

Machine Id
CRANE 11 NORTH BRIDGE
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 220 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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 | | | PCA0101446 | PCA0079657 | --- |
| Sample Date | Client Info | | | 28 Aug 2023 | 22 Sep 2022 | --- |
| Machine Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | Client Info | | | N/A | Not Changd | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| PQ | | ASTM D8184 | | 12 | 7 | --- |
| Iron | ppm | ASTM D5185m | >200 | <1 | <1 | --- |
| Chromium | ppm | ASTM D5185m | >15 | 0 | 0 | --- |
| Nickel | ppm | ASTM D5185m | >15 | <1 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 0 | --- |
| Lead | ppm | ASTM D5185m | >100 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >200 | <1 | <1 | --- |
| Tin | ppm | ASTM D5185m | >25 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | --- |

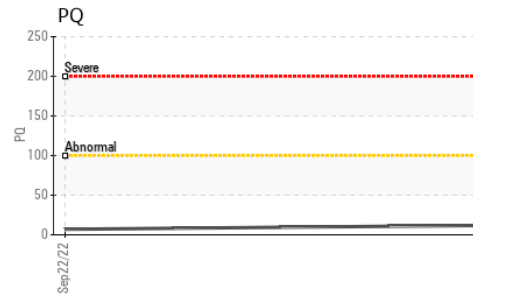
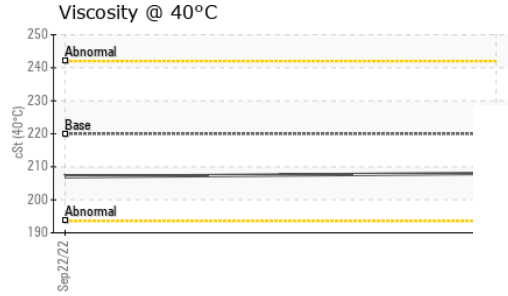
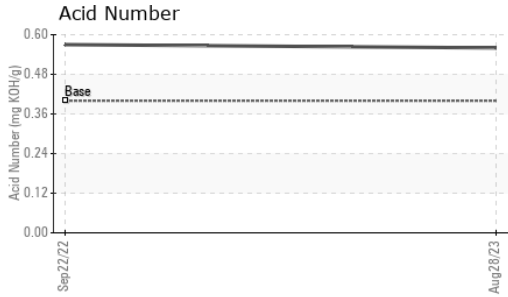
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 60 | 10 | 8 | --- |
| Barium | ppm | ASTM D5185m | 0 | 32 | 15 | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | <1 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 0 | 2 | 1 | --- |
| Calcium | ppm | ASTM D5185m | 0 | 17 | 18 | --- |
| Phosphorus | ppm | ASTM D5185m | 270 | 259 | 233 | --- |
| Zinc | ppm | ASTM D5185m | 0 | 14 | 10 | --- |
| Sulfur | ppm | ASTM D5185m | 11200 | 8707 | 8429 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >50 | 12 | 10 | --- |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | --- |



| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.40 | 0.56 | 0.57 | --- |

| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- | --- |

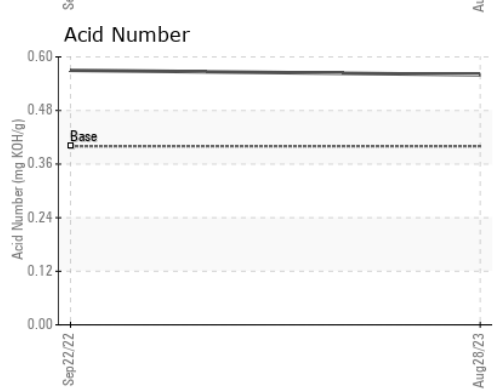
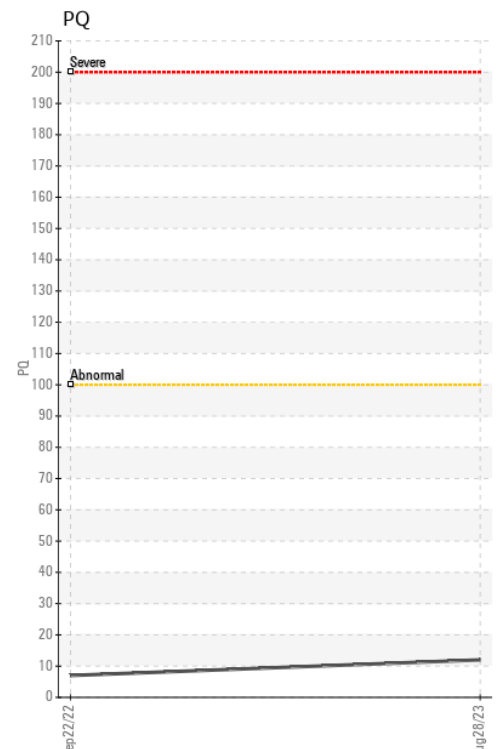
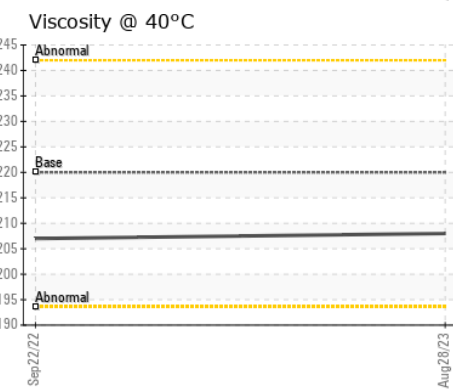
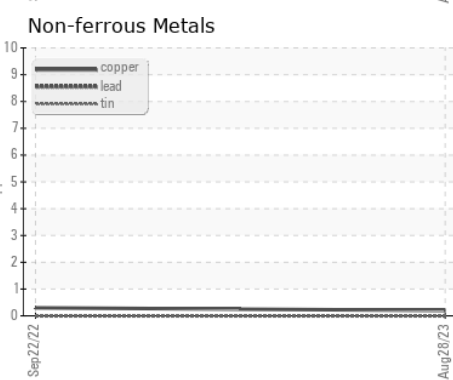
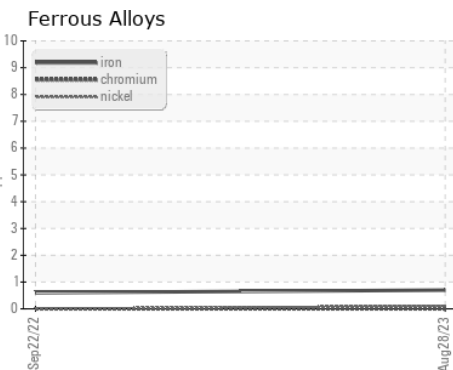
OIL ANALYSIS REPORT



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 220 | 208 | 207 | --- |

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0101446 **Received** : 29 Aug 2023
Lab Number : 05937354 **Diagnosed** : 30 Aug 2023
Unique Number : 10622625 **Diagnostician** : Wes Davis
Test Package : PLANT

SDI - Steel Dynamics Inc. - Heartland
 455 West Industrial Drive
 Terre Haute, IN
 US 47802
 Contact: BRAD ELLIS
 brad.ellis@steeldynamics.com
 T:
 F:

Certificate L2367
 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)