



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HAMM HC 120iP WGH0H252HHAA00249
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0219697	JR0203680	---
Sample Date		Client Info		24 Jun 2024	29 Jan 2024	---
Machine Age	hrs	Client Info		1139	0	---
Oil Age	hrs	Client Info		569	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ATTENTION	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	28	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>4	0	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	3	6	---
Lead	ppm	ASTM D5185m	>40	32	26	---
Copper	ppm	ASTM D5185m	>330	15	109	---
Tin	ppm	ASTM D5185m	>15	1	4	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

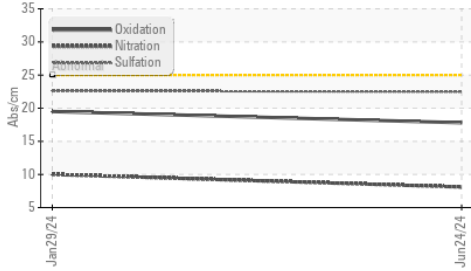
Silicon	ppm	ASTM D5185m	>25	7	11	---
Potassium	ppm	ASTM D5185m	>20	6	4	---
Fuel		WC Method	>5	<1.0	0.8	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	8.1	10.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.6	---
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	>0.2	NEG	NEG	---

FLUID CONDITION

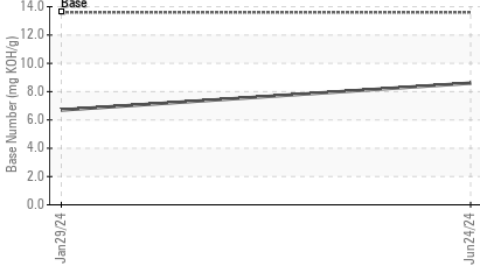
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	4	---
Boron	ppm	ASTM D5185m		137	92	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		133	216	---
Manganese	ppm	ASTM D5185m		<1	3	---
Magnesium	ppm	ASTM D5185m		484	814	---
Calcium	ppm	ASTM D5185m		2227	1649	---
Phosphorus	ppm	ASTM D5185m		1154	1022	---
Zinc	ppm	ASTM D5185m		1387	1278	---
Sulfur	ppm	ASTM D5185m		4298	3336	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	19.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	6.7	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	11.6	---

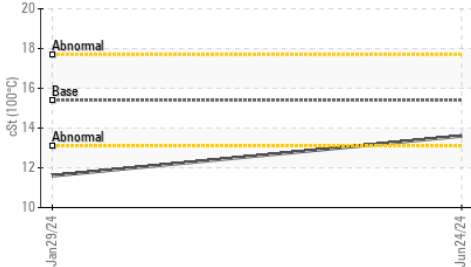
FT-IR (Direct Trend)



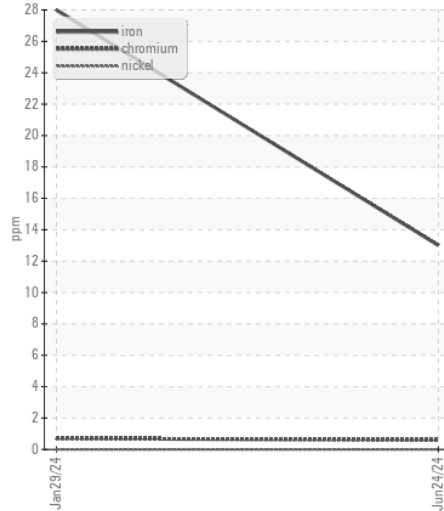
Base Number



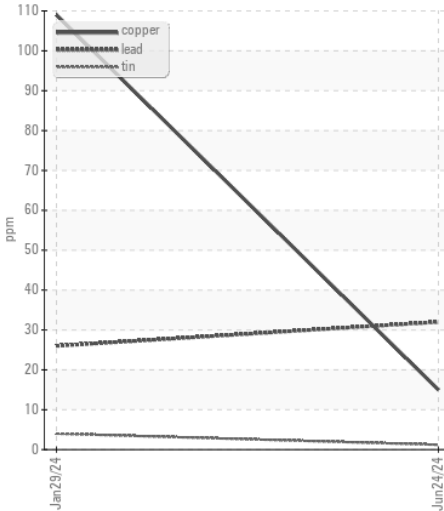
Viscosity @ 100°C



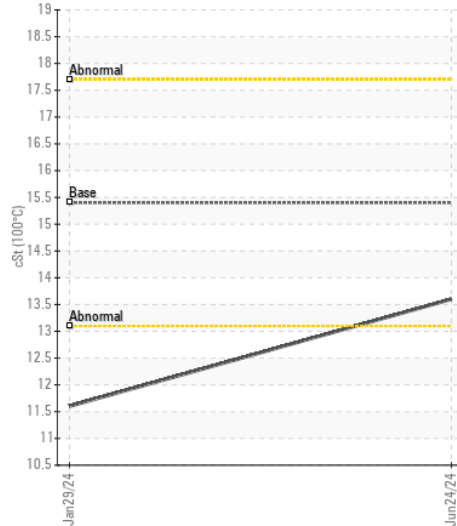
Ferrous Alloys



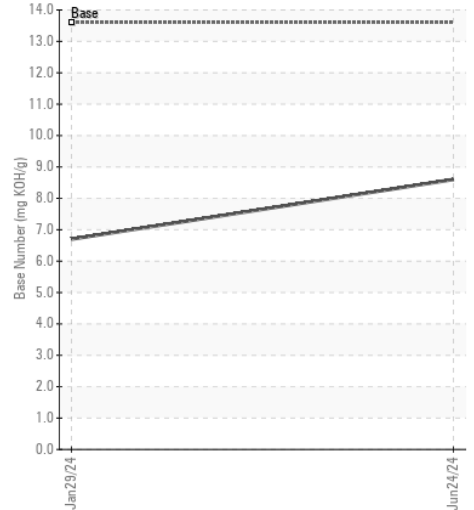
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0219697 **Received** : 01 Jul 2024
Lab Number : 06224307 **Tested** : 02 Jul 2024
Unique Number : 11102504 **Diagnosed** : 02 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

CARLTON'S BACKHOE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: LEO

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: (704)547-0211

F: