



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
11218
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: The meter is based on miles, not hours. Current miles are 325416)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110367	GFL0096911	GFL0069753
Sample Date		Client Info		16 May 2024	07 Feb 2024	11 Oct 2023
Machine Age	mls	Client Info		325416	17685	17023
Oil Age	mls	Client Info		300000	17685	17023
Filter Age	mls	Client Info		300000	0	17023
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	21	21
Chromium	ppm	ASTM D5185m	>20	0	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	8	7
Lead	ppm	ASTM D5185m	>40	1	1	<1
Copper	ppm	ASTM D5185m	>330	<1	2	2
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

CONTAMINATION

There is no indication of any contamination in the oil.

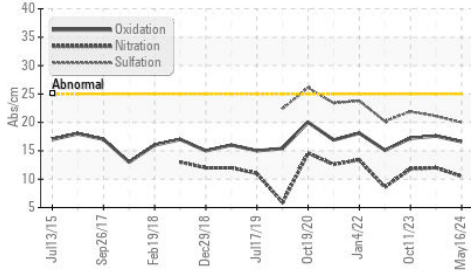
Silicon	ppm	ASTM D5185m	>25	5	7	6
Potassium	ppm	ASTM D5185m	>20	<1	1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	1.3	1.8
Nitration	Abs/cm	*ASTM D7624	>20	10.5	12.0	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	21.1	21.9
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

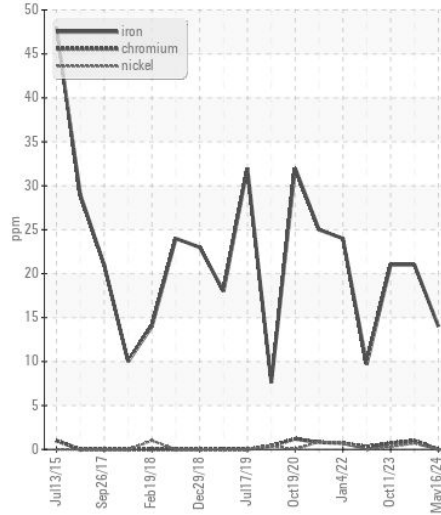
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	0	5
Boron	ppm	ASTM D5185m	0	7	9	6
Barium	ppm	ASTM D5185m	0	0	0	4
Molybdenum	ppm	ASTM D5185m	60	66	69	65
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	939	902	821
Calcium	ppm	ASTM D5185m	1070	1096	1191	1095
Phosphorus	ppm	ASTM D5185m	1150	1074	1011	905
Zinc	ppm	ASTM D5185m	1270	1251	1228	1100
Sulfur	ppm	ASTM D5185m	2060	3536	3242	2691
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	17.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.3	7.3	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	12.6	13.5

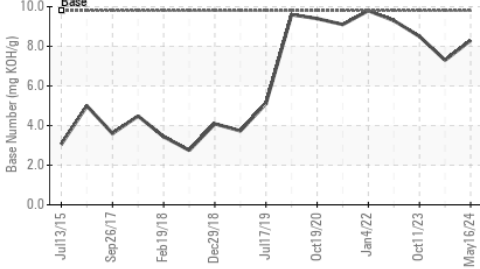
FT-IR (Direct Trend)



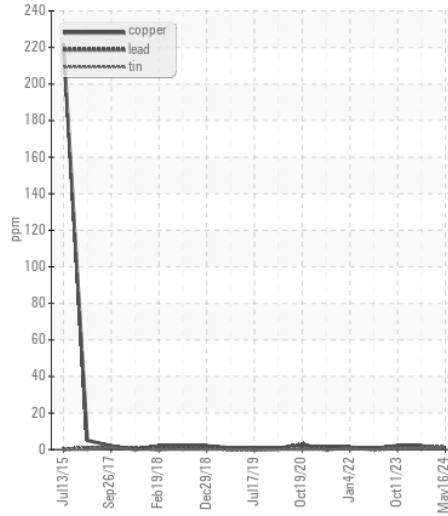
Ferrous Alloys



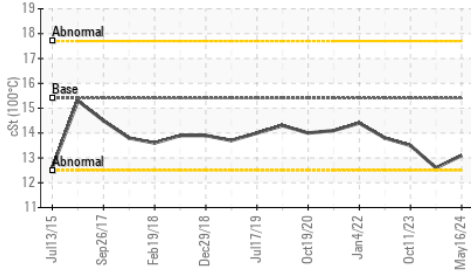
Base Number



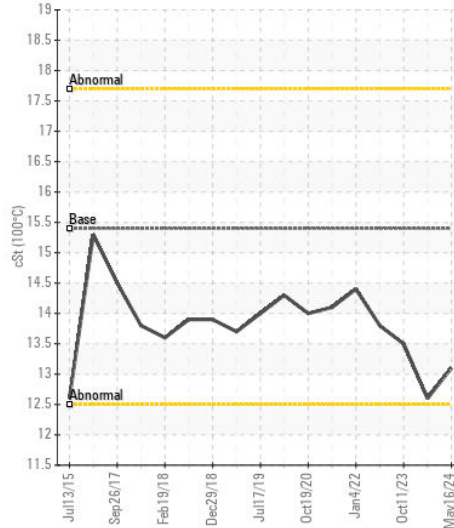
Non-ferrous Metals



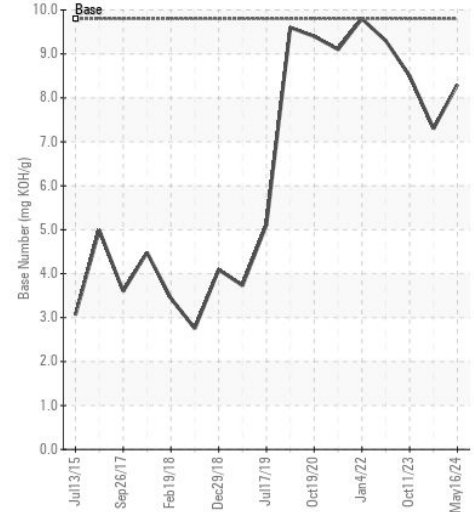
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110367
Lab Number : 06187079
Unique Number : 11043831
Test Package : FLEET

Received : 21 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Sean Felton

GFL Environmental - 031 - Greenville/Spartanburg
 1635 Antioch Church Rd
 Piedmont, SC
 US 29673

Contact: TECHNICIAN ACCOUNT
 catherine.anastasio@wearcheck.com

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)

T:
F: