

OIL ANALYSIS REPORT

Area KANSAS/44/EG - LOADER Machine Id 45.44L [KANSAS^44^EG - LOADER] Component

Judoi 1 Maylozzo Declozo Neviozzi Bandozz Junicz

Sample Rating Trend



600

Resample at the next service interval to monitor.

There is no indication of any contamination in the

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the

All component wear rates are normal.

oil is suitable for further service.

Recommendation

Contamination

Fluid Condition

Wear

oil.

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history |
|--|--|--|---|---|---|---|
| Sample Number | | Client Info | | WC0833846 | WC0781256 | WC077983 |
| Sample Date | | Client Info | | 26 Sep 2023 | 13 Jun 2023 | 06 Mar 202 |
| Machine Age | hrs | Client Info | | 3851 | 3564 | 3298 |
| Oil Age | hrs | Client Info | | 2654 | 2654 | 2654 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATIO | N | method | limit/base | current | history1 | history |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history |
| Iron | ppm | ASTM D5185m | >100 | 8 | 12 | 19 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 9 | 10 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 0 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history |
| | | | | | | |
| Boron | ppm | ASTM D5185m | 0 | 46 | 50 | 30 |
| Boron Barium | ppm ppm | ASTM D5185m ASTM D5185m | | 46 0 | 50 0 | 30 0 |
| Barium | | | 0 | | | |
| Barium Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| | ppm ppm | ASTM D5185m ASTM D5185m | 0 | 0 38 | 0 42 | 0 35 |
| Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 0 38 <1 | 0 42 <1 | 0 35 1 |
| Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 0 38 <1 525 | 0 42 <1 548 | 0 35 1 491 |
| Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 0 38 <1 525 1657 | 0 42 <1 548 1817 | 0 35 1 491 1610 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 0 38 <1 525 1657 768 | 0 42 <1 548 1817 1002 | 0 35 1 491 1610 713 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 0 38 <1 525 1657 768 934 | 0 42 <1 548 1817 1002 1221 | 0 35 1 491 1610 713 839 2547 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 0 limit/base | 0 38 <1 525 1657 768 934 2748 | 0 42 <1 548 1817 1002 1221 3714 | 0 35 1 491 1610 713 839 2547 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 0 limit/base | 0 38 <1 525 1657 768 934 2748 current | 0 42 <1 548 1817 1002 1221 3714 history1 | 0 35 1 491 1610 713 839 2547 history |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | 0 0 0 0 <u>limit/base</u> >25 | 0 38 <1 525 1657 768 934 2748 current 3 | 0 42 <1 548 1817 1002 1221 3714 history1 5 | 0 35 1 491 1610 713 839 2547 history 5 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m | 0 0 0 0 <u>limit/base</u> >25 | 0 38 <1 525 1657 768 934 2748 2748 current 3 3 3 | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 38 <1 525 1657 768 934 2748 current 3 3 0 | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 0 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm ppm score ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 38 <1 525 1657 768 934 2748 2748 current 3 3 0 Current | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 0 history1 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 history |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm s ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 38 <1 525 1657 768 934 2748 Current 3 3 0 Current 0.2 | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 0 history1 0.3 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 history 0.5 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 38 <1 525 1657 768 934 2748 <u>current</u> 3 3 0 <u>current</u> 0.2 6.8 | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 0 history1 0.3 6.8 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 history 0.5 9.3 21.5 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1 2 2 5 20 2 0 1 1 1 1 2 0 2 0 2 0 2 0 2 0 2 0 | 0 38 <1 525 1657 768 934 2748 Current 3 3 0 Current 0.2 6.8 21.2 | 0 42 <1 548 1817 1002 1221 3714 history1 5 3 0 history1 0.3 6.8 22.5 | 0 35 1 491 1610 713 839 2547 history 5 4 <1 history 0.5 9.3 |

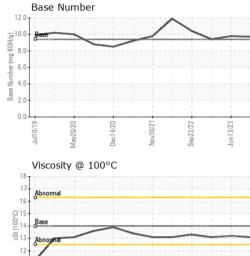


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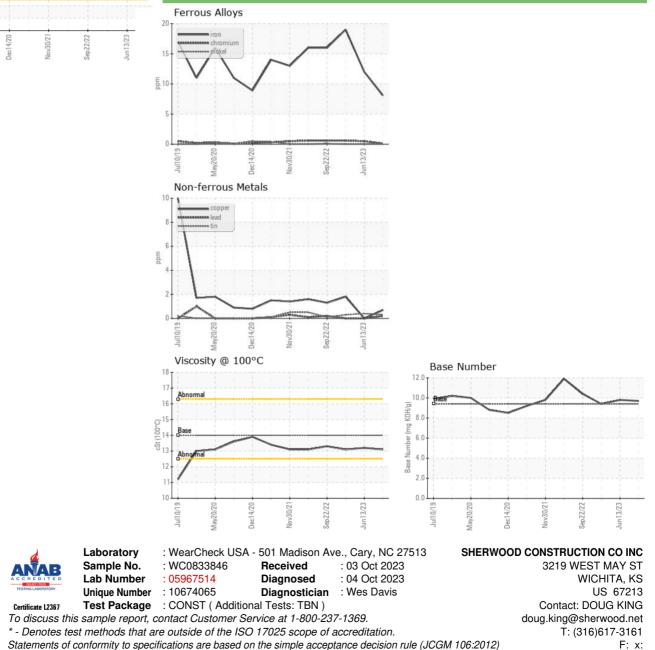
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OIL ANALYSIS REPORT



| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPER | TIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 13.1 | 13.2 | 13.1 |
| GRAPHS | | | | | | |



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)