FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
569M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

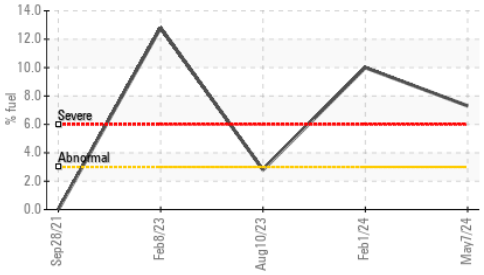
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high amount of fuel present in the oil.

FLUID CONDITION

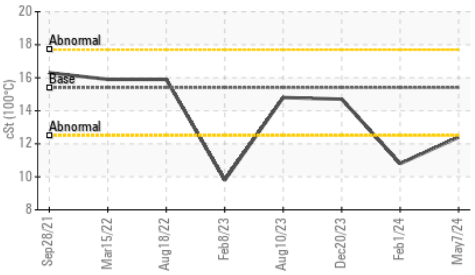
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117568	GFL0108790	GFL0105873
Sample Date		Client Info		07 May 2024	01 Feb 2024	20 Dec 2023
Machine Age	hrs	Client Info		7714	7351	7284
Oil Age	hrs	Client Info		7351	7284	7200
Filter Age	hrs	Client Info		0	7284	7200
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				SEVERE	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>90	▲ 148	9	0
Chromium	ppm	ASTM D5185m	>20	8	<1	0
Nickel	ppm	ASTM D5185m	>2	5	2	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	● 16	1	<1
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>330	3	3	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	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	▲ 49	4	5
Potassium	ppm	ASTM D5185m	>20	4	2	<1
Fuel	%	ASTM D3524	>3.0	▲ 7.3	▲ 10.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	1.1	0.6	0
Nitration	Abs/cm	*ASTM D7624	>20	12.2	9.0	4.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	18.9	17.1
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		10	2	2
Boron	ppm	ASTM D5185m	0	<1	0	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	55	45	59
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	890	804	951
Calcium	ppm	ASTM D5185m	1070	1048	875	1040
Phosphorus	ppm	ASTM D5185m	1150	961	875	1122
Zinc	ppm	ASTM D5185m	1270	1134	1027	1294
Sulfur	ppm	ASTM D5185m	2060	3086	2207	3257
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.8	14.6	12.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	6.6	9.2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.4	▲ 10.8	14.7

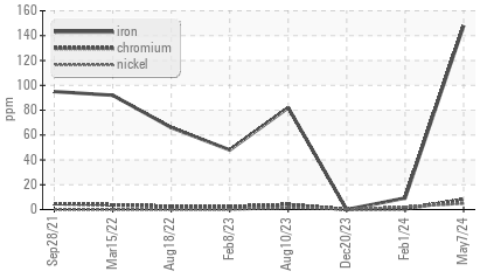
Fuel Dilution



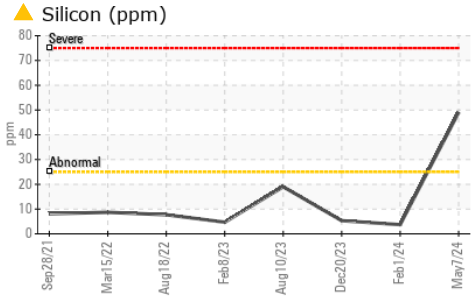
Viscosity @ 100°C



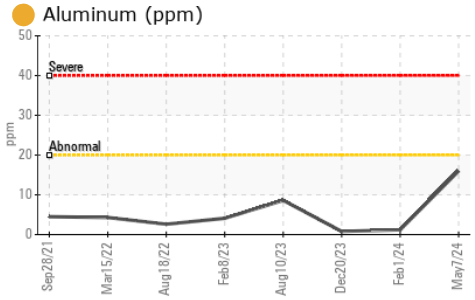
Ferrous Alloys



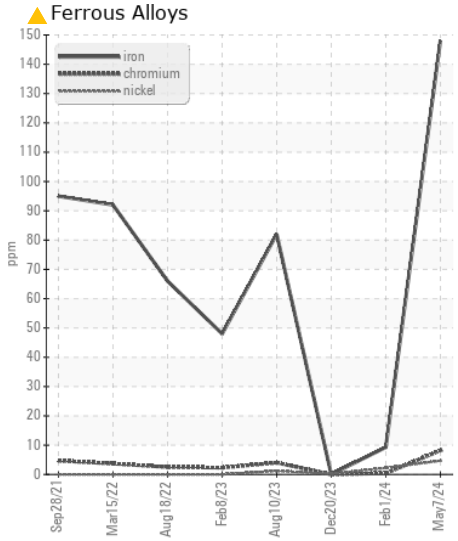
Silicon (ppm)



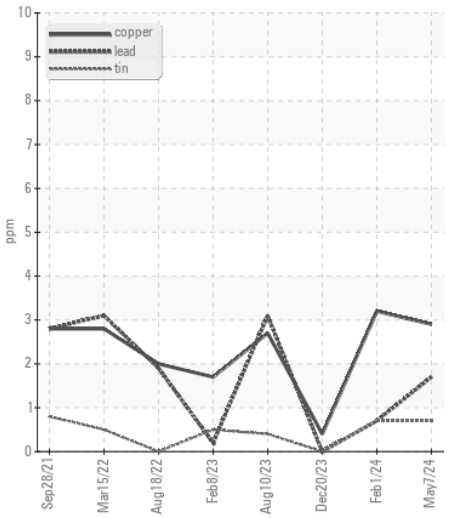
Aluminum (ppm)



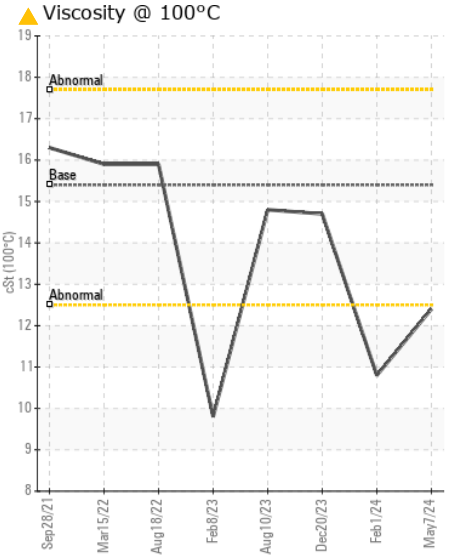
Ferrous Alloys



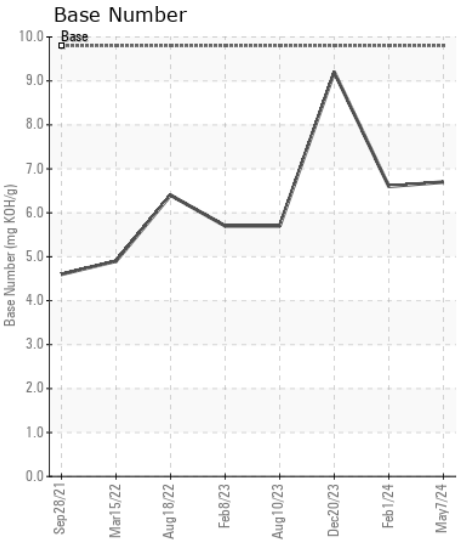
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117568
Lab Number : 06175203
Unique Number : 11021256
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 10 May 2024
Tested : 15 May 2024
Diagnosed : 15 May 2024 - Don Baldridge

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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