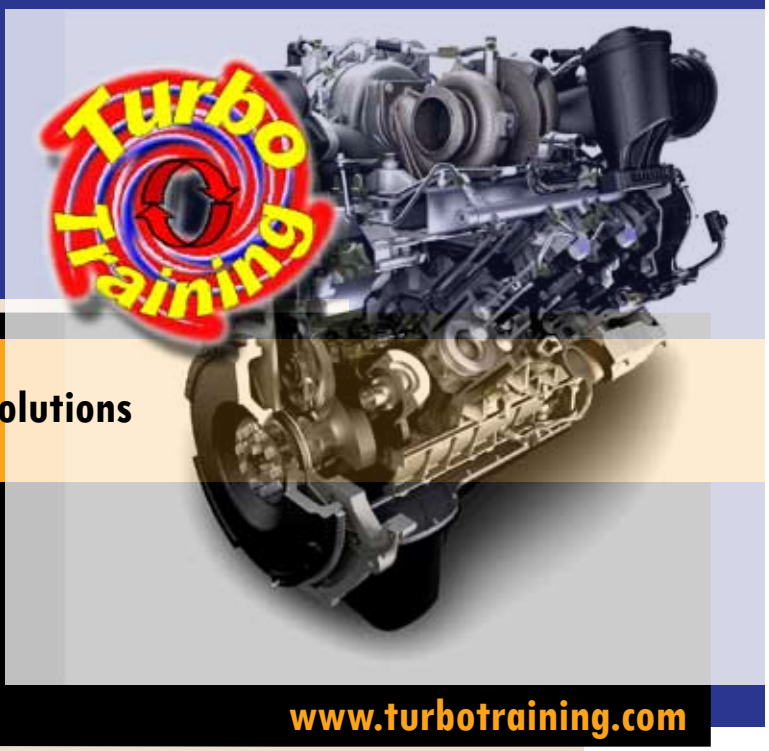
Bruce Amacker's Turbo Training

Unique training solutions are now available for all of your automotive and truck applications!

As a maintenance shop owner since 1977, Bruce Amacker contributes a wide range of both automotive and truck repair experience.

Practical knowledge has been applied to the writing of many training programs and the development of a variety of auto and truck-based continuing education classes.



Unique Training Solutions

P.O. Box 361584
Strongsville, OH 44136
phone: 440-846-3885
fax: 330-220-7404
bamacker@aol.com
turbotraining.com

www.turbotraining.com

- Programs are custom-tailored to ***your*** needs.
- Comprehensive full-color manuals complement each class.
- We bring a complete cutaway engine to your site for the following engine classes:
  - 6.7 PowerStroke **(NEW!)**
  - 7.3 PowerStroke (IH T444E)
  - 6.0 PowerStroke (IH VT365)
  - 6.4 PowerStroke (2008)
  - DT466E (1996 - 2003)
  - DT466 (2004 - Up EGR)
- References available on request.

Turbo Training makes it easy!

All classes are delivered on site...

At YOUR site!

Call today to schedule classes!

Office: **440-846-3885**

Bruce Amacker cell: **440-263-9282**

Bruce Amacker would like to share his skill and years of experience with your repair staff, and present the programs at your operations facilities. We look forward to helping your team!

Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Ford PowerStroke Diesel 6.4 (2008)

This unique engine is covered in detail, covering all operating systems: glow plug circuits, fuel supply and delivery, complete theory and application, EGR system and coolers, twin turbochargers including variable turbocharger, computer and injector control systems, diagnostic procedures, computer strategies, injector sleeve replacements, glow plug sleeve replacements, common problems and pattern failures. A complete cutaway 6.4 PowerStroke engine will be torn down in the classroom to examine fuel delivery! A wide variety of 6.4 PowerStroke parts are provided for demonstration purposes: cylinder head, both turbochargers, fuel injectors, sensors, pumps, a complete fuel system, and more. A 6.4 PowerStroke cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests on running PowerStroke equipped trucks with the scan tool of choice. A full-color training manual is provided.

