

File  
G60-C005B  
079-0007d



# General Permit G60-C

Application for a Class II General Permit administrative update  
for Emergency Generators.  
Toyota Motor manufacturing, West Virginia, Inc.

December, 2014

# TABLE OF CONTENTS

- Application Form
- ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- ATTACHMENT B: PROCESS DESCRIPTION
- ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- ATTACHMENT D: PROCESS FLOW DIAGRAM
- ATTACHMENT E: PLOT PLAN
- ATTACHMENT F: AREA MAP
- ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM
- ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS
- ATTACHMENT I: EMISSIONS CALCULATIONS
- ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- ATTACHMENT K: ELECTRONIC SUBMITTAL
- ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ATTACHMENT M: SITING CRITERIA WAIVER
- ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)
- ATTACHMENT O: EMISSIONS SUMMARY SHEETS
- OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)



WEST VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF AIR QUALITY  
 601 57<sup>th</sup> Street, SE  
 Charleston, WV 25304  
 Phone: (304) 926-0475 • www.dep.wv.gov/daq

**APPLICATION FOR GENERAL PERMIT REGISTRATION**  
 CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE  
 A STATIONARY SOURCE OF AIR POLLUTANTS

9 CONSTRUCTION      9 MODIFICATION      9 RELOCATION      9 CLASS I ADMINISTRATIVE UPDATE  
 9 CLASS II ADMINISTRATIVE UPDATE

**CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:**

- |   |  |
|---|--|
| <input type="checkbox"/> <b>G10-D</b> – Coal Preparation and Handling                                   | <input type="checkbox"/> <b>G40-C</b> – Nonmetallic Minerals Processing                  |
| <input type="checkbox"/> <b>G20-B</b> – Hot Mix Asphalt   | <input type="checkbox"/> <b>G50-B</b> – Concrete Batch                                   |
| <input type="checkbox"/> <b>G30-D</b> – Natural Gas Compressor Stations                                 | <input checked="" type="checkbox"/> <b>G60-C</b> - Class II Emergency Generator          |
| <input type="checkbox"/> <b>G33-A</b> – Spark Ignition Internal Combustion Engines                      | <input type="checkbox"/> <b>G65-C</b> – Class I Emergency Generator                      |
| <input type="checkbox"/> <b>G35-A</b> – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> <b>G70-A</b> – Class II Oil and Natural Gas Production Facility |

**SECTION I. GENERAL INFORMATION**

1. Name of applicant (as registered with the WV Secretary of State's Office): Toyota Motor Manufacturing, West Virginia, Inc.	2. Federal Employer ID No. (FEIN): 94-2-001250
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3. Applicant's mailing address: 1 Sugar Maple Lane Post Office Box 600 Buffalo, West Virginia 25033	4. Applicant's physical address: 1 Sugar Maple Lane Buffalo, West Virginia 25033
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5. If applicant is a subsidiary corporation, please provide the name of parent corporation:

6. **WV BUSINESS REGISTRATION.** Is the applicant a resident of the State of West Virginia?       YES       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 LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A.

**SECTION II. FACILITY INFORMATION**

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.):  Emergency Generator	8a. Standard Industrial Classification Classification (SIC) code: 3714	AND	8b. North American Industry System (NAICS) code: 33635
9. DAQ Plant ID No. (for existing facilities only):  079-00072	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): R30-07900072-2013 R13-2062K		

**A: PRIMARY OPERATING SITE INFORMATION**

11A. Facility name of primary operating site:  <b>Buffalo Plant</b>	12A. Address of primary operating site:  <b>Same as above</b>	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <span style="float:right"><input checked="" type="checkbox"/> YES    <input type="checkbox"/> NO</span> – IF YES, please explain: <b>Applicant owns site</b>  – IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14A. – For <b>Modifications or Administrative Updates</b> 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 <b>MAP as Attachment F.</b>  <p style="text-align: center;">Take Exit 39 from I-64 West toward Teays Valley/Winfield. Turn right onto WV Route 34S for 5.1 miles. Turn left onto US Route 35 for 6.8 miles. Turn left at Lower Buffalo Bridge and travel across Kanawha River. Turn left on WV Route 62 for 1.0 miles. Turn right on Sugar Maple Lane.</p>		
15A. Nearest city or town:  <b>Buffalo</b>	16A. County:  <b>Putnam</b>	17A. UTM Coordinates: Northing (KM): <u>4272.589</u> Easting (KM): <u>413.462</u> Zone: <u>17</u>
18A. Briefly describe the proposed new operation or change (s) to the facility:  A new emergency generator will be installed to provide emergency power to a building used to house medical services.		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: <u>38.59760 deg</u> Longitude: <u>81.99382 deg</u>

**B: 1<sup>ST</sup> ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)**

11B. Name of 1 <sup>st</sup> alternate operating site:  <p align="center">N/A</p>	12B. Address of 1 <sup>st</sup> alternate operating site:  <p align="center">N/A</p>	
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <span style="float:right"><input type="checkbox"/> YES    <input type="checkbox"/> NO</span> – IF YES, please explain: _____  _____  – IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		

14B. — For **Modifications or Administrative Updates** 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 F**.

\_\_\_\_\_

\_\_\_\_\_

15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

**C: 2<sup>ND</sup> ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):**

11C. Name of 2 <sup>nd</sup> alternate operating site:  N/A	12C. Address of 2 <sup>nd</sup> alternate operating site:  N/A
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13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site?  YES  NO

— IF YES, please explain: \_\_\_\_\_

\_\_\_\_\_

— IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14C. — For **Modifications or Administrative Updates** 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 F**.

\_\_\_\_\_

\_\_\_\_\_

15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

<p>20. Provide the date of anticipated installation or change:</p> <p style="text-align: center;">____/____/____</p> <p><input type="checkbox"/> If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen: :</p> <p style="text-align: center;">____/____/____</p>	<p>21. Date of anticipated Start-up if registration is granted:</p> <p style="text-align: center;">____/____/____</p>
<p>22. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).</p> <p>Hours per day _____ Days per week _____ Weeks per year _____ Percentage of operation _____</p>	

**SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS**

<p>23. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).</p>
<p>24. Include a <b>Table of Contents</b> as the first page of your application package.</p>
<p>All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone</p>
<p>25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> ATTACHMENT A : CURRENT BUSINESS CERTIFICATE</li> <li><input checked="" type="checkbox"/> ATTACHMENT B: PROCESS DESCRIPTION</li> <li><input type="checkbox"/> ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS</li> <li><input checked="" type="checkbox"/> ATTACHMENT D: PROCESS FLOW DIAGRAM</li> <li><input checked="" type="checkbox"/> ATTACHMENT E: PLOT PLAN</li> <li><input checked="" type="checkbox"/> ATTACHMENT F: AREA MAP</li> <li><input checked="" type="checkbox"/> ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM</li> <li><input type="checkbox"/> ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS</li> <li><input checked="" type="checkbox"/> ATTACHMENT I: EMISSIONS CALCULATIONS</li> <li><input checked="" type="checkbox"/> ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT</li> <li><input checked="" type="checkbox"/> ATTACHMENT K: ELECTRONIC SUBMITTAL</li> <li><input checked="" type="checkbox"/> ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE</li> <li><input type="checkbox"/> ATTACHMENT M: SITING CRITERIA WAIVER</li> <li><input type="checkbox"/> ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)</li> <li><input type="checkbox"/> ATTACHMENT O: EMISSIONS SUMMARY SHEETS</li> <li><input type="checkbox"/> OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)</li> </ul> <p>Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please <b>DO NOT</b> fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.</p>

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

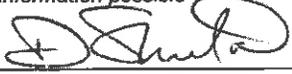
I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

I certify that I am the Owner and Proprietor

I hereby certify that (please print or type) Doug Shields  
is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature  12/12/14  
(please use blue ink) Responsible Official Date

Name & Title Doug Shields, General Manager, Administration  
(please print or type)

Signature \_\_\_\_\_  
(please use blue ink) Authorized Representative (if applicable) Date

Applicant's Name Toyota Motor Manufacturing, West Virginia, Inc. c/o Marc Crouse, Specialist, Env. Eng.

Phone & Fax (304) 937-7000 (304) 937-7399  
Phone Fax

Email marc.crouse@tema.toyota.com



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## Attachment A

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

ISSUED TO:  
**TOYOTA MOTOR MANUFACTURING WEST VIRGINIA INC  
1 SUGAR MAPLE LN  
BUFFALO, WV 25033-9430**

**BUSINESS REGISTRATION ACCOUNT NUMBER: 1044-3969**

This certificate is issued on: **06/15/2011**

*This certificate is issued by  
the West Virginia State Tax Commissioner  
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*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

## **Attachment B**

### **Process Description**

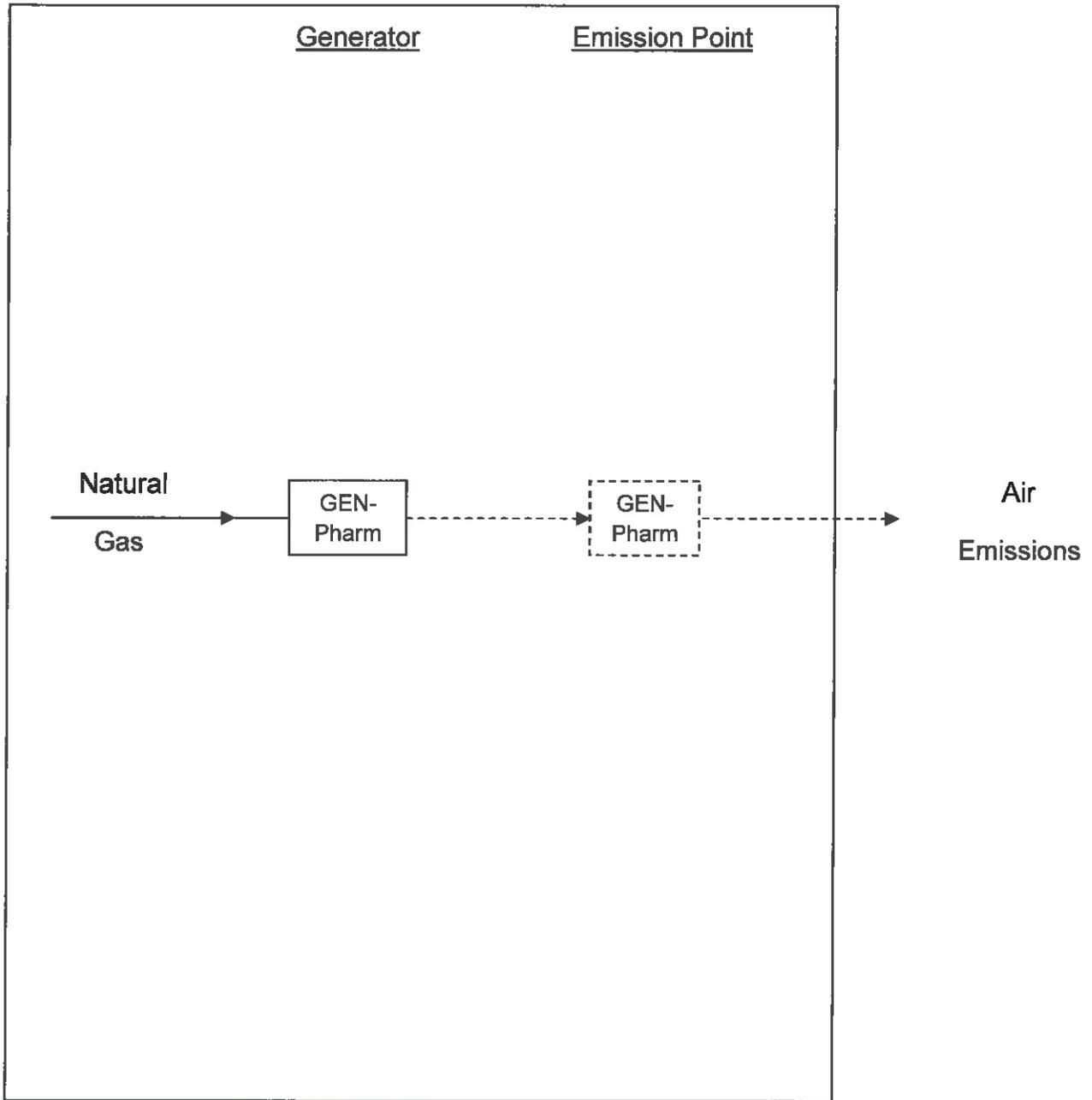
#### **Emergency Generators**

Toyota Motor Manufacturing, West Virginia, Inc., (Toyota) will utilize a total of ten generators for emergency electricity if a power outage occurs. Nine generators are already permitted pursuant to Toyota's Existing G60 and Title V operating permits. In addition, the natural gas usage for all emergency generators currently is reported in Toyota's annual emissions inventory. However, Toyota now seeks to register another generator (not installed) which previously has not been permitted pursuant to G60-C, the Class II Emergency Generator General Permit. The make and model of the generator is set forth in Attachment I. The emission factors for this engine were applied based on peak emission rates and the maximum power rating. As with any internal combustion engine, pollutants are generally emitted through the exhaust, with some total organic compounds escaping from the crankcase as a result of blowby as well as evaporative losses from the carburetor. The exhaust exits the generator a local emission point with the same identification number as each emergency generator.

This permit modification is specific to the new emergency generator. Accordingly, the process description, process flow diagram, and plot plan refers only to this source which is being added in this permit modification. Toyota's other existing operations are addressed in detail in Permit R30-079000072-2013.

**Attachment C**  
**Not Applicable**

## Attachment D

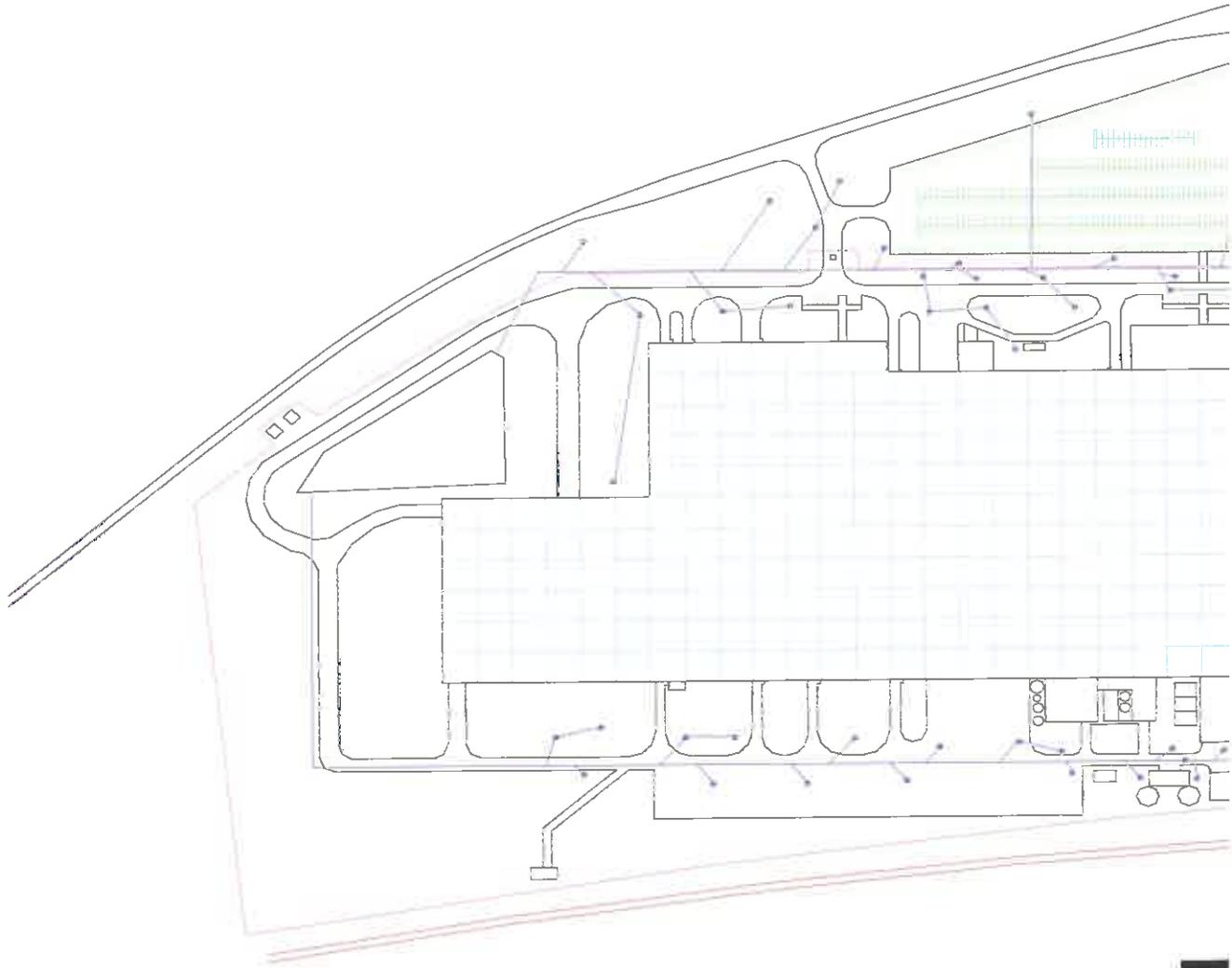


Site

**Attachment D**  
Toyota Motor Manufacturing, West Virginia, Inc.  
Process Flow Diagram  
Emergency Generator

## Attachment E

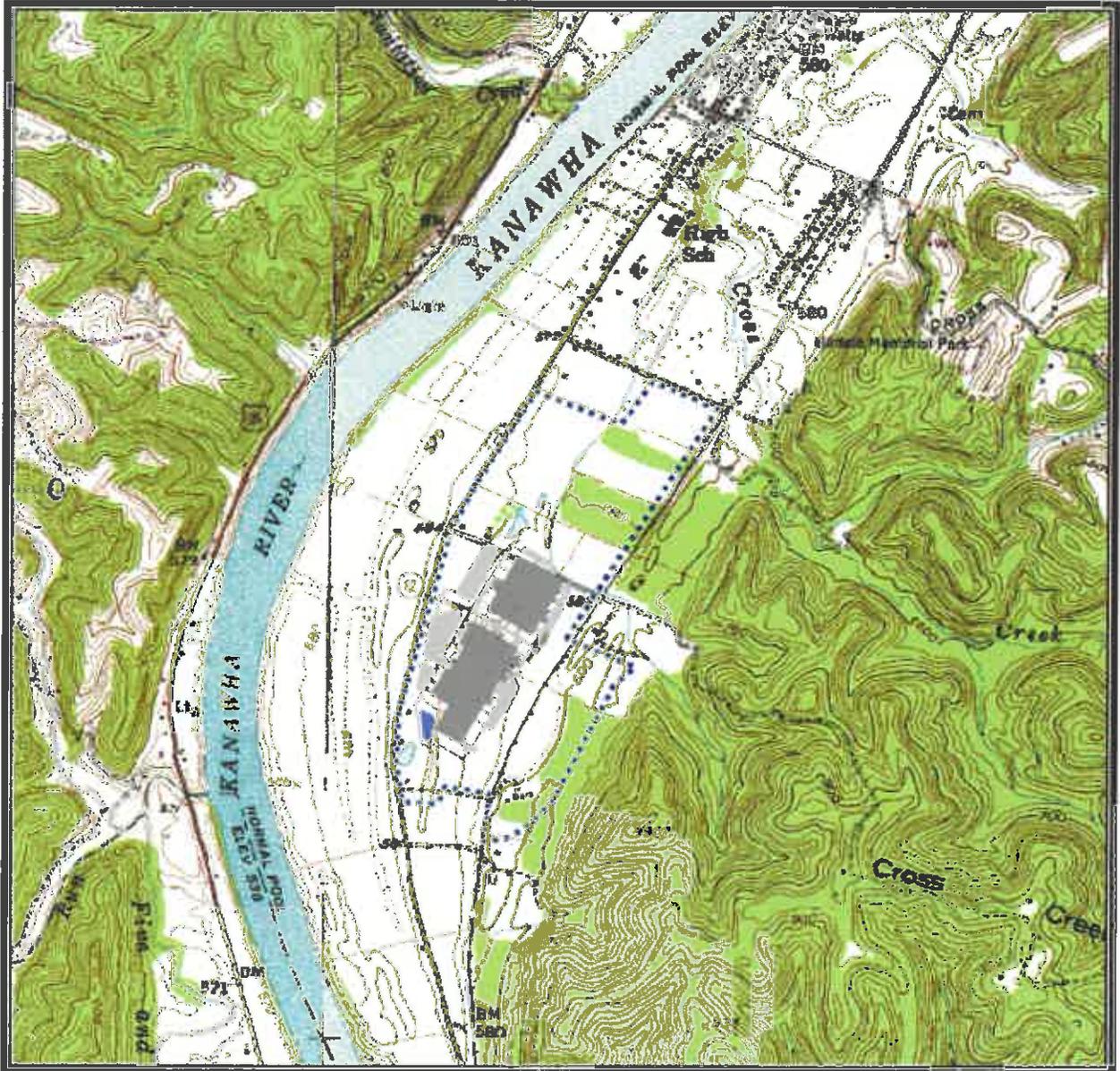
# TMMWV Ger



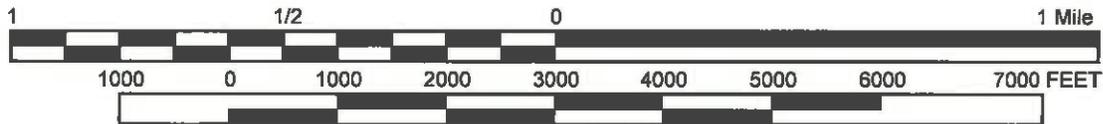
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## Attachment F

# Toyota Motor Manufacturing, WV Inc.



SCALE: 1:24 000



## ATTACHEMENT F - AREA MAP

USGS 7.5 minute Series

Topographic Map

Winfield and Mt. Olive, WV Quadrangles

## Attachment G

Model: **30REZG**

# KOHLER Power Systems

190-600 V

Gas



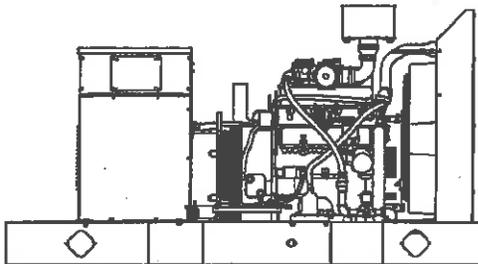
**EPA-Certified for Stationary  
Emergency Applications**

## Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A one-year limited warranty covers all systems and components. Two- and five-year extended warranties are also available.
- Alternator features:
  - The unique Fast-Response™ II excitation system delivers excellent voltage response and short-circuit capability using a permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.

## Ratings Range

Standby:	kW kVA	60 Hz	50 Hz
		28-30 28-38	23-26 23-33



## Generator Set Ratings

Alternator	Voltage	Ph	Hz	Natural Gas 130°C Rise Standby Rating		LP Gas 130°C Rise Standby Rating	
				kW/kVA	Amps	kW/kVA	Amps
4P5	120/208	3	60	29/36	101	30/38	104
	127/220	3	60	29/36	95	30/38	98
	120/240	3	60	29/36	87	30/38	90
	120/240	1	60	28/28	117	28/28	117
	139/240	3	60	29/36	87	30/38	90
	220/380	3	60	29/36	55	30/38	57
	277/480	3	60	29/36	44	30/38	45
	347/600	3	60	29/36	35	30/38	36
	110/190	3	50	25/31	95	25/31	95
	115/200	3	50	25/31	90	25/31	90
	120/208	3	50	25/31	87	25/31	87
	110/220	1	50	23/23	105	23/23	105
	110/220	3	50	25/31	82	25/31	82
	220/380	3	50	25/31	47	25/31	47
4P7	230/400	3	50	25/31	45	25/31	45
	240/416	3	50	25/31	43	25/31	44
	120/208	3	60	30/38	104	30/38	104
	127/220	3	60	30/38	98	30/38	98
	120/240	3	60	30/38	90	30/38	90
	120/240	1	60	28/28	117	28/28	117
	139/240	3	60	30/38	90	30/38	90
	220/380	3	60	30/38	57	30/38	57
	277/480	3	60	30/38	45	30/38	45
	347/600	3	60	30/38	36	30/38	36
	110/190	3	50	26/33	99	26/33	99
	115/200	3	50	26/33	94	26/33	94
	120/208	3	50	26/33	90	26/33	90
	110/220	3	50	26/33	85	26/33	85
110/220	1	50	25/25	114	25/25	114	
220/380	3	50	26/33	49	26/33	49	
230/400	3	50	26/33	47	26/33	47	
240/416	3	50	26/33	45	26/33	45	
4Q7	120/240	1	60	30/30	125	30/30	125
	110/220	1	50	25/25	114	25/25	114

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. **Standby Ratings:** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. **Prime Power Ratings:** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

## Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads: quantity, type	
4P5, 4P7	12, Reconnectable
4Q7	4, 110-120/220-240
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dlp for voltages below)
480 V, 380 V 4P5 (12 lead)	140 (60 Hz), 98 (50 Hz)
480 V, 380 V 4P7 (12 lead)	194 (60 Hz), 134 (50 Hz)
240 V, 220 V 4Q7 (4 lead)	104 (60 Hz), 91 (50 Hz)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

## Application Data

### Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	General Motors	
Engine: model, type	Industrial Powertrain 3.0 L, 4-Cycle Natural Aspiration	
Cylinder arrangement	4 Inline	
Displacement, L (cu. in.)	3.0 (181)	
Bore and stroke, mm (in.)	101.6 x 91.4 (4.00 x 3.60)	
Compression ratio	8.2:1	
Piston speed, m/min. (ft./min.)	329 (1080)	274 (900)
Main bearings: quantity, type	2 Bolt	
Rated rpm	1800	1500
Max. power at rated rpm, kW (HP)	36.5 (49)	32 (43)
Engine power at standby rating, kW (HP)	36.5 (49)	32 (43)
Cylinder head material	Cast Iron	
Piston type and material	High Silicon Aluminum	
Crankshaft material	Nodular Iron	
Valve (exhaust) material	Forged Steel	
Governor type	Electronic	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±0.5%	
Frequency	Fixed	
Air cleaner type, all models	Dry	

### Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	7.1 (250)	5.9 (208)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	588 (1270)	
Maximum allowable back pressure, kPa (in. Hg)	10.2 (3.0)	
Exhaust outlet size at engine hookup, mm (in.)	64 (2.5) OD	

### Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition system	Electronic, Distributor	
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	12	
Ampere rating	70	
Starter motor rated voltage (DC)	12	
Battery, recommended cold cranking amps (CCA):		
Qty., rating for -18°C (0°F)	1, 630	
Battery voltage (DC)	12	

### Fuel

Fuel System	60 Hz	50 Hz
Fuel type	Natural Gas, LP Gas, or Dual Fuel	
Fuel supply line inlet	1 NPTF	
Natural gas fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.74-2.74 (7-11)	
LPG vapor withdrawal fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.24-2.74 (5-11)	
Dual fuel engine, LPG vapor withdrawal fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.24 (5)	

Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume	90 min.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume	0.1 max.	5.0 max.
C <sub>4</sub> and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass	25 max.	
Lower heating value, MJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), min.	33.2 (880)	84.2 (2260)

\* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

## Application Data

### Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.)	3.8 (4.0)	
Oil pan capacity with filter, L (qt.)	4.1 (4.3)	
Oil filter: quantity, type	1, Cartridge	

### Cooling

Radiator System	60 Hz	50 Hz
Ambient temperature, °C (°F) *	50 (122)	
Engine jacket water capacity, L (gal.)	6.8 (1.8)	
Radiator system capacity, including engine, L (gal.)	14.9 (3.9)	
Engine jacket water flow, Lpm (gpm)	42 (11)	35 (9)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	34.1 (1940)	28.4 (1617)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	533 (21)	
Fan, kWm (HP)	1.5 (2.0)	1.0 (1.2)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.125 (0.5)	

\* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

### Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) †	142 (5000)	113 (4000)
Combustion air, m <sup>3</sup> /min. (cfm)	2.1 (74)	1.75 (62)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	9.2 (522)	15.4 (860)
Alternator, kW (Btu/min.)	4.5 (259)	3.75 (216)

† Air density = 1.20 kg/m<sup>3</sup> (0.075 lbm/ft<sup>3</sup>)

Fuel Consumption ‡	60 Hz	50 Hz
Natural Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings	
100%	12.2 (430)	10.2 (358)
75%	9.6 (340)	8.0 (283)
50%	7.2 (255)	6.0 (213)
25%	5.1 (179)	4.3 (149)

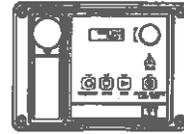
LP Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings	
100%	5.0 (175)	4.2 (146)
75%	4.1 (144)	3.4 (120)
50%	3.1 (108)	2.6 (90)
25%	2.1 (74)	1.8 (62)

‡ Nominal fuel rating: Natural gas, 37 MJ/m<sup>3</sup> (1000 Btu/ft.<sup>3</sup>)  
LP vapor, 83 MJ/m<sup>3</sup> (2500 Btu/ft.<sup>3</sup>)

LP vapor conversion factors:

6.58 ft.<sup>3</sup> = 1 lb.  
0.535 m<sup>3</sup> = 1 kg.  
36.39 ft.<sup>3</sup> = 1 gal.

### Controllers



#### Decision-Maker® 3000 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-100 for additional controller features and accessories.



#### Decision-Maker® 550 Controller

Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.

- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.

KOHLER CO., Kohler, Wisconsin 53044 USA  
 Phone 920-457-4441, Fax 920-459-1646  
 For the nearest sales and service outlet in the  
 US and Canada, phone 1-800-544-2444  
 KOHLERPower.com

Kohler Power Systems  
 Asia Pacific Headquarters  
 7 Jurong Plier Road  
 Singapore 619159  
 Phone (65) 6264-6422, Fax (65) 6264-6455

## Standard Features

- Alternator Protection
- Battery Rack and Cables
- Electronic, Isochronous Governor
- Gas Fuel System (includes fuel mixer, electronic secondary gas regulator, gas solenoid valve, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature

## Available Options

### Approvals and Listings

- CSA Approval
- IBC Seismic Certification
- UL 2200 Listing

### Enclosed Unit

- Sound Enclosure (with enclosed critical silencer)
- Weather Enclosure (with enclosed critical silencer)

### Open Unit

- Exhaust Silencer, Critical (kit: PA-352663)
- Flexible Exhaust Connector, Stainless Steel

### Fuel System

- Dual Fuel NG/LPG (automatic changeover)
- Flexible Fuel Line (required when the generator set skid is spring mounted)
- Gas Filter
- LP Liquid Withdrawal (vaporizer)
- Secondary Gas Solenoid Valve

### Controller

- Common Fault Relay
- Communication Products and PC Software (Decision-Maker® 550 controller only)
- Customer Connection (Decision-Maker® 550 controller only)
- Dry Contact (isolated alarm) (Decision-Maker® 550 controller only)
- Input/Output Module (Decision-Maker® 3000 controller only)
- Remote Annunciator Panel
- Remote Audiovisual Alarm Panel (Decision-Maker® 550 controller only)
- Remote Emergency Stop
- Run Relay

### Cooling System

- Block Heater, 1000 W, 110-120 V Recommended for ambient temperatures below 10°C (50°F)
- Radiator Duct Flange

### Electrical System

- Alternator Strip Heater
- Battery
- Battery Charger, Equalize/Float Type
- Battery Heater
- Line Circuit Breaker (NEMA1 enclosure)
- Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)

### Miscellaneous

- Air Cleaner Restrictor Indicator
- Certified Test Report
- Engine Fluids (oil and coolant) Added
- Rated Power Factor Testing
- Rodent Guards

### Literature

- General Maintenance
- NFPA 110
- Overhaul
- Production

### Warranty

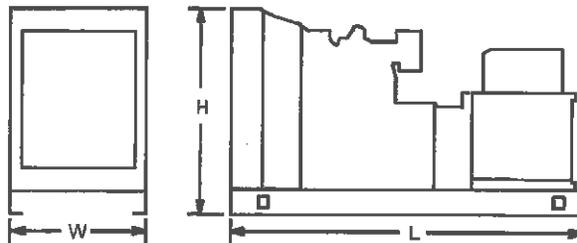
- 2-Year Basic
- 5-Year Basic
- 5-Year Comprehensive

### Other Options

- 
- 
- 
- 
- 
- 
- 
- 

## Dimensions and Weights

Overall Size, L x W x H, mm (in.):  
 Wide Skid 2200 x 1040 x 1172 (86.6 x 40.9 x 46.1)  
 Narrow Skid 2200 x 884 x 1172 (86.6 x 34.0 x 46.1)  
 Weight (radiator model), wet, kg (lb.): 639 (1409)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

## DISTRIBUTED BY:

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**Attachment H**  
**Not Applicable**

**Attachment I**  
**Calculations Provided in Attachment G**

# Emergency Generator Engine Data Sheet

Source Identification Number <sup>1</sup>	GEN-Pharm	
Application / location	Team Member Building	
Generator Model #	30REZG	
Serial #	SGM329497	
Engine Manufacturer/Model/Model Year	General Motors GM-3.0L / 2014	
Manufacturer's Rated bhp/rpm	49 / 1,800	
Source Status <sup>2</sup>	ES	
Date Installed/Modified/Removed <sup>3</sup>	3/27/2014	
Engine Type <sup>4</sup>	RB4S	
Fuel Tank	n/a	
APCD Type <sup>5</sup>	HEIS	
Fuel Type <sup>6</sup>	PNG	
H2S (gr/100 scf)	0.2	
Operating bhp/rpm	1,800 rpm	
Fuel Consumption	430 cfm @ 100%	
Operation (hrs/yr)	500	
Potential Emissions	lb/MMBtu	tons/yr
NO <sub>x</sub>	2.21	0.2423
CO	3.72	0.4079
VOC	0.0296	0.0032
SO <sub>2</sub> <sup>9</sup>	0.000588	0.0001
PM <sub>10</sub>	0.0095	0.0010
Formaldehyde	0.0205	0.0022
Benzene	0.00158	0.0002
Ethylbenzene	0.0000245	0.0000
Toluene	0.000558	0.0001
Xylene	0.000195	0.0000
n-Hexane	n/a	

Where emission rates are calculated as follows:

lb/hr = Fuel Consumption (cfm)\*EF (lb/MMBtu)\*(1020 Btu/scf)\*(1MMBtu/106 Btu)

TPY= Hourly Emissions \* 500 hr/yr \* (1ton/2000lb)

Emission Factors from AP-42:

<http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf>

All Generators					
Reference <sup>7</sup>	Updated		PREVIOUS		INCREASE
	TOTAL EMISSIONS	TOTAL EMISSIONS	TOTAL EMISSIONS	TOTAL EMISSIONS	
	lb/hr	tons/yr	lb/hr	tons/yr	tons/yr
AP	9.2107	2.3027	8.3103	2.0776	0.9003
AP	15.5039	3.8760	13.8723	3.4681	1.6316
AP	0.1234	0.0308	0.1104	0.0276	0.0130
AP	0.0025	0.0006	0.0022	0.0005	0.0003
AP	0.0396	0.0099	0.0354	0.0089	0.0042
AP	0.0854	0.0214	0.0764	0.0191	0.0090
AP	0.0066	0.0016	0.0059	0.0015	0.0007
AP	0.0001	0.0000	0.0001	0.0000	0.0000
AP	0.0023	0.0006	0.0021	0.0005	0.0002
AP	0.0008	0.0002	0.0007	0.0002	0.0001
AP					

## Attachment J

**AIR QUALITY PERMIT NOTICE**  
**Notice of Application**

Notice is given that Toyota Motor Manufacturing, West Virginia, Inc., has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II General Permit Administrative Update for an emergency generator located on Sugar Maple Lane, Buffalo, West Virginia, in Putnam County, West Virginia. The latitude and longitude coordinates are: lat: 38.59760°, lon: 81.99382°.

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be:

NOx 0.2251 TPY  
CO 0.4079 TPY  
VOC 0.0032 TPY  
All other pollutants – trace

Startup of operation is planned to begin as necessary during a power outage. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57<sup>th</sup> Street, SE, 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 1227, during normal business hours.

Dated this the 18<sup>th</sup> day of December, 2014.

By: Toyota Motor Manufacturing, West Virginia, Inc  
Millie Marshall, President  
1 Sugar Maple Lane, Post Office Box 600  
Buffalo, West Virginia 25033

## Attachment K

# Attachment L

## **Marc Crouse (TMMWV)**

---

**From:** Adkins, Sandra K <Sandra.K.Adkins@wv.gov>  
**Sent:** Friday, December 12, 2014 1:59 PM  
**To:** McKeone, Beverly D; Rice, Jennifer L  
**Cc:** Marc Crouse (TMMWV)  
**Subject:** Toyota DAQ Application Fee

Hello,

Marc has called to give cc info to process a DAQ app fee of \$300.00. Application will be mailed to us today – please let me know when everything is ok to process payment. Thank you!

Sandra

**Attachment M**  
**Not Applicable**

**Attachment N  
Not Applicable**

## Attachment O

## Emergency Generator Criteria P

Company Name <u>Toyota Motor Manufacturing, West Virginia, Inc.</u>						Re
Source Identification Number	NO <sub>x</sub>		CO		VOC	
	PTE tons/yr	PTE lbs/hr	PTE tons/yr	PTE lbs/hr	PTE tons/yr	
GEN-11E	0.15723	0.62892	0.26466	1.05864	0.00211	0
GEN-11W	0.15723	0.62892	0.26466	1.05864	0.00211	0
GEN-12	0.15723	0.62892	0.26466	1.05864	0.00211	0
GEN-13	0.15723	0.62892	0.26466	1.05864	0.00211	0
GEN-14	0.32855	1.31420	0.55303	2.21214	0.00440	0
GEN-15	0.32855	1.31420	0.55303	2.21214	0.00440	0
GEN-IS	0.32855	1.31420	0.55303	2.21214	0.00440	0
GEN-SBR	0.44577	1.78307	0.75034	3.00137	0.00597	0
GEN-PHARM	0.24233	0.96931	0.40790	1.63159	0.00325	0
<b>TOTAL</b>	<b>2.30267</b>	<b>9.21066</b>	<b>3.87598</b>	<b>15.50392</b>	<b>0.03084</b>	<b>0</b>

## Emergency Generator Hazardous/Tc

Company Name <u>Toyota Motor Manufacturing, West Virginia, Inc.</u>						Re
Source Identification Number	Benzene		Ethylbenzene		Toluen	
	PTE tons/yr	PTE lbs/hr	PTE tons/yr	PTE lbs/hr	PTE tons/yr	
GEN-11E	0.00011	0.00045	0.00000	0.00001	0.00004	0
GEN-11W	0.00011	0.00045	0.00000	0.00001	0.00004	0
GEN-12	0.00011	0.00045	0.00000	0.00001	0.00004	0
GEN-13	0.00011	0.00045	0.00000	0.00001	0.00004	0
GEN-14	0.00023	0.00094	0.00000	0.00001	0.00008	0
GEN-15	0.00023	0.00094	0.00000	0.00001	0.00008	0
GEN-IS	0.00023	0.00094	0.00000	0.00001	0.00008	0
GEN-SBR	0.00032	0.00127	0.00000	0.00002	0.00011	0
GEN-PHARM	0.00017	0.00069	0.00000	0.00000	0.00006	0
<b>TOTAL</b>	<b>0.00165</b>	<b>0.00658</b>	<b>0.00002</b>	<b>0.00009</b>	<b>0.00058</b>	<b>0</b>