

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine

Fluid PETRO CANADA DURON SHP 15W40 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a components first oil change.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

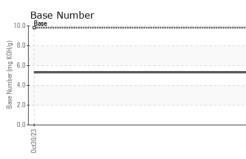
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

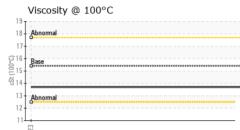
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|---|--|---|--|---|--|--|
| Sample Number | | Client Info | | GFL0059130 | | |
| Sample Date | | Client Info | | 30 Oct 2023 | | |
| | hrs | Client Info | | 17913 | | |
| Oil Age | hrs | Client Info | | 17913 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| | | | line it //e e e e | | la ta ta mud | la i ata muQ |
| | UN | method | limit/base | current | history1 | history2 |
| Fuel | | | >5 | <1.0 | | |
| Glycol | | WC Method | | NEG | | |
| WEAR METALS | \$ | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 24 | | |
| Chromium | ppm | ASTM D5185m | >20 | <1 | | |
| Nickel | ppm | ASTM D5185m | >4 | 0 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | >3 | 0 | | |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | | |
| Lead | ppm | ASTM D5185m | >40 | 3 | | |
| Copper | ppm | ASTM D5185m | >330 | 2 | | |
| Tin | ppm | ASTM D5185m | >15 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | 0 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | <1 | | |
| Barium | ppm | ASTM D5185m | 0 | 0 | | |
| Molybdenum | ppm | ASTM D5185m | 60 | 58 | | |
| Manganese | | | | | | |
| manyanost | ppm | ASTM D5185m | 0 | <1 | | |
| J. | ppm ppm | ASTM D5185m ASTM D5185m | 0 1010 | <1 973 | | |
| ě | ppm ppm ppm | | | | | |
| Magnesium Calcium | ppm ppm | ASTM D5185m | 1010 | 973 | | |
| Magnesium Calcium | ppm ppm ppm | ASTM D5185m ASTM D5185m | 1010 1070 | 973 1091 | | |
| Magnesium Calcium Phosphorus Zinc | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 | 973 1091 937 | | |
| Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 | 973 1091 937 1292 | | |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 2060 limit/base | 973 1091 937 1292 2247 | | |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method | 1010 1070 1150 1270 2060 limit/base | 973 1091 937 1292 2247 current | | |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m | 1010 1070 1150 1270 2060 limit/base >25 | 973 1091 937 1292 2247 current 16 | history1 | history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium | ppm ppm ppm ppm ppm FS ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 2060 limit/base >25 | 973 1091 937 1292 2247 current 16 17 | history1 | history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 | 973 1091 937 1292 2247 current 16 17 2 2 current | history1 | history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 | 973 1091 937 1292 2247 current 16 17 2 2 current 1.4 | history1 history1 | history2 history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 | 973 1091 937 1292 2247 current 16 17 2 current 1.4 9.1 | history1 history1 | history2 history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 | 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >3 >20 >3 >20 | 973 1091 937 1292 2247 <u>current</u> 16 17 2 <u>current</u> 1.4 9.1 22.7 | history1 history1 | history2 history2 history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD | ppm ppm ppm ppm ppm FS ppm ppm ppm ppm % Abs/cm Abs/cm Abs/.1mm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 | 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >3 >20 >30 imit/base | 973 1091 937 1292 2247 current 16 17 2 current 1.4 9.1 22.7 current | history1 history1 history1 history1 | history2 history2 |
| Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 | 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >3 >20 >3 >20 | 973 1091 937 1292 2247 <u>current</u> 16 17 2 <u>current</u> 1.4 9.1 22.7 | history1 history1 | history2 history2 history2 |

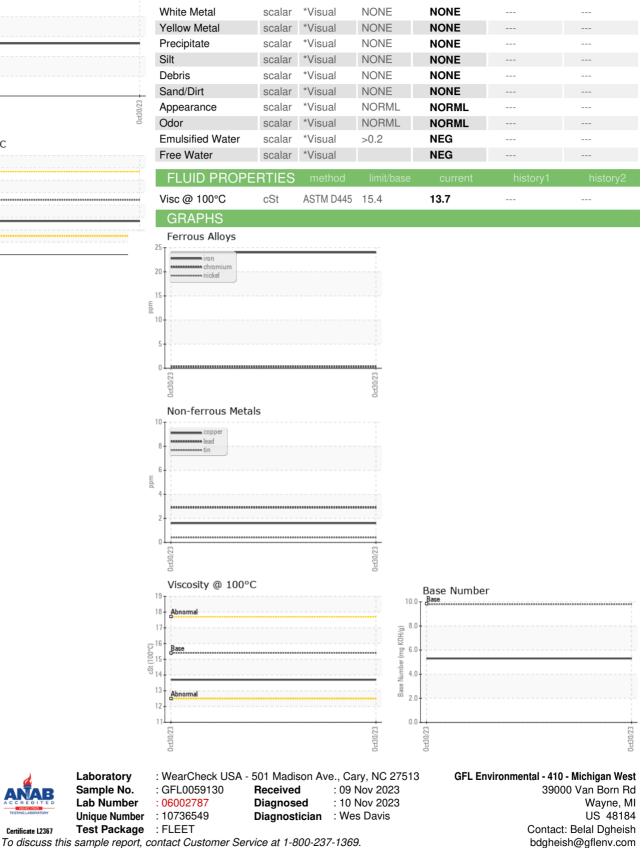


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VISUAL







* - 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

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