



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**AMR-Cheyenne**  
Machine Id  
**17529 VOLVO EC460CL 110459**  
Component  
**Hydraulic System**  
Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (139 GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Oil and 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		<b>DJJ028501</b>	DJJ0012256	DJJ0019219
Sample Date		Client Info		<b>14 Mar 2024</b>	06 Oct 2023	18 May 2023
Machine Age	hrs	Client Info		<b>8269</b>	14810	14362
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	<b>1</b>	2	3
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>150	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

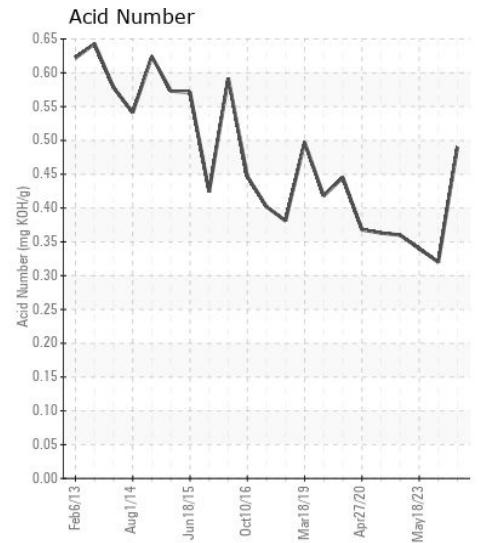
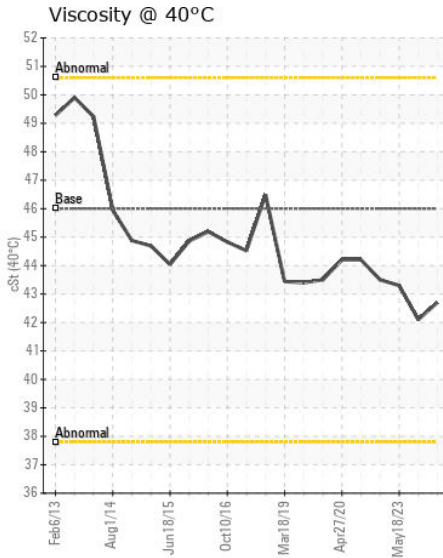
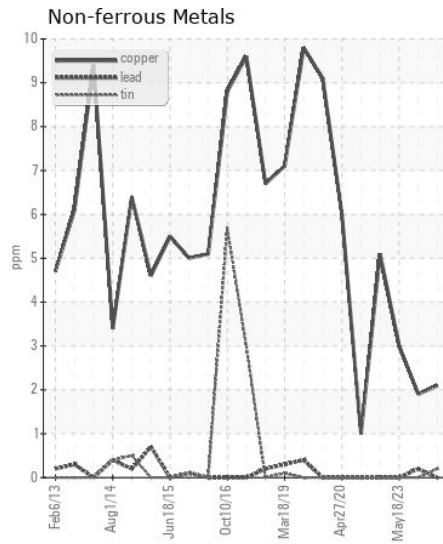
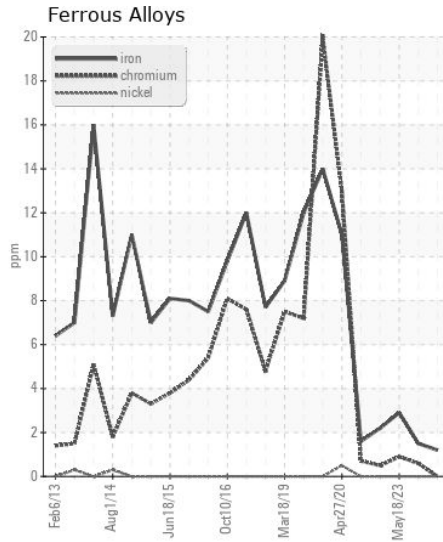
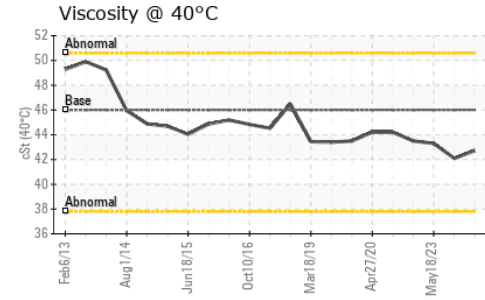
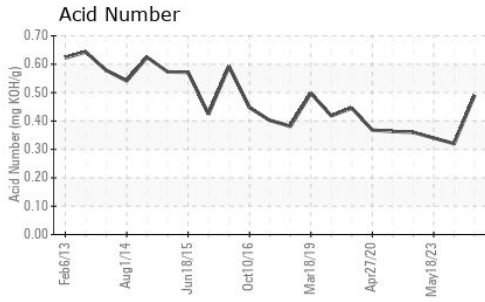
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>40000	<b>---</b>	▲ 94015	7297
Particles >6µm		ASTM D7647	>10000	<b>---</b>	▲ 30917	801
Particles >14µm		ASTM D7647	>2500	<b>---</b>	1678	38
Particles >21µm		ASTM D7647	>640	<b>---</b>	379	10
Particles >38µm		ASTM D7647	>160	<b>---</b>	8	1
Particles >71µm		ASTM D7647	>40	<b>---</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	<b>---</b>	▲ 24/22/18	20/17/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	▲ <b>MODER</b>	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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		<b>0</b>	<1	<1
Boron	ppm	ASTM D5185m	14	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	3	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>3</b>	<1	<1
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	2.6	<b>36</b>	1	<1
Calcium	ppm	ASTM D5185m	49	<b>110</b>	126	87
Phosphorus	ppm	ASTM D5185m	354	<b>339</b>	361	362
Zinc	ppm	ASTM D5185m	419	<b>398</b>	454	456
Sulfur	ppm	ASTM D5185m	3719	<b>974</b>	1013	1146
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.49</b>	0.32	0.34
Visc @ 40°C	cSt	ASTM D445	46	<b>42.7</b>	42.1	43.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ028501  
**Lab Number** : 06145257  
**Unique Number** : 10970065  
**Test Package** : MOB 2

**Received** : 10 Apr 2024  
**Tested** : 13 Apr 2024  
**Diagnosed** : 13 Apr 2024 - Don Baldrige

**ADVANTAGE METALS RECYCLING - CHEYENNE**  
 1015 S. PACKARD ST  
 KANSAS CITY, KS  
 US 66105  
 Contact: BRIAN JACOBS  
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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)