Course Descriptions for Train-the-Trainer 23

TCAT- Elizabethton, Tennessee

April 24 – 28, 2017

All classes include teaching strategies for effective delivery and integration ideas on how to seamlessly weave these certifications into your program's already existing curriculum. Share your ideas and learn new ones as you build a professional network of instructors from across the country.

Automotive Scanner Diagnostics Certification:

This course is designed to create Power Users, individuals who can efficiently and effectively utilize 90%+ of all available features, found on the various platforms of Snap-on diagnostic equipment. This includes diagnostic research and repair information such as ShopKey5, Scanner navigation with the Solus Edge, and Verus Edge, and then continues with Lab Scope operation found on Verus Edge. Details from basic navigation through effective use of the Fast-Track Troubleshooter, Component Test Meter, PID Triggers, and glitch capture techniques are thoroughly explained while each student demonstrates these techniques using his/her individual diagnostic tool supplied during the training. Individual hands-on attention is a cornerstone to this program. Learn by doing!

Advanced Scanner and Diagnostics Certification:

Participants will dive deeper into the functionality of the Verus Edge, including discussion about the use of ignition and transducer accessories used during the diagnostic process. The Verus Edge, in conjunction with ShopKey Pro will be applied to multiple diagnostic situations using various ATech training boards to simulate faulty vehicle systems. An interactive and hands-on approach to operating the Verus Pro scanner and lab scope along with integrated service information is used to guide participants through diagnostic scenarios. Emphasis will be placed on diagnostic strategy and utilizing a systematic procedure to tackle any diagnostic issue. Successful completion of Shopkey Pro and the Verus Edge Scanner and Lab Scope certification exams are required **before** taking Advanced Diagnostics.

Mechanical & Electronic Torque Instruments Certification:

This course has two key objectives. First, students will develop a new appreciation for the complexities behind the proper tightening of fasteners. Second, students will be trained, tested, and certified on various torque instruments ensuring proper tool set-up and physical technique. This course begins on the relationship between tightening torque versus clamping pressure and how various external factors can greatly affect this relationship, and thus cause a fastened joint to fail prematurely. This concept is discovered by the students through a number of lab activities and demonstrations illustrating how external factors affect torque and clamping pressure. Students then demonstrate proficiency on a number of mechanical and electrical torque tools developed by Snap-on. Students will get instant "actual torque applied" feedback while using each tool on a calibration machine, so they can hone their technique and become both accurate and precise in the use of each tool.

Wheel Service and Alignment Certification:

This course is designed to create Power Users, individuals who can efficiently and effectively utilize 90%+ of all available features, found on the RFV 2000 Wheel balancer, EHP System V Tire Changer, and Pro42 Alignment Software. Details from basic navigation through effective use of the Diagnostic software, calibration menus and use of all accessories are thoroughly explained while each student demonstrates these techniques using each piece of equipment during the training. The Pro42 software instruction is delivered utilizing a laptop loaded with the Pro42 alignment software for each student. The Pro42 class includes EZstream technology training for vehicles that require OBD connection to complete alignment, covers optional scan tool use also. This class also includes delivery techniques and recommendation for integration into existing under car courses. Individual hands-on attention is a cornerstone to this program. Learn by doing!

Heavy Duty Diesel Scanner Diagnostics Certification (Pro-Link Ultra):

This course is designed to create Power Users, individuals who can efficiently and effectively utilize 90%+ of all available features, found on the ProLink Ultra equipment. This includes Scanner navigation of all available heavy-duty application menus to include: Allison transmission, Caterpillar, Detroit Diesel, Mack Trucks, Cummins and OBDII applications. Details from basic navigation through effective use of Code structure techniques, vehicle applications, bi-direction testing are thoroughly explained while each student demonstrates these techniques using his/her individual diagnostic tool supplied during the training. This class also includes delivery techniques and recommendation for integration into existing Diesel courses. Individual hands-on attention is a cornerstone to this program. Learn by doing!

Multimeter Certification:

This course is designed to create Power Users, individuals who can efficiently and effectively utilize 90%+ of all available features, found on the multimeter equipment. Through the use of a demonstration signal generator board, all of the electrical measurement features and options will be performed by the student. Learn how to perform initial safety and reliability checks on the meter using the meter itself, followed by common voltage, amperage, and resistances measurements with a focus of meter set-up and connection to avoid overload and blown fuses in the future. Next the advanced features of the meter are explored including recording values, temperature, frequency, and other special settings dependent on the actual meter model used in the training. When conducted for instructors special attention is placed on meter curriculum integration within normal program courses, student activities, and other teaching strategies for implementing the meter program.

Precision Measuring Instruments Certification:

This course is designed to assist multiple technical training disciplines with the proper operation, calibration, and measuring technique's required for utilizing precision measurement equipment effectively. Both SAE and metric measuring instruments will be covered; including steel rules, feeler gauges, precision straight edge, calipers, inside and outside micrometers, angle measurement, small hole gauges, telescoping gauges and dial indicators.

Advanced Measuring Instruments Certification:

This course is designed to assist multiple advanced technical training disciplines with the proper operation, field verification, and measuring techniques of instruments utilized in precision machining and manufacturing. Both SAE and metric measuring instruments will be covered in topics including Primary standards, Flexible Measuring Instruments, Support and Layout, Surface Finishing and Hardness, Data Acquisition and Optical Comparator.

Trane Residential Airflow Certification:

A student who successfully completes Trane Residential Certification 1 – Airflow will understand airflow requirements in a standard residential HVAC system; be able to properly measure characteristics of airflow; be able to measure the quantity of air moved by the system; and understand the use of tools and methods used in determining airflow.

Trane Residential Refrigeration Diagnostics:

A student who successfully completes Trane Residential Certification 2 – Refrigeration Diagnostics will be able to diagnose the functions of refrigerant cycle components; obtain critical data from the

equipment; use critical data to create a probable cause list of a malfunction or failure; analyze the probably cause list to determine the actual fault; repair the fault and the confirm diagnosis; and understand the use of tools and methods used in refrigeration diagnostics.

Rotor Matching Master Technician Certification:

From the recognized leader in on-car brake lathing systems, the Pro-cut Rotor Matching Master Technician certification will teach technicians how to properly correct and avoid common brake problems associated with today's precisely engineered vehicles. Upon successful completion, technicians will be certified as Master Rotor Matching Technicians and develop a highly valuable skillset by being able to diagnose and repair one of the most common and misunderstood customer issues facing the automotive repair industry.