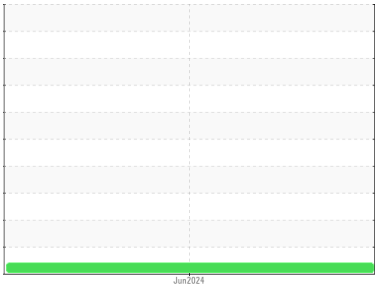
OIL ANALYSIS REPORT

Area
RESIN PLANT
Machine Id
FIRE PUMP (S/N 86-65638)
Component
Pump
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (5 GAL)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0943765**	---	---
Sample Date		Client Info		**25 Jun 2024**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ATTENTION**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.1	**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**16**	---	---
Iron	ppm	ASTM D5185m	>90	**0**	---	---
Chromium	ppm	ASTM D5185m	>5	**<1**	---	---
Nickel	ppm	ASTM D5185m	>5	**0**	---	---
Titanium	ppm	ASTM D5185m	>3	**0**	---	---
Silver	ppm	ASTM D5185m	>3	**0**	---	---
Aluminum	ppm	ASTM D5185m	>7	**2**	---	---
Lead	ppm	ASTM D5185m	>12	**0**	---	---
Copper	ppm	ASTM D5185m	>30	**0**	---	---
Tin	ppm	ASTM D5185m	>9	**0**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**66**	---	---
Barium	ppm	ASTM D5185m		**0**	---	---
Molybdenum	ppm	ASTM D5185m		**40**	---	---
Manganese	ppm	ASTM D5185m		**0**	---	---
Magnesium	ppm	ASTM D5185m		**480**	---	---
Calcium	ppm	ASTM D5185m		**1561**	---	---
Phosphorus	ppm	ASTM D5185m		**821**	---	---
Zinc	ppm	ASTM D5185m		**1106**	---	---
Sulfur	ppm	ASTM D5185m		**2802**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	**3**	---	---
Sodium	ppm	ASTM D5185m		**1**	---	---
Potassium	ppm	ASTM D5185m	>20	**2**	---	---
Fuel	%	ASTM D3524		**1.0**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	---	---
Nitration	Abs/cm	*ASTM D7624		**4.8**	---	---
Sulfation	Abs/.1mm	*ASTM D7415		**21.2**	---	---

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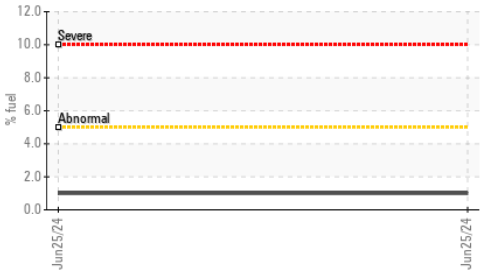
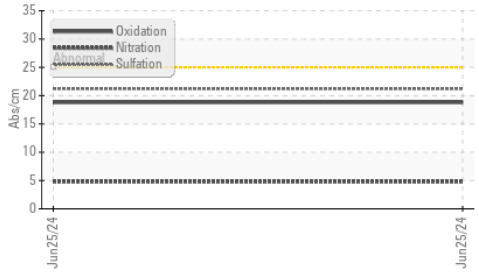
Viscosity @ 100°C

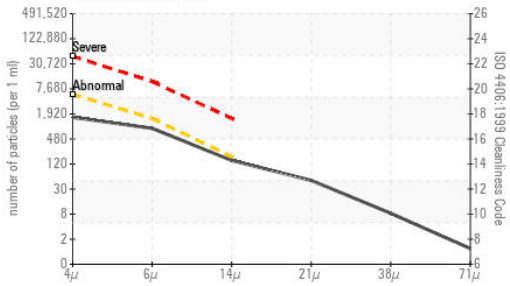
Fuel Dilution



FT-IR (Direct Trend)



Particle Count



Base Number

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**1392**	---	---
Particles >6µm		ASTM D7647	>1300	**758**	---	---
Particles >14µm		ASTM D7647	>160	**129**	---	---
Particles >21µm		ASTM D7647	>40	**43**	---	---
Particles >38µm		ASTM D7647	>10	**7**	---	---
Particles >71µm		ASTM D7647	>3	**1**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**18/17/14**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**18.8**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		**9.86**	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>.1	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**11.3**	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0943765
Lab Number : 06221412
Unique Number : 11099609
Test Package : PLANT (Additional Tests: FT-IR, FUELDILUTION, KV100, PercentFuel, TBN)

Received : 26 Jun 2024
Tested : 01 Jul 2024
Diagnosed : 01 Jul 2024 - Jonathan Hester

BAKELITE CHEMICALS - BEAVER CREEK
4113 W 4 MILE RD
GRAYLING, MI
US 49738
Contact: Nick Swiercz
nick.swiercz@bakelite.com
T:
F:

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)