



# **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 : 16AU0302 - RECENT TRENDS IN AUTOMOBILES**

**III YEAR / VI SEMESTER**

**Unit 4 – Comfort Systems**

**Topic : Hill Assistance System & Power Steering**



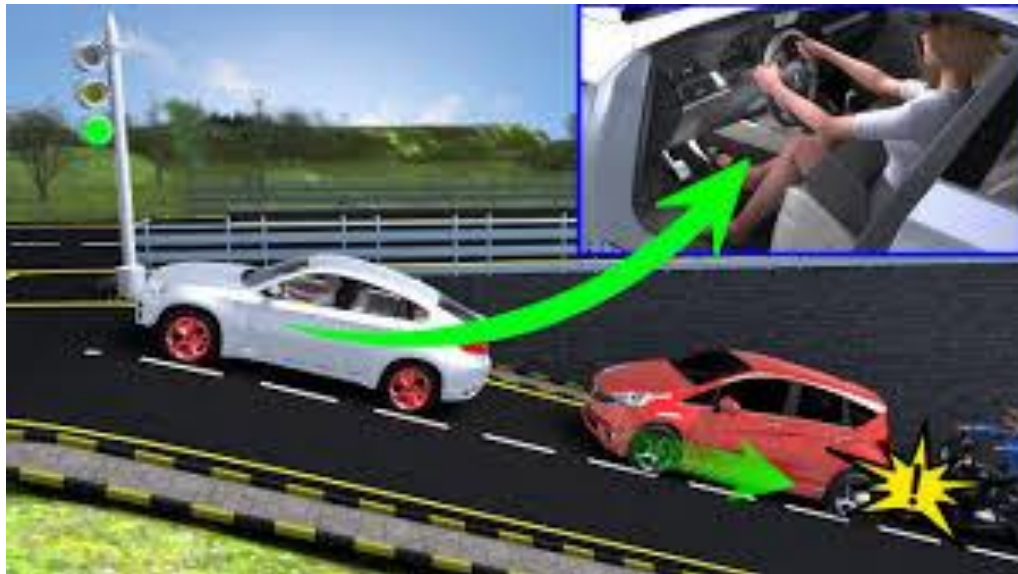
# Hill Assistance system



A Hill Assist System prevents a vehicle from rolling back on inclines by automatically applying the brakes for a brief period after the driver releases the brake pedal and before engaging the accelerator pedal.

The underlying technology involves sensors that detect the vehicle's inclination and wheel speed. When the system detects that the vehicle is on an incline and the brake pedal is released, it engages the brakes momentarily to prevent rollback. Some systems also utilize the vehicle's electronic stability control system to manage brake pressure and wheel slip, ensuring smooth and seamless operation.

By providing temporary brake support, Hill Assist Systems offer convenience and safety, especially in stop-and-go traffic or challenging driving conditions





# Differences between hydraulic and electric power steering



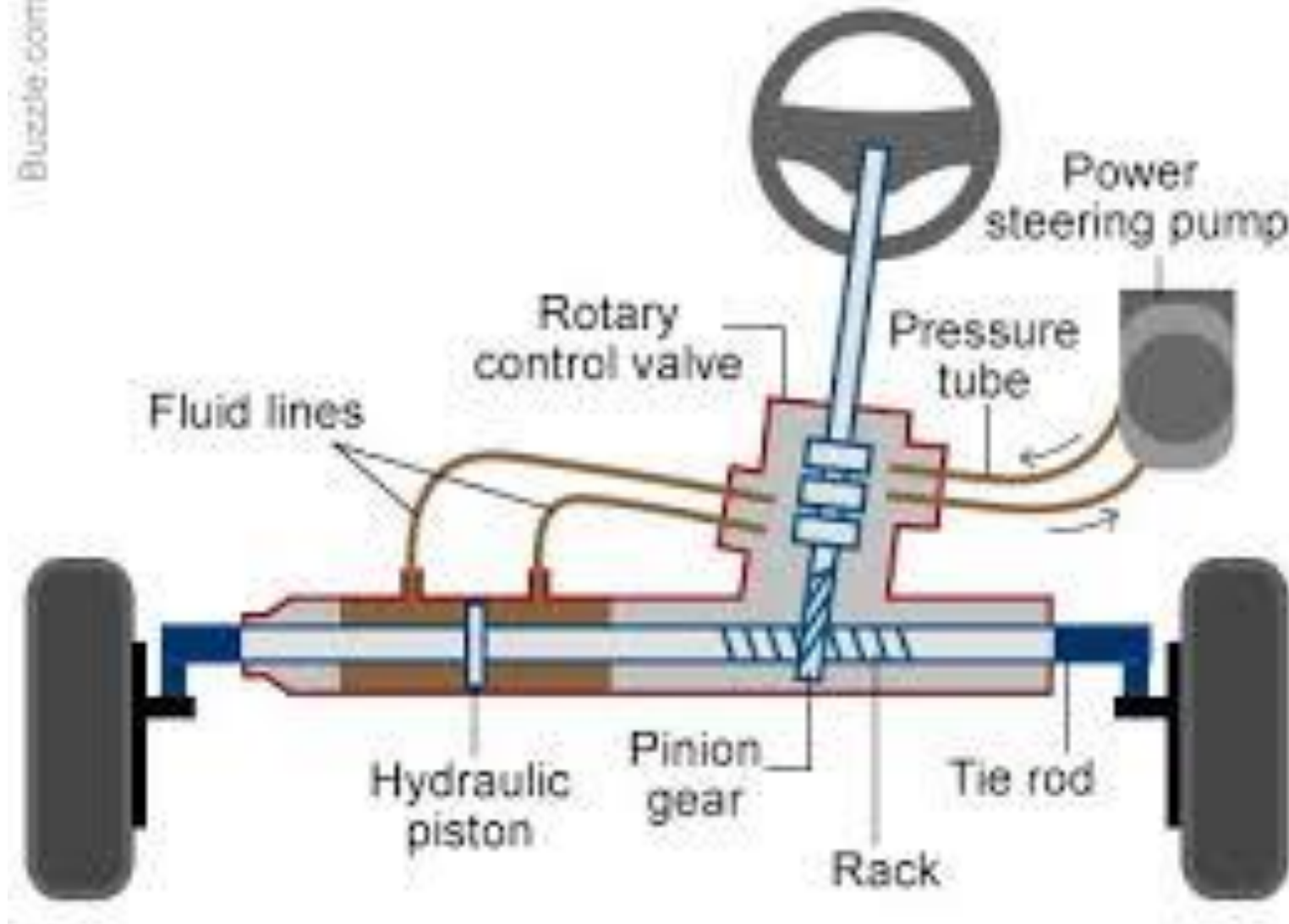
- Efficiency
- Maintenance requirements
- Performance
- Weight and Packaging
- Response and feed back



# HYDRAULIC POWER STEERING

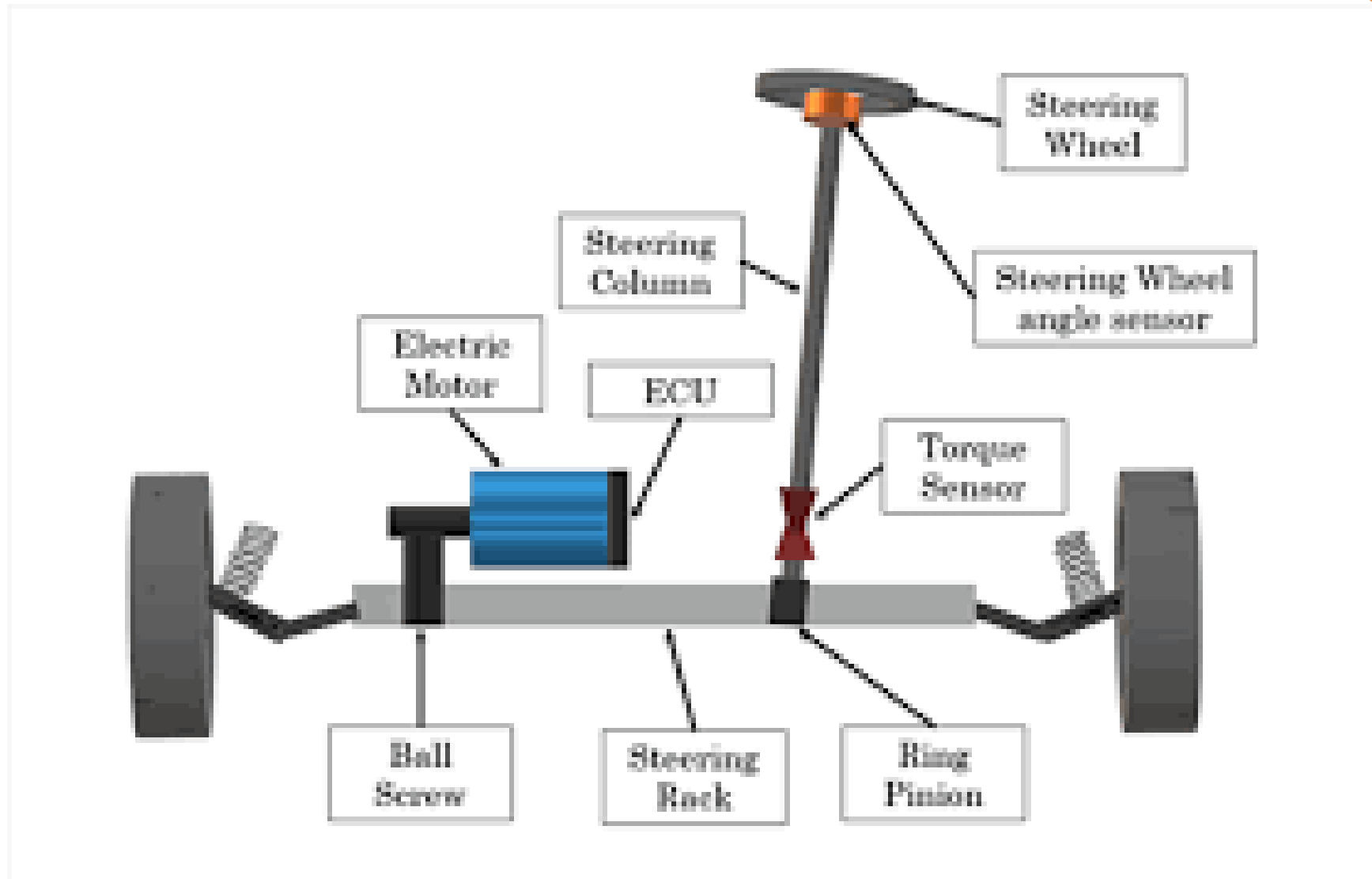


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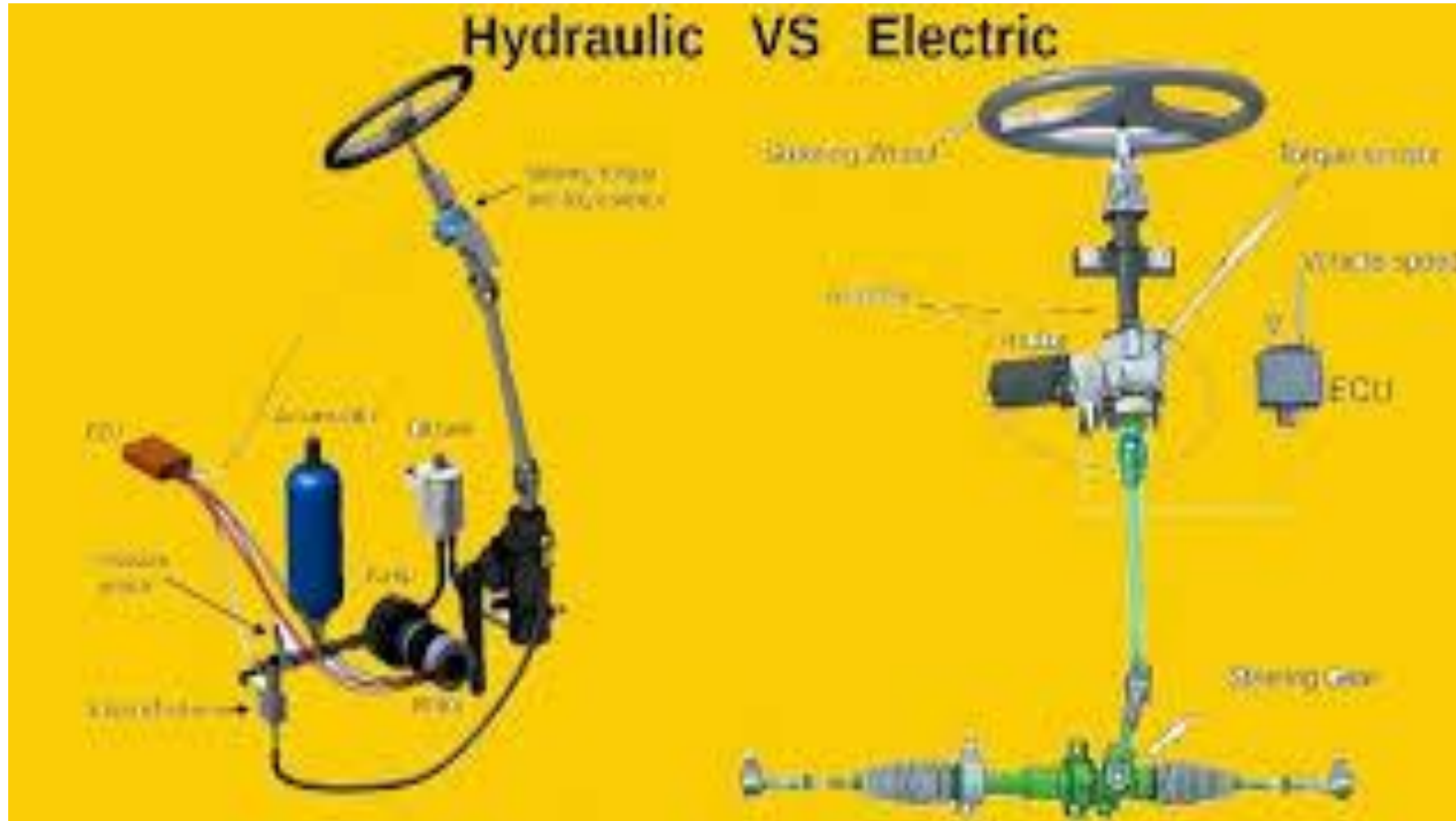


# ELECTRIC POWER STEERING





# POWER STEERING SYSTEM





# ACTIVE SUSPENSION SYSTEM



- An active suspension is a type of automotive suspension on a vehicle.
- It uses an onboard system to control the vertical movement of the vehicle's wheels relative to the chassis or vehicle body.
- These technologies allow car manufacturers to achieve a greater degree of ride quality and car handling.



## REFERENCE



- [https://en.wikipedia.org/wiki/Active\\_suspension](https://en.wikipedia.org/wiki/Active_suspension)





THANK YOU !!!