

REAL September 2020 Torque

Contact maintenance for any questions on 0800 80 80 69

Aichi EWP boom stowing.

This month's Real Torque topic is covering Aichi's recommendation that the Auto boom stowing function be used whenever possible on Aichi EWP's.

Aichi EWPs have two stowing modes, auto and manual. Auto should be used unless impractical or in emergency situations.

Recently, we have seen several incidents where the main boom was damaged because the auto stow function was not used. The manual stowing mode has been used instead resulting in some very costly repairs and long periods of downtime while waiting for parts to come from overseas.

Using the manual mode to stow the main boom can create an opportunity for the operator to make a mistake at speeds with full hydraulic pressure being imparted between the boom and the stow cradle.

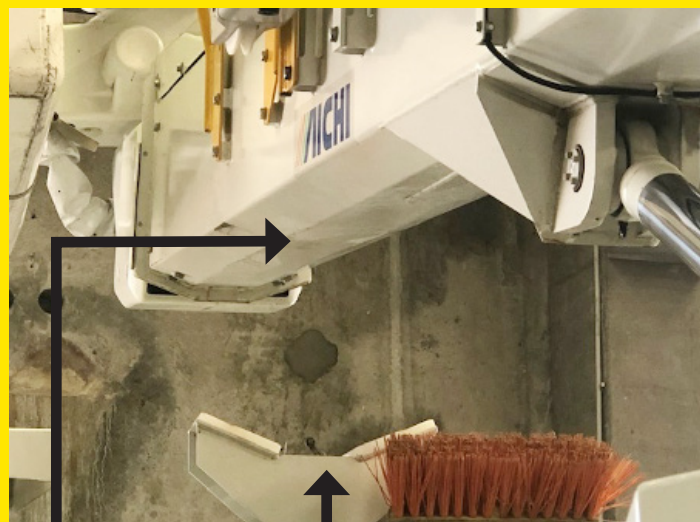
Aichi have strict tolerances regarding boom damage. The 2 damaged booms shown could not be repaired or certified and had to be replaced at a cost of approx. \$40,000.



Boom bent



Boom damage impact



**Area where
damage occurs**

**Boom Stow
Cradle**

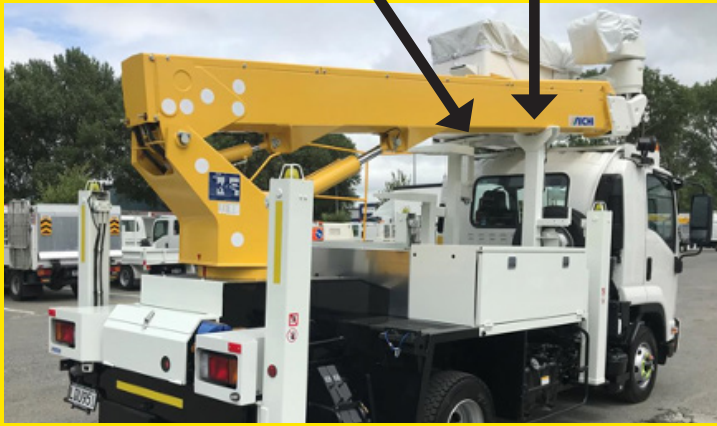
The damage shown was done using the manual mode. This mode is used when working in close proximity to power lines because if the auto stow function is used it will not recognize these and would take the shortest route to stow the boom which could result in coming into contact with the lines. The solution here is to simply use manual mode to move the boom into a safe position and complete the stow using Auto Stow.



Aichi control panel showing auto stow switch.

Bucket and boom in correct stow position.

Where the damage occurs.



Aichi recommends using the Auto Stow function whenever possible as this process lowers the boom onto its cradle slowly and without the excessive hydraulic downforce that using the manual override function can.

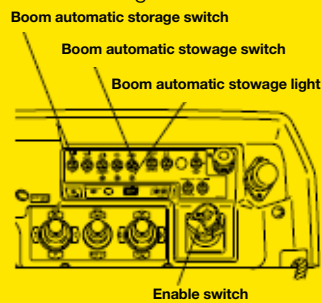
Boom automatic stowage CAUTION

- ▶ The boom automatic stowage system does not cover the bucket elevation function. Therefore, use the bucket elevation switch to lower and stow the bucket onto the bucket rest after stowing the boom onto the boom rest.
- ▶ Before stowing the boom, check the winch and rotate the winch to the position where the winch does not interfere with the bucket while stowing the boom automatically.
- ▶ After stowing the boom, check the bucket and make sure that the bucket does not protrude from the chassis. If the bucket protrudes from the chassis, rotate the bucket and the arm to move the bucket within the width of the chassis.

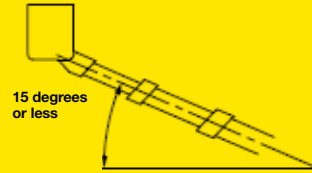
Boom automatic stowage can be done by the boom automatic stowage switch and enable switch.

Stow the boom using the boom automatic stowage switch as follows.

1. Make sure that the boom is raised more than 15 degrees and the boom is not rotated above the boom rest. The boom automatic stowage system does not work, if the boom is not raised more than 15 degrees or is rotated above the boom rest.
2. Lift the bucket fully using the bucket elevation switch. If you do not lift the bucket, the bucket may be excessively pressed against the bucket rest after the boom is stowed on the boom rest.



3. Move the boom automatic stowage switch up without pushing the enable switch. If the boom is positioned in the boom automatic stowage capable range mentioned above, the boom automatic storage light goes on.



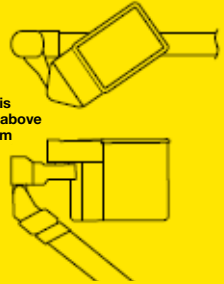
4. Hold the boom automatic stowage switch in its ON position, and push and hold the enable switch. The boom and the bucket move in the following sequence until the boom is stowed on the boom rest.

1. Boom retracts until it is fully retracted.

2. Boom rotates and stops above the boom rest.

3. Bucket rotates, if the bucket is rotated above the boom and the bottom of the bucket interferes with the boom when lowering the boom. Bucket does not rotate, if the bucket is not rotated above the boom.

Bucket is rotated above the boom



4. Boom lowers and stops at the specified boom angle.
5. Arm rotates and stops at the specified storage position.
6. Bucket rotates and stops at the specified storage position.
7. Boom lowers to stow the boom on the boom rest.

To stop the automatic stowage functions, release the automatic stowage switch or the enable switch.

5. After the boom is stowed on the boom rest, operate the bucket elevation switch to lower the bucket until the bucket sits on the bucket rest.



Tips and Tricks

- ▶ Only trained and competent operators should use EWP's.
- ▶ Refer to the operator's manual if unsure.
- ▶ Try to always use the Auto Stow function and only use the manual override in an emergency or if Auto Stow is inactive or impractical to use.
- ▶ Make sure the main boom is fully retracted before stowing.
- ▶ If you have to use the manual stow mode operate all the hydraulic functions with caution and slowly as immense hydraulic pressure is produced by these machines.
- ▶ Do not overload the bucket- the maximum safe loading is 250 kgs.
- ▶ Contact TR Driver training for correct machine operational training and familiarization.

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