



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1695
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

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		HRE000499	WC0860422	WC0721997
Sample Date		Client Info		27 Jun 2024	09 Nov 2023	14 Sep 2022
Machine Age	mls	Client Info		62401	56927	50889
Oil Age	mls	Client Info		0	0	6000
Filter Age	mls	Client Info		0	0	6000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

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

CONTAMINATION

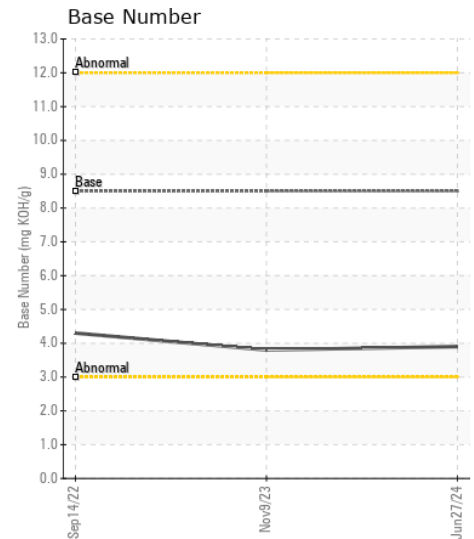
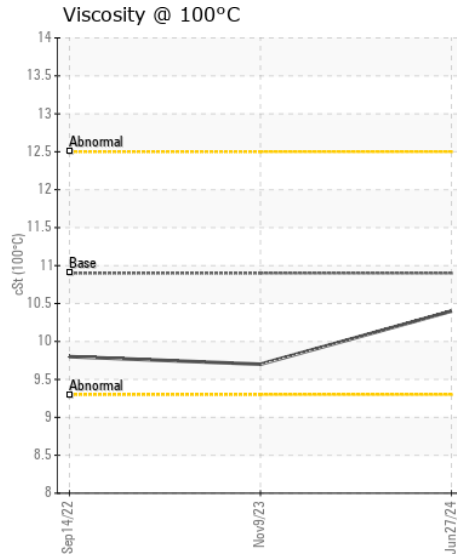
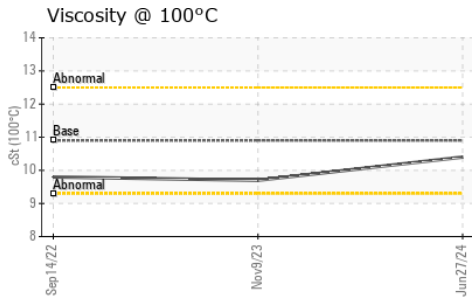
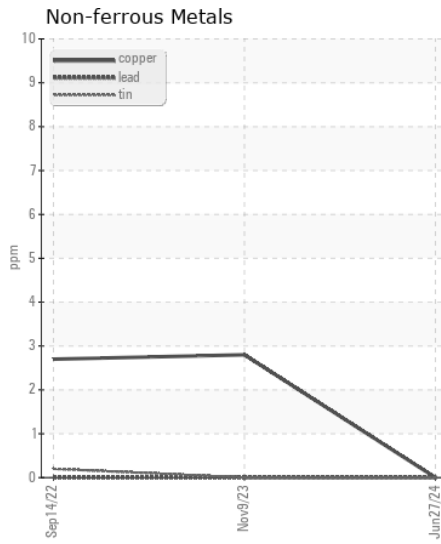
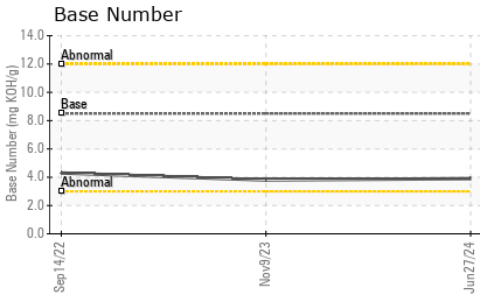
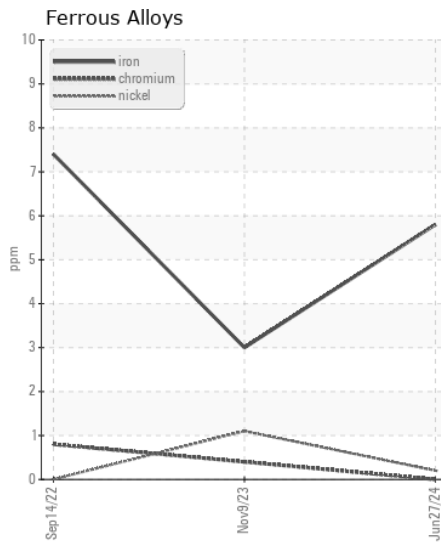
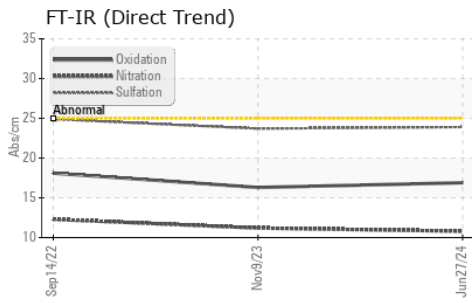
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	15	9	6
Potassium	ppm	ASTM D5185m	>20	0	<1	3
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
Nitration	Abs/cm	*ASTM D7624	>20	10.8	11.2	12.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.9	23.7	24.9
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		2	3	3
Boron	ppm	ASTM D5185m	250	25	43	51
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	188	68	67
Manganese	ppm	ASTM D5185m		10	<1	<1
Magnesium	ppm	ASTM D5185m	450	634	507	470
Calcium	ppm	ASTM D5185m	3000	1231	1170	1155
Phosphorus	ppm	ASTM D5185m	1150	639	628	601
Zinc	ppm	ASTM D5185m	1350	776	778	741
Sulfur	ppm	ASTM D5185m	4250	3283	2793	2765
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	16.3	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	3.9	3.8	4.3
Visc @ 100°C	cSt	ASTM D445	10.9	10.4	9.7	9.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000499 **Received** : 11 Jul 2024
Lab Number : 06232957 **Tested** : 11 Jul 2024
Unique Number : 11116450 **Diagnosed** : 11 Jul 2024 - Wes Davis
Test Package : FLEET

TOWN OF CHAPEL HILL
 6900 MILLHOUSE RD
 CHAPEL HILL, NC
 US 27516

Contact: Lisa DePasqua
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 T: (919)696-4941

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)