



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	ATTENTION

Machine Id
S4
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0841436	WC0841408	WC0841465
Sample Date		Client Info		17 May 2024	02 Feb 2024	06 Oct 2023
Machine Age	hrs	Client Info		11369	10822	10310
Oil Age	hrs	Client Info		534	3310	527
Filter Age	hrs	Client Info		534	3310	527
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	32	61	82
Chromium	ppm	ASTM D5185m	>4	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	1	3	3
Lead	ppm	ASTM D5185m	>45	0	0	<1
Copper	ppm	ASTM D5185m	>85	0	3	5
Tin	ppm	ASTM D5185m	>4	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

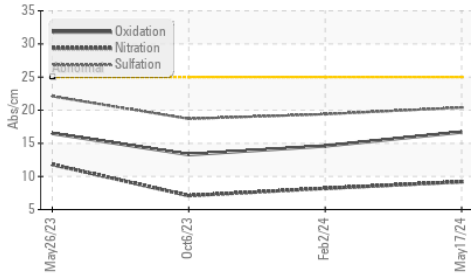
Silicon	ppm	ASTM D5185m	>30	5	8	6
Potassium	ppm	ASTM D5185m	>20	36	99	128
Fuel		WC Method	>5	<1.0	0.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.2	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	19.4	18.7
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

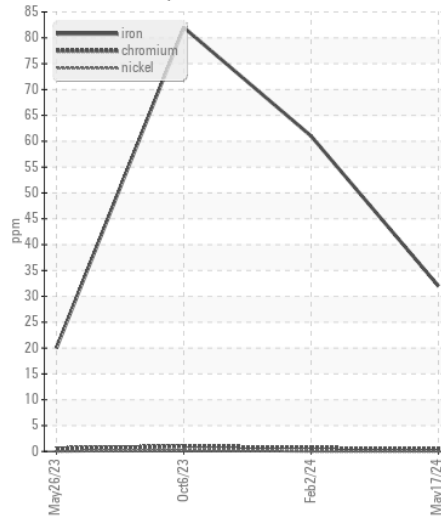
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>158	27	76	105
Boron	ppm	ASTM D5185m	250	9	15	20
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	85	84
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	450	838	802	801
Calcium	ppm	ASTM D5185m	3000	1212	1111	1387
Phosphorus	ppm	ASTM D5185m	1150	980	970	1089
Zinc	ppm	ASTM D5185m	1350	1148	1139	1351
Sulfur	ppm	ASTM D5185m	4250	3376	3060	3649
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	14.6	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9	7.9	8.9
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.2	13.0

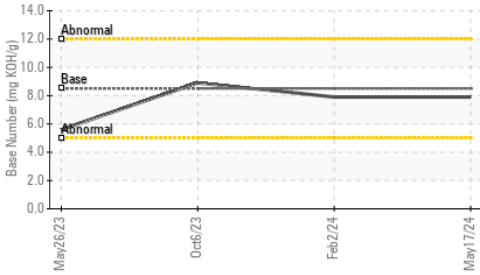
FT-IR (Direct Trend)



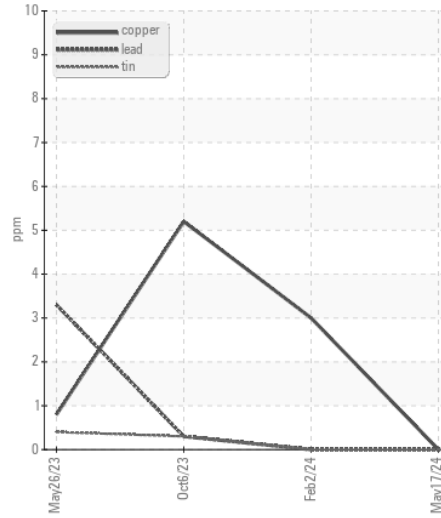
Ferrous Alloys



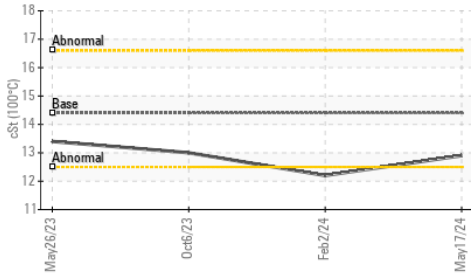
Base Number



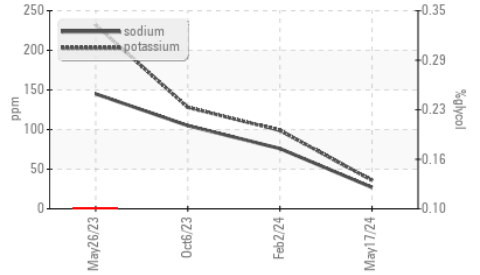
Non-ferrous Metals



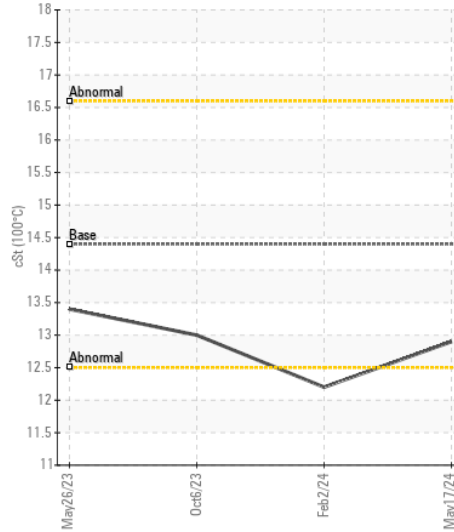
Viscosity @ 100°C



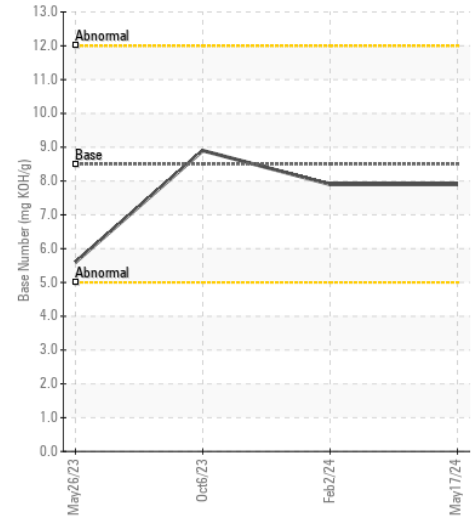
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0841436 **Received** : 19 Jun 2024
Lab Number : 06214296 **Tested** : 20 Jun 2024
Unique Number : 11087160 **Diagnosed** : 20 Jun 2024 - Sean Felton
Test Package : CONST (Additional Tests: Glycol, TBN)

Apple Valley Waste - SEW Location
 309 Salina Road
 Sewell, NJ
 US 08080
 Contact: Service Manager

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: