# FINAL YEAR PROJECT REPORT DIPLOMA OF MECHANICAL ENGINEERING

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# POSSIBILITY OF IMPLEMENTATION THE FUEL INJECTION FOR TWO STROKE SPARK IGNITION ENGINE (SI)

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#### ABSTRACT

Since the global oil crisis of the 1970's there has been concern over the continuing supply of fossil fuel resources with much effort directed toward alternative fuels. However, subsequent discoveries have shown that adequate global reserves exist to power the internal combustion engine for at least another 20 years. This may be extended further if fuel-efficient combustion technology can be applied. Attention is also focused on the environment. Most notably the recent Earth Summit brought together the leaders of many industrialized nations to discuss and enforce stringent pollution controls in an attempt to curb the deterioration of the global environment in a world . The first high volume production of a direct fuel injected two-stroke engine utilising world leading Orbital Combustion Process (OCP) Technology will occur with the introduction of the . Two-stroke internal combustion engines are inherently simpler in construction than comparable performance four-stoke equivalents providing advantages of fewer parts, lighter weight, compact packaging volume and lower manufacturing and investment costs. Based on this research we try to convert the OCP TECHNOLOGY to the YAMAHA 110 cc engine by replacing the carburrator

The two stroke fuel injection system has been successfully implemented on automotive and marine engines. In this work, a preliminary study is carried to investigate the possibility of implementation of the fuel injection system to YAMAHA 110ss engine replacing carburrator fuelling system

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The objectives of this work could summarize as follows:

- 1. Review the literature for application of fuel injection to the two stroke spark ignition engine(SI).
- Study the possibility implementation of the fuel injection the commercial Yamaha 110ss engine.
- 3. The proposed type of the modification to be carried to achieve the above objective. A brief study is carried to explore the functions of the fuel injection system. The optimization of the combustion chamber and the modification of the injected spray requirements.