



Lubecore Technical Announcement

Chain Oiling Automatic Lubrication System

Lubecore is pleased to announce the availability of an oil mist automatic lubrication system. It was designed to lubricate and clean the chain drives on on-site mixing cement trucks. It is also applicable wherever oil mist lubrication is desired.

System Overview

- Pump is based upon a Lubecore Multi-Line Pump.
- Standard lid has been replaced with one incorporating a filler cap and inlet strainer.
- Follower plate has been removed.
- Standard MLP elements are used in the ring.
- Set-up can be provided with a timer, or the motor can be hardwired to the chain drive system such that the chain sees constant lubrication while in use.
- Air supply is controlled by solenoid valve running off the same power source to ensure air is introduced at the same time as the oil.
- Oil mist is created by introducing air and oil into a manifold. The air picks up oil fed into the manifold by the metering elements and forces it out of the delivery fitting as oil droplets.
- Oil lubricates the chain, and the high velocity air cleans the chain as it passes under the oil delivery fittings.



Figure 1 Full Pump Assembly

Air System

Air is fed to the pump through a pressure regulator and onto the oil delivery manifold. Air is fed to a single manifold input from where it flows over the individual oil introduction ports and then down the lubrication delivery lines. Since the air is distributed across a manifold, it is recommended to keep all secondary lines equal lengths to achieve approximately equal flow rates in each line.

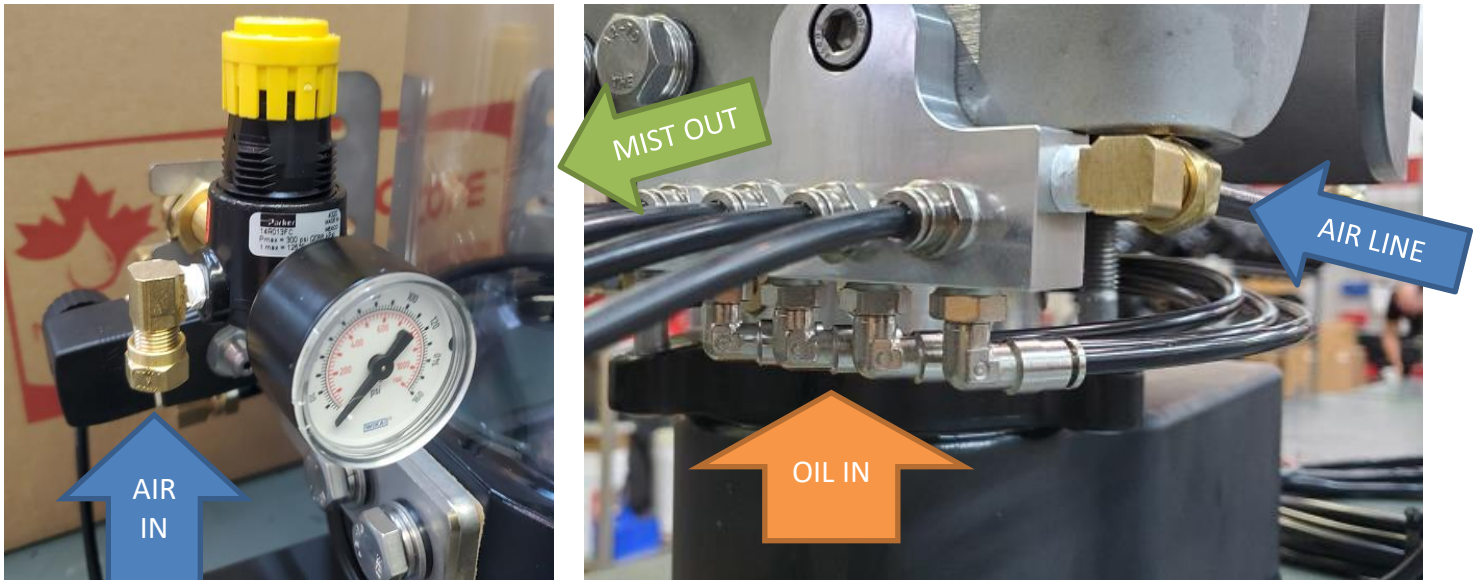


Figure 2 Air System Overview

Delivery Fittings

The delivery fittings direct oil mist over both sides of the chain links. The two mist delivery holes are isolated from each other such that each side of the chain gets a dedicated lubrication stream.

