

TOWER CRANE SAFETY ALERT



Advice to Tower Crane Users

Taking tower cranes from and reinstating back into service for extended out-of-service periods

Background:

Where tower cranes are to be placed out of service for extended periods, as with the outbreak of the Coronavirus, the Construction Plant-hire Association (CPA) is issuing advice to tower crane users relating to how tower cranes should be left out of service, along with the subsequent checks that should be carried out when re-instating those cranes back into service.

Failure to take the crane out of service in line with manufacturer's instructions and to periodically inspect the crane whilst out of service could result in very high wind loadings being placed on the crane, with consequential collapse of the jib or the whole crane.

Failure to thoroughly check the crane when placing back into service and carry out enhanced pre-use procedures could result in damage to the crane with associated safety implications.

1. Action Required: Placing the Crane Out of Service

If it becomes necessary to leave the tower crane out of service for long periods, tower crane users should:

- Ensure that the most up to date information for taking the crane out of service is obtained from the manufacturer or supplier of the tower crane for the specific make, model and configuration of crane. This should be checked against the information recorded in the project lift plan;
- From the information provided by the crane manufacturer or supplier, verify that the crane has been left in the correct out-of-service condition;
- With luffing cranes, it is strongly advised that the jib is parked at a radius larger than the minimum specified by the manufacturer whilst allowing for any surrounding, structures, cranes, obstacles or oversailing restrictions. Leaving the jib at a radius larger than the minimum specified by the manufacturer will allow the jib to slew more easily and reduce the risk that the jib may be blown backwards;
- With a saddle jib crane, park the trolley at the manufacturer's recommended position along the jib;
- Check the function of the free slew mechanism and report any fault to the owners' or suppliers' service department immediately. Leave the crane in free slew;
- Make note of the direction of the tower crane jib in relation to the wind direction. When the jib is in free slew, it should follow any change in wind direction. If the jib remains in the same position when the wind direction changes, contact the crane supplier's service department immediately;

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- Check the integrity of fixings of any wind sail or advertising boards;
- Secure any intruder prevention barriers;
- Hand all keys to designated project management representative and inform the crane owner's service department of the key holder's contact details;
- Put in place procedures to ensure that the base of cranes is kept free from surface water that may accumulate;
- Put in place arrangements for the crane to be periodically inspected by a competent person. If the crane driver is not available, then arrangements should be made with the crane supplier to undertake the inspections.

It is recommended that the thorough examination regime for the crane is maintained whilst remains out of service.

2. Action Required: Placing the Crane Back into Service

Prior to the crane re-entering service, the following enhanced checks should be undertaken by a competent person. Any faults that are found should be reported to the maintenance provider and rectified prior to the crane re-entering service.

1	Check that the tower crane and lifting accessories have current reports of thorough examination	
2	Remove any water or debris that may have collected at the tower crane base. When clean and dry, inspect the base for any cracks or signs of movement	
3	Check that power is available to the crane (mains power or generator)	
4	Check that any security or task lighting is functioning	
5	Inspect the access route, for the crane operator, to the base of the crane and/or the mast	
6	Tower crane operator to complete the pre-use check-list, specific to the make & model of the tower crane deployed	
7	Check that any aircraft warning lights are illuminated and any back up batteries charged	
8	Check that all crane control movements & safety systems are operating correctly	
9	Check all anemometers are working & reading correctly	
10	Check that any camera systems are fully functional and any back up batteries are charged	

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11	Ensure radios for communications with slinger/signallers & lifting team members are fully operational & charged	
12	Ensure that any battery back-up, and/or devices using batteries, are fully charged	
13	Confirm that the free slew mechanism has been returned to the in-service position and that the slew brake functions correctly	
14	Check the integrity of any wind sail boards, advertising boards and banners.	

Reference documents:

BS 7121-5:2019 - *Code of practice for safe use of cranes - Part 5: Tower cranes*

CPA-TCIG-0701 - *Safe Use of Top Slewing Tower Cranes*

CPA-TCIG-0801- *Maintenance, Inspection and Thorough Examination of Tower Cranes*

CPA-TCIG-TIN 021 – *Maintenance principles for Tower Cranes*

CPA-TCIG-TIN 027 – *Tower Crane Out-of-Service Wind Speeds*

CPA-TCIG-TIN 038 – *Leaving Tower Cranes Out-of-Service*

CPA-TCIG-TIN 044 – *User Responsibilities for the Maintenance, Inspection and Thorough Examination of Tower Cranes*

CPA documents are available for free download from www.cpa.net.uk

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NOTE: Whilst every care has been taken to ensure the accuracy of the material contained within this publication, no liability is accepted by the Construction Plant-hire Association in respect of the information given.