



**CLASS II ADMINISTRATIVE UPDATE TO
REGULATION 13 PERMIT R13-3251 FOR A
TRUCK ASSEMBLY FACILITY**

Prepared for:

Hino Motors Manufacturing U.S.A., Inc.
1 Hino Way
Williamstown, West Virginia 26187

Prepared by:

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Project No. 0101-16-0105

May 2016



POTESTA



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Attachments not applicable to, and not included in, this application: Q, R and S

SECTION I - III

GENERAL APPLICANT INFORMATION



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): Hino Motors Manufacturing U.S.A., Inc.		2. Federal Employer ID No. (FEIN): 33-0638183	
3. Name of facility (if different from above): West Virginia Plant		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 1 Hino Way Williamstown, WV 26187		5B. Facility's present physical address: 1 Hino Way Williamstown, WV 26187	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇒ If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A . ⇒ If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A .			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Hino Motors, Ltd.			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇒ If YES, please explain: Own ⇒ If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Truck Assembly and Painting Facility		10. North American Industry Classification System (NAICS) code for the facility: 371101	
11A. DAQ Plant ID No. (for existing facilities only): 107-00153		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-3251	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- ⇒ For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- ⇒ For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP as Attachment B**.

From I-77, take Exit #185 to Williamstown (State Route 51) and go 0.2 miles. Turn left on Highland Avenue (State Route 14) and go 1.4 miles. Turn left on State Route 14, go 1.5 miles and the facility is located on the left.

12.B. New site address (if applicable):
NA

12C. Nearest city or town:
Williamstown

12D. County:
Wood

12.E. UTM Northing (KM): 4,360.59698

12F. UTM Easting (KM): 459.52454

12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Addition of retractable paint booth for repair operations and windshield installation operation.

14A. Provide the date of anticipated installation or change: 06/22/2016

⇒ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen:

14B. Date of anticipated Start-Up if a permit is granted:

06/22/2016

14C. Provide a **Schedule** of the planned **Installation of/Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

24 Hours Per Day 7 Days Per Week 52 Weeks Per Year

16. Is demolition or physical renovation at an existing facility involved? YES NO

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).

Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.

Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
 For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	

General Emission Unit, specify **Retractable Paint Booth and Windshield Installation**

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System

Other Collectors, specify **Paint Filter**.

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.
 ➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and *Example Legal Advertisement* for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?
 YES NO
 ➤ If YES, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "*Precautionary Notice – Claims of Confidentiality*" guidance found in the *General Instructions* as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE Steve Stalnaker DATE: 5/3/16
(Please use blue ink) (Please use blue ink)

35B. Printed name of signer: Steve Stalnaker 35C. Title: Vice President

35D. E-mail: sstalnaker@hmmusa.com 36E. Phone: (304) 375-6703 36F. FAX: (304) 375-6767

36A. Printed name of contact person (if different from above): Same 36B. Title:

36C. E-mail: 36D. Phone: 36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input checked="" type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input checked="" type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan | <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input checked="" type="checkbox"/> Attachment P: Public Notice |
| <input checked="" type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
 - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
 - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
 - NSR permit writer should notify a Title V permit writer of draft permit,
 - Public notice should reference both 45CSR13 and Title V permits,
 - EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A
BUSINESS CERTIFICATE

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**HINO MOTORS MANUFACTURING U.S.A., INC.
1 HINO WAY
WILLIAMSTOWN, WV 26187-9605**

BUSINESS REGISTRATION ACCOUNT NUMBER: 2002-8882

This certificate is issued on: 06/24/2010

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code § 11-12.*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

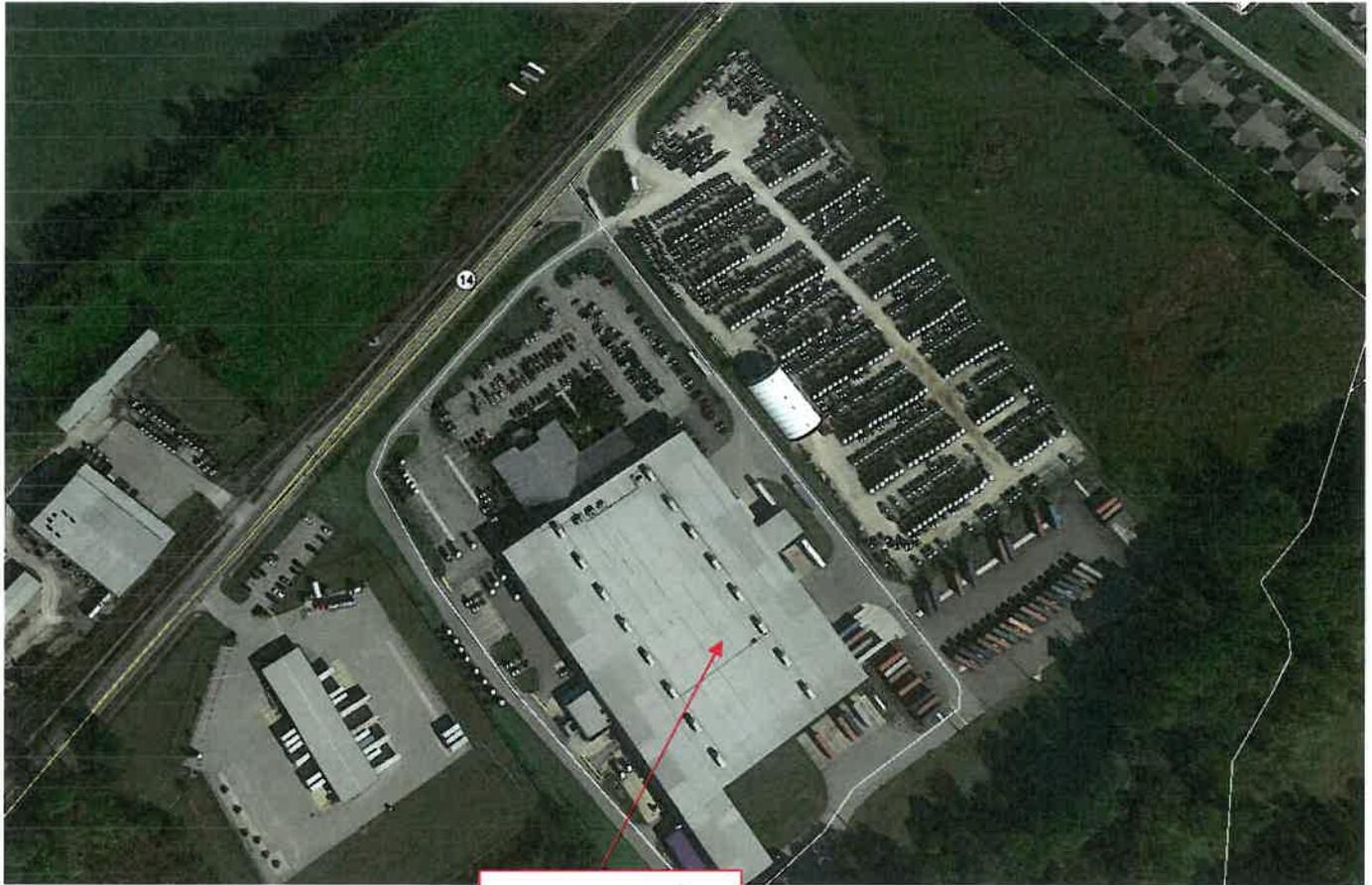
This certificate is not transferrable and must be displayed at the location for which issued

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner

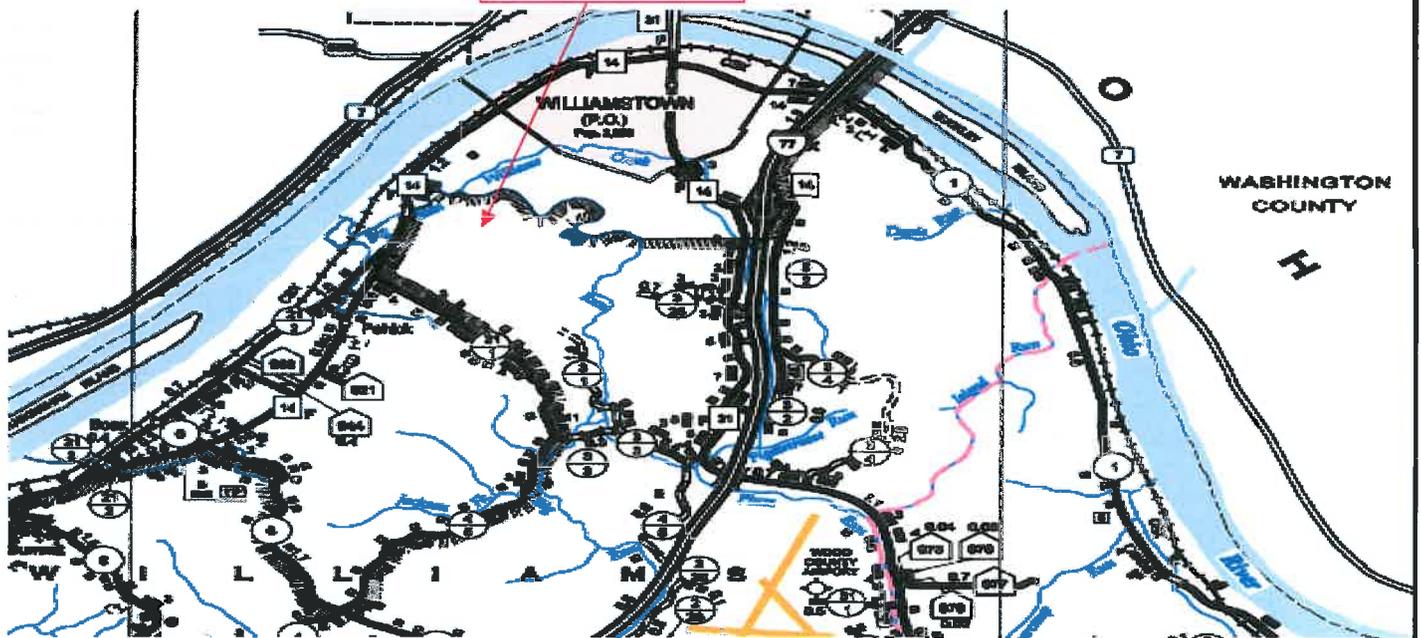
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**

ATTACHMENT B
AREA MAP



Facility Location



7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304
Phone: (304) 342-1400
Fax: (304) 343-9031

Area Map
Hino Truck Assembly Facility
Hino Motors Manufacturing U.S.A., Inc.
Wood County, West Virginia

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDULE

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDULE

The existing truck assembly operation was installed and started operations in 2007. The initial operation was for assembly of vehicles only. The cabs and fenders of these vehicles are received painted in white. In September 2015, the facility added a custom color department consisting of preparation and painting operations. The proposed additions to the facility are a Retractable Paint Booth for assembled truck paint repairs and a windshield installation operation. Startup of the Retractable Paint Booth and windshield installation will occur upon approval of the Class II Administrative Update.

ATTACHMENT D
REGULATORY DISCUSSION

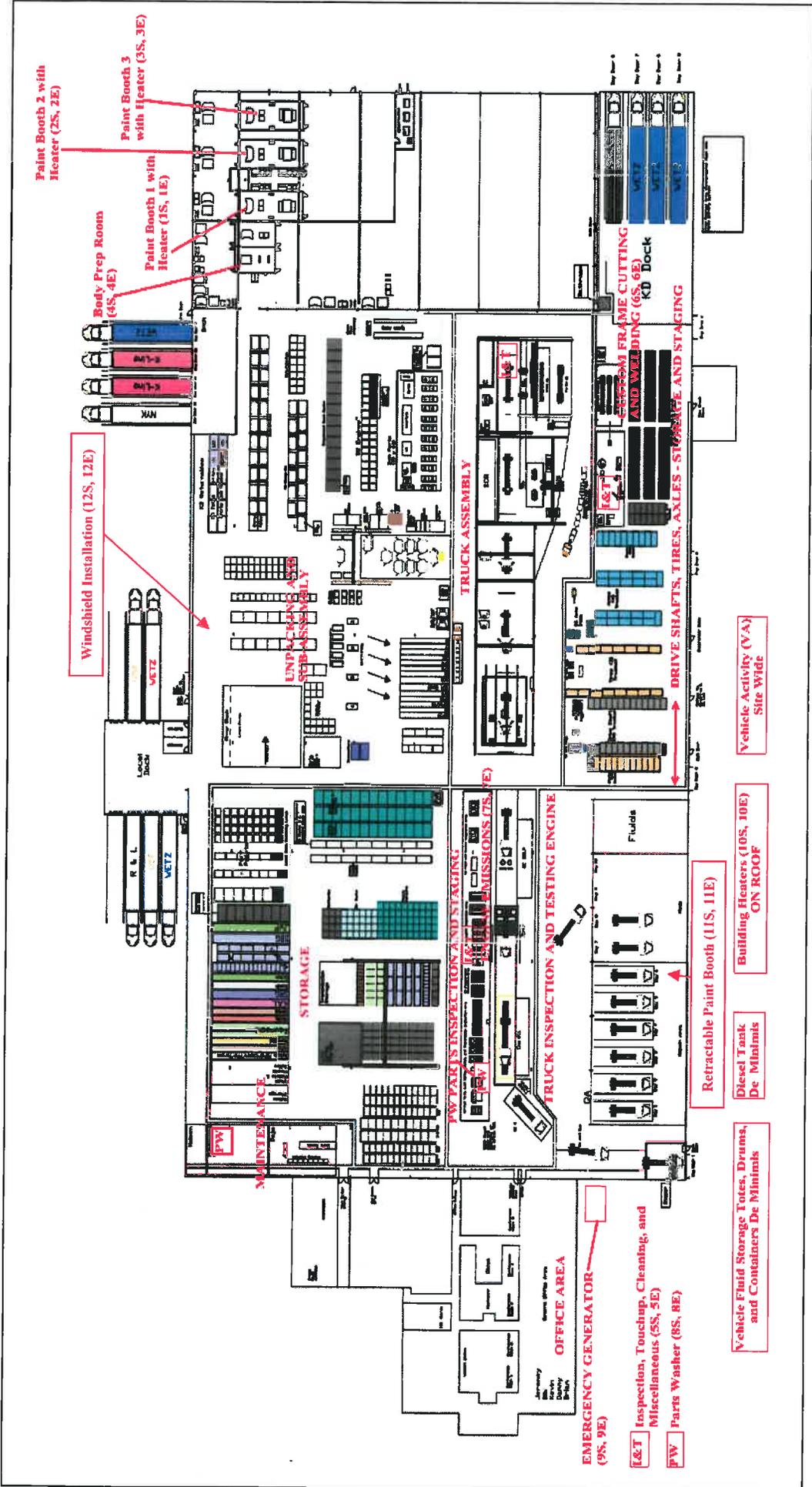
ATTACHMENT D

REGULATORY DISCUSSION

The permit revisions requested herein do not change the applicable regulations for the facility. The facility is required to comply with the requirements contained in the applicable provisions of (1) 45CSR4, (2) 45CSR7, and (3) 45CSR13, (4) 45CSR21, and (5) 40CFR60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

1. 45CSR4. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to objectionable odor at any location occupied by the public.
2. 45CSR7 45-7-4, 4.1. No person shall cause, suffer, allow, or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A of the rule.
3. 45CSR13 requires the facility to operate within the limits of the permit and in accordance with the permit application.
4. 45CSR21 requires a facility to utilize appropriate coatings and applies to Wood County. This facility is subject to Section 45-21-19, Coating of Miscellaneous Metal Parts. The paint and primer as applied meets the 3.5 lbs/gallon Volatile Organic Compound (VOC) limit and clear coat meets 42 lbs/gallon VOC limit.
5. 40CFR60, Subpart JJJJ, applies to engines and requires testing to verify of meeting emissions levels or certification. The engine in the emergency generator is certified by the Environmental Protection Agency.

ATTACHMENT E
PLOT PLAN



Hino Motors Manufacturing U.S.A., Inc.

Plot Plan

Wood County, West Virginia
Project No. 0101-16-0105

7012 MacCorkle Avenue, S.E
Charleston, West Virginia 25304
Phone: (304) 342-1400
Fax: (304) 343-9031

POTESTA
Engineers and Environmental Consultants

Windshield Installation (12S, 12E)

Body Prep Room (4S, 4E)

Paint Booth 1 with Heater (1S, 1E)

Paint Booth 2 with Heater (2S, 2E)

Paint Booth 3 with Heater (3S, 3E)

UNPACKING AXLE SUB-ASSEMBLY

TRUCK ASSEMBLY

CUSTOM FRAME CUTTING AND WELDING (6S, 6E)

DRIVE SHAFTS, TIRES, AXLES, STORAGE AND STAGING

TRUCK INSPECTION AND TESTING ENGINE

FLUIDS

STORAGE

MAINTENANCE

OFFICE AREA

EMERGENCY GENERATOR (9S, 9E)

Inspection, Touchup, Cleaning, and Miscellaneous (5S, 5E)

Parts Washer (8S, 8E)

Vehicle Fluid Storage Totes, Drums, and Containers De Minimis

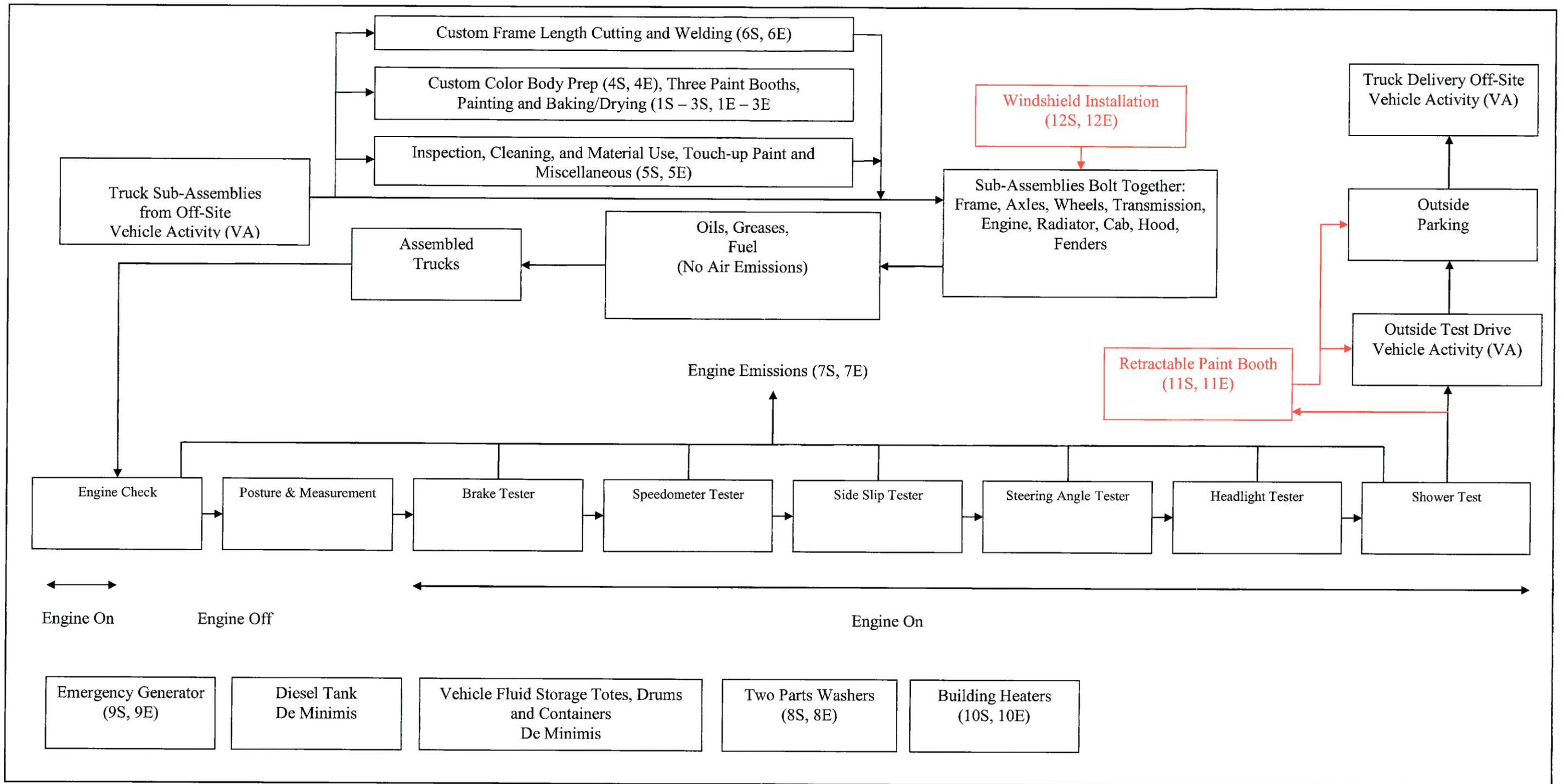
Diesel Tank De Minimis

Retractable Paint Booth (11S, 11E)

Building Heaters (10S, 10E) ON ROOF

Vehicle Activity (VA) Site Wide

ATTACHMENT F
DETAILED PROCESS FLOW DIAGRAM



7012 MacCorkle Avenue, S.E
 Charleston, West Virginia 25304
 Phone: (304) 342-1400
 Fax: (304) 343-9031

Hino Motors Manufacturing U.S.A., Inc.
Process Flow Diagram
 Wood County, West Virginia
 Project No. 0101-16-0105

ATTACHMENT G
PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Proposed Additions

There are two facility additions proposed in this application: (1) Retractable Paint Booth and (2) Windshield Installation.

Retractable Paint Booth (11S)

The proposed Retractable Paint Booth is portable and can be retracted to 20 – 25 percent of its length. The booth will be used to repair scratches or other similar cosmetic damage to truck cabs and parts. It is designed to intake fresh air through pre-filters in the main entry doors and the air is vented through a filter unit at the opposite end.

Because the booth will be used for repairs on an as-needed basis, with existing paint colors, we are not requesting a yearly increase in the amount of materials used in the painting operation. Therefore, for the emissions estimate, it is assumed that hourly emissions will increase, but total yearly emissions will remain unchanged. There are no new paints proposed for this paint booth. The paints used are the same paints as currently permitted; therefore, we have not included the Material Safety Data Sheets (MSDS) in this application.

Windshield Installation (12S)

The proposed Windshield Installation operation will be located in the Unpacking and Sub-Assembly area of the facility. Windshields will be attached to trucks with Sikaflex-255 FC, a polyurethane based adhesive with VOC and HAP components. The MSDS for this material is included in Attachment H. This adhesive, or a similar adhesive, will be used to install the windshields.

Existing Facility

Hino Motors Manufacturing U.S.A., Inc. (HINO) installed a medium duty truck assembly plant in an existing building near Williamstown, West Virginia in 2007. The facility was approved for installation under a permit determination. A permit was issued on September 11, 2015 and included the sources described below. The standard color of the HINO trucks is white. The white truck cabs, fenders, and hood are delivered finished from other HINO operations or suppliers. HINO is now operating a custom color system which allows custom color application at the assembly facility.

Truck Assembly Description

HINO assembles medium duty trucks. Sub-assemblies arrive via truck from offsite. The trucks are assembled by building the frame (side members and cross pieces) and adding the axles, wheels and brake components. The transmission, engine and radiator are added, along with their peripheral equipment (tanks, wiring, pedals, clutch assembly, differential, drive train, steering components, etc.). The cab (as delivered, fully assembled), fenders and hood are the final components of the assembly process. The assembly does not include placement of the truck bed on the vehicle. Beds will be installed at other locations as required for the customers' use. The sub-assemblies are units which bolt or otherwise are clipped or fastened together to form completed trucks. This is a mechanical assembly process which does not include gluing or adhesive application.

During assembly, fluids are added to the trucks. Typical motor vehicle fluids are kept on hand for filling of the vehicles' parts. The materials are coolant fluids (antifreeze), diesel fuel, engine oil, transmission oil (manual and automatic transmissions), differential oil, power steering oil/fluid, brake oil/fluid, clutch oil/fluid, and greases for the steering, pedal assembly, clutch, parking brake control, and transmissions. These materials are stored in the containers in which they are delivered (for example, 5 gallon pails, 55 gallon drums, totes, diesel in a 5,000 gallon tank). Storage of these materials and their placement into the vehicles does not produce air emissions.

After fluid addition, the truck engines are tested as the vehicles move to an inspection area. With the engine switched off, the trucks are inspected for posture and measurement. The truck engines are restarted and the vehicles are tested by a brake tester, speedometer tester, side slip tester, steering angle tester, and a headlight tester. The trucks are then shower tested for water tightness of the windshield and windows. This operation occurs inside the facility and no venting of water vapor occurs. The total engine run time for this process (engine testing and all subsequent testing) is approximately 40 minutes inside the facility

The following are the identified emission sources at this facility:

Custom Color Operation

Equipment - Paint Booths with Heaters (1S-3S) and Body Prep Area (4S)

The custom color operation includes two paint booths with heaters and a body prep area. A third paint booth is proposed for future operations. The white paint is prepped in the body prep area to allow the custom color to adhere to the existing paint. This operation is a scuffing type operation to remove the glossy finish of the existing paint. The body of the truck is then moved into the paint booths and the custom color (primer, paint, and clearcoat) is applied. Although the operation includes mostly custom color application and not a complete body painting, the existing permit is to allow for a quantity of primer, paint, and clearcoat (approximately one gallon of each per vehicle) to allow for approximately 5,000 truck cabs to be painted, whether it is a complete paint job or custom color application. There is no limit on the amount of trucks that can be painted, but a limit on the amount of materials used in the painting operation.

Therefore, if less paint is used on a body, then the total number of bodies to be repainted can be higher than 5,000 per year.

The painting sequences are intermittent with the application of a coating, then a 15 minute tack time prior to the next coating application. After the clearcoat is applied, the paint booths are closed and the temperature raised to accelerate drying. At least two color layers must be applied and two clearcoat layers with a 15 minute tack time between the applications of each layer. The drying time lasts approximately 30 minutes. This also includes paint mixing.

Miscellaneous Touch-Up, Cleaning, and Material Use (5S)

Equipment - Various uses of aerosol and other paints to touch up scratches during inspections, cleaners for the painting operations, and materials which contain VOCs and HAPs that are used on the assembly floor

HINO receives parts from numerous suppliers which are shipped in, wrapped, and stored at the site. The main two colors that are used for touch up are black and white (since this is the current major color scheme). The frame and other major parts under the body are painted black. The current main color for the body is white. The facility uses Rustoleum products for touch up at the inspection stations. These paints only release VOC from the facility. Additionally, at the beginning of the assembly line, there is a pot sprayer with Asian paint. This paint is VOC free. Other products are used, such as a rubberized undercoating, Magnaflux Spotcheck, WD-40, brakleen, and cleaners for the painting operation. The VOC and HAP constituents of these materials are released from the building.

Welding (6S)

Equipment - Welders

Welding occurs when the facility shortens a wheel base for the trucks. The frames are cut with a saw and then the ends need to be refinished to replace the endcaps on the frames. Welding emissions are based on the worst case emissions estimate from each type of welding electrode in AP-42, Section 12.19-2.

Truck Engine Emissions (7S)

Equipment - Assembled Vehicles on the Inspection Line

After assembly is completed on a vehicle, it is inspected. The inspection has several steps (see the process flow diagram) where the engine is on or off depending on what is being inspected. The emissions from the engines are based on certified manufacturers emissions, AP-42, and an approximate run time of 40 minutes per engine. Once the trucks leave the building, they are mobile equipment and the engine emissions are not counted toward the potential to emit.

Parts Washers (8S)

Equipment - Parts Washer (2)

Two parts washers are located at the site. There is one in the maintenance area and one in the inspection area. The emissions from the parts washers are based on AP-42. Fluids are only refreshed as needed.

Emergency Generator (9S)

Equipment - Generac QuietSource 22 KW

There is an emergency generator to power the emergency lights and office operations should a power failure occur. The generator is not sized to power the facility during power disruptions. The emergency generator is a natural gas fueled 40 horsepower engine and is certified under 40CFR60, Subpart JJJJ. Emissions are based on manufacturer's emissions and AP-42.

Building Heaters (10S)

Equipment - Multiple Trane, Lennox, Reznor, and Horizon Natural Gas Fueled Heaters

There are 33 building heaters at the site. The building had existing heaters when HINO moved into the site. There are 29 heaters with heat ratings ranging from 120,000 Btu/hr up to 800,000 Btu/hr. A new addition, which holds the custom color department, includes 4 more building heaters. The emissions from the heaters are based on the total heat rating of the heaters and AP-42 emissions factors. The 29 heaters have a total heat rating of 16.21 MM Btu/hr. The 4 custom color department heaters have a total heat rating of 2.2 MM Btu/hr.

Vehicle Activity (VA)

Equipment - Assembled vehicles moving on paved and gravel surfaces and delivery vehicles on paved surfaces

Future estimates call for assembly of approximately 20,000 trucks. The trucks leave the assembly building and drive around the building to the gravel parking area. The trucks are then sold and driven off the gravel area for delivery to the customer.

Additionally, this facility receives the parts to assemble the trucks in shipping containers and other delivery trucks. These vehicles drive to either the unloading docks or to the container storage area at the back of the property. Delivery vehicles are on paved road surfaces while at the site.

AP-42 emissions estimate methods were used to determine the emissions.

ATTACHMENT H
MATERIAL SAFETY DATA SHEETS

Sikaflex[®]-255 FC

High Strength, Elastic Adhesive

Technical Product Data (typical values)

Chemical base		1-C polyurethane
Color		Black
Cure mechanism		Moisture Curing
Density (uncured)		10.1 lb/gal
VOC (EPA method 24)		0.53 lb/gal (64.1 g/l)
Non-sag properties		Excellent
Application temperature	product	50°-95°F (10°-35°C)
Tack free time ¹⁾		30 min
Curing speed		(see diagram 1)
Shrinkage		3% approx.
Shore A-hardness (ASTM D 2240)		52-57
Tensile strength (ASTM D 412)		870 psi
Elongation at break (ASTM D 412)		400%
Tensile lap-shear strength (ASTM D 1002)		580 psi
Volume resistivity (ASTM D 257-99)		1X10 ⁷ Wcm appx.
Service temperature	permanent	-40°-194°F (-40°-90°C)
Shelf life (storage below 80°F (27°C))	Cartridges/Unipacs	9 months
	Drums	6 months

¹⁾ 73°F (23°C) / 50% r.h.

Description

Sikaflex[®]-255 FC is a fast curing, flexible, high-performance one-component, polyurethane based adhesive for bonding glass, panels and other structures to a variety of substrates. Sikaflex[®]-255 FC begins to cure and exhibit excellent green strength as soon as the product is extruded or the cartridge is opened. Sikaflex[®]-255 FC is not for use in the replacement of automotive windshields. Sikaflex[®]-255 FC is manufactured in accordance with ISO 9001/14001 Quality Assurance Systems and the Responsible Care Program.

Product Benefits

- One-component
- Low odor
- Bonds and seals at the same time
- Short tack free and curing time
- Very high thixotropy for good gap filling properties
- Adhesion to a wide range of substrates
- Non-staining curing process
- Non-corrosive
- Initial load bearing capacity
- Overpaintable with many coatings (Consult Sika)
- Increases torsional stiffness of final assembly
- Shock/Impact resistant
- Vibration and sound damping properties

Areas of Application

- Sikaflex[®]-255 FC is suitable for use on glass as well as metal panels (primed and painted). Sikaflex[®]-255 FC offers extremely high initial bond strength. Its fast rate of cure results in rapid strength development and shorter service times.
- Bonding trim, molding and all kinds of styling elements
 - Structural bonding of large parts, including sheet metal, composites and glass
 - Used to replace rivets and other mechanical fasteners
 - This product is suitable only for experienced professional users.
 - Tests with actual substrates and conditions have to be performed to



ensure adhesion and material compatibility.

Cure Mechanism

Sikaflex®-255 FC cures by reaction with atmospheric moisture. At low temperatures, the water content of the air is lower and the curing reaction proceeds somewhat slower (see diagram).

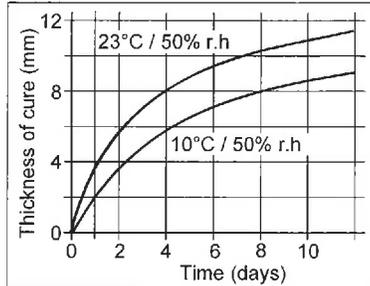


Diagram 1: Curing speed Sikaflex®-255 FC

Chemical Resistance

Sikaflex®-255 FC is resistant to fresh water, seawater, dilute acids and caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal oils; not resistant to organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents. The above information is offered for general guidance only. Advice on specific applications will be given on request. Contact the Technical Service Department of Sika Industry at 888-832-7452.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from all traces of grease, oil and dust. The surfaces must be treated with a cleaning or activating agent and/or primed with the appropriate primer. See Sika Surface Preparation Guidelines or contact the Technical Service Department of Sika Industry at 888-832-7452.

Application

Cartridges: Pierce cartridge nozzle opening. **Unipacs:** Place unipac in the application gun and snip off the

closure clip. Cut tip of nozzle to appropriate size. For satisfactory results the adhesive must be applied with a piston type manual, air or battery cartridge gun. To ensure uniform thickness of adhesive bead, we recommend that the adhesive is applied in the form of a triangular bead (see illustration). Do not apply below 50°F (10°C) or above 95°F (35°C). The optimum temperature for substrate and adhesive is between 59°F (15°C) and 77°F (25°C). **Bulk:** For advice on selecting and using a suitable pump system, please contact the System Engineering Department of Sika Industry at 248-577-0020.

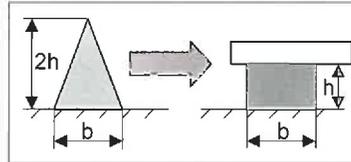


Figure 1: Recommended bead configuration

Tooling and finishing

To facilitate tooling, wet finger or best available tool with Sika®-Slick or light soapy water. Do not use alcohol as a tooling agent.

Removal

Uncured Sikaflex®-255 FC may be removed with Sika® Remover 208 or Mineral Spirits. Do not use solvents containing alcohol as a cleaning agent. Cured Sikaflex®-255 FC may only be removed mechanically.

Overpainting

If overpainting is desired, the paint and paint process compatibility must be tested before use. Contact Sika Technical Services Department in all cases at 888-832-7452.

Limitations

- For best results, use opened cartridges the same day.
- When applying sealant, avoid air entrapment.
- Do not use on polyethylene, polypropylene, silicone, PTFE, and certain plasticized resins (consult

our Technical Services Department for advice).

- When working in low temperature conditions, allow cartridge to reach room temperature.
- Always use a piston type cartridge gun (hand operated or pneumatic) to apply adhesive.
- Avoid contact with alcohol and solvents containing alcohol during application and curing.

WARNING: IRRITANT, SENSITIZER

Contains Polyisocyanate Prepolymer (Mixture), Isophorone Diisocyanate (CAS 4098-71-9), Methylene Bisphenyl Isocyanate (CAS 101-68-8) and Xylene (CAS 1330-20-7). Causes eye irritation. May cause skin/respiratory irritation. May cause skin and/or respiratory sensitization after prolonged contact. May be harmful if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Headaches and dizziness may result. **Deliberate misuse by inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.**

HMIS

Health	*2
Flammability	1
Reactivity	0
Personal Protection	C

First Aid

Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** – Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

Further information available at:
www.sikaindustry.com



Sika Corporation
Industry Division
30800 Stephenson Highway
Madison Heights, MI 48071
USA
Tel. 248 577 0020
Fax 248 577 0810



Further Information

Copies of the following publications are available on our website www.sikaindustry.com:

- Material Safety Data Sheets
- Product Data Sheet
- Sika Primer Chart
- General guidelines for bonding and sealing with Sika products

In case of emergency call:

Chemtrec: 800-424-9300
International: 703-527-3887

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety related data. It is highly recommended to read the actual Material Safety Data Sheet before using the product.

- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- KEEP CONTAINER TIGHTLY CLOSED

Packaging Information

Cartridge	300 ml
Unipac	600 ml
Drum	200L/52.8 Gal.

Value Basis

All technical data stated on this Product Data Sheet are based on the results of laboratory tests only. Actual measured data in the field may vary due to site specific conditions which are not known to Sika and beyond our control.

Handling and Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is

poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.

Storage temperatures not in excess of 80°F will help ensure maximum product shelf life.

Clean Up

Use personal protective equipment (chemical resistant gloves/ goggles /clothing). Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

Limited Material Warranty

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES IMPLIED OR EXPRESS SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Legal Notes/Disclaimer

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith

based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s).

Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sikacorp.com or by calling 201-933-8800.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available at www.sikaindustry.com. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.

Further information available at:
www.sikaindustry.com

Sika Corporation
Industry Division
30800 Stephenson Highway
Madison Heights, MI 48071
USA
Tel. 248 577 0020
Fax 248 577 0810





1. Identification

Product name : Sikaflex®-255 FC

Supplier : Sika Corporation

Address : 201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887
ehs@sika-corp.com

Recommended use of the chemical and restrictions on use : For further information, refer to the product technical data sheet.

2. Hazards identification

GHS Classification

Respiratory sensitization , Category 1 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization , Category 1 H317: May cause an allergic skin reaction.

Carcinogenicity , Category 2 H351: Suspected of causing cancer.

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351 Suspected of causing cancer.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.



P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Warning : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Carbon black	1333-86-4	>= 10 - < 20 %
xylene	1330-20-7	>= 2 - < 5 %
ethylbenzene	100-41-4	>= 1 - < 2 %
4,4'-methylenediphenyl diisocyanate	101-68-8	>= 0 - < 1 %
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	>= 0 - < 1 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.



- | | |
|---|---|
| In case of eye contact | : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Induce vomiting immediately and call a physician.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and delayed | : sensitizing effects

Asthmatic appearance
Allergic reactions
See Section 11 for more detailed information on health effects and symptoms. |
| Protection of first-aiders | : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance. |
| Notes to physician | : Treat symptomatically. |

5. Fire-fighting measures

- | | |
|--|---|
| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific extinguishing methods | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : In the event of fire, wear self-contained breathing apparatus. |

6. Accidental release measures

- | | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.
Deny access to unprotected persons. |
| Environmental precautions | : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained. |
| Methods and materials for containment and cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal. |



7. Handling and storage

- Advice on safe handling** : Do not breathe vapors or spray mist.
 Avoid exceeding the given occupational exposure limits (see section 8).
 Do not get in eyes, on skin, or on clothing.
 For personal protection see section 8.
 Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
 Smoking, eating and drinking should be prohibited in the application area.
 Follow standard hygiene measures when handling chemical products.
- Conditions for safe storage** : Store in original container.
 Keep container tightly closed in a dry and well-ventilated place.
 Observe label precautions.
 Store in accordance with local regulations.
- Materials to avoid** : no data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
xylene	1330-20-7	OSHA Z-1	TWA	100 ppm 435 mg/m ³
		ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
		OSHA P0	STEL	150 ppm 655 mg/m ³
ethylbenzene	100-41-4	OSHA P0	TWA	100 ppm 435 mg/m ³
		ACGIH	TWA	100 ppm
		ACGIH	STEL	125 ppm
		OSHA Z-1	TWA	100 ppm 435 mg/m ³
		OSHA P0	TWA	100 ppm 435 mg/m ³

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		OSHA P0	STEL	125 ppm 545 mg/m3
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*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

**Basis

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.



9. Physical and chemical properties

Appearance	: paste
Color	: black
Odor	: aromatic
Odor Threshold	: no data available
Flash point	: Note: not applicable
Ignition temperature	: not applicable
Decomposition temperature	: no data available
Lower explosion limit (Vol%)	: no data available
Upper explosion limit (Vol%)	: no data available
Flammability (solid, gas)	: no data available
Oxidizing properties	: no data available
Autoignition temperature	: no data available
pH	: no data available
Melting point/range / Freezing point	: no data available
Boiling point/boiling range	: no data available
Vapor pressure	: no data available
Density	: 1.19 g/cm ³ at 68 °F (20 °C)
Water solubility	: Note: insoluble
Partition coefficient: n- octanol/water	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: > 20.5 mm ² /s at 104 °F (40 °C)
Relative vapor density	: no data available
Evaporation rate	: no data available
Burning rate	: no data available
Volatile organic compounds (VOC) content	: 64.1 g/l



10. Stability and reactivity

- Reactivity : No dangerous reaction known under conditions of normal use.
- Chemical stability : The product is chemically stable.
- Possibility of hazardous reactions : Stable under recommended storage conditions.
- Conditions to avoid : no data available
- Incompatible materials : no data available

11. Toxicological information

Acute toxicity

Product

- Acute oral toxicity : no data available
- Acute inhalation toxicity : no data available
- Acute dermal toxicity : no data available

Ingredients:

Carbon black :

- Acute oral toxicity : LD50 Oral rat: > 8,000 mg/kg

4,4'-methylenediphenyl diisocyanate :

- Acute inhalation toxicity : Acute toxicity estimate : 1.5 mg/l
Test atmosphere: dust/mist
Method: Expert judgment

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate :

- Acute oral toxicity : LD50 Oral rat: 4,814 mg/kg
- Acute inhalation toxicity : LC50 rat: 0.031 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
- Acute dermal toxicity : LD50 Dermal rat: > 7,000 mg/kg

Skin corrosion/irritation

Product

no data available

Serious eye damage/eye irritation

Product

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no data available

Respiratory or skin sensitization

Product

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Product

Mutagenicity : no data available

Carcinogenicity

Product

Carcinogenicity : Suspected of causing cancer.

IARC

Group 2B: Possibly carcinogenic to humans

Carbon black 1333-86-4

ethylbenzene 100-41-4

NTP

not applicable

Reproductive Toxicity/Fertility

Product

Reproductive toxicity : no data available

Reproductive Toxicity/Development/Teratogenicity

Product

Teratogenicity : no data available

STOT-single exposure

Product

Assessment: no data available

STOT-repeated exposure

Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Product

Assessment: no data available

Aspiration toxicity

Product

no data available



12. Ecological information

Other information Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Component:

Carbon black	1333-86-4	<u>Toxicity to fish:</u> LC50 Species: Brachydanio rerio (zebrafish) Dose: > 1,000 mg/l Exposure time: 96 h
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13. Disposal considerations

Disposal methods

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not dangerous goods
IATA
Not dangerous goods
IMDG
Not dangerous goods

Special precautions for user
no data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the

Safety Data Sheet

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TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard
Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
xylene 1330-20-7 4.46 %
ethylbenzene 100-41-4 1.05 %

Clean Air Act

Ozone-Depletion Potential This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Table with 3 columns: chemical name, CAS number, and percentage. Rows include xylene (1330-20-7, 4.46%) and ethylbenzene (100-41-4, 1.05%).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.
WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

16. Other information

HMIS Classification

HMIS Classification table with 4 rows: Health (3), Flammability (0), Physical Hazard (0), Personal Protection (X).

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Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 08/25/2014

Material number: 469505

ATTACHMENT I
EMISSION UNITS TABLE

Attachment I
Emission Units Table
(includes all emission units and air pollution control devices
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID ¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
1S	1E	Paint Booth No. 1 with Heater	2015	Paint Gun 225 gm/min Heater 1.5126 MMBtu/hr	Existing	Filter
2S	2E	Paint Booth No. 2 with Heater	2015	Paint Gun 225 gm/min Heater 1.5126 MMBtu/hr	Existing	Filter
3S	3E	Paint Booth No. 3 with Heater	Future	Paint Gun 225 gm/min Heater 1.5126 MMBtu/hr	Existing	Filter
4S	4E	Body Prep Room	2015	NA	Existing	Filter
5S	5E	Inspection, Touchup, Cleaning, and Miscellaneous	2007	NA	Existing	NA
6S	6E	Welding	2007	NA	Existing	NA
7S	7E	Engine Emissions	2007	NA	Existing	NA
8S	8E	Parts Washers	2007	NA	Existing	NA
9S	9E	Emergency Generator	2014	40 HP	Existing	NA
10S	10E	Building Heaters	2007/2015	Btu/hr	Existing	NA
11S	11E	Retractable Paint Booth	2016	Paint Gun 49.61 gm/min	New	Filter
12S	12E	Windshield Installation	2016	2,100 gm/hr	New	NA
VA	VA	Vehicle Activity	2007	NA	Existing	NA
De Minimis		Diesel Tank	2007	5,000	NA	NA
De Minimis		Vehicle Fluid Storage Totes, Drums and Containers	2007	Various	NA	NA

¹ For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S, or other appropriate designation.

² For Emission Points use the following numbering system: 1E, 2E, 3E, or other appropriate designation.

