

# Cat® Production Measurement for Excavators Quick Reference

This area displays the functions that are available.  
Press the corresponding function key button in order to select the function.



**1) Pattern Change Key** – Press key to cycle through different function key patterns.

**2) Standby/Weigh Key** – Press to cycle between standby and weigh modes.

**3) Site Configuration Key** – Press to go to the site configuration menu.

**4) Truck Store Key** – Press to store and save information. Truck payload and bucket count values will be cleared for the next truck.

**5) Truck Cancel Key** – Press to clear information for a loaded truck. Truck Payload, Remaining Payload, Bucket Pass, and Bucket Payload values will be cleared. Truck Count value will remain the same.

**6) Bucket Cancel Key** – Press to subtract the previous bucket payload value from the current truck payload value. A bucket pass will also be subtracted from the bucket count value.

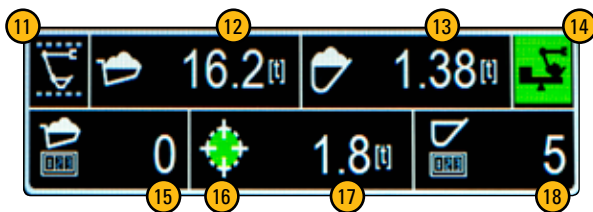
**7) Bucket Recall Key** – Press to add the previous bucket payload value to the current truck payload value. A bucket pass will also be added to the bucket count value.

**8) Bucket Zero Key** – Press to go to the “Re-Zero Adjustment” menu. The “Re-Zero Adjustment” menu is used to re-zero the current bucket weight.

**9) Reset Key** – Press to reset the work monitor information. The reset key is found on the “Work Monitor” menu.

**10) Erase Key** – Press to erase the data stored in the system memory.

# Cat® Production Measurement for Excavators Quick Reference



- 11) **Cat Grade Control Linkage Elevation Monitor Status** – See Operation and Maintenance Manual, SEBU8358, “Cat Grade Control Depth & Slope for E-Series and F-Series Excavators”.
- 12) **Truck Payload** – Displays the weight of material that has been added to the truck total.
- 13) **Bucket Payload** – Displays the weight of material currently in the bucket.
- 14) **Weigh Status** – Displays the bucket payload weigh status and the accuracy of the weigh.
- 15) **Truck Count** – Displays the number of trucks that have been loaded.
- 16) **Truck Status** – Displays the load status of the truck payload.
- 17) **Remaining Payload** – Displays the remaining weight needed to reach the target payload for the truck.
- 18) **Bucket Count** – Displays the number of buckets loaded to truck.

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## JOYSTICK CONTROLS

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► **Weigh/Standby**



► **Store**



► **Adjust Target Payload**



► **Or press up Arrow to Adjust Target Payload**



**Weigh Status** — indicator **14** located on the status bar, displays the accuracy of the bucket payload.



**Estimated Payload** – A BLACK square with the weigh symbol will illuminate on the status bar while the bucket payload is being determined or when an accurate payload has not been determined.



**Accurate Payload Obtained** – A GREEN square with the weigh symbol will illuminate on the status bar when an accurate payload has been obtained.



**Accurate Payload Complete** – A GREEN square will be displayed when the truck has been loaded with an accurate payload. If enabled, an alarm may also sound. The status will remain until the next weigh operation.



**Inaccurate Weigh Complete** – A BLACK square will be displayed when the truck has been loaded with an inaccurate payload. The status will remain until the next weigh operation.

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**Truck Status** — indicator **16** located on the status bar, displays the status of the truck payload.



**Target Not Reached** – The truck status indicator will not be illuminated when the target truck payload has not been reached.



**Last Cycle** – The center of the truck status indicator will illuminate GREEN when one cycle is needed to reach the target truck payload.



**Target Reached** – The entire truck status indicator will illuminate GREEN when the target truck payload is reached.



**Over Load** – The entire truck status indicator will illuminate RED when the target truck payload has been exceeded.

**NOTE: A continuous alarm will sound when the system detects a bucket weight that is heavier than the remaining truck payload.**

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## BASIC OPERATION

- 1) First, use the pattern change key to view the Cat Production Measurement functions.



- 2) Second, press the site configuration key to select a truck. Select OK to highlight the truck menu, scroll to the truck you want, press OK again, press home.



- 3) Third, lift and swing smoothly for an accurate weight and to avoid warning messages.



- 4) Fourth, place load into truck when weigh status indicates accurate.



- 5) Fifth, press store to save the truckload and begin the next.



