



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
W/C
Machine Id
[W/C] 714

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (18 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0901434	WC0843734	WC0788569
Sample Date		Client Info		13 Mar 2024	12 Dec 2023	21 Jun 2023
Machine Age	mls	Client Info		270102	258366	248198
Oil Age	mls	Client Info		11736	10168	11164
Filter Age	mls	Client Info		11736	10168	11164
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	8	20	22
Chromium	ppm	ASTM D5185m	>5	0	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	5	3
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	<1	1	0
Tin	ppm	ASTM D5185m	>5	<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

CONTAMINATION

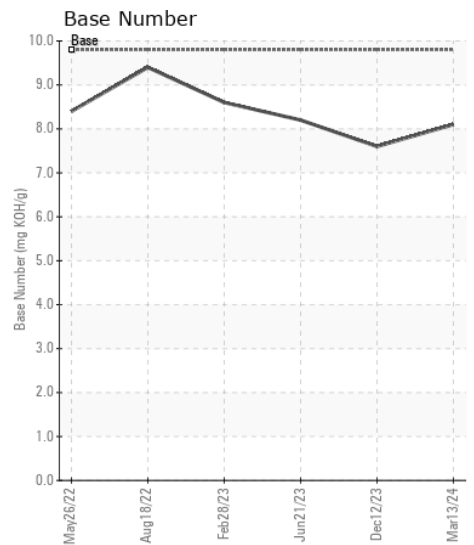
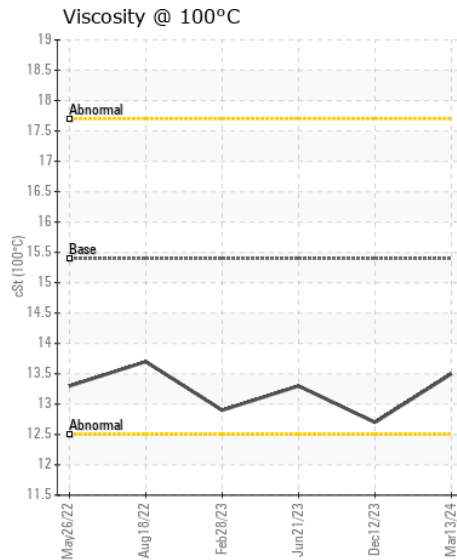
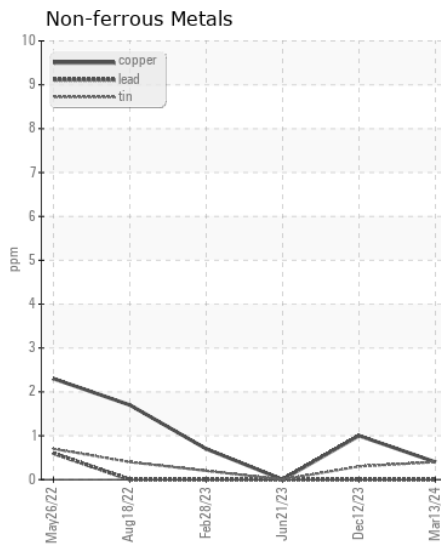
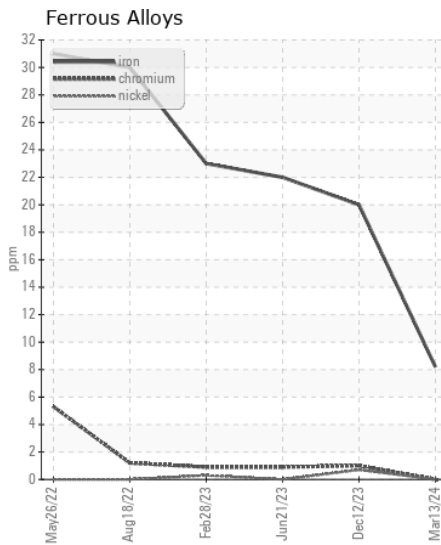
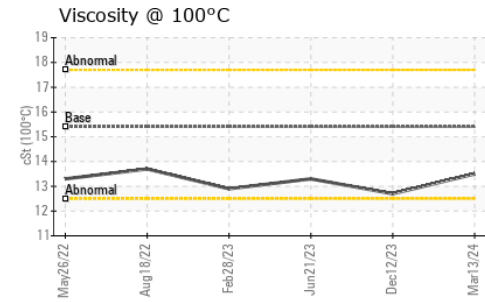
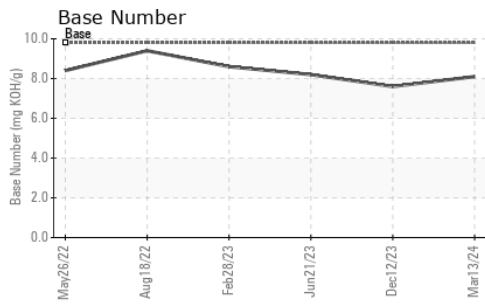
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	19	4
Potassium	ppm	ASTM D5185m	>20	2	6	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	6.6	8.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	19.7	20.8
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		2	3	4
Boron	ppm	ASTM D5185m	0	7	10	8
Barium	ppm	ASTM D5185m	0	0	12	0
Molybdenum	ppm	ASTM D5185m	60	59	65	65
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	955	952	1044
Calcium	ppm	ASTM D5185m	1070	1045	1069	1169
Phosphorus	ppm	ASTM D5185m	1150	1023	995	1076
Zinc	ppm	ASTM D5185m	1270	1249	1234	1347
Sulfur	ppm	ASTM D5185m	2060	3470	3086	3606
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	15.4	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.1	7.6	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	12.7	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0901434
Lab Number : 06124232
Unique Number : 10938383
Test Package : FLEET
Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Wes Davis

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)