NationaLease

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
8607
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

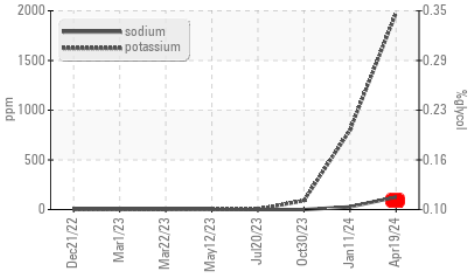
Sodium and/or potassium levels are high. Test for glycol is positive.

FLUID CONDITION

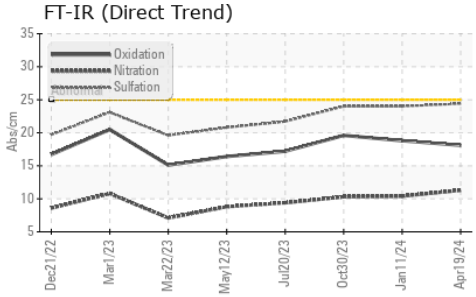
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**NL0002035**	NL0001838	NL0001694
Sample Date		Client Info		**19 Apr 2024**	11 Jan 2024	30 Oct 2023
Machine Age	mls	Client Info		**370484**	330155	292190
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				**SEVERE**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	**43**	40	57
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**2**	2	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m	>3	**<1**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**14**	8	5
Lead	ppm	ASTM D5185m	>40	**3**	2	4
Copper	ppm	ASTM D5185m	>330	**23**	19	19
Tin	ppm	ASTM D5185m	>15	**2**	1	2
Vanadium	ppm	ASTM D5185m		**<1**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**12**	9	11
Potassium	ppm	ASTM D5185m	>20	▲ **1977**	▲ 801	▲ 91
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		▲ **0.12**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.7**	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	**11.3**	10.4	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.4**	24.0	24.0
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
Sodium	ppm	ASTM D5185m		▲ **126**	▲ 27	0
Boron	ppm	ASTM D5185m	0	**8**	<1	1
Barium	ppm	ASTM D5185m	0	**2**	<1	5
Molybdenum	ppm	ASTM D5185m	60	**128**	70	68
Manganese	ppm	ASTM D5185m	0	**2**	<1	1
Magnesium	ppm	ASTM D5185m	1010	**845**	851	928
Calcium	ppm	ASTM D5185m	1070	**1118**	1092	1166
Phosphorus	ppm	ASTM D5185m	1150	**831**	914	1025
Zinc	ppm	ASTM D5185m	1270	**1198**	1121	1238
Sulfur	ppm	ASTM D5185m	2060	**3070**	2965	2911
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.1**	18.8	19.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.4**	5.9	5.2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.7**	13.7	13.7

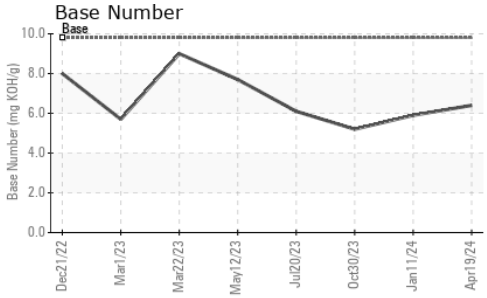
Glycol Contamination



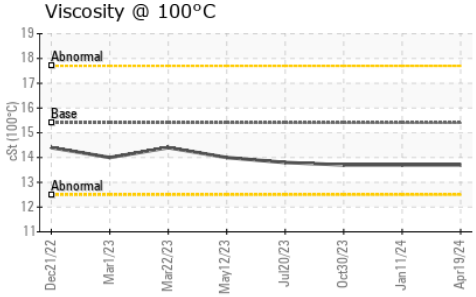
FT-IR (Direct Trend)



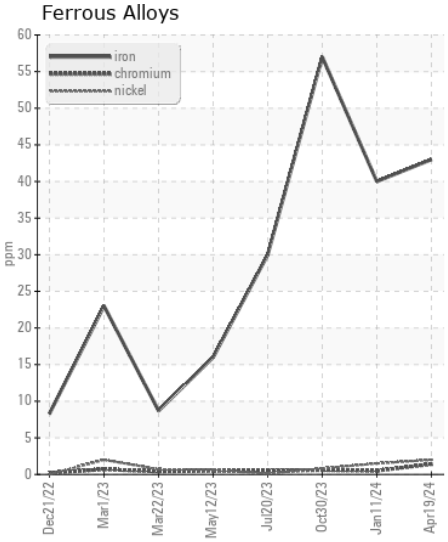
Base Number



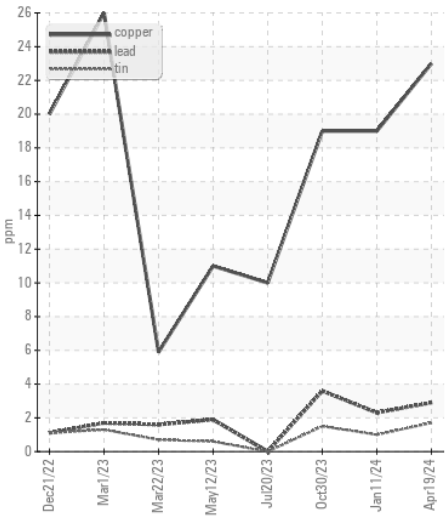
Viscosity @ 100°C



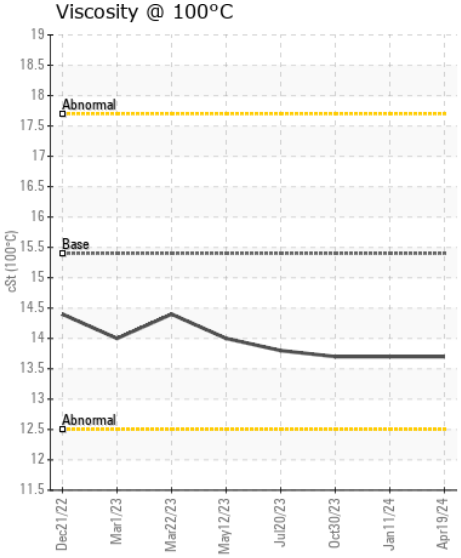
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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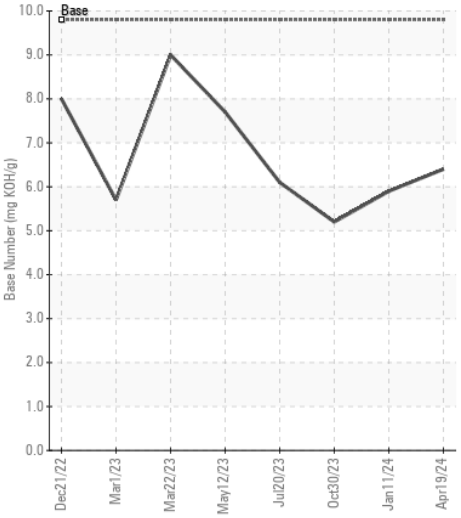

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002035
Lab Number : 06217843
Unique Number : 11096040
Test Package : FLEET (Additional Tests: Glycol)

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Jonathan Hester

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)

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