



PROBLEM SUMMARY

Sample Rating Trend



FUEL

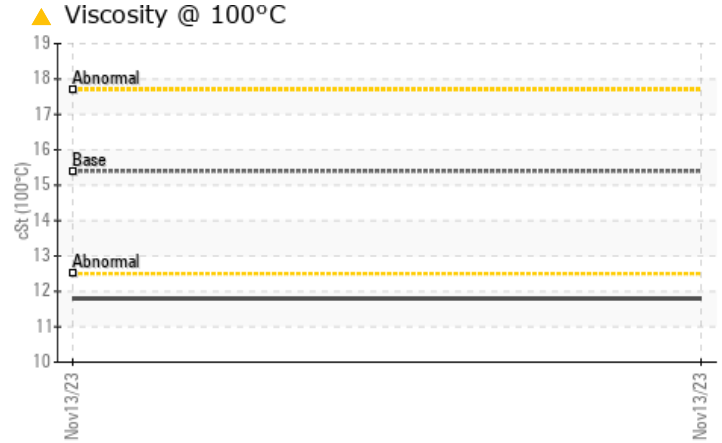
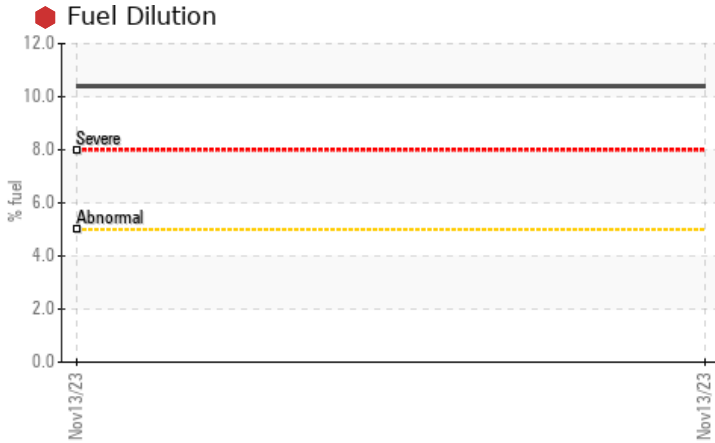


Machine Id
427207

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | --- | --- |
|---------------|-----|------------|------|---------------|-----|-----|
| Fuel | % | ASTM D3524 | >5 | 10.4 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 11.8 | --- | --- |

Customer Id: GFL975
Sample No.: GFL0095690
Lab Number: 06016096
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
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wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
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RECOMMENDED ACTIONS

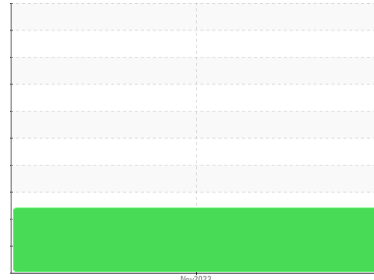
| Action | Status | Date | Done By | Description |
|----------------------------|--------|------|---------|---|
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Check Fuel/injector System | --- | --- | ? | We advise that you check the fuel injection system. |

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
427207

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | GFL0095690 | --- | --- |
| Sample Date | Client Info | 13 Nov 2023 | --- | --- |
| Machine Age | hrs Client Info | 10837 | --- | --- |
| Oil Age | hrs Client Info | 0 | --- | --- |
| Oil Changed | Client Info | Changed | --- | --- |
| Sample Status | | SEVERE | --- | --- |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|----------------|------------|----------|----------|
| Water | WC Method >0.2 | NEG | --- | --- |
| Glycol | WC Method | NEG | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|----------|----------------------|--------------|----------|----------|
| Iron | ppm ASTM D5185m >100 | 18 | --- | --- |
| Chromium | ppm ASTM D5185m >20 | 1 | --- | --- |
| Nickel | ppm ASTM D5185m >4 | 0 | --- | --- |
| Titanium | ppm ASTM D5185m | <1 | --- | --- |
| Silver | ppm ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm ASTM D5185m >20 | <1 | --- | --- |
| Lead | ppm ASTM D5185m >40 | 7 | --- | --- |
| Copper | ppm ASTM D5185m >330 | 10 | --- | --- |
| Tin | ppm ASTM D5185m >15 | <1 | --- | --- |
| Vanadium | ppm ASTM D5185m | <1 | --- | --- |
| Cadmium | ppm ASTM D5185m | 0 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|------------|----------------------|--------------|----------|----------|
| Boron | ppm ASTM D5185m 0 | 0 | --- | --- |
| Barium | ppm ASTM D5185m 0 | 0 | --- | --- |
| Molybdenum | ppm ASTM D5185m 60 | 54 | --- | --- |
| Manganese | ppm ASTM D5185m 0 | <1 | --- | --- |
| Magnesium | ppm ASTM D5185m 1010 | 9 | --- | --- |
| Calcium | ppm ASTM D5185m 1070 | 2258 | --- | --- |
| Phosphorus | ppm ASTM D5185m 1150 | 941 | --- | --- |
| Zinc | ppm ASTM D5185m 1270 | 1247 | --- | --- |
| Sulfur | ppm ASTM D5185m 2060 | 3039 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------|---------------------|-------------|----------|----------|
| Silicon | ppm ASTM D5185m >25 | 8 | --- | --- |
| Sodium | ppm ASTM D5185m | 1 | --- | --- |
| Potassium | ppm ASTM D5185m >20 | 2 | --- | --- |
| Fuel | % ASTM D3524 >5 | 10.4 | --- | --- |

INFRA-RED

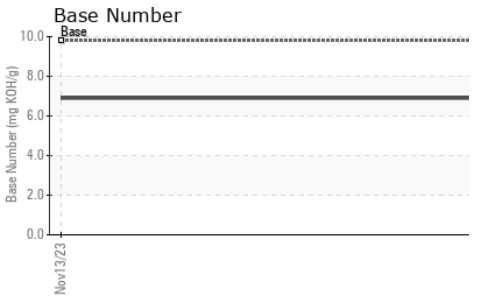
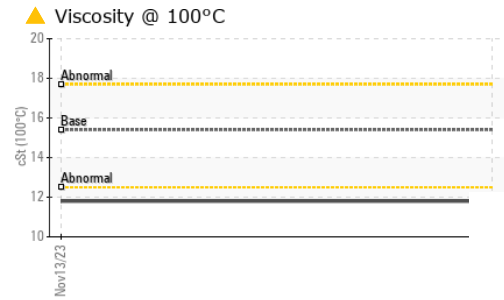
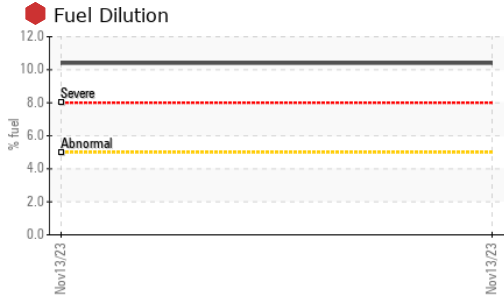
| method | limit/base | current | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot % | % *ASTM D7844 >3 | 1 | --- | --- |
| Nitration | Abs/cm *ASTM D7624 >20 | 7.4 | --- | --- |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | 19.1 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 >25 | 10.1 | --- | --- |
| Base Number (BN) | mg KOH/g ASTM D2896 9.8 | 6.9 | --- | --- |



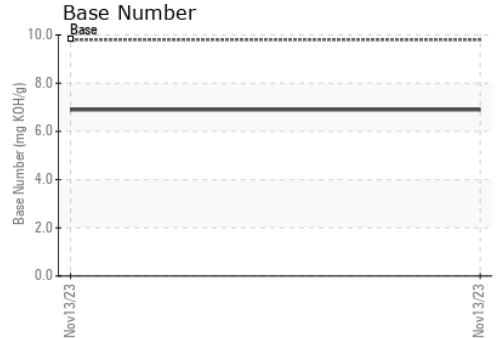
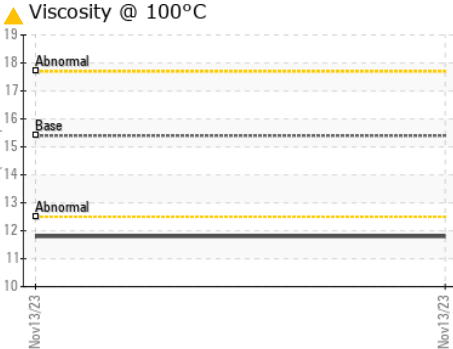
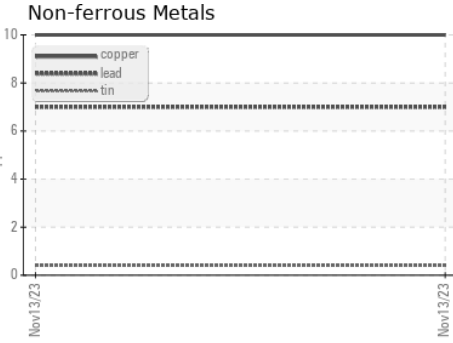
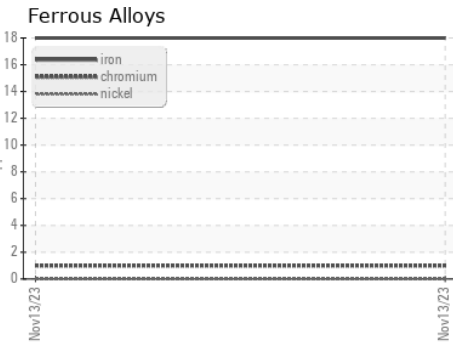
OIL ANALYSIS REPORT



| 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 | ▲ 11.8 | --- |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0095690 **Received** : 24 Nov 2023
Lab Number : 06016096 **Diagnosed** : 28 Nov 2023
Unique Number : 10755240 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)