



SAFE TRACTOR OPERATION & MAINTENANCE CDE

(REVISED NOVEMBER 2024)

PURPOSE

The Safe Tractor Operation and Maintenance CDE is designed to develop the ability of all FFA members to demonstrate the knowledge and skills related to the maintenance and safe operations of tractors.

ELIGIBILITY

The participant must be an active member of a chartered Florida FFA Chapter and enrolled in grades 9, 10, 11 or 12. Each chapter may enter one participant.

EVENT PROCEDURES

FFA members are to wear OUTDOOR FFA Official Dress, and will be scored accordingly.

Drivers and judges will have a meeting prior to starting to outline the expectations for the event and ensure all drivers are aware of their surroundings.

Students are required to present a safety waiver at check-in in order to participate in the event. The waiver is included with the rules.

EVENT SCHEDULE

The event will be held in three rounds: sub-district, district and state level competitions. Each chapter may enter one participant at the sub-district level with each sub-district forwarding their winners on to the district contest. The 12 district winners are then eligible to compete in the state contest.

INDIVIDUAL PRACTICUMS

KNOWLEDGE PRACTICUM

WRITTEN EXAM

Participants will complete a multiple choice written exam at the event. The exam will be made up of questions from the Safe Tractor Operations for Agricultural Employers, posted on FloridaFFA.org and from sections 4 & 5 of the National Safe Tractor and Machinery Operation Program Student Manual, <https://extension.psu.edu/national-safe-tractor-and-machinery-operation-program-manual>.

SAFETY VIDEOS

Participants will be required to view a set of tractor safety videos and answer a series of questions based on those videos. While the questions do not have a score attached to them, failure to complete this task by the designated date will result in disqualification. Links to the videos will be provided to the FFA Advisor after the registration period closes.

ORAL QUESTIONS

Participants will answer oral questions related to the safety videos that they are required to watch or the listed references. Oral questions will be asked at the event prior to the student operating the tractor.

PERFORMANCE PRACTICUM

TRACTOR OPERATION

- The tractor should no additional implements attached.
- The student is to drive the tractor to the trailer, stop tractor, turn off tractor, dismount and attach the trailer to the tractor drawbar. The student will then drive through the course layout, returning trailer to its starting point and then the tractor to the starting line.
- A two wheeled trailer will be used (not a farming implement)
- Each student may take a 2 minute test drive with the trailer, but not through the course
- Safety belts must be worn by the student, only if the tractor is equipped with a ROPS.
- Time begins when the operator releases the clutch after the warm-up and is signaled from the judge in charge.
- Drivers must drive the outlined course.
- No assistance will be allowed in spotting
- No running or jumping on the tractor is allowed
- Three safety violations result in disqualification of the contestant at the discretion of the judges
- Time ends when the tractor is unhitched and returned to the starting point with the engine stopped.

SCORING

Practicum	Activity	Individual
Knowledge	Safe Tractor Operations	100
Skills	Tractor Operation	
Knowledge	Oral Questions	
Official Dress		50
Total		

The student with the lowest score sheet wins. Participants shall be ranked in numerical order on the basis of the final score to be determined by each judge without consultation. The judges' ranking of each participant shall then be added, and the winner will be that whose total of rankings is the lowest. Other placings shall be determined in the same manner. (low point method of selection)

TIE BREAKERS

In the event of a tie in individualized scores, the following events will be used in order to determine award recipients:

INDIVIDUAL

1. Written Exam

AWARDS

Awards will be presented by the event host at Sub-District and District CDEs/LDEs. State finals awards will be presented during a designated session at the annual State FFA Convention and Expo.

Awards will be presented to the top three individuals at both Sub-District and District CDEs/LDEs and the top five individuals at the state finals based upon their rankings. Awards are sponsored by a cooperating industry sponsor(s) as a special project and/or by the general fund of the Florida

REFERENCES

This list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation. Previous event materials may be available on the Florida FFA Website.

- Written Exam & Oral Questions - Safe Tractor Operations for Agricultural Employers, posted on FloridaFFA.org
- Written Exam & Oral Questions - National Safe Tractor and Machinery Operation Program Student Manual, <https://extension.psu.edu/national-safe-tractor-and-machinery-operation-program-manual>



SAFE TRACTOR OPERATIONS CDE

NAME _____

CHAPTER _____

PRE-WARM-UP

1. Failure to check water		x7	
2. Failure to check oil		x7	
3. Failure to check fuel		x7	

STARTING ENGINE

4. Failure to check neutral position		x10	
5. Failure to disengage clutch while starting engine		x10	
6. Switch not turned on		x3	

WARM-UP AND CLUTCH OPERATION

7. Failure to warm-up engine for period specified		x7	
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DRIVING

(No points deducted for the first three and one half minutes (210 seconds), however, seconds more than three and one half will be multiplied by one-fifth. If the student exceeds 10 minutes, the driver will be stopped.)

8. Time:	Total Seconds:		x0.2
9. Number of pull ups to improve position (While backing into the shed or through the course.)			
10. Markers scraped (number)			
11. Markers moved or upset (number)			
12. Killed engine (number times)			
13. Grated gears (number times, does not apply to hydrostatic tractors)			
14. Rough clutch engagement (number times, does not apply to hydrostatic tractors)			
15. Failure to disengage clutch (number times, does not apply to hydrostatic tractors)			
16. Number of inches wheel off center when the tractor is stopped to detach trailer			
17. Number of inches trailer is + or - 4 inches from rear boundary			
18. Out of bounds (number times)			

SAFETY

19. Skidding or spinning wheels when starting (number of violations)			
20. Turning too short and fouling implement (number of violations)			
21. Moving tractor with brake set (number of violations)			
22. Failure to dismount to insert or remove drawbar pin			
23. Failure to bring tractor to complete stop and / or turn tractor off before dismounting			
24. Failure to lock brakes before dismounting to hook-up or unhook implement at finish line			
25. Excessive use of brakes (number of violations)			
26. Failure to wear safety belts (only if equipped with ROPS)			
27. Failure to mount/dismount properly (driver must face tractor, maintain three points of contact)			

TRACTOR OPERATION SUB-TOTAL

TOTAL SCORE

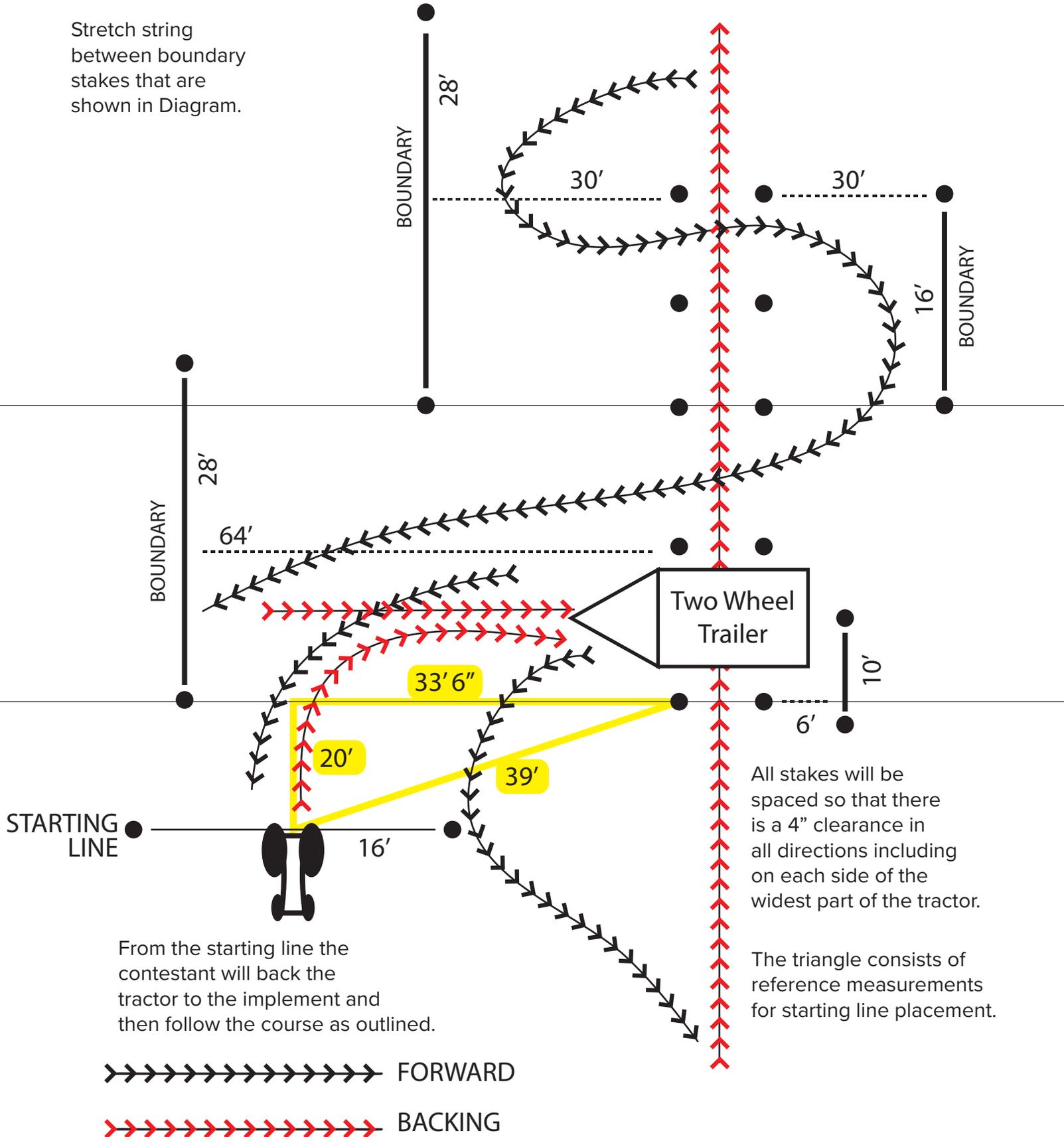
Written Exam (number missed)		x4	
Tractor Operation (number missed)		x1	
Oral Exam and/or Demonstration		x1	

GRAND TOTAL (LOW SCORE WINS)

TWO-WHEEL TRACTOR LAYOUT

FLORIDA FFA SAFE TRACTOR OPERATIONS CDE

Stretch string between boundary stakes that are shown in Diagram.



Note: If combined length of tractor and trailer exceeds 22 feet, then 4 feet should be added to every boundary.



CAREER DEVELOPMENT EVENT

Safe Tractor Operations

Authorization, Waiver & Release of Liability

To be signed by student, guardian, advisor

Student Name: _____ FFA Chapter: _____

For the purpose hereof, "Student and "CDE" shall have the meaning set forth above.

Please select the section applicable on date of signature

_____ **STUDENT UNDER AGE 18:** I represent and warrant that I am the parent or legal guardian of the student, who is under the age of (18) (the "minor") as of the date hereof, and I, for myself and on the minor's behalf, knowingly agree to the terms set forth herein.

_____ **STUDENT AGE 18 or ABOVE:** I, the student, represent and warrant I am over the age of eighteen (18) as of the date hereof, and I knowingly agree to the terms set forth herein.

1. **PERMITTED ACTIVITIES:** I acknowledge that the Florida FFA Association (the "FFA") only permits student's participation in this CDE in a manner consistent with the rules established by the FFA for the CDE (collectively, the "Permitted Activities").
I acknowledge and hereby agree that student has read the rules, it is otherwise familiar with the rules, established by the FFA for the CDE, has had an opportunity to request clarification from appropriate advisors or officials regarding any rules that are unclear to the student, and has received sufficient training to participate in the CDE in a manner consistent with the rules established by the FFA for the CDE. It is agreed and understood that the student's participation in the CDE is voluntary.
2. **WAIVER & RELEASE:** I HEREBY EXPRESSLY WAIVE AND RELEASE AND ALL CLAIMS, KNOWN OR UNKNOWN, AGAINST THE FFA, THE OWNER OF ANY REAL PROPERTY OR PERSONAL PROPERTY USED FOR PURPOSES OR IN FURTHERANCE OF THE CDE, ANY PERSON PRESENT AT THE CDE, INCLUDING WITHOUT LIMITATION ADVISORS, ORGANIZERS, JUDGES, COORDINATORS, SPECTATORS, VOLUNTEERS, DONARS, AND CO-PARTICIPANTS, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, EMPLOYERS, AGENTS, AFFILIATES, SHAREHOLDERS, SUCCESSORS AND ASSIGNS (COLLECTIVELY, "RELEASES"), RELATED TO BODILY INJURY TO OR DISABILITY OR DEATH OF THE STUDENT OR DAMAGE TO ANY OF THE STUDENT'S PROPERTY ARISING OUT OF THE STUDENTS PARTICIPATION OR PRESENCE AT THE TRACTOR DRIVING CDE.
3. **ASSUMPTION OF RISKS:** I HEREBY KNOWINGLY AND VOLUNTARILY ACCEPT AND ASSUME ANY AND ALL RISKS, FORESEEABLE OR UNFORESEEABLE, KNOWN OR UNKNOWN, OF INJURY TO OR DISABILITY OR DEATH OF THE STUDENT OR DAMAGE TO ANY OF THE STUDENTS PROPERTY, WHETHER CAUSED BY THE NEGLIGENCE OR WRONGFUL CONDUCT OF THE FFA, THE STUDENT'S ADVISOR OR OTHER MENTOR OR COACH RELATED TO THE STUDENTS INVOLVEMENT IN THE CDE, THE ORGANIZERS, COORDINATORS OR JUDGES OF THE CDE, CO-PARTICIPANTS, SPECTATORS, VOLUNTEERS, OR THIRD PARTIES ATTENDING THE CDE, AND THEIR RESPECTIVE EMPLOYEES, EMPLOYERS, AGENTS OR AFFILIATES. I ACCEPT PERSONAL RESPONSIBILITY FOR ANY LIABILITY, INJURY, LOSS, OR DAMAGE IN ANY WAY CONNECTED WITH THE STUDENT'S PARTICIPATION IN THE CDE. I acknowledge that the permitted activities involve risk of serious bodily injury, death, and/or property damage due to the inherent risks of the permitted activities, which could include but are not limited to: (a) possible equipment malfunction or misuse; (b) hazards related to traversing and driving across mostly undeveloped land,

including without limitation holes, uneven dirt, fence wire, and wild or poisonous animals or insects, (c) slipping or falling, including from elevated locations or while mounting or dismounting equipment; (d) colliding with motorized vehicles, persons, or stationary objects, (e) burns, cuts, and bruises. And (f) the student's negligence or the negligence of other persons, including without limitations organizers, judges, and co-participants, related to the CDE.

4. Consent to Medical Treatment: I authorize FFA and the organizers of the CDE to provide me, through medical personnel of their choice, customary medical assistance, transportation, and emergency medical services. This consent does not impose a duty upon FFA to provide such assistance, transportation, or services.
5. Publicity Release: I authorize FFA to use my name, photo, materials produced for the CDE or presentation in CDE for FFA materials including but not limited to, educational resources, press releases, web-based publicity and other publicity materials.

THIS IS A WAIVER AND RELEASE OF LIABILITY. I HAVE READ THIS AUTHORIZATION, WAIVER, AND RELEASE OF LIABILITY. I UNDERSTAND THAT I HAVE GIVEN UP SUBSTANTIAL RIGHTS BY SIGNING IT. I AM SIGNING THIS AUTHORIZATION, WAIVER, RELEASE OF LIABILITY VOLUNTARILY. I UNDERSTAND AND AGREE TO ALL OF THE TERMS OF THIS RELEASE.

STUDENT SIGNATURE: _____ DATE: _____

IF THE STUDENT PARTICIPATING IN THE CDE IS NOT YET 18 YEARS OLD, A LEGAL GUARDIAN MUST SIGN.

PARENT/GUARDIAN SIGNATURE: _____ DATE: _____

FFA ADVISOR SIGNATURE: _____ DATE: _____