



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
924033-260253
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118175	GFL0109172	GFL0109219
Sample Date		Client Info		08 Apr 2024	05 Mar 2024	13 Feb 2024
Machine Age	hrs	Client Info		610	470	9521
Oil Age	hrs	Client Info		610	600	300
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	Not Changed
Sample Status				ATTENTION	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	44	41	35
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	4	3
Lead	ppm	ASTM D5185m	>40	1	0	0
Copper	ppm	ASTM D5185m	>330	0	2	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Sodium and/or potassium levels remain high. Test for glycol is negative.

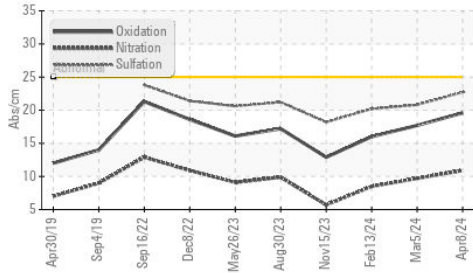
Silicon	ppm	ASTM D5185m	>25	5	5	5
Potassium	ppm	ASTM D5185m	>20	6	4	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.9	9.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	20.8	20.2
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

FLUID CONDITION

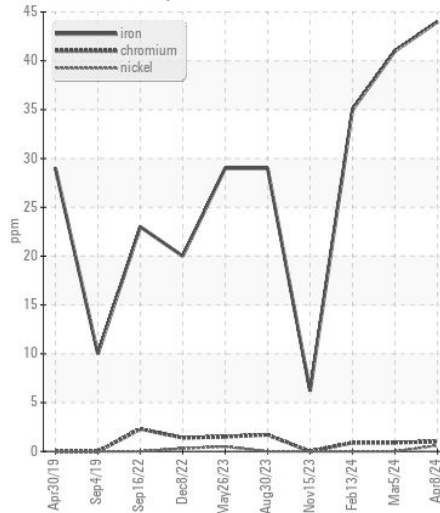
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		96	98	105
Boron	ppm	ASTM D5185m	0	6	10	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	60	60
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	880	860	910
Calcium	ppm	ASTM D5185m	1070	1015	960	989
Phosphorus	ppm	ASTM D5185m	1150	1003	977	961
Zinc	ppm	ASTM D5185m	1270	1220	1138	1160
Sulfur	ppm	ASTM D5185m	2060	3340	2872	2758
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6	17.7	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.4	7.6	7.5
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	13.0	13.1

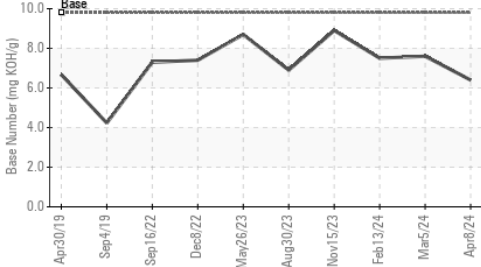
FT-IR (Direct Trend)



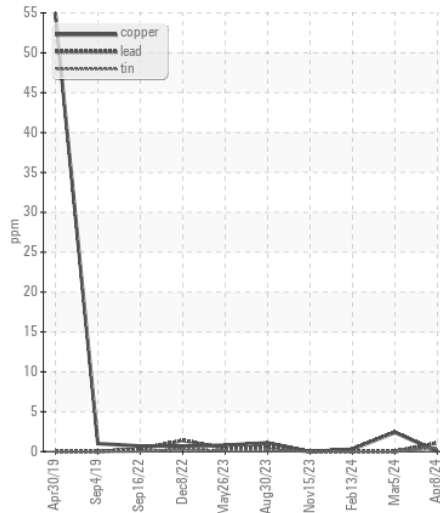
Ferrous Alloys



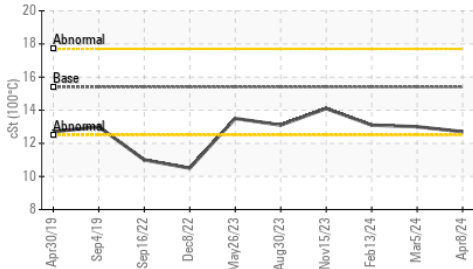
Base Number



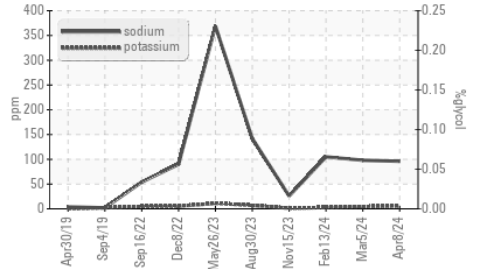
Non-ferrous Metals



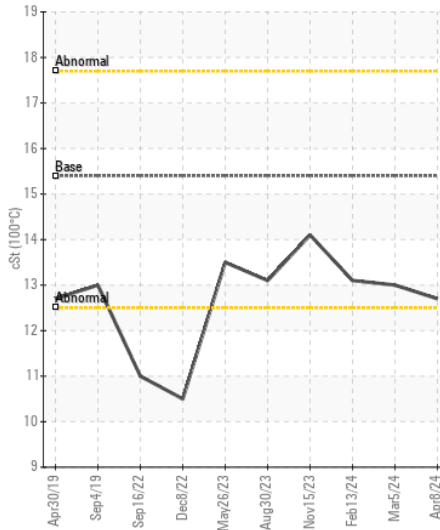
Viscosity @ 100°C



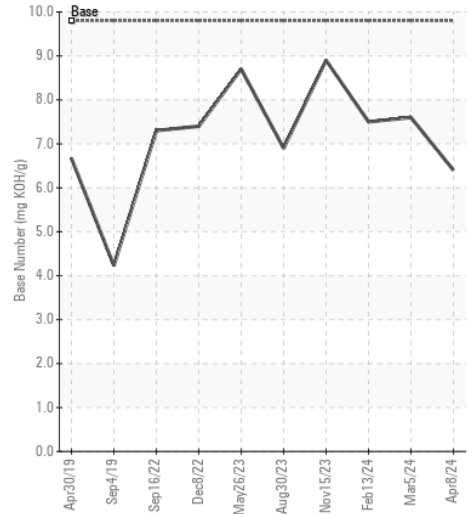
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0118175

Lab Number : 06146329

Unique Number : 10976407

Test Package : FLEET (Additional Tests: Glycol)

Received : 11 Apr 2024

Tested : 16 Apr 2024

Diagnosed : 16 Apr 2024 - Jonathan Hester

GFL Environmental - 822 - Springfield Hauling

2120 West Bennett Street

Springfield, MO

US 65807

Contact: Dennis Moore

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T: (417)403-3641

F:

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)