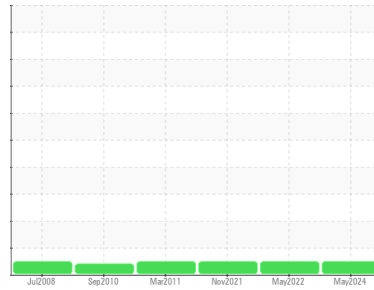




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
STP PROVER SKID
 Component
Hydraulic System
 Fluid
ROYAL PURPLE SYNFILM 32 (35 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | RP0002094 | RP0002097 | RP0001283 |
| Sample Date | Client Info | | | 09 May 2024 | 03 May 2022 | 10 Nov 2021 |
| Machine Age | yrs | Client Info | | 0 | 0 | 0 |
| Oil Age | yrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Antimony | ppm | ASTM D5185m | | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | <1 |

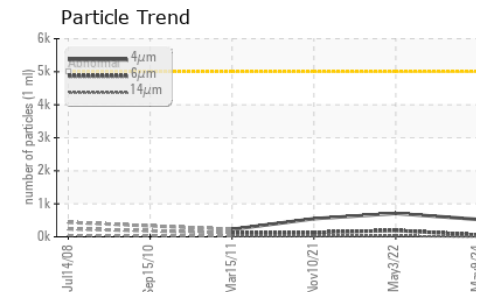
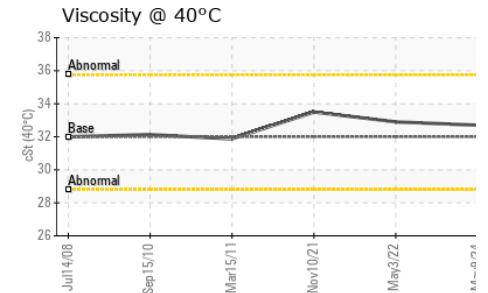
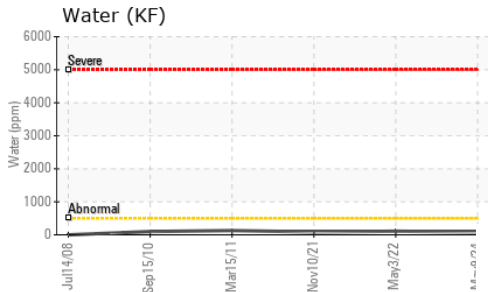
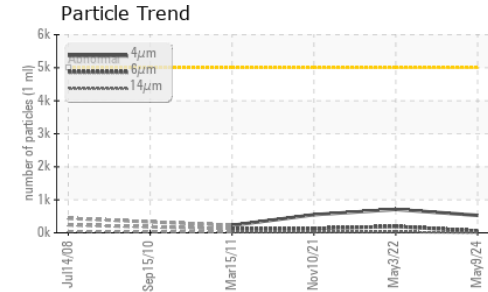
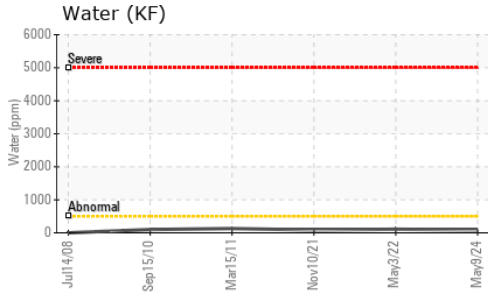
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | <1 | 5 |
| Barium | ppm | ASTM D5185m | | 0 | 3 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | 31 | 25 | 15 |
| Calcium | ppm | ASTM D5185m | | 118 | 116 | 136 |
| Phosphorus | ppm | ASTM D5185m | | 476 | 461 | 549 |
| Zinc | ppm | ASTM D5185m | | 581 | 586 | 704 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | 2 | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | 2 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | 0 |
| Water | % | ASTM D6304 | >0.05 | 0.008 | 0.010 | 0.008 |
| ppm Water | ppm | ASTM D6304 | >500 | 86 | 109.8 | 86.2 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 528 | 709 | 549 |
| Particles >6µm | | ASTM D7647 | >1300 | 55 | 194 | 132 |
| Particles >14µm | | ASTM D7647 | >160 | 5 | 23 | 22 |
| Particles >21µm | | ASTM D7647 | >40 | 2 | 6 | 11 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 3 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 16/13/10 | 17/15/12 | 16/14/12 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.70 | 0.73 | 0.663 |

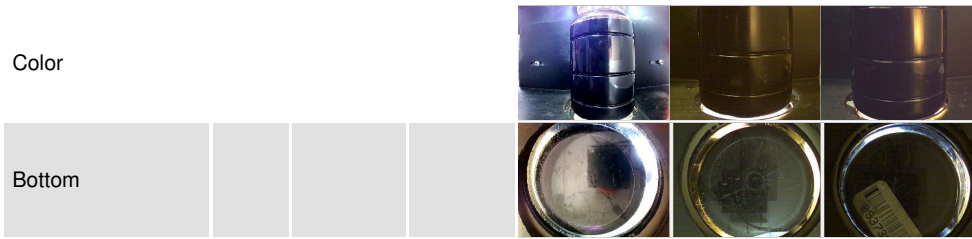
OIL ANALYSIS REPORT



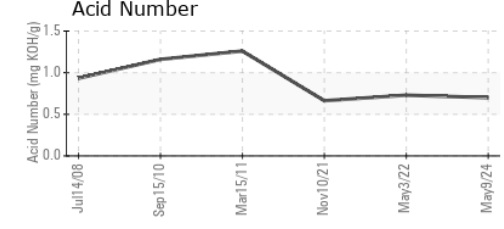
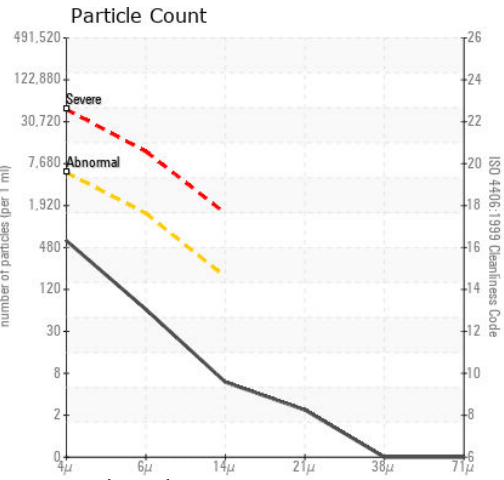
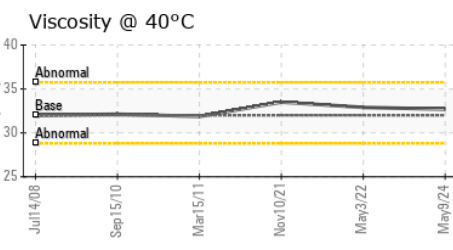
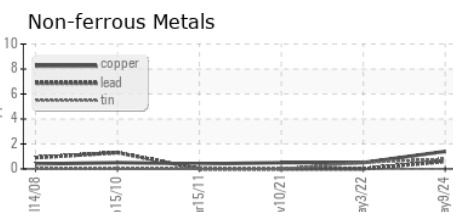
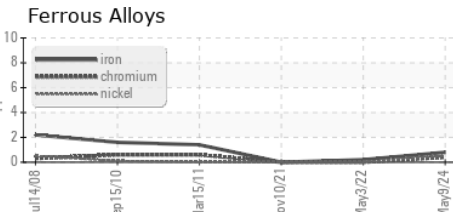
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | VLITE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 32 | 32.7 | 32.9 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0002094
Lab Number : 06183329
Unique Number : 11034655
Test Package : IND 2
Received : 17 May 2024
Tested : 20 May 2024
Diagnosed : 21 May 2024 - Don Baldrige

EXPLORER PIPELINE
 1355 ROBBINS RD
 HARTFORD, IL
 US 62048
 Contact: ROGELIO BERUMEN
 rberumen@expl.com

Certificate L2367
 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.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)