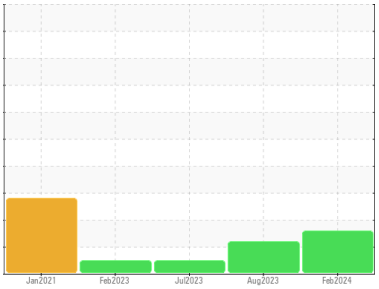
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
706373
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. 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 oil viscosity is higher than normal. The BN level is low.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0114573**	PCA0102939	PCA0100803
Sample Date		Client Info		**08 Feb 2024**	24 Aug 2023	17 Jul 2023
Machine Age	mls	Client Info		**694836**	74845	37789
Oil Age	mls	Client Info		**100000**	74845	37789
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

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	**66**	62	44
Chromium	ppm	ASTM D5185m	>20	**2**	3	2
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	7	7
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**8**	12	8
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**17**	58	57
Tin	ppm	ASTM D5185m	>15	**<1**	2	2
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	**17**	2	1
Barium	ppm	ASTM D5185m	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	50	**10**	57	57
Manganese	ppm	ASTM D5185m	0	**<1**	1	1
Magnesium	ppm	ASTM D5185m	950	**188**	940	912
Calcium	ppm	ASTM D5185m	1050	**2119**	1376	1377
Phosphorus	ppm	ASTM D5185m	995	**908**	1055	1014
Zinc	ppm	ASTM D5185m	1180	**1282**	1388	1300
Sulfur	ppm	ASTM D5185m	2600	**3047**	2709	2749

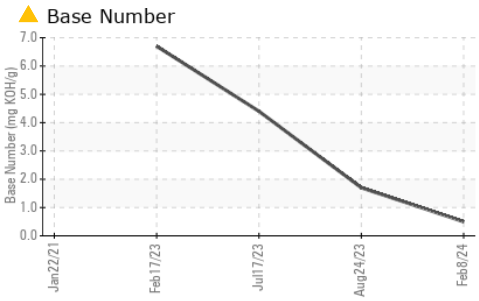
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**10**	8	6
Sodium	ppm	ASTM D5185m		**0**	4	4
Potassium	ppm	ASTM D5185m	>20	**16**	9	6

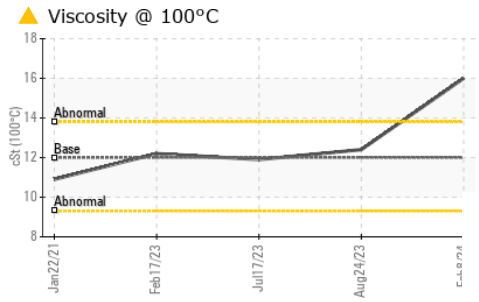
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.8**	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**17.7**	19.0	13.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**35.5**	28.8	25.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**41.0**	34.3	25.2
Base Number (BN)	mg KOH/g	ASTM D2896		▲ **0.5**	▲ 1.7	4.4

OIL ANALYSIS REPORT

OIL DIAGNOSTICS

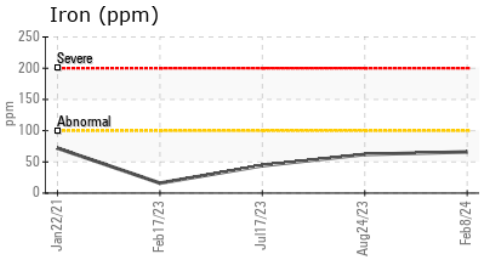


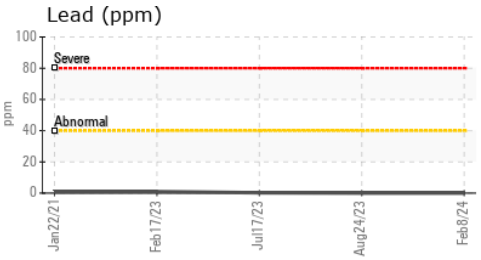


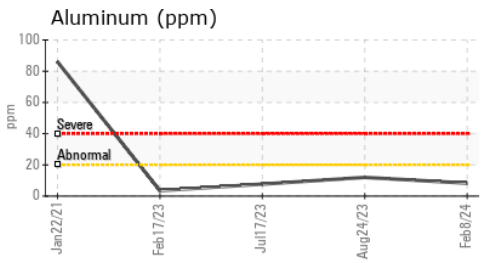
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

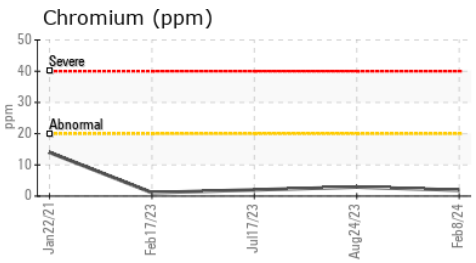
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	▲ **16.0**	12.4	11.9

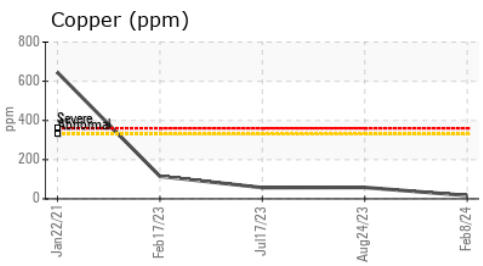
GRAPHS

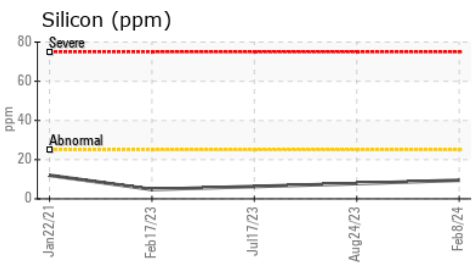


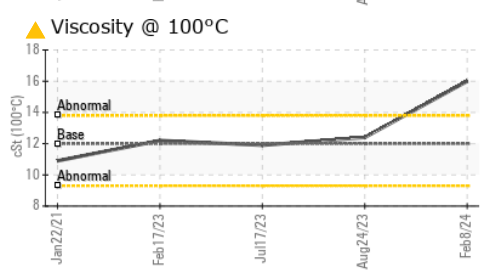


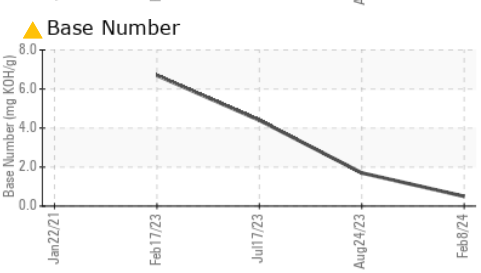












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0114573
Lab Number : 06095306
Unique Number : 10888159
Test Package : MOB 1 (Additional Tests: TBN)

Received : 21 Feb 2024
Tested : 22 Feb 2024
Diagnosed : 22 Feb 2024 - Sean Felton

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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