



Quinplex® H1 Penetrating Oil & Lubricant (4058) Quinplex® Synthetic Food Grade Oil (4046)

Maple Leaf Pork – Manitoba, Canada

Quick Chill Chain

- **Eliminated chain problems, saving 4 hours of downtime per week**

Customer Profile

Maple Leaf Foods Inc. is a leading, global food processing company. Based in Toronto, Canada, Maple Leaf employs approximately 15,000 people at operations across Canada, in the United States, Europe and Asia and reported sales of \$4.8 billion in 2001. Maple Leaf is a publicly traded company, common shares trade on the Toronto Stock Exchange under the symbol "MFI".

The company has many plants across Canada including Canada's largest pork facility, located in Brandon, Manitoba, Canada. Maple Leaf has been processing hogs at the Brandon facility since August 31, 1999. The Brandon plant is a world-class, technologically advanced facility. It is the company's flagship pork processing operation and is one of the largest in North America, processing approximately 45,000 hogs per week. This location has been an LE customer since 2001.

Application

The Quick Chill Chain is a 1 km long (3280 feet) chain that carries the pigs through the quick chill freezer at -45°C.

Challenge

Once a week, on the weekend, the freezer is warmed up and washed down and then the freezer is started up again. On Monday morning at start-up, the chain would repeatedly jam due to water frozen in their links causing 4 hours of downtime at the start of every week.

LE Solution

The LE Canada representative recommended a three-step process to remove the ice and lubricate the chain. A chain spray system with 6 nozzles was installed to spray a combination of air and liquid into the pin area of the chain. First food grade alcohol is applied to dissolve the ice, then H1 Quinplex® Penetrating Oil & Lubricant (4058) is applied to displace the water, finally Quinplex® Synthetic Food Grade Oil (4046) is applied to lubricate the chain effectively even at -45°C.

Quinplex 4058 contains a food grade polar organic solvent to assist in water displacement, it also dissolves most rust and loosens corroded and frozen parts and protects metal surfaces from rust and corrosion.

Quinplex 4046 has a pour point of -57°C (-70°F) and has excellent load carrying and anti-wear properties. It is ideal for use in bearings, bushings, chains, hydraulics and air compressors operating in both normal ambient temperatures and extreme cold conditions such as blast freezers and cold rooms.

Both Quinplex 4058 and Quinplex 4046 are USDA authorized and rated H1 for food and beverage equipment, they are also CFIA approved (n1) by the Canadian Food Inspection Agency for incidental food contact.



Results

The three-step process succeeded in dissolving the ice and lubricating the chain. The chain problems have been eliminated saving 4 hours of downtime per week. The savings in downtime is quite significant for a plant of this size.

Other Products Used

- Duolec® Vari-Purpose Gear Lubricant (1606) is used in gearboxes
- Quinplex® Food Machinery Lubricant (4025) is used in bearings throughout the plant
- H1 Quinplex® Penetrating Oil & Lubricant (4059) is used as a penetrating oil
- Quinplex® White Gear Lubricant (4140) is used on the Cryovac chains
- Synolec® Gear Lubricant (9920) is used in gearboxes in the freezer

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Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

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