



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
CLI TRANSPORT LP - MANASSAS

Machine Id

8542

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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		NL0002033	NL0000571	NL0001611
Sample Date		Client Info		18 Apr 2024	26 Sep 2023	24 May 2023
Machine Age	mls	Client Info		308441	272302	235383
Oil Age	mls	Client Info		45000	45000	45000
Filter Age	mls	Client Info		45000	45000	45000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>100	37	34	54
Chromium	ppm	ASTM D5185m	>20	1	<1	1
Nickel	ppm	ASTM D5185m	>4	▲ 8	▲ 6	▲ 10
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	1	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	3	4
Lead	ppm	ASTM D5185m	>40	4	4	4
Copper	ppm	ASTM D5185m	>330	71	90	103
Tin	ppm	ASTM D5185m	>15	4	4	7
Vanadium	ppm	ASTM D5185m		<1	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.

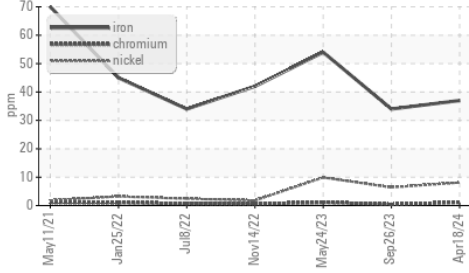
Silicon	ppm	ASTM D5185m	>25	9	8	▲ 25
Potassium	ppm	ASTM D5185m	>20	8	11	18
Fuel		WC Method	>5	<1.0	<1.0	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	9.9	10.2	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	22.5	22.8
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

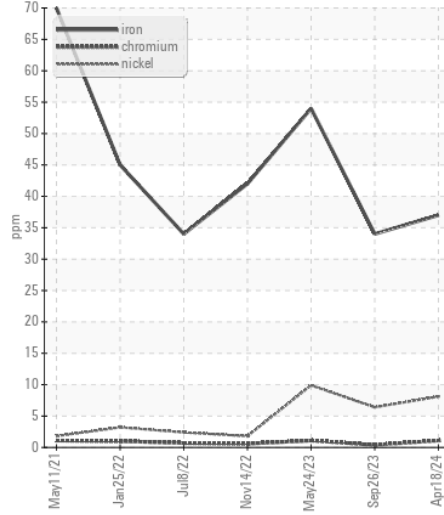
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	0	13
Boron	ppm	ASTM D5185m	0	17	2	15
Barium	ppm	ASTM D5185m	0	1	4	0
Molybdenum	ppm	ASTM D5185m	60	76	66	63
Manganese	ppm	ASTM D5185m	0	2	1	4
Magnesium	ppm	ASTM D5185m	1010	1049	861	564
Calcium	ppm	ASTM D5185m	1070	1318	1188	1939
Phosphorus	ppm	ASTM D5185m	1150	1095	949	1115
Zinc	ppm	ASTM D5185m	1270	1444	1204	1527
Sulfur	ppm	ASTM D5185m	2060	2967	2635	3840
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	18.1	18.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.3	6.5	6.1
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.8	▲ 12.4

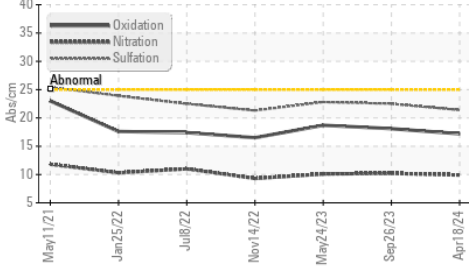
▲ Ferrous Alloys



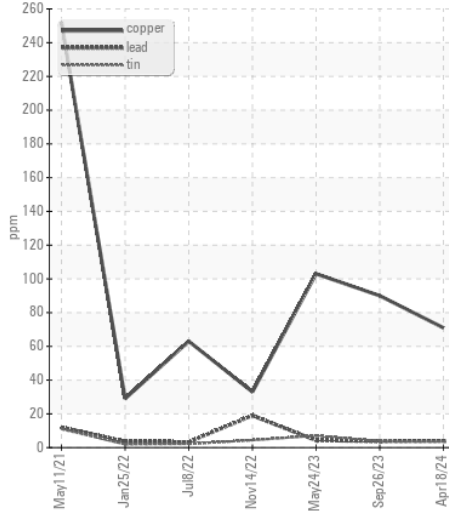
▲ Ferrous Alloys



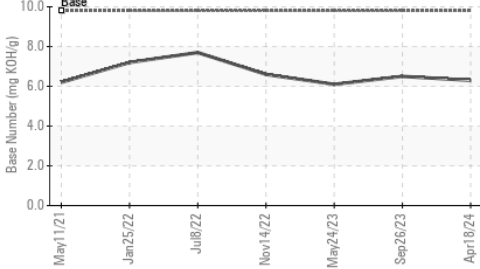
FT-IR (Direct Trend)



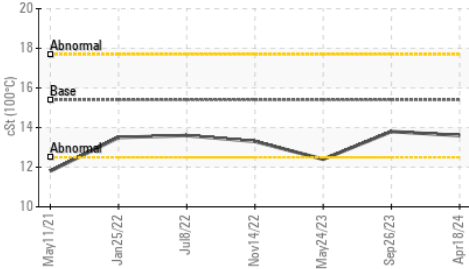
Non-ferrous Metals



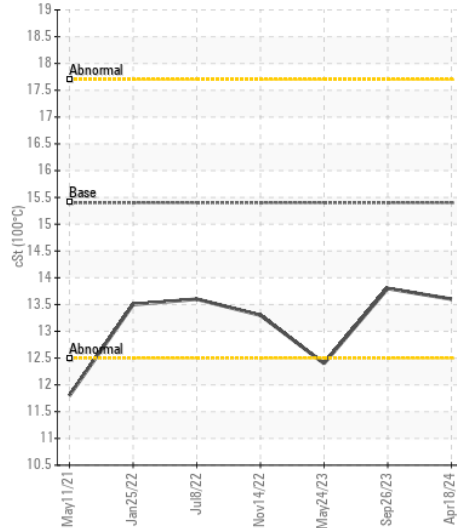
Base Number



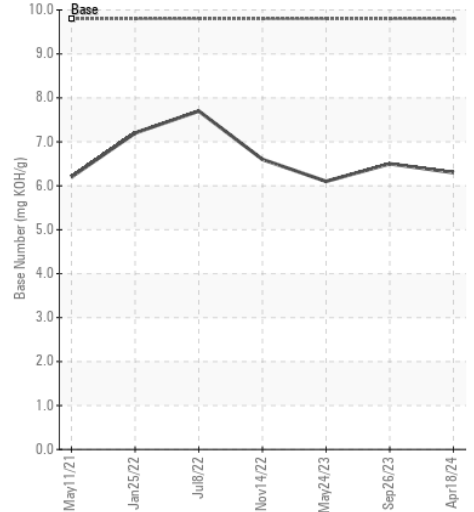
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002033
Lab Number : 06217846
Unique Number : 11096043
Test Package : FLEET

FOX & JAMES NATIONALEASE - Manassas
 1145 INDUSTRIAL RD
 MANASSAS, VA
 US 20109
 Contact: JOSH ROLAND
 j.roland@foxandjames.com
 T: (571)379-5296
 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)