

OIL ANALYSIS REPORT

Sample Rating Trend



GFL035 834018

Diesel Engine PETRO CANADA DURON SHP 15W40 (42 QTS)

SAMPLE INFORMATION method

DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

Area

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 Number		Client Info		GFL0116488	GFL0116475	GFL0085232
Sample Date		Client Info		22 May 2024	14 May 2024	15 Jan 2024
Machine Age	hrs	Client Info		0	0	1805
Oil Age	hrs	Client Info		600	600	146
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	8	23	34
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	0	0	1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	4	6
Lead	ppm	ASTM D5185m	>40	1	10	8
Copper	ppm	ASTM D5185m	>330	<1	3	5
Tin	ppm	ASTM D5185m	>15	0	1	3
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 37	history1 14	history2 5
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 0 0	current 37 0	history1 14 0	history2 5 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60	current 37 0 50	history1 14 0 60	history2 5 0 65
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 60 0	current 37 0 50 <1	history1 14 0 60 2	history2 5 0 65 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010	current 37 0 50 <1 602	history1 14 0 60 2 658	history2 5 0 65 4 704
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070	current 37 0 50 <1 602 1670	history1 14 0 60 2 658 1877	history2 5 0 65 4 704 1790
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150	current 37 0 50 <1 602 1670 829	history1 14 0 60 2 658 1877 877	history2 5 0 65 4 704 1790 873
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270	current 37 0 50 <1 602 1670 829 957	history1 14 0 60 2 658 1877 877 1103	history2 5 0 65 4 704 1790 873 1089
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 0 0 0 1010 1070 1150 1270 2060	current 37 0 50 <1 602 1670 829 957 2948	history1 14 0 60 2 658 1877 877 1103 2920	history2 5 0 65 4 704 1790 873 1089 2481
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 0 0 60 1010 1070 1150 1270 2060	current 37 0 50 <1 602 1670 829 957 2948 current	history1 14 0 60 2 658 1877 877 1103 2920 history1	history2 5 0 65 4 704 1790 873 1089 2481 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 0 0 0 0 1010 1070 1150 1270 2060 limit/base >25	current 37 0 50 <1 602 1670 829 957 2948 current 4	history1 14 0 60 2 658 1877 877 1103 2920 history1 6	history2 5 0 65 4 704 1790 873 1089 2481 history2 11
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Chosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method ASTM D5185m	limit/base 0 0 0 1010 1070 1150 1270 2060 limit/base >25	current 37 0 50 <1 602 1670 829 957 2948 current 4 5	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	method ASTM D5185m	limit/base 0 0 0 0 0 1010 1070 1150 1270 2060 limit/base >25	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 6 8 2 history1	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 limit/base >4	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3 current 0	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 0	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2 0
ADDITIVES 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	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 limit/base >20 >20 >20 >20 >20	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3 current 0 7.5	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 0 11.6	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2 0 13.5
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 t ppm ppm	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 limit/base >20 >20 >20 >20 >30	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3 current 0 7.5 19.6	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 0 11.6 25.6	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2 0 13.5 28.8
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 ppm	method ASTM D5185m ASTM D5185m	limit/base 0 0 0 60 0 1010 1150 1270 2060 limit/base >20 limit/base >4 >20 >30	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3 current 0 7.5 19.6	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 0 11.6 25.6 history1	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2 0 13.5 28.8 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D78444 *ASTM D7415 method *ASTM D7414	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 limit/base >20 limit/base >20 limit/base >20 1000000000000000000000000000000000000	current 37 0 50 <1 602 1670 829 957 2948 current 4 5 3 current 0 7.5 19.6 current 16.3	history1 14 0 60 2 658 1877 877 1103 2920 history1 6 8 2 history1 0 11.6 25.6 history1 21.1	history2 5 0 65 4 704 1790 873 1089 2481 history2 11 12 7 history2 0 13.5 28.8 history2 24.9



Base

13 Abnorm 12

11

Sep26/23

Nov17/23

OIL ANALYSIS REPORT



Jan 15/24

Mav14/24

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	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	>0.2	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	15.4	14.6	14.7	14.4
GRAPHS						

Ferrous Alloys 40 35 30 25





Unique Number : 11048210 Diagnosed : 29 May 2024 - Angela Borella Test Package : FLEET Certificate 12367 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)

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Report Id: GFL035 [WUSCAR] 06191458 (Generated: 05/29/2024 16:56:09) Rev: 1

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