

Rayovac Corporation  
601 Rayovac Drive  
Madison, WI 53711-2497  
P.O. Box 44960  
Madison, WI 53744-4960  
Phone 608-275-3340  
Fax 608-275-4577

DEPT. OF TRANSPORTATION

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**RAYOVAC®**

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**Paul G. Cheeseman**  
Vice President  
of Technology

NHTSA-2000-8572-24

April 2, 2001

Dr. August L. Burgett  
Chief, Advanced Safety Systems Research Division  
Technical Director, USDOT Intelligent Vehicle Initiative  
US Department of Transportation  
National Highway Traffic Safety Administration  
Office of Vehicle Safety Research  
400 7<sup>th</sup> Street S.W.  
Washington, DC 20590

Dear Dr. Burgett,

Thank you for taking the time to see us last week. It was a pleasure to meet you and others at the Department of Transportation and to learn more about the "Tread Act". We now have a greater appreciation of both the difficulty and complexity involved in the development of this specification.

In our contribution to this process we presented a significant amount of battery information. So that the key points will not be lost in the quantity of data disclosed, please allow me to provide a better focus within this communication.

1. Based on our experience over the past seven years we recommend that **Active TPMS be the standard for tire monitoring**. Only this system will provide accurate, real-time and instant monitoring of pressure at each tire.
2. Based on our extensive experience of batteries, which stretches over almost one hundred (100) years, we believe that the standard should **prohibit battery systems that are corrosive, toxic and may exhibit explosive behavior**. To achieve this requirement the standard should clearly specify that **all components of the TPMS must have recognition by the EPA for disposal as household waste**.



3. Component reliability will be critical to the satisfactory and safe functioning of the TPMS. To ensure acceptable performance here, we believe that it is essential to specify the reasonable extremes of temperature that the TPMS will experience. Therefore, we recommend **all components be able to withstand, with no loss of functionality, temperature excursions up to +100 C and down to -40 C.** The duration of these temperature excursions is best specified by the TPMS, tire and/or auto manufacturers. We can advise on specific tests if this would be helpful.
4. Batteries that lose functionality, e.g. low temperature performance, as they are discharged are not a good choice for this application. We have set for ourselves the requirement that these batteries must operate the application for ten years. We believe that this standard for reliability is appropriate for this application. Moreover a battery that need not be replaced for ten years will be the lowest cost approach and will be the best consumer solution.

I hope the above both clarifies the views of Rayovac and also gives you useful direction. Please add this document to the public record. If I, or anyone else at Rayovac, can be of assistance please do not hesitate to contact us. We all wish you well with your work and the development of this important specification.

Sincerely

A handwritten signature in black ink, appearing to read "Paul Cheeseman", written in a cursive style.

Paul Cheeseman (Dr.)  
Vice President of Technology

PGC:dc