



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area **Store 5 - Cross Lanes**

Machine Id **JLG TH-09**

Component **Diesel Engine**

Fluid **DIESEL ENGINE OIL SAE 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		LEC0046390	LEC0032597	---
Sample Date		Client Info		07 Jun 2024	05 Dec 2022	---
Machine Age	hrs	Client Info		3290	2113	---
Oil Age	hrs	Client Info		400	300	---
Filter Age	hrs	Client Info		400	300	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	52	46	---
Chromium	ppm	ASTM D5185m	>20	<1	1	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	▲ 24	17	---
Lead	ppm	ASTM D5185m	>40	0	1	---
Copper	ppm	ASTM D5185m	>330	4	6	---
Tin	ppm	ASTM D5185m	>15	<1	1	---
Vanadium	ppm	ASTM D5185m		0	<1	---
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.

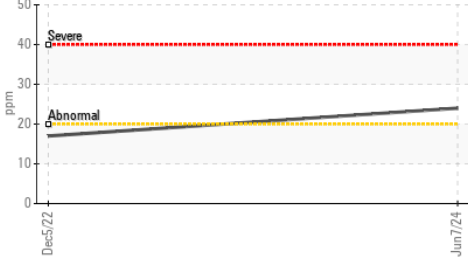
Silicon	ppm	ASTM D5185m	>120	9	8	---
Potassium	ppm	ASTM D5185m	>20	3	4	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	21.8	---
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

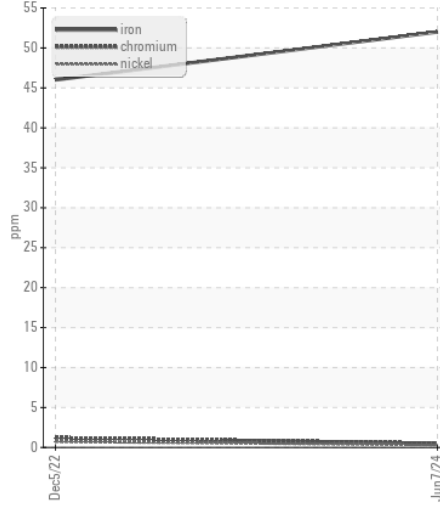
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	6	4	---
Boron	ppm	ASTM D5185m	250	118	412	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	77	99	---
Manganese	ppm	ASTM D5185m		1	1	---
Magnesium	ppm	ASTM D5185m	450	730	514	---
Calcium	ppm	ASTM D5185m	3000	1390	1571	---
Phosphorus	ppm	ASTM D5185m	1150	1038	955	---
Zinc	ppm	ASTM D5185m	1350	1240	1216	---
Sulfur	ppm	ASTM D5185m	4250	3779	3747	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	16.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.7	7.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.4	---

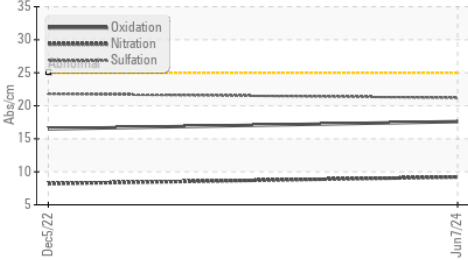
▲ Aluminum (ppm)



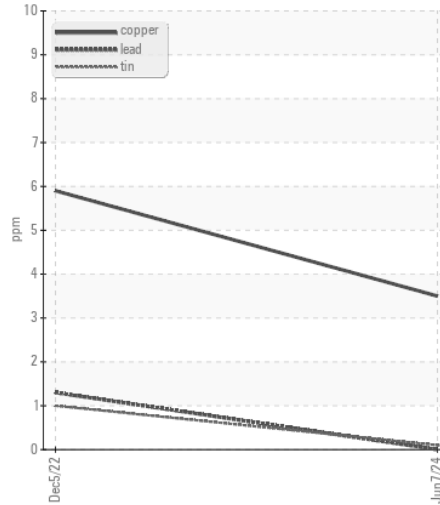
Ferrous Alloys



FT-IR (Direct Trend)



Non-ferrous Metals



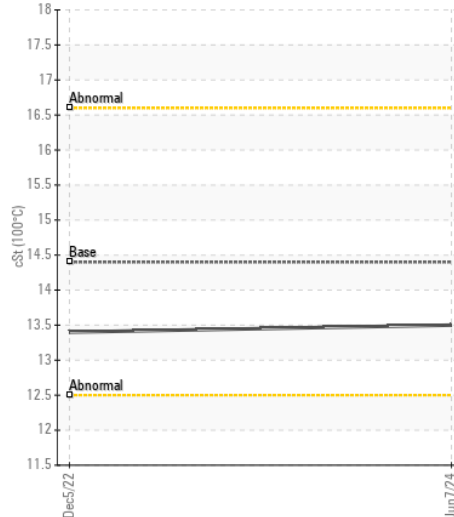
Base Number



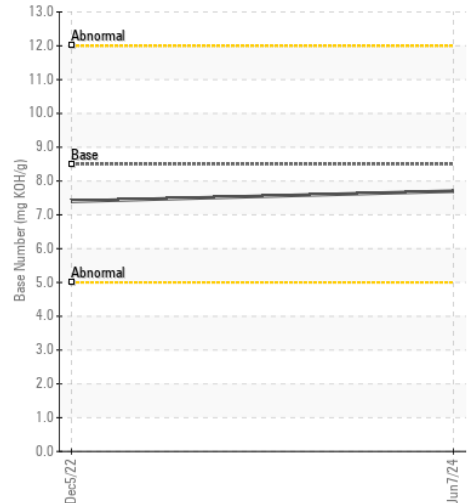
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : LEC0046390 Received : 05 Jul 2024
 Lab Number : 06228240 Tested : 08 Jul 2024
 Unique Number : 11111733 Diagnosed : 08 Jul 2024 - Don Baldrige
 Test Package : CONST (Additional Tests: TBN)

APEX PIPELINE

P.O. BOX 580
 NITRO, WV
 US 25143

Contact: KELLY TUCKER

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)

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