

FUEL REPORT



Machine Id

KIOTI CK2610 XL9500860

Diesel Fuel

Fluid No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

DIAGNOSIS

A Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

Corrosion

All metal levels are normal indicating no corrosion in the cooling system.

Contaminants

There is a high amount of particulates present in the fuel. The water content is negligible. No evidence of fuel present in the fuel.

Fuel Condition

Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|----------------------------|--------|------------------|------------|-------------|----------|----------|
| Sample Number | | Client Info | | KT0000912 | | |
| Sample Date | | Client Info | | 11 Apr 2024 | | |
| Machine Age | hrs | Client Info | | 253 | | |
| Sample Status | | | | ABNORMAL | | |
| PHYSICAL PROP | ERTIES | method | limit/base | current | history1 | history2 |
| Fuel Color | text | *Visual Screen | Yllow | Yllow | | |
| ASTM Color | scalar | *ASTM D1500 | | L2.5 | | |
| Visc @ 40°C | cSt | ASTM D445 | 3.0 | 2.59 | | |
| Pensky-Martens Flash Point | °C | *PMCC Calculated | 52 | 61 | | |
| SULFUR CONTER | NT | method | limit/base | current | history1 | history2 |
| Sulfur | ppm | ASTM D5185m | 10 | 20 | | |
| Sulfur (UVF) | ppm | ASTM D5453 | | 11 | | |
| DISTILLATION | | method | limit/base | current | history1 | history2 |
| Initial Boiling Point | °C | ASTM D86 | 165 | 171 | | |
| 5% Distillation Point | °C | ASTM D86 | | 194 | | |
| 10% Distill Point | °C | ASTM D86 | 201 | 204 | | |
| 15% Distillation Point | °C | ASTM D86 | | 212 | | |
| 20% Distill Point | °C | ASTM D86 | 216 | 220 | | |
| 30% Distill Point | °C | ASTM D86 | 230 | 235 | | |
| 40% Distill Point | °C | ASTM D86 | 243 | 249 | | |
| 50% Distill Point | °C | ASTM D86 | 255 | 262 | | |
| 60% Distill Point | °C | ASTM D86 | 267 | 276 | | |
| 70% Distill Point | °C | ASTM D86 | 280 | 289 | | |
| 80% Distill Point | °C | ASTM D86 | 295 | 304 | | |
| 85% Distillation Point | °C | ASTM D86 | | 314 | | |
| 90% Distill Point | °C | ASTM D86 | 310 | 325 | | |
| 95% Distillation Point | °C | ASTM D86 | | 343 | | |
| Final Boiling Point | °C | ASTM D86 | 341 | 357 | | |
| IGNITION QUALIT | ΓY | method | limit/base | current | history1 | history2 |
| API Gravity | | ASTM D7777 | 37.7 | 37 | | |
| Cetane Index | | ASTM D4737 | <40.0 | 49 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | <1.0 | 0 | | |
| Sodium | ppm | ASTM D5185m | <0.1 | 1 | | |
| Potassium | ppm | ASTM D5185m | <0.1 | 0 | | |
| Water | % | ASTM D6304 | < 0.05 | 0.004 | | |
| ppm Water | ppm | ASTM D6304 | <500 | 49 | | |
| % Gasoline | % | *In-House | <0.50 | 0.0 | | |
| % Biodiesel | % | *In-House | <20.0 | 0.0 | | |



491,520 122,880

122,000 (III 30,720 6 1,920 7,680 1 1,920 9 1,920 9 1,920 9 480 -1,920 9 480 -120 -30 -120 8 30 -120 8 1,920 9 480 -120 8 30 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 480 -120 8 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9 1,920 9

FUEL REPORT

| | Particle Count | FLUID CLEANLIN | VESS | method | limit/base | current | history1 | |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|--------------------------|------------|-----------------------------|------------------------------------------|----------|
| 91,520 22,880 | L I ²⁶ | | | ASTM D7647 | | ▲ 5880 | | |
| 80,720 | Severe 22 8 | Particles >4µm Particles >6µm | | ASTM D7647 ASTM D7647 | | ▲ 2171 | | |
| 7,680 | 20 4406:1993 Cleanliness 16 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 000 - 12 00 | Particles >0µm | | ASTM D7647 ASTM D7647 | | ▲ 218 | | |
| 1,920 480 | | Particles >21µm | | ASTM D7647 | | ▲ 218 ▲ 42 | | |
| 120 | 10 Geanin | Particles >38µm | | ASTM D7647 | | 42 1 | | |
| 30 | 12 8 0 | Particles >71µm | | ASTM D7647 | | 0 | | |
| 8 | 10 8 | Oil Cleanliness | | ISO 4406 (c) | | ▲ 20/18/15 | | |
| 2 | μ 6μ 14μ 21μ 38μ 71μ | | | | | | | |
| | | HEAVY METALS | | method | limit/base | current | history1 | |
| 6k | | Aluminum | ppm | ASTM D5185m | | 0 | | |
| 5k | 4μm | Nickel | ppm | ASTM D5185m | | 0 | | |
| 10 4k | 14μm | Lead | ppm | ASTM D5185m | | 0 | | |
| 4k (1) 4k | Abnamal | Vanadium | ppm | ASTM D5185m | <0.1 | 0 | | |
| 0 | Abnormal | Iron | ppm | ASTM D5185m | <0.1 | 0 | | |
| Jaquanu 1k | | Calcium | ppm | ASTM D5185m | <0.1 | 0 | | |
| Ok | | Magnesium | ppm | ASTM D5185m | <0.1 | 0 | | |
| UK | 1/24 | Phosphorus | ppm | ASTM D5185m | <0.1 | 0 | | |
| | Apri 1/24 | Zinc | ppm | ASTM D5185m | <0.1 | 0 | | |
| | Water (KF) | SAMPLE IMAGE | S | method | limit/base | current | history1 | |
| 1200 | | | | | | | | 1 |
| 1000 | Severe | | | | | | | |
| 800 | | Color | | | | | no image | n |
| d 600 | Abnormal | | | | | | | |
| 400 | | | | | | | | |
| 200 | | Dattana | | | | | | |
| 0 | | Bottom | | | | | no image | n |
| | Apr11/24 Apr11/24 | | | | | | | |
| | Ap | GRAPHS | | | | | | |
| | Viscosity @ 40°C | Fuel Distillation Cu | urve | | | Pensky-Marter | ns Flash Point (| (°C) |
| 6 | | 380°C Sample | | | ې 8 | | | |
| 5 | Abnormal | 360°CBaseline | | | arat | 0 | | |
| 4 ي | Abnormal | 340°C - | | | ter ? . | Base | | |
| cSt (40°C) | Base | 320°C - | | | 1/ 5 | 24 24 24 | | |
| 2 | Abnormal | | | 1 | | Apr11 | | |
| 1 | - | 300°C - | | 1.00 | | GCD Spectrum | ı | |
| 0 | 4 4 4 B | 280°C - | 1 | | 60 | | | |
| | Apr11/24 Apr11/24 - | 260°C - | 1. | | 55 | 0+ | | |
| | A A | 240°C | w.r. | | 45 | | | |
| | Gas Chromatography (GCD) | 220°C | | | - 40 | | | |
| 400 | GCD 10% | | | | (Pd) 35 | 0- | | |
| 350 | | 200°C | | දී 30 සි 25 | 0- | | | |
| ్ల జ 300 | | 180°C | | | 20 | 0 | | |
| e 300 250 | | 160°C | | | | | | |
| | | 140°C - | | | 10 | | | |
| 200 | | | | | | | <u> </u> | |
| 150 | 4 ⁻ | 120°C + + + + + + + + 0% | 50% | 70% | 90% | 0 5 8 8 10 8 | 11 11 12 12 12 12 12 12 12 12 12 12 12 1 | 21 23 |
| | Aprl 1/24 | | ercent Recovere | | - | | | |
| | Ac | | | | | | | |
| | | | | | | | | ~ = ~ |

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

Tested

: 15 Apr 2024

: 26 Apr 2024

: 26 Apr 2024 - Angela Borella



* - 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)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Test Package : DF-2 (Additional Tests: Fuel, Screen)

US 29625 Contact: SERVICE MANAGER hs@stecequipment.com T: (864)225-3666 F:

Report Id: STEAND [WUSCAR] 06149743 (Generated: 04/26/2024 18:03:11) Rev: 1

Certificate 12367

Laboratory

Sample No. : KT0000912

Lab Number : 06149743

Unique Number : 10979821

Contact/Location: SERVICE MANAGER - STEAND

23 25 26 28

STEC EQUIPMENT

405 MCGEE RD

ANDERSON, SC

history2

history2

history2

no image

no image

Apr11/24.