



CONSTRUCTION EQUIPMENT

SW1028515 VOLVO EC220EL 314053 - REAR RIGHT FINAL DRIVE



Sample No: VCP444493
Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5
Job No: SW1028515



SAMPLE INFORMATION

Sample Number	VCP444493	VCP319100	---	---
Sample Date	06 Feb 2024	17 Sep 2021	---	---
Machine Hours	0	2358	---	---
Oil Hours	0	2358	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	SEVERE	SEVERE	---	---

ARNOLD MACHINERY COMPANY
 2975 WEST 2100 SOUTH
 SALT LAKE CITY, UT
 US 84119
 Contact: S. KARBACH
 skarbach@arnoldmachinery.com
 T: (801)972-4000
 F: (801)975-9434



OIL CONDITION

Visc @ 40°C	cSt	▲ 368	■ 166	---	---
-------------	-----	-------	-------	-----	-----



CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	● 5112	● 586	---	---
Sodium	ppm	■ 308	■ 16	---	---
Potassium	ppm	■ 376	■ 47	---	---



WEAR METALS

Iron	ppm	● 6232	● 2214	---	---
Copper	ppm	■ 9	■ 4	---	---
Lead	ppm	■ 1	■ <1	---	---
Tin	ppm	■ 1	■ <1	---	---
Aluminum	ppm	▲ 1331	▲ 124	---	---
Chromium	ppm	■ 34	▲ 20	---	---
Molybdenum	ppm	■ 3	■ 2	---	---
Nickel	ppm	■ 13	1	---	---
Titanium	ppm	■ 69	7	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	■ 43	■ 19	---	---
Vanadium	ppm	2	<1	---	---



ADDITIVES

Calcium	ppm	■ 1110	■ 255	---	---
Magnesium	ppm	■ 262	■ 53	---	---
Zinc	ppm	■ 26	■ 34	---	---
Phosphorus	ppm	■ 887	■ 790	---	---
Barium	ppm	■ 19	■ 0	---	---
Boron	ppm	■ 162	■ 91	---	---

Diagnosis

We advise that you check all areas where dirt can enter the system. 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. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Depot: VOLVO8770
Unique No: 10873859
Signed: Don Baldrige
Report Date: 13 Feb 2024



CONSTRUCTION EQUIPMENT



GRAPHS

