



Company _____ Job Name _____ Date _____

Weekly Tool Box Talk: **Anti Two-Blocking Devices on Cranes**

The practice of using a crane to hoist workers in man baskets is common in the construction industry. OSHA 1926.550(g) requires that cranes used to hoist personnel in a man basket be equipped with certain safety gear such as anti two-blocking devices and boom angle indicators.

Two-blocking is defined as, " *the condition in which the lower load block (or hook assembly) comes in contact with the upper load block (or boom point sheave assembly), seriously interfering with safe operation of the crane.*" When two-blocking occurs, life threatening forces can be applied to the hoist or hook arrangement, either breaking the hoist line or disengaging the load straps from the hook. This may cause the load hook to fall or lose the load, which may imperil the lives of those working or standing directly below.

When using a manbasket to perform work, certain steps must be taken *before* workers are lifted:

1. Assure that the Anti Two-Blocking device is in place and working.
2. Check to assure the basket is properly constructed and connected according to OSHA requirements for *suspended personnel platforms*.
3. Inspect wire ropes and slings for wear or frayed areas, to be sure they are capable of supporting at least 7 times the intended load.
4. Assure that the crane is within 1% of level and located on firm footing.
5. Check the area for electrical lines that could be contacted by the crane.
6. Conduct a proof test of the system. The crane must lift the personnel platform from where workers will enter to where they will be operating, with a fully anticipated load. This step must be completed for every work position and each time the crane is moved.
7. Assure that proper fall protection is utilized by employees working in the basket.

Anti two-blocking devices are electrical sensing devices. They are installed on the crane to prevent the "headache ball" from hitting the sheave. If such contact causes the line to break, the man basket can tip or fall. The anti two-blocking device consists of a weighted ring around the hoist line; the ring is suspended on a chain from a limit switch that is attached to the boom tip. When the "headache ball" or hook assembly touches the suspended weighted ring, the switch opens and an alarm in the cab warns the operator to stop hoisting.

These anti two-blocking devices should be standard equipment on all cranes that are intended to lift personnel. Currently, most new mobile hydraulic cranes are equipped with these devices. If older model cranes are used, it should be established which are to be used for lifting personnel platforms, then install an anti two-blocking device. This will help prevent serious man basket-related injuries and meet OSHA requirements. It is important to include this equipment on the operator's daily inspection log as well.

Safety Recommendations: _____

Job Specific Topics: _____

M.S.D.S. Reviewed: _____

Attended By: _____

