

OIL ANALYSIS REPORT

TYSDCP NORTH (S/N CK8939U09230) Component

Hydraulic System USPI FG HYD 46 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

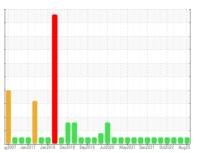
All component wear rates are normal.

Contamination

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

Fluid Condition

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



Sample Rating Trend

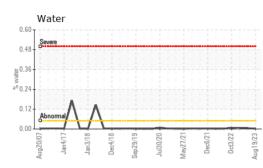


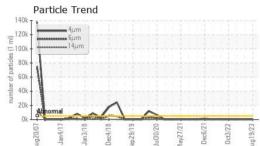
NORMAL

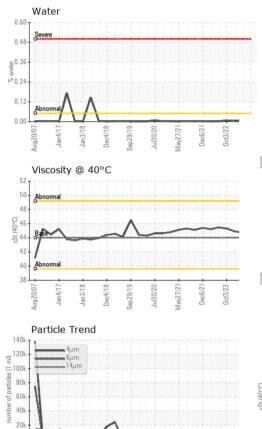
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
|------------------|---------------|--------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | USPM29275 | USPM28888 | USPM26226 |
| Sample Date | | Client Info | | 19 Aug 2023 | 11 May 2023 | 25 Jan 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | 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 | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| 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 |
| Barium | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 1 | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | 725 | 490 | 480 | 496 |
| Zinc | ppm | ASTM D5185m | | 8 | 6 | 4 |
| Sulfur | ppm | ASTM D5185m | 625 | 655 | 597 | 643 |
| CONTAMINANTS | 3 | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 1 | 2 | <1 |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 0 |
| Water | % | ASTM D6304 | >0.05 | 0.002 | 0.005 | 0.004 |
| ppm Water | ppm | ASTM D6304 | >500 | 16.3 | 56.3 | 45.9 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >5000 | 294 | 488 | 94 |
| Particles >6µm | | ASTM D7647 | >1300 | 96 | 118 | 27 |
| Particles >14µm | | ASTM D7647 | >160 | 11 | 12 | 4 |
| Particles >21µm | | ASTM D7647 | >40 | 3 | 2 | 1 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 15/14/11 | 16/14/11 | 14/12/9 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.36 | 0.31 | 0.29 | 0.30 |



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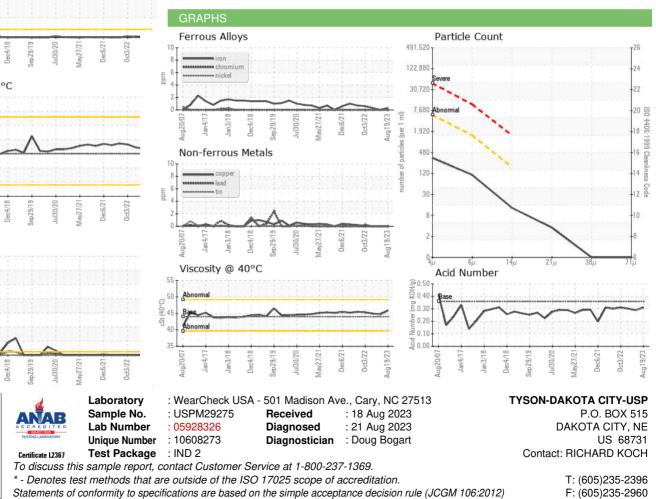




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| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | 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 |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 44 | 45.8 | 44.7 | 44.9 |
| SAMPLE IMAGES | ; | method | limit/base | current | history1 | history2 |
| Color | | | | | | |
| | | | | 1 | 11/ | |

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Contact/Location: RICHARD KOCH - IBPDAK01