



FUEL REPORT

| | |
|----------------|---------------|
| CORROSION | NORMAL |
| CONTAMINANTS | NORMAL |
| FUEL CONDITION | NORMAL |

Machine Id
NC SPECIALTY HOSPITAL

Component
Diesel Fuel

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

RECOMMENDATION

All laboratory tests indicate that this sample meets specifications for No.2 low-sulfur diesel fuel.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC06237471 | WC0949582 | WC05497527 |
| Sample Date | | Client Info | | 15 Jul 2024 | 25 Jun 2024 | 21 Mar 2022 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

CORROSION

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

| | | | | | | |
|----------|-----|-------------|------|----------|---|----|
| Aluminum | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Iron | ppm | ASTM D5185m | <0.1 | 0 | 0 | <1 |

CONTAMINANTS

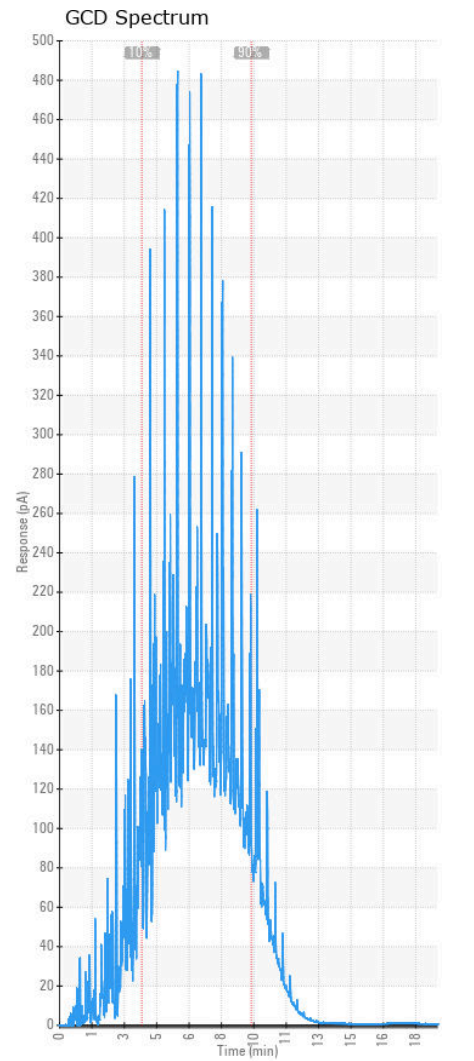
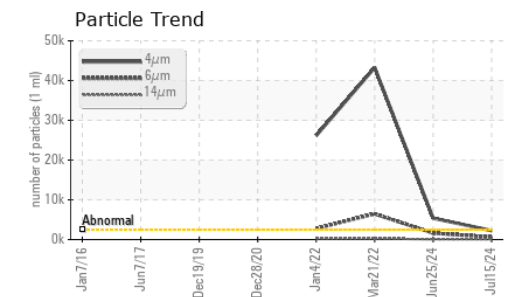
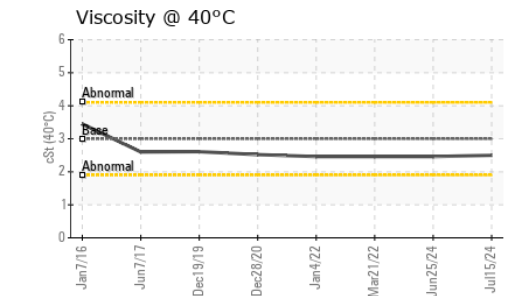
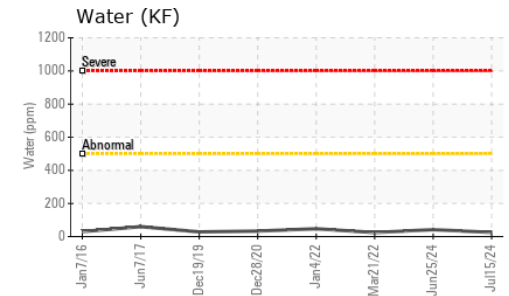
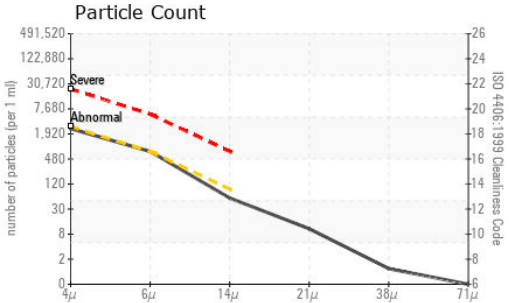
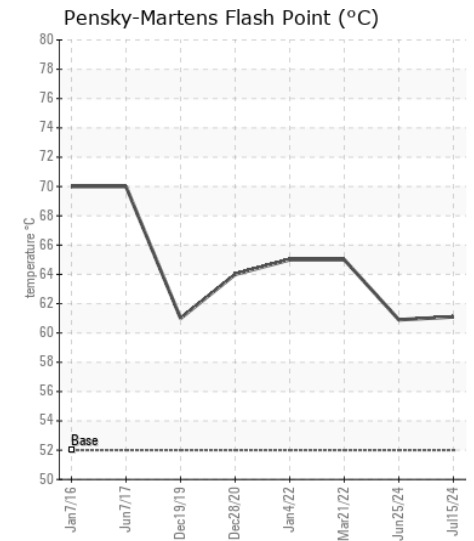
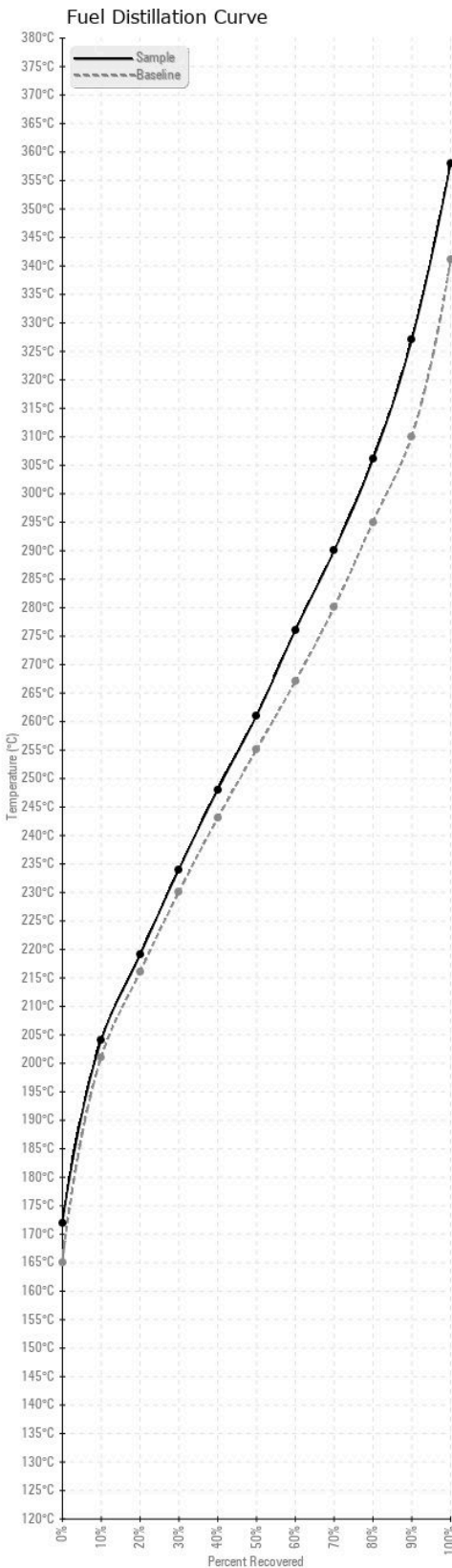
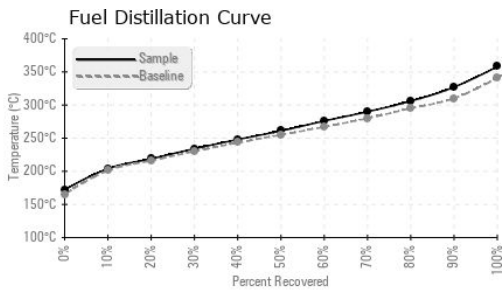
The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample. There is no indication of any contamination in the fuel. The amount and size of particulates present in the system are acceptable.

