



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
EPIROC T35 JPS22SED2703

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0197605	JR0190864	JR0181617
Sample Date		Client Info		15 Jan 2024	30 Oct 2023	27 Jul 2023
Machine Age	hrs	Client Info		2047	1732	1151
Oil Age	hrs	Client Info		315	500	575
Filter Age	hrs	Client Info		315	500	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	27	26	41
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	7
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	5
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	13	13	67
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

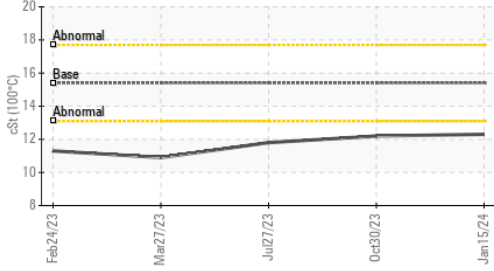
Silicon	ppm	ASTM D5185m	>25	16	18	▲ 29
Potassium	ppm	ASTM D5185m	>20	<1	0	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.7	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	23.6	23.1
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

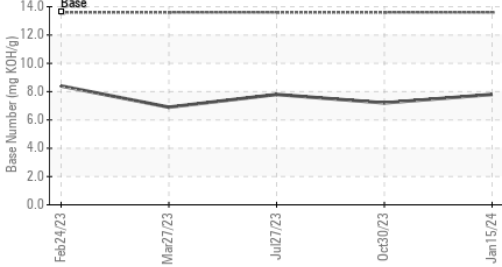
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	0	2
Boron	ppm	ASTM D5185m		108	110	70
Barium	ppm	ASTM D5185m		0	<1	5
Molybdenum	ppm	ASTM D5185m		259	265	210
Manganese	ppm	ASTM D5185m		<1	1	3
Magnesium	ppm	ASTM D5185m		886	864	864
Calcium	ppm	ASTM D5185m		1511	1502	1440
Phosphorus	ppm	ASTM D5185m		803	848	843
Zinc	ppm	ASTM D5185m		1087	1120	1143
Sulfur	ppm	ASTM D5185m		3007	2892	2947
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.0	19.5	19.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.8	7.2	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	▲ 12.2	▲ 11.8

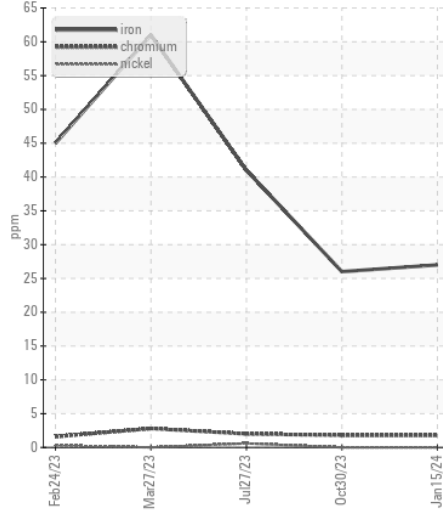
▲ Viscosity @ 100°C



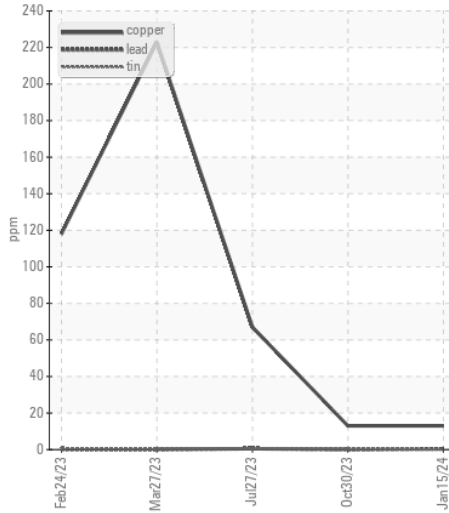
Base Number



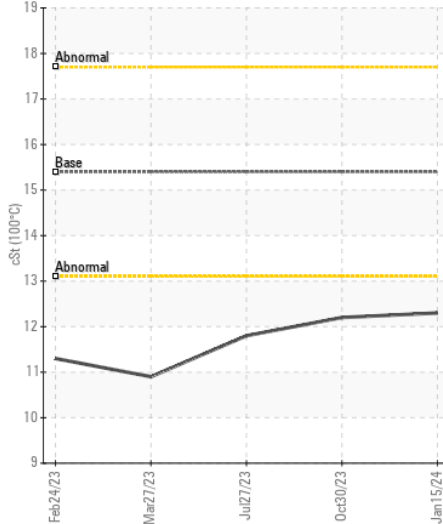
Ferrous Alloys



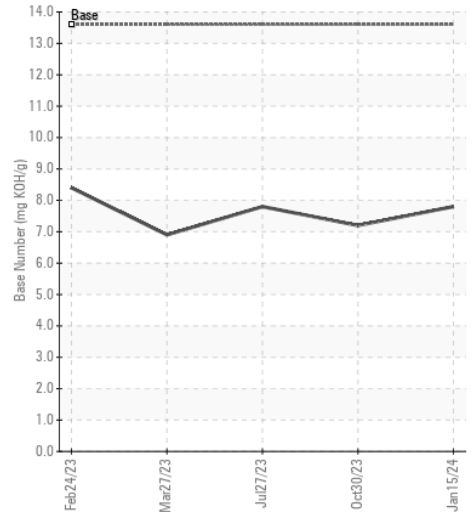
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0197605 **Recieved** : 17 Jan 2024
Lab Number : 06062487 **Diagnosed** : 18 Jan 2024
Unique Number : 10833869 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: TBN)

CAROLINA CIVIL
 PO BOX 80337
 RALEIGH, NC
 US 27623
 Contact:

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: