

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

**LOK SABHA
UNSTARRED QUESTION NO. - 1990
ANSWERED ON 30th JULY, 2026**

ARAI STUDY ON E20 FUEL

1990. Adv. CHANDRA SHEKHAR:

Will the Minister of ROAD TRANSPORT AND HIGHWAYS

सड़क परिवहन और राजमार्ग मंत्री

be pleased to state:

- (a) whether the Government has examined the findings of the 2021 Automotive Research Association of India (ARAI) study indicating that E20 fuel may cause accelerated volume change and degradation in non-metallic rubber-based fuel system components, such as O-rings, gaskets and hoses, in legacy E10-compliant vehicles;**
- (b) whether the Government has issued or proposes to issue any advisory to owners of legacy vehicles regarding preventive inspection or replacement of such components, if so, the details thereof; and**
- (c) the reasons for not placing the said study in the public domain at an earlier stage, along with the steps taken to ensure transparency regarding fuel compatibility and vehicle safety?**

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) to (c) 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.

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 study for evaluation of effect of E20 on BS-III, BS-IV and BS-VI E10 (Gasoline) two wheelers and four wheelers was carried out jointly by ARAI, SIAM and Indian Oil Corporation Limited (IOCL). The study comprised of standard testing as per the respective certification requirements & customized test protocols developed along with the Original Equipment Manufacturers (OEMs). The exhaust emissions as per standard tests meet the respective norms (i.e. BS VI vehicles meet the BS VI emission norms when tested with E20). The fuel efficiency of vehicles may be reduced by 2 to 6 % depending on the vehicle category and vintage. The tests for engine durability on dynamometer and vehicle tests on road have not shown any failures due to E20.

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.
