SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35.
Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

DEPARTMENT OF AUTOMOBILE ENGINEERING

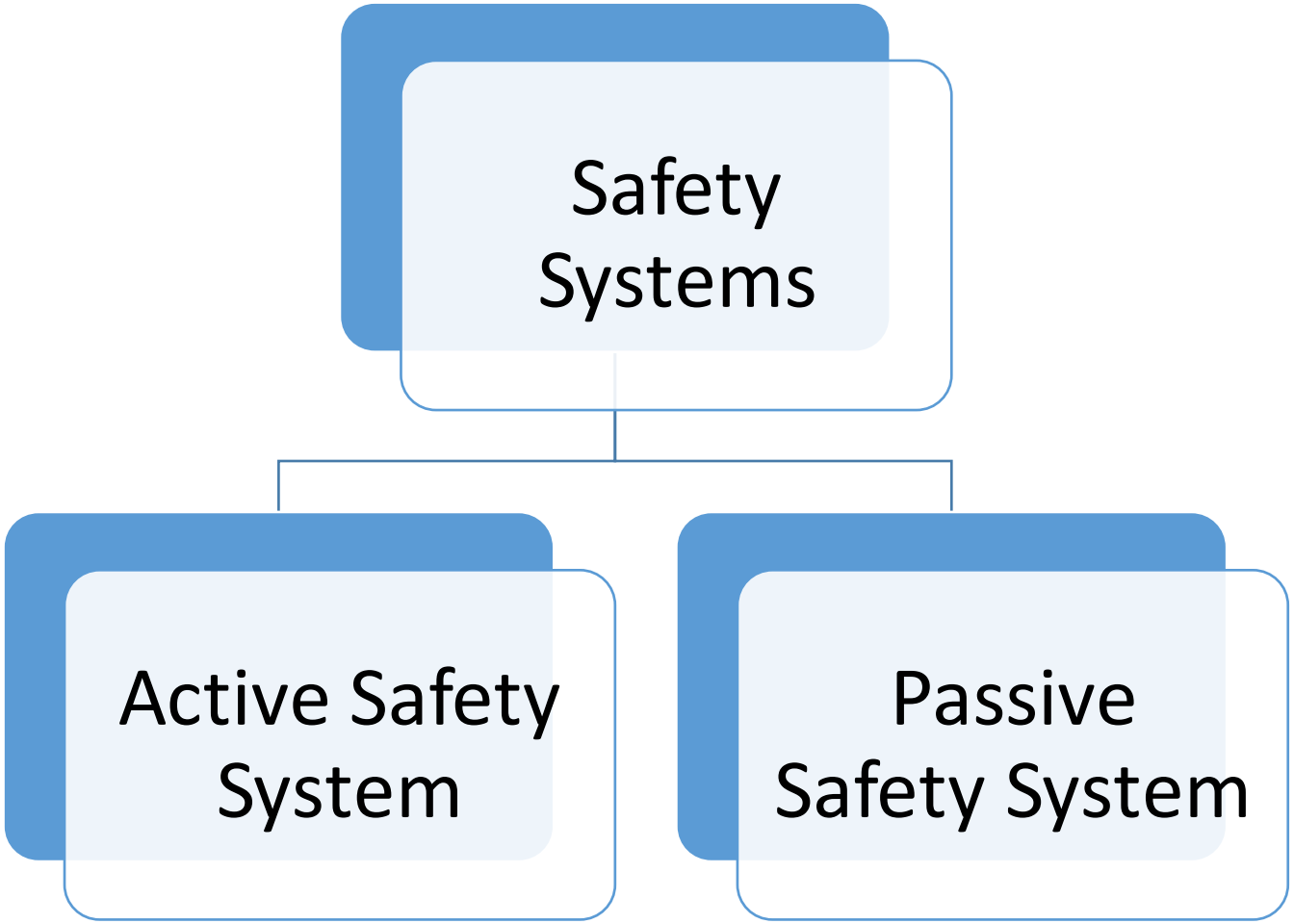
COURSE NAME : 16AUOE6 - RECENT TRENDS IN AUTOMOBILES

III YEAR / VI SEMESTER

Unit 3 – Safety and Security Systems

Topic : Antilock Braking System

Types of Safety Systems in Automobile



Need for ABS

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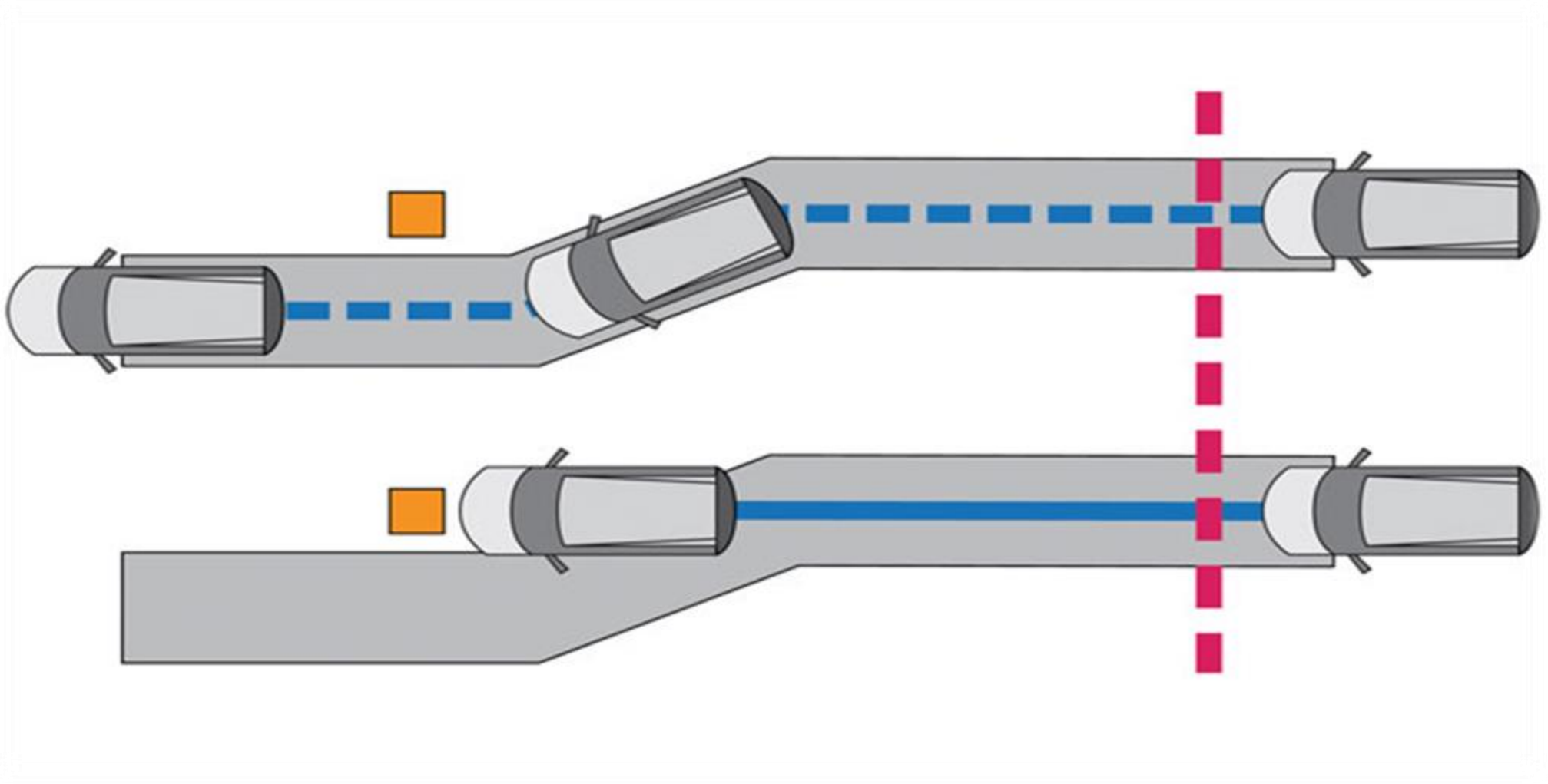
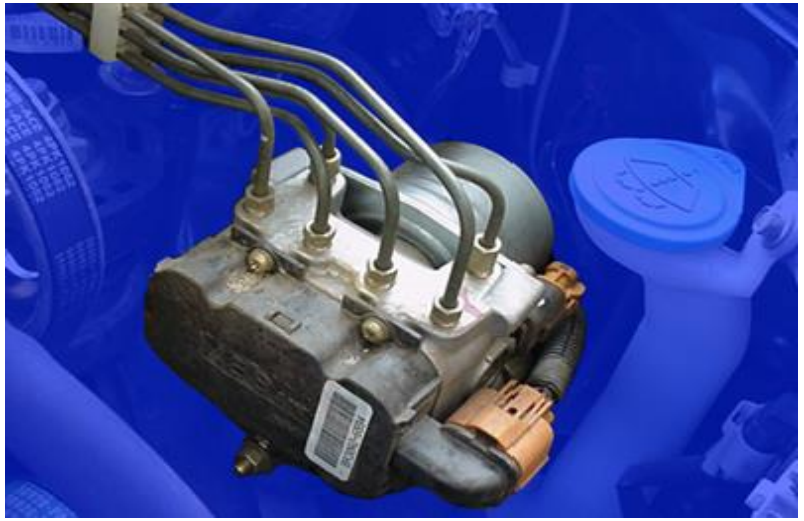


