

OIL ANALYSIS REPORT









MINING Machine Id ME-71 CATERPILLAR 349L HPD01020 Component Right Final Drive

SHELL Spirax S4 CX 30 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Gear wear is indicated.

Contamination

There is no indication of any contamination in the oil

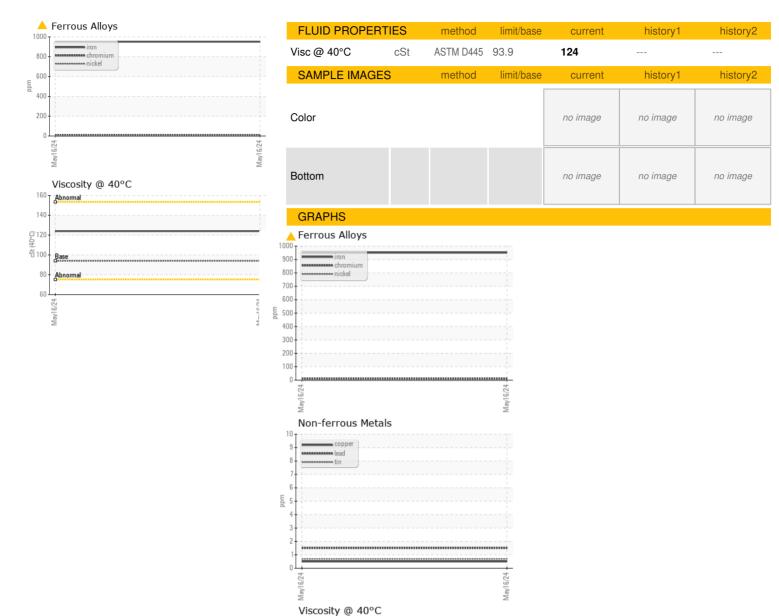
Fluid Condition

The condition of the oil is acceptable for the time in service.

| Sample Number Client Info WC0938475 | 0 (GAL) | | <u>, </u> | | May2024 | | |
|--|---------------|--------|--|----------------------|--------------|-----------|----------|
| Client Info 16 May 2024 | SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Client Info 16 May 2024 | Sample Number | | Client Info | | WC0938475 | | |
| Machine Age hrs Client Info 8534 | · | | | | | | |
| Dil Age | • | hre | | | - | | |
| Client Info | | | | | | | |
| CONTAMINATION method limit/base current history1 histo | • | 1110 | | | | | |
| CONTAMINATION method limit/base current history1 history WEAR METALS method limit/base current history1 history VEAR METALS method limit/base current history1 history Portonium ppm ASTM D5185m >800 4 951 Chromium ppm ASTM D5185m >10 Vickel ppm ASTM D5185m >15 <1 Siliver ppm ASTM D5185m >2 <1 Aluminum ppm ASTM D5185m >2 <1 Lead ppm ASTM D5185m >75 <1 Lead ppm ASTM D5185m >10 2 Capper ppm ASTM D5185m >8 <1 Capper ppm ASTM D5185m \$1 <td></td> <td></td> <td>Olicit iiilo</td> <td></td> <td></td> <td></td> <td></td> | | | Olicit iiilo | | | | |
| WEAR METALS | | J | method | limit/hase | | | |
| Part | | • | | | | | |
| Description | WEAR METALS | | method | limit/base | current | history1 | history2 |
| ASTM D5185m >10 | ron | ppm | ASTM D5185m | >800 | ▲ 951 | | |
| ASTM D5185m S | - | | | | | | |
| Silver | | | | | | | |
| Silver | | | | | | | |
| ASTM D5185m >75 3 | | | | | | | |
| ASTM D5185m >10 2 | - | • • | | | | | |
| ASTM D5185m | | | | | | | |
| Astronometric Astronometri | | | | | | | |
| Anadium | | | | | | | |
| ADDITIVES | in | ppm | | >8 | | | |
| Managanese ppm ASTM D5185m Sarium ppm ASTM D5185m ppm ppm ASTM D5185m ppm ppm | /anadium | ppm | ASTM D5185m | | <1 | | |
| Soron ppm ASTM D5185m 8 | Cadmium | ppm | ASTM D5185m | | <1 | | |
| Sarium | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185m 5 Manganese ppm ASTM D5185m 12 Magnesium ppm ASTM D5185m 16 Calcium ppm ASTM D5185m 915 Phosphorus ppm ASTM D5185m 988 Vinc ppm ASTM D5185m 6140 CONTAMINANTS method limit/base current history1 history Solium ppm ASTM D5185m >400 17 Solium ppm ASTM D5185m >20 2 Solium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history Visual NONE NONE Vieweithate scalar *Visual | Boron | ppm | ASTM D5185m | | 8 | | |
| Manganese ppm ASTM D5185m 12 Magnesium ppm ASTM D5185m 16 Phosphorus ppm ASTM D5185m 915 Phosphorus ppm ASTM D5185m 988 Sulfur ppm ASTM D5185m 6140 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >400 17 Sodium ppm ASTM D5185m >20 2 Sotassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history Visual NONE NONE Visual NONE NONE Visual NONE NONE | Barium | ppm | ASTM D5185m | | <1 | | |
| Magnesium ppm ASTM D5185m 16 Calcium ppm ASTM D5185m 3322 Chosphorus ppm ASTM D5185m 915 Cinc ppm ASTM D5185m 988 Sulfur ppm ASTM D5185m 6140 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history2 CONTAMINANTS method limit/base current history2 | Nolybdenum | ppm | ASTM D5185m | | 5 | | |
| Calcium ppm ASTM D5185m 3322 Phosphorus ppm ASTM D5185m 915 Pince ppm ASTM D5185m 988 Sulfur ppm ASTM D5185m 6140 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >400 17 Potassium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history1 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 | Manganese | ppm | ASTM D5185m | | 12 | | |
| Salcium | /lagnesium | ppm | ASTM D5185m | | 16 | | |
| Phosphorus ppm ASTM D5185m 915 Sulfur ppm ASTM D5185m 988 Sulfur ppm ASTM D5185m 6140 CONTAMINANTS method limit/base current history1 history Sodium ppm ASTM D5185m >400 17 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history1 Visual NONE NONE Visual NONE NONE Visual NONE NONE Visual NONE NONE Visual NONE NONE Visual NORML | - | • • | ASTM D5185m | | 3322 | | |
| Sulfur | | | | | | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >400 17 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history1 history2 VisuAL method limit/base current history1 history2 VisuAL method limit/base current history1 history2 VisuAL method limit/base current history1 history2 Visia NONE NONE Viellow Metal scalar *Visual NONE Visite Metal scalar *Visual NONE Visite Metal scalar *Visual NONE NONE </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >400 17 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 VISUAL method limit/base current history1 history2 VISUAL scalar *Visual NONE Viellow Metal scalar *Visual NONE NONE Viellow Metal scalar *Visual NONE NONE | - | | | | | | |
| Silicon | | | | Proceeds the control | | | |
| Sodium | | | | | | nistory i | nistory |
| Potassium ppm ASTM D5185m >20 2 VNite Metal scalar *Visual NONE NONE Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | | ppm | | >400 | • • | | |
| VISUAL method limit/base current history1 history1 Vhite Metal scalar *Visual NONE Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | | ppm | | | | | |
| White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE MODER Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | otassium | ppm | ASTM D5185m | >20 | 2 | | |
| Vellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE MODER Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | VISUAL | | method | limit/base | current | history1 | history2 |
| Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE MODER Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Sand/Dirt scalar *Visual >0.2 NEG | White Metal | scalar | *Visual | NONE | NONE | | |
| Silt scalar *Visual NONE MODER Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Ddor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | 'ellow Metal | scalar | *Visual | NONE | NONE | | |
| Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Ddor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | Precipitate | scalar | *Visual | NONE | NONE | | |
| Sand/Dirt scalar *Visual NONE NONE Spearance scalar *Visual NORML NORML NORML Spearance scalar *Visual NORML NORML NORML Smulsified Water scalar *Visual >0.2 NEG | Silt | scalar | *Visual | NONE | MODER | | |
| Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | Debris | scalar | *Visual | NONE | NONE | | |
| Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.2 NEG | | | | NORML | NORML | | |
| Emulsified Water scalar *Visual >0.2 NEG | • • | | | | | | |
| | | | | | | | |
| | ree Water | scalar | *Visual | - | NEG | | |



OIL ANALYSIS REPORT







Certificate 12367

Sample No.

Lab Number : 06194468

Test Package : CONST

160

140 130

: WC0938475 Unique Number : 11056591

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 May 2024

Tested : 31 May 2024 Diagnosed : 31 May 2024 - Sean Felton

23769 STATE HWY 110 NORTH TROUP, TX US 75789

Contact: Forrest Howell forrest.howell@coviacorp.com

COVIA - TROUP - 084

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.

T: (903)574-0693 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Wes Davis