

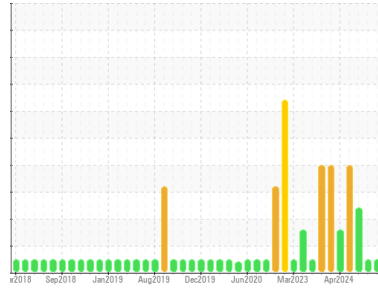
Area

Gas Compression [450343742]

Machine Id
Compressor (HP1) - Lubrication System (S/N Sample Tag XX-23003-S1)

Component
Lube System

Fluid
PETRO CANADA TURBOFLO XL32 (10350 LTR)



DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA TURBOFLO XL32, however, a fluid match indicates that this fluid is ISO 32 R&O Hydraulic Oil. Please confirm the oil type and grade on your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Component wear rates appear to be normal (unconfirmed).

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2

| Sample Number | Client Info | PC0080661 | PC | PC |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Date | Client Info | 28 May 2024 | 20 May 2024 | 28 Apr 2024 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | NORMAL | NORMAL | ABNORMAL |

CONTAMINATION method limit/base current history1 history2

| Water | WC Method | >0.05 | NEG | NEG | NEG |
|-------|-----------|-------|------------|-----|-----|
|-------|-----------|-------|------------|-----|-----|

WEAR METALS method limit/base current history1 history2

| PQ | ASTM D8184* | | 0 | 0 | 0 |
|-----------|-------------|-------------------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) >20 | <1 | 0 | 0 |
| Chromium | ppm | ASTM D5185(m) >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) >10 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) >10 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185(m) >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) >20 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) >10 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | 0 | 0 | 0 |

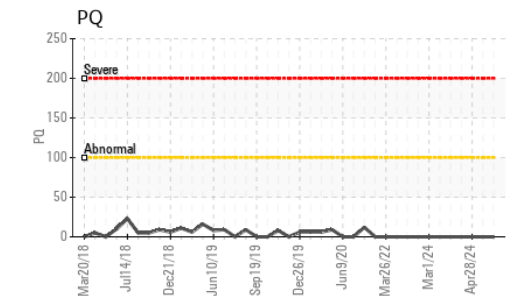
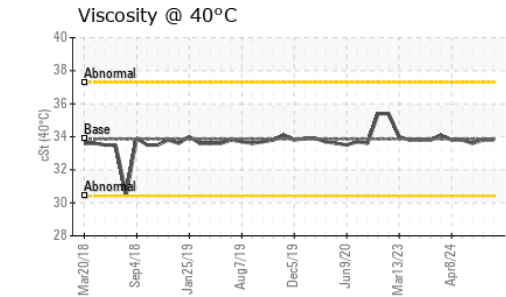
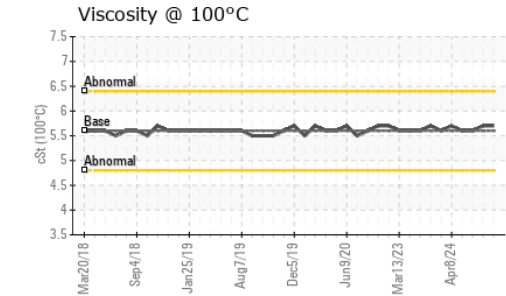
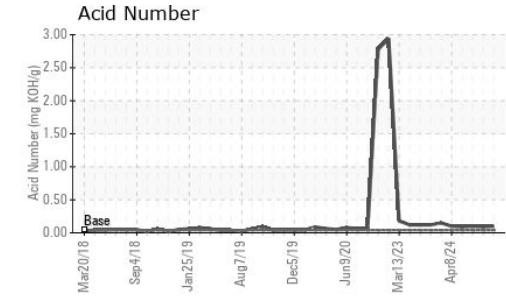
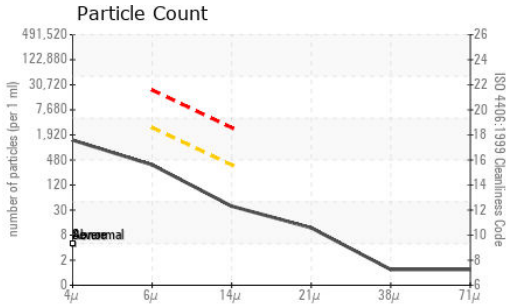
ADDITIVES method limit/base current history1 history2

| Boron | ppm | ASTM D5185(m) 0 | 0 | <1 | <1 |
|------------|-----|-------------------|--------------|-----|-----|
| Barium | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) 0 | 0 | <1 | 0 |
| Calcium | ppm | ASTM D5185(m) 0 | <1 | 0 | <1 |
| Phosphorus | ppm | ASTM D5185(m) 5 | 80 | 82 | 81 |
| Zinc | ppm | ASTM D5185(m) 0 | 1 | 1 | 1 |
| Sulfur | ppm | ASTM D5185(m) 750 | 246 | 253 | 339 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS method limit/base current history1 history2

| Silicon | ppm | ASTM D5185(m) >15 | <1 | <1 | <1 |
|-----------|-----|-------------------|--------------|----|----|
| Sodium | ppm | ASTM D5185(m) | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185(m) >20 | <1 | <1 | <1 |

OIL ANALYSIS REPORT



| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--------------|-----------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | | | 1264 | 1151 | 1646 |
| Particles >6µm | ASTM D7647 | >2500 | | 322 | 319 | 459 |
| Particles >14µm | ASTM D7647 | >320 | | 33 | 20 | 39 |
| Particles >21µm | ASTM D7647 | >80 | | 10 | 3 | 9 |
| Particles >38µm | ASTM D7647 | >20 | | 1 | 0 | 1 |
| Particles >71µm | ASTM D7647 | >4 | | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/18/15 | | 17/16/12 | 17/15/11 | 18/16/12 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.04 | 0.10 | 0.09 | 0.10 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | ▲ WGOIL |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.05 | NEG | NEG | .5% |
| Free Water | scalar | Visual* | | NEG | NEG | ▲ 1% |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------|-------|---------------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 33.86 | 33.8 | 33.8 | 33.6 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 5.60 | 5.7 | 5.7 | 5.6 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 101 | 108 | 108 | 103 |

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080661 **Received** : 24 Jun 2024
Lab Number : **02643743** **Tested** : 25 Jun 2024
Unique Number : 5801282 **Diagnosed** : 25 Jun 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, PQ, TAN Man, VI)

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

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.