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May 25, 2004

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

RE: Supplemental Comments on Tire Aging, Docket 2005-21276

Dear Dr. Runge:

The following comments supplement my September 17, 2003 (15400-12) and November 5, 2004 (15400-31, 15400-32) submissions 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.

Our position on tire age degradation is simple—consumers and tire dealers need information and guidelines about the increased, and often invisible, risks presented by aged tires. Many of the cases we've reviewed show due care was exercised by the vehicle owner and even the tire service technicians; however, absent guidelines and information about the risks results in preventable tragedies.

Recently, Ford Motor Company began recommending tire replacement after 6 years. As the agency knows, Ford's published research in the area of tire aging adds important data to the public realm and their conclusion that a 6 year recommendation is appropriate sends a clear message about their findings. DaimlerChrysler also acknowledged that they are issuing a similar message. DaimlerChrysler's position is likely based, at least in part, on the work done in the 1990s by Mercedes-Benz research. These recommendations are important steps to raising awareness about tire age degradation.

Based on the continuum of information and data on tire age degradation, I again urge the agency to consider a Consumer Advisory alerting the public to the dangers of

aged tires. There is ample precedent for such an action, and an advisory will provide tire dealers and service technicians with much needed guidelines and lend support to the vehicle manufacturers' recommendations. Further, a Consumer Advisory does not interfere with the agency's plans to propose a tire age performance standard.

In addition to the vehicle manufacturer's positions on tire age limits, the agency's data from the Phoenix tire dataset, of which only a small portion is now publicly available show that tires from the field in Phoenix that are aged more than 4 years could no longer pass FMVSS 139, yet these tires would have continued in service and potentially failed in a catastrophic manner. Admittedly, the data are limited and the sample too small to draw any sweeping conclusions; however, it does appear to support data from other sources.

Attached is a spreadsheet that contains a list of 70 cases in which tires older than 6 years experienced tread / belt separations causing loss of control crashes. These crashes have caused 52 fatalities and 51 injuries. The case listing represents incidents that SRS has identified primarily through a survey of litigation, which is one of the only publicly available sources from which we can learn of such incidents. As a result, our case list is skewed toward incidents that have resulted in severe injury or fatality. The list includes several non-litigation incidents; however, most incidents that do not involve injuries or fatalities are likely to go unreported and undocumented. Because litigation serves as a bell-weather for trends, we strongly suspect that aged tires are contributing to a significantly larger number of failures than are documented.

In addition to the information presented above and in our prior comments, following is an overview some of our recent findings as they relate to tire aging guidelines.

In June 1998 the U.S. based Tire Retread Information Bureau (TRIB) published a reprint of an article that originally appeared in *Commercial Tire Management* (a Goodyear publication) under the title "Sleeping Tires Wear Too."[1] The article discusses tire degradation, wear and overall aging, associated with tires, which are "out of service." The article succinctly stated "regardless of use, tires do wear out." Degradation of spare tires, those in warehouses, or tires that have otherwise been removed from service continue to degrade. Can this degradation be put on hold? According to the author, the answer "is a qualified 'no' . . . Like most natural things, tires exposed to air, water, and foreign substances eventually will weather, degrade and weaken; though it can take years before this natural aging process renders them unusable." While this article appeared in the U.S., the Europeans passed Addendum 107 to Regulation 108, which prohibited the retreading of passenger car tires that were older than 7 years.[2] The addendum was added following proposals dating back to 1992 that raised concerns about the safety of reusing passenger car tire casings that were older than 5 years.

[1] News Release About Tires: Stored Tires Get Old And Weary. When They Do, They Can Cause Trouble So You MUST Be On The Lookout!" Tire Retread Information Bureau, 6/98

[2] ECE Regulation 108 Uniform Provisions Concerning the Approval for the Production of Retreaded Pneumatic Tyres for Motor Vehicles and their Trailers. 6/23/98

We have identified additional published literature from Europe that helps to shed light on what is known about tire age degradation. One such example is from a 1990 article published in *Auto Rader Reifen-Gummibereifung*.[3] This article was written based on the tire manufacturers' recommendations about long storage and concluded even if tires show plenty of tread they may not be safe—particularly if they are too old. Tires past a certain age "are considered a risk factor, because the homogeneity of the product as a whole declines." According to Uniroyal

> "The adhesion between the steel belt and the rubber becomes weaker, and separation between the running surface and the belt can occur."

The article goes on to note that manufacturers had a hard time providing an answer to the question "When is a tire old?" However, "six years can serve as a rule of thumb; most of the answers circled around this figure . . . the industry's recommendation follows DEKRA's study results." As pointed out in my previous submissions, DEKRA found that tires older than six years failed at a disproportionately high rate. The article goes on to say the Economic Association of the German Natural Rubber Industry (W.d.K.) was working on providing more precise information on tire aging by the year end and there "was reticence on the part of the association to comment on the details of the content at this time." In summary, the advice provided was (1) tires were meant to be driven and they are at their best when used, (2) store tires cautiously, (3) tires may look good but the internal condition is impossible to assess—it is dangerous to buy used tires from cars that are salvaged. In closing the article states

> "Surely, not every consumer is aware of the interconnections and possible consequences. Here the trade is called upon, not as a last resort, to make its contribution to improved enlightenment."

In 1994, the German automobile magazine, *Auto Motor und Sport*, also warned about the danger of aged spare tires.[4] The magazine tested unused spares, looking at twelve tires with speed ratings from S through V from six of the largest manufacturers in Europe. The tires, which are not identified by brand or model, were made between 1979 and 1989, and were tested using the Dunlop high-speed test bench.

> "The results of the trial are alarming: Seven specimens failed to meet the minimum requirements. To some degree, their fitness for high speeds diminished appreciably. For most the towel was thrown in prematurely because individual belt layers loosened from one another, in others, major peeling of chunks could be noted. Even though no uniform dependency between age and ability to withstand high speed operation exists, because of the wide array of tires studied, the tendencies are nevertheless clear."

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[3] Out of the Cellar, onto the Rim? (Aus dem Keller auf die Felge), Rubber Tires (Auto Rader Reifen-Gummibereifung), 11/1990

[4] The Risk of the Spare Tire -The Silent Spare (Risiko Reserverad - Stille Reserve), *Auto Motor Und Sport*, 1994

The article goes on to state:

> "Like nearly all products of mineral origin, the tire, too, is subject to constant aging process. Over time, the individual components of the natural rubber lose their elasticity and the connection between the steel belt layers and the rubber material loses its firmness. As a consequence, the running surface mixture hardens [and] the structural stability declines in a threatening manner. . . This effect is shown in the products of all manufacturers and yet, there are no directives concerning age limits in the case of tires. For this reason, it would make good sense if the firms could, at least, hammer out a recommendation, which – similar to what auto makers have done in the case of oil change intervals, recommends a limitation of tire use in terms of time. [Such] a provision could even be introduced relatively easily, because a code that is vulcanized into the sidewall provides information concerning the production date."

The above noted publications follow earlier work from ADAC, DEKRA, and warnings issued in the owner's manuals of many German manufacturers' and Toyota vehicles that tires older than six years present an added risk. This also follows numerous technical papers by the tire industry describing tire and rubber component age degradation, of which the agency is aware.

More recent publications again show industry understanding of the tire degradation problem. For example, in 2001 the German Trade Association BRV (Federal Association of Tire Trade and Vulcanizers), in collaboration with the tire industry, including Bridgestone/Firestone, Continental, Dunlop, Goodyear, Michelin, Pirelli, Fulda, Kleber, Pnuemant, Semperit, Uniroyal, Vredestein and Yokohama, issued a statement that tires are only new up until they are 5 years old assuming "proper" storage, and that a 10-year service life is considered the *maximum* within the industry.[5] Another notable reference comes from the German Rubber Industry (W.d.K). They issued "Guideline 90" which addresses tire age and recommends that tires older than 10 years may be used only if they have been used continuously under normal conditions--this does not apply to tires that are not used or rarely used. W.d.K. 90 also recommends tires on trailers should be replaced at six to eight years.

A 2001 report by the trade association VRO (Association of Tire Specialists of Austria), stated the following about spare or "substitute tires" [6]

> "Substitute tires should be used at the latest with only an age of six years, and only in emergencies. . . In order to ensure a long use period, it is recommended to bring new tires to first use as soon as possible, and in any case within three years from the production date. After 6-8 years motor vehicle tires no longer correspond in general in all features to the actual state of the art."

[5] Federal Association of Tire Trade and Vulcanizers (BRV) presentation at "Round Table for tire technology"
[6] 2001 VRO Presentation on Motor Vehicles and Tire Technology

A presentation summarizing a study on the passenger car tire aging process by Dr. Sabine Müller with Continental Tire in Germany was presented at a tire "roundtable" meeting for the tire industry in 2003. The study investigated chemical and physical factors that contribute to tire age degradation and concluded that if stored "properly" tires don't age and stored tires are acceptable as new for up to five years. Dr. Müller's presentation also noted consumers in Germany are already requesting discounts on tires older than one year.

The issue of "proper" storage is often raised by the tire industry; however, proper storage appears to be premised on German DIN standard 7716 and ISO 2230, conditions that are more the exception than the rule, particularly once tires reach retailers or certainly if they are resold as used. Both standards outline parameters that include temperature, light, moisture and other guidelines for tire storage. In the case of DIN 7716, tire specific guidelines even go as far as addressing the maximum height tires can be stacked (maximum height of 1.20 meters).

Again the above-referenced information leads us to conclude that a Consumer Advisory could have a significant effect in preventing crashes from aged tires, which appear to be primarily spares and used tires. Please consider a collaborative effort with the vehicle manufacturers who already provide tire age recommendations.

We will provide additional data and findings shortly. In the interim, please do not hesitate to contact me should you need further information.

Finally, we request that the agency duplicate the comments from the docket 15400 that relate to tire aging into the new docket (2005-21276) that was recently established.

Sincerely,

Sean E. Kane

Aged Tire Cases

Case Name	Manufacturer	Model	Size	Incident State	Incident City/County	DOT	DOA	Vehicle Yr.	Vehicle Mk.	Vehicle Mdl.	Description	Used Tire	Spare Tire	Injury Total	Fatality Total
Aldridge V. Michelin	Michelin-Uniroyal-Goodrich	BF Goodrich Trail blazer 2	P205/75R15	MI	Ingham County	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.		Y	1	
Andersen/Hill	Bridgestone-Firestone	Dueler 684	P245/70R16	FL		Made in LaVergne, TN, 45th week of 1998	5/31/2004		Isuzu	Amigo	1998 tire was purchased new in 2003 approximately 1 year prior to our wreck. Tread separation occurred causing Isuzu Rodeo to overturn multiple times.			2	
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.		Y	1	
Barnett v. BFS	Bridgestone-Firestone	Firestone	P175/70R13	TX	Blanco	H4FHDJE167	8/8/2004	1986	Honda	Accord	Left rear tire separated, driver lost control rotated sideways across a lane and rolled.			1	
Becera	Dunlop	Remington XT 120				DHYE45223	1/29/2003	1993	Ford	Aerostar	Tire detreaded, vehicle became uncontrollable and struck a tree.				1
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.				
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.	Y			
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.			1	
Castro v. BFS	Bridgestone-Firestone	FR480	P225/70R15	CA	Palm Springs / Riverside	W2UU1MX381	6/10/2003	1992	Ford	Explorer	Tire was supplied as a spare tire at the time of purchase in 9/2001. Tire was put in service 3 days before the accident, which occurred 6/10/03.		Y	2	1
Cheung V. Michelin	Michelin	Uniroyal Tigerpaw	P205/75R15	CA	Fresno	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.		Y		1
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			1	1
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.		Y		1
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 and occupant behind were killed.		Y		2

Delphia Bailey v. Rockbusters, Inc.	Bridgestone-Firestone	Bridgestone M844 M1X V-Steel	440/65R22.5	TX	Blanco	3CB23HE098	Oct-04	1991	Ingersoll-Rand	Drilling Truck	This truck is a drilling rig that sees low mileage. The left from tire failed causing the vehicle to pull left and cross the center line of the highway (it was a two lane non-divided highway) and struck a Ford Explorer at the the A-pillar. Prior to the trip, company had inspected each tires--they showed no signs of cuts, nails, repairs and had ample tread depth. The failure was on the inside sidewall of the left front tire. Expert's initial opinion is that the causes was "rubber fatigue."				1
Englehardt v. BFS	Bridgestone-Firestone	Wilderness	P235/75R15	AZ		W2HL 1MO353	Jul-03	1995	Ford	Explorer	The tire was a spare on a 1995 Ford Explorer. Tire was mounted on vehicle in March 2003. Tread separation occurred on July 4, 2003. Tread depth between 7/32 to 8/32				
Figueroa	Firestone	ATX	P235/75R15	Jalisko, MX		353	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.		Y	1	2
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.		Y		1
Heather Keeney V. Bridgestone/Firestone	Bridgestone-Firestone	Firestone FR480	P205/75R15	OH			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.		Y	2	
Hernandez v. Ford/Firestone	Bridgestone-Firestone	Firestone ATX	P235/75R15	Mexico	2 miles over the TX boarder at Progresso	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.		Y	4	1
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.		Y	1	
Howard, et al. V. Firestone	Bridgestone-Firestone	ATX		SC		W2UL1ML458	8/5/2001	1989	Ford	Bronco II	RR tire came apart causing the driver to lose control; vehicle rolled over. Tire was original issue and had never been used before. Tread was good, but once tire failed it appeared to have dry rot.		Y	3	1
Howeedy V. Bridgestone-Firestone, et al	Bridgestone-Firestone	Firestone FR410	P215/75R15	FL	Oceoala	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.	Y		1	2
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.			1	
Jones V. Cooper	Cooper Tire	Cooper Discoverer Radial AST	31x10.5 R15LT	UT	St. George / Washington	UT60CXW234	3/2/2001	1998	Toyota	Pickup	Tread Separation causing loss of control				1
Josan Hicks V. Dunlop/Goodyear, Toyota, et al	Dunlop	Dunlop Grand Trek	P265/70R16	CA	San Bernadino	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.		Y		1
Katrina Owens V. Firestone	Bridgestone-Firestone	Firehawk SS	P235/60R15	AL		DOT: W2VL FH5 094			Oldsmodbile	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.				3

Keddington v. Michelin	Michelin-Uniroyal-Goodrich	BF Goodrich Trailmaker	P235/75R15	UT	Beaver County UT on I15. Mile 113	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.			1	1
Kelly v. Land Rover, et al.	Continental-General	Ameri 550 AS	P235/70 R16	CA	San Bernadino	A308443258		1995	Land Rover	Discovery	RR tread separation causing loss of control and rollover approx. 5 turns			1	
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.	Y		1	
Lewis v. Cooper	Cooper	Starfire Flite Line IV	P205/70 R15 M+S			U9MO85E 479	8/8/2004				Tire looked almost brand new - perhaps a spare				1
Mateo V. Cooper	Cooper	Cornell 700 HT	P215/75R15	AZ	Casa Grande / Pinal	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.				1
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.			1	
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.				1
Munoz V. Bridgestone-Firestone, Ford	Bridgestone-Firestone	Firestone ATX	P235/74R15	TX	Near Brady, 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		Y	1	
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.			2	2
Northview Fire Dept	Goodyear		385/65R22.5	NC	Northview	1991	2004	1992	Fire Truck		Right front tire was orignal on fire truck. Travelling back from a fire tire separated (vehicle governed at 65 mph), took 600 feet to stop the vehicle--no crash. [Failed tire and companion being shipped to SRS]				
Oates V. Cooper	Cooper Tire	Cooper Lifeliner Classic M/S	P225/70R15	AR	Hope	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.			1	2
Payan V. Ford, Continental-General	Continental-General	General Ameri 550	P235/70R16	Mexico		A308443417	7/17/2004	1998	Ford	F-150	Tire had 80% or its tread left when a separation occurred. Loss of control and rollover followed	Y		1	
Pena V. Continental General, Nissan	Continental-General	General Ameri-trac	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.		Y	1	

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			1+	1
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.		Y	1	
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.		Y		1
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 spearated causing loss of control rollover crash.				1
Ramos V. Goodyear	Goodyear	Kelly Springfield	P275/60R15			TAR7DEKR058		1983	Ford	E150	RR tread separation causing loss of control. Vehicle crossed into oncoming traffic where it was struck on the passenger side be a Chevy				
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.				1
Rivira	Yokohama	Medallist Radial A/S		TX	Bexar County	CCHCVEA200	6/11/2003	1988	Plymouth	Voyager	Travelling on I35, Left rear tread separation, loss of control rollover				1
Rocco V. Cooper	Cooper	Hercules Terra Trac	33x12.5R16.5 LT	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.			1	
Rodriguez/Reyes v. Yokohama Tire	Yokohama	Yokohama All Season 370G	P205/75R14	TX	Jim Wells Co.	FDREMLN492	3/10/2002	1990	Ford	Aerostar	Tire was on the vehicle when the vehicle was purchased used. Origins unknown.			1	2
Rowan V. BFS, Ford	Bridgestone-Firestone	Firestone FR480	P205/75R15	FL	Titusville / Brevard	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.		Y		1
Schifo	Continental General	General Ameri-Star	14	AZ		Mt. Vernon 1993									
Scudera V. BFS, Ford, Fuzzies, et al.	Bridgestone-Firestone	Firestone	P235/75R15	FL	Miami Dade	1992 tire	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.		Y		1
Selling V. Continental-General	Continental-General	Continental GT 8000	P195/60R14	TX	Near Wichita Falls	ACR43EW407	7/29/2002	1990	Acura	Integra	Tire separated (remained inflated), resulted in a loss of control rollover.			1	
Shinhoster 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.	Y			1
Teamer v. Michelin	Michelin	BF Goodrich Trail Maker	P225/75R15	MI		BHHHL01328		1993	Chevrolet	Astro	Tire was manufactured in 1988 and was a used tire sold from a Discount Tire Store in Battle Creek, MI. LR tire blew out causing loss of control and rollover.	Y		6	2
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.				1

Turner	Yokohama														
	Michelin	Michelin		Scotland		Made in 1987	2001		Peugot	205	Tire was put on a Peugot 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.			?	
Valdovinos V. Michelin	Michelin	Challenger Regul Sport	P275/60R15	NC		BER7N7HH488		1996	Ford	Explorer	Tire was purchased used. Tread separation, loss of control rollover.	Y		1	
Viel V. Kumho	Kumho	Marshal	P175/80R13	FL	Daytona Beach		8/29/1999	1994	Toyota	Tercel	LR tread separation causing vehicle to fishtail across the median where it was struck on the right-side passenger door by another vehicle			1	2
Vigil v. Michelin	Michelin														
Wiest V. Bridgestone/Firestone	Firestone	FR721	P215/75R15	AZ	Fredonia / Mohave	HYIIFF77033	6/27/2000	1995	Ford	Ranger	Truck was purchased from an auto auction in Salt lake City on 5/19/00 and was sold with a Firestone 721 full-size spare. The tire had almost full tread and showed no visible signs of deterioration. Sometime between the 5/19/00 and 6/27/00 the spare was mounted on the left rear. Tread separation occurred and led to loss of control rollover. Unbelted driver ejected		Y		1
Wilkenson V. BFS	Firestone	Firehawk SS10		WY		1995	8/21/2003	1978	Ferrari	308 GTB	LR tread separation causing loss of control and rollover. Victim ejected. The 8-year-old tires were purchased with the car 9 days earlier from a Wyoming doctor who rarely used the vehicle.				1
Williams	Michelin-Uniroyal-Goodrich		P235/75R15	FL	Suwannee County	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.				1
Williams et al, V. Pirelli/Armstrong, Sears	Pirelli-Armstrong	Sears Ice & Snow Roadhandler	P215/75R15	FL	Alachua	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.	Y		6	1
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 second hand 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. Truck burst into flames.	Y			2
Young v. Cooper	Cooper	Courser	LT245/75R16			UP11BTU453	8/31/2001				Tire failure caused driver loss of control, resulting in collision.				1
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.			0	0
	Goodyear	Kelly Springfield		TX		Made in 1996	May-04	1995	GM	Dodge Ram	Tread Separation of tire that was mounted on 1995 Dodge Ram.				

	Seiberling	Trailrider	31/10.5R15			VD60YWH285	4/17/2003	1979	Ford	Bronco	Tire purchased new from wholesaler at 7 years of age. Had several thousand miles on it. Suffered tread separation			1	
Owens V. Michelin	Michelin	Uniroyal Tigerpaw	235/75R15	OK	Wheeler	ANHLHU11247	3/16/2005	1997	Ford	Explorer	The spare tire was rotated onto the right rear of the vehicle earlier in the day of the crash. The vehicle was travelling on the highway with 5 occupants when the right rear tire suffered a tread belt separation causing the driver to lose control. Vehicle rolled and all occupants were ejected (unbelted).				2
														51	52