



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
5
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013292	KL0013245	KL0013237
Sample Date		Client Info		15 Jan 2024	15 Nov 2023	11 Oct 2023
Machine Age	hrs	Client Info		0	8443	8401
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	6	5
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	<1	2
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

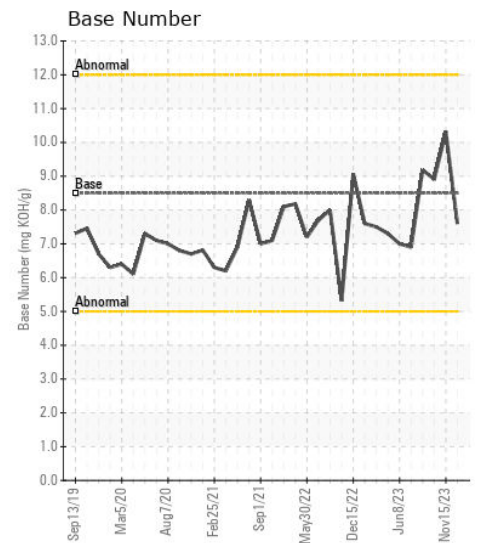
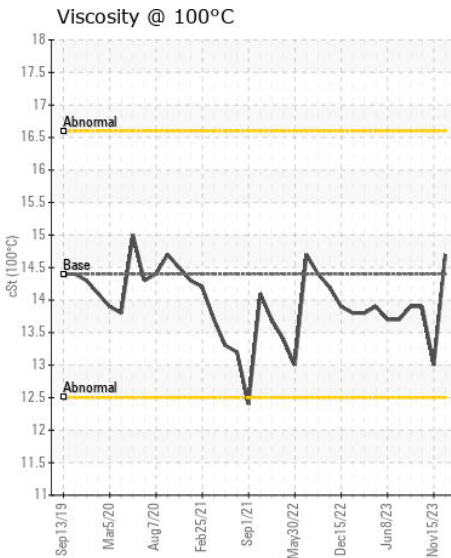
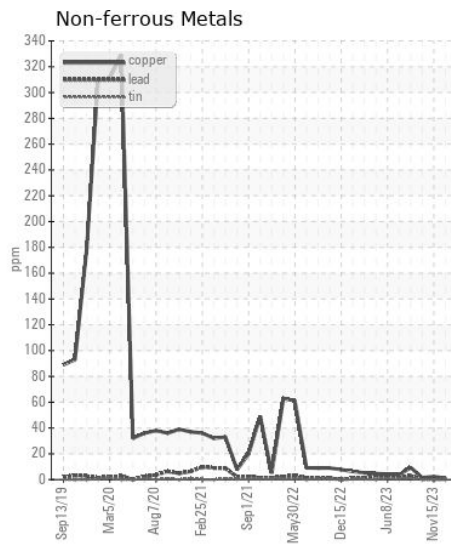
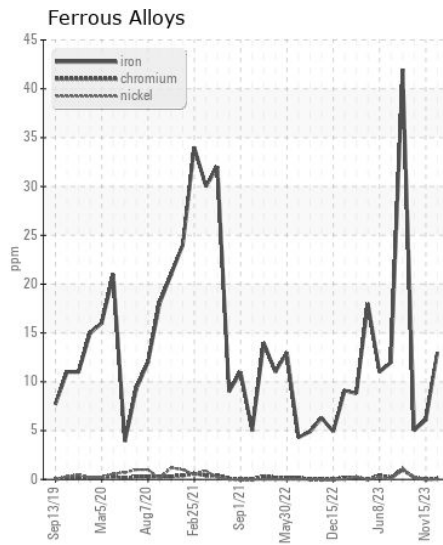
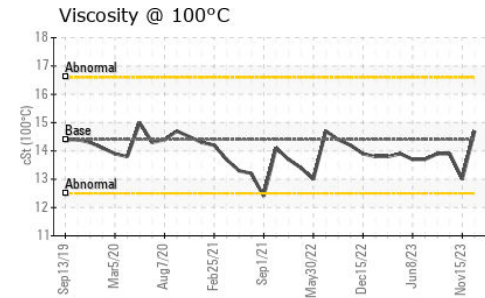
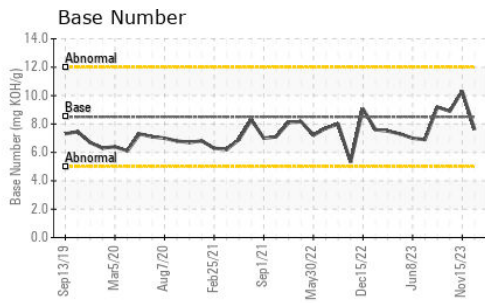
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	4	3
Potassium	ppm	ASTM D5185m	>20	2	4	7
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	6.5	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	17.9	17.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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	>216	2	3	2
Boron	ppm	ASTM D5185m	250	81	15	13
Barium	ppm	ASTM D5185m	10	0	0	3
Molybdenum	ppm	ASTM D5185m	100	72	79	70
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	450	177	623	646
Calcium	ppm	ASTM D5185m	3000	1908	1571	1324
Phosphorus	ppm	ASTM D5185m	1150	1059	1006	925
Zinc	ppm	ASTM D5185m	1350	1228	1225	1175
Sulfur	ppm	ASTM D5185m	4250	4545	3683	3945
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	13.6	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.6	10.32	8.9
Visc @ 100°C	cSt	ASTM D445	14.4	14.7	13.0	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KL0013292

Lab Number : 06082941

Unique Number : 10870386

Test Package : FLEET

Received : 07 Feb 2024

Tested : 08 Feb 2024

Diagnosed : 08 Feb 2024 - Wes Davis

UNITED SALT

1434 POTASH MINES RD

CARLSBAD, NM

US 88220

Contact: GERALD GOAD

ggoad@unitedsalt.com

T:

F:

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)