

# Accuracy of fuel displays can vary

## AAA recommends drivers fill up at quarter tank

Rising gasoline prices have put fuel economy near the top of the list of importance for drivers. The cost per gallon is more than \$4 in many states and getting the most miles from a full tank has rarely been more critical.

Technology has assisted in helping drivers learn their vehicles' gas mileage, miles per tank and how many miles can be driven before the tank is empty. But how accurate are these gauges? AAA research delved in to learning more about their reliability.

In-dash fuel economy plays a leading role in assisting drivers. It displays the estimated number of miles a vehicle gets per gallon, including how many "miles to empty." AAA tested the accuracy of these systems and found their estimates vary significantly over shorter trips or are dependent on the consistency of aspects that effect gas mileage like speed and acceleration.

Drivers could be taking unnecessary risks should they over rely on these displays. This is particularly true for 74% of drivers who use their "miles-to-empty" display when they are low on gas to decide when to refill the tank, according to a AAA consumer survey. AAA recommends drivers monitor their fuel gauges and fill up when it reaches a quarter tank.

The AAA Auto Club App can direct drivers to the nearest stations that have the lowest fuel prices.



**GOING THE DISTANCE** – In-dash fuel gauges can be helpful, but drivers shouldn't rely solely on them in deciding when to fill up. Image: AAA.

AAA, in collaboration with ARC of the Automobile Club of Southern California, used a dynamometer – a treadmill for vehicle testing – to run selected cars through a series of simulated driving scenarios to determine the accuracy of the fuel-economy estimation and the range-value ("miles-to-empty") systems.

On average, the fuel-economy display of the vehicles tested showed a low error of 2.3% as compared to the fuel

economy measured by the dynamometer. But individual-vehicle error varied significantly, ranging from minus-6.4% to 2.8%. The negative number indicates that one test vehicle overestimated fuel economy by 6.4% or 2.2 mpg, while another underestimated it by 2.8% or 0.9 mpg. The specific results suggest that each vehicle reacted to changes in driving differently, and the accuracy can be impacted by driving styles and conditions.

Testing the "miles-to-empty" display found similar results with accuracy fluctuating across driving scenarios. Even though each manufacturer likely uses a unique algorithm to estimate range, it can be assumed that some historical driving data also is used to determine the vehicle's fuel efficiency for future driving, proving range estimation is affected by the vehicle's most recent driving conditions.

To get the best fuel efficiency from your vehicle, AAA recommends:

- Run multiple errands in one trip, and whenever possible avoid times of day when traffic is heavier.
- If you own more than one car, use the most fuel-efficient model whenever possible.
- Avoid hard acceleration to maximize fuel economy, and always inflate your tires to the recommended pressure.
- Remove unnecessary and bulky items from your car. Minimize your use of roof racks and remove special carriers when not in use.
- Consider minimizing your use of air conditioning. Even at highway speeds, open windows have less effect on fuel economy than the engine power required to operate the air-conditioning compressor.
- In hot weather, park in the shade or use a windshield sunscreen to lessen heat buildup inside the car.

## Exclusive Tickets and Savings for AAA Members!



### WALT DISNEY WORLD® RESORT

Enjoy Endless Fun with Theme Park Tickets! There are 4 unique theme parks at Walt Disney World® Resort, featuring hundreds of attractions, shows and entertainment. Explore them with 1-park-per-day tickets or choose tickets with the Park Hopper or Park Hopper Plus option so you can visit multiple parks on the same day.



### UNIVERSAL ORLANDO RESORT™

Take your vacation to the next level at Universal Orlando Resort™. With three amazing theme parks – Universal Studios Florida™, Universal's Islands of Adventure™, and Universal's Volcano Bay™ water theme park, now open – unforgettable dining, incredible entertainment and more, it's days and nights of endless fun for every member of the family.



### SEAWORLD – ORLANDO

SeaWorld Orlando is a renowned marine-themed amusement park where visitors can enjoy exhilarating rides, mesmerizing live shows, and interactive experiences with marine life. From thrilling roller coasters to up-close encounters with dolphins, penguins and more, it offers a captivating blend of entertainment, education, and conservation.



### LEGOLAND FLORIDA RESORT

LEGOLAND® Florida Resort is the place where kids rule! It's where princesses, knights and adventurers roam. Where dragons soar, castles are stormed, and pirates sail the seven seas. We are truly the ultimate multi-day vacations destination for families with young kids and imagination comes to life.



Purchase tickets at any AAA branch office or buy online at [AAA.com/tickets](http://AAA.com/tickets).