IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 6, March 2025

The Effects of Ethanol on Engine

Shrushti Thorat and Leena Deore

Second Year Mechanical Department Guru Gobind Singh Polytechnic, Nashik, Maharashtra, India shrushtithorat2007@gmail.com, leenadeore17@gmail.com

Abstract: This paper looks into how ethanol affects engine performance, emissions, and efficiency, focusing on ethanol blends such as E10 and E85. By combining experiments and reviewing current research, the study evaluates the impact of these blends on important engine factors. The results show that ethanol can boost octane ratings and cut down on some types of emissions, which helps the environment. Yet, it also points out challenges, like possible drops in engine performance under certain conditions. This research aims to provide a thorough analysis of the pros and cons of using ethanol in modern engine technologies.

Keywords: Ethanol, Engine Performance, E10, E85, Emissions, Efficiency, Fuel Blends, Octane Rating

DOI: 10.48175/IJARSCT-24273

