Piaggio

California Environmental Protection Agency AIR RESOURCES BOARD	PIAGGIO & C. S.p.A.	EXECUTIVE ORDER M-48-1 New On-Road Motorcycles

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 the following 2001 model-year engine and emission control systems (ECS) produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles:

Engine Family	Evaporative Family	Displacement (cm^3)	Class	ECS & Special Features
1PVMC0.15M19	1PVME0027M19	150	I	EM

Vehicle Models (Equivalent Inertia Mass): Vespa ET4 (190 kg)

Production motorcycles shall be in all material respects the same as those for which certification is granted.

The exhaust emission standards and certification values in grams per kilometer for hydrocarbons (HC) and carbon monoxide (CO), and the HC evaporative (Evap) standard and certification value in grams per test for this engine/evaporative family are as follows:

	HC	CO	Evap HC
Standard: (Effective Standard)	1.0	12	2.0 (1.8)
Certification:	0.8	8	1.1

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 because the listed motorcycles are certified to 0.2 grams per test or more below the applicable evaporative emission standard, the vehicles are exempt from complying 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 16TH day of November 2000.

FOR
R. B. Summerfield, Chief
Mobile Source Operations Division

EO# M-48-1

Engine Family: 1PVMC0.15M19

Motorcycle Test Information Form

0.125

27. Are you carrying over test results from a previously certified family? ___ Yes **X** 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: **Vespa ET4**

29. Test Information Number: **1**

30. Vehicle ID: **ZAPM1900000011552**

31. Service Accumulation Duration: **6,000 km**

32. Maximum Rated Power: **8.4 kW @ 7500 RPM**

33. Displacement: **150 cc**

34. Certification Fuel: **according to 40 CFR 86.513-90**

35. Test Data Set: **1**

36. Road Load: **113.1**

37. Inertia Mass: **190 kg**

38. N/V: **84.07**

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

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	**2504**	**0.66**	**6.88**
2	**3600**	**0.52**	**6.06**
3	**4800**	**0.68**	**6.81**
4	**6000**	**0.66**	**7.00**
5			
6			
7			
Interpolated Values at 2,500 km:		**HC = 0.605**	**CO = 6.5146**
Extrapolated Values at 12,000 km:		**HC = 0.7428**	**CO = 7.4679**

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	**7.00**				(X)	**1.15**
g/km	CO^2	**58.26**					----------
g/km	HC	**0.66**				(X)	**1.23**
g/test	Evap.	**0.216**				(+)	**0.87**

44. Certification Levels:

g/km	CO	**8.02**			
g/km	HC	**0.81**			
g/test	Evap.	1.1			

Processed by Steve Hodge Date 11/9/00 Reviewed by Joseph Jegede Date 11/9/00

EO # M-48-1

Issued:

Revised:

Motorcycle Engine Family Information Form

1. Manufacturer: **Piaggio & C. S.p.A.**

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

Kathleen Wolf **tel. (909) 626-1395**
Harrison / Wolf **fax (909) 626-2906**
1275 N. Indian Hill Blvd.
Claremont. CA 91711

3. Model Year: **2001**

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

5. Engine Family: **1PVMC0.15M19**
50s Engine Code: _____
49s Engine Code: _____
Calif. Engine Code: _____

6. Emission Control System: **E.M.**

7. Calif. Designated Standard: **1.0**

8. Projected Annual Sales:
CONFIDENTIAL

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

10. Displacement: **150 cc**

11. Number of Cylinders: **1**

12. Cylinder Arrangement: **forward inclined**

13. Cylinder Head Configuration: **SOHC**

14. Type of Cooling: **air**

15. Combustion Cycle: **4 stroke**

16. Method of Aspiration: **natural**

17. Fuel System: **gravity feed**

18. Number of Catalytic Converters: **N.A.**

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: _____