



# OIL ANALYSIS REPORT

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



Area  
**AMR-Cheyenne**  
Machine Id  
**17500 VOLVO A30D 74090**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL SAE 10W30 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0010599</b>	DJJ0010610	DJJ0010597
Sample Date		Client Info		<b>25 Jan 2024</b>	29 Jun 2023	14 Feb 2023
Machine Age	hrs	Client Info		<b>10439</b>	10178	9878
Oil Age	hrs	Client Info		<b>250</b>	1000	250
Filter Age	hrs	Client Info		<b>250</b>	1000	250
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	4	3
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
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

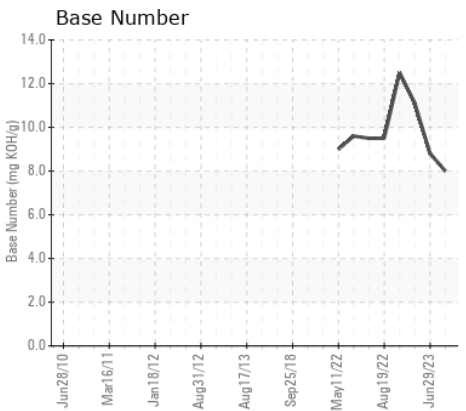
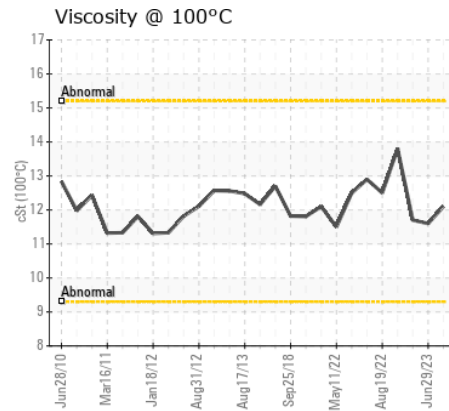
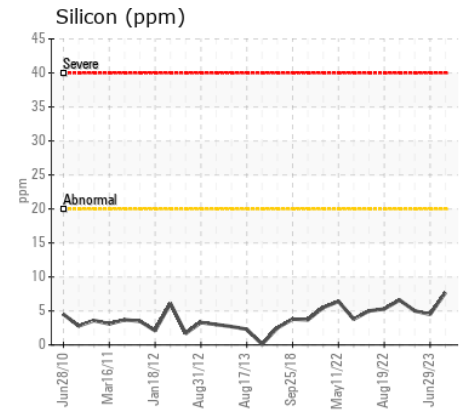
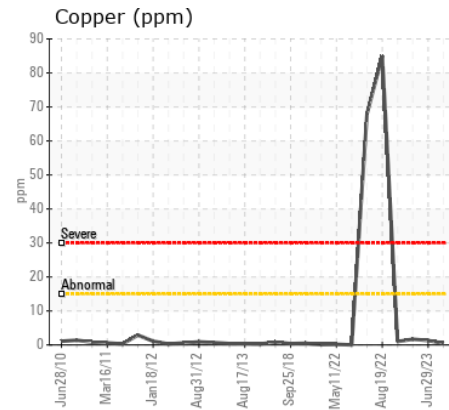
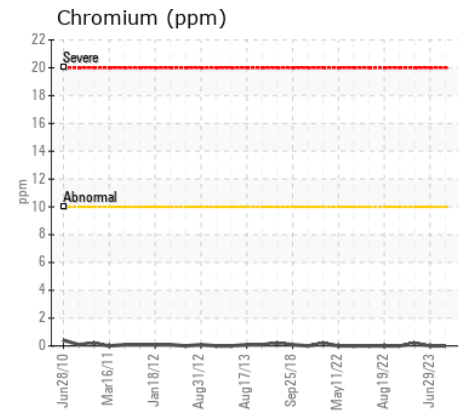
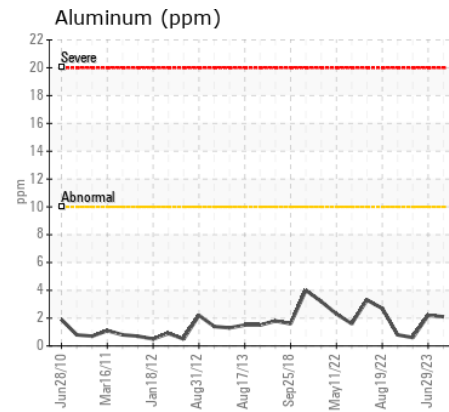
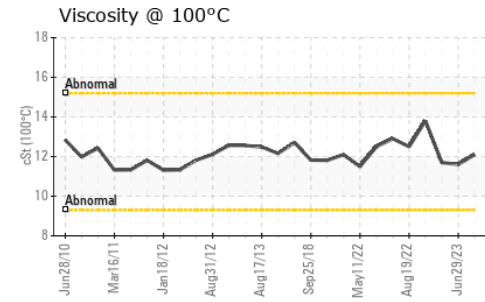
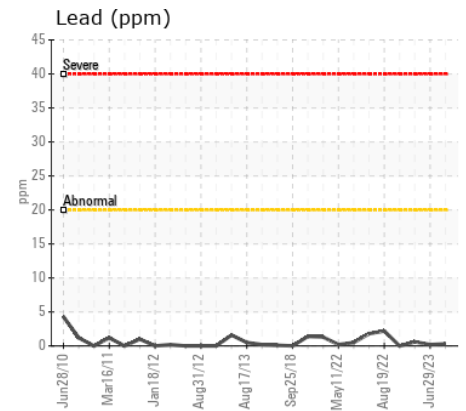
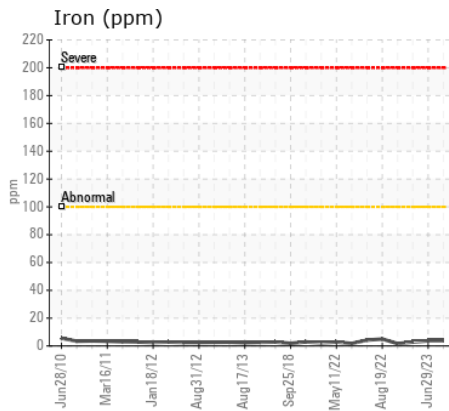
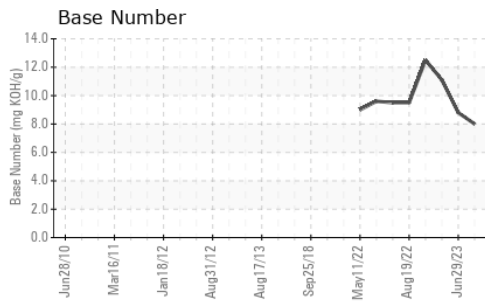
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	▲ 3.7
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.4</b>	5.9	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.2	21.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	2
Boron	ppm	ASTM D5185m		<b>385</b>	399	81
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>103</b>	100	45
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>456</b>	469	516
Calcium	ppm	ASTM D5185m		<b>1390</b>	1443	1779
Phosphorus	ppm	ASTM D5185m		<b>818</b>	875	883
Zinc	ppm	ASTM D5185m		<b>1043</b>	1025	1107
Sulfur	ppm	ASTM D5185m		<b>2936</b>	3224	3214
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.8</b>	15.2	18.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.0</b>	8.8	11.1
Visc @ 100°C	cSt	ASTM D445		<b>12.1</b>	▲ 11.6	▲ 11.7



Certificate L2367

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

**Sample No.** : DJJ0010599

**Lab Number** : 06089239

**Unique Number** : 10876684

**Test Package** : MOBCE ( Additional Tests: TBN )

**Received** : 14 Feb 2024

**Tested** : 15 Feb 2024

**Diagnosed** : 16 Feb 2024 - Sean Felton

**ADVANTAGE METALS RECYCLING - CHEYENNE**

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US 66105

Contact: BRIAN JACOBS

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F:

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)