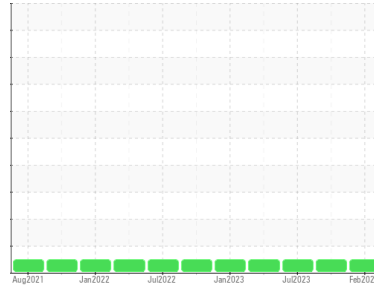


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Pickle Line
 Machine Id
[Pickle Line] 520150-FLATTENER 1
 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 | PCA0112941 | PCA0101621 | PCA0095494 |
| Sample Date | Client Info | 14 Feb 2024 | 25 Oct 2023 | 01 Jul 2023 |
| 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 | NORMAL |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|----------------|------------|----------|----------|
| Water | WC Method >0.2 | NEG | NEG | NEG |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|----------|----------------------|--------------|----------|----------|
| PQ | ASTM D8184 | 8 | 13 | --- |
| Iron | ppm ASTM D5185m >200 | 6 | 7 | 7 |
| Chromium | ppm ASTM D5185m >15 | 0 | 0 | 0 |
| Nickel | ppm ASTM D5185m >15 | 0 | 0 | 0 |
| Titanium | ppm ASTM D5185m | <1 | <1 | <1 |
| Silver | ppm ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm ASTM D5185m >25 | 0 | 0 | 0 |
| Lead | ppm ASTM D5185m >100 | 0 | 0 | 0 |
| Copper | ppm ASTM D5185m >200 | <1 | <1 | <1 |
| Tin | ppm ASTM D5185m >25 | 0 | 0 | 0 |
| Vanadium | ppm ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|------------|-----------------------|-------------|----------|----------|
| Boron | ppm ASTM D5185m 60 | 7 | 8 | 6 |
| Barium | ppm ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm ASTM D5185m 0 | 0 | 0 | <1 |
| Manganese | ppm ASTM D5185m 0 | 0 | <1 | 0 |
| Magnesium | ppm ASTM D5185m 0 | 0 | 0 | 0 |
| Calcium | ppm ASTM D5185m 0 | 11 | 12 | 11 |
| Phosphorus | ppm ASTM D5185m 270 | 257 | 246 | 266 |
| Zinc | ppm ASTM D5185m 0 | 0 | 10 | 7 |
| Sulfur | ppm ASTM D5185m 11200 | 9341 | 9329 | 11851 |

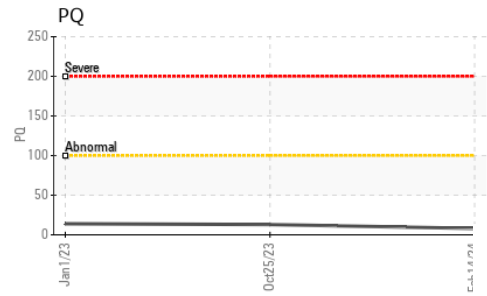
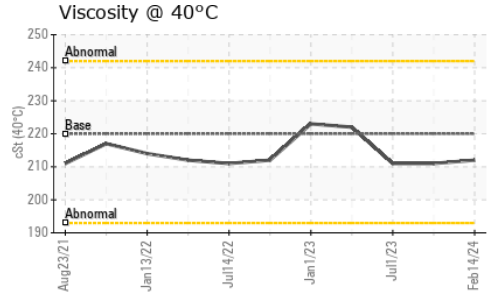
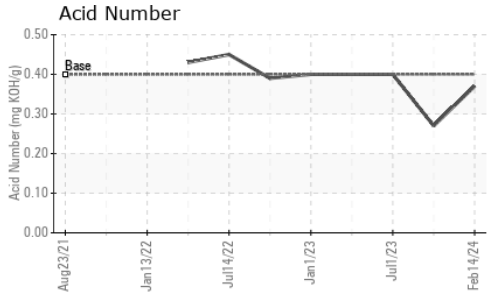
CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------|---------------------|--------------|----------|----------|
| Silicon | ppm ASTM D5185m >50 | 6 | 7 | 6 |
| Sodium | ppm ASTM D5185m | <1 | 2 | 0 |
| Potassium | ppm ASTM D5185m >20 | 0 | <1 | <1 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g ASTM D8045 0.40 | 0.37 | 0.27 | 0.40 |

