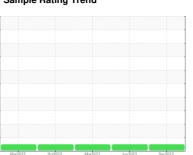


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



FOSW_U61 FOSW_U61_P61

Drive End Pump

ROYAL PURPLE SYNFILM GT 32 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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 | | | Mar2022 | 0ct2022 | Mar2023 Jun2023 | Sep2023 | |
|--|------------------|----------|-------------|------------|-----------------|-------------|-------------|
| Sample Date | SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Date | Sample Number | | Client Info | | RP0023915 | RP0025792 | RP0025787 |
| Machine Age | | | Client Info | | 22 Sep 2023 | 15 Jun 2023 | 30 Mar 2023 |
| Oil Age hrs Client Info N/A N/A N/A N/A Oil Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history2 Iron ppm ASTM D5185m >90 4 6 9 Chromium ppm ASTM D5185m >5 0 0 0 Nickel ppm ASTM D5185m >5 0 <1 0 Silver ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >3 0 <1 0 Alluminum ppm ASTM D5185m >3 0 <1 0 Alluminum ppm ASTM D5185m >12 4 4 3 Copper ppm ASTM D5185m >9 0 0 0 Tin ppm ASTM D5185m >9 0 0 0 </td <td></td> <td>hrs</td> <td>Client Info</td> <td></td> <th></th> <td>0</td> <td>0</td> | | hrs | Client Info | | | 0 | 0 |
| Cilichanged Cilichanged Cilichanged Ni/A NORMAL NORMAL NORMAL NORMAL | | hrs | Client Info | | 0 | 0 | 0 |
| NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 history2 limit/base current history1 history2 history2 limit/base current history1 history2 limit/base limit/base current history1 history2 limit/base limi | • | | | | | N/A | N/A |
| Pron | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Chromium ppm ASTM D5185m >5 0 0 0 Nickel ppm ASTM D5185m >5 0 <1 0 Tittanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >7 2 1 <1 Lead ppm ASTM D5185m >12 4 4 3 Copper ppm ASTM D5185m >9 0 0 0 Tin ppm ASTM D5185m >9 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Caddmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 <th>WEAR METALS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th> | WEAR METALS | | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185m | >90 | 4 | 6 | 9 |
| Titanium | Chromium | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Silver | Nickel | ppm | ASTM D5185m | >5 | 0 | <1 | 0 |
| Aluminum | Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | Silver | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Copper ppm ASTM D5185m >30 12 6 6 Tin ppm ASTM D5185m >9 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 72 79 77 72 79 77 Calcium ppm ASTM D5185m 0 2 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 | Aluminum | ppm | ASTM D5185m | >7 | 2 | 1 | <1 |
| Copper ppm ASTM D5185m >30 12 6 6 Tin ppm ASTM D5185m >9 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnaese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 72 79 77 72 79 77 Calcium ppm ASTM D5185m 0 2 4 1 4 1 4 1 4 1 2 4 2 2 4 2 2 2 2 2 2 | Lead | | | | 4 | 4 | 3 |
| Tin | | | | >30 | 12 | 6 | |
| Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 72 79 77 Calcium ppm ASTM D5185m 0 2 4 Phosphorus ppm ASTM D5185m 0 2 4 Zinc ppm ASTM D5185m 0 2 4 2 Zinc ppm ASTM D5185m 2 2 2 2 2 CONTAMINANTS method limit/base current history1 history2 Silicon ppm < | | | | | | | |
| Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 72 79 77 77 Calcium ppm ASTM D5185m 0 2 4 1 1 2 1 4 1 2 1 77 77 77 77 77 77 77 77 77 77 77 77 77 77 77 77 77 77 72 79 77 77 77 72 79 77 77 70 72 2 1 1 1 1 1 1 1 | Vanadium | | ASTM D5185m | | | 0 | 0 |
| Boron ppm ASTM D5185m 0 0 0 0 0 | | | ASTM D5185m | | | | 0 |
| Barium | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m <1 | Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td> | Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td> | Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Calcium ppm ASTM D5185m 0 2 <1 Phosphorus ppm ASTM D5185m 0 2 4 Zinc ppm ASTM D5185m 0 0 2 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 2 2 2 Sodium ppm ASTM D5185m >20 0 1 <1 | | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Phosphorus ppm ASTM D5185m 0 2 4 Zinc ppm ASTM D5185m 0 0 2 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 2 2 2 2 Sodium ppm ASTM D5185m 20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Water % ASTM D5185m >20 0 1 <1 <1 Protassium <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>72</th> <td>79</td> <td>77</td> | Magnesium | ppm | ASTM D5185m | | 72 | 79 | 77 |
| Zinc ppm ASTM D5185m 0 0 2 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 2 2 2 2 Sodium ppm ASTM D5185m 20 0 1 <1 | Calcium | ppm | ASTM D5185m | | 0 | 2 | <1 |
| Zinc ppm ASTM D5185m 0 0 2 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >60 2 2 2 Sodium ppm ASTM D5185m >20 0 1 <1 | Phosphorus | ppm | ASTM D5185m | | 0 | 2 | 4 |
| Silicon ppm ASTM D5185m >60 2 2 2 2 Sodium ppm ASTM D5185m 2 2 2 0 Potassium ppm ASTM D5185m >20 0 1 <1 Water % ASTM D6304 >.1 0.017 0.026 0.013 ppm Water ppm ASTM D6304 >.1000 171.6 267.0 130.5 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.45 0.45 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Pr | | ppm | ASTM D5185m | | 0 | 0 | 2 |
| Sodium ppm ASTM D5185m 2 2 0 Potassium ppm ASTM D5185m >20 0 1 <1 | CONTAMINANTS | 5 | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185m >20 0 1 <1 Water % ASTM D6304 >.1 0.017 0.026 0.013 ppm Water ppm ASTM D6304 >1000 171.6 267.0 130.5 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.45 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar <td< td=""><td>Silicon</td><td>ppm</td><td>ASTM D5185m</td><td>>60</td><th>2</th><td>2</td><td>2</td></td<> | Silicon | ppm | ASTM D5185m | >60 | 2 | 2 | 2 |
| Water % ASTM D6304 >.1 0.017 0.026 0.013 ppm Water ppm ASTM D6304 >1000 171.6 267.0 130.5 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML | Sodium | ppm | ASTM D5185m | | 2 | 2 | 0 |
| ppm Water ppm ASTM D6304 >1000 171.6 267.0 130.5 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOHlg ASTM D8045 0.45 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML NORML | Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | <1 |
| FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.45 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML NORML | Water | % | ASTM D6304 | >.1 | 0.017 | 0.026 | 0.013 |
| Acid Number (AN) mg KOHg ASTM D8045 0.45 0.45 0.52 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML | ppm Water | ppm | ASTM D6304 | >1000 | 171.6 | 267.0 | 130.5 |
| VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML | FLUID DEGRADA | NOITA | method | limit/base | current | history1 | history2 |
| White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML | Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.45 | 0.45 | 0.52 |
| Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML | VISUAL | | method | limit/base | current | history1 | history2 |
| Precipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML | | | | | | | |
| Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML | Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Odor scalar *Visual NORML NORML NORML NORML | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Emulsified Water | scalar | *Visual | >.1 | NEG | NEG | NEG |

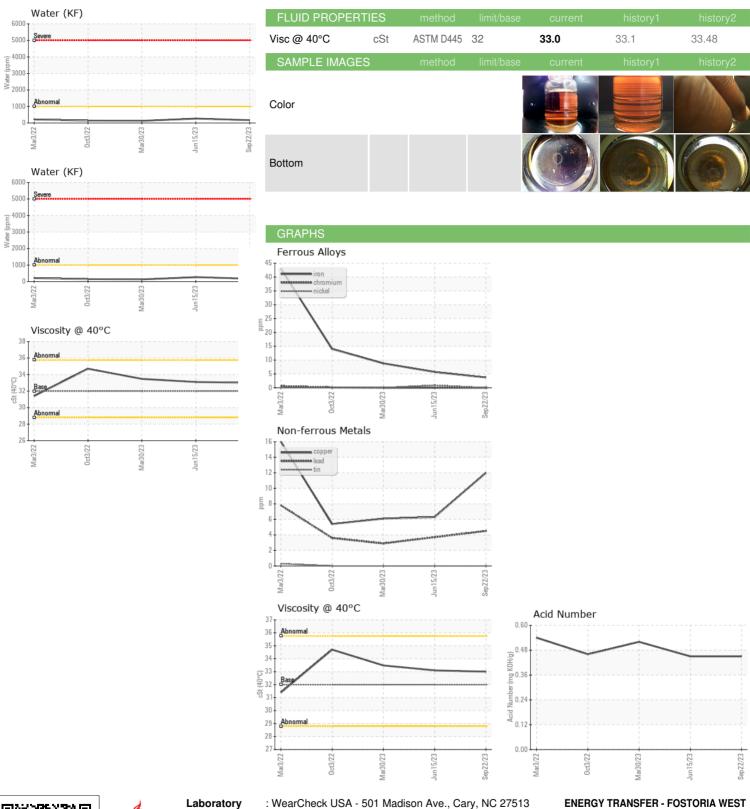
bmitter By: CHRIS BECKWITH

NEG

scalar *Visual



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number

Unique Number

: RP0023915 : 05964264 : 10670815 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 Sep 2023

: 01 Oct 2023 Diagnosed Diagnostician : Don Baldridge

Contact: CHRIS BECKWITH christopher.beckwith@energytransfer.com T:

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)

22782 STATE ROUTE 12

FOSTORIA, OH

US 44830

F: