



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

2-270

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- QTS)

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		WC0834200	WC0847591	WC0794779
Sample Date		Client Info		07 Jan 2024	06 Oct 2023	21 Jun 2023
Machine Age	hrs	Client Info		0	2734	1566
Oil Age	hrs	Client Info		0	1168	785
Filter Age	hrs	Client Info		0	1168	785
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	23	20
Chromium	ppm	ASTM D5185m	>20	<1	2	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	14	8
Lead	ppm	ASTM D5185m	>40	<1	2	4
Copper	ppm	ASTM D5185m	>330	33	112	▲ 457
Tin	ppm	ASTM D5185m	>15	1	1	3
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

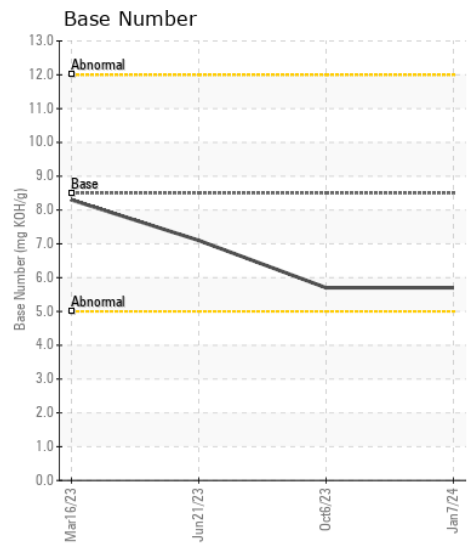
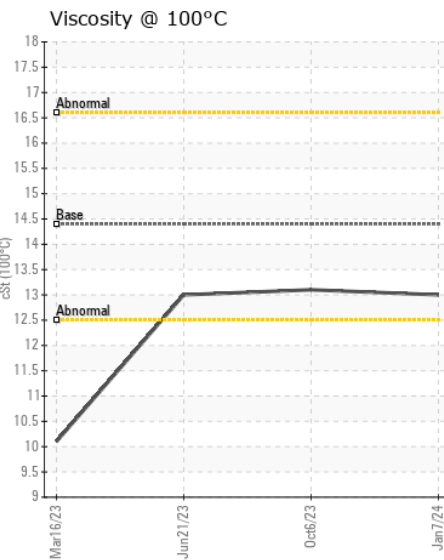
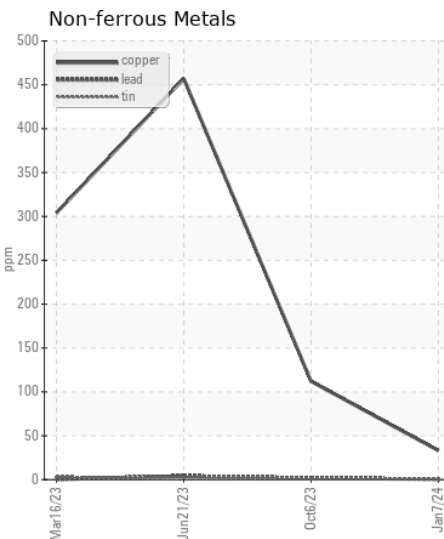
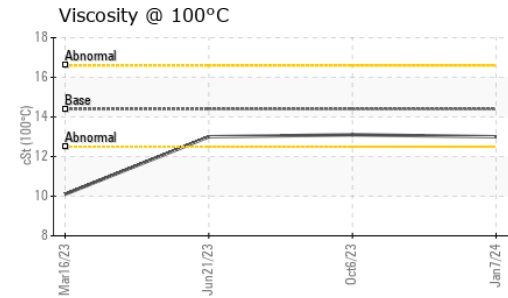
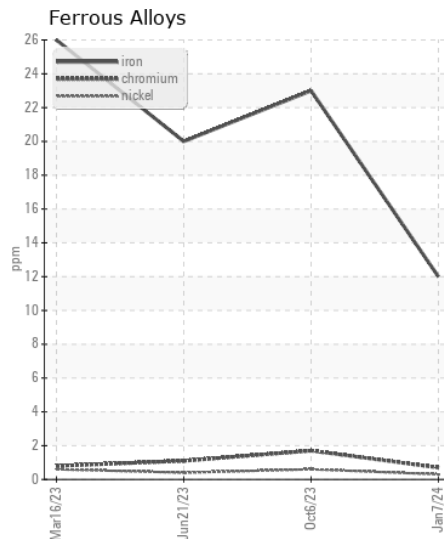
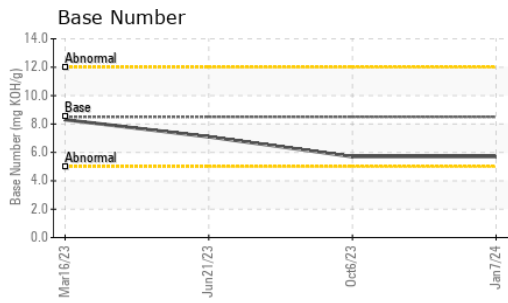
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	12	8
Potassium	ppm	ASTM D5185m	>20	14	38	17
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	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.9	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	20.6	21.3
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	2	3	3
Boron	ppm	ASTM D5185m	250	25	20	27
Barium	ppm	ASTM D5185m	10	0	3	0
Molybdenum	ppm	ASTM D5185m	100	10	12	8
Manganese	ppm	ASTM D5185m		<1	1	1
Magnesium	ppm	ASTM D5185m	450	773	693	786
Calcium	ppm	ASTM D5185m	3000	1341	1373	1554
Phosphorus	ppm	ASTM D5185m	1150	760	665	717
Zinc	ppm	ASTM D5185m	1350	866	775	860
Sulfur	ppm	ASTM D5185m	4250	2716	2195	2763
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	17.8	19.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.7	5.7	7.1
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	13.1	13.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0834200 **Received** : 17 Jan 2024
Lab Number : 06063384 **Diagnosed** : 18 Jan 2024
Unique Number : 10834766 **Diagnostician** : Wes Davis
Test Package : FLEET

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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)