

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 3512C AUTOCAR ACX Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (40 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

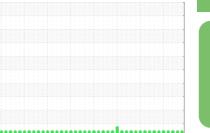
Metal levels are typical for a new component breaking in.

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.



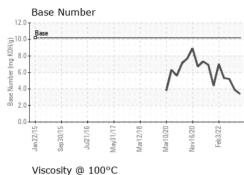


12015 Sep2015 Juc2016 May2017 Mar2018 Mar2020 Nov2020 Feb2022

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103152	GFL0089315	GFL0056592
Sample Date		Client Info		15 Mar 2024	26 Sep 2023	28 Feb 2023
Machine Age	hrs	Client Info		5011	3867	2620
Oil Age	hrs	Client Info		0	0	985
Oil Changed		Client Info		Not Changd	Changed	Changed
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	32	28	24
Chromium	ppm	ASTM D5185m	>4	4	3	4
Nickel	ppm	ASTM D5185m	>2	1	<1	1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	10	6	4
Lead	ppm	ASTM D5185m	>30	12	9	1
Copper	ppm	ASTM D5185m	>35	5	4	10
Tin	ppm	ASTM D5185m	>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 50	current 5	history1 9	history2 14
	ppm ppm					
Boron		ASTM D5185m	50	5	9	14
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	5 0	9 0	14 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	5 0 60	9 0 65	14 0 52
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	5 0 60 <1	9 0 65 <1	14 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	5 0 60 <1 659	9 0 65 <1 699	14 0 52 <1 518
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	5 0 60 <1 659 1746	9 0 65 <1 699 2005	14 0 52 <1 518 1596
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	50 5 50 0 560 1510 780	5 0 60 <1 659 1746 818	9 0 65 <1 699 2005 839	14 0 52 <1 518 1596 707
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm 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	5 0 60 <1 659 1746 818 1095	9 0 65 <1 699 2005 839 1153	14 0 52 <1 518 1596 707 969
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	5 0 60 <1 659 1746 818 1095 2845 2845 current 9	9 0 65 <1 699 2005 839 1153 2728	14 0 52 <1 518 1596 707 969 2200
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040	5 0 60 <1 659 1746 818 1095 2845 current	9 0 65 <1 699 2005 839 1153 2728 history1	14 0 52 <1 518 1596 707 969 2200 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 method	50 50 00 560 1510 780 870 2040	5 0 60 <1 659 1746 818 1095 2845 2845 current 9	9 0 65 <1 699 2005 839 1153 2728 history1 13	14 0 52 <1 518 1596 707 969 2200 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	5 0 60 <1 659 1746 818 1095 2845 2845 <u>current</u> 9 9	9 0 65 <1 699 2005 839 1153 2728 history1 13 12	14 0 52 <1 518 1596 707 969 2200 history2 13 9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 limit/base >+100	5 0 60 <1 659 1746 818 1095 2845 <u>current</u> 9 9 9	9 0 65 <1 699 2005 839 1153 2728 history1 13 12 11	14 0 52 <1 518 1596 707 969 2200 history2 13 9 3
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	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 limit/base >+100	5 0 60 <1 659 1746 818 1095 2845 current 9 9 9 11	9 0 65 <1 699 2005 839 1153 2728 history1 13 12 11 11 history1	14 0 52 <1 518 1596 707 969 2200 history2 13 9 3 history2
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 ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 >+100 >+100 >20 imit/base	5 0 60 <1 659 1746 818 1095 2845 current 9 9 9 11 11 current 0.1	9 0 65 <1 699 2005 839 1153 2728 history1 13 12 11 11 history1 0	14 0 52 <1 518 1596 707 969 2200 history2 13 9 3 3 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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 imit/base >+100 20 imit/base	5 0 60 <1 659 1746 818 1095 2845 <i>current</i> 9 9 9 11 <i>current</i> 0.1 12.9	9 0 65 <1 699 2005 839 1153 2728 history1 13 12 11 11 history1 0 11.3	14 0 52 <1 518 1596 707 969 2200 history2 13 9 3 history2 0.1 9.8
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 50 150 1510 780 870 2040 imit/base >20 imit/base >20 imit/base	5 0 60 <1 659 1746 818 1095 2845 <u>current</u> 9 9 9 11 11 <u>current</u> 0.1 12.9 27.9	9 0 65 <1 699 2005 839 1153 2728 history1 13 12 11 13 12 11 0 0 11.3 24.9	14 0 52 <1 518 1596 707 969 2200 history2 13 9 3 history2 0.1 9.8 21.4

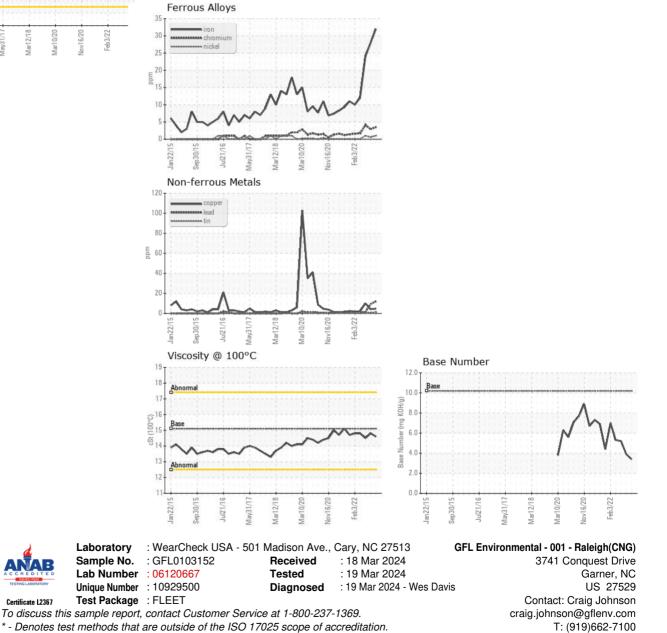


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	14.6	14.8	14.5
GRAPHS						



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

Certificate L2367

Submitted By: aka Keith - Ronald Gregory

F: (919)662-7130