

AGRICULTURAL MECHANICS PROJECT SHOW

Sponsored by Shell

Superintendent – Dr. Curtis Langley – Hico, TX
Assistant Superintendents - Chase Kizziah – Richmond, TX & Don Henson – La Grange, TX

First release from Airport Blvd. to NRG:	Friday	March 18	7 a.m.
Must be in place at Airport Blvd. no later than:	Friday	March 18	10 a.m.
Self/Mobile Check-In Deadline:	Friday	March 18	3 p.m.
			ALL PROJECTS MUST BE CHECKED IN
Projects Judged	Saturday	March 19	8 a.m.
Awards Breakfast	Sunday	March 20	7 – 7:45 a.m.
Awards	Sunday	March 20	8 a.m.
Release immediately following Awards*	Sunday	March 20	All Projects Must Be Out By 4 p.m.

* All projects must go to the Houston Livestock Show and Rodeo property on Airport Blvd. for staging purposes prior to Move-In and also prior to Release.

Purpose of the Agricultural Mechanics Project Show

1. To provide an opportunity for 4-H and FFA members to display constructed projects.
2. To promote the development of skills in agricultural mechanics through competition.
3. To recognize individual and group accomplishments in the area of agricultural mechanics.
4. To provide an opportunity for public appreciation of this important phase of 4-H and FFA Youth Programs.

Special Rules for Agricultural Mechanics Project Show

1. **Rules:** This contest is subject to the Houston Livestock Show General Rules and Regulations, Junior Show Rules and Regulations, and to the Special Rules of this section. Where Special Rules conflict with other rules, Special Rules prevail.
2. **Eligible Entries:** Entries in this division are limited to TX FFA and 4-H members. Projects exhibited must have been constructed by FFA and 4-H members under direct supervision of the CEA or AST.
3. **Maximum Entries:** Each exhibitor may enter only one individual project. Each group of students may enter no more than two group constructed projects and may have no more than one entry in any project class. No individual exhibitor may enter more than two projects, either group and/or individually constructed.
4. **Staging and Arrival:** All projects will stage at the Staging Lot located at 1901 Airport Blvd. Gates will open at 5 a.m. **No projects will be allowed to stage prior to 5 a.m.** Projects will begin releasing from the Staging Lot to NRG Center at 7 a.m.
5. **Classification of Projects:** Projects are to be classified by primary use or function. Show superintendent reserves the right to modify the classification of projects due to entry into the wrong class, misrepresented projects, or otherwise in conflict with class descriptions. All projects must be related to agriculture use. The classification of project entries will take place at the Staging Lot prior to being released to NRG Center.
6. **Self-Check-In:** Exhibitor(s) will be responsible for individually checking in their entry. The exhibitor will need the following information:
 - a. Project Location

The Exhibitor(s) will be responsible for making sure the information entered is accurate and if there are any issues, the exhibitor **MUST** make any corrections with the Superintendent Office prior to the check-in closing listed in the schedule. Any discrepancies with class postings will be resolved using the information on the project's check-in summary.

Special Rules for Agricultural Mechanics Project Show

7. **Ineligible Projects:**
 - a. Any project that cannot be placed into one of the stated classes will be disqualified by the Superintendent. Barbecue cookers, deer blinds, feral hog traps, deer feeders and other recreational and/or convenience-type projects or accessories will not be allowed (Only feeders and equipment for domesticated farm animals will be allowed).
 - b. Towed or hauled projects that exceed typical or legal road and highway widths, and cause city traffic flow problems are subject to disqualification and/or may not be allowed to access to Show grounds.
 - c. Projects with inappropriate and/or vulgar items, signage, or other materials will be asked to remove the item from the project, or the whole project will be disqualified and removed from the show.
8. **Substitutions:** For exhibitor substitution, see Junior Show Rules. Project substitutions must be made to the Houston Livestock Show and Rodeo, by February 1 and must indicate the project being eliminated and the project being added. Only those substitutions with official post office postmarks on or before February 1 will be accepted without fee. Substitutions postmarked after February 1, will be charged a \$50 late fee. All substitutions are subject to approval by the Superintendent.
9. **Construction Date:** A project can be exhibited only one time at the Houston Livestock Show and Rodeo.
10. **Exhibit Space:** The Show reserves the right to display the projects as space and quantity of projects allow. Projects may be double decked as long as they are safely displayed and accessible for judging. It is possible that projects might be displayed at an alternate site. Buildings over 200 square feet will be disqualified.
11. **Project Presentation:** All projects must be painted or properly treated and must be clean and in a presentable condition, even though they may have been used. No touch up painting of any type will be allowed once project is in place. Operation of ramps, extensions, and other special features may be demonstrated only as directed by show officials and as space permits. Floor covering, with the exception of restored tractors, is not encouraged. When used, it must be limited to the floor area under individual projects. No additional floor space will be provided for podiums, chairs, tables, show boxes, etc. Electrical outlets may be provided upon request at check-in but are not guaranteed.
12. **Documentation:** An original plan or drawing, a bill of materials and photographs showing all phases of construction are to be provided with projects. **All documentation must be typed or presented in an electronic format.** TxDOT and/or ASABE regulations and specifications must be provided as they apply to individual projects. TxDOT documentation must include registration and inspection and/or justification of exemption. Display of plans, photos, etc. must be done in such a manner that no additional floor space is required. Stands, podiums, computers, etc. will be permitted only when they can be positioned on or under the project.
13. **Project Safety:** Appropriate and safe display stands must be provided for gates, panels, and other projects that need support. Sharp edges and points, such as found on self-feeder roofs, bale movers, etc., are to be padded or covered as necessary to prevent injury.
14. **Trailer Safety:** All trailers and other equipment that is to be operated and/or transported on public roads are to be equipped with the safety equipment specified in Title 7, **Federal Motor Carrier Safety Administration or Vehicles and Traffic Transportation Code of TX Statutes.** All tongue equipment that is pulled on a public highway – for example: trailers, squeeze chutes, mowers, tillage tools, etc. must have approved safety chains. **All trailers that are rated at 4,500 pounds GWR or greater must have approved brakes and brake-away.** All trailers must be equipped with lift jacks for hitching and unhitching. Tie down attachments (minimum of 4) are recommended on all trailers. Any trailer that is over width (102 inches) must have a current permit. Trailer widths will be measured from metal to metal, including for example, fenders, wheels, and dust caps, at the widest point. Trailers should follow Federal Safety lighting requirements as described by the NHTSA. A link to the lightning requirements has been provided for convenience: <http://optronicsinc.com/RESOURCES/FMVSSRequirements/Trailers.aspx>. Any trailer that does not meet these requirements may lose points during the judging process.
15. **Electrical Safety:** All 120 VAC and higher electrical plugs and receptacles are to be the equipment grounding type. All metal components are to be grounded. Ground fault circuit interrupters (GFCI) are mandatory for all 120 VAC receptacles. All 50 VAC and higher connections are to be protected in appropriate indoor or outdoor rated enclosures.
16. **Chemical and Liquid Safety:** Flammable and/or combustible liquids shall not be used, stored, or sprayed inside of any Houston Livestock Show and Rodeo building at any time. This shall include, but not be limited to: enamel paints, thinners, reducers, gasoline, or any other petroleum based liquids. All liquids must be in properly labeled original containers. No compressed gas cylinders are permitted. Decoy cylinders are NOT permitted.

Special Rules for Agricultural Mechanics Project Show

17. **Projects Needing Offloading Assistance:** Projects to be hoisted from the top-side are to be fitted with lifting eyes at balance points that accommodate 1-inch shackles. Projects that cannot be safely off-loaded or set-up with equipment available may be disqualified. Projects requiring prolonged unloading or assembly time, will be attended to after all other projects are offloaded. Transport trailers loaded in a manner that is unsafe to be towed into the display area with a move-in tractor will be towed in by the exhibitor, as space is available, after all other projects are in place.
18. **Projects with Small Engines:** There is to be no more than two gallons of fuel in any fuel tank. The fuel tank cap is to be in place and sealed with tape. The battery is to be disconnected. This applies to all engines in the exhibit area.
19. **Vehicles:** Tractors, trucks, ATVs or other vehicles (including non-entered trailers) are not allowed in the exhibit area as part of the display, unless approved by the Superintendent.
20. **Signs:** All projects are to be identified with standard club exhibitor cards. No "For Sale" or sponsorship signs will be permitted.
21. **Loss or Damage:** Houston Livestock Show and Rodeo, officials or committee members will NOT be responsible for any loss or damage to projects.
22. **Judging System:** The Danish System will be used in judging the projects. Projects will be judged on:

Criteria	Points
a. Workmanship	25
b. Functionality	25
c. Design and Material Used	10
d. Presentation	10
e. General Appearance, Finish, and/or Preservation.....	10
f. Documentation and Presentation	10
g. Degree of Difficulty	10

Minimum Judging Criteria Expectations

- a. **Workmanship (25 points)**
Projects should be constructed in a neat and clean manner. Care should be taken so material is fit well, welds are of appropriate size and quantity, sharp edges and weld spatter are removed from material but grinding/sanding is not excessive, electrical connections are secure and neat, exposed wire is kept to a minimum, and material is joined in a manner that is aesthetically pleasing.
- b. **Functionality (25 points)**
Projects should be constructed in such a manner they can function while at the time of show. Projects should be free from mechanical, hydraulic, or electrical malfunctions. Consideration will be given where space limits the ability to operate, such as a ramp hitting another project if it was to open.
- c. **Design and Material Used (10 points)**
Material used should be considered by each individual showman. The material should match the purpose and the function of the project. Students should be knowledgeable about any specific, special, or unique material used during the construction of the project.
- d. **Presentation (10 points)**
Students should be knowledgeable about the project they are presenting. They should be able to describe in detail, when requested, processes used in the construction of their project. Students should be able to answer questions pertaining to the end use, purpose, and functionality of the project they are presenting. Students should present projects in a professional and courteous manner.
- e. **Finish and/or Preservation (10 points)**
Each project should be finished in an appropriate manner. Some projects, such as welding shop tables, may have portions where no finish is appropriate. The applied finish should match the use of the project and applied in an accepted manner. Students should be involved in the finishing process as much as possible, and at minimum have knowledge of the application process.
- f. **Documentation (10 points)**
Students will be evaluated on the presentation of their documentation. Documentation requirements are listed in the general rules above. Complete lack of documentation will result in a ribbon color deduction.
- g. **Difficulty (10 points)**
Inherently some projects are more difficult than others. The difficulty of the projects will be evaluated by each set of judges based on the amount of fabrication, design engineering, and innovation within the given project.

Special Rules for Agricultural Mechanics Project Show

- 23. Ag Mechanics Career Fair:** On Saturday, March 21 from 8 a.m. – Noon & 1 p.m. – 5 p.m. all junior and senior high school exhibitors will have the opportunity to participate in the HLSR Ag Mechanics Career Fair. There is no additional entry fee required for students to participate. Students who choose to participate in the career fair will need to place a visible placard/note for the judges to know the student(s) are currently at the career fair. There are no penalties or deductions during project judging for those participating in the career fair. The class judges will come back to the project when students are present to resume judging of the project.
- 24. Awards:** Ribbons will be given as follows: Blue, Red and White. Projects receiving a red or white ribbon will not be placed as class winners. Prizes are awarded to clubs/chapters and not individual exhibitors for each project.
- 25. Showmanship Awards:** Judges will select exhibitors (by entry number) to receive recognition for showmanship awards based on the following criteria:
- Display and presentation of projects to show officials, judges, and the general public
 - Housekeeping around projects
 - Exhibitor's dress and professionalism
 - Conduct, attitude and participation of exhibitors
- 26. Judging Courtesy:** Exhibitors are not to interfere with judging. It is recommended they be with their projects as they are judged to answer questions and demonstrate operations as requested by the judges. AST/CEAs or adult leaders are not to participate in judging activities. Students participating on the Agricultural Mechanics Job Fair will not be penalized for attending the Fair. **Exhibitors should not "over-recruit" passersby.**

27. Project Divisions & Classes

AGRICULTURAL EQUIPMENT CLASSES

- Hay Handling Equipment and Implements
- Mounted Agricultural Equipment and Implements
- Pulled-Type Agricultural Equipment and Implements
- Shop Tables (Non-CNC-type tables)
- Shop Equipment
- Truck Accessories, Bumpers, Headache Racks, Tool Boxes, and Replacement Beds
- 1st place project for Division
- 2nd place project for Division

LIVESTOCK EQUIPMENT CLASSES

- Entry Gates and Panels
- Livestock Restraining and Handling Equipment
- Livestock Show Equipment
- Livestock Feeders (no wildlife feeders)
- 1st place project for Division
- 2nd place project for Division

BUMPER PULL TRAILER CLASSES

- Utility and Lowboy Trailers – 10 ft. but less than 13 ft. in length (length of cargo space)
- Utility and Lowboy Trailers –13 ft. but less than 15 ft. in length (length of cargo space)
- Utility and Lowboy Trailers –15 ft. but less than 17 ft. in length (length of cargo space)
- Utility and Lowboy Trailers – Over 17 ft. in length (length of cargo space)
- Welding and Service Trailers – all lengths
- Modified Utility, Modified Implement, Stock, Cargo, Dump, and Special Purpose Trailers – all lengths
- 1st place project for Division
- 2nd place project for Division

GOOSENECK AND FIFTH WHEEL TRAILER CLASSES

- Gooseneck and Fifth Wheel Flatbed and Dovetail Trailers
- Gooseneck and Fifth Wheel Stock and Enclosed Trailers
- Gooseneck and Fifth Wheel Lowboy and Utility Trailers
- Gooseneck and Fifth Wheel Special Purpose Trailers
- 1st place project for Division
- 2nd place project for Division

Special Rules for Agricultural Mechanics Project Show

- 28. Naming and Class Project Descriptions:** A thorough and unique description should be utilized to describe projects. Brand names should not be used.

AGRICULTURAL EQUIPMENT CLASSES

- 1. Hay Handling Equipment and Implements** – Names and descriptions to use: 3-pt. hay fork, 3-pt. hay spear, front loader hay fork, bucket mounted hay spear, hay accumulator, pull-type single bale hay fork, hay conveyor, hay grapple, hay rake, single bale hauler, etc.
- 2. Mounted Agricultural Equipment and Implements** – Names and descriptions to use: 3-pt. 8ft arena drag, 3-pt. 12ft land plane, front end loader, 3-pt. 8ft box blade, 3-pt. 8ft disc harrow, tractor mounted backhoe, etc.
- 3. Pulled Type Agricultural Equipment and Implements** -- Names and descriptions to use: 15ft flex-wing rotary mower, Pull type 2 cubic yard scraper, 32ft crust buster, 14ft pasture aerator, 700 bushel grain cart, etc.
- 4. Shop Tables (Non CNC-Type Tables)** – Names and descriptions to use: 12ft metal shop table with vice, 6ft shop table with drawers, welding and cutting table, etc.
- 5. Shop Equipment** – Names and descriptions to use: 4ft x 8ft CNC plasma table, 5 on shop hoist, 5 ton pipe roller, abrasive chop saw, CNC controlled band saw, 6ft pinch roller, etc.
- 6. Truck Accessories, Bumpers, Headache Racks, Tool Boxes, and Replacement Beds** – Names and descriptions to use: Truck replacement bed, pickup headache rack with brake lights, pickup brush guard, front and/or rear pickup bumper, welding bed for truck, etc.

LIVESTOCK EQUIPMENT CLASSES

(Domesticated Livestock Equipment Only)

- 9. Entry Gates and Panels** – Names and descriptions to use: 10ft entrance gate, 10ft pasture gate, 10ft livestock panel, 24ft double entrance gate with arch way, cattle guard, etc. (All gates may be displayed outside)
- 10. Livestock Restraining and Handling Equipment** – Names and descriptions to use: Hydraulic squeeze chute, hoof trimming table, squeeze chute with crowding pen or panels, squeeze chute, calf tilt table, farrowing crates, stalls, roping chutes, portable alley way, etc. (projects in this class are used in production of livestock)
- 11. Livestock Show Equipment** – Names and descriptions to use: Cattle trim chute, sheep trimming stand, goat trimming stand, swine clipping stand, pickup bed livestock hauler, livestock scale, show box, grooming stand, lamb treadmill, clipper blade sharpener, livestock blower, etc. (projects in this class are used by exhibitors that show livestock)
- 12. Livestock Feeders (No Wildlife Feeders)** – Names and descriptions to use: wind-vane mineral feeder, 8ft open feed trough, 6ft x 4ft mineral and salt feeder, hanging hay feeder for horse stall, 12ft hay/grain feeder, 1-ton self-feeder, 8ft creep feeder, 12ft trailer mounted self-feeder, 10ft combination self/creep feeder, etc. No Wildlife feeders such as timed-tripod feeders, mineral feeders, etc.

Note: No wildlife projects such as deer stands (blinds), observation towers, hog traps, cages or hunting equipment.

Special Rules for Agricultural Mechanics Project Show

BUMPER PULL TRAILER CLASSES

15. **Utility and Lowboy Trailers – 10 ft. but less than 13 ft. in length** - Names and descriptions to use: 10ft utility trailer, 11ft tilt-bed utility trailer, 11ft utility trailer, etc.
16. **Utility and Lowboy Trailers – 13 ft. but less than 15 ft. in length** – Names and descriptions to use: 13ft utility trailer, 14ft tilt-bed equipment trailer, 13ft utility trailer, etc.
17. **Utility and Lowboy Trailers –15 ft. but less than 17 ft. in length** - 15ft utility trailer, 16ft tilt-bed utility trailer, 15ft utility trailer, etc. 16ft equipment hauler, etc. 15ft implement trailer, etc.
18. **Utility and Lowboy Trailers – 17 ft. and over in length** – Names and descriptions to use: 19ft tilt-bed utility trailer, 20ft utility trailer, 17ft equipment hauler, etc.
19. **Welding and Service Trailers (All Lengths)** – Names and descriptions to use: 14ft welding trailer, 19ft welding trailer with cutting torch, 19ft fuel trailer, 20ft fabrication trailer, etc.
20. **Modified Utility, Modified Implement, Stock, Cargo, Hydraulic Dump and Special Purpose Trailers- All Lengths** - *Note: Drop-bed trailers, landscape trailers, pipe trailers, and other special purpose trailers that do not fit into the traditional trailer classes are to be entered in this class. All trailers must be for agriculture use:* Names and descriptions to use: multi-bale hay hauler, 12 bale hay mover, 20ft hydraulic dump trailer, 16ft stock trailer, 12ft aluminum low-profile stock trailer etc.

GOOSENECK AND FIFTH WHEEL TRAILER CLASSES

23. **Gooseneck and Fifth Wheel Flatbed and Dovetail Trailers** – Names and descriptions to use: 32ft gooseneck float, 32ft gooseneck dovetail, 24ft gooseneck flat deck trailer, 53ft fifth wheel flatbed trailer, etc.
24. **Gooseneck and Fifth Wheel Stock and Enclosed Trailers** – Names and descriptions to use: 24ft gooseneck stock trailer, 24ft aluminum stock trailer, 30ft fifth wheel stock trailer, 24ft gooseneck enclosed trailer etc.
25. **Gooseneck and Fifth Wheel Lowboy and Utility Implement Trailers** – Names and descriptions to use: 24ft gooseneck implement hauler, 20ft gooseneck lowboy with ramps, 28ft fifth wheel lowboy trailer, etc.
26. **Gooseneck and Fifth Wheel Special Purpose Trailers** - *Note: Drop-bed trailers, pipe trailers, header trailers, service body trailers, welding trailers, and other special purpose trailers that do not fit into the traditional trailer classes are to be entered in this class. All trailers must be for agriculture use:* 24ft welding trailer, 10 bale hay hauler trailer, 28ft hydraulic dump bed trailer, 42ft header trailer, etc.

Tractor Restoration Project Show

Presented by Houston Livestock Show and Rodeo

Superintendent – Dr. Curtis Langley – Hico, TX

Assistant Superintendents - Chase Kizziah – Richmond, TX & Don Henson – La Grange, TX

First release from Airport Blvd. to NRG:	Friday	March 18	7 a.m.
Tractor Judging Begins:	Friday	March 18	7:30 a.m.
Must be in place at Airport Blvd. no later than:	Friday	March 18	11 a.m.
Kiosk Check-In: (Located in East Arena)	Friday	March 18	1 p.m.
Judging Tractors	Saturday	March 19	8 a.m.
Awards Breakfast	Sunday	March 20	7:30 a.m.
Awards	Sunday	March 20	9 a.m.
Release immediately following Awards*	Sunday	March 20	All Projects Must Be Out By 4 p.m.

* All tractors must go to the Houston Livestock Show and Rodeo property on Airport Blvd. for staging purposes prior to Move-In and prior to Release.

Purpose of the Tractor Restoration Project Show

1. To provide an opportunity for 4-H and FFA members to display restored tractors.
2. To promote the development of skills in agricultural mechanics through competition.
3. To recognize individual and group accomplishments in the area of agricultural mechanics.
4. To provide an opportunity for public appreciation of this important phase of 4-H and FFA Youth Programs.

Special Rules for Tractor Restoration Project Show

1. **Rules:** This contest is subject to the Houston Livestock Show General Rules and Regulations, Junior Show Rules and Regulations, and to the Special Rules of this section. Where Special Rules conflict with other rules, Special Rules prevail.
2. **Eligible Entries:** Entries in this division are limited to TX FFA and 4-H members. Projects exhibited must have been restored by FFA and 4-H members under direct supervision of the CEA or AST.
3. **Maximum Entries:** Each exhibitor may enter only one individual tractor project. Each group of students may enter no more than two group tractor projects. No individual exhibitor may enter more than two tractor projects, either group and/or individual.
4. **Staging and Arrival:** All projects will stage at the Staging Lot located at 1901 Airport Blvd. Gates will open at 5 a.m. **No projects will be allowed to stage prior to 5 a.m.** Projects will begin releasing from the Staging Lot to NRG Center at 7 a.m.
5. **Classification of Projects:** Tractor projects are to be classified by year or placed into a class by the Superintendent.
6. **Ineligible Projects:** Any tractor project that cannot be placed into one of the stated classes will be disqualified by the Superintendent.
 - a. Tractors only allowed.
 - b. Self-propelled equipment such as combines, hay mowers, and cotton pickers are not eligible.
 - c. Horse-drawn equipment is not allowed.
 - d. No lawn or garden tractors allowed.
 - e. No implements or non-factory accessories allowed.
 - f. Serial Number is required at time of entry or disqualification is possible.
7. **Substitutions:** For exhibitor substitution, see Junior Show Rules. Tractor project substitutions must be made to the Houston Livestock Show and Rodeo, by February 1 and must indicate the project being eliminated and the project being added. Only those substitutions with official post office postmarks on or before February 1 will be accepted without fee. Substitutions postmarked after February 1, will be charged a \$50 late fee. All substitutions are subject to Superintendent approval.

Special Rules for Tractor Restoration Project Show

8. **Restoration Date:** A tractor project can be exhibited only one time at the Houston Livestock Show and Rodeo and must have been restored within one calendar year of the exhibition date.
9. **Exhibit Space:** Each tractor entry will receive a maximum of 1,000 square feet of exhibit space in the primary exhibit area. The Show reserves the right to display tractors as space and quantity of tractor projects allow. It is possible that tractor projects might be displayed at an alternate site.
10. **Signs:** All tractor projects are to be identified with standard club exhibitor cards. No "For Sale" or sponsorship signs will be permitted.
11. **Loss or Damage:** Houston Livestock Show and Rodeo, officials or committee members will NOT be responsible for any loss or damage to tractor projects.
12. **Awards:** Ribbons will be given as follows: Blue, Red and White. Tractor projects receiving a red or white ribbon will not be placed as class winners. Prizes are awarded to clubs/chapters and not individual exhibitors for each project.
13. **Showmanship Awards:** Judges will select 1 or more exhibitors (by entry number) to receive recognition for showmanship based on the following criteria:
 - a. Display and presentation of tractor
 - b. Housekeeping
 - d. Exhibitor's dress and professionalism
 - e. Conduct, attitude and participation of exhibitors
14. **Judging Courtesy:** Exhibitors are not to interfere with judging. It is recommended they be with their tractor project as they are judged to answer questions and demonstrate operations as requested by the judges. AST/CEAs or adult leaders are not to participate in judging activities. Students participating on the Agricultural Mechanics Job Fair will not be penalized for attending the Fair. Exhibitors should not "over-recruit" passersby.
15. **Judging System:** A modified form of the Danish System will be used in judging the tractor projects. Content specific judging groups will use the following criteria and assigned points. Superintendent may modify criteria and points in the event that weather or other factors result in not being able to judge outside on Friday. Detailed description of the 100 points available at the end of these rules.
16. **Mechanical** is to include the restoration of engine, transmission, final drive, fuel system, cooling system, cranking or starting system, charging system, hydraulic system, steering system, etc.
17. **Aesthetics** is to include overall appearance of tractor. This includes workmanship and finish. Items to be considered include but are not limited to: metal preparation, completeness of sheet metal, paint and finish, detail and completeness of components such as wheels, tires, steering wheels, seats, decals, instrument panels, wiring harness, etc.
18. **Documentation** is to be computer-generated, arranged in a three-ring binder, properly divided and sequenced, with a table of contents and page numbers. The documentation should include the following:
 - a. One-page description of the overall restoration project;
 - i. Engine disassembly
 - ii. Transmission inspection and repair
 - iii. Final drive inspection and repair
 - b. An expense report identifying all costs of restoration;
 - c. Images with captions showing the restoration process – before, during and completed;
 - d. Images that depict a safe working environment; and,
 - e. A completed description of all mechanical work performed.
 - f. Justification for color, color scheme, and/or additional equipment attached.
 - g. Painting and Sheetmetal work should be documented in photos. Students should complete all paint and body work, or at minimum have knowledge of the process. Student completed paint and body work will be rewarded over professional work.

Documentation should be grammatically correct; points will be deducted for spelling and grammar errors. An example of a grammatical error would be the use of the word "axel" instead of the correct "axle." The National FFA Tractor Restoration Competition format and forms may be used.

Special Rules for Tractor Restoration Project Show

- 19. Safety equipment** is to include all equipment that was original to the tractor.
- It also includes the provision of drip pans containing floor absorbent to collect any liquids that may drip from the tractor during display.
 - Fuel shut-off valves under all fuel tanks must be functional, and tractors are to be exhibited with the valves closed.
 - A fully charged ABC fire extinguisher with a minimum 2.5 pound capacity must be provided with each tractor.
 - Extra fuel may not be stored in exhibit building. Tractor engines are to be started and run only at the request of Show Officials.
 - Exhibitors of tractors with steel lugs or steel tracks must provide mats or lumber/plywood to serve as runners to protect asphalt and concrete from damage.
 - Batteries must be disconnected and cranking or ignition systems must be disabled on all tractors to prevent unauthorized starting while on display.
 - All fuel tank caps are to be in place and sealed with tape. Fuel tanks must be less than 25% filled on all engines.
 - LP-Gas tractors will be allowed in the exhibit area.
- 20. Originality** is to include paint color, fasteners, electrical systems, fuel systems, exhaust systems, mechanical systems, original unaltered serial plates, etc.
- 21. Classes:** Names and descriptions to use model year-manufacturer-model-serial number (Example: 1939 John Deere B Serial # 1112983). **Note,** Tractor Restoration Projects are not eligible for Ag Mech Show Placings such as Grand or Reserve Grand Champion Ag Mechanics Project.
- Tractors 1950 and Older
 - Tractors 1951 through 1960
 - Tractors 1961 through present day
 - 1st place tractor for Division (Grand Champion Tractor)
 - 2nd place tractor for Division (Reserve Grand Champion Tractor)
- 22. Detailed Judging Criteria**
- Tractor Restoration:** No lawn or garden tractors allowed. No implements or non-factory accessories allowed. Exhibitors of tractors with steel lugs or steel tracks must provide mats or lumber/plywood to serve as runners to protect asphalt and concrete from damage. Batteries must be disconnected and cranking or ignition systems must be disabled on all tractors to prevent unauthorized starting while on display. All fuel tank caps are to be in place and sealed with tape. LP-Gas tractors will be allowed in the exhibit area. Fuel tanks must be less than 25% filled. Ribbons will be awarded as follows: Blue, Red, and White.
 - Aesthetics**
 - overall appearance of tractor
 - workmanship and finish
 - metal preparation, completeness of sheet metal, paint and finish
 - detail and completeness of components such as wheels, tires, steering wheels, seats, decals, instrument panels, wiring harness, etc.
 - Originality**
 - paint color
 - fasteners
 - electrical systems
 - fuel systems
 - exhaust systems
 - mechanical systems
 - original unaltered serial plates
 - Mechanical**
 - static evaluation
 - rolling evaluation
 - engine
 - transmission
 - final drive
 - fuel system
 - cooling system
 - hydraulic system
 - steering system
 - charging system
 - cranking or starting system

Special Rules for Tractor Restoration Project Show

- e. **Safety Equipment all equipment that was original to the tractor**
 - i. drip pans containing floor absorbent
 - ii. fuel shut-off valves under all fuel tanks, off
 - iii. 2.5 lb. ABC fire extinguisher

- f. **Documentation**
 - i. typed text, three-ring binder with TOC and page numbers.
 - ii. one page description of the overall restoration project
 - iii. expense report identifying all costs of restoration
 - iv. photos showing before, during and after & safe working environment
 - v. complete description of all mechanical work performed

- g. **Note: Uniformity between shows:**
 - i. Manifolds and exhaust systems may be painted or coated in high temp black paint.
 - ii. All rubber, including hoses, belts, electrical wiring and harness may be left unpainted even though they may have been originally painted at the factory.
 - iii. Assembly bolt heads and nuts should be painted if originally painted.
 - iv. Magnetos, distributors, starting motors, generators, and voltage regulators may be painted black or left unpainted.
 - v. Non-rust surfaces such as aluminum or zinc coated surfaces including insulation surfaces may be left unpainted.