



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
M32022
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0034174	DC0034106	DC0032110
Sample Date		Client Info		26 Jun 2024	22 Apr 2024	30 Oct 2023
Machine Age	mls	Client Info		66512	63439	52897
Oil Age	mls	Client Info		6757	0	0
Filter Age	mls	Client Info		6757	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	13	50	29
Chromium	ppm	ASTM D5185m	>20	<1	2	1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	2	1	2
Aluminum	ppm	ASTM D5185m	>20	2	2	4
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	2	5	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

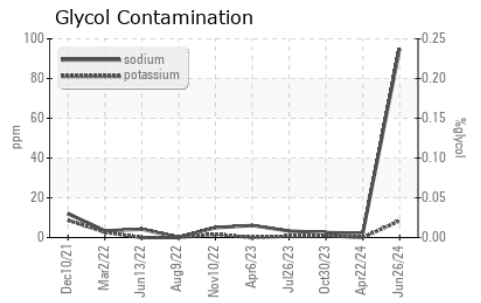
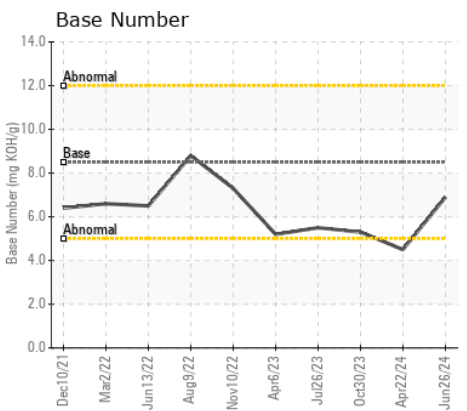
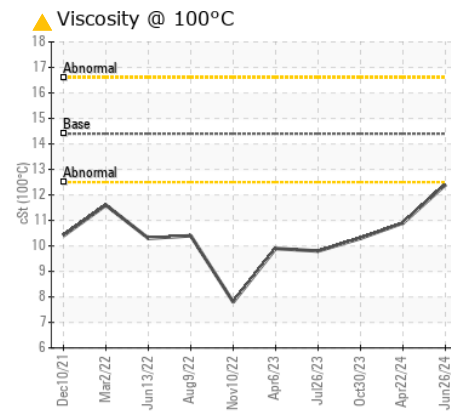
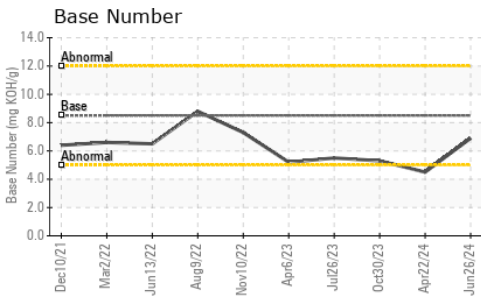
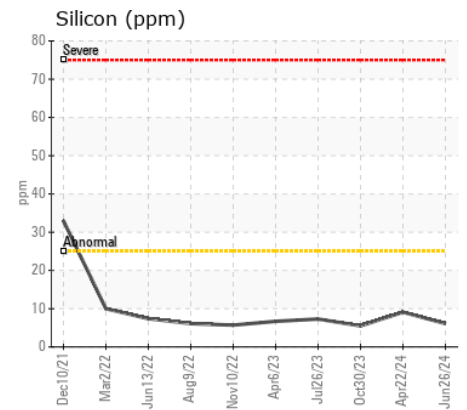
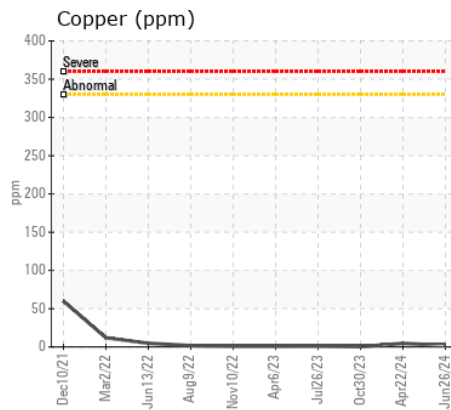
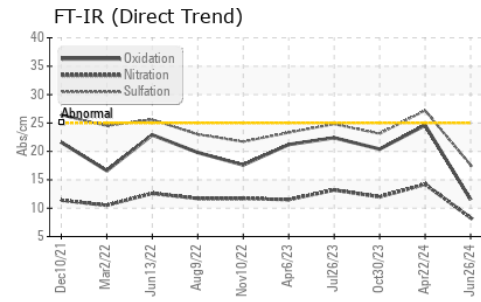
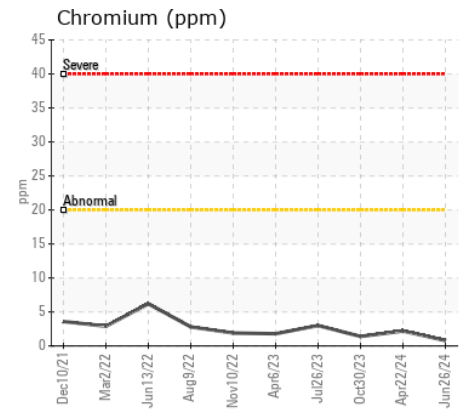
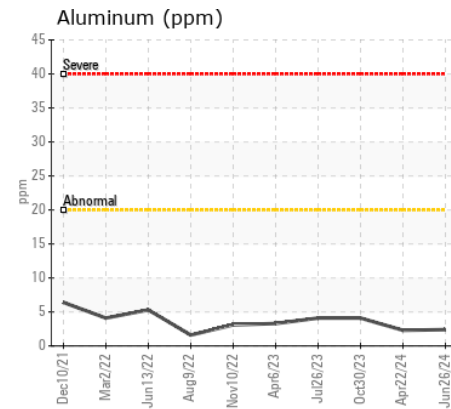
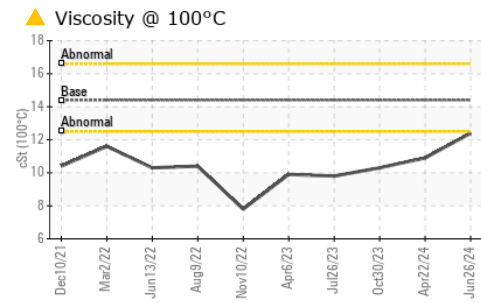
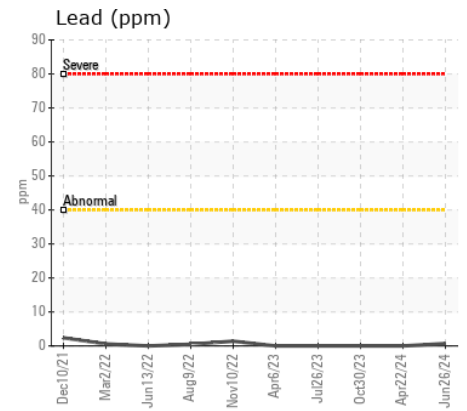
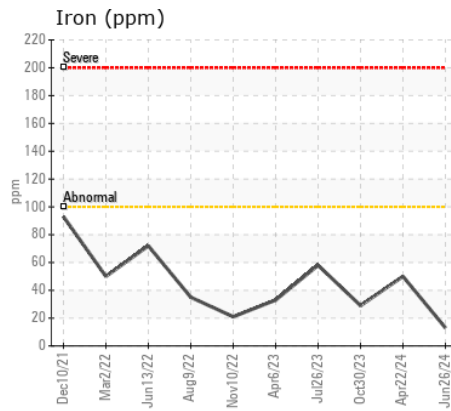
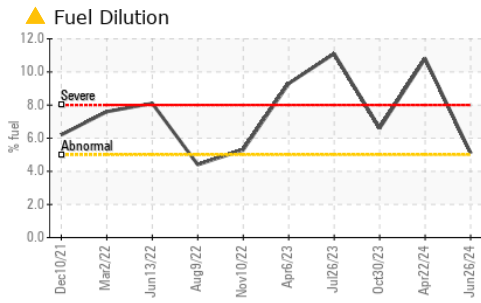
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	9	6
Potassium	ppm	ASTM D5185m	>20	8	0	1
Fuel	%	ASTM D3524	>5	▲ 5.1	▲ 10.8	▲ 6.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	14.2	12.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.6	27.2	23.1
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. Fuel is present in the oil and is lowering the viscosity.

Sodium	ppm	ASTM D5185m	>158	95	2	2
Boron	ppm	ASTM D5185m	250	3	4	16
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	5	14	75
Manganese	ppm	ASTM D5185m		1	2	<1
Magnesium	ppm	ASTM D5185m	450	54	56	82
Calcium	ppm	ASTM D5185m	3000	2069	2055	1968
Phosphorus	ppm	ASTM D5185m	1150	789	798	989
Zinc	ppm	ASTM D5185m	1350	963	934	1150
Sulfur	ppm	ASTM D5185m	4250	3239	3242	3248
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.5	24.6	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.9	4.5	5.3
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 12.4	▲ 10.9	▲ 10.3



Certificate L2367

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

Sample No. : DC0034174

Lab Number : 06232108

Unique Number : 11115601

Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, TBN)

Received : 10 Jul 2024

Tested : 12 Jul 2024

Diagnosed : 12 Jul 2024 - Sean Felton

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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