| | | | | | | |
|-----------------|-----|--------------|-----------|-----------------|------------|----------|
| Silicon | ppm | ASTM D5185m | <1.0 | 0 | 0 | <1 |
| Sodium | ppm | ASTM D5185m | <0.1 | 2 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Water | % | ASTM D6304 | <0.05 | 0.002 | 0.004 | 0.002 |
| ppm Water | ppm | ASTM D6304 | <500 | 25 | 42 | 24.3 |
| Particles >4µm | | ASTM D7647 | >2500 | 2250 | ▲ 5385 | 43262 |
| Particles >6µm | | ASTM D7647 | >640 | 638 | ▲ 1625 | 6467 |
| Particles >14µm | | ASTM D7647 | >80 | 49 | 78 | 227 |
| Particles >21µm | | ASTM D7647 | >20 | 9 | 14 | 25 |
| Particles >38µm | | ASTM D7647 | >4 | 1 | 2 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/13 | 18/16/13 | ▲ 20/18/13 | 23/20/15 |
| % Gasoline | % | *In-House | <0.50 | 0.0 | 0.0 | 0.0 |
| % Biodiesel | % | *In-House | <20.0 | 1.7 | 1.5 | 1.8 |
| Calcium | ppm | ASTM D5185m | <0.1 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | <0.1 | 0 | 0 | 3 |
| Zinc | ppm | ASTM D5185m | <0.1 | 0 | 0 | 0 |

FUEL CONDITION

Sulfur value derived by ASTM D5453 method for ULSD validation.

| | | | | | | |
|----------------------------|--------|------------------|-------|-------------|------|-------|
| Specific Gravity | | *ASTM D1298 | 0.839 | --- | --- | 0.843 |
| Fuel Color | text | *Visual Screen | Yllow | Red | Red | Red |
| ASTM Color | scalar | *ASTM D1500 | | L5.0 | L4.5 | L5.5 |
| Visc @ 40°C | cSt | ASTM D445 | 3.0 | 2.5 | 2.46 | 2.46 |
| Pensky-Martens Flash Point | °C | *PMCC Calculated | 52 | 61.1 | 60.9 | 65 |
| Sulfur | ppm | ASTM D5185m | 250 | 0 | 0 | 31 |
| Sulfur (UVF) | ppm | ASTM D5453 | | 16 | 19 | 145 |
| Initial Boiling Point | °C | ASTM D86 | 165 | 172 | 171 | 168 |
| 10% Distill Point | °C | ASTM D86 | 201 | 204 | 203 | 200 |
| 20% Distill Point | °C | ASTM D86 | 216 | 219 | 219 | 217 |
| 30% Distill Point | °C | ASTM D86 | 230 | 234 | 234 | 232 |
| 40% Distill Point | °C | ASTM D86 | 243 | 248 | 247 | 247 |
| 50% Distill Point | °C | ASTM D86 | 255 | 261 | 261 | 262 |
| 60% Distill Point | °C | ASTM D86 | 267 | 276 | 275 | 276 |
| 70% Distill Point | °C | ASTM D86 | 280 | 290 | 289 | 291 |
| 80% Distill Point | °C | ASTM D86 | 295 | 306 | 306 | 308 |
| 90% Distill Point | °C | ASTM D86 | 310 | 327 | 326 | 328 |
| Final Boiling Point | °C | ASTM D86 | 341 | 358 | 356 | 350 |
| Distillation Residue | % | ASTM D86 | 3.0 | --- | --- | 1.4 |
| Distillation Loss | % | ASTM D86 | 3.0 | --- | --- | 0.6 |
| API Gravity | | ASTM D7777 | 37.7 | 36 | 36 | 36.4 |
| Cetane Index | | ASTM D4737 | <40.0 | 48 | 48 | 47.6 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC06237471 **Received** : 15 Jul 2024
Lab Number : 06237471 **Tested** : 18 Jul 2024
Unique Number : 11126305 **Diagnosed** : 18 Jul 2024 - Elizabeth Valachovic
Test Package : DF-2 (Additional Tests: Fuel, Screen)

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Certificate L2367
 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)