



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

RTS
Machine Id
[RTS] 891

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (15 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0901458	WC0843776	WC0788563
Sample Date		Client Info		11 Apr 2024	28 Nov 2023	21 Jul 2023
Machine Age	mls	Client Info		69714	58687	48089
Oil Age	mls	Client Info		11027	10598	10573
Filter Age	mls	Client Info		11027	10598	10573
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>75	49	47	41
Chromium	ppm	ASTM D5185m	>5	2	1	1
Nickel	ppm	ASTM D5185m	>4	1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	10	7	4
Lead	ppm	ASTM D5185m	>25	0	0	2
Copper	ppm	ASTM D5185m	>100	22	112	▲ 294
Tin	ppm	ASTM D5185m	>4	<1	0	<1
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.

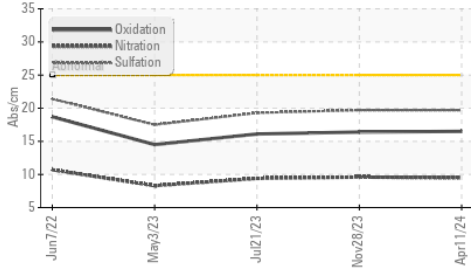
Silicon	ppm	ASTM D5185m	>25	10	14	12
Potassium	ppm	ASTM D5185m	>20	1	6	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.5	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.6	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	19.7	19.3
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

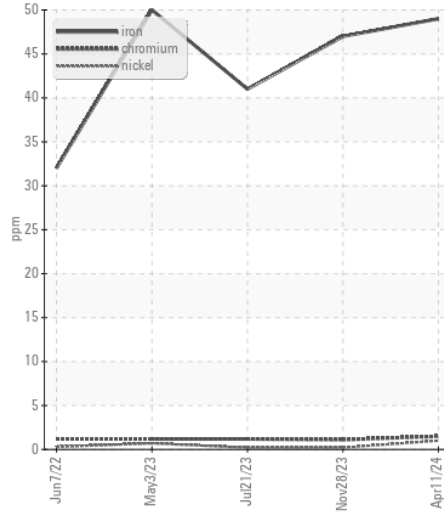
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	5	6
Boron	ppm	ASTM D5185m	0	2	0	<1
Barium	ppm	ASTM D5185m	0	0	6	0
Molybdenum	ppm	ASTM D5185m	60	64	65	62
Manganese	ppm	ASTM D5185m	0	2	<1	2
Magnesium	ppm	ASTM D5185m	1010	1051	953	1001
Calcium	ppm	ASTM D5185m	1070	1113	1114	1129
Phosphorus	ppm	ASTM D5185m	1150	1105	994	1018
Zinc	ppm	ASTM D5185m	1270	1375	1246	1277
Sulfur	ppm	ASTM D5185m	2060	3320	2828	3187
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	16.4	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.2	6.3	7.3
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.0	13.3

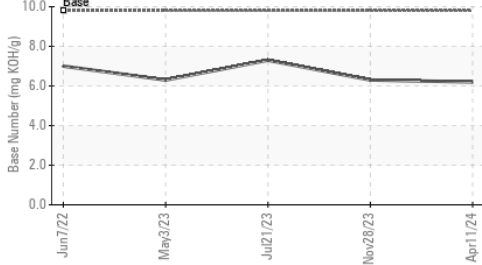
FT-IR (Direct Trend)



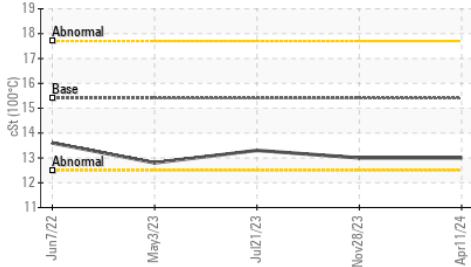
Ferrous Alloys



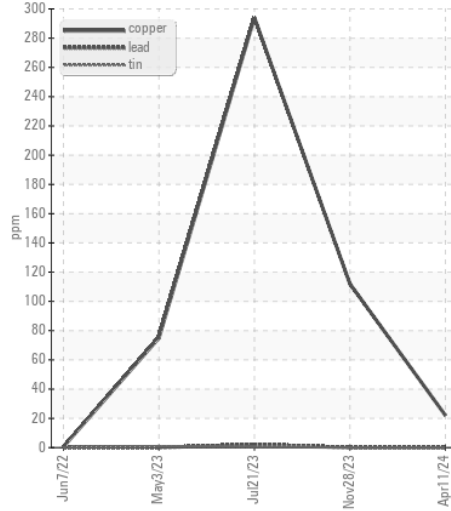
Base Number



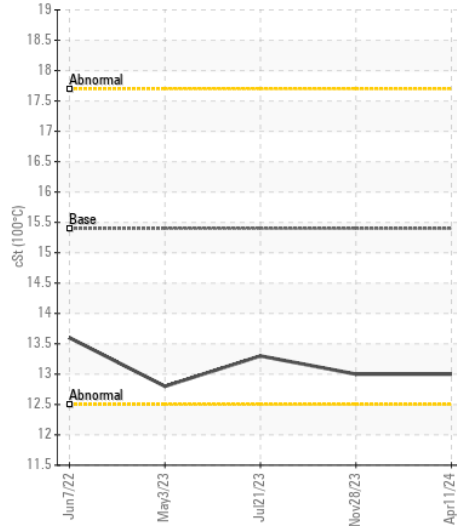
Viscosity @ 100°C



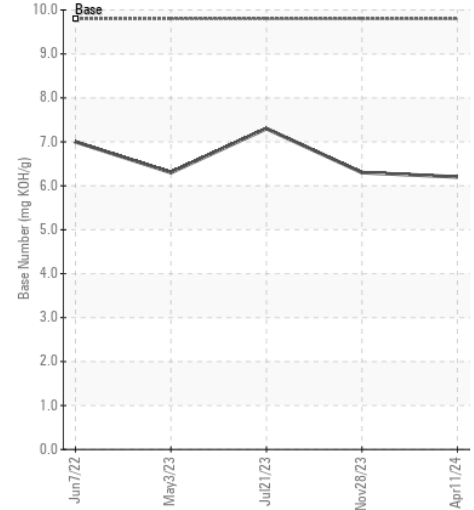
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0901458
Lab Number : 06149400
Unique Number : 10979478
Test Package : FLEET

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

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)

T:
F: