



CONSTRUCTION EQUIPMENT

FLYWAY VOLVO EC220EL 3 10218 - REAR RIGHT FINAL DRIVE



Sample No: VCP415280
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: FLYWAY



SAMPLE INFORMATION

Sample Number	VCP415280	VCP368180	VCP331569	VCP292921
Sample Date	18 Nov 2023	17 Feb 2023	24 Nov 2021	02 Nov 2020
Machine Hours	0	5055	3927	2888
Oil Hours	0	0	2000	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	SEVERE	SEVERE	ABNORMAL

HIGHWAY EQUIPMENT AND SUPPLY CO
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OIL CONDITION

Visc @ 40°C	cSt	375	62.5	228	103
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CONTAMINATION

Water	%	12.3	24.3	NEG	NEG
Silicon	ppm	4142	587	1552	209
Sodium	ppm	64	4	35	6
Potassium	ppm	174	11	156	13



WEAR METALS

Iron	ppm	12146	2137	3423	846
Copper	ppm	25	7	8	2
Lead	ppm	2	<1	2	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	557	50	364	48
Chromium	ppm	85	18	22	6
Molybdenum	ppm	12	2	5	<1
Nickel	ppm	12	3	3	<1
Titanium	ppm	54	3	33	4
Silver	ppm	0	<1	5	<1
Manganese	ppm	75	13	25	5
Vanadium	ppm	2	<1	1	<1



ADDITIVES

Calcium	ppm	241	45	238	29
Magnesium	ppm	123	6	101	12
Zinc	ppm	14	36	51	0
Phosphorus	ppm	844	1934	1270	1411
Barium	ppm	1	0	2	0
Boron	ppm	100	56	147	233

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 is no longer serviceable due to the presence of contaminants.

Depot: INSEPH
Unique No: 10750327
Signed: Sean Felton
Report Date: 21 Nov 2023



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GRAPHS

