

OIL ANALYSIS REPORT

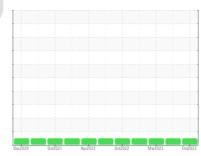
Sample Rating Trend

NORMAL



Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (9 GAL)

SAMPLE INFORMATION method





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

| | | method | iiiiii/base | current | TIIStOLA | THSTOLYZ |
|---------------------------|-------------------|-----------------------|-------------|-----------------|------------------|------------------|
| Sample Number | | Client Info | | PCA0106025 | PCA0095337 | PCA0090439 |
| Sample Date | | Client Info | | 23 Oct 2023 | 21 Apr 2023 | 03 Mar 2023 |
| Machine Age | hrs | Client Info | | 16392 | 15962 | 15636 |
| Oil Age | hrs | Client Info | | 970 | 326 | 222 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATI | ON | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >120 | 7 | 6 | 5 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 1 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 1 | 2 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 2 | 3 | 3 |
| Barium | ppm | ASTM D5185m | 0 | 4 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 65 | 60 | 61 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 908 | 981 | 957 |
| Calcium | ppm | ASTM D5185m | 1070 | 1066 | 1060 | 1077 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1073 | 1035 | 1012 |
| Zinc | ppm | ASTM D5185m | 1270 | 1194 | 1270 | 1278 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3139 | 3690 | 3689 |
| CONTAMINAN | TS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 4 | 3 | 4 |
| Sodium | ppm | ASTM D5185m | | <1 | 5 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | <1 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >4 | 0.2 | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.1 | 8.8 | 6.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.5 | 18.6 | 18.6 |
| | | | 11 1.0 | | | |
| FLUID DEGRAD | ATION | method | limit/base | current | history1 | history2 |
| FLUID DEGRAD Oxidation | ATION Abs/.1mm | method *ASTM D7414 | limit/base | current 16.0 | history1 16.8 | history2 14.0 |



13 Abnormal

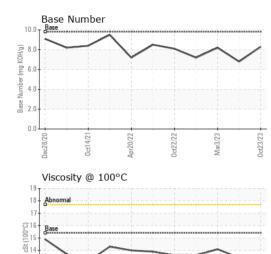
12

Dec28/20

0ct14/21

Mar3/23 -

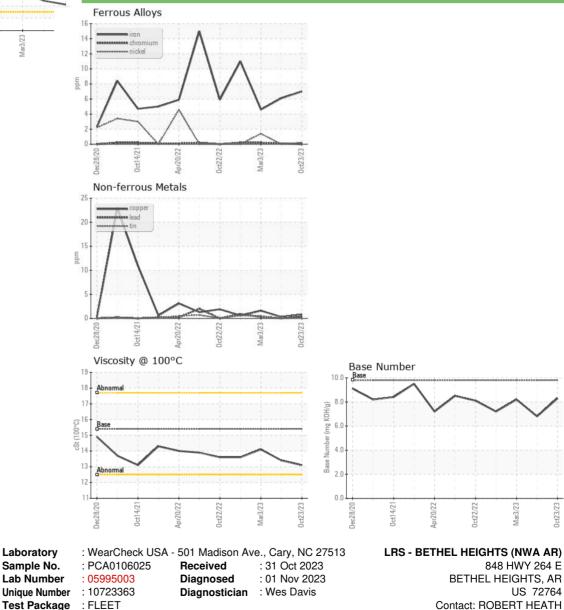
OIL ANALYSIS REPORT



Apr20/22

0ct22/22

| 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 | 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPE | RTIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.1 | 13.4 | 14.1 |
| GRAPHS | | | | | | |





Test Package : FLEET 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)

Certificate L2367

Submitted By: ALSO ORIVANAR ORIHAR ORITOP - JAMIE HAYWORTH

rheath@lrsrecycles.com

T: (479)305-8958

0ct23/23

F: