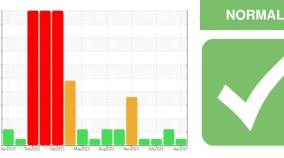


OIL ANALYSIS REPORT

Sample Rating Trend

SAMPLE INFORMATION method limit/b



Machine Id

928073-260342

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.

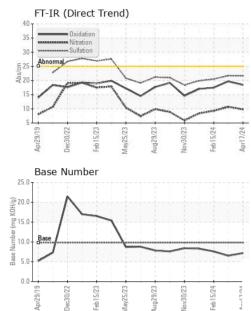
Fluid Condition

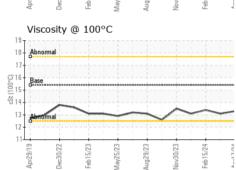
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM		methoa	iimit/base	current	nistory i	nistory2
Sample Number		Client Info		GFL0104820	GFL0104838	GFL0104948
Sample Date		Client Info		17 Apr 2024	25 Mar 2024	15 Feb 2024
Machine Age	mls	Client Info		136517	30893	30733
Oil Age	mls	Client Info		0	2809	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ATTENTION	NORMAL
-				NonimAE		-
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
	0	mathad	limit/bass	ourroat	biotorud	history ()
WEAR METAL	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	15	16	15
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	5	5
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 1	history2 0
	ppm ppm	ASTM D5185m			· · · · · ·	
Boron Barium	ppm	ASTM D5185m	0	0	1	0
Boron		ASTM D5185m ASTM D5185m	0	0 0	1 0	0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 66	1 0 62	0 0 61
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 66 0	1 0 62 <1	0 0 61 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 0 66 0 984	1 0 62 <1 892	0 0 61 <1 888
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	0 0 66 0 984 1157	1 0 62 <1 892 1010	0 0 61 <1 888 964
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	0 0 66 0 984 1157 1075	1 0 62 <1 892 1010 974	0 0 61 <1 888 964 974
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	0 0 60 1010 1070 1150 1270 2060	0 0 66 0 984 1157 1075 1348 3660	1 0 62 <1 892 1010 974 1206 3242	0 0 61 <1 888 964 974 1126 2745
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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	0 0 66 0 984 1157 1075 1348 3660 current	1 0 62 <1 892 1010 974 1206 3242 history1	0 0 61 <1 888 964 974 1126 2745 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 1010 1070 1150 1270 2060	0 0 66 0 984 1157 1075 1348 3660 current 6	1 0 62 <1 892 1010 974 1206 3242 history1 8	0 0 61 <1 888 964 974 1126 2745 history2 8
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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Limit/base	0 0 66 0 984 1157 1075 1348 3660 current 6 71	1 0 62 <1 892 1010 974 1206 3242 history1 8 90	0 0 61 <1 888 964 974 1126 2745 history2 8 76
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 >25	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2 2 current	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20 Limit/base >20	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2 2 current 0.6	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1 0.7	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2 0.5
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 20 <i>limit/base</i> >3 >20	0 0 66 0 984 1157 1075 1348 3660 <i>current</i> 6 71 2 <i>current</i> 0.6 9.8	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1 0.7 10.7	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2 0.5 9.3
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20 Limit/base >20	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2 2 current 0.6	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1 0.7	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2 0.5
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 <i>limit/base</i> >25 20 <i>limit/base</i> >3 >20	0 0 66 0 984 1157 1075 1348 3660 <i>current</i> 6 71 2 <i>current</i> 0.6 9.8	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1 0.7 10.7	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2 0.5 9.3
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 imit/base >25 imit/base >3 >20	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2 current 0.6 9.8 21.6	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 4 history1 0.7 10.7 21.7	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 history2 0.5 9.3 20.5
Boron Barium 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 ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 20 20 3 20 3 20 3 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	0 0 66 0 984 1157 1075 1348 3660 current 6 71 2 current 0.6 9.8 21.6 current	1 0 62 <1 892 1010 974 1206 3242 history1 8 90 4 history1 0.7 10.7 21.7 history1	0 0 61 <1 888 964 974 1126 2745 history2 8 76 1 1 history2 0.5 9.3 20.5 history2

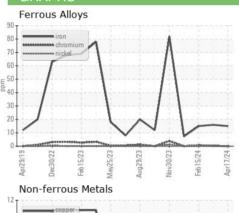


OIL ANALYSIS REPORT



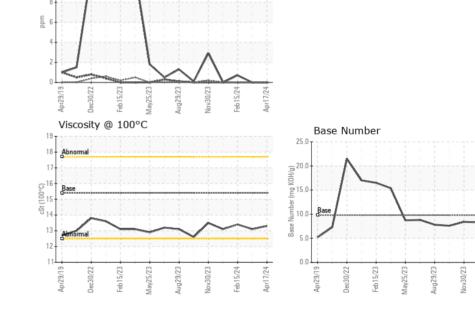


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	13.3	13.1	13.4
GRAPHS						



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lead



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 820 - Joplin Hauling Sample No. : GFL0104820 Received : 24 Apr 2024 3700 West 7th Street Lab Number : 06158732 Tested : 25 Apr 2024 Joplin, MO US 64801 Unique Number : 10994155 Diagnosed : 25 Apr 2024 - Wes Davis Test Package : FLEET Contact: James Jarrett Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jjarrett@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (417)310-2802 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: GFL820 [WUSCAR] 06158732 (Generated: 04/25/2024 11:39:58) Rev: 1

Submitted By: VINCE ASTI Page 2 of 2

Apr17/24

Feb 15/24