TOOL FACTS

TF-002

AIR TOOL LUBRICATION

By Andrew Mayer

As a manufacturer, let us start by stressing how important proper lubrication is to a tool. Without a sufficient amount of the proper oil, you can very easily shorten the life of an expensive air tool you have just purchased.

In the field, we often come across situations where the wrong amount, or type, of oil is being used, or where no lubricator is in use at all, either the integral "built-in" reservoir or a line oiler. Furthermore, even when a line oiler is in use, it can have the wrong setting or too much hose between it and the tool to be effective. There are many things to look for when trying to adequately lubricate air tools to insure efficient operation and low maintenance costs.

While discussing lubrication, we would also like to stress the importance of a clean and dry air system. It should be regulated for proper pressure at the onset. Also, it should be mentioned that our meaning of proper pressure relates to the pressure at the tool (not the compressor gauge) while the tool is running. The best way to check for proper air pressure is by using a needle pressure gauge.

To move on to the subject of proper lubrication, we would like to discuss two main points; those being the type of oil used and the lubrication system itself:

TYPE OF OIL

We recommend a fairly light oil for percussion type tools, such as Chippers, Rivet Busters, Clay Diggers, Paving Breakers and Tampers. This oil should be a 10W oil or equivalent. When we say "equivalent", we mean you can also substitute a good grade of "ATF" fluid, or even a 10W automotive type oil as long as it is light enough or has a low viscosity to make it easier to flow thru a line oiler. There are also some good specific "Air Tool" oils on the market . These oils generally have rust and oxidation inhibitors included in their formula to reduce the negative affects of moisture in the air line reaching the tool. This Air Tool oil also has a soluble property to it. Because it is a soluble oil, it mixes with water very well while retaining its lubricity. Also, we would like to point out that oil with all the right properties for air tool usually generally costs more but the additional cost is negated through the reduction of maintenance costs.

Another oil, which we have not talked about, is Rock Drill oil. This is a fairly thick oil with high lubricating properties in it. It is formulated this way because of the way that heavy Rock Drills are used. Some are put on jack legs for mine drilling, and others are installed on dowel hole drilling machines. These drills, when used in those situations,

undergo a lot of stress and friction and thus a heavier oil is required. This type of oil mixes very well in wet situations. If water is introduced, either through the air line or from the environment, it keeps its lubricating capability. This is because of the special make up of the oil. It is designed to stick to the surface of the parts, as well as being a rust and oxidation inhibitor. We recommend this oil only be used with rock drills because of its unique viscosity and solubility properties.

For smaller rock drills in the 9 lb. to 15 lb. class a regular 10 W oil or equivalent should be used. Rock Drill oil as described above should only be used on heavier models.

THE LUBRICATION SYSTEM

There are basically two types of lubricating systems. The first being the integral "built-in oilier system". This means there is a reservoir built into the tool itself. The capacity of these reservoirs is usually about a 1 ½ ounces, which gives you about 2-4 hours of operating time before refilling. If you are going to use this type of oiling system, you must make sure the reservoir is checked about every 2 hours of operating time. Also by using this "built-in" system, there are no adjustments that you can make as to how much oil is emitted into the tool.

Second, there is the line oiler. When using a line oilier, the reservoirs are available in larger capacities. They can range from 3 ounces to 1 fluid pint. The larger the capacity, the longer the operation time you have before refilling. Also, the line oilers come equipped with a metering screw inside the reservoir. This allows you to adjust the oil flow from light to heavy mists of oil. When using a line oiler with a tool, the ideal situation for operation would be to install the oiler about 8 feet away from the tool. A whip hose can be used, which is normally sold in 8 foot lengths. Attach the oiler end to the air supply hose, and the other end to the tool, using standard hose fittings. Take care to insure the lubricator is installed in the right direction for proper flow by looking at the indicator arrow on the side of the lubricator.

To find out what specific number that manufacturers such as Mobil Oil, Texaco, Gulf, Shell and others recommend for air tool use, please consult with your local dealer.