bcc: NTJ/RD/SS
R. A. Damiani - CHICAGO
J. R. Fallon - DETROIT

April 22, 1968

Mr. Donald R. Doran
Maintenance Foreman
Omaha Plant
Kellogg Company
9601 F Street
Omaha, Nebraska 68103

Dear Mr. Doran:

The following results are reported for a Therminol FR-2 sample submitted for analysis March 12, 1968.

| Test | March 1968 Sample | New Therminol FR-2 Specifications |
|---|---|---|
| Viscosity @ 100°F., Centistokes | 79.2 | 52 Maximum |
| Acid Number, mg KOH/g | 1.10 | 0.01 Maximum |
| Moisture, ppm | 1330 | 50 Maximum |
| Hiboiler, % | 3.7 | None |

Values for all tests are increased over new fluid specifications. This denotes a degree of fluid decomposition. Acid number is particularly high and should be reduced if possible by venting a slip stream of fluid from the discharge side of the pump or heater to the vapor space of the expansion tank. Moisture level indicates free water floating on this system. The hiboiler content at 3.7% has not yet reached our point for concern which is 10%; but, considering past experience on this system, I would expect this value to continue to increase.

DSW 343412

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In March of 1967 a sample of fluid was submitted that was severely decomposed and, at that time, we recommended cleaning the system and recharging with fresh fluid.

If the hiboiler again reaches the 10% level, our recommendation would be the same. We would further recommend at this point that your Therminol heat transfer system be thoroughly evaluated to determine what might possibly be done to improve fluid life in your system. We do know that maintaining acid number as low as possible has a beneficial effect toward fluid life.

Our Therminol Fluids Specialist serving your area is Mr. Bob Damiani who is located at 3158 Des Plaines Avenue, Des Plaines, Illinois 60018. Please feel free to contact either Bob or myself if we can be of any further assistance.

Very truly yours,

Donald E. Roush
Engineering Specialist
Functional Fluids

DER:lh

cc: Mr. John Christensen
Plant Engineer
Kellogg Company

DSW 343413