16 hours

6.7 PowerStroke Diesel (2011)

This class covers the 2011, 6.7 PowerStroke engine, which is completely designed and built by Ford Motor Company. This engine utilizes many unique new systems including a single sequential turbocharger, as well as dual EGR coolers, **SCR** (Selective Catalytic Reduction or Urea Injection), Bosch **HPCR** (High Pressure Common Rail) fuel injection, aluminum cylinder heads, dual cooling systems, and exhaust aftertreatment system. System operation, component location, service features, diagnostics, pattern failures and repair are covered.

8 hours

Visit us online at ***www.turbotraining.com*** to purchase a wide selection of self-study materials, including color training manuals and DVDs.

Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Ford PowerStroke Diesel 7.3

Covers all operating systems: glow plug circuits, fuel supply and delivery, complete HEUI theory and application, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, common problems and pattern failures. A complete 7.3 PowerStroke engine will be torn down in the classroom to examine fuel delivery. A wide variety of PowerStroke parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, flywheels, and more. A PowerStroke cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests on running PowerStroke equipped trucks with the Ford NGS, or scan tool of choice, and installing pressure gauges. A full-color training manual is provided. **16 hours**

Ford PowerStroke Diesel 6.0

This dynamic course covers all operating systems for the unique engine including: glow plug circuits, fuel supply and delivery, complete HEUI theory and application, EGR system, variable turbocharger, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, glow plug sleeve replacements, common problems and pattern failures. A complete cutaway 6.0 PowerStroke engine will be torn down in the classroom to examine fuel delivery! A wide variety of 6.0 PowerStroke parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, and more. A PowerStroke cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests on running PowerStroke equipped trucks with the scan tool of choice. A full-color training manual is included. **16 hours**

Call today to schedule classes!

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Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Navistar Electronic Engine Controls DT466E (1996-2004)

This covers the DT466E and 530E engines produced from 1996 to 2004, including all operating systems: fuel supply and delivery, complete HEUI theory and application, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, common problems and pattern failures. A complete cutaway DT466E engine will be torn down in the classroom to examine fuel delivery. A wide variety of engine parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, and more. A cylinder head, which has been cut in half to expose all passageways, also is used. This class includes using a full electronic demonstrator board to further explain how the fuel control system works. The class expands on diagnostics with time spent in the shop doing live tests on running Navistar equipped trucks with the factory ServiceMaxx software or scan tool of choice. A cutaway variable turbocharger accompanies this class. A full-color training manual is provided. **16 hours**

Navistar Electronic Engine Controls DT466 EGR (2005 and newer)

This intensive class covers the 2005 up DT466, 570, MaxxForce 9, MaxxForce 10, and MaxxForce DT engines to current production in IH's medium duty trucks. The class examines all operating systems: fuel supply and delivery, complete HEUI theory and application, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, common problems and pattern failures. A complete cutaway DT466 (EGR) engine will be torn down in the classroom to examine fuel delivery. A wide variety of engine parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, and more. A cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests with the factory ServiceMaxx software on running Navistar equipped trucks. A full-color training manual is provided. **16 hours**

Navistar Electronic Engine Controls T444E

Covers the T444E engine, including all operating systems: glow plug circuits, fuel supply and delivery, complete HEUI theory and application, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, common problems and pattern failures. A complete cutaway T444E engine will be torn down in the classroom to examine fuel delivery! A wide variety of engine parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, and more. A cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests with the factory MD Fleet software on running Navistar equipped trucks. A full-color training manual is included. **16 hours**

Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Navistar Electronic Engine Controls VT-365

This unique engine is covered in detail in this class. Course examines all operating systems: glow plug circuits, fuel supply and delivery, complete HEUI theory and application, EGR system, variable turbocharger, oil pump low pressure and high pressure circuits, all plumbing circuits involved for both systems, computer and injector driver module systems, diagnostic procedures, computer strategies, injector sleeve replacements, glow plug sleeve replacements, common problems and pattern failures. A complete cutaway VT-365 engine will be torn down in the classroom to examine fuel delivery! A wide variety of VT-365 parts are provided for demonstration purposes: cylinder head, turbocharger, fuel injectors, sensors, pumps, a complete fuel system, and more. A VT-365 cylinder head, which has been cut in half to expose all passageways, also is used. The class expands on diagnostics with time spent in the shop doing live tests on a running VT-365 equipped truck with the Navistar MD Fleet program. A full-color training manual is included. **16 hours**

The Scan Tool Decision

This class is aimed at managers, purchasing agents and upper level technicians. It explores the pros and cons of automotive and HD truck scan tools currently on the market. Topics covered include: all factory scan tools, aftermarket generic scan tools, PDA based scan tools, and PC laptop based scan tools. IH's MD Fleet, ISIS, and Diamond Logic Builder are covered in detail, as well as Ford's NGS, PDS, and IDS. This is not a technical class covering diagnostics; rather it examines the abilities of software to fulfill the needs of its user. A full-color training manual is provided. **3 hours**

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Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Freightliner Multiplexing

NEW!

This class covers the body control system used on the Freightliner M2 and later Cascadia series trucks. The M2 and Cascadia both use a Bulkhead Module and Chassis Module to control all body functions such as lights, heater, A/C, and all accessories. Since none of the switches are hard-wired, special diagnostics are required for such simple things as light problems and heater controls. Taught from a technician's point of view. A **full-color training manual** is provided. ServiceLink software training is available. **8 hours**.

All classes are delivered on site...

At your site...

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Bruce Amacker's Turbo Training

Truck Based Classes

A full-color training manual is provided for each participant in all classes.

Electrical Theory and Troubleshooting

Principles, operation, and diagnosis of Automotive Electrical Systems: including: fundamentals of electricity and magnetism, charging systems, starting systems, and use of schematics. This hands-on class uses 15 large demonstrator boards (one per student) to explore voltages, amperage, relay operation, series and parallel circuits, DVOM use, and diagnostics. This class continues into the shop to do live diagnostics while each student completes a worksheet, with emphasis on starter and alternator amperage testing, voltage drop testing, proper alternator and battery testing, and ground circuits. Testing in the shop is done with a VAT, DVOM, or any tool of choice. This class may be tailored to either automotive, truck, or both applications. A full-color training manual is included. **16 hours**

Navistar Multiplexing

This class covers the body controls system used on the International/Navistar NGV 4200/4300/4400/7000 series trucks. These trucks are easily identified by the chrome grill and sleek windswept hood and are commonly seen in use as tow trucks and for small business delivery. The NGV uses a complete Body Control Module (ESC) system similar to high-end cars to control all body functions such as lights, heater, A/C, radio, dash cluster gauges, cruise control and all accessories. Since none of the switches are hard-wired, electronic diagnostics must be done for such simple things as light problems and heater controls. There is no taillight fuse in these trucks, instead they use a current limiting resistor. The ESC or Body Controller processor monitors amp load on each circuit and will set codes when the amp load is too low, as with a blown bulb, or too high, as with a short circuit. Learn how to do the diagnostics using only the digital dash; no laptop or scan tool is needed. Taught from a technician's point of view. A full-color training manual is provided. Diamond Logic Builder software training is included in the class. **8 hours**

Bendix MD/HD Truck ABS Systems

This class covers the Bendix EC-16, EC-17, EC-17N, EC-30 and EC-60 Air Brake ABS systems used commonly in late IH truck chassis. The course covers system operation, diagnostics, pattern failures, and repair of this system. A complete ABS system on a demonstrator board is used in the classroom to explore diagnostics using both manual methods and software diagnostics. A running truck is requested to do live diagnostics at the end of the program. Diagnostics are performed in the shop using: manual diagnostics with the LED's and DVOM, electronic diagnostics with the DCI interface box, Bendix's A-Com program, and Bendix ABS programs. A full-color training manual is provided. **4 hours**

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Truck Based Classes

A full-color training manual is provided for each participant in all classes.

