

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
738613
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

▲ 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.

▲ Wear

The iron level is abnormal. All other metal levels are typical for a new component breaking in.

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. 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 acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info | | PCA0100777 | --- | --- |
| Sample Date | Client Info | | 08 Jul 2023 | --- | --- |
| Machine Age | mls | Client Info | 74014 | --- | --- |
| Oil Age | mls | Client Info | 74014 | --- | --- |
| Oil Changed | Client Info | | Changed | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | --- | --- |
| Glycol | WC Method | | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | ▲ 198 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | 8 | --- | --- |
| Nickel | ppm | ASTM D5185m >4 | 2 | --- | --- |
| Titanium | ppm | ASTM D5185m | <1 | --- | --- |
| Silver | ppm | ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | 53 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | 3 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | 242 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | 4 | --- | --- |
| Vanadium | ppm | ASTM D5185m | <1 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m 2 | 21 | --- | --- |
| Barium | ppm | ASTM D5185m 0 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m 50 | 48 | --- | --- |
| Manganese | ppm | ASTM D5185m 0 | 5 | --- | --- |
| Magnesium | ppm | ASTM D5185m 950 | 588 | --- | --- |
| Calcium | ppm | ASTM D5185m 1050 | 2082 | --- | --- |
| Phosphorus | ppm | ASTM D5185m 995 | 863 | --- | --- |
| Zinc | ppm | ASTM D5185m 1180 | 1092 | --- | --- |
| Sulfur | ppm | ASTM D5185m 2600 | 2432 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 10 | --- | --- |
| Sodium | ppm | ASTM D5185m | 7 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 150 | --- | --- |

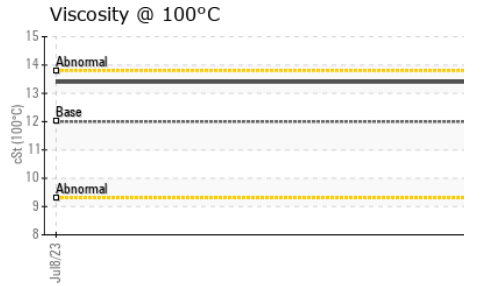
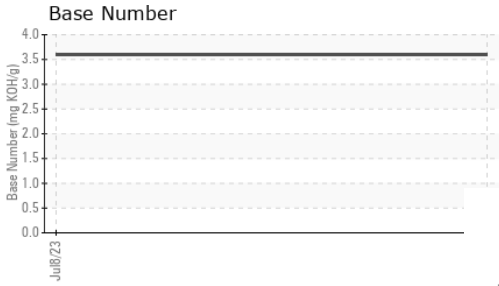
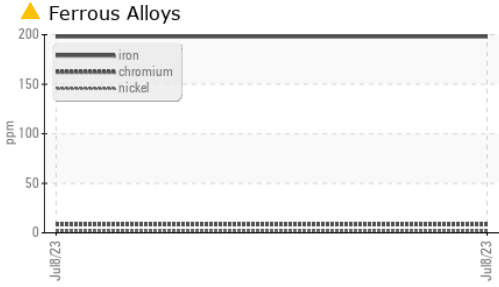
INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 1.9 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 21.8 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 33.5 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 47.7 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 3.6 | --- | --- |

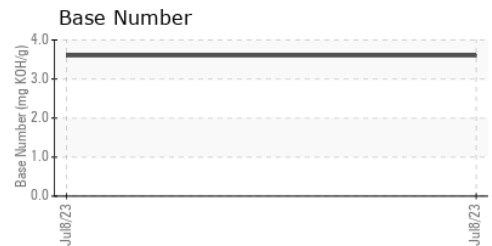
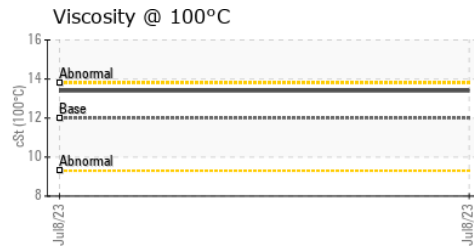
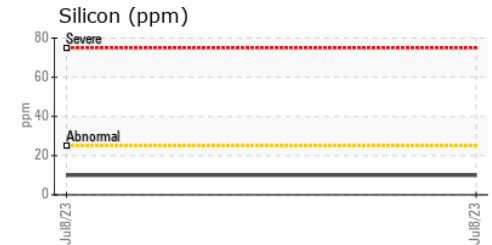
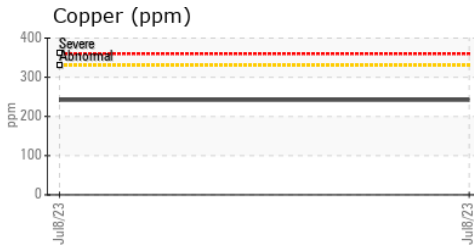
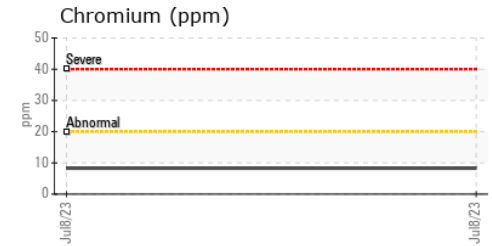
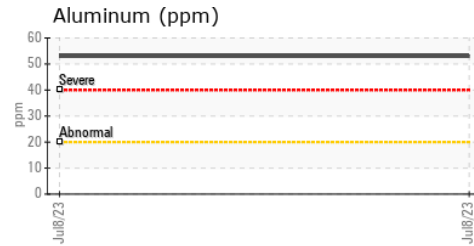
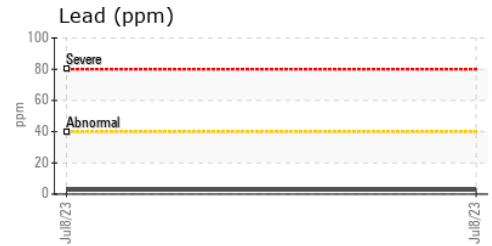
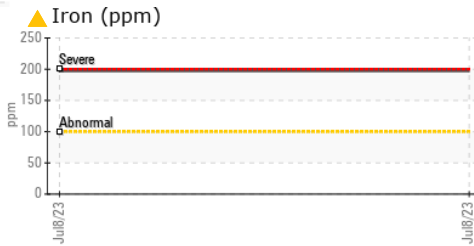
OIL ANALYSIS REPORT



| 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 | 12.00 | 13.4 | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100777 **Received** : 20 Jul 2023
Lab Number : 05903008 **Diagnosed** : 21 Jul 2023
Unique Number : 10564364 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

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 PHILADELPHIA, PA
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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)