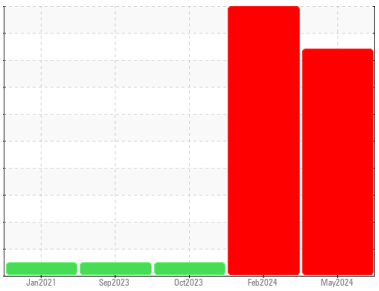
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
186487
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Wear
Metal levels are typical for a new component breaking in.

Contamination
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0125240**	PCA0114583	PCA0108388
Sample Date		Client Info		**09 May 2024**	08 Feb 2024	12 Oct 2023
Machine Age	mls	Client Info		**2784**	50004	47332
Oil Age	mls	Client Info		**2784**	0	47332
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Sample Status				**SEVERE**	SEVERE	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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**19**	6	4
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**15**	23	<1
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**5**	2	2
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**2**	1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**22**	42	11
Barium	ppm	ASTM D5185m	0	**2**	<1	0
Molybdenum	ppm	ASTM D5185m	50	**122**	86	60
Manganese	ppm	ASTM D5185m	0	**<1**	0	0
Magnesium	ppm	ASTM D5185m	950	**809**	1133	783
Calcium	ppm	ASTM D5185m	1050	**1115**	1499	1174
Phosphorus	ppm	ASTM D5185m	995	**1005**	1301	990
Zinc	ppm	ASTM D5185m	1180	**1166**	1615	1181
Sulfur	ppm	ASTM D5185m	2600	**3691**	4658	3481

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**9**	13	6
Sodium	ppm	ASTM D5185m		**924**	322	67
Potassium	ppm	ASTM D5185m	>20	**555**	170	14
Glycol	%	*ASTM D2982		**0.10**	0.10	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**11.7**	6.8	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.5**	17.5	16.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.0**	13.4	12.5
Base Number (BN)	mg KOH/g	ASTM D2896		**10.0**	10.2	8.8

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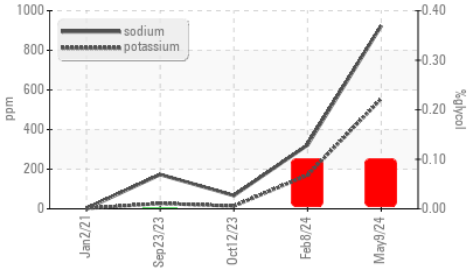
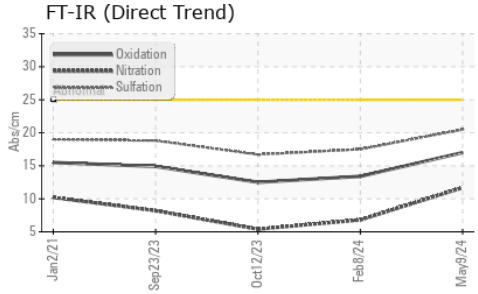
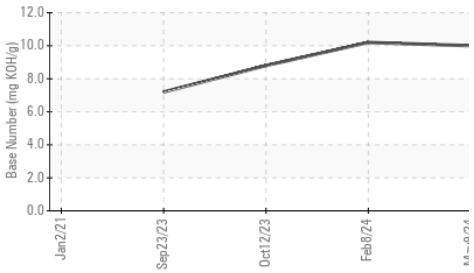
Glycol Contamination



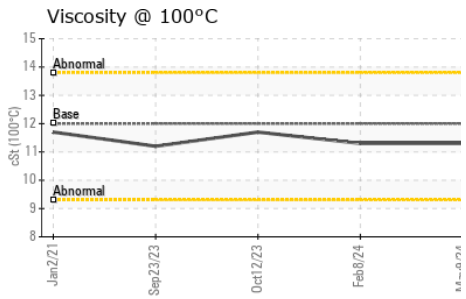
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

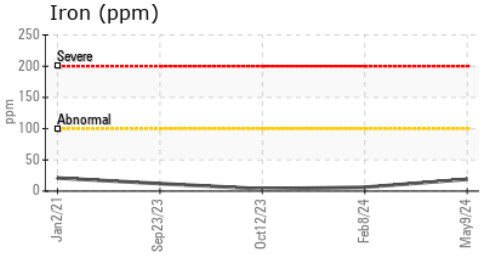


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

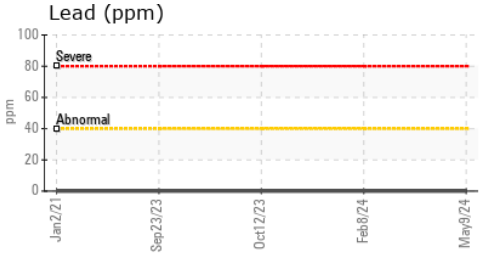
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**11.3**	11.3	11.7

GRAPHS

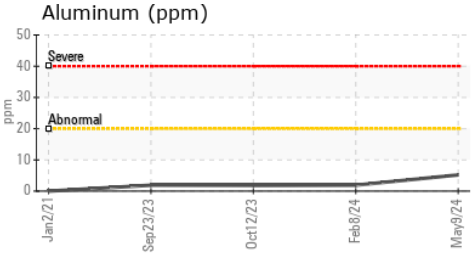
Iron (ppm)



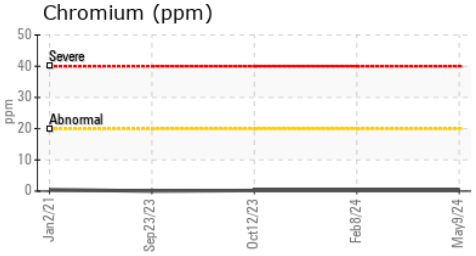
Lead (ppm)



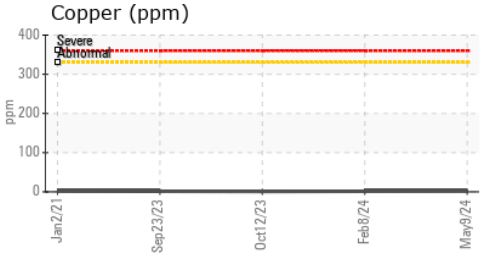
Aluminum (ppm)



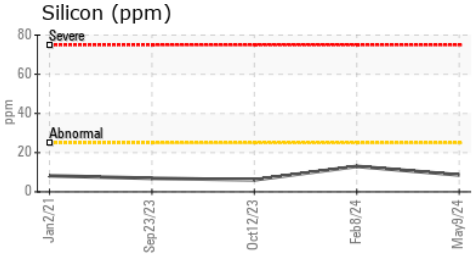
Chromium (ppm)



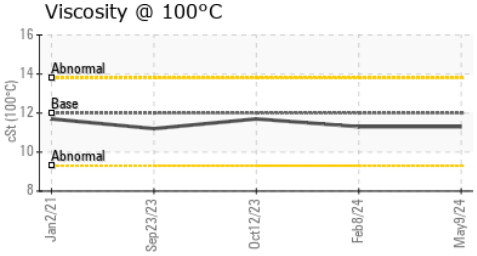
Copper (ppm)



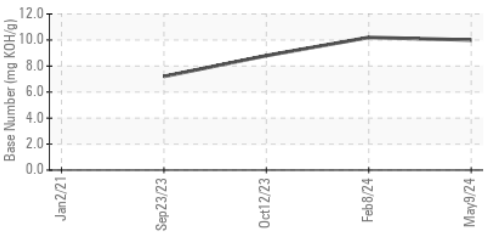
Silicon (ppm)



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0125240
Lab Number : 06195256
Unique Number : 11057379
Test Package : MOB 1 (Additional Tests: TBN)

Received : 30 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 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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Report Id: MILPHINE [WUSCAR] 06195256 (Generated: 05/31/2024 12:33:08) Rev: 1

Contact/Location: ROSTY VITER - MILPHINE