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|-----------------|-----------------|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | ABNORMAL |

Machine Id
833117C
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (29 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | GFL0117973 | --- | --- |
| Sample Date | | Client Info | | 09 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 1187 | --- | --- |
| Oil Age | hrs | Client Info | | 600 | --- | --- |
| Filter Age | hrs | Client Info | | 600 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >90 | 49 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Nickel | ppm | ASTM D5185m | >2 | 2 | --- | --- |
| Titanium | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 5 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | 3 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 20 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 3 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

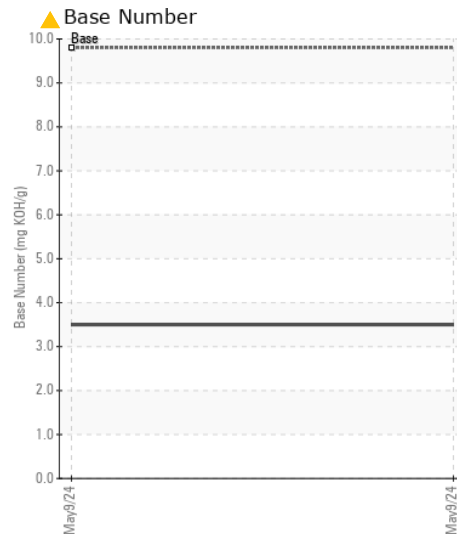
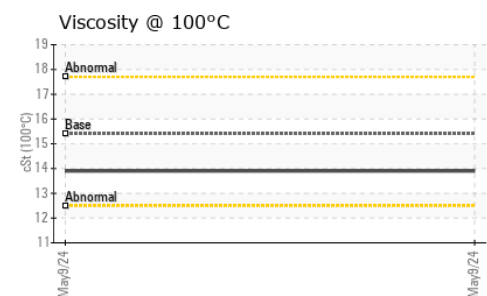
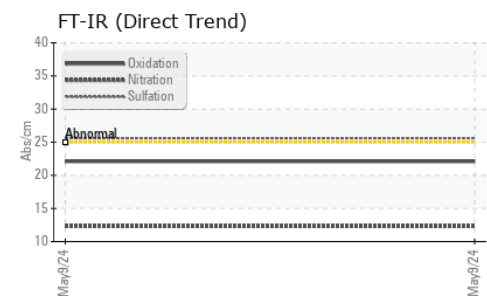
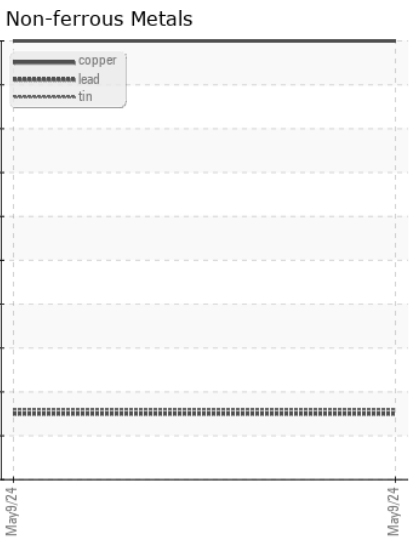
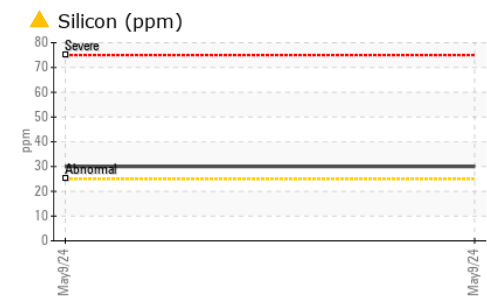
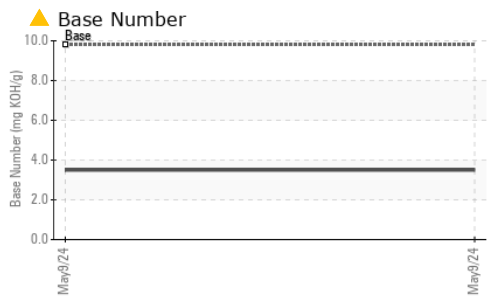
Elemental level of silicon (Si) above normal indicating ingress of seal material.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | ▲ 30 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 4 | --- | --- |
| Fuel | | WC Method | >3.0 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >6 | 0 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 12.3 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 25.6 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | --- | --- |

FLUID CONDITION

The BN level is low.

| | | | | | | |
|------------------|----------|-------------|------|--------------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 5 | --- | --- |
| Boron | ppm | ASTM D5185m | 0 | 9 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | 5 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 88 | --- | --- |
| Manganese | ppm | ASTM D5185m | 0 | 18 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 999 | --- | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1903 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1038 | --- | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 1269 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 3590 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 22.1 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | ▲ 3.5 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.9 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117973
Lab Number : 06176513
Unique Number : 11022566
Test Package : FLEET
Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 14 May 2024 - Sean Felton

GFL Environmental - 030 - Conway Myrtle Beach
 3010 HWY 378
 Conway, SC
 US 29527
 Contact: ARCILIO RUEZ
 aruiz@gflenv.com

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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F: