

## Explanatory Cover – November 1, 2023 - M2025

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To: Snell M Certified Manufacturers and Other Interested parties

Subject: 2025 Standard for Protective Headgear for Use with Motorcycles and Other Motorized Vehicles (M2025D and M2025R Final Versions)

This document introduces finalized versions of M2025D and M2025R, two separate and distinct Snell standards for motorcycle headgear. M2025D applies mostly to helmets which must also meet mandatory requirements such as DOT (FMVSS 218) and JIS. M2025R applies to helmets which, in addition to DOT and JIS, must also meet the demands of ECE R 22-06.

Two separate Snell standards and programs are necessary largely because ECE R 22-06 appears to be incompatible with previous Snell standards for motorcycle headgear. The helmet industry had adapted designs and technologies to satisfy the demands of successive Snell standards M2010, M2015 and M2020D as well as JIS and DOT. Many excellent helmet models have won Snell's certification to these standards. M2025D maintains this succession and Snell is proud to continue to recommend these helmets to riders in North America and Japan as "the most protective helmets a rider might reasonably be expected to wear."

Snell M2025R is more general, it follows from M2020R and is expected to enable headgear which will also meet ECE R 22-06 as well as DOT and JIS. Snell will be proud to recommend helmets meeting M2025R to riders everywhere with the same confidence that we recommend helmets meeting M2020D and M2025D.

For the most part, these finalized M2025D and M2025R remain unchanged from M2020D and M2020R however they both also include a new set of oblique impact tests in addition to the previous requirements. These oblique impact tests are the same for both M2025D and M2025R and are similar to those called out in FIM FRHPhe#1 and in ECE R22-06. The test head forms are to be treated with the same silicone coating prescribed in FIM FRHPhe#1. The impact surface is flat and tilted at 45° and is faced with 80 grit paper. Two helmets are tested at lab ambient in up to three impacts each with a drop velocity of 8.0 m/sec. The head form is oriented with its Z axis pointing straight down. The test technician selects the orientation about that Z axis for each impact. The magnitude of the rotational acceleration must not exceed 10000 radians per second-squared; this value has been increased from 9000 radians per second-squared which had been proposed in the earlier drafts. The calculated Brain Injury Criterion (BrIC) still must not exceed 0.78.

Please review these documents carefully. Although we do not anticipate any further revisions we will be grateful for comments, questions, advice and any corrections that seem necessary.

## **Proposed Transition**

- Certification testing to M2025D and M2025R begins now.
- April 1, 2024. Shipments of M2025D and M2025R certification labels begins.
- September 30, 2024. The last day M2020D and M2020R labels may be ordered.
- October 1, 2024. M2025D and M2025R take effect. This is the first day helmets claiming M2025D or M2025R certification or bearing M2025D or M2025R certification labels may be made available for sale or for use.
- April 1, 2025. All production of M2020D and M2020R labeled helmets must cease.

Please direct comments, suggestions, criticisms and questions to:

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