

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

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

DIAGNOSIS

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

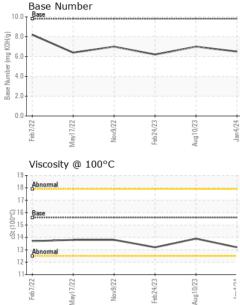
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

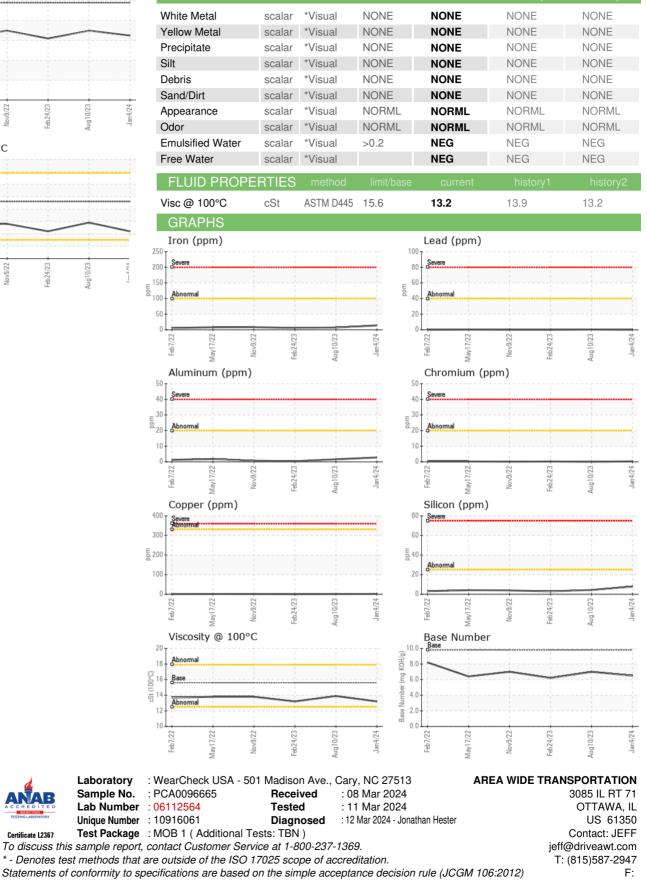
,		Feb2022	May2022 Nov2022	Feb2023 Aug2023	Jan2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0096665	PCA0096644	PCA0080670
Sample Date		Client Info		04 Jan 2024	10 Aug 2023	24 Feb 2023
Machine Age	mls	Client Info		352461	323881	299441
Oil Age	mls	Client Info		28574	24446	29647
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	14	7	6
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	- T	4	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum		ASTM D5185m	>20	3	2	<1
Lead	ppm	ASTM D5185m	>20	0	<1	0
	ppm		>40 >330	2	<1	<1
Copper Tin	ppm	ASTM D5185m ASTM D5185m	>330		0	<1
Vanadium	ppm		>10	<1 <1	<1	<1
	ppm	ASTM D5185m			< 1	< 1
				•	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base		-	-
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 11	history1 3	history2 3
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 11 0	history1 3 0	history2 3 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 11 0 98	history1 3 0 68	history2 3 0 54
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 11 0 98 0	history1 3 0 68 <1	history2 3 0 54 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 11 0 98 0 1525	history1 3 0 68 <1 1125	history2 3 0 54 <1 876
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 11 0 98 0 1525 1922	history1 3 0 68 <1 1125 1233	history2 3 0 54 <1 876 1201
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 11 0 98 0 1525 1922 1771	history1 3 0 68 <1 1125 1233 1145	history2 3 0 54 <1 876 1201 962
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 11 0 98 0 1525 1922 1771 2035	history1 3 0 68 <1 1125 1233 1145 1415	history2 3 0 54 <1 876 1201 962 1129
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		Current 11 0 98 0 1525 1922 1771 2035 5063	history1 3 0 68 <1 1125 1233 1145 1415 3137	history2 3 0 54 <1 876 1201 962 1129 2801
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 11 0 98 0 1525 1922 1771 2035 5063 current	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1	history2 3 0 54 <1 876 1201 962 1129 2801 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 11 0 98 0 1525 1922 1771 2035 5063 current 8	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 history1	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 0 0 0 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current 0.3	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 2 4 0.4	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 0 history2 0 0.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 history1	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 0 0 0 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	Imit/base >25 >20 Imit/base >3 >20 >30	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current 0.3 10.1 22.5	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 D.4 10.8 22.0	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 history2 0 0.3 10.7 23.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method ASTM D5185m ASTM D7185m ASTM D7624 *ASTM D7624 *ASTM D7415	limit/base >25 >20 limit/base >3 >20 >30 >30	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current 0.3 10.1 22.5 current	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 2 4 0.4 10.8 22.0 history1	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 history2 3 0 history2 0.3 10.7 23.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	Imit/base >25 >20 Imit/base >3 >20 >30	current 11 0 98 0 1525 1922 1771 2035 5063 current 8 <1 4 current 0.3 10.1 22.5	history1 3 0 68 <1 1125 1233 1145 1415 3137 history1 4 2 4 D.4 10.8 22.0	history2 3 0 54 <1 876 1201 962 1129 2801 history2 3 0 history2 0 0.3 10.7 23.4



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VISUAL





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