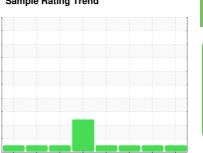


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 344M Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

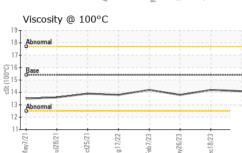
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

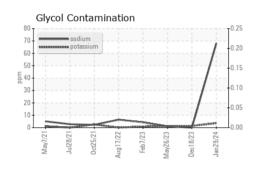
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0108707	GFL0105727	GFL0081384
Sample Date		Client Info		29 Jan 2024	18 Dec 2023	26 May 2023
Machine Age	hrs	Client Info		25477	25476	25169
Oil Age	hrs	Client Info		25169	25169	24563
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAD METAL	0					
WEAR METAL		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	46	8	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	11	2	2
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm	ASTM D5185m	>330	6	11	3
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVEC		us sales sal	limit/base	ourront.	history1	history2
ADDITIVES		method	iiiiii/base	current	HISTORY	ilistoi y Z
Boron	ppm	ASTM D5185m	0	6	16	3
	ppm				•	
Boron		ASTM D5185m	0	6	16	3
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	6 0	16	3
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	6 0 54	16 0 59	3 0 62
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	6 0 54 <1	16 0 59	3 0 62 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	6 0 54 <1 923	16 0 59 0 864	3 0 62 <1 888
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	6 0 54 <1 923 976	16 0 59 0 864 972	3 0 62 <1 888 1086
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	6 0 54 <1 923 976 1006	16 0 59 0 864 972 865	3 0 62 <1 888 1086 1018
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 ASTM D5185m	0 0 60 0 1010 1070 1150	6 0 54 <1 923 976 1006	16 0 59 0 864 972 865 1105	3 0 62 <1 888 1086 1018
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 0 1010 1070 1150 1270 2060	6 0 54 <1 923 976 1006 1177 2888	16 0 59 0 864 972 865 1105 2884	3 0 62 <1 888 1086 1018 1238 3319
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 0 54 <1 923 976 1006 1177 2888	16 0 59 0 864 972 865 1105 2884 history1	3 0 62 <1 888 1086 1018 1238 3319 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 0 54 <1 923 976 1006 1177 2888 current	16 0 59 0 864 972 865 1105 2884 history1	3 0 62 <1 888 1086 1018 1238 3319 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	6 0 54 <1 923 976 1006 1177 2888 current	16 0 59 0 864 972 865 1105 2884 history1 8	3 0 62 <1 888 1086 1018 1238 3319 history2
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	0 0 60 0 1010 1070 1150 1270 2060 limit/base	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4	16 0 59 0 864 972 865 1105 2884 history1 8 0	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG current 0.5	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG history1	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1 NEG history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1 NEG
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG current 0.5 8.5 19.8	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG history1 0.2 5.0 18.1	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1 NEG history2 0.5 7.6 19.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG current 0.5 8.5 19.8 current	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG history1 0.2 5.0 18.1 history1	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1 NEG history2 0.5 7.6 19.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20	6 0 54 <1 923 976 1006 1177 2888 current 15 68 4 NEG current 0.5 8.5 19.8	16 0 59 0 864 972 865 1105 2884 history1 8 0 1 NEG history1 0.2 5.0 18.1	3 0 62 <1 888 1086 1018 1238 3319 history2 5 1 1 NEG history2 0.5 7.6 19.3



OIL ANALYSIS REPORT



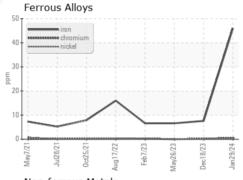


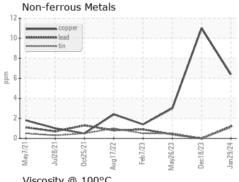


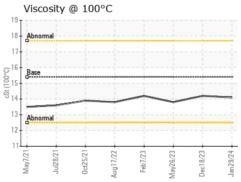
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

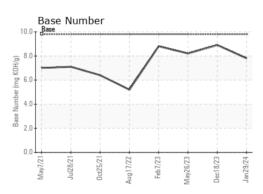
FLUID PROPE	:RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.2	13.8

GRAPHS













Laboratory Sample No. Lab Number **Unique Number**

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0108707 : 06075450

Recieved Diagnosed

: 31 Jan 2024 : 02 Feb 2024 Diagnostician : Jonathan Hester

: 10857541 Test Package : FLEET (Additional Tests: GLYCOL) To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

GFL Environmental - 415 - Michigan East

6200 Elmridge Sterling Heights, MI US 48313 Contact: Frank Wolak fwolak@gflenv.com T: (586)825-9514

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Frank Wolak