OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
X50 (S/N NHNM1838)
Component
Diesel Engine
Fluid
VALVOLINE PREMIUM BLUE (--- GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

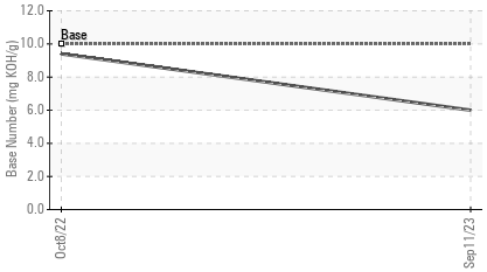
There is no indication of any contamination in the oil.

FLUID CONDITION

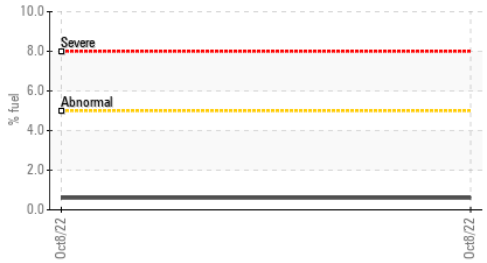
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0849054**	WC0731571	---
Sample Date		Client Info		**11 Sep 2023**	08 Oct 2022	---
Machine Age	hrs	Client Info		**2021**	834	---
Oil Age	hrs	Client Info		**1187**	834	---
Filter Age	hrs	Client Info		**1187**	834	---
Oil Changed		Client Info		**Changed**	Changed	---
Filter Changed		Client Info		**Changed**	Changed	---
Sample Status				**NORMAL**	NORMAL	---
Iron	ppm	ASTM D5185m	>100	**35**	38	---
Chromium	ppm	ASTM D5185m	>20	**2**	1	---
Nickel	ppm	ASTM D5185m	>4	**<1**	0	---
Titanium	ppm	ASTM D5185m		**0**	<1	---
Silver	ppm	ASTM D5185m	>3	**0**	0	---
Aluminum	ppm	ASTM D5185m	>20	**16**	12	---
Lead	ppm	ASTM D5185m	>40	**<1**	0	---
Copper	ppm	ASTM D5185m	>330	**11**	25	---
Tin	ppm	ASTM D5185m	>15	**1**	2	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185m	>25	**8**	13	---
Potassium	ppm	ASTM D5185m	>20	**38**	35	---
Fuel	%	ASTM D3524	>5	**<1.0**	0.6	---
Water		WC Method	>0.2	**NEG**	NEG	---
Glycol		WC Method		**NEG**	NEG	---
Soot %	%	*ASTM D7844	>3	**0**	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	**13.3**	10.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**26.6**	24.1	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	---
Sodium	ppm	ASTM D5185m		**4**	5	---
Boron	ppm	ASTM D5185m	2.9	**22**	36	---
Barium	ppm	ASTM D5185m	0.1	**0**	3	---
Molybdenum	ppm	ASTM D5185m	0.0	**61**	45	---
Manganese	ppm	ASTM D5185m		**2**	6	---
Magnesium	ppm	ASTM D5185m	18	**730**	500	---
Calcium	ppm	ASTM D5185m	2936	**1299**	1530	---
Phosphorus	ppm	ASTM D5185m	998	**669**	712	---
Zinc	ppm	ASTM D5185m	1095	**885**	879	---
Sulfur	ppm	ASTM D5185m	5469	**2807**	2503	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	**25.1**	22.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	**6.0**	9.4	---
Visc @ 100°C	cSt	ASTM D445	15.2	**11.7**	10.0	---

