

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

CITIZEN WC1021 (S/N V35449)

Hydraulic System Fluid SPINDLE OIL-3 (VELOCITE) (--- 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

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

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

| | | | | Mar2024 | | |
|---|--|---|--|---|--|---|
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | WC0797074 | | , |
| Sample Date | | Client Info | | 19 Mar 2024 | | |
| Machine Age | yrs | Client Info | | 2 | | |
| Oil Age | yrs | Client Info | | 0 | | |
| Oil Changed | yı 5 | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| | | | 11 11 11 | | | |
| CONTAMINATIO | N | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.05 | NEG | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >20 | 10 | | |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | | |
| Nickel | ppm | ASTM D5185(m) | >20 | 0 | | |
| Titanium | ppm | ASTM D5185(m) | | 0 | | |
| Silver | ppm | ASTM D5185(m) | | 0 | | |
| Aluminum | ppm | ASTM D5185(m) | >20 | 0 | | |
| Lead | ppm | ASTM D5185(m) | >20 | 0 | | |
| Copper | ppm | ASTM D5185(m) | >20 | 0 | | |
| Tin | 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 | | |
| | ppm | | | - | la la tament | bister 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 | | |
| Manganese | ppm | ASTM D5185(m) | | 1 | | |
| Magnesium | ppm | ASTM D5185(m) | | <1 | | |
| Calcium | 1-1- | A0110 D0100(11) | | ~ ' | | |
| Galcium | ppm | ASTM D5185(m) | | <1 | | |
| Phosphorus | | ASTM D5185(m) ASTM D5185(m) | | | | |
| | ppm | ASTM D5185(m) | | <1 | | |
| Phosphorus Zinc Sulfur | ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | | <1 <1 | | |
| Phosphorus Zinc Sulfur | ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | | <1 <1 3 | | |
| Phosphorus Zinc | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | limit/base | <1 <1 3 190 <1 | | |
| Phosphorus Zinc Sulfur Lithium | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | | <1 <1 3 190 <1 | | |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) | limit/base | <1 <1 3 190 <1 current 181 | history1 | history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method | limit/base | <1 <1 3 190 <1 current | history1 | history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | limit/base >15 >20 | <1 <1 3 190 <1 <u>current</u> 181 0 0 | history1 | history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method | limit/base >15 >20 limit/base | <1 <1 3 190 <1 current 181 0 0 0 Current | history1 history1 | history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | limit/base >15 >20 limit/base >5000 | <1 <1 3 190 <1 current 181 0 0 current 178 | history1 history1 | history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | limit/base >15 >20 limit/base >5000 >1300 | <1 <1 3 190 <1 Current 181 0 0 Current 178 59 | history1 history1 | history2 history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 | limit/base >15 >20 limit/base >5000 >1300 >160 | <1 <1 3 190 <1 181 0 0 Current 178 59 6 | history1 history1 | history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D7647 ASTM D7647 | limit/base >15 >20 limit/base >5000 >1300 >160 >40 | <1 <1 3 190 <1 Current 181 0 0 0 Current 178 59 6 2 | history1 history1 | history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 | <1 <1 3 190 <1 181 0 0 Current 178 59 6 2 0 | history1 history1 | history2 history2 |
| Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | limit/base >15 >20 limit/base >5000 >1300 >160 >40 | <1 <1 3 190 <1 Current 181 0 0 0 Current 178 59 6 2 | history1 history1 | history2 history2 history2 < |





