

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 707408

Component Diesel Engine

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.

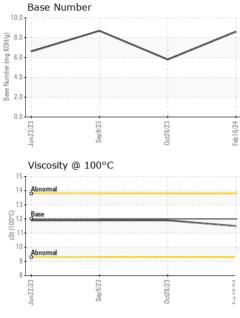
Fluid Condition

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

| TS) | | Jun 202 | 3 Sep2023 | 0ct2023 Fe | 62024 | |
|--------------------------|--------------------|-------------|------------|-----------------|------------------|------------------|
| SAMPLE INFOR | MATION | method | limit/base | | history1 | history2 |
| Sample Number | | Client Info | | PCA0114571 | PCA0108356 | PCA0105304 |
| Sample Date | | Client Info | | 16 Feb 2024 | 26 Oct 2023 | 09 Sep 2023 |
| Machine Age | mls | Client Info | | 4473 | 594133 | 567770 |
| Oil Age | mls | Client Info | | 4473 | 594133 | 567770 |
| Oil Changed | | Client Info | | Changed | Changed | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Nater | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METAL | _S | method | limit/base | current | history1 | history2 |
| ron | ppm | ASTM D5185m | >100 | 7 | 18 | 6 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Fitanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 8 | 5 |
| ead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 1 | 4 | 2 |
| īn | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| /anadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 2 | 10 | <1 | 2 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Nolybdenum | ppm | ASTM D5185m | 50 | 54 | 62 | 64 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 950 | 890 | 921 | 944 |
| Calcium | ppm | ASTM D5185m | 1050 | 1071 | 1216 | 1216 |
| Phosphorus | ppm | ASTM D5185m | 995 | 1103 | 1016 | 1086 |
| Zinc | ppm | ASTM D5185m | 1180 | 1272 | 1288 | 1327 |
| Sulfur | ppm | ASTM D5185m | 2600 | 3246 | 2751 | 3760 |
| CONTAMINAN | NTS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 4 | 5 | 4 |
| Sodium | ppm | ASTM D5185m | | <1 | 2 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 1 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.8 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.3 | 10.2 | 7.0 |
| | Abs/.1mm | *ASTM D7415 | >30 | 17.8 | 23.5 | 18.5 |
| Sulfation | | | | | | |
| Sulfation FLUID DEGRA | DATION | method | limit/base | current | history1 | history2 |
| | DATION Abs/.1mm | | limit/base | current 13.8 | history1 19.6 | history2 14.0 |



OIL ANALYSIS REPORT



| | VISUAL | | method | limit/base | current | history1 | history2 | |
|---|--|--------|-----------|--|--------------|--|----------|--|
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE | |
| \sim | Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE | |
| | Silt | scalar | *Visual | NONE | NONE | NONE | NONE | |
| | Debris | scalar | *Visual | NONE | NONE | NONE | NONE | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE | |
| 0ct26/23 - Feb 16/24 - | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML | |
| 0ct26/23 Feb16/24 | Odor | | *Visual | NORML | NORML | NORML | NORML | |
| | Emulsified Water | | *Visual | >0.2 | NEG | NEG | NEG | |
| | Free Water | | *Visual | | NEG | NEG | NEG | |
| | FLUID PROPE | RTIES | method | limit/base | current | history1 | history2 | |
| | Visc @ 100°C | cSt | ASTM D445 | 12.00 | 11.5 | 11.9 | 11.9 | |
| | GRAPHS | | | | | | | |
| 1 | Iron (ppm) | | | 10 | Lead (ppm |) | | |
| /23 - | 200 - Severe | | | 8 | 0 - Severe | | | |
| Oct26/23 | E 150 | | | 6 | 0- | | | |
| | E 150 100 - Abnormal | | | E 4 | Abnormal | | | |
| | 50- | | | 2 | 0 | | | |
| | 0 | | m | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | m | |
| | Jun22/23 Sep9/23 | | 0ct26/23 | Feb16/24 | Jun22/23 | Sep 9/23 | 0ct26/23 | |
| | - | | 0 | Fel | | | 00 | |
| | Aluminum (ppm) | | | 5 | 1 | (ppm) | | |
| | 40 - Severe | | | 4 | | | | |
| | E 30 20 - Abnormal | | | ³ و ³ | 0 | | | |
| | 20 - Abnormal | | | ² 2 | 0 - Abnormal | | | |
| | 10- | | | 1 | 0- | | | |
| | 0 | | | | | 27 | | |
| | un22/23 Sep9/23 | | 0ct26/23 | Feb16/24 | Jun22/23 | Sep9/23 | 0ct26/23 | |
| | Copper (ppm) | | 0 | LE. | Silicon (ppr | | 0 | |
| | 400 Severe | | | 8 | | | | |
| | 300 - | | | 6 | 0 - | | | |
| | 툍 200 - | | | 톱 4 | 0 | | | |
| | 100 | | | 2 | Abnormal | | | |
| | | | | 2 | | | | |
| | un22/23 | | 6/23 - | 6/24 | 2/23 | Sep 9/23 + | 6/23 - | |
| | 7 | | 0ct26/23 | Feb16/24 | Jun22/23 | | 0ct26/23 | |
| | Viscosity @ 100°C | | | | Base Numb | per | | |
| | 14 Abnormal | | | 6, KOH/ | 0- | | | |
| | 0 0 12 73 | | | <u> </u> | 0 | | | |
| | | | | (b) HOX (b) HOX (b) HOX (b) HOX (b) HOX (b) HOX (c) HO | 0 | | | |
| | 10 Abnormal | | 1 | ase 2. | 0 | | | |
| | 3 | | | | | 23 | 53+ | |
| | Jun 22/23 Sep 9/23 | | 0ct26/23 | Feb16/24 | Jun22/23 | Sep 9/23 | 0ct26/23 | |
| Laboratory Sample No. Lab Number Unique Number Test Package | : WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0114571 Received : 04 Mar 2024 : 06107118 Tested : 04 Mar 2024 | | | | | MILLER TRUCK LEASING #1 2196 BENNETT ROA PHILADELPHIA, F | | |

Contact/Location: ROSTY VITER - MILPHINE