

**GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. - 869
ANSWERED ON 23rd JULY, 2026**

IMPACT OF ETHANOL-BLENDED PETROL ON VEHICLES

**869. MS. MAHUA MOITRA:
SHRI K RADHAKRISHNAN:
SHRI DHARMENDRA YADAV:**

Will the Minister of ROAD TRANSPORT AND HIGHWAYS

सड़क परिवहन और राजमार्ग मंत्री

be pleased to state:

- (a) whether the Government is aware of complaints regarding poor vehicle performance, reduced fuel efficiency, technical defects, engine, fuel system and other component-related damage and maintenance problems allegedly associated with the use of ethanol-blended petrol, particularly in older vehicles and two-wheelers and if so, the details thereof;**
- (b) whether the Government has conducted or commissioned any scientific, technical or other assessment to examine the impact of ethanol-blended petrol on different categories of vehicles, particularly older vehicles and two-wheelers, if so, the findings of such studies thereof;**
- (c) the number and nature of complaints received during the last three years and the current year, State/UT-wise and year-wise;**
- (d) whether the Government has issued or proposes to issue any safety standards, compatibility guidelines, advisories or directions to vehicle manufacturers and Oil Marketing Companies regarding the compatibility, quality and safe use of ethanol-blended petrol and if so, the details thereof; and**

(e) the steps taken or proposed to be taken by the Government to address consumer grievances, safeguard vehicle owners from any adverse effects, ensure the quality and suitability of ethanol-blended petrol supplied across the country and promote the use of ethanol-compatible vehicles while providing adequate safeguards for existing vehicles?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) and (c) E19–E20 fuel has been in use for over two-and-a-half years. As per information received from Society of Indian Automobile Manufacturers (SIAM), no widespread issues of engine failure or vehicle breakdown attributable to ethanol blending have been reported. Certain concerns relating to engine performance, mileage and vehicle wear have been arising largely through public commentary and social media discourse.

(b) and (e) Yes, Government in the Ministry of Petroleum and Natural Gas has introduced the Ethanol Blended Petrol (EBP) Programme by consultation with stakeholders, field trials and validation by expert agencies at each stage of blending escalation:

- i. Ethanol Blending Program is administered by the Government in Ministry of Petroleum and Natural Gas. A Study for the evaluation of effects of E20 on BS-III, BS-IV and BS-VI E10 (Gasoline) two-wheelers and four-wheelers was carried out jointly by Indian Oil Corporation Limited (IOCL), Indian Institute of Petroleum (IIP) Dehradun, Society of Indian Automobile Manufacturers (SIAM) and Automotive Research Association of India (ARAI). The exhaust emissions meet the respective norms (ie BS VI vehicles meet the BS VI emission norms when tested with E20). The studies have not shown any need to modify the car and two-wheeler engines. These studies confirmed that even legacy vehicles did not exhibit any significant variations in**

performance, nor do they show abnormal wear-and-tear when operated with E20 fuel. No issues were reported in parameters such as drivability, startability, metal compatibility, and plastic compatibility. Only in case of testing done on BS-III vehicles introduced from 1st April, 2005 and manufactured prior to 2016, some rubber parts and gaskets may require replacement, which can be easily managed during routine servicing regime of the vehicle. With regard to the concern of vehicle mileage due to the use of E20 fuel, Government, automobile manufacturers and vehicle/engine testing agencies have clarified that vehicle mileage is influenced by a host of factors beyond just fuel type. These include driving habits, maintenance practices such as oil changes and air filter cleanliness, tyre pressure and alignment, and even air conditioning load.

- ii. An Inter-Ministerial Committee (IMC), constituted on 26 December 2020 under NITI Aayog, comprehensively examined vehicle compatibility and mileage/efficiency aspects of ethanol blending. This assessment was supported by research conducted by Indian Oil Corporation Ltd. (IOCL), the Automotive Research Association of India (ARAI) and the Society of Indian Automobile Manufacturers (SIAM).**
- iii. The Committee's "Roadmap for Ethanol Blending in India 2020-25", released in June 2021, was prepared after extensive consultation with automobile manufacturers, oil companies and agricultural experts, and examined material compatibility, engine calibration, fuel systems, drivability, durability, emissions and fuel efficiency. The Committee's report preceded the introduction of E-20 fuel.**

The Ethanol Blended Petrol (EBP) Programme has been implemented through a phased, calibrated, scientifically validated and consultative approach.

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. Before the introduction of E20, extensive laboratory studies, durability trials and field validation were undertaken covering engine durability, material compatibility, fuel systems, corrosion resistance, drivability, emissions, fuel economy and overall vehicle performance.

As seen from the table, the progression has been gradual:

Ethanol Supply Year	Average Blending (%)
2013-14	~1.53
2020-21	~8.1
2021-22	~10
2022-23	~12
2023-24	~14.6
2024-25	~19.2
2025-26 (Nov-June)	20

(d) The Government in Ministry of Road Transport and Highways has notified Safety Standard (AIS 171) for various blends of ethanol with gasoline vide G.S.R 343 (E) dated 25th May 2021.