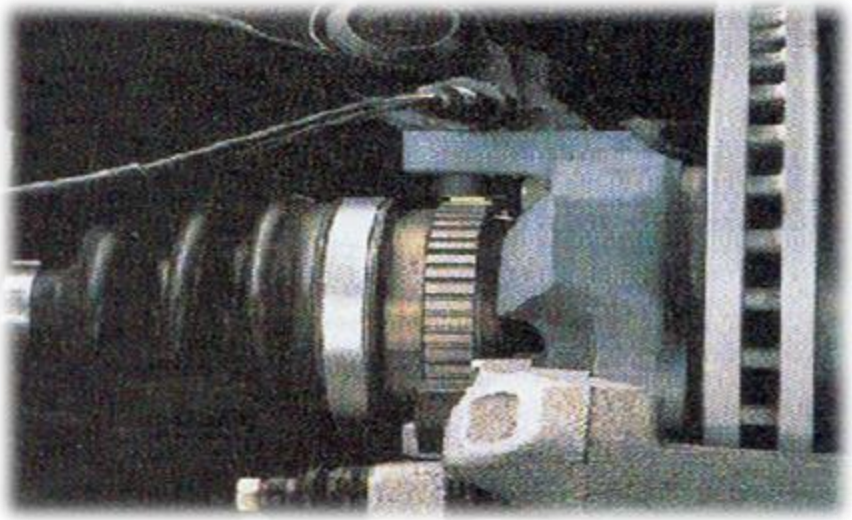
INTRODUCTION

- An anti-lock braking system (ABS) is a safety anti-skid braking system used on cars, motorcycles, trucks, and buses.
- ABS operates by preventing the wheels from locking up during braking.
- It maintains the tractive contact with the road surface and allowing the driver to maintain more control over the vehicle.

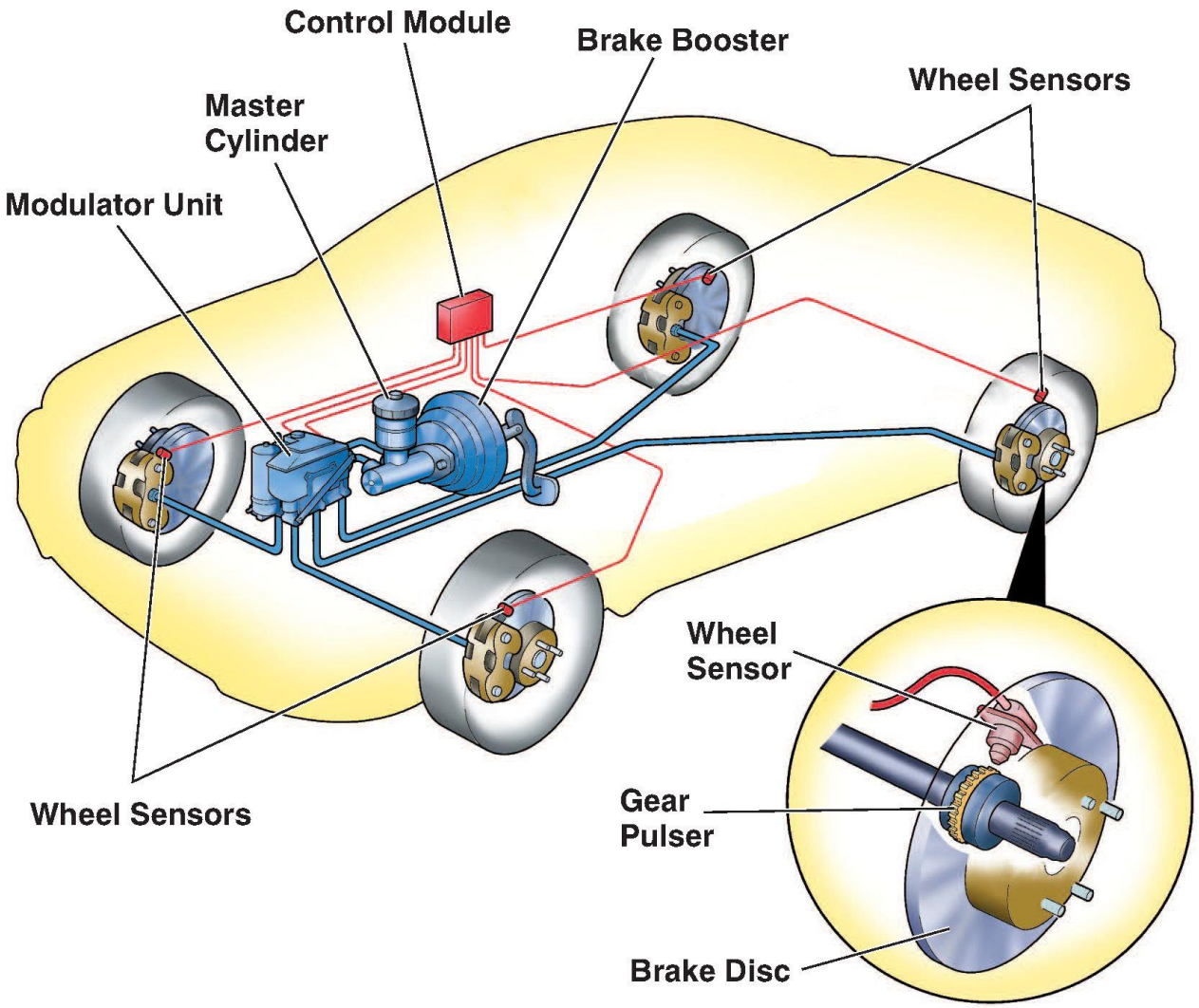
COMPONENTS OF ABS

- Speed sensors
- Pump
- Valves
- Controller

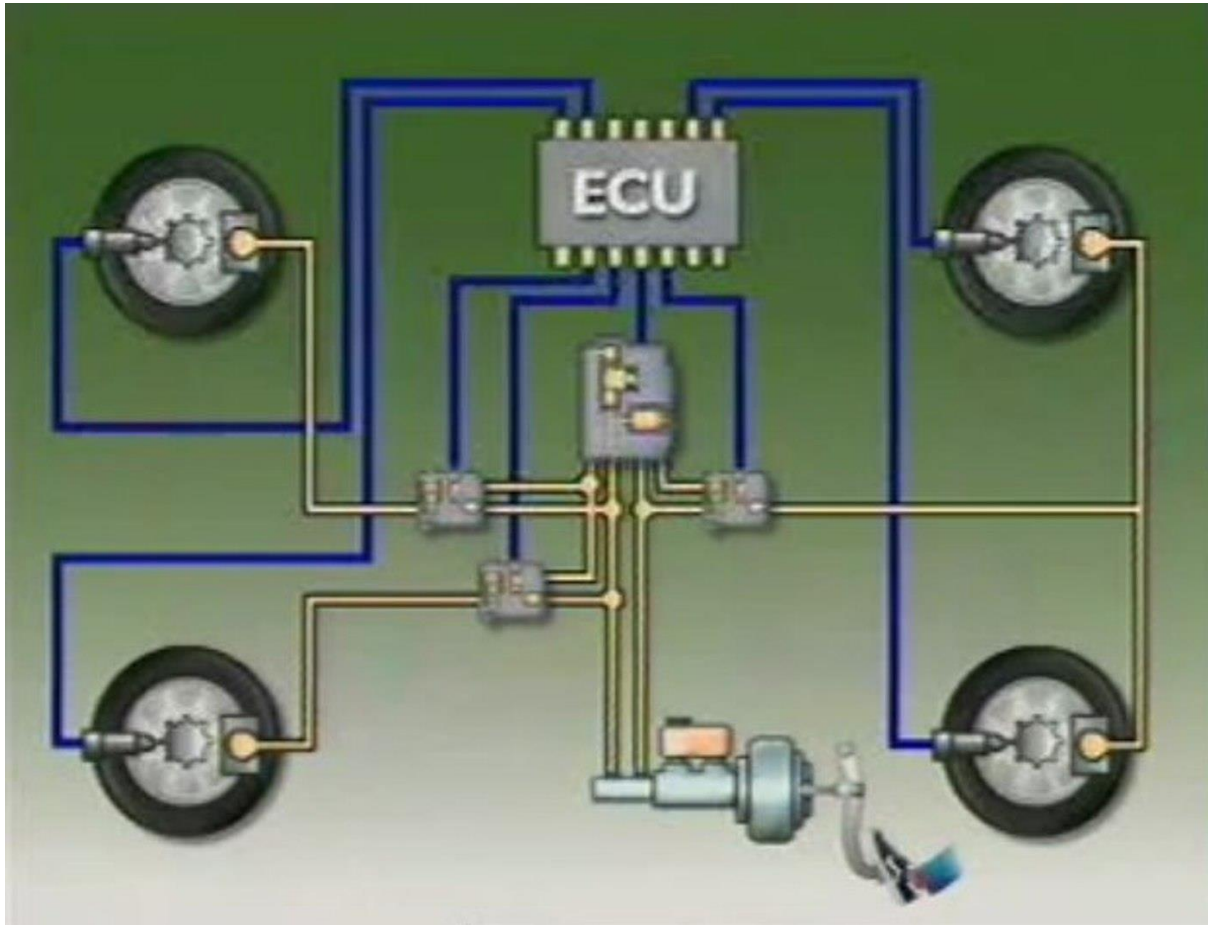


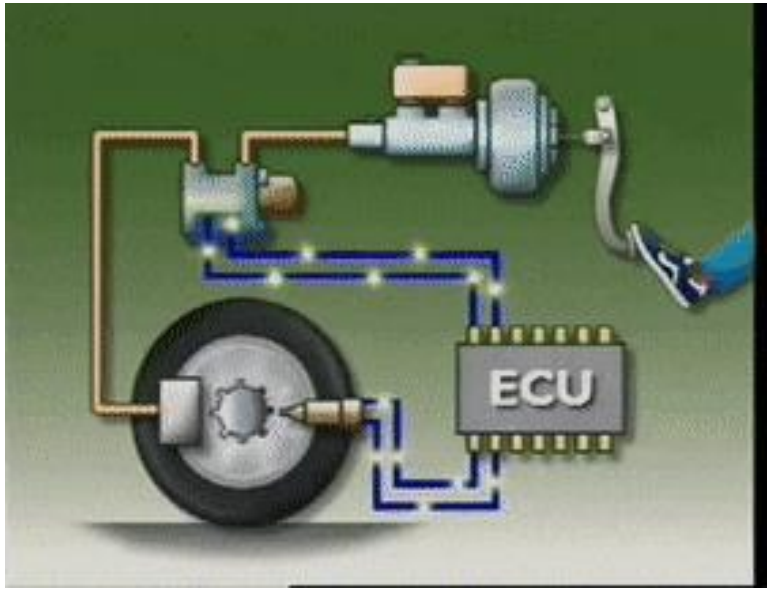


CONSTRUCTION



WORKING





ADVANTAGES

- Achieves the Shortest Stopping distance
- Better chance on Steering around obstacle
- Reduced risk of skidding
- Maintain directional stability in steering during heavy/sudden braking.
- Easy Fault/Failure detection by the vehicle owner
- Automatic change of brake fluid pressure in each wheel

DISADVANTAGES

- Proved less effective on gravel road or road compacted by snow
- Very Costly
- Maintenance of a Car equipped with ABS is required more.