California Environmental Protection Agency AIR RESOURCES BOARD	PIAGGIO & C. S.p.A.	EXECUTIVE ORDER M-048-0011 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-02-003;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles. Production vehicles shall be in all material respects the same as those for which certification is granted. **The manufacturer shall ensure that character "C" or "3" is <u>not</u> used in the eighth (8th) position of the vehicle identification number (VIN) of all vehicles in the engine family listed below. Violation of this VIN provision may result in incorrect registration of the vehicles.**

MODEL YEAR	ENGINE FAMILY	EVAPORATIVE FAMILY	ENGINE DISPLACEMENT (cc)	CLASS
2005	5PVMC.459M27	5PVME0027M27	459	III

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	VEHICLE MODELS (equivalent inertia mass in kilograms, kg)	* = not applicable
TBI, OC	PIAGGIO X9 500 (290 kg)	

ABBREVIATIONS: EM=engine modification TWC=three-way catalyst OC=oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2 (prefix)=parallel (2) (suffix)=in series

The following are the exhaust hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) standards, or designated HC+NOx standard as applicable, and certification levels in grams per kilometer (g/km), and evaporative standard and certification level in grams per test (g/test) for this engine/evaporative family. The designated HC+NOx standard, as applicable, shall be listed on the permanent tune-up label.

				EARLY COMPLIANCE CREDIT MULTIPLIER			*
HC+NOx (g/km)				CO (g/km)		EVAPORATIVE (g/test)	
CORPORATE AVERAGE STANDARD	DESIGNATED STANDARD	(DIRECT) STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL
*	*	1.4	0.6	12	6	2.0	0.8

BE IT FURTHER RESOLVED: That certification to the designated HC+NOx standard listed above, as applicable, is subject to the following terms, limitations and conditions:

The designated HC+NOx standard shall be the exhaust emission limit for this engine family and cannot be changed during the model year. It serves as the HC+NOx exhaust standard applicable to this engine family for determining compliance with Title 13, California Code of Regulations, Sections 1958(b) and 2101.

BE IT FURTHER RESOLVED: That for certification to the HC+NOx standard, or designated standard as applicable, listed above, the listed vehicle models are granted an early-compliance credit multiplier as indicated above pursuant to Title 13, California Code of Regulations, Section 1958(g).

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

This Executive Order is only granted to the engine family and model-year listed above. Vehicles in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 8TH day of March 2005.

Allen Lyons, Chief
Mobile Source Operations Division

E.O. # M-048-0011

2005 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET
MOTORCYCLES

Manufacturer: PIAGGIO & C. S.p.A.
Exhaust Engine Family: 5P V M C . 4 5 9 M 2 7
Evaporative Family: 5P V M E 0 0 2 7 M 2 7
Evaporative Group:
All Engine Codes in Engine Family: CA ~~X~~ 49S ~~X~~ 50S X
Max Rated Power: ~~15.1~~ 24.4 kW @ ~~8750~~ 7250 RPM
Exhaust ECS: ~~E.M.~~ TBI, OC

Engine Information	
Displacement (cc)	459 cc
Engine Configuration	SOHC
Valves/Cylinder	2
Strokes/Cycle	4-stroke
Cooling Medium	liquid
No. Carburetors	0
Bbls per Carb	0
Fuel Injection	TBI

		Page No. in Application	
1.	Warranty Statement	Section 3	
2.	Warranty Parts List	Section 7, page 7-10	
3.	Tune-up Label & Vac Hose Diagram	Section 7, page 11	
4.	Projected Sales	Section 7, page 12	
5.	Vehicle Description	Section 7	
6.	Durability Data Plot - Exhaust/Evaporative		
7.	Total California Sales < 500	YES	NO
8.	Carry-Over/Carry-Across MY & ID	Exhaust	Evaporative
	Durability ZAPM270W245000999	new	same as exhaust
	Bench	N/A	
	Emission ZAPM270W245000999	new	same as exhaust
9.	Type of Evaporative Control	canister	
10.	Evap Bench Test Proc Approval	Date: N/A	
11.	Fill Pipe/Access Zone	Meet ____	Exempt X
12.	EPA Certificate	No ____ Yes X	# MC- PVM-WC-05-01
13.	Corporate Plan	Date: N/A	

PROJECTED EMISSIONS (1)

Vehicle ID	Code	Displ.	Trans	EIM	RL Force	HC+NOx gm/km	CO gm/km	Evap gm/t	CO^2 gm/km
ZAPM270W245000999	~~M272M~~ M342M	459	auto.	290	133.4	0.639	6.10	~~0.677~~ 0.831	86.9

___ 1.4 Corporate Average
___ 1.0 Corporate Average
✓ 1.4 HC + NOx
___ HC NOx CO
1.00 1.00 1.00 ~~0.5~~ 0.346

(1) Comply with class: III standards of
and include deterioration factors of
Evaporative DF is average of Vehicle 0.193 and Bench assigned DF of 0.5
The designated exhaust HC emission standard is: ____ gm/km or N/A

Remarks:

Application Processed by: K. Pryor Date: 2/25/05 Reviewed by: [illegible] Date: 3-2-05

Date Issued:

Date Issued:

Revisions: