

Machine Id **P210-10-1029 (S/N V605)**

Component Hydraulic System

EMPE

TULCO LUBSOIL SUPER HYDRAULIC AW 68 (200 GAL)

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | | History1 | History2 |
|---|------------------|------------|--------------------------|-----------------|-------------|----------|----------|
| The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. | Sample Number | | Client Info | | TO5002460 | | |
| | Sample Date | | Client Info | | 10 Nov 2023 | | |
| | Machine Age | hrs | Client Info | | 5487 | | |
| | Oil Age | hrs | Client Info | | 0 | | |
| | Filter Age | hrs | Client Info | | 0 | | |
| | Oil Changed | | Client Info | | Not Changd | | |
| | Filter Changed | | Client Info | | Changed | | |
| | Sample Status | | | | ABNORMAL | | |
| | | | | | 0 | | |
| | Iron | ppm | ASTM D5185m | | 0 | | |
| All component wear rates are normal. | Chromium | ppm | ASTM D5185m | | 0 | | |
| | Nickel | ppm | ASTM D5185m | >20 | 0 | | |
| | Titanium | ppm | ASTM D5185m | | 0 | | |
| | Silver | ppm | ASTM D5185m | 00 | 0 | | |
| | Aluminum | ppm | ASTM D5185m | | 0 | | |
| | Lead | ppm | ASTM D5185m | | 0 | | |
| | Copper | ppm | ASTM D5185m | | 16 | | |
| | Tin | ppm | ASTM D5185m | >20 | 0 | | |
| | Vanadium | ppm | ASTM D5185m | NONE | 0 | | |
| | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | <15 < | 7 | | |
| There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. | Potassium | ppm | ASTM D5185m | | 2 | | |
| | Water | % | ASTM D6304 | | 0.009 | | |
| | ppm Water | ppm | ASTM D6304 | | 93 | | |
| | Particles >4µm | ррш | ASTM D0504 ASTM D7647 | | ▲ 27659 | | |
| | Particles >6µm | | ASTM D7647 | | ▲ 3722 | | |
| | Particles >14µm | | ASTM D7647 | | 67 | | |
| | Particles >21µm | | ASTM D7647 | | 12 | | |
| | Particles >38µm | | ASTM D7647 | | 12 | | |
| | Particles >71µm | | ASTM D7647 ASTM D7647 | | 0 | | |
| | Oil Cleanliness | | ISO 4406 (c) | >3 >19/17/14 | A 22/19/13 | | |
| | Silt | scalar | *Visual | NONE | NONE | | |
| | Debris | scalar | *Visual | NONE | LIGHT | | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| | Appearance | scalar | *Visual | NORML | NORML | | |
| | Odor | scalar | *Visual | NORML | NORML | | |
| | Emulsified Water | scalar | *Visual | >0.05 | NEG | | |
| | | | visuai | >0.05 | NEG | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 1 | | |
| | Boron | | ASTM D5185m | | 0 | | |
| The AN level is acceptable for this fluid. The oil is still serviceable | Barium | ppm | ASTM D5185m | | 0 | | |
| provided that the contaminant(s) can be reduced to acceptable levels. | Molybdenum | ppm | ASTM D5185m | | 0 | | |
| | Manganese | ppm | ASTM D5185m | | ہ <1 | | |
| | Magnesium | ppm | ASTM D5185m | | 83 | | |
| | Calcium | ppm | ASTM D5185m | | 70 | | |
| | Phosphorus | ppm | ASTM D5185m | 425 | 302 | | |
| | Zinc | | ASTM D5185m | | 302 | | |
| | Sulfur | ppm ppm | ASTM D5185m | | 1693 | | |
| | Guildi | ppill | | 1000 | 1093 | | |

Acid Number (AN) mg KOH/g ASTM D8045 0.7

Viscosity Index (VI) Scale ASTM D2270 102

Visc @ 100°C cSt

Visc @ 40°C cSt ASTM D445 67.4

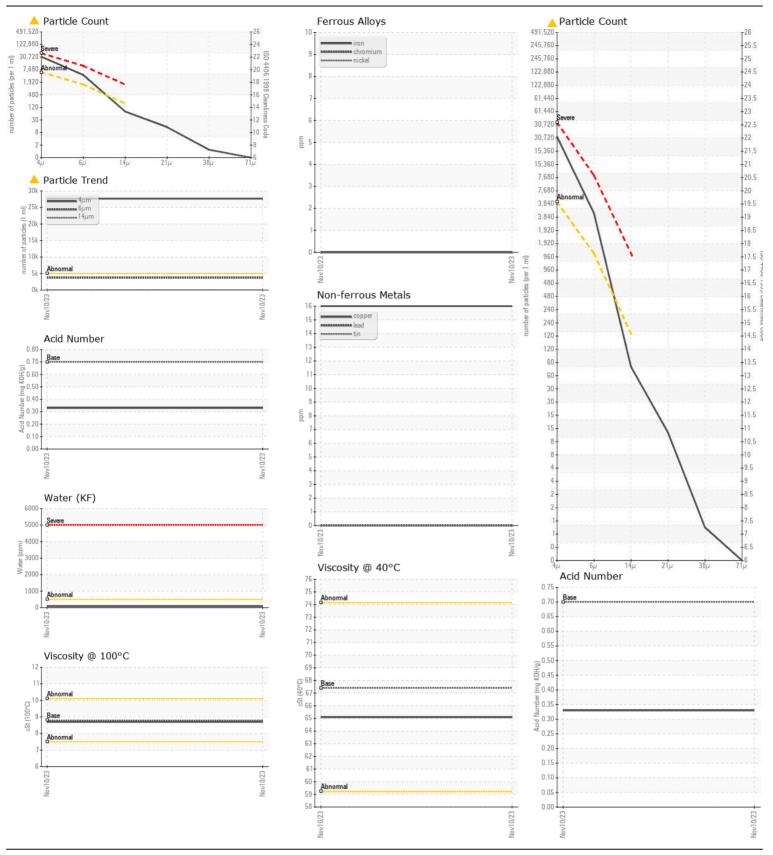
ASTM D445 8.8

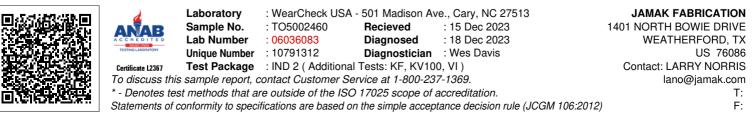
0.33

65.1

8.7

105





Contact/Location: LARRY NORRIS - JAMWEA