

Machine Id
WESTERN STAR 822054
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

RECOMMENDATION

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0094635 | GFL0100790 | GFL0080951 |
| Sample Date | | Client Info | | 12 Feb 2024 | 17 Nov 2023 | 09 Aug 2023 |
| Machine Age | hrs | Client Info | | 4403 | 3986 | 3394 |
| Oil Age | hrs | Client Info | | 417 | 592 | 600 |
| Filter Age | hrs | Client Info | | 417 | 592 | 600 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

Les taux d'usure de tous les composants sont normaux.

| | | | | | | |
|--------------|--------|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >100 | 13 | 21 | 38 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 8 | 13 | 20 |
| Lead | ppm | ASTM D5185(m) | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | <1 | 2 |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |

CONTAMINATION

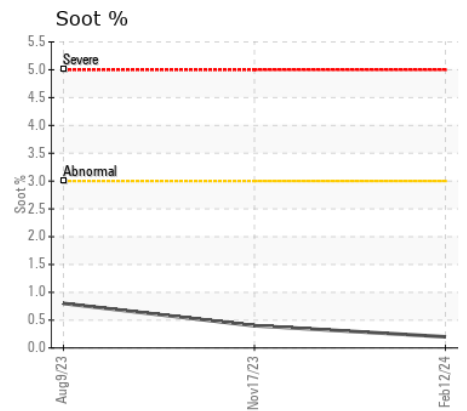
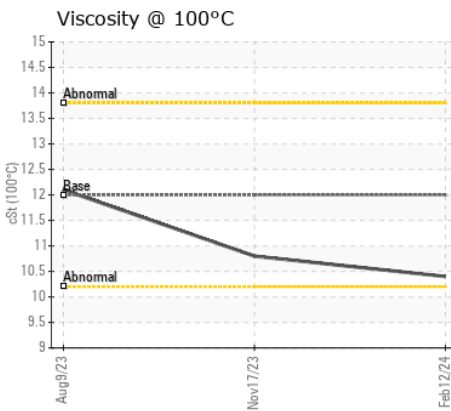
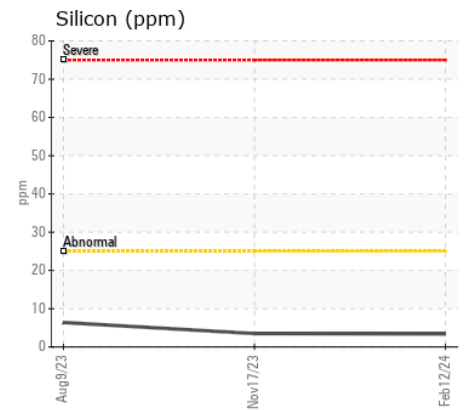
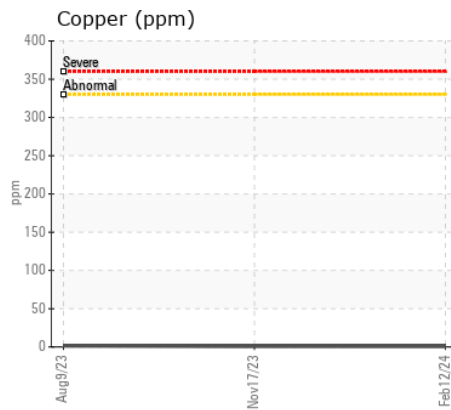
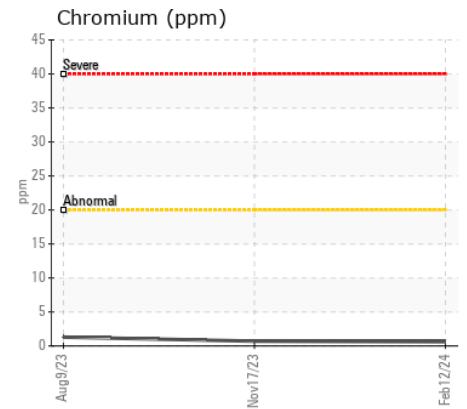
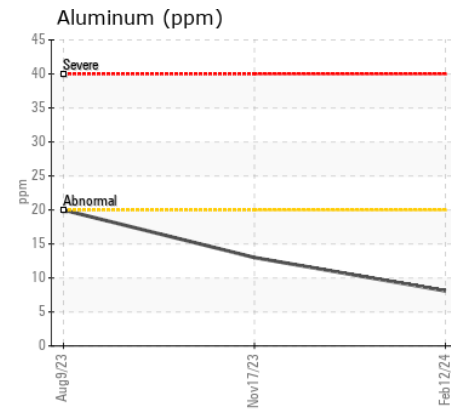
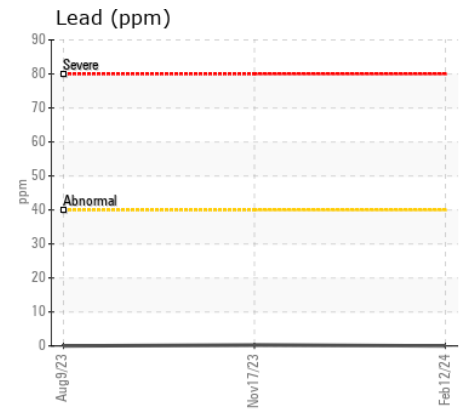
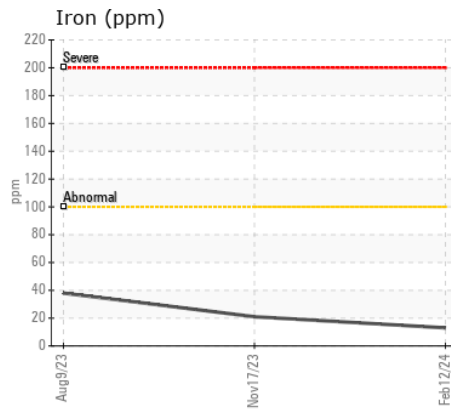
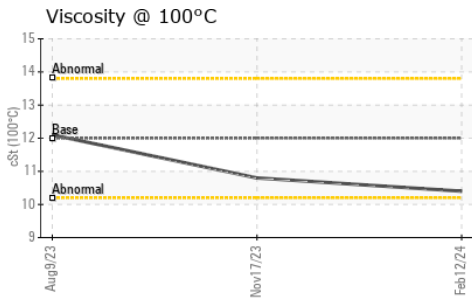
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Il n'y a aucun indice de contamination dans l'huile.

| | | | | | | |
|------------------|----------|---------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >25 | 3 | 4 | 6 |
| Potassium | ppm | ASTM D5185(m) | >20 | 9 | 25 | 35 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 0.2 | 0.4 | 0.8 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.1 | 8.7 | 11.1 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 19.3 | 20.1 | 26.1 |
| 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 | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

L'état de l'huile est acceptable pour la durée de service.

| | | | | | | |
|--------------|----------|---------------|-------|-------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 3 | 5 | 2 |
| Boron | ppm | ASTM D5185(m) | 2 | 14 | 12 | 49 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 63 | 64 | 104 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | <1 | 1 |
| Magnesium | ppm | ASTM D5185(m) | 950 | 947 | 911 | 794 |
| Calcium | ppm | ASTM D5185(m) | 1050 | 1091 | 1075 | 1362 |
| Phosphorus | ppm | ASTM D5185(m) | 995 | 1037 | 963 | 841 |
| Zinc | ppm | ASTM D5185(m) | 1180 | 1177 | 1136 | 959 |
| Sulfur | ppm | ASTM D5185(m) | 2600 | 2776 | 2410 | 2266 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 14.5 | 16.3 | 20.5 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 12.00 | 10.4 | 10.8 | 12.1 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0094635 **Received** : 15 Feb 2024
Lab Number : 02615931 **Tested** : 15 Feb 2024
Unique Number : 5733041 **Diagnosed** : 15 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental 791MAT - Matane
 29 rue Brilliant
 Matane, QC
 CA G4W 0J7
 Contact: B Berube
 bberube@matrec.ca

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.