Peter M. Rooney
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Protection

Air Resources Board

John D. Dunlap, III, Chairman
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Pete Wilson
Governor

Mail-Out #MSO 98-05

APR 1 3 1998

TO: ALL MANUFACTURERS OF ON-HIGHWAY MOTORCYCLES
ALL OTHER INTERESTED PARTIES

SUBJECT: Optional Application Format for Certification of On-Highway Motorcycles

Attached is the optional application format for certification of on-highway motorcycles. Beginning with the 1999 model-year (MY), certification applications for new, on-highway motorcycles may be submitted using either the optional format or the current ("long-form") format. All applications must be submitted in paper format. Electronic submission of the applications in the form of computer diskettes is not accepted by the Air Resources Board (ARB) at present.

New on-highway motorcycles have been regulated by the ARB since the 1978 MY for exhaust emissions, and since the 1983 MY for evaporative emissions. To receive ARB's certification, motorcycle manufacturers conduct durability and emission testing according to prescribed test procedures. The test data and technical information are compiled in an application submitted to the ARB to demonstrate compliance with all certification requirements, for example, labeling and emission warranty. The application is the primary means for the ARB to determine compliance with the regulations before Executive Orders are issued for the engine families. The ARB currently uses the application guidelines adopted by the United States Environmental Protection Agency (U.S. EPA) with some additional modifications for California-specific requirements, for example, evaporative emission control.

Many on-highway motorcycles today are carryovers that are essentially similar to those previously certified. Experience has also been gained by the ARB, the U.S. EPA and the industry during the past two decades in the certification of on-highway motorcycles. As a result, much of the information, in particular, the general technical descriptions, has become redundant, and/or inefficient in its present format. Thus, since mid-1997, the ARB staff has worked closely with the U.S. EPA and the Motorcycle Industry Council and its members in developing a streamlined application format that provides paperwork relief and yet retains the integrity of the on-highway motorcycle emission control program. All durability and emission testing as required by the current test procedure must still be performed by the manufacturers. In the streamlined format, summary test data are submitted and technical

descriptions and test data are maintained by manufacturers but must be made available to the agencies within 30 days upon request. Such a format is expected to greatly expedite the review and processing of on-highway motorcycle applications.

The optional, streamlined on-highway motorcycle application consists of two parts: a general portion (Sections 1 through 6) that contains general information applicable to some or all engine families in the manufacturer's product offerings, and a separate, "check-off/fill-in" portion (Section 7) containing specific information about each individual engine family. The general portion is expected to be submitted once per year and shall be revised and updated as necessary. Three-ring binders should be submitted with tab dividers for the sections and engine families as well as for "Correspondence" and "Executive Orders."

If you have questions or require further assistance, please telephone Mr. Duc Nguyen, Manager, Certification Section, or Mr. Dean Hermano, Staff Engineer, at (626) 450-6103.

Sincerely,

R. B. Summerfield, Chief
Mobile Source Operations Division

Attachment

OPTIONAL APPLICATION FORMAT

FOR 1999 & LATER

ON-HIGHWAY MOTORCYCLES

April 13, 1998

CALIFORNIA AIR RESOURCES BOARD
MOBILE SOURCE OPERATIONS DIVISION
P.O. BOX 8001, 9528 TELSTAR AVENUE
EL MONTE, CA 91734-8001

On-Road Motorcycle Application for Certification

Section 1: CONTACTS

Section 2: CONFIDENTIALITY

Section 3: MAINTENANCE AND WARRANTY

Section 4: NEW TECHNOLOGY

Section 5: COMPLIANCE STATEMENTS

Section 6: CORPORATE PLAN

Section 7: INDIVIDUAL ENGINE FAMILIES

01.00.00.00 COMMUNICATIONS

.01.00.00 Mailing Information

Indicate the name, title, and mailing address of the individual to whom one copy of all technical information (including ARB Mail-outs and Manufacturers Advisory Correspondences, and Federal Register and Advisory Circulars) should be sent to.

.01.00 EPA/ARB Liaison Representatives in the U.S.

.02.00 Representatives in a Foreign Country

.03.00 Certificate Information

The corporation name and address which should appear on the Certificate of Conformity and/or Executive Order.

The Name and address of the person to whom the Certificate of Conformity or Executive Order should be mailed.

02.00.00.00 STATEMENT OF CONFIDENTIALITY

1. Which information in the application for certification is considered to be entitled to confidential treatment until model introduction?

2. Which information in the application for certification is considered to be entitled to continuing confidential treatment after model introduction?

{Explanations}

03.00.00.00 MAINTENANCE AND WARRANTY

.01.00.00 Maintenance Instructions

.02.00.00 Emission System Warranty Statement

04.00.00.00 NEW TECHNOLOGY

This section will contain detailed information about new technology.

The EPA and CARB will use the 1998 Model Year Certification Application Section 8 as the starting point. Emission control system components that incorporate new technology (new components or a different way of using an existing component) will be described in this section. This section will only contain those new technologies introduced into the manufacturer's product line during the model year which the application for certification covers.

