

CASE STUDY: Perform – Intercept little problems before they become big problems



70% improvement in operator behaviour in 1 month.

ISSUE

For one of iVolve’s prominent clients, the concern over machine health and performance was escalating. iVolve collaborated closely with on-site personnel to delve into the root issues, pinpointing areas where operator behavior was negatively impacting vehicle operation and machine health. The absence of timely feedback and tracking mechanisms made it challenging to identify and rectify poor operating practices.

In response, iVolve swiftly engaged with the client to develop a tailored solution. The outcome was Mine4D Perform, an innovative tool designed to enhance operator behavior. This solution provides operators with real-time feedback on deviations from optimal operating practices, empowering them to immediately rectify their actions. By continuously monitoring vehicle states and instances of misuse, Mine4D Perform prompts operators in-cab, guiding them towards corrective actions. The power of the Perform solution, is its ability to use machine parameters, combined into rules, that allow site to target observed behaviours.

PROCESS

A baseline level of performance was post iVolve deployment and prior to enhancement.

Operators were shown how Perform gave them instant feedback in cab. Dispatch and management were shown how to use the iVolve dashboards and reporting to plan, oversee and report on Perform notifications.

FINDINGS

Significant improvements to operator behavior were observed within just four months of installation. There was a 70% improvement in operator behavior (from 37,715 events from commissioning, to just 1594 by the third month).

Not only this, but specific events, transmission abuse, coasting in neutral, and body up in motion events also saw significant improvements within four months after commissioning (82% reduction in transmission abuse, 93% reduction in coasting in neutral and 83% reduction in body up in motion events.)

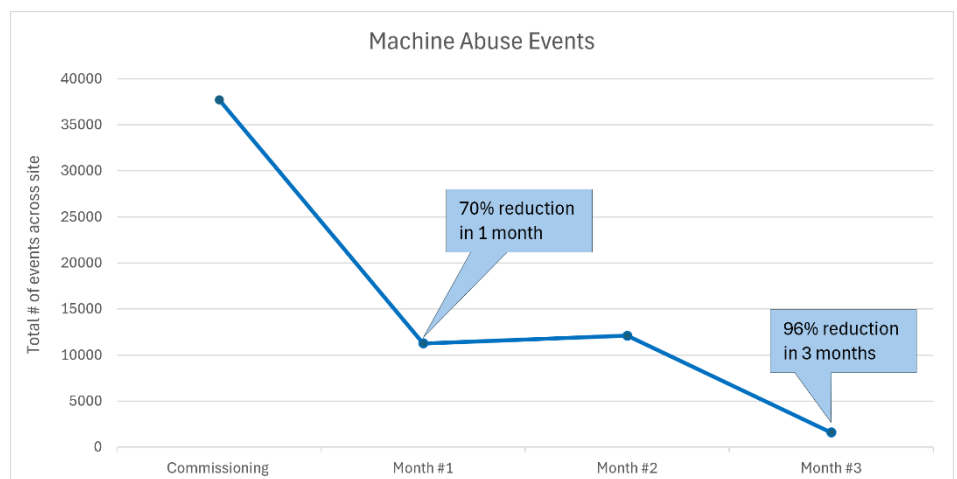


Figure 1: Machine Abuse events over 3 months

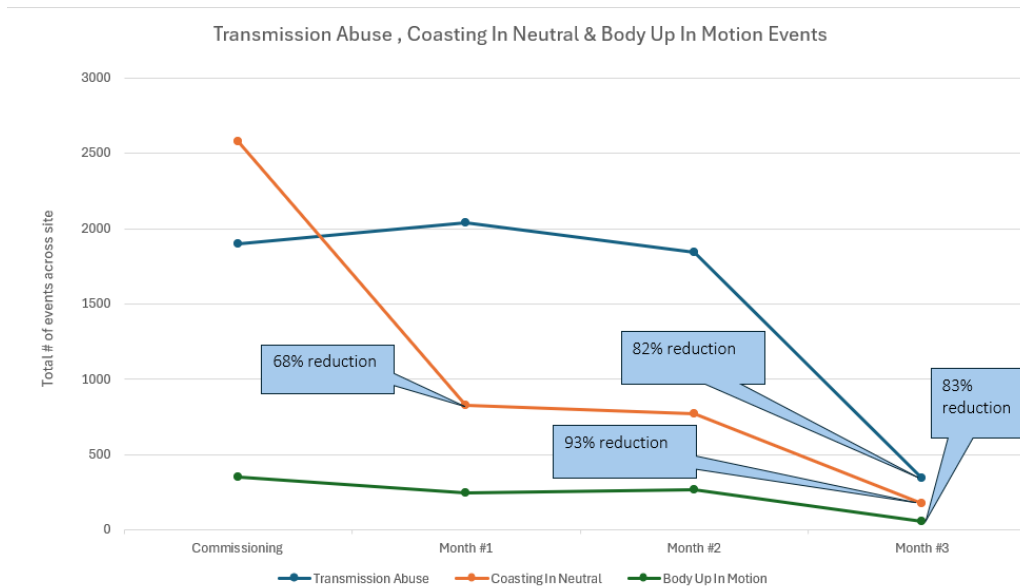


Figure 2: Perform events reported over 3 months

ADDITIONAL BENEFITS

Improve safe operation of the fleet.

Perform provided operators with up-to-the-minute data directly in the cab, decreasing hazardous machine operations such as engine overspeed and body movement while in motion. This gave Health and Safety personnel the time to investigate other issues quickly that they otherwise would not have been able to. Opportunities for operator training were identified with historical Perform event reporting.

Changing Operator Behaviour

Changing operator behaviors early, can lead to significant cost savings, due to poor operating behaviour being corrected before it becomes an issue.

“Perform has had a huge impact ... we have reduced Maintenance downtime and improved our bottom line.”

— Production Manager

Minimised unscheduled downtime.

Through proper machine handling, component life has been extended and unexpected interruptions due to unplanned maintenance have been reduced.

SOLUTION

iVolve Mine4D Perform ensures operators and supervisors are informed when machine abuse has occurred in real-time. Once these machine abuse scenarios are detected, a banner with an error message appears on the in-cab screen and an audible tone plays for 10 seconds.

Intercept little problems before they become big problems with Perform.



Perform