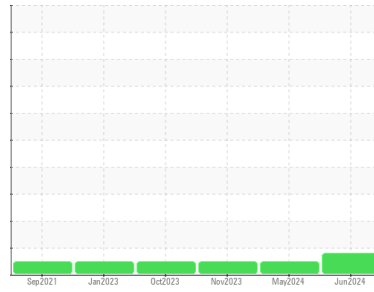




OIL ANALYSIS REPORT

Sample Rating Trend



SOOT



Area
(PG4339)
 Machine Id
960T
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done.

Wear

All component wear rates are normal.

Contamination

Light concentration of carbon/soot present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0077465	GFL0077446	GFL0083072
Sample Date	Client Info	27 Jun 2024	21 May 2024	02 Nov 2023
Machine Age	hrs	Client Info	4877	0
Oil Age	hrs	Client Info	4877	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>80	27	49	29
Chromium	ppm	ASTM D5185m	>5	0	4	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	29	8
Lead	ppm	ASTM D5185m	>30	<1	<1	14
Copper	ppm	ASTM D5185m	>150	1	7	1
Tin	ppm	ASTM D5185m	>5	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	6	4	17
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	63	61	66
Manganese	ppm	ASTM D5185m	0	<1	1	<1
Magnesium	ppm	ASTM D5185m	1010	966	899	554
Calcium	ppm	ASTM D5185m	1070	1050	1045	1623
Phosphorus	ppm	ASTM D5185m	1150	1044	970	997
Zinc	ppm	ASTM D5185m	1270	1260	1203	1304
Sulfur	ppm	ASTM D5185m	2060	3384	2719	2929

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>20	8	7	11
Sodium	ppm	ASTM D5185m		2	6	1
Potassium	ppm	ASTM D5185m	>20	<1	19	0
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	▲ 3.1	0.9	1.1
Nitration	Abs/cm	*ASTM D7624	>20	12.2	11.3	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.9	24.0	26.6

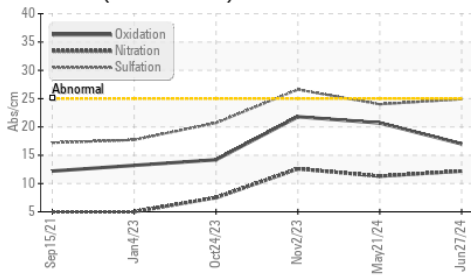
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	20.7	21.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.8	5.2	6.9

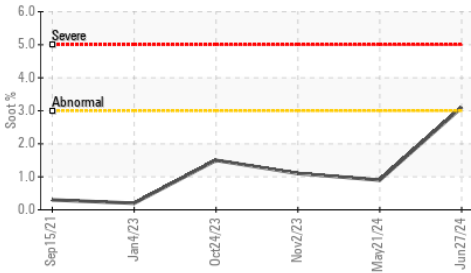


OIL ANALYSIS REPORT

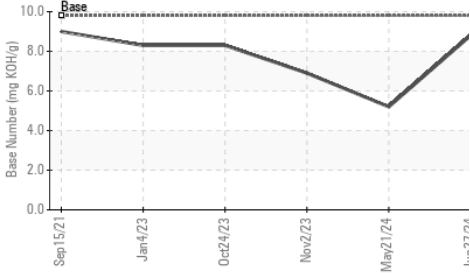
▲ FT-IR (Direct Trend)



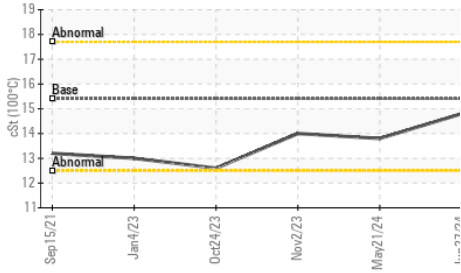
▲ Soot %



Base Number



Viscosity @ 100°C

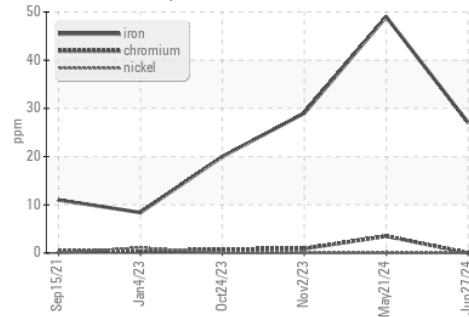


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

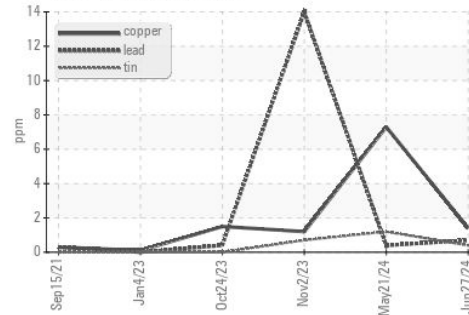
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	13.8

GRAPHS

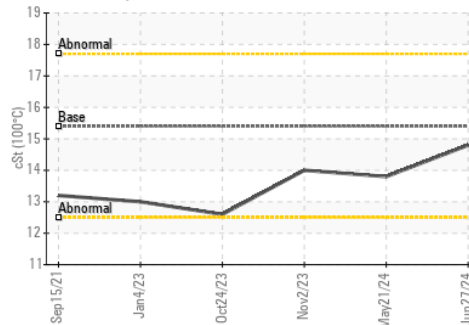
Ferrous Alloys



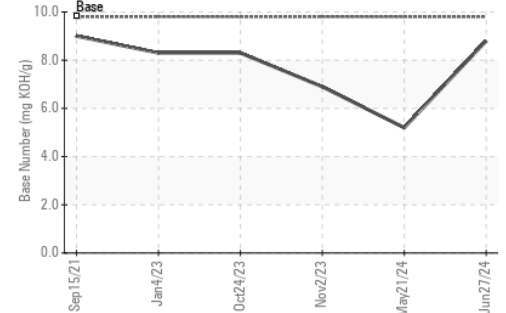
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0077465

Lab Number : 06228274

Unique Number : 11111767

Test Package : FLEET (Additional Tests : FuelDilution)

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)

Received : 05 Jul 2024

Tested : 08 Jul 2024

Diagnosed : 08 Jul 2024 - Wes Davis

GFL Environmental - 072 - Americus - Transwaste

361 McMath Mill Road

Americus, GA

US 31719

Contact: RICHARD HEINZERLING

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