

GROUP INFO: MUSC Health DATE: 7-11-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 358 SCEP (Sabin St) UST 15k (358-0150-UST-15)
 ADDRESS: 111 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0425
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3524
 Unit Id : 358-30822 Type : UST Capacity : 15,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

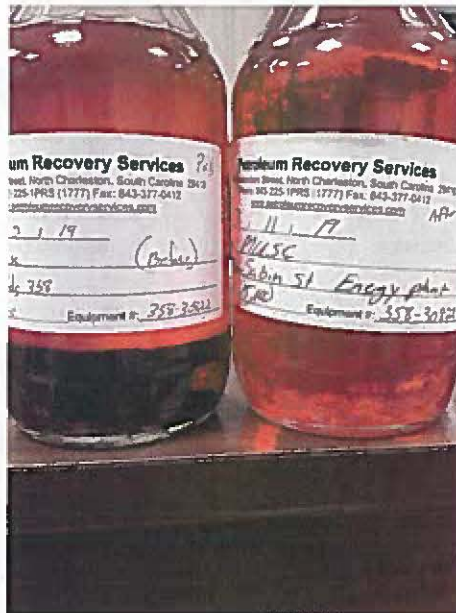
- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None

Exterior Tank Condition:

- Good Bad
 Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS:

Picture of the before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike and Ron

DATE: 7-11-19



Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: 358-30822
 Sample ID: 358-30822
 PO: 632498
 WO: MUSC - Hospital - Post

Sample Collection Date: 07/11/2019
 Date Received: 07/31/2019
 Date Released: 08/5/2019
 Component Make:
 Component Model: UST
 Tank Capacity: 15,000 g
 Quantity in Tank:
 Test Package: PRS Package
 Type of Fuel: ULSD
 Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	45.9
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	241.11
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	63.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0.7
Sulfur	15 ppm maximum	ASTM D5453-09	17
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	67

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-11-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 358 SCEP (Sabin St) UST 20k (358-0151-UST20) (300-FT-21)
 ADDRESS: 112 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0426
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3525
 Unit Id : 358-30823 Type : UST Capacity : 20,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

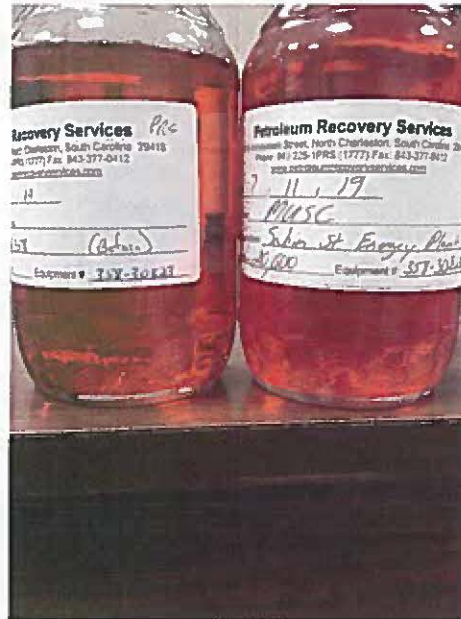
- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None

Exterior Tank Condition:

- Good Bad
 Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS:

Picture of the before cleaning sample is on the left and the after cleaning sample is on the right.

SERVICE TECHNICIAN: Mike and Ron

DATE: 7-11-19



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 358-30823
Sample ID: 358-30823
PO: 632498
WO: MUSC - Hospital - Post

Sample Collection Date: 07/11/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: UST
Tank Capacity: 20,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	45.5
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	240.0
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	71.11
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0.7
Sulfur	15 ppm maximum	ASTM D5453-09	36
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	77

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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915 Jefferson St., Vancouver, WA 98660 : 360-546-3835

GROUP INFO: MUSC Health DATE: 7-24-2019
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 580 Rutledge Tower DT2
 ADDRESS: 113 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0427
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3526
 Unit Id : 580-0152-DT2 Type : AST Capacity : 150 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None



Exterior Tank Condition:

- Good Bad
 Recommend Inspection

PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
 None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
 Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS:

The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-2019



Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: 580-0152-DT2
 Sample ID: 580-0152-DT2
 PO: 632503
 WO: MUSC - Hospital - Post

Sample Collection Date: 07/24/2019
 Date Received: 08/2/2019
 Date Released: 08/7/2019
 Component Make:
 Component Model: AST
 Tank Capacity: 150 g
 Quantity in Tank:
 Test Package: PRS Package
 Type of Fuel: ULSD
 Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.2
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	78.89
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0
Sulfur	15 ppm maximum	ASTM D5453-09	67
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	79

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-24-2019

CUSTOMER: MUSC INFO-OTHER: Hospital tanks

FACILITY: Building 580 Rutledge Tower DT1)

ADDRESS: 114 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0428

EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3527

Unit Id : 580-0153-DT1 Type : AST Capacity : 150 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- S-1001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
- C 1032
- icide Predator 6000

External Condition:

- Good
- Re-inspection



PARTITION:

- Good N/A - Fill Cap
- Good N/A - Vent
- Good N/A - Fill Port
- Good N/A - Sump
- Good N/A - Spill Bucket
- Good N/A - Gauge
- Good N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use

THIS TANK **PASS ASTM D975 "CLEAR & BRIGHT"**

*Tank cleaning based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK **PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.**

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

Comments: cleaning sample is on the left and the after cleaning sample is on the right

TECHNICIAN: Mike & Tommie

DATE: 7-24-2019

877-252-6396 (Toll Free) ● 843-225-1777 ● 843-377-0412 (Fax)

4310 Amsterdam St., N. Charleston, SC 29418

www.petroleumrecovery.com



Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: 580-0153-DT1
 Sample ID: 580-0153-DT1
 PO: 632503
 WO: MUSC - Hospital - Post

Sample Collection Date: 07/24/2019
 Date Received: 08/2/2019
 Date Released: 08/7/2019
 Component Make:
 Component Model: AST
 Tank Capacity: 150 g
 Quantity in Tank:
 Test Package: PRS Package
 Type of Fuel: ULSD
 Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	48
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	248.89
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.33
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	79

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-16-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 580 Rutledge Tower (Parking) BOIL (580-NOID-BOIL)
 ADDRESS: 115 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0429
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3528
 Unit Id : 590-FT-19 Type : UST Capacity : 15,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None



Exterior Tank Condition:

- Good Bad
 Recommend Inspection

PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
 None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
 Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS:

The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Willi & Tommie DATE: 7-16-19



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 590-FT-19
Sample ID: 590-FT-19
PO: 632498
WO: MUSC - Hospital - Post

Sample Collection Date: 07/16/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: UST
Tank Capacity: 15,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	48.2
Cloud Point	report °C	ASTM D2500-99	-12
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	249.44
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	64.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	2.7
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	54

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: 590-FT-20
 Sample ID: 590-FT-20
 PO: 632498
 WO: MUSC - Hospital - Post

Sample Collection Date: 07/17/2019
 Date Received: 07/31/2019
 Date Released: 08/5/2019
 Component Make:
 Component Model: UST
 Tank Capacity: 15,000 g
 Quantity in Tank:
 Test Package: PRS Package
 Type of Fuel: ULSD
 Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.5
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	71.11
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6
Sulfur	15 ppm maximum	ASTM D5453-09	62
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	68

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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GROUP INFO: MUSC Health DATE: 7-16-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 600 Clinical Science 3 (600-CE-3AST)
 ADDRESS: 117 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0431
 EMAIL: burt@d@musc.edu, Longmat@musc.edu CELL: (843) 792-3530
 Unit Id : 600-FT-08 Type : AST Capacity : 3,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None



Exterior Tank Condition:

- Good Bad
 Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A -Fill Cap
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Vent
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A -Fill Port
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A -Sump
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Spill Bucket
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gauge
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
 None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
 Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS:

The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Willi & Tommie DATE: 7-16-19



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 600-FT-08
Sample ID: 600-FT-08
PO: 632498
WO: MUSC - Hospital - Post

Sample Collection Date: 07/16/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: AST
Tank Capacity: 3,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	241.67
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	61.67
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	2.7
Sulfur	15 ppm maximum	ASTM D5453-09	20
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	64

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 850-01-128/129
Sample ID: 850-01-128/129
PO: 632503
WO: MUSC - Hospital - Post

Sample Collection Date: 07/22/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 400 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	48.3
Cloud Point	report °C	ASTM D2500-99	-12
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	250.0
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.33
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	4.7
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	58

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-8-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 850 Phsych Center #12 (850 #2)
 ADDRESS: 119 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0433
 EMAIL: burtmd@musc.edu, Longmat@musc.edu CELL: (843) 792-3532
 Unit Id : 850-FT-12 Type : UST Capacity : 8,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
 Post Clean
 None

SERVICES PERFORMED:

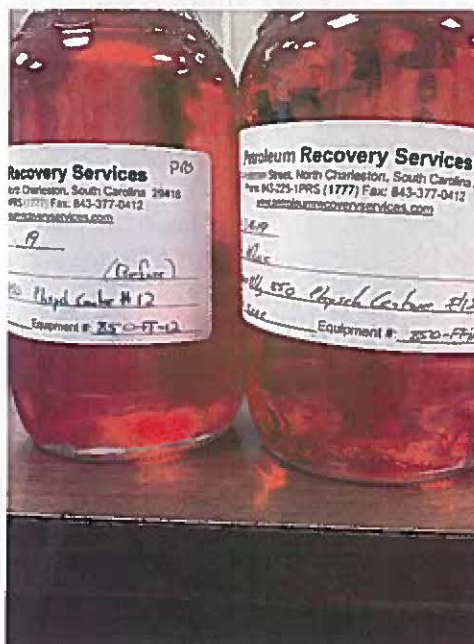
- Maintenance
 STI 001 Inspection
 Tank Cleaning
 Bottom Sweep
 Pre-clean Lab Analysis
 Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
 ILFC 1032
 Biocide Predator 6000
 None

Exterior Tank Condition:

- Good Bad
 Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Cap
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Vent
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Port
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Sump
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Spill Bucket
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gauge
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
 None
 Bulk Water
 Suspended Water
 Micro-organisms
 Sediments
 Rust
 Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
 Refinery Fresh
 Good
 Watch Closely
 Advanced Aging
 Bad-Not Recommended
 Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample is on the left and the after cleaning sample is on the right.

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-8-19



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 850-FT-12
Sample ID: 850-FT-12
PO: 632498
WO: MUSC - Hospital - Post

Sample Collection Date: 07/8/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: UST
Tank Capacity: 8,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	48.4
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	250.56
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	71.67
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0.7
Sulfur	15 ppm maximum	ASTM D5453-09	15
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	68

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-8-19
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: Building 850 Phsych Center #13 (850 #1)
 ADDRESS: 120 Jonathan Lucas St. MSC 190, Charleston 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0434
 EMAIL: burd@musc.edu, Longmat@musc.edu TEL: (843) 792-3533
 Unit Id : 850-FT-13 Type : UST Cr : 10,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- STI 001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis
- Fuel Treatment:**
- HydroClean
- C 1032
- Side Predator 6000

External Condition:

- Good
- Bad Inspection

PARTITION:

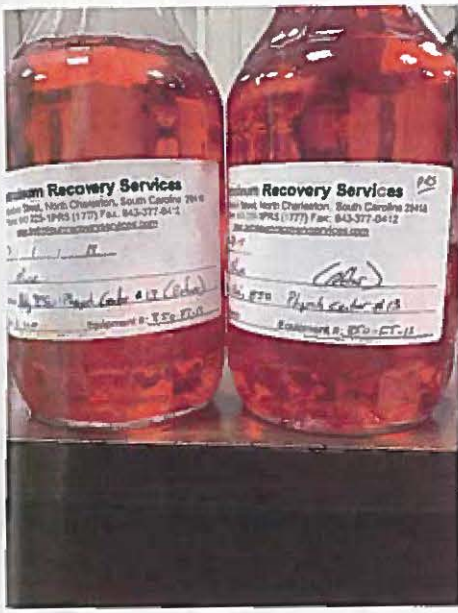
- Good N/A - Fill Cap
- Good N/A - Vent
- Good N/A - Fill Port
- Good N/A - Sump
- Good N/A - Spill Bucket
- Good N/A - Gauge
- Good N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean
- Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean
- Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use



THIS TANK FAILS ASTM D975 "CLEAR & BRIGHT"

*Tank cleaned based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

Comments: of the the before cleaning sample on the left and the after cleaning sample on the right

TECHNICIAN: Ron and Steven

DATE: 7-8-19



Certificate of Analysis

Laboratory Number: 73119544

Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: 850-FT-13
 Sample ID: 850-FT-13
 PO: 632498
 WO: MUSC - Hospital - Post

Sample Collection Date: 07/8/2019
 Sample Received: 07/31/2019
 Sample Released: 08/5/2019
 Component Make: UST
 Component Model: 10,000 g
 Tank Capacity:
 Quantity in Tank:
 Package: PRS Package
 Type of Fuel: ULSD
 ID Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	47.9
Cloud Point	report °C	ASTM D2500-99	-13
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	248.33
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	60.56
Microbial Growth	report	MicroCulture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6
Sulfur	15 ppm maximum	ASTM D5453-09	3
Visual Appearance	Visual	ASTM D4176-04	Clear, particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	69

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel. Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835

GROUP INFO: MUSC Health DATE: 7-24-2019
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: CAC - Generator Belly Tank
 ADDRESS: 126 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0440
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3539
 Unit Id : NEW-CAC-Gen-SBT-2319 Type : SBT Capacity : 2,319 Material: Dsl

Last Tank Service: New

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- STI 001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
- ILFC 1032
- Biocide Predator 6000
- None



Exterior Tank Condition:

- Good Bad
- Recommend Inspection

PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS: This is your before cleaning sample

SERVICE TECHNICIAN: Steven

DATE: 7-24-2019



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: NEW-CAC-GEN-SBT-2319
Sample ID: NEW-CAC-2319
PO: 632501
WO: MUSC - Hospital - Pre

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: SBT
Tank Capacity: 2,319 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	46.9
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	251.11
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.33
Flash Point	52 °C minimum	ASTM D93-10	61.11
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	2.7
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	78

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-24-2019
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: SJCH - Day Tank - 1
 ADDRESS: 124 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0438
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3537
 Unit Id : NEW-SJCH-Day 1-225g Type : SBT Capacity : 225 Material: Dsl

Last Tank Service: New

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- STI 001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
- ILFC 1032
- Biocide Predator 6000
- None



Exterior Tank Condition:

- Good Bad
- Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS: This is your before cleaning sample.

SERVICE TECHNICIAN: Steven DATE: 7-24-2019



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: NEW-SJCH-Day 1-225g
Sample ID: NEW-Day 1-225g
PO: 632501
WO: MUSC - Hospital - Pre

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: SBT
Tank Capacity: 225 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.6
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.89
Flash Point	52 °C minimum	ASTM D93-10	65.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6.7
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	94

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-24-2019
 CUSTOMER: MUSC INFO-OTHER: Hospital tanks
 FACILITY: SJCH - Day Tank - 2
 ADDRESS: 125 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0439
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3538
 Unit Id : NEW-SJCH-Day 2-225g Type : SBT Capacity : 225 Material: Dsl

Last Tank Service: New

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- STI 001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
- ILFC 1032
- Biocide Predator 6000
- None



Exterior Tank Condition:

- Good Bad
- Recommend Inspection

PARTS CONDITION:

Good	Bad	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -Fill Cap
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -Vent
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -Fill Port
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -Sump
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - Spill Bucket
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - Gauge
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

COMMENTS: This is your before cleaning sample

SERVICE TECHNICIAN: Steven

DATE: 7-24-2019



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: NEW-SJCH-Day 2-225g
Sample ID: NEW-Day 2-225g
PO: 632501
WO: MUSC - Hospital - Pre

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: SBT
Tank Capacity: 225 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.6
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.89
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D7321-08	2
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	109

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-24-2019

 CUSTOMER: MUSC INFO-OTHER: Hospital tanks

 FACILITY: SJCH - Tank - 1

 ADDRESS: 122 Jonathan Lucas St. MSC 190, Charleston, SC 29425

 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0436

 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3535

 Unit Id : NEW-SJCH-Tank 1-12k Type : SBT Capacity : 12,000 Material: Dsl

 Last Tank Service: New
FUEL SAMPLE TAKEN:

-
- Annual/Pre-Clean
-
-
- Post Clean
-
-
- None

SERVICES PERFORMED:

-
- Maintenance
-
-
- STI 001 Inspection
-
-
- Tank Cleaning
-
-
- Bottom Sweep
-
-
- Pre-clean Lab Analysis
-
-
- Post-clean Lab Analysis

Fuel Treatment:

-
- HydroClean
-
-
- ILFC 1032
-
-
- Biocide Predator 6000
-
-
- None


Exterior Tank Condition:

-
- Good
-
- Bad
-
-
- Recommend Inspection

PARTS CONDITION:

Good	Bad	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

-
- Pre-Clean
-
- Post Clean
-
-
- None
-
-
- Bulk Water
-
-
- Suspended Water
-
-
- Micro-organisms
-
-
- Sediments
-
-
- Rust
-
-
- Sludge

VISUAL FUEL RATING:

-
- Pre-Clean
-
- Post Clean
-
-
- Refinery Fresh
-
-
- Good
-
-
- Watch Closely
-
-
- Advanced Aging
-
-
- Bad-Not Recommended
-
-
- Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION
**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.
**Lab Report will determine fuel parameters based on ASTM D975 Specifications*

 COMMENTS: This is your before cleaning sample

 SERVICE TECHNICIAN: Steven

 DATE: 7-24-2019



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: NEW-SJCH-Tank1-12k
Sample ID: NEW-Tank 1-12k
PO: 632501
WO: MUSC - Hospital - Pre

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: SBT
Tank Capacity: 12,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.2
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.89
Flash Point	52 °C minimum	ASTM D93-10	64.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	38.7
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Light Sediment, Some Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.01
Water by Karl Fischer	report in ppm	ASTM D6304-16	95

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

GROUP INFO: MUSC Health DATE: 7-24-2019

CUSTOMER: MUSC INFO-OTHER: Hospital tanks

FACILITY: SJCH - Tank - 2

ADDRESS: 123 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0437

EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3536

Unit Id : NEW-SJCH-Tank 2-12k Type : SBT Capacity : 12,000 Material: Dsl

Last Tank Service: New

FUEL SAMPLE TAKEN:

- Annual/Pre-Clean
- Post Clean
- None

SERVICES PERFORMED:

- Maintenance
- STI 001 Inspection
- Tank Cleaning
- Bottom Sweep
- Pre-clean Lab Analysis
- Post-clean Lab Analysis

Fuel Treatment:

- HydroClean
- ILFC 1032
- Biocide Predator 6000
- None



Exterior Tank Condition:

- Good Bad
- Recommend Inspection

PARTS CONDITION:

Good	Bad	N/A	Item
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Fill Cap
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Vent
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Fill Port
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Sump
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Spill Bucket
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Gauge
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Gaskets

CONTAMINANTS FOUND:

- Pre-Clean Post Clean
- None
- Bulk Water
- Suspended Water
- Micro-organisms
- Sediments
- Rust
- Sludge

VISUAL FUEL RATING:

- Pre-Clean Post Clean
- Refinery Fresh
- Good
- Watch Closely
- Advanced Aging
- Bad-Not Recommended
- Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

**Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications*

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COMMENTS: This is your before cleaning sample

SERVICE TECHNICIAN: Steven DATE: 7-24-2019



Loretta Shaw
 Petroleum Recovery Services
 4310 Amsterdam St.
 North Charleston, SC 29418
 843-225-1777

Sample Taken From: NEW-SJCH-Tank 2-12k
 Sample ID: NEW-Tank 2-12k
 PO: 632501
 WO: MUSC - Hospital - Pre

Sample Collection Date: 07/24/2019
 Date Received: 08/2/2019
 Date Released: 08/7/2019
 Component Make:
 Component Model: SBT
 Tank Capacity: 12,000 g
 Quantity in Tank:
 Test Package: PRS Package
 Type of Fuel: ULSD
 Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.6
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.89
Flash Point	52 °C minimum	ASTM D93-10	66.67
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6.7
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	97

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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