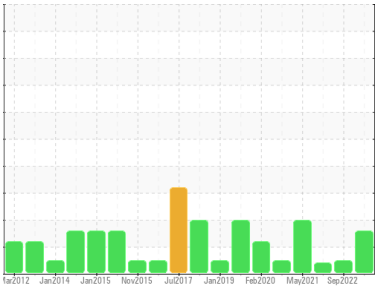
PROBLEM SUMMARY

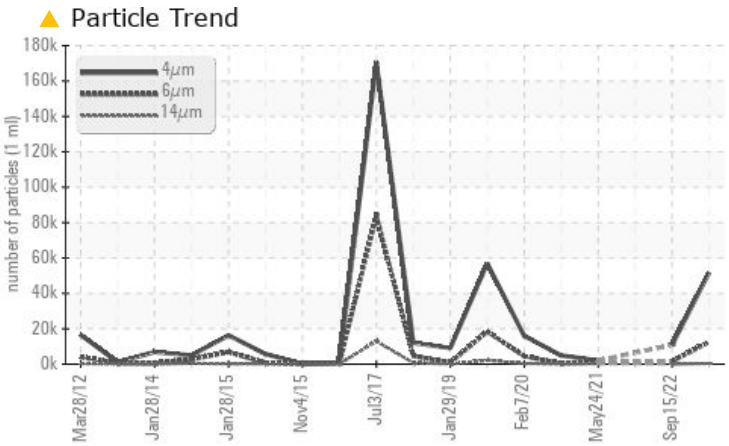
Area
AMR-Cheyenne
Machine Id
VOLVO L90E 67837
Component
Hydraulic System
Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	ABNORMAL
Particles >6µm		ASTM D7647	>2500	▲ **12546**	1682	---
Particles >14µm		ASTM D7647	>80	▲ **404**	67	---
Particles >21µm		ASTM D7647	>20	▲ **75**	4	---
Oil Cleanliness		ISO 4406 (c)	>--/18/13	▲ **23/21/16**	21/18/13	---

Customer Id: ADVKANKS
Sample No.: DJJ0010724
Lab Number: 06011449
Test Package: MOBCE

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

15 Sep 2022 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

---

27 Apr 2022 Diag: Doug Bogart

VIS DEBRIS

We recommend you service the filters on this component. 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.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

---

24 May 2021 Diag: Don Baldridge

CONTAMINANT

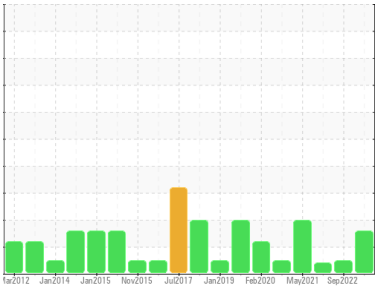
We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. Appearance is hazy. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Area
AMR-Cheyenne
Machine Id
VOLVO L90E 67837
Component
Hydraulic System
Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

Sample Rating Trend



ISO

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**DJJ0010724**	DJJ0010731	DJJ0010737
Sample Date		Client Info		**26 Oct 2023**	15 Sep 2022	27 Apr 2022
Machine Age	hrs	Client Info		**13259**	12255	11987
Oil Age	hrs	Client Info		**4000**	1000	0
Oil Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**1**	<1	1
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	**0**	0	0
Copper	ppm	ASTM D5185m	>150	**1**	<1	1
Tin	ppm	ASTM D5185m	>20	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

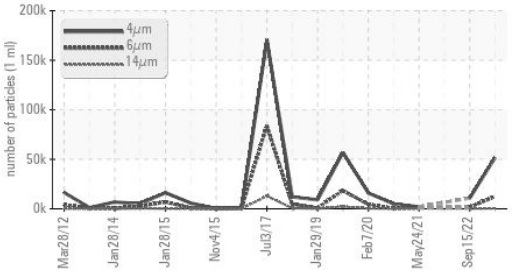
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	14	**2**	<1	<1
Barium	ppm	ASTM D5185m	0.0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0.0	**<1**	<1	<1
Manganese	ppm	ASTM D5185m	0.0	**0**	0	0
Magnesium	ppm	ASTM D5185m	2.6	**0**	<1	<1
Calcium	ppm	ASTM D5185m	49	**160**	107	62
Phosphorus	ppm	ASTM D5185m	354	**366**	337	339
Zinc	ppm	ASTM D5185m	419	**461**	415	456
Sulfur	ppm	ASTM D5185m	3719	**1029**	1487	1451

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**1**	1	2
Sodium	ppm	ASTM D5185m		**0**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	0	<1

