



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2108
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0876665	WC0686151	WC0654945
Sample Date		Client Info		27 Dec 2023	27 May 2022	10 Apr 2022
Machine Age	mls	Client Info		423961	258581	246446
Oil Age	mls	Client Info		50000	100000	50000
Filter Age	mls	Client Info		50000	50000	50000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	▲ 102	12	42
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	3
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	8	1	5
Lead	ppm	ASTM D5185m	>40	2	<1	2
Copper	ppm	ASTM D5185m	>330	10	2	7
Tin	ppm	ASTM D5185m	>15	1	<1	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

There is no indication of any contamination in the oil.

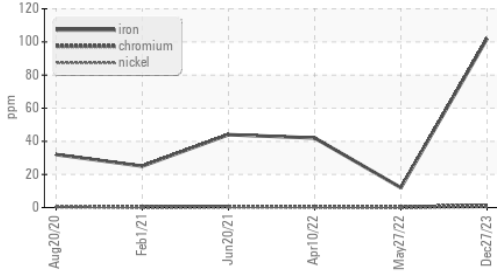
Silicon	ppm	ASTM D5185m	>25	12	6	7
Potassium	ppm	ASTM D5185m	>20	7	6	10
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.6	0.3	0.9
Nitration	Abs/cm	*ASTM D7624	>20	14.5	9.5	14.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.6	20.8	30.5
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

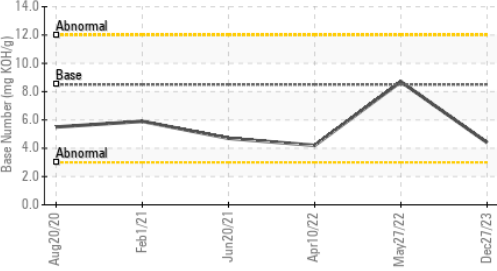
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	3	3
Boron	ppm	ASTM D5185m	250	8	36	9
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	64	61	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	1128	1086	1117
Calcium	ppm	ASTM D5185m	3000	860	845	927
Phosphorus	ppm	ASTM D5185m	1150	1101	1023	1056
Zinc	ppm	ASTM D5185m	1350	1303	1263	1326
Sulfur	ppm	ASTM D5185m	4250	3100	3212	2692
Oxidation	Abs/.1mm	*ASTM D7414	>25	33.5	18.9	32.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.4	8.7	4.2
Visc @ 100°C	cSt	ASTM D445	10.9	12.5	11.8	11.0

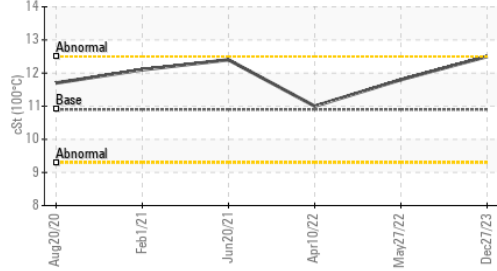
▲ Ferrous Alloys



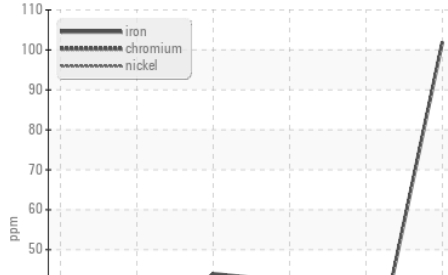
Base Number



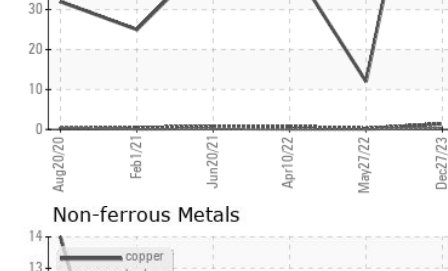
Viscosity @ 100°C



▲ Ferrous Alloys



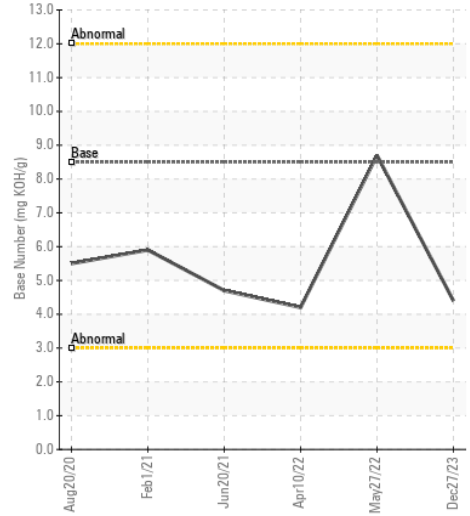
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0876665 **Received** : 11 Jan 2024
Lab Number : 06058678 **Diagnosed** : 14 Jan 2024
Unique Number : 10830060 **Diagnostician** : Don Baldridge
Test Package : FLEET

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 US 27289

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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)