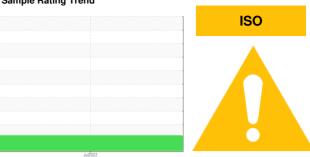


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

GROUND PLANE

Hydraulic System

SHELL TELLUS 32 (300 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

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

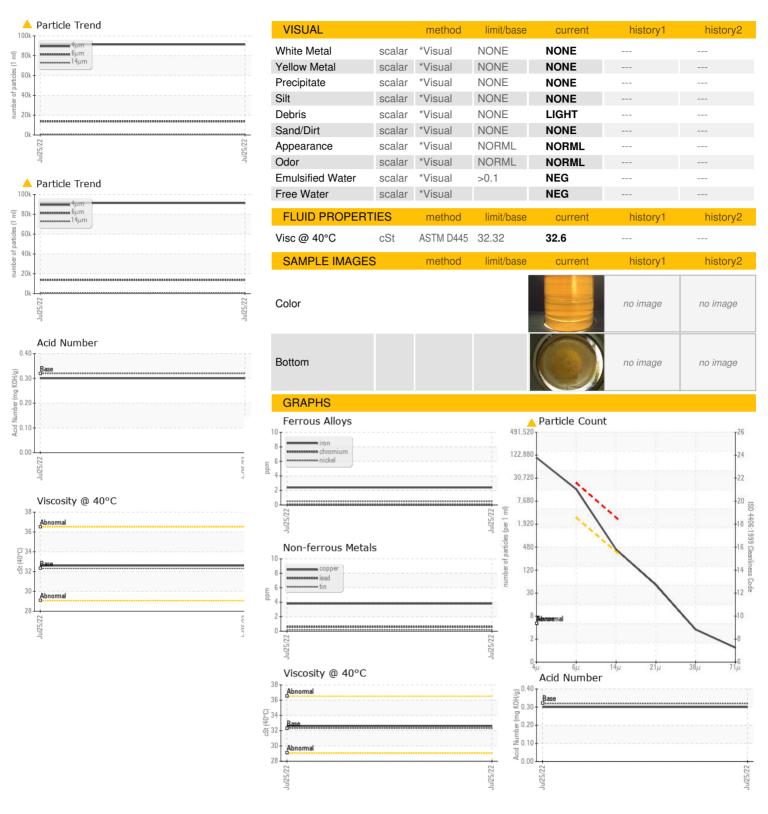
| | | | | Jul2022 | | |
|---|--|---|---|---|----------------------------------|-------------------|
| | | | | | | |
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | PTK0003650 | | |
| Sample Date | | Client Info | | 25 Jul 2022 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | ABNORMAL | | |
| CONTAMINATION | NI. | method | limit/base | current | history1 | history2 |
| | • | | | | motory | motoryz |
| Water | | WC Method | >0.1 | NEG | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >20 | 2 | | |
| Chromium | ppm | ASTM D5185m | >10 | 0 | | |
| Nickel | ppm | ASTM D5185m | | <1 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | | <1 | | |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | | |
| Lead | ppm | ASTM D5185m | >10 | <1 | | |
| Copper | ppm | ASTM D5185m | >75 | 4 | | |
| Tin | ppm | ASTM D5185m | >10 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | 0 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | historv1 | history2 |
| ADDITIVES | nnm | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | limit/base | <1 | | |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | limit/base | <1 0 | | |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | <1 0 0 | | |
| Boron Barium Molybdenum Manganese | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | <1 0 0 0 | | |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 | <1 0 0 0 0 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 | <1 0 0 0 0 12 78 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 | <1 0 0 0 0 12 78 266 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 277 | <1 0 0 0 12 78 266 289 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 | <1 0 0 0 0 12 78 266 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 277 | <1 0 0 0 12 78 266 289 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 277 1865 | <1 0 0 0 12 78 266 289 3864 | | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 11 35 259 277 1865 limit/base | <1 0 0 0 12 78 266 289 3864 current | history1 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 11 35 259 277 1865 limit/base | <1 0 0 0 12 78 266 289 3864 current | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 11 35 259 277 1865 limit/base >20 | <1 0 0 0 12 78 266 289 3864 current 3 | history1 | |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 111 35 259 277 1865 limit/base >20 | <1 0 0 0 12 78 266 289 3864 current 3 0 | history1 | history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | 11 35 259 277 1865 limit/base >20 >20 | <1 0 0 0 12 78 266 289 3864 current 3 0 0 current 91271 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method ASTM D5185m | 111 35 259 277 1865 limit/base >20 limit/base >20 | <1 0 0 0 12 78 266 289 3864 current 3 0 0 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 | 111 35 259 277 1865 limit/base >20 >20 limit/base >2500 >320 | <1 0 0 0 12 78 266 289 3864 current 3 0 0 current 91271 13668 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 | 111 35 259 277 1865 limit/base >20 | <1 0 0 12 78 266 289 3864 current 3 0 0 current 91271 13668 369 44 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 111 35 259 277 1865 limit/base >20 >20 limit/base >2500 >320 >80 >20 | <1 0 0 0 12 78 266 289 3864 current 3 0 0 current 91271 13668 369 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 111 35 259 277 1865 limit/base >20 >20 limit/base >2500 >320 >80 >20 >4 | <1 0 0 0 12 78 266 289 3864 | history1 history1 | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 111 35 259 277 1865 limit/base >20 >20 limit/base >2500 >320 >80 >20 | <1 0 0 0 12 78 266 289 3864 | history1 history1 | history2 history2 |

Acid Number (AN)

mg KOH/g ASTM D8045 0.32



OIL ANALYSIS REPORT







Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 05603426 Unique Number : 10072907

: PTK0003650 Test Package : MOB 2

Received : 28 Jul 2022 **Tested** : 29 Jul 2022

Diagnosed : 30 Jul 2022 - Don Baldridge

Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

 st - 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)

ROLLS ROYCE STENNIS

H1 TEST SITE BUILDING 5002 STENNIS SPACE CENTER, MS US 39529

Contact: JORDAN DEATON jordan.deaton@rolls-royce.com T: (228)342-5332

Contact/Location: JORDAN DEATON - ROLSTEMS