³ New, modification, removal

⁴ For Control Devices use the following numbering system: 1C, 2C, 3C, or other appropriate designation.

ATTACHMENT J

EMISSION POINTS DATA SUMMARY SHEET

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E	Vertical	1S	Paint Booth No. 1 with Heater	IC	Filter	NA	NA	VOC (Paint/Heat)	16.00/0.01	28.25/0.04	16.00/0.01	28.25/0.04	Vapor	Mass Balance and AP-42	NA
								PM/PM10/PM2.5	9.89/0.01	19.93/0.05	0.10/0.01	0.20/0.05	Solid		
								CO (Heat)	0.12	0.55	0.12	0.55	Gas		
								NOX (Heat)	0.15	0.65	0.15	0.65	Gas		
								SO ₂ (Heat)	0.01	0.01	0.01	0.01	Gas		
2E	Vertical	2S	Paint Booth No. 2 with Heater	2C	Filter	NA	NA	HAPs (Paint/Heat)	3.90/2.80E-3	2.62/1.22E-2	0.000001	0.000003	Solid	Mass Balance and AP-42	NA
								VOC (Paint/Heat)	16.00/0.01	*70.04	16.00/0.01	*70.04	Vapor/Solid		
								PM/PM10/PM2.5	9.89/0.01	*70.05	9.89/0.01	19.93/0.05	Solid		
								CO (Heat)	0.12	0.55	0.12	0.55	Gas		
								NOX (Heat)	0.15	0.65	0.15	0.65	Gas		
3E	Vertical	3S	Paint Booth No. 3 with Heater	3C	Filter	NA	NA	SO ₂ (Heat)	0.01	0.01	0.01	0.01	Gas	Mass Balance and AP-42	NA
								Lead (Heat)	0.000001	0.000003	0.000001	0.000003	Gas		
								HAPs (Paint/Heat)	3.90/2.80E-3	*1.22E-2	3.90/2.80E-3	*1.22E-2	Solid		
								VOC (Paint/Heat)	16.00/0.01	*70.04	16.00/0.01	*70.04	Vapor		
								PM/PM10/PM2.5	9.89/0.01	*70.05	9.89/0.01	*70.05	Solid		
11E	Vertical	11S	Retractable Paint Booth	11C	Filter	NA	NA	VOC	3.53	*	3.53	*	Vapor	Mass Balance and AP-42	NA
								PM/PM10/PM2.5	2.18	*	0.11	*	Solid		
								HAPs	0.86	*	0.86	*	Vapor		

*The yearly emissions for paint VOC, PM/PM10/PM2.5, and HAPs are combined and shown under Paint Booth No. 1 with Heater. These emissions may be from either of the three (3) paint booths or the proposed Retractable Paint Booth.

4E	Vents Inside Building	4S	Body Prep Room	4C	Filter	NA	NA	PM	5.00	21.90	5.00	21.90	Solid	Reg. 7 Limit	NA
								PM10	2.38	10.43	2.38	10.43	Solid		
								PM2.5	2.38	10.43	2.38	10.43	Solid		
5E	NA	5S	Inspection, Touchups Cleaning, and Miscellaneous	NA	NA	NA	NA	VOC	5.28	7.54	5.28	7.54	Vapor	Mass Balance	NA
								HAPs	1.59	2.26	1.59	2.26	Vapor		

**Attachment J Continued
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
6E	NA	6S	Welding	NA	NA	NA	NA	PM/PM10/PM2.5 HAPs	0.08 0.298	0.02 0.0077	0.08 0.298	0.02 0.0077	Solid Vapor	AP-42	NA
7E	NA	7S	Engine Emissions	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO ₂ HAPs	0.03 0.09 0.04 0.53 2.49 0.0322	0.09 0.09 0.12 1.56 7.35 0.0951	0.03 0.03 0.04 0.53 2.49 0.0322	0.09 0.09 0.12 1.56 7.35 0.0951	Vapor Solid Gas Gas Gas Vapor	AP-42 and Manufacturer EF	NA
8E	NA	8S	Parts Washer	NA	NA	NA	NA	VOC	0.15	0.66	0.13	0.57	Vapor	AP-42	NA
9E	Vertical	9S	Emergency Generator	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO ₂ HAPs	0.21 0.0031 8.93 0.19 0.0002 0.0109	0.0516 0.0008 2.23 0.05 0.0001 0.0029	0.21 0.0031 8.93 0.19 0.0002 0.0109	0.0516 0.0008 2.23 0.05 0.0001 0.0029	Vapor Solid Gas Gas Gas Vapor	AP-42 and Manufacturer EF	NA
10E	Vertical	10E	Building Heaters	NA	NA	NA	NA	VOC PM/PM10/PM2.5 CO NOX SO ₂ Pb HAPs	0.10 0.14 1.51 1.81 0.02 0.00009 3.40E-2	0.43 0.60 6.64 7.90 0.05 0 1.49E-2	0.10 0.14 1.51 1.81 0.02 0.00005 3.40E-2	0.43 0.60 6.64 7.90 0.05 0.00004 1.49E-2	Vapor Solid Gas Gas Gas Solid Vapor	AP-42	NA
12E	NA	12S	Windshield Installation	NA	NA	NA	NA	VOC Xylenes Ethylbenzene 4,4'-methylenebis(phenyl diisocyanate) HAPs	0.37 0.23 0.09 0.05 0.37	0.58 0.36 0.15 0.07 0.58	0.37 0.23 0.09 0.05 0.37	0.58 0.36 0.15 0.07 0.58	Vapor Vapor Vapor Vapor Vapor	Mass Balance and AP-42	NA

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET. Emission units are listed in the table. Emission units are listed in the table. Emission units are listed in the table.

¹ Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (e.g., 5 m/day, 2 days/week).
² Please add descriptors such as toward vertical stack, downward vertical stack.
³ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, C₂S, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.
⁴ Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).
⁵ Give maximum potential controlled emission rate with control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).
⁶ Indicate method used to determine emission rate as follows: MB = manual balance; ST = stack test (give date of test); EF = emission factor (give source and units); etc.
⁷ Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68° F and 29.92 inches Hg) (see 40CFR77). If the pollutant is SO₂, use units of ppmv (see 40CFR81.0).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data

Emission Point ID No. <i>(Must match Emission Units Table)</i>	Inner Diameter (ft.)	Exit Gas				Emission Point Elevation (ft)			UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow ¹ (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting		
1E*	NA	Ambient	NA	NA	~626	~25 FT				
2E*	NA	Ambient	NA	NA	~626	~25 FT				
3E*	NA	Ambient	NA	NA	~626	~25 FT				
4E*	NA	Ambient	NA	NA	~626	~25 FT				
5E*	NA	Ambient	NA	NA	~626	NA				
6E*	NA	Ambient	NA	NA	~626	NA				
7E*	NA	Ambient	NA	NA	~626	NA		4,360.59	459.52	
8E*	NA	Ambient	NA	NA	~626	NA				
9E*	NA	Ambient	NA	NA	~626	NA				
10E*	NA	Ambient	NA	NA	~626	NA				
11E*	NA	Ambient	NA	NA	~626	NA				
12E	NA	Ambient	NA	NA	~626	NA				

¹ Give at operating conditions. Include inerts.
² Release height of emissions above ground level.
 *See design details in the Appendix.

ATTACHMENT K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY		All Regulated Pollutants ¹ Chemical Name/CAS ¹	Maximum Potential Uncontrolled Emissions ²		Maximum Potential Controlled Emissions ³		Est. Method Used ⁴
			lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads	PM	4.28	5.93	4.28	5.93	AP-42	
	PM10	0.86	1.20	0.86	1.20		
	PM2.5	0.24	0.33	0.24	0.33		
Unpaved Haul Roads	PM	11.66	16.65	11.66	16.65	AP-42	
	PM10	3.12	4.46	3.12	4.46		
	PM2.5	0.32	0.45	0.32	0.45		
Storage Pile Emissions							
Loading/Unloading Operations							
Wastewater Treatment Evaporation & Operations							
Equipment Leaks							
General Clean-up VOC Emissions							
Other							

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, etc. DO NOT LIST CO₂, H₂, H₂O, N₂, O₂, and Noble Gases.

² Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

³ Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁴ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT L
EMISSION UNIT DATA SHEETS

**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 11S (11E)

<p>1. Name or type and model of proposed affected source:</p> <p>Retractable Paint Booth – See Information in Appendix</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>Paint Gun – 6.56 pounds per hour</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>Painted Materials</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
NA			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
NA			
(c) Theoretical combustion air requirement (ACF/unit of fuel): NA			
@		°F and	
		psia.	
(d) Percent excess air:			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
NA			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
NA			
(g) Proposed maximum design heat input:		1.5126	× 10 ⁶ BTU/hr.
7. Projected operating schedule:			
Hours/Day	52	Days/Week	7
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: Per Booth

@	Ambient	°F and	Ambient	psia
a. NO _x		lb/hr		grains/ACF
b. SO ₂		lb/hr		grains/ACF
c. CO		lb/hr		grains/ACF
d. PM ₁₀	2.18	lb/hr		grains/ACF
e. Hydrocarbons		lb/hr		grains/ACF
f. VOCs	3.53	lb/hr		grains/ACF
g. Pb		lb/hr		grains/ACF
h. Specify other(s)				
HAPs*	0.86			
*Speciated HAPs in Attachment N		lb/hr		grains/ACF
		lb/hr		grains/ACF
		lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING
 Track the amount of paint used and VOC content.

RECORDKEEPING
 Record the amount of paint used and VOC content.

REPORTING
 None

TESTING
 None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None Provided

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 12S (12E)

<p>1. Name or type and model of proposed affected source:</p> <p>Windshield Installation Operation</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>Windshield Sealant: 2,100 grams per hour</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>NA</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):		
(a) Type and amount in appropriate units of fuel(s) to be burned:		
NA		
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:		
NA		
(c) Theoretical combustion air requirement (ACF/unit of fuel): NA		
@	°F and	psia.
(d) Percent excess air:		
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:		
NA		
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:		
NA		
(g) Proposed maximum design heat input: NA × 10 ⁶ BTU/hr.		
7. Projected operating schedule:		
Hours/Day	52	Days/Week
		7
		Weeks/Year
		52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: Per Booth

@	Ambient	°F and	Ambient	psia
a.	NO _x		lb/hr	grains/ACF
b.	SO ₂		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM ₁₀		lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	0.37	lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	HAPs*	0.37	lb/hr	
	*Speciated HAPs in Attachment N		lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

None

RECORDKEEPING

Record the amount of sealant purchased.

REPORTING

None

TESTING

None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

NA

ATTACHMENT M

AIR POLLUTION CONTROL DEVICE SHEETS

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
PM/ PM10/PM2.5	2.18		100	0.11		95
D						
E						

24. Dimensions of stack: Height NA Diameter NA

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table:

Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
	Weight % for Size Range	Weight % for Size Range
0 – 2		95
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification): Ambient

28. Describe the collection material disposal system: Filters are landfilled.

29. Have you included **Other Collectores Control Device** in the Emissions Points Data Summary Sheet?

30. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:

Track when the filters are replaced.

RECORDKEEPING:

Record when the filters are replaced.

REPORTING:

None

TESTING:

None

MONITORING:

Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.

RECORDKEEPING:

Please describe the proposed recordkeeping that will accompany the monitoring.

REPORTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

TESTING:

Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 95

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 95

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

Use as required in the paint booth.

ATTACHMENT N
SUPPORTING EMISSIONS CALCULATIONS

Hino Motors Manufacturing U.S.A., Inc.
Truck Assembly Facility

POTESTA & ASSOCIATES, INC.
Project No: 0101-16-0105

By: JJD
Date: 4/08/2016

Checked by: PEW
Date: 04/15/2016

Proposed PTE

Pollutant	Total Emissions			
	Uncontrolled		Controlled	
	lb/hour	ton/yr	lb/hour	ton/yr
VOC	57.70	37.72	57.68	37.63
PM	53.08	65.27	21.63	45.54
PM ₁₀	38.50	36.88	7.05	17.15
PM _{2.5}	35.08	32.00	3.63	12.27
NO _x	2.98	11.46	2.98	11.46
CO	10.84	10.64	10.84	10.64
SO ₂	2.54	7.43	2.54	7.43
Total HAPs	14.62	5.76	14.62	5.76
Lead	0.000011	0.000049	0.000011	0.000049

Hino Motors Manufacturing U.S.A., Inc.
Truck Assembly Facility

POTESTA & ASSOCIATES, INC.
Project No: 0101-16-0105

By: JJD
Date: 4/08/2016

Checked by: PEW
Date: 04/15/2016

Retractable Paint Booth and Windshield Sealant Emissions

Pollutant	Change in Emissions			
	Uncontrolled		Controlled	
	lb/hour	ton/yr	lb/hour	ton/yr
VOC	3.90	0.58	3.90	0.58
PM	2.18	0	0.11	0
PM ₁₀	2.18	0	0.11	0
PM _{2.5}	2.18	0	0.11	0
NO _x	0	0	0	0
CO	0	0	0	0
SO ₂	0	0	0	0
Total HAPs	1.23	0.58	1.23	0.58
Lead	0	0	0	0

Hino Motors Manufacturing U.S.A., Inc.
Truck Assembly Facility

POTESTA & ASSOCIATES, INC.
Project No: 0101-14-0346-004

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Existing PTE

Pollutant	Total Emissions			
	Uncontrolled		Controlled	
	lb/hour	ton/yr	lb/hour	ton/yr
VOC	53.80	37.14	53.78	37.05
PM	50.90	65.27	21.52	45.54
PM ₁₀	36.32	36.88	6.94	17.15
PM _{2.5}	32.90	32.00	3.52	12.27
NO _x	2.98	11.46	2.98	11.46
CO	10.84	10.64	10.84	10.64
SO ₂	2.54	7.43	2.54	7.43
Total HAPs	13.39	5.17	13.39	5.17
Lead	0.000011	0.000049	0.000011	0.000049

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Paint Booths (1S, 2S, & 3S)

There are three identical paint booths proposed for this facility. To estimate the hourly emissions the Regulation 21, Section 19, limitations are being utilized. The paint and primer meet the definition of air dried coatings with a VOC limits of 3.5 pounds per gallon. The clear coat has a limit of 4.3 pounds per gallon. Therefore, for the maximum hourly VOC emissions it is assumed that the operation will use clear coat for one hour. The maximum hourly particulate emissions (PM, PM10, and PM2.5 assumed to be equal) are based on the highest solids coating being utilized for the entire hour. Maximum HAP emissions are based on the percent by weights of the HAPS present in the materials, the gallons per hour capacity of the paint gun, and the unit weight of the specific material. It is assumed that the material is used for an entire hour and the highest HAP value is requested to be the emissions value.

Paint Gun Capability

Paint Gun Theoretical Throughput = 225 gm/min (Dan-Am Co. SATA Distributor USA)
454 gm/lb
60 min/hr
29.74 pph

Hourly Emissions Estimate

Volatile Organic Compounds

Minimum Weight Per Gallon of Paint = 7.99 ppg (Imron Elite Appearance Clear Coat (8430S))
Maximum Gallons = 3.72 gph
VOC Content = 4.3 ppg (Regulation 21, Section 19 Limit)
VOC Emissions = 16.00 pph

Particulate Matter (PM, PM10, and PM2.5 Assumed Equal)

Maximum Solids Content = 7.59 ppg (Color Atlas White (CAS992))
Usage Rate of Solids = 28.26 pph
Transfer Efficiency of Solids = 65 %
Uncontrolled PM/PM10/PM2.5 Emissions = 9.89 pph
Control Efficiency = 99 %
Controlled PM/PM10/PM2.5 Emissions = 0.10 pph

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Hourly Emissions Estimate (Continued)

Hazardous Air Pollutants

Paint

Weight = 8.55 ppg (Color Atlas Yellow (CAS250))
Ethylbenzene = 0.1 % 0.03 pph

Primers

Weight = 12.28 ppg (Gray Hybrid Epoxy Primer (825P32760))
Xylene = 2 % 0.91 pph
Ethylbenzene = 0.4 % 0.18 pph
Naphthalene = 0.3 % 0.14 pph

Weight = 10.82 ppg (Gray Urethane Sandable Primer (1220S))
Ethylene Glycol Monobutyl Ether Acetate = 6 % 2.42 pph

Weight = 7.37 ppg (Hybrid Primer Medium Activator (FGP32765))
Xylene = 4 % 1.10 pph
Ethylbenzene = 0.9 % 0.25 pph

Total Hourly Emissions

	One Booth		Three Booths	
	Uncontrolled	Controlled	Uncontrolled	Controlled
VOC	16.00	16.00	48.01	48.01 pph
PM/PM10/PM2.5	9.89	0.10	29.67	0.30 pph
Xylene	1.10	1.10	3.29	3.29 pph
Ethylbenzene	0.25	0.25	0.74	0.74 pph
Naphthalene	0.14	0.14	0.41	0.41 pph
Ethylene Glycol Monobutyl Ether Acetate	2.42	2.42	7.25	7.25 pph
Total HAPS	3.90	3.90	11.69	11.69 pph

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Yearly Emissions Estimate

A mass balance is used for the yearly emissions with the required coating usages for each truck being painted. It is estimated that each truck will take one gallon each of primer, paint, and clear coat. The total estimated coating usage is based on the total number of trucks to be painted. For total particulate from painting it is assumed that all the coatings have the highest solids presented as in the hourly emissions estimate. Maximum HAP emissions are based on the weight percents of the HAPS present in the materials, the gallons per year use of each material, and the unit weight of the specific material. It is assumed that the material is used for an entire hour and the highest HAP value is requested to be the emissions value.

Number of Trucks Painted = 5,000 trucks per year

Volatile Organic Compounds

Clear Coat

Application Rate Per Truck = 1 gallon per truck
Total Amount Used = 5,000 gpy
VOC Content = 4.3 ppg (Regulation 21, Section 19 Limit)
VOC Emissions = 21,500 ppy
10.75 tpy

Paint

Application Rate Per Truck = 1 gallon per truck
Total Amount Used = 5,000 gpy
VOC Content = 3.5 ppg (Regulation 21, Section 19 Limit)
VOC Emissions = 17,500 ppy
8.75 tpy

Primer

Application Rate Per Truck = 1 gallon per truck
Total Amount Used = 5,000 gpy
VOC Content = 3.5 ppg (Regulation 21, Section 19 Limit)
VOC Emissions = 17,500 ppy
8.75 tpy
Total VOC Emissions = 28.25 tpy

Particulate Matter (PM, PM10, and PM2.5 Assumed Equal)

Maximum Solids Content = 7.59 ppg (Color Atlas White (CAS992))
Total Coating = 15,000 gpy
Usage Rate of Solids = 113,903 ppy
Transfer Efficiency of Solids = 65 %
Uncontrolled PM/PM10/PM2.5 Emissions = 39,865.93 ppy
19.93 tpy
Control Efficiency = 99 %
Controlled PM/PM10/PM2.5 Emissions = 398.66 ppy
0.20 tpy

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Yearly Emissions Estimate (Continued)

Hazardous Air Pollutants

Paint

Weight = 8.55 ppg (Color Atlas Yellow (CAS250))
Ethylbenzene = 0.1 % 0.02 tpy

Primers

Weight = 12.28 ppg (Gray Hybrid Epoxy Primer (825P32760))
Xylene = 2 % 0.61 tpy
Ethylbenzene = 0.4 % 0.12 tpy
Naphthalene = 0.3 % 0.09 tpy

Weight = 10.82 ppg (Gray Urethane Sandable Primer (1220S))
Ethylene Glycol Monobutyl Ether Acetate = 6 % 1.62 tpy

Weight = 7.37 ppg (Hybrid Primer Medium Activator (FGP32765))
Xylene = 4 % 0.74 tpy
Ethylbenzene = 0.9 % 0.17 tpy

Maximum Emissions for HAPS

Xylene = 0.74 tpy
Ethylbenzene = 0.17 tpy
Naphthalene = 0.09 tpy
Ethylene Glycol Monobutyl Ether Acetate = 1.62 tpy
Total = 2.62 tpy

By: JJD
Date: 4/08/2016

Checked by: PEW
Date: 04/15/2016

Retractable Paint Booth 11S

There is one retractable paint booth proposed for this facility. To estimate the hourly emissions the Regulation 21, Section 19, limitations are being utilized. The paint and primer meet the definition of air dried coatings with a VOC limits of 3.5 pounds per gallon. The clear coat has a limit of 4.3 pounds per gallon. Therefore, for the maximum hourly VOC emissions it is assumed that the operation will use clear coat for one hour. The maximum hourly particulate emissions (PM, PM10, and PM2.5 assumed to be equal) are based on the highest solids coating being utilized for the entire hour. Maximum HAP emissions are based on the percent by weights of the HAPS present in the materials, the gallons per hour capacity of the paint gun, and the unit weight of the specific material. It is assumed that the material is used for an entire hour and the highest HAP value is requested to be the emissions value.

Paint Gun Capability

Paint Gun Theoretical Throughput =	1.75 oz/min (Supplied by Client)
	28.3495 gm/oz
	49.61 gm/min
	454 gm/lb
	60 min/hr
	6.56 pph

Hourly Emissions Estimate

Volatile Organic Compounds

Minimum Weight Per Gallon of Paint =	7.99 ppg (Imron Elite Appearance Clear Coat (8430S))
Maximum Gallons =	0.821 gph
VOC Content =	4.3 ppg (Regulation 21, Section 19 Limit)
VOC Emissions =	3.529 pph

Particulate Matter (PM, PM10, and PM2.5 Assumed Equal)

Maximum Solids Content =	7.59 ppg (Color Atlas White (CAS992))
Usage Rate of Solids =	6.23 pph
Transfer Efficiency of Solids =	65 %
Uncontrolled PM/PM10/PM2.5 Emissions =	2.181 pph
Control Efficiency =	95 %
Controlled PM/PM10/PM2.5 Emissions =	0.1090 pph

By: JJD
Date: 4/08/2016

Checked by: PEW
Date: 04/15/2016

Hourly Emissions Estimate (Continued)

Hazardous Air Pollutants

Paint

Weight = 8.55 ppg (Color Atlas Yellow (CAS250))
Ethylbenzene = 0.1 % 0.0070 pph

Primers

Weight = 12.28 ppg (Gray Hybrid Epoxy Primer (825P32760))
Xylene = 2 % 0.2015 pph
Ethylbenzene = 0.4 % 0.0403 pph
Naphthalene = 0.3 % 0.0302 pph

Weight = 10.82 ppg (Gray Urethane Sandable Primer (1220S))
Ethylene Glycol Monobutyl Ether Acetate = 6 % 0.53 pph

Weight = 7.37 ppg (Hybrid Primer Medium Activator (FGP32765))
Xylene = 4 % 0.2419 pph
Ethylbenzene = 0.9 % 0.0544 pph

Total Hourly Emissions

	Uncontrolled	Controlled
VOC	3.53	3.53 pph
PM/PM10/PM2.5	2.18	0.11 pph
Xylene	0.24	0.24 pph
Ethylbenzene	0.05	0.05 pph
Naphthalene	0.03	0.03 pph
Ethylene Glycol Monobutyl Ether Acetate	0.53	0.53 pph
Total HAPS	0.86	0.86 pph

Yearly Emissions Estimate

No additional yearly emissions will be produced. The total yearly paint throughput will not increase with the addition of the Portable Paint Booth and no new paint types will be used.

By: JJD
Date: 4/15/2016

Checked By: PEW
Date: 4/21/2016

Windshield Installation Operation (12S)

Throughput =	2,100	gm/hr (Provided)
	454	gm/lb
	4.63	lb/hr
	6,600	kg/yr (Provided)
	0.454	kg/lb
	14,551	lb/yr
Weight Per Gallon of Sealant =	10.10	ppg (Product Data Sheet)
VOC Content =	0.53	ppg (Product Data Sheet)
Maximum Gallons =	0.46	gph
Gallons per Year =	1,441	gal/yr

Hazardous Air Pollutants

Xylene =	5%	Concentration (SDS)
Ethylbenzene =	2%	Concentration (SDS)
4,4'-methylenediphenyl diisocyanate =	1%	Concentration (SDS)

Total Emissions

Pollutant	Uncontrolled		Controlled	
	pph	tpy	pph	tpy
VOC ¹	0.37	0.58	0.37	0.58
Xylene	0.23	0.36	0.23	0.36
Ethylbenzene	0.09	0.15	0.09	0.15
4,4'-methylenediphenyl diisocyanate	0.05	0.07	0.05	0.07
Total HAPS	0.37	0.58	0.37	0.58

1. The Product Data Sheet and SDS list VOC content at 0.53 lb/gal (64.1 gm/l) which calculates to 0.24 pph and 0.38 tpy. Precise HAP concentrations were unavailable so the maximum listed values from the SDS were used. Using conservative HAP concentrations yielded HAP emissions higher than VOC emissions, but all the HAPs are VOCs. For this reason we are using the Total HAPS emissions as the VOC emissions.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Paint Booth Heaters (1S, 2S, & 3S)

There are three identical paint booths proposed for the site each with the same heating unit and each are fueled with natural gas.

Paint Booth Heater = 1,512,600 Btu/hr
 Operating Hours = 1,5126 MMBtu/hr
 Number of Units = 8,760 hrs/yr
 3

Emission Type	lb/10 ⁶ scf	EF ^(a) lb/MMBtu	One Unit Emissions	
			lb/hr	tons/year
CO	84	0.08235	0.12	0.55
NO _x	100	0.09804	0.15	0.65
PM	7.6	0.00745	0.01	0.05
PM ₁₀ ⁽¹⁾	7.6	0.00745	0.01	0.05
PM _{2.5} ⁽¹⁾	7.6	0.00745	0.01	0.05
SO ₂	0.6	0.00059	0.01	0.01
VOC/TOC	5.5	0.00539	0.01	0.04
Lead	0.0005	4.90E-07	0.000001	0.000003

Rounding to = 2

Emission Type	Three Units Emissions	
	lb/hr	tons/year
CO	0.36	1.65
NO _x	0.45	1.95
PM	0.03	0.15
PM ₁₀ ⁽¹⁾	0.03	0.15
PM _{2.5} ⁽¹⁾	0.03	0.15
SO ₂	0.03	0.03
VOC/TOC	0.03	0.12
Lead	2.22E-06	9.74E-06

Conversion from lb/10⁶ scf to lb/MMBtu (divide by) = 1,020

References:

- a. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.

Note:

- 1. It is assumed that PM10 and PM2.5 are equal to PM.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Paint Booth Heaters (1S, 2S, & 3S)

Total Heaters Rating =	1.5126	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF ¹		One Unit Emissions		Three Units Emissions	
		lb/10 ⁶ scf	lb/MMBtu	lb/hr	tons/year	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	3.56E-08	1.56E-07	1.07E-07	4.68E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	2.37E-08	1.04E-07	7.12E-08	3.12E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	3.56E-09	1.56E-08	1.07E-08	4.68E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
71-43-2	Benzene	2.10E-03	2.06E-06	3.11E-06	1.36E-05	9.34E-06	4.09E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	1.78E-09	7.79E-09	5.34E-09	2.34E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	1.78E-06	7.79E-06	5.34E-06	2.34E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	4.45E-09	1.95E-08	1.33E-08	5.85E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	4.15E-09	1.82E-08	1.25E-08	5.46E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.07E-04	4.68E-04	3.20E-04	1.40E-03
110-54-3	Hexane	1.80E+00	1.76E-03	2.67E-03	1.17E-02	8.01E-03	3.51E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	2.67E-09	1.17E-08	8.01E-09	3.51E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	9.05E-07	3.96E-06	2.71E-06	1.19E-05
85-01-8	Phenanthrene	1.70E-05	1.67E-08	2.52E-08	1.10E-07	7.56E-08	3.31E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	7.41E-09	3.25E-08	2.22E-08	9.74E-08
108-88-3	Toluene	3.40E-03	3.33E-06	5.04E-06	2.21E-05	1.51E-05	6.63E-05
7440-38-2	Arsenic	2.00E-04	1.96E-07	2.97E-07	1.30E-06	8.90E-07	3.90E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	1.78E-08	7.79E-08	5.34E-08	2.34E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	1.63E-06	7.14E-06	4.89E-06	2.14E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	2.08E-06	9.09E-06	6.23E-06	2.73E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.25E-07	5.46E-07	3.74E-07	1.64E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	5.64E-07	2.47E-06	1.69E-06	7.40E-06
7439-97-6	Mercury	2.60E-04	2.55E-07	3.86E-07	1.69E-06	1.16E-06	5.07E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	3.11E-06	1.36E-05	9.34E-06	4.09E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	3.56E-08	1.56E-07	1.07E-07	4.68E-07
VOC HAPs Subtotal				2.79E-03	1.22E-02	8.36E-03	3.66E-02
Metal HAPs Subtotal				8.25E-06	3.61E-05	2.47E-05	1.08E-04
Total HAPs				2.80E-03	1.22E-02	8.39E-03	3.67E-02

References:

1. AP42 Table 1.4-3 and Table 1.4-4.

Conversion from lb/10⁶ scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Body Prep Room (4S)

The following methodology for estimating emissions is used for particulate matter from sanding of the truck body to allow for painting. The Regulation 7 particulate mass standard limit is used to estimate these emissions. Using 5,000 lbs/hour as the maximum weight of process material processed through the operations in a single hour, for an 'a' source Table 45-7A results in a particulate matter emission rate of 5.0 lbs/hour.

	Regulation 7 Mass Weight Limit (lbs/hr)	Requested Permit Limits	
		lbs/hr	tons/yr
PM	5.00	5.00	21.90
PM ₁₀ ⁽²⁾	2.38	2.38	10.43
PM _{2.5} ⁽²⁾	2.38	2.38	10.43

- (1) For calculation purposes it is assumed that grinding operates at 8,760 hrs/year.
(2) PM₁₀=PM/2.1 and PM_{2.5}=PM/10

Welding (6S)

	Usage		Particulates Emission Factor ⁽¹⁾	Emissions	
	lbs/hr	lbs/yr	PM/PM ₁₀ /PM _{2.5} (per 1,000 pounds)	lbs/hr	tons/yr
Welding	1	500	81.6	0.08	0.02

(1) Emission factor from AP-42 Table 12.19-1 worst case of all electrode types.

HAP	HAPs		
	Emission Factor ⁽¹⁾ (10 ⁻¹ /per 1,000 pounds)	lbs/hr	tons/yr
Cr	25.30	0.0026	0.0007
Cr(VI)	18.80	0.0019	0.0005
Co	0.01	0.0001	0.0001
Mn	232.00	0.0232	0.0058
Ni	17.10	0.0018	0.0005
Pb	1.62	0.0002	0.0001
	Total =	0.0298	0.0077

Rounded to = 4

(1) Emission factors from worst case of electrode type for each HAP in AP-42 Table 12.19-2 of all electrode types.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Miscellaneous Touch-up Paint, Cleaning, and Material Use (5S)

Item Name	Item Description	VOC (g/l)	VOC (%)	VOC (lb/gal)	Xylene	Ethylbenzene	Toluene	Methanol
Rustoleum Enamel	Black Spray Paint	541			10	5	5	
Rustoleum	Clear Enamel Paint	584					20	
Rustoleum Industrial Choice	White Spray Paint	507			10	5		
Rustoleum Industrial Choice	Yellow Spray Paint	509			10	5		
3M Protector	Rubberized Undercoating	440					30	0.5
Magnaflux Spotcheck SKC-5	CF Cleaner		90					
Magnaflux Spotcheck SKD-S2	Developer	750						
WD - 40	WD - 40	412	49.5					
CRC Brakleen	Brake Cleaner	657.2	84				25	50
Asian	Black Paint for Online Sprayer	0	0					
Lacquer Thinner 106	Paint Gun Cleaner			4.4	3	0.8	30	20
Low HAP Cleaning Solvent	Paint Gun Cleaner			3.9			10	
Final Klean Fast Dry Cleaner	Cleaning Solvent			6.1			12	
Low VOC Final Klean	Cleaning Solvent			0.5				

Item Name	2014		Max Usage	Can Size		
	Cans/Yr	Max Usage		fl-oz	g/can	liter/can
Rustoleum Enamel	5,175	12,814	15	426	0.444	
Rustoleum	132	327	15	426	0.444	
Rustoleum Industrial Choice	122	302	15	426	0.444	
Rustoleum Industrial Choice	53	131	15	426	0.444	
3M Protector	121	300	16	454	0.473	
Magnaflux Spotcheck SKC-5	478	1,184	16	454	0.473	
Magnaflux Spotcheck SKD-S2	577	1,429	16	454	0.473	
WD - 40	47	116	16	454	0.473	
CRC Brakleen	46	114	20	397	0.591	
Asian	169	418	NA	NA	NA	
Lacquer Thinner 106		gal/yr	lb/gal			
Low HAP Cleaning Solvent		365	6.78			
Final Klean Fast Dry Cleaner		365	6.56			
Low VOC Final Klean		365	6.07			
		365	8.31			

Item Name	Max Weight	Usage	VOC			
			grams/yr	lb/hr(1)	lbs/yr(2)	tpv(2)
Rustoleum Enamel	12,024	5694	3,075,263	2.37	6,773.71	3.39
Rustoleum	307	145	84,676	0.07	186.51	0.09
Rustoleum Industrial Choice	283	134	67,943	0.05	149.65	0.07
Rustoleum Industrial Choice	123	58	29,632	0.02	65.27	0.03
3M Protector	300	142	62,379	0.05	137.40	0.07
Magnaflux Spotcheck SKC-5	1,184	560	483,622	0.37	1,065.25	0.53
Magnaflux Spotcheck SKD-S2	1,429	676	507,038	0.39	1,116.82	0.56
WD - 40	116	55	22,688	0.02	49.97	0.02
CRC Brakleen	100	67	44,276	0.03	97.32	0.05
Asian	NA	NA	NA	NA	NA	NA
Lacquer Thinner 106	2,475	NA	NA	0.56	1,606.00	0.80
Low HAP Cleaning Solvent	2,394	NA	NA	0.50	1,423.50	0.71
Final Klean Fast Dry Cleaner	2,216	NA	NA	0.78	2,226.50	1.11
Low VOC Final Klean	3,033	NA	NA	0.06	182.50	0.09
			Total	5.28	15,080.61	7.54

Item Name	Xylene		Ethylbenzene		Toluene		Methanol	
	lb/hr(1)	tpv(2)	lb/hr(1)	tpv(2)	lb/hr(1)	tpv(2)	lb/hr(1)	tpv(2)
Rustoleum Enamel	0.4208	0.6012	0.2104	0.3006	0.2194	0.3006	0	0
Rustoleum	0	0	0	0	0.0215	0.0307	0	0
Rustoleum Industrial Choice	0.0099	0.0142	0.0050	0.0071	0	0	0	0
Rustoleum Industrial Choice	0.0043	0.0062	0.0022	0.0031	0	0	0	0
3M Protector	0	0	0	0	0.0315	0.0449	0.0005	0.0007
Magnaflux Spotcheck SKC-5	0	0	0	0	0	0	0	0
Magnaflux Spotcheck SKD-S2	0	0	0	0	0	0	0	0
WD - 40	0	0	0	0	0	0	0	0
CRC Brakleen	0	0	0	0	0.0087	0.0125	0.0174	0.0249
Asian	NA	NA	NA	NA	NA	NA	NA	NA
Lacquer Thinner 106	0.0260	0.0371	0.0069	0.0099	0.2598	0.3712	0.1732	0.2475
Low HAP Cleaning Solvent	0	0	0	0	0.0838	0.1197	0	0
Final Klean Fast Dry Cleaner	0	0	0	0	0.0931	0.1329	0	0
Low VOC Final Klean	0	0	0	0	0	0	0	0
Total	0.4611	0.6586	0.2245	0.3207	0.7088	1.0125	0.1912	0.2731
					Total HAPS	1.59	2.26	

1 liter = 33.814 fluid ounces
1 pound = 454 grams

- Notes:
1. Based on seven (7) trucks per hour.
2. Based on 20,000 trucks per year.

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Truck Engine Emissions (7S)

Engine =	260	horsepower	1 gram =	0.002204	lbs
Engine Test Time =	40	minutes	Trucks/year =	20,000	Provided
	0.67	hours	Trucks/hour =	7.0	Provided
Operations =	246	days/yr	BSFC ⁽³⁾ =	7,000	Btu/hp/hr
	24	hrs/day			
	5,904	hours/year			

I. Criteria Pollutant Emissions

Criteria Pollutant	Emission Factor			Emissions	
	(g/hp-hr)	(lb/hp-hr)	EF Source	lb/hr	ton/yr
PM/PM10/PM2.5	0.008	1.76E-05	Manufacturer	0.03	0.09
SO ₂	NA	2.05E-03	AP42 Table 3.3-1.	2.49	7.35
VOC	0.01	2.20E-05	Manufacturer	0.03	0.09
CO	0.013	2.87E-05	Manufacturer	0.04	0.12
NO _x	0.195	4.30E-04	Manufacturer	0.53	1.56

2. Hazardous Air Pollutant Emissions

Hazardous Air Pollutant	Emission Factor ⁽³⁾ (lb/MMBtu)	Emissions	
		lb/hr	ton/yr
Benzene ⁽²⁾	9.33E-04	0.0079	0.0234
Toluene	4.09E-04	0.0035	0.0103
Xylenes	2.85E-04	0.0024	0.0071
1,3-Butadiene ⁽²⁾	3.91E-05	0.00033	0.0010
Formaldehyde ⁽²⁾	1.18E-03	0.0100	0.0296
Acetaldehyde	7.67E-04	0.0065	0.0192
Acrolein	9.25E-05	0.0008	0.0023
Naphthalene	8.48E-05	0.0007	0.0021
Total HAPs		0.0322	0.0951

1. AP42 Table 3.3-2.
2. Toxic Air Pollutant (TAP) by 45CSR13 Table 45-13A.
3. Brake Specific Fuel Consumption.

Hino Motors Manufacturing U.S.A., Inc.
Truck Assembly Facility

POTESTA & ASSOCIATES, INC.
Project No: 0101-14-0346-004

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Parts Washer (8S)

	Uncontrolled	Controlled	
Emission Factor(1)	0.33	0.2871	tpy/unit
Number of Units	2	2	No.
Hours Per Year	8,760	8,760	hrs/yr
Emission	1,320	1,148	lbs/yr
	0.15	0.13	lbs/hr
	0.66	0.57	tpy

Emission Reduction for Cover(2)	13	%
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References:

1. AP-42, Table 4.6-2
2. AP-42, Table 4.6-3 Footnote E

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Emergency Generator (9S)

	Specifications		
Fuel Type =	Natural Gas		
Fuel Usage =	316	cu. ft./hour	Manufacturer
Engine Power =	22	kW	Manufacturer
HHV =	1,000	Btu/scf	Constant
Maximum Horsepower =	40	hp	Manufacturer
Maximum Fuel Input =	0.32	MMBtu/hour	Calculated
	453.59	gram/lb	Constant

Hours Per Year = 500

Regulated Pollutant	Emission Factor		Hourly Emissions (lbs/hour)	Annual Emissions (tons/year)
	(g/hp-hr)(1)	(lb/MMBtu)(2)		
NO _x	2.15	4.08	0.19	0.05
CO	101.28	3.72	8.93	2.23
SO ₂	NA	0.0006	0.0002	0.0001
PM/PM ₁₀ /PM _{2.5}	NA	0.00991	0.0031	0.0008
VOC	2.34	0.12	0.21	0.0516
Hazardous Air Pollutants (HAPS) (2)				
1,1,2,2-tetrachloroethane	NA	4.00E-05	0.00002	0.00001
1,1,2-trichloroethane	NA	3.18E-05	0.00002	0.00001
1,3-Butadiene	NA	6.63E-04	0.00021	0.00006
1,3-dichloropropene	NA	2.65E-05	0.00001	0.00001
2-methylnaphthalene	NA	3.32E-05	0.00002	0.00001
2,2,4-trimethylpentane	NA	2.50E-04	0.00008	0.00002
Acenaphthene	NA	1.25E-06	0.00001	0.00001
Acetaldehyde	NA	2.79E-03	0.00089	0.00023
Acrolein	NA	2.63E-03	0.00084	0.00021
Benzene	NA	1.58E-03	0.00050	0.00013
Carbon Tetrachloride	NA	1.77E-05	0.00001	0.00001
Chlorobenzene	NA	1.29E-05	0.00001	0.00001
Chloroform	NA	1.37E-05	0.00001	0.00001
Ethylbenzene	NA	2.48E-05	0.00001	0.00001
Ethylene dibromide	NA	2.13E-05	0.00001	0.00001
Formaldehyde	NA	2.50E-02	0.00790	0.00198
Naphthalene	NA	9.71E-05	0.00004	0.00001
PAH	NA	1.41E-04	0.00005	0.00002
Styrene	NA	2.36E-05	0.00001	0.00001
Tetrachloroethane	NA	2.48E-06	0.00001	0.00001
Toluene	NA	5.58E-04	0.00018	0.00005
Vinyl chloride	NA	1.49E-05	0.00001	0.00001
Xylenes	NA	1.95E-04	0.00007	0.00002
Total HAPS			0.0109	0.0029

Round to = 5

Notes:

1. Emissions factors provided by Generac.
2. Emission factors from AP-42 Table 3.2-2 or 3.2-3. Air/fuel ratio is unknown-highest EF for each pollutant used.

Hino Motors Manufacturing U.S.A., Inc.
Truck Assembly Facility

POTESTA & ASSOCIATES, INC.
Project No: 0101-14-0346-004

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Total Building Heaters (10S)

Emission Type	Emissions	
	lb/hr	tons/year
CO	1.51	6.64
NO _x	1.81	7.90
PM	0.14	0.60
PM10	0.14	0.60
PM2.5	0.14	0.60
SO ₂	0.02	0.05
VOC/TOC	0.10	0.43
Lead	0.000009	0.000040
Total HAPS	3.40E-02	1.49E-01

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Existing Building Heaters

There are multiple existing building heaters at this facility with variable heat ratings. The emissions provided here are for the existing building heaters and the total heat rating (total Btu/hr).

Total Heater Rating = 16,210,000 Btu/hr
 16.21 MMBtu/hr
 Operating Hours = 8,760 hrs/yr

Emission Type	EF (1)		Emissions	
	lb/10 ⁶ scf	lb/MMBtu (3)	lb/hr	tons/year
CO	84	0.08235	1.33	5.85
NO _x	100	0.09804	1.59	6.96
PM	7.6	0.00745	0.12	0.53
PM10 (2)	7.6	0.00745	0.12	0.53
PM2.5 (2)	7.6	0.00745	0.12	0.53
SO ₂	0.6	0.00059	0.01	0.04
VOC/TOC	5.5	0.00539	0.09	0.38
Lead	0.0005	4.90E-07	0.000008	0.000035

Rounding to = 2

Note:

1. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.
2. It is assumed that PM10 and PM2.5 are equal to PM.
3. Conversion from lb/10⁶ scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Existing Building Heaters HAPs

Total Heaters Rating =	16.21	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF (1)		Emissions	
		lb/10 ⁶ scf	lb/MMBtu (2)	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	3.81E-07	1.67E-06
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	2.54E-07	1.11E-06
83-32-9	Acenaphthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
120-12-7	Anthracene	2.40E-06	2.35E-09	3.81E-08	1.67E-07
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
71-43-2	Benzene	2.10E-03	2.06E-06	3.34E-05	1.46E-04
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
218-01-9	Chrysene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	1.91E-08	8.35E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	1.91E-05	8.35E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	4.77E-08	2.09E-07
86-73-7	Fluorene	2.80E-06	2.75E-09	4.45E-08	1.95E-07
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.14E-03	5.01E-03
110-54-3	Hexane	1.80E+00	1.76E-03	2.86E-02	1.25E-01
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	2.86E-08	1.25E-07
91-20-3	Naphthalene	6.10E-04	5.98E-07	9.69E-06	4.25E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	2.70E-07	1.18E-06
129-00-0	Pyrene	5.00E-06	4.90E-09	7.95E-08	3.48E-07
108-88-3	Toluene	3.40E-03	3.33E-06	5.40E-05	2.37E-04
7440-38-2	Arsenic	2.00E-04	1.96E-07	3.18E-06	1.39E-05
7440-41-7	Beryllium	1.20E-05	1.18E-08	1.91E-07	8.35E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	1.75E-05	7.66E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	2.22E-05	9.75E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.33E-06	5.85E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	6.04E-06	2.65E-05
7439-97-6	Mercury	2.60E-04	2.55E-07	4.13E-06	1.81E-05
7440-02-0	Nickel	2.10E-03	2.06E-06	3.34E-05	1.46E-04
7782-49-2	Selenium	2.40E-05	2.35E-08	3.81E-07	1.67E-06
VOC HAPs Subtotal				2.99E-02	1.31E-01
Metal HAPs Subtotal				8.84E-05	3.87E-04
Total HAPs				3.00E-02	1.31E-01

References:

1. AP42 Table 1.4-3 and Table 1.4-4.
2. Conversion from lb/10⁶ scf to lb/MMBtu (divide by) =

1,020

By: PEW
 Date: 05/19/2015

Checked by: LKB
 Date: 05/21/2015

New Building Heaters

There are multiple new/proposed building heaters for the expansion. The emissions provided here are for the new building heaters and the total heat rating (total Btu/hr).

Total Heater Rating = 2,200,000 Btu/hr
 Operating Hours = 8,760 hrs/yr
 2.2 MMBtu/hr

Emission Type	EF (1)		Emissions	
	lb/10 ⁶ scf	lb/MMBtu (3)	lb/hr	tons/year
CO	84	0.08235	0.18	0.79
NO _x	100	0.09804	0.22	0.94
PM	7.6	0.00745	0.02	0.07
PM10 (2)	7.6	0.00745	0.02	0.07
PM2.5 (2)	7.6	0.00745	0.02	0.07
SO ₂	0.6	0.00059	0.01	0.01
VOC/TOC	5.5	0.00539	0.01	0.05
Lead	0.0005	4.90E-07	0.000001	0.000005

Rounding to = 2

Unit	Heat Rating (btu/hr)
Horizon	1,000,000
Trane	400,000
Trane	400,000
Trane	400,000
Total	2,200,000

Note:

1. Emission factors from AP-42, 1.4, Natural Gas Combustion, 7/98.
2. It is assumed that PM10 and PM2.5 are equal to PM.
3. Conversion from lb/10⁶ scf to lb/MMBtu (divide by) = 1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

New Building Heaters HAPs

Total Heaters Rating =	2.2	MMBtu/hr
Operating Hours =	8,760	hrs/yr

CAS No.	Hazardous Air Pollutants	EF (1)		Emissions	
		lb/10 ⁶ scf	lb/MMBtu (2)	lb/hr	tons/year
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	5.18E-08	2.27E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	3.45E-08	1.51E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	5.18E-09	2.27E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
71-43-2	Benzene	2.10E-03	2.06E-06	4.53E-06	1.98E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
205-82-3	Benzo(k)fluoranthene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	2.59E-09	1.13E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	2.59E-06	1.13E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	6.47E-09	2.83E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	6.04E-09	2.65E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	1.55E-04	6.80E-04
110-54-3	Hexane	1.80E+00	1.76E-03	3.88E-03	1.70E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	3.88E-09	1.70E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	1.32E-06	5.76E-06
85-01-8	Phenanthrene	1.70E-05	1.67E-08	3.67E-08	1.61E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	1.08E-08	4.72E-08
108-88-3	Toluene	3.40E-03	3.33E-06	7.33E-06	3.21E-05
7440-38-2	Arsenic	2.00E-04	1.96E-07	4.31E-07	1.89E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	2.59E-08	1.13E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	2.37E-06	1.04E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	3.02E-06	1.32E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	1.81E-07	7.94E-07
7439-96-5	Manganese	3.80E-04	3.73E-07	8.20E-07	3.59E-06
7439-97-6	Mercury	2.60E-04	2.55E-07	5.61E-07	2.46E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	4.53E-06	1.98E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	5.18E-08	2.27E-07
VOC HAPs Subtotal				4.05E-03	1.78E-02
Metal HAPs Subtotal				1.20E-05	5.25E-05
Total HAPs				4.07E-03	1.78E-02

References:

- AP42 Table 1.4-3 and Table 1.4-4.
- Conversion from lb/10⁶ scf to lb/MMBtu (divide by) =

1,020

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Vehicle Activity (VA)

Paved Roadway: Finished trucks going from the plant to the parking area.

Emission Factor Equation from AP-42 Section 13.2.1, Paved Roads (January 2011):

$$E = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C] * (1 - (P/4*N)) = \text{lb} / \text{Vehicle Mile Traveled (VMT)}$$

	PM	PM10	PM2.5	
k =	0.011	0.0022	0.00054	dimensionless, particle size multiplier
sL =	9.7	9.7	9.7	surface material silt content (g/m ²)
W =	16.5	16.5	16.5	tons, mean vehicle weight
P =	157	157	157	no. days/year with 0.01 in of rain
C =	0.00047	0.00047	0.00047	factor for exhaust, brake wear and tire wear
e =	0.35	0.07	0.02	lb/VMT

Rounding to 2

Trucks

Pollutant	No. of Vehicles		Miles Per Trip (mi)	Control Device		Emissions			
	Per Hour	Per Year		Type	Effic(%)	Uncontrolled		Controlled	
						(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	7	20,000	0.55	N	0	1.35	1.93	1.35	1.93
PM10	7	20,000	0.55	N	0	0.27	0.39	0.27	0.39
PM2.5	7	20,000	0.55	N	0	0.08	0.11	0.08	0.11

Paved Roadway: Delivery trucks entering and then leaving the site.

Emission Factor Equation from AP-42 Section 13.2.1, Paved Roads (January 2011):

$$E = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C] * (1 - (P/4*N)) = \text{lb} / \text{Vehicle Mile Traveled (VMT)}$$

	PM	PM10	PM2.5	
k =	0.011	0.0022	0.00054	dimensionless, particle size multiplier
sL =	9.7	9.7	9.7	surface material silt content (g/m ²)
W =	40.0	40.0	40.0	tons, mean vehicle weight (80,000 pounds maximum road weight)
P =	157	157	157	no. days/year with 0.01 in of rain
C =	0.00047	0.00047	0.00047	factor for exhaust, brake wear and tire wear
e =	1.33	0.27	0.07	lb/VMT

Rounding to 2

Trucks

Pollutant	No. of Vehicles (1)		Miles Per Trip (mi)	Control Device		Emissions			
	Per Hour	Per Year		Type	Effic(%)	Uncontrolled		Controlled	
						(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	4	10,950	0.55	N	0	2.93	4.00	2.93	4.00
PM10	4	10,950	0.55	N	0	0.59	0.81	0.59	0.81
PM2.5	4	10,950	0.55	N	0	0.16	0.22	0.16	0.22

1. Number of vehicles based on 30 trucks per day, average trucks per hour of 4, and 365 days per year.

Total Paved Roadway Emissions			
Uncontrolled		Controlled	
(lb/hr)	(tpy)	(lb/hr)	(tpy)
4.28	5.93	4.28	5.93
0.86	1.20	0.86	1.20
0.24	0.33	0.24	0.33

By: PEW
Date: 05/19/2015

Checked by: LKB
Date: 05/21/2015

Vehicular Traffic (VA)

Unpaved Haulroads

PM Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor ⁽¹⁾ (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)	
Plant into Gravel Area	7	20,000	0.15	3.70	3.89	5.55	N	0	3.89	5.55	
Leaving Site	7	20,000	0.30	3.70	7.77	11.10	N	0	7.77	11.10	
Total					11.66	16.65			Total	11.66	16.65

PM10 Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor ⁽¹⁾ (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)	
Plant into Gravel Area	7	20,000	0.15	0.99	1.04	1.49	N	0	1.04	1.49	
Leaving Site	7	20,000	0.30	0.99	2.08	2.97	N	0	2.08	2.97	
Total					3.12	4.46			Total	3.12	4.46

PM2.5 Emissions

Source	Vehicle Trips per Hour	Vehicle Trips per Year	Miles per Trip	Emission Factor ⁽¹⁾ (lb/VMT)	Uncontrolled (lb/hr)	Uncontrolled (tpy)	Control Device	Control Efficiency (%)	Controlled (lb/hr)	Controlled (tpy)	
Plant into Gravel Area	7	20,000	0.15	0.10	0.11	0.15	N	0	0.11	0.15	
Leaving Site	7	20,000	0.30	0.10	0.21	0.30	N	0	0.21	0.3	
Total					0.32	0.45			Total	0.32	0.45

Emission Equation AP-42 Section 13.2.2, Unpaved Roads (12/03), where:
 $e = k [(s/12)^6 (W/3)^6] [(365-p)/365] = \text{lb/ Vehicle Mile Traveled (VMT)}$

	Emission Factors ⁽¹⁾			
	PM	PM10	PM2.5	
k =	4.9	1.5	0.15	dimensionless, particle size multiplier
s =	6	6	6	%, surface material silt content
W =	16.5	16.5	16.5	tons, mean vehicle weight
a =	0.7	0.9	0.9	constants
b =	0.45	0.45	0.45	constants
p =	157	157	157	no. days/year with 0.1 in of rain
e =	3.70	0.99	0.10	lb/VMT

1. AP-42, Section 13.2.2 (11/06)

ATTACHMENT O
MONITORING, RECORDKEEPING, REPORTING,
TESTING PLANS

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

Hino Motors Manufacturing U.S.A., Inc. requests monitoring, recordkeeping, reporting and testing as stated in the Emissions Unit Data Sheets contained in Attachment L.

ATTACHMENT P

PUBLIC NOTICE

LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE Notice of Application

Notice is given that Hino Motors Manufacturing U.S.A., Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update of Permit R13-3251 at their truck assembly facility located on Hino Way near Williamstown, Wood County, West Virginia. The latitude and longitude coordinates are: 39.393910 and -81.470051.

The applicant estimates the potential increase to discharge the following Regulated Air Pollutants will be: VOC of 3.90 pounds per hour (lb/hr) and 0.58 tons per year (tpy); PM of 0.11 lb/hr; PM₁₀ of 0.11 lb/hr; PM_{2.5} of 0.11 lb/hr; total HAPs of 1.23 lb/hr and 0.58 tpy. There is no increase in the yearly potential to emit for PM, PM₁₀, or PM_{2.5}.

Startup of operation is planned to begin on or about the 22nd day of June. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, Extension 1250, during normal business hours.

Dated this the (PLEASE INSERT DATE) day of May, 2016.

By: Hino Motors Manufacturing U.S.A., Inc.
Steve Stalnaker
Vice President
1 Hino Way
Williamstown, West Virginia 26187

APPENDIX

ADDITIONAL EQUIPMENT INFORMATION

RETRACTABLE PAINT BOOTH

TOLL FREE
1-855-618-4646

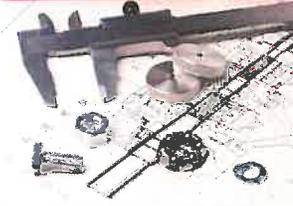


Revised Proposal - PE1131-1

Increase your efficiency, profitability, wiggle room & get a peace of mind solution!

Retractable System Model 50-15.5-14

Date: March 7, 2016



Engineered



Expandable



Retractable



Flexible



Accessible

CLIENT: Hino Motors Mfg. USA
Attn: Anthony Frontera | V/R
1 Hino Way,
Williamstown, WV 26187
Email: afrontera@hmmusa.com
Phone: (304) 617-8518

Account Manager: James Stankiewicz,
V.P Business Development,
19 Thorne St., 305, Cambridge, ON N1R 1S3
Phone: 1.855.618.4646 or 716.240.2611
Email: james@rollitbooths.com

"A Factory Direct... Retractable Paint Area Solution"

Retractable By Design...

Our modular retractable structures can handle any size from a motorcycle or furniture application or expanded to fit a car, truck, oversized vessels or large industrial fixtures.

A Portable Solution...

Roll it Booths tubular steel structure is easily assembled, it's on casters wheels to make extension, retraction or moving an easy and smooth operation.

A Space Saver...

Once the job is finished the enclosure retracts to 20 - 25% of the extended length. Saving valuable shop workspace while assisting & reducing material handling.

Increased Productivity...

Our retractable systems insure better efficiency because it lets you carry out more functions in the same space. It also lets you adjust business processes, without having to work your processes around a fixture.

Retractable Functionality...

Our retractable enclosures can be designed to function as extensions for your existing structure; or custom sized to suit your space and specific application or project requirements.

Compliant Turn-Key Solutions...

Roll it Booths meet both the Environmental, Health & Safety and NFPA Regulations. Plus we can assist your project from start to finish with an On-Site Adviser to help you to get a prompt "return on investment".



www.rollitbooths.com

Canada
Phone: 519-622-4646
Buffalo, N.Y., USA
Phone: 716-240-2611



Applied Engineered Design for Fire, Health and Life Safety Compliance

Code Compliance: Roll it Booths are engineered to meet the requirement of:

- Electrical Certified - ETL or UL Listed | Fans AMCA Certified
- EPA 40CFR – Spray Finishing Requirements – Part 63.11173
- NFPA 17 – Dry Chemical Extinguishing Systems
- NFPA 33 - Spray Applications Using Flammable or Combustible Materials
- NFPA 91 – Standard for Exhaust Systems for Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids
- NFPA 101 – Life Safety Code
- NFPA 259 – Standard Test Method for Potential Heat of Building Material
- NFPA 701– Flame Resistance – Fabric
- OSHA 29CFR – 1910.107 Spray Finishing
- OSHA 29CFR – 1910.94 Ventilation



Overall Dimensions:
50ft.Lx 15.5ft.Wx 14ft.H

Entrance Clearance:

12.5 ft W x 13 ft H

Retracted Size: 8-10 ft.

20-25% of extracted length

Model Style: 5015.514



Performa wheels reject floor debris including metal shavings, chips, sand and gravel.



Structure: 50ft. L x 15.5ft. W x 14ft. H Indoor (RIB-IN) Model Style-5015.514

- Qik-Fit Tubular Steel **Double Scissor Arm Structure** for strength; **plus a coated finish**
- **Flat Roof**, trussed for stability, max cubic capacity & entrance clearance
- **Safety Lock-Outs**, positioned to restrict the structure collapsing beyond a set dimension
- **Qik-Lok Tension System**: fast & easy 2 point structure stabilization
- **Unique Scalable Design** - Add length at anytime, or as future Project Work requires;

Traction: *Mobility*

- **Tru-Trak Mobility System**: using a 'Heavy Duty Tread' - (**Rigid & Swivel**) **Casters** for 'enhanced' load capacity and ease of operation - on extension or retraction.
- An individual **Wheel Lock Function on the casters** assists the **positioning function**.
- **Mobility Mode** - a lock function for when the structure needs to be relocated

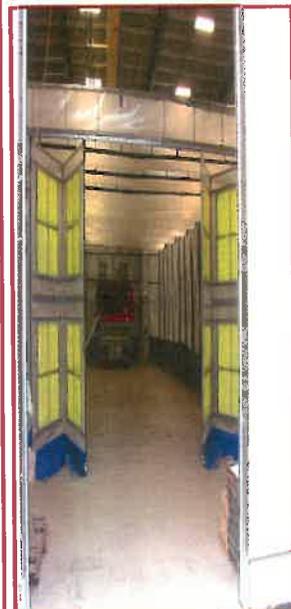
Openings: [Front/Rear]

Front Entrance Wall: [Inside Shop]

- Overall Front Opening Dimensions **12.5' W x 13' H**
- Door Style: Bi-Fold Doors approx. **3.08ft W x 13 ft H per Door Panel**
- **Front Wall Exterior Safety Brace Support System** - Optional \$795.00
- **Door Safety Lock Bar**, included for when opening/closing, moving structure or relocating
- Front Doors fitted with **24" x 24" Universal Filter Frame Holders** for pre-filtered air
- Includes the **first set of door filter panels** (Input Air Pre-filters)

End Drive Thru Wall: [@ Roll up Door]

- Overall Front Opening Dimensions **12.5' W x 13' H**
- Door Style: Bi-Fold Doors approx. **3.08ft W x 13 ft H per Door Panel**
- **Rear Wall Exterior Safety Brace Support System** - Optional \$795.00



Enclosure Cover:

- **Fire Retardant (NFPA 701 Approved) PVC Cover Material**
- 1) Clear; Heavy Duty Translucent PVC Cover
- 2) **Clear Reinforced;** *Webbed Fiberglass Heavy Duty Translucent PVC Cover*
- 3)* **Sun-Roof Combo;** Clear Roof Panels with **Clear Reinforced PVC for Side/End Panels**
- **Unique - Sectional Cover System;** easier to install, repair or replace [**& cost effective**]
- **Apron Trim Color;** (RED)
- **Apron Management with Side Apron Holdbacks/Tie ups - included**
- [Optional - PVC Patch Repair Kit - \$100.00]



Enhanced Safety Features - For a 'Retractable Structure'

- **Double Scissor Arm - Pantograph Structure** - aids overall structural integrity, maintains balance of retractable structure when extending, moving, retracting or storing.
- **Safety Lock Out Pins** - positioned to ensure that the structure cannot be retracted beyond a safe retraction point.
- **Mobility Mode** - pin lock positions for when the structure needs to be moved to another location within the facility.
- **Heavy Duty Tread - Rigid & Swivel Casters** for 'enhanced' load capacity per wheel. Improves manoeuvrability and minimizes manpower expenditure or physical strain when moving or positioning the retractable structure.
- **Caster Wheel Locks** - provides a primary method to position and lock the structure into any dimension position quickly.
- **Bi-Fold Door Lock Bars** - secure the doors in position for the relocation process avoiding a safety hazard.
- **Outrigger Support System** - 'Front Wall / Rear Wall - Optional' - provides additional and integral support to the structure front whether positioning or relocating etc.
- **Fire Extinguisher Holders** - positioned near man doors or located elsewhere for Fire Safety.
- **Emergency Egress Doors** - more additional emergency egress doors than building code requires.

Delivery & Setup:

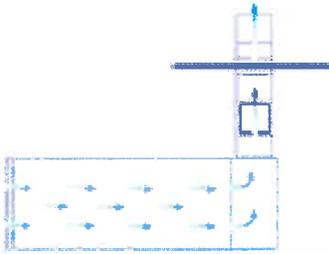
- **Door-to-Door Shipping** is extra; est. \$1,550.00 - Flatbed (charged separately)
- **Customer is responsible to unload at site;** boom or fork truck, or crane
- **On-Site Adviser cost for installation of enclosure is - est. \$900.00 (charged separately)**
- **Packaged with Assembly Instructions**
- **Engineer Report for NFPA, Health & Safety on Structure - included**

Warranty: 24 Month Limited Warranty [visit website @ www.rollitbooths.com for complete details]



**Retractable Enclosure
Model 50-15.5-14
\$26,000.00
(Meets NFPA & OSHA
Requirements)**





A Cross Draft Retractable Paint System intakes fresh air through pre-filters in the main entry doors. Then the clean filtrated air moves through the booth over the item or vehicle being painted. It is then exhausted through an exhaust filter unit at the opposite end. Roll it Booths - Cross Draft Retractable Paint Systems are cost effective, efficient to operate, easy to maintain.

But...Best of All...When you are finished painting or prepping, the structure retracts back to 15% of the overall length, giving you back valuable shop floor space for other purposes.

Optional - Cross Draft Filter System - Portable Fan/Filter Unit (1 Fan Unit)

Filter Unit Dimensions: *Specifications per Unit (2 Corner Angled Column Filter Units Required)*
Unit approx. 26" W x 18" D x 6ft. H approx.

Construction: Tubular Steel Frame
18 gauge steel construction panels,
Seated on a base frame with caster wheels with select locking

Air Movement: Dimensional Airflow req. 20,925 CFM (75% Capacity 15,289 CFM provided)
1 - 30" Fan Unit: 15,289 CFM (+/-) @ 0.50" SP (static pressure)

Motor (s): 30" Unit - 5.0 HP/ 3 Phase / 460V/ 60Hz, Fan Motor * Belt Guard provided

Control: Optional VFD Control Available - \$ 1,295.00
(Variable Frequency Drive - Controls Motor Speed and Airflow Volume)

Fan (s): 1 - 30" UL Approved Tube Axial Fan, non sparking - AMCA Certified

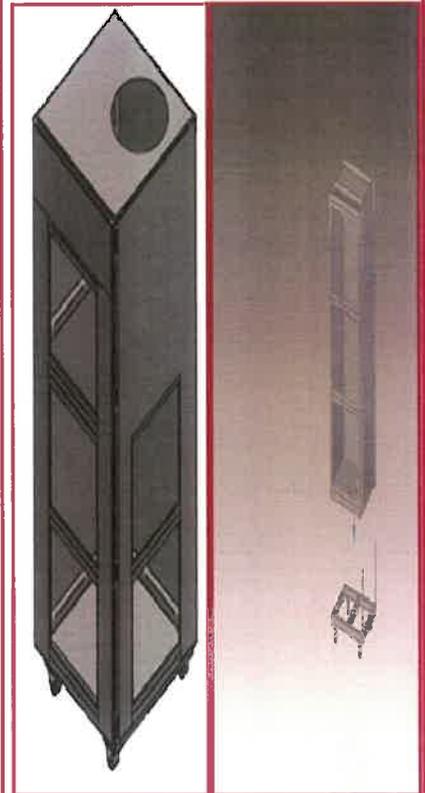
Filters: 20" or 24" - Square Universal Filter Frame Holders plus 1st starter set of Filters

Manometer: Gauge provided to check filter replacement on Filter Unit.

Duct Connection: 30" Companion Flange (s) 1 provided per Fan Unit
Additional Companion Flanges - Available as an Option

Flexible Ducting Options: 30" Available as an Option

Ducting: Excludes connecting duct work etc.



"1 Fan Unit 15,289 CFM"

Fan / Filter Unit

\$ 8,495.00

(Meets NFPA & OSHA Requirements)

Warranty: 24 Month Limited Warranty on Filtration Unit and 12 Months on the Fan/Motor Assembly

Exclusions: Control Panels, Ducting, Electrical Connections, Exhaust Stack, Makeup Air, Installation or Setup,
EPA, MOE, Local, Municipal, Provincial, State or Federal, Certifications, Licences and Permits.

Roll It Booths 'Our Factory Direct Advantage'

- The choice is yours. You can blow a bundle, choose the middle of the road approach or decide on a smart choice; realize overall savings and leave more money in the budget and your pocket.

Do you sacrifice anything to realize a saving?

- When it comes to Retractable Spray Paint Systems, it's a pretty much a level playing field.
- You either pay the middle man or cut him out, but you do not sacrifice anything in the process. All competitive products have to meet the same Fire, Health and Safety Regulations and Requirements, (it's a level field). How we accomplish it, is what separates us.
- Higher advertising, marketing, operating costs, or the use of third party agents, marketers and suppliers, is what drives the price point higher than it needs to be.

Decide what course of action is right for you & your Project. **Spend or Save, the Choice is Yours!**

"ROLL IT BOOTH...PROVIDING MORE OPTIONS FOR YOUR BUDGET "



"FACTORY DIRECT...PROVIDES MORE WIGGLE ROOM FOR YOUR BUDGET "



Custom-sized Retractable Structure: 50ftLx15.5ftWx13.75ft H
1 Fan Unit + 2 Column Filter Units for 15,289 CFM @ 0.50" SP
VDF Control—Variable Frequency Drive
Estimated Shipping Charge
On-Site Adviser Charge

Investment
\$ 26,000.00
\$ 8,495.00
\$ 1,295.00
\$ 1,550.00
\$ 900.00
Investment
\$ 38,240.00
Order Confirmation Deposit 50%
<i>*due with order prior to commencement</i>
\$ 19,120.00

Option - Full Payment in Advance...
 'Cash in Advance'
 Discount 2.50 % Applies
\$38,240.00 - \$956.00 = \$37,284.00 Due

Order Confirmation Deposit 50%
**due with order prior to commencement*
Balance is Due 7 Days Prior to Shipping

Please Note: This Proposal is based on the Clients known design criteria and may vary from final design requirements; The Vendor reserves the right to correct this Proposal for any errors or omissions.

- Any Requested or Required Engineering changes are an addition to this proposal.
- Excludes allowance and correction for any errors and omissions .
- Excludes any additional Shipping and/or On-Site Advisor costs which are estimated at this time and may vary from actual costs.



19 Thorne St., 305
Cambridge, ON
N1R 1S3



Canada
Phone: 519-622-4646
Buffalo, N.Y., USA
Phone: 716-240-2611



*Get more wiggle room for your
business!*



NO PAYPAL ACCOUNT NEEDED!

www.RollitBooths.com

Timeline from Order to Delivery...

1. **Order Confirmation:** Deposit Funds are required to validate the Order
 2. **Order Deposit:** Predefined Deposit Funds required prior to order commencement
 3. **Manufacturing Process:** 4 — 10+ weeks from confirmed order and deposit receipt
 4. **Balance Due:** The remaining funds balance of order is due 7 days prior to shipping
 5. **Engineer Review:** order is packaged, documented & signed off by our Engineer
 6. **Shipping:** Order is loaded and Shipping details, ETA etc are forwarded to client
 7. **On-Site Adviser:** if elected, the Adviser will be On-site within 72 hrs of delivery
- Terms of Payment:** Deposit by Bank Wire Transfer, *Surcharge applies to Credit Card or PayPal
Finance Option: Lease Finance Available OAC

Terms and Conditions of Sale:

Order Confirmation: a 50% Order Deposit is required to confirm order.

Non Refundable Custom Product: due to custom manufacturing, deposits are non-refundable and finished products are not returnable.

Mounting and Accessories: as part of the sale, an installation manual is supplied.

Installation Adviser: (if this Option is elected), to be On-Site at Purchasers Location within approx. 72 hours or 3 business days of confirmed delivery at Purchasers location. The On-site Adviser is to advise on the correct setup of the retractable enclosure. Installation and setup labour is the responsibility of the Purchaser.

Customer Installation: If the customer or purchaser chooses to oversee their own installation, the customer assumes all responsibility for assembly, functionality and installation.

Alternative Suppliers: to supply their own instructions and technical support for their products

Code Compliance & Connection Services: The customer is responsible for all costs of ductwork, exhaust stack, electrical work, fire suppression and makeup air needed to complete the installation.

Permits, Licenses, Inspections, Safety Reviews: In addition, all local permits licenses, environmental, inspections and pre-start reviews are the responsibility of the customer/end-user or purchaser.

Guarantees and Warranties: The enclosure and filter unit is warranted separately; the control panel, fan/motor units, dust collection units or fire suppression systems are provided by the alternative suppliers. It is the customer's responsibility to read and understand all terms and conditions, return policies etc., of each alternative supplier's warranty.

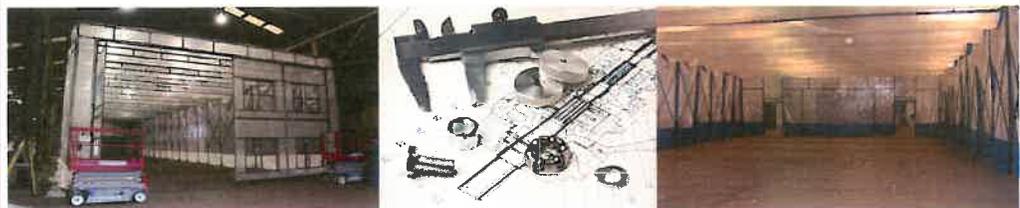
Additional Charges: Shipping to the Consignee/ Purchasers business address or primary location, is not included as part of the quotation unless noted herein. Any shipping cost quoted may vary from the actual cost at time of shipping the completed order. The Consignee / Purchaser is liable to pay any additional cost adjustments once the order is shipped or once these costs are available. Any import charges, duties, handling or taxes if applicable are an extra to this quotation and the sole responsibility of the Consignee/Purchaser.

Unloading: of all equipment is the responsibility of the consignee. A forklift, crane or boom truck is required.

This Proposal is valid for 15 Days from date of issue March 7, 2016



An Engineered Difference that's Factory Direct!



Let our 15 plus years of experience work for you!

PAINT GUN

SATAjet® 20 B



Spray Guns



Airbrush for Painters

- Versatile in application - ensuring perfect finishes
- Special gun design with perfect ergonomics for imaginative painters
- Flexible air supply
- Large available range of round spray nozzles

SATAjet 20 B - An Unique Gun

The SATAjet 20 B has been designed for use in all areas of creative painting: For all kinds of artbrush applications including graphic design, automotive custom painting, model making, artwork and calligraphy - the results are simply outstanding.

A new way of airbrushing:

- Ergonomically shaped gun body similar to conventional guns which allows working without fatigue
- Flexible air supply - inlet connection available at the base and at the rear of the gun
- Can be used with gravity flow cup or practical plug-in cups
- Simultaneous air and material control via the trigger for a familiar action
- Material flow control
- Low maintenance due to self-adjusting seals
- Large range of precision nozzle set-ups for ultimate detailing available

Accessories:

Plug-in cup kit

for easy preparation of the colours and quick colour change.

25 ml glass cup (5x) with ...
... plug-in lid

Art. No. 53033

... blank lid

Art. No. 58164

SATA spray gun stand

prevents material spillage and eases filling, for gravity flow cups and plug-in cups.

Art. No. 69328



Versions

Air consumption 40 NI/min

SATAjet 20 B Scope of Delivery	Nozzle size				
	0.2	0.35	0.5	0.8	1.0
Spray gun with 65 ccm PVC cup	65078	65581	65649	66316	69229
Spray gun with 65 ccm PVC cup, glass plug-in jar and 3 glass jars with blank lid	86181	86199	86207	86215	86223
Nozzle set	60459	80540	61200	61344	61523

SATAjet 20 B design set

90381	SATA design set with SATAjet 20 B nozzle 0.5 and spare nozzle set 0.2, air micrometer, PVC air hose 3 m, glass jar 25 ml with blank lid, cleaning and seal kit, spray gun stand	
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Air hoses

54353	PVC air hose, 2 m with mini quick coupling	
32987	PVC air hose, 3 m with mini quick coupling	
134791	Braided air hose, 2.5 m with mini quick coupling	



Your SATA dealer



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Tel. +49 7154 811-200
Fax +49 7154 811-190
E-Mail: export@sata.com
www.sata.com

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