**What is it?**
This CDE tests both technical and agricultural mechanics skills and your ability to work with others while solving problems. During the event, members complete a written exam and demonstrate problem-solving and hands-on performance skills. The event takes a “systems” approach and emphasizes machinery and equipment systems, related industry and marketing systems, energy systems, structural systems and environmental/natural resource systems.

**Career Opportunities**

**Career Clusters**
- Agricultural and Forestry Production
- Marketing, Merchandising, and Sales
- Science and Engineering
- Social Services
- Education and Communication

Career opportunities found in the career cluster areas:
- **Agricultural and Forestry Production** – field sales representative – agriculture equipment
- **Marketing, Merchandising, and Sales** – technical service representative
- **Science and Engineering** – diesel mechanic, agricultural electrician, agricultural equipment designer, machinist, equipment operator, agricultural safety engineer, irrigation engineer, welder, agricultural engineer
- **Education and Communication** – technical writer, postsecondary teacher

**Educational Requirements**

**Vocational Technical & Industry Training** – welder, equipment operator, agricultural electrician, machinist,

**Associates Degree** – diesel mechanic, technical service representative

**Bachelor of Science Degree** – field sales representative - agricultural equipment, agricultural safety engineer, irrigation engineer, agricultural engineer, technical writer

**Graduate Degree** – agricultural equipment designer, postsecondary teacher

**SAE Opportunities**
Rebuilding a lawnmower engine, overhauling a diesel engine, design and build a trailer, building a pole barn and fence, wiring a barn or other agricultural structure, employment at a tractor dealership

**Proficiency Award Areas**
- Agriculture Mechanical Systems Cluster
  - Design and Fabrication
  - Repair and Maintenance
  - Energy Systems

**Curriculum Resources**
- FOS. John Deere.
- Power Tool Safety and Operation. Hobar.
- Agricultural Mechanics I Lesson Plans. UMC-IML.
- Agricultural Mechanics II Lesson Plans. UMC-IML.
- Agricultural Structures, Volumes I and II. UMC-IML
- National FFA Agricultural Mechanics web site: http://web.missouri.edu/~pavt0689/natcon.html