## RE-ZERO ADJUSTMENT

**Raise Boom Up, Lift and Swing Empty Bucket at Least 90°** (simultaneously)

**Start Position** » Stick in lifting position; Bucket closed; Near ground

**End Position** » Boom up (dump height); Stick out; Bucket closed

**Return** » Swing back, Boom down; Bucket closed; Return to start position

**NOTE!** 1) Gradually raise and swing at least 90° to simulate truck loading

2) Repeat until "Success" is shown on display, minimum 5 times

3) Recommended DAILY, and AFTER each bucket change

**REPEAT 5 TIMES**



START

# Cat® Production Measurement for Excavators Quick Reference

**Cat® Production Measurement requires a Weighing Calibration before using the system and:**

- ▶ Every six months per bucket
- ▶ After system repair
- ▶ After Cat Grade Control boom or stick sensor calibration

**At the Main Menu:**

- ▶ Select Work Tool Menu (1)



- ▶ Select Work Tool (2)



- ▶ Select Calibrate (3)



The Weighing Calibration consists of three different operations:

- ▶ Boom Single Operation Calibration
- ▶ Front Multi-Operation Calibration
- ▶ Re-Zero Adjustment (Required daily and after bucket change)

**Note:** Hydraulic Temp must be above 40°C / 104°F. Calibration procedures must be performed on a level and stable surface.

**CAUTION!** Ensure there is adequate room to perform operation.



## BOOM SINGLE OPERATION CALIBRATION

**Raise and lower Boom slowly at Minimum reach:**

**Start Position** ▶ Boom down; Stick in; Bucket closed; Linkage near ground

**End Position** ▶ Boom up; Stick in; Bucket closed

- ▶ Boom movement **ONLY** at constant speed
- ▶ Boom up: 30 seconds (toward end of cylinder stroke)
- ▶ Boom down: 30 seconds (return to start position)

**Note!** 1) Repeat until "Success" is shown on display  
2) Hydraulic speed may change; may be necessary to move boom lever slightly to maintain constant boom angle speed



**Raise and lower Boom slowly at Maximum reach:**

**Start Position** ▶ Boom down; Stick out; Bucket closed; Near ground

**End Position** ▶ Boom up; Stick out; Bucket closed

- ▶ Boom movement **ONLY** at constant speed
- ▶ Boom up: 30 seconds (toward end of cylinder stroke)
- ▶ Boom down: 30 seconds (return to start position)

**Note!** 1) Repeat until "Success" is shown on display  
2) Hydraulic speed may change; may be necessary to move boom lever slightly to maintain constant boom angle speed



**Proceed to Front Multi-Operation Calibration**

# Cat® Production Measurement for Excavators Quick Reference

## FRONT MULTI-OPERATION CALIBRATION

**4** OPERATIONS X **5** CYCLES EACH

- ▶ Swing 180° and Boom Up simultaneously.
- ▶ Swing back 180° and Boom Down simultaneously. } **ONE CYCLE**
- ▶ Maintain constant, smooth movements
- ▶ Calibration is performed at normal operating speed

### 1 Raise Boom Up and Swing 180° (simultaneously)

**Start Position** ▶ Boom down; Stick out; Bucket closed; Near ground

**End Position** ▶ Boom up; Stick out; Bucket closed

**Return** ▶ Swing back and Boom down; Return to start position

**NOTE!** 1) Gradually raise as boom swings; reverse on return  
2) Repeat until "Success" is shown on display, minimum 5 times

**REPEAT 5 TIMES**



### 2 Raise Boom Up, Swing 180° and Open Bucket (simultaneously)

**Start Position** ▶ Boom down; Stick out; Bucket closed; Near ground

**End Position** ▶ Boom up; Stick out; Bucket open

**Return** ▶ Swing back, Boom down and Close bucket; Return to start position

**NOTE!** 1) Gradually raise and open bucket as boom swings; reverse on return  
2) Repeat until "Success" is shown on display, minimum 5 times

**REPEAT 5 TIMES**



### 3 Raise Boom Up, Swing 180° and Stick In (simultaneously)

**Start Position** ▶ Boom down; Stick out; Bucket closed; Near ground

**End Position** ▶ Boom up; Stick in; Bucket closed

**Return** ▶ Swing back, Boom down and Stick out; Return to start position

**NOTE!** 1) Gradually raise and move stick in as boom swings; reverse on return  
2) Repeat until "Success" is shown on display, minimum 5 times

**REPEAT 5 TIMES**



### 4 Raise Boom Up, Swing 180° and Stick In (simultaneously)

**Start Position** ▶ Boom down; Stick out; Bucket open; Near ground

**End Position** ▶ Boom up; Stick In; Bucket open

**Return** ▶ Swing back, Boom down and Stick out; Return to start position

**NOTE!** 1) Gradually raise and move stick in as boom swings; reverse on return  
2) Repeat until "Success" is shown on display, minimum 5 times

**REPEAT 5 TIMES**



**For complete operating instructions, refer to the following OMMs: HEX (SEBU9211-01)**



Scan with your Smart Phone to view instructional videos or go to [http://www.cat.com/en\\_US/articles/support/technology/Production-Measurement-Excavators.html](http://www.cat.com/en_US/articles/support/technology/Production-Measurement-Excavators.html) and navigate to operator training for more advanced features.