



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
INTERNATIONAL 1641
Component
Diesel Engine
Fluid
SHELL 15W40 (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

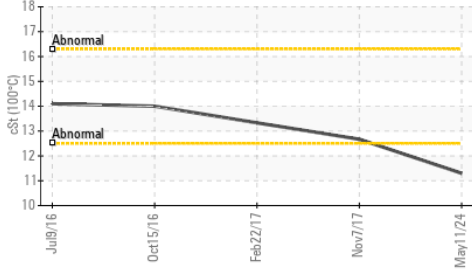
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

FLUID CONDITION

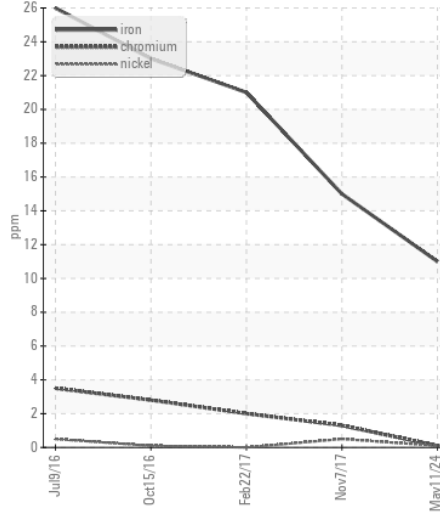
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0926107	WCMFB77847	WCMFB77974
Sample Date		Client Info		11 May 2024	07 Nov 2017	22 Feb 2017
Machine Age	mls	Client Info		0	103920	75420
Oil Age	mls	Client Info		5265	12218	18318
Filter Age	mls	Client Info		5265	12218	18318
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	11	15	21
Chromium	ppm	ASTM D5185m	>20	<1	1	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	2	1	<1
Copper	ppm	ASTM D5185m	>330	<1	1	4
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	8	8
Potassium	ppm	ASTM D5185m	>20	1	3	0
Fuel	%	ASTM D3524	>2.0	0.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.4	8.	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	19.	18.
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
Sodium	ppm	ASTM D5185m	>150	1	2	2
Boron	ppm	ASTM D5185m		11	58	53
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		63	80	72
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		926	362	402
Calcium	ppm	ASTM D5185m		1181	2068	2020
Phosphorus	ppm	ASTM D5185m		1049	996	1000
Zinc	ppm	ASTM D5185m		1303	1190	1254
Sulfur	ppm	ASTM D5185m		3664	2998	2897
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.9	14.	12.
Base Number (BN)	mg KOH/g	ASTM D2896		5.8	8.23	10.09
Visc @ 100°C	cSt	ASTM D445		11.3	12.67	13.33

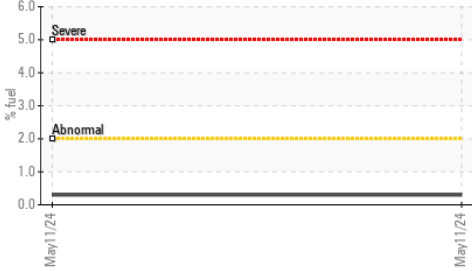
● Viscosity @ 100°C



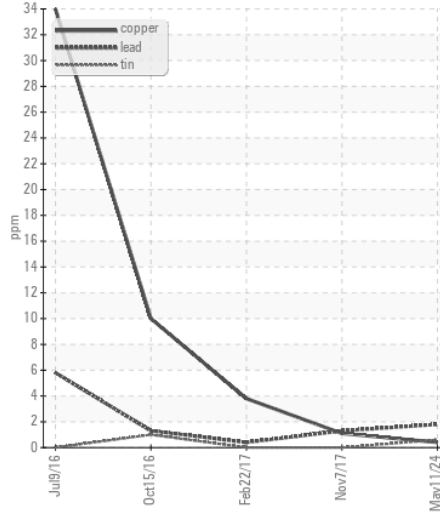
Ferrous Alloys



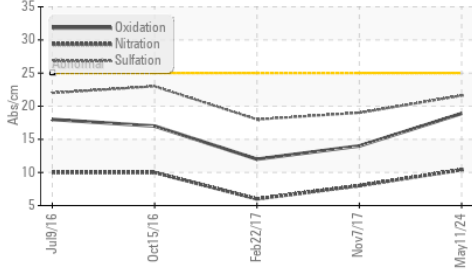
Fuel Dilution



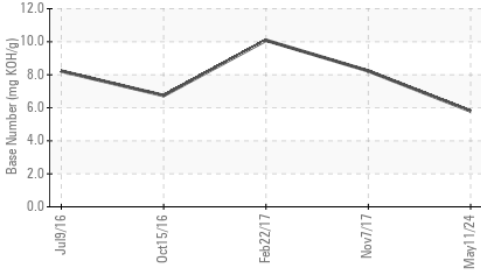
Non-ferrous Metals



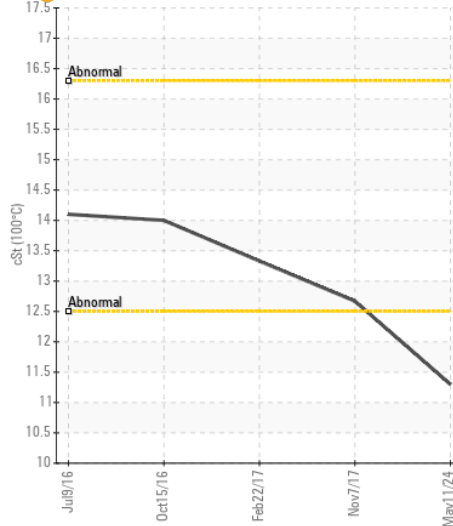
FT-IR (Direct Trend)



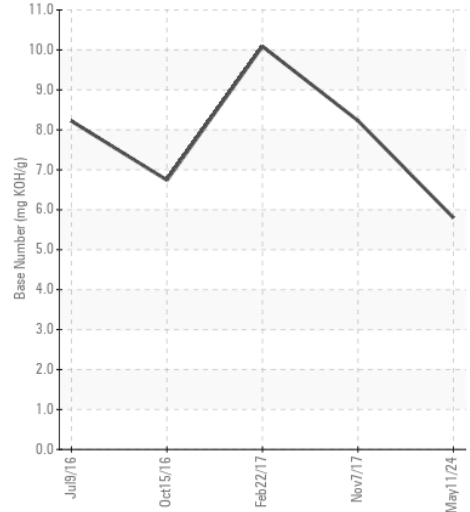
Base Number



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0926107 **Received** : 24 May 2024
Lab Number : 06190217 **Tested** : 31 May 2024
Unique Number : 11046969 **Diagnosed** : 31 May 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
 Contact: DENNIS CATES
 denniscales@carcotrans.com
 T: (800)967-0777
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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)