


## CATA Curricular Code Change Proposal

<b>Contest:</b>	Farm Power and Machinery
<b>Proposed By:</b> (Name, School, Email)	John Williams CSU, Fresno jswilliams@csufresno.edu
<b>Issue: (Describe the reason/rationale for the proposed change.)</b>	
<p>The proposed change is to increase the list of equipment that can be used for troubleshooting and identification. The equipment added are used throughout the state of California. It is also to eliminate two of the list pieces of equipment as we have not used them at state finals in at least 10 years. The equipment added to the list are easily accessed by the state finals host site and would make the contest better as it would add rigor to these aspects of the contest.</p>	
Please answer yes or no to ALL the questions below.	
<b>This proposal will require a contest to open out of rotation.</b>	No
<b>The change will affect General Rules.</b>	No
<b>The change will affect the awards needed.</b>	No
<b>The proposed change will affect tabulations/scorecards.</b>	No
<b>The proposed change will affect contest forms.</b>	No
<b>The proposed change will affect contest hosting site. (e.g. additional facilities, new sections, additional scoring, etc.)</b>	No
If you answered yes to any of the above questions, you need to include the following signatures:	
<b>CATA Approved Contest Advisor's Signature</b>	
<b>CDE Host Site Contest Coordinator's Signature</b>	
If you answered yes to any of the above questions, please explain.	
<p><b>*It is recommended that you, or a representative, attend the pre-conference governing board meeting to answer any questions regarding proposed curricular code changes to contests that are requested to be opened out of rotation.</b></p>	

**Description:** (Describe what is changing.)

**Proposed CATA Code Change:** (Only include the section that the proposed change pertains to – do not include the entire contest. Reference numbered section. If editing text show new text with old text in parenthesis. For large changes set track changes in the Word document and attach the file, with edits, to this document when submitting.)

## **FARM POWER AND MACHINERY**

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**Revised 6/2008**

### **Purpose and Standards**

The contest shall be designed to test a student's mechanical skills and abilities relating to power equipment used in agriculture, and shall serve as a training forum for students interested in pursuing a career as an equipment technician.

Foundation Standards: Mathematics Algebra 10, 12, 13, 15 and Geometry 8, 10, 11, Listening and Speaking 1.8, 2.3, Technology 4.1, 4.2, 4.6, Problem Solving and Critical Thinking 5.1, 5.2, 5.3, Health and Safety 6.2, 6.4, 6.5, Ethics and Legal Responsibilities 8.3, Leadership and Teamwork 9.1, 9.2, 9.3.

Ag Mechanics Pathway Standards: Safety B 1.0, Engines and Machinery B 11.0.

### **Contestants**

Teams consist of three members, with all three individual scores counting as the team score. All team members are eligible for individual awards.

### **Classes**

		<b>Individual Points</b>	<b>Team Points</b>
A.	Parts & Tool Identification	100	300
B.	General Information Test	100	300
C.	Tractor Operation and Safety	100	300
D.	Trouble Shooting of Tractors and Machinery	100	300
	TOTAL	400	1200

### **Tie Breaker**

1. In the Farm Power and Machinery Contest ties will be broken on the basis of the highest individual or team score(s) using the general information test portion of the contest.
2. If a tie still exists, the total score of the individual or team will be used to determine the high individual or team.

### **Sub-contest Awards**

Sub-contest awards will be given for high teams and individuals in the following areas: Parts & Tool Identification, General Information Test, Tractor Operation and Safety, and Trouble Shooting of Tractors and Machinery.

### **Host School Requirements**

The sponsoring school shall determine which area in the Tractor Driving section it will offer and then inform schools in their letter of invitation for the contest.

### **Rules**

- I. Each area of competition may have several methods of presentation. The selection of the method to use for competition is to be made by the organizing group who is sponsoring the contest.
- II. The sponsoring agency will select four pieces of equipment to be used for identification and/or trouble shooting from the list of equipment below:

Disc Harrows

Moldboard Plows

Cultivators

Swathers/Mowers	Rakes	Balers
Planters/Drills	<del>Combines</del>	Spray Equipment
Wheel/Track Tractors	<del>Forage Harvesters</del>	Nut Sweeper
Tree Shaker	Shuttle Cart	Nut Pickup Machine

III. Written materials will be returned; Scantron score sheets could be returned.

IV. The references to be used for the contest are listed below:

- FMO Tractors
- FOS Engines
- FOS Hydraulics
- FOS Electrical Systems
- FOS Shop Tools
- FMO Books pertaining to EQUIPMENT listed above.

Various operator’s manuals related to the listed equipment may be used for contest sections A, C and D. Deere and Company publishes many of the resources. All equipment dealers provide equivalent materials.

V. Contest Area Descriptions

A. Parts & Tool Identification – This area shall consist of the identification of parts and tools that are commonly found and currently used in the area of power equipment.

The references listed above shall establish the common name of parts and tools used in the contest and provide consistency from contest to contest. There may, however, be variations of the parts as they are shown in the references.

The testing format for this area is at the discretion of the sponsoring school, which could be name identification, purpose or function identification, or problems associated with those parts used.

Tool ID, Engine ID, and Hydraulic ID	40 pts.
Tractor and Machinery ID	60 pts.

B. General Information Test – The written test for this contest shall be designed to test the contestants on their knowledge in the area of farm power and machinery.

The test format can be true/false, multiple choice, short answer, fill in, matching, math problems, or any combination of testing systems. The subject areas to be included on the test are as follows:

Diesel Engines	10 pts.
Gasoline Engines	10 pts.
Hydraulics	10 pts.
Electrical Systems	10 pts.
Equipment Maintenance	10 pts.
Field Operation	15 pts.
Implements	15 pts.
Power Transmission	20 pts.
TOTAL	100 pts.

- C. Tractor Operation and Safety – This area shall consist of a Safety Test, one Tractor Driving section, and one Tractor Controls section to test the contestants' ability to safely and accurately operate modern farm tractors and machinery.

Safety Test – 20 pts.

Consists of written questions on safety procedures when operating, servicing, and working around tractors and farm machinery.

Tractor Driving – 40 pts.

The sponsoring agency will devise a course to test contestants' driving skills in one of three areas:

Backing – trailer shall be of the two-wheel variety only.

Precision – tractor mounted implement.

Hitching – 3 pt. Mounted Implement.

Scoring in all events will have a balance between time and safety. Standardized score sheets shall be developed for this area. Only wheel tractors will be used and when possible, like types of tractors and implements will be provided for each area.

Tractor Controls – 40 pts.

The sponsoring agency will develop an operation procedure to test contestants' knowledge and skills in correctly adjusting and operating tractor and implement controls.

Note: Possible Operation Control Examples are as follow, hosting schools are not limited to this list.

Draft/Position Control Setting

Lower/Response Setting

Height Adjustment – three point

Remote Hydraulic Operation

Differential Lock Usage

Turning Brake Usage

Mechanical Front Wheel Drive Operation

Seat Adjustment

Light System

Instrument Panel Check

Pre-operational Check

Safety Check

Tire Setup

Functional Explanation of Transmission

Use of Hydraulic Pressure Test Gauge

Use of Volt/Ohm Meter

- D. Trouble Shooting of Tractors and Machinery – This area will test the contestants' ability to inspect Tractors, Implements, or Machinery and determine maintenance needs, adjustment problems, and visible faults and safety hazards. Common and visible faults are to be used. Implements may be set on the ground, in transport position, or in working field position.

VI. Post - Contest Procedures

- A. Critique – a review of each area of the contest, open to all Agricultural Teachers and contestants, will be held after the contest.