



CONSTRUCTION EQUIPMENT

SPM703646 ALPINE DEM VOLVO EC480E 391030 - HYDRAULIC SYSTEM



Sample No: VCP438294
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SPM703646 ALPINE DEM



ALTA EQUIPMENT CO - ORLAND PARK
 5000 INDUSTRIAL HWY
 GARY, IN
 US 46406
 Contact: DAVE ENG
 DAVE.ENG@ALTG.COM
 T: (312)350-2560
 F:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-----|-----|
| Sample Number | VCP438294 | VCP415350 | --- | --- |
| Sample Date | 06 May 2024 | 12 Sep 2023 | --- | --- |
| Machine Hours | 3348 | 2080 | --- | --- |
| Oil Hours | 0 | 0 | --- | --- |
| Oil Changed | Not Chngd | Not Chngd | --- | --- |
| Sample Status | NORMAL | ABNORMAL | --- | --- |



OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|-----|-----|
| Visc @ 40°C | cSt | 45.4 | 41.4 | --- | --- |
| Acid Number (AN) | mg KOH/g | 0.36 | 0.47 | --- | --- |



CONTAMINATION

| | | | | | |
|-------------------|-----|-----------------|-----|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Particles >4µm | | 1461 | --- | --- | --- |
| Particles >6µm | | 331 | --- | --- | --- |
| Particles >14µm | | 11 | --- | --- | --- |
| ISO 4406:1999 (c) | | 18/16/11 | --- | --- | --- |
| Silicon | ppm | 1 | 6 | --- | --- |
| Sodium | ppm | 0 | 2 | --- | --- |
| Potassium | ppm | <1 | 1 | --- | --- |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|-----|-----|
| Iron | ppm | <1 | 11 | --- | --- |
| Copper | ppm | <1 | 12 | --- | --- |
| Lead | ppm | <1 | <1 | --- | --- |
| Tin | ppm | <1 | 0 | --- | --- |
| Aluminum | ppm | 2 | <1 | --- | --- |
| Chromium | ppm | <1 | 1 | --- | --- |
| Molybdenum | ppm | <1 | <1 | --- | --- |
| Nickel | ppm | <1 | 0 | --- | --- |
| Titanium | ppm | <1 | <1 | --- | --- |
| Silver | ppm | 0 | 0 | --- | --- |
| Manganese | ppm | <1 | <1 | --- | --- |
| Vanadium | ppm | 0 | 0 | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|-----|-----|-----|
| Calcium | ppm | 61 | 585 | --- | --- |
| Magnesium | ppm | 2 | 19 | --- | --- |
| Zinc | ppm | 416 | 712 | --- | --- |
| Phosphorus | ppm | 328 | 573 | --- | --- |
| Barium | ppm | 0 | 0 | --- | --- |
| Boron | ppm | 0 | 0 | --- | --- |

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: VOLVO8885
Unique No: 11084403
Signed: Wes Davis
Report Date: 18 Jun 2024

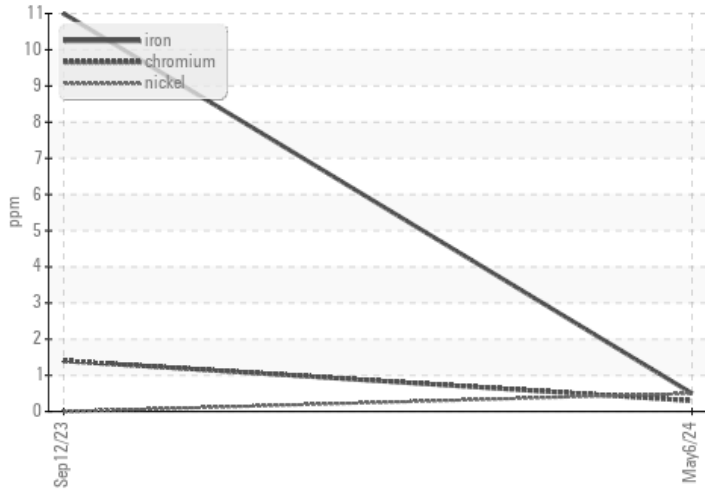


CONSTRUCTION EQUIPMENT

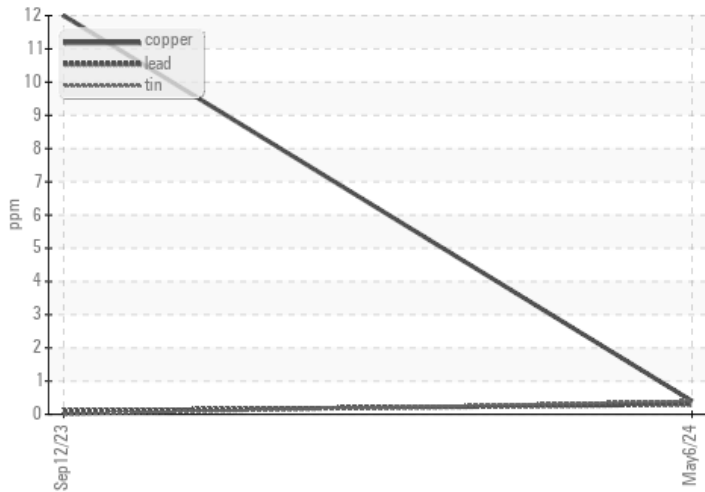


GRAPHS

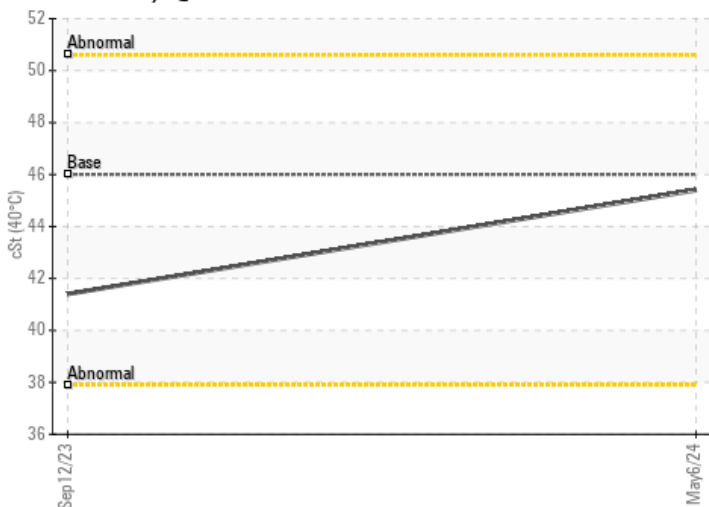
Ferrous Alloys



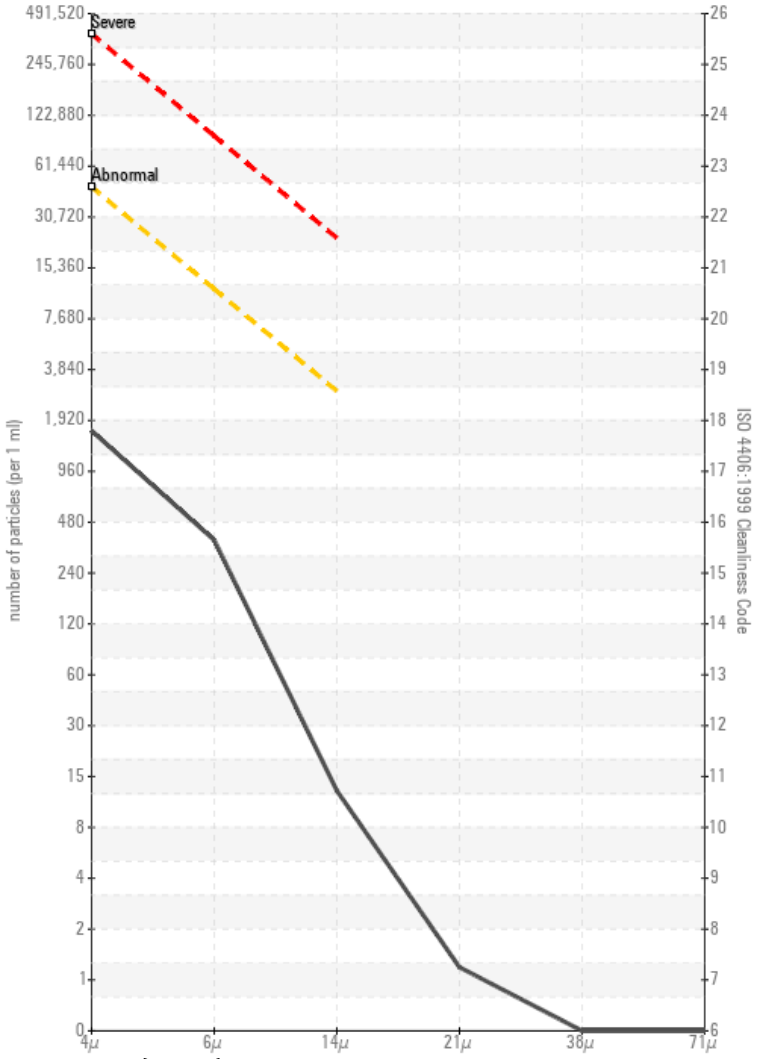
Non-ferrous Metals



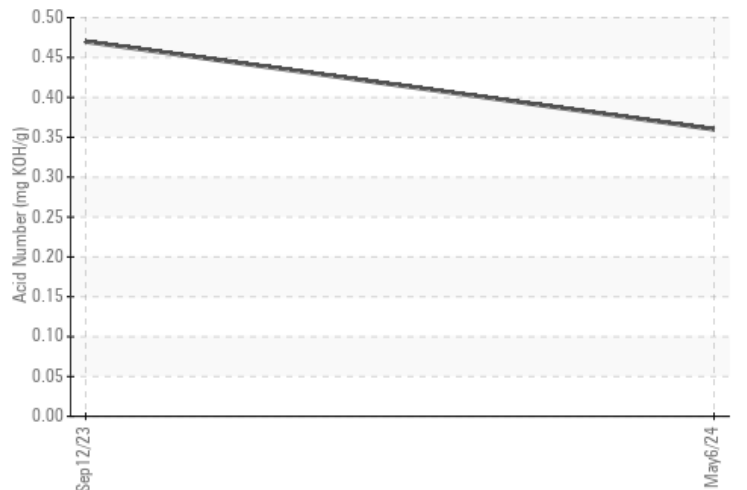
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

SPM633854 ALPINE VOLVO EC480E 391030 - LEFT SWING DRIVE



Sample No: VCP440608
Oil Type: GEAR OIL SAE 80W90
Job No: SPM633854 ALPINE



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP440608 | VCP420699 | VCP355044 | --- |
| Sample Date | 15 Nov 2023 | 12 Sep 2023 | 21 Jul 2022 | --- |
| Machine Hours | 2564 | 2080 | 972 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | Changed | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

ALTA EQUIPMENT CO - ORLAND PARK
 5000 INDUSTRIAL HWY
 GARY, IN
 US 46406
 Contact: DAVE ENG
 DAVE.ENG@ALTG.COM
 T: (312)350-2560
 F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 197 | 198 | 183 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | 14 | 18 | 15 | --- |
| Sodium | ppm | 0 | 0 | 2 | --- |
| Potassium | ppm | 2 | 2 | <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 | 44 | 60 | 81 | --- |
| Copper | ppm | 7 | 6 | 10 | --- |
| Lead | ppm | <1 | 0 | 0 | --- |
| Tin | ppm | <1 | <1 | <1 | --- |
| Aluminum | ppm | 1 | 3 | 1 | --- |
| Chromium | ppm | 1 | 1 | 1 | --- |
| Molybdenum | ppm | 3 | <1 | <1 | --- |
| Nickel | ppm | <1 | 0 | <1 | --- |
| Titanium | ppm | <1 | 0 | 0 | --- |
| Silver | ppm | <1 | 0 | <1 | --- |
| Manganese | ppm | 1 | 1 | 2 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|-----|-----|
| Calcium | ppm | 2560 | 2401 | 7 | --- |
| Magnesium | ppm | 31 | 10 | 2 | --- |
| Zinc | ppm | 1107 | 1027 | 15 | --- |
| Phosphorus | ppm | 921 | 898 | 287 | --- |
| Barium | ppm | 0 | 0 | 8 | --- |
| Boron | ppm | 6 | 2 | 0 | --- |

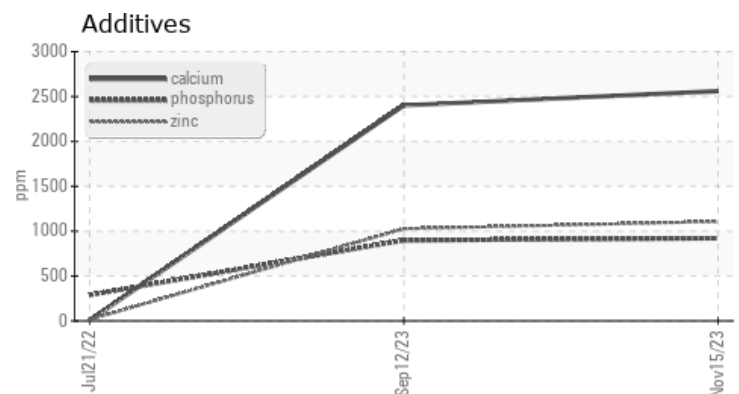
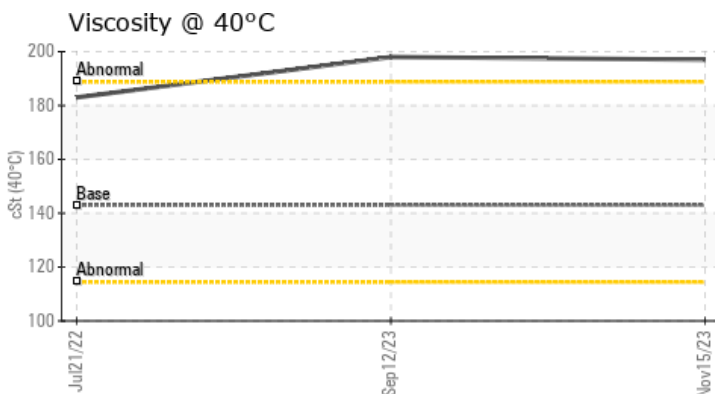
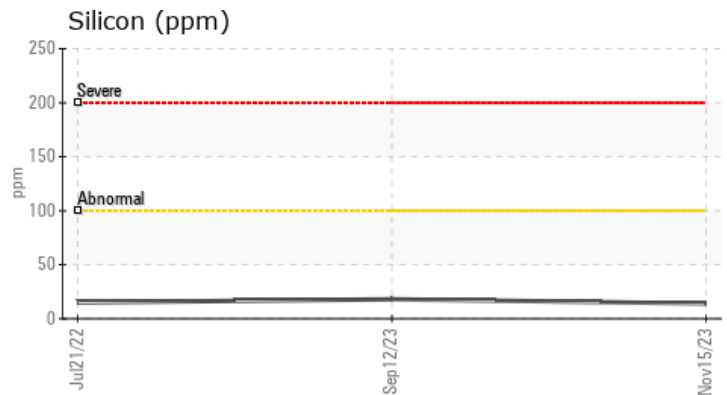
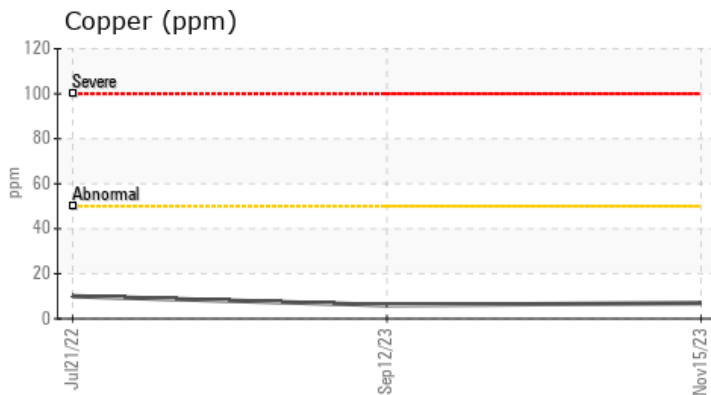
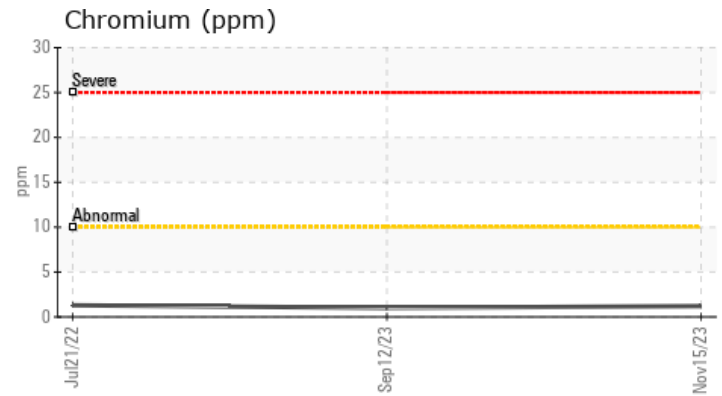
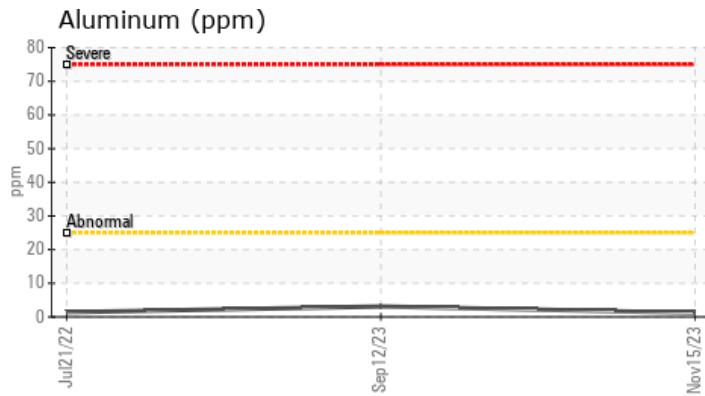
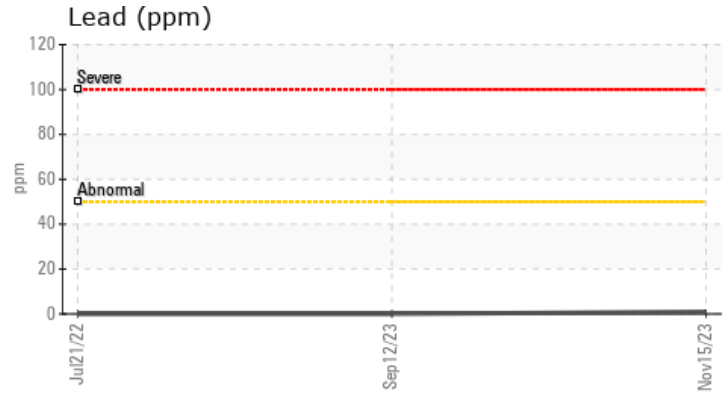
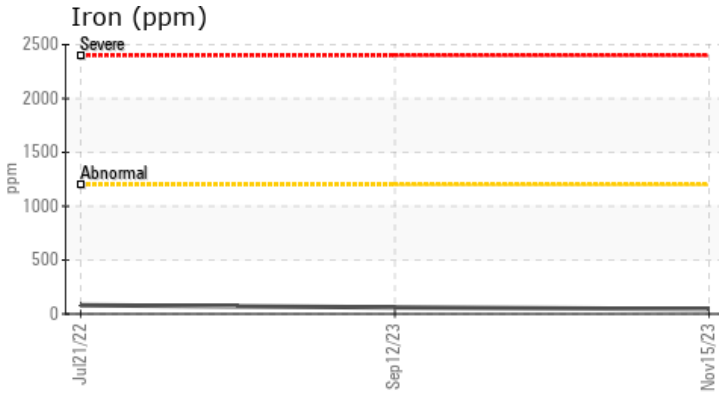
Depot: VOLVO8885
Unique No: 10883423
Signed: Don Baldrige
Report Date: 17 Feb 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM703646 ALPINE VOLVO EC480E 391030 - SWING DRIVE



Sample No: VCP437419
Oil Type: GEAR OIL SAE 80W90
Job No: SPM703646 ALPINE



SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VCP437419 | --- | --- | --- |
| Sample Date | 06 May 2024 | --- | --- | --- |
| Machine Hours | 3348 | --- | --- | --- |
| Oil Hours | 0 | --- | --- | --- |
| Oil Changed | Not Chngd | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

ALTA EQUIPMENT CO - ORLAND PARK
5000 INDUSTRIAL HWY
GARY, IN
US 46406
Contact: DAVE ENG
DAVE.ENG@ALTG.COM
T: (312)350-2560
F:



OIL CONDITION

| | | | | | |
|-------------|-----|-------|-----|-----|-----|
| Visc @ 40°C | cSt | █ 162 | --- | --- | --- |
|-------------|-----|-------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Silicon | ppm | █ 10 | --- | --- | --- |
| Sodium | ppm | █ 2 | --- | --- | --- |
| Potassium | ppm | █ 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 | █ 75 | --- | --- | --- |
| Copper | ppm | █ 44 | --- | --- | --- |
| Lead | ppm | █ 0 | --- | --- | --- |
| Tin | ppm | █ <1 | --- | --- | --- |
| Aluminum | ppm | █ 2 | --- | --- | --- |
| Chromium | ppm | █ <1 | --- | --- | --- |
| Molybdenum | ppm | █ 1 | --- | --- | --- |
| Nickel | ppm | █ <1 | --- | --- | --- |
| Titanium | ppm | <1 | --- | --- | --- |
| Silver | ppm | 0 | --- | --- | --- |
| Manganese | ppm | █ 3 | --- | --- | --- |
| Vanadium | ppm | <1 | --- | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|-------|-----|-----|-----|
| Calcium | ppm | █ 991 | --- | --- | --- |
| Magnesium | ppm | █ 17 | --- | --- | --- |
| Zinc | ppm | █ 483 | --- | --- | --- |
| Phosphorus | ppm | █ 821 | --- | --- | --- |
| Barium | ppm | █ 6 | --- | --- | --- |
| Boron | ppm | █ 24 | --- | --- | --- |

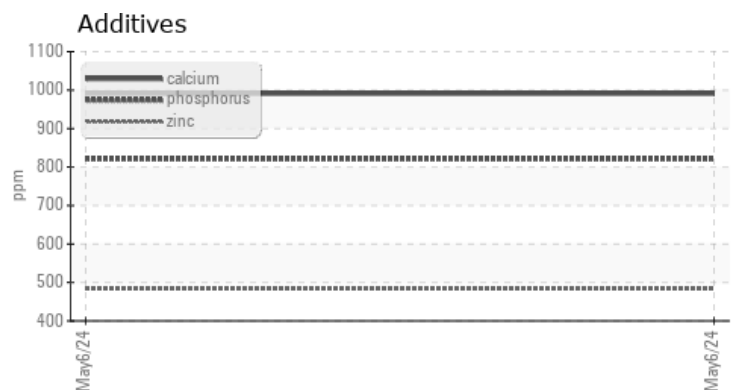
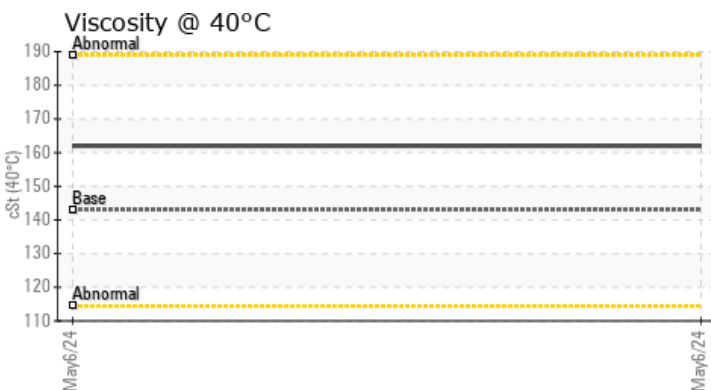
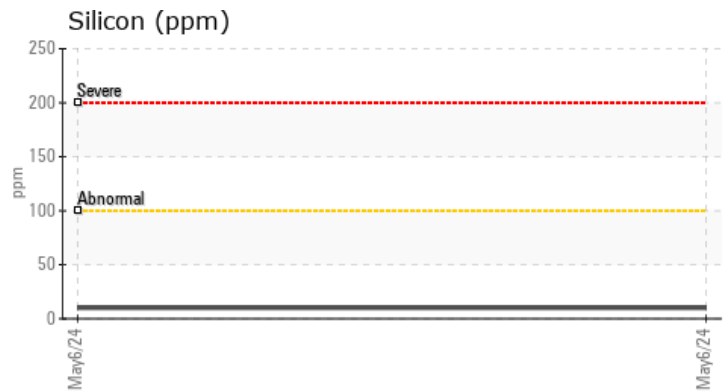
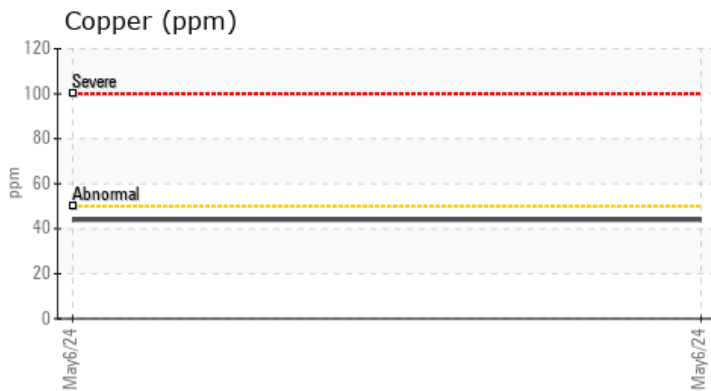
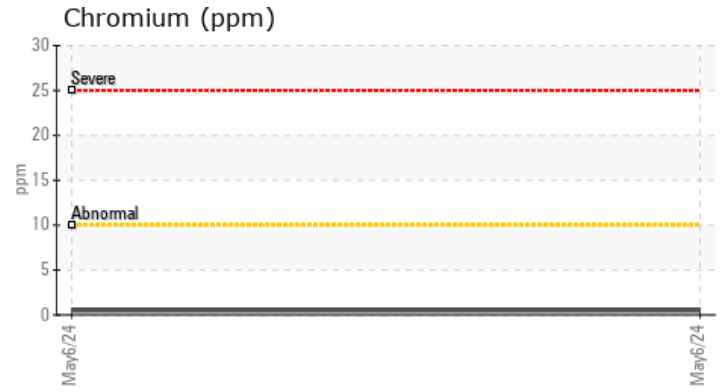
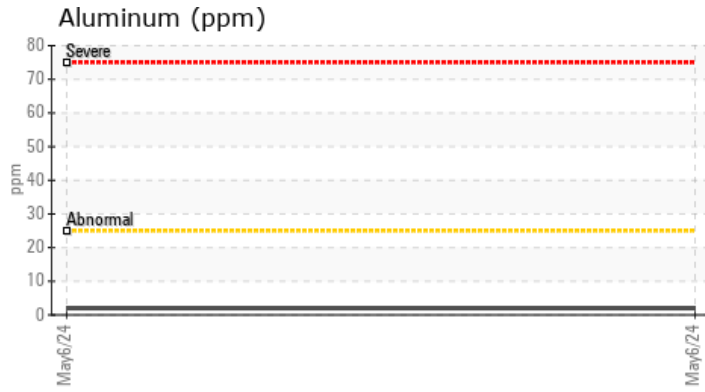
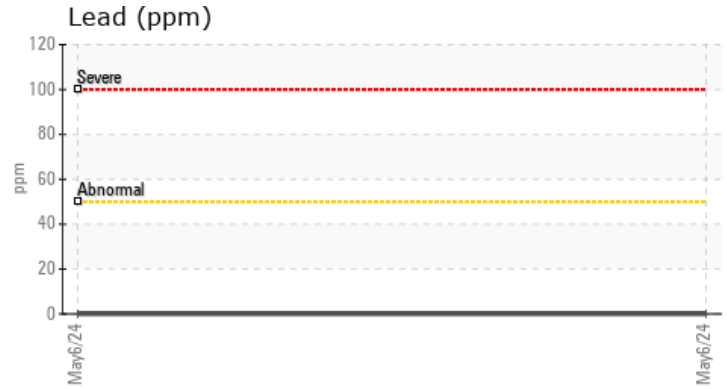
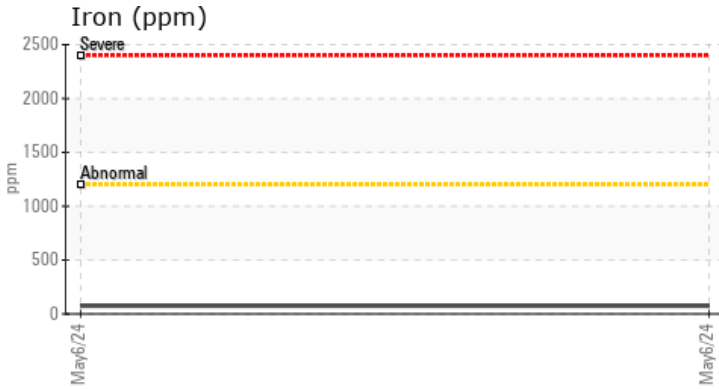
Depot: VOLVO8885
Unique No: 11085066
Signed: Don Baldrige
Report Date: 19 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM633854 ALPINE VOLVO EC480E 391030 - RIGHT SWING DRIVE



