MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
AIR QUALITY DIVISION

June 18, 2010

PERMIT TO INSTALL
No. 7-09

ISSUED TO
JBAutotech, LLC

LOCATED AT
34039 Schoolcraft Rd.
Livonia, Michigan 48150

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
B5826

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Natural Resources and Environment. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **3/24/2009**	
DATE PERMIT TO INSTALL APPROVED: **6/18/2009**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	yr	Year
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUTESTCELL1	Engine test cell #1. The test cell has a maximum rating of 150 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL2	Engine test cell #2. The test cell has a maximum rating of 175 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL3	Engine test cell #3. The test cell has a maximum rating of 350 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL4	Engine test cell #4. The test cell has a maximum rating of 450 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL5	Engine test cell #5. The test cell has a maximum rating of 450 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL6	Engine test cell #6. The test cell has a maximum rating of 500 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL7	Engine test cell #7. The test cell has a maximum rating of 1,000 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUTESTCELL8	Engine test cell #8. The test cell has a maximum rating of 2,400 kW and has the capability of firing diesel fuel, biodiesel fuel, gasoline, and ethanol.	TBD	FGTESTCELLS
EUMAINFUELTANK	2,000 gallon fuel storage tank.	TBD	FGFACILITY
EUSUBFUELTANK	2,000 gallon fuel storage tank.	TBD	FGFACILITY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTESTCELLS	All diesel test cells located at this facility.	EUTESTCELL1 EUTESTCELL2 EUTESTCELL3 EUTESTCELL4 EUTESTCELL5 EUTESTCELL6 EUTESTCELL7 EUTESTCELL8
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply to: FGTESTCELLS

POLLUTION CONTROL EQUIPMENT: Each test cell is equipped with an electric heater and a clean-air injection system for the control of particulate matter, a dual oxidation catalyst (DOC) for the control of hydrocarbons and carbon monoxide, selective catalytic reduction for the control of NOx, and ammonia slip catalyst for the control of ammonia slip.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	1.7 g/kW-hr*	Test Protocol	All test cells	SC V.1	40 CFR 94 40 CFR 89 40 CFR 1039 40 CFR 1068
2. NOX	20.52 pph	Hourly	All test cells	SV VI.2	R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
3. CO	2.1 g/kW-hr*	Test Protocol	All Test cells	SC V.1	40 CFR 94 40 CFR 89 40 CFR 1039 40 CFR 1068
4. CO	25.35 pph	Hourly	All test cells	SV VI.2	R336.2804 40 CFR 52.21(d)
5. PM-10	0.13 g/kW-hr*	Test Protocol	All test cells	SC V.1	40 CFR 94 40 CFR 89 40 CFR 1039 40 CFR 1068
6. PM-10	1.57 pph	Hourly	All test cells	SV VI.2	R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
7. VOC's	0.70 g/kW-hr*	Test Protocol	All test cells	SC V.1	40 CFR 94 40 CFR 89 40 CFR 1039 40 CFR 1068
8. VOC's	8.45 pph	Hourly	All test cells	SV VI.2	R336.1205(3) R336.702(a)
* For purposes of demonstrating compliance, these limits shall represent emission factors which will be used to show compliance with the pound per hour and tons per limits.					

II. MATERIAL LIMITS

1. The sulfur content of any fuels used in any test cell shall not exceed 15 ppm (parts per million) by weight. **(R336.1205(3))**

III. PROCESS/OPERATIONAL RESTRICTIONS

N/A

IV. DESIGN/EQUIPMENT PARAMETERS

1. The fuel usage for **FGTESTCELLS** shall not exceed 8,940 gallons per calendar day**. (R336.1205(3), R336.1225, R 336.2804, R336.2804, 40 CFR 52.21 (c) and (d), R336.2810).**

2. The fuel usage for **FGTESTCELLS** shall not exceed 3,263,146 gallons per 12-month rolling time period as determined at the end of each calendar month**. (R336.1205(3), R336.1225, R 336.2804, R336.2804, 40 CFR 52.21 (c) and (d), R336.2810).**

3. The applicant shall not operate any test cell unless the clean-air injection system, dual oxidation catalyst, selective catalytic reduction system, and ammonia slip catalyst system are installed and operating properly. **(R336.1205(3), R336.2803, R336.2804, 40 CFR 52.21(c) and (d))**

4. The permittee shall not operate engine test cell unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the engine test cell emission control systems, has been submitted within 45 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)).**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R336.1201(3))**

1. Within 180 days after commencement of trial operation, the permittee shall verify NOx, CO, PM-10, and VOC emission rates from any individual test cell in FGTESTCELLS. No less than 45 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to

testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001, R336.2003, R336.2004)**

VI. MONITORING/RECORDKEEPING

1. The permittee shall complete all required calculation in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in all monitoring/recordkeeping special condition. **(R336.1205, R336.1225, R336.1702(a), R336.1910, R336.2803, R336.2804, 40 CFR 52.21(c) and (d))**

2. The permittee shall monitor and record the following information on a monthly basis for FGTESTCELLS:

   a) Total kilowatt-hours generated by each test cell as determined at the end of each calendar month,
   b) A record of the days of operation for each test cell as determined at the end of each calendar month.
   c) A record of the daily hours of operation for each test cell.
   d) NOx emission calculations determining the average hourly emission rate in pounds per hour, based upon a monthly average.
   e) CO emission calculations determining the average hourly emission rate in pounds per hour, based upon a monthly average.
   f) PM-10 emission calculations determining the average hourly emission rate in pounds per hour, based upon a monthly average.
   g) VOC emission calculations determining the average hourly emission rate in pounds per hour, based upon a monthly average.
   h) Daily, monthly, and 12-month rolling time period fuel usages (gallons) for all fuels used.

   The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon Request. **(R336.1205, R336.1224, R336.1225, R336.1702(a), R336.2803, R336.2804, R336.2810, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVTESTCELL1	6.0	53	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
2. SVTESTCELL2	6.0	53	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
3. SVTESTCELL3	6.0	53	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
4. SVTESTCELL4	6.0	70	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
5. SVTESTCELL5	8.0	70	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
6. SVTESTCELL6	8.0	70	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
7. SVTESTCELL7	20.0	70	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
8. SVTESTCELL8	24.0	70	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	89.7 tons per year	Rolling 12-month time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	60.2 tons per year	Rolling 12-month time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
3. PM-10	3.3 tons per year	Rolling 12-month time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
4. VOC's	37.0 tons per year	Rolling 12-month time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
5. Each Individual HAP	Less than 22 tpy *	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
6. Aggregate HAPs	Less than 9 tpy *	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
* For purposes of demonstrating compliance, these limits shall represent emission factors which will be used to show compliance with the pound per hour and tons per limits.					

II. MATERIAL LIMITS

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only burn diesel, bio-diesel fuel, ethanol fuel in **FGTESTCELLS**. **(R336.1205, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The total combined fuel usage for **FGTESTCELLS** shall not exceed 3,263,1461 gallons per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15TH day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The permittee shall keep the following information on a monthly basis for **FGTESTCELLS**:
   a) A record of days of operation.
   b) Gallons of all fuels used per day, month, and 12-month rolling time period.
   c) NO_x emission calculations determining the monthly emission rate in tons per calendar month.
   d) NO_x emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   e) CO emission calculations determining the monthly emission rate in tons per calendar month.
   f) CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   g) Fuel supplier certifications. The certification shall include the supplier name and address, and the sulfur content of the diesel fuel and biodiesel supplied.
   h) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
   i) Individual and aggregate HAP emission calculations determining the cumulative emission rate of each during the first 12-months and the annual emission rate of each thereafter, in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205**, **R336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).