



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
TR1014
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0923053	WC0751839	WC0610467
Sample Date		Client Info		02 Jul 2024	26 Sep 2023	21 Dec 2021
Machine Age	hrs	Client Info		2214	2063	5596
Oil Age	hrs	Client Info		250	2063	0
Filter Age	hrs	Client Info		250	2063	0
Oil Changed		Client Info		N/A	Not Changd	Changed
Filter Changed		Client Info		N/A	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	18	27	23
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	9	5
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	2	22	157
Tin	ppm	ASTM D5185m	>15	0	<1	<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.

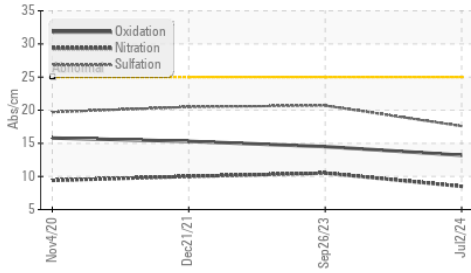
Silicon	ppm	ASTM D5185m	>25	6	9	4
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.5	10.5	10
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.6	20.7	20.5
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

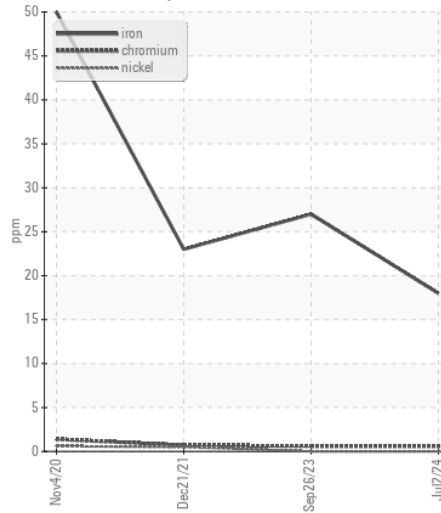
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	2	1	1
Boron	ppm	ASTM D5185m	250	54	51	60
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	75	87	54
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	189	49	116
Calcium	ppm	ASTM D5185m	3000	1789	2067	2125
Phosphorus	ppm	ASTM D5185m	1150	976	1008	1063
Zinc	ppm	ASTM D5185m	1350	1142	1191	1212
Sulfur	ppm	ASTM D5185m	4250	3235	4337	3316
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	14.5	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.6	5.3	6.1
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	13.6	13.4

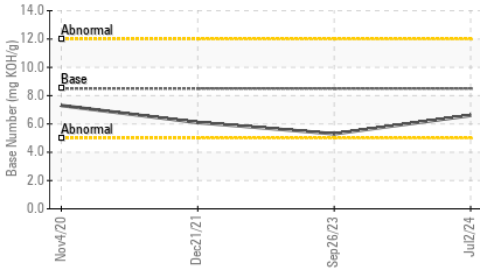
FT-IR (Direct Trend)



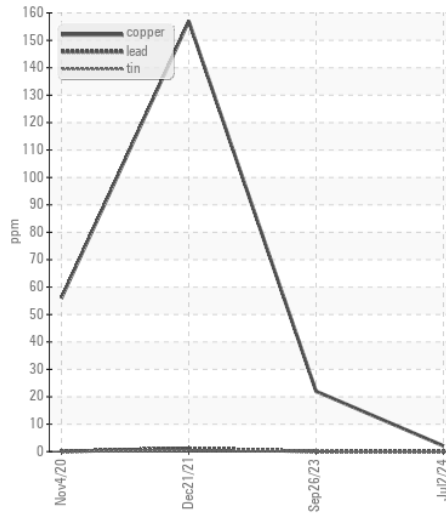
Ferrous Alloys



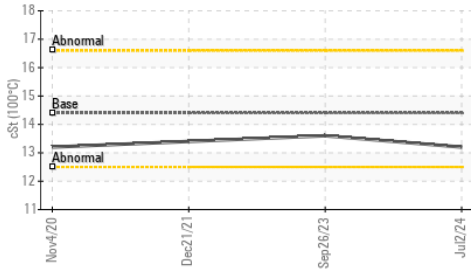
Base Number



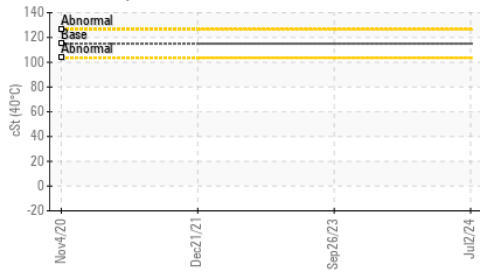
Non-ferrous Metals



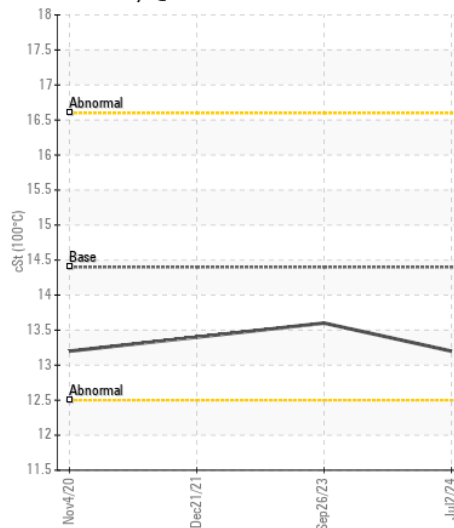
Viscosity @ 100°C



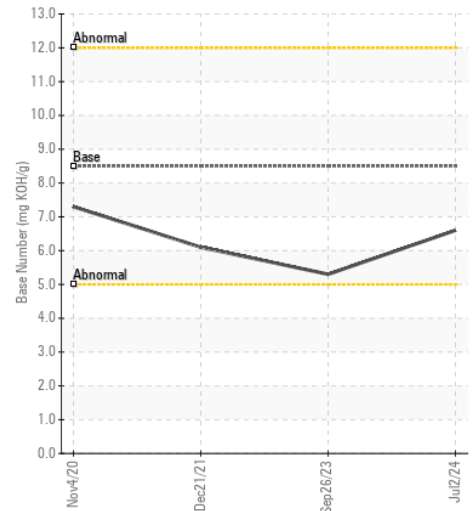
Viscosity @ 40°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0923053 **Received** : 03 Jul 2024
Lab Number : 06227033 **Tested** : 05 Jul 2024
Unique Number : 11110526 **Diagnosed** : 05 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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