FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
427087-402443
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

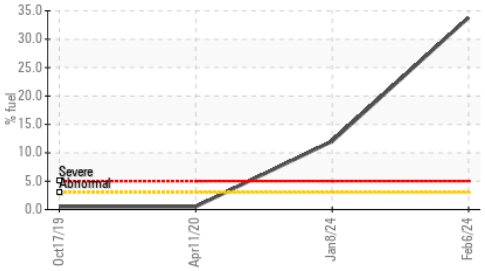
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

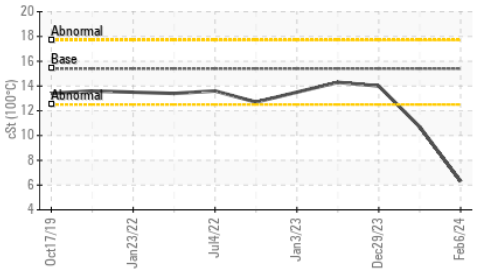
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0103996**	GFL0100552	GFL0103951
Sample Date		Client Info		**06 Feb 2024**	08 Jan 2024	29 Dec 2023
Machine Age	hrs	Client Info		**18460**	18356	328962
Oil Age	hrs	Client Info		**0**	18356	328962
Filter Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Filter Changed		Client Info		**Changed**	Not Changd	Changed
Sample Status				**SEVERE**	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>120	**2**	5	19
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>5	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**1**	4	4
Lead	ppm	ASTM D5185m	>40	**0**	<1	8
Copper	ppm	ASTM D5185m	>330	**<1**	12	51
Tin	ppm	ASTM D5185m	>15	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**3**	7	15
Potassium	ppm	ASTM D5185m	>20	**6**	23	▲ 166
Fuel	%	ASTM D3524	>3.0	⬢ **33.8**	⬢ 12.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>4	**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.2**	5.1	5.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**15.2**	17.6	20.1
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
Sodium	ppm	ASTM D5185m		**1**	19	▲ 118
Boron	ppm	ASTM D5185m	0	**4**	34	240
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**28**	55	100
Manganese	ppm	ASTM D5185m	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**452**	723	366
Calcium	ppm	ASTM D5185m	1070	**951**	1056	963
Phosphorus	ppm	ASTM D5185m	1150	**680**	940	1009
Zinc	ppm	ASTM D5185m	1270	**829**	1105	1209
Sulfur	ppm	ASTM D5185m	2060	**2178**	2866	3330
Oxidation	Abs/.1mm	*ASTM D7414	>25	**10.1**	13.2	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**7.9**	8.3	11.8
Visc @ 100°C	cSt	ASTM D445	15.4	⬢ **6.3**	▲ 10.7	14.0

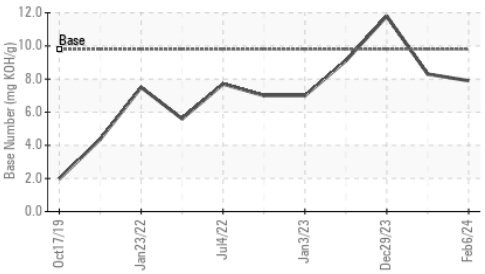
Fuel Dilution



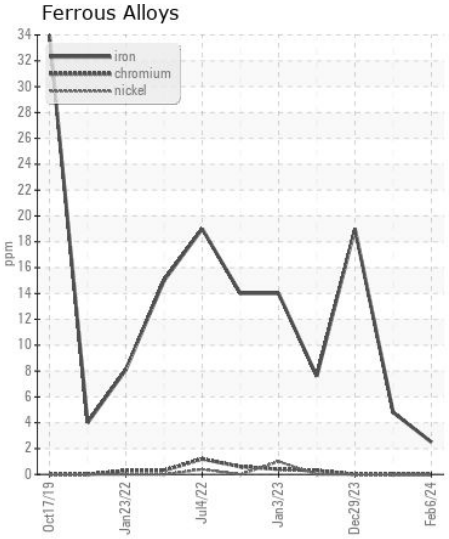
Viscosity @ 100°C



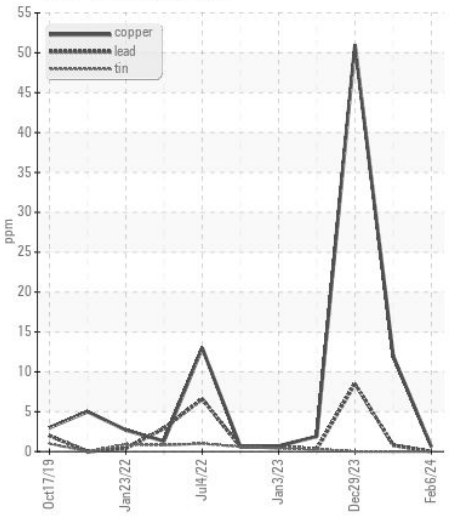
Base Number



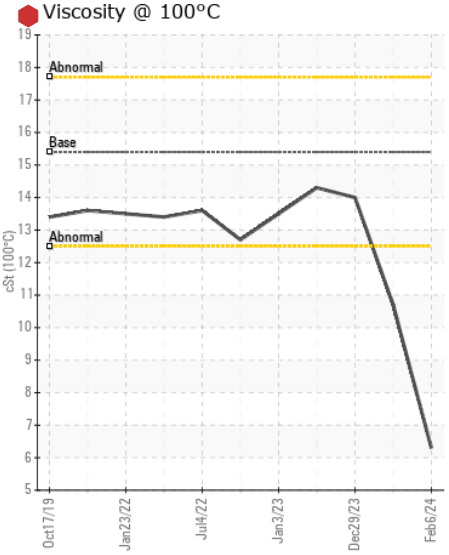
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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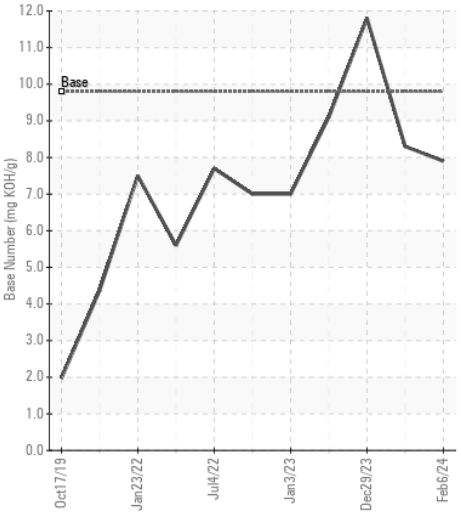

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103996
Lab Number : 06085606
Unique Number : 10873051
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 12 Feb 2024
Tested : 14 Feb 2024
Diagnosed : 14 Feb 2024 - Wes Davis

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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Report Id: GFL865 [WUSCAR] 06085606 (Generated: 02/14/2024 15:28:53) Rev: 1

Submitted By: TECHNICIAN ACCOUNT