05.00.00.00 COMPLIANCE STATEMENTS

This section will contain all of the statements of compliance required by the regulations.

All of the statements of compliance can be submitted once, in this section, at the beginning of the certification year. Manufacturers can reference this statement of compliance in their cover letter for the individual engine families.

06.00.00.00 CORPORATE PLAN (California)

This section will contain the corporate average plans for Class III motorcycles intended for sale in the State of California.

Motorcycle Engine Family Information Form

1. Manufacturer:

2. Certification Contact Person, address, phone, and fax:

3. Model Year: _____

4. Process Code: _____
(new, correction, revision, r/c, f/f. etc.)

5. Engine Family: _____
50s Engine Code: _____
49s Engine Code: _____
Calif. Engine Code: _____

6. Emission Control System: _____

7. Calif. Designated Standard: _____

8. Projected Annual Sales:
CONFIDENTIAL

9. New Technology ___ Yes ___ No
If yes, cite the correspondence or reference the submittal document: _____

10. Displacement: _____

11. Number of Cylinders: ___

12. Cylinder Arrangement: _____

13. Cylinder Head Configuration: _____

14. Type of Cooling: _____

15. Combustion Cycle: _____

16. Method of Aspiration: _____

17. Fuel System: _____

18. Number of Catalytic Converters: _____

19. Adjustable Parameters:

Parameter(s)	Adjustable Range (or NA)	Tamper Resistance Method (or NA)	Method Approved

20. AECDs In the Emission Control Systems:

Exhaust System		Evaporative System	
AECDs In System:	_____	AECDs In System:	_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____
	_____		_____

Engine Family: _____

21. Carburetor

Number of Carburetors: _____

Number of barrels per carburetor: _____

Feedback control: ___ Yes ___ No

Use of heat spacer: ___ Yes ___ No

Float Bowl Vent Control: ___ Yes ___ No

Idle Circuit: ___ Yes ___ No

Fast idle Circuit: ___ Yes ___ No

Other subsystems (Specify): _____

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

22. Fuel Injection _____

Type: _____

Feedback Control: ___ Yes ___ No

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

23. Oxygen Sensor (O2S)

Type: Heated _____
Unheated _____
Other _____
(specify, e.g. universal or A/F ratio sensor)

Location: Port _____
Exh. Manifold _____
Other (specify) _____

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

24. Secondary Air Injection

Type: Pump _____
Pulsed _____

Point of Injection: Port _____
Exh. Manifold _____
Other (specify) _____

Method of modulation: Vacuum _____
Solenoid _____
Other (specify) _____

Sensed parameters: Coolant temp _____
Engine RPM _____
MAP _____
Other (specify) _____

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

25. Catalytic Converter

Type: _____
(use J1930 terminology)

Number of Catalysts: _____

Arrangement: _____
(Series, Parallel, other)

Location of Catalytic Converter _____

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

Catalyst manufacturer: _____

Substrate:
Configuration: Pellet _____
Honeycomb _____

Composition: Ceramic _____
Metallic _____
Other (specify) _____

Number of Cells: _____ (per cm^2)

Containment: Wire mesh _____
Other (specify) _____

Physical Description: _____

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Active Material:
Composition _____
Ratio _____
Loading (g/l) _____

26. High Altitude Performance Adjustment:

Procedure requires the use of optional parts:

☐ Yes

☐ No

Altitude:	Part Description:	Item Number in Part Number Summary Form

Procedure requires parameter adjustment:

☐ Yes

☐ No

Altitude:	Parameter Adjusted:	Adjustment Specification:

Engine Family: _____

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? ___ Yes ___ No
    a) If yes, indicate family name: _____
    b) Is the family being certified identical to the family from which the data is being carried over? _____

28. Model Designation of Test Vehicle: _____

29. Test Information Number: ____

30. Vehicle ID: _____

31. Service Accumulation Duration: _____(km)

32. Maximum Rated Power:_____kW @ _____RPM

33. Displacement: _____cc

34. Certification Fuel: _____

35. Test Data Set: _____

36. Road Load: _____

37. Inertia Mass: _____

38. N/V: ____

39. EVAP. Bench Test Method Approved:
    Date: _____
    Reference: _____

40. Unscheduled Maintenance: ____ Yes ____ No

41. If yes, Vehicle Log provided: _____

42. Exhaust Emission Deterioration Factors:

		Emission Values	
Test Number	System Kilometers	HC	CO
1			
2			
3			
4			
5			
6			
7			
Interpolated Values at _____ km:		**HC = _____**	**CO = _____**
Extrapolated Values at _____ km:		**HC = _____**	**CO = _____**

Check one:	
Regular DF	
Modified DF	
If different vehicle specify vehicle ID	

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4		Deterioration Factors
g/km	CO					(X)	
g/km	CO^2						_____
g/km	HC					(X)	
g/test	Evap.					(+)	

44. Certification Levels:

g/km	CO				
g/km	HC				
g/test	Evap.				

Engine Family: _____

Evaporative Emission Information

45. Evaporative Family: _____
46. Number of Evap. Canisters: _____
47. Design Working Capacity: _____
48. Configuration: _____
49. Number of Storage Areas: _____
50. Fuel Reservoir Volume: _____
51. Vent System Configuration: _____
52. Nominal Tank Capacity: _____
53. Engine Displacement Class: ____
54. Storage Medium Composition: _____
55. Evap. Canister Medium Volume:
56. Evap. Family Sales: _____
57. Engine Code: _____
58. Evap. Emission Family Code: _____
59. Evap. Emission Family Group: _____
60. **Overall Evap D.F. =** _____

Bench DF

61. Test Vehicle ID: _____
62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1		
2		
3		
4		
5		
6		
7		
Interpolated Values at _____ km: = _____		
Extrapolated Values at _____ km: = _____		
Bench Test D.F. = _____		

Check One:	
Regular DF:	
Modified DF:	
If different vehicle specify the vehicle ID	

Vehicle DF

63. Test Vehicle ID: _____
64. Test Results.

Test Number	System Kilometers	Evap. Emission Values (g/test)
1		
2		
3		
4		
5		
6		
7		
Interpolated Values at _____ km: = _____		
Extrapolated Values at _____ km: = _____		
Vehicle Test D.F. = _____		

Engine Family: _____

Motorcycle Model Summary Form

65. Model Designation	66. Worst Case	67. Disp. (cc)	68. Bore / Stroke (mm)	69. Basic Ignition Timing (degrees)	70 Power (kW)	71 Rated Speed (RPM)	72 Rated Torque (Nm)	73. Rated Speed (RPM)

65. Model Designation	74. EIM (kg)	75. Loaded Vehicle Weight Range (kg)	76 Road Load (nt)	77 Total Vehicle Mass (kg)	78 Full Weight with All Factory Options (kg)	79. Trans. Type	80 N/V

Engine Family: _____

Motorcycle Part Number Summary Form

81. FUEL SYSTEM:

65. Model Designation	A Carburetor Assembly	B Fuel Injector	C (Other)

65. Model Designation	D. (Other)	E (Other)	F (Other)

82. IGNITION SYSTEM:

65. Model Designation	A ECM/ICM	B Ignition Coil	C Spark Plug

65. Model Designation	D (Other)	E (Other)	F (Other)

65. Model Designation	G (Other)	H (Other)	I (Other)

Engine Family: _____

Motorcycle Part Number Summary Form (cont.)

83. AIR INJECTION SYSTEM: _____ Type: _____

65. Model Designation	A. Control Valve	B. Check Valve	C. Solenoid Valve

65. Model Designation	D (Other)	E (Other)	F. (Other)

84. EVAPORATIVE EMISSION CONTROL SYSTEM: _____

65. Model Designation	A Evap. Canister	B. Carburetor Air Vent Control Valve	C Purge Control Valve

65. Model Designation	D Fuel Tank	E Fuel Fill Cap	F (Other)

65. Model Designation	G (Other)	H (Other)	I (Other)

Engine Family: _____

Motorcycle Part Number Summary Form (cont.)

85. EXHAUST AFTER TREATMENT SYSTEM: _____

65. Model Designation	A Catalyst	B (Other)	C (Other)

65. Model Designation	D (Other)	E (Other)	F (Other)

86. ELECTRONIC SENSORS: _____

65. Model Designation	A. Coolant Temperature Sensor	B Throttle Position Sensor	C (Other)

65. Model Designation	D Oxygen Sensor	E (Other)	F (Other)

65. Model Designation	G (Other)	H (Other)	I (Other)

Engine Family: _____

Motorcycle Part Number Summary Form (cont.)

87. CRANKCASE EMISSION CONTROL SYSTEM:

65. Model Designation	A Air Cleaner	B Air Cleaner Housing	C Air Cleaner Housing Cover

65. Model Designation	C Crankcase Breather Separator	D Crankcase Breather Storage Tank	E (Other)

88. OTHER COMPONENTS: _____

65. Model Designation	A. EGR	B. (Specify)	C (Specify)

89. INTAKE AIR TEMPERATURE SYSTEM: _____

65. Model Designation	A IAT Check Valve	B IAT Sensor	C IAT Thermal Vacuum Valve

65. Model Designation	D IAT Valve	E (Other)	F (Other)

Engine Family: _____

Motorcycle Label and Warranty Information Form

90. Emission Label Format Previously Approved? ____ Yes ___ No
If yes, Reference Previous Approval: _____

91. Emission Warranty Previously Approved? ____ Yes ___ No
If yes, Reference Previous Approval: _____
Have any changes been made since the last approval? _____
If yes, provide an explanation to point out the changes: _____
_____
_____
_____

92. Emission Control Information Label Location:

SAMPLE LABEL

93. Vacuum Hose Routing Diagram Label Location:

SAMPLE LABEL

Engine Family: _____

CONFIDENTIAL Information Form

94.

Item Number	Description	Information
8	Projected Sales: Calif: 49 State:	
25	Catalytic Converter: Composition: Ratio: Loading (g/l):	

Engine Family: _____

95. Additional Comments: