



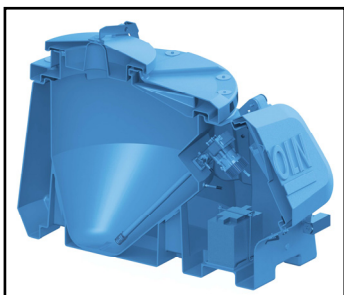
CASE STUDY: INDUSTRIAL RAILWAY

APPLICATION: GAUGE FACE RAILSIDE LUBRICATION

This company was experiencing excessive and premature wear of the car wheels and the rail itself, caused by the extreme strain of the fully loaded cars and the tight radius of the tracks. In curved sections, the high rail (outside) wheel runs on the gauge face. This contact results in semi-continuous friction that significantly causes wear to the wheel flange and gauge face. The strong contact friction between wheel and rail surfaces also causes noise emission in the track curve. In Ontario, the cost to repair track can be as high as Can\$ 5 million/mile - something had to be done.

THE FLO SOLUTION

Gauge face lubrication reduces wheel flange friction. FLO supplied a progressive-type, positive displacement design automatic wayside rail lubrication system, to apply lubricant with a wiper bar that is flanged to the rail profile. The lube is picked up by the train's wheel circumference and evenly distributed on the rail contact area. A high-pressure pump and the positive displacement design of the divider block ensure a constant, metered volume of grease is delivered to the contact surface on the gauge face regardless of back pressure or cold weather conditions. Sensors detect and count the axles of the approaching train and initiate a lube event. The duration of the event which determines the lube supply, is adjustable and can be set to the applicable conditions.



The system is assembled in a large stand-alone, high-impact, double-wall enclosure, complete with controller, pump package and grease reservoir level indicator. This enclosure allows for remote installation, protects the system from outdoor environmental conditions and reduces possible contamination. A solar panel power supply was also included. The pump package is integrated into the enclosure, with the pump inlet located in the bottom of the 800lb, hopper-style grease reservoir. High fluid pressure from the pump pushes grease to each piston in the Lincoln SSV distribution valve to displace fluid to one port. Each port receives equal amounts of grease, so there is no pooling of grease at the ports with least resistance, no clogging of ports and no wasted grease. Cavity displacement within the reservoir is the same regardless of temperature and pressure resistance.



FLO RESULTS

The wayside rail lubrication system from FLO Components lowered noise emission and considerably reduced wear on rails and wheels, reducing maintenance costs and increasing the lifespan of the rail network. FLO's high-pressure system enabled the usage of NLGI 2 class grease, which offers exceptional adhesion to the rail and wheel as well as better lubrication properties.

**For Total Lube Solutions,
GO WITH THE FLO!**

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