



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
NSE-AL-TRACTOR (NEW SOUTH EXPRESS)

Machine Id
AUTOCAR NSE21001

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 40 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0002236	NL0001605	NL0001540
Sample Date		Client Info		10 Apr 2024	08 Apr 2023	05 Apr 2023
Machine Age	hrs	Client Info		11191	10615	7737
Oil Age	hrs	Client Info		10615	0	1279
Filter Age	hrs	Client Info		0	0	1279
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	37	86	69
Chromium	ppm	ASTM D5185m	>20	<1	1	3
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	<1	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

There is no indication of any contamination in the oil.

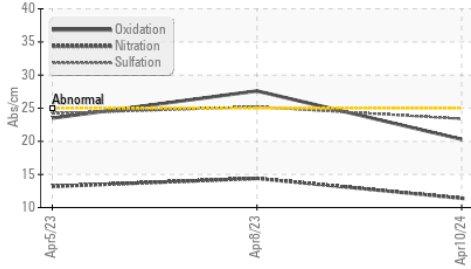
Silicon	ppm	ASTM D5185m	>25	4	6	4
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.4	1.6	1.8
Nitration	Abs/cm	*ASTM D7624	>20	11.4	14.4	13.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	25.2	24.2
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

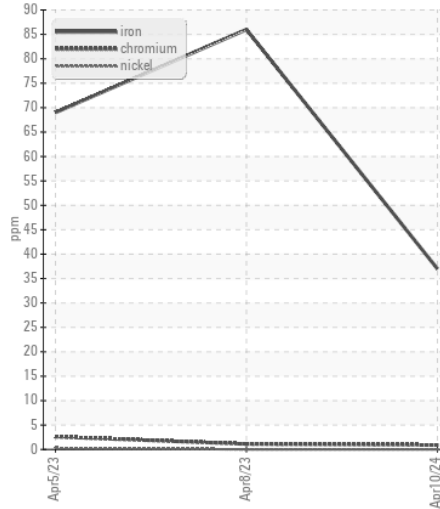
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	2	0	1
Boron	ppm	ASTM D5185m		5	21	0
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		62	39	55
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		878	489	848
Calcium	ppm	ASTM D5185m		1038	1506	982
Phosphorus	ppm	ASTM D5185m		1009	667	905
Zinc	ppm	ASTM D5185m		1188	853	1109
Sulfur	ppm	ASTM D5185m		3225	2501	2473
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	27.6	23.5
Base Number (BN)	mg KOH/g	ASTM D2896		6.6	6.7	5.4
Visc @ 100°C	cSt	ASTM D445		12.9	13.0	13.2

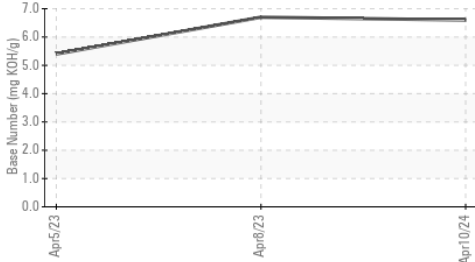
FT-IR (Direct Trend)



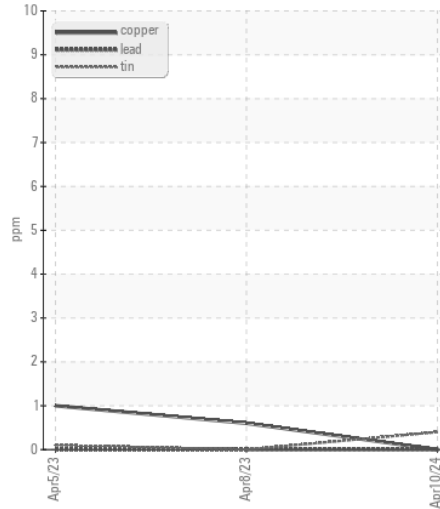
Ferrous Alloys



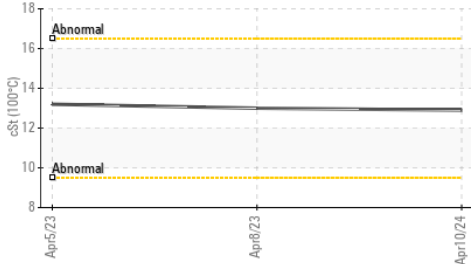
Base Number



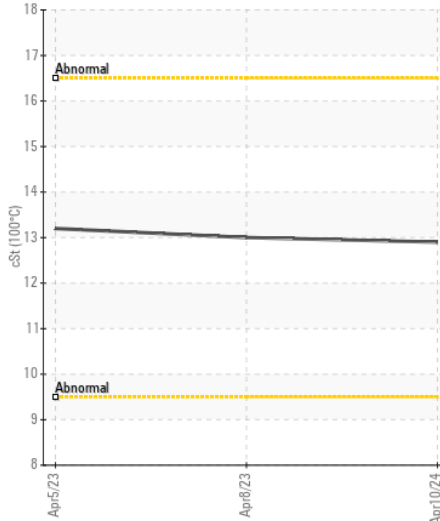
Non-ferrous Metals



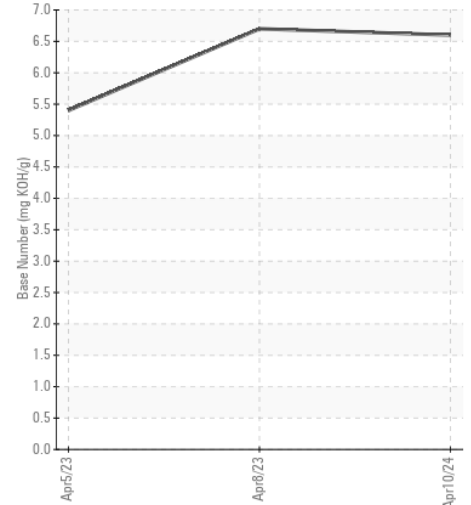
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : NL0002236

Lab Number : 06157361

Unique Number : 10992784

Test Package : FLEET

Received : 23 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Wes Davis

KIRK NATIONALEASE - SHOP 49

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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)