



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
INTERNATIONAL 3520
Component
Front Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (44 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0854006	WC0854054	WC0822951
Sample Date		Client Info		21 Feb 2024	29 Nov 2023	20 Jul 2023
Machine Age	mls	Client Info		370252	360089	344439
Oil Age	mls	Client Info		10163	15654	9241
Filter Age	mls	Client Info		10163	15654	9241
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	25	28	16
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	12	12	8
Lead	ppm	ASTM D5185m	>150	<1	0	0
Copper	ppm	ASTM D5185m	>90	<1	<1	<1
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

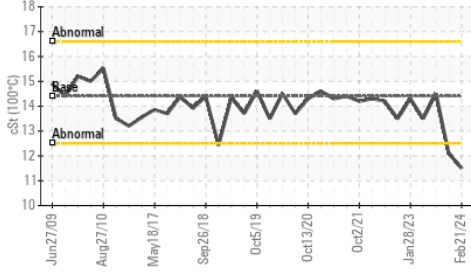
Silicon	ppm	ASTM D5185m	>35	5	5	4
Potassium	ppm	ASTM D5185m	>20	4	6	4
Fuel	%	ASTM D3524	>3.0	0.5	0.4	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	1.1	1.4	0.9
Nitration	Abs/cm	*ASTM D7624	>20	8.9	10.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	22.3	19.3
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

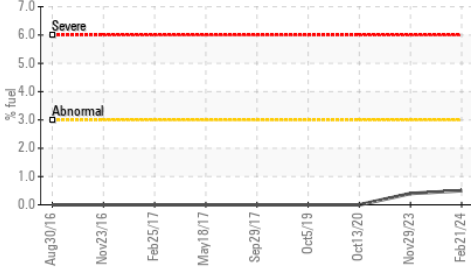
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>44	2	1	2
Boron	ppm	ASTM D5185m	250	1	4	19
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	66	56	18
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	1062	841	110
Calcium	ppm	ASTM D5185m	3000	1206	1293	2325
Phosphorus	ppm	ASTM D5185m	1150	1206	1060	952
Zinc	ppm	ASTM D5185m	1350	1378	1283	1189
Sulfur	ppm	ASTM D5185m	4250	3586	3315	4161
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	17.4	12.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.1	7.6	7.0
Visc @ 100°C	cSt	ASTM D445	14.4	11.5	12.1	14.5

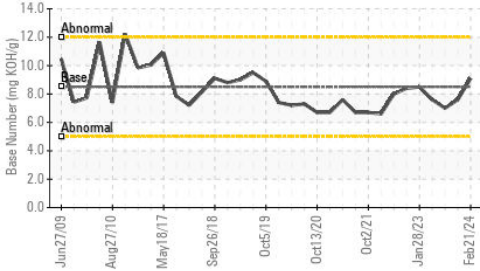
● Viscosity @ 100°C



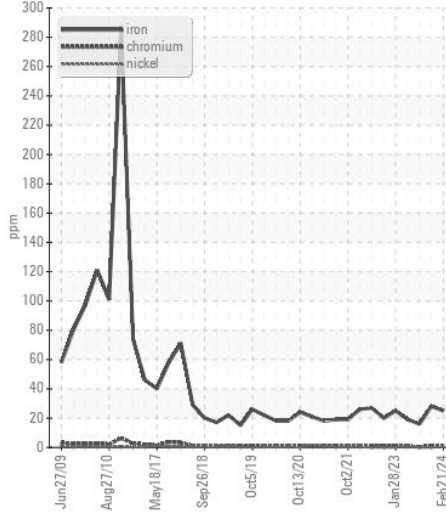
Fuel Dilution



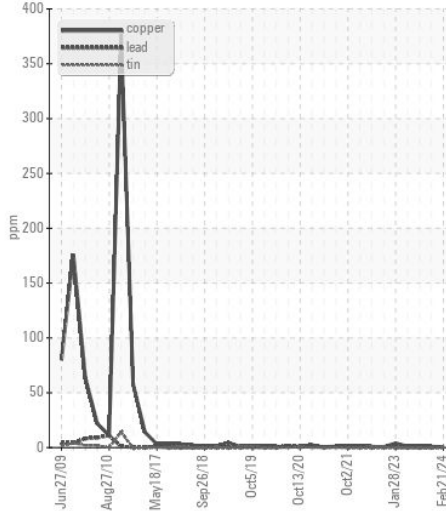
Base Number



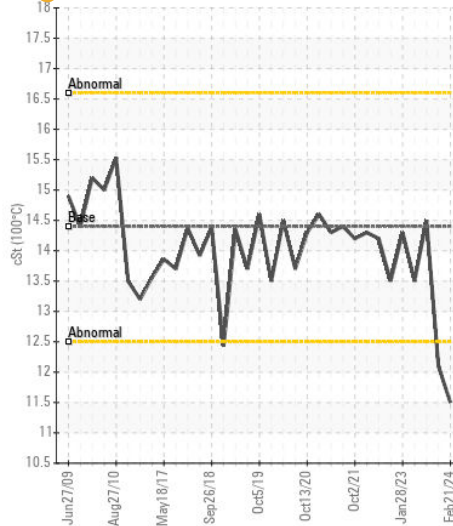
Ferrous Alloys



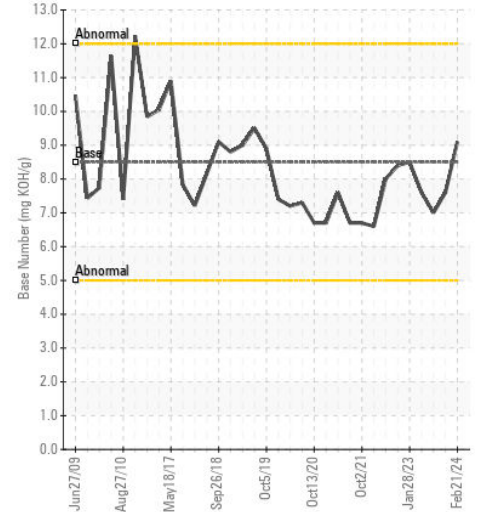
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0854006 **Received** : 18 Mar 2024
Lab Number : 06121485 **Tested** : 22 Mar 2024
Unique Number : 10930318 **Diagnosed** : 22 Mar 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

CARCO TRANSPORTATION
 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
 Contact: DENNIS CATES
 denniscates@carcotrans.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: (800)967-0777

F: