



# PANAIR LABORATORY, INC.

4301 N.W.72 AVE., MIAMI, FL 33166 (305) 594-9055 FAX (305) 477-9137

## GASOLINE ANALYSIS REPORT

|   |
|---|
| LABORATORY NO.<br>12753G                |
| AWB NO.<br>001-281558001                |
| CUSTOMER<br>J&R Industrial Services     |
| TEST COMPLETED<br>2/4/15                |
| SAMPLED FROM<br>8000 Gasoline from Tank |

|                         |                                |   |
|-------------------------|--------------------------------|---|
| ORIGIN<br>Grand Cayman  | FUEL TYPE<br>Mogas             | CUSTOMER<br>J&R Industrial Services     |
| DATE SAMPLED<br>1/23/15 | RECEIVED AT LAB<br>2/3/15      | TEST COMPLETED<br>2/4/15                |
| REFINER                 | REFINER'S DESIGNATION<br>Mogas | SAMPLED FROM<br>8000 Gasoline from Tank |


THIS REPORT RELATES ONLY TO THE SAMPLE TESTED AND DOES NOT GUARANTEE THE BULK OF THE MATERIAL TO BE OF EQUAL QUALITY.

### ASTM (D 86)

| DISTILLATION   | C      |
|----------------|--------|
| IBP            | 30.2   |
| 10% Evaporated | 54.4   |
| 50% Evap.      | 108.2  |
| 90% Evap.      | 156.6  |
| END POINT      | 197.9  |
| RECOVERY       | 98.7 % |
| RESIDUE        | 1.0 %  |
| LOSS           | 0.3 %  |

|  |           |
|--|-----------|
| API GRAVITY @ 60 (D4052)                             | 57.71     |
| SPECIFIC GRAVITY @ 60 F (CONV.)                      | 0.7478    |
| APPEARANCE (D4176)                                   |           |
| OLEFINS, % VOL. (D 1319)                             |           |
| ODOR   |           |
| COLOR VISUAL   |           |
| CORROSION, COPPER STRIP (D 130)                      | 1a        |
| DOCTOR TEST (IP 30)                                  |           |
| EXISTENT GUM, MG/100 ML (D 381/ IP 131)              | 9         |
| WASHED GUM, MG/100 ML (D 381)                        | 1         |
| FREEZE POINT, C (D 2386)                             |           |
| VAPOR LOCK INDEX (D323)                              |           |
| DRIVEABILITY (D4814)                                 |           |
| OCTANE NUMBER, MOTOR (D 2700)                        | 85.2      |
| OCTANE SENSITIVITY (RON - MON)                       |           |
| OCTANE NUMBER, RESEARCH (D 2699)                     | 96.2      |
| ANTI-KNOCK INDEX (R+M/2)                             | 90.7      |
| OXIDATION STABILITY @ 100 C, MINUTES (D 525)         |           |
| PARTICULATE MATTER, MG/L, (D 5452)                   | 0.62      |
| FILTER MEMBRANE COLOR RATING (D 5452)                | B-1       |
| THRUPUT, LITERS                                      | 0.844     |
| PHOSPHOROUS CONTENT, MG/L (D 3231)                   |           |
| POTENTIAL GUM, MG/100 ML (D 873)                     |           |
| MANGANESE, mg/L (D 3831)                             | 2.3       |
| SULFUR mg / kg. (D4294)                              |           |
| TETRAETHYLLLEAD CONTENT,g/U.S. gal. (D 3237/ IP 362) |           |
| LEAD CONTENT g/Liter ( CONV.)                        |           |
| SILVER CORROSION (D4814 annex)                       |           |
| VAPOR PRESSURE (LB REID/kPa) (D 5191)                | 9.24/63.7 |

Product complies with ASTM D4814 for Mogas test results shown if box is checked

  
 CARL E. JOHNSON, PRESIDENT  
 PAL-0238 Issued 10-21-13, Revision 1



# PANAIR LABORATORY, INC.

4301 N.W. 72 AVE. MIAMI, FL 33166 (305) 594-9055

## FUEL OIL ANALYSIS

LABORATORY NO.

2556F

AWB NO.

001-2815 8001

|                                |   |  |
|--------------------------------|---|--|
| ORIGIN<br><b>Grand Cayman</b>  | FUEL TYPE<br><b>Ultra Low Sulfur Diesel</b> | CUSTOMER<br><b>J &amp; R Industrial Services</b> |
| DATE SAMPLED<br><b>1-23-15</b> | RECEIVED AT LAB<br><b>2-3-15</b>            | TEST COMPLETED                                   |
| REFINER<br>-----               | REFINER'S DESIGNATION<br><b>ULSD</b>        | SAMPLED FROM<br><b>Composite 8 &amp; 9</b>       |

This report relates to the sample tested and does not guarantee the bulk of the material to be of equal

### DISTILLATION (D 86)

APPEARANCE, VISUAL

**Clear and Bright \***

ASH, % WGT. (D 482)

ASPHALTENES, % WGT. (IP 143)

CARBON RESIDUE CONRADSON (ON 10% B), WGT. (D 189)

CARBON RESIDUE RAMSBOTTOM (ON 10% B), WGT. (D524)

CETANE INDEX (D 976)

**49.5**

CETANE NUMBER (D 613)

CLOUD POINT F/C \*(D 2500)

COPPER CORROSION (3 HRS 122 F/ 212 F) (D 130)

COLOR, ASTM (D 1500)

FLASH POINT PENSKY-MARTENS F /C (D 93)

NET CALORIFIC VALUE, BTU/LB (D240)

NET CALORIFIC VALUE, BTU/ US gal.,

GRAVITY, API @ 60 F (D 4052)

**35.44**

SPECIFIC GRAVITY @ 60 F/ 60 F

**0.8476**

DENSITY @ 15 C

**0.8472**

POUNDS PER GALLON @ 60 F

**7.04**

NEUTRALIZATION NUMBER mg KOH/gm (D 974)

OXIDATION STABILITY, mg/100 ml. (D 2274)

POUR POINT F /C(D 97)

SEDIMENT BY EXTRACTION, % MASS (D 473)

SEDIMENT BY HOT FILTRATION, % MASS (IP 375)

SULFUR, % WGT., XRAY (D 4294)

SULFUR, mg / Kg, XRAY (D 2622)

**9.9 (ppm)**

VISCOSITY, KINEMATIC @ 50 C mm2/sec. (D 445)

VISCOSITY, KINEMATIC @ 40C mm2/sec. (D 445)

**2.749**

WATER BY DISTILLATION, % WGT. (D 95)

WATER AND SEDIMENT, % VOL. (D 1796)

WATER AND SEDIMENT, % VOL (D 2709)

**0.005**

SUSPENDED SEDIMENT mg/100 ml. (D6217)

**0.44**

THRUPUT, LITERS

**0.760**

| % RECOVERY | C      |
|------------|--------|
| IBP        | 168.2  |
| 10         | 211.8  |
| 20         | 230.5  |
| 30         | 245.1  |
| 40         | 258.1  |
| 50         | 270.3  |
| 60         | 283.0  |
| 70         | 296.3  |
| 80         | 311.7  |
| 90         | 332.5  |
| 95         | 350.8  |
| END POINT  | 361.6  |
| RECOVERY   | 98.2 % |
| RESIDUE    | 1.4 %  |
| LOSS       | 0.4 %  |

### Lubricity, HFRR, (D6079)

WEAR SCAR DIAMETER, micron

MAJOR AXIS, um

MINOR AXIS, um

TEST DATE MM/DD/YR

Nitrogen, % wgt. (Combustion)

Hydrogen, % wgt. (Combustion)

BioDiesel Content, % vol.  
(prEN 14078, mod.) mod.=  
lab-blended oil standards

Aromatics, % vol. (D1319)

Electrical Conductivity, (D2624),  
ps/m @ Centigrade

Particle Count, microns..... Particles/mL

> or = 4

> or = 6

> or = 14

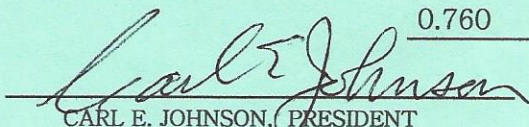
> or = 21

> or = 25

> or = 30

ISO Code >= 4/6/14 (ISO 4406)

\* Appearance (D4176) Pass / 1

  
**CARL E. JOHNSON, PRESIDENT**