FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
(YA163865)
Machine Id
711038
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (5 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

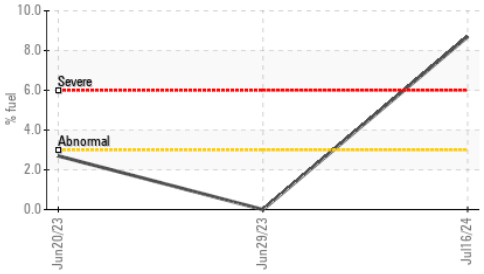
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

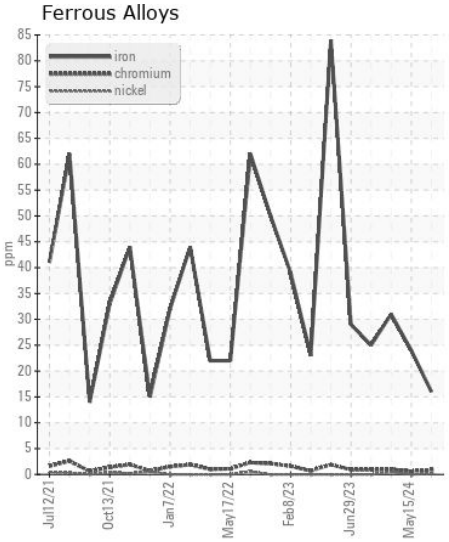
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0125716**	GFL0118413	GFL0088506
Sample Date		Client Info		**16 Jul 2024**	15 May 2024	19 Feb 2024
Machine Age	hrs	Client Info		**652**	652	652
Oil Age	hrs	Client Info		**130**	430	599
Filter Age	hrs	Client Info		**0**	0	599
Oil Changed		Client Info		**N/A**	N/A	Changed
Filter Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>90	**16**	24	31
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**4**	2	4
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**7**	2	3
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**4**	3	4
Potassium	ppm	ASTM D5185m	>20	**6**	4	9
Fuel	%	ASTM D3524	>3.0	▲ **8.7**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>6	**0.5**	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**9.9**	9.7	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.8**	20.3	21.1
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		**8**	6	7
Boron	ppm	ASTM D5185m		**5**	0	3
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**52**	59	56
Manganese	ppm	ASTM D5185m		**2**	<1	<1
Magnesium	ppm	ASTM D5185m		**829**	935	888
Calcium	ppm	ASTM D5185m		**944**	1058	1002
Phosphorus	ppm	ASTM D5185m		**939**	1014	1011
Zinc	ppm	ASTM D5185m		**1136**	1250	1211
Sulfur	ppm	ASTM D5185m		**3137**	3248	2721
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.5**	17.5	18.6
Base Number (BN)	mg KOH/g	ASTM D2896		**8.2**	7.7	6.9
Visc @ 100°C	cSt	ASTM D445		▲ **12.4**	13.9	13.4

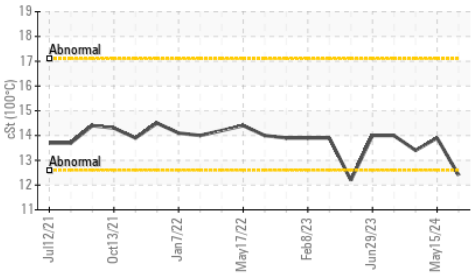
Fuel Dilution



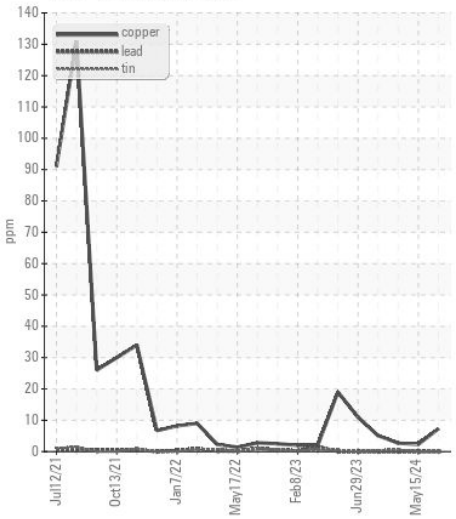
Ferrous Alloys



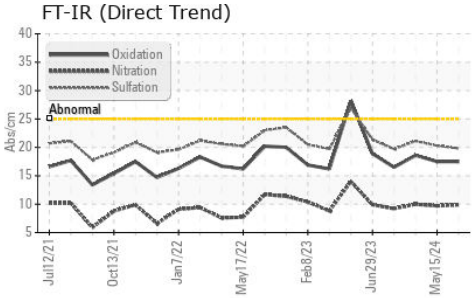
Viscosity @ 100°C



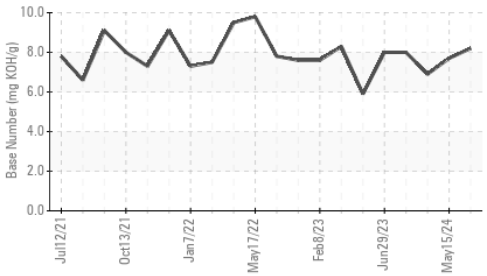
Non-ferrous Metals



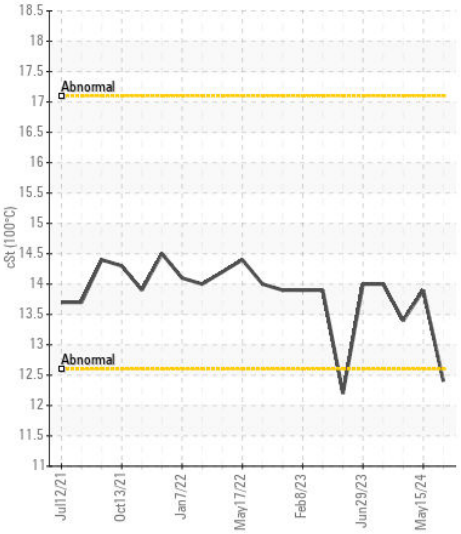
FT-IR (Direct Trend)



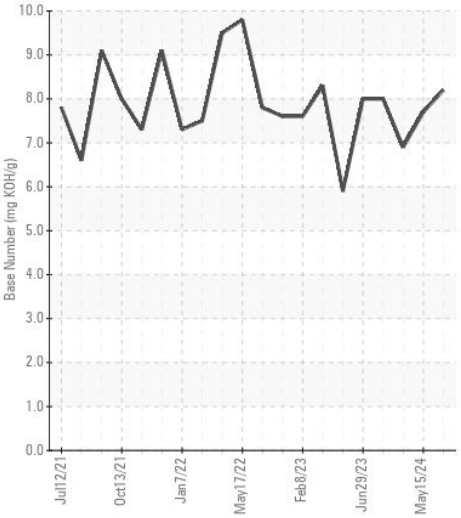
Base Number



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125716
Lab Number : 06238775
Unique Number : 11127609
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 18 Jul 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)

GFL Environmental - 017 - Durham
148 Stone Park Court
Durham, NC
US 27703
Contact:
bill.waring@wearcheck.com
T: (919)596-1363
F: (919)598-1852