

OIL ANALYSIS REPORT

Samp

Sample Rating Trend NORMAL



Machine Id 933035 Component Natural Gas Engine

PETRO CANADA DURON SHP 15W40 (5 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

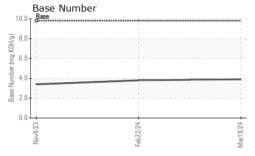
Fluid Condition

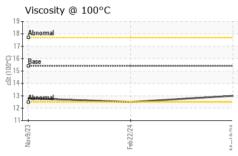
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|)N SHP 15W40 (| GAL) | No | v2023 | Feb 2024 Mar 20 | 124 | |
|------------------|----------|-------------|------------|-----------------|-------------|-------------|
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | GFL0114509 | GFL0103422 | GFL0092490 |
| Sample Date | | Client Info | | 19 Mar 2024 | 22 Feb 2024 | 09 Nov 2023 |
| Machine Age | hrs | Client Info | | 2412 | 2194 | 1315 |
| Oil Age | hrs | Client Info | | 1178 | 879 | 1315 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| ron | ppm | ASTM D5185m | >50 | 46 | 27 | <u>^</u> 70 |
| Chromium | ppm | ASTM D5185m | >5 | 3 | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | 3 | <1 | 2 |
| Titanium | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | | 8 | 5 | 10 |
| _ead | ppm | ASTM D5185m | >40 | 3 | 1 | <1 |
| Copper | ppm | ASTM D5185m | >150 | 10 | 4 | 15 |
| Γin | ppm | ASTM D5185m | >4 | 2 | <1 | 2 |
| /anadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 4 | <1 | 5 |
| Barium | ppm | ASTM D5185m | 0 | 1 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185m | 60 | 89 | 67 | 55 |
| Manganese | ppm | ASTM D5185m | 0 | 3 | 2 | 11 |
| Magnesium | ppm | ASTM D5185m | 1010 | 1039 | 839 | 825 |
| Calcium | ppm | ASTM D5185m | 1070 | 1326 | 1061 | 951 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1090 | 892 | 818 |
| Zinc | ppm | ASTM D5185m | 1270 | 1364 | 1115 | 1061 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2481 | 2301 | 2196 |
| CONTAMINAN | ITS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 9 | 6 | 19 |
| Sodium | ppm | ASTM D5185m | | 7 | 8 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 12 | 6 | 16 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | | 0 | 0.1 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.9 | 9.7 | 10.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.1 | 21.2 | 23.1 |
| FLUID DEGRA | NOITAC | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.9 | 15.2 | 20.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 3.9 | 3.8 | 3.4 |
| | | | | | | |



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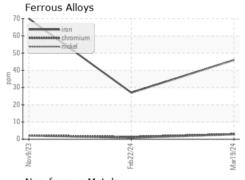


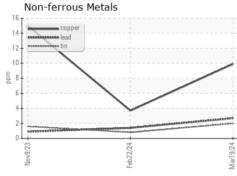


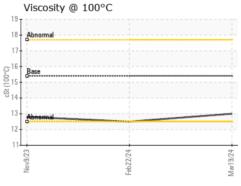
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | 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 | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

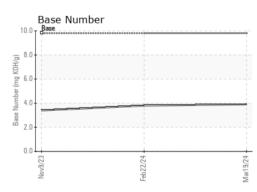
| FLUID PROPE | RHES | method | | | | history2 |
|--------------|------|-----------|------|------|------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.0 | 12.5 | 12.8 |

GRAPHS













Laboratory

Sample No. Lab Number : 06126908 Unique Number: 10941059

: GFL0114509

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Mar 2024 **Tested** : 26 Mar 2024

Diagnosed : 26 Mar 2024 - Wes Davis

GFL Environmental - 095 - Atlanta West

2699 Cochran Industrial Blvd Douglasville, GA US 30127-1332

Contact: Darrell Welch darrell.welch@gflenv.com T: (800)207-6618

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)