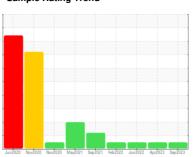


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



DT692

Component **Diesel Engine**

Fluid

PETRO CANADA DURON SHP 10W30 (36 hrs)

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.

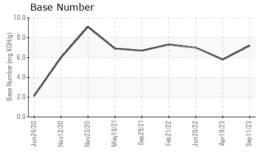
Fluid Condition

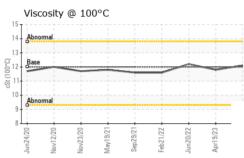
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| hrs) | | Jun2020 No | v2020 Nov2020 May2021 | Sep2021 Feb2022 Jun2022 Apr202 | 23 Sep2023 | | |
|---|----------|-------------|-----------------------|--------------------------------|-------------|-------------|--|
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 | |
| Sample Number | | Client Info | | PCA0104218 | PCA0095700 | PCA0074133 | |
| Sample Date | | Client Info | | 11 Sep 2023 | 19 Apr 2023 | 20 Jun 2022 | |
| Machine Age | mls | Client Info | | 226306 | 201359 | 131130 | |
| Oil Age | mls | Client Info | | 226306 | 201359 | 100051 | |
| Oil Changed | | Client Info | | Changed | Changed | Changed | |
| Sample Status | | | | NORMAL | NORMAL | NORMAL | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 | |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 | |
| Glycol | | WC Method | | NEG | NEG | NEG | |
| WEAR METAL | .S | method | limit/base | current | history1 | history2 | |
| Iron | ppm | ASTM D5185m | >100 | 36 | 42 | 35 | |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 | |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 | |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 | |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 | |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 9 | 10 | |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 | |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | 3 | |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 | |
| Antimony | ppm | ASTM D5185m | | | | | |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 | |
| Boron | ppm | ASTM D5185m | 2 | 3 | 5 | 3 | |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 | |
| Molybdenum | ppm | ASTM D5185m | 50 | 67 | 66 | 65 | |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 | |
| Magnesium | ppm | ASTM D5185m | 950 | 1022 | 987 | 888 | |
| Calcium | ppm | ASTM D5185m | 1050 | 1247 | 1195 | 1115 | |
| Phosphorus | ppm | ASTM D5185m | 995 | 1079 | 1022 | 1027 | |
| Zinc | ppm | ASTM D5185m | 1180 | 1376 | 1292 | 1231 | |
| Sulfur | ppm | ASTM D5185m | 2600 | 3469 | 3378 | 2556 | |
| CONTAMINAN | ITS | method | limit/base | current | history1 | history2 | |
| Silicon | ppm | ASTM D5185m | >25 | 11 | 11 | 9 | |
| Sodium | ppm | ASTM D5185m | | 2 | 2 | 0 | |
| Potassium | ppm | ASTM D5185m | >20 | 8 | 8 | 20 | |
| INFRA-RED | | method | limit/base | current | history1 | history2 | |
| Soot % | % | *ASTM D7844 | >3 | 1 | 0.9 | 1 | |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.2 | 9.2 | 10.5 | |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.4 | 19.9 | 24.0 | |
| FLUID DEGRADATION method limit/base current history1 history2 | | | | | | | |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.8 | 16.7 | 20.7 | |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 7.2 | 5.8 | 7.0 | |
| () | 0 - 9 | | | | | | |



OIL ANALYSIS REPORT

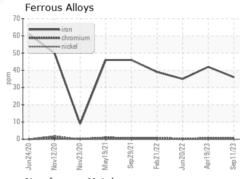


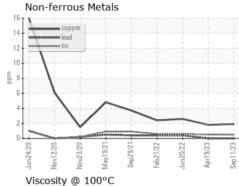


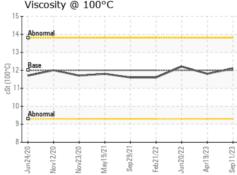
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | 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 |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

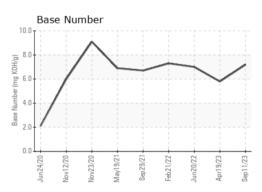
| FLUID PROPERTIES | | method | | | | history2 |
|------------------|-----|-----------|-------|------|------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | 12.1 | 11.8 | 12.2 |

GRAPHS













Certificate L2367

Report Id: NWWCOL [WUSCAR] 05958552 (Generated: 09/30/2023 09:37:09) Rev: 1

Laboratory Sample No. Lab Number

: 05958552 Unique Number : 10659765 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0104218 Received : 22 Sep 2023

Diagnosed : 23 Sep 2023 Diagnostician : Wes Davis

NW WHITE & CO - COLUMBIA DIVISION

100 INDEPENDENCE BLVD COLUMBIA, SC

US 29210 Contact: GEORGE EDWARDS

gedwards@nwwhite.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)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Submitted By: Paul Riddick

T:

F: