# Case Study

## DuBois Machine Company Void Fill

### Problem

A machine company was having problems with their CNC machines. They were constantly needing to be leveled in order to operate correctly, and efficiently. The Manufacturer of the CNC's came to investigate. Using dial gauges, it was determined that the floor was moving with the vibration of the CNC's workload.

### Summary

A one inch void was found under the slab due to erosion; The shop was built on marshland. This allowed for no support causing the slab to deflect significantly.

### Solution

The local concrete lifting company was called and the work was completed in 6 hours. Using the EliteOne gun and HMI's 501 polyurethane foam the void was filled, which stabilized the concrete slab. 501 polyurethane foam was chosen for this job because it provides a slower reaction time and further spread. Due to the distance this foam can travel, 501 is excellent for undersealing and stabilizing joints on rocking slabs from slab curl. The same dial gauge test was performed after the foam was injected, and showed no deflection. The CNC's were re-leveled and operations continued. The only alternative would have been to tear out, and replace the entire slab. Which would have affected production greatly. By choosing to fill the void, they were able to continue production immediately following the repair.

### Material

853 lbs of HMI 501 stabilizing polyurethane foam