attachments will also be available, fully compatible with the Tilt Rotator Option.

Buckets:

Cable Bucket – 400mm



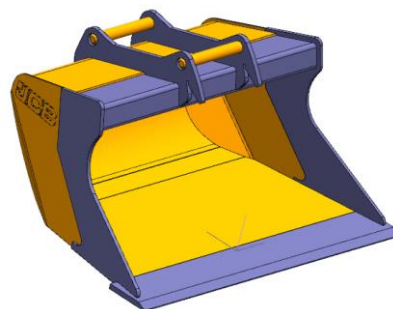
GP Bucket – 600mm / 700 mm



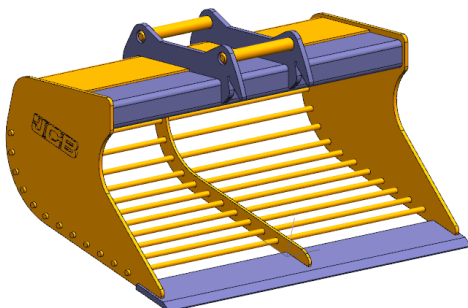
Bladed Bucket – 600mm / 700mm



Grading Bucket – 1400mm

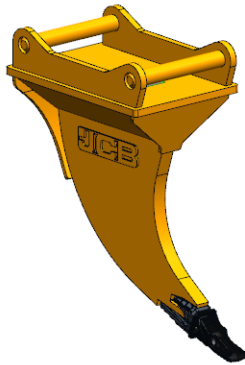


Riddle Bucket – 1400mm

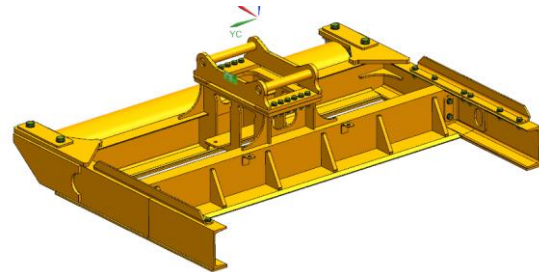


Mechanical Attachments

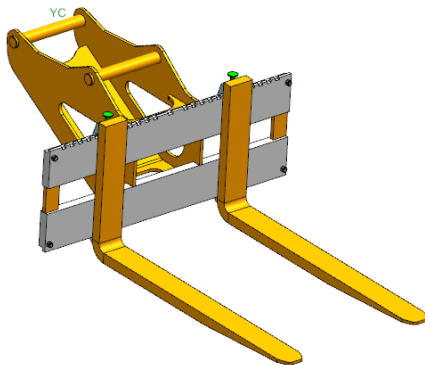
Ripper



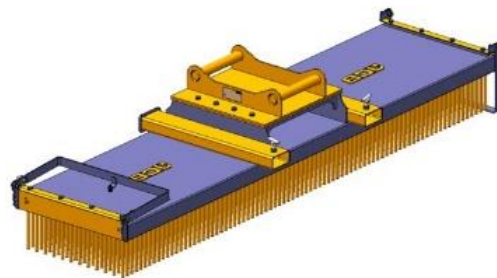
Grading Beam



Fork Frame



Mechanical Brush

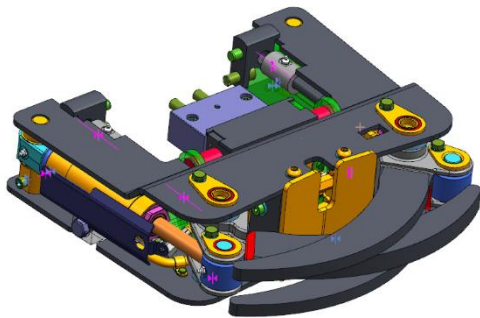


Tarmac Cutter



Hydraulic Attachments

Gripper



Compactor



Planer



HM0033T (Breaker) –
Sandwich Hitch Only



Grab



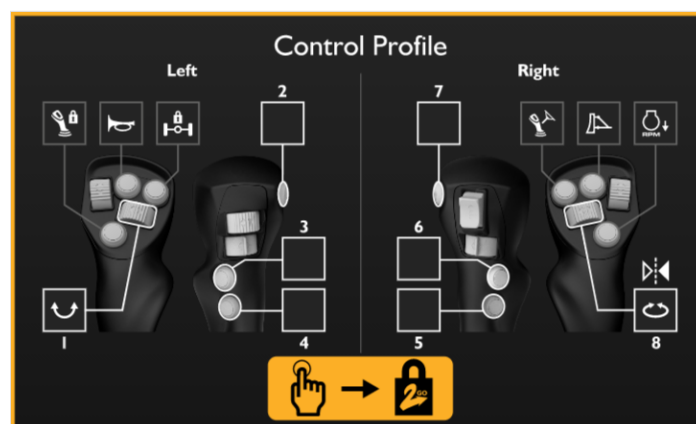
c. **Machine Start-Up**

Machine start-up remains the same as the existing product, with a couple of minor changes. The first update is the 2-GO button. This feature now has a fixed hot key on the left-hand joystick (see below).



