



Career Program Area: Agricultural Machinery Service Technician

Participant Personal Equipment

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

1. **Industrial-Quality Eye Protection/Safety Glasses** – This includes side shields on prescription eyewear of industrial quality. Participants 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 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.

Five penalty points will be deducted from participants who do not bring the required materials to their career program area event listed above.

Organization of Teams

1. Each team shall consist of two participants from the same postsecondary institution.
2. Team certification must be received by the PAS Executive Director as required by the national contest registration rules.
3. Team participations 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.

Rules

1. Smoking and/or smokeless tobacco use by participants is not permitted in the testing area at any time.
2. Participants may be disqualified for the following reasons:
 - a. Failure to follow the instructions of the career program area officials.
 - b. Violation of common safety rules or endangering other participants through carelessness.
 - c. Carelessness with machinery or tools and equipment, causing damage to the equipment.

3. Non-authorized team advisors and non-participants will not be permitted at the contest site.
4. No career program area materials will be returned to the participants or their advisors.
5. Use of Cell Phones is strictly prohibited

Subject Matter, Scoring and Procedures

1. Agricultural Power Systems include:
 - a. Engines
 - b. Power Trains
 - c. Hydraulics
 - d. Electrical
 - e. Air Conditioning
2. Agricultural Machinery Systems include:
 - a. Harvesting Systems
 - b. Planting and Tillage Systems
 - c. Handling Systems
 - d. Controller Systems
 - e. Monitoring Systems
 - f. Precision Farming
 - g. Safety and Regulations

Procedures

There will be two major rounds of competition, an individual round and a team round.

In the event that the total registered participant numbers are within the capacity of the contest, all registered teams and members will be allowed to complete all contest items, regardless of how well they do with "individual round" items. A true elimination will only take place should the registered number of teams exceed the capacity of the contest based on availability of equipment, facility size and availability of judges.

Individual 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.

1. Written Examination: 100 points and counts toward 50 percent of the overall score

Written Examination Covers	Points
Engines	15
Drive Train	15
Hydraulic	10
Electrical	10

Air Conditioning	5
Harvesting	15
Plant/Till	10
Precision Farming	5
Controllers	5
Monitoring	5
Safety/Regulations	5
Total Possible Points	100

2. Measuring and Testing: 50 points – counts as 25 percent of the overall score
 - a. Includes measuring, testing, evaluating components and parts according to specifications. There are five items worth 10 points each or 10 items worth 5 points each.
3. Identification: 50 points - counts as 25 percent of the overall score
 - a. Requires identifying the type, use, name, application of tools and/or parts related to agricultural machinery. Twenty five items worth 2 points each or 50 items worth 1 point each. Career Program Area: Agricultural Machinery Service Technician

Team 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 one and round two scores. Each individual team member is awarded exactly half of the team score for the purpose of individual placing. (Note: Point Values below are approximate!)

1. **Diagnostic and Repair:** 240 points - counts as 60 percent of the overall score
 - a. Consists of trouble-shooting, analyzing and solving problems associated with agricultural equipment.
 - b. Emphasis should be placed on the use of technical manuals, proper use of tools, testing instruments and safety.
 - c. Six stations – worth 40 points each, from both Power Systems and Machinery Systems in identified subject matter areas. There is 15-20 minutes allowed for each station.
 - d. Approximately 90 percent of the time will be used for evaluation and 10 percent for moving between areas.
2. **Calibration/Adjustment:** 160 points - counts as 40 percent of the overall score
 - a. Includes the use of technical manuals to correctly match equipment and performance to a given situation.
 - b. Four stations - subject matters selected from both Power Systems and Machinery Systems in identified subject matter areas. There is 15-20 minutes allowed for each station.

Team Scoring

Each individual team member is awarded exactly half of the team score for the purpose of individual placing. The results in Round 1 are worth a total of 200 points per individual and 400

per team. The same is true for Round 2; 200 points per individual and 400 points per team, making rounds 1 and 2 worth 50 percent 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.

*Point Values are subject to change as deemed necessary by the Event Coordinator

Performance Evaluation

Participation and team ties will be broken with the high scores in the following sequence.

Final Score Ties

1. Written Examination
2. Diagnostic and Repair
3. Calibration and Adjustment
4. Measuring and Testing
5. Identification

If still tied, duplicate awards will be given to each tied individual or team.