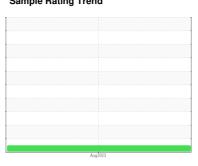


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



91-506 CRANE D-LINE

Component

Hydraulic System

SHELL TELLUS S2 VX 32 (114 LTR)

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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 Number Client Info WC0848537 Sample Date Client Info 11 Aug 2023 Machine Age hrs Client Info 2 | | | | | | | |
|--|---|--------|---------------|--------------------|-------------|----------|----------|
| Sample Number Client Info WC0848537 | | | | | Aug2023 | | |
| Sample Date | SAMPLE INFORM | AOITAN | l method | limit/base | current | history1 | history2 |
| Machine Age hrs Client Info 2 | Sample Number | | Client Info | | WC0848537 | | |
| Machine Age hrs Client Info 2 | Sample Date | | Client Info | | 11 Aug 2023 | | |
| Dil Age | • | hrs | Client Info | | • | | |
| Dil Changed Client Info N/A NORMAL NORMAL NORMAL NORMAL NORMAL NOR | | | Client Info | | 2 | | |
| WEAR METALS method limit/base current history1 history2 | • | | Client Info | | N/A | | |
| Chromium ppm ASTM D5185(m) >20 <1 Chromium ppm ASTM D5185(m) >20 0 Chromium ppm ASTM D5185(m) >20 <1 Chromium ppm ASTM D5185(m) >20 0 Chromium ppm ASTM D5185(m) >20 0 Chromium ppm ASTM D5185(m) >20 0 Chromium ppm ASTM D5185(m) -20 -1 | <u> </u> | | | | NORMAL | | |
| Chromium | WEAR METALS | | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185(m) | >20 | <1 | | |
| Titanium ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) >20 -1 Acad ppm ASTM D5185(m) >20 -1 Copper ppm ASTM D5185(m) >20 -1 Titin ppm ASTM D5185(m) >20 0 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 Barium ppm ASTM D5185(m) 0 Barium ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 0 Mary Sphorus ppm AS | Chromium | ppm | ASTM D5185(m) | >20 | 0 | | |
| Titanium | Nickel | | ASTM D5185(m) | >20 | 0 | | |
| Silver | Titanium | | . , | | 0 | | |
| Alluminum ppm ASTM D5185(m) >20 <1 | | | () | | - | | |
| Lead | | | . , | >20 | - | | |
| Copper | | | . , | | | | |
| Trin | | | | | | | |
| Antimony ppm ASTM D5185(m) 0 | • | | () | | | | |
| Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 70 Magnesium ppm ASTM D5185(m) 9 Calcium ppm ASTM D5185(m) 9 Phosphorus ppm ASTM D5185(m) 281 Sulfur ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) <1 | | | . , | <i>></i> 20 | | | |
| Beryllium | • | | () | | | | |
| ADDITIVES | | | . , | | | | |
| ADDITIVES | • | | (/ | | | | |
| Boron ppm ASTM D5185(m) c1 | | ppm | | | | | |
| Description | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Manganese ppm ASTM D5185(m) 0 | Boron | ppm | . , | | | | |
| Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 70 Calcium ppm ASTM D5185(m) 9 Phosphorus ppm ASTM D5185(m) 281 Zinc ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) 671 Lithium ppm ASTM D5185(m) <1 | | ppm | | | 0 | | |
| Magnesium ppm ASTM D5185(m) 70 Calcium ppm ASTM D5185(m) 9 Phosphorus ppm ASTM D5185(m) 281 Zinc ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) 671 Lithium ppm ASTM D5185(m) <1 | Molybdenum | ppm | ASTM D5185(m) | | | | |
| Calcium ppm ASTM D5185(m) 9 Phosphorus ppm ASTM D5185(m) 281 Zinc ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) 671 Lithium ppm ASTM D5185(m) <1 | Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Phosphorus ppm ASTM D5185(m) 281 Zinc ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) 671 Lithium ppm ASTM D5185(m) <1 | Magnesium | ppm | ASTM D5185(m) | | - | | |
| Zinc ppm ASTM D5185(m) 358 Sulfur ppm ASTM D5185(m) 671 | Calcium | ppm | ASTM D5185(m) | | 9 | | |
| Sulfur ppm ASTM D5185(m) 671 | Phosphorus | ppm | ASTM D5185(m) | | 281 | | |
| Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 1 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 <1 | Zinc | ppm | ASTM D5185(m) | | 358 | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 1 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 <1 | Sulfur | ppm | ASTM D5185(m) | | 671 | | |
| Silicon ppm ASTM D5185(m) >15 1 | Lithium | ppm | ASTM D5185(m) | | <1 | | |
| Sodium ppm ASTM D5185(m) 0 | CONTAMINANTS | 3 | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185(m) >20 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 1031 Particles >6μm ASTM D7647 >1300 277 Particles >14μm ASTM D7647 >160 27 Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Dil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Silicon | ppm | ASTM D5185(m) | >15 | 1 | | |
| Potassium ppm ASTM D5185(m) >20 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 1031 Particles >6μm ASTM D7647 >1300 277 Particles >14μm ASTM D7647 >160 27 Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Sodium | ppm | ASTM D5185(m) | | 0 | | |
| Particles >4μm ASTM D7647 >5000 1031 Particles >6μm ASTM D7647 >1300 277 Particles >14μm ASTM D7647 >160 27 Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Potassium | ppm | ASTM D5185(m) | >20 | <1 | | |
| Particles >6μm ASTM D7647 >1300 277 Particles >14μm ASTM D7647 >160 27 Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >14μm ASTM D7647 >160 27 Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Dil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Particles >4µm | | ASTM D7647 | >5000 | 1031 | | |
| Particles >21μm ASTM D7647 >40 8 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Dil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Particles >6µm | | ASTM D7647 | >1300 | 277 | | |
| Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Particles >14µm | | ASTM D7647 | >160 | | | |
| Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | Particles >21µm | | ASTM D7647 | >40 | 8 | | |
| Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | | | ASTM D7647 | >10 | | | |
| Oil Cleanliness ISO 4406 (c) >19/17/14 17/15/12 | | | | | | | |
| FLUID DEGRADATION method limit/base current history1 history2 | | | | | - | | |
| | FLUID DEGRADA | ATION | method | limi <u>t/base</u> | current | historv1 | history2 |

