



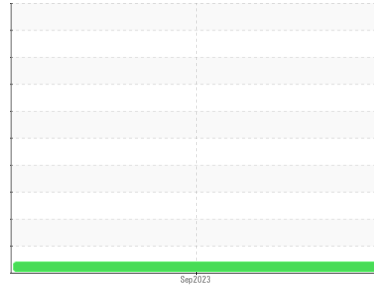
PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

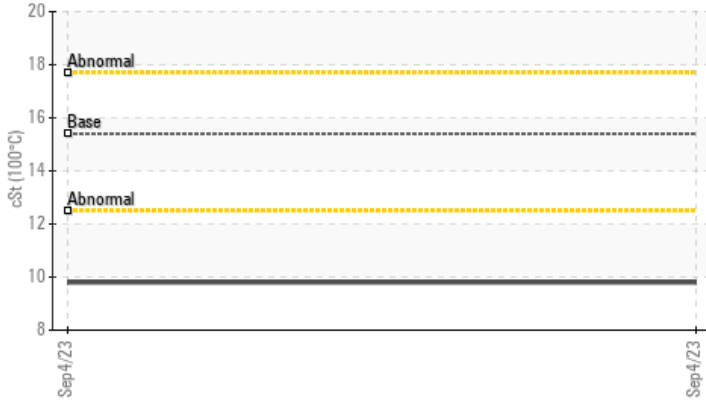


Machine Id
414060
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | ABNORMAL | | --- | --- | | |
|---------------|----------|-----------|------|-------|-----|-----|
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 9.8 | --- | --- |

Customer Id: GFL152
Sample No.: GFL0078660
Lab Number: 05956193
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|------|---------|---------------------------------------------------------------|
| Change Fluid | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |
| Change Filter | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
414060
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. Confirm oil type.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|------------|----------|
| Sample Number | Client Info | GFL0078660 | --- | --- |
| Sample Date | Client Info | 04 Sep 2023 | --- | --- |
| Machine Age | hrs | Client Info | 574 | --- |
| Oil Age | hrs | Client Info | 0 | --- |
| Oil Changed | Client Info | Changed | --- | --- |
| Sample Status | | ABNORMAL | --- | --- |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|------------|------------|----------|----------|
| Glycol | WC Method | NEG | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|------------------|--------------|----------|-----|
| Iron | ppm | ASTM D5185m >120 | 36 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | 2 | --- | --- |
| Nickel | ppm | ASTM D5185m >5 | 1 | --- | --- |
| Titanium | ppm | ASTM D5185m >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | 23 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | 173 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | 3 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|------------------|--------------|----------|-----|
| Boron | ppm | ASTM D5185m 0 | 158 | --- | --- |
| Barium | ppm | ASTM D5185m 0 | <1 | --- | --- |
| Molybdenum | ppm | ASTM D5185m 60 | 118 | --- | --- |
| Manganese | ppm | ASTM D5185m 0 | 4 | --- | --- |
| Magnesium | ppm | ASTM D5185m 1010 | 611 | --- | --- |
| Calcium | ppm | ASTM D5185m 1070 | 1430 | --- | --- |
| Phosphorus | ppm | ASTM D5185m 1150 | 665 | --- | --- |
| Zinc | ppm | ASTM D5185m 1270 | 825 | --- | --- |
| Sulfur | ppm | ASTM D5185m 2060 | 2632 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|------------|----------|-----|
| Silicon | ppm | ASTM D5185m >25 | 60 | --- | --- |
| Sodium | ppm | ASTM D5185m | 5 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 53 | --- | --- |
| Fuel | % | ASTM D3524 >3.0 | 0.4 | --- | --- |

