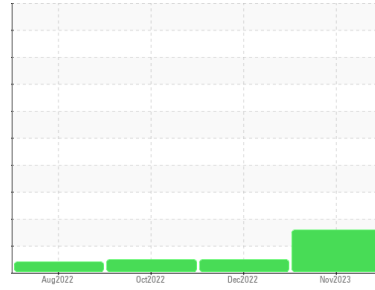


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
EXCAVATOR
Machine Id
JOHN DEERE 350P 2509

Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Bearing and/or bushing wear is indicated. Valve wear is indicated.

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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0064557	PCA0064570	PCA0064342
Sample Date	Client Info			20 Nov 2023	08 Dec 2022	06 Oct 2022
Machine Age	hrs	Client Info		2190	1000	500
Oil Age	hrs	Client Info		2190	1000	500
Oil Changed	Client Info			Changed	N/A	N/A
Sample Status				ABNORMAL	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	47	21	15
Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 11	<1	5
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>31	4	<1	2
Lead	ppm	ASTM D5185m	>26	2	1	1
Copper	ppm	ASTM D5185m	>26	▲ 26	4	3
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		10	7	40
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		102	58	82
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		968	800	930
Calcium	ppm	ASTM D5185m		1165	1164	1260
Phosphorus	ppm	ASTM D5185m		949	938	1019
Zinc	ppm	ASTM D5185m		1261	1136	1228
Sulfur	ppm	ASTM D5185m		2509	3260	3894

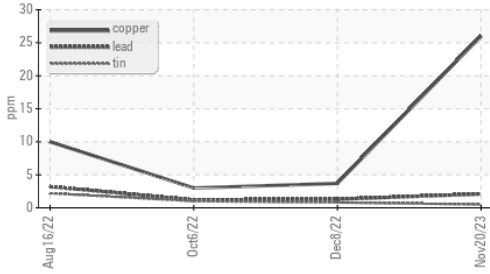
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	8	3	5
Sodium	ppm	ASTM D5185m	>31	5	0	2
Potassium	ppm	ASTM D5185m	>20	2	2	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.1	7.6	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	21.5	21.2

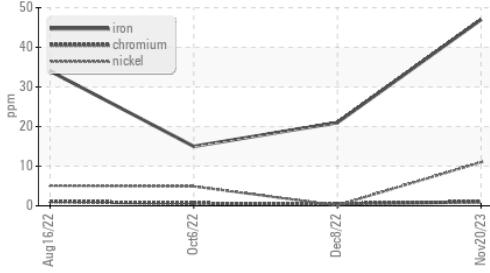
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	17.4	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.4	9.0	10.2

OIL ANALYSIS REPORT

▲ Non-ferrous Metals



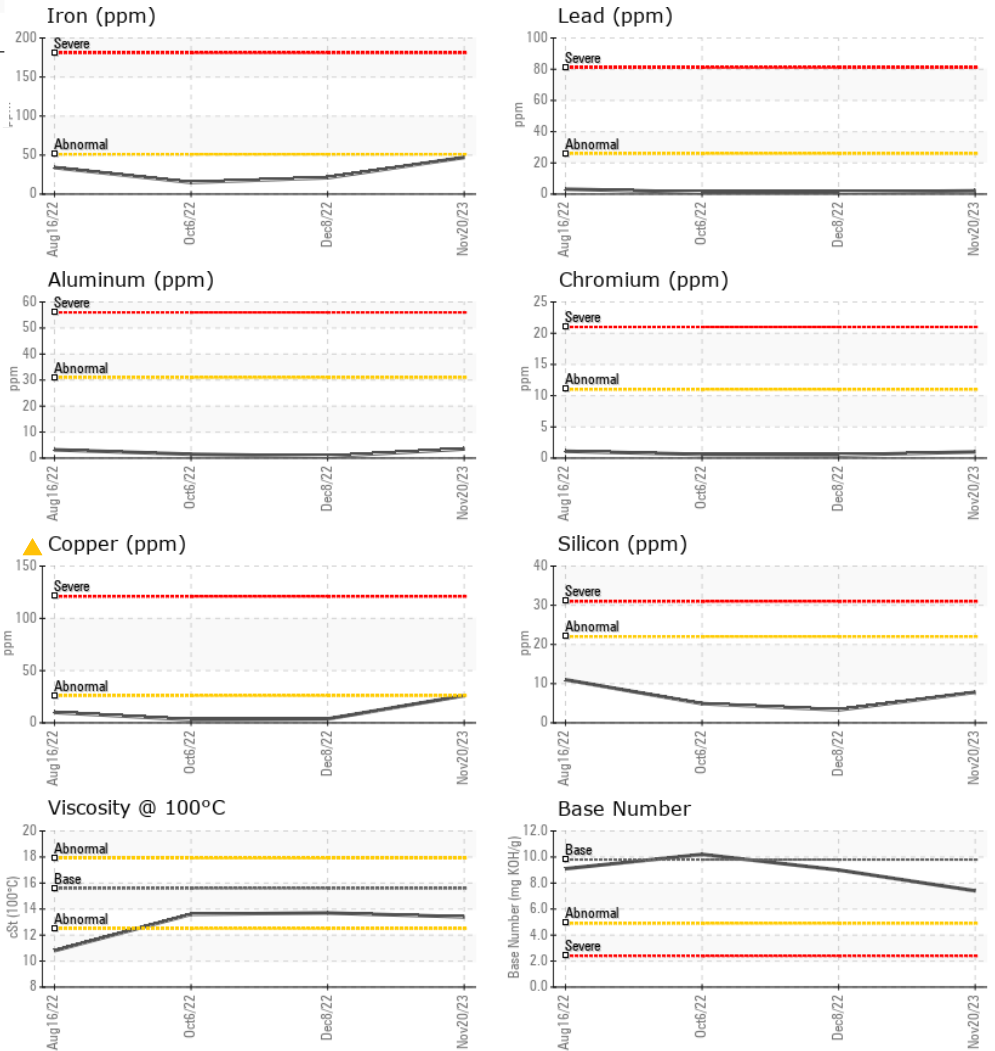
▲ Ferrous Alloys



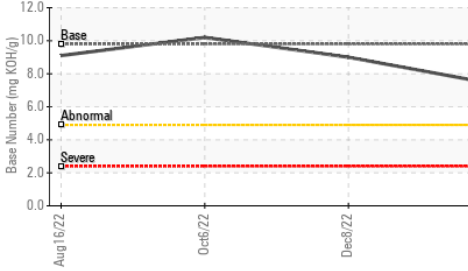
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	15.6	13.4	13.7	13.6

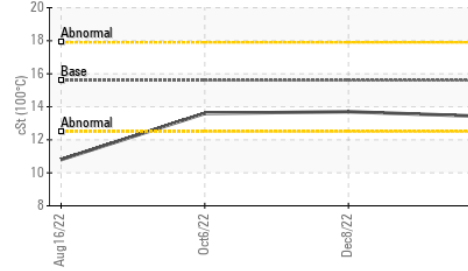
GRAPHS



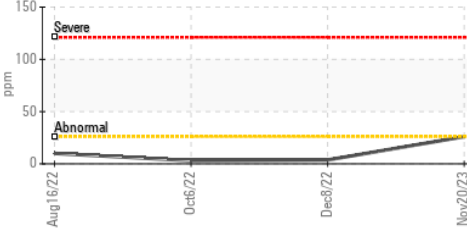
Base Number



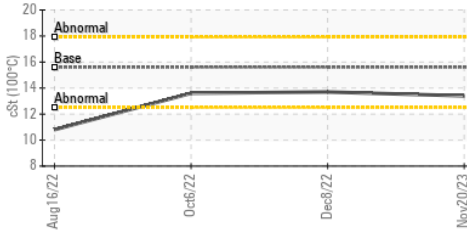
Viscosity @ 100°C



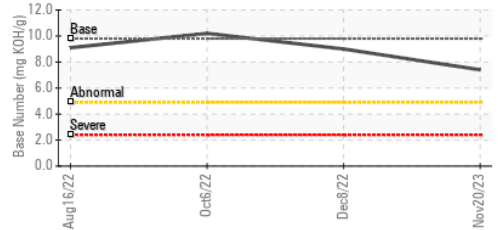
▲ Copper (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0064557 **Received** : 08 Dec 2023
Lab Number : 06029954 **Diagnosed** : 12 Dec 2023
Unique Number : 10779745 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: 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)

D-CONSTRUCTION

1488 S BROADWAY
 COAL CITY, IL
 US 60416

Contact: J. MASCOLO
 J.MASCOLO@DCONSTRUCTION.COM

T: (815)518-3150

F: