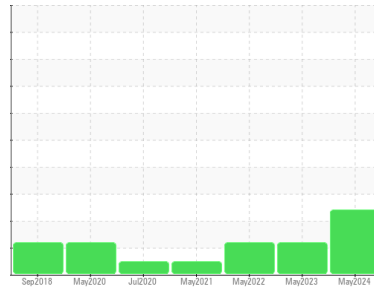




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area

(EQ2072) S

Machine Id
Denise BPS (S/N 662540, 2086454)

Component

Diesel Engine

Fluid

PETRO CANADA DURON UHP 5W40 (15 GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil.

▲ Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0934071	WC0810889	WC0696110
Sample Date	Client Info		08 May 2024	18 May 2023	11 May 2022
Machine Age	hrs	Client Info	490	467	429
Oil Age	hrs	Client Info	61	77	0
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			SEVERE	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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	2	2	2
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >4	0	<1	0
Titanium	ppm	ASTM D5185m	9	8	9
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	2	<1
Lead	ppm	ASTM D5185m >40	2	2	2
Copper	ppm	ASTM D5185m >330	3	<1	2
Tin	ppm	ASTM D5185m >15	<1	1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 65	61	67	71
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 65	48	48	48
Manganese	ppm	ASTM D5185m 0	<1	<1	0
Magnesium	ppm	ASTM D5185m 1160	957	977	992
Calcium	ppm	ASTM D5185m 820	952	943	998
Phosphorus	ppm	ASTM D5185m 1160	997	1041	1045
Zinc	ppm	ASTM D5185m 1260	1235	1300	1186
Sulfur	ppm	ASTM D5185m 3000	3964	4260	3079

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	3
Sodium	ppm	ASTM D5185m	2	2	2
Potassium	ppm	ASTM D5185m >20	<1	2	0
Fuel	%	ASTM D3524 >5	▲ 8.7	▲ 6.7	▲ 6.4

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	9.5	9.0	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.1	19.5	18.6

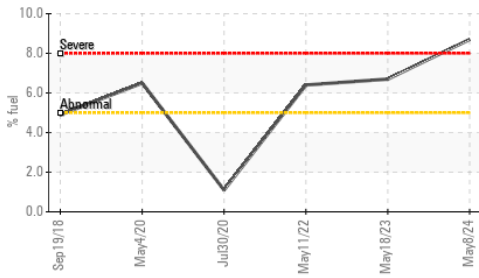
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.6	18.8	17.1
Base Number (BN)	mg KOH/g	ASTM D2896 11.0	8.0	8.9	8.6

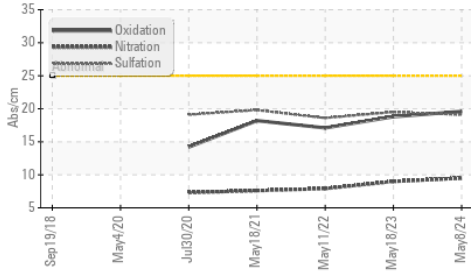


OIL ANALYSIS REPORT

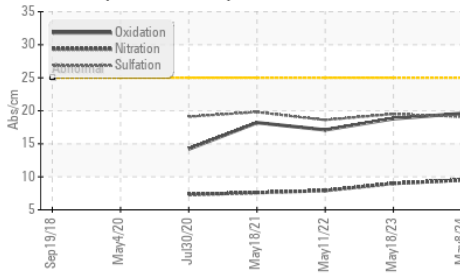
Fuel Dilution



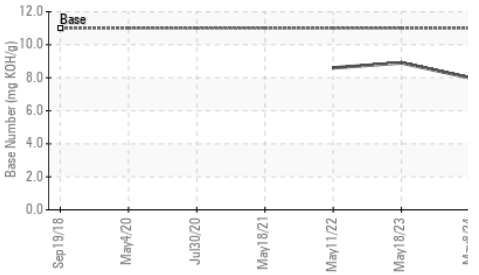
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

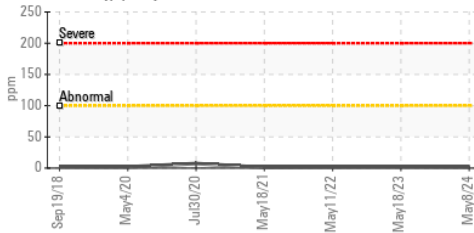


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

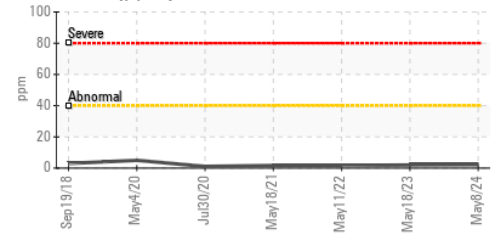
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.3	▲ 11.6	▲ 12.1

GRAPHS

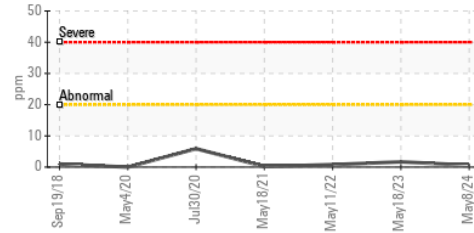
Iron (ppm)



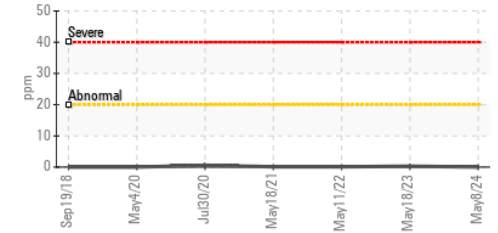
Lead (ppm)



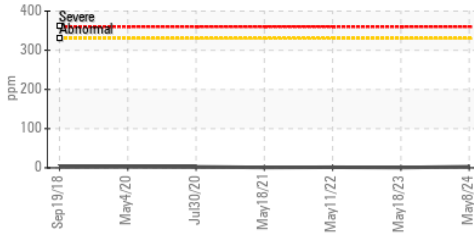
Aluminum (ppm)



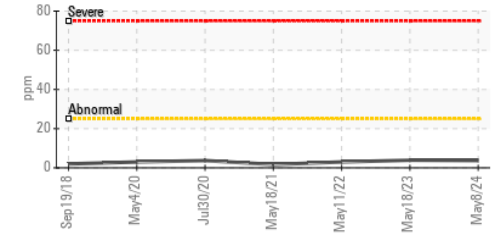
Chromium (ppm)



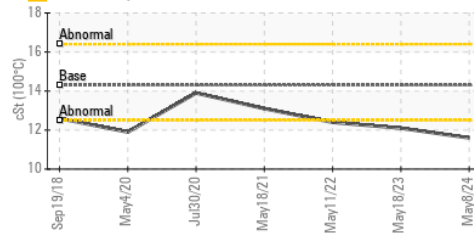
Copper (ppm)



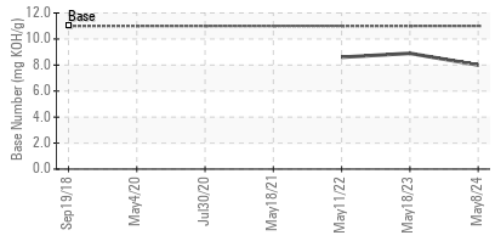
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0934071

Lab Number : 06176908

Unique Number : 11022961

Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

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)

Received : 13 May 2024

Tested : 15 May 2024

Diagnosed : 15 May 2024 - Sean Felton

MONROE COUNTY WATER AUTHORITY

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ROCHESTER, NY

US 14612

Contact: SCOTT TRAIL

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