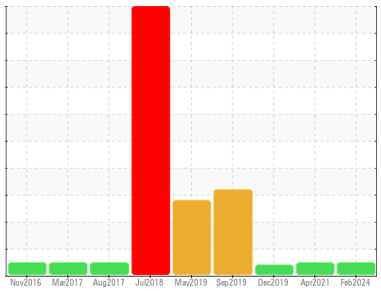
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
150-17
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All 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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0089584**	PCA0050384	LWI-000693
Sample Date		Client Info		**02 Feb 2024**	13 Apr 2021	13 Dec 2019
Machine Age	hrs	Client Info		**248129**	22054	201143
Oil Age	hrs	Client Info		**10000**	9054	10000
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	**35**	35	61
Chromium	ppm	ASTM D5185m	>4	**1**	2	2
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**2**	2	3
Lead	ppm	ASTM D5185m	>50	**<1**	2	1
Copper	ppm	ASTM D5185m	>55	**1**	2	1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	0
Antimony	ppm	ASTM D5185m		**---**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**2**	14	0
Barium	ppm	ASTM D5185m	0	**2**	0	0
Molybdenum	ppm	ASTM D5185m	60	**58**	51	65
Manganese	ppm	ASTM D5185m	0	**0**	<1	0
Magnesium	ppm	ASTM D5185m	1010	**925**	924	1048
Calcium	ppm	ASTM D5185m	1070	**1007**	1256	1140
Phosphorus	ppm	ASTM D5185m	1150	**951**	1092	1081
Zinc	ppm	ASTM D5185m	1270	**1207**	1261	1282
Sulfur	ppm	ASTM D5185m	2060	**2879**	2788	---
Lithium	ppm	ASTM D5185m		**---**	---	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**5**	4	6
Sodium	ppm	ASTM D5185m		**2**	4	12
Potassium	ppm	ASTM D5185m	>20	**1**	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**1.4**	2.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**9.3**	11.4	15
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.2**	24.6	---

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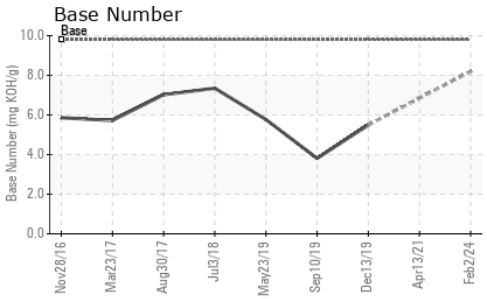
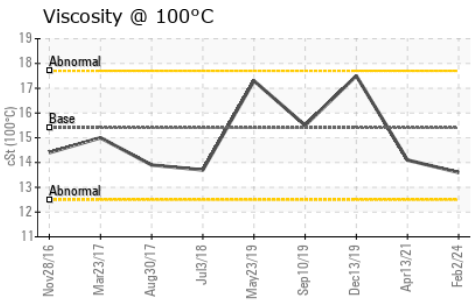


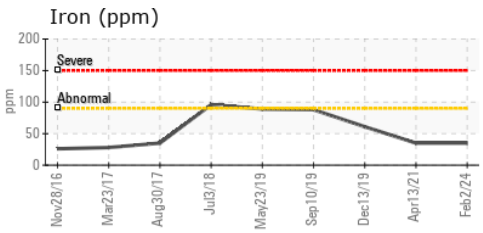


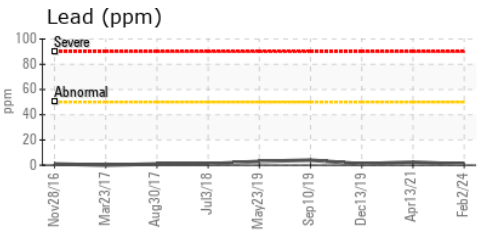
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	18.7	16
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.2**	---	5.49

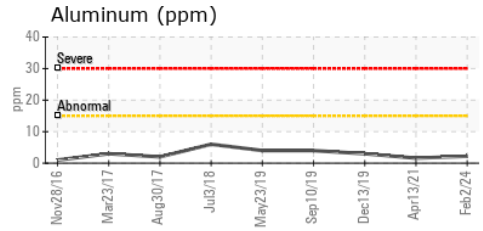
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

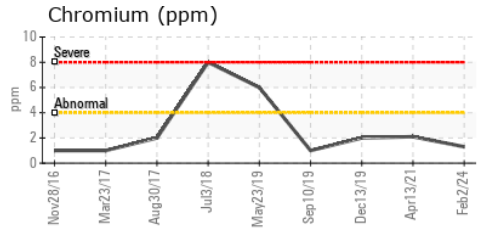
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.6**	14.1	▲ 17.5

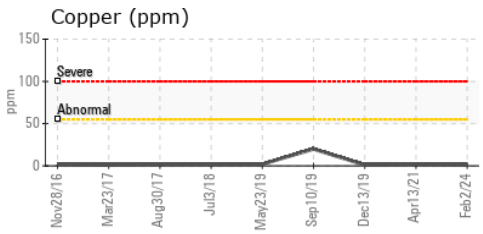
GRAPHS

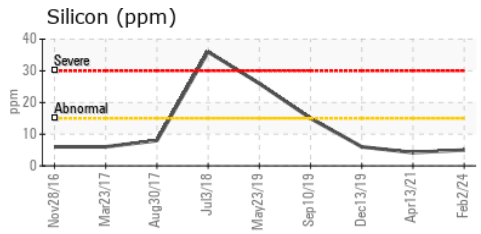


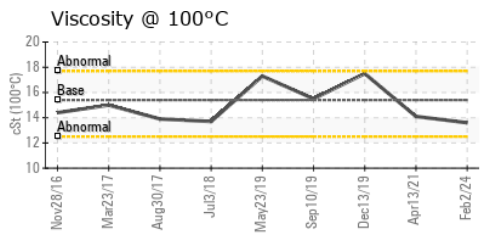


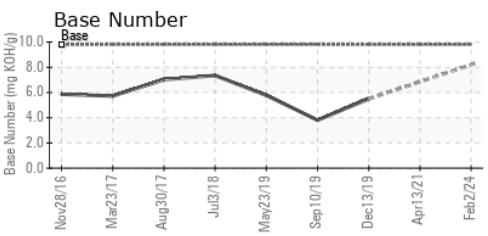












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0089584
Lab Number : 06082225
Unique Number : 10869670
Test Package : MOB 1 (Additional Tests: TBN)

Received : 07 Feb 2024
Tested : 07 Feb 2024
Diagnosed : 07 Feb 2024 - Wes Davis

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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