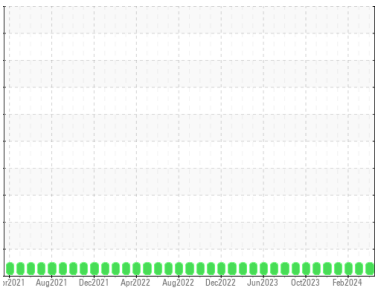
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
ALBERT LEA
Machine Id
Unit 04 DB010104E
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON MONOGRADE HD 40W (350 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. (Customer Sample Comment: 241 gallons of lube oil added in March.)

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0106493**	PCA0098890	PCA0106490
Sample Date		Client Info		**10 Apr 2024**	29 Feb 2024	28 Feb 2024
Machine Age	hrs	Client Info		**15460**	15137	15137
Oil Age	hrs	Client Info		**15460**	42	15137
Oil Changed		Client Info		**Oil Added**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**4**	<1	<1
Chromium	ppm	ASTM D5185m	>4	**0**	0	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**<1**	<1	2
Lead	ppm	ASTM D5185m	>30	**<1**	<1	0
Copper	ppm	ASTM D5185m	>35	**1**	0	1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
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		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**1**	<1	2
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**882**	904	955
Calcium	ppm	ASTM D5185m		**1017**	990	1034
Phosphorus	ppm	ASTM D5185m		**1097**	1125	1077
Zinc	ppm	ASTM D5185m		**1161**	1297	1385
Sulfur	ppm	ASTM D5185m		**3413**	3162	3190

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**2**	26	3
Sodium	ppm	ASTM D5185m		**1**	1	0
Potassium	ppm	ASTM D5185m	>20	**0**	0	1
Fuel	%	ASTM D3524	>4.0	**1.1**	0.7	1.1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**3.8**	2.9	3.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**13.2**	12.0	13.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**6.8**	5.6	6.7
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.61**	1.76	1.79
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.14**	7.83	8.56

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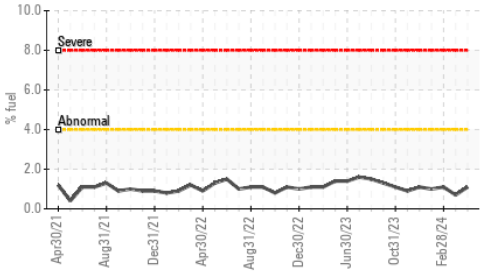
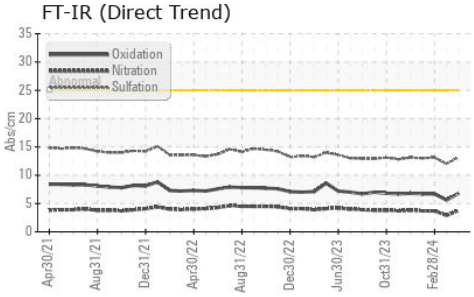
OIL DIAGNOSTICS

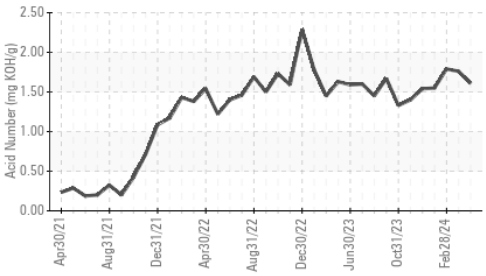
Fuel Dilution



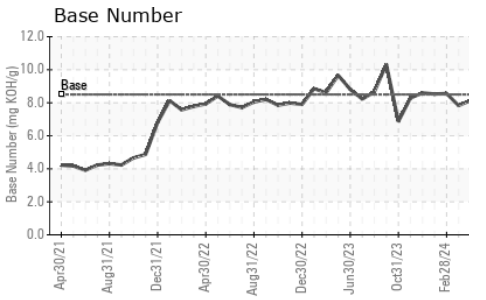
FT-IR (Direct Trend)



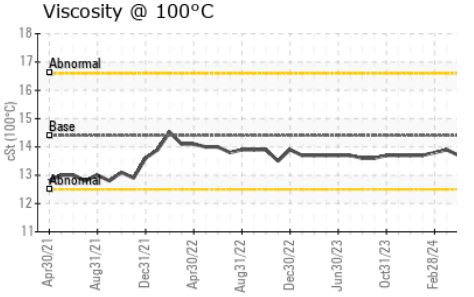
Acid Number



Base Number



Viscosity @ 100°C

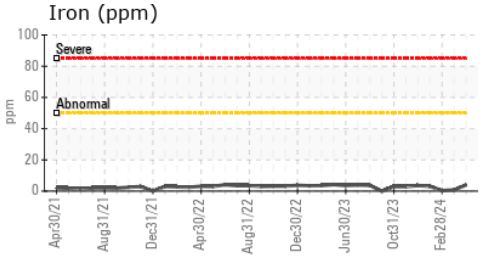


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

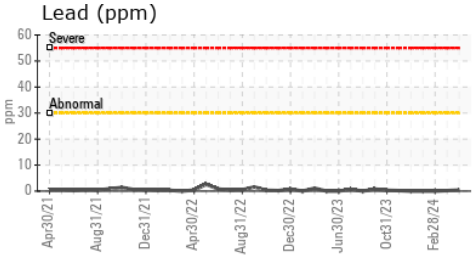
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**13.7**	13.9	13.8

GRAPHS

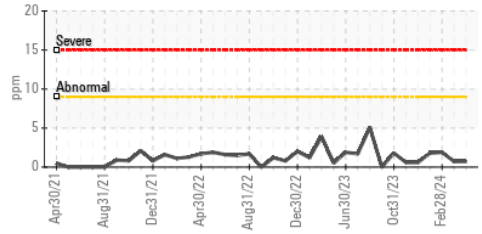
Iron (ppm)



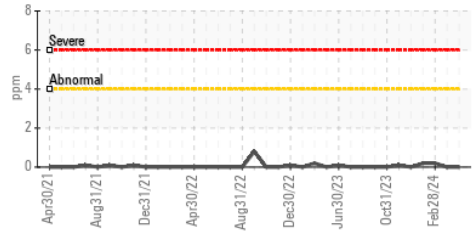
Lead (ppm)



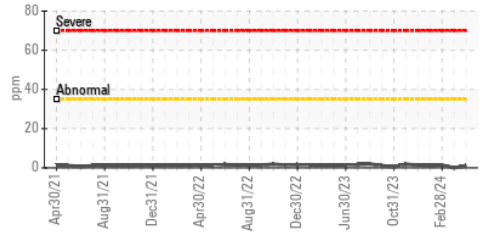
Aluminum (ppm)



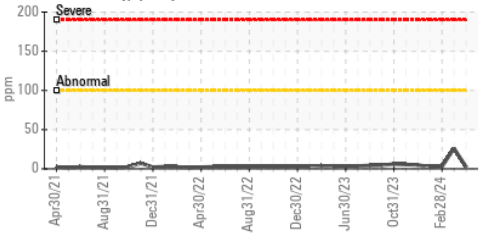
Chromium (ppm)



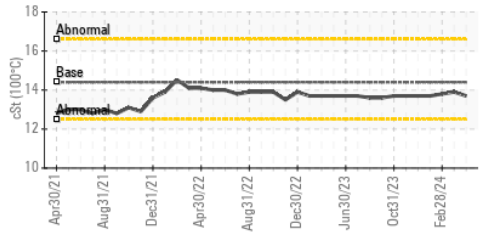
Copper (ppm)



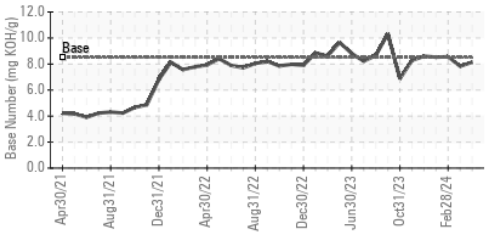
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106493
Lab Number : 06154649
Unique Number : 10990072
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 19 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 23 Apr 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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