



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2034
 Component
Diesel Engine
 Fluid
SHELL 10W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0916512	WC0853985	WC0822877
Sample Date		Client Info		08 Apr 2024	14 Oct 2023	11 Jul 2023
Machine Age	mls	Client Info		14972	0	458231
Oil Age	mls	Client Info		14972	23679	26885
Filter Age	mls	Client Info		14972	23679	26885
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	24	43	29
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	4
Lead	ppm	ASTM D5185m	>40	1	2	3
Copper	ppm	ASTM D5185m	>330	1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

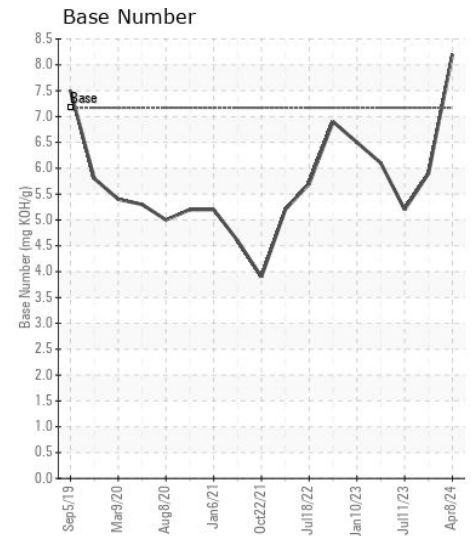
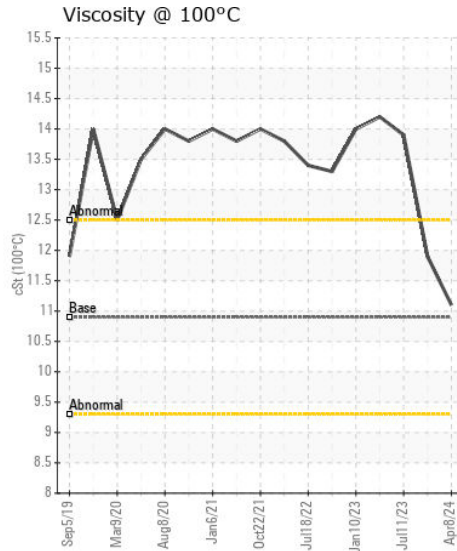
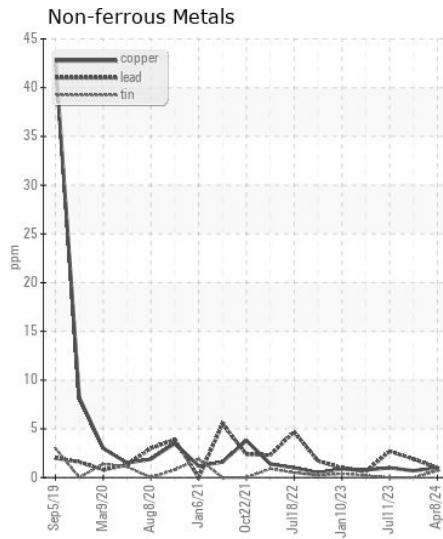
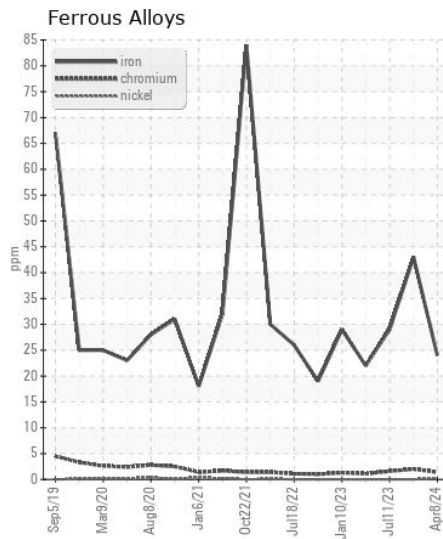
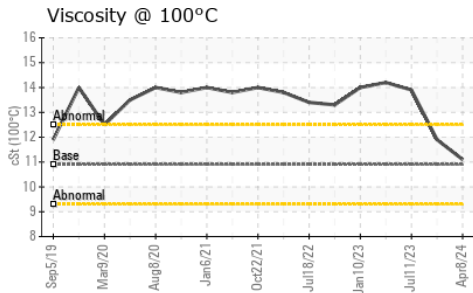
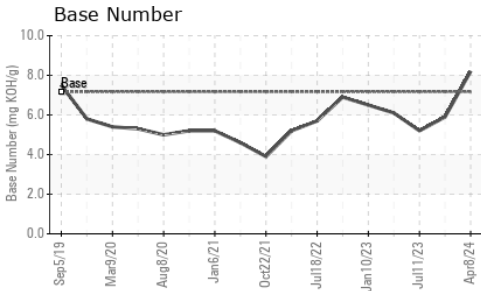
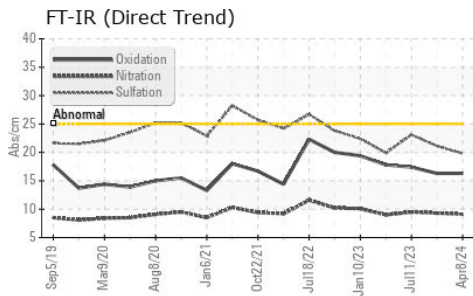
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	14	8
Potassium	ppm	ASTM D5185m	>20	3	5	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	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.3	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	21.1	23.1
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		<1	3	2
Boron	ppm	ASTM D5185m		<1	2	12
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		64	45	40
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	470	1009	653	266
Calcium	ppm	ASTM D5185m	1150	1109	1460	2106
Phosphorus	ppm	ASTM D5185m	94	1166	935	964
Zinc	ppm	ASTM D5185m	1030	1322	1213	1232
Sulfur	ppm	ASTM D5185m		3546	2952	3830
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	16.3	17.4
Base Number (BN)	mg KOH/g	ASTM D2896	7.17	8.2	5.9	5.2
Visc @ 100°C	cSt	ASTM D445	10.90	11.1	11.9	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916512
Lab Number : 06155161
Unique Number : 10990584
Test Package : FLEET

Received : 19 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 22 Apr 2024 - Wes Davis

CARCO TRANSPORTATION
 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206

Contact: DENNIS CATES
 denniscales@carcotrans.com

T: (800)967-0777

F:

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)