INFRA-RED

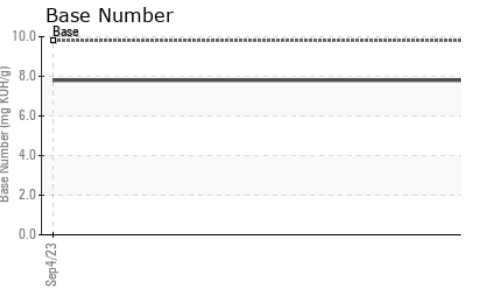
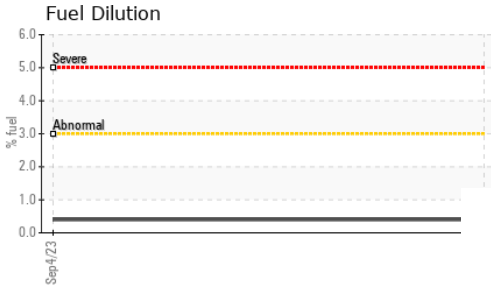
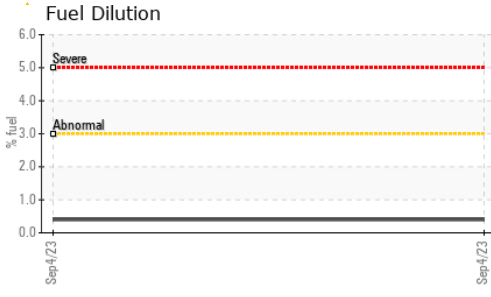
| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|-------------|----------|-----|
| Soot % | % | *ASTM D7844 >4 | 0.3 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 9.4 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 23.8 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|-----|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 22.0 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.8 | 7.8 | --- | --- |



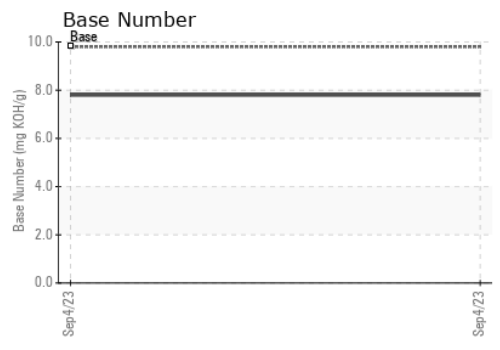
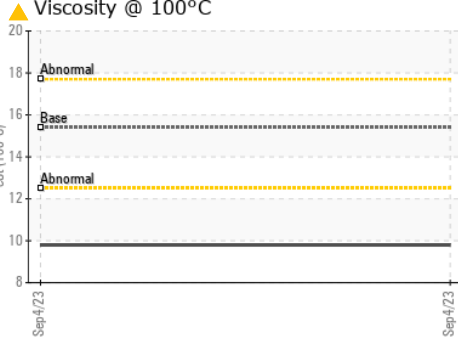
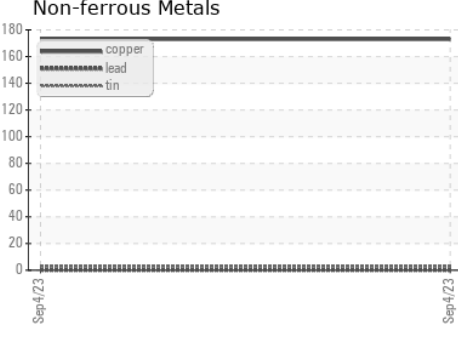
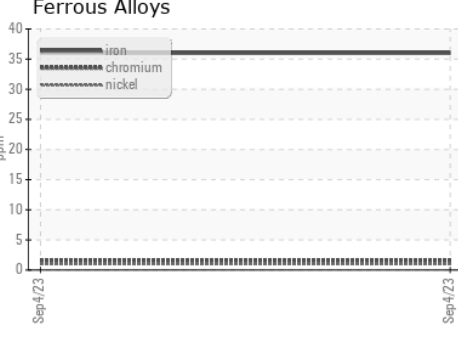
OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 9.8 | --- |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0078660 **Received** : 20 Sep 2023
Lab Number : 05956193 **Diagnosed** : 21 Sep 2023
Unique Number : 10657406 **Diagnostician** : Angela Borella
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 152 - Jacksonville
 7580 PHILIPS HWY
 Jacksonville, FL
 US 32256
 Contact: Robert Clark

Certificate L2367
 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)

T:
F: