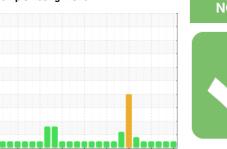


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id 9951 Component Diesel Engine Fluid

PETRO CANADA DURON XL SYN BLEND 15W40 (37 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

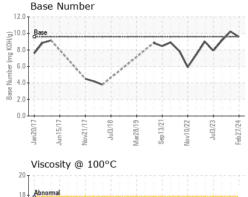
Fluid Condition

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

Client Info 27 Feb 2024 26 Dec 2023 20 Jul 2023	STR BELIED 13W40	(37 E111)	in2017 Jun20	017 Nov2017 Jul2018	Mar2019 Sep2021 Nov2022 Jul	2023 Feb 202		
Client Info 27 Feb 2024 26 Dec 2023 20 Jul 2023	SAMPLE INFOR	NOITAM	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 26846 505000 489343	Sample Number		Client Info		GFL0112418	GFL0099539	GFL0084298	
Oil Age	Sample Date		Client Info		27 Feb 2024	26 Dec 2023	20 Jul 2023	
Colient Info Changed N/A N/A N/A NORMAL NOR	Machine Age	hrs	Client Info		26846	505000	489343	
NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		476	0	0	
CONTAMINATION	Oil Changed		Client Info		Changed	d N/A N/A		
Fuel	Sample Status				NORMAL	NORMAL	NORMAL	
Water WC Method So.2 NEG NEG NEG NEG	CONTAMINAT	ΓΙΟΝ	method	limit/base	current	history1	history2	
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0	
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG	
Chromium	Glycol		WC Method		NEG	NEG	NEG	
Chromium	WEAR METAL	_S	method	limit/base	current	history1	history2	
Nickel	Iron	ppm	ASTM D5185(m)	>120	9	3	4	
Description	Chromium	ppm	ASTM D5185(m)	>20	<1	0	0	
Silver	Nickel	ppm	ASTM D5185(m)	>5	<1	0	0	
Aluminum	Titanium	ppm	ASTM D5185(m)	>2	0	0	0	
Lead	Silver	ppm	ASTM D5185(m)	>2	0	0	0	
Lead	Aluminum	ppm	ASTM D5185(m)	>20	2	2	1	
Copper	Lead				<1	<1	<1	
Trin	Copper		ASTM D5185(m)	>330	<1	<1	<1	
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 1 2 3 2 Barium ppm ASTM D5185(m) 1 0 0 0 Molybdenum ppm ASTM D5185(m) 1 0 0 0 Manganese ppm ASTM D5185(m) 1010 900 908 928 Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705			, ,		0	0	0	
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 1 2 3 2 Barium ppm ASTM D5185(m) 1 0 0 0 Molybdenum ppm ASTM D5185(m) 1 0 0 0 Manganese ppm ASTM D5185(m) 1010 900 908 928 Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705	Antimony	ppm	ASTM D5185(m)		0	0	0	
Description	Vanadium				0	0	0	
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 1 2 3 2 Barium ppm ASTM D5185(m) 1 0 0 0 Molybdenum ppm ASTM D5185(m) 60 55 55 55 Manganese ppm ASTM D5185(m) 100 0 <1	Beryllium		ASTM D5185(m)		0	0	0	
Boron	Cadmium	ppm	ASTM D5185(m)		0	0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2	
Barium	Boron	ppm	ASTM D5185(m)	1	2	3	2	
Manganese ppm ASTM D5185(m) 1 0 0 <1 Magnesium ppm ASTM D5185(m) 1010 900 908 928 Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) 20 <1	Barium		ASTM D5185(m)	1	0	0	0	
Magnesium ppm ASTM D5185(m) 1010 900 908 928 Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) <1	Molybdenum	ppm	ASTM D5185(m)	60	55	55	55	
Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)	1	0	0	<1	
Calcium ppm ASTM D5185(m) 1070 1028 1026 990 Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) <1	-	ppm	ASTM D5185(m)	1010	900	908	928	
Phosphorus ppm ASTM D5185(m) 1150 976 970 1025 Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 6 7 5 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Calcium	ppm	ASTM D5185(m)	1070	1028	1026	990	
Zinc ppm ASTM D5185(m) 1270 1129 1137 1136 Sulfur ppm ASTM D5185(m) 2060 2603 2705 2547 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 6 7 5 Sodium ppm ASTM D5185(m) 3 2 3 Potassium ppm ASTM D5185(m) >20 <1	Phosphorus		ASTM D5185(m)	1150		970	1025	
Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 6 7 5 Sodium ppm ASTM D5185(m) 3 2 3 Potassium ppm ASTM D5185(m) >20 <1	Zinc		ASTM D5185(m)	1270	1129	1137	1136	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 6 7 5 Sodium ppm ASTM D5185(m) 3 2 3 Potassium ppm ASTM D5185(m) >20 <1	Sulfur	ppm	ASTM D5185(m)	2060	2603	2705	2547	
Silicon ppm ASTM D5185(m) >25 6 7 5 Sodium ppm ASTM D5185(m) 3 2 3 Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Lithium	ppm	ASTM D5185(m)		<1	<1	<1	
Sodium ppm ASTM D5185(m) 3 2 3 Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	CONTAMINA	NTS	method	limit/base	current	history1	history2	
Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Silicon	ppm	ASTM D5185(m)	>25	6	7	5	
INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Sodium	ppm	ASTM D5185(m)		3	2	3	
Soot % % ASTM D7844* >4 0.5 0 0.2 Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0	
Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	INFRA-RED		method	limit/base	current	history1	history2	
Nitration Abs/cm ASTM D7624* >20 7.7 4.8 5.9	Soot %	%	ASTM D7844*	>4	0.5	0	0.2	
	Nitration	Abs/cm		>20		4.8	5.9	
	Sulfation							

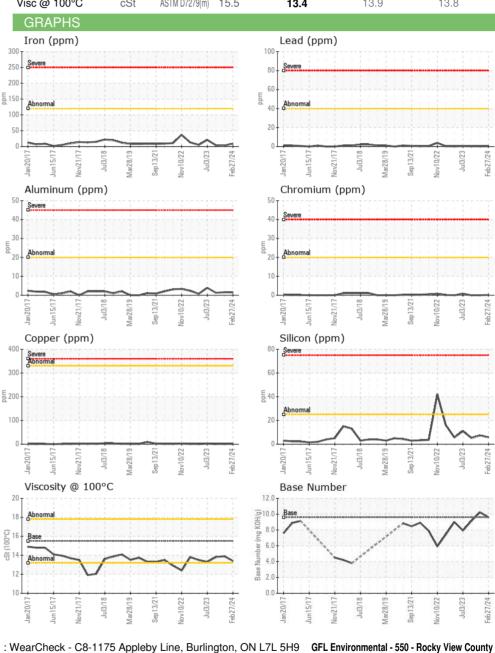


OIL ANALYSIS REPORT





Viso	cosity	@ 10	0°C					
18 Abno	ormal							
(2) 16 - Base (3) 14 - Abno	444	444		444	-			
Abno	ormal	$\overline{}$	1	~		1	_	
12								
Jan20/17	Jun15/17 -	Nov21/17 -	Jul3/18 -	Mar28/19 -	Sep13/21-	Nov10/22	Jul3/23 -	Lat 27 70 A





CALA ISO 17025:2017 Accredited

Laboratory Sample No.

Lab Number : 02619530 Unique Number : 5736640

: GFL0112418

Test Package : MOB 2

Received : 04 Mar 2024 **Tested** : 05 Mar 2024

Diagnosed

: 05 Mar 2024 - Kevin Marson

220 Carmek Blvd Rocky View County, AB **CA T1X 1X1**

Contact: GFL Calgary calgarymaintenance@gflenv.com T:

F: (403)369-6163

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

Submitted By: GFL Calgary