

OIL ANALYSIS REPORT

NORMAL



Supermarket - Tractor FREIGHTLINER 107A1895

Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

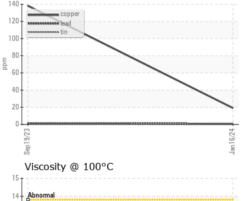


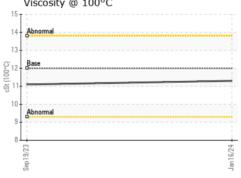
| Sample Number Sample Date | | Client Info | | PCA0116481 16 Jan 2024 | PCA0104812 19 Sep 2023 | |
|---|--|---|---|---|---|-------------------|
| Machine Age | mls | Client Info | | 58335 | 37780 | |
| Oil Age | mls | Client Info | | 20555 | 10105 | |
| Oil Changed | | Client Info | | Changed | Changed | |
| 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 METALS method | | | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >80 | 21 | 29 | |
| Chromium | ppm | ASTM D5185m | >5 | 3 | 3 | |
| Nickel | ppm | ASTM D5185m | >2 | <1 | <1 | |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | |
| Silver | ppm | ASTM D5185m | >3 | 0 | 1 | |
| Aluminum | ppm | ASTM D5185m | >30 | 43 | 52 | |
| Lead | ppm | ASTM D5185m | >30 | <1 | 2 | |
| Copper | ppm | ASTM D5185m | >150 | 19 | 138 | |
| Tin | ppm | ASTM D5185m | >5 | 1 | 2 | |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | |
| A D D (T) (T) | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | ASTM D5185m | 2 | 6 | 8 | history2 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | 2 | 6 0 | 8 | |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 | 6 0 62 | 8 0 56 | |
| Boron Barium Molybdenum Manganese | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 | 6 0 62 <1 | 8 0 56 2 | |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 | 6 0 62 <1 904 | 8 0 56 2 882 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 | 6 0 62 <1 904 1106 | 8 0 56 2 882 1198 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 | 6 0 62 <1 904 1106 949 | 8 0 56 2 882 1198 1034 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | 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 0 950 1050 995 1180 | 6 0 62 <1 904 1106 949 1218 | 8 0 56 2 882 1198 1034 1227 | |
| 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 ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 | 6 0 62 <1 904 1106 949 | 8 0 56 2 882 1198 1034 1227 2857 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 | 6 0 62 <1 904 1106 949 1218 3128 | 8 0 56 2 882 1198 1034 1227 2857 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 | 6 0 62 <1 904 1106 949 1218 3128 current 6 | 8 0 56 2 882 1198 1034 1227 2857 history1 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base | 6 0 62 <1 904 1106 949 1218 3128 current 6 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base | 6 0 62 <1 904 1106 949 1218 3128 current 6 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 | 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 ppm ppm | ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3 | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 85 current 0.5 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 history1 0.6 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm | ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 >20 limit/base >3 >20 | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 85 current 0.5 7.1 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 history1 0.6 7.5 | 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 ppm ppm | ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3 | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 85 current 0.5 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 history1 0.6 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm | ASTM D5185m method *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145 | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 >20 limit/base >3 >20 | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 85 current 0.5 7.1 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 history1 0.6 7.5 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm | ASTM D5185m method *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145 | 2 0 50 0 950 1050 995 1180 2600 limit/base >20 >20 >3 >20 >30 limit/base | 6 0 62 <1 904 1106 949 1218 3128 current 6 4 85 current 0.5 7.1 19.2 | 8 0 56 2 882 1198 1034 1227 2857 history1 5 3 133 history1 0.6 7.5 20.6 | history2 history2 |

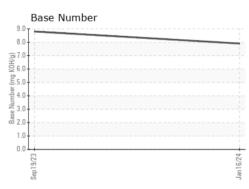


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Certificate L2367

Laboratory Sample No.

Lab Number Unique Number

: PCA0116481 : 06071013 : 10847690 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 25 Jan 2024 Recieved Diagnosed : 26 Jan 2024

: Wes Davis Diagnostician

Transervice - Shop 1072 - Supermarket-Elizabeth

505 Division Street Elizabeth, NJ US 07207 Contact: Normand Brizak

nbrizak@transervice.com T:

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)

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