



ENVIRONMENTAL & CIVIL ENGINEERING

## Transmittal

500 Moseley Road  
 Cross Roads, TX 76227  
 (940) 387-0805 Phone  
 (940) 387-0830 Fax

RECEIVED

SEP 01 2016

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 STATE A Q PROGRAM

**Date** 8/29/2016

**From** KJE

**Attention**

Air Quality Program Office- Application Processing

**Project No.**

CJT041315A

**Firm or Agency**

Department of Environmental Quality  
 1410 N. Hilton  
 Boise, ID 83706-1255

**Copies to**

**THE FOLLOWING IS TRANSMITTED**

- Herewith  
 Under Separate Cover

COPIES	DATE	DESCRIPTION
1	8/29/2016	Circle J Trailers Permit to Construct Application Signature

**Remarks:**

Enclosures/Attachments		Action Requested	
<input type="checkbox"/> Letter	<input type="checkbox"/> Sample	<input type="checkbox"/> Resubmit	<input type="checkbox"/> For Your Approval
<input type="checkbox"/> Contract Documents	<input type="checkbox"/> Clarification Drawings	<input type="checkbox"/> For Your Review	<input type="checkbox"/> Reply ASAP
<input type="checkbox"/> Sketch	<input type="checkbox"/> Print	<input type="checkbox"/> Information Only	<input type="checkbox"/> For Your Signature
<input type="checkbox"/> Modification Drawings	<input type="checkbox"/> Shop Drawings	<input type="checkbox"/> Your Information and File	<input type="checkbox"/> Other
<input type="checkbox"/> Report	<input type="checkbox"/> Other	<input type="checkbox"/> Please Comment	

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# Big Tex Trailer Manufacturing, Inc.

## Permit to Construct Amendment Application

PERMIT# P-2010.0071

**PREPARED FOR:**

BIG TEX TRAILER MANUFACTURING, INC.  
950 INTERSTATE HIGHWAY 30 EAST  
MOUNT PLEASANT, TEXAS 75455  
PHONE: (903) 575-0300

**SITE:**

CIRCLE J TRAILERS, INC.  
312 W SIMPLOT BLVD  
CALDWELL, ID 83605  
(800) 247-2535

**PREPARED BY:**



ENVIRONMENTAL & CIVIL ENGINEERING  
500 MOSELEY ROAD  
CROSS ROADS, TX 76227  
(940) 387-0805 PHONE  
(940) 387-0830 FAX

TBPE# F-12214

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## **INTRODUCTION**



ENVIRONMENTAL & CIVIL ENGINEERING  
500 Moseley Road  
Cross Roads, TX 76227  
Phone: 940-387-0805  
Fax: 940-387-0830

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July 12, 2016

Mr. Bill Rogers  
Air Quality Permit Coordinator  
Idaho Department of Environmental Quality  
Air Quality Program  
1410 N. Hilton St.,  
Boise, Idaho 83706

Re: Circle J Trailers, Inc. (Circle J)  
312 W. Simplot Blvd.  
Caldwell, Idaho 83605  
Paint Booth & Curing Oven Replacement – PTC Amendment Application and Exemption  
Determination

Dear Mr. Rogers:

KJ Environmental Management, Inc. (KJE) is pleased to submit the enclosed package pertaining to the removal of Prime Booth #1 and Paint Booth #2, as previously permitted, and the new construction of one (1) 90'-4" x 16'-0" x 13'-0" proposed paint booth (Emission Unit (EU): PB1), construction of one (1) proposed auxiliary air makeup unit (EU: AMU1), and construction of one (1) 52'-0" x 16'-0" x 13'-0" proposed curing oven (EU: CO1) at the Caldwell facility.

In addition to the physical changes at the facility, Circle J requests a few administrative changes to occur with the permit amendment. First, Circle J would like to change their Facility Name to Big Tex Trailer Manufacturing, Inc. In addition to the name change, Circle J requests to change the emissions unit names for the Painting Operations that occur in Building 4 as follows:

- Prime Booth #2 changed to PB2
- Paint Booth #2 changed to PB3

For the purpose of clarity, the facility is referred to as Circle J Trailers throughout this application.

Currently, Circle J is operating the Caldwell surface coating / manufacturing facility under a Permit to Construct (PTC) (Permit No. P-2010.0071), issued on November 9, 2010. Circle J is requesting to replace EUs: Paint Booth #1 & Prime #1 with one (1) proposed paint booth (EU: PB1). Circle J will no longer utilize the carbon filters with 35% control efficiency that were previously permitted. These will not be replaced by any additional control devices.

Circle J proposes that the limitations of the conditions of Circle J's current authorization be amended to reflect the addition of these changes, as well as an increase in production since the existing authorization was issued. The following permit conditions are proposed:

- Coating Operations:
  - Coating emissions will pass through one of six stacks, two for each booth
  - Meet an uncontrolled emissions limitation of 98.55 tons VOC per year
  - Operate with opacity limitations of 20% for a period or periods aggregating more than three (3) minutes in any 60-minute period,

Furthermore, Circle J will ensure that EUs: PB1, PB2, and PB3 will be controlled with particulate filters with an efficiency of 99.53%.

In addition to the paint booth replacement, Circle J is requesting that all emissions units previously located at the site, but not accurately depicted on the air permit, be included in the amended permit. These sources included welding operations, grinding operations, manual and robot plasma cutting operations, four small combustion devices within the wash bay area, and an existing curing oven.

Circle J proposes that the limitations of the conditions of Circle J's current authorization be amended to reflect these emissions units. The following permit conditions are proposed:

- Combustion Units:
  - 5,000 operating hours, each, per year
- Hand-held Plasma Cutting Operations:
  - 1,536,000 feet of material cut per year
    - Will be tracked based on type and number of trailers produced
- Robot Plasma Cutting Operations:
  - 424,500 feet of material cut per year

- Will be tracked based on type and number of trailers produced
  
- Welding Operations:
  - 600,000 pounds of welding consumables used per year
  
- Grinding Operations:
  - 300,000 pounds of grinding wheels used per year

Emissions calculations for these sources have been included in the emissions calculations application to ensure that the emissions from these sources, limited the aforementioned permit conditions, are Below Regulatory Concern (BRC), as defined in defined in IDAPA 58.01.01.221 (01). BRC has been further defined as less than 10% of the significant emission rates set out in the definition of significant in IDAPA 58.01.01.006 (101)(a)(i)(ii)(iii) & (iv). The rates listed above are 10% of the significant emission rates.

Enclosed are all applicable forms and checklists required by the Idaho Department of Environmental Quality to ensure that the application is administratively complete.

Please feel free to contact me if you have any questions or concerns.

Regards,

Caitlin Wilding  
Environmental Specialist  
KJ Environmental Mgt., Inc.

**CSPT FORM**



**DEQ AIR QUALITY PROGRAM**

1410 N. Hilton, Boise, ID 83706

For assistance, call the

**Air Permit Hotline – 1-877-5PERMIT**

Cover Sheet for Air Permit Application – Permit to Construct **Form CSPTC**

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER	
1. Company Name	Big Tex Trailer Manufacturing, Inc.
2. Facility Name	Circle J Trailers, Inc.
3. Facility ID No.	027-00064
4. Brief Project Description - One sentence or less	Replacement of a paint booth at an existing, permitted facility and increasing usage and emission limitations of the facility.

PERMIT APPLICATION TYPE	
5. <input type="checkbox"/> New Source	<input checked="" type="checkbox"/> New Source at Existing Facility
<input checked="" type="checkbox"/> Unpermitted Existing Source	<input type="checkbox"/> Facility Emissions Cap
<input type="checkbox"/> Required by Enforcement Action: Case No.: _____	<input type="checkbox"/> PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c
<input checked="" type="checkbox"/> Modify Existing Source: Permit No.: <u>P-2010.0071</u> Date Issued: <u>11/9/2010</u>	
6. <input checked="" type="checkbox"/> Minor PTC	<input type="checkbox"/> Major PTC

FORMS INCLUDED			
Included	N/A	Forms	DEQ Verify
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CSPTC – Cover Sheet	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form GI – Facility Information	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU0 – Emissions Units General	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU1– Industrial Engine Information	Please specify number of EU1s attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU2– Nonmetallic Mineral Processing Plants	Please specify number of EU2s attached: _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU3– Spray Paint Booth Information	Please specify number of EU3s attached: <u>3</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU4– Cooling Tower Information	Please specify number of EU3s attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU5 – Boiler Information	Please specify number of EU4s attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CBP– Concrete Batch Plant	Please specify number of CBPs attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form HMAP – Hot Mix Asphalt Plant	Please specify number of HMAPs attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PERF – Portable Equipment Relocation Form	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form AO – Afterburner/Oxidizer	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CA – Carbon Adsorber	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CYS – Cyclone Separator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form ESP – Electrostatic Precipitator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form BCE– Baghouses Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form SCE– Scrubbers Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form VSCE – Venturi Scrubber Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CAM – Compliance Assurance Monitoring	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Forms EI– Emissions Inventory	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PP – Plot Plan	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Forms MI1 – MI4 – Modeling	(Excel workbook, all 4 worksheets)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form FRA – Federal Regulation Applicability	<input type="checkbox"/>

**GI FORM**



Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

**Identification**

1. Facility name  2. Existing facility identification number   Check if new facility (not yet operating)

3. Brief project description

**Facility Information**

4. Primary facility permitting contact name  Contact type   
 Telephone number  E-mail

5. Alternate facility permitting contact name  Alternate contact type   
 Telephone number  E-mail

6. Mailing address where permit will be sent (street/city/county/state/zip code)

7. Physical address of permitted facility (if different than mailing address) (street/city/county/state/zip code)

8. Is the equipment portable?  Yes\*  No \*If yes, complete and attach PERF; see instructions.

9. NAICS codes: Primary NAICS  Secondary NAICS

10. Brief business description and principal product produced

11. Identify any adjacent or contiguous facility this company owns and/or operates

12. Specify type of application  Permit to construct (PTC); application fee of \$1,000 required. See instructions.

Tier I permit  Tier II permit  Tier II/Permit to construct

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

Co-process Tier I modification and PTC  Incorporate PTC at the time of Tier I renewal  Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)

**Certification**

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name  Official's title

Official's address

Telephone number  E-mail

Official's signature  Date

14. Check here to indicate that you want to review the draft permit before final issuance.

## **PROCESS DESCRIPTION**

## **Introduction**

Circle J Trailers, Inc. (Circle J) is seeking an amendment to their current Permit to Construct (Permit No. P-2010.0071 dated 11/09/2010) for their trailer manufacturing facility. The site is located at 312 W. Simplot Blvd. Caldwell, Canyon County, Idaho. The primary activity at Circle J is the assembly and coating of utility trailers. The assembly operations involve the plasma cutting, welding, and grinding of metal components to the specifications of the desired trailer. The coating operations consist of a small surface prep process involving two wash bays which utilize a VOC-free solution to remove any debris from the trailers, primer application and drying processes, and a coating application and drying processes.

## **Process Description**

### **Trailer Assembly**

Trailer Assembly at Circle J begins with the receipt of metal components. Many of the metal components must be manipulated by the facility before the assembly process begins, through plasma cutting, welding, and grinding (EUs: PC1-9, WELD1-62, MG1-16). These fabricated components, as well as pre-fabricated components, are welded together to the specifications of the specific trailer being manufactured. Once all components have been incorporated to the trailer, the trailers are buffed with grinders to ensure a smooth seam. Once the trailer has been assembled, it is then transferred to the surface coating operations. All trailer assembly operations occur inside Building 6.

### **Surface Coating Preparation**

The surface preparation operations take place in Building 4 at Circle J. The surface preparation process involves rinsing the parts with a VOC-free aqueous cleaning solution in one of two (2) wash booths on the west side of Building 4. Each of these Wash Booths (EU: WB-1, WB-2) are equipped with two (2) small combustion units (EPN: WB1a, WB2a, WB1b, WB2b) that heat the air within the booth to reduce the time spent drying the trailers after they have been washed. Once the trailers have been washed and dried, they proceed to the surface coating operations.

### **Surface Coating**

The surface coating operation at Circle J consists of a prime booth (EU: PB2), a paint booth (EU: PB3), and a paint/prime booth (EU: PB1). All three booths utilize electrostatic spray guns with an 80% transfer efficiency. The emissions from PB-1 are discharged through air emissions stacks 1 and 2 (EPNs: PB-1a and PB-1b), the emissions from PB-2 are discharged through stacks 3 and 4 (EPNs: PB2-a and PB2-b), and emissions from PB-3 are discharged through stacks 5 and 6 (EPNs: PB-3a and PB-3b). All emissions pass through a PM filter with a 99.53% capture efficiency prior to being discharged to the atmosphere through the stacks. No add-on VOC controls are utilized by the facility. The trailers are coated with a primer coat either in the west end of PB-1 or in PB-2 and allow to cure fully within the booth before being moved to the east end of PB-1 or PB-3 for a topcoat to be applied. Once the topcoat is applied, the trailers are moved to one of the facility's curing ovens (EUs: CO1 and CO2) to allow the topcoat to cure completely. The coated trailers and parts then proceed to final assembly before they are sold to the customer or put out on the property for storage until it is sold.

### **Final Assembly**

The fabricated and coated trailers and parts undergo final assembly operations before the completed product is ready for retail sale. Final assembly typically includes the bolt-on of auxiliary parts and application of adhesive-backed identifying placards, followed by the application and installation of a wooden floor in Building 3, if specified. No emissions are expected to occur from these processes.

### **Maximum Operating Conditions**

Circle J has normal business hours of 7-5 Monday through Friday; however, in order to allow for maximum flexibility in operations, Circle J respectfully requests operating hours of up 8,760 hours per year. The operation of certain emissions units will be less than this value, as requested by the individual EU0 Forms.

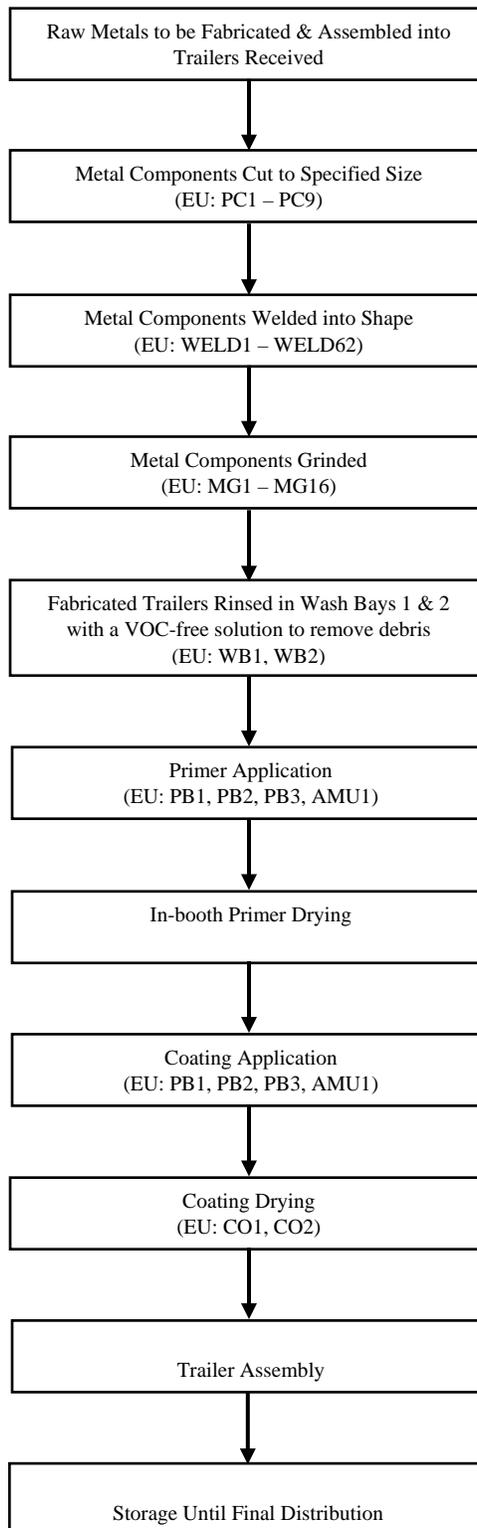
### **Air Modeling Discussion**

Air modeling was not performed for this project because the Facility-Wide Emissions for all regulated contaminants, except for VOCs, were below the “Below Regulatory Concern” (BRC) levels. Idaho Regulations define “BRC” as less than 10% of the “significant” emissions rates, as defined by IDAPA 58.01.01.006 (101)(a)(i)(ii)(iii) & (iv). Emissions rates are limited by the requested limitations on each general emission unit form (EU0) and summarized in the introduction of this application.

Modeling for Toxic Air Pollutants (TAPs) was not conducted because the uncontrolled maximum emission rate of each TAP from the site does not exceed the applicable screening emission level (EL) established in the Idaho Air Rules Section 585. No carcinogenic TAPs are emitted from the site. Emissions calculations and paint product speciations have been provided with this application to confirm that the previous statements are correct.

**PROCESS FLOW DIAGRAM**

# Process Flow Diagram

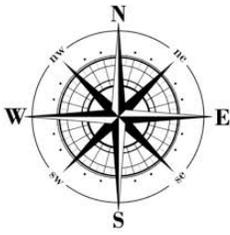


Circle J Trailers, Inc.  
312 W Simplot Blvd.  
Caldwell, Canyon County, ID 83605

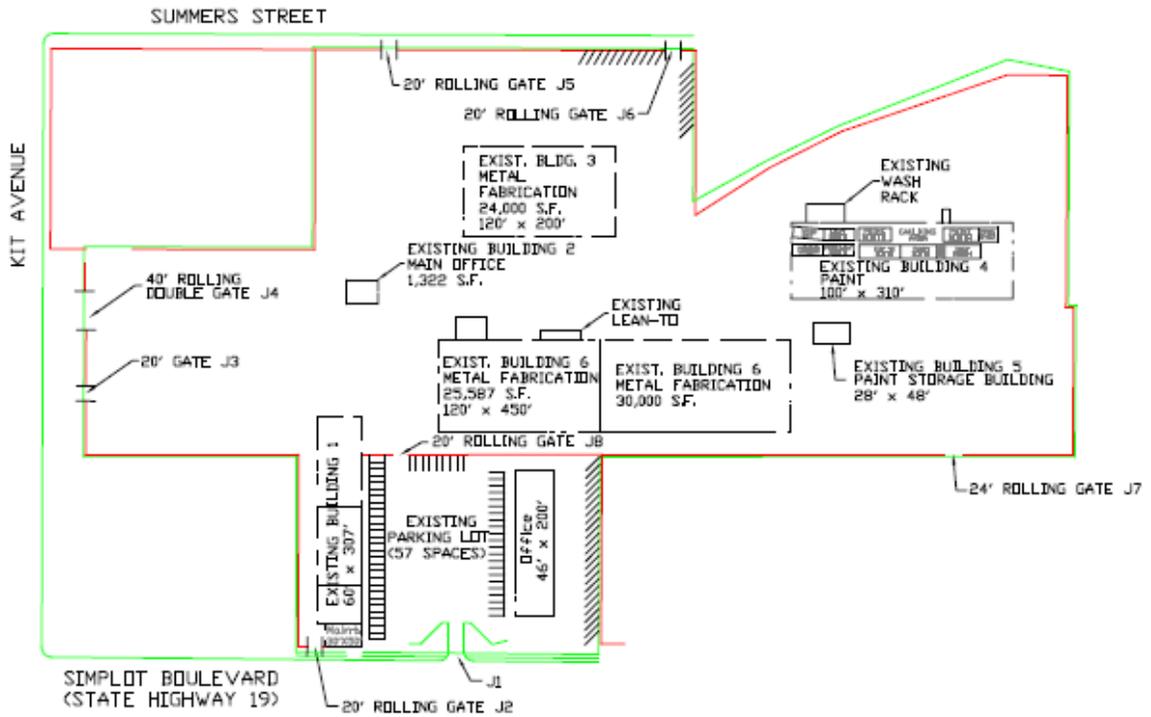
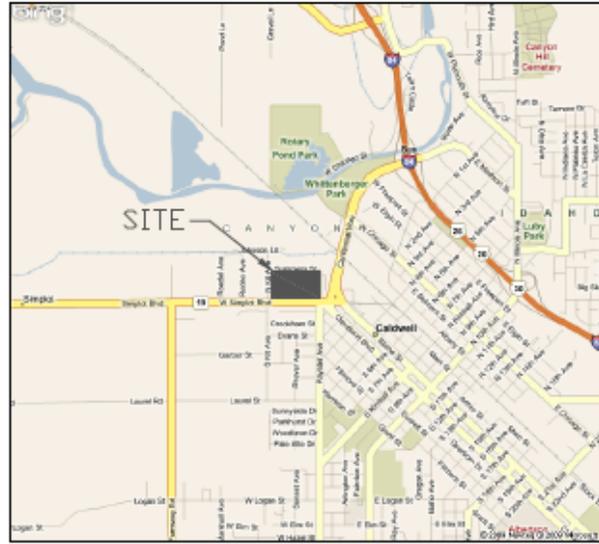


JULY 2016

**PLOT PLANS**



### VICINITY MAP CALDWELL, IDAHO



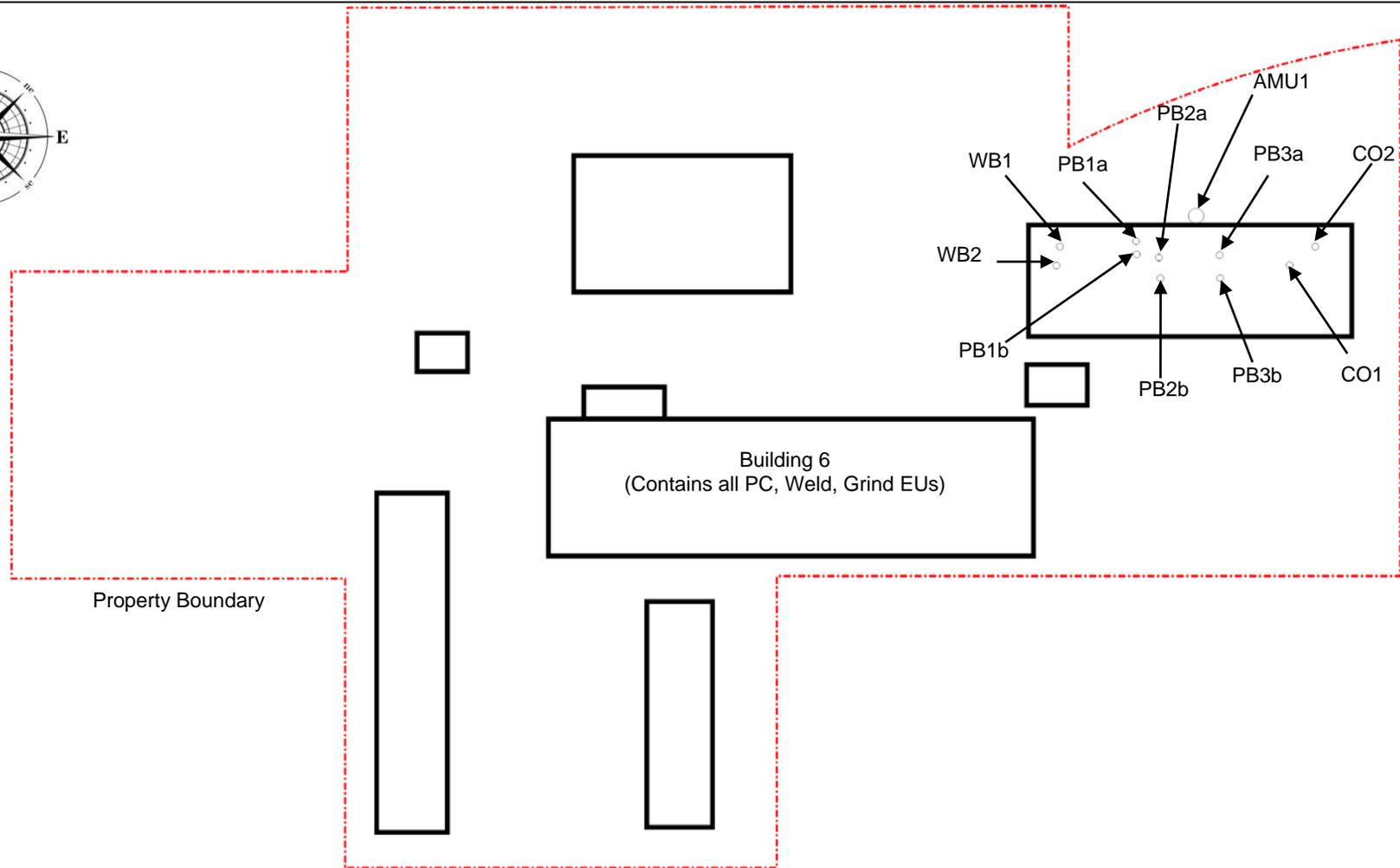
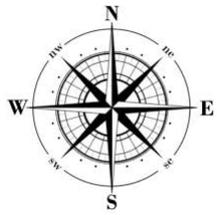
### Plot Plan – Building Dimensions

Circle J Trailers, Inc.  
312 Simplot Blvd.  
Caldwell, ID 83605

Scale:  
NTS

July 2016





**Plot Plan – Emissions Point Locations**

Circle J Trailers, Inc.  
312 Simplot Blvd.  
Caldwell, ID 83605

Scale:  
NTS

July 2016



**FRA FORM**



**IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**  
1410 N. Hilton, Boise, ID 83706  
For assistance, call the  
**Air Permit Hotline – 1-877-5PERMIT**

**Preapplication Meeting Information  
Form FRA (Federal Requirements Applicability) -  
Regulatory Review**

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name:  <p style="text-align: center;"><u>Big Tex Trailer Manufacturing, Inc.</u></p>	2. Facility Name:  <p style="text-align: center;"><u>Circle J Trailers, Inc.</u></p>
3. Brief Project Description:  <p style="text-align: center;"><u>Permit to Construct Amendment – Adding a new coating booth, air makeup unit and curing oven, while simultaneously removing the representation of carbon filters from the permit and increasing usage and emission limitations.</u></p>	
APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) ( <a href="#">40 CFR part 60</a> ).  List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not.  Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s):  List of all non-applicable subpart(s) which may appear to apply but do not:  <input checked="" type="checkbox"/> Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) ( <a href="#">40 CFR part 61</a> and <a href="#">40 CFR part 63</a> ).  List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not.  Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference <a href="#">EPA's webpage on NESHAPs</a> for more information.	List of all applicable subpart(s): <p style="text-align: center;"><b><u>40 CFR Part 63, Subpart HHHHHH</u></b></p> List of all non-applicable subpart(s) which may appear to apply but do not: <p style="text-align: center;"><b><u>40 CFR Part 63, Subpart MMMM</u></b> <b><u>40 CFR Part 63, Subpart XXXXXX</u></b></p> <input type="checkbox"/> Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages.  <b>Note</b> - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	<input checked="" type="checkbox"/> A detailed regulatory review is provided (Follow instructions and example).  <input type="checkbox"/> DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

**DETAILED FEDERAL APPLICABILITY**

## **FEDERAL APPLICABILITY**

Circle J Trailers, Inc. (Circle J) located in Caldwell, Canyon County, Idaho, is seeking an amendment to their current Permit to Construct for their Utility Trailer Manufacturing facility. The below determinations demonstrate that Circle J is compliant with the following Subparts of the Federal NSPS (40 CFR Part 60) or the Federal NESHAP (40 CFR Parts 61 and 63).

### **Federal Applicability Summary**

#### **40 CFR Part 63, Subpart HHHHHH**

This subpart establishes “National Emission Standards for Paint Stripping and Miscellaneous Surface Coating Operations Area Sources.” Though Circle J does not strip with methylene chloride nor does the facility paint with coatings containing the target HAPs at or above applicable thresholds, Circle J has chosen to voluntarily comply with the standards of this regulation in order to allow for future flexibility in operations and paint choices. The Initial Notification and Notification of Compliance Status for NESHAP 6H were mailed to the EPA and the state of Idaho in February of 2016, certifying that all requirements, as outlined in further detail below, are fulfilled.

#### **40 CFR Part 63, Subpart XXXXXX**

This subpart establishes “National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories.” Circle J is not subject to this subpart because Circle J’s NAICS and SIC codes are not listed as applicable codes by the EPA.

#### **40 CFR Part 63, Subpart MMMM**

This subpart establishes “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.” Circle J is not subject to this subpart because Circle J does not have a potential to emit 10 tons per year of any single HAP and 25 tons per year combination of HAPs.

## **Detailed Federal Applicability**

### **NESHAP 6H**

#### **What This Subpart Covers**

##### **§63.11169 What is the purpose of this subpart?**

Except as provided in paragraph (d) of this section, this subpart establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in any of the activities in paragraphs (a) through (c) of this section. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards contained herein.

(a) Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), Chemical Abstract Service number 75092, in paint removal processes;

(b) Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations;

(c) Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.

(d) This subpart does not apply to any of the activities described in paragraph (d)(1) through (6) of this section.

(1) Surface coating or paint stripping performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.

(2) Surface coating or paint stripping of military munitions, as defined in §63.11180, manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or equipment directly and exclusively used for the purposes of transporting military munitions.

(3) Surface coating or paint stripping performed by individuals on their personal vehicles, possessions, or property, either as a hobby or for maintenance of their personal vehicles, possessions, or property. This subpart also does not apply when these operations are performed by individuals for others without compensation. An individual who spray applies surface coating to more than two motor vehicles or pieces of mobile equipment per year is subject to the requirements in this subpart that pertain to motor vehicle and mobile equipment surface coating regardless of whether compensation is received.

(4) Surface coating or paint stripping that meets the definition of “research and laboratory activities” in §63.11180.

(5) Surface coating or paint stripping that meets the definition of “quality control activities” in §63.11180.

(6) Surface coating or paint stripping activities that are covered under another area source NESHAP.

- Circle J acknowledges the purpose of 40 CFR 63 Subpart HHHHHH.

**§63.11170 Am I subject to this subpart?**

(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:

- (1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.
- (2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.
- (3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.

(b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

- Though Circle J does not currently perform any of the actions that would make the facility applicable to this subpart, Circle J has voluntarily chose to comply with the standards set forth within in order to allow for flexibility in operations in the future.

**§63.11171 How do I know if my source is considered a new source or an existing source?**

(a) This subpart applies to each new and existing affected area source engaged in the activities listed in §63.11170, with the exception of those activities listed in §63.11169(d) of this subpart.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (6) of this section. Not all affected sources will have all of the items listed in paragraphs (b)(1) through (6) of this section.

(1) Mixing rooms and equipment;

(2) Spray booths, ventilated prep stations, curing ovens, and associated equipment;

(3) Spray guns and associated equipment;

(4) Spray gun cleaning equipment;

(5) Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint; and

(6) Equipment used for paint stripping at paint stripping facilities using paint strippers containing MeCl.

(c) An affected source is a new source if it meets the criteria in paragraphs (c)(1) and (c)(2) of this section.

(1) You commenced the construction of the source after September 17, 2007 by installing new paint stripping or surface coating equipment. If you purchase and install spray booths, enclosed spray gun cleaners, paint stripping equipment to reduce MeCl emissions, or purchase new spray guns to comply with this subpart at an existing source, these actions would not make your existing source a new source.

(2) The new paint stripping or surface coating equipment is used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

(d) An affected source is reconstructed if it meets the definition of reconstruction in §63.2.

(e) An affected source is an existing source if it is not a new source or a reconstructed source.

- Because the facility replaced two old paint booths with the new paint booth (EU: PB-1) after September 17, 2007, the facility is considered a new source.

### **General Compliance Requirements**

#### **§63.11172 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) and (b) of this section.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is after September 17, 2007, the compliance date is January 9, 2008.

(2) If the initial startup of your new or reconstructed affected source occurs after January 9, 2008, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is January 10, 2011.

- Circle J acknowledges the applicable compliance dates.

**§63.11173 What are my general requirements for complying with this subpart?**

(a) Each paint stripping operation that is an affected area source must implement management practices to minimize the evaporative emissions of MeCl. The management practices must address, at a minimum, the practices in paragraphs (a)(1) through (5) of this section, as applicable, for your operations.

(1) Evaluate each application to ensure there is a need for paint stripping (e.g., evaluate whether it is possible to re-coat the piece without removing the existing coating).

(2) Evaluate each application where a paint stripper containing MeCl is used to ensure that there is no alternative paint stripping technology that can be used.

(3) Reduce exposure of all paint strippers containing MeCl to the air.

(4) Optimize application conditions when using paint strippers containing MeCl to reduce MeCl evaporation (e.g., if the stripper must be heated, make sure that the temperature is kept as low as possible to reduce evaporation).

(5) Practice proper storage and disposal of paint strippers containing MeCl (e.g., store stripper in closed, air-tight containers).

(b) Each paint stripping operation that has annual usage of more than one ton of MeCl must develop and implement a written MeCl minimization plan to minimize the use and emissions of MeCl. The MeCl minimization plan must address, at a minimum, the management practices specified in paragraphs (a)(1) through (5) of this section, as applicable, for your operations. Each operation must post a placard or sign outlining the MeCl minimization plan in each area where paint stripping operations subject to this subpart occur. Paint stripping operations with annual usage of less than one ton of MeCl, must comply with the requirements in paragraphs (a)(1) through (5) of this section, as applicable, but are not required to develop and implement a written MeCl minimization plan.

(c) Each paint stripping operation must maintain copies of annual usage of paint strippers containing MeCl on site at all times.

(d) Each paint stripping operation with annual usage of more than one ton of MeCl must maintain a copy of their current MeCl minimization plan on site at all times.

- The facility does not perform paint stripping with MeCl or otherwise.

(e) Each motor vehicle and mobile equipment surface coating operation and each miscellaneous surface coating operation must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.

(1) All painters must be certified that they have completed training in the proper spray application of surface coatings and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (f) of this section. The spray application of surface coatings is prohibited by persons who are not certified as having completed the training described in paragraph (f) of this section. The requirements of this paragraph do not apply to the students of an accredited surface coating training program who are under the direct supervision of an instructor who meets the requirements of this paragraph.

(2) All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of paragraph (e)(2)(i) of this section and either paragraph (e)(2)(ii), (e)(2)(iii), or (e)(2)(iv) of this section.

(i) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98-percent capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14 of subpart A of this part). The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement. The requirements of this paragraph do not apply to waterwash spray booths that are operated and maintained according to the manufacturer's specifications.

- Filters at the facility have at least 98% capture efficiency.

(ii) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other

openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.

- All booths at the facility are fully enclosed, with a full roof, four complete walls and are ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains.

(iii) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.

- All booths at the facility are fully enclosed, with a full roof, four complete walls and are ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains.

(iv) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.

- The facility does not use mobile ventilated enclosures.

(3) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see §63.14 of subpart A of this part). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training centers. The requirements of this paragraph do not apply to the surface coating of aerospace vehicles that involves the coating of components that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; to the application of coatings on aerospace vehicles that contain fillers that adversely affect atomization with HVLP spray guns; or to the application of coatings on aerospace vehicles that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

- The facility uses electrostatic spray guns with a transfer efficiency of 80%.

(4) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be

done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.

- The facility acknowledges this requirement and will comply when cleaning spray guns.

(5) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the emission standards in this section after you have requested approval to do so according to §63.6(g)(2).

(f) Each owner or operator of an affected miscellaneous surface coating source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

(1) A list of all current personnel by name and job description who are required to be trained;

(2) Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the topics listed in paragraphs (f)(2)(i) through (2)(iv) of this section.

i. Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

ii. Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

iii. Routine spray booth and filter maintenance, including filter selection and installation.

iv. Environmental compliance with the requirements of this subpart.

(3) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (f)(2) of this section are not required to provide the initial training required by that paragraph to these painters.

- The facility acknowledges the training requirements of this subpart, has trained all existing painters, and will certify the training of new painters accordingly.

(g) As required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

- (1) If your source is a new source, all personnel must be trained and certified no later than 180 days after hiring or no later than July 7, 2008, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.
- (2) If your source is an existing source, all personnel must be trained and certified no later than 180 days after hiring or no later than January 10, 2011, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.
- (3) Training and certification will be valid for a period not to exceed five years after the date the training is completed, and all personnel must receive refresher training that meets the requirements of this section and be re-certified every five years.
- (4) The facility acknowledges the training requirements of this subpart, has trained all existing painters, and will certify the training of new painters accordingly.

#### **§63.11174 What parts of the General Provisions apply to me?**

(a) Table 1 of this subpart shows which parts of the General Provisions in subpart A apply to you.

(b) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

- The facility acknowledges the General Provisions that apply.

#### **Notifications, Reports, and Records**

##### **§63.11175 What notifications must I submit?**

(a) Initial Notification. If you are the owner or operator of a paint stripping operation using paint strippers containing MeCl and/or a surface coating operation subject to this subpart, you must submit the initial notification required by §63.9(b). For a new affected source, you must submit the Initial Notification no later than 180 days after initial startup or July 7, 2008, whichever is later. For an existing affected source, you must submit the initial notification no later than

January 11, 2010. The initial notification must provide the information specified in paragraphs (a)(1) through (8) of this section.

(1) The company name, if applicable.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

(3) The street address (physical location) of the affected source and the street address where compliance records are maintained, if different. If the source is a motor vehicle or mobile equipment surface coating operation that repairs vehicles at the customer's location, rather than at a fixed location, such as a collision repair shop, the notification should state this and indicate the physical location where records are kept to demonstrate compliance;

(4) An identification of the relevant standard (i.e., this subpart, 40 CFR part 63, subpart HHHHHH);

(5) A brief description of the type of operation as specified in paragraph (a)(5)(i) or (ii) of this section.

(i) For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

(ii) For paint stripping operations, identify the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

(6) Each paint stripping operation must indicate whether they plan to annually use more than one ton of MeCl after the compliance date.

(7) A statement of whether the source is already in compliance with each of the relevant requirements of this subpart, or whether the source will be brought into compliance by the compliance date. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d) of this subpart. For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g) of this subpart.

(8) If your source is a new source, you must certify in the initial notification whether the source is in compliance with each of the requirements of this subpart. If your source is an existing source, you may certify in the initial notification that the source is already in compliance. If you are certifying in the initial notification that the source is in compliance with the relevant requirements of this subpart, then include also a statement by a responsible official with that official's name, title, phone number, e-mail address (if available) and signature, certifying the truth, accuracy, and completeness of the notification, a statement that the source has complied with all the relevant standards of this subpart, and that this initial notification also serves as the notification of compliance status.

(b) Notification of Compliance Status. If you are the owner or operator of a new source, you are not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided you were able to certify compliance on the date of the initial notification, as part of the initial notification, and your compliance status has not since changed. If you are the owner or operator of any existing source and did not certify in the initial notification that your source is already in compliance as specified in paragraph (a) of this section, then you must submit a notification of compliance status. You must submit a Notification of Compliance Status on or before March 11, 2011. You are required to submit the information specified in paragraphs (b)(1) through (4) of this section with your Notification of Compliance Status:

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d). For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g).

(3) The date of the Notification of Compliance Status.

(4) If you are the owner or operator of an existing affected paint stripping source that annually uses more than one ton of MeCl, you must submit a statement certifying that you have developed and are implementing a written MeCl minimization plan in accordance with §63.11173(b).

- Circle J submitted an initial notification and notification of compliance status in February of 2016 certifying that all requirements are being met.

**§63.11176 What reports must I submit?**

(a) Annual Notification of Changes Report. If you are the owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, you are required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. This includes notification when paint stripping affected sources that have not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) used more than one ton of MeCl in the previous calendar year. The annual notification of changes report must be submitted prior to March 1 of each calendar

year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

(b) If you are the owner or operator of a paint stripping affected source that has not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) of this subpart, you must submit a report for any calendar year in which you use more than one ton of MeCl. This report must be submitted no later than March 1 of the following calendar year. You must also develop and implement a written MeCl minimization plan in accordance with §63.11173(b) no later than December 31. You must then submit a Notification of Compliance Status report containing the information specified in §63.11175(b) by March 1 of the following year and comply with the requirements for paint stripping operations that annually use more than one ton of MeCl in §§63.11173(d) and 63.11177(f).

- The facility will submit an Annual Notification of Changes when applicable.

#### **§63.11177 What records must I keep?**

If you are the owner or operator of a surface coating operation, you must keep the records specified in paragraphs (a) through (d) and (g) of this section. If you are the owner or operator of a paint stripping operation, you must keep the records specified in paragraphs (e) through (g) of this section, as applicable.

(a) Certification that each painter has completed the training specified in §63.11173(f) with the date the initial training and the most recent refresher training was completed.

(b) Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in §63.11173(e)(3)(i).

(c) Documentation from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by the Administrator to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in §63.11173(e)(4).

(d) Copies of any notification submitted as required by §63.11175 and copies of any report submitted as required by §63.11176.

(e) Records of paint strippers containing MeCl used for paint stripping operations, including the MeCl content of the paint stripper used. Documentation needs to be sufficient to verify annual usage of paint strippers containing MeCl (e.g., material safety data sheets or other documentation provided by the manufacturer or supplier of the paint stripper, purchase receipts, records of paint stripper usage, engineering calculations).

(f) If you are a paint stripping source that annually uses more than one ton of MeCl you are required to maintain a record of your current MeCl minimization plan on site for the duration of your paint stripping operations. You must also keep records of your annual review of, and updates to, your MeCl minimization plan.

(g) Records of any deviation from the requirements in §63.11173, §63.11174, §63.11175, or §63.11176. These records must include the date and time period of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

(h) Records of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.

- The facility will keep all applicable records.

**§63.11178 In what form and for how long must I keep my records?**

(a) If you are the owner or operator of an affected source, you must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

- The facility acknowledges record keeping requirements.

**EU0 FORMS**



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name:	2. Facility Name:	3. Facility ID No:
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.	027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	AIR MAKEUP UNIT		
6. EU ID Number:	AMU-1		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	COL-MET		
9. Model:	EH-3540K-V		
10. Maximum Capacity:	N/A		
11. Date of Construction:	NOVEMBER 2014		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)					
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 4 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	5000 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input checked="" type="checkbox"/> Operation Hour Limit(s):	5000 HRS/YEAR
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEPING SITE-WIDE EMISSIONS BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name:	2. Facility Name:		3. Facility ID No:			
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.		027-00064			
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:	CURING OVEN 2					
6. EU ID Number:	CO-2					
7. EU Type:	<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:			
8. Manufacturer:	UNKNOWN					
9. Model:	UNKNOWN					
10. Maximum Capacity:	3 MMBTU/HR					
11. Date of Construction:	UNKNOWN					
12. Date of Modification (if any):	N/A					
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.					
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 4 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		5000 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input checked="" type="checkbox"/> Operation Hour Limit(s):		5000 HRS/YEAR				
<input type="checkbox"/> Production Limit(s):						
<input type="checkbox"/> Material Usage Limit(s):						
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		Keep Sitewide Emissions BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		CURING OVEN 1				
6. EU ID Number:		CO-1				
7. EU Type:		<input checked="" type="checkbox"/> New Source <input type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		COL-MET				
9. Model:		BCC-16-13-52-P-DT				
10. Maximum Capacity:		3 MMBTU/HR				
11. Date of Construction:		2015				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 4 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		5000 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input checked="" type="checkbox"/> Operation Hour Limit(s):		5000 HOURS/YEAR				
<input type="checkbox"/> Production Limit(s):						
<input type="checkbox"/> Material Usage Limit(s):						
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name: Big Tex Trailer Manufacturing, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	GRINDERS		
6. EU ID Number:	MG-14 - MG-16		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	DEWALT		
9. Model:	DWE402		
10. Maximum Capacity:	N/A		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)				
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	8760 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input checked="" type="checkbox"/> Material Usage Limit(s):	300,000 POUNDS OF GRINDING WHEELS
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	Keep Sitewide Emissions BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name:	2. Facility Name:	3. Facility ID No:
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.	027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	PLASMA CUTTERS		
6. EU ID Number:	PC-9		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	HYPERTHERM		
9. Model:	85 HAND PLAZ		
10. Maximum Capacity:	N/A		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)					
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	3000 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input checked="" type="checkbox"/> Material Usage Limit(s):	1,536,000 FEET CUT PER YEAR (ALL HANDHELD PC)
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name:	2. Facility Name:	3. Facility ID No:
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.	027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	PLASMA CUTTER		
6. EU ID Number:	PC-1		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	HYPERTHERM		
9. Model:	1250		
10. Maximum Capacity:	N/A		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)				
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	3000 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input checked="" type="checkbox"/> Production Limit(s):	424,500 FEET CUT PER YEAR
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name:	2. Facility Name:	3. Facility ID No:
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.	027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	PLASMA CUTTERS		
6. EU ID Number:	PC-2 - PC-6		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	HYPERTHERM		
9. Model:	105 HAND PLAZ		
10. Maximum Capacity:	N/A		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)				
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	3000 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input checked="" type="checkbox"/> Material Usage Limit(s):	1,536,000 FEET CUT PER YEAR (ALL HANDHELD PC)
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		WELDING MACHINES				
6. EU ID Number:		GMAW-63 - GMAW-68				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		LINCOLN				
9. Model:		POWERMIG MIG300				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		8760 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):		600,000 POUNDS OF WELDING WIRE/YEAR				
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name:	2. Facility Name:		3. Facility ID No:			
Big Tex Trailer Manufacturing, Inc.	Circle J Trailers, Inc.		027-00064			
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:	GRINDER					
6. EU ID Number:	MG-1 - MG-3					
7. EU Type:	<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:			
8. Manufacturer:	MAKITA					
9. Model:	9557PB					
10. Maximum Capacity:	N/A					
11. Date of Construction:	UNKNOWN					
12. Date of Modification (if any):	N/A					
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.					
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR					
23. Maximum Operation:	8760 HOURS/YEAR					
REQUESTED LIMITS						
24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)					
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):	300,000 POUNDS OF GINDING WHEELS					
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports					
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC					



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		GRINDER				
6. EU ID Number:		MG-4 - MG-13				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MAKITA				
9. Model:		GA7911				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		8760 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):		300,000 POUNDS OF GINDING WHEELS				
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name: Big Tex Trailer Manufacturing, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064
4. Brief Project Description:		

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	WELDING MACHINES		
6. EU ID Number:	GMAW-59		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	MILLER		
9. Model:	MILLERMATIC 211		
10. Maximum Capacity:	N/A		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	8760 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input checked="" type="checkbox"/> Material Usage Limit(s):	600,000 POUNDS OF WELDING WIRE/YEAR
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		WELDING MACHINES				
6. EU ID Number:		GMAW-58				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MILLER				
9. Model:		350LX				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		8760 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):		600,000 POUNDS OF WELDING WIRE/YEAR				
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		WELDING MACHINES				
6. EU ID Number:		GMAW-1 - GMAW-5				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MILLER				
9. Model:		350P				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		8760 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):		600,000 POUNDS OF WELDING WIRE/YEAR				
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		WELDING MACHINES				
6. EU ID Number:		GMAW-60 - GMAW-62				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MILLER				
9. Model:		CP300				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		8760 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input checked="" type="checkbox"/> Material Usage Limit(s):		600,000 POUNDS OF WELDING WIRE				
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		WELDING MACHINES				
6. EU ID Number:		GMAW-6 - GMAW-57				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MILLER				
9. Model:		CP302				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?		<input type="checkbox"/> Yes <input type="checkbox"/> No				
20. Does the manufacturer guarantee the control efficiency of the control equipment?		<input type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, attach and label manufacturer guarantee)				
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY				
23. Maximum Operation:		4380 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input type="checkbox"/> Material Usage Limit(s):						
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):						



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name: Big Tex Trailer Manufacturing, Inc.		2. Facility Name: Circle J Trailers, Inc.		3. Facility ID No: 027-00064		
4. Brief Project Description:						
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:		PLASMA CUTTERS				
6. EU ID Number:		PC-7 - PC-8				
7. EU Type:		<input type="checkbox"/> New Source <input checked="" type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		Date Issued:		
8. Manufacturer:		MILLER				
9. Model:		POWERMAX MAX1000 HAND PLAZ				
10. Maximum Capacity:		N/A				
11. Date of Construction:		UNKNOWN				
12. Date of Modification (if any):		N/A				
13. Is this a Controlled Emission Unit?		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.				
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		10 HOURS/DAY, 5 DAYS/WEEK, 50 WEEKS/YEAR				
23. Maximum Operation:		3000 HOURS/YEAR				
REQUESTED LIMITS						
24. Are you requesting any permit limits?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (If Yes, indicate all that apply below)				
<input type="checkbox"/> Operation Hour Limit(s):						
<input checked="" type="checkbox"/> Production Limit(s):		1,536,000 FEET CUT PER YEAR (ALL HANDHELD PC)				
<input type="checkbox"/> Material Usage Limit(s):						
<input type="checkbox"/> Limits Based on Stack Testing:		Please attach all relevant stack testing summary reports				
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):		KEEP SITEWIDE EMISSIONS BRC				



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name: Big Tex Trailer Manufacturing, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064

4. Brief Project Description:

**EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION**

5. Emissions Unit (EU) Name:	WASH BOOTH HEATERS		
6. EU ID Number:	WB-1A&B, WB-2A&B		
7. EU Type:	<input type="checkbox"/> New Source	<input checked="" type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	AMBIRAD		
9. Model:	7AR84		
10. Maximum Capacity:	0.18 MMBTU/HR		
11. Date of Construction:	UNKNOWN		
12. Date of Modification (if any):	N/A		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

**EMISSIONS CONTROL EQUIPMENT**

14. Control Equipment Name and ID:						
15. Date of Installation:						16. Date of Modification (if any):
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)				
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

**EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)**

22. Actual Operation:	10 HOURS/DAY, 4 DAYS/WEEK, 50 WEEKS/YEAR
23. Maximum Operation:	5000 HOURS/YEAR

**REQUESTED LIMITS**

24. Are you requesting any permit limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, indicate all that apply below)
<input checked="" type="checkbox"/> Operation Hour Limit(s):	5000 HOURS/YEAR
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	KEEP SITEWIDE EMISSIONS BRC

**EU3 FORMS**



Please see instructions on page 2 before filling out the form.

**IDENTIFICATION**

1. Company Name: Big Tex Trailers, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064
4. Brief Project Description: Replacement of a paint booth at an existing, permitted facility and increasing usage and emission limitations of the facility.		

**BOOTH INFORMATION**

5. Booth Type:	<input type="checkbox"/> New Booth	<input type="checkbox"/> Unpermitted Existing Booth
	<input checked="" type="checkbox"/> Modification to a Permitted Booth, Permit #: P-2010.0071, Date Issued: 11/9/2010	
6. Construction Date:	2015	

**SPRAY GUN DESCRIPTION AND SPECIFICATIONS**

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	Graco	244401, umax 85kv	Electrostatic Air Spray Gun	30	variable
2					
3					
4					

Number of guns to be used simultaneously:

**SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS**

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSD (Y/N)
Primer	Metal	420	varies (calcs included)	varies (calcs included)	Y
Topcoat	Metal	420	varies (calcs included)	varies (calcs included)	Y

**REQUEST FOR PERMIT LIMITATIONS**

18. Are you requesting any permit limits? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. If Yes, check all that apply below and fill in requested limit(s)	
<input type="checkbox"/> Operation Hour Limits:	<input type="checkbox"/> Production Limits:
<input checked="" type="checkbox"/> Material Usage Limits: 38,421 gallons of coating (between 3 booths)	<input checked="" type="checkbox"/> Other: VOC Emissions: 98.55 TPY, facility-wide

19. Rationale for Requesting the Limit(s): The facility is already a synthetic minor with a gallon usage limitation.

**EMISSION CONTROL DEVICE (FILTER<sup>b</sup>) DESCRIPTION AND SPECIFICATIONS**

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%) <sup>a</sup>	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Air Flow Technologies	Series 64 poly pad 1"	99.53	26,640 SF 1 in
Stack 2				
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.  
 b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

**BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)**

24. Actual Operation: 10 hours/day, 4 days/week	25. Maximum Operation: 8760 hours/year
-------------------------------------------------	----------------------------------------



Please see instructions on page 2 before filling out the form.

**IDENTIFICATION**

1. Company Name: Big Tex Trailers, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064
4. Brief Project Description: Replacement of a paint booth at an existing, permitted facility and increasing usage and emission limitations of the facility.		

**BOOTH INFORMATION**

5. Booth Type:	<input type="checkbox"/> New Booth	<input type="checkbox"/> Unpermitted Existing Booth
	<input checked="" type="checkbox"/> Modification to a Permitted Booth, Permit #: P-2010.0071, Date Issued: 11/9/2010	
6. Construction Date:	2015	

**SPRAY GUN DESCRIPTION AND SPECIFICATIONS**

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	Graco	244401, umax 85kv	Electrostatic Air Spray Gun	30	variable
2					
3					
4					

Number of guns to be used simultaneously:

**SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS**

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSD (Y/N)
Primer	Metal	420	varies (calcs included)	varies (calcs included)	Y
Topcoat	Metal	420	varies (calcs included)	varies (calcs included)	Y

**REQUEST FOR PERMIT LIMITATIONS**

18. Are you requesting any permit limits? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. If Yes, check all that apply below and fill in requested limit(s)	
<input type="checkbox"/> Operation Hour Limits:	<input type="checkbox"/> Production Limits:
<input checked="" type="checkbox"/> Material Usage Limits: 38,421 gallons of coating (between 3 booths)	<input checked="" type="checkbox"/> Other: VOC Emissions: 98.55 TPY, facility-wide

19. Rationale for Requesting the Limit(s): The facility is already a synthetic minor with a gallon usage limitation.

**EMISSION CONTROL DEVICE (FILTER<sup>b</sup>) DESCRIPTION AND SPECIFICATIONS**

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%) <sup>a</sup>	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Air Flow Technologies	Series 64 poly pad 1"	99.53	26,640 SF 1 in
Stack 2				
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.  
 b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

**BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)**

24. Actual Operation: 10 hours/day, 4 days/week	25. Maximum Operation: 8760 hours/year
-------------------------------------------------	----------------------------------------



Please see instructions on page 2 before filling out the form.

**IDENTIFICATION**

1. Company Name: Big Tex Trailer Manufacturing, Inc.	2. Facility Name: Circle J Trailers, Inc.	3. Facility ID No: 027-00064
4. Brief Project Description: Replacement of a paint booth at an existing, permitted facility and increasing usage and emission limitations of the facility.		

**BOOTH INFORMATION**

5. Booth Type:	<input checked="" type="checkbox"/> New Booth	<input type="checkbox"/> Unpermitted Existing Booth
	<input type="checkbox"/> Modification to a Permitted Booth, Permit #: _____, Date Issued: _____	
6. Construction Date:	2015	

**SPRAY GUN DESCRIPTION AND SPECIFICATIONS**

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	Graco	244401, umax 85kv	Electrostatic Air Spray Gun	30	variable
2					
3					
4					

Number of guns to be used simultaneously: \_\_\_\_\_

**SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS**

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSD (Y/N)
Primer	Metal	420	varies (calcs included)	varies (calcs. included)	Y
Topcoat	Metal	420	varies (calcs included)	varies (calcs. included)	Y

**REQUEST FOR PERMIT LIMITATIONS**

18. Are you requesting any permit limits? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. If Yes, check all that apply below and fill in requested limit(s)	
<input type="checkbox"/> Operation Hour Limits:	<input type="checkbox"/> Production Limits:
<input checked="" type="checkbox"/> Material Usage Limits: 38,421 gallons of coating (between 3 booths)	<input checked="" type="checkbox"/> Other: VOC Emissions: 98.55 TPY, facility-wide

19. Rationale for Requesting the Limit(s): The facility is already a synthetic minor with a gallon usage and VOC emission limitation.

**EMISSION CONTROL DEVICE (FILTER<sup>b</sup>) DESCRIPTION AND SPECIFICATIONS**

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%) <sup>a</sup>	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Air Flow Technologies	Series 64 poly pad 1"	99.53	26,640 SF 1 in
Stack 2				
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.  
 b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

**BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)**

24. Actual Operation: 10 hours/day, 4 days/week	25. Maximum Operation: 8760 hours/year
-------------------------------------------------	----------------------------------------

## **EMISSIONS CALCULATIONS**

Circle J Trailers, Inc.  
Potential Emissions Summary  
Air Emissions Inventory

EU	EPN	VOCs		Exempt Solvent		NO <sub>x</sub>		NO <sub>2</sub>		CO		PM <sub>2.5</sub>		PM <sub>10</sub>		SO <sub>2</sub>		HAPs		Pb		
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	lb/month	tpy
PB1	PB1a	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
	PB1b	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
PB2	PB2a	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
	PB2b	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
PB3	PB3a	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
	PB3b	13.383	16.385	9.173	3.420							0.008	0.010	0.008	0.010			0.692	1.694			
AMU1	AMU1	0.022	0.054			0.392	0.980	0.024	0.735	0.329	0.824	0.030	0.075	0.030	0.075	0.002	0.006					
WB1a	WB1	0.001	0.002			0.017	0.043	0.001	0.032	0.014	0.036	0.001	0.003	0.001	0.003	0.000	0.000					
WB1b		0.001	0.002			0.017	0.043	0.001	0.032	0.014	0.036	0.001	0.003	0.001	0.003	0.000	0.000					
WB2a	WB2	0.001	0.002			0.017	0.043	0.001	0.032	0.014	0.036	0.001	0.003	0.001	0.003	0.000	0.000					
WB2b		0.001	0.002			0.017	0.043	0.001	0.032	0.014	0.036	0.001	0.003	0.001	0.003	0.000	0.000					
CO1	CO1	0.016	0.040			0.294	0.735	0.018	0.551	0.247	0.618	0.022	0.056	0.022	0.056	0.002	0.004					
CO2	CO2	0.016	0.040			0.294	0.735	0.018	0.551	0.247	0.618	0.022	0.056	0.022	0.056	0.002	0.004					
PC1	BLDG6					0.792	0.594	0.063	0.048			0.266	0.199	0.266	0.199			0.018	0.019	0.000		0.000
PC2-9						0.507	0.761	0.041	0.061			0.136	0.204	0.136	0.204			0.005	0.008	0.000		0.000
MG1-16												0.001	0.001	0.001	0.001							
WELD1-68												0.240	0.240	0.240	0.240			0.076	0.076	0.000		0.000
<b>Facility-wide Total</b>		<b>80.35</b>	<b>98.45</b>	<b>55.04</b>	<b>20.52</b>	<b>2.35</b>	<b>3.98</b>	<b>0.17</b>	<b>2.08</b>	<b>0.88</b>	<b>2.20</b>	<b>0.77</b>	<b>0.90</b>	<b>0.77</b>	<b>0.90</b>	<b>0.01</b>	<b>0.02</b>	<b>4.25</b>	<b>10.27</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>
<b>Below Regulatory Concern[1]</b>		--	4.00	--	--	--	4.00	--	4.00	--	10.00	--	1.00	--	1.50	--	4.00	--	--	--	--	0.06
<b>BRC?</b>		<b>NA</b>	<b>No</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>Yes</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>Yes</b>

Note: PM = PM10, PM 2.5

1) BRC, or below regulatory concern levels were calculated as 10% of the significant emissions rates as defined in IDAPA 58.01.01.006 (101)(a)(i)(ii)(iii) & (iv).

2) Individual HAPs are less than

Prepared by:  
KJ Environmental Mgt., Inc.  
500 Moseley Road  
Cross Roads, TX 76227  
(940) 387-0805

Circle J Trailers, Inc.  
 IDEQ Screening Emissions Levels and Acceptable Ambient Concentration  
 Air Emissions Inventory

CAS NO.	INGREDIENT NAME	SCREENING EMISSIONS LEVELS (EL) [lb/hr]	CAS NO.	INGREDIENT NAME	Acceptable Ambient Concentration (AAC) [mg/m3]
67-64-1	Acetone	119	67-64-1	Acetone	89
123-86-4	Butyl Acetate	47.3	123-86-4	Butyl Acetate	35.5
98-82-8	Cumene	16.3	98-82-8	Cumene	12.25
100-41-4	Ethylbenzene	29	100-41-4	Ethylbenzene	21.75
110-43-0	Methyl -amyl Ketone	15.7	110-43-0	Methyl -amyl Ketone	11.75
142-82-5	Heptane	109	142-82-5	Heptane	82
64-17-5	Ethanol	125	64-17-5	Ethanol	94
67-56-1	Methanol	17.3	67-56-1	Methanol	13
8052-413	Stoddard Solvent	35	8052-413	Stoddard Solvent	26.25
78-83-1	Isobutyl Alcohol	10	78-83-1	Isobutyl Alcohol	6
1477-55-0	m-Xylene a, a-diamine (CL)	0.0007	1477-55-0	m-Xylene a, a-diamine (CL)	0.0005
67-63-0	Isopropyl Alcohol	65.3	67-63-0	Isopropyl Alcohol	49
78-93-3	Methylethyl Ketone	39.3	78-93-3	Methylethyl Ketone	29.5
108-10-1	Methyl Isobutyl Ketone	13.7	108-10-1	Methyl Isobutyl Ketone	10.25
110-43-0	Methyl N-Amyl Ketone	15.7	110-43-0	Methyl N-Amyl Ketone	11.75
108-88-3	Toluene	25	108-88-3	Toluene	18.75
25551-13-7	Trimethylbenzene	8.2	25551-13-7	Trimethylbenzene	6.15
71-36-3	N-Butyl Alcohol	10	71-36-3	N-Butyl Alcohol	7.5
1330-20-7	Xylene	29	1330-20-7	Xylene	21.75
108-83-8	Diisobutyl Ketone	9.67	108-83-8	Diisobutyl Ketone	7.25
91-20-3	Napthalene	3.33	91-20-3	Napthalene	2.5
14808-60-7	Silica, Crystalline	0.0067	14808-60-7	Silica, Crystalline	0.005
67-64-1	Dimethyl Ketone-Exempt Solvent	119	67-64-1	Dimethyl Ketone-Exempt Solvent	89
112-07-2	Ethylene Glycol Monobutyl ether	8.33	112-07-2	Ethylene Glycol Monobutyl ether Acetate	1.25
67-56-1	Methyl Alcohol	17.3	67-56-1	Methyl Alcohol	13
8052-41-3	Petroleum Distillates	35	8052-41-3	Petroleum Distillates	26.25
108-65-6	Propyleneglycol Monomethyl ether	25	108-65-6	Propyleneglycol Monomethyl ether Acetate	3.6
1333-86-4	Carbon Black	0.23	1333-86-4	Carbon Black	0.175
131-13-2	Zinc Oxide	0.333	131-13-2	Zinc Oxide	0.05
7429-90-5	Aluminum	0.667	7429-90-5	Aluminum	0.5
7439-96-5	Manganese Compounds	0.333	7439-96-5	Manganese Compounds	0.25
111-76-2	Ethylene Glycol Monobutyl Ether	8	111-76-2	Ethylene Glycol Monobutyl Ether	6

Prepared by:  
 KJ Environmental Mgt., Inc.  
 500 Moseley Road  
 Cross Roads, TX 76227  
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Circle J Trailers, Inc.  
HAP Emissions Summary  
Air Emissions Inventory

EPN	Cumene 98-82-8		Ethyl Benzene 100-41-4		Methyl Isobutyl Ketone 108-10-1		Toluene 108-88-3		Xylene 1330-20-7		Napthalene 91-20-3		Chromium Compounds		Manganese Compounds		Nickel Compounds		Phosphorus Compounds		Cobalt Compounds		Lead Compounds	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
PB1a	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
PB1b	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
PB2a	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
PB2b	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
PB3a	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
PB3b	0.051	0.062	0.025	0.030	0.096	0.118	0.188	0.230	0.172	0.211	0.159	0.195												
AMU1																								
WB1a																								
WB1b																								
WB2a																								
WB2b																								
CO1																								
CO2																								
PC1-9													0.004	0.004	0.008	0.008	0.000	0.000	0.004	0.004	0.002	0.002	0.000	0.000
GW1-16																								
WELD1-68													0.040	0.040	0.018	0.018	0.017	0.017			0.000	0.000	0.000	0.000
<b>INDIVIDUAL TOTALS</b>	<b>0.31</b>	<b>0.37</b>	<b>0.15</b>	<b>0.18</b>	<b>0.58</b>	<b>0.71</b>	<b>1.13</b>	<b>1.38</b>	<b>1.03</b>	<b>1.27</b>	<b>0.95</b>	<b>1.17</b>	<b>0.04</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>MAX HAPS (LB/HR)</b>	<b>4.24</b>																							
<b>MAX HAPS (TPY)</b>	<b>5.18</b>																							

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**Table 1a - Actual Speciated Coating Emissions**

Circle J Trailers  
HAPs, TAPs, and Other Constituents  
EU: PB1, PB2, PB3

Circle J Trailers, Inc. Paint TAP Emissions Calculations							TAPs												
VALSPAR Product #	Description	2015 Usage	50% Buffer	Density (lbs/gal)	VOC Content (lbs/gal)	Emitted lbs. of VOC	NDNE	67-641 Acetone	123-86-4 Benzl Acetate	98-82-8 Camphene	100-51-1 Ethylbenzene	142-82-5 Heptane	64-17-5 Ethanol	78-93-1 Isobutyl Alcohol	78-93-1 Methyl Ethyl Ketone	108-10-1 Methyl Isobutyl Ketone	110-42-0 Methyl N- Amyl Ketone	108-88-2 Toluene	
							Total Lbs.	Total Lbs.	Total Lbs.	Yes	Yes	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Yes	Total Lbs.
53-X145B	Component B Urethane Catalyst	2705	4057.5	8.84	2.52	10224.90	0.00	0.00	4903.20	39.46	28.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
354Y902S.2000	Low HAPS Cat Yellow Primer	55	82.5	10.29	4.42	364.65	0.00	0.00	145.93	1.61	0.42	0.00	0.00	1.19	0.00	0.00	0.00	0.00	0.00
400.0000865.076	Universal Blend 6UC	46.692	70.038	5.85	5.27	369.10	0.00	203.35	0.00	0.00	0.00	0.00	0.00	0.00	72.64	0.00	0.00	0.00	0.00
760B789S	Gloss Black Low HAPS Acrylic	575	862.5	8.34	4.06	3501.75	0.00	0.00	3073.68	2.16	2.88	0.00	0.00	1.44	0.00	0.00	0.00	0.00	0.00
71-X245A	Urethane Inhibitor	0	0	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71-X342A	Polyurethane Accelerator Solution	50	75	8.14	7.33	549.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AXA0848	Low HAPS AD Primer	280	420	11.21	3.40	1428.00	0.00	0.00	404.91	5.65	0.47	0.00	0.00	0.00	372.42	0.00	0.00	33.43	0.00
CEC0161	R-Cure 200 Epoxy Primer Curing Agent	1029	1543.5	8.14	5.80	8952.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEA0221	R-Cure 200 Primer AD/FD Black Epoxy	8090	12135	11.73	3.62	43928.70	0.00	0.00	20070.44	128.11	128.11	0.00	0.00	0.00	9693.60	498.20	0.00	0.00	14.23
KPA0997	Black Urethane R-Cure 800	6360	9540	8.46	3.31	31577.40	0.00	0.00	14422.59	16.14	96.85	56.50	0.00	0.00	1331.69	0.00	0.00	330.90	0.00
KPM0100	Silver Metallic R-Cure	48	72	8.45	3.45	248.40	0.00	0.00	71.30	0.85	0.30	0.43	1.22	0.06	20.87	0.00	0.00	2.56	0.00
KPM0108	Arizona Beige Pearl Metallic	60	90	8.46	3.47	312.30	0.00	0.00	86.04	1.07	0.00	0.53	0.91	0.08	31.37	0.00	0.00	3.20	0.00
KPM0201	Storm Grey Pearl Metallic R-Cure 800	76	114	8.45	3.36	383.04	0.00	0.00	123.59	1.16	0.39	0.67	2.02	0.10	48.74	0.00	0.00	4.05	0.00
KPM0259	Mocha Steel Metallic R-Cure 800	4	6	8.53	3.29	19.74	0.00	0.00	6.03	0.07	0.03	0.04	0.00	0.01	1.57	0.00	0.00	0.22	0.00
KPR0797	Flame Red R-Cure	32	48	8.80	3.11	149.28	0.00	0.00	80.21	0.04	0.08	0.25	0.89	0.00	8.36	0.00	0.00	1.39	0.00
KPR0810	Equipment Orange Acrylic	84	126	8.93	3.06	385.56	0.00	0.00	209.73	0.23	0.34	0.56	1.80	0.00	15.87	0.00	0.00	3.15	0.00
KPW0475	GM Fleet White R-Cure	26	39	11.06	3.13	122.07	0.00	0.00	40.89	0.04	0.09	0.22	0.86	0.00	0.00	0.00	0.00	1.34	0.00
KPW0747	GM Fleet White R-Cure	64	96	10.74	3.09	296.64	0.00	0.00	131.87	0.21	0.00	0.52	2.06	0.00	17.63	0.00	0.00	4.64	0.00
KPY0675	Safety Yellow Urethane R-Cure	31	46.5	9.29	3.15	146.48	0.00	0.00	67.99	0.09	0.09	0.22	1.04	0.00	16.46	0.00	0.00	1.21	0.00
KXC0124	Universal Blending Solvent	1	1.5	7.17	6.94	10.41	0.00	0.00	0.08	0.02	0.37	0.00	0.00	0.00	0.00	0.00	0.00	2.86	3.25
UER4575S	Fast Urethane/Epoxy Reducer	1071	1606.5	7.25	7.25	11647.13	0.00	0.00	3494.14	0.00	582.36	0.00	0.00	0.00	2329.43	0.00	0.00	2911.78	0.00
UER6590S	Medium Urethane/Epoxy Reducer	1760	2640	7.35	7.35	19404.00	0.00	0.00	4113.65	50.45	0.00	0.00	0.00	0.00	2999.86	0.00	0.00	1895.77	0.00
UER85100S	Slow Urethane / Epoxy	650	975	7.24	7.24	7059.00	0.00	0.00	1085.67	45.18	83.30	0.00	0.00	0.00	781.43	0.00	0.00	0.00	7.06
WR2030B	Waterborne Underbody	1272	1908	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UERX01S	Fast Exempt Reducer	1244	1866	6.59	0.00	0.00	0.00	12296.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Total (gal)</b>		25613.692	38420.538																
<b>Annual Total (lbs)</b>						141,080.59	0.00	12,500.29	52,531.95	292.52	924.76	59.93	10.80	2.87	17,741.93	498.20	388.94	4,832.10	
<b>Annual Total (tons)</b>						70.54	0.00	6.25	26.27	0.15	0.46	0.03	0.01	0.00	8.87	0.25	0.19	2.42	
<b>Combined TAPS (tons)</b>						49.03													
<b>Combined HAPS from Paint (tons)</b>						5.63													

**Table 1a - Actual Speciated Coating Emissions**

Circle J Trailers  
HAPs, TAPs, and Other Constituents  
EU: PB1, PB2, PB3

Circle J Trailers, Inc. Paint TAP Emissions Calculations							Non-Carcinogenic TAPs												
VALSPAR Product #	Description	2015 Usage	50% Buffer	Density (lbs/gal)	VOC Content (lbs/gal)	Emitted lbs. of VOC	71-262-N-Butyl Acetamide	1330-2027-N-Xylene	108-83-8-Dibutyl Ketone	91-202-Naphthalene	112-807-2-Ethylene Glycol Monobutyl ether Acetate	8012-312-4-Mineral Spirits	8952-41-3-Petroleum Distillates	108-865-8-Propylacetone	111-762-Ethylacetone Ethyl Monobutyl Ether	1314-112-2-Zinc Oxide	15056-58-8-Manganese Octoate	27253-32-3-Neodecanoic Acid-Manganese Salt	
							Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
							Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.	Total Lbs.
53-X145B	Component B Urethane Catalyst	2705	4057.5	8.84	2.52	10224.90	0.00	82.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
354Y902S.2000	Low HAPS Cat Yellow Primer	55	82.5	10.29	4.42	364.65	0.00	4.92	0.00	0.08	0.00	0.00	0.00	0.68	0.00	0.34	2.29	0.00	0.00
400.0000865.076	Universal Blend 6UC	46.692	70.038	5.85	5.27	369.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
760B789S	Gloss Black Low HAPS Acrylic	575	862.5	8.34	4.06	3501.75	14.39	23.02	0.00	0.00	135.95	0.00	2.88	0.00	10.07	0.00	0.00	0.00	0.00
71-X245A	Urethane Inhibitor	0	0	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71-X342A	Polyurethane Accelerator Solution	50	75	8.14	7.33	549.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AXA0848	Low HAPS AD Primer	280	420	11.21	3.40	1428.00	0.00	11.77	0.00	0.47	0.00	0.00	0.00	10.83	6.12	0.00	6.12	6.12	6.12
CEC0161	R-Cure 200 Epoxy Primer Curing Agent	1029	1543.5	8.14	5.80	8952.30	1314.20	0.00	0.00	467.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEA0221	R-Cure 200 Primer AD/FD Black Epoxy	8090	12135	11.73	3.62	43928.70	0.00	839.83	14.23	99.64	0.00	0.00	0.00	241.98	0.00	0.00	0.00	0.00	0.00
KPA0997	Black Urethane R-Cure 800	6360	9540	8.46	3.31	31577.40	0.00	403.54	0.00	395.47	0.00	0.00	56.50	976.57	104.92	0.00	0.00	0.00	0.00
KPM0100	Silver Metallic R-Cure	48	72	8.45	3.45	248.40	0.00	2.62	0.00	4.56	0.00	1.40	4.08	0.00	0.79	0.00	0.00	0.00	0.00
KPM0108	Arizona Beige Pearl Metallic	60	90	8.46	3.47	312.30	0.00	3.20	0.00	5.86	0.00	0.00	4.64	1.14	0.99	0.00	0.00	0.00	0.00
KPM0201	Storm Grey Pearl Metallic R-Cure 800	76	114	8.45	3.36	383.04	0.00	3.95	0.00	5.68	0.00	0.00	4.72	0.58	0.00	0.00	0.00	0.00	0.00
KPM0259	Mocha Steel Metallic R-Cure 800	4	6	8.53	3.29	19.74	0.00	0.23	0.00	0.33	0.00	0.00	0.32	0.08	0.07	0.00	0.00	0.00	0.00
KPR0797	Flame Red R-Cure	32	48	8.80	3.11	149.28	0.00	0.46	0.00	1.31	0.00	0.00	0.25	8.03	0.42	0.00	0.00	0.00	0.00
KPR0810	Equipment Orange Acrylic	84	126	8.93	3.06	385.56	0.00	1.69	0.00	4.73	0.00	0.00	0.23	7.20	1.01	0.00	0.00	0.00	0.00
KPW0475	GM Fleet White R-Cure	26	39	11.06	3.13	122.07	0.00	0.43	0.00	3.19	6.51	0.00	0.17	0.43	0.43	0.00	0.00	0.00	0.00
KPW0747	GM Fleet White R-Cure	64	96	10.74	3.09	296.64	0.00	0.41	0.00	3.71	0.00	0.00	0.10	1.75	0.00	0.00	0.00	0.00	0.00
KPY0675	Safety Yellow Urethane R-Cure	31	46.5	9.29	3.15	146.48	0.00	0.52	0.00	1.81	0.00	0.00	0.26	3.50	0.43	0.00	0.00	0.00	0.00
KXC0124	Universal Blending Solvent	1	1.5	7.17	6.94	10.41	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UER4575S	Fast Urethane/Epoxy Reducer	1071	1606.5	7.25	7.25	11647.13	0.00	1747.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UER6590S	Medium Urethane/Epoxy Reducer	1760	2640	7.35	7.35	19404.00	0.00	100.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UER85100S	Slow Urethane / Epoxy	650	975	7.24	7.24	7059.00	0.00	489.19	0.00	0.00	612.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WR2030B	Waterborne Underbody	1272	1908	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70	0.00	0.00	0.00	0.00
UERX01S	Fast Exempt Reducer	1244	1866	6.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Total (gal)</b>		25613.692	38420.538																
<b>Annual Total (lbs)</b>						141,080.59	1,328.59	3,718.06	14.23	994.25	754.48	1.40	74.83	1,252.10	129.30	2.29	6.12	6.12	6.12
<b>Annual Total (tons)</b>						70.54	0.66	1.86	0.01	0.50	0.38	0.00	0.04	0.63	0.06	0.00	0.00	0.00	0.00
<b>Combined TAPs (tons)</b>						49.03													
<b>Combined HAPS from Paint (tons)</b>						5.63													

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**Table 1b - Maximum Coating Emissions**  
 Circle J Trailers  
 Short-Term & Annual VOC, Exempt Solvent, & PM Emissions  
 Primer, Topcoat, & Thinner  
 EU: PB1, PB2, PB3

Parameters	Data	Units	Information Source
Maximum Application Rate	15.50	gal/hr	Circle J Trailers (All Liquid Coating Booths)
Annual Usage	37,954	gal/yr	Circle J Trailers (All Liquid Coating Booths)
Maximum Coating Density	11.00	lbs/gal	As-Applied Contents - See Topcoat and Primer Data
Maximum VOC Content (Short-Term)	5.18	lbs/gal	As-Applied Contents - See Topcoat and Primer Data
Maximum VOC Content (Annual)	5.18	lbs/gal	As-Applied Contents - See Topcoat and Primer Data
Minimum VOC Content	0.00	lbs/gal	As-Applied Contents - See Topcoat and Primer Data
Maximum Exempt Solvent Content (Short-Term)	1.00	lbs/gal	Applicant Request - Coating Flexibility
Maximum Exempt Solvent Content (Annual)	1.00	lbs/gal	Applicant Request - Coating Flexibility
VOC Control Efficiency	0.00%	-	No Additional Control
Percent Overspray	20.00%	-	Circle J Trailers
Transfer Efficiency (Electrostatic)	80.00%	-	Electrostatic Guns
VOC Flash-Off	100.00%	-	Conservative Estimate
Filter Efficiency- Booth	99.53%	-	Filtrair
PM Fallout	90.00%	-	Engineering Judgement
PM <sub>10</sub> Fallout	90.00%	-	Engineering Judgement
PM <sub>2.5</sub> Fallout	90.00%	-	Engineering Judgement

**Total Emissions -**

Short-Term									
VOC Emissions	Spray Rate (gal/hr)	Max VOC Content (lbs/gal)	VOC Flash-Off (%)	(1 - VOC Control Eff.) (%)	Total VOC Emissions (lbs/hr)				
	15.50	5.18	100.00%	100.00%	=	80.30			
Exempt Solvent	Spray Rate (gal/hr)	Max Ex Solvent Content (lbs/gal)	Exempt Solvent Flash-Off (%)	(1 - ES Control Eff.) (%)	Total Exempt Solvent Emissions (lbs/hr)				
	15.50	1.00	100.00%	100.00%	=	15.50			
PM Emissions <sup>1,2</sup>	Spray Rate (gal/hr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM Emissions (lbs/hr)			
	15.50	11.00	20.00%	0.47%	10.00%	0.02			
PM <sub>10</sub> Emissions <sup>1,2</sup>	Spray Rate (gal/hr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM <sub>10</sub> Emissions (lbs/hr)			
	15.50	11.00	20.00%	0.47%	10.00%	0.02			
PM <sub>2.5</sub> Emissions <sup>1,2</sup>	Spray Rate (gal/hr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM <sub>2.5</sub> Emissions (lbs/hr)			
	15.50	11.00	20.00%	0.47%	10.00%	0.02			
Annual									
VOC Emissions	Spray Rate (gal/yr)	Max VOC Content (lbs/gal)	VOC Flash-Off (%)	(1 - VOC Control Eff.) (%)	Total VOC Emissions (tons/yr)				
	37,954	5.18	100.00%	100.00%	=	98.31			
Exempt Solvent	Spray Rate (gal/yr)	Max Ex Solvent Content (lbs/gal)	Exempt Solvent Flash-Off (%)	(1 - ES Control Eff.) (%)	Total Exempt Solvent Emissions (tons/yr)				
	37,954	1.00	100.00%	100.00%	=	18.98			
PM Emissions <sup>1,2</sup>	Spray Rate (gal/yr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM Emissions (tons/yr)			
	37,954	11.00	20.00%	0.47%	10.00%	0.02			
PM <sub>10</sub> Emissions <sup>1,2</sup>	Spray Rate (gal/yr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM <sub>10</sub> Emissions (tons/yr)			
	37,954	11.00	20.00%	0.47%	10.00%	0.02			
PM <sub>2.5</sub> Emissions <sup>1,2</sup>	Spray Rate (gal/yr)	Max PM Content (lbs/gal)	(1 - Transfer Efficiency) (%)	(1 - Filter Efficiency) (%)	(1 - Fallout)	Total PM <sub>2.5</sub> Emissions (tons/yr)			
	37,954	11.00	20.00%	0.47%	10.00%	0.02			

**Notes:**

- Booths have 100 % capture efficiency and all PM emissions are exhausted through the booth stacks.
- Booth doors remain closed during all coating and solvent cleaning operations.

**Table 2 - Short-Term & Annual Clean-Up Emissions**

Circle J Trailers  
EU: PB1, PB2, PB3

Parameters	Data	Units	Information Source
Maximum Hourly Usage Rate	6.00	gal/hr	Circle J
Annual Usage	<b>466.50</b>	gal/yr	Circle J
Maximum Solvent Density	6.59	lbs/gal	Acetone
Maximum VOC Content (Short-Term)	0.00	lbs/gal	Acetone - Exempt Solvent
Maximum VOC Content (Annual)	0.00	lbs/gal	Acetone - Exempt Solvent
Maximum Exempt Solvent Content (Short-Term)	6.59	lbs/gal	Acetone - Exempt Solvent
Maximum Exempt Solvent Content (Annual)	6.59	lbs/gal	Acetone - Exempt Solvent
VOC Control Efficiency	0.00%	-	NO Additional Add on Control

**Note:**

**Total Emissions -**

<b>Short-Term</b>						
VOC Emissions	Usage Rate (gal/hr)	x	Max VOC Content (lbs/gal)	x	(1- VOC Control Eff.) (%)	Total VOC Emissions (lbs/hr)
	<b>6.00</b>		<b>0.00</b>		<b>100.00%</b>	<b>0.00</b>
Exempt Solvent	Usage Rate (gal/hr)	x	Max Ex Solvent Content (lbs/gal)	x	(1- VOC Control Eff.) (%)	Total Exempt Solvent Emissions (lbs/hr)
	<b>6.00</b>		<b>6.59</b>		<b>100.00%</b>	<b>39.54</b>
<b>Annual</b>						
VOC Emissions	Usage Rate (gal/yr)	x	Max VOC Content (lbs/gal)	x	(1- VOC Control Eff.) (%)	Total VOC Emissions (tons/yr)
	<b>467</b>		<b>0.00</b>		<b>100.00%</b>	<b>0.00</b>
Exempt Solvent	Usage Rate (gal/yr)	x	Max Ex Solvent Content (lbs/gal)	x	(1- VOC Control Eff.) (%)	Total Exempt Solvent Emissions (tons/yr)
	<b>164</b>		<b>6.59</b>		<b>100.00%</b>	<b>1.54</b>

**Notes:**

1. All clean-up is performed inside the coating booths.
2. Booth doors remain closed during spray gun equipment clean-up operations.
3. Because solvent recovered from clean-up operations is used in thinning in the undercoating application, the Maximum Hourly and Annual Usage Rates are based on 25% of total solvent used.

Prepared by:



**Table 3a - Primer Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>PRIMER #1</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>R-CURE 200 PRIMER AD/FD BLACK EPOXY</b>	<b>R-CURE 200 EPOXY PRIMER CURING AGENT</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	11.73	8.14	7.35
Coating VOC Content (lbs/gal)	3.62	5.8	7.35
Mixing Ratio	90.91%	9.1%	10.0%
<b>Coating Operation Characteristics</b>			
Hourly Usage (gal/hr)	15.50		
1 - VOC Control Efficiency %	100.00%		
VOC Flashoff %	100.00%		
Capture Efficiency	100.00%		
(1- Transfer Efficiency)	20.00%		
(1 - Filter Efficiency)	0.470000%		
(1 - Fallout Factor)	10.00%		

**Notes:**

**The Primer #1 mixing ratio reflects as-applied coatings without thinner.**

**1) Calculations As-Applied Primer #1**

PRIMER: (10 Parts Part A) + (1 Part Part B) = 11 Parts Total Coating

PRIMER Part A: (10 Parts Part A) / (11 Parts Total Coating) x 100 = 90.91%

PRIMER Part B: (1 Part Part A) / (11 Parts Total Coating) x 100% = 9.09%

**2) Primer #1 Thinner = 10% Recommended Reduction**

As-applied VOC Content
4.45

As-applied Density
11.00

Prepared by:



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**Table 3a - Primer Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b><u>PRIMER #2</u></b>			
<b><u>Chemical Characteristics - Individual Components via Coating EDSs</u></b>			
Characteristics	Low HAPs AD Primer	R-CURE 200 EPOXY PRIMER CURING AGENT	MEDIUM URETHANE/EPOXY REDUCER
Coating Density (lbs/gal)	11.21	8.14	7.35
Coating VOC Content (lbs/gal)	3.4	5.8	7.35
Mixing Ratio	90.91%	9.1%	10.0%
<b><u>Coating Operation Characteristics</u></b>			
Hourly Usage (gal/hr)	15.50		
1 - VOC Control Efficiency %	100.00%		
VOC Flashoff %	100.00%		
Capture Efficiency	100.00%		
(1- Transfer Efficiency)	20.00%		
(1 - Filter Efficiency)	0.470000%		
(1 - Fallout Factor)	10.00%		

**Notes:**

**The Primer #1 mixing ratio reflects as-applied coatings without thinner.**

**1) Calculations As-Applied Primer #1**

PRIMER: (10 Parts Part A) + (1 Part Part B) = 11 Parts Total Coating

PRIMER Part A: (10 Parts Part A) / (11 Parts Total Coating) x 100 = 90.91%

PRIMER Part B: (1 Part Part A) / (11 Parts Total Coating) x 100% = 9.09%

**2) Primer #1 Thinner = 10% Recommended Reduction**

As-applied VOC Content
4.25

As-applied Density
10.57

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**Table 3a - Primer Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>PRIMER #3</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
Characteristics	Low HAPs Cat Yellow Primer	R-CURE 200 EPOXY PRIMER CURING AGENT	MEDIUM URETHANE/EPOXY REDUCER
Coating Density (lbs/gal)	10.29	8.14	7.35
Coating VOC Content (lbs/gal)	4.42	5.8	7.35
Mixing Ratio	90.91%	9.1%	10.0%
<b>Coating Operation Characteristics</b>			
Hourly Usage (gal/hr)	15.50		
1 - VOC Control Efficiency %	100.00%		
VOC Flashoff %	100.00%		
Capture Efficiency	100.00%		
(1- Transfer Efficiency)	20.00%		
(1 - Filter Efficiency)	0.470000%		
(1 - Fallout Factor)	10.00%		

**Notes:**

**The Primer #1 mixing ratio reflects as-applied coatings without thinner.**

**1) Calculations As-Applied Primer #1**

PRIMER: (10 Parts Part A) + (1 Part Part B) = 11 Parts Total Coating

PRIMER Part A: (10 Parts Part A) / (11 Parts Total Coating) x 100 = 90.91%

PRIMER Part B: (1 Part Part A) / (11 Parts Total Coating) x 100% = 9.09%

**2) Primer #1 Thinner = 10% Recommended Reduction**

As-applied VOC Content
5.18

As-applied Density
9.82

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**Table 3c - Primer Full-Speciation - Maximum Short-Term Emissions**

Circle J Trailers  
EU: PB1, PB2, PB3

"Maximum As-Applied Weight" is the maximum summation of all common constituents between Part A & Part B

PRIMER - MAXIMUM SPECIES HOURLY EMISSIONS RATE				
CAS Number	SPECIATION / INGREDIENT NAME	INGREDIENT TYPE	MAXIMUM AS-APPLIED WEIGHT (lbs/gal)	TOTAL EMISSION RATE
100-41-4	ETHYLBENZENE	V	0.010	0.149
108-10-1	METHYL ISOBUTYL KETONE	V	0.037	0.579
108-65-6	PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE	V	0.024	0.379
108-83-8	DIISOBUTYL KETONE	V	0.001	0.017
108-88-3	TOLUENE	V	0.001	0.017
110-43-0	METHYL N-AMYL KETONE	V	0.072	1.122
111-76-2	Ethylene Glycol Monobutyl Ether	V	0.013	0.205
111-77-3	DIETHYLENE GLYCOL MONOMETHYL ETHER	V	0.003	0.047
123-86-4	BUTYL ACETATE	V	1.608	24.925
1314-13-2	ZINC OXIDE*	P	0.025	0.000
1317-65-3	LIMESTONE	P	2.640	0.004
1330-20-7	XYLENE	V	0.063	0.975
1333-86-4	C.I. PIGMENT BLACK 7	P	0.146	0.000
8052-41-3	Stoddard Solvent	V	0.007	0.116
13983-17-0	WOLLASTONITE*	P	0.445	0.001
14808-60-7	SILICA*	P	0.002	0.000
19549-80-5	4,6-DIMETHYLHEPTAN-2-ONE	V	0.001	0.017
25036-25-3	EPOXY RESIN (MOL WT>1100)	P	1.304	0.002
37244-96-5	NEPHELINE SYENITE	P	1.469	0.002
64742-47-8	MINRAL SPIRITS	V	0.014	0.221
64742-48-9	NAPHTHA	V	0.006	0.095
64742-89-8	NAPHTHA	V	0.747	11.585
64742-94-5	AROMATIC NAPHTHA, HEAVY	V	0.193	2.993
64742-95-6	AROMATIC NAPHTHA, LIGHT	V	1.030	15.964
67989-52-0	EPOXY ESTER	P	0.677	0.001
7779-90-0	ZINC PHOSPHATE*	P	0.455	0.001
78-83-1	ISOBUTYL ALCOHOL	V	0.013	0.203
78-93-3	METHYL ETHYL KETONE	V	0.806	12.495
91-20-3	NAPHTHALENE	V	0.035	0.542
95-63-6	1,2,4-TRIMETHYLBENZENE	V	0.515	7.987
96-29-7	2-BUTANONE OXIME	V	0.022	0.348
98-82-8	CUMENE	V	0.018	0.275
136-52-7	Cobalt Octoate	P	0.014	0.000
27253-32-3	NOEDECANOIC ACID, MANGANESE SALT	P	0.013	0.000
15956-58-8	Manganese Octoate	P	0.013	0.000
UNKNOWN	ALUMINIUM ORTHOPHOSPHATE HYDRATE	P	0.125	0.000
UNKNOWN	UNKNOWN COPOLYMER	P	0.048	0.000
UNKNOWN	ADDITIVE, VISCOSITY CONTROL	P	0.026	0.000
UNKNOWN	UNSATURATED POLYCARBOXYLIC ACID	P	0.018	0.000
UNKNOWN	UNKNOWN NON-HAZARDOUS MATERIAL	P	0.002	0.000
100-51-6	BENZYL ALCOHOL	V	0.174	2.700
1477-55-0	M-XYLENEDIAMINE	P	0.077	0.000
57214-10-5	FORMALDEHYDE POL. WITH 1,3-BENZENEDIMETHANAMINE AND PHENOL	P	0.135	0.000
71-36-3	N-BUTYL ALCOHOL	V	0.077	1.200

**Example Volatile Ingredient Species Emission Rate: Ethylbenzene**  
(Max. As-Applied Wt. 0.00958 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (VOC Flashoff 100%) = 0.539 lbs Ethylbenzene/hr

**Example Particulate Ingredient Species Emission Rate: Zinc Oxide**  
(Max. As-Applied Wt. 0.01171 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (1 - Transfer Efficiency 80%) x (1 - Filter Efficiency 99%) x (1 - PM Fallout 10%) = 0.0002 lbs Zinc Oxide/hr

THINNER				
108-88-3	TOLUENE	V	0.072	1.113
123-86-4	BUTYL ACETATE	V	0.156	2.415
1330-20-7	XYLENE	V	0.004	0.059
64742-95-6	AROMATIC NAPHTHA, LIGHT	V	0.112	1.742
763-69-9	ETHYL 3-ETHOXYPROPIONATE	V	0.220	3.411
78-93-3	METHYL ETHYL KETONE	V	0.114	1.761
95-63-6	1,2,4-TRIMETHYLBENZENE	V	0.056	0.861
98-82-8	CUMENE	V	0.002	0.030

**Example Volatile Ingredient Species Emission Rate: Toluene**  
(Max. As-Applied Wt. 0.072 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (VOC Flashoff 100%) = 4.041 lbs Toluene/hr

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #1</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>R-CURE 800 URETHANE BLACK</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.42</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.31	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #1**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #1 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.78

As-applied Density
8.41

Prepared by:



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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #2</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>R-CURE 800 Storm Grey Pearl Metallic</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.45</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.36	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #2 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #2**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #2 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.82

As-applied Density
8.43

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #3</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>R-CURE 800 Arizona Beige Pearl Metallic</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.46</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.47	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #3 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #3**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #3 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.90

As-applied Density
8.43

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #4</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Gloss Black Low HAPS</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.34</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	4.06	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #4**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #4 Thinner = 10% Recommended Reduction**

As-applied VOC Content
4.34

As-applied Density
8.35

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #5</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Silver Metallic R-Cure</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.43</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.45	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #5**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #5 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.88

As-applied Density
8.41

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #6</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Mocha Steel Metallic R-Cure</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.53</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.29	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #6**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #6 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.76

As-applied Density
8.48

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #7</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Flame Red R-Cure</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.8</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.11	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #7**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #7 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.63

As-applied Density
8.66

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #8</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>R-Cure 800 Equipment Orange</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>8.93</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.06	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #8**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #8 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.59

As-applied Density
8.75

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #9</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>GM Fleet White R-Cure 1</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>11.06</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.13	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #9**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #9 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.64

As-applied Density
10.19

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #10</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>GM Fleet White R-Cure 2</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>10.74</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.09	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #10**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #10 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.61

As-applied Density
9.97

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #11</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Safety Yellow Urethane R-Cure</b>	<b>COMPONENT B URETHANE CATALYST (PAIL)</b>	<b>MEDIUM URETHANE/EPOXY REDUCER</b>
Coating Density (lbs/gal)	<b>9.29</b>	<b>8.84</b>	<b>7.35</b>
Coating VOC Content (lbs/gal)	3.15	<b>2.52</b>	<b>7.65</b>
Mixing Ratio	<b>75.0%</b>	<b>25.0%</b>	<b>10.0%</b>
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #11**

TOPCOAT: (3 Parts Part A) + (1 Part Part B) = 4 Parts Total Coating  
 TOPCOAT Part A: (3 parts Part A) / (4 Parts Total Coating) x 100 = 75%  
 TOPCOAT Part : (1 parts Part A) / (4 Parts Total Coating) x 100 = 25%

**2) Topcoat #11 Thinner = 10% Recommended Reduction**

As-applied VOC Content
3.66

As-applied Density
8.99

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**Table 4a - Topcoat Data - Short-Term Speciation**

Circle J Trailers  
EU: PB1, PB2, PB3

<b>TOPCOAT #12</b>			
<b>Chemical Characteristics - Individual Components via Coating EDSs</b>			
<b>Characteristics</b>	<b>Waterborne Underbody Coating</b>		
Coating Density (lbs/gal)	<b>9.7</b>		
Coating VOC Content (lbs/gal)	<b>0</b>		
Mixing Ratio	<b>100.0%</b>		
<b>Coating Operation Characteristics -</b>			
Hourly Usage (gal/hr)	<b>15.50</b>		
1 - VOC Control Efficiency %	<b>100.00%</b>		
VOC Flashoff %	<b>100.00%</b>		
Capture Efficiency	<b>100.00%</b>		
(1 - Transfer Efficiency)	<b>20.00%</b>		
(1 - Filter Efficiency)	<b>0.47%</b>		
(1 - Fallout Factor)	<b>10.00%</b>		

**Notes:**

The Topcoat #1 mixing ratio reflects as-applied coatings without thinner.

**1) Calculations As-Applied Topcoat #12**

No additional products are recommended for the application of this product.

As-applied VOC Content
0.00

As-applied Density
9.70

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**Table 4c - Topcoat Full-Speciation - Maximum Short-Term Emissions**

Circle J Trailers  
EUs: PB1, PB2, PB3

"Maximum As-Applied Weight" is the maximum summation of all common constituents between Part A & Part B. Orange Highlighted cells indicate species that were common among part As and part Bs.

TOPCOATS				
CAS #	INGREDIENT NAME	INGREDIENT TYPE	MAXIMUM AS-APPLIED WEIGHT (lbs/gal)	TOTAL EMISSION RATE PER LIQUID COATING BOOTH (lbs/hr)
100-41-4	ETHYLBENZENE	V	0.01	0.145
108-65-6	Propylene Glycol Monomethyl Ether Acetate	V	0.13	1.944
108-88-3	TOLUENE	V	0.00	0.000
110-43-0	METHYL N-AMYL KETONE	V	0.04	0.562
111-66-0	OCT-1-ENE	V	0.00	0.013
111-76-2	ETHYLENE GLYCOL MONOBUTYL ETHER	V	0.01	0.129
112-07-2	Ethylene Glycol Monobutyl Ether Acetate	V	0.32	4.894
123-54-6	ACETYLACETONE	V	0.29	4.461
123-86-4	N-BUTYL ACETATE	V	2.83	43.836
1330-20-7	XYLENE	V	0.04	0.578
1333-86-4	C.I. PIGMENT BLACK 7	P	0.00	0.000
142-82-5	HEPTANE	V	0.00	0.069
25068-38-6	EPOXY RESIN	P	0.00	0.000
7429-90-5	Aluminum	P	0.20	0.000
52829-07-9	HINDERED AMINE LIGHT STABILIZER	P	0.00	0.000
557-09-5	ZINC OCTOATE	P	0.00	0.000
590-01-2	N-BUTYL PROPIONATE	V	0.26	3.970
64-17-5	ETHANOL	V	0.02	0.323
27252-87-5	Polyethylene Glycol Monoallyl Ether Acetate	V	0.00	0.012
64742-49-0	LOW BOILING NAPHTHA 100/140	V	0.01	0.208
64742-94-5	AROMATIC NAPHTHA, HEAVY	V	0.54	8.421
64742-95-6	AROMATIC NAPHTHA, LIGHT	V	0.69	10.635
67-56-1	METHYL ALCOHOL	V	0.00	0.000
70657-70-4	2-Methoxy-1-Acetoxy Propane	V	0.00	0.010
68611-44-9	DICHLORODIMETHYLSILANE TREATED SILICA	P	0.00	0.000
590-01-2	N-Butyl Propionate	V	0.11	1.719
763-69-9	ETHYL 3-ETHOXYPROPIONATE	V	0.15	2.271
77-58-7	DIBUTYL TIN DILAURATE	P	0.00	0.000
78-93-3	METHYL ETHYL KETONE	V	0.27	4.234
57-55-6	Propylene Glycol	V	0.00	0.010
78-83-1	Isobutyl Alcohol	V	0.00	0.010
8032-32-4	Mineral Spirits	V	0.01	0.225
8052-41-3	STODDARD SOLVENT	V	0.05	0.735
9038-95-3	OLYETHER MODIFIED POLYDIMETHYLSILOXANE	P	0.00	0.000
91-20-3	NAPHTHALENE	V	0.06	0.955
95-63-6	1,2,4-TRIMETHYLBENZENE	V	0.32	4.894
97-85-8	ISOBUTYL ISOBUTYRATE	V	0.04	0.551
98-82-8	CUMENE	V	0.01	0.185
UNKNOWN	Mixed Esters	V	0.02	0.360
UNKNOWN	UNKNOWN ACRYLIC POLYOL	P	2.02	0.000
UNKNOWN	POLYESTER RESIN	P	0.69	0.000
UNKNOWN	POLYMERIC DISPERSANT	P	0.14	0.000
UNKNOWN	POLYURETHANE RESIN	P	0.07	0.000
UNKNOWN	ALDEHYDE RESIN	P	0.07	0.000
UNKNOWN	ACRYLIC COPOLYMER	P	0.04	0.000
UNKNOWN	5-HEXANEDIYLBIS (12-HYDROXY-OCTADECAN	P	0.02	0.000
UNKNOWN	METHYLALKYLPOLYSILOXANE	P	0.01	0.000
UNKNOWN	MODIFIED RESIN	P	0.01	0.000
28182-81-2	HEXANE, 1,6-DIISOCYANATO-, HOMOPOLYMER	NE	1.58	0.000
822-06-0	HEXAMETHYLENE DIISOCYANATE	NE	0.00	0.000

**Example Volatile Ingredient Species Emission Rate: Ethylbenzene**  
(Max. As-Applied Wt. 0.00935 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (VOC Flashoff 100%) = 0.526 lbs Ethylbenzene/hr

**Example Particulate Ingredient Species Emission Rate: C.I. Pigment Black 7**  
(Max. As-Applied Wt. 0.00000 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (1 - Transfer Efficiency 80%) x (1 - Filter Efficiency 99%) x (1-PM Fallout 10%) = 0.000 lbs C.I. Pigment Black 7/hr

**Example Volatile Ingredient Species Emission Rate: Toluene**  
(Max. As-Applied Wt. 0.072 lbs/gal) x (Max. Spray Rate 56.28 gal/hr) x (VOC Flashoff 100%) = 4.04 lbs Ethylbenzene/hr

THINNER				
CAS #	INGREDIENT NAME	INGREDIENT TYPE	MAXIMUM AS-APPLIED WEIGHT (lbs/gal)	TOTAL EMISSION RATE PER LIQUID COATING BOOTH (lbs/hr)
108-88-3	TOLUENE	V	0.072	1.11
123-86-4	BUTYL ACETATE	V	0.156	2.42
1330-20-7	XYLENE	V	0.004	0.06
64742-95-6	AROMATIC NAPHTHA, LIGHT	V	0.112	1.74
763-69-9	ETHYL 3-ETHOXYPROPIONATE	V	0.220	3.41
78-93-3	METHYL ETHYL KETONE	V	0.114	1.76
95-63-6	1,2,4-TRIMETHYLBENZENE	V	0.056	0.86
98-82-8	CUMENE	V	0.002	0.03



**Table 5a**  
 Circle J Trailers  
 Table Plasma Cutting Emissions Calculations  
 EU: PC1

Plasma Arc Cutting EU: PC1		
Type of cutting	Plasma (PAC)	
Number of Cutters On-Site	1	
Cutting technique	Dry cutting	
Metal being cut	Mild Steel	
Maximum operating hours per year	1500	hours
Emission factor for Plasma Arc Cutting	26.0	g fumes/min
Emission factor for Plasma Arc Cutting	0.057320	lb fumes/min
Emission factor for Plasma Arc Cutting	3.439229	lb fumes/hr
NOx Emission factor for Plasma Arc Cutting Mild Steel	5.50	l/min
Filter efficiency	90.00%	
Table capture efficiency	95.00%	
Maximum Cutters Being Used at Once	1	cutters
Cut Rate in AP-42 Referenced Document	106	inches/min
Maximum cutting time per hour, each	32	minutes
Maximum feet of material cut per hour, total	283.47	feet
Resulting fume generation, uncontrolled	1.834	lb/hr
Resulting fume generation, uncontrolled	1.376	tpy
Resulting fume generation, controlled	0.266	lb/hr
Resulting fume generation, controlled	0.199	tpy

NOTE - emission rate represents emissions for the limited operating time of the unit with hourly based on 45 min/hr and tons per year calculated as the lb/hr factor multiplied by the total annual hours of operation.

NOTE - Ambient air filtration systems will be installed in the facility. The manufacturer of these filtrations systems estimates 75-85% PM reductions.

Mild Steel Analysis		Emissions	
Element	Constituent (wt%)	lb/hr	tpy
AL - Aluminum	0.010%	0.00003	0.00002
Sb - Antimony	0.090%	0.00024	0.00018
Be - Beryllium	0.090%	0.00024	0.00018
B - Boron	0.900%	0.00239	0.00180
Cd - Cadmium	0.090%	0.00024	0.00018
Ca - Calcium	0.900%	0.00239	0.00180
C - Carbon	0.950%	0.00253	0.00190
Cr - Chromium	1.000%	0.00266	0.00199
Co - Cobalt	0.090%	0.00024	0.00018
Cu - Copper	0.900%	0.00239	0.00180
Pb - Lead	0.090%	0.00024	0.00018
Mn - Manganese	2.000%	0.00532	0.00399
Mo - Molybdenum	0.900%	0.00239	0.00180
Nb - Niobium	0.900%	0.00239	0.00180
Ni - Nickel	0.100%	0.00027	0.00020
N - Nitrogen	0.900%	0.00239	0.00180
P - Phosphorus	0.900%	0.00239	0.00180
Se - Selenium	0.900%	0.00239	0.00180
S - Sulfur	0.900%	0.00239	0.00180
Si - Silicon	0.900%	0.00239	0.00180
Sn - Tin	0.900%	0.00239	0.00180
Ti - Titanium	0.900%	0.00239	0.00180
W - Tungsten	0.900%	0.00239	0.00180
V - Vanadium	0.900%	0.00239	0.00180
Zn - Zinc	0.010%	0.00003	0.00002

NOx Emissions	
lb/hr	tpy
0.792	0.594

NO2 Emissions	
lb/hr	tpy
0.06336	0.04752

NOTES:

1. Plasma Arc Cutting emissions factors from Swedish study, AP-42 reference document, mild steel factor ranges from 20 to 26 grams/minute
2. Plasma Arc Cutting emissions were based on cutting Mild Steel
3. Elements highlighted in blue are categorized as Hazardous Air Pollutants (HAPs)
4. Plasma Arc Cutting NOx emissions factor from Swedish study, AP-42 reference document, dry cutting of mild steel ranges from 4.4 to 5.5 liters/minute

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**Table 5b**  
 Circle J Trailers  
 Handheld Plasma Cutting Emissions Calculations  
 EUs: PC2-9

Handheld Plasma Arc Cutting			
EUs: PC2-9			
Type of cutting	Plasma (PAC)		
Cutting technique	Dry cutting		
Metal being cut	Carbon Steel		
Maximum Number of Plasma Cutters Used at Once	4		
Maximum operating hours per cutter per year	3000	hours	
Average Metal Thickness	0.200	inches	
Average Cut Width	0.125	inches	
Maximum Cut Speed (Manual - Full Cut)	12.0	inches/min	
Density of Mild Steel	0.282874	lb/in <sup>3</sup>	
NOx Emission factor for Plasma Arc Cutting Mild Steel	7.80	l/min	NOTE: Because the emission factor was based on minimum cut speed of 106.3 inches/minute of a robotic cutter, the NOx emission rate was scaled to the ratio of the maximum cutting speed of a manually operated plasma cutter.
Scaled NOx Emission factor for Plasma Arc Cutting Mild Steel	0.88	l/min	
Fume Generation	5.00%		NOTE: The AP-42 Reference Document indicates that, in a dry environment, only 5% of the total material removed when cutting mild steel is emitted as fumes. This has been determined to be representative of the emissions from the facility.
Indoor Emissions Fallout Factor	75.00%		
Maximum feet of material cut per hour, each	32.00	feet	
Maximum cutting time per hour, each	32.00	minutes	
Maximum feet of material cut per hour, total	128.00	feet	
Maximum cutting time per hour, total	128.00	minutes	
Resulting fume generation, uncontrolled	0.543	lb/hr	
Resulting fume generation, uncontrolled	0.815	tpy	
Resulting fume generation, controlled	0.136	lb/hr	NOTE: For PTE, emissions from the Hand Held Plasma Cutter emissions are controlled by a fabric filter prior to discharge from the building.
Resulting fume generation, controlled	0.204	tpy	

Mild Steel Analysis		Emissions	
Element	Constituent (wt%)	lb/hr	tpy
AL - Aluminum	0.010%	0.00001	0.00002
Sb - Antimony	0.090%	0.00012	0.00018
Be - Beryllium	0.090%	0.00012	0.00018
B - Boron	0.900%	0.00122	0.00183
Cd - Cadmium	0.090%	0.00012	0.00018
Ca - Calcium	0.900%	0.00122	0.00183
C - Carbon	0.950%	0.00129	0.00193
Cr - Chromium	1.000%	0.00136	0.00204
Co - Cobalt	0.090%	0.00012	0.00018
Cu - Copper	0.900%	0.00122	0.00183
Pb - Lead	0.090%	0.00012	0.00018
Mn - Manganese	2.000%	0.00272	0.00407
Mo - Molybdenum	0.900%	0.00122	0.00183
Nb - Niobium	0.900%	0.00122	0.00183
Ni - Nickel	0.100%	0.00014	0.00020
N - Nitrogen	0.900%	0.00122	0.00183
P - Phosphorus	0.900%	0.00122	0.00183
Se - Selenium	0.900%	0.00122	0.00183
S - Sulfur	0.900%	0.00122	0.00183
Si - Silicon	0.900%	0.00122	0.00183
Sn - Tin	0.900%	0.00122	0.00183
Ti - Titanium	0.900%	0.00122	0.00183
W - Tungsten	0.900%	0.00122	0.00183
V - Vanadium	0.900%	0.00122	0.00183
Zn - Zinc	0.010%	0.00001	0.00002

NO <sub>x</sub> Emissions	
lb/hr	tpy
0.507183443	0.7607752

NO <sub>2</sub> Emissions	
lb/hr	tpy
0.040574675	0.060862

**NOTES:**

1. Plasma Arc Cutting emissions factors were calculated based on the information presented in the Swedish study "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel," AP-42 reference document.
2. Plasma Arc Cutting emissions were based on cutting conditions which generate the maximum fumes for cutting Stainless Steel
3. Elements highlighted in blue are categorized as Hazardous Air Pollutants (HAPs)
4. Plasma Arc Cutting NOx emissions factor from Swedish study, AP-42 reference document, dry cutting of stainless steel maximum value of 7.8 liters/minute
6. Stainless Steel Analysis Based on the ASM values for Type 316 Steel, a commonly used stainless steel.
7. Indoor Emissions PM fallout factor is based on Engineer's estimate of fallout based on fume size and ratio of building area open to air to completely enclosed emissions. The maximum ratio of openings in the building will be 25%. This is due to bay doors and egress doors being open during operation.

**Table 6**  
 Circle J Trailers  
 Products of Combustion Emissions Calculations  
 EUs: AMU1, WB1a, WB1b, WB2a, WB2b, CO1, CO2

Reference for Emission Factors	Fuel	Units	CO	NO <sub>x</sub>	PM <sub>10</sub> <sup>A</sup>	SO <sub>2</sub>	VOC
AP-42, Sec. 1.4, Table 1.4-1	Natural Gas	lb/MMBtu <sup>B</sup>	8.24E-02	9.80E-02	7.45E-03	5.88E-04	5.39E-03
(7/98), Table 1.4-2(7/98)	Natural Gas	lb/MMscf	84	100	7.6	0.6	5.5

<sup>A</sup> All particulate matter is assumed to be less than 1mm, therefore the emission factor and the calculated emissions are the same for PM and PM<sub>30</sub>.

<sup>B</sup> The heating value of natural gas is 1,020 Btu/scf.

EU	EMISSION UNITS	FUEL	FIRING RATE	OPERATING HOURS	CO		NO <sub>x</sub>		PM/PM <sub>10/2.5</sub>		SO <sub>2</sub>		VOC		NO <sub>2</sub>	
			(MMBtu/hr)	(hrs/yr)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
AMU-1	Air Makeup Unit 1	Natural Gas	4.00	5,000	0.33	0.82	0.39	0.98	0.03	0.07	0.00	0.01	0.02	0.05	0.02	0.74
WB-1a	Wash Bay 1a	Natural Gas	0.18	5,000	0.01	0.04	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
WB-1b	Wash Bay 1a	Natural Gas	0.18	5,000	0.01	0.04	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
WB-2a	Wash Bay 2a	Natural Gas	0.18	5,000	0.01	0.04	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
WB-2b	Wash Bay 2b	Natural Gas	0.18	5,000	0.01	0.04	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
CO-1	Curing Oven 1	Natural Gas	3.00	5,000	0.25	0.62	0.29	0.74	0.02	0.06	0.00	0.00	0.02	0.04	0.02	0.55
CO-2	Curing Oven 2	Natural Gas	3.00	5,000	0.25	0.62	0.29	0.74	0.02	0.06	0.00	0.00	0.02	0.04	0.02	0.55
<b>TOTAL EMISSIONS</b>					<b>0.88</b>	<b>2.20</b>	<b>1.05</b>	<b>2.62</b>	<b>0.08</b>	<b>0.20</b>	<b>0.01</b>	<b>0.02</b>	<b>0.06</b>	<b>0.14</b>	<b>0.06</b>	<b>1.97</b>

Prepared by:



500 Moseley Road  
 Cross Roads, TX 76227  
 Phone: (940) 387-0805

**Table 7**  
**Circle J Trailers**  
**Grinding Wheel Emissions Calculations**  
**EUs: MG1 - MG16**

	<u>Total Fume Emission Factor [lb/1000lb] of Total Electrode Consumed<sup>2</sup></u>	<u>HAP Emission Factor [lb/1000lb] of Total Electrode Consumed<sup>3</sup></u>	<u>Max Hourly Emissions</u>	<u>Annual Emissions TPY</u>
<b>Abrasive Grinding Wheel Usage<sup>6</sup></b>	-	-	250	300,000
<i>Total PM-10 Grinding Emissions (tpy)</i>	0.02	-	0.00125	0.00075
<i>Aluminium 97-99% (tpy)</i>	0.01	-	0.000625	0.00038
<i>Titanium Dioxide (tpy)</i>	0.01	-	0.000625	0.00038

<b>Indoor Emissions Fallout Factor</b>
75%

**Notes:**

- Emission Factors For Shielded Metal Arc Welding (SMAW) Welding Operations using E6011 Electrodes. ( E6011 rods are the predominate welding rods used in the welding shop).
- AP-42, Table 12.19-1 "PM-10 Emission Factors for Welding Operations".
- AP-42, Table 12.19-2 "Hazardous Air Pollutant (HAP) Emission Factors for Welding Operations".
- Total Fume Emissions include other non-hazardous components including, Rosin Smoke, Fe, Cu, Al, etc.
- Typical Emissions Calculations: tpy = (Emission Factor, lbs/1000 lbs) \* (Total Usage lbs/yr) / (1000) / (2000 lb/ton)
- Emission Factor of Abrasive Grinding Wheel based on Engineer's Estimate of PM-10 liberated.
- Indoor Emissions PM fallout factor is based on Engineer's estimate of fallout based on fume size and ratio of building area open to air to completely enclosed emissions. The maximum ratio of openings in the building will be 25%. This is due to bay doors and egress doors being open during operation.

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**Table 8**  
 Circle J Trailers  
 Welding Wire Emissions Calculations  
 EUs: WELD1 - WELD62

	Total Fume Emission Factor [lb/1000lb] of Total Electrode Consumed <sup>2</sup>	HAP Emission Factor [lb/1000lb] of Total Electrode Consumed <sup>3</sup>	Max Hourly Emissions	Annual Emissions TPY
<b>Steel Welding Wire Usage (lbs.)</b>	-	-	300	600,000
<b>Total PM-10 Fume Emissions (tpy)<sup>4</sup></b>	3.2	-	0.2	0.2400
<i>Chromium (tpy)</i>	-	0.53	0.04	0.0396
<i>Chromium VI (tpy)</i>	-	0.01	0.00	0.0008
<i>Cobalt (tpy)</i>	-	ND	0.000	0.0000
<i>Manganese (tpy)</i>	-	0.25	0.018	0.0184
<i>Nickel (tpy)</i>	-	0.226	0.017	0.0170
<i>Lead</i>	-	ND	0.00	0.0000

<b>Indoor Emissions Fallout Factor</b>
75%

Notes:

- Emission Factors For Gas Metal Arc Welding (GMAW) Welding Operations using E316 Electrodes. ( E316 wires are the predominate welding wires used in the welding shop).
- AP-42, Table 12.19-1 "PM-10 Emission Factors for Welding Operations".
- AP-42, Table 12.19-2 "Hazardous Air Pollutant (HAP) Emission Factors for Welding Operations".
- Total Fume Emissions include other non-hazardous components including, Rosin Smoke, Fe, Cu, Al, etc.
- Typical Emissions Calculations: tpy = (Emission Factor, lbs/1000 lbs) \* (Total Usage lbs/yr) / (1000) / (2000 lb/ton)
- Indoor Emissions PM fallout factor is based on Engineer's estimate of fallout based on fume size and ratio of building area open to air to completely enclosed emissions. The maximum ratio of openings in the building will be 25%. This is due to bay doors and egress doors being open during operation.

Prepared by:



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**SPECIFICATION SHEETS**



DN-14-10-13-0823

October 13, 2014

One (1) Col-Met EH-3540K-V vertical, outdoor, floor mounted air makeup unit will provide 35,000-40,000 SCFM of heated replacement air to the booth. The AMU is capable of providing a 100° F temperature rise from its 4,000,000 BTU burner. A variable frequency drive is provided for the exhaust fan(s) (10HP max) and light switches for the booth lighting will be included with the controls for the AMU. (1) Remote control panel included.

Qty.	Description:	extension @ dealer net
1	Col-Met EH-3540K-V Vertical, Outdoor AMU, Natural Gas (Heat Only)	\$40,000.00
1	AMU Discharge Plenum 3-Way	\$980.00
<b>Total</b>		<b>\$40,980.00</b>

**Air Replacement Unit:**

- Direct fired, natural gas, Horizontal, outdoor, heater designed, assembled, wired and factory tested, providing 35,000-40,000 SCFM of clean tempered air @ ½” ESP, having the ability of providing a minimum 100 degree temperature rise from its 4.0 million BTU burner.
- Controls and gas trains are to be FM designed.
- The AMU’s control panel will be equipped with the starters for the exhaust fan motors.
- An inlet screen and filters are provided for each AMU.

**Code Compliance:**

- All Col-Met Spray Booths are designed to meet or exceed the requirements and recommendations of the National Fire Protection Association (NFPA), Standard Number 33, as well as the Occupational Health and Safety Administration (OSHA) CFR 29.1910.107 covering the operation and construction of spray booths.

**Warranty:**

- Col-Met Spray Booths warrants to buyer that the equipment to be free from defects of materials or workmanship under normal use and maintenance for a period of one (1) year.
- All components supplied but not produced by Col-Met Spray Booths shall carry the warranty of the manufacturer.

Col-Met EZ Heat Air Makeup Units are designed to optimize booth efficiency, safety and operator comfort through precision controlled heat circulation. They are available for both indoor and outdoor applications, can be set up in either vertical or horizontal configurations, and can be retrofitted



DN-14-10-13-0823

to fit any existing booth set-up.

Designed for optimal fuel efficiency, Col-Met EZ Heat & Cure Air Makeup Units deliver conditioned and filtered heated air evenly throughout your booth.

Precision-controlled to minimize temperature variations, the EZ Heat & Cure effectively removes particulates from the air that can negatively affect the quality of your finish.

By utilizing direct-fired burners, our motorized auto gas control delivers a consistent burn for an evenly heated airflow into the booth. With self-adjusting profile and inlet dampers, the EZ Heat & Cure modulates airflow as it passes over the burners, regulating air pressure and fuel consumption for a clean, fuel-efficient burn.

Col-Met Spray Booths EZ Heat Air Makeup Units have exclusive features for safer operations and enhanced operator comfort. Fuel-efficient and designed for better finishing,

**Benefits with Col -Met  
EZ Heat & Cure Units:**

- Improved Air Quality
- Reduced total energy costs
- Enhanced finishing applications due to reduced air particulates.
- Decreased cold air infiltration.
- Increased production and productivity with an accelerated dry time.

**Standard Col-Met EZ Heat Features:**

- ETL listed
- White Powder Coated finish for durability and professional appearance
- Eclipse Burner -Natural Gas (Propane Optional)
- 1.5 – 4 million BTU Motorized Auto Gas Control Burner



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- High Efficiency Direct Drive Plug Type Fan For Extended Filter Life
- UL-listed Digital Control Panel that manages multiple functions
- All Digital Microprocessor, PID, Dual Set Point Temperature Control
- Multi-Position, Self-Adjusting Variable Inlet Damper for Supply Air Control and to minimize sudden airflow changes
- Automatic Variable Profile Damper to Maintain Optimum Flame Efficiency
- VFD (Energy Savings) Control for Exhaust Fan for User-Friendly Booth Pressure Balancing and Economy Prep Mode
- Motorized Gas Control to Reduce Rapid Temperature Fluctuations Caused By Cheap Control Methods used in other AMU's
- Easy to read indicator lights displaying unit operation.
- Magnahelic Gauge for monitoring booth's pressure (Easy Balance)
- Integrated Platform Stand on all Vertical Units
- Inlet Filtered Hood on all Horizontal units
- User-adjustable Flash/Cure/Cool Down Times (Cure Models Only)
- Individual Potentiometers for Spray and Cure Modes (Cure Models Only)
- Col-Met Spray Booths EZ Heat and Cure Air Make-Up Units Comply with all OSHA and NFPA Regulations

**EZ HEAT & CURE PRODUCT SELECTION GUIDE**

<b>Model #</b>	<b>Product Description</b>	<b>AMU HP</b>	<b>BTUs</b>	<b>CFM Range</b>
EH-3540K	EZ Heat AMU	40	4,000,000	35,000-40,000
EHC-3540K	EZ Heat & Cure AMU	40	4,000,000	35,000-40,000

**EHC-3540K II  
Specifications**

Incoming power: 480 Volt 3 Phase 76 Amps (AMU plus exhaust fans), or  
 240 Volt 3 Phase 150 Amps, or  
 208 Volt 3 Phase 172 Amps, and



DN-14-10-13-0823

120 Volt 1 phase 1.1 Amps / light fixture

Fuel: Natural Gas or Propane 14" minimum pressure 5 lb. maximum pressure.

Gas Inlet: 2"

Eclipse Burner and Eclipse Flame safety control.

Gas train components: FM approved

Max Gas consumption: 4 Million BTU

Maximum Temp setpoint: 160 Degrees 180 Degree trip.

Largest Load Amps: 52 Amps (460V), 120 Amps (208V) 40 Hp blower

Electrical Cabinet: Nema 12 UL Approved

Remote Cabinet: Nema 12 UL Approved

AMU is ETL approved.

Short Circuit Current: 5KA rms Symmetrical 600V Maximum

Weight: 4,800# Pounds

Discharge Opening Size: 54" x 24"

Inlet Opening Size: 64" x 46"

Inlet Filters: Six (6) Three Link Filters 20" X 60"

**Standard Construction Features:**

- 10 gauge welded mild steel chassis
- Welded plenum box
- 10 gauge mild steel fan mounting plate
- Welded structural steel internal framing 2" x 2" x ¼" Angle Iron Frame
- Welded 14 gauge burner frame
- 18 gauge outer skin (bolted to chassis)
- Burner sight glass
- All seams interior & exterior caulked
- Removable maintenance access panel
- White Powder Coated finish for durability and professional appearance
- High efficiency direct drive plug type fan
- Inlet air filter access door

**EXCLUSIONS:**

- ❖ Any Federal, State, or City taxes imposed, directly or indirectly, by any present or future law on the sale or use of the proposed equipment and or material described in or required under the agreement between the parties, are the sole responsibility of the purchaser apart and separate from the agreed purchase price.



DN-14-10-13-0823

- ❖ Permits: (Approvals, certificates, licenses, bonds and taxes) Purchaser at its own expense shall procure any all construction and or use permits and licenses required in connection with the installation and use of proposed equipment and shall indemnify and hold Col-Met harmless from all civil and or criminal liability for failure to procure same and any and all violations, assessments, penalties, or damages relating thereto.
- ❖ Site modifications (floor clearing, cleaning, sealing or leveling as well as any building reinforcement or structural changes)
- ❖ Any and all installation services. (Even on pre-assembled ovens some field erection of exhaust fans, possible air seal fans, etc. are required) (Most ovens require some field wiring and exhaust stack installation)
- ❖ Removal, relocation, rerouting and/or reconnection and testing of displaced utilities (i.e. Gas lines, electrical lines, water lines, paint lines, sprinkler system lines, compressed air lines, etc.)
- ❖ Any and all fire detection or suppression equipment required by code authorities.
- ❖ Freight costs including packing, crating, shipment, unloading, etc.

**UNLESS SPECIFICALLY CONTRACTED TO PROVIDE**

- ❖ Electrical, Gas, Compressed Air, Water and Sewer services to attachment points on Col-Met supplied equipment.
- ❖ Supply of exhaust duct components unless specifically mentioned in the body of this proposal (Ductwork can be quoted as an option if provided with accurate required length and configuration requirements)
- ❖ Weatherproof storage and security of equipment at job site.
- ❖ Cutting, sealing, or framing of roof, for any and all required penetrations.
- ❖ Unloading of equipment from freight lines.
- ❖ Touch-up painting of equipment.
- ❖ Supply of additional gas regulator(s), which may be required to assure proper gas pressure to attachment point on Col-Met supplied equipment.
- ❖ Supply of additional motor disconnects, which might be required by local authorities or unique installation circumstances.
- ❖ Supply of additional safety related equipment not specifically mentioned in the body of this proposal.

**PROPOSED ADDITION TO PROPOSAL**

Proposal is valid for 45 days from the date of proposal. After 45 days all pricing will be reassessed for validity. Any changes from the terms of this proposal must be in writing; Col-Met Spray Booths does not recognize any oral changes, additions or deletions from or to this original proposal. Any oral changes must be submitted to the company in writing, and approval by an officer of the company before such changes become a part of this proposal.

Inside Sales  
Col-Met Spray Booths



Quote #: EJ-14-10-08-1033

## NEW CURE OVEN

October 8, 2014

Col-Met Spray Booths is pleased to offer the following proposal for your consideration. Quoted per your request, one (1) **Batch Cure Chamber** Model: **BCC-16-13-52-P-DT** w/ interior working dimensions: **16'-0" wide X 13'-0" tall X 52'-0" long (Note: bridge exhaust chamber inside working floor space).**

Approximate overall dimensions are 17'-0" wide X 15'-2" tall (+ AMU) X 52'-4" long.

This chamber is constructed out of 18 gauge single skin sheet metal with a galvanized finish.

### **The chamber will include the following:**

- (1) One 24"Ø, 1.5HP tubeaxial fan rated for 6,240 SCFM @ 1/2" static pressure will provide exhaust.
- (10) 48-Inch 4-lamp ETL Listed Class I Division II inside-access fluorescent fixtures (lamps included) will supply illumination.
- (2) Two set(s) of Solid Door(s) with a nominal opening of: 10' wide X 11' tall.
- (3) Three 30" X 84" Personnel Door(s) with Window(s) will provide egress.
- (1) ½" 120V solenoid valve will be provided
- (1) Manometer: Mark 11-25 will be provided (one per exhaust chamber).

Fresh tempered air will be provided through the intake plenum located in the ceiling towards the front of the chamber by an ETL Listed Col-Met air make-up unit (heat range up to 160°F) at 31,200 SCFM at ½" SP; this unit will recirculate (80%) from the exhaust plenum via Recirc duct; the remaining air (20%) will be exhausted from the exhaust plenum via the exhaust fan provided with the chamber (fan information above). Air pressure/balance will be controlled by a variable frequency drive on the exhaust fan. A magnehelic gauge will be provided for a visual reference to balance the airflow.

Exhaust ductwork has been quoted based on an estimated roof height of 16 feet with an Estimated Flat Roof with no pitch. Ductwork is figured using a straight run with no offsets. Actual ductwork requirements will be dictated by field conditions including but not limited to a verified roof height, roof pitch, obstructions and local code restrictions.

AMU Supply, Discharge & Recirc duct (if quoted) is shown for estimation purposes only and assumes a straight run with no offsets. Actual ductwork requirements will be dictated by field conditions including but not limited to verified roof height, roof pitch, obstructions and local code restrictions.

Thank you for the opportunity to quote your needs. Approval drawings (if required) will be available 1-2 weeks after receipt of down payment. Booth shipment dates are scheduled after receipt of signed approval; prices quoted are F.O.B. point of manufacture. All Col-Met terms and conditions apply. Please reference this Quote Number on Purchase Orders. Proposal is valid for 45 days from the date of presentation. After 45 days all pricing will be reassessed for validity.



Quote #: EJ-14-10-08-1033

Qty.	Description:	extension @ dealer net
1	<b>BCC-16-13-52-P-DT</b> Pressurized Modified Downdraft Batch Cure Chamber	\$27,495.50
1	<b>Exhaust Duct: 16' Roof</b> CNX-24, PPD-24, (2) PP-24, FRF-24, ARV-24, GWKIT-6FT	\$667.10
1	<b>EHC-2734K-H-R</b> Heat/Recirc Air Makeup Unit w/ Control Panel, VFD, Vertical, Outdoors	\$35,290.10
5	<b>Explosion Proof Limit Switch Kit*</b>	\$1,186.50
1	<b>Typical AMU Discharge Duct</b> (4' Straight, (2) 45° Elbows, Transition)	\$1,459.50
1	<b>Recirc Ductwork (from chamber to mix box)</b> (37LF Straight/ (2) 90° Elbow, (1) Transition)	\$7,024.85
1	<b>Supply Duct:</b> <b>Sq-CNX-42, (2) PP-42, Large Inlet Hood</b>	\$1,834.00
1	<b>Installation Cost</b>	\$38,000.00
<b>Total</b>		<b>\$112,957.55</b>

**\*NFPA-33 Chapter 13.3.1.3.2 requirement where industrial air heaters are used to elevate the temperature for curing means shall be provided to deter entry into chamber and interlocks shall be provided to shut down the chamber if entry is made.**

**OPTIONS**

1	<b>Powder Coated White</b>	\$4,210.00	\$4,210.00	\$2,947.00
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**Scope:**

Air flows in through the filtered air intake plenum (located in the ceiling toward the front of the booth) downward through the work area and exits through the exhaust plenum located in the side of the booth. Filtered exhaust air is drawn through the exhaust plenum and discharged upward into the atmosphere through the exhaust stack. This booth is provided complete, with all necessary hardware to meet the applicable national requirements established by OSHA, and the NFPA for paint booth construction.

**EHC-2734K II  
Specifications.**

**Incoming power: 480 Volts 3 Phase 52 Amps (AMU plus exhaust fans), or  
240 Volt 3 Phase 100 Amps, or  
208 Volt 3 Phase 115 Amps, and  
120 Volt 1 phase 1.1A / light fixture**

**Fuel: Natural Gas or Propane 14" minimum pressure 5 lb. maximum pressure.**

**Gas Inlet: 2"**

**Eclipse Burner and Eclipse Flame safety control.**

**Gas train components: FM approved**

**Max Gas consumption: 3 Million BTU**

**Maximum Temp setpoint: 160 Degrees 180 Degree trip.**

**Largest Load Amps: 34 Amps (460V), 78 Amps (208V) 25 Hp blower**

**Electrical Cabinet: Nema 12 UL Approved**

**Remote Cabinet: Nema 12 UL Approved**

**Short Circuit Current: 5KA rms Symmetrical 600V Maximum**



Quote #: EJ-14-10-08-1033

#### **Construction Features:**

##### **Panels:**

- Panels are fabricated from 18-gauge quality galvanized steel precision punched for maximum rigidity. Panels are fastened together are to be sealed with the provided caulk following assembly.

##### **Columns and Beams:**

- Fabricated from structural steel members, precision punched to match corresponding panels.

##### **Illumination:**

- Lighting is provided by 48" long, 4-tube, 32 watt, T-8, fluorescent type fixtures. Fixtures are Inside Access rated for Class I Div. II Groups A, B, C, and D Class II Div. II Groups F & G. All fixtures are ETL listed and approved for their intended use and placement. Fixtures are supplied with dual ballasts to accept either 120V or 277V power. Ballasts carry a 5 year limited warranty.

##### **Filtration:**

- Intake air filters: Rated by UL as Class 2 and are EPA registered as environmentally safe. Filters are self-supporting in an internal frame sized 20" x 20" x 1". One (1) set of filters will be supplied with this unit.
- Exhaust air filters are a fiberglass paint arrestor pad made specifically for the collection of paint overspray. These filters are UL rated as Class 2. A filter holding grid is provided for each filter cell. This unit is provided with one (1) set of filters.
- Manometer(s) will be provided with the unit to monitor the filter resistance and thereby offer a visual indicator of the filter's life and efficiency.

##### **Exhaust**

- A tubeaxial type duct fan specifically designed and constructed for use in paint spray booths and similar applications is provided for exhaust. A precision balanced, fabricated, aluminum non-sparking fan blade moves the air through the fan. Bearings are mounted in rubber isolators for smooth operation. The motor, drive, and bearings are isolated from the exhaust air stream. The bearings are sized with a minimum average life, per AFBMA, in excess of 200,000 hours when operating at the maximum RPM of the fan size.

##### **Product Doors:**

- Standard Swing Door product entry doors are fabricated with tube steel frames hung on structural channel jambs. Solid doors are skinned with an 18 gauge galvanized steel sheet that is welded or pop riveted in place. These doors are provided with a foam rubber weather stripping seal about the perimeter and a rubber sweep seal at the threshold. The mounting hardware provided includes FM approved panic type safety latch(s) and four 6" door pulls.

##### **Personnel Door:**

- Personnel Door is double wall galvanized steel units sized at 30" x 84", and are provided pre-hung in a heavy gauge steel frame ready for mounting to the spray booth. The mounting hardware includes a FM approved panic type safety latch and two (2) door pulls.

##### **Code Compliance:**

- All Col-Met Spray Booths are designed to meet or exceed the requirements and recommendations of the National Fire Protection Association (NFPA), Standard Number 33, as well as the Occupational Health and Safety Administration (OSHA) CFR 29.1910.107 covering the operation and construction of spray booths.

##### **Warranty:**

- Col-Met Spray Booths warrants to buyer that the equipment to be free from defects of materials or workmanship under normal use and maintenance for a period of one (1) year.
- All components supplied but not produced by Col-Met Spray Booths shall carry the warranty of the manufacturer.



Quote #: EJ-14-10-08-1033

## **EXCLUSIONS:**

- ❖ Any Federal, State, or City taxes imposed, directly or indirectly, by any present or future law on the sale or use of the proposed equipment and or material described in or required under the agreement between the parties, are the sole responsibility of the purchaser apart and separate from the agreed purchase price.
- ❖ Permits: (Approvals, certificates, licenses, bonds and taxes) Purchaser at its own expense shall procure any all construction and or use permits and licenses required in connection with the installation and use of proposed equipment and shall indemnify and hold Col-Met harmless from all civil and or criminal liability for failure to procure same and any and all violations, assessments, penalties, or damages relating thereto.
- ❖ Site modifications (floor clearing, cleaning, sealing or leveling as well as any building reinforcement or structural changes)
- ❖ Any and all installation services. (Even on pre-assembled ovens some field erection of exhaust fans, possible air seal fans, etc. are required) (Most ovens require some field wiring and exhaust stack installation)
- ❖ Removal, relocation, rerouting and/or reconnection and testing of displaced utilities (i.e. Gas lines, electrical lines, water lines, paint lines, sprinkler system lines, compressed air lines, etc.)
- ❖ Any and all fire detection or suppression equipment required by code authorities.
- ❖ Freight costs including packing, crating, shipment, unloading, etc.

### **UNLESS SPECIFICALLY CONTRACTED TO PROVIDE**

- ❖ Electrical, Gas, Compressed Air, Water and Sewer services to attachment points on Col-Met supplied equipment.
- ❖ Supply of exhaust duct components unless specifically mentioned in the body of this proposal (Ductwork can be quoted as an option if provided with accurate required length and configuration requirements)
- ❖ Weatherproof storage and security of equipment at job site.
- ❖ Cutting, sealing, or framing of roof, for any and all required penetrations.
- ❖ Unloading of equipment from freight lines.
- ❖ Touch-up painting of equipment.
- ❖ Supply of additional gas regulator(s), which may be required to assure proper gas pressure to attachment point on Col-Met supplied equipment.
- ❖ Supply of additional motor disconnects, which might be required by local authorities or unique installation circumstances.
- ❖ Supply of additional safety related equipment not specifically mentioned in the body of this proposal.

### **PROPOSED ADDITION TO PROPOSAL**

**Proposal is valid for 45 days from the date of proposal. After 45 days all pricing will be reassessed for validity. Any changes from the terms of this proposal must be in writing; Col-Met Spray Booths does not recognize any oral changes, additions or deletions from or to this original proposal. Any oral changes must be submitted to the company in writing, and approval by an officer of the company before such changes become a part of this proposal.**

Inside Sales  
Col-Met Spray Booths



EJ-14-10-08-1007

## **NEW PAINT BOOTH**

October 8, 2014

Col-Met Spray Booths is pleased to offer the following proposal for your consideration.

(1) - One – Custom Heavy Duty Non-Pressurized Modified **Downdraft Drive-thru booth** with interior working dimensions of: **16' wide X 13' tall X 90' long.**

Design Note: this booth will be provided w/ (2) pre-filtered ceilings located towards the center of the booth. (2) Bridge style exhaust chambers located on each end of the booth.

Approximate overall dimensions: 17' wide X 13'-6" tall (+ fan) X 90'-4" long.

(2) - Two- 42" diameter, 5HP tube axial fan operation at 20,800 SCFM @ 1/2" static pressure each will provide exhaust. Total air exhausted will be 20,800 SCFM per side.

(48) - 48 Inch 4-lamp ETL Listed Class I Division II Inside-access fluorescent fixtures (lamps included) will supply illumination (24-lights per side).

This Booth is supplied with (2) - Two - set(s) of Solid Door(s) with a nominal opening of: 10 ft. wide X 11 ft. tall.

(4) - Four- 30" X 84" Personnel Door(s) with Window(s) will provide egress.

Exhaust ductwork has been quoted based on an estimated roof height of 16 feet with an Estimated Flat Roof with no pitch. Ductwork is figured using a straight run with no offsets. Actual ductwork requirements will be dictated by field conditions including but not limited to a verified roof height, roof pitch, obstructions and local code restrictions.

### UL/ ETL Listed Control Equipment:

A deluxe control panel shipped pre-wired by Col-Met for easy and accurate hookup. Panel controls the exhaust fan and light operation of the spray booth. Panel includes a NEMA 12 electrical enclosure with main disconnect switch, magnetic motor starter with overload disconnect and operative On/Off switch with fire protection interlock.

Thank you for the opportunity to quote your needs. Approval drawings (if required) will be available 1-2 weeks after receipt of down payment. Booth shipment dates are scheduled after receipt of signed approval; prices quoted are F.O.B. point of manufacture. All Col-Met terms and conditions apply. Please reference this Quote Number on Purchase Orders. Proposal is valid for 45 days from the date of presentation. After 45 days all pricing will be reassessed for validity.



EJ-14-10-08-1007

<b>QTY</b>	<b>Part Number</b>	<b>Description</b>	<b>Dealer Net</b>
<b>1</b>	<b>Custom HDM-16-13-90-N-DT (2) Pre-filtered ceilings (2) Exhaust plenums</b>	<b>Modified Downdraft Heavy Duty Truck Booth</b>	<b>\$80,214.00</b>
<b>4</b>	<b>PP-42</b>	<b>42" PLAIN PIPE</b>	<b>\$324.80</b>
<b>2</b>	<b>PPD-42</b>	<b>42" PIPE WITH CLEANOUT DOOR</b>	<b>\$194.60</b>
<b>2</b>	<b>CNX-42</b>	<b>42" CONNECTING RING</b>	<b>\$130.20</b>
<b>2</b>	<b>ARV-42</b>	<b>42" AUTO DAMPER STACK HEAD</b>	<b>\$656.60</b>
<b>2</b>	<b>FRF-42</b>	<b>42" FLAT ROOF FLANGE</b>	<b>\$487.20</b>
<b>2</b>	<b>GWKIT-6FT</b>	<b>6' Guy Wire Kit</b>	<b>\$131.60</b>
<b>1</b>	<b>CP-480-3P-5-2F</b>	<b>CONTROL PANEL, 2 FAN 480 VOLTS, 5 HP</b>	<b>\$1,792.70</b>
<b>1</b>	<b>INST</b>	<b>Installation Cost</b>	<b>\$48500.00</b>
		<b>Total:</b>	<b>\$132,431.00</b>



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**Scope:**

- Clean air is drawn into the booth through the filters (located in the roof toward the front of the booth), moves downward passing through the work area, and exits through the bridge exhaust plenum located in the rear of the booth. Filtered exhaust air is drawn thru the exhaust plenum and discharged upward into the atmosphere through the exhaust stack(s). This booth is provided complete, with all necessary hardware to meet the applicable national requirements established by OSHA, and the NFPA for paint booth construction.

(Optional) **Startup:** Factory startup with one year extended warranty including travel to and from the job site expenses, lodging and 10 hours of on-site time. Col-Met Spray Booths will need two weeks of notification prior to scheduling startup and pending completion of startup checklist. Additional startup time is available upon request.

**Construction Features:**

**Panels:**

- Panels are fabricated from 18 Gauge galvanized steel precision punched on 6" centers for maximum rigidity. Panels are fastened together with 5/16" bolts/nuts and are to be sealed with the provided caulk following assembly.

**Structural Support:**

- Panels run vertically with horizontal 12" wide, 18 gauge stiffeners (punched to match corresponding panels) running the entire length of the booth placed on maximum 10' centers for added rigidity. Columns are fabricated from structural I-Beams (W-6 X 9) with welded 10 gauge attachments, pre-punched to match the wall panels.

**Illumination:**

- Lighting is provided by 48" long, 4-tube, 32 watt, T-8, fluorescent type fixtures. Fixtures are Inside Access rated for Class I Div. II Groups A, B, C, and D Class II Div. II Groups F & G. All fixtures are ETL listed and approved for their intended use and placement. Fixtures are supplied with dual ballasts to accept either 120V or 277V power. Ballasts carry a 5 year limited warranty.



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**Filtration:**

- Intake air filters: Rated by UL as Class 2 and are EPA registered as environmentally safe. Filters are self-supporting in an internal frame sized 20" x 20" x 1". One set of filters will be supplied with this unit.
- Exhaust air filters are a fiberglass paint arrestor pad made specifically for the collection of paint overspray. These filters are UL rated as Class 2. A filter holding grid is provided for each filter cell. This unit is provided with one set of filters.
- Manometer(s) will be provided with the unit to monitor the filter resistance and thereby offer a visual indicator of the filter's life and efficiency.

**Exhaust Air:**

- A tube axial type duct fan specifically designed and constructed for use in paint spray booths and similar applications is provided for exhaust. A precision balanced, fabricated, aluminum non-sparking fan blade moves the air through the fan. Bearings are mounted in rubber isolators for smooth operation. The motor, drive, and bearings are isolated from the exhaust air stream. The bearings are sized with a minimum average life, per AFBMA, in excess of 200,000 hours when operating at the maximum RPM of the fan size.

**Product Doors:**

- Standard Swing Door (Solid):  
Standard Swing Door product entry doors are fabricated with tube steel frames hung on structural channel jambs. Solid doors are skinned with an 18 gauge galvanized steel sheet that is welded or pop riveted in place. These doors are provided with a foam rubber weather stripping seal about the perimeter and a rubber sweep seal at the threshold. The mounting hardware provided includes FM approved panic type safety latch(s) and four 6" door pulls.

**Personnel access doors:**

- Personnel access doors are double wall 18 Ga. galvanized steel, and are provided pre-hung in a heavy gauge steel frame ready for mounting to the spray booth. These doors are provided with a foam rubber weather stripping seal about the perimeter. The mounting hardware includes a FM approved panic type safety latch and two 6" door pulls.

**Code Compliance:**

- All Col-Met Spray Booths are designed to meet or exceed the requirements and recommendations of the National Fire Protection Association (NFPA), Standard Number 33, as well as the Occupational Health and Safety Administration (OSHA) CFR 29.1910.107 covering the operation and construction of spray booths.

**Warranty:**

- Col-Met Spray Booths warrants to buyer that the equipment to be free from defects of materials or workmanship under normal use and maintenance for a period of one year.
- All components supplied but not produced by Col-Met Spray Booths shall carry the warranty of the manufacturer.



EJ-14-10-08-1007

## **EXCLUSIONS:**

- ❖ Any Federal, State, or City taxes imposed, directly or indirectly, by any present or future law on the sale or use of the proposed equipment and or material described in or required under the agreement between the parties, are the sole responsibility of the purchaser apart and separate from the agreed purchase price.
- ❖ Permits: (Approvals, certificates, licenses, bonds and taxes) Purchaser at its own expense shall procure any all construction and or use permits and licenses required in connection with the installation and use of proposed equipment and shall indemnify and hold Col-Met harmless from all civil and or criminal liability for failure to procure same and any and all violations, assessments, penalties, or damages relating thereto.
- ❖ Site modifications (floor clearing, cleaning, sealing or leveling as well as any building reinforcement or structural changes)
- ❖ Any and all installation services. (Even on pre-assembled ovens some field erection of exhaust fans, possible air seal fans, etc. are required) (Most ovens require some field wiring and exhaust stack installation)
- ❖ Removal, relocation, rerouting and/or reconnection and testing of displaced utilities (i.e. Gas lines, electrical lines, water lines, paint lines, sprinkler system lines, compressed air lines, etc.)
- ❖ Any and all fire detection or suppression equipment required by code authorities.
- ❖ Freight costs including packing, crating, shipment, unloading, etc.

### **UNLESS SPECIFICALLY CONTRACTED TO PROVIDE**

- ❖ Electrical, Gas, Compressed Air, Water and Sewer services to attachment points on Col-Met supplied equipment.
- ❖ Supply of exhaust duct components unless specifically mentioned in the body of this proposal (Ductwork can be quoted as an option if provided with accurate required length and configuration requirements)
- ❖ Weatherproof storage and security of equipment at job site.
- ❖ Cutting, sealing, or framing of roof, for any and all required penetrations.
- ❖ Unloading of equipment from freight lines.
- ❖ Touch-up painting of equipment.
- ❖ Supply of additional gas regulator(s), which may be required to assure proper gas pressure to attachment point on Col-Met supplied equipment.
- ❖ Supply of additional motor disconnects, which might be required by local authorities or unique installation circumstances.
- ❖ Supply of additional safety related equipment not specifically mentioned in the body of this proposal.

### **PROPOSED ADDITION TO PROPOSAL**

**Proposal is valid for 45 days from the date of proposal. After 45 days all pricing will be reassessed for validity. Any changes from the terms of this proposal must be in writing; Col-Met Spray Booths does not recognize any oral changes, additions or deletions from or to this original proposal. Any oral changes must be submitted to the company in writing, and approval by an officer of the company before such changes become a part of this proposal.**

Inside Sales  
Col-Met Spray Booths

# PAINT ARRESTANCE FILTER TEST REPORT

Spray Removal Efficiency & Paint Holding Capacity

**BASED ON 40 CFR PART 63 NATIONAL EMISSION STANDARD**

Tested for:  
Filter Mfr.:  
Filter Name:  
Report#./Test#  
Report Date:

**Air Flow Technologies**  
**Air Flow Tecjologies**  
**Series 64 poly pad 1"**  
**R 901 T 911**  
**January 8, 2010**

## Test Information

FILTER DESCRIPTION (20" x 20" pad):

White on blue highloft poly pad

PAINT DESCRIPTION:

High Solids Baking Enamel (S.W. Permaclad 2400, red)

PAINT SPRAY METHOD:

Conventional Air Gun at 40 PSI

SPRAY FEED RATE:

143 gr./min. 135 cc./min.

AIR VELOCITY:

150 FPM

## Test Results

INITIAL PRESSURE DROP of Clean Test Filter

0.03 in. water

FINAL PRESSURE DROP of Loaded Test Filter

0.50 in. water

WEIGHT GAIN on TEST FILTER & Test Frame Trough

1985 grams

PAINT HOLDING CAPACITY of TEST FILTER

1813 grams = 4.0 lbs.

PAINT RUN-OFF

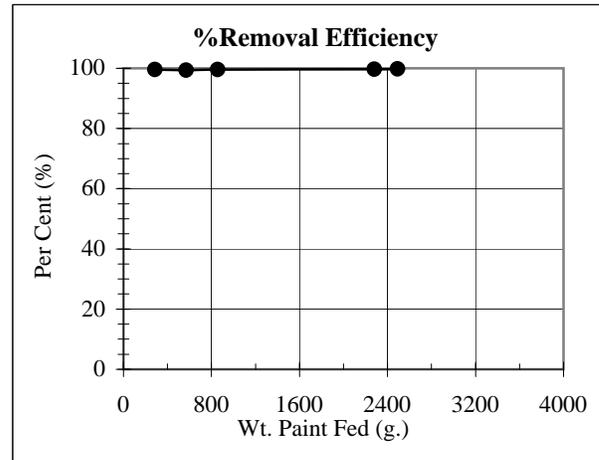
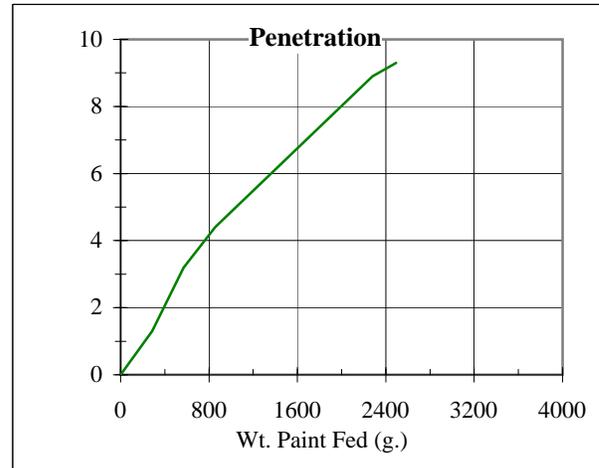
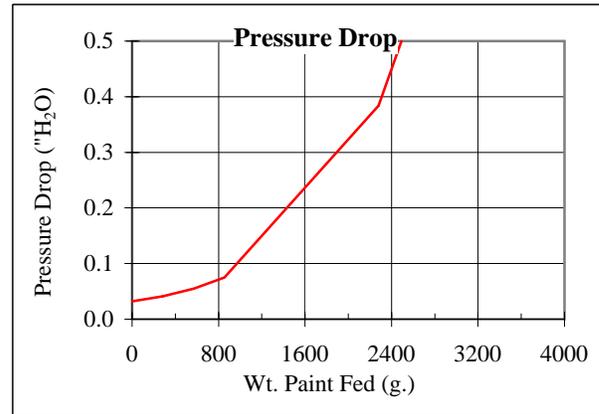
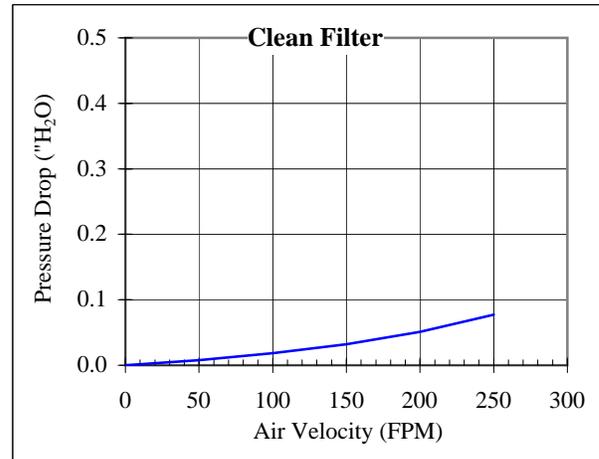
172 grams

WEIGHT GAIN - FINAL FILTER

9.3 grams = PENETRATION

AVERAGE REMOVAL EFFICIENCY of TEST FILTER

99.53 %



Test Engineer: Todd Kruger

Supervising Engineer: K. C. Kwok, Ph.D.

# Instructions - Parts List



First choice when  
quality counts™

# 309295

Rev. A



This manual contains important  
warnings and information.  
**READ AND KEEP FOR REFERENCE.**

INSTRUCTIONS

MANUAL ELECTROSTATIC

# PRO™ Xs4 AA

# Air-Assisted Spray Gun

100 psi (0.7 MPa, 7 bar) Maximum Air Inlet Pressure

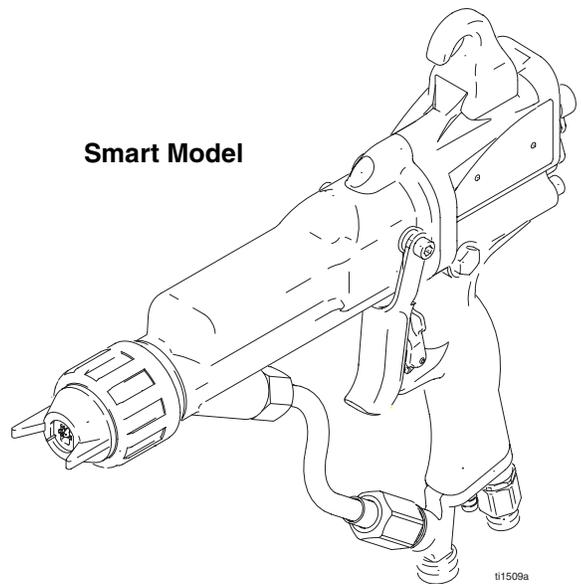
3000 psi (21 MPa, 210 bar) Maximum Working Fluid Pressure

See page 3 for a List of Models

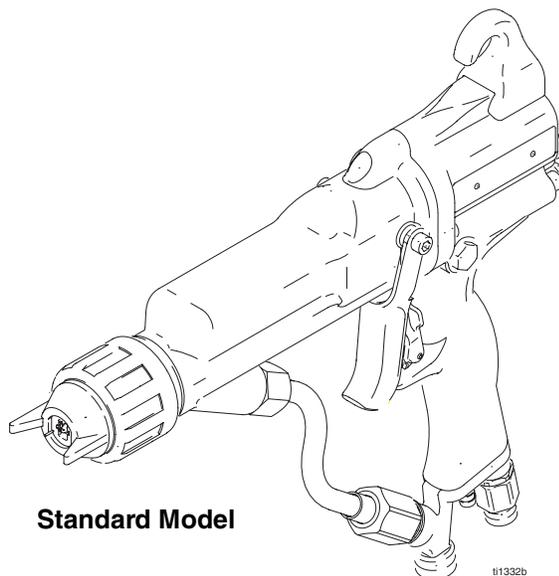
U.S. Patent Pending

For use with Class I Group D or Class II 2 G spray materials.

Smart Model



t11509a



Standard Model

t11332b



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# List of Models

Part No.	Model	Description	Operation Manual
244572	PRO Xs4 AA	Manual Air-Assisted Spray Gun	309296/ 3W9296/3Z9296
244573	PRO Xs4 AA	Manual Air-Assisted Spray Gun with smart display	309296/ 3W9296/3Z9296

## Symbols

### Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

### Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

 **WARNING****Fire, Explosion, and Electric Shock Hazard**

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in a fire, explosion, or electric shock.

- Electrostatic equipment must be used only by trained, qualified personnel who understand the requirements in this manual.
- Ground the equipment, all personnel in or close to the spray area, the object being sprayed, and all conductive objects in the spray area. See “**Grounding**”, page 13.
- Check gun resistance daily. See “**Test Gun Resistance**” on page 19.
- If there is any static sparking while using the equipment, **stop spraying immediately**. Identify and correct the problem.
- Provide fresh air ventilation to avoid buildup of flammable or toxic vapors. Interlock the gun air supply to prevent operation unless ventilating fans are on. See “**Ventilate the Spray Booth**” on page 9.
- Use solvents that comply with local regulations. Flash point should be higher than 100°F (38°C).
- Do not flush with the gun electrostatics on. Do not turn on the gun electrostatics until all solvent is removed from the system.
- Keep the spray area free of debris and rags. Do not store solvent and flammable fluids in the spray area.
- Eliminate all ignition sources such as pilot lights, cigarettes, and static arcs from plastic drop cloths. Do not plug in or unplug power cords or turn lights on or off in the spray area.
- Use only non-sparking tools to clean residue from the booth and hangers.


**WARNING**

**Fluid Injection Hazard**

Spray from the gun, hose leaks, or ruptured components can inject fluid into your body and cause an extremely serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin might look like just a cut, but is a serious injury. **Get immediate medical attention.**
- Do not point the gun at anyone or at any part of the body. Do not put your hand or fingers over the spray tip. Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Never spray without the tip guard in place.
- Lock the trigger safety when you stop spraying.
- Follow the “**Pressure Relief Procedure**”, page 25, when you stop spraying and before cleaning, checking, or repairing equipment.
- Check the hoses and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.
- Tighten all fluid connections before each use.


**Toxic Fluid Hazard**

Hazardous fluids or toxic fumes can cause a serious injury or death if splashed in the eyes or on the skin, swallowed, or inhaled.

- Know the specific hazards of the fluid you are using. Read the fluid manufacturer’s warnings.
- Store hazardous fluid in an approved container. Dispose of the hazardous fluid according to all local, state, and national guidelines.
- Wear appropriate protective clothing, gloves, eyewear, and respirator.

 **WARNING****Equipment Misuse Hazard**

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in a serious injury.

- This equipment is for professional use only.
- Read all manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain, call your Graco distributor.
- Do not alter or modify equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Maximum working fluid pressure of this equipment is **3000 psi (21 MPa, 210 bar)**.
- Use fluids and solvents that are compatible with the equipment wetted parts. See the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Route the hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below -40°F (-40°C).
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and other safety regulations.

# Introduction

## How the Electrostatic AA Spray Gun Works

### **WARNING**

#### **Fluid Injection Hazard**



**Remember, this is not an air spray gun.**  
For your safety, read and follow all Warnings in this manual.

The air-assisted spray gun combines airless and air spraying concepts. The spray tip shapes the fluid into a fan pattern, as does a conventional airless spray tip. Air from the air cap further atomizes the fluid and completes the atomization of the fluid tails to produce a uniform pattern.

As the gun is triggered, part of the regulated air operates the turbine and the rest of the air atomizes the fluid being sprayed. The turbine generates power, which is converted by the power cartridge to supply high voltage current to the gun's electrode.

The regulated air that is directed to the air cap can be further controlled using the gun's atomizing air adjustment valve. This valve can be used to restrict air flow to the air cap while maintaining sufficient air flow to the turbine. The atomizing air adjustment valve does not control pattern width. To change pattern width, a new tip size must be used.

The high working fluid pressure of this gun provides the power needed to atomize higher solids materials.

The gun's internal power supply provides high voltage current. The fluid is electrostatically charged as it passes the electrode. The charged fluid is attracted to the grounded workpiece, wrapping around and evenly coating all surfaces.

**NOTE:** For airless atomization, if desired, turn the gun's atomizing air adjustment valve completely off. Closing this valve does not affect turbine operation.

## Gun Overview

The electrostatic gun includes the following controls (see Fig. 1).

- **Air cap/tip guard and spray tip.** Never spray without the tip guard. See page 48 for spray tip sizes.
- **Trigger safety lock.** Prevents the gun from spraying.
- **Atomizing AIR adjustment valve.** Adjusts atomizing air.
- **ES ON/OFF valve.** Turns electrostatics ON (I) or OFF (0).
- **ES INDICATOR (standard gun only).** Green when ES is ON (I).
- **Voltage/current DISPLAY (smart models only).** Shows voltage (V) and current (A). Green=spray, yellow/red=see Troubleshooting, page 24.
- **ES HI/LO switch (smart models only).** Sets voltage to HI or LO (factory settings).
- **LO voltage adjustment (smart models only).** Remove plug to adjust to four settings.

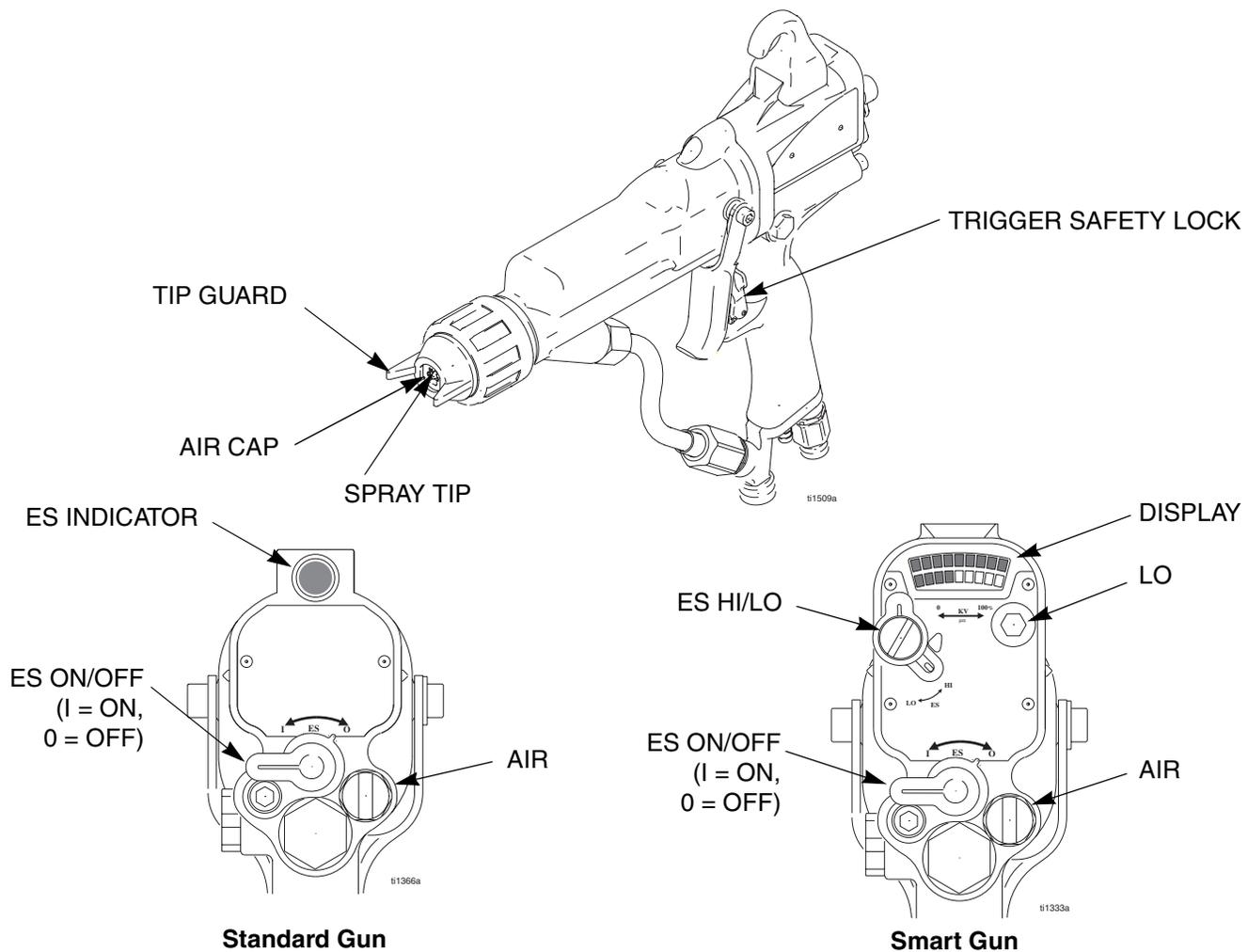


Fig. 1. Gun Overview

# Installation

## Install the System


**WARNING**

**Fire, Explosion, and Electric Shock Hazard**

Installing and servicing this equipment requires access to parts which may cause electric shock or other serious injury if work is not performed properly.

- 
 • Do not install or service this equipment unless you are trained and qualified.
- Be sure your installation complies with National, State and Local codes for the installation of electrical apparatus in a Class I, Group D or a Class II 2G Hazardous Location.
- Comply with all applicable local, state, and national fire, electrical, and other safety regulations.

Fig. 2 shows a typical electrostatic air-assisted spray system. It is not an actual system design. For assistance in designing a system to suit your particular needs, contact your Graco distributor.

## Warning Sign

Mount warning signs in the spray area where they can easily be seen and read by all operators. An English Warning Sign is provided with the gun.

## Ventilate the Spray Booth


**WARNING**

**Flammable or Toxic Vapor Hazard**


 Provide fresh air ventilation to avoid the buildup of flammable or toxic vapors. Do not operate the gun unless ventilation fans are operating.

Electrically interlock the gun air supply with the ventilators to prevent gun operation without ventilating fans operating. Check and follow all National, State, and Local codes regarding air exhaust velocity requirements.

**NOTE:** High velocity air exhaust will decrease the operating efficiency of the electrostatic system. Air exhaust velocity of 100 ft/min (31 linear meters/minute) should be sufficient.

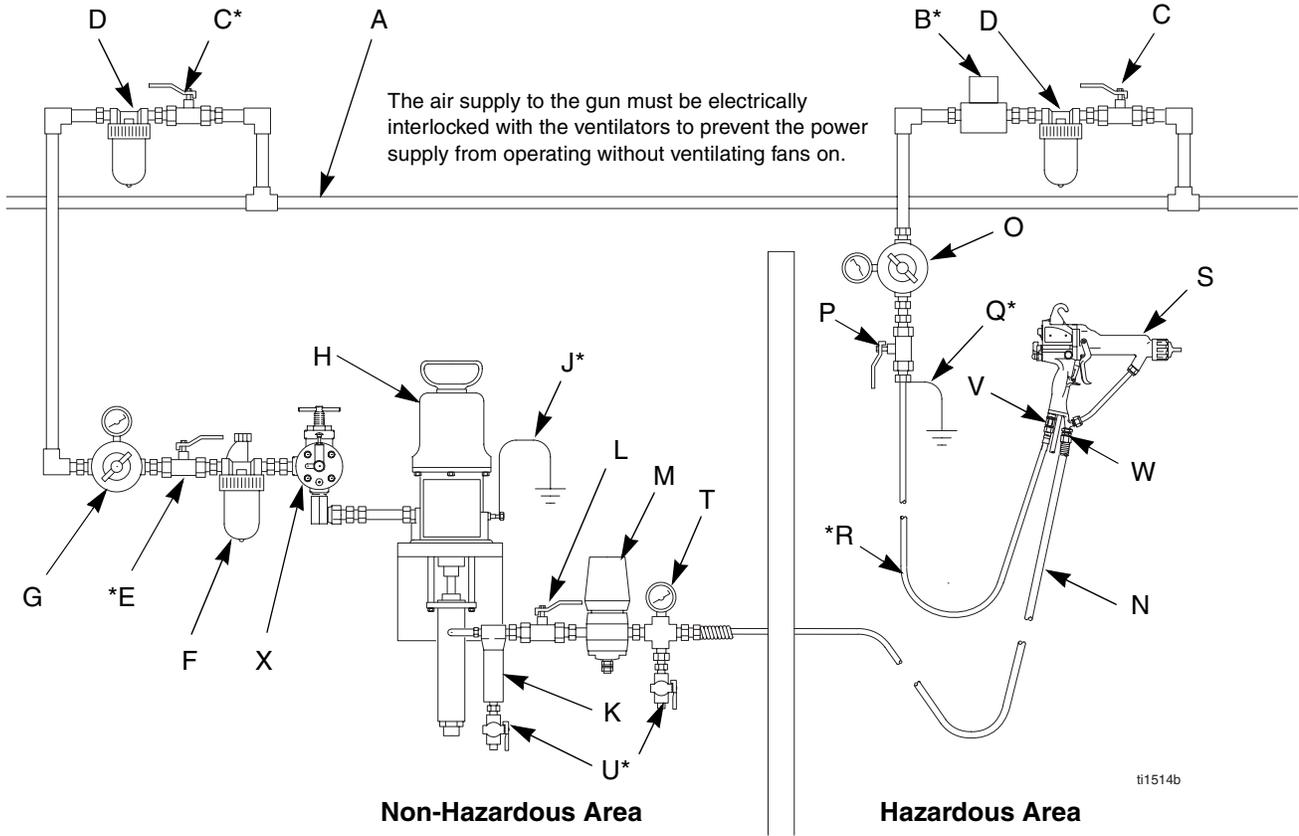


Fig. 2. Typical Installation

Key

- A Main Air Supply Line
- B\* Ventilation Fan Interlock Solenoid Valve
- C\* Main Air Supply Shutoff Valve (bleed-type)
- D Air Line Filter/Water Separator
- E\* Pump Air Supply Shutoff Valve (bleed-type)
- F Air Line Lubricator
- G Air Pressure Regulator
- H Pump
- J\* Pump Ground Wire
- K Fluid Filter
- L Fluid Supply Line Shutoff Valve
- M Fluid Pressure Regulator
- N Grounded Fluid Supply Line, with spring guards
- O Gun Air Regulator
- P Gun Air Supply Line Shutoff Valve
- Q\* Air Hose Ground Wire
- R\* Graco Grounded Air Hose
- S Electrostatic Air-Assisted Spray Gun
- T Fluid Pressure Gauge
- U\* Fluid Drain Valve
- V Gun Air Inlet
- W Gun Fluid Inlet
- X Pump Runaway Valve
- \* Required for safe operation. Must be purchased separately. **NOTE:** Solenoid valve (B) is not offered as a Graco accessory.

## Connect the Air Line

### WARNING

#### Electric Shock Hazard



To reduce the risk of electric shock or other serious injury, the air supply hose must be electrically connected to a true earth ground. Use only **Graco Grounded Air Supply Hose**.

1. Connect the Graco Grounded Air Supply Hose (R) between the air supply line and the gun's air inlet (V). The gun air inlet fitting has a left-hand thread. Connect the air supply hose ground wire (Q) to a true earth ground.
2. Install an air line filter/water separator (D) on the air line to ensure a dry, clean air supply to the gun. Dirt and moisture can ruin the appearance of your finished workpiece and can cause the gun to malfunction.

### WARNING

#### Fluid Injection Hazard



To reduce the risk of serious injury due to component rupture, including fluid injection, pump pressure must be limited by the pump air regulator. Do not rely on the gun fluid regulator to limit the fluid pressure to the gun.

The fluid supply pump must be prevented from producing a fluid pressure greater than the 3000 psi (21 MPa, 210 bar) *Maximum Working Fluid Pressure* of the gun. For example, the air supply pressure to a 30:1 ratio pump must not exceed 100 psi (0.7 MPa, 7 bar).

3. Install a bleed-type air regulator (G, O) on the pump and gun air supply lines to control air pressure to the pump and gun.

### WARNING

#### Fluid Injection Hazard



The bleed-type air valve (E) is required in your system to relieve air trapped between the valve and the pump after the air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly, which can result in serious injury, including fluid injection and splashing fluid in the eyes or on the skin.

4. Install a bleed-type air valve (E) on the pump air line to shut off air to the pump. Install an additional bleed-type air valve (C) on the main air line (A) to isolate the accessories for servicing.
5. Install an air shutoff valve (P) on each gun air supply line to shut off air to the gun(s).

## Connect the Exhaust Tube

Press the exhaust tube (38) onto the barbed adapter on the bottom of the gun handle. Secure the tube with the clamp (39).

## Connect the Fluid Line

1. Before connecting the fluid line (N), blow it out with air and flush it with solvent. Use solvent which is compatible with the fluid to be sprayed.
2. Install a fluid regulator (M) on the fluid line to control fluid pressure to the gun.

### **WARNING**

#### Fluid Injection Hazard



The fluid drain valve (U) is required in your system to assist in relieving fluid pressure in the displacement pump, hose and gun. Triggering the gun to relieve pressure may not be sufficient. Install a drain valve close to the pump's fluid outlet. The drain valve reduces the risk of serious injury, including fluid injection and splashing in the eyes or on the skin.

3. Install a drain valve (U) near the pump outlet.
4. Connect the fluid line to the 1/4 npsm gun fluid inlet (W).
5. Before running any paint through the spray gun, flush it out with a compatible solvent.

## Filter the Fluid

Install a fluid filter (K) at the pump outlet to remove particles and sediment which could clog the spray tip.

The gun includes an inline fluid filter (1) for additional filtration.

## Select a Spray Tip

### **WARNING**

#### Fluid Injection Hazard



To reduce the risk of a fluid injection injury, always follow the "**Pressure Relief Procedure**", page 25, before removing or installing the spray tip, air cap, or tip guard.

The fluid output and pattern width depend on the size of the spray tip, the fluid viscosity, and the fluid pressure. Use the "**Spray Tip Selection Chart**", page 48, as a guide for selecting the appropriate spray tip for your application.

Refer to the gun operation manual to install the spray tip.

# Grounding


WARNING

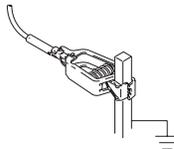
**Fire, Explosion, and Electric Shock Hazard**



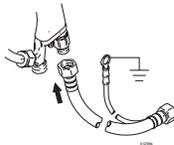
When operating the electrostatic gun, any ungrounded objects in the spray area (people, containers, tools, etc.) can become electrically charged. Improper grounding can result in static sparking, which can cause a fire, explosion, or electric shock. Follow the grounding instructions below.

The following are minimum grounding requirements for a basic electrostatic system. Your system may include other equipment or objects which must be grounded. Check your local electrical code for detailed grounding instructions. Your system must be connected to a true earth ground.

- *Pump:* ground the pump by connecting a ground wire and clamp as described in your separate pump instruction manual.



- *Electrostatic Air-Assisted Spray Gun:* ground the gun by connecting the Graco Grounded Air Hose and connecting the air hose ground wire to a true earth ground. See “Check Electrical Grounding”, page 14.

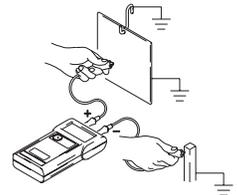


- *Air compressors:* ground the equipment according to the manufacturer's recommendations.
- *All air and fluid lines* must be properly grounded. Use only grounded hoses with a maximum of 100 feet (30.5 m) combined hose length to ensure grounding continuity.

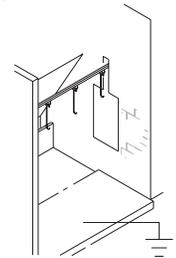
- *All persons entering the spray area:* shoes must have conductive soles, such as leather, or personal grounding straps must be worn. Do not wear shoes with non-conductive soles such as rubber or plastic. If gloves are worn, cut off fingers or cut out palm area, to ensure your hand contacts the grounded gun handle.



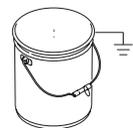
- *Object being sprayed:* keep the workpiece hangers clean and grounded at all times. Resistance must not exceed 1 megohm.



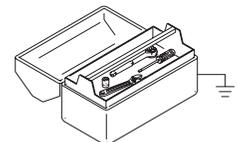
- *The floor of the spray area:* must be electrically conductive and grounded. Do not cover the floor with cardboard or any non-conductive material which would interrupt grounding continuity.



- *Flammable liquids in the spray area:* must be kept in approved, grounded containers. Do not use plastic containers. Do not store more than the quantity needed for one shift.



- *All electrically conductive objects or devices in the spray area:* including fluid containers and wash cans, must be properly grounded.



## Check Electrical Grounding

### WARNING

#### Fire, Explosion, and Electric Shock Hazard

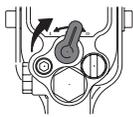


Megohmmeter Part No. 241079 (AA-see Fig. 3) is not approved for use in a hazardous area. To reduce the risk of sparking, do not use the megohmmeter to check electrical grounding unless:

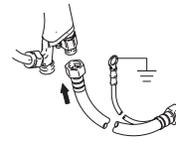
- The gun has been removed from the hazardous area;
- Or all spraying devices in the hazardous area are turned off, ventilation fans in the hazardous area are operating, and there are no flammable vapors in the area (such as open solvent containers or fumes from spraying).

Failure to follow this warning could cause fire, explosion, and electric shock and result in serious injury and property damage.

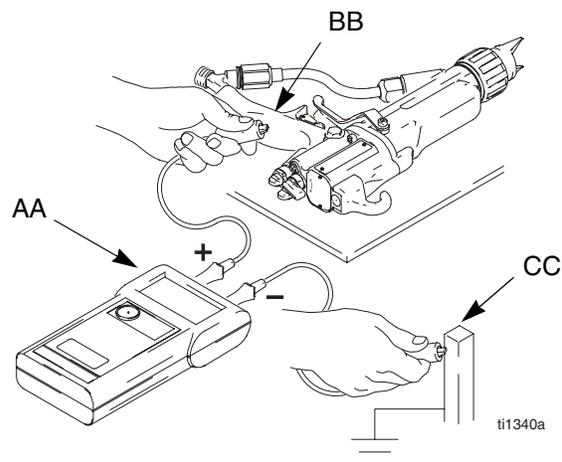
1. Have a qualified electrician check the electrical grounding continuity of the spray gun and air hose.
2. Turn the ES ON/OFF valve OFF.



3. Turn off the air and fluid supply to the gun. The fluid hose must not have any fluid in it.
4. Make sure the grounded air hose (R) is connected and the hose ground wire is connected to a true earth ground.



5. Measure the resistance between the gun handle (BB) and a true earth ground (CC). Use an applied voltage of 500 minimum to 1000 volts maximum. The resistance should not exceed 1 megohm. See Fig. 3.
6. If the resistance is greater than 1 megohm, check the tightness of the ground connections and be sure the air hose ground wire is connected to a true earth ground. If the resistance is still too high, replace the air hose.



**Fig. 3. Check Gun Grounding**

## Check Fluid Resistivity


**WARNING**

**Fire, Explosion, and Electric Shock Hazard**





Check the fluid resistivity in a non-hazardous area only. Resistance Meter 722886 and Probe 722860 are not approved for use in a hazardous area.

Failure to follow this warning could cause fire, explosion, electric shock and result in serious injury and property damage.

Graco Part No. 722886 Resistance Meter and 722860 Probe are available as accessories to check that the resistivity of the fluid being sprayed meets the requirements of an electrostatic air-assisted spray system.

Follow the instructions included with the meter and probe. Readings of 25 megohms-cm and above provide the best electrostatic results.

## Check Fluid Viscosity

To check fluid viscosity you will need:

- a viscosity cup
  - a stopwatch.
1. Completely submerge the viscosity cup in the fluid. Lift the cup out quickly, starting the stopwatch as soon as the cup is completely removed.
  2. Watch the stream of fluid coming from the bottom of the cup. As soon as there is a break in the stream, shut off the stopwatch.
  3. Record the fluid type, elapsed time, and size of the viscosity cup.
  4. If the viscosity is too high or too low, contact the material supplier and adjust as necessary.

# Operation

 <b>INSTRUCTIONS</b>	Refer to the gun operation manual (supplied) for Setup, Shutdown, and Daily Care procedures.
----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------

## Low Voltage Adjustment (Smart Guns Only)

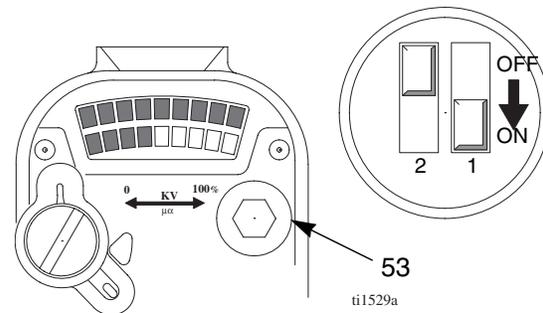
The ES HI/LO switch enables you to switch between full voltage and a lower voltage output. The lower voltage is factory set, but can be adjusted.

1. Set the ES HI/LO switch to LO.
2. Remove the LOW VOLTAGE adjustment plug (53). Set the desired voltage, using a small screwdriver to slide switches 1 and 2 ON or OFF, according to Table 1. Also see Fig. 4.

**Table 1: Low Voltage Adjustment**

1	2	kV
ON	ON	70
ON	OFF	60
OFF	ON	50
OFF	OFF	40

Factory Setting →



**Fig. 4. Low Voltage Adjustment Switches**

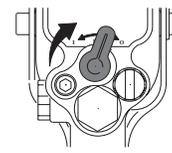
# Maintenance

 <b>INSTRUCTIONS</b>	Refer to the gun operation manual (supplied) for Daily Care and Cleaning procedures.
----------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

## Flush the Spray Gun

Flush the gun before changing colors, at the end of the day, before storing, and before repairing the gun.

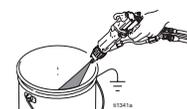
1. Turn the ES ON/OFF valve OFF.



 <b>WARNING</b>	
<b>Fire, Explosion, and Electric Shock Hazard</b>	
	To reduce the risk of fire, explosion, or electric shock, turn the ES ON/OFF valve OFF before flushing the gun.

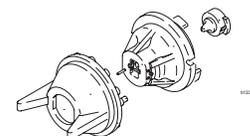
 <b>WARNING</b>	
<b>Fluid Injection Hazard</b>	
	To reduce the risk of a fluid injection injury, always follow the “ <b>Pressure Relief Procedure</b> ”, page 25, whenever you are instructed to relieve the pressure.

2. Relieve the pressure.



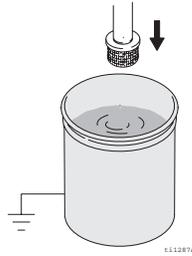
 <b>CAUTION</b>	
Flush the gun with a non-conductive, compatible solvent. Conductive solvents can cause the gun to malfunction.	
Do not use methylene chloride as a flushing or cleaning solvent with this gun as it will damage nylon components.	

3. Remove and clean the air cap and the spray tip.

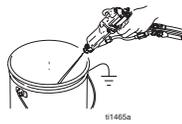


*Continued on page 18.*

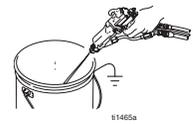
4. Change the fluid source to solvent, or disconnect the fluid line and connect a solvent supply line to the gun.



5. Point the gun into a grounded metal pail. Flush until clean solvent flows from the gun.

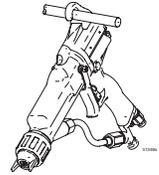


6. Relieve the pressure. Lock the trigger.



7. Shut off or disconnect the solvent line.

8. Hang the gun from its hook, with the nozzle pointing down.



9. When ready to spray again, reconnect the fluid supply line. Follow the Setup procedure in the Gun Operation Manual.

# Electrical Tests

Electrical components inside the gun affect performance and safety. The following procedures test the condition of the power supply (18) and barrel (16), and electrical continuity between components.

## CAUTION

The barrel resistor cartridge is part of the barrel and is not replaceable. To avoid destroying the gun barrel, do not attempt to remove the barrel resistor.

Use megohmmeter Part No. 241079 (AA) with an applied voltage of 500 V. Connect the leads as shown.

## WARNING

### Fire, Explosion, and Electric Shock Hazard



Megohmmeter Part No. 241079 (AA-see Fig. 5) is not approved for use in a hazardous area. To reduce the risk of sparking, do not use the megohmmeter to check electrical grounding unless:

- The gun has been removed from the hazardous area;
- Or all spraying devices in the hazardous area are turned off, ventilation fans in the hazardous area are operating, and there are no flammable vapors in the area (such as open solvent containers or fumes from spraying).

Failure to follow this warning could cause fire, explosion, and electric shock and result in serious injury and property damage.

## Test Gun Resistance

1. Flush and dry the fluid passage.
2. Measure resistance between the electrode needle tip (9b) and the air swivel (35); it should be 156-180 megohms. See Fig. 5. If outside this range, go to the next test. If in range, refer to “**Electrical Troubleshooting**” on page 24 for other possible causes of poor performance.

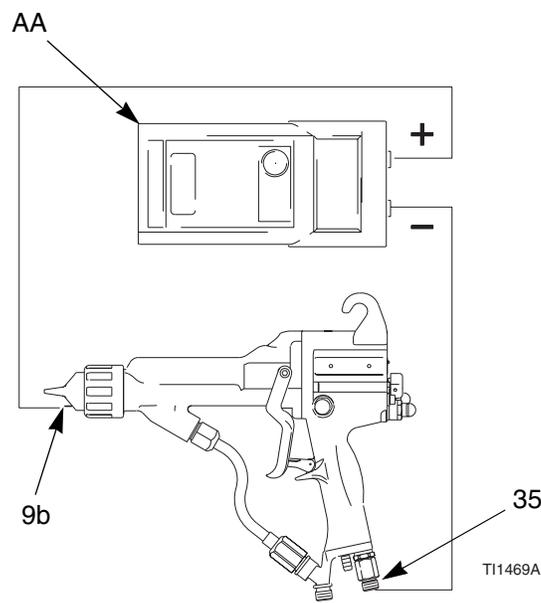
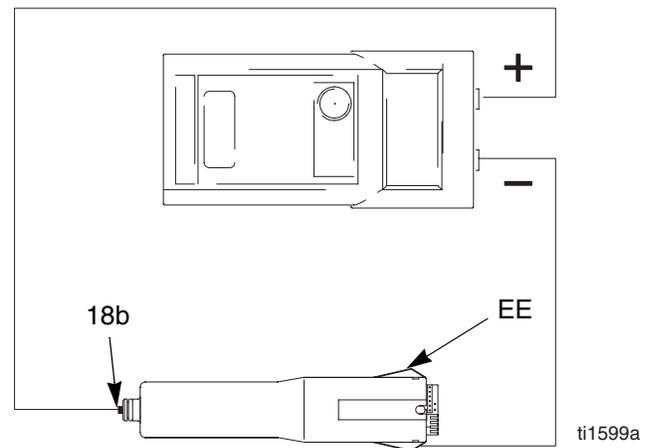


Fig. 5. Test Gun Resistance

## Test Power Supply Resistance

1. Remove the power supply (18), page 33.
2. Remove the turbine alternator (19) from the power supply, page 34.
3. Measure resistance from the power supply's ground strips (EE) to the spring (18b). See Fig. 6.
4. The resistance should be 135-150 megohms. If outside this range, replace the power supply. If in range, proceed to the next test.
5. If you still have problems, refer to **“Electrical Troubleshooting”** on page 24 for other possible causes of poor performance, or contact your Graco distributor.
6. Be sure the spring (18b) is in place before reinstalling the power supply.

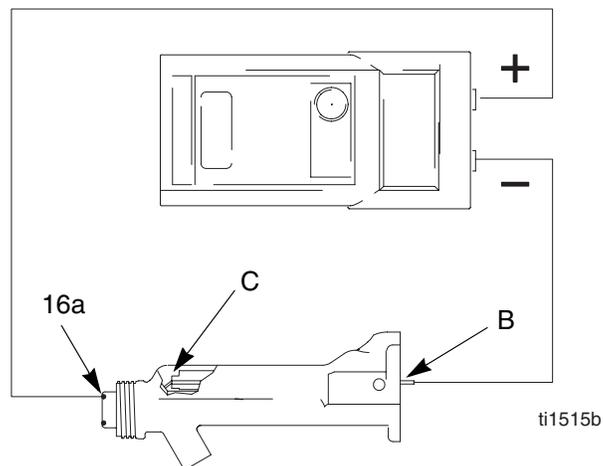


**Fig. 6. Test Power Supply Resistance**

## Test Barrel Resistance

1. Insert a conductive rod (B) into the gun barrel (removed for the power supply test) and against the metal contact (C) in the front of the barrel.
2. Measure the resistance between the conductive rod (B) and the barrel contact ring (16a). See Fig. 7. The resistance should be 19-29 megohms. If the resistance is incorrect, make sure the metal contact (C) in the barrel and the barrel contact ring (16a) are clean and undamaged.
3. If the resistance is still outside the range, remove the barrel contact ring (16a) and measure the resistance between the conductive rod (B) and the wire lead at the bottom of the contact ring groove.
4. If the resistance is in range, replace the contact ring (16a) with a new one. Press the contact ring firmly into the groove on the front of the barrel.

5. If the resistance is still outside the range, replace the barrel.



**Fig. 7. Test Barrel Resistance**

### **WARNING**

#### **Fire, Explosion, and Electric Shock Hazard**



The barrel contact ring (16a) is a conductive contact ring, not a sealing o-ring. To reduce the risk of sparking or electric shock, do not remove the barrel contact ring (16a) except to replace it and never operate the gun without the contact ring in place. Do not replace the contact ring with anything but a genuine Graco part.

# Troubleshooting

## ⚠ WARNING

### Electric Shock Hazard



Installing and servicing this equipment requires access to parts which may cause an electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified.

## ⚠ WARNING

### Fluid Injection Hazard

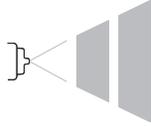
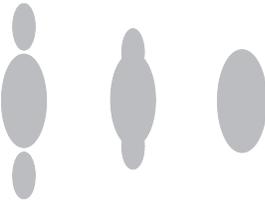


To reduce the risk of a fluid injection injury, always follow the “**Pressure Relief Procedure**” on page 25 whenever you are instructed to relieve the pressure.

**NOTE:** Check all possible remedies in the Troubleshooting Chart before disassembling the gun.

## Spray Pattern Troubleshooting

**NOTE:** Some spray pattern problems are caused by the improper balance between air and fluid.

Problem	Cause	Solution
Fluttering or spitting spray. 	No fluid.	Refill supply.
	Air in fluid supply.	Check fluid source. Refill.
Irregular pattern. 	Fluid buildup; partially plugged tip.	Clean. See gun operation manual.
	Worn/damaged tip or air cap holes.	Clean or replace.
Pattern pushed to one side; air cap gets dirty.	Air cap holes plugged.	Clean. See gun operation manual.
Tails in pattern. 	Air pressure too low.	Open atomizing air adjustment valve.
	Fluid pressure too low.	Increase.
Fluid buildup on air cap/tip guard.	Air pressure too high.	Decrease.
	Fluid pressure too low.	Increase.

## Gun Operation Troubleshooting

Problem	Cause	Solution
Excessive spray fog.	Atomizing air pressure too high.	Close atomizing air valve some, or decrease air pressure as low as possible; minimum 40 psi (0.28 MPa, 2.8 bar) needed at gun for full voltage.
	Fluid too thin.	Increase viscosity.
"Orange Peel" finish.	Atomizing air pressure too low.	Open atomizing air valve more or increase gun air inlet pressure; use lowest air pressure necessary.
	Spray tip is too large.	Use smaller tip. See page 48.
	Poorly mixed or filtered fluid.	Remix or refilter fluid.
	Fluid too thick.	Reduce viscosity.
Fluid leaks from the fluid packing area	Worn fluid needle packings or shaft.	Replace fluid needle assembly (26); see page 31.
Air leaks from the front of the gun	Air valve (21) is not seating properly.	Clean and service air valve; see page 36.
Fluid leakage from the front of the gun	Worn or damaged fluid needle ball.	Replace fluid needle (26); see page 31.
	Worn fluid seat housing (2).	Replace seat housing; see page 27.
	Loose spray tip (3).	Tighten retaining ring (27); see page 27.
	Damaged tip seal (3a).	Replace; see page 27.
Gun does not spray	Low fluid supply.	Add fluid if necessary.
	Damaged spray tip (3).	Replace; see page 27.
	Dirty or clogged spray tip (3).	Clean; see gun operation manual.
	Damaged fluid needle (26).	Replace; see page 31.
Dirty air cap	Damaged or plugged air cap (9).	Clean air cap; see gun operation manual.

# Electrical Troubleshooting

Problem	Cause	Solution
Poor wrap.	ES ON/OFF valve OFF (0).*	Turn ON (I).
	Gun air pressure too low.	Check air pressure to gun; minimum 40 psi (0.28 MPa, 2.8 bar) needed at gun for full voltage.
	Atomizing air pressure too high.	Decrease.
	Fluid velocity too high.	Decrease fluid pressure or replace worn tip.
	Incorrect distance from gun to part.	Should be 8-12 in. (200-300 mm).
	Poorly grounded parts.	Resistance must be 1 megohm or less. Clean workpiece hangers.
	Faulty gun resistance.	See "Test Gun Resistance" on page 19.
	Low fluid resistivity.	Check fluid resistivity. See page 15.
	Fluid leaks from the fluid needle (26) packings and causes a short.	Clean the needle cavity. Replace the fluid needle. See page 31.
	Faulty turbine alternator (19).	Be sure the plug is in place on the back of the turbine alternator housing. Remove and test the turbine alternator. See page 34.
	The KV HI-LO lever is on LO.	Check the lever position; replace if needed.
ES indicator or voltage/current display is not lit.	ES ON/OFF valve OFF (0).*	Turn ON (I).
	No power.	Repair/replace alternator turbine; replace power supply. See page 33.
Voltage/current display stays red (smart guns only).	Gun too close to part.	Should be 8-12 in. (200-300 mm).
	Check fluid resistivity.	See "Check Fluid Resistivity" on page 15.
	Dirty gun.	Clean. See Operation Manual.
Operator gets mild shock.	Operator not grounded or is near ungrounded object.	See "Grounding" on page 13.
	Gun not grounded.	See "Check Electrical Grounding" on page 14 and "Test Gun Resistance" on page 19.
Operator gets shock from workpiece.	Workpiece not grounded.	Resistance must be 1 megohm or less. Clean workpiece hangers.

\* ES indicator light is off when the gun is triggered.

# Repair

## Pressure Relief Procedure

### **WARNING**

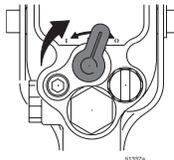
#### Fluid Injection Hazard



The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or electric shock, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure
- stop spraying
- check or repair any of the system equipment
- or install or clean the spray tip.

1. Turn the ES ON/OFF valve OFF.



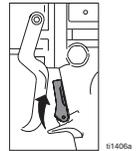
2. Lock the trigger.



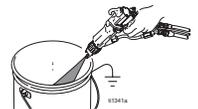
3. Turn off the air bleed valves to the fluid source and to the gun.



4. Unlock the trigger.



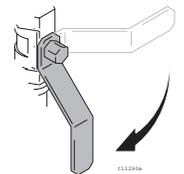
5. Trigger the gun into a grounded metal waste container to relieve the fluid pressure.



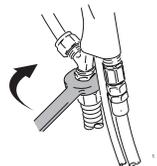
6. Lock the trigger.



7. Open the pump drain valve and all other fluid drain valves in the system, having a waste container ready to catch the drainage. Leave the drain valve(s) open until you are ready to spray again.



8. If the nozzle or hose is completely clogged or pressure is not fully relieved, slowly loosen the hose end coupling. Now clear the nozzle or hose.



## Prepare the Gun for Service

### WARNING

#### Electric Shock Hazard



Installing and repairing this equipment requires access to parts that may cause electric shock or other serious injury if the work is not performed properly. Do not install or service this equipment unless you are trained and qualified.

### WARNING

#### Fluid Injection Hazard



To reduce the risk of injury, follow the “**Pressure Relief Procedure**” on page 25 before checking or repairing any part of the system and whenever you are instructed to relieve the pressure.

#### NOTE:

- Check all possible remedies in “**Troubleshooting**” before disassembling the gun.
- Use a vise with padded jaws to prevent damage to plastic parts.
- Lubricate the power supply o-ring (18a) and the plastic end of the fluid tube (14) with dielectric grease (40).
- Lightly lubricate o-rings and seals with non-silicone grease. Order Part No. 111265 Lubricant. Do not over-lubricate.
- Only use genuine Graco parts. Do not mix or use parts from other PRO Gun models. Note that the air cap, spray tip, and tip guard for this gun are orange.

- Air Seal Repair Kit 244781 is available. The kit must be purchased separately. Kit parts are marked with an asterisk, for example (6\*).

### WARNING

Some PRO Xs4 AA Gun replacement parts look similar to other PRO Gun parts but are not interchangeable! **When repairing, do not mix or use other PRO Gun parts that may look similar, but have different part numbers!** Use of parts other than those specified in the PRO Xs4 AA Gun parts lists could alter the grounding continuity of the gun, cause parts to leak or rupture, or cause the gun to malfunction and result in serious injury, fire, explosion, or property damage.

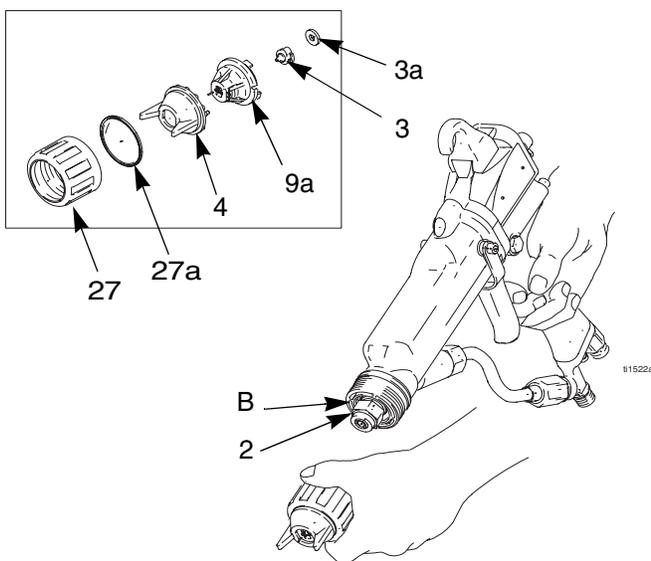
1. Flush the gun, page 17.
2. Relieve the pressure, page 25.
3. Disconnect the gun air and fluid lines.
4. Remove the gun from the worksite. Repair area must be clean.

## Tools Needed

- 2 mm driver (supplied)
- 4 mm driver (supplied)
- 9 mm driver (supplied)
- adjustable wrench
- medium screwdriver
- snap ring pliers
- needle-nose pliers

## Tip Guard, Air Cap, Spray Tip, or Seat Housing Replacement

1. Prepare gun for service, page 26.
2. Remove the retaining ring (27), tip guard (4), air cap (9a), and spray tip (3). You may have to turn the air cap with the tip guard to remove it. See Fig. 8.
3. Replace the tip gasket (3a) if damaged.



**Fig. 8. Tip Guard, Air Cap, and Spray Tip Replacement**

4. Trigger the gun and remove the seat housing (2) with the tool (37) provided. See Fig. 9.



### CAUTION

The barrel resistor cartridge (B) is part of the barrel and is not replaceable. To avoid destroying the gun barrel, do not attempt to remove the barrel resistor.



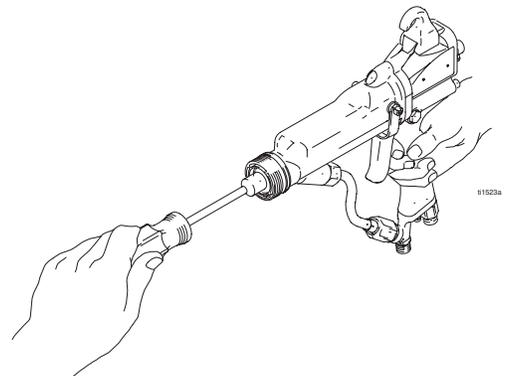
### WARNING

#### Fire, Explosion, and Electric Shock Hazard





The barrel contact ring (16a) is a conductive contact ring, not a sealing o-ring. To reduce the risk of sparking or electric shock, do not remove the barrel contact ring (16a) except to replace it and never operate the gun without the contact ring in place. Do not replace the contact ring with anything but a genuine Graco part.



**Fig. 9. Seat Housing Replacement**

*Continued on page 28.*

 **CAUTION**

To avoid damaging the seat housing and gun barrel, never over-tighten the seat housing. Over-tightening may result in improper fluid shut-off.

5. Trigger the gun and install the gray-colored seat housing (2). Tighten until snug, then 1/4 turn more.

 **CAUTION**

To avoid damaging the tip guard (4), orientate the air cap (9a) before tightening the retaining ring (27). Do not turn the cap when the retaining ring is tight.

6. Assemble the spray tip (3), air cap (9a), and tip guard (4). Make sure the electrode (9b) is not damaged or missing. Install the air cap assembly with the retaining ring (27). The u-cup (27a) lips must face forward.
7. Test gun resistance, page 19.

# Electrode Replacement

## ! WARNING

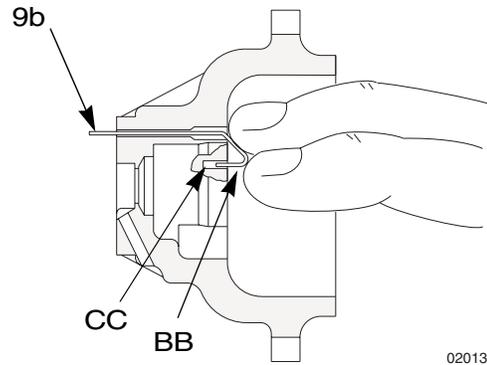
### Electric Shock Hazard



To reduce the risk of fire, explosion, or electric shock, do not operate the spray gun without the electrode installed in the air cap.

1. Prepare the gun for service, page 26.
2. Remove the air cap assembly, page 27.
3. Pull the electrode (9b) out of the back of the air cap, using a needle-nose pliers.

4. Push the new electrode through the air cap hole. Make sure the short end (BB) of the electrode engages the hole (CC) in the back of the air cap. Press the electrode in place firmly with your fingers. See Fig. 10.
5. Install the air cap assembly, page 27.
6. Test gun resistance, page 19.



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**Fig. 10. Electrode Replacement**

## Fluid Tube Replacement

1. Prepare the gun for service, page 26.
2. Disconnect the bottom fluid tube nut (C). See Fig. 11.
3. Carefully unscrew the top fluid tube nut (D).

### CAUTION

Be careful not to damage the fluid tube assembly (14) when cleaning or installing it, especially the sealing surface (E). If the sealing surface is damaged, the entire fluid tube assembly must be replaced.

4. Apply dielectric grease (40) to the entire length of the plastic extension on the end of the fluid tube (14).
5. Apply low strength thread sealant to the fluid tube nut threads.
6. Install the fluid tube into the gun barrel and tighten the top nut (D) hand-tight, then 1/4 to 1/2 turn with a wrench. There will be a gap between the nut and barrel. Do not overtighten the nut.
7. Make sure the fluid filter (1) is in place in the fluid fitting. Tighten the bottom nut (C) onto the fitting and torque to 20-30 in-lb (2.3-3.4 N•m). Make sure the top nut remains tight.

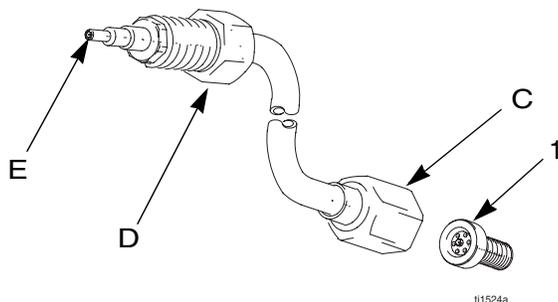


Fig. 11. Fluid Tube Replacement

## Fluid Filter Removal

1. Prepare the gun for service, page 26.
2. Disconnect the bottom fluid tube nut (C).
3. Remove the fluid filter (1) from the fluid fitting. Clean or replace the filter, as needed. See Fig. 12.

**NOTE:** Replacement filters are available in 100 mesh (standard) or 60 mesh sizes. See page 47.

4. Install the fluid filter in the fluid fitting. Tighten the bottom nut (C) onto the fitting and torque to 20-30 in-lb (2.3-3.4 N•m). Make sure the top nut remains tight.

### CAUTION

Be sure the fluid tube (14) is not twisted after tightening the bottom nut (C).

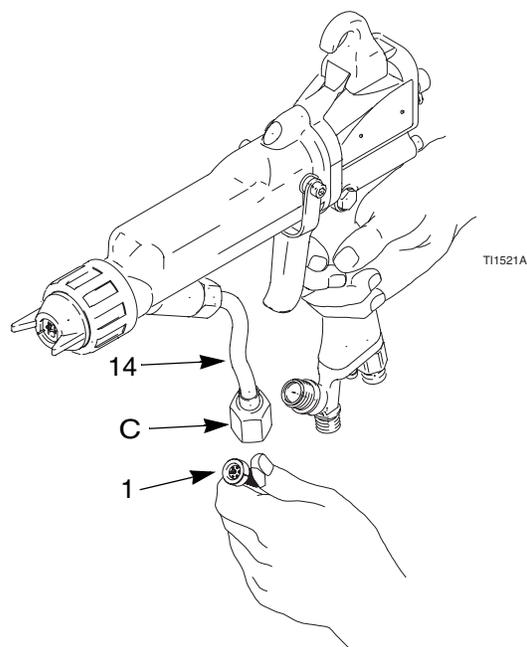


Fig. 12. Fluid Filter Removal

## Fluid Needle Replacement

1. Prepare the gun for service, page 26.
2. Remove the air cap assembly and seat housing, page 27.
3. Remove the barrel (16), page 32.
4. Remove the trigger screws (8) and trigger (30).
5. Remove the spring cap (45) and the spring (26a) from the barrel. See Fig. 13.
6. Place the 2 mm driver (44) in the back of the fluid needle assembly. Push the tool in and turn it counterclockwise about 12 full turns to unthread the needle.
7. Insert the tool in the front of the gun and push the fluid needle assembly out the back of the barrel.

### CAUTION

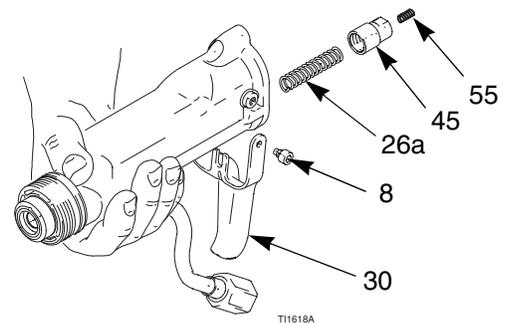
To avoid damaging the needle assembly, be sure the needle is completely unthreaded before pushing it out of the barrel.

8. Install the fluid needle assembly in the gun barrel. Push in on the needle with the tool (44) and tighten. See Fig. 14.
9. Install the spring (26a).
10. Install the spring cap (45), making sure the grounding spring (55) is in place.
11. Install the trigger (30) and screws (8).
12. Install the barrel (16), page 32.

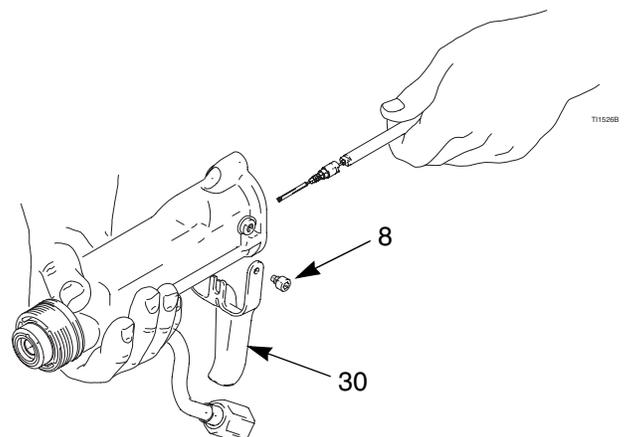
### CAUTION

To avoid damaging the seat housing and gun barrel, never overtighten the seat housing. Overtightening may result in improper fluid shutoff.

13. Install the seat housing and air cap, page 27.
14. Test gun resistance, page 19.



**Fig. 13. Spring Cap and Springs**



**Fig. 14. Fluid Needle Replacement**

## Barrel Removal

1. Prepare the gun for service, page 26.
2. Carefully loosen the nut (C) from the bracket fluid fitting (13). See Fig. 15.
3. Loosen the three screws (11).

### CAUTION

To avoid damaging the power supply (18), pull the gun barrel straight away from the gun handle. If necessary, gently move the gun barrel from side to side to free it from the gun handle.

4. Hold the gun handle (17) with one hand and pull the barrel (16) straight off the handle.

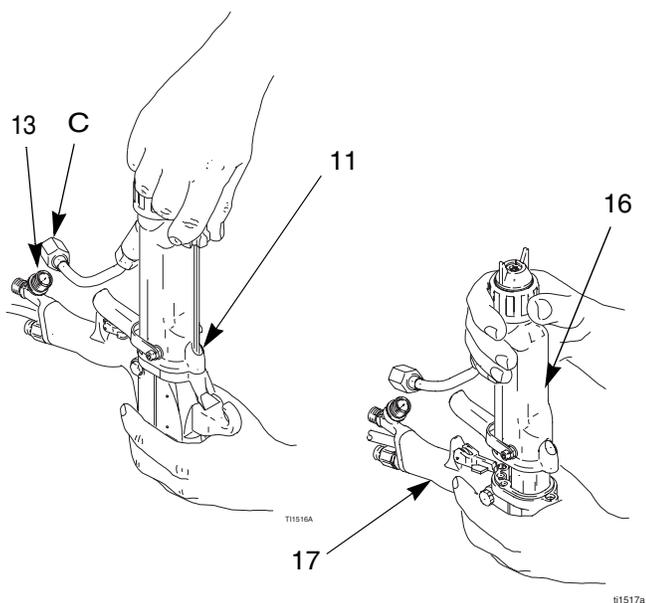


Fig. 15. Barrel Removal

## Barrel Installation

1. Be sure the gasket (10\*, Fig. 16) and grounding spring (55, Fig. 13) are in place and the gasket air holes are aligned properly. Replace if damaged.

2. Place the barrel (16) over the power supply (18) and onto the gun handle (17).
3. Tighten the three screws (11) oppositely and evenly (about a half turn past snug).

### CAUTION

Do not over-tighten the screws (11).

4. Make sure the fluid filter (1) is in place in the fluid fitting. Tighten the bottom fluid tube nut (C) onto the bracket (13) fluid fitting and torque to 20-30 in-lb (2.3-3.4 N•m). Make sure the top nut remains tight.

### CAUTION

Be sure the fluid tube (14) is not twisted after tightening the bottom nut (C).

5. Test gun resistance, page 19.

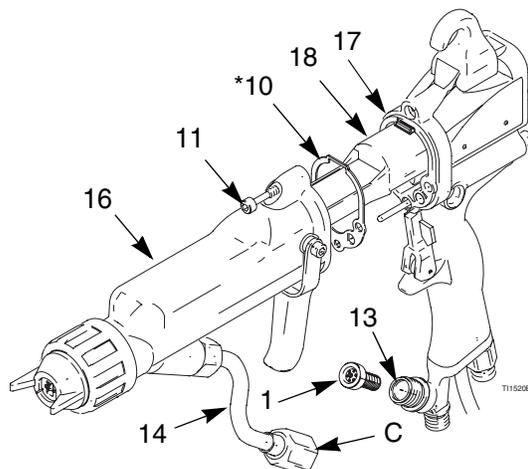


Fig. 16. Barrel Installation

## Power Supply Removal and Replacement

### NOTE:

- Inspect the gun handle power supply cavity for dirt or moisture. Clean with a clean, dry rag.
- Do not expose gasket (10) to solvents.

- Prepare gun for service, page 26.
- Remove the barrel (16), page 32.



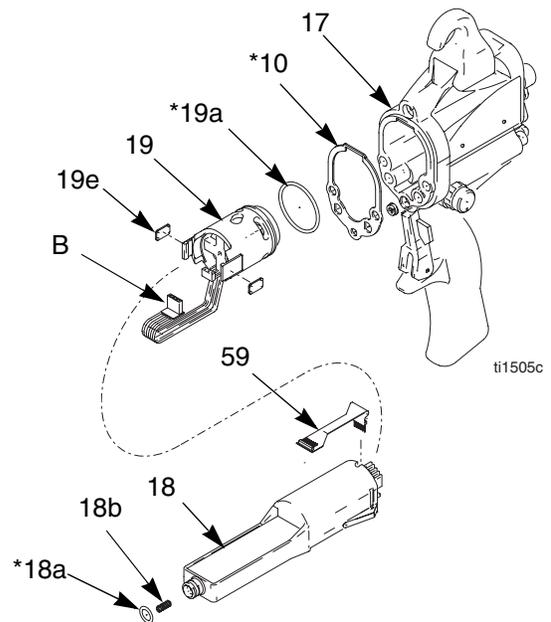
Be careful when handling the power supply (18) to avoid damaging it.

- Grasp the power supply (18) with your hand. With a gentle side to side motion, free the power supply/alternator assembly from the gun handle (17), then carefully pull it straight out. *On Smart Models only*, disconnect the flexible circuit (59) from the socket at the top of the handle (17). See Fig. 17.
- Disconnect the 3-wire connector (B) from the power supply. Slide the alternator up and off the power supply. Inspect the power supply and alternator for damage. *On Smart Models only*, disconnect the 6-pin flexible circuit (59) from the power supply.
- Check the power supply resistance, page 20. Replace if necessary.

**NOTE:** Before installing the power supply, make sure the o-rings (18a\*, 19a\*), spring (18b), and pads (19e) are in place.

- On Smart Models only*, connect the 6-pin flexible circuit (59) to the power supply.

- Connect the 3-wire connector (B). Slide the alternator (19) down onto the power supply (18).
- Lubricate the alternator o-ring (19a\*) with non-silicone grease, Part No. 111265. Do not over-lubricate.
- Lubricate the power supply o-ring (18a\*) with dielectric grease (40).
- Insert the power supply/alternator assembly in the gun handle (17). Make sure the ground strips make contact with the handle. *On Smart Models only*, connect the flexible circuit (59) to the socket at the top of the handle. Push the 6-pin connector into the socket to ensure it is properly connected.
- Install the barrel (16), page 32.
- Test gun resistance, page 19.



**Fig. 17. Power Supply and Turbine Alternator**

## **Turbine Alternator Removal and Replacement**

**NOTE:** Replace turbine bearings after 2000 hours of operation. Order Part No. 223688 Bearing Kit.

1. Prepare gun for service, page 26.
2. Remove the power supply/alternator assembly, page 33.
3. Disconnect the alternator from the power supply, page 33.
4. Measure resistance between the two outer terminals of the 3-wire connector (B); it should be 2.5-3.5 ohms. If outside this range, replace the alternator coil.
5. Follow the bearing replacement procedure in the bearing kit manual 308034.
6. Install the alternator on the power supply, page 33.
7. Install the power supply/alternator assembly, page 33.

## Atomizing Air Adjustment Valve Repair

1. Prepare the gun for service, page 26.
2. Place a wrench on the flats of the valve assembly (20) and unscrew it from the handle (17).

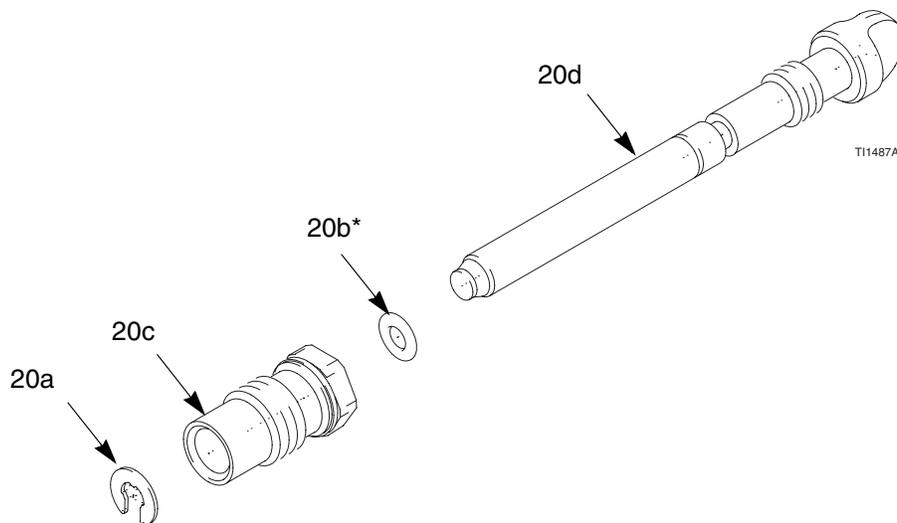
**NOTE:** You may replace the valve as an assembly (go to step 9) or as individual parts (steps 3-9).

3. Remove the retaining ring (20a). See Fig. 18.
4. Turn the valve stem (20d) counterclockwise until it comes free from the valve housing (20c).
5. Remove the o-ring (20b).

6. Clean all parts and inspect for wear or damage.

**NOTE:** Use non-silicone grease, Part No. 111265. Do not over-lubricate.

7. When reassembling the atomizing air valve (20), lightly lubricate the valve threads and screw the stem (20d) fully into the housing (20c) until bottomed. Install the o-ring (20b\*), lubricate, and unscrew the valve stem until the o-ring enters the housing.
8. Reassemble the retaining ring (20a). Unscrew the valve stem from the housing until it is stopped by the retaining ring.
9. Screw the valve assembly (20) into the gun handle, using a wrench on the flats of the housing. Torque to 15-25 in-lb (1.7-2.8 N•m).



**Fig. 18. Atomizing Air Adjustment Valve**

## Air Valve Repair

1. Prepare the gun for service, page 26.
2. Remove the barrel, page 32.
3. Remove the air valve cap (25) from the handle (17). Remove the spring (15). See Fig. 19.

### CAUTION

Clean all parts in non-conductive solvent compatible with the fluid being used, such as xylol or mineral spirits. Use of conductive solvents can cause the gun to malfunction.

4. Remove the air valve (21) with a pliers. Inspect the seal (21a) and replace if damaged. Be sure the seal is pressed securely onto the valve so the outer cone is flat.

### CAUTION

When removing the air valve (21) be careful not to damage the seat area.

5. Inspect the u-cup (6\*). Do not remove the u-cup unless damaged. If removed, install the new one with its lips facing into the gun handle (17).
6. Install the air valve (21) and spring (15) into the gun handle (17).
7. Install the air valve cap (25). Torque to 15-25 in-lb (1.7-2.8 N•m).
8. Install the barrel, page 32.

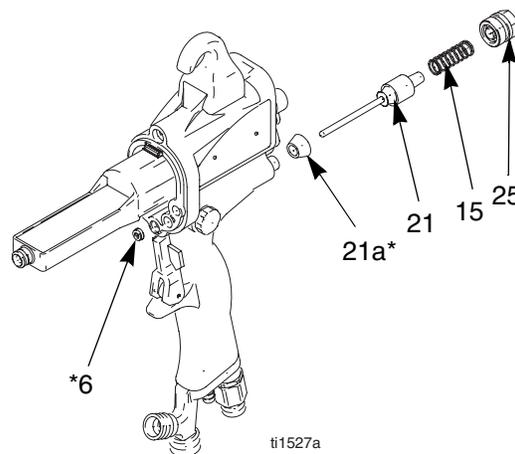


Fig. 19. Air Valve

## ES ON/OFF Valve Repair

1. Prepare the gun for service, page 26.
2. Loosen the screw (48). Remove the valve.
3. Lubricate the o-rings (22a\* and 22b\*) with non-silicone grease, Part No. 111265. Do not over-lubricate.

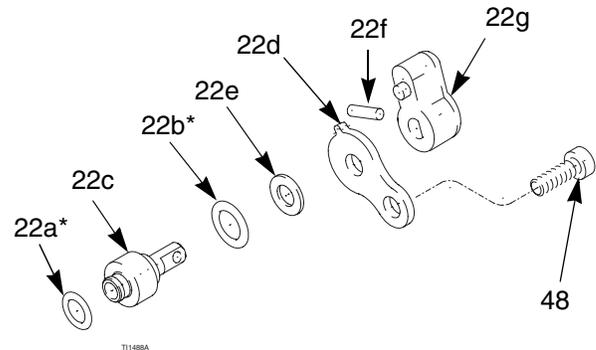
### CAUTION

Do not over-lubricate parts. Excessive lubricant on the o-rings can be pushed into the gun air passage and blemish the finish on the workpiece.

4. Clean and inspect parts for damage. Replace if necessary.

**NOTE:** The protrusion on the retainer plate (22d) must point upward.

5. Reinstall the valve. Torque the screw (48) to 15-25 in-lb (1.7-2.8 N•m).

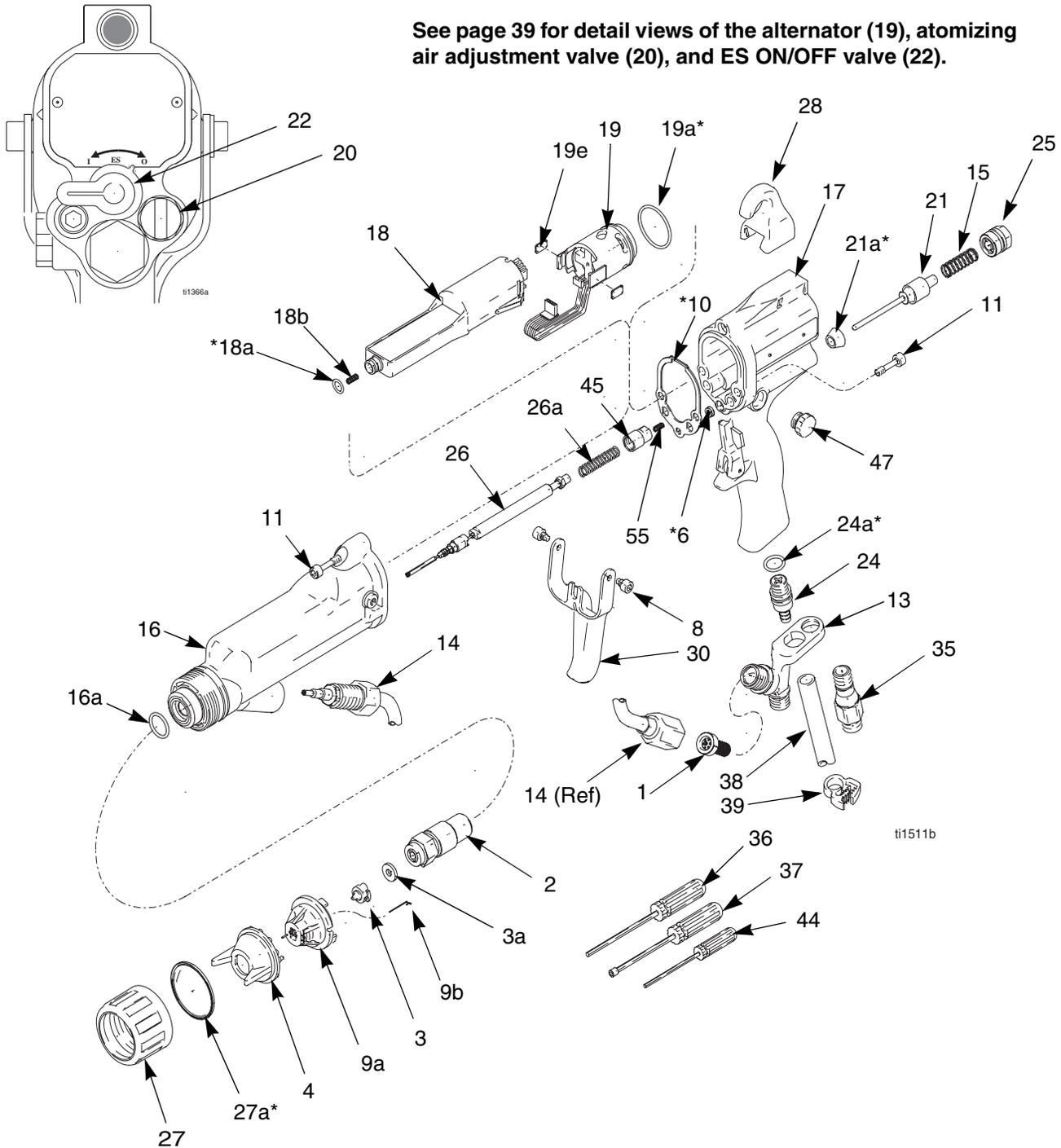


**Fig. 20. ES ON/OFF Valve**

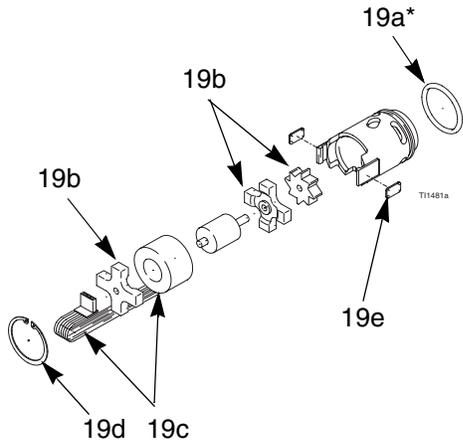
# Parts

## Part No. 244572 85 kV Electrostatic Gun, Series A (items 1-50)

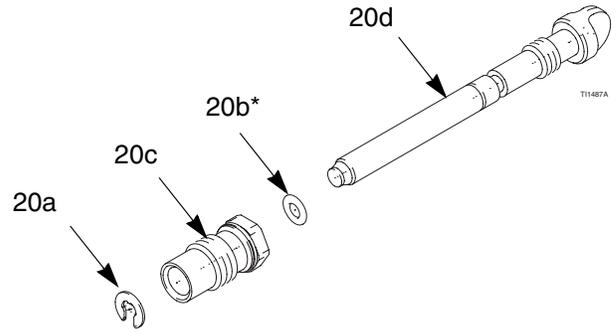
See page 39 for detail views of the alternator (19), atomizing air adjustment valve (20), and ES ON/OFF valve (22).



