FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
(83J3TW)
Machine Id
229035-632119
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

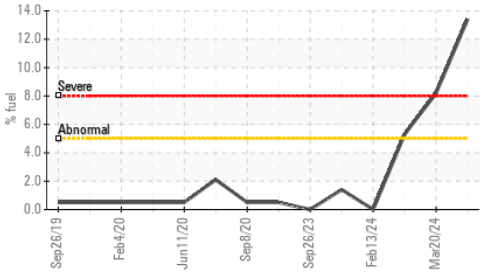
There is a high amount of fuel present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

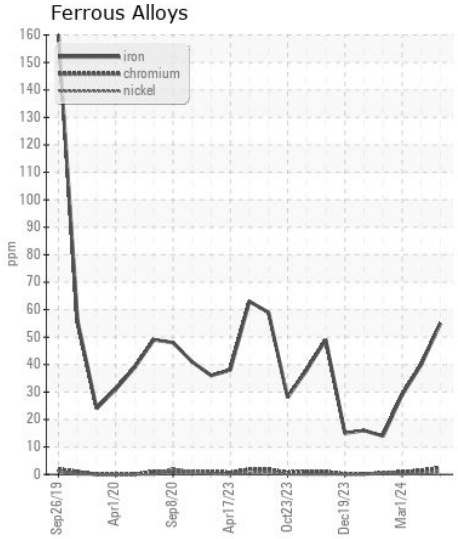
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118760	GFL0114114	GFL0108052
Sample Date		Client Info		16 Apr 2024	20 Mar 2024	01 Mar 2024
Machine Age	hrs	Client Info		10793	10617	10483
Oil Age	hrs	Client Info		10392	10350	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	55	40	29
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	1	<1	0
Titanium	ppm	ASTM D5185m		1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	4	4
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	80	57	14
Tin	ppm	ASTM D5185m	>15	2	<1	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 37	▲ 34	▲ 37
Potassium	ppm	ASTM D5185m	>20	9	5	5
Fuel	%	ASTM D3524	>5	▲ 13.4	▲ 8.2	▲ 5.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.6	9.3	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	20.8	20.0
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		2	3	3
Boron	ppm	ASTM D5185m	0	8	8	11
Barium	ppm	ASTM D5185m	0	13	14	13
Molybdenum	ppm	ASTM D5185m	60	46	47	48
Manganese	ppm	ASTM D5185m	0	5	4	4
Magnesium	ppm	ASTM D5185m	1010	638	761	753
Calcium	ppm	ASTM D5185m	1070	1163	1339	1245
Phosphorus	ppm	ASTM D5185m	1150	890	866	949
Zinc	ppm	ASTM D5185m	1270	1037	1170	1120
Sulfur	ppm	ASTM D5185m	2060	2636	3199	3238
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	17.8	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.1	8.1	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9.4	▲ 10.4	▲ 11.0

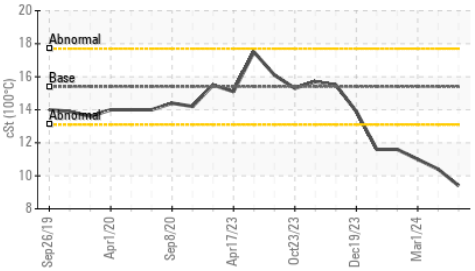
Fuel Dilution



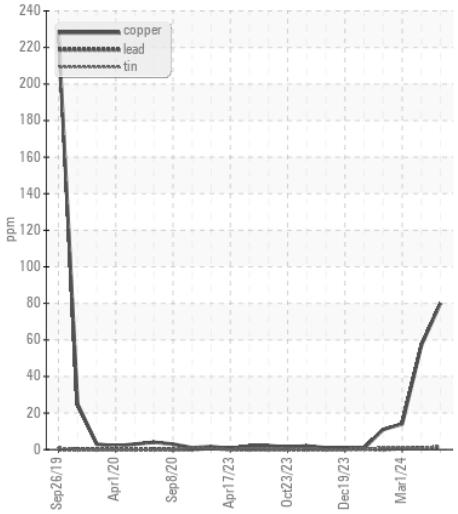
Ferrous Alloys



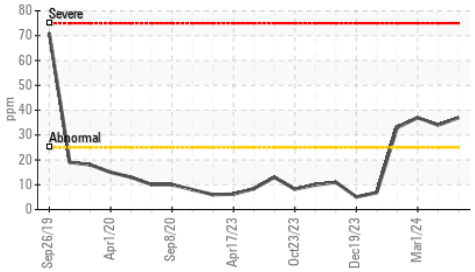
Viscosity @ 100°C



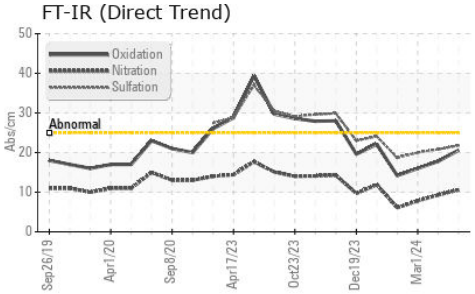
Non-ferrous Metals



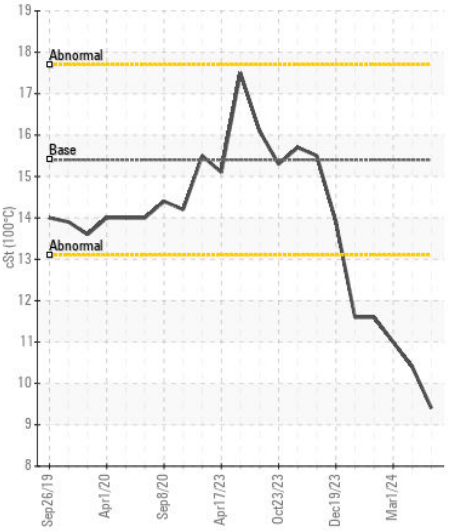
Silicon (ppm)



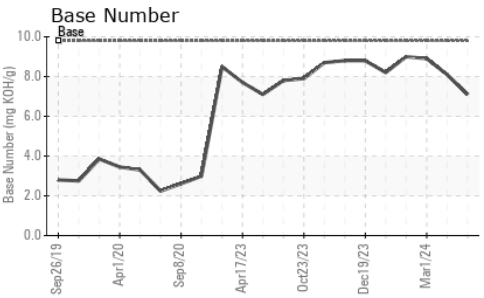
FT-IR (Direct Trend)



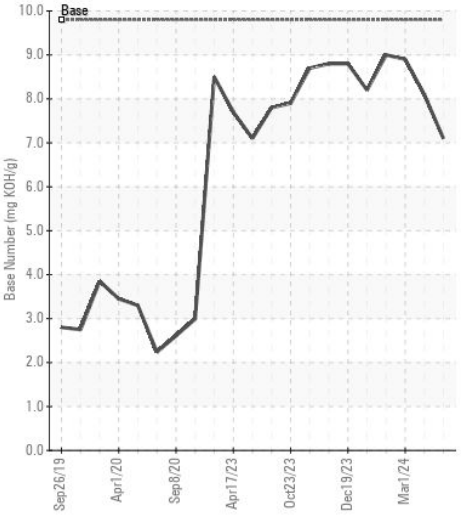
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: GFL0118760	**Received**	: 22 Apr 2024
Lab Number	: 06156770	**Tested**	: 25 Apr 2024
Unique Number	: 10992193	**Diagnosed**	: 26 Apr 2024 - Jonathan Hester
Test Package	: FLEET (Additional Tests: 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)

GFL Environmental - 837 - Harrison TS
22820 S State Route 291
Harrisonville, MO
US 64701
Contact: SARA PATRICK
spatrick@gflenv.com
T:
F: