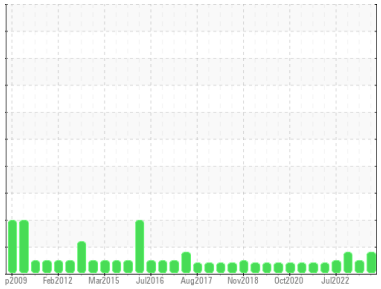
# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
## 2007 PETERBILT 9628H
Component
**Hydraulic System**
Fluid
**CHEVRON DELO 400 MULTIGRADE 15W40 (40 GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **KL0012922** | KL0011854 | KL0009714 |
| Sample Date | | Client Info | | **06 Sep 2023** | 03 May 2023 | 13 Jan 2023 |
| Machine Age | mls | Client Info | | **12733** | 427954 | 419989 |
| Oil Age | mls | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ATTENTION** | NORMAL | ATTENTION |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **3** | 4 | 4 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | **2** | 10 | 8 |
| Lead | ppm | ASTM D5185m | >10 | **1** | 2 | 2 |
| Copper | ppm | ASTM D5185m | >75 | **10** | 10 | 11 |
| Tin | ppm | ASTM D5185m | >10 | **<1** | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | 1 | 1 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 151 | **327** | 297 | 269 |
| Barium | ppm | ASTM D5185m | 0.4 | **0** | 0 | 4 |
| Molybdenum | ppm | ASTM D5185m | 250 | **52** | 54 | 52 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | **377** | 418 | 362 |
| Calcium | ppm | ASTM D5185m | 2046 | **1374** | 1443 | 1374 |
| Phosphorus | ppm | ASTM D5185m | 1043 | **888** | 961 | 908 |
| Zinc | ppm | ASTM D5185m | 943 | **1049** | 1137 | 1073 |
| Sulfur | ppm | ASTM D5185m | 5012 | **3492** | 4351 | 4115 |

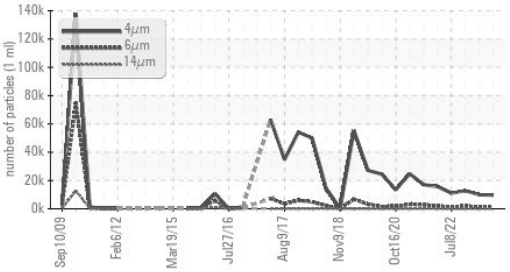
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **6** | 7 | 7 |
| Sodium | ppm | ASTM D5185m | | **<1** | 1 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 2 | <1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **9659** | 9942 | 12836 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **1443** | 971 | ▲ 2021 |
| Particles >14µm | | ASTM D7647 | >160 | **28** | 15 | 47 |
| Particles >21µm | | ASTM D7647 | >40 | **3** | 4 | 7 |
| Particles >38µm | | ASTM D7647 | >10 | **0** | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >17/14 | ▲ **18/12** | 17/11 | ▲ 18/13 |

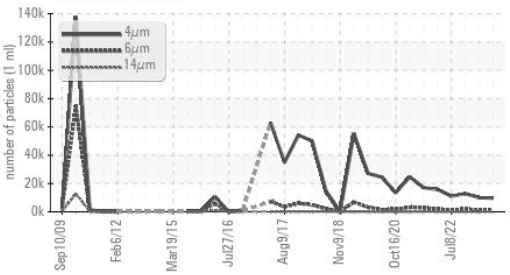
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **1.42** | 1.38 | 1.36 |

# OIL ANALYSIS REPORT

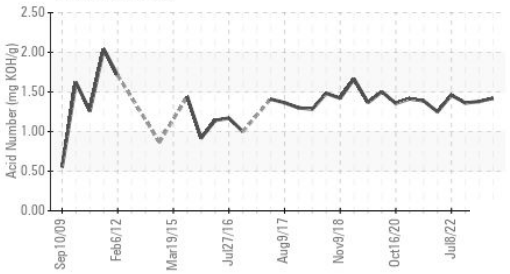
Particle Trend



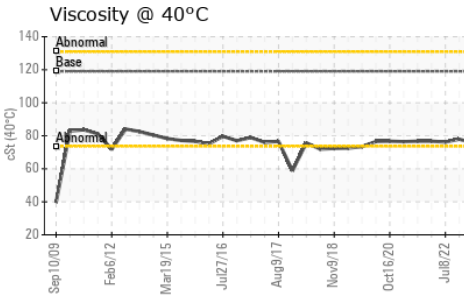

Particle Trend




Acid Number

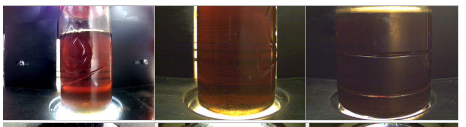
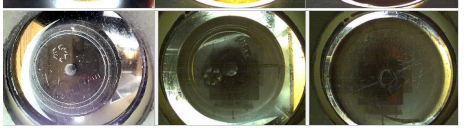



Viscosity @ 40°C



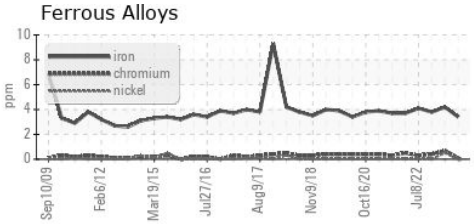

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **LIGHT** | 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 | >0.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 119 | **75.7** | 75.6 | 77.9 |

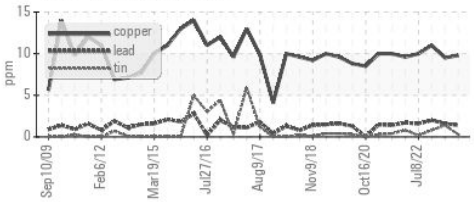
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

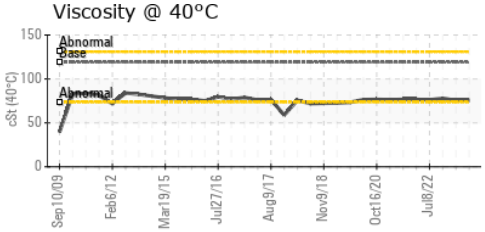
Ferrous Alloys



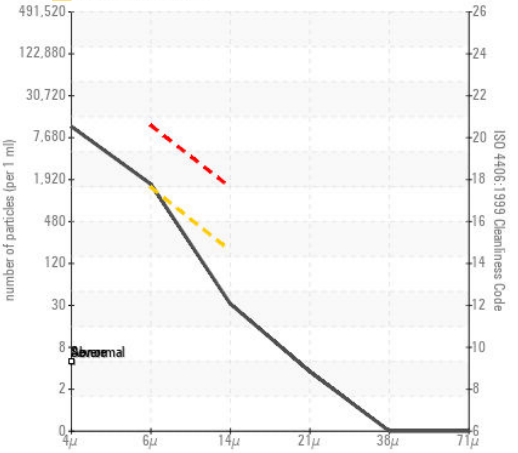

Non-ferrous Metals



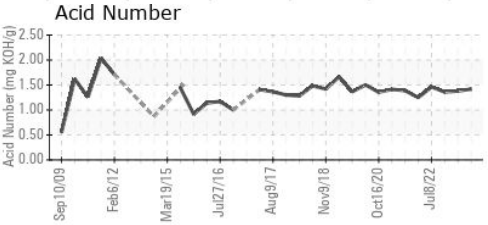

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KL0012922
**Lab Number** : 05965349
**Unique Number** : 10671900
**Test Package** : MOB 2

**Received** : 29 Sep 2023
**Diagnosed** : 02 Oct 2023
**Diagnostician** : Wes Davis

*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)*

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