D-A LUBRICANT COMPANY

PERFORMANCE ENGINEERED LUBRICANTS SINCE 1919

HEAT TRANSFER OIL & CLEANING FLUID

Before The Clean
Improve Efficiency and Save Money

D-A Lubricant Company® felt it would help our customers and prospects get the maximum benefit from both D-A **Heat Transfer Cleaning Fluid** and D-A **Heat Transfer Oil** by presenting the following useful information.

Heat Transfer Systems (HTC) are traditionally run hard from spring to late fall producing asphalt to take optimum advantage of the contribution they make to generation of revenue. Therefore, they are rarely shut down during the season except in the case of a catastrophic failure that cannot wait until the scheduled maintenance, if any, in the winter. Because of that "hard-running" schedule, the "coking" problem these systems often encounter are often overlooked.

Coking, the buildup of hard deposits on the inside of the piping, acts as an insulator that has a negative effect on system efficiency. As the coke builds, the result is a higher and higher demand for fuel used by the heating unit. In order to overcome the inefficiencies that coking causes, operators must turn up the heat setting just to maintain the same temperature. Over time, the cost of added fuel used is significant and the added wear and tear on the heating unit itself will take a toll, potentially shortening the unit life.

Another negative effect of system overheating is **shortened effective oil life**. In many cases, too much heat generated at the boiler will oxidize, or cook, the oil leaving it unable to fulfill its function of transferring heat to the system. Chances are good that any oil left in a system longer than OEM specified drain intervals will oxidize and be rendered ineffective. In most cases, this will add to coking deposits if a system cleaner is not being used.

With that in mind, D-A Lubricant Company has several options to address and correct this situation, which in turn will improve efficiency and, more importantly, save money.

Before the clean-up process is begun, a used oil sample should be obtained from the system. The results of the analysis will serve as the base line sample for the cleaning process. Used oil analysis should be performed at 7-14 day intervals throughout the clean-up process to monitor physical changes and wear metals, which will indicate that the system has been restored to normal cleanliness. In addition, regular sampling of heat transfer systems after the clean-up process is essential for monitoring system condition.

D-A Lubricant Company
@DALubricant

D-A LUBRICANT COMPANY
D-A Lubricant Company
801 Edwards Drive, Lebanon, IN 46052
317-923-5321 • 1-800-645-5823 • Fax: 765-482-3065
www.dalube.com • dalube@dalube.com

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CAUTION: Great care should be taken during the sampling process to avoid burns from the system, oil, or from the sample bottle.

OPTION 1
Drain the entire system, replace with Heat Transfer Cleaning Fluid (HTCF), and run under normal conditions for two to three weeks. After the cleaning period, drain the HTCF and replace with HTO-300.

OPTION 2
Drain off 25% of the system capacity and replace with HTCF. Continue to run the system as normal.

OPTION 3
Completely drain the system and replace with HTCF and run as normal in the system. The HTCF can then be run as a full time product and will not need to be replaced. This will ensure that the cleaning process continues. Some important notes:

IMPORTANT NOTES

- When HTCF, or mixtures of HTCF and heat transfer fluids are drained out of the system, they are not hazardous materials. They may be disposed of as any other non-hazardous liquid waste, and they are safe to burn in shop or plant heaters.

- Both D-A Heat Transfer Cleaning Fluid and D-A Heat Transfer Oil #300 are available in drums & bulk. Asphalt systems are the “work horses” that are relied upon heavily for production and often ignored when problematic symptoms arise and are pushed off to be dealt with later. The concern with that approach in the short term is increased fuel costs to maintain the required temperature for manufacturing asphalt, and in the long term, shortened component life.

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Heat Transfer Fluids offer advantages over direct heating techniques:

- The heat is more uniformly applied, and the temperature more precisely regulated.
- Quality and output are increased, and waste is minimized.
- A single Heat Transfer Fluid can serve many processes, even at variable temperatures.

Heat Transfer Problems

- Hot oil system problems are commonly caused by oxidation, thermal degradation, carbon deposits or contamination, sometimes in combination. There is normally no set rule for establishing the lifetime of a charge of hot oil. Extensive methods of testing and monitoring of fluid quality are available with D-A CLS Program.

Heat Transfer Applications

- Asphalt Plants
- Plastic Blow Molding Operations (PET)
- Injection Molding
- Lamination (Composites)
- Flake Board Manufacturing (OSB example)
- Extrusion Operations (barrel screw heating)
- Rubber Operations (drying & curing)
- Waste-Heat Recovery
- Asphalt Shingle Manufactures
- Roofing Companies (Hot Asphalt)

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