



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 : 19AUB202 – AUTOMOTIVE SYSTEMS

II YEAR / III SEMESTER

Unit 3 – Transmission System

Topic : Rear axle and its types -Full Floating, Three Quarter Floating and Semi Floating Axles



REAR AXLE



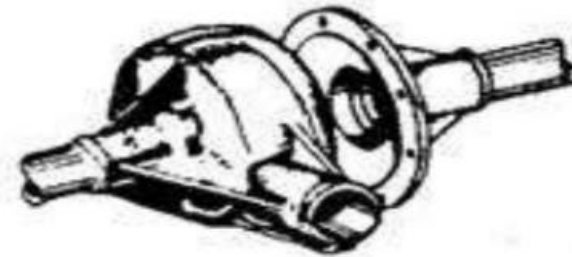
- ❖ The rear axle is a critical component of a vehicle's drivetrain and suspension system, responsible for supporting the rear wheels, transmitting power from the engine to the wheels, and maintaining stability and control.



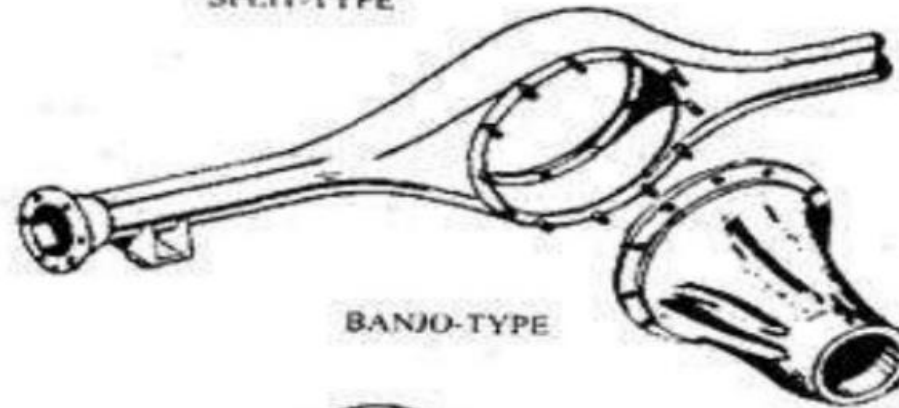


Axle Casing

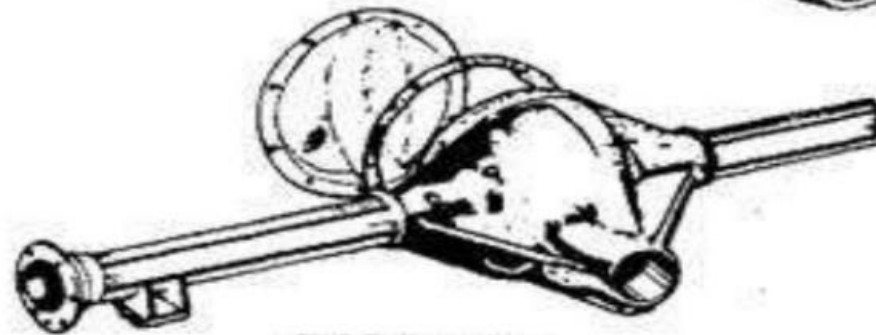
- Split Type
- Banjo Type
- Carrier Type



SPLIT-TYPE



BANJO-TYPE



CARRIER-TYPE



TYPES OF REAR AXLE



- Depending upon Floating Axle
 - ❖ Full Floating Axle
 - ❖ Semi Floating Axle
 - ❖ Three Quarter Floating Axle
- Depending upon Power Transmission to the wheels
 - ❖ Dead Axle
 - ❖ Live Axle



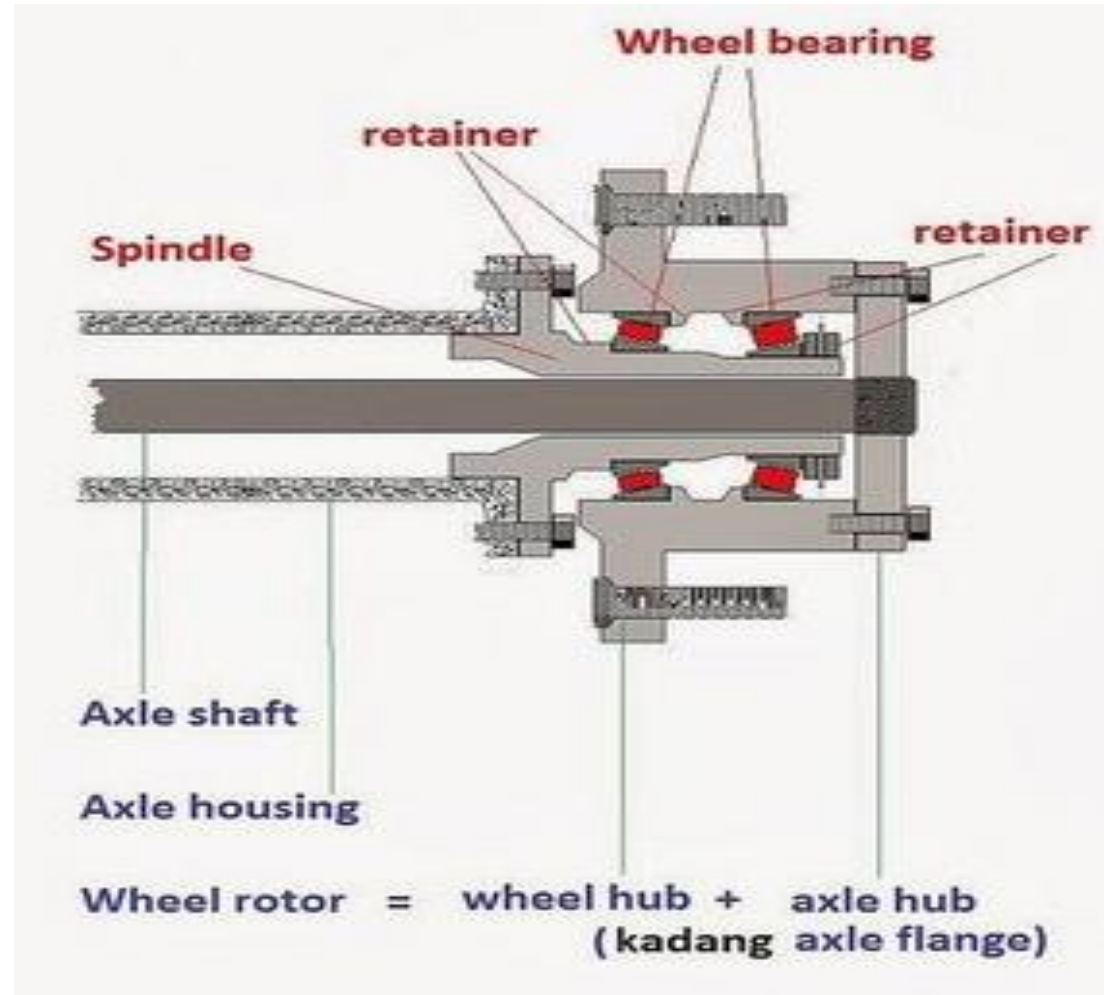
FULL FLOATING AXLE



- A full-floating axle is a type of rear axle commonly used in heavy-duty vehicles and trucks.
- Unlike semi-floating axles, which support the weight of the vehicle and also transmit driving torque to the wheels, a full-floating axle is designed to support the vehicle's weight but does not transmit power to the wheels.



FULL FLOATING AXLE





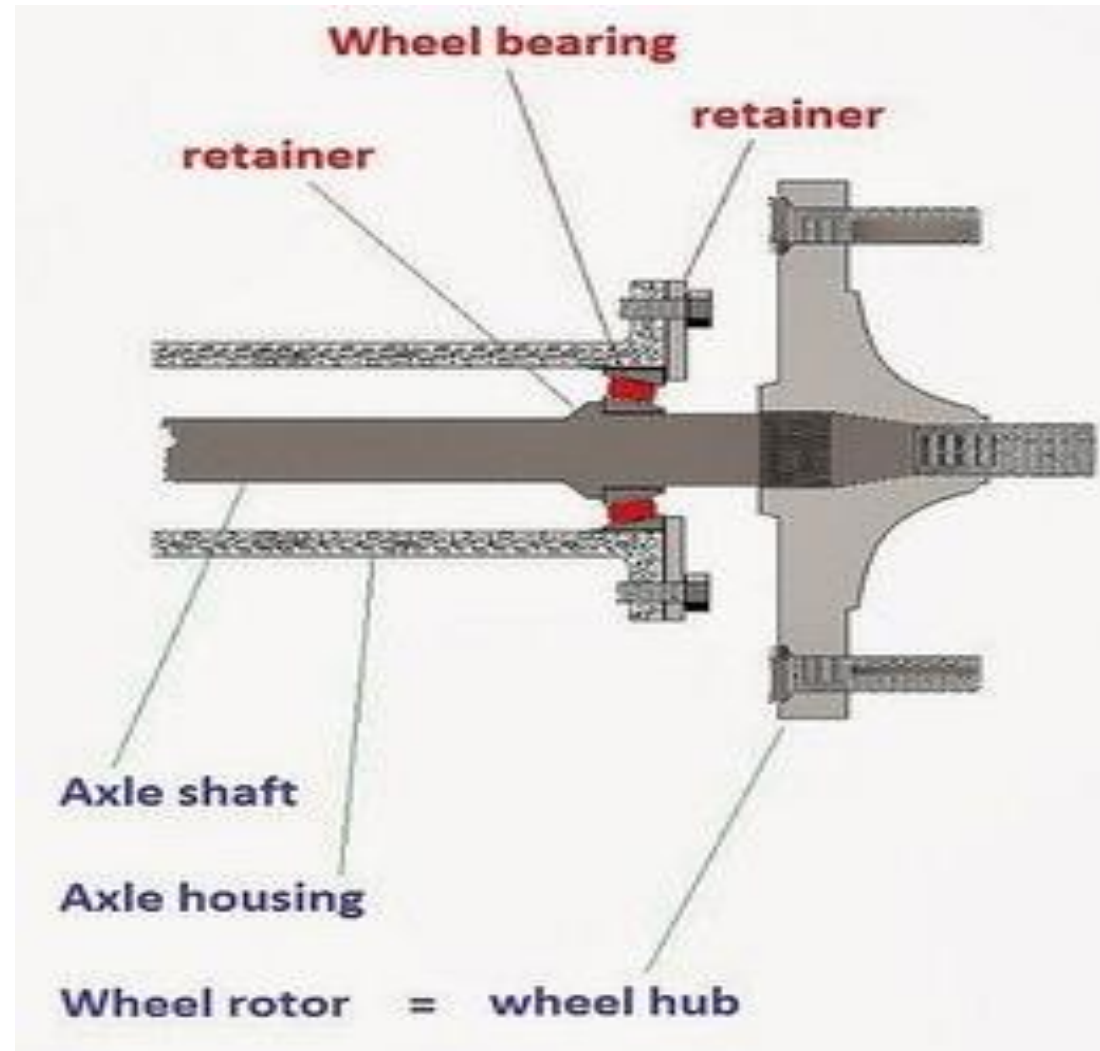
SEMI FLOATING AXLE



- A semi-floating axle is a common type of rear axle used in many passenger cars and light-duty trucks.
- It is a design that combines the functions of supporting the vehicle's weight and transmitting power from the engine to the wheels.
- Unlike a full-floating axle, which is primarily designed to support the vehicle's weight, a semi-floating axle is responsible for both supporting the weight and delivering the engine's power to the wheels.



SEMI FLOATING AXLE





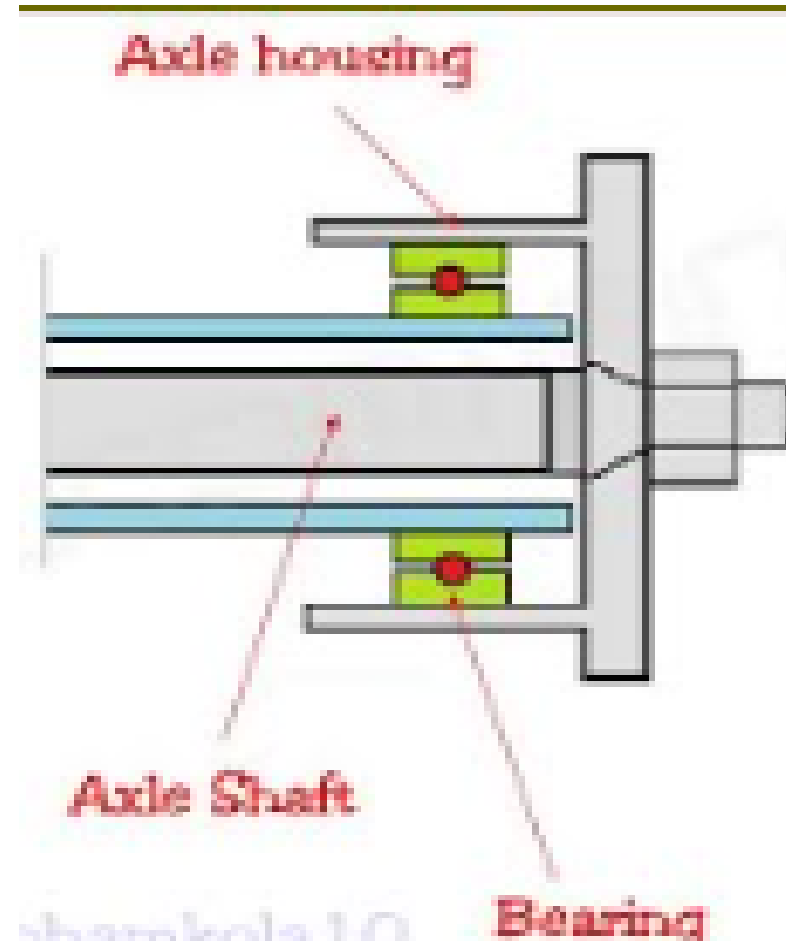
THREE QUARTER FLOATING AXLE

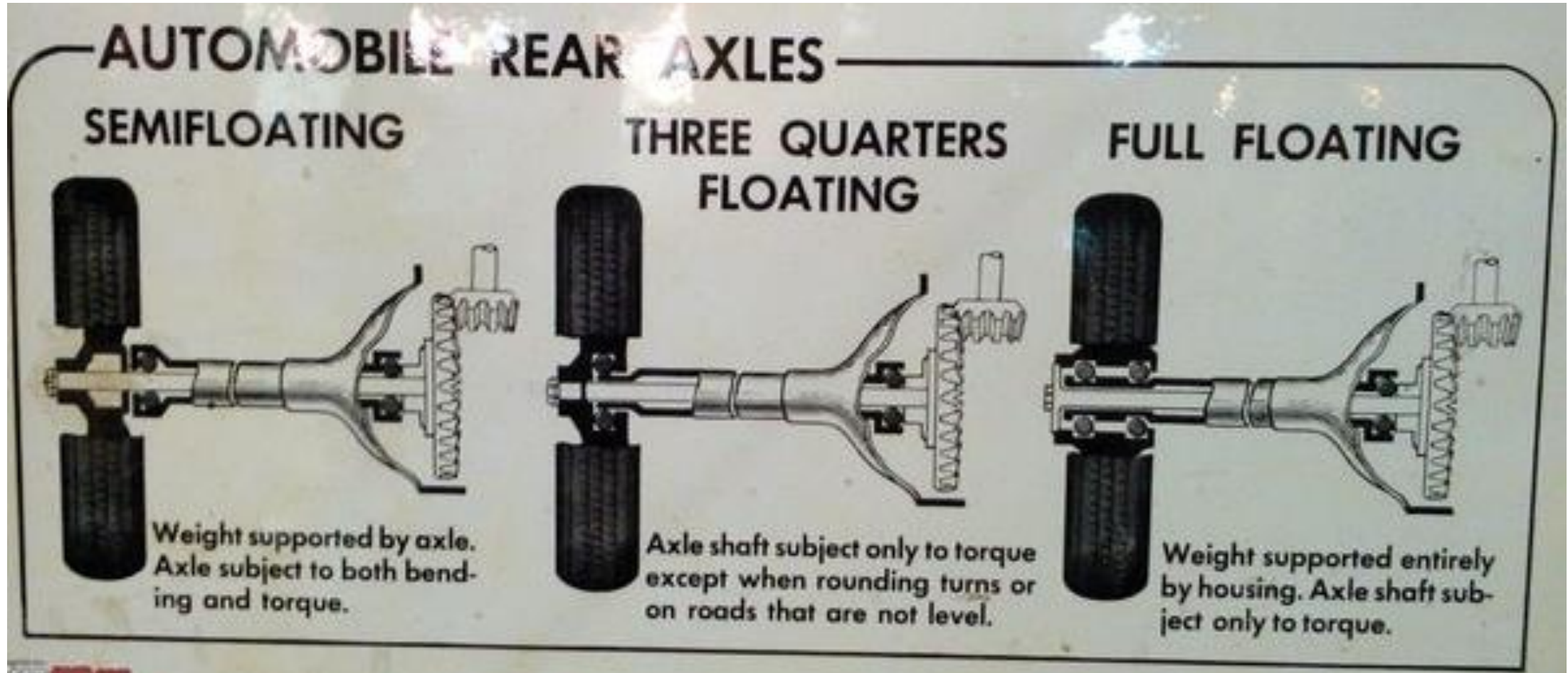


- A three-quarter floating axle is a less common type of rear axle configuration used in some vehicles.
- It falls between the design of semi-floating axles and full-floating axles in terms of its load-bearing and power transmission capabilities.
- It's important to note that the term "three-quarter floating axle" is not widely recognized, and it may not be a standard industry term.



THREE QUARTER FLOATING AXLE







THANK YOU !!!