



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
427192
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Engine)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0105495	GFL0089433	GFL0085493
Sample Date		Client Info		05 Jan 2024	28 Jul 2023	14 Jul 2023
Machine Age	mls	Client Info		341405	329996	327918
Oil Age	mls	Client Info		341405	329996	327918
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	3	6
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	<1
Lead	ppm	ASTM D5185m	>40	1	<1	1
Copper	ppm	ASTM D5185m	>330	<1	0	1
Tin	ppm	ASTM D5185m	>15	0	0	<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

Elemental level of silicon (Si) above normal.

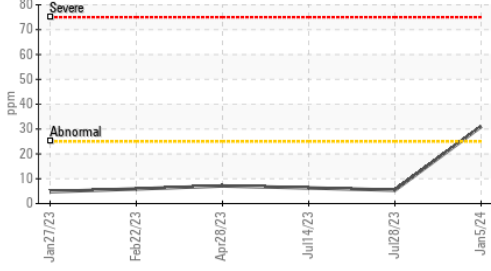
Silicon	ppm	ASTM D5185m	>25	▲ 31	5	6
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	5.8	6.1	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.4	15.8	19.1
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

FLUID CONDITION

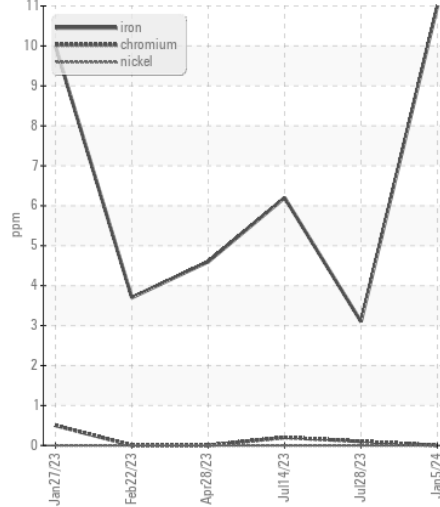
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	<1	2
Boron	ppm	ASTM D5185m	0	0	0	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	48	36	41
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	11	23	21
Calcium	ppm	ASTM D5185m	1070	2292	2260	2553
Phosphorus	ppm	ASTM D5185m	1150	979	989	1094
Zinc	ppm	ASTM D5185m	1270	1294	1178	1279
Sulfur	ppm	ASTM D5185m	2060	3054	3556	3824
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.6	9.3	10.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.5	7.4	6.8
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	13.8	13.8

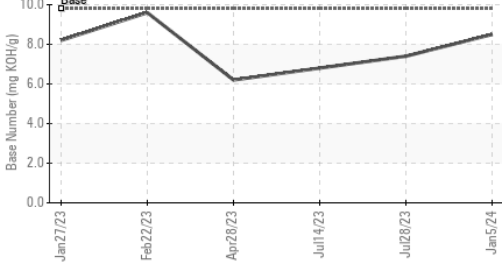
▲ Silicon (ppm)



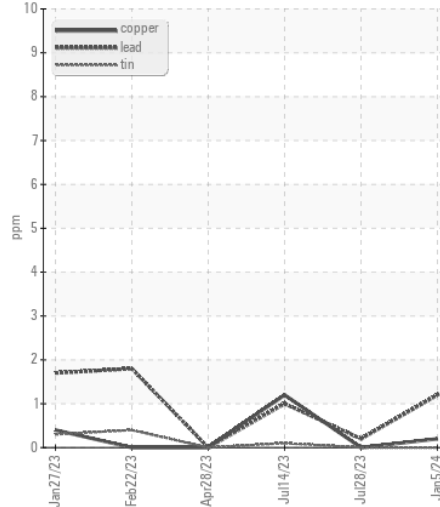
Ferrous Alloys



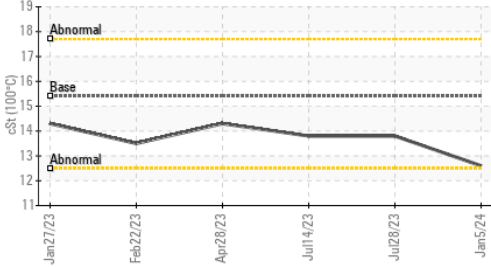
Base Number



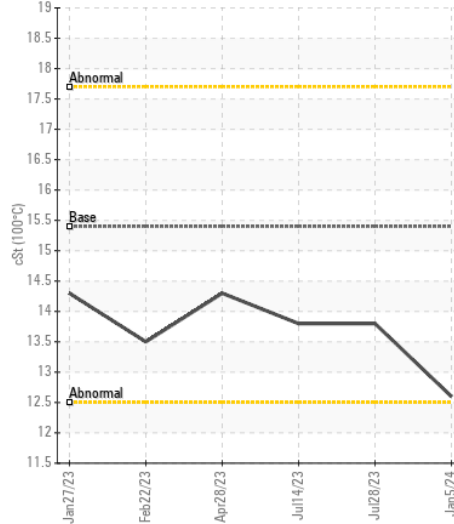
Non-ferrous Metals



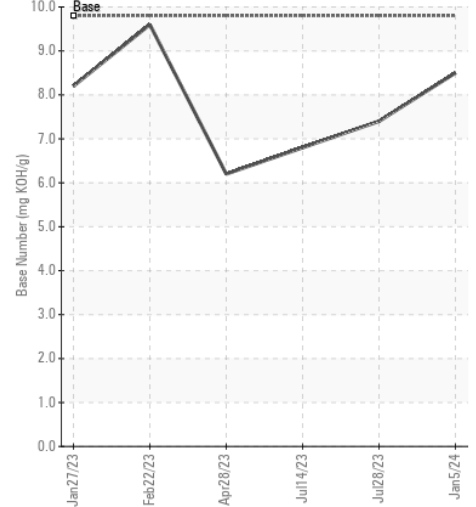
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0105495 **Received** : 11 Jan 2024
Lab Number : 06057808 **Diagnosed** : 12 Jan 2024
Unique Number : 10829190 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 983 - Sugar Land Hauling
 16011 West Belfort Street
 Sugar Land, TX
 US 77498
 Contact: TECHNICIAN ACCOUNT
 wcgfldemo@gmail.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: