



TECHNICAL BULLETIN ON MILITEC-1 FOR HYDRAULIC SYSTEMS

April 4, 2002

SUMMARY: Hydraulic pumps with a life expectancy of only eight to nine months functioned normally for over two years with no failures. The operating temperature of the hydraulic systems was also reduced significantly. Both these results were entirely due to the use of MILITEC-1 Metal Conditioner.

The Fleet Manager of a city in New York State reports that they were able to extend the life of the hydraulic pumps in their "sanitation packers." This is their term for the waste haulers, or garbage trucks, that circulate around the city picking up residential and commercial trash.

Before application of MILITEC-1 Metal Conditioner, the sanitation packers all exhibited the same two problems with their hydraulic systems. First, they were operating at such high temperatures that touching a finger to the outside of the hydraulic oil tank would result in a burn. Second, historical data showed the hydraulic pumps were wearing out and breaking down approximately every 8-9 months. The replacement pumps each cost \$500 plus labor, plus downtime, plus new hydraulic oil. Further, the pumps often failed at inopportune times during service runs, creating even more of a burden.

Two gallons of MILITEC-1 were added to a reservoir of 275 gallons of fresh hydraulic oil, which was the amount needed for all the trucks in the test. Thus, the ratio of MILITEC-1 to hydraulic oil was only 9.3 ounces per 10 gallons (Militec, Inc. recommends 8 oz. per 5 gallons.). This new oil was used to replace the old hydraulic oil in the test vehicles. The trucks were then put back into normal daily waste-hauling service.

The first sign that MILITEC-1 was working was an immediate and significant decrease in the temperature of the hydraulic oil. Unfortunately, the temperature drop was not measured, but the Fleet Manager says that instead of burning the skin upon touching the tank, they could place a hand against the wall of the tank and leave it there. It was still hot, but not to the same degree.

Much more importantly, two years later, *all* the hydraulic pumps on *all* of the test trucks were still operating normally. During this period, all of the trucks had been used continuously in normal daily waste-hauling service. No pump failures were recorded during the entire two-year period.

At the end of the two years, the hydraulic oil was changed again, with MILITEC-1 added at the same ratio. Several months later, at the time this report was written, the pumps were *still* operating without failure. Also, the temperature of the tanks remained low throughout.

The Fleet Manager has about 11 years of experience with MILITEC-1 and has seen many of its benefits. He has used MILITEC-1 in the engines, transmissions, differentials, etc. of the city's vehicles with excellent results. However, he reports that the hydraulic pump experience related above was the most telling of all the applications he has tried.

The Fleet Manager also stressed that in all the years of using MILITEC-1, he has never seen any detrimental effects.

Contact information for the Fleet Manager is available on request.