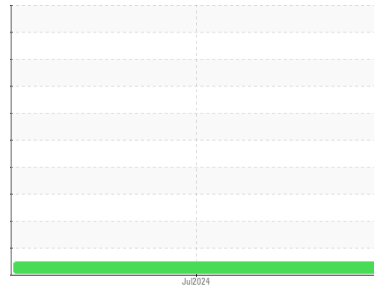


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
T338
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

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 suitable for further service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info | | PCA0116169 | --- | --- |
| Sample Date | Client Info | | 11 Jul 2024 | --- | --- |
| Machine Age | mls | Client Info | 32736 | --- | --- |
| Oil Age | mls | Client Info | 0 | --- | --- |
| Oil Changed | Client Info | | Changed | --- | --- |
| Sample Status | | | NORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | --- | --- |
| Water | WC Method | >0.2 | NEG | --- | --- |
| Glycol | WC Method | | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | 77 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m >4 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | 0 | --- | --- |
| Silver | ppm | ASTM D5185m >3 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | 63 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | 13 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m 2 | 13 | --- | --- |
| Barium | ppm | ASTM D5185m 0 | 2 | --- | --- |
| Molybdenum | ppm | ASTM D5185m 50 | 19 | --- | --- |
| Manganese | ppm | ASTM D5185m 0 | 2 | --- | --- |
| Magnesium | ppm | ASTM D5185m 950 | 780 | --- | --- |
| Calcium | ppm | ASTM D5185m 1050 | 1375 | --- | --- |
| Phosphorus | ppm | ASTM D5185m 995 | 798 | --- | --- |
| Zinc | ppm | ASTM D5185m 1180 | 886 | --- | --- |
| Sulfur | ppm | ASTM D5185m 2600 | 3251 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 12 | --- | --- |
| Sodium | ppm | ASTM D5185m | 6 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 188 | --- | --- |

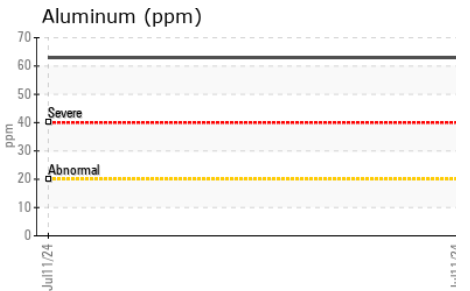
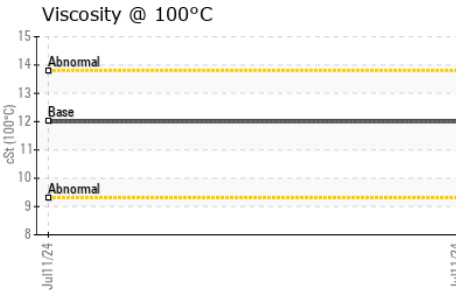
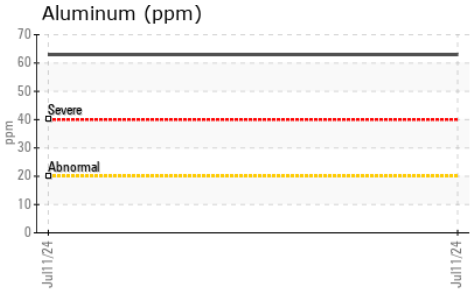
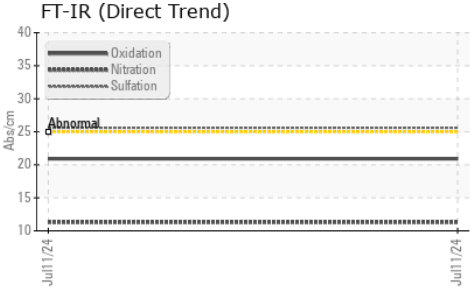
INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.5 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 11.3 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 25.6 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 20.9 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 5.3 | --- | --- |

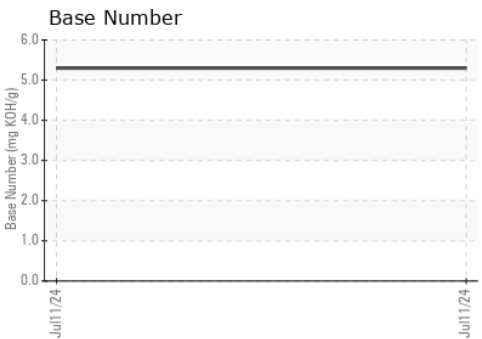
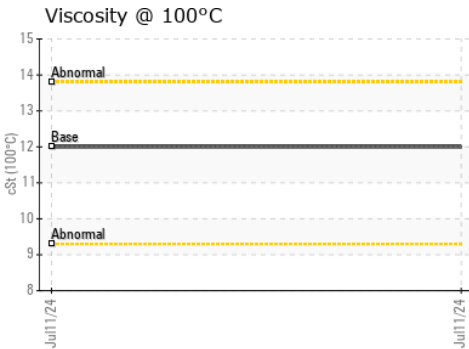
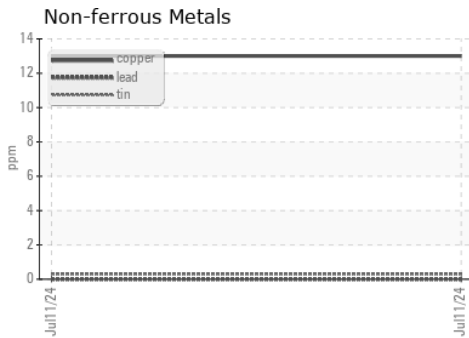
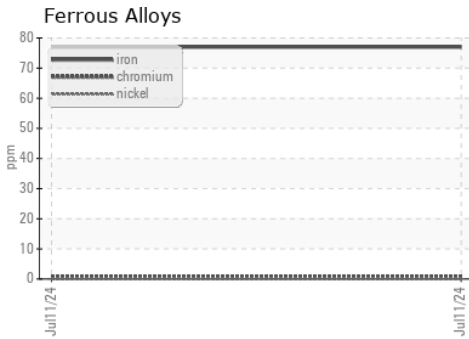
OIL ANALYSIS REPORT



| 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 | 12.0 | --- | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0116169
Lab Number : 06235495
Unique Number : 11124329
Test Package : FLEET

Received : 15 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - Wes Davis

NW WHITE & CO - COLUMBIA DIVISION
 100 INDEPENDENCE BLVD
 COLUMBIA, SC
 US 29210
 Contact: GEORGE EDWARDS
 gedwards@nwwhite.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)

T:
F: