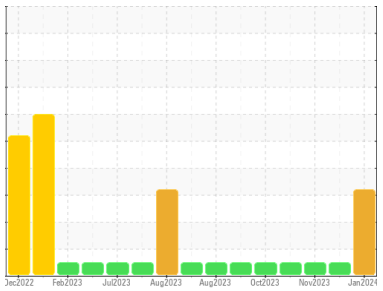
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
429052-402457
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0103506**	GFL0094778	GFL0094796
Sample Date		Client Info		**03 Jan 2024**	14 Dec 2023	21 Nov 2023
Machine Age	hrs	Client Info		**11691**	11567	11436
Oil Age	hrs	Client Info		**517**	393	262
Oil Changed		Client Info		**N/A**	Not Changd	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
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	>110	**55**	27	7
Chromium	ppm	ASTM D5185m	>4	▲ **9**	4	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ **7**	5	1
Lead	ppm	ASTM D5185m	>45	**3**	<1	<1
Copper	ppm	ASTM D5185m	>85	**3**	2	1
Tin	ppm	ASTM D5185m	>4	**1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**11**	11	13
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**95**	87	87
Manganese	ppm	ASTM D5185m	0	**1**	<1	0
Magnesium	ppm	ASTM D5185m	1010	**981**	904	935
Calcium	ppm	ASTM D5185m	1070	**1145**	1075	1137
Phosphorus	ppm	ASTM D5185m	1150	**908**	1041	1070
Zinc	ppm	ASTM D5185m	1270	**1304**	1218	1243
Sulfur	ppm	ASTM D5185m	2060	**2789**	3411	3063

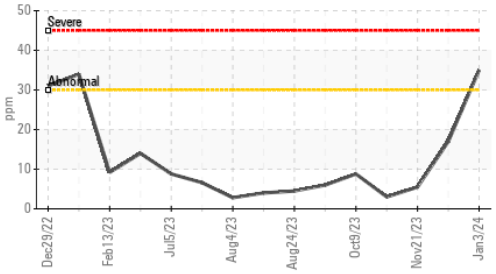
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	▲ **35**	17	6
Sodium	ppm	ASTM D5185m		**2**	4	4
Potassium	ppm	ASTM D5185m	>20	**13**	11	9

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**10.4**	9.3	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.7**	20.8	19.8

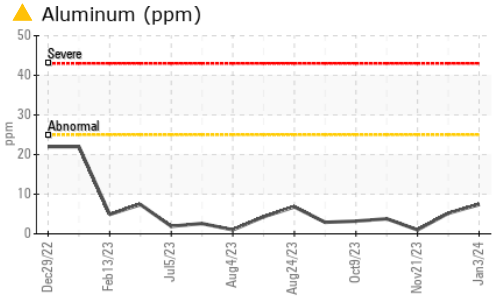
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.9**	17.3	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.8**	7.2	7.8

OIL ANALYSIS REPORT

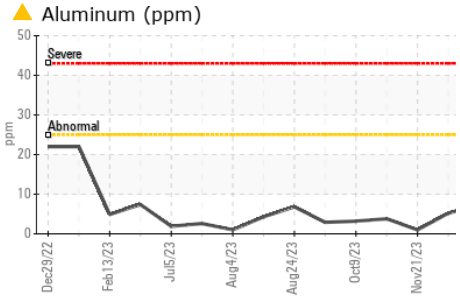
Silicon (ppm)



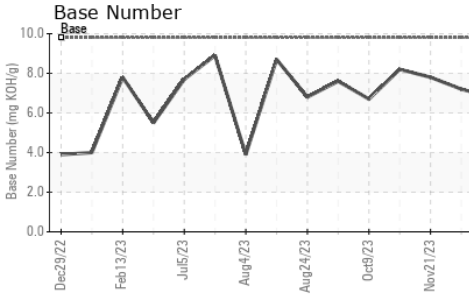
Aluminum (ppm)



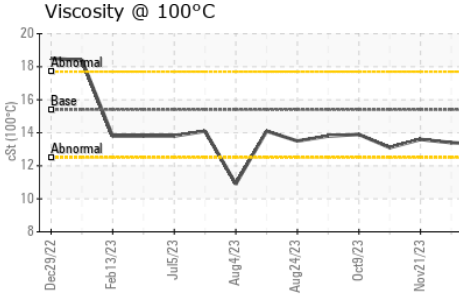
Aluminum (ppm)



Base Number



Viscosity @ 100°C

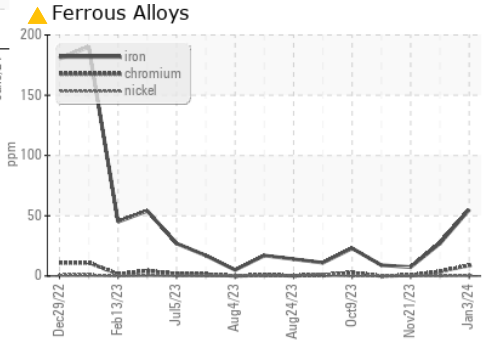


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

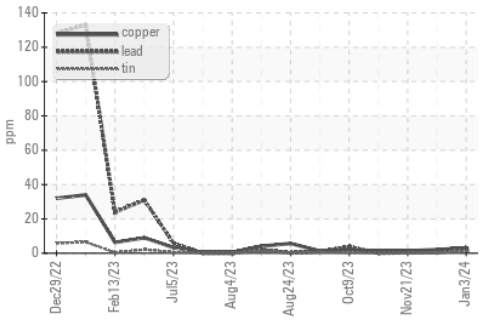
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.3**	13.4	13.6

GRAPHS

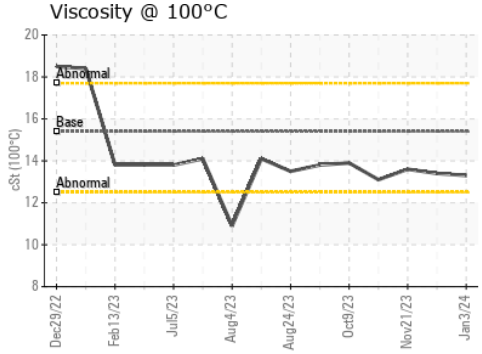
Ferrous Alloys



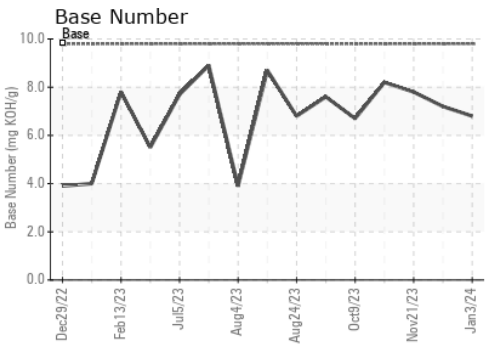
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103506
Lab Number : 06055143
Unique Number : 10821092
Test Package : FLEET

Recieved : 09 Jan 2024
Diagnosed : 10 Jan 2024
Diagnostician : Jonathan Hester

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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