

# Mobile Machinery, Unplanned Motion Detection

Multiskilled Resources Australia has developed an effective “online” monitoring system to ensure mobile machine stopping and braking performance is within tolerance and is operating safely.

Multiskilled’s vast experience in mobile machines, Automation systems and Drive systems has allowed a robust and reliable system to be implemented regardless of the technologies or equipment brands used on a specific site.

We call it an unplanned Motion Detector because it does more than just ensure braking systems are operating correctly. It verifies that some key drive system characteristics are within tolerance, it allows predictive stopping behaviour for operator inputs and it can detect slippage on rails.



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## FEATURES

- ✓ **Continuous monitoring means failure conditions that occur between scheduled proof testing and maintenance intervals are captured.**
- ✓ **Advanced warning of “out of specification” performance provides protection from unplanned movement due to deteriorating braking performance or slippage.**
- ✓ **Some Drive system (VVVF, DC and the like) configuration issues are also detected.**
- ✓ **Trending of the monitoring system predictions allows operator error to be readily identified where machines are manually driven.**

**Case example: A shiploader being manually driven collided with a ship. Concerns were raised that the brakes had not functioned as expected. Based on unplanned motion prediction trends all potential technical causes for the collision were quickly eliminated allowing the machine to return to service.**

- ✓ **Detects drive and brake system non conformances.**
- ✓ **Typical Mobile machines are compatible or closely compatible with the system requiring only minimal changes, if any to integrate this feature into a machine.**
- ✓ **The system is robust and is not sensitive to nuisance trips**

