KOMATSU

Smart Construction

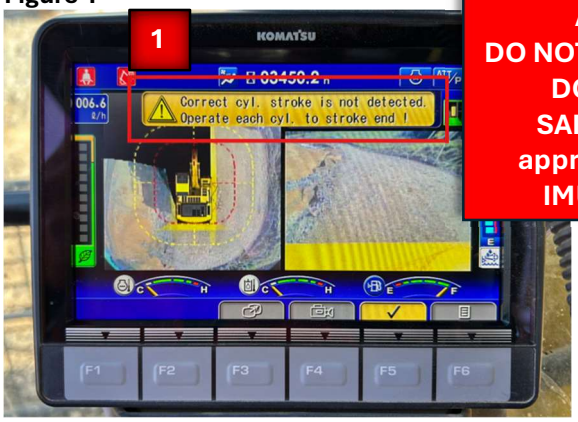
Work smarter. Not harder.

How to properly start the Komatsu INTELLIGENT MACHINE CONTROL (IMC1.0, IMC2.0)

Mandatory requirement for EVERY ENGINE START when working with 'GPS'/GNSS.

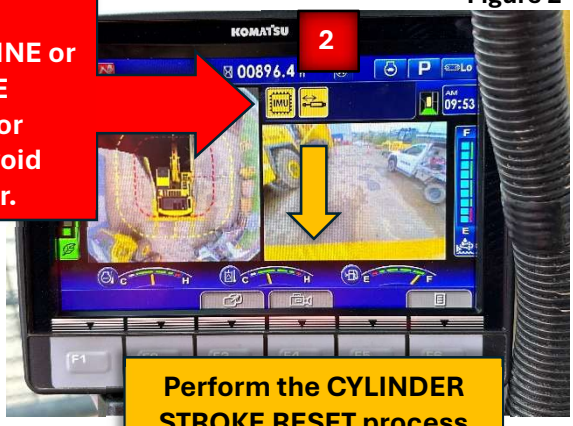
IMC Excavator Machine monitor:

Figure 1



After engine start, DO NOT MOVE THE MACHINE or DO NOT UNLOCK THE SAFETY LOCK LEVER for approx. 5 seconds to avoid IMU Initialization Error.

Figure 2



Perform the CYLINDER STROKE RESET process and hold each stroke end for 2 seconds.

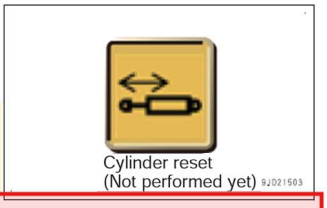
CYLINDER FUNCTION STATE CAUTION LAMP

Cylinder function state caution lamp displays the state that stroke measuring function of cylinder has not been reset.

Stroke measuring function of boom cylinder, arm cylinder, and bucket cylinder has not been reset since the starting switch was turned on.

The caution lamp lights up in yellow. (Action level is not displayed.)

This is the state that stroke measuring function of cylinder has never been reset since the starting switch was turned on.



Cylinder stroke may be mistakenly recognized. Keep each cylinder of boom cylinder, arm cylinder, and bucket cylinder at its stroke end for 2 seconds before operation.

If this caution lamp does not go out, ask your Komatsu distributor for an inspection and maintenance.

IMU STATE CAUTION LAMP

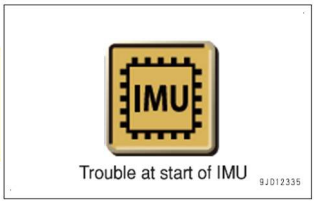
The IMU state caution lamp warns a problem in IMU.

When abnormal

The caution lamp lights up in yellow. (Action level is not shown.)

The IMU cannot start normally or the precision is low.

This can occur when the machine is operated in less than 2 seconds after you turn the starting switch to the ON position.



In such a case, wait until the warning lamp goes off, or set the starting switch to the OFF position and then set it to the ON position again. At this time, make sure that the machine and the work equipment are grounded and in stable condition.

Do not move the machine for at least 3 seconds after you turn the starting switch to the ON position.

