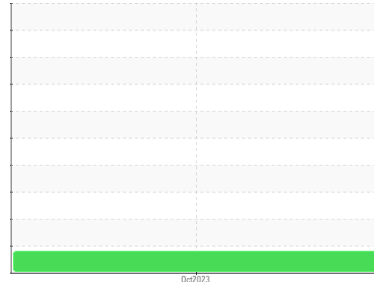




# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**PD-091423-2**

Component  
**New (Unused) Oil**

Fluid  
**TRC MOLY XL PROSPEC III 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

This is the baseline readout on this new (unused) oil. The fluid is suitable for service.

### Wear

{not applicable}

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. There is no indication of any contamination in the new (unused) oil.

### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The condition of the oil is suitable for service.

## SAMPLE INFORMATION

| method        | limit/base      | current            | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info     | <b>PP</b>          | ---      | ---      |
| Sample Date   | Client Info     | <b>12 Oct 2023</b> | ---      | ---      |
| Machine Age   | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info     | <b>N/A</b>         | ---      | ---      |
| Sample Status |                 | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR METALS

| method    | limit/base        | current      | history1 | history2 |
|-----------|-------------------|--------------|----------|----------|
| Iron      | ppm ASTM D5185(m) | <b>1</b>     | ---      | ---      |
| Chromium  | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Nickel    | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Titanium  | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Silver    | ppm ASTM D5185(m) | <b>&lt;1</b> | ---      | ---      |
| Aluminum  | ppm ASTM D5185(m) | <b>2</b>     | ---      | ---      |
| Lead      | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Copper    | ppm ASTM D5185(m) | <b>&lt;1</b> | ---      | ---      |
| Tin       | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Antimony  | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Vanadium  | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Beryllium | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |
| Cadmium   | ppm ASTM D5185(m) | <b>0</b>     | ---      | ---      |

## ADDITIVES

| method     | limit/base             | current      | history1 | history2 |
|------------|------------------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185(m)      | <b>110</b>   | ---      | ---      |
| Barium     | ppm ASTM D5185(m)      | <b>&lt;1</b> | ---      | ---      |
| Molybdenum | ppm ASTM D5185(m)      | <b>40</b>    | ---      | ---      |
| Manganese  | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Magnesium  | ppm ASTM D5185(m)      | <b>19</b>    | ---      | ---      |
| Calcium    | ppm ASTM D5185(m) 4500 | <b>5350</b>  | ---      | ---      |
| Phosphorus | ppm ASTM D5185(m)      | <b>1130</b>  | ---      | ---      |
| Zinc       | ppm ASTM D5185(m) 1400 | <b>1270</b>  | ---      | ---      |
| Sulfur     | ppm ASTM D5185(m)      | <b>3550</b>  | ---      | ---      |
| Lithium    | ppm ASTM D5185(m)      | <b>&lt;1</b> | ---      | ---      |

## CONTAMINANTS

| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185(m)     | <b>9</b>     | ---      | ---      |
| Sodium    | ppm ASTM D5185(m)     | <b>2</b>     | ---      | ---      |
| Potassium | ppm ASTM D5185(m) >20 | <b>&lt;1</b> | ---      | ---      |

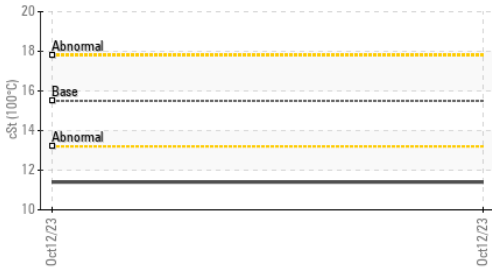
## INFRA-RED

| method    | limit/base           | current     | history1 | history2 |
|-----------|----------------------|-------------|----------|----------|
| Soot %    | % ASTM D7844*        | <b>0</b>    | ---      | ---      |
| Nitration | Abs/cm ASTM D7624*   | <b>5.5</b>  | ---      | ---      |
| Sulfation | Abs/.1mm ASTM D7415* | <b>16.7</b> | ---      | ---      |



# OIL ANALYSIS REPORT

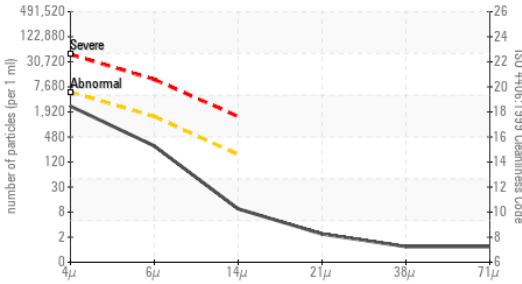
▲ Viscosity @ 100°C



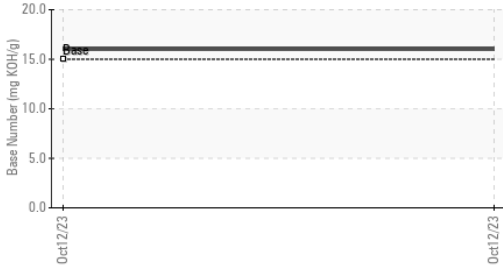
▲ Viscosity @ 40°C



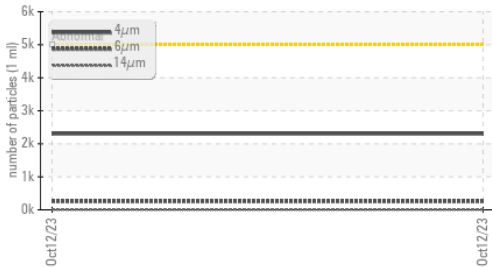
Particle Count



Base Number



Particle Trend



| FLUID CLEANLINESS | method       | limit/base | current         | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm    | ASTM D7647   | >5000      | <b>2303</b>     | ---      | ---      |
| Particles >6µm    | ASTM D7647   | >1300      | <b>257</b>      | ---      | ---      |
| Particles >14µm   | ASTM D7647   | >160       | <b>8</b>        | ---      | ---      |
| Particles >21µm   | ASTM D7647   | >40        | <b>2</b>        | ---      | ---      |
| Particles >38µm   | ASTM D7647   | >10        | <b>1</b>        | ---      | ---      |
| Particles >71µm   | ASTM D7647   | >3         | <b>1</b>        | ---      | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >19/17/14  | <b>18/15/10</b> | ---      | ---      |

| FLUID DEGRADATION | method   | limit/base  | current      | history1 | history2 |
|-------------------|----------|-------------|--------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414* | <b>9.7</b>   | ---      | ---      |
| Acid Number (AN)  | mg KOH/g | ASTM D974*  | <b>2.27</b>  | ---      | ---      |
| Base Number (BN)  | mg KOH/g | ASTM D2896* | <b>16.01</b> | ---      | ---      |

| VISUAL           | method | limit/base | current      | history1 | history2 |
|------------------|--------|------------|--------------|----------|----------|
| White Metal      | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Yellow Metal     | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Precipitate      | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Silt             | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Debris           | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Sand/Dirt        | scalar | Visual*    | <b>NONE</b>  | ---      | ---      |
| Appearance       | scalar | Visual*    | <b>NORML</b> | ---      | ---      |
| Odor             | scalar | Visual*    | <b>NORML</b> | ---      | ---      |
| Emulsified Water | scalar | Visual*    | <b>NEG</b>   | ---      | ---      |
| Free Water       | scalar | Visual*    | <b>NEG</b>   | ---      | ---      |

| FLUID PROPERTIES     | method | limit/base    | current       | history1 | history2 |
|----------------------|--------|---------------|---------------|----------|----------|
| Visc @ 40°C          | cSt    | ASTM D7279(m) | ▲ <b>75.0</b> | ---      | ---      |
| Visc @ 100°C         | cSt    | ASTM D7279(m) | ▲ <b>11.4</b> | ---      | ---      |
| Viscosity Index (VI) | Scale  | ASTM D2270*   | <b>144</b>    | ---      | ---      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PP  
**Lab Number** : 02588894  
**Unique Number** : 5657960  
**Test Package** : MOB 2 ( Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TAN Man, TBN, VI )

**FORSYTHE LUBRICATION**  
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 F: (905)525-7024

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.