

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
TPR-Houston Port
Machine Id
110119 VOLVO EC330CL 110119
Component
Diesel Engine
Fluid
CHEVRON 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0018929	DJJ0001456	DJJ020808
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	250	250
Filter Age	hrs	Client Info		0	250	250
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	2	9	6
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	4	2
Lead	ppm	ASTM D5185m	>20	0	1	<1
Copper	ppm	ASTM D5185m	>15	0	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

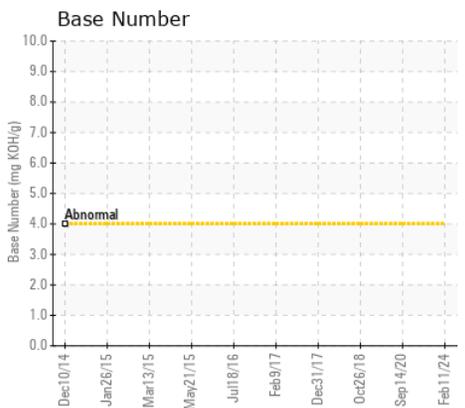
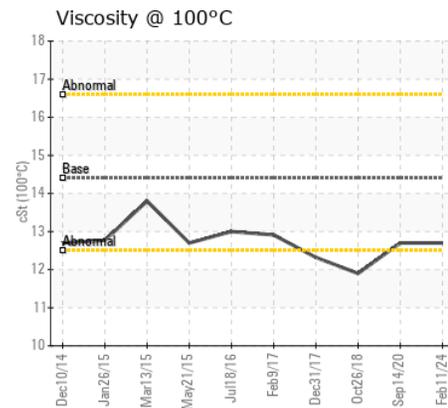
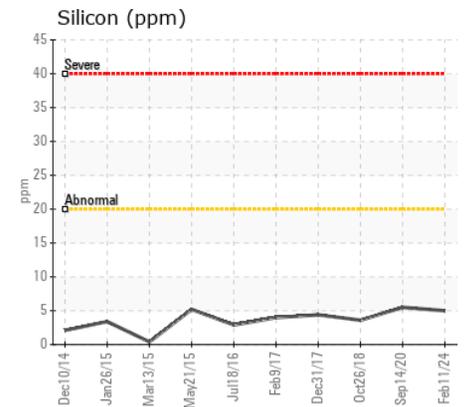
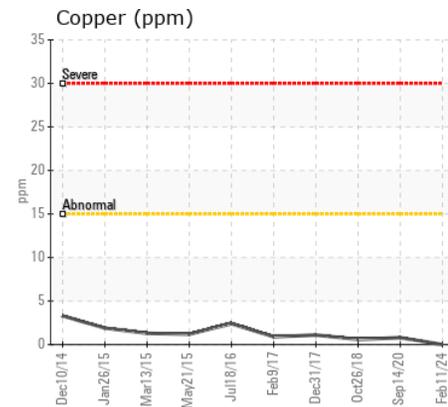
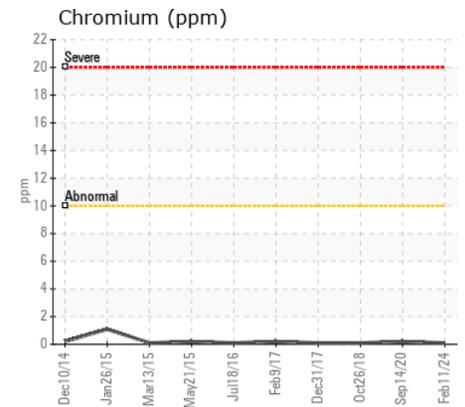
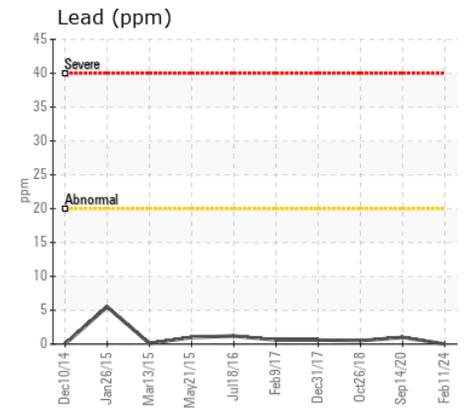
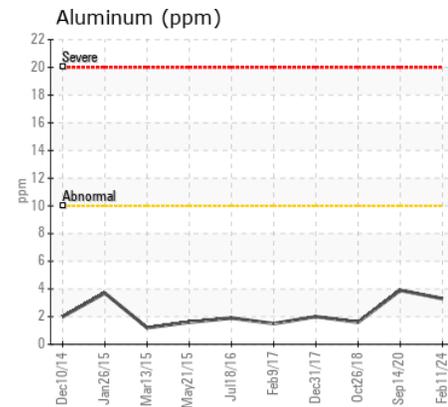
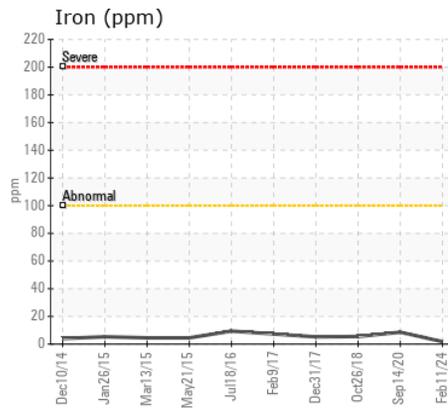
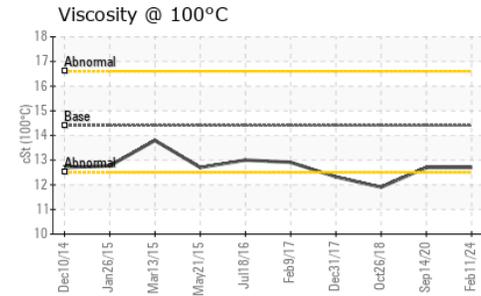
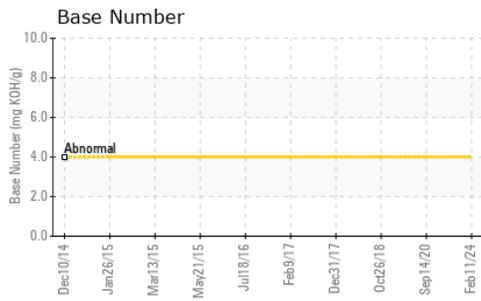
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	5	6	4
Potassium	ppm	ASTM D5185m	>20	0	12	5
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	5.6	7	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	21.6	21
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

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	<1	2	7
Boron	ppm	ASTM D5185m		388	303	47
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		122	126	46
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		678	696	487
Calcium	ppm	ASTM D5185m		1468	1635	1754
Phosphorus	ppm	ASTM D5185m		720	861	778
Zinc	ppm	ASTM D5185m		809	1014	838
Sulfur	ppm	ASTM D5185m		2374	2497	2166
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	16.1	18.4
Base Number (BN)	mg KOH/g	ASTM D2896		9.2	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	12.7	▲ 11.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0018929
Lab Number : 06085854
Unique Number : 10873299
Test Package : MOBCE (Additional Tests: TBN)

Received : 12 Feb 2024
Tested : 13 Feb 2024
Diagnosed : 13 Feb 2024 - Wes Davis

TEXAS PORT RECYCLING - HOUSTON PORT
 8945 MANCHESTER ST
 HOUSTON, TX
 US 77012
 Contact: Dale Shaw
 dale.shaw@tmrecycling.com

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)

T:
 F: (713)921-5545