



# VOLVO

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**TAKEUCHI 410001658**

Component  
**Hydraulic System**

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

### RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP434813	VCP351235	VCP293279
Sample Date		Client Info		25 Jun 2024	31 Mar 2022	22 Jun 2021
Machine Age	hrs	Client Info		3950	2400	1850
Oil Age	hrs	Client Info		0	500	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	14	9	7
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>10	2	2	<1
Lead	ppm	ASTM D5185m	>10	1	2	3
Copper	ppm	ASTM D5185m	>75	16	15	16
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

### CONTAMINATION

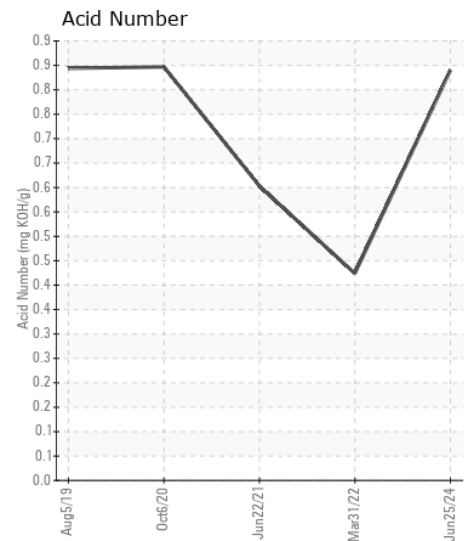
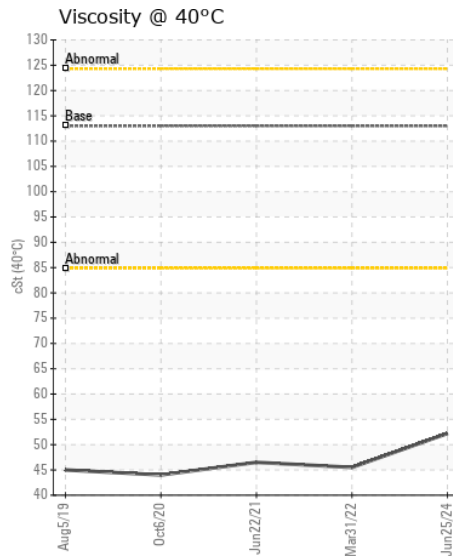
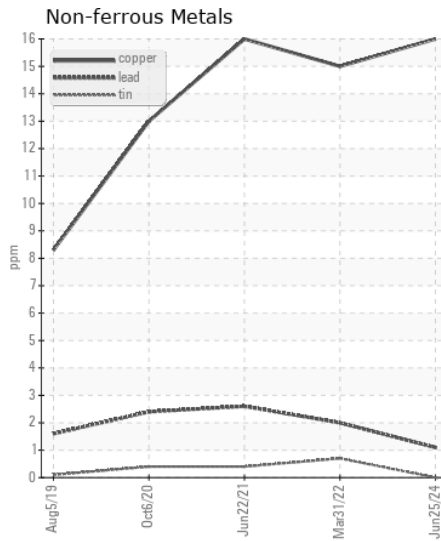
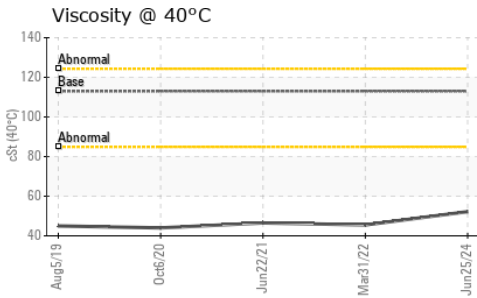
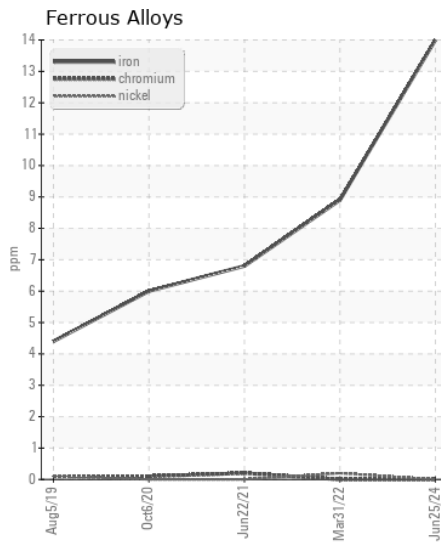
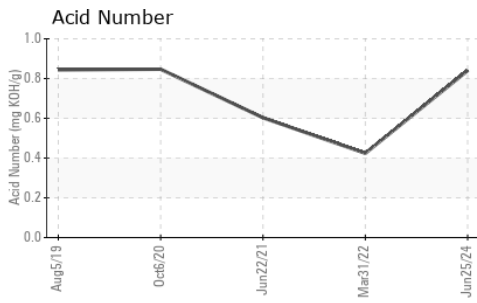
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>20	6	6	4
Potassium	ppm	ASTM D5185m	>20	1	0	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	▲ 89226	4311
Particles >6µm		ASTM D7647	>1300	---	▲ 21259	767
Particles >14µm		ASTM D7647	>160	---	▲ 1033	58
Particles >21µm		ASTM D7647	>40	---	▲ 142	15
Particles >38µm		ASTM D7647	>10	---	2	0
Particles >71µm		ASTM D7647	>3	---	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	▲ 24/22/17	19/17/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	VLITE	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	>0.1	NEG	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	3	4
Boron	ppm	ASTM D5185m	2.5	29	18	32
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	19	14	19
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	165	49	60
Calcium	ppm	ASTM D5185m	2057	2310	2690	3459
Phosphorus	ppm	ASTM D5185m	935	621	471	576
Zinc	ppm	ASTM D5185m	1223	743	623	735
Sulfur	ppm	ASTM D5185m	4079	5148	4703	6555
Acid Number (AN)	mg KOH/g	ASTM D8045		0.84	0.424	0.603
Visc @ 40°C	cSt	ASTM D445	113	52.2	45.5	46.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : VCP434813

**Lab Number** : 06230104

**Unique Number** : 11113597

**Test Package** : MOB 2

**Received** : 08 Jul 2024

**Tested** : 09 Jul 2024

**Diagnosed** : 09 Jul 2024 - Don Baldrige

**LEONARDS CONTRACTING**

30850 STEPHENSON HWY

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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)