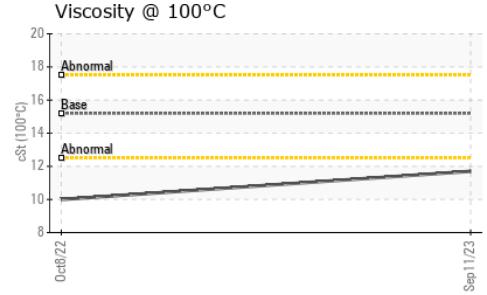
Base Number



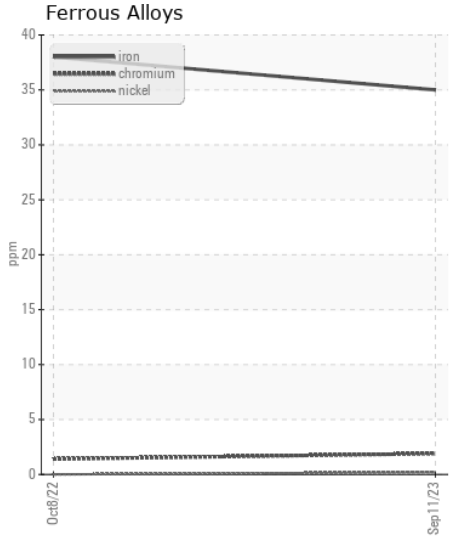
Fuel Dilution



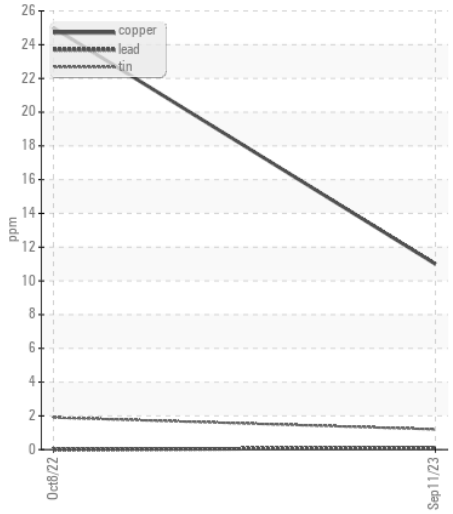
Viscosity @ 100°C



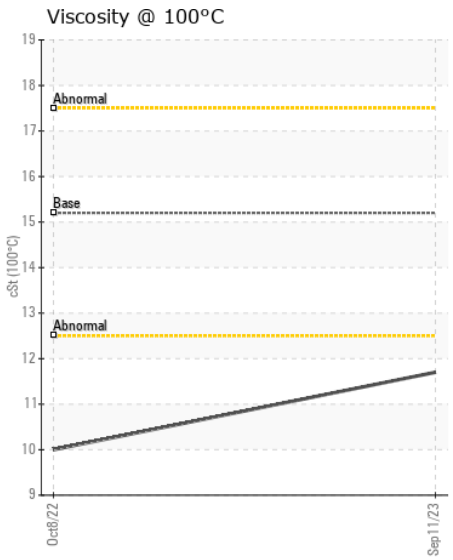
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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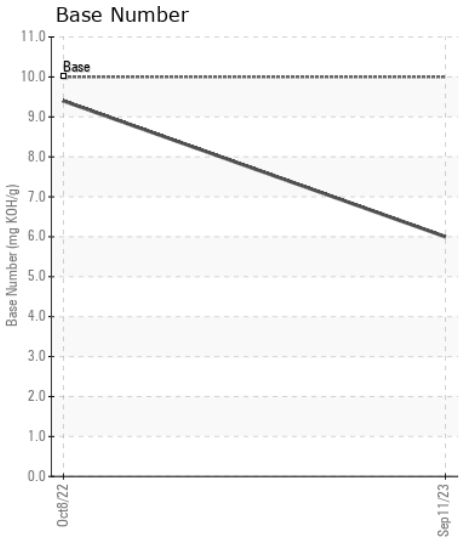

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0849054 **Received** : 19 Sep 2023
Lab Number : 05955783 **Tested** : 21 Sep 2023
Unique Number : 10656996 **Diagnosed** : 21 Sep 2023 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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)

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