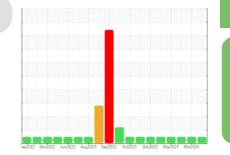


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend



NORMAL

Machine Id

223031-10

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.

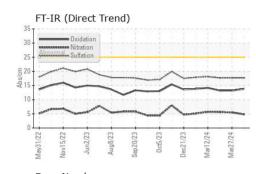
Fluid Condition

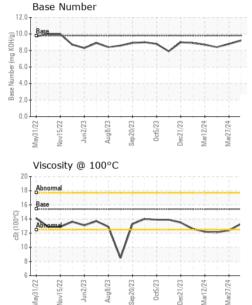
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		methou	IIIIII/Dase	Current		
Sample Number		Client Info		GFL0110625	GFL0110542	GFL0110582
Sample Date		Client Info		11 Apr 2024	27 Mar 2024	25 Mar 2024
Machine Age	hrs	Client Info		27235	45659	27127
Oil Age	hrs	Client Info		400	600	200
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
-				-		-
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<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	>100	6	14	11
Chromium	ppm		>20	<1	<1	<1
Nickel	ppm		>4	1	<1	<1
Titanium	ppm	ASTM D5185m	~ 1	<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm		>20	1	2	2
Lead	ppm	ASTM D5185m	>40	1	<1	0
Copper	ppm		>330	1	2	2
Tin	ppm		>15	1	<1	2
	DDIII	ASTIVI DUTOJITI	>10		<	2
		ACTM DE105m		-	.1	-1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Vanadium Cadmium		ASTM D5185m		<1 1	<1	0
Vanadium Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	<1 1 current	<1 history1	0 history2
Vanadium Cadmium	ppm	ASTM D5185m method ASTM D5185m	limit/base 0	<1 1 current 10	<1 history1 77	0 history2 84
Vanadium Cadmium ADDITIVES Boron Barium	ppm ppm	ASTM D5185m method ASTM D5185m		<1 1 current 10 0	<1 history1 77 0	0 history2 84 0
Vanadium Cadmium ADDITIVES Boron	ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 1 current 10	<1 history1 77 0 62	0 history2 84 0 54
Vanadium Cadmium ADDITIVES Boron Barium	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 60	<1 1 current 10 0	<1 history1 77 0 62 <1	0 history2 84 0 54 <1
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 1 current 10 0 59	<1 history1 77 0 62	0 history2 84 0 54
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	<1 1 current 10 0 59 1	<1 history1 77 0 62 <1	0 history2 84 0 54 <1
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	<1 1 current 10 0 59 1 919	<1 history1 77 0 62 <1 830	0 history2 84 0 54 <1 764
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	<1 1 10 0 59 1 919 1121	<1 history1 77 0 62 <1 830 1473	0 history2 84 0 54 <1 764 1526
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	<1 1 current 10 0 59 1 919 1121 1156	<1 history1 77 0 62 <1 830 1473 995	0 history2 84 0 54 <1 764 1526 909
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	<1 1 current 10 0 59 1 919 1121 1156 1226	<1 history1 77 0 62 <1 830 1473 995 1208	0 history2 84 0 54 <1 764 1526 909 1137
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	<1 1 current 10 0 59 1 919 1121 1156 1226 3738	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm	ASTM D5185m method 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	<1 1 current 10 0 59 1 919 1121 1156 1226 3738 current	<1 history1 77 0 62 <1 830 1473 995 1208 3126	0 history2 84 0 54 <1 764 1526 909 1137 3435
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m 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	<1 1 current 10 0 59 1 919 1121 1156 1226 3738 current 4	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Maganese Magnesium Calcium Phosphorus Zinc Calcium Phosphorus Zinc Sulfur Sulfur Sulfur	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	<1 1 current 10 0 59 1 1 919 1121 1156 1226 3738 current 4 1	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 3
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m method ASTM D5185m 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 imit/base >25 >20	<1 1 current 10 0 59 1 1 919 1121 1156 1226 3738 current 4 1 2 current	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1 5 <1 5 }	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 4 4
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 1 Current 10 0 59 1 919 1121 1156 1226 3738 Current 4 1 2 Current 0.1	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 < <1 5 < <1 5 history1 0.2	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 3 4 4 history2 0.2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >20 20	<1 1 current 10 0 59 1 1 919 1121 1156 1226 3738 current 4 1 2 current	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1 5 <1 5 }	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 4 4
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc 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	0 0 0 1010 1070 1150 1270 2060 imit/base >25 20 imit/base >3 >20 >3	<1 1 Current 10 0 59 1 919 1121 1156 1226 3738 Current 4 1 2 Current 0.1 4.8 17.7	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1 5 history1 0.2 5.5 17.7 	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 4 history2 0.2 5.6 17.7
Vanadium Cadmium 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 ppm	ASTM D5185m method ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 220 20 33 20 330 20 330	<1 1 Current 1 0 0 59 1 919 1121 1156 1226 3738 Current 4 1 2 Current 4 1 2 Current 0.1 4.8 17.7 Current	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1 5 history1 0.2 5.5 17.7 history1 	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 3 4 5.6 17.7 history2
Vanadium Cadmium 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 ppm	ASTM D5185m ASTM	0 0 0 1010 1070 1150 1270 2060 imit/base >25 20 imit/base >3 >20 >3	<1 1 Current 10 0 59 1 919 1121 1156 1226 3738 Current 4 1 2 Current 0.1 4.8 17.7	<1 history1 77 0 62 <1 830 1473 995 1208 3126 history1 5 <1 5 history1 0.2 5.5 17.7 	0 history2 84 0 54 <1 764 1526 909 1137 3435 history2 3 3 4 history2 0.2 5.6 17.7



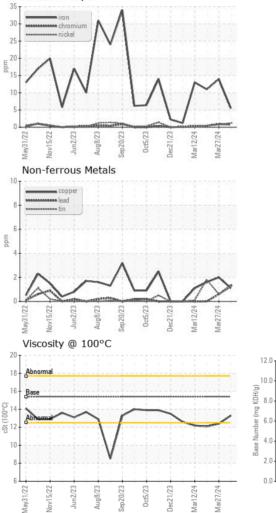
OIL ANALYSIS REPORT

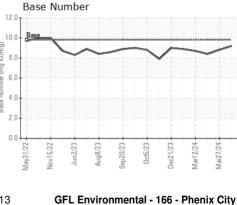




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	12.4	12.1
GRAPHS						

Ferrous Alloys





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 166 - Phenix City Sample No. : GFL0110625 Received : 18 Apr 2024 18 Old Brickyard Rd È Lab Number : 06152752 Tested : 18 Apr 2024 Phenix City, AL Unique Number : 10982830 Diagnosed : 18 Apr 2024 - Wes Davis US 36869 Test Package : FLEET Contact: DEAN PEACE JR Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dean.peace@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: GFL166 [WUSCAR] 06152752 (Generated: 04/18/2024 16:39:00) Rev: 1

Submitted By: DARRIN WRIGHT

Page 2 of 2