

# TREND POLL RESULTS

## U.S. DRIVERS' BEHAVIORS AND OPINIONS REGARDING TIRE PRESSURE AND TIRE MAINTENANCE

MAY 2009

### Methodology

- Total Sample Size: n=1,000
- Eligibility: Adult Drivers and Vehicle Owners
- Interview Dates: May 8-18, 2009
- Interview Method: Telephone
- Client: Rubber Manufacturers Association
- Margin of Error: Plus or minus 3% at the 95% confidence level

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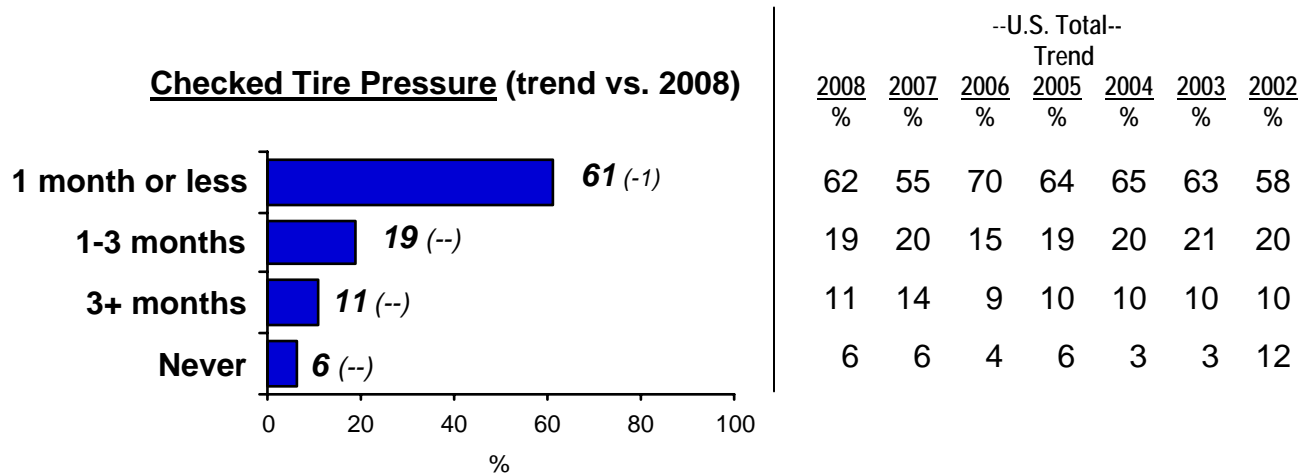
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## I. Tire Pressure.

This year's reporting of last time drivers checked their vehicle's tire pressure (61% checked in last month) is virtually unchanged from the 2008 measure. This volunteered measure of "last time checked" has ranged from a low of 55% in 2007 to a high of 70% in 2006 for those who checked tire pressure within the last month.

### Last Time Checked Tire Pressure (Volunteered Responses)



Combining those saying they checked tire pressured over the last three months, "recent" checkers are at 80% -- again, virtually identical to 2008 percentages.

The bounceback in reported "last month" tire pressure checking measured in 2008 from the dip in 2007 is now sustained for a second straight year.

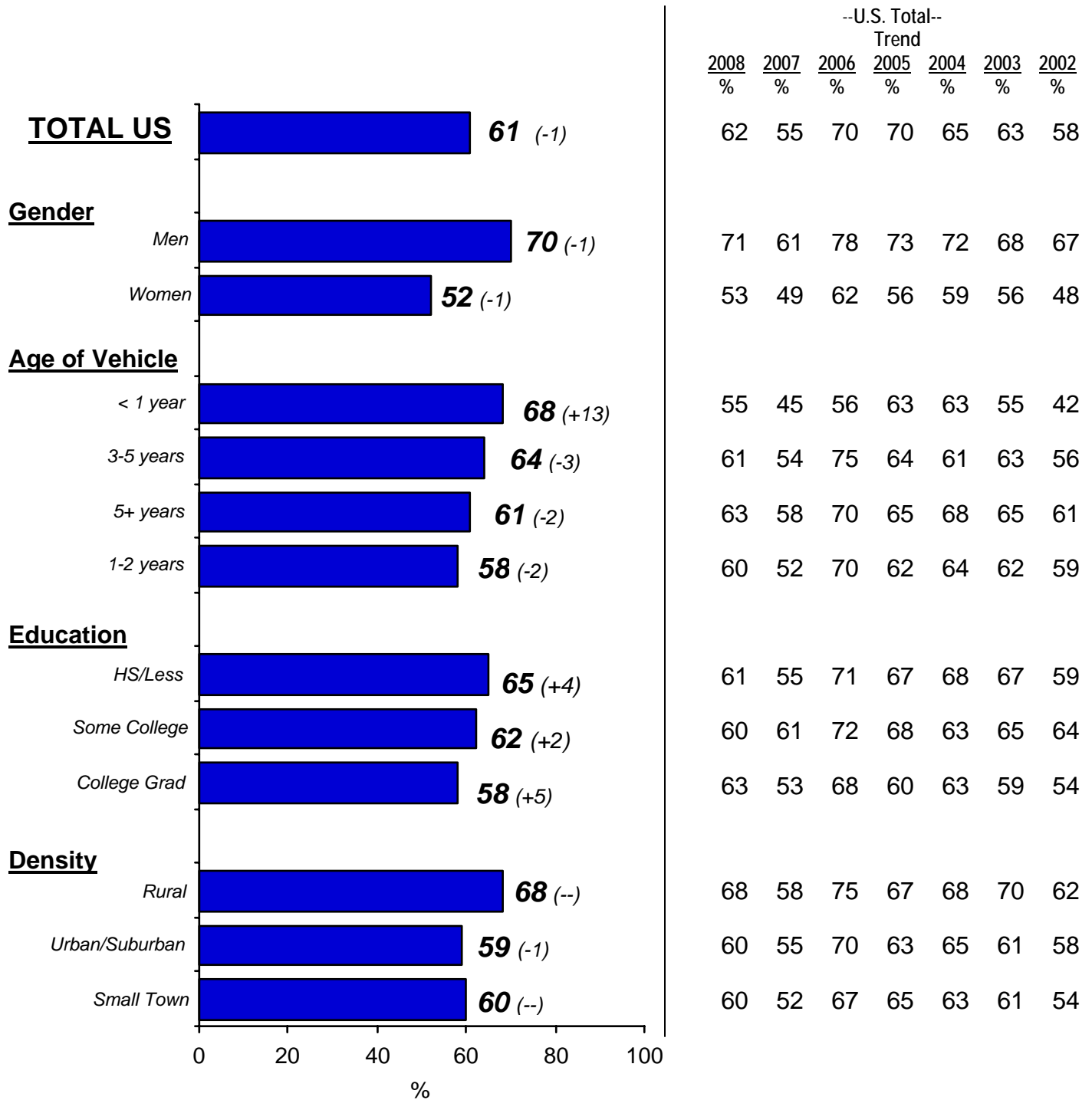
Historically, the high-water mark of 70% “last month” checkers in February 2007 followed a sharp run-up in gas prices in the wake of Hurricane Katrina and other world events. Other polling at that time showed a high awareness in the link between tire pressure and gas mileage. In early 2007, however, national gas prices retreated to the low \$2 levels for “regular” nationwide. In early 2008, gas prices were back up; averaging near \$3 per gallon. Throughout Summer 2008, gas prices rose to historic highs well over \$4 per gallon. In Spring 2009, the economic crash and recession of Fall/Winter 2009 brought gas prices back down to the low \$2 per gallon range, but evidently, memories of historic gas price highs linger.

Subgroup Analysis: Incidence of most recent (“within last month”) checking of tire pressure is fairly steady with all subgroups of drivers with the exception of new vehicle owners who have spiked up to 68% (+13). This sample segment, however, is the smallest size of any survey taken (since 2002) due to the recessionary impact on new vehicle purchases. As such, a small sample size (n=44 respondents) is prone to wider swings and a larger margin of error.

As usual, men remain more frequent checkers (70%) than women (52%) by a fairly wide margin.

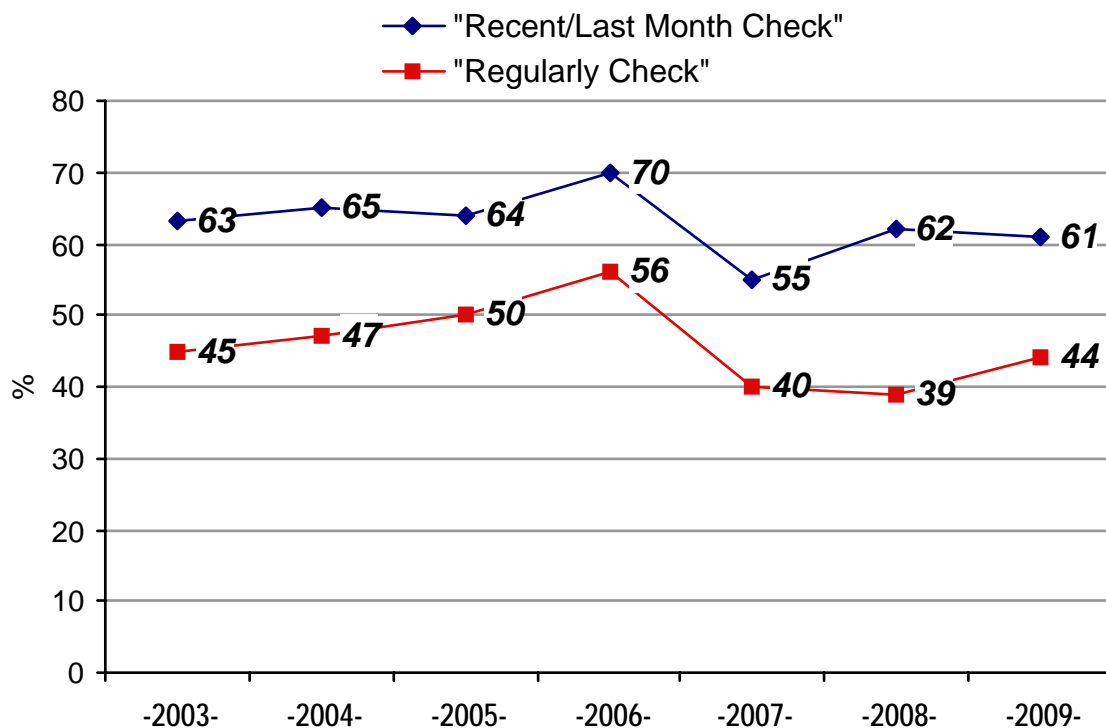
Also, rural residents continue their pattern of being slightly higher recent tire pressure checkers (68%) than residents of metro (59%) or small town (60%) areas.

**Tire Pressure Breakout (Trend vs. 2008)**  
 (% Volunteering They Checked Tire Pressure Within Last Month)



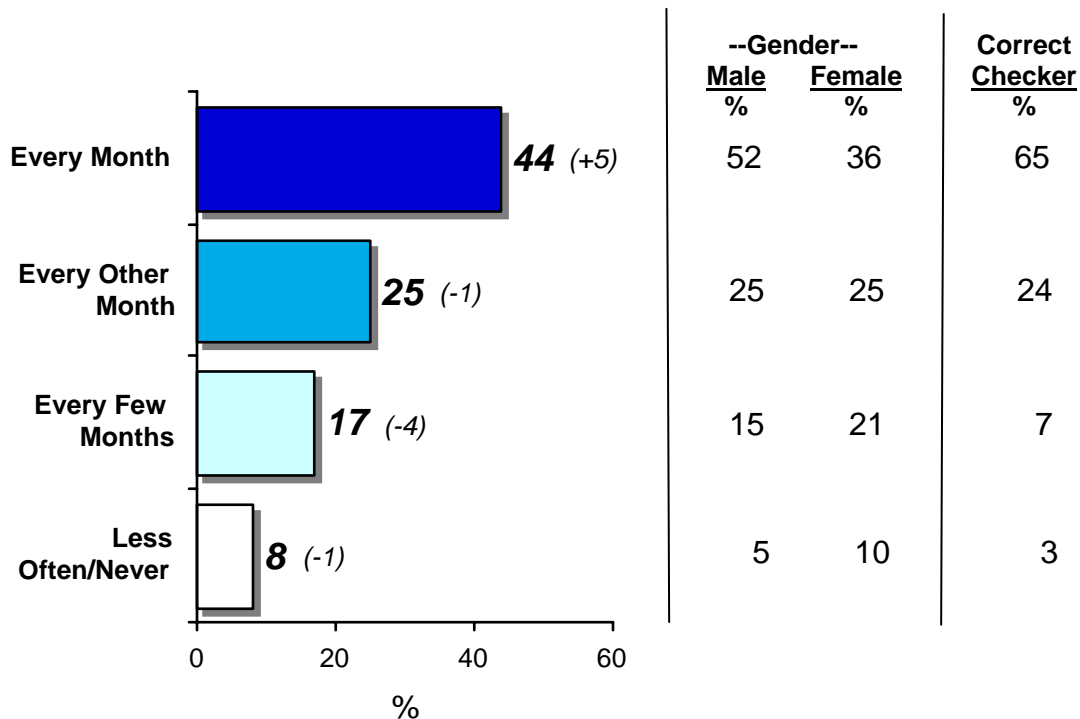
Whereas 61% voluntarily report checking their tire's pressure within the last month, just 44% report being "regular" monthly checkers. This 17-point gap between "regular" and "recent" monthly checking is more narrow than the 23-point gap in 2008. Reporting of "regular" monthly checking (now 44%) is up five points since 2008 but still below levels of 50% reported in 2006 and prior.

### Reported Tire Pressure Monthly Check: "Recent/Last Month" vs. "Regular"



As the following chart shows, 69% report “regularly” checking tire pressure at least every other month. This number is up 4 points from 2008

**Frequency of Drivers Regularly Checking Tire Pressure**  
(Trend vs. 2008)



Men (52%) continue to be more likely than women (36%) to report regularly check tire pressure monthly. This gender gap exists at every age group ... +26 for men under 40, +28 for men aged 40 to 59 and +16 for men 65+.

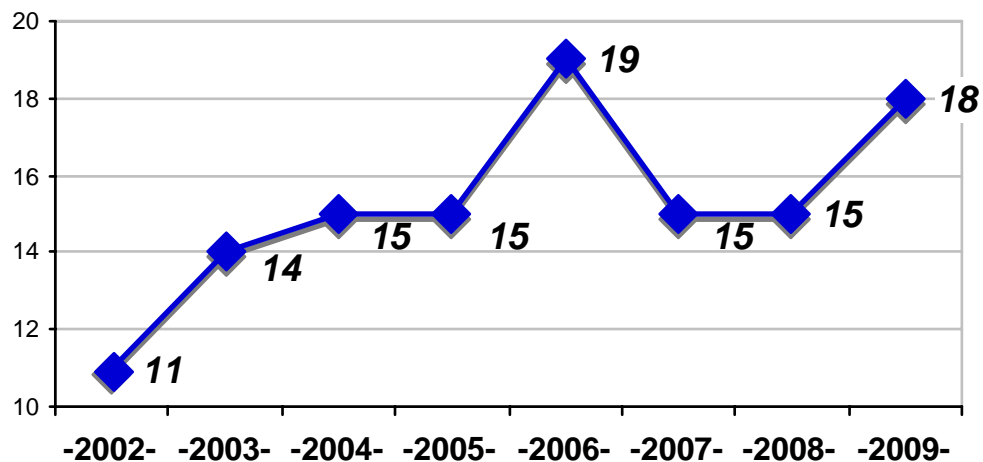
Two-thirds of “correct checkers” report regularly checking tire pressure.

## II. Tire Smart.

The report of frequent tire pressure checking (checked tire pressure within previous month) is just one measure of proper behavior. To be truly “tire smart,” a driver should also know who sets proper inflation pressure and when to best check a tire’s pressure.

The percent of U.S. drivers who are “tire smart” correct-checkers now stands at 18% -- up from 15% in 2008, 2007, 2005, and 2004. Thus, despite a constant level of “recent” tire pressure checking from 2008 to 2009, U.S. drivers still gained a bit more “tire smart” knowledge over the past year about other factors; most notably, checking tires when cold not warm.

**% “Tire Smart” \***  
*(Trend Over Time)*



\* “Tire Smart” =

- Checked tire pressure within LAST MONTH
- Know to check tire pressure COLD
- Know to use pressure set my VEHICLE MANUFACTURER

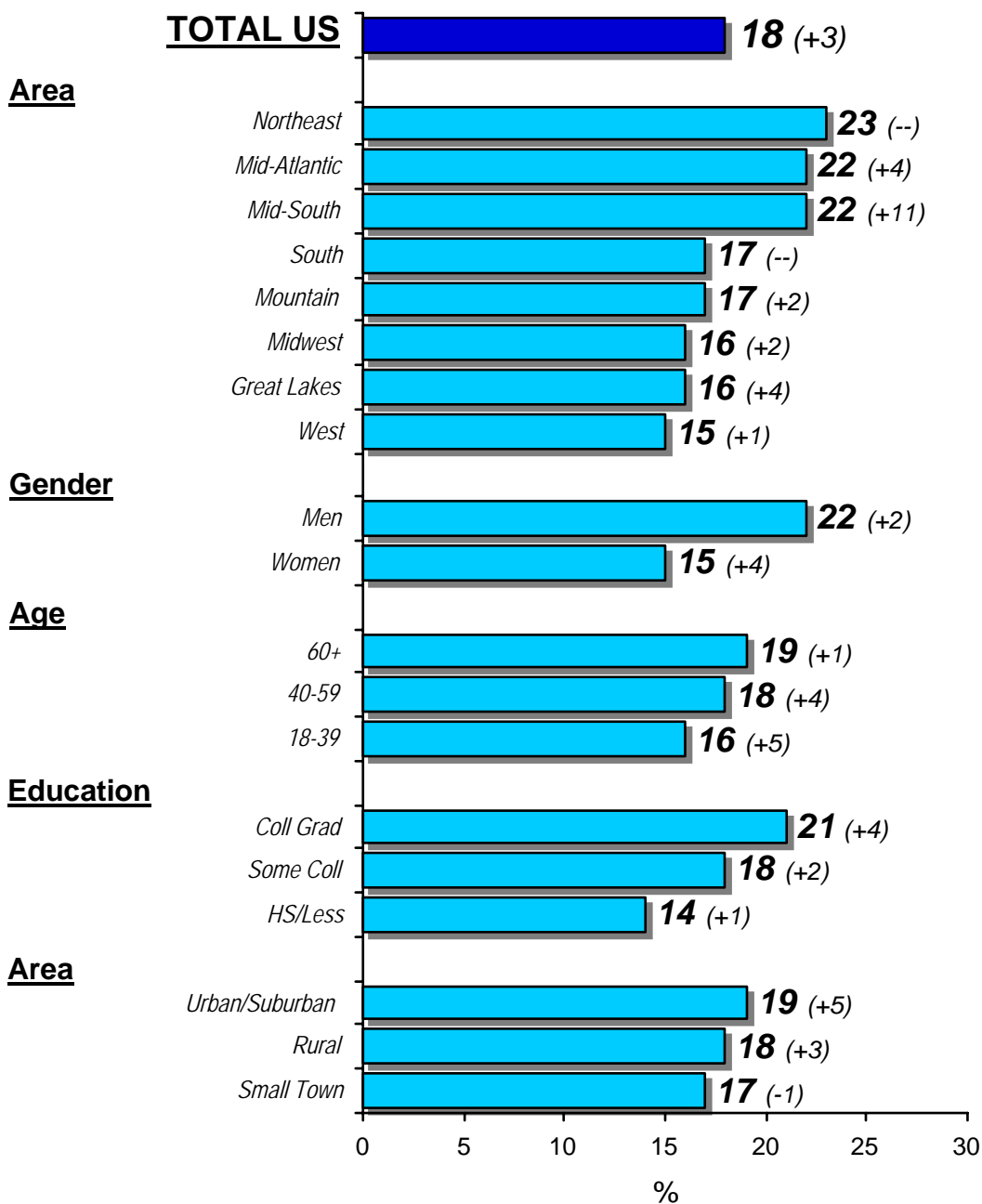
Charting the percent of “tire smart” drivers by region of the country shows drivers in the Northeast and Mid-Atlantic continue to be most “tire smart” with biggest gains in the proportion of correct-checkers coming in the Mid-South region (+11).

Youngest drivers – 18 to 39 – still lag behind older drivers but have gained (+5) more than others in their “tire IQ” since last year than have seniors aged 60+ (+1).

Men (22%) continue to edge women (15%) in the three correct-checker measures by a wide margin.

College graduates (21%) also continue to be more “tire smart” than those with a high school or less education (14%).

## % "Tire Smart" \*



\* "Tire Smart" =

- Checked tire pressure within LAST MONTH
- Know to check tire pressure COLD
- Know to use pressure set my VEHICLE MANUFACTURER

For the first time since measured in nationwide polling, nearly as many U.S. drivers (42%) now believe proper tire pressure inflation standards are set by the vehicle manufacturer as by the tire manufacturer (44%).

The current minus 2-point gap in “correct knowledge” is much lower than the 14, 17, 18, 19-point gaps of 2003 and 2006.

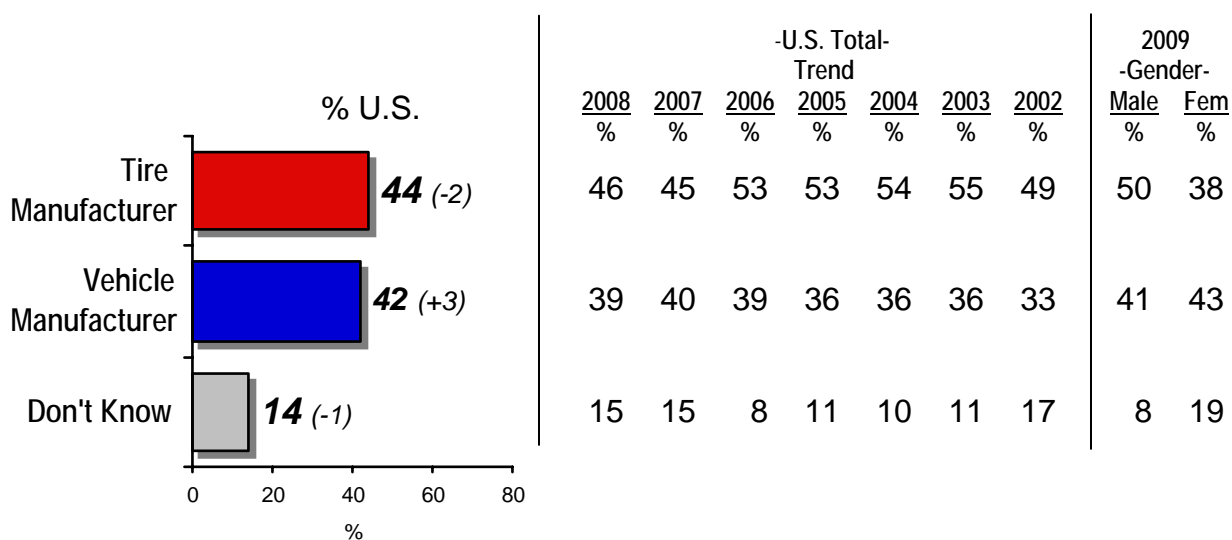
### Source for Proper Vehicle Tire Inflation Pressure

*From what you know, who sets the proper tire inflation pressure for your car or your vehicle?*

- *The tire manufacturer, who has it printed on the side of the tire.*

--OR--

- *The vehicle manufacturer, who has it printed either in the owner's manual or somewhere on the interior of the vehicle.*

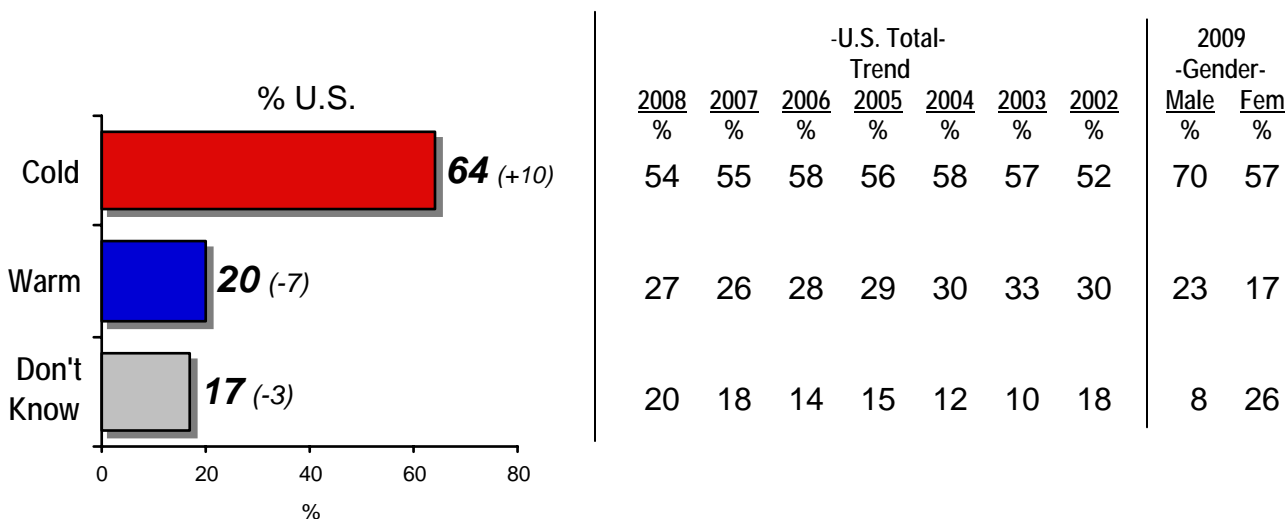


A 64% majority of U.S. drivers now correctly report the proper temperature (cold) to check tire pressure. This level of awareness represents a large 10-point bump up in “cold check” awareness since 2008 and is higher than any measure over the last six years. Men (70%) continue to be more correct on this measure than women (57%). Since women remain less likely to guess the answer (26% “don’t know”), they are also less likely to give the wrong “warm check” answer (17%) as are men (23%). The nationwide “warm check” percentage of 20% is also significantly lower than any previous.

### Best Time to Check Tire Pressure

*When is the best time to check the pressure of your vehicle’s tire? Is the best time when your tires are...?*

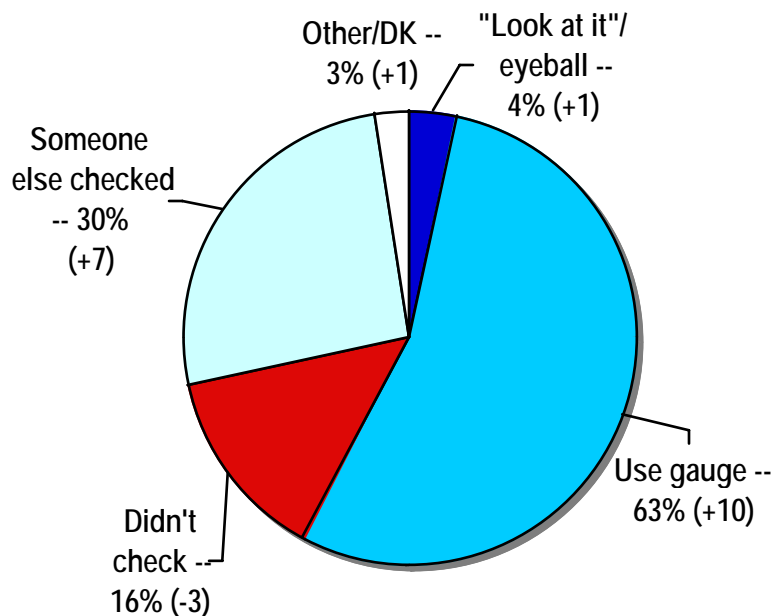
- Warm, because you have driven on the tires.
- OR--
- Cold, because you have not driven on the tires.



The trend in increased tire inflation awareness also extends to “how” U.S. drivers report checking tire pressure. Now, 63% of drivers who report checking their tire pressure within the last 3 months properly checked their tire’s pressure in the last three months using a tire gauge. This is a 10-point jump over 2008/2007 levels. The previous high in tire gauge usage was 60% in both 2005 and 2003. Only a small fraction (4%) continues to say they “eyeballed” the pressure in their tires as the only method of checking tire pressure.

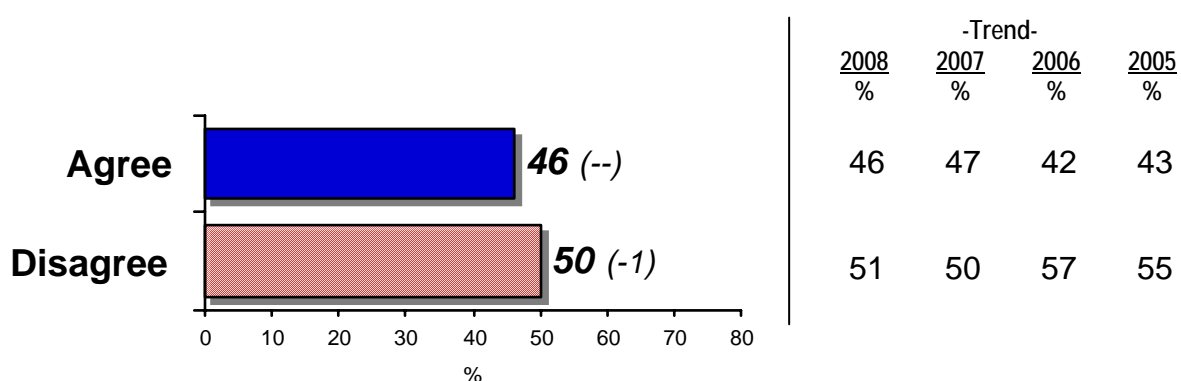
### Checking Tire Pressure

*What exactly did you do to check your tire’s air pressure?  
(Asked if checking within last three months)  
(Trend vs. 2008)*



Despite changes in other measures of tire pressure monitoring awareness, there has been no change in the number of drivers who agree that simply “looking” is a sufficient test of a vehicle’s tire pressure. Currently 46% agree and 51% disagree – unchanged from the previous two years’ results. As true in previous surveys, belief in the validity of the “look at” test falls with formal education; those with just a high school education are 56% agree that “look only” is a sufficient test vs. 47% for those with some college and 40% for college graduates.

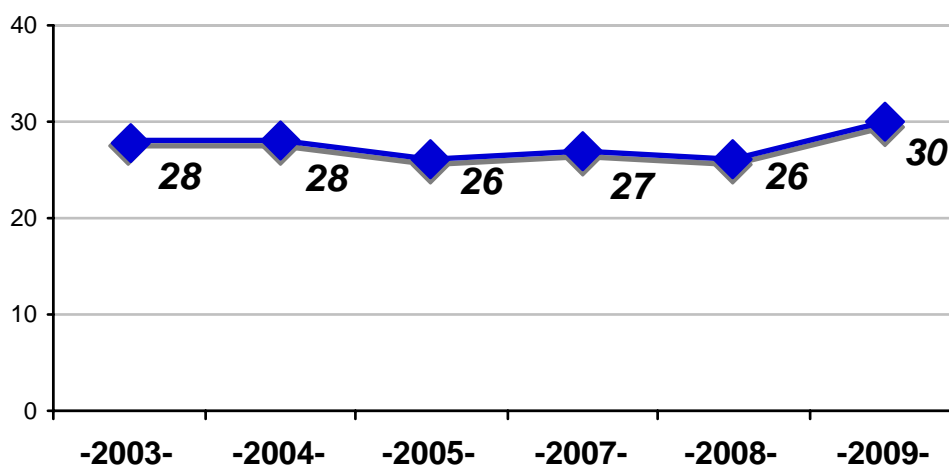
***“It is possible to tell if your tire pressure is too low simply by looking at it.”***



In summary, while there has been some sharp gains in awareness surrounding when to check tire pressure (cold) and how to check it (with a tire gauge) as well as a growing understanding proper inflation pressure is set by the tire, not vehicle manufacturer, the overall level of reported “recent” monthly checking is flat, so the overall Tire Smart population is up ... but only up from 15% to 18% of the U.S. driver population.

A slightly higher number (30% -- a +4 trend) of U.S. drivers now report having “ever” checked tire pressure in their vehicle’s spare tire compared to 2008. As shown below, the current measure is a slight up-tick from flat trends on this behavioral measure back to 2003.

***“Have you ever checked the air pressure in your spare tire?”***

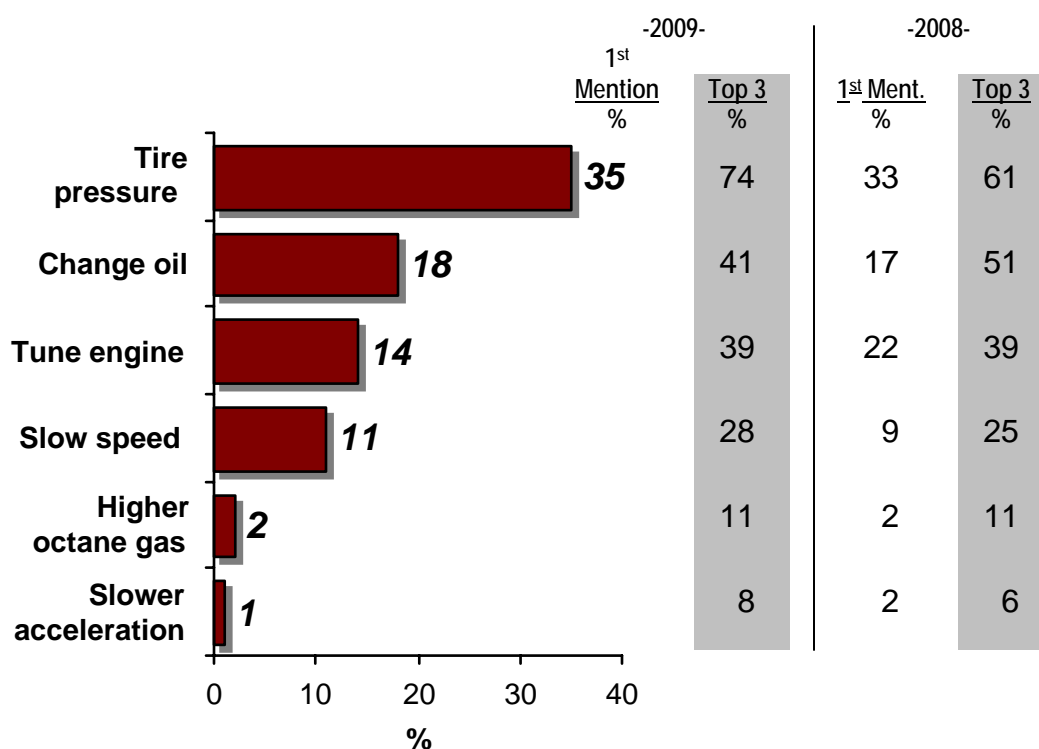


Truck owners, Mountain state residents, and men over 40 are highest in reporting the check of a spare tire’s inflation.

### III. Tire Pressure and Gas Mileage.

America's drivers' awareness of the link between proper tire inflation and better gas mileage continues to grow. While 35% volunteer "correct tire pressure" as the #1 action to take to improve vehicle gas mileage (+2 over 2008), when given three choices, 74% now pick tire pressure – up 13 points over 2008 levels.

#### Volunteered Actions to Take to Improve Gas Mileage

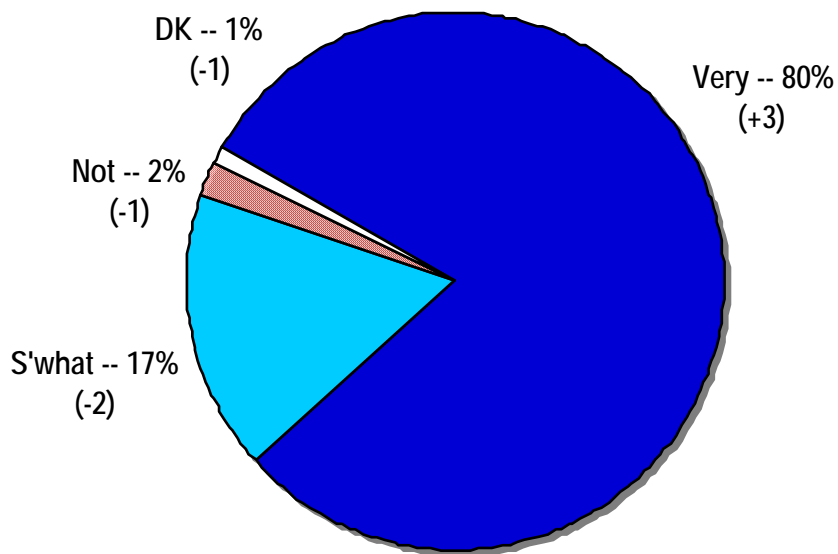


In first choice for best actions to improve gas mileage, "proper tire pressure" is up two points (from 33% in 2008) but "engine tuning" (-7) is down. As such, "changing oil" (+1) is now the second most frequently mentioned action with "engine tuning" third and slower speed fourth.

When asked in a direct and “aided” format, 80% say proper tire inflation pressure is “very important” to getting the best possible gas mileage. This is a consistently high measure from 78% in 2006, 81% in 2007, and 77% in 2008.

### **Importance of Tire Pressure to Gas Mileage (Trend vs. 2008)**

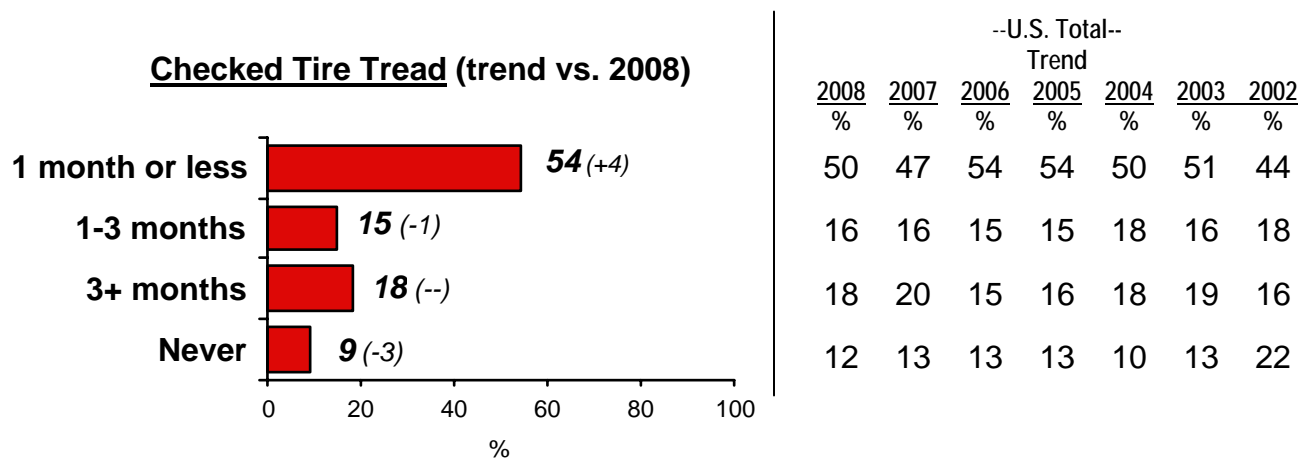
*In your opinion, how important is proper tire pressure to getting the best possible gas mileage out of your vehicle – very important, somewhat important, or not that important given all of the other factors that determine a vehicle’s gas mileage?*



## IV. Tire Tread Wear.

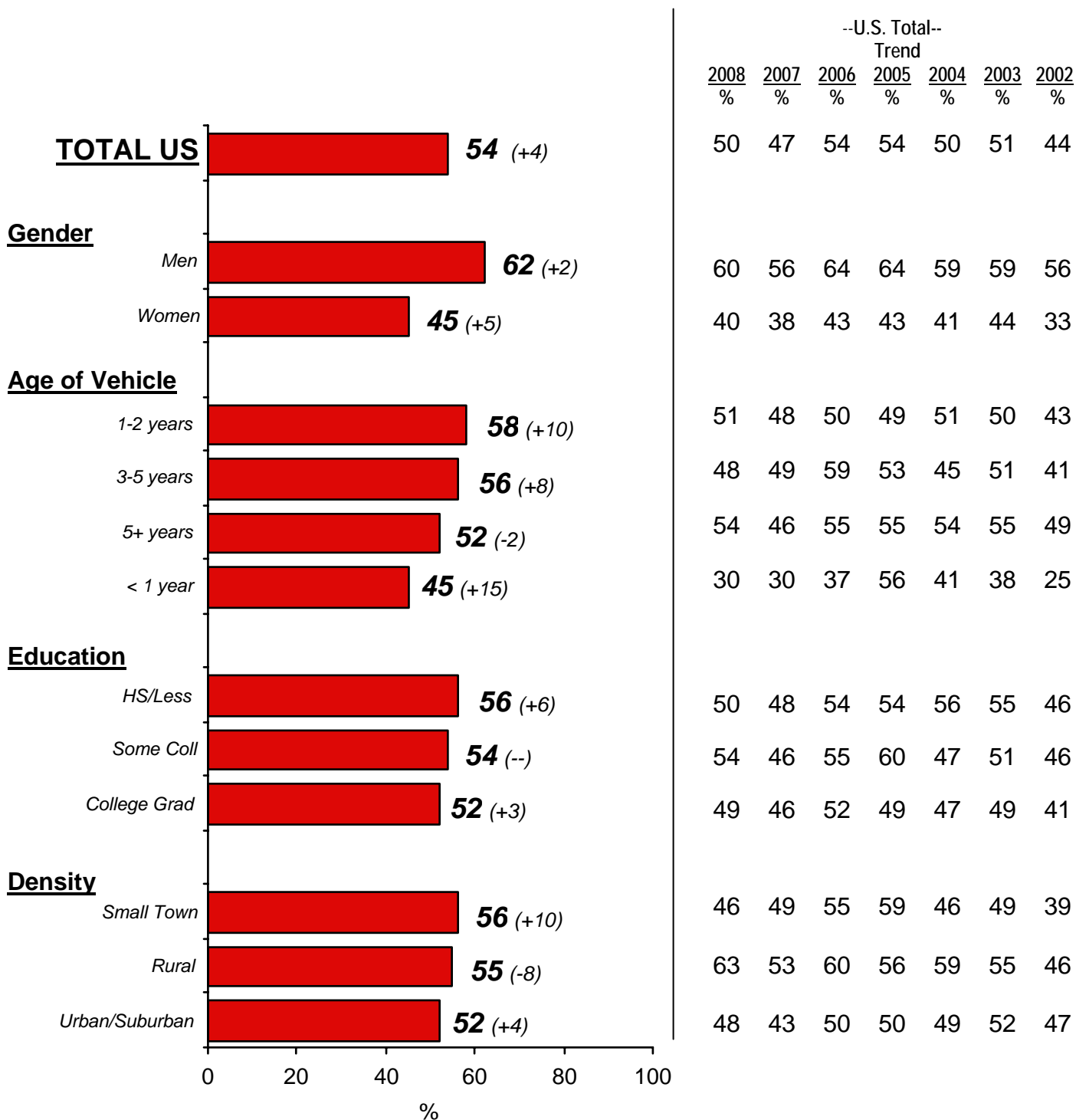
A 54% majority of U.S. drivers now report checking their tire's tread wear within last month. This reported frequent tire wear checking is on the high end of monthly checking; equal to 2005 and 2006 levels.

### Tire Maintenance Behaviors: Last Time Checked Tread for Wear (Volunteered Responses)



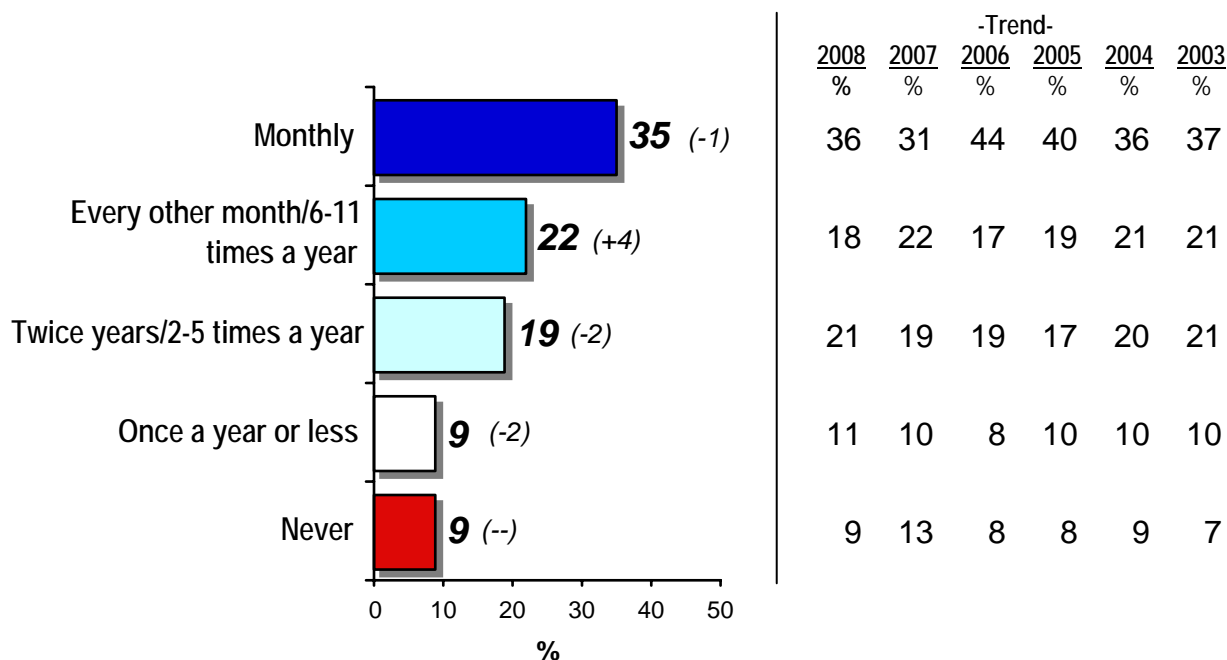
Men (62%) continue to be more frequent tread wear checkers than women (45%). Likewise, new vehicle owners are still less aggressive tire wear checkers. Those who are “correct checkers” of tire pressure are at 69% for reported checking of tire wear in the previous month.

### Checked Tire Tread (Trend vs. 2008) (% Volunteering They Checked Tire Tread Within Last Month)



While 54% claim to have checked tread wear within the last month, fewer (35%) say they check habitually on a monthly basis. This level of reported regular tread wear checking is unchanged from 2008 and the same as in 2004 and 2003 – all of which are lower than the 2006 (44%) high mark.

**How often on a REGULAR BASIS do you check your tires' tread for wear?**  
*(Trend vs. 2008)*

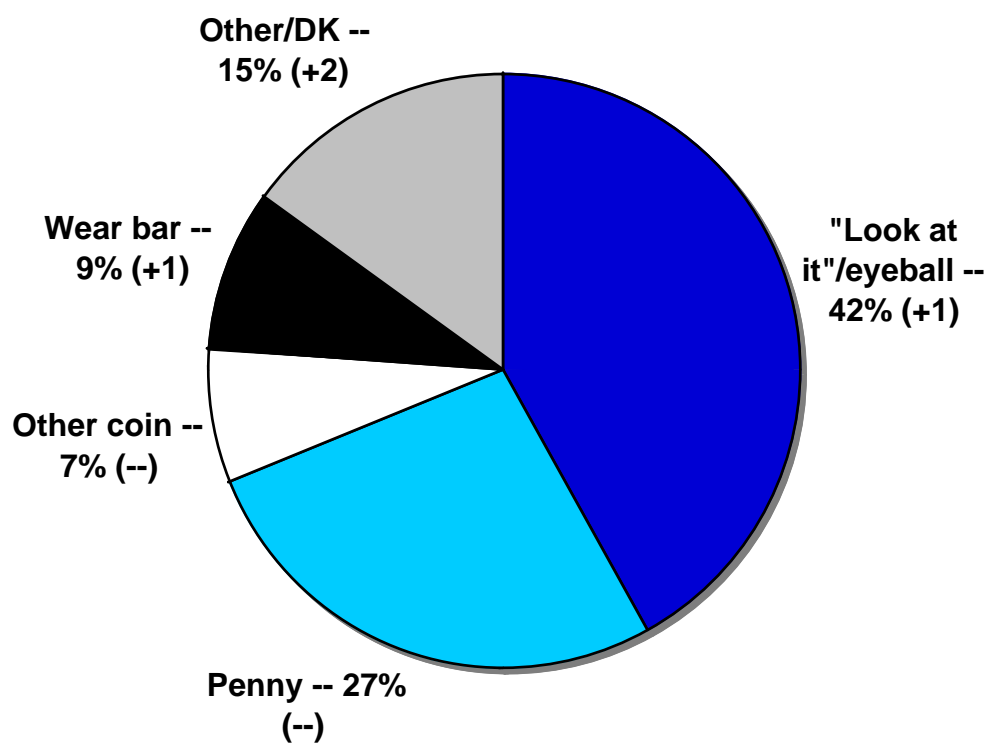


U.S. drivers' behavior in how they check tire tread wear is unchanged in 2009 from 2008. The plurality (42%) continues to “eyeball” tread wear; compared to 27% doing the “penny test.” Combined, the “penny test” and “other coin use” are still at 34%.

### Best Way to Tell if Tire Tread is Worn Out

*(Volunteered Responses)*

*(Trend vs. 2008)*

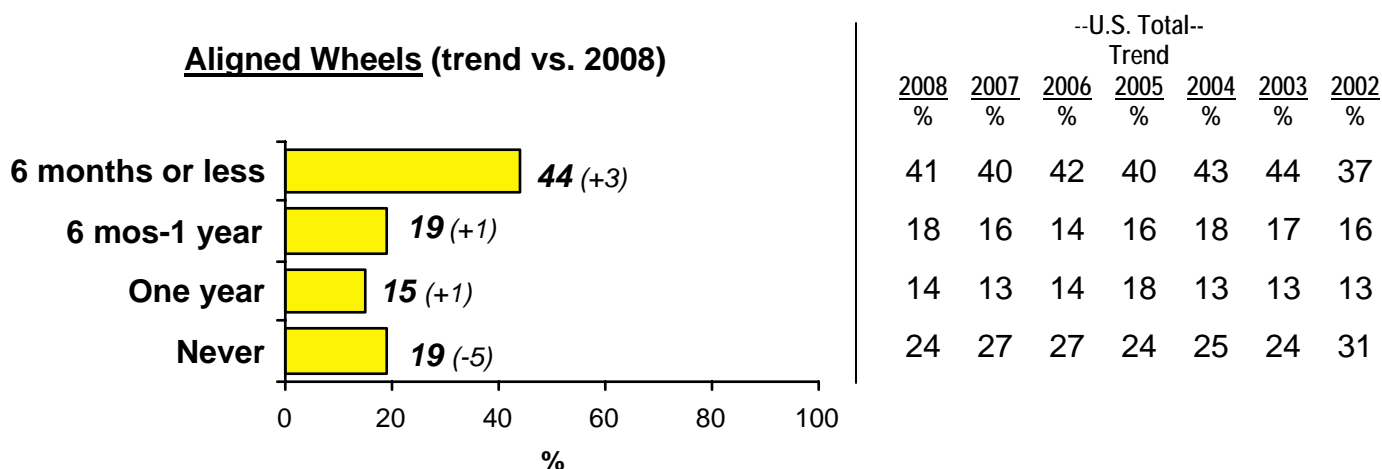


The current 27% “penny test” awareness – while unchanged from 2008 – is still at the high end of the trend line that has ranged from a low of 17% (2006) to a previous high of 25% in 2007.

## V. Other Tire Maintenance Behaviors.

Highly frequent wheel alignment (within the last six months) continues to remain steady; 44% aligned wheels in the last 6 months, 63% did so in the last year ... similar to the number reporting annual alignment in past years.

### Tire Maintenance Behaviors: Last Time Aligned Wheels (Volunteered Responses)

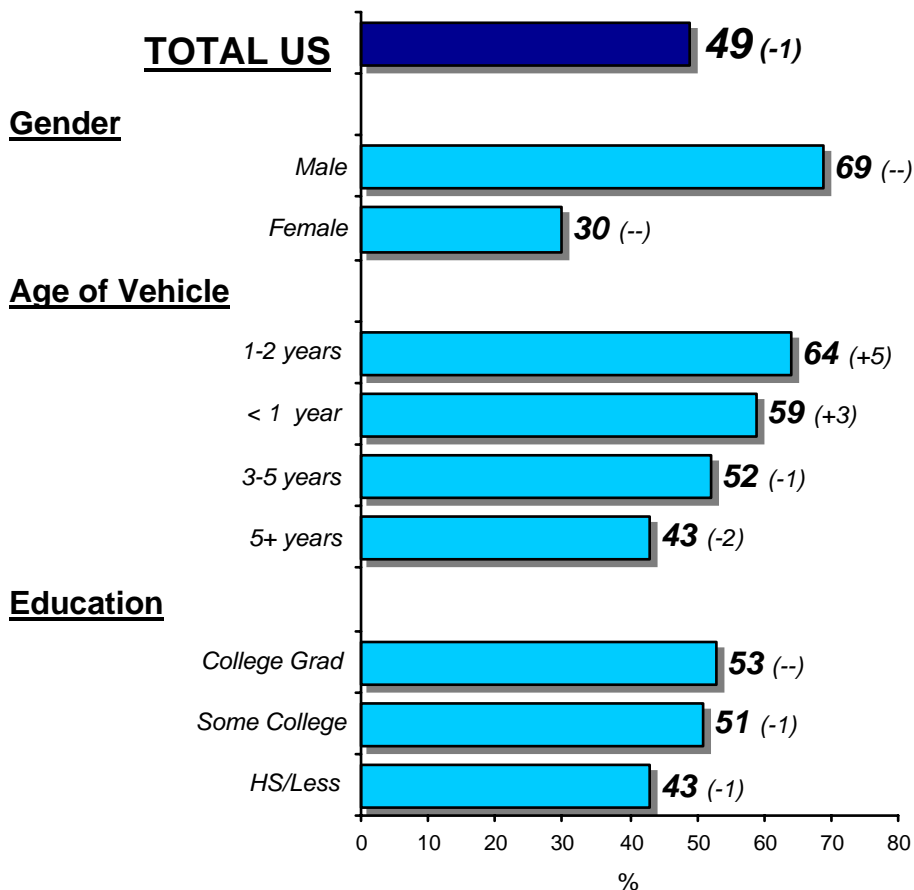


## Tire Pressure Monitoring System (TPMS).

Awareness of tire pressure monitoring systems (TPMS) has leveled off, but experience with TPMS continues to rise. About half (49%) of U.S. drivers say they are aware of TPMS; unchanged from 2008. Men (69%) continue to be more than twice as aware of TPMS than women (30%).

### Awareness of TPMS: Tire Pressure Monitoring System (% Yes) (Trend compared to February 2008)

*Have you heard or read about a new piece of equipment being installed on some new vehicles called a "tire pressure monitoring system"?*

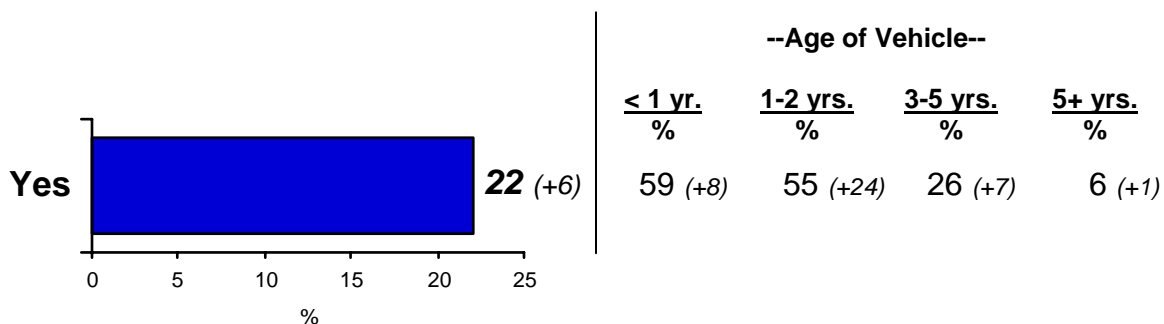


TPMS awareness continues to be associated with age of vehicle owned. Newer vehicle owners (2 years or less) are 63% aware of TPMS. Those with vehicles 3 to 5 years old drop to 52% awareness while those driving vehicles 5 years old or more are just 43% aware.

More than one-in-five (22%) of U.S. drivers now claim their vehicle is equipped with a TPMS -- +6 points from 2008 and +11 since 2007. As it should, "TPMS equipped" drops by age of vehicle with 59% (+8) of newest vehicle owners saying their vehicle has this monitoring system. TPMS has spiked to 55% (+24) among those in vehicles 1 to 2 years old but after 3 years, frequency drops to 26% for vehicles 3 to 5 years old and just 6% for those over 5 years old.

### TPMS: Vehicles with TPMS

*Is the vehicle you drive most often equipped with a Tire Pressure Monitoring System?*



Having a TPMS has no impact on actual tire pressure checking behavior.

Among TPMS vehicle drivers...

- 63% checked their tire pressure within the last month compared to 61% without TPMS;
- 47% say they REGULARLY check tire pressure monthly compared to 43% without TPMS.

Thus, even as TPMS is becoming more common in vehicles, it does not seem to be changing drivers' tire pressure checking behavior.

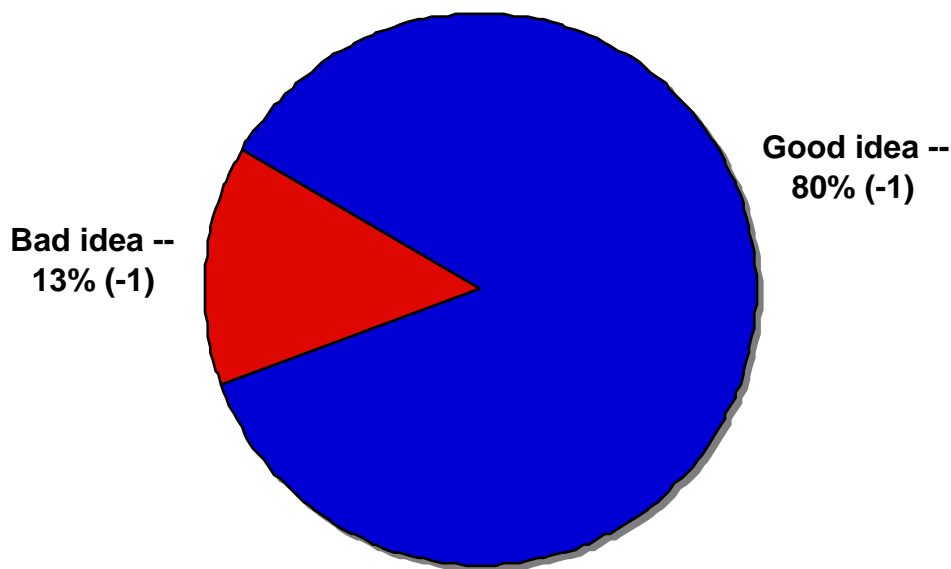
When explained, the overwhelming majority of U.S. drivers continue to think TPMS is a good idea. The 80% positive reaction is nearly identical to the 2008 and 2007 measures.

### **Opinion of TPMS (Trend vs. 2008)**

*Let me give you some more information about this tire pressure monitoring system.*

*Starting next year, in 2008, all new cars will be equipped with a tire pressure sensor that would alert the driver when at least one tire on the vehicle has low inflation pressure.*

*Do you think this proposed regulation is a good idea or a bad idea?*



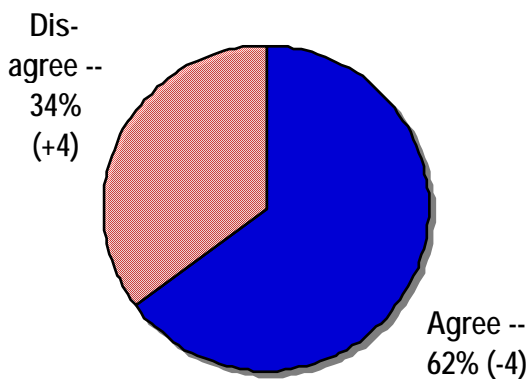
While the introduction of TPMS in vehicles has had little impact on recent or regular tire pressure checking behaviors, drivers report TPMS may have a significant impact on frequency of manually checking tire pressure in the future.

Sixty-two percent (62%) agree they would be “less concerned with routinely maintaining” their tire’s recommended pressure if their vehicle had TPMS; down slightly, but similar to previous years’ measures.

### TPMS: Impact on Tire Pressure Maintenance (Trend vs. 2008)

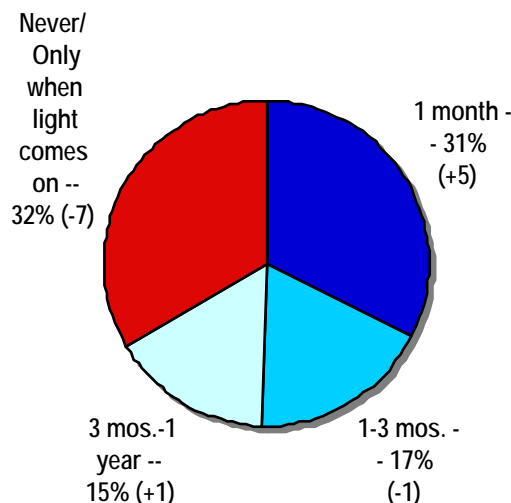
#### Less Concerned

*Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with this statement: “If the vehicle you drive most were equipped with one of these tire pressure sensors with a dashboard indicator light warning of low tire pressure, it would allow you to be less concerned with routinely maintaining your tires’ recommended tire pressure”*



#### How Often Check

*If your vehicle had a Tire Pressure Monitoring System with a dashboard light warning of low tire pressure, how often would you regularly check your tires with a tire pressure gauge?*



One-third of drivers (32%) say they would check tire pressure “never” or “only when the warning light comes on” if their vehicle were equipped with TPMS. An equal proportion (31%) says they would still check tire pressure monthly even with TPMS. This 31% “monthly” represents a drop-off from 44% who now report regular monthly checking of their tire pressure.

Again, the frequency of anticipated “monthly” checking tire pressure if TPMS were installed in the vehicle (31%) is much lower than the ...

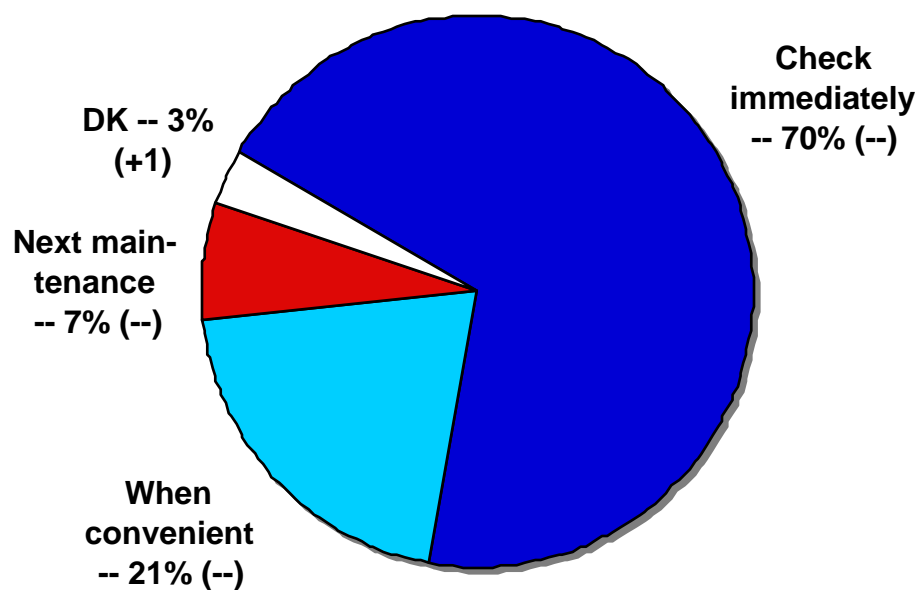
- 61% who report checking last month; or
- 44% reporting “regular” checking on a monthly basis;

Just 70% of U.S. drivers say they would immediately check tire pressure if their TPMS sensor light came on (no change in trend). This means that 30% would NOT immediately check their tire's pressure if a TPMS warning light came on; most of whom (21%) would wait "until it's convenient."

### **TPMS: What Drivers Will Do (Trend vs. 2008)**

*As new vehicles having tire pressure monitoring system become standard equipment, which course of action do you think will be most common for drivers when that warning light comes on*

- *Check pressure in all tires immediately.*
- *Check pressure in all tires within a few weeks when it's convenient.*
- OR--
- *Wait until a next maintenance or regular service is performed on the vehicle?*

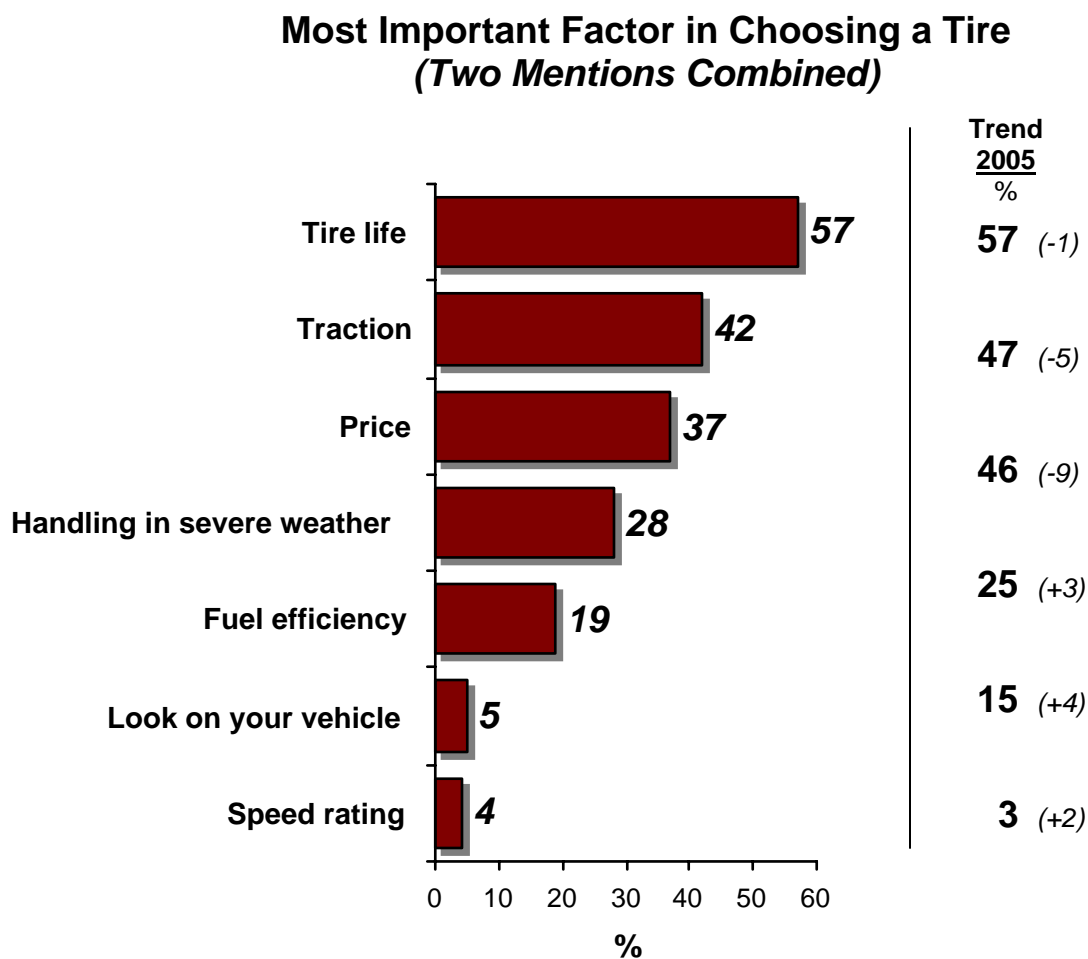


Current TPMS drivers are more likely to be attuned to the need to check immediately (76%) than those without the monitoring system (68%); but still, one quarter of current TPMS vehicle drivers would wait to check.

<u>If light comes on...</u>	<b>-Have TPMS-</b>	
	<u>Yes</u> %	<u>No</u> %
Check immediately	76	68
Check within few weeks	18	22
Next service	4	7

## Importance of Gas Mileage and New Tires

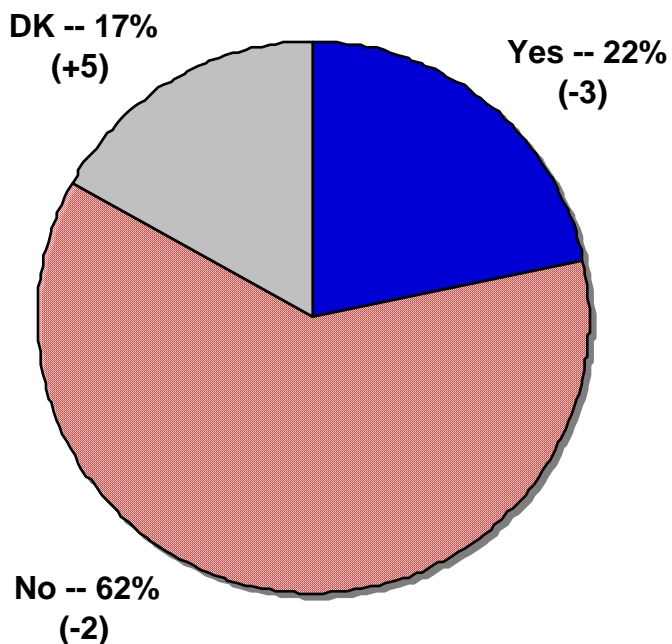
U.S. drivers continue to rate “tire longevity” ahead of factors such as “traction,” “price,” or “severe weather handling.” Fuel efficiency (19% choice as a 1<sup>st</sup> or 2<sup>nd</sup> choice) is a distant 5<sup>th</sup> in importance.



By nearly three-to-one, U.S. drivers say they would not purchase “low roll” tires that improve gas mileage if they knew such tires would not last as long as other tires.

### Lower Rolling Resistance (Trend vs. 2005)

*Some tires are engineered to have “lower rolling resistance” which helps slightly improve a vehicle’s gas mileage. But, some experts say such “lower rolling resistance” tires wear out faster and need to be replaced more often than other tires commonly in use today. Knowing this, would you purchase tires that helped improve your vehicle’s gas mileage even if they did not last as long?*



Given “tire life” and “price” are much more important factors in a new tire purchase, it makes sense that drivers would reject the “low roll” option. Responses have changed little since 2005 despite historic swings in gas prices.