When activated, the button will be backlit. Similarly, to the existing 2-GO button, this can be used to isolate the controls at any point while operating the machine. Note: the pre-existing 2-GO button has not been removed and remains on the main button pack for an alternative method.

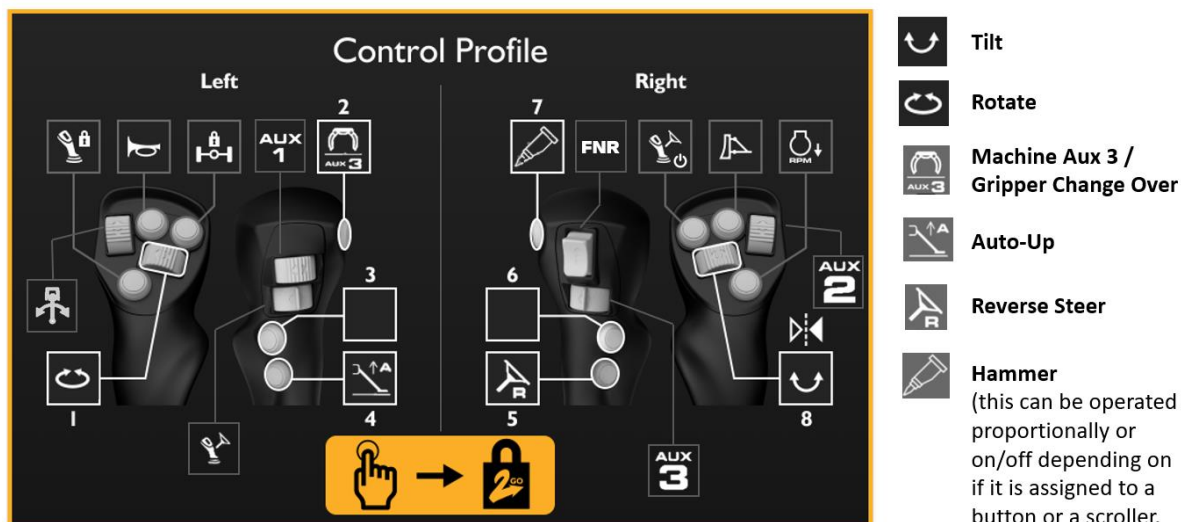
Secondly, joystick controls must be accepted before the machine can be used / made live. This is a safety feature to ensure operators understand the controls before using the machine. Upon dropping the tilting pod, users will be greeted with the screen below:



Once controls have been understood, the 2-GO button on the joystick or main button pack can be used to activate the machine.

d. Controls / Joystick Set-Up & Customisation

Once unlocked, the control profile can be viewed and customised. The machine has a default setting which is shown below:

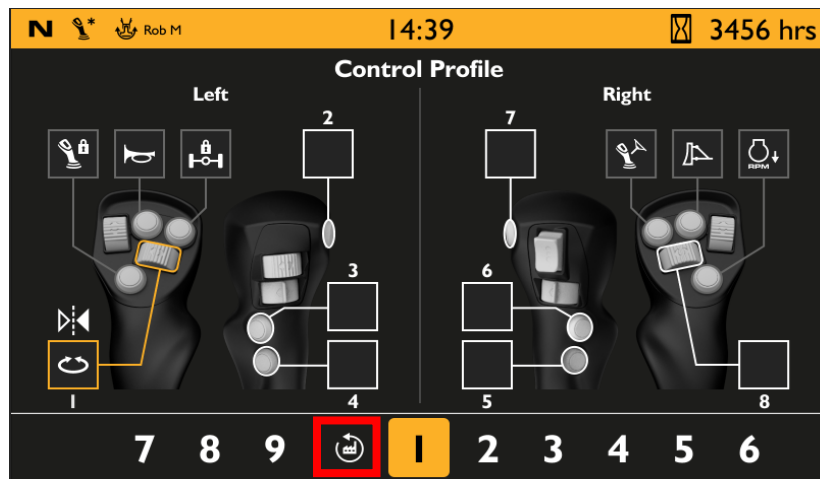


The icons highlighted in a white box are indicated as the customisable hot keys. This feature allows customers to assign most of the machine features to an easily accessible button on the joystick. A full list of features that can be assigned to these buttons is shown below:

Icon	Description	Rules / Comments
	<u>Rotate</u>	Can only be assigned to LH or RH main roller. (Or unassigned).
	<u>Tilt</u>	Can only be assigned to LH or RH main roller. (Or unassigned).
	<u>Breaker</u>	Can be assigned to either button or roller if proportional control is preferred.
	<u>Auto-Up</u>	Button Only
	<u>Reverse Steer</u>	Button Only
	<u>Gripper / Aux 3 Change Over</u>	Button Only

	<u>Hand-Held Tool Circuit</u>	Button Only
	<u>Highway Mode</u>	Button Only
	<u>SRS (Smooth Ride System)</u>	Button Only
	<u>Reverse Fan</u>	Button Only
	<u>Lift Overload Mode</u>	Button Only
	<u>Eco Mode</u>	Button Only
	<u>Latched Status (Aux 1)</u>	Button Only
	<u>Latched Status (Aux 2)</u>	Button Only
	<u>Latched Status (TR Aux 1) (1A)</u>	Button Only
	<u>Latched Status (TR Aux 2) (2A)</u>	Button Only

Customers will have the option to restore the settings to default, by selecting the icon highlighted below:



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e. Tilt Rotator Set-Up

To help tailor to every operator's unique preference, the Tilt Rotator system allows for further customisation of both machine controls and hydraulic performance characteristics. These settings are explained in detail in the following section.

Tilt & Rotate Roller Assignment

Upon opening this section of the Tilt Rotator settings, users will be prompted to assign the tilt and rotate rollers and will be given the option to invert the direction of movement. The default setting is:

Rotate:

Button assignment: lefthand joystick, main roller

Scroll left: rotate clockwise.

Scroll right: rotate anti-clockwise.

Tilt:

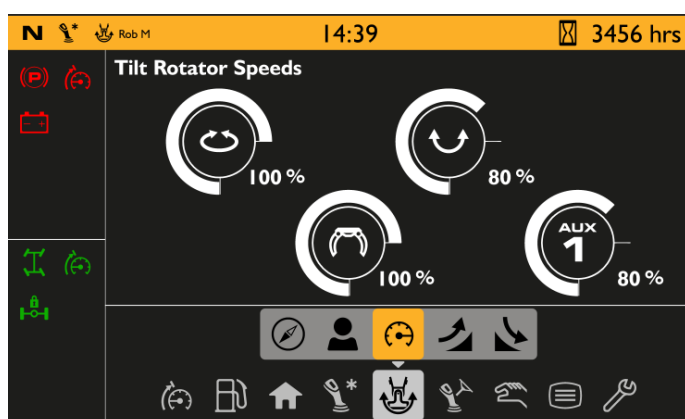
Button assignment: righthand joystick, main roller

Scroll left: retract left ram, extend right ram.

