

Wheel Wear Report HPF/LCF OnBoard Sticks Transit East Coast US Transit System

EXECUTIVE SUMMARY

The Kelsan Technologies Corporation was approached to evaluate the effectiveness of its Transit Rail Friction Management Solution on a East Coast US Transit System (ECUSTS). The objectives were to determine the expected improvement in wheel life, possibilities to decrease wheel/rail interface noise generation and to establish solid stick product consumption rates.

In this case, the Kelsan solution consists of the LCF (Low Coefficient of Friction) product applied to the flange/tread transition zone, HPF (High Positive Friction) applied to the TOR contact zone for controlling friction in the wheel/rail interface, and custom-fitted delivery systems.

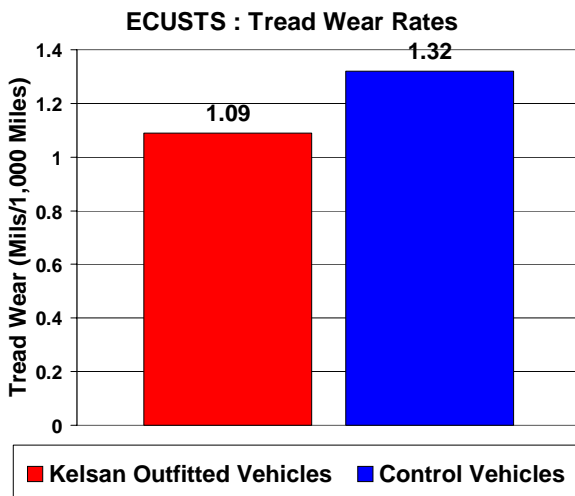
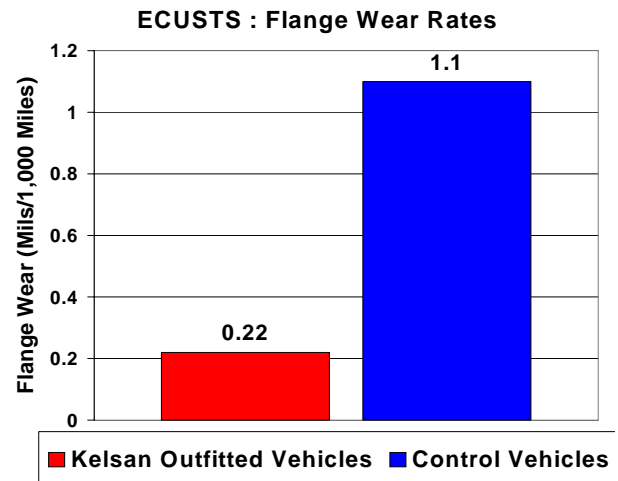
The results of both the wheel life and stick wear rate tests are included in this document. No noise testing was carried out during the trial. ECUSTS determined at an early stage that noise generation was of secondary importance to determining potential savings resulting from extending wheel life.

Summary Result: Wheel Wear Testing

The wheel wear performance of the Kelsan Solution four-car consist, outfitted with Kelsan LCF and HPF, was compared to a four-car control consist without lubrication. The vehicles accumulated over 20,000 miles during the seven-month trial period.

The LCF trial resulted in an average 500% increase in wheel flange life for the trial vehicles relative to the control vehicles.

Avg. Result: 5 X Flange Life



The HPF trial resulted in an average 121% increase in wheel tread life for the trial vehicles outfitted with the Kelsan solution relative to the control vehicles.

Avg. Result: 21% Greater Tread Life

Summary Result: Product Consumption Testing

- Kelsan LCF stick wear rates resulted in an average consumption of 1,781 miles/inch.
- Kelsan HPF stick wear rate was 1,400 miles/inch.

Conclusion

A solution of Kelsan LCF and HPF in the solid form delivered through a car-mounted delivery system is recommended to extend wheel life and thereby decrease the ECUSTS operational expenses related to wheel truing and replacement.

Note: To obtain a copy of the full report or find out the identity of the East Coast US Transit System, please contact John Milobar, Vice President Sales & Marketing at 604-984-6100 or jmilobar@kelsan.com.