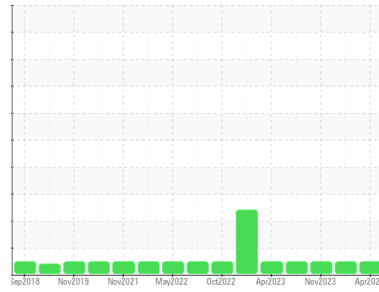




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

UTILITIES

Machine Id

PS1-GEN

Component

Auxiliary Power Unit Natural Gas Engine

Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

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			WC0840374	WC0840384	WC0840388
Sample Date	Client Info			22 Apr 2024	22 Jan 2024	13 Nov 2023
Machine Age	hrs	Client Info		212	207	201
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	2	<1	<1
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	<1	1
Lead	ppm	ASTM D5185m	>30	2	2	<1
Copper	ppm	ASTM D5185m	>35	8	5	4
Tin	ppm	ASTM D5185m	>4	1	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	12	10	10
Barium	ppm	ASTM D5185m	10	0	0	6
Molybdenum	ppm	ASTM D5185m	100	58	58	63
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	450	938	936	903
Calcium	ppm	ASTM D5185m	3000	1067	1077	1107
Phosphorus	ppm	ASTM D5185m	1150	1109	1034	1110
Zinc	ppm	ASTM D5185m	1350	1236	1252	1188
Sulfur	ppm	ASTM D5185m	4250	3837	3138	3391

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	5	4	4
Sodium	ppm	ASTM D5185m		3	<1	0
Potassium	ppm	ASTM D5185m	>20	1	2	<1

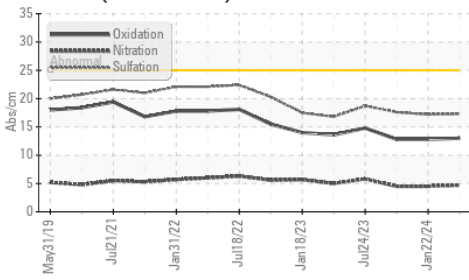
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	4.7	4.5	4.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.3	17.2	17.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0	12.8	12.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.32	10.22	10.00

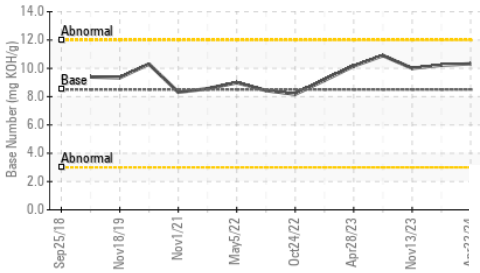


OIL ANALYSIS REPORT

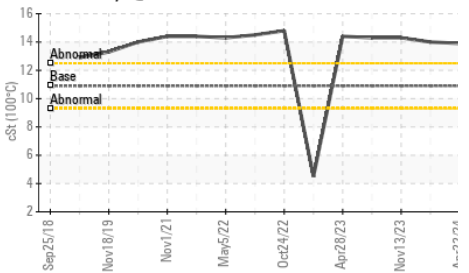
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

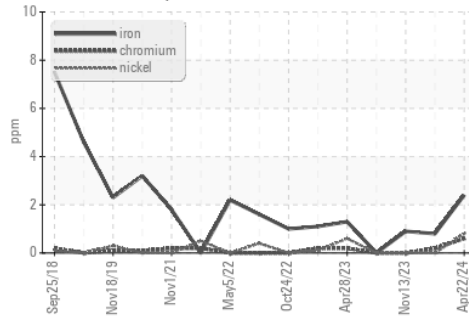


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

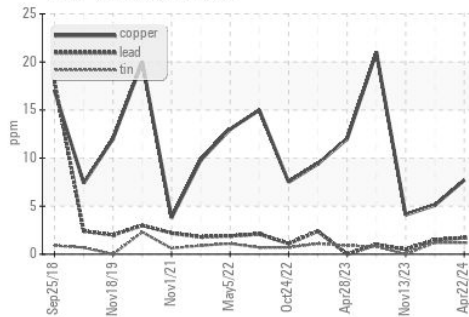
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	13.9	14.0

GRAPHS

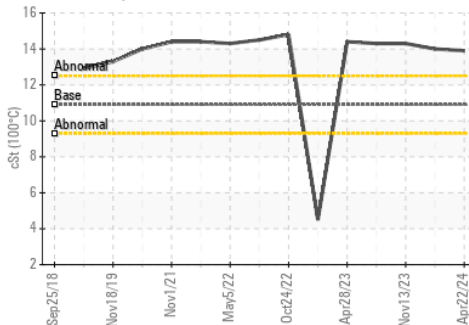
Ferrous Alloys



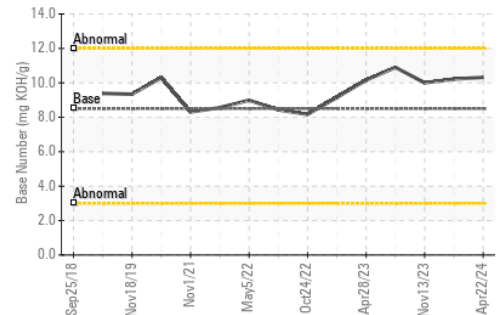
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0840374
 Lab Number : 06160579
 Unique Number : 10996002
 Test Package : IND 2

Received : 25 Apr 2024
 Tested : 26 Apr 2024
 Diagnosed : 26 Apr 2024 - Wes Davis

TORAY CARBON FIBERS AMERICA INC
 2202 MOORE DUNCAN HWY
 MOORE, SC
 US 29369
 Contact: Kirk Stilling
 Kirk.stilling@toraycma.com

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)

T:
F: