U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

OCT 0 3 2012

Mr. Dave Madsen
Chair, Supplier Regulatory Workgroup
North American Automotive Hazardous
Materials Action Committee
Autoliv Ogden Technical Center
3350 Airport Road
Ogden, UT, USA 84405

Reference No. 12-0133

Dear Mr. Madsen:

This is in response to your June 14, 2012 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to inner packagings of air bag inflators, air bag modules, seat-belt pretensioners, and other hazardous materials. Specifically, you ask if these inner packagings when placed in outer packagings are required to be secured so they do not shift or move, or if the HMR permits the inner packagings to shift or move in a manner that does not reduce the structural integrity of the completed package. You state it is your understanding that §§ 173.24a(a)(3) and 173.166(e), (e)(4), and (e)(4)(iii) permit inner packagings of hazardous materials and other devices or dunnage to move or shift in a limited manner within an outer package of a combination packaging provided no damage occurs that would reduce the package's overall structural integrity.

Your understanding is not correct. Air bag inflators, air bag modules, seat-belt pretensioners and dunnage, which can include other equipment, must be secured within the outer packaging to prevent their movement during transportation. Section 173.166(e) requires airbags to be placed in "rigid outer packagings that meet the general packaging requirements of 49 CFR Part 173," which are prescribed in Subpart B and include § 173.24a(a)(3), "and the packaging specification and performance requirements of 49 CFR Part 178 ... at the Packing Group III performance level" if these packagings meet specific additional requirements prescribed in § 173.166(e). Some of these additional requirements are that packagings for these devices "must be designed and constructed to prevent movement of the articles and [their] inadvertent operation" (see § 173.166(e)), and that internal dunnage placed in these packagings "must be sufficient to prevent shifting of the devices within the container" (see § 173.166(e)(4)(iii)).

The general packaging provisions in §173.24a(a)(3) require that inner packagings of combination packagings must be packed, secured, and cushioned within an outer packaging in a manner that prevents their breakage or leakage under conditions normally

incident to transportation. Although the HMR does not define the phrase "conditions normally incident in transportation," PHMSA has interpreted it, through various rulemakings and letters of clarification, to mean a package used for the shipment of hazardous materials that is made, filled, and closed so that under normal transportation conditions there will be no identifiable release of a hazardous material from the package and its effectiveness will not be substantially reduced. While this can be interpreted as possibly permitting some movement of inner packagings within an outer packaging of a combination package provided no identifiable release of hazardous material or reduction in package effectiveness, § 173.166(e)(4) does not permit this movement when transporting air bag inflators, air bag modules, seat-belt pretensioners to prevent their possible actuation. Furthermores, any additional hazardous materials or non-hazardous materials placed within the packagings you described must not be capable of reacting dangerously with the air bag devices or each other, and the inner and outer packagings used must conform to the relevant packaging and hazard communication requirements of the HMR for each hazardous material they contain (see §§ 171.2(e), 173.24(e)(4) and 173.24a(c)).

I hope this satisfies your request.

Sincerely,

T. Glenn Foster

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Edmonson
§173.24a
§173.166
Applicability
12-0133

NAAHAC

North American Automotive
Hazardous Materials Action Committee

June 14, 2012

Mr. Charles Betts
Director, Standards & Rulemaking
US DOT – PHMSA
East Building – 2nd Floor
1200 New Jersey Ave. SE
Washington, DC 20590

Re: **Request for Interpretation – Prevent / Control Shifting / Movement**

Hello, Mr. Betts.

NAAHAC is an issue-driven, action-oriented voluntary working group currently comprised of participants employed by North American Automotive companies and their key suppliers, whose purpose is to consider and respond to the vital hazardous materials and dangerous goods issues of its membership.

The Supplier Regulatory Workgroup within NAAHAC consists of representatives from Autoliv, Key Safety Systems, Takata and TRW – all manufacturers of air bag inflators, modules, seat-belt pretensioners and other safety devices. We are seeking clarification of the DOT's intent regarding shifting or movement of hazardous materials inside packages.

There are several different references to either preventing or controlling shifting or movement within the 49 CFR. Two of these references are listed below.

§ 173.24a Additional general requirements for non-bulk packagings and packages.

(a) *Packaging design.* Except as provided in §172.312 of this subchapter:

(3) *Securing and cushioning.* Inner packagings of combination packagings must be so packed, secured and cushioned to prevent their breakage or leakage and to control their shifting within the outer packaging under conditions normally incident to transportation. Cushioning material must not be capable of reacting dangerously with the contents of the inner packagings or having its protective properties significantly weakened in the event of leakage.

And...

§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.

(e) *Packagings.* Rigid, outer packagings, meeting the general packaging requirements of part 173, and the packaging specification and performance requirements of part 178 of this subchapter at the Packing Group III performance level are authorized as follows. The packagings must be designed and constructed to prevent movement of the articles and inadvertent operation.

(4) Reusable high strength plastic or metal containers or dedicated handling devices are authorized for shipment of air bag

inflators, air bag modules, and seat-belt pretensioners from a manufacturing facility to the assembly facility, subject to the following conditions:

(iii) Internal dunnage must be sufficient to prevent shifting of the devices within the container.

The Supplier Regulatory Workgroup, along with packaging engineers from each supplier, recently met to discuss how our companies develop packagings that conform with the regulations. Because our devices are not subject to inadvertent operation due to their design, our major considerations focus around shipping parts that are not damaged during transportation and ensuring that package integrity is maintained during transportation. The group agreed that whether we use spec packaging or non-spec packaging, and whether we use single or combination packagings, the goal is to **ENSURE THAT SHIFTING OF DEVICES WITHIN THE PACKAGE DOES NOT CAUSE DAMAGE THAT COULD REDUCE THE STRUCTURAL INTEGRITY OF THE PACKAGE.**

We feel that phrases such as "prevent shifting" and "control shifting" can lead to the interpretation that any shifting of the device(s) within a single package or devices / dunnage within a combination package is unacceptable, when we believe the DOT's intent is to ensure that the shifting is controlled to the extent that there can be no damage to the package that could reduce the structural integrity of the package. Example – a seat-belt buckle pretensioner in a combination packaging – inner packaging, bubble wrap, outer packaging, 4G fiberboard. This device may be able to shift within the package such that a sound of a buckle moving or the assembly sliding slightly within the package may be heard, but there is absolutely no possibility that this shifting would damage the package such that the structural integrity of the package would be reduced.

To re-state NAAHAC's position, we believe that the DOT's intent is not to require no shifting or movement of devices, but rather to ensure that the shifting of devices within the package does not cause damage that could reduce the structural integrity of the package. We would appreciate receiving a written response indicating either your agreement with this position or an interpretation that can be used by all.

We thank you in advance for your assistance in this matter. If you need additional information regarding our inquiry you can contact me by phone at (801) 612-5665 or by e-mail at dave.madsen@autoliv.com. We look forward to your written response.

Sincerely,

Dave Madsen

Dave Madsen
Chair, Supplier Regulatory Workgroup
NAAHAC

NAAHAC Member Companies

American Honda Motor Co., Inc.

Autoliv ASP, Inc.

BMW of North America

Chrysler Corp. LLC / Mopar

Delphi Automotive systems, LLC

Ford Motor Company

General Motors Company

General Motors Parts & Service

Honda of America Manufacturing

Key Safety Systems

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