FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
811041-101310
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

CONTAMINATION

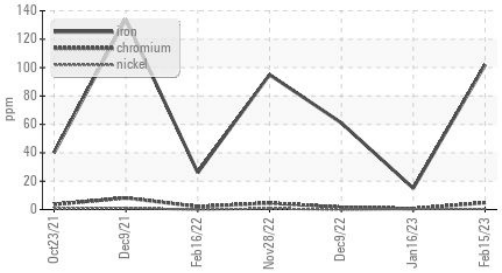
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

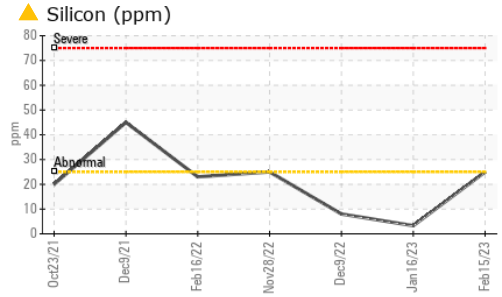
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0046915	GFL0046907	GFL0046886
Sample Date		Client Info		15 Feb 2023	16 Jan 2023	09 Dec 2022
Machine Age	hrs	Client Info		2994	4108	3806
Oil Age	hrs	Client Info		2994	302	3806
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	▲ 102	15	61
Chromium	ppm	ASTM D5185m	>20	5	<1	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	29	6	17
Lead	ppm	ASTM D5185m	>40	2	<1	2
Copper	ppm	ASTM D5185m	>330	4	1	4
Tin	ppm	ASTM D5185m	>15	1	<1	<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	▲ 25	3	8
Potassium	ppm	ASTM D5185m	>20	83	11	42
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.3	0.4	1.4
Nitration	Abs/cm	*ASTM D7624	>20	12.6	6.9	12.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.2	18.6	26.7
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	3	3
Boron	ppm	ASTM D5185m	0	15	3	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	150	57	63
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	907	935	918
Calcium	ppm	ASTM D5185m	1070	1088	1014	1096
Phosphorus	ppm	ASTM D5185m	1150	878	1001	999
Zinc	ppm	ASTM D5185m	1270	1148	1247	1224
Sulfur	ppm	ASTM D5185m	2060	3005	3694	3008
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.4	14.2	23.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.0	8.8	5.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.7	13.1

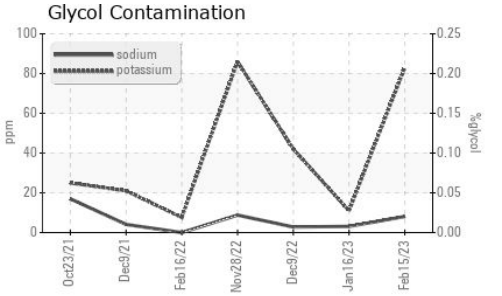
Ferrous Alloys



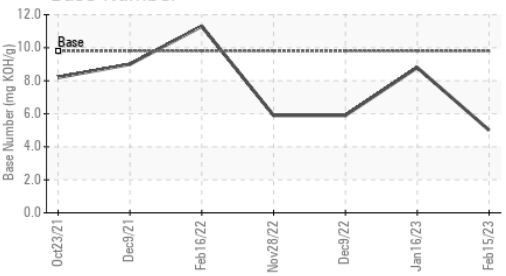
Silicon (ppm)



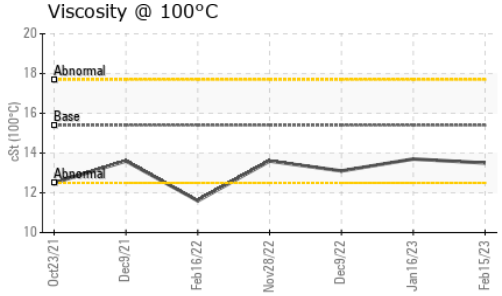
Glycol Contamination



Base Number



Viscosity @ 100°C



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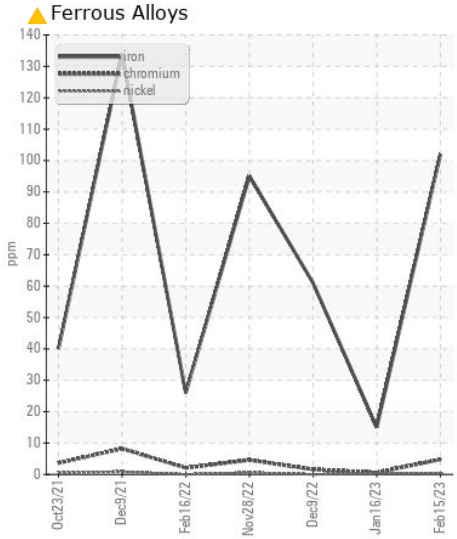
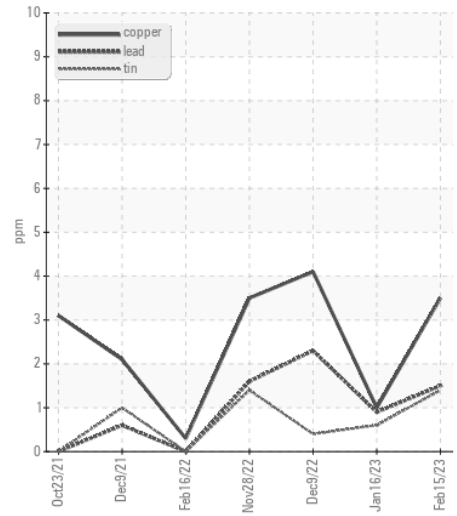
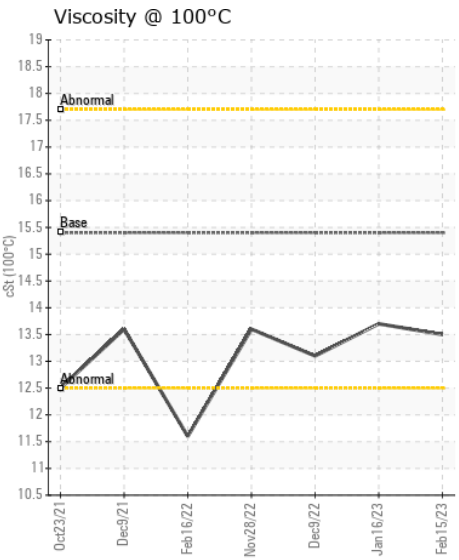


Non-ferrous Metals



Viscosity @ 100°C



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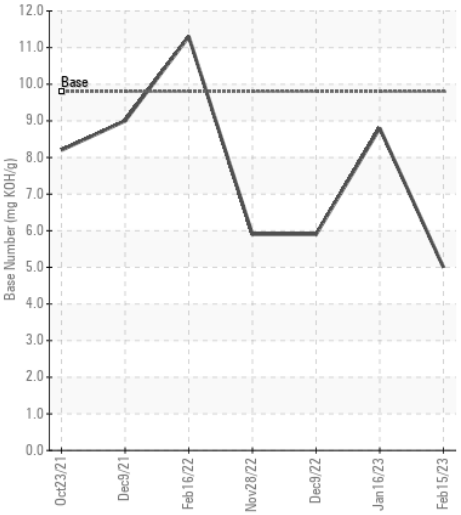

Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: GFL0046915	**Recieved**	: 22 Feb 2023
Lab Number	: 05774380	**Diagnosed**	: 23 Feb 2023
Unique Number	: 10348997	**Diagnostician**	: Don Baldridge
Test Package	: FLEET		

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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