

Instructions: Internal Combustion Engine Form

Introduction	Use the following instructions to help guide you through the Internal Combustion Engine (ICE) Form .
Who should use this form?	This form should be submitted with new permit applications and applications to modify or alter existing sources. This form is for all ICEs, except for turbines (for turbines, submit a Combustion form).
Facility Information	<ul style="list-style-type: none">• Air District Facility ID – The facility ID number is available on any permit or invoice issued by the Air District. This can be found in the upper right of the permit or the invoice.<ul style="list-style-type: none">➤ If this application is for a new facility (not currently permitted by the Air District), you must also submit a Facility Creation Form and Facility Contacts Form.
General Device Information	<ul style="list-style-type: none">• Air District Device ID – For existing facilities, the device ID number can be found on the Permit to Operate to the left of the device name (for example: S1 Emergency Standby Engine).• Device/Operation Name – This is the name you associate with this device.• Initial/Proposed Date of Operation:<ul style="list-style-type: none">○ For new construction, enter the date that you propose will be the initial date of operation.○ For a modification of an existing permitted operation, enter the date that you propose the changes to occur.○ For an existing operation that is not currently permitted by the Air District, enter the date for which the facility initially operated.• Device/Operation Description – This is your description of the device or operation. This field can be used to distinguish it from other similar devices (e.g. ID numbers, location, make, model, etc.)
Equipment Information	<p>Provide the manufacturer's specification sheet of the ICE with this form.</p> <p>If the engine will be equipped with add-on abatement equipment, please submit an Abatement Device form with your application.</p>
Material Usage	See Tables A and B for a list of material codes, usage units, and maximum fuel use rate units, and Table C for a list of basis codes.
Submission Information	<p>All applications can be submitted through our Online Permitting System, by e-mail, or by mail:</p> <ul style="list-style-type: none">• Online Permitting System: https://www.baaqmd.gov/onlinepermitting• E-mail: permits@baaqmd.gov• Mail: Bay Area Air District, Engineering Division, 375 Beale Street, Suite 600, San Francisco, CA 94105
Still need help?	Contact the Engineering Division: (415) 749-4990 permits@baaqmd.gov

INTERNAL COMBUSTION ENGINE FORM



For all internal combustion engines, except for turbines.
All fields are required unless otherwise noted. Please type or print.

1. Facility Information

Facility Name	Air District Facility ID (Existing facilities only)
Facility Address (Street address and city)	

2. General Device Information

Air District Device ID (If applicable)	
Device/Operation Name	Initial/Proposed Date of Operation
Device/Operation Description	

3. Operating Schedule – Select “Continuous” or specify specific schedule in the 4 columns

Continuous

☐

Maximum hours/day	Typical hours/day	Days/week	Weeks/year

4. Equipment Type

➤ Please submit the manufacturer’s specification sheet with this form.

Equipment Manufacturer (Make)	Equipment Model

Select the type of Internal Combustion Engine: ☐ Emergency Standby ☐ Prime

5. Additional Information

EPA/CARB Engine Family Name	Serial Number (Required Before Start-up Date)	Year of Manufacture
Maximum Rated Output	Typical Load Percent (Optional)	
bhp	%	

Primary Use of Engine:

- | | | | |
|-------------------------------------|---|--|--|
| <input type="radio"/> Chipper | <input type="radio"/> Crane Driver | <input type="radio"/> Fire Pump Driver | <input type="radio"/> Screen Driver |
| <input type="radio"/> Co-generation | <input type="radio"/> Electrical Generation | <input type="radio"/> Pump | <input type="radio"/> Tub Grinder Driver |
| <input type="radio"/> Compressor | <input type="radio"/> Other: _____ | | |

Diesel Engine Tier Rating (Diesel Engines only):

- | | | | | |
|--|------------------------------|------------------------------|------------------------------|------------------------------|
| <input type="radio"/> Non-certified (Tier 0) | <input type="radio"/> Tier 1 | <input type="radio"/> Tier 2 | <input type="radio"/> Tier 3 | <input type="radio"/> Tier 4 |
|--|------------------------------|------------------------------|------------------------------|------------------------------|

Engine Ignition Type:

- | | | | |
|--|--------------------------------------|--|--------------------------------------|
| <input type="radio"/> 2 Stroke Compression | <input type="radio"/> 2 Stroke Spark | <input type="radio"/> 4 Stroke Compression | <input type="radio"/> 4 Stroke Spark |
|--|--------------------------------------|--|--------------------------------------|

Engine Burn Type:

- | | | | |
|---------------------------------|---------------------------------|--------------------------------------|-------------------------------|
| <input type="radio"/> Lean Burn | <input type="radio"/> Rich Burn | <input type="radio"/> Not Applicable | <input type="radio"/> Unknown |
|---------------------------------|---------------------------------|--------------------------------------|-------------------------------|

Which of these describes this engine?

- | | | |
|---|--|----------------------------------|
| <input type="radio"/> Off-Site Portable | <input type="radio"/> On-Site Portable | <input type="radio"/> Stationary |
|---|--|----------------------------------|

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6. Equipment Information

Does this engine include any of the following? (Check all that apply)

- | | | |
|--|--|---------------------------------------|
| <input type="checkbox"/> Aftercooler | <input type="checkbox"/> Inter-cooler | <input type="checkbox"/> Supercharger |
| <input type="checkbox"/> Injection Timing Retard | <input type="checkbox"/> Naturally Aspirated | <input type="checkbox"/> Turbocharger |

Is this engine equipped with any integral abatement equipment? ☐ Yes ☐ No

Will this engine be equipped with add-on abatement equipment? ☐ Yes ☐ No

➤ If yes, submit an Abatement Device form with your application.

7. Material Usage

Fill out information on the fuel used with this device:

➤ See Tables A and B for a list of material codes, usage units, and maximum fuel use rate units, and Table C for a list of basis codes.

Material Name	Material Code	Maximum Annual Usage	Material Usage Units
Maximum Fuel Use Rate	Max. Use Rate Units		

Optional Additional Information for Prime Engines Using Non-Standard Fuels

Higher Heating Value	Higher Heating Value Units	Sulfur Content	Sulfur Content Units
Nitrogen Content	Nitrogen Content Units		

Combustion Material Emission Factors

Pollutant	Emission Factors (units)	Basis Code
Particulates		
Organics		
Nitrogen Oxides (NO _x)		
Sulfur Dioxide		
Carbon Monoxide		
Other:		
Other:		

8. Emission Train Information – Emission Point forms required with all Internal Combustion Engine applications

With regard to emission flow, what abatement devices and/or emission points are *immediately* downstream of this source?

Abatement Devices: A- _____ A- _____ A- _____ Emission Points: P- _____ P- _____ P- _____

➤ Complete an Abatement Device Form and/or Emission Point Form for each connection.

9. Certification/Signature of person responsible for the information on this form

I hereby certify that I am authorized to complete this form and that all information contained herein is true and correct.

Name	Title	
Signature	Date	Phone (xxx-xxx-xxxx)

Table A. Stationary Emergency Standby Internal Combustion Engine Material Codes

CODE	MATERIAL NAME	UNITS	MAX RATE UNITS	CODE	MATERIAL NAME	UNITS	MAX RATE UNITS
815	Biodiesel (B100)	hours	gallons/hour	160	LPG	hours	gallons/hour
816	Biodiesel (B20-blend)	hours	gallons/hour	189	Natural gas	hours	scf/hour
98	Diesel fuel	hours	gallons/hour	417	Propane	hours	gallons/hour
551	Gasoline - Unleaded	hours	gallons/hour				

Table B. Prime Internal Combustion Engine Material Codes

CODE	MATERIAL NAME	UNITS	MAX RATE UNITS	CODE	MATERIAL NAME	UNITS	MAX RATE UNITS
816	Biodiesel (B20-blend)	thou gallons	gallons/hour	160	LPG	thou gallons	gallons/hour
98	Diesel fuel	thou gallons	gallons/hour	511	Landfill gas**	Mcf	scf/hour
493	Digester gas**	Mcf	scf/hour	189	Natural gas	Mcf	scf/hour
551	Gasoline - Unleaded	thou gallons	gallons/hour	417	Propane	thou gallons	gallons/hour

**Non-standard fuels

Table C. Basis Codes – for Emission Factor Table

CODE	BASIS	CODE	BASIS	CODE	BASIS
1	BAAQMD Regulation 9-7	5	EPA/CARB Certification	9	Other
2	CARB Certification	6	EPA Certification	10	Other Literature
3	CATEF	7	Manufacturer/Vendor Specification	11	Regulation
4	EPA AP-42	8	Material Balance	12	Source Test