



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
TPR-Houston Port
Machine Id
110119 VOLVO EC330CL 110119
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (25 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0018927	DJJ0001454	DJJ020811
Sample Date		Client Info		11 Feb 2024	14 Sep 2020	26 Oct 2018
Machine Age	hrs	Client Info		12279	10154	8656
Oil Age	hrs	Client Info		0	1000	2000
Filter Age	hrs	Client Info		0	1000	2000
Oil Changed		Client Info		N/A	Not Changd	Changed
Filter Changed		Client Info		N/A	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	16	11	9
Chromium	ppm	ASTM D5185m	>10	1	4	6
Nickel	ppm	ASTM D5185m	>10	<1	0	<1
Titanium	ppm	ASTM D5185m		3	0	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	0	<1
Lead	ppm	ASTM D5185m	>20	1	<1	<1
Copper	ppm	ASTM D5185m	>150	15	4	2
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

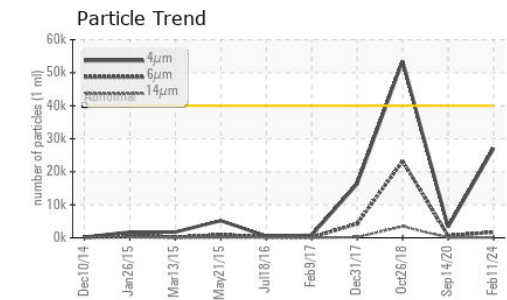
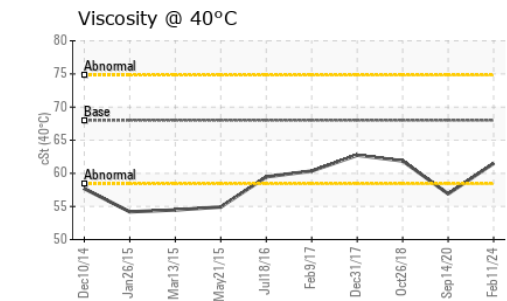
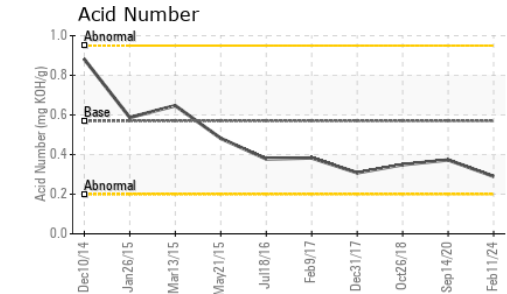
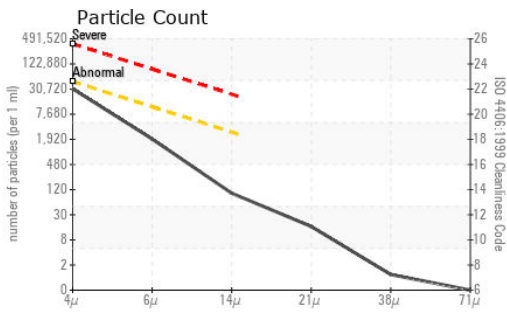
The amount and size of particulates present in the system is acceptable. There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>50	4	3	4
Potassium	ppm	ASTM D5185m	>20	1	<1	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>40000	27077	3294	▲ 53515
Particles >6µm		ASTM D7647	>10000	1712	631	▲ 23170
Particles >14µm		ASTM D7647	>2500	87	33	▲ 3452
Particles >21µm		ASTM D7647	>640	14	7	▲ 943
Particles >38µm		ASTM D7647	>160	1	0	22
Particles >71µm		ASTM D7647	>40	0	0	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	22/18/14	19/16/12	▲ 23/22/19
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
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		0	<1	<1
Boron	ppm	ASTM D5185m	5	0	2	<1
Barium	ppm	ASTM D5185m	5	13	0	0
Molybdenum	ppm	ASTM D5185m	5	2	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	25	7	6	2
Calcium	ppm	ASTM D5185m	200	56	59	50
Phosphorus	ppm	ASTM D5185m	300	365	277	255
Zinc	ppm	ASTM D5185m	370	416	380	311
Sulfur	ppm	ASTM D5185m	2500	2531	2161	2915
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.29	0.373	0.349
Visc @ 40°C	cSt	ASTM D445	68	61.5	56.9	61.87



Certificate L2367

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

Sample No. : DJJ0018927

Lab Number : 06085990

Unique Number : 10873435

Test Package : MOBCE

Received : 12 Feb 2024

Tested : 13 Feb 2024

Diagnosed : 13 Feb 2024 - Don Baldrige

TEXAS PORT RECYCLING - HOUSTON PORT

8945 MANCHESTER ST

HOUSTON, TX

US 77012

Contact: Dale Shaw

dale.shaw@tmrecycling.com

T:

F: (713)921-5545

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)

