

Machine Id **427161** Component **2 Differential** Fluid **GEAR OIL SAE 75W90 (--- GAL)**

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (AI) indicate aluminasilicate (coarse dirt) ingress.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|--|--|---|------------------|----------------------|
| Sample Number | | Client Info | | GFL0066534 | | |
| Sample Date | | Client Info | | 02 Jul 2024 | | |
| Machine Age | hrs | Client Info | | 387233 | | |
| Oil Age | hrs | Client Info | | 387233 | | |
| Filter Age | hrs | Client Info | | 387233 | | |
| Oil Changed | | Client Info | | N/A | | |
| Filter Changed | | Client Info | | N/A | | |
| Sample Status | | | | SEVERE | | |
| | | | | | | |
| Iron | ppm | ASTM D5185m | >500 | 2145 | | |
| Chromium | ppm | ASTM D5185m | >10 | 1 7 | | |
| Nickel | ppm | ASTM D5185m | >10 | ▲ 52 | | |
| Titanium | ppm | ASTM D5185m | | 2 | | |
| Silver | ppm | ASTM D5185m | | 0 | | |
| Aluminum | ppm | ASTM D5185m | >25 | <mark>)</mark> 119 | | |
| Lead | ppm | ASTM D5185m | >25 | <1 | | |
| Copper | ppm | ASTM D5185m | >100 | 6 | | |
| Tin | ppm | ASTM D5185m | >10 | <1 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| White Metal | scalar | *Visual | NONE | NONE | | |
| Yellow Metal | scalar | *Visual | NONE | NONE | | |
| | | | | | | |
| Silicon | | ASTM D5185m | >75 | 2 65 | | |
| Silicon Potassium | ppm pom | ASTM D5185m ASTM D5185m | >75 >20 | ▲ 265 28 | | |
| Silicon Potassium Water | ppm ppm | ASTM D5185m ASTM D5185m WC Method | >75 >20 >.2 | ▲ 265 28 NEG | | |
| Silicon Potassium Water Silt | ppm ppm scalar | ASTM D5185m ASTM D5185m WC Method *Visual | >75 >20 >.2 NONE | 265 28 NEG NONE | | |
| Silicon Potassium Water Silt Debris | ppm ppm scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual | >75 >20 >.2 NONE NONE | 265 28 NEG NONE NONE | | |
| Silicon Potassium Water Silt Debris Sand/Dirt | ppm ppm scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual | >75 >20 >.2 NONE NONE NONE | 265 28 NEG NONE NONE NONE | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance | ppm ppm scalar scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual | >75 >20 >.2 NONE NONE NONE | 265 28 NEG NONE NONE NONE NONE NORE | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor | ppm ppm scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual | >75 >20 >.2 NONE NONE NORME NORML | 265 28 NEG NONE NONE NORML NORML | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water | ppm ppm scalar scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual | >75 >20 >.2 NONE NONE NORML NORML >.2 | 265 28 NEG NONE NONE NORML NEG | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water | ppm ppm scalar scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual | >75 >20 >.2 NONE NONE NORML NORML >.2 | 265 28 NEG NONE NONE NORE NORML NORML NEG | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium | ppm ppm scalar scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m | >75 >20 >.2 NONE NONE NORML NORML >.2 | 265 28 NEG NONE NONE NORML NORML NEG 11 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron | ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NONE NORML NORML >.2 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium | ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NONE NORML NORML >.2 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 0 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium | ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NONE NORML NORML >.2 400 200 12 | 265 28 NEG NONE NORML NORML NEG 11 181 0 2 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese | ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NORME NORML >.2 400 200 12 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 0 2 24 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium | ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NONE NORML >.2 400 200 12 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 0 2 24 10 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium | ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NORME NORML >.2 400 200 12 12 12 150 | 265 28 NEG NONE NORE NORML NORML NEG 11 181 0 2 24 10 92 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >2 NONE NORME NORML >2 400 200 12 12 150 1650 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 0 2 24 10 92 1468 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >.2 NONE NORME NORML >.2 400 200 12 12 150 125 | 265 28 NEG NONE NONE NORML NORML NEG 11 181 0 2 24 10 92 1468 48 | | |
| Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >75 >20 >2 NONE NORME NORML >.2 400 200 12 12 150 125 22500 | 265 28 NEG NONE NONE NORML NORML NORML 11 181 0 2 24 10 92 1468 48 27229 | | |

Submitted By: Erik Bazaldua



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Certificate L2367

Sample No.

Lab Number : 06230576

Unique Number : 11114069

Test Package : FLEET

: GFL0066534

Received

Diagnosed

Tested

: 08 Jul 2024

: 10 Jul 2024

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