Acid Number (AN)

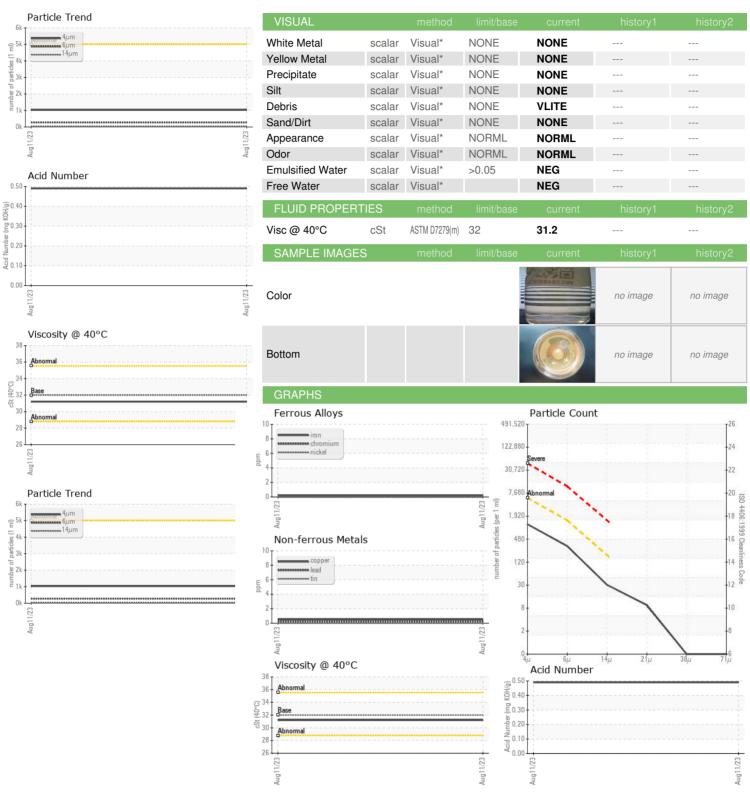
mg KOH/g ASTM D974*

Report Id: GEIMIS [WCAMIS] 02575702 (Generated: 08/15/2023 10:28:07) Rev: 1

Contact/Location: Saddam Suarez - GEIMIS



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

Test Package

: WC0848537

: 02575702 : 5620753 : IND 2

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 14 Aug 2023 : 15 Aug 2023 Diagnosed

: Kevin Marson Diagnostician

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.

GEISMAR CANADA

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