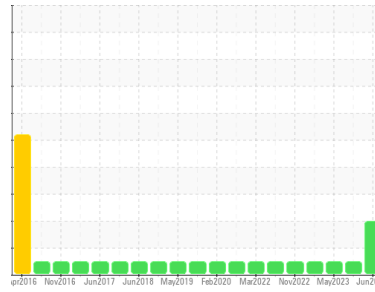




OIL ANALYSIS REPORT

Sample Rating Trend



Area
(YA130663)

Machine Id
2633

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (12 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0094485	GFL0058817	GFL0058812
Sample Date	Client Info		04 Jun 2024	26 May 2023	05 May 2023
Machine Age	hrs	Client Info	15514	8775	8775
Oil Age	hrs	Client Info	600	8775	8775
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>165	17	12	32
Chromium	ppm	ASTM D5185m	>5	<1	1	2
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	4	2	<1
Lead	ppm	ASTM D5185m	>150	<1	<1	3
Copper	ppm	ASTM D5185m	>90	2	0	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	2
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	8	10	10
Barium	ppm	ASTM D5185m	0	2	0	0
Molybdenum	ppm	ASTM D5185m	60	60	59	66
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	868	951	974
Calcium	ppm	ASTM D5185m	1070	1150	1181	1151
Phosphorus	ppm	ASTM D5185m	1150	959	1087	1068
Zinc	ppm	ASTM D5185m	1270	1240	1354	1314
Sulfur	ppm	ASTM D5185m	2060	3331	3510	3652

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>35	▲ 41	8	13
Sodium	ppm	ASTM D5185m		4	4	6
Potassium	ppm	ASTM D5185m	>20	3	3	3
Fuel	%	ASTM D3524	>3.0	0.5	<1.0	<1.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>7.5	0.1	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	4.8	8.9	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.8	20.2	23.3

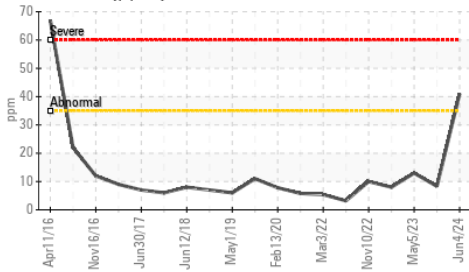
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	17.2	22.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.3	8.2	5.7

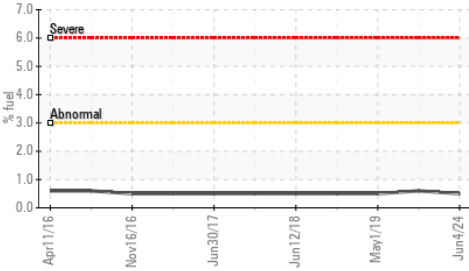


OIL ANALYSIS REPORT

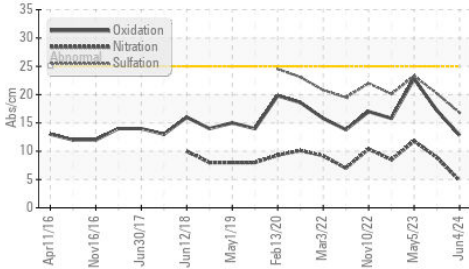
▲ Silicon (ppm)



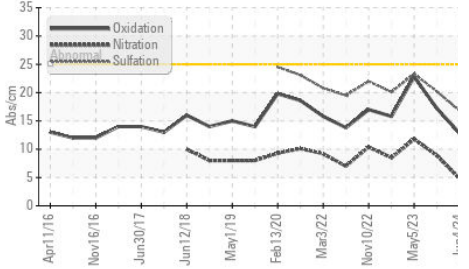
▲ Fuel Dilution



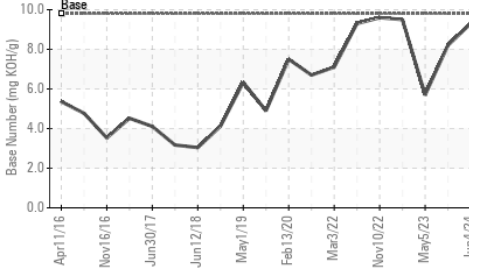
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

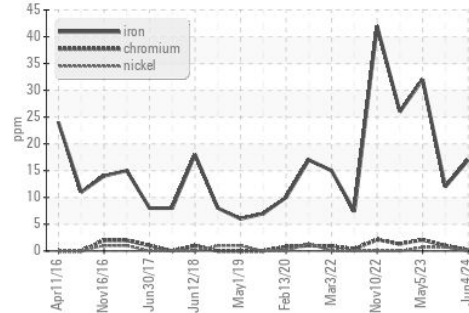


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

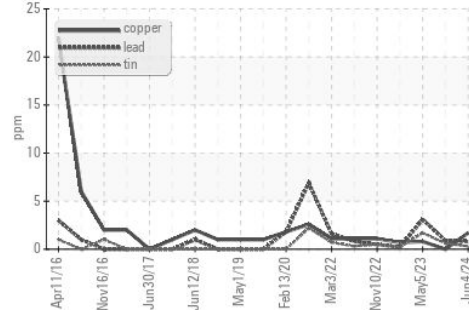
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	● 11.8	13.9

GRAPHS

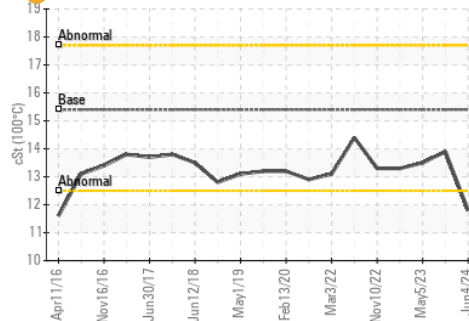
Ferrous Alloys



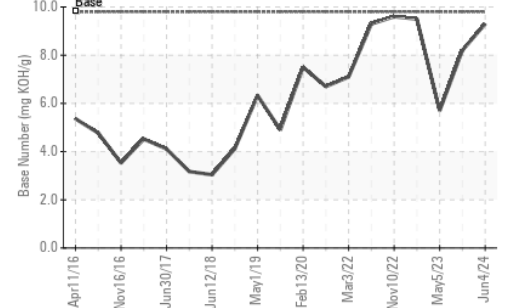
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0094485

Lab Number : 06201319

Unique Number : 11063442

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

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