

TRACTOR SYSTEMS OPERATION AND MAINTENANCE

1. The force in the direction of travel, developed by the traction device medium (soil) and transferred to the vehicle is **Traction**.
2. Tractor which have endless chain or track in the place of Pneumatic wheels are called **Crawler tractor**.
3. The complete path of power from the engine to the wheels is called **power train**.
4. The speed reducing mechanism, equipped with several gears is known as **power transmission** system.
5. The difference in the distance of the centre lines of the back end and front end of front wheels of the tractor is known as **Toe-in**.
6. Device used on tractors for transmission, of power and for multiplying the torque of the engine is **Hydrokinetic transmission** (or) **Torque converter**.
7. The special arrangement of gears to permit one of the rear wheels of the tractor to rotate slower or faster than the other is **Differential unit**.
8. The bevel pinion in mesh with a large bevel wheel is known as **Crown wheel**.
9. The system, governing the angular movement of front wheels of a tractor is called **steering system**.
10. Brake system based on Pascal's law is **Hydraulic system**.
11. Constant depth of ploughing is maintained by automatic adjustment of **Hydraulic Control** of tractor.
12. Implements can be attached to Tractor in two ways one is drawbar and the other is **3 point linkage**.
13. To improve the traction of rear wheel in the Puddling operation **Cage wheels** are recommended.
14. The compressive strength of tyres is given by **Ply rating** of tyres.
15. The angle between the center line of the tyre and the vertical line is **Camber angle**.

16. The horizontal distance between the front and rear wheels of a tractor, measured at the ground contact is **wheel base**.
17. To stop the movement of tractor, pull the **Throttle lever** to reduce the engine speed.
18. The height of the lowest point of the tractor from the ground surface, the tractor being loaded to its maximum permissible weight is **Ground clearance**.
19. Noise of the tractor is measured with a **Sound meter**.
20. Tractor Engine is used as a prime mover for active tools and stationary farm machinery through **Pto (or) belt pulley**.
21. The sound level of agricultural tractor should not exceed **Sound meter**.
22. The force required in the direction of travel to overcome resistance is **Rolling resistance**.
23. In tractor to maintain the uniform depth of operation **position control** is used.
24. The inflation pressure in rear wheels of tractor varies from 0.8-1.5 kg/cm².
25. In wheel type tractor, wheel slippage is about **15-20%**.
26. Useful life of pneumatic tyres is **6000** working hours.
27. A **Drawbar** is a device by which the pulling power of tractor is transmitted to the trailing implement.
28. The prime mover in which the direction of travel and its control for field operation performed by the operator walking behind is known as **Power tiller**.
29. In tractors **Gear** type of hydraulic pump is used.
30. In cropping pattern **50-55** hp tractor is suitable for 60 hectares farm.
31. Flat belts are available in the range from **25-50** cm.
32. Hydrokinetic transmission is known as **Torque converter**.
33. When two shafts are close to each other in a compact form **Gear device** type of transmission is recommended.

34. In power tillers **Dog Clutch** Type of clutch is used.
35. The **Final drive** is a gear reduction unit in the power trains between differential & drive wheels.
36. The **Clutch** is used to connect and disconnect the tractor engine from the transmission gears and drive wheels.
37. Tractor manufacturing was started in India by first manufacturer **M.S Eicher**.
38. Tractor having three of four pneumatic wheels is called as **wheel tractor**.
39. The **Tractor** is a self propelled power unit having wheels or tracks for operating agriculture implements.
40. The **Brake** is used to stop or slow down the motion of a tractor system.
41. The angle between the centre line of the king pin of the tractor and the Vertical line is **Caster angle**.
42. Engagement and disengagement of clutch is very smooth due to larger surface area of friction member is **multiple disc clutch**.
43. The **Hydraulic tank** is used for storing hydraulic oil for the system.
44. The inflation pressure of the front wheel of tractor varies between **1.5-2.5** kg/cm².
45. Walking type tractor are know as **Power tiller**.



THANK YOU