

3.1 *Locate, read and interpret hazard alerts and safety messages contained in the operator’s manual provided with agricultural tractors.*

3.2 *Locate, read and interpret the hazard alert warnings on typical agricultural tractors.*

3.3 *Explain the level of risk associated with each of the following safety messages:*

- CAUTION
- WARNING
- DANGER

3.4 *Read and interpret special operating instructions found in the operator’s manual for a typical agricultural tractor, including the following:*

- Operating a tractor with a front-end loader
- Removing a stuck tractor
- Towing heavy loads
- Operating a tractor on a public highway
- Sequence for jump starting a tractor with a discharged battery
- Towing a disabled tractor
- Proper fueling

3.5 *Explain the process of conducting a pre-operational visual inspection of a typical agricultural tractor including checking for each of the following conditions:*

- Fluid leaks (fuel, hydraulics, coolant)
- Broken, damaged, or missing components
- Accumulation of trash, dirt, or flammable material
- Damaged or non-working lights, reflectors, or SMV emblem
- Dirty battery
- Check surroundings
- Discharged fire extinguisher

- Loose or missing lug bolts on wheels
- Damaged, cut, or under-inflated tires
- Corroded or damaged wheels/rims
- Shields and guards not in place or in working condition
- Dirty windows and misaligned mirrors

3.6 *Explain the process used to safely complete each of the following pre-operational maintenance tasks:*

- Check crankcase oil level and add as needed
- Check coolant level and add as needed
- Check fuel and Diesel Emission Fluid (DEF) levels and add as needed
- Check tire inflation pressure
- Check hydraulic and transmission fluid
- Check engine and cab air filters
- Check air cleaner obstruction indicator
- Clean windows, lights, reflectors, and SMV emblem
- Replace light bulbs as needed
- Lubricate grease zerks as needed
- Replace wiper blades as needed
- Replace PTO master shield

3.7 *Identify the procedure to follow before operating a tractor.*

- Notify supervisor/parent/boss where you will be working
- Get appropriate instruction on operation of tractor/machinery and how to perform tasks
- Check your tractor and surroundings for bystanders, obstacles, maintenance issues, animals and adequate ventilation (if operating tractor indoors).
- Start tractor only from operator seat

3.8 Identify the following design features on a modern agricultural tractor that reduce the potential for injury during mounting and dismounting.

- Steps
- Non-slip surfaces
- Handholds and railings

3.9 Explain the safe way to mount and dismount a tractor.

3.10 List the following adjustments to the operator's station of an agricultural tractor or self propelled machine that should be made to increase operator safety:

- Adjust seat, steering wheel and mirrors
- Fasten seatbelt
- Make sure there are no bystanders near the tractor
- Verbal or audible warning before starting

3.11 Explain the role of Roll Over Protective Structures (ROPS) in preventing agricultural tractor related fatalities.

3.12 Identify the two basic types of ROPS used on agricultural tractors.

- Protective frames (2 and 4 post, and foldable)
- Protective enclosures (cabs)

3.13 Explain the appropriate use of foldable ROPS in each of the following settings:

- Low clearance buildings
- Vineyards
- Orchards

3.14 Describe the zone of protection on a ROPS-equipped tractor.

3.15 Explain the role of the seat belt in protecting an operator in the event of an overturn.

3.16 Explain the advantages of an environmentally-controlled cab on an agricultural tractor or self propelled machine, including:

- Reduces sound level
- Protects from sun exposure
- Reduces fatigue
- Reduces dust exposure
- Protects from dangerous insects
- Protects from extreme temperatures
- Protects from precipitation (rain, snow, etc.)

3.17 Explain the role of Falling Object Protective Structures (FOPS) on off-highway equipment.:

- Provide overhead falling object protection
- Protects from foreign object penetration

3.18 Explain the message associated with each of the following commonly used hand signals.

- Come to me or come help
- Stop engine
- Move out or take off
- Lower equipment
- Move toward me or follow me
- This far to go
- Speed up
- Slow down
- Raise equipment
- Stop
- Start engine