CONSTRUCTION EQUIPMENT
A10657   VOLVO EC480E 314799 - DIESEL ENGINE

Sample No: VCP416346

Oil Type: MOBIL 15W40

Job No: A10657

SAMPLE INFORMATION

Sample Number		**VCP416346**	VCP406499	VCP376481	---
Sample Date		**13 Jul 2023**	01 May 2023	25 Jul 2022	---
Machine Hours		**1715**	1135	575	---
Oil Hours		**500**	500	575	---
Oil Changed		**Changed**	Changed	Changed	---
Sample Status		**ABNORMAL**	ABNORMAL	ABNORMAL	---

OIL CONDITION

Visc @ 100°C	cSt	▲ **11.8**	▲ 11.9	▲ 10.1	---
Base Number (BN)	mg KOH/g	■ **5.8**	■ 6.4	■ 5.3	---
Oxidation (PA)	%	**59**	79	78	---

CONTAMINATION

Soot %	%	■ **0.1**	■ 0.1	■ 0.1	---
Nitration (PA)	%	**69**	70	93	---
Sulfation (PA)	%	**58**	58	65	---
Glycol	%	**NEG**	NEG	NEG	---
Fuel	%	**<1.0**	<1.0	■ 0.6	---
Silicon	ppm	■ **8**	■ 10	■ 28	---
Sodium	ppm	■ **1**	■ 1	■ 2	---
Potassium	ppm	■ **1**	■ 0	■ <1	---

WEAR METALS

Iron	ppm	■ **7**	■ 7	■ 14	---
Copper	ppm	▲ **19**	▲ 110	▲ 173	---
Lead	ppm	■ **1**	■ 0	■ 3	---
Tin	ppm	■ **1**	■ 1	■ 4	---
Aluminum	ppm	■ **2**	■ 1	■ 3	---
Chromium	ppm	■ **0**	■ 0	■ <1	---
Molybdenum	ppm	■ **22**	■ 55	■ 86	---
Nickel	ppm	■ **0**	■ 0	■ <1	---
Titanium	ppm	**<1**	0	0	---
Silver	ppm	■ **0**	■ 0	<1	---
Manganese	ppm	■ **<1**	■ 1	■ 4	---
Vanadium	ppm	**<1**	0	0	---

ADDITIVES

Calcium	ppm	■ **2213**	■ 1736	■ 2240	---
Magnesium	ppm	■ **224**	■ 498	■ 43	---
Zinc	ppm	■ **1096**	■ 1167	■ 1116	---
Phosphorus	ppm	■ **868**	■ 929	■ 885	---
Barium	ppm	■ **0**	■ 0	■ 0	---
Boron	ppm	■ **5**	■ 47	■ 23	---

K C CONSTRUCTION
1737 STOUT DRIVE
IVYLAND, PA
US 18974
Contact: DUKE D.
duked@kcconstruct.com
T: (267)784-7337
F: x:

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot: KCCIVY
Unique No: 10562272
Signed: Sean Felton
Report Date: 19 Jul 2023

GRAPHS

Iron (ppm)

Lead (ppm)

Aluminum (ppm)

Chromium (ppm)

⚠ Copper (ppm)

Silicon (ppm)

⚠ Viscosity @ 100°C

Base Number