

GOVERNMENT OF INDIA
MINISTRY OF PETROLEUM AND NATURAL GAS
RAJYA SABHA
UNSTARRED QUESTION No. 924
ANSWERED ON 27/07/2026

ETHANOL BLENDING AND E20-COMPATIBLE VEHICLE

924. SHRI RANDEEP SINGH SURJEWALA:

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) the category-wise number of E10/E20-compatible vehicles versus pure-petrol vehicles currently operational in the country;
- (b) whether older, pre-E20 vehicles face operational issues such as mileage drop, fuel pump corrosion or engine clogging due to ethanol blends;
- (c) whether running E20 blended petrol requires flex-engine technology that is largely absent in the existing vehicle fleet; and
- (d) if so, whether Government has arranged for the parallel supply of unblended regular petrol for non-E20 compatible vehicles?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF PETROLEUM & NATURAL GAS

(SHRI SURESH GOPI)

(a) & (b): The Ethanol Blended Petrol (EBP) Programme has been implemented through a phased, scientifically validated and consultative process involving NITI Aayog, automobile manufacturers, Oil Marketing Companies (OMCs), Automotive Research Association of India (ARAI), Society of Indian Automobile Manufacturers (SIAM), Indian Institute of Petroleum (IIP) and other technical institutions.

Ethanol is not a new fuel. It has been used globally for over a century, with countries such as Brazil operating higher ethanol blends for decades. In India, the Ethanol Blended Petrol (EBP) Programme commenced with a pilot in 2001, E5 was introduced in 2006, and although blending remained around 1.53% in 2013-14, it has since been increased progressively in a calibrated manner after creating the necessary production capacity, infrastructure and regulatory framework.

E15+ blended petrol has been in widespread use for over three-and-a-half years and E19-E20 fuel for over two-and-a-half years. More than 20 crore two-wheelers and over 3 crore petrol cars have been operating on these blends without any verified evidence of widespread engine failure or vehicle breakdown attributable to ethanol blending. Manufacturer service data confirm that there is no abnormal corrosion, wear or reduction in vehicle life due to E20 fuel. Manufacturers continue to honour warranty obligations for vehicles using E20 fuel, providing further confidence in its safety and reliability.

A leading OEM serviced 2.84 crore vehicles during FY 2025-26, including approximately 1.5 crore vehicles that were not originally certified as E20-compatible, and reported no E20-linked corrosion, abnormal wear or reduction in component life. A leading 2-wheeler company has reported similar field experience. One OEM recently stated that data from 1.4 crore E20-operated

vehicles tracked over an extended period showed no evidence of ethanol-induced corrosion. ARAI reaffirmed that vehicles undergo rigorous international-standard validation before reaching consumers.

With regard to mileage, studies by Government agencies and automobile manufacturers indicate that fuel efficiency is influenced by several factors, including driving conditions, driving habits and vehicle maintenance. Any reduction in fuel economy in certain E10-designed vehicles is generally limited to about 3-5%, while E20 offers a higher-octane rating, superior anti-knock characteristics, cleaner combustion and smoother engine performance.

(c): No, running E20 blended petrol on existing vehicle fleet does not requires flex-engine technology. E85 fuel (containing 85% ethanol and 15% petrol) has been introduced exclusively for use in Flex Fuel Vehicles (FFVs) designed and certified for such fuel (E85).

(d): Having been scientifically validated and accepted by the automobile industry after extensive testing, there is no proposal to revert to E0/E10 petrol. The objective of public policy is to move forward with a superior fuel, not return to an inferior standard.

The transition to E20 has been phased, consultative and scientifically validated, following extensive consultations with automobile manufacturers, ARAI, SIAM, Oil Marketing Companies and other stakeholders. Material compatibility, engine durability, fuel systems, drivability, emissions and performance were comprehensively evaluated before rollout.

E20 fuel provides better acceleration, improved ride quality and approximately 30% lower carbon emissions compared to E10 fuel. Higher ethanol blends also enable cleaner and more complete combustion, resulting in near-zero particulate matter emissions and improved urban air quality.

Maintaining parallel nationwide supply chains for E0, E10 and E20 petrol across more than one lakh retail outlets would significantly increase logistics complexity, inventory and handling costs. Public policy must balance consumer convenience with energy security, environmental sustainability and farmer welfare.

Once a cleaner and scientifically validated fuel has been adopted, the objective is to move forward with better technology, not revert to an inferior standard.
