

## CRUISE CONTROL SYSTEMS AND EXAMINATION OF THESE SYSTEMS WITH TODAY'S TECHNOLOGY

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### Abstract

*Cruise control is a system that automatically controls the speed of an automobile. Cruise control systems have shown improvements thanks to developing technology. Cruise control is safe, economical and comfortable. This has become with the development of sensor technology and throttle, braking systems which are electronic in vehicles. Via traffic measurement systems used on highways and in city centers, vehicle can determine speed information, the best route and the most economical travel time.*

*In this study, safety, economy and comfort of the main cruise control systems and adaptive cruise control system, which is used today, will be focused on. Smooth acceleration, line tracking system, vehicle tracking distance protection technologies will be examined provided by the Advanced Driver Assistance Systems.*

**Keywords:** Cruise Control, Adaptive Cruise Control, Advanced Driver Assistance Systems.

### INTRODUCTION

Cruise is a system that automatically controls the speed of a motor vehicle. This system is useful for driving on the roads which are big, straight, and the destination is farther apart [3,9]. To operate the system, the driver sets the speed and the system takes over the throttle of the car to maintain the speed. The system thereby improves driver comfort in steady traffic conditions. In congested traffic conditions, where speeds vary widely, these systems are no longer effective [17, 23]. Some modern vehicles have adaptive cruise control (ACC) systems, which is a general term meaning improved cruise control. These improvements can be automatic braking or dynamic set-speed type controls [2, 24, 25].

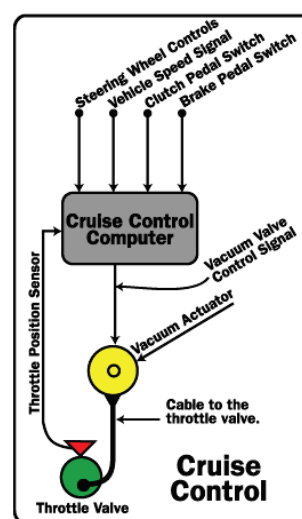
Advanced Driver Assistance Systems (ADAS) are a whole of systems, which Adaptive Cruise Control (ACC) including and providing safety, comfortable, economic trip to drivers.[12,23]

### EXPOSITION

#### *Cruise Control (CC)*

The diagram below shows the inputs and outputs of a typical cruise control system. Cruise control is a small computer. According

to the speed information received from the sensors which is found in the vehicle, controls the velocity of the vehicle.[14,17] The system controls the position of the throttle until you reach the top speed of the driver reaches. Here, speed information, throttle position is taken from the sensors in the vehicle. Speed of the vehicle is provided only with a throttle control. [26] This is not a safe technology.



*Fig. 1. Cruise Control System*