

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 2569C

Component Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (12 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.

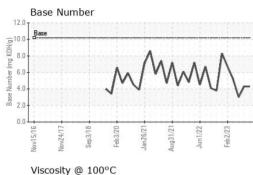
Fluid Condition

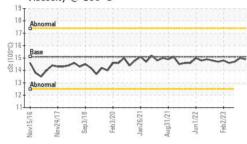
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0087524	GFL0087531	GFL0071824
Sample Date		Client Info		10 Oct 2023	03 Aug 2023	12 May 2023
Machine Age	hrs	Client Info		7092	6684	6154
Oil Age	hrs	Client Info		938	530	708
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	32	19	34
Chromium	ppm	ASTM D5185m	>4	3	2	4
Nickel	ppm	ASTM D5185m	>2	0	0	1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	1	3
Lead	ppm	ASTM D5185m	>30	14	3	20
Copper	ppm	ASTM D5185m	>35	<1	2	2
Tin	ppm	ASTM D5185m	>4	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	7	6	5
Barium	ppm	ASTM D5185m	5	0	0	2
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	5 50	0 58	0 56	2 62
Molybdenum	ppm	ASTM D5185m	50	58	56	62
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	50 0	58 <1	56 <1	62 1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560	58 <1 580	56 <1 604	62 1 607
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510	58 <1 580 1655	56 <1 604 1704	62 1 607 1752
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780	58 <1 580 1655 733	56 <1 604 1704 714	62 1 607 1752 784
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870	58 <1 580 1655 733 1014	56 <1 604 1704 714 1041	62 1 607 1752 784 1045
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 0 560 1510 780 870 2040	58 <1 580 1655 733 1014 2304	56 <1 604 1704 714 1041 2951	62 1 607 1752 784 1045 2593
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	50 0 560 1510 780 870 2040 limit/base	58 <1 580 1655 733 1014 2304 current	56 <1 604 1704 714 1041 2951 history1	62 1 607 1752 784 1045 2593 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	50 0 560 1510 780 870 2040 limit/base	58 <1 580 1655 733 1014 2304 current 5	56 <1 604 1704 714 1041 2951 history1 4	62 1 607 1752 784 1045 2593 history2 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 imit/base >+100	58 <1 580 1655 733 1014 2304 current 5 12	56 <1 604 1704 714 1041 2951 history1 4 11	62 1 607 1752 784 1045 2593 history2 5 12
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 0 560 1510 780 870 2040 2040 >+100 >20	58 <1 580 1655 733 1014 2304 current 5 12 <1	56 <1 604 1704 714 1041 2951 history1 4 11 <1	62 1 607 1752 784 1045 2593 history2 5 12 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >204 limit/base	58 <1 580 1655 733 1014 2304 current 5 12 <1 <1	56 <1 604 1704 714 1041 2951 history1 4 11 <1 history1	62 1 607 1752 784 1045 2593 history2 5 12 2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >204 limit/base	58 <1 580 1655 733 1014 2304 current 5 12 <1 <1 current 0	56 <1 604 1704 714 1041 2951 history1 4 11 <1 history1 0	62 1 607 1752 784 1045 2593 history2 5 12 2 2 history2 0
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 0 560 1510 780 870 2040 2040 >+100 >20 imit/base >20	58 <1 580 1655 733 1014 2304 <u>current</u> 5 12 <1 2 <1 <u>current</u> 0 11.7	56 <1 604 1704 714 1041 2951 <u>history1</u> 4 11 <1 <u>history1</u> 0 11.0	62 1 607 1752 784 1045 2593 history2 5 12 2 history2 0 12.2
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 0 560 1510 780 870 2040 imit/base >20 imit/base >20 imit/base	58 <1 580 1655 733 1014 2304 <u>current</u> 5 12 <1 current 0 11.7 24.3	56 <1 604 1704 714 1041 2951 history1 4 11 <1 history1 0 11.0 22.3	62 1 607 1752 784 1045 2593 history2 5 12 2 history2 0 12.2 27.1



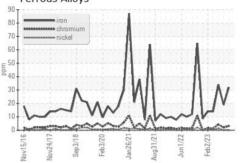
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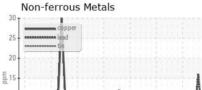


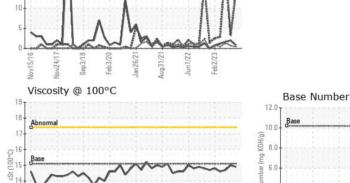


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	14.9	15.0	14.7
GRAPHS						

Ferrous Alloys







Aug31/21.

Jun1/22

Jan 26/21

Received

Diagnosed

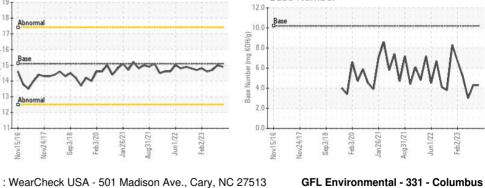
Diagnostician

Feb2/23 -

: 11 Oct 2023

: 12 Oct 2023

: Wes Davis



180 Ada Moore Rd Columbus, NC US 28722 Contact: Matt Segars matt.segars@gflenv.com T: (800)207-6618 F: (252)617-2494



Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Sep3/18 .

Feb3/20

13 Abnor

12 11

Laboratory

Sample No.

Lab Number

Unique Number

Nov15/16 Nov24/17

: GFL0087524

: 05976338 : 10688288

Submitted By: Matt Segars

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