



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO VHD64B T-40 (S/N 4V5KC9EG5KN216294)

Component
Diesel Engine

Fluid
PHILLIPS 66 15W40 (10 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0879516	WC0828375	WC0770324
Sample Date		Client Info		06 Feb 2024	02 Sep 2023	19 Jan 2023
Machine Age	mls	Client Info		203830	186641	23524
Oil Age	mls	Client Info		17189	16219	23524
Filter Age	mls	Client Info		17189	16219	23524
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	>80	35	20	51
Chromium	ppm	ASTM D5185m	>6	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	117	72	7
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>95	<1	0	2
Copper	ppm	ASTM D5185m	>85	6	2	6
Tin	ppm	ASTM D5185m	>9	<1	<1	2
Vanadium	ppm	ASTM D5185m		2	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

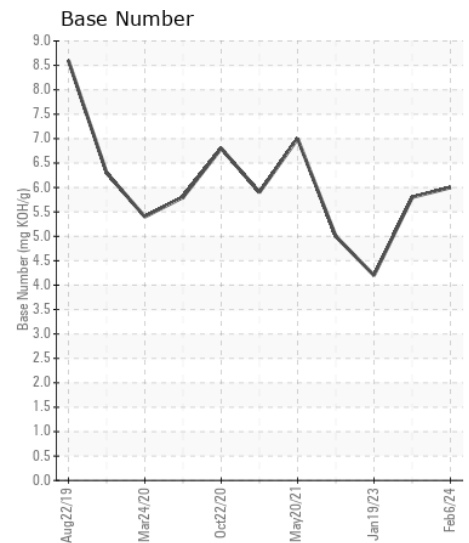
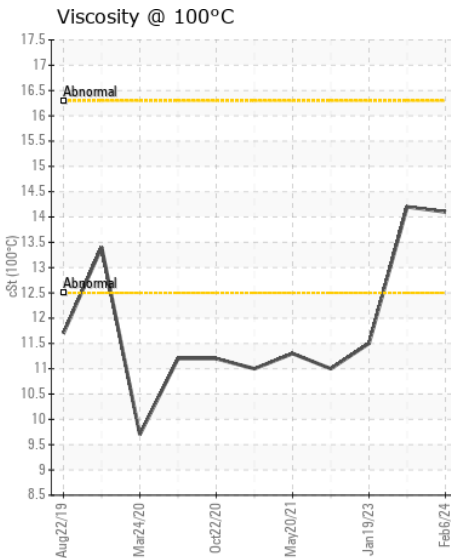
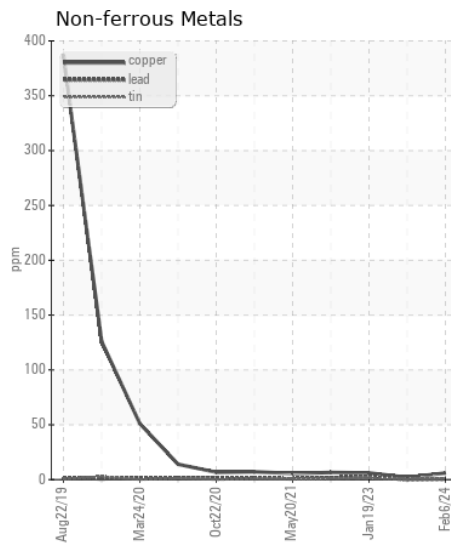
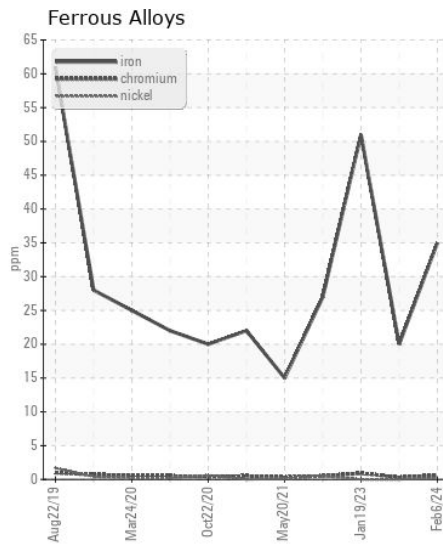
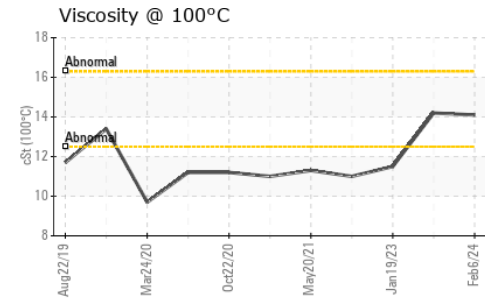
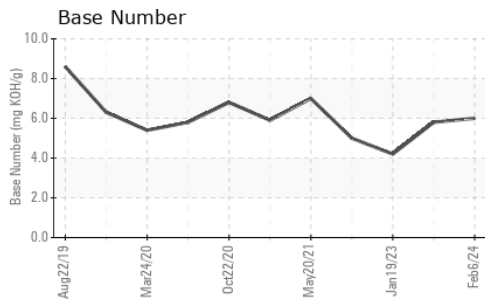
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	5	7
Potassium	ppm	ASTM D5185m	>20	8	3	5
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.4	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	9.6	9.9	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	24.3	27.1
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		4	3	6
Boron	ppm	ASTM D5185m		48	25	15
Barium	ppm	ASTM D5185m		12	0	2
Molybdenum	ppm	ASTM D5185m		18	2	12
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		731	410	557
Calcium	ppm	ASTM D5185m		2432	1709	1304
Phosphorus	ppm	ASTM D5185m		1581	935	657
Zinc	ppm	ASTM D5185m		1773	1169	801
Sulfur	ppm	ASTM D5185m		6574	4186	3047
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	18.4	22.3
Base Number (BN)	mg KOH/g	ASTM D2896		6.0	5.8	4.2
Visc @ 100°C	cSt	ASTM D445		14.1	14.2	11.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0879516 **Received** : 14 Feb 2024
Lab Number : 06088609 **Tested** : 15 Feb 2024
Unique Number : 10876054 **Diagnosed** : 15 Feb 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

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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)