

Machine Id **331** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- GAL) RECOMMENDATION**

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

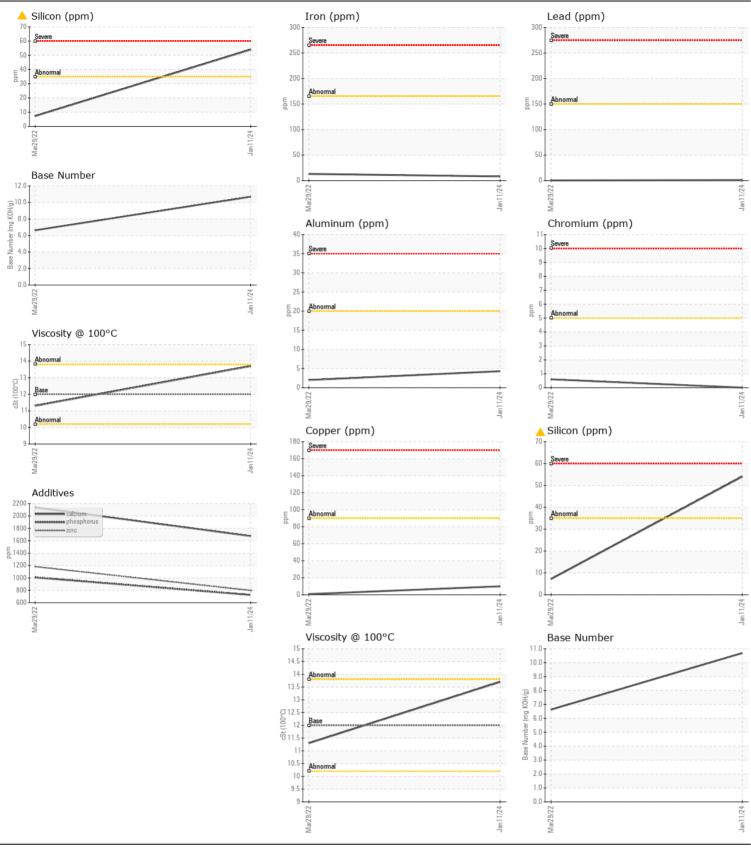
There is a moderate concentration of dirt present in the oil.

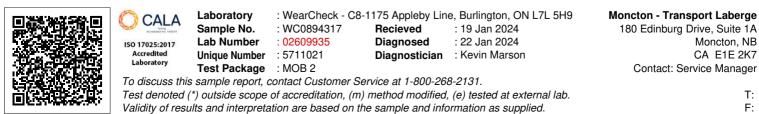
FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

TestUOMMethodLimit/AbnCurrentSample NumberClient InfoWC0894317Sample DateClient Info11 Jan 2024Machine AgekmsClient Info869467Oil AgekmsClient Info7479	History1 WC 29 Mar 2022 0 0 0	History2
Sample Date Client Info 11 Jan 2024 Machine Age kms Client Info 869467	29 Mar 2022 0 0 0	
Machine Age kms Client Info 869467	0 0 0 0	
, i i i i i i i i i i i i i i i i i i i	0	
Oil Age kms Client Info 7479	0	
Filter Age kms Client Info 7479		
Oil Changed Client Info Changed	N/A	
Filter Changed Client Info Changed	N/A	
Sample Status ABNORMAL	NORMAL	
Iron ppm ASTM D5185(m) >165 8	13	
Chromium ppm ASTM D5185(m) >5 0	<1	
Nickel ppm ASTM D5185(m) >4 1	0	
Titanium ppm ASTM D5185(m) >2 0	0	
Silver ppm ASTM D5185(m) >2 0	0	
AluminumppmASTM D5185(m)>204	2	
Lead ppm ASTM D5185(m) >150 <1	<1	
Copper ppm ASTM D5185(m) >90 10	<1	
Tin ppm ASTM D5185(m) >5 <1	<1	
Vanadium ppm ASTM D5185(m) 0	0	
Silicon ppm ASTM D5185(m) >35 🔺 54	7	
Potassium ppm ASTM D5185(m) >20 2	4	
Fuel WC Method >3.0 <1.0	0.4	
Water WC Method >0.2 NEG	NEG	
Glycol WC Method NEG	NEG	
Soot % % ASTM D7844* >7.5 0	0	
Nitration Abs/cm ASTM D7624* >20 4.6	9.7	
Sulfation Abs/.1mm ASTM D7415* >30 22.0	22.3	
Emulsified Water scalar Visual* >0.2 NEG	NEG	
Sodium ppm ASTM D5185(m) 3	3	
Boron ppm ASTM D5185(m) 2 281	26	
Barium ppm ASTM D5185(m) 0 6	0	
Molybdenum ppm ASTM D5185(m) 50 104	14	
Manganese ppm ASTM D5185(m) 0 1	<1	
Magnesium ppm ASTM D5185(m) 950 568	217	
Calcium ppm ASTM D5185(m) 1050 1675	2138	
Phosphorus ppm ASTM D5185(m) 995 725	1008	
Zinc ppm ASTM D5185(m) 1180 797	1182	
Sulfur ppm ASTM D5185(m) 2600 2318	3086	
Oxidation Abs/.1mm ASTM D7414* >25 14.3	14.8	
Base Number (BN) mg KOH/g ASTM D2896* 10.69	6.63	
Visc @ 100°C cSt ASTM D7279(m) 12.00 13.7	11.3	

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