

STATE TRACTOR DRIVING EXAM

- T F 1. Calcium chloride solution is the most commonly used type of weighting material for tractor tires.
- T F 2. The recommended practice is 75% fill or fill to valve level with the valve at the bottom of the tire when adding a solution of CaCl.
- T F 3. Calcium Chloride is heavier than water.
- T F 4. A gap of .303 inches is recommended for the spark plug on a 4020 diesel John Deere tractor.
- T F 5. A good operator need not be a mechanic but he knows when it is time to get the help of a mechanic.
- T F 6. The tractor operator's manual gives instructions on servicing and maintenance, including daily service and adjustments.
- T F 7. Checking and servicing the air cleaner on your tractor is one of the most important service jobs for you to do.
- T F 8. The common carburetor uses about 7,000 to 12,000 gallons of air for every gallon of fuel.
- T F 9. If dirt is not filtered out by the air cleaner it passes directly through the intake manifold into the engine cylinders.
- T F 10. The two types of air cleaners are (1) oil bath and (2) water bath.
- T F 11. An oil type air cleaner causes the air to pass through the oil, which traps the dirt particles.
- T F 12. Air is cleaned in a dry-type cleaner by passing it through a special pleated paper element which filters out small particles and holds them on the outer surface of the filter element.
- T F 13. An oil bath air cleaner can be mounted horizontally or vertically.
- T F 14. Gasoline should be used to clean air oil-bath air cleaner.
- T F 15. The dust unloader is a rubber duck-bill arrangement that is held shut by suction while the engine is running.
- T F 16. Overheating causes oil to oxidize.

- T F 17. Oil in the crankcase keeps working parts hot.
- T F 18. Oil forms a seal between the piston rings and cylinder walls.
- T F 19. Oil cushions the pounding action on piston pins and bearings.
- T F 20. Overfilling the crankcase with oil does not cause any problem.
- T F 21. Approximately 40% of engine heat is given off through the cylinder walls.
- T F 22. A thermostat measures the amount of water in cooling system.
- T F 23. A pressure-relief valve is located in the radiator cap.
- T F 24. A vacuum valve allows air to reenter the radiator as it cools.
- T F 25. Refill radiator to within about 2 inches of the radiator neck.
- T F 26. Dirty water clogs the cooling system and makes it less effective.
- T F 27. Wipe the end of a grease fitting with a clean cloth before greasing.
- T F 28. Water is more of a problem in diesel fuel than it is in gasoline.
- T F 29. It is important for you to be prepared to operate a tractor safely.
- T F 30. Wear shoes that are comfortable when operating a tractor, such as tennis shoes, thongs, etc.
- T F 31. Watching for the parts that need attention and caring for them at the time they need it, is part of the difference between a tractor driver and a competent operator.
- T F 32. Adding weight to rear wheels of a two-wheel drive tractor reduces traction for pulling.
- T F 33. Adding weight to front wheels keeps them from rising when driving up a slope.
- T F 34. Wash pressure gauge after testing tires containing calcium chloride solution.
- T F 35. Provide ventilation in a closed building before starting your tractor.
- T F 36. Carburetor-type engines give off carbon monoxide, which can cause sickness or death if confined in a building.
- T F 37. The 4 strokes of a 4 cycle engine in order are: Intake, Power, Compression, Exhaust.
- T F 38. Tractor speed control levers are usually mounted on the steering column or instrument panel.

- T F 39. Some diesel tractors have an electric heating element for starting in cold weather.
- T F 40. When traveling on the highway, unlock the latch connecting the right and left brake pedals.
- T F 41. The majority of farm tractors are designed to haul more than one person.
- T F 42. Some tractors are equipped with a range level to provide faster or slower speed selection with your regular gear shift.
- T F 43. Even at relatively slow speeds, running over a hidden object can cause a tractor to tip sideways.
- T F 44. After the clutch is engaged, completely remove your foot from it.
- T F 45. Hooking to the axle when towing can cause a tractor to overturn backwards.
- T F 46. When pulling equipment with PTO shaft and draw bar, it is better to have a short draw bar rather than a long draw bar.
- T F 47. Sway locks or stabilizer bars eliminate swinging action of the hitch.
- T F 48. Attach the right lower link of a 3-point hitch first, because it has no adjustment.
- T F 49. Standards provide that two shafts shall be splined differently so it is impossible to connect a 540 rpm implement to a 1000 rpm PTO shaft, or vice versa.
- T F 50. A remote cylinder is positioned under the tractor hood.
- T F 51. A remote cylinder is used to raise the lower trailing equipment such as plows, disc harrows and the cutter bars of combines and mowers.
- T F 52. A dust cap should be covering the PTO shaft when using PTO equipment.
- T F 53. Some tractors are equipped with an automatic draft control, which is used with equipment such as a plow or disc harrow.
- T F 54. Some implements provide for two tongue positions – one for transport and the other for field operation.
- T F 55. You get greatest efficiency from a carburetor engine on a light load when the speed-control lever is completely open.
- T F 56. A diesel engine may start running backwards if it is about to stall under a heavy load.

