

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 2324358

Z3Z4358 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 components first oil change.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

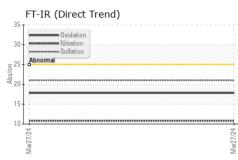
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

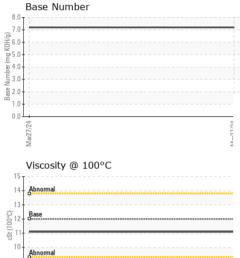
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|--|---|--|--|--|--|--|
| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PCA0111412 | | |
| Sample Date | | Client Info | | 27 Mar 2024 | | |
| Machine Age | mls | Client Info | | 31312 | | |
| Oil Age | mls | Client Info | | 31312 | | |
| Oil Changed | | Client Info | | Changed | | |
| 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 | 33 | | |
| Chromium | ppm | | >20 | <1 | | |
| Nickel | ppm | ASTM D5185m | >4 | 0 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | >3 | <1 | | |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | | |
| Lead | ppm | | >40 | 0 | | |
| Copper | ppm | ASTM D5185m | >330 | 3 | | |
| Tin | ppm | ASTM D5185m | >15 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| Cadmium | | ASTM D5185m | | 0 | | |
| Oddinidini | ppm | ASTIVI DJ10JIII | | U | | |
| ADDITIVES | ppm | method | limit/base | current | history1 | history2 |
| | ppm | | limit/base | - | | |
| ADDITIVES | | method | | current | history1 | history2 |
| ADDITIVES Boron | ppm | method ASTM D5185m | 2 | current 0 | history1 | history2 |
| ADDITIVES Boron Barium | ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 | current 0 0 | history1 | history2 |
| ADDITIVES Boron Barium Molybdenum | ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 | current 0 0 72 | history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese | ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 | current 0 0 72 1 | history1 | history2 |
| ADDITIVES 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 0 0 72 1 963 | history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium | 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 0 0 72 1 963 1229 | history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm 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 995 | Current 0 0 72 1 963 1229 1035 | history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 | current 0 0 72 1 963 1229 1035 1230 | history1 | history2 |
| ADDITIVES 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 0 0 72 1 963 1229 1035 1230 3327 | history1 | history2 |
| ADDITIVES 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 0 0 72 1 963 1229 1035 1230 3327 current | history1 history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm ppm TS | 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 0 0 72 1 963 1229 1035 1230 3327 current 5 | history1 history1 | history2 history2 |
| ADDITIVES 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 0 0 72 1 963 1229 1035 1230 3327 current 5 1 | history1 history1 | history2 |
| ADDITIVES 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 0 950 1050 995 1180 2600 limit/base >25 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 | history1 history1 | history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 current | history1 history1 history1 history1 history1 | history2 history2 history2 history2 |
| ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | method ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 current 0.7 | history1 history1 history1 history1 | history2 history2 history2 history2 history2 |
| ADDITIVES 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 TS ppm ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 i mit/base >25 >20 i mit/base >3 >20 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 current 0.7 10.8 | history1 history1 history1 history1 history1 | history2 history2 history2 |
| ADDITIVES 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 D7844 *ASTM D7624 *ASTM D7415 method | 2 0 0 50 0 950 1050 995 1180 2600 2600 255 20 220 20 20 33 20 30 20 30 20 30 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 current 0.7 10.8 21.0 current | history1 history1 history1 history1 history1 </th <th>history2 history2 history2 </th> | history2 history2 history2 |
| ADDITIVES 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 TS ppm ppm ppm | method ASTM D5185m ASTM D5185m | 2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20 >30 | current 0 0 72 1 963 1229 1035 1230 3327 current 5 1 4 current 0.7 10.8 21.0 | history1 history1 history1 history1 history1 history1 | history2 history2 history2 history2 history2 history2 |



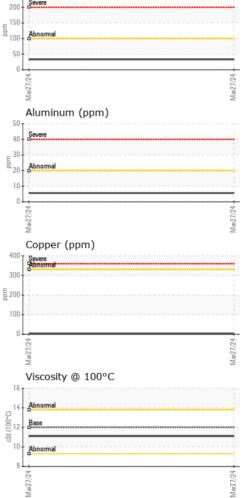
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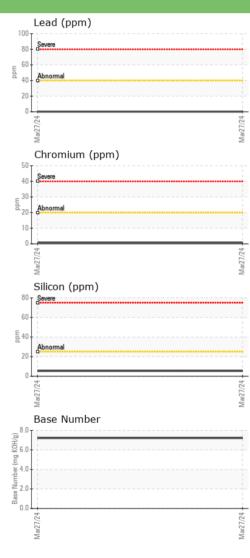
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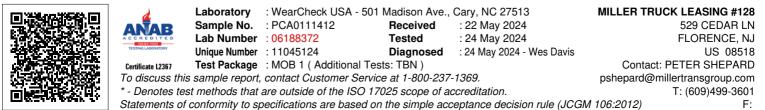




VISUAL NONE White Metal *Visual NONE scalar Yellow Metal *Visual NONE NONE scalar NONE Precipitate scalar *Visual NONE Silt scalar *Visual NONE NONE Debris *Visual NONE NONE scalar Sand/Dirt NONE NONE scalar *Visual NORML Appearance scalar *Visual NORML Odor *Visual NORML NORML scalar **Emulsified Water** scalar *Visual >0.2 NEG Free Water scalar *Visual NEG **FLUID PROPERTIES** Visc @ 100°C cSt ASTM D445 12.00 11.1 GRAPHS Iron (ppm) Lead (ppm) 250 100 200 80







Contact/Location: PETER SHEPARD - MILFLO