



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**X51 (S/N NDNJ2667)**  
 Component  
**Diesel Engine**  
 Fluid  
**VALVOLINE PREMIUM BLUE 2000 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		WC0849053	---	---
Sample Date		Client Info		11 Sep 2023	---	---
Machine Age	hrs	Client Info		1830	---	---
Oil Age	hrs	Client Info		1049	---	---
Filter Age	hrs	Client Info		1049	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	63	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>4	<1	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	13	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	13	---	---
Tin	ppm	ASTM D5185m	>15	2	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

## CONTAMINATION

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

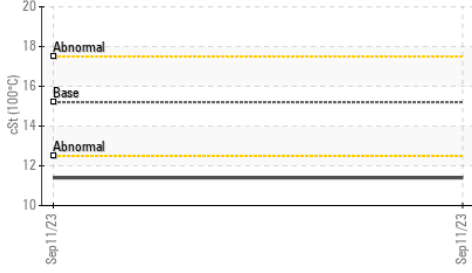
Silicon	ppm	ASTM D5185m	>25	9	---	---
Potassium	ppm	ASTM D5185m	>20	25	---	---
Fuel	%	ASTM D3524	>5	1.9	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	14.0	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.3	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

## FLUID CONDITION

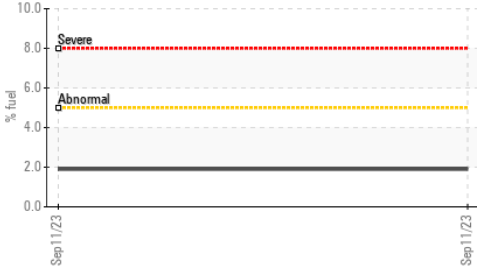
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m		21	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		69	---	---
Manganese	ppm	ASTM D5185m		5	---	---
Magnesium	ppm	ASTM D5185m		674	---	---
Calcium	ppm	ASTM D5185m		1397	---	---
Phosphorus	ppm	ASTM D5185m		704	---	---
Zinc	ppm	ASTM D5185m		894	---	---
Sulfur	ppm	ASTM D5185m		2603	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	6.3	---	---
Visc @ 100°C	cSt	ASTM D445	15.2	▲ 11.4	---	---

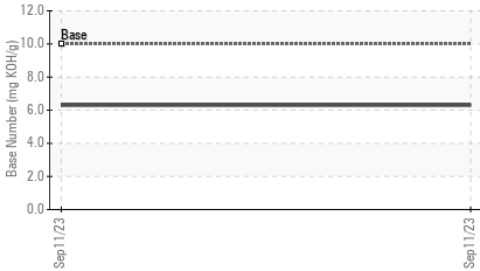
▲ Viscosity @ 100°C



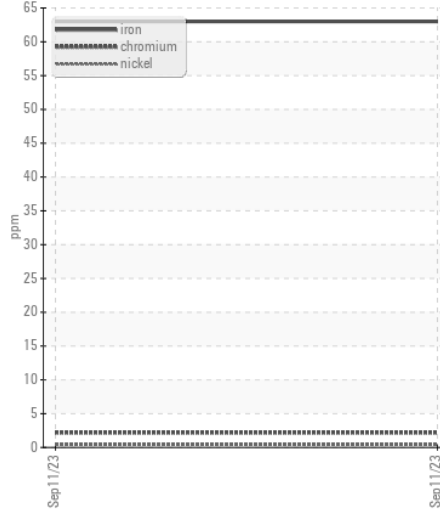
Fuel Dilution



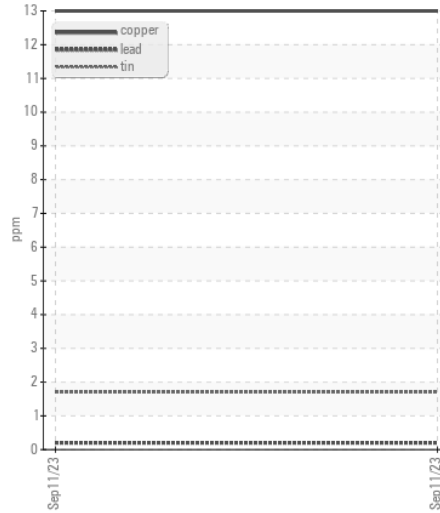
Base Number



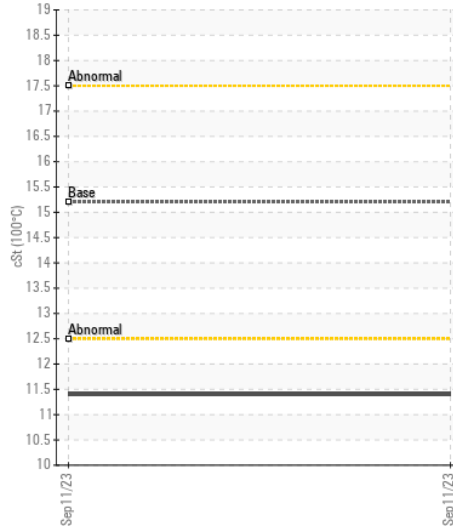
Ferrous Alloys



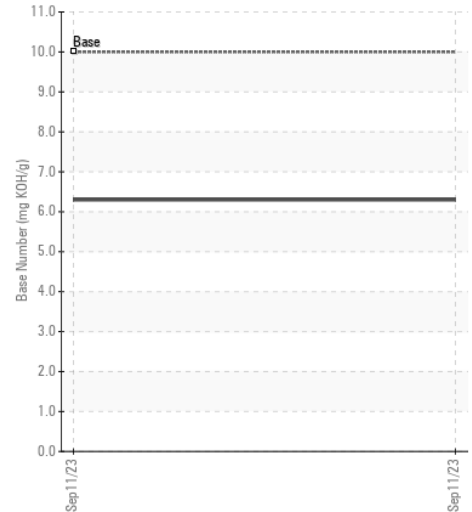
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0849053 **Received** : 19 Sep 2023  
**Lab Number** : 05955784 **Tested** : 21 Sep 2023  
**Unique Number** : 10656997 **Diagnosed** : 21 Sep 2023 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**TULLY CONSTRUCTION BOULEVARD**  
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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)