

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL



(74010A) Machine Id FREIGHTLINER RL-64 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION Test UOM Method Limit/Abn Current History1 History2 Client Info Sample Number WC0941095 WC0875554 ----Resample at the next service interval to monitor. Sample Date **Client Info** 13 Jun 2024 04 Mar 2024 Machine Age hrs Client Info 4033 3263 Oil Age hrs Client Info 600 600 Filter Age hrs **Client Info** 600 600 Oil Changed **Client Info** Changed Changed Filter Changed Changed ----Client Info Changed NORMAL Sample Status NORMAL WEAR Iron ppm ASTM D5185m >90 34 24 Chromium ASTM D5185m >20 <1 1 ppm All component wear rates are normal. Nickel ASTM D5185m >2 0 <1 ppm Titanium ppm ASTM D5185m >2 <1 <1 Silver ASTM D5185m >2 0 0 ppm Aluminum ASTM D5185m >20 2 1 ppm Lead ASTM D5185m >40 0 ppm <1 3 Copper ASTM D5185m >330 1 ppm Tin ppm ASTM D5185m >15 0 1 Vanadium ppm ASTM D5185m <1 <1 White Metal NONE NONE scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE CONTAMINATION Silicon ASTM D5185m >25 3 5 ppm 35 3 Potassium ppm ASTM D5185m >20 There is no indication of any contamination in the oil. Fuel WC Method >3.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG % Glycol *ASTM D2982 NFG NEG Soot % % *ASTM D7844 >6 1.1 0.8 Nitration Abs/cm *ASTM D7624 >20 10.9 9.8 Sulfation Abs/.1mm *ASTM D7415 >30 23.4 21.2 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE *Visual NONE NONE Sand/Dirt NONE scalar Appearance *Visual NORML NORML NORML scalar NORML Odor scalar *Visual NORML NORML Emulsified Water scalar NEG *Visual >0.2 NFG FLUID CONDITION Sodium ASTM D5185m >216 9 0 ppm 7 7 Boron ASTM D5185m 250 ppm The BN result indicates that there is suitable alkalinity remaining in the 0 Barium ppm ASTM D5185m 10 <1 oil. The condition of the oil is suitable for further service. Molybdenum ASTM D5185m 79 75 ppm 100 Manganese ASTM D5185m <1 ppm ۲2 965 838 Magnesium ppm ASTM D5185m 450 Calcium ASTM D5185m 3000 1414 1190 ppm Phosphorus 1158 1129 ppm ASTM D5185m 1150 Zinc ppm ASTM D5185m 1350 1423 1229 Sulfur ppm ASTM D5185m 4250 3866 3311

Oxidation

Base Number (BN)

Visc @ 100°C

Abs/.1mm

mg KOH/g

cSt

*ASTM D7414

ASTM D2896

ASTM D445

>25

8.5

14.4

20.4

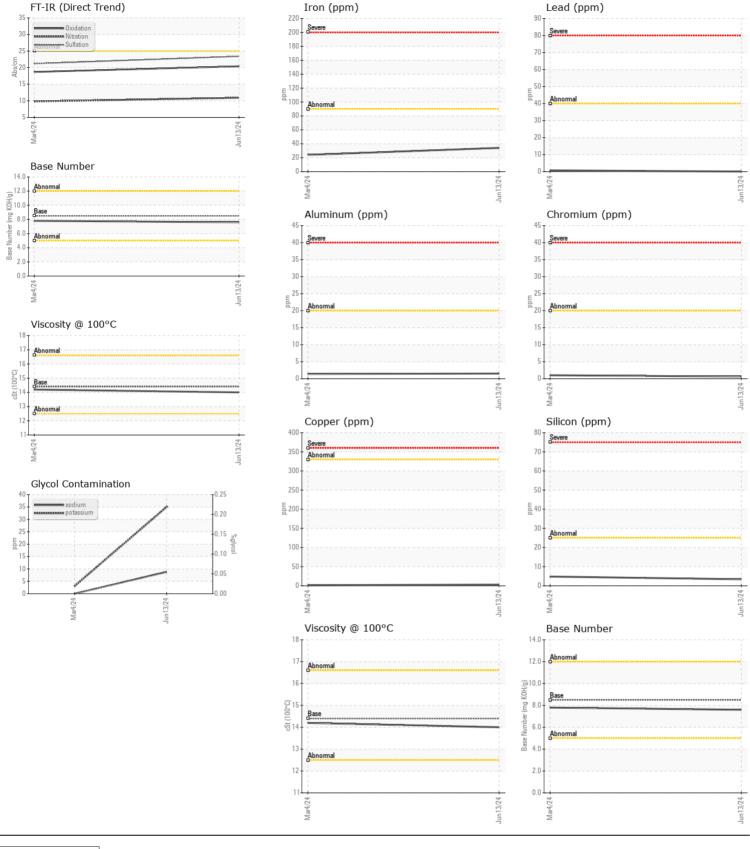
7.6

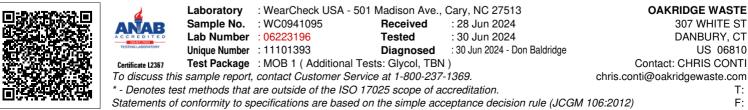
14.0

18.7

7.8

14.2





Submitted By: CHRIS CONTI Page 2 of 2