

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



[] CRANE 13 WEST BRIDGE

Gearbox

PETRO CANADA ENDURATEX EP 220 (---

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| GAL) | | | Sep2022 | Aug ² 023 | | |
|------------------------|----------|---------------|-------------|----------------------|-------------|-------------|
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PCA0101559 | PCA0080287 | |
| Sample Date | | Client Info | | 28 Aug 2023 | 22 Sep 2022 | |
| | hrs | Client Info | | • | 0 | |
| Machine Age | | Client Info | | 0 | 0 | |
| Oil Age Oil Changed | hrs | Client Info | | N/A | Not Changd | |
| Sample Status | | Ciletit IIIIO | | NORMAL | NORMAL | |
| WEAR METAL | C | method | limit/base | | | history2 |
| | .0 | | IIIIIIVDase | | history1 | HISTOLYZ |
| PQ | | ASTM D8184 | 000 | 15 | 7 | |
| Iron | ppm | ASTM D5185m | >200 | 4 | 3 | |
| Chromium | ppm | ASTM D5185m | >15 | 0 | 0 | |
| Nickel | ppm | | >15 | <1 | 0 | |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | |
| Silver | ppm | ASTM D5185m | | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 0 | |
| Lead | ppm | ASTM D5185m | >100 | <1 | 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 | <1 | 0 | |
| Barium | ppm | ASTM D5185m | 0 | 18 | 17 | |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | |
| Manganese | ppm | ASTM D5185m | 0 | 0 | <1 | |
| Magnesium | ppm | ASTM D5185m | 0 | <1 | 0 | |
| Calcium | ppm | ASTM D5185m | 0 | 9 | 8 | |
| Phosphorus | ppm | ASTM D5185m | 270 | 271 | 269 | |
| Zinc | ppm | ASTM D5185m | 0 | 17 | 16 | |
| Sulfur | ppm | ASTM D5185m | 11200 | 10745 | 11750 | |
| CONTAMINAN | ITS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >50 | 12 | 7 | |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | |
| FLUID DEGRAI | DATION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.40 | 0.42 | 0.41 | |
| 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 | |
| E 14/ . | | *) /' | | NEO | | TILIC CDITE |

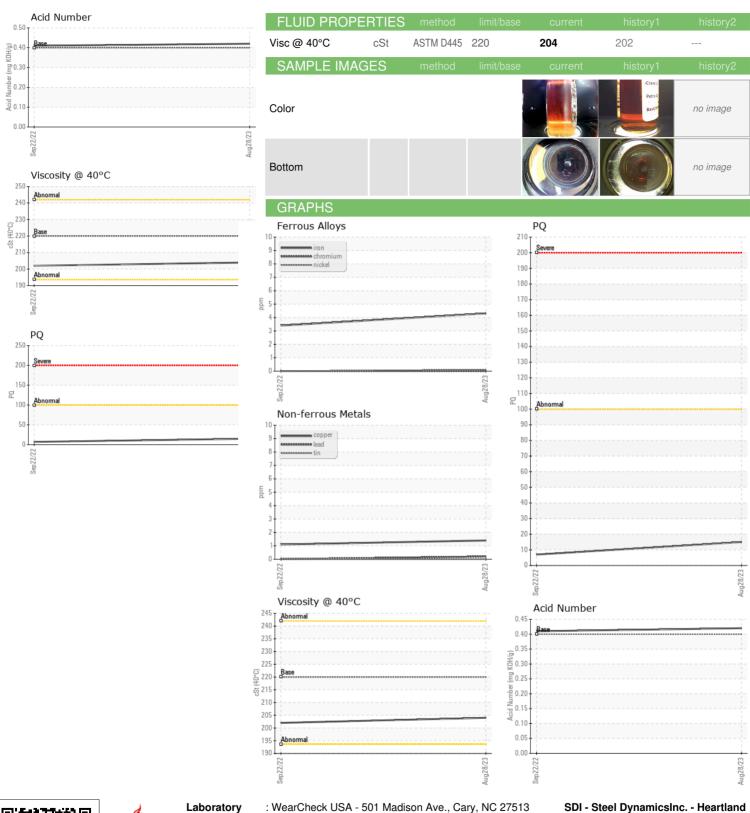
ocatine BRAD ELLIS - SDITER

NEG

scalar *Visual



OIL ANALYSIS REPORT





Certificate L2367

Laboratory Sample No. Lab Number Test Package : PLANT

Unique Number

: PCA0101559 : 05937398 : 10622669

Received Diagnosed Diagnostician : Wes Davis

: 29 Aug 2023 : 30 Aug 2023 SDI - Steel DynamicsInc. - Heartland 455 West Industrial Drive

Terre Haute, IN US 47802

Contact: BRAD ELLIS brad.ellis@steeldynamics.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.

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