

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id

429059-402467

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 15W40 (--- 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 INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0121210	GFL0121215	GFL0118620
Sample Date		Client Info		08 Jul 2024	03 Jun 2024	15 Apr 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	0.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	5	6	11
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		1	6	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	2
Lead	ppm	ASTM D5185m	>45	0	1	2
Copper	ppm	ASTM D5185m	>85	<1	<1	0
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ouumum	ppiii	AO INI DO IOOIII		U	0	0
ADDITIVES	ppm	method	limit/base	current	history1	history2
	ppm	method	limit/base		-	-
ADDITIVES		method ASTM D5185m		current 15 0	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 15	history1 92	history2 3
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 15 0	history1 92 0	history2 3 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 15 0 50	history1 92 0 26	history2 3 0 62
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 15 0 50 0	history1 92 0 26 <1	history2 3 0 62 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 15 0 50 0 844	history1 92 0 26 <1 414 1681 1002	history2 3 0 62 0 988
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current 15 0 50 0 844 1234	history1 92 0 26 <1 414 1681 1002 1170	history2 3 0 62 0 988 1321
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	Current 15 0 50 0 844 1234 1051	history1 92 0 26 <1 414 1681 1002	history2 3 0 62 0 988 1321 1029 1341 3830
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 15 0 50 0 844 1234 1051 1284 3829 Current	history1 92 0 26 <1 414 1681 1002 1170 3719 history1	history2 3 0 62 0 988 1321 1029 1341 3830 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	0 0 60 1010 1070 1150 1270 2060	current 15 0 50 0 844 1234 1051 1284 3829 current 4	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Limit/base	current 15 0 50 0 844 1234 1051 1284 3829 current 4 2	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 3 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Limit/base	current 15 0 50 0 844 1234 1051 1284 3829 current 4	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3
ADDITIVES 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	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30	Current 15 0 50 0 844 1234 1051 1284 3829 Current 4 2 2 2 Current	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 20 limit/base	15 0 50 0 844 1234 1051 1284 3829 current 4 2 2 current 0.2	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3 history1 0.1	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2 0 history2 0 0.4
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 TS ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >30 <i>limit/base</i> >30	Current 15 0 50 0 844 1234 1051 1284 3829 current 4 2 current 0.2 6.9	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3 history1 0.1 6.9	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2 0 0.4 7.9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 20 limit/base	15 0 50 0 844 1234 1051 1284 3829 current 4 2 2 current 0.2	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3 history1 0.1	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2 0 history2 0 0.4
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 TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >30 <i>limit/base</i> >30	Current 15 0 50 0 844 1234 1051 1284 3829 current 4 2 current 0.2 6.9	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3 history1 0.1 6.9	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2 0 0.4 7.9
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 TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 imit/base >3 20	15 0 50 0 844 1234 1051 1284 3829 current 4 2 current 0.2 6.9 18.7	history1 92 0 26 <1 414 1681 1002 1170 3719 history1 6 2 3 history1 0.1 6.9 19.2	history2 3 0 62 0 988 1321 1029 1341 3830 history2 3 1 history2 0.4 7.9 19.8

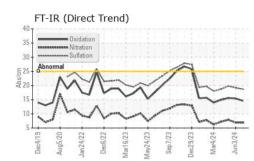


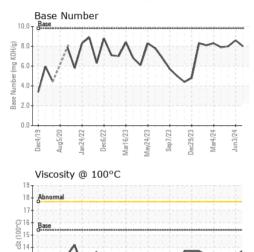
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OIL ANALYSIS REPORT





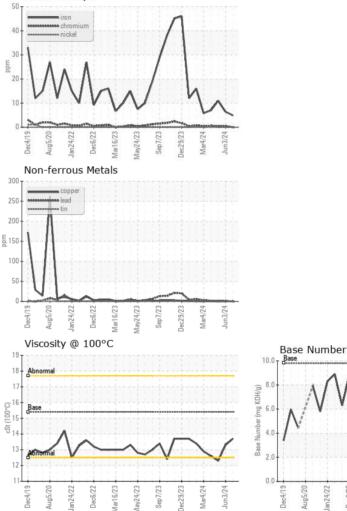
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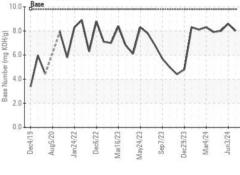
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Jun3/24

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	13.7	13.3	12.3
GRAPHS						

Ferrous Alloys





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 846 - Mayfield Hauling Sample No. : GFL0121210 Received : 18 Jul 2024 3426 State Route 45 Lab Number : 06240070 Tested : 19 Jul 2024 Mayfield, KY US 42066 Unique Number : 11128904 Diagnosed : 19 Jul 2024 - Wes Davis Test Package : FLEET Contact: Jack Lindsey Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jack.lindsey@gflenv.com T: (270)970-3690 * - 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) F:

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Contact/Location: Jack Lindsey - GFL846

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