

**REPORT:** FE-42-97  
**RAILROAD:** Grand Trunk Western Railway Company  
**LOCATION:** Lake Orion, Michigan  
**DATE, TIME:** Dec. 10, 1997, 11:45 a.m., EST

**PROBABLE CAUSE:**

The Crane Operator did not utilize the crane's outriggers (stabilizers) while attempting to lift and swing excessive weight.

**POSSIBLE CONTRIBUTING FACTOR:**

A deviation of 2 ½ inches from zero cross level and 4 ¾ inches of vertical movement of the south rail.

**EMPLOYEE:**      **Craft..... MOW**  
  
Activity.....      Aligning new track with crane  
  
Occupation.....      Crane Operator  
  
Age.....      47 years  
  
Length of Service.....      27 years  
  
Last Rules Training.....      February 1997  
  
Last Safety Training.....      February 1997  
  
Last Crane Operating Training.....      November 1995  
  
Last Physical Exam.....      June 1997

**Circumstances Prior to the Accident**

On Dec. 10, 1997, the Crane Operator, upon returning from vacation, reported for duty at 9:30 a.m., EST, at Pontiac, Michigan. The Crane Operator deadheaded Crane LGC 9503 approximately eight miles from Pontiac, arriving at Lake Orion, Michigan at about 11:00 a.m. The Track Foreman, Crane Operator, and three Trackmen had a job briefing about aligning the new track with the crane. After the job briefing, the Crane Operator moved the crane to the end of the new track.

The new track was approximately 120 feet long with one 39-foot track panel lying on top of the extreme end of the track. After the Trackmen set the wood blocking in place, the outriggers were placed on the blocking. Then the cable sling was hooked to the track panel, and the panel was moved from the top of the new track to approximately 20 feet south and set on the ground. Afterwards, the cable sling was unhooked from the panel and attached to the end of the new track. The Crane Operator moved the track in a southward direction approximately three or four inches. The Operator stopped the move and dismounted the crane. The Foreman and Operator agreed the track would be easier to align from the opposite end of the track near the frog.

The Crane Operator then moved the crane eastward to the opposite end of the track and stopped the rear end of the crane near the frog. The Foreman had another job briefing with the Crane Operator and the three Trackmen. It was decided that they would attempt to align the track to the south from that point.

At the time of the accident, the sky was cloudy, and it was snowing. The temperature was 30° F. There were approximately three inches of snow on the ground. The ground in the immediate area was soft and muddy because of the new track construction.

### **The Accident**

The Trackmen hooked the sling to the track structure. The Crane Operator made an attempt to raise the load and swing the boom to the south without the use of the outriggers. The Foreman saw the rail wheels at the rear of the crane lifting up from the rail and notified the Operator. According to the witnesses, the Operator stopped the move, and almost immediately, accelerated the engine and made a short side movement to the north. Then, in a jerking movement, he tried to move the boom to the south. The crane tipped over to the south, pinning the Crane Operator inside the control compartment. The accident occurred at approximately 11:45 a.m.

The Oakland County Sheriffs' Department and Oakland County Response Team arrived at 11:55 a.m. The Orion Township Fire Department arrived at 12:01 p.m. Air bags and wood blocking were used to lift the crane to remove the Operator's body from the control compartment.

### **Post-Accident Investigation**

The investigation revealed that the Crane Operator had been trained Sept. 11 through 14, 1995 to operate the Little Giant Crane. The training was conducted by a Stanley H. Smith Company representative (classroom and field training), who qualified the Operator to operate this crane.

Results of the toxicology test performed on the deceased in conjunction with the autopsy were negative.

The investigation disclosed that Crane 9503 was facing in a westward direction while the

Operator attempted to align the track in a southward direction. At the precise location where the left front (south) rail wheel was sitting on the track, the cross level measured 2 ½ inches deviation from zero. The unloaded cross level deviation plus a 4 ¾ inch void under the track ties created a 7 ¼ inch loaded cross level deviation.

Crane 9503 was a 1995 model, 18-ton Little Giant Crane with a 48-foot telescopic boom. The crane, which weighed 68,700 pounds, was delivered to the Grand Trunk Western Railway Company in September 1995 by Stanley H. Smith Company, in Nicklesville, Kentucky.

At the time of the accident, the boom was extended to 43 feet 6 inches. The piston cylinder located between the body of the crane and the boom extended outward 19 inches, putting the boom of the crane at 16 ½ degrees. The Operator's compartment of the crane was located on the front (south) side of the crane.

The Foreman indicated he was aware of the cross level condition of the track and of the void under the ties, and had discussed this matter with the Crane Operator. The Crane Operator was of the opinion that the skeletonized track should move fairly easily.

After the crane was set upright, a thorough inspection was conducted by the Superintendent of Maintenance-of-Way Equipment and his technicians. All mechanical and electrical features of the crane were found to be working as intended.