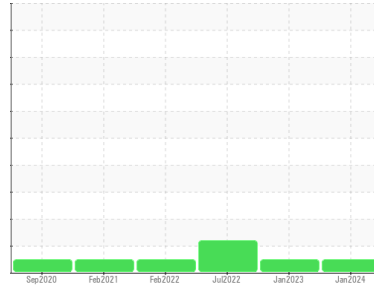




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

2111

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 5W30 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0876693	WC0717343	WC0686074
Sample Date	Client Info			06 Jan 2024	08 Jan 2023	15 Jul 2022
Machine Age	mls	Client Info		453990	328868	277726
Oil Age	mls	Client Info		50000	50000	100000
Oil Changed	Client Info			Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	54	28	83
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	14	8	9
Lead	ppm	ASTM D5185m	>40	1	1	3
Copper	ppm	ASTM D5185m	>330	7	4	10
Tin	ppm	ASTM D5185m	>15	1	1	2
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	8	17	6
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	64	67
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	1021	567	1214
Calcium	ppm	ASTM D5185m	3000	893	1734	988
Phosphorus	ppm	ASTM D5185m	1150	1045	1022	1075
Zinc	ppm	ASTM D5185m	1350	1243	1347	1393
Sulfur	ppm	ASTM D5185m	4250	3048	3696	3504

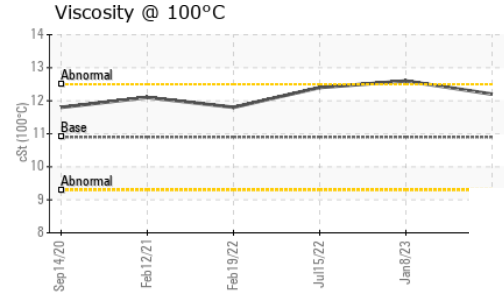
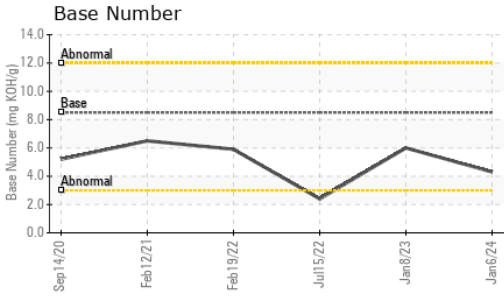
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	13	14	8
Sodium	ppm	ASTM D5185m		4	3	6
Potassium	ppm	ASTM D5185m	>20	9	6	15

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1.3	0.7	1.2
Nitration	Abs/cm	*ASTM D7624	>20	13.4	10.5	19.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.0	24.8	36.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.3	21.4	43.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.3	6.0	▲ 2.4



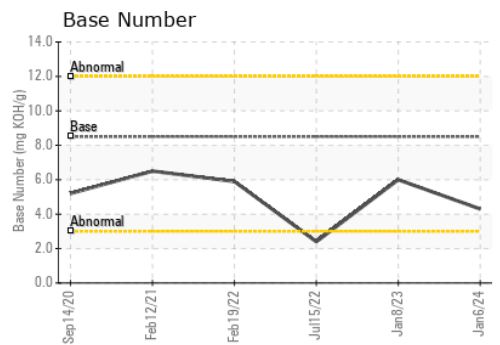
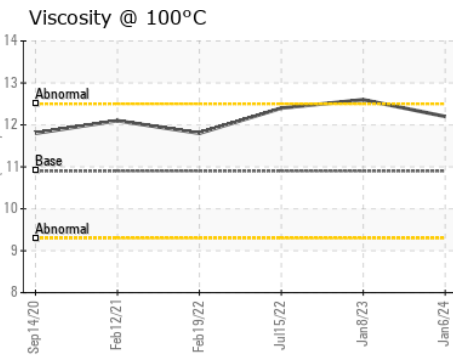
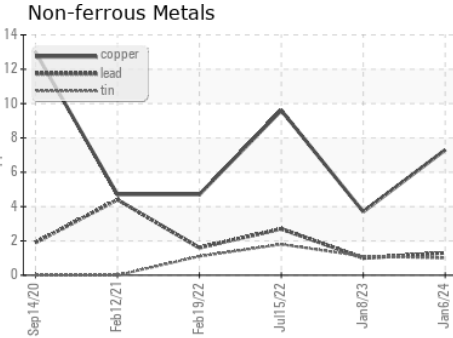
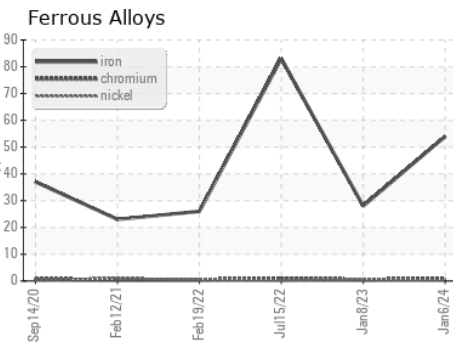
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.9	12.2	12.6	12.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0876693 **Recieved** : 11 Jan 2024
Lab Number : **06058675** **Diagnosed** : 14 Jan 2024
Unique Number : 10830057 **Diagnostician** : Don Baldrige
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)