



Machine Id
SCRAPPER HPU PC12

Component
Hydraulic System

Fluid
{not provided} (--- GAL)

RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample.

WEAR

Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal.

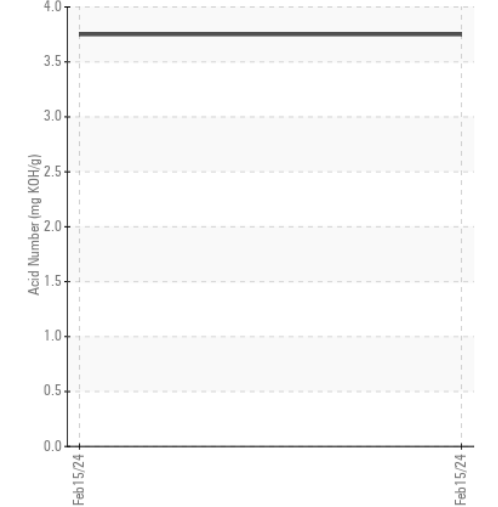
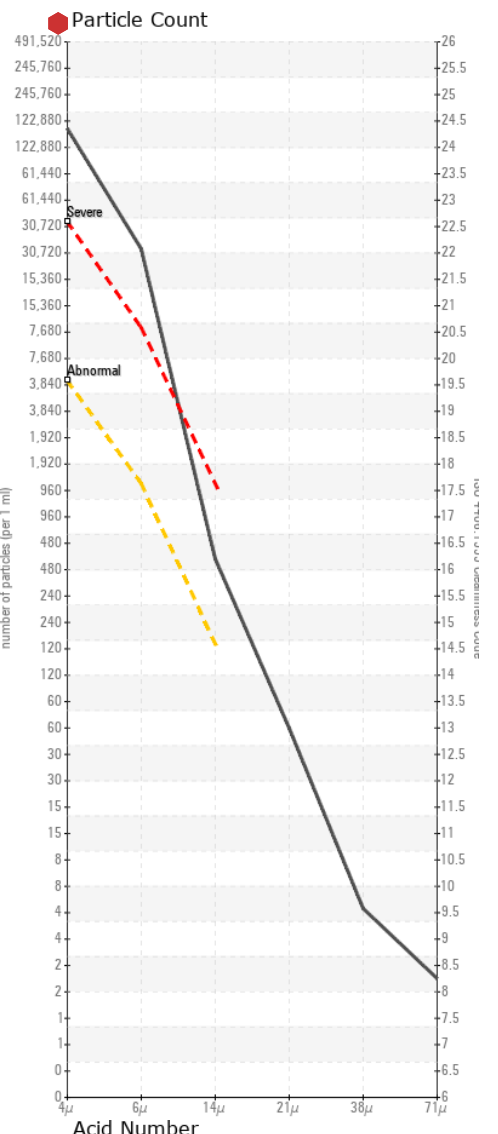
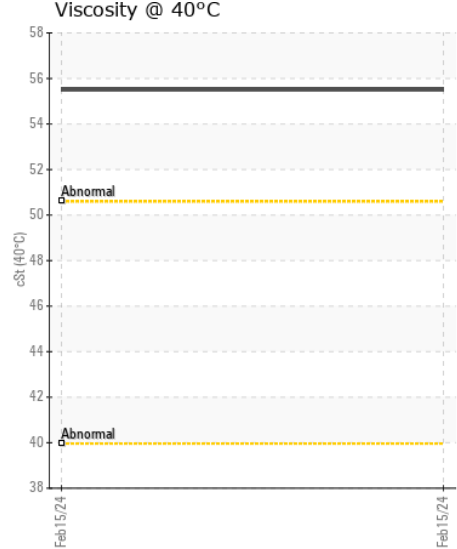
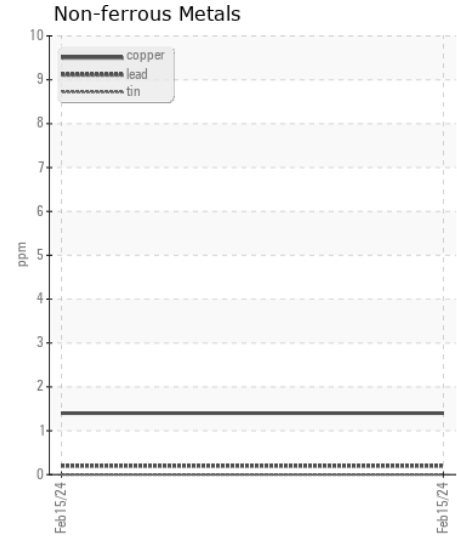
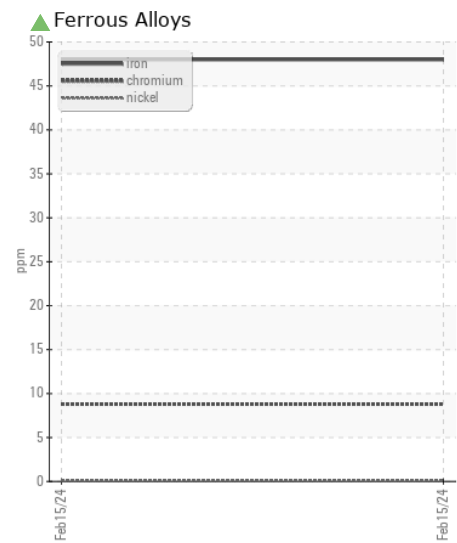
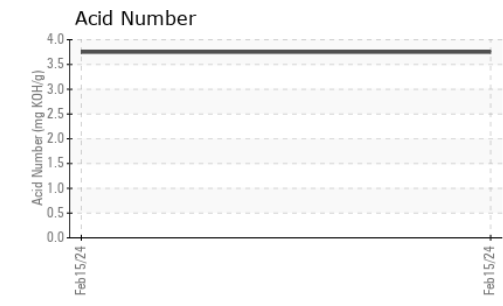
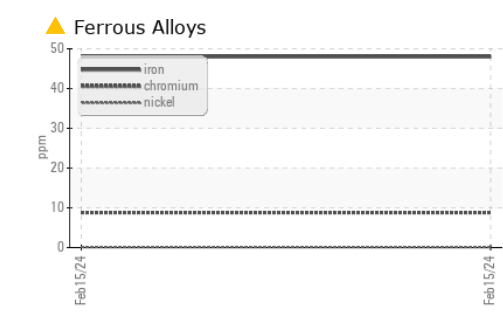
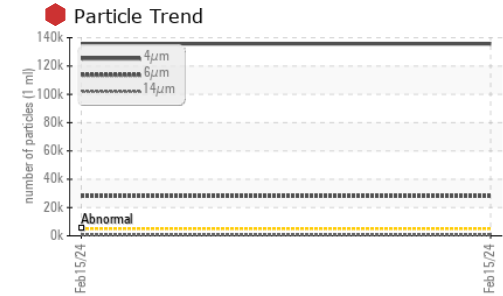
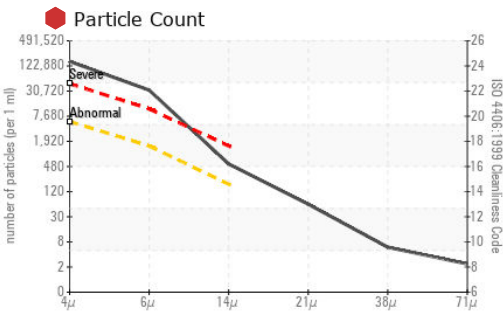
CONTAMINATION

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------------|----------|---------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | PC | --- | --- |
| Sample Date | | Client Info | | 15 Feb 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |
| PQ | | ASTM D8184* | | 0 | --- | --- |
| Iron | ppm | ASTM D5185(m) | >20 | ▲ 48 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 9 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 1 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >20 | 1 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >20 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185(m) | >15 | 2 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | --- | --- |
| Water | | WC Method | >0.05 | NEG | --- | --- |
| Particles >4µm | | ASTM D7647 | >5000 | ● 135656 | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ● 28020 | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | ▲ 486 | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | 53 | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | 5 | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | 2 | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ● 24/22/16 | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | --- | --- |
| Emulsified Water | scalar | Visual* | >0.05 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | 3 | --- | --- |
| Boron | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | 2 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | 39 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 97 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | 6 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 894 | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D974* | | 3.75 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 55.5 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 10.4 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | | 179 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02616228
Unique Number : 5733338
Test Package : IND 2 (Additional Tests: KV100, PQ, TAN Man, VI)
Received : 16 Feb 2024
Tested : 20 Feb 2024
Diagnosed : 20 Feb 2024 - Kevin Marson

Petro-Canada Technical/Behshad Sabah
 Mississauga, ON
 CA L5J 1K2
 Contact: Behshad Sabah
 Behshad.Sabah@hfsinclair.com
 T: (905)716-2158
 F: (905)403-6740

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.