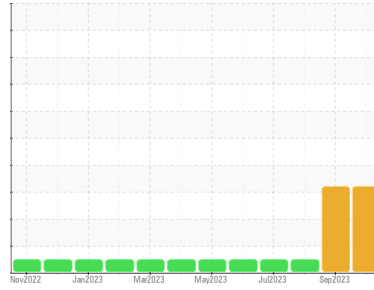




PROBLEM SUMMARY

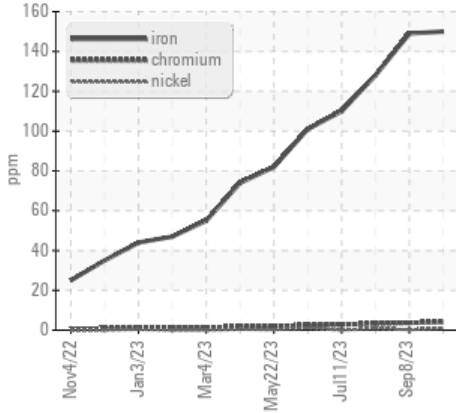
Sample Rating Trend



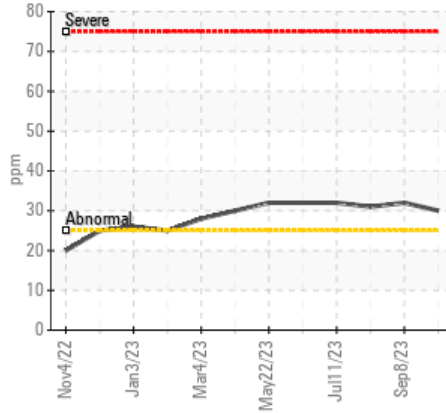
Area
ARIZONA GROUPING
 Machine Id
8477
 Component
Diesel Engine
 Fluid
NAPA Motor Oil 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

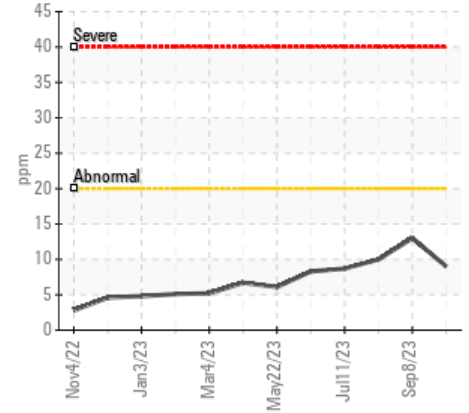
▲ Ferrous Alloys



▲ Silicon (ppm)



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	▲ 150	▲ 149	128
Aluminum	ppm	ASTM D5185m	>20	▲ 9	▲ 13	10
Silicon	ppm	ASTM D5185m	>25	▲ 30	▲ 32	31

Customer Id: SEAOKL
 Sample No.: WC0857159
 Lab Number: 05980123
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

08 Sep 2023 Diag: Jonathan Hester

DIRT



We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

[view report](#)



04 Aug 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

[view report](#)



11 Jul 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

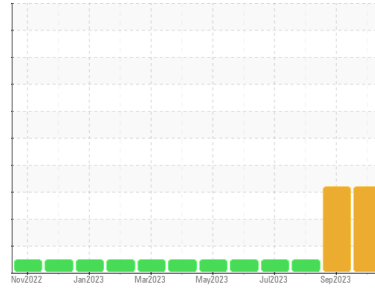
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



Area
ARIZONA GROUPING
 Machine Id
8477
 Component
Diesel Engine
 Fluid
NAPA Motor Oil 15W40 (--- GAL)

DIAGNOSIS

- Recommendation**
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.
- Wear**
Cylinder, crank, or cam shaft wear is indicated.
- Contamination**
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.
- 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0857159	WC0838565	WC0825489
Sample Date	Client Info		10 Oct 2023	08 Sep 2023	04 Aug 2023
Machine Age	hrs	Client Info	1396	1237	1047
Oil Age	hrs	Client Info	1396	1237	1047
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 150	▲ 149	128
Chromium	ppm	ASTM D5185m >20	4	4	3
Nickel	ppm	ASTM D5185m >4	<1	<1	<1
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	▲ 9	▲ 13	10
Lead	ppm	ASTM D5185m >40	<1	0	0
Copper	ppm	ASTM D5185m >330	24	26	25
Tin	ppm	ASTM D5185m >15	2	2	1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	39	47	38
Barium	ppm	ASTM D5185m	8	0	6
Molybdenum	ppm	ASTM D5185m	43	48	43
Manganese	ppm	ASTM D5185m	8	9	8
Magnesium	ppm	ASTM D5185m	506	551	531
Calcium	ppm	ASTM D5185m	1577	1802	1584
Phosphorus	ppm	ASTM D5185m	699	740	689
Zinc	ppm	ASTM D5185m	844	934	896
Sulfur	ppm	ASTM D5185m	1933	2540	2178

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 30	▲ 32	31
Sodium	ppm	ASTM D5185m	8	8	8
Potassium	ppm	ASTM D5185m >20	10	10	10

