

Issued to: Colt Atlantic Services, Inc.  
P.O. Box 74396  
Richmond, VA 23236

Job No: 9051L

Project: Colt Atlantic Services, Inc.  
Richmond, VA

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FIELD ENGINEER'S REPORT

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A/C Hipot

Corner to Corner



Test Voltage Leakage

- 5,000: .2 AC mA
- 10,000: .3 AC mA
- 15,000: .5 AC mA
- 20,000: .7 AC mA
- 25,000: .75 AC mA Hear Tracking
- 30,000: 1.0 AC mA Hear Tracking
- 35,000: 1.2 AC mA Hear Tracking (5 Minutes)

Front to Back



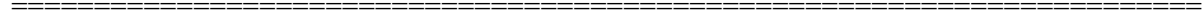
- 5,000: .2 AC mA
- 10,000: .3 AC mA
- 15,000: .5 AC mA
- 20,000: .75 AC mA
- 25,000: 1.0 AC mA
- 30,000: 1.25 AC mA
- 35,000: Flash over before.

Leakage current is measured in AC milliamps.

Results of Dielectric Fluid  
Laboratory Tests  
Device History Report

Customer Name: **Colt Atlantic**  
 Project: **Colt Atlantic**  
 Device Designation: **Contaminated Sample**  
 Manufacturer: -  
 Serial Number: -  
 Fluid Type: **Mineral Oil**

Customer No: **C2548**  
 Report Date: **3/ 8/03**  
 Job No: **9051L**



<b>Dissolved Gas in Oil/R-Temp of the above device: (DGIO)</b>				
Date:	<b>3/ 8/03</b>			
Sample No:	<b>Y3132</b>			

Hydrogen (H2):	<b>0</b>			
Methane (CH4):	<b>1</b>			
Ethane (C2H3):	<b>0</b>			
Ethylene (C2H4):	<b>0</b>			
Acetylene (C2H2):	<b>0</b>			
Carbon Monoxide (CO):	<b>1</b>			
Carbon Dioxide (CO2):	<b>707</b>			
Nitrogen (N2):	<b>41395</b>			
Oxygen (O2):	<b>22653</b>			

Total Gas Content:	<b>64757</b>			
Total Combustible Gas:	<b>2</b>			

Laboratory Tests  
Device History Report

Customer Name: **Colt Atlantic**  
 Project: **Colt Atlantic**  
 Device Designation: **Clean Control Sample**  
 Manufacturer: -  
 Serial Number: -  
 Fluid Type: **Mineral Oil**

Customer No: **C2548**  
 Report Date: **3/ 8/03**  
 Job No: **9051L**

<b>Dissolved Gas in Oil/R-Temp of the above device: (DGIO)</b>				
Date:	<b>3/ 8/03</b>			
Sample No:	<b>Y3133</b>			
Hydrogen (H2):	<b>1</b>			
Methane (CH4):	<b>1</b>			
Ethane (C2H3):	<b>0</b>			
Ethylene (C2H4):	<b>0</b>			
Acetylene (C2H2):	<b>0</b>			
Carbon Monoxide (CO):	<b>0</b>			
Carbon Dioxide (CO2):	<b>647</b>			
Nitrogen (N2):	<b>35403</b>			
Oxygen (O2):	<b>17597</b>			
Total Gas Content:	<b>53649</b>			
Total Combustible Gas:	<b>2</b>			

-----BURLINGTON ELECTRICAL TESTING COMPANY-----

**REPORT**

Mr. Jim Hackett

**Issued to:** Colt Atlantic Services, Inc.  
1845 South Lee Court, Unit C  
Buford, Georgia 30518

**Date of Report:** 3/ 8/03

**Report No:** 9051L

**Project:** Colt Atlantic Services

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**Description:** Perform analysis of oil samples.

### SUMMARY

Two (2) samples of electrical insulating oil were provided for analysis. One sample had been "contaminated" with the customer's two-part sealant (S-22).

The sealant was injected into the oil and allowed to cure. The oil was then analyzed.

Both samples were analyzed for dissolved gas content to determine if the presence of the sealant in transformer oil would generate additional combustible gases.

Results are provided for both sets of tests and there is no noticeable change in the total combustible gas content.

Carbon Dioxide, Nitrogen and Oxygen are non-combustible gasses that are present in air and therefore are not likely due to the presence of the sealant but instead due to exposure to air.

A second series of tests was performed on a solid piece of harden sealant. An AC hipot test was performed on the square sample at increasing voltages.

This report certifies that the above equipment has been tested in compliance with recognized standards or for safe use in a specific manner, or in accordance with Federal, State or Municipal regulations. The report is accurate and true to the best of our knowledge and belief. All equipment used in making physical determinations is accurate and bears recent and direct traceability to the National Bureau of Standards (NBS).

Burlington Electrical Testing Co., Inc.  
825 Sycamore Avenue  
Croydon, Pa. 19021 (215) 826-9400

By

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Michael Johnson  
Project Manager

Colt Atlantic Services, Inc.  
March 8, 2003  
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The sample was approximately 4" square and 1" thick. Tests were performed corner to corner and front to back at test voltages up to 35000 Volts AC.

The material performed a level of dielectric strength much greater than oil or air alone.

There is no indication from the tests performed that the presence of this sealant will negatively effect the oil.