



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
VOLVO L90F VCEOL90F900071862
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PTK0004950	PTK0004974	PTK0004145
Sample Date		Client Info		28 Jun 2024	03 Jan 2024	03 Jul 2023
Machine Age	hrs	Client Info		18387	17916	17141
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	2	<1
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>20	<1	<1	0
Copper	ppm	ASTM D5185m	>150	1	<1	<1
Tin	ppm	ASTM D5185m	>20	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

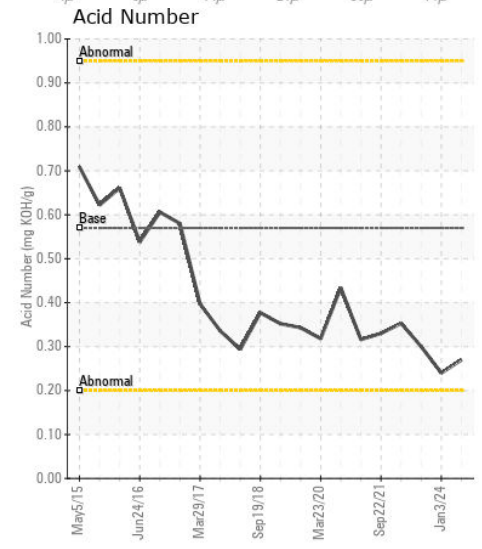
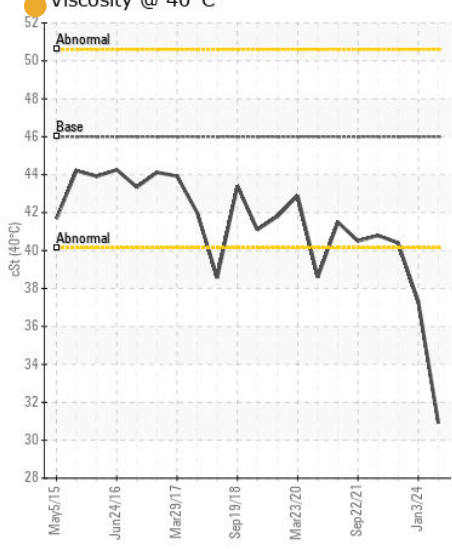
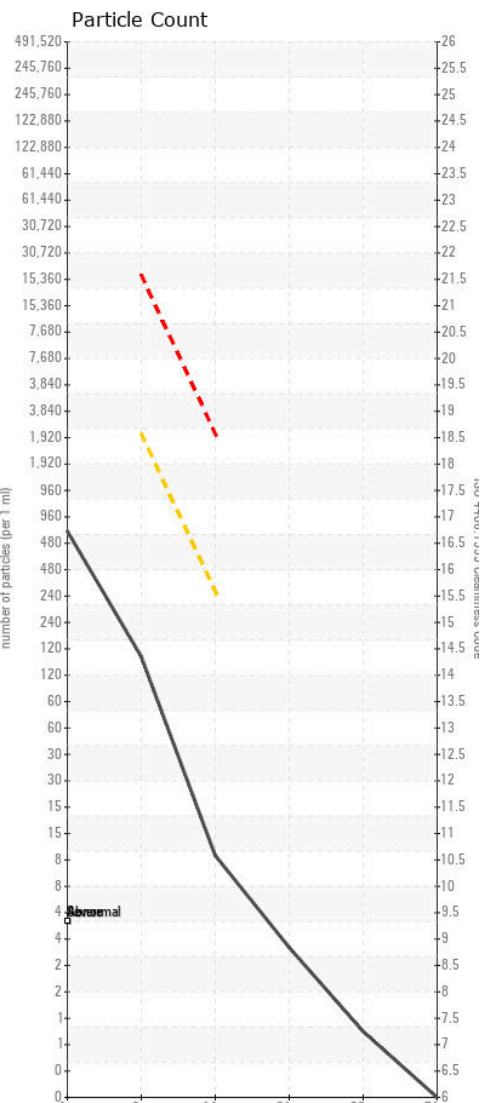
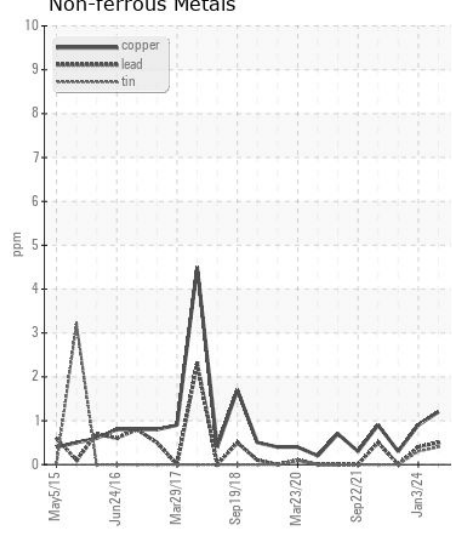
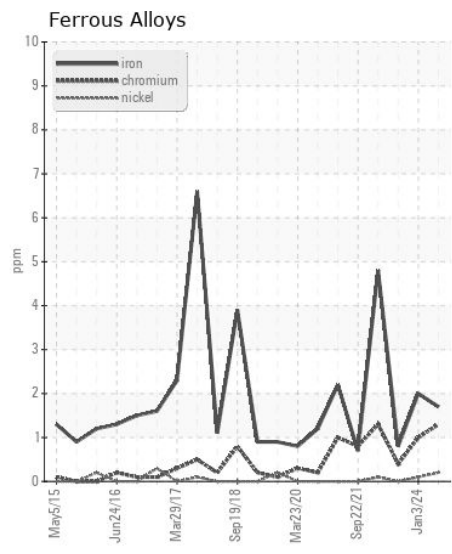
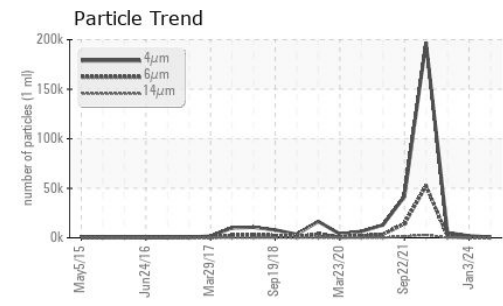
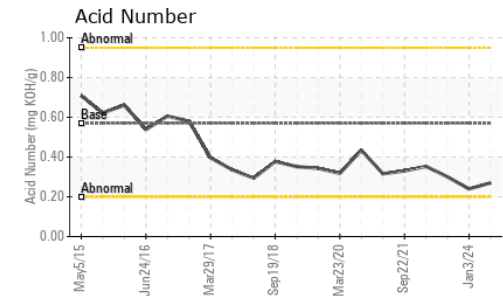
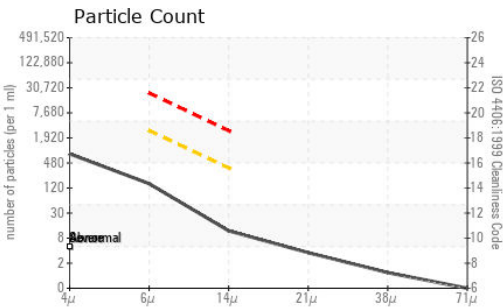
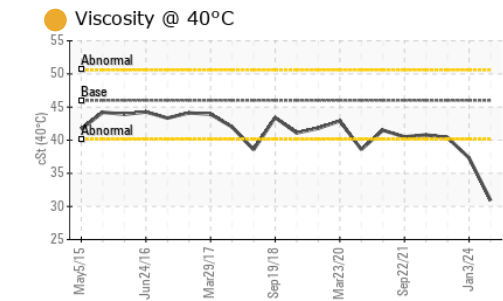
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647		699	2003	5091
Particles >6µm		ASTM D7647	>2500	135	361	1697
Particles >14µm		ASTM D7647	>320	10	26	137
Particles >21µm		ASTM D7647	>80	3	6	32
Particles >38µm		ASTM D7647	>20	1	0	1
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/15	14/10	16/12	18/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	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

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		0	0	<1
Boron	ppm	ASTM D5185m	5	1	1	2
Barium	ppm	ASTM D5185m	5	<1	7	0
Molybdenum	ppm	ASTM D5185m	5	2	2	1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	25	5	5	8
Calcium	ppm	ASTM D5185m	200	60	68	68
Phosphorus	ppm	ASTM D5185m	300	336	359	355
Zinc	ppm	ASTM D5185m	370	442	469	445
Sulfur	ppm	ASTM D5185m	2500	1091	1205	1300
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.27	0.24	0.30
Visc @ 40°C	cSt	ASTM D445	46	30.9	37.31	40.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PTK0004950 **Received** : 09 Jul 2024
Lab Number : 06231464 **Tested** : 10 Jul 2024
Unique Number : 11114957 **Diagnosed** : 11 Jul 2024 - Jonathan Hester
Test Package : MOB 2

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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)