



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Ascendum Machinery
Machine Id
VOLVO L70H 624409
Component
Diesel Engine
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0009845	ASC0007415	ASC0000381
Sample Date		Client Info		11 Jun 2024	12 Feb 2024	28 Jul 2023
Machine Age	hrs	Client Info		3457	3009	2377
Oil Age	hrs	Client Info		448	632	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	13	26
Chromium	ppm	ASTM D5185m	>10	<1	2	2
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>10	5	5	8
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>15	<1	2	3
Tin	ppm	ASTM D5185m	>10	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	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.

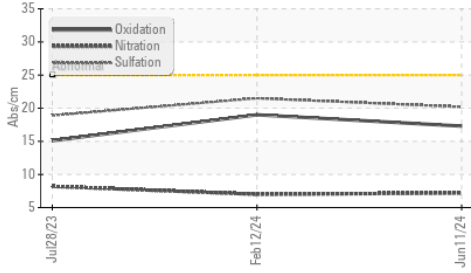
Silicon	ppm	ASTM D5185m	>20	6	8	9
Potassium	ppm	ASTM D5185m	>20	2	1	1
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.0	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	21.5	18.9
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

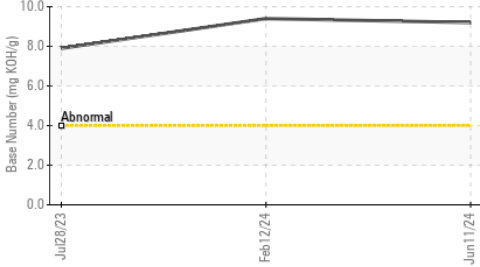
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	0	1
Boron	ppm	ASTM D5185m		63	42	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		49	43	60
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m		364	494	951
Calcium	ppm	ASTM D5185m		1739	1505	1322
Phosphorus	ppm	ASTM D5185m		834	930	1122
Zinc	ppm	ASTM D5185m		1099	1047	1407
Sulfur	ppm	ASTM D5185m		3189	3422	4097
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	19.0	15.1
Base Number (BN)	mg KOH/g	ASTM D2896		9.2	9.4	7.9
Visc @ 100°C	cSt	ASTM D445		13.5	13.0	14.2

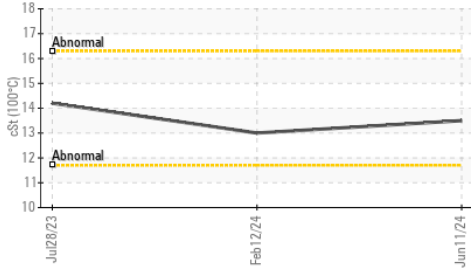
FT-IR (Direct Trend)



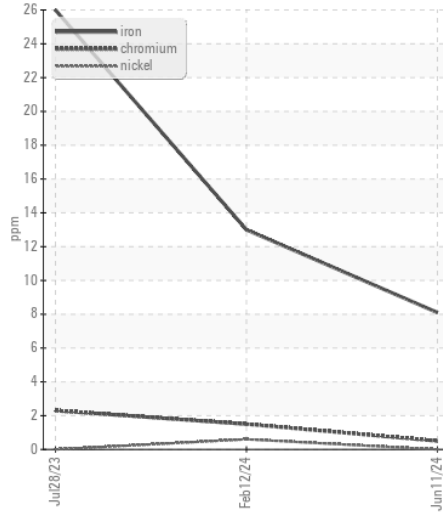
Base Number



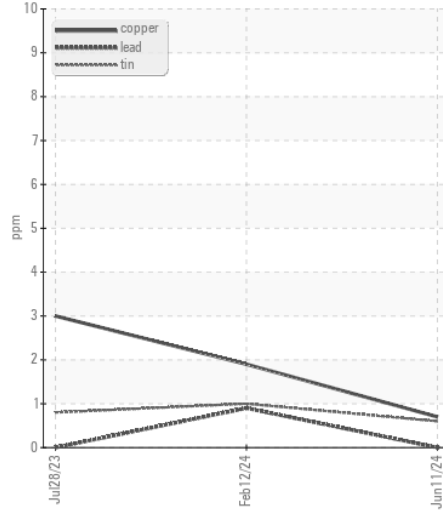
Viscosity @ 100°C



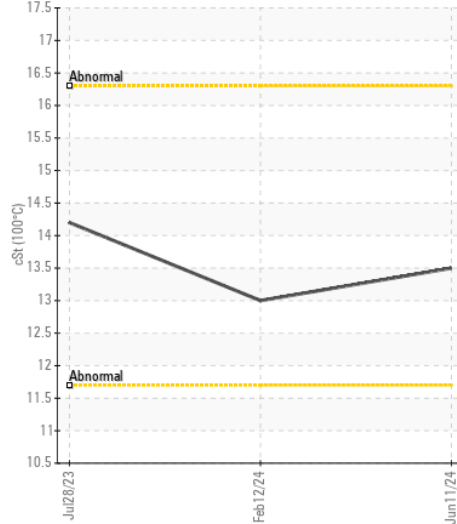
Ferrous Alloys



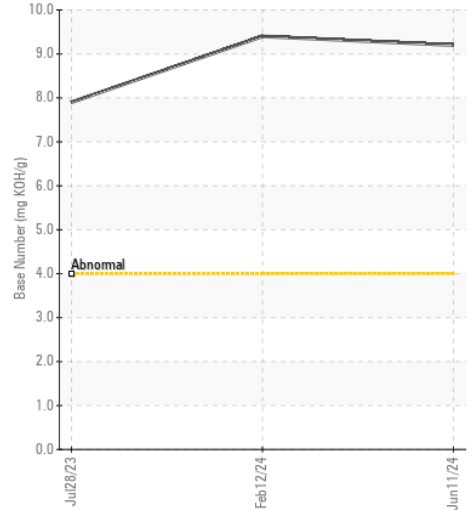
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009845 **Received** : 14 Jun 2024
Lab Number : 06209888 **Tested** : 17 Jun 2024
Unique Number : 11082752 **Diagnosed** : 17 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

LKQ CORPORATION
 500 W MADISON ST, SUITE 2800
 CHICAGO, IL
 US 60661
 Contact: GEOVANNY CARRERA
 lgcarrera@lkqcorp.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: