



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
8772
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0002238	NL0001787	NL0001740
Sample Date		Client Info		02 May 2024	30 Nov 2023	11 Aug 2023
Machine Age	mls	Client Info		103597	66112	22898
Oil Age	mls	Client Info		45000	45000	20000
Filter Age	mls	Client Info		45000	45000	20000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	22	34	32
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	2	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	11	31
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	26	173	199
Tin	ppm	ASTM D5185m	>15	2	4	2
Vanadium	ppm	ASTM D5185m		<1	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.

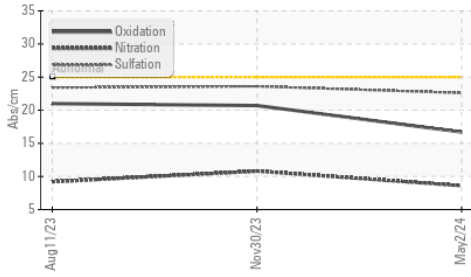
Silicon	ppm	ASTM D5185m	>25	8	10	53
Potassium	ppm	ASTM D5185m	>20	5	35	77
Fuel		WC Method	>5	<1.0	<1.0	0.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.6	10.8	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	23.6	23.4
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

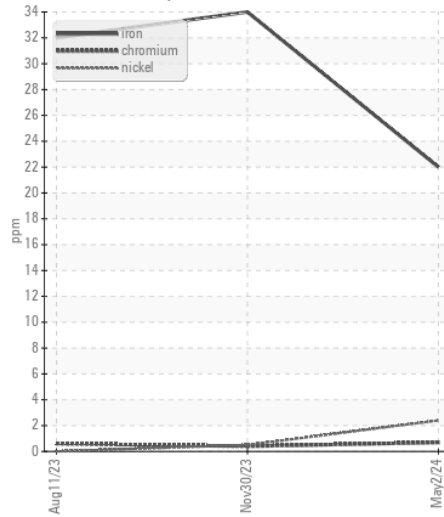
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<1	0	0
Boron	ppm	ASTM D5185m	250	65	3	152
Barium	ppm	ASTM D5185m	10	1	<1	0
Molybdenum	ppm	ASTM D5185m	100	80	69	112
Manganese	ppm	ASTM D5185m		1	1	2
Magnesium	ppm	ASTM D5185m	450	573	887	767
Calcium	ppm	ASTM D5185m	3000	1317	1137	1575
Phosphorus	ppm	ASTM D5185m	1150	1004	936	758
Zinc	ppm	ASTM D5185m	1350	1241	1116	956
Sulfur	ppm	ASTM D5185m	4250	2792	2172	3275
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	20.7	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.7	5.6	7.4
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.2	10.2

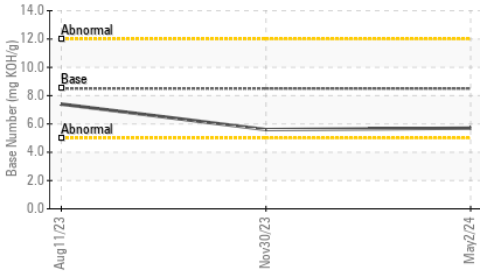
FT-IR (Direct Trend)



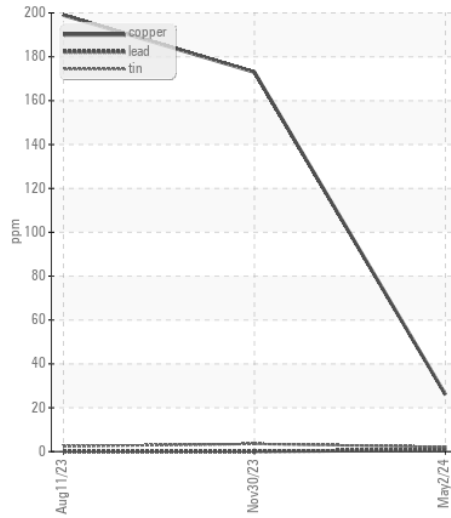
Ferrous Alloys



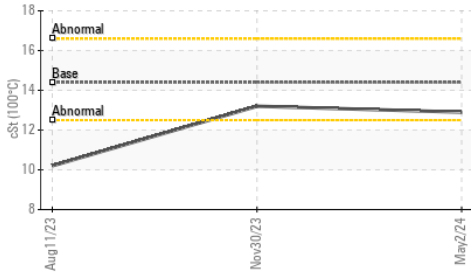
Base Number



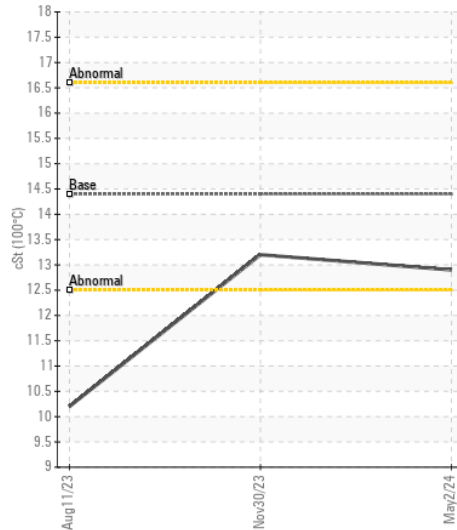
Non-ferrous Metals



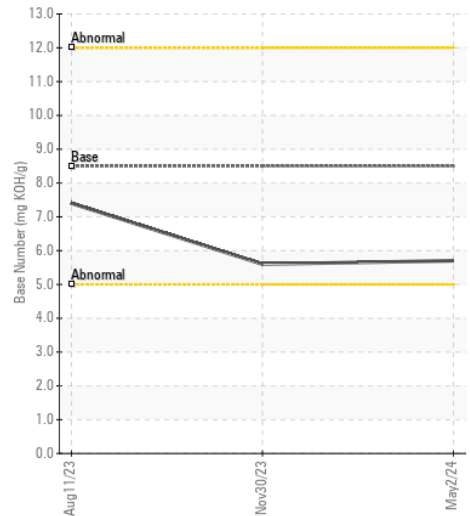
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002238
Lab Number : 06217841
Unique Number : 11096038
Test Package : FLEET

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

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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)