

# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Motivation . . . . .	2
1.2	Background . . . . .	7
1.3	Objetives . . . . .	8
1.4	Thesis outline . . . . .	10
	Chapter 1 bibliography . . . . .	18
<b>2</b>	<b>RDE European Regulation</b>	<b>19</b>
2.1	Introduction . . . . .	20
2.2	RDE regulation . . . . .	20
2.3	Conclussions . . . . .	27
	Chapter 2 bibliography . . . . .	30
<b>3</b>	<b>Engine test bench characterisation</b>	<b>31</b>
3.1	Introduction . . . . .	32
3.2	Methodology . . . . .	32
3.3	Conclussions . . . . .	52
	Chapter 3 bibliography . . . . .	54
<b>4</b>	<b>RDE dynamic assessment</b>	<b>55</b>
4.1	Introduction . . . . .	56
4.2	Matherial and methods . . . . .	57
4.3	RDE cycles description . . . . .	58
4.4	Results . . . . .	65
4.5	Conclussions . . . . .	90
	Chapter 4 bibliography . . . . .	96
<b>5</b>	<b>RDE assessment under different temperatures scenarios</b>	<b>97</b>
5.1	Introduction . . . . .	98
5.2	RDE cycles under different intake temperatures . . . . .	100
5.3	RDE cycles under different ambient temperatures . . . . .	111
5.4	Conclussions . . . . .	124
	Chapter 5 bibliography . . . . .	130

<b>6 Global Conclusions</b>	<b>131</b>
6.1 Introduction . . . . .	132
6.2 Summary of findings and contributions . . . . .	132
6.3 Limitations . . . . .	134
6.4 Suggestions for future studies . . . . .	135
Chapter 6 bibliography . . . . .	136
<b>Global bibliography</b>	<b>137</b>