



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

RTS
Machine Id
[RTS] 889

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (24 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0901449	WC0901478	WC0843778
Sample Date		Client Info		13 Jun 2024	21 Feb 2024	30 Nov 2023
Machine Age	mls	Client Info		482636	471139	459519
Oil Age	mls	Client Info		11497	11620	11560
Filter Age	mls	Client Info		11497	11620	11560
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	18	15	26
Chromium	ppm	ASTM D5185m	>5	1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>25	<1	1	<1
Copper	ppm	ASTM D5185m	>100	2	1	1
Tin	ppm	ASTM D5185m	>4	<1	<1	0
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.

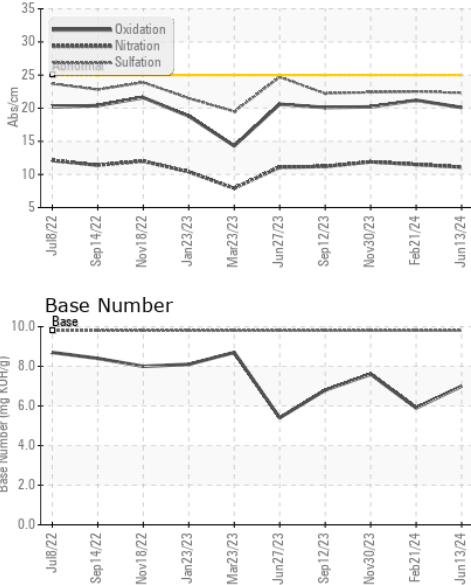
Silicon	ppm	ASTM D5185m	>25	7	7	11
Potassium	ppm	ASTM D5185m	>20	59	103	488
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	0.10
Soot %	%	*ASTM D7844	>6	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	11.1	11.5	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	22.5	22.4
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

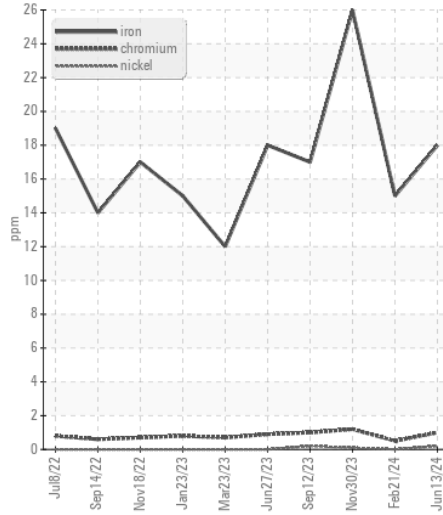
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		26	37	171
Boron	ppm	ASTM D5185m	0	5	5	3
Barium	ppm	ASTM D5185m	0	<1	0	6
Molybdenum	ppm	ASTM D5185m	60	73	67	97
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	1072	990	984
Calcium	ppm	ASTM D5185m	1070	1231	1058	1165
Phosphorus	ppm	ASTM D5185m	1150	1116	1047	1029
Zinc	ppm	ASTM D5185m	1270	1361	1305	1273
Sulfur	ppm	ASTM D5185m	2060	2899	2878	3318
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	21.2	20.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.0	5.9	7.6
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.8	13.9

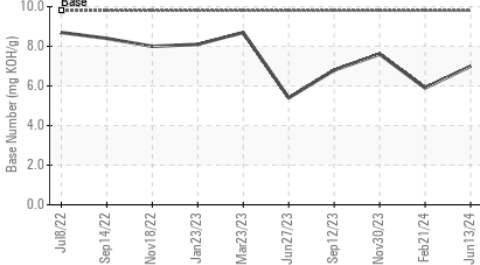
FT-IR (Direct Trend)



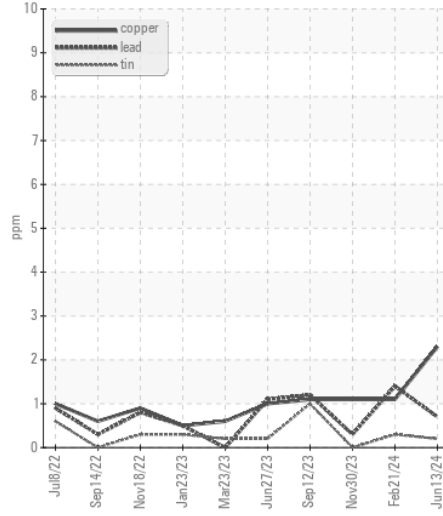
Ferrous Alloys



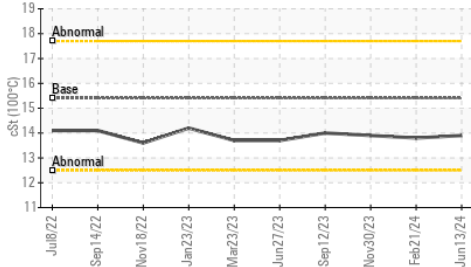
Base Number



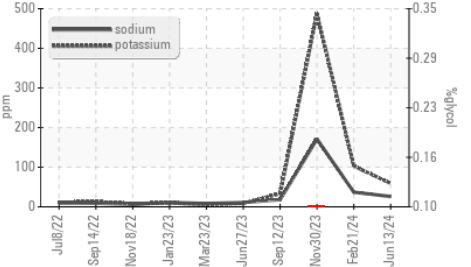
Non-ferrous Metals



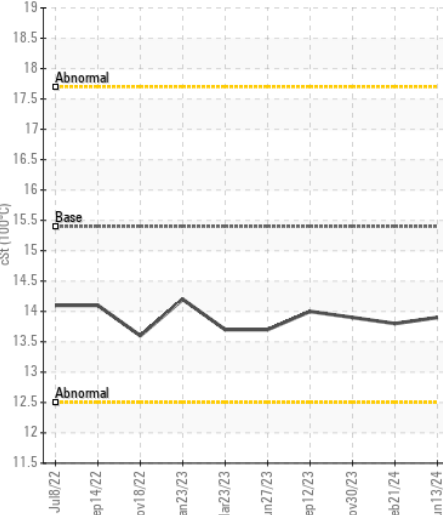
Viscosity @ 100°C



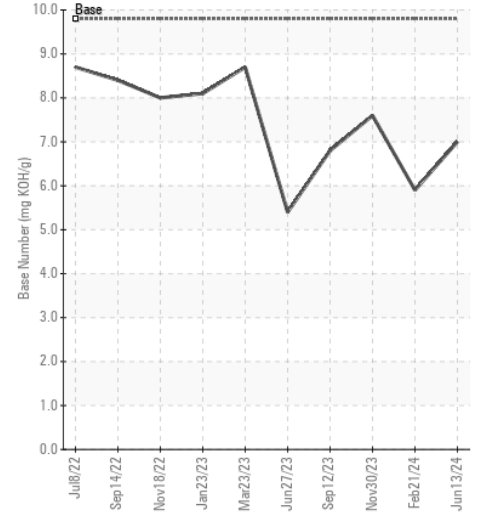
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0901449 **Received** : 28 Jun 2024
Lab Number : 06224239 **Tested** : 02 Jul 2024
Unique Number : 11102436 **Diagnosed** : 02 Jul 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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)