

Fake Motorcycle Helmets, Yes, that's a thing

David R. Thom, MS

Collision and Injury Dynamics

El Segundo, CA

www.ci-dynamics.com



**FMVSS 218 Labeling
requirements updated 2013:**
External label includes "DOT" plus Make,
Model "FMVSS No. 218 Certified"



**Disclaimer in Helmets:
Sewn-in permanent label**



Motorcycle Helmet Standards

- FMVSS No. 218 (DOT)
 - Mandatory for motorcycle use
 - Labeling updated 2013
 - Proposed changes to close novelty helmet loophole
- Snell Memorial Foundation
 - Optional from private foundation
- European: ECE 22.05

Novelty Helmets Widely Used

- 11% in 1994 California study
- 34% in 2000 Florida Study (Universal Helmet Law)
- 16% in 2007 NOPUS study
- 9% in 2013 NOPUS study





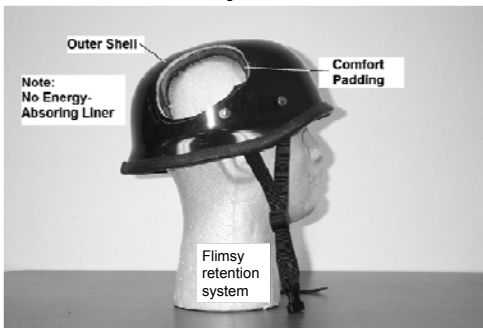


"Real" Helmet

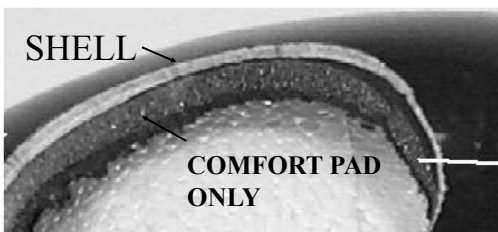


Sturdy Retention System

Novelty Helmet



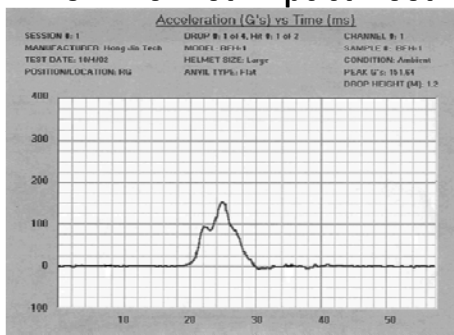
Novelty Helmet Closeup



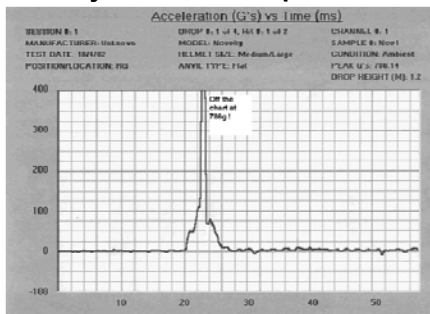
Pass/Fail Criteria

- FMVSS 218 allows 400G with 2.0msec at 200g
- Effective limit is 250G
- Novelty helmets greatly exceed 400G, e.g. 636 to 992g

DOT Helmet Impact Test



Novelty Helmet Impact Test



NHTSA NPRM May 2015

Notice of Proposed Rulemaking to close the novelty helmet loophole.

1. Add definition of "motorcycle helmet"
2. Add dimension requirements
3. Provide alternative compliance process

Comments closed July 2015,
still under consideration

Add definition of Motorcycle Helmet

1. Motorcycle helmet if:
2. - Sold for motorcycle use
3. - Manufactured by motorcycle related company
4. - Described as motorcycle in packaging or advertising
5. - Imported as motorcycle helmet

Add dimensional and compression requirements

- 1. Total helmet thickness of shell and EPS liner at apex must be at least 25mm (1 inch)
- 2. EPS liner thickness minimum thickness 19mm (3/4 inch)
- 3. Soft, easily compressed comfort foam does not count

NHTSA Proposed Measurement



Negative comments on NPRM

- Proposed thickness check using push pin through helmet liner.
- Helmet laws suck

Current NHTSA Research

R&D contract with ACT Lab exploring potential upgrades to modernize and harmonize with other standards.

- 1. Impact attenuation with ISO headforms
- 2. Positional stability (Roll-off resistance)
- 3. Chin bar impact attenuation
- 4. Face shield penetration resistance

Law Enforcement

- California Highway Patrol current policy does not allow citing for hard shell beanie type helmets and does not allow for helmet seizure. CHP does allow citation for no headgear and obviously not motorcycle helmets and requires a photograph of non-compliant headgear cited. Unknown what proposed 218 changes would mean.

Local Law Enforcement

- Two LA area police agencies
- Multiple traffic officers
- Q: is it a problem? Answer: No
- No local enforcement policy, up to individual officers.
- Objective criteria would be helpful to encourage and promote enforcement



"It's like having a fake fire extinguisher," says David Thom

Time Magazine
Sept. 12, 2002

Thank you for your attention



www.resources

- DOT-NHTSA --www.nhtsa.dot.gov
- Collision & Injury Dynamics – ci-dynamics.com
- Motorcycle Safety Found. - www.msf-usa.org
- MIC DOT Helmet List– www.headcheck.org
- Snell Memorial Foundation - www.smf.org
- AMA (the motorcycle one) -ama-cycle.org
