CONSTRUCTION EQUIPMENT
A05836   VOLVO EC480E 310234 - REAR RIGHT FINAL DRIVE

Sample No: VCP310392

Oil Type: MOBIL MOBILUBE HD 85W140

Job No: A05836

SAMPLE INFORMATION

Sample Number		**VCP310392**	VCP226586	VCP205098	VCP196753
Sample Date		**18 May 2021**	24 Jan 2019	05 May 2017	24 Sep 2016
Machine Hours		**4415**	3870	2200	0
Oil Hours		**2000**	1000	1000	1000
Oil Changed		**Changed**	Not Changd	Changed	Not Changd
Sample Status		**SEVERE**	SEVERE	ABNORMAL	ABNORMAL

OIL CONDITION

Visc @ 40°C	cSt	▲ **1393**	▲ 608.8	▪ 259.0	▪ 196.8

CONTAMINATION

Water	%	⬢ **4.20**	▪ 0.124	---	---
Silicon	ppm	⬢ **7372**	⬢ 3239	▲ 291	▲ 204
Sodium	ppm	▪ **67**	▪ 64	▪ 11	▪ 3
Potassium	ppm	▪ **355**	▪ 192	▪ 18	▪ 11

WEAR METALS

Iron	ppm	⬢ **10000**	⬢ 7165	▲ 654	▲ 805
Copper	ppm	▪ **17**	▪ 15	▪ 0	▪ 1
Lead	ppm	▪ **5**	▪ 0	▪ 0	▪ 0
Tin	ppm	▪ **4**	▪ 0	▪ 12	▪ 0
Aluminum	ppm	▲ **1003**	▲ 677	▲ 51	▲ 38
Chromium	ppm	⬢ **96**	⬢ 67	▪ 6	▪ 10
Molybdenum	ppm	▪ **18**	▪ 0	▪ <1	0
Nickel	ppm	▪ **10**	6	<1	<1
Titanium	ppm	▪ **148**	▪ 63	5	3
Silver	ppm	▪ **<1**	0	0	0
Manganese	ppm	▪ **84**	▪ 56	▪ 6	7
Vanadium	ppm	**4**	2	0	<1

ADDITIVES

Calcium	ppm	▪ **155**	▪ 161	▪ 154	5
Magnesium	ppm	▪ **123**	▪ 71	▪ 19	2
Zinc	ppm	▪ **66**	▪ 89	▪ 78	8
Phosphorus	ppm	▪ **723**	▪ 643	▪ 829	242
Barium	ppm	▪ **4**	▪ 6	▪ 0	6
Boron	ppm	▪ **160**	▪ 89	▪ 120	2

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Diagnosis

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.The iron level is severe. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the oil. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Depot: KCCIVY
Unique No: 9514979
Signed: Don Baldridge
Report Date: 25 May 2021

GRAPHS

Iron (ppm)

Lead (ppm)

Aluminum (ppm)

Chromium (ppm)

Copper (ppm)

Silicon (ppm)

Viscosity @ 40°C

Water