Sample No: VCP429120
Oil Type: GEAR OIL SAE 80W90
Job No: SPM633854 ALPINE



ALTA EQUIPMENT CO - ORLAND PARK
5000 INDUSTRIAL HWY
GARY, IN
US 46406
Contact: DAVE ENG
DAVE.ENG@ALTG.COM
T: (312)350-2560
F:

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VCP429120 | VCP355046 | --- | --- |
| Sample Date | 15 Nov 2023 | 21 Jul 2022 | --- | --- |
| Machine Hours | 2564 | 972 | --- | --- |
| Oil Hours | 0 | 0 | --- | --- |
| Oil Changed | Not Changed | Changed | --- | --- |
| Sample Status | ABNORMAL | NORMAL | --- | --- |

OIL CONDITION

| | | | | | |
|-------------|-----|-------|-------|-----|-----|
| Visc @ 40°C | cSt | █ 199 | █ 182 | --- | --- |
|-------------|-----|-------|-------|-----|-----|

CONTAMINATION

| | | | | | |
|-----------|-----|------|------|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Silicon | ppm | █ 17 | █ 16 | --- | --- |
| Sodium | ppm | █ 0 | █ 0 | --- | --- |
| Potassium | ppm | █ 1 | █ <1 | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|------|-------|-----|-----|
| Iron | ppm | █ 52 | █ 109 | --- | --- |
| Copper | ppm | █ 5 | █ 16 | --- | --- |
| Lead | ppm | █ <1 | █ 0 | --- | --- |
| Tin | ppm | █ <1 | <1 | --- | --- |
| Aluminum | ppm | █ 1 | 2 | --- | --- |
| Chromium | ppm | █ 1 | 1 | --- | --- |
| Molybdenum | ppm | █ 2 | █ <1 | --- | --- |
| Nickel | ppm | █ <1 | 0 | --- | --- |
| Titanium | ppm | <1 | <1 | --- | --- |
| Silver | ppm | <1 | 0 | --- | --- |
| Manganese | ppm | █ 1 | █ 2 | --- | --- |
| Vanadium | ppm | <1 | 0 | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-------|-----|-----|
| Calcium | ppm | ▲ 2694 | █ 53 | --- | --- |
| Magnesium | ppm | █ 24 | █ 2 | --- | --- |
| Zinc | ppm | ▲ 1157 | █ 36 | --- | --- |
| Phosphorus | ppm | █ 974 | █ 273 | --- | --- |
| Barium | ppm | █ 0 | █ 8 | --- | --- |
| Boron | ppm | █ 4 | █ 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.

