

Safety Tips Sheet No. 2: Pre-operational equipment check of Cranes and Hoists

This is the second in a series of Safety Tips developed by The Crane, Hoist and Monorail Alliance concerning operator safety.

At the start of each shift a crane/hoist operator should inspect his or her equipment to help ensure that it is in safe and proper working order. This inspection should be routinely conducted every day at the beginning of each shift worked and should consist of the following inspection points as a minimum.

If the equipment fails any of the inspection point's No. 1 – 12, the employee's supervisor should be notified and the equipment tagged as "out of service" unless the situation is immediately corrected. If inspection point No.13 does not pass, the employee should notify his or her supervisor to have the situation corrected.

1.) Tagged crane or hoist

Check that crane or hoist is not tagged with an out-of-order sign. If the equipment is tagged, do not use and report the situation to your supervisor.

2.) Control Devices

Test that all motions (hoist, trolley, bridge) agree with the control device markings i.e.: the hoist up (raising) motion agrees with the hoist up marking on the control pendant, radio or cab master switch.

3.) Brakes

Check that all motions do not have excessive drift and that stopping distance is normal when the motion is powered off.

4.) Hook

Check for damage, cracks, nicks, gouges, deformations of the throat opening, wear on saddle or load bearing point, and twist. Refer to the manual furnished by the original equipment manufacturer for acceptable tolerances.

5.) Hook Latch

If a hook latch is required, check for proper operation.

6.) Wire Rope (on wire rope hoists)

Check for broken wires, broken strands, kinks and any deformation or damage to the rope structure.

7.) Hoist Chain (on chain hoists)

Check for cracks, nicks, gouges, wear and stretch – check that the chain is in the upper and lower sprockets and in the chain guide.

8.) Reeving on Wire Rope Hoists

Check that the wire rope is properly reeved and that rope parts are not twisted about each other.

9.) Limit Switches

Check that the upper limit device stops the lifting motion of the hoist load block before striking any part of the hoist or crane.

10.) Oil Leakage

Check for any sign of oil leakage on the crane and on the floor beneath the crane.

11.) Unusual Sounds

Check for any unusual sounds from the crane or hoist mechanism while operating the crane or hoist.

12.) Warning and Safety Labels

Check that warning and other safety labels are not missing and are legible.

13) Housekeeping and Lighting

Check area for accumulation of material to prevent tripping or slipping. Also check area for poor lighting.