



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
15337
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0891674	WC0891654	WC0861133
Sample Date		Client Info		23 Jan 2024	11 Jan 2024	02 Oct 2023
Machine Age	mls	Client Info		48687	0	12287
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
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	7	13	32
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	2
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	4	12	56
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	113	335	93
Tin	ppm	ASTM D5185m	>15	<1	1	5
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.

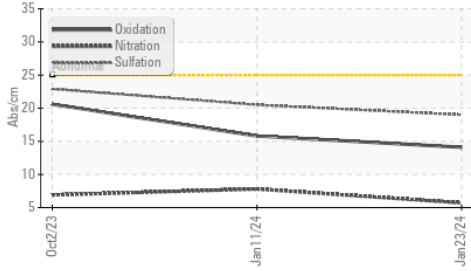
Silicon	ppm	ASTM D5185m	>25	3	3	8
Potassium	ppm	ASTM D5185m	>20	28	31	166
Fuel		WC Method	>5	<1.0	<1.0	0.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.7	7.8	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	20.5	22.9
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

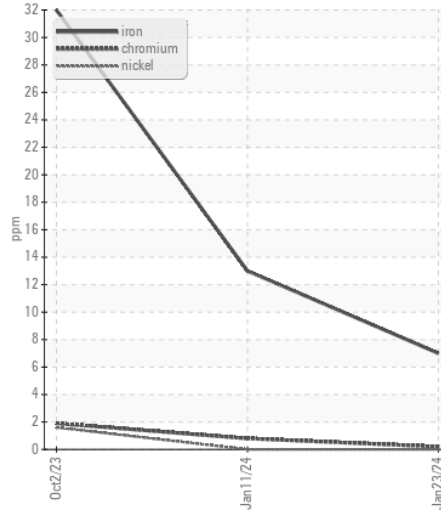
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	13	3	3
Boron	ppm	ASTM D5185m	250	2	7	52
Barium	ppm	ASTM D5185m	10	0	0	1
Molybdenum	ppm	ASTM D5185m	100	61	63	43
Manganese	ppm	ASTM D5185m		<1	1	4
Magnesium	ppm	ASTM D5185m	450	962	977	510
Calcium	ppm	ASTM D5185m	3000	1058	1095	1685
Phosphorus	ppm	ASTM D5185m	1150	1081	1088	755
Zinc	ppm	ASTM D5185m	1350	1239	1258	914
Sulfur	ppm	ASTM D5185m	4250	3738	3504	2382
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	15.8	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.0	9.1	9.6
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.4	9.6

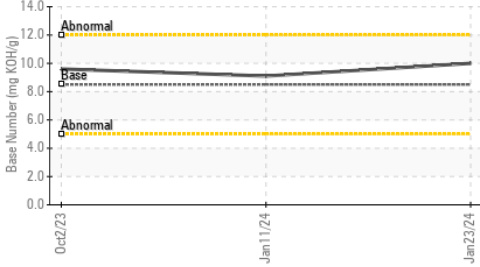
FT-IR (Direct Trend)



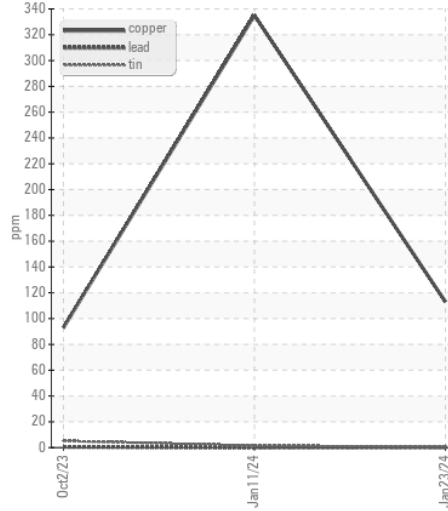
Ferrous Alloys



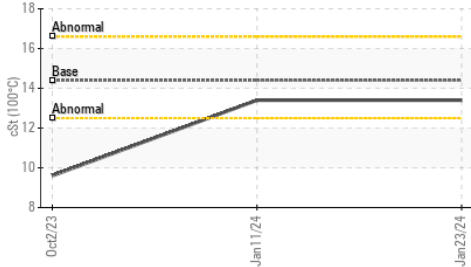
Base Number



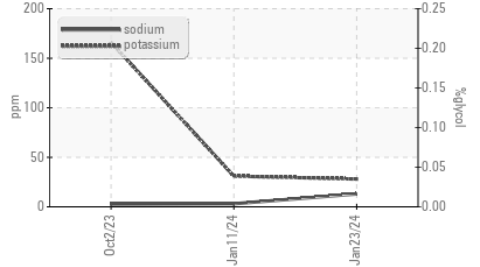
Non-ferrous Metals



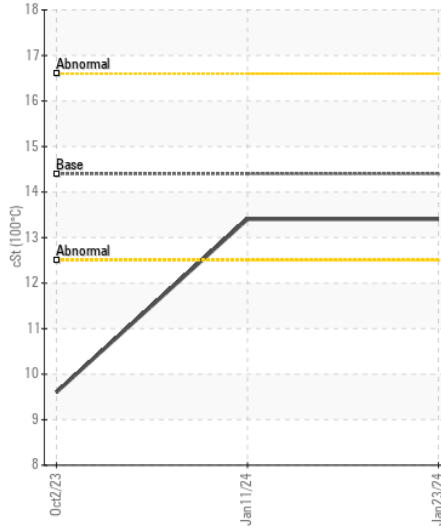
Viscosity @ 100°C



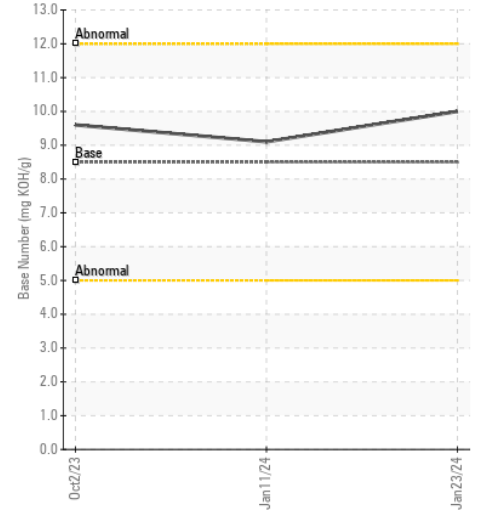
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0891674

Lab Number : 06153663

Unique Number : 10983741

Test Package : FLEET (Additional Tests: Glycol)

Received : 18 Apr 2024

Tested : 23 Apr 2024

Diagnosed : 23 Apr 2024 - Don Baldrige

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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