



CONSTRUCTION EQUIPMENT

SPM675413 ALTER ROCK SENNEBOGEN 840ME 840.0.2170 - DIESEL ENGINE



Sample No: VCP377859
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SPM675413 ALTER ROCK



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP377859 | VCP433261 | VCP399618 | VCP387220 |
| Sample Date | 26 Feb 2024 | 16 Nov 2023 | 14 Aug 2023 | 03 Apr 2023 |
| Machine Hours | 9642 | 9010 | 8508 | 7779 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | ABNORMAL | NORMAL | NORMAL | MARGINAL |

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OIL CONDITION

| | | | | | |
|------------------|----------|---------------|--------|--------|--------|
| Visc @ 100°C | cSt | ▲ 11.7 | ■ 13.6 | ■ 13.7 | ■ 12.3 |
| Base Number (BN) | mg KOH/g | ■ 6.7 | ■ 8.5 | ■ 7.8 | ■ 8.4 |
| Oxidation (PA) | % | 82 | 71 | 78 | 90 |

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

CONTAMINATION

| | | | | | |
|----------------|-----|--------------|-------|-------|--------------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | ■ 0.1 | ■ 0.1 | ■ 0.2 | ■ 0.1 |
| Nitration (PA) | % | 76 | 71 | 82 | 72 |
| Sulfation (PA) | % | 60 | 56 | 58 | 61 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | ▲ 5.0 | <1.0 | <1.0 | ▲ 2.9 |
| Silicon | ppm | ■ 3 | ■ 4 | ■ 3 | ■ 6 |
| Sodium | ppm | ■ 1 | ■ 6 | ■ 2 | ■ <1 |
| Potassium | ppm | ■ 2 | ■ 3 | ■ 2 | ■ 2 |

WEAR METALS

| | | | | | |
|------------|-----|----------------|------|------|------|
| Iron | ppm | ■ 7 | ■ 14 | ■ 9 | ■ 7 |
| Copper | ppm | ■ 1 | ■ 3 | ■ 1 | ■ <1 |
| Lead | ppm | ■ 4 | ■ 0 | ■ <1 | ■ 0 |
| Tin | ppm | ■ 0 | ■ <1 | ■ <1 | ■ 0 |
| Aluminum | ppm | ■ 2 | ■ 6 | ■ 2 | ■ 0 |
| Chromium | ppm | ■ <1 | ■ <1 | ■ <1 | ■ <1 |
| Molybdenum | ppm | ■ 56 | ■ 65 | ■ 62 | ■ 41 |
| Nickel | ppm | ■ 0 | ■ 0 | ■ 0 | ■ 0 |
| Titanium | ppm | ■ <1 | ■ 0 | ■ <1 | ■ 0 |
| Silver | ppm | ■ 0 | ■ 0 | ■ <1 | ■ 0 |
| Manganese | ppm | ■ 0 | ■ <1 | ■ <1 | ■ <1 |
| Vanadium | ppm | <1 | 0 | <1 | 0 |

ADDITIVES

| | | | | | |
|------------|-----|---------------|--------|--------|--------|
| Calcium | ppm | ■ 1088 | ■ 1172 | ■ 1185 | ■ 1672 |
| Magnesium | ppm | ■ 943 | ■ 870 | ■ 1026 | ■ 489 |
| Zinc | ppm | ■ 1137 | ■ 1223 | ■ 1289 | ■ 1126 |
| Phosphorus | ppm | ■ 971 | ■ 1048 | ■ 1024 | ■ 896 |
| Barium | ppm | ■ 0 | ■ 0 | ■ 0 | ■ 2 |
| Boron | ppm | ■ 1 | ■ 14 | ■ 2 | ■ 53 |

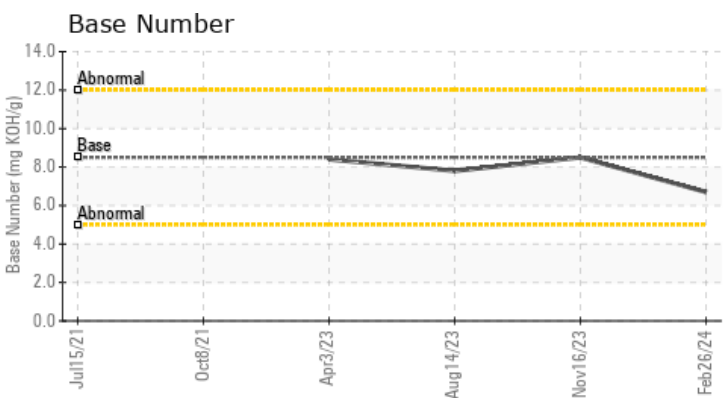
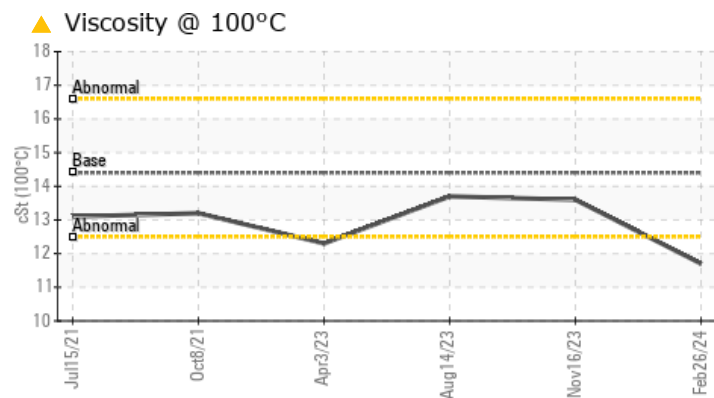
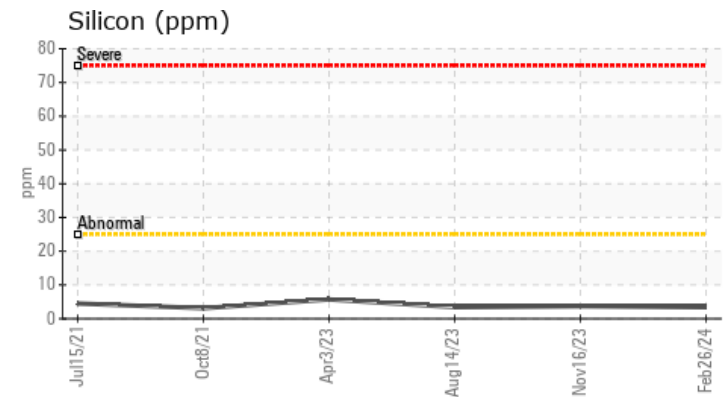
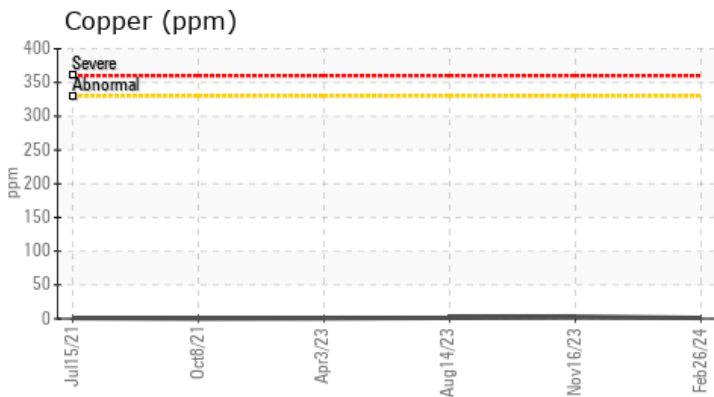
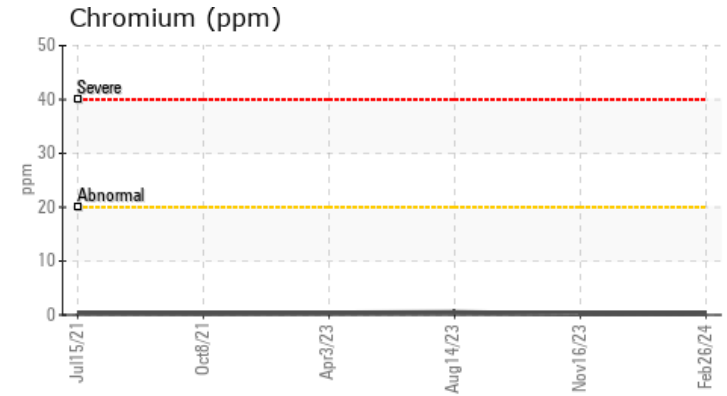
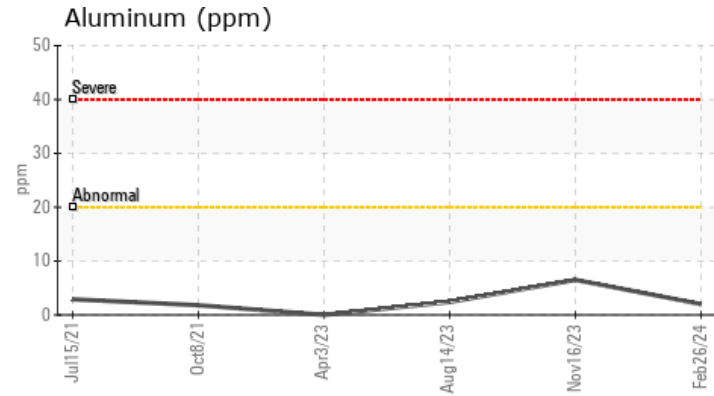
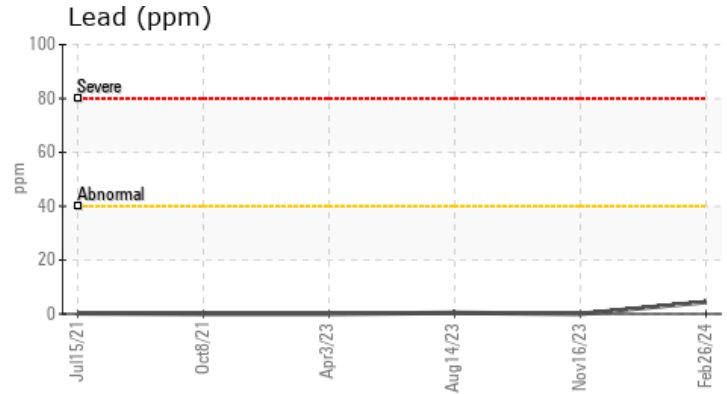
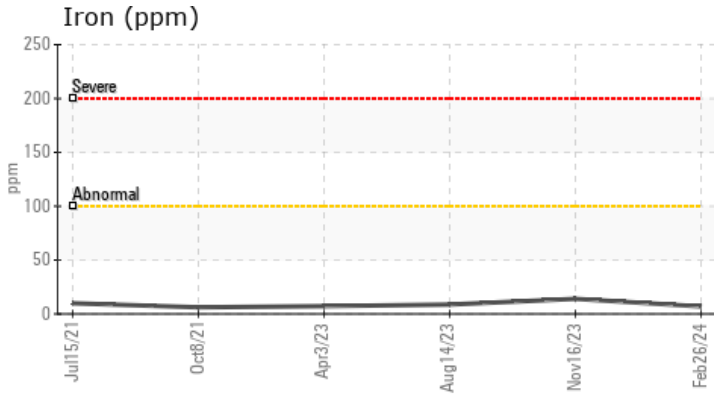
Depot: VOLVO5055
Unique No: 10914668
Signed: Wes Davis
Report Date: 11 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 ALTER ROCK SENNEBOGEN 840ME 840.0.2170 - HYDRAULIC SYSTEM



Sample No: VCP436987
Oil Type: AW HYDRAULIC OIL ISO 46
Job No: SPM675413 ALTER ROCK



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP436987 | VCP399751 | VCP323144 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Jul 2021 | --- |
| Machine Hours | 9642 | 8508 | 3424 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | Changed | --- |
| Sample Status | ATTENTION | ATTENTION | NORMAL | --- |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|-------|-----|
| Visc @ 40°C | cSt | 41.0 | 42.1 | 37.9 | --- |
| Acid Number (AN) | mg KOH/g | 0.50 | 0.52 | 0.728 | --- |



CONTAMINATION

| | | | | | |
|-------------------|-----|-----------------|----------|---------|-----|
| Water | % | NEG | NEG | NEG | --- |
| Particles >4µm | | 5030 | 8388 | 465 | --- |
| Particles >6µm | | 1121 | 1504 | 44 | --- |
| Particles >14µm | | 47 | 63 | 3 | --- |
| ISO 4406:1999 (c) | | 20/17/13 | 20/18/13 | 16/13/9 | --- |
| Silicon | ppm | 0 | 1 | <1 | --- |
| Sodium | ppm | 0 | <1 | 3 | --- |
| Potassium | ppm | 0 | <1 | 0 | --- |

Diagnosis

We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 4 | 10 | 10 | --- |
| Copper | ppm | 2 | 2 | 2 | --- |
| Lead | ppm | 0 | <1 | <1 | --- |
| Tin | ppm | 0 | 0 | 0 | --- |
| Aluminum | ppm | 0 | <1 | <1 | --- |
| Chromium | ppm | 2 | 3 | 1 | --- |
| Molybdenum | ppm | 1 | 4 | 2 | --- |
| Nickel | ppm | 0 | 0 | <1 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | 0 | <1 | --- |
| Manganese | ppm | <1 | 0 | <1 | --- |
| Vanadium | ppm | 0 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|-----|-----|-----|
| Calcium | ppm | 137 | 205 | 652 | --- |
| Magnesium | ppm | 18 | 24 | 13 | --- |
| Zinc | ppm | 429 | 479 | 554 | --- |
| Phosphorus | ppm | 335 | 373 | 426 | --- |
| Barium | ppm | 0 | 0 | 0 | --- |
| Boron | ppm | 0 | 3 | 0 | --- |

Depot: VOLVO5055
Unique No: 10914862
Signed: Wes Davis
Report Date: 08 Mar 2024

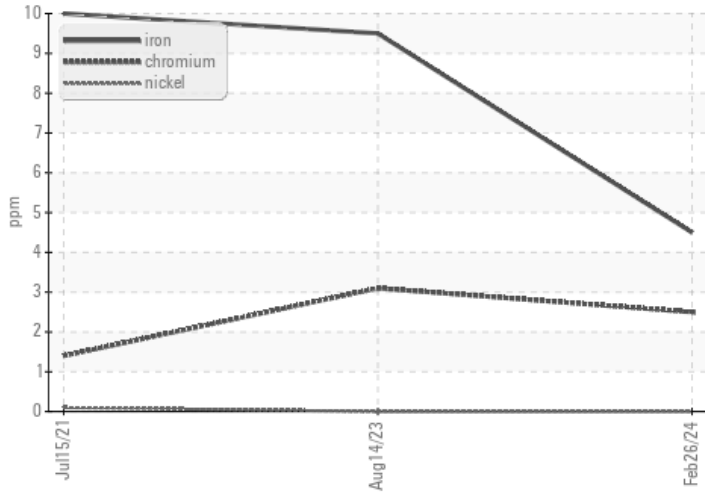


CONSTRUCTION EQUIPMENT

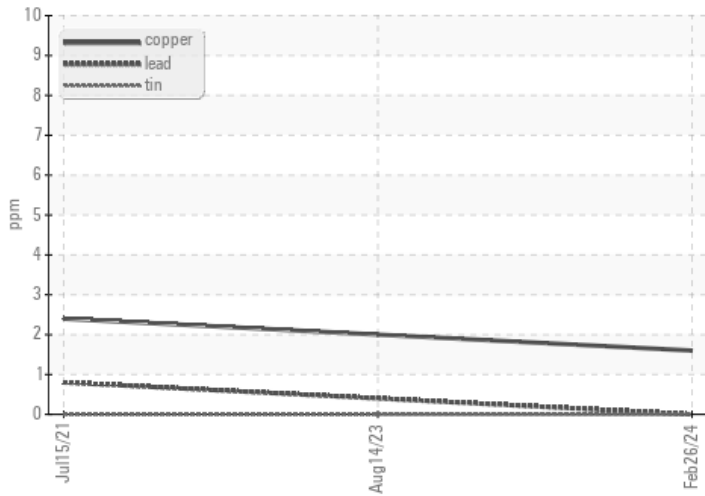


GRAPHS

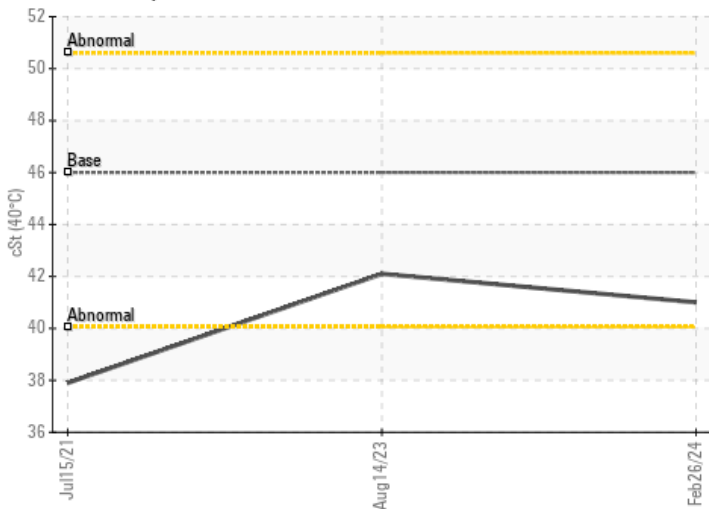
Ferrous Alloys



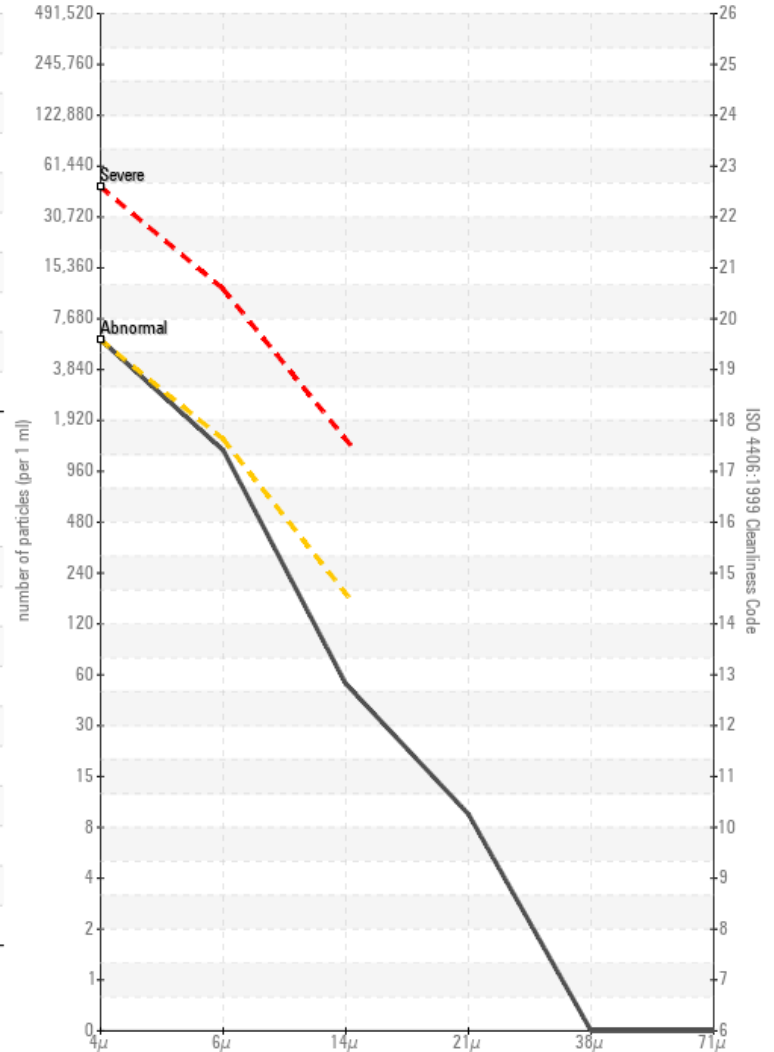
Non-ferrous Metals



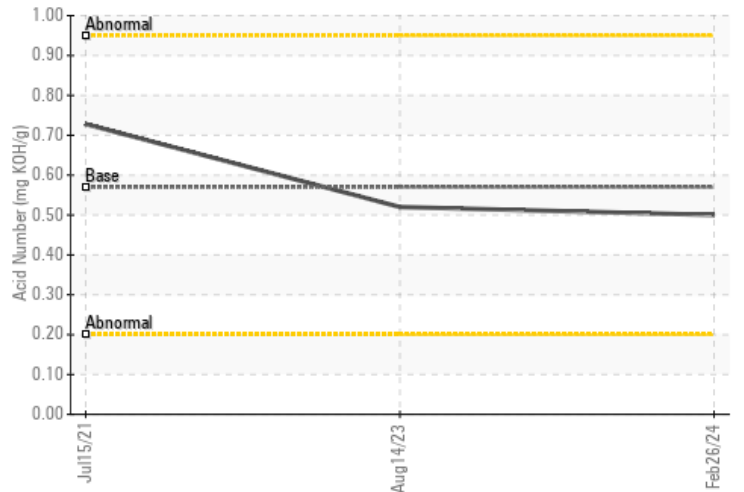
Viscosity @ 40°C



Particle Count



Acid Number



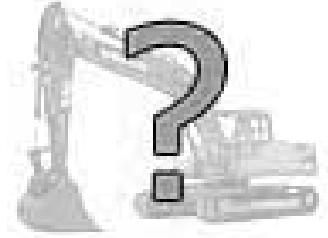


CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - LEFT SWING DRIVE



Sample No: VCP377858
Oil Type: MOBIL SHC 630
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP377858 | VCP423340 | VCP323147 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Jul 2021 | --- |
| Machine Hours | 8642 | 8508 | 3424 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | N/A | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

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OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 222 | 214 | 216 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | 25 | 21 | 5 | --- |
| Sodium | ppm | 1 | 0 | <1 | --- |
| Potassium | ppm | 0 | 0 | 0 | --- |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|-----|-----|-----|
| Iron | ppm | 358 | 376 | 120 | --- |
| Copper | ppm | 123 | 50 | 68 | --- |
| Lead | ppm | 0 | 0 | <1 | --- |
| Tin | ppm | 8 | 9 | 9 | --- |
| Aluminum | ppm | 0 | 0 | 1 | --- |
| Chromium | ppm | 2 | 2 | <1 | --- |
| Molybdenum | ppm | 0 | 0 | <1 | --- |
| Nickel | ppm | 0 | <1 | 0 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | 0 | 0 | --- |
| Manganese | ppm | 3 | 3 | 1 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|--------------|-----|-----|-----|
| Calcium | ppm | 75 | 11 | 16 | --- |
| Magnesium | ppm | <1 | 4 | <1 | --- |
| Zinc | ppm | 72 | 70 | 43 | --- |
| Phosphorus | ppm | 431 | 405 | 418 | --- |
| Barium | ppm | 0 | 0 | 0 | --- |
| Boron | ppm | 13 | 6 | 22 | --- |

