

TrackMaster®

Wheel Flange Lubrication System

A Century of Performance

For over 100 years, Lubriquip has provided innovative and reliable lubrication products and systems that have withstood the test of time. From standard pump packages, divider valves and controls to custom-engineered and fully integrated systems, Lubriquip is your single source for all your lubrication requirements.

Lubriquip's experience with the railroad industry dates back to 1898, then known as Madison Kipp Corporation, when it supplied steam engine cylinder lubricators for locomotives and farm machinery. In 1985, Lubriquip introduced the first wheel flange lubrication system under the TrackMaster® name. Since then, thousands of systems have been installed and are operating on freight railroads throughout the world.

Wheel Flange & Rail Wear

The natural tendency for locomotive wheels is to "hunt" or go back and forth, perpendicular to the track to find a path. In the process, wheel flanges come in contact with the side of the rail causing undesirable friction. Wheels and rails wear at the point of contact, most notably on the leading axle on the high rail and the trailing axle on the low rail. This undesirable friction causes excessive wear and leads to expensive wheel and rail replacement and high fuel usage. Friction also contributes to the forces that cause the locomotive wheels to climb the rails and cause derailment.

TrackMaster® Wheel Flange Lubrication System

The TrackMaster Wheel Flange Lubrication System is a self contained, on-board system that accurately delivers lubricant to the wheel flange and rail interface. The system includes a lubricant distribution network, a controller and typically four nozzle assemblies. The distribution network consists of a lubricant reservoir and pump, a shutdown sensor for empty reservoir or broken lubrication line, solenoid valves that control each nozzle, and air and lubricant distribution hoses.



The system controller is microprocessor-based and allows the user to optimize the lubrication cycle based on distance, speed, curves, or any combinations thereof. The controller can be programmed to prevent lubrication during sanding, braking and low speed operation. A curve sensor determines when the locomotive is in a curve and increases lubrication to the high rail wheel on the leading axle and the low rail wheel on the trailing axle.

Each nozzle assembly is located outside of the locomotive chassis and consists of a metering piston, nozzle and housing, and mounting hardware. All components are designed and built to withstand severe environmental exposure. The nozzles can dispense lubricant at three cycles per second and are independently controlled to provide proper lubrication to both high and low rails and in curves.

System Benefits & Results

By using Lubriquip's TrackMaster Wheel Flange Lubrication System you can reduce wheel flange and rail wear, reduce your spare parts cost, and equally important, reduce your fuel expenses. Testing by the American Association of Railroads showed a reduction of 34% in the average energy required to keep a test train moving when the TrackMaster system was used. On curved track, the savings was 38% to 51% based on a 30 degree to 5 degree curve. On tangent track, a savings of 30% was achieved. Territory wide tests showed fuel savings of up to 11% depending on the severity of the track in terms of grade, slope of curves, and speed of operation.

A major freight railroad in North America reduced its \$300 million fuel costs by more than \$15 million after it installed TrackMaster Wheel Flange Lubrication Systems on 800 of its locomotives. As a result, it estimates a savings of \$20,000 per locomotive per year for fuel and spare parts!

Total Support Network

Lubriquip's products are supported by experienced application engineers, service technicians and authorized distributors. A Lubriquip engineer or service technician can provide system application and design engineering expertise, installation and service support, after-market parts, and other value-added services. For more information visit our website: www.lubriquip.com.