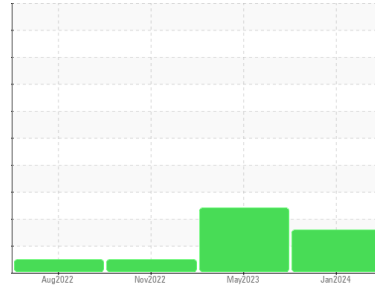


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
421
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal.

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		PCA0069340	PCA0069349	PCA0069498
Sample Date	Client Info		03 Jan 2024	25 May 2023	15 Nov 2022
Machine Age	mls	Client Info	533050	466963	427117
Oil Age	mls	Client Info	0	18766	22845
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	16	79	25
Chromium	ppm	ASTM D5185m >20	<1	9	<1
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	3	13	3
Lead	ppm	ASTM D5185m >40	2	2	0
Copper	ppm	ASTM D5185m >330	1	1	<1
Tin	ppm	ASTM D5185m >15	1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

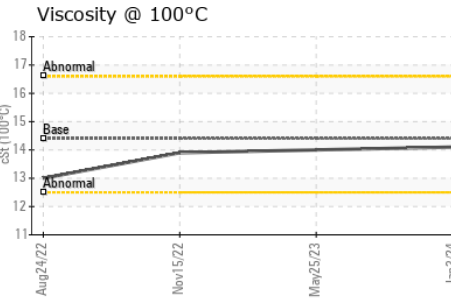
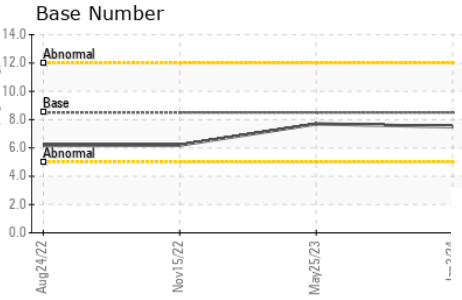
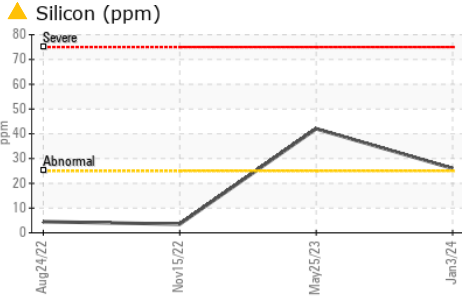
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	2	2	4
Barium	ppm	ASTM D5185m 10	1	0	0
Molybdenum	ppm	ASTM D5185m 100	66	63	60
Manganese	ppm	ASTM D5185m	<1	1	<1
Magnesium	ppm	ASTM D5185m 450	1023	936	952
Calcium	ppm	ASTM D5185m 3000	1257	1109	1115
Phosphorus	ppm	ASTM D5185m 1150	1150	1008	1000
Zinc	ppm	ASTM D5185m 1350	1373	1246	1247
Sulfur	ppm	ASTM D5185m 4250	3599	2966	3336

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 26	▲ 42	4
Sodium	ppm	ASTM D5185m >158	5	4	4
Potassium	ppm	ASTM D5185m >20	4	5	2

INFRA-RED	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	9.0	9.8	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.9	21.9	23.5

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.3	18.4	20.8
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	7.5	7.7	6.2

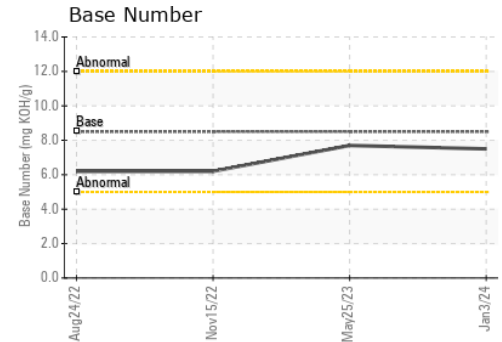
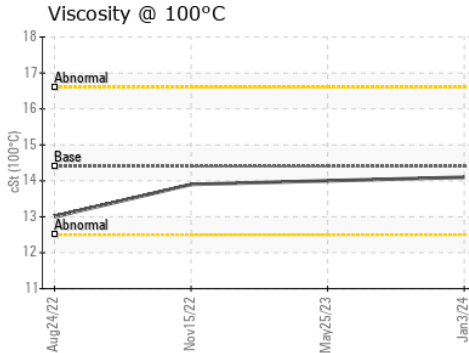
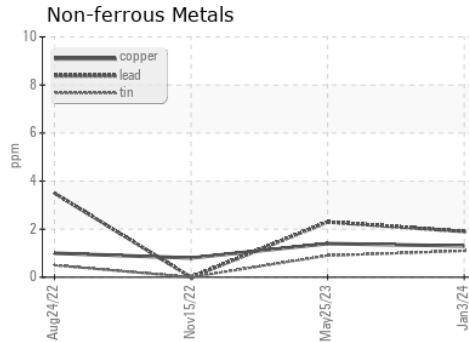
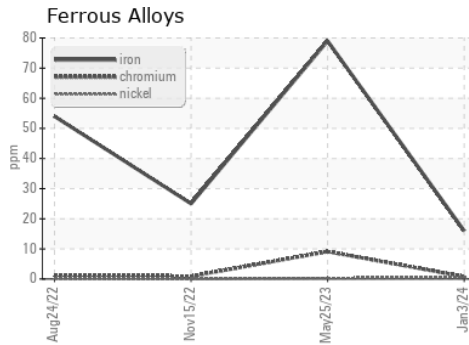
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0069340 **Received** : 25 Mar 2024
Lab Number : **06128552** **Tested** : 26 Mar 2024
Unique Number : 10942703 **Diagnosed** : 28 Mar 2024 - Don Baldrige
Test Package : FLEET

LEFEBVRE AND SONS
 10895 171ST AVE NW
 ELK RIVER, MN
 US 55330
 Contact: JAY LEFEBVRE
 jay.lefebvre@lefruck.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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