OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
RTS
Machine Id
[RTS] 895
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (24 QTS)

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

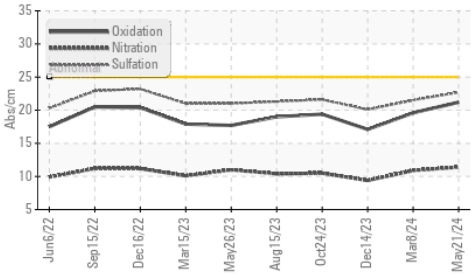
Sodium and/or potassium levels are high.

FLUID CONDITION

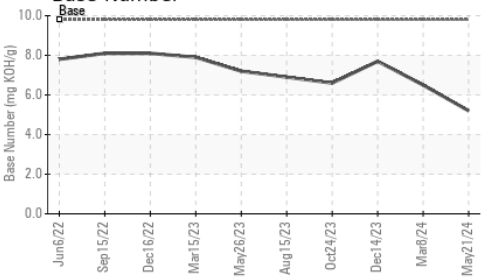
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0901444	WC0901436	WC0843736
Sample Date		Client Info		21 May 2024	08 Mar 2024	14 Dec 2023
Machine Age	mls	Client Info		429907	418612	407816
Oil Age	mls	Client Info		11295	10796	7512
Filter Age	mls	Client Info		11295	10796	7512
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	33	17	10
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>25	<1	3	0
Copper	ppm	ASTM D5185m	>100	<1	2	0
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	6	5
Potassium	ppm	ASTM D5185m	>20	▲ 254	▲ 156	30
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.4	10.9	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	21.5	20.1
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
Sodium	ppm	ASTM D5185m		▲ 88	▲ 55	14
Boron	ppm	ASTM D5185m	0	2	2	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	76	67	65
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	984	1023	986
Calcium	ppm	ASTM D5185m	1070	1105	1140	1072
Phosphorus	ppm	ASTM D5185m	1150	971	1024	1071
Zinc	ppm	ASTM D5185m	1270	1226	1312	1319
Sulfur	ppm	ASTM D5185m	2060	3252	3572	2968
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.2	19.6	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.2	6.5	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	13.6	13.9

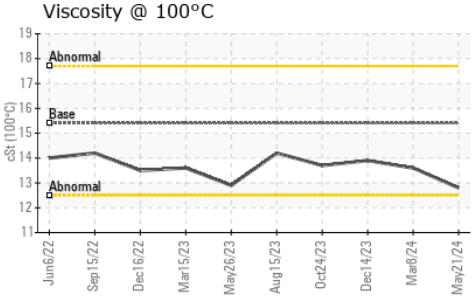
FT-IR (Direct Trend)



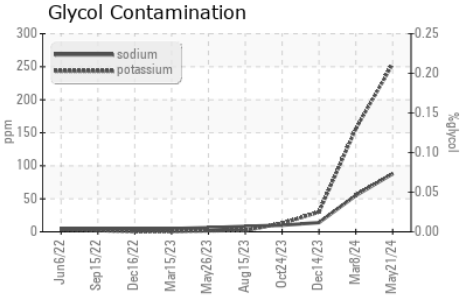
Base Number



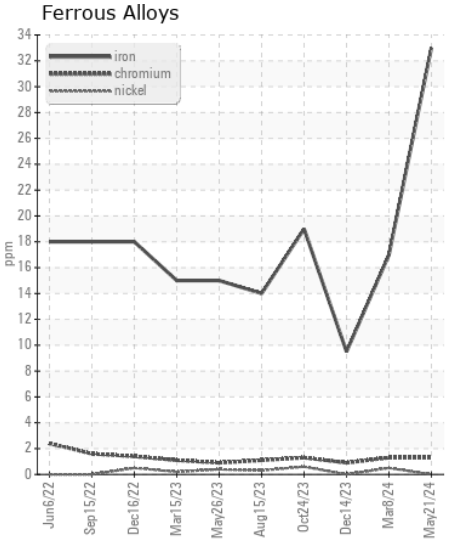
Viscosity @ 100°C



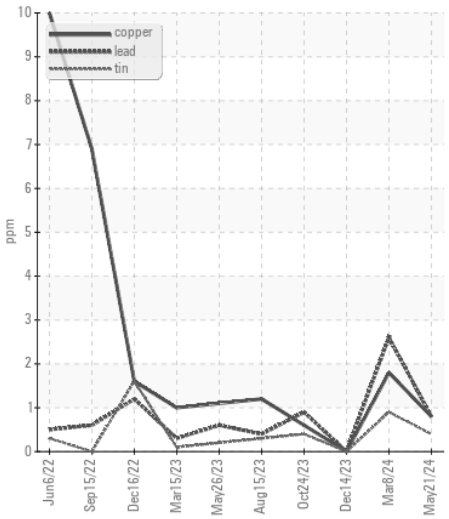
Glycol Contamination



Ferrous Alloys



Non-ferrous Metals



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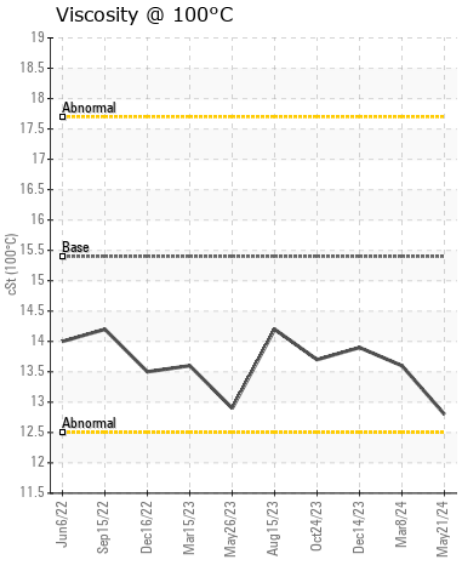

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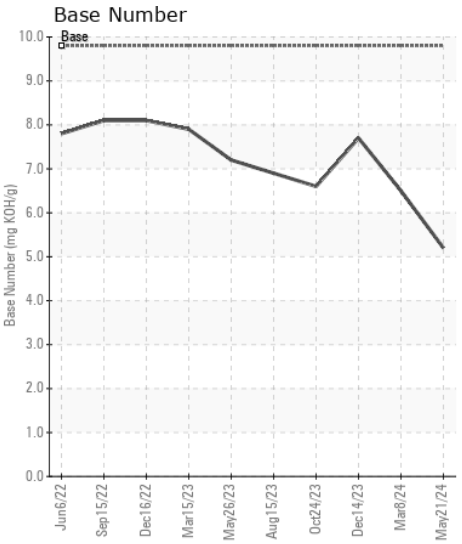

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0901444
Lab Number : 06196133
Unique Number : 11058256
Test Package : FLEET (Additional Tests: Glycol)

Received : 30 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Sean Felton

HUMBOLDT TRANSIT AUTHORITY
133 V ST
EUREKA, CA
US 95501
Contact: KELLY MASTERSON
kelly@hta.org
T:
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)