

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 600 Component

Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

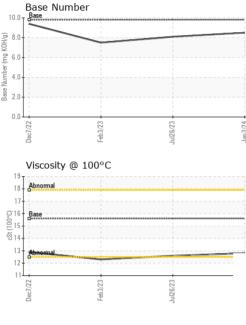
Fluid Condition

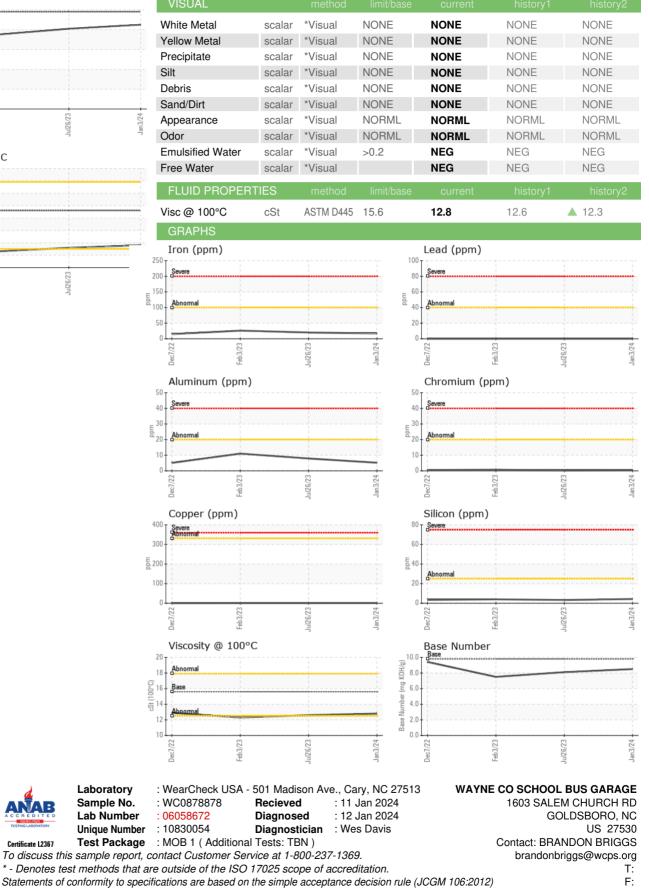
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			2 Feb2023	Jul2023 J		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878878	WC0792704	WC0727316
Sample Date		Client Info		03 Jan 2024	26 Jul 2023	03 Feb 2023
Machine Age	mls	Client Info		98724	85457	72029
Oil Age	mls	Client Info		5000	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	3 .1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	17	20	26
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	8	11
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 7	history1 6	history2 7
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	7	6	7
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	7 0	6 0	7
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 0 58	6 0 65	7 0 62
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 0 58 <1	6 0 65 <1	7 0 62 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 0 58 <1 865	6 0 65 <1 848	7 0 62 <1 777
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	7 0 58 <1 865 1010	6 0 65 <1 848 1161	7 0 62 <1 777 1123
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	limit/base	7 0 58 <1 865 1010 982	6 0 65 <1 848 1161 999	7 0 62 <1 777 1123 953
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	7 0 58 <1 865 1010 982 1145	6 0 65 <1 848 1161 999 1211	7 0 62 <1 777 1123 953 1146
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		7 0 58 <1 865 1010 982 1145 3054	6 0 65 <1 848 1161 999 1211 3313	7 0 62 <1 777 1123 953 1146 3048 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	7 0 58 <1 865 1010 982 1145 3054 current	6 0 65 <1 848 1161 999 1211 3313 history1	7 0 62 <1 777 1123 953 1146 3048 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >25	7 0 58 <1 865 1010 982 1145 3054 current 4	6 0 65 <1 848 1161 999 1211 3313 history1 3	7 0 62 <1 777 1123 953 1146 3048 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25	7 0 58 <1 865 1010 982 1145 3054 <u>current</u> 4 0	6 0 65 <1 848 1161 999 1211 3313 history1 3 0	7 0 62 <1 777 1123 953 1146 3048 history2 4 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20	7 0 58 <1 865 1010 982 1145 3054 current 4 0 5	6 0 65 <1 848 1161 999 1211 3313 history1 3 0 11	7 0 62 <1 777 1123 953 1146 3048 history2 4 1 1
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	7 0 58 <1 865 1010 982 1145 3054 <i>current</i> 4 0 5 <i>current</i>	6 0 65 <1 848 1161 999 1211 3313 history1 3 0 11 11 history1	7 0 62 <1 777 1123 953 1146 3048 history2 4 1 1 11 11
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	7 0 58 <1 865 1010 982 1145 3054 <u>current</u> 4 0 5 <u>current</u> 0.4	6 0 65 <1 848 1161 999 1211 3313 history1 3 0 11 history1 0.4	7 0 62 <1 777 1123 953 1146 3048 history2 4 1 1 11 11 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	7 0 58 <1 865 1010 982 1145 3054 <i>current</i> 4 0 5 <i>current</i> 0.4 7.6	6 0 65 <1 848 1161 999 1211 3313 history1 3 0 11 history1 0.4 8.5	7 0 62 <1 777 1123 953 1146 3048 history2 4 1 1 1 1 1 1 bistory2 0.5 9.3
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 >30	7 0 58 <1 865 1010 982 1145 3054 <u>current</u> 4 0 5 <u>current</u> 0.4 7.6 18.5	6 0 65 <1 848 1161 999 1211 3313 history1 3 0 11 11 history1 0.4 8.5 19.2	7 0 62 <1 777 1123 953 1146 3048 history2 4 1 1 11 11 bistory2 0.5 9.3 18.9



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Certificate L2367

Contact/Location: BRANDON BRIGGS - WAYGOL