

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



834046 Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0120238	GFL0114076	GFL010977
Sample Date		Client Info		03 Jun 2024	27 Mar 2024	13 Feb 2024
Machine Age	hrs	Client Info		1380	960	673
Oil Age	hrs	Client Info		0	960	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Chango
Sample Status				ABNORMAL	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	5 2	45	4
Chromium	ppm	ASTM D5185m	>5	4	<1	<1
Nickel	ppm	ASTM D5185m	>4	2	2	<1
Titanium	ppm	ASTM D5185m	>5	<1	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	6	6	5
Lead	ppm	ASTM D5185m	>40	11	2	2
Copper	ppm	ASTM D5185m	>150	2	9	2
Tin	ppm	ASTM D5185m	>4	2	2	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history
Boron	ppm	ASTM D5185m	50	4	9	31
Barium	ppm	ASTM D5185m	5	2	0	0
Danum	ppm					
Molybdenum	ppm	ASTM D5185m	50	60	53	47
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	50 0	60 1	53 9	47 <1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560	60 1 536	53 9 711	47 <1 544
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510	60 1 536 1893	53 9 711 1404	47 <1 544 1432
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	60 1 536 1893 806	53 9 711 1404 749	47 <1 544 1432 734
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870	60 1 536 1893 806 1055	53 9 711 1404 749 986	47 <1 544 1432 734 919
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	50 0 560 1510 780 870 2040	60 1 536 1893 806 1055 2912	53 9 711 1404 749 986 2702	47 <1 544 1432 734 919 2392
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 0 560 1510 780 870 2040 limit/base	60 1 536 1893 806 1055 2912 current	53 9 711 1404 749 986 2702 history1	47 <1 544 1432 734 919 2392 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 ASTM D5185m method ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >25	60 1 536 1893 806 1055 2912 current 18	53 9 711 1404 749 986 2702 history1 20	47 <1 544 1432 734 919 2392 history: 7
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 method ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >25	60 1 536 1893 806 1055 2912 current 18 11	53 9 711 1404 749 986 2702 history1 20 4	47 <1 544 1432 734 919 2392 history: 7 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 >25	60 1 536 1893 806 1055 2912 <u>current</u> 18 11 4	53 9 711 1404 749 986 2702 history1 20 4 4	47 <1 544 1432 734 919 2392 history 7 4 12
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	50 0 560 1510 780 870 2040 limit/base >25 >20	60 1 536 1893 806 1055 2912 current 18 11 4 current	53 9 711 1404 749 986 2702 history1 20 4 4 4 history1	47 <1 544 1432 734 919 2392 history: 7 4 12 history:
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 0 560 1510 780 870 2040 limit/base >25 >20 limit/base	60 1 536 1893 806 1055 2912 current 18 11 4 current 0.1	53 9 711 1404 749 986 2702 history1 20 4 4 4 history1 0	47 <1 544 1432 734 919 2392 history 7 4 12 history 0
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	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 imit/base >25 >20 limit/base >20	60 1 536 1893 806 1055 2912 current 18 11 4 current 0.1 12.1	53 9 711 1404 749 986 2702 history1 20 4 4 4 history1 0 12.4	47 <1 544 1432 734 919 2392 history 7 4 12 history 0 7.9
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	ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base >20 >20	60 1 536 1893 806 1055 2912 current 18 11 4 current 0.1 12.1 26.5	53 9 711 1404 749 986 2702 history1 20 4 4 4 <u>history1</u> 0 12.4 23.8	47 <1 544 1432 734 919 2392 history2 7 4 12 history2 0 7.9 19.7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm % Abs/tmm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	50 0 560 1510 780 870 2040 imit/base >25 imit/base >20 20 20 imit/base	60 1 536 1893 806 1055 2912 current 18 11 4 current 0.1 12.1 26.5 current	53 9 711 1404 749 986 2702 history1 20 4 4 4 history1 0 12.4 23.8 history1	47 <1 544 1432 734 919 2392 history 7 4 12 history 0 7.9 19.7 history
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7414	50 0 560 1510 780 870 2040 limit/base >25 limit/base >20 >30 limit/base >25	60 1 536 1893 806 1055 2912 current 18 11 4 current 0.1 12.1 26.5 current 22.1	53 9 711 1404 749 986 2702 history1 20 4 4 4 history1 0 12.4 23.8 history1 21.2	47 <1 544 1432 734 919 2392 history 7 4 12 history 0 7.9 19.7 history 16.1

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

📥 Wear

Cylinder, crank, or cam shaft wear is indicated. All other 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 acceptable for the time in service.



OIL ANALYSIS REPORT







Jan 23/24

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	LIGHT	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	14.6	13.9
GRAPHS						



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)

Report Id: GFL836 [WUSCAR] 06201056 (Generated: 06/09/2024 09:20:12) Rev: 1

Certificate 12367

Mar27/24

Feb 13/24

Contact/Location: GFL823,834,836,837,840 - Loyce Stewart - GFL836

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