Scroll right: retract right ram, extend left ram.

Hydraulic Tuning / Speeds

Customers can change the 'speed' or flow delivery of some machine & Tilt Rotator auxiliaries, as well as tilt and rotate. This can be adapted to the users' preferences.



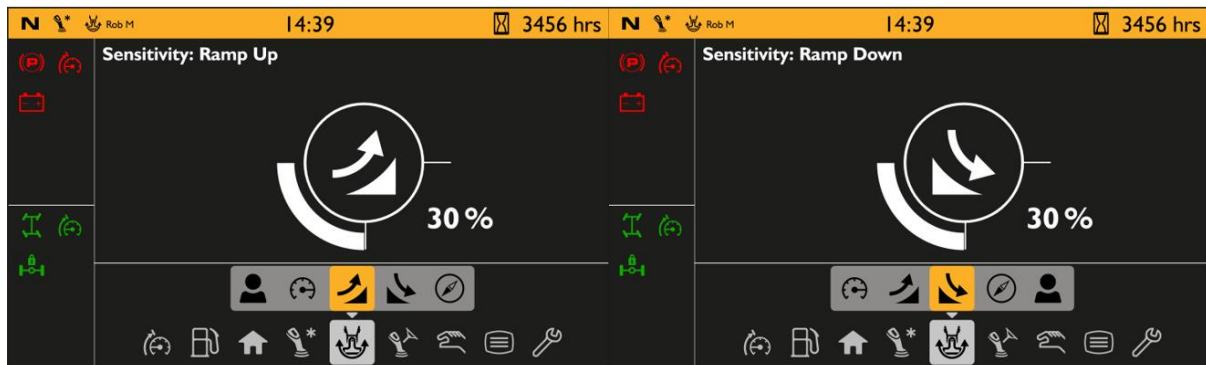
The auxiliaries that can be changed are below:

- Tilt
- Rotate
- Gripper / Aux 2(2A)
- Auxiliary 1(1A)

Ramp-Up & Ramp Down

Ramp-Up & Ramp-Down speeds control the small amount of time between the operator using a joystick control, and the tilt, rotate and auxiliary functions activating ensuring smooth operation.

This setting is found in the Tilt Rotator settings (shown below) and affects all auxiliary outputs. The sensitivity can be changed between 0% – 100%.

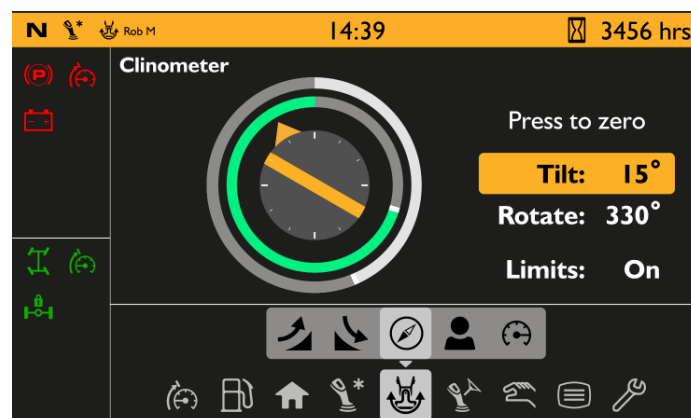


Clinometer – Zeroing & Limits

The Tilt Rotator is fitted with two clinometers (angle sensors) for Tilt and Rotate. This means the machine (and user) knows what angles the tilt rotator is operating with at a given time. This enables useful features such as zeroing and limiting:

Zeroing

Zeroing allows the customer to set a new 'zero' or default position for the tilt and rotate functions of the Tilt Rotator. This means the customer can set a reference point to work from and monitor using the clinometer reading.



Limits

Limiting is a feature that is unique for the rotate function. This allows users to set an electronical limit to how far they can rotate the tilt rotator.

An example for where this is useful is if a 'loop-around' hose is present in the machine set-up. Rotating 360 degrees in this situation would rip out any hoses / electrical connections.

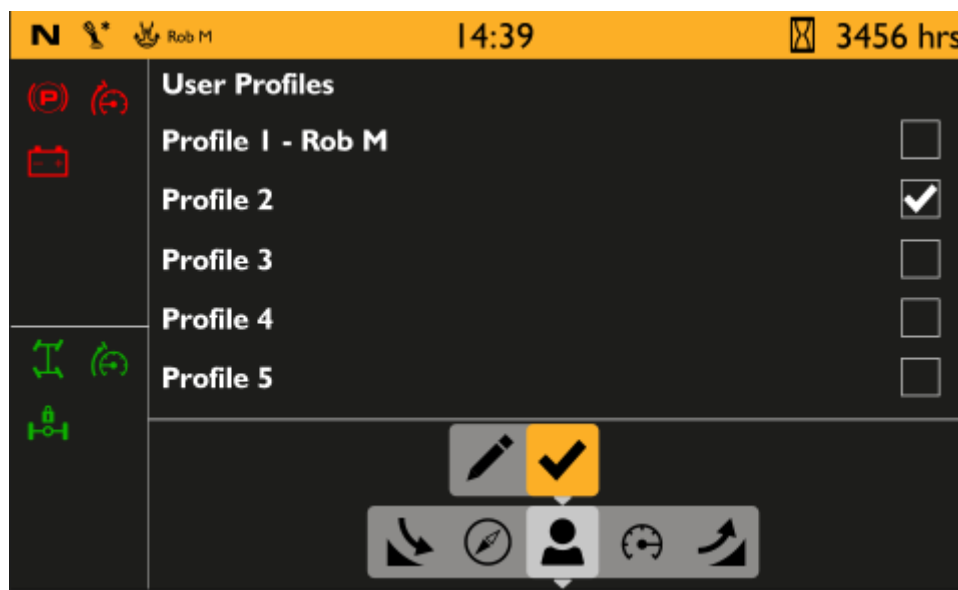
The limit feature allows customers to limit the machine from rotating to a point in which tension would be put on these hoses. The image below shows the menu used to do this.



f. Profile Customisation & Profile Saving

The new user interface allows users to save up-to 5 custom control setting profiles. This means machines can be shared between operators, without having to set-up control settings each time. The process is as follows:

By navigating to the Tilt Rotator menu and selecting the user profiles indicated by the 'person' icon, the user is greeted by the screen below and given the opportunity to either select the desired profile or edit said profile.



By selecting edit, the user can change the name of the profile.

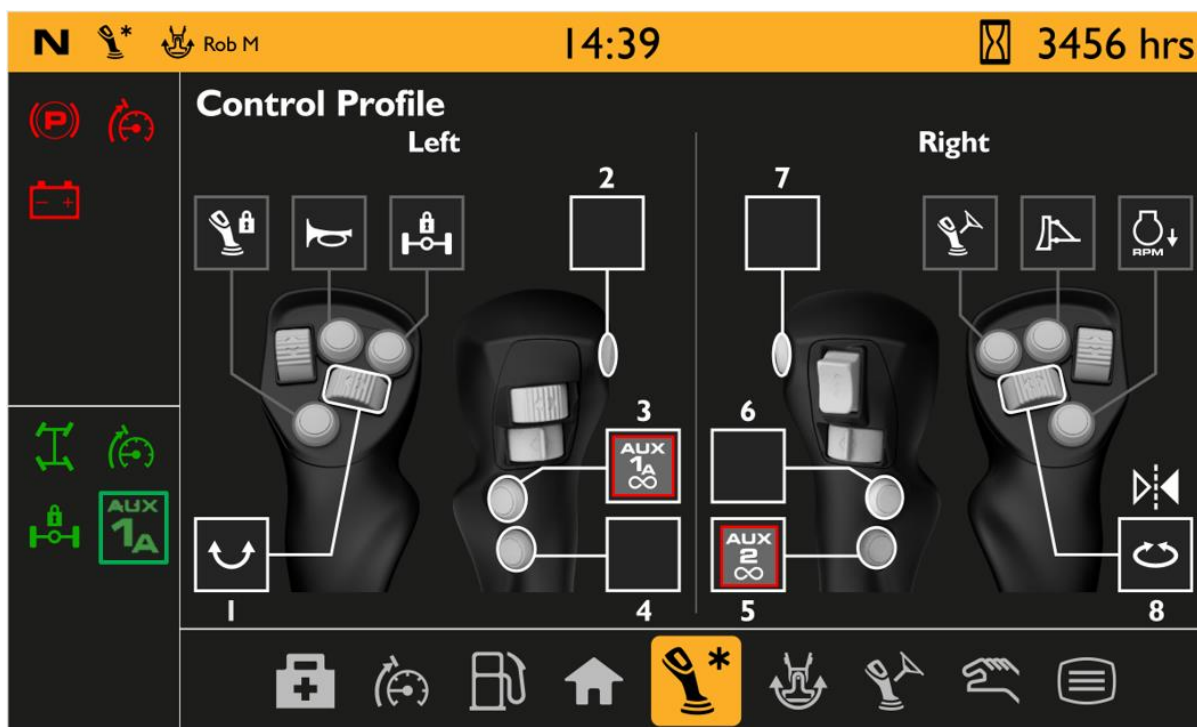
Once a profile is selected, the user can customise the settings as shown in the previous section of this document.

Please note, this feature only saves the tilt rotator settings, not the joystick control settings.

g. Flow Latching

The Tilt Rotator has been developed to allow for hydraulic flow latching of the tilt rotator auxiliaries.

In order to use this feature, the flow latching feature must be assigned to a button on the joysticks as highlighted in red in the image below:



When clicked, the corresponding auxiliary (in this case Aux 1A) will be put into a 'pre-latched' state. This will be indicated via a 'telltale' symbol as highlighted in green on the above image.

The auxiliary is now able to be latched by activating and holding on for X seconds.

The telltale symbol will remain active until the button is clicked again to de-activate the 'pre-latched' state.

To un-latch the auxiliary, simply move the auxiliary roller again and release, or click the latch enable button again to disable the feature.

h. Quick Hitch Operation

As previously mentioned, the Tilt Rotator is able to be specified with a S45 or S50 Sandwich Hitch. This is the name given to a machine with both a machine side quick hitch and a quick hitch on the bottom end of the tilt rotator. This function requires additional machine controls and changes to the software to ensure operation is easy for the customer.

Machine-Side Quick Hitch

The 'machine side' quick hitch operation process remains the same as the existing machine, to limit confusion with existing customers.

The only change being that an image is shown on the screen to indicate which hitch is being operated clearly to the user. This is shown below:

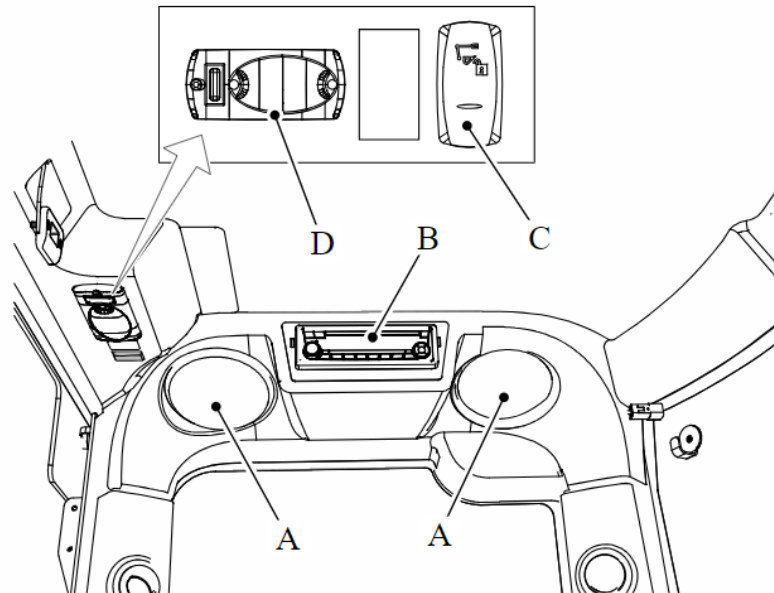


Please note:

1. When a direct mount option is selected, the machine quick hitch button will be made redundant. This will be indicated by the button no longer being backlit.
2. This quick hitch will not work while the tilt rotator harness is plugged in. This is a fail-safe to ensure the operator does not cause accidental damage to electrical connections / harnesses.

Tilt Rotator Quick Hitch

The Tilt Rotator Quick Hitch process is started by pressing and holding the tilt rotator quick hitch rocker switch in the rear right-hand part of the roof. This is labelled 'C' in the image below:



Activating this button will prompt the user with the screen below, again displaying an image that clearly highlights which hitch is in use.



3) Key Selling Features

WALKAROUND SUMMARY - 10 KEY TAKEAWAYS:

- 1) Innovative ram design, ensuring a narrow working envelope.
- 2) Optional, detachable Gripper Cassette.
- 3) Up-to 120L/Min High Flow Tilt Rotator auxiliary.
- 4) New Joystick Steering up to 14kph
- 5) Flow latching for tilt rotator auxiliaries.
- 6) Fully tuneable tilt rotator settings (Speed, ramp-up, ramp-down).
- 7) Fully customisable hot keys
- 8) Rotate limit setting and tilt and rotate zeroing features.
- 9) Storage for up to 5 unique control profiles.
- 10) Customisable S45 or S50 design, direct-mount or sandwich hitch.

4) Pothole Pro

Once the Tilt Rotator is released, it will be made a standard feature of the Pothole Pro it is important to understand the benefits of doing this. Firstly, it shares many of the same benefits that the Hydradig gains:

- Factory-Fitted, JCB design Tilt Rotator
- Narrow design, increasing visibility
- All-new Sense+ Joysticks with customisable controls
- Customisable hydraulic performance characteristics
- Storage for up-to 5 unique control profiles
- Joystick Steering
- Up-to 120 L/min high flow

These features give some specific benefits to the Pothole Pro.

