5. DIESEL ENGINE TROUBLESHOOTING

Contest Coordinator: Jon Clayson
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A PURPOSE – Members diagnose the trouble in a diesel engine that prevents starting, smooth operation, and maximum power output, then make proper adjustments for its operation.

B OBJECTIVES – This will be a six-station event. The stations will be as follows
- Station 1 - Written Test on diesel engine theory. Approx. 25 questions.
- Station 2 - Tractor Diesel Engine Parts ID on existing tractors that are already on site.
- Station 3 - Parts failure ID (such as piston failure). Students will have to identify what caused each failure.
- Station 4 - Troubleshoot a system failure (such as a diesel starter system) Isolate a problem, such as a faulty solenoid.
- Station 5 - Electronic System Analysis unit. Students will use a digital meter to find faulty parts by using ohms, volts and/or amps.
- Station 6 - Injector Tester Station. Students will be expected to check injectors and make the four tests to determine which injectors are faulty.

C ELIGIBILITY
1) A team will consist of 2 members. A team may represent a sub-district or a school, but a member cannot compete on both.
2) Contest will consist of two levels of competition.
   - Junior - Level grades 6 - 8
   - Senior- Level grades 9 – 12

D EVENT RULES
1) A team shall consist of two FFA members from the same program.
2) Teams must furnish safety glasses and tools.

E ATTIRE – Clean coveralls, shop coats, FFA jackets, or FFA t-shirts

F LOCATION – FFA building, Saturday, August 25, 9:00 a.m.

G AWARDS – 1:00 p.m.