



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

AMRTS

Machine Id

[AMRTS] 925

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (24 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0901467	WC0901442	WC0843741
Sample Date		Client Info		15 May 2024	27 Feb 2024	01 Dec 2023
Machine Age	mls	Client Info		303659	296162	289084
Oil Age	mls	Client Info		7497	7078	7192
Filter Age	mls	Client Info		7497	7078	7192
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	12	11	11
Chromium	ppm	ASTM D5185m	>5	1	0	<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	3	1	2
Lead	ppm	ASTM D5185m	>25	<1	0	<1
Copper	ppm	ASTM D5185m	>100	2	<1	1
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

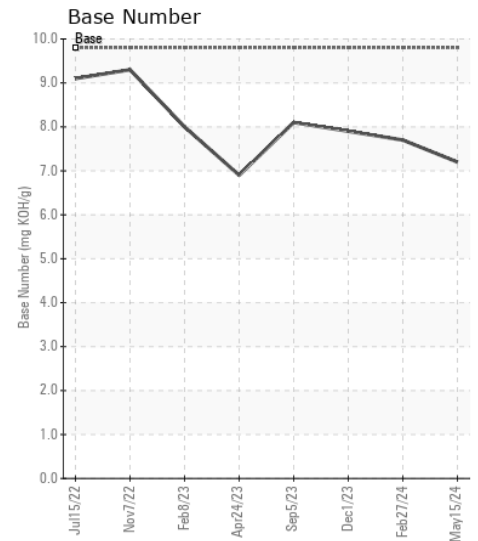
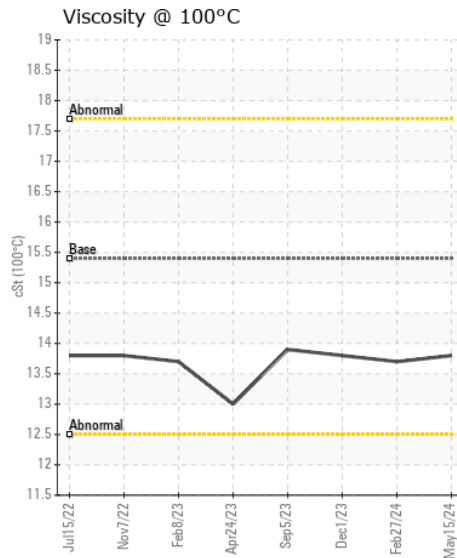
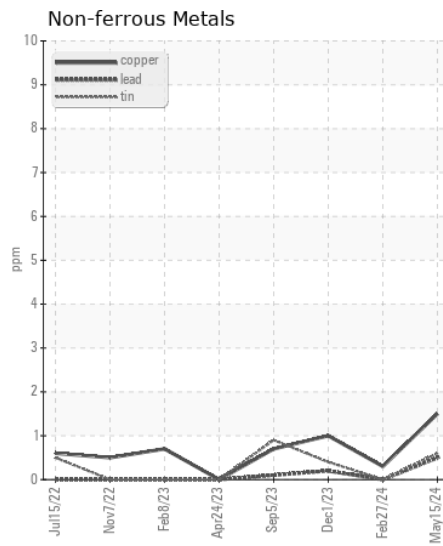
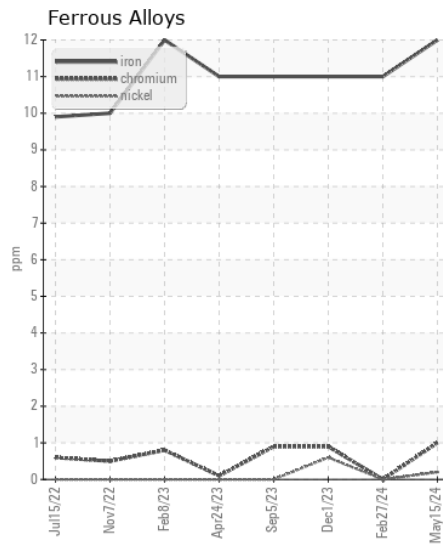
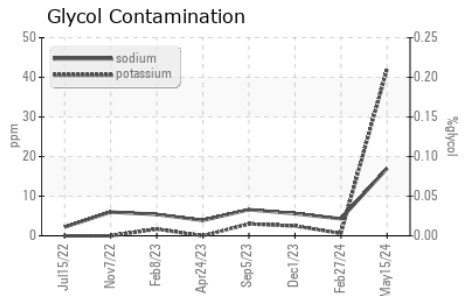
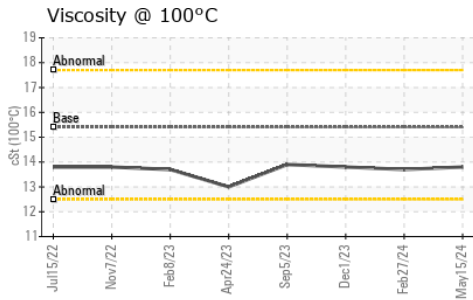
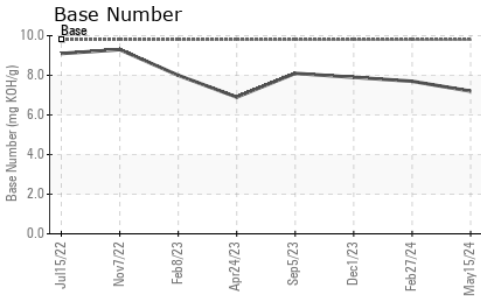
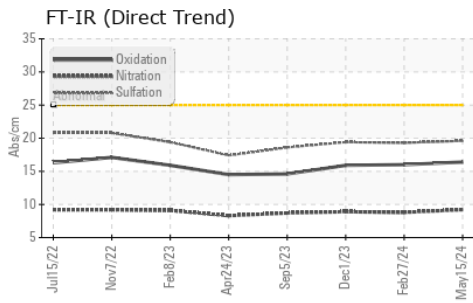
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	6	3	4
Potassium	ppm	ASTM D5185m	>20	42	<1	2
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	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.8	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.3	19.4
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		17	4	6
Boron	ppm	ASTM D5185m	0	3	3	2
Barium	ppm	ASTM D5185m	0	0	0	12
Molybdenum	ppm	ASTM D5185m	60	65	66	60
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	985	1221	947
Calcium	ppm	ASTM D5185m	1070	1116	1293	1028
Phosphorus	ppm	ASTM D5185m	1150	1021	1288	982
Zinc	ppm	ASTM D5185m	1270	1306	1595	1231
Sulfur	ppm	ASTM D5185m	2060	3240	3739	3148
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	16.0	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	7.7	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.7	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0901467
Lab Number : 06188516
Unique Number : 11045268
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)