



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
427081-402333
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0112259	GFL0112253	GFL0065432
Sample Date		Client Info		21 Jun 2024	31 May 2024	06 May 2024
Machine Age	hrs	Client Info		1408	1289	1134
Oil Age	hrs	Client Info		150	150	150
Filter Age	hrs	Client Info		150	150	150
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	19	13	11
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	▲ 6	3	3
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	4
Lead	ppm	ASTM D5185m	>40	2	0	2
Copper	ppm	ASTM D5185m	>330	21	3	2
Tin	ppm	ASTM D5185m	>15	3	1	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

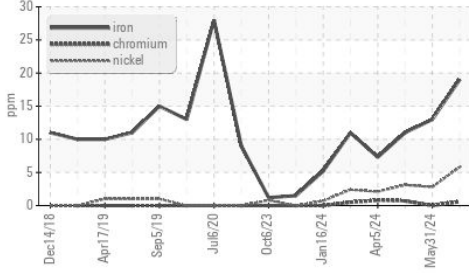
Silicon	ppm	ASTM D5185m	>25	12	4	11
Potassium	ppm	ASTM D5185m	>20	3	<1	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.8	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.4	8.6	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	20.4	18.8
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

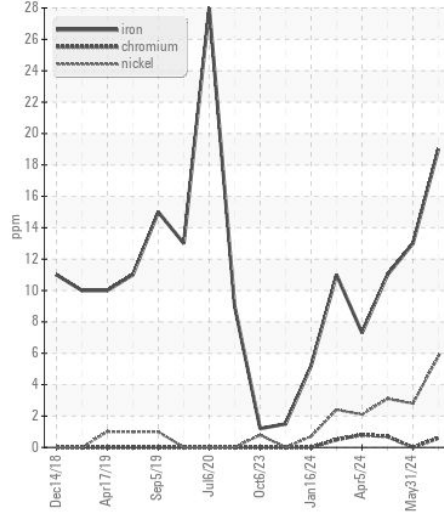
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	4	2
Boron	ppm	ASTM D5185m	0	<1	0	<1
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	60	56	54	56
Manganese	ppm	ASTM D5185m	0	1	<1	1
Magnesium	ppm	ASTM D5185m	1010	874	894	884
Calcium	ppm	ASTM D5185m	1070	1030	1034	997
Phosphorus	ppm	ASTM D5185m	1150	1058	1007	957
Zinc	ppm	ASTM D5185m	1270	1202	1176	1147
Sulfur	ppm	ASTM D5185m	2060	2800	3207	2978
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	15.8	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.6	7.1	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	12.8	13.3

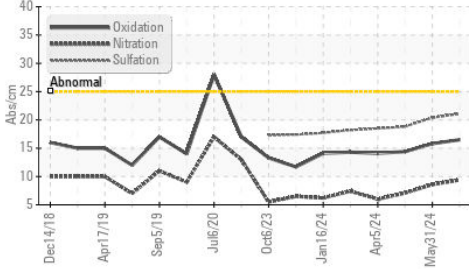
▲ Ferrous Alloys



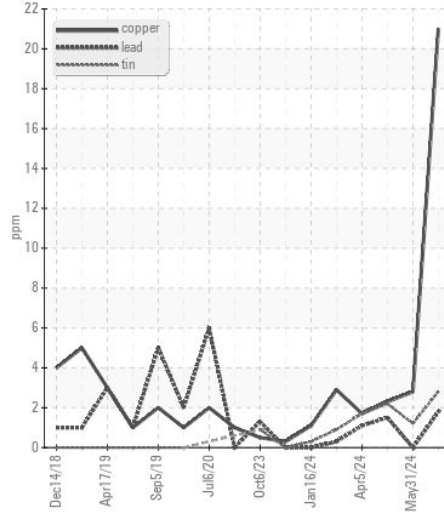
▲ Ferrous Alloys



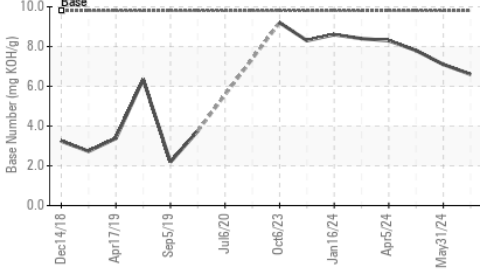
FT-IR (Direct Trend)



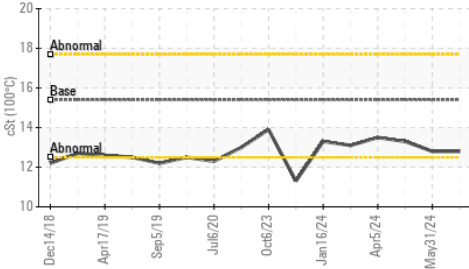
Non-ferrous Metals



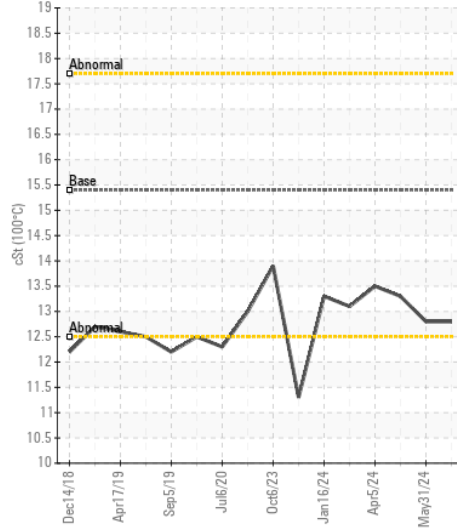
Base Number



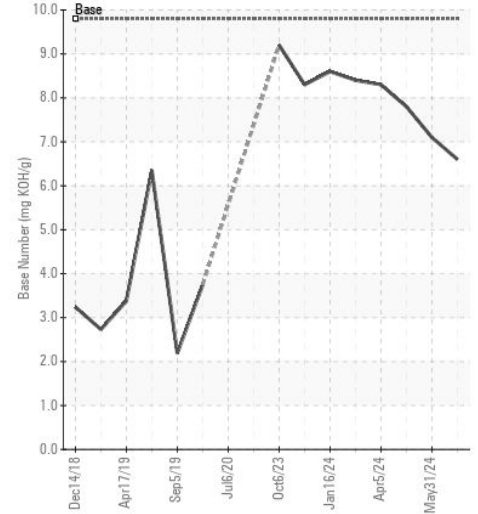
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0112259
Lab Number : 06219261
Unique Number : 11097458
Test Package : FLEET
Received : 25 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 26 Jun 2024 - Don Baldrige

GFL Environmental - 829 - Wilco Hauling
 5054 Highway HH
 Hartville, MO
 US 65667
 Contact: James Jones
 james.jones@gflenv.com
 T: (417)349-5006
 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)