CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
GM 13434
Component
Diesel Engine
Fluid
GASOLINE ENGINE OIL SAE 5W30 (--- QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

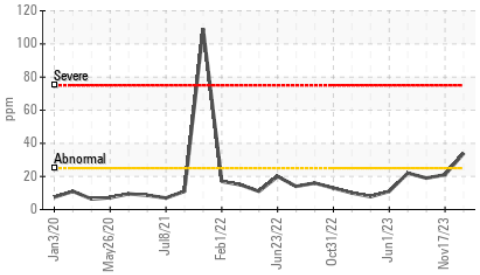
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

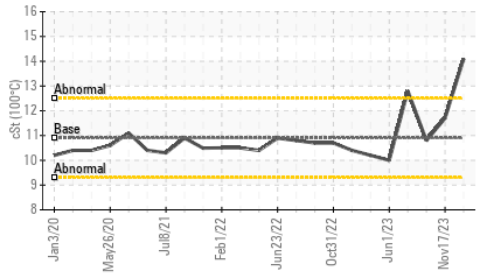
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0882714	WC0856997	WC0856779
Sample Date		Client Info		12 Feb 2024	17 Nov 2023	26 Sep 2023
Machine Age	mls	Client Info		215828	205848	198046
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	56	30	24
Chromium	ppm	ASTM D5185m	>20	4	2	2
Nickel	ppm	ASTM D5185m	>4	2	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 11	6	6
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	10	7	7
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 34	21	19
Potassium	ppm	ASTM D5185m	>20	4	4	2
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	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	15.7	12.8	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.7	24.9	21.7
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
Sodium	ppm	ASTM D5185m		6	3	<1
Boron	ppm	ASTM D5185m	75	19	27	5
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	100	16	61	45
Manganese	ppm	ASTM D5185m		12	6	1
Magnesium	ppm	ASTM D5185m	12	694	488	476
Calcium	ppm	ASTM D5185m	2100	1257	1273	1010
Phosphorus	ppm	ASTM D5185m	650	700	655	607
Zinc	ppm	ASTM D5185m	850	831	802	736
Sulfur	ppm	ASTM D5185m	2500	2724	2333	1910
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.3	21.5	18.6
Base Number (BN)	mg KOH/g	ASTM D2896		3.5	4.2	3.4
Visc @ 100°C	cSt	ASTM D445	10.9	▲ 14.1	11.7	10.8

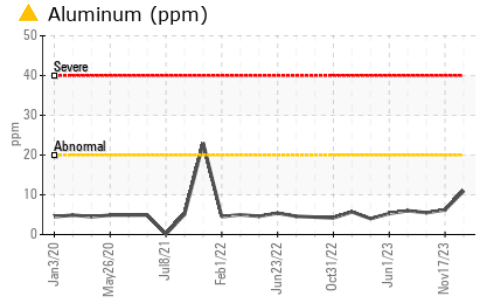
Silicon (ppm)



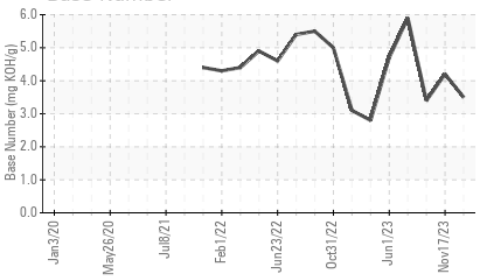
Viscosity @ 100°C



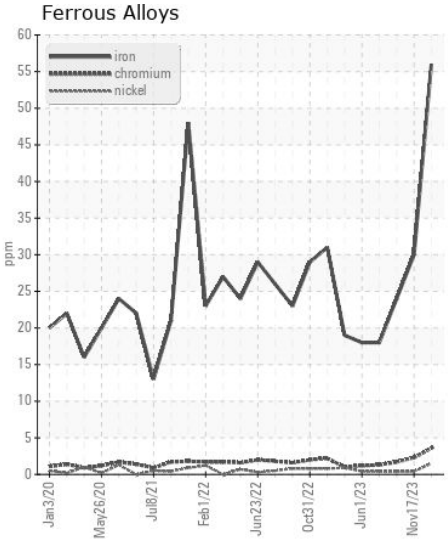
Aluminum (ppm)



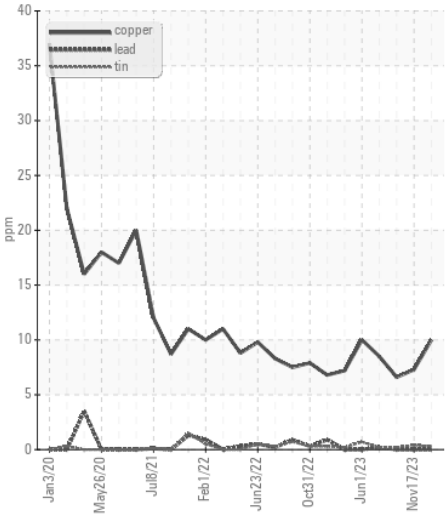
Base Number



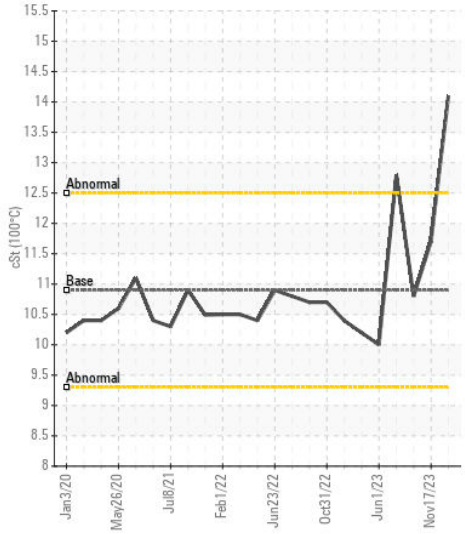
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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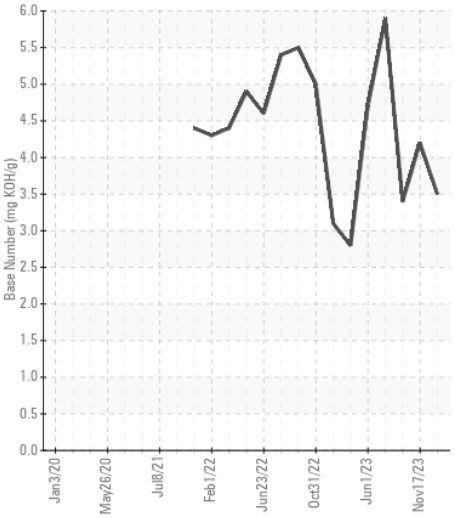

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0882714 **Received** : 13 Feb 2024
Lab Number : 06087998 **Tested** : 14 Feb 2024
Unique Number : 10875443 **Diagnosed** : 15 Feb 2024 - Don Baldridge
Test Package : CONST (Additional Tests: TBN)

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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