

Facility Name: **Carlyle Compressor Remanufacturing**  
 City: Stone Mountain  
 County: Dekalb  
 AIRS #: 04-13-089-00313

Application #: TV-16256  
 Date Application Received: June 14, 2005  
 Date Application Deemed  
 Administratively Complete:  
 Date of Draft Permit:  
 Permit No: 3585-089-0313-V-02-0

Program	Review Engineers	Review Managers
SSPP	Wei-Wei Qiu	Eric Cornwell
ISMP	Marcus Cureton	James Capp
SSCP	James Eason	James Eason
Toxics	N/A	N/A

## Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Carlyle Compressor Remanufacturing** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

**I. Facility Description****A. Facility Identification**

1. Facility Name: Carlyle Compressor Remanufacturing
2. Parent/Holding Company Name: Carrier Corporation
3. Previous and/or Other Name(s)

None known.

4. Facility Location

1440 Rock Mountain Boulevard  
Stone Mountain, Georgia 30083 (DeKalb County)

5. Attainment or Non-attainment Area Location

This facility is located in the Atlanta ozone non-attainment area.

6. Class I Area Impacts

This facility is located within 200 km of one Class I area: Cohutta Wilderness Area.

**B. Site Determination**

There are no other facilities which could possibly be contiguous or adjacent and under common control.

**C. Existing Permits**

**Table 1: List of Current Permits as Amended**

Permit Number and/or Purpose of Issuance	Date of Issuance and Date of Amendments (if any)	Comments	
		Yes	No
3585-089-0313-S-01-0	05/15/2001		x

**Table 2: Comments on Specific Permits**

Permit Number	Comments
N/A	N/A

#### D. Process Description

1. SIC Codes(s): 3585

2. Description of Product(s):

New and remanufactured compressors for air condition and refrigeration applications

3. Overall Facility Process Description

This facility produces new and remanufactured compressors and motors for air condition and refrigeration applications. Compressors produced range from 5 to 120 tons of refrigeration capacity.

Remanufacturing operation includes disassembling of old compressors and motors, cleaning of compressor components, inspecting of the components, sanding, gauging an/or machining of the components as needed, restacking and welding of stators, winding of motors, varnish dipping and electrical testing of remanufactured motors, re-assembling of the compressors and drying of the re-assembled compressors. The reassembled compressors are then pressure-tested, and water-proof coated.

Manufacturing of new compressors only comprised of assembly of new components shipped from off-site suppliers, drying of assembled compressors, pressure-testing of the compressors, and water-proof coating of the compressors.

Supporting operations include maintenance, tool design and assembly, quality control, warranty repair, and wastewater treatment.

4. Overall Process Flow Diagram (optional)

The facility provided a process flow diagram in their Title V permit application.

#### E. Regulatory Status

1. PSD/NAA/NSR

This facility is a NSR major source because it has potential to emit more than 25 tons per year (tpy) of volatile organic compounds (VOC) in the Atlanta ozone non-attainment area. Potential emissions of nitrogen oxides (NO<sub>x</sub>) from this facility are less than 25 tpy. This facility is a minor source for other criteria air pollutants. Any future facility modification causing any increases in criteria pollutant emissions will require a NSR applicability analyses to determine if the modification is major and thus subject to non-attainment area (NAA) permitting requirements under NSR and/or state regulations.

## 2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓			✓
PM <sub>10</sub>	✓			✓
SO <sub>2</sub>	✓			✓
VOC	✓	✓		
NO <sub>x</sub>	✓			✓
CO	✓			✓
TRS	N/A			
H <sub>2</sub> S	N/A			
Individual HAP	✓		✓	
Total HAPs	✓		✓	

## 3. MACT Standards

This facility is potentially a major source under NESHAP because it has potential to emit more than 10 tpy of individual HAP, but has taken emission limits of 10 tpy for individual HAP and 25 tpy for all HAPs combined. These emission limits allow the facility to remain a minor source under NESHAP regulations, and thus avoids being subject to 40 CFR Part 63 Subpart M - "National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products".