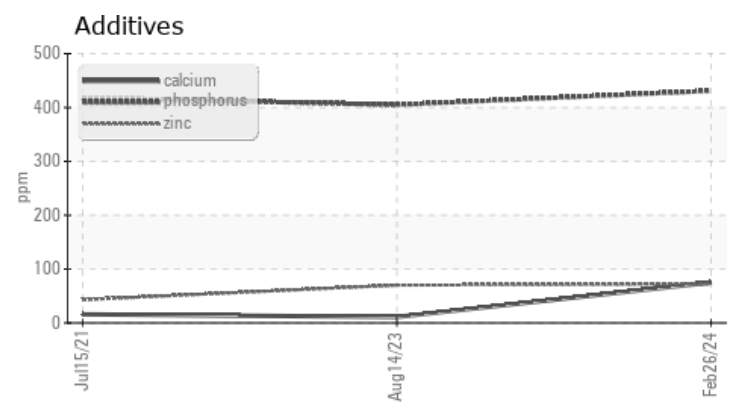
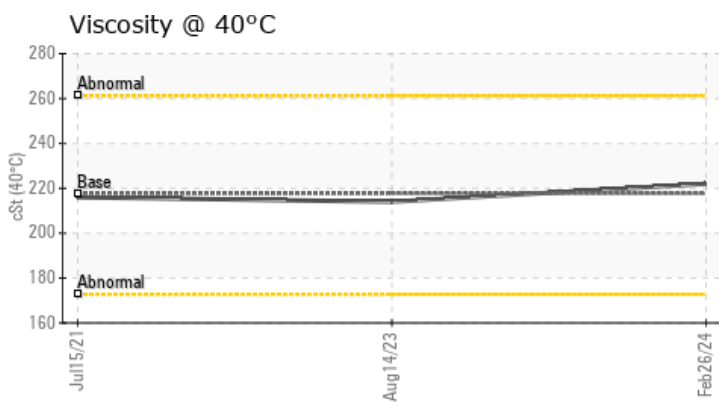
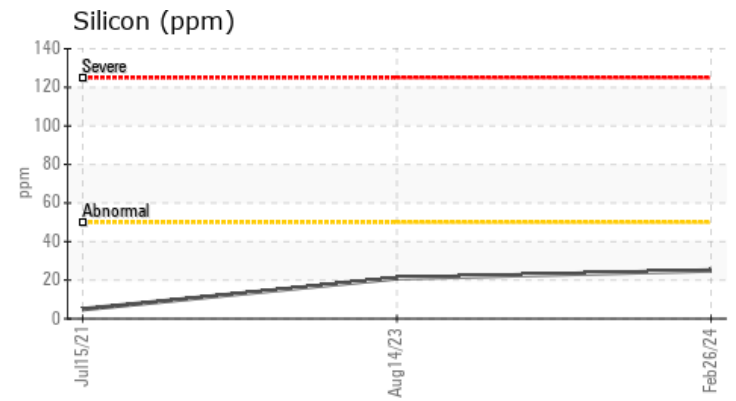
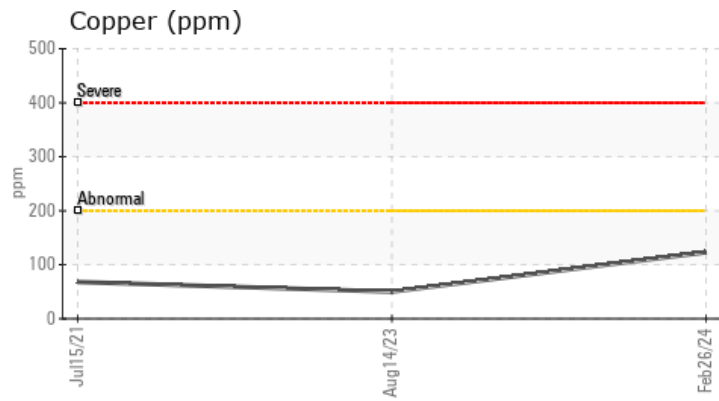
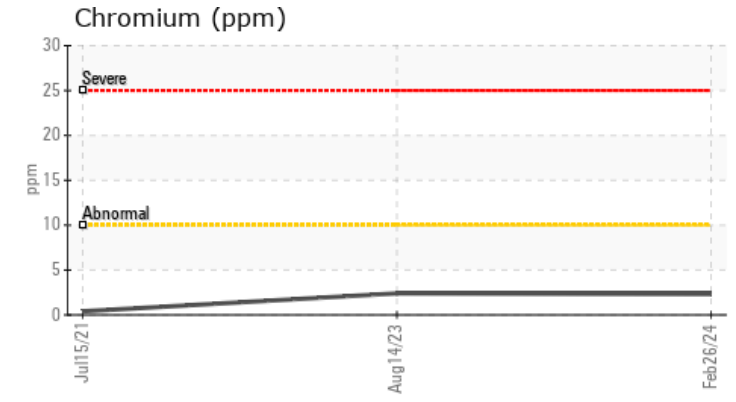
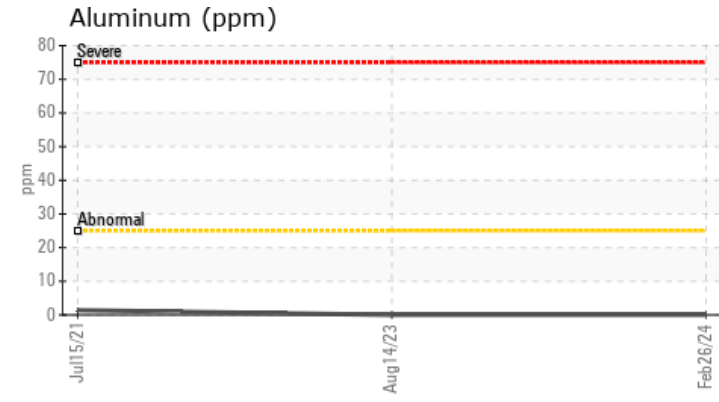
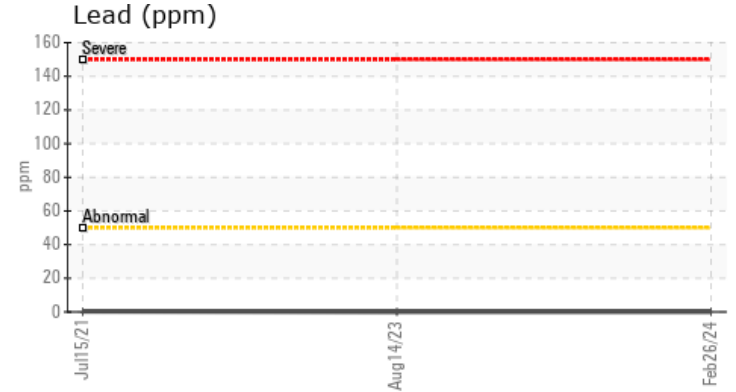
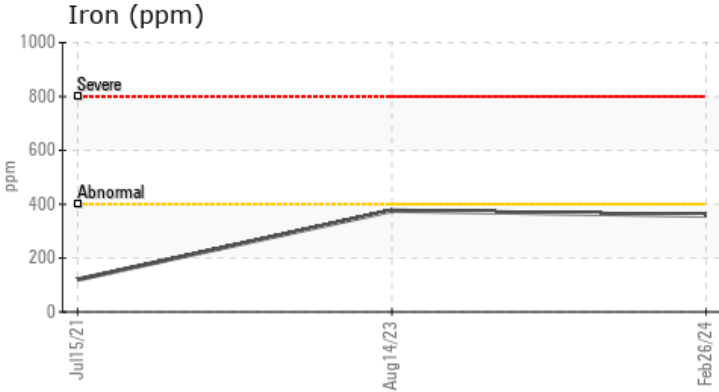
Depot: VOLVO5055
Unique No: 10915234
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - RIGHT SWING DRIVE



Sample No: VCP350319
Oil Type: MOBIL SHC 630
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP350319 | VCP399516 | VCP323145 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Jul 2021 | --- |
| Machine Hours | 9642 | 8508 | 3424 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | N/A | --- |
| Sample Status | NORMAL | SEVERE | SEVERE | --- |

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OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 218 | 222 | 233 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|--------------|------|------|-----|
| Water | % | 0.170 | 1.92 | 2.58 | --- |
| Silicon | ppm | 16 | 29 | 8 | --- |
| Sodium | ppm | <1 | 0 | 0 | --- |
| Potassium | ppm | 0 | 0 | <1 | --- |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|-----|-----|-----|
| Iron | ppm | 163 | 465 | 686 | --- |
| Copper | ppm | 100 | 114 | 105 | --- |
| Lead | ppm | 0 | 0 | 1 | --- |
| Tin | ppm | 3 | 14 | 14 | --- |
| Aluminum | ppm | 0 | 0 | 4 | --- |
| Chromium | ppm | <1 | 3 | 5 | --- |
| Molybdenum | ppm | 0 | 0 | 2 | --- |
| Nickel | ppm | 0 | <1 | 2 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | 0 | 0 | --- |
| Manganese | ppm | 1 | 3 | 4 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|--------------|-----|-----|-----|
| Calcium | ppm | 30 | 13 | 22 | --- |
| Magnesium | ppm | <1 | 4 | 4 | --- |
| Zinc | ppm | 20 | 40 | 49 | --- |
| Phosphorus | ppm | 390 | 467 | 401 | --- |
| Barium | ppm | 0 | 0 | 0 | --- |
| Boron | ppm | 2 | 5 | 23 | --- |

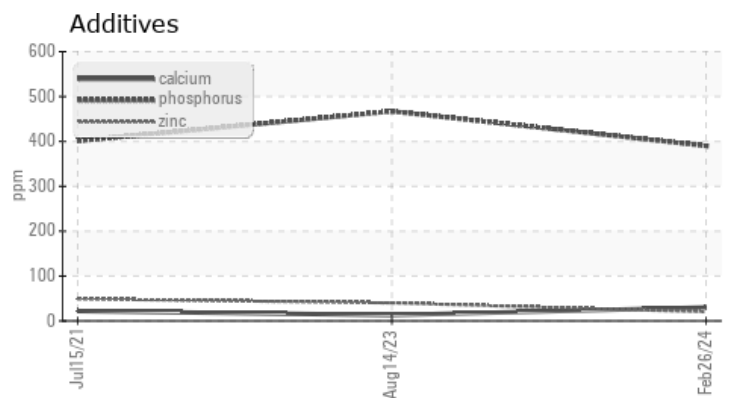
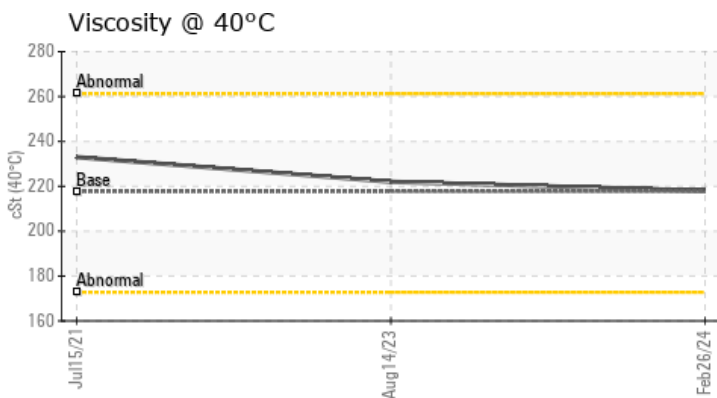
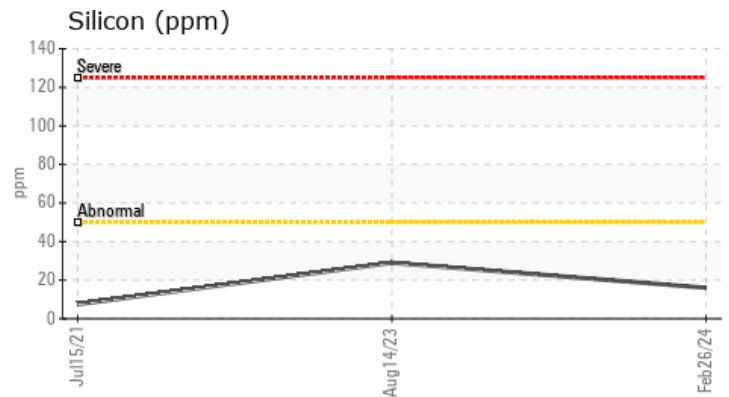
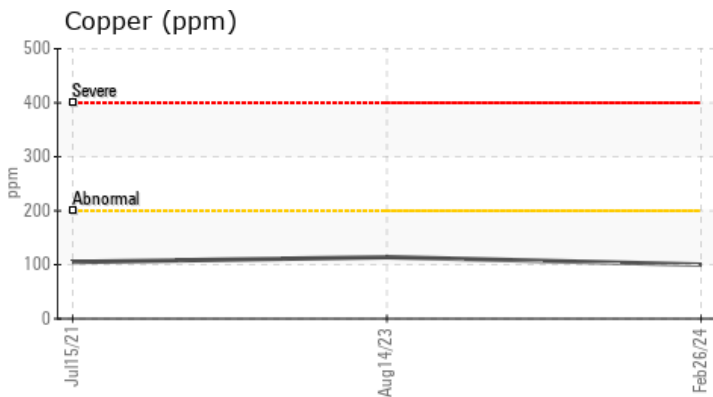
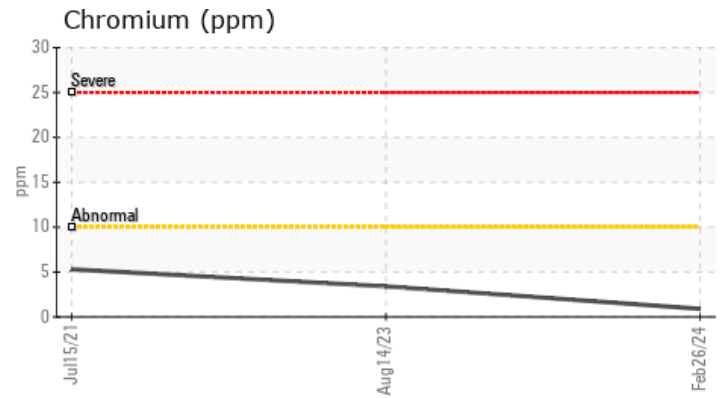
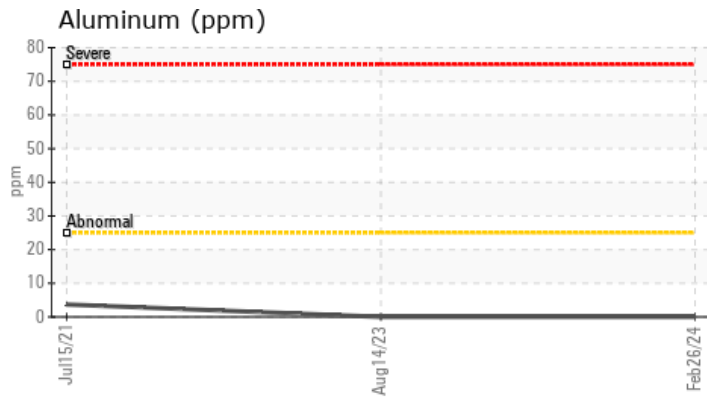
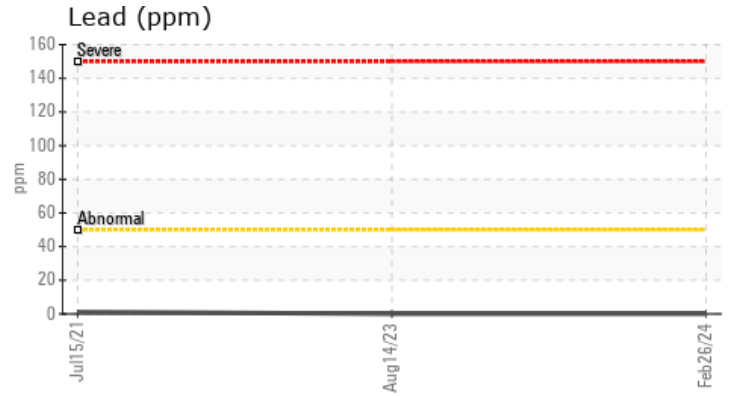
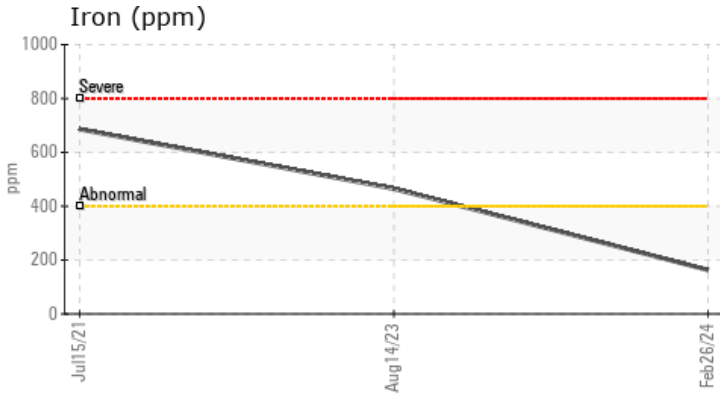
Depot: VOLVO5055
Unique No: 10915222
Signed: Don Baldrige
Report Date: 10 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - FRONT LEFT FINAL DRIVE



Sample No: VCP377870
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP377870 | VCP399517 | VCP323149 | VCP318361 |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Sep 2021 | 14 Jul 2021 |
| Machine Hours | 9642 | 8508 | 3424 | 3424 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | N/A | Not Changd |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 140 | 146 | 125 | 116 |
|-------------|-----|------------|-----|-----|-----|

CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|-----------|-----|----------|-----|-----|-----|
| Silicon | ppm | 3 | 6 | 2 | 2 |
| Sodium | ppm | 1 | <1 | 1 | <1 |
| Potassium | ppm | 0 | 0 | 3 | <1 |

Diagnosis

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 condition of the oil is acceptable for the time in service.

WEAR METALS

| | | | | | |
|------------|-----|--------------|-----|-----|----|
| Iron | ppm | 161 | 280 | 210 | 69 |
| Copper | ppm | 9 | 31 | 9 | 4 |
| Lead | ppm | 0 | 0 | 2 | 0 |
| Tin | ppm | 0 | 0 | 0 | <1 |
| Aluminum | ppm | <1 | 0 | <1 | 3 |
| Chromium | ppm | <1 | 2 | 2 | <1 |
| Molybdenum | ppm | 0 | 0 | 0 | <1 |
| Nickel | ppm | 0 | 0 | <1 | 0 |
| Titanium | ppm | <1 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 2 | 4 | 3 | 1 |
| Vanadium | ppm | <1 | 0 | <1 | 0 |

ADDITIVES

| | | | | | |
|------------|-----|--------------|------|-----|-----|
| Calcium | ppm | 28 | 22 | 30 | 14 |
| Magnesium | ppm | <1 | 4 | 2 | 3 |
| Zinc | ppm | 12 | 30 | 14 | 10 |
| Phosphorus | ppm | 720 | 1914 | 516 | 877 |
| Barium | ppm | 0 | 1 | 5 | 1 |
| Boron | ppm | 22 | 27 | 30 | 88 |

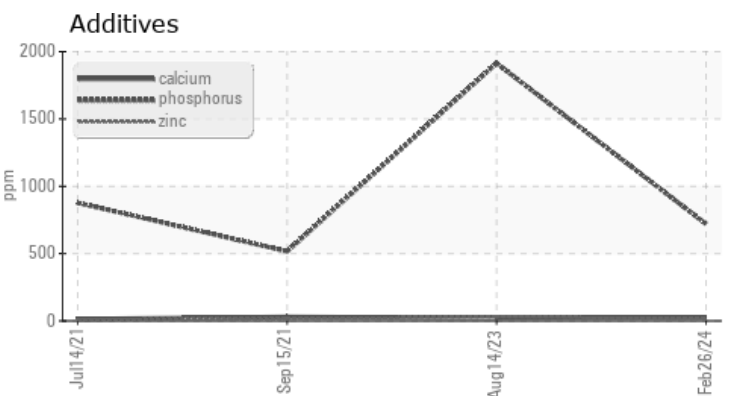
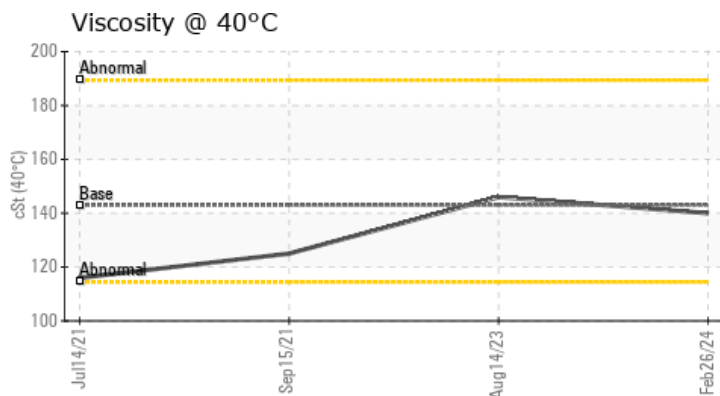
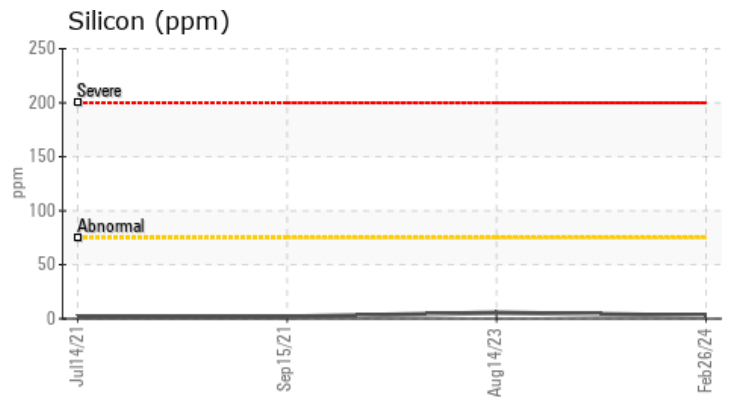
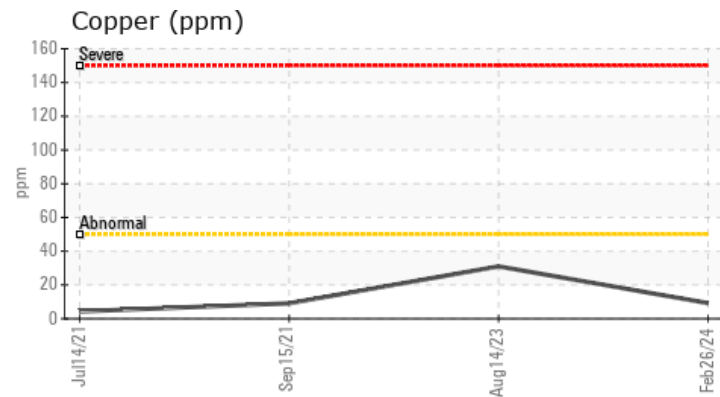
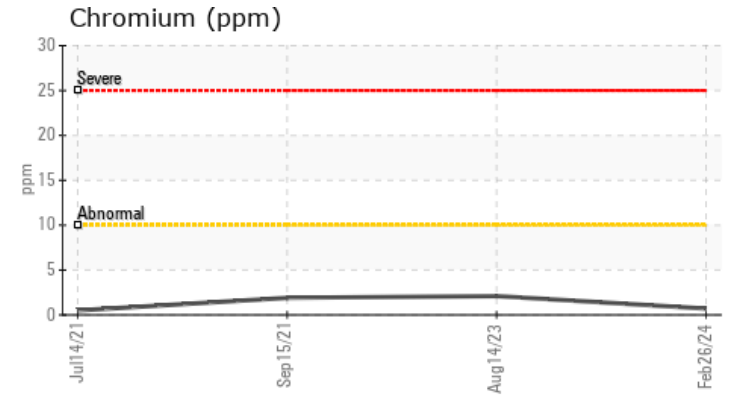
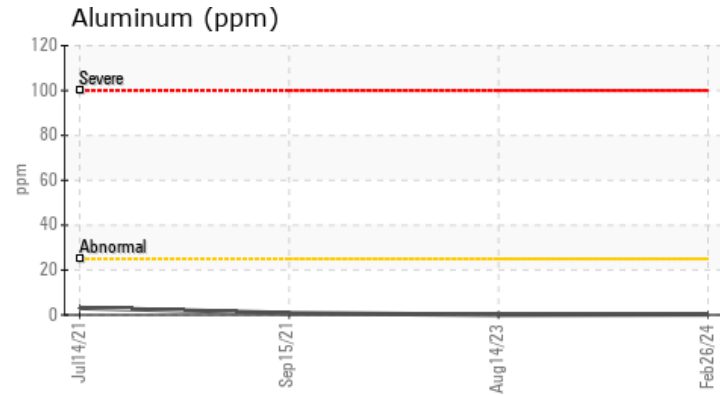
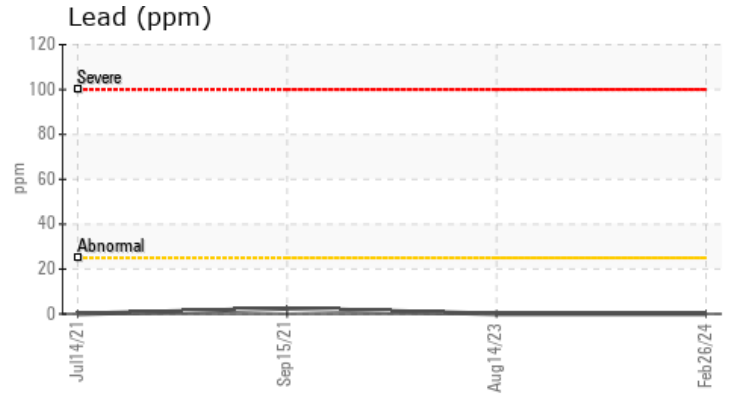
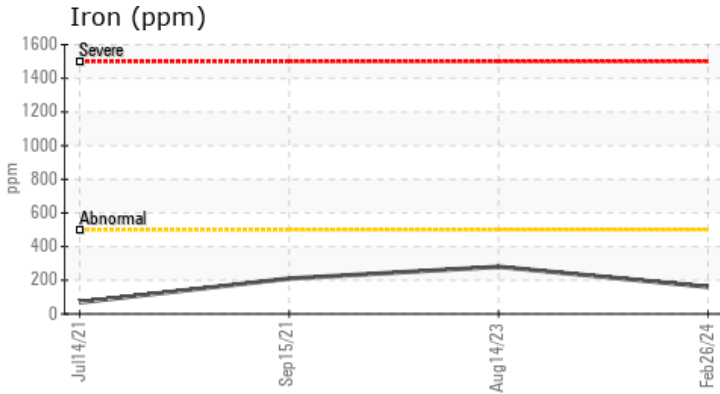
Depot: VOLVO5055
Unique No: 10915237
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 SENNEBOGEN 840ME 840.0.2170 - FRONT AXLE



Sample No: VCP377874
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP377874 | VCP396697 | VCP344706 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 08 Oct 2021 | --- |
| Machine Hours | 9642 | 8508 | 4315 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Changed | Changed | Not Changd | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

ALTA CONSTRUCTION EQUIPMENT

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OTTAWA, IL
US 61350
Contact: ALEX MARCO
ALEXANDER.MARCO@ALTG.COM
T:
F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 138 | 146 | 148 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|--------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | <1 | 2 | 0 | --- |
| Sodium | ppm | <1 | 0 | 0 | --- |
| Potassium | ppm | 0 | 0 | 0 | --- |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|---|----|-----|
| Iron | ppm | 4 | 2 | 2 | --- |
| Copper | ppm | <1 | 0 | 0 | --- |
| Lead | ppm | 0 | 0 | 0 | --- |
| Tin | ppm | 0 | 0 | 0 | --- |
| Aluminum | ppm | 0 | 0 | 0 | --- |
| Chromium | ppm | 0 | 0 | 0 | --- |
| Molybdenum | ppm | 0 | 0 | 0 | --- |
| Nickel | ppm | 0 | 0 | 0 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | 0 | 0 | --- |
| Manganese | ppm | 0 | 0 | <1 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|------|------|-----|
| Calcium | ppm | 31 | 3 | 0 | --- |
| Magnesium | ppm | 1 | 1 | 0 | --- |
| Zinc | ppm | 10 | 5 | 5 | --- |
| Phosphorus | ppm | 463 | 2103 | 1862 | --- |
| Barium | ppm | 0 | 0 | 0 | --- |
| Boron | ppm | 12 | 166 | 186 | --- |

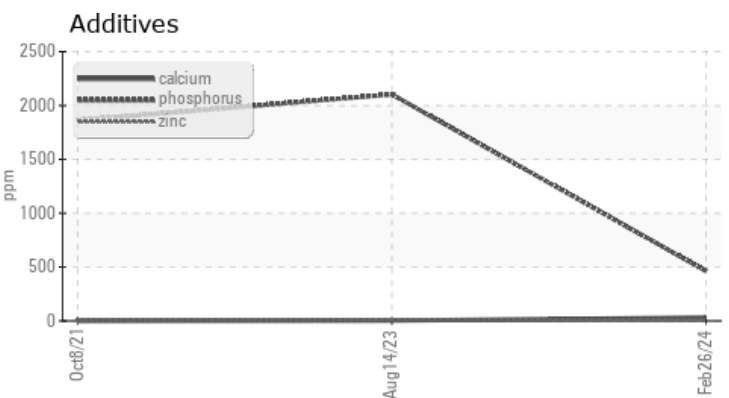
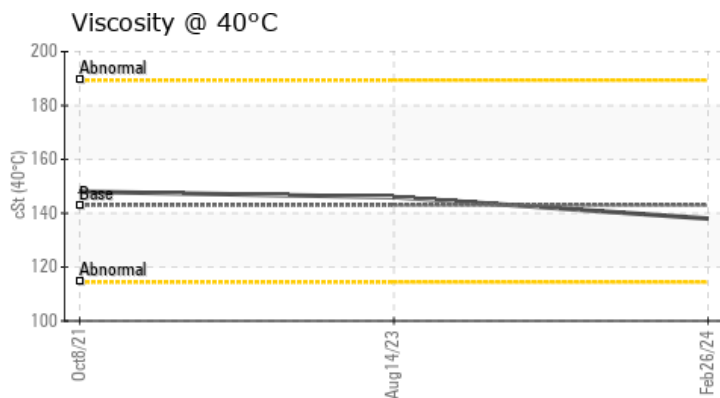
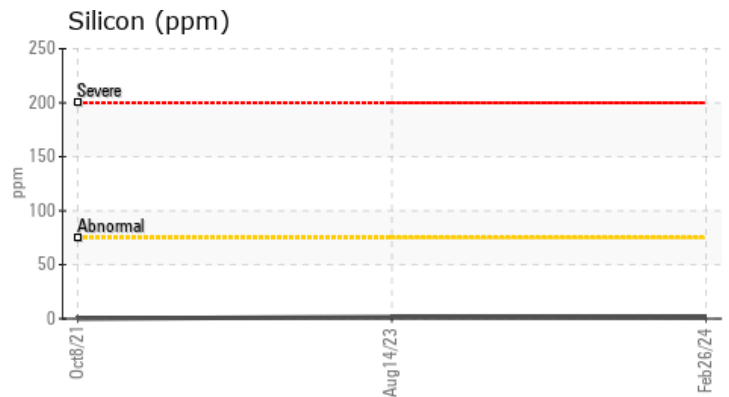
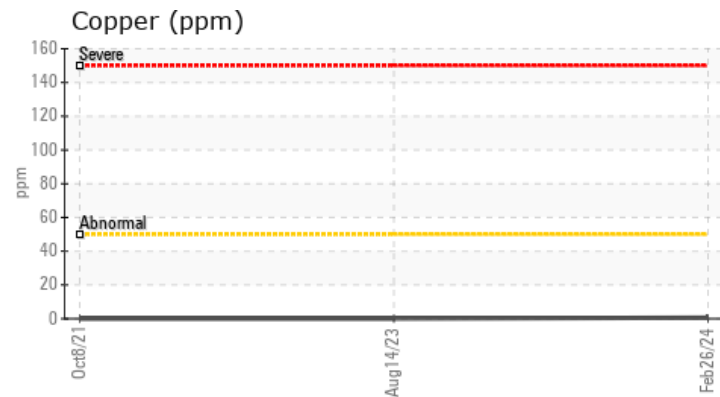
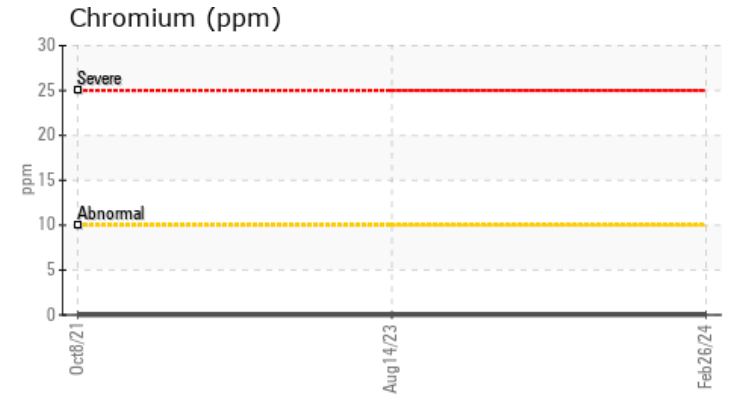
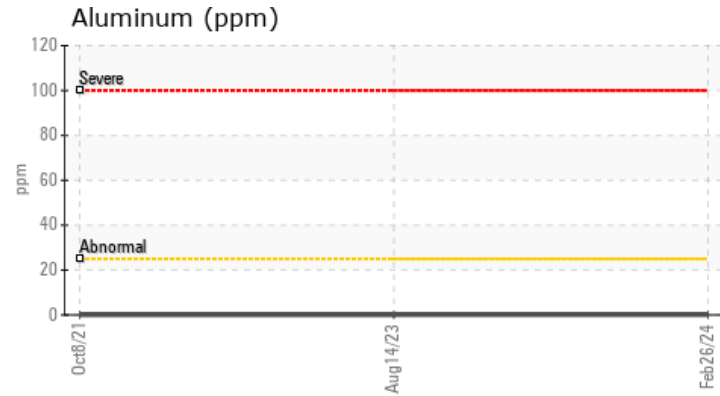
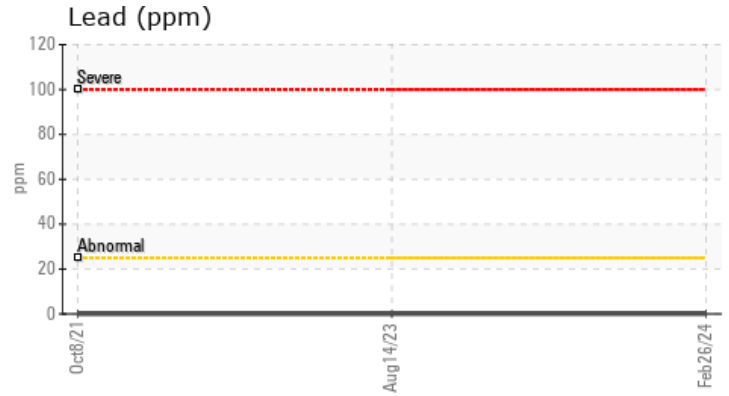
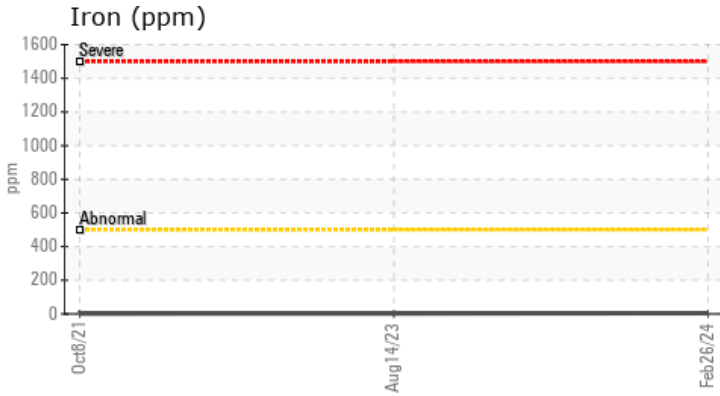
Depot: VOLVO5055
Unique No: 10915236
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS



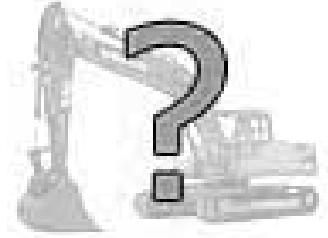


CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - FRONT RIGHT FINAL DRIVE



Sample No: VCP377872
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP377872 | VCP422926 | VCP299443 | VCP323156 |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Sep 2021 | 15 Sep 2021 |
| Machine Hours | 9642 | 8508 | 3424 | 3424 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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US 61350
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F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 139 | 146 | 124 | 114 |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|-----------|-----|--------------|-----|-----|-----|
| Silicon | ppm | 15 | 73 | 2 | 1 |
| Sodium | ppm | <1 | 0 | <1 | 1 |
| Potassium | ppm | 0 | 0 | 6 | 6 |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 35 | 27 | 46 | 130 |
| Copper | ppm | 2 | 2 | 3 | 10 |
| Lead | ppm | 0 | 0 | 3 | 2 |
| Tin | ppm | 0 | 0 | 0 | 0 |
| Aluminum | ppm | 0 | 0 | <1 | 1 |
| Chromium | ppm | 0 | 0 | <1 | 1 |
| Molybdenum | ppm | 0 | 0 | 2 | 0 |
| Nickel | ppm | 0 | 0 | 0 | 0 |
| Titanium | ppm | 0 | 0 | 0 | <1 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | <1 | <1 | <1 | 2 |
| Vanadium | ppm | <1 | 0 | <1 | <1 |



ADDITIVES

| | | | | | |
|------------|-----|--------------|------|-----|-----|
| Calcium | ppm | 33 | 12 | 10 | 16 |
| Magnesium | ppm | <1 | 3 | 2 | 3 |
| Zinc | ppm | 12 | 12 | 7 | 13 |
| Phosphorus | ppm | 690 | 2030 | 866 | 548 |
| Barium | ppm | 0 | 0 | 3 | 11 |
| Boron | ppm | 32 | 145 | 133 | 28 |

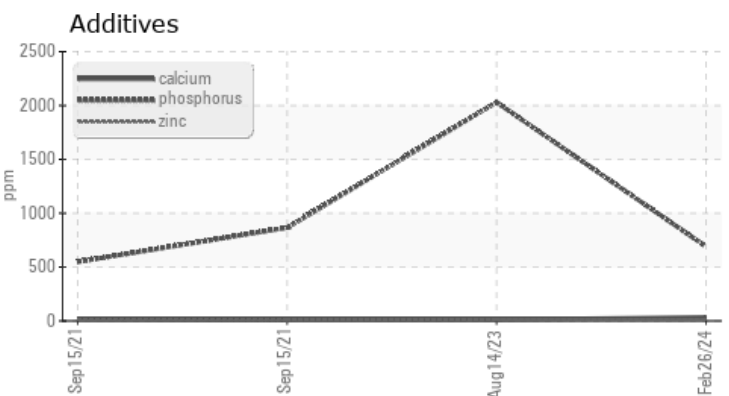
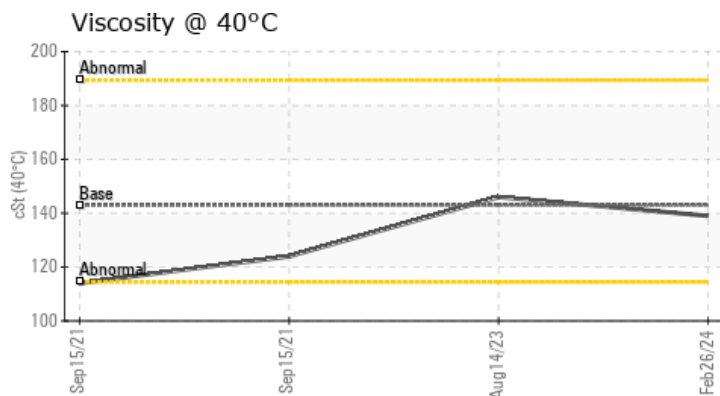
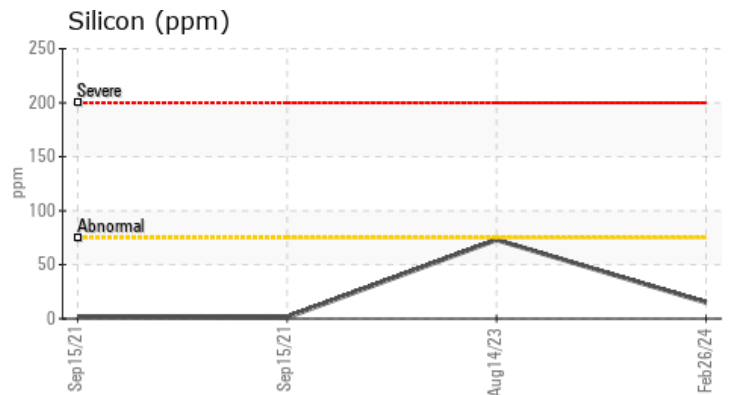
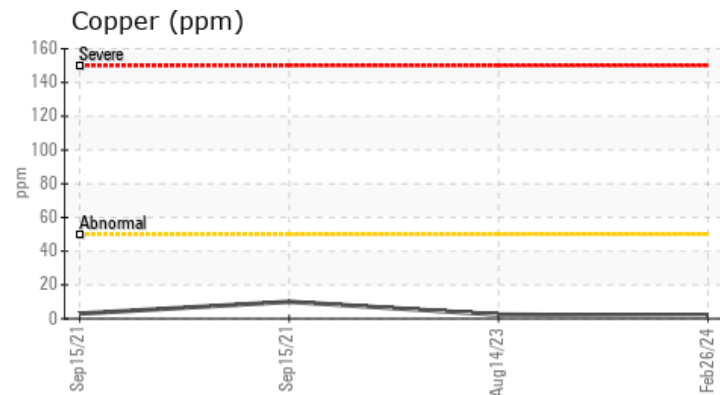
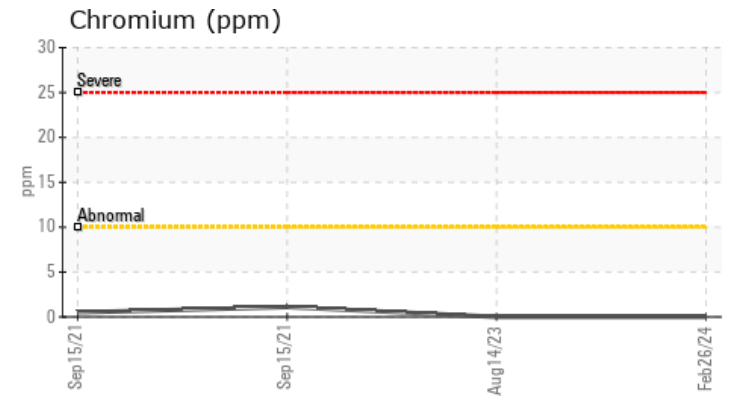
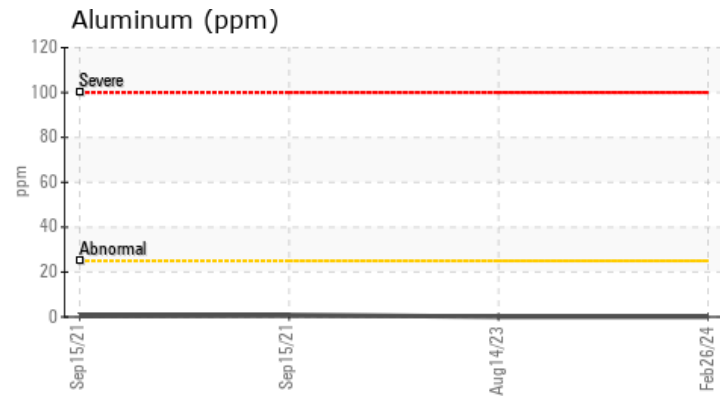
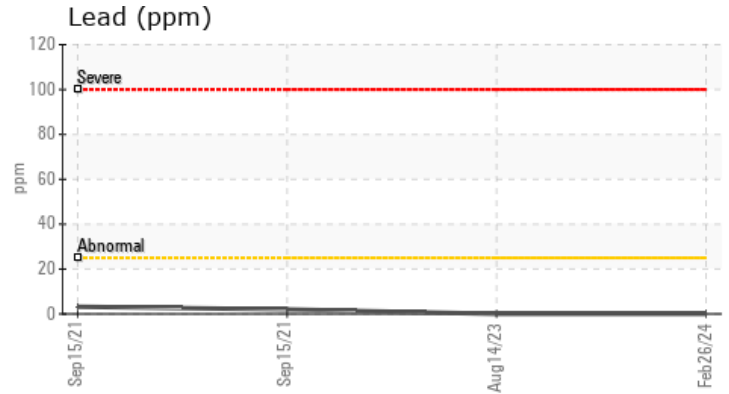
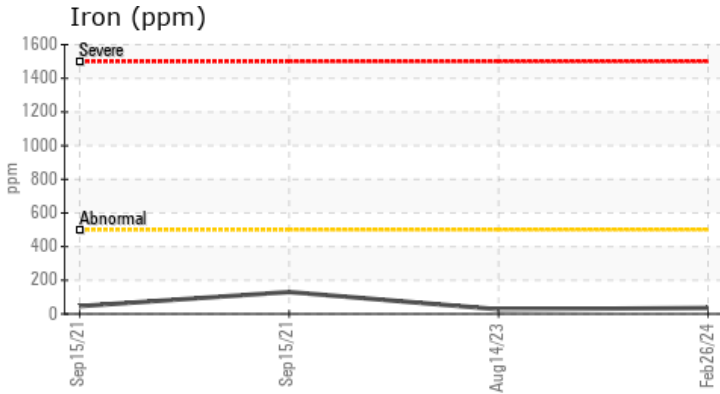
Depot: VOLVO5055
Unique No: 10915239
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS



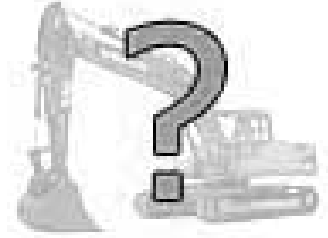


CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - REAR LEFT FINAL DRIVE



Sample No: VCP377867
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP377867 | VCP399752 | VCP299445 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Jul 2021 | --- |
| Machine Hours | 9642 | 8508 | 3424 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Changed | Changed | Changed | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

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OTTAWA, IL
US 61350
Contact: KEVIN SKRTICH
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OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 138 | 148 | 133 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | 3 | 2 | 1 | --- |
| Sodium | ppm | 1 | 0 | <1 | --- |
| Potassium | ppm | 0 | 0 | 0 | --- |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 19 | 13 | 15 | --- |
| Copper | ppm | 3 | 2 | 2 | --- |
| Lead | ppm | 0 | 0 | 2 | --- |
| Tin | ppm | 0 | 0 | 0 | --- |
| Aluminum | ppm | 0 | 0 | <1 | --- |
| Chromium | ppm | 0 | 0 | <1 | --- |
| Molybdenum | ppm | 0 | 0 | 1 | --- |
| Nickel | ppm | 0 | 0 | 0 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | 0 | <1 | --- |
| Manganese | ppm | <1 | <1 | <1 | --- |
| Vanadium | ppm | <1 | 0 | <1 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|------|-----|-----|
| Calcium | ppm | 32 | 4 | 6 | --- |
| Magnesium | ppm | 0 | 1 | 0 | --- |
| Zinc | ppm | 11 | 7 | 4 | --- |
| Phosphorus | ppm | 528 | 2056 | 916 | --- |
| Barium | ppm | 0 | 0 | <1 | --- |
| Boron | ppm | 15 | 126 | 157 | --- |

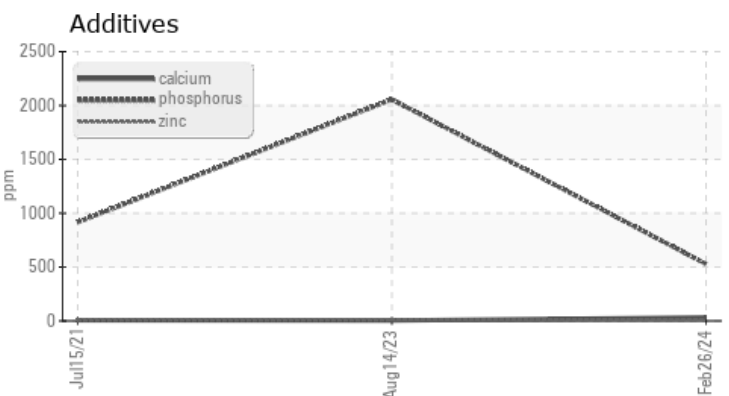
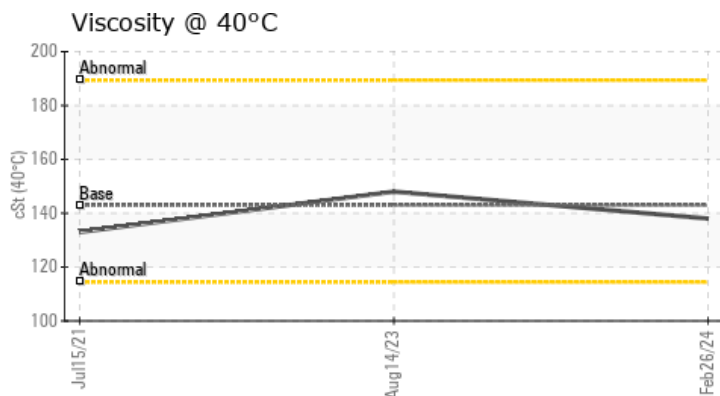
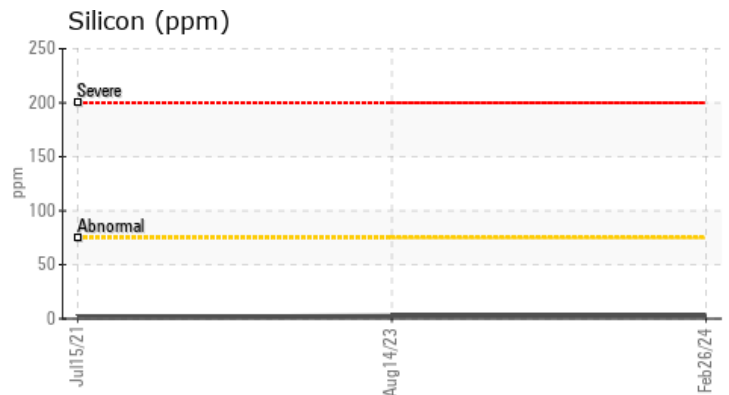
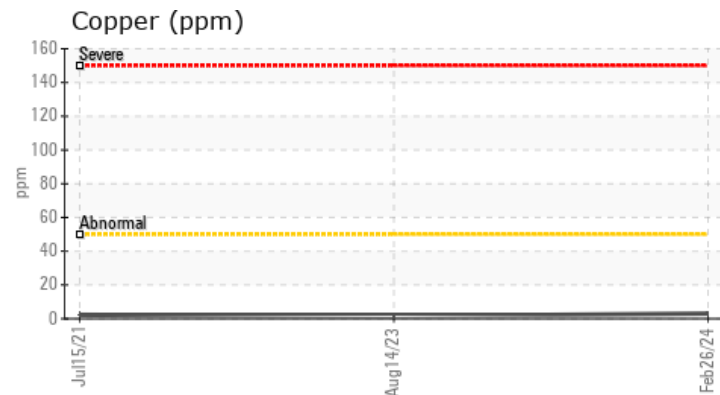
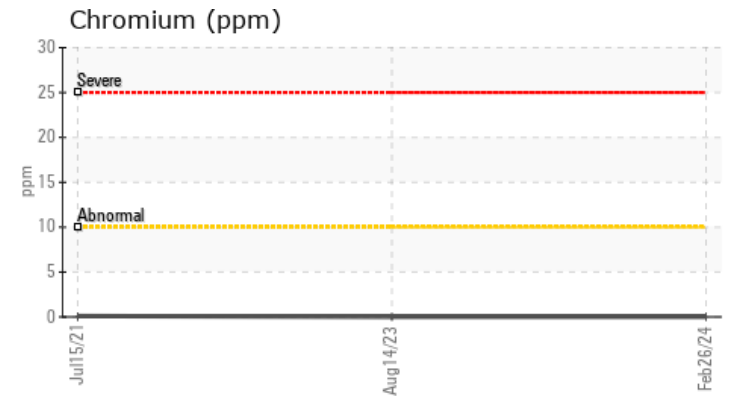
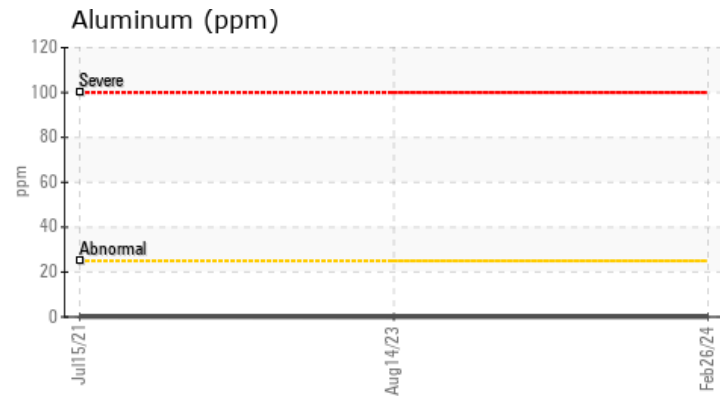
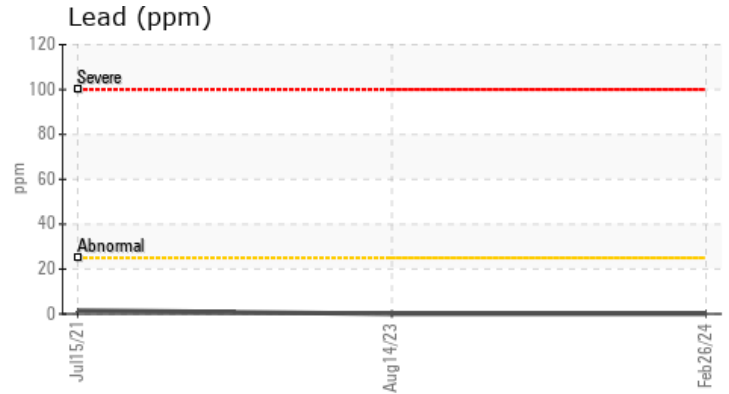
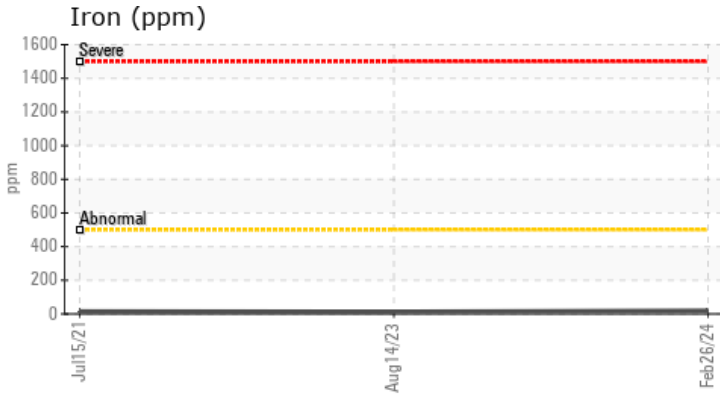
Depot: VOLVO5055
Unique No: 10915235
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 SENNEBOGEN 840ME 840.0.2170 - REAR AXLE



Sample No: VCP377866
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP377866 | VCP399522 | VCP344704 | --- |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 08 Oct 2021 | --- |
| Machine Hours | 9642 | 8508 | 4315 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Changed | Changed | Not Changd | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

ALTA CONSTRUCTION EQUIPMENT

613 E STEVENSON RD

OTTAWA, IL

US 61350

Contact: ALEX MARCO

ALEXANDER.MARCO@ALTG.COM

T:

F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 138 | 148 | 146 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| Water | % | NEG | NEG | NEG | --- |
|-----------|-----|--------------|-----|-----|-----|
| Silicon | ppm | 1 | 3 | 0 | --- |
| Sodium | ppm | <1 | 0 | 0 | --- |
| Potassium | ppm | 0 | 0 | 0 | --- |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 14 | 13 | 12 | --- |
| Copper | ppm | 1 | 2 | 0 | --- |
| Lead | ppm | 0 | 0 | 0 | --- |
| Tin | ppm | 0 | 0 | 0 | --- |
| Aluminum | ppm | 0 | 0 | 0 | --- |
| Chromium | ppm | 0 | 0 | 0 | --- |
| Molybdenum | ppm | 0 | 0 | 0 | --- |
| Nickel | ppm | 0 | 0 | 0 | --- |
| Titanium | ppm | 0 | 0 | 0 | --- |
| Silver | ppm | 0 | <1 | 0 | --- |
| Manganese | ppm | <1 | <1 | <1 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|------|------|-----|
| Calcium | ppm | 31 | 4 | 0 | --- |
| Magnesium | ppm | 1 | 2 | 0 | --- |
| Zinc | ppm | 9 | 8 | 6 | --- |
| Phosphorus | ppm | 545 | 2049 | 1718 | --- |
| Barium | ppm | 0 | 0 | 0 | --- |
| Boron | ppm | 15 | 117 | 161 | --- |

Diagnosis

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 80W90. Please confirm.

All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: VOLVO5055

Unique No: 10915238

Signed: Wes Davis

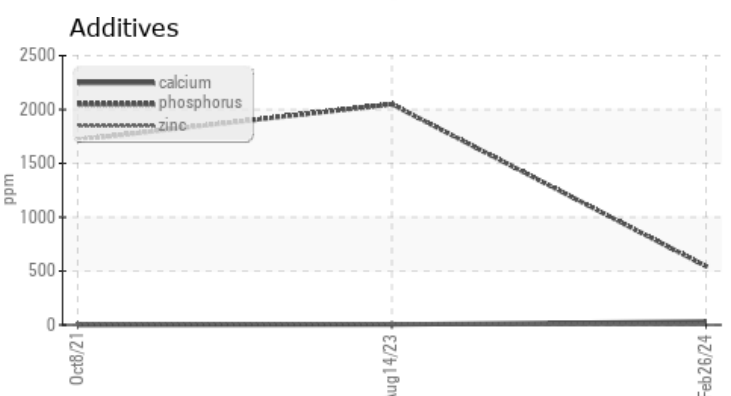
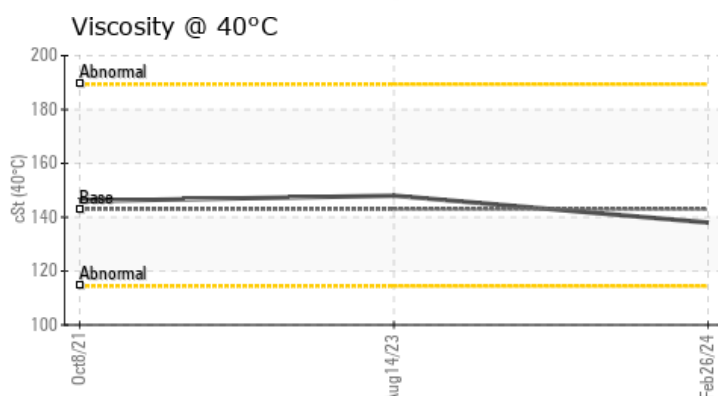
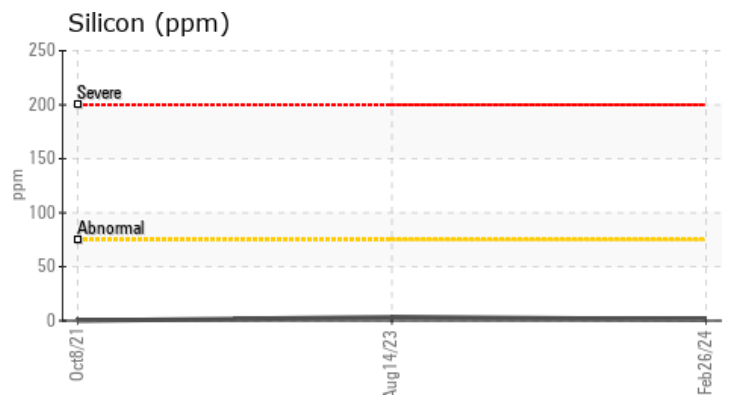
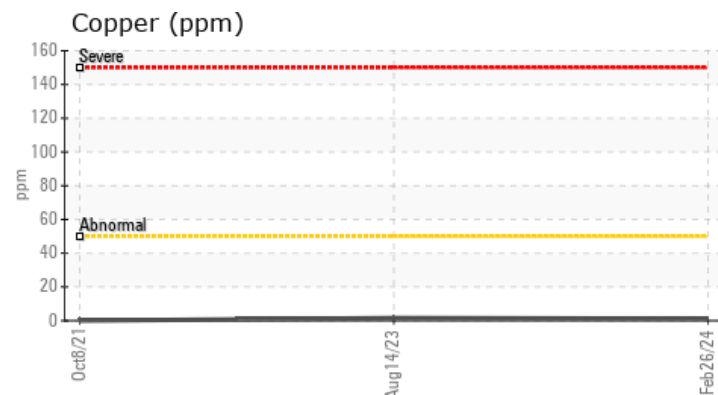
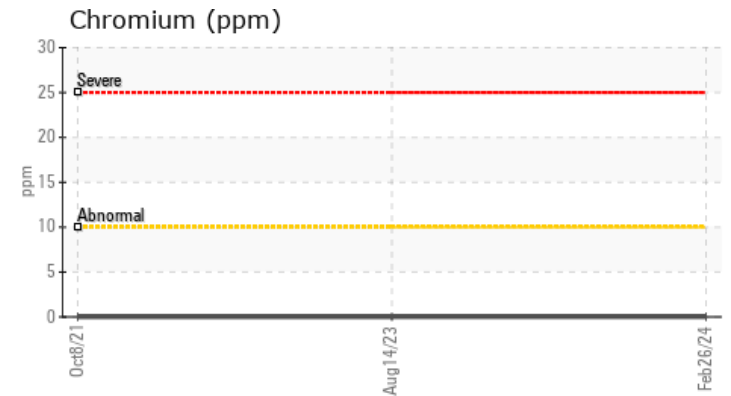
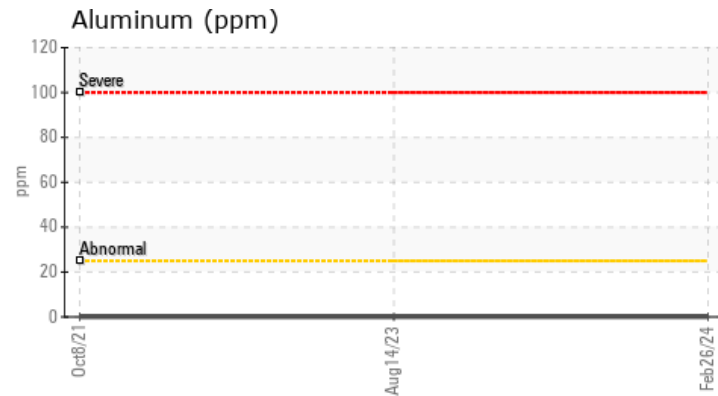
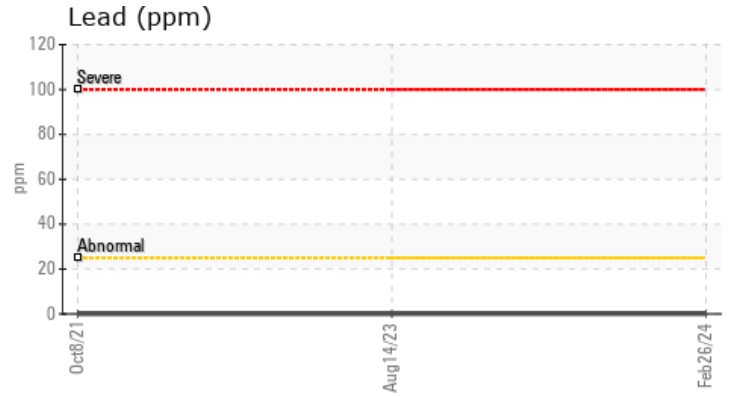
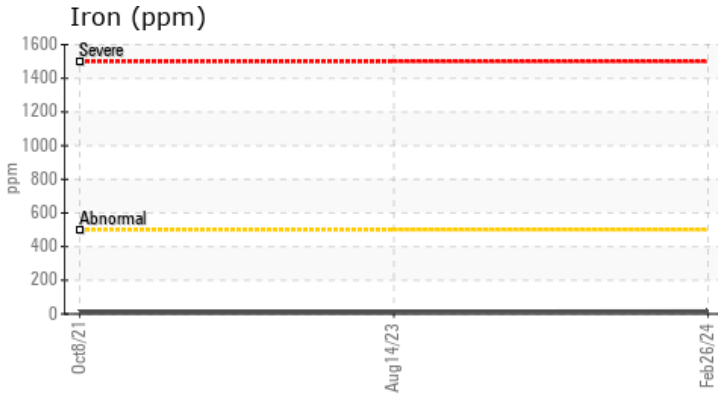
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM675413 ALTER SENNEBOGEN 840ME 840.0.2170 - REAR RIGHT FINAL DRIVE



Sample No: VCP377876
Oil Type: GEAR OIL SAE 80W90
Job No: SPM675413 ALTER



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP377876 | VCP396510 | VCP323146 | VCP323153 |
| Sample Date | 26 Feb 2024 | 14 Aug 2023 | 15 Jul 2021 | 14 Jul 2021 |
| Machine Hours | 9642 | 8508 | 3424 | 3424 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | N/A |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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US 61350
Contact: KEVIN SKRTICH
KEVIN.SKRTICH@ALTAEQUIPMENT.COM
T:
F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 138 | 147 | 136 | 137 |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|-----------|-----|--------------|-----|-----|-----|
| Silicon | ppm | 2 | 3 | 2 | 2 |
| Sodium | ppm | <1 | 0 | <1 | <1 |
| Potassium | ppm | 0 | 0 | 2 | 2 |

Diagnosis

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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 12 | 13 | 96 | 115 |
| Copper | ppm | 1 | 2 | 5 | 4 |
| Lead | ppm | 0 | 0 | 0 | 0 |
| Tin | ppm | 0 | 0 | <1 | 0 |
| Aluminum | ppm | 0 | 0 | 1 | 2 |
| Chromium | ppm | 0 | 0 | <1 | 1 |
| Molybdenum | ppm | 0 | 0 | <1 | <1 |
| Nickel | ppm | 0 | 0 | 0 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 0 | <1 | 1 | 1 |
| Vanadium | ppm | <1 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------------|------|-----|-----|
| Calcium | ppm | 31 | 5 | 10 | 18 |
| Magnesium | ppm | 0 | 1 | 1 | 2 |
| Zinc | ppm | 10 | 8 | 8 | 11 |
| Phosphorus | ppm | 534 | 2054 | 589 | 597 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 16 | 117 | 8 | 6 |

Depot: VOLVO5055
Unique No: 10915240
Signed: Wes Davis
Report Date: 08 Mar 2024



CONSTRUCTION EQUIPMENT



GRAPHS

