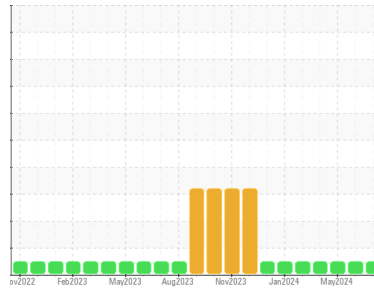




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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			WC0910154	WC0935455	WC0935448
Sample Date	Client Info			02 Jul 2024	11 Jun 2024	04 May 2024
Machine Age	hrs	Client Info		2336	2270	2158
Oil Age	hrs	Client Info		628	562	450
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	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	50	49	46
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	4	4	9
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		40	50	63
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		8	6	8
Manganese	ppm	ASTM D5185m		1	2	1
Magnesium	ppm	ASTM D5185m		670	760	691
Calcium	ppm	ASTM D5185m		1473	1384	1334
Phosphorus	ppm	ASTM D5185m		727	762	761
Zinc	ppm	ASTM D5185m		810	851	839
Sulfur	ppm	ASTM D5185m		3109	3407	3063

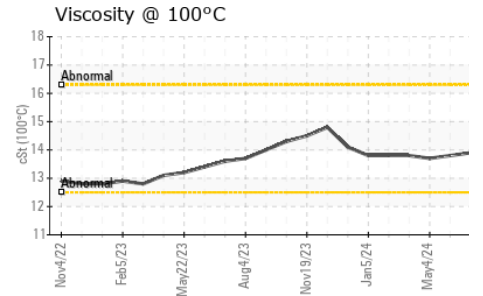
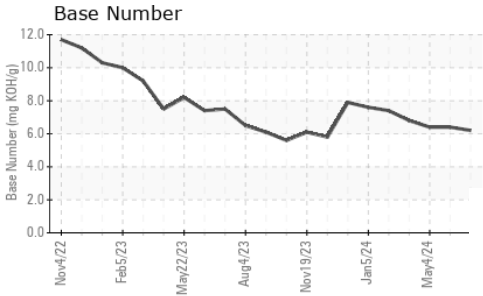
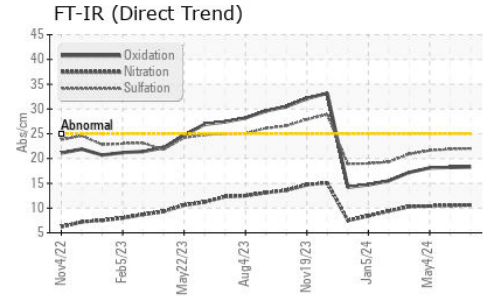
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	9	10	9
Sodium	ppm	ASTM D5185m		4	3	3
Potassium	ppm	ASTM D5185m	>20	3	6	6

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.9	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.6	10.5	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	21.9	21.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	18.2	18.1
Base Number (BN)	mg KOH/g	ASTM D2896		6.2	6.4	6.4



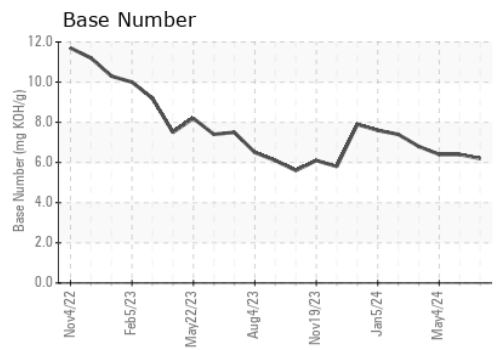
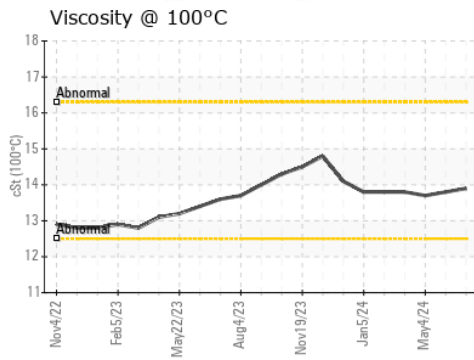
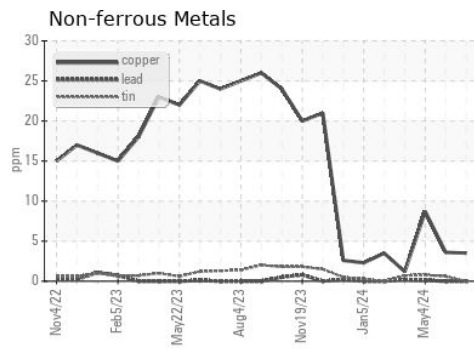
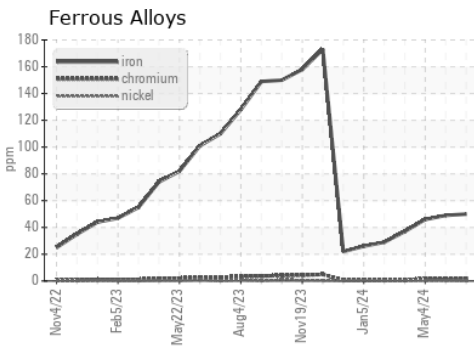
OIL ANALYSIS REPORT



PARAMETER	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	13.9	13.8	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910154 **Received** : 11 Jul 2024
Lab Number : 06234295 **Tested** : 12 Jul 2024
Unique Number : 11123129 **Diagnosed** : 12 Jul 2024 - Wes Davis
Test Package : FLEET

LIBERTY DISPOSAL
 6401 S EASTERN AVE
 OKLAHOMA CITY, OK
 US 73149
 Contact: M Rutherford
 M.Rutherford@ldi89.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)