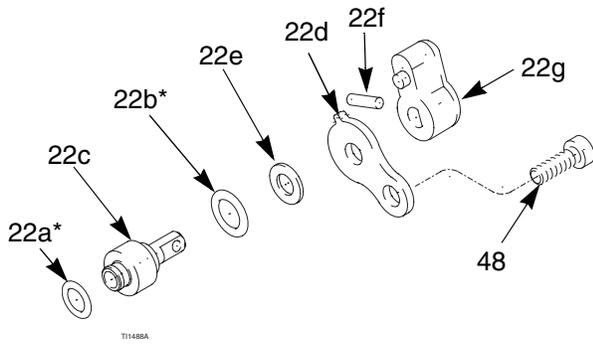
**Ref. No. 19: Alternator**



**Ref. No. 20: Atomizing Air Adjustment Valve**



**Ref. No. 22: ES ON/OFF Valve**

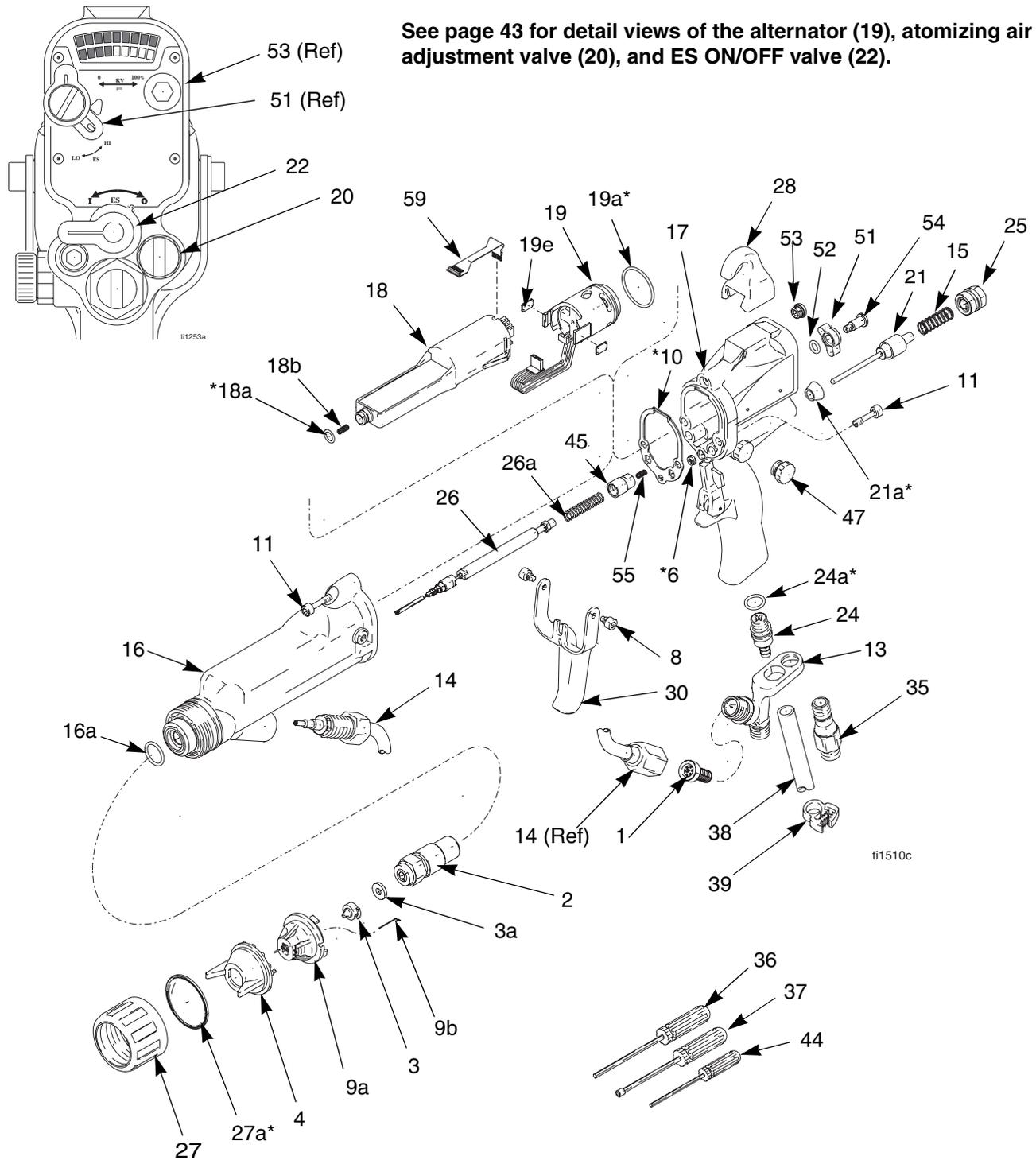


## Part No. 244572 85 kV Electrostatic Gun, Series A (items 1-50)

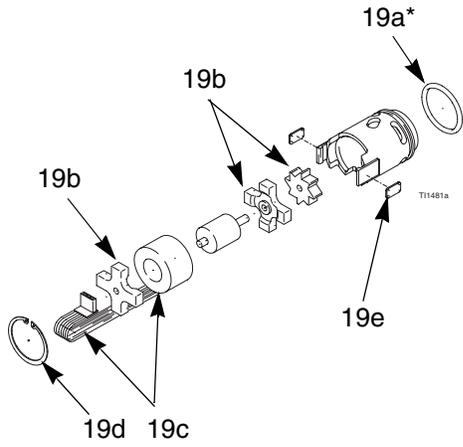
Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
				19c	244577	. COIL	1
1	205264	FILTER, fluid, inline	1	19d	111745	. RING, retaining	1
2	245280	HOUSING, seat	1	19e	198821	. PAD, pressure	2
3	GG3XXX	SPRAY TIP (customer's choice); includes item 3a	1	20	244556	VALVE, adjustment, atomizing air; includes items 20a-20d	1
3a	183459	. SEAL, spray tip	1	20a	101021	. RING, retaining	1
4	276767	TIP GUARD	1	20b*	106560	. O-RING; fluorocarbon	1
6*	188749	PACKING, u-cup, air valve; UHMWPE	1	20c	197566	. HOUSING, valve	1
				20d	197567	. STEM, valve	1
8	197369	SCREW, trigger	2	21	244557	VALVE, air; includes item 21a	1
9	245276	AIR CAP ASSEMBLY	1	21a*	276733	. SEAL; fluoroelastomer	1
9a	198679	. AIR CAP	1	22	244558	VALVE, electrostatics, ON/OFF; includes items 22a-22g	1
9b	244917	. ELECTRODE (kit of 5)	1	22a*	111516	. O-RING; CV75	1
10*	197517	GASKET, barrel	1	22b*	113137	. O-RING; fluoroelastomer	1
11	197518	SCREW; socket-hd; 10-24 x 3/4 in. (19 mm)	3	22c	198403	. SHAFT, valve	1
13	197832	BRACKET, inlet, fluid	1	22d	198404	. PLATE, retaining	1
14	244713	TUBE, fluid	1	22e	198453	. WASHER	1
15	185116	SPRING, compression	1	22f	198464	. PIN	1
16	244531	BARREL, gun; includes item 16a	1	22g	276753	. KNOB	1
16a	197486	. O-RING; conductive	1	24	244560	VALVE, exhaust; includes item 24a	1
17	245286	HANDLE, gun	1	24a*	106555	. O-RING; fluoroelastomer	1
18	244541	POWER SUPPLY, 85 kV; includes items 18a-18b	1	25	197966	CAP, air valve	1
18a*	103337	. O-RING; Viton®	1	26	244714	NEEDLE, fluid; includes item 26a	1
18b	197624	. SPRING, compression	1	26a	112691	. SPRING, compression	1
19	244555	TURBINE, alternator; includes items 19a-19e	1	27	244927	RING, retaining, air cap; includes item 27a	1
19a*	110073	. O-RING; Viton®	1	27a*	198307	. PACKING, u-cup	1
19b	223688	. BEARING KIT; includes front and rear bearings and fan	1	28	276695	HOOK	1
				30	276698	TRIGGER	1
				35	185105	FITTING, air; left-hand threads	1

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
36	107460	WRENCH, ball end; 4 mm	1	44	112080	TOOL, needle; 2 mm	1
37	110087	DRIVER, hex nut; 9 mm	1	45	198516	CAP, spring	
38	185103	TUBE, exhaust	1	47	197967	PLUG	1
39	110231	CLAMP	1	48	198058	SCREW, cap, socket hd	1
40	116553	GREASE, dielectric, tube (not shown)	1	49	222385	CARD, warning (not shown); replacement available at no cost	1
41	244915	COVER, gun; box of 10 (not shown)	1	50	188774	TAG, warning (not shown); replacement available at no cost	1
42	179791	TAG, warning (not shown); replacement available at no cost	1	* Included in Air Seal Repair Kit 244781.			
43	180060	SIGN, warning (not shown); replacement available at no cost	1	Replacement Warning labels, signs, tags, and cards are available at no cost.			

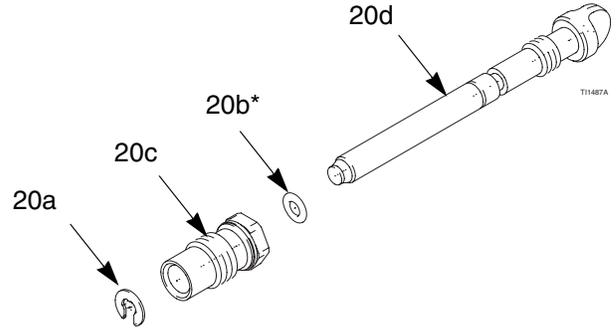
**Part No. 244573 85 kV Electrostatic Gun, Series A (items 1-59)**



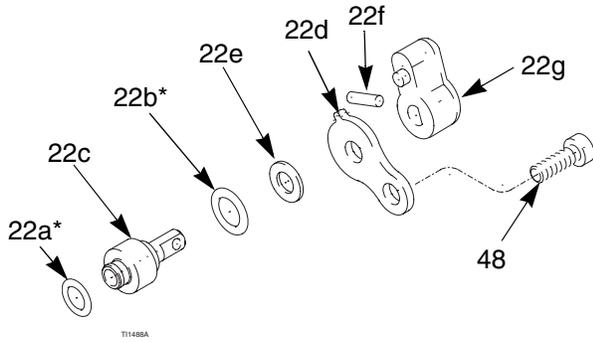
**Ref. No. 19: Alternator**



**Ref. No. 20: Atomizing Air Adjustment Valve**



**Ref. No. 22: ES ON/OFF Valve**



## Part No. 244573 85 kV Electrostatic Gun, Series A (items 1-59)

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
				19c	244577	. COIL	1
1	205264	FILTER, fluid, inline	1	19d	111745	. RING, retaining	1
2	245280	HOUSING, seat	1	19e	198821	. PAD, pressure	2
3	GG3XXX	SPRAY TIP (customer's choice); includes item 3a	1	20	244556	VALVE, adjustment, atomizing air; includes items 20a-20d	1
3a	183459	. SEAL, spray tip	1	20a	101021	. RING, retaining	1
4	276767	TIP GUARD	1	20b*	106560	. O-RING; fluorocarbon	1
6*	188749	PACKING, u-cup, air valve; UHMWPE	1	20c	197566	. HOUSING, valve	1
				20d	197567	. STEM, valve	1
8	197369	SCREW, trigger	2	21	244557	VALVE, air; includes item 21a	1
9	245276	AIR CAP ASSEMBLY	1	21a*	276733	. SEAL; fluoroelastomer	1
9a	198679	. AIR CAP	1	22	244558	VALVE, electrostatics, ON/OFF; includes items 22a-22g	1
9b	244917	. ELECTRODE (kit of 5)	1				
10*	197517	GASKET, barrel	1	22a*	111516	. O-RING; CV75	1
11	197518	SCREW; socket-hd; 10-24 x 3/4 in. (19 mm)	3	22b*	113137	. O-RING; fluoroelastomer	1
				22c	198403	. SHAFT, valve	1
13	197832	BRACKET, inlet, fluid	1	22d	198404	. PLATE, retaining	1
14	244713	TUBE, fluid	1	22e	198453	. WASHER	1
15	185116	SPRING, compression	1	22f	198464	. PIN	1
16	244531	BARREL, gun; includes item 16a	1	22g	276753	. KNOB	1
16a	197486	. O-RING; conductive	1	24	244560	VALVE, exhaust; includes item 24a	1
17	245288	HANDLE, gun	1				
18	244541	POWER SUPPLY, 85 kV; includes items 18a-18b	1	24a*	106555	. O-RING; fluoroelastomer	1
				25	197966	CAP, air valve	1
18a*	103337	. O-RING; Viton®	1	26	244714	NEEDLE, fluid; includes item 26a	1
18b	197624	. SPRING, compression	1	26a	112691	. SPRING, compression	1
19	244555	TURBINE, alternator; includes items 19a-19e	1	27	244927	RING, retaining, air cap; includes item 27a	1
19a*	110073	. O-RING; Viton®	1	27a*	198307	. PACKING, u-cup	1
19b	223688	. BEARING KIT; includes front and rear bearings and fan	1	28	276695	HOOK	1
				30	276698	TRIGGER	1

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
35	185105	FITTING, air; left-hand threads	1	47	197967	PLUG	1
36	107460	WRENCH, ball end; 4 mm	1	48	198058	SCREW, cap, socket hd	1
37	110087	DRIVER, hex nut; 9 mm	1	49	222385	CARD, warning (not shown); replacement available at no cost	1
38	185103	TUBE, exhaust	1	50	188774	TAG, warning (not shown); replacement available at no cost	1
39	110231	CLAMP	1	51	244627	SWITCH, ES HI/LO	1
40	116553	GREASE, dielectric, tube (not shown)	1	52	111450	O-RING	1
41	244915	COVER, gun; box of 10 (not shown)	1	53	276734	PLUG, LO voltage adjustment	1
42	179791	TAG, warning (not shown); replacement available at no cost	1	54	197910	SCREW, pivot	1
43	180060	SIGN, warning (not shown); replacement available at no cost	1	55	197624	SPRING, grounding	1
44	112080	TOOL, needle; 2 mm	1	59	245265	CIRCUIT, flexible	1
45	198516	CAP, spring		* Included in Air Seal Repair Kit 244781.			
Replacement Warning labels, signs, tags, and cards are available at no cost.							

# Accessories

## Air Line Accessories

### AirFlex™ Flexible Grounded Air Hose

100 psi (7 bar, 0.7 MPa) Maximum Working Pressure  
0.315 in. (8 mm) ID; 1/4 npsm(f) x 1/4 npsm(f) left-hand thread

244963	6 ft (1.8 m)
244964	15 ft (4.6 m)
244965	25 ft (7.6 m)
244966	36 ft (11 m)
244967	50 ft (15 m)
244968	75 ft (23 m)
244969	100 ft (30.5 m)

### Standard Grounded Air Hose

100 psi (7 bar, 0.7 MPa) Maximum Working Pressure  
0.315 in. (8 mm) ID; 1/4 npsm(f) x 1/4 npsm(f) left-hand thread

223068	6 ft (1.8 m)
223069	15 ft (4.6 m)
223070	25 ft (7.6 m)
223071	36 ft (11 m)
223072	50 ft (15 m)
223073	75 ft (23 m)
223074	100 ft (30.5 m)

### Grounded Air Whip Hose

100 psi (7 bar, 0.7 MPa) Maximum Working Pressure  
0.188 in. (5 mm) ID; 1/4 npsm(m) x 1/4 npsm(f) left-hand threads

236130	3 ft (0.9 m)
236131	6 ft (1.8 m)

### Bleed-Type Master Air Valve

300 psi (21 bar, 2.1 MPa) Maximum Working Pressure  
Relieves air trapped in the air line between this valve and the pump air motor when closed.

107141	3/4 npt
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### Air Line Shutoff Valve

150 psi (10 bar, 1.0 MPa) Maximum Working Pressure  
For turning air to gun on or off.

224754	1/4 npsm(m) x 1/4 npsm(f) left-hand thread.
--------	---------------------------------------------

### Air Line Quick Disconnect

112534 Swiveling quick disconnect replaces standard air inlet swivel.

### Air Hose Adapter Nipple

185493 Use to connect multiple air hoses. 1/4 npt x 1/4 npsm left-hand thread.

### Non-Swivel Air Inlet Fitting

185105 Replaces standard swivel. Left-hand thread.

### Extended Air Inlet Fitting

189191 Replaces standard swivel to provide extended handle grip area. Left-hand thread.

## Fluid Line Accessories

### Nylon Fluid Hose

3000 psi (210 bar, 21 MPa) Maximum Working Pressure

223540	1/4 in. (6 mm) ID x 25 ft (7.6 m), 1/4 npsm
223541	1/4 in. (6 mm) ID x 50 ft (15.2 m), 1/4 npsm

### Fluid Whip Hose

3000 psi (210 bar, 21 MPa) Maximum Working Pressure  
0.125 in. (3 mm) ID; 1/4 npsm(f) x 1/4 npt(m)

236134	3 ft (0.9 m)
236135	6 ft (1.8 m)

### Fluid Shutoff/Drain Valve

5000 psi (350 bar, 35 MPa) Maximum Working Pressure  
For turning fluid on or off to the gun and for relieving fluid line pressure at the pump.

210657	1/2 npt(m), Viton seals
210658	3/8 npt(m), Viton seals
210659	3/8 npt x 1/4 npt(m), Viton seals
214037	1/4 npt(m), PTFE seals

### Fluid Swivel

5800 psi (405 bar, 40 MPa) Maximum Working Pressure  
115898 1/4 npsm(m) x 1/4 npsm(f)

## Gun Accessories

### Gun Repair Kit

244781 Air Seal Repair Kit

### Electrode Replacement Kit

244917 Includes five electrodes.

### Inline Fluid Filters

238561 100 mesh filter. Set of three.

238563 60 mesh filter. Set of three.

### Round Pattern Kit

Provides higher level of performance to electrostatic spraying.

245282 Includes tip of choice.

### ES Always On Kit

244913 Replaces inlet fitting with ball valve to shut off air during flushing. Converts ES ON/OFF valve to always ON condition.

### Handle Grips

245263 Medium Grip

245264 Large Grip

### Gun Washer Kit

245271 Use to convert Graco gun washers so they can clean PRO Xs4 air-assisted spray guns.

### Gun Valve Lubricant

111265 4 oz (113 g) tube of sanitary (non-silicone) lubricant for fluid seals and wear areas.

### Alternator Bearing Kit

223688 To repair the turbine alternator.

### Cleaning Brush

105749 For cleaning air cap and fluid nozzle.

## Miscellaneous Accessories

### Ground Wire and Clamp

222011 For grounding pump and other components and equipment in the spray area. 12 gauge, 25 ft (7.6 m).

### Megohmmeter

241079 500 Volt output; 0.01-2000 megohms.  
*Not for use in hazardous areas.*

### Paint Resistance Meter

722886 Use with 722860 Paint Probe to measure resistance of paint.  
*Not for use in hazardous areas.*

### Paint Probe

722860 Use with 722886 Paint Resistance Meter to measure resistance of paint.  
*Not for use in hazardous areas.*

### Safety Warning Sign

180060 English Warning Sign. FM Approved.  
Available at no charge from Graco.

### Instruction Signs

198310 English Setup Instructions.

198320 English Daily Care Instructions.

# Spray Tip Selection Chart

Part No.	Fan Width at 10 in. (250 mm) in. (mm)	Orifice Size in. (mm)
GG3107	2-4 (50-100)	0.007 (0.178)
GG3207	4-6 (100-150)	
GG3307	6-8 (150-200)	
GG3209	4-6 (100-150)	0.009 (0.229)
GG3309	6-8 (150-200)	
GG3409	8-10 (200-250)	
GG3211	4-6 (100-150)	0.011 (0.279)
GG3311	6-8 (150-200)	
GG3411	8-10 (200-250)	
GG3511	10-12 (250-300)	
GG3611	12-14 (300-350)	
GG3213	4-6 (100-150)	0.013 (0.330)
GG3313	6-8 (150-200)	
GG3413	8-10 (200-250)	
GG3513	10-12 (250-300)	
GG3613	12-14 (300-350)	
GG3215	4-6 (100-150)	0.015 (0.381)
GG3315	6-8 (150-200)	
GG3415	8-10 (200-250)	
GG3515	10-12 (250-300)	
GG3615	12-14 (300-350)	

Part No.	Fan Width at 10 in. (250 mm) in. (mm)	Orifice Size in. (mm)
GG3217	4-6 (100-150)	0.017 (0.432)
GG3317	6-8 (150-200)	
GG3417	8-10 (200-250)	
GG3517	10-12 (250-300)	
GG3617	12-14 (300-350)	
GG3319	6-8 (150-200)	0.019 (0.483)
GG3419	8-10 (200-250)	
GG3519	10-12 (250-300)	
GG3619	12-14 (300-350)	
GG3719	14-16 (350-400)	
GG3421	8-10 (200-250)	0.021 (0.533)
GG3521	10-12 (250-300)	
GG3621	12-14 (300-350)	
GG3721	14-16 (350-400)	
GG3821	16-18 (400-450)	
GG3423	8-10 (200-250)	0.023 (0.584)
GG3523	10-12 (250-300)	
GG3623	12-14 (300-350)	
GG3723	14-16 (350-400)	
GG3823	16-18 (400-450)	
GG3425	8-10 (200-250)	0.025 (0.635)
GG3525	10-12 (250-300)	
GG3625	12-14 (300-350)	
GG3725	14-16 (350-400)	
GG3825	16-18 (400-450)	

# Technical Data

Category	Data
Maximum Working Fluid Pressure	3000 psi (21 MPa, 210 bar)
Maximum Working Air Pressure	100 psi (0.7 MPa, 7 bar)
Minimum Air Pressure to Gun Inlet	40 psi (0.28 MPa, 2.8 bar)
Maximum Fluid Operating Temperature	120°F (48°C)
Paint Resistivity Range	3 megohm/cm to infinity
Short Circuit Current Output	125 microamperes
Voltage Output	PRO Xs4 AA (244572): 85 kV PRO Xs4 AA (244573): 40-85 kV
Sound Power (measured per ISO Standard 9216)	at 40 psi (0.28 MPa, 2.8 bar): 88.9 dB(A) at 100 psi (0.7 MPa, 7 bar): 99.7 dB(A)
Sound Pressure (measured 1 m from gun)	at 40 psi (0.28 MPa, 2.8 bar): 86.0 dB(A) at 100 psi (0.7 MPa, 7 bar): 95.0 dB(A)
Air inlet fitting, left-hand thread	1/4 npsm(m)
Fluid inlet fitting	1/4-18 npsm(m)
Gun Weight	29.1 oz (825 g)
Gun Length	11.4 in. (29 cm)
Wetted Parts	Stainless Steel; Nylon, Acetal, Ultra-High Molecular Weight Polyethylene, Fluoroelastomer, PEEK, Tungsten Wire, Polyethylene

PTFE and Viton®

*Loctite® is a registered trademark of the Loctite Corporation.*

# Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months or two thousand hours of operation from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. However, any deficiency in the barrel, handle, trigger, hook, internal power supply, and alternator (excluding turbine bearings) will be repaired or replaced for thirty-six months or six thousand hours of operation from the date of sale. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

## **FOR GRACO CANADA CUSTOMERS**

The parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

# Graco Phone Numbers

***TO PLACE AN ORDER***, contact your Graco distributor, or call this number to identify the distributor closest to you:

**1-800-367-4023 Toll Free**

**612-623-6921**

**612-378-3505 Fax**

*All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.*

**Sales Offices:** Minneapolis, Detroit

**International Offices:** Belgium, Korea, Hong Kong, Japan

**GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441**

**www.graco.com**

*PRINTED IN USA 309295 10/2001*

**EDS AND MSDS SHEETS**

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## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identification

**Product ID:** 53-X145B  
**Product Name:** COMPONENT B URETHANE CATALYST (PAIL)  
**Product Use:** Paint or Coatings Related Product  
**Print date:** 30/Mar/2011  
**Revision Date:** 03/Sep/2010

### Company Identification

The Valspar Corporation  
PO Box 1461  
Minneapolis, MN 55440

**Manufacturer's Phone:** 1-612-332-7371

**24-Hour Medical Emergency  
Phone:** 1-888-345-5732

## 2. HAZARDS IDENTIFICATION

### Primary Routes of Exposure:

Inhalation  
Ingestion  
Skin absorption

### Eye Contact:

- Moderate eye irritation

### Skin Contact:

- May cause defatting of the skin.
- Causes skin irritation.
- Dermatitis
- May cause sensitization by skin contact.

### Ingestion:

- Irritation of the mouth, throat, and stomach.
- Aspiration hazard if swallowed - can enter lungs and cause damage.

### Inhalation:

- Causes respiratory tract irritation.
- Harmful by inhalation.

- Difficulty in breathing
- May cause pulmonary edema.
- May cause bronchopneumonia or bronchitis.
- May cause sensitization by inhalation.

**Target Organ and Other Health Effects:**

- Causes headache, drowsiness or other effects to the central nervous system.
- Kidney injury may occur.
- Liver injury may occur.
- Blood disorders

**This product contains ingredients that may contribute to the following potential chronic health effects:**

- Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
- Overexposures may cause certain individuals to develop isocyanate sensitization which causes a reaction in isocyanates below the TLV.
- Chronic exposure may cause permanent damage of health.
- As a result of a previous exposure or a large single dose certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to subsequent exposures to isocyanates below the TLV. Symptoms of wheezing, cough, shortness of breath or asthma attack. Individuals may develop lung sensitivity which may persist for long periods. May cause lung damage or impairment. Sensitization may be temporary or permanent.
- Possible sensitization.

**3. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS**

<b>Ingredient Name CAS-No.</b>	<b>Approx. Weight %</b>	<b>Chemical Name</b>
PROPRIETARY RESIN	70 - 75	PROPRIETARY RESIN
BUTYL ACETATE 123-86-4	10 - 15	n-Butyl acetate
AROMATIC NAPHTHA, LIGHT 64742-95-6	5 - 10	Petroleum naphtha, light aromatic
1,2,4-TRIMETHYLBENZENE 95-63-6	5 - 10	1,2,4-Trimethylbenzene

If this section is blank there are no hazardous components per OSHA guidelines.

**4. FIRST AID MEASURES**

**Eye Contact:**

Get medical attention, if symptoms develop or persist. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyes wide apart.

**Skin Contact:**

Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

**Ingestion:**

Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention immediately.

**Inhalation:**

Move injured person into fresh air and keep person calm under observation. Get medical attention immediately. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration.

**Medical conditions aggravated by exposure:**

Any respiratory or skin condition.

**5. FIRE FIGHTING MEASURES**

Flash point (Fahrenheit):	84
Flash point (Celsius):	29
Lower explosive limit (%):	1
Upper explosive limit (%):	8
Autoignition temperature:	not determined
Sensitivity to impact:	no
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.
Hazardous combustion products:	See Section 10.

**Unusual fire and explosion hazards:**

None known.

**Extinguishing media:**

Carbon dioxide, dry chemical, foam and/or water fog.

**Fire fighting procedures:**

Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

**6. ACCIDENTAL RELEASE MEASURES****Action to be taken if material is released or spilled:**

Ventilate the area. Avoid breathing dust or vapor. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 7, "Handling and Storage", for proper container and storage procedures. Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Avoid all personal contact.

**7. HANDLING AND STORAGE****Precautions to be taken in handling and storage:**

Keep away from heat, sparks and open flame. - No smoking. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

**8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS****Personal Protective Equipment****Eye and face protection:**

Chemical goggles, also wear a face shield if splashing hazard exists.

**Skin protection:**

Gloves: Neoprene or other nonporous.

**Other Personal Protection Data:**

To prevent skin contact wear protective clothing covering all exposed areas. Chemical resistant apron

**Respiratory protection:**

If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

**Ventilation**

Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Ovens used for curing should contain a fresh air purge to prevent vapours from accumulating and creating a possible explosive mixture. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

**Exposure Guidelines****OSHA Permissible Exposure Limits (PEL's)**

Ingredient Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
BUTYL ACETATE 123-86-4	10 - 15	150 ppm TWA 710 mg/m <sup>3</sup> TWA		

**ACGIH Threshold Limit Value (TLV's)**

Ingredient Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
BUTYL ACETATE 123-86-4	10 - 15	150 ppm TWA	200 ppm STEL		
1,2,4-TRIMETHYLBENZENE 95-63-6	5 - 10	25 PPM			

**9. PHYSICAL PROPERTIES**

Odor:	Normal for this product type.
Physical State:	liquid
pH:	not determined
Vapor pressure:	9.7744361 mmHg @ 68°F (20°C)
Vapor density (air = 1.0):	4.3
Boiling point:	not determined
Solubility in water:	not determined
Coefficient of water/oil distribution:	not determined
Density (lbs per US gallon):	8.84
Specific Gravity:	1.06
Evaporation rate (butyl acetate = 1.0):	1
Flash point (Fahrenheit):	84
Flash point (Celsius):	29
Lower explosive limit (%):	1
Upper explosive limit (%):	8
Autoignition temperature:	not determined

**10. STABILITY AND REACTIVITY**

Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat.
Incompatibility:	Strong oxidizing agents
Hazardous Polymerization:	None anticipated.

## 10. STABILITY AND REACTIVITY

Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide. Nitrogen compounds.

Sensitivity to static discharge:

Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 11. TOXICOLOGICAL INFORMATION

Ingredient Name CAS-No.	Approx. Weight %	NIOSH - Selected LD50s and LC50s
PROPRIETARY RESIN	70 - 75	= 18500 mg/m <sup>3</sup> Inhalation LC50 Rat 1 h
BUTYL ACETATE 123-86-4	10 - 15	= 10768 mg/kg Oral LD50 Rat = 390 ppm Inhalation LC50 Rat 4 h > 17600 mg/kg Dermal LD50 Rabbit
AROMATIC NAPHTHA, LIGHT 64742-95-6	5 - 10	= 3400 ppm Inhalation LC50 Rat 4 h = 8400 mg/kg Oral LD50 Rat > 2000 mg/kg Dermal LD50 Rabbit > 5.2 mg/L Inhalation LC50 Rat 4 h
1,2,4-TRIMETHYLBENZENE 95-63-6	5 - 10	= 18 g/m <sup>3</sup> Inhalation LC50 Rat 4 h = 3400 mg/kg Oral LD50 Rat > 3160 mg/kg Dermal LD50 Rabbit

Mutagens/Teratogens/Carcinogens: None known.

## 12. ECOLOGICAL DATA

No information on ecology is available.

## 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORTATION INFORMATION

### U.S. Department of Transportation

UN ID Number (msds): UN1263  
Proper Shipping Name: PAINT  
Hazard Class: 3  
Packing Group: III  
Hazardous Ingredient (Land) 1: BUTYL ACETATE  
Hazardous Ingredient (Land) 2: AROMATIC NAPHTHA, LIGHT

### U.S Hazmat and/or International DG shipment exceptions

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

### Reportable Quantity Description:

### International Air Transport Association (IATA):

UN ID Number (msds): UN1263  
Proper Shipping Name: Paint  
Hazard Class: 3

Packing Group: III  
IATA N.O.S. Technical Name 1: BUTYL ACETATE  
IATA N.O.S. Technical Name 2: AROMATIC NAPHTHA, LIGHT

**International Maritime Organization (IMO):**

IMO UN/ID Number (msds): UN1263  
Proper Shipping Name: PAINT  
Hazard Class: 3  
Packing Group: III  
IMDG N.O.S. Technical Name 1: BUTYL ACETATE  
IMDG N.O.S. Technical Name 2: AROMATIC NAPHTHA, LIGHT

**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS:**

Ingredient Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ in lbs.
BUTYL ACETATE 123-86-4	10 - 15			5000
1,2,4-TRIMETHYLBENZENE 95-63-6	5 - 10		Listed.	

**SARA 311/312 Hazard Class:**

Acute: yes  
Chronic: yes  
Flammability: yes  
Reactivity: no  
Sudden Pressure: no

**U.S. STATE REGULATIONS:**

**Right to Know:**

The specific chemical identity of a component may be withheld as a trade secret under 34 Pennsylvania Code, Chapter 317.

**Pennsylvania Right To Know:**

BUTYL ACETATE	123-86-4
PROPRIETARY RESIN	Trade Secret
AROMATIC NAPHTHA, LIGHT	64742-95-6
1,2,4-TRIMETHYLBENZENE	95-63-6

**Rule 66 status of product** Photochemically reactive.

**INTERNATIONAL REGULATIONS - Chemical Inventories**

**US TSCA Inventory:**

All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

**Canada Domestic Substances List:**

All components of this product are listed on the Domestic Substances List.

**16. OTHER INFORMATION**

**HMIS Codes**

Health: 2\*  
Flammability: 3

## 16. OTHER INFORMATION

**Reactivity:** 1  
**PPE:** X - See Section 8 for Personal Protective Equipment (PPE).

### Abbreviations:

OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

### Disclaimer:

The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. VALSPAR WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option. This MSDS contains additional information required by the state of Pennsylvania.

### Preparation Information:

Prepared By: Regulatory Affairs Department  
Print date: 30/Mar/2011  
Revision Date: 03/Sep/2010

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## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identification

**Product ID:** 400.0000865.076  
**Product Name:** 865 UNIVERSAL BLEND 6UC  
**Product Use:** Paint product.  
**Print date:** 11/Mar/2011  
**Revision Date:** 11/Mar/2011

### Company Identification

The Valspar Corporation  
1000 Lake Road  
Medina, OH 44256

**Manufacturer's Phone:** 1-330-725-4511

**24-Hour Medical Emergency  
Phone:** 1-888-345-5732

## 2. HAZARDS IDENTIFICATION

### Primary Routes of Exposure:

Inhalation  
Ingestion  
Skin absorption

### Eye Contact:

- Severe eye irritation

### Skin Contact:

- May cause defatting of the skin.
- Dermatitis
- Causes skin irritation.

### Ingestion:

- Irritation of the mouth, throat, and stomach.
- Harmful if swallowed.
- Aspiration hazard if swallowed - can enter lungs and cause damage.

### Inhalation:

- Causes respiratory tract irritation.
- Harmful by inhalation.

- Asphyxia

**Acute Other Health Effects:**

- May cause frostbite
- Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Target Organ and Other Health Effects:**

- Causes headache, drowsiness or other effects to the central nervous system.
- Cardiac arrhythmias
- Blood disorders
- Kidney injury may occur.
- Liver injury may occur.

**This product contains ingredients that may contribute to the following potential chronic health effects:**

- Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**3. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS**

Ingredient Name CAS-No.	Approx. Weight %	Chemical Name
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	45 - 50	Acetone
PROPANE 74-98-6	15 - 20	Propane
METHYL ETHYL KETONE 78-93-3	15 - 20	Methyl ethyl ketone
BUTANE 106-97-8	10 - 15	Butane
ETHYL 3- ETHOXYPROPIONATE 763-69-9	1 - 5	Ethyl 3-ethoxypropionate

If this section is blank there are no hazardous components per OSHA guidelines.

**4. FIRST AID MEASURES**

**Eye Contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. If medical assistance is not immediately available, flush an additional 15 minutes. Get medical attention immediately.

**Skin Contact:**

Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

**Ingestion:**

Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention immediately.

**Inhalation:**

Move injured person into fresh air and keep person calm under observation. Get medical attention immediately. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Do not give direct mouth-to-mouth resuscitation if inhaled. To protect rescuer, use air-viva, oxy-viva or one-way mask. Resuscitate in a well-ventilated area.

**Medical conditions aggravated by exposure:**

Any respiratory or skin condition.

**5. FIRE FIGHTING MEASURES**

Flash point (Fahrenheit):	-31
Flash point (Celsius):	-35
Lower explosive limit (%):	1
Upper explosive limit (%):	16
Autoignition temperature:	not determined
Sensitivity to impact:	no
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.
Hazardous combustion products:	See Section 10.

**Unusual fire and explosion hazards:**

None known.

**Extinguishing media:**

Carbon dioxide, dry chemical, foam and/or water fog.

**Fire fighting procedures:**

Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

**6. ACCIDENTAL RELEASE MEASURES****Action to be taken if material is released or spilled:**

Ventilate the area. Avoid breathing dust or vapor. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 7, "Handling and Storage", for proper container and storage procedures. Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Avoid contact with eyes.

**7. HANDLING AND STORAGE****Precautions to be taken in handling and storage:**

Keep away from heat, sparks and open flame. - No smoking. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

**8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS****Personal Protective Equipment****Eye and face protection:**

Chemical goggles, also wear a face shield if splashing hazard exists.

**Skin protection:**

Appropriate chemical resistant gloves should be worn.

#### Other Personal Protection Data:

To prevent skin contact wear protective clothing covering all exposed areas.

#### Respiratory protection:

If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

#### Ventilation

Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Ovens used for curing should contain a fresh air purge to prevent vapours from accumulating and creating a possible explosive mixture. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

#### Exposure Guidelines

##### OSHA Permissible Exposure Limits (PEL's)

Ingredient Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	45 - 50	1000 ppm TWA 2400 mg/m <sup>3</sup> TWA		
PROPANE 74-98-6	15 - 20	1000 ppm TWA 1800 mg/m <sup>3</sup> TWA		
METHYL ETHYL KETONE 78-93-3	15 - 20	200 ppm TWA 590 mg/m <sup>3</sup> TWA		

##### ACGIH Threshold Limit Value (TLV's)

Ingredient Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	45 - 50	500 ppm TWA	750 ppm STEL		
PROPANE 74-98-6	15 - 20	1000 ppm TWA			
METHYL ETHYL KETONE 78-93-3	15 - 20	200 ppm TWA	300 ppm STEL		
BUTANE 106-97-8	10 - 15	1000 ppm TWA			

## 9. PHYSICAL PROPERTIES

Odor:	Normal for this product type.
Physical State:	Aerosol
pH:	not determined
Vapor pressure:	NOT DETERMINED mmHg @ 68°F (20°C)
Vapor density (air = 1.0):	5.0
Boiling point:	not determined
Solubility in water:	not determined
Coefficient of water/oil distribution:	not determined
Density (lbs per US gallon):	5.85
Evaporation rate (butyl acetate = 1.0):	5.7
Flash point (Fahrenheit):	-31
Flash point (Celsius):	-35

## 9. PHYSICAL PROPERTIES

Lower explosive limit (%): 1  
Upper explosive limit (%): 16  
Autoignition temperature: not determined

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.  
Conditions to Avoid: Heat.  
Incompatibility: Strong oxidizing agents  
Hazardous Polymerization: None anticipated.  
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

**Sensitivity to static discharge:** Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 11. TOXICOLOGICAL INFORMATION

Ingredient Name CAS-No.	Approx. Weight %	NIOSH - Selected LD50s and LC50s
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	45 - 50	= 5800 mg/kg Oral LD50 Rat
PROPANE 74-98-6	15 - 20	= 658 mg/L Inhalation LC50 Rat 4 h
METHYL ETHYL KETONE 78-93-3	15 - 20	= 2737 mg/kg Oral LD50 Rat = 32 g/m <sup>3</sup> Inhalation LC50 Mouse 4 h = 6480 mg/kg Dermal LD50 Rabbit
BUTANE 106-97-8	10 - 15	= 658 mg/L Inhalation LC50 Rat 4 h
ETHYL 3- ETHOXYPROPIONATE 763-69-9	1 - 5	= 10 mL/kg Dermal LD50 Rabbit = 3200 mg/kg Oral LD50 Rat

**Mutagens/Teratogens/Carcinogens:** None known.

## 12. ECOLOGICAL DATA

No information on ecology is available.

## 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORTATION INFORMATION

### U.S. Department of Transportation

UN ID Number (msds): CONCOM  
Proper Shipping Name: CONSUMER COMMODITY ORM-D [Paint]

### U.S Hazmat and/or International DG shipment exceptions

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

**Reportable Quantity Description:****International Air Transport Association (IATA):**

UN ID Number (msds): UN1950  
 Proper Shipping Name: AEROSOLS, FLAMMABLE  
 Hazard Class: 2.1

**International Maritime Organization (IMO):**

IMO UN/ID Number (msds): UN1950  
 Proper Shipping Name: AEROSOLS, FLAMMABLE  
 Hazard Class: 2.1

**15. REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS:**

Ingredient Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ in lbs.
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	45 - 50			5000
METHYL ETHYL KETONE 78-93-3	15 - 20			5000

**SARA 311/312 Hazard Class:**

Acute: yes  
 Chronic: yes  
 Flammability: yes  
 Reactivity: no  
 Sudden Pressure: yes

**U.S. STATE REGULATIONS:****Right to Know:**

The specific chemical identity of a component may be withheld as a trade secret under 34 Pennsylvania Code, Chapter 317.

**Pennsylvania Right To Know:**

BUTANE	106-97-8	
DIMETHYL KETONE- EXEMPT SOLVENT		67-64-1
PROPANE	74-98-6	
ETHYL 3-ETHOXYPROPIONATE		763-69-9
METHYL ETHYL KETONE	78-93-3	

**Rule 66 status of product**

Not photochemically reactive.

**INTERNATIONAL REGULATIONS - Chemical Inventories****US TSCA Inventory:**

All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

**Canada Domestic Substances List:**

All components of this product are listed on the Domestic Substances List.

**16. OTHER INFORMATION****HMIS Codes**

## 16. OTHER INFORMATION

**Health:** 2\*  
**Flammability:** 4  
**Reactivity:** 1  
**PPE:** X - See Section 8 for Personal Protective Equipment (PPE).

### Abbreviations:

OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

### Disclaimer:

The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. UNLESS VALSPAR AGREES OTHERWISE IN WRITING, VALSPAR MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. VALSPAR WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option. This MSDS contains additional information required by the state of Pennsylvania.

### Preparation Information:

Prepared By: Regulatory Affairs Department  
Print date: 11/Mar/2011  
Revision Date: 11/Mar/2011

# The Valspar Corporation

## Material Safety Data Sheet

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Material Identification

**Product ID:** 760B789  
Product Name: GLOSS BLACK LOW HAPS ACRYLIC  
Product Use: Paint product.  
Date Published: 2005/02/10  
Revision Date: 2005/02/10

#### Company Identification

The Valspar Corporation The Valspar Corporation - Packaging Division  
2350 114TH ST.  
GRAND PRAIRIE, TX 75050  
Manufacturer's Phone: 1-972-647-9049

**24-Hour Medical Emergency Phone:** 1-888-345-5732

### 2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Common Name CAS #	Approx Wt%	Chemical name
BUTYL ACETATE 123-86-4	35 - 40	n-Butyl acetate
AROMATIC NAPHTHA, LIGHT 64742-95-6	1 - 5	Petroleum naphtha, light aromatic
1,2,4-TRIMETHYLBENZENE 95-63-6	1 - 5	PSEUDO CUMENE
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	1 - 5	Ethylene glycol monobutyl ether acetate
Trade Secret : SUPPLIER TRADE SECRET	1 - 5	SUPPLIER TRADE SECRET

If this section is blank there are no hazardous components per OSHA guidelines.

### 3. HAZARDS IDENTIFICATION

#### Primary Routes of Exposure:

Inhalation  
Ingestion  
Skin absorption

#### Emergency Overview:

This section not in use.

**This product contains ingredients that may contribute to the following potential acute health effects:**

**Inhalation Effects:**

Harmful if inhaled. May affect the brain, nervous system, or respiratory system, causing dizziness, headache, nausea or respiratory irritation.

**Eye Contact:**

May cause moderate eye irritation.

**Skin Contact:**

Harmful if absorbed through the skin.

**Acute Ingestion:**

None known

**Other Effects:**

May cause kidney damage. May cause liver damage.

**This product contains ingredients that may contribute to the following potential chronic health effects:**

Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. May cause eye damage and pain. Contains glycol ether which has been shown to cause blood effects damage in laboratory animals. Possible cancer hazard. Contains ingredients which may cause cancer based on animal data. Risk of cancer depends on duration and level of exposure. May cause liver damage.

See Section 11 for toxicological information about Mutagens, Teratogens and Carcinogens.

If this section is blank, no information is available.

## **4. FIRST AID MEASURES**

**Inhalation:**

If affected by inhalation, move victim to fresh air. If symptoms persist, seek medical attention.

**Eye Contact:**

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. If irritation persists get medical attention.

**Ingestion:**

If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Medical conditions aggravated by exposure:** Any respiratory or skin condition.

## **5. FIRE FIGHTING MEASURES**

Flash point (Fahrenheit):	81° F ( 27° C) TCC/PM
Lower explosive limit:	1 %
Upper explosive limit:	8 %
Autoignition temperature:	Not available.° F ( ° C)
Sensitivity to impact:	No.
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.
Hazardous combustion products:	See Section 10.

#### **Unusual fire and explosion hazards:**

Contaminated rags, wipes, saw dust, etc., may catch fire spontaneously. Store waste under water in closed metal containers until disposed of in compliance with applicable regulations. Contains oxidizable materials.

#### **Extinguishing media:**

Carbon dioxide, dry chemical, foam and/or water fog.

#### **Fire fighting procedures:**

Use water spray to cool nearby containers and structures exposed to fire.

## **6. ACCIDENTAL RELEASE MEASURES**

#### **Action to be taken if material is released or spilled:**

Ventilate area. Avoid breathing of vapors. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 5, "Unusual Fire and Explosion Hazards", for proper container and storage procedures. Remove sources of ignition. Remove with inert absorbent and non sparking tools. Avoid all personal contact.

## **7. HANDLING AND STORAGE**

#### **Precautions to be taken in handling and storage:**

Keep away from heat, sparks, and flames. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

## **8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS**

### **Personal Protective Equipment**

#### **Eye and face protection:**

Wear chemical goggles with splash shields or face shield. Contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury in case of exposure.

#### **Skin protection:**

Appropriate chemical resistant gloves should be worn. To prevent skin contact wear protective clothing covering all exposed areas.

#### **Respiratory protection:**

If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

**Ventilation**

Required when spraying or applying in confined area. Ventilation equipment should be explosion proof. Eliminate ignition sources.

**Exposure Guidelines****OSHA Permissible Exposure Limits (PEL's)**

Common Name CAS #	Approx Wt%	TWA (final)	Ceilings limits (final)	Skin designations
BUTYL ACETATE 123-86-4	35 - 40	710 MGM3 150 ppm		
Trade Secret : SUPPLIER TRADE SECRET	1 - 5	3.5 MGM3 5 MGM3 Respirable fraction. 15 MGM3 Total dust. Respirable fraction. Listed. Total dust. Listed.		

**ACGIH Threshold Limit Value (TLV's)**

Common Name CAS #	Approx Wt%	TWA	STEL	Ceiling limits	Skin designations
BUTYL ACETATE 123-86-4	35 - 40	150 ppm	200 ppm		
1,2,4-TRIMETHYLBENZENE 95-63-6	1 - 5	25 ppm			
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	1 - 5	20 ppm			
Trade Secret : SUPPLIER TRADE SECRET	1 - 5	3.5 MGM3 10 MGM3 Inhalable particles. 3 MGM3 Respirable particles.			

If this section is blank, no information is available.

**9. PHYSICAL PROPERTIES**

Odor:	Normal for this product type.
Physical State:	Liquid
pH:	Not determined.
Vapor pressure:	8 mmHG @ 68° F ( 20° C)
Vapor density (air = 1.0):	5.5
Boiling point:	259° F ( 126° C)
Solubility in water:	Insoluble.

Coefficient of water/oil distribution: Not determined.  
 Density (lbs per US gallon): 8.34  
 Specific gravity (water = 1): 1  
 Evaporation rate (butyl acetate = 1.0): 1

## 10. STABILITY AND REACTIVITY

Stability: This product is stable.  
 Conditions to Avoid: None known.  
 Incompatibility: Strong oxidizers.  
 Hazardous Polymerization: None anticipated.  
 Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

**Sensitivity to static discharge:** Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 11. TOXICOLOGICAL INFORMATION

**Mutagens:**

**Teratogens:**

**Carcinogens:**

Common Name CAS #	Approx Wt%	IARC Group 1 - Human Evidence	IARC Group 2A - limited human data	IARC Group 2b - sufficient animal data
Trade Secret : SUPPLIER TRADE SECRET	1 - 5			Monograph 65, 1996

Common Name CAS #	Approx Wt%	OSHA Select carcinogens	OSHA Possible select carcinogens	ACGIH Carcinogens
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	1 - 5			Group A3 Confirmed animal carcinogen with unknown relevance to humans.

If this section is blank, no information is available.

## 12. ECOLOGICAL DATA

Not available at this time.

## 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORTATION INFORMATION

**U.S. Department of Transportation**

Proper Shipping Name: PAINT  
 Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: III

**49 CFR Hazardous Material Regulations Parts 100-180**

The supplier will apply the combustible liquid exception in 49 CFR 173.150(f), limited quantity or "does not sustain combustion" exceptions and consumer commodity rules, when authorized. Please check 49 CFR Parts 100-180 to determine if the use of these exceptions applies to your shipments when re-shipping our products.

**International Air Transport Association:**

Proper Shipping Name: PAINT  
 Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: III

**International Maritime Organization:**

Proper Shipping Name: PAINT  
 Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: III

**15. REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS:**

Common Name CAS #	Approx Wt%	SARA 302	SARA 313	CERCLA RQ IN LBS.
BUTYL ACETATE 123-86-4	35 - 40			5000 LBS 100 LBS
1,2,4-TRIMETHYLBENZENE 95-63-6	1 - 5		form R reporting required for 1.0% de minimis concentration	
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	1 - 5		YES	

**SARA 311/312 Hazard Class:**

Acute: Yes  
 Chronic: Yes  
 Flammability: Yes  
 Reactivity: No  
 Sudden Pressure: No

**U.S. STATE REGULATIONS:****Pennsylvania Right To Know:**

1,2,4-TRIMETHYLBENZENE  
 ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE  
 BUTYL ACETATE  
 SUPPLIER TRADE SECRET

95-63-6  
 112-07-2  
 123-86-4  
 Trade Secret

Product ID: 760B789

**Additional Non-Hazardous Materials**PROPRIETARY RESIN  
PROPRIETARY RESINTrade Secret  
Trade Secret**Rule 66 status of product** Photochemically reactive.**INTERNATIONAL REGULATIONS - Chemical Inventories****TSCA Inventory:** All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.**Canada Domestic Substances List:** Not all components in this product are listed on the Domestic Substances List.**16. OTHER INFORMATION****HMIS Codes**

<b>Health:</b>	2
<b>Flammability:</b>	3
<b>Reactivity:</b>	1
<b>PPE:</b>	X - See Section 8 for Personal Protective Equipment (PPE).

**Abbreviations:**

OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

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## Material Safety Data Sheet

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### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Product Identification

**Product ID:** X01  
**Product Name:** REDUCER FAST LOW VOC  
**Product Use:** None specified.  
**Print date:** 26/Mar/2015  
**Revision Date:** 13/Oct/2014

#### Company Identification

The Valspar Corporation  
PO Box 1461  
Minneapolis, MN 55440

**Manufacturer's Phone:** 1-612-851-7000

**24-Hour Medical Emergency Phone:** 1-888-345-5732

### 2. HAZARDS IDENTIFICATION

#### Primary Routes of Exposure:

Inhalation  
Ingestion  
Skin absorption

#### Eye Contact:

- Severe eye irritation

#### Skin Contact:

- May cause defatting of the skin.

#### Ingestion:

- Irritation of the mouth, throat, and stomach.
- Aspiration hazard if swallowed - can enter lungs and cause damage.

#### Inhalation:

- Causes respiratory tract irritation.

**Target Organ and Other Health Effects:**

- Blood disorders
- Causes headache, drowsiness or other effects to the central nervous system.
- Kidney injury may occur.

**This product contains ingredients that may contribute to the following potential chronic health effects:**

- Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**3. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS**

Ingredient Name CAS-No.	Approx. Weight %	Chemical Name
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	95 - 100	Acetone

If this section is blank there are no hazardous components per OSHA guidelines.

**4. FIRST AID MEASURES**

**Eye Contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. If medical assistance is not immediately available, flush an additional 15 minutes. Get medical attention immediately.

**Skin Contact:**

Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

**Ingestion:**

Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Get medical attention immediately.

**Inhalation:**

Move injured person into fresh air and keep person calm under observation. Get medical attention, if symptoms develop or persist.

**Medical conditions aggravated by exposure:**

Any respiratory or skin condition.

**5. FIRE FIGHTING MEASURES**

Flash point (Fahrenheit):	1
Flash point (Celsius):	-17
Lower explosive limit (%):	3
Upper explosive limit (%):	13
Autoignition temperature:	not determined
Sensitivity to impact:	no
Sensitivity to static discharge:	Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 5. FIRE FIGHTING MEASURES

Hazardous combustion products:

See Section 10.

### Unusual fire and explosion hazards:

None known.

### Extinguishing media:

Carbon dioxide, dry chemical, foam and/or water fog.

### Fire fighting procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

## 6. ACCIDENTAL RELEASE MEASURES

### Action to be taken if material is released or spilled:

Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 7, "Handling and Storage", for proper container and storage procedures. Avoid contact with eyes.

## 7. HANDLING AND STORAGE

### Precautions to be taken in handling and storage:

Keep away from heat, sparks and open flame. - No smoking. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

## 8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS

### Personal Protective Equipment

#### Eye and face protection:

Wear safety glasses or goggles to protect against exposure.

#### Skin protection:

Appropriate chemical resistant gloves should be worn.

#### Other Personal Protection Data:

Usual industrial work clothes.

#### Respiratory protection:

If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

#### Ventilation

Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Ovens used for curing should contain a fresh air purge to prevent vapours from accumulating and creating a possible explosive mixture. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

### Exposure Guidelines

#### OSHA Permissible Exposure Limits (PEL's)

Ingredient Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	95 - 100	1000 ppm TWA 2400 mg/m <sup>3</sup> TWA		

#### ACGIH Threshold Limit Value (TLV's)

Ingredient Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	95 - 100	500 ppm TWA	750 ppm STEL		

## 9. PHYSICAL PROPERTIES

Odor:	Normal for this product type.
Physical State:	liquid
pH:	not determined
Vapor pressure:	175.1879699 mmHg @ 68°F (20°C)
Vapor density (air = 1.0):	2
Boiling point:	132.89°F (56°C)
Solubility in water:	Complete (soluble in all proportions)
Coefficient of water/oil distribution:	not determined
Density (lbs per US gallon):	6.59
Specific Gravity:	0.791
Evaporation rate (butyl acetate = 1.0):	5.6
Flash point (Fahrenheit):	1
Flash point (Celsius):	-17
Lower explosive limit (%):	3
Upper explosive limit (%):	13
Autoignition temperature:	not determined

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	Heat.
Incompatibility:	None known.
Hazardous Polymerization:	None anticipated.
Hazardous Decomposition Products:	Carbon monoxide and carbon dioxide.

**Sensitivity to static discharge:** Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 11. TOXICOLOGICAL INFORMATION

Ingredient Name CAS-No.	Approx. Weight %	NIOSH - Selected LD50s and LC50s
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	95 - 100	= 5800 mg/kg Oral LD50 Rat

**Mutagens/Teratogens/Carcinogens:** None known.

## 12. ECOLOGICAL DATA

No information on ecology is available.

## 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORTATION INFORMATION

### U.S. Department of Transportation

UN ID Number (msds): UN1090  
Proper Shipping Name: ACETONE  
Hazard Class: 3  
Packing Group: II

### U.S Hazmat and/or International DG shipment exceptions

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

### Reportable Quantity Description:

### International Air Transport Association (IATA):

UN/ID No: UN1090  
Proper shipping name: ACETONE  
Hazard Class: 3  
Packing Group: II

### International Maritime Organization (IMO):

UN/ID No: UN1090  
Proper shipping name: ACETONE  
Hazard Class: 3  
Packing Group: II  
Marine Pollutant: No

## 15. REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS:

Ingredient Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ in lbs.
DIMETHYL KETONE- EXEMPT SOLVENT 67-64-1	95 - 100			5000

### SARA 311/312 Hazard Class:

Acute: yes  
Chronic: yes  
Flammability: yes  
Reactivity: no  
Sudden Pressure: no

### U.S. STATE REGULATIONS:

**Right to Know:**

The specific chemical identity of a component may be withheld as a trade secret under 34 Pennsylvania Code, Chapter 317.

**Pennsylvania Right To Know:**

DIMETHYL KETONE- EXEMPT SOLVENT

67-64-1

**Rule 66 status of product**

Not photochemically reactive.

**INTERNATIONAL REGULATIONS - Chemical Inventories****US TSCA Inventory:**

All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

**Canada Domestic Substances List:**

All components of this product are listed on the Domestic Substances List.

**16. OTHER INFORMATION****HMIS Codes**

<b>Health:</b>	2
<b>Flammability:</b>	3
<b>Reactivity:</b>	0
<b>PPE:</b>	X - See Section 8 for Personal Protective Equipment (PPE).

**Abbreviations:**

OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

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**Preparation Information:**

Prepared By:	Regulatory Affairs Department
Print date:	26/Mar/2015
Revision Date:	13/Oct/2014

# The Valspar Corporation Material Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Material Identification

**Product ID:** UER85100  
Product Name: SLOW URETHANE/EPOXY REDUCER  
Product Use: Paint product.  
Print date: 02/Feb/2006  
Revision Date: 01/Feb/2006

### Company Identification

The Valspar Corporation  
2350 114TH ST.  
GRAND PRAIRIE, TX 75050  
Manufacturer's Phone: 1-972-647-9049

**24-Hour Medical Emergency Phone:** 1-888-345-5732

## 2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Common Name CAS-No.	Approx. Weight %	Chemical name
AROMATIC NAPHTHA, LIGHT 64742-95-6	30 - 35	Petroleum naphtha, light aromatic
1,2,4-TRIMETHYLBENZENE 95-63-6	20 - 25	PSEUDO CUMENE
BUTYL ACETATE 123-86-4	15 - 20	ACETIC ACID, BUTYL ESTER
METHYL ETHYL KETONE 78-93-3	10 - 15	Methyl ethyl ketone
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	5 - 10	Ethylene glycol monobutyl ether acetate
XYLENE 1330-20-7	5 - 10	Xylenes (o-, m-, p- isomers)
ETHYLBENZENE 100-41-4	1 - 5	Ethyl benzene
CUMENE 98-82-8	1 - 5	Cumene

If this section is blank there are no hazardous components per OSHA guidelines.

## 3. HAZARDS IDENTIFICATION

### Primary Routes of Exposure:

Inhalation  
Ingestion  
Skin absorption

**Emergency Overview:**

This section not in use.

**This product contains ingredients that may contribute to the following potential acute health effects:****Inhalation Effects:**

Harmful if inhaled. May affect the brain, nervous system, or respiratory system, causing dizziness, headache, nausea or respiratory irritation.

**Eye Contact:**

May cause moderate eye irritation.

**Skin Contact:**

Harmful if absorbed through the skin.

**Acute Ingestion:**

None known

**Other Effects:**

May cause liver damage. May cause kidney damage.

**This product contains ingredients that may contribute to the following potential chronic health effects:**

Notice: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. May cause redness and blistering of skin. Contains glycol ether which has been shown to cause blood effects damage in laboratory animals. May cause liver damage.

See Section 11 for toxicological information about Mutagens, Teratogens and Carcinogens.

If this section is blank, no information is available.

## 4. FIRST AID MEASURES

**Inhalation:**

If affected by inhalation, move victim to fresh air. If symptoms persist, seek medical attention.

**Eye Contact:**

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. If irritation persists get medical attention.

**Ingestion:**

If swallowed, do not induce vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Get medical attention immediately. If swallowed, get medical attention immediately.

**Medical conditions aggravated by exposure:** Any respiratory or skin condition.

## 5. FIRE FIGHTING MEASURES

Flash point (Fahrenheit):	20° F ( -7° C) TCC/PM
Lower explosive limit:	1 %
Upper explosive limit:	16 %
Autoignition temperature:	Not available. ° F ( ° C)
Sensitivity to impact:	No.

Sensitivity to static discharge:

Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

Hazardous combustion products:

See Section 10.

**Unusual fire and explosion hazards:**

None known.

**Extinguishing media:**

Carbon dioxide, dry chemical, foam and/or water fog.

**Fire fighting procedures:**

Use water spray to cool nearby containers and structures exposed to fire. Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Action to be taken if material is released or spilled:**

Ventilate area. Avoid breathing of vapors. Use self-containing breathing apparatus or airmask for large spills in a confined area. Wipe, scrape or soak up in an inert material and put in a container for disposal. See section 5, "Unusual Fire and Explosion Hazards", for proper container and storage procedures. Remove sources of ignition. Remove with inert absorbent and non sparking tools. Avoid contact with eyes.

## 7. HANDLING AND STORAGE

**Precautions to be taken in handling and storage:**

Keep away from heat, sparks, and flames. Keep container closed when not in use. Do not store above 120 degrees F. (49 degrees C). Based on flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106, Ontario OH&S regulation 851 section 22. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

## 8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS

### Personal Protective Equipment

**Eye and face protection:**

Avoid contact with eyes. Wear chemical goggles if there is the possibility of contact or splashing in the eye.

**Skin protection:**

Appropriate chemical resistant gloves should be worn. To prevent skin contact wear protective clothing covering all exposed areas.

**Respiratory protection:**

If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.

**Ventilation**

Required when spraying or applying in confined area. Ventilation equipment should be explosion proof. Eliminate ignition sources.

### Exposure Guidelines

#### OSHA Permissible Exposure Limits (PEL's)

Common Name CAS-No.	Approx. Weight %	TWA (final)	Ceilings limits (final)	Skin designations
BUTYL ACETATE 123-86-4	15 - 20	710 mg/m <sup>3</sup> 150 ppm		
METHYL ETHYL KETONE 78-93-3	10 - 15	590 mg/m <sup>3</sup> 200 ppm		
XYLENE 1330-20-7	5 - 10	435 mg/m <sup>3</sup> 100 ppm		
ETHYLBENZENE 100-41-4	1 - 5	435 mg/m <sup>3</sup> 100 ppm		
CUMENE 98-82-8	1 - 5	245 mg/m <sup>3</sup> 50 ppm		Can be absorbed through the skin.

### ACGIH Threshold Limit Value (TLV's)

Common Name CAS-No.	Approx. Weight %	TWA	STEL	Ceiling limits	Skin designations
1,2,4-TRIMETHYLBENZENE 95-63-6	20 - 25	25 ppm			
BUTYL ACETATE 123-86-4	15 - 20	150 ppm	200 ppm		
METHYL ETHYL KETONE 78-93-3	10 - 15	200 ppm	300 ppm		
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	5 - 10	20 ppm			
XYLENE 1330-20-7	5 - 10	100 ppm	150 ppm		
ETHYLBENZENE 100-41-4	1 - 5	100 ppm	125 ppm		
CUMENE 98-82-8	1 - 5	50 ppm			

If this section is blank, no information is available.

## 9. PHYSICAL PROPERTIES

Odor:	Normal for this product type.
Physical State:	Liquid
pH:	Not determined.
Vapor pressure:	78 mmHG @ 68° F ( 20° C)
Vapor density (air = 1.0):	5.5
Boiling point:	156° F ( 69° C)
Solubility in water:	Insoluble.
Coefficient of water/oil distribution:	Not determined.
Density (lbs per US gallon):	7.23
Specific Gravity	.87
Evaporation rate (butyl acetate = 1.0):	5.6

## 10. STABILITY AND REACTIVITY

Stability	Stable
Conditions to Avoid:	None known.
Incompatibility:	Strong oxidizers.
Hazardous Polymerization:	None anticipated.

Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide.

**Sensitivity to static discharge:**

Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

## 11. TOXICOLOGICAL INFORMATION

**Mutagens:**

**Teratogens:**

**Carcinogens:**

Contains ethylbenzene, which has been determined by NTP to be an animal carcinogen with no known relevance to humans. IARC has classified ethylbenzene as possibly carcinogenic to humans (2b) on the basis of sufficient evidence of carcinogenicity in laboratory animals but inadequate evidence of cancer in humans.

Common Name CAS-No.	Approx. Weight %	IARC Group 1 - Human Evidence	IARC Group 2A - limited human data	IARC Group 2b - sufficient animal data
ETHYLBENZENE 100-41-4	1 - 5			Monograph 77, 2000

Common Name CAS-No.	Approx. Weight %	NTP Known carcinogens	NTP Suspect carcinogens	NTP Evidence of carcinogenicity
ETHYLBENZENE 100-41-4	1 - 5			male rat-clear evidence; female rat-some evidence; male mice- some evidence; female mice-some evidence

Common Name CAS-No.	Approx. Weight %	OSHA Select carcinogens	OSHA Possible select carcinogens	ACGIH Carcinogens
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	5 - 10			Group A3 Confirmed animal carcinogen with unknown relevance to humans.
ETHYLBENZENE 100-41-4	1 - 5			Group A3 Confirmed animal carcinogen with unknown relevance to humans.

If this section is blank, no information is available.

## 12. ECOLOGICAL DATA

Not available at this time.

## 13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORTATION INFORMATION

**U.S. Department of Transportation**

Proper Shipping Name: PAINT RELATED MATERIAL

Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: II

**49 CFR Hazardous Material Regulations Parts 100-180**

The supplier will apply the combustible liquid exception in 49 CFR 173.150(f), limited quantity or "does not sustain combustion" exceptions and consumer commodity rules, when authorized. Please check 49 CFR Parts 100-180 to determine if the use of these exceptions applies to your shipments when re-shipping our products.

**International Air Transport Association:**

Proper Shipping Name: PAINT RELATED MATERIAL  
 Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: II

**International Maritime Organization:**

Proper Shipping Name: PAINT RELATED MATERIAL  
 Hazard Class: 3  
 UN ID Number: UN1263  
 Packing Group: II

**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS:**

Common Name CAS-No.	Approx. Weight %	SARA 302	SARA 313	CERCLA RQ IN LBS.
1,2,4-TRIMETHYLBENZENE 95-63-6	20 - 25		form R reporting required for 1.0% de minimis concentration	
BUTYL ACETATE 123-86-4	15 - 20			5000
METHYL ETHYL KETONE 78-93-3	10 - 15			5000
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE 112-07-2	5 - 10		YES	
XYLENE 1330-20-7	5 - 10		form R reporting required for 1.0% de minimis concentration	100
ETHYLBENZENE 100-41-4	1 - 5		form R reporting required for 1.0% de minimis concentration	1000
CUMENE 98-82-8	1 - 5		form R reporting required for 1.0% de minimis concentration	5000

**SARA 311/312 Hazard Class:**

Acute: Yes  
 Chronic: Yes  
 Flammability: Yes  
 Reactivity: No  
 Sudden Pressure: No

**U.S. STATE REGULATIONS:**

**Pennsylvania Right To Know:**

ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	112-07-2
BUTYL ACETATE	123-86-4
XYLENE	1330-20-7
AROMATIC NAPHTHA, LIGHT	64742-95-6
METHYL ETHYL KETONE	78-93-3
1,2,4-TRIMETHYLBENZENE	95-63-6
CUMENE	98-82-8

**California Proposition 65:**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**Rule 66 status of product**

Photochemically reactive.

**INTERNATIONAL REGULATIONS - Chemical Inventories****TSCA Inventory:**

All components of this product are in compliance with U.S. TSCA Chemical Substance Inventory Requirements.

**Canada Domestic Substances List:**

All components of this product are listed on the Domestic Substances List.

**16. OTHER INFORMATION****HMIS Codes**

<b>Health:</b>	2
<b>Flammability:</b>	3
<b>Reactivity:</b>	1
<b>PPE:</b>	X - See Section 8 for Personal Protective Equipment (PPE).

**Abbreviations:**

OSHA - Occupational Safety and Health Administration, IARC - International Agency for Research on Cancer, NIOSH - National Institute of Occupational Safety and Health, NTP - National Toxicology Program, ACGIH - American Conference of Governmental Industrial Hygienists, SCAQMD - South Coast Air Quality Management District, TSCA - Toxic Substances Control Act, IATA - International Air Transport Association, IMO - International Maritime Organization, DOT - Department of Transportation, NA - Not applicable, NOT ESTAB - Not established, N.A.V. - Not available, RQ - Reportable quantity, WT - Weight, MG/CU M - Milligrams per cubic meter, G/L - Grams per liter, MM - Millimeters, MPPCF - Millions of particles per cubic foot, PPM - parts per million, PPT - parts per thousand, TCC/PM - Tag closed cup / Pensky-Martens, PB - Lead, PEL - Permissible exposure level, TWA - Time Weighted Average, STEL - Short term exposure limit, C - Celsius, F - Fahrenheit.

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Date: February 20, 2015

Product Number: **354Y902S**  
Product Description: **LOW HAPS CAT YELLOW PRIMER**

<b>Specifications</b>		
<b>Physical Characteristics:</b>	<b>Lb/Gal</b>	<b>g/L</b>
Density of Product	10.29	1233
Density of Organic Solvent	7.07	847
Non-Volatile Mass (%):	56.99	56.99
Non-Volatile Volume (%):	37.42	37.42
Total Volatiles by Weight (%):	43.01	43.01
H2O by Weight (%):	0.02	0.02
H2O by Volume (%):	0.02	0.02
Exempts by Weight (%):	0.00	0.00
Exempts by Volume (%):	0.00	0.00
VOC by Weight (%):	43.00	43.00
<b>VOC Information:</b>		
Coating VOC (VOC less water and exempt solvents):	4.42	530
Material VOC (VOC with water and exempt solvents):	4.42	530
Wgt VOC/Vol Solids:	11.82	1416
Wgt VOC/Wgt of Solids*:	0.75	0.75
<b>HAP Information:</b>		
Wgt VHAP/Wgt of Solids*:	0.01	0.01
Wgt VHAP/Vol of Solids:	0.23	28
Wgt VHAP/Vol of Product:	0.09	11
% VHAP:	0.83	0.83
Wgt Total HAP/Wgt of Solids*:	0.02	0.02
Wgt Total HAP/Vol of Solids:	0.25	30
Wgt Total HAP/Vol of Product:	0.10	11
% Total HAP:	0.93	0.93
Photochemically Reactive (Rule-66 / CA-102):		YES
Mix Ratio:		***Not Available***

\* Values represented Lb/Lb or g/g.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
BUTYL ACETATE	123-86-4	17.19	1.77	212	4.73	566
AROMATIC NAPHTHA, LIGHT	64742-95-6	11.01	1.13	136	3.03	363
NAPHTHA	64742-89-8	7.99	0.82	99	2.20	263
1,2,4-TRIMETHYLBENZENE	95-63-6	5.45	0.56	67	1.50	180
XYLENE	1330-20-7	0.58	0.06	7	0.16	19
2-BUTANONE OXIME	96-29-7	0.24	0.02	3	0.07	8
CUMENE	98-82-8	0.19	0.02	2	0.05	6
ISOBUTYL ALCOHOL	78-83-1	0.14	0.01	2	0.04	5
STODDARD SOLVENT	8052-41-3	0.08	0.01	1	0.02	3
ETHYLBENZENE	100-41-4	0.05	0.01	1	0.01	2
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	0.04	<0.01	<0.01	0.01	1
NAPHTHA	64742-48-9	0.04	<0.01	<0.01	0.01	1
NAPHTHALENE	91-20-3	0.01	<0.01	<0.01	0.00	0
	<b>Total:</b>	43.01	4.41	530	11.83	1417

Regulatory Information				
Chemical Name	CAS Number	Weight %	HAP	SARA 313
1,2,4-TRIMETHYLBENZENE	95-63-6	5.45	NO	YES
ZINC PHOSPHATE	7779-90-0	0.67	NO	YES
XYLENE	1330-20-7	0.58	YES	YES
ZINC OXIDE	1314-13-2	0.27	NO	YES
CUMENE	98-82-8	0.19	YES	YES
COBALT OCTOATE	136-52-7	0.10	YES	YES
ETHYLBENZENE	100-41-4	0.05	YES	YES
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	0.04	NO	YES
NAPHTHALENE	91-20-3	0.01	YES	YES

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Date: May 01, 2015

Product Number: **AXA0848**  
Product Description: **DURASPAR 130 LOW HAPS AD PRIMER**

<b>Specifications</b>		
<b>Physical Characteristics:</b>	<b>Lb/Gal</b>	<b>g/L</b>
Density of Product	11.20	1342
Density of Organic Solvent	6.92	829
Non-Volatile Mass (%):	69.55	69.55
Non-Volatile Volume (%):	50.78	50.78
Total Volatiles by Weight (%):	30.45	30.45
H2O by Weight (%):	0.17	0.17
H2O by Volume (%):	0.22	0.22
Exempts by Weight (%):	0.00	0.00
Exempts by Volume (%):	0.00	0.00
VOC by Weight (%):	30.28	30.28
<b>VOC Information:</b>		
Coating VOC (VOC less water and exempt solvents):	3.40	407
Material VOC (VOC with water and exempt solvents):	3.39	406
Wgt VOC/Vol Solids:	6.68	800
Wgt VOC/Wgt of Solids*:	0.44	0.44
<b>HAP Information:</b>		
Wgt VHAP/Wgt of Solids*:	0.01	0.01
Wgt VHAP/Vol of Solids:	0.09	11
Wgt VHAP/Vol of Product:	0.05	6
% VHAP:	0.42	0.42
Wgt Total HAP/Wgt of Solids*:	0.01	0.01
Wgt Total HAP/Vol of Solids:	0.18	22
Wgt Total HAP/Vol of Product:	0.09	11
% Total HAP:	0.83	0.83
Photochemically Reactive (Rule-66 / CA-102):		YES
Mix Ratio:		***Not Available ***

\* Values represented Lb/Lb or g/g.

Volatile Composition						
Chemical Name	CAS Number	Weight %	Lb/Gal	g/L	Lb/Gal Solids	g/L Solids
BUTYL ACETATE	123-86-4	8.67	0.97	116	1.91	229
METHYL ETHYL KETONE	78-93-3	7.91	0.89	106	1.74	209
AROMATIC NAPHTHA, LIGHT	64742-95-6	6.90	0.77	93	1.52	182
1,2,4-TRIMETHYLBENZENE	95-63-6	3.42	0.38	46	0.75	90
NAPHTHA	64742-89-8	1.38	0.15	18	0.30	36
METHYL N-AMYL KETONE	110-43-0	0.71	0.08	9	0.16	19
XYLENE	1330-20-7	0.25	0.03	3	0.06	7
PROPYLENEGLYCOL MONOMETHYL ETHER ACETATE	108-65-6	0.24	0.03	3	0.05	6
AROMATIC NAPHTHA, LIGHT	64742-95-6	0.22	0.02	3	0.05	6
MINERAL SPIRITS	64742-47-8	0.14	0.02	2	0.03	4
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	0.13	0.01	2	0.03	3
CUMENE	98-82-8	0.12	0.01	2	0.03	3
2-BUTANONE OXIME	96-29-7	0.09	0.01	1	0.02	2
NAPHTHA	64742-48-9	0.06	0.01	1	0.01	2
DIETHYLENE GLYCOL MONOMETHYL ETHER	111-77-3	0.03	<0.01	<0.01	0.01	1
NAPHTHALENE	91-20-3	0.01	<0.01	<0.01	0.00	0
ETHYLBENZENE	100-41-4	0.01	<0.01	<0.01	0.00	0
	<b>Total:</b>	<b>30.29</b>	<b>3.38</b>	<b>405</b>	<b>6.67</b>	<b>799</b>

Regulatory Information				
Chemical Name	CAS Number	Weight %	HAP	SARA 313
1,2,4-TRIMETHYLBENZENE	95-63-6	3.42	NO	YES
ZINC PHOSPHATE	7779-90-0	1.24	NO	YES
XYLENE	1330-20-7	0.25	YES	YES
COBALT OCTOATE	136-52-7	0.14	YES	YES
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	0.13	NO	YES
NEODECANOIC ACID, MANGANESE SALT	27253-32-3	0.13	YES	YES
MANGANESE OCTOATE	15956-58-8	0.13	YES	YES
CUMENE	98-82-8	0.12	YES	YES
DIETHYLENE GLYCOL MONOMETHYL ETHER	111-77-3	0.03	YES	YES
ETHYLBENZENE	100-41-4	0.01	YES	YES
NAPHTHALENE	91-20-3	0.01	YES	YES

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