

IEA-Advanced Motor Fuels ANNUAL REPORT 2022

Task 62



Task 62: Wear in Engines Using Alternative Fuels

Project Duration	January 2022–December 2023
Participants Task sharing Cost sharing	China, Denmark, Finland, Germany, Switzerland
Total Budget	In-kind contributions corresponding to more than EUR 150,000 (USD 165,520)
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Purpose, Objectives, and Key Question

Alternative fuels are being intensively introduced in transportation sectors in recent years. That these fuels are responsible for causing special wear in engines is readily evident, but the problems become even more apparent after years of this fuel use. To prevent the onset of significant issues in the future, this Task evaluates excessive wear in internal combustion engines caused by the use of alternative fuels.

Our objective is to review ongoing related projects in the member countries in combination with a general literature review to evaluate which engine wear problems can be foreseen with the future use of alternative fuels.

We address the following key questions:

- How severe are the problems associated with application of alternative fuels, and what is the expected increase in engine wear caused by these fuels?
- What can be done to solve these problems?

Activities

General literature review

Alternative fuels comprise several different fuels. In this study we conduct a general literature review, including all relevant alternative fuels. From there we focus on fuels that are specific to ongoing studies related to marine engine applications in the countries involved in the Task. This includes methanol, ammonia, and biooils, among others.

In the literature review we compile the available information and report it in a structured way in order to support future application of alternative fuels.

Online seminars

Activities related to engine wear are ongoing in the involved AMF countries. These studies will be communicated through presentations from the responsible “activity” persons (or other designated people) at frequent seminars. The results from the seminars will create background for the literature review report as well.

Key Findings

The results will be published in a common report to be delivered at the end of the project period. In addition, the results will be published at international conferences and in international journals.

Main Conclusions

The project results will identify and add to the understanding of the reasons for high degrees of wear caused by application of alternative fuels in engines used in the transportation sector.

Publications

None so far.