



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
31262
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL 10W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0882811	WC0924572	WC0857107
Sample Date		Client Info		03 Jul 2024	13 Apr 2024	14 Dec 2023
Machine Age	hrs	Client Info		1141	827	579
Oil Age	hrs	Client Info		1250	250	250
Filter Age	hrs	Client Info		1250	250	250
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	7	4	2
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	5	1	2
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	3	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<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.

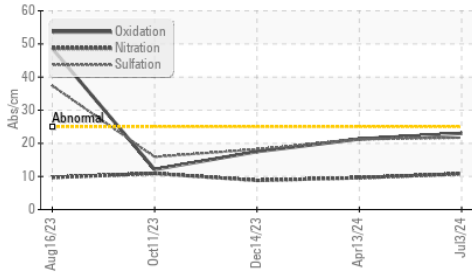
Silicon	ppm	ASTM D5185m	>25	15	7	8
Potassium	ppm	ASTM D5185m	>20	13	20	4
Fuel		WC Method	>5	<1.0	0.7	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.8	9.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.2	18.2
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

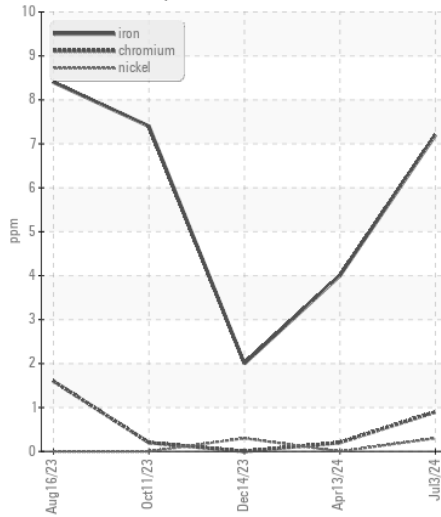
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	3	1
Boron	ppm	ASTM D5185m	250	106	134	205
Barium	ppm	ASTM D5185m	10	0	0	<1
Molybdenum	ppm	ASTM D5185m	100	52	36	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	1019	816	673
Calcium	ppm	ASTM D5185m	3000	1554	1432	1835
Phosphorus	ppm	ASTM D5185m	1150	911	745	879
Zinc	ppm	ASTM D5185m	1350	1076	865	972
Sulfur	ppm	ASTM D5185m	4250	2675	2977	3875
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.0	21.3	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.9	10.6	9.1
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	12.3	13.4

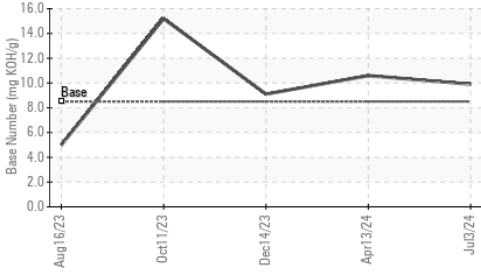
FT-IR (Direct Trend)



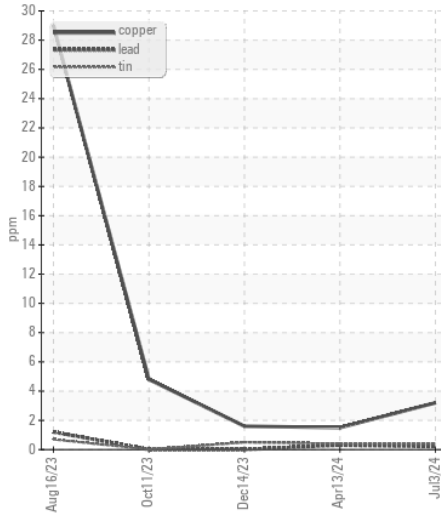
Ferrous Alloys



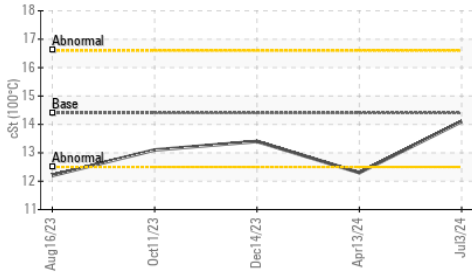
Base Number



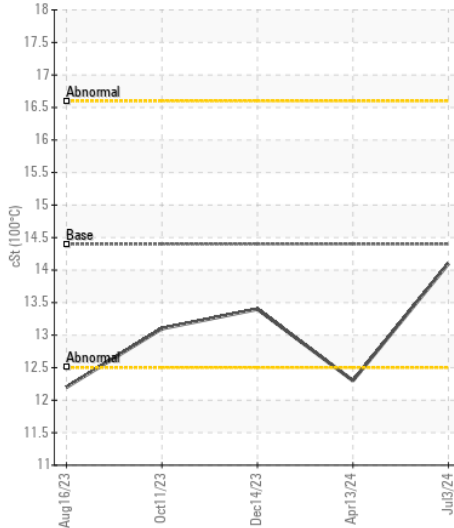
Non-ferrous Metals



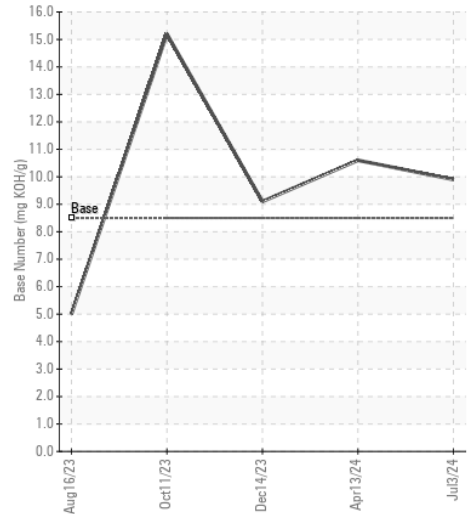
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0882811 **Received** : 11 Jul 2024
Lab Number : 06233056 **Tested** : 11 Jul 2024
Unique Number : 11116549 **Diagnosed** : 12 Jul 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

SULLIVAN EASTERN INC
 2860 C SLATER RD
 MORRISVILLE, NC
 US 27560
 Contact: SCOTT SULLIVAN
 ssullivan@sullivaneastern.com
 T: (919)484-8993
 F: (919)484-2136

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)