

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 465148

Component Diesel Engine

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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

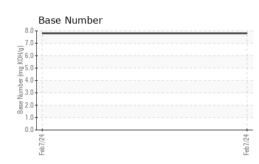
Fluid Condition

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

| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
|---|--|---|---|---|--|--|
| Sample Number | | Client Info | | PCA0100498 | | |
| Sample Date | | Client Info | | 07 Feb 2024 | | |
| Machine Age | mls | Client Info | | 249761 | | |
| Oil Age | mls | Client Info | | 9376 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | | |
| Water | | WC Method | >0.2 | NEG | | |
| Glycol | | WC Method | | NEG | | |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 23 | | |
| Chromium | ppm | ASTM D5185m | >20 | 1 | | |
| Nickel | ppm | ASTM D5185m | >4 | <1 | | |
| Titanium | ppm | ASTM D5185m | | 1 | | |
| Silver | ppm | ASTM D5185m | >3 | 0 | | |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | | |
| Lead | ppm | ASTM D5185m | >40 | 1 | | |
| Copper | ppm | ASTM D5185m | >330 | 1 | | |
| Tin | ppm | ASTM D5185m | >15 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| Cadmium | ppm | ASTM D5185m | | <1 | | |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | method ASTM D5185m | limit/base | current <1 | history1 | history2 |
| | ppm ppm | | | | | |
| Boron | | ASTM D5185m | 2 | <1 | | |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | 2 0 | <1 34 | | |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 | <1 34 49 | | |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 | <1 34 49 <1 | | |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 | <1 34 49 <1 721 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 | <1 34 49 <1 721 886 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 9 950 1050 995 | <1 34 49 <1 721 886 870 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 | <1 34 49 <1 721 886 870 998 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 | <1 34 49 <1 721 886 870 998 2723 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 | <1 34 49 <1 721 886 870 998 2723 current | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm TS | 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 limit/base >25 | <1 34 49 <1 721 886 870 998 2723 2723 current 5 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m 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 limit/base >25 | <1 34 49 <1 721 886 870 998 2723 2723 current 5 4 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 imit/base >25 >20 | <1 34 49 <1 721 886 870 998 2723 current 5 4 2 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 | <1 34 49 <1 721 886 870 998 2723 current 5 4 2 2 current | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3 | <1 34 49 <1 721 886 870 998 2723 current 5 4 2 2 current 1 | history1 history1 | 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 | ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20 | <1 34 49 <1 721 886 870 998 2723 current 5 4 2 2 current 1 1 11.2 | history1 history1 | 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 | ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20 | <1 34 49 <1 721 886 870 998 2723 current 5 4 2 2 current 1 11.2 21.0 | history1 history1 history1 | history2 history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm | ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 | 2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30 | <1 34 49 <1 721 886 870 998 2723 Current 5 4 2 Current 1 11.2 21.0 Current | history1 history1 history1 history1 | history2 history2 history2 history2 |

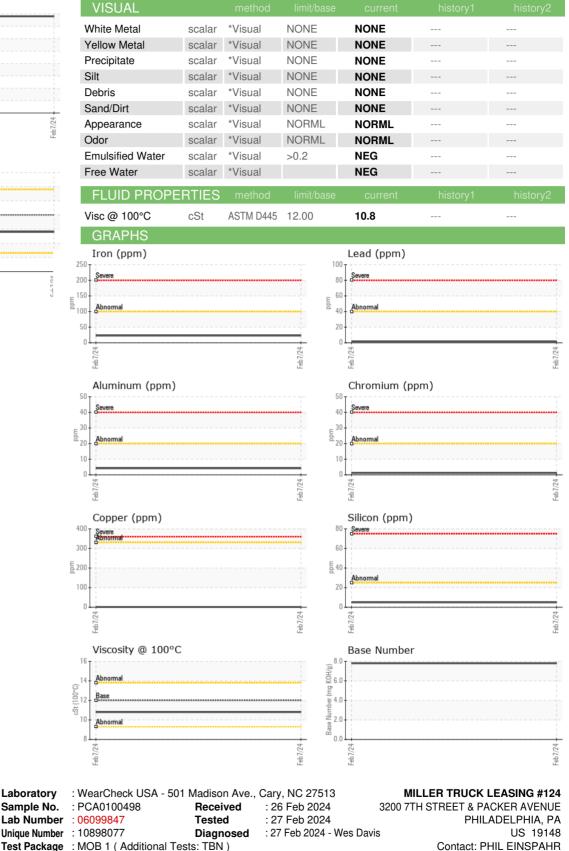


OIL ANALYSIS REPORT



Viscosity @ 100°C 15 14 Ba





Unique Number : 10898077 Test Package : MOB 1 (Additional Tests: TBN) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. peinspahr@millertransgroup.com * - 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)

Laboratory

Sample No.

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