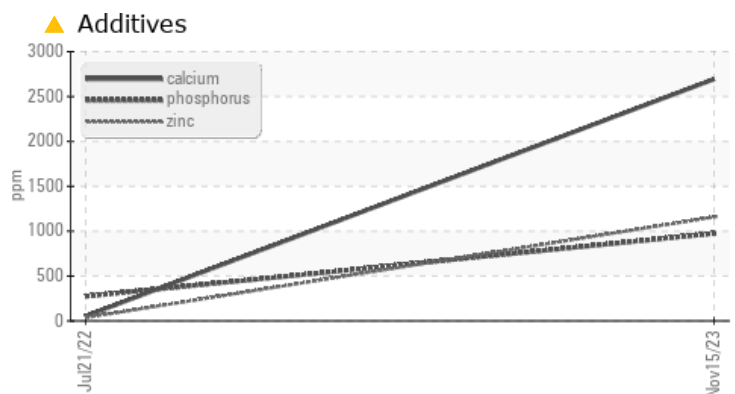
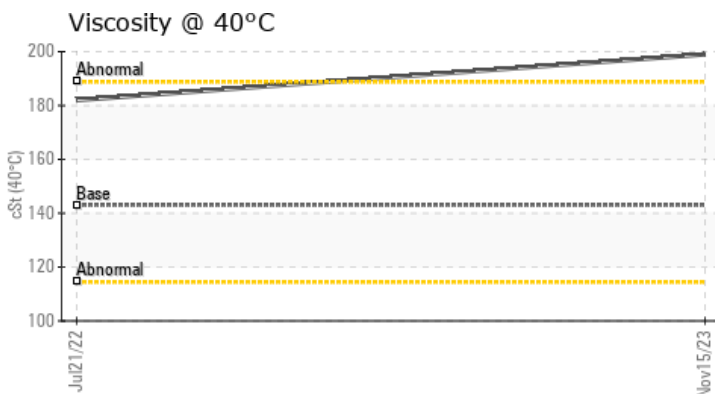
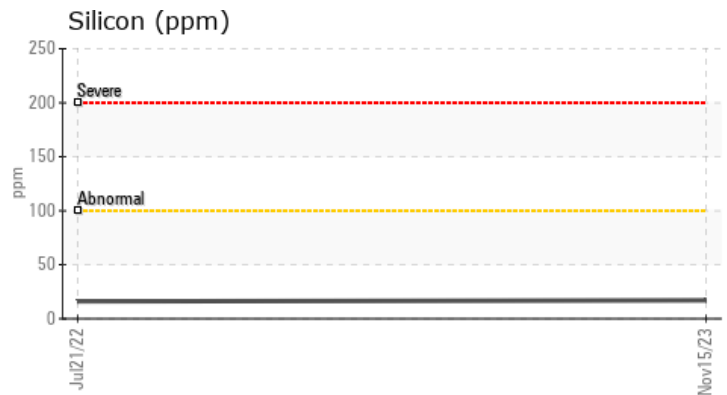
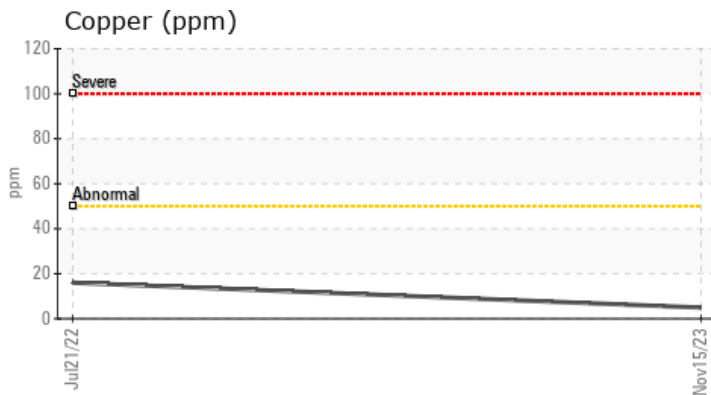
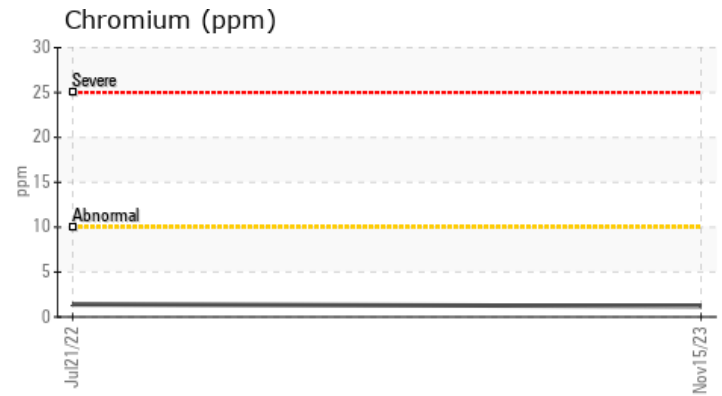
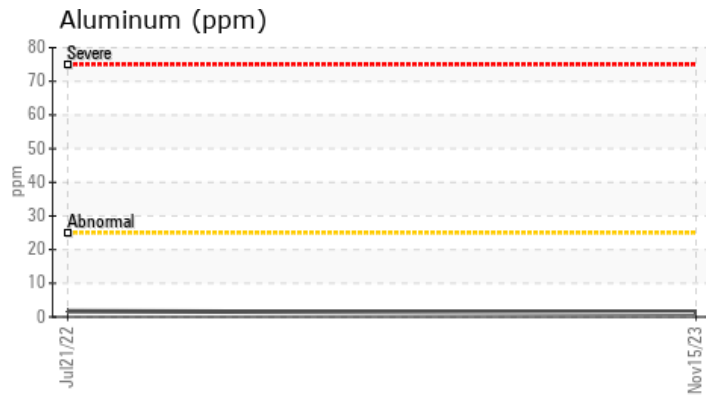
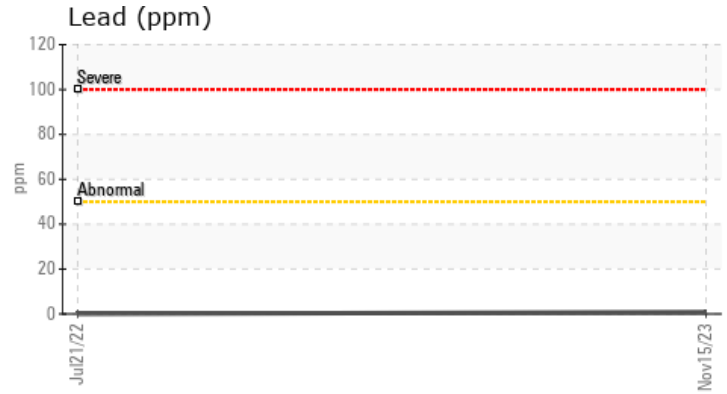
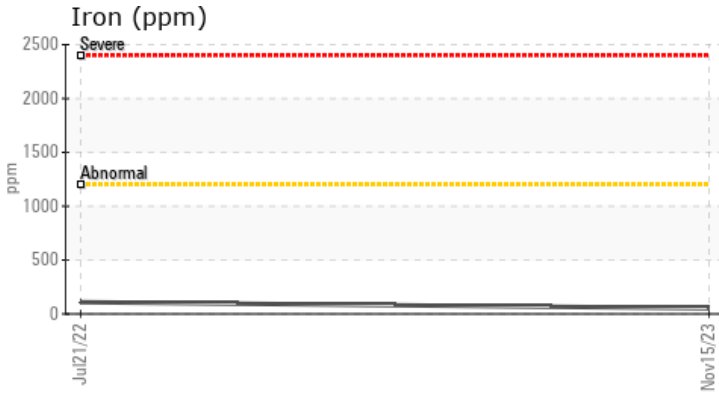
Depot: VOLVO8885
Unique No: 10883415
Signed: Don Baldrige
Report Date: 17 Feb 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM703646 ALPINE VOLVO EC480E 391030 - LEFT FINAL DRIVE



Sample No: VCP438291
Oil Type: GEAR OIL SAE 80W90
Job No: SPM703646 ALPINE



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP438291 | VCP415237 | VCP355047 | --- |
| Sample Date | 06 May 2024 | 12 Sep 2023 | 21 Jul 2022 | --- |
| Machine Hours | 3348 | 2080 | 972 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | Not Chngd | --- |
| Sample Status | NORMAL | NORMAL | ABNORMAL | --- |

ALTA EQUIPMENT CO - ORLAND PARK
 5000 INDUSTRIAL HWY
 GARY, IN
 US 46406
 Contact: DAVE ENG
 DAVE.ENG@ALTG.COM
 T: (312)350-2560
 F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 165 | 156 | 158 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | 10 | 21 | 8 | --- |
| Sodium | ppm | 2 | 24 | 14 | --- |
| Potassium | ppm | 1 | 5 | 3 | --- |

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 | 76 | 322 | 134 | --- |
| Copper | ppm | 45 | <1 | <1 | --- |
| Lead | ppm | 0 | <1 | 0 | --- |
| Tin | ppm | <1 | 0 | 0 | --- |
| Aluminum | ppm | 2 | 5 | 2 | --- |
| Chromium | ppm | <1 | 10 | 5 | --- |
| Molybdenum | ppm | 1 | <1 | <1 | --- |
| Nickel | ppm | <1 | 2 | 0 | --- |
| Titanium | ppm | <1 | <1 | <1 | --- |
| Silver | ppm | 0 | 0 | 0 | --- |
| Manganese | ppm | 3 | 8 | 4 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|-----|-----|-----|
| Calcium | ppm | 925 | 75 | 61 | --- |
| Magnesium | ppm | 17 | 11 | 5 | --- |
| Zinc | ppm | 461 | 8 | 11 | --- |
| Phosphorus | ppm | 798 | 352 | 250 | --- |
| Barium | ppm | 6 | 0 | 3 | --- |
| Boron | ppm | 24 | 0 | 0 | --- |

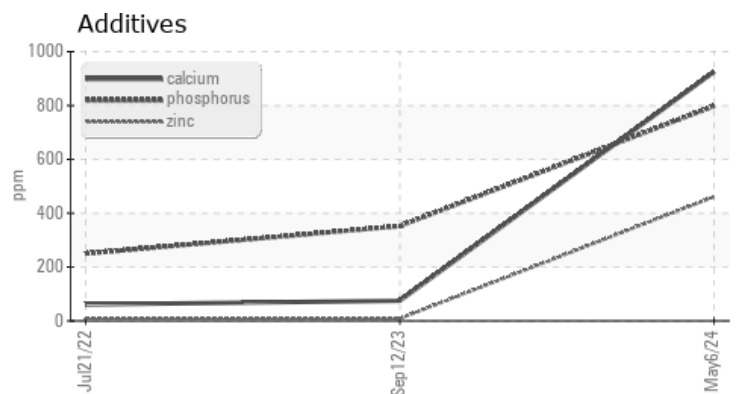
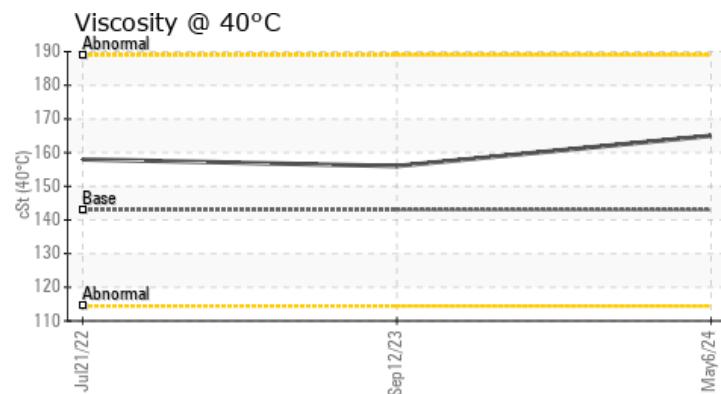
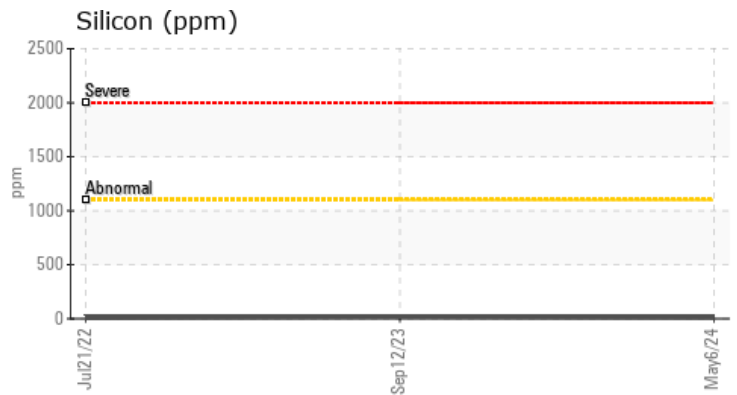
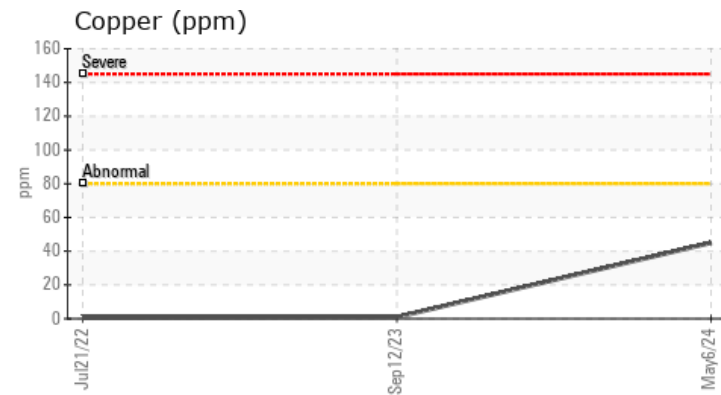
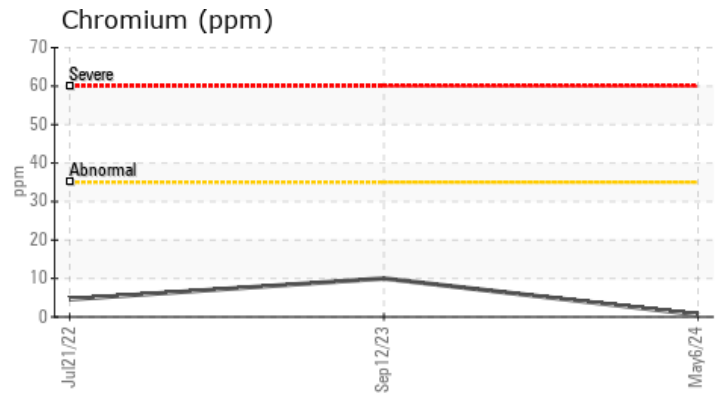
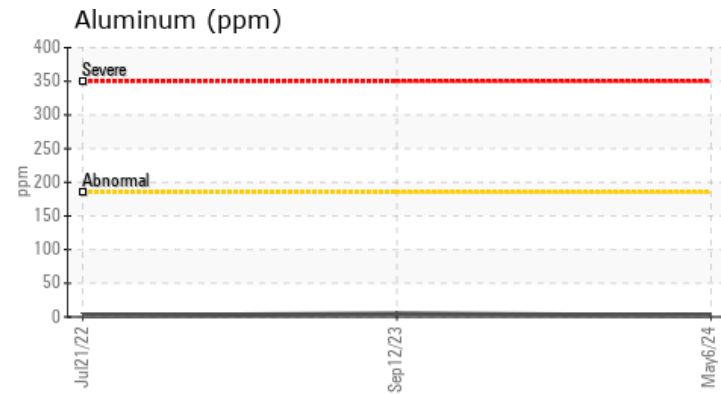
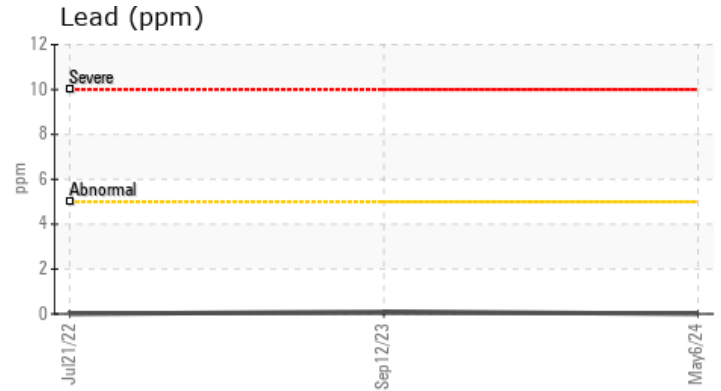
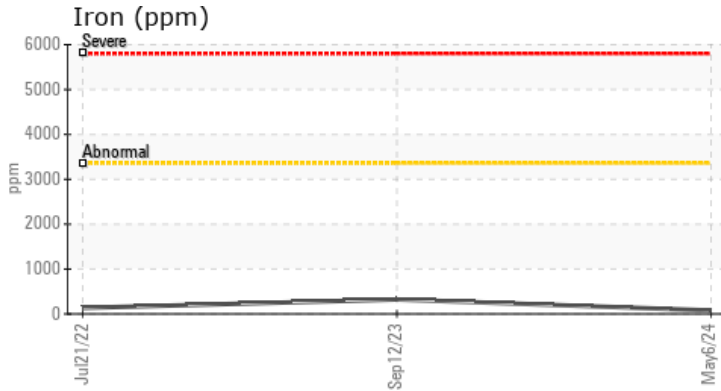
Depot: VOLVO8885
Unique No: 11085054
Signed: Don Baldrige
Report Date: 19 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

SPM703646 ALPINE VOLVO EC480E 391030 - RIGHT FINAL DRIVE



Sample No: VCP437420
Oil Type: GEAR OIL SAE 80W90
Job No: SPM703646 ALPINE



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VCP437420 | VCP420702 | VCP388958 | --- |
| Sample Date | 06 May 2024 | 12 Sep 2023 | 21 Jul 2022 | --- |
| Machine Hours | 3348 | 2080 | 972 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Not Chngd | Changed | Not Chngd | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

ALTA EQUIPMENT CO - ORLAND PARK
 5000 INDUSTRIAL HWY
 GARY, IN
 US 46406
 Contact: DAVE ENG
 DAVE.ENG@ALTG.COM
 T: (312)350-2560
 F:



OIL CONDITION

| | | | | | |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | 164 | 159 | 161 | --- |
|-------------|-----|------------|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | --- |
| Silicon | ppm | 12 | 19 | 3 | --- |
| Sodium | ppm | 2 | 14 | 11 | --- |
| Potassium | ppm | 2 | 4 | 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 | 79 | 271 | 138 | --- |
| Copper | ppm | 44 | 1 | <1 | --- |
| Lead | ppm | 0 | <1 | 0 | --- |
| Tin | ppm | <1 | 0 | 0 | --- |
| Aluminum | ppm | 2 | 5 | 1 | --- |
| Chromium | ppm | <1 | 9 | 6 | --- |
| Molybdenum | ppm | 1 | <1 | <1 | --- |
| Nickel | ppm | <1 | 1 | 0 | --- |
| Titanium | ppm | <1 | <1 | 0 | --- |
| Silver | ppm | 0 | 0 | 0 | --- |
| Manganese | ppm | 3 | 8 | 5 | --- |
| Vanadium | ppm | <1 | 0 | 0 | --- |



ADDITIVES

| | | | | | |
|------------|-----|------------|-----|-----|-----|
| Calcium | ppm | 930 | 24 | 28 | --- |
| Magnesium | ppm | 18 | 2 | 1 | --- |
| Zinc | ppm | 469 | 5 | 9 | --- |
| Phosphorus | ppm | 832 | 309 | 295 | --- |
| Barium | ppm | 7 | 0 | 4 | --- |
| Boron | ppm | 26 | 0 | <1 | --- |

Depot: VOLVO8885
Unique No: 11085048
Signed: Don Baldrige
Report Date: 19 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS

