



# Remedy for Side Loading and Too Many Adapters

Each adapter added to a load cell setup contributes to increased measurement error. The load cell's sensitivity to off-center loading will also increase measurement error. Together, these conditions created an undesirable crane scale setup at a state office of weights and measures.



Crane Scale Setup with Six Adapters and S-beam Load Cell

A metrologist at the state office contacted Jeff Phillippe at Morehouse Instrument Company to review their crane scale setup and determine if it could be improved. Their main areas of concern were the:

- S-beam load cell, which was prone to side loading errors
- Complicated crane scale setup, which included six adapters

## Remedy for Side Loading and Too Many Adapters



Jeff worked with the Morehouse team to design custom adapters for a Morehouse shear web load cell, which reduced the number of adapters needed.



Two of the Six Adapters were Eliminated with the Morehouse Solution

### **The Morehouse Impact**

The office of weights and measures reduced the number of adapters needed for their crane scale and overcame the challenges associated with side loading. This will significantly reduce their risk for measurement error.

### **Remedy for Side Loading and Too Many Adapters**

Contact Morehouse at (717) 843-0081 or [sales@mhforce.com](mailto:sales@mhforce.com) for your custom solution

The Morehouse Precision shear web load cell was designed with low susceptibility to eccentric loading, reducing the effect of side loading. The load cell was calibrated per ASTM E74 with deadweight standards accurate to <math><0.002\%</math> and paired with a Morehouse 4215 indicator.



Morehouse Precision Calibration Load Cell with Custom Adapters

The crane scale setup is used by the office of weights and measures for a weight cart that quickly tests a large capacity scale. The setup was implemented in their newly constructed laboratory.

#### **Force Calibration Solutions by Morehouse**

Force calibration can be difficult, but Morehouse is here to help. We welcome the opportunity to answer your questions and develop a solution that meets your specific requirements. Our technical experts are here to help. Contact us at (717) 843-0081 or [sales@mhforce.com](mailto:sales@mhforce.com) for a consultation.