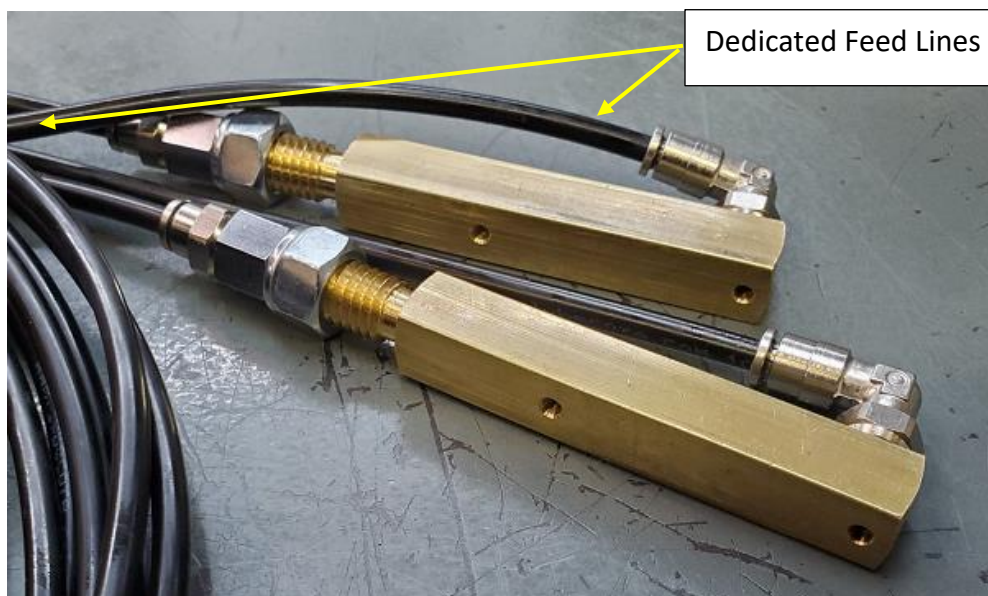


Figure 3 Delivery Fittings

Example Installation



An installed oil pump is shown on the left. The oil delivery fitting on this installation is hidden within the vehicle frame. The fitting is located just above the chain with the delivery nozzle pointed down towards the chain. Two lines feed the left chain as shown and two lines are routed through the vehicle structure to deliver the air oil mist to the right chain.

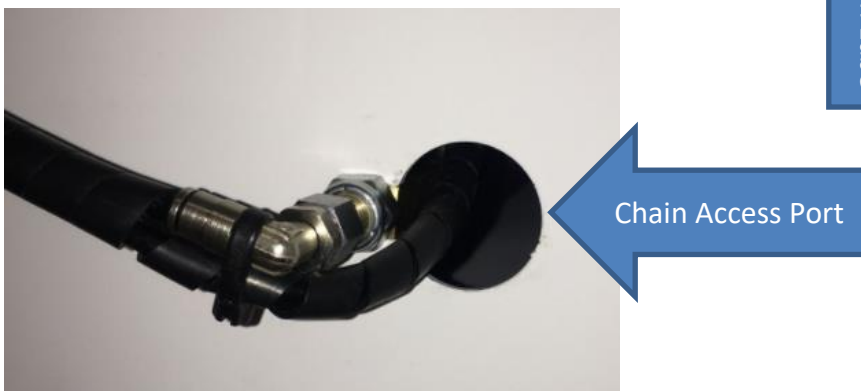


Figure 4 Installation Example

Chain Sizes

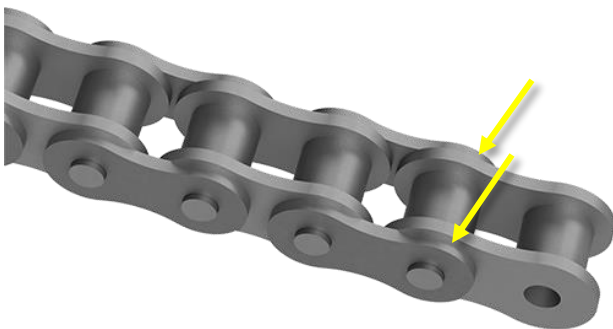


Figure 5 Roller Chain

ANSI standard roller chain comes in Trade Number sizes typically ranging from numbers 25 to 160 (1/4" pitch to 2" pitch; 1/8" roller width to 1 1/4" roller width). Oil mist delivery fittings can be configured for any standard chain size. The system shown is configured for 120 chain. Oil spray is aimed directly at chain pin hinge points.

Application

Should you have an application that could use a chain oil lubrication system please contact Lubecore product development. Fittings can be manufactured to meet your specific chain lubrication needs.