

Department of Mechanical Engineering

PROJECT TITLE	DESIGN AND DEVELOPMENT OF AUTOMATIC IDLING STOP AND START SYSTEM IN MOTORCYCLES
STUDENT NAMES	ALAGAPPA SUBRAMANIAN.S DEEPAN K S BALAJI.M
SUPERVISOR	K.MADHIVANAN, ASST. PROFESSOR
OBJECTIVE	<ol style="list-style-type: none"> 1. To design a system to reduce the fuel consumption. 2. To reduce the carbon monoxide and hydrocarbon emissions
ABSTRACT/IDEA	<p>All the vehicles are to be stopped during red signal at traffic junctions. This leads to idle running condition of engine which consumes high amount of fuel and results more exhaust emissions.</p> <p>The idle stop/start system is developed by using counters, two proximity sensors, timers and contact relay. The proximity sensor1 senses the stationary position of the wheel when the vehicle comes to rest position and indicates in the counter as zero rpm. This signal from the counter is used to switch off the ignition system and the engine stops from running in idle condition.</p> <p>The accelerator bar is to be twisted for 15⁰ for immediate starting of the engine when the green signal at traffic junctions. This immediate starting function can be operated by using the proximity sensor2 which is placed close to the accelerator bar.</p> <p>The Idling Stop System automatically switches the engine off at traffic lights and other brief stops, eliminating wasteful fuel consumption. This system will also enable us to</p>

	<p>reduce exhaust emissions during idling. A scooter with an idling stop/start system was developed aiming at enhancing riding comfort and environmental protection. This results in reducing fuel consumption by 723litres and reduction in carbon monoxide emission by 35000ppm theoretically.</p>
TECHNOLOGY USED	Broader impact of Start/Stop system
WORKING STEPS	Identification of Sensors – Position of Sensors – Identification of Counter , timer and relays – Study of wiring diagram – Developing wiring diagram for SS system – Evaluation of setup – implementation of Setup in the vehicle – performing calculating Analysis
REQUIREMENTS	Proximity Sensor, Relay
BENIFITS	The Idling stop system automatically switches the engine off at traffic light and other brief stops