

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



KEMP QUARRIES / RIVER VALLEY BACKBONE **OHT124**

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

DIAGNOSIS

Recommendation

Contamination

Fluid Condition

Wear

oil.



All component wear rates are normal.

oil is suitable for further service.

Resample at the next service interval to monitor.

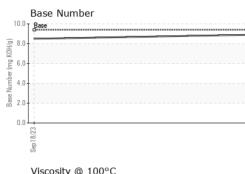
There is no indication of any contamination in the

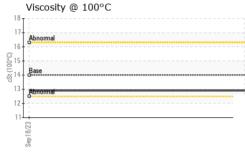
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the

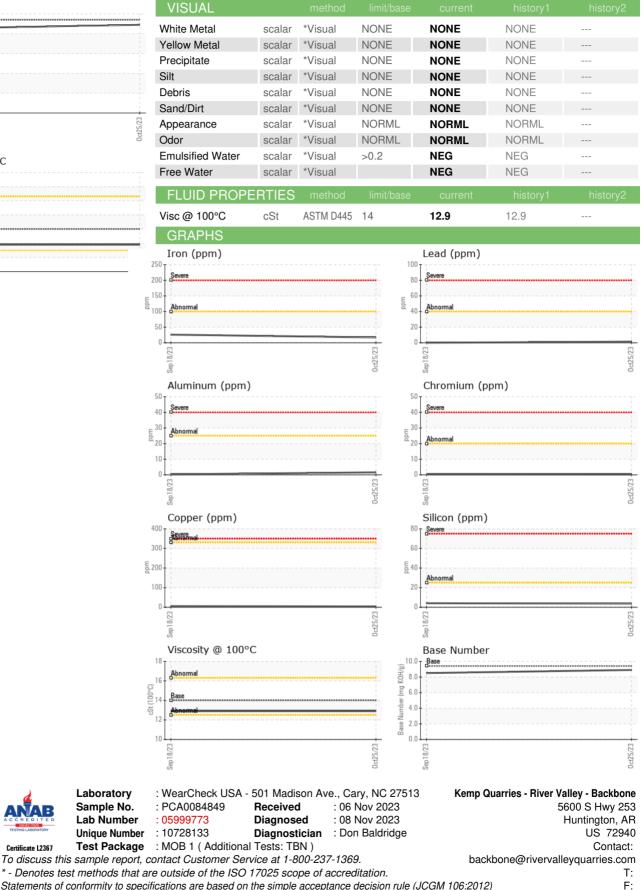
| | | | Sep2023 | 0ct2023 | | |
|--|--|---|--|---|--|--|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PCA0084849 | PCA0084787 | |
| Sample Date | | Client Info | | 25 Oct 2023 | 18 Sep 2023 | |
| Machine Age | hrs | Client Info | | 30229 | 30012 | |
| Oil Age | hrs | Client Info | | 217 | 325 | |
| Oil Changed | | Client Info | | Changed | Changed | |
| Sample Status | | | | NORMAL | NORMAL | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | |
| Glycol | | WC Method | | NEG | NEG | |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 17 | 26 | |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 0 | |
| Titanium | ppm | ASTM D5185m | >2 | <1 | 0 | |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | <1 | |
| Lead | ppm | ASTM D5185m | >40 | 1 | 0 | |
| Copper | ppm | ASTM D5185m | >330 | 4 | 6 | |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 4 | 13 | |
| Barium | | | | _ | | |
| | ppm | ASTM D5185m | 0 | 5 | 0 | |
| Molybdenum | ppm ppm | | 0 | 5 58 | 0 54 | |
| • | | | | - | | |
| Manganese | ppm | ASTM D5185m ASTM D5185m | | 58 | 54 | |
| Manganese Magnesium | ppm ppm | ASTM D5185m ASTM D5185m | 0 | 58 <1 | 54 <1 | |
| Manganese Magnesium Calcium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 58 <1 902 | 54 <1 1004 | |
| Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 58 <1 902 1096 | 54 <1 1004 1203 | |
| Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 58 <1 902 1096 1088 | 54 <1 1004 1203 1066 | |
| Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 58 <1 902 1096 1088 1185 | 54 <1 1004 1203 1066 1278 | |
| Maganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 limit/base | 58 <1 902 1096 1088 1185 3552 | 54 <1 1004 1203 1066 1278 3596 | |
| Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method | 0 0 limit/base | 58 <1 902 1096 1088 1185 3552 current | 54 <1 1004 1203 1066 1278 3596 history1 | |
| Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | 0 0 limit/base >25 | 58 <1 902 1096 1088 1185 3552 current 4 | 54 <1 1004 1203 1066 1278 3596 history1 4 | history2 |
| Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m | 0 0 limit/base >25 | 58 <1 902 1096 1088 1185 3552 current 4 0 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 | history2 |
| Maganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 0 0 | 58 <1 902 1096 1088 1185 3552 current 4 0 2 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 10 | history2 |
| Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 58 <1 902 1096 1088 1185 3552 current 4 0 2 2 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 10 history1 | history2 history2 |
| Maganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 58 <1 902 1096 1088 1185 3552 <u>current</u> 4 0 2 2 <u>current</u> 0.5 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 10 history1 0.7 | history2 history2 |
| Maganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 1 2 25 >20 1 imit/base >3 >20 | 58 <1 902 1096 1088 1185 3552 <u>current</u> 4 0 2 2 <u>current</u> 0.5 5.8 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 10 history1 0.7 6.5 | history2 history2 |
| Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 1 2 25 >20 1 imit/base >3 >20 >30 | 58 <1 902 1096 1088 1185 3552 <u>current</u> 4 0 2 2 <u>current</u> 0.5 5.8 18.3 | 54 <1 1004 1203 1066 1278 3596 history1 4 3 10 history1 0.7 6.5 18.4 | history2 history2 |



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

Certificate L2367