

OIL ANALYSIS REPORT

Sample Rating Trend



Area Compactor 142

Component Diesel Engine Fluid

PETRO CANADA DURON HP 15W40 (--- GAL)

SAMPLE INFORMATION method

BINGINOUIO

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

	ATION	method	iimii/base	current	nistory i	nistory2
Sample Number		Client Info		KFS0006015	KFS0004045	
Sample Date		Client Info		16 Apr 2024	01 Dec 2023	
Machine Age	hrs	Client Info		11878	11456	
Oil Age	hrs	Client Info		422	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
			11 1.0			
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
						mstoryz
Iron	ppm	ASTM D5185m	>100	17	12	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>2	<1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m		2	2	
Lead	ppm	ASTM D5185m	>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	1	<1	
Tin	ppm		>15	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method		current		history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base			history2
	ppm ppm		limit/base	current 3 0	history1 8 0	history2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	3 0	8 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m	limit/base	3 0 93	8	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1	8 0 63 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93	8 0 63 0 1018	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645	8 0 63 0 1018 1321	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473	8 0 63 0 1018 1321 1156	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473 1775	8 0 63 0 1018 1321 1156 1373	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		3 0 93 <1 1355 1645 1473 1775 4547	8 0 63 0 1018 1321 1156 1373 3525	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473 1775 4547 current	8 0 63 0 1018 1321 1156 1373	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473 1775 4547	8 0 63 0 1018 1321 1156 1373 3525	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473 1775 4547 current	8 0 63 0 1018 1321 1156 1373 3525 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 93 <1 1355 1645 1473 1775 4547 current 6	8 0 63 0 1018 1321 1156 1373 3525 history1 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25	3 0 93 <1 1355 1645 1473 1775 4547 <u>current</u> 6 <	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20	3 0 93 <1 1355 1645 1473 1775 4547 current 6 <	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	3 0 93 <1 1355 1645 1473 1775 4547 current 6 <1 2 current	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 4 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	3 0 93 <1 1355 1645 1473 1775 4547 <i>current</i> 6 <1 2 <i>current</i> 0.2	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 4 0.3	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >3 >20	3 0 93 <1 1355 1645 1473 1775 4547 <i>current</i> 6 <1 2 <i>current</i> 0.2 8.0 20.2	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 4 5 0.3 10.0 21.0	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	3 0 93 <1 1355 1645 1473 1775 4547 <i>current</i> 6 <1 2 <i>current</i> 0.2 8.0 20.2 <i>current</i>	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 0.3 10.0 21.0 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	limit/base >25 >20 limit/base >3 >20 >30 limit/base >30	3 0 93 <1 1355 1645 1473 1775 4547 <i>current</i> 6 <1 2 <i>current</i> 0.2 8.0 20.2 <i>current</i> 16.2	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 0.3 10.0 21.0 history1 17.9	 history2 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	3 0 93 <1 1355 1645 1473 1775 4547 <i>current</i> 6 <1 2 <i>current</i> 0.2 8.0 20.2 <i>current</i>	8 0 63 0 1018 1321 1156 1373 3525 history1 4 4 4 4 4 0.3 10.0 21.0 history1	 history2 history2 history2 history2 history2



35

30

2!

Abs/cm

10

12.0

r (mg KOH/g)

6.0

4 (Base

> 19 18

> 17

() 16 001015 Ba

13 Abnorma

12

Dec1/23

Dec]

OIL ANALYSIS REPORT



Submitted By: BILL ENYART