1. High flow and electrical connection through the centre of the Tilt Rotator

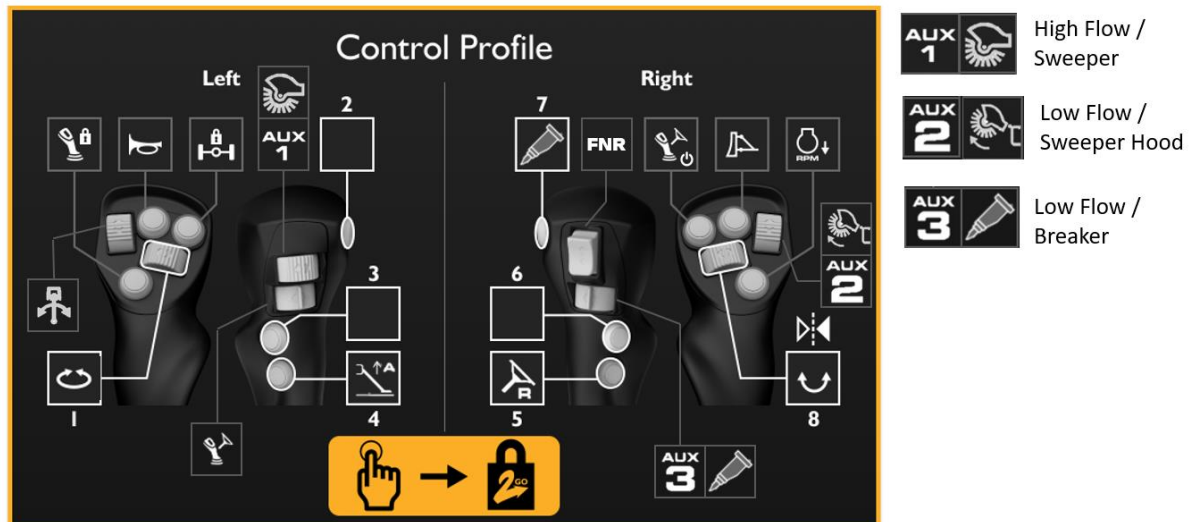
This is of specific benefit to the Pothole Pro as it removes the need for the 'loop around' hoses, meaning the user can rotate the sweeper collector 360 degrees without ripping hoses out.



2. Sense+ Joysticks

The new joysticks offer more programmable buttons and scrollers to the Pothole Pro. This means a changeover button is no longer required to switch between operation of the sweeper hood and the breaker. For the customer, this will allow for smoother operation and faster switching between tasks.

For reference, the default control profile for Pothole Pro is shown below:



Sales Codes

All new sales codes relating to Tilt Rotator and compatible attachments will be located in a new O Code Section (S-Type Attachments & Tilt Rotators). This ensures all compatible attachments are in one place in the ordering system.

O-Codes – S-Type Attachments & Tilt Rotators

<u>Tilt Rotators</u>
Tilt Rotate Ready Pack (Sense + Joysticks & Harness Only)
Direct Mount / S45 Tilt Rotator (No Gripper)
Direct Mount / S50 Tilt Rotator (No Gripper)
S45 / S45 Sandwich Hitch Tilt Rotator (No Gripper)
S50 / S50 Sandwich Hitch Tilt Rotator (No Gripper)
Direct Mount / S45 Tilt Rotator (Gripper)
Direct Mount / S50 Tilt Rotator (Gripper)
S45 / S45 Sandwich Hitch Tilt Rotator (Gripper)
S50 / S50 Sandwich Hitch Tilt Rotator (Gripper)
<u>S-Type Attachments</u>
GP Bucket 600mm (S45)
GP Bucket 700mm (S45)
Bladed Bucket 600mm (S45)
Bladed Bucket 700mm (S45)
Cable Bucket 400mm (S45)
Riddle Bucket 400mm (S45)
Grading Bucket 400mm (S45)
Fork Frame (S45)
Ripper (S45)
S-Type Hitch (S45)
HM033T Breaker (S45)
Detachable Gripper (S45)
Grading Beam 500mm (S45)
Grading Beam 2000mm (S45)
Tarmac Cutter (S45)
Mechanical Brush (S45)
Compactor (S45)
Patch Planer (S45)
Sorting Grab (S45)
GP Bucket 600mm (S50)
GP Bucket 700mm (S50)
Bladed Bucket 600mm (S50)
Bladed Bucket 700mm (S50)
Cable Bucket 400mm (S50)
Riddle Bucket 400mm (S50)

Grading Bucket 400mm (S50)
Fork Frame (S50)
Ripper (S50)
S-Type Hitch (S50)
HM033T Breaker (S50)
Detachable Gripper (S50)
Grading Beam 500mm (S50)
Grading Beam 2000mm (S50)
Tarmac Cutter (S50)
Mechanical Brush (S50)
Compactor (S50)
Patch Planer (S50)
Sorting Grab (S50)

Note:

Additional option codes may be released after the product is launched.

Not all option codes will be released to all regions.

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