



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
20543
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0939012	WC0829639	WC0711052
Sample Date		Client Info		06 Jun 2024	19 Feb 2024	13 Mar 2023
Machine Age	mls	Client Info		319502	307536	258548
Oil Age	mls	Client Info		319502	0	258548
Filter Age	mls	Client Info		319502	0	258548
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	17	62	14
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	7	33	5
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<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.

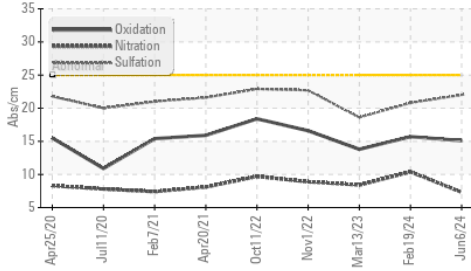
Silicon	ppm	ASTM D5185m	>25	11	21	9
Potassium	ppm	ASTM D5185m	>20	7	12	12
Fuel		WC Method	>5	<1.0	0.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.9	0.9
Nitration	Abs/cm	*ASTM D7624	>20	7.3	10.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	20.8	18.6
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

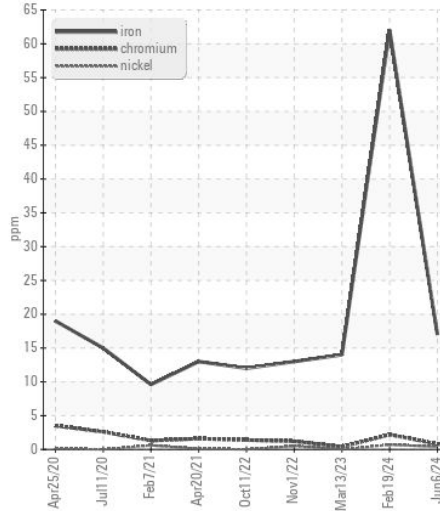
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	4	14	1
Boron	ppm	ASTM D5185m	250	274	30	2
Barium	ppm	ASTM D5185m	10	0	1	0
Molybdenum	ppm	ASTM D5185m	100	88	82	53
Manganese	ppm	ASTM D5185m		1	3	<1
Magnesium	ppm	ASTM D5185m	450	400	248	799
Calcium	ppm	ASTM D5185m	3000	1414	2202	1145
Phosphorus	ppm	ASTM D5185m	1150	1092	1119	914
Zinc	ppm	ASTM D5185m	1350	1288	1351	1137
Sulfur	ppm	ASTM D5185m	4250	3915	5097	3256
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	15.7	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.5	7.1	7.9
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	11.5	13.5

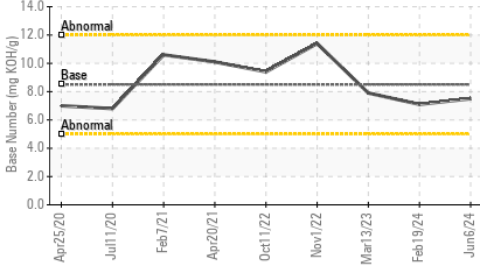
FT-IR (Direct Trend)



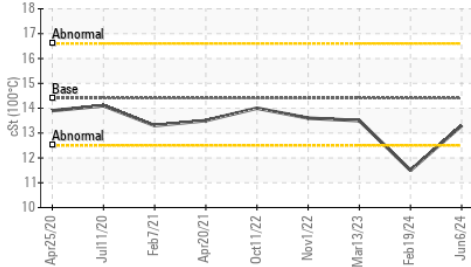
Ferrous Alloys



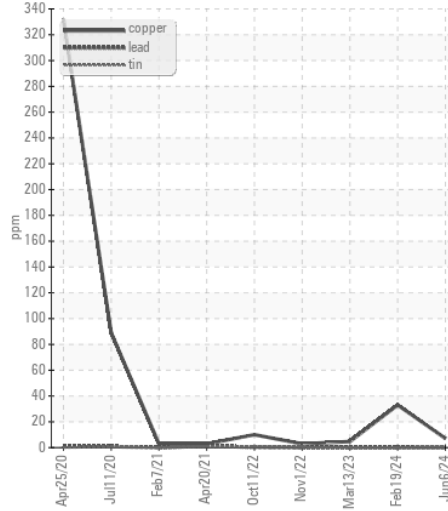
Base Number



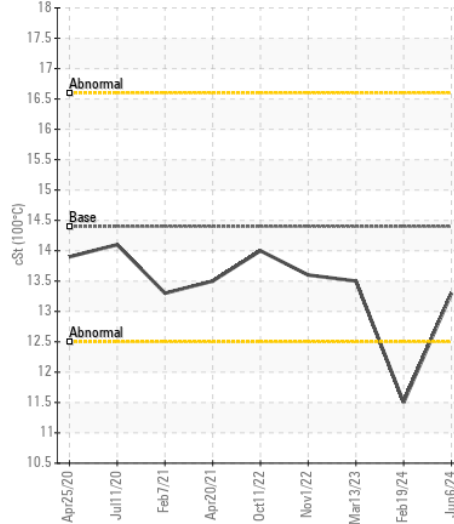
Viscosity @ 100°C



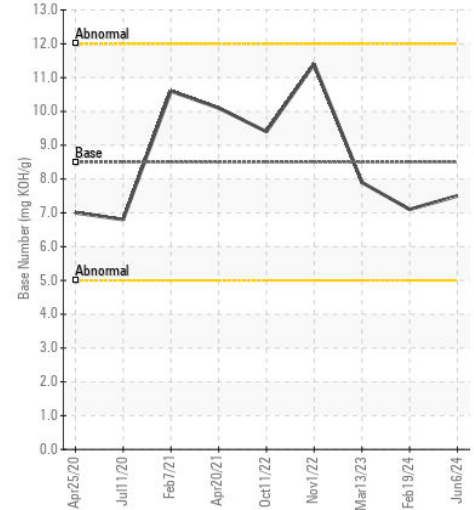
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939012 **Received** : 21 Jun 2024
Lab Number : 06217637 **Tested** : 24 Jun 2024
Unique Number : 11090501 **Diagnosed** : 24 Jun 2024 - Wes Davis
Test Package : FLEET

SALEM NATIONALEASE CORPORATION
 198 PARK PLAZA DRIVE
 WINSTON SALEM, NC
 US 27105
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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)