

CONTENTS

	Page
A. INTRODUCTION	
1. OBJECTIVE OF THE STUDY	1
2. SCOPE AND LIMITATIONS OF THE STUDY	1
3. CONDUCT OF THE STUDY	1
B. RECOMMENDATIONS	3
1. ROTATIVE SPEED	3
2. BRAKE MEAN EFFECTIVE PRESSURE	4
3. FUEL CONSUMPTION	4
4. FILTERING EQUIPMENT	4
5. OVERLOAD CAPACITY	4
6. OPERATING EXPERIENCE	4
7. DATA COLLECTION AND ANALYSIS	4
8. CONTINUATION OF STUDY	5
9. OTHER STUDIES	5
C. SUPPORTING INFORMATION	6
1. SPEED	6
1.1 Speed Range	6
1.2 Concerns with Speed	7
1.3 High vs. Low RPM	7
1.4 Speed and Depreciation Rate	8
1.5 Conclusions	9
2. BRAKE MEAN EFFECTIVE PRESSURE	10
2.1 Its Meaning	10
2.2 Pressure-Charging to Increase BMEP	11
2.3 Future Trends	12
2.4 Cooling	13
3. FUEL	14
3.1 Efficiency of Energy Conversion	14
3.2 Determining Fuel Consumption Rate	15
3.3 Processing Equipment	15
4. LUBRICATION	16
4.1 Principal Functions	16
4.2 Filtering Systems	17
5. RESPONSE TO LOAD CHANGES	18
5.1 Momentary Variations in Load	18
5.2 Overloads	18
6. RELIABILITY	19
6.1 Effect of Design Philosophy	19
6.2 Effect of Environment	19
6.3 Limits to Acceptable Changes	20
6.4 Effect of Kinds of Service	21
6.5 Effect of Components	21
7. CRITERIA DEVELOPMENT	23
7.1 Existing Criteria	23

7.2 Future Criteria Evaluations	23
7.3 Noise	24
7.4 Torsional Vibration Stresses	24