

# Govt, auto majors differ over use of ethanol-blended petrol

**RAGING DEBATE.** Oil Ministry downplays mileage drop; vehicle makers warn of parts damage

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On a day the Ministry of Petroleum and Natural Gas clarified that the "marginal" decrease in vehicle mileage by ethanol-blending can be minimised through engine tuning, industry experts said petrol blended with 20 per cent ethanol (E20 fuel) is decidedly corrosive and a staggering number of two- and four-wheelers would require retrofitting to minimise the damage.

## MARGINAL MILEAGE DIP

In the wake of a social media campaign about the negative impact of ethanol-blended petrol on vehicles, the Ministry asserted on Monday that ethanol, being lower in energy density than petrol, results in a marginal decrease in mileage, estimated at 1-2 per cent for four-wheelers designed for E10 fuel and calibrated for E20, and 3-6 per cent in other vehicles.

"This marginal drop in ef-



**DROP IN RANGE.** Ethanol's lower energy density leads to a slight mileage drop — about 1-2 per cent in E10-designed four-wheelers calibrated for E20, and 3-6 per cent in others

ficiency can be further minimised through improved engine tuning and use of E20-compatible materials, which leading automobile manufacturers have already adopted," the Oil Ministry said on X.

It added that material corrosion in older vehicles could be checked by replacing some rubber parts, which are inexpensive and easily done.

However, an automobile industry leader pointed out that old vehicles are at a risk of facing serious complications with components and damage if they are not modi-

fied by manufacturers.

## CORROSIVE FOR PARTS

Experts pointed out that ethanol is "corrosive" for vehicles. "E20 fuel can cause serious issues in vehicles not designed for it. Ethanol absorbs moisture, leading to phase separation and corrosion in metal components like fuel tank, pipes, injectors, engine and exhaust. It also degrades rubber and plastic parts such as seals, gaskets and fuel hoses, which aren't ethanol-resistant," said Anurag Singh, Advisor, Primus Partners. "Additionally, ethanol alters the air-

fuel ratio, and if the ECU or PGM-FI system isn't calibrated for E20, it can result in poor combustion, knocking, reduced performance and hard cold starts."

## RETROFIT NEEDED

Leading two-wheeler manufacturer Hero MotoCorp said on its website that vehicles manufactured before April 2023 may require modifications in the engine-fuel system for it to run efficiently on E20 fuel.

"Certain rubber, elastomers and plastic components (like gaskets, O-rings and fuel tube) may need to be replaced for prolonged usage with new parts made with E20 compatible material," it added. TVS Motor, too, mentioned on its website that ethanol is corrosive to several materials.

"There are isolated incidences of choking of fuel injectors of E20 fuel, which are still bearable. But if you go for higher ethanol mix (like E30 or E40), then issues may come up," said CS Vigneshwar, President, Federation of Automobile Dealers Association.