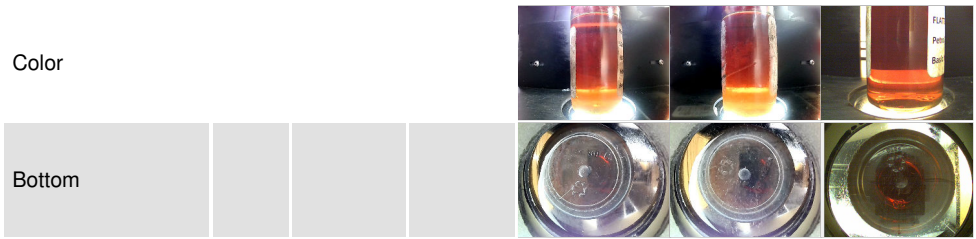
OIL ANALYSIS REPORT



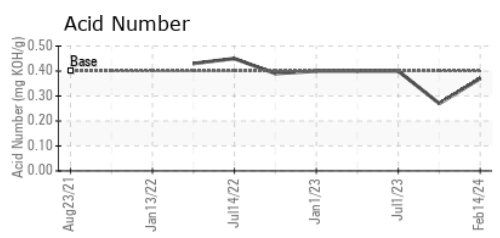
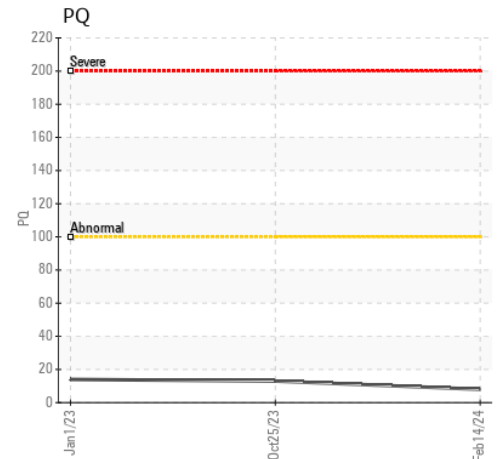
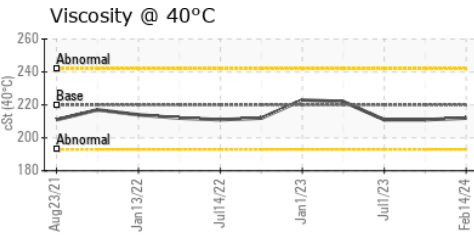
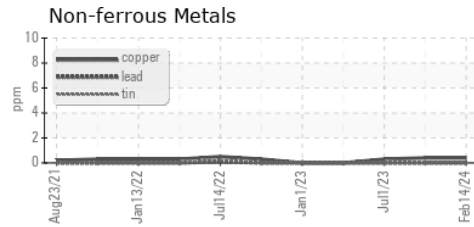
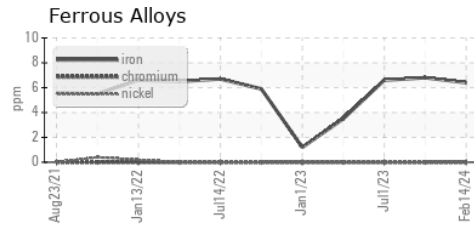
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 220 | 212 | 211 | 211 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0112941
Lab Number : 06091090
Unique Number : 10883943
Test Package : PLANT
Received : 15 Feb 2024
Tested : 16 Feb 2024
Diagnosed : 16 Feb 2024 - Wes Davis

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

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)