

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:

<u>Engine Family</u>	<u>Displacement Cubic Centimeters</u>	<u>Class</u>	<u>Exhaust Emission Control Systems &amp; Special Features</u>
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:

<u>Hydrocarbon Standards (Corporate Average) Grams per Kilometer</u>	<u>Hydrocarbons (Designated) Grams per Kilometer</u>	<u>Hydrocarbons (Certification) Grams per Kilometer</u>	<u>Carbon Monoxide (Standard) Grams per Kilometer</u>	<u>Carbon Monoxide (Certification) Grams per Kilometer</u>
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.

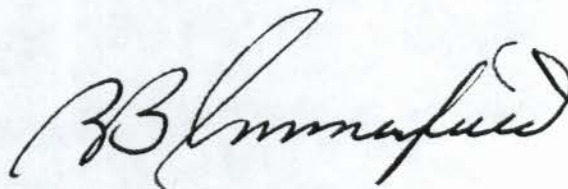
BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

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 7<sup>th</sup> day of September 1999.



R. B. Summerfield, Chief  
Mobile Source Operations Division

Motorcycle Model Summary Form

65. Model Designation	66. Wors t 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

Engine Family: YBMXC0.65F65

## Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family?  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  No  
 41. If yes, Vehicle Log provided: \_\_\_\_\_

42. Exhaust Emission Deterioration Factors:

Test Number	System Kilometers	Emission Values	
		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 <u>15 000</u> km:		HC = <u>0.284</u>	CO = <u>8.287</u>
Extrapolated Values at <u>30 000</u> km:		HC = <u>0.158</u>	CO = <u>8.431</u>

Check one:	
Regular DF	<input checked="" type="checkbox"/>
Modified DF	<input type="checkbox"/>
If different vehicle specify vehicle ID	

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	CO	6,787			
g/km	CO <sup>2</sup>	93,6			
g/km	HC	0,225			
g/test	Evap.	1,020			

Deterioration Factors	
(X)	1,017
(X)	1,000
(+)	0,0

44. Certification Levels:

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

## 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

0.14

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: <u>ICM</u> <u>Cold start lever</u>	AECDs In System: <u>NA</u> _____ _____ _____ _____

Engine Family: YBMXC0.65F65

## Evaporative Emission Information

- |   |   |
|---|---|
| 45. Evaporative Family: <u>YBMXC0024F65</u> | 53. Engine Displacement Class: <u>III</u>                   |
| 46. Number of Evap. Canisters: <u>1</u>     | 54. Storage Medium Composition: <u>charcoal</u>             |
| 47. Design Working Capacity: <u>24 g</u>    | 55. Evap. Canister Medium Volume: <u>450 cm<sup>3</sup></u> |
| 48. Configuration: <u>plastic can</u>       | 56. Evap. Family Sales: <u>140 (California)</u>             |
| 49. Number of Storage Areas: <u>1</u>       | 57. Engine Code: <u>50s</u>                                 |
| 50. Fuel Reservoir Volume: <u>9 l</u>       | 58. Evap. Emission Family Code: <u>50s</u>                  |
| 51. Vent System Configuration: <u>purge</u> | 59. Evap. Emission Family Group: <u>NA</u>                  |
| 52. Nominal Tank Capacity: <u>9 l</u>       | 60. Overall Evap D.F. = <u>0.0</u>                          |

**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 <u>15000 km</u> : = <u>0.518</u>		
Extrapolated Values at <u>30000 km</u> : = <u>0.332</u>		
Bench Test D.F. = - <u>0,186</u> = <u>0.0</u>		

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 <u>15000 km</u> : = <u>0.603</u>		
Extrapolated Values at <u>30000 km</u> : = <u>0.040</u>		
Vehicle Test D.F. = - <u>0.564</u> = <u>0.0</u>		

Processed by S. Hada Date 9/2/99

Reviewed by [Signature] Date 09/03/99