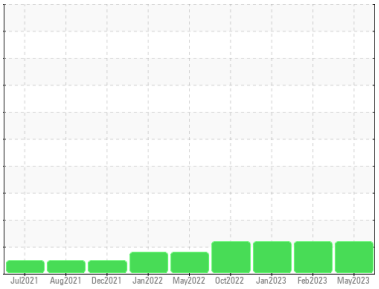
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
RIDGEWAY
Machine Id
[RIDGEWAY] DB170105E Unit 05
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON MONOGRADE HD 40W (350 GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

▲ Contamination
There is a moderate amount of fuel present in the oil.

▲ Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0094544**	PCA0053726	PCA0053713
Sample Date		Client Info		**30 May 2023**	27 Feb 2023	31 Jan 2023
Machine Age	hrs	Client Info		**28301**	27526	27273
Oil Age	hrs	Client Info		**3891**	3116	2863
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**11**	14	14
Chromium	ppm	ASTM D5185m	>4	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**3**	2	2
Lead	ppm	ASTM D5185m	>30	**2**	2	3
Copper	ppm	ASTM D5185m	>35	**4**	5	6
Tin	ppm	ASTM D5185m	>4	**1**	<1	<1
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		**14**	16	16
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**18**	21	22
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**832**	687	699
Calcium	ppm	ASTM D5185m		**1239**	1209	1208
Phosphorus	ppm	ASTM D5185m		**1066**	885	979
Zinc	ppm	ASTM D5185m		**1275**	1085	1162
Sulfur	ppm	ASTM D5185m		**3869**	3081	3234

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**3**	5	4
Sodium	ppm	ASTM D5185m		**3**	2	<1
Potassium	ppm	ASTM D5185m	>20	**<1**	0	2
Fuel	%	ASTM D3524	>4.0	▲ **4.6**	▲ 6.8	▲ 6.5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**5.0**	4.9	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**14.1**	13.9	13.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**7.2**	7.1	6.9
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.35**	1.11	1.13
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**10.09**	6.96	7.96

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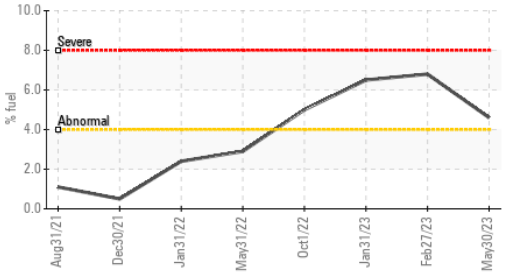
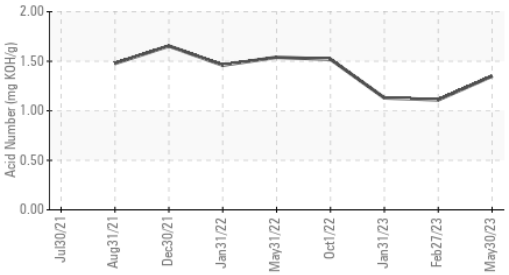
OIL DIAGNOSTICS

