ATTACHMENT 1

Supplemental Information Formats (12 pages)

Part I – Exhaust Information
Part II – Evaporative Information

Model Year: _____
Manufacturer Name: _____
Engine Family: _____
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Part I – Exhaust Information

S01. CARBURETOR: Yes _____ No_____

a. Number of Carburetors: _____

b. Number of Barrels per Carburetor: _____

c. Feedback Control: Yes ___ No ___

d. Idle Circuit: Yes ___ No ___

e. Fast Idle Circuit: Yes ___ No ___

f. Other Subsystems (specify): _____

g. Used in previous/other engine model: No ___ Yes ___

   If yes, last model year used: _____

S02. FUEL INJECTION: Yes _____ No _____

a. Type (e.g., TBI, DGI, MPI, SMPI): _____   b. Feedback Control: Yes ___ No ____

c. Point of Injection (e.g., manifold, cylinder, pre-chamber, throttle body): _____

d. Used in previous/other engine models: No _____ Yes ___ If yes, last year used: _____

S03. CRANKCASE CONTROL

a. Type (e.g., PCV valve, uncontrolled flow, crankcase scavenging for 2-stroke engines): _____

b. Routing: Air Cleaner ___   Intake Manifold ___   Inlet Ports (2-Stroke Engines) ___   Other (specify) ___

S04. OXYGEN SENSOR: Yes _____ No _____

a. Type: Heated ___   Unheated ___   Other (specify) _____

b. Location: Port ___   Exhaust Manifold ___   Other (specify) ___

c. Used in previous/other engine models: No ___ Yes ___ If yes, last year used: _____

S05. SECONDARY AIR INJECTION: Yes _____ No_____

a. Type: Pump ___ (AIR) Pulsed ___ (PAIR)

b. Point of Injection: Port ___   Exhaust Manifold ___   Other (specify) _____

c. Method of Modulation: Vacuum ___   Solenoid ___

d. Sensed Parameters (check all applicable): Coolant Temp ___   Engine RPM ___   MAP ___
   Throttle Position___   Other (specify) _____

e. Used in previous/other engine models: No ___   Yes ___ If yes, last year used: _____

S06. EXHAUST GAS RECIRCULATION (EGR): Yes _____ No_____

a. Sensed Parameters (check all applicable): Coolant Temp _____   Engine RPM _____   MAP ____
   Throttle Position_____   Other (specify) _____

b. Method of Modulation: Vacuum _____   Solenoid _____

c. Used in previous/other engine models: No ___   Yes ___ If yes, last year used: _____

S07. ADJUSTABLE PARAMETERS AND ANTI-TAMPERING MEASURES

Parameter	Adjustable Range (or N/A)	Tamper Resistance Method (or N/A)	Approval Reference

S08. AUXILIARY EMISSION CONTROL DEVICES (AECD)[1] AND DEFEAT DEVICES[2]

TABLE A: Sensed Parameters[3] versus Controlled Parameters[4]

Sensed Parameter	Sensor	Control Parameters				

TABLE B: Justifications for AECDs

Parameters		Device	Justifications / Notes
Controlled	Sensed		

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[1] **AECD**: any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any of the emission control system.

[2] **Defeat Device**: An AECD that reduces the effectiveness of the emission control system under conditions that may reasonably be expected to be encountered in normal operation and use, unless (1) such conditions are substantially included in the emission test procedure, (2) the need for the AECD is justified in terms of protecting the engine against damage or accident, or (3) the AECD does not go beyond the requirements of engine starting. **A pending engine family that is shown to contain a defeat device will not be certified. A certified engine family that is found to contain a defeat device will subject the manufacturer to enforcement actions**.

[3] Examples of Sensed Parameters: atmospheric pressure, crankshaft position, engine RPM, cylinder position, coolant temperature, intake air temperature, intake manifold pressure, throttle position, oxygen concentration in exhaust gas, vehicle speed, knocking, EGR valve position, shift position of transmission, etc.

[4] Examples of Controlled Parameters: fuel metering, ignition timing, idle speed, EGR valve, secondary air injection pump or valve, etc.

