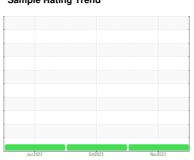


OIL ANALYSIS REPORT

Sample Rating Trend









544M 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

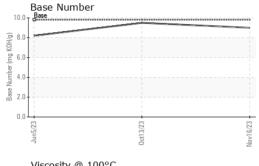
Fluid Condition

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

			2023	Oct2023 Nov20		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0101571	GFL0089138	GFL0069842
Sample Date		Client Info		16 Nov 2023	13 Oct 2023	05 Jun 2023
Machine Age	hrs	Client Info		20500	20226	19330
Oil Age	hrs	Client Info		20500	2400	600
Oil Changed		Client Info		Changed	Changed	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
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	20	18	52
Chromium	ppm	ASTM D5185m	>20	1	1	2
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	4	4
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	1	1
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m	60	64	56	55
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	1010	968	836	878
Calcium						0/0
	mag	ASTM D5185m	1070			
Phosphorus	ppm	ASTM D5185m ASTM D5185m	1070 1150	1121	981	1032
Phosphorus Zinc	ppm	ASTM D5185m	1150	1121 1086	981 936	1032 919
Phosphorus Zinc Sulfur				1121	981	1032
Zinc	ppm ppm	ASTM D5185m ASTM D5185m	1150 1270	1121 1086 1263	981 936 1154	1032 919 1152
Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060	1121 1086 1263 3217	981 936 1154 3067	1032 919 1152 3328
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1150 1270 2060 limit/base	1121 1086 1263 3217 current	981 936 1154 3067 history1	1032 919 1152 3328 history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base	1121 1086 1263 3217 current	981 936 1154 3067 history1	1032 919 1152 3328 history2
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25	1121 1086 1263 3217 current 6	981 936 1154 3067 history1 5	1032 919 1152 3328 history2 4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base >25 >20 limit/base	1121 1086 1263 3217 current 6 3 4	981 936 1154 3067 history1 5 5 4	1032 919 1152 3328 history2 4 3 12
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m	1150 1270 2060 limit/base >25 >20 limit/base >6	1121 1086 1263 3217 current 6 3 4 current 0.8	981 936 1154 3067 history1 5 5 4 history1 0.8	1032 919 1152 3328 history2 4 3 12 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	1150 1270 2060 limit/base >25 >20 limit/base >6 >20	1121 1086 1263 3217 current 6 3 4 current 0.8 8.5	981 936 1154 3067 history1 5 5 4 history1 0.8 8.2	1032 919 1152 3328 history2 4 3 12 history2 2 13.4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30	1121 1086 1263 3217 current 6 3 4 current 0.8 8.5 19.8	981 936 1154 3067 history1 5 5 4 history1 0.8 8.2 19.7	1032 919 1152 3328 history2 4 3 12 history2 2 13.4 24.8
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7624 *ASTM D7415 method	1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30 limit/base	1121 1086 1263 3217 current 6 3 4 current 0.8 8.5 19.8	981 936 1154 3067 history1 5 5 4 history1 0.8 8.2 19.7 history1	1032 919 1152 3328 history2 4 3 12 history2 2 13.4 24.8
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30	1121 1086 1263 3217 current 6 3 4 current 0.8 8.5 19.8	981 936 1154 3067 history1 5 5 4 history1 0.8 8.2 19.7	1032 919 1152 3328 history2 4 3 12 history2 2 13.4 24.8



OIL ANALYSIS REPORT

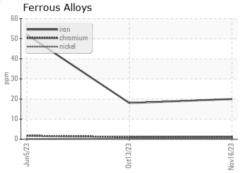


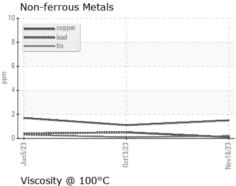
Viscosity @ 100°C	
18 - Abnormal	
17-	
Base	
5016 Base 0015	
13 Abnormal	
12 -	
1111	m
Jun5/23	0ct13/23

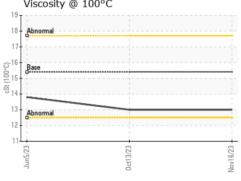
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

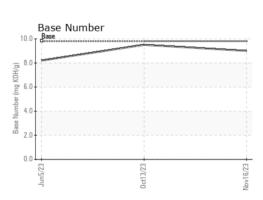
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.0	13.8

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10750970 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0101571 : 06011826

Received : 20 Nov 2023 Diagnosed : 21 Nov 2023 Diagnostician : Wes Davis

GFL Environmental - 415 - Michigan East

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

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.

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