OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1834
Component
Diesel Engine
Fluid
SHELL 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

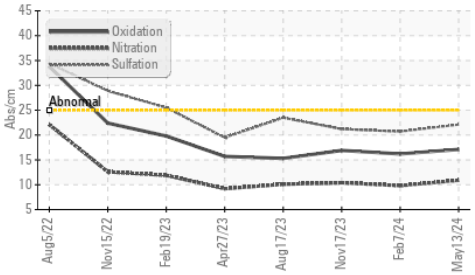
There is no indication of any contamination in the oil.

FLUID CONDITION

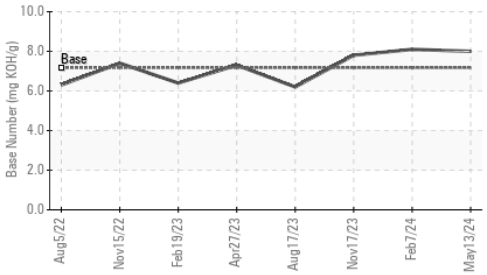
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0916535**	WC0878565	WC0878576
Sample Date		Client Info		**13 May 2024**	07 Feb 2024	17 Nov 2023
Machine Age	mls	Client Info		**1732**	18466	16960
Oil Age	mls	Client Info		**1732**	1506	2500
Filter Age	mls	Client Info		**1732**	1506	2500
Oil Changed		Client Info		**Changed**	Changed	N/A
Filter Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**NORMAL**	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	**26**	21	33
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	4	3
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>15	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**3**	4	4
Potassium	ppm	ASTM D5185m	>20	**5**	7	5
Fuel		WC Method	>5	**<1.0**	<1.0	▲ 2.1
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**1.5**	1.2	1.3
Nitration	Abs/cm	*ASTM D7624	>20	**10.9**	9.8	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.1**	20.7	21.2
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		**2**	<1	1
Boron	ppm	ASTM D5185m		**3**	<1	1
Barium	ppm	ASTM D5185m		**0**	0	3
Molybdenum	ppm	ASTM D5185m		**59**	60	55
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m	470	**949**	1031	862
Calcium	ppm	ASTM D5185m	1150	**1064**	1101	1170
Phosphorus	ppm	ASTM D5185m	94	**1077**	1139	1031
Zinc	ppm	ASTM D5185m	1030	**1270**	1343	1223
Sulfur	ppm	ASTM D5185m		**3575**	3337	3111
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.1**	16.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	7.17	**8.0**	8.1	7.8
Visc @ 100°C	cSt	ASTM D445	10.90	**11.5**	11.3	▲ 11.5

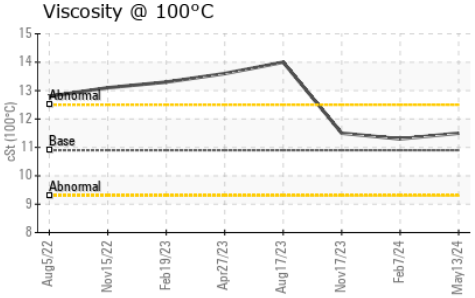
FT-IR (Direct Trend)



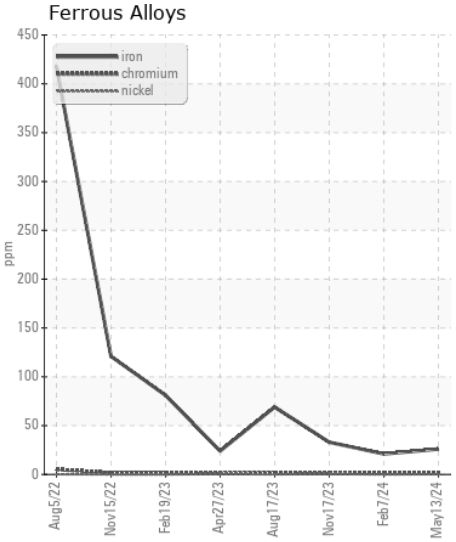
Base Number



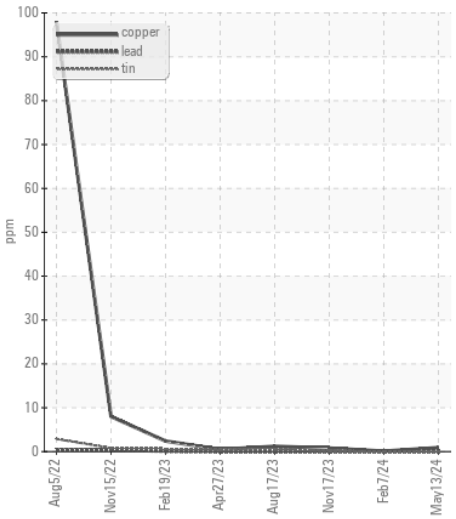
Viscosity @ 100°C



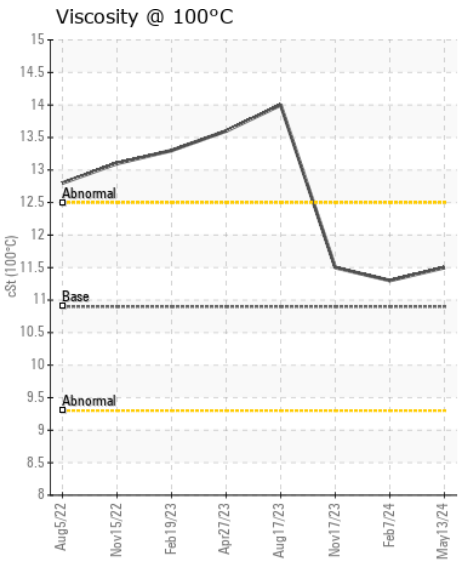
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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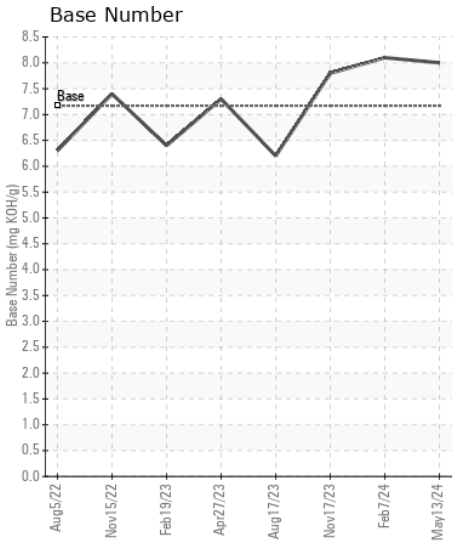

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916535
Lab Number : 06212883
Unique Number : 11085747
Test Package : FLEET

Received : 17 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 19 Jun 2024 - Wes Davis

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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