

WHSQ SS 04

Swing stage load test procedure

Purpose

This document provides guidance on load testing of swing stage cradles prior to use – testing is to be carried out prior to the initial use on site and prior to use each time the swing stage is re-located on that site. This test is in addition to other testing specified in Australian Standard 4576, such as testing of the swing stage hoists to determine the load limiting device is operational (i.e. 25 per cent overload test).

The testing is to be witnessed by the person responsible for inspecting the swing stage suspension system (i.e. the person who completes the Swing stage suspension system verification statement WHSQ SS 03).

Test procedure – using weights

1. Testing both needles at one time

Test load size - test load is to be equivalent to 100 per cent of the working load limit (WLL) with 100 per cent of load spread evenly across full length of cradle (e.g. cradle WLL 400kg, evenly distribute 400kg across the length). **Note: test weights must be clearly marked with the weight in kilograms.**

Procedure

1. Ensure suspension system has been inspected and Swing stage suspension verification statement WHSQ SS 03 has been completed (except for load test part and final sign off).
2. Ensure remote control system has been fitted to each swing stage hoist motor.
3. With cradle located on ground, or landing, load swing stage cradle with test weights positioned evenly along length of cradle.
4. Standing away from, and to the side of the cradles (i.e. a distance of at least three metres to the side), operate remote control(s) and raise cradle 50cm above landing.
5. Hold cradle at one metre above landing and check that cradle does not move. If cradle does not move, raise cradle to three metres above landing. Observe that cradle remains stationary.
6. Lower cradle to landing and remove test weights.

2. Testing one needle at a time

Test load size - each needle is to be tested with 60 per cent of the WLL of the cradle per needle (e.g. cradle WLL is 400kg, test load is 240kg applied within one metre of end of cradle). **Note: test weights must be clearly marked with the weight in kilograms.**

Procedure

1. Ensure suspension system has been inspected and Swing stage suspension verification statement WHSQ SS 03 has been completed (except for load test part and final sign-off).
2. Ensure remote control system has been fitted to each swing stage hoist motor.
3. With cradle located on ground, or landing, load one end of swing stage cradle with weights positioned **within one metre of end of cradle**.
4. Standing away from, and to the side of the cradles (i.e. a distance of at least three metres to the side), operate remote control(s) and raise cradle 50cm above landing.
5. Hold cradle at one metre above landing and check that cradle does not move. If cradle does not move, raise cradle to three metres above landing.
6. Lower cradle to landing and move test weights to the opposite end of the cradle, within one metre of end of cradle.
7. Repeat steps (4) and (5) above.
8. Lower cradle to ground and remove test weights.

Test procedure – using load cells

Load cells, anchored between a solid structure and the swing stage cradle, may be used as an alternative to test weights. When using load cells to undertake the load test, the following conditions are to be complied with:

1. The test procedure is to be prepared and approved by a professional engineer. A copy of the documentation verifying this is to be located at the test location.
2. The loading is to accurately simulate 100 per cent of the working load limit to the swing stage suspension system.
3. Application of the test load must not damage the swing stage cradle in any way and it will likely be necessary to use a load spreading frame between the load cell(s) and swing stage cradle. If such a frame is used its design is to be certified by the professional engineer.
4. The load cell(s) is to be calibrated at intervals not exceeding one year or at a more regular interval determined by the professional engineer. Calibration documentation is to be available upon request.
5. When using the load cell to carry out the load test, persons operating the swing stage hoist motors are to stand away from, and to the side of, the cradles (i.e. a distance of at least three metres to the side).