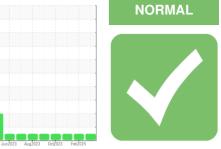


OIL ANALYSIS REPORT

SAMPLE INFORMATION meth

Sample Rating Trend



Machine Id

928012-9046

Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- LTR)

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.

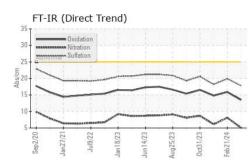
Fluid Condition

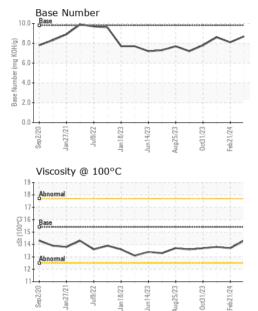
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

	VIATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0091838	GFL0101311	GFL0101320
Sample Date		Client Info		03 May 2024	21 Feb 2024	13 Jan 2024
Machine Age	hrs	Client Info		18266	17784	17454
Oil Age	hrs	Client Info		18266	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
				Normize	NOTINIA	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
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	2	10	0
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	<1	<1
Lead	ppm	ASTM D5185m	>45	0	1	0
Copper	ppm	ASTM D5185m	>85	<1	1	1
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current <1	history1 2	history2 <1
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	<1	2	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	<1 0	2 <1	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 0 55	2 <1 62	<1 0 57
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	<1 0 55 0	2 <1 62 <1	<1 0 57 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	<1 0 55 0 890	2 <1 62 <1 922	<1 0 57 <1 898
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	<1 0 55 0 890 1075	2 <1 62 <1 922 1034	<1 0 57 <1 898 975
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	0 0 60 0 1010 1070 1150	<1 0 55 0 890 1075 1061	2 <1 62 <1 922 1034 1029	<1 0 57 <1 898 975 1028
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	<1 0 55 0 890 1075 1061 1175	2 <1 62 <1 922 1034 1029 1219	<1 0 57 <1 898 975 1028 1172
Boron Barium 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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	<1 0 55 0 890 1075 1061 1175 3382	2 <1 62 <1 922 1034 1029 1219 3144	<1 0 57 <1 898 975 1028 1172 2856
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	0 0 60 0 1010 1070 1150 1270 2060	<1 0 55 0 890 1075 1061 1175 3382 current	2 <1 62 <1 922 1034 1029 1219 3144 history1	<1 0 57 <1 898 975 1028 1172 2856 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	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30	<1 0 555 0 890 1075 1061 1175 3382 current 3	2 <1 62 <1 922 1034 1029 1219 3144 history1 6	<1 0 57 <1 898 975 1028 1172 2856 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30	<1 0 55 0 890 1075 1061 1175 3382 current 3 2	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3	<1 0 57 <1 898 975 1028 1172 2856 history2 5 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30	<1 0 55 0 890 1075 1061 1175 3382 current 3 2 2	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10	<1 0 57 <1 898 975 1028 1172 2856 history2 5 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 >20 limit/base	<1 0 55 0 890 1075 1061 1175 3382 current 3 2 2 2	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10 history1	<1 0 57 <1 898 975 1028 1172 2856 bistory2 5 <1 0 bistory2 bistory2
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 >20 limit/base	<1 0 55 0 890 1075 1061 1175 3382 current 3 2 2 2 2 current 0.1	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10 history1 0.3	<1 0 57 <1 898 975 1028 1172 2856 history2 5 <1 0 history2 0.2
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 200 limit/base >30	<1 0 55 0 890 1075 1061 1175 3382 current 3 2 2 2 current 0.1 5.1	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10 history1 0.3 8.1	<1 0 57 <1 898 975 1028 1172 2856 history2 5 <10 0 history2 0.2 6.1
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 imit/base >30 imit/base >3 20	<1 0 55 0 890 1075 1061 1175 3382 Current 3 2 2 Current 0.1 5.1 17.8 Current	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10 history1 0.3 8.1 19.9 history1	<1 0 57 <1 898 975 1028 1172 2856 1172 2856 61 0 0 6.1 18.2 bistory2
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 2060 200 200 200 200 20	<1 0 55 0 890 1075 1061 1175 3382 <u>current</u> 3 2 2 2 <u>current</u> 0.1 5.1 17.8	2 <1 62 <1 922 1034 1029 1219 3144 history1 6 3 10 history1 0.3 8.1 19.9	<1 0 57 <1 898 975 1028 1172 2856 bistory2 5 <1 0 bistory2 0.2 6.1 18.2



OIL ANALYSIS REPORT



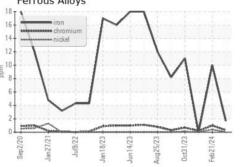


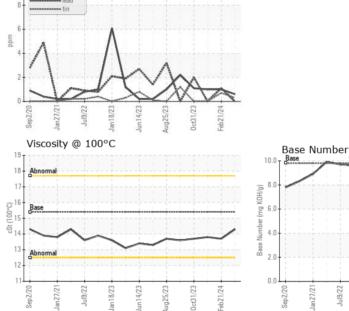
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	14.3	13.7	13.8
GRAPHS						

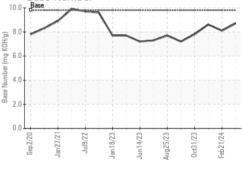
Ferrous Alloys

Non-ferrous Metals

10







Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 654 - Richmond Hauling Sample No. : GFL0091838 Received : 09 May 2024 11800 Lewis Road Lab Number : 06174875 Tested : 10 May 2024 Chester, VA US 23831 Unique Number : 11020928 Diagnosed : 10 May 2024 - Wes Davis Test Package : FLEET Contact: Jimmy Mayes Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jmayes@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: GFL654 [WUSCAR] 06174875 (Generated: 05/10/2024 15:52:59) Rev: 1

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