



Area
KEMP QUARRIES / HULBERT
Machine Id
OHT047
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | PCA0085949 | PCA0109294 | PCA0086853 |
| Sample Date | | Client Info | | 07 Jun 2024 | 06 Jan 2024 | 15 Sep 2023 |
| Machine Age | hrs | Client Info | | 37981 | 37484 | 37028 |
| Oil Age | hrs | Client Info | | 500 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 22 | 15 | 33 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 1 | 2 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 6 | 4 | 16 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 2 | 4 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 1 | 2 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

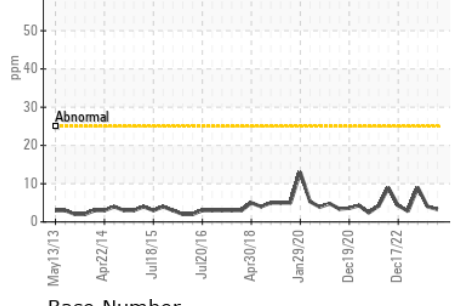
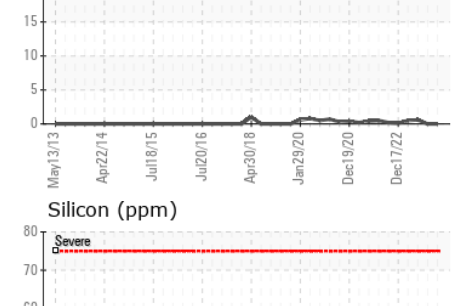
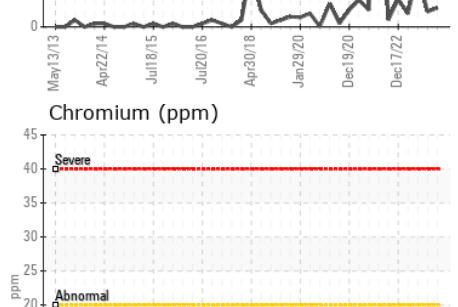
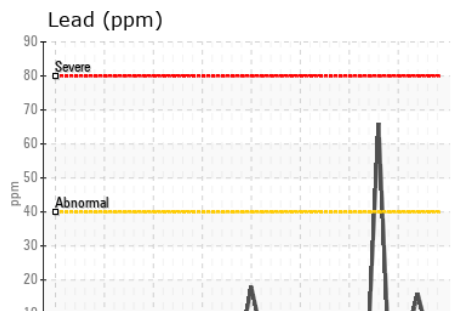
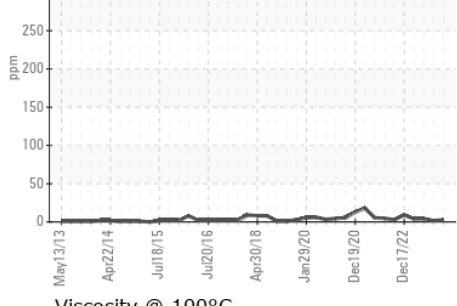
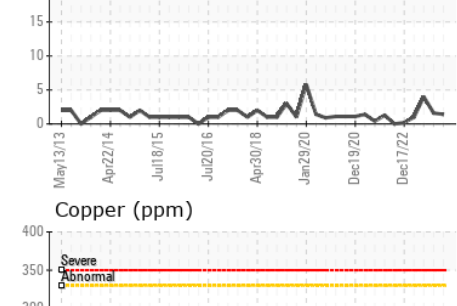
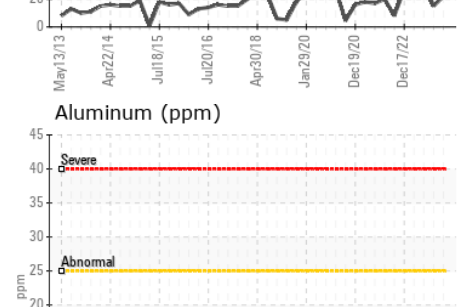
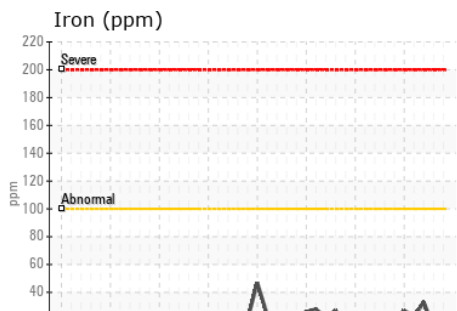
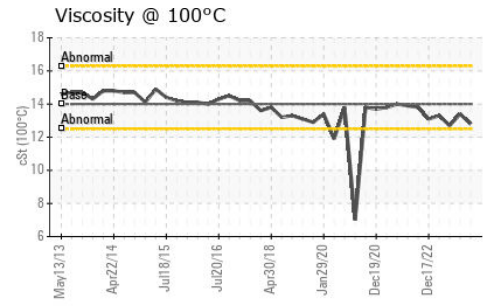
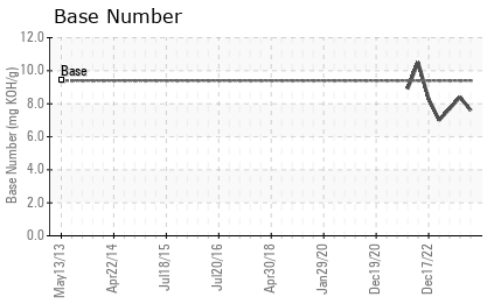
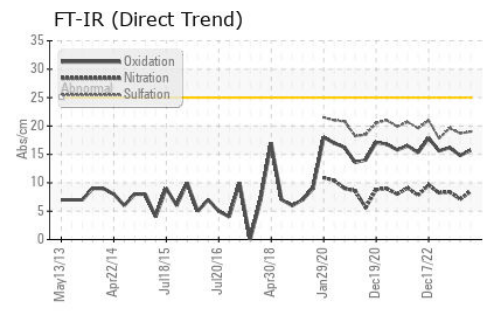
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 4 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 2 | 3 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.4 | 0.3 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 7.1 | 8.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.0 | 18.7 | 19.6 |
| 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 |

FLUID CONDITION

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

| | | | | | | |
|------------------|----------|-------------|-----|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 18 | 8 | 9 |
| Boron | ppm | ASTM D5185m | 0 | 3 | <1 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 53 | 51 | 54 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | 854 | 868 | 846 |
| Calcium | ppm | ASTM D5185m | | 968 | 979 | 959 |
| Phosphorus | ppm | ASTM D5185m | | 1028 | 975 | 918 |
| Zinc | ppm | ASTM D5185m | | 1199 | 1118 | 1118 |
| Sulfur | ppm | ASTM D5185m | | 3385 | 2830 | 2696 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.7 | 14.8 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | 7.6 | 8.4 | 7.7 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 12.8 | 13.4 | 12.7 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085949
Lab Number : 06211270
Unique Number : 11084134
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Kemp Stone - Hulbert
 17801 Hwy 80
 Hulbert, OK
 US 74441
 Contact:
 hulbert@kempstone.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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