

## CONSTRUCTION EQUIPMENT W09-2687 VOLVO A30G 742607 - DIESEL ENGINE



Sample No: VCP441121
Oil Type: NOT GIVEN
Job No: W09-2687

Sample Number
SAMPLE INFORMATION
Sample Date         14 Dec 2023         13 Jun 2023         08 Sep 2021            Machine Hours         2511         1998         486            Oil Hours         500         0         0            Oil Changed         Changed         Changed         N/A            Sample Status         ABNORMAL         NORMAL         ABNORMAL            VOICE © Color Market         ABNORMAL
Sample Date         14 Dec 2023         13 Jun 2023         08 Sep 2021            Machine Hours         2511         1998         486            Oil Hours         500         0         0            Oil Changed         Changed         Changed         N/A            Sample Status         ABNORMAL         NORMAL         ABNORMAL            VOICE © Color Machine Mac
Machine Hours         2511         1998         486            Oil Hours         Changed         Changed         N/A            Sample Status         ABNORMAL         NORMAL         ABNORMAL            Sample Status         ABNORMAL         NORMAL         ABNORMAL            VISTORIAN ABNORMAL             Visc @ 100°C         CSt         11.8         12.1         4 9.3            Base Number (BN)         mg KOH/g         6.2         17.6             Oxidation (PA)         %         70         63         56            Soot %         NEG         NEG         NEG         NEG            Soot %         0.2         0.2         0.2            Sulfation (PA)         %         79         60         53            Sulfation (PA)         %         55         56         51            Glycol         NEG         NEG         NEG         NEG         NEG           Fiele         %         4.2         2.9         7.4            So
Oil Changed Sample Status         Changed ABNORMAL         Changed NORMAL         NIA            Sample Status         ABNORMAL         NORMAL         ABNORMAL            VOLVO         OIL CONDITION           Visc @ 100°C         cSt         ▲ 11.8         12.1         ▲ 9.3            Base Number (BN)         mg KOH/g         6.2         7.6             Coxidation (PA)         %         70         63         56            COXIDATION           Water         %         NEG         NEG         NEG            Soot %         %         0.2         0.2         0.2            Solifation (PA)         %         79         60         53            Sulfation (PA)         %         NEG         NEG         NEG         NEG           Glycol         %         NEG         NEG         NEG            Silicon         ppm         3         4         37            Volumental Polar All All All All All All All All All Al
Sample Status
Sample Status
Oil CONDITION           Visc @ 100°C         CSt         ▲ 11.8         □ 12.1         ▲ 9.3            Base Number (BN)         mg KOH/g         ■ 6.2         □ 7.6             Oxidation (PA)         %         70         63         56            CONTAMINATION           Water         %         NEG
OIL CONDITION           Visc @ 100°C         cSt         \$ 11.8         \$ 12.1         \$ 9.3            Base Number (BN)         mg KOH/g         \$ 6.2         \$ 7.6             Oxidation (PA)         %         \$ 70         \$ 63         \$ 56            CONTAMINATION           Water         %         NEG         NEG         NEG         NEG         NEG         NEG         NEG          NEG         NEG         NEG         NEG          Sulfation (PA)         %         \$ 55         \$ 56         \$ 51          Sulfation (PA)         %         \$ 55         \$ 56         \$ 51          Sulfation (PA)         %         \$ 55         \$ 56         \$ 51          Sulfation (PA)         %         \$ 55         \$ 56         \$ 51          Sulfation (PA)         %         \$ 85         \$ 56         \$ 51          Sulfation (PA)         \$ 86         \$ 92         \$ 7.4           \$ 92         \$ 7.4           \$ 92         \$ 7.4           \$ 92         \$ 7.4
Visc @ 100°C         cSt         ▲ 11.8         □ 12.1         ▲ 9.3            Base Number (BN)         mg KOH/g         6.2         □ 7.6             Oxidation (PA)         %         70         63         56            CONTAMINATION           Water         %         NEG         NEG         NEG            Soot %         %         0.2         0.2         0.2            Soot %         %         79         60         53            Sulfation (PA)         %         55         56         51            Glycol         %         NEG         NEG         NEG            Fuel         %         4.2         2.9         4.74            Solicon         ppm         0         1         2            Sodium         ppm         0         1         2            WEAR METALS           Iron         ppm         0         0         -         1            VORTON METALS           -
Base Number (BN)         mg KOH/g         ■6.2         ■7.6             Oxidation (PA)         %         70         63         56            CONTAMINATION           Water         %         NEG         NEG         NEG            Soot %         %         0.2         0.2         0.2            Nitration (PA)         %         79         60         53            Sulfation (PA)         %         55         56         51            Glycol         %         NEG         NEG         NEG            Fuel         %         4.2         2.9         7.4            Soliicon         ppm         0         1         2            Sodium         ppm         0         1         2            Potassium         ppm         0         1         2            WEAR METALS           Iron         ppm         0         0         1            Copper         ppm         0         0         1
Contamination           Water         %         NEG         1         NEG         NEG         NEG         NEG         NEG         NEG         NEG         NEG         NEG         1         NEG
CONTAMINATION           Water         %         NEG         NEG         NEG            Soot %         %         0.2         0.2            Nitration (PA)         %         79         60         53            Sulfation (PA)         %         55         56         51            Glycol         %         NEG         NEG         NEG            Fuel         %         4.2         2.9         7.4            Solium         ppm         0         1         2            Sodium         ppm         0         1         2            Potassium         ppm         2         2         3            WEAR METALS           Ilron         ppm         7         3         15            Copper         ppm         11         7         231            Lead         ppm         0         0         <1            Aluminum         ppm         <1         <1         <1            Chromium         ppm
CONTAMINATION           Water         %         NEG         NEG         NEG            Soot %         %         0.2         0.2         0.2            Nitration (PA)         %         79         60         53            Sulfation (PA)         %         55         56         51            Glycol         %         NEG         NEG         NEG            Fuel         %         4.2         2.9         7.4            Silicon         ppm         3         4         37            Sodium         ppm         0         1         2            Potassium         ppm         2         2         3            WEAR METALS         WEAR METALS           Iron         ppm         7         3         15            Copper         ppm         0         0         <1            Lead         ppm         0         0         <1            Tin         ppm         <1         <1         <1
Water         %         NEG         NEG         NEG            Soot %         %         ■0.2         ■0.2         □0.2         □           Nitration (PA)         %         79         60         53         □           Sulfation (PA)         %         55         56         51         □           Glycol         %         NEG         NEG         NEG         □           Fuel         %         4.2         ■2.9         ↑7.4         □           Silicon         ppm         ■3         ■4         ■37         □           Sodium         ppm         ■0         ■1         ■2         □           Potassium         ppm         ■2         ■2         ■3         □           WEAR METALS           Iron         ppm         ■7         ■3         ■15         □           Copper         ppm         ■11         ■7         ■231         □           Lead         ppm         ■0         ■0         ■<1         □           Tin         ppm         ■<1         ■1         ■1         ■1         □           Aluminum         <
Soot %         %         □0.2 <td< th=""></td<>
Nitration (PA)       %       79       60       53          Sulfation (PA)       %       55       56       51          Glycol       %       NEG       NEG       NEG          Fuel       %       4.2       2.9       ^ 7.4          Silicon       ppm       3       4       37          Sodium       ppm       0       1       2          Potassium       ppm       2       2       3          VEAR METALS       Iron       ppm       7       3       15          Copper       ppm       11       7       231          Lead       ppm       0       0       <1          Tin       ppm       <1       <1       3          Aluminum       ppm       2       1       <1          Chromium       ppm       <1       <1       <1          Molybdenum       ppm       50       79       <1
Sulfation (PA)       %       55       56       51          Glycol       %       NEG       NEG          Fuel       %       4.2       2.9       7.4          Silicon       ppm       3       4       37          Sodium       ppm       0       1       2          Potassium       ppm       2       2       3          VEAR METALS         Iron       ppm       7       3       15          Copper       ppm       11       7       231          Lead       ppm       0       0       <1          Tin       ppm       <1       <1       3          Aluminum       ppm       2       1       <1       <1          Chromium       ppm       <1       <1       <1       <         Molybdenum       ppm       50       79       <1
Glycol         %         NEG         NEG         NEG            Fuel         %         4.2         2.9         7.4            Silicon         ppm         3         4         37            Sodium         ppm         0         1         2            Potassium         ppm         2         2         3            Iron         ppm         7         3         15            Copper         ppm         11         7         231            Lead         ppm         0         0         <1            Tin         ppm         <1         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1         <1            Molybdenum         ppm         50         79         <1
Fuel       %       4.2       2.9       7.4          Silicon       ppm       3       4       37          Sodium       ppm       0       1       2          Potassium         Ppm       2       2       3          WEAR METALS         Iron       ppm       7       3       15          Copper       ppm       11       7       231          Lead       ppm       0       0       <1          Tin       ppm       <1       <1       3          Aluminum       ppm       2       1       <1          Chromium       ppm       <1       <1       <1          Molybdenum       ppm       50       79       <1
Silicon       ppm       3       4       37          Sodium       ppm       0       1       2          Potassium       ppm       2       2       3          WEAR METALS         Iron       ppm       7       3       15          Copper       ppm       11       7       231          Lead       ppm       0       0       <1          Tin       ppm       <1       <1       3          Aluminum       ppm       2       1       <1          Chromium       ppm       <1       <1       <1          Molybdenum       ppm       50       79       <1
Sodium         ppm         □ 0         □ 1         □ 2            Potassium         ppm         □ 2         □ 2         □ 3         □ 15            Copper         ppm         □ 11         □ 7         △ 231            Lead         ppm         □ 0         □ < 1
Potassium         ppm         2         2         3            WEAR METALS         Iron         ppm         7         3         15            Copper         ppm         11         7         231            Lead         ppm         0         0         <1
WEAR METALS           Iron         ppm         7         3         15            Copper         ppm         11         7         ≥ 231            Lead         ppm         0         <1            Tin         ppm         <1         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1         <1            Molybdenum         ppm         50         79         <1
WEAR METALS           Iron         ppm         7         3         15            Copper         ppm         11         7         231            Lead         ppm         0         0         <1            Tin         ppm         <1         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1         <           Molybdenum         ppm         50         79         <1
WEAR METALS           Iron         ppm         7         3         15            Copper         ppm         11         7         231            Lead         ppm         0         0         <1            Tin         ppm         <1         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1         <           Molybdenum         ppm         50         79         <1
Iron         ppm         □7         □3         □15            Copper         ppm         □1         □7         △231            Lead         ppm         □0         □<1            Tin         ppm         □<1         □<1         □           Aluminum         ppm         □2         □1         □<1            Chromium         ppm         □<1         □<1         □<1            Molybdenum         ppm         □50         □79         □<1
Copper         ppm         11         7         231            Lead         ppm         0         0         <1            Tin         ppm         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1            Molybdenum         ppm         50         79         <1
Lead         ppm         0         <1            Tin         ppm         <1         <1         3            Aluminum         ppm         2         1         <1            Chromium         ppm         <1         <1            Molybdenum         ppm         50         79         <1
Tin         ppm         <1
Chromium         ppm         1         <1
<b>Molybdenum</b> ppm <b>■50 ■</b> 79 <b>■</b> <1
, ,
<b>Nickel</b> ppm <b>□0</b> □0 □<1
<b>Titanium</b> ppm <b>0</b> <1 <1
<b>Silver</b> ppm <b>□0</b> □0 <1
<b>Manganese</b> ppm <b>0</b> <1 4
<b>Vanadium</b> ppm <b>0</b> <1 0
VOLVO
ADDITIVES
Calcium ppm <b>1196</b> 1867 2046
Magnesium ppm 632 277 66
Zinc ppm <b>890</b> 1249 1076

**1030** 

**0** 

285

**918** 

**1** 



## MCCLUNG-LOGAN EQUIPMENT CO - WISE

PO BOX 1158
WISE, VA
US 24293
Contact: DANNY BARRINGTON
dbarrington@mcclung-logan.com
T:
F:

## 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. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot:VOLVO8881Unique No:10806371Signed:Jonathan HesterReport Date:29 Dec 2023

ppm

ppm

ppm

786

**0** 

**46** 

Phosphorus

Barium

Boron



## **CONSTRUCTION EQUIPMENT**