- T F 57. It is generally agreed when slippage becomes greater than 30% during normal field operations you should either add weight to the rear wheels or reduce the tractor load.
- T F 58. $\frac{(\text{Distance to}) A - (\text{Distance to}) B}{(\text{Distance to}) A} \times 100 = \text{percent of slips}$
- T F 59. On very steep slopes, if you have no trailing equipment, back the tractor up the hill for greatest safety.
- T F 60. Weights on the front of your tractor help offset implements that add weight to the rear.
- T F 61. Wide wheel spacing increases safety on slopes.
- T F 62. When starting up a hill with a load, quick engagement of the clutch gives you more power for climbing the hill.
- T F 63. When in gear, the engine does not help brake the tractor on slopes.
- T F 64. A tractor equipped with a roll bar helps protect the operator in case of overturning sideways.
- T F 65. The normal shear angle of soil without vegetation is about 45 degrees for ditches six feet or less in depth.
- T F 66. You are taking no risk of overturning backwards by driving forward out of a mud hole or ditch.
- T F 67. Riding the tractor draw bar is a dangerous practice.
- T F 68. Backing a tractor out of a mud hole or ditch is safe practice.
- T F 69. Turning too sharply may cause a lug on the rear wheel to lift an implement and lodge it on the tire.
- T F 70. In diesel engines, knock is caused by the fuel igniting too rapidly.
- T F 71. Ignition quality is a term to express the immediate burning of the diesel fuel.
- T F 72. If the oil-pressure indicator suddenly drops to zero, or points to the red area, check on it when you finish for the day.
- T F 73. Diesel tractors are even more dependent on high temperature for proper operation than carburetor type tractors.
- T F 74. The odometer shows the rate of battery charge or discharge.

- T F 75. Farm tractors and other farm vehicles, road maintenance and construction equipment, and horse-drawn vehicles designed for a speed of no more than 25 MPH, have been classified as slow moving vehicles.
- T F 76. Use standard hand turn signals for tractor operation as when operating an automobile.
- T F 77. Diesel fuel and water mix rather readily and the water is slow to settle out, much slower than with gasoline.
- T F 78. Smoking while refueling is not recommended for those that wish to continue living.
- T F 79. The paper element air cleaner is more efficient than oil bath air cleaners.
- T F 80. Solvent rather than gasoline should be used for cleaning parts.
- T F 81. Use 10 weight oil in summer and 50 weight oil in winter.
- T F 82. A good oil for diesel tractors is rated ML.
- T F 83. To prevent damage to the injectors on a diesel tractor, drain water from the fuel filters if so equipped.
- T F 84. Check the octane rating when buying diesel fuel.
- T F 85. Diesel engines should be thoroughly warmed up before putting under heavy load.
- T F 86. A gasoline engine has a higher compression ratio than a diesel engine.
- T F 87. L – P gas is commonly known as Propane.
- T F 88. It is a safe practice to remove the radiator cap while the engine is hot.
- T F 89. To prevent condensation from forming, keep the fuel tank full.
- T F 90. To avoid danger of fuel vapor igniting, wait 4 to 5 minutes for the tractor to cool before refueling.
- T F 91. It is generally accepted as a safe practice to ride on implements being towed by a tractor.
- T F 92. A diesel tractor that has been under heavy load should be allowed to run a few minutes at an idle before shutting off.
- T F 93. Category I hitches are 80 horse power and over.

- T F 94. As you double ground speed the forces which cause overturning increase four times.
- T F 95. Engaging the differential lock assists in turning the tractor.
- T F 96. A SMV sign is a red and white rectangular sign.
- T F 97. Adjust belts when moving and under power.
- T F 98. It is recommended to give a tractor under heavy load a shot of ether for extra power.
- T F 99. Side wall or radial cracks are caused by under-inflation or by heavy axle loads.
- T F 100. An above-ground fuel storage tank will lose less from evaporation than an underground fuel tank.
- T F 101. Clean hydraulic coupling ends before connecting.
- T F 102. Release hydraulic pressure before disconnecting the hydraulic systems.
- T F 103. Hooking above the draw bar when pulling a load is not considered dangerous.
- T F 104. When operating a tractor with a front loader, carrying the load at full height will make it more stable.
- T F 105. Riding the clutch helps control the tractor speed.
- T F 106. When operating on a steep down slope shift the tractor to a low gear, this will help control speed.
- T F 107. By-passing the neutral safety switch will allow you to start the tractor in gear.
- T F 108. When bearings on safety shields on PTO shafts wear out, remove the shield and leave it off.
- T F 109. When red lights on dash come on it is okay to operate tractor.
- T F 110. On non synchro-meshed transmissions it is okay to shift while tractor is moving.
- T F 111. On diesel tractors, after changing fuel filters the fuel system normally needs to be bled.
- T F 112. When checking fluid levels both oil and water it is better to check immediately after operation of tractor.

- T F 113. You should always use glow plugs when starting diesel engine if you are going to use ether.
- T F 114. If your tractor is equipped with ROPS it isn't necessary to use seat belts.
- T F 115. On some tractors when operating PTO equipment the momentum of the PTO can cause tractor to move forward even when clutch is disengaged.
- T F 116. ROPS manufactured on the farm may not meet the safety specifications established by the manufacturer.
- T F 117. When using mounted spray tanks on tractors it is better to mount them on the rear rather than the front.
- T F 118. The adjustable links on the three point hitch have very little use and are a waste of money.
- T F 119. When the tractor is not in use and it has a three point implement mounted on it, the equipment should be lowered to the ground.
- T F 120. When you have removed safety shields on equipment for repairs leave them off so repairs can be made easier next time.
- T F 121. When moving a combine down the highway with 16 foot header, flashing warning lamps should be mounted on the widest part of machine.
- T F 122. Only one safety chain is required when towing a piece of equipment down the highway.