IH Lucas Varity Hydraulic ABS Systems

This class covers the Lucas Varity Hydraulic ABS systems commonly used in IH 3200 series bus chassis and IH 4700 series truck chassis from 1998-2004. The course deals with system operation, diagnostics, pattern failures, and repair. A running truck is requested to do live diagnostics at the end of the program. Diagnostics are performed in the shop with IH's Hydraulic ABS Program. A full-color training manual is provided. **4 hours**

Electronic Service Information

Much of diagnostics these days is doing research on a particular problem or symptom. This class explores PC and Internet-based sources of truck repair information and how to use them efficiently. The class is aimed at high-level technicians, foremen, managers and assistants. The objective is to increase productivity and lower comebacks by providing more information and support to the technician through the use of websites such as IATN, Identifix, factory websites, and others. Internet and PC skills are a prerequisite. A PC lab is requested, but not required, when presenting this class. A full-color training manual is included. This class may be presented in either a **4 hour or 8 hour format**.

Diesel Emission Controls:

This class covers the EGR (Exhaust Gas Recirculation), Diesel Oxidation Catalyst (DOC), Diesel Particulate Filter (DPF), Selective Catalytic Reduction (SCR), and Diesel Exhaust Fluid (DEF) systems used on all makes of LD, MD, and HD trucks starting in the 2008 model year. Because of the similarities in system operation, this class applies to all makes and models of MD/HD trucks. System operation, service, pattern failures, and maintenance peculiarities will be covered in the class. **8 hours**

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Bruce Amacker's Turbo Training

Automotive Based Classes

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Electrical Theory and Troubleshooting

Principles, operation, and diagnosis of automotive electrical systems including: fundamentals of electricity, and magnetism, charging systems, starting systems, and use of schematics. This hands-on class uses 15 large demonstrator boards (one per student) to explore voltages, amperage, relay operation, series and parallel circuits, DVOM use, and diagnostics. This class continues into the shop to do live diagnostics while each student completes a worksheet, with emphasis on starter and alternator amperage testing, voltage drop testing, proper alternator and battery testing, and ground circuits. Testing in the shop is done with a VAT, DVOM, or any tool of choice. This class may be tailored to either automotive, truck, or both applications. A full-color training manual is included. **16 hours**

Automotive Fuel Control (normally used as the Level 1 Fuel Control class)

This class explores sensor inputs, PCM strategies and outputs and how they relate to a modern fuel control system. Exploration of sensor operation, open and closed loop, fuel trims and how to use them effectively. Considerable shop time is included using a scan tool and forcing situations and codes. Multiple scan tools and workstations are set up during the shop portion of the class. A full-color training manual is provided. **16 hours**

Understanding OBD2 (normally used as the Level 2 Fuel Control class)

This class covers the operation of OBD2, including P, B, and U series codes, pending trouble codes, diagnostics, generic and factory sides of data, freeze frame, and how to use these effectively to reduce comebacks. Understand how continuous and non-continuous monitors work, and what enable criteria is and how to comprehend the strategies. Time is spent in the shop tracking monitors and data. Multiple scan tools and workstations are set up during the shop portion of the class. A full-color training manual is included. **16 hours**

The Scan Tool Decision

This class is aimed at managers, purchasing agents and upper level technicians. It explores the pros and cons of automotive scan tools currently on the market. Topics covered include: all factory scan tools, aftermarket generic scan tools, PDA based scan tools, and PC laptop based scan tools. GM's Tech 1 and Tech 2 are covered, as well as Daimler/Chrysler's DRB3 and StarScan tools, and Ford's WDS, NGS, PDS, and IDS. This is not a technical class covering diagnostics; rather it examines the abilities of software to fulfill the needs of its user. A full-color training manual is provided. **3 hours**

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Automotive Based Classes

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Scan Tool Use

This class explores the use of your scan tool and its functions. Topics include basic fuel control, bidirectional ability of the scan tool, evaluating the PID list, and the differences between OBD1 and OBD2. Substantial time is spent in the shop environment. Use the scan tool of choice. Included during the Automotive Fuel Control and OBD2 classes, this is generally used as a refresher class after the Level 1 Fuel Control and Level 2 OBD2 classes are presented. A full-color training manual is provided. **8 hours**

Electronic Service Information

Much of diagnostics these days is doing research on a particular problem or symptom. This class explores PC and Internet-based sources of automotive repair information and how to use them efficiently. The class is aimed at high-level technicians, foremen, managers and assistants. The objective is to increase productivity and lower comebacks by providing more information and support to the technician through the use of websites such as IATN, Identifix, factory websites, and others. Internet and PC skills are a prerequisite. A PC lab is requested, but not required, when presenting this class. A full-color training manual is included. This class can be presented in either a **4 hour or 8 hour format**.

Introduction to Oscilloscopes

Spend time in the classroom with oscilloscopes covering voltages, time bases, frequencies, AC and DC patterns, and trigger levels. Continue in the shop environment testing ignition patterns, alternator diodes, and doing live diagnostics. A full-color training manual is provided. **4 hours**

Automotive ABS Braking Systems

This class covers ABS systems commonly used in late automotive applications. The course covers system operation, diagnostics, pattern failures, and repair. The class concludes in the shop doing live diagnostics on a car with the appropriate scan tool. A full-color training manual is provided. **8 hours**

TurboTraining References:

Mike Franke, Service Director, Southeast Power Systems of Tampa (813) 623-1551, ext. 124, mfranke@se-power.com

Jeff Masterman, Standard Motor Products Training Development Director, (828) 688-9085, jmasterman@smpsfa.com

Mike Bower, Transportation Manager, Cleveland Metropolitan School District, (216) 441-8235, bowermi@cmsdnet.net

Bruce Amacker's Turbo Training

About Your Instructor

Bruce Amacker:

Educator of the Year, 2007: Bruce Amacker, owner and instructor of TurboTraining, was named Educator of the Year at the North American Council of Automotive Teachers (NACAT) 2007 Conference held in Long Beach, CA. Each year NACAT recognizes one of the nation's top teachers for excellence in automotive repair instruction.

Turbo Training, Instructor, 1998-Present: Instructor and Trainer for PowerStroke/T444E/ DT466E Engines, School Bus Fleet Maintenance, ABS Braking Systems, Multiplexing, Automotive Fuel Control, and other topics across the United States. His mastery of technology, combined with more than 30 years of repair experience, gives his programs a distinct hands-on approach, which has won high marks from attendees. Visit turbotraining.com for more information.

Fleet Plus, Owner and Operator, 1977-2003: In the same location for more than twenty years, Fleet Plus employed three full-time technicians under Mr. Amacker's management, using state-of-the-art diagnostic and repair tools. Specializing in light and medium duty truck repair for small business, the shop developed a loyal clientele of business truck customers. Mr. Amacker sold Fleet Plus in 2003.

ASE, Evaluator and Editor, May 2011: Invited to attend ASE Medium/Heavy Duty T6 Electrical test writing workshop in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in writing and evaluating the current ASE test.

ASE, Evaluator and Editor, October 2008: Invited to attend A9 Diesel Engine test writing workshop in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in developing a new ASE test.

ASE, Evaluator and Editor, May 2008: Invited to attend A9 Diesel Engine test writing workshop in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in developing a new ASE test.

ASE, Evaluator and Editor, October 2007: Invited to attend ASE Medium/Heavy Duty T2 Diesel Engine test writing workshop in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in writing and evaluating the current ASE test.

ASE, Evaluator and Editor, October 2004: Invited to attend ASE Medium/Heavy Duty Service Manager's Test writing workshop in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in writing and evaluating a new ASE test.

ASE, Evaluator and Editor, June 2003: Invited to attend ASE A2 Automatic Transmission Test Rewrite in Washington, DC. Participated with 20 of the nation's top trainers, educators and engineers in writing, evaluating, and editing the current test.

ASE, Evaluator and Editor, July 2001: Invited to attend ASE L1 (Advanced Engine Performance) Test rewrite conference in Detroit, Michigan. Participated with 20 of the nation's top trainers, educators and engineers in writing, evaluating, and editing the current test.

Current Certifications: ASE Master Automobile Technician, Advanced Engine Performance (L1), Master Truck Technician, Electronic Diesel Engine Diagnosis (L2)

Ohio EPA Certified Emission Repair Technician

Professional Association: Sponsoring member, International Automotive Technicians Network