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S09. CATALYTIC CONVERTER: Yes _____ No_____
   a. Type/Number/Arrangement (e.g., TWC, OC, 2TWC for 2 parallel, TWC-2 for 2 in series): _____
   b. Location (e.g., close coupled, exhaust manifold, muffler): _____
   c. Catalyst Manufacturer.: _____
   d. Substrate: (i) Volume: _____ cc (ii) Construction: Pellet ____ Honeycomb ____
      Number of cells:_____ (per cm^2)
      (iii) Composition: Ceramic ____ Metallic ____ (iv) Containment Method: Wire mesh ____ Other (specify) ____
   e. Active Material:

   | Composition (Pt, Pd, Rh): _____ | Ratio: _____ | Loading (g/L)_____ |

CONFIDENTIAL

S10. PROJECTED SALES AND PRODUCTION PERIOD   ## CONFIDENTIAL
   a. Projected California Annual Sales (units): _____ Projected 50 State Sales (units): _____.
   b. Estimated Production Period: Start Date: _____ End Date: _____
   c. Estimated Introduction into Commerce Date: _____

S11. MANUFACTURER'S AUTHORIZED CONTACTS

Certification Contact

Name:
Title:
Address:
Telephone Number:
Fax Number:
E-Mail Address:

Recipient of Executive Order

Name:
Title:
Address:
Telephone Number:
Fax Number:
E-Mail Address:

Plant Contact

Name:
Title:
Address:
Telephone Number:
Fax Number
E-Mail Address:

Plant Contact

Name:
Title:
Address:
Telephone Number:
Fax Number
E-Mail Address:

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Manufacturer Name: _____

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S12. MODEL SUMMARY (Use an asterisk (*) to identify worst-case engine model used for certification testing.)

S13. Engine Model	S14. Engine Code	S15. Sales Codes (Check ALL appropriate)			S16. Eng. Displ. (Liters)	S17. Rated Power (kW)	S18. Rated Speed (RPM)	S19. Peak Torque (FT-LB)	S20. Peak Torque Speed (RPM)
		Calif. Only	49-State	50-State					

S21. EMISSION-RELATED PART NUMBERS

(Part numbers as stamped on the component, not the stock or inventory numbers, should be listed here.)

	S11. Engine Model				
Fuel System:					
Carb/Mixer Assy.					
Fuel Injector					
Fuel Pump					
ECM					
Pressure Regulator					
Oxygen Sensor					
Other (specify)					
Intake System:					
Air Cleaner Element					
Intake Manifold					
Turbocharger					
Supercharger					
Charge Air Cooler					
Other (specify)					
Ignition System:					
Spark Plug					
Ignition Coil					
Ignition Control Valve Module					
Distributor					
Other (specify)					
EGR:					
EGR Valve Assembly					
Vacuum Control Valve					
Air Injection					
Control Valve					
Check Valve					
Solenoid Valve					
Aftertreatment System:					
Catalyst					
Exhaust Manifold					
Crankcase System:					
PCV Valve					

S22. LABELING:
    a. Emission label format approved? No_____ Yes ____ If yes, reference approval:_____
      Sample label attached? No_____ Yes (put label in #S24)_____

S23. WARRANTY: Emission warranty approved? No____ (Provide full warranty statement in #S24)
                                       Yes ____ (Reference approval: _____)
    Have any changes been made since the last approval?
    No_____ Yes _____ If yes, provide an explanation of the changes:
    _____
    _____
    _____
    _____
    _____
    _____

Model Year: _____

Manufacturer Name: _____

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S24. ADDITIONAL INFORMATION AND COMMENTS

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Part II - Evaporative Information

S25. EVAPORATIVE CERTIFICATION APPLICATION:

a) ☐ Performance Based Certification (Complete #S26, S27, S29)

b) ☐ Design Based Certification (Complete #S27, S28, S29)

S26. EVAPORATIVE HYDROCARBON EMISSIONS:

Test No.	HC Official Test Results, g/gal	HC DF	HC Certification Level, g/gal

S27. NONMETALLIC FUEL LINES:

Part Code	Model	# of Layers	Material	Meets SAE J2260, Cat.1
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

S28. GAS CAP:

a) Does gas cap stay sealed up to a positive pressure of 24.5 kPa or a vacuum pressure of 0.7 kPa?
   YES_____   NO_____

b) (i) Tethered Gas Cap?   YES_____   NO_____

   (ii) Self-Closing Gas Cap?   YES_____   NO_____

c) Demonstrate compliance.

