State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER M-6-80
Relating to Certification of New Motorcycles

BAYERISCHE MOTOREN WERKE AG

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and,

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That 2000 model-year Bayerische Motoren Werke AG exhaust emission control systems are certified as described below for four-stroke gasoline-powered motorcycles:

Engine Family	Displacement Cubic Centimeters	Class	Exhaust Emission Control Systems & Special Features
YBMXC0.65F65	652	III	Oxidation Catalytic Converter Pulsed Secondary Air Injection

Vehicle models and transmissions are listed on the attachment. Production motorcycles shall be in all material respects the same as those for which certification is granted.

The following are the exhaust emission standards and exhaust emission certification values for this engine family. The designated hydrocarbons standard shall be listed on the permanent tune-up label:

Hydrocarbon Standards (Corporate Average) Grams per Kilometer	Hydrocarbon Standards (Designated) Grams per Kilometer	Hydrocarbons (Certification) Grams per Kilometer	Carbon Monoxide (Standard) Grams per Kilometer	Carbon Monoxide (Certification) Grams per Kilometer
1.0	0.4	0.2	12	7

BE IT FURTHER RESOLVED: That the above-described certification is subject to the following terms, limitations and conditions:

The above designated hydrocarbons standard shall be the exhaust limit for this engine family during the model year and therefore cannot be redesignated by the manufacturer. It represents the hydrocarbons exhaust emission standard applicable to this engine family that shall be applied when determining compliance of any motorcycle within this engine family pursuant to Section 2101 of Title 13, California Code of Regulations. It will also be used to determine compliance with the above corporate average hydrocarbons standard as required per Section 1958(b), Title 13 of the California Code of Regulations.

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

BE IT FURTHER RESOLVED: That these motorcycles are found exempt from compliance with the Air Resources Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" pursuant to Executive Order G-70-16-E.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 7th day of September 1999.

R. B. Summerfield, Chief
Mobile Source Operations Division

2000 / BMW Motorcycle

EO# M-6-80

Issued:7/22/99
Revised:

Engine Family: YBMXC0.65F65

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)
F650	X	652	100/83	0° static	35	6500	57	5200

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
F650	280	276 - 285	131,1	450	256	M-5	33.4

EO# M-6-80

Issued:7/22/99
Revised:

Engine Family: YBMXC0.65F65

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? X Yes __ No
    a) If yes, indicate family name: XBMXC0.65F65
    b) Is the family being certified identical to the family from which the data is being carried over? Yes

28. Model Designation of Test Vehicle: F650

29. Test Information Number: F65

30. Vehicle ID: V 101521

31. Service Accumulation Duration: 15060 (km)

32. Maximum Rated Power: 35 kW @ 6500 RPM

33. Displacement: 652 cc

34. Certification Fuel: 95 RON

35. Test Data Set: 1

36. Road Load: 131,1 N

37. Inertia Mass: 280 kg

38. N/V: 43.0

39. EVAP. Bench Test Method Approved:
    Date: 1996

    Reference: V 101466

40. Unscheduled Maintenance: ____ Yes X No

41. If yes, Vehicle Log provided: _____

42. Exhaust Emission Deterioration Factors:

		Emission Values	
Test Number	System Kilometers	HC	CO
1	3539	0,361	8.113
2	9936	0,426	8,919
3	9970	0,273	7,691
4	15060	0,318	9,721
5			
6			
7			
Interpolated Values at 15 000 km:		**HC = 0.284**	**CO = 8.287**
Extrapolated Values at 30 000 km:		**HC = 0,158**	**CO = 8,431**

Check one:	
Regular DF	X
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	6,787				(X)	1.017
g/km	CO^2	93,6					----------
g/km	HC	0,225				(X)	1,000
g/test	Evap.	1,020				(+)	0,0

44. Certification Levels:

g/km	CO	6,905			
g/km	HC	0,225			
g/test	Evap.	1,020			

EO# M-6-81

Issued: 7/22/99
Revised:

Motorcycle Engine Family Information Form

1. Manufacturer: BMW

2. Certification Contact Person, address, phone, and fax:
   Mr.Gordon B. Keil
   BMW of North America, Inc.
   Montvale, N.J. 07645
   Phone No. 201-573 2195
   Fax No. 201-930 8402

D-14

3. Model Year: 2000

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

5. Engine Family: YBMXC0.65F65
   50s Engine Code: X
   49s Engine Code: _____
   Calif. Engine Code: _____

6. Emission Control System: OC, PAIR

7. Calif. Designated Standard: 0.4 g/km HC

8. Projected Annual Sales: total
   California

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

10. Displacement: 652 cc

11. Number of Cylinders: 1

12. Cylinder Arrangement: upright

13. Cylinder Head Configuration: OHC

14. Type of Cooling: Water

15. Combustion Cycle: 4 stroke

16. Method of Aspiration: natural

17. Fuel System: Carburetor

18. Number of Catalytic Converters: 1

19. Adjustable Parameters:

Parameter(s)	Adjustable Range (or NA)	Tamper Resistance Method (or NA)	Method Approved
Ignition timing	N.A.	N.A.	
Idle speed	1300 + 100 RPM	N.A.	

20. AECDs In the Emission Control Systems:

Exhaust System	Evaporative System
AECDs In System: ICM Cold start lever	AECDs In System: NA

EO# M-6-80

Issued: 7/22/99
Revised:

Engine Family: YBMXC0.65F65

Evaporative Emission Information

45. Evaporative Family: YBMXC0024F65
46. Number of Evap. Canisters: 1
47. Design Working Capacity: 24 g
48. Configuration: plastic can
49. Number of Storage Areas: 1
50. Fuel Reservoir Volume: 9 l
51. Vent System Configuration: purge
52. Nominal Tank Capacity: 9 l
53. Engine Displacement Class: III
54. Storage Medium Composition: charcoal
55. Evap. Canister Medium Volume: 450 cm^3
56. Evap. Family Sales: 140 (California)
57. Engine Code: 50s
58. Evap. Emission Family Code: 50s
59. Evap. Emission Family Group: NA
60. **Overall Evap D.F.** = 0,0

Bench DF

61. Test Vehicle ID: V 101466
62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3500	0,69
2	10000	0,51
3	15000	0,56
4		
5		
6		
7		
Interpolated Values at 15000 km: = 0.518		
Extrapolated Values at 30000 km: = 0.332		
Bench Test D.F. = - 0,186 = 0.0		

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

Vehicle DF

63. Test Vehicle ID: V 101521
64. Test Results.

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3539	1,20
2	9936	0,64
3	9970	0,57
4	15060	0,81
5		
6		
7		
Interpolated Values at 15000 km: = 0.603		
Extrapolated Values at 30000 km: = 0,040		
Vehicle Test D.F. = - 0.564 = 0.0		

Processed by S. Hada Date 9/2/99

Reviewed by [signature] Date 09/03/99