



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta
Machine Id
5048
Component
Gasoline Engine
Fluid
LYDEN 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		LEC0049522	LEC0046935	---
Sample Date		Client Info		28 May 2024	06 Feb 2024	---
Machine Age	hrs	Client Info		444	291	---
Oil Age	hrs	Client Info		173	171	---
Filter Age	hrs	Client Info		173	171	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	34	47	---
Chromium	ppm	ASTM D5185m	>20	2	4	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		62	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>40	7	6	---
Lead	ppm	ASTM D5185m	>50	<1	<1	---
Copper	ppm	ASTM D5185m	>155	2	3	---
Tin	ppm	ASTM D5185m	>10	2	3	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	LIGHT	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material. Tests indicate that there is no fuel present in the oil.

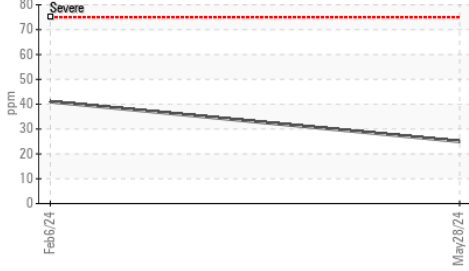
Silicon	ppm	ASTM D5185m	>120	▲ 25	▲ 41	---
Potassium	ppm	ASTM D5185m	>20	4	<1	---
Fuel	%	ASTM D3524	>4.0	0.3	▲ 4.3	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.2	5.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	13.5	---
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

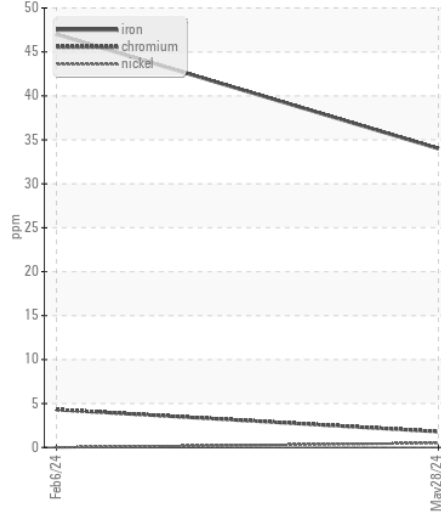
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>400	4	2	---
Boron	ppm	ASTM D5185m		132	137	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		21	66	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		413	459	---
Calcium	ppm	ASTM D5185m		1577	837	---
Phosphorus	ppm	ASTM D5185m		811	560	---
Zinc	ppm	ASTM D5185m		1164	790	---
Sulfur	ppm	ASTM D5185m		3337	2332	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	7.4	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.4	6.2	---
Visc @ 100°C	cSt	ASTM D445		13.8	▲ 8.2	---

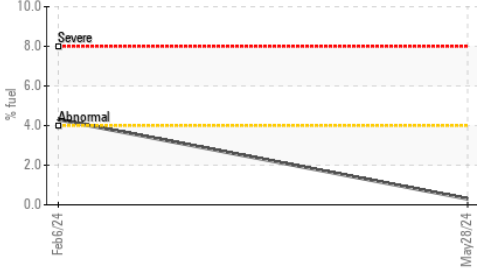
▲ Silicon (ppm)



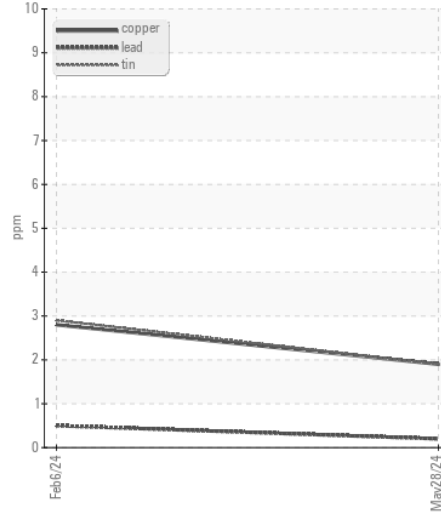
Ferrous Alloys



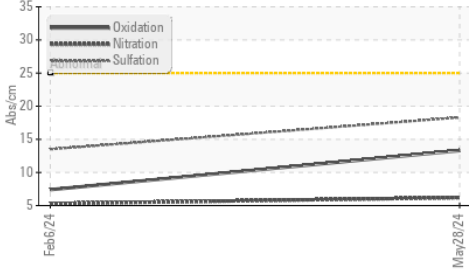
Fuel Dilution



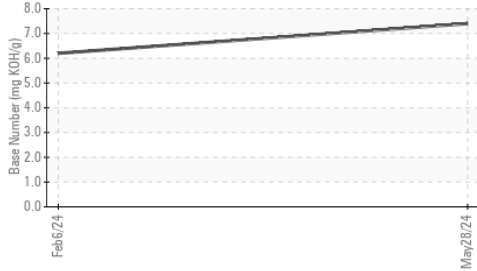
Non-ferrous Metals



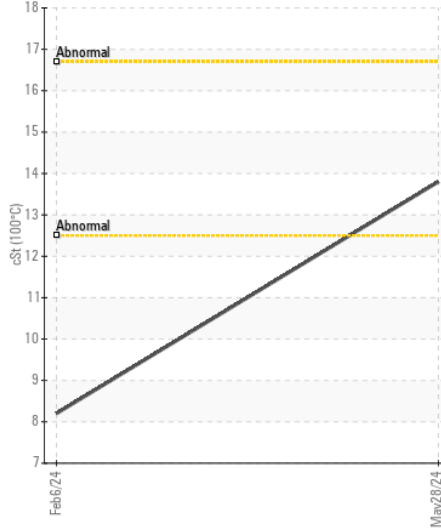
FT-IR (Direct Trend)



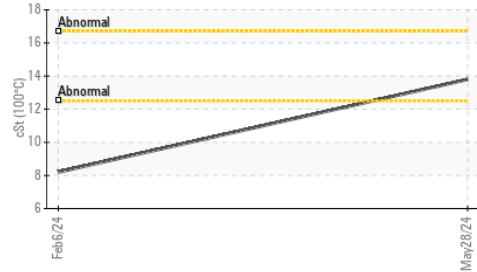
Base Number



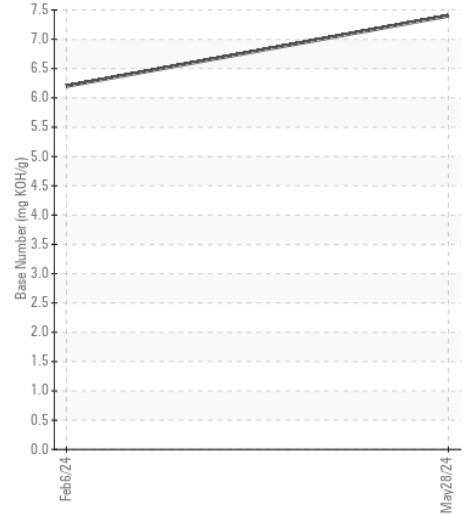
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049522 **Received** : 18 Jun 2024
Lab Number : 06213100 **Tested** : 20 Jun 2024
Unique Number : 11085964 **Diagnosed** : 20 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PercentFuel, TBN)

LAROCHE TREE SERVICE
 7 COMMERCE PKWY
 BELLAIRE, OH
 US 43906
 Contact: GLEN VARGO
 glen.vargo@larochetree.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)

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