

Agricultural Machinery Service Technician Career Program Area

Registration

Individual and Team Pre-registrations are due to the National PAS Executive Director on or before February 11. Any changes to team members or individuals must be brought to the Agricultural Machinery Service Technician orientation session prior to the start of the competition. The specific time for the orientation session will be set in the conference program.

Goals

The Agricultural Machinery Service Technician Career Program Area is designed to:

- Encourage the development of Agricultural Service Technicians' opportunities.
- Provide incentives to develop and improve curriculum and instructional techniques.
- Evaluate participant and program efficiency.
- Recognize individual accomplishments and educational curriculum in Agricultural Service Technician programs.
- Encourage cooperation between education and industry.
- Strengthen the PAS organization by encouraging active participation.

Subject Matter, Scoring and Procedures

The following descriptions are guides to the award program evaluation areas:

1. Subject Matter Areas:

a. Agricultural Power Systems include:

1. Engines
2. Power Trains
3. Hydraulics
4. Electrical
5. Air Conditioning

b. Agricultural Machinery Systems include:

1. Harvesting Systems
2. Planting and Tillage Systems
3. Handling Systems
4. Controller Systems
5. Monitoring Systems
6. Precision Farming
7. Safety and Regulations

2. Methodology of participant evaluation will be based on the following:

There will be two major rounds of competition, an elimination round and a final round.

Participants, who do not go on to compete in Round 2 of this event, have the opportunity to participate in the conference workshops or seminars. Advisors shall ensure that Agricultural Machinery Service Technician participants who do not go on to compete in Round 2 attend these workshops or seminars.

Round 1 – Elimination Round

Each registered student will compete individually with the items listed below. Their score will be added to their partner's score for a team score. Only the top 10 scoring teams will advance to the final round.

a. Written Examination **50%** **100 points**

100 four-answer multiple-choice questions as follows:

Engines	15	Harvesting	15
Drive train	15	Plant/Till	10
Hydraulic	10	Precision Farming	5
Electrical	10	Controllers	5
Air Conditioning	5	Monitoring	5
		Safety/Reg	5

Total 100

b. Measuring and Testing **25%** **50 points**

Includes measuring, testing and evaluating components and parts according to specifications. Five items worth 10 points each or 10 items worth 5 points each.

c. Identification **25%** **50 points**

Requires identifying the type, use, name and application of tools and/or parts related to agricultural machinery. Twenty-five items worth 2 points each or 50 items worth 1 point each.

Round 2 – Final Round

Each registered team will compete as a team, not individually, with the items listed below. Final Total Team Scores used to determine awards and prizes will include BOTH round 1 and round 2 scores. Each individual team member is awarded exactly 1/2 of the team score for the purpose of individual placings.

a. Diagnostic and Repair **60%** **240 points**

Consists of trouble-shooting, analyzing and solving problems associated with agricultural equipment. Emphasis should be placed on the use of technical manuals, proper use of tools, testing instruments and safety. Six stations—worth 40 points each, one in each Power Systems subject matter area—15–20 minutes each. Approximately 90 percent of the time will be used for evaluation and 10 percent for moving between areas.

b. Calibration/Adjustment **40%** **160 points**

Includes the use of technical manuals to correctly match equipment and performance to a given situation. Four stations, subject matters selected from the different Ag Machinery systems areas—15-20 minutes each.

Each individual team member is awarded exactly 1/2 of the team score for the purpose of individual placings. This results in Round 1 being worth a total of 200 points per individual and 400 points per team. The same would then be true for round 2, 200 points per individual and 400 points per team, making rounds 1 and 2 each worth 50% of the overall contest score.

Participants will have points deducted for unsafe or careless practices, as deemed necessary by the award program judges and may be disqualified from the award program for these reasons.

3. Parts, tools and components related to agricultural machinery will be used in participant evaluation. Each participant should be proficient in the use of the technician's hand tools and any equipment described or listed in the John Deere Fundamentals of Service (F.O.S.) manuals.

Participant Personal Equipment

Each participant will be responsible for all personal safety equipment including:

1. **Industrial-Quality Eye Protection**- This includes side shields on prescription eyewear of industrial quality. Those wearing prescription eyewear not of industrial quality must also wear goggles.
2. **Clothing**- Clothing must be free from logos, names, school insignia and any other identifying symbols. No loose or unsafe clothing is permitted.
3. **Industrial**- Quality Work Shoes Leather work shoes should be worn during the award program, steel-toed footwear is strongly recommended.
4. **Tools and Equipment**- All tools and equipment will be provided for the award program. Participants may use the tools and equipment furnished at the award program site. Participants may bring their own multimeter only.
5. **Written Materials**- All written materials will be furnished for the award program. Participants should provide clipboards, sharpened pencils and calculators.

General Rules

Participants will only be eligible to compete in one Specialist Area at the national level per year. No participant shall be allowed to compete in more than one specialist area.

* Please refer to Ag Machinery Specific Rules (1)(c) regarding past national winners, participating in future years.

All career program areas requiring tests will be written by a non-affiliated representative or the test will be administered by certification representatives if available. Power to select representatives will be under the direction of the National PAS Executive Director.

**Five points will be deducted from participants who do not bring required materials to their career program area event. (Please read Agricultural Machinery Service Technician Participant Personal Equipment rules for materials needed.) Calculators will no longer be provided; it will be the responsibility of participant to be prepared at the event. Cellular phones, Palm Pilots or any other type of programmable device will not be allowed during the Agricultural Machinery Service Technician event.

***Though not required, each team is highly encouraged to write a general unsealed thank you letter to the career program area sponsor of the Agricultural Machinery Service Technician event area.** Thank you letters should be submitted to the Agricultural Machinery Service Technician coordinators at the beginning of the competition. If possible, write thank you letters on local or state PAS stationary. Therefore, participants will be responsible for their own thank you stationery and their own writing utensils.

Ag Machinery Specific Rules

1. Award program eligibility shall be restricted to:
 - a. PAS institutions and members in good standing.
 - b. Students currently enrolled full-time in a postsecondary institution.
 - c. Participants who have not previously won the PAS Agricultural Machinery Service Technician Career Program Area at the national level as either an individual or a team member
2. Each team shall consist of two participants from the same postsecondary institution.
 - a. Selection of team participants is to be certified by the Advisor of the Agricultural Machinery Program.
 - b. Team certification must be received by the PAS Executive Director as required by national contest registration rules.
 - c. Team participants must be registered in advance as required by the current PAS Handbook or conference pre-registration deadline. Each participant will then be assigned a team number.
 - d. Smoking by participants is not permitted in the work area at any time.
 - e. Participants may be disqualified for the following reasons:
 1. Failure to follow the instructions of the career program area officials.
 2. Violation of common safety rules or endangering other participants through carelessness.
 3. Carelessness with machinery or tools and equipment, causing damage to the equipment.
3. Team certification for the national career program area will be determined by the following selection process:
 - a. Each state may enter the following number of teams (based on their membership as of December 10).

1-50 members	3 teams
51-100 members	4 teams
101-150 members	5 teams
151+ members	6 teams
 - b. Determination of actual teams representing each state should be made by a state or regional Agricultural Machinery Service Technician Career Program Area competition of similar format to the national competition.
4. Participation and team ties will be broken with the high scores in the following sequence:

Round 1 Ties for 10th place

- a. Written Examination Scores
- b. Measuring and Testing Scores
- c. Identification Scores

Final Score Ties

- a. Written Examination
- b. Diagnostic and Repair
- c. Calibration and Adjustment
- d. Measuring and Testing
- e. Identification

If still tied, cash awards will be split between participants and duplicate plaques given to each tied individual or team.

5. Alternatives or substitutes will be determined by the following policy:
 - a. If one member of a state's pre-registered team cannot attend, his or her school may select another currently enrolled member of the same program who participated at state or regional competition as a substitute.
 - b. If neither member of a state's pre-registered team can attend, the next placing team from that state or regional competition may represent the state in the national program. It is the responsibility of a local advisor to contact the state PAS official and to make arrangements for the alternate or substitute team to attend.
 - c. The alternate or substitute will be eligible for \$50 cash awards for each team member.
6. Team advisors and non-participants will not be permitted at the contest site.
7. No career program area materials will be returned to participants or their advisors.

Awards

State Awards

- Participant: • certificate
State Winner's School: • certificate

National Awards

- Participant: Each team member receives • plaque
• \$50 cash
- High Individual: • plaque and \$500 cash
- First Place Team: • plaque and \$500 cash (each member)
• \$1,000 cash to school to purchase training aids
• plaque to school
- Second Place Team: • plaque and \$300 cash (each member)
• \$600 cash to school to purchase training aids
• plaque to school
- Third Place Team: • plaque and \$200 cash (each member)
• \$400 cash to school to purchase training aids
• plaque to school.

*Cash prizes may not be awarded for unfunded career program area events.

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