



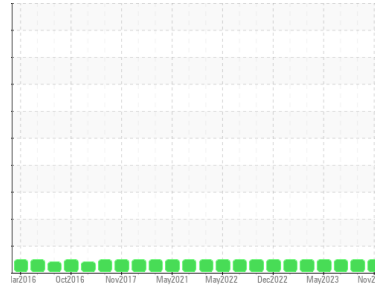
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
WMR-Salt Lake City
 Machine Id
VOLVO L150H 4449
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)



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		DJJ0015298	DJJ0008930	DJJ0015265
Sample Date	Client Info		06 Nov 2023	12 Sep 2023	19 Jul 2023
Machine Age	hrs	Client Info	15734	15438	15138
Oil Age	hrs	Client Info	280	300	300
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	0	<1	2
Chromium	ppm	ASTM D5185m >10	0	<1	<1
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >10	<1	2	<1
Lead	ppm	ASTM D5185m >20	0	<1	0
Copper	ppm	ASTM D5185m >15	0	<1	0
Tin	ppm	ASTM D5185m >10	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	7	10	5
Barium	ppm	ASTM D5185m 0.0	0	0	0
Molybdenum	ppm	ASTM D5185m 0.7	59	91	54
Manganese	ppm	ASTM D5185m 0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 256	944	1285	919
Calcium	ppm	ASTM D5185m 2057	1014	1457	1042
Phosphorus	ppm	ASTM D5185m 935	1033	1354	980
Zinc	ppm	ASTM D5185m 1223	1248	1671	1196
Sulfur	ppm	ASTM D5185m 4079	3037	4929	3573

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	2	4	2
Sodium	ppm	ASTM D5185m	0	2	2
Potassium	ppm	ASTM D5185m >20	0	<1	<1

INFRA-RED

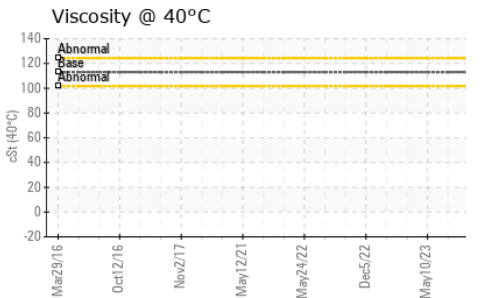
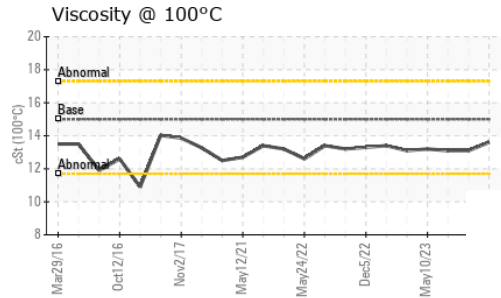
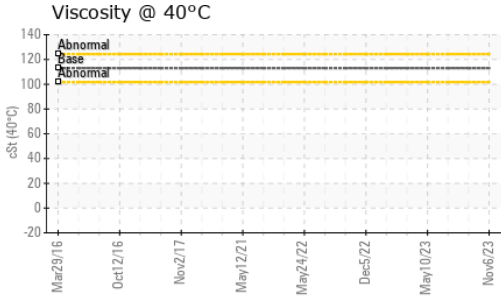
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.3	5.3	5.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.8	18.2	18.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.1	13.4	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 10	9.3	9.2	9.6



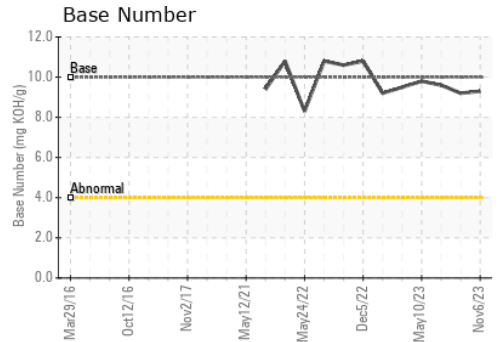
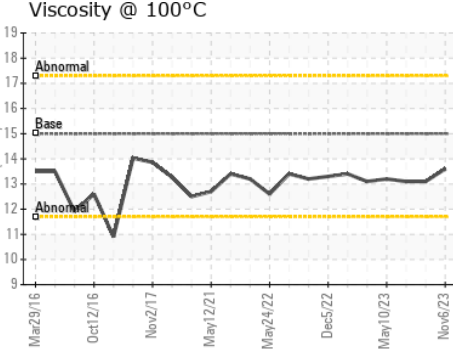
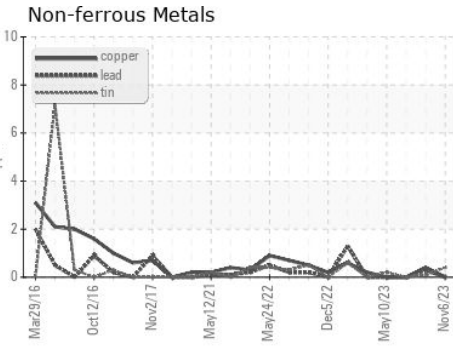
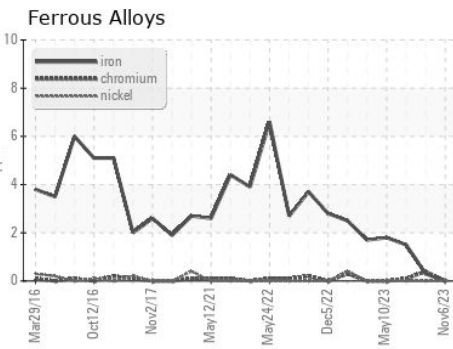
OIL ANALYSIS REPORT



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	15.0	13.6	13.1	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0015298 **Received** : 17 Nov 2023
Lab Number : **06010639** **Diagnosed** : 21 Nov 2023
Unique Number : 10749783 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: KV40, TBN)

WESTERN METALS RECYCLING - SALT LAKE CITY
 4221 WEST 700 SOUTH
 SALT LAKE CITY, UT
 US 84104
 Contact: TIMOTHY SHEFFIELD
 timothy.sheffield@wmrecycling.com
 T: (801)373-4225
 F: (801)975-9590

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)