The IMU does not operate correctly. So the intelligent Machine Control is not available or precision of the intelligent Machine Control is low. At this time, you can do the operations other than intelligent Machine Control.

If the warning cannot be cleared even after you operate the starting switch, consult your Komatsu distributor for inspection and maintenance.

Move the **BUCKET fully CURL**.

Move the **BUCKET fully DUMP**.

Move the **ARM fully OUT** while lowering the BOOM.

LOWER the BOOM to the ground.

Move the **ARM fully IN** while raising the BOOM.

BOOM fully RAISE.

Figure 3

Machine is READY.

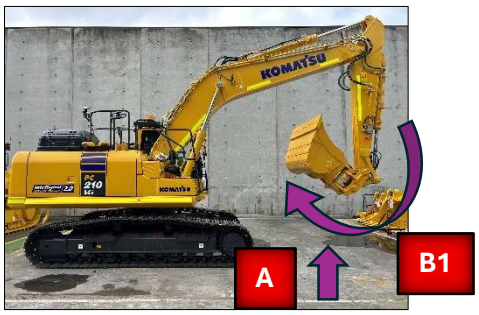
⚠ WARNING

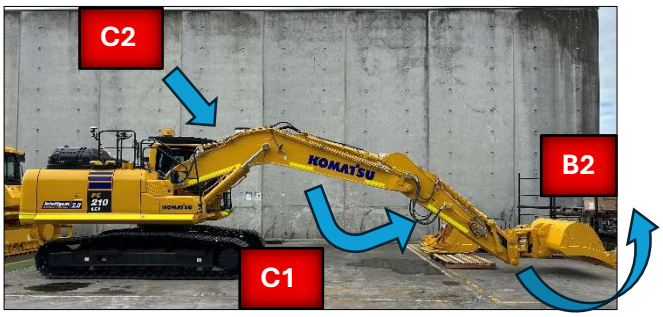
- Start the engine only while sitting on the operator's seat.
- Do not attempt to start the engine by short-circuiting the engine starting circuit. This may cause a fire or serious personal injury or death.
- Check that there is no person or obstacle in the area around the machine, then sound the horn and start the engine.

See the back page for additional information.

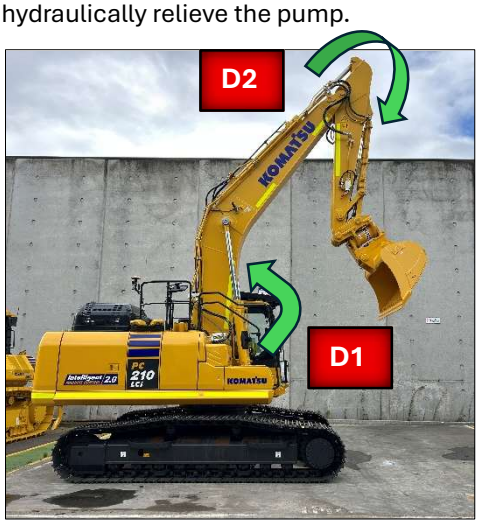
Recommended procedures for *EVERY ENGINE START*:

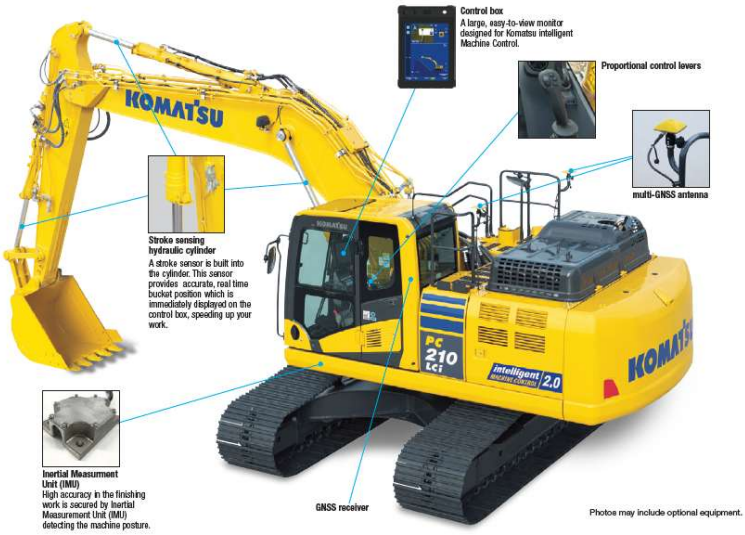
1. Start the engine.
2. Message box **(1)** shown in page 1 in figure 1 will prompt for 2-3 seconds, then message box **(1)** will change to icon **(2)** shown in page 1 in figure 2.
   - ⚠ **DO NOT MOVE THE MACHINE. DO NOT UNLOCK OR RAISE THE SAFETY LOCK LEVER.**
   - ⚠ **Wait for about 5 seconds for IMU initialization while the engine is warming up and to ensure proper engine oil circulation.** During this time, the Body IMU and Tilt Bucket IMU sensors are initializing.
   - ⚠ Sudden or drastic movement immediately after startup will disturb the IMU initialization process and will cause a sensor error.
3. Perform the **MS Cylinder Stroke Reset Request** according to recommended sequence below:
   a. Lift the boom slightly from parking position.
   b. Move the **Bucket to stroke end – fully CURL then fully DUMP**. Hold the joystick for 2 seconds on each stroke end movement to hydraulically relieve the pump.
   c. Move the **Arm to stroke end – fully EXTEND** while simultaneously **Lowering the Boom to the ground** for safe work equipment posture, then hold the joystick for 2 seconds to hydraulically relieve the pump.



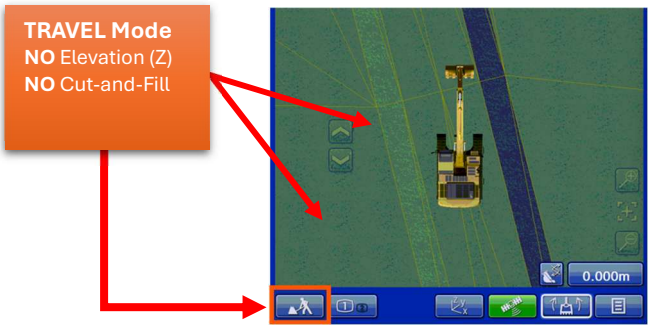


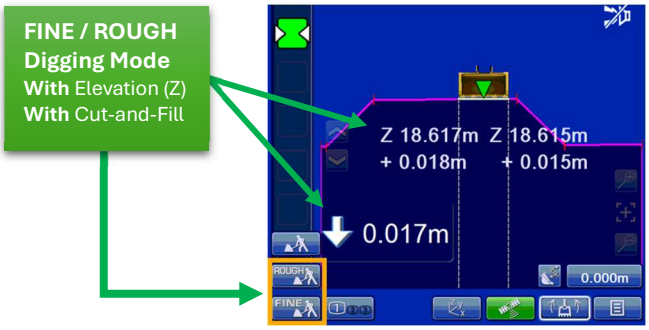
   d. Move the **Boom to stroke end – fully RAISE** slowly while simultaneously moving the **Arm to stroke end – fully IN** for safe work equipment posture. Hold the joystick for 2 seconds on each stroke end movement to hydraulically relieve the pump.





4. Confirm that icon is no longer displayed.
   - ⚠ In case the icon above still displayed, repeat the procedures stated in Step 4 for 2-3 times.
5. Wait for the 'GPS' tablet (PH700/X31 monitor) to fully boot up. Visually check that the posture of the work equipment shown on the tablet is the same as that of the actual machine.
6. From the default startup mode – **TRAVEL Mode (Use when machine travels in the job site.)**, select either **FINE or ROUGH Digging Mode** to work with the design surface with displayed elevation and cut-and-fill values.





*For IMC system concerns and support, please contact your Smart Construction Support at **1300 445 978** or to your nearest Service Branch / allocated Technology Advisor.*

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