



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
428057-402383
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0104819	GFL0104890	GFL0104959
Sample Date		Client Info		26 Apr 2024	08 Apr 2024	29 Feb 2024
Machine Age	mls	Client Info		477569	473428	465185
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	8	4	8
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	0	3
Lead	ppm	ASTM D5185m	>45	0	0	1
Copper	ppm	ASTM D5185m	>85	3	0	<1
Tin	ppm	ASTM D5185m	>4	<1	0	2
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

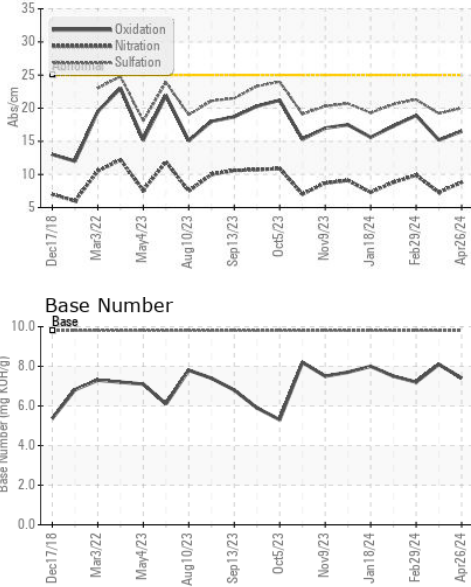
Silicon	ppm	ASTM D5185m	>30	5	3	3
Potassium	ppm	ASTM D5185m	>20	<1	<1	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.8	7.3	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	19.2	21.3
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

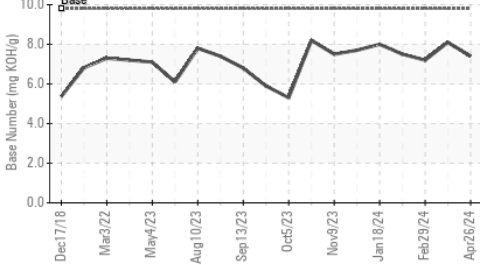
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	2	5
Boron	ppm	ASTM D5185m	0	2	0	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	59	57
Manganese	ppm	ASTM D5185m	0	1	0	<1
Magnesium	ppm	ASTM D5185m	1010	962	982	974
Calcium	ppm	ASTM D5185m	1070	1086	1185	1077
Phosphorus	ppm	ASTM D5185m	1150	1085	1097	983
Zinc	ppm	ASTM D5185m	1270	1274	1346	1231
Sulfur	ppm	ASTM D5185m	2060	3467	3762	3398
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	15.2	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.4	8.1	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.1	13.5

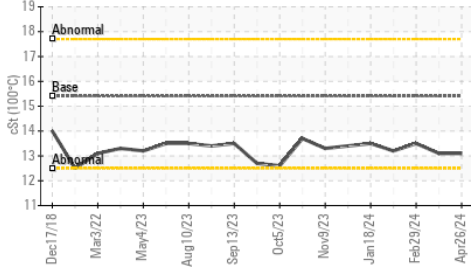
FT-IR (Direct Trend)



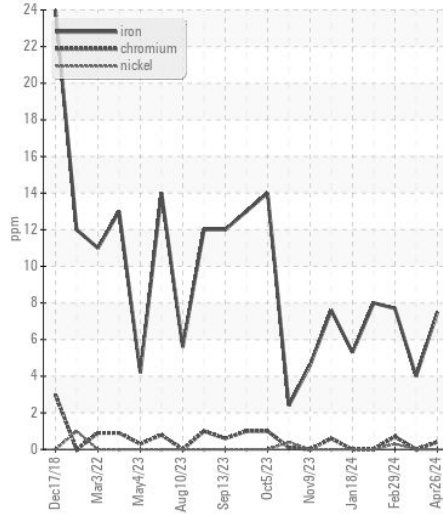
Base Number



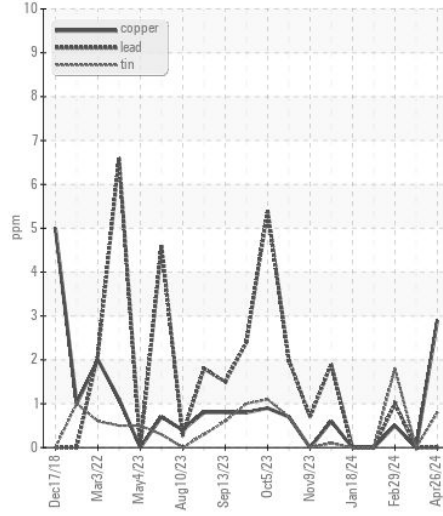
Viscosity @ 100°C



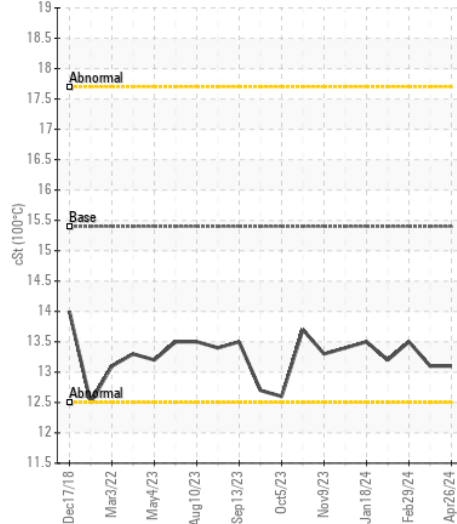
Ferrous Alloys



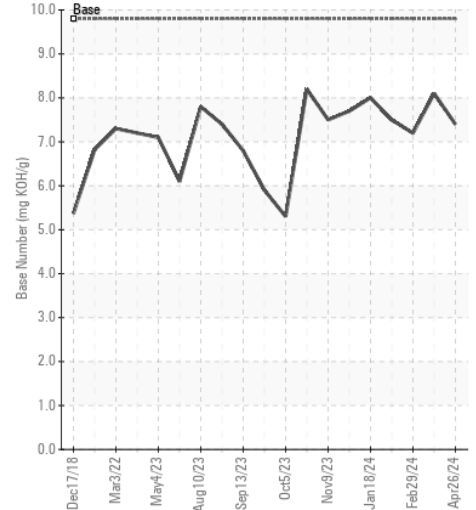
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104819
Lab Number : 06176729
Unique Number : 11022782
Test Package : FLEET

Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 14 May 2024 - Wes Davis

GFL Environmental - 820 - Joplin Hauling
 3700 West 7th Street
 Joplin, MO
 US 64801

Contact: James Jarrett
 jjarrett@gflenv.com

T: (417)310-2802

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)