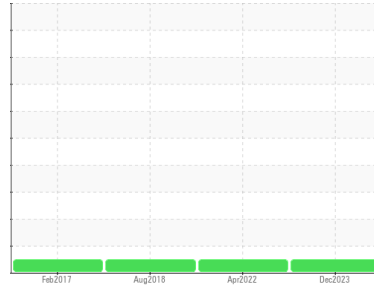


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
JOHN DEERE 600-158
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (21 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0106871	PCA0057444	LWI-S37870
Sample Date	Client Info		05 Dec 2023	13 Apr 2022	15 Aug 2018
Machine Age	hrs	Client Info	5973	5496	4413
Oil Age	hrs	Client Info	500	520	503
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<1.0	<1.0	<1.0
Water	WC Method	>0.21	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >51	21	34	27
Chromium	ppm	ASTM D5185m >11	<1	<1	0
Nickel	ppm	ASTM D5185m >5	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >31	<1	2	2
Lead	ppm	ASTM D5185m >26	<1	2	0
Copper	ppm	ASTM D5185m >26	19	21	4
Tin	ppm	ASTM D5185m >4	0	<1	0
Antimony	ppm	ASTM D5185m	---	---	0
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 0	2	16	18
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	55	46	43
Manganese	ppm	ASTM D5185m 0	<1	2	0
Magnesium	ppm	ASTM D5185m 1010	910	720	722
Calcium	ppm	ASTM D5185m 1070	1139	1506	1736
Phosphorus	ppm	ASTM D5185m 1150	967	1034	1133
Zinc	ppm	ASTM D5185m 1270	1188	1248	1334
Sulfur	ppm	ASTM D5185m 2060	2842	2781	---
Lithium	ppm	ASTM D5185m	---	---	0

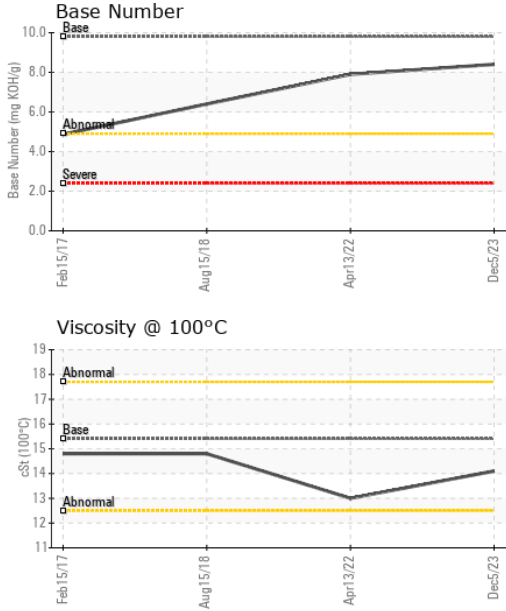
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >22	4	4	3
Sodium	ppm	ASTM D5185m >31	1	4	4
Potassium	ppm	ASTM D5185m >20	0	1	0

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	8.7	9.9	8
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.4	20.8	---

OIL ANALYSIS REPORT

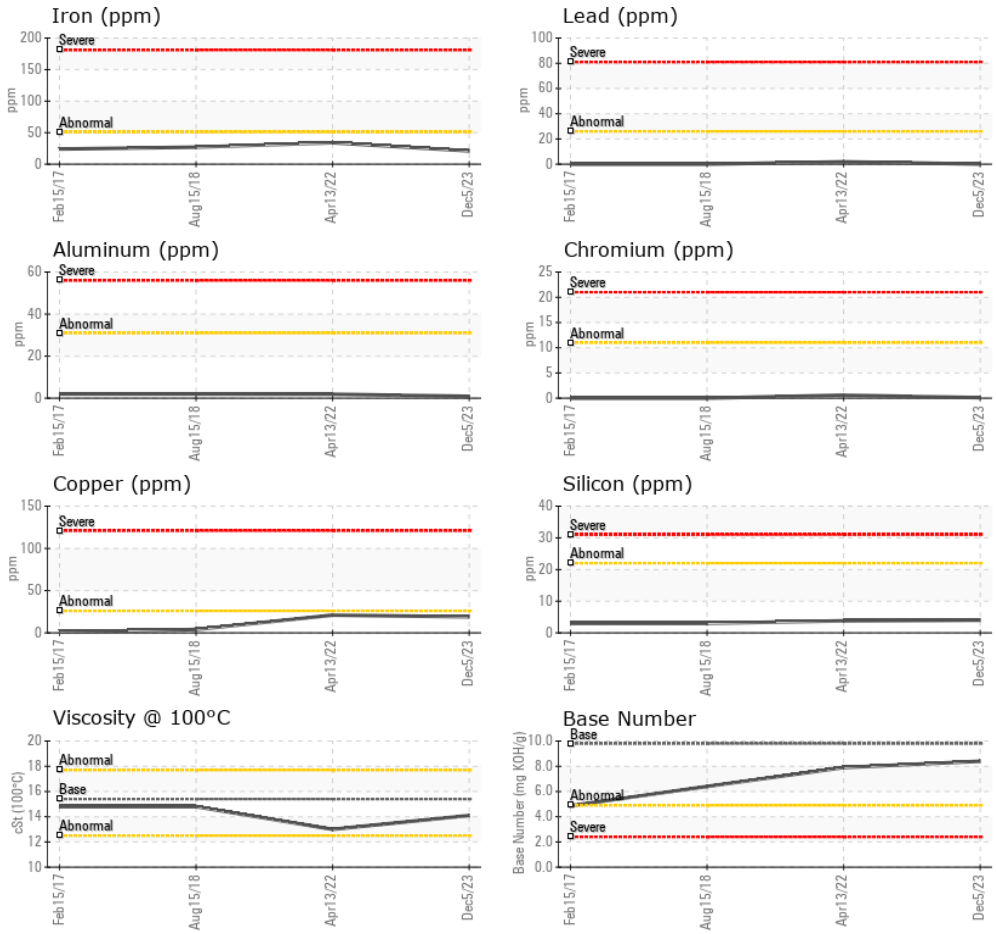


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	>25	14.8	15.3	11
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	7.9	6.4

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	>0.21	NEG	NEG	---
Free Water	scalar	*Visual		NEG	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	13.0	14.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106871 **Received** : 27 Dec 2023
Lab Number : **06046006** **Diagnosed** : 28 Dec 2023
Unique Number : 10806614 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

GE MARSHALL EXCAVATION
 1351 JOLIET RD
 VALPARAISO, IN
 US 46385
 Contact: MARK STEFFEL
 mark.steffel@gemarshall.com

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)

T:
F: