

**ANALYSIS OF MEDITRAN SX SAE 15W-40 LUBRICANTS
BASED ON OPERATIONAL HOURS OF KRISBOW BRAND
LATHE KW 15-979**

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ABSTRACT

Based on the manual for Krisbow KW 15-979 the lubricating oil for the gearbox used is Meditran SX SAE 15W-40 lubricating oil with a service life of 3 months. This study aims to evaluate the operating hours of replacing Meditran SX SAE 15W-40 lubricating oil on a Krisbow KW 15-979 lathe. The data to be taken in the research are the temperature value of the lubricating oil in the gearbox, the density of the lubricating oil and looking for the viscosity value by comparing the new lubricating oil (Meditran SX SAE 15W-40) and the lubricating oil that has been used for 40, 80 and 144 hours of operation. The results of the temperature test which was operated for 6 hours obtained the highest value, namely 36.5 °C still in normal temperature, for the density of lubricating oil has increased from 0.88 g / ml to 0.96 g / ml because the lubricating oil has been contaminated, while the results of testing the viscosity of lubricating oil at 144 hours of operation is still within the allowable limits, with a viscosity test result value of 62.41 cP (min value 50.6 cP) and (max value 112.0 cP). Thus, the use of lubricating oil for 144 hours of operation is still within the specified threshold.

Keywords: *Temperature, Density, Viscosity, Testing.*