

OIL ANALYSIS REPORT



Machine Id 221507 Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

Metal levels are typical for a new component breaking in.

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 INFORI | MATION | method | limit/base | current | history1 | history2 |
|---|--|--|---|--|--|--|
| Sample Number | | Client Info | | PCA0121697 | PCA0093162 | |
| Sample Date | | Client Info | | 02 May 2024 | 06 May 2023 | |
| Machine Age | mls | Client Info | | 46611 | 26235 | |
| Oil Age | mls | Client Info | | 0 | 26235 | |
| Oil Changed | | Client Info | | Changed | Changed | |
| Sample Status | | | | NORMAL | NORMAL | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | |
| Water | | WC Method | >0.2 | NEG | NEG | |
| Glycol | | WC Method | | NEG | NEG | |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 41 | 94 | |
| Chromium | ppm | ASTM D5185m | >20 | 1 | 3 | |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >20 | 20 | 35 | |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | |
| Copper | ppm | ASTM D5185m | >330 | 8 | 29 | |
| Tin | ppm | ASTM D5185m | >15 | 3 | 4 | |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| | ppm | | | U | 0 | |
| ADDITIVES | PPIII | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | | limit/base | - | - | history2 |
| | | method | | current | history1 | |
| Boron | ppm | method ASTM D5185m | 2 | current | history1 42 | |
| Boron Barium | ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 | current 10 1 | history1 42 0 | |
| Boron Barium Molybdenum | ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 | current 10 1 67 | history1 42 0 30 | |
| Boron Barium Molybdenum Manganese | ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 | current 10 1 67 2 | history1 42 0 30 9 | |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 | current 10 1 67 2 853 | history1 42 0 30 9 531 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 | current 10 1 67 2 853 1259 | history1 42 0 30 9 531 1852 805 1045 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 | current 10 1 67 2 853 1259 1035 | history1 42 0 30 9 531 1852 805 1045 3222 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 | current 10 1 67 2 853 1259 1035 1244 3481 current | history1 42 0 30 9 531 1852 805 1045 3222 history1 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 950 1050 995 1180 2600 limit/base | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 950 1050 995 1180 2600 limit/base >25 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 950 1050 995 1180 2600 limit/base | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 950 1050 995 1180 2600 limit/base >25 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 current 0.8 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 history1 0.8 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm TS | method ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 current 0.8 10.8 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 history1 0.8 12.3 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 current 0.8 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 history1 0.8 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 current 0.8 10.8 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 history1 0.8 12.3 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 50 1050 955 1050 995 1180 2600 imit/base >25 imit/base >3 >20 >3 >30 | current 10 1 67 2 853 1259 1035 1244 3481 current 4 3 35 current 0.8 10.8 21.7 | history1 42 0 30 9 531 1852 805 1045 3222 history1 10 7 82 history1 0.8 12.3 24.6 | history2 history2 history2 |



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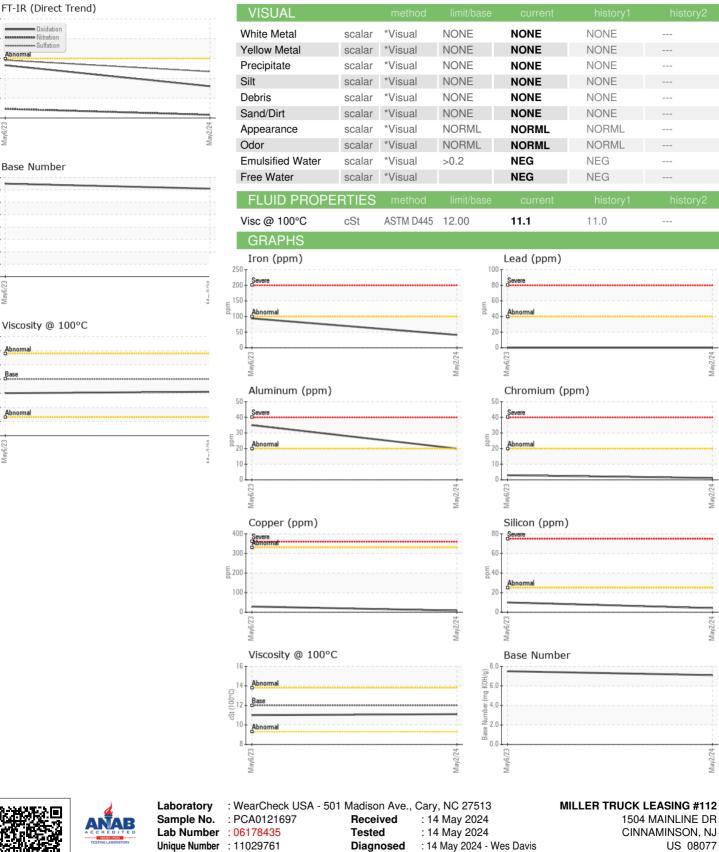
15 14

13 cSt (100°C) Ba

Mav6/23

Abs

OIL ANALYSIS REPORT



Test Package : MOB 1 (Additional Tests: TBN)

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 12367

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