



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
310
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0847899	WC0759994	WC0759971
Sample Date		Client Info		22 Nov 2023	17 Feb 2023	15 Dec 2022
Machine Age	hrs	Client Info		50952	49795	49356
Oil Age	hrs	Client Info		49795	439	0
Filter Age	hrs	Client Info		49795	439	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	43	37	29
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	2	2
Lead	ppm	ASTM D5185m	>40	5	10	6
Copper	ppm	ASTM D5185m	>330	2	1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

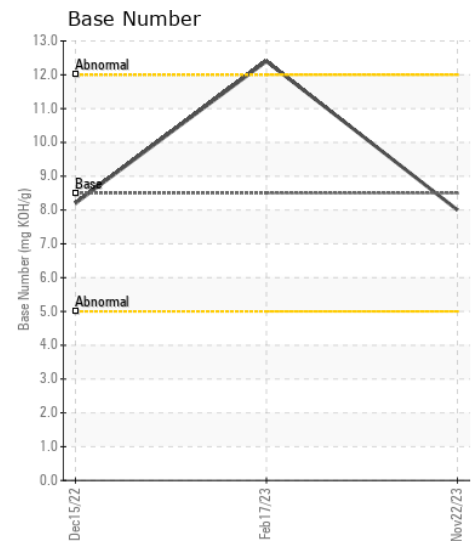
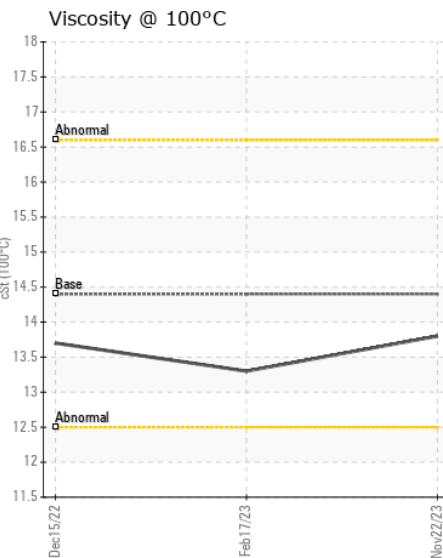
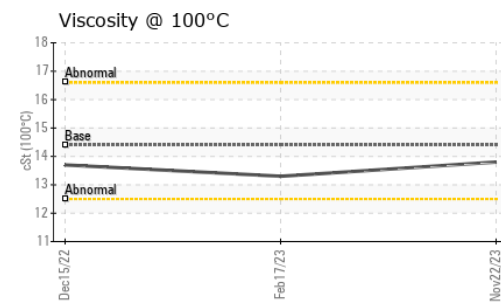
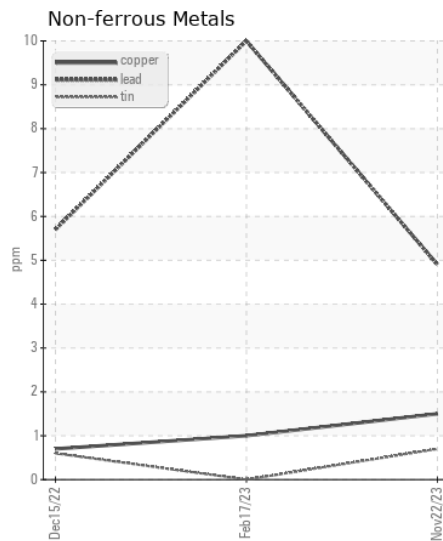
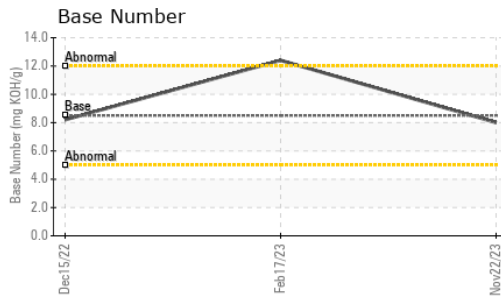
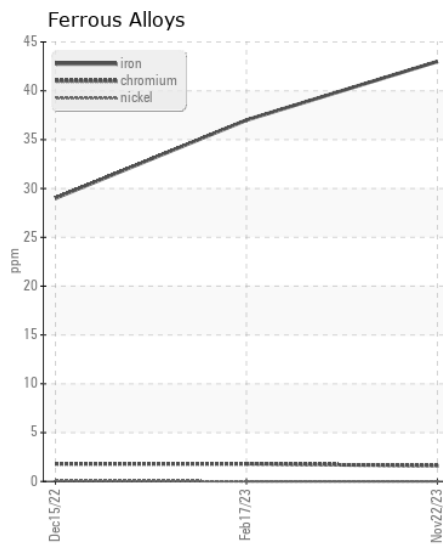
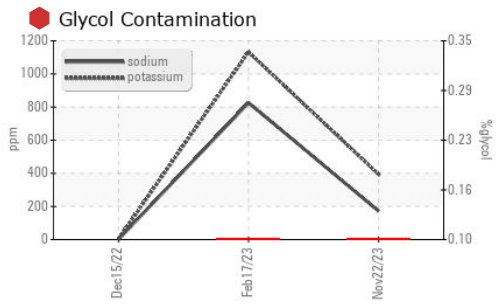
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>25	9	11	6
Potassium	ppm	ASTM D5185m	>20	394	1132	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.10	0.10	NEG
Soot %	%	*ASTM D7844	>3	2.1	0.7	1
Nitration	Abs/cm	*ASTM D7624	>20	12.9	13.3	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	22.6	23.4
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.

Sodium	ppm	ASTM D5185m	>158	172	826	2
Boron	ppm	ASTM D5185m	250	9	11	3
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	110	243	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	917	812	937
Calcium	ppm	ASTM D5185m	3000	1125	1133	1405
Phosphorus	ppm	ASTM D5185m	1150	1079	918	1069
Zinc	ppm	ASTM D5185m	1350	1286	1083	1423
Sulfur	ppm	ASTM D5185m	4250	3073	3353	3662
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	17.2	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.0	12.4	8.2
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	13.3	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0847899 **Received** : 17 Jan 2024
Lab Number : 06063417 **Diagnosed** : 19 Jan 2024
Unique Number : 10834799 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

Apple Valley Waste - Chambersburg Location
 5436 Sunset Pike
 Chambersburg, PA
 US 17202
 Contact: Service Manager

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)

T:
F: