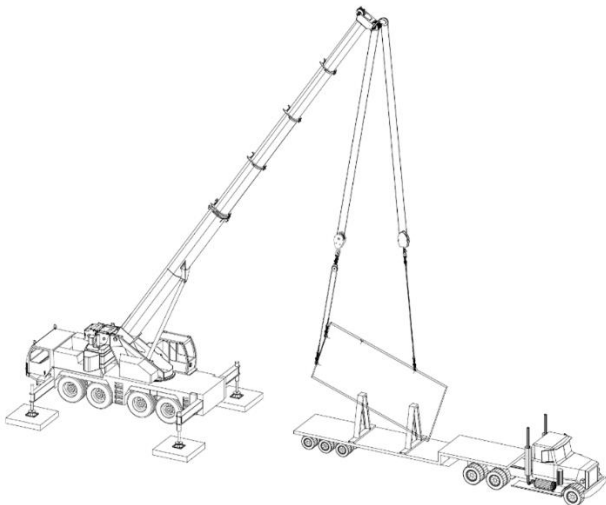


Greetings all, today's bulletin is all about Single Crane Dual Hook Operations.

Single crane dual hook lifts use both the main and the auxiliary hooks of a single mobile crane to simultaneously lift a load and in general rotate to a different orientation to the initial lift.

These are similar to multi-crane tailing lifts but have additional unique considerations which should be factored in during the planning stages.

Single crane dual hook operations must be undertaken in accordance with instructions found in the crane operators manual developed by the OEM, as not all crane configurations are designed for single crane dual hook operations. In the absence of OEM manual coverage of *single crane dual hook* operation, guidance can be sought from the OEM, or a lift engineer.

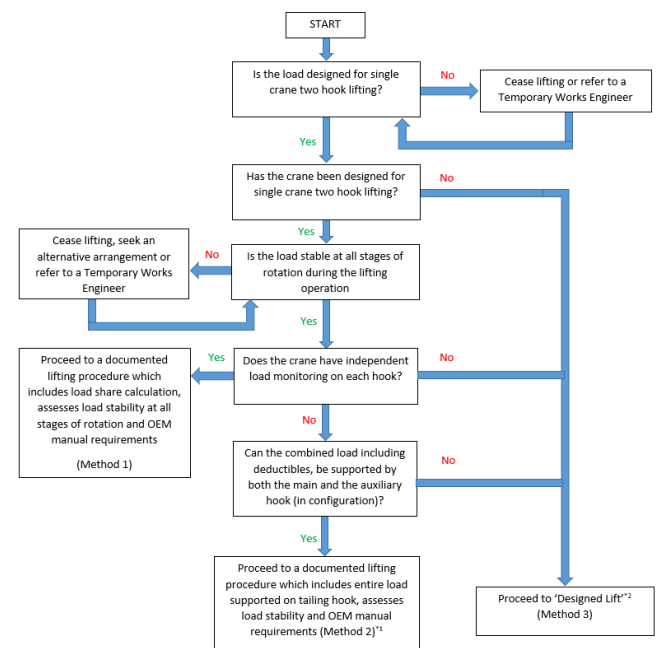


It is important to note:

1. The main and auxiliary hook controls should be operated independently.
2. The lifting points and rigging need to be designed to take the load in direction / orientation that will occur during the rotation process.
3. The load on the main and auxiliary hooks should ideally be monitored separately to ensure no overloading of either winch arrangement, hook, rigging and load. In practice, many cranes will not have independent hook load monitoring. In absence of independent load monitoring, load share calculations can help control the risk of excessive load through each hook.
4. If the entire weight of the load and rigging (deductions) is lifted within the rated capacity of both

the main and the auxiliary hook configuration, load share calculations are not required for the lift plan. However, a lift procedure is still required, and the lift procedure should specify the risk management process of the entire operation.

5. If the entire weight of the load to be lifted exceeds either rated capacity of the main or the auxiliary hook, the lift should be treated as a Designed Lift. Risks mentioned in the guidance note should be considered as part of the lift plan.



Notes:

*1 When using Method 2, the 1.2 factor from AS 2550.5 (2016) applied to the distributed load is not required to be applied.

*2 For guidance on designed lifts, please refer to the full CICA Guidance Note and Australian Standard 2550.1.

Guidance Note

Single crane two hooks lifts need to be performed in accordance with AS 2550.1:2011 and AS2550.5:2016. If there is any doubt as to the capabilities of the crane or conformity of the lift planning in relation to applicable standards, then the lift planning should be considered as a designed lift.

The CICA technical committee is developing a guidance note on single crane multi-hook lifting to address key risks with planning and conducting lifting operations with a *single crane using dual hooks*.

This guidance note also provides further guidance and position for the industry where current guidance

material is either conflicting, silent or has multiple references. Considerations in this guidance note include manufacturer's requirements, applicable standards and industry regulations and requirements.

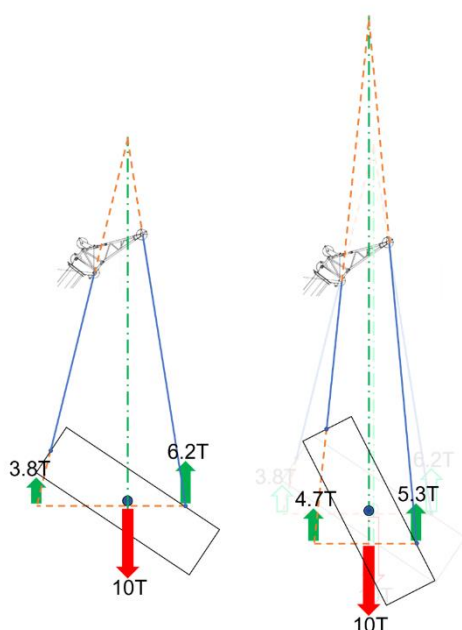
CICA has produced for members a simple Excel calculation tool to demonstrate how the load is transferred during rotation from the auxiliary hook to the main hook.

Load share between the main and the auxiliary hook is an important factor that can assist the risk control process. Forces from load rotation need to be carefully considered at all stages of the lifting operations.

Particular consideration is required for loads that are relatively slender in nature with significant differences between main and auxiliary lift points, where operational percentage of hoist line system would be drastically increase after initial pick position.

In the guidance note, sample calculations on main and auxiliary hook load share during the entire lift operation were given to assist the load share monitoring.

Below is an example of a lift operation for concrete panel rotation. The example drawing shows the load share for the main and the auxiliary hook when the panel is rotated at 63 degrees.



Refer to the guidance note for detailed calculation on the whole panel rotation process and detailed calculation for rotating a slender shape load.

This CICA Guidance Note is available to CICA Members or by contacting Alice Edwards (alice@cica.com.au)

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