

Changes in the U.S. Household Vehicle Fleet – September 2009



NHTS BRIEF

National Household Travel Survey

U.S. Department of Transportation
Federal Highway Administration

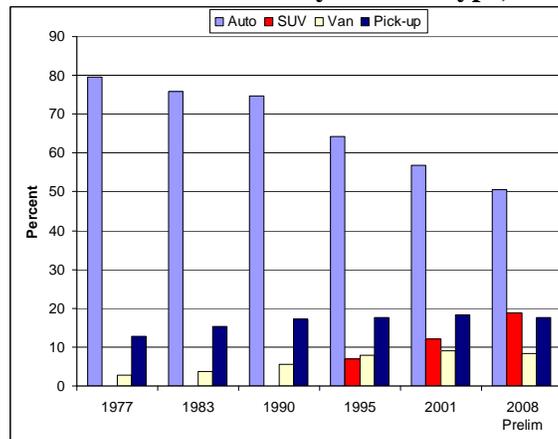


The preliminary 2008 NHTS shows a number of important changes in the U.S. household-based vehicle fleet¹. The NHTS collects detailed information on household vehicle ownership, including the type of vehicles, model year, odometer reading, and daily use characteristics.

Perhaps reversing a longstanding trend towards the aging of the household vehicle fleet, the preliminary 2008 NHTS shows a leveling off in average vehicle age--in 1977, the average household vehicle was 6.6 years old, by 2001 average age was 8.9 years, but declined slightly to 8.3 years in the 2008 preliminary data. Older vehicles (10 years or older) accounted for 39 percent of the household fleet in 2001, but their share declined slightly to 37 percent in 2008. At the other end of the spectrum, the number of newer vehicles rose, including the addition of nearly 5 million hybrid or alternative fuel vehicles.

Maybe more importantly, the mix of household vehicles continues to include fewer passenger cars and more SUVs. SUVs account for over 18 percent of all household vehicles in 2008, an increase from 12 percent in 2001, as shown in Exhibit 1.

Exhibit 1 – Percent of Vehicles by Vehicle Type, 1977 to 2008



Source: NHTS data series

The recent Car Allowance Rebate System or ‘Cash for Clunkers’ program encouraged people to trade in older vehicles for new, more efficient vehicles. According to the latest information, nearly 700,000 vehicles were exchanged (out of an estimated 24 million vehicles in the passenger fleet that qualified, e.g. between 10 and 25 years old and averaging 18 mpg and less). A whopping 84 percent of the trade-in vehicles were older SUVs and pickups, while 60 percent of the vehicles purchased through the program were cars.

¹ The household fleet consists of passenger vehicles (cars, station wagons, vans, SUVs and pick-ups) available for use and does not normally include rental cars, company or government fleets, or taxis. The 2008 NHTS also includes light electric vehicles, which were not included in this analysis.

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However, SUVs continue to be a significant part of the vehicle mix, and many SUVs are now aging. According to the preliminary data, the number of SUVs which are 10 years old or more increased 47.5 percent since 2001 as shown in Exhibit 2. On the other hand, passenger cars showed a sizeable increase in vehicles less than 2 years old. However, the popularity and lifespan of SUVs will continue to impact fleet characteristics for years to come.

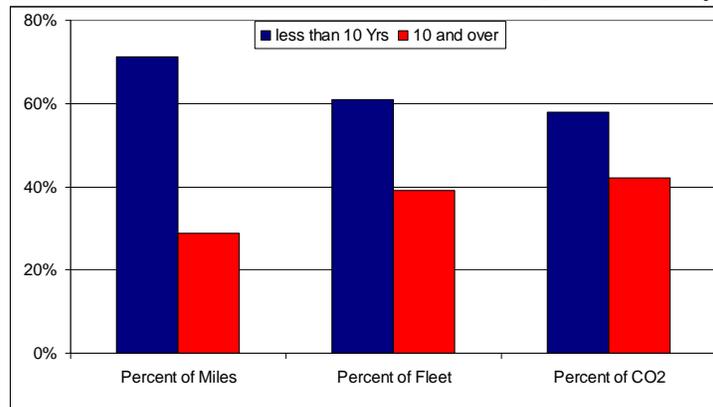
Exhibit 2 – Percent Change in Number of Vehicles by Vehicle Type, 2001 to 2008

	0-2 years old	3-5 years old	6-9 years old	10 years and more
Car	28.8%	-12.6%	-7.3%	-20.1%
Van	-8.3%	-7.7%	6.0%	6.2%
SUV	36.5%	34.6%	49.1%	47.5%
Pick-up	-2.5%	-1.0%	13.8%	-1.0%

Source: NHTS data series

Because more SUVs are aging into the 10 years and older category, we expect that the proportion of CO₂ emissions from older vehicles will continue to be a policy challenge. While overall older vehicles are driven less miles on average than newer vehicles, they account for a disproportionate amount of emissions. For instance, in 2001 older vehicles (10 years or older) accounted for just under 40 percent of all vehicles, and less than 30 percent of all vehicle miles. However, because of the generally lower fuel efficiency of older vehicles, they accounted for 42 percent of the gas consumption and CO₂ emissions²

Exhibit 3 – Percent of Miles, Household Fleet, and CO₂ Emissions by Vehicle Age



Tracking the characteristics and use of household vehicles is vital for policies aiming to reduce fuel use and green house gas emissions, such as the new CAFE standards and incentive programs like ‘Cash for Clunkers’. The 2008 fuel consumption and emission data are not yet available from the NHTS program. FHWA coordinates with the Energy Information Administration (EIA) in calculating emissions and fuel efficiency through vehicle specific mpg estimates.

Be sure to check out our most recent NHTS Policy Briefs at

<http://nhts.ornl.gov>

² The information for sampled vehicles obtained in the NHTS allows the calculation of CO₂ estimates for individual vehicles based on the estimate of annual miles the vehicle is used, estimated miles per gallon of gas, and resulting estimate of annual gallons of gas used. The estimate for regular gasoline (all grades, all formulations) is 8.8 Kg of CO₂ per gallon.