

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 54 Component Diesel Engine Fluid

PETRO CANADA DURON HP 15W40 (--- GAL)

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.

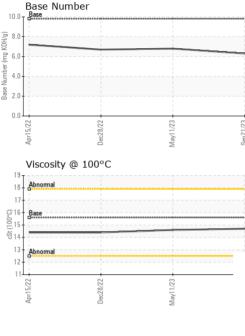
Fluid Condition

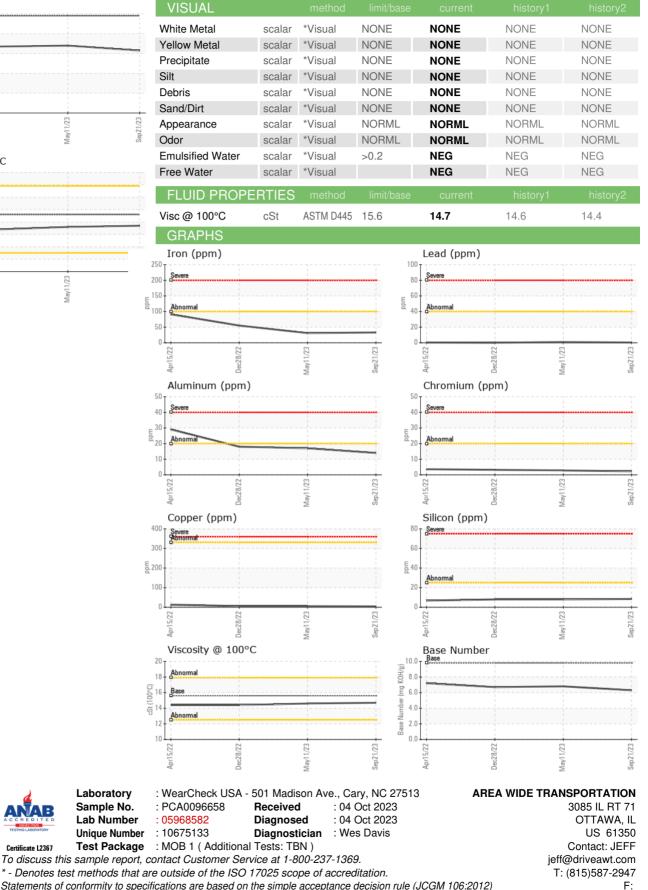
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| L) | | Apr202 | 2 Dec2022 | May2023 Se | p2023 | |
|---------------|----------|-------------|------------|-------------|-------------|-------------|
| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PCA0096658 | PCA0096628 | PCA0088229 |
| Sample Date | | Client Info | | 21 Sep 2023 | 11 May 2023 | 28 Dec 2022 |
| Machine Age | mls | Client Info | | 635284 | 604428 | 578367 |
| Oil Age | mls | Client Info | | 30856 | 26062 | 22839 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 33 | 31 | 55 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 3 | 3 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 14 | 17 | 18 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 4 | 5 | 6 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 2 | 3 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 66 | 60 | 56 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 1119 | 967 | 886 |
| Calcium | ppm | ASTM D5185m | | 1311 | 1123 | 1198 |
| Phosphorus | ppm | ASTM D5185m | | 1148 | 991 | 1018 |
| Zinc | ppm | ASTM D5185m | | 1477 | 1230 | 1239 |
| Sulfur | ppm | ASTM D5185m | | 2949 | 2857 | 2650 |
| CONTAMINAN | TS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 8 | 8 | 8 |
| Sodium | ppm | ASTM D5185m | | 3 | 4 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 2 | 3 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >3 | 1.1 | 0.7 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.3 | 10.9 | 10.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.5 | 23.0 | 22.6 |
| FLUID DEGRAD | DATION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.5 | 19.6 | 19.1 |
| | | | | | | |



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

Certificate L2367

Laboratory