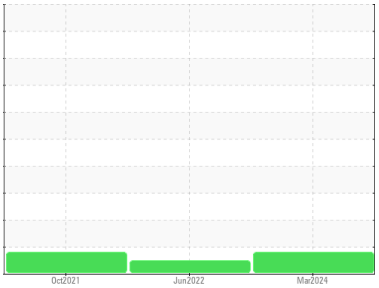
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Sample Rating Trend



WEAR

Machine Id
624224
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The aluminum level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0113642**	PCA0068600	PCA0055085
Sample Date		Client Info		**20 Mar 2024**	11 Jun 2022	04 Oct 2021
Machine Age	mls	Client Info		**226247**	151270	0
Oil Age	mls	Client Info		**74921**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**70**	62	79
Chromium	ppm	ASTM D5185m	>20	**3**	6	14
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>20	▲ **25**	47	142
Lead	ppm	ASTM D5185m	>40	**0**	<1	12
Copper	ppm	ASTM D5185m	>330	**36**	84	▲ 546
Tin	ppm	ASTM D5185m	>15	**0**	2	6
Antimony	ppm	ASTM D5185m		**---**	---	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**4**	7	11
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	50	**70**	56	14
Manganese	ppm	ASTM D5185m	0	**<1**	2	4
Magnesium	ppm	ASTM D5185m	950	**1101**	922	722
Calcium	ppm	ASTM D5185m	1050	**1319**	1190	1278
Phosphorus	ppm	ASTM D5185m	995	**1137**	957	725
Zinc	ppm	ASTM D5185m	1180	**1470**	1192	875
Sulfur	ppm	ASTM D5185m	2600	**3058**	2206	2082

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**8**	6	9
Sodium	ppm	ASTM D5185m		**6**	7	10
Potassium	ppm	ASTM D5185m	>20	**39**	93	287

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**2**	1.8	1.6
Nitration	Abs/cm	*ASTM D7624	>20	**14.1**	14.7	14.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**26.4**	27.5	26.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.9**	24.7	23.1
Base Number (BN)	mg KOH/g	ASTM D2896		**5.4**	4.7	---

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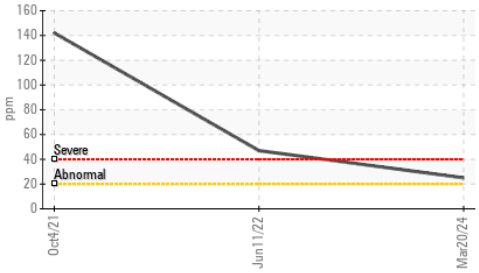
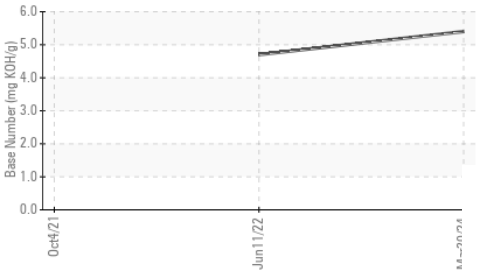
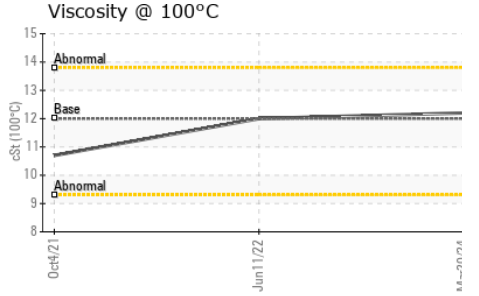
Aluminum (ppm)



Base Number



Viscosity @ 100°C

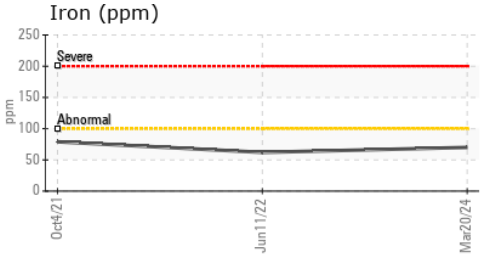


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

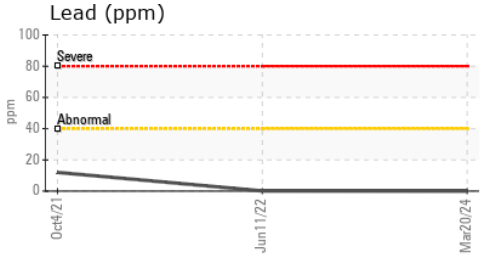
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**12.2**	12.0	10.7

GRAPHS

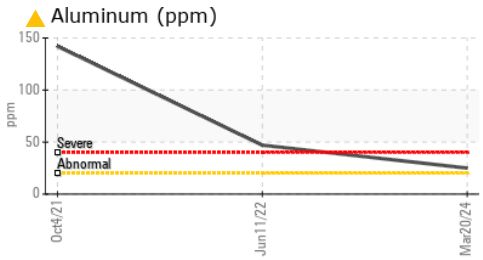
Iron (ppm)



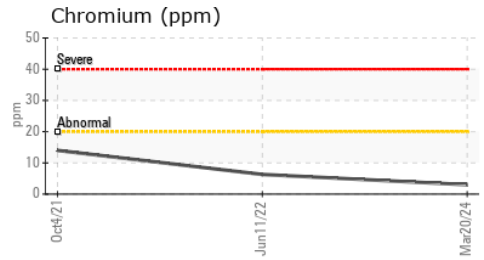
Lead (ppm)



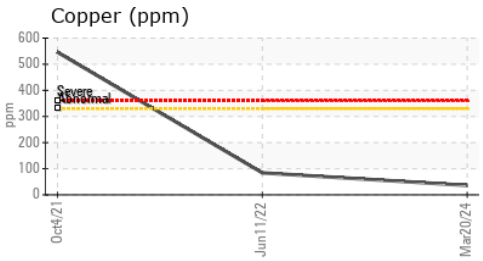
Aluminum (ppm)



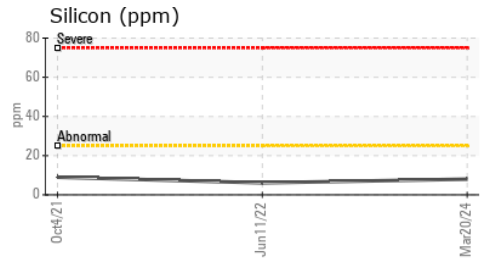
Chromium (ppm)



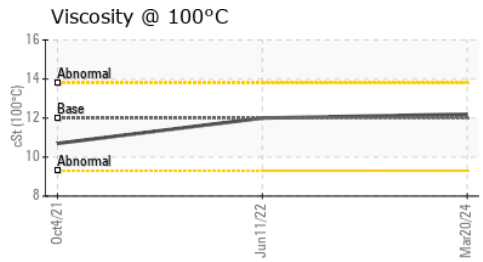
Copper (ppm)



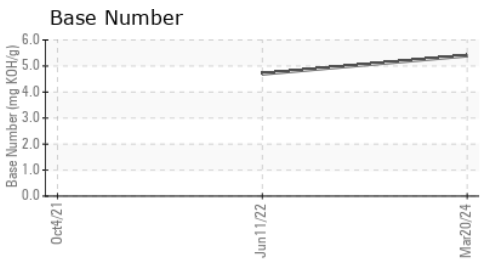
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0113642
Lab Number : 06124626
Unique Number : 10938777
Test Package : MOB 1 (Additional Tests: TBN)

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 23 Mar 2024 - Don Baldridge

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)

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