



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
11613
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 5W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0913532	WC0924529	WC0882686
Sample Date		Client Info		25 Jun 2024	29 Apr 2024	09 Feb 2024
Machine Age	mls	Client Info		73557	69346	63355
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	5	5
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	8	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
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.

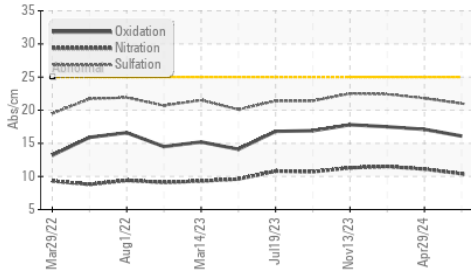
Silicon	ppm	ASTM D5185m	>25	8	6	9
Potassium	ppm	ASTM D5185m	>20	5	3	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	10.4	11.1	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	21.8	22.4
Silt	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

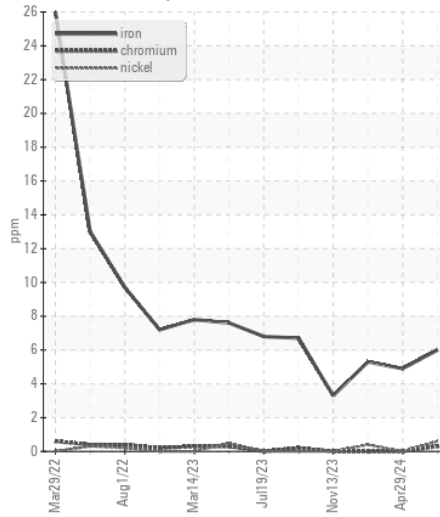
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	2	3
Boron	ppm	ASTM D5185m	250	46	19	33
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	5	4	3
Manganese	ppm	ASTM D5185m		7	4	2
Magnesium	ppm	ASTM D5185m	450	651	709	685
Calcium	ppm	ASTM D5185m	3000	1246	1335	1205
Phosphorus	ppm	ASTM D5185m	1150	621	699	685
Zinc	ppm	ASTM D5185m	1350	761	779	782
Sulfur	ppm	ASTM D5185m	4250	2561	3339	2789
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	17.1	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.1	5.6	5.0
Visc @ 100°C	cSt	ASTM D445	10.9	11.9	11.7	11.5

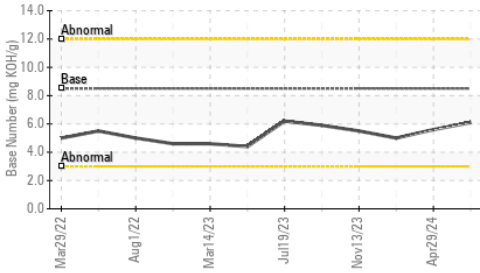
FT-IR (Direct Trend)



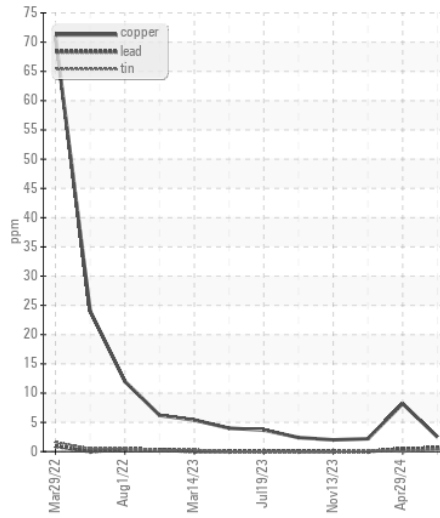
Ferrous Alloys



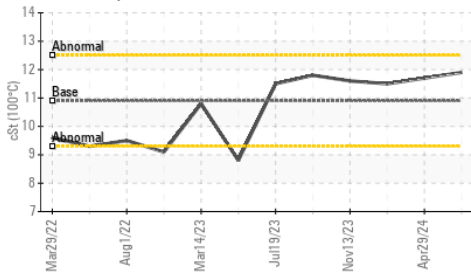
Base Number



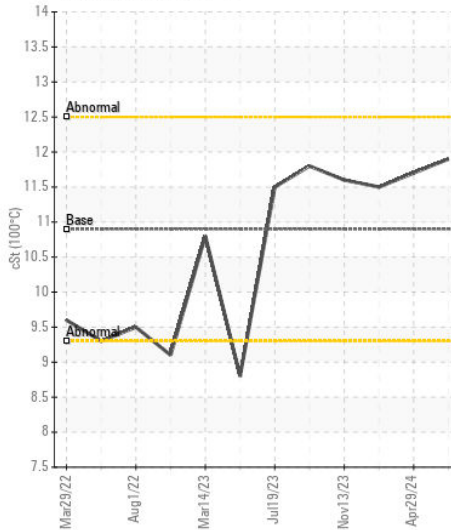
Non-ferrous Metals



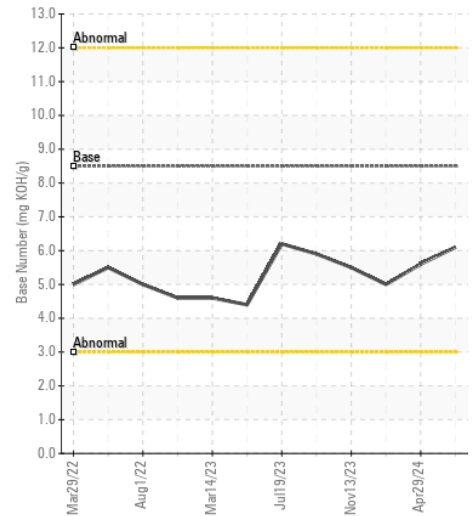
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0913532 **Received** : 25 Jun 2024
Lab Number : 06219442 **Tested** : 26 Jun 2024
Unique Number : 11097639 **Diagnosed** : 26 Jun 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

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: (919)484-8993
 F: (919)484-2136