



OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HC2218
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935904	WC0785074	WC0720587
Sample Date		Client Info		22 Jun 2024	20 Mar 2023	07 Nov 2022
Machine Age	hrs	Client Info		3757	2075	1693
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		0	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

An increase in the copper level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	3	3
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	1	0
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	136	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	<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

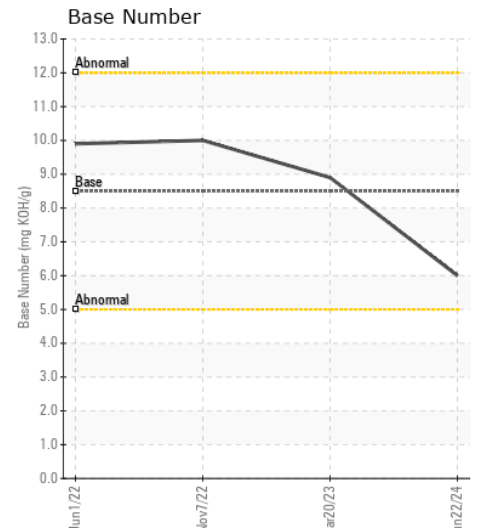
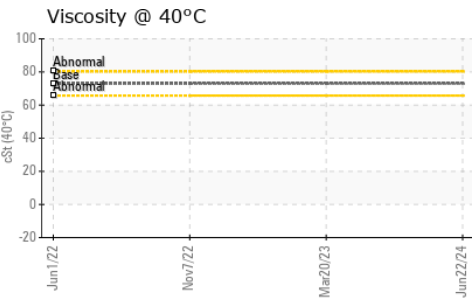
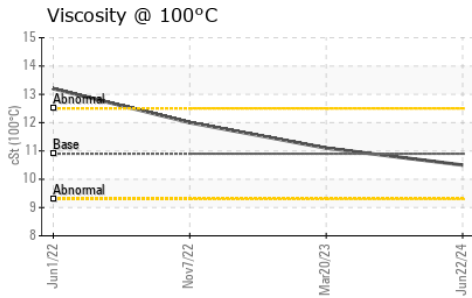
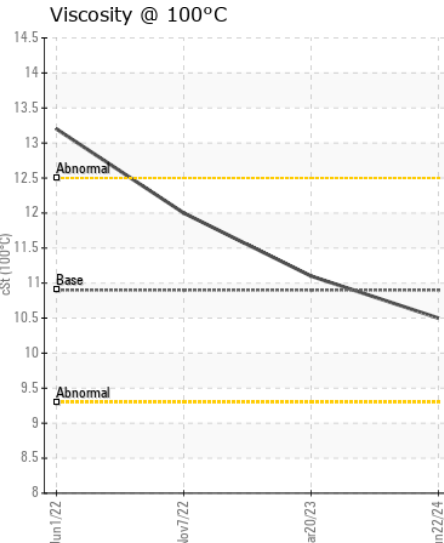
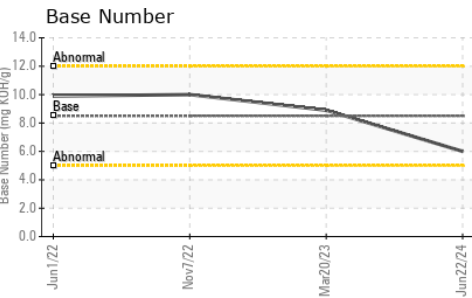
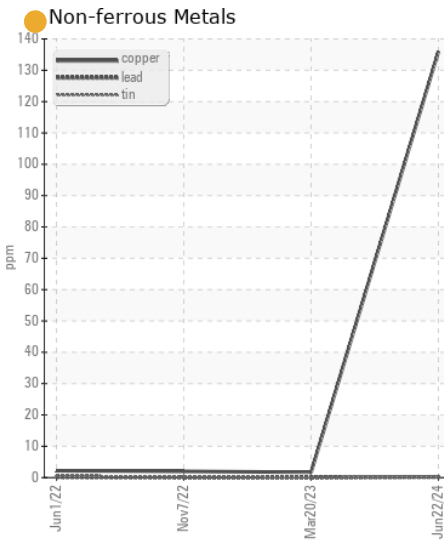
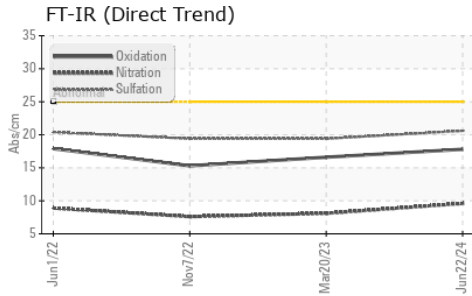
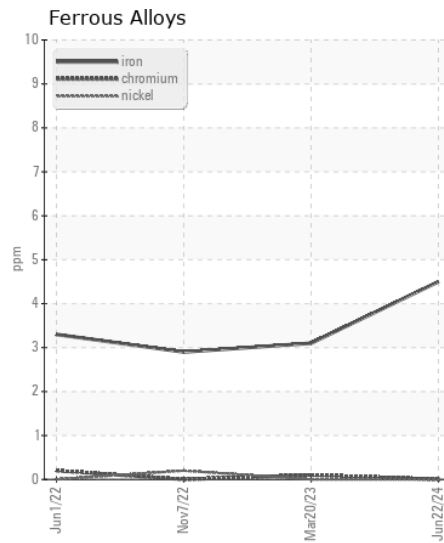
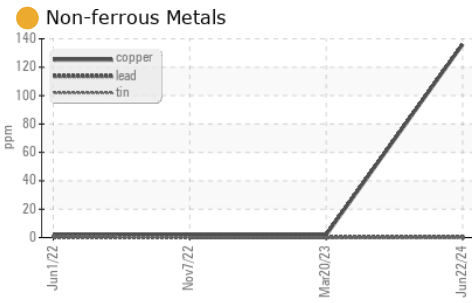
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	7	4
Potassium	ppm	ASTM D5185m	>20	0	1	2
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	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.6	8.1	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	19.4	19.4
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	1	2
Boron	ppm	ASTM D5185m	250	6	29	25
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	56	51	61
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	865	788	808
Calcium	ppm	ASTM D5185m	3000	1165	1181	1147
Phosphorus	ppm	ASTM D5185m	1150	862	803	987
Zinc	ppm	ASTM D5185m	1350	1130	968	1178
Sulfur	ppm	ASTM D5185m	4250	2834	2555	3707
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	16.6	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.0	8.9	10
Visc @ 100°C	cSt	ASTM D445	10.9	10.5	11.1	12.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0935904 **Received** : 01 Jul 2024
Lab Number : 06225552 **Tested** : 03 Jul 2024
Unique Number : 11103749 **Diagnosed** : 03 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: KV40, TBN)

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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