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S29. FUEL TANK TEMPERATURE:

    a) Does fuel reach boiling during continuous engine operation at ambient temperature of 30 °C?
        YES_____   NO_____

    b) Provide fuel temperature test data or other supporting evidence of compliance.

Model Year: _____
Manufacturer Name: _____
Engine Family: _____
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S30. ENGINE DIAGNOSTICS:

Describe engine diagnostic system.

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S31. TORQUE BROADCASTING:

a) Small-volume manufacturer?   YES (Skip to S32)_____   NO_____

b) Will all necessary hardware, software, and tools to access broadcasts from onboard computers and electronic control units be provided if requested?   YES_____   NO_____

c) Description of torque broadcasting method as specified in §1048.115(b).

Model Year: _____

Manufacturer Name: _____

Engine Family: _____

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S32. FIELD TESTING:

a) Do all engines in this engine family comply with the field-testing emission standards as specified in §1048.101(c)?   YES_____   NO_____

b) Describe relevant testing or engineering analysis for compliance with field-testing requirements.

ATTACHMENT 2   **CERTIFICATION DATABASE FORM**

The certification database form closely follows the Certification Summary described in Attachment 1. The database form is an **Access 97** file; the **electronic version** of this form can be **obtained by contacting your assigned ARB Certification Section staff person**. An imprint of this database form is enclosed for information purposes (only for hard copy mailings of this guidance). In the Access 97 file, the light blue fields indicate fill-in boxes, dark blue fields indicate pull-down menus and red fields indicate they are "reserved for ARB use only. The optimal screen viewing setting for your computer display is 600 x 800 pixels on 256-colors or better.

After **completing** and **verifying** this database form for each engine family, the manufacturer should (1) print a **hard copy** and submit it in lieu of the Certification Summary form described in Attachment 1 (which is a Word 97 document) as part of the engine family's certification application package, and (2) **electronically send** the certification database information to its assigned Certification staff person.

Below is a list of the information fields that manufacturers must provide in order to complete an application for certification. **Incorrect or missing information will render the application incomplete and result in a certification delay**. The fields below are numbered in the order encountered when one fills in the Certification Database Form.

Field	Reserved for ARB Use Only	Pull-Down Menu	Fill-In/Describe
1. Model Year		☒	
2. Application Type		☒	
3. Manufacturer		☒	
4. EO No.	☒		
5. Emission Compliant EF?		☒	
6. Engine Family Name			12 alphanumeric characters
7. EF Name on Engine Label			12 alphanumeric characters
8. Trade Name			Up to 32 alphanumeric characters
9. Equipment Applications (six pulldown fields)		☒	
10. Sales_Code		☒	
11. EF CA Projected Sales			Up to 10 digits
12. EF US Projected Sales			Up to 10 digits
13. Production Engine Assembly		☒	
14. Engine_Displace_x (five fill-in fields)			xxxx.xxx (in cc)
15. Highest Power (in kW)			xxx.xxx (in kW)
16. Lowest Power (in kW)			xxx.xxx (in kW)
17. Engine Models			Up to 200 alphanumeric characters
18. Combustion Cycle		☒	

Field	Reserved for ARB Use Only	Pull-Down Menu	Fill-In/Describe
19. Oil/Fuel Ratio			Up to 10 alphanumeric characters (e.g., 40:1, 50:1); enter "N/A" for 4-strokes
20. Engine Type		⊠	
21. Valvetrain		⊠	
22. Valve (Ports)/Cylinder		⊠	
23. Cooling Medium		⊠	
24. # of Cylinders		⊠	
25. Cylinder Arrangement		⊠	
26. Fuel System Configuration		⊠	
27. # of Fuel System		⊠	
28. Operating Fuel		⊠	
29. ECS_Cat		⊠	
30. ECS_O_2S		⊠	
31. ECS_fuelsys1		⊠	
32. ECS_fuelsys2		⊠	
33. ECS_fuelsys3		⊠	
34. ECS_egr		⊠	
35. ECS_asp		⊠	
36. ECS_air		⊠	
37. ECS_em:		⊠	Use "EM" only when CARB (carburetor) fuel system and NA (natural aspiration) are the only other information. Use "*" otherwise.
38. New Durability Testing?		⊠	
39. Durability Carryover EF Name			12 alphanumeric characters; enter "N/A" if #38 is "Yes"
40. Durability Engine Model			Up to 32 characters
41. Durability Engine ID Number			Up to 32 characters
42. Service Accumulation Hours			xxx.xxx (in hours)
43. DF_Type		⊠	
44. xxHC_DF			xx.xxx
45. NOx_DF			xx.xxx
46. xxHC+NOx_DF			xx.xxx (This is optional and for additive DF type only.)
47. CO_DF			xx.xxx
48. Trans_ xxHC_DF			xx.xxx
49. Trans_ NOx_DF			xx.xxx
50. Trans_ xxHC+NOx_DF			xx.xxx (This is optional and for additive DF type only.)
51. Trans_ CO_DF			xx.xxx
52. CERT_EDE_type		⊠	

Field	Reserved for ARB Use Only	Pull-Down Menu	Fill-In/Describe
53. Emission Carryover Engine Family Name			12 alphanumeric characters; enter "N/A" if #48 is "NEW"
54. Cert_engine model			Up to 32 characters
55. Cert_engine_id			Up to 32 characters
56. Rated Power (kW)			xxx.xxx (in kW)
57. @ Rated_rpm			Up to 5 digits; no decimals
58. Cert_engine_stabilization_ hours (for certification emission test)			Up to 3 digits
59. cert_test_date			month/date/year (e.g., 06/19/00 for June 19, 2000)
60. Certification Test Fuel		☒	
61. Certification Test Procedure		☒	
62. Certification Test Cycle		☒	
63. Cert_TP: List all special test equipment…			Up to 200 alphanumeric characters
64. HC+Nox_Hi (Certification Level)			xxx.xxx (in g/kW-hr); (Enter level from confirmatory test, if any. If none, enter highest value from all certification tests for this EF.)
65. CO_Hi (Certification Level)			xxx.xxx (in g/kW-hr), (Enter level from confirmatory test, if any. If none, enter highest value from all certification tests for this EF.)
66. HC+Nox_standard			xxx.x (in g/kW-hr)
67. CO_standard			xxx.x (in g/kW-hr)
68. Emission Standard Durability Period			xxxx.x (in hours); enter "0" for emission compliance phase-in and non-compliant EFs.
69. TEST_SET_x; (_x- denotes upto 4 sets of data, if applicable)		☒	
70. HC_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
71. Nox_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW -hr)

Field	Reserved for ARB Use Only	Pull-Down Menu	Fill-In/Describe
72. HC+Nox_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (This is optional and for additive DF only.)
73. CO_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
74. HC_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
75. Nox_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
76. HC+Nox_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
77. CO_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
78. Trans_TEST_SET_x; (_x-denotes upto 4 sets of data, if applicable)		⊠	
79. Trans_HC_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
80. Trans_Nox_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
81. Trans_HC+Nox_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (This is optional and for additive DF only.)
82. Trans_CO_x; (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
83. Trans_HC_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
84. Trans_Nox_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
85. Trans_HC+Nox_x (Deteriorated); (_x-denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)

Field	Reserved for ARB Use Only	Pull-Down Menu	Fill-In/Describe
86. Trans_CO_x (Deteriorated); (_x- denotes upto 4 sets of data, if applicable)			xxx.xxx (in g/kW-hr)
87. QA_Procedure		☒	
88. Date_issued			month/date/year (e.g., 06/19/00 for June 19, 2000)
89. Date_revision			month/date/year (e.g., 06/19/00 for June 19, 2000)
90. Remarks			Up to 200 alphanumeric characters
91. Processed By:	☒		
92. Process_Date	☒		
93. Review By:	☒		
94. Review_date	☒		