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**POSITION REGARDING SUITABILITY OF PIAGGIO MP3 SCOOTER  
FOR USE IN MOTORCYCLE TRAINING COURSES  
AND OPERATOR LICENSING TESTING**

The Motorcycle Safety Foundation® (MSF) is a national, not-for-profit organization dedicated to improving the safety of motorcyclists with programs in rider training, operator licensing and public information. The Foundation is supported by the U.S. manufacturers and distributors of BMW, BRP, Ducati, Harley-Davidson, Honda, Kawasaki, KTM, Piaggio/Vespa, Suzuki, Triumph, Victory and Yamaha motorcycles.

Piaggio introduced the PIAGGIO MP3 in 2006. This motor vehicle has two independently suspended front wheels with the center of the tire contact patches 420 mm (16.5 inches) apart, and one rear wheel. The MP3 meets the definition of "motorcycle" under U.S. Department of Transportation regulation [*Motorcycle* means a motor vehicle with motive power having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground (49 CFR Part 571)] and under nearly every state law.

Every state requires motorcycle operators to have a special motorcycle license or endorsement. Since the MP3 falls under the motorcycle definition, every state requires operators of this 3-wheeled motorcycle to have a motorcycle license/endorsement, with the exception of California, which exempts 3-wheeled motorcycles from the motorcycle operator license requirement. [Until 2007, Delaware also excluded 3-wheeled motorcycles from such requirement, but in 2007 it enacted a law, effective 6/14/07, requiring operators of 3-wheeled vehicles, when tandem wheels are less than 3' apart, to have a motorcycle endorsement.]

In nearly every state, the MSF's Basic *RiderCourse* (BRC) can be an integral part of obtaining a motorcycle license. The DMV-administered skills test is generally waived for applicants for motorcycle licenses who successfully complete the BRC. In some cases, the written examination is also waived. If a motorcyclist chooses to go to the state licensing facility and take the state-approved skills test, many states require completion of the Alt-MOST test, developed by the MSF, or other equivalent exam (e.g. MOST, MLST, or "Lollipop Test").

The technical specifications of the PIAGGIO MP3 meet the European standards for "twinned wheels" since the tire contact patches are less than 460 mm (18.1 inches) apart. Thus, the European standards consider twinned wheels as one wheel and as a result, this vehicle meets the European Union definition of a single-track vehicle. (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0024:EN:NOT>)

With this background, MSF was asked to test the MP3 for its appropriateness for use in the BRC as well as the Alt-MOST licensing test. In testing, the main question centered on how similar the vehicle "acts like" a motorcycle. If significant similarities were present, the operator would likely benefit from BRC training and would be able to take the vehicle through the state's Alt-MOST examination.

Following this testing, MSF has concluded that the PIAGGIO MP3 should be treated as a two-wheeled motorcycle for purposes of training and testing.

**Training:**

The PIAGGIO MP3 can be accommodated in the BRC with only minor adjustments that can be made through RiderCoach instruction. As preparation for coaching a student using a PIAGGIO MP3, RiderCoaches should review the RiderCoach Guide supplemental section on "Using Scooters in the BRC."

When adapting an exercise with a boundary or a narrow path of travel to the PIAGGIO MP3, MSF recommends that a coach or examiner adopt the standard that one of the two front wheels must remain inside of any exercise boundary at all times.

Differences exist between the MP3 and a traditional motorcycle as with any scooter. The BRC RiderCoach Guide contains a supplemental section on "Using Scooters in the BRC" with recommended RiderCoach adaptations for shifting, braking, mounting, posture, throttle application and automatic clutches, front forks, and response to pressing. The wide array of topics covered under these general categories should serve as adequate preparation material for any RiderCoach who is not familiar with a scooter's operation. MSF's Scooter School 1 materials have additional information in these areas.

A RiderCoach who is teaching a BRC with a PIAGGIO MP3 included should have an understanding of the differences between scooters and traditional motorcycles.

Two specific areas were noted by reviewers: start up procedures and exercises with boundary lines. One area of concern for the reviewers was the suspension locking system. As this feature is integral to the MP3's start up and shut down procedure, the RiderCoach must accommodate this in Exercise 1 (Motorcycle Familiarization). However, the reviewers felt that the use of the locking feature during normal riding exercises (such as coming to a stop) should not be allowed since it is a more advanced technique.

The only additional detail noted by the review team and specific to the PIAGGIO MP3, was that the RiderCoach should be aware of the twinned front wheel track when a student is negotiating an exercise with a boundary such as the U-turn box or the swerve. The twinned wheels, slightly over 1.5 feet apart overall, should represent one distinct path of travel for the coach to "watch" while evaluating a boundary cross. For purposes of evaluating, RiderCoaches should consider the twinned wheels as a single path of travel. Thus, for example, the criterion for deducting points would be stated by the RiderCoach as "Crossing a boundary is scored if the contact patch of both front tires clearly crosses completely over any of the solid painted or dashed lines, or if either tire hits or 'skips' an entry or exit cone or if the cone passes through the gap in the twinned wheels."

However, the concerns noted by the reviewers would not require any formal change in the range cards.

**Testing:**

The MP3 can negotiate all of the evaluations in the Alt-MOST. MSF recommends that license examiners adopt the standard that a boundary violation has occurred only if both front wheels or the rear wheel go outside the boundaries of the lines of the test/exercise. Stated differently, while negotiating the licensing exam, one of the two front wheels and the rear wheel of the MP3 must stay within the boundaries at all times. One exception is when the examination calls for stopping with the front tire within a marked box, the PIAGGIO MP3 rider should be asked to place both front tires in the box.

For the Alt-MOST maneuvers, the PIAGGIO MP3 will brake in a similar distance when compared to most traditional motorcycles. Its ability to corner or maneuver in tight spaces is similar to most traditional motorcycles.

The only area of adaptation that licensing examiners may need to make is to remind the operator of the standard for the exercise that requires the contact patch of one wheel to remain within the lines at all times.

**Conclusion:**

Overall results indicated that the PIAGGIO MP3 is appropriate for use in the BRC with minor coaching adjustments. The Alt-MOST test will also accommodate the PIAGGIO MP3.