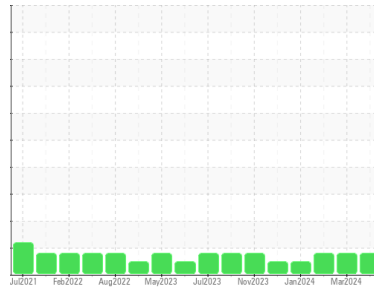


OIL ANALYSIS REPORT

Area
PONCA CITY
 Machine Id
Unit 03 DB130103E
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON MONOGRADE HD 40W (350 GAL)

Sample Rating Trend



FUEL



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	PCA0100348	PCA0100341	PCA0100326
Sample Date	Client Info	03 Apr 2024	05 Mar 2024	05 Feb 2024
Machine Age	hrs	Client Info	1330	1275
Oil Age	hrs	Client Info	1330	1275
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		MARGINAL	MARGINAL	MARGINAL

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	5	7	6
Chromium	ppm ASTM D5185m >4	<1	<1	<1
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m	0	0	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >9	2	3	1
Lead	ppm ASTM D5185m >30	<1	1	1
Copper	ppm ASTM D5185m >35	0	1	2
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	2	2	1
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	1	2	2
Manganese	ppm ASTM D5185m	<1	0	0
Magnesium	ppm ASTM D5185m	896	895	902
Calcium	ppm ASTM D5185m	1118	1166	1074
Phosphorus	ppm ASTM D5185m	1112	1226	983
Zinc	ppm ASTM D5185m	1300	1306	1289
Sulfur	ppm ASTM D5185m	3602	3468	2921

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	9	13	4
Sodium	ppm ASTM D5185m	2	0	0
Potassium	ppm ASTM D5185m >20	<1	1	2
Fuel	% ASTM D3524 >4.0	▲ 2.1	▲ 2.0	▲ 2.0

INFRA-RED

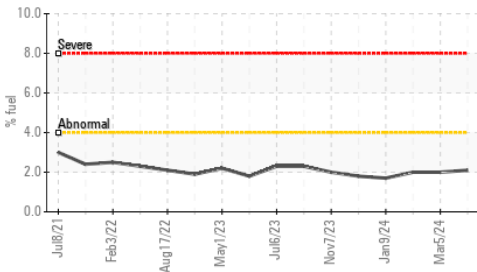
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	4.2	4.3	4.2
Sulfation	Abs/.1mm *ASTM D7415 >30	13.2	13.0	13.1

FLUID DEGRADATION

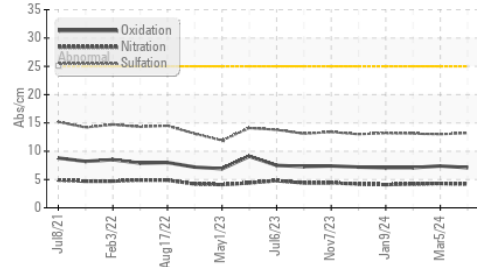
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	7.1	7.4	7.1
Acid Number (AN)	mg KOH/g ASTM D8045	1.55	1.84	1.37
Base Number (BN)	mg KOH/g ASTM D2896 8.5	8.09	8.28	8.29

OIL ANALYSIS REPORT

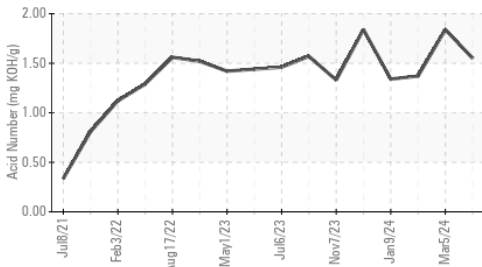
Fuel Dilution



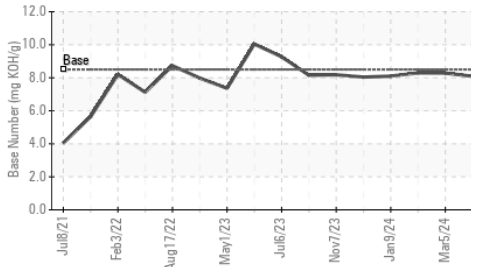
FT-IR (Direct Trend)



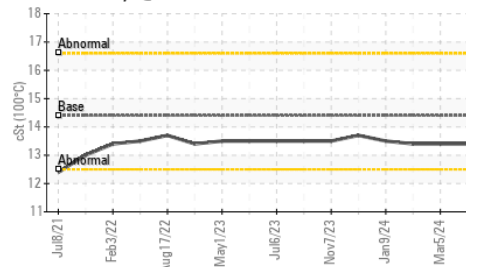
Acid Number



Base Number



Viscosity @ 100°C

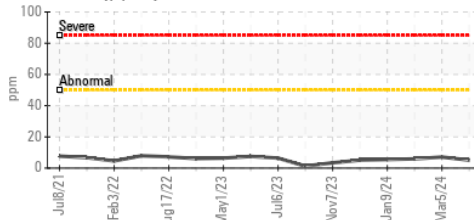


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

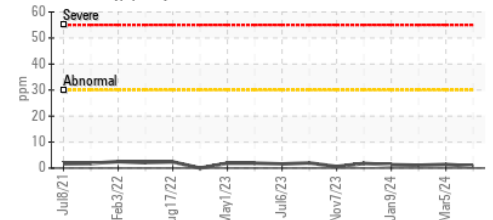
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.4

GRAPHS

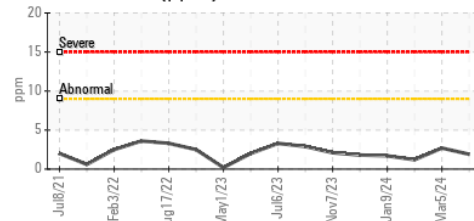
Iron (ppm)



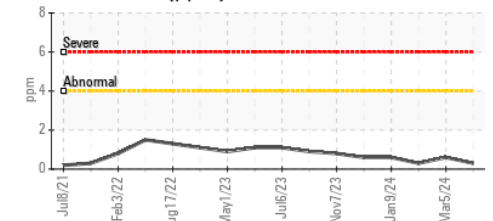
Lead (ppm)



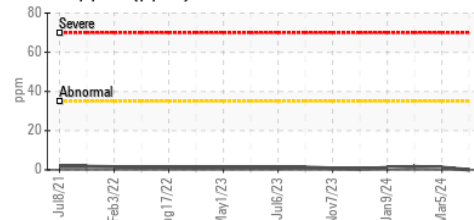
Aluminum (ppm)



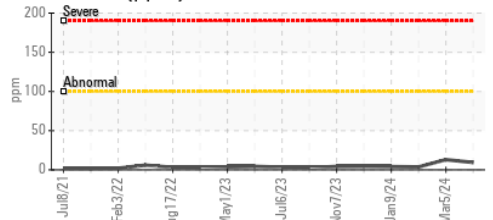
Chromium (ppm)



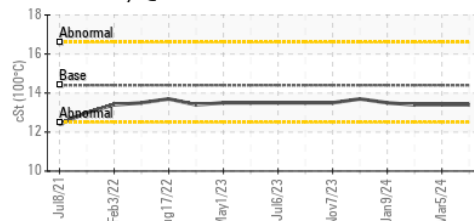
Copper (ppm)



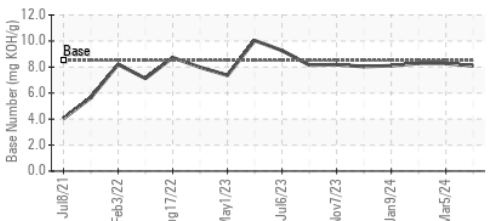
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : PCA0100348

Lab Number : 06157845

Unique Number : 10993268

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)

Received : 23 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Don Baldrige

Magellan Midstream LP - Ponca City

3990 South Union Street

Ponca City, OK

US 74601

Contact: Jake Daniel

Jacob.Daniel@magellanlp.com

T:

F: