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Experimental Investigations On DI Diesel Engine Using Bio fuel – A Review

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Abstract – Bio fuel is an alternative to conventional diesel fuel made from renewable resources such as non – edible vegetable oils. No engine modifications are required to use bio fuel in place of petroleum-based diesel. Bio fuel can be mixed with petroleum based diesel in any proportion. This interest is based on a number of properties of bio fuel including the fact that, it is produced from a renewable domestic source, its biodegradability, and its potential to reduce exhaust emissions. The present work attempts to make a detailed review of literature available on experimental investigations and the effect of biofuel derived from various feedstock on a DI diesel engine, selection of fuel that gives better performance, and the effect of injection parameters on the engine using various biodiesels. From the present review work, it has been concluded that, through various bio fuels with different blends give emerging results in the load tests, the inter comparison of performance of various blends with various bio fuel revealed that, variation of improvements are marginal. In some bio fuels it may be more than conventional and viceversa. However, the success of bio fuel applications depends on the abundant availability / production of bio fuel and the cost of extracting the same. Hence this survey will pave way for exploring the optimum methods of bio fuel production.