



CONSTRUCTION EQUIPMENT

HILLSBOROUGH CITY VOLVO L70H 632864 - DIESEL ENGINE



Sample No: VCP429375
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: HILLSBOROUGH CITY



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SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VCP429375 | VCP389359 | --- | --- |
| Sample Date | 09 Oct 2023 | 19 Oct 2022 | --- | --- |
| Machine Hours | 8172 | 825 | --- | --- |
| Oil Hours | 0 | 0 | --- | --- |
| Oil Changed | N/A | N/A | --- | --- |
| Sample Status | ABNORMAL | NORMAL | --- | --- |



OIL CONDITION

| | | | | | |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C | cSt | █ 13.5 | █ 13.2 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.2 | █ 10.4 | --- | --- |
| Oxidation (PA) | % | 71 | 81 | --- | --- |



CONTAMINATION

| | | | | | |
|----------------|-----|-------|-------|-----|-----|
| Soot % | % | █ 0.5 | █ 0.3 | --- | --- |
| Nitration (PA) | % | 76 | 74 | --- | --- |
| Sulfation (PA) | % | 57 | 63 | --- | --- |
| Glycol | % | NEG | NEG | --- | --- |
| Fuel | % | <1.0 | <1.0 | --- | --- |
| Silicon | ppm | ▲ 29 | █ 16 | --- | --- |
| Sodium | ppm | █ 2 | █ 4 | --- | --- |
| Potassium | ppm | █ 2 | █ 2 | --- | --- |



WEAR METALS

| | | | | | |
|------------|-----|------|-------|-----|-----|
| Iron | ppm | █ 22 | █ 228 | --- | --- |
| Copper | ppm | █ 1 | █ 7 | --- | --- |
| Lead | ppm | █ 3 | █ 5 | --- | --- |
| Tin | ppm | █ 1 | █ 2 | --- | --- |
| Aluminum | ppm | ▲ 24 | █ 16 | --- | --- |
| Chromium | ppm | █ 1 | █ 7 | --- | --- |
| Molybdenum | ppm | █ 58 | █ 31 | --- | --- |
| Nickel | ppm | █ <1 | █ <1 | --- | --- |
| Titanium | ppm | █ 0 | █ <1 | --- | --- |
| Silver | ppm | █ <1 | <1 | --- | --- |
| Manganese | ppm | █ <1 | █ 7 | --- | --- |
| Vanadium | ppm | 0 | <1 | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|--------|--------|-----|-----|
| Calcium | ppm | █ 1000 | █ 1654 | --- | --- |
| Magnesium | ppm | █ 921 | █ 490 | --- | --- |
| Zinc | ppm | █ 1283 | █ 1099 | --- | --- |
| Phosphorus | ppm | █ 1068 | █ 884 | --- | --- |
| Barium | ppm | █ 0 | █ 0 | --- | --- |
| Boron | ppm | █ 45 | █ 46 | --- | --- |

Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Depot: VOLVO0093
Unique No: 10739022
Signed: Don Baldrige
Report Date: 15 Nov 2023

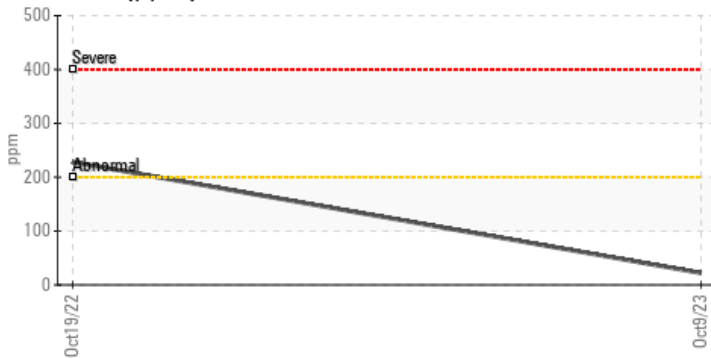


CONSTRUCTION EQUIPMENT

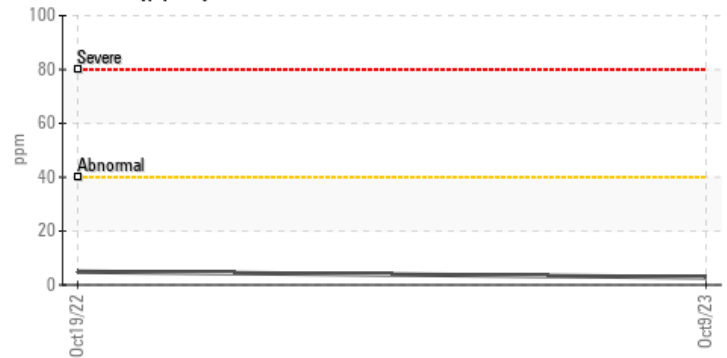


GRAPHS

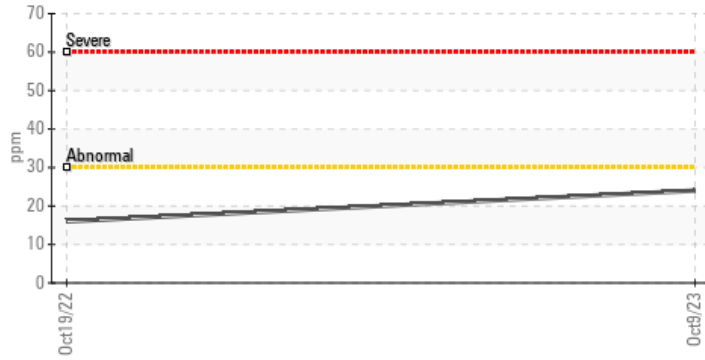
Iron (ppm)



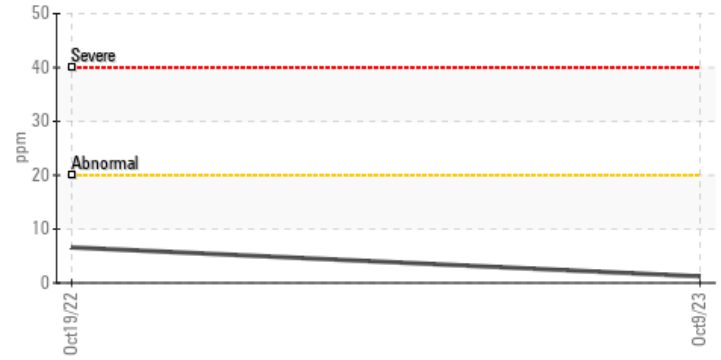
Lead (ppm)



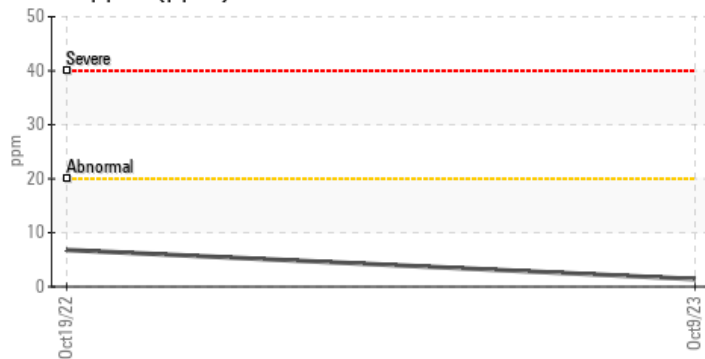
Aluminum (ppm)



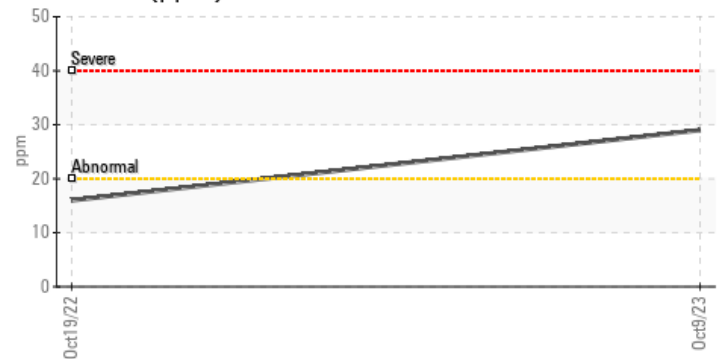
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

