

TOOLBOX TALK #37

CRANE COLLAPSE ACCIDENT

A pair of brothers were killed when a crane boom collapsed on their truck along the interstate. The employer, a pile driving company, was contracted to install supports for an elevated section of the highway. On the day of the accident, employees were attempting to drive a concrete piling into the ground but were unsuccessful.

Before moving on to attempt another pile driving, the employees had to retrieve a piece of equipment out of the ground with the crane. The crane's boom, however, wasn't configured according to the manufacturer's specifications. A 40-ft section was in the wrong place.

OSHA's safety engineer said the company chose not to reconfigure the crane to save time and money. The company's owner said he used this configuration multiple times and never encountered any problems. He believed his configuration would be as good as the manufacturer's. He was wrong. Putting the 40-ft section in the wrong spot made the crane boom weaker and vulnerable to collapse.

Additionally, the company miscalculated – by nearly 5000 pounds – the weight the crane was trying to lift. Further, the employees were trying to “side pull” a load instead of lifting it straight up, a technique that is prohibited by the American Society of Mechanical Engineers (ASME). The side-pulling, the miscalculated weight and the misconfigured crane boom all contributed to the deadly collapse.

To prevent similar occurrences:

- Always follow safety instructions from the manufacturer's operation manual, including crane assembly. Contact the manufacturer for consultation, if needed.
- Properly calculate the weight being lifted and only pick up objects that are directly under the crane boom – no side pulling.
- Remember that even if you perform a task multiple times without incident, that doesn't mean it's a safe operation.
- Always follow OSHA and industry-recognized standards.

