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November 5, 2004

The Honorable Jeffrey W. Runge, M.D.  
Administrator  
National Highway Traffic Safety Administration  
400 7<sup>th</sup> Street, S.W.  
Washington, DC 20590

RE: Comment to Docket 03-15400

Dear Dr. Runge:

The following comments supplement my September 17, 2003 submission to NHTSA's Final Rule upgrading tire performance standards (FMVSS 139), particularly with respect to the agency's intention to commence further research related to deterioration of tire performance caused by aging before adopting a test procedure.

Safety Research & Strategies (SRS) is a research and consulting firm specializing in motor vehicle safety issues. Our clients include lawyers, supplier and technology companies, government, and media. We work with organizations and individuals who share our goals of improving safety and reducing harm in the motor vehicle and transportation environment. We have prepared these comments based on research into real-world cases of tread belt separation in "aged" tires (i.e., tires that are six years old or older), technical papers and presentations, industry documents, deposition testimony, as well as consultation with tire experts.

Since my 2003 submission (previously submitted under Strategic Safety), we have identified a significant number of additional cases of catastrophic tread belt separations in "aged" tires, bringing the number to nearly 50, with at least 37 fatalities and 35 serious injuries (see attached case list). The case listing represents incidents that SRS has identified, and is undoubtedly an under-representation of the scope and magnitude of the total problem, which cannot be captured in available surveillance data. However, the cases identified offer a glimpse into the types of aged tire failures seen in

the real world environment and they clearly point to a disturbing trend. Our case list is skewed toward incidents that have resulted in severe injury or fatality and most involve litigation—which is one of the only reliable ways of locating such incidents—as available datasets frequently do not include the DOT numbers which allow for decoding the date of manufacture. In addition, cases in litigation have had the benefit of inspection by experts in tire design and failure analysis.

What can be learned from these cases? First, it is apparent that tires with acceptable tread and no significant visible signs of defect or degradation are likely to find their way into service or continue to remain in service regardless of their age. Unfortunately, consumers today are no better informed about tire age factors than they were pre-Firestone, yet an examination of the circumstances that have led to the senseless catastrophic injuries and fatalities almost all demonstrate that consumers were exercising reasonable judgment in the absence of appropriate or meaningful guidelines from vehicle and tire manufacturers or the agency. A number of the cases involve spare tires that were put into service following a flat or simply as a way to use a tire that, by all appearances, was brand new. These spares may be rotated into service by tire or vehicle technicians who at the request of the owner, or by their own accord, see a tire that is “new.” Other instances involve tires purchased used through tire dealers, salvage yards, flea markets, or tires on low mileage vehicles. Even those who understand how to decode the DOT and can determine the date of manufacture are left with little or no information about the meaning of the product age or internal fatigue strength. Yet, this agency, as do the tire and vehicle manufacturers, understand the simple fact that aged tires present a greater safety risk. Therein lays the danger and the opportunity for NHTSA to take immediate remedial action and to work with the industry to share this information about the hazards of tire aging in a meaningful way with consumers as an *interim* step toward solving the problem.

A closer look at the cases identified in the attachment shows that the likelihood of appropriate consumer information could have saved lives or prevented serious injuries. An example is the Hicks case. In this unnecessary catastrophe the owner of 1997 Toyota 4Runner had her vehicle serviced by a Toyota dealer who rotated the original equipment Dunlop spare into service. Several weeks later while driving across the country in a move to California with her young son, the Dunlop tire experienced a tread/belt separation at highway speed. As NHTSA has found in its own research, tread/belt separations on SUVs often render these vehicles uncontrollable at highway speeds.<sup>1 2</sup> In this case, the Hicks vehicle went out-of-control and rolled. Ms. Hicks, who was wearing her seatbelt at the time of the crash, died of fatal head injuries while her son was fortunate enough to survive. Similarly in the Aldridge case the original BF Goodrich spare was put into service on 1990 Geo Tracker in 1999, necessitated by a flat tire. The unused spare had less than 200 miles in service when the father of the vehicle owner, who was on his way to obtain a new tire for his son, when the former spare tire experienced a tread

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<sup>1</sup> NHTSA Engineering Analysis Report and Initial Decision Regarding EA00-023: Firestone Wilderness AT Tires

<sup>2</sup> “Investigation of Driver Reactions to Tread Separation Scenarios in the National Advanced Driving Simulator (NADS)” T. Ranney; G. Heydinger; G. Watson; K. Salaani; E. Mazzne; P. Grygier

separation. The tire failure was followed by a loss of control rollover in which Mr. Aldridge, the belted driver, suffered a serious closed head injury. Another example is the Bell case. In this instance the original spare from a 1988 Bronco II was put into service after the right rear tire was punctured. Ms. Bell and her fiancé were returning to Connecticut from Georgia, they were nearly home when the 14-year-old tire suffered a catastrophic tread belt separation. The tire failure precipitated a loss of control rollover. Ms. Bell received serious neck and head injuries. In a nearly identical circumstance, the Crane case, which also involved a 1988 Bronco II, this time with an original equipment Firestone FR480 spare, that separated shortly after being put on the vehicle. A loss of control rollover ensued, and an 18-year-old belted passenger was fatally injured. In the Munoz case the unused original spare, a Firestone ATX was put into service on a 1993 Mazda Navajo (a rebadged Ford Explorer 2-door), two weeks later the tire experienced a tread belt separation. A loss of control rollover rendered the right rear passenger, Rose Munoz, an incomplete quadriplegic. The unused spare was indeed a tire that should have been replaced during the Firestone recall. As the agency is aware from its investigation, the Firestone ATX and Wilderness tires did not begin to exhibit high rates of tread/belt separation until they had aged for several years. NHTSA's Office of Defects Investigation (ODI) concluded that age was a factor in its investigation into Firestone ATX and Wilderness tires.

The Scudera case also involves a recalled Firestone that was mounted as a spare on a 1993 Explorer. The tire had 11/32nds of tread when it was put into service to replace a flat. The vehicle owner previously replaced four tires in 2002 and was advised by the tire dealer that the spare was in good condition and did not need replacement. Shortly after the Firestone tire was put into service on the right rear it suffered a tread separation. The vehicle became uncontrollable and Anthony Scudera, a 20-year-old driver, was killed in the subsequent rollover.

An equally tragic case involving "new" spare tires is exemplified in the Hill case. The unused spare was fitted to the rear of a 1987 Ford LTD Country Squire station wagon to replace a tire that began to exhibit signs of potential failure. The "new" 1987 Firestone 721 tire experienced a separation after only one day in service. The ensuing loss of control crash resulted in rear seat passenger who suffered head injuries and was in a coma for 13 days. Likewise, in the Prince case the OE Michelin Radial X spare was used on a 1988 Jeep Cherokee, 10 years after it was manufactured, when it separated causing a single vehicle rollover and yet another fatality. The Pena case similarly involved an unused spare General Tire on a 1987 Nissan pickup. A tread/belt separation occurred one day later, and again a loss of control rollover paralyzing the driver. In the Prenger case, the original equipment Bridgestone Dueler spare was put into service on a 1992 Isuzu Trooper in 2002. Shortly after the tire suffered a tread/belt separation, the vehicle became uncontrollable and rolled. Ms. Prenger survived the crash but several fingers were amputated during the event, which prevent her from working in her profession as a nurse anesthetist.

Full-size "new" old spares represent a significant portion of the tire age problem, but they are not the only scenarios in which aged tires find their way into service. Take

the Zarzauer incident in which the owner of a 1997 Chevy Astro van purchased a set of four new Firestone FR480s from their local Firestone-owned company store in 2002. Within the first year of service three of the tires experienced tread separations, two causing significant vehicle damage. Two tires were returned to Firestone following the company's claim procedure. However, Firestone denied the claim and in a letter to the claimant noted that the tires were made in 1989 and should not have been in service. While the likelihood of these circumstances occurring with regularity is not great, the incident highlights an issue associated with the DOT number date coding which most would have interpreted as indicating the tire was made in 1999. Interestingly, Firestone was content to deny the Zarzauer claim because the tire was too old, yet a corporate representative has testified that tire age is not a factor.<sup>3</sup> Firestone ultimately settled with the Zarzauer's, but only after a products liability attorney intervened and represented her *pro bono* as the damages (approximately \$3,500) didn't rise to level that it was feasible to litigate.

In the Peralta case the owners of a 1994 Mazda MPV purchased a "new" Falken tire from a small retailer and had the tire installed in 1994. Unbeknownst to them the tire was made in 1988 and was stored for years before being sold. Shortly after the tire was installed a tread belt separation occurred and loss of control rollover ensued fatally injuring a child, seriously injuring another.

Classic car owners are also at risk. In the Townsend case, the owner of a restored Sunbeam Tiger was unaware that the 11-year-old Pirelli tires with approximately 4,000 miles of service represented an unseen hazard. While driving to a classic car meet the driver experienced a catastrophic tread separation, the ensuing loss of control and rollover left a seriously brain-injured driver.

The Keddington incident exemplifies other cases in which an aged tire fails; however, there is no record how the old tire found its way onto the vehicle. In this case a 1995 Chevy Blazer was fitted with 15-year-old BF Goodrich tires. At the time that one of the tires suffered catastrophic tread/belt separation, the tread depth was measured at 8/32nds. The tires were inspected less than one month prior to the crash. Following the tire failure the vehicle became uncontrollable and rolled. The driver was fatally injured and the vehicle owner, a medical doctor and passenger at the time of the crash, suffered significant head injuries during the crash.

A number of other cases involve the purchase of used tires. There is a tendency to dismiss these cases and to shift the blame to the purchaser. The reality is that used tire sales make up a huge market in the U.S. and it is estimated that 10 million tires are resold each year.<sup>4</sup> A significant portion of used tire sales occur through tire dealers, and an unknown number are sold at the hundreds of car swap meets, flea markets, online venues, and classified ads. Again, a tire with adequate tread depth (i.e., greater than 2/32nds), and a lack of significant visible damage, will likely find its way into service.

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<sup>3</sup> Deposition testimony of Brian Queiser, *Hill V. BFS*

<sup>4</sup> Ohio Department of Natural Resources,

In my 2003 comments, owner's manual warnings, primarily in vehicles manufactured by German companies, were noted to have originated in the early 1990s. These warnings differed a bit during the years based on the vehicle manufacturer, but the messages were consistent: Tires older than 6 years present an increase risk. These warnings, which are not widely known, clearly indicate that the German vehicle manufacturers understand the dangers associated with aged tires and the need to communicate this to consumers, albeit in a method that may not be very effective. Following is the language from Volkswagen's manuals:

WARNING - Old tires can fail in use, causing loss of vehicle control and personal injury. Replace tires after six years regardless of tread wear. Always reduce speed and drive cautiously if you must use an old tire in an emergency. Replace the tire as soon as possible.

In addition to the German manufacturers,' Toyota also provides warnings in its owner's manuals. Toyota's warnings contain the following language:

Any tires which are over 6 years old must be checked by a qualified technician even if damage is not obvious. Tires deteriorate with age even if they have never or seldom been used. This also applies to the spare tire and tires stored for future use.

These warnings originated from data, testing, research and consultation with tire manufacturers. For example, the German testing and scientific research firm DEKRA issued a "special topic" report in 1986 that examined defects that resulted in crashes.<sup>5</sup> They found that based on examination of 146 tread separation failures they examined during the prior 7 years, there was a noted increase in failures after 2 years and a continuous increase starting at year 5 through the 8th year, with dramatic increases in tires that are older than 6 years. This led to the conclusion that consumers should not drive on tires that are six years old or older regardless of the tread depth, particularly for tires that were stored for an extended period of time.

In another report published in a German technical journal, the author described finding of his analysis of the age affects and defects in rubber components on vehicles (i.e., coolant and heater hoses, toothed belts, V belts and tires).<sup>6</sup> The study is based on more than 1 million roadside assistance services by the ADAC in 1985. ADAC responded to approximately 40,000 tire breakdowns in 1985, 90% of which took place on the autobahn. From the tire-related breakdowns, the data from 5,000 reports were usable for this study and included the DOT number. Based on a correlation of tire registrations with the number of tires by age, the author concluded that *failure frequency rose disproportionately with increasing tire age* and estimated the probability of a breakdown from a tire was eight times as high with a nine-year-old tire than with a two-year-old tire.

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<sup>5</sup> "Technical Defects on Motor Vehicles 1986" DEKRA

<sup>6</sup> "Observations in the Field: Knowledge is Lying on the Pavement" *Natural Rubber + Rubber Plastics*, Vol 40, No. 8/87

The author went on to note that "over-aged" tires are being sold and part of the problem was due to the "consumer-unfriendly" way in which the date was coded in the DOT number. The data and result were shared with manufacturers.

The reports cited above are only two examples of the type of research that was undertaken. Other more comprehensive and detailed findings exist. More recently we have learned about the Rubber Manufacturers Association (RMA) Tire Engineering Policy Committee (TEPC) meetings in late 2003, chaired by a Bridgestone representative and attended by representatives of Continental, Cooper, Goodyear, Michelin, and Pirelli, in which they decided to draft recommendation for maximum service life for light truck and passenger tires. The recommendation noted

While most tires will need replacement before 10 years, it is recommended that any tires in service older than 10 years from the date of manufacture be replaced with new tires as a simple precaution (including spare tires), even if such tires appear serviceable (or even if such tires have not reached the legal wear limit).

This recommendation applies also to retreaded light vehicles tires (passenger and LT tires through load range E) older than 10 years from the date of manufacture of the initial casing.

For tires that were on an original equipment vehicle (i.e., acquired by the consumer on a new vehicle), follow the OE vehicle manufacturer's tire replacement recommendations.

RMA, reluctantly addressed the tire age hazard internally, but never disclosed this draft to the public. What is even more unconscionable is the misinformation purveyed by the RMA.

On June 26, 2004, in order to learn what the RMA would advise regarding the use of a new "aged" tire, I presented an unused 11 year-old Goodyear to an RMA technical spokesperson at Sullivan Tire in Fall River, Massachusetts, who was present under the auspices of educating New Englanders about tire care and safety. The tire presented was a Goodyear Wrangler RTS LT245/75R16 LR C, DOT MK11MH0V414 (see attached photos). This tire was purchased from a wholesaler who obtained it from a customer in trade for a discount on a purchase of a set of new tires. It is not known how long the tire was in storage; however, it was never put into service as seen by the attached photos. Further, the tire was likely mounted as a spare underneath a pickup truck or SUV as the sidewall shows a tell-tale line from the spare tire carrier. The only visible signs of aging were slight browning around the sides and the tread is noticeably hard when compared to a new tire. Before the RMA official inspected the tire, it was presented to a Sullivan Tire employee. He noted that the tire was old but stated that tires do not have expiration dates. He went on to comment that the tire's condition was good and there was no reason not to use it. I requested the RMA official's opinion. After a cursory visual inspection he pronounced that the tire was acceptable and could be used. When pressed about the tire's age, he stated that I should run it for 1000 miles and then inspect it for any signs of rapid

or unusual deterioration. Otherwise, he said the tire was acceptable for use. The RMA draft, which was never disclosed to the public, contradicts this position. In addition the RMA draft falls short of the detail found in the 2001 British Rubber Manufacturers Association (BRMA) recommendation, which I disclosed to the agency in my prior comments. The BRMA recommendation was never publicly cited or disclosed prior to this submission. Again this important recommendation stated:

BRMA members strongly recommend that unused tyres should not be put into service if they are over 6 years old and that all tyres should be replaced 10 years from the date of their manufacture.

And

[I]n ideal conditions, a tyre may have a life expectancy that exceeds 10 years from its date of manufacture. However such conditions are rare.

Further, the BRMA noted a very important point that is exemplified by the cases we've identified:

'Ageing' may not exhibit any external indications and, since there is no non destructive test to assess the serviceability of a tyre, even an inspection carried out by a tyre expert may not reveal the extent of any deterioration.

As the agency knows, there has been an increased awareness of the tire aging problem following Firestone. This is in no small part due to the excellent work recently done by NHTSA's VRTC, Ford Motor Company's John Baldwin, and the ASTM committee. Their work is leading to a better understanding of the issue and will likely serve as the basis for a standard method for accelerated aging and testing. However, this process is not completed and any agency rulemaking to require a tire age test is still, at best, years from implementation. In the interim, consumers are at risk of catastrophic tread/belt separation and have little or no information about a danger that is known by NHTSA, tire makers and vehicle manufacturers. Recognizing many variables contribute to tire aging (i.e., tire construction, use, nonuse, storage, environment, inflation medium, etc.) and the industry resistance to expiration dates, NHTSA, tire makers, and vehicle manufacturers have an obligation to—at a minimum—alert consumers to the danger that has needlessly taken lives and caused serious injuries to many people. As a result I recommend that following steps as *interim* measures to reduce further injuries and fatalities from aged tires:

- The agency should immediately issue a “Consumer Advisory” alerting the public to the dangers of aged tires. The advisory should warn consumers that testing has shown tires have a much greater propensity to fail as they age and that both vehicle and tire manufacturers have recommend light truck and passenger tires older than six years from the date of manufacture should not be used, particularly

spares. The advisory should also educate consumers about decoding the DOT—the only means for determining the date of manufacture.

There is ample precedent for the agency to act through the use of a Consumer Advisory. An advisory will likely provide tire dealers with the guidelines they need since they have been abandoned by the manufacturers and the RMA, both of whom have refused to address the problem in a meaningful way. Currently tire dealers have little or no understanding of the hazards associated with tires, yet they are in the best position to ensure consumers are alerted to the danger and to monitor their inventory.

- NHTSA should begin rulemaking to require a non-coded date of manufacture molded into both sidewalls of all tires. This is a critical step toward addressing tire aging hazards as the DOT date code has clearly outlived its usefulness. In order to facilitate this process, I have attached a Petition for Rulemaking, which is being submitted in conjunction with these comments. Rulemaking will likely need to be phased in over a number of years, as manufacturers will argue about the costs associated with changing their molds; however, this is a long-overdue step that will provide significant benefit to consumers without undue burden on the industry.
- Reiterating my 2003 comments to the docket and during an ex-parte meeting with agency staff, NHTSA should issue a request to obtain information that will assist the agency in its ongoing study of the tire aging issue. This information will be particularly helpful to evaluate the current testing by VRTC and will provide an important foundation for anticipated rulemaking. A Special Order request is now in order and should include the following:
  - Request vehicle and tire manufacturers provide all lawsuits, claims, and adjustments involving tire tread separations in which the tires were 6 years old or older at the time of failure.
  - Request vehicle and tire manufacturers provide all testing that they have participated in, contracted, or are otherwise aware of related to tire aging. This should include testing performed in Europe and other countries.
  - Request vehicle and tire manufacturers provide internal requirements or recommendations (past and present) on tire aging, spare tire temperature, and warehousing and storage as well as the data supporting these requirements.
  - Request tire manufacturers provide the length of their warranties for each year beginning in 1985 and the rationale for any time expiration.
  - Request vehicle manufacturers provide detailed accounts of why tire age warnings were added to some owner's manuals, when they were added and supporting data used in the development of these warnings.



I will provide additional information and data to NHTSA if needed. I am also available to meet with agency personnel to discuss any of the above referenced findings in more detail. Please do not hesitate to contact me.

Sincerely,

Sean E. Kane

Tire Aging Cases

Case Name	Manufacturer	Model	Size	Incident State	DOT	DOA	Vehicle Yr.	Vehicle Mk.	Vehicle Model	Description	Injuries
Rivira	Yokohama	Medallist Radial A/S		TX	CCHCVEA200	6/11/2003	1988	Plymouth	Voyager	Travelling on I35, Left rear tread separation, loss of control rollover	One Fatal (5-year-old female)
Figueroa	Firestone	ATX	P235/75R15	Jalisco, MX	VNHL1MO250	2/20/2003	1993	Ford	Explorer	Occurred just over the Texas border. Appears that the tire was a spare put into service. History of the tire is unclear. Tire remained inflated after separation.	Two fatalities--26 year old, and 18 year old. One serious injury (broken neck, pelvis)
Selling V. Continental-General	Continental-General	Continental GT 8000	P195/60R14	TX	ACR43EW407	7/29/2002	1990	Acura	Integra	Tire separated (remained inflated), resulted in a loss of control rollover.	Severe head injury
Becera	Dunlop	Remington XT 120			DHYE45223	1/29/2003	1993	Ford	Aerostar	Tire detreaded, vehicle became uncontrollable and struck a tree.	Fatal
Munoz V. Bridgestone-Firestone, Ford	Bridgestone-Firestone	Firestone ATX	P235/74R15	TX	Made in 1993	4/12/2002	1993	Mazda	Navajo	Tire was a slightly used OE spare on an Explorer. Put into service within two weeks suffered catastrophic tread belt separation. Resulted in a loss of control rollover	Incomplete Quadriplegic
Pena V. Continental General, Nissan	Continental-General	General Ameritrac	P235/75R15	NC	A3HL27V236	9/00/2000	1987	Nissan	Pickup	Tire was an unused spare on a 1987 Nissan Pickup. Was put into service and suffered a tread separation after one day of use. Vehicle lost control and rolled. Belted driver was in a coma for two weeks and was rendered a paraplegic.	Paraplegic
Rowan V. BFS, Ford	Bridgestone-Firestone	Firestone FR480	P205/75R15	FL	VD1ML019	2/19/1999	1989	Ford	Bronco II	Original spare tire was put into service on a 1989 Bronco II and suffered a catastrophic tread separation within 2 weeks of operation (approximately 4,000 - 6,000 miles of total use). Traffic Homicide report noted that the tire looked new.	Fatality - 22 year old male
Hill V. Ford, BFS	Bridgestone-Firestone	Firestone 721	P205/75R15	FL	VNUL1HE087	6/16/2000	1987	Ford	LTD	Tire was an unused spare on a 1987 Ford LTD Country Squire station wagon. Spare was put on after tire on the right rear started "thumping." Tread separation occurred after one day in service.	Passenger in the rear of the vehicle received head injuries and was in a coma for 13 days.

Tire Aging Cases

Townsend	Pirelli	Pirelli P4	165R13	MO	XPE9XJJX347	7/11/1999	1965	Sunbeam	Tiger	Tires were put on a restored Tiger that was stored on blocks and rarely used. The 11 year old tires had about 4,000 miles in service when one experienced catastrophic tread separation. Lead to loss of control rollover.	Driver suffered serious brain damage.
Hall V. Ford and Continental-General	Continental-General	General GT52S	P205/75R15		Made in Mt. Vernon, 1987		1987	Ford	Bronco II	Tire was an unused spare on the rear of a Bronco II. It was 9 years old when first put into service. Catastrophic tread separation occurred after it was driven less than 1,000 miles--lead to rollover.	Fatal
Rios V. Goodyear	Goodyear	Kelley Safari AWR	P215/75R15	TX	PJHSKACR141	4/29/2000	1994	Mazda	MPV	Tire was 10 years old at the time of the accident and found with 60 percent of its tread depth at the time of separation.	29 year old father of 3 - Fatal
Hernandez v. Ford/Firestone	Bridgestone-Firestone	Firestone ATX	P235/75R15	Mexico	VNHL IMO 163	8/12/2001	1993	Ford	Explorer	Original spare was put on and subsequently suffered a separation. The vehicle was purchased through an auction during the recall. Sold with the OE spare which was never replaced.	One fatal, four injured
Benivedes V. Michelin-Uniroyal-Goodrich	Michelin-Uniroyal-Goodrich	Uniroyal Laredo	P235/75R15	TX	Ardmore, OK plant, 31st week of 1990					The tire was nine years old tire when it was placed on another vehicle. Subsequent tread separation.	
Shinoster V. BFS, Ford	Bridgestone-Firestone	Seiberling	P235/75R15	AL	VDHLT3A463	6/11/2000		Ford	Explorer	Tire was purchased used in May 2000 for a spare. Was put into service shortly after. Tire failed with nearly 9/32nds tread depth.	Fatal
Crum	Bridgestone-Firestone		P215/75R15		W2xxxxx243	7/31/2002		GMC	Safari	Vehicle owned by driver's father. Five kids travelling in the van when The right front tire experienced a tread separation, but didn't lose air. Was able to drive to a rest stop. Had the spare put on. Bought a new Uniroyal tire, put spare back in the rear. Left rear then detreads. This time lost control rolled over into an embankment. Driver and occupant behind were killed.	Two fatalities

Tire Aging Cases

Mateo V. Cooper	Cooper	Cornell 700 HT	P215/75R15	AZ	UTHBB73497, Texarkana plant	7/25/1998	1991	Ford	Aerostar	1991 Ford Aerostar. Right rear tire tread separation causing driver to lose control. Vehicle left the road and rolled.	Fatal--driver died 3 months after the crash from injuries.
Rocco V. Cooper	Cooper	Hercules Terra Trac	33x12.5R16.5LT	AZ	UPXFHKX3882, 38th week of '92, Findlay, OH	8/15/1999	1966	International	Crew-Cab pickup	1966 International Crew Cab pickup. Plaintiff was operating the vehicle when the left front tire experienced a tread/belt separation causing her to lose control of the vehicle which left the roadway. Vehicle was used very infrequently.	Paraplegic
Prince V. Michelin	Michelin-Uniroyal-Goodrich	Michelin Radial X				26-Jun-98	1988	Jeep	Cherokee	OE spare was put into service. Tread separation resulted in a single vehicle rollover crash.	Fatality
Carver V. Uniroyal	Michelin-Uniroyal-Goodrich	Uniroyal Laredo	LT235/85R16 LRE	CA	Made in 1983	1992		GM	Pickup	Tread separation caused driver to lose control.	Quadriplegic
Cabrera V. Goodyear, Ford	Goodyear	Goodyear Vector	P235/75R15	CA	Unknown--Vectors were last made in 1991	8/15/1999	1995	Ford	Explorer	Tread separation on the rear of a 1995 Explorer. Loss of control rollover. Tires were discarded by the CHP before a DOT was noted. However, the Vector was last made in 1991. Looking for service records to determine when the tire was put on the vehicle.	
Proctor V. Kumho	Kumho	Marshall Steel Belted Radial 771	195/70R14	FL	YOJ9YA1Y374	8/11/2001	1984	Mercedes	8/27/1900	Replacement tires were on the vehicle when it was purchased. Tread separated causing loss of control rollover crash.	Fatal head injury to the left rear outboard passenger.
Aldridge V. Michelin	Michelin-Uniroyal-Goodrich	BF Goodrich Trail blazer 2	P205/75R15	MI	AUULF3-120	9/4/1999	1990	Geo	Tracker	Original unused spare put into service after the owner had a flat tire. Shortly after owner's father took the vehicle to obtain a new tire for the vehicle (spare had less than 200 miles use) and experienced a tread separation. Lost control and rolled.	Closed head injury. Belted driver - head strike on the A-pillar. Former truck driver in late 30s can no longer work.

Tire Aging Cases

Wilson V. Yokohama	Yokohama (Mohawk)	Mohawk		MO	1984 [NEED Full DOT] Defendants claim the tire was made in Salem VA plant in 1984	7/11/2002	1970	Chevrolet	C10	Unused Mohawk tires were purchased at a car swap meet and stored for several years before being mounted on a 1970 Chevy C-10 Pickup truck. With more than 50% of the tread left, experienced a tread separation. Driver lost control crossed a median and struck another vehicle.	Two fatalities
Prenger V. BFS	Bridgestone-Firestone	Bridgestone Dueler	P24570R16	GA	EJMTJMM072	5/00/2002	1992	Isuzu	Trooper	Original spare tire suffered catastrophic tread separation shortly after being put into service. Vehicle became uncontrollable and rolled.	Driver had three fingers amputated during the rollover
Katrina Owens V. Firestone	Bridgestone-Firestone	Firehawk SS	P235/60R15	AL	DOT: W2VL FH5 094			Oldsmobile	88	Replacement tire on an Olds Delta 88. Tread separation caused a loss of control while travelling at about 60 mph. Vehicle T-boned an ambulance.	Three fatalities (occupants in the Olds)
Miller V. Cooper, Ford	Cooper	Patriot Ultra Supreme 775	P235/75R15	FL	15th week of 1992	3/29/2001		Ford	Explorer	Tread separation, loss of control rollover.	One fatal (head injury)
Jackson V. Goodyear	Goodyear	Goodyear Wrangler	P235/75R15		M6HL-FNHR-132	7/30/2000	1997	Ford	Explorer	Tread separation resulted in a loss of control rollover. Vehicle was being driven by the owner's mother.	Paraplegic
Murillo V. Michelin, General Motors	Michelin-Uniroyal-Goodrich	Uniroyal Laredo LT	235/85R16		ANORB01105	7/10/2002	1986	Chevrolet	Sierra Classic Pickup	Tire experienced a tread separation within about 15,000 miles of service.	Two fatalities (mother and father) and moderate injuries to two children (16 year old and 2-year old)
Zarzaur	Bridgestone-Firestone	Firestone FR480	P215/75R15	AL	W2HF1MM149	9/3/2003	1997	Chevrolet	Astro	Tires were replaced by a Firestone dealer on a 1997 Chevy Astro van on 8/19/2002 with FR480s. Within one year three of the tires experienced tread separations, two causing significant vehicle damage. Two tires were returned to Firestone Corp. following the claim procedure--Firestone denied the claim and noted that the tires were made in 1989 and should not be in service.	Vehicle damage only
Williams	Michelin-Uniroyal-Goodrich		P235/75R15	FL	APHLF3U052	2/8/2002	1992	Ford	Explorer	Tread separation on a 1992 Explorer caused loss of control and rollover. Tire had 11/32nds tread depth when in failed.	One fatal

Tire Aging Cases

Heather Keeney V. Bridgestone/Firestone	Bridgestone-Firestone	Firestone FR480	P205/75R15	OH	1988	6/15/2002	1988	Ford	Bronco II	Original spare tire on a 1988 Bronco II was put into service about two months before the failure. Tire failed causing a loss of control rollover.	Two serious injuries
McGuire V. Dunlop Tire, Sumitomo Rubber	Sumitomo	Dunlop SP4N		FL	Made in 1986	3/16/1996		MG	Midget	Tires were on a MG Midget that was driven infrequently. Vehicle owner's brother was driving the vehicle when the left rear tire experienced a tread separation. The driver lost control of the vehicle but was able to maneuver it to the shoulder; however a semi-truck attempting to avoid the vehicle struck the MG.	Driver suffered closed head injuries and was in a coma for four weeks. Permanently disabled.
Cleworth V. Goodyear	Goodyear	Goodyear		FL	Made in 1986	5/15/1997		Mack	Dump Truck	Goodyear truck tire on the left front of a Mack dump truck blew out causing a loss of control. The vehicle crossed the centerline and struck an oncoming tractor-trailer. The Mack dump truck was in a prior crash and had sat in a salvage facility for a period of time. After the repairs were made the tire failed after 50 miles of service	One fatal, one serious injury. The driver of the Mack had both legs traumatically amputated. The driver of the Tractor-trailer died following a fire that erupted after the crash.
Unknown	Michelin	Michelin		Scotland	Made in 1987	2001		Peugot	205	Tire was put on a Peugeot 205 by a Kwik Fit service center (owned by Ford) and was 14 years old at the time. Tread belt separation occurred, driver lost control and hit a minibus.	Several serious injuries to the occupants of the minibus (head injuries), several minor injuries
Antoinette Bell V. Bridgestone-Firestone, et al	Bridgestone-Firestone	Firestone	P205/75R15	CT	Made in 1988	2002	1988	Ford	Bronco II	Tire was a brand new OE spare put into service when it was 14 years old and suffered a catastrophic tread belt separation within a short period of time. Subsequent loss of control rollover.	Driver seriously injured (head and neck)

Tire Aging Cases

Keddington	Michelin-Uniroyal-Goodrich	BF Goodrich Trailmaker	P235/75R15	UT	DOT BEHLWF0386	7/8/2001	1995	Chevrolet	Blazer	Vehicle was travelling at highway speed when the right rear tire separated. The vehicle went off the road and rolled and struck a Dodge van. Tire was inspected by a tire dealer less than one month prior to the crash. 8/32nds of tread depth left--no punctures or other damage.	Passenger Rebecca Keddington (31 yo) was ejected and killed. Rear passenger Dr. Danny Purser was ejected and suffered closed head injury.
Williams et al, V. Pirelli/Armstrong, Sears	Pirelli-Armstrong	Sears Ice & Snow Roadhandler	P215/75R15	FL	CKHF2FC376	5/18/2001	1998	Ford	Windstar	Experienced a flat tire while travelling on the highway. Purchased the subject tire used from a gas station. After completing the trip, the vehicle was inspected by a tire dealer who indicated the tires were fine. Drove on the tire for about two months before it experienced a tread separation (right rear). At the time of the failure the tire had an approximately 7/32nds. The vehicle became uncontrollable and rolled.	One fatal, six injured--one serious brain damage.
Josan Hicks V. Dunlop/Good year, Toyota, et al	Dunlop	Dunlop Grand Trek	P265/70R16	CA	DB72A16376	7/6/2003	1997	Toyota	4Runner	Driver and son were moving from Florida to California. Prior to trip, Toyota dealer rotated the unused OE spare onto the right rear three weeks prior. Tread belt separation occurred causing loss of control and rollover.	Driver (belted) suffered fatal head injuries.
Howeedy V. Bridgestone-Firestone, et al	Bridgestone-Firestone	Firestone FR410	P215/75R15	FL	VDMO41A477	3/21/2004	1992	Ford	Windstar	Tire purchased used from a tire dealer just prior to the crash with 8/32nds tread depth, no repairs or punctures. Tread separation after two months in service.	Two fatalities - both third row seat occupants, aged 15 and 4. Brain injured 8 year old (seated behind the driver).
Peralta V. All Weather Tire Sales, Ohtsu, et al	Ohtsu	Falken		NY	Jul-88		1994	Mazda	MPV	Tire was purchased new from a small retailer and put on the car in March 1994. Tread separation	One fatal injury to a child, one serious injury and several minor injuries.
Rodriguez/Reyes v. Yokohama Tire	Yokohama	Yokohama All Season 370G	P205/75R14	TX	FDREMLN492	3/10/2002	1990	Ford	Aerostar	Tire was on the vehicle when the vehicle was purchased used. Origins unknown.	Two fatalities. One seriously injured
Crane v. Ford, Bridgestone-Firestone	Bridgestone-Firestone	Firestone FR480	P205/75R15	CA	W2UL1ML338.	8/11/2002	1988	Ford	Bronco II	Firestone 480 original spare on right rear, put on shortly before accident, 360 degree tread separation; rollover.	Fatal injuries to a belted 18 year old passenger.

Tire Aging Cases

Jones V. Cooper	Cooper Tire	Cooper Discoverer Radial AST	31x10.5 R15LT	UT		3/2/2001					
Weist V. Bridgestone/ Firestone	Firestone	FR721	P215/75R15	AZ		6/27/2000		Ford	F-Series	Tread separation led to loss of control rollover. Unbelted driver ejected	
Oates V. Cooper	Cooper Tire	Cooper Lifeliner Classic M/S	P225/70R15	AR	U9UUCU9293	8/14/2002	1995	GMC	Safari	Tire purchased by a former Cooper tire employee at a Cooper company store in 1996 in Texarkana. Tire was intended for a classic car that was being restored. Tires were mounted on the vehicle which was stored on jacks. At some point the tire was removed and stored in a garage and mounted on a GMC van--about 8 months prior to the crash (set of 4). First separation occurred on a rear tire, no crash. This tire was brought to Cooper, who replaced it for \$1.50 as it had virtually no wear. Second failure occurred on the left rear and resulted in a loss of control crash.	Two fatalities, one seriously injured
Kiney/Tucker V. Ohtsu	Ohtsu	Ohtsu		MD	1984	4/12/1996	1991	Mazda	MPV	Tire was purchased used and placed on the vehicle in 1996. Tread separation, vehicle became uncontrollable and rolled.	One serious injury
Scudera V. BFS, Ford, Fuzzies, et al.	Bridgestone-Firestone	Firestone	P235/75R15	FL	1993	6/2/2004	1993	Ford	Explorer	Vehicle was purchased in Feb. 2002. Purchased four new tires, tire dealer advised that the spare tire was in good condition, no need to replace. Spare was put into service following a flat, appears to have been an OE spare tire. 11/32nds tread depth. Tread separation after two days in service caused a loss of control rollover.	One fatal
Cheung V. Michelin	Michelin	Uniroyal Tigerpaw	P205/75R15	CA	APULBB11287	8/11/2002	1996	Nissan	Quest	Tire bought at a Firestone dealer as a spare. Used as a spare in place of the temporary spare. Had a problem with one tire and moved the spare onto the vehicle. Experienced a separation within two weeks. During the separation vehicle became uncontrollable and rolled.	One fatal



Tire Aging Cases

Valdovinos V. Michelin	Michelin	Challenger Regul Sport	P275/60R15		BER7N7HH488		1996	Ford	Explorer	Tire was purchased used. Tread separation, loss of control rollover.	One serious injury - arm amputated from elbow down.
Payan V. Ford, Continental-General	Continental-General	General Ameri 550	P235/70R16	TX	A308443417	7/17/2004	1998	Ford	F-150	Tire tread separation caused a loss of vehicle control and subsequent rollover. Tire had 80% tread depth left.	



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November 5, 2004

Dr. Jeffrey Runge  
Administrator  
National Highway Traffic Safety Administration  
400 7<sup>th</sup> Street, SW  
Washington, DC 20059

RE: Petition for Rulemaking

Dear Dr. Runge:

Please consider the following petition for rulemaking pursuant to 49 CFR § 552. This petition is being submitted in conjunction with comments to Docket 15400 that pertain to the hazards associated with tire aging.

As outlined in my attached comments, it is apparent that a consumer-friendly date of manufacture molded into the sidewall is a necessary foundational step that will allow consumers the ability, at a glance, to determine the age of their tires. Regardless of any future agency action on the issue of tire aging, a simple date of manufacture will not create a conflict with other possible requirements and conveys information that NHTSA, and the tire and vehicle manufacturers all agree is vitally important.

Modifying tire molds to accommodate a date of manufacture will likely require a phase-in period over a number of years. As the rulemaking process can be lengthy, it is the intent of this petition is to facilitate this process so as to minimize further delays.

Specifically, this petition requests that the agency promulgate rulemaking to require clear, non-coded, date of manufacturer indicators molded on both sidewalls of all passenger and light truck tires.

Sincerely,

Sean E. Kane