Saturday, January 10-11, 2020
Lakes Region Community College

Agenda

Friday January 10, 2020

8:00am-4:00pm Contest set-up and validation (Judges and contest officials only)

Saturday January 11, 2020 (Contest Day)

8:00am – 8:30am	Team Check in - Automotive Building lobby
8:30am – 8:50am	Welcome and Contestant Briefing (Contest Area)
9:00am – 12:00pm	Contest (7 Rotations)
12:00pm – 12:30pm	Lunch (contestants will get lunch and return to their workstations)
12:35pm – 2:00pm	Contest Resumes (3 Rotations)
2:00pm - 3:00pm	Contest Scoring and Debrief
3:00pm	Awards Ceremony

The hands-on portion of the contest will consist of 10 stations worth 50 points each. Recognition awards and scholarships will be awarded to the top 3 teams with the highest combined written test score, the top 3 teams with the highest hands on score and the top 3 combined hands-on and written scores. The event champion and the team that will advance to the national contest will be team with the highest combined written and hands on score.

To help prepare for the event the following station list is being provided:

	ON-VEHICLE WORKSTATIONS	Items PROVIDED
Station 1 Multi-point Vehicle In-spection MANCHESTER COMMUNITY COLLEGE	Students will perform a Multi-point Vehicle Inspection. Students will be asked to perform visual and operation checks to determine the need for repair. Contestants must document their findings and recommendations.	MPVI Worksheet and appropriate tools
Station 2 Vehicle Engine Performance Diagnosis & Testing GENERAL MOTORS ASEP AUTOMOTIVE SERVICE EDUCATIONAL PROGRAM	Students will diagnose faults related to the en-gine control and emissions system. This in-cludes drivability, MIL-ON DTC and Engine Control Module related issues. A repair order will be provided to identify the customer complaint. Students will be expected to use basic diagnostic strategies to identify root cause, read sche-matics/wiring diagrams, correctly connect and use test equipment and interpret results.	Snap-On Verus Edge Diagnostic tool will be used. For instructions and tutorials on this diagnostic platform visit: SNAP ON

Station 3 Braking Systems Diagnosis and testing 	Contestants will diagnose a concern in the base brake system. Contestants should be familiar with: • Apply System • Boost System • Hydraulic System • Disc Brake Service • Parking Brake • Warning System	Appropriate brake ser-vice tools and service information will be provided. Snap-On Verus Edge Diagnostic tool will be used. For instructions and tu-torials on this diagnos-tic platform visit: SNAP ON
Station 4 Body Electrical Diagnosis and Testing 	Contestants will be asked to diagnose and document the repair of a malfunctioning windshield wiper/washer, exterior lighting or warning system. Contestants will be expected to read schematics, use appropriate service information, correctly connect and use test equipment, and use diagnostic strategies to identify root cause. Station is bugged. Contestants will be asked to complete a repair order and record diagnostic steps and test results.	Snap-On Verus Edge Diagnostic tool will be used. For instructions and tutorials on this diagnostic platform visit: SNAP ON

Station 5 Tire and Wheel Service  	Basic Tire Construction; Tire Size Information; Tire Tread Depth Measurement; Tire Wear Pat-tern Identification; Tire Pressure Monitor System (TPMS) Operation Proper Tire Dismount/Mount Procedures; Proper Wheel Balancing Procedures; Axial and Lateral Imbalance Forces; and, Road Force Measurement.	Hunter GSP9700 w/ Road Force Measurement
	BENCH WORKSTATIONS	
Station 6 Job Interview  	Teams will demonstrate that they can clearly and completely fill out a job application, communicate clearly and effectively and have appropriate professional behaviors during the job interview. Printed copy of resume required.	All contestants must bring a printed copy of their resume to registration.
Station 7 General auto circuit testing with S.E.T. boards  	Contestants will test and identify proper circuit operation on a typical automotive wiring harness. Contestants will demonstrate the necessary skills involved in diagnostics including: • Reading a wire diagram • Proper setup of a digital multimeter • Circuit testing with a digital multimeter • Documenting proper electrical terminology • Measuring Current, Voltage and Resistance • Determining if faults exist in an electrical circuit	Appropriate electrical testing tools will be provided. Fluke 87/88 series digi-tal multimeter or PDI DM-930 multimeter
Station 8 Electronic Service In-formation  	Students will locate specifications and other repair information using electronic service information as a resource.	ShopKey Pro (Mitchell) and/or ALLDATA Pro Service Information will be used. (Both will be available. The contestants can choose which they want to use based on their own preference)

Station 9 Basic Engine Diagnostics ELECTUDE	Team members will use a virtual Engine Management Simulator to test their knowledge of engine management systems and fault diagnostic skills.	Contact Joe Zahra at 516.695.0392, or joezahra@aol.com. He will provide links to your school site for the Electude Management Simulator and an introductory training session to familiarize the students.
Station 10 STEM Challenge MEGATECH	Teams will demonstrate competency in basic concepts associated with hybrid vehicle technology including electric motors, capacitors, LEDs, etc.	
Written Test ASE ***200 of 700 points possible for overall champion.***	This 100 question written test will test the stu-dent's technical knowledge of automobile diag-nosis and repair in the vehicle system specialty areas of: • General Knowledge (safety, tools, etc) • Engine Repair • Automatic Transmission/Trans-axle • Manual Drive Train and Axles • Suspension and Steering • Brakes • Electrical/Electronic Systems • Heating and Air Conditioning • Engine Performance	Combined team score from the qualifying test. 200 points possi-ble

Notes:

- Teams will be given 20 minutes to read the provided information and complete each work station. 5 minutes will be added into the rotation time to reset stations and rotate student groups.
- All tools and equipment will be provided. We will make the best effort to use industry stand-ard tools except when specified above.
- You must work as a team! Develop a strategy that allows you to work most efficiently to accomplish the task.

Event parking will be located on the North side of the Automotive building in Lot C (see map below) with additional overflow parking in Lot B. Enter the campus, turn right, and follow the access road to the stop sign. The Automotive building will be to your left. You may park in any available open space. Registration will take place in the reception area of the auto building.