File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-8-97
Relating to Certification of New Motor Vehicles

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 1996 model-year Bayerische Motoren Werke AG exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: TBM1.9VJGKEK Displacement: 1.9 Liters (115.6 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Three Way Catalytic Converter
Heated Oxygen Sensors (two)
Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The certification exhaust emission standards for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.25	3.4	0.4	10.0
100,000	0.31	4.2	0.6	n/a

The certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.10	1.0	0.2	4.5
100,000	0.12	1.2	0.2	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average non-methane organic gas (NMOG) exhaust mass emission requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles", and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

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

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 21st day of December 1995.

John Kowalski for

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

E.O.# A-8-97
1 of 1

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT DUTY TRUCKS AND MEDIUM DUTY VEHICLES

Manufacturer : BMW Exh Engine Family : TBM1.9VJGKEK Evap. Fam: TBM1025BYPA0
All Eng Codes in Eng Fam: **CA** ____ **49S** ____ **50S** X **AB965** ____
Exh Std: CA Tier-1 X TLEV ___ LEV ___ ULEV ___ ZEV ____ ; US EPA Tier-1 X
Evap Std: 50K X Useful Life with R/L ___ In-Use Exh Std: Full In Use X Alt In Use ___
Veh Class(es): PC X LDT1 ___ LDT2 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___
Single Cert Std for Multi - Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type (s): Dedicated ___ Flex-Fuel ___ Dual Fuel ___ Bi - Fuel ___ Gasoline X Diesel ___
CNG ___ LNG ___ LPG ___ M85 ___ Other (specify) ____
Emiss Test Fuel (s): Indo ___ Ph2 X CNG ___ LPG ___ M85 ___ Other (specify) ____
Diesel: 13 CCR 2282 ___ 40 CFR86.113-90 ___ 40 CFR86.113-94 ___
Service Accum: Std AMA ___ Mod AMA ___ Mfr ADP X Other (specify) ____
NMOG Test Procedure: N/A X Std ___ Equiv ___ R/L Test Proc: SHED ___ Pt Source ___
Hybrid: Type A ___ B ___ C ___ , APU Cycle (e.g., Otto, Diesel, Turbine) ____
Engine Configuration: 4-inline Displacement: 1.9 Liters 115.6 Cubic Inches
Valves per Cylinder: 4 Rated HP: 138 @ 6 000 RPM
Engine: Front X Mid ___ Rear ___ Drive: FWD ___ RWD X 4WD-FT ___ 4WD-PT ___
Exhaust ECS: TWC,HO2S(2),SFI

Engine Code (50 ST)	Vehicle Models	Trans. Type	ETW (lbs.)	DPA or RLHP (hp)	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
1.9/3/C M5	318iC	M5	3 375	6.6	1 743 389 1 429 812*		1 743 613 1 432 446
1.9/3/C M5	318i, is	M5	3 250	6.5			
1.9/3/C M5	318ti	M5	3 000	6.8			
1.9/3/C M5	Z3	M5	3 000	7.5			
1.9/3/C A4	318iAC	A4	3 500	6.6	1 743 565 1 429 813*		
1.9/3/C A4	318iA, isA	A4	3 375	6.5			
1.9/3/C A4	318tiA	A4	3 125	6.8			
1.9/3/C A4	Z3A	A4	3 125	7.5			

*) FF 96 - 1.9 - 2

E.O.# A-8-97
1 of 2

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT DUTY TRUCKS AND MEDIUM DUTY VEHICLES

7.195

Manufacturer : BMW Exh Engine Family : TBM1.9VJGKEK Evap. Fam: TBM1025BYPA0
All Eng Codes in Eng Fam: CA ____ 49S ____ 50S X AB965 ____
Exh Std: CA Tier-1 X TLEV ___ LEV ___ ULEV ___ ZEV ____ ; US EPA Tier-1 X
Evap Std: 50K X Useful Life with R/L ___ In-Use Exh Std: Full In Use X Alt In Use ___
Veh Class(es): PC X LDT1 ___ LDT2 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___
Single Cert Std for Multi - Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type (s): Dedicated ___ Flex-Fuel ___ Dual Fuel ___ Bi - Fuel ___ Gasoline X Diesel ___
CNG ___ LNG ___ LPG ___ M85 ___ Other (specify) ____
Emiss Test Fuel (s): Indo ___ Ph2 X CNG ___ LPG ___ M85 ___ Other (specify) ____
Diesel: 13 CCR 2282 ___ 40 CFR86.113-90 ___ 40 CFR86.113-94 ___
Service Accum: Std AMA ___ Mod AMA ___ Mfr ADP X Other (specify) ____
NMOG Test Procedure: N/A X Std ___ Equiv ___ R/L Test Proc: SHED ___ Pt Source ___
ybrid: Type A ___ B ___ C ___ , APU Cycle (e.g., Otto, Diesel, Turbine) ____
Engine Configuration: 4-inline Displacement: 1.9 Liters 115.6 Cubic Inches
Valves per Cylinder: 4 Rated HP: 138 @ 6 000 RPM
Engine: Front X Mid ___ Rear ___ Drive: FWD ___ RWD X 4WD-FT ___ 4WD-PT ___
Exhaust ECS: TWC, HO2S(2) SFI

		Section			Section
1	Authorized Representative	01.00.00	21	Gen Std, Increase in Emissions Safety, Meets all Requirements	20.10.00
2	Fuel Specifcations	03.00.00	22	Emiss. Label Durability St.	17.01.00
3	Test Equipment	04.00.00	23	Driveability Statement	17.01.00
4	Test Procedure	05.00.00	24	Adjustable Parameters	n/a
5	Mileage Accumulation Route	05.00.00	25	Tamper Resistance Method(s)	none
6	Emiss.Warranty Statement(St.)	17.01.00	26	Fill Pipe Specifications	17.01.00
7	Maint: Cert/Req'd/Recm'd	06.00.00	27	High Altitude Compliance	17.04.00
8	Emiss.Label/Vac. Hose Diag.	07.00.00	28	OBD Sys.incl.Marked Revisions	17.05.00
9	Evap. Control System	08.11.00	29	I&M Test Procedure & Data	17.01.00
10	Engine Parameters	20.01.00	30	50 Degree F Compliance	n/a
11	Fuel System	08.01.00	31	Manufacturer's RAF	n/a
12	Ignition System	08.02.00	32	Phase In Plans: Exh Cert Stds	see
13	Exhaust Control Systems	08.10.00		Exh In-Use Stds	Cert.
14	Projected Sales (LDT/MDV Split)	17.01.00		Evap Cert Stds	Plan
15	Vehicle Description	22.00.00	33	NMOG Fleet Average Calculation	MY96
16	Evap. Bench Test Procedure	17.01.00	34	AB965 Credits/Withdrawals	n/a
17	R/L Temp & Press Profiles	n/a	35	EPA Certificate BMW-LDV-96-04-00	
18	EDV Selection	17.01.00	36	Equiv NMOG Proc--ARB Approval	n/a
19	Prod.Veh.same as Test Veh.St.	17.01.00			

20 Test Veh. Information	Durability Data Vehicle	Emission Data Vehicle	Emission Data Vehicle	Emission Data Vehicle
C/O or C/A				
MY & ID	96 A M70 190	96 A M71 349	96 A M51 536	
Vehicle Log Page(s)	22.01.00	22.02.00	22.03.00	
Zero Mile Books	—	—	—	
Maint. Logs & Engr. Eval.	22.01.00	22.02.00	22.03.00	

ISSUE DATE

E.O.# A-8-97
292

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT DUTY TRUCKS AND MEDIUM DUTY VEHICLES

Manufacturer: BMW
Exhaust Engine Family: TBM1.9VJGKEK
Evaporative Family: TBM1025BYPA0

Vehicle ID(3)	Code (Displ)	Test Location	Trans-mission	ETW	DPA or RLHP	MPG City/Hwy
1. A M71 349 (Type 03)	1.9/3/C A4	BMW	L4	3 125 lbs.	7.5	24.3/37.7
2. A M51 536 (Type 00)	1.9/3/C M5	BMW	M5	3 375 lbs.	6.6	24.4/38.6
3. F E50 041 (Evap.)	2.5/36/4 A4	BMW	L4	3 375 lbs.	7.0	20.1/32.0

Projected Emissions (1) & (2)
(g/mi, except mg/mi for HCHO and g/test for D+HS)

		OMNMHCE X NMHC NMOG	CO	NOx	HCHO	20°F CO	PM	Hwy NOx	City CO_2	Evaporative X 50K 3-day D+HS	Evaporative 2-day D+HS	Evaporative R/L
1. A M71 349 (Type 03)	50K	0.104	0.98	0.16	n.a.	4.52	n.a.	0.01	354	n.a.	n.a.	n.a.
	100K	0.118	1.17	0.19	n.a.	n.a.	n.a.	0.01	n.a.	n.a.	n.a.	n.a.
2. A M51 536 (Type 00)	50K	0.092	0.68	0.16	n.a.	---	n.a.	0.02	353	n.a.	n.a.	n.a.
	100K	0.104	0.84	0.19	n.a.	n.a.	n.a	0.03	n.a.	n.a.	n.a.	n.a.
3. F E50 041 (Evap.)	50K	0.146	1.03	0.17	n.a.	n.a.	n.a.	0.04	440	1.0	n.a.	n.a.
(1) The EDV's above comply with the standards of (@ 50K):		0.25	3.4	0.4	n.a.	10.0		0.53	n.a.	2.0	n.a.	n.a.
standards of (@ 100K):		0.31	4.2	0.6	n.a	n.a.		0.80	n.a.	n.a	n.a.	n.a
and includes deterioration factors of (@ 50K):		1.148	1.252	1.249	n.a	1.252	n.a.	1.249	n.a.	0.0	n.a.	n.a.
factors of (@ 100K):		1.295	1.504	1.498	n.a	n.a.	n.a.	1.498	n.a.	n.a	n.a	n.a

and an Reactivity Adjustment Factor (RAF) for NMOG of: NMOG n.a Methane (CNG or LNG only) n.a

TLEV/LEV/ULEV 50° F emissions (w/RAF but w/o DF's):					Exempted	n.a
TLEV/LEV/ULEV 50° F standards:					Exempted	

(2) Evap DF is average of:
50K or 3-day D+HS: Veh DF: 0.0 and Bench DF: 0.0
2-day D+HS: Veh DF: n.a and Bench DF: n.a
R/L: Veh DF: n.a and Bench DF: n.a

(3) List configuration with the highest projected sales first

Remarks

Application Processed by: R Runyon Date: 12/11/95 Reviewed by: Steve Hade Date: 12/19/95

ISSUE DATE