## 4. Program Applicability

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 - Part 61 NESHAP	No
Program Code 9 - NSPS	No
Program Code M - Part 63 NESHAP	No
Program Code V - Title V	Yes

## Regulatory Analysis

### II. Facility Wide Requirements

#### A. Emission and Operating Caps:

Title V operating permit No. 3585-089-0313-V-02-0 incorporates the facility-wide 10/25 tpy HAP and 50 tpy VOC emission limits from Air Quality Permit No. 3585-089-0313-S-01-0 currently regulating the facility.

The 50 tpy facility-wide VOC emission cap was established upon the request of the company during the issuance of permit No. 3585-089-0313-S-01-0 to allow the facility to remain a minor source under non-attainment area (NAA) NSR rules. Since then, the major source thresholds for VOC and NO<sub>x</sub> emissions in the Atlanta ozone non-attainment area have been reduced to 25 tpy after EPA's reclassification. Because the facility has potential to emit more than 25 tpy of VOC, this facility is now considered as a major source of VOC emissions under pertinent NSR and state regulations. Consequently, the company submitted the Title V operating permit application No. 16256 upon the request of the Division.

The 10/25 tpy HAP emission caps ensure the facility is not a major source under NESHAP regulations.

#### B. Applicable Rules and Regulations

None applicable.

#### C. Compliance Status

The Title V permit application No. 16256 indicates that the facility is in compliance with all the applicable rules or regulations.

#### D. Operational Flexibility

None applicable.

#### E. Permit Conditions

Conditions 2.1.1 and 2.1.2 are incorporated from Conditions 5 and 6 of the permit No. 3585-089-0313-S-01-0 without any changes. These conditions contain the current facility-wide annual VOC and HAP emissions limits.

Other facility-wide conditions include the general provisions in Part 8.0 of the Permit. The current SIP permits and their amendments have facility-wide conditions for good air pollution control practice, performance testing, fugitive emission prevention, equipment malfunction or breakdown, particulate matter emissions, and visible emissions. All these conditions have either been addressed by conditions in Part 4.0, 6.0 or 8.0 of the Permit.

### III. Regulated Equipment Requirements

#### A. Brief Process Description

This facility produces new and remanufactured compressors and motors for air condition and refrigeration applications. Compressors produced range from 5 to 120 tons of refrigeration capacity.

Remanufacturing operation includes disassembling of old compressors and motors, cleaning of compressor components, inspecting of the components, sanding, gauging an/or machining of the components as needed, restacking and welding of stators, winding of motors, varnish dipping and electrical testing of remanufactured motors, re-assembling of the compressors, and drying of the re-assembled compressors. The reassembled compressors are then pressure-tested, and water-proof coated.

Manufacturing of new compressors only comprised of assembly of new components shipped from off-site suppliers, drying of assembled compressors, pressure-testing of the compressors, and water-proof coating of the compressors.

Supporting operations include maintenance, tool design and assembly, quality control, warranty repair, and wastewater treatment.

Primary emissions of air pollutants are VOC compounds from the use of paints, coatings, thinners and clean-up solvents. A portion of the VOC emissions are EPA listed HAPs. There are no VOC emission controls being used at this facility. Emissions of other regulated air pollutants are negligible due to the nature of the production processes.

#### B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
MM01	Miscellaneous Material Usage Operations	391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.5.1, 3.5.2, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9	N/A	None
1100	Paint Booth D (Line D Paint Booth)	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9	N/A	None
1101	Paint Booth D (Line E Paint Booth)				
1475	Paint Booth S (Line S Paint Booth)				
1590	Paint Booth OEMD (Line OEMD Paint Booth)				
5383	Paint Booth GK (Line GK Paint Booth)				
VD01	Varnish Dip Tank 1				
VD02	Varnish Dip Tank 2				

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
WOST	6,800-gallon 32 Weight Oil Storage Tank	391-3-1-.02(2)(vv)	2.1.1, 3.4.2, 6.2.1, 6.2.2, 6.2.3, 6.2.9	N/A	None

\* Generally applicable requirements contained in this permit may also apply to emission units listed above.

C. Equipment & Rule Applicability

**Emission and Operating Caps –**

None applicable.

**Applicable Rules and Regulations -**

- Georgia Rule 391-3-1-.02(2)(b), “*Visible Emissions*” applies to all the process units at this facility which do not have a more stringent limit. Visible emissions are limited by this Rule to less than 40% opacity. The visible emissions from this facility are substantially below 40% opacity due to the nature of the production processes involved.
- Georgia Rule 391-3-1-.02(2)(e), “*Particulate Emission from Manufacturing Processes*” applies to all process units at this facility that are not covered by a more specific rule or regulation. This Rule establishes PM emission limits for the process units based on their process weight input rates. PM emissions from this facility are substantially below the applicable Georgia Rule (e) limits due to the natural of the production processes involved.
- The existing miscellaneous metal parts surface coating operation at this facility is subject to Georgia Rule 391-3-1-.02(2)(ii), “*VOC Emissions from Surface Coating of Miscellaneous metal parts and Products*”. The facility has been complying with the applicable VOC emission limit(s) in Georgia Rule (ii) without using VOC control.
- Georgia Rule 391-3-1-.02(2)(vv), “*Volatile Organic Liquid handling and Storage*” applies to the transfer of any volatile organic liquid other than gasoline from any delivery vessel into any stationary tank(s) of greater than 4,000 gallons at this facility. Georgia Rule (vv) requires the tank(s) be equipped with submerged fill pipes. Currently the only source at this facility subject to this rule is the 6,800 gallon weight oil storage tank.

D. Compliance Status

The application No. 16256 does not indicate that the facility is operating out of compliance with any of the rules or regulations described above.

E. Operational Flexibility

None.

## F. Permit Conditions

Condition 3.4.1 is derived from Condition 7 in the current permit No. 3585-089-0313-S-01-0 with substantial changes. This condition subjects the metal parts surface coating operation at this facility to Georgia Rule 391-3-1-.02(2)(ii) which limits the VOC emissions from the coating operation according to the types of the coatings being used. As compared with Condition 7, Condition 3.4.1 contains additional VOC emission limits for certain other types of coatings (such as varnishes) which are being used for the miscellaneous metal parts and products surface coating operation at the facility. To avoid unnecessary confusion, most of the condition is directly quoted from Georgia Rule (ii). Parts of the compliance provisions of Georgia Rule (ii) applicable to the facility have been added to this condition for comprehensiveness and clarity. To be more consistent with the requirement of Georgia Rule (ii), Condition 7.b of the permit No. 3585-089-0313-S-01-0 has been replaced by the last paragraph of Condition 3.4.1.

Condition 3.4.2 is added to subject the 6,800-gallon oil storage tank at this facility to Georgia Rule (vv) which requires the tank be equipped with submerged fill pipe(s).

Conditions 3.4.3 and Condition 3.4.4 are added to establish respectively the PM and visible emission limits under Georgia Rules (b) and (e) for the process units at this facility.

Conditions 3.5.1 and 3.5.2 are added to establish certain good work practice requirements for reducing unintended VOC emissions. These requirements are common among air quality permits regulating similar sources.

Some of current SIP permit conditions such as those for good air pollution control practice, general record keeping and reporting, performance/compliance testing, equipment malfunction or breakdown, fugitive emissions, circumvention, future additional emission control, and notification and reporting have been replaced by same or similar conditions in the Permit.

**IV. Testing Requirements (with Associated Record Keeping and Reporting)****A. General Testing Requirements**

The standard general requirements are included in the permit. Conditions are included which specify that a performance test(s) may be required to determine compliance with the emission limits in Part 3.0, and that list the test methods to be used to determine compliance. A condition to require notification of any test and for the submission of a test plan is included.

**B. Specific Testing Requirements**

None applicable.

**V. Monitoring Requirements (with Associated Record Keeping and Reporting)****A. General Monitoring Requirements**

The standard general requirements are included in the permit.

**B. Specific Monitoring Requirements**

PM and visible emissions from all the process units and oxidizers are subject to Georgia Rules (e) and (b). The likelihood of violation of Georgia Rules (e) and (b) is minimal, therefore no monitoring is required.

## VI. Other Record Keeping and Reporting Requirements

### A. General Record Keeping and Reporting Requirements

The standard general requirements are included in the permit.

### B. Specific Record Keeping and Reporting Requirements

Conditions 6.2.1, 6.2.2 and 6.2.3 updates respectively Conditions 9, 10 and 11 of the current permit No. 3585-089-0313-S-01-0. These conditions establish detailed record keeping, compliance determination, and/or reporting requirements for Condition 2.1.1, and thus make the facility-wide VOC emission limit in Condition 2.1.1 practically enforceable.

Conditions 6.2.4, 6.2.5 and 6.2.6 updates respectively Conditions 13, 14 and 15 of the current permit No. 3585-089-0313-S-01-0. These conditions establish detailed record keeping, compliance determination, and/or reporting requirements for Condition 2.1.2, and thus make the facility-wide HAP emission limits in Condition 2.1.2 practically enforceable.

Conditions 6.2.7 and 6.2.8 update respectively the record keeping, compliance demonstration, and reporting requirements for Georgia Rule (ii) in Conditions 9 and 12 of the current permit No. 3585-089-0313-S-01-0. Both conditions contains detailed record keeping, compliance determination, and/or reporting requirements for Condition 3.4.1, and thus make the applicable VOC emission limit(s) in Condition 3.4.1 practically enforceable. As compared with the existing conditions, Conditions 6.2.7 and 6.2.8 are more consistent with similar conditions in other Part 70 permits and permit amendments issued recently to similar sources.

Condition 6.2.9 establishes a record keeping requirement for the 6,800-gallon oil storage tank which is required by Georgia Rule (vv) to have submerged fill pipes. This condition allows the demonstration of compliance with Condition 3.4.2.

To improve documentation and ease compliance determination, Condition 6.2.10 is added to require the Permittee to notify the Division of any switch between different emission limits as allowed by Georgia Rule (ii).

Condition 16 of the current permit No. 3585-089-0313-S-01-0 has been eliminated because the Permittee fulfilled its requirement for a scheduled submittal of sample monthly records for Division's approval.

**VII. Specific Requirements**

## A. Operational Flexibility

None.

## B. Alternative Requirements

None applicable.

## C. Insignificant Activities

Refer to <http://airpermit.dnr.state.ga.us/GATV/default.asp> for the Online Title V Application.

## D. Temporary Sources

None.

## E. Short-Term Activities

None.

## F. Compliance Schedule/Progress Reports

None.

## G. Emissions Trading

Not applicable.

## H. Acid Rain Requirements

None applicable.

## I. Prevention of Accidental Releases

Not applicable.

## J. Stratospheric Ozone Protection Requirements

The facility has indicated in the Title V permit application No. 16256 that they are subject to Title VI

K. Pollution Prevention

Not applicable.

L. Specific Conditions

None.

**VIII. General Provisions**

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

**Addendum to Narrative**

The 30-day public review started on December 1, 2005 and ended on December 31, 2005. Comments from the Permittee were received by the Division on December 7, 2005. No comments were received from the public or US EPA.

In the comments, the Permittee requested to add a condition in Part 5.0 of this permit to require monthly inspections to document compliance with the work practice requirements in Conditions 3.5.1 and 3.5.2. The Permittee also requested to define an additional "excursion" in Condition 6.1.7 for any instance of not following the work practice requirements. Both comments are acceptable. Condition 5.2.1 has been added to require the monthly inspections and records. Condition 6.1.7 has been revised to include the "excursion".

The Permittee also made comments on the Attachment B of the permit to update the quantities of certain insignificant activities and to correct some typos. Necessary changes have been made to the attachment in accordance with the comments.