INFRA-RED

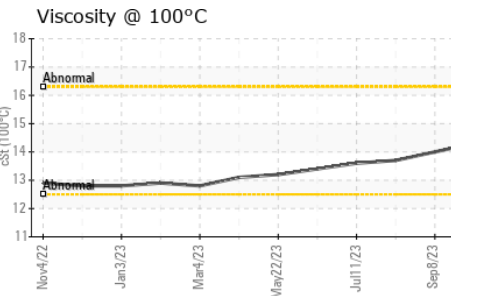
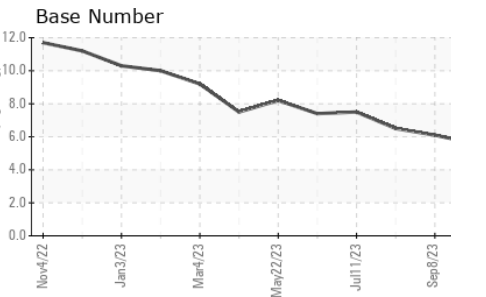
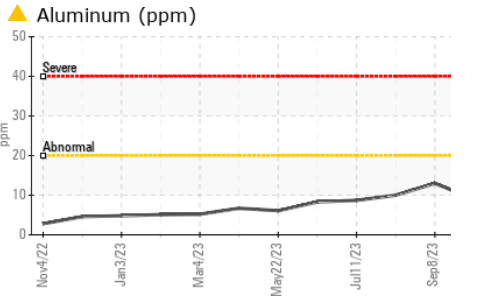
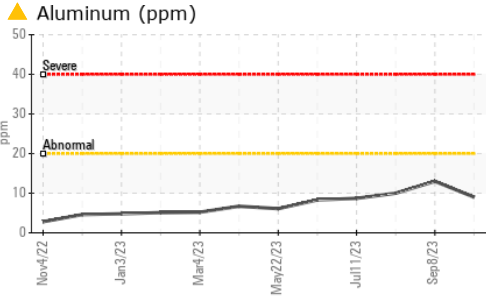
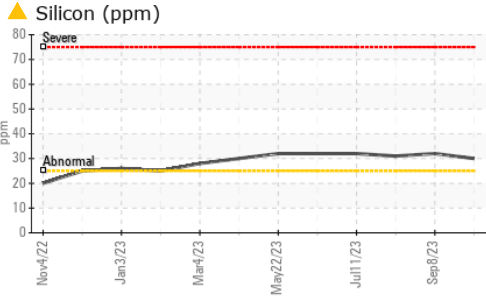
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.3	1.2	1.1
Nitration	Abs/cm	*ASTM D7624 >20	13.6	13.1	12.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.6	26.1	25.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	30.5	29.6	28.2
Base Number (BN)	mg KOH/g	ASTM D2896	5.6	6.1	6.5



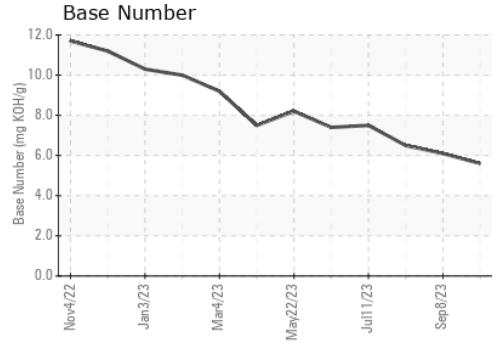
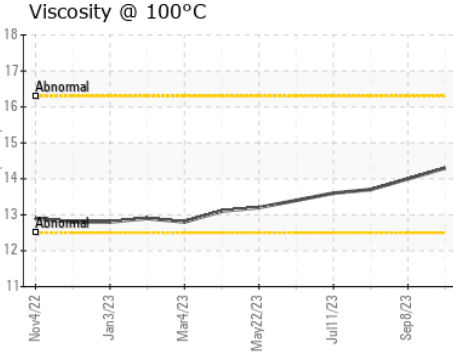
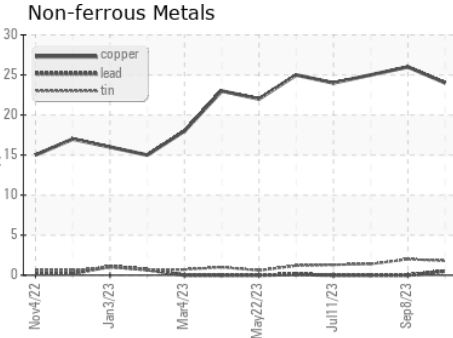
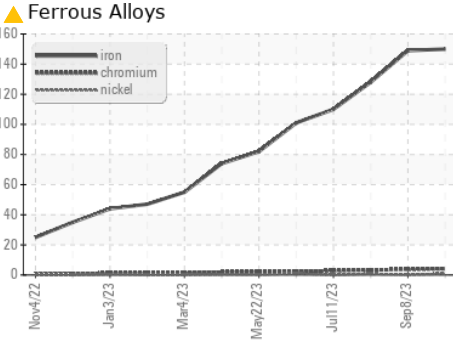
OIL ANALYSIS REPORT



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	14.3	14.0	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0857159 **Received** : 16 Oct 2023
Lab Number : **05980123** **Diagnosed** : 18 Oct 2023
Unique Number : 10697418 **Diagnostician** : Don Baldrige
Test Package : FLEET

LIBERTY DISPOSAL
 6401 S EASTERN AVE
 OKLAHOMA CITY, OK
 US 73149
 Contact: CATHY ROSA
 c.rosa@ldi89.com

Certificate L2367
 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)