

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 130119

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

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.

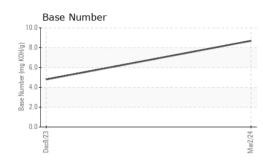
Fluid Condition

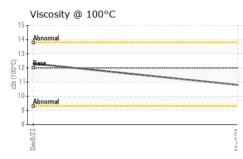
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| TS) | | | Dec2023 | Mar2024 | | |
|---|--|---|---|---|---|--|
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PCA0116933 | PCA0105810 | |
| Sample Date | | Client Info | | 02 Mar 2024 | 08 Dec 2023 | |
| Machine Age | mls | Client Info | | 22359 | 12367 | |
| Oil Age | mls | Client Info | | 10000 | 0 | |
| Oil Changed | | Client Info | | Changed | N/A | |
| 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 |
| ron | ppm | ASTM D5185m | >100 | 28 | 53 | |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | |
| Aluminum | ppm | ASTM D5185m | >20 | 5 | 9 | |
| _ead | ppm | ASTM D5185m | >40 | 1 | 0 | |
| Copper | ppm | ASTM D5185m | >330 | 19 | 0 | |
| Гin | ppm | ASTM D5185m | >15 | 2 | 0 | |
| /anadium | ppm | ASTM D5185m | | <1 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 2 | 17 | 0 | |
| | | ASTM D5185m | 0 | 2 | 4 | |
| Barium | ppm | ASTIVI DJ TOJITI | | - | | |
| | ppm ppm | ASTM D5185m | 50 | 57 | 70 | |
| Molybdenum | | | 50 0 | | | |
| Molybdenum Manganese | ppm | ASTM D5185m | | 57 | 70 | |
| Molybdenum Manganese Magnesium | ppm ppm | ASTM D5185m ASTM D5185m | 0 | 57 <1 | 70 0 | |
| Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 | 57 <1 813 | 70 0 962 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 1050 | 57 <1 813 1172 | 70 0 962 1308 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 1050 995 | 57 <1 813 1172 1014 | 70 0 962 1308 1149 | |
| 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 | 0 950 1050 995 1180 | 57 <1 813 1172 1014 1208 | 70 0 962 1308 1149 1350 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 1050 995 1180 2600 | 57 <1 813 1172 1014 1208 3296 | 70 0 962 1308 1149 1350 3500 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 1050 995 1180 2600 limit/base | 57 <1 813 1172 1014 1208 3296 current | 70 0 962 1308 1149 1350 3500 history1 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 950 1050 995 1180 2600 limit/base | 57 <1 813 1172 1014 1208 3296 current 11 | 70 0 962 1308 1149 1350 3500 history1 <1 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | 0 950 1050 995 1180 2600 limit/base >25 | 57 <1 813 1172 1014 1208 3296 current 11 0 | 70 0 962 1308 1149 1350 3500 history1 <1 0 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | 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 | 0 950 1050 995 1180 2600 limit/base >25 >20 | 57 <1 813 1172 1014 1208 3296 current 11 0 3 | 70 0 962 1308 1149 1350 3500 history1 <1 0 6 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 0 950 1050 995 1180 2600 limit/base >25 >20 | 57 <1 813 1172 1014 1208 3296 current 11 0 3 Current | 70 0 962 1308 1149 1350 3500 history1 <1 0 6 history1 | history2 history2 |
| 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 | 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 | 57 <1 813 1172 1014 1208 3296 current 11 0 3 current 0.4 | 70 0 962 1308 1149 1350 3500 history1 <1 0 6 history1 1.1 | history2 history2 |
| 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 | 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 | 57 <1 813 1172 1014 1208 3296 current 11 0 3 current 0.4 7.3 | 70 0 962 1308 1149 1350 3500 history1 <1 0 6 history1 1.1 1.1 14.6 | history2 history2 |
| Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30 | 57 <1 813 1172 1014 1208 3296 current 11 0 3 current 0.4 7.3 18.9 | 70 0 962 1308 1149 1350 3500 history1 <1 0 6 <u>history1</u> 1.1 1.1 14.6 28.0 | history2 history2 history2 |



OIL ANALYSIS REPORT









Unique Number : 10938680 Test Package : MOB 1 (Additional Tests: TBN) Contact: ED DAVIS Certificate L2367 edavis@millertransgroup.com 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)

Laboratory

Sample No.

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