



CONSTRUCTION EQUIPMENT

2176BO VOLVO EC220EL 314082 - SWING DRIVE



Sample No: VCP400584
Oil Type: VOLVO PREMIUM GEAR OIL 85W-140 GL-5
Job No: 2176BO



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP400584 | VCP326479 | VCP305107 | VCP274545 |
| Sample Date | 12 Jan 2023 | 04 Nov 2021 | 23 Mar 2021 | 04 Jun 2020 |
| Machine Hours | 6283 | 4319 | 3056 | 1966 |
| Oil Hours | 0 | 1000 | 0 | 0 |
| Oil Changed | Changed | Changed | Not Changd | Not Changd |
| Sample Status | ATTENTION | ATTENTION | NORMAL | NORMAL |

LCSWMA - LANCASTER COUNTY SOLID WASTE
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OIL CONDITION

| | | | | | |
|-------------|-----|---------------|-------|-------|-------|
| Visc @ 40°C | cSt | ▲ 57.4 | ▲ 241 | ■ 175 | ■ 174 |
|-------------|-----|---------------|-------|-------|-------|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|------|------|
| Silicon | ppm | ■ 5 | ■ 3 | ■ 10 | ■ 9 |
| Sodium | ppm | ■ 1 | ■ 1 | ■ <1 | ■ <1 |
| Potassium | ppm | ■ 2 | ■ 0 | ■ 6 | ■ 0 |



WEAR METALS

| | | | | | |
|------------|-----|----------------|------|------|------|
| Iron | ppm | ■ 66 | ■ 48 | ■ 87 | ■ 84 |
| Copper | ppm | ■ 5 | ■ 6 | ■ 14 | ■ 16 |
| Lead | ppm | ■ <1 | ■ 0 | ■ <1 | ■ 0 |
| Tin | ppm | ■ <1 | <1 | 0 | 0 |
| Aluminum | ppm | ■ <1 | 0 | 2 | <1 |
| Chromium | ppm | ■ <1 | <1 | 2 | 2 |
| Molybdenum | ppm | ■ 1 | ■ 5 | ■ 0 | ■ 0 |
| Nickel | ppm | ■ 0 | 0 | 0 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | <1 | 0 | 0 |
| Manganese | ppm | ■ <1 | ■ <1 | ■ 2 | ■ 2 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|---------------|-------|-------|-------|
| Calcium | ppm | ■ 108 | ■ 133 | ■ 0 | ■ 14 |
| Magnesium | ppm | ■ 12 | ■ 42 | ■ 0 | ■ 0 |
| Zinc | ppm | ▲ 33 | ■ 86 | ■ 10 | ■ 19 |
| Phosphorus | ppm | ▲ 2329 | ■ 927 | ■ 419 | ■ 422 |
| Barium | ppm | ■ 0 | ■ 0 | ■ 0 | ■ 0 |
| Boron | ppm | ▲ 287 | ■ 200 | ■ 4 | ■ 2 |

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The condition of the oil is acceptable for the time in service.

Depot: LANLANPA
Unique No: 10298919
Signed: Don Baldrige
Report Date: 23 Jan 2023



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GRAPHS

