

OIL ANALYSIS REPORT

Sample Rating Trend



Area (PO552E) Machine Id 931015-205338 Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (11 LTR)

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.

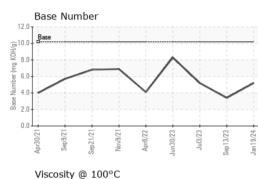
Fluid Condition

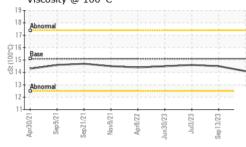
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0096040	GFL0071770	GFL0071721
Sample Date		Client Info		19 Jan 2024	13 Sep 2023	03 Jul 2023
Machine Age	hrs	Client Info		5364	4354	3799
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Oil Added
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	6	8	5
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	0	3
Lead	ppm	ASTM D5185m	>30	11	10	2
Copper	ppm	ASTM D5185m	>35	5	3	3
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base		history1	history2
ADDITIVE3		method	iiiiii/base	current		
Boron	ppm	ASTM D5185m	50	15	8	13
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	50 5	15 0	8 <1	13 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	15 0 54	8 <1 57	13 0 52
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	15 0 54 <1	8 <1 57 <1	13 0 52 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	15 0 54 <1 627	8 <1 57 <1 618	13 0 52 <1 552
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	15 0 54 <1 627 1679	8 <1 57 <1 618 1779	13 0 52 <1 552 1713
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780	15 0 54 <1 627 1679 848	8 <1 57 <1 618 1779 811	13 0 52 <1 552 1713 764
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870	15 0 54 <1 627 1679 848 1069	8 <1 57 <1 618 1779 811 1055	13 0 52 <1 552 1713 764 1031
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	50 5 50 0 560 1510 780	15 0 54 <1 627 1679 848	8 <1 57 <1 618 1779 811	13 0 52 <1 552 1713 764 1031 3020
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040	15 0 54 <1 627 1679 848 1069 2617 current	8 <1 57 <1 618 1779 811 1055 3049 history1	13 0 52 <1 552 1713 764 1031 3020 history2
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 ASTM D5185m	50 5 50 0 560 1510 780 870 2040	15 0 54 <1 627 1679 848 1069 2617 <u>current</u> 5	8 <1 57 <1 618 1779 811 1055 3049 history1 7	13 0 52 <1 552 1713 764 1031 3020 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 >+100	15 0 54 <1 627 1679 848 1069 2617 current	8 <1 57 <1 618 1779 811 1055 3049 history1	13 0 52 <1 552 1713 764 1031 3020 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 >+100	15 0 54 <1 627 1679 848 1069 2617 <u>current</u> 5	8 <1 57 <1 618 1779 811 1055 3049 history1 7	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 6 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 >+100	15 0 54 <1 627 1679 848 1069 2617 current 5 8 0 0	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 <1 +istory2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	15 0 54 <1 627 1679 848 1069 2617 <i>current</i> 5 8 0 <i>current</i> 0.1	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1 0.1	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 6 <1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	15 0 54 <1 627 1679 848 1069 2617 current 5 8 0 0	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 <1 +istory2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 Limit/base >+100 S20 Limit/base	15 0 54 <1 627 1679 848 1069 2617 <i>current</i> 5 8 0 <i>current</i> 0.1	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1 0.1	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 6 <1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 Iimit/base >+100 20 Iimit/base	15 0 54 <1 627 1679 848 1069 2617 <i>current</i> 5 8 0 <i>current</i> 0.1 10.7	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1 0.1 12.0	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 6 <1 history2 0.1 10.2
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	ASTM D5185m ASTM D5185m	50 50 50 150 1510 780 870 2040 imit/base >20 imit/base >20 i mit/base	15 0 54 <1 627 1679 848 1069 2617 <i>current</i> 5 8 0 <i>current</i> 0.1 10.7 24.4	8 <1 57 <1 618 1779 811 1055 3049 history1 7 10 0 history1 0.1 12.0 25.6	13 0 52 <1 552 1713 764 1031 3020 history2 6 6 6 6 <1 history2 0.1 10.2 22.5

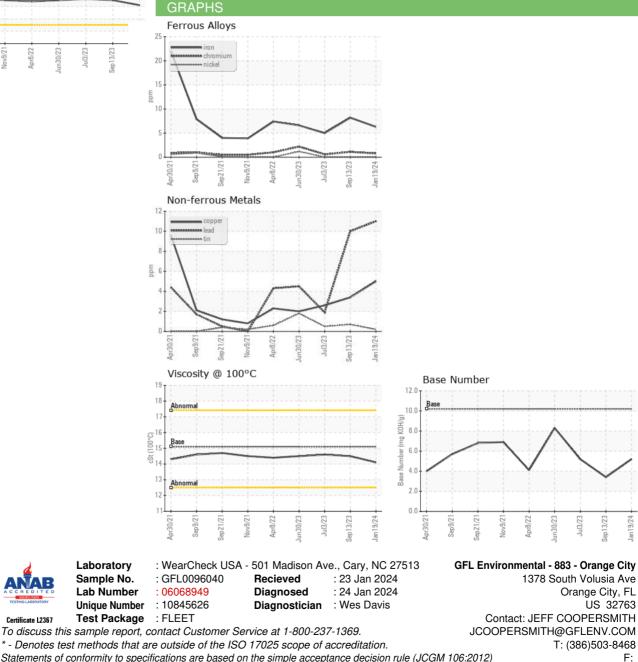


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.1	14.5	14.6
GRAPHS						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Page 2 of 2