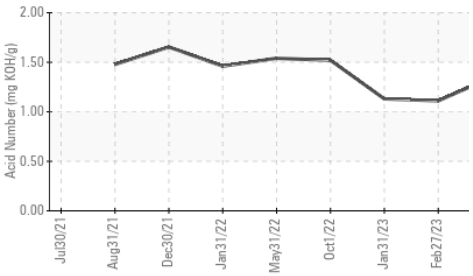
▲ Fuel Dilution



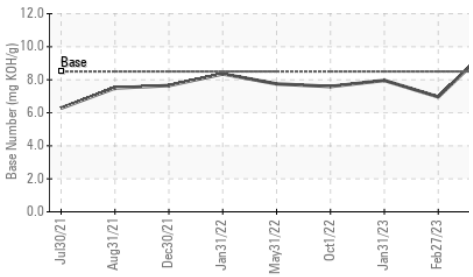
Acid Number



Acid Number



Base Number

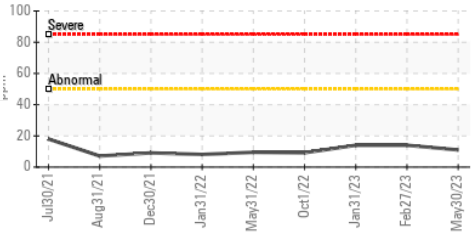


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

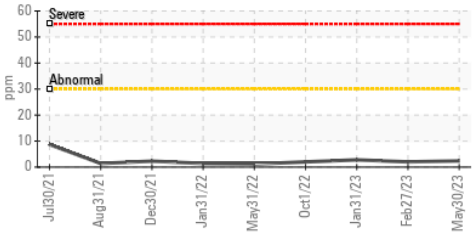
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **12.5**	▲ 11.8	▲ 11.9

GRAPHS

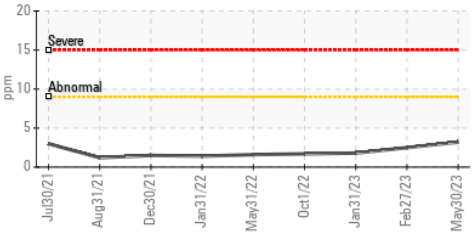
Iron (ppm)



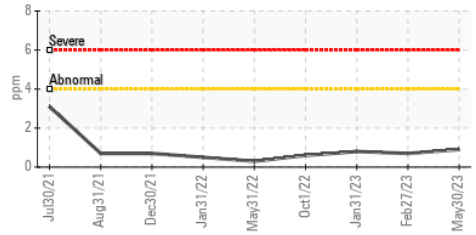
Lead (ppm)



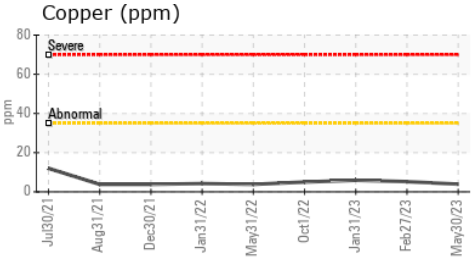
Aluminum (ppm)



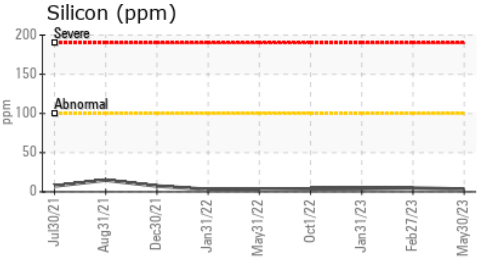
Chromium (ppm)



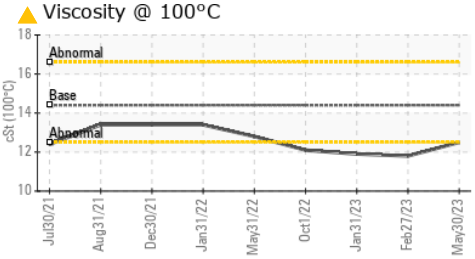
Copper (ppm)



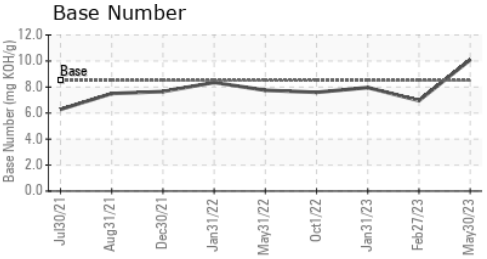
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0094544 **Received** : 05 Jun 2023
Lab Number : 05865235 **Diagnosed** : 07 Jun 2023
Unique Number : 10499700 **Diagnostician** : Don Baldridge
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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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