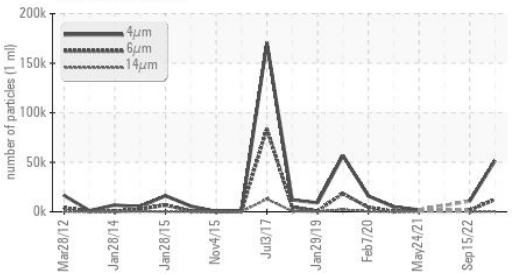
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**51649**	10847	---
Particles >6µm		ASTM D7647	>2500	▲ **12546**	1682	---
Particles >14µm		ASTM D7647	>80	▲ **404**	67	---
Particles >21µm		ASTM D7647	>20	▲ **75**	4	---
Particles >38µm		ASTM D7647	>4	**2**	0	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>--/18/13	▲ **23/21/16**	21/18/13	---

OIL ANALYSIS REPORT

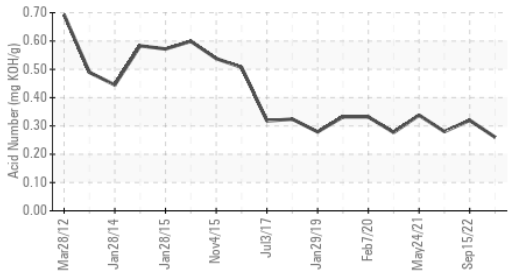
Particle Trend



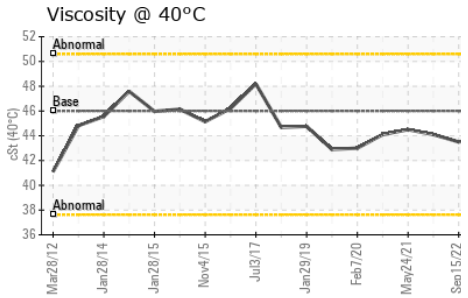
Particle Trend



Acid Number



Viscosity @ 40°C

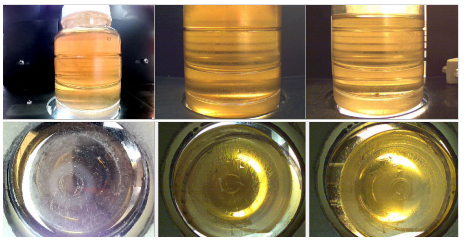


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.26**	0.32	0.28

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

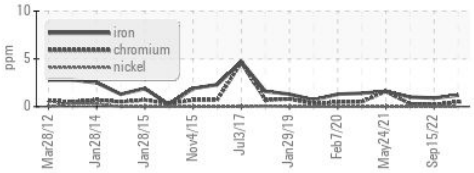
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**43.9**	43.5	44.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

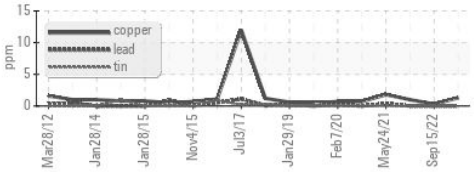


GRAPHS

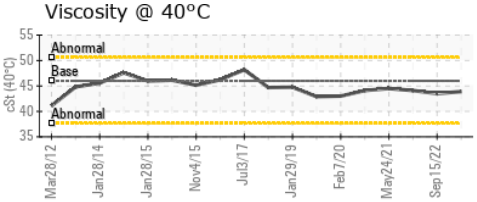
Ferrous Alloys



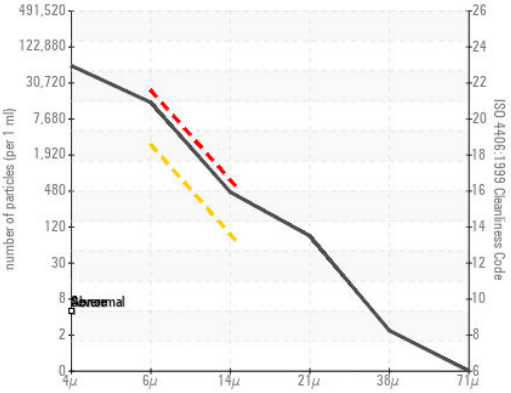
Non-ferrous Metals



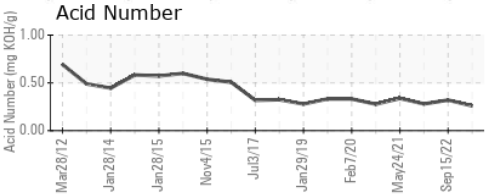
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0010724
Lab Number : 06011449
Unique Number : 10750593
Test Package : MOBCE

Received : 17 Nov 2023
Diagnosed : 20 Nov 2023
Diagnostician : Wes Davis

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)

ADVANTAGE METALS RECYCLING - CHEYENNE
1015 S. PACKARD ST
KANSAS CITY, KS
US 66105
Contact: BRIAN JACOBS
BRIAN.JACOBS@ADVANTAGERECYCLING.COM
T: (816)808-4711
F: