



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
TAKEUCHI TB230RA 130008871

Component
Diesel Engine

Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

The oil 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		ML0000777	---	---
Sample Date		Client Info		14 Feb 2024	---	---
Machine Age	hrs	Client Info		265	---	---
Oil Age	hrs	Client Info		250	---	---
Filter Age	hrs	Client Info		250	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	67	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>4	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	7	---	---
Lead	ppm	ASTM D5185m	>40	6	---	---
Copper	ppm	ASTM D5185m	>330	20	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

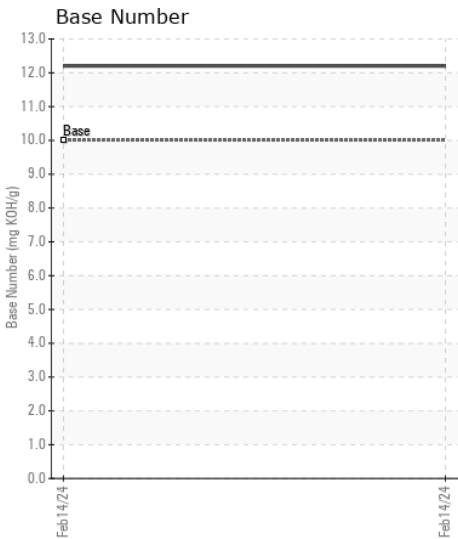
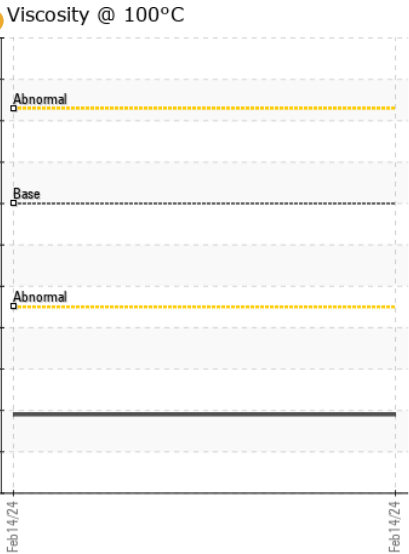
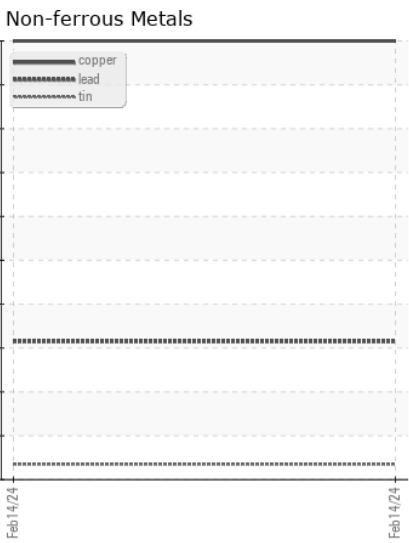
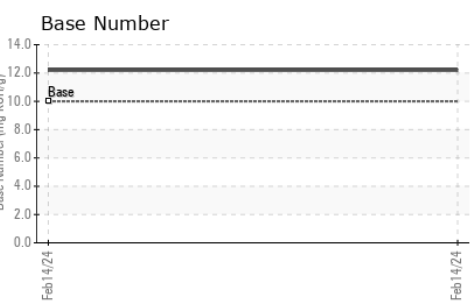
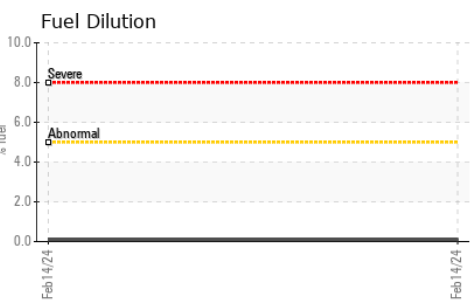
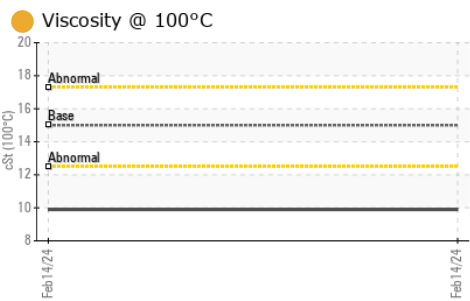
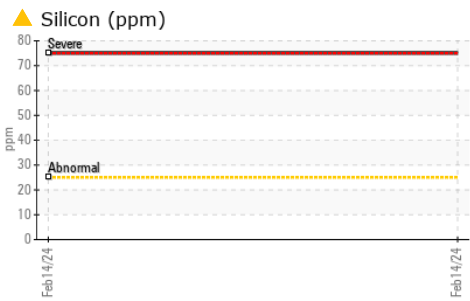
Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 75	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Fuel	%	ASTM D3524	>5	0.1	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	7.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.2	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
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		24	---	---
Boron	ppm	ASTM D5185m	2.5	51	---	---
Barium	ppm	ASTM D5185m	0.0	23	---	---
Molybdenum	ppm	ASTM D5185m	0.7	121	---	---
Manganese	ppm	ASTM D5185m	0.0	2	---	---
Magnesium	ppm	ASTM D5185m	256	43	---	---
Calcium	ppm	ASTM D5185m	2057	4203	---	---
Phosphorus	ppm	ASTM D5185m	935	1214	---	---
Zinc	ppm	ASTM D5185m	1223	1432	---	---
Sulfur	ppm	ASTM D5185m	4079	6664	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	12.2	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	● 9.9	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0000777 **Received** : 26 Feb 2024
Lab Number : 06100725 **Tested** : 29 Feb 2024
Unique Number : 10898955 **Diagnosed** : 29 Feb 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

MCCLUNG-LOGAN EQUIPMENT CO - CHESAPEAKE
 4112 HOLLAND BLVD
 CHESAPEAKE, VA
 US 23323
 Contact: TOMMY GRIFFIN
 tgriffin@mcclung-logan.com
 T: (757)485-3314
 F: (757)485-3415

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)