



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
77061
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. 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		WC0903194	WC0852267	WC0717653
Sample Date		Client Info		15 Mar 2024	01 Sep 2023	02 Jun 2023
Machine Age	mls	Client Info		40357	33704	30588
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	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	24	19	7
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	8	6
Lead	ppm	ASTM D5185m	>40	2	0	0
Copper	ppm	ASTM D5185m	>330	11	1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

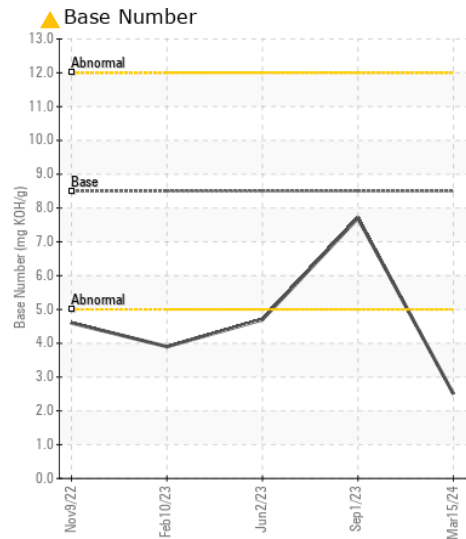
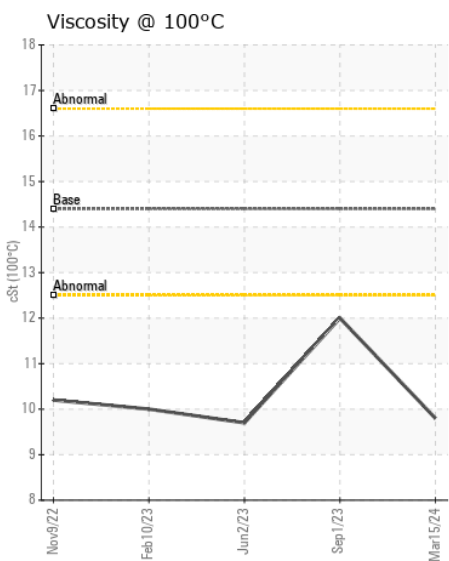
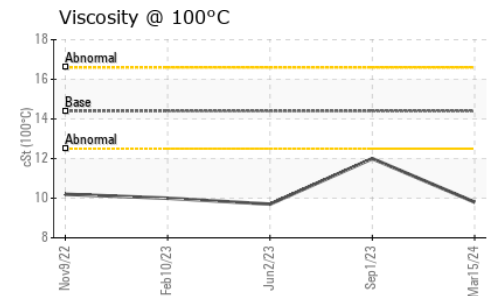
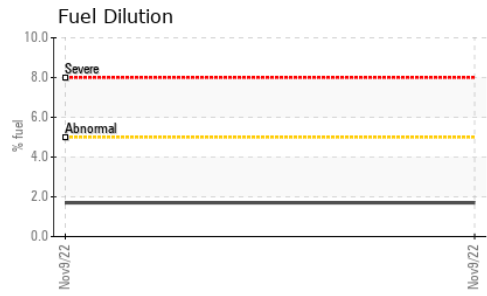
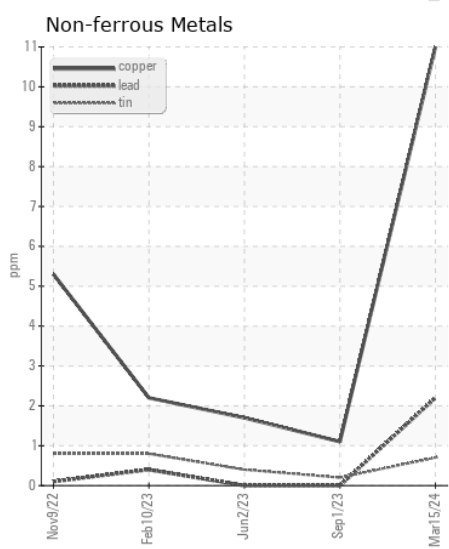
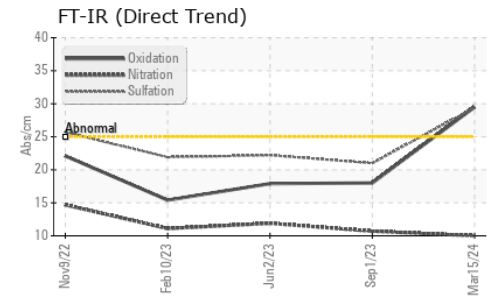
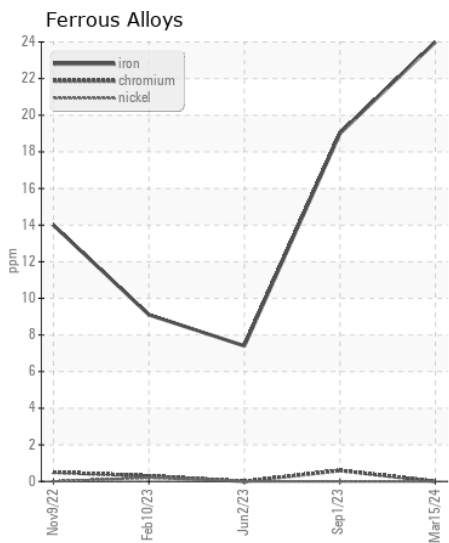
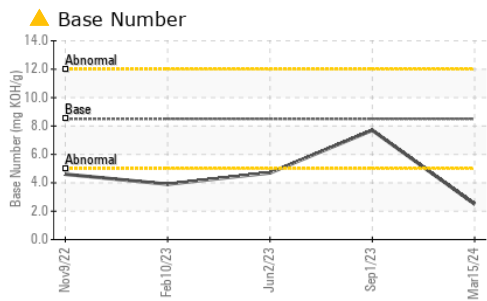
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	7	11
Potassium	ppm	ASTM D5185m	>20	3	5	1
Fuel	%	ASTM D3524	>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	0.7	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.0	10.7	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.4	21.0	22.2
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

FLUID CONDITION

The BN level is low.

Sodium	ppm	ASTM D5185m	>158	5	2	2
Boron	ppm	ASTM D5185m	250	92	12	31
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	78	70	94
Manganese	ppm	ASTM D5185m		6	<1	2
Magnesium	ppm	ASTM D5185m	450	485	851	683
Calcium	ppm	ASTM D5185m	3000	935	982	844
Phosphorus	ppm	ASTM D5185m	1150	681	900	678
Zinc	ppm	ASTM D5185m	1350	777	1116	830
Sulfur	ppm	ASTM D5185m	4250	2547	3155	2705
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.5	18.0	17.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ 2.5	7.7	4.7
Visc @ 100°C	cSt	ASTM D445	14.4	9.8	12.0	● 9.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0903194 **Received** : 12 Apr 2024
Lab Number : 06147148 **Tested** : 15 Apr 2024
Unique Number : 10977226 **Diagnosed** : 16 Apr 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution)

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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)