

Mobile Launcher Platform (MLP) Load Cells

Industry: Aerospace

Summary

Customer Challenge

Rocket mobile launcher platforms must safely support, transport, and position massive launch vehicles while enduring extreme structural loads at multiple interface points. Engineers need to measure compression, tension, and dynamic multi-axis forces throughout the launcher system to validate structural integrity and ensure safe launch readiness.

Interface Solution

Interface provided a complete force measurement solution by integrating their load cells at each key structural interface of the mobile launcher platform. 1200 LowProfile® Standard Load Cells were installed at the rocket hold-down posts and crawler jacks. 6AXX Axis Load Cells measured dynamic loads at the crawler frame interfaces at the bottom of the platform. This instrumentation setup provided real-time force data throughout transport and launch preparation.

Results

By deploying Interface's precision force measurement products across the mobile launcher platform, engineers gained accurate real-time visibility into the structural loads acting throughout the system. The data enabled the team to verify balanced load distribution, identify stress concentrations, and validate that the launcher platform could safely support the rocket during all operational phases.

Materials

1. 1200 Standard Precision Universal LowProfile® Load Cells
- 6AXX 6-Axis Load Cells
- Mobile Launcher Platform undergoing test

How It Works

1. 1200 Standard Precision Universal LowProfile® Load Cells are installed under the crawler jacks to monitor reaction forces and ensure the platform remains evenly supported. 6A40A Multi-Axis Load Cells are mounted between the crawler bogies and frame to measure dynamic vertical, lateral, and moment loads during transport.
2. All load cell data is sent to the control system in real time, allowing engineers to monitor structural loads and confirm the launcher platform is operating safely.

