

FINAL YEAR PROJECT REPORT
DIPLOMA IN MECHANICAL ENGINEERING



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BEARING DAMAGE ANALYSIS

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ABSTRACT

Different types of bearings, materials used in bearings, Lubrication and Inspection of bearings are presented in this report.

Bearing failures and their causes are dealt in detail Different types of Bearing damages are illustrated with suitable figures.

Roughness and Roundness tests were conducted and the results are presented. The differences in the surface roughness and roundness were found by comparing new and old bearings.

The procedure for conducting Multi-element Oil Analyzer (MOA) is presented along with a sample test result.

This work gives an exposure to bearing wear, a few techniques for analyzing worn bearings and also oil analysis procedure.

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1.0 INTRODUCTION

This report will explain and analysis concerning of bearings. In Chapter 1 and Chapter 2 covered the different types and varieties of defects. Where as Chapter 3 and Chapter 4 will explain and expose the users and testing of the bearing to de-extent of it mulfunctions.

Roughness and Roundness Testing is to indicate and analysis the damage of the bearing surface. The results will be shown in graph. In Chapter 4 the testing of Multi-element Oil Analyzer (MOA) will be carried out to indicate the types of material composition used in the bearing. Therefore we could know which parts of bearings is defective. Figure 1.1.A. shows a cut sectional view of an aircraft engine

1.0.1 OBJECTIVE OF THIS WORK

- A. To get exposure to different types of bearings.
- B. To get exposure to different types of bearing failures and analysis.
- C. To get exposure to surface measurements.
- D. To get exposure to bearing lubrication oil analysis techniques.