



OIL ANALYSIS REPORT

| | |
|-----------------|----------|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |

Area
PCS - PORTABLE CRUSHING SERVICES

Machine Id
LD07 BOBCAT LD07 - PCS

Component
Diesel Engine

Fluid
CHEVRON DELO 400 SDE SAE 15W40 (12 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. No corrective action is recommended at this time. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | KL0014089 | KL0013053 | KL0009481 |
| Sample Date | | Client Info | | 10 Jan 2024 | 03 Oct 2023 | 03 Apr 2023 |
| Machine Age | hrs | Client Info | | 6306 | 6238 | 5843 |
| Oil Age | hrs | Client Info | | 50 | 515 | 120 |
| Filter Age | hrs | Client Info | | 50 | 515 | 120 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 10 | 32 | 22 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 0 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

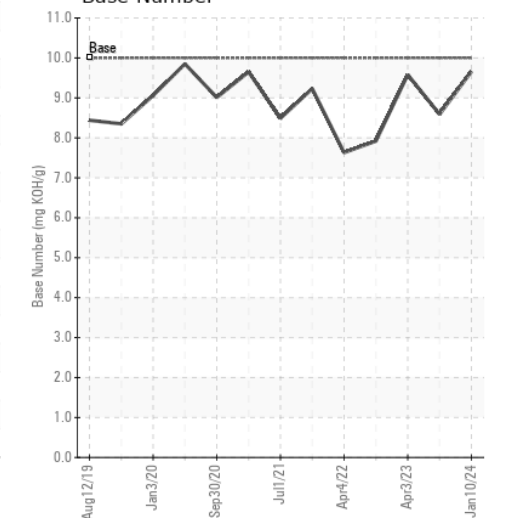
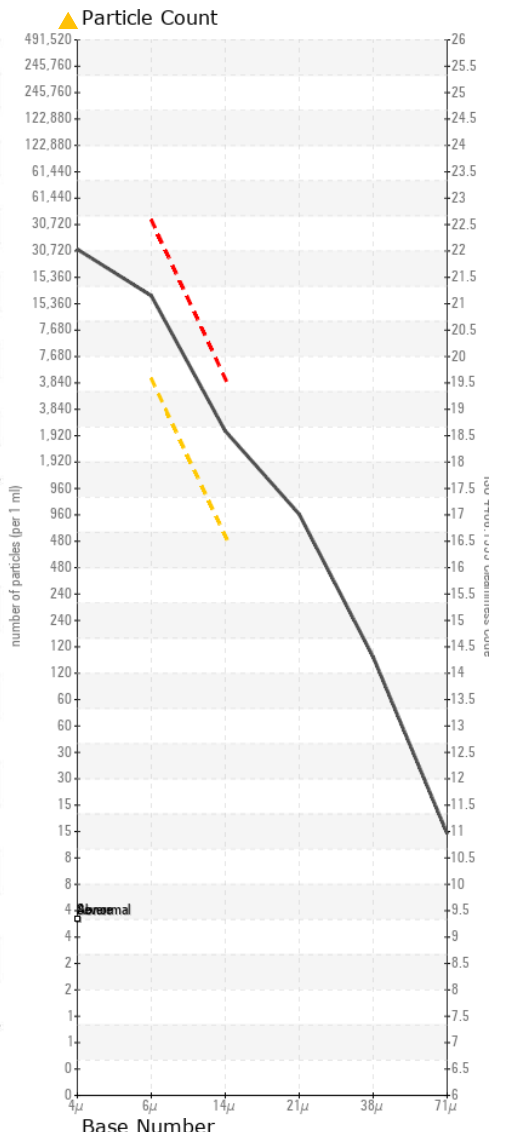
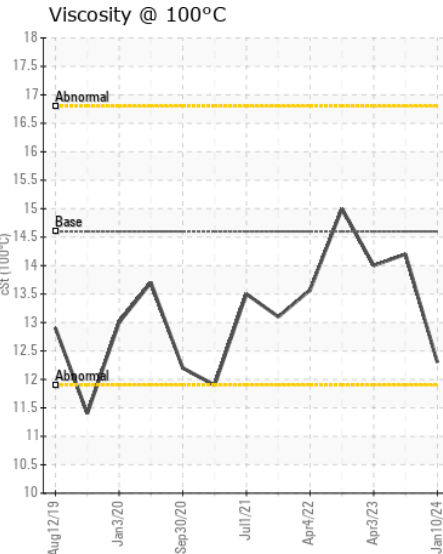
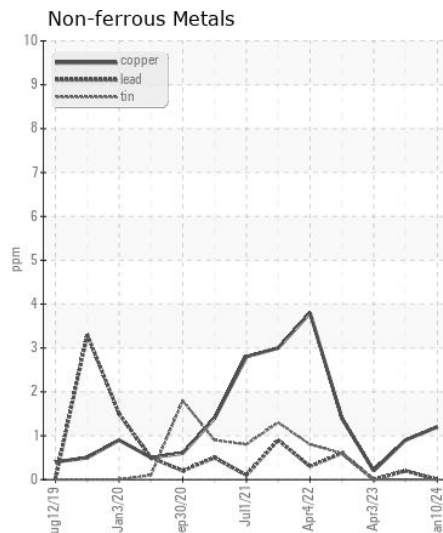
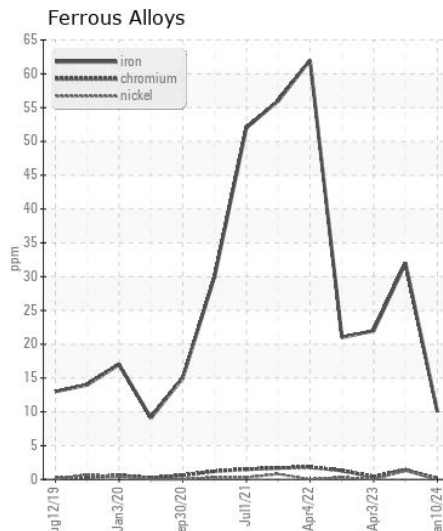
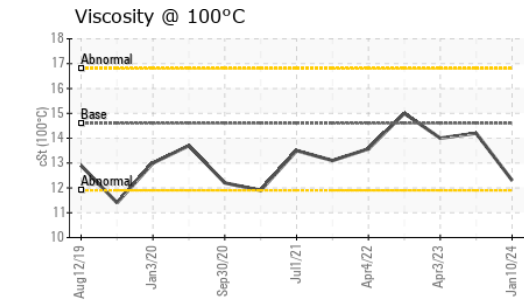
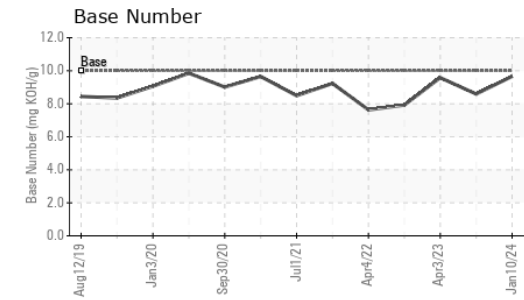
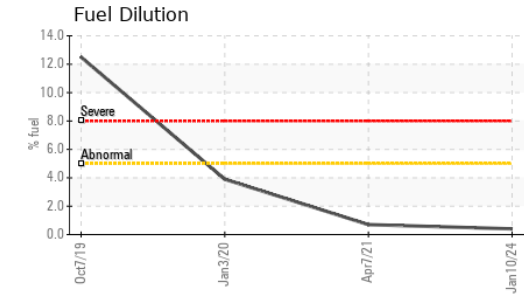
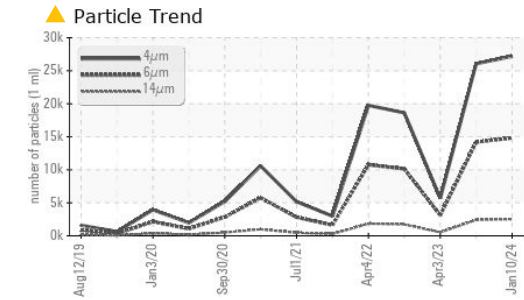
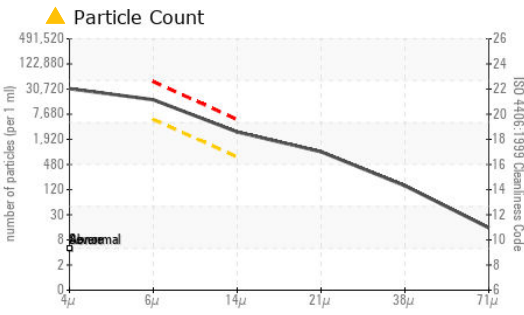
Fuel content negligible. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

| | | | | | | |
|------------------|----------|--------------|--------|----------------|---------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 8 | 12 | 14 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 3 | 1 |
| Fuel | % | ASTM D3524 | >5 | 0.4 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.7 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 4.6 | 7.5 | 6.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.6 | 21.8 | 20.9 |
| Particles >4µm | | ASTM D7647 | | 27195 | 26055 | 5703 |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ 14815 | ▲ 14194 | 3107 |
| Particles >14µm | | ASTM D7647 | >640 | ▲ 2521 | ▲ 2416 | 529 |
| Particles >21µm | | ASTM D7647 | >160 | ▲ 849 | ▲ 814 | 178 |
| Particles >38µm | | ASTM D7647 | >40 | ▲ 131 | ▲ 126 | 27 |
| Particles >71µm | | ASTM D7647 | >10 | 13 | 13 | 3 |
| Oil Cleanliness | | ISO 4406 (c) | >19/16 | ▲ 21/19 | ▲ 21/18 | 19/16 |
| 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.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 1 |
| Boron | ppm | ASTM D5185m | | 196 | 345 | 344 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 56 | 81 | 64 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 438 | 326 | 282 |
| Calcium | ppm | ASTM D5185m | | 1462 | 1558 | 1578 |
| Phosphorus | ppm | ASTM D5185m | 760 | 838 | 982 | 861 |
| Zinc | ppm | ASTM D5185m | 800 | 1015 | 1216 | 1060 |
| Sulfur | ppm | ASTM D5185m | 3000 | 2836 | 4144 | 4571 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.0 | 16.7 | 15.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 9.66 | 8.59 | 9.58 |
| Visc @ 100°C | cSt | ASTM D445 | 14.6 | 12.3 | 14.2 | 14.0 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014089 **Received** : 16 Jan 2024
Lab Number : 06061364 **Diagnosed** : 18 Jan 2024
Unique Number : 10832746 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, PrtCount)

PIKES PEAK PERFORMANCE PRODUCTS
 7888 BULLET RD
 PEYTON, CO
 US 80831
 Contact: SCOTT RIGGS
 riggs.pikespeakperformance@gmail.com
 T: (303)434-0126
 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)