

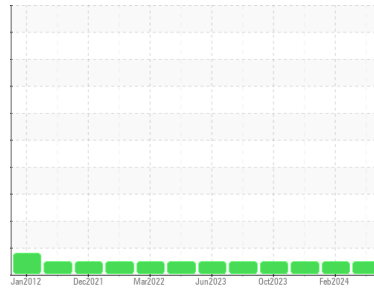


OIL ANALYSIS REPORT



Area
WMR-Pueblo
 Machine Id
110479 VOLVO EC460CL 110479
 Component
Diesel Engine
 Fluid
PHILLIPS 66 15W40 (--- GAL)

Sample Rating Trend



NORMAL

DIAGNOSIS

- Recommendation**
 Resample at the next service interval to monitor.
- Wear**
 All component wear rates are normal.
- Contamination**
 There is no indication of any contamination in the oil.
- 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		DJJ0008744	DJJ0009393	DJJ0015287
Sample Date	Client Info		05 Jun 2024	16 Feb 2024	06 Dec 2023
Machine Age	hrs Client Info		16581	16194	15994
Oil Age	hrs Client Info		400	200	250
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m	>100	12	4	2
Chromium	ppm ASTM D5185m	>10	<1	0	0
Nickel	ppm ASTM D5185m	>10	0	0	<1
Titanium	ppm ASTM D5185m		0	<1	<1
Silver	ppm ASTM D5185m	>2	0	0	0
Aluminum	ppm ASTM D5185m	>10	3	1	2
Lead	ppm ASTM D5185m	>20	1	0	0
Copper	ppm ASTM D5185m	>15	3	<1	0
Tin	ppm ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm ASTM D5185m		<1	0	<1
Cadmium	ppm ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m		95	104	127
Barium	ppm ASTM D5185m		0	0	0
Molybdenum	ppm ASTM D5185m		9	13	18
Manganese	ppm ASTM D5185m		<1	<1	<1
Magnesium	ppm ASTM D5185m		704	601	690
Calcium	ppm ASTM D5185m		1476	1258	1329
Phosphorus	ppm ASTM D5185m		748	631	725
Zinc	ppm ASTM D5185m		844	657	834
Sulfur	ppm ASTM D5185m		3583	2628	2994

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m	>20	8	4	3
Sodium	ppm ASTM D5185m		2	2	2
Potassium	ppm ASTM D5185m	>20	4	1	5

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	>3	0.4	0.2	0.3
Nitration	Abs/cm *ASTM D7624	>20	7.7	7.1	7.4
Sulfation	Abs./1mm *ASTM D7415	>30	17.8	17.5	18.0

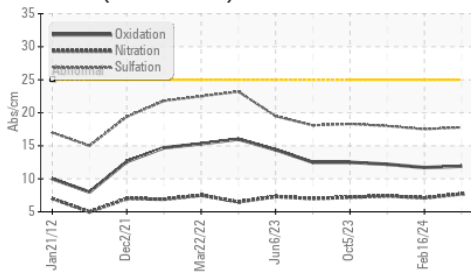
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm *ASTM D7414	>25	11.9	11.7	12.2
Base Number (BN)	mg KOH/g ASTM D2896		7.4	8.0	7.7

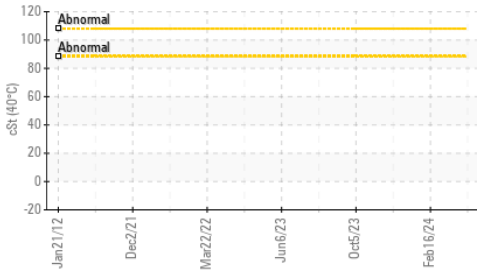


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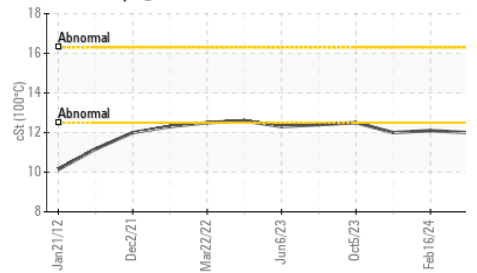
FT-IR (Direct Trend)



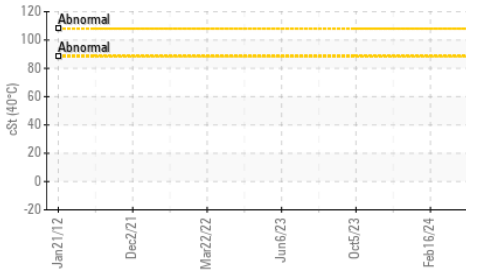
Viscosity @ 40°C



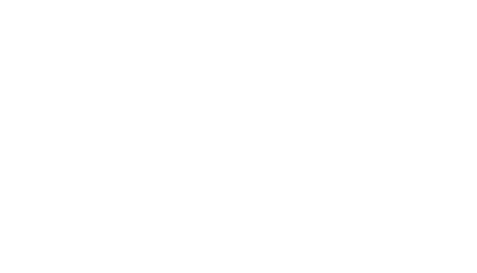
Viscosity @ 100°C



Viscosity @ 40°C



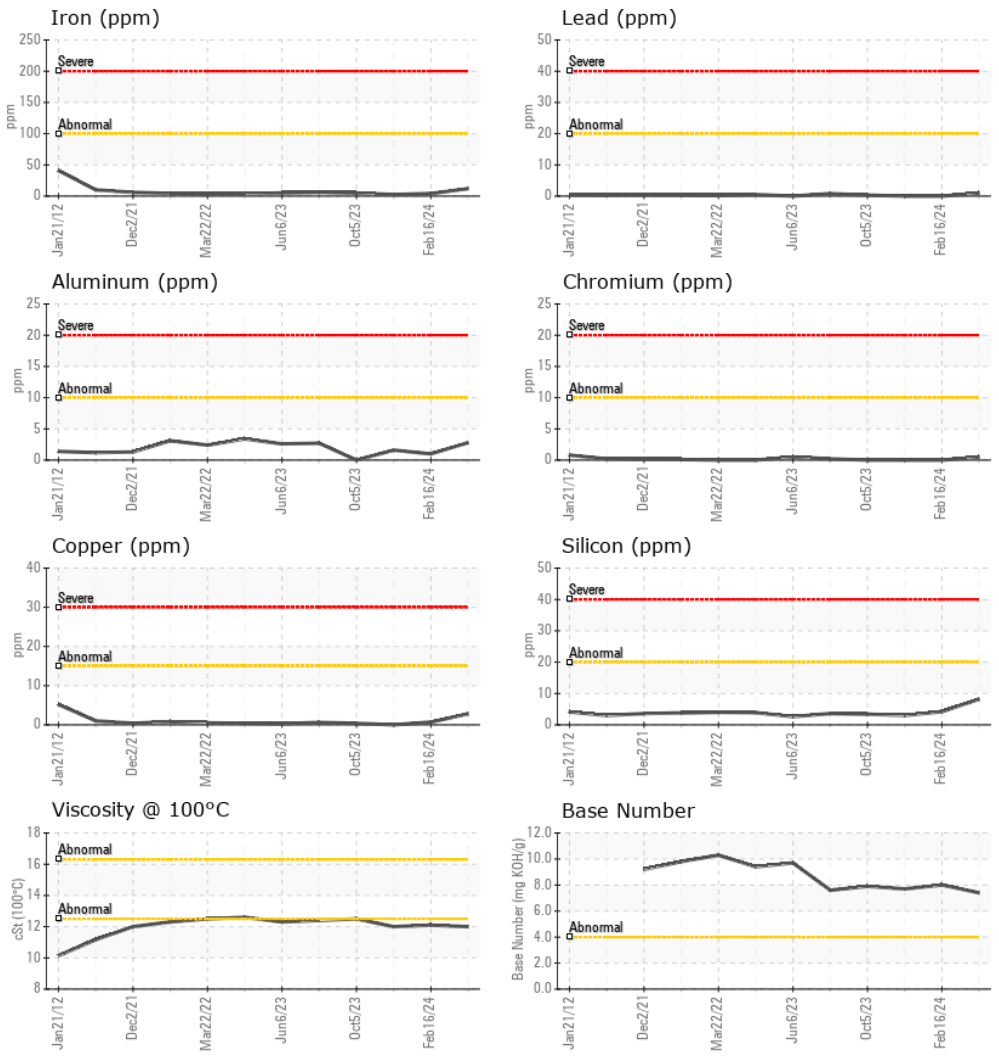
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.0	12.1	12.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0008744 **Received** : 12 Jun 2024
Lab Number : 06207417 **Tested** : 14 Jun 2024
Unique Number : 11074878 **Diagnosed** : 14 Jun 2024 - Sean Felton
Test Package : MOBCE (Additional Tests: KV40, TBN)

WESTERN METALS RECYCLING - PLYMOUTH
 7400 WEST CEMETERY ROAD
 PLYMOUTH, UT
 US 84330
 Contact: JARDEE STEED
 jardee.steed@wmrecycling.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)

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