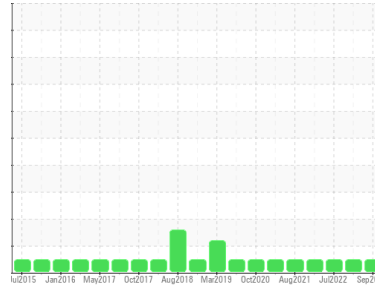




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
1373E

Component
Diesel Engine

Fluid
PURUS SYNTHETIC BLEND 15W40 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | KL0013227 | KL0011855 | KL0008602 |
| Sample Date | Client Info | | 06 Sep 2023 | 03 May 2023 | 08 Jul 2022 |
| Machine Age | mls | Client Info | 148113 | 142409 | 132995 |
| Oil Age | mls | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Glycol | WC Method | | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | 10 | 2 | 11 |
| Chromium | ppm | ASTM D5185m >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | 0 | 1 |
| Aluminum | ppm | ASTM D5185m >20 | 2 | 5 | 2 |
| Lead | ppm | ASTM D5185m >40 | 2 | 0 | 2 |
| Copper | ppm | ASTM D5185m >330 | 4 | <1 | 1 |
| Tin | ppm | ASTM D5185m >15 | 1 | 0 | 1 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m | 6 | 12 | 11 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 79 | 64 | 61 |
| Manganese | ppm | ASTM D5185m | 1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 1152 | 1030 | 873 |
| Calcium | ppm | ASTM D5185m | 1281 | 1163 | 1133 |
| Phosphorus | ppm | ASTM D5185m | 1266 | 1105 | 890 |
| Zinc | ppm | ASTM D5185m | 1545 | 1367 | 1136 |
| Sulfur | ppm | ASTM D5185m | 3821 | 3878 | 3482 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 4 | 2 | 3 |
| Sodium | ppm | ASTM D5185m | 6 | <1 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 4 | 2 | 0 |

INFRA-RED

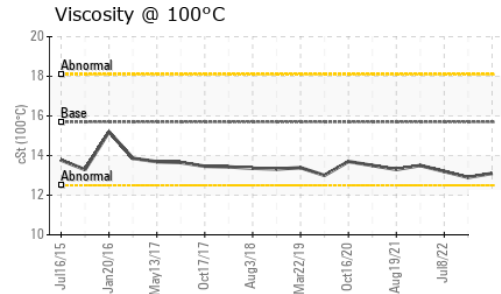
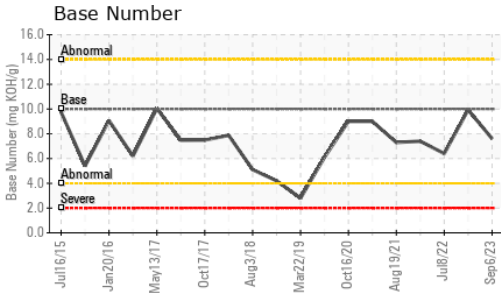
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.3 | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 >20 | 9.1 | 8.8 | 11.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 20.3 | 20.2 | 24.5 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 17.3 | 16.7 | 21.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 10 | 7.6 | 9.93 | 6.4 |



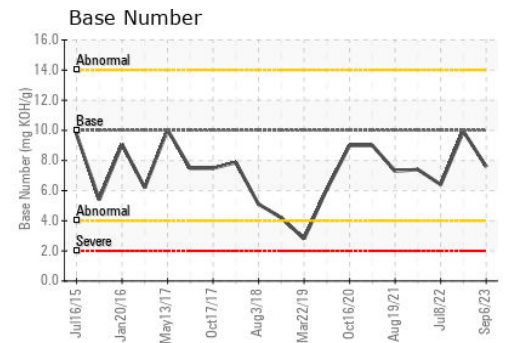
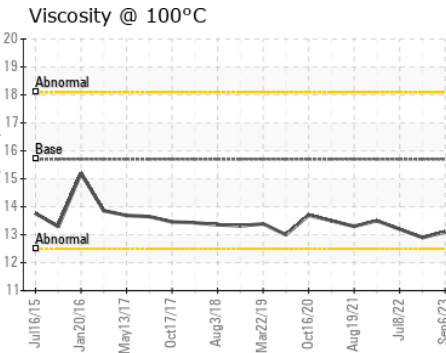
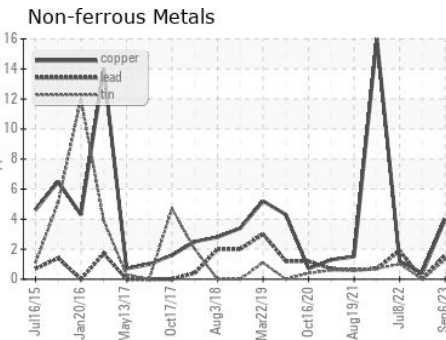
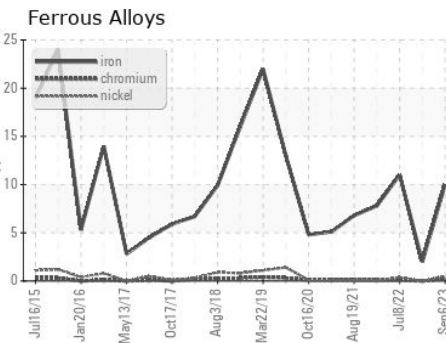
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 13.1 | 12.9 | 13.2 |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013227
Lab Number : 05966135
Unique Number : 10672686
Test Package : FLEET

Received : 02 Oct 2023
Diagnosed : 03 Oct 2023
Diagnostician : Wes Davis

VILLAGE OF RUIDOSO
 313 CREE MEADOWS DR
 RUIDOSO, NM
 US 88355
 Contact: JERRY PARSONS
 jerryparsons@ruidoso-nm.gov
 T: (575)257-1702
 F: x:

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)