

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 not used in the eighth (8<sup>th</sup>) 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                |
| <b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>  |               | <b>VEHICLE MODELS</b><br>(equivalent inertia mass in kilograms, kg) |                          | * = not applicable |
| TBI, OC   |               | PIAGGIO X9 500 (290 kg)   |                          |                    |
| <b>ABBREVIATIONS:</b> EM=engine modification TWC=three-way catalyst OC=oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor<br>HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SF=sequential MFI<br>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.

| HC+NOx (g/km)              |                     |                   |                     | EARLY COMPLIANCE CREDIT MULTIPLIER |                     | 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 8<sup>TH</sup> day of March 2005.

  
 Allen Lyons, Chief  
 Mobile Source Operations Division

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 ~~49S~~ ~~50S~~ X  
 Max Rated Power: 15.1 kW @ 8750 RPM  
 Exhaust ECS: -E.M. <sup>29.4</sup> <sup>7250</sup>  
**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

- |   |                                       |
|---|---------------------------------------|
| 1. Warranty Statement                         | Page No. in Application               |
| 2. Warranty Parts List                        | Section 3                             |
| 3. Tune-up Label & Vac Hose Diagram           | Section 7, page 7-10                  |
| 4. Projected Sales                            | Section 7, page 11                    |
| 5. Vehicle Description                        | Section 7, page 12                    |
| 6. Durability Data Plot - Exhaust/Evaporative | Section 7                             |
| 7. Total California Sales < 500               | <u>YES</u> YES NO                     |
| 8. Carry-Over/Carry-Across MY & ID            | <u>Exhaust</u> 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 _____                            |
| 12. EPA Certificate                           | No _____ Yes <u>X</u> Exempt <u>X</u> |
| 13. Corporate Plan                            | Date: N/A # MC- <u>puw-wcos-01</u>    |

| Vehicle ID        | Code                  | Displ. | Trans | EIM | Force | HC+NOx gm/km | CO gm/km | Evap gm/t                        | CO <sup>2</sup> gm/km |
|-------------------|-----------------------|--------|-------|-----|-------|--------------|----------|----------------------------------|-----------------------|
| ZAPM270W245000999 | M272M<br><b>M342M</b> | 459    | auto. | 290 | 133.4 | 0.639        | 6.10     | <del>0.677</del><br><b>0.831</b> | 86.9                  |

PROJECTED EMISSIONS (1)

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. Lopez Date: 2/25/05 Reviewed by: [Signature] Date: 3-2-05

Date Issued:

Date Issued:

Revisions: