



# CONSTRUCTION EQUIPMENT

## HORST EXCAVATING VOLVO EC460CL 110503 - REAR LEFT FINAL DRIVE



**Sample No:** VCP148653  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:** HORST EXCAVATING



**HIGHWAY EQUIPMENT AND SUPPLY CO**  
 200 BURKHOLDER DR.  
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### SAMPLE INFORMATION

Sample Number	<b>VCP148653</b>	VCP135516	---	---
Sample Date	<b>18 Dec 2015</b>	06 Apr 2012	---	---
Machine Hours	<b>3899</b>	1163	---	---
Oil Hours	<b>0</b>	1000	---	---
Oil Changed	<b>Not Chngd</b>	Changed	---	---
Sample Status	<b>ABNORMAL</b>	ABNORMAL	---	---



### OIL CONDITION

Visc @ 40°C	cSt	<b>145.1</b>	█ 192.3	---	---
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### CONTAMINATION

Silicon	ppm	▲ <b>162</b>	▲ 195	---	---
Sodium	ppm	█ <b>6</b>	█ 26	---	---
Potassium	ppm	█ <b>10</b>	█ 15	---	---



### WEAR METALS

Iron	ppm	▲ <b>720</b>	▲ 661	---	---
Copper	ppm	█ <b>83</b>	█ 64	---	---
Lead	ppm	█ <b>4</b>	█ 6	---	---
Tin	ppm	█ <b>0</b>	█ 5	---	---
Aluminum	ppm	▲ <b>31</b>	▲ 41	---	---
Chromium	ppm	█ <b>9</b>	█ 15	---	---
Molybdenum	ppm	█ <b>0</b>	█ <1	---	---
Nickel	ppm	<b>3</b>	3	---	---
Titanium	ppm	<b>2</b>	4	---	---
Silver	ppm	<b>0</b>	0	---	---
Manganese	ppm	█ <b>7</b>	█ 12	---	---
Vanadium	ppm	<b>0</b>	<1	---	---



### ADDITIVES

Calcium	ppm	<b>227</b>	█ 119	---	---
Magnesium	ppm	█ <b>6</b>	█ 19	---	---
Zinc	ppm	█ <b>122</b>	█ 87	---	---
Phosphorus	ppm	█ <b>825</b>	█ 906	---	---
Barium	ppm	█ <b>1</b>	█ 8	---	---
Boron	ppm	█ <b>102</b>	█ 54	---	---

### Diagnosis

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor. Moderate concentration of visible metal present. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The condition of the oil is acceptable for the time in service.

**Depot:** INSEPH  
**Unique No:** 7255529  
**Signed:** Jonathan Hester  
**Report